CHAPTER

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LANDING GEAR

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32-11-00		
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32-11-61		
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512	Feb 15/2008	
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32-32-00		
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LANDING GEAR

Subject/Page	Date	COC
32-32-00 (cont)		
O 503	Jun 15/2009	
O 504	Jun 15/2009	
O 505	Jun 15/2009	
506	Oct 10/2006	
507	Oct 10/2006	
508	Oct 10/2006	
509	Oct 10/2003	
510	BLANK	
32-32-11		
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402	Feb 15/2009	
403	Jun 10/2005	
404	Oct 10/2003	
405	Oct 10/2003	
406	Oct 10/2003	
407	Oct 10/2003	
408	Oct 10/2003	
409	Feb 15/2009	
410	Feb 15/2009	
411	Feb 15/2009	
412	Feb 15/2009	
413	Feb 15/2009	
414	Feb 15/2009	
32-32-11		
601	Jun 10/2007	
602	Jun 10/2006	
603	Jun 10/2006	
604	Jun 10/2006	
605	Oct 10/2003	
606	Oct 10/2003	
607	Oct 10/2003	
608	Jun 10/2007	
609	Jun 15/2008	
610	Jun 15/2008	
32-32-21		
401	Feb 15/2009	
402	Feb 15/2009	
403	Oct 10/2003	
R 404	Jun 15/2009	
32-32-21 (cont)		
405	Feb 15/2009	
406	BLANK	
32-32-31		
401	Feb 15/2009	
402	Feb 15/2009	
403	Jun 10/2005	
404	Feb 10/2006	
405	Jun 10/2005	
406	Jun 10/2005	
407	Jun 10/2006	
408	Jun 10/2005	
409	Feb 15/2009	
410	Feb 15/2009	
411	Jun 15/2008	
412	Feb 15/2009	
413	Feb 15/2009	
414	Feb 15/2009	
415	Jun 15/2008	
416	Jun 15/2008	
32-32-31		
601	Oct 10/2003	
602	Oct 10/2003	
603	Oct 10/2003	
604	Oct 10/2003	
605	Oct 10/2003	
606	Oct 10/2003	
607	Oct 10/2003	
608	Oct 10/2003	
32-32-41		
401	Oct 10/2003	
402	Jun 10/2005	
403	Oct 10/2003	
404	Oct 10/2003	
405	Jun 15/2008	
406	Jun 15/2008	
407	Jun 15/2008	
408	Jun 15/2008	
32-32-51		
401	Oct 10/2003	
32-32-51 (cont)		
402	Jun 10/2005	
403	Oct 10/2003	
404	Oct 10/2003	
405	Oct 10/2003	
406	Jun 15/2008	
407	Jun 15/2008	
408	Feb 10/2006	
409	Feb 10/2006	
410	BLANK	
32-32-52		
401	Jun 10/2005	
402	Jun 10/2005	
403	Oct 10/2003	
404	Oct 10/2003	
405	Jun 15/2008	
406	Jun 15/2008	
407	Jun 15/2008	
408	Jun 15/2008	
409	Jun 15/2008	
410	BLANK	
32-32-71		
401	Oct 10/2003	
402	Jun 10/2005	
403	Oct 10/2003	
404	Feb 15/2009	
405	Feb 15/2009	
406	Feb 15/2009	
32-32-72		
401	Jun 15/2008	
402	Jun 15/2008	
403	Jun 15/2008	
404	Jun 15/2008	
405	Jun 15/2008	
406	BLANK	
32-32-91		
401	Oct 10/2006	
402	Jun 10/2004	
403	Oct 10/2003	
404	Oct 10/2003	

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32-32-91 (cont)		
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406	Feb 15/2009	
32-32-93		
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403	Oct 10/2003	
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R 405	Jun 15/2009	
406	Feb 15/2009	
407	Feb 15/2009	
408	BLANK	
32-33-00		
R 501	Jun 15/2009	
O 502	Jun 15/2009	
O 503	Jun 15/2009	
O 504	Jun 15/2009	
O 505	Jun 15/2009	
O 506	Jun 15/2009	
O 507	Jun 15/2009	
508	Oct 10/2003	
32-33-11		
401	Jun 10/2005	
402	Jun 10/2005	
403	Oct 10/2003	
404	Oct 10/2003	
405	Oct 10/2003	
R 406	Jun 15/2009	
407	Feb 15/2009	
408	Feb 15/2009	
409	Feb 15/2009	
410	Feb 15/2009	
32-33-21		
401	Jun 10/2005	
402	Jun 15/2008	
403	Oct 10/2003	
404	Jun 15/2008	
R 405	Jun 15/2009	
406	Feb 15/2009	
407	Feb 15/2009	

Subject/Page	Date	COC
32-33-21 (cont)		
408	Feb 15/2009	
32-33-31		
401	Jun 10/2005	
402	Jun 10/2005	
403	Oct 10/2003	
404	Oct 10/2003	
405	Feb 15/2009	
406	Oct 15/2008	
407	Oct 15/2008	
408	BLANK	
32-33-41		
401	Jun 10/2005	
402	Jun 10/2005	
403	Oct 10/2003	
404	Jun 15/2008	
405	Jun 15/2008	
406	Feb 10/2006	
32-33-51		
401	Feb 15/2009	
R 402	Jun 15/2009	
403	Feb 15/2009	
404	Feb 15/2009	
R 405	Jun 15/2009	
406	Feb 15/2009	
407	Feb 15/2009	
R 408	Jun 15/2009	
409	Feb 15/2009	
R 410	Jun 15/2009	
411	Feb 15/2009	
412	Feb 15/2009	
32-33-51		
601	Oct 10/2003	
602	Oct 10/2003	
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604	Oct 10/2003	
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606	Oct 10/2003	
607	Oct 10/2003	
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Subject/Page	Date	COC
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402	Jun 10/2005	
403	Oct 10/2003	
R 404	Jun 15/2009	
405	Feb 15/2009	
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32-33-61		
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403	Oct 10/2003	
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406	Oct 10/2003	
R 407	Jun 15/2009	
408	Feb 15/2009	
409	Feb 15/2009	
410	Feb 15/2009	
32-33-61		
501	Oct 15/2008	
502	Oct 10/2006	
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32-33-61		
601	Oct 10/2003	
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607	Oct 10/2003	
608	Oct 10/2003	
32-33-71		
401	Feb 15/2009	
402	Feb 15/2009	
403	Oct 10/2003	
R 404	Jun 15/2009	
405	Feb 15/2009	

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32-33-71 (cont)		
406	Feb 15/2009	
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408	Feb 10/2005	
409	Feb 15/2009	
410	Feb 15/2009	
411	Feb 15/2009	
412	Feb 15/2009	
32-33-72		
401	Oct 10/2003	
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405	Oct 10/2003	
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32-34-00		
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503	Oct 10/2003	
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507	Jun 10/2005	
508	Feb 15/2009	
509	Feb 15/2008	
510	Feb 15/2008	
511	Feb 15/2008	
512	Feb 15/2008	
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515	Oct 15/2008	
516	Oct 15/2008	
517	Oct 15/2008	
518	Oct 15/2008	
519	Oct 15/2008	
520	Oct 15/2008	
32-34-11		
401	Jun 10/2005	
402	Jun 10/2005	
403	Oct 10/2003	
32-34-11 (cont)		
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406	Oct 10/2003	
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408	Oct 10/2003	
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411	Feb 15/2009	
412	Feb 15/2009	
413	Oct 10/2003	
414	Oct 10/2003	
415	Oct 10/2003	
416	Oct 10/2003	
32-34-21		
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403	Oct 10/2003	
404	Oct 10/2003	
405	Oct 10/2003	
406	Oct 10/2003	
407	Oct 10/2003	
408	Feb 15/2009	
409	Feb 15/2009	
410	Feb 15/2009	
32-34-31		
401	Jun 10/2005	
402	Oct 10/2003	
403	Feb 10/2007	
404	Feb 10/2007	
405	Feb 10/2007	
406	Feb 10/2007	
407	Feb 15/2009	
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32-35-00		
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512	Feb 15/2009	
32-35-11		
401	Jun 10/2005	
402	Oct 10/2003	
403	Oct 10/2003	
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405	Jun 10/2005	
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32-35-20		
401	Oct 10/2007	
402	Oct 10/2007	
403	Oct 10/2007	
404	Oct 10/2007	
32-35-21		
401	Jun 10/2005	
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403	Oct 10/2003	
404	Oct 10/2003	
405	Oct 10/2003	
406	Oct 10/2003	
407	Feb 15/2009	
408	Oct 10/2003	
409	Feb 15/2009	
410	Jun 15/2008	
411	Jun 15/2008	
412	BLANK	
32-41-00		
201	Feb 10/2005	
202	Feb 10/2005	

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203	Oct 10/2003	
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215	Oct 10/2005	
216	Oct 10/2005	
32-41-00		
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502	Feb 15/2009	
503	Feb 15/2009	
504	Feb 15/2009	
505	Feb 15/2009	
506	Feb 15/2009	
507	Feb 15/2009	
508	Feb 15/2009	
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513	Jun 10/2007	
514	Oct 15/2008	
515	Oct 15/2008	
516	Oct 15/2008	
517	Feb 15/2009	
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521	Feb 15/2009	
522	Feb 15/2009	
32-41-11		
401	Oct 10/2003	
32-41-11 (cont)		
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403	Oct 10/2003	
404	Oct 15/2008	
405	Jun 15/2008	
406	Oct 15/2008	
32-41-21		
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404	Oct 10/2003	
405	Oct 10/2003	
406	Oct 10/2003	
407	Oct 10/2003	
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409	Oct 10/2003	
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411	Oct 15/2008	
412	Oct 15/2008	
413	Oct 15/2008	
414	BLANK	
32-41-31		
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402	Jun 10/2007	
403	Oct 10/2003	
404	Oct 10/2003	
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406	Oct 10/2003	
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410	Feb 15/2009	
32-41-41		
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407	Jun 15/2008	
32-41-41 (cont)		
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412	Oct 15/2008	
32-41-41		
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603	Oct 10/2003	
604	Oct 10/2003	
605	Jun 15/2008	
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608	Oct 10/2003	
32-41-51		
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403	Oct 10/2003	
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32-41-53		
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32-41-54		
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32-41-71		
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402	Jun 10/2005	
403	Oct 10/2003	

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404	Jun 10/2006	
405	Jun 10/2006	
406	Jun 10/2006	
407	Feb 15/2009	
408	Feb 15/2009	
32-41-81		
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402	Jun 15/2008	
403	Jun 15/2008	
404	Oct 10/2003	
405	Oct 10/2003	
406	Oct 10/2003	
407	Oct 10/2003	
408	Oct 10/2003	
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410	Oct 15/2008	
411	Oct 15/2008	
412	Feb 15/2008	
413	Feb 15/2009	
414	Feb 15/2009	
32-41-91		
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403	Oct 10/2003	
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405	Oct 15/2008	
406	Jun 15/2008	
32-41-93		
401	Oct 10/2003	
402	Oct 10/2003	
403	Oct 10/2003	
404	Oct 10/2003	
32-41-93 (cont)		
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32-41-95		
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404	Oct 10/2003	
405	Oct 15/2008	
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32-42-00		
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502	Feb 15/2009	
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511	Oct 10/2003	
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513	Jun 10/2004	
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515	Oct 10/2003	
516	Oct 10/2003	
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523	Oct 15/2008	
32-42-00 (cont)		
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32-42-11		
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405	Jun 15/2008	
R 406	Jun 15/2009	
407	Oct 10/2005	
408	BLANK	
32-42-21		
401	Feb 15/2008	
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403	Oct 10/2003	
404	Feb 15/2008	
32-42-31		
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402	Oct 15/2008	
403	Oct 15/2008	
404	Oct 15/2008	
405	Oct 15/2008	
406	Feb 15/2009	
407	Feb 15/2009	
408	Feb 15/2009	
409	Feb 15/2009	
410	BLANK	
32-42-51		
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402	Jun 10/2005	
403	Oct 10/2003	
404	Oct 10/2003	
405	Feb 15/2009	
406	Feb 15/2009	
407	Feb 15/2009	
408	BLANK	
32-42-61		
401	Jun 10/2006	

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403	Feb 10/2007	
404	Feb 10/2007	
405	Feb 10/2007	
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407	Jun 10/2006	
408	Jun 10/2006	
32-42-71		
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405	Oct 10/2003	
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407	Oct 15/2008	
408	Oct 15/2008	
32-42-81		
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403	Oct 10/2003	
404	Oct 10/2003	
405	Oct 10/2003	
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407	Oct 10/2003	
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505	Oct 10/2003	
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510	Oct 10/2003	
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512	Oct 10/2006	
513	Oct 10/2006	
514	Jun 10/2005	
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516	Jun 10/2004	
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32-44-11		
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413	Oct 10/2003	
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415	Jun 10/2005	
416	Jun 10/2005	
417	Oct 10/2003	
418	Oct 10/2003	
419	Feb 15/2009	
420	Feb 15/2009	
32-44-21		
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402	Feb 10/2006	
403	Oct 10/2003	
404	Oct 10/2003	
32-44-21 (cont)		
R 405	Jun 15/2009	
406	Feb 15/2009	
407	Oct 15/2008	
408	Oct 15/2008	
32-45-00		
201	Feb 15/2008	
202	Feb 15/2008	
203	Feb 15/2009	
204	Jun 10/2007	
32-45-00		
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602	Feb 15/2009	
603	Feb 15/2009	
604	Feb 15/2009	
605	Oct 10/2003	
606	Oct 10/2003	
607	Oct 10/2003	
608	Oct 10/2004	
609	Feb 15/2008	
610	Oct 10/2003	
611	Oct 10/2003	
612	Oct 10/2003	
613	Oct 10/2003	
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32-45-08		
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403	Oct 10/2006	
404	Feb 15/2009	
405	Jun 10/2007	
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32-45-11		
401	Feb 15/2009	
402	Feb 15/2009	
403	Jun 15/2008	
404	Jun 10/2004	
405	Jun 10/2004	
406	Feb 15/2008	
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410	Feb 15/2009	
32-45-21		
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402	Feb 15/2009	
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32-45-31		
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203	Feb 15/2008	
204	Jun 15/2008	
205	Oct 10/2003	
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32-51-00		
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506	Oct 10/2005	
507	Oct 10/2005	
508	Oct 10/2005	
509	Oct 10/2005	
510	Oct 10/2005	
R 511	Jun 15/2009	
512	Oct 10/2005	
513	Oct 10/2006	
514	Jun 15/2008	
515	Oct 10/2006	
516	Jun 15/2008	
517	Feb 10/2007	
32-51-00 (cont)		
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519	Oct 10/2006	
520	Oct 10/2005	
R 521	Jun 15/2009	
R 522	Jun 15/2009	
R 523	Jun 15/2009	
R 524	Jun 15/2009	
R 525	Jun 15/2009	
R 526	Jun 15/2009	
R 527	Jun 15/2009	
O 528	Jun 15/2009	
O 529	Jun 15/2009	
R 530	Jun 15/2009	
O 531	Jun 15/2009	
R 532	Jun 15/2009	
R 533	Jun 15/2009	
R 534	Jun 15/2009	
R 535	Jun 15/2009	
O 536	Jun 15/2009	
32-51-00		
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602	Feb 15/2009	
603	Jun 10/2005	
604	Jun 10/2005	
605	Jun 10/2005	
606	Jun 10/2005	
607	Jun 10/2005	
608	Jun 10/2005	
609	Jun 10/2005	
610	Jun 10/2005	
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32-51-11		
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403	Jun 15/2008	
32-51-11 (cont)		
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406	Oct 10/2003	
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409	Jun 15/2008	
R 410	Jun 15/2009	
411	Feb 15/2009	
412	Oct 15/2008	
413	Oct 15/2008	
414	BLANK	
32-51-21		
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403	Oct 10/2003	
404	Oct 10/2003	
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32-51-31		
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413	Feb 15/2009	
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415	Feb 15/2009	
416	Feb 15/2009	
417	Oct 15/2008	
418	Oct 15/2008	

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420	Feb 15/2009	
421	Feb 15/2009	
422	Oct 15/2008	
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32-51-31		
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602	Oct 15/2008	
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402	Oct 10/2003	
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407	Oct 10/2003	
408	Oct 10/2003	
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401	Oct 10/2006	
402	Jun 15/2008	
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409	Oct 10/2006	
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403	Feb 15/2009	
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402	Jun 15/2008	
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404	Oct 10/2003	
405	Oct 10/2003	
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404	Oct 10/2003	
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R 406	Jun 15/2009	
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408	BLANK	
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510	Jun 15/2008	
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Alternate Brake Selector Valve Removal TASK 32-41-93-000-801			401	HAP ALL

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Alternate Brake Selector Valve Installation TASK 32-41-93-420-801			405	HAP ALL
Alternate Brake Selector Valve Test TASK 32-41-93-700-801			407	HAP ALL
Gear Retract Braking - Operational Test TASK 32-41-93-710-801			409	HAP ALL
BRAKE SHUTTLE VALVES - REMOVAL/ INSTALLATION	32-41-95		401	HAP ALL
Brake Shuttle Valve Removal TASK 32-41-95-000-801			401	HAP ALL
Brake Shuttle Valve Installation TASK 32-41-95-400-801			405	HAP ALL
ANTISKID/AUTOBRAKE SYSTEM - ADJUSTMENT/TEST	32-42-00		501	HAP ALL
Antiskid/Autobrake Control Unit Functional Test TASK 32-42-00-720-801			501	HAP ALL
Antiskid Valve Functional Test TASK 32-42-00-720-802			506	HAP ALL
Transducer Functional Test TASK 32-42-00-710-801			512	HAP ALL
Antiskid Valve Operational Test TASK 32-42-00-720-803			516	HAP ALL
Autobrake Pressure Control Module Operational Test TASK 32-42-00-400-801			518	HAP ALL
Autobrake Shuttle Valve Operational Test TASK 32-42-00-400-802			521	HAP ALL
Transducer Operational Test TASK 32-42-00-710-802			523	HAP ALL

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Transducer Removal TASK 32-42-11-000-801			401	HAP ALL
Transducer Installation TASK 32-42-11-400-801			405	HAP ALL
ANTISKID/AUTOBRAKE CONTROL UNIT - REMOVAL/INSTALLATION	32-42-21		401	HAP ALL
Antiskid/Autobrake Control Unit Removal TASK 32-42-21-000-801			401	HAP ALL
Antiskid/Autobrake Control Unit Installation TASK 32-42-21-400-801			404	HAP ALL
ANTISKID VALVE - REMOVAL/ INSTALLATION	32-42-31		401	HAP ALL
Antiskid Valve Removal TASK 32-42-31-000-801			401	HAP ALL
Antiskid Valve Installation TASK 32-42-31-400-801			406	HAP ALL
ANTISKID LANDING GEAR LEVER UP SWITCH - REMOVAL/INSTALLATION	32-42-51		401	HAP ALL
Antiskid Landing Gear Lever Up Switch Removal TASK 32-42-51-000-801			401	HAP ALL
Antiskid Landing Gear Lever Up Switch Installation TASK 32-42-51-420-801			405	HAP ALL
AUTOBRAKE SELECTOR SWITCH - REMOVAL/INSTALLATION	32-42-61		401	HAP ALL
Autobrake Selector Switch - Removal TASK 32-42-61-000-801			401	HAP ALL
Autobrake Selector Switch - Installation TASK 32-42-61-400-801			402	HAP ALL

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AUTOBRAKE SHUTTLE VALVE - REMOVAL/ INSTALLATION	32-42-71		401	HAP ALL
Autobrake Shuttle Valve Removal TASK 32-42-71-000-801			401	HAP ALL
Autobrake Shuttle Valve Installation TASK 32-42-71-400-801			406	HAP ALL
AUTOBRAKE PRESSURE CONTROL MODULE - REMOVAL/INSTALLATION	32-42-81		401	HAP ALL
Autobrake Pressure Control Module Valve Removal TASK 32-42-81-000-801			401	HAP ALL
Autobrake Pressure Control Module Installation TASK 32-42-81-400-801			408	HAP ALL
Autobrake Pressure Control Module Line Replaceable Units Removal TASK 32-42-81-000-802			409	HAP ALL
Autobrake Pressure Control Module Line Replaceable Units Installation TASK 32-42-81-000-803			412	HAP ALL
PARKING BRAKE SYSTEM - ADJUSTMENT/ TEST	32-44-00		501	HAP ALL
Parking Brake System Adjustment TASK 32-44-00-820-801			501	HAP ALL
Parking Brake System - Operational Test TASK 32-44-00-710-801			512	HAP ALL
Parking Brake Hold Check TASK 32-44-00-790-801			515	HAP ALL
PARKING BRAKE LINKAGE - REMOVAL/ INSTALLATION	32-44-11		401	HAP ALL
Parking Brake Lever Removal TASK 32-44-11-000-801			401	HAP ALL

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Parking Brake Jackshaft Removal TASK 32-44-11-000-802			405	HAP ALL
Parking Brake Jackshaft Installation TASK 32-44-11-400-802			409	HAP ALL
Parking Brake Latch Removal TASK 32-44-11-000-803			410	HAP ALL
Parking Brake Latch Installation TASK 32-44-11-400-803			414	HAP ALL
Parking Brake Latch Switch Removal TASK 32-44-11-000-804			415	HAP ALL
Parking Brake Latch Switch Installation TASK 32-44-11-400-804			419	HAP ALL
Parking Brake Mechanism Visual Inspection TASK 32-44-11-000-805			420	HAP ALL
PARKING BRAKE SHUTOFF VALVE - REMOVAL/INSTALLATION	32-44-21		401	HAP ALL
Parking Brake Shutoff Valve Removal TASK 32-44-21-000-801			401	HAP ALL
Parking Brake Shutoff Valve Installation TASK 32-44-21-400-801			405	HAP ALL
TIRES AND WHEELS - MAINTENANCE PRACTICES	32-45-00		201	HAP ALL
Tires and Wheels - Deflation/Inflation TASK 32-45-00-000-801			201	HAP ALL
TIRES AND WHEELS - INSPECTION/CHECK	32-45-00		601	HAP ALL
Wheels Fast Check (Wheel Installed on the Airplane) TASK 32-45-00-700-801			601	HAP ALL
Wheels Inspection (Wheel Removed from the Airplane) TASK 32-45-00-700-802			602	HAP ALL

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Tires Inspection TASK 32-45-00-700-803			603	HAP ALL
TIRE INFLATION VALVE - REMOVAL/ INSTALLATION	32-45-08		401	HAP ALL
Tire Inflation Valve Removal TASK 32-45-08-000-801			401	HAP ALL
Tire Inflation Valve Installation TASK 32-45-08-400-801			402	HAP ALL
MAIN LANDING GEAR WHEEL AND TIRE ASSEMBLY - REMOVAL/INSTALLATION	32-45-11		401	HAP ALL
Main Landing Gear Wheel and Tire Assembly Removal TASK 32-45-11-000-801			401	HAP ALL
Main Landing Gear Wheel and Tire Assembly Installation TASK 32-45-11-400-801			407	HAP ALL
NOSE LANDING GEAR WHEEL AND TIRE ASSEMBLY - REMOVAL/INSTALLATION	32-45-21		401	HAP ALL
Nose Landing Gear Wheel and Tire Assembly Removal TASK 32-45-21-000-801			401	HAP ALL
Nose Landing Gear Wheel and Tire Assembly Installation TASK 32-45-21-400-801			407	HAP ALL
NOSE WHEEL SPIN BRAKE LINING - MAINTENANCE PRACTICES	32-45-31		201	HAP ALL
Nose Wheel Spin Brake Lining - Removal TASK 32-45-31-000-801			201	HAP ALL
Nose Wheel Spin Brake Lining - Installation TASK 32-45-31-400-801			204	HAP ALL

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Nose Wheel Spin Brake Lining Inspection TASK 32-45-31-700-801			204	HAP ALL
NOSE WHEEL STEERING SYSTEM - ADJUSTMENT/TEST	32-51-00		501	HAP ALL
General Check of the Adjustment of the Nose Wheel Steering System TASK 32-51-00-820-803			501	HAP ALL
Rudder Pedal Interconnect Mechanism Adjustment Check TASK 32-51-00-820-804			513	HAP ALL
Rudder Pedal Interconnect Mechanism Adjustment TASK 32-51-00-820-801			514	HAP ALL
Nose Wheel Steering System Adjustment Check TASK 32-51-00-820-805			517	HAP ALL
Nose Wheel Steering System Adjustment TASK 32-51-00-820-802			521	HAP ALL
Nose Wheel Steering System Test TASK 32-51-00-700-801			527	HAP ALL
NOSE WHEEL STEERING SYSTEM - INSPECTION/CHECK	32-51-00		601	HAP ALL
Nose Wheel Steering System Mechanism Inspection TASK 32-51-00-200-801			601	HAP ALL
NOSE WHEEL STEERING - MAINTENANCE PRACTICES	32-51-11		201	HAP ALL
Clean the Exterior Surfaces of the Towing Lever Assembly TASK 32-51-11-100-801			201	HAP ALL

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STEERING METERING VALVE - REMOVAL/ INSTALLATION	32-51-11		401	HAP ALL
Steering Metering Valve Removal TASK 32-51-11-000-801			401	HAP ALL
Steering Metering Valve Installation TASK 32-51-11-400-801			410	HAP ALL
RUDDER PEDAL STEERING MECHANISM - REMOVAL/INSTALLATION	32-51-21		401	HAP ALL
Rudder Pedal Steering Mechanism Removal TASK 32-51-21-000-801			401	HAP ALL
Rudder Pedal Steering Mechanism Installation TASK 32-51-21-400-801			407	HAP ALL
Rudder Pedal Steering Mechanism Visual Inspection TASK 32-51-21-000-802			408	HAP ALL
STEERING SYSTEM CABLES - REMOVAL/ INSTALLATION	32-51-31		401	HAP ALL
Removal of the Position Cables for the Nose Gear Steering TASK 32-51-31-000-801			401	HAP ALL
Installation of Position Cables for the Nose Gear Steering TASK 32-51-31-400-801			413	HAP ALL
Removal of the Steering System Cables for the Nose Gear TASK 32-51-31-000-802			416	HAP ALL
Installation of the Steering System Cables for the Nose Gear TASK 32-51-31-400-802			419	HAP ALL
STEERING SYSTEM CABLES - INSPECTION/ CHECK	32-51-31		601	HAP ALL
Inspect Nose Gear Steering Cables TASK 32-51-31-220-801			601	HAP ALL

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NOSE LANDING GEAR CONTROL WHEEL AND TILLER ASSEMBLY - REMOVAL/INSTALLATION	32-51-41		401	HAP ALL
Nose Landing Gear Steering Control Wheel Removal TASK 32-51-41-000-801			401	HAP ALL
Nose Landing Gear Tiller Assembly Removal TASK 32-51-41-000-802			405	HAP ALL
Nose Landing Gear Tiller Assembly Installation TASK 32-51-41-400-801			406	HAP ALL
Nose Landing Gear Steering Control Wheel Installation TASK 32-51-41-400-802			408	HAP ALL
NOSE GEAR STEERING ACTUATOR - REMOVAL/INSTALLATION	32-51-51		401	HAP ALL
Nose Gear Steering Actuator Removal TASK 32-51-51-000-801			401	HAP ALL
Nose Gear Steering Actuator Installation TASK 32-51-51-400-801			409	HAP ALL
Nose Gear Hydraulic Swivel Removal TASK 32-51-51-000-802			412	HAP ALL
Nose Gear Hydraulic Swivel Installation TASK 32-51-51-400-802			414	HAP ALL
NOSE GEAR STEERING ACTUATOR - INSPECTION/CHECK	32-51-51		601	HAP ALL
Nose Gear Steering Actuator Rod End Visual Inspection TASK 32-51-51-200-801			601	HAP ALL
Nose Gear Steering Actuator Trunnion and Trunnion Bushing Dimensional Inspection TASK 32-51-51-200-802			602	HAP ALL

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NOSE LANDING GEAR STEERING SUMMING MECHANISM - REMOVAL/INSTALLATION	32-51-52		401	HAP ALL
Summing Mechanism Removal TASK 32-51-52-020-801			401	HAP ALL
Summing Mechanism Installation TASK 32-51-52-420-801			409	HAP ALL
STEERING COLLAR - REMOVAL/INSTALLATION	32-51-61		401	HAP ALL
Steering Collar Removal TASK 32-51-61-000-801			401	HAP ALL
Steering Collar Installation TASK 32-51-61-400-801			416	HAP ALL
Upper Steering Sleeve Removal TASK 32-51-61-000-802			422	HAP ALL
Upper Steering Sleeve Installation TASK 32-51-61-000-803			423	HAP ALL
STEERING COLLAR - INSPECTION/CHECK	32-51-61		601	HAP ALL
Steering Collar Inspection TASK 32-51-61-220-801			601	HAP ALL
RUDDER PEDAL STEERING ROTARY ACTUATOR - REMOVAL/INSTALLATION	32-51-81		401	HAP ALL
Rudder Pedal Steering Rotary Actuator Removal TASK 32-51-81-000-801			401	HAP ALL
Rudder Pedal Steering Rotary Actuator Installation TASK 32-51-81-400-801			406	HAP ALL
LANDING GEAR POSITION INDICATING AND WARNING SYSTEM - ADJUSTMENT/TEST	32-61-00		501	HAP ALL
Landing Gear Position Indicating and Warning System - Test TASK 32-61-00-710-801			501	HAP ALL

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Main Landing Gear Uplock Sensor Removal TASK 32-61-21-020-801			401	HAP ALL
Main Landing Gear Uplock Sensor Installation TASK 32-61-21-400-801			405	HAP ALL
MAIN LANDING GEAR UPLOCK SENSOR - ADJUSTMENT/TEST	32-61-21		501	HAP ALL
Main Landing Gear Uplock Sensor Clearance Measurement (Airplane on Jacks) TASK 32-61-21-400-802			501	HAP ALL
Main Landing Gear Uplock Sensor Clearance Measurement (Airplane not on Jacks) TASK 32-61-21-400-803			505	HAP ALL
Main Landing Gear Uplock Sensor Clearance Adjustment TASK 32-61-21-820-801			507	HAP ALL
Main Landing Gear Up-and-Locked Sensor Operational Test TASK 32-61-21-710-801			508	HAP ALL
MAIN LANDING GEAR DOWN-AND-LOCKED SENSOR - REMOVAL/INSTALLATION	32-61-31		401	HAP ALL
Main Landing Gear Down-and-Locked Sensor Removal TASK 32-61-31-020-801			401	HAP ALL
Main Landing Gear Down-and-Locked Sensor Installation TASK 32-61-31-400-801			405	HAP ALL

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Main Landing Gear Down-and-Locked Sensor Clearance Measurement TASK 32-61-31-220-801			501	HAP ALL
Main Landing Gear Down-and-Locked Sensor Clearance Adjustment TASK 32-61-31-400-802			504	HAP ALL
Main Landing Gear Down-and-Locked Sensor Operational Test TASK 32-61-31-710-801			505	HAP ALL
NOSE LANDING GEAR LOCK SENSOR - REMOVAL/INSTALLATION	32-61-41		401	HAP ALL
Nose Landing Gear Lock Sensor Removal TASK 32-61-41-020-801			401	HAP ALL
Nose Landing Gear Lock Sensor Installation TASK 32-61-41-400-801			406	HAP ALL
NOSE LANDING GEAR LOCK SENSOR - ADJUSTMENT/TEST	32-61-41		501	HAP ALL
Nose Landing Gear Lock Sensor Clearance Measurement TASK 32-61-41-220-801			501	HAP ALL
Nose Landing Gear Lock Sensor Clearance Adjustment TASK 32-61-41-400-802			504	HAP ALL
Nose Landing Gear Lock Sensor Operational Test TASK 32-61-41-710-801			505	HAP ALL
NOSE LANDING GEAR DOWN POSITION SENSOR - REMOVAL/INSTALLATION	32-61-51		401	HAP ALL
Nose Landing Gear Down Position Sensor Removal TASK 32-61-51-020-801			401	HAP ALL

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NOSE LANDING GEAR DOWN POSITION SENSOR - ADJUSTMENT/TEST	32-61-51		501	HAP ALL
Nose Landing Gear Down Position Sensor Clearance Measurement TASK 32-61-51-220-801			501	HAP ALL
Nose Landing Gear Down Position Sensor Clearance Adjustment TASK 32-61-51-400-801			504	HAP ALL
Nose Landing Gear Down Position Sensor Operational Test TASK 32-61-51-710-801			505	HAP ALL
TAILSKID ASSEMBLY - MAINTENANCE PRACTICES	32-71-00		201	HAP 001-013, 015-026, 028-054
Replacement of the Tailskid Cartridge Core Assembly TASK 32-71-00-960-801			201	HAP 001-013, 015-026, 028-054
Replacement of the Tailskid Shoe. TASK 32-71-00-960-802			204	HAP 001-013, 015-026, 028-054
TAILSKID ASSEMBLY - REMOVAL/ INSTALLATION	32-71-00		401	HAP 001-013, 015-026, 028-054
Drag Lever Removal TASK 32-71-00-000-801			401	HAP 001-013, 015-026, 028-054
Drag Lever Installation TASK 32-71-00-400-801			405	HAP 001-013, 015-026, 028-054
Cartridge Assembly Removal TASK 32-71-00-000-802			406	HAP 001-013, 015-026, 028-054
Cartridge Assembly Installation TASK 32-71-00-400-802			407	HAP 001-013, 015-026, 028-054

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Tailskid Cartridge Assembly - Inspection/Check TASK 32-71-00-200-801			601	HAP 001-013, 015-026, 028-054
Tailskid Shoe Inspection TASK 32-71-00-900-801			602	HAP 001-013, 015-026, 028-054
TAILSKID PIVOT LINKAGE - REMOVAL/ INSTALLATION	32-71-21		401	HAP 001-013, 015-026, 028-054
Tailskid Pivot Linkage Removal TASK 32-71-21-000-801			401	HAP 001-013, 015-026, 028-054
Tailskid Pivot Linkage Installation TASK 32-71-21-400-801			405	HAP 001-013, 015-026, 028-054

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LANDING GEAR - DDG MAINTENANCE PROCEDURES

1. General

A. This procedure has the maintenance tasks for the Master Minimum Equipment List (MMEL) maintenance requirements as shown in the Dispatch Deviations Procedures Guide (DDPG). These tasks prepare the airplane for flight with systems/components that are inoperative.

B. This procedure also has the tasks that put the airplane back to its usual condition.

C. These are the tasks for the components in the landing gear system:

(1) MMEL 32-2 (DDPG) Preparation - Antiskid System Inoperative

(2) MMEL 32-2 (DDPG) Restoration - Antiskid System Inoperative

(3) MMEL 32-3 (DDPG) Preparation - Parking Brake Valve Inoperative

(4) MMEL 32-3 (DDPG) Restoration - Parking Brake Valve Inoperative

(5) MMEL 32-4 (DDPG) Preparation - Parking Brake Light Inoperative

(6) MMEL 32-4 (DDPG) Restoration - Parking Brake Light Inoperative

(7) MMEL 32-7 (DDPG) Preparation - Automatic Brake System Inoperative

(8) MMEL 32-7 (DDPG) Restoration - Automatic Brake System Inoperative

(9) MMEL 32-8 (DDPG) Preparation - Rudder Pedal Nose Wheel Steering System Inoperative

(10) MMEL 32-8 (DDPG) Restoration - Rudder Pedal Nose Wheel Steering System Inoperative

(11) MMEL 32-10 (DDPG) Preparation - Alternate Antiskid Valves Inoperative

(12) MMEL 32-10 (DDPG) Restoration - Alternate Antiskid Valves Inoperative

(13) MMEL 32-12 (DDPG) Preparation - Nose Wheel Steering Switch Inoperative

(14) MMEL 32-12 (DDPG) Restoration - Nose Wheel Steering Switch Inoperative

(15) MMEL 32-13 (DDPG) Preparation - Hydraulic Brake Pressure Indicator Inoperative

(16) MMEL 32-13 (DDPG) Restoration - Hydraulic Brake Pressure Indicator Inoperative

(17) MMEL 32-15 (DDPG) Preparation - Landing Gear Selector Bypass Valve Inoperative

(18) MMEL 32-15 (DDPG) Restoration - Landing Gear Selector Bypass Valve Inoperative

(19) MMEL 32-16 (DDPG) Preparation - Landing Gear Actuation System Inoperative

(20) MMEL 32-16 (DDPG) Restoration - Landing Gear Actuation System Inoperative

(21) MMEL 32-17 (DDPG) Preparation - PSEU Fault or PSEU Light Inoperative

(22) MMEL 32-17 (DDPG) Restoration - PSEU Fault or PSEU Light Inoperative

(23) MMEL 32-18 (DDPG) Preparation - Landing Gear Alternate Extension System Inoperative

(24) MMEL 32-18 (DDPG) Restoration - Landing Gear Alternate Extension System Inoperative

(25) MMEL 32-19 (DDPG) Preparation - Main Landing Gear Uplock Springs Inoperative

(26) MMEL 32-19 (DDPG) Restoration - Main Landing Gear Uplock Springs Inoperative

(27) MMEL 32-20 (DDPG) Preparation - Landing Gear Frangible Fitting Broken or Missing

(28) MMEL 32-20 (DDPG) Restoration - Landing Gear Frangible Fitting Broken or Missing

TASK 32-00-00-040-801

2. MMEL 32-2 (DDPG) Preparation - Antiskid System Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Antiskid System Inoperative.

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(2) This task has these two methods:

(a) Applicable Antiskid Channel Deactivation (Preferred Method) - This procedure uses the BITE test to find which antiskid channel is inoperative

(b) Antiskid System Deactivation (Alternate Method).

B. References

Reference	Title
FIM 32-42 TASK 801	Antiskid/Autobrake Control Unit (AACU) BITE Procedure

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. Applicable Antiskid Channel Deactivation (Preferred Method)

SUBTASK 32-00-00-740-001

(1) Find which antiskid channel is inoperative:

(a) To get access to the antiskid/autobrake control unit (AACU) on the E1-3 shelf, do this step:

Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(b) Do the AACU FIM 32-42 TASK 801.

SUBTASK 32-00-00-040-001

(2) Deactivate the applicable antiskid channel:

(a) If message XDCR 1, XDCR 4, BOX 1, or BOX 4 shows on the AACU display, then do this step:

1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
E	18	C00195	LANDING GEAR ANTISKID OUTBD

(b) If message XDCR 2, XDCR 3, BOX 2, or BOX 3 shows on the AACU display, then do this step:

1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
E	16	C00196	LANDING GEAR ANTISKID INBD

(c) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

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SUBTASK 32-00-00-480-001

(3) Attach an AUTOBRAKE INOP - LEAVE OFF placard to the autobrake switch.

F. Antiskid System Deactivation (Alternate Method)

SUBTASK 32-00-00-860-001

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

SUBTASK 32-00-00-480-002

(2) Attach an AUTOBRAKE INOP - LEAVE OFF placard to the autobrake switch.

——————— END OF TASK ———————

TASK 32-00-00-440-801

3. MMEL 32-2 (DDPG) Restoration - Antiskid System Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Antiskid System Inoperative.

B. References

Reference	Title
FIM 32-42 TASK 801	Antiskid/Autobrake Control Unit (AACU) BITE Procedure

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. Antiskid System Restoration

SUBTASK 32-00-00-860-002

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

F. Antiskid System Repair

SUBTASK 32-00-00-810-001

(1) Do these steps to correct the fault:

(a) To get access to the antiskid/autobrake control unit (AACU), do this step:

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Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(b) To find the maintenance message number, do this task: FIM 32-42 TASK 801.

1) Find the task number on the same line as the maintenance message number.

(c) Go to the task in the FIM and do the steps in the task.

(d) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

SUBTASK 32-00-00-080-001

(2) Remove the AUTOBRAKE INOP - LEAVE OFF placard from the autobrake switch.

———————— END OF TASK ————————

TASK 32-00-00-040-802

4. MMEL 32-3 (DDPG) Preparation - Parking Brake Valve Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Parking Brake Valve Inoperative.

B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

D. Parking Brake Valve Deactivation in the Closed Position

SUBTASK 32-00-00-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-00-00-860-003

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-00-00-480-004

(3) Make sure the tires have chocks installed around them.

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SUBTASK 32-00-00-860-004

(4) Release the parking brake.

SUBTASK 32-00-00-860-005

(5) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

SUBTASK 32-00-00-020-001

(6) Disconnect the electrical connector from the parking brake valve in the main wheel well.

(a) Attach the electrical connector to the parking brake valve.

SUBTASK 32-00-00-860-006

(7) Manually move the position override lever on the parking brake valve to the POS 2 (closed) position.

SUBTASK 32-00-00-860-007

(8) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

SUBTASK 32-00-00-860-008

(9) Make sure the ANTISKID INOP light comes on.

SUBTASK 32-00-00-860-009

(10) Set the autobrake switch to the OFF position.

SUBTASK 32-00-00-080-002

WARNING: DO NOT REMOVE THE DOWNLOCK PINS UNLESS ALL MAINTENANCE AND SERVICING OF THE AIRPLANE IS COMPLETE. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(11) If all maintenance and servicing of the airplane is complete, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

SUBTASK 32-00-00-480-005

(12) Attach a LIGHT INOP placard to the parking brake light on the center aisle stand.

SUBTASK 32-00-00-480-006

(13) Attach a PARK BRK VLV CLOSED placard near the parking brake lever.

SUBTASK 32-00-00-480-007

(14) Attach an AUTOBRAKE INOP - LEAVE OFF placard to the autobrake switch.

SUBTASK 32-00-00-480-008

(15) Attach an AUTO SPOILERS INOP placard near the auto speed brake control lever.

END OF TASK

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TASK 32-00-00-440-802

5. MMEL 32-3 (DDPG) Restoration - Parking Brake Valve Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Parking Brake Valve Inoperative.

B. References

Reference	Title
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
FIM 32-42 TASK 801	Antiskid/Autobrake Control Unit (AACU) BITE Procedure

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. Parking Brake Valve Restoration

SUBTASK 32-00-00-480-009

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-00-00-480-010

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-00-00-860-010

(3) Release the parking brake.

SUBTASK 32-00-00-860-011

(4) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

SUBTASK 32-00-00-420-001

(5) Connect the electrical connector to the parking brake valve.

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SUBTASK 32-00-00-860-012

(6) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

F. Parking Brake Valve Repair

SUBTASK 32-00-00-810-002

(1) Do these steps to correct the fault:

(a) To get access to the antiskid/autobrake control unit (AACU), do this step:

Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(b) To find the maintenance message number, do this task: FIM 32-42 TASK 801.

1) Find the task number on the same line as the maintenance message number.

(c) Go to the task in the FIM and do the steps in the task.

(d) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

SUBTASK 32-00-00-080-003

WARNING: DO NOT REMOVE THE DOWNLOCK PINS UNLESS ALL MAINTENANCE AND SERVICING OF THE AIRPLANE IS COMPLETE. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) If all maintenance and servicing of the airplane is complete, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

SUBTASK 32-00-00-080-004

(3) Remove the LIGHT INOP placard from the parking brake light on the center aisle stand.

SUBTASK 32-00-00-080-005

(4) Remove the PARK BRK VLV CLOSED placard near the parking brake lever.

SUBTASK 32-00-00-080-006

(5) Remove the AUTOBRAKE INOP - LEAVE OFF placard from the autobrake switch.

SUBTASK 32-00-00-080-007

(6) Remove the AUTO SPOILERS INOP placard near the auto speed brake control lever.

——————— END OF TASK ———————

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TASK 32-00-00-040-803

6. MMEL 32-4 (DDPG) Preparation - Parking Brake Light Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Parking Brake Light Inoperative.

B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

D. Procedure

SUBTASK 32-00-00-480-011

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-00-00-860-013

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-00-00-480-012

(3) Make sure the tires have chocks installed around them.

SUBTASK 32-00-00-860-014

(4) Make sure that the parking brake shutoff valve operates normally:

(a) Set the parking brake.

(b) Make sure the parking brake shutoff valve moves to the POS 2 (closed) position.

NOTE: The parking brake shutoff valve is installed on the wheel well aft bulkhead.

(c) Release the parking brake.

(d) Make sure the parking brake shutoff valve moves to POS 1 (open) position.

SUBTASK 32-00-00-040-002

(5) If the parking brake shutoff valve does not operate when you set and release the parking brake, then, do this task: MMEL 32-3 (DDPG) Preparation - Parking Brake Valve Inoperative, TASK 32-00-00-040-802.

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SUBTASK 32-00-00-080-008

WARNING: DO NOT REMOVE THE DOWNLOCK PINS UNLESS ALL MAINTENANCE AND SERVICING OF THE AIRPLANE IS COMPLETE. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(6) If all maintenance and servicing of the airplane is complete, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

SUBTASK 32-00-00-480-013

(7) Attach a LIGHT INOP placard to the parking brake light on the center aisle stand.

——————— END OF TASK ———————

TASK 32-00-00-440-803

7. MMEL 32-4 (DDPG) Restoration - Parking Brake Light Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Parking Brake Light Inoperative.

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

C. Procedure

SUBTASK 32-00-00-960-001

(1) Replace the parking brake light.

SUBTASK 32-00-00-740-002

(2) If the parking brake light was not the problem, then do these steps to correct the fault:

(a) Find the fault code or description of the fault that occurred.

(b) If you find a fault code, then do these steps:

1) Go to the Fault Code Index in the applicable chapter of the FIM and find the fault code.

NOTE: The first two digits of the fault code is the FIM chapter.

2) Find the task number on the same line as the fault code.

3) Go to the task in the FIM and do the steps in the task.

(c) If you find a description of the fault, then do these steps:

1) Go to the Observed Fault List at the beginning of the FIM and find the best description for the fault.

2) Find the task number on the same line as the fault description.

3) Go to the task in the FIM and do the steps in the task.

SUBTASK 32-00-00-080-009

(3) Remove the LIGHT INOP placard from the parking brake light on the center aisle stand.

——————— END OF TASK ———————

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TASK 32-00-00-040-805

8. MMEL 32-7 (DDPG) Preparation - Automatic Brake System Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Automatic Brake System Inoperative.

(2) If the AUTO BRAKE DISARM or INOP light goes off with the autobrake select switch in the OFF position, then airplane can be dispatched without the autobrake valve module deactivation.

B. References

Reference	Title
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-42-81-000-801	Autobrake Pressure Control Module Valve Removal (P/B 401)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

D. Autobrake Valve Module Deactivation - Method 1

SUBTASK 32-00-00-860-016

(1) Remove the pressure from the system B hydraulic system. To remove it, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-00-00-860-017

(2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1

SUBTASK 32-00-00-020-003

(3) Disconnect, cap and stow the electrical connectors from the autobrake valve module in the main wheel well.

SUBTASK 32-00-00-480-014

(4) Remove the auto brake valve module. To remove it, do this task: Autobrake Pressure Control Module Valve Removal, TASK 32-42-81-000-801.

(a) Cap the hydraulic supply pressure line.

(b) Connect the brake pressure line and the return line with a 3/8 inch section of tubing or flexible hose.

NOTE: This will keep the brake shuttle valves from the brakes off position.

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SUBTASK 32-00-00-860-055

(5) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1

SUBTASK 32-00-00-860-018

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF ALL CONTROL SURFACE BEFORE YOU SUPPLY HYDRAULIC POWER. AILERONS, RUDDERS, ELEVATORS, FLAPS, SPOILERS, SLATS, AND THRUST REVERSERS CAN MOVE QUICKLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(6) Pressurize the hydraulic system B. To pressure it, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-00-00-210-001

(7) Make sure that there is no leakage at the autobrake valve module.

SUBTASK 32-00-00-860-019

(8) Remove the pressure from the hydraulic system B. To remove it, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-00-00-480-015

(9) Attach an INOP placard to the autobrake select switch.

E. Autobrake Brake Module Deactivation - Method 2

SUBTASK 32-00-00-860-056

(1) Remove the pressure from the system B hydraulic system. To remove it, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-00-00-860-021

(2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1

SUBTASK 32-00-00-020-004

(3) Disconnect electrical connectors D2570, D2572, and D2574 from the autobrake valve module in the main wheel well.

SUBTASK 32-00-00-020-005

(4) Disconnect the inlet hydraulic pressure line from the autobrake valve module.

(a) Install a plug to the inlet hydraulic pressure line and cap to the autobrake valve module port.

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SUBTASK 32-00-00-860-057

(5) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1

SUBTASK 32-00-00-860-022

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF ALL CONTROL SURFACE BEFORE YOU SUPPLY HYDRAULIC POWER. AILERONS, RUDDERS, ELEVATORS, FLAPS, SPOILERS, SLATS, AND THRUST REVERSERS CAN MOVE QUICKLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(6) Pressurize the hydraulic system B. To pressure it, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-00-00-210-002

(7) Make sure that there is no leakage at the autobrake valve module.

SUBTASK 32-00-00-860-023

(8) Remove the pressure from the hydraulic system B. To remove it, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-00-00-480-017

(9) Attach an INOP placard to the autobrake select switch.

——————— END OF TASK ———————

TASK 32-00-00-440-805

9. MMEL 32-7 (DDPG) Restoration - Automatic Brake System Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Automatic Brake System Inoperative.

B. References

Reference	Title
FIM 32-42 TASK 801	Antiskid/Autobrake Control Unit (AACU) BITE Procedure

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
130	Subzone - Body Station 540.00 to Body Station 727.00
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

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E. Autobrake Valve Module Restoration

SUBTASK 32-00-00-080-010

(1) Remove the 3/8 inch section of tubing or flexible hose from the brake pressure line and the return line, if it is installed.

SUBTASK 32-00-00-080-011

(2) Remove the cap from the autobrake valve module and plug from the hydraulic pressure line, if they are installed.

(a) Connect the hydraulic pressure line to the autobrake valve module.

SUBTASK 32-00-00-420-002

(3) Connect the electrical connectors to the autobrake valve module.

SUBTASK 32-00-00-860-024

(4) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	9	C00440	FLIGHT CONTROL AUTO SPEED BRAKE

F. Autobrake Valve Module Repair

SUBTASK 32-00-00-810-004

(1) Do these steps to correct the fault:

(a) To get access to the antiskid/autobrake control unit (AACU), do this step:

Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(b) To find the maintenance message number, do this task: FIM 32-42 TASK 801.

(c) Find the task number on the same line as the maintenance message number.

(d) Go to the task in the FIM and do the steps in the task.

(e) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

SUBTASK 32-00-00-080-012

(2) Remove the INOP placard from this circuit breaker:

Remove the INOP placard from this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	9	C00440	FLIGHT CONTROL AUTO SPEED BRAKE

SUBTASK 32-00-00-080-013

(3) Remove the INOP placard from the autobrake select switch.

——————— END OF TASK ———————

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TASK 32-00-00-040-806

10. MMEL 32-8 (DDPG) Preparation - Rudder Pedal Nose Wheel Steering System Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Rudder Pedal Nose Wheel Steering System Inoperative.

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
324	Vertical Fin - Rear Spar To Trailing Edge
713	Nose Landing Gear

C. Procedure

SUBTASK 32-00-00-860-025

(1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	17	C01027	LANDING GEAR NOSE GEAR STEER

SUBTASK 32-00-00-860-026

(2) Operate the rudder pedal steering.

(a) Make sure that the nose gear does not turn.

SUBTASK 32-00-00-860-027

(3) Operate the rudder pedals.

(a) Make sure that the rudder operates normally.

SUBTASK 32-00-00-860-028

(4) Operate the tiller.

(a) Make sure that the nose gear steering operates normally.

SUBTASK 32-00-00-860-029

(5) Attach a RUDDER PEDAL NWS INOP placard to each pilots' airspeed indicator.

———————— END OF TASK ————————

TASK 32-00-00-440-806

11. MMEL 32-8 (DDPG) Restoration - Rudder Pedal Nose Wheel Steering System Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Rudder Pedal Nose Wheel Steering System Inoperative.

B. Location Zones

Zone	Area
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

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C. Rudder Pedal Nose Gear Steering System Restoration

SUBTASK 32-00-00-860-030

(1) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	17	C01027	LANDING GEAR NOSE GEAR STEER

D. Rudder Pedal Nose Gear Steering System Repair

SUBTASK 32-00-00-740-004

(1) Do these steps to correct the fault:

(a) Find the fault code or description of the fault that occurred.

(b) If you find a fault code, then do these steps:

1) Go to the Fault Code Index in the applicable chapter of the FIM and find the fault code.

NOTE: The first two digits of the fault code is the FIM chapter.

2) Find the task number on the same line as the fault code.

3) Go to the task in the FIM and do the steps in the task.

(c) If you find a description of the fault, then do these steps:

1) Go to the Observed Fault List at the beginning of the FIM and find the best description for the fault.

2) Find the task number on the same line as the fault description.

3) Go to the task in the FIM and do the steps in the task.

SUBTASK 32-00-00-080-014

(2) Remove the RUDDER PEDAL NWS INOP placard from the each pilots' airspeed indicator.

——————— END OF TASK ———————

TASK 32-00-00-040-807

12. MMEL 32-10 (DDPG) Preparation - Alternate Antiskid Valves Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Alternate Antiskid Valves Inoperative.

B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

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(Continued)

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Manual Braking Operational Test

SUBTASK 32-00-00-480-018

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-00-00-860-031

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-00-00-480-019

(3) Make sure the tires have chocks installed around them.

SUBTASK 32-00-00-860-032

(4) Make sure the pressure is removed from the system B hydraulic system.

SUBTASK 32-00-00-860-033

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF ALL CONTROL SURFACE BEFORE YOU SUPPLY HYDRAULIC POWER. AILERONS, RUDDERS, ELEVATORS, FLAPS, SPOILERS, SLATS, AND THRUST REVERSERS CAN MOVE QUICKLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(5) Pressurize the hydraulic system A. To pressure it, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-00-00-860-034

(6) Make sure that you can operate the brakes manually:

(a) Push and release the brake pedals for three or four times.

(b) Make sure that all brakes operate normally.

NOTE: To make sure that the brake operates normally, look for the movement of the brake wear indicator pins.

SUBTASK 32-00-00-860-035

(7) If the brakes do not operate normally, then do these steps:

(a) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

(b) Push and release the brake pedals for two or three times.

(c) Make sure that all brakes operate normally.

NOTE: To make sure that the brake operates normally, look for the movement of the brake wear indicator pins.

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(d) If one of the brakes does not operate normally, then the airplane cannot be dispatched.

SUBTASK 32-00-00-040-003

(8) If all the brakes operate normally, then attach an ALT ANTISKID VALVE INOP to the ANTISKID INOP light.

SUBTASK 32-00-00-860-036

(9) Remove the pressure from the hydraulic system A. To remove it, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

——————— END OF TASK ———————

TASK 32-00-00-440-807

13. MMEL 32-10 (DDPG) Restoration - Alternate Antiskid Valves Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Alternate Antiskid Valves Inoperative.

B. References

Reference	Title
FIM 32-42 TASK 801	Antiskid/Autobrake Control Unit (AACU) BITE Procedure

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. Procedure

SUBTASK 32-00-00-810-005

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

SUBTASK 32-00-00-810-006

(2) Do these steps to correct the fault:

(a) To get access to the antiskid/autobrake control unit (AACU), do this step:

Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(b) To find the maintenance message number, do this task: FIM 32-42 TASK 801.

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(c) Find the task number on the same line as the maintenance message number.

(d) Go to the task in the FIM and do the steps in the task.

(e) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

SUBTASK 32-00-00-080-015

(3) Remove the ALT ANTISKID VALVE INOP placard from the ANTISKID INOP light.

——————— END OF TASK ———————

TASK 32-00-00-040-808

14. MMEL 32-12 (DDPG) Preparation - Nose Wheel Steering Switch Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Nose Wheel Steering Switch Inoperative.

B. References

Reference	Title
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-31-71-400-802	Operational Test of the Transfer Valve (P/B 401)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Procedure

SUBTASK 32-00-00-860-037

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF ALL CONTROL SURFACE BEFORE YOU SUPPLY HYDRAULIC POWER. AILERONS, RUDDERS, ELEVATORS, FLAPS, SPOILERS, SLATS, AND THRUST REVERSERS CAN MOVE QUICKLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Pressurize the hydraulic system A. To pressure it, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-00-00-710-002

(2) Do this task: Operational Test of the Transfer Valve, TASK 32-31-71-400-802.

(a) Make sure the landing gear transfer valve operational test is OK.

NOTE: The airplane can be dispatched if the landing gear transfer valve operational test is OK.

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SUBTASK 32-00-00-860-038

(3) Remove the pressure from the hydraulic system A. To remove it, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-00-00-860-039

(4) Set the nose wheel steering switch to the NORM position.

SUBTASK 32-00-00-480-020

(5) Attach a INOP placard to the nose wheel steering switch.

——————— END OF TASK ———————

TASK 32-00-00-440-808

15. MMEL 32-12 (DDPG) Restoration - Nose Wheel Steering Switch Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Nose Wheel Steering Switch Inoperative.

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

C. Procedure

SUBTASK 32-00-00-960-002

(1) Replace the nose wheel steering switch.

SUBTASK 32-00-00-740-005

(2) If the nose wheel steering switch was not the problem, then do these steps to correct the fault:

(a) Find the fault code or description of the fault that occurred.

(b) If you find a fault code, then do these steps:

1) Go to the Fault Code Index in the applicable chapter of the FIM and find the fault code.

NOTE: The first two digits of the fault code is the FIM chapter.

2) Find the task number on the same line as the fault code.

3) Go to the task in the FIM and do the steps in the task.

(c) If you find a description of the fault, then do these steps:

1) Go to the Observed Fault List at the beginning of the FIM and find the best description for the fault.

2) Find the task number on the same line as the fault description.

3) Go to the task in the FIM and do the steps in the task.

SUBTASK 32-00-00-080-016

(3) Remove the INOP from the nose wheel steering switch.

——————— END OF TASK ———————

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TASK 32-00-00-040-809

16. MMEL 32-13 (DDPG) Preparation - Hydraulic Brake Pressure Indicator Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Hydraulic Brake Pressure Indicator Inoperative.

B. References

Reference	Title
12-15-11-420-801	Hydraulic Brake Accumulator Servicing (P/B 301)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Procedure

SUBTASK 32-00-00-480-021

(1) Make sure the tires have chocks installed around them.

SUBTASK 32-00-00-860-040

(2) Release the parking brakes.

SUBTASK 32-00-00-860-041

(3) Make sure the operative brake indicator pressure (flight deck or wheel well brake accumulator gauge) operates normally:

(a) Make sure the pressure is removed from the hydraulic systems A and B.

(b) Apply and release the brakes 10 times with approximately 3 seconds between each application.

1) To make sure the operative brake indicator pressure operates normally and in the limits, do this task: Hydraulic Brake Accumulator Servicing, TASK 12-15-11-420-801.

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF ALL CONTROL SURFACE BEFORE YOU SUPPLY HYDRAULIC POWER. AILERONS, RUDDERS, ELEVATORS, FLAPS, SPOILERS, SLATS, AND THRUST REVERSERS CAN MOVE QUICKLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(c) Pressurize the hydraulic systems A and B. To pressure them, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

1) Make sure the operative brake indicator is approximately 3000 psi.

SUBTASK 32-00-00-860-042

(4) Set the parking brakes.

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SUBTASK 32-00-00-860-043

(5) Remove the pressure from the hydraulic systems A and B. To remove it, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-00-00-080-017

WARNING: DO NOT REMOVE THE DOWNLOCK PINS UNLESS ALL MAINTENANCE AND SERVICING OF THE AIRPLANE IS COMPLETE. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(6) If all maintenance and servicing of the airplane is complete, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

SUBTASK 32-00-00-860-044

(7) Attach an INOP to the inoperative brake pressure indicator.

———————— END OF TASK ————————

TASK 32-00-00-440-809

17. MMEL 32-13 (DDPG) Restoration - Hydraulic Brake Pressure Indicator Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Hydraulic Brake Pressure Indicator Inoperative.

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

C. Procedure

SUBTASK 32-00-00-960-003

(1) Replace the inoperative brake pressure indicator.

SUBTASK 32-00-00-740-006

(2) If the applicable brake pressure indicator was not the problem, then do these steps to correct the fault:

(a) Find the fault code or description of the fault that occurred.

(b) If you find a fault code, then do these steps:

1) Go to the Fault Code Index in the applicable chapter of the FIM and find the fault code.

NOTE: The first two digits of the fault code is the FIM chapter.

2) Find the task number on the same line as the fault code.

3) Go to the task in the FIM and do the steps in the task.

(c) If you find a description of the fault, then do these steps:

1) Go to the Observed Fault List at the beginning of the FIM and find the best description for the fault.

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2) Find the task number on the same line as the fault description.

3) Go to the task in the FIM and do the steps in the task.

SUBTASK 32-00-00-080-018

(3) Remove the INOP placard from the applicable brake pressure indicator.

——————— END OF TASK ———————

TASK 32-00-00-040-811

18. MMEL 32-15 (DDPG) Preparation - Landing Gear Selector Bypass Valve Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Landing Gear Selector Bypass Valve Inoperative.

B. References

Reference	Title
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Procedure

SUBTASK 32-00-00-860-046

(1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	16	C01432	LANDING GEAR ALTN EXTEND SOL

SUBTASK 32-00-00-480-022

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-00-00-480-023

(3) Make sure the tires have chocks installed around them.

SUBTASK 32-00-00-710-003

(4) Make sure the landing gear bypass valve is in the NORMAL position:

(a) Make sure the landing gear retract actuator starts to extend when the landing gear control lever is temporarily in the UP position.

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SUBTASK 32-00-00-080-019

WARNING: DO NOT REMOVE THE DOWNLOCK PINS UNLESS ALL MAINTENANCE AND SERVICING OF THE AIRPLANE IS COMPLETE. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(5) If all maintenance and servicing of the airplane is complete, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

END OF TASK

TASK 32-00-00-440-811

19. MMEL 32-15 (DDPG) Restoration - Landing Gear Selector Bypass Valve Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Landing Gear Selector Bypass Valve Inoperative.

B. References

Reference	Title
32-31-51-020-801	Landing Gear Selector Valve Removal (P/B 401)
32-31-51-400-801	Landing Gear Selector Valve Installation (P/B 401)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

D. Procedure

SUBTASK 32-00-00-960-004

(1) Replace the landing gear selector valve. These are the tasks:

(Landing Gear Selector Valve Removal, TASK 32-31-51-020-801), (Landing Gear Selector Valve Installation, TASK 32-31-51-400-801).

SUBTASK 32-00-00-860-047

(2) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	16	C01432	LANDING GEAR ALTN EXTEND SOL

SUBTASK 32-00-00-740-012

(3) If the landing gear selector bypass valve was not the problem, then do these steps to correct the fault:

(a) Find the fault code or description of the fault that occurred.

(b) If you find a fault code, then do these steps:

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1) Go to the Fault Code Index in the applicable chapter of the FIM and find the fault code.

NOTE: The first two digits of the fault code is the FIM chapter.

2) Find the task number on the same line as the fault code.

3) Go to the task in the FIM and do the steps in the task.

(c) If you find a description of the fault, then do these steps:

1) Go to the Observed Fault List at the beginning of the FIM and find the best description for the fault.

2) Find the task number on the same line as the fault description.

3) Go to the task in the FIM and do the steps in the task.

—————— END OF TASK ——————

TASK 32-00-00-040-812

20. MMEL 32-16 (DDPG) Preparation - Landing Gear Actuation System Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Landing Gear Actuation System Inoperative.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Consumable Materials

Reference	Description	Specification
G01912	Lockwire - Monel (0.032 In. Dia.)	NASM20995N~ C32 (QQ-N-281)

D. Location Zones

Zone	Area
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
734	Left Main Landing Gear
744	Right Main Landing Gear

E. Procedure

SUBTASK 32-00-00-480-024

(1) Install the downlock pins in the nose and main landing gear. To install them, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

HAP 031-054, 101-999

SUBTASK 32-00-00-860-053

(2) Activate the switch for ALTERNATE GEAR DOWN DISPATCH:

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(a) Move the switch for ALTERNATE GEAR DOWN DISPATCH, S01127, to the VMO position, per the following steps:

NOTE: The switch is located directly inside of the main equipment center, next to the switch for the E/E bay lights.

NOTE: The switch must be pulled from its locked position to move it.

1) Cut the lockwire in the switch guard.
2) Lift the switch guard and move the switch to the ALTN position.
3) Lockwire the switch guard using lockwire, G01912 and the double twist method.

HAP ALL

SUBTASK 32-00-00-480-025

(3) Attach a GEAR LOCKED DOWN placard to the landing gear lever.

——————— END OF TASK ———————

TASK 32-00-00-440-812

21. MMEL 32-16 (DDPG) Restoration - Landing Gear Actuation System Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Landing Gear Actuation System Inoperative.

B. References

Reference	Title
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)

C. Consumable Materials

Reference	Description	Specification
G01912	Lockwire - Monel (0.032 In. Dia.)	NASM20995N~ C32 (QQ-N-281)

D. Location Zones

Zone	Area
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
734	Left Main Landing Gear
744	Right Main Landing Gear

E. Procedure

SUBTASK 32-00-00-740-013

(1) Do these steps to correct the fault:

(a) Find the fault code or description of the fault that occurred.

(b) If you find a fault code, then do these steps:

1) Go to the Fault Code Index in the applicable chapter of the FIM and find the fault code.

NOTE: The first two digits of the fault code is the FIM chapter.

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2) Find the task number on the same line as the fault code.

3) Go to the task in the FIM and do the steps in the task.

(c) If you find a description of the fault, then do these steps:

1) Go to the Observed Fault List at the beginning of the FIM and find the best description for the fault.

2) Find the task number on the same line as the fault description.

3) Go to the task in the FIM and do the steps in the task.

SUBTASK 32-00-00-080-020

WARNING: DO NOT REMOVE THE DOWNLOCK PINS UNLESS ALL MAINTENANCE AND SERVICING OF THE AIRPLANE IS COMPLETE. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) If all maintenance and servicing of the airplane is complete, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

HAP 031-054, 101-999

SUBTASK 32-00-00-860-054

(3) Deactivate the switch for ALTERNATE GEAR DOWN DISPATCH:

(a) Move the switch for ALTERNATE GEAR DOWN DISPATCH, S01127, to the VMO position, per the following steps:

NOTE: The switch is located directly inside of the main equipment center, next to the switch for the E/E bay lights.

NOTE: The switch must be pulled from its locked position to move it.

1) Cut the lockwire in the switch guard.

2) Lift the switch guard and move the switch to the NORMAL position.

3) Lockwire the switch guard using lockwire, G01912 and the double twist method.

HAP ALL

SUBTASK 32-00-00-080-021

(4) Remove the GEAR LOCKED DOWN placard from the landing gear lever.

———————— END OF TASK ————————

TASK 32-00-00-040-815

22. MMEL 32-17 (DDPG) Preparation - PSEU Fault or PSEU light Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with a PSEU fault or PSEU light which is inoperative.

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

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C. Access Panels

Number	Name/Location
112A	Forward Access Door

D. Preparations for a PSEU Fault

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04

SUBTASK 32-00-00-730-001

(1) Push the master caution light switch.

(a) Make sure the PSEU light goes out.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04

SUBTASK 32-00-00-730-002

(2) Make sure that the Engines are shutdown and the parking brake is set.

(a) Make sure the PSEU light goes out.

HAP ALL

E. Preparations for an Inoperative PSEU Light

SUBTASK 32-00-00-010-003

(1) Open this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-00-00-740-016

(2) Do the EXISTING FAULTS test on the PSEU BITE to make sure there are no active faults on the PSEU:

(a) Push the ON/OFF switch.

NOTE: The display will show EXISTING FAULTS?

(b) Push the YES switch.

(c) Make sure the display shows NO FAULTS or DISPATCH PER MEL (message number 32-64003).

NOTE: Dispatch is not allowed if message numbers 32–62009, 32–62010, or 32–62014 are also shown. If any of these message numbers are shown, refer to MMEL item 32–21.

SUBTASK 32-00-00-860-050

(3) Push the ON/OFF switch to turn the PSEU display off.

SUBTASK 32-00-00-410-005

(4) Close this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-00-00-410-006

(5) Attach a LIGHT INOP placard to the PSEU light.

END OF TASK

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TASK 32-00-00-440-815

23. MMEL 32-17 (DDPG) Restoration - PSEU Fault or PSEU light Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with a PSEU fault or PSEU light which is inoperative.

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Procedure

SUBTASK 32-00-00-810-008

(1) Correct the fault.

(a) Find the fault code or description of the fault that occurred.

(b) If you find a fault code, then do these steps:

1) Go to the Fault Code Index in the applicable chapter of the FIM and find the fault code.

NOTE: The first two digits of the fault code is the FIM chapter.

2) Find the task number on the same line as the fault code.

3) Go to the task in the FIM and do the steps in the task.

(c) If you find a description of the fault, then do these steps:

1) Go to the Observed Fault List at the beginning of the FIM and find the best description for the fault.

2) Find the task number on the same line as the fault description.

3) Go to the task in the FIM and do the steps in the task.

SUBTASK 32-00-00-710-004

(2) Make sure the PSEU light comes on when the light switch is pushed then goes off when released.

SUBTASK 32-00-00-020-007

(3) If it is necessary, remove the LIGHT INOP placard from the PSEU light.

——————— END OF TASK ———————

TASK 32-00-00-040-813

24. MMEL 32-18 (DDPG) Preparation - Landing Gear Alternate Extension System Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Landing Gear Alternate Extension System Inoperative.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

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C. Consumable Materials

Reference	Description	Specification
G01912	Lockwire - Monel (0.032 In. Dia.)	NASM20995N~ C32 (QQ-N-281)

D. Location Zones

Zone	Area
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
734	Left Main Landing Gear
744	Right Main Landing Gear

E. Procedure

SUBTASK 32-00-00-480-026

(1) Install the downlock pins in the nose and main landing gear. To install them, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

HAP 031-054, 101-999

SUBTASK 32-00-00-860-058

(2) Activate the switch for ALTERNATE GEAR DOWN DISPATCH:

(a) Move the switch for ALTERNATE GEAR DOWN DISPATCH, S1127, to the VMO position, per the following steps:

NOTE: The switch is located directly inside of the main equipment center, next to the switch for the E/E bay lights.

NOTE: The switch must be pulled from its locked position to move it.

1) Cut the lockwire in the switch guard.

2) Lift the switch guard and move the switch to the ALTN position.

3) Lockwire the switch guard using lockwire, G01912 and the double twist method.

HAP ALL

SUBTASK 32-00-00-480-027

(3) Attach a GEAR LOCKED DOWN placard to the landing gear lever.

———————— END OF TASK ————————

TASK 32-00-00-440-813

25. MMEL 32-18 (DDPG) Restoration - Landing Gear Alternate Extension System Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Landing Gear Alternate Extension System Inoperative.

B. References

Reference	Title
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)

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C. Consumable Materials

Reference	Description	Specification
G01912	Lockwire - Monel (0.032 In. Dia.)	NASM20995N~ C32 (QQ-N-281)

D. Location Zones

Zone	Area
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
734	Left Main Landing Gear
744	Right Main Landing Gear

E. Procedure

SUBTASK 32-00-00-740-014

(1) Do these steps to correct the fault:

(a) Find the fault code or description of the fault that occurred.

(b) If you find a fault code, then do these steps:

1) Go to the Fault Code Index in the applicable chapter of the FIM and find the fault code.

NOTE: The first two digits of the fault code is the FIM chapter.

2) Find the task number on the same line as the fault code.

3) Go to the task in the FIM and do the steps in the task.

(c) If you find a description of the fault, then do these steps:

1) Go to the Observed Fault List at the beginning of the FIM and find the best description for the fault.

2) Find the task number on the same line as the fault description.

3) Go to the task in the FIM and do the steps in the task.

SUBTASK 32-00-00-080-022

WARNING: DO NOT REMOVE THE DOWNLOCK PINS UNLESS ALL MAINTENANCE AND SERVICING OF THE AIRPLANE IS COMPLETE. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) If all maintenance and servicing of the airplane is complete, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

HAP 031-054, 101-999

SUBTASK 32-00-00-860-059

(3) Deactivate the switch for ALTERNATE GEAR DOWN DISPATCH:

(a) Move the switch for ALTERNATE GEAR DOWN DISPATCH, S1127, to the VMO position, per the following steps:

NOTE: The switch is located directly inside of the main equipment center, next to the switch for the E/E bay lights.

NOTE: The switch must be pulled from its locked position to move it.

1) Cut the lockwire in the switch guard.

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2) Lift the switch guard and move the switch to the NORMAL position.

3) Lockwire the switch guard using lockwire, G01912 and the double twist method.

HAP ALL

SUBTASK 32-00-00-080-023

(4) Remove the GEAR LOCKED DOWN placard from the landing gear lever.

END OF TASK

TASK 32-00-00-040-814

26. MMEL 32-19 (DDPG) Preparation - Main Landing Gear Uplock Springs Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Main Landing Gear Uplock Springs Inoperative.

B. References

Reference	Title
32-32-31-000-801	Main Gear Uplock Assembly Removal (P/B 401)

C. Location Zones

Zone	Area
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Procedure

SUBTASK 32-00-00-200-001

(1) Remove the applicable main landing gear uplock springs (Main Gear Uplock Assembly Removal, TASK 32-32-31-000-801).

SUBTASK 32-00-00-480-028

(2) Attach an AFTER TAKEOFF - LEAVE UP placard to the landing gear lever.

END OF TASK

TASK 32-00-00-440-814

27. MMEL 32-19 (DDPG) Restoration - Main Landing Gear Uplock Springs Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Main Landing Gear Uplock Springs Inoperative.

B. References

Reference	Title
32-32-31-400-801	Main Gear Uplock Assembly Installation (P/B 401)

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C. Location Zones

Zone	Area
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Procedure

SUBTASK 32-00-00-420-003

(1) Install a new main landing gear uplock springs (Main Gear Uplock Assembly Installation, TASK 32-32-31-400-801).

SUBTASK 32-00-00-740-015

(2) If the main landing gear uplock springs was not the problem, then do these steps to correct the fault:

(a) Find the fault code or description of the fault that occurred.

(b) If you find a fault code, then do these steps:

1) Go to the Fault Code Index in the applicable chapter of the FIM and find the fault code.

NOTE: The first two digits of the fault code is the FIM chapter.

2) Find the task number on the same line as the fault code.

3) Go to the task in the FIM and do the steps in the task.

(c) If you find a description of the fault, then do these steps:

1) Go to the Observed Fault List at the beginning of the FIM and find the best description for the fault.

2) Find the task number on the same line as the fault description.

3) Go to the task in the FIM and do the steps in the task.

SUBTASK 32-00-00-080-024

(3) Remove the AFTER TAKEOFF - LEAVE UP placard from the landing gear lever.

——————— END OF TASK ———————

TASK 32-00-00-040-816

28. MMEL 32-20 (DDPG) Preparation - Landing Gear Frangible Fitting Missing or Broken

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Landing Gear Frangible Fitting Missing or Broken.

B. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
734	Left Main Landing Gear

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(Continued)

Zone	Area
744	Right Main Landing Gear

D. Procedure

SUBTASK 32-00-00-480-029

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-00-00-860-051

(2) Remove the pressure from the hydraulic systems A. To remove it, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-00-00-020-008

(3) Disconnect the hydraulic line from the manifold of the frangible fitting.

SUBTASK 32-00-00-420-004

(4) Install a cap on the hydraulic line that is capable of rated for 3000 psi (20,000 kPa).

END OF TASK

TASK 32-00-00-440-816

29. MMEL 32-20 (DDPG) Restoration - Landing Gear Frangible Fitting Missing or Broken

A. General

(1) This task puts the airplane back to its usual condition after operation with the Landing Gear Frangible Fitting Missing or Broken.

B. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-32-52-400-802	Main Gear Frangible Fitting Assembly Installation (P/B 401)

C. Location Zones

Zone	Area
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Procedure

SUBTASK 32-00-00-480-030

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

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SUBTASK 32-00-00-860-052

(2) Remove the pressure from the hydraulic systems A. To remove it, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-00-00-020-009

(3) Remove the cap from the hydraulic line.

SUBTASK 32-00-00-420-005

(4) Replace the frangible fitting, do this task: Main Gear Frangible Fitting Assembly Installation, TASK 32-32-52-400-802.

END OF TASK

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LANDING GEAR DOWNLOCK PINS - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

(1) An installation of the downlock pins for the main and the nose landing gear

(2) A removal of the downlock pins for the main and the nose landing gear.

B. The downlock pins are items of safety equipment. You install the downlock pins to make sure the landing gear does not retract when you do maintenance on the airplane.

C. You also install the downlock pins (with the safety hardware) when the airplane must fly with the landing gear locked in the extended position.

TASK 32-00-01-480-801

2. Landing Gear Downlock Pins Installation

(Figure 201 or Figure 202)

A. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1499	Pin - Lock, NLG Towing Lever (Part #: A09003-2, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A09003-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1880	Equipment - Downlock, NLG and MLG (Part #: C32026-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
STD-1048	Stepladder - 6 foot (1.83 m)

B. Location Zones

Zone	Area
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

C. Prepare for the Installation

SUBTASK 32-00-01-860-001

(1) Make sure the nose and main landing gear are down and locked.

SUBTASK 32-00-01-860-002

(2) Make sure the control lever for the landing gear on the center instrument panel is in the DN position.

WARNING: MAKE SURE OTHER PERSONS DO NOT MOVE THE CONTROL LEVER FOR THE LANDING GEAR TO THE UP POSITION. IF THEY MOVE THE CONTROL LEVER TO THE UP POSITION, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) Attach a DO-NOT-OPERATE tag on the control lever for the landing gear.

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D. Landing Gear Downlock Pins Installation

SUBTASK 32-00-01-480-001

(1) Do the steps below for each of the main landing gear to install the downlock pin equipment, SPL-1880 [4]:

(a) If the airplane must fly with the main landing gear locked in the extended position, do the step below:

1) Remove the split rings and the REMOVE BEFORE FLIGHT streamer from each of the downlock pin equipment, SPL-1880 [4].

(b) Use the 6 foot (1.83 m) stepladder, STD-1048 to get access to the downlock strut.

(c) Put the downlock pin equipment, SPL-1880 [4] through the upper [1] and the lower [3] lock links for the main landing gear.

NOTE: If the downlock pin will not go into the lock links, it is possible an adjustment of the lock links is necessary.

(d) If you installed the downlock pin equipment, SPL-1880 [4] for maintenance, make sure the REMOVE BEFORE FLIGHT streamers are extended and can be easily seen.

SUBTASK 32-00-01-480-002

(2) Do the steps below to install the downlock pin equipment, SPL-1880 [21] for the nose landing gear:

(a) If the airplane must fly with the landing gear locked in the extended position, do the step below:

1) Remove the split rings and the REMOVE BEFORE FLIGHT streamer from the downlock pin equipment, SPL-1880 [21].

(b) Use the 6 foot (1.83 m) stepladder, STD-1048 to get access to the lock mechanism for the nose landing gear.

(c) Put the downlock pin equipment, SPL-1880 [21] through the forward [24] and the aft [22] lock links for the nose landing gear.

NOTE: If the downlock pin, will not go into the lock links, it is possible an adjustment of the lock links is necessary.

(d) If you installed the downlock pin equipment, SPL-1880 [21] for maintenance, make sure the REMOVE BEFORE FLIGHT streamer is extended and can be easily seen.

SUBTASK 32-00-01-480-003

WARNING: ONLY USE THE CORRECT PIN FOR THE AIRPLANE MODEL. IF YOU USE AN INCORRECT PIN, THE HYDRAULIC STEERING CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(3) To install the lever lock NLG towing lever pin, SPL-1499 [25] for towing the airplane, do the steps below:

NOTE: The towing lever lets you depressurize the nose wheel steering system. Installation of the NLG towing lever pin, SPL-1499 in the towing lever lets you tow the airplane without depressurizing the hydraulic system A.

(a) Move the towing lever [27] forward to the tow position.

(b) Put the lever lock NLG towing lever pin, SPL-1499 [25] through the pin hole in the towing lever [27] to hold the lever in the towing position.

(c) If you installed the lever lock NLG towing lever pin, SPL-1499 [25] for maintenance, make sure the REMOVE BEFORE FLIGHT streamer is extended and can be easily seen.

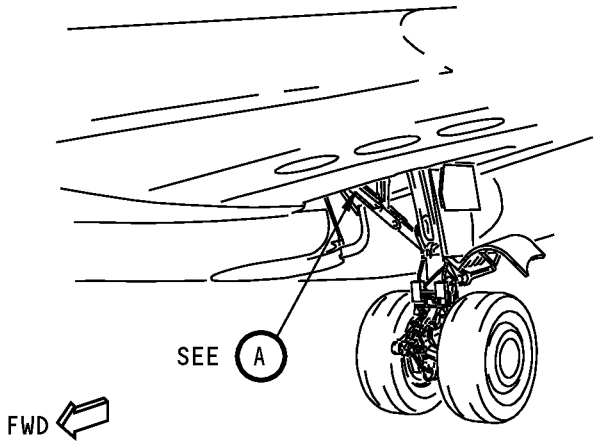
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(d) If the airplane must fly with the landing gear locked in the extended position, do the steps below:

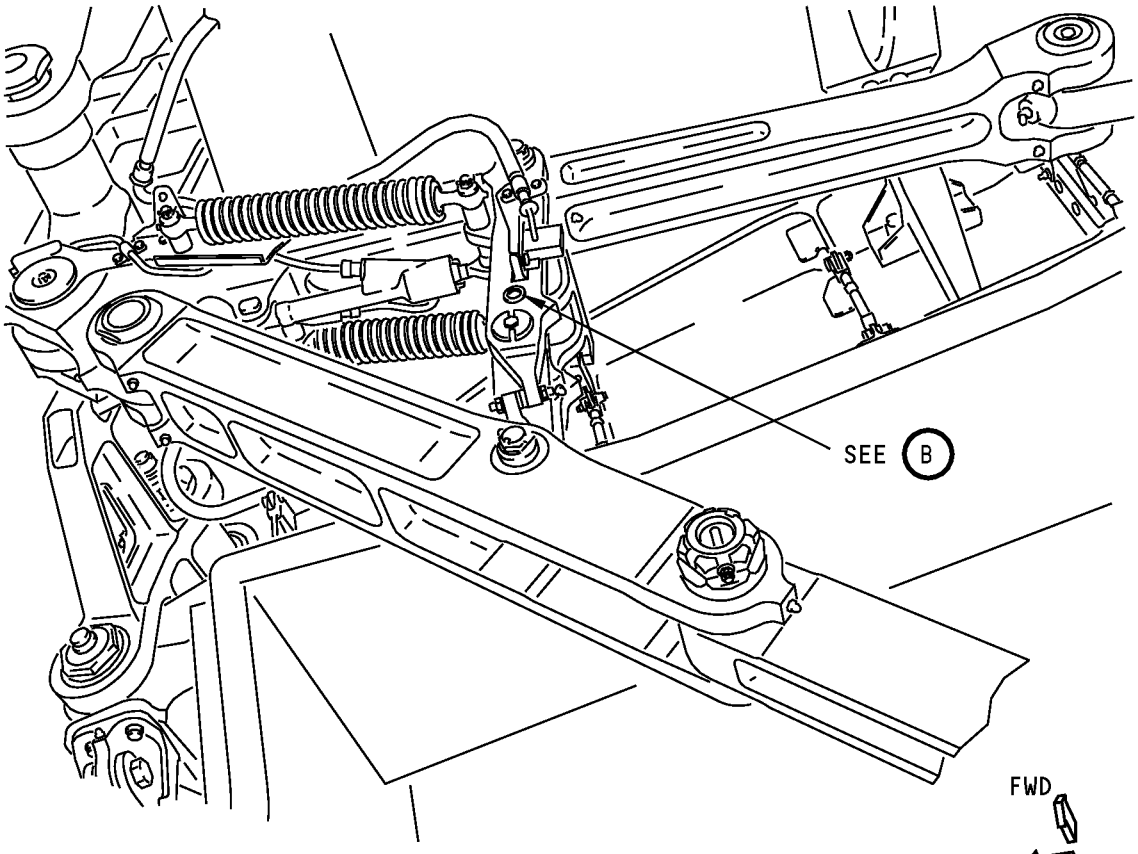
1) Remove the lever lock NLG towing lever pin, SPL-1499 [25] from the towing lever [27] for the nose wheel steering mechanism.

——————— END OF TASK ———————

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LEFT MAIN LANDING GEAR
(RIGHT MAIN LANDING GEAR IS EQUIVALENT)

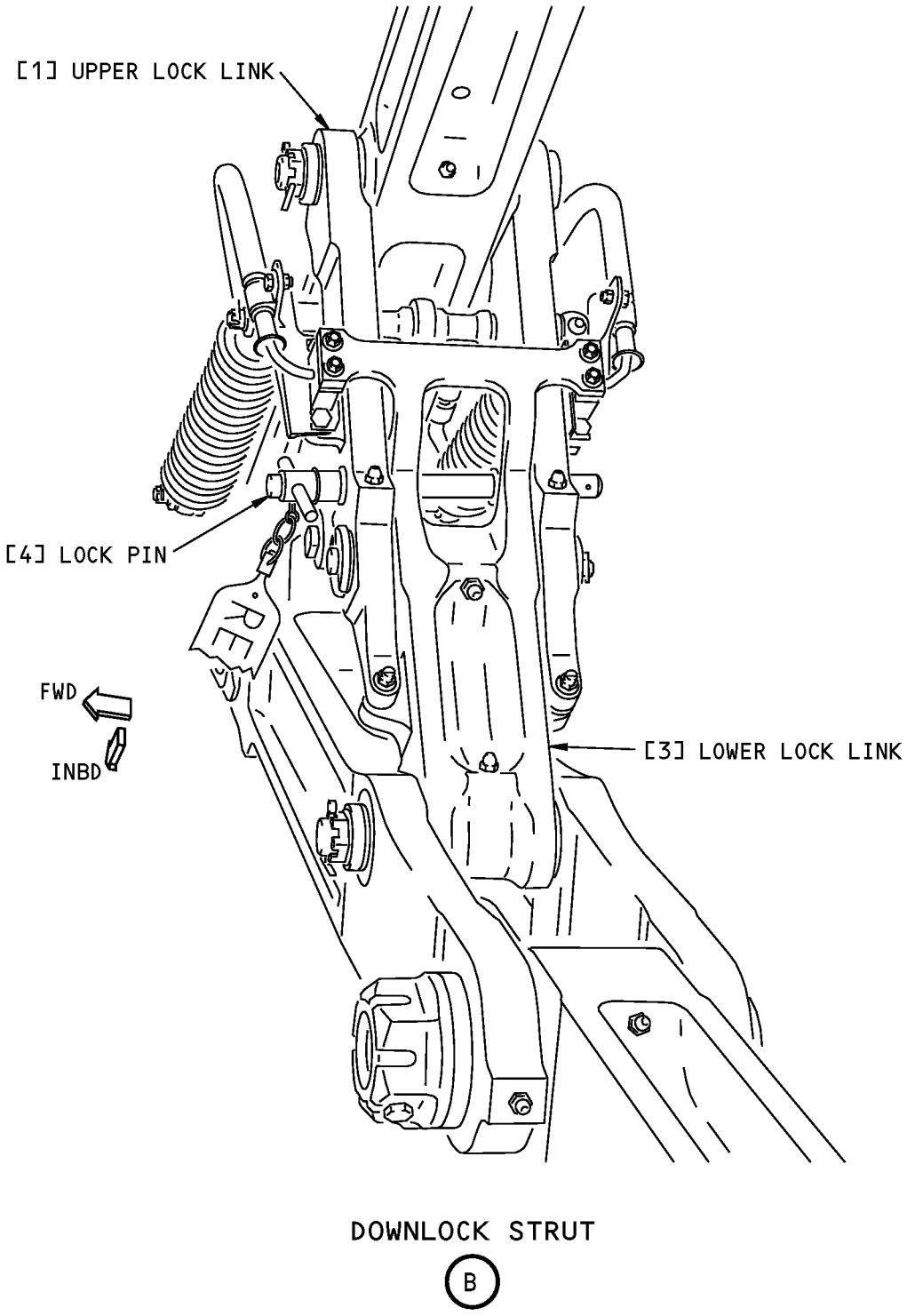


SIDE STRUT ASSEMBLY

A

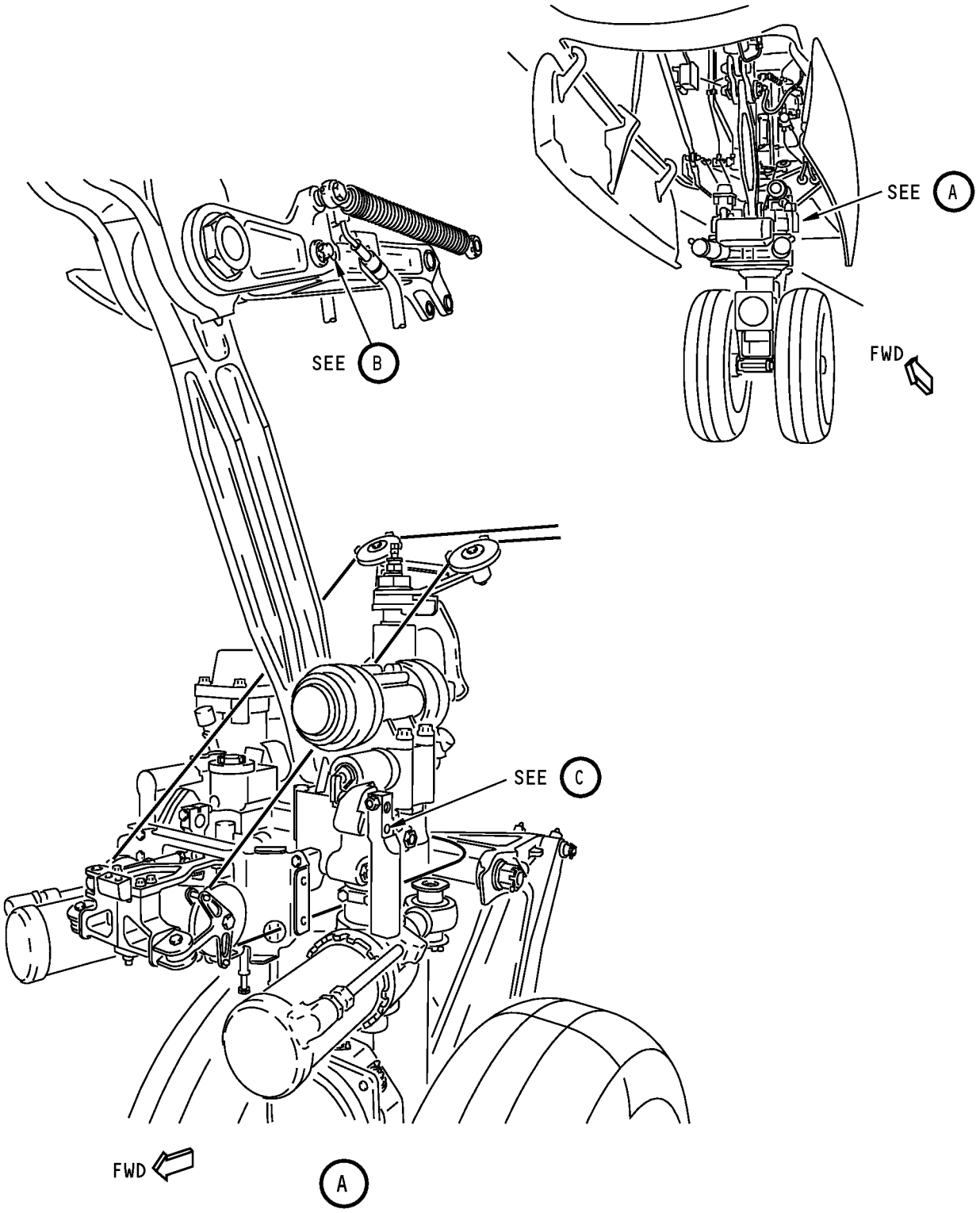
Main Landing Gear Downlock Pin Installation
Figure 201 (Sheet 1 of 2)/32-00-01-990-801

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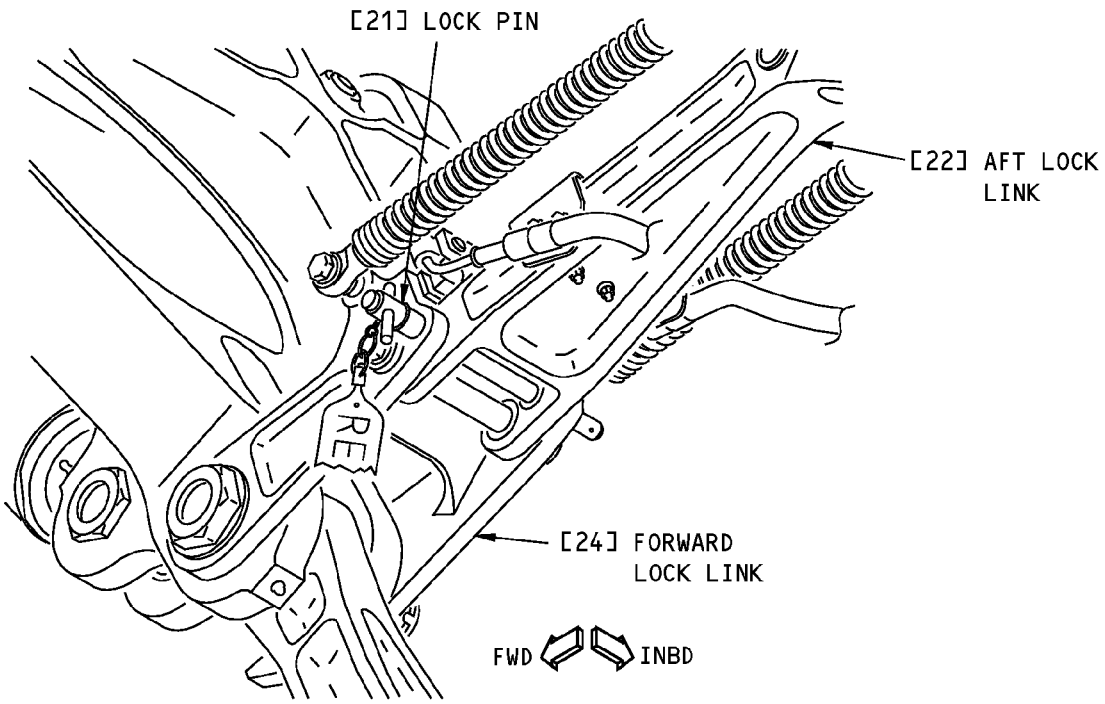
Main Landing Gear Downlock Pin Installation
Figure 201 (Sheet 2 of 2)/32-00-01-990-801

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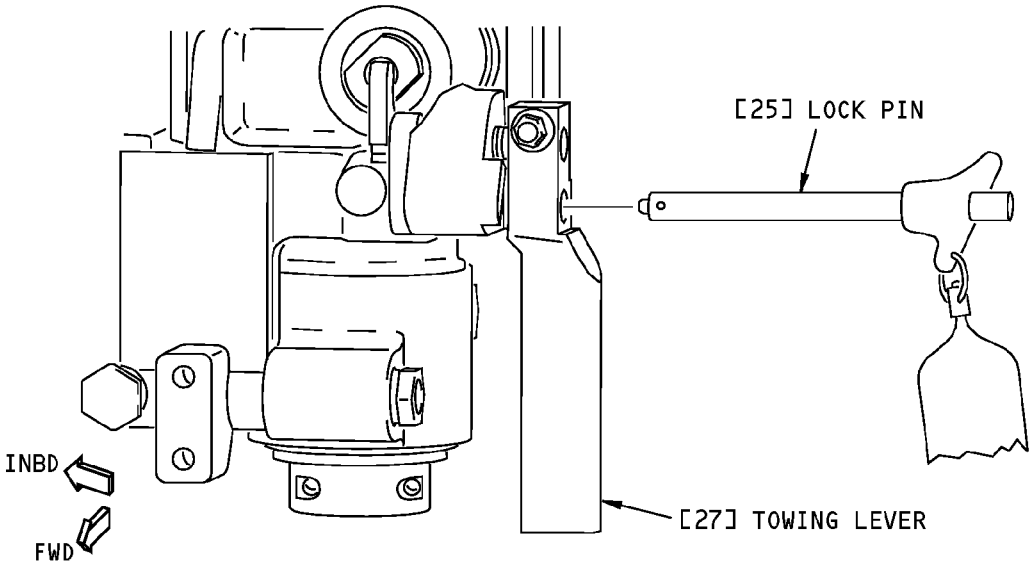
Nose Landing Gear Downlock Pins Installation
Figure 202 (Sheet 1 of 2)/32-00-01-990-802

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LOCK MECHAMISM

B



NOSE WHEEL STEERING MECHANISM

C

Nose Landing Gear Downlock Pins Installation
Figure 202 (Sheet 2 of 2)/32-00-01-990-802

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TASK 32-00-01-080-801

3. Landing Gear Downlock Pins Removal

(Figure 201 or Figure 202)

A. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1499	Pin - Lock, NLG Towing Lever (Part #: A09003-2, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A09003-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1880	Equipment - Downlock, NLG and MLG (Part #: C32026-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
STD-1048	Stepladder - 6 foot (1.83 m)

B. Location Zones

Zone	Area
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

C. Prepare for the Removal

SUBTASK 32-00-01-860-003

(1) Make sure the control lever for the landing gear on the center instrument panel is in the DN position.

WARNING: MAKE SURE OTHER PERSONS DO NOT MOVE THE CONTROL LEVER FOR THE LANDING GEAR TO THE UP POSITION. IF THEY MOVE THE CONTROL LEVER TO THE UP POSITION, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) Attach a DO-NOT-OPERATE tag on the control lever for the landing gear.

D. Landing Gear Downlock Pins Removal

SUBTASK 32-00-01-080-001

(1) Do the steps below for each main landing gear to remove the downlock pins equipment, SPL-1880 [4]:

(a) Use the 6 foot (1.83 m) stepladder, STD-1048 to get access to the upper [1] and lower [3] lock links.

(b) Remove the downlock pin equipment, SPL-1880 [4] from the upper [1] and the lower [3] lock links.

(c) If it is necessary, attach the split rings and the REMOVE BEFORE FLIGHT streamer to the downlock pins equipment, SPL-1880 [4].

SUBTASK 32-00-01-080-002

(2) Do the steps below to remove the downlock pin equipment, SPL-1880 [21] for the nose landing gear:

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(a) Use the 6 foot (1.83 m) stepladder, STD-1048 to get access to the forward [24] and the aft [22] lock mechanism for the nose landing gear.

(b) Remove the downlock pin equipment, SPL-1880 [21] from the forward [24] and the aft [22] lock links for the nose landing gear.

(c) If it is necessary, attach the split rings and the REMOVE BEFORE FLIGHT streamer to the downlock pin equipment, SPL-1880 [21].

SUBTASK 32-00-01-080-003

(3) Do the steps below to remove the lever lock NLG towing lever pin, SPL-1499 [25] from the towing lever:

(a) Remove the lever lock NLG towing lever pin, SPL-1499 [25] from the towing lever [27] for the nose wheel steering mechanism.

(b) If it is necessary, attach the split rings and the REMOVE BEFORE FLIGHT streamer to the lever lock NLG towing lever pin, SPL-1499 [25].

——————— END OF TASK ———————

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LANDING GEAR INNER CYLINDER CHROME - INSPECTION

1. General

A. This procedure provides instructions to examine the chrome surface of the landing gear inner cylinder.

B. This procedure is applicable to the nose landing gear and the main landing gear.

TASK 32-00-10-211-801

2. Landing Gear Inner Cylinder Chrome Inspection

A. References

Reference	Title
12-15-31-610-802	Main Landing Gear Shock Strut Servicing (P/B 301)
12-15-41-610-802	Nose Landing Gear Shock Strut Servicing (P/B 301)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-00-10-100-801	Landing Gear Inner Cylinder Chrome Cleaning (P/B 701)
32-00-10-300-801	Landing Gear Inner Cylinder Chrome Repair (P/B 801)
32-11-21-200-801	Main Landing Gear Shock Strut Seal Leakage Check (P/B 801)
32-11-21-960-802	Replace the Active and the Spare Seals (P/B 801)
32-21-11-200-801	Nose Landing Gear Shock Strut Seal Leakage Check (P/B 801)
32-21-11-960-802	Replace the Active Seals and Spare Seals (P/B 801)

B. Location Zones

Zone	Area
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

C. Prepare for the procedure

SUBTASK 32-00-10-490-002

WARNING: MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801

SUBTASK 32-00-10-212-002

(2) Inspect the scraper ring and shock strut seals for damage.

(a) Visually examine the chrome surface of the inner cylinder before you clean it.

NOTE: If you find vertical streaks of fluid or accumulated debris on the chrome surface, it is an indication that part of the scraper ring may be defective.

(b) Make sure the scraper ring is in the installed position. Normal operation can force the scraper ring down the inner cylinder.

NOTE: A mirror and flashlight can help you to examine the scraper ring. Put the mirror below the outer cylinder and against the inner cylinder to see the condition and position of the scraper ring.

(c) If one of the two inspections finds a fault with the scraper ring, do the steps that follow:

1) Examine the shock strut for seal leakage (TASK 32-11-21-200-801 or TASK 32-21-11-200-801).

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2) Deflate the strut and drain the oil (TASK 12-15-31-610-802 TASK 12-15-41-610-802).

3) Disconnect the gland nut from the outer cylinder (TASK 32-11-21-960-802 or TASK 32-21-11-960-802), then lower the gland nut to examine the scraper ring.

4) If the scraper ring is damaged then replace the scraper ring with a new production scraper ring (TASK 32-11-21-960-802 or TASK 32-21-11-960-802.

NOTE: This task requires the removal of the inner cylinder from the outer cylinder.

(d) Examine the shock strut for seal leakage (TASK 32-11-21-200-801 or TASK 32-21-11-200-801).

SUBTASK 32-00-10-615-002

(3) Do this task: Landing Gear Inner Cylinder Chrome Cleaning, TASK 32-00-10-100-801.

D. Procedure

SUBTASK 32-00-10-212-001

(1) Examine the chrome surface on the outer diameter of the shock strut inner cylinder:

NOTE: Chrome plating on large diameter parts will show very small and narrow lines that look like cracks. These lines (chicken-wire cracks) naturally occur when the chrome plate was initially applied on the base metal. When you look at these parts in dim light or with a light source angled to the surface for the inspection, you will see these lines.

(a) Shine light at an angle to the chrome surface of the inner cylinder.

NOTE: You can use a flashlight for this check.

(b) Look at the surface from different directions to make sure you see all of the cracks or scratches.

NOTE: Do not use a magnifying glass to do this inspection. A scratch on the chrome will have sharp edges along it's length and can be seen without the aide of a magnifying glass or plastic scraper. A wide crack on the chrome surface has a gradual contour to it's edges which makes it difficult to see and requires the use of the plastic scraper to indentify.

(c) Move the sharp edge of a new hard plastic scraper perpendicular over all the exposed chrome plated surface with a smooth movement and light hand pressure.

NOTE: You will feel a "grab" or a "catch" when you go over a wide crack or scratch with this method. Make sure the plastic scraper is new, as used scrapers will not satisfactorily find the wide cracks.

(d) If you see any possible area of corrosion, chipping, lifting of the chrome plate, or if you felt a wide crack with the plastic scraper, reinspect the area with a metal dental explorer. Move the sharp point of the explorer with medium hand pressure to go over the area of suspected damage. Go over the area with the dental explorer from multiple directions. If the chrome is lifting and/or loose try to pick it off with the metal explorer.

NOTE: If you feel a sudden high resistance when you go over the area, but do not see signs of possible corrosion, then this is a site with a wide crack. It is an area that must have more protection and be closely monitored. Repair this area with the crack repair procedure. If you are able to remove or lift small pieces of chrome plate from the base metal, if there are bubbles in the chrome, or if the crack extends to the base metal the inner cylinder is not serviceable.

(2) If you find scratches or wide cracks, do the steps that follow:

(a) Look for one or more of the conditions that follow, if any of the conditions that follow are present then the inner cylinder is not serviceable:

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1) Corrosion exists in the damaged area of the chrome.

   NOTE: You must use a 4x (minimum) magnifier to examine the area of damage.

2) Poor chrome bonds with the base metal.

3) Bubbles in the chrome plating.

4) An area of chrome plate that moves above the smooth surface of the adjacent chrome plate when you move the dental explorer across it.

5) Chrome plate that comes off in flakes when you move the dental explorer over the chrome plate.

(b) Make sure the scratches or wide cracks have not penetrated to the base metal of the strut.

(c) If the base metal is exposed you must measure the depth of the damage.

(d) If the measured depth of damage to the base metal exceeds 0.0005 inches, excluding chrome thickness, or the area of damage exceeds 1 sq. inch then you must replace or overhaul the inner cylinder.

(e) If the base metal is exposed by a scratch then the scratch will then be considered a gouge and be repaired as a crack.

(f) Measure the size of the area that has the cracks, and make a sketch of the location and shape of each area, and mark the dimensions on the sketch. Make sure you keep this data so it can be used for the next inspection.

(g) Repair the scratches on the chrome surface (TASK 32-00-10-300-801), if identified.

(h) Repair the cracks on the chrome surface (TASK 32-00-10-300-801), if identified.

(i) If you repaired the chrome surface then you must do this inspection task again in four months or 400 cycles (whichever comes first), and then again until the shock strut is removed and replaced. Once chrome is damaged, there is no permanent repair, and the damage can continue to spread. The only permanent repair is to strip and replate the chrome.

——————— END OF TASK ———————

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LANDING GEAR INNER CYLINDER CHROME - CLEANING/PAINTING

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure provides instruction to clean the dirt and grit from the chrome surfaces of the landing gear inner cylinders. Cleaning these chrome surfaces will make it easier to determine if any seals leak and it will also prolong the life of the seals.

C. This procedure is applicable to the nose landing gear and the main landing gear.

TASK 32-00-10-100-801

2. Landing Gear Inner Cylinder Chrome Cleaning

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
12-15-31-610-802	Main Landing Gear Shock Strut Servicing (P/B 301)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Consumable Materials

Reference	Description	Specification
D00467	Fluid - Landing Gear Shock Strut	BMS3-32, Type II

D. Location Zones

Zone	Area
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

E. Prepare for the procedure

SUBTASK 32-00-10-490-003

WARNING: MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801

SUBTASK 32-00-10-582-001

(2) To clean as much of the chrome surface possible, do one of these steps:

(a) Use airplane jacks to lift the airplane until the tires do not touch the ground (TASK 07-11-01-580-815).

(b) Over-inflate the shock strut with dry-air or nitrogen (TASK 12-15-31-610-802).

(c) Clean the chrome before you fill the airplane with fuel.

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F. Procedure

SUBTASK 32-00-10-100-003

CAUTION: DO NOT RUB THE SMEAR MARKS TO TRY TO REMOVE THEM. THIS COULD CAUSE DAMAGE TO THE CHROME SURFACE.

(1) On the shock strut inner cylinder chrome, you may find dark smear marks that have a small amount of texture and are difficult to remove. These smear marks are created by oxidation of the self lubricating material that is deposited on the chrome by the shock strut bearings. These smear marks are considered acceptable.

SUBTASK 32-00-10-100-001

(2) Clean the dirt, oil and other unwanted materials from the chrome surface of the inner cylinders with a clean cloth that is soaked in one of the these:

NOTE: To clean the maximum exposed chrome surface of the inner cylinder, do this task before you fill the airplane with fuel.

(a) fluid, D00467

SUBTASK 32-00-10-440-001

(3) Put the aircraft back to its usual condition.

——————— END OF TASK ———————

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LANDING GEAR INNER CYLINDER CHROME - REPAIR

1. General

A. This procedure provides instructions to repair cracks and minor scratches to the chrome surface of the landing gear inner cylinder.

B. This procedure is applicable to the nose landing gear and the main landing gear.

TASK 32-00-10-300-801

2. Landing Gear Inner Cylinder Chrome Repair

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-00-10-100-801	Landing Gear Inner Cylinder Chrome Cleaning (P/B 701)
32-00-10-211-801	Landing Gear Inner Cylinder Chrome Inspection (P/B 601)

B. Consumable Materials

Reference	Description	Specification
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I
D00467	Fluid - Landing Gear Shock Strut	BMS3-32, Type II
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5
G01601	Abrasive - Aluminum Oxide Coated Cloth, 400 to 600 grit	
G50220	Abrasive - Pad - Scotch- Brite 7447	
G50338	Abrasive Paper - Aluminum Oxide, 800 Grit	

C. Location Zones

Zone	Area
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the procedure

SUBTASK 32-00-10-490-001

WARNING: MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801

SUBTASK 32-00-10-615-001

(2) Make sure these tasks are accomplished before you do the repair:

(a) Landing Gear Inner Cylinder Chrome Cleaning, TASK 32-00-10-100-801.

(b) Landing Gear Inner Cylinder Chrome Inspection, TASK 32-00-10-211-801.

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E. Procedure

SUBTASK 32-00-10-350-001

CAUTION: DO NOT USE POWER TOOLS TO DO THIS TASK. YOU MUST USE HAND TOOLS. IF YOU USE POWER TOOLS, YOU CAN CAUSE MORE DAMAGE TO COMPONENTS.

(1) To repair cracks to the chrome surface, do these steps:

(a) Use 400 to 600 grit abrasive cloth, G01601, that is soaked in fluid, D00467, to hand blend the exposed base metal and remove any corrosion and sharp edges to the chrome.

NOTE: Ensure reworked edges can not be caught with the sharp point of the dental explorer.

(b) Use a cotton wiper, G00034 to apply a thick layer of primer, C00259 to the exposed base metal with adequate overlap on the chrome surface.

(c) Before the primer dries, remove the excess primer with a clean, dry cloth.

NOTE: Make sure no primer gets on the seals or scraper, as they can be damaged by the primer and may start to leak.

(d) Let the primer cure for at least 4 hours., then apply a second layer of primer and allow to dry an additional 4 hours.

(e) Use abrasive pad - Scotch-Brite 7447, G50220, that is soaked in fluid, D00467, to blend and smooth out the primer surface to acheive a similar contour as the chrome surface.

(f) Use abrasive paper, G50338, that is soaked in fluid, D00467, to polish the chrome surface.

SUBTASK 32-00-10-350-002

CAUTION: DO NOT USE POWER TOOLS TO DO THIS TASK. YOU MUST USE HAND TOOLS. IF YOU USE POWER TOOLS, YOU CAN CAUSE MORE DAMAGE TO COMPONENTS.

(2) To repair minor scratches to the chrome surface, do these steps:

(a) Use 400 to 600 grit abrasive cloth, G01601, that is soaked in fluid, D00467, to smooth out the chrome surface until you can not see evidence of a scratch.

(b) Use abrasive paper, G50338, that is soaked in fluid, D00467, to polish the chrome surface.

SUBTASK 32-00-10-615-003

(3) Do this task: Landing Gear Inner Cylinder Chrome Cleaning, TASK 32-00-10-100-801.

——————— END OF TASK ———————

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LANDING GEAR RETRACT/STEERING ACTUATOR CHROME - CLEANING

1. General

A. This procedure has these task:

(1) Main Landing Gear Retract Actuator Chrome Cleaning.

(2) Nose Landing Gear Steering Actuator Chrome Surfaces Cleaning.

(3) Nose Landing Gear Retract Actuator Chrome Cleaning.

TASK 32-00-11-100-801

2. Main Landing Gear Retract Actuators Chrome Surfaces Cleaning

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Consumable Materials

Reference	Description	Specification
B00130	Alcohol - Isopropyl	TT-I-735

C. Location Zones

Zone	Area
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Access Panels

Number	Name/Location
551BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
651BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel

E. Prepare to Clean the Main Landing Gear Retract Actuators Chrome Surfaces

SUBTASK 32-00-11-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-00-11-010-001

(2) To gain access to the left or right wing, do this step:

Open these access panels:

Number	Name/Location
551BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
651BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel

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F. Clean the Main Landing Gear Retract Actuators Chrome Surfaces

SUBTASK 32-00-11-100-001

(1) Clean the dirt, oil and other unwanted materials from the chrome cylinder surface of the main landing gear retract actuators with a clean cloth that is soaked in isopropyl alcohol, B00130.

NOTE: It is not necessary to retract the landing gear to expose more of the chrome surface.

SUBTASK 32-00-11-840-002

(2) Clean the dirt, oil and other unwanted materials from the main landing gear retract actuator exterior surfaces where the chrome piston rod passes through the end gland with a clean cloth that is soaked in isopropyl alcohol, B00130.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 32-00-11-410-001

(1) Close the applicable access panel, do this step:

Close these access panels:

Number	Name/Location
551BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
651BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel

——————— END OF TASK ———————

TASK 32-00-11-100-802

3. Nose Landing Gear Steering Actuators Chrome Surfaces Cleaning

A. General

(1) There are two methods to clean the chrome surfaces of the steering actuators. Each method is optional to the other. The method that is used is determined by the ground equipment that is available.

(a) Method 1:

1) This method disconnects the apex joint of the torsion link.

(b) Method 2:

1) This method uses hydraulic system A to turn the nose wheel tires.

B. References

Reference	Title
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-21-31-000-803	Nose Landing Gear Torsion Link Disconnection (P/B 401)
32-21-31-400-803	Nose Landing Gear Torsion Link Connection (P/B 401)

C. Consumable Materials

Reference	Description	Specification
B00130	Alcohol - Isopropyl	TT-I-735

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D. Location Zones

Zone	Area
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

E. Prepare to Clean the Nose Landing Gear Steering Actuator Chrome Surfaces

SUBTASK 32-00-11-480-002

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-00-11-020-001

(2) For Method 1, do this task: Nose Landing Gear Torsion Link Disconnection, TASK 32-21-31-000-803.

SUBTASK 32-00-11-860-004

(3) For Method 1, push or pull on the upper torsion link to turn the steering collar until the chrome surface of the steering actuator to be cleaned is exposed.

SUBTASK 32-00-11-840-004

(4) For Method 2, do the following if you will use greased plates to turn the nose landing gear.

NOTE: The use of greased plates is optional for method 2.

(a) Put greased plates on the ground, such that the greased plates are close to the nose landing gear.

(b) Move the airplane until the nose landing gear tires are on the greased plates.

SUBTASK 32-00-11-860-005

(5) For Method 2, pressurize hydraulic system A: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801..

SUBTASK 32-00-11-820-001

(6) For Method 2, use the steering tiller to operate the steering system of the nose wheel full left and full right or until the chrome surface of the actuator to be cleaned is fully exposed.

NOTE: The steering system has a 1 - 2 degree dead band in the center position.

F. Clean the Nose Landing Gear Steering Actuators Chrome Surfaces

SUBTASK 32-00-11-100-002

(1) Clean the dirt, oil and other unwanted materials from the chrome cylinder surface of the steering actuator with a clean cloth that is soaked in isopropyl alcohol, B00130.

NOTE: Make sure that the chrome cylinder surface of the steering actuators are exposed when you do this step.

SUBTASK 32-00-11-100-003

(2) Clean the dirt, oil and other unwanted materials from the steering actuator exterior surfaces where the chrome piston rod passes through the end gland with a clean cloth that is soaked in isopropyl alcohol, B00130.

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G. Put the Airplane Back to Its Usual Condition

SUBTASK 32-00-11-420-001

(1) If you used Method 1, do this task: Nose Landing Gear Torsion Link Connection, TASK 32-21-31-400-803.

SUBTASK 32-00-11-840-005

(2) If you used Method 2, move the airplane away from the greased plates if they were used.

——————— END OF TASK ———————

TASK 32-00-11-100-803

4. Nose Landing Gear Retract Actuator Chrome Surfaces Cleaning

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Consumable Materials

Reference	Description	Specification
B00130	Alcohol - Isopropyl	TT-I-735

C. Location Zones

Zone	Area
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare to Clean the Nose Landing Gear Retract Actuator Chrome Surfaces

SUBTASK 32-00-11-480-003

WARNING: MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT. THIS CAN CAUSE INJURIES TO PERSONS, AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

E. Clean the Nose Landing Gear Retract Actuator Chrome Surfaces

SUBTASK 32-00-11-100-004

(1) Clean the dirt, oil and other unwanted materials from the chrome cylinder surface of the retract actuator of the nose landing gear with a clean cloth that is soaked in isopropyl alcohol, B00130.

NOTE: It is not necessary to retract the landing gear to expose more of the chrome surface.

(2) Clean the dirt, oil and other unwanted materials from the nose landing gear retract actuator exterior surfaces where the chrome piston rod passes through the end gland with a clean cloth that is soaked in isopropyl alcohol, B00130.

——————— END OF TASK ———————

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LANDING GEAR - CORROSION PREVENTION

1. General

Table 201/32-00-37-993-802 specific Corrosion Problems - Landing Gear

AREA	PROBLEM	INDEX
Main Landing Gear	Corrosion because of environmental exposure.	32-11-37
	Damage to the side strut finish caused by interference with center door.	
	Corrosion on MLG torsion pins.	
	Stress corrosion cracks on H11 brake attachment bolts.	
Nose Landing Gear	Corrosion on torsion link pin and shaft.	32-21-37
	Corrosion found in steering collar area.	
	Corrosion on torsion link pin and shaft.	

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LANDING GEAR - STRUCTURAL INSPECTIONS - MAINTENANCE PRACTICES

TASK 32-05-03-210-801

1. INTERNAL - GENERAL VISUAL: INTERNAL - LEFT MAIN LANDING GEAR ASSEMBLY

A. General

(1) This procedure is a scheduled maintenance task.

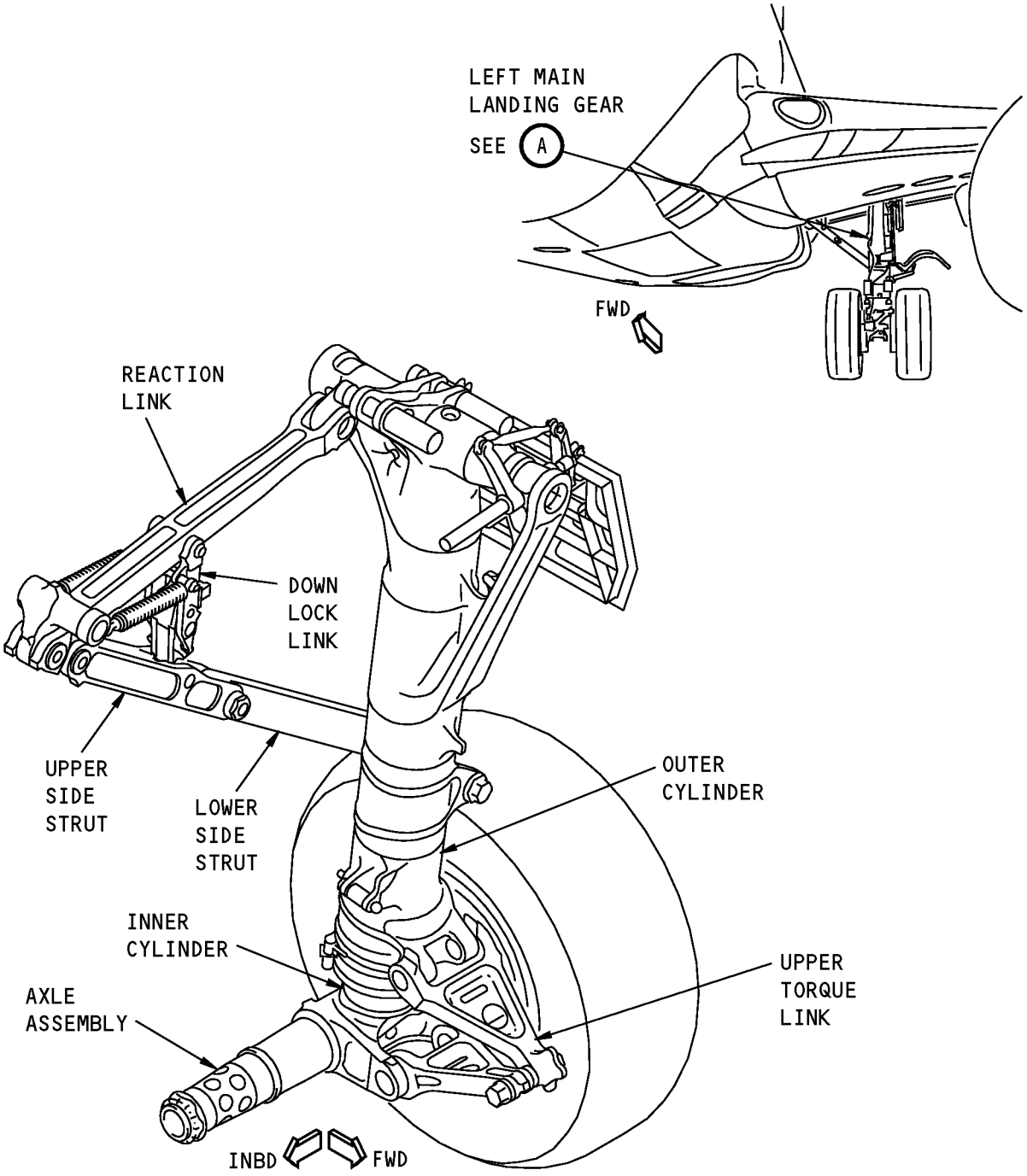
B. Inspection

SUBTASK 32-05-03-210-001

(1) Do the inspection.

END OF TASK

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Left Main Landing Gear Assembly
Figure 201/32-05-03-990-803

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TASK 32-05-03-210-802

2. INTERNAL - GENERAL VISUAL: INTERNAL - RIGHT MAIN LANDING GEAR ASSEMBLY

A. General

(1) This procedure is a scheduled maintenance task.

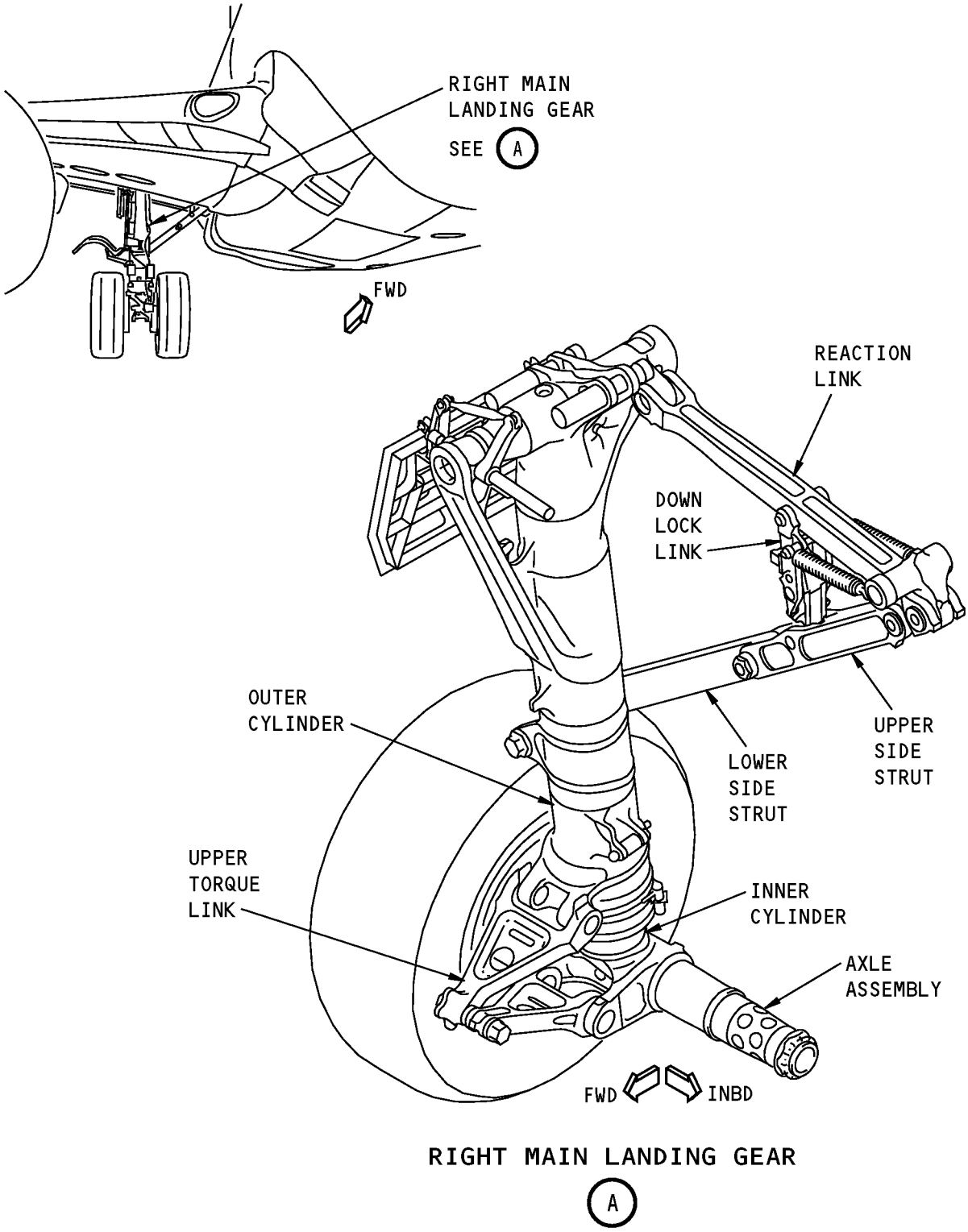
B. Inspection

SUBTASK 32-05-03-210-002

(1) Do the inspection.

——————— END OF TASK ———————

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Right Main Landing Gear Assembly
Figure 202/32-05-03-990-802

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TASK 32-05-03-210-803

3. INTERNAL - GENERAL VISUAL: INTERNAL - NOSE LANDING GEAR ASSEMBLY

A. General

(1) This procedure is a scheduled maintenance task.

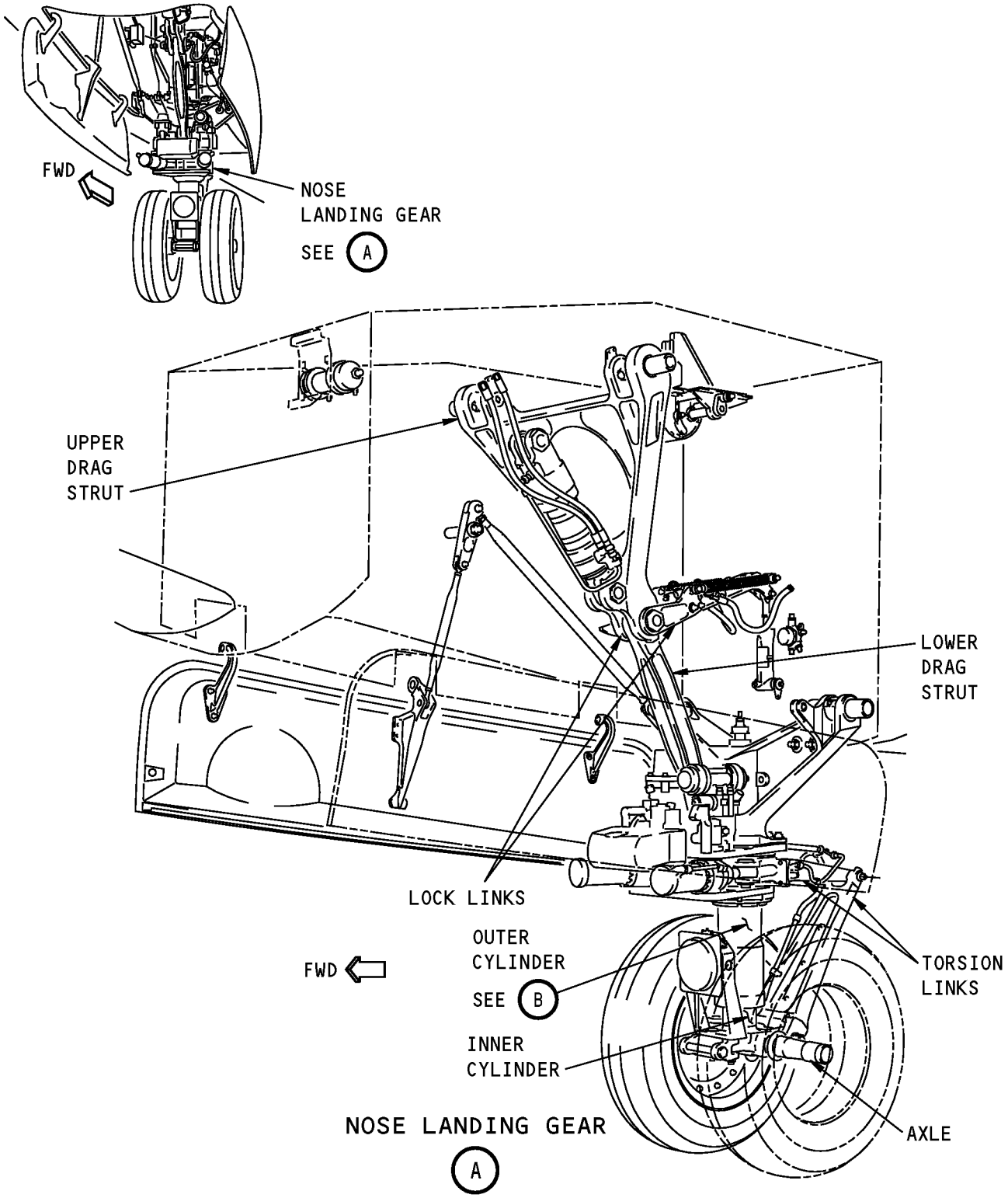
B. Inspection

SUBTASK 32-05-03-210-003

(1) Do the inspection.

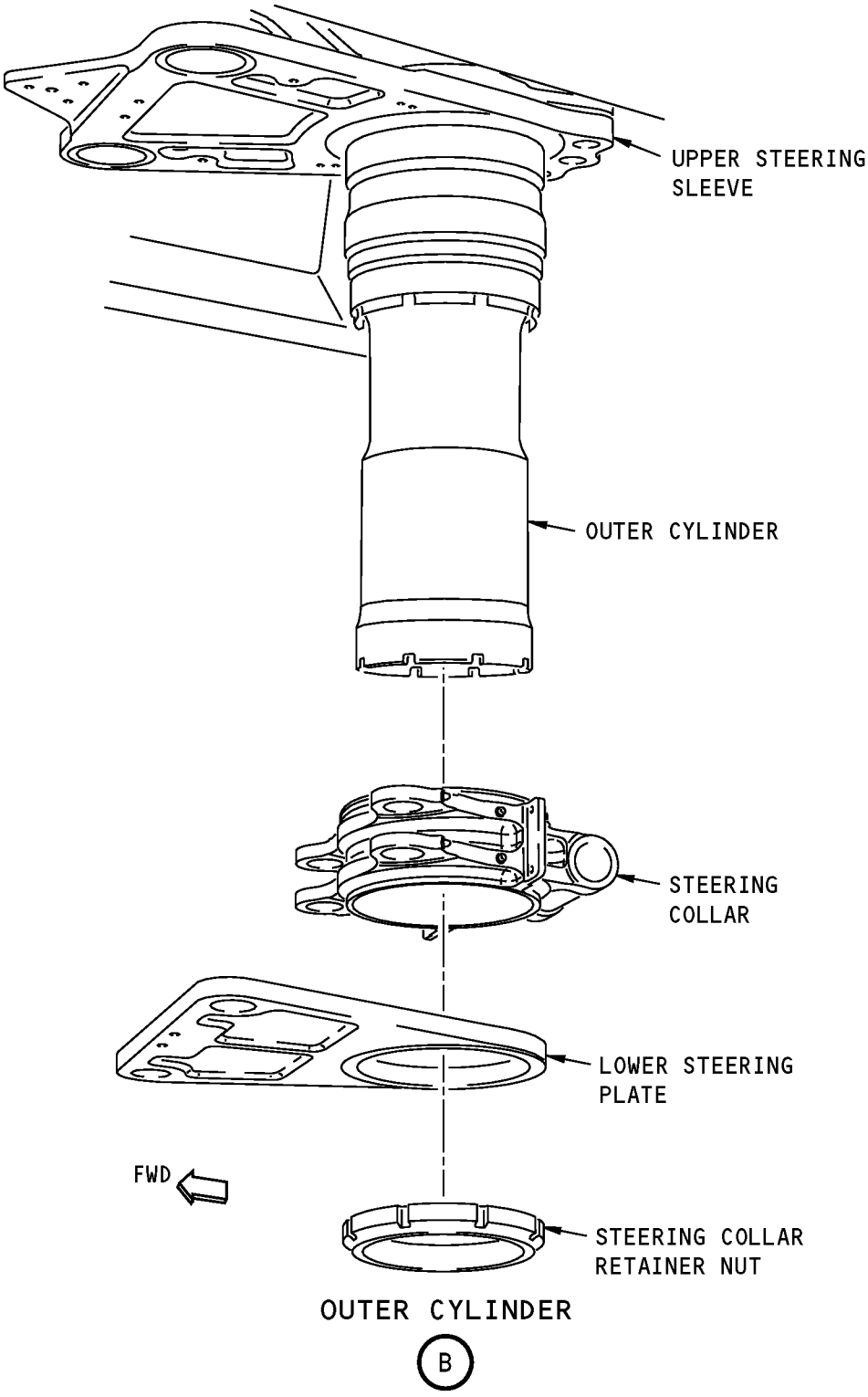
———————— END OF TASK ————————

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Nose Landing Gear Assembly
Figure 203 (Sheet 1 of 2)/32-05-03-990-801

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Nose Landing Gear Assembly
Figure 203 (Sheet 2 of 2)/32-05-03-990-801

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AIR/GROUND SYSTEM - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

(1) Prepare to put the airplane in the air mode

(2) Put the airplane in the air mode

(3) Return the airplane to the ground mode

(4) Put the airplane systems back to their normal on ground condition.

TASK 32-09-00-840-801

2. Prepare to Put the Airplane in the Air Mode

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
78-31-00-040-802-F00	Thrust Reverser Deactivation For Ground Maintenance (P/B 201)

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

C. Procedure

SUBTASK 32-09-00-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-09-00-480-002

WARNING: MAKE SURE THE CHOCKS ARE INSTALLED ON THE LANDING GEAR. WITHOUT THE CHOCKS, THE AIRPLANE COULD MOVE AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(2) Make sure chocks are installed at the wheels.

SUBTASK 32-09-00-040-004

(3) Make sure that the take off warning horn will not operate.

(a) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF

SUBTASK 32-09-00-040-009

HAP (4) Make sure that ACARS will not operate.

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HAP (a) Open these circuit breakers and install safety tags:

HAP F/O Electrical System Panel, P6-1

Row	Col	Number	Name
HAP 001-013, 015-026, 028-036			
E	7	C00744	ACARS MU AC
HAP 001-013, 015-026, 028-030			
E	8	C00743	ACARS MU DC
HAP 031-054, 101-999			
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

HAP **HAP ALL**

SUBTASK 32-09-00-040-003

(5) Make sure that the weather radar will not operate.

(a) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	13	C00120	WEATHER RADAR RT

SUBTASK 32-09-00-040-005

(6) Make sure that the door area heaters will not operate.

(a) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	11	C01274	AIR CONDITIONING DOOR AREA HEAT CONT

Power Distribution Panel Number 1, P91

Row	Col	Number	Name
HAP 001-013, 015-026, 028-036			
A	14	C01279	DOOR AREA HTR-AFT
A	16	C01280	DOOR AREA HTR-FWD
HAP 037-054, 101-999			
D	7	C01279	DOOR AREA HTR-AFT
D	9	C01280	DOOR AREA HTR-FWD

HAP ALL

SUBTASK 32-09-00-040-006

(7) Make sure that the AOA Vane heaters will not operate.

(a) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT

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SUBTASK 32-09-00-040-001

(8) Make sure the drain masts do not get too hot:

NOTE: If you will put the airplane in the air mode for less than a minute, you do not need to de-activate the drain mast.

(a) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	4	C00700	HEATERS DRAIN MAST AIR

SUBTASK 32-09-00-840-001

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU PUT THE AIRPLANE IN AIR MODE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(9) Make sure persons and equipment are clear of flight control surfaces.

SUBTASK 32-09-00-040-002

WARNING: DO THE DEACTIVATION PROCEDURE TO PREVENT THE OPERATION OF THE THRUST REVERSER. THE ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(10) Do this task: Thrust Reverser Deactivation For Ground Maintenance, TASK 78-31-00-040-802-F00.

END OF TASK

TASK 32-09-00-860-801

3. Put the Airplane in the Air Mode

(Figure 201, Figure 202)

A. General

(1) This task has three options to put the airplane in the air mode.

NOTE: Using the PSEU BITE procedure to simulate air mode is the recommended method. Using deactuators or jacking the airplane are the alternate methods. The use of deactuators or jacking the airplane will cause nuisance faults.

(a) You can put the airplane in the air mode with the BITE in the Proximity Switch Electronics Unit (PSEU) (Recommended Method).

(b) You can also put deactuators on the nose and main landing gear to put the airplane in air mode (Alternate Method).

NOTE: A total of six (6) deactuators are needed.

(c) You can also lift the airplane on jacks to put the airplane in air mode (Alternate Method).

B. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

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Reference	Description
SPL-1690	Set - Actuators/Deactuators, Proximity Sensor Test (Part #: 8-758-01, Supplier: 08748, A/P Effectivity: 737-ALL) (Part #: A27092-106, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A27092-84, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
211	Flight Compartment - Left
212	Flight Compartment - Right
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

E. Access Panels

Number	Name/Location
112A	Forward Access Door

F. Prepare for the Procedure

SUBTASK 32-09-00-860-001

WARNING: OBEY THE PROCEDURE THAT PREPARES TO PUT THE AIRPLANE IN THE AIR MODE. IN THE AIR MODE, MANY OF THE AIRPLANE SYSTEMS CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Prepare to Put the Airplane in the Air Mode, TASK 32-09-00-840-801.

G. Put the Airplane in the Air Mode With the PSEU BITE (Recommended Method)

NOTE: The PSEU software puts the air/ground relays in the mode opposite to the landing gear indicated states. For example, if the landing gear sensors indicate that the airplane is on the ground, the PSEU will only override to the "in air" condition.

SUBTASK 32-09-00-010-001

(1) Open this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-09-00-860-002

(2) Push the ON/OFF switch on the PSEU BITE panel to turn the PSEU BITE on.

SUBTASK 32-09-00-860-008

(3) Push the down arrow until AIR/GND OVRD? is displayed.

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SUBTASK 32-09-00-860-009

(4) Push the YES switch to select this option.

NOTE: The BITE display will show SET SYS 1 IN AIR?. The PSEU is designed so that the air/ground system 1 and system 2 can be controlled independently. You will put both systems in the air mode unless a procedure specifies a system.

NOTE: Irregular operation of various systems may occur if SYS 1 and SYS2 are placed in air and ground mode at the same time. If this occurs, disable the irregularly operating system.

SUBTASK 32-09-00-860-012

(5) To change the state of systems 1 and 2, push the down arrow until SET SYS 1 & 2 IN AIR? shows.

SUBTASK 32-09-00-860-017

(6) Push the YES switch.

SUBTASK 32-09-00-860-013

(7) The message ARE YOU SURE? will show. Push the YES switch again.

NOTE: The BITE display will show SYS 1 (2, or 1 & 2) IN AIR.

SUBTASK 32-09-00-860-014

(8) The SYS 1 IN AIR and SYS 2 IN AIR lights will come on.

H. Put the Airplane in the Air Mode With Deactuators (Alternate Method)

SUBTASK 32-09-00-860-003

NOTE: This is not the recommended method to simulate air mode. This method will induce nuisance faults.

(1) Attach deactuators to the face of the air/ground sensors for the nose and main landing gear.

NOTE: You will need six A27092-64 deactuators to put the airplane in the air mode. The proximity sensor test set, SPL-1690 contains one deactuator.

NOTE: As an option, deactuators can be constructed as follows: Material: 5052, 6061, 7075, or 2024 aluminum or sheet copper. For rectangular sensors - 1.5 in. (38 mm) x 0.75 in. (19 mm) x0.05 in. (1.27 mm). For round sensors - 1.0 in. (25 mm) x 1.0 in. (25 mm) x 0.05 in. (1.27 mm)

SUBTASK 32-09-00-860-015

(2) The SYS 1 IN AIR and SYS 2 IN AIR lights on the PSEU BITE panel will come on.

I. Put the Airplane in the Air Mode by Lifting the Airplane on Jacks (Alternate Method)

SUBTASK 32-09-00-860-004

NOTE: This is not the recommended method to simulate air mode. This method will induce nuisance faults.

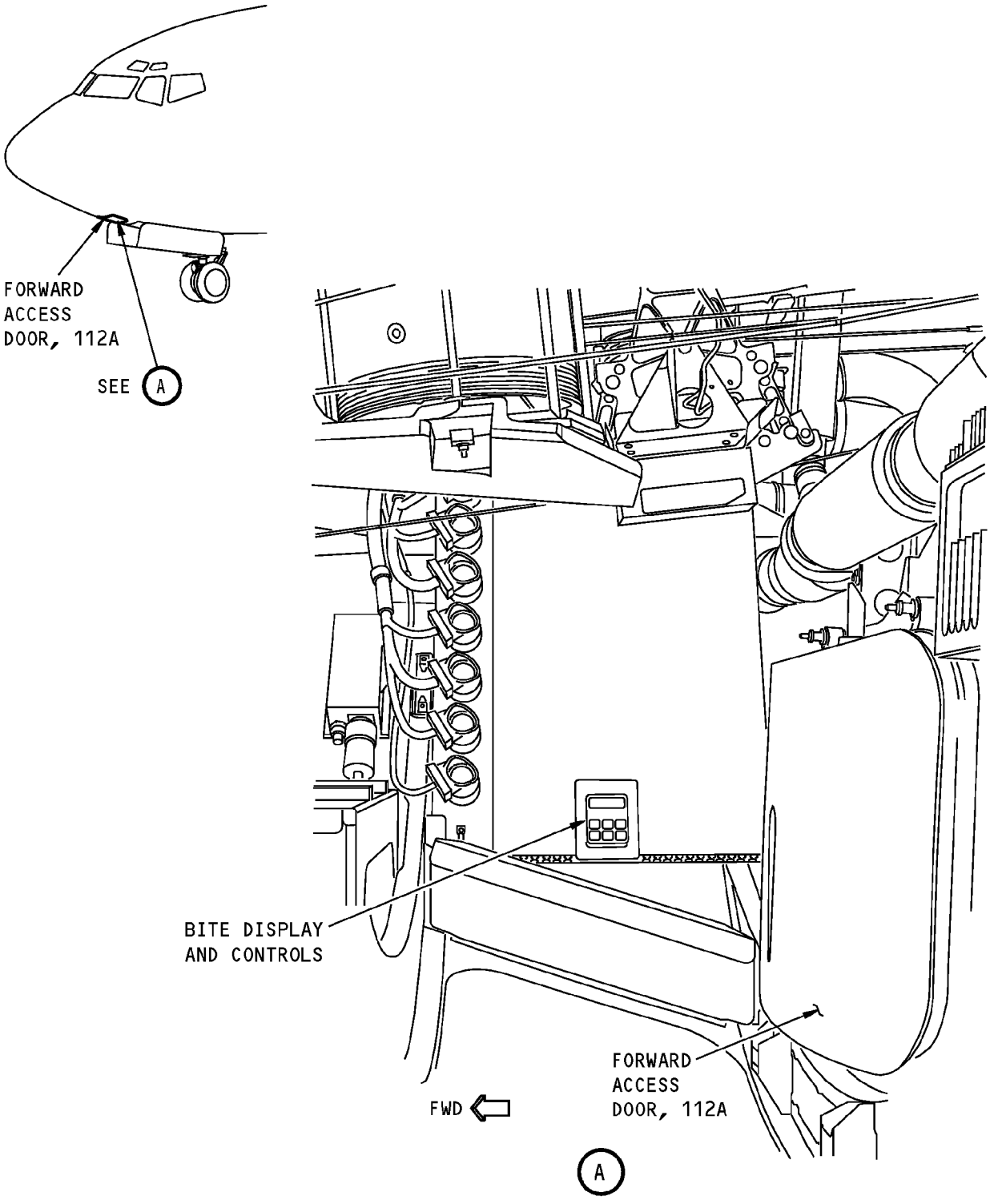
(1) Do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-09-00-860-016

(2) The SYS 1 IN AIR and SYS 2 IN AIR lights on the PSEU BITE panel will come on.

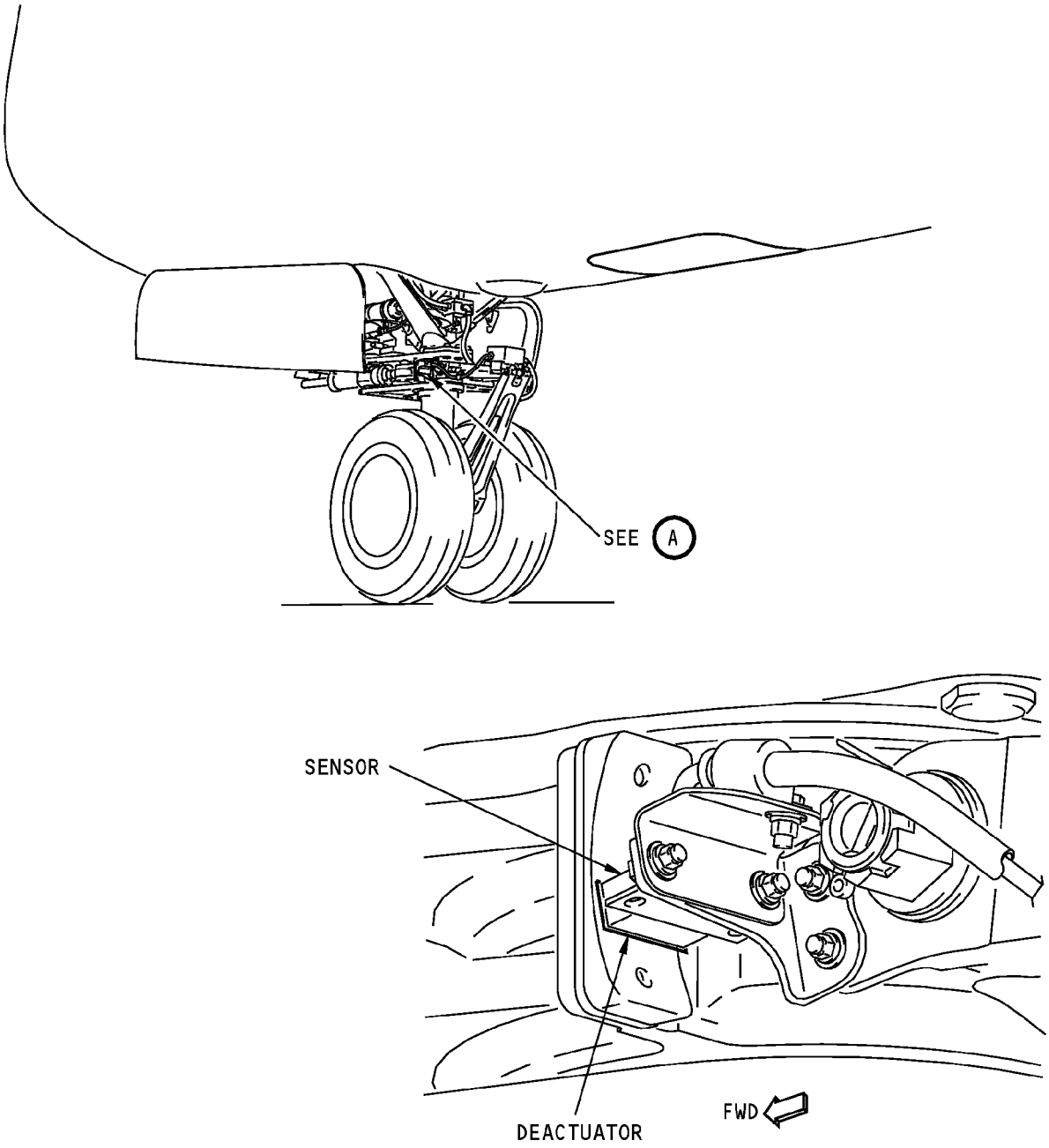
END OF TASK

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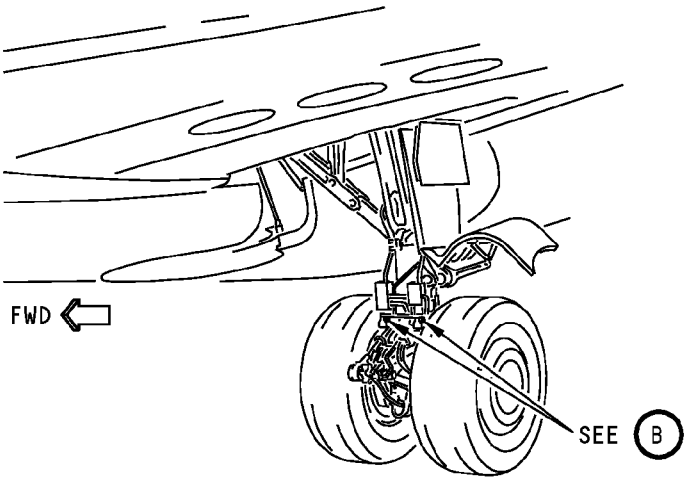
Air Mode Simulation with the PSEU BITE
Figure 201/32-09-00-990-801

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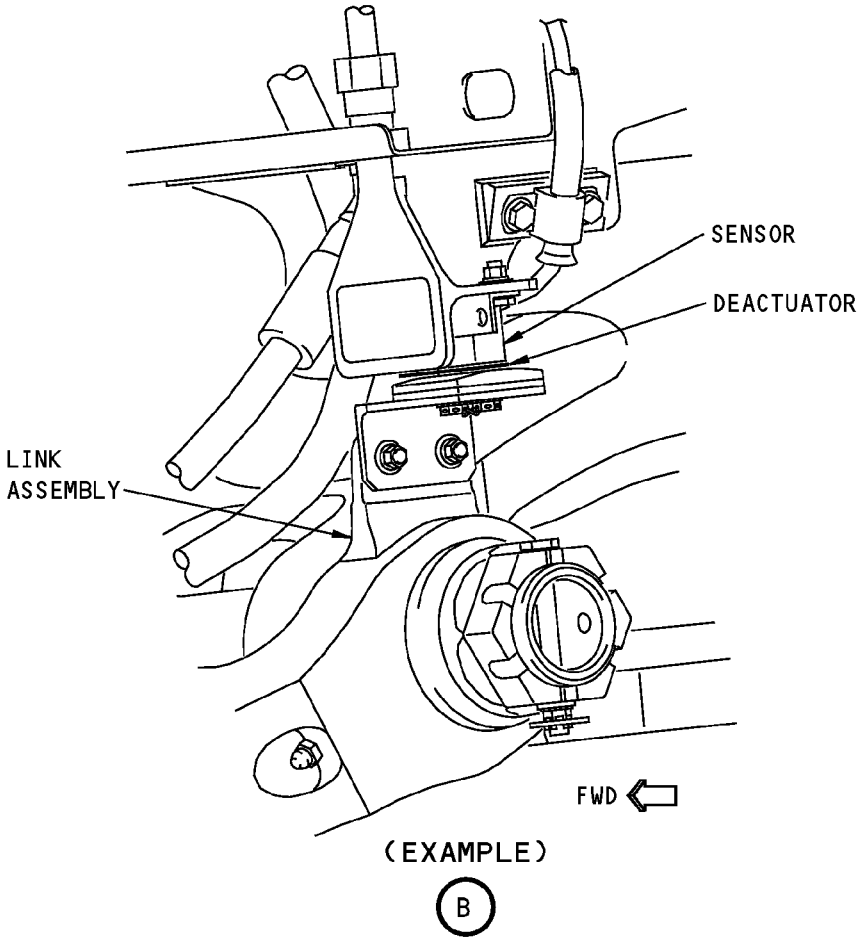


Air Mode Simulation with Deactuators
Figure 202 (Sheet 1 of 2)/32-09-00-990-802

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LEFT MAIN LANDING GEAR
(RIGHT MAIN LANDING GEAR IS OPPOSITE)



Air Mode Simulation with Deactuators
Figure 202 (Sheet 2 of 2)/32-09-00-990-802

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TASK 32-09-00-860-802

4. Return the Airplane to the Ground Mode

(Figure 201)

A. References

Reference	Title
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
211	Flight Compartment - Left
212	Flight Compartment - Right
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

C. Access Panels

Number	Name/Location
112A	Forward Access Door

D. Put the Airplane in Ground Mode

SUBTASK 32-09-00-860-005

(1) If the airplane was put in the air mode with the PSEU BITE, then do these steps:

(a) If the PSEU BITE display is off, then do these steps:

1) Push the ON/OFF switch on the PSEU BITE panel to turn the PSEU BITE display on.

2) Push the down arrow until AIR/GND OVRD? shows on the PSEU display.

3) Push the YES switch to select this option.

NOTE: The BITE display will show SET SYS 1 (2, or 1 & 2) IN AIR?

(b) Push the down arrow until RESET OVRD? shows.

(c) Push the YES switch to select this option.

NOTE: The BITE display will show ARE YOU SURE?.

(d) Push the YES switch.

NOTE: The BITE display will show OVRD RESET. After a two second delay the BITE display will show AIR/GND OVRD?.

(e) The SYS 1 IN AIR and SYS 2 IN AIR lights will go off.

(f) Close this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-09-00-860-006

(2) If the airplane was put in the air mode with deactuators, remove the deactuators from the nose and main landing gear.

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SUBTASK 32-09-00-860-007

(3) If the airplane was put in the air mode by jacking the airplane, do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

SUBTASK 32-09-00-840-003

(4) Put the airplane systems back to their usual on-ground condition. To do this, do this task: Return the Airplane Systems Back to Their Normal On Ground Condition, TASK 32-09-00-840-802.

SUBTASK 32-09-00-860-018

(5) If you used the deactuator or jacked the airplane to simulate air mode do these steps to reset the PSEU:

NOTE: When you simulate air mode using the deactuators or by jacking the airplane, you will induce nuisance faults.

(a) Push the ON/OFF switch on the PSEU BITE panel to turn the PSEU BITE display on.

(b) Push YES switch to the following prompt: EXISTING FAULTS?

(c) Push the up arrow key until RESET LATCHES? shows on the PSEU display.

(d) Push the YES switch to select this option.

(e) Push YES switch to the following prompt: ARE YOU SURE?

——————— END OF TASK ———————

TASK 32-09-00-840-802

5. Return the Airplane Systems Back to Their Normal On Ground Condition

A. References

Reference	Title
78-31-00-440-803-F00	Thrust Reverser Activation After Ground Maintenance (P/B 201)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
211	Flight Compartment - Left
212	Flight Compartment - Right
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

C. Procedure

SUBTASK 32-09-00-440-003

(1) Return the take off warning system to its original condition.

(a) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF

SUBTASK 32-09-00-860-019

HAP (2) Return ACARS to its original condition.

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HAP (a) Remove the safety tags and close these circuit breakers:

HAP F/O Electrical System Panel, P6-1

	Row	Col	Number	Name
HAP	**HAP 001-013, 015-026, 028-036**			
HAP	E	7	C00744	ACARS MU AC
HAP	**HAP 001-013, 015-026, 028-030**			
HAP	E	8	C00743	ACARS MU DC
HAP	**HAP 031-054, 101-999**			
HAP	E	8	C01483	CMU-1 AC
HAP	E	9	C01500	CMU/ACARS DC

HAP **HAP ALL**

SUBTASK 32-09-00-440-002

(3) Return the weather radar to its original condition.

(a) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	13	C00120	WEATHER RADAR RT

SUBTASK 32-09-00-040-007

(4) Return the door area heaters to their original condition.

(a) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	11	C01274	AIR CONDITIONING DOOR AREA HEAT CONT

Power Distribution Panel Number 1, P91

Row	Col	Number	Name
HAP 001-013, 015-026, 028-036			
A	14	C01279	DOOR AREA HTR-AFT
A	16	C01280	DOOR AREA HTR-FWD
HAP 037-054, 101-999			
D	7	C01279	DOOR AREA HTR-AFT
D	9	C01280	DOOR AREA HTR-FWD

HAP ALL

SUBTASK 32-09-00-040-008

(5) Return the AOA Vane heaters to their original condition.

(a) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT

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SUBTASK 32-09-00-840-002

(6) Return the drain mast heat to the normal condition.

(a) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	4	C00700	HEATERS DRAIN MAST AIR

SUBTASK 32-09-00-440-001

(7) Do this task: Thrust Reverser Activation After Ground Maintenance, TASK 78-31-00-440-803-F00.

END OF TASK

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MAIN LANDING GEAR AIR/GROUND SENSOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) Removal of the main landing gear air/ground sensor

(2) Installation of the main landing gear air/ground sensor

B. The procedures for the left and right installations are similar.

TASK 32-09-01-020-801

2. Main Landing Gear Air/Ground Sensor Removal

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-840-801	Prepare to Put the Airplane in the Air Mode (P/B 201)

B. Location Zones

Zone	Area
731	Left Main Landing Gear - Outboard Door
741	Right Main Landing Gear - Outboard Door

C. Prepare for the Removal

SUBTASK 32-09-01-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-09-01-840-003

WARNING: OBEY THE PROCEDURE THAT PREPARES TO PUT THE AIRPLANE IN THE AIR MODE. IN THE AIR MODE, MANY OF THE AIRPLANE SYSTEMS CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(2) Do this task: Prepare to Put the Airplane in the Air Mode, TASK 32-09-00-840-801.

SUBTASK 32-09-01-860-001

(3) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Main Landing Gear Air/Ground Sensor Removal

SUBTASK 32-09-01-210-001

(1) Inspect the sensor [4] and target assembly for damage or other evidence that the sensor clearance may be out of tolerance.

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(a) Write a note to check the sensor clearance if there is evidence that the sensor clearance may be out of tolerance.

SUBTASK 32-09-01-020-001

(2) Disconnect the sensor wires in the junction box.

(a) Remove the screws [7] and washers [5] securing the junction box cover [6].

(b) Remove the junction box cover [6].

(c) Remove the sensor wire contacts from the terminal block in the junction box.

(d) Attach a string to the sensor wires.

NOTE: This string will be used to pull the wires of the new sensor through the conduit. The string can be tied to the landing gear structure to ensure that the string is not pulled through the conduit.

SUBTASK 32-09-01-020-002

(3) Remove the sensor [4].

(a) Remove the nuts [1], washers [2], and bolts [3] which secure the sensor [4] to the mounting bracket.

(b) Remove the sensor [4] from the bracket.

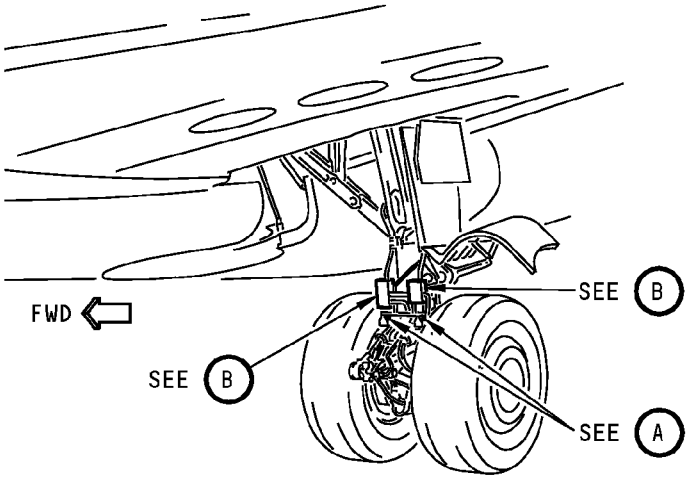
(c) Pull the sensor wires out of the conduit.

NOTE: Make sure you do not pull the string through the conduit.

(d) Remove the string from the sensor wires.

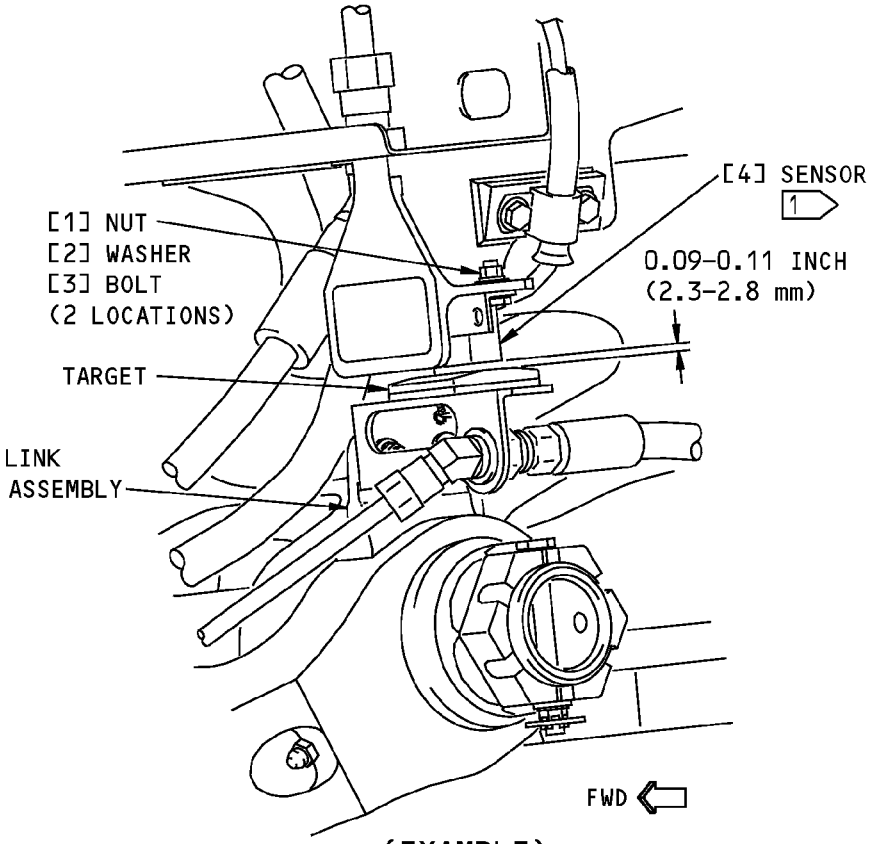
——————— END OF TASK ———————

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LEFT MAIN LANDING GEAR
(RIGHT MAIN LANDING GEAR IS OPPOSITE)

1 ITEM	SENSOR NO.	MLG	LOCATION
[4]	S1010	R	OUTBD
[4]	S1011	R	INBD
[4]	S1012	L	OUTBD
[4]	S1013	L	INBD

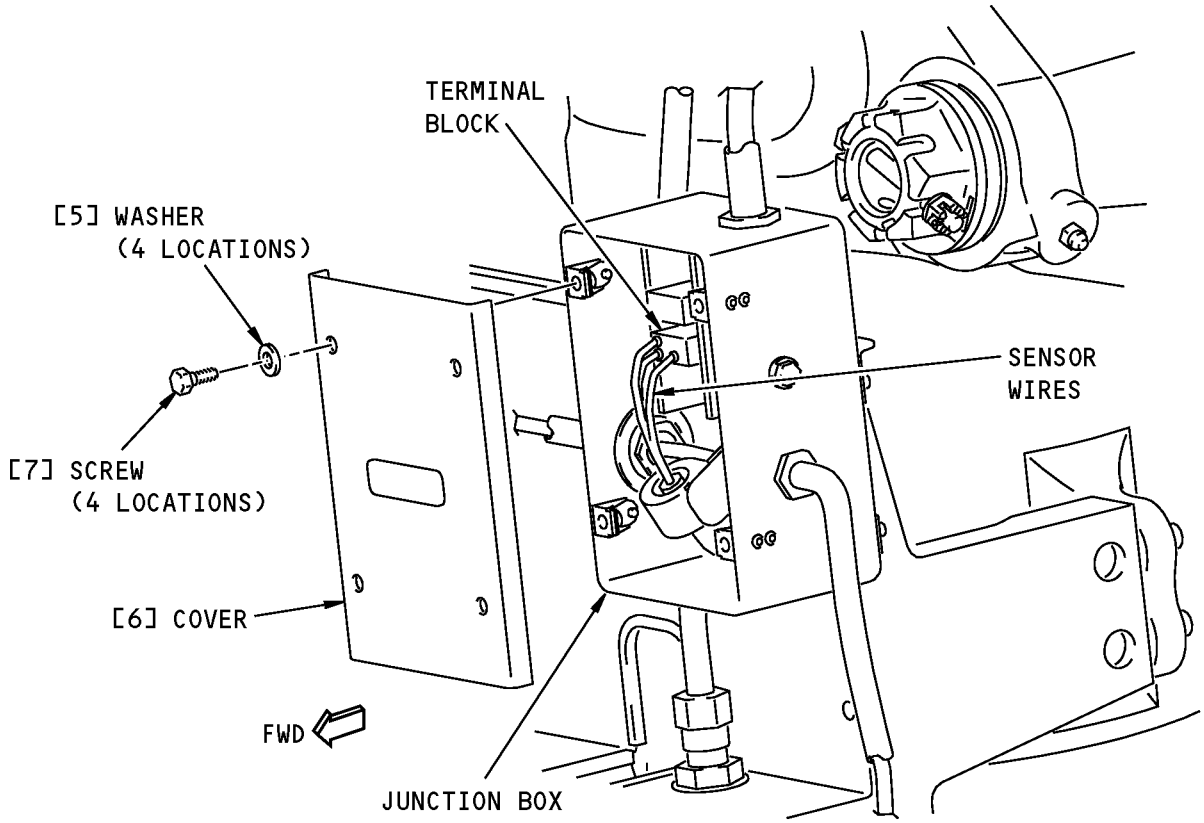


(EXAMPLE)

A

Main Landing Gear Air/Ground Sensor Installation
Figure 401 (Sheet 1 of 2)/32-09-01-990-801

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OUTBOARD JUNCTION BOX
(INBOARD JUNCTION BOX IS EQUIVALENT)
(EXAMPLE)

B

Main Landing Gear Air/Ground Sensor Installation
Figure 401 (Sheet 2 of 2)/32-09-01-990-801

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TASK 32-09-01-400-801

3. Main Landing Gear Air/Ground Sensor Installation

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-840-801	Prepare to Put the Airplane in the Air Mode (P/B 201)
32-09-00-840-802	Return the Airplane Systems Back to Their Normal On Ground Condition (P/B 201)
32-09-01-710-801	Main Landing Gear Air/Ground Sensor Operational Test (P/B 501)
32-09-01-820-801	Main Landing Gear Air/Ground Sensor Clearance Adjustment (P/B 501)

B. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27

C. Location Zones

Zone	Area
731	Left Main Landing Gear - Outboard Door
741	Right Main Landing Gear - Outboard Door

D. Access Panels

Number	Name/Location
112A	Forward Access Door

E. Prepare for the Installation

SUBTASK 32-09-01-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-09-01-840-004

WARNING: OBEY THE PROCEDURE THAT PREPARES TO PUT THE AIRPLANE IN THE AIR MODE. IN THE AIR MODE, MANY OF THE AIRPLANE SYSTEMS CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(2) If the airplane systems are not prepared for air mode simulation, then, do this task: Prepare to Put the Airplane in the Air Mode, TASK 32-09-00-840-801.

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SUBTASK 32-09-01-860-002

(3) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

F. Main Landing Gear Air/Ground Sensor Installation

SUBTASK 32-09-01-350-001

(1) Cut the sensor wires to the correct length:

(a) You can use the sensor that was removed to determine the wire length on the replacement sensor.

SUBTASK 32-09-01-420-001

(2) Attach the contacts to the sensor wires.

SUBTASK 32-09-01-420-002

(3) Attach the sensor [4] to the mounting bracket.

(a) Position the sensor [4] on the bracket.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(b) Apply a thin coat of compound, C50056 or compound, C00913 (alternative) to the thread reliefs and threads of the bolts [3] and the nuts [1] and the faces of the washers [2]. Wipe off the excess.

(c) Install the bolts [3], washers [2], and nuts [1].

SUBTASK 32-09-01-410-001

(4) Attach the sensor wires to the airplane.

(a) Attach the string to the sensor wires.

(b) Pull the wires through the conduit to the junction box.

(c) Remove the string from the sensor wires

(d) Install the sensor contacts into the terminal block.

1) Red wire goes into position A.

2) Yellow wire goes into position E.

3) Blue wire goes into position C.

SUBTASK 32-09-01-410-002

(5) Replace the junction box cover [6].

(a) Install the washers [5] and screws [7] to secure the junction box cover [6].

G. Main Landing Gear Air/Ground Sensor Test

SUBTASK 32-09-01-200-001

(1) Do a post installation check of the sensor [4].

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(a) If there was any evidence that the sensor clearance is out of tolerance, measure the clearance between the sensor [4] and target with a feeler gage.

1) If the clearance is not as shown in Figure 401, then, do this task: Main Landing Gear Air/Ground Sensor Clearance Adjustment, TASK 32-09-01-820-801.

(b) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

(c) Do this task: Return the Airplane Systems Back to Their Normal On Ground Condition, TASK 32-09-00-840-802.

(d) Open this access panel:

Number	Name/Location
112A	Forward Access Door

(e) Use the PSEU BITE to test the sensor.

1) Push the ON/OFF switch on the PSEU BITE display.
2) Push the down arrow until OTHER FUNCTNS? shows.
3) Push the YES switch to select OTHER FUNCTNS?
4) Push the down arrow until SENSOR RIGGING? shows.
5) Push the YES switch to select SENSOR RIGGING?
6) Push the down arrow until the applicable sensor identification shows.

NOTE: See the table in (Figure 401) for the sensor identification and location.

7) Push the YES switch to show the sensor number and gap display.
8) Make sure the PSEU BITE display shows the sensor clearance within tolerance.

NOTE: For a description of the sensor clearance display see (Main Landing Gear Air/Ground Sensor Operational Test, TASK 32-09-01-710-801).

H. Put the Airplane Back to Its Usual Condition

SUBTASK 32-09-01-010-001

(1) Push the ON/OFF switch on the PSEU BITE panel to turn off the PSEU BITE.

SUBTASK 32-09-01-410-003

(2) Close this access panel:

Number	Name/Location
112A	Forward Access Door

END OF TASK

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MAIN LANDING GEAR AIR/GROUND SENSOR - ADJUSTMENT/TEST

1. General

A. This procedure has these tasks:

(1) Measurement of the main landing gear air/ground sensor clearance

(2) Adjustment of the main landing gear air/ground sensor clearance

(3) Operational test of the main landing gear air/ground sensor

B. The procedures for the left and right adjustment/tests are similar.

TASK 32-09-01-400-802

2. Main Landing Gear Air/Ground Sensor Clearance Measurement

(Figure 501)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
731	Left Main Landing Gear - Outboard Door
741	Right Main Landing Gear - Outboard Door

C. Prepare for the Procedure

SUBTASK 32-09-01-480-005

(1) Make sure chocks are installed at the wheels.

SUBTASK 32-09-01-480-006

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(2) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

D. Measure the Main Landing Gear Air/Ground Sensor Clearance

SUBTASK 32-09-01-220-001

(1) Measure the clearance between the sensor and target [1] with a feeler gage.

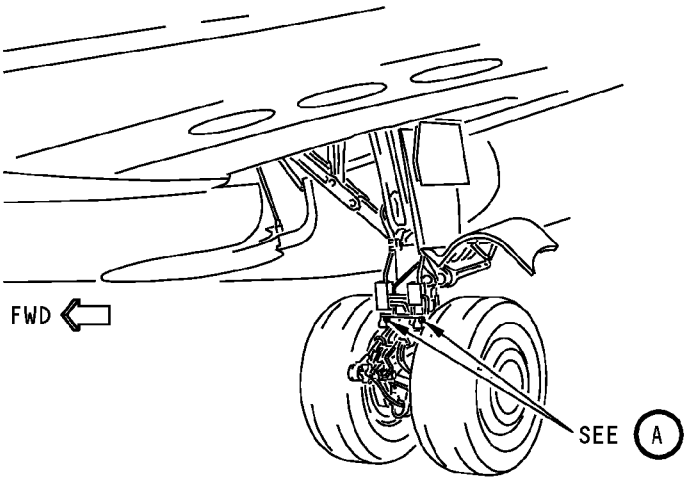
SUBTASK 32-09-01-820-001

(2) If the sensor clearance is outside the tolerance shown in Figure 501, then adjust the sensor clearance. To adjust the clearance, (Main Landing Gear Air/Ground Sensor Clearance Adjustment, TASK 32-09-01-820-801).

NOTE: Write down the measured clearance so you will know what adjustments must be made.

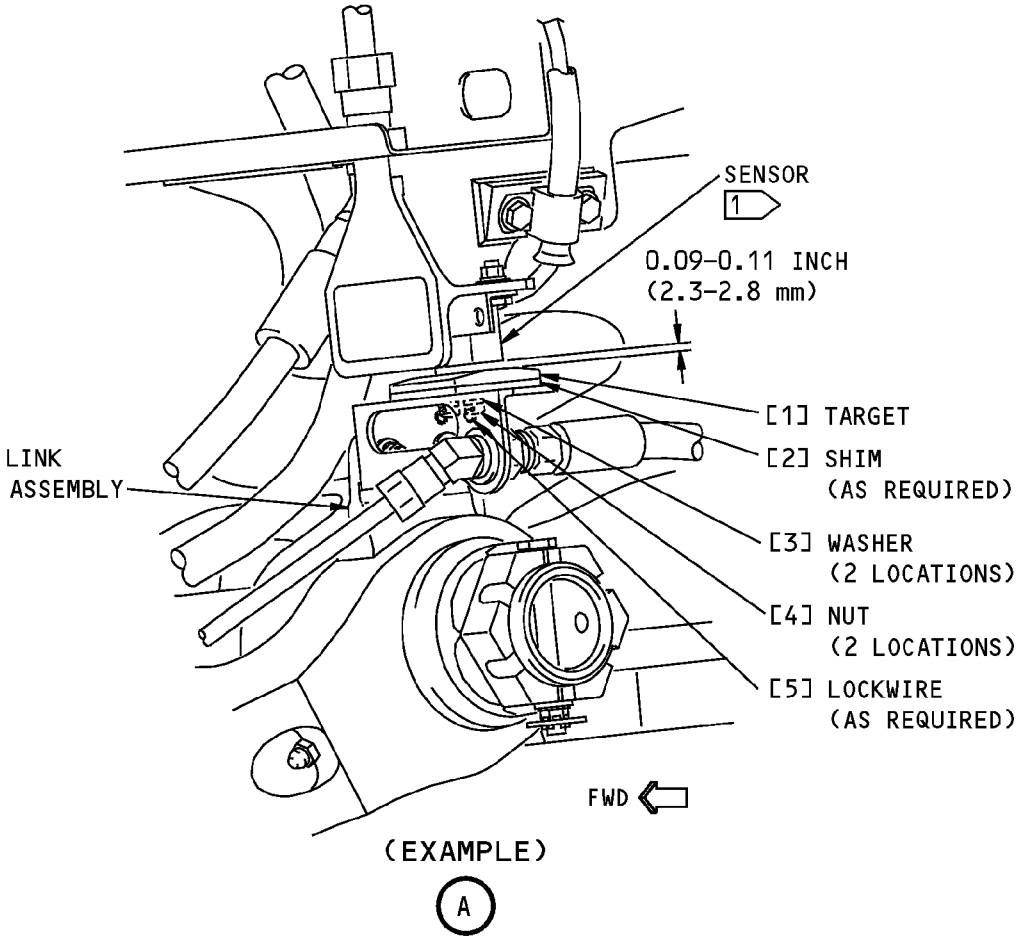
——————— END OF TASK ———————

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1 SENSOR NO.	MLG	LOCATION
S1010	R	OUTBD
S1011	R	INBD
S1012	L	OUTBD
S1013	L	INBD

LEFT MAIN LANDING GEAR
(RIGHT MAIN LANDING GEAR IS OPPOSITE)

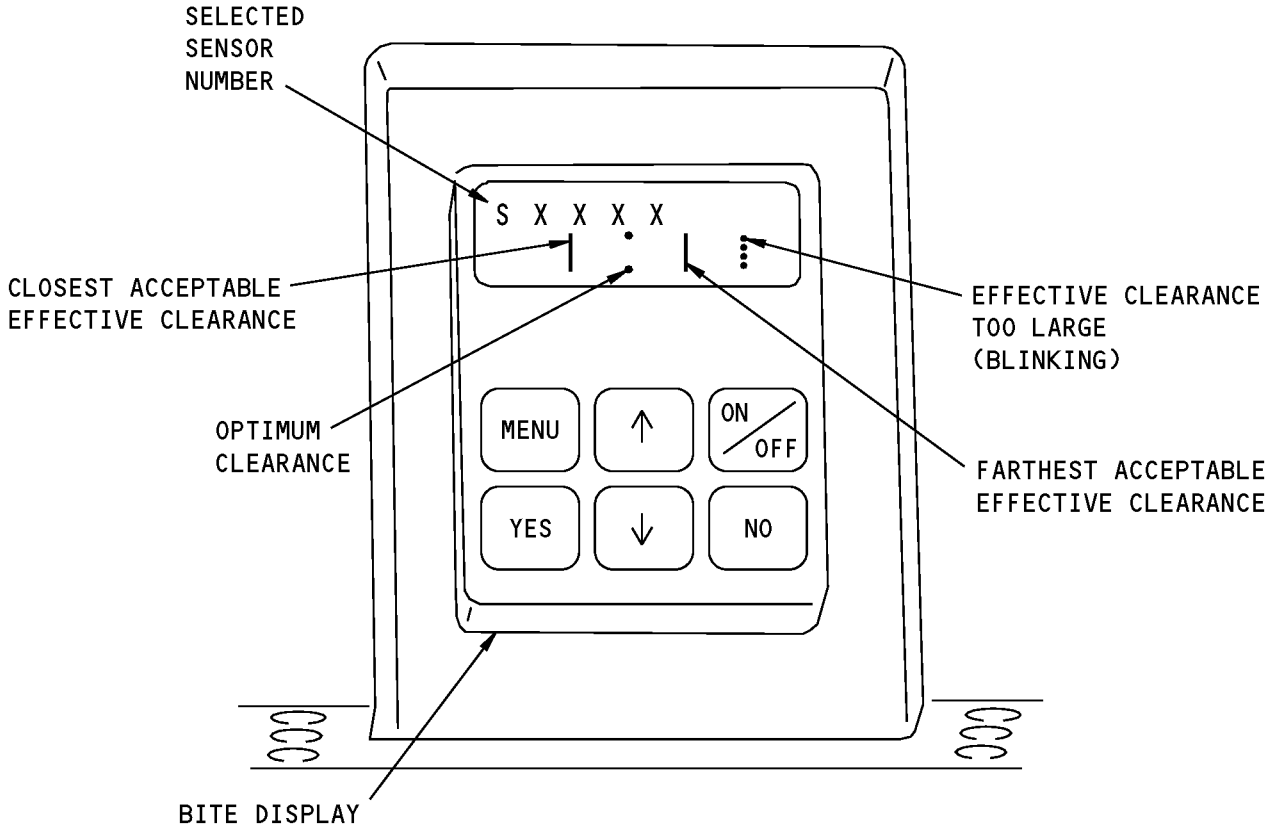


(EXAMPLE)

A

Main Landing Gear Air/Ground Sensor Test
Figure 501 (Sheet 1 of 2)/32-09-01-990-802

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PROXIMITY SWITCH ELECTRONICS UNIT (PSEU)

Main Landing Gear Air/Ground Sensor Test
Figure 501 (Sheet 2 of 2)/32-09-01-990-802

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TASK 32-09-01-820-801

3. Main Landing Gear Air/Ground Sensor Clearance Adjustment

(Figure 501)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27

C. Location Zones

Zone	Area
731	Left Main Landing Gear - Outboard Door
741	Right Main Landing Gear - Outboard Door

D. Prepare for the Procedure

SUBTASK 32-09-01-480-007

(1) Make sure chocks are installed at the wheels.

SUBTASK 32-09-01-480-008

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(2) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

E. Adjust the Main Landing Gear Air/Ground Sensor clearance

SUBTASK 32-09-01-020-009

(1) Use the target bracket to adjust the sensor clearance:

(a) Loosen the attaching hardware on the target bracket.

(b) Adjust the bracket to get the correct clearance (Figure 501).

(c) If you can adjust the bracket to get the correct clearance, then do the steps to re-tighten the bracket fasteners.

(d) If you cannot adjust the bracket to get the correct clearance, then continue the adjustment procedure.

(e) Do these steps to re-tighten the bracket fasteners:

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WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

1) Apply a thin coat of compound, C50056 or compound, C00913 (alternate) to the thread reliefs and threads of the nuts and the faces of the washers which secure the target bracket. Wipe off the excess.
2) Tighten the target bracket fasteners.

SUBTASK 32-09-01-020-007

(2) Do these steps to remove the main landing gear air/ground sensor.
   (a) Remove the attaching hardware from the sensor.
   (b) Move the sensor out of the way.

SUBTASK 32-09-01-020-003

(3) Do these steps to remove the target and shims:
   (a) Remove the lockwire [5], nuts [4], and washers [3].
   (b) Remove the target [1] and shims [2].

SUBTASK 32-09-01-110-001

(4) Clean the shims and mounting surfaces.

SUBTASK 32-09-01-420-004

(5) Remove or add shims [2] as required to get the necessary clearance.

SUBTASK 32-09-01-420-005

(6) Do these steps to secure the shim stack and target [1]:
   (a) Position the shim [2] and target [1] on the mounting bracket.

   WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

   (b) Apply a thin coat of compound, C50056 or compound, C00913 (alternate) to the thread reliefs and threads of the nuts [4] and the faces of the washers [3]. Wipe off the excess.
   (c) Replace the hardware holding the shim stack and target [1].

SUBTASK 32-09-01-020-008

(7) Do these steps to re-install the main landing gear air/ground sensor:
   (a) Position the sensor on the link assembly.

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WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(b) Apply a thin coat of compound, C50056 or compound, C00913 (alternate) to the thread reliefs, threads, and washer faces of the attaching hardware. Wipe off the excess.

(c) Secure the sensor with the attaching hardware.

SUBTASK 32-09-01-220-002

(8) Do the task to measure the sensor clearance (TASK 32-09-01-400-802).

(a) If the sensor clearance is not correct, do the steps to adjust the sensor clearance again.

SUBTASK 32-09-01-390-002

(9) Do these steps to seal the shim stack.

(a) Clean the shims [2].

(b) Apply sealant, A00247 to the shim surfaces.

SUBTASK 32-09-01-390-003

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(10) Apply a thin coat of compound, C50056 or compound, C00913 (alternate) to lockwire [5].

SUBTASK 32-09-01-420-003

(11) Install the lockwire [5] on the nuts [4] which secure the target [1].

——————— END OF TASK ———————

TASK 32-09-01-710-801

4. Main Landing Gear Air/Ground Sensor Operational Test

(Figure 501)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
731	Left Main Landing Gear - Outboard Door
741	Right Main Landing Gear - Outboard Door

C. Access Panels

Number	Name/Location
112A	Forward Access Door

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D. Prepare for the Procedure

SUBTASK 32-09-01-480-009

(1) Make sure chocks are installed at the wheels.

SUBTASK 32-09-01-480-010

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(2) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

E. Procedure

SUBTASK 32-09-01-010-002

(1) Open this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-09-01-740-001

(2) Use the PSEU BITE to test the sensor.

(a) Push the ON/OFF switch on the PSEU BITE display.

(b) Push the down arrow until OTHER FUNCTNS? shows.

(c) Push the YES switch to select OTHER FUNCTNS?

(d) Push the down arrow until SENSOR RIGGING? shows.

(e) Push the YES switch to select SENSOR RIGGING?

(f) Push the down arrow until the applicable sensor identification shows.

NOTE: See the table in (Figure 501) for the sensor identification and location.

(g) Push the YES switch to select the sensor.

(h) Push the YES switch to select GAP GRAPH? The sensor number and gap display meter will show.

NOTE: You can also display the gap value in MILS (1 MIL equals 1/1000th of an inch) or required changes to the sensor gap. Push on the down arrow or NO switch to show these options.

(i) Make sure the PSEU display shows the sensor clearance within tolerance.

NOTE: For a description of the sensor clearance display see (Figure 501).

F. Return the airplane to its normal configuration

SUBTASK 32-09-01-840-001

(1) Push the ON/OFF switch on the PSEU BITE display to turn the BITE display off.

(a) Push the YES switch to confirm that you want to turn off the display.

SUBTASK 32-09-01-840-002

(2) Close this access panel:

Number	Name/Location
112A	Forward Access Door

END OF TASK

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NOSE LANDING GEAR AIR/GROUND SENSOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) Removal of the nose landing gear air/ground sensor

(2) Installation of the nose landing gear air/ground sensor

B. The procedures for the left and right installations are similar.

TASK 32-09-02-000-801

2. Nose Landing Gear Air/Ground Sensor Removal

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-840-801	Prepare to Put the Airplane in the Air Mode (P/B 201)

B. Location Zones

Zone	Area
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-09-02-480-007

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-09-02-840-002

WARNING: OBEY THE PROCEDURE THAT PREPARES TO PUT THE AIRPLANE IN THE AIR MODE. IN THE AIR MODE, MANY OF THE AIRPLANE SYSTEMS CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(2) Do this task: Prepare to Put the Airplane in the Air Mode, TASK 32-09-00-840-801.

SUBTASK 32-09-02-860-001

(3) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Nose Landing Gear Air/Ground Sensor Removal

SUBTASK 32-09-02-210-001

(1) Inspect the sensor [1] and target assembly for damage or other evidence that the sensor clearance may be out of tolerance.

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(a) Write a note to check the sensor clearance if there is evidence that the sensor clearance may be out of tolerance.

SUBTASK 32-09-02-020-003

(2) Disconnect the sensor wires in the junction box.

(a) Remove the screws [5] and washers [6] securing the junction box cover [7].

(b) Remove the junction box cover [7].

(c) Remove the sensor wire contacts from the terminal block in the junction box.

(d) Attach a string to the sensor wires.

NOTE: This string will be used to pull the wires of the new sensor through the conduit. The string can be attached to the landing gear structure to ensure that the string is not pulled through the conduit.

SUBTASK 32-09-02-020-004

(3) Remove the sensor [1].

(a) Remove the nuts [2], washers [3], and bolts [4] which secure the sensor [1] to the mounting bracket.

(b) Remove the sensor [1] from the bracket.

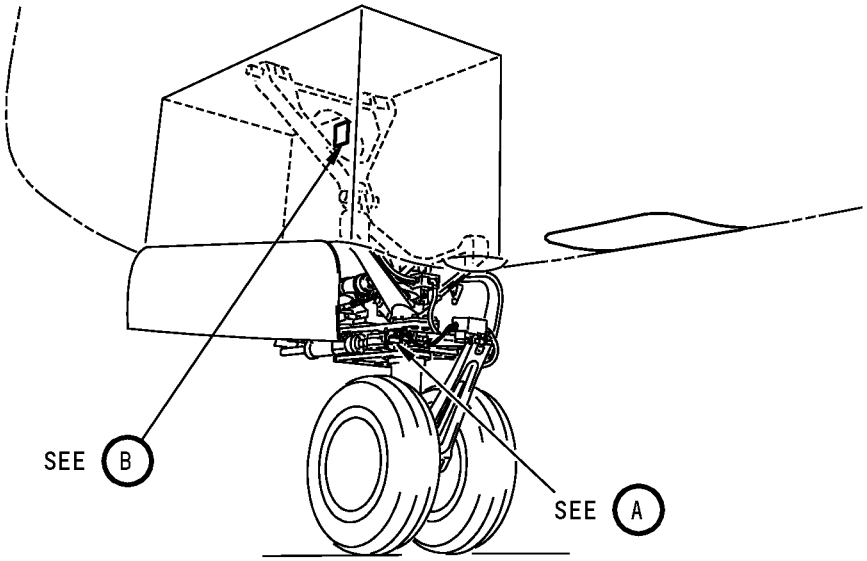
(c) Pull the sensor wires out of the conduit.

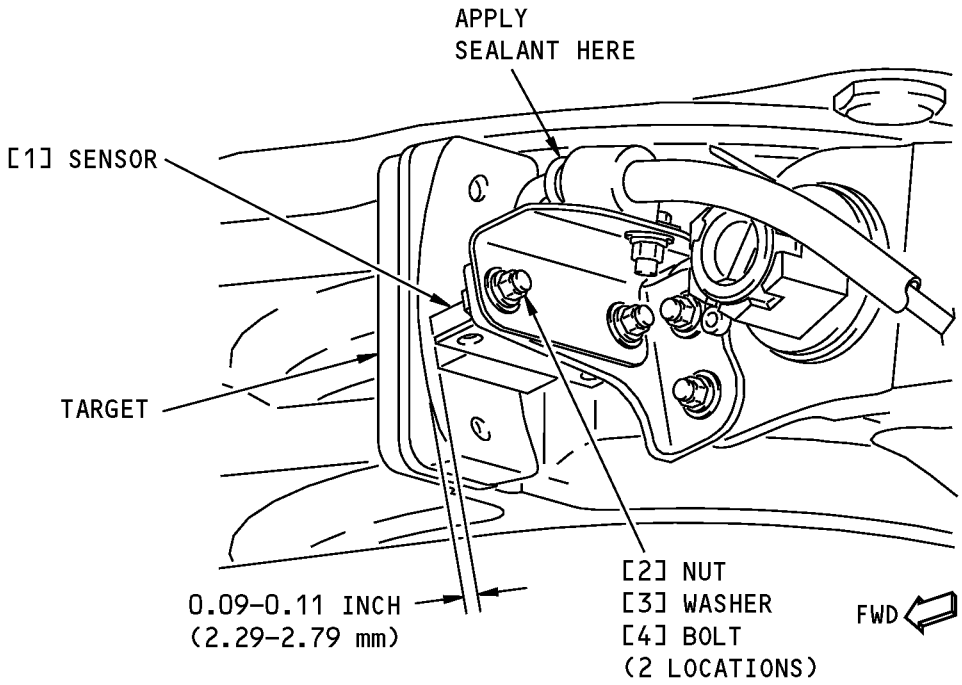
NOTE: Make sure you do not pull the string through the conduit.

(d) Remove the string from the sensor wires.

——————— END OF TASK ———————

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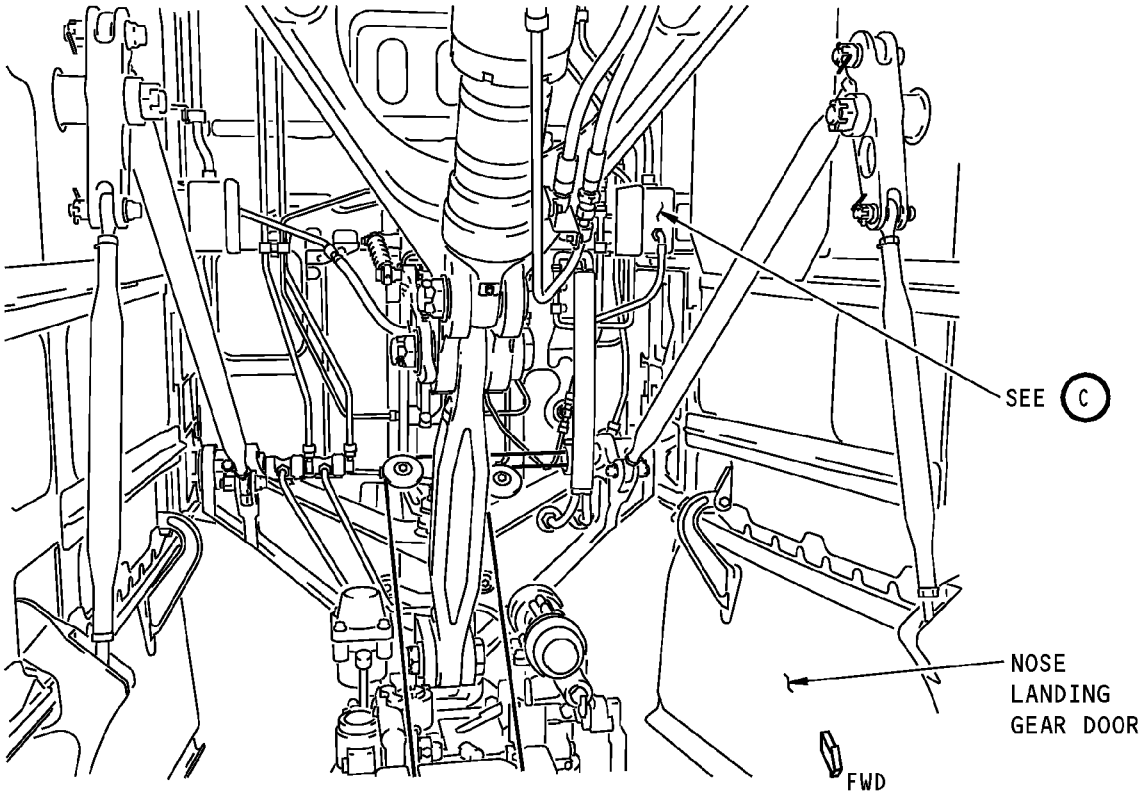


LEFT SENSOR
(RIGHT SENSOR IS OPPOSITE)

A

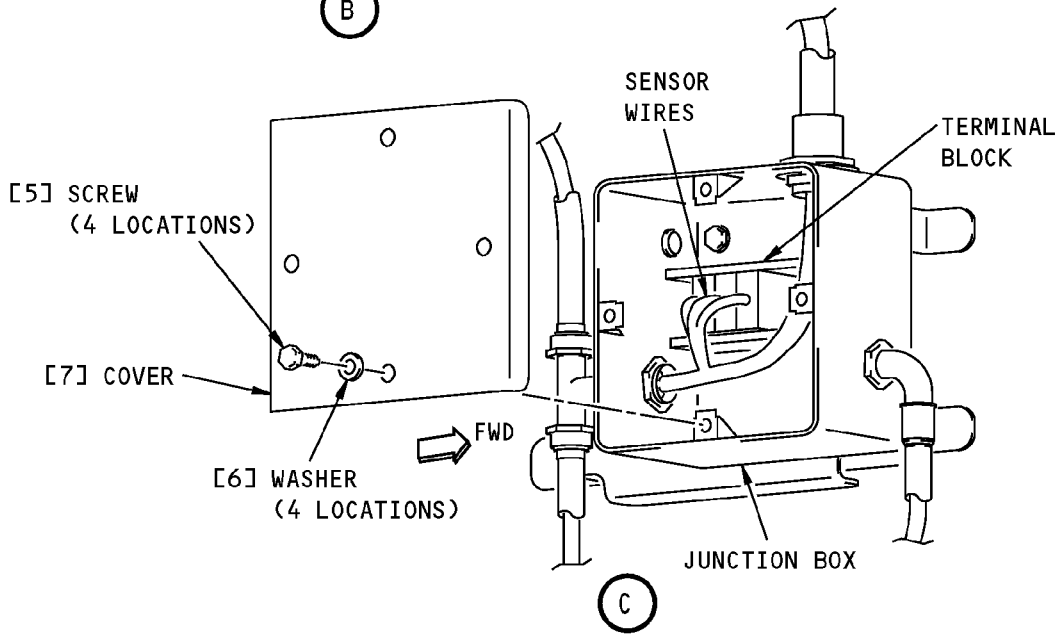
Nose Landing Gear Air/Ground Sensor Installation
Figure 401 (Sheet 1 of 2)/32-09-02-990-802

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NOSE LANDING GEAR WHEEL WELL

B



C

Nose Landing Gear Air/Ground Sensor Installation
Figure 401 (Sheet 2 of 2)/32-09-02-990-802

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TASK 32-09-02-400-802

3. Nose Landing Gear Air/Ground Sensor Installation

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-840-801	Prepare to Put the Airplane in the Air Mode (P/B 201)
32-09-00-840-802	Return the Airplane Systems Back to Their Normal On Ground Condition (P/B 201)
32-09-02-400-801	Nose Landing Gear Air/Ground Sensor Clearance Adjustment (P/B 501)
32-09-02-710-801	Nose Landing Gear Air/Ground Sensor Operational Test (P/B 501)

B. Consumable Materials

Reference	Description	Specification
A00027	Adhesive - Silicone Rubber, 1 Part, RTV	BAC5010, Type 60
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Sensor	32-09-02-01-035	HAP ALL

D. Location Zones

Zone	Area
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

E. Access Panels

Number	Name/Location
112A	Forward Access Door

F. Prepare for the Installation

SUBTASK 32-09-02-480-009

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

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SUBTASK 32-09-02-840-003

WARNING: OBEY THE PROCEDURE THAT PREPARES TO PUT THE AIRPLANE IN THE AIR MODE. IN THE AIR MODE, MANY OF THE AIRPLANE SYSTEMS CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(2) If the airplanes systems are not prepared for air mode simulation, do this task: Prepare to Put the Airplane in the Air Mode, TASK 32-09-00-840-801.

SUBTASK 32-09-02-860-002

(3) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

G. Nose Landing Gear Air/Ground Sensor Installation

SUBTASK 32-09-02-420-004

(1) Attach the sensor [1] to the mounting bracket.

(a) Position the sensor [1] on the bracket.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(b) Apply a thin coat of compound, C50056 or compound, C00913 (alternate) to the thread reliefs and threads of the bolts [4] and the nuts [2] and the faces of the washers [3]. Wipe off the excess.

(c) Install the bolts [4], washers [3] and nuts [2] to secure the sensor [1].

SUBTASK 32-09-02-350-002

(2) Do these steps to pull the sensor wires through the conduit:

(a) Attach the string to the sensor wires.

(b) Pull the wires through the conduit to the junction box.

(c) Remove the string from the sensor wires.

SUBTASK 32-09-02-420-005

(3) Attach the contacts to the sensor wires.

SUBTASK 32-09-02-410-001

(4) Attach the sensor wires to the airplane.

(a) Install the sensor contacts into the terminal block.

1) Red wire goes into position A.

2) Yellow wire goes into position E.

3) Blue wire goes into position C.

SUBTASK 32-09-02-410-002

(5) Replace the junction box cover [7].

(a) Install the washers [6] and screws [5] to secure the junction box cover [7].

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SUBTASK 32-09-02-390-002

(6) Seal the end of the conduit near the sensor with 1 in. (25.4 mm) of adhesive, A00027.

NOTE: Make sure that the sensor wiring is not touching the flared end of the conduit.

H. Nose Landing Gear Air/Ground Sensor Installation Test

SUBTASK 32-09-02-200-001

(1) Do this post installation check of the sensor [1]:

(a) If there was any evidence that the sensor clearance is out of tolerance, measure the clearance between the sensor [1] and target with a feeler gage.

1) If the clearance is not as shown in Figure 401, adjust the sensor clearance. To adjust the clearance, do this task: Nose Landing Gear Air/Ground Sensor Clearance Adjustment, TASK 32-09-02-400-801.

(b) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

(c) Do this task: Return the Airplane Systems Back to Their Normal On Ground Condition, TASK 32-09-00-840-802.

(d) Open this access panel:

Number	Name/Location
112A	Forward Access Door

(e) Do these steps to to test the sensor [1].

1) Push the ON/OFF switch to turn on the PSEU BITE display.
2) Push the down arrow until OTHER FUNCTNS? shows.
3) Push the YES switch to select OTHER FUNCTNS?
4) Push the down arrow until SENSOR RIGGING? shows.
5) Push the YES switch to select SENSOR RIGGING?
6) Push the down arrow until the applicable sensor identification shows.
7) Push the YES switch to show the sensor number and inductance meter.
8) Make sure the PSEU BITE display shows the sensor clearance within tolerance.

NOTE: For a description of the sensor clearance display see (Nose Landing Gear Air/Ground Sensor Operational Test, TASK 32-09-02-710-801).

I. Put the Airplane Back to Its Usual Condition

SUBTASK 32-09-02-010-003

(1) Push the ON/OFF switch on the PSEU BITE panel to turn off the PSEU BITE display.

SUBTASK 32-09-02-410-003

(2) Close this access panel:

Number	Name/Location
112A	Forward Access Door

END OF TASK

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NOSE LANDING GEAR AIR/GROUND SENSOR - ADJUSTMENT/TEST

1. General

A. This procedure has these tasks:

(1) Measure the nose landing gear air/ground sensor clearance

(2) Adjust the nose landing gear air/ground sensor clearance

(3) Operational test of the nose landing gear air/ground sensor.

B. The procedures for the left and right adjustment/tests are similar.

TASK 32-09-02-220-801

2. Nose Landing Gear Air/Ground Sensor Clearance Measurement

(Figure 501)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
713	Nose Landing Gear

C. Prepare for the Procedure

SUBTASK 32-09-02-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-09-02-480-002

(2) Make sure chocks are installed at the wheels.

D. Measure the Main Landing Gear Air/Ground Sensor Clearance

SUBTASK 32-09-02-220-001

(1) Measure the clearance between the sensor and target [1] with a feeler gage.

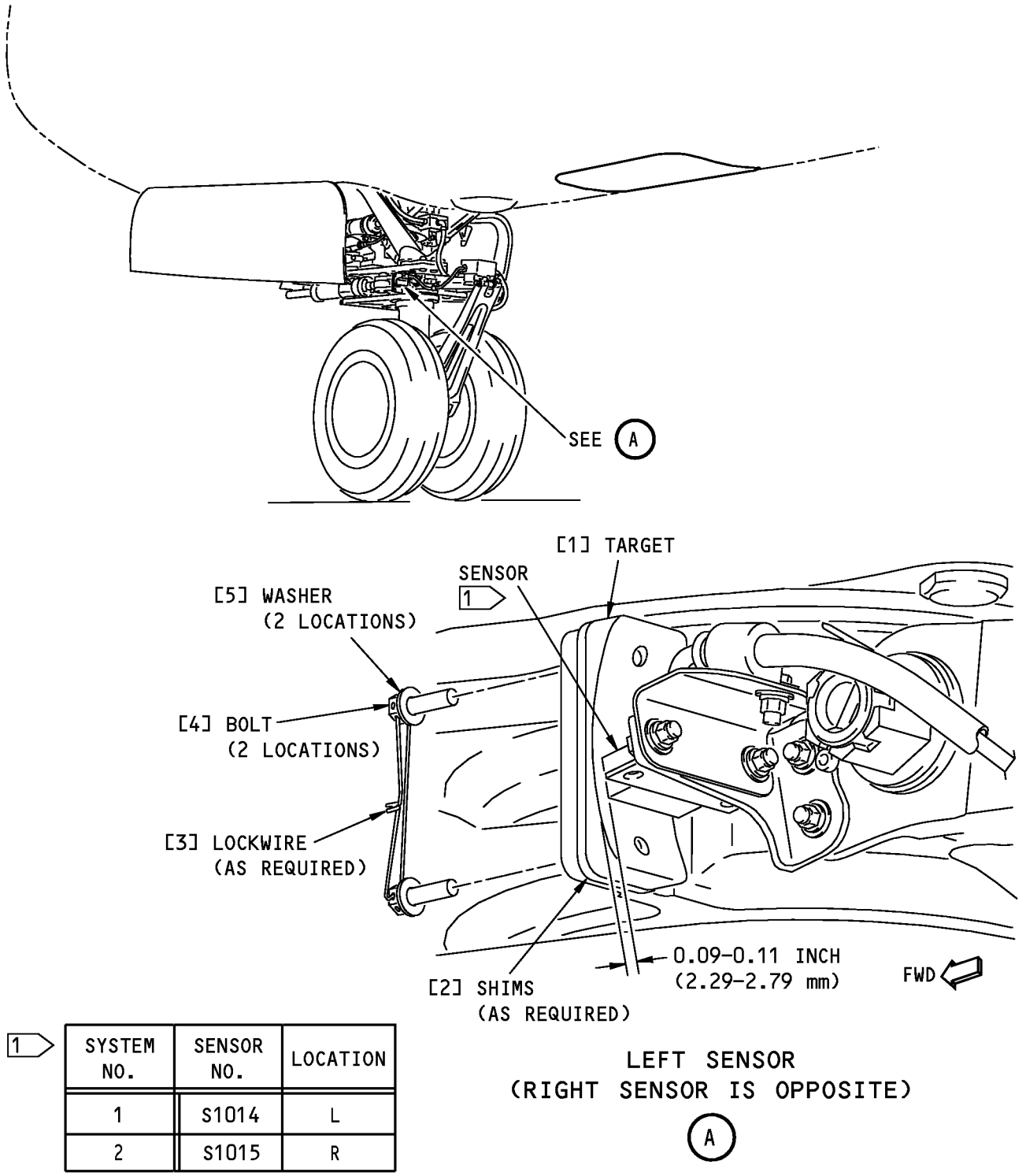
SUBTASK 32-09-02-820-001

(2) If the sensor clearance is outside the tolerance shown in Figure 501, do this task: Nose Landing Gear Air/Ground Sensor Clearance Adjustment, TASK 32-09-02-400-801.

NOTE: Write down the measured clearance so you will know what adjustments must be made.

END OF TASK

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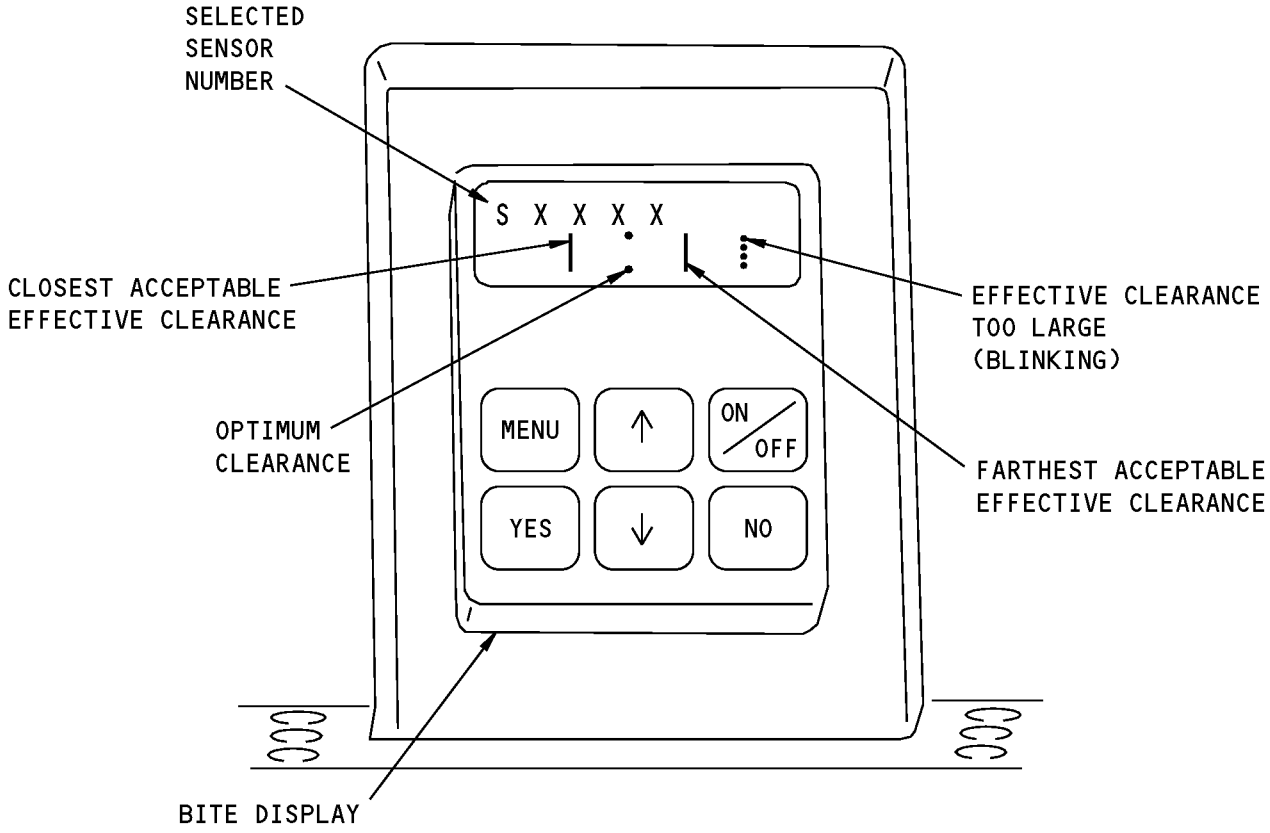
1

SYSTEM NO.	SENSOR NO.	LOCATION
1	S1014	L
2	S1015	R

F97068 S0006574729_V2

Nose Landing Gear Air/Ground Sensor Test
Figure 501 (Sheet 1 of 2)/32-09-02-990-801

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PROXIMITY SWITCH ELECTRONICS UNIT (PSEU)

Nose Landing Gear Air/Ground Sensor Test
Figure 501 (Sheet 2 of 2)/32-09-02-990-801

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TASK 32-09-02-400-801

3. Nose Landing Gear Air/Ground Sensor Clearance Adjustment

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27

C. Location Zones

Zone	Area
713	Nose Landing Gear

D. Prepare for the Procedure

SUBTASK 32-09-02-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-09-02-480-004

(2) Make sure chocks are installed at the wheels.

E. Adjust the Nose Landing Gear Air/Ground Sensor Clearance

SUBTASK 32-09-02-020-001

(1) Remove the lockwire [3], bolts [4], and washers [5].

SUBTASK 32-09-02-020-002

(2) Remove the target [1] and shims [2].

SUBTASK 32-09-02-110-001

(3) Clean the shims [2] and mounting surfaces.

SUBTASK 32-09-02-820-002

(4) Remove or add shims [2] as required to get the necessary clearance.

SUBTASK 32-09-02-620-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(5) Apply a thin coat of compound, C50056 or compound, C00913 (alternate) to the thread reliefs and threads of the bolts [4] and the faces of the washers [5]. Wipe off the excess.

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SUBTASK 32-09-02-420-001

(6) Assemble the target assembly [1]:

(a) Position the shims [2] and target [1] on the mounting bracket.

(b) Install the bolts [4] and washers [5].

SUBTASK 32-09-02-220-002

(7) Do this task: Nose Landing Gear Air/Ground Sensor Clearance Measurement, TASK 32-09-02-220-801.

(a) If the sensor clearance is not correct, do the steps to adjust the sensor clearance again.

SUBTASK 32-09-02-390-001

(8) Seal the shim stack.

(a) Clean the shims [2].

(b) Apply sealant, A00247 to the shim surfaces.

SUBTASK 32-09-02-620-002

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(9) Apply a thin coat of compound, C50056 or compound, C00913 (alternate) to the lockwire [3].

SUBTASK 32-09-02-420-002

(10) Install lockwire [3] on the bolts [4].

——————— END OF TASK ———————

TASK 32-09-02-710-801

4. Nose Landing Gear Air/Ground Sensor Operational Test

(Figure 501)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
731	Left Main Landing Gear - Outboard Door
741	Right Main Landing Gear - Outboard Door

C. Access Panels

Number	Name/Location
112A	Forward Access Door

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D. Prepare for the Procedure

SUBTASK 32-09-02-480-005

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-09-02-480-006

(2) Make sure chocks are installed at the wheels.

E. Procedure

SUBTASK 32-09-02-010-001

(1) Open this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-09-02-740-001

(2) Use the PSEU BITE to test the sensor.

(a) Push the ON/OFF switch to turn on the PSEU BITE display.

(b) Push the down arrow until OTHER FUNCTNS? shows.

(c) Push the YES switch to select OTHER FUNCTNS?

(d) Push the down arrow until SENSOR RIGGING? shows.

(e) Push the YES switch to select SENSOR RIGGING?

(f) Push the down arrow until the applicable sensor identification shows.

NOTE: See the table in (Figure 501) for the sensor identification and location.

(g) Push the YES switch to select the sensor.

(h) Make sure the PSEU display shows the sensor clearance within tolerance.

NOTE: For a description of the sensor clearance display see (Figure 501).

F. Put the Airplane Back to Its Usual Condition

SUBTASK 32-09-02-010-002

(1) Push the ON/OFF switch on the PSEU BITE panel to turn off the PSEU BITE display.

(a) Push the YES switch to confirm that you want to turn off the display.

SUBTASK 32-09-02-840-001

(2) Close this access panel:

Number	Name/Location
112A	Forward Access Door

END OF TASK

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PROXIMITY SWITCH ELECTRONICS UNIT (PSEU) - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) Removal of the Proximity Switch Electronics Unit (PSEU)

(2) Installation of the Proximity Switch Electronics Unit (PSEU).

TASK 32-09-10-000-801

2. Proximity Switch Electronics Unit (PSEU) Removal

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-840-801	Prepare to Put the Airplane in the Air Mode (P/B 201)

B. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

C. Access Panels

Number	Name/Location
112A	Forward Access Door

D. Prepare for the Removal

SUBTASK 32-09-10-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-09-10-840-007

(2) Prepare for air mode simulation. To do this, do this task: Prepare to Put the Airplane in the Air Mode, TASK 32-09-00-840-801.

SUBTASK 32-09-10-010-002

(3) For access to the PSEU [1], do this step:

Open this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-09-10-860-003

(4) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

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F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

E. PSEU Removal.

SUBTASK 32-09-10-020-001

(1) Remove the electrical connectors [7] from the PSEU [1].

SUBTASK 32-09-10-860-010

(2) Put a cap on the electrical connectors [7] for protection.

SUBTASK 32-09-10-020-005

(3) Remove the bonding jumper [6] from the PSEU [1].

NOTE: The bonding jumper may be attached to a grounding stud on the PSEU [1]. Attach the bonding jumper to the lower left mounting bolt on the PSEU [1] when you install the PSEU [1].

SUBTASK 32-09-10-020-003

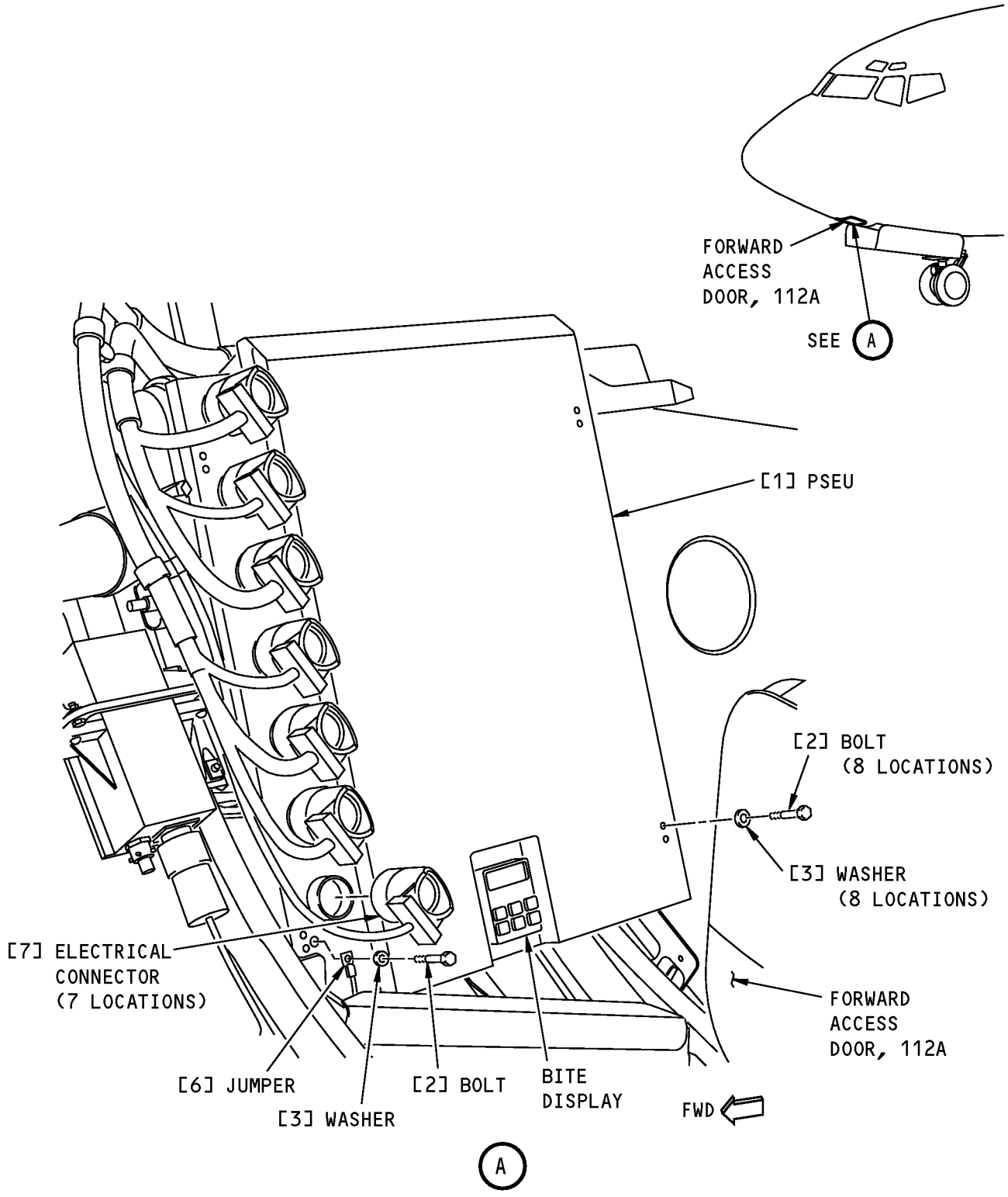
(4) Remove the bolts [2] and washers [3].

SUBTASK 32-09-10-020-004

(5) Remove the PSEU [1] from the mounting surface.

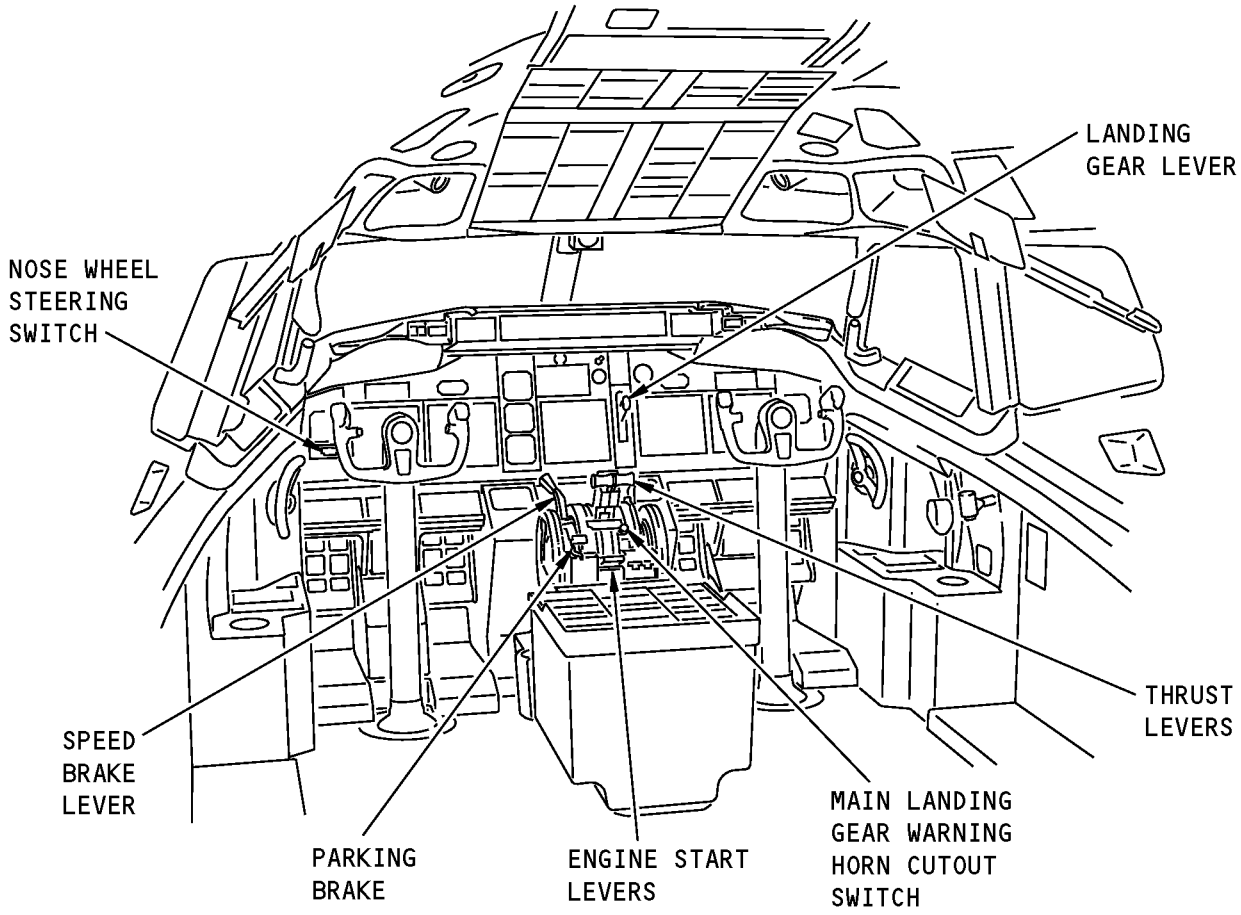
——————— END OF TASK ———————

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Proximity Switch Electronics Unit (PSEU) Installation
Figure 401 (Sheet 1 of 2)/32-09-10-990-802

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FLIGHT COMPARTMENT

Proximity Switch Electronics Unit (PSEU) Installation
Figure 401 (Sheet 2 of 2)/32-09-10-990-802

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TASK 32-09-10-400-801

3. Proximity Switch Electronics Unit (PSEU) Installation

(Figure 401)

A. References

Reference	Title
32-09-00-840-802	Return the Airplane Systems Back to Their Normal On Ground Condition (P/B 201)
32-09-10-710-801	Proximity Switch Electronics Unit (PSEU) - Operational Test (P/B 501)
52-11-00 P/B 201	FORWARD ENTRY DOOR - MAINTENANCE PRACTICES
52-13-00 P/B 201	AFT ENTRY DOOR - MAINTENANCE PRACTICES
52-22-00 P/B 201	EMERGENCY EXIT DOOR - MAINTENANCE PRACTICES
SWPM 20-20-00	Electrical Bonds and Grounds
SWPM 20-20-00, Section 2	Standard Wiring Practices Manual

B. Consumable Materials

Reference	Description	Specification
A02315	Sealant - Low Density, Synthetic Rubber. 2 Part	BMS5-142
B00130	Alcohol - Isopropyl	TT-I-735
B00184	Solvent - Presealing, Cleaning Solvent	BMS11-7

C. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well

D. PSEU Installation

SUBTASK 32-09-10-480-003

(1) Clean the PSEU [1] mounting surfaces with solvent, B00184 or alcohol, B00130. To do this, refer to (SWPM 20-20-00, Section 2).

SUBTASK 32-09-10-410-001

(2) Position the PSEU [1] on the mounting brackets.

SUBTASK 32-09-10-410-002

(3) Install the washers [3] and bolts [2].

NOTE: Do not install the washer and bolt for the lower left mounting location.

SUBTASK 32-09-10-480-004

(4) Clean the remaining washer [3], bolt [2], grounding jumper [6], and PSEU [1] mounting surface with solvent, B00184 or alcohol, B00130.

SUBTASK 32-09-10-420-001

(5) Attach the grounding jumper [6] to the PSEU [1] with a washer [3] and bolt [2].

SUBTASK 32-09-10-760-001

(6) Do a check of the bonding resistance between the PSEU [1] and the airplane structure. SWPM 20-20-00

(a) Make sure that the resistance is less than 0.0005 ohms.

SUBTASK 32-09-10-390-001

(7) Seal the grounding jumper connector.

(a) Clean the grounding jumper connector with solvent, B00184 or alcohol, B00130.

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(b) Seal the grounding jumper connector with sealant, A02315.

SUBTASK 32-09-10-020-006

(8) Remove the caps from the electrical connectors [7].

SUBTASK 32-09-10-410-003

(9) Attach the electrical connectors [7] to the PSEU [1].

SUBTASK 32-09-10-840-017

(10) Put the airplane systems back to normal on ground condition. To put it back to normal, do this task: Return the Airplane Systems Back to Their Normal On Ground Condition, TASK 32-09-00-840-802.

E. PSEU Installation Test

SUBTASK 32-09-10-840-018

(1) If installed, make sure the airstairs are in the stowed position. This will prevent warning messages concerning the airstairs from displaying when the airplane is placed in the AIR mode.

(2) Close these doors:

- Forward Entry Door, FORWARD ENTRY DOOR - MAINTENANCE PRACTICES, PAGEBLOCK 52-11-00/201.
- Aft Entry Door, AFT ENTRY DOOR - MAINTENANCE PRACTICES, PAGEBLOCK 52-13-00/201.
- Left and Right Overwing Exit Doors, EMERGENCY EXIT DOOR - MAINTENANCE PRACTICES, PAGEBLOCK 52-22-00/201.

SUBTASK 32-09-10-860-004

(3) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

SUBTASK 32-09-10-200-001

(4) Do this Task:Proximity Switch Electronics Unit (PSEU) - Operational Test, TASK 32-09-10-710-801.

END OF TASK

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PROXIMITY SWITCH ELECTRONICS UNIT (PSEU) - ADJUSTMENT/TEST

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) An operational test of the PSEU

(2) A ground test of the PSEU

(3) A test of the PSEU fault light.

TASK 32-09-10-710-801

2. Proximity Switch Electronics Unit (PSEU) - Operational Test

(Figure 501)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
24-22-00-860-813	Supply External Power (P/B 201)
24-22-00-860-814	Remove External Power (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
36-00-00-860-806	Remove Pressure from the Pneumatic System (P/B 201)
52-11-00 P/B 201	FORWARD ENTRY DOOR - MAINTENANCE PRACTICES
52-13-00 P/B 201	AFT ENTRY DOOR - MAINTENANCE PRACTICES
52-22-00 P/B 201	EMERGENCY EXIT DOOR - MAINTENANCE PRACTICES

C. Location Zones

Zone	Area
212	Flight Compartment - Right

D. Access Panels

Number	Name/Location
112A	Forward Access Door

E. Prepare for the Test

SUBTASK 32-09-10-860-001

(1) Do this task: Supply External Power, TASK 24-22-00-860-813.

SUBTASK 32-09-10-840-001

(2) Make sure there is no hydraulic pressure on the airplane. If there is hydraulic pressure, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-09-10-840-002

(3) Make sure chocks are installed on the nose and main landing gear.

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SUBTASK 32-09-10-840-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(4) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-09-10-840-004

(5) Make sure the airplane is in this configuration:

(a) The flaps are up.

(b) Make sure the stab trim is in the green band.

(c) Close these doors:

- Forward Entry Door, FORWARD ENTRY DOOR - MAINTENANCE PRACTICES, PAGEBLOCK 52-11-00/201.
- Aft Entry Door, AFT ENTRY DOOR - MAINTENANCE PRACTICES, PAGEBLOCK 52-13-00/201.
- Left and Right Overwing Exit Doors, EMERGENCY EXIT DOOR - MAINTENANCE PRACTICES, PAGEBLOCK 52-22-00/201.

(d) If installed, make sure the airstairs are in the stowed position. This will prevent warning messages concerning the airstairs from displaying when the airplane is placed in the AIR mode.

SUBTASK 32-09-10-010-001

(6) Open this access panel:

Number	Name/Location
112A	Forward Access Door

F. Do a Test of the PSEU

SUBTASK 32-09-10-740-001

(1) Push the ON/OFF switch on the PSEU BITE panel to turn on the BITE display.

SUBTASK 32-09-10-740-002

NOTE: The correct answer to the question: ARE YOU DONE?, should be NO in order to continue and YES to drop out of the program sequence.

(2) Start the REPLACE TEST on the PSEU BITE.

(a) Push the down switch until GROUND TEST? shows.

1) Push the YES switch to select GROUND TEST.

(b) Push the down arrow until REPLACE TEST? shows.

1) Push the YES switch to select REPLACE TEST.

(c) TEST IN PROGRESS will show while the PSEU performs internal tests.

1) If faults are found, the test will stop and a list of faults will show.

a) Refer to the Fault Isolation Manual (FIM) to determine the cause of the fault.

2) If no faults are found then START SEQUENCE will show.

NOTE: The PSEU is now ready for changes to the PSEU inputs.

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SUBTASK 32-09-10-740-003

NOTE: The correct answer to the question: ARE YOU DONE?, should be NO in order to continue and YES to drop out of the program sequence.

(3) Change these inputs to the PSEU.

NOTE: The REPLACE TEST uses signals from the following systems to test the PSEU. The PSEU looks for a change in these inputs. These inputs can be changed in any order.

(a) Use one of these methods to change the state of the engine running relays:

1) Either start and stop the engines.

2) Or, do these steps to simulate the engines running:

a) Make sure there is no pneumatic power to the engine starters. To do this, do this task: Remove Pressure from the Pneumatic System, TASK 36-00-00-860-806.

b) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	1	C00458	ENGINE 1 IGNITION RIGHT
A	3	C00153	ENGINE 1 IGNITION LEFT

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
D	4	C00459	ENGINE 2 IGNITION RIGHT
D	6	C00151	ENGINE 2 IGNITION LEFT

c) Put the the ENG START levers to the idle position for a minimum of 5 minutes.

(b) Put the NOSE WHEEL STEERING switch to the ALT position and back to NORM position.

NOTE: Do the step above in less than 5 seconds or else a LGTV SET fault will be set in Existing Faults and the PSEU light will come on.

(c) Put the speed brake handle an inch or more past the ARMED position and back to the DOWN position.

(d) Push the right thrust lever fully forward and back to idle.

(e) Push the left thrust lever fully forward and back to idle.

(f) Release and reset the parking brake.

(g) Put the landing gear lever to the OFF position and then to the DN position.

(h) Momentarily push the horn reset switch.

NOTE: If you push the switch for more than 5 seconds, then the test will fail.

(i) Do these steps to cycle the takeoff warning cutoff:

1) Open this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF

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2) Close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF

(j) Open or close these doors:

NOTE: If the door is open, you can activate the door switch manually. If the door is closed, then you must unlatch the door. You do not need to open the door completely.

1) Forward cargo door
2) Aft cargo door
3) E/E bay access door

SUBTASK 32-09-10-740-004

(4) The question ARE YOU DONE? will show on the BITE display.

(a) When you are finished, push the YES switch on the BITE display.

1) If no faults are found, TEST PASS will show.
2) If faults are found, a list of faults will show.

a) Go to the FIM to determine the cause of the fault.

G. Return the Airplane to Its Usual Condition

SUBTASK 32-09-10-840-005

(1) Push the ON/OFF switch on the PSEU BITE module to turn off the PSEU BITE.

SUBTASK 32-09-10-840-006

(2) Close this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-09-10-840-011

(3) If it is necessary, do these steps to return the engine running relays back to the not running condition:

(a) Put ENG START lever back to the CUTOFF position.

(b) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	1	C00458	ENGINE 1 IGNITION RIGHT
A	3	C00153	ENGINE 1 IGNITION LEFT

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
D	4	C00459	ENGINE 2 IGNITION RIGHT
D	6	C00151	ENGINE 2 IGNITION LEFT

SUBTASK 32-09-10-840-012

(4) If it is necessary, put the cargo and E/E bay access doors to their original pre-test conditions.

(5) If it is necessary, put the forward access door to their original pre-test conditions.

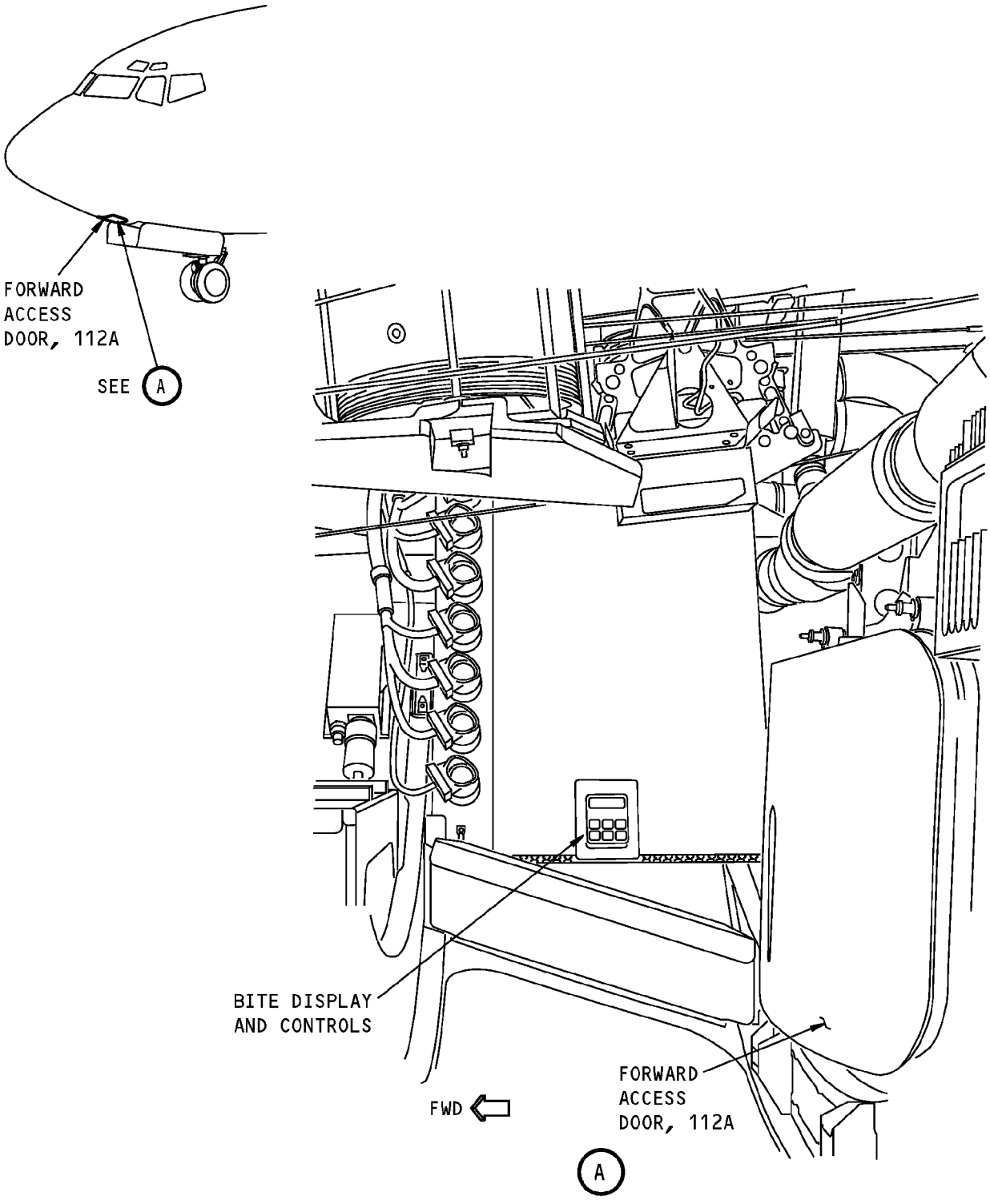
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SUBTASK 32-09-10-860-002

(6) If electrical power is no longer needed, do this task: Remove External Power, TASK 24-22-00-860-814.

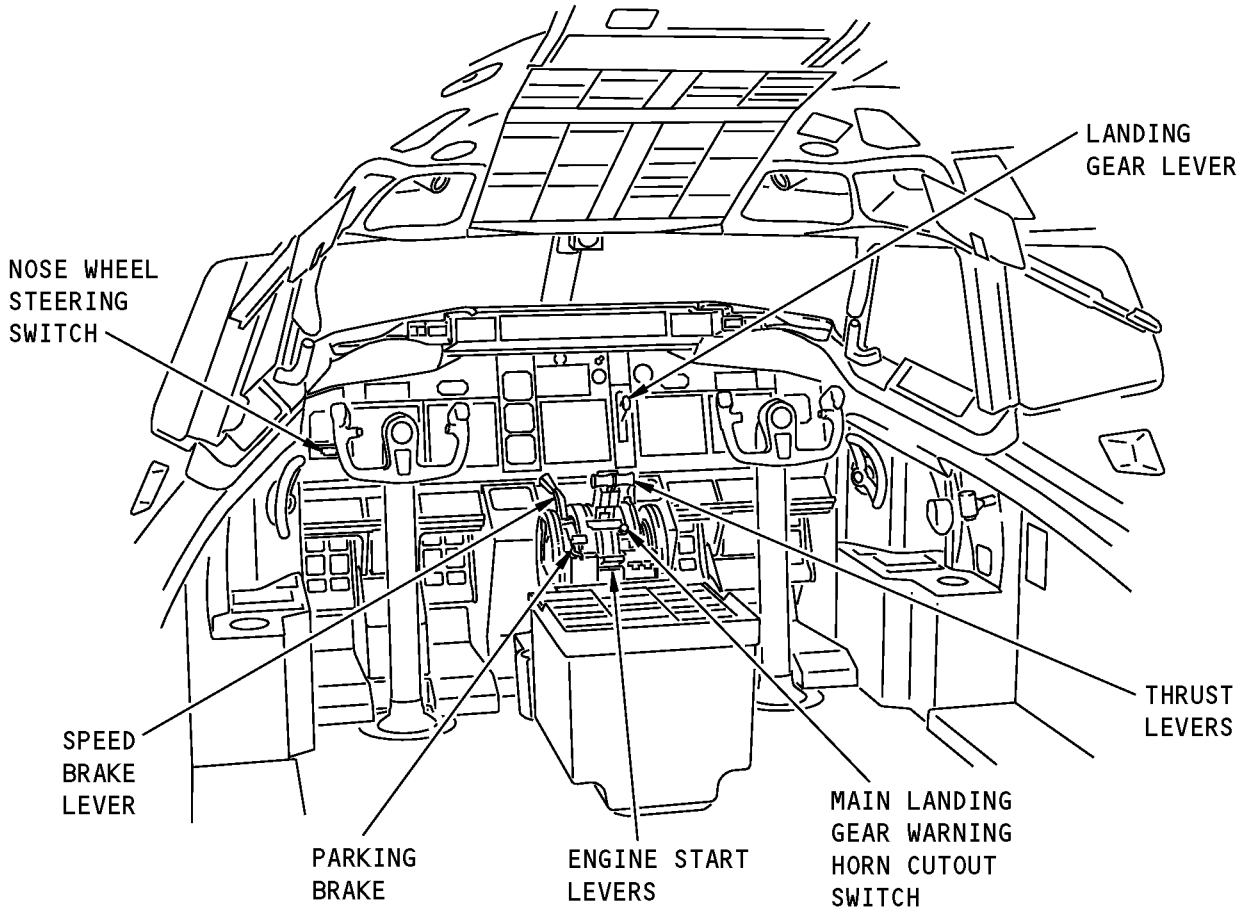
——————— END OF TASK ———————

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Proximity Switch Electronics Unit (PSEU) Test
Figure 501 (Sheet 1 of 2)/32-09-10-990-801

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FLIGHT COMPARTMENT

Proximity Switch Electronics Unit (PSEU) Test
Figure 501 (Sheet 2 of 2)/32-09-10-990-801

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TASK 32-09-10-740-801

3. Proximity Switch Electronics Unit (PSEU) BITE Test - Ground Test

(Figure 501)

A. General

(1) This procedure does the GROUND TEST? portion of the Proximity Switch Electronics Unit (PSEU) BITE.

(2) For GROUND TEST, the PSEU has several menus:

(a) REPLACE TEST? - This tests exercises the inputs to the PSEU and is used when the PSEU is replaced. To do the REPLACE TEST, do this task: Proximity Switch Electronics Unit (PSEU) - Operational Test, TASK 32-09-10-710-801.

(b) SELF TEST? - This performs a self test sequence of the PSEU.

(c) LGTV TEST? - This performs a landing gear transfer valve (LGTV) test.

(d) SPDBRK TEST? - This performs a speedbrake extended warning test.

(e) T/O WARN TEST? - This performs a takeoff warning test.

(f) DISPLAY TEST? - This performs a test of the PSEU display.

(3) This task has a procedure for these menu items:

(a) SELF TEST?

(b) LGTV TEST?

(c) SPDBRK TEST?

(d) T/O WARN TEST?

(e) DISPLAY TEST?

B. References

Reference	Title
24-22-00-860-813	Supply External Power (P/B 201)
24-22-00-860-814	Remove External Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
FIM 32-09 TASK 801	Proximity Switch Electronics Unit (PSEU) BITE Procedure
FIM 32-09 TASK 809	Proximity Switch Electronics Unit (PSEU) Internal Fault - Fault Isolation

C. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

D. Access Panels

Number	Name/Location
112A	Forward Access Door

E. Prepare for the Tests

SUBTASK 32-09-10-860-006

(1) Do this task: Supply External Power, TASK 24-22-00-860-813.

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SUBTASK 32-09-10-010-003

(2) Open this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-09-10-740-009

(3) Do these steps to start the GROUND TEST on the PSEU.

(a) Push the ON/OFF switch on the PSEU to turn on the BITE.

(b) Push the down arrow until GROUND TEST? shows on the PSEU display.

(c) Push the YES switch to select GROUND TEST.

F. SELF TEST

SUBTASK 32-09-10-740-010

(1) Push the up arrow and down arrow to show SELF TEST?

SUBTASK 32-09-10-740-011

(2) Push the YES button to start the self test.

(a) SEE WARNINGS will show on the BITE display.

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES. THESE COMPONENTS CAN MOVE SUDDENLY WHEN THE SELF TEST IS RUN. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(b) ARE YOU SURE? will show on the BITE display.

(c) Push the YES switch after you follow the steps in the warning.

(d) TEST IN PROGRESS will show while the test is run.

(e) When the self test is complete either:

1) FAULT #1 will show.

2) Or, TEST PASS will show.

(f) If there are PSEU faults, then, do this task: FIM 32-09 TASK 809 or FIM 32-09 TASK 801.

(g) If the test passed, then push the MENU switch to return to the SELF TEST? display.

G. LGTV TEST

SUBTASK 32-09-10-840-019

(1) For Hydraulic System A and System B, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801

SUBTASK 32-09-10-740-012

(2) Push the up arrow or down arrow until LGTV TEST? shows.

SUBTASK 32-09-10-740-013

(3) Push the YES button to start the LGTV TEST.

(a) TEST IN PROGRESS will show on the BITE display.

(b) When the landing gear transfer valve test is complete either:

1) FAULT #1 will show.

2) Or, TEST PASS will show.

(c) If there are PSEU faults, then, do this task: FIM 32-09 TASK 809 or FIM 32-09 TASK 801.

(d) If the test passed, then push the MENU switch to return to the LGTV TEST? display.

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SUBTASK 32-09-10-840-020

(4) For Hydraulic System A and System B, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

H. SPDBRK TEST

SUBTASK 32-09-10-740-014

(1) Push the up arrow or down arrow until SPDBRK TEST? shows.

SUBTASK 32-09-10-740-015

(2) Push the YES button to start the SPDBRK TEST.

(a) TEST IN PROGRESS will show on the BITE display.

(b) When the speedbrake test is complete either:

1) FAULT #1 will show.

2) Or, TEST PASS will show.

(c) If there are PSEU faults, then, do this task: FIM 32-09 TASK 809 or FIM 32-09 TASK 801.

(d) If the test passed, then push the MENU switch to return to the SPDBRK TEST? display.

I. T/O WARN TEST

SUBTASK 32-09-10-740-016

(1) Push the up arrow or down arrow until T/O WARN TEST? shows.

SUBTASK 32-09-10-740-017

(2) Push the YES button to start the T/O WARN TEST.

(a) TEST IN PROGRESS will show on the BITE display.

(b) When the take off warning test is complete either:

1) FAULT #1 will show.

2) Or, TEST PASS will show.

(c) If there are PSEU faults, then, do this task: FIM 32-09 TASK 809 or FIM 32-09 TASK 801.

(d) If the test passed, then push the MENU switch to return to the T/O WARN TEST? display.

J. DISPLAY TEST

SUBTASK 32-09-10-740-018

(1) Push the up arrow or down arrow until DISPLAY TEST? shows.

SUBTASK 32-09-10-740-019

(2) Push the YES button to start the DISPLAY TEST.

(a) All the pixels on the first quarter of the BITE display will light.

(b) After a short time delay, the second quarter of the BITE display will light.

(c) After a short time delay, the third quarter of the BITE display will light.

(d) After a short time delay, the fourth quarter of the BITE display will light.

(e) If any of the pixels did not light, then there is a PSEU fault.

(f) Push the MENU switch to return to the DISPLAY TEST? display.

K. If you are finished with the PSEU ground tests, return the airplane to normal.

SUBTASK 32-09-10-860-007

(1) Push the ON/OFF button to turn the PSEU display off.

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SUBTASK 32-09-10-410-005

(2) Close this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-09-10-860-008

(3) If it it not necessary, do this task: Remove External Power, TASK 24-22-00-860-814.

——————— END OF TASK ———————

TASK 32-09-10-710-802

4. PSEU Fault Light - Operational Test

(Figure 501)

A. References

Reference	Title
24-22-00-860-813	Supply External Power (P/B 201)
24-22-00-860-814	Remove External Power (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1690	Set - Actuators/Deactuators, Proximity Sensor Test (Part #: 8-758-01, Supplier: 08748, A/P Effectivity: 737-ALL) (Part #: A27092-106, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A27092-84, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
744	Right Main Landing Gear

D. Prepare for the Test

SUBTASK 32-09-10-860-011

(1) Do this task: Supply External Power, TASK 24-22-00-860-813.

SUBTASK 32-09-10-840-013

(2) Make sure there is no hydraulic pressure on the airplane. If there is hydraulic pressure, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-09-10-840-014

(3) Make sure chocks are installed on the nose and main landing gear.

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SUBTASK 32-09-10-840-015

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(4) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-09-10-840-016

(5) Make sure the airplane is in this configuration:

(a) The flaps are up.

(b) Make sure the stab trim is in the green band.

E. Do a Test of the PSEU Fault Light

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

SUBTASK 32-09-10-210-001

(1) Make sure the PSEU fault light is not on and the Master Caution lights are not on.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

SUBTASK 32-09-10-210-002

(2) Make sure the PSEU fault light is not on.

HAP ALL

SUBTASK 32-09-10-710-001

(3) Open this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI

(a) Make sure the PSEU fault light comes on

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(b) Push the Master Caution switch

(c) Make sure the PSEU fault light stays on.

HAP ALL

SUBTASK 32-09-10-710-002

(4) Close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(a) Push the Master Caution switch

HAP ALL

(b) Make sure the PSEU fault light goes out

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HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

SUBTASK 32-09-10-710-003

(5) Attach a deactuator to the face of the air/ground sensor, S01010, for the right main landing gear.

NOTE: You will need one A27092-64 deactuator. The proximity sensor test set, SPL-1690 contains one deactuator.

NOTE: As an option, deactuators can be constructed as follows: Material: 5052, 6061, 7075, or 2024 aluminum or sheet copper. For rectangular sensors - 1.5 in. (38 mm) x 0.75 in. (19 mm) x 0.05 in. (1.27 mm).

(a) Push the Master Caution Annunciator Light

(b) Make sure the PSEU fault light comes on

(c) Push the Master Caution switch

(d) Make sure the PSEU fault light goes off.

SUBTASK 32-09-10-080-001

(6) Remove the deactuator from the air/ground sensor, S01010, for the right main landing gear.

HAP ALL

F. Return the Airplane to Its Usual Condition

SUBTASK 32-09-10-860-012

(1) If electrical power is no longer needed, do this task: Remove External Power, TASK 24-22-00-860-814.

——————— END OF TASK ———————

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MAIN LANDING GEAR - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) A removal of the main landing gear

(2) An installation of the main landing gear.

TASK 32-11-00-000-801

2. Main Landing Gear Removal

(Figure 401, Figure 402, Figure 403)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
24-22-00-860-811	Supply Electrical Power (P/B 201)
27-51-00-040-801	Trailing Edge Flap System Deactivation (P/B 201)
27-51-00-860-803	Extend the Trailing Edge Flaps (P/B 201)
27-62-51-000-801	Ground Spoiler Interlock Valve Cable Removal (P/B 401)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-11-61-000-802	Main Landing Gear Lower Side Strut Removal (P/B 401)
32-13-11-000-802	Main Landing Gear Center Door Removal (P/B 401)
32-13-11-000-804	Main Landing Gear Inner Door Removal (P/B 401)
32-13-21-000-802	Main Landing Gear Wing Door Removal (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1362	Assembly - Wrench Adapter (C32029-6, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1363	Assembly - Wrench Adapter (C32029-7, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1365	Protector - Thread (C32029-9, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1366	Protector - Thread (C32029-10, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1367	Driver - Slug (C32029-11, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1371	Protector - Thread (C32029-15, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

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(Continued)

Reference	Description
SPL-1372	Protector - Thread (C32029-16, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1744	Set - Lock, Inboard Ground Spoiler Actuator (Contains 4 Lock Assemblies) (Part #: C27046-13, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C27046-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1862	Equipment - Removal/Installation, MLG Aft Trunnion Pin (Part #: C32031-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1869	Fixture - Transportation, Main Landing Gear, Removal/Installation (Part #: C32034-211, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1871	Strap - Retention, NLG/MLG Inner Cylinder (Part #: C32030-10, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-5011	Set - Lock, Inboard Ground Spoiler Actuator, 737 SFP (Contains 4 Lock Assemblies) (Part #: C27046-13, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-11076	Torque Wrench Adaptor (Part #: C32013-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

E. Access Panels

Number	Name/Location
551BB	Lower Inboard Fixed Trailing Edge, Gear Adjustment Door
551BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
551CB	Lower Inboard Fixed Trailing Edge, Gear Access Panel
551DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel
651BB	Lower Inboard Fixed Trailing Edge, Gear Door Adjustment
651BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
651CB	Lower Inboard Fixed Trailing Edge, Gear Access Panel
651DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

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F. Prepare for the Removal

SUBTASK 32-11-00-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-00-860-016

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-11-00-860-001

(3) Extend the trailing edge flaps fully. To extend them, do this task: Extend the Trailing Edge Flaps, TASK 27-51-00-860-803

NOTE: This step will provide access to the aft trunnion pin [19].

SUBTASK 32-11-00-860-002

(4) Do this task: Trailing Edge Flap System Deactivation, TASK 27-51-00-040-801.

SUBTASK 32-11-00-860-017

(5) Put the SPOILER A and B switches to the OFF position to remove the hydraulic power from the flight spoilers.

NOTE: SPOILER A AND B switches are on the flight control panel (P5-3).

SUBTASK 32-11-00-860-018

(6) Put the speed brake lever in the UP position to lift the ground spoilers.

HAP 001-013, 015-026, 028-036, 101-999

SUBTASK 32-11-00-480-021

(7) Install the set, SPL-1744 for the applicable ground spoiler.

HAP 037-054

SUBTASK 32-11-00-480-024

(8) Install the lock set, SPL-5011 for the applicable ground spoiler.

HAP ALL

SUBTASK 32-11-00-860-003

(9) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1
B	16	C01346	LANDING GEAR PARKING BRAKE
B	17	C00129	LANDING GEAR LATCH & PRESS WARN
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	15	C01401	LANDING GEAR AIR/GND RELAY
D	16	C01432	LANDING GEAR ALTN EXTEND SOL
E	16	C00196	LANDING GEAR ANTISKID INBD

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Row	Col	Number	Name
E	18	C00195	LANDING GEAR ANTISKID OUTBD

SUBTASK 32-11-00-860-004

(10) Do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-11-00-860-005

(11) Push the brake pedals a minimum of twelve times to remove the pressure from the brake lines.

SUBTASK 32-11-00-020-001

WARNING: DO NOT REMOVE THE VALVE BODY UNTIL THE SHOCK STRUT IS FULLY DEFLATED. IF YOU REMOVE THE VALVE BODY WHEN THERE IS PRESSURE, THE PRESSURE CAN BLOW THE VALVE BODY OUT AND CAUSE INJURY TO PERSONS.

(12) Deflate the shock strut [1] for the two main landing gear fully:

NOTE: This task is necessary keep the airplane level when you do the subsequent steps.

(a) Remove the cap [4] for the air valve [2].

(b) Loosen the swivel nut [3] for a maximum of two turns.

NOTE: Fluid in the shock strut [1] will have bubbles when you release the pressure. Deflate the shock strut slowly to prevent the leakage of the fluid through the air valve [2].

(c) Loosen the swivel nut [3] fully when all of the pressure in the shock strut [1] is released.

NOTE: The shock strut [1] is fully deflated when the dimension from the lower surface of the outer cylinder to the upper surface of the axle clevis on the inner cylinder is 0.9 in. (2.3 cm).

SUBTASK 32-11-00-480-002

WARNING: DO AN INSPECTION OF THE STRAP FOR CORRECT INSTALLATION AND DAMAGE BEFORE YOU USE IT. INCORRECT INSTALLATION OR DAMAGE CAN CAUSE THE STRAP TO BREAK. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(13) Install the retention strap, SPL-1871,strap, SPL-1871 with the marker facing up, to hold the shock strut [1] in its compressed position.

NOTE: two straps are required to be used to hold the inner cylinder secure.

SUBTASK 32-11-00-480-022

(14) Lift the airplane with the jacks until the tires are off of the ground, do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-11-00-010-003

(15) Remove the applicable access panel:

(a) For the left landing gear, do this step:

Open these access panels:

Number	Name/Location
551BB	Lower Inboard Fixed Trailing Edge, Gear Adjustment Door
551CB	Lower Inboard Fixed Trailing Edge, Gear Access Panel

(b) For the right landing gear, do this step:

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Open these access panels:

Number	Name/Location
651BB	Lower Inboard Fixed Trailing Edge, Gear Door Adjustment
651CB	Lower Inboard Fixed Trailing Edge, Gear Access Panel

(c) Open these access panels:

Number	Name/Location
551DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel
651DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

SUBTASK 32-11-00-020-002

(16) Do this task: Main Landing Gear Inner Door Removal, TASK 32-13-11-000-804.

SUBTASK 32-11-00-020-018

(17) Do this task: Main Landing Gear Center Door Removal, TASK 32-13-11-000-802.

SUBTASK 32-11-00-020-003

(18) Do this task: Main Landing Gear Wing Door Removal, TASK 32-13-21-000-802.

SUBTASK 32-11-00-020-004

(19) Do this task: Main Landing Gear Lower Side Strut Removal, TASK 32-11-61-000-802.

SUBTASK 32-11-00-020-019

(20) Disconnect the reaction link assembly [30] from the outer cylinder trunnion [33]:

(a) Remove the cotter pin [41], nut [40] and washer [39] from the cross bolt [31].

(b) Remove the cross bolt [31] from the reaction link pin [32].

(c) Remove the end cap [42] from the reaction link pin [32].

(d) Use the slug slug driver, SPL-1367 to remove the reaction link pin [32] that holds the reaction link assembly [30] to the trunnion [33].

SUBTASK 32-11-00-020-020

(21) Remove the nuts [37], washers [35, 36] and bolts [34] to disconnect the turnbuckle [38] from the bracket.

SUBTASK 32-11-00-020-021

(22) Disconnect the retract actuator [43] from the main gear trunnion:

(a) Remove the cotter pin [41], nut [47], and the washer [46] from the safety bolt [44].

(b) Remove the bolt [44] from the actuator attach pin [50].

(c) Use the wrench adapter assembly, SPL-1363 to hold the head of the actuator attach pin [50].

(d) Remove the nut [45] and the washer [48] from the actuator attach pin [50].

(e) Remove the wrench adapter assembly, SPL-1363 from the head of the actuator attach pin [50].

(f) Install the thread protector, SPL-1372 on the actuator attach pin [50].

(g) Remove the actuator attach pin [50] to disconnect the retract actuator [43] from the main gear trunnion.

(h) Remove the thread protector, SPL-1372 from the actuator attach pin [50].

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(i) Remove the spacers [49].

SUBTASK 32-11-00-020-022

(23) Disconnect the walking beam [51] from the main gear trunnion:

(a) Remove the cotter pin [41], nut [47] and the washer [46] from the safety bolt [54].

(b) Remove the safety bolt [54] from the walking beam attach pin [52].

(c) Use the wrench adapter assembly, SPL-1362 to hold the head of the walking beam attach pin [52].

(d) Remove the nut [55], and the washer [53].

(e) Remove the wrench adapter assembly, SPL-1362 from the head of the walking beam attach pin [52].

(f) Install the thread protector, SPL-1371 on the walking beam attach pin [52].

(g) Remove the walking beam attach pin [52] to disconnect the walking beam [51] from the main gear trunnion.

(h) Remove the thread protector, SPL-1371 from the walking beam attach pin [52].

SUBTASK 32-11-00-480-008

(24) Use rope to hold the disconnected ends of the walking beam [51], and the retract actuator [43], such that the ends will be out of the way when you remove the main landing gear [93].

SUBTASK 32-11-00-010-004

(25) Remove the applicable access panel:

For the left wing, open this access panel:

Number	Name/Location
551BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel

For the right wing, open this access panel:

Number	Name/Location
651BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel

SUBTASK 32-11-00-020-017

(26) Remove the hose guide [18].

SUBTASK 32-11-00-020-006

(27) If you will remove the right gear, disconnect the interlock valve cable of the ground spoiler. To do this, do this task: Ground Spoiler Interlock Valve Cable Removal, TASK 27-62-51-000-801.

G. Main Landing Gear Removal

SUBTASK 32-11-00-020-007

(1) Disconnect the brake hose assembly [6]:

(a) Put a tag to identify the brake hose assembly [6] to prevent the crossing of the hoses during the installation.

(b) Disconnect the brake hose assembly [6] from the elbow [5].

(c) Put plugs in the brake hose assembly [6].

(d) Put caps on the elbow [5].

(e) Move the brake hose assembly [6] away from the work area.

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SUBTASK 32-11-00-020-008

(2) Disconnect the electrical connector [11]:

(a) Remove the screws [7], washers [8], clamps [9], and nuts [10] that hold the electrical connector [11] to the structure.

(b) Disconnect the electrical connector [11] from the electrical connector.

(c) Put cap on the electrical connector [11].

(d) Pull the electrical connector [11] out of the hose guide [12].

(e) Wind the electrical connector [11] into loop.

SUBTASK 32-11-00-020-009

(3) Disconnect the electrical connector [13]:

(a) Remove the screws [14], washers [15], clamps [16], and nuts [17] that hold the electrical connector [13] to the hose guide [18].

(b) Disconnect the electrical connector [13] from the electrical connector.

(c) Put cap on the electrical connector [13].

(d) Wind the electrical connector [13] into loop.

SUBTASK 32-11-00-020-023

(4) Disconnect one end of the brake safety cable.

SUBTASK 32-11-00-020-025

(5) Remove the aft trunnion cross bolt [23]:

(a) Remove the cotter pin [20], nut [21], and washer [22] from the aft trunnion cross bolt [23].

(b) Install the thread protector, SPL-1366 on the aft trunnion cross bolt [23].

(c) Remove the aft trunnion cross bolt [23] to disconnect the aft trunnion pin [19] from the aft trunnion.

(d) Remove the thread protector, SPL-1366 from the aft trunnion cross bolt [23].

SUBTASK 32-11-00-020-024

(6) Remove the forward trunnion cross bolt [28]:

(a) Remove the cotter pin [24], nut [25], and washer [26] from the forward trunnion cross bolt [28].

(b) Install the thread protector, SPL-1365 on the forward trunnion cross bolt [28].

(c) Remove the forward trunnion cross bolt [28] to disconnect the forward trunnion from the forward trunnion bearing pin [29].

(d) Remove the thread protector, SPL-1365 from the forward trunnion cross bolt [28].

SUBTASK 32-11-00-020-028

(7) Remove the retaining ring [61], support ring assembly [62] and the forward trunnion seal [63] from the forward trunnion bearing pin [29] (Figure 401, View B-B) .

NOTE: Use wrench, torque wrench adaptor, SPL-11076, to remove the retaining ring.

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SUBTASK 32-11-00-480-009

CAUTION: MAKE SURE THE FORWARD TRUNNION BEARING PIN DOES NOT MOVE ON THE PROTECTOR ASSEMBLY DURING THE REMOVAL OR INSTALLATION OF THE MAIN LANDING GEAR. IF THIS CONDITION OCCURS, IT CAN CAUSE DAMAGE TO THE PIN.

(8) Install the protector assembly, (C32034-4) [92]. The protector assembly is part of this tool set: fixture, SPL-1869. Do these steps to install the protector assembly:

NOTE: The protector assembly will prevent damage to the forward trunnion bearing pin during removal or installation of the main landing gear.

(a) Put the upper end of the protector assembly, (C32034-4) [92] in the large clearance between the forward trunnion bearing pin [29] and the housing assembly.

(b) Attach the lower end of the protector assembly, (C32034-4) [92] over the bottom of the housing assembly, such that you hear a click when you attach it.

SUBTASK 32-11-00-480-010

(9) Attach the support assembly, (C32034-212) [96] to the main landing gear [93]:

NOTE: Make sure that a minimum of 2 person will do this task.

(a) Make sure the side strut attach assembly, (C32034-14) [94] is not attached to the support assembly, (C32034-212) [96] and the jackball pin is removed from the hole in the jackball fitting.

NOTE: The jackball fitting is located on the support assembly, (C32034-212) [96].

(b) Put the side strut attach assembly, (C32034-14) [94] into the lower side strut attach point on the main landing gear [93].

NOTE: Make sure the stenciled plate of the assembly is in vertical and in the up position.

1) Install the washer, and the nut finger tight on the threaded end of the side strut attach assembly,(C32034-14) [94].

(c) Put the support assembly, (C32034-212) [96] in its position on the aft side of the main landing gear [93].

NOTE: Make sure the jackball fitting on the support assembly is fully engaged on the jacking ball of the main landing gear.

(d) If it is necessary, align the holes in the support assembly, (C32034-212) [96] with the jacking ball hole for the installation of the jackball pin.

(e) Put the jackball pin through the jackball fitting and the jacking ball of the main landing gear [93].

(f) Install the lynch pin in the jackball pin.

(g) Loosen the nut that holds the side strut attach assembly, (C32034-14) [94] such that the stenciled plate can be attached to the studs on the side strut support assembly, (C32034-12) [97].

1) If it is necessary, adjust the adjustable square support tube of the side strut support assembly, (C32034-12) [97].

(h) Tighten the two hand knobs to hold the stenciled plate to the studs on the side strut support assembly, (C32034-12) [97].

(i) Tighten the nut that holds the side strut attach assembly, (C32034-14) [94] to the lower side strut attach point.

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SUBTASK 32-11-00-840-001

(10) Lift the airplane with the jacks (TASK 07-11-01-580-815) until the lower surface of the housing assembly, for the forward trunnion bearing pin [29], is 97 ±2 in. (246 ±5 cm) above the ground (Figure 403, View A).

NOTE: Make sure to keep the airplane level.

SUBTASK 32-11-00-480-011

(11) Attach the dolly assembly, (C32034-213) [98] to the support assembly, (C32034-212) [96]:

NOTE: A minimum of 2 person is necessary to do this task.

(a) If installed, remove the transportation support assembly and the aft tire support assembly from the dolly assembly, (C32034-213) [98].

(b) From the aft side, carefully move the dolly assembly, (C32034-213) [98] in the forward direction under the wing.

(c) Push the dolly assembly, (C32034-213) [98] aft such that the boom arm, (C32034-214) [91] points forward of the main landing gear [93] and the legs are parallel to the fuselage and in the center with the main landing gear [93].

(d) Lift or lower the boom arm, (C32034-214) [91] until you can connect the lift links, (C32034-34) [95] to the support assembly, (C32034-212) [96].

(e) Install the pins to hold the lift links, (C32034-34) [95] to the support assembly, (C32034-212) [96].

(f) Connect the winch assembly, (C32034-207) [99] to the support assembly, (C32034-212) [96] with the snapper pin.

SUBTASK 32-11-00-020-011

WARNING: MAKE SURE THE HYDRAULIC PRESSURE IS BELOW 5000 PSIG WHEN YOU DISCONNECT THE AFT TRUNNION FROM THE AFT TRUNNION BEARING PIN. IF THE HYDRAULIC PRESSURE IS 5000 PSIG OR HIGHER, A BINDING CONDITION OCCURS. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(12) Prepare the dolly assembly, (C32034-213) [98] to disconnect the aft trunnion:

(a) Operate the hydraulic pump on the dolly assembly, (C32034-213) [98] until approximately 1500 psi is shown on the gage.

NOTE: Make sure the dolly assembly, (C32034-213) [98] stays in center with the main landing gear [93].

(b) Make sure the swivel locks for the single caster wheels are released.

(c) Use the pry lever bar to remove the load off of the caster wheels one at a time.

(d) Use the lever bar assemblies to turn the single caster wheels parallel to the legs of the dolly assembly, (C32034-213) [98].

1) Lock the swivel locks for the single wheel casters.

(e) Operate the hydraulic pump on the dolly assembly, (C32034-213) [98] until approximately 4500 psi is shown on the gage.

NOTE: This will decrease the weight of the main landing gear from the aft trunnion pin [19].

(f) Put chocks on all the caster wheels.

SUBTASK 32-11-00-480-012

(13) Use equipment, SPL-1862 to push the aft trunnion pin [19] into the aft trunnion:

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(a) Attach the push adapter [75] to the shaft [71].

(b) Put the push adapter [74] through the pin access hole in the main landing gear beam.

(c) Push the slide hammer [72] until the aft trunnion pin [19] is disconnected from the aft trunnion bearing and it is inside the aft trunnion.

SUBTASK 32-11-00-480-013

(14) Use tie wraps to hold the aft trunnion pin [19] inside the aft trunnion.

NOTE: This will prevent the aft trunnion pin from falling out when you do the subsequent steps.

SUBTASK 32-11-00-950-003

(15) Put protective tape on the outer edge of the aft trunnion to protect its surface finish from scratching.

SUBTASK 32-11-00-420-021

WARNING: MAKE SURE THE HYDRAULIC PRESSURE IS BELOW 5000 PSIG WHEN YOU OPERATE THE DOLLY ASSEMBLY AND THE MAIN LANDING GEAR PIVOTS ABOUT THE FORWARD TRUNNION BEARING PIN. IF THE HYDRAULIC PRESSURE IS 5000 PSIG OR HIGHER, A BINDING CONDITION OCCURS. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(16) Lower the aft trunnion:

NOTE: The initial main landing gear [93] removal path is done with the forward trunnion bearing pin [29] attached to the forward trunnion. This removal path follows a combination of movements from lowering and moving the aft trunnion inboard while the main landing gear pivots about the forward trunnion bearing pin.

(a) Make sure to lock the swivel locks for the caster wheels when the main landing gear [93] pivots about the forward trunnion bearing pin [29] as follows;

1) Use the pry lever bar to remove the load off of the caster wheels one at a time.

2) Lock the single wheel casters perpendicular to the forward trunnion pivot axis approximately 38 degrees, and 90 degrees for the double wheel caster.

(b) Put the fork end of the lever bar assemblies on the rectangular tubing above the single wheel casters.

(c) Hold the lever bar assemblies to slowly push the aft end of the dolly assembly, (C32034-213) [98] inboard.

NOTE: Make sure the swivel locks for all the caster wheels are released.

(d) Do the steps below to lower the aft trunnion inboard while at the same time the aft end of the main landing gear [93] moves inboard:

NOTE: When lifting or lowering the aft trunnion, put the single caster wheels parallel to the dolly assembly legs and lock the swivel locks.

1) Use the winch assembly, (C32034-207)([99] to pull the bottom of the main landing gear [93] forward.

2) Use the manual valve on the hydraulic pump to lower the boom arm, (C32034-214) [91].

3) Continue to lower and to move the aft trunnion inboard until it clears the following components;

a) The lower flange of the main landing gear beam

b) The seals for the lower trailing edge panel

c) The seal for the support beam

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d) And the aft trunnion is just below the lower trailing edge panel.

(e) If the forward tire support assembly touches the tires at this time, remove it.

SUBTASK 32-11-00-020-013

WARNING: MAKE SURE THE HYDRAULIC PRESSURE IS BELOW 5000 PSIG WHEN YOU DISCONNECT THE FORWARD TRUNNION FROM THE FORWARD TRUNNION BEARING PIN. IF THE HYDRAULIC PRESSURE IS 5000 PSIG OR HIGHER, A BINDING CONDITION OCCURS. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(17) Disconnect the forward trunnion:

(a) Make sure the swivel locks for the caster wheels are released.

(b) Use the lever bar assemblies to push the dolly assembly, (C32034-213) [98] outboard such that the axis of the forward trunnion bearing pin [29] is perpendicular to the housing assembly and the rear spar.

(c) Use the pry lever bar to remove the load off of the caster wheels one at a time.

(d) If it is necessary, use the lever bar assemblies and put the single caster wheels parallel to the legs of the dolly assembly, (C32034-213) [98].

1) Lock the swivel locks for the single caster wheels.

(e) Attach the outer cylinder strap assembly to the hoist ring on the end of the boom arm [91] and around the outer cylinder at the aft trunnion.

(f) Remove the tension from the strap.

(g) Put the chocks approximately 2 inches aft of the single wheel casters, and in contact with the double wheel caster to limit the movement of the dolly assembly, (C32034-213) [98].

(h) Make sure the chock is in contact with the double wheel caster to prevent the movement of the dolly assembly, (C32034-213) [98].

(i) Put the fork end of the lever bar assemblies on the rectangular tubing above the single wheel casters.

(j) Hold the lever bar assemblies to slowly push on the dolly assembly [98], such that the forward trunnion will come off of the forward trunnion bearing pin [29].

NOTE: Make sure the swivel locks for all the caster wheels are released.

(k) Continue to push the dolly assembly, (C32034-213) [98] while lowering the aft end of the main landing gear [93] with the use of the winch assembly, (C32034-207) [99] and the boom arm, (C32034-214) [91].

(l) Continue this movement until the aft trunnion will clear the lower trailing edge panel seals, the forward trunnion is disconnected from the forward trunnion bearing pin [29].

(m) Remove the outer cylinder strap assembly from the hoist ring and the outer cylinder.

(n) Use the boom arm, (C32034-214) [91] and the winch assembly, (C32034-207) [99] to lower the main landing gear [93], such that the dolly assembly, (C32034-213) [98], with the main landing gear [93] can be removed below the wing.

SUBTASK 32-11-00-580-002

(18) Lower the main landing gear [93] on the tire support assemblies, such that the support assembly, (C32034-212) [96] rests in the cradle of the transportation support assembly.

SUBTASK 32-11-00-480-014

(19) Use the retention strap, SPL-1871 to hold the tires and the main landing gear [93].

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SUBTASK 32-11-00-480-023

(20) Tighten the adjustable square support tube of the side strut support assembly, (C32034-12) [97] with the two adjustable handles.

SUBTASK 32-11-00-020-026

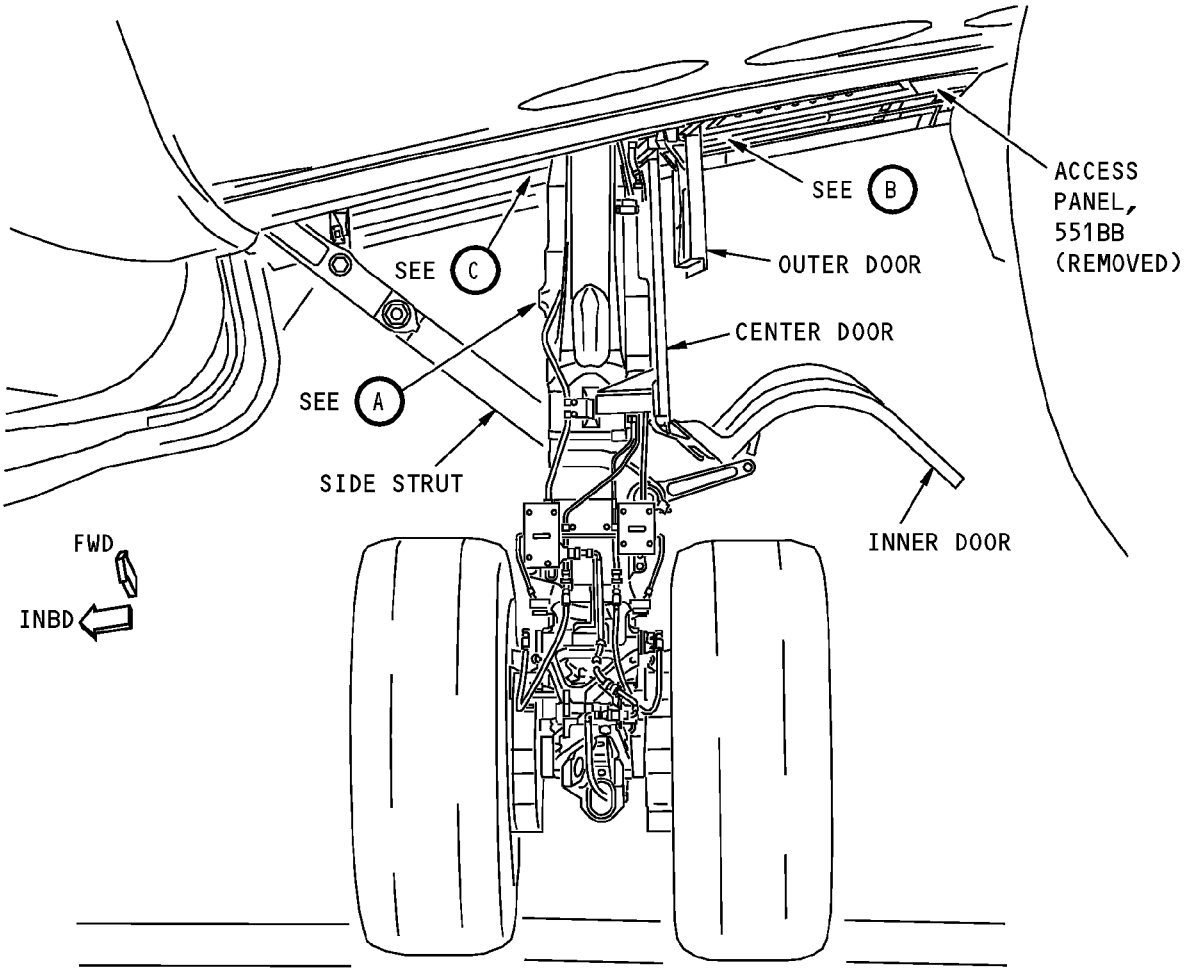
CAUTION: DO NOT TOW THE MAIN LANDING GEAR SUPPORT EQUIPMENT OVER 5 MPH. THE MAIN LANDING GEAR SUPPORT EQUIPMENT IS FOR SHOP HANDLING ONLY.

CAUTION: MAKE SURE THE RETENTION STRAP OR EQUIVALENT IS INSTALLED ON THE SHOCK STRUT [1] IF THE MAIN LANDING GEAR FIXTURE, SPL-1869 WILL BE REMOVED FROM THE MAIN LANDING GEAR [93]. THE SHOCK STRUT CAN EXTEND AND DAMAGE TO THE EQUIPMENT CAN OCCUR.

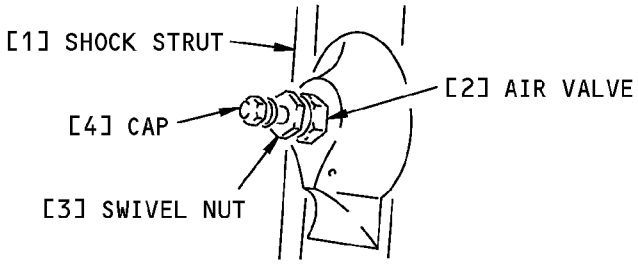
(21) Remove the dolly assembly, (C32034-213) [98], with main landing gear [93] from the work area.

———————— END OF TASK ————————

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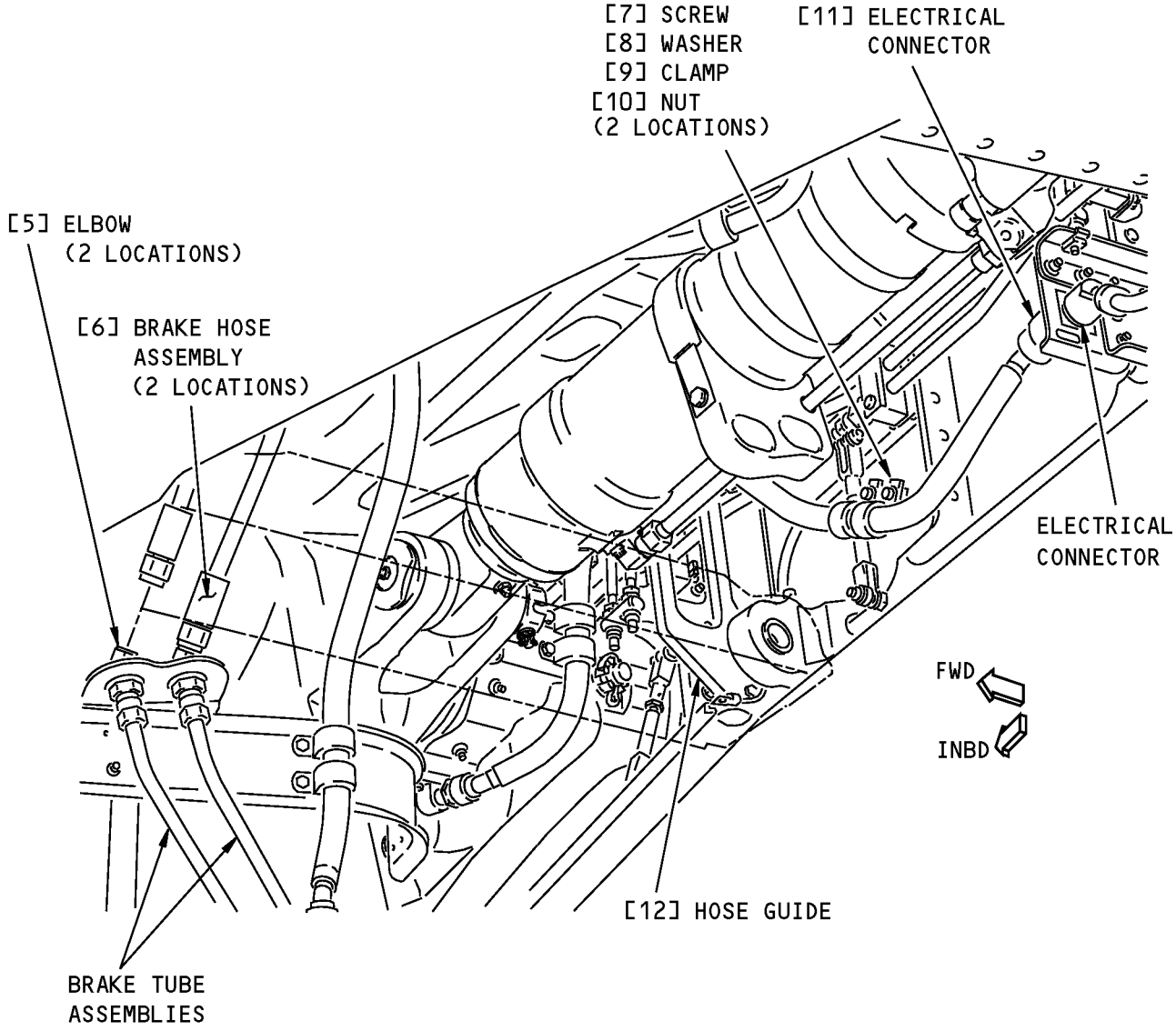
LEFT MAIN LANDING GEAR
(RIGHT MAIN LANDING GEAR IS EQUIVALENT)



SHOCK STRUT INFLATION VALVE
A

Main Landing Gear Installation
Figure 401 (Sheet 1 of 6)/32-11-00-990-801

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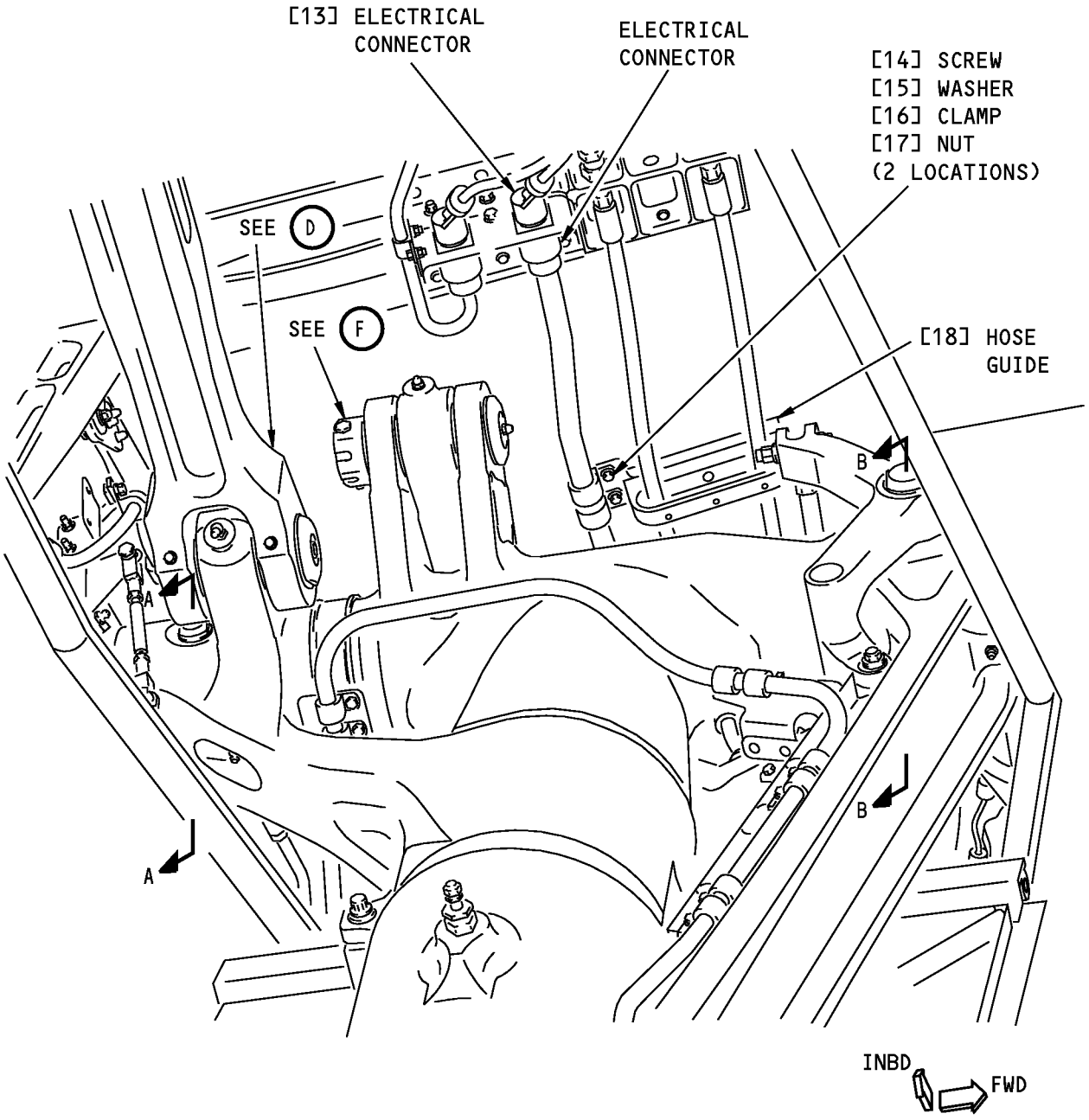


HYDRAULIC LINES AND ELECTRICAL CONNECTORS

B

Main Landing Gear Installation
Figure 401 (Sheet 2 of 6)/32-11-00-990-801

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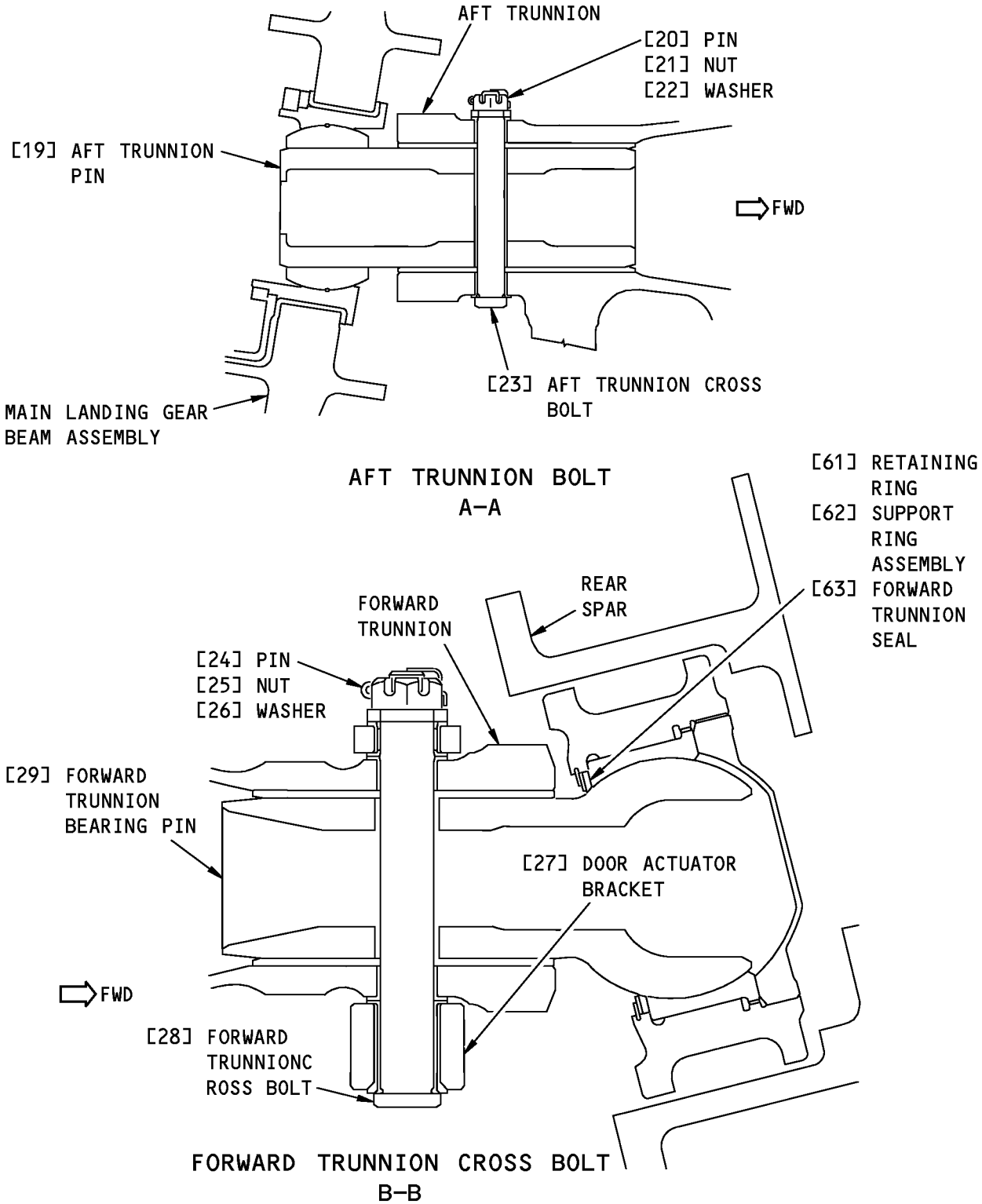
ELECTRICAL CONNECTOR AND TRUNNION SUPPORTS

C

G02347 S0006574757_V2

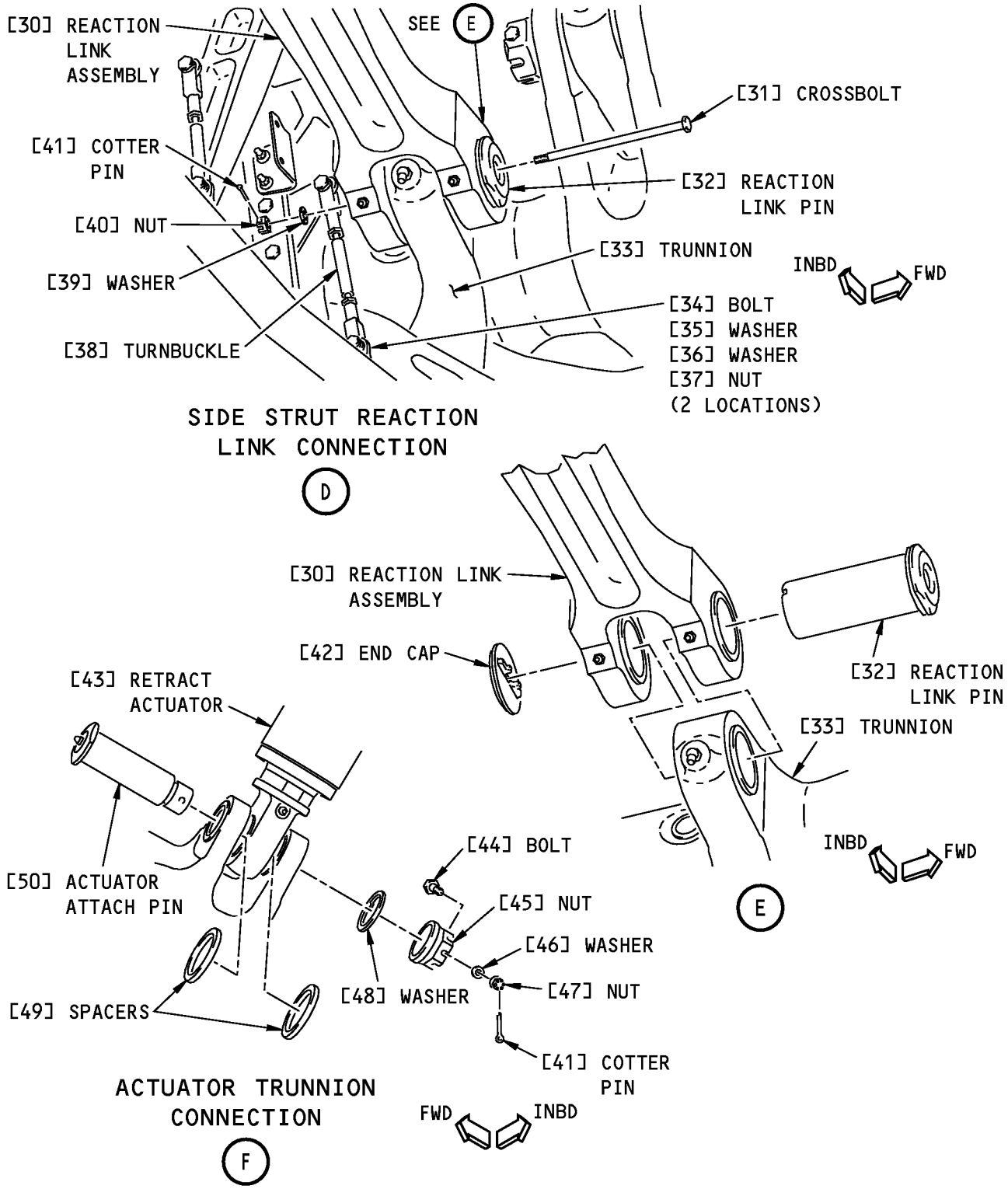
Main Landing Gear Installation
Figure 401 (Sheet 3 of 6)/32-11-00-990-801

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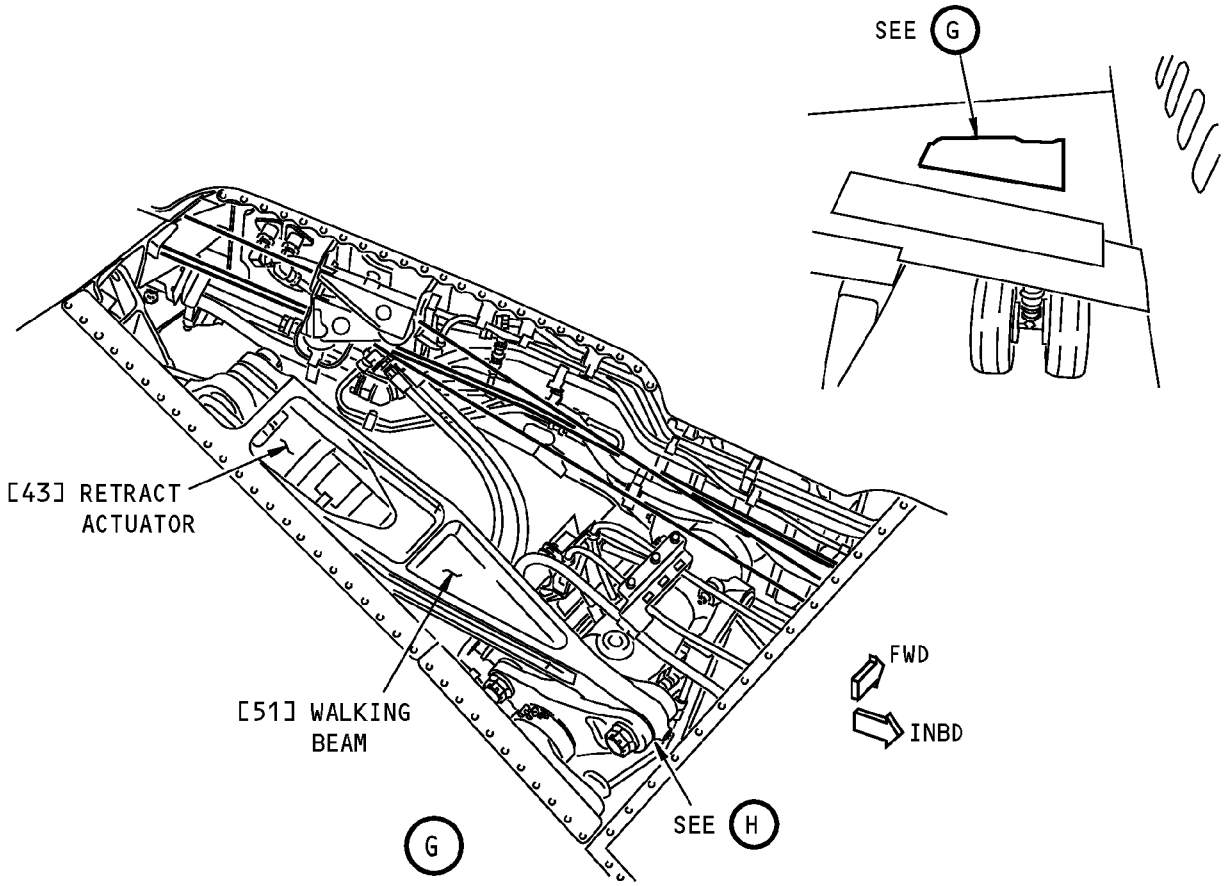
Main Landing Gear Installation
Figure 401 (Sheet 4 of 6)/32-11-00-990-801

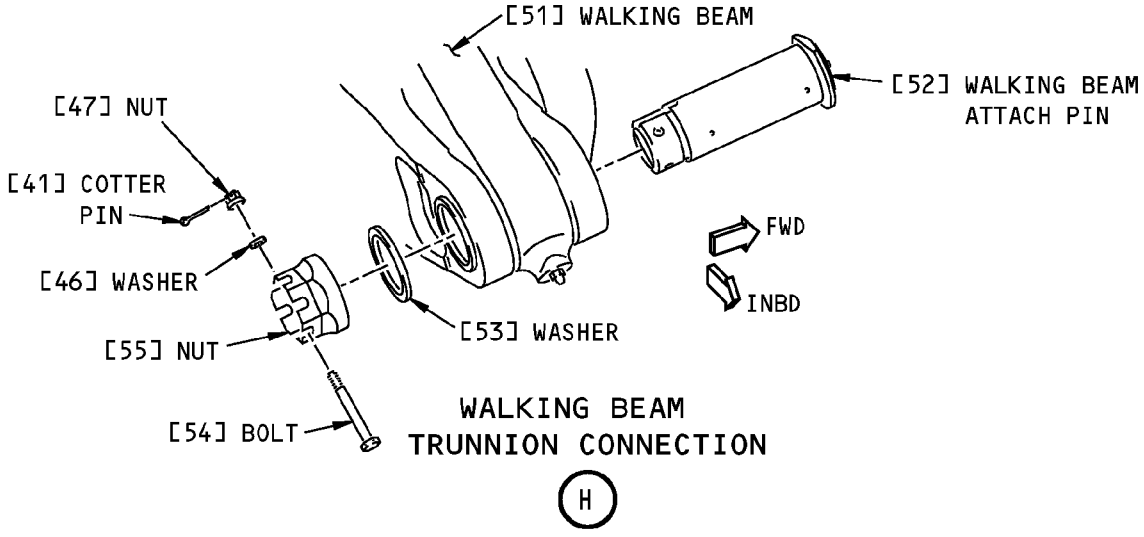
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Main Landing Gear Installation
Figure 401 (Sheet 5 of 6)/32-11-00-990-801

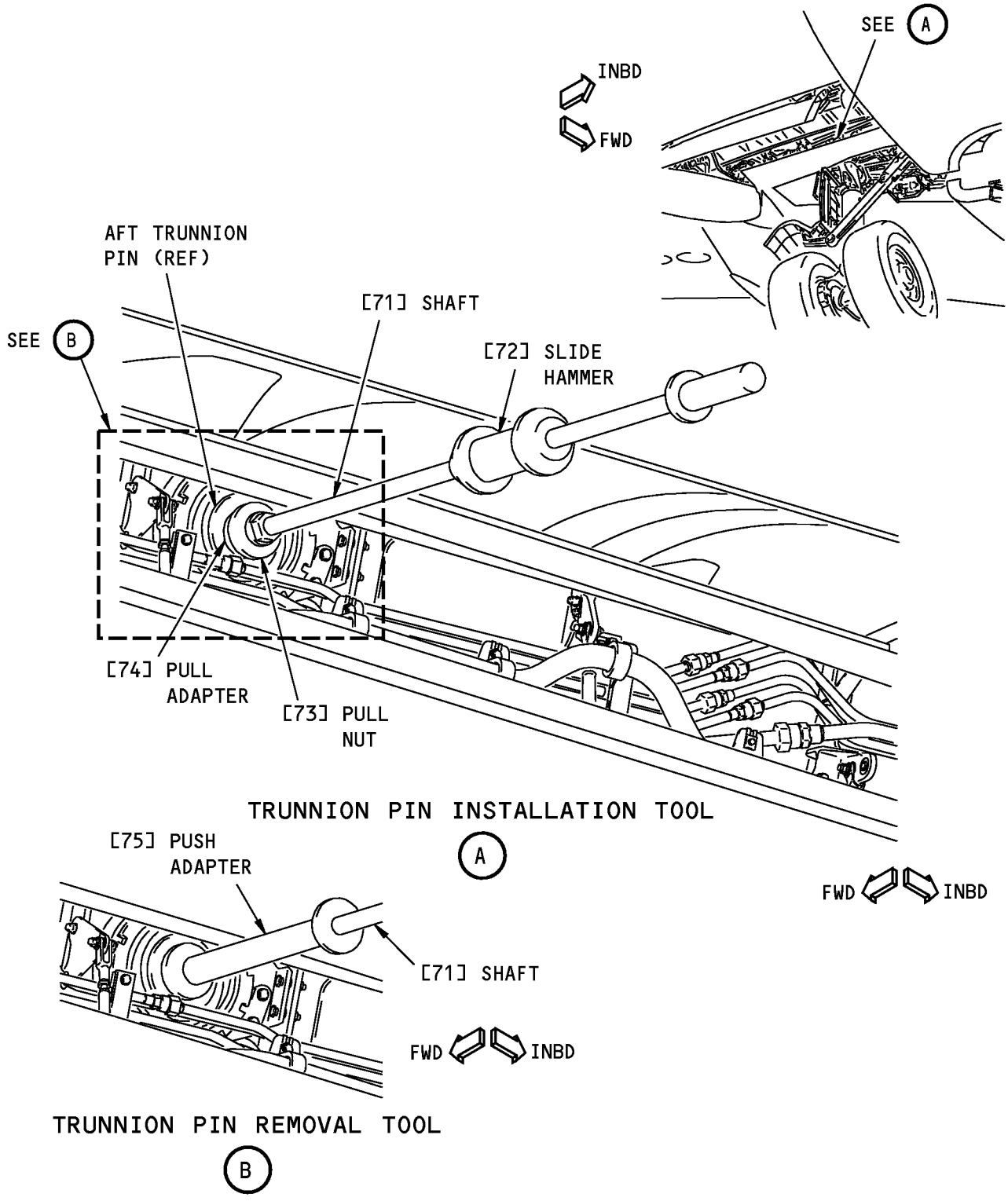
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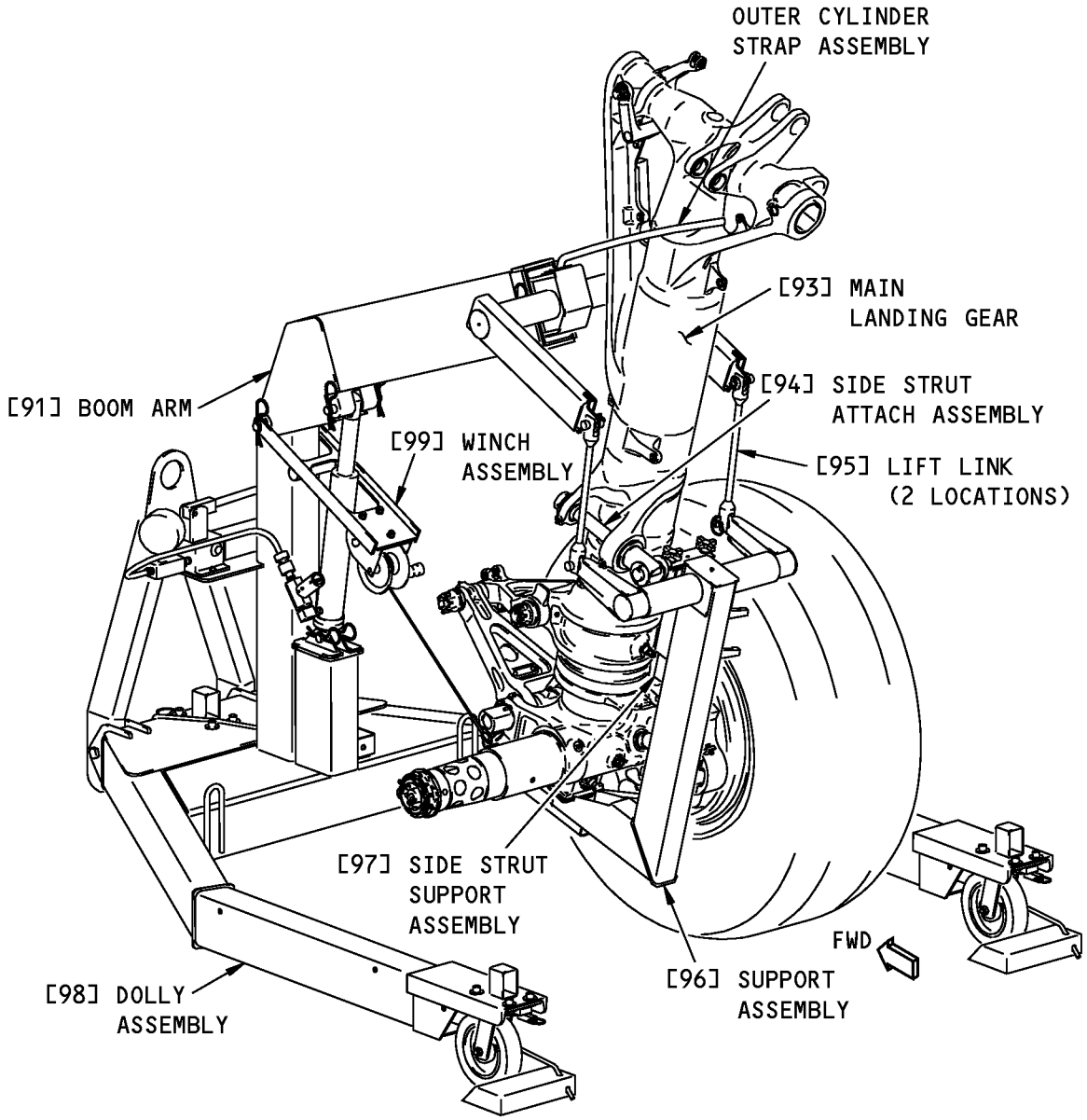
Main Landing Gear Installation
Figure 401 (Sheet 6 of 6)/32-11-00-990-801

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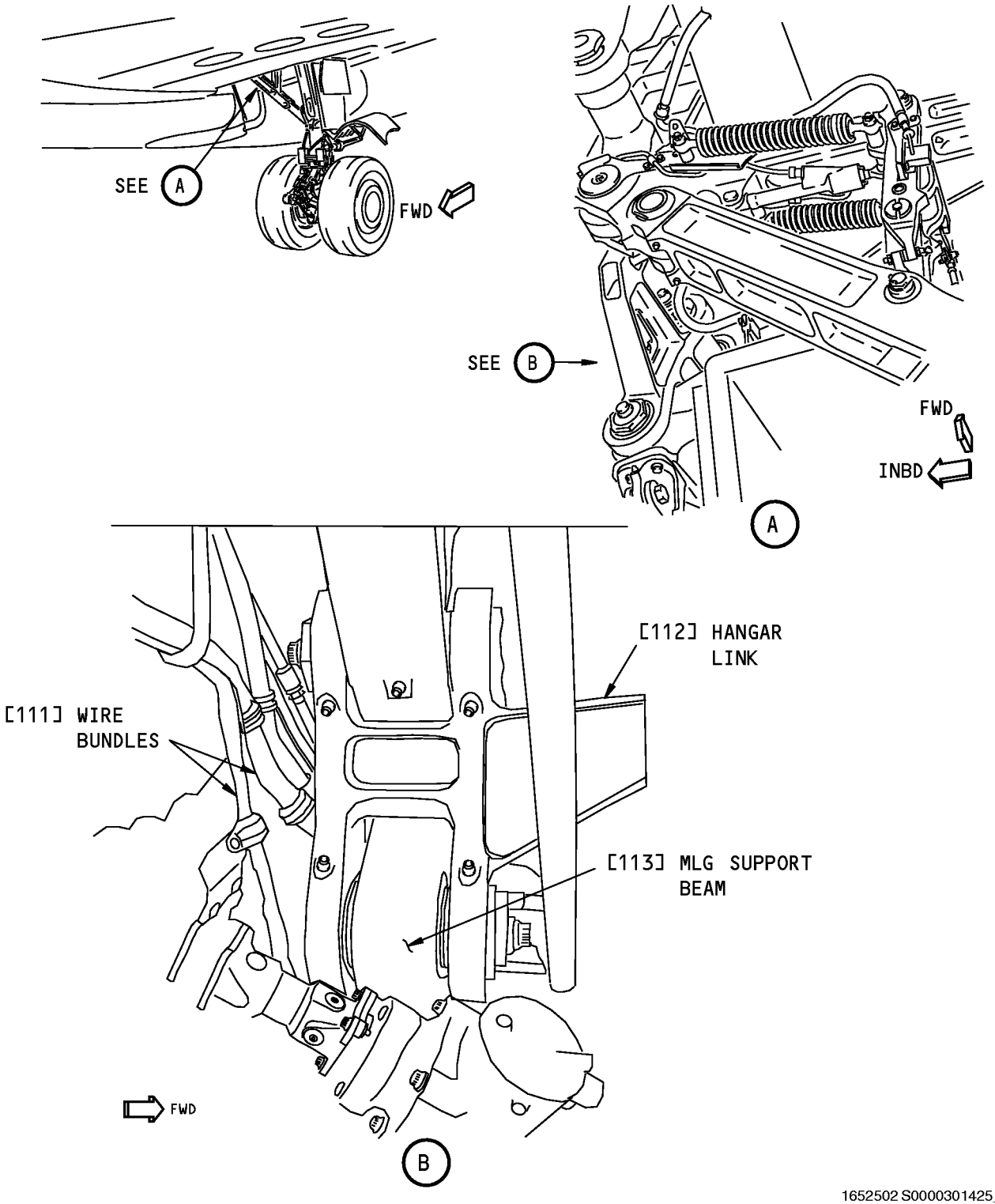
Main Landing Gear Trunnion Pin Puller Equipment
Figure 402/32-11-00-990-803

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Main Landing Gear Support Equipment
Figure 403/32-11-00-990-804

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Main Landing Gear Clearance Requirements
Figure 404/32-11-00-990-806

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TASK 32-11-00-400-801

3. Main Landing Gear Installation

(Figure 401, Figure 402, Figure 403)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
12-15-31-610-802	Main Landing Gear Shock Strut Servicing (P/B 301)
12-15-31-990-802	Figure: Main Landing Gear Shock Strut Servicing Chart (P/B 301)
12-21-11-640-801	Main Landing Gear Upper End Components Servicing (P/B 301)
12-21-11-640-802	Main Landing Gear Lower End Components Servicing (P/B 301)
24-22-00-860-814	Remove External Power (P/B 201)
27-51-00-040-801	Trailing Edge Flap System Deactivation (P/B 201)
27-51-00-440-801	Trailing Edge Flap System Reactivation (P/B 201)
27-51-00-860-804	Retract the Trailing Edge Flaps (P/B 201)
27-62-00-800-801	Speed Brake Hydraulic Systems A and B Pressurization (P/B 201)
27-62-00-840-802	Put the Speed Brake Systems A and B Back to the Condition Before the Pressure Removal (P/B 201)
27-62-51-400-801	Ground Spoiler Interlock Valve Cable Installation (P/B 401)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-11-61-400-802	Main Landing Gear Lower Side Strut Installation (P/B 401)
32-13-11-420-802	Main Landing Gear Center Door Installation (P/B 401)
32-13-11-420-804	Main Landing Gear Inner Door Installation (P/B 401)
32-13-11-820-801	Main Landing Gear Shock Strut Door Adjustment (P/B 501)
32-13-21-000-801	Main Landing Gear Wing Door Adjustment (P/B 501)
32-13-21-420-801	Main Landing Gear Wing Door Installation (P/B 401)
32-32-00-710-801	Main Landing Gear Operational Test (P/B 501)
32-34-00-730-801	Main Gear Manual Extension System Test - Airplane on Jacks (P/B 501)
32-41-00-870-802	Normal (System B) Hydraulic Brake System - Bleeding (P/B 201)
32-42-00-710-802	Transducer Operational Test (P/B 501)
SWPM 20-60-03	Special Protection of Electrical Connectors

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1362	Assembly - Wrench Adapter (C32029-6, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1363	Assembly - Wrench Adapter (C32029-7, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

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(Continued)

Reference	Description
SPL-1365	Protector - Thread (C32029-9, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1366	Protector - Thread (C32029-10, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1371	Protector - Thread (C32029-15, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1372	Protector - Thread (C32029-16, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1521	Tool - Strut Inflation, Landing Gear (Part #: F70200-1, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1744	Set - Lock, Inboard Ground Spoiler Actuator (Contains 4 Lock Assemblies) (Part #: C27046-13, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C27046-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1862	Equipment - Removal/Installation, MLG Aft Trunnion Pin (Part #: C32031-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1869	Fixture - Transportation, Main Landing Gear, Removal/Installation (Part #: C32034-211, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1871	Strap - Retention, NLG/MLG Inner Cylinder (Part #: C32030-10, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-5011	Set - Lock, Inboard Ground Spoiler Actuator, 737 SFP (Contains 4 Lock Assemblies) (Part #: C27046-13, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-11076	Torque Wrench Adaptor (Part #: C32013-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00633	Grease - Aircraft General Purpose	BMS3-33
G00018	Nitrogen - Gaseous, Pressurizing, 99.5 Percent Pure	A-A-59503, Type I, Grade B
G02314	Air - Compressed, Breathing	BB-A-1034
G50171	Compound - Corrosion Inhibiting Compound, Interior Application - D5026NS or ZC-026	

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E. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

F. Access Panels

Number	Name/Location
551BB	Lower Inboard Fixed Trailing Edge, Gear Adjustment Door
551BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
551CB	Lower Inboard Fixed Trailing Edge, Gear Access Panel
551DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel
651BB	Lower Inboard Fixed Trailing Edge, Gear Door Adjustment
651BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
651CB	Lower Inboard Fixed Trailing Edge, Gear Access Panel
651DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

G. Prepare for the Installation

SUBTASK 32-11-00-480-015

CAUTION: MAKE SURE THE FORWARD TRUNNION BEARING PIN DOES NOT MOVE ON THE PROTECTOR ASSEMBLY DURING THE REMOVAL OR INSTALLATION OF THE MAIN LANDING GEAR. IF THIS CONDITION OCCURS, IT CAN CAUSE DAMAGE TO THE PIN.

(1) If the protector assembly, from fixture, SPL-1869, is not already installed, do the steps that follow:

NOTE: The protector assembly will prevent damage to the forward trunnion bearing pin during the installation of the main landing gear.

(a) Put the upper end of the protector assembly in the large clearance between the forward trunnion bearing pin [29] and the housing assembly.

(b) Attach the lower end of the protector assembly over the bottom of the housing assembly, such that you hear a click when you attach it.

SUBTASK 32-11-00-480-016

(2) Install the retention strap, SPL-1871, with the marker facing up, to hold the shock strut [1] in its compressed position.

NOTE: two straps are required to hold the inner cylinder secure.

SUBTASK 32-11-00-640-001

(3) Make sure the aft trunnion pin [19] can easily move.

(a) If you cannot easily move the aft trunnion pin [19], remove it from the aft trunnion and lubricate it with grease, D00633.

(b) Put the aft trunnion pin [19] into the aft trunnion.

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SUBTASK 32-11-00-480-017

(4) Use tie wraps to hold the aft trunnion pin [19] inside the aft trunnion.

NOTE: This will prevent the aft trunnion pin from falling out of the outer cylinder trunnion when you do the subsequent steps.

SUBTASK 32-11-00-950-001

(5) Put protective tape on the outer edge of the aft trunnion to protect its surface finish from scratching.

SUBTASK 32-11-00-860-007

(6) Do this task: Trailing Edge Flap System Deactivation, TASK 27-51-00-040-801.

H. Main Landing Gear Installation

SUBTASK 32-11-00-480-018

(1) Attach the support assembly [96] and the side strut attach assembly [94] to the main landing gear [93]:

NOTE: Make sure that a minimum of 2 person will do this task.

(a) Make sure the side strut attach assembly [94] is not attached to the support assembly [96].

(b) Make sure the jackball pin is removed from the hole in the jackball fitting of the support assembly [96].

(c) Put the side strut attach assembly [94] into the lower side strut attach point on the main landing gear [93], and such that the stenciled plate is in vertical position.

1) Install the washer on the threaded end of the side strut attach assembly [94].

2) Make sure the stenciled plate is still in a vertical position and install the nut finger tight.

(d) Put the support assembly [96] in its position on the aft side of the main landing gear [93].

NOTE: Make sure the jackball fitting on the support assembly is fully engaged on the jacking ball of the main landing gear.

(e) If it is necessary, align the holes for the installation of the jackball pin.

(f) Put the jackball pin through the jackball fitting of the support assembly [96] and the jacking ball of the main landing gear [93].

(g) Install the lynch pin in the jackball pin.

(h) Loosen the nut that holds the side strut attach assembly [94], such that the stenciled plate can be attached to the studs on the side strut support assembly [97].

1) If it is necessary, adjust the adjustable square support tube of the side strut support assembly [97].

(i) Tighten the two hand knobs to hold the stenciled plate to the studs on the side strut support assembly [97].

(j) Tighten the nut that holds the side strut attach assembly [94] to the lower side strut attach point.

(k) Tighten the two adjustable handles to hold the adjustable square support tube of the side strut support assembly [97].

SUBTASK 32-11-00-480-019

(2) Attach the dolly assembly [98] to the support assembly [96]:

NOTE: Make sure a minimum of 2 person will do this task.

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(a) Put the dolly assembly [98] in its position such that the boom arm [91] is on the forward side of the main landing gear [93] and the legs are in center with the main landing gear [93].

(b) Use the manual valve on the hydraulic pump to lift or lower the boom arm [91] until you can connect the lift links [95] to the support assembly [96].

(c) Connect the lift links [95] to the support assembly [96].

(d) Install the pins to hold the lift links [95] to the support assembly [96].

(e) Connect the winch assembly [99] to the support assembly [96] with the snapper pin.

SUBTASK 32-11-00-480-020

(3) Make sure the airplane is lifted with the jacks (TASK 07-11-01-580-815) and the lower surface of the housing, for the forward trunnion bearing pin [29], measures 97 ±2 in. (246 ±5 cm) above the ground (Figure 403, View A).

NOTE: Make sure to keep the airplane level.

SUBTASK 32-11-00-580-003

(4) Use the boom arm [91] to lift the main landing gear [93], such that the transportation support assembly and the aft tire support assembly can be removed from the dolly assembly [98].

SUBTASK 32-11-00-980-001

(5) From the aft side, carefully move the dolly assembly [98] with main landing gear [93] forward below the wing and put it in its position below the wheel well area.

(a) Move the dolly assembly [98] such that the axis of the forward trunnion bearing pin [29] will be perpendicular to the housing assembly and the rear spar.

SUBTASK 32-11-00-020-027

WARNING: MAKE SURE THE HYDRAULIC PRESSURE IS BELOW 5000 PSIG WHEN YOU CONNECT THE FORWARD TRUNNION TO THE FORWARD TRUNNION BEARING PIN. IF THE HYDRAULIC PRESSURE IS 5000 PSIG OR HIGHER, A BINDING CONDITION OCCURS. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(6) Connect the forward trunnion:

(a) Lift the main landing gear [93] with the boom arm [91] and the winch assembly [99], such that the forward trunnion and the forward trunnion bearing pin [29 are aligned.

1) Remove the transportation support assembly and the aft tire support assembly from the dolly assembly [98].

(b) Attach the outer cylinder strap assembly to the hoist ring on the end of the boom arm (91) and around the outer cylinder at the aft trunnion.

(c) Remove the tension from the strap.

(d) Use the pry lever bar to remove the load off of the caster wheels one at a time.

(e) Use the lever bar assemblies to turn all the caster wheels parallel to the dolly assembly [98] legs, such that the forward trunnion can be inserted straight onto the forward trunnion bearing pin [29].

NOTE: Make sure the swivel locks on the caster wheels are not locked.

(f) Make sure the forward trunnion stays aligned with the forward trunnion bearing pin [29] and lock the swivel locks.

(g) Put chocks on all caster wheels but put the forward chock approximately 2 inches forward of the double wheel caster.

(h) Put the fork end of the lever bar assemblies on the rectangular tubing above the single wheel casters.

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(i) Use the lever bar assemblies to slowly push the dolly assembly [98] forward.

NOTE: Make sure the aft trunnion will clear the lower trailing edge panel seals when you do this task. Also, make sure the chocks are in contact with the single wheel casters to prevent the movement of the dolly assembly [98].

(j) Slowly lift the aft end of the main landing gear [93] with the winch assembly [99] and lifting the boom arm [91] at the same time while you continue to push the dolly assembly [98] forward.

NOTE: Use the manual valve on the hydraulic pump to lift the boom arm [91]. Tighten the outer cylinder strap if necessary to remove the tension, such that the forward trunnion will not come off of the forward trunnion bearing pin [29].

(k) Continue the movement of the dolly assembly [98] until the forward trunnion is fully inserted onto the forward trunnion bearing pin [29].

(l) Visually examine the protective coating on the transition radius of the forward trunnion pin for chipping, cracks or corrosion.

SUBTASK 32-11-00-620-004

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(7) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

(a) The shank, thread, and thread relief of the forward trunnion cross bolt [28]

(b) The thread of the nut [25]

(c) The spline, and face of the washer [26]

(d) The pin [24].

SUBTASK 32-11-00-160-005

(8) Remove all unwanted corrosion preventive compound, C00913.

SUBTASK 32-11-00-420-029

(9) Install the forward trunnion cross bolt [28]:

(a) Install the thread protector, SPL-1365 on the forward trunnion cross bolt [28].

(b) Put the forward trunnion cross bolt [28] through the door actuator bracket [27], forward trunnion, and the forward trunnion bearing pin [29].

(c) Remove the thread protector, SPL-1365 from the forward trunnion cross bolt [28].

(d) Install the washer [26] and the nut [25] on the forward trunnion cross bolt [28].

(e) Tighten the nut [25] to 21 ft-lb (28 N·m) – 25 ft-lb (34 N·m) more than the run-on torque.

(f) Install the pin [24] in the forward trunnion cross bolt [28]. If it is necessary, loosen the nut [25] to the nearest castellation to align the holes for the pin [24].

SUBTASK 32-11-00-080-011

(10) Remove the outer cylinder strap assembly from the hoist ring and the outer cylinder.

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SUBTASK 32-11-00-420-022

WARNING: MAKE SURE THE HYDRAULIC PRESSURE IS BELOW 5000 PSIG WHEN YOU OPERATE THE DOLLY ASSEMBLY AND TO LIFT THE AFT TRUNNION INTO ITS POSITION. IF THE HYDRAULIC PRESSURE IS 5000 PSIG OR HIGHER WHEN YOU DO THIS, A BINDING CONDITION OCCURS. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(11) Operate the dolly assembly [98] to put the aft trunnion in its position:

NOTE: The main landing gear [93] installation path is done with the forward trunnion bearing pin [29] attached to the forward trunnion. This installation path is a combination of moving the aft trunnion inboard, lifting the aft trunnion, and moving the aft trunnion outboard as the main landing gear pivots about the forward trunnion bearing pin.

(a) Make sure to lock the caster wheels when the main landing gear [93] pivots about the forward trunnion bearing pin [29] as follows;

1) Use the pry lever bar to remove the load off of the caster wheels one at a time.

2) Lock the single wheel casters perpendicular to the forward trunnion pivot axis approximately 38 degrees, and 90 degrees for the double wheel caster.

(b) Put the fork end of the lever bar assemblies on the rectangular tubing above the single wheel casters.

(c) Do a check to make sure the locks for the caster wheels are released.

(d) Hold the lever bar assemblies to slowly push the aft end of the dolly assembly [98] inboard, such that the aft trunnion will clear the main landing gear beam lower flange, lower trailing edge panel seals, and the seal support beam when the aft trunnion is lifted.

(e) If it is necessary, use the lever bar assemblies and the pry lever bar to put the caster wheels parallel to the legs of the dolly assembly [98].

(f) Lock the caster wheels.

(g) Lift and move the aft trunnion outboard at the same time while you clear the main landing gear [93] from the main landing gear beam as follows;

1) Release the tension on the winch assembly [99].

2) Use the manual valve on the hydraulic pump to lift the boom arm [91].

(h) Put the aft trunnion in its position directly below the aft trunnion bearing.

1) If the forward tire support assembly is on the way of the tires, remove it.

(i) Put chocks on all the casters.

(j) Continue to slowly lift the aft trunnion of the main landing gear [93] until the aft trunnion and the aft trunnion bearing are aligned.

NOTE: Make sure the chock is in contact with the double wheel caster to prevent the forward movement of the dolly assembly [98].

SUBTASK 32-11-00-080-006

(12) Remove the two tie wraps that hold the aft trunnion pin [19].

SUBTASK 32-11-00-080-007

(13) Remove the protective tape from the outer edge of the aft trunnion.

SUBTASK 32-11-00-640-002

(14) Lubricate the chrome plated surfaces of the aft trunnion cross bolt [28] with grease, D00633.

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SUBTASK 32-11-00-160-001

(15) Remove all unwanted grease, D00633.

SUBTASK 32-11-00-620-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(16) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

(a) The shank, thread, and thread relief of the aft trunnion bolt [23]

(b) The thread of the nut [21]

(c) The spline, and face of the washer [22]

(d) The pin [20].

SUBTASK 32-11-00-160-002

(17) Remove all unwanted corrosion preventive compound, C00913.

SUBTASK 32-11-00-420-007

(18) Connect the aft trunnion:

(a) Put a flashlight, or other bright lights, at the top of the main landing gear [93] and shine them back past the aft trunnion.

(b) Look through the aft trunnion pin access hole so you can see the aft trunnion pin [19] through the aft trunnion bearing.

(c) Move the dolly assembly [98] from side to side or lift and lower it until you can see equal amounts of light all the way around the aft trunnion pin [19] through the aft trunnion bearing.

NOTE: When you have the aft trunnion pin [19] and the aft trunnion bearing correctly aligned, the aft trunnion pin will install very easily.

(d) Use the aft trunnion equipment, SPL-1862 to pull the aft trunnion pin [19] from the aft trunnion:

1) Put the pull adapter [74] through the pin access hole in the main landing gear beam [30].

2) Attach the pull adapter [74] to the aft trunnion pin [19].

3) Pull the slide hammer [72] until the aft trunnion pin [19] is out of the aft trunnion bearing such that the aft trunnion will connect to the main landing gear beam.

(e) Move the aft trunnion bearing until it is in line with the aft trunnion pin [19].

(f) If it is necessary, use the aft trunnion equipment, SPL-1862 to turn the aft trunnion pin [19] clockwise until the holes for the aft trunnion bolt [23] are aligned.

(g) Install the thread protector, SPL-1366 on the aft trunnion cross bolt [23].

(h) Put the aft trunnion cross bolt [23] through the aft trunnion and the aft trunnion pin [19].

(i) Remove the thread protector, SPL-1366 from the aft trunnion cross bolt [23].

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(j) Install the washer [22], and the nut [21] on the aft trunnion cross bolt [23].

(k) Tighten the nut [21] to 160 in-lb (18 N·m) – 190 in-lb (21 N·m) more than the run-on torque.

NOTE: Use long wrench with narrow body, ratchet wrench or crowsfoot with 4 inches extension to tighten the nut.

(l) Install the cotter pin [20] in the aft trunnion cross bolt [23]. If it is necessary, loosen the nut [21] to the nearest castellation to align the holes for the pin [20].

SUBTASK 32-11-00-080-004

(19) Remove the main landing gear fixture, SPL-1869 from the main landing gear [93].

SUBTASK 32-11-00-080-008

(20) Remove the protector assembly.

SUBTASK 32-11-00-420-030

(21) Install the forward trunnion seal [63], support ring assembly [62]and the retaining ring [61] on the forward trunnion bearing pin [29] (Figure 401, View B-B).

NOTE: Use wrench, torque wrench adaptor, SPL-11076, to install the retaining ring.

SUBTASK 32-11-00-080-009

(22) Remove retention strap, SPL-1871 from the main landing gear [93].

SUBTASK 32-11-00-212-001

(23) Before you connect the electrical connector, examine the connector for corrosion.

WARNING: DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

(a) If there was corrosion, refer to (SWPM 20-60-03) to correct the problem.

(b) Apply the D5026NS or ZC-026 compound, G50171 to the connector (SWPM 20-60-03)

SUBTASK 32-11-00-420-008

(24) Connect the electrical connector [13]:

(a) Attach the clamps [16] to the electrical connector [13].

(b) Install the screws [14], washers [15], and nuts [17] to the clamps [16] that hold the electrical connector [13] to the hose guide [18].

(c) Remove the cap from the electrical connector [13].

(d) Connect the electrical connector [13] to the electrical connector.

SUBTASK 32-11-00-420-009

(25) Connect the electrical connector [11]:

(a) Put the electrical connector [11] through the hose guide [12].

(b) Attach the clamps [9] to the electrical connector [11].

(c) Install the screws [7], washers [8], and nuts [10] to the clamps [9] that hold the electrical connector [11] to the structure.

(d) Remove the cap from the electrical connector [11].

(e) Connect the electrical connector [11] to the electrical connector.

SUBTASK 32-11-00-420-010

(26) Connect the brake hose assembly [6]:

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(a) Remove the caps from the brake hose assembly [6].

(b) Remove the caps from the elbow [5].

(c) Connect the brake hose assembly [6] to the elbow [5].

(d) Remove the tags from the brake hose assembly [6].

SUBTASK 32-11-00-420-023

(27) Connect the disconnected end of the brake safety cable.

SUBTASK 32-11-00-100-001

(28) Clean the surfaces of these items that will attach the retract actuator [43] to the main gear trunnion:

(a) Attachment fitting on the main gear trunnion

(b) Actuator Attach Pin [50]

(c) Spacers [49]

(d) Washer [48]

(e) Nut [45]

(f) Cotter pin [41], nut [47], washer [46], and bolt [44].

SUBTASK 32-11-00-100-002

(29) Clean the surfaces of these items that will attach the walking beam [51] and the retract actuator [43] to the main gear trunnion:

(a) Attachment fitting on the main gear trunnion

(b) Walking beam attach pin [52]

(c) Washer [53]

(d) Nut [55]

(e) Cotter pin [41], nut [47], washer [46], and bolt [54].

SUBTASK 32-11-00-600-001

(30) Apply grease, D00633 to the chrome-plated surfaces of the pin [32], actuator attach pin [50], and the walking beam attach pin [52].

SUBTASK 32-11-00-620-002

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CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(31) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) , to these items:

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces.

(a) The threads and thread reliefs on the actuator attach pin [50], and the walking beam attach pin [52]

(b) The threads and thread reliefs of the bolts [44, 54]

(c) The threads and thread reliefs of the nuts [45, 47, 55]

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(d) The faces of the washer [46, 48, 53]

(e) The cotter pins [41].

SUBTASK 32-11-00-160-003

(32) Remove all unwanted corrosion preventive compound, C00913.

SUBTASK 32-11-00-080-010

(33) Remove the rope that holds the disconnected ends of the walking beam [51] and the retract actuator [43].

SUBTASK 32-11-00-010-005

(34) Remove the clamps for the electrical conduit on the inboard side of the nut [45] and move the conduit to get clearance to tighten the nut [45].

SUBTASK 32-11-00-420-024

(35) Connect the retract actuator [43] to the main gear trunnion:

(a) Put the retract actuator [43] in its position for connection to the main gear trunnion.

(b) Install the thread protector, SPL-1372 on the actuator attach pin [50].

(c) Put the actuator attach pin [50] through the retract actuator [43], spacers [49] and the main gear trunnion.

(d) Remove the thread protector, SPL-1372 from the actuator attach pin [50].

(e) Install the washer [48] and the nut [45] on the actuator attach pin [50].

(f) Use the wrench adapter assembly, SPL-1363 to hold the head of the actuator attach pin [50].

(g) Tighten the nut [45] to 95 ft-lb (129 N·m) – 115 ft-lb (156 N·m) above the run-on torque.

(h) If it is necessary, loosen the nut [45] to the nearest castellation to align the holes for the bolt [44].

(i) Remove the wrench adapter assembly, SPL-1363 from the actuator attach pin [50].

(j) Put the bolt [44] through the actuator attach pin [50].

(k) Install the washer [46] and the nut [47] on the actuator attach pin [50].

(l) Tighten the nut [47] to 20-24 pound-inches (2-3 newton-meters) above the run-on torque.

(m) If it is necessary, loosen the nut [47] to the nearest castellation to align the holes for the cotter pin [41].

(n) Install the cotter pin [41] in the bolt [44].

SUBTASK 32-11-00-410-003

(36) Put the electrical conduit back in its position and install the clamps.

SUBTASK 32-11-00-420-025

(37) Connect the walking beam [51] to the main gear trunnion:

(a) Put the walking beam [51] in its position for the connection to the main gear trunnion.

(b) Install the thread protector, SPL-1371 on the walking beam attach pin [52].

(c) Put the walking beam attach pin [52] through the walking beam [51], and the main gear trunnion.

(d) Remove the thread protector, SPL-1371 from the walking beam attach pin [52].

(e) Install the washer [53] and the nut [55] on the walking beam attach pin [52].

(f) Install the wrench adapter assembly, SPL-1362 to hold the head of the walking beam attach pin [52].

(g) Tighten the nut [55] to 170 ft-lb (230 N·m) – 200 ft-lb (271 N·m) above the run-on torque.

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(h) If it is necessary, loosen the nut [55] to the nearest castellation to align the holes for the bolt [54].

(i) Remove the wrench adapter assembly, SPL-1362 from the walking beam attach pin [52].

(j) Put the bolt [54] through the walking beam attach pin [52].

(k) Install the washer [46] and the nut [47] on the walking beam attach pin [52].

(l) Tighten the nut [47] to 20 in-lb (2 N·m) – 24 in-lb (3 N·m) above the run-on torque.

(m) If it is necessary, loosen the nut [47] to the nearest castellation to align the holes for the pin [41].

(n) Install the pin [41] in the bolt [54].

SUBTASK 32-11-00-420-026

(38) Install the nuts [37], washers [35, 36] and bolts [34] to connect the turnbuckle [38] to the bracket.

SUBTASK 32-11-00-620-003

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CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(39) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) , to these items:

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces.

(a) The threads and thread reliefs of the crossbolt [31]

(b) The threads of the nut [40]

(c) The faces of the washer [39].

SUBTASK 32-11-00-640-003

(40) Apply grease, D00633 the chrome plated surfaces of the trunnion pin [32] and the end cap [42].

SUBTASK 32-11-00-160-004

(41) Remove all unwanted corrosion preventive compound, C00913 and grease, D00633.

SUBTASK 32-11-00-420-027

(42) Connect the reaction link assembly [30] to the trunnion [33]:

(a) Put the outboard end of the reaction link assembly [30] in its position for attachment to the trunnion [33].

(b) Put the trunnion pin [32] through the reaction link assembly [30] and the trunnion [33].

(c) Install the end cap [42] on the trunnion pin [32].

(d) Put the cross bolt [31] through the trunnion pin [32] and the end cap [42].

(e) Install the washer [39] and the nut [40] on the cross bolt [31].

(f) Tighten the nut [40] to 20 in-lb (2 N·m) – 24 in-lb (3 N·m) above the run-on torque.

(g) If it is necessary, loosen the nut [40] to the nearest castellation to align the holes for the cotter pin [41].

(h) Install the cotter pin [41] in the crossbolt [31].

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SUBTASK 32-11-00-420-019

(43) Do this task: Main Landing Gear Lower Side Strut Installation, TASK 32-11-61-400-802.

SUBTASK 32-11-00-200-001

WARNING: MAKE SURE THAT THE SYSTEM-TO-SYSTEM SEPARATIONS ARE CORRECT. SEPARATIONS THAT ARE NOT CORRECT COULD CAUSE UNWANTED CONDITIONS, WHICH COULD INCLUDE CHAFING, FIRE OR ELECTROMAGNETIC INTERFERENCE. THIS CAN CAUSE INJURIES TO PERSONNEL, OR CAN MAKE FLIGHT DANGEROUS, OR CAN CAUSE DAMAGE TO THE SYSTEMS.

(44) Make sure that there is a minimum distance of 0.13 in. (3.30 mm) between the wire bundles [111] and the hangar link [112], Figure 404..

SUBTASK 32-11-00-420-020

(45) Install the hose guide [18].

SUBTASK 32-11-00-410-002

(46) Install the applicable panel:

(a) For the left wing, do this step:

Close this access panel:

Number	Name/Location
551BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel

(b) For the right wing, do this step:

Close this access panel:

Number	Name/Location
651BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel

SUBTASK 32-11-00-420-031

(47) If you will install the right gear, connect the interlock valve cable of the ground spoiler, do this task: Ground Spoiler Interlock Valve Cable Installation, TASK 27-62-51-400-801.

SUBTASK 32-11-00-420-013

(48) Do this task: Main Landing Gear Wing Door Installation, TASK 32-13-21-420-801.

SUBTASK 32-11-00-420-028

(49) Do this task: Main Landing Gear Center Door Installation, TASK 32-13-11-420-802.

SUBTASK 32-11-00-420-014

(50) Do this task: Main Landing Gear Inner Door Installation, TASK 32-13-11-420-804.

SUBTASK 32-11-00-410-001

(51) Install the applicable panel:

(a) For the left landing gear, do this step:

Close these access panels:

Number	Name/Location
551BB	Lower Inboard Fixed Trailing Edge, Gear Adjustment Door
551CB	Lower Inboard Fixed Trailing Edge, Gear Access Panel

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(b) For the right landing gear, do this step:

Close these access panels:

Number	Name/Location
651BB	Lower Inboard Fixed Trailing Edge, Gear Door Adjustment
651CB	Lower Inboard Fixed Trailing Edge, Gear Access Panel

(c) Close these access panels:

Number	Name/Location
551DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel
651DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

I. Put the Airplane Back to Its Usual Condition

SUBTASK 32-11-00-860-015

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1
B	16	C01346	LANDING GEAR PARKING BRAKE
B	17	C00129	LANDING GEAR LATCH & PRESS WARN
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	15	C01401	LANDING GEAR AIR/GND RELAY
D	16	C01432	LANDING GEAR ALTN EXTEND SOL
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

SUBTASK 32-11-00-860-009

(2) Do this task: Trailing Edge Flap System Reactivation, TASK 27-51-00-440-801.

SUBTASK 32-11-00-860-010

(3) Do this task: Retract the Trailing Edge Flaps, TASK 27-51-00-860-804.

HAP 001-013, 015-026, 028-036, 101-999

SUBTASK 32-11-00-080-013

(4) Remove set, SPL-1744.

HAP 037-054

SUBTASK 32-11-00-080-014

(5) Remove lock set, SPL-5011.

HAP ALL

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SUBTASK 32-11-00-860-019

(6) Do this task: Put the Speed Brake Systems A and B Back to the Condition Before the Pressure Removal, TASK 27-62-00-840-802.

SUBTASK 32-11-00-860-020

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF ALL CONTROL SURFACES BEFORE YOU SUPPLY HYDRAULIC POWER. AILERONS, RUDDERS, ELEVATORS, FLAPS, SLATS, SPOILERS, LANDING GEAR, AND THRUST REVERSERS CAN MOVE QUICKLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(7) Do this task: Speed Brake Hydraulic Systems A and B Pressurization, TASK 27-62-00-800-801.

SUBTASK 32-11-00-860-021

(8) Move the speed brake lever to the DOWN position to lower the spoilers.

SUBTASK 32-11-00-820-001

(9) If you changed the length of one or more of the door rods, do the steps that follows:

(a) Adjust the shock strut doors of the main landing gear. To adjust them, do this task: Main Landing Gear Shock Strut Door Adjustment, TASK 32-13-11-820-801.

(b) Adjust the outer door of the main landing gear. To adjust it, do this task: Main Landing Gear Wing Door Adjustment, TASK 32-13-21-000-801.

SUBTASK 32-11-00-610-001

(10) Lubricate the main landing gear. To lubricate it, do this task: Main Landing Gear Upper End Components Servicing, TASK 12-21-11-640-801 and, do this task: Main Landing Gear Lower End Components Servicing, TASK 12-21-11-640-802.

SUBTASK 32-11-00-619-001

(11) To fully service the shock strut with the airplane on jacks, do these steps to service the shock strut with fluid:

NOTE: Hold the shock strut in a vertical position to do these steps.

(a) Make sure the shock strut is fully deflated, refer to service placard for the fully deflated dimension (Figure 12-15-31-990-802).

(b) Do the steps to ''fill the shock strut with fluid'' (SUBTASK 12-15-31-600-001).

(c) Close the valves and install their caps.

SUBTASK 32-11-00-619-002

(12) To inflate the shock strut with the airplane on jacks, do these steps:

NOTE: To do these steps, you must have accomplished the steps to add fluid to the strut, at the start of this task.

(a) Install the tool, SPL-1521 on the gas valve

(b) Inflate the shock strut with nitrogen, G00018 until you reach the fully extended pressure, refer to the servicing placard for the correct pressure (Figure 12-15-31-990-802).

NOTE: If nitrogen is not available, you can use air, G02314, as an alternative, to inflate the shock strut.

(c) Remove the tool, SPL-1521 and install the cap on the gas valve.

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SUBTASK 32-11-00-619-003

(13) If you did not do the steps to service the strut with fluid, at the start of this task, then you must do this task Main Landing Gear Shock Strut Servicing, TASK 12-15-31-610-802

SUBTASK 32-11-00-860-011

(14) For hydraulic systems A and B, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-11-00-870-001

(15) Bleed the brake hydraulic system:

(a) To bleed the brake hydraulic system do this task. Normal (System B) Hydraulic Brake System - Bleeding, TASK 32-41-00-870-802

SUBTASK 32-11-00-790-001

(16) Examine the connections of the hydraulic brake line for leakage.

SUBTASK 32-11-00-710-001

(17) Do a test of the operation of the skid detectors. To do this, do this task: Transducer Operational Test, TASK 32-42-00-710-802.

SUBTASK 32-11-00-080-002

(18) If the downlock pins are installed on all the landing gear, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

SUBTASK 32-11-00-710-002

(19) Do this task: Main Landing Gear Operational Test, TASK 32-32-00-710-801.

SUBTASK 32-11-00-710-003

(20) Do this task: Main Gear Manual Extension System Test - Airplane on Jacks, TASK 32-34-00-730-801.

SUBTASK 32-11-00-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(21) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801

SUBTASK 32-11-00-580-001

(22) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

SUBTASK 32-11-00-860-012

(23) Set the parking brakes.

SUBTASK 32-11-00-610-002

(24) Check the pressure and extension of the shock strut:

(a) Measure the pressure and extension of the shock strut

(b) Make sure the pressure you measure is still correct for the extension of the shock strut (Figure 12-15-31-990-802).

(c) If the pressure is not correct for the extension of the shock strut, then the shock strut does not have the proper amount of fluid and you must fully service the shock strut (Main Landing Gear Shock Strut Servicing, TASK 12-15-31-610-802).

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SUBTASK 32-11-00-860-013

(25) If electrical power is not necessary, do this task: Remove External Power, TASK 24-22-00-860-814.

——————— END OF TASK ———————

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MAIN LANDING GEAR - INSPECTION/CHECK

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure contains the task to examine the main landing gear.

C. This procedure does not remove or install the main landing gear. Refer to TASK 32-11-00-000-801 to remove and install the main landing gear.

TASK 32-11-00-200-801

2. Main Landing Gear Inspection

(Figure 601)

A. General

(1) This task provides the regular inspection of the main landing gear.

NOTE: This inspection can be done with the airplane on the ground or on jacks.

(2) Refer to TIME LIMITS/MAINTENANCE CHECKS, CHAPTER 05 for special inspection procedure on the following conditions:

(a) After a hard or overweight landing

(b) After a brake seizure when you tow the airplane, or the airplane is moving at high speed on the ground

(c) After the gear has collided with an obstacle

(d) After a high energy stop.

B. References

Reference	Title
05	TIME LIMITS/MAINTENANCE CHECKS
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-45-00-700-801	Wheels Fast Check (Wheel Installed on the Airplane) (P/B 601)
32-45-00-700-803	Tires Inspection (P/B 601)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Procedure

SUBTASK 32-11-00-480-004

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801

SUBTASK 32-11-00-480-005

(2) Put chocks around the tires of all the landing gear.

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SUBTASK 32-11-00-210-001

(3) Examine the upper components of the main landing gear:

(a) Examine the retract actuator assembly as follows:

1) Damage, looseness and security of actuator components and attchment bolts.

2) Dirt, scratches and debris on exposed piston chrome and actuator body rod end.

3) Leaks and loose hydraulic connections.

(b) Examine the walking beam and the attachment bolts for damage, looseness and security.

(c) Examine the attachments of the beam hanger for security and damage.

(d) Examine the uplock mechanism for damage and security of attachments.

(e) Examine the hydraulic connections of the uplock and the downlock actuator assemblies for leaks and security of attachments.

(f) Do these steps to examine the shock strut:

1) Examine the shock strut for leaks and specified extension.

2) Examine the exposed surface of the inner cylinder for dirt, scratches or galling.

(g) On the right landing gear, examine the interlock cable of the ground speed brake for damage, corrosion and security of attachments.

(h) Examine the attachments of the side strut assembly for corrosion, damage or missing pins and cross bolts.

1) Examine the components of the side strut assembly for damage or missing pins and cross bolt.

(i) Make sure that the wing door is correctly attached to the push rod and the stabilizer link assembly.

1) Examine the attaching hardware for condition and security.

(j) Make sure that the shock strut doors are correctly attached to the shock strut.

1) Examine the attaching hardware for condition and security.

SUBTASK 32-11-00-210-002

(4) Examine the lower end components of the main landing gear:

(a) Do this task: Tires Inspection, TASK 32-45-00-700-803.

(b) Do this task: Wheels Fast Check (Wheel Installed on the Airplane), TASK 32-45-00-700-801.

(c) Examine the brake hydraulic hoses for chafing and leaks.

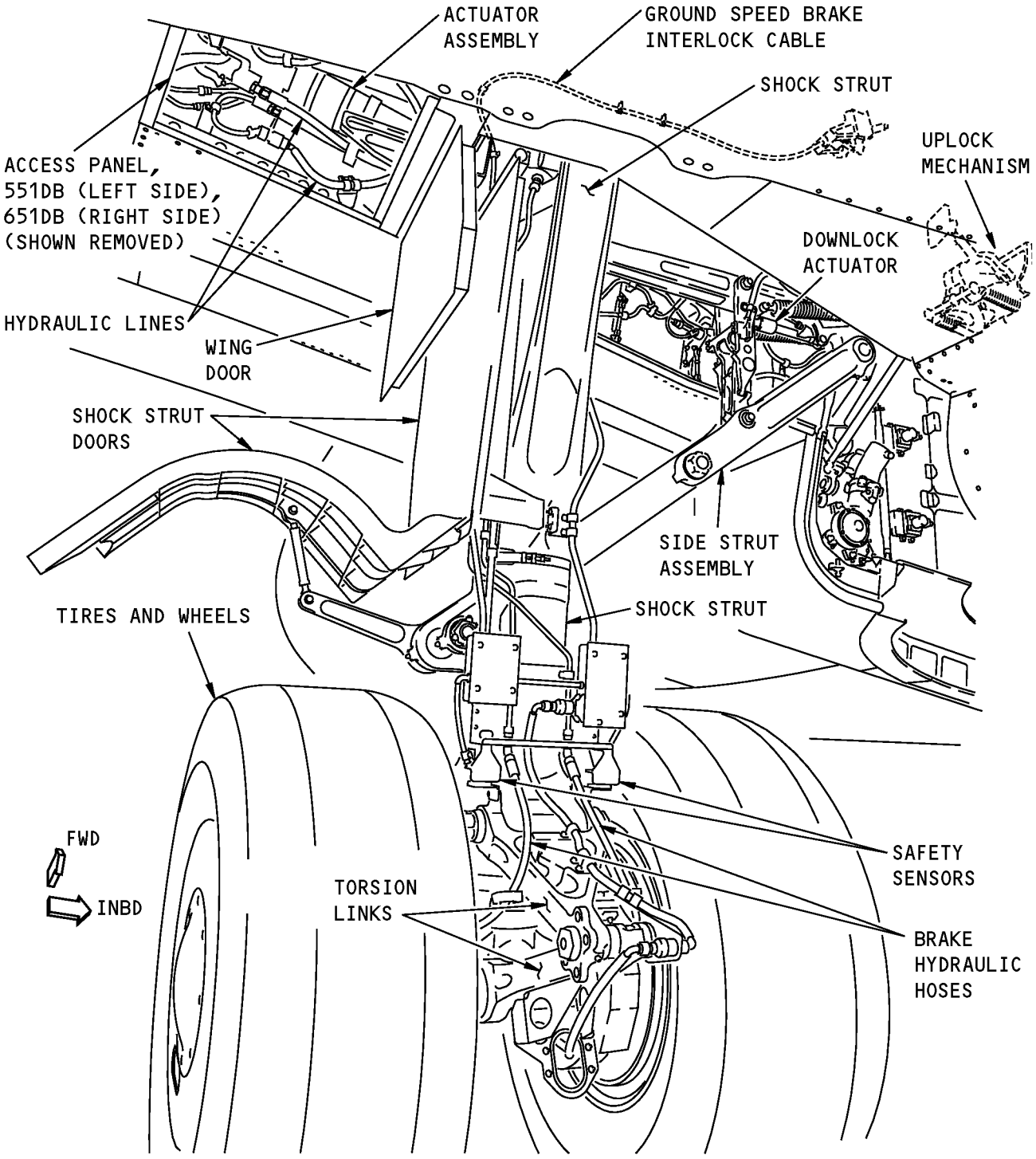
(d) Examine the safety sensors and all the electrical wiring for security and chafing.

(e) Make sure that the torsion links are correctly attached to the shock strut.

1) Examine the attachment lugs of the torsion links for cracks.

——————— END OF TASK ———————

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RIGHT MAIN LANDING GEAR
(LEFT MAIN LANDING GEAR IS EQUIVALENT)

Main Landing Gear Inspection
Figure 601/32-11-00-990-802

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MAIN LANDING GEAR SHOCK STRUT SEALS - REPAIRS

1. General

A. There are two tasks in this procedure that supply instructions to replace the seals on the shock strut of the main landing gear:

(1) The first task is to replace the active seals with the spare seals on the lower bearing carrier.

(2) The second task is to install new dynamic seals, new static seals, and new spare seals.

B. The third task is to check hydraulic leaks on the shock strut of the main landing gear.

TASK 32-11-21-960-801

2. Replace the Active Seals with the Spare Seals

(Figure 802)

A. General

(1) This task replaces the active static seal and the active dynamic seal with the spare seals on the lower bearing carrier of the main landing gear.

B. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
07-11-03-580-801	Lift the Main Landing Gear Axles with the Axle Jacks (P/B 201)
12-15-31-610-802	Main Landing Gear Shock Strut Servicing (P/B 301)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-11-51-020-801	Main Landing Gear Torsion Link Disconnection (P/B 401)
32-11-51-400-803	Main Landing Gear Torsion Link Connection (P/B 401)
32-41-41-000-801	Main Landing Gear Brake Removal (P/B 401)
32-41-41-400-801	Main Landing Gear Brake Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1340	Assembly - Spacer (C32017-4 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1341	Assembly - Carrier Puller (C32017-5 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1342	Assembly - Clamp, Dynamic Seal (C32017-7 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

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(Continued)

Reference	Description
SPL-1343	Assembly - Retainer, Thread Protector (C32017-8 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1344	Protector - Thread (C32017-9 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1347	Plunger - Dynamic Seal (C32017-23 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1829	Valve - Drain, Landing Gear Shock Strut Oil (Part #: J32060-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A32066-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1861	Adapter - Wrench, MLG Strut Gland Nut
SPL-3927	Assembly - Strap (751069-007 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
STD-1110	Container - Hydraulic Fluid Resistant, 5 Gallon (19 Liters)
STD-1140	Hose - Flexible, 1/2 Inch ID, BMS 3-11 Resistant, 10 Foot

D. Consumable Materials

Reference	Description	Specification
A00226	Compound - Tamper-Proof Putty	BMS8-45
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00467	Fluid - Landing Gear Shock Strut	BMS3-32, Type II
D00589	Lubricant - Hydraulic Assembly - AFS-682	
G50136	Paste - Corrosion Inhibiting, Non-drying	BMS 3-38

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
13	O-ring	32-11-21-03-060	HAP 001-013, 015-026, 028-030
		32-11-21-03A-070	HAP 031-054, 101-999
16	Spare static seal	32-11-21-03-075	HAP 001-013, 015-026, 028-030
		32-11-21-03A-085	HAP 031-054, 101-999
		32-11-21-03A-100	HAP 031-054, 101-999
17	Spare dynamic seal	32-11-21-03-080	HAP 001-013, 015-026, 028-030
		32-11-21-03A-090	HAP 031-054, 101-999

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F. Location Zones

Zone	Area
731	Left Main Landing Gear - Outboard Door
741	Right Main Landing Gear - Outboard Door

G. Prepare for the Replacement

SUBTASK 32-11-21-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-21-860-001

(2) Do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-11-21-860-002

(3) Operate the brakes eight times to remove pressure from the brake accumulator.

SUBTASK 32-11-21-860-003

(4) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1
B	16	C01346	LANDING GEAR PARKING BRAKE
B	17	C00129	LANDING GEAR LATCH & PRESS WARN
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	15	C01401	LANDING GEAR AIR/GND RELAY
D	16	C01432	LANDING GEAR ALTN EXTEND SOL
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

SUBTASK 32-11-21-480-002

(5) Lift the airplane a small amount to set the jacks properly and to keep the airplane level when the shock strut is deflated, do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-11-21-020-001

WARNING: DO NOT REMOVE THE VALVE BODY UNLESS YOU DEFLATE THE SHOCK STRUT FULLY. THE AIR PRESSURE CAN BLOW THE VALVE BODY OUT AND CAUSE INJURY TO PERSONS.

(6) Deflate the shock strut [1] for the main landing gear:

(a) Remove the cap [2] for the gas valve [3].

(b) Loosen the swivel nut [4] a maximum of two turns.

NOTE: Fluid in the shock strut [1] will have bubbles when you release the pressure. Deflate the shock strut slowly to prevent the leakage of the fluid through the gas valve [3].

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(c) Loosen the swivel nut [4] fully when all of the pressure in the shock strut [1] is released.

NOTE: The shock strut [1] is fully deflated when the dimension "X" is 0.9 in. (2.3 cm).

SUBTASK 32-11-21-680-001

(7) Drain the oil from the shock strut [1] for the main landing gear:

(a) Remove the cap [5] from the oil charging valve [6].

(b) Put a 5 gallon (19 liters) hydraulic fluid resistant container, STD-1110 in a position to catch the shock strut fluid when the oil charging valve [6] is opened.

(c) Install the drain equipment on the oil charging valve [6]:

1) Install the landing gear shock strut drain valve, SPL-1829 on the oil charging valve [6] to drain the shock strut.

2) If you wish to drain the shock strut [1] with a quicker method, do the steps that follow:

a) Cut a length of plastic ten foot hose (1/2 inch ID), STD-1140, long enough to reach the container on the floor.

b) Insert a small allen wrench in the end of the length of tubing, such that the end of the long part of the allen wrench is flush with the end of the tube and the short part penetrates the side wall of the tube.

c) Install the ten foot hose (1/2 inch ID), STD-1140 on the oil charging valve [6] such that the allen wrench goes into the charging valve and holds it open to drain the hydraulic fluid.

(d) Remove the drain equipment when you have removed all of the shock strut oil.

SUBTASK 32-11-21-020-002

(8) Do this task: Main Landing Gear Torsion Link Disconnection, TASK 32-11-51-020-801.

SUBTASK 32-11-21-480-003

(9) Use rope to hold the disconnected end of the upper torsion link and attach it to the outer cylinder [8].

NOTE: This step will hold the upper torsion link in its position when you do the subsequent steps.

SUBTASK 32-11-21-480-004

(10) Lift the airplane until there is more than enough room to install the carrier puller assembly, SPL-1341 [50] on the inner cylinder [12] after the gland nut [19] has been removed, do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-11-21-020-003

(11) Do this task: Main Landing Gear Brake Removal, TASK 32-41-41-000-801.

NOTE: This procedure will also remove the wheel and the tire assemblies. Also, this will give better access to the inner and outer cylinders.

SUBTASK 32-11-21-580-001

(12) Use axle jack to hold the inner cylinder [12] in its position in the outer cylinder [8], do this task: Lift the Main Landing Gear Axles with the Axle Jacks, TASK 07-11-03-580-801.

SUBTASK 32-11-21-020-004

(13) Remove the gland nut [19]:

(a) Remove the bolts [24], the washers [25], and the nuts [26] for the plate [24] to release the gland nut [19].

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(b) Wind a cloth around the chrome surface of the inner cylinder [12].

NOTE: This will prevent damage to the inner cylinder [12] when the gland nut [19] moves down.

(c) Use the gland nut wrench adapter, SPL-1861 to remove the gland nut [19] from the outer cylinder [8].

1) Loosen the gland nut [19] until it is disconnected from the outer cylinder [8].

NOTE: Do not move the gland nut down the inner cylinder [12].

SUBTASK 32-11-21-580-002

(14) Lower the axle jack until the gland nut [19] is approximately 3 in. (7.6 cm) below the outer cylinder [8].

NOTE: This will allow you to install the spacer assembly, SPL-1340 [51], such that the gland nut can slide down the inner cylinder.

SUBTASK 32-11-21-480-010

(15) Install the spacer assembly, SPL-1340 [51]:

(a) Put the spacer assembly, SPL-1340 [51] around the gland nut [19].

(b) Tighten the retainer screws to hold the spacer assembly, SPL-1340 [51] on its position.

(c) Move the spacer assembly, SPL-1340 [51] with the gland nut [19] down the inner cylinder [12].

SUBTASK 32-11-21-020-005

(16) Remove the lower bearing carrier [11] from the outer cylinder [8]:

(a) Loosely install the carrier puller assembly, SPL-1341 [50] around the inner cylinder [12].

(b) Push the carrier puller assembly, SPL-1341 [50] up, such that it is installed correctly at the bottom of the outer cylinder [8].

(c) Align the holes in ther carrier puller assembly, SPL-1341 [50] with the holes in the lower bearing carrier [11] for the carrier puller screws [52].

(d) Install the carrier puller screws [52] to hold the carrier puller assembly, SPL-1341 [50] to the lower bearing carrier [11].

(e) Tighten the retainer screws on each side of the carrier puller assembly, SPL-1341 [50].

(f) Install the strap assembly, SPL-3927 [47] around the axle and connect the ends to the shoulder bolts on each side of the carrier puller assembly, SPL-1341 [50].

(g) Lift the airplane until there is enough room to install the retainer assembly, SPL-1343 [49] at the bottom of the outer cylinder [8], do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-11-21-480-011

WARNING: MAKE SURE YOU INSTALL THE RETAINER ASSEMBLY [49] IN THE STEPS BELOW. THE SPACER CAN MOVE DOWN THE INNER CYLINDER QUICKLY IF THE RETAINER ASSY IS NOT INSTALLED. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(17) If the spacer [10] has moved down the inner cylinder [12] with the lower bearing carrier [11], push it back into the outer cylinder [8], then install the retainer assembly, SPL-1343 [49] as follows:

NOTE: The retainer assy will hold the spacer [10] inside the outer cylinder [8] and prevent it from moving down the inner cylinder [12].

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(a) Loosely install the retainer assembly, SPL-1343 [49] around the inner cylinder [12].

(b) Push the retainer assembly, SPL-1343 [49] up, such that it is installed correctly at the bottom of the outer cylinder [8].

(c) Tighten the retainer screws on each side of the retainer assembly, SPL-1343 [49].

(d) Move the two retainer plates on each side of the retainer assembly, SPL-1343 [49], such that they touch the chrome surface of the inner cylinder [12].

(e) Tighten the four shoulder bolts to hold the two retainer plates in their position.

(f) Put the snapper pin to prevent movement of the retainers.

(g) Install the strap assembly, SPL-3927 [47] around the outer cylinder [8] and connect the ends to the shoulder bolts on each side of the retainer assembly, SPL-1343 [49].

SUBTASK 32-11-21-580-003

(18) Continue to lift the airplane until the lower bearing carrier [11] is completely out of the outer cylinder [8], do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

NOTE: Lift the airplane a minimum of 77 inches from the floor to the lowest point on the MLG inner door in order to have the airplane high enough from the floor.

SUBTASK 32-11-21-020-029

(19) Push the lower bearing carrier [11] down the inner cylinder [12] until it rests on the spacer assembly, SPL-1340 [51] with the gland nut [19].

NOTE: The lower bearing carrier [11] is coated with a dry lube film. The film may be worn and appear uneven. This is not a cause for bearing carrier replacement.

H. Procedure to Replace the Active Static and the Active Dynamic Seal with the Spare Seals

SUBTASK 32-11-21-900-001

(1) Replace the active static seal [15] with a spare static seal [16]:

NOTE: Make sure your hands are clean when you handle the elastomer seals. Some greases can cause the elastomer seals to swell too much. This can cause the seals to leak.

(a) Remove the brown rings from around the active static seal [15].

(b) Make sure the brown rings are serviceable.

NOTE: Install new brown rings if there are nicks, scratches or other damage to the old brown rings. The recommended installation is to replace all the old brown rings with new brown rings. Use the old brown rings only after a full inspection, and new rings are not available.

(c) Use a tool for cutting plastic that has a back-up strip to cut the active static seal [15] from its outer groove in the lower bearing carrier [11].

(d) Move the spare static seal [16] out of the spare seal groove of the lower bearing carrier [11].

CAUTION: DO NOT APPLY VASELINE OR PETROLATUM TO THE SEALS AS THIS CAN CAUSE TOO MUCH SWELLING OF THE SEAL MATERIAL.

(e) Apply a thin layer of fluid, D00467 or AFS-682 lubricant, D00589 to the spare static seal [16] and the brown rings.

NOTE: The AFS-682 lubricant, D00589 will help keep the brown rings in their positions.

(f) Install the spare static seal [16] on the active static seal groove of the lower bearing carrier [11].

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(g) Install the brown rings on the spare static seal [16], with the rounded edge of the brown rings against the seal.

SUBTASK 32-11-21-020-030

(2) Remove the seal retainer [22]:

(a) Remove the o-ring [13] for the seal retainer [22].

(b) Remove the retainer pins [21].

(c) Move the seal retainer [22] away from the lower bearing carrier [11] to get access to the location for the active dynamic seal [14].

(d) Use tape to hold the seal retainer [22] around the inner cylinder [12], and prevent it from moving down on the lower bearing carrier [11].

SUBTASK 32-11-21-900-002

(3) Replace the active dynamic seal [14] with a spare dynamic seal [17]:

NOTE: Make sure your hands are clean when you handle the elastomer seals. Some greases can cause the elastomer seals to swell too much. This can cause the seals to leak.

(a) Remove the active dynamic seal [14]:

1) Move the lower bearing carrier [11] up and down the inner cylinder [12] to move the active dynamic seal [14] backup ring, and the cap from the inner groove of the lower bearing carrier [11].

2) If the active dynamic seal [14], backup ring, and the cap does not come out of the inner groove of the lower bearing carrier [11], remove them with a tool which is not sharp.

NOTE: Hardened steel cotter pin removal tools work well for removing the dynamic seal.

3) Use a tool for cutting plastic that has a back-up strip to cut the old active dynamic seal [14], backup ring, and the cap from the inner groove of the lower bearing carrier [11].

(b) Move one of the spare dynamic seal [17] from the spare seals groove of the lower bearing carrier [11] and move it into the inner cylinder [12].

NOTE: The round sealing surface of the seal must be against the chrome on the inner cylinder.

(c) Remove the spare backup rings from the spare seals groove of the lower bearing carrier [11].

CAUTION: DO NOT APPLY VASELINE OR PETROLATUM TO THE SEALS AS THIS CAN CAUSE TOO MUCH SWELLING OF THE SEAL MATERIAL.

(d) Apply a thin layer of fluid, D00467 or AFS-682 lubricant, D00589 to the spare dynamic seal [17] and the spare backup rings.

NOTE: The AFS-682 lubricant, D00589 will help keep the spare backup rings in their positions.

CAUTION: MAKE SURE THE BACKUP RINGS AND THE SEAL STAY TOGETHER AS YOU INSTALL THE SEAL. IF THE BACKUP RINGS AND THE SEAL MOVE APART THEY WILL NOT INSTALL CORRECTLY. THIS CAN CAUSE DAMAGE TO THE SEAL AND THE BACKUP RINGS.

(e) Install the spare dynamic seal [17]:

1) Install one of the brown backup rings [29] in the inner groove for the dynamic seal.

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2) Install one of the white backup rings [28] in the inner groove for the dynamic seal, with the split in an opposite position on the diameter of the inner cylinder [12] as the brown backup ring, and with the rounded edge facing up.
3) Make sure the backup rings are tight against the inner cylinder [12].
4) Use the dynamic seal clamp assembly, SPL-1342 [54] to install the spare dynamic seal [17] in the inner groove for the dynamic seal, with the rounded edge against the inner cylinder [12].
5) Use the dynamic seal plunger, SPL-1347 [53] to push the spare dynamic seal [17] in the inner groove of the lower bearing carrier [11].
6) Install the other white backup ring [28] in the inner groove for the dynamic seal, with the rounded edge facing the spare dynamic seal [17].
7) Install the other brown backup ring [29] in the inner groove for the dynamic seal, with the split in an opposite position on the diameter of the inner cylinder [12] as the white backup ring.
8) Make sure the dynamic seal assembly is together, without any twists or bulges.

SUBTASK 32-11-21-420-002

(4) Install the seal retainer [22]:
   (a) Remove the tape that holds the seal retainer [22] from around the inner cylinder [12].
   (b) Move the seal retainer [22] down on the lower bearing carrier [11].
   (c) Install the retainer pins [21] to hold the seal retainer [22] on the lower bearing carrier [11].
   (d) Install the o-ring [13] to hold the retainer pins [21] in their positions.

SUBTASK 32-11-21-020-031

WARNING: MAKE SURE THE SPACER [10] STAYS INSIDE THE OUTER CYLINDER [8]. THE SPACER CAN MOVE DOWN THE INNER CYLINDER QUICKLY IF THE RETAINER PLATES IS NOT INSTALLED. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(5) Move the retainer plates for the retainer assembly, SPL-1343 [49]:
   (a) Remove the two snapper pins.
   (b) Loosen the four shoulder bolts that hold the two retainer plates in their positions.
   (c) Move the two retainer plates away from the chrome surface of the inner cylinder [12].

SUBTASK 32-11-21-480-013

(6) If the spacer [10] has moved down the inner cylinder [12] with the lower bearing carrier [11], push it back into the outer cylinder [8].

SUBTASK 32-11-21-420-021

(7) Carefully put the thread protector, SPL-1344 [48] between the outer cylinder [8] and the inner cylinder [12].

   NOTE: The thread protector will expand and press against the outer cylinder [8]. This will protect the static seals from the gland nut threads on the outer cylinder [8].

SUBTASK 32-11-21-080-005

(8) Remove the strap assembly, SPL-3927 [47] around the axle and from the shoulder bolts on each side of the carrier puller assembly, SPL-1341 [50].

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SUBTASK 32-11-21-580-004

(9) To lift the inner cylinder [12] slowly with the axle jack until the bottom of the lower bearing carrier [11] is about 1.5 in. (3.8 cm) from the bottom of the outer cylinder [8], do this task: Lift the Main Landing Gear Axles with the Axle Jacks, TASK 07-11-03-580-801.

NOTE: Make sure the static seals stay in their positions as the lower bearing carrier [11] is installed.

I. Put the Airplane Back to Its Usual Condition.

SUBTASK 32-11-21-080-006

(1) Remove the carrier puller assembly, SPL-1341 [50]:

(a) Remove the carrier puller screws [52] to disconnect the carrier puller assembly, SPL-1341 [50] from the lower bearing carrier [11].

(b) Loosen the two retainer screws and pull th carrier puller assembly, SPL-1341 [50] out of the outer cylinder [8].

SUBTASK 32-11-21-080-007

(2) Remove the retainer assembly, SPL-1343 [49]:

(a) Remove the strap assembly, SPL-3927 [47] that holds the retainer assembly, SPL-1343 [49] to the outer cylinder [8].

(b) Loosen the two retainer screws and remove the retainer assembly, SPL-1343 [49].

SUBTASK 32-11-21-020-009

(3) Remove the thread protector, SPL-1344 [48] inside the outer cylinder [8].

SUBTASK 32-11-21-640-001

(4) Remove the spacer assembly, SPL-1340 [51] from around the gland nut [19].

SUBTASK 32-11-21-620-002

WARNING: DO NOT GET THE CORROSION-INHIBITING COMPOUND ON YOUR SKIN, IN YOUR EYES, OR ON YOUR CLOTHES. THE COMPOUND IS POISONOUS AND FLAMMABLE. USE APPROVED GLOVES, AND EYE PROTECTION. MAKE SURE THAT THERE IS GOOD AIRFLOW IN THE WORK AREA. KEEP THE COMPOUND AWAY FROM SPARKS AND FLAMES. THE COMPOUND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

CAUTION: REMOVE UNWANTED CORROSION INHIBITING COMPOUND FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY CORROSION INHIBITING COMPOUND TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(5) Apply a thin layer of corrosion inhibiting non-drying paste, G50136 (preferred) or corrosion preventive compound, C00913 (alternate) to these items:

(a) The threads and thread reliefs of the bolt [24].

(b) The threads of the nuts [26].

(c) The splines and faces of the washers [25].

(6) Apply a liberal amount of corrosion inhibiting non-drying paste, G50136 to the threads of the gland nut [19] and to the threads of the outer cylinder [8].

SUBTASK 32-11-21-160-003

(7) Remove all unwanted corrosion inhibiting non-drying paste, G50136 or corrosion preventive compound, C00913.

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SUBTASK 32-11-21-420-004

(8) Install the gland nut [19]:

(a) Move the gland nut [19] up to the outer cylinder [8] and engage the gland nut threads.

(b) Use the gland nut wrench adapter, SPL-1861 for the gland nut [19] to tighten the gland nut to 125 ft-lb (169 N·m) – 150 ft-lb (203 N·m).

SUBTASK 32-11-21-420-005

(9) Install the plate [23] for the gland nut [19]:

(a) Install the plate [23] in the holes which will put the tab of the plate [23] as close to a slot in the gland nut [19] as possible.

NOTE: If it is necessary, loosen the gland nut [19] a small amount to help with the alignment.

(b) Install the bolts [24], washers [25] and nuts [26].

(c) Apply compound, A00226, (Figure 801), View B-B.

NOTE: Apply it to make sure the seal made by the compound, A00226, will break if the bolts [24] are loosened.

SUBTASK 32-11-21-020-010

(10) Do this task: Main Landing Gear Brake Installation, TASK 32-41-41-400-801.

NOTE: This procedure will also install the wheel and tire assemblies.

SUBTASK 32-11-21-080-009

(11) Remove the axle jack (Lift the Main Landing Gear Axles with the Axle Jacks, TASK 07-11-03-580-801).

SUBTASK 32-11-21-080-001

(12) Lower the airplane and remove the jacks, do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

SUBTASK 32-11-21-420-006

(13) Remove the rope that holds the disconnected end of the upper torsion link to the outer cylinder [8].

SUBTASK 32-11-21-420-007

(14) Do this task: Main Landing Gear Torsion Link Connection, TASK 32-11-51-400-803.

SUBTASK 32-11-21-420-008

(15) Install the oil valve cap [5] loosely.

SUBTASK 32-11-21-600-001

(16) Do this task: Main Landing Gear Shock Strut Servicing, TASK 12-15-31-610-802.

SUBTASK 32-11-21-860-007

(17) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

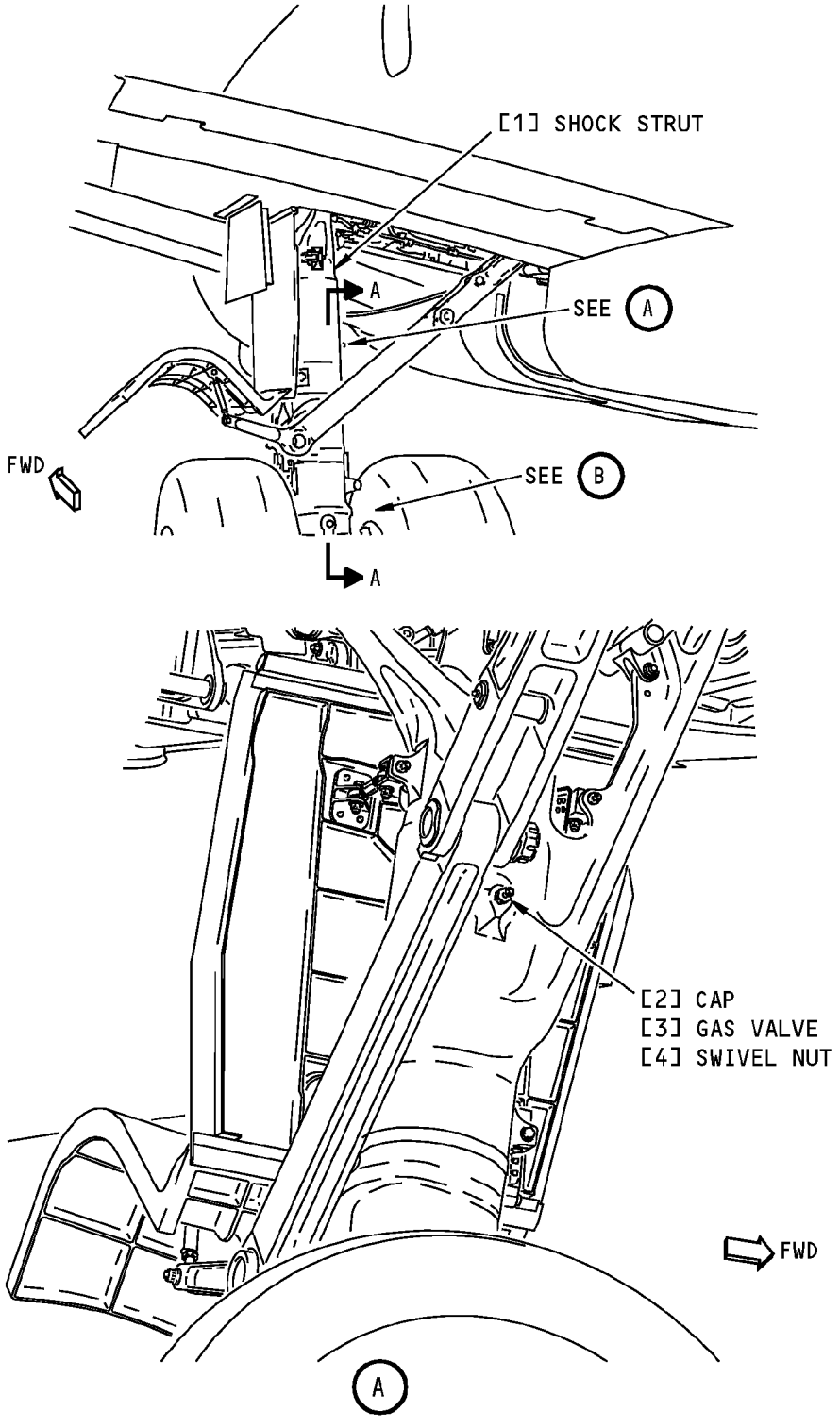
Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1
B	16	C01346	LANDING GEAR PARKING BRAKE
B	17	C00129	LANDING GEAR LATCH & PRESS WARN
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1

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Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	15	C01401	LANDING GEAR AIR/GND RELAY
D	16	C01432	LANDING GEAR ALTN EXTEND SOL
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

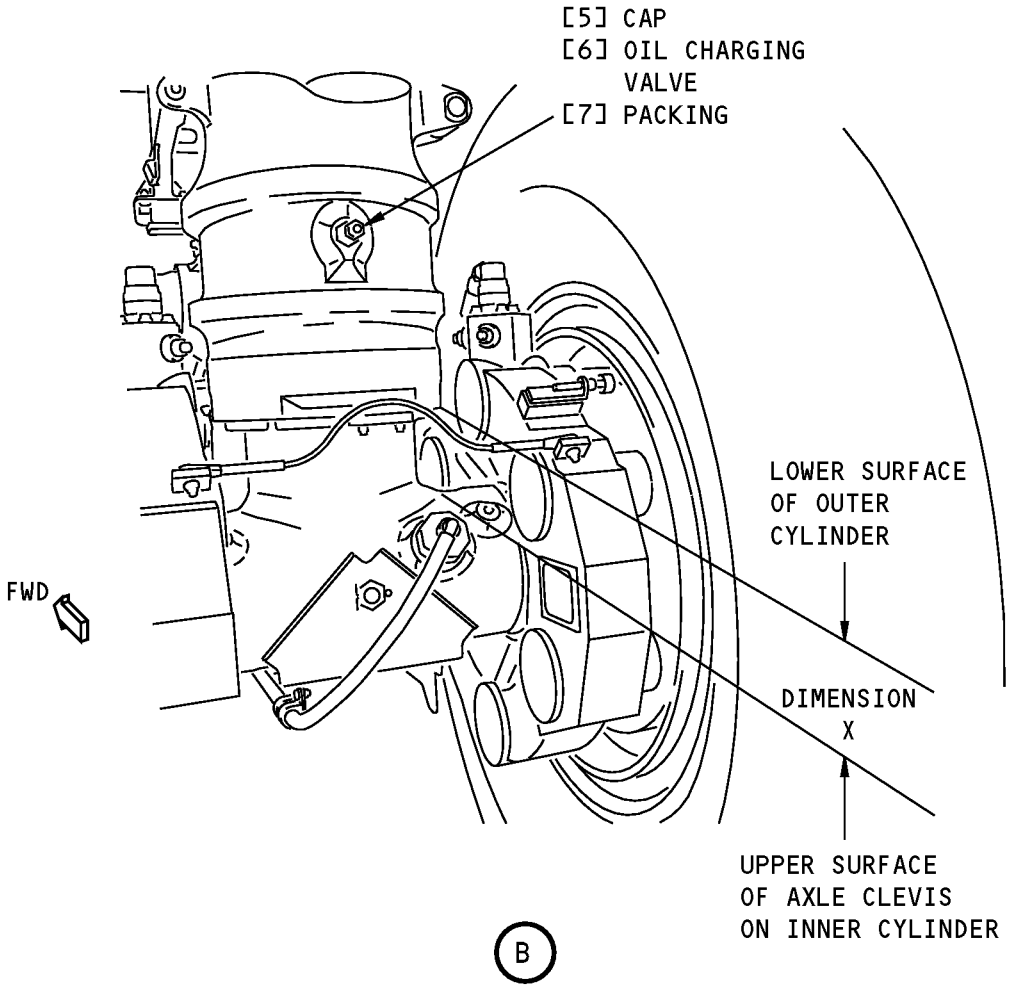
END OF TASK

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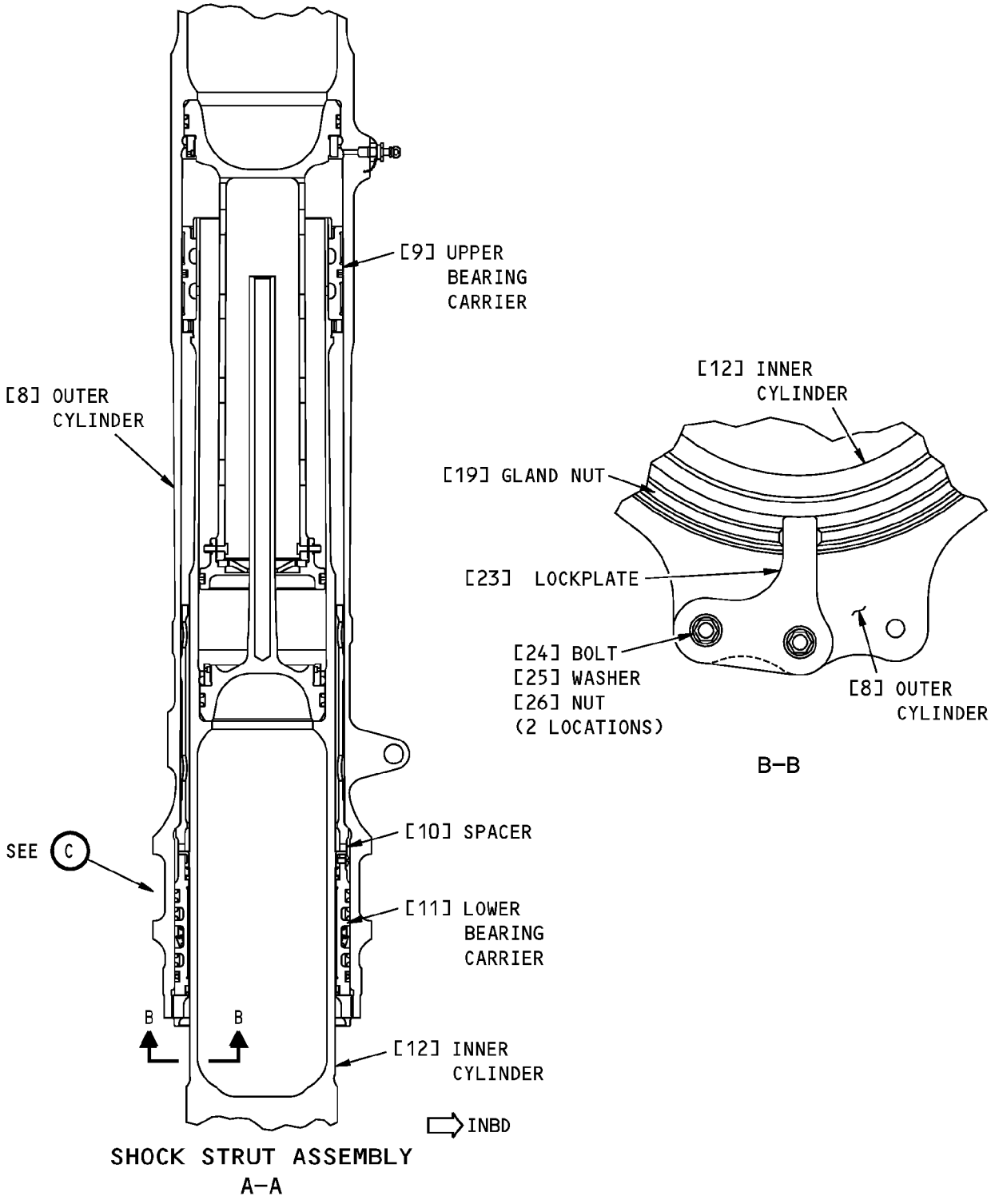
Main Landing Gear Shock Strut Seal Replacement
Figure 801 (Sheet 1 of 4)/32-11-21-990-801

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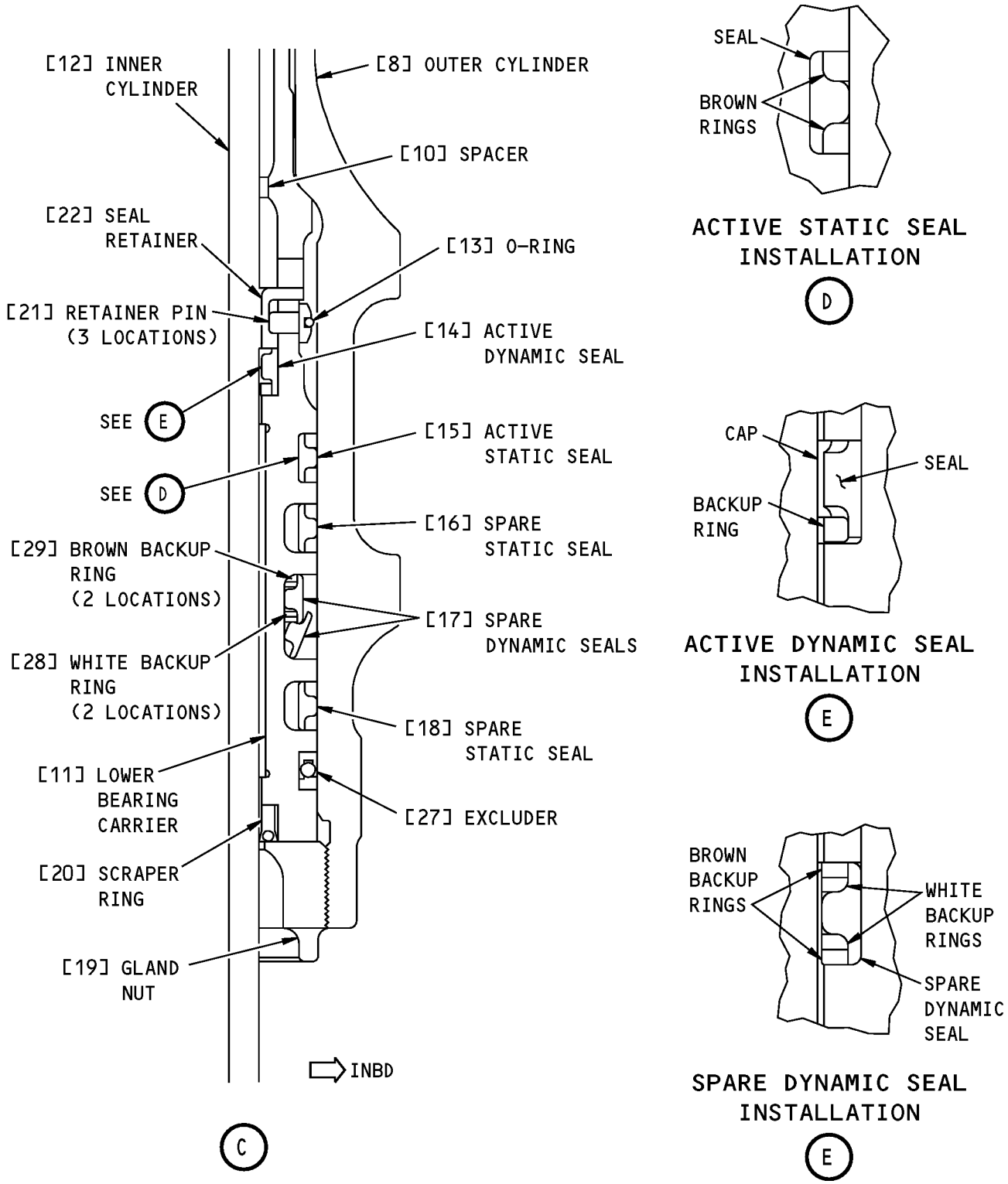
Main Landing Gear Shock Strut Seal Replacement
Figure 801 (Sheet 2 of 4)/32-11-21-990-801

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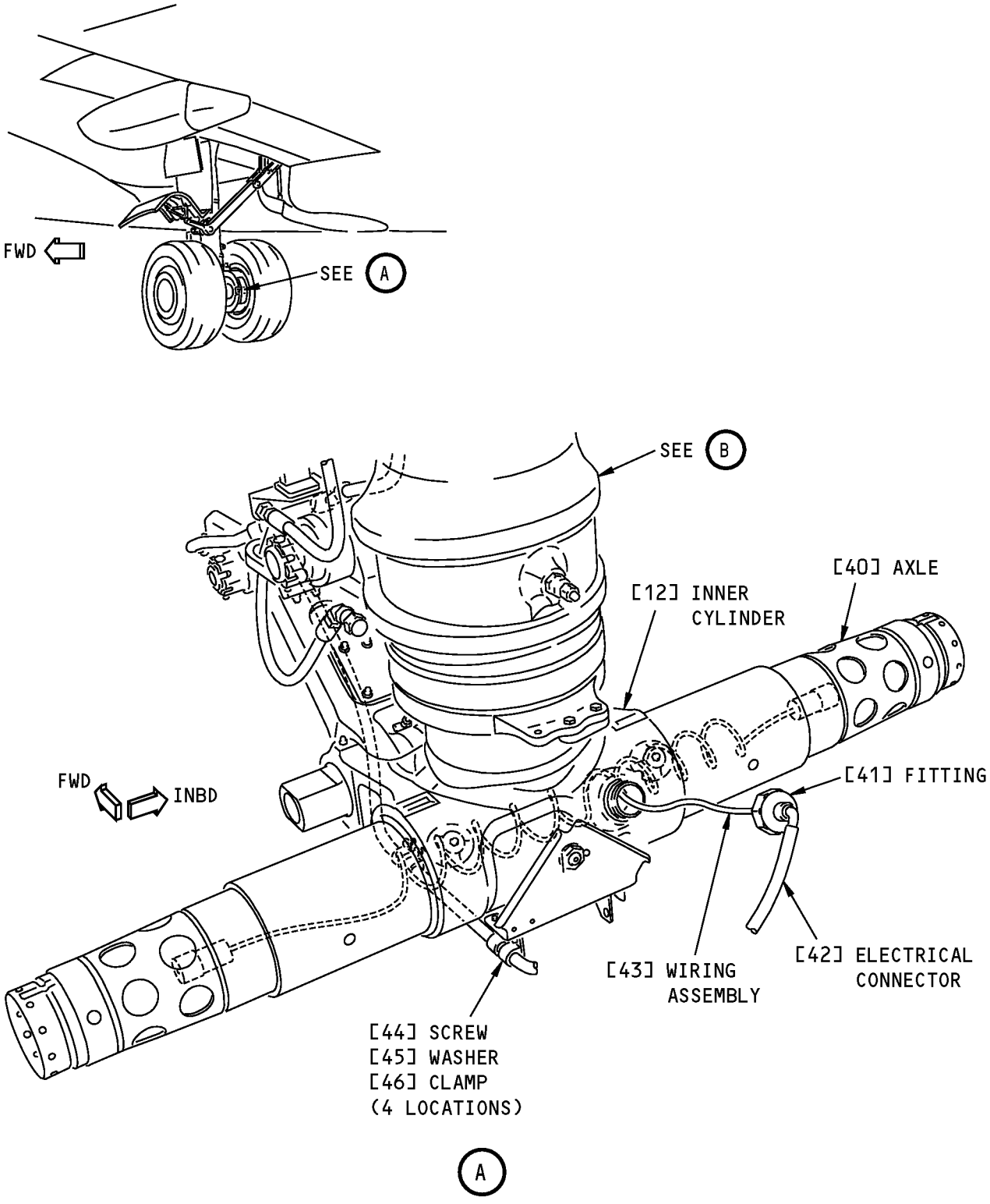
Main Landing Gear Shock Strut Seal Replacement
Figure 801 (Sheet 3 of 4)/32-11-21-990-801

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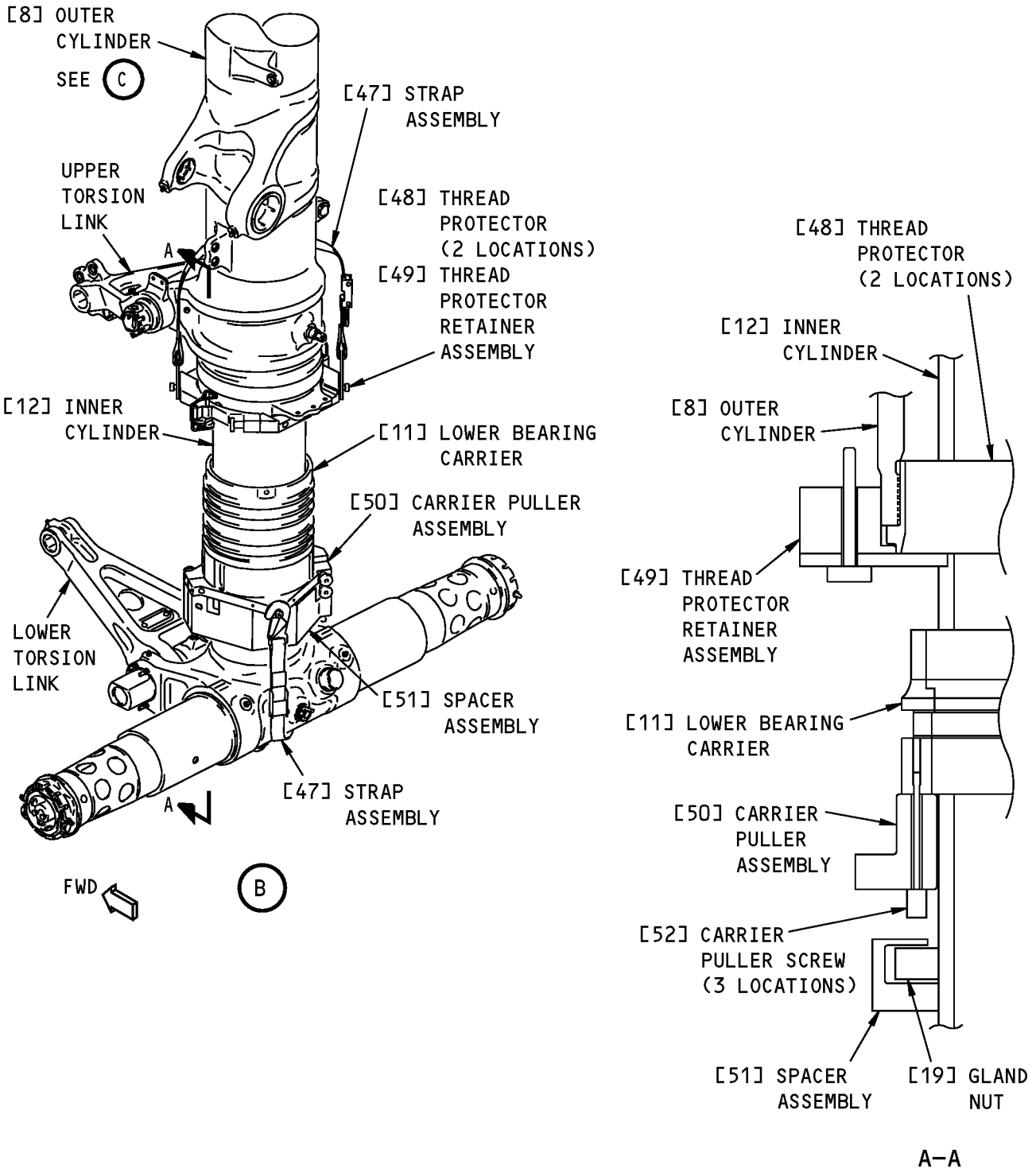
Main Landing Gear Shock Strut Seal Replacement
Figure 801 (Sheet 4 of 4)/32-11-21-990-801

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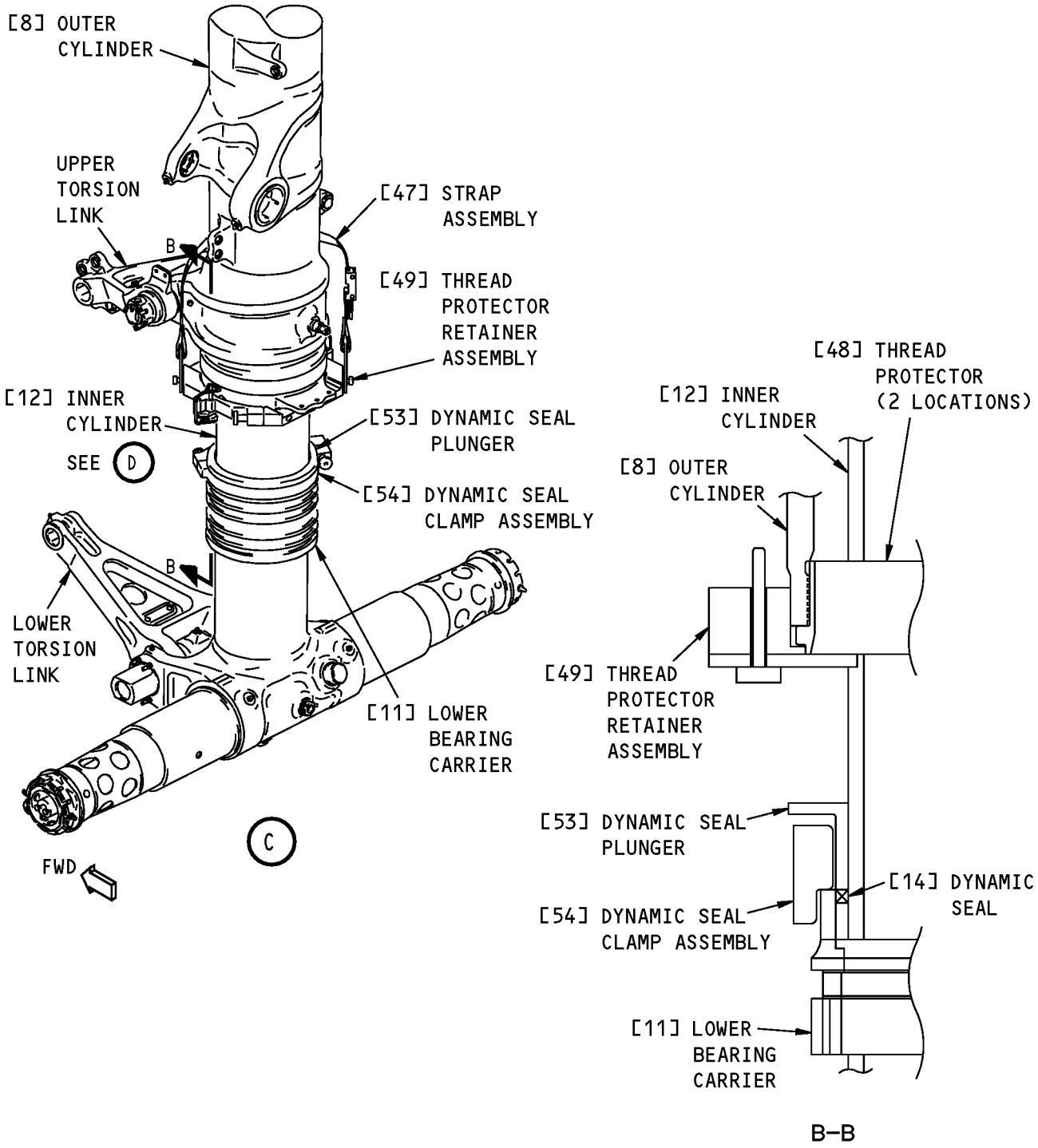
Main Landing Gear Lower Bearing Seal Replacement
Figure 802 (Sheet 1 of 10)/32-11-21-990-802

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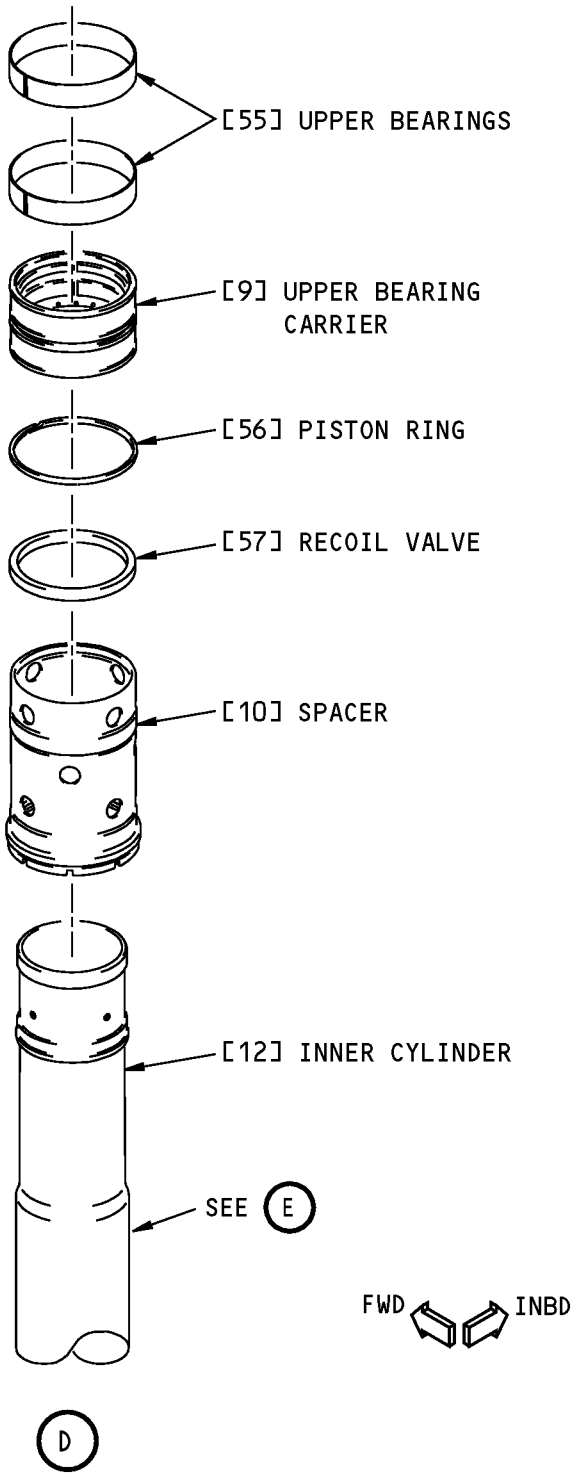
Main Landing Gear Lower Bearing Seal Replacement
Figure 802 (Sheet 2 of 10)/32-11-21-990-802

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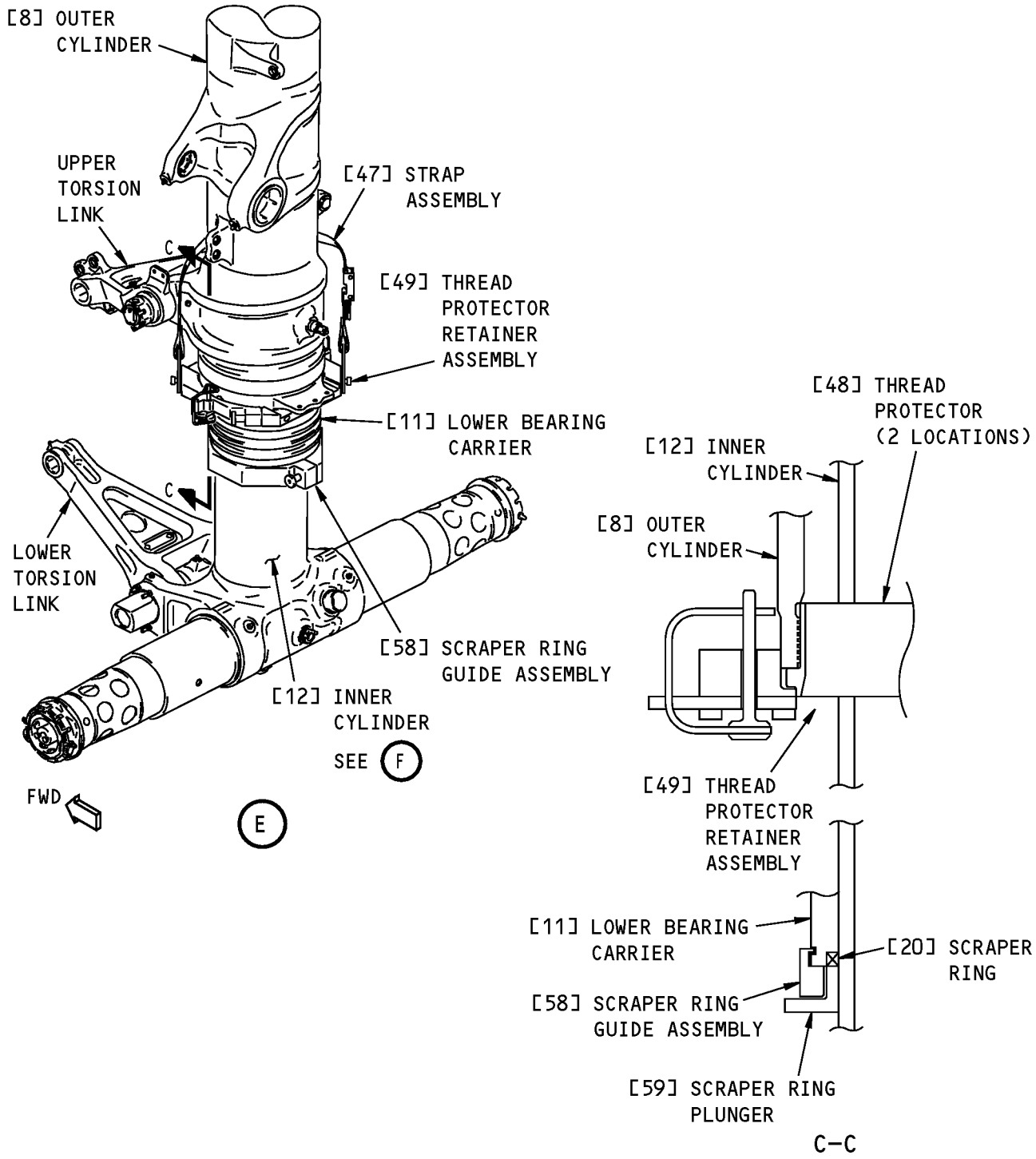
Main Landing Gear Lower Bearing Seal Replacement
Figure 802 (Sheet 3 of 10)/32-11-21-990-802

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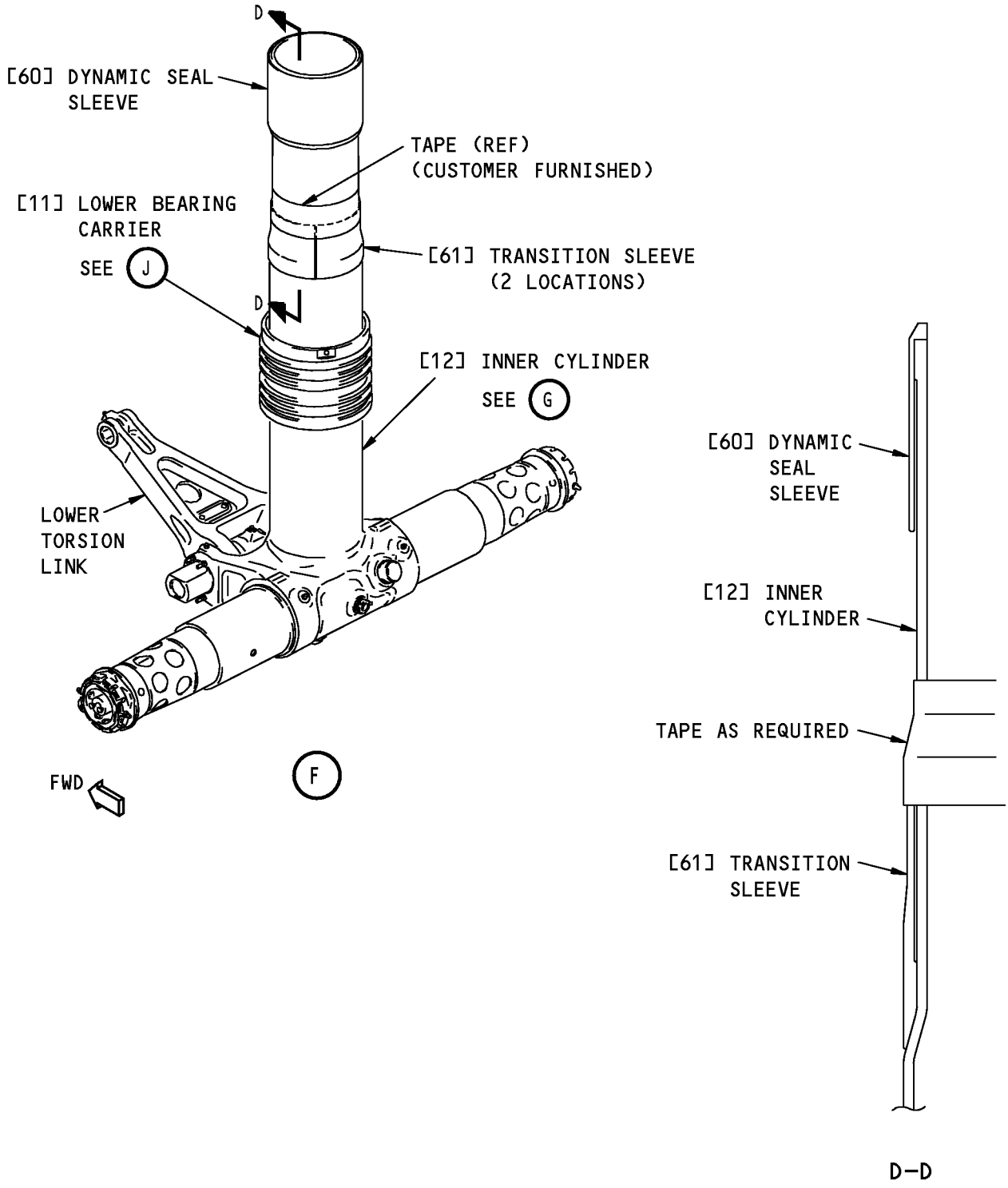
Main Landing Gear Lower Bearing Seal Replacement
Figure 802 (Sheet 4 of 10)/32-11-21-990-802

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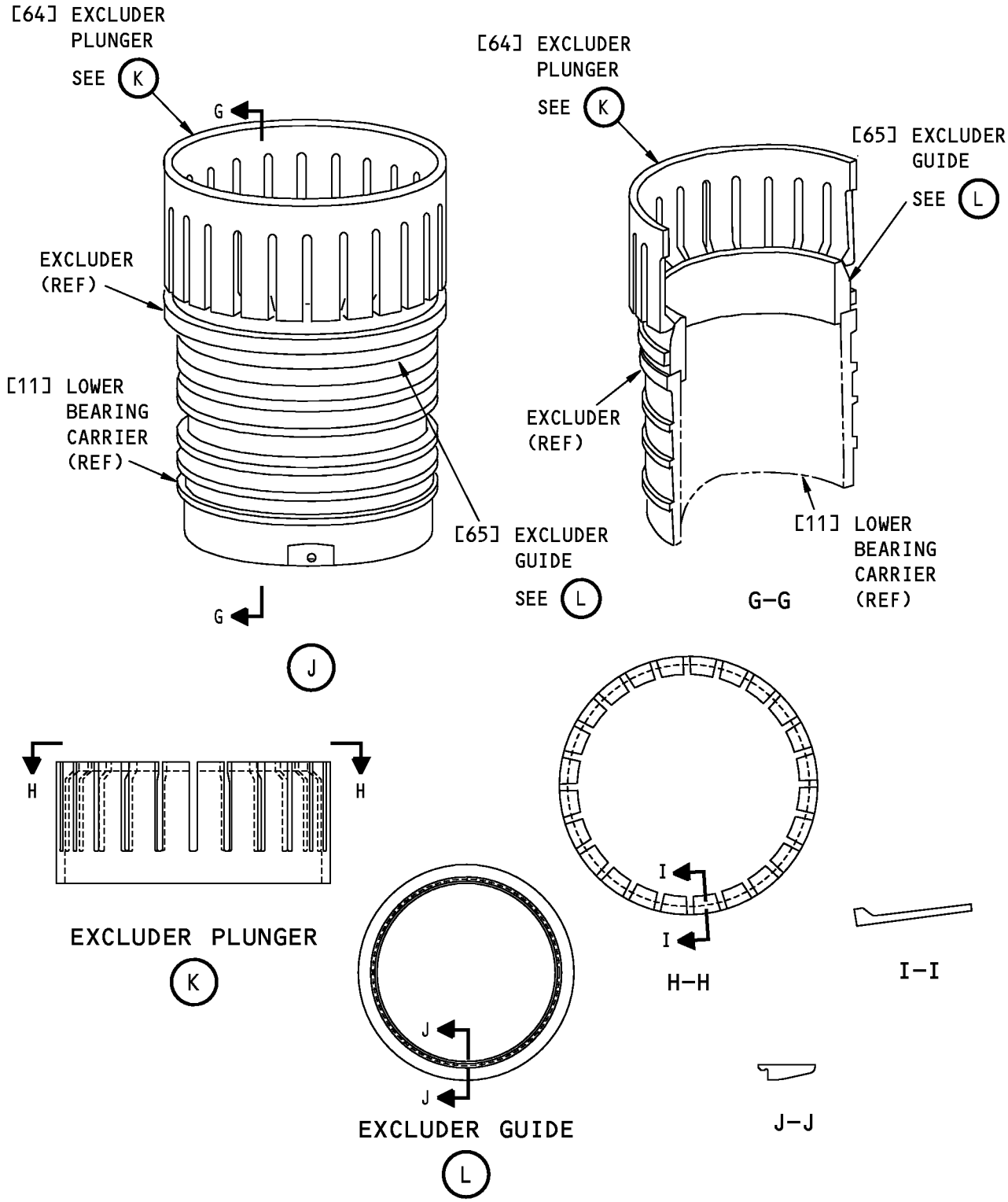
Main Landing Gear Lower Bearing Seal Replacement
Figure 802 (Sheet 5 of 10)/32-11-21-990-802

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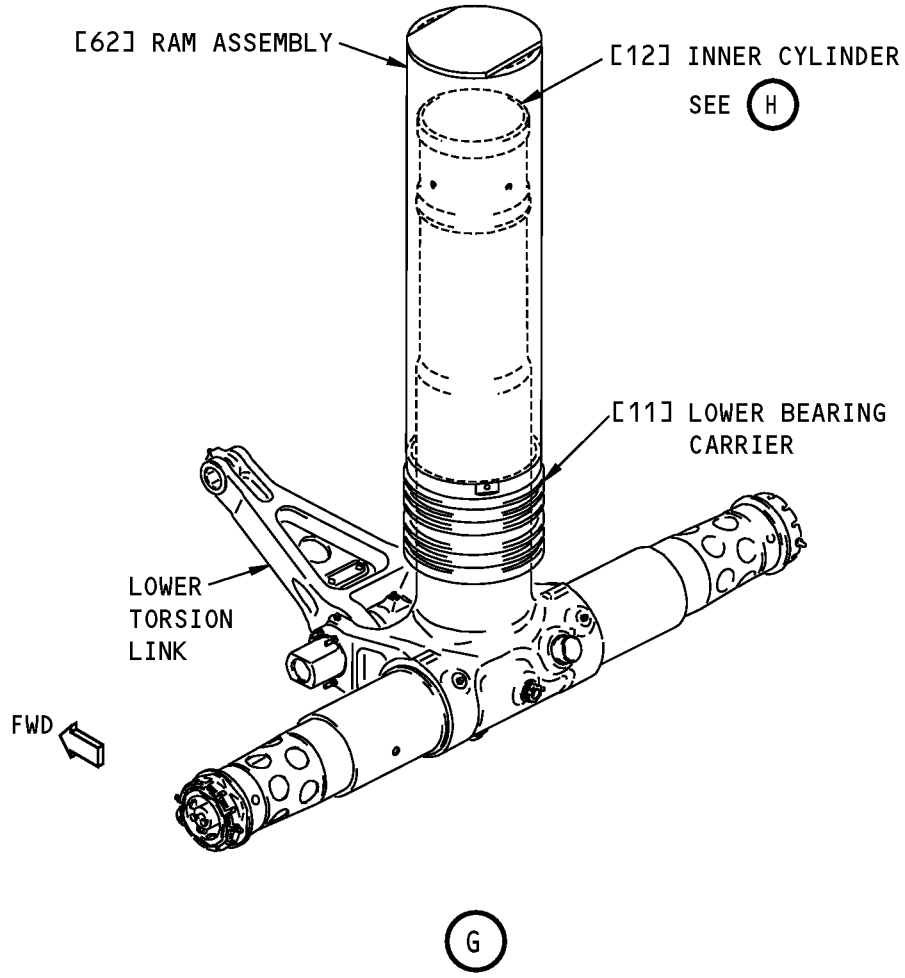
Main Landing Gear Lower Bearing Seal Replacement
Figure 802 (Sheet 6 of 10)/32-11-21-990-802

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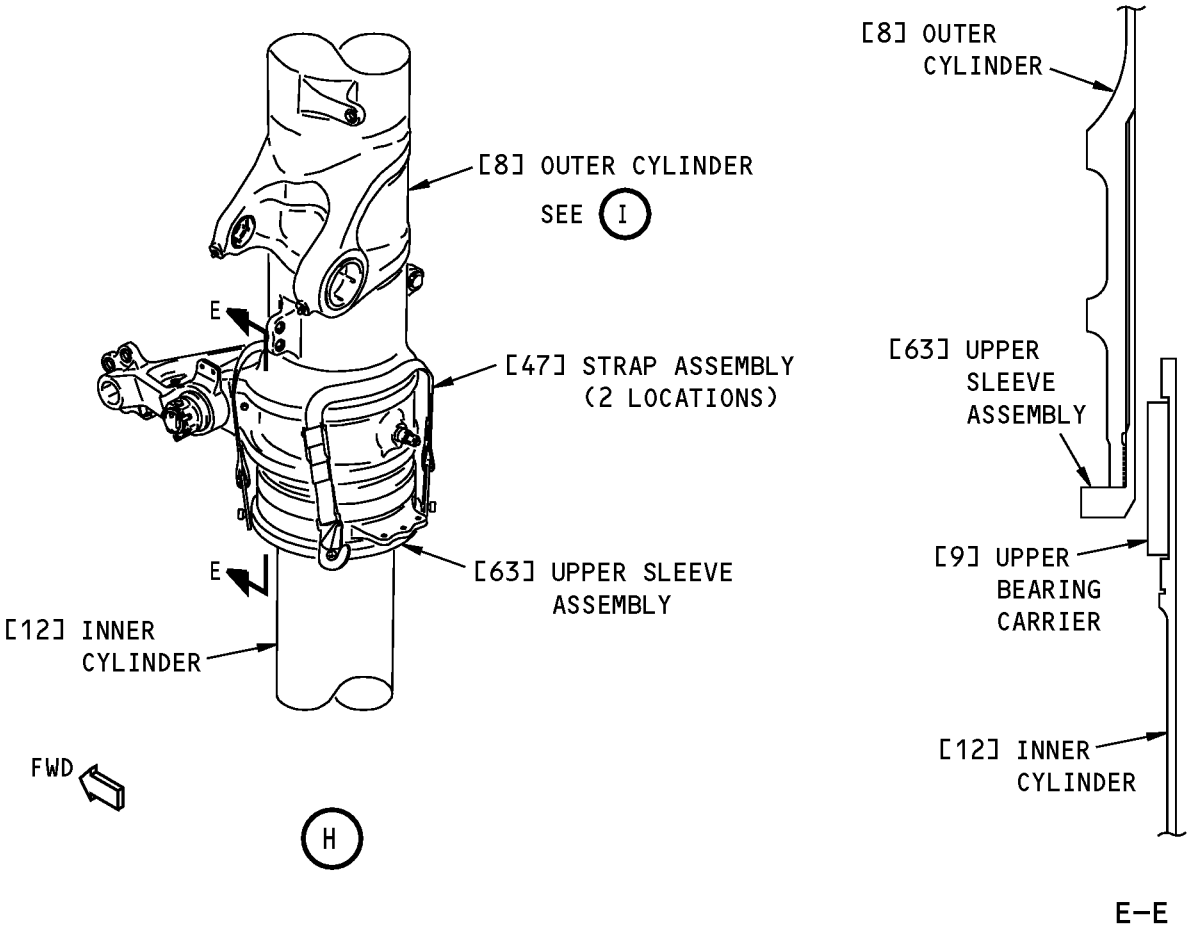
Main Landing Gear Lower Bearing Seal Replacement
Figure 802 (Sheet 7 of 10)/32-11-21-990-802

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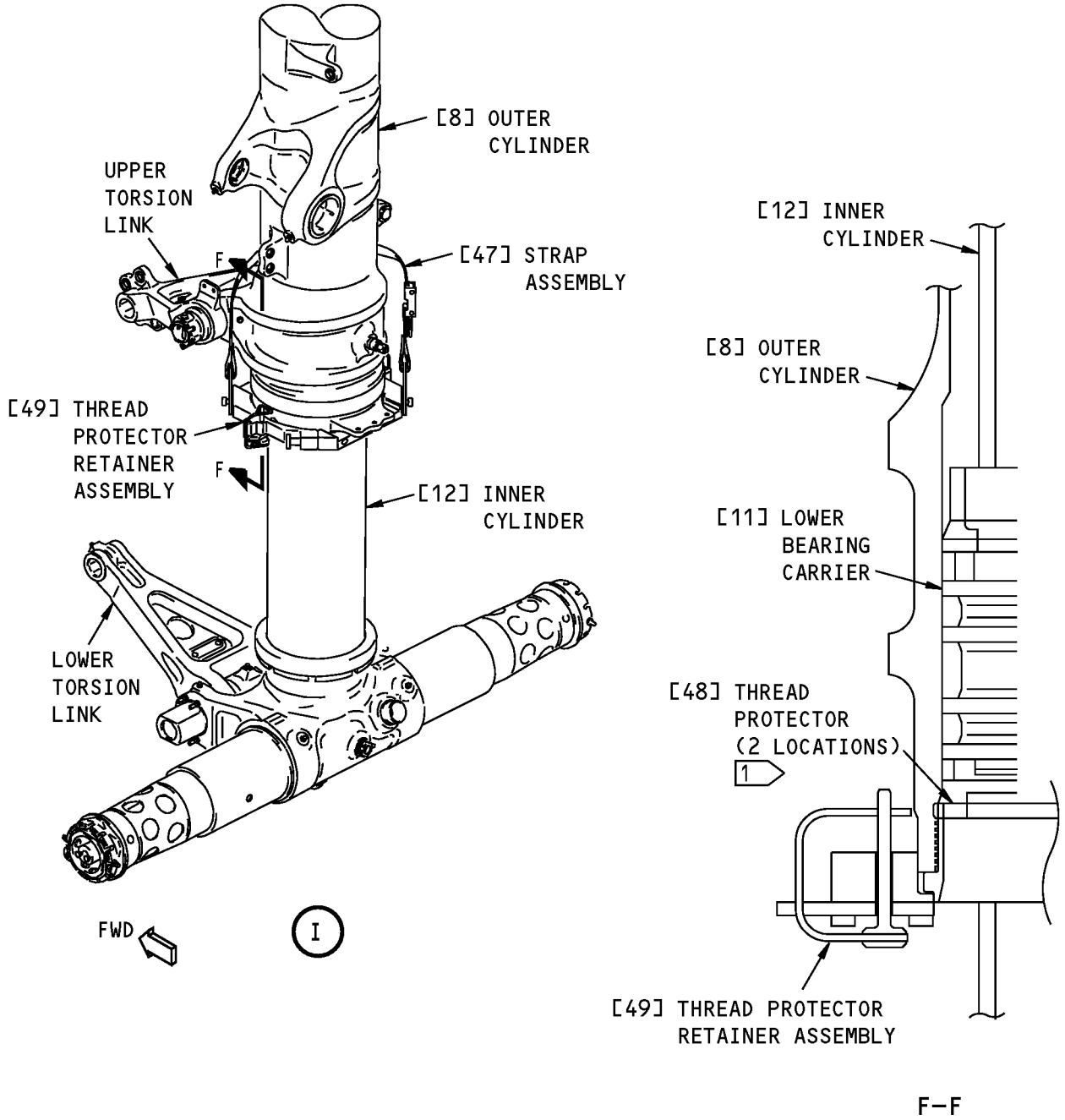
Main Landing Gear Lower Bearing Seal Replacement
Figure 802 (Sheet 8 of 10)/32-11-21-990-802

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Main Landing Gear Lower Bearing Seal Replacement
Figure 802 (Sheet 9 of 10)/32-11-21-990-802

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1 USE THREAD PROTECTOR FOR LOWER BEARING CARRIER INSTALLATION ONLY.

Main Landing Gear Lower Bearing Seal Replacement
Figure 802 (Sheet 10 of 10)/32-11-21-990-802

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TASK 32-11-21-960-802

3. Replace the Active and the Spare Seals

(Figure 801, Figure 802)

A. General

(1) This procedure supplies instructions to install new dynamic seals, new static seals, and new spare seals.

NOTE: To do this procedure it is necessary to disconnect the inner cylinder from the outer cylinder.

(2) Use this procedure when there are no spare seals available on the lower bearing carrier to replace the active seals, and you will install a new 3-piece active dynamic seal.

B. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
07-11-03-580-801	Lift the Main Landing Gear Axles with the Axle Jacks (P/B 201)
12-15-31-610-802	Main Landing Gear Shock Strut Servicing (P/B 301)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-11-51-020-801	Main Landing Gear Torsion Link Disconnection (P/B 401)
32-11-51-400-803	Main Landing Gear Torsion Link Connection (P/B 401)
32-41-41-000-801	Main Landing Gear Brake Removal (P/B 401)
32-41-41-400-801	Main Landing Gear Brake Installation (P/B 401)
32-42-11-000-801	Transducer Removal (P/B 401)
32-42-11-400-801	Transducer Installation (P/B 401)
SWPM 20-60-03	Special Protection of Electrical Connectors

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1340	Assembly - Spacer (C32017-4 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1341	Assembly - Carrier Puller (C32017-5 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1343	Assembly - Retainer, Thread Protector (C32017-8 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

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(Continued)

Reference	Description
SPL-1344	Protector - Thread (C32017-9 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1345	Assembly - Upper Sleeve (C32017-10 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1346	Sleeve - Transition (C32017-11 Part of Kit C32017-1) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1348	Sleeve - Dynamic Seal (C32017-29 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1349	Assembly - Ram (C32017-30 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1350	Plunger - Excluder (C32017-33 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1351	Guide - Excluder (C32017-34 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1829	Valve - Drain, Landing Gear Shock Strut Oil (Part #: J32060-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A32066-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1861	Adapter - Wrench, MLG Strut Gland Nut
SPL-3927	Assembly - Strap (751069-007 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
STD-1110	Container - Hydraulic Fluid Resistant, 5 Gallon (19 Liters)
STD-1140	Hose - Flexible, 1/2 Inch ID, BMS 3-11 Resistant, 10 Foot

D. Consumable Materials

Reference	Description	Specification
A00226	Compound - Tamper-Proof Putty	BMS8-45
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27

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(Continued)

Reference	Description	Specification
D00467	Fluid - Landing Gear Shock Strut	BMS3-32, Type II
D00589	Lubricant - Hydraulic Assembly - AFS-682	
G50136	Paste - Corrosion Inhibiting, Non-drying	BMS 3-38
G50171	Compound - Corrosion Inhibiting Compound, Interior Application - D5026NS or ZC-026	

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
13	O-ring	32-11-21-03-060	HAP 001-013, 015-026, 028-030
		32-11-21-03A-070	HAP 031-054, 101-999
14	Active dynamic seal	32-11-21-03-090	HAP 001-013, 015-026, 028-030
		32-11-21-03A-115	HAP 031-054, 101-999
17	Spare dynamic seal	32-11-21-03-080	HAP 001-013, 015-026, 028-030
		32-11-21-03A-090	HAP 031-054, 101-999

F. Location Zones

Zone	Area
731	Left Main Landing Gear - Outboard Door
741	Right Main Landing Gear - Outboard Door

G. Prepare for the Replacement

SUBTASK 32-11-21-480-005

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-21-860-004

(2) Do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-11-21-860-005

(3) Operate the brakes eight times to remove pressure from the brake accumulator.

SUBTASK 32-11-21-860-006

(4) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1
B	16	C01346	LANDING GEAR PARKING BRAKE
B	17	C00129	LANDING GEAR LATCH & PRESS WARN
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

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Row	Col	Number	Name
D	15	C01401	LANDING GEAR AIR/GND RELAY
D	16	C01432	LANDING GEAR ALTN EXTEND SOL
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

SUBTASK 32-11-21-480-006

(5) To lift the airplane until there is enough room to keep the airplane level when the shock strut is deflated and to install the spacer assembly, SPL-1340 [51] on the gland nut [19], do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-11-21-020-011

WARNING: DO NOT REMOVE THE VALVE BODY UNLESS YOU DEFLATE THE SHOCK STRUT FULLY. THE AIR PRESSURE CAN BLOW THE VALVE BODY OUT AND CAUSE INJURY TO PERSONS.

(6) Deflate the shock strut [1] for the main landing gear:

(a) Remove the cap [2] for the gas valve [3].

(b) Loosen the swivel nut [4] a maximum of two turns.

NOTE: Fluid in the shock strut [1] will have bubbles when you release the pressure. Deflate the shock strut slowly to prevent the leakage of the fluid through the gas valve [3].

(c) Loosen the swivel nut [4] fully when all of the pressure in the shock strut [1] is released.

NOTE: The shock strut [1] is fully deflated when the dimension "X" is 0.9 in. (2.3 cm).

SUBTASK 32-11-21-680-002

(7) Drain the oil from the shock strut [1] for the main landing gear:

(a) Remove the cap [5] from the oil charging valve [6].

(b) Put a 5 gallon (19 liters) hydraulic fluid resistant container, STD-1110 in a position to catch the shock strut fluid when the oil charging valve [6] is opened.

(c) Install the drain equipment on the oil charging valve [6]:

1) Install the tool, landing gear shock strut drain valve, SPL-1829, on the oil charging valve [6] to drain the shock strut.

2) If you wish to drain the shock strut [1] with a quicker method, do the steps that follow:

a) Cut a length of plastic ten foot hose (1/2 inch ID), STD-1140, long enough to reach the container on the floor.

b) Insert a small allen wrench in the end of the length of tubing, such that the end of the long part of the allen wrench is flush with the end of the tube and the short part penetrates the side wall of the tube.

c) Install the ten foot hose (1/2 inch ID), STD-1140 on the oil charging valve [6] such that the allen wrench goes into the charging valve and holds it open to drain the hydraulic fluid.

(d) Remove the drain equipment when you have removed all of the shock strut oil.

H. Prepare to disconnect the inner cylinder from the outer cylinder

SUBTASK 32-11-21-020-012

(1) Do this task: Main Landing Gear Brake Removal, TASK 32-41-41-000-801.

NOTE: This procedure will also remove the wheel and tire assemblies.

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SUBTASK 32-11-21-020-013

(2) Remove the in-axle assemblies. To remove them, do this task: Transducer Removal, TASK 32-42-11-000-801.

NOTE: Make sure you attach a label to the wires to indicate the left and right connectors.

SUBTASK 32-11-21-020-015

(3) Disconnect the electrical connector [42] and the wiring assembly [43]:

(a) Remove the screws [44] and the washers [45] to disconnect the electrical connector [42] from the clamps [46].

(b) Remove the lockwires from the fittings.

(c) Loosen the fitting [41] to disconnect the electrical connector [42] from the inner cylinder [12].

(d) Pull the wiring assembly [43] completely out of the axle [40] and the inner cylinder [12].

NOTE: Make sure you attach a label to the wires to indicate the left and the right connectors.

SUBTASK 32-11-21-020-032

(4) Do this task: Main Landing Gear Torsion Link Disconnection, TASK 32-11-51-020-801.

SUBTASK 32-11-21-480-007

(5) Use rope to hold the disconnected end of the lower torsion link, the electrical connector [42], and the wiring assembly [43], such that they will be out of the way when you do the subsequent steps.

SUBTASK 32-11-21-580-005

(6) To use the axle jack to hold the inner cylinder [12] when you do the subsequent steps, do this task: Lift the Main Landing Gear Axles with the Axle Jacks, TASK 07-11-03-580-801.

SUBTASK 32-11-21-020-019

(7) Remove the gland nut [19]:

(a) Remove the bolts [24], the washers [25], and the nuts [26] for the plate [24] to release the gland nut [19].

(b) Wind a cloth around the chrome surface of the inner cylinder [12].

NOTE: This will prevent damage to the inner cylinder [12] when the gland nut [19] moves down.

(c) Use the gland nut wrench adapter, SPL-1861 to remove the gland nut [19] from the outer cylinder [8].

1) Loosen the gland nut [19] until it is disconnected from the outer cylinder [8].

NOTE: Do not move the gland nut down the inner cylinder [12].

SUBTASK 32-11-21-480-014

(8) Install the spacer assembly, SPL-1340 [51]:

(a) Put the spacer assembly, SPL-1340 [51] around the gland nut [19].

(b) Tighten the retainer screws to hold the spacer assembly, SPL-1340 [51] on its position.

(c) Move the spacer assembly, SPL-1340 [51] with the gland nut [19] down the inner cylinder [12].

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SUBTASK 32-11-21-580-006

(9) To lift the airplane with the jacks until the measurement from the bottom of the outer cylinder [8] to the ground is 60 inches (152 centimeters), do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-11-21-480-015

(10) Prepare sandbags to put the inner cylinder [12] down after its disconnected from the outer cylinder [8].

SUBTASK 32-11-21-020-020

WARNING: MAKE SURE A MINIMUM OF FOUR PERSON WILL HOLD THE INNER CYLINDER WHEN YOU DO THE SUBSEQUENT STEPS. THE INNER CYLINDER WEIGHS APPROXIMATELY 320 LB (145 KG). INJURY TO PERSONS OR DAMAGE TO THE EQUIPMENT CAN OCCUR IF THE INNER CYLINDER IS NOT HELD PROPERLY.

(11) Remove the inner cylinder [12]:

(a) Lower the axle jack slowly until the inner cylinder [12] is completely disconnected from the outer cylinder [8], (TASK 07-11-03-580-801).

(b) Hold the inner cylinder [12] in a vertical position.

SUBTASK 32-11-21-020-021

(12) Remove the upper bearing carrier [9]:

(a) Remove the upper bearings [55] from the upper bearing carrier [9].

NOTE: Pull the bearing apart slightly and slide it up and off the upper bearing carrier [9].

1) Inspect the upper bearings [55] for damage and excessive wear.

a) The upper bearing [55] thickness must be greater than or equal to 0.0895 in. (2.2733 mm).

b) Replace the upper bearing [55] if necessary.

(b) Remove the piston ring [56] from the upper bearing carrier [9].

(c) Remove the upper bearing carrier [9] halves from the inner cylinder [12].

SUBTASK 32-11-21-020-033

(13) Remove the recoil valve [57] from the inner cylinder [12].

SUBTASK 32-11-21-020-022

(14) Remove the spacer [10] from the inner cylinder [12].

SUBTASK 32-11-21-020-034

(15) Remove the seal retainer [22]:

(a) Remove the o-ring [13] for the seal retainer [22].

(b) Remove the retainer pins [21] to disconnect the seal retainer [22] from the lower bearing carrier [11].

(c) Remove the seal retainer [22] from the lower bearing carrier [11].

SUBTASK 32-11-21-020-023

(16) Remove the lower bearing carrier [11] from the inner cylinder [12]:

(a) Loosely install the carrier puller assembly, SPL-1341 [50] around the inner cylinder [12].

(b) Align the holes in the carrier puller assembly, SPL-1341 [50] with the holes in the lower bearing carrier [11] for the carrier puller screws [52].

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(c) Put the carrier puller screws [52] through the holes in the bottom of the carrier puller assembly, SPL-1341 [50] and in the lower bearing carrier [11].

(d) Tighten the carrier puller screws [52] to attach the carrier puller assembly, SPL-1341 [50] to the lower bearing carrier [11].

(e) Tighten the retainer screws on each side of the carrier puller assembly, SPL-1341 [50].

(f) Use a rubber mallet and lighty hit the bottom of the carrier puller assembly, SPL-1341 [50] until the lower bearing carrier [11] can be pulled out off the top of the inner cylinder [12].

NOTE: The lower bearing carrier [11] is coated with a dry lube film. The film may be worn and appear uneven, this is not cause for bearing carrier replacement.

(g) Remove the carrier puller screws [52] to disconnect the carrier puller assembly, SPL-1341 [50] from the lower bearing carrier [11].

(h) Remove the carrier puller assembly, SPL-1341 [50] from the lower bearing carrier [11].

SUBTASK 32-11-21-840-002

WARNING: MAKE SURE A MINIMUM OF FOUR PERSON WILL HOLD THE INNER CYLINDER WHEN YOU DO THE STEP BELOW. THE INNER CYLINDER WEIGHS APPROXIMATELY 320 LB (145 KG). INJURY TO PERSONS OR DAMAGE TO THE EQUIPMENT CAN OCCUR IF THE INNER CYLINDER IS NOT HELD PROPERLY.

(17) Slowly put the inner cylinder [12] down on sandbags.

SUBTASK 32-11-21-640-003

CAUTION: DO NOT APPLY VASELINE OR PETROLATUM TO THE SEALS AS THIS CAN CAUSE TOO MUCH SWELLING OF THE SEAL MATERIAL.

(18) Lubricate the replacement seals with fluid, D00467 or AFS-682 lubricant, D00589:

(a) These are the seals that can be necessary:

1) 2 spare static seals

2) 2 spare dynamic seals

3) 1 active static seal

4) 1 active dynamic seal

5) 1 excluder

6) 1 scraper ring.

I. Procedure to install a new active static seal, new spare static seals, new spare dynamic seals, a new active dynamic seal, a new excluder, and a new scraper ring.

SUBTASK 32-11-21-840-001

(1) Put the lower bearing carrier [11] on a bench or table, with the bottom in the up position.

(a) Inspect the lower bearing insert for damage and excessive wear.

1) The lower bearing insert thickness must be greater than or equal to 0.0895 in. (2.2733 mm).

2) Replace the lower bearing insert if necessary.

SUBTASK 32-11-21-900-003

(2) Install the new scraper ring [20] on the lower bearing carrier [11]:

NOTE: The scraper ring [20] prevents dirt and debris from entering the shock strut when the inner and outer cylinder compress.

(a) Remove the old scraper ring [20] from its groove on the lower bearing carrier [11].

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(b) Install the new scraper ring [20] in its groove on the lower bearing carrier [11].

SUBTASK 32-11-21-900-004

(3) Install the new excluder on the lower bearing carrier [11]:

(a) Remove the old excluder from its groove on the lower bearing carrier [11].

(b) Use the excluder guide, SPL-1351 [65] and excluder plunger, SPL-1350 [64] to install the new excluder in its groove on the lower bearing [11].

SUBTASK 32-11-21-840-003

(4) Put the lower bearing carrier [11] in the up position.

SUBTASK 32-11-21-900-010

(5) Install the new spare static seal [18] on the lower bearing carrier [11]:

(a) Remove the old spare static seal [18] from its groove on the lower bearing carrier [11].

(b) Install the new spare static seal [18] in its groove on the lower bearing carrier [11].

SUBTASK 32-11-21-420-009

(6) Install the two spare dynamic seals [17], the two brown backup rings [28], and the two white backup rings [29]:

(a) Install the first spare dynamic seals [17] at the top of its groove on the lower bearing carrier [11].

(b) Apply a thin layer of fluid, D00467 or AFS-682 lubricant, D00589 to the brown backup ring [28], and the white backup ring [29].

NOTE: The AFS-682 lubricant, D00589 will help keep the backup rings in their positions.

(c) Install the brown backup ring [28] and the white backup ring [29] between the first spare dynamic seals [17] installed, with the rounded edge of the white rings against the seal.

(d) Install the second spare dynamic seals [17] from its groove in the lower bearing carrier [11], with the edge overlaps to the first spare dynamic seal installed.

SUBTASK 32-11-21-900-005

(7) Install the new spare static seal [16] on the lower bearing carrier [11]:

(a) Remove the old spare static seal [16] from its groove on the lower bearing carrier [11].

(b) Install the new spare static seal [16] in its groove on the lower bearing carrier [11].

SUBTASK 32-11-21-900-006

(8) Install the new active static seal [15] on the lower bearing carrier [11]:

(a) Remove the two brown rings from around the active static seal [15].

(b) Make sure the brown rings are serviceable.

NOTE: Install new brown rings if there are nicks, scratches, or other damage. The recommended installation is to replace all the old brown rings with new brown rings. Use the old brown rings only after a full inspection, and new rings are not available.

(c) Remove the old active static seal [15] from its groove on the lower bearing carrier [11].

(d) Install the new active static seal [15] in its groove on the lower bearing carrier [11].

(e) Apply a thin layer of fluid, D00467 or AFS-682 lubricant, D00589 to the brown rings.

NOTE: The AFS-682 lubricant, D00589 will help keep the brown rings in their positions.

(f) Install the brown rings on the new active static seal [15] with the rounded edge of the brown rings against the seal.

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SUBTASK 32-11-21-900-007

(9) Install the new active dynamic seal [14] in the lower bearing carrier [11]:

(a) Remove the cap, active dynamic seal [14], and backup ring from the inner groove for the dynamic seal.

CAUTION: DO NOT APPLY VASELINE OR PETROLATUM TO THE SEALS AS THIS CAN CAUSE TOO MUCH SWELLING OF THE SEAL MATERIAL.

(b) Apply AFS-682 lubricant, D00589 to the active dynamic seal [14] to help keep the seal parts together.

(c) Install the backup ring part of the new active dynamic seal [14] in the inner groove for the dynamic seal.

NOTE: Position the backup ring toward the bottom end of the shock strut with the curved corners of the backup ring against the seal (Figure 801).

(d) Install the seal part of the new active dynamic seal [14] in inner groove for the dynamic seal.

(e) Install the cap part of the new active dynamic seal [14].

SUBTASK 32-11-21-420-022

(10) Install the seal retainer [22]:

(a) Put the seal retainer [22] on top of the lower bearing carrier [11].

(b) Install the retainer pins [21] to connect the seal retainer [22] to the lower bearing carrier [11].

(c) Install the o-ring [13] to hold the retainer pin [21] in its position.

SUBTASK 32-11-21-840-004

WARNING: MAKE SURE A MINIMUM OF FOUR PERSON WILL HOLD THE INNER CYLINDER WHEN YOU DO THE SUBSEQUENT STEPS. THE INNER CYLINDER WEIGHS APPROXIMATELY 320 LB (145 KG). INJURY TO PERSONS OR DAMAGE TO THE EQUIPMENT CAN OCCUR IF THE INNER CYLINDER IS NOT HELD PROPERLY.

(11) Hold the inner cylinder [12] in a vertical position.

SUBTASK 32-11-21-480-016

(12) Install the transition sleeve, SPL-1346 [61]:

(a) Put the transition sleeve, SPL-1346 [61] around the inner cylinder [12].

(b) Use tape to hold the transition sleeve, SPL-1346 [61] in its position around the inner cylinder [12].

SUBTASK 32-11-21-480-017

(13) Install the dynamic seal sleeve, SPL-1348 [60] at the top of the inner cylinder [12].

SUBTASK 32-11-21-020-024

(14) Install the lower bearing carrier [11]:

CAUTION: MAKE SURE THE BACKUP RINGS AND THE SEAL STAY TOGETHER AS YOU MOVE THE LOWER BEARING CARRIER. IF THE BACKUP RINGS AND THE SEAL MOVE APART THEY WILL NOT INSTALL CORRECTLY. THIS CAN CAUSE DAMAGE TO THE SEAL AND THE BACKUP RING.

(a) Put the lower bearing carrier [11] in its position for installation on the inner cylinder [12].

(b) Use a rubber mallet and lighty hit the top of the lower bearing carrier [11] until it passes the dynamic seal sleeve, SPL-1348 [60].

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(c) Use the ram assembly, SPL-1349 [62] to push the lower bearing carrier [11] down to the inner cylinder [12].

NOTE: A 1 in. (25 mm) webbing may be used to assist in moving the ram assembly, SPL-1349 [62].

NOTE: Leave enough room for the installation of the carrier puller assembly, SPL-1341 [50].

SUBTASK 32-11-21-020-025

(15) Remove the ram assembly, SPL-1349 [62], the dynamic seal sleeve, SPL-1348 [60], and the transition sleeve, SPL-1346 [61] from the inner cylinder [12].

SUBTASK 32-11-21-420-023

(16) Put the spacer [10] down the inner cylinder [12] and on top of the lower bearing carrier [11].

SUBTASK 32-11-21-420-024

(17) Install the recoil valve [57] on the inner cylinder [12].

SUBTASK 32-11-21-420-010

(18) Install the upper bearing carrier [9]:

(a) Install the upper bearing carrier [9] halves on the inner cylinder [12].

(b) Install the piston ring [56] to hold the upper bearing carrier [9] halves around the inner cylinder [12].

(c) Install one of the upper bearings [55] on the lower groove of the upper bearing carrier [9] halves, with the split about 90 degrees from the split of the upper bearing carrier [9] halves.

NOTE: Make an overlap of 0.25 in. (0.64 cm) to the upper bearing to keep their round shape.

(d) Install the other upper bearing [55] on the top groove of the upper bearing carrier [9] halves, with the split opposite the split of the first upper bearing [55] installed.

SUBTASK 32-11-21-420-011

(19) Install the upper sleeve assembly, SPL-1345 [63]:

(a) Install the upper sleeve assembly, SPL-1345 [63], such that it fits at the bottom of the outer cylinder [8].

(b) Install the straps strap assembly, SPL-3927 [47] around the outer cylinder [8] and connect the ends to the shoulder bolts on the side of the upper sleeve assembly, SPL-1345 [63].

1) Tighten the strap assembly, SPL-3927 [47].

SUBTASK 32-11-21-420-012

CAUTION: MAKE SURE YOU PUT THE INNER AND OUTER CYLINDER TOGETHER CAREFULLY. IF YOU ARE NOT CAREFUL, THE NEW SEALS CAN CATCH ON THE OUTER CYLINDER OR THE INNER AND OUTER CYLINDERS CATCH AS THEY ARE ASSEMBLED. THIS CAN CAUSE DAMAGE TO THE EQUIPMENT.

(20) Slowly lift the inner cylinder [12] with the axle jack such that the inner cylinder goes into the outer cylinder [8], (Lift the Main Landing Gear Axles with the Axle Jacks, TASK 07-11-03-580-801).

NOTE: Leave enough chrome visible on the inner cylinder [12] such that you can install the carrier puller assembly, SPL-1341 [50].

SUBTASK 32-11-21-080-010

(21) Remove the upper sleeve assembly, SPL-1345 [63] from the outer cylinder [8] after it goes on the upper bearing [9].

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SUBTASK 32-11-21-420-025

(22) Carefully put the thread protector, SPL-1344 [48] between the outer cylinder [8] and the inner cylinder [12].

NOTE: The thread protector will expand and press against the outer cylinder [8], this will protect the static seals from the gland nut threads on the outer cylinder [8].

SUBTASK 32-11-21-480-018

(23) Install ther retainer assembly, SPL-1343 [49]:

(a) Install the retainer assembly, SPL-1343 [49] around the inner cylinder [12], such that it fits at the bottom of the outer cylinder [8].

(b) Tighten the retainer screws on each side of the retainer assembly, SPL-1343 [49].

(c) Move the two retainer plates for the retainer assembly, SPL-1343 [49], such that it does not touch the chrome surface of the inner cylinder [12].

(d) Install the strap assembly, SPL-3927 [47] around the outer cylinder [8] and connect the ends to the shoulder bolts on each side of the retainer assembly, SPL-1343 [49].

SUBTASK 32-11-21-480-019

(24) Install the carrier puller assembly, SPL-1341 [50]:

(a) Loosely install the carrier puller assembly, SPL-1341 [50] around the inner cylinder [12], such that its below the lower bearing carrier [11].

(b) Align the holes in the carrier puller assembly, SPL-1341 [50] with the holes in the lower bearing carrier [11] for the carrier puller screws [52].

(c) Put the carrier puller screws [52] through the holes in the carrier puller assembly, SPL-1341 [50] and in the lower bearing carrier [11].

(d) Tighten the carrier puller screws [52] to attach the carrier puller assembly, SPL-1341 [50] to the lower bearing carrier [11].

(e) Tighten the retainer screws on each side of the carrier puller assembly, SPL-1341 [50].

SUBTASK 32-11-21-580-007

(25) To lift the inner cylinder [12] slowly with the axle jack until the bottom of the lower bearing carrier [11] is about 1.5 in. (3.8 cm) from the bottom of the outer cylinder [8], do this task: Lift the Main Landing Gear Axles with the Axle Jacks, TASK 07-11-03-580-801.

NOTE: Make sure the static seals stay in their positions as the lower bearing carrier [11] is installed.

SUBTASK 32-11-21-080-011

(26) Remove the retainer assembly, SPL-1343 [49]:

(a) Remove the strap assembly, SPL-3927 [47] that holds the retainer assembly, SPL-1343 [49] to the outer cylinder [8].

(b) Loosen the retainer screws and remove the retainer assembly, SPL-1343 [49].

SUBTASK 32-11-21-080-012

(27) Remove the thread protector, SPL-1344 [48] from the outer cylinder [8].

SUBTASK 32-11-21-480-020

(28) Remove the spacer assembly, SPL-1340 [51] from around the gland nut [19].

SUBTASK 32-11-21-080-013

(29) Remove the carrier puller assembly, SPL-1341 [50]:

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(a) Remove the carrier puller screws [52] to disconnect the carrier puller assembly, SPL-1341 [50] from the lower bearing carrier [11].

(b) Loosen the retainer screws and pull the carrier puller assembly, SPL-1341 [50] out of the outer cylinder [8].

SUBTASK 32-11-21-620-003

WARNING: DO NOT GET THE CORROSION-INHIBITING COMPOUND ON YOUR SKIN, IN YOUR EYES, OR ON YOUR CLOTHES. THE COMPOUND IS POISONOUS AND FLAMMABLE. USE APPROVED GLOVES, AND EYE PROTECTION. MAKE SURE THAT THERE IS GOOD AIRFLOW IN THE WORK AREA. KEEP THE COMPOUND AWAY FROM SPARKS AND FLAMES. THE COMPOUND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

CAUTION: REMOVE UNWANTED CORROSION INHIBITING COMPOUND FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY CORROSION INHIBITING COMPOUND TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(30) Apply a thin layer of corrosion inhibiting non-drying paste, G50136 (preferred) or corrosion preventive compound, C00913 (alternate) to these items:

(a) The threads and thread reliefs of the bolt [24].

(b) The threads of the nuts [26].

(c) The splines and faces of the washers [25].

(31) Apply a liberal amount of corrosion inhibiting non-drying paste, G50136 to the threads of the gland nut [19] and to the threads of the outer cylinder [8].

SUBTASK 32-11-21-160-004

(32) Remove all unwanted corrosion inhibiting non-drying paste, G50136 or compound, C00913.

SUBTASK 32-11-21-420-014

(33) Install the gland nut [19]:

(a) Move the gland nut [19] up to the outer cylinder [8] and engage the gland nut threads.

(b) Use the gland nut wrench adapter, SPL-1861 to tighten the gland nut [19] to 125 ft-lb (169 N·m) – 150 ft-lb (203 N·m).

(c) Install the plate [23] in the holes which will put the tab of the plate [23] as close to a slot in the gland nut [19] as possible.

NOTE: If it is necessary, loosen the gland nut [19] a small amount to help with the alignment.

(d) Install the bolts [24], washers [25] and nuts [26].

(e) Apply compound, A00226.

NOTE: Apply it to make sure the seal made by the compound, A00226, will break if the bolts [24] are loosened.

J. Put the Airplane Back to Its Usual Condition.

SUBTASK 32-11-21-420-026

(1) Before you connect the electrical connector [42] and the wiring assembly [43], examine the connector for corrosion.

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WARNING: DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

(a) If there was corrosion, refer to (SWPM 20-60-03) to correct the problem.

(b) Apply the D5026NS or ZC-026 compound, G50171 to the connector (SWPM 20-60-03).

(2) Connect the wiring assembly [43] and the electrical connector [42]:

(a) Put the wiring assembly [43] into the inner cylinder [12] and the axle [40].

(b) Tighten the fitting [41] to 70 in-lb (7.9 N·m) – 90 in-lb (10.2 N·m) to connect the electrical connector [42] to the inner cylinder [12].

(c) Install lockwire on the fittings.

(d) Put the electrical connector [42] in its position for attachment to the clamps [46] on the bracket.

(e) Install the washers [45], and the screws [44] to hold the electrical harness to the clamps [46].

SUBTASK 32-11-21-860-009

(3) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1
B	16	C01346	LANDING GEAR PARKING BRAKE
B	17	C00129	LANDING GEAR LATCH & PRESS WARN
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	15	C01401	LANDING GEAR AIR/GND RELAY
D	16	C01432	LANDING GEAR ALTN EXTEND SOL
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

SUBTASK 32-11-21-420-019

(4) Do this task: Main Landing Gear Brake Installation, TASK 32-41-41-400-801.

NOTE: This procedure will also install the wheel and tire assemblies.

NOTE: Make sure you connect the correct wires to the correct in-axle assembly.

SUBTASK 32-11-21-420-027

(5) Do this task: Transducer Installation, TASK 32-42-11-400-801.

SUBTASK 32-11-21-080-014

(6) To lower and remove the axle jack, do this task: Lift the Main Landing Gear Axles with the Axle Jacks, TASK 07-11-03-580-801.

SUBTASK 32-11-21-420-028

(7) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

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SUBTASK 32-11-21-420-029

(8) Remove the rope that holds the disconnected end of the upper torsion link to the outer cylinder [8].

SUBTASK 32-11-21-420-030

(9) Do this task: Main Landing Gear Torsion Link Connection, TASK 32-11-51-400-803.

SUBTASK 32-11-21-420-020

(10) Install the oil valve cap [5] loosely.

SUBTASK 32-11-21-600-002

(11) Do this task: Main Landing Gear Shock Strut Servicing, TASK 12-15-31-610-802.

——————— END OF TASK ———————

TASK 32-11-21-200-801

4. Main Landing Gear Shock Strut Seal Leakage Check

A. General

(1) This task gives the instructions to make sure a shock strut is serviceable when you find fluid leakage on the inner cylinder. This task requires a repeated wipe and observing period in order to determine if there is leakage.

NOTE: The presence of a fluid film on the inner cylinder following landings is normal. This film is different from the actual continuous drips that are the indication of shock strut seal leakage.

B. References

Reference	Title
05-51-01 P/B 201	HARD LANDING OR HIGH DRAG/SIDE LOAD LANDING - MAINTENANCE PRACTICES (CONDITIONAL INSPECTION)
05-51-01-210-801	Phase I Inspection (P/B 201)
09-11-00-580-801	Towing (P/B 201)
12-15-31-610-802	Main Landing Gear Shock Strut Servicing (P/B 301)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
143	Area Below Aft Cargo Compartment - Left
144	Area Below Aft Cargo Compartment - Right
731	Left Main Landing Gear - Outboard Door
741	Right Main Landing Gear - Outboard Door

D. Shock Strut Seal Leak Inspection

NOTE: If the inspection finds a fault on the scraper ring you will have to replace the damaged scraper ring.

NOTE: The inner cylinder must be removed from the outer cylinder shock strut to replace the scraper ring.

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SUBTASK 32-11-21-480-009

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-21-210-001

(2) Inspect the shock struts for leakage.

SUBTASK 32-11-21-210-002

(3) If you find leakage of the shock strut fluid on the inner cylinder, do the steps that follow to make sure the shock strut is serviceable:

(a) Check for leaks for 5 minutes:

1) Wipe the surface of the inner cylinder with a clean cloth to remove all of the fluid from the leak.

2) Monitor the inner cylinder where it meets the outer cylinder for 5 minutes.

NOTE: Make sure the extension of the inner cylinder does not change during this time.

3) Make a record of the location and the number of drops which come from the seals during the 5 minutes.

(b) Tow the airplane to cause movement between the inner cylinder and the outer cylinder. To tow the airplane, do this task: Towing, TASK 09-11-00-580-801.

NOTE: The minimum distance the airplane must be moved is two airplane lengths.

(c) Check for leaks for 5 minutes:

1) Wipe the surface of the inner cylinder with a clean cloth to remove all of the fluid from the leak.

2) Monitor the inner cylinder where it meets the outer cylinder for 5 minutes.

NOTE: Make sure the extension of the inner cylinder does not change during this time.

3) Make a record of the location and the number of drops which come from the seals during the 5 minutes.

(d) Calculate the average of the number of drops which came from the seals during both of the 5 minute measurements.

SUBTASK 32-11-21-210-003

(4) If the leakage stopped, do the steps that follow:

(a) Continue to monitor the strut for leakage on subsequent landings.

1) If you see more signs of leakage, do the entire leak check procedure again.

NOTE: If you find a continuous leakage flow on subsequent landings the shock strut is not serviceable.

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CAUTION: A DEFLATED OR FLAT STRUT CAN CAUSE DAMAGE DURING LANDING. IF THE AIRPLANE LANDED WITH A DEFLATED OR FLAT STRUT, DO HARD LANDING INSPECTION PER AMM 05-51-01/201 TO MAKE SURE THERE IS NO DAMAGE.

(b) If you do not find leakage on subsequent landings, examine the fluid level of the shock strut within 5 days or 15 flight cycles, do this task: Main Landing Gear Shock Strut Servicing, TASK 12-15-31-610-802.

NOTE: If the leakage has stopped, there is no additional action necessary.

1) If the shock strut is deflated or flat, do this task: Phase I Inspection, TASK 05-51-01-210-801.

SUBTASK 32-11-21-210-004

(5) If there was leakage but the average was less than 50 drops during the two 5 minute periods, do the steps that follow:

NOTE: 20 drops is equal to 1.0 cc.

(a) Continue to monitor the strut for leakage on subsequent landings until you replace the seals.

1) If the leakage continues or increases, do the entire seal leak check procedure again.

CAUTION: A DEFLATED OR FLAT STRUT CAN CAUSE DAMAGE DURING LANDING. IF THE AIRPLANE LANDED WITH A DEFLATED OR FLAT STRUT, DO HARD LANDING INSPECTION PER HARD LANDING OR HIGH DRAG/SIDE LOAD LANDING - MAINTENANCE PRACTICES (CONDITIONAL INSPECTION), PAGEBLOCK 05-51-01/201 TO MAKE SURE THERE IS NO DAMAGE.

(b) If you do not find leakage on subsequent landings, examine the fluid level of the shock strut within 3 days or 10 flight cycles, do this task: Main Landing Gear Shock Strut Servicing, TASK 12-15-31-610-802.

1) If the shock strut is deflated or flat, do this task: Phase I Inspection, TASK 05-51-01-210-801.

(c) Continue to monitor the fluid level of the shock strut at no more than 5 day or 15 flight cycle intervals, until you replace the seals, (Main Landing Gear Shock Strut Servicing, TASK 12-15-31-610-802).

SUBTASK 32-11-21-210-005

(6) If the average leakage was more than 50 drops during the two 5 minute periods, but was not continuous, do the steps that follow:

NOTE: 20 drops is equal to 1.0 cc.

CAUTION: A DEFLATED OR FLAT STRUT CAN CAUSE DAMAGE DURING LANDING. IF THE AIRPLANE LANDED WITH A DEFLATED OR FLAT STRUT, DO THE LANDING INSPECTION PER HARD LANDING OR HIGH DRAG/SIDE LOAD LANDING - MAINTENANCE PRACTICES (CONDITIONAL INSPECTION), PAGEBLOCK 05-51-01/201 TO MAKE SURE THERE IS NO DAMAGE.

(a) Do this task: Main Landing Gear Shock Strut Servicing, TASK 12-15-31-610-802.

1) If the shock strut is deflated or flat, do this task: Phase I Inspection, TASK 05-51-01-210-801.

(b) Continue to monitor the fluid level of the shock strut after each flight until you replace the seals.

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SUBTASK 32-11-21-210-006

(7) If the fluid leaked continuously during the 5 minute period, the shock strut is not serviceable and you must replace the shock strut seals.

——————— END OF TASK ———————

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MAIN LANDING GEAR CORROSION PREVENTION - MAINTENANCE PRACTICES

1. General

A. The main landing gear fittings, especially at the attachment lugs, have been found susceptible to corrosion. Damaged paint finishes and plating are attributed to exposure to the weather elements and runway debris. Service wear and hard landings contribute to galling of lugs and lug faces.

B. Specific corrosion problems have been encountered with the aft center door hinge connecting the inner and center door. Corrosion has been attributed to the accumulation of debris in the recessed area of the attachments to the center door.

C. Damaged finishes on the outboard aft lug of the main landing gear upper strut could contribute to stress corrosion cracking of the steel strut. The damage has been attributed to chafing by the center door on airplanes with the inner skin and honeycomb core trimmed for clearance. No problems have been reported on airplanes with a depression in the door manufactured with a continuous inner skin.

D. Corrosion has been reported under the head of the bolt through the main gear actuator and walking beam.

E. Cracks and damaged finishes have been reported on the upper torsion link pins. Cracking is attributed to stress corrosion.

F. Corrosion has been reported on the trunnion link pin thread relief radius. Stress corrosion has been reported to cause the main landing gear trunnion 4340M steel pin to fracture at the thread relief and at the flange relief.

G. Broken MLG torsion pins were found on some airplanes. Cracks at the anti-rotation bolthole were examined on some torsion pins. Corrosion, flaking chrome and excessive wear were found on some torsion pins.

H. Stress corrosion cracking has been reported on the MLG brake assembly shear studs. Cracked or broken attaching shear studs will reduce the structural integrity of the brake attaching assembly.

I. Pitting corrosion has been reported on the main landing gear as a result of missing chrome plate at the fuse bolt location.

J. Corrosion occurred on the actuator beam attach lugs, the actuator beam bolt assemblies, and the trunnion pin. Corrosion can cause the actuator beam arm and trunnion pin to break.

TASK 32-11-37-600-801

2. CORROSION PREVENTION

A. References

Reference	Title
SRM 51-10-02	Structural Repair Manual

B. Consumable Materials

Reference	Description	Specification
G00009	Compound - Organic Corrosion Inhibiting	BMS3-23

C. Corrosion Prevention Practices

SUBTASK 32-11-37-610-004

(1) Do these steps to prevent corrosion in the main landing gear:

(a) Make regular inspections to prevent or find the start of corrosion. Fasteners that are gone, white powdery or other deposits are signs of corrosion

(b) After you clean the areas, make sure that protective finishes stay serviceable.

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(c) If you find corrosion (bulges of the skin or white deposits of corrosion products at fastener heads or joint edges), refer to SRM 51-10-02 for details of corrosion removal.

(d) For small amounts of corrosion, to decrease the downtime of the airplane, clean off corrosion products. Apply a corrosion inhibiting compound into the affected area to stop the corrosion process. Repair the finish system when the maintenance schedule permits.

D. Prevention Treatment

SUBTASK 32-11-37-610-001

(1) Do these steps for prevention treatment:

(a) At earliest opportunity consistent with the maintenance activity, corrosion prevention treatment should be accomplished to the main landing gear.

CAUTION: DO NOT APPLY CORROSION INHIBITING COMPOUND ON GREASE JOINTS OR SEALED BEARINGS. THESE COMPOUNDS DISSOLVE GREASE AND OTHER LUBRICANTS. THEY ARE PENETRATING COMPOUNDS AND CAN GET AROUND THE SEALS AND INTO THE BEARINGS.

(b) After application of corrosion inhibiting compound, all grease fittings in the treated areas should be regreased.

(c) If you cleaned with steam or high pressure water and detergent, apply the corrosion inhibitor again.

(d) Shock Struts (Oleo). Apply water displacing corrosion inhibiting compound to exterior areas of the inner and outer cylinder with broken finish systems. All lugs, lug faces, connecting pin fasteners, and strut door attachments should be sprayed with corrosion inhibitor.

(e) Axles. Apply water displacing corrosion inhibiting compound to outside surfaces of the axles except journal and bearing surfaces. Make suitable nozzle extension and spray the inside surfaces of the axles with corrosion inhibitor after protecting electrical wire and connectors.

(f) Side Struts. Apply water displacing corrosion inhibiting compound to surface areas with broken finish systems on both the upper and lower side struts. All lugs, lug faces, connecting pins and fasteners should be sprayed with corrosion inhibitor.

(g) Drag Strut. Apply water displacing corrosion inhibiting compound to exterior surface areas with broken finish systems.

(h) Walking Beam. Apply water displacing corrosion inhibiting compound to surface areas with broken finish systems. All lugs, lug faces and connecting pins shall be sprayed with corrosion inhibitor.

(i) Torsion Links. Apply water displacing corrosion inhibiting compound to surface areas with broken finish systems. All lugs, lug faces and connecting pins shall be sprayed with corrosion inhibitor.

(j) Trunnion Link. Apply water displacing corrosion inhibiting compound to surface areas with broken finish systems. Lugs, lug faces and connecting pins should also be sprayed.

(k) Trunnion. The trunnion should be treated at the same time that the trailing edge attachment fittings are treated.

(l) Door Hinges. Remove debris from recessed areas of door and apply water displacing corrosion inhibiting compound to all hinge fittings. Relubricate hinge pins as necessary after application of corrosion inhibitor.

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(m) Miscellaneous. Lugs, lug faces and connecting pins of links, actuators and lock mechanisms connecting above mentioned components should also be sprayed with corrosion inhibitor.

(n) The installation of mylar tape under corrosion resistant steel clamps is recommended at overhaul to minimize risk of galvanic corrosion should the finish be damaged.

(o) Ensure that there is adequate clearance between the center door and the upper aft lug of the side strut. It is permissible to trim the door, as shown in (Figure 201), to obtain the required clearance of 0.1U to 0.25.

E. Frequency of Application

SUBTASK 32-11-37-610-003

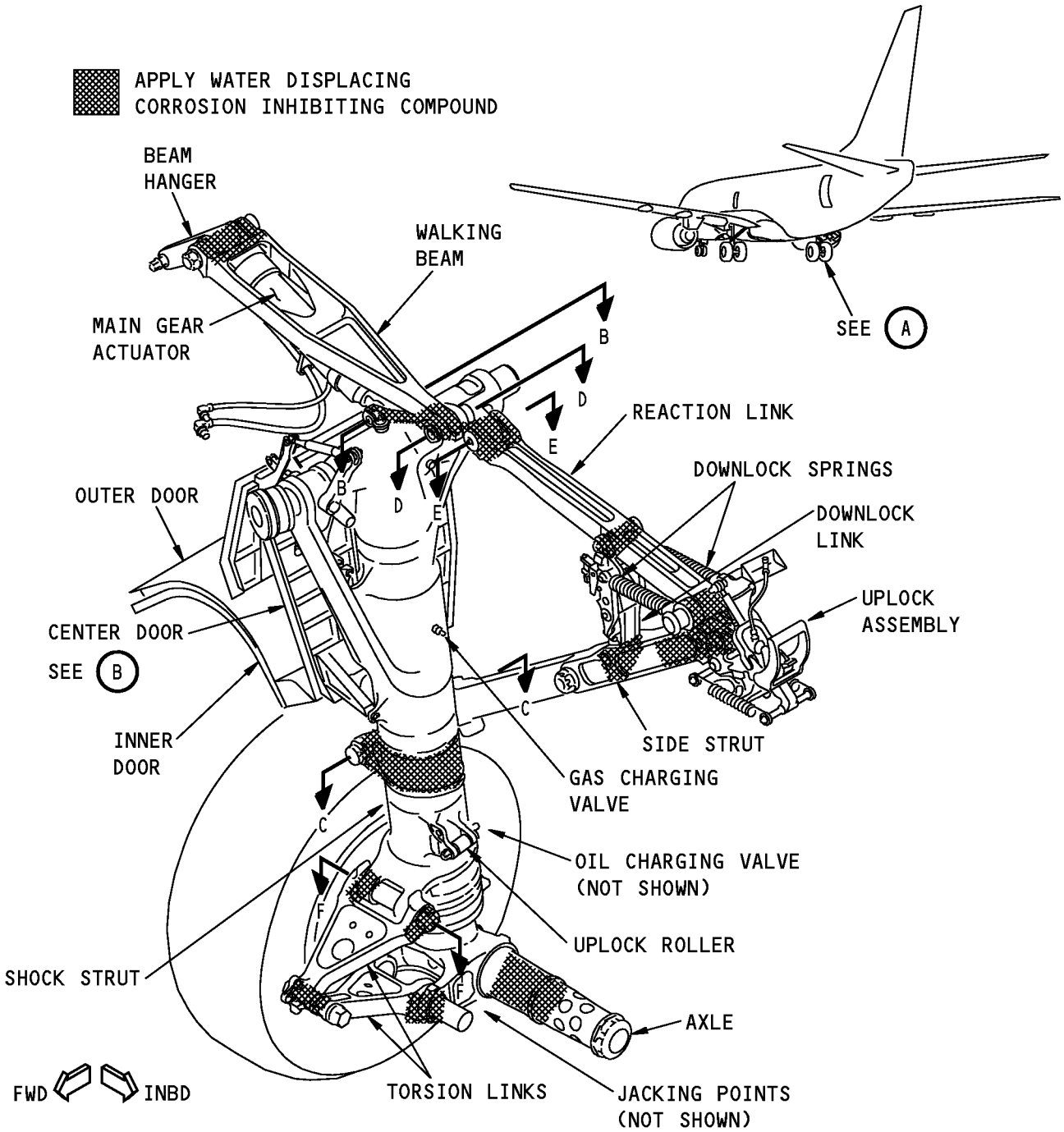
(1) Frequency of corrosion prevention application is as follows:

(a) Periodic inspection is required to areas identified as susceptible to corrosion and should be consistent to the schedules identified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrence.

(b) Annual application of corrosion inhibiting compound, G00009 is necessary to areas identified or as required by washing cycles.

——————— END OF TASK ———————

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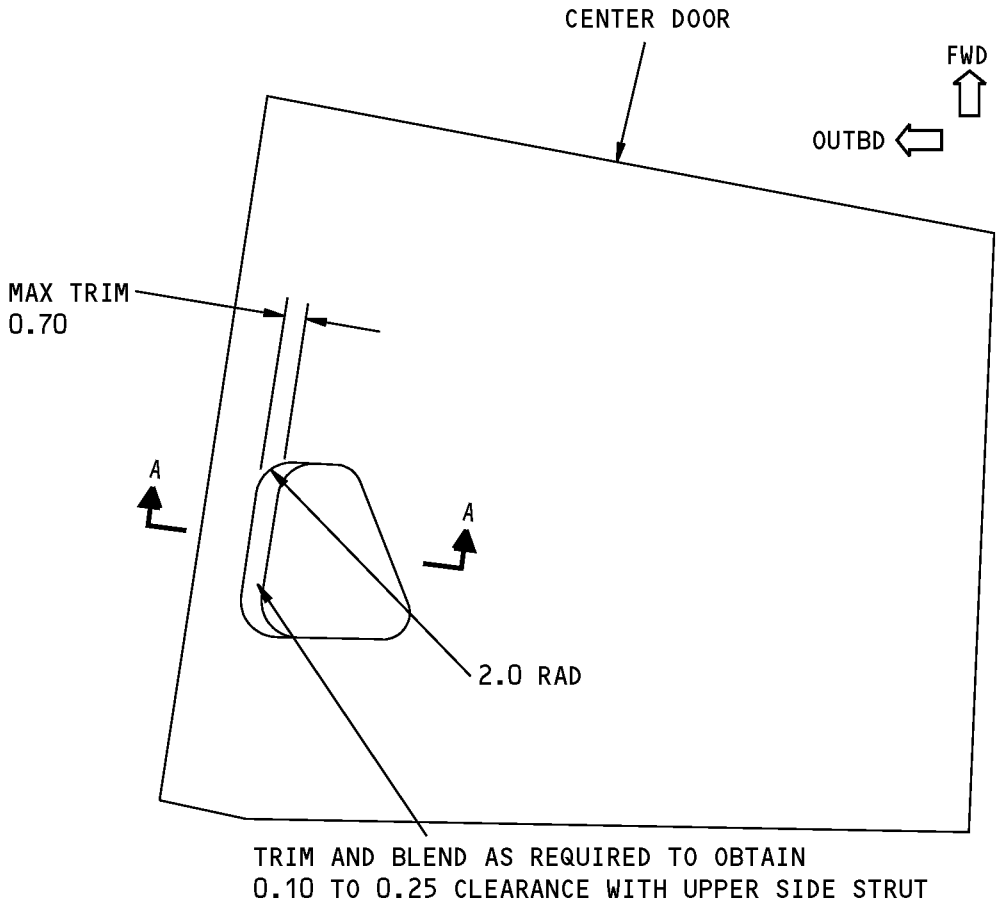


PREVENTIVE MAINTENANCE
LANDING GEAR
A

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Main Landing Gear Corrosion Prevention
Figure 201 (Sheet 1 of 4)/32-11-37-990-801

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PLAN VIEW ON LEFT HAND DOOR
IN RETRACTED POSITION

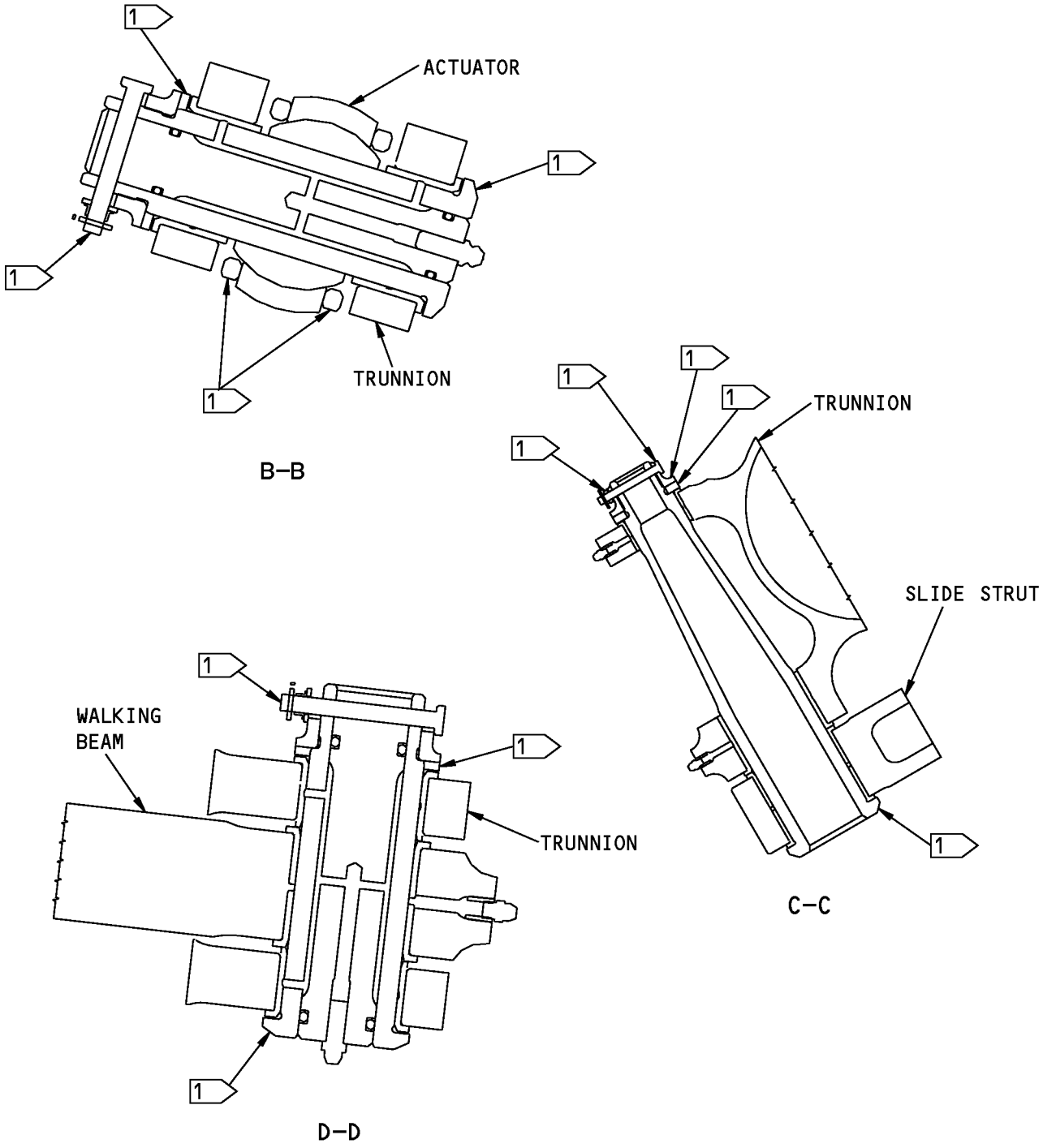
B



A–A

Main Landing Gear Corrosion Prevention
Figure 201 (Sheet 2 of 4)/32-11-37-990-801

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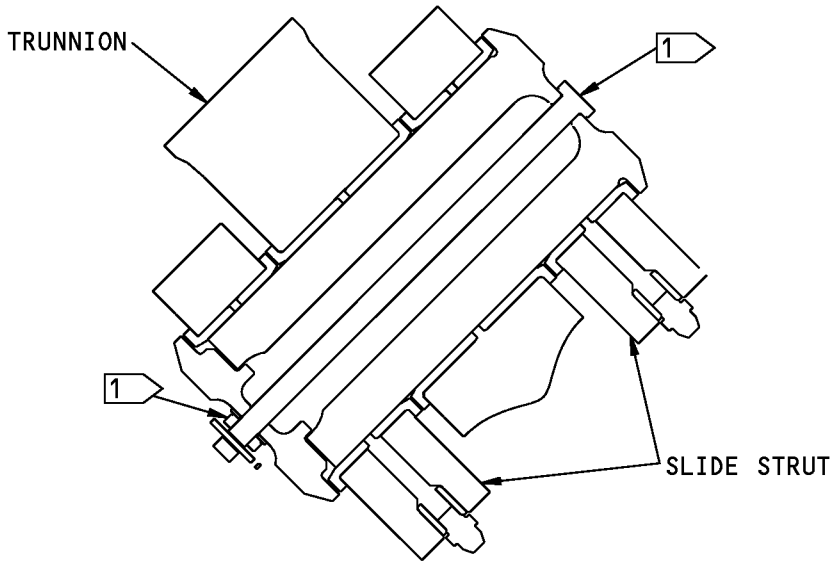


1 APPLY BMS 3-38 TO THESE AREAS.

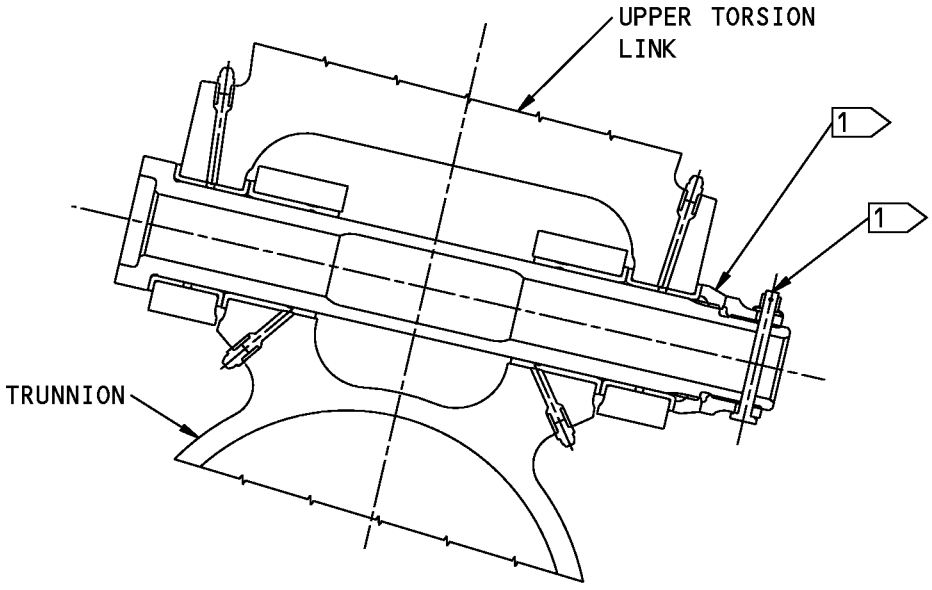
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Main Landing Gear Corrosion Prevention
Figure 201 (Sheet 3 of 4)/32-11-37-990-801

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E–E



F–F

1 APPLY BMS 3-38 TO THESE AREAS.

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Main Landing Gear Corrosion Prevention
Figure 201 (Sheet 4 of 4)/32-11-37-990-801

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MAIN LANDING GEAR TORSION LINKS - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the upper torsion link from the main landing gear

(2) A removal of the lower torsion link from the main landing gear

(3) The disconnection of the torsion links for the main landing gear

(4) An installation of the upper torsion link for the main landing gear

(5) An installation of the lower torsion link for the main landing gear

(6) The connection of the torsion links for the main landing gear

TASK 32-11-51-000-801

2. Main Landing Gear Upper Torsion Link Removal

(Figure 401)

A. General

(1) This task provides instructions to remove the upper torsion link.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-11-81-000-801	Main Landing Gear Shimmy Damper Removal (P/B 401)
32-45-11-000-801	Main Landing Gear Wheel and Tire Assembly Removal (P/B 401)

C. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Removal

SUBTASK 32-11-51-490-001

WARNING: MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801

SUBTASK 32-11-51-020-014

(2) Do this task: Main Landing Gear Shimmy Damper Removal, TASK 32-11-81-000-801.

SUBTASK 32-11-51-020-001

(3) Remove the left hand inboard or the right hand outboard tire of the main landing gear. To do this, do this task: Main Landing Gear Wheel and Tire Assembly Removal, TASK 32-45-11-000-801.

E. Main Landing Gear Upper Torsion Link Removal

SUBTASK 32-11-51-020-002

(1) Remove the support brackets [4] from the upper torsion link assembly [5]:

NOTE: Remove the brackets [4] with the sensor targets attached.

(a) Remove the nuts [2] and the washers [3] from the bolts [1].

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(b) Remove the bolts [1] that hold the support brackets [4] to the upper torsion link assembly [5].

(c) Remove the washers [6] from the bolts [1].

(d) Remove the support brackets [4] from the work area.

SUBTASK 32-11-51-020-003

(2) Remove the bracket [19] from the upper torsion link assembly [5]:

NOTE: Remove the bracket [19] with the electrical conduit and the clamps attached.

(a) Remove the nuts [10] and the washers [9] from the bolts [7].

(b) Remove the bolts [7] to disconnect the aft side of the bracket [19] from the upper torsion link assembly [5].

(c) Remove the washers [8] from the bolts [7].

(d) Remove the nut [14], and the washer [13] from the bolt [21].

(e) Remove the bolt [21] to disconnect the forward side of the bracket [19] from the upper torsion link assembly [5].

NOTE: Removal of the bolt [21] will also disconnect one side of the hose guide bracket [12] from the upper torsion link assembly [5].

(f) Remove the washer [20] from the bolt [21].

(g) Isolate the bracket [19] from the upper torsion link assembly [5].

SUBTASK 32-11-51-020-004

(3) Remove the hose guide bracket [12] from the upper torsion link assembly [5]:

NOTE: Remove the bracket [12] with the hose guides and the brake hoses attached.

(a) Remove the nut [15] and the washer [16] from the bolt [18].

(b) Remove the bolt [18] to disconnect the hose guide bracket [12] from the upper torsion link assembly [5].

(c) Remove the washer [17] from the bolt [18].

(d) Isolate the hose guide bracket [12] from the upper torsion link assembly [5].

SUBTASK 32-11-51-480-002

(4) Use a rope to hold the forward side of the lower torsion link assembly [22] to the outer cylinder [33].

NOTE: This step will hold the lower torsion link assembly [22] in its position when you do the subsequent steps.

SUBTASK 32-11-51-420-001

(5) Disconnect the upper torsion link assembly [5] and the lower torsion link assembly [22]:

(a) Remove the cotter pin [26], nut [27], and the washer [25] from the bolt [23].

(b) Remove the bolt [23] from the apex pin [31].

(c) Remove the apex nut [24] from the apex pin [31].

(d) Remove the bracket [28] and the washer [29] and the tapered sleeve [54] from the apex pin [31].

(e) Isolate the bracket [28] from the apex joint.

NOTE: Isolate the bracket [28] with the electrical conduit and the clamps attached.

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(f) Remove the apex pin [31] to disconnect the upper torsion link assembly [5] from the lower torsion link assembly [22].

(g) Remove the spacer [30] between the upper torsion link assembly [5] and the lower torsion link assembly [22].

SUBTASK 32-11-51-020-005

(6) Disconnect the upper torsion link assembly [5] from the outer cylinder [33]:

(a) Remove the cotter pin [38], nut [39], and the washer [37] from the bolt [35].

(b) Remove the bolt [35] from the upper torsion link pin [32].

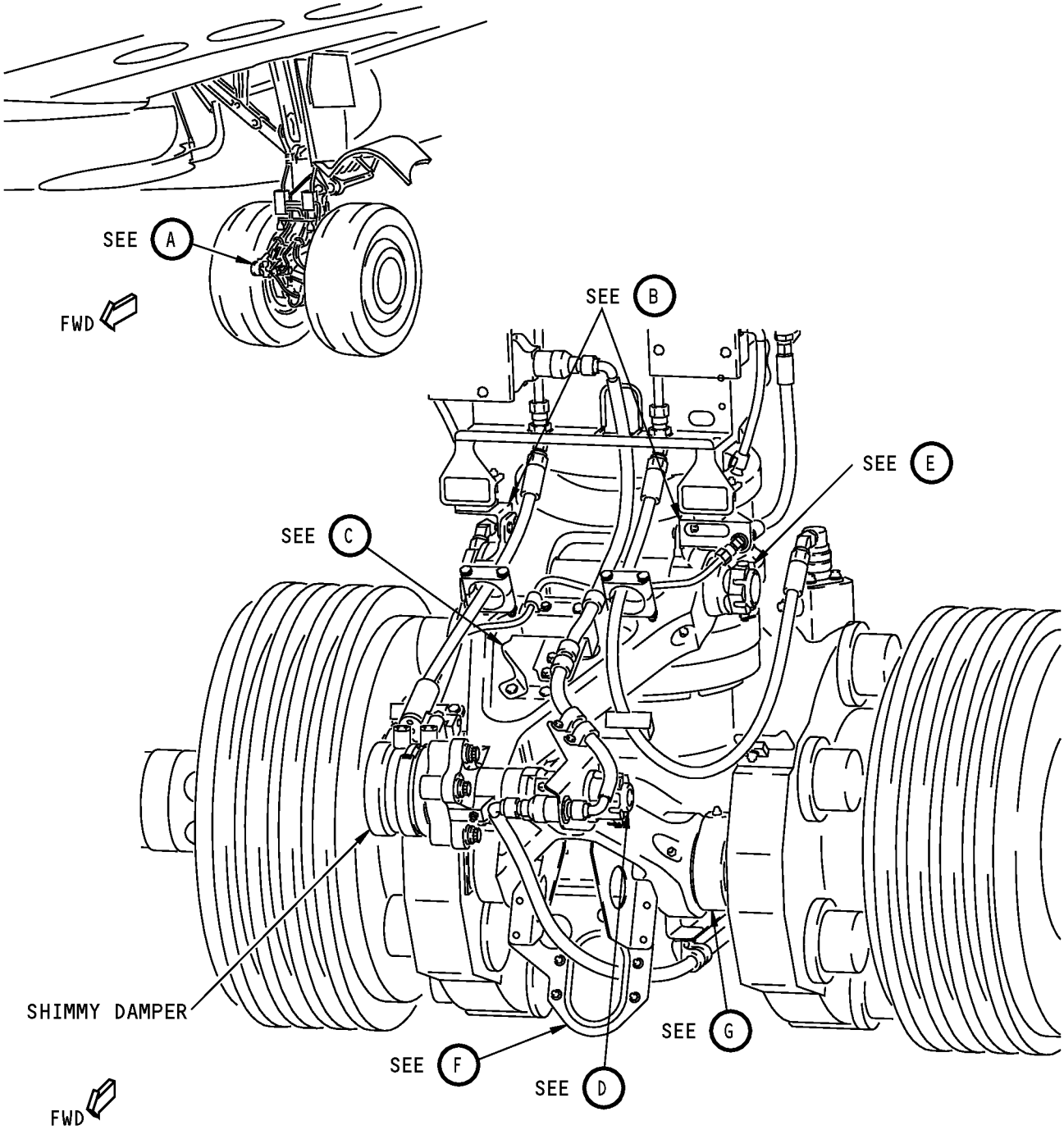
(c) Remove the nut [36] and the washer [34] from the upper torsion link pin [32].

(d) Hold the upper torsion link assembly [5] and remove the upper torsion link pin [32] to disconnect the upper torsion link assembly [5] from the outer cylinder [33].

(e) Remove the upper torsion link assembly [5] from the airplane.

——————— END OF TASK ———————

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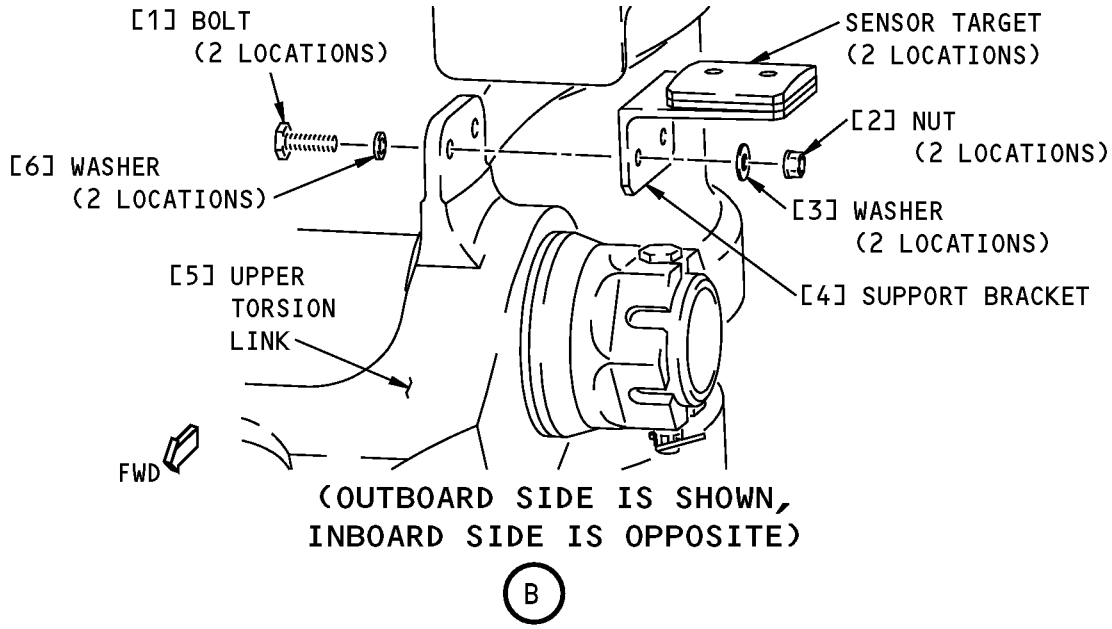


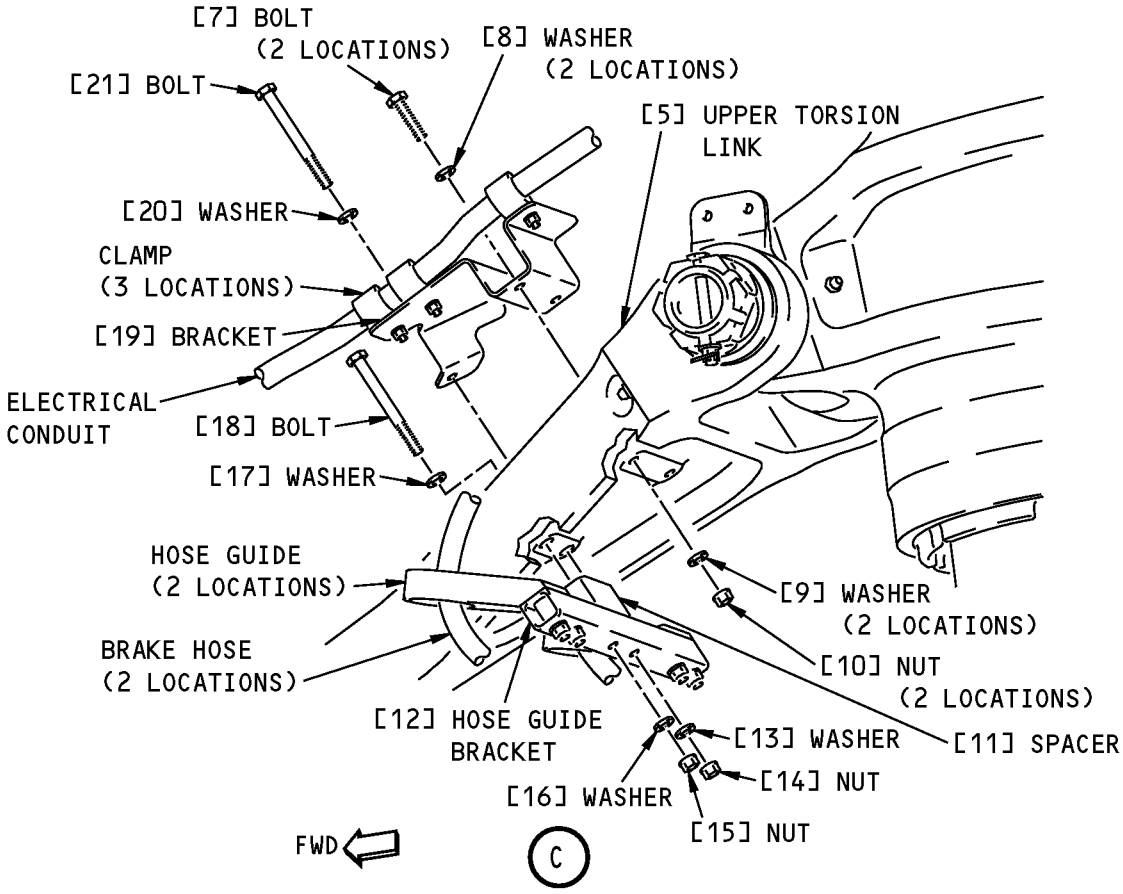
LEFT MAIN LANDING GEAR
(RIGHT MAIN LANDING GEAR IS EQUIVALENT)

A

Main Landing Gear Torsion Link Installation
Figure 401 (Sheet 1 of 4)/32-11-51-990-803

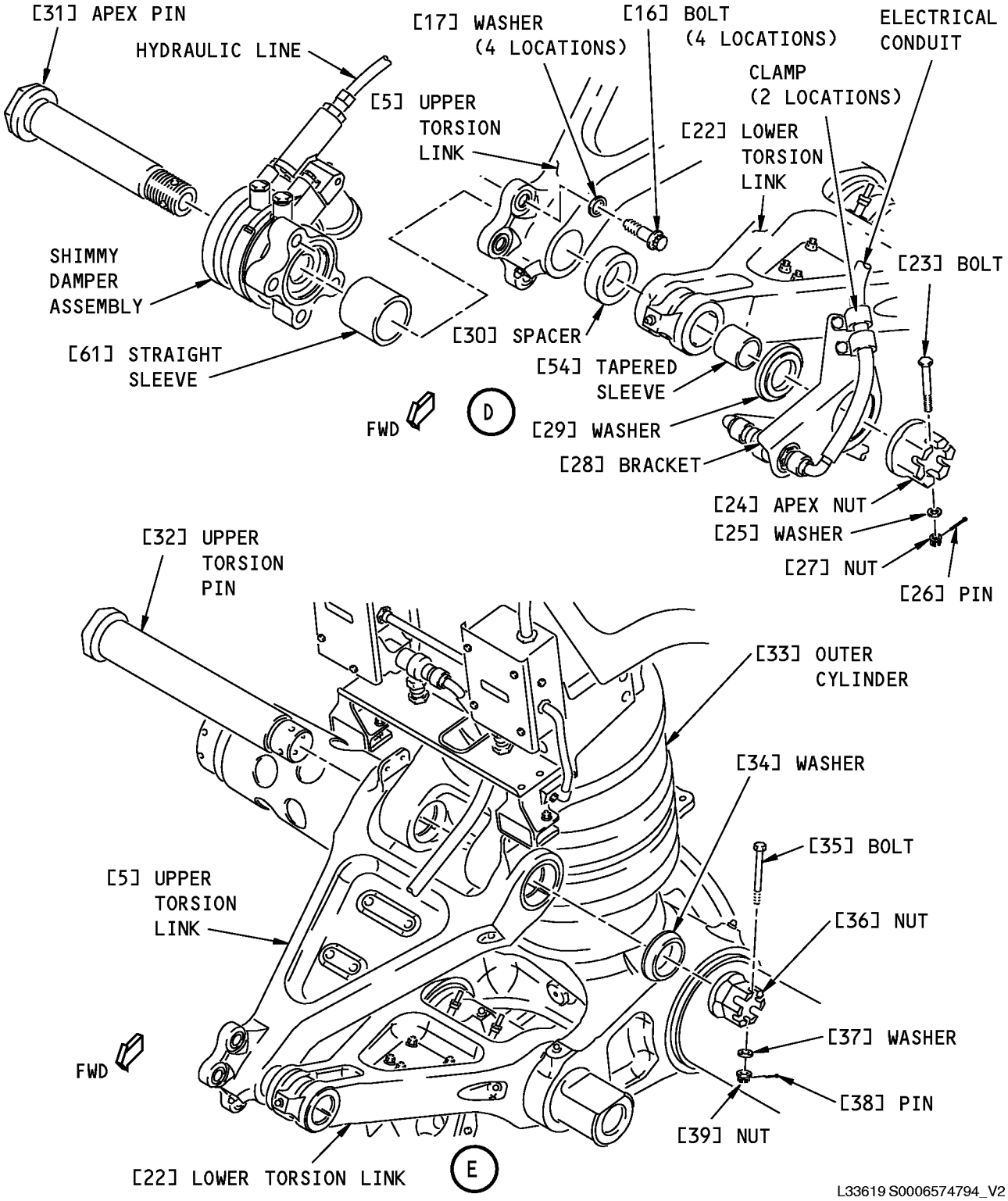
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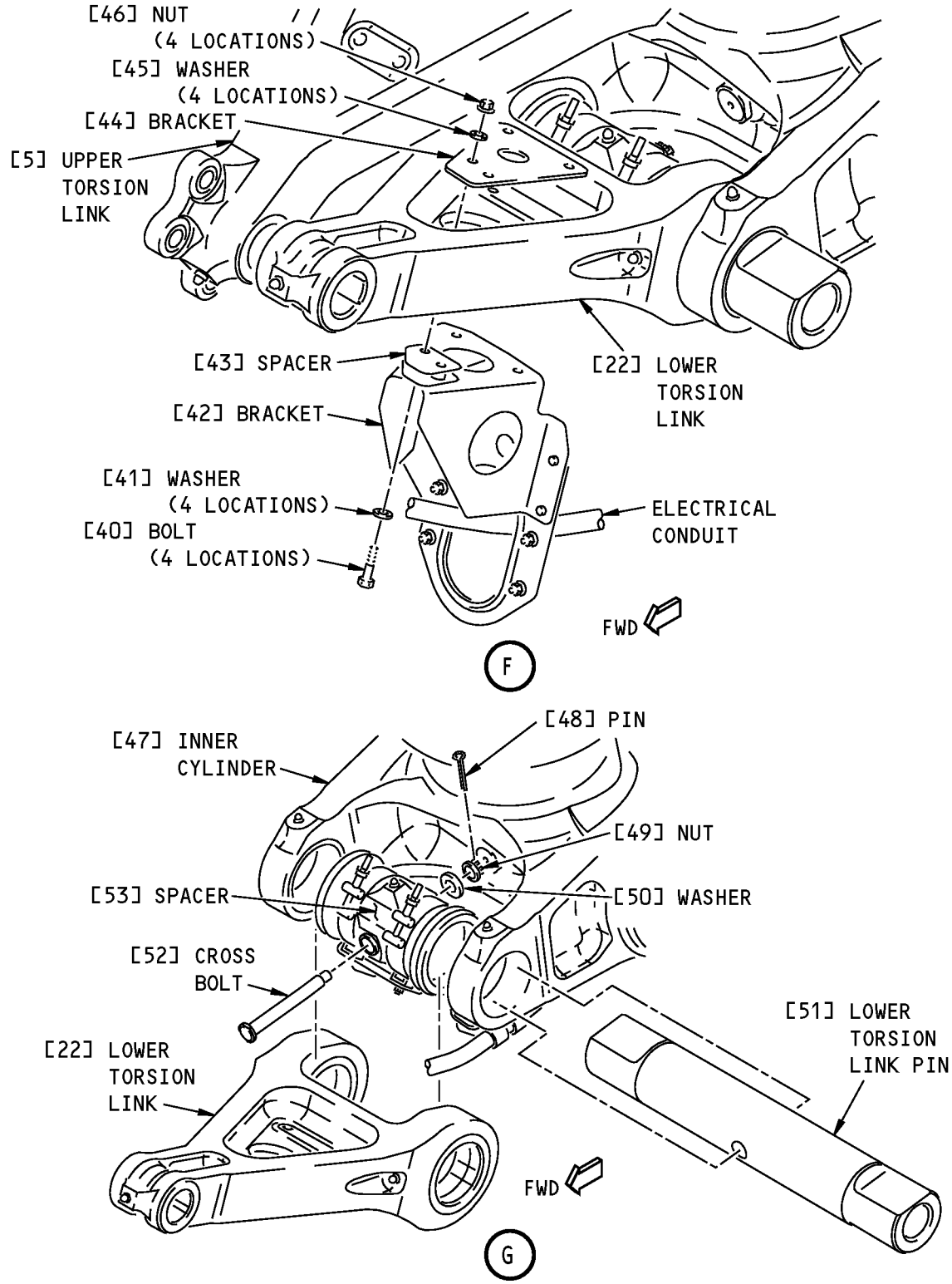
Main Landing Gear Torsion Link Installation
Figure 401 (Sheet 2 of 4)/32-11-51-990-803

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Main Landing Gear Torsion Link Installation
Figure 401 (Sheet 3 of 4)/32-11-51-990-803

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Main Landing Gear Torsion Link Installation
Figure 401 (Sheet 4 of 4)/32-11-51-990-803

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TASK 32-11-51-000-802

3. Main Landing Gear Lower Torsion Link Removal

(Figure 401)

A. General

(1) This task provides instructions to remove the lower torsion link.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-11-81-000-801	Main Landing Gear Shimmy Damper Removal (P/B 401)
32-41-41-000-801	Main Landing Gear Brake Removal (P/B 401)

C. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Removal

SUBTASK 32-11-51-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-51-020-015

(2) Do this task: Main Landing Gear Shimmy Damper Removal, TASK 32-11-81-000-801.

SUBTASK 32-11-51-020-006

(3) Do this task: Main Landing Gear Brake Removal, TASK 32-41-41-000-801.

NOTE: This procedure will also remove the wheel and tire assemblies.

E. Main Landing Gear Lower Torsion Link Removal

SUBTASK 32-11-51-020-007

(1) Remove the brackets [42] and [44] from the lower torsion link assembly [22]:

NOTE: Remove the bracket [42] with the electrical conduit attached.

(a) Remove the nuts [46], and the washers [45] from the bolts [40].

(b) Remove the bolts [40] to disconnect the brackets [42], and [44] from the lower torsion link assembly [22].

(c) Remove the washers [41] from the bolts [40].

(d) Remove the bracket [44] and the spacer [43] from the lower torsion link assembly [22].

(e) Isolate the bracket [42] from the lower torsion link assembly [22].

SUBTASK 32-11-51-480-004

(2) Use a rope to hold the forward side of the upper torsion link assembly [5] to the outer cylinder [33].

NOTE: This step will hold the upper torsion link assembly [5] in its position when you do the subsequent steps.

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SUBTASK 32-11-51-420-002

(3) Disconnect the upper torsion link assembly [5] and the lower torsion link assembly [22]:

(a) Remove the cotter pin [26], nut [27], and the washer [25] from the bolt [23].

(b) Remove the bolt [23] from the apex pin [31].

(c) Remove the apex nut [24] from the apex pin [31].

(d) Remove the bracket [28] and the washer [29] and the tapered sleeve [54] from the apex pin [31].

(e) Isolate the bracket [28] from the apex joint.

NOTE: Isolate the bracket [28] with the electrical conduit and the clamps attached.

(f) Remove the apex pin [31] to disconnect the upper torsion link assembly [5] from the lower torsion link assembly [22].

(g) Remove the spacer [30] between the upper torsion link assembly [5] and the lower torsion link assembly [22].

SUBTASK 32-11-51-020-008

(4) Disconnect the lower torsion link assembly [22] from the inner cylinder [47]:

(a) Remove the cotter pin [48], nut [49], and washer [50] from the cross bolt [52].

(b) Remove the cross bolt [52] that holds the lower torsion link pin [51] to the spacer [53].

(c) Hold the lower torsion link assembly [22] and remove the lower torsion link pin [51] to disconnect the lower torsion link assembly [22] from the inner cylinder [47].

SUBTASK 32-11-51-480-005

(5) Use a rope to hold the spacer [53] to the inner cylinder [47].

NOTE: This step will hold the spacer [53] in its position when you remove and install the lower torsion link assembly [22] in the subsequent steps.

END OF TASK

TASK 32-11-51-020-801

4. Main Landing Gear Torsion Link Disconnection

(Figure 401)

A. General

(1) This task provides instructions to disconnect the torsion links.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-11-81-000-801	Main Landing Gear Shimmy Damper Removal (P/B 401)

C. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

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D. Prepare for Disconnection

SUBTASK 32-11-51-480-006

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-51-020-016

(2) Do this task: Main Landing Gear Shimmy Damper Removal, TASK 32-11-81-000-801.

E. Main Landing Gear Torsion Link Disconnection

SUBTASK 32-11-51-420-003

(1) Disconnect the upper torsion link assembly [5] and the lower torsion link assembly [22]:

(a) Remove the cotter pin [26], nut [27], and the washer [25] from the bolt [23].

(b) Remove the bolt [23] from the apex pin [31].

(c) Remove the apex nut [24] from the apex pin [31].

(d) Remove the bracket [28] and the washer [29] and the tapered sleeve [54] from the apex pin [31].

(e) Isolate the bracket [28] from the apex joint.

NOTE: Isolate the bracket [28] with the electrical conduit and the clamps attached.

(f) Remove the apex pin [31] to disconnect the upper torsion link assembly [5] from the lower torsion link assembly [22].

(g) Remove the spacer [30] between the upper torsion link assembly [5] and the lower torsion link assembly [22].

———————— END OF TASK ————————

TASK 32-11-51-400-801

5. Main Landing Gear Upper Torsion Link Installation

(Figure 401)

A. General

(1) This task provides instructions to install the upper torsion link.

B. References

Reference	Title
12-21-11-640-802	Main Landing Gear Lower End Components Servicing (P/B 301)
32-11-81-400-801	Main Landing Gear Shimmy Damper Installation (P/B 401)
32-45-11-400-801	Main Landing Gear Wheel and Tire Assembly Installation (P/B 401)

C. Consumable Materials

Reference	Description	Specification
A00226	Compound - Tamper-Proof Putty	BMS8-45
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27

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(Continued)

Reference	Description	Specification
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00633	Grease - Aircraft General Purpose	BMS3-33

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
5	Link assembly	32-11-51-04-225	HAP 001-013, 015-026, 028-030
		32-11-51-04A-110	HAP 031-054, 101-999
26	Pin	32-11-00-01-210	HAP 001-013, 015-026, 028-030
		32-11-51-04A-015	HAP 031-054, 101-999
		32-11-81-01-020	HAP 012, 013, 015-026, 028-054, 101-999
38	Pin	32-11-51-04-015	HAP 001-013, 015-026, 028-030
		32-11-51-04A-010	HAP 031-054, 101-999

E. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

F. Main Landing Gear Upper Torsion Link Installation

SUBTASK 32-11-51-620-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(1) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate), to these items:

(a) The face common to spacer [30] on the upper torsion link [5];

(b) The threads, thread reliefs and faces of bolt [23], washer [25] and nut [27];

(c) The pin shank, threads, thread reliefs and faces of the apex pin [31], washer [29]and apex nut [24];

(d) The inside diameter of spacer [30] and tapered sleeve [54];

(e) The faces, threads and thread reliefs of washer [34], nut [36], bolt [35], washer [37] and nut [39];

(f) The cotter pin [26] and cotter pin [38].

SUBTASK 32-11-51-160-001

(2) Remove any excess corrosion preventive compound, C00913.

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SUBTASK 32-11-51-640-001

(3) Apply the lubricant grease, D00633 to the following parts and areas:

(a) Apply to the outside diameter of the tapered sleeve [54] and the upper torsion link pin [32];

SUBTASK 32-11-51-160-002

(4) Remove all unwanted grease, D00633.

SUBTASK 32-11-51-420-004

(5) Connect the upper torsion link assembly [5] to the outer cylinder [33]:

(a) Put the upper torsion link assembly [5] in its position on the clevis of the outer cylinder [33].

(b) Put the upper torsion link pin [32] through the upper torsion link assembly [5] and the clevis of the outer cylinder [33].

(c) Install the washer [34] and the nut [36] on the upper torsion link pin [32].

(d) Tighten the nut [36] to 95 ft-lb (129 N·m) – 115 ft-lb (156 N·m).

(e) If it is necessary, loosen the nut [36] to the nearest castellation to align the holes for the bolt [35].

(f) Install the bolt [35] in the upper torsion link pin [32].

(g) Install the washer [37] and the nut [39] on the bolt [35].

(h) Install the cotter pin [38] in the bolt [35]. If it is necessary, loosen the nut [39] to the nearest castellation to align the hole for the cotter pin [38].

(i) Apply the compound, A00226, to the nut [39] such that any tampering must cause the seal to break.

SUBTASK 32-11-51-080-001

(6) Remove the rope that holds the lower torsion link assembly [22] in its position to the outer cylinder [33].

SUBTASK 32-11-51-420-005

(7) Connect the upper torsion link assembly [5] and the lower torsion link assembly [22]:

(a) Align the apex holes in the upper torsion link assembly [5] and the lower torsion link assembly [22].

(b) Put the spacer [30] in its position between the upper torsion link assembly [5] and the lower torsion link assembly [22].

(c) Put the apex pin [31] through the upper torsion link assembly [5], spacer [30], and the lower torsion link assembly [22].

CAUTION: MAKE SURE THAT YOU INSTALL THE SLEEVES IN THE CORRECT LOCATIONS. IF YOU INSTALL THE SLEEVES IN THE INCORRECT LOCATIONS, VIBRATION CAN CAUSE DAMAGE TO COMPONENTS OF LANDING GEAR.

(d) Install the tapered sleeve [54] in the lower torsion link assembly [22], the washer [29], and the bracket [28] on the apex pin [31].

NOTE: There may be a gap between the torsion link and the apex joint. This condition is part of a normal shimmy damper installation.

NOTE: The shimmy damper installation has a straight sleeve and a tapered sleeve. The straight sleeve is longer than the tapered sleeve.

(e) Install the apex nut [24] on the apex pin [31].

(f) Tighten the apex nut [24] to 50 ft-lb (67.8 N·m) – 58 ft-lb (78.6 N·m).

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1) Advance the apex nut [24] to the nearest castellation that aligns with the hole in the apex pin [31]. The final torque must not be more than 150 pound-feet (202.5 Newton-meters).

(g) Install the retention bolt [23] through the apex nut [24] and the apex pin [31].

(h) Install the washer [25] and the nut [27] on the bolt [23].

(i) Install the cotter pin [26] in the bolt [23]. If it is necessary, loosen the nut [27] to the nearest castellation to align the hole for the cotter pin [26].

(j) Apply the compound, A00226, to the nut [27] such that any tampering must cause the seal to break.

SUBTASK 32-11-51-420-006

(8) Connect the hose guide bracket [12] to the upper torsion link assembly [5]:

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(a) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) to the bolt [18], washers [16] and [17], and nut [15].

(b) Install the washer [17] on the bolt [18].

(c) Put the hose guide bracket [12] in its position below the upper torsion link assembly [5].

(d) Put the spacer [11] in its position between the hose guide bracket [12], and the upper torsion link assembly [5].

(e) Put the bolt [18] through the upper torsion link assembly [5], spacer [11], and the hose guide bracket [12].

NOTE: This step will connect one side of the hose guide bracket [12] to the upper torsion link assembly [5].

(f) Install the washer [16] and the nut [15] on the bolt [18].

SUBTASK 32-11-51-420-007

(9) Connect the bracket [19] to the upper torsion link assembly [5]:

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(a) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) to the bolts [7] and [21], washers [8], [9], [13] and [20], and nuts [10] and [14].

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(b) Install the washers [8] on the bolts [7].

(c) Put the bracket [19] in its position on the upper torsion link assembly [5].

(d) Put the bolt [7] through the bracket [19], and the upper torsion link assembly [5].

NOTE: This step will connect the aft side of the bracket [19] to the upper torsion link assembly [5].

(e) Install the washers [9] and the nuts [10] on the bolts [7].

(f) Install the washer [20] on the bolt [21].

(g) Put the bolt [21] through the bracket [19], upper torsion link assembly [5], spacer [11], and the hose guide bracket [12].

(h) Install the washer [13], and the nut [14] on the bolt [21].

SUBTASK 32-11-51-390-001

(10) Fay seal the spacer [11] with sealant, A00247.

SUBTASK 32-11-51-420-008

(11) Connect the support bracket [4] to the upper torsion link assembly [5]:

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(a) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) to the bolts [1], nuts [2], and washers [3] and [6]

(b) Install the washers [6] on the bolts [1].

(c) Put the bolts [1] through the upper torsion link assembly [5], and the support bracket [4].

(d) Install the washers [3] and the nuts [2] on the bolts [1].

SUBTASK 32-11-51-420-018

(12) Do this task: Main Landing Gear Shimmy Damper Installation, TASK 32-11-81-400-801.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 32-11-51-640-002

(1) For the grease fittings on the upper torsion link assembly [5], and the lower torsion link assembly [22], do this task Main Landing Gear Lower End Components Servicing, TASK 12-21-11-640-802.

SUBTASK 32-11-51-420-009

(2) Install the left hand inboard or the right hand outboard tire of the main landing gear. To install it, do this task: Main Landing Gear Wheel and Tire Assembly Installation, TASK 32-45-11-400-801.

END OF TASK

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TASK 32-11-51-400-802

6. Main Landing Gear Lower Torsion Link Installation

(Figure 401)

A. General

(1) This task provides instructions to install the lower torsion link.

B. References

Reference	Title
12-21-11-640-802	Main Landing Gear Lower End Components Servicing (P/B 301)
32-11-81-400-801	Main Landing Gear Shimmy Damper Installation (P/B 401)
32-41-41-400-801	Main Landing Gear Brake Installation (P/B 401)

C. Consumable Materials

Reference	Description	Specification
A00226	Compound - Tamper-Proof Putty	BMS8-45
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00633	Grease - Aircraft General Purpose	BMS3-33

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
22	Link assembly	32-11-51-04-230	HAP 001-013, 015-026, 028-030
		32-11-51-04A-115	HAP 031-054, 101-999
26	Pin	32-11-00-01-210	HAP 001-013, 015-026, 028-030
		32-11-51-04A-015	HAP 031-054, 101-999
		32-11-81-01-020	HAP 012, 013, 015-026, 028-054, 101-999
48	Pin	32-11-51-04-025	HAP 001-013, 015-026, 028-030
		32-11-51-04A-015	HAP 031-054, 101-999

E. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

F. Main Landing Gear Lower Torsion Link Installation

SUBTASK 32-11-51-620-002

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

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(WARNING PRECEDES)

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(1) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

(a) The threads of the bolts [23]

(b) The threads of the apex nut [24] and the nuts [27] and [49]

(c) The faces of the washers [25], tapered sleeve [54], [29], and [50]

(d) The cotter pin [26].

SUBTASK 32-11-51-160-003

(2) Remove any excess corrosion preventive, compound, C00913.

SUBTASK 32-11-51-640-003

(3) Lubricate the chrome plated surfaces of the apex pin [31], lower torsion link pin [51] and cross bolt [52] with grease, D00633.

SUBTASK 32-11-51-160-004

(4) Remove all unwanted grease, D00633.

SUBTASK 32-11-51-080-002

(5) Remove the rope that holds the spacer [53] to the inner cylinder [47].

SUBTASK 32-11-51-420-010

(6) Connect the lower torsion link assembly [22] to the inner cylinder [47]:

(a) Put the lower torsion link assembly [22] in its position on the inner cylinder [47].

(b) Put the lower torsion link pin [51] through the clevis on the inner cylinder [47] and the spacer [53].

(c) Align the hole in the lower torsion link pin [51] with hole in the spacer [53] for the installation of the cross bolt [52].

(d) Put the cross bolt [52] through the spacer [53] and the lower torsion link pin [51].

(e) Install the washer [50] and the nut [49] on the cross bolt [52].

(f) Tighten the nut [49] to 160 in-lb (18 N·m) – 190 in-lb (21 N·m).

(g) Install the cotter pin [48] in the cross bolt [52]. If it is necessary, loosen the nut [49] to the nearest castellation to align the hole for the cotter pin [48].

SUBTASK 32-11-51-080-003

(7) Remove the rope that holds the upper torsion link assembly [5] to the outer cylinder [33].

SUBTASK 32-11-51-420-011

(8) Connect the upper torsion link assembly [5] and the lower torsion link assembly [22]:

(a) Align the apex holes in the upper torsion link assembly [5] and the lower torsion link assembly [22].

(b) Put the spacer [30] in its position between the upper torsion link assembly [5] and the lower torsion link assembly [22].

(c) Put the apex pin [31] through the upper torsion link assembly [5], spacer [30], and the lower torsion link assembly [22].

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CAUTION: MAKE SURE THAT YOU INSTALL THE SLEEVES IN THE CORRECT LOCATIONS. IF YOU INSTALL THE SLEEVES IN THE INCORRECT LOCATIONS, VIBRATION CAN CAUSE DAMAGE TO COMPONENTS OF LANDING GEAR.

(d) Install the tapered sleeve [54] in the lower torsion link assembly [22], washer [29], bracket [28] and apex nut [24] on the apex pin [31].

NOTE: There may be a gap between the torsion link and the apex joint. This condition is part of a normal shimmy damper installation.

NOTE: The shimmy damper installation has a straight sleeve and a tapered sleeve. The straight sleeve is longer than the tapered sleeve.

(e) Tighten the apex nut [24] to 50-58 pound-feet (67.5-78.3 Newton-meters).

1) Advance the apex nut [24] to the nearest castellation that aligns with the hole in the apex pin [31]. The final torque must not be more than 150 pound-feet (202.5 Newton-meters)

(f) Install the retention bolt [23] through the apex nut [24] and the apex pin [31].

(g) Install the washer [25] and the nut [27] on the bolt [23].

(h) Install the cotter pin [26] in the bolt [23]. If it is necessary, loosen the nut [27] to the nearest castellation to align the hole for the cotter pin [26].

(i) Apply the compound, A00226, to the nut [27] such that tampering must cause the seal to break.

SUBTASK 32-11-51-420-020

(9) Do this task: Main Landing Gear Shimmy Damper Installation, TASK 32-11-81-400-801.

SUBTASK 32-11-51-420-012

(10) Connect the brackets [42] and [44] to the lower torsion link assembly [22]:

(a) Put brackets [42] and [44], and the spacer [43] in their position on the lower torsion link assembly [22]

(b) Install the washers [41] on the bolts [40].

(c) Put the bolts [40] through the bracket [42], spacer [43], lower torsion link assembly [22] and the bracket [44].

(d) Install the washers [45] and the nuts [46] on the bolts [40].

SUBTASK 32-11-51-420-023

(11) Do this task: Main Landing Gear Brake Installation, TASK 32-41-41-400-801

G. Put the Airplane Back to Its Usual Condition

SUBTASK 32-11-51-640-004

(1) For the grease fittings on the upper torsion link assembly [5], and the lower torsion link assembly [22], do this task, Main Landing Gear Lower End Components Servicing, TASK 12-21-11-640-802.

——————— END OF TASK ———————

TASK 32-11-51-400-803

7. Main Landing Gear Torsion Link Connection

(Figure 401)

A. General

(1) This task provides instructions to connect the torsion links.

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B. References

Reference	Title
12-21-11-640-802	Main Landing Gear Lower End Components Servicing (P/B 301)
32-11-81-400-801	Main Landing Gear Shimmy Damper Installation (P/B 401)

C. Consumable Materials

Reference	Description	Specification
A00226	Compound - Tamper-Proof Putty	BMS8-45
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00633	Grease - Aircraft General Purpose	BMS3-33

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
26	Pin	32-11-00-01-210	HAP 001-013, 015-026, 028-030
		32-11-51-04A-015	HAP 031-054, 101-999
		32-11-81-01-020	HAP 012, 013, 015-026, 028-054, 101-999

E. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

F. Main Landing Gear Torsion Link Connection

SUBTASK 32-11-51-620-003

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(1) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

(a) The threads of the bolts [23]

(b) The threads of the apex nut [24] and the nut [27]

(c) The faces of the tapered sleeve [54] and the washers [25] and [29]

(d) The cotter pin [26].

SUBTASK 32-11-51-160-005

(2) Remove any excess corrosion preventive compound, C00913.

SUBTASK 32-11-51-640-006

(3) Lubricate the chrome plated surfaces of the apex pin [31] with grease, D00633.

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SUBTASK 32-11-51-160-006

(4) Remove all unwanted grease, D00633.

SUBTASK 32-11-51-420-022

(5) Do this task: Main Landing Gear Shimmy Damper Installation, TASK 32-11-81-400-801.

SUBTASK 32-11-51-420-013

(6) Connect the upper torsion link assembly [5], and the lower torsion link assembly [22]:

(a) Align the apex holes in the upper torsion link assembly [5] and the lower torsion link assembly [22].

(b) Put the spacer [30] in its position between the upper torsion link assembly [5], and the lower torsion link assembly [22].

(c) Put the apex pin [31] through the upper torsion link assembly [5], spacer [30], and the lower torsion link assembly [22].

CAUTION: MAKE SURE THAT YOU INSTALL THE SLEEVES IN THE CORRECT LOCATIONS. IF YOU INSTALL THE SLEEVES IN THE INCORRECT LOCATIONS, VIBRATION CAN CAUSE DAMAGE TO COMPONENTS OF LANDING GEAR.

(d) Install the tapered sleeve [54], washer [29], bracket [28] and the apex nut [24] on the apex pin [31].

NOTE: There may be a gap between the torsion link and the apex joint. This condition is part of the normal shimmy damper installation.

NOTE: The shimmy damper installation has a straight sleeve and a tapered sleeve. The straight sleeve is longer than the tapered sleeve.

(e) Tighten the apex nut [24] to 50 ft-lb (68 N·m) to 58 ft-lb (79 N·m).

1) Advance the apex nut [24] to the nearest castellation that aligns with the hole in the apex pin [31]. The final torque must not be more than 150 ft-lb (203 N·m).

(f) Install the retention bolt [23] through the apex nut [24] and the apex pin [31].

(g) Install the washer [25], and the nut [27] on the bolt [23].

(h) Install the cotter pin [26] in the bolt [23]. If it is necessary, loosen the nut [27] to the nearest castellation to align the hole for the cotter pin [26].

(i) Apply the compound, A00226, to the nut [27] such that any tampering must cause the seal to break.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 32-11-51-640-005

(1) For the grease fittings on the upper torsion link assembly [5], and the lower torsion link assembly [22], do this task, Main Landing Gear Lower End Components Servicing, TASK 12-21-11-640-802.

END OF TASK

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MAIN LANDING GEAR TORSION LINKS - INSPECTION/CHECK

1. General

A. This task supplies the data for a dimensional inspection of the torsion links for the main landing gear.

B. This task does not remove or install the torsion links. Refer to the Main Landing Gear Torsion Links - Removal/Installation for procedures to remove and install the torsion links of the main landing gear.

TASK 32-11-51-200-801

2. Main Landing Gear Torsion Links Inspection

(Figure 601)

A. General

(1) This procedure gives wear limits and repair data for the torsion links on the main landing gear.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-11-51-000-801	Main Landing Gear Upper Torsion Link Removal (P/B 401)
32-11-51-000-802	Main Landing Gear Lower Torsion Link Removal (P/B 401)
32-11-51-400-801	Main Landing Gear Upper Torsion Link Installation (P/B 401)
32-11-51-400-802	Main Landing Gear Lower Torsion Link Installation (P/B 401)

C. Tools/Equipment

Reference	Description
STD-1096	Micrometer - Depth, 0-1 Inch, Readable to 1/1000 Inch
STD-1097	Caliper - Vernier, 0-6 Inch, Readable to 1/1000 Inch

D. Location Zones

Zone	Area
713	Nose Landing Gear

E. Procedure

SUBTASK 32-11-51-480-007

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-51-020-010

(2) To remove or to get access to the torsion links of the main landing gear do the tasks that follows Figure 601:

(a) Do this task: Main Landing Gear Upper Torsion Link Removal, TASK 32-11-51-000-801.

(b) Do this task: Main Landing Gear Lower Torsion Link Removal, TASK 32-11-51-000-802.

SUBTASK 32-11-51-020-011

(3) Use these tools to check for wear on the parts of the main landing gear torsion links:

(a) micrometer (0-1 Inch, readable to 1/1000 Inch), STD-1096

(b) readable to 1/1000 inch vernier 0 - 6 inch caliper, STD-1097

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SUBTASK 32-11-51-020-012

(4) Examine the parts of the main landing gear torsion links for worn areas:

(a) Remove the parts to be checked.

(b) Measure the parts as necessary with a micrometer (0-1 Inch, readable to 1/1000 Inch), STD-1096 or a readable to 1/1000 inch vernier 0 - 6 inch caliper, STD-1097.

(c) Compare the dimensions you measured with the permitted wear dimensions in (Table 601).

(d) If the parts are not in the tolerance, replace or repair the part as shown in (Table 601).

Table 601/32-11-51-993-803 Wear Limits

NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MAXIMUM SERVICE DIAMETRIC CLEARANCE
#1 BUSHING	I.D.	1.8764 in (47.660) mm	1.8779 in (47.698) mm	1.8816 in (47.792) mm	0.007 in (0.177) mm
#1 PIN	O.D.	1.8730 in (47.574) mm	1.8740 in (47.599) mm	1.8703 in (47.505) mm	
#2 BUSHING	I.D.	1.8758 in (47.645) mm	1.8773 in (47.683) mm	1.8810 in (47.777) mm	0.007 in (0.177) mm
#2 PIN	O.D.	1.8730 in (47.574) mm	1.8740 in (47.599) mm	1.8703 in (47.505) mm	
#3 BUSHING	I.D.	1.3760 in (34.950) mm	1.3772 in (34.980) mm	1.3810 in (35.077) mm	0.007 in (0.177) mm
#3 PIN	O.D.	1.3725 in (34.861) mm	1.3740 in (34.899) mm	1.3702 in (34.803) mm	
#4 BUSHING	I.D	1.3760 in (34.950) mm	1.3772 in (34.980) mm	1.3810 in (35.077) mm	0.007 in (0.177) mm
#4 PIN	O.D.	1.3725 in (34.861) mm	1.3740 in (34.899) mm	1.3702 in (34.803) mm	
#5 BUSHING	I.D.	1.3760 in (34.950) mm	1.3772 in (34.980) mm	1.3815 in (35.090) mm	0.007 in (0.177) mm
#5 SLEEVE	O.D.	1.3720 in	1.3740 in	1.3697 in	

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(Continued)

NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MAXIMUM SERVICE DIAMETRIC CLEARANCE
		(34.848) mm	(34.899) mm	(34.790) mm	
#6 BUSHING	I.D	1.3760 in (34.950) mm	1.3772 in (34.980) mm	1.3815 in (35.090) mm	0.008 in (0.203) mm
#6 SLEEVE	O.D.	1.3710 in (34.823) mm	1.3730 in (34.874) mm	1.3687 in (34.764) mm	
#7 BUSHING	I.D.	2.5009 in (63.522) mm	2.5024 in (63.560) mm	2.5071 in (63.680) mm	0.008 in (0.203) mm
#7 PIN	O.D.	2.4975 in (63.436) mm	2.4990 in (63.474) mm	2.4943 in (63.355) mm	
#8 BUSHING	I.D.	2.5018 in (63.545) mm	2.5033 in (63.583) mm	2.5080 in (63.703) mm	0.009 in (0.228) mm
#8 PIN	O.D.	2.4975 in (63.436) mm	2.4990 in (63.474) mm	2.4943 in (63.355) mm	
#9 BUSHING	I.D.	2.5016 in (63.540) mm	2.5031 in (63.578) mm	2.5078 in (63.698) mm	0.008 in (0.203) mm
#9 PIN	O.D.	2.4975 in (63.436) mm	2.4990 in (63.474) mm	2.4943 in (63.355) mm	

SUBTASK 32-11-51-020-013

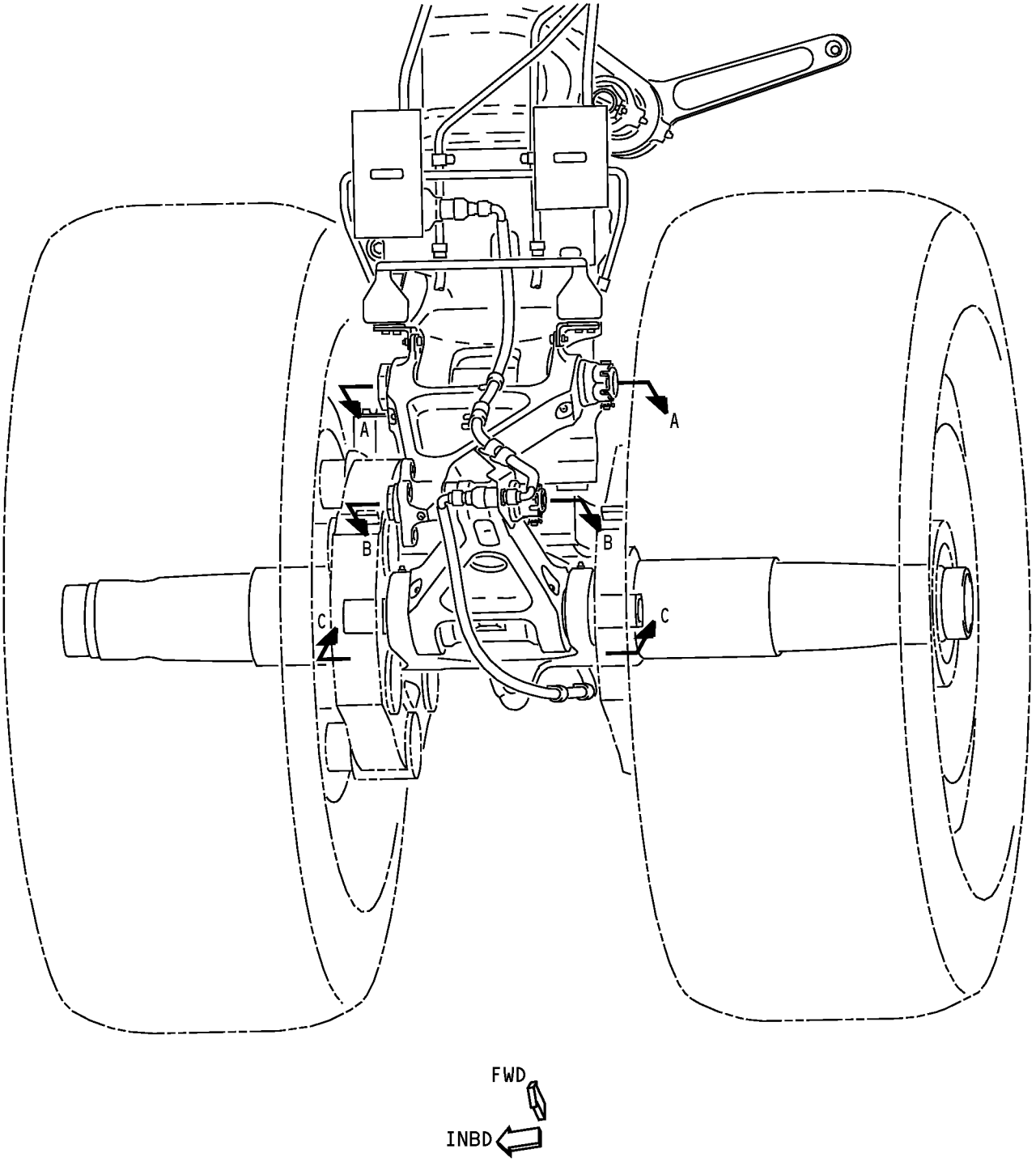
(5) To install the torsion links or parts for the main landing gear do the task that follows:

(a) Do this task: Main Landing Gear Upper Torsion Link Installation, TASK 32-11-51-400-801.

(b) Do this task: Main Landing Gear Lower Torsion Link Installation, TASK 32-11-51-400-802.

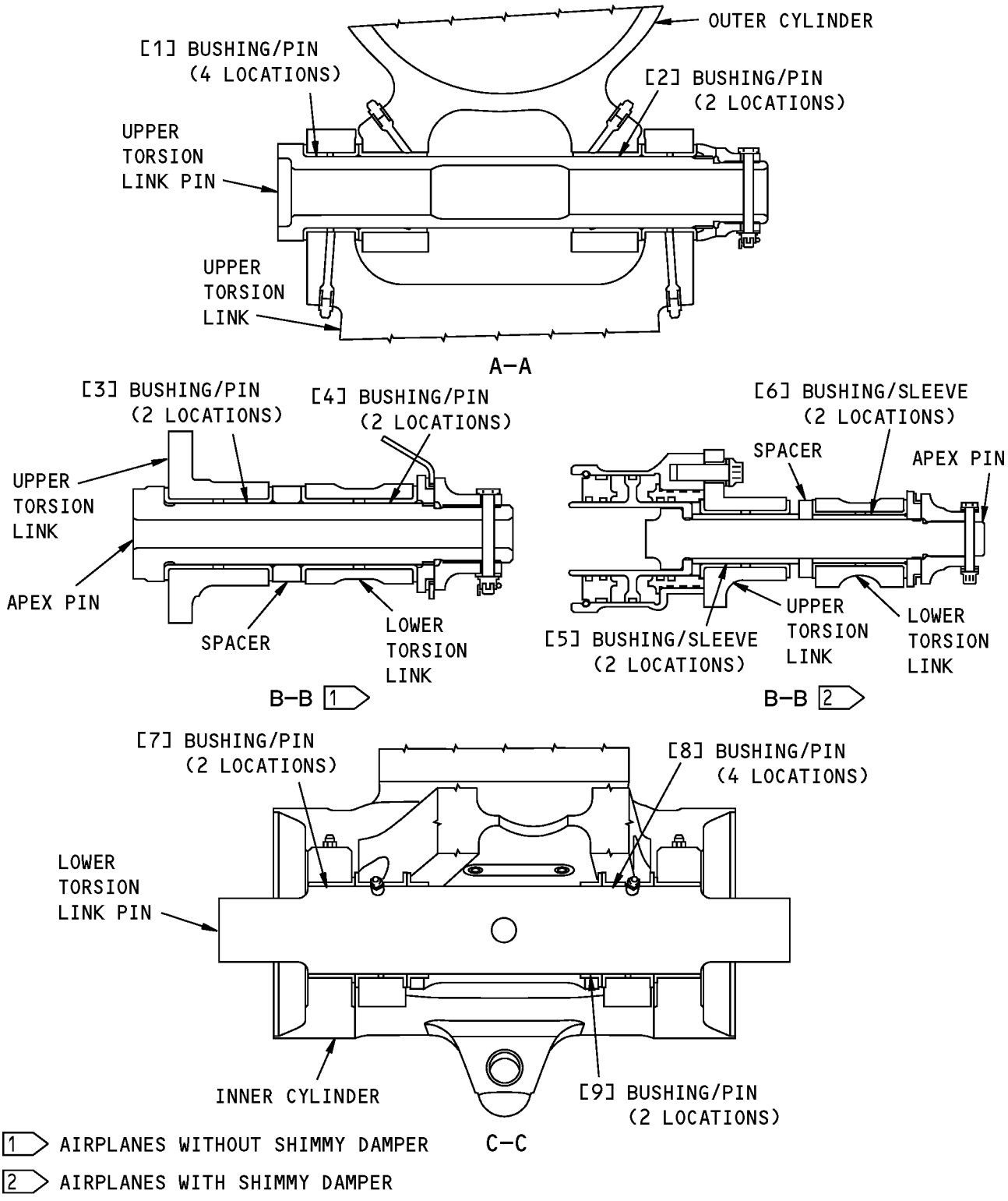
END OF TASK

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Main Landing Gear Torsion Wear Limits
Figure 601 (Sheet 1 of 2)/32-11-51-990-802

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Main Landing Gear Torsion Wear Limits
Figure 601 (Sheet 2 of 2)/32-11-51-990-802

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MAIN LANDING GEAR SIDE STRUT ASSEMBLY - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) A removal of the upper side strut for the main landing gear

(2) An installation of the upper side strut for the main landing gear.

(3) A removal of the lower side strut from the main landing gear

(4) An installation of the lower side strut on the main landing gear.

(5) A removal of the side strut from the main landing gear

(6) An installation of the side strut on the main landing gear.

C. The lower side strut and the upper side strut are referred to as the "side strut" in this procedure.

TASK 32-11-61-000-801

2. Main Landing Gear Upper Side Strut Removal

(Figure 401)

A. General

(1) This procedure supplies instructions to remove the upper side strut.

B. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-32-91-000-801	Main Gear Downlock Springs Removal (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1359	Assembly - Wrench Adapter (C32029-3, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1367	Driver - Slug (C32029-11, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1368	Protector - Thread (C32029-12, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1369	Protector - Thread (C32029-13, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

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D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

E. Prepare for the Removal

SUBTASK 32-11-61-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR, BUT THE ONE TO BE WORKED ON. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-61-580-004

(2) Do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-11-61-860-001

(3) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-11-61-020-001

(4) Do this task: Main Gear Downlock Springs Removal, TASK 32-32-91-000-801.

F. Main Landing Gear Upper Side Strut Removal

SUBTASK 32-11-61-020-002

(1) Disconnect the upper side strut assembly [3] from the downlock strut [1]:

(a) Remove the pin [6] from the downlock link pin [2].

(b) Remove the nut [5], and the washer [4] from the downlock link pin [2].

(c) Remove the downlock link pin [2] to disconnect the upper side strut assembly [3] from the downlock strut [1].

NOTE: Use the thread protector, SPL-1369, for the downlock link pin [2] when you do this step.

SUBTASK 32-11-61-020-003

(2) Disconnect the upper side strut assembly [3] from the lower side strut assembly, lower [8]]:

(a) Remove the cotter pin [13], nut [14], and washer [12] from the bolt [11].

(b) Remove the bolt [11] from the side strut pin [7].

(c) Use a rope to support the upper end of the lower side strut assembly, lower [8] and attach the rope to the outboard side of the reaction link assembly [15].

NOTE: The lower side strut weighs approximately 48.3 lb (21.91 kg).

(d) Remove the end cap [9] from the side strut pin [7].

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(e) Remove the side strut pin [7] to disconnect the upper side strut assembly [3] from the lower side strut assembly, lower [8].

NOTE: Use the slug slug driver, SPL-1367, for the side strut pin [7] when you do this step.

SUBTASK 32-11-61-020-004

(3) Disconnect the upper side strut assembly [3] from the reaction link assembly [15]:

(a) Remove the pin [19], nut [18], and washer [17] from cross bolt [16].

(b) Remove the cross bolt [16] from the side strut pin [22].

(c) Remove the side strut nut [20], and the side strut washer [21] from the side strut pin [22].

NOTE: Use wrench adapter assembly, SPL-1359, to hold the head of the side strut pin [22] when you loosen the side strut nut [20].

(d) Remove the side strut pin [22] that holds the upper side strut assembly [3] to the reaction link assembly [15].

NOTE: Use the thread protector, SPL-1368, for the side strut pin [22] when you do this step.

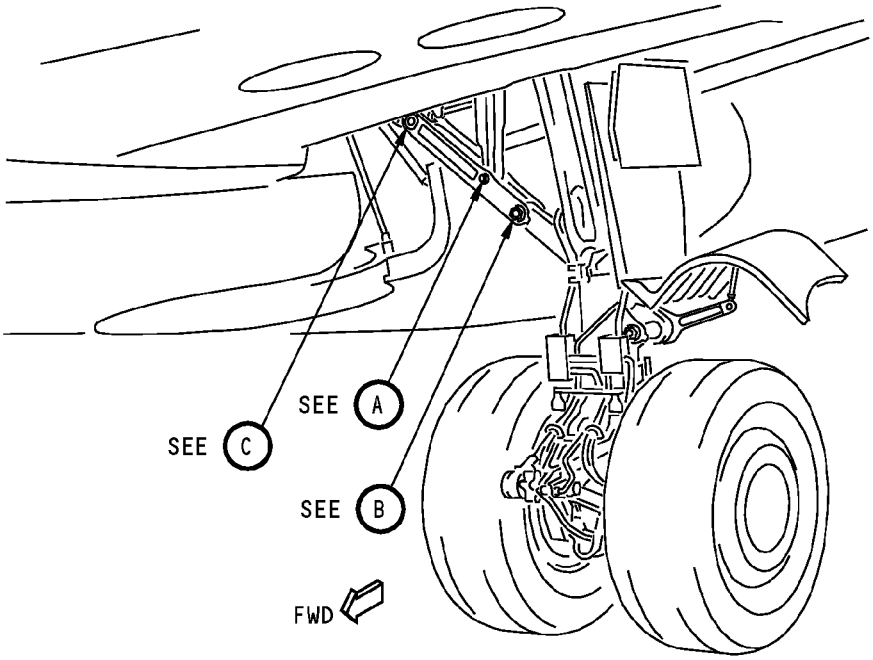
SUBTASK 32-11-61-020-005

(4) Lower the upper side strut assembly [3] carefully and remove it from the airplane.

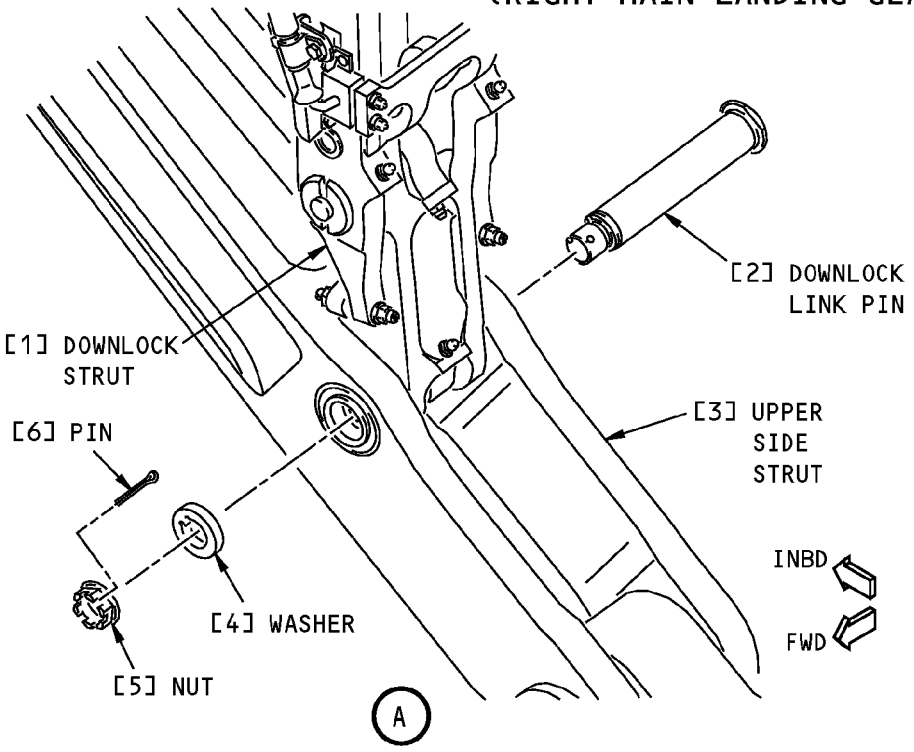
NOTE: Make sure the upper side strut is supported carefully when you lower it. The upper side strut weighs approximately 42.8 lb (19.41 kg).

——————— END OF TASK ———————

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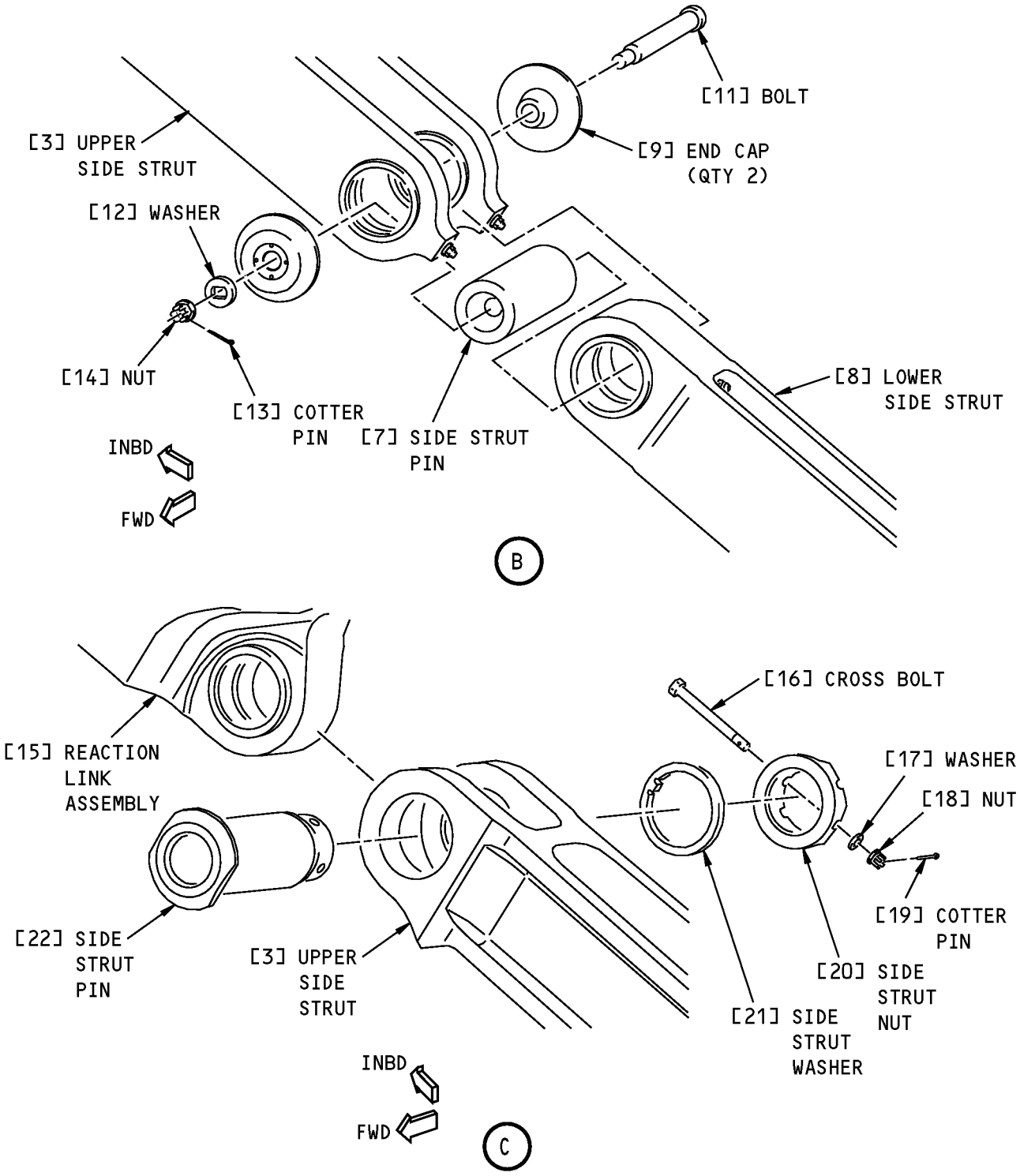


LEFT MAIN LANDING GEAR
(RIGHT MAIN LANDING GEAR IS EQUIVALENT)



Main Landing Gear Upper Side Strut Installation
Figure 401 (Sheet 1 of 2)/32-11-61-990-801

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Main Landing Gear Upper Side Strut Installation
Figure 401 (Sheet 2 of 2)/32-11-61-990-801

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TASK 32-11-61-400-801

3. Main Landing Gear Upper Side Strut Installation

(Figure 401)

A. General

(1) This procedure supplies instructions to install the upper side strut.

B. References

Reference	Title
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
12-21-11-640-801	Main Landing Gear Upper End Components Servicing (P/B 301)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-32-00-710-801	Main Landing Gear Operational Test (P/B 501)
32-32-91-400-801	Main Gear Downlock Spring Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1359	Assembly - Wrench Adapter (C32029-3, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1368	Protector - Thread (C32029-12, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1369	Protector - Thread (C32029-13, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00633	Grease - Aircraft General Purpose	BMS3-33

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	Strut assembly	32-11-61-01-480	HAP ALL

F. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
713	Nose Landing Gear
734	Left Main Landing Gear

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(Continued)

Zone	Area
744	Right Main Landing Gear

G. Prepare for the Installation

SUBTASK 32-11-61-480-002

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR, BUT THE ONE TO BE WORKED ON. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801

H. Main Landing Gear Upper Side Strut Installation

SUBTASK 32-11-61-420-001

(1) Connect the upper side strut assembly [3] to the reaction link assembly [15]:

(a) Lubricate the chrome plated surfaces of the side strut pin [22] with grease, D00633.

(b) Remove all unwanted grease, D00633.

(c) Put the upper side strut assembly [3] in its position for connection to the reaction link assembly [15].

(d) Put the side strut pin [22] through the upper side strut assembly [3] and the reaction link assembly [15].

NOTE: Use the thread protector, SPL-1368, for the side strut pin [22] when you do this step.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(e) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces.

1) The threads and thread reliefs of the side strut pin [22], and the cross bolt [16]

2) The threads of the side strut nut [20], and the nut [18]

3) The faces of the side strut washer [21], and the washer [17].

(f) Remove all unwanted corrosion preventive compound, C00913.

(g) Install the side strut washer [21], and the side strut nut [20] on the side strut pin [22].

(h) Tighten the side strut nut [20] to 600 in-lb (67.79 N·m) – 900 in-lb (101.69 N·m).

NOTE: Use the wrench adapter assembly, SPL-1359, to hold the head of the side strut pin [22] when you tighten the side strut nut [20].

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(i) If it is necessary, loosen the side strut nut [20] to the nearest castellation to align the hole for the cross bolt [16].

(j) Install the cross bolt [16] in the side strut pin [22].

(k) Install the washer [17], and the nut [18] on the cross bolt [16].

(l) Tighten the nut [18] to 30 in-lb (3.39 N·m) – 50 in-lb (5.65 N·m).

(m) If it is necessary, loosen the nut [18] to the nearest castellation to align the holes for the pin [19].

(n) Install the pin [19] in the cross bolt [16].

SUBTASK 32-11-61-620-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(2) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces.

(a) The inside diameter of the side strut pin [7], the inside unplated surface of the end caps [9]

(b) The threads of the nut [14]

(c) The face of the washer [12].

SUBTASK 32-11-61-160-001

(3) Remove all unwanted corrosion preventive compound, C00913.

(a) Make sure the drainage holes in the end cap [9] are clear of the corrosion preventive compound, C00913 after the application.

SUBTASK 32-11-61-620-002

(4) Lubricate the chrome plated surfaces of the side strut pin [7] and the surfaces of the end cap [9] with grease, D00633.

SUBTASK 32-11-61-160-002

(5) Remove all unwanted grease, D00633.

SUBTASK 32-11-61-420-002

(6) Connect the upper side strut assembly [3] to the lower side strut [8]:

(a) Remove the rope that supports the lower side strut [8] to the reaction link assembly [15].

(b) Put the upper side strut assembly [3] in its position for connection to the lower side strut [8].

(c) Put the side strut pin [7] through the upper side strut assembly [3] and the lower side strut [8].

(d) Install the end cap [9] on the side strut pin [7].

(e) Apply a thin layer of the corrosion preventive compound, C00913, to the threads, thread reliefs of the bolt [11], and its shank.

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces.

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CAUTION: MAKE SURE THAT THE HEAD OF THE BOLT POINTS IN THE AFT DIRECTION. IF THE HEAD OF THE BOLT POINTS FORWARD, DAMAGE TO COMPONENTS AND THE AIRPLANE STRUCTURE WILL OCCUR.

(f) Install the bolt [11] in the side strut pin [7].

(g) Install the washer [12], and the nut [14] on the bolt [11].

(h) Tighten the nut [14] to 30 in-lb (3.39 N·m) – 50 in-lb (5.65 N·m) more than the run on torque.

(i) If it is necessary, loosen the nut [14] to the nearest castellation to align the hole for the cotter pin [13].

(j) Install the cotter pin [13] in the bolt [11].

SUBTASK 32-11-61-420-003

(7) Connect the upper side strut assembly [3] to the downlock strut [1]:

(a) Lubricate the chrome plated surfaces of the downlock link pin [2] with grease, D00633.

(b) Remove all unwanted grease, D00633.

(c) Put the downlock strut [1] in its position for connection to the upper side strut assembly [3].

(d) Put the downlock link pin [2] through the upper side strut assembly [3] and the downlock strut [1].

NOTE: Use the thread protector, SPL-1369, for the downlock link pin [2] when you do this step.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(e) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces.

1) The threads and thread reliefs of the downlock link pin [2]

2) The threads of the nut [5]

3) The faces of the washer [4].

(f) Remove all unwanted corrosion preventive compound, C00913.

(g) Install the washer [4], and the nut [5] on the downlock link pin [2].

(h) Tighten the nut [5] to 360 in-lb (40.67 N·m) – 600 in-lb (67.79 N·m).

(i) If it is necessary, loosen the nut [5] to the nearest castellation to align the hole for the pin [6].

(j) Install the pin [6] in the downlock link pin [2].

SUBTASK 32-11-61-420-004

(8) Do this task: Main Gear Downlock Spring Installation, TASK 32-32-91-400-801.

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SUBTASK 32-11-61-640-001

(9) Lubricate the lube fittings on the upper side strut. To lubricate them, refer to Main Landing Gear Upper End Components Servicing, TASK 12-21-11-640-801.

SUBTASK 32-11-61-780-001

(10) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-11-61-710-001

(11) Do this task: Main Landing Gear Operational Test, TASK 32-32-00-710-801.

SUBTASK 32-11-61-580-005

(12) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

——————— END OF TASK ———————

TASK 32-11-61-000-802

4. Main Landing Gear Lower Side Strut Removal

(Figure 402)

A. General

(1) This procedure supplies instructions to remove the lower side strut.

B. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-32-91-000-801	Main Gear Downlock Springs Removal (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1370	Protector - Thread (C32029-14, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

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E. Prepare for the Removal

SUBTASK 32-11-61-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR BUT THE ONE TO BE REMOVED. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801

SUBTASK 32-11-61-580-006

(2) Do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-11-61-860-002

(3) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-11-61-020-006

(4) Do this task: Main Gear Downlock Springs Removal, TASK 32-32-91-000-801.

F. Main Landing Gear Lower Side Strut Removal

SUBTASK 32-11-61-020-007

(1) Disconnect the lower side strut assembly, lower [8] from the pushrod [41]:

(a) Remove the nut [42], washer [43] from the bolt [46].

(b) Remove the bolt [46] to disconnect the lower side strut assembly, lower [8] from the pushrod [41].

(c) Isolate the pushrod [41] from the lower side strut assembly, lower [8].

SUBTASK 32-11-61-480-004

(2) Use a rope to hold the pushrod [41] and the inner door in its position.

SUBTASK 32-11-61-020-008

(3) Disconnect the lower side strut assembly, lower [8] from the shock strut [51]:

(a) Remove the pin [49], nut [50], and washer [48] from the cross bolt [47].

(b) Remove the cross bolt [47] from the side strut pin [52].

(c) Remove the side strut nut [54], and the side strut washer [53] from the side strut pin [52].

(d) Remove the side strut pin [52] to disconnect the lower side strut assembly, lower [8] from the shock strut [51].

NOTE: Use the thread protector, SPL-1370, for the side strut pin [52] when you do this step.

SUBTASK 32-11-61-020-009

(4) Disconnect the lower strut assembly, lower [8] from the upper side strut assembly [3]:

(a) Remove the cotter pin [13], nut [14], and washer [12] from the bolt [11].

(b) Remove the bolt [11] from the side strut pin [7].

(c) Remove the end cap [9] from the side strut pin [7].

(d) Use a rope to support the upper end of the lower side strut assembly, lower [8] and attach the rope to the outboard side of the reaction link assembly [15].

NOTE: The lower side strut weighs approximately 48.3 lb (21.91 kg).

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(e) Remove the side strut pin [7] to disconnect the upper side strut assembly [3] from the lower side strut assembly, lower [8].

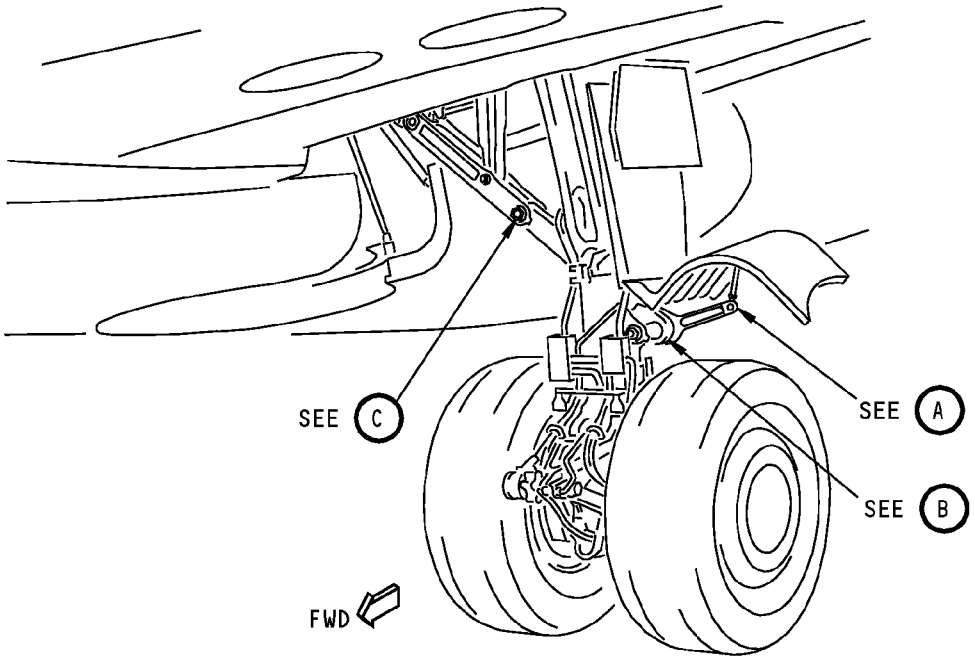
SUBTASK 32-11-61-020-016

(5) Carefully lower and remove the lower side strut assembly, lower [8] from the airplane.

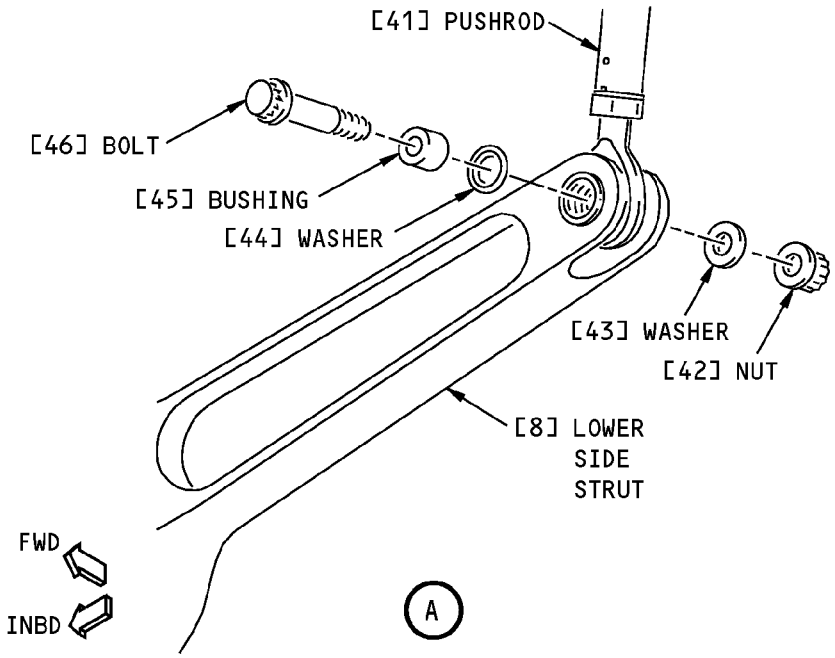
NOTE: The lower side strut assembly, lower [8] weighs approximately 48.3 lb (21.91 kg). Make sure its sufficiently supported.

——————— END OF TASK ———————

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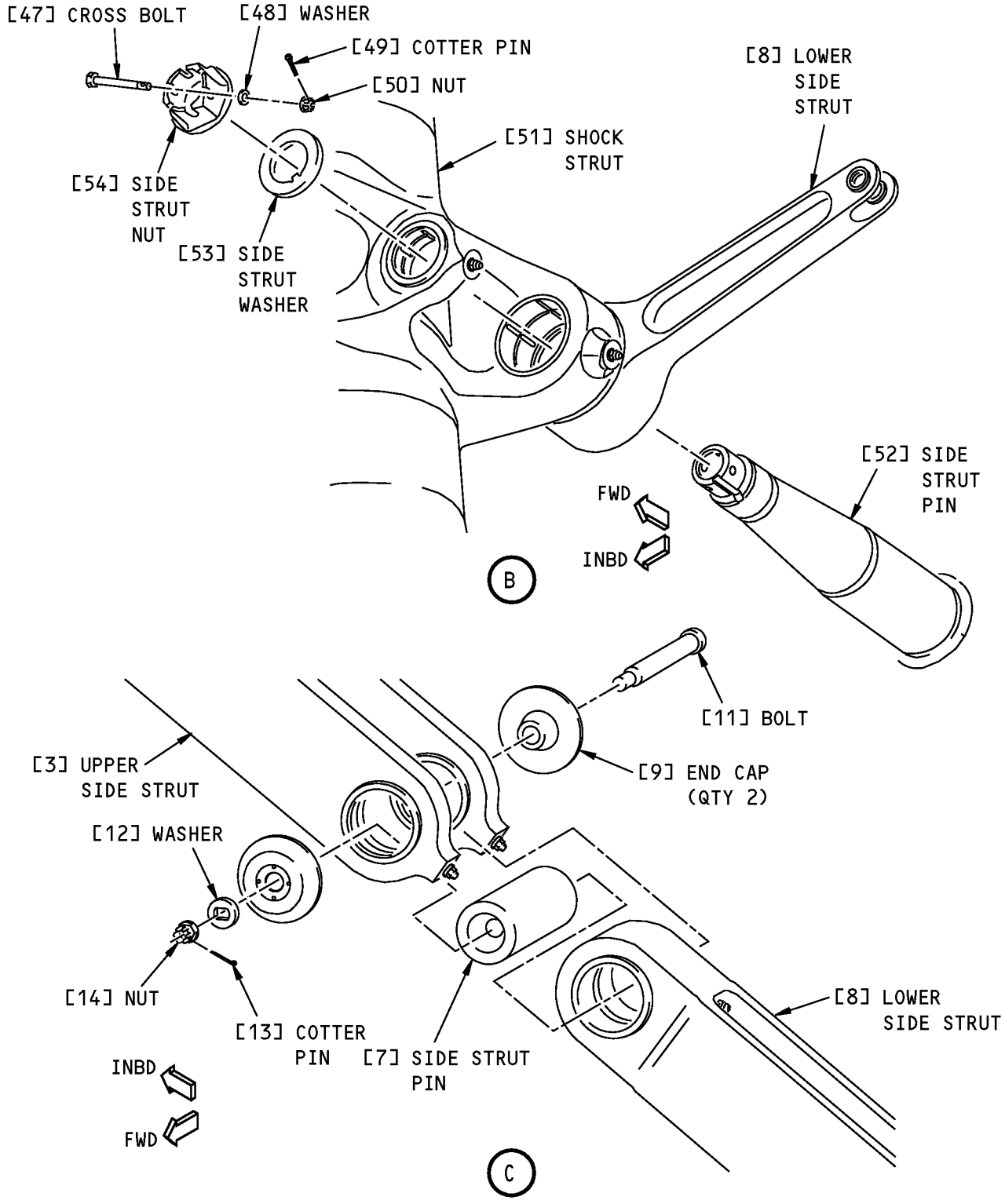


LEFT MAIN LANDING GEAR
(RIGHT MAIN LANDING GEAR IS EQUIVALENT)



Main Landing Gear Lower Side Strut Installation
Figure 402 (Sheet 1 of 2)/32-11-61-990-802

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Main Landing Gear Lower Side Strut Installation
Figure 402 (Sheet 2 of 2)/32-11-61-990-802

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TASK 32-11-61-400-802

5. Main Landing Gear Lower Side Strut Installation

(Figure 402)

A. General

(1) This procedure supplies instructions to install the lower side strut.

B. References

Reference	Title
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
12-21-11-640-801	Main Landing Gear Upper End Components Servicing (P/B 301)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-13-11-820-801	Main Landing Gear Shock Strut Door Adjustment (P/B 501)
32-32-00-710-801	Main Landing Gear Operational Test (P/B 501)
32-32-91-400-801	Main Gear Downlock Spring Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1361	Assembly - Wrench Adapter (C32029-5, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1370	Protector - Thread (C32029-14, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00633	Grease - Aircraft General Purpose	BMS3-33

E. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

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F. Prepare for the Installation

SUBTASK 32-11-61-480-005

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR, BUT THE ONE TO BE REMOVED. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

G. Main Landing Gear Lower Side Strut Installation

SUBTASK 32-11-61-620-003

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(1) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces.

(a) The inside diameter of the side strut pin [7], the inside unplated surface of the end caps [9]

(b) The threads of the nut [14]

(c) The face of the washer [12].

SUBTASK 32-11-61-160-003

(2) Remove all unwanted corrosion preventive compound, C00913.

(a) Make sure the drainage holes in the end cap [9] are clear of the corrosion preventive compound, C00913 after the application.

SUBTASK 32-11-61-620-004

(3) Lubricate the chrome plated surfaces of the side strut pin [7] and the surfaces of the end cap [9] with grease, D00633.

SUBTASK 32-11-61-160-004

(4) Remove all unwanted grease, D00633.

SUBTASK 32-11-61-420-014

(5) Connect the upper side [3] to the lower side strut [8]:

(a) Remove the rope that supports the lower side strut [8] to the reaction link assembly [15].

(b) Put the upper side strut assembly [3] in its position for connection to the lower side strut [8].

(c) Put the side strut pin [7] through the upper side strut assembly [3] and the lower side strut [8].

(d) Install the end cap [9] on the side strut pin [7].

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(e) Apply a thin layer of the corrosion preventive compound, C00913, to the threads, thread reliefs of the bolt [11], and its shank.

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces.

CAUTION: MAKE SURE THAT THE HEAD OF THE BOLT POINTS IN THE AFT DIRECTION. IF THE HEAD OF THE BOLT POINTS FORWARD, DAMAGE TO COMPONENTS AND THE AIRPLANE STRUCTURE WILL OCCUR.

(f) Install the bolt [11] in the side strut pin [7].

(g) Install the washer [12], and the nut [14] on the bolt [11].

(h) Tighten the nut [14] to 30 in-lb (3.39 N·m) – 50 in-lb (5.65 N·m) more than the run on torque.

(i) If it is necessary, loosen the nut [14] to the nearest castellation to align the hole for the cotter pin [13].

(j) Install the cotter pin [13] in the bolt [11].

SUBTASK 32-11-61-420-006

(6) Connect the lower side strut strut assembly, lower [8] to the shock strut [51]:

(a) Lubricate the chrome plated surfaces of the side strut pin [52] with grease, D00633.

(b) Remove all unwanted grease, D00633.

(c) Put the lower side strut [8] in its position for attachment to the shock strut [51].

(d) Put the side strut pin [52] through the lower side strut [8] and the clevis on the shock strut [51].

NOTE: Use the thread protector, SPL-1370, for the pin [52] when you do this task.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(e) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces.

1) The threads and thread reliefs of the side strut pin [52], pin [49], and the cross bolt [47].

2) The threads of the side strut nut [54], and nut [50]

3) The faces of the side strut washer [53], and [48].

(f) Remove all unwanted corrosion preventive compound, C00913.

(g) Install the side strut washer [53], and the side strut nut [54] on the side strut pin [52].

(h) Tighten the side strut nut [54] to 95 ft-lb (128.80 N·m) – 115 ft-lb (155.92 N·m) more than the run-on torque.

NOTE: Use the wrench adapter assembly, SPL-1361, to hold the head of the pin [52] when you tighten the nut [54].

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(i) If it is necessary, loosen the side strut nut [54] to the nearest castellation to align the hole for the cross bolt [47].

(j) Install the cross bolt [47] in the side strut pin [52].

(k) Install the washer [48], and the nut [50] on the cross bolt [47].

(l) Tighten the nut [50] to 20 in-lb (2.26 N·m) – 24 in-lb (2.71 N·m) more than the run-on torque.

(m) If it is necessary, loosen the nut [50] to the nearest castellation to align the hole for the pin [49].

(n) Install the pin [49] in the cross bolt [47].

SUBTASK 32-11-61-080-002

(7) Remove the rope that holds the pushrod [41] in its position.

SUBTASK 32-11-61-420-007

(8) Connect the lower side strut [8] to the pushrod [41]:

(a) Lubricate the nut [42], washer [43], and bolt [46] with grease, D00633.

(b) Remove all unwanted grease, D00633.

(c) Align the hole in the pushrod [41] with the hole in the lower side strut [8].

(d) Put the bushing [45] through the lower side strut [8], and the pushrod [41].

(e) Install the washer [44] on the bolt [46].

(f) Put the bolt [46] through the lower side strut [8], and the pushrod [41].

(g) Install the washer [43], and nut [42] on the bolt [46].

(h) Hand tighten the nut [42] until after final adjustments to the doors are made in the subsequent steps.

SUBTASK 32-11-61-820-001

(9) If you changed the length of pushrod [41], do the step that follows:

NOTE: No adjustment to the doors is necessary if the pushrod was not changed.

(a) Do this task: Main Landing Gear Shock Strut Door Adjustment, TASK 32-13-11-820-801.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 32-11-61-420-013

(1) Do this task: Main Gear Downlock Spring Installation, TASK 32-32-91-400-801.

SUBTASK 32-11-61-640-002

(2) Lubricate the lube fittings on the lower side strut. To lubricate them, refer to Main Landing Gear Upper End Components Servicing, TASK 12-21-11-640-801.

SUBTASK 32-11-61-780-003

(3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-11-61-710-006

(4) Do this task: Main Landing Gear Operational Test, TASK 32-32-00-710-801.

SUBTASK 32-11-61-580-007

(5) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

——————— END OF TASK ———————

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TASK 32-11-61-000-803

6. Main Landing Gear Side Strut Removal

(Figure 403)

A. General

(1) This procedure is a scheduled maintenance task.

(2) This procedure supplies instructions to remove the side strut.

B. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-32-91-000-801	Main Gear Downlock Springs Removal (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1359	Assembly - Wrench Adapter (C32029-3, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1368	Protector - Thread (C32029-12, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1369	Protector - Thread (C32029-13, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1370	Protector - Thread (C32029-14, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

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E. Prepare for the Removal

SUBTASK 32-11-61-480-006

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR, BUT THE ONE TO BE WORKED ON. WITHOUT THE GROUND LOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801

SUBTASK 32-11-61-580-008

(2) Do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-11-61-860-003

(3) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-11-61-020-010

(4) Do this task: Main Gear Downlock Springs Removal, TASK 32-32-91-000-801.

F. Main Landing Gear Side Strut Removal

SUBTASK 32-11-61-020-011

(1) Disconnect the upper side strut assembly [3] from the downlock strut [1]:

(a) Remove the pin [6] from the downlock link pin [2].

(b) Remove the nut [5], and the washer [4] from the downlock link pin [2].

(c) Remove the downlock link pin [2] to disconnect the upper side strut assembly [3] from the downlock strut [1].

NOTE: Use the thread protector, SPL-1369, for the downlock link pin [2] when you do this step.

SUBTASK 32-11-61-020-012

(2) Disconnect the lower side strut assembly, lower [8] from the pushrod [41]:

(a) Remove the nut [42], washer [43] from the bolt [46].

(b) Remove the bolt [46] to disconnect the lower side strut assembly, lower [8] from the pushrod [41].

(c) Isolate the pushrod [41] from the lower side strut assembly, lower [8].

SUBTASK 32-11-61-480-007

(3) Use a rope to hold the pushrod [41] and the inner door in its position.

SUBTASK 32-11-61-020-013

(4) Disconnect the lower side strut assembly, lower [8] from the shock strut [51]:

(a) Remove the pin [49], nut [50], and washer [48] from the cross bolt [47].

(b) Remove the cross bolt [47] from the side strut pin [52].

(c) Remove the side strut nut [54], and the side strut washer [53] from the side strut pin [52].

(d) Remove the side strut pin [52] to disconnect the lower side strut assembly, lower [8] from the shock strut [51].

NOTE: Use the thread protector, SPL-1370, for the side strut pin [52] when you do this step.

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SUBTASK 32-11-61-020-014

(5) Disconnect the upper side strut assembly [3] from the reaction link assembly [15]:

(a) Remove the pin [19], nut [18], and washer [17] from cross bolt [16].

(b) Remove the cross bolt [16] from the side strut pin [22].

(c) Remove the side strut nut [20], and the side strut washer [21] from the side strut pin [22].

NOTE: Use wrench adapter assembly, SPL-1359, to hold the head of the side strut pin [22] when you loosen the side strut nut [20].

(d) Remove the side strut pin [22] that holds the upper side strut assembly [3] to the reaction link assembly [15].

NOTE: Use the thread protector, SPL-1368, for the side strut pin [22] when you do this step.

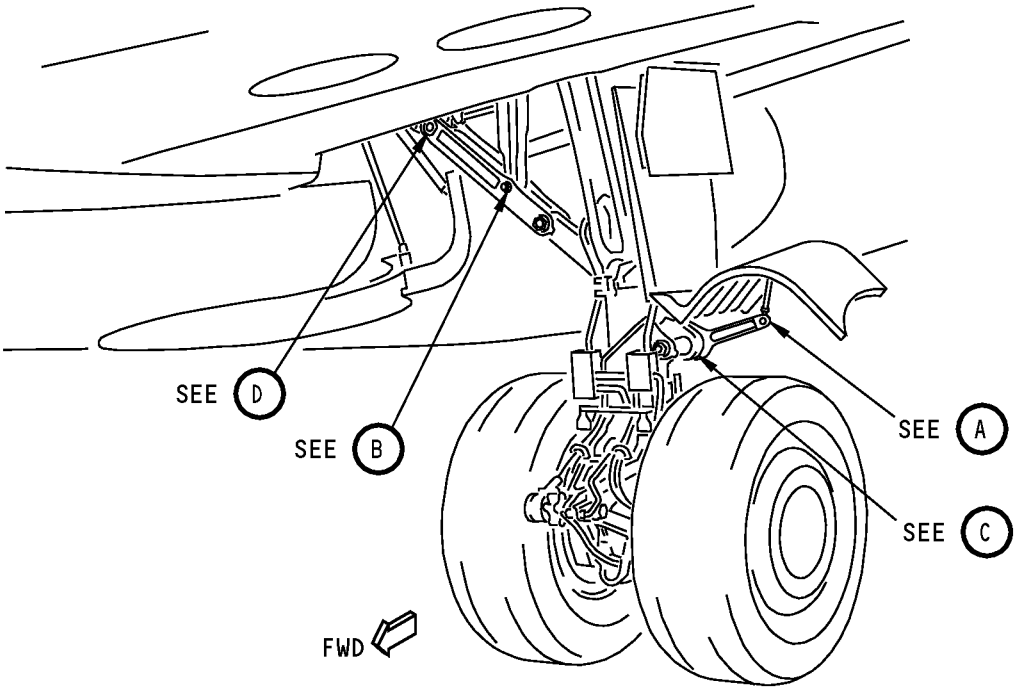
SUBTASK 32-11-61-020-015

(6) Remove the assembly of the upper side strut assembly [3], and the lower side strut assembly, lower [8] from the airplane.

NOTE: The side strut assembly weighs approximately 90.11 lb (40.87 kg). Make sure a minimum of two person will hold and lower the side strut when you remove it from the airplane.

END OF TASK

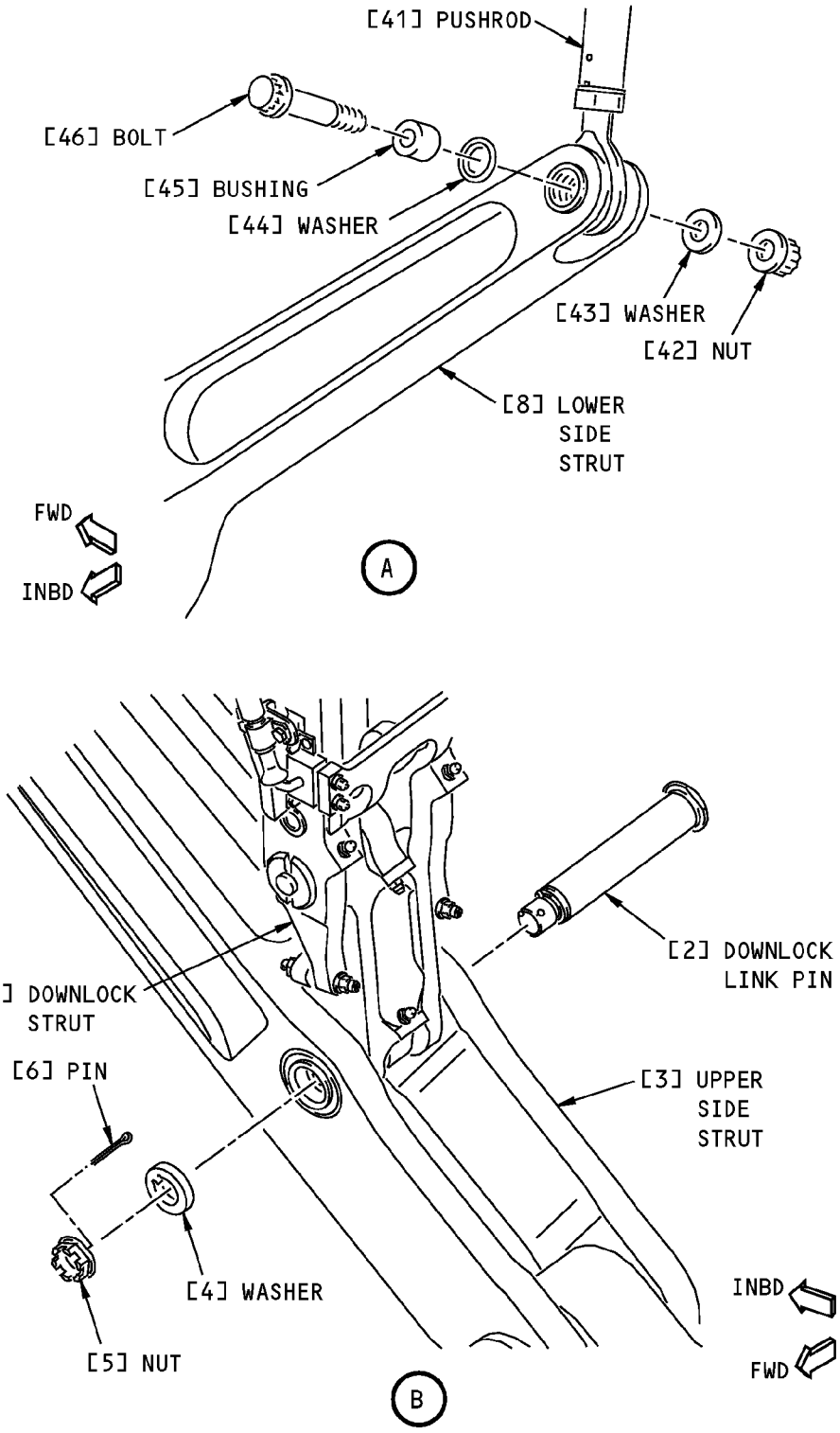
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LEFT MAIN LANDING GEAR
(RIGHT MAIN LANDING GEAR IS EQUIVALENT)

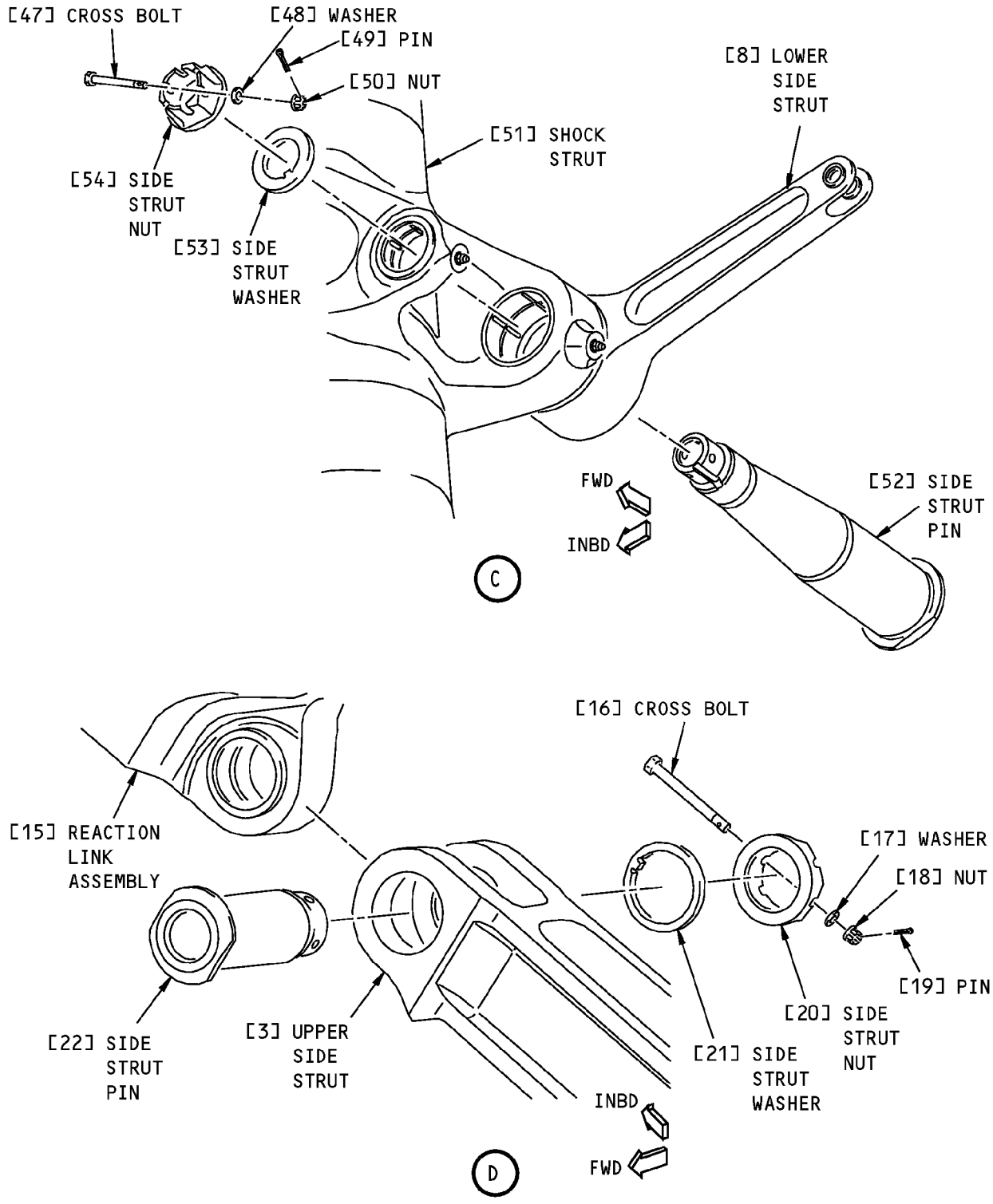
Main Landing Gear Side Strut Installation
Figure 403 (Sheet 1 of 3)/32-11-61-990-803

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Main Landing Gear Side Strut Installation
Figure 403 (Sheet 2 of 3)/32-11-61-990-803

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Main Landing Gear Side Strut Installation
Figure 403 (Sheet 3 of 3)/32-11-61-990-803

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TASK 32-11-61-400-803

7. Main Landing Gear Side Strut Installation

(Figure 403)

A. General

(1) This procedure is a scheduled maintenance task.

(2) This procedure supplies instructions to install the side strut.

B. References

Reference	Title
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
12-21-11-640-801	Main Landing Gear Upper End Components Servicing (P/B 301)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-13-11-820-801	Main Landing Gear Shock Strut Door Adjustment (P/B 501)
32-32-00-710-801	Main Landing Gear Operational Test (P/B 501)
32-32-91-400-801	Main Gear Downlock Spring Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1359	Assembly - Wrench Adapter (C32029-3, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1361	Assembly - Wrench Adapter (C32029-5, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1368	Protector - Thread (C32029-12, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1369	Protector - Thread (C32029-13, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1370	Protector - Thread (C32029-14, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00633	Grease - Aircraft General Purpose	BMS3-33

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	Strut assembly	32-11-61-01-480	HAP ALL

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F. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

G. Prepare for the Installation

SUBTASK 32-11-61-480-008

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR, BUT NOT THE ONE TO BE WORKED ON. WITHOUT THE GROUND LOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

H. Main Landing Gear Side Strut Installation

SUBTASK 32-11-61-420-008

(1) Connect the upper side strut assembly [3] to the reaction link assembly [15]:

(a) Lubricate the chrome plated surfaces of the side strut pin [22] with grease, D00633.

(b) Remove all unwanted grease, D00633.

(c) Put the upper side strut assembly [3] in its position for connection to the reaction link assembly [15].

(d) Put the side strut pin [22] through the upper side strut assembly [3] and the reaction link assembly [15].

NOTE: Use the thread protector, SPL-1368, for the side strut pin [22] when you do this step.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(e) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces.

1) The threads and thread reliefs of the side strut pin [22], and the cross bolt [16]

2) The threads of the side strut nut [20], and the nut [18]

3) The faces of the side strut washer [21], and the washer [17].

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(f) Remove all unwanted corrosion preventive compound, C00913.

(g) Install the side strut washer [21], and the side strut nut [20] on the side strut pin [22].

(h) Tighten the side strut nut [20] to 600-900 pound-inches (67.79-101.69 newton-meters).

NOTE: Use the wrench adapter assembly, SPL-1359, to hold the head of the side strut pin [22] when you tighten the side strut nut [20].

(i) If it is necessary, loosen the side strut nut [20] to the nearest castellation to align the hole for the cross bolt [16].

(j) Install the cross bolt [16] in the side strut pin [22].

(k) Install the washer [17], and the nut [18] on the cross bolt [16].

(l) Tighten the nut [18] to 30 in-lb (3.39 N·m) – 50 in-lb (5.65 N·m).

(m) If it is necessary, loosen the nut [18] to the nearest castellation to align the holes for the pin [19].

(n) Install the pin [19] in the cross bolt [16].

SUBTASK 32-11-61-420-009

(2) Connect the lower side strut [8] to the shock strut [51]:

(a) Lubricate the chrome plated surfaces of the side strut pin [52] with grease, D00633.

(b) Remove all unwanted grease, D00633.

(c) Put the lower side strut [8] in its position for attachment to the shock strut [51].

(d) Put the side strut pin [52] through the lower side strut [8] and the clevis on the shock strut [51].

NOTE: Use the thread protector, SPL-1370, for the pin [52] when you do this task.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(e) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces.

1) The threads and thread reliefs of the side strut pin [52], pin [49], and cross bolt [47].

2) The threads of the side strut nut [54], and nut [50]

3) The faces of the side strut washer [53], and [48].

(f) Remove all unwanted corrosion preventive compound, C00913.

(g) Install the side strut washer [53], and the side strut nut [54] on the side strut pin [52].

(h) Tighten the side strut nut [54] to 95 ft-lb (128.80 N·m) – 115 ft-lb (155.92 N·m) more than the run on torque.

NOTE: Use the wrench adapter assembly, SPL-1361, to hold the head of the pin [52] when you tighten the nut [54].

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(i) Install the cross bolt [47] in the side strut pin [52]. If it is necessary, loosen the side strut nut [54] to the nearest castellation to align the hole for the cross bolt [47].

(j) Install the washer [48], and the nut [50] on the cross bolt [47].

(k) Tighten the nut [50] to 20 in-lb (2.26 N·m) – 24 in-lb (2.71 N·m) more than the run on torque.

(l) If it is necessary, loosen the nut [50] to the nearest castellation to align the hole for the pin [49].

(m) Install the pin [49] in the cross bolt [47].

SUBTASK 32-11-61-080-003

(3) Remove the rope that holds the push rod [41] in its position.

SUBTASK 32-11-61-420-010

(4) Connect the lower side strut [8] to the pushrod [41]:

(a) Lubricate the nut [42], washer [43], and bolt [46] with grease, D00633.

(b) Remove all unwanted grease, D00633.

(c) Align the hole in the pushrod [41] with the hole in the lower side strut [8].

(d) Put the bushing [45] through the lower side strut [8], and the push rod [41].

(e) Install the washer [44] on the bolt [46].

(f) Put the bolt [46] through the lower side strut [8], and the push rod [41].

(g) Install the washer [43], and nut [42] on the bolt [46].

NOTE: Do not tighten the nut [42]. Final torque to the nut will be done after final adjustments to the doors are made in the subsequent step.

SUBTASK 32-11-61-420-011

(5) Connect the upper side strut assembly [3] to the downlock strut [1]:

(a) Lubricate the chrome plated surfaces of the downlock link pin [2] with grease, D00633.

(b) Remove all unwanted grease, D00633.

(c) Put the downlock strut [1] in its position for connection to the upper side strut assembly [3].

(d) Put the downlock link pin [2] through the upper side strut assembly [3] and the downlock strut [1].

NOTE: Use the thread protector, SPL-1369, for the downlock link pin [2] when you do this step.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(e) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces.

1) The threads and thread reliefs of the downlock link pin [2]

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2) The threads of the nut [5]

3) The faces of the washer [4].

(f) Remove all unwanted corrosion preventive compound, C00913.

(g) Install the washer [4], and the nut [5] on the downlock link pin [2].

(h) Tighten the nut [5] to 360 in-lb (40.67 N·m) – 600 in-lb (67.79 N·m).

(i) If it is necessary, loosen the nut [5] to the nearest castellation to align the hole for the pin [6].

(j) Install the pin [6] in the downlock link pin [2].

SUBTASK 32-11-61-820-002

(6) If you changed the length of pushrod [41], do the step that follows:

NOTE: No adjustment to the doors is necessary if the pushrod was not changed.

(a) Do this task: Main Landing Gear Shock Strut Door Adjustment, TASK 32-13-11-820-801.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 32-11-61-420-012

(1) Do this task: Main Gear Downlock Spring Installation, TASK 32-32-91-400-801.

SUBTASK 32-11-61-640-003

(2) Lubricate the lube fittings on the side strut. To lubricate them, refer to Main Landing Gear Upper End Components Servicing, TASK 12-21-11-640-801.

SUBTASK 32-11-61-780-004

(3) For hydraulic systems A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-11-61-710-002

(4) Do this task: Main Landing Gear Operational Test, TASK 32-32-00-710-801.

SUBTASK 32-11-61-580-009

(5) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

——————— END OF TASK ———————

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MAIN LANDING GEAR SIDE STRUT ASSEMBLY - INSPECTION/CHECK

1. General

A. This task supplies the data for a dimensional inspection of the side strut assembly for the main landing gear.

B. This task does not remove or install the side strut assembly. Refer to the Main Landing Gear Side Strut Assembly - Removal/Installation for procedures to remove and install the side strut assembly for the main landing gear.

TASK 32-11-61-200-803

2. Main Landing Gear Side Strut Assembly Inspection

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

C. General

SUBTASK 32-11-61-200-002

(1) This task gives the maximum design clearances for the side strut assembly for the main landing gear.

NOTE: A certain amount of free play is allowable as a result of design tolerances for all joints on the side strut assembly.

D. Procedure

SUBTASK 32-11-61-480-010

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-61-200-001

(2) Examine the joints on the side strut assembly for the main landing gear.

(a) Make sure the all joints on the side strut assembly for the main landing gear are within the maximum design clearances.

(b) If the joint exceeds the maximum design clearance then replace or repair the applicable part.

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Main Landing Gear Side Strut Design Clearances

Joint (Main Landing Gear Side Strut Design Clearance/Figure 601)	Maximum Design Clearances inches/mm
A *[1]	0.040 inches (1.016) mm
B *[2]	0.1995 inches (5.067) mm
C *[3]	0.1019 inches (2.588) mm
D *[4]	0.049 inches (1.245) mm
E *[5]	0.030 inches (0.762) mm
F *[6]	0.030 inches (0.762) mm
G *[7]	0.045 inches (1.143) mm

*[1] Distance between the outboard end of the reaction link and outer cylinder.

*[2] Distance between the hanger link and the fuselage attach fitting.

*[3] Maximum axial free play for the side of body joint pin.

*[4] Distance between the inboard end of the reaction link and the lower end of the hanger link.

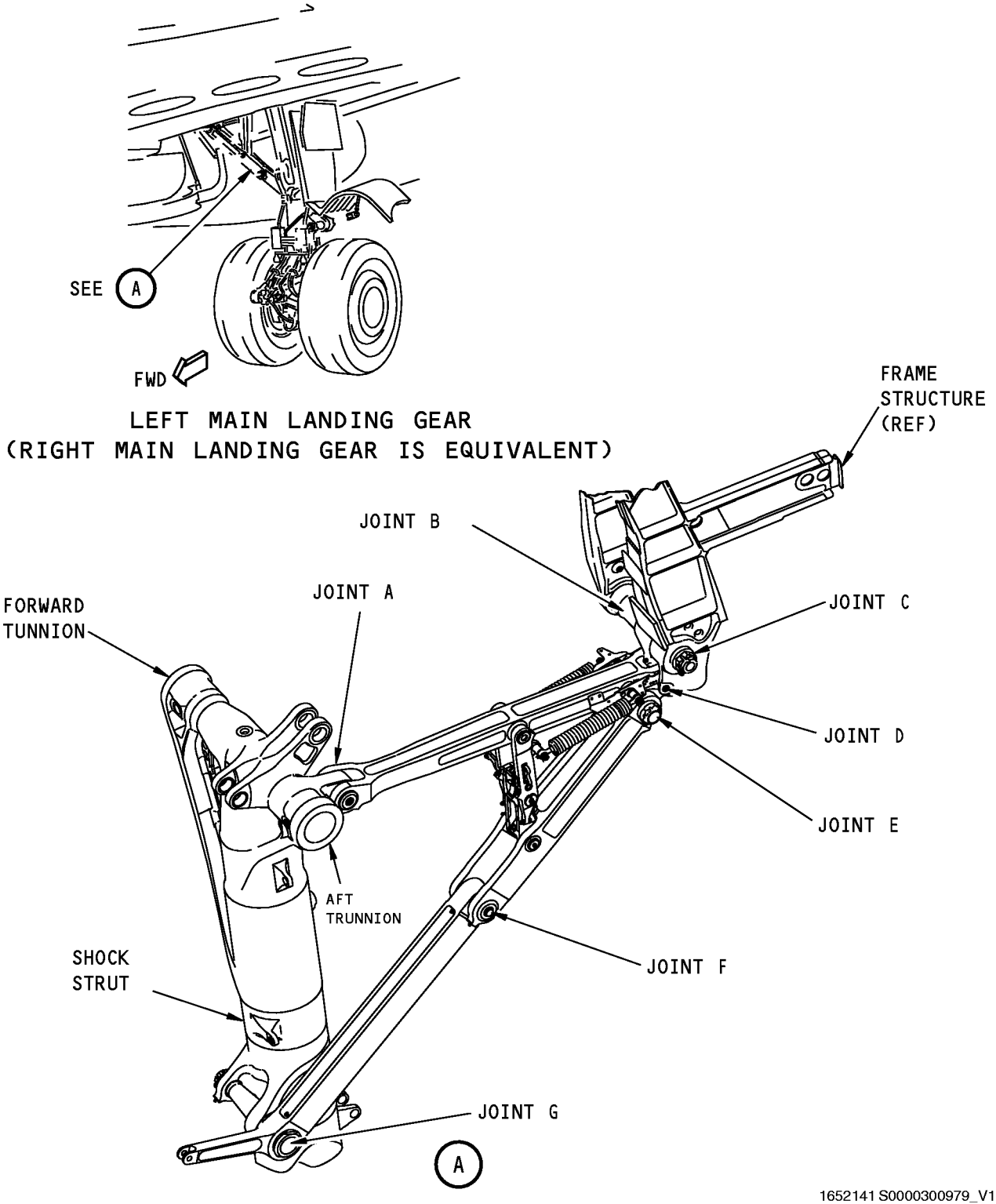
*[5] Distance between the upper end of the upper side strut and the reaction link.

*[6] Distance between the upper and lower side strut.

*[7] Distance between the lower end of the lower side strut and the outer cylinder.

END OF TASK

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Main Landing Gear Side Strut Design Clearance
Figure 601/32-11-61-990-805

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MAIN LANDING GEAR REACTION LINK ASSEMBLY - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) A removal of the reaction link assembly for the main landing gear

(2) An installation of the reaction link assembly for the main landing gear.

TASK 32-11-71-000-801

2. Main Landing Gear Reaction Link Assembly Removal

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-32-91-000-801	Main Gear Downlock Springs Removal (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1359	Assembly - Wrench Adapter (C32029-3, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1360	Assembly - Wrench Adapter (C32029-4, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1364	Assembly - Slug Driver (C32029-8, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1368	Protector - Thread (C32029-12, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1369	Protector - Thread (C32029-13, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
713	Nose Landing Gear
734	Left Main Landing Gear

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(Continued)

Zone	Area
744	Right Main Landing Gear

E. Prepare for the Removal.

SUBTASK 32-11-71-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-71-860-001

(2) Remove the pressure from the hydraulic systems A and B, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-11-71-860-003

(3) Remove the power from the hydraulic systems A and B, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-11-71-580-001

(4) Install chocks around the tires of the main landing gear.

F. Main Landing Gear Reaction Link Assembly Removal

SUBTASK 32-11-71-020-001

(1) Do this task: Main Gear Downlock Springs Removal, TASK 32-32-91-000-801.

SUBTASK 32-11-71-020-002

(2) Do these steps to disconnect the hydraulic lines [37] from the hydraulic tubes [2]:

(a) Disconnect the hydraulic lines [37] from the hydraulic tubes [2] attached to the bracket assembly [38].

(b) Install caps on the hydraulic lines [37].

(c) Put tags on the lines [37] to prevent the crossing of the lines during the installation.

(d) Disconnect the hydraulic tubes [2] from the downlock actuator [4].

(e) Install caps on the hydraulic tubes [2].

(f) Remove the packings [46] from the ports of the downlock actuator [4] and discard them.

(g) Install plugs in the ports of the downlock actuator [4].

SUBTASK 32-11-71-020-003

(3) Do these steps to disconnect the reaction link assembly [1] from the downlock actuator [4]:

(a) Remove the cotter pin [11], nut [10] and the washer [9] from the rod end pin [6].

(b) Remove the rod end pin [6] that attaches the head end of the downlock actuator [4] to the reaction link assembly [1].

(c) Remove the washers [7] and [8].

(d) Slowly lower the head end of the downlock actuator [4] to the upper end of the upper side strut [21].

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(e) Use a tape to attach the head end of the downlock actuator [4] to the upper end of the upper side strut [21].

NOTE: This task will prevent the downlock actuator [4] from moving when you do the subsequent steps.

SUBTASK 32-11-71-020-004

(4) Do these steps to disconnect the reaction link link assembly [1] from the upper lock link [5]:

(a) Remove the cotter pin [16] from the downlock link pin [13].

(b) Remove the nut [15] and the washer [14] from the downlock link pin [13].

NOTE: Use the wrench adapter assembly, SPL-1360, to hold the head of the downlock link pin [13] when you loosen the nut [15].

(c) Remove the downlock link pin [13] that attaches the reaction link assembly [1] to the upper lock link [5].

NOTE: Use the thread protector, SPL-1369, when you do this step.

SUBTASK 32-11-71-020-005

(5) Do these steps to disconnect the reaction link assembly [1] from the upper side strut [21]:

(a) Remove the cotter pin [23], nut [22] and washer [24] from crossbolt [17].

(b) Remove the crossbolt [17] from the side strut pin [20].

(c) Remove the side strut nut [18] and the side strut washer [19] from the side strut pin [20].

NOTE: Use the wrench adapter assembly, SPL-1359 to hold the head of the side strut pin [20] when you loosen the side strut nut [18].

(d) Attach a strap to the upper end of the upper side strut [21].

NOTE: The assembly of the upper side strut, lower side strut, and the lower lock link weigh approximately 130 pounds

(59 kilograms).

1) Lower the upper side strut [21] sufficiently for the removal of the reaction link assembly [1] in the subsequent steps.

2) Attach the upper end of the upper side strut [21] to the hanger link assembly [35].

(e) Remove the side strut pin [20] that attach the reaction link assembly [1] to the upper side strut [21].

NOTE: Use the thread protector, SPL-1368, when you do this step.

SUBTASK 32-11-71-020-006

(6) Do these steps to disconnect the reaction link assembly [1] from the hanger link assembly [35]:

(a) Remove the pin assembly [31] from the reaction link assembly [1].

(b) Remove the cotter pin [28], nut [29] and washer [30] from the crossbolt [25].

(c) Remove the crossbolt [25] from the end cap [27].

(d) Remove the washer [26] from the cross bolt [25].

(e) Isolate the end cap [27], bracket assembly [38], hydraulic tube [2], electrical harness [12], and the spacers [32] and [36] as an assembly from the reaction link assembly [1].

(f) If it is necessary to disconnect the electrical harness [12], do this step:

1) Disconnect the electrical harness [12] by removing the bolts for the bracket which holds the sensor to the upper lock link [5].

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(g) Remove the hanger link pin [34] that attaches the reaction link assembly [1] to the hanger link assembly [35].

NOTE: Use the slug driver assembly, SPL-1364, when you do this step.

SUBTASK 32-11-71-020-013

(7) If necessary, do the following steps to remove the hanger link assembly [35] from the supporting structure:

(a) Remove the cotter pin [53], nut [52] and washer [51] from the crossbolt [50].

(b) Remove the cross bolt [50] from the hanger link assembly pin [46].

(c) Remove the nut [49] and washer [48] from the hanger link assembly pin [46].

(d) Remove the hanger link assembly pin [46] that attaches the hanger link assembly to the supporting structure.

(e) Remove the hanger link assembly [35].

SUBTASK 32-11-71-020-007

(8) Do these steps to disconnect the reaction link assembly [1] from the trunnion [41]:

(a) Remove the cotter pin [44], nut [43] and washer [42] from the crossbolt [39].

(b) Remove the cross bolt [39] from the trunnion pin [40].

(c) Remove the end cap [45] from the trunnion pin [40].

(d) Remove the trunnion pin [40] that attaches the reaction link assembly [1] to the trunnion [41].

NOTE: Use the slug driver assembly, SPL-1364, when you do this task.

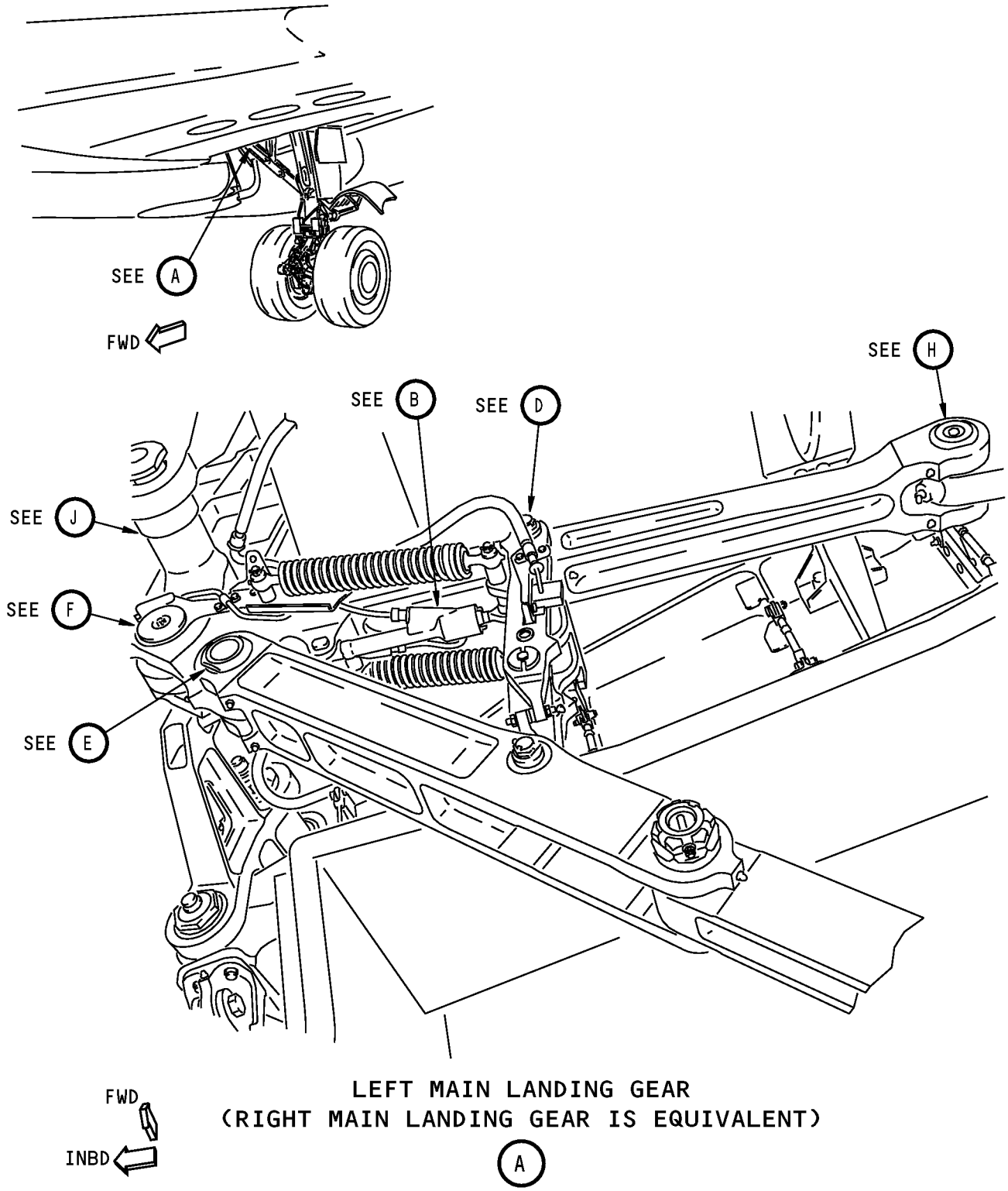
SUBTASK 32-11-71-020-008

(9) Remove the reaction link assembly [1] from the airplane.

NOTE: The reaction link assembly weighs approximately 63.2 lb (28.7 kg). Make sure a minimum of two persons will hold the reaction link assembly [1] when you remove it from the airplane.

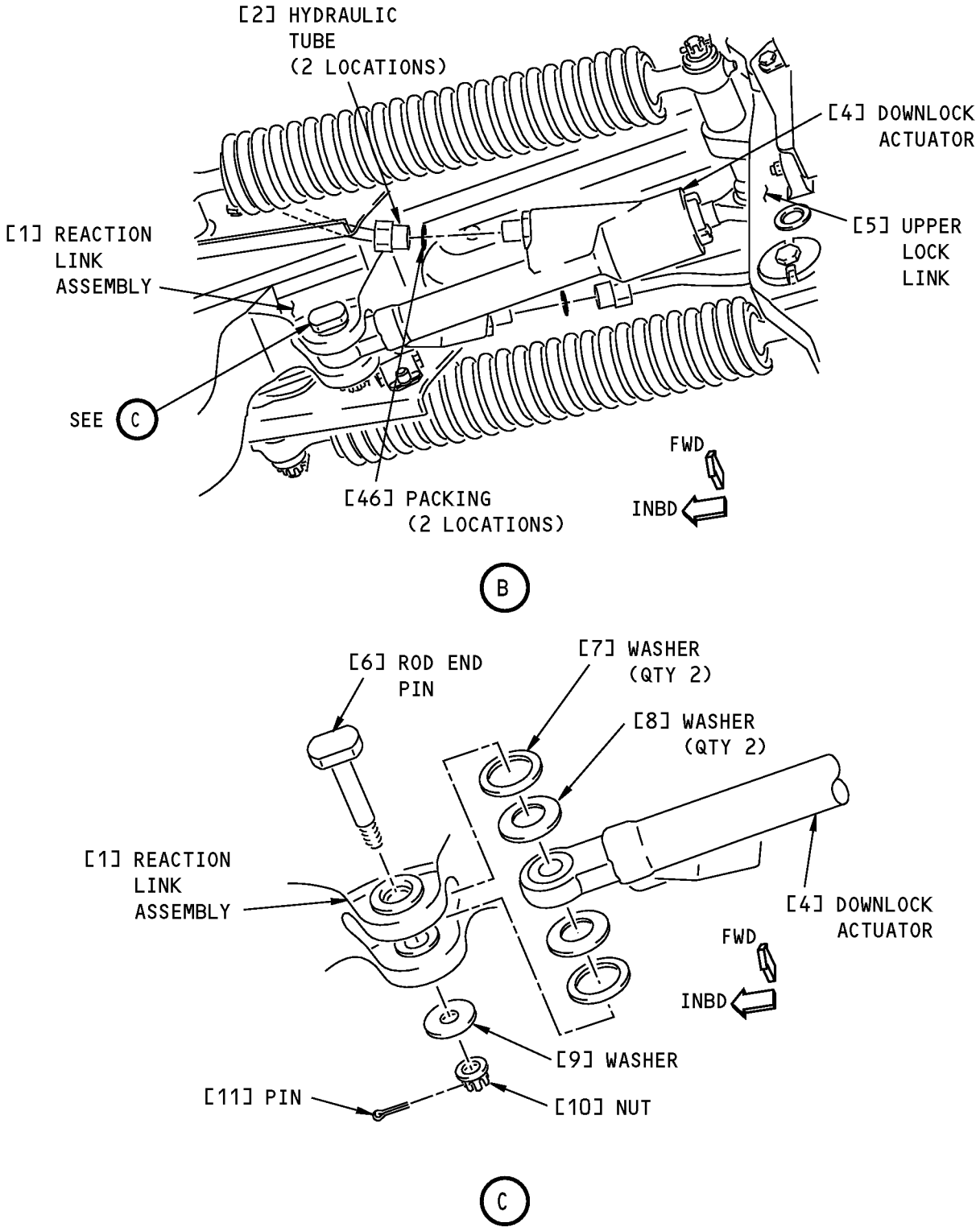
END OF TASK

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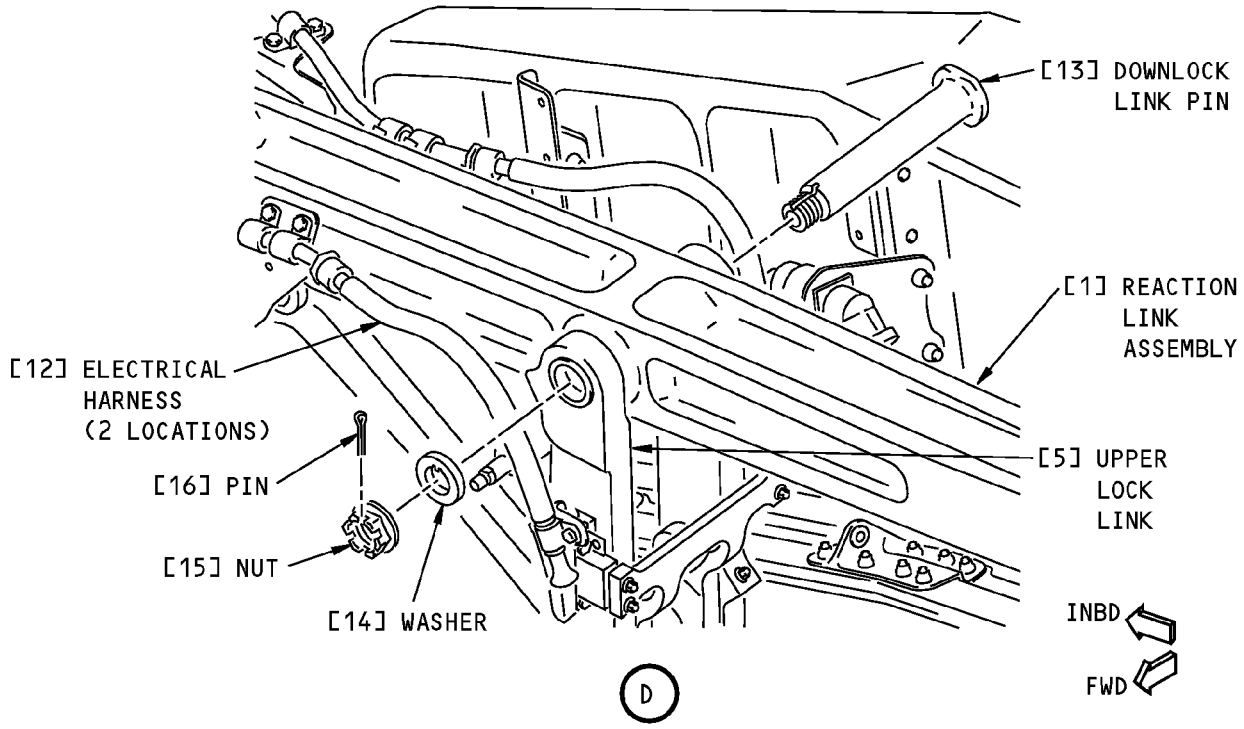
Main Landing Gear Reaction Link Assembly Installation
Figure 401 (Sheet 1 of 6)/32-11-71-990-801

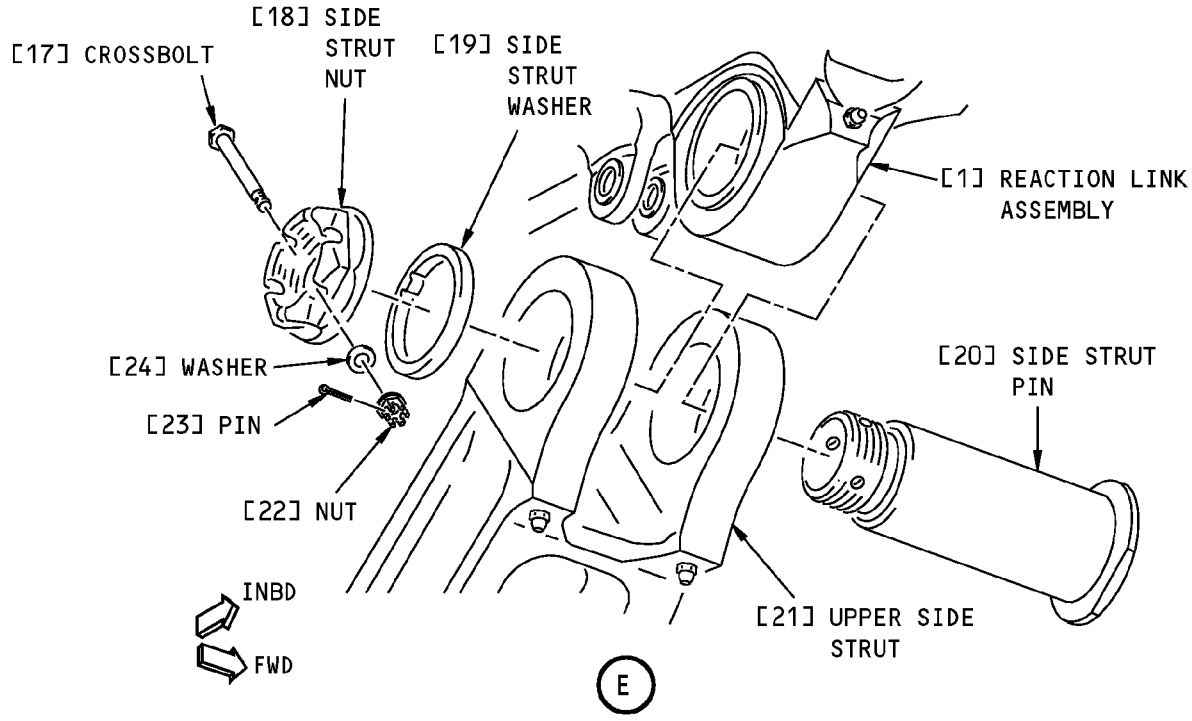
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Main Landing Gear Reaction Link Assembly Installation
Figure 401 (Sheet 2 of 6)/32-11-71-990-801

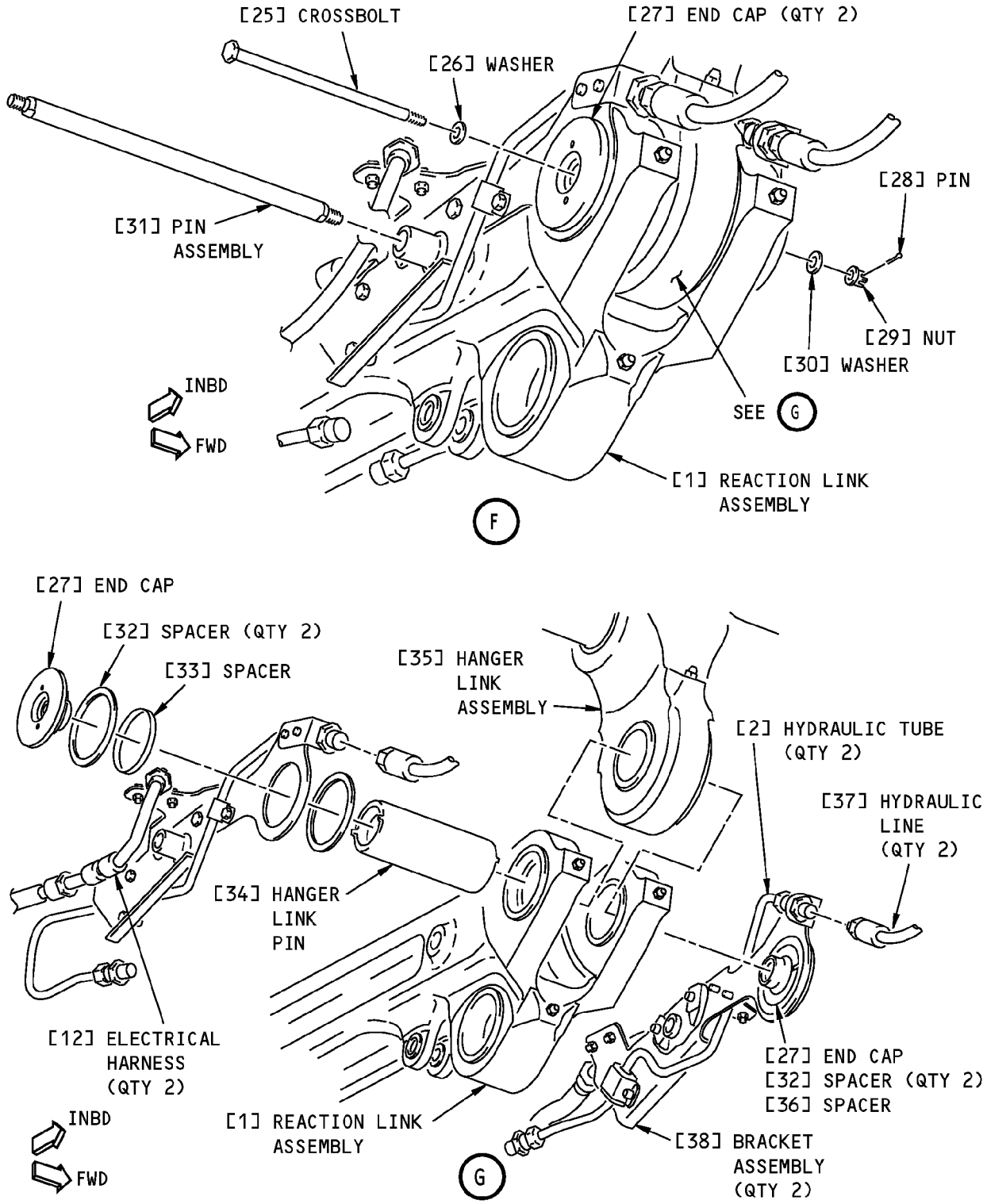
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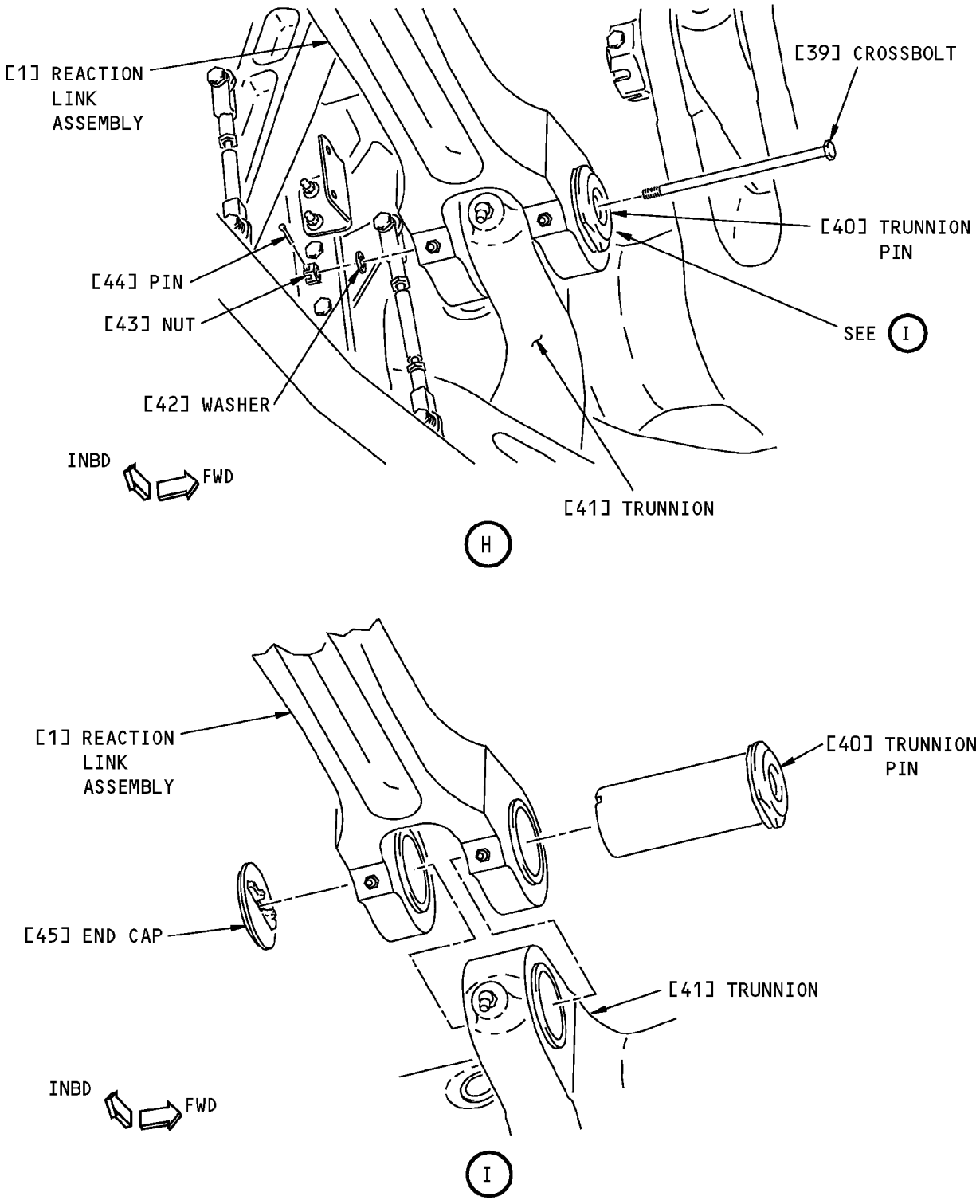
Main Landing Gear Reaction Link Assembly Installation
Figure 401 (Sheet 3 of 6)/32-11-71-990-801

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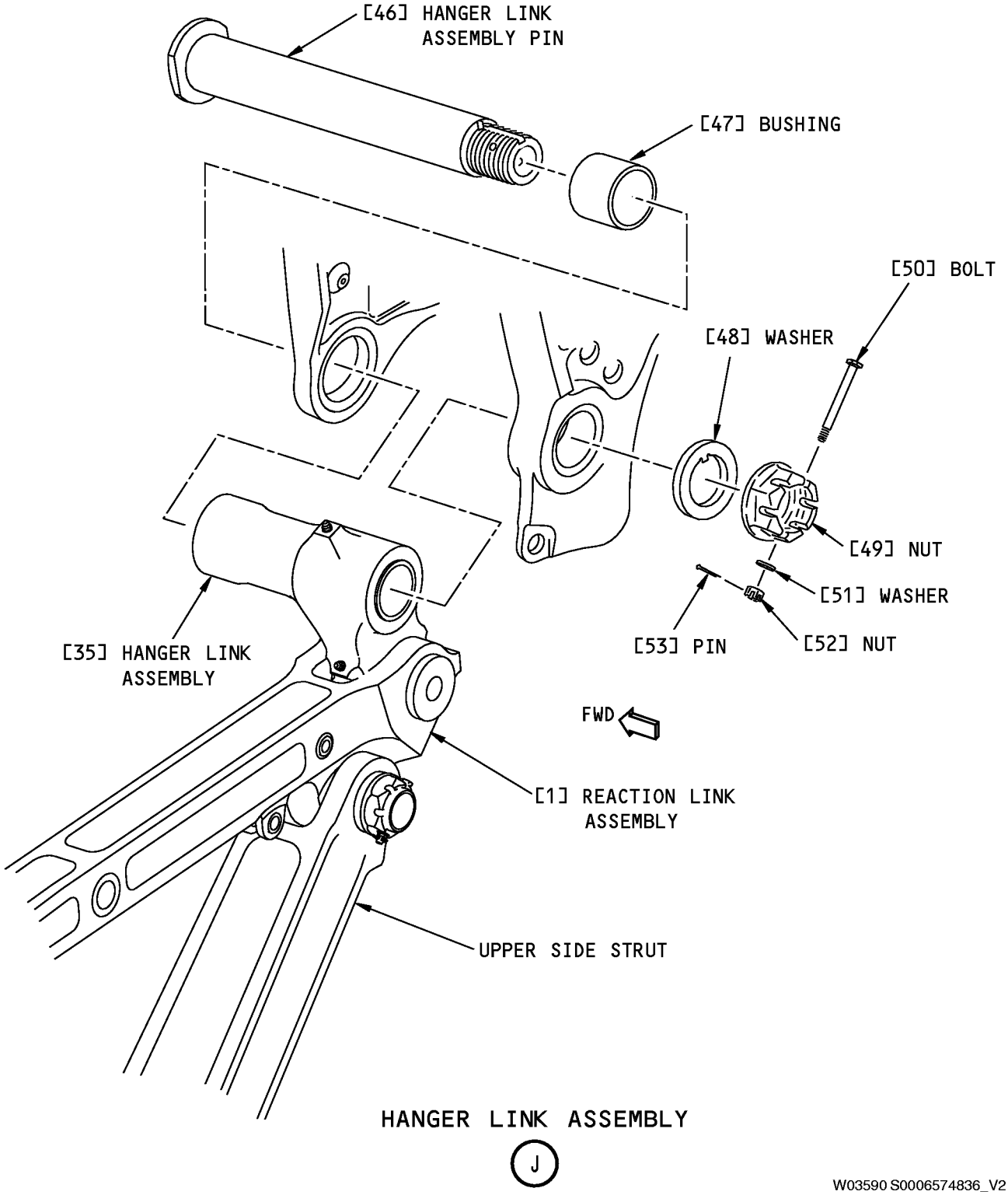
Main Landing Gear Reaction Link Assembly Installation
Figure 401 (Sheet 4 of 6)/32-11-71-990-801

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Main Landing Gear Reaction Link Assembly Installation
Figure 401 (Sheet 5 of 6)/32-11-71-990-801

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Main Landing Gear Reaction Link Assembly Installation
Figure 401 (Sheet 6 of 6)/32-11-71-990-801

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TASK 32-11-71-420-801

3. Main Landing Gear Reaction Link Assembly Installation

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
29-09-00-860-801	Hydraulic Reservoirs Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
29-11-01-860-801	Hydraulic Reservoirs Pressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-32-51-400-801	Main Gear Downlock Actuator Installation (P/B 401)
32-32-91-400-801	Main Gear Downlock Spring Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1359	Assembly - Wrench Adapter (C32029-3, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1360	Assembly - Wrench Adapter (C32029-4, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1368	Protector - Thread (C32029-12, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1369	Protector - Thread (C32029-13, Part of Kit C32029-1) (Part #: C32029-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00013	Grease - Aircraft And Instrument Grease	MIL-PRF-23827 (NATO G-354) (Supersedes MIL-G-23827)
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)
D00633	Grease - Aircraft General Purpose	BMS3-33

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E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
11	Pin	32-32-51-01-003	HAP ALL
44	Pin	32-11-61-03-010	HAP ALL

F. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

G. Prepare for the Installation.

SUBTASK 32-11-71-480-002

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

H. Main Landing Gear Reaction Link Assembly Installation

SUBTASK 32-11-71-420-001

(1) Do these steps to connect the reaction link assembly [1] to the trunnion [41]:

(a) Lubricate the chrome plated surfaces of the trunnion pin [40] and the end cap [45] with grease, D00633.

(b) Position the outboard end of the reaction link assembly [1] for attachment to the trunnion [41].

NOTE: The reaction link assembly weighs approximately 63.2 lb (28.7 kg). Make sure a minimum of two persons will hold the reaction link assembly [1] when you install it to the airplane.

(c) Put the trunnion pin [40] through the reaction link assembly [1] and the trunnion [41].

(d) Install the end cap [45] on the trunnion pin [40].

(e) Put the crossbolt [39] through the trunnion pin [40] and the end cap [45].

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

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(WARNING PRECEDES)

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(f) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces.

1) The threads and thread reliefs of the crossbolt [39]
2) The threads of the nut [43]
3) The faces of the washer [42].

(g) Remove all unwanted corrosion preventive compound, C00913.

(h) Install the washer [42] and the nut [43] on the cross bolt [39].

(i) If it is necessary, loosen the nut [43] to the nearest castellation that aligns with the hole for the cotter pin [44].

(j) Install the cotter pin [44] in the crossbolt [39].

SUBTASK 32-11-71-020-014

(2) If previously removed, do the following steps to install the hanger link assembly [35] into the supporting structure:

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CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(a) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces.

1) The threads and thread reliefs of the hanger link assembly pin [46] and crossbolt [50]
2) The threads of the nuts [49] and [52]
3) The faces of the washers [48] and [51].
4) Remove all unwanted corrosion preventive compound, C00913.

(b) Prior to installation of the hanger link assembly pin [46], lubricate chrome plated surfaces with grease, D00633.

(c) Install the hanger link assembly pin [46] that supports the hanger link assembly [35] to the supporting structure, through the hanger link assembly [35].

(d) Install the washer [48] and nut [49] on the hanger link assembly pin [46].

(e) Tighten the nut [49] to 95 ft-lb (129 N·m) – 115 ft-lb (156 N·m) above run-on torque.

(f) Install the cross bolt [50] in the hanger link assembly pin [46].

(g) Install the cotter pin [53], nut [52] and washer [51] to the crossbolt [50].

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(h) Tighten the nut [52] to 20 in-lb (2.3 N·m) – 24 in-lb (2.7 N·m) above run-on torque.

SUBTASK 32-11-71-420-002

(3) Do these steps to connect the reaction link assembly [1] to the hanger link assembly [35]:

(a) Lubricate the chrome plated surfaces of the hanger link pin [34] and the end cap [27] with grease, D00633.

(b) Put the inboard end of the reaction link assembly [1] in its position for attachment to the hanger link assembly [35].

(c) Put the hanger link pin [34] through the reaction link assembly [1] and the hanger link assembly [35].

(d) Attach the assembly of the end cap [27], bracket assembly [38], hydraulic tube [2], electrical harness [12], and the spacers [32] and [36] on each end of the hanger link pin [34].

(e) If it is necessary to connect the electrical harness [12], do this step:

1) Connect the electrical harness [12] by installing the bolts for the bracket which holds the sensor to the upper lock link [5].

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(f) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to the faces of the washer [26].

(g) Put the washer [26] on the cross bolt [25].

(h) Put the crossbolt [25] through the end caps [27].

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(i) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces.

1) The threads and thread reliefs of the crossbolt [25]

2) The threads of the nut [29]

3) The faces of the washer [30].

(j) Remove all unwanted corrosion preventive compound, C00913.

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(k) Install the washer [30] and the nut [29] on the crossbolt [25].

(l) Tighten the nut [29] to 30 in-lb (3 N·m) – 50 in-lb (6 N·m).

(m) If it is necessary, loosen the nut [29] to the nearest castellation that aligns with the hole for the cotter pin [28].

(n) Install the cotter pin [28] in the crossbolt [25].

(o) Put the pin assembly [31] through the bracket assembly [38] and the reaction link assembly [1].

SUBTASK 32-11-71-420-003

(4) Do these steps to connect the reaction link assembly [1] to the upper side strut [21]:

(a) Lubricate the chrome plated surfaces of the side strut pin [20] with grease, D00633.

(b) Remove the strap that supports the upper side strut [21] to the hanger link assembly [35].

(c) Position the upper side strut [21] for attachment to the reaction link assembly [1].

(d) Put the side strut pin [20] through the upper side strut [21] and the reaction link assembly [1].

NOTE: Use the thread protector, SPL-1368, when you do this step.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(e) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces.

1) The threads and thread reliefs of the side strut pin [20] and the crossbolt [17]

2) The threads of the side strut nut [18] and the nut [22]

3) The faces of the side strut washer [19] and the washer [24].

(f) Remove all unwanted corrosion preventive compound, C00913.

(g) Install the side strut washer [19] and the side strut nut [18] on the side strut pin [20].

(h) Tighten the side strut nut [18] to 600 in-lb (68 N·m) – 900 in-lb (102 N·m).

NOTE: Use the wrench adapter assembly, SPL-1359, to hold the head of the side strut pin [20] when you tighten the side strut nut [18].

(i) If it is necessary, loosen the side strut nut [18] to the nearest castellation that aligns with the hole for the crossbolt [17].

(j) Install the crossbolt [17] in the side strut pin [20].

(k) Install the washer [24] and the nut [22] on the crossbolt [17].

(l) Tighten the nut [22] to 30 in-lb (3 N·m) – 50 in-lb (6 N·m).

(m) If it is necessary, loosen the nut [22] to the nearest castellation that aligns with the hole for the cotter pin [23].

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(n) Install the cotter pin [23] in the crossbolt [17].

SUBTASK 32-11-71-420-004

(5) Do these steps to connect the reaction link assembly [1] to the upper lock link [5]:

(a) Lubricate the chrome plated surfaces of the downlock link pin [13] with grease, D00633.

(b) Position the upper lock link [5] for attachment to the reaction link assembly [1].

(c) Put the downlock link pin [13] through the upper lock link [5] and the reaction link assembly [1].

NOTE: Use the thread protector, SPL-1369, when you do this task.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(d) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces.

1) The threads and thread reliefs of the downlock link pin [13]

2) The threads of the nut [15]

3) The faces of the washer [14].

(e) Remove all unwanted corrosion preventive compound, C00913.

(f) Install the washer [14] and the nut [15] on the downlock link pin [13].

(g) Tighten the nut [15] to 360 in-lb (41 N·m) – 600 in-lb (68 N·m).

NOTE: Use the wrench adapter assembly, SPL-1360, to hold the head of the downlock link pin [20] when you tighten the nut [15].

(h) If it is necessary, loosen the nut [15] to the nearest castellation that aligns with the hole for the cotter pin [16].

(i) Install the cotter pin [16] in the downlock link pin [13].

SUBTASK 32-11-71-640-001

(6) Do these steps to connect the downlock actuator [4] to the reaction link assembly [1]:

(a) Lubricate the inside surface of the lug, the head end of the downlock actuator [4], and the rod end pin [6] with grease, D00633.

NOTE: Use grease, D00013 if grease, D00633, is not available.

(b) Position the head end of the downlock actuator [4] for attachment to the reaction link assembly [1].

1) If it is necessary, retract or extend the downlock actuator [4] to align the head end to the reaction link assembly [1].

(c) Put the rod end pin [6] through the reaction link assembly [1], washers [7] and [8] and the head end of the downlock actuator [4].

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(d) Install the washer [9] and the nut [10] on the rod end pin [6].

(e) Tighten the nut [10] to 15 in-lb (2 N·m) – 25 in-lb (3 N·m).

(f) If it is necessary, loosen the nut [10] to the nearest castellation that aligns with the hole for the cotter pin [11].

(g) Install the cotter pin [11] in the rod end pin [6].

SUBTASK 32-11-71-420-005

(7) Do these steps to connect the hydraulic tubes [2] to the downlock actuator [4]:

(a) Remove the plugs from the ports on the downlock actuator [4].

(b) Lubricate the new packings [46] with fluid, D00153 and install them in the ports of the downlock actuator [4].

(c) Remove the caps from the unions and connect the hydraulic tubes [2] to the downlock actuator [4].

(d) Tighten the hydraulic tubes [2] to 140 pound-inches

(16 Newton-meters).

(e) Loosen the hydraulic tubes [2] and re-tighten them to 133 in-lb (15 N·m) – 147 in-lb (17 N·m).

SUBTASK 32-11-71-420-006

(8) Do these steps to connect the hydraulic lines [37] to the hydraulic tube [2]s that are attached to the bracket assembly [38]:

(a) Remove the caps from the hydraulic lines [37].

(b) Connect the hydraulic lines [37] to the hydraulic tubes [2].

(c) Tighten the hydraulic lines [37].

SUBTASK 32-11-71-420-007

(9) Do this task: Main Gear Downlock Spring Installation, TASK 32-32-91-400-801.

SUBTASK 32-11-71-710-001

(10) Do this task: Main Gear Downlock Actuator Installation, TASK 32-32-51-400-801.

SUBTASK 32-11-71-860-004

(11) Do this task: Hydraulic Reservoirs Pressurization, TASK 29-11-01-860-801 or Hydraulic Reservoirs Pressurization, TASK 29-09-00-860-801.

SUBTASK 32-11-71-210-001

(12) Check the hydraulic connections for leakage.

I. Put the Airplane Back to Its Usual Condition.

SUBTASK 32-11-71-860-002

(1) For hydraulic systems A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

——————— END OF TASK ———————

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MAIN LANDING GEAR HYDRAULIC SHIMMY DAMPER COMPONENTS - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the compensator assembly for the hydraulic shimmy damper on the main landing gear

(2) An installation of the compensator assembly for the hydraulic shimmy damper on the main landing gear

(3) A removal of the manifold assembly for the hydraulic shimmy damper on the main landing gear

(4) An installation of the manifold assembly for the hydraulic shimmy damper on the main landing gear

(5) A removal of the end gland assembly for the hydraulic shimmy damper on the main landing gear

(6) An installation of the end gland assembly for the hydraulic shimmy damper on the main landing gear

TASK 32-11-81-000-803

2. Main Landing Gear Shimmy Damper Compensator Removal

(Figure 201)

A. General

(1) This procedure provides instructions to remove the compensator assembly from the hydraulic shimmy damper on the main landing gear torsion links.

B. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Removal

SUBTASK 32-11-81-480-009

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-81-480-010

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-11-81-860-005

(3) For the A and B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

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SUBTASK 32-11-81-860-011

(4) For the A and B hydraulic systems, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

E. Main Landing Gear Compensator Assembly Removal

SUBTASK 32-11-81-020-006

(1) Remove the lockwire from the compensator assembly [16].

SUBTASK 32-11-81-020-007

(2) Remove the compensator assembly [16] from the manifold assembly [4] on the shimmy damper [1].

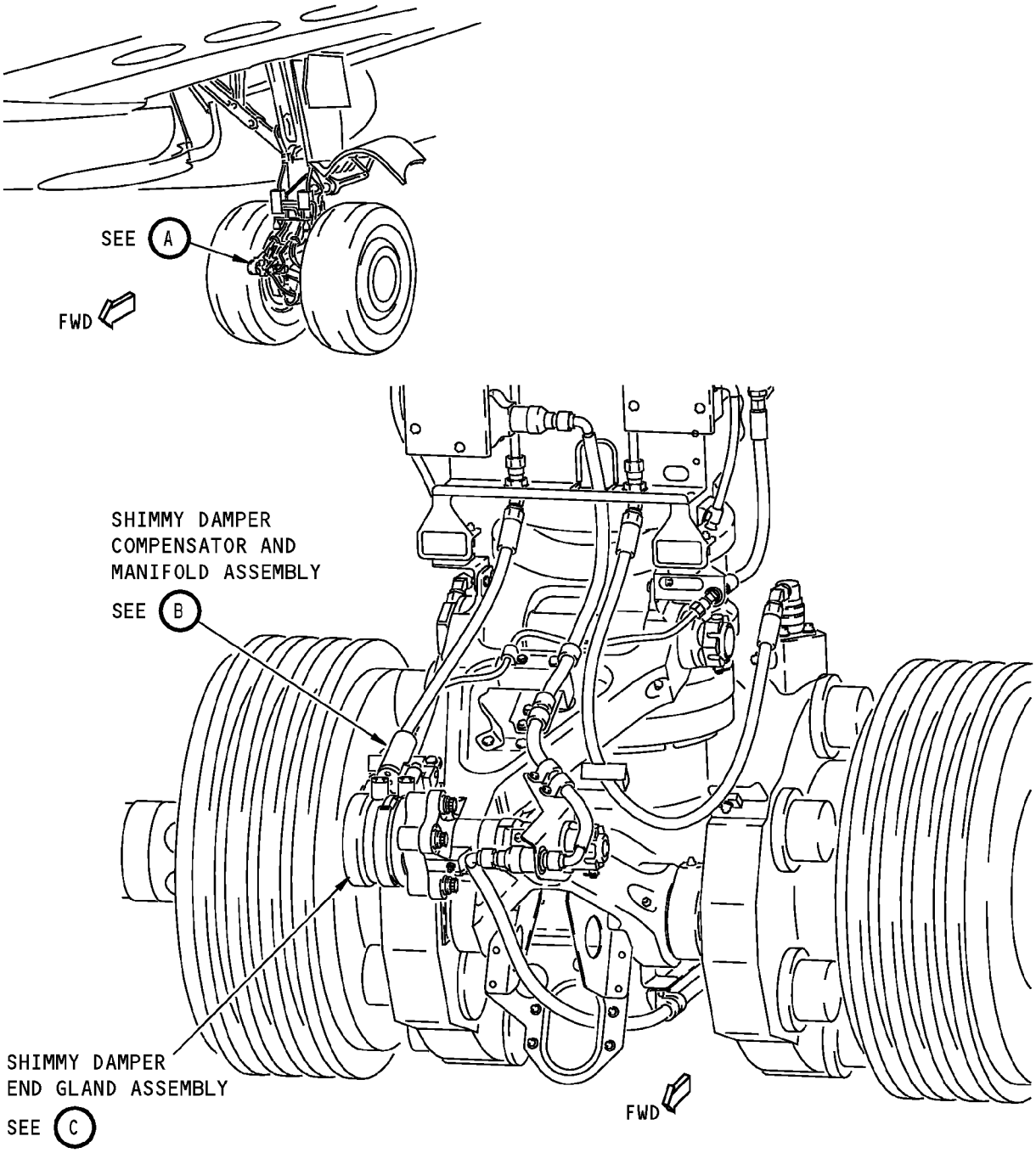
(a) Remove the packing [14] and the backup rings [13,15] from the compensator assembly [16] and discard.

SUBTASK 32-11-81-480-011

(3) Install a plug in the port of the manifold assembly [4] for the compensator assembly [16].

END OF TASK

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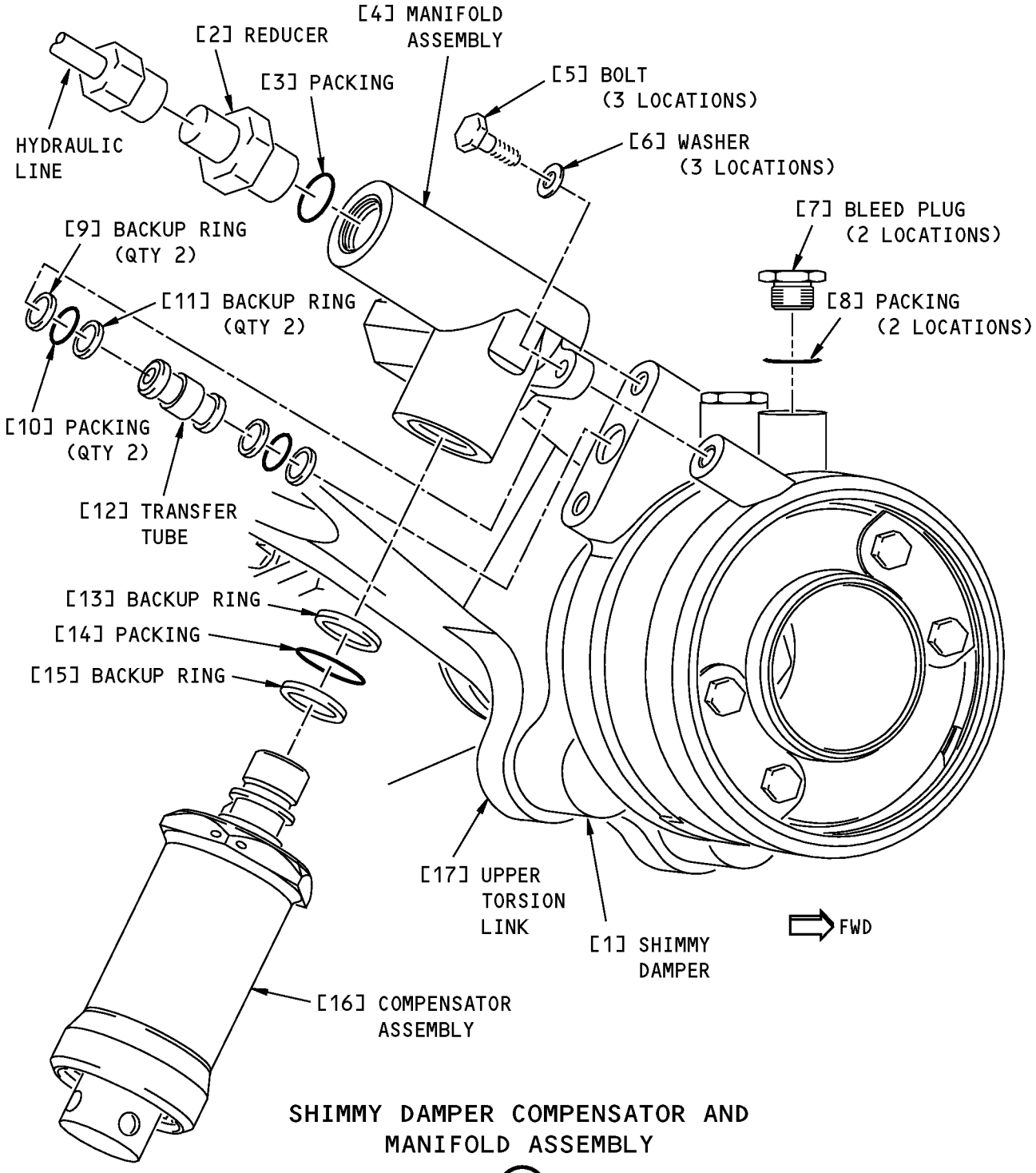


LEFT MAIN LANDING GEAR
(RIGHT MAIN LANDING GEAR IS EQUIVALENT)

A

Main Landing Gear Shimmy Damper Component Installation
Figure 201 (Sheet 1 of 3)/32-11-81-990-802

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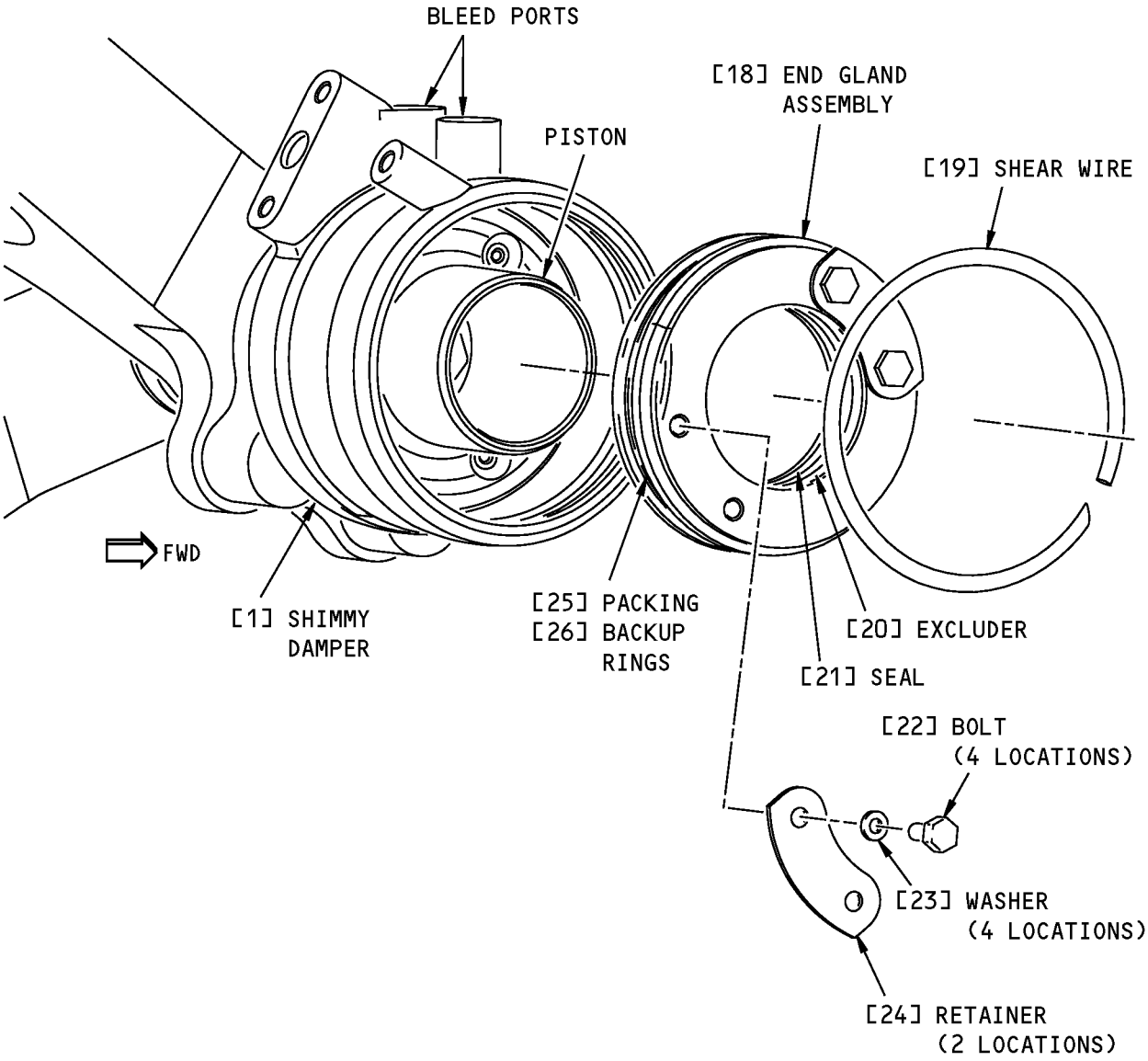


SHIMMY DAMPER COMPENSATOR AND MANIFOLD ASSEMBLY

B

Main Landing Gear Shimmy Damper Component Installation
Figure 201 (Sheet 2 of 3)/32-11-81-990-802

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SHIMMY DAMPER END GLAND ASSEMBLY

C

Main Landing Gear Shimmy Damper Component Installation
Figure 201 (Sheet 3 of 3)/32-11-81-990-802

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TASK 32-11-81-400-802

3. Main Landing Gear Shimmy Damper Compensator Installation

(Figure 201)

A. General

(1) This procedure provides instructions to install the compensator assembly for the hydraulic shimmy damper on the main landing gear torsion links.

B. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-11-81-870-801	Hydraulic Shimmy Damper - Bleeding (P/B 401)

C. Consumable Materials

Reference	Description	Specification
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
13	Ring	32-11-81-01-197	HAP 012, 013, 015-026, 028-054, 101-999
14	Packing	32-11-81-01-195	HAP 012, 013, 015-026, 028-054, 101-999
15	Ring	32-11-81-01-197	HAP 012, 013, 015-026, 028-054, 101-999
16	Compensator	32-11-81-01-235	HAP 012, 013, 015-026, 028-054, 101-999

E. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

F. Main Landing Gear Compensator Assembly Installation

SUBTASK 32-11-81-480-012

(1) Remove the plug from the manifold assembly [4] on the shimmy damper [1], if one is installed.

SUBTASK 32-11-81-420-009

(2) Make sure the new packing [14] and new ring [13] and new ring [15] are installed on thecompensator [16] assembly.

SUBTASK 32-11-81-420-010

(3) Lubricate the compensator assembly thread area [16], the packing [14], and the backup rings [13,15] with fluid, D00153.

SUBTASK 32-11-81-420-011

(4) Install the compensator assembly [16] in its location in the manifold assembly [4].

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SUBTASK 32-11-81-420-012

(5) Tighten the compensator assembly [16] to 385 ±19 in-lb (43.5 ±2.1 N·m).

SUBTASK 32-11-81-420-013

(6) Install lockwire on the compensator to the closest bolt [5] for the manifold assembly [4].

SUBTASK 32-11-81-420-014

(7) Do this task: Hydraulic Shimmy Damper - Bleeding, TASK 32-11-81-870-801.

(a) Look for leaks at the compensator connection when you bleed the shimmy damper [1].

G. Put the Airplane Back to its Usual Condition

SUBTASK 32-11-81-480-013

(1) Remove the chocks from around the landing gear tires.

SUBTASK 32-11-81-860-006

(2) For the A and B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

——————— END OF TASK ———————

TASK 32-11-81-000-804

4. Main Landing Gear Shimmy Damper Manifold Assembly Removal

(Figure 201)

A. General

(1) This procedure provides instructions to remove the manifold assembly from the hydraulic shimmy damper on the main landing gear torsion links.

B. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Removal

SUBTASK 32-11-81-480-014

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-81-480-015

(2) Make sure the tires have chocks installed around them.

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SUBTASK 32-11-81-860-007

(3) For the A and B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-11-81-860-012

(4) For the A and B hydraulic systems, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

E. Main Landing Gear Manifold Assembly Removal

SUBTASK 32-11-81-020-008

(1) Disconnect the hydraulic line from the manifold assembly [4] on the hydraulic shimmy damper [1].

SUBTASK 32-11-81-020-009

(2) If the replacement manifold assembly [4] does not have a hydraulic reducer [2] installed, do these steps:

(a) Remove the hydraulic reducer [2] and the packing [3].

(b) Discard the packing [3].

SUBTASK 32-11-81-480-016

(3) Do these steps to remove the manifold assembly [4]:

(a) Remove the bolts [5] and the washers [6] that connect the manifold assembly [4] to the shimmy damper [1].

(b) Remove the manifold assembly [4] from the shimmy damper [1].

(c) Remove the transfer tube [12] from its location.

NOTE: The transfer tube can be in the manifold assembly or the port for the manifold assembly.

(d) Remove the packings [10] and the backup rings [9,11] from the transfer tube [12] and discard.

——————— END OF TASK ———————

TASK 32-11-81-400-803

5. Main Landing Gear Shimmy Damper Manifold Assembly Installation

(Figure 201)

A. General

(1) This procedure provides instructions to install the manifold assembly on the hydraulic shimmy damper on the main landing gear.

B. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-11-81-870-801	Hydraulic Shimmy Damper - Bleeding (P/B 401)

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C. Consumable Materials

Reference	Description	Specification
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange~able & intermixable with Type V)

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	Packing	32-11-81-01-100	HAP 012, 013, 015-026, 028-054, 101-999
9,11	Ring	32-11-81-01-290	HAP 012, 013, 015-026, 028-054, 101-999
10	Packing	32-11-81-01-285	HAP 012, 013, 015-026, 028-054, 101-999

E. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

F. Main Landing Gear Manifold Assembly Installation

SUBTASK 32-11-81-420-015

(1) Make sure the matting surfaces on the manifold assembly [4] and on the shimmy damper [1] are clean.

SUBTASK 32-11-81-480-017

(2) Remove the plug from the new manifold assembly [4] and from the shimmy damper [1], if they are installed.

SUBTASK 32-11-81-480-018

(3) Do these steps to install the the transfer tube [12]:

(a) Install thenew packing [10]and the new rings [9,11]on the transfer tube [12] in their two locations.

(b) Lubricate the transfer tube [12], the packings [10], and the backup rings [9,11] with fluid, D00153.

(c) Install the transfer tube [12] in its location in the shimmy damper [1].

SUBTASK 32-11-81-480-019

(4) Do these steps to install the manifold assembly [4]:

(a) Put the manifold assembly [4] in its location on the shimmy damper [1] (and the transfer tube [12]).

(b) Install the bolts [5] and the washers [6] to connect the manifold assembly [4] to the shimmy damper [1].

(c) Install lockwire on the compensator to the closest bolt [5] for the manifold assembly [4].

SUBTASK 32-11-81-020-010

(5) If the new manifold assembly [4] does not have a reducer [2] installed, do these steps:

(a) Remove the plug from the port in the manifold assembly, if one is installed.

(b) Lubricate the hydraulic reducer [2] and the new packing [3] with fluid, D00153.

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(c) Install the packing [3] on the hydraulic reducer [2].

(d) Install the reducer [2] in the manifold assembly [4].

SUBTASK 32-11-81-480-020

(6) Remove the cap from the reducer [2], if one is installed.

SUBTASK 32-11-81-420-016

(7) Connect the hydraulic line to the manifold assembly [4] on the hydraulic shimmy damper [1].

SUBTASK 32-11-81-420-017

(8) Do this task: Hydraulic Shimmy Damper - Bleeding, TASK 32-11-81-870-801.

(a) Look for leaks at the manifold connection and the hydraulic line connection when you bleed the shimmy damper [1].

G. Put the Airplane Back to its Usual Condition

SUBTASK 32-11-81-480-021

(1) Remove the chocks from around the landing gear tires.

SUBTASK 32-11-81-860-008

(2) For the A and B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

——————— END OF TASK ———————

TASK 32-11-81-000-805

6. Main Landing Gear Shimmy Damper End Gland Assembly Removal

(Figure 201)

A. General

(1) This procedure provides instructions to remove the end gland assembly from the hydraulic shimmy damper on the main landing gear torsion links.

B. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Removal

SUBTASK 32-11-81-480-022

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

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SUBTASK 32-11-81-480-023

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-11-81-860-009

(3) For the A and B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-11-81-860-013

(4) For the A and B hydraulic systems, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

E. Main Landing Gear End Gland Assembly Removal

SUBTASK 32-11-81-020-011

(1) Remove the bolts [22] and the washers [23] that hold the retainers [24] to the end gland assembly [18].

SUBTASK 32-11-81-020-012

(2) Remove the retainers [24] from the end gland assembly [18].

SUBTASK 32-11-81-020-013

(3) Remove the shear wire [19] from the inner diameter of the shimmy damper [1].

SUBTASK 32-11-81-020-014

(4) Remove the end gland assembly [18] from the shimmy damper [1].

SUBTASK 32-11-81-480-024

(5) Put a covering on the end of the shimmy damper [1] for protection.

——————— END OF TASK ———————

TASK 32-11-81-400-804

7. Main Landing Gear Shimmy Damper End Gland Assembly Installation

(Figure 201)

A. General

(1) This procedure provides instructions to install the end gland assembly for the hydraulic shimmy damper on the main landing gear torsion links.

B. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-11-81-870-801	Hydraulic Shimmy Damper - Bleeding (P/B 401)

C. Consumable Materials

Reference	Description	Specification
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
20	Excluder	32-11-81-01-330	HAP 012, 013, 015-026, 028-054, 101-999

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(Continued)

AMM Item	Description	AIPC Reference	AIPC Effectivity
21	Seal	32-11-81-01-335	HAP 012, 013, 015-026, 028-054, 101-999
25	Packing	32-11-81-01-315	HAP 012, 013, 015-026, 028-054, 101-999
26	Ring	32-11-81-01-320	HAP 012, 013, 015-026, 028-054, 101-999

E. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

F. Main Landing Gear End Gland Assembly Installation

SUBTASK 32-11-81-480-025

(1) If the seals for the end gland assembly [18] are not installed, do these steps:

(a) Install the new excluder [20] in the inside groove closest to the outside face of the end gland assembly [18].

(b) Install the new seal [21] in the inside groove closest to the inside face of the end gland assembly [18].

(c) Install the new packing [25] and the new rings [26] in the outside groove on the end gland assembly [18].

SUBTASK 32-11-81-480-026

(2) Remove the covering from the end of the shimmy damper [1], if it is installed.

SUBTASK 32-11-81-480-027

(3) Lubricate all of the seals for the end gland assembly [18] with fluid, D00153.

SUBTASK 32-11-81-020-015

(4) Install the end gland assembly [18] in the shimmy damper [1].

NOTE: Make sure the backup rings stay in their location.

SUBTASK 32-11-81-020-016

(5) Install the shear wire [19] on the inner diameter of the shimmy damper [1].

NOTE: The shear wire must be in the groove in the end gland assembly, and the groove in the inner diameter of the shimmy damper.

SUBTASK 32-11-81-020-017

(6) Put the retainers [24] in their position on the end gland assembly [18].

SUBTASK 32-11-81-020-018

(7) Install the bolts [22] and the washers [23] to hold the retainers [24] to the end gland assembly [18].

SUBTASK 32-11-81-420-018

(8) Do this task: Hydraulic Shimmy Damper - Bleeding, TASK 32-11-81-870-801.

(a) Look for leaks at the end gland assembly [18] interface when you bleed the shimmy damper [1].

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G. Put the Airplane Back to its Usual Condition

SUBTASK 32-11-81-480-028

(1) Remove the chocks from around the landing gear tires.

SUBTASK 32-11-81-860-010

(2) For the A and B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

END OF TASK

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MAIN LANDING GEAR HYDRAULIC SHIMMY DAMPER - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the hydraulic shimmy damper from the main landing gear

(2) An installation of the hydraulic shimmy damper on the main landing gear

(3) Bleed the hydraulic shimmy damper on the main landing gear

TASK 32-11-81-000-801

2. Main Landing Gear Shimmy Damper Removal

(Figure 401)

A. General

(1) This procedure provides instructions to remove the hydraulic shimmy damper for the main landing gear from the torsion links.

B. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-11-51-020-801	Main Landing Gear Torsion Link Disconnection (P/B 401)

C. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Removal

SUBTASK 32-11-81-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-81-480-002

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-11-81-860-001

(3) For the A and B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-11-81-860-014

(4) For the A and B hydraulic system, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

E. Main Landing Gear Hydraulic Shimmy Damper Removal

SUBTASK 32-11-81-020-001

(1) Disconnect the hydraulic line from the manifold assembly [2] on the hydraulic shimmy damper [1].

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SUBTASK 32-11-81-020-002

(2) If the replacement hydraulic shimmy damper [1] does not have a reducer [3] installed in the manifold assembly [2], do these steps:

(a) Remove the hydraulic reducer [3] and the packing [4] from the shimmy damper you removed.

(b) Discard the packing [4].

(c) Install the reducer [3] with a cap and a new packing [4] in the port of the manifold assembly [2] of the replacement shimmy damper [1].

(d) As an alternative, you can install a plug in the port of the manifold assembly [2].

SUBTASK 32-11-81-020-003

(3) Do this task: Main Landing Gear Torsion Link Disconnection, TASK 32-11-51-020-801.

SUBTASK 32-11-81-020-004

HAP 031-054, 101-999

(4) Hold the hydraulic shimmy damper [1] in its location and remove the bolts [16], the washers [17] and [22] and the straight sleeve [21] that holds the hydraulic shimmy damper to the upper torsion link [18].

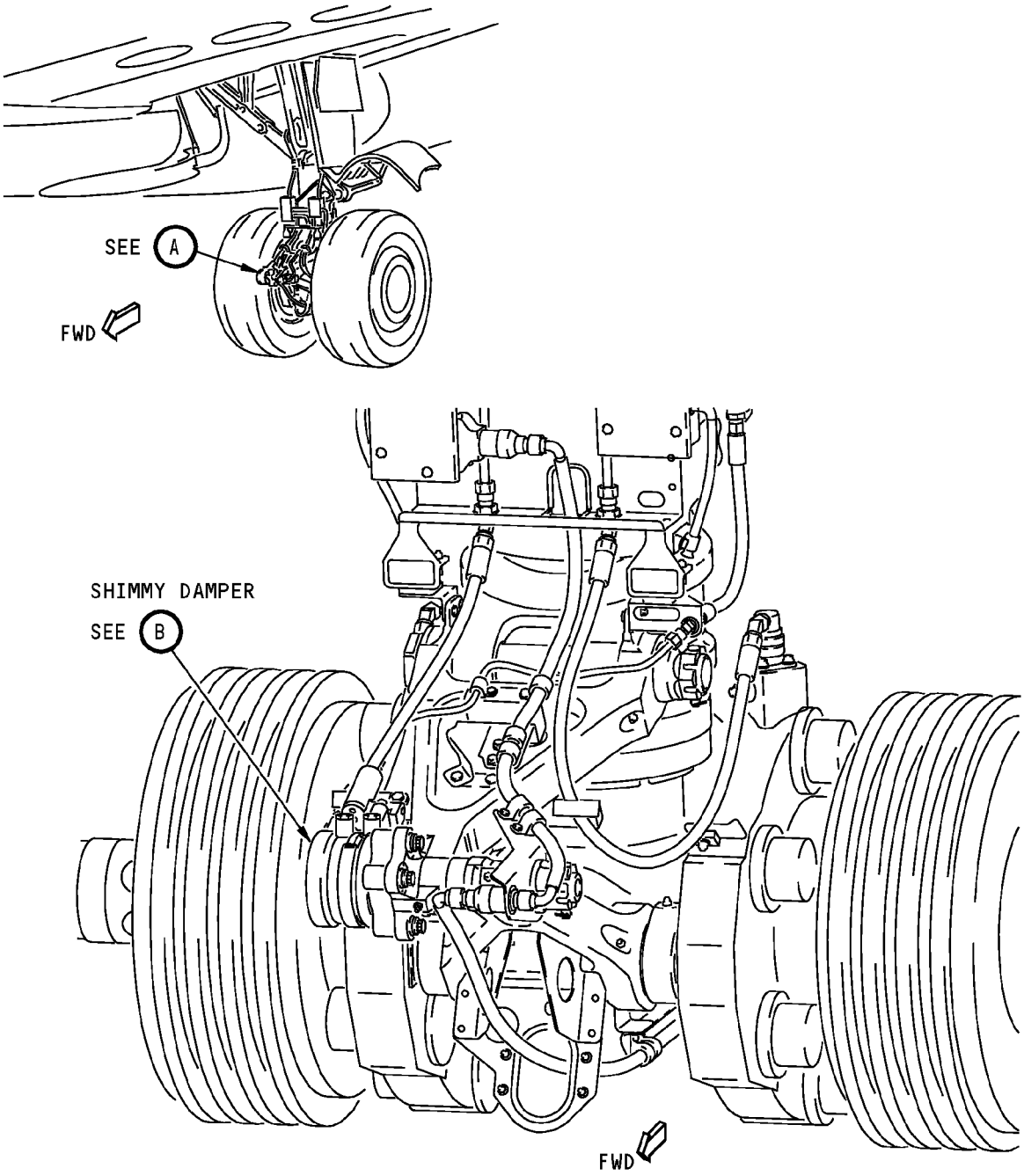
HAP 001-013, 015-026, 028-030

(5) Hold the hydraulic shimmy damper [1] in its location and remove the bolts [16], the washers [17] and the straight sleeve [21] that holds the hydraulic shimmy damper to the upper torsion link [18].

HAP ALL

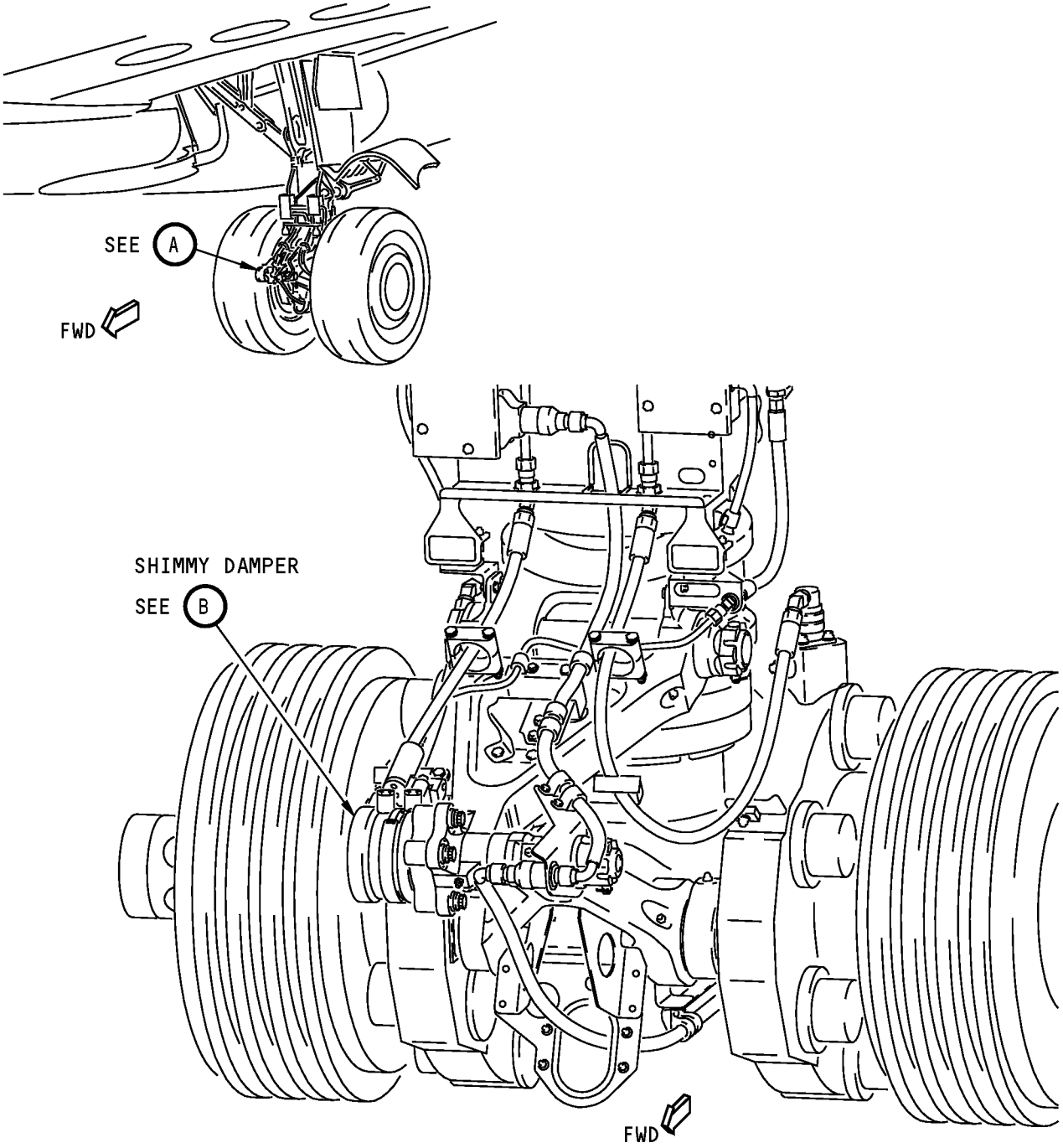
——————— END OF TASK ———————

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Main Landing Gear Shimmy Damper Installation
Figure 401 (Sheet 1 of 4)/32-11-81-990-801

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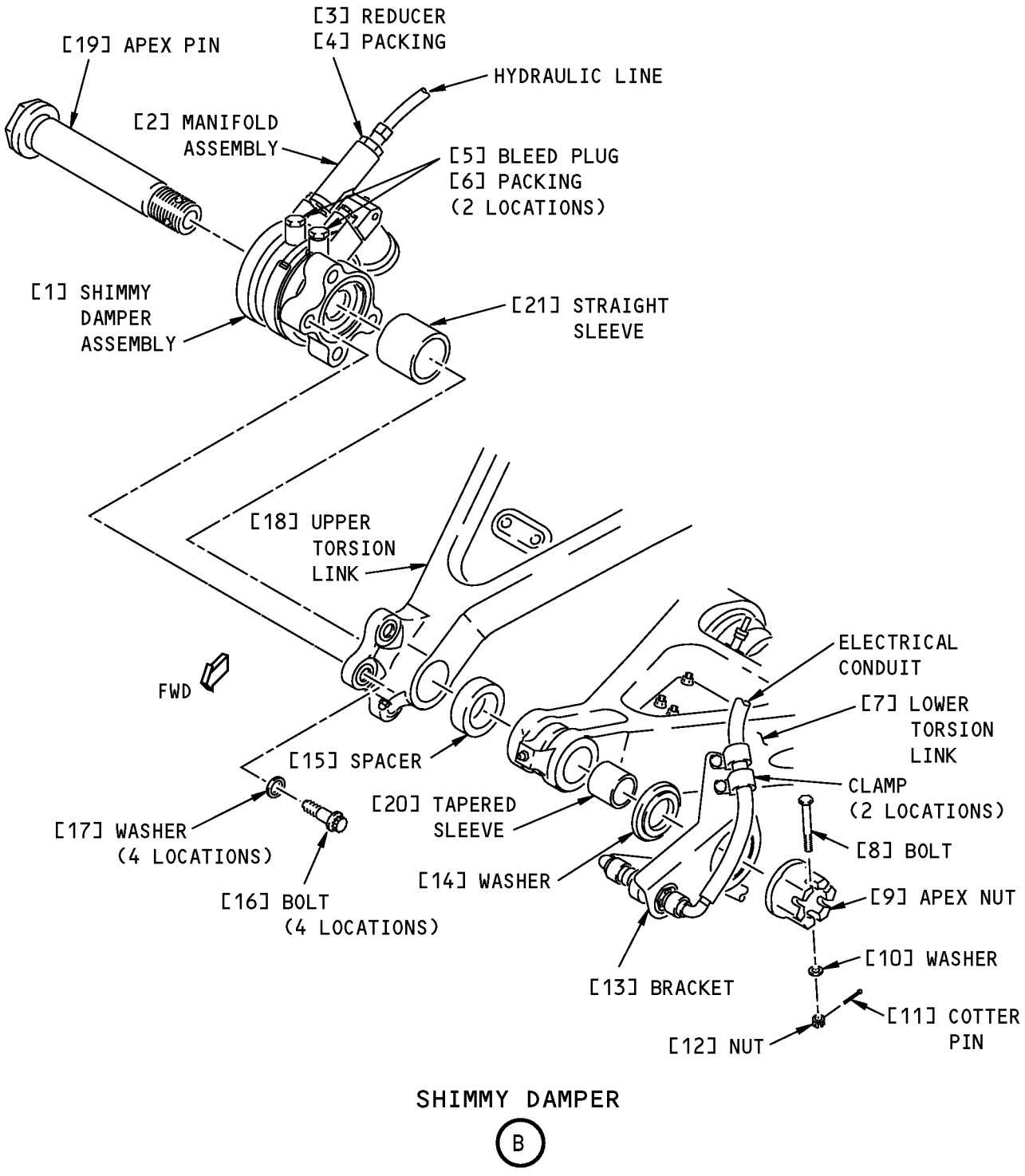


LEFT MAIN LANDING GEAR
(RIGHT MAIN LANDING GEAR IS EQUIVALENT)

A

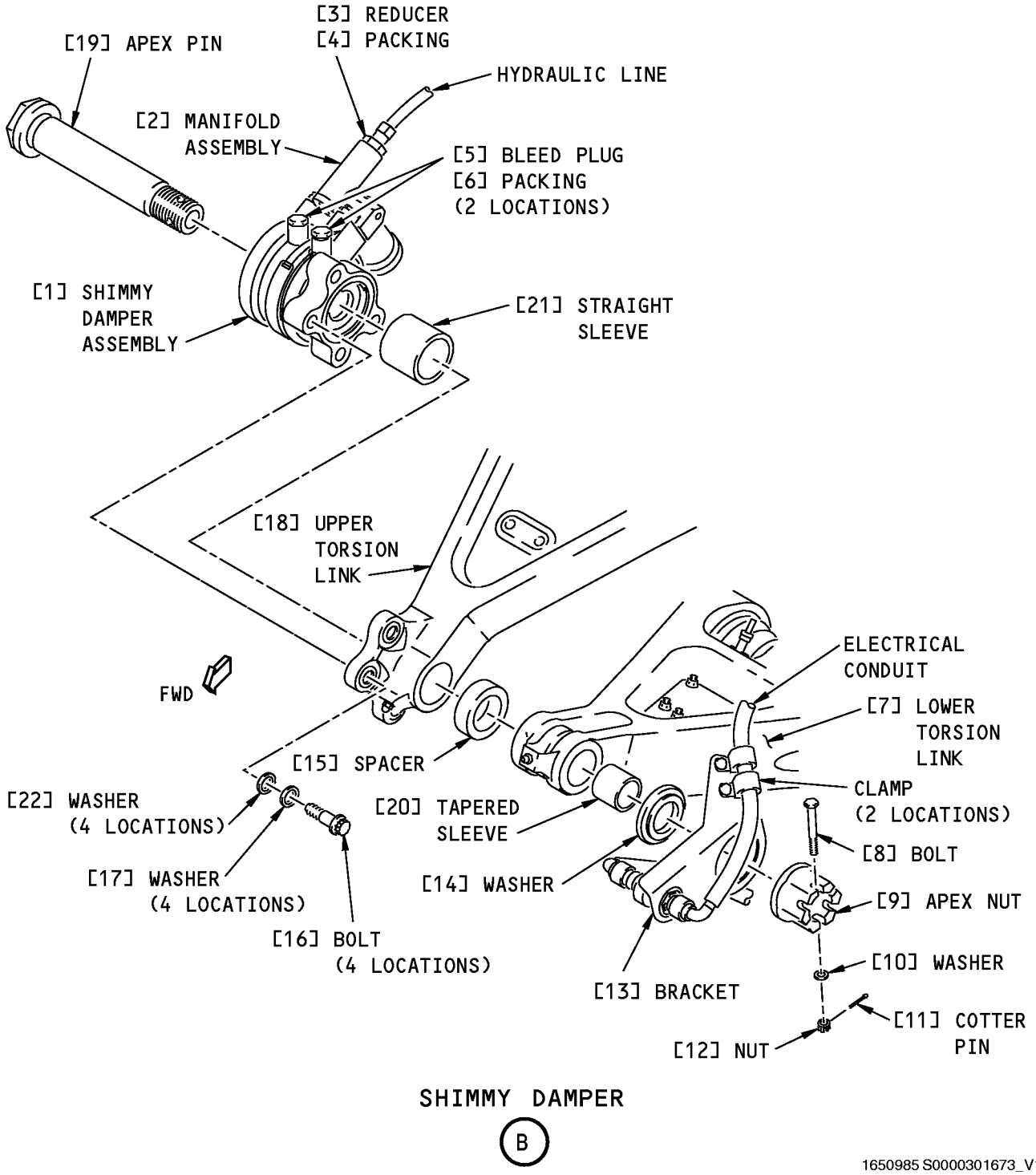
Main Landing Gear Shimmy Damper Installation
Figure 401 (Sheet 2 of 4)/32-11-81-990-801

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Main Landing Gear Shimmy Damper Installation
Figure 401 (Sheet 3 of 4)/32-11-81-990-801

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Main Landing Gear Shimmy Damper Installation
Figure 401 (Sheet 4 of 4)/32-11-81-990-801

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TASK 32-11-81-400-801

3. Main Landing Gear Shimmy Damper Installation

(Figure 401)

A. General

(1) This procedure provides instructions to install the hydraulic shimmy damper for the main landing gear on the torsion links.

B. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-11-51-400-803	Main Landing Gear Torsion Link Connection (P/B 401)

C. Consumable Materials

Reference	Description	Specification
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)
D00633	Grease - Aircraft General Purpose	BMS3-33
G50136	Paste - Corrosion Inhibiting, Non-drying	BMS 3-38

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	Packing	32-11-81-01-100	HAP 012, 013, 015-026, 028-054, 101-999
11	Pin	32-11-81-01-020	HAP 012, 013, 015-026, 028-054, 101-999

E. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

F. Main Landing Gear hydraulic Shimmy Damper Installation

SUBTASK 32-11-81-420-002

(1) Prepare the following parts for installation:

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HAP 031-054, 101-999

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(a) Apply a thin layer of compound, C00913 to the thread reliefs, threads of the bolt [16], faces of the washer [17] and [22], the inside diameter of the straight sleeve [21] and the threads inside the shimmy damper attach holes.

HAP 001-013, 015-026, 028-030

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(b) Apply a thin layer of compound, C00913 to the thread reliefs, threads of the bolt [16], faces of the washer [17], the inside diameter of the straight sleeve [21] and the threads inside the shimmy damper attach holes.

HAP ALL

(c) Apply a thin layer of grease, D00633 to the outside diameter of the straight sleeve [21].

NOTE: Make sure you install the bolts and washers and the straight sleeve immediately while the compund is wet.

(d) Apply a thin layer of primer, C00259, compound, C00913 or corrosion inhibiting non-drying paste, G50136 to the shimmy damper face common to the upper torsion link.

1) Make sure no compound is in or on the piston shaft of the damper.

(e) Remove excess compound.

SUBTASK 32-11-81-420-020

(2) Hold the hydraulic shimmy damper [1] in its location on the upper torsion link [18].

SUBTASK 32-11-81-420-003

HAP 031-054, 101-999

CAUTION: MAKE SURE THAT YOU INSTALL THE SLEEVES IN THE CORRECT LOCATIONS. IF YOU INSTALL THE SLEEVES IN THE INCORRECT LOCATIONS, VIBRATION CAN CAUSE DAMAGE TO COMPONENTS OF LANDING GEAR.

(3) Loosely install the bolts [16], the washers [17] and [22], and the straight sleeve [21] to hold the hydraulic shimmy damper to the upper torsion link [18].

NOTE: The shimmy damper installation has a straight sleeve and a tapered sleeve. The straight sleeve is longer than the tapered sleeve.

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HAP 001-013, 015-026, 028-030

CAUTION: MAKE SURE THAT YOU INSTALL THE SLEEVES IN THE CORRECT LOCATIONS. IF YOU INSTALL THE SLEEVES IN THE INCORRECT LOCATIONS, VIBRATION CAN CAUSE DAMAGE TO COMPONENTS OF LANDING GEAR.

(4) Loosely install the bolts [16], the washers [17] and the straight sleeve [21] to hold the hydraulic shimmy damper to the upper torsion link [18].

NOTE: The shimmy damper installation has a straight sleeve and a tapered sleeve. The straight sleeve is longer than the tapered sleeve.

NOTE: Addition of a second washer is recommended to prevent the bolt [16] from bottoming out in the hole and coming loose in service.

HAP ALL

SUBTASK 32-11-81-420-004

CAUTION: MAKE SURE THAT YOU INSTALL THE SLEEVES IN THE CORRECT LOCATIONS. IF YOU INSTALL THE SLEEVES IN THE INCORRECT LOCATIONS, VIBRATION CAN CAUSE DAMAGE TO COMPONENTS OF LANDING GEAR.

(5) Do this task: Main Landing Gear Torsion Link Connection, TASK 32-11-51-400-803.

(a) When you connect the torsion links, do not tighten the apex nut [9] completely or install the retention bolt [8] for the apex nut [9].

SUBTASK 32-11-81-420-022

(6) Tighten the bolts [16] for the hydraulic shimmy damper, in a cross pattern, to 450 in-lb (51 N·m) to 550 in-lb (62 N·m).

(a) Install lockwire on the bolts [16] with the double-twist method.

SUBTASK 32-11-81-420-019

(7) Tighten the apex nut [9] to 50-58 pound-feet (67.5-78.3 Newton-meters).

(a) Advance the apex nut [9] to the nearest castellation that aligns with the hole in the apex pin [19]. The final torque must not be more than 150 ft-lb (203.4 N·m).

(b) Install the retention bolt [8], washer [10], nut [12], and new pin [11].

SUBTASK 32-11-81-020-005

(8) If the new hydraulic shimmy damper [1] does not have a reducer [3] and new packing [4] installed in the manifold assembly [2], do these steps:

(a) Remove the plug from the port in the manifold assembly [2], if one is installed.

(b) Lubricate the hydraulic reducer [3] and the packing [4] with fluid, D00153.

(c) Install the packing [4] on the hydraulic reducer [3].

(d) Install the reducer [3] in the manifold assembly [2].

SUBTASK 32-11-81-480-004

(9) Remove the cap on the reducer [3], if one is installed.

SUBTASK 32-11-81-420-007

(10) Connect the hydraulic line to the reducer [1] on the shimmy damper manifold assembly [2].

SUBTASK 32-11-81-420-008

(11) Do this task: Hydraulic Shimmy Damper - Bleeding, TASK 32-11-81-870-801.

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(a) Look for leaks at the hydraulic connection when you bleed the shimmy damper [1].

G. Put the Airplane Back to its Usual Condition

SUBTASK 32-11-81-480-005

(1) Remove the chocks from around the landing gear tires.

SUBTASK 32-11-81-860-002

(2) For the A and B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

——————— END OF TASK ———————

TASK 32-11-81-870-801

4. Hydraulic Shimmy Damper - Bleeding

(Figure 401)

A. General

(1) This task provides instructions to bleed the hydraulic shimmy damper.

(2) The hydraulic shimmy damper has an internal piston with areas for hydraulic fluid on the two sides of the piston. To bleed the shimmy damper it is necessary to remove the air from the two fluid areas.

B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
6	Packing	32-11-81-01-305	HAP 012, 013, 015-026, 028-054, 101-999

D. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

E. Bleed the Hydraulic Shimmy Damper

SUBTASK 32-11-81-480-006

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-81-860-003

(2) If the bleed plugs [5] need new packings [6], do these steps:

(a) For the A hydraulic system, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

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(b) Remove the bleed plug [5] from the shimmy damper [1].

NOTE: Hydraulic return pressure that remains after you have depressurized system A will force fluid out the bleed port when you remove the bleed plug.

(c) Install the packing [6] on the bleed plug [5].

(d) Install the bleed plug [5] in its location on the shimmy damper [1].

SUBTASK 32-11-81-480-007

(3) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-11-81-790-001

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) For the hydraulic system (system A), do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-11-81-480-008

(5) Make sure the tires have chocks installed around them.

SUBTASK 32-11-81-840-001

(6) Do the steps that follow to bleed the air from the hydraulic shimmy damper [1] at the two bleed plugs [5]:

(a) Bleed one side of the hydraulic shimmy damper piston:

NOTE: The shimmy damper hydraulic pressure is supplied from the return lines of hydraulic system (system A), to bleed the damper it is necessary to cycle the landing gear control lever.

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

1) Move the landing gear control handle to the UP position.
2) Open one of the two bleed plugs [5].

NOTE: You can open either the left or the right bleed plugs.

3) Move the landing gear control handle to the DOWN position.
4) Close the bleed plug [5].

(b) Continue to move the landing gear control handle and open and close the bleed plug as stated above until the air is gone from the fluid flow.

(c) Bleed the other side of the hydraulic shimmy damper piston through the bleed plug that remains:

1) Do the steps that follow to bleed the hydraulic shimmy damper [1] from the other bleed plug [5]:
   a) Move the landing gear control handle to the UP position.
   b) Open the other bleed plug [5].
   c) Move the landing gear control handle to the DOWN position.
   d) Close the bleed plug [5].

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(d) Continue to move the landing gear control handle and open and close the bleed plug as stated above until the air is gone from the fluid flow.

SUBTASK 32-11-81-860-004

(7) For the hydraulic system (system A), do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-11-81-860-015

(8) Check the PSEU for faults generated by the bleeding procedure and clear them.

NOTE: When you move the landing gear control lever to bleed the shimmy damper, the gear lock sensors will not transition their state. This will cause faults to be stored in the PSEU and cause the PSEU light to illuminate.

——————— END OF TASK ———————

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MAIN LANDING GEAR SHIMMY DAMPER AND TORSION LINK APEX ASSEMBLY - INSPECTION/CHECK

1. General

A. This task gives the data for a dimensional inspection and wear limits for the hydraulic shimmy damper and torsion link apex assembly of the main landing gear.

B. This task does not remove or install the hydraulic shimmy damper. Refer to the Main Landing Gear Hydraulic Shimmy Damper - Removal/Installation for procedures to remove and install the hydraulic shimmy damper of the main landing gear.

C. This task does not remove or install the torsion link apex assembly. Refer to the Main Landing Gear Torsion Link Assembly - Removal/Installation for procedures to remove and install the torsion link apex assembly.

TASK 32-11-81-200-801

2. Main Landing Gear Hydraulic Shimmy Damper and Torsion Link Assembly Inspection

(Figure 601)

A. General

(1) This procedure gives the wear limits and repair data for the shimmy damper and the torsion link apex assembly of the main landing gear.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-11-51-000-801	Main Landing Gear Upper Torsion Link Removal (P/B 401)
32-11-51-000-802	Main Landing Gear Lower Torsion Link Removal (P/B 401)
32-11-51-400-801	Main Landing Gear Upper Torsion Link Installation (P/B 401)
32-11-51-400-802	Main Landing Gear Lower Torsion Link Installation (P/B 401)

C. Tools/Equipment

Reference	Description
STD-1096	Micrometer - Depth, 0-1 Inch, Readable to 1/1000 Inch
STD-1097	Caliper - Vernier, 0-6 Inch, Readable to 1/1000 Inch

D. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

E. Procedure

SUBTASK 32-11-81-480-029

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. IF THE LANDING GEAR PINS ARE NOT INSTALLED, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-81-020-019

(2) To remove or to get access to the torsion link assembly of the main landing gear do the tasks that follow(Figure 601):

(a) Do this task: Main Landing Gear Upper Torsion Link Removal, TASK 32-11-51-000-801.

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(b) Do this task: Main Landing Gear Lower Torsion Link Removal, TASK 32-11-51-000-802.

SUBTASK 32-11-81-020-020

(3) Use these tools to check for wear on the parts of the main landing gear shimmy damper and the torsion link apex assembly:

(a) micrometer (0-1 Inch, readable to 1/1000 Inch), STD-1096

(b) readable to 1/1000 inch vernier 0 - 6 inch caliper, STD-1097.

SUBTASK 32-11-81-020-021

(4) To examine the parts of the main landing gear shimmy damper and the torsion link apex assembly for worn areas, do the steps that follow:

(a) Remove the parts to be checked.

(b) Measure the parts as necessary with a micrometer (0-1 Inch, readable to 1/1000 Inch), STD-1096 or a readable to 1/1000 inch vernier 0 - 6 inch caliper, STD-1097.

(c) Compare the dimensions you measured with the permitted wear limits in Figure 601.

(d) If the parts do not agree with the limits, repair or replace the part as shown in Figure 601.

SUBTASK 32-11-81-020-022

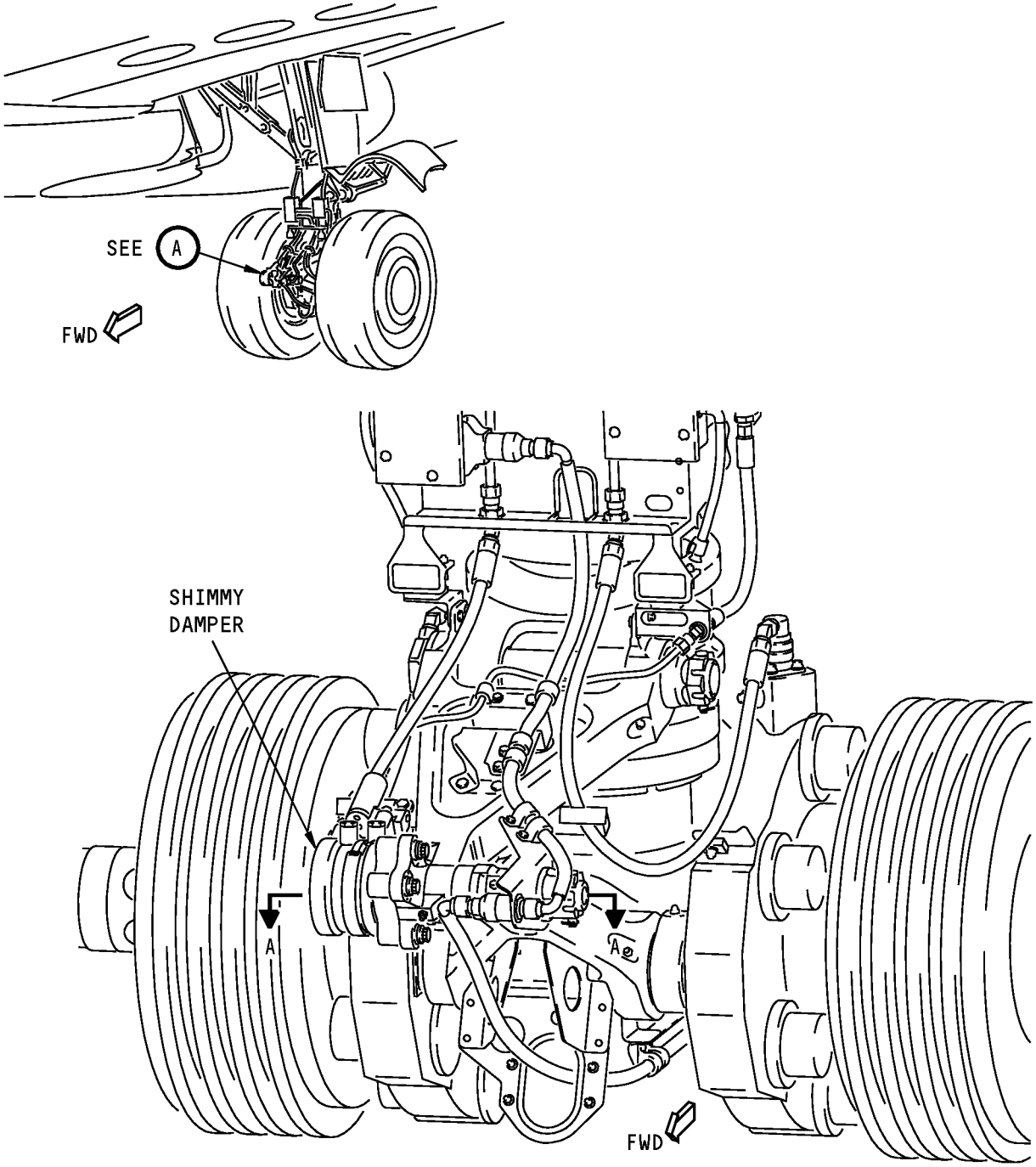
(5) To install the torsion link apex assembly or parts for the main landing gear do the tasks that follow:

(a) Do this task: Main Landing Gear Upper Torsion Link Installation, TASK 32-11-51-400-801.

(b) Do this task: Main Landing Gear Lower Torsion Link Installation, TASK 32-11-51-400-802.

——————— END OF TASK ———————

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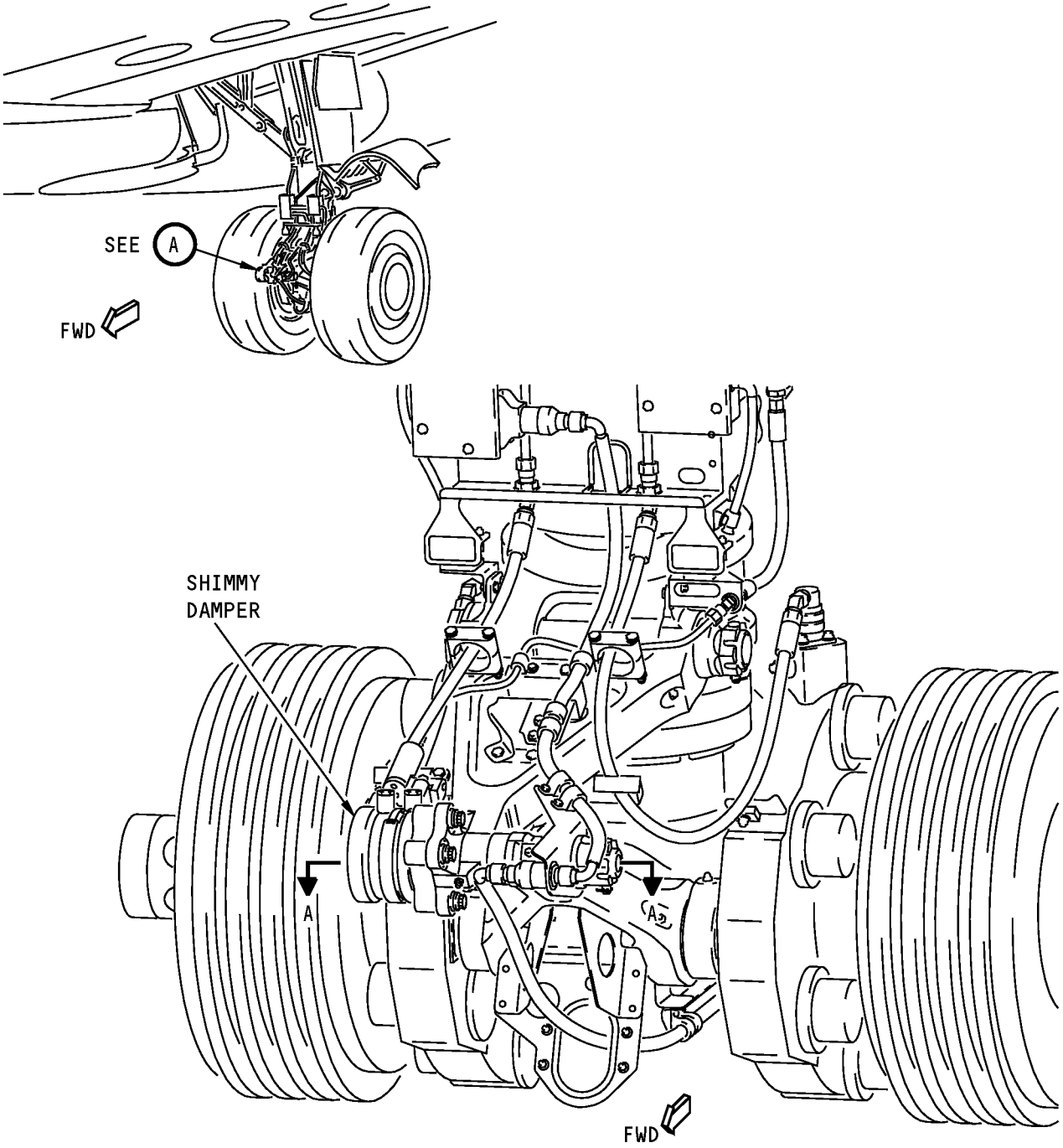


LEFT MAIN LANDING GEAR
(RIGHT MAIN LANDING GEAR IS EQUIVALENT)

A

Main Landing Gear Shimmy Damper Inspection/Check
Figure 601 (Sheet 1 of 5)/32-11-81-990-803

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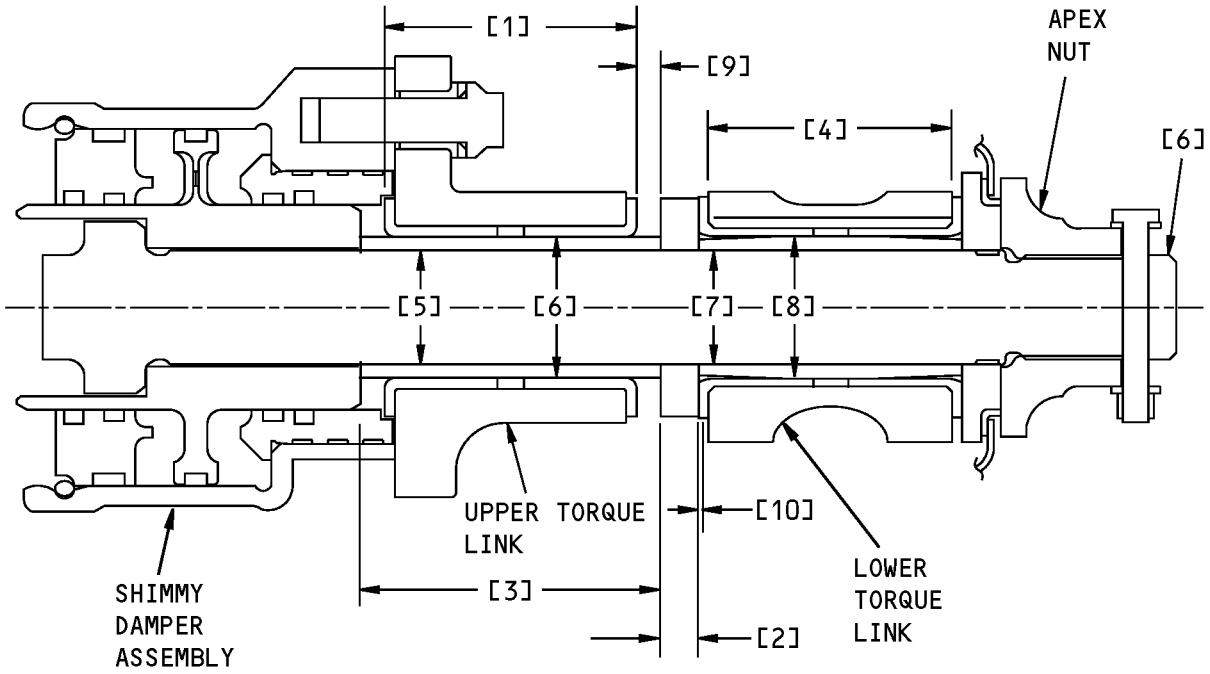


LEFT MAIN LANDING GEAR
(RIGHT MAIN LANDING GEAR IS EQUIVALENT)

A

Main Landing Gear Shimmy Damper Inspection/Check
Figure 601 (Sheet 2 of 5)/32-11-81-990-803

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Main Landing Gear Shimmy Damper Inspection/Check
Figure 601 (Sheet 3 of 5)/32-11-81-990-803

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INDEX NO.	PART NAME	DIM.	DESIGN LIMITS		WEAR LIMITS		REPLACE WORN PART	REPAIR WORN PART	REPAIR INSTR
			DIAMETER		PERMITTED WEAR DIMENSION INCHES (mm)	MAXIMUM DIAMETER CLEARANCE INCHES (mm)			
			MINIMUM INCHES (mm)	MAXIMUM INCHES (mm)					
[1]	BUSHINGS	WIDTH	2.4355 (61.56)	2.4430 (62.05)	2.4300 (61.72)	N/A	X		2
[2]	SPACER	WIDTH	0.3500 (8.89)	0.3600 (9.14)	0.3500 (8.89)	N/A	X		
[3]	STRAIGHT SLEEVE	LENGTH	2.9300 (74.42)	2.9400 (74.67)	2.9300 (74.42)	N/A	X		
[4]	BUSHING	WIDTH	2.5855 (65.67)	2.5925 (65.85)	2.5800 (65.32)	N/A	X		3
	TAPERED SLEEVE	LENGTH	2.5950 (65.91)	2.6050 (66.17)	2.5950 (65.91)	N/A	X		
[5]	BOLT	OD	1.1225 (28.51)	1.1240 (28.54)	1.1200 (28.49)	0.010 (0.25)		X	1
	STRAIGHT SLEEVE	ID	1.1260 (28.60)	1.1280 (28.65)	1.1300 (28.70)				
[6]	STRAIGHT SLEEVE	OD	1.3720 (34.85)	1.3740 (34.90)	1.3710 (34.82)	0.0065 (0.165)	X		
	BUSHING	ID	1.3750 (34.93)	1.3762 (34.96)	1.3775 (34.99)		X		
[7]	BOLT	OD	1.1225 (28.51)	1.1240 (28.55)	1.1200 (28.45)	0.0100 (0.254)		X	1
	TAPERED SLEEVE	ID	1.1260 (28.60)	1.1280 (28.66)	1.1300 (28.70)		X		
[8]	TAPERED SLEEVE	OD	1.3710 (34.82)	1.3730 (34.88)	1.3700 (34.80)	0.0075 (0.191)	X		
	BUSHING	ID	1.3750 (34.93)	1.3762 (34.96)	1.3775 (34.99)		X		

TABLE A

Main Landing Gear Shimmy Damper Inspection/Check
Figure 601 (Sheet 4 of 5)/32-11-81-990-803

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INDEX NO.	PART NAME	DIM.	DESIGN LIMITS		WEAR LIMITS		REPLACE WORN PART	REPAIR WORN PART	REPAIR INSTR
			DIAMETER		PERMITTED WEAR DIMENSION INCHES (mm)	MAXIMUM DIAMETER CLEARANCE INCHES (mm)			
			MINIMUM INCHES (mm)	MAXIMUM INCHES (mm)					
[9]	DAMPER STROKE	GAP	0.000 (0.000)	0.5045 (12.81)	N/A	0.5150 (13.08)	X		5
[10]	LOWER TORSION LINK GAP	GAP	0.0025 (0.06)	0.0195 (0.49)	N/A	0.0250 (0.635)	X		4

TABLE A

NOTES:

- DIMENSIONS ARE IN INCHES (MILLIMETERS ARE IN PARENTHESES)

1 THE WORN PART IS REPAIRABLE. REFER TO THE SOPM.

2 WIDTH IS THE DISTANCE BETWEEN THE BUSHING FLANGE FACES OF THE UPPER TORSION LINK.

3 WIDTH IS THE DISTANCE BETWEEN THE BUSHING FLANGE FACES OF THE LOWER TORSION LINK.

4 THE MAXIMUM GAP IS MEASURED WITH A FEELER GAGE.

5 THE GAP CAN HAVE A RANGE WITHIN THE LIMITS SHOWN AND IS DEPENDENT ON THE POSITION OF THE SHIMMY DAMPER PISTON ALONG ITS STROKE.

Main Landing Gear Shimmy Damper Inspection/Check
Figure 601 (Sheet 5 of 5)/32-11-81-990-803

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MAIN LANDING GEAR FORWARD TRUNNION BEARING ASSEMBLY - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) A removal of the forward trunnion bearing assembly for the main landing gear

(2) An installation of the forward trunnion bearing assembly for the main landing gear.

TASK 32-11-83-000-801

2. Main Landing Gear Forward Trunnion Bearing Assembly Removal

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-11-00-000-801	Main Landing Gear Removal (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1868	Puller - Fuse Pin, Main Landing Gear Forward Trunnion Support (Part #: C32015-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -BBJ)

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

E. Prepare for the Removal

SUBTASK 32-11-83-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-83-020-001

(2) Do this task: Main Landing Gear Removal, TASK 32-11-00-000-801.

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F. Main Landing Gear Forward Trunnion Bearing Assembly Removal

SUBTASK 32-11-83-020-002

(1) Remove the forward trunnion bearing assembly:

(a) Remove the nuts [2], washers [5] and the fuse pin caps [3] on each end of the rods [4].

(b) Remove the rods [4] from the fuse pins [6].

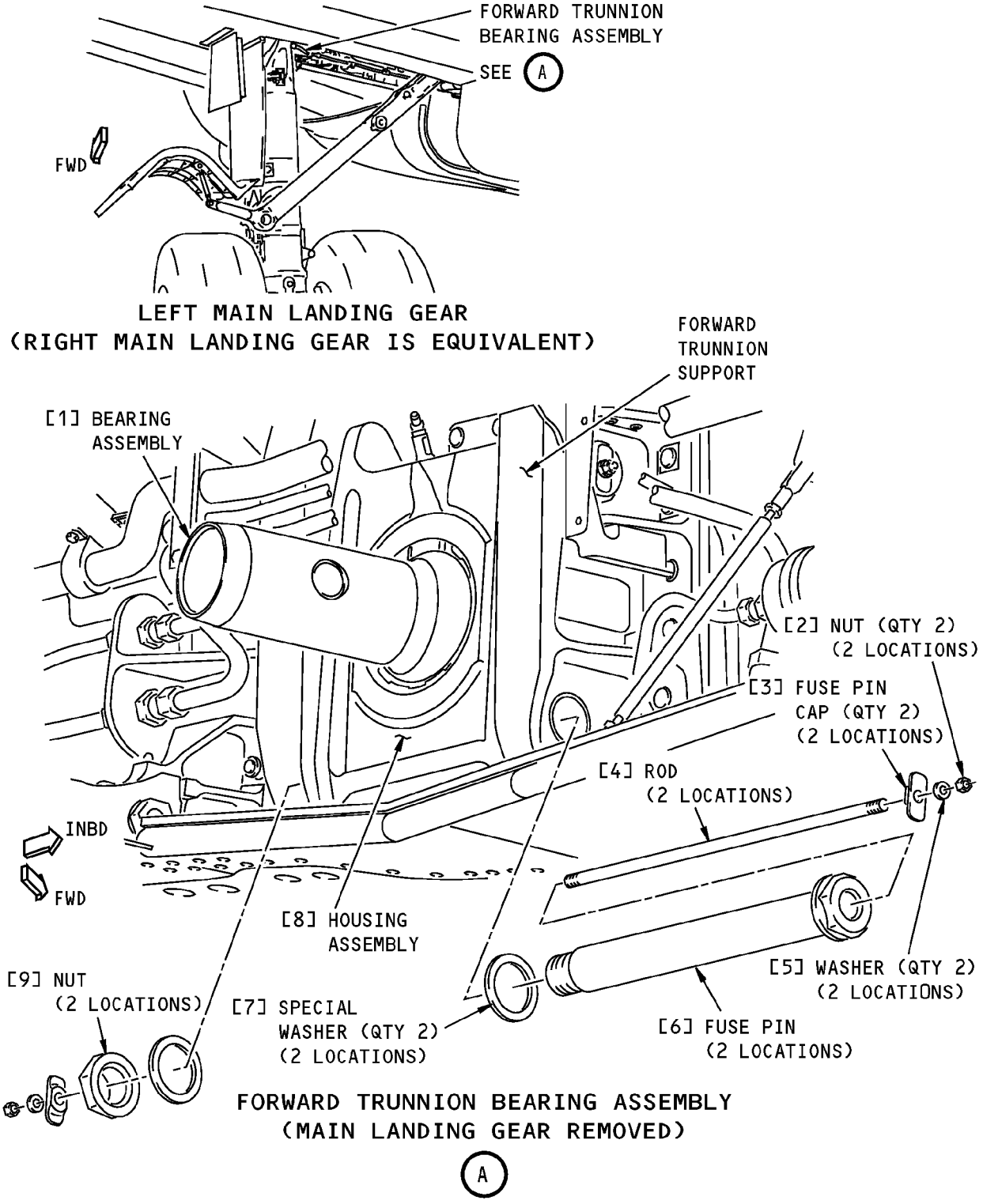
(c) Remove the nuts [9] and the special washers [7] from the fuse pins [6].

(d) Use puller, SPL-1868, to remove the fuse pins [6] that hold the housing assembly [8] to the forward trunnion support.

(e) Remove the forward trunnion bearing assembly from the airplane.

END OF TASK

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Main Landing Gear Forward Trunnion Bearing Assembly Installation
Figure 401/32-11-83-990-801

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TASK 32-11-83-400-801

3. Main Landing Gear Forward Trunnion Bearing Assembly Installation

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
12-21-11-640-801	Main Landing Gear Upper End Components Servicing (P/B 301)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-11-00-400-801	Main Landing Gear Installation (P/B 401)

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
A50009	Sealant - Low Density, Chromate Type Synthetic Rubber	BMS5-142, Class B-1/2
G50136	Paste - Corrosion Inhibiting, Non-drying	BMS 3-38

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
8	Housing assembly	32-11-00-04-065	HAP ALL
		32-11-00-04-095	HAP ALL

E. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

F. Prepare for the Installation

SUBTASK 32-11-83-480-002

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-83-420-001

(2) Install the forward trunnion bearing assembly:

(a) Apply a thin layer of corrosion inhibiting non-drying paste, G50136 to the threads and the outer diameter of the fuse pins [6].

(b) Put the housing assembly [8] in its position for connection to the forward trunnion support.

(c) Align the holes in the housing assembly [8] to the holes in the forward trunnion support.

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(d) Apply a thin layer of corrosion inhibiting non-drying paste, G50136 to the faying surface of the special washers [7] and forward trunnion support..

(e) Turn the flat side of each special washer [7] against the forward trunnion support.

1) Make sure that the special washers [7] are centered with the fitting bore.

(f) Put the fuse pins [6] through the forward trunnion support and the housing assembly [8].

(g) Install the nuts [9] on the fuse pins [6].

(h) Tighten the nuts [9] to 1300 in-lb (147 N·m) – 1350 in-lb (153 N·m).

1) Make sure that the special washers [7] stay centered with the fitting bore when you tighten the nut.

2) Visually inspect that the special washers [7] are centered.

(i) Use sealant, A00247 or sealant, A50009 to clean excess corrosion inhibiting non-drying paste, G50136 at the special washer [7] and the fillet seal edges common to the forward trunnion fitting.

(j) Put the rods [4] into the fuse pins [6].

(k) Install the fuse pin caps [3], washers [5] and the nuts [2] on each end of the rods [4].

(l) Tighten the nuts [2] to 50 in-lb (6 N·m) – 80 in-lb (9 N·m).

SUBTASK 32-11-83-420-002

(3) Do this task: Main Landing Gear Installation, TASK 32-11-00-400-801.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 32-11-83-610-001

(1) Lubricate the housing assembly [8], do this task: Main Landing Gear Upper End Components Servicing, TASK 12-21-11-640-801.

——————— END OF TASK ———————

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MAIN LANDING GEAR AXLE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the axle (referred to as the axle assembly [1]) for the main landing gear

(2) An installation of the axle for the main landing gear.

(3) A removal of the axle sleeve for the main landing gear

(4) An installation of the axle sleeve for the main landing gear.

(5) A removal of the brake sleeve for the main landing gear

(6) An installation of the brake sleeve for the main landing gear.

TASK 32-11-85-000-801

2. Main Landing Gear Axle Removal

NOTE: See Figure 401.

A. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-11-51-000-802	Main Landing Gear Lower Torsion Link Removal (P/B 401)
32-41-41-000-801	Main Landing Gear Brake Removal (P/B 401)
32-42-11-000-801	Transducer Removal (P/B 401)

B. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

C. Prepare for the Removal

SUBTASK 32-11-85-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-85-580-001

(2) Do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

D. Main Landing Gear Axle Removal

SUBTASK 32-11-85-020-001

(1) Do this task: Main Landing Gear Brake Removal, TASK 32-41-41-000-801.

NOTE: This procedure will also remove the wheel and tire assemblies.

SUBTASK 32-11-85-020-002

(2) Remove the in-axle assemblies. To remove them, do this task: Transducer Removal, TASK 32-42-11-000-801.

NOTE: Make sure you attach a label to the wires to indicate the left and right connectors.

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SUBTASK 32-11-85-020-003

(3) Do these steps to remove the wiring assembly from the axle assembly [1]:

(a) Loosen the elbow [4] for the electrical connector.

(b) Loosen the nut [5] to disconnect the electrical connector from the inner cylinder assembly [3].

(c) Pull the wiring assembly completely out of the axle assembly [1].

NOTE: Make sure you attach a label to the wires to indicate the left and the right connectors.

SUBTASK 32-11-85-020-004

(4) Remove the brake sleeve [2] from the axle assembly [1]. Use puller assembly, C32032-57.

NOTE: Applied heat may be required for removal.

SUBTASK 32-11-85-020-007

(5) Do these steps to remove the bracket [10]:

(a) Remove the cotter pin [9] from the pin [6].

(b) Remove the nut [8] and washer [7] from the pin [6].

(c) Remove the nut [11] and washer [12] that hold the bracket [10] to the mounting studs.

(d) Slowly lower the bracket [10] to the ground.

SUBTASK 32-11-85-020-008

(6) Do this procedure to remove the lower torsion link: Main Landing Gear Lower Torsion Link Removal, TASK 32-11-51-000-802

SUBTASK 32-11-85-020-005

(7) Do these steps to remove the axle assembly [1]:

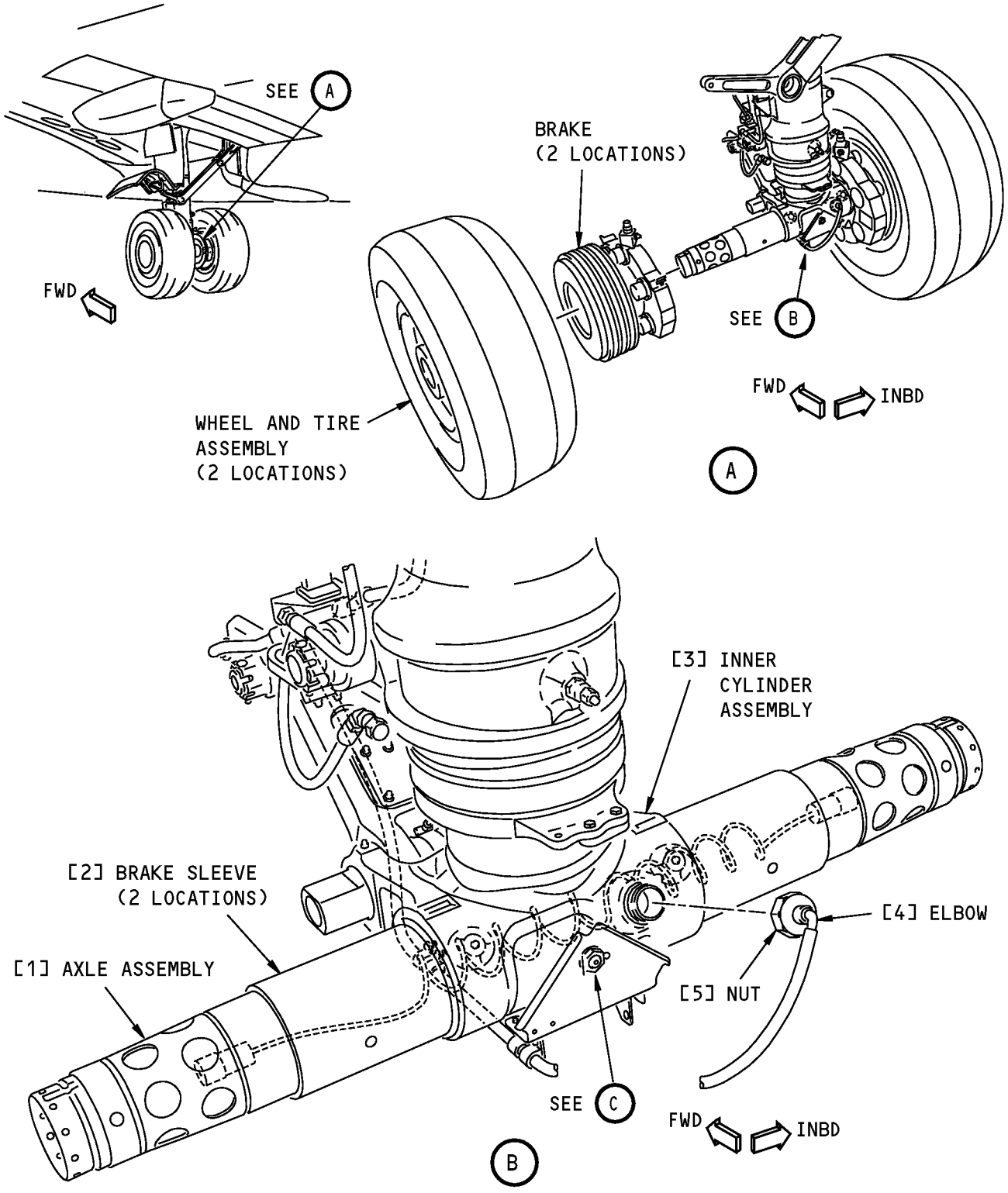
(a) Remove the pin [6] that holds the axle assembly [1] to the inner cylinder assembly [3].

(b) Remove the axle assembly [1] from the airplane.

NOTE: If the removal of the axle assembly [1] is difficult, applied heat may be required. Use puller assembly, C32032-57.

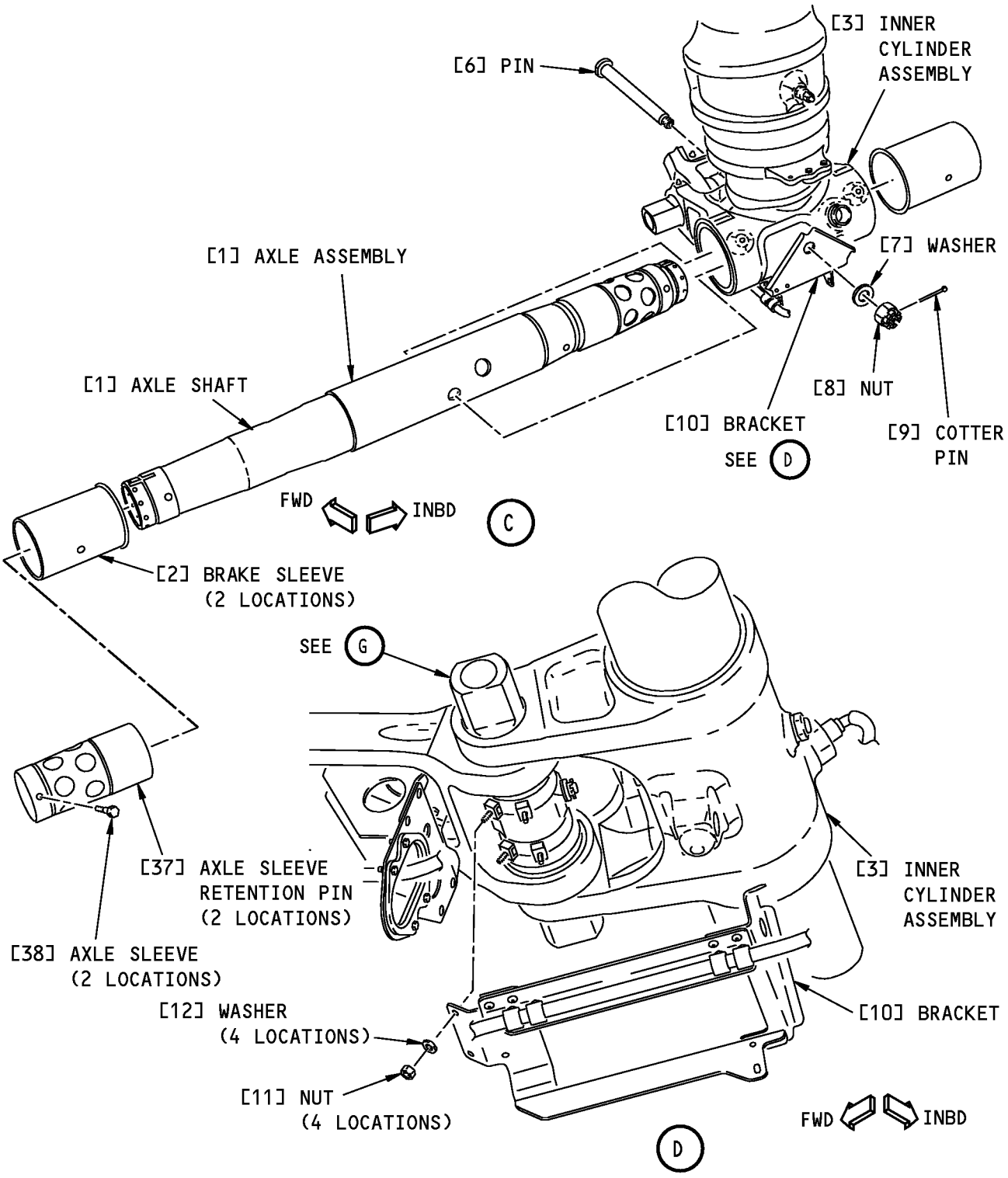
———————— END OF TASK ————————

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Main Landing Gear Axle Installation
Figure 401 (Sheet 1 of 2)/32-11-85-990-801

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Main Landing Gear Axle Installation
Figure 401 (Sheet 2 of 2)/32-11-85-990-801

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TASK 32-11-85-420-801

3. Main Landing Gear Axle Installation

NOTE: See Figure 401.

A. References

Reference	Title
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
12-21-11-640-802	Main Landing Gear Lower End Components Servicing (P/B 301)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-11-51-400-802	Main Landing Gear Lower Torsion Link Installation (P/B 401)
32-11-81-400-801	Main Landing Gear Shimmy Damper Installation (P/B 401)
32-41-41-400-801	Main Landing Gear Brake Installation (P/B 401)
32-42-11-400-801	Transducer Installation (P/B 401)
SWPM 20-60-03	Special Protection of Electrical Connectors

B. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00013	Grease - Aircraft And Instrument Grease	MIL-PRF-23827 (NATO G-354) (Supersedes MIL-G-23827)
D00015	Grease - Aircraft Bearing (Use BMS 3-24 until existing stocks are depleted, BMS 3-33 supersedes BMS 3-24)	BMS3-24 (Superseded by BMS 3-33)
D00633	Grease - Aircraft General Purpose	BMS3-33
G50171	Compound - Corrosion Inhibiting Compound, Interior Application - D5026NS or ZC-026	

C. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Installation

SUBTASK 32-11-85-480-002

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

E. Main Landing Gear Axle Installation

SUBTASK 32-11-85-420-006

(1) Lightly lubricate the bushing bores of the inner cylinder assembly [3] with grease, D00633.

NOTE: Use grease, D00013 if grease, D00633 is not available.

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SUBTASK 32-11-85-420-007

(2) Put theaxle assembly [1] through the inner cylinder assembly [3].

SUBTASK 32-11-85-420-008

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(3) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces of the pin [6].

(a) The head face of the pin [6]

(b) The threads and thread reliefs of the pin [6]

(c) The threads of the nut [8]

(d) The faces of the washer [7].

SUBTASK 32-11-85-020-009

(4) Remove all unwanted corrosion preventive compound, C00913.

SUBTASK 32-11-85-420-009

(5) Lubricate the chrome plated surfaces of pin [6] with grease, D00633.

NOTE: Use grease, D00013 if grease, D00633 is not available.

SUBTASK 32-11-85-420-010

(6) Align the hole on the axle assembly [1] with the holes on the inner cylinder assembly [3] for the installation of the pin [6].

SUBTASK 32-11-85-420-011

(7) Put the pin [6] through the inner cylinder assembly [3] and the axle assembly [1].

SUBTASK 32-11-85-420-025

(8) Do this task: Main Landing Gear Shimmy Damper Installation, TASK 32-11-81-400-801.

SUBTASK 32-11-85-420-012

(9) Do these steps to install the lower torsion link: Main Landing Gear Lower Torsion Link Installation, TASK 32-11-51-400-802

SUBTASK 32-11-85-420-013

(10) Put the bracket [10] in its position on the pin [6] for attachment to the mounting studs.

SUBTASK 32-11-85-420-014

(11) Install the washers [12] and the nuts [11] that hold the bracket [10] to the mounting studs. Tighten the nuts [11] with your hand.

SUBTASK 32-11-85-420-015

(12) Install the washer [7] and nut [8] on the pin [6].

SUBTASK 32-11-85-420-016

(13) Tighten the nut [8] to 160 in-lb (18 N·m) – 190 in-lb (21 N·m). If it is necessary, loosen the nut [8] to the nearest castellation to align the holes for the cotter pin [9].

SUBTASK 32-11-85-420-017

(14) Install the cotter pin [9] in the pin [6].

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SUBTASK 32-11-85-640-001

(15) Do these steps to install the brake sleeve [2]:

(a) Apply a light coating of grease, D00015 to the lands of the axle assembly [1] and the axle assembly axle sleeve, where the brake sleeve [2] inside diameters set.

NOTE: Avoid use of too much grease on the brake sleeve [2].

NOTE: Use grease, D00013 if grease, D00633 is not available.

(b) Heat the brake sleeve [2] to 375 degrees +/- 25 degrees farenheit.

(c) Install the brake sleeve [2] on the axle assembly [1].

(d) Remove all unwanted grease, D00633 or grease, D00013.

SUBTASK 32-11-85-420-003

(16) Do these steps to install the wiring assembly in the axle assembly [1]:

(a) Before you connect the electrical connector to the inner cylinder assembly [3], examine the connector for corrosion.

WARNING: DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

(b) If there was corrosion, refer to (SWPM 20-60-03) to correct the problem.

(c) Apply the D5026NS or ZC-026 compound, G50171 to the connector (SWPM 20-60-03).

(d) Push the wiring through the hole on the inner cylinder assembly [3] and into the axle assembly [1].

(e) Tighten the nut [11] to connect the electrical connector to the inner cylinder assembly [3].

(f) Tighten the elbow [4].

(g) Install lockwire on the nut [11].

SUBTASK 32-11-85-420-004

(17) Install the in-axle assemblies. To install them, do this task: Transducer Installation, TASK 32-42-11-400-801.

SUBTASK 32-11-85-420-005

(18) Do this task: Main Landing Gear Brake Installation, TASK 32-41-41-400-801.

NOTE: This procedure will also install the wheel and tire assemblies.

NOTE: Make sure you connect the correct wires to the correct in-axle assembly.

SUBTASK 32-11-85-600-001

(19) For the grease fittings on the upper torsion link [13] and the lower torsion link [14], do this task: Main Landing Gear Lower End Components Servicing, TASK 12-21-11-640-802.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 32-11-85-580-002

(1) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

END OF TASK

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TASK 32-11-85-000-802

4. Main Landing Gear Axle Sleeve Removal

NOTE: See Figure 401.

A. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-41-41-000-801	Main Landing Gear Brake Removal (P/B 401)
32-42-11-000-801	Transducer Removal (P/B 401)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1864	Equipment - Puller, MLG Axle Sleeve Assembly (Part #: C32032-57, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Removal

SUBTASK 32-11-85-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-85-580-003

(2) Do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

E. Main Landing Gear Axle Sleeve Removal

SUBTASK 32-11-85-020-010

(1) Do this task: Main Landing Gear Brake Removal, TASK 32-41-41-000-801.

NOTE: This procedure will also remove the wheel and tire assemblies.

SUBTASK 32-11-85-020-011

(2) Remove the in-axle assemblies. To remove them, do this task: Transducer Removal, TASK 32-42-11-000-801.

NOTE: Make sure you attach a label to the wires to indicate the left and right connectors.

SUBTASK 32-11-85-020-012

(3) Do these steps to remove the wiring assembly from the axle assembly [1]:

(a) Loosen the elbow [4] for the electrical connector.

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(b) Loosen the nut [5] to disconnect the electrical connector from the inner cylinder assembly [3].

(c) Pull the wiring assembly completely out of the axle assembly [1].

NOTE: Make sure you attach a label to the wires to indicate the left and the right connectors.

SUBTASK 32-11-85-020-022

(4) Remove the brake sleeve (2) from the axle assembly (1). Use the equipment, SPL-1864

NOTE: Applied heat may be required for removal.

SUBTASK 32-11-85-020-013

(5) Do these steps to remove the axle sleeve [37] from the axle assembly [1]:

(a) Remove the rentention pin [38]. Use the equipment, SPL-1864, RC-50 Assy to push the retention pin out of the axle assembly [1].

(b) Remove the axle sleeve [37]. Use the equipment, SPL-1864.

NOTE: Applied heat may be required for removal.

——————— END OF TASK ———————

TASK 32-11-85-420-802

5. Main Landing Gear Axle Sleeve Installation

NOTE: See Figure 401.

A. References

Reference	Title
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
12-21-11-640-802	Main Landing Gear Lower End Components Servicing (P/B 301)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-41-41-400-801	Main Landing Gear Brake Installation (P/B 401)
32-42-11-400-801	Transducer Installation (P/B 401)
SWPM 20-60-03	Special Protection of Electrical Connectors

B. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00015	Grease - Aircraft Bearing (Use BMS 3-24 until existing stocks are depleted, BMS 3-33 supersedes BMS 3-24)	BMS3-24 (Superseded by BMS 3-33)
G50171	Compound - Corrosion Inhibiting Compound, Interior Application - D5026NS or ZC-026	

C. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

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D. Prepare for the Installation

SUBTASK 32-11-85-480-004

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

E. Main Landing Gear Axle Sleeve Installation

SUBTASK 32-11-85-420-018

(1) Do the following steps to install the axle sleeve [37]:

(a) Apply a generous coating of grease, D00015 to the lands of the axle assembly [1], where the axle sleeve [37] inside diameters set.

(b) Heat the axle sleeve [37] to 375 degrees +/- 25 degrees farenheit.

(c) Align the retention pin holes in the axle sleeve [37] and the axle assembly [1] before installing the sleeve on the axle assembly [1].

NOTE: The axle sleeve will rapidly shrink to normal size and seize the axle, preventing further pin alignment efforts.

SUBTASK 32-11-85-420-019

(2) Do the following steps to install the retention pin [38]:

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(a) Apply corrosion preventive compound, C50056 or compound, C00913 (alternate), or sealant, A00247to the retention pin hole in the axle assembly [1], and the hole in the axle sleeve [37].

(b) Install the retention pin [38] by lightly pressing or tapping the pin into place. The head of the pin must be flush or below the outside diameter of the axle sleeve [37].

SUBTASK 32-11-85-020-014

(3) Remove all unwanted corrosion preventive compound, C00913.

SUBTASK 32-11-85-420-026

(4) Do these steps to install the brake sleeve (2):

(a) Apply a light coating of grease, D00015 to the lands of the axle assembly (1) and the axle assembly sleeve, where the brake sleeve (2) inside diameters set.

NOTE: Avoid use of too much grease on the brake sleeve (2).

NOTE: Use grease, D00633 if grease, D00015 is not available.

(b) Heat the brake sleeve (2) to 375 degrees +/- 25 degrees farenheit.

(c) Install the brake sleeve (2) on the axle assembly (1).

(d) Remove all unwanted grease, D00633 or grease, D00015.

SUBTASK 32-11-85-420-020

(5) Do these steps to install the wiring assembly in the axle assembly [1]:

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(a) Before you connect the electrical connector to the inner cylinder assembly [3], examine the connector for corrosion.

WARNING: DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

(b) If there was corrosion, refer to (SWPM 20-60-03) to correct the problem.

(c) Apply the D5026NS or ZC-026 compound, G50171 to the connector (SWPM 20-60-03).

(d) Push the wiring through the hole on the inner cylinder assembly [3] and into the axle assembly [1].

(e) Tighten the nut [11] to connect the electrical connector to the inner cylinder assembly [3].

(f) Tighten the elbow [4].

(g) Install lockwire on the nut [11].

SUBTASK 32-11-85-420-021

(6) Install the in-axle assemblies. To install them, do this task: Transducer Installation, TASK 32-42-11-400-801.

SUBTASK 32-11-85-420-022

(7) Do this task: Main Landing Gear Brake Installation, TASK 32-41-41-400-801.

NOTE: This procedure will also install the wheel and tire assemblies.

NOTE: Make sure you connect the correct wires to the correct in-axle assembly.

SUBTASK 32-11-85-600-002

(8) For the grease fittings on the upper torsion link [13] and the lower torsion link [14], do this task: Main Landing Gear Lower End Components Servicing, TASK 12-21-11-640-802.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 32-11-85-580-004

(1) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

——————— END OF TASK ———————

TASK 32-11-85-000-803

6. Main Landing Gear Brake Sleeve Removal

(Figure 401)

A. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
32-41-41-000-801	Main Landing Gear Brake Removal (P/B 401)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

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Reference	Description
SPL-1864	Equipment - Puller, MLG Axle Sleeve Assembly (Part #: C32032-57, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Removal

SUBTASK 32-11-85-580-006

(1) Do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

E. Main Landing Gear Brake Sleeve Removal

SUBTASK 32-11-85-020-020

(1) Do this task: Main Landing Gear Brake Removal, TASK 32-41-41-000-801.

NOTE: This procedure will also remove the wheel and tire assemblies.

SUBTASK 32-11-85-020-021

(2) Do these steps to remove the brake sleeve [2] from the axle assembly [1]:

(a) Remove the brake sleeve [2]. Use the equipment, SPL-1864.

——————— END OF TASK ———————

TASK 32-11-85-420-803

7. Main Landing Gear Brake Sleeve Installation

(Figure 401)

A. References

Reference	Title
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-41-41-400-801	Main Landing Gear Brake Installation (P/B 401)

B. Consumable Materials

Reference	Description	Specification
D00015	Grease - Aircraft Bearing (Use BMS 3-24 until existing stocks are depleted, BMS 3-33 supersedes BMS 3-24)	BMS3-24 (Superseded by BMS 3-33)

C. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

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D. Prepare for the Installation

SUBTASK 32-11-85-490-001

WARNING: MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

E. Main Landing Gear Brake Sleeve Installation

SUBTASK 32-11-85-410-001

(1) Do the steps that follow to install the brake sleeve [2]:

(a) Apply a this layer of grease, D00015 to the lands of the axle assembly [1] and axle sleeve [3], where the brake sleeve [2] inside diameters set.

(b) Heat the brake sleeve [2] to 375 degrees +/- 25 degrees farenheit.

(c) Install the brake sleeve [2] on the axle assembly [1] and the axle sleeve [3].

NOTE: The brake sleeve will rapidly shrink to normal size and seize the axle, preventing further movement.

SUBTASK 32-11-85-410-002

(2) Do this task: Main Landing Gear Brake Installation, TASK 32-41-41-400-801.

NOTE: This procedure will also install the wheel and tire assemblies.

NOTE: Make sure you connect the correct wires to the correct in-axle assembly.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 32-11-85-860-001

(1) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

END OF TASK

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MAIN LANDING GEAR AXLE - APPROVED REPAIRS

1. General

A. This procedure contains these tasks:

(1) Repair of the Main landing Gear Axle

(2) Repair of the Axle Sleeves of the Main Landing Gear

B. You can remove the cadium plating to inspect the base metal for heat damage on airplanes on which heavy braking gives sufficient heat to melt the cadium plating on the axle.

C. The repairs to the axle sleeves will be the blending out of scratches, scoring, and galling in the limits given below.

TASK 32-11-85-300-801

2. Repair on the Main Landing Gear Axle

(Figure 801, Figure 802)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-11-85-000-802	Main Landing Gear Axle Sleeve Removal (P/B 401)
32-11-85-420-801	Main Landing Gear Axle Installation (P/B 401)
32-41-41-000-801	Main Landing Gear Brake Removal (P/B 401)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1864	Equipment - Puller, MLG Axle Sleeve Assembly (Part #: C32032-57, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
B00102	Abrasive - Aluminum Oxide Coated Cloth	ANSI B74.18
B00137	Abrasive - Garnet Coated Paper	ANSI B74.18
B00138	Abrasive - Silicon Carbide Coated Cloth	ANSI B74.18
C00250	Coating - Inorganic, Heat, Weather And Oil Resistant Protective Coating (Elevated Temperature Cure)	BMS14-4, Type I
C00251	Coating - Inorganic, Heat, Weather And Oil Resistant Protective Coating (Room Temperature Catalytic Cure)	BMS14-4, Type II
D00015	Grease - Aircraft Bearing (Use BMS 3-24 until existing stocks are depleted, BMS 3-33 supersedes BMS 3-24)	BMS3-24 (Superseded by BMS 3-33)

D. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

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E. Procedure to Repair the Axle of the Main Landing Gear

SUBTASK 32-11-85-480-005

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-85-020-015

(2) Do this task: Main Landing Gear Brake Removal, TASK 32-41-41-000-801.

NOTE: This procedure will also remove the wheel and tire assemblies.

SUBTASK 32-11-85-300-001

(3) Remove lockbolt and nut.

SUBTASK 32-11-85-300-002

(4) Remove the sleeve from the axle with an approved puller equipment, SPL-1864 (Main Landing Gear Axle Sleeve Removal, TASK 32-11-85-000-802).

(a) If it is necessary, you can increase the temperature of the sleeve to approximately 200 degrees F.

SUBTASK 32-11-85-300-003

(5) Use an abrasive, B00137 or abrasive cloth, B00102 or abrasive, B00138 and remove the plating by hand.

NOTE: Do not use power tools. The maximum mismatch is 0.003 inch.

SUBTASK 32-11-85-300-004

CAUTION: DO NOT REMOVE MORE THAN 0.003 INCH OF BASE METAL.

(6) If you find any cracks, continue to remove the plating and the base metal until the cracks will be smooth.

SUBTASK 32-11-85-300-005

(7) Apply an coating, C00250 or coating, C00251 (Ref. Chapter 51, Heat, Weather, and Oil Resistant Inorganic Protective Coating).

SUBTASK 32-11-85-300-006

(8) Apply a thick layer of grease, D00015 to the axle lands.

NOTE: Do not remove too much grease, D00015 from the inside diameter of the axle sleeve after installation.

SUBTASK 32-11-85-420-024

(9) Do this, do this task: Main Landing Gear Axle Installation, TASK 32-11-85-420-801.

SUBTASK 32-11-85-300-007

(10) Align the bolt holes in the axle and the sleeve.

(a) Install the lockbolt.

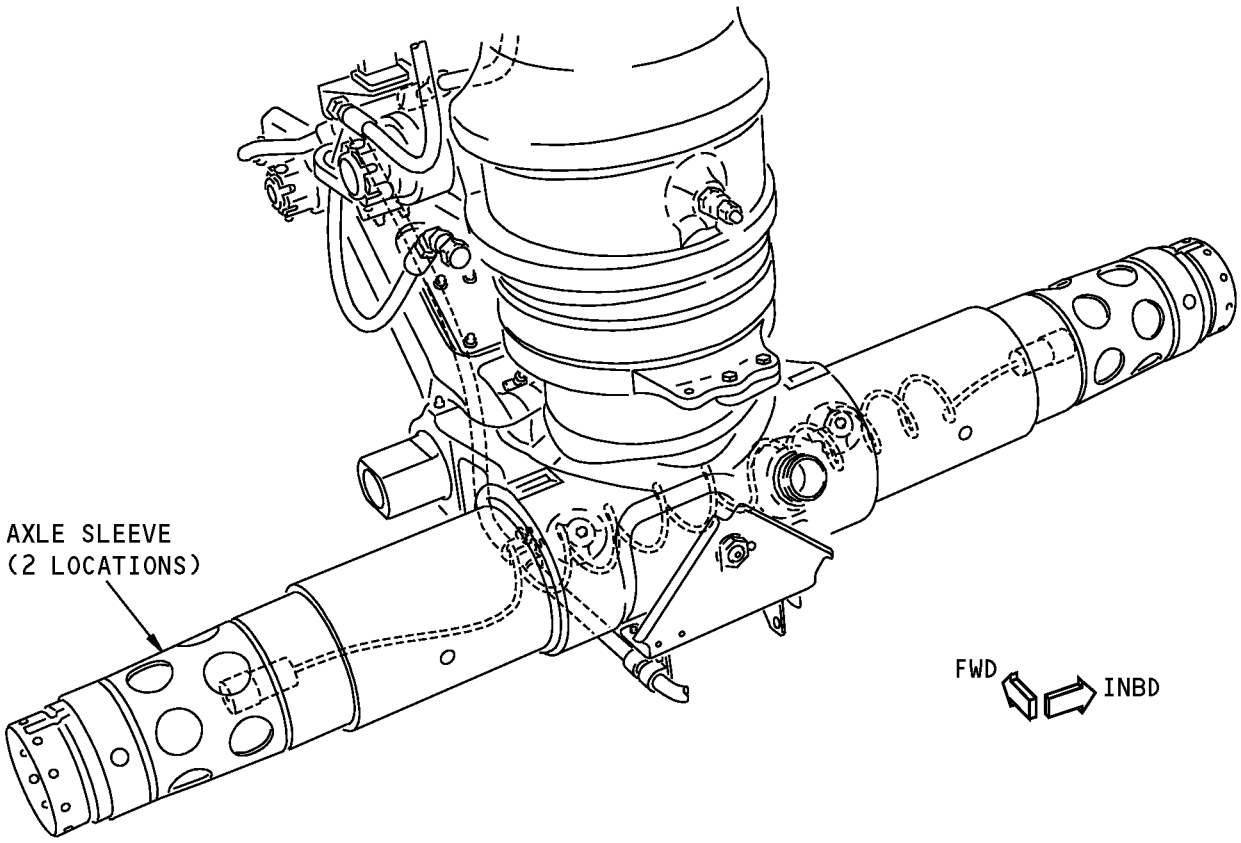
SUBTASK 32-11-85-300-008

(11) Verify the diameter of the bearing supports after the sleeve installation.

NOTE: The outer diameter of the small bearing support must not be more than 4.3293 inches. The outer diameter of large bearing support must not be more than 4.7491 inches.

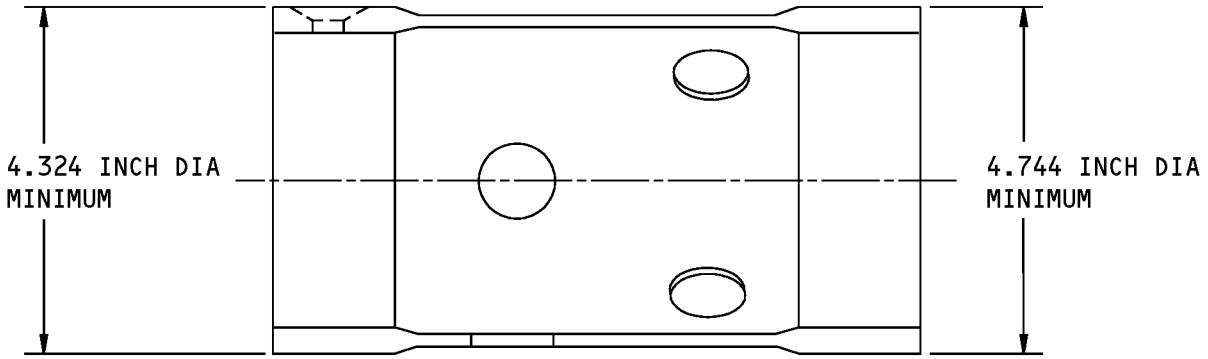
END OF TASK

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Axle Sleeve Installation
Figure 801/32-11-85-990-802

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NOTE: THE DIMENSIONS OF THE AXLE SLEEVES YOU WILL INSTALL WILL BE DIFFERENT THAN THE AXLE SLEEVES YOU WILL REMOVE BECAUSE OF THE INTERFERENCE FIT.

Permitted Wear Limits of Installed Axle Sleeves
Figure 802/32-11-85-990-803

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TASK 32-11-85-300-802

3. Repair of the Axle Sleeve of the Main Landing Gear

(Figure 801, Figure 802)

A. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

B. Procedure to repair the Axle Sleeve of the Main Landing Gear.

SUBTASK 32-11-85-300-009

(1) Do a check on the wear limits of the bearing boss.

(a) Examine the diameters of the inboard and the outboard bearing boss for worn areas as shown on Figure 802.

NOTE: If worn areas on the bearing boss is more than the specified wear limits and the clearance between the bearing and the boss is more than 0.006 inch, you must remove the axle sleeve and replace or rework. If worn areas on the bearing boss is more than the specified wear limits and the clearance between the bearing and the boss is not more than 0.006 inch, the axle sleeve can continue to be in service for 65 hours flying time before removal for replacment or repairs.

SUBTASK 32-11-85-300-010

(2) Repair the local damage on the bearing surfaces.

(a) Remove the sharp edges and make a smooth finish on the damage to a 0.50 radius.

NOTE: Do not reduce the wall thickness by more than 0.025 inch or more than 30 % of the total bearing area of any 90 degree segment when you rework.

(b) If damage is on the antirotation bolt hole, replace the sleeve or contact BOEING to make an analysis of a possible repair.

——————— END OF TASK ———————

TASK 32-11-85-300-803

4. Repair of the Brake Sleeve of the Main Landing Gear

A. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

B. Procedure to repair the Brake Sleeve of the Main Landing Gear.

SUBTASK 32-11-85-220-001

(1) Do a check on the wear limits of the sleeve.

(a) Measure the sleeve diameter in the worn and unworn areas of the sleeve.

1) Make sure that the difference in the sleeve diameter is not more than 0.003 inches.

2) Make sure that the base metal is not exposed.

SUBTASK 32-11-85-020-023

(2) Replace the brake sleeve if the worn areas are more than the specified limit.

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(a) Do the replacement of the brake sleeve in less than 65 hours of flight time.

—————— END OF TASK ——————

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MAIN LANDING GEAR DOWNLOCK STRUT - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) A removal of the referred to as retraction link assembly [6] and the link arm assembly for the main landing gear

(2) An installation of the lock link assembly and the link arm assembly for the main landing gear.

C. The assembly of the lock link assembly and the link arm assembly are referred to as the "downlock strut" in this procedure.

TASK 32-11-89-000-801

2. Main Landing Gear Downlock Strut Removal

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-03-580-801	Lift the Main Landing Gear Axles with the Axle Jacks (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-32-91-000-801	Main Gear Downlock Springs Removal (P/B 401)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Removal

SUBTASK 32-11-89-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-11-89-860-001

(2) Lift the airplane on jacks until the main landing gear wheels are off of the ground (TASK 07-11-01-580-815).

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SUBTASK 32-11-89-860-002

(3) Remove the power from hydraulic system A and B, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-11-89-020-001

(4) Do this task: Main Gear Downlock Springs Removal, TASK 32-32-91-000-801.

E. Main Landing Gear Downlock Strut Removal

SUBTASK 32-11-89-020-002

(1) Do these steps to disconnect the hydraulic lines [2] from the downlock actuator [4]:

(a) Put tags on the hydraulic lines [2] to prevent the crossing of the lines during the installation.

(b) Disconnect the hydraulic lines [2] from the downlock actuator [4].

(c) Install caps on the hydraulic lines [2].

(d) Install plugs in the ports of the downlock actuator [4].

(e) Remove and discard the packings [3].

SUBTASK 32-11-89-020-003

(2) Do these steps to disconnect the rod end of the downlock actuator [4] from the downlock strut [5]:

(a) Remove the spacer [7] from the rod end pin [8].

(b) From the forward side, remove the rod end pin [8] that holds the rod end of the downlock actuator [4] to the downlock strut [5].

(c) Remove the spacers [9], and the washers [10].

(d) Slowly lower the rod end of the downlock actuator [4] to the upper end of the upper side strut.

(e) Use a tape to attach the rod end of the downlock actuator [4] to the upper end of the upper side strut.

NOTE: This will prevent the downlock actuator [4] from moving when you do the subsequent steps.

SUBTASK 32-11-89-020-004

(3) Do these steps to disconnect the the electrical harnesses [11] from the downlock strut [5]:

NOTE: Remove the brackets [17] with the sensors attached.

(a) Remove the nuts [20], washers [19], and the bolts [18] to disconnect the brackets [17] from the downlock strut [5].

(b) Isolate the brackets [17] from the downlock strut [5].

SUBTASK 32-11-89-080-001

(4) Remove the downlock pin from the main landing gear for which the downlock strut [5] is to be removed (TASK 32-00-01-080-801).

SUBTASK 32-11-89-020-005

(5) Do these steps to disconnect the downlock strut [5] from the reaction retraction link assembly [6]:

(a) Remove the pin [22] from the downlock link pin [12].

(b) Remove the nut [21], and the washer [23] from the downlock link pin [12].

NOTE: Use wrench adapter C32029-5 to hold the head of the downlock link pin [12] when you loosen the nut [21].

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(c) Remove the downlock link pin [12] that holds the downlock strut [5] to the reaction retraction link assembly [6].

NOTE: Use thread protector C32029-14 when you do this task.

SUBTASK 32-11-89-020-006

(6) Do these steps to disconnect the downlock strut [5] from the upper side strut:

(a) Remove the pin [16] from the downlock link pin [13].

(b) Remove the nut [15], and the washer [14] from the downlock link pin [13].

(c) Remove the downlock link pin [4] that holds the downlock strut [5] to the upper side strut.

NOTE: Use thread protector C32029-13 when you do this task.

SUBTASK 32-11-89-020-007

(7) Remove the downlock strut [5] from the airplane.

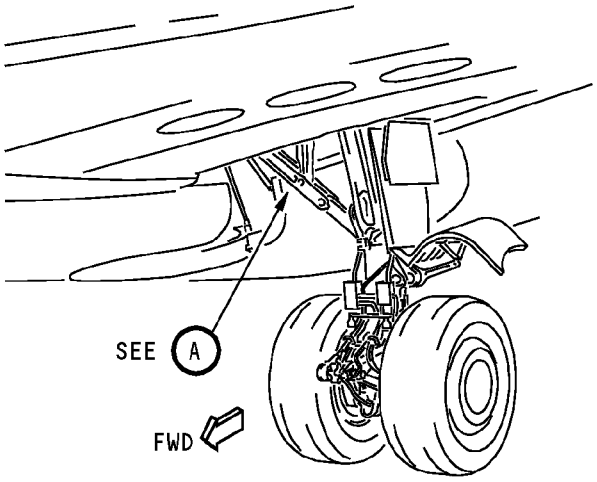
NOTE: If removal of the downlock strut [5] is difficult, do the step that follows to decrease the weight on the gear.

SUBTASK 32-11-89-580-001

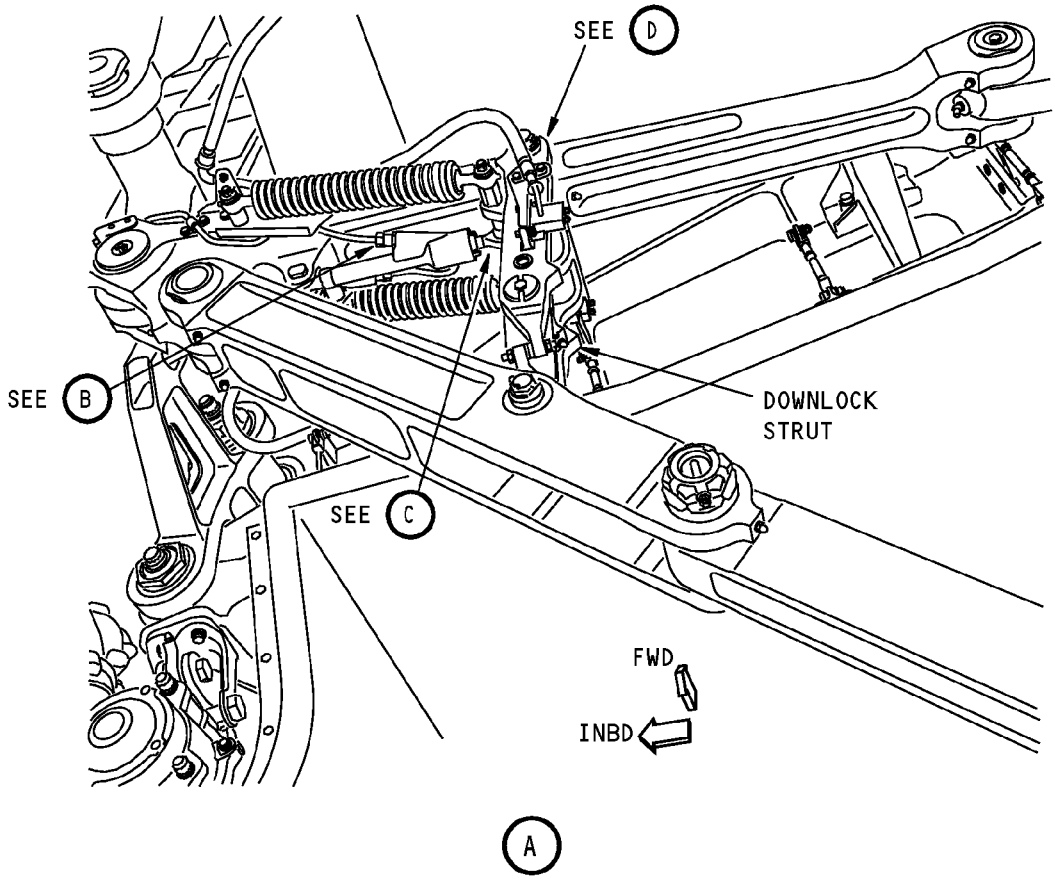
(8) Do this task: (TASK 07-11-03-580-801)

END OF TASK

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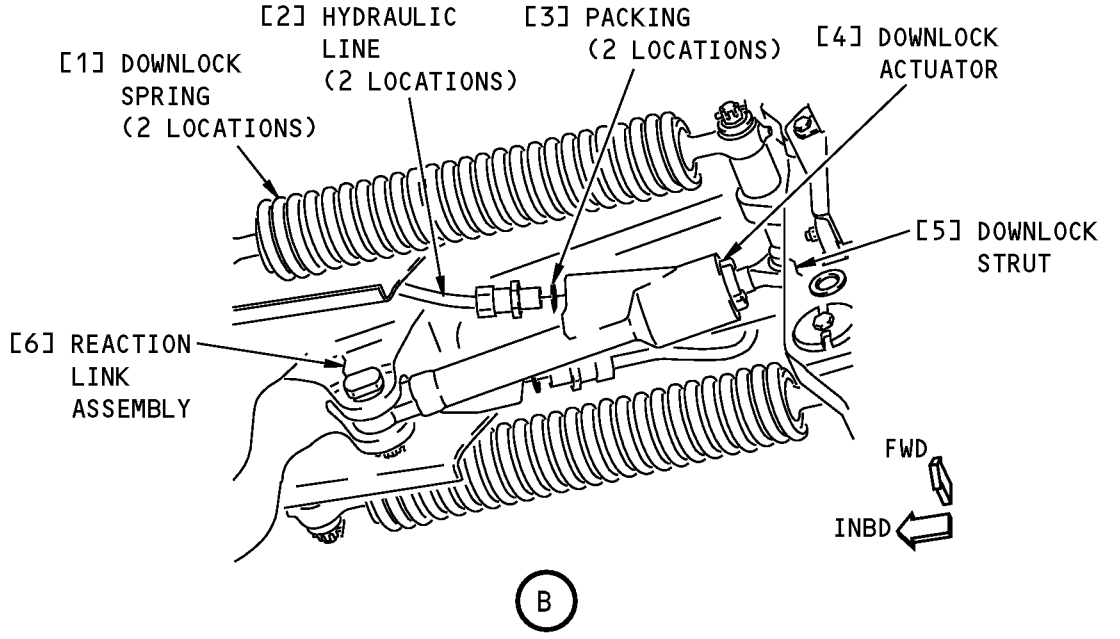


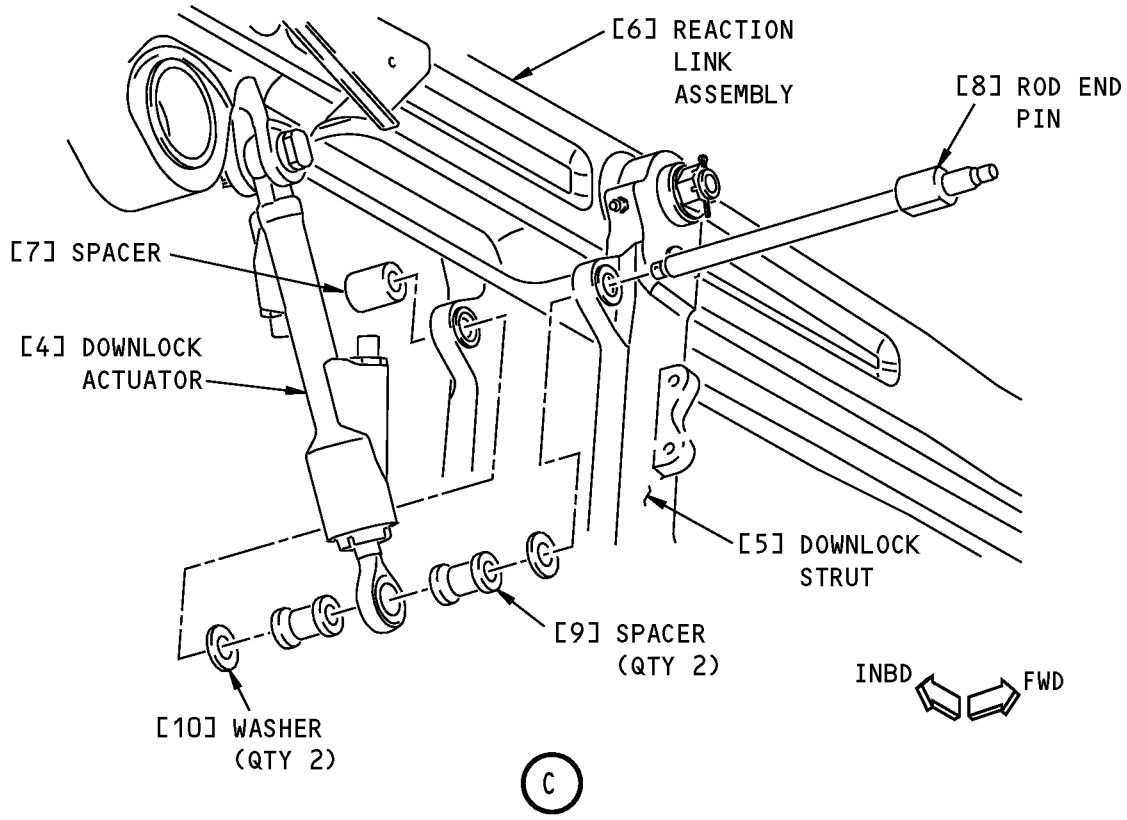
LEFT MAIN LANDING GEAR
(RIGHT MAIN LANDING GEAR IS OPPOSITE)



Main Landing Downlock Strut Installation
Figure 401 (Sheet 1 of 3)/32-11-89-990-801

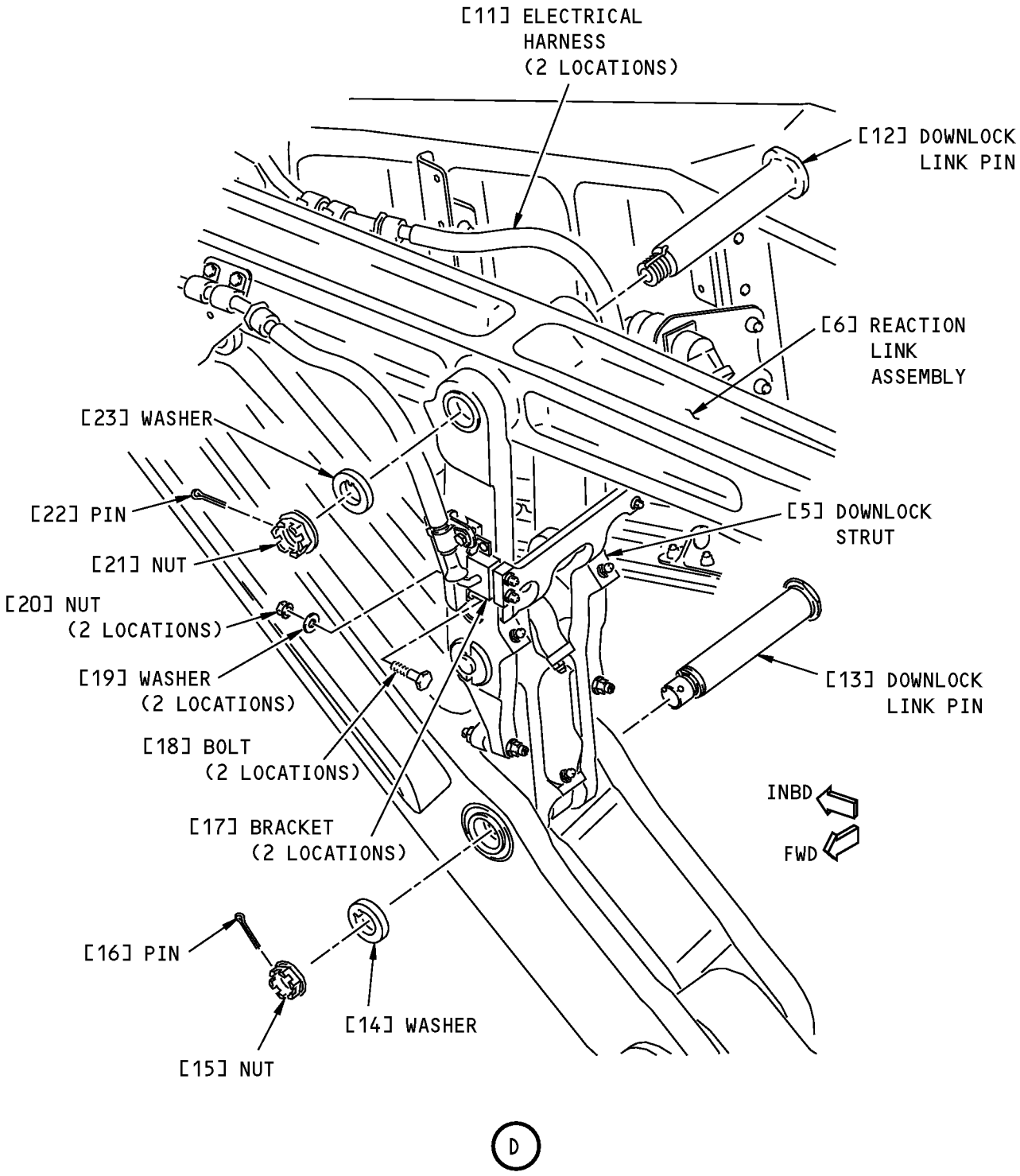
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Main Landing Downlock Strut Installation
Figure 401 (Sheet 2 of 3)/32-11-89-990-801

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Main Landing Downlock Strut Installation
Figure 401 (Sheet 3 of 3)/32-11-89-990-801

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TASK 32-11-89-420-801

3. Main Landing Gear Downlock Strut Installation

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
12-21-11-640-801	Main Landing Gear Upper End Components Servicing (P/B 301)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-32-51-400-801	Main Gear Downlock Actuator Installation (P/B 401)
32-32-91-400-801	Main Gear Downlock Spring Installation (P/B 401)

C. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00013	Grease - Aircraft And Instrument Grease	MIL-PRF-23827 (NATO G-354) (Supersedes MIL-G-23827)
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)
D00633	Grease - Aircraft General Purpose	BMS3-33

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

E. Prepare for the Installation.

SUBTASK 32-11-89-480-002

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

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F. Main Landing Gear Downlock Strut Installation

SUBTASK 32-11-89-420-001

(1) Do these steps to connect the downlock strut [5] to the upper side strut:

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(a) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces.

1) The threads and thread reliefs of the downlock link pin [13]
2) The threads of the nut [15]
3) The faces of the washer [14].

(b) Remove any excess corrosion preventive compound, C00913.

(c) Lubricate the chrome plated surfaces of the downlock link pin [13] with grease, D00633.

(d) Put the downlock strut [5] in its position for attachment to the upper side strut.

(e) Put the downlock link pin [13] through the upper side strut and the downlock strut [5].

NOTE: Use thread protector C32029-13 when you do this task.

(f) Install the washer [14], and the nut [15] on the downlock link pin [13].

(g) Tighten the nut [15] to 360 in-lb (40.7 N·m) – 600 in-lb (67.8 N·m).

(h) Install the pin [16] in the downlock link pin [13]. If it is necessary, loosen the nut [15] to the nearest castellation that aligns with the holes for the pin [16].

SUBTASK 32-11-89-420-002

(2) Do these steps to connect the downlock strut [5] to the reaction retraction link assembly [6]:

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(a) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

NOTE: Do not apply corrosion preventive compound to the chrome plated surfaces.

1) The threads and thread reliefs of the downlock link pin [12]

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2) The threads of the nut [21]

3) The faces of the washer [23].

(b) Remove any excess corrosion preventive compound, C00913.

(c) Lubricate the chrome plated surfaces of the downlock link pin [12] with grease, D00633.

(d) Put the downlock strut [5] in its position for attachment to the reaction retraction link assembly [6].

(e) Put the downlock link pin [12] through the downlock strut [5] and the reaction retraction link assembly [6].

NOTE: Use thread protector C32029-14 when you do this task.

(f) Install the washer [23], and the nut [21] on the downlock link pin [12].

(g) Tighten the nut [21] to 360-600 pound-inches (40.7-67.8 Newton-meters)360 in-lb (40.7 N·m) – 600 in-lb (67.8 N·m).

NOTE: Use wrench adapter C32029-5 to hold the head of the downlock link pin [12] when you tighten the nut [21].

(h) Install the pin [22] in the downlock link pin [12]. If it is necessary, loosen the nut [21] to the nearest castellation that aligns with the holes for the pin [22].

SUBTASK 32-11-89-640-001

(3) Do these steps to connect the rod end of the downlock actuator [4] to the downlock strut [5]:

(a) Lubricate the inside surface of the rod end of the downlock actuator [4], and the rod end pin [8] with grease, D00633.

NOTE: Use, grease, D00013 if grease, D00633 is not available.

(b) Put the rod end of the downlock actuator [4] in its position for attachment to the downlock strut [5].

1) If it is necessary, retract or extend the downlock actuator [4] to align the rod end of the downlock actuator [4] to the lug on the downlock strut [5].

(c) From the forward side, put the rod end pin [8] through the downlock strut [5], spacers [9], washers [10], and the rod end of the downlock actuator [4].

(d) Install the spacer [7] on the rod end pin [8].

SUBTASK 32-11-89-420-003

(4) Do these steps to connect the hydraulic lines [2] to the downlock actuator [4]:

(a) Remove the plugs from the ports on the downlock actuator [4].

(b) Lubricate the new packings [3] with fluid, D00153 and install the packings [3] in the ports of the downlock actuator [4].

(c) Remove the caps from the unions and connect the hydraulic lines [2] to the downlock actuator [4].

(d) Tighten the hydraulic tube fittings [2] to 140 in-lb (16 N·m).

(e) Loosen the hydraulic tube fittings [2] and re-tighten them to 137 in-lb (15 N·m) – 147 in-lb (17 N·m).

(f) Remove the tags from the hydraulic lines [2].

SUBTASK 32-11-89-420-005

(5) Do this step to connect the electrical harnesses [11] to the downlock strut [5]:

(a) Install the nuts [20], washers [19], and the bolts [18] to connect the brackets [17] to the downlock strut [5].

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G. Put the Airplane back to its Usual Condition.

SUBTASK 32-11-89-860-003

(1) For hydraulic systems A and B, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-11-89-420-004

(2) Do this task: Main Gear Downlock Spring Installation, TASK 32-32-91-400-801.

SUBTASK 32-11-89-610-001

(3) Lubricate the downlock strut [5]. To lubricate it, do this task: Main Landing Gear Upper End Components Servicing, TASK 12-21-11-640-801.

SUBTASK 32-11-89-710-001

(4) Test the downlock actuator [4]. To test it, do this task: Main Gear Downlock Actuator Installation, TASK 32-32-51-400-801.

SUBTASK 32-11-89-790-001

(5) Examine the connections of the hydraulic lines for leakage.

SUBTASK 32-11-89-080-002

(6) Do this task: TASK 07-11-01-580-816.

——————— END OF TASK ———————

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MAIN LANDING GEAR WHEEL WELL BLADE SEAL - REMOVAL/INSTALLATION

1. General

A. This has procedure has these tasks:

(1) A removal of the blade seal from the wheel well of the main landing gear

(2) An installation of the blade seal on the wheel well of the main landing gear.

B. The blade seal can be replaced in segments or all at one time.

TASK 32-12-12-000-801

2. Main Landing Gear Wheel Well Blade Seal Removal

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

C. Prepare for the Removal

SUBTASK 32-12-12-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801

SUBTASK 32-12-12-480-002

(2) Put chocks around the tires of all the landing gear.

D. Wheel Well Blade Seal Removal

SUBTASK 32-12-12-020-001

(1) Do these steps to remove all the blade seals [4] from the wheel well:

(a) Remove the screws [1] that hold the blade seals [4] between the seal retainer (upper) [3] and the seal retainer (lower) [5].

(b) Isolate the seal retainer (upper) [3] from the blade seals [4] and the seal retainer (lower) [5].

(c) Remove the blade seals [4] from the wheel well.

(d) Hold the lower retainer (lower) [5] in place with tape.

SUBTASK 32-12-12-020-003

(2) Do these steps to remove a segment or segments of blade seal [4] from the wheel well:

(a) Remove the screws [1] that hold the segment or segments of blade seal [4] between the seal retainer (upper) [3] and the seal retainer (lower) [5].

(b) Loosen the adjacent screws to a segment or segments of blade seal [4] you will remove to help in the removal of blade seal [4].

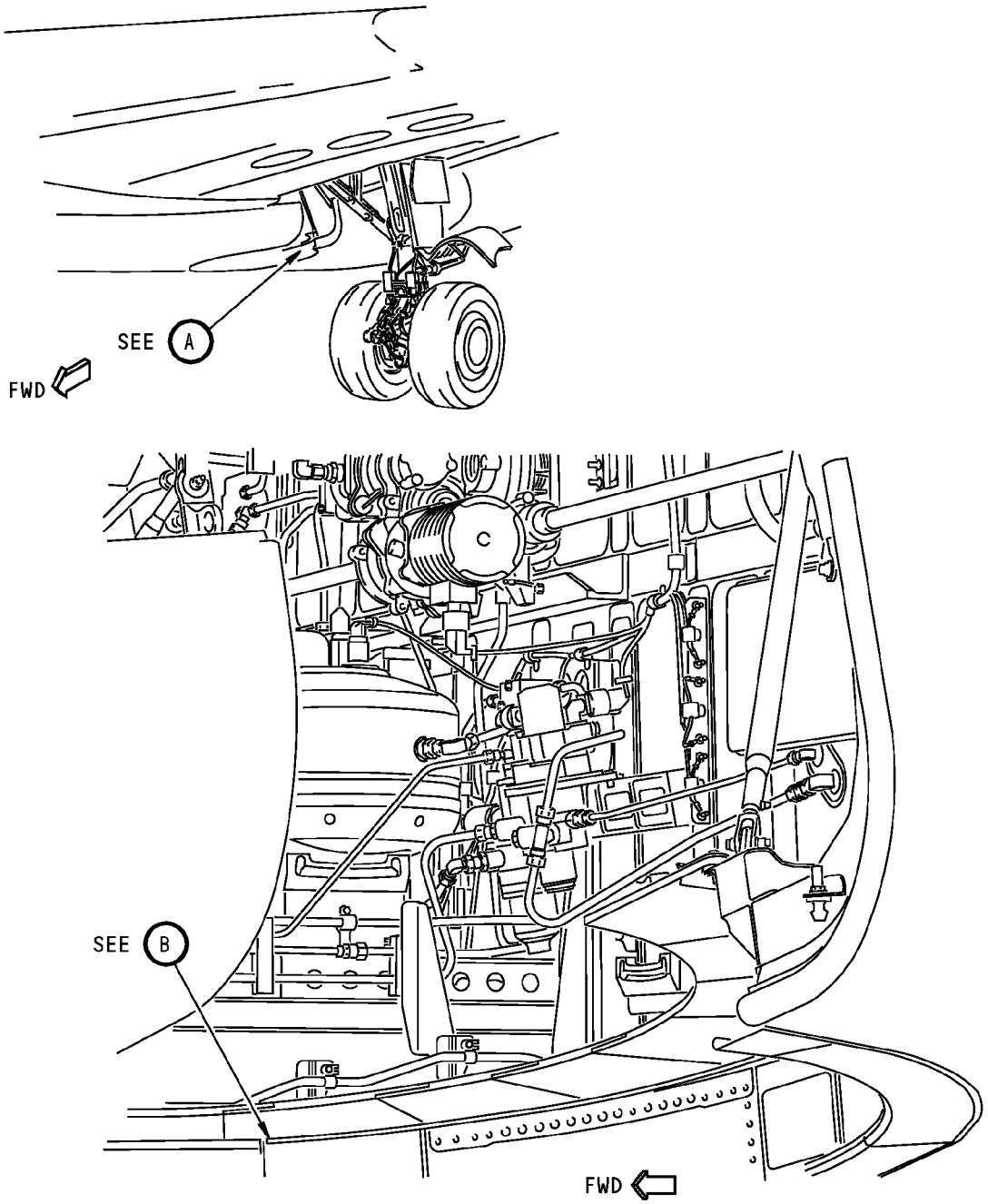
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(c) Lift the seal retainer (upper) [3] lightly until you can remove a segment or segments of blade seal [4].

(d) Remove a segment or segments of a blade seal [4] from the wheel well.

END OF TASK

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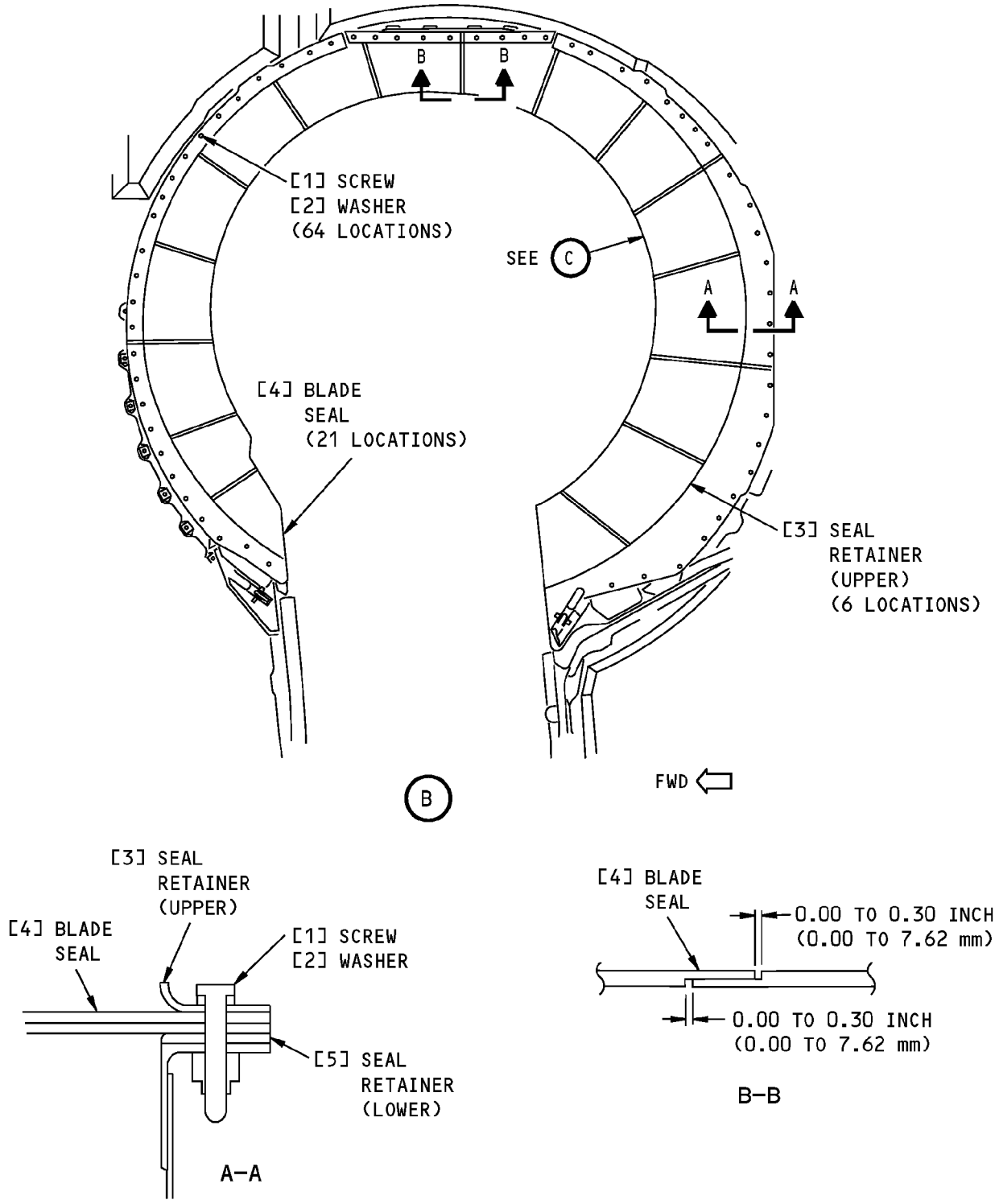


MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE IS SHOWN, RIGHT SIDE IS EQUIVALENT)

A

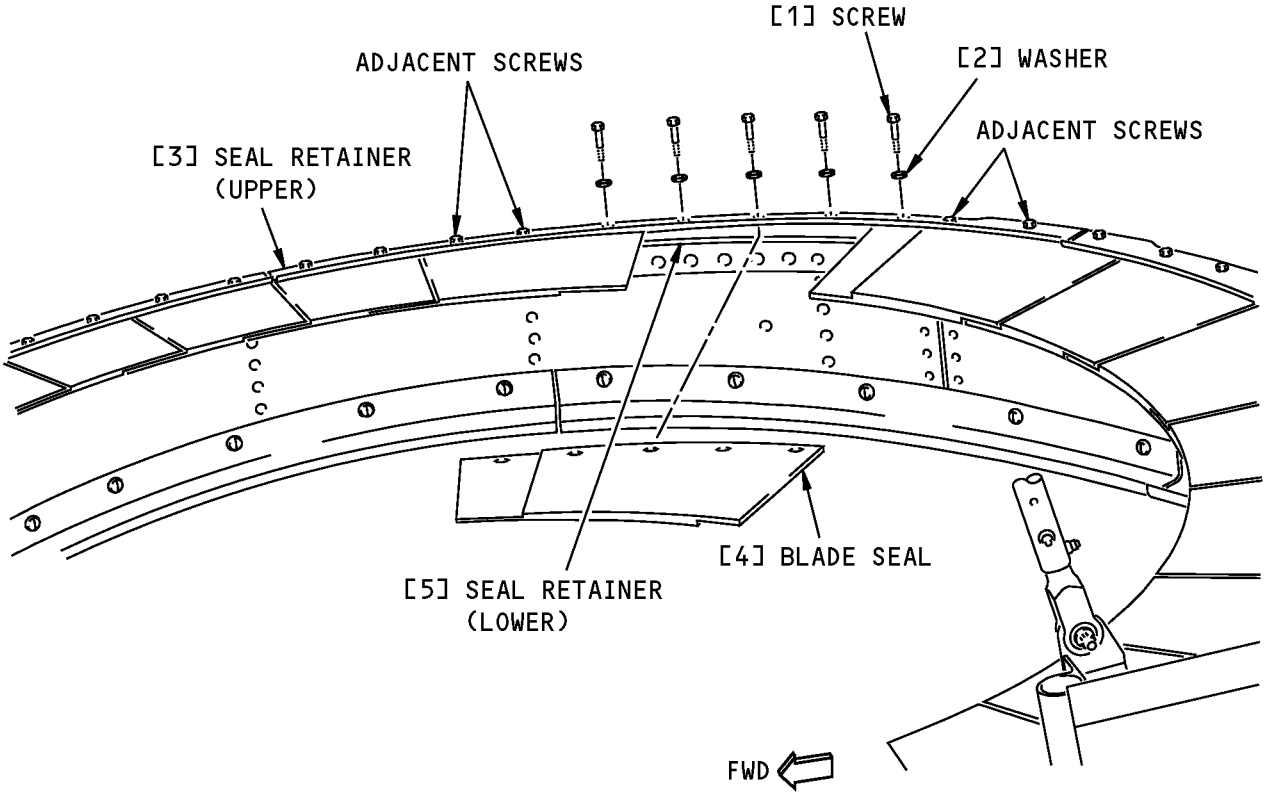
Main Landing Gear Wheel Well Blade Seal Installation
Figure 401 (Sheet 1 of 3)/32-12-12-990-801

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Main Landing Gear Wheel Well Blade Seal Installation
Figure 401 (Sheet 2 of 3)/32-12-12-990-801

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Main Landing Gear Wheel Well Blade Seal Installation
Figure 401 (Sheet 3 of 3)/32-12-12-990-801

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TASK 32-12-12-400-801

3. Main Landing Gear Wheel Well Blade Seal Installation

(Figure 401)

A. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

B. Wheel Well Blade Seal Installation

SUBTASK 32-12-12-420-001

(1) Do these steps to install all the blade seals [4] on the wheel well:

(a) Remove the tape that hold the seal retainer (lower) [5] in place.

(b) Position the blade seals [4] and the seal retainer (upper) [3] on the seal retainer (lower) [5].

NOTE: Each blade seal and seal retainer was designed to fit a specified area. Make sure you install the blade seal and the seal retainer on the same position from which they were removed.

(c) Align the fastener holes on the blade seals [4] with the fastener holes on the seal retainer (upper) [3] and seal retainer (lower) [5].

(d) Install the screws [1] to hold the blade seals [4] between the seal retainer (upper) [3] and the seal retainer (lower) [5].

(e) Tighten the screws [1] to 23-28 pound-inches (2-3 newton-meters).

SUBTASK 32-12-12-420-002

(2) Do these steps to install a segment or segments of blade seal [4] on the wheel well:

(a) Lift the seal retainer (upper) [3] lightly until you can install a segment or segments of a blade seal [4] between the seal retainer (upper) [3] and the seal retainer (lower) [4].

(b) Align the fastener holes on the blade seal [4] with the fastener holes on the seal retainer (upper) [3] and the seal retainer (lower) [5].

(c) Install the screws [1] to hold the blade seal [4] between the seal retainer (upper) [3] and the seal retainer (lower) [5].

(d) Tighten the screws [1] to 23-28 pound-inches (2-3 newton-meters).

C. Put the Airplane Back to Its Usual Condition

SUBTASK 32-12-12-080-001

(1) Remove chocks around the tires of all the landing gear.

——————— END OF TASK ———————

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MAIN LANDING GEAR WHEEL WELL BLADE SEAL - INSPECTION/CHECK

1. General

A. This procedure contains the task to examine the blade seal on the wheel well of the main landing gear.

TASK 32-12-12-200-801

2. Main Landing Gear Wheel Well Blade Seal Inspection

(Figure 601)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-12-12-000-801	Main Landing Gear Wheel Well Blade Seal Removal (P/B 401)
32-41-00 P/B 501	HYDRAULIC BRAKE SYSTEM - ADJUSTMENT/TEST
32-42-51 P/B 401	ANTISKID LANDING GEAR LEVER UP SWITCH - REMOVAL/INSTALLATION

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

C. Prepare for the Inspection

SUBTASK 32-12-12-210-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-12-12-480-003

(2) Put chocks around the tires of all the landing gear.

D. Wheel Well Blade Seal Inspection

SUBTASK 32-12-12-020-002

(1) Examine the blade seal segments for tears in the half-thickness (overlap) areas.

(a) If one segment of the overlap area has a tear, do the steps that follow:

1) Cut a sufficient area from the overlap to fully remove the tear. Use scissors or a utility blade.

NOTE: The area of damage removal must be over or under an undamaged area of the adjacent blade seal segment.

(b) If both segments of the overlap area have a tear, do the steps that follow:

1) Replace one or both blade seal segments.

NOTE: If one blade seal segment is replaced, refer to the above step to repair the remaining damaged blade seal segment.

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SUBTASK 32-12-12-020-004

(2) Examine the blade seal segments for tears in the full-thickness (non-overlap) areas.

(a) If you find a tear in a blade seal segment, replace the segment Main Landing Gear Wheel Well Blade Seal Removal, TASK 32-12-12-000-801.

SUBTASK 32-12-12-020-005

(3) Examine the seal segments for damage possibly caused by friction wear when a tire enters the wheel well.

NOTE: Worn edges from friction with tires is usual, and local fraying of fabric along the worn edges is permitted. If the worn edge has no tears or separated sections, then there is no limit to the depth of wear and operators may replace blade seals at their discretion. Be advised, however, that blade seals which have worn beyond the point of contact with the tire could contribute to drag in the wheel well area.

(a) If you find damage to the blade seals which appears to have been caused by spinning tires, perform a continuity check ANTISKID LANDING GEAR LEVER UP SWITCH - REMOVAL/INSTALLATION, PAGEBLOCK 32-42-51/401.

(b) If the problem persists, perform the Gear Retract Braking - Operational Test HYDRAULIC BRAKE SYSTEM - ADJUSTMENT/TEST, PAGEBLOCK 32-41-00/501.

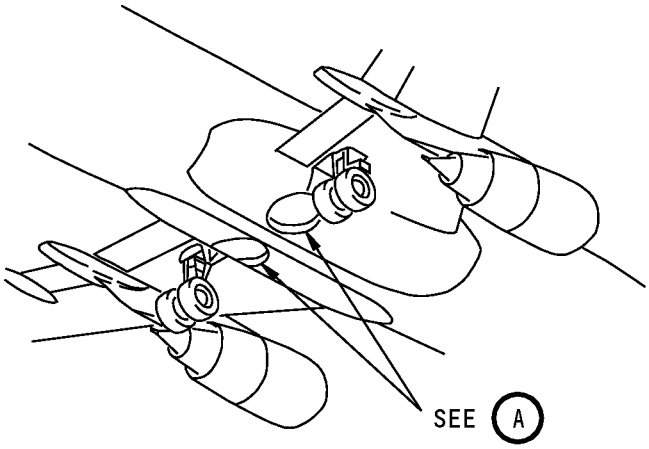
E. Put the Airplane Back to Its Usual Condition

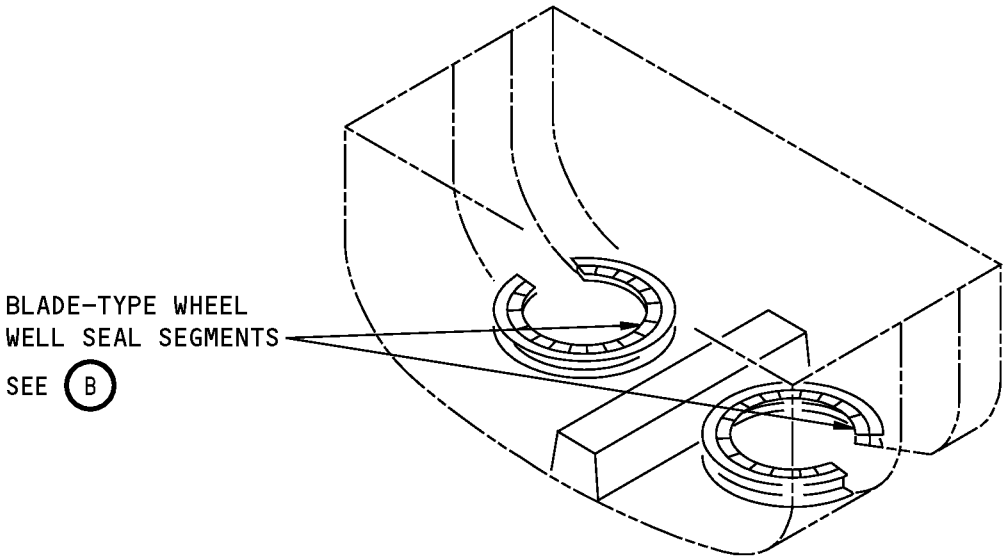
SUBTASK 32-12-12-080-002

(1) Remove chocks around the tires of all the landing gear.

———————— END OF TASK ————————

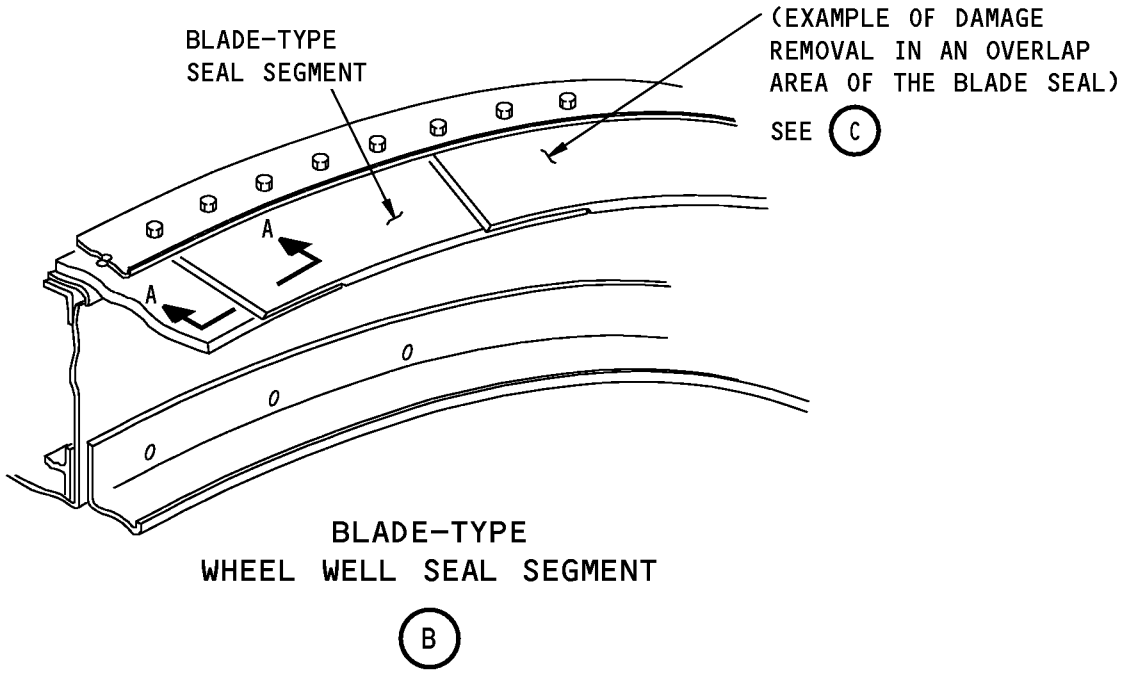
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Main Landing Gear Wheel Well Blade Seal Inspection/Check
Figure 601 (Sheet 1 of 3)/32-12-12-990-802

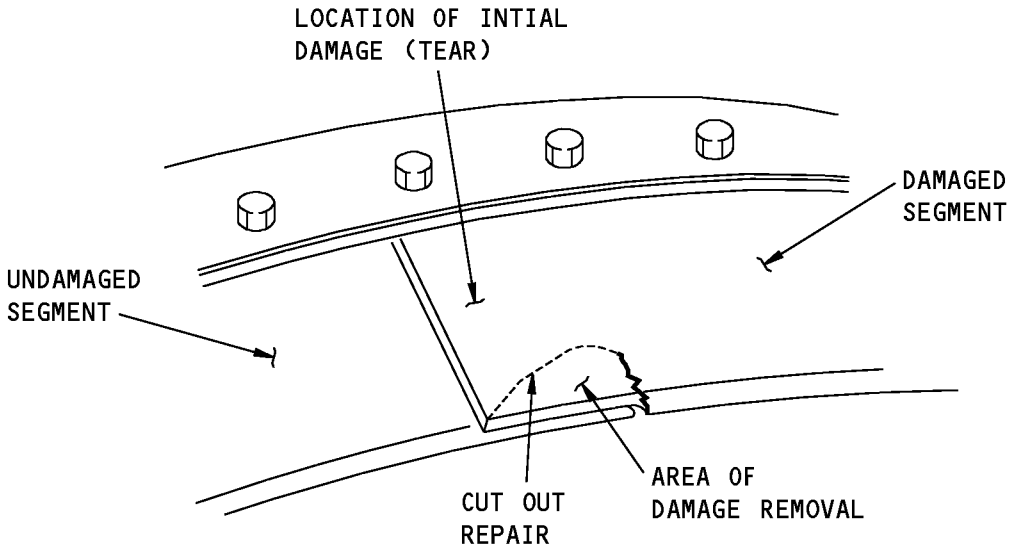
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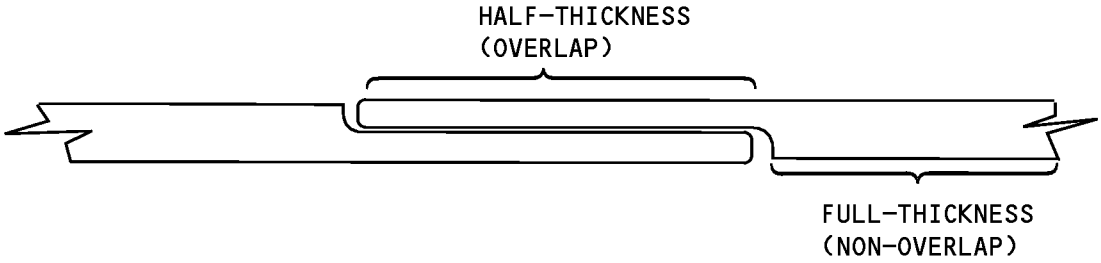
Main Landing Gear Wheel Well Blade Seal Inspection/Check
Figure 601 (Sheet 2 of 3)/32-12-12-990-802

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(EXAMPLE OF DAMAGE REMOVAL IN AN OVERLAP
AREA OF A WHEEL WELL BLADE SEAL)

C



(EXAMPLE)
A-A

1496768 S0000271948_V2

Main Landing Gear Wheel Well Blade Seal Inspection/Check
Figure 601 (Sheet 3 of 3)/32-12-12-990-802

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MAIN LANDING GEAR SHOCK STRUT DOORS - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the center door from the shock strut (referred to as the center door assy [1])

(2) An installation of the center door on the shock strut of the main landing gear

(3) A removal of the inner door from the shock strut (referred to as the inner door assy [2]

(4) An installation of the inner door on the shock strut of the main landing gear

(5) A removal of the door assembly from the shock strut of the main landing gear

(6) An installation of the door assembly on the shock strut of the main landing gear

B. The assembly of the inner door assy [2] and the center door assy [1] is referred to as the "door assembly" in this procedure.

TASK 32-13-11-000-802

2. Main Landing Gear Center Door Removal

(Figure 401)

A. General

(1) This task provides instructions to remove the center door.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
732	Left Main Landing Gear - Center Door
733	Left Main Landing Gear - Inboard Door
734	Left Main Landing Gear
742	Right Main Landing Gear - Center Door
743	Right Main Landing Gear - Inboard Door
744	Right Main Landing Gear

D. Prepare for the Removal

SUBTASK 32-13-11-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-13-11-480-008

(2) Put chocks around the tires of all the landing gear.

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E. Main Landing Gear Center Door Removal

SUBTASK 32-13-11-020-005

(1) Do these steps to remove the center door assy [1]:

(a) Disconnect the jumper cable [28] from the center door assy [1].

(b) Remove the cotter pin [10], cotter pin [12], nuts [9, 13], spacers [7, 14], washers [5, 15] and the bolts [4, 16] to disconnect the tie rods [3, 11] from the shock strut [8].

(c) Do these steps to remove the anti-rotation clips:

1) Remove the nuts [56], bolt [53] and washers [54, 55].

2) Remove the antirotation clip [51].

3) Remove the bolt [63], washers [64, 65] and nuts [66].

4) Remove the clip [60], spacer [61] and shim [62].

(d) Remove the bolts [17, 29], washers [18, 30] and the laminated washers [19, 31] to disconnect the center door assy [1] from the shock strut [8].

(e) Remove the anti-rotation clip assembly [52].

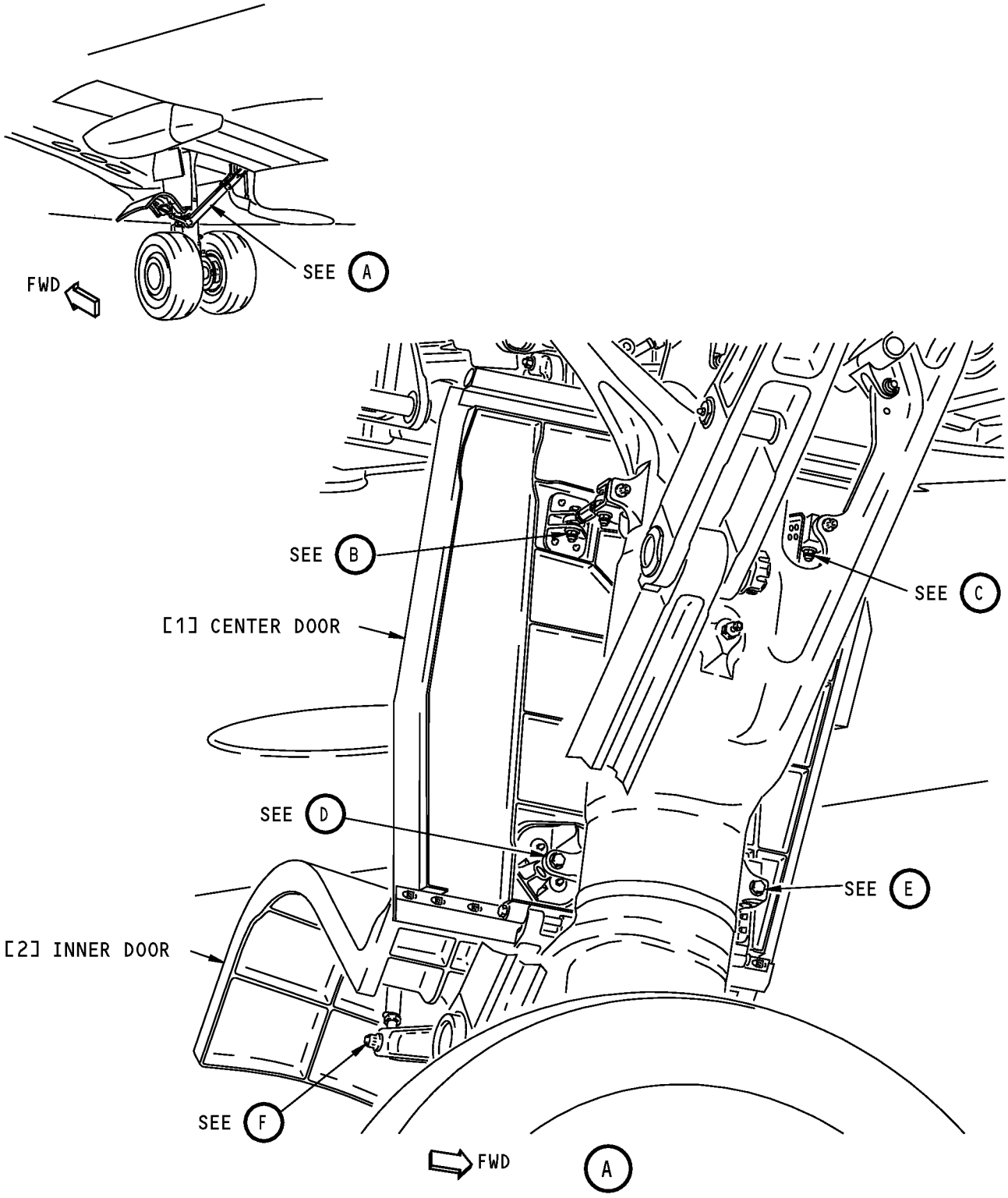
(f) Remove the cotter pins [24], nuts [23], washers [22] and the bolts [21] from the forward and aft hinges [20] to disconnect the center door assy [1] from the inner door assy [2].

NOTE: If it is necessary, remove the bolts [26, 27] and pull the seal [25] slightly to the down position for easy removal of the bolts [21].

(g) Remove the center door assy [1] from the airplane.

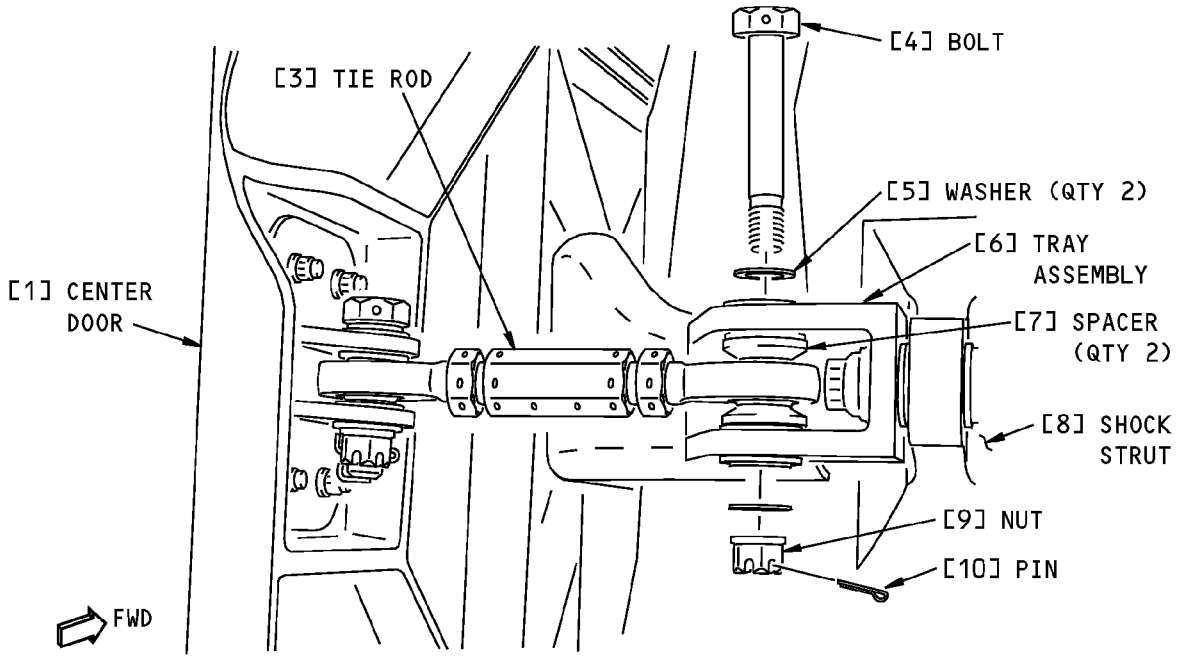
——————— END OF TASK ———————

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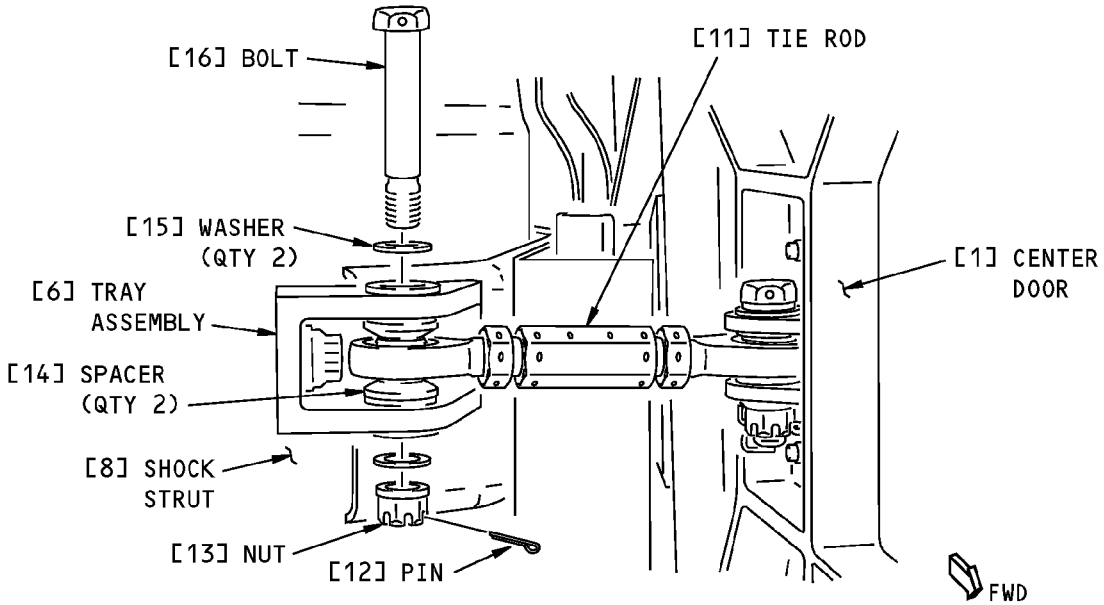
Main Landing Gear Shock Strut Doors Installation
Figure 401 (Sheet 1 of 5)/32-13-11-990-801

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CENTER DOOR TOP AFT HINGE CONNECTON

B

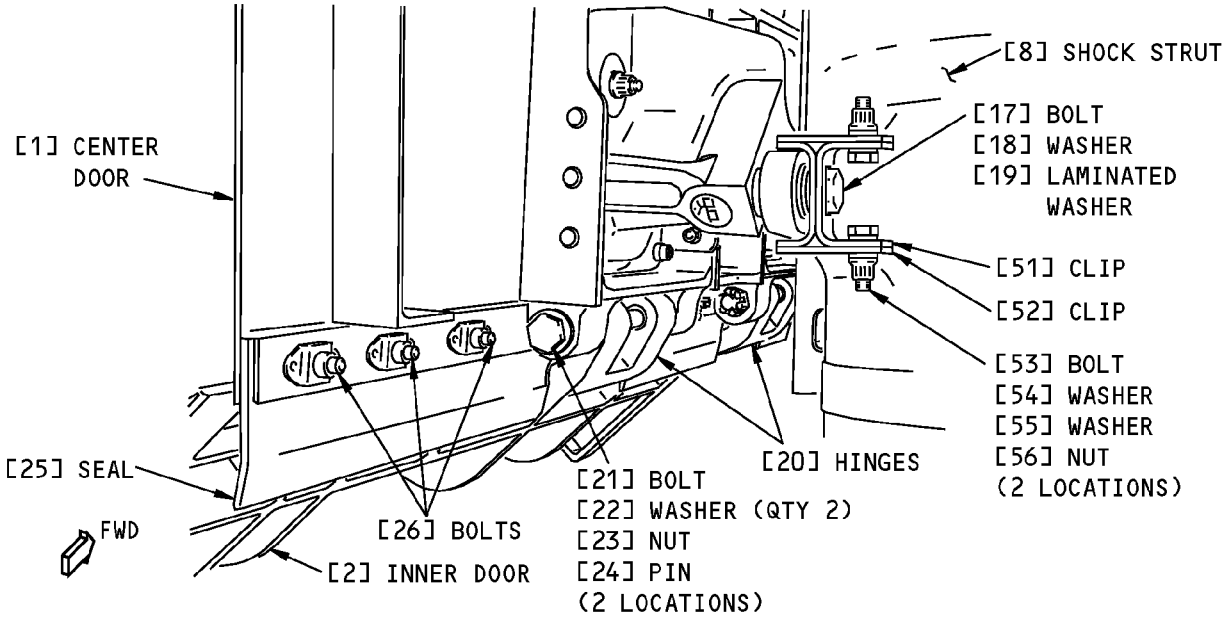


CENTER DOOR TOP FORWARD HINGE CONNECTION

C

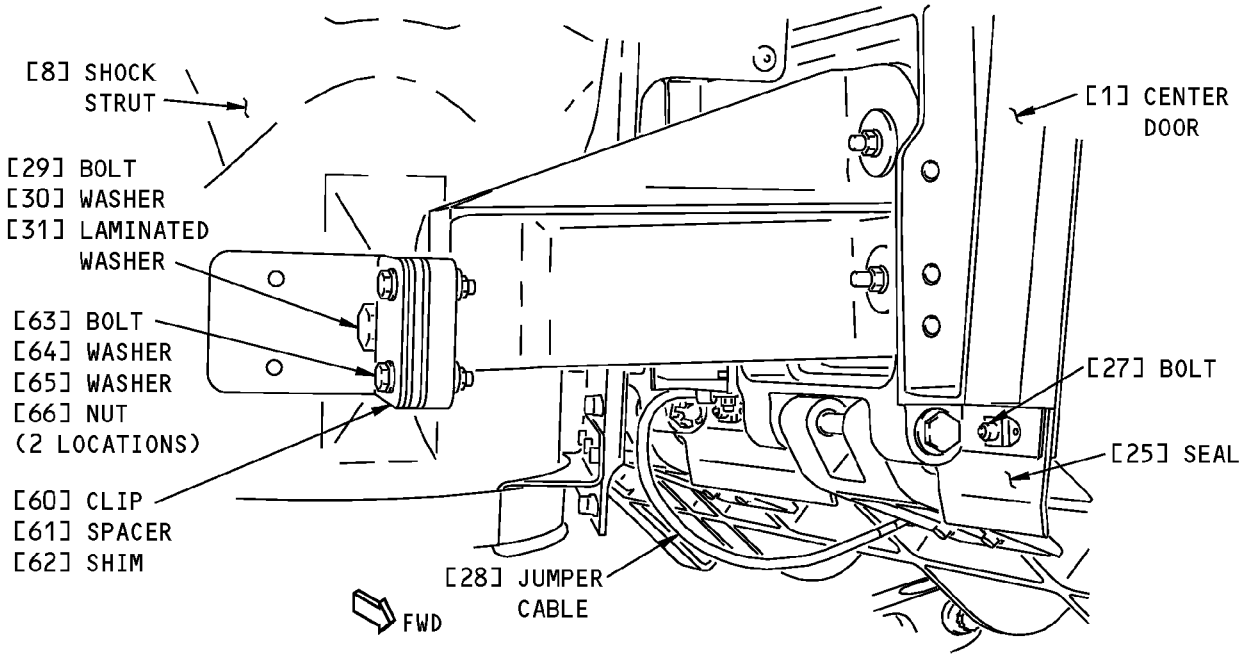
Main Landing Gear Shock Strut Doors Installation
Figure 401 (Sheet 2 of 5)/32-13-11-990-801

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CENTER DOOR BOTTOM AFT HINGE CONNECTION

D

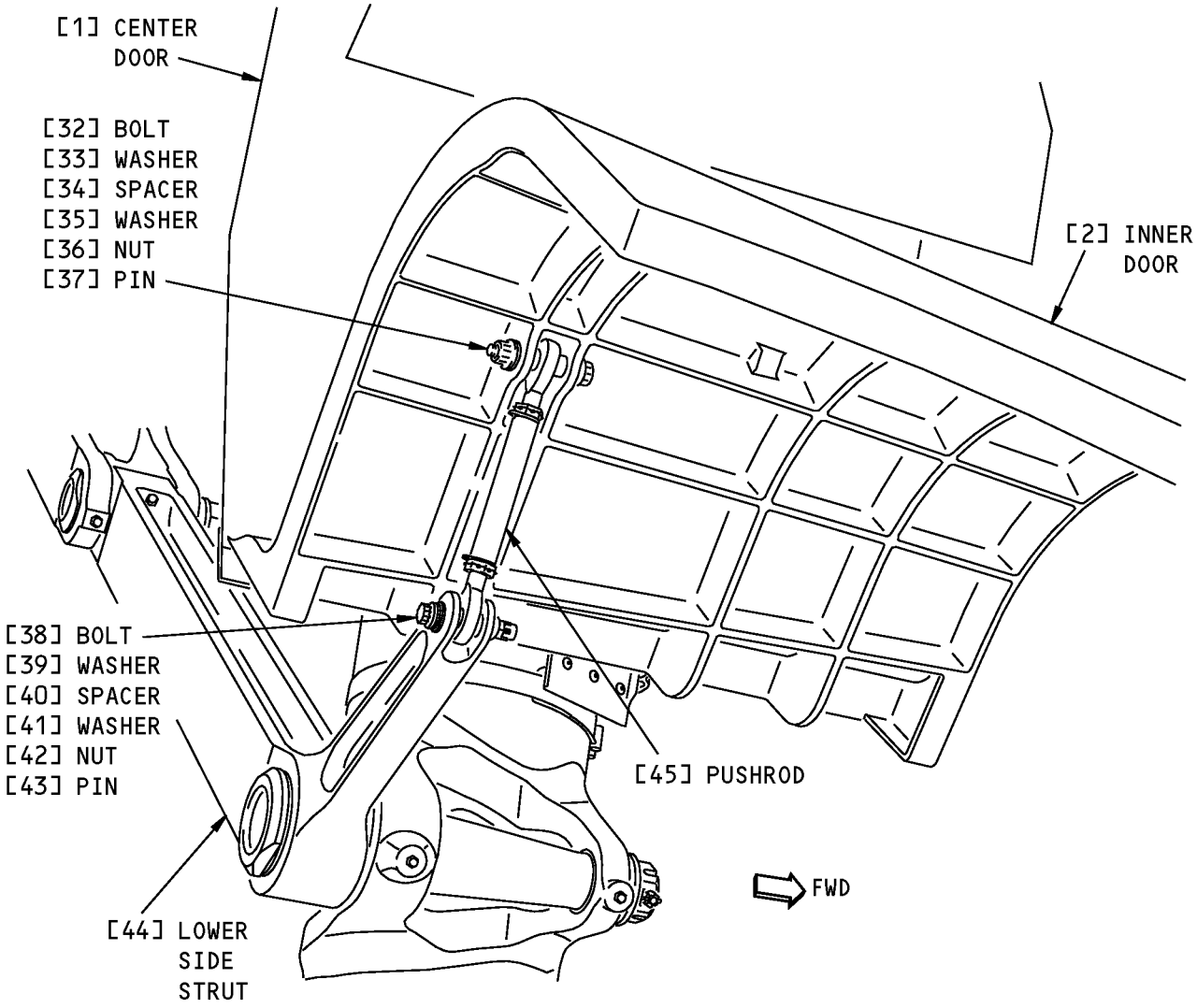


CENTER DOOR BOTTOM FORWARD HINGE CONNECTION

E

Main Landing Gear Shock Strut Doors Installation
Figure 401 (Sheet 3 of 5)/32-13-11-990-801

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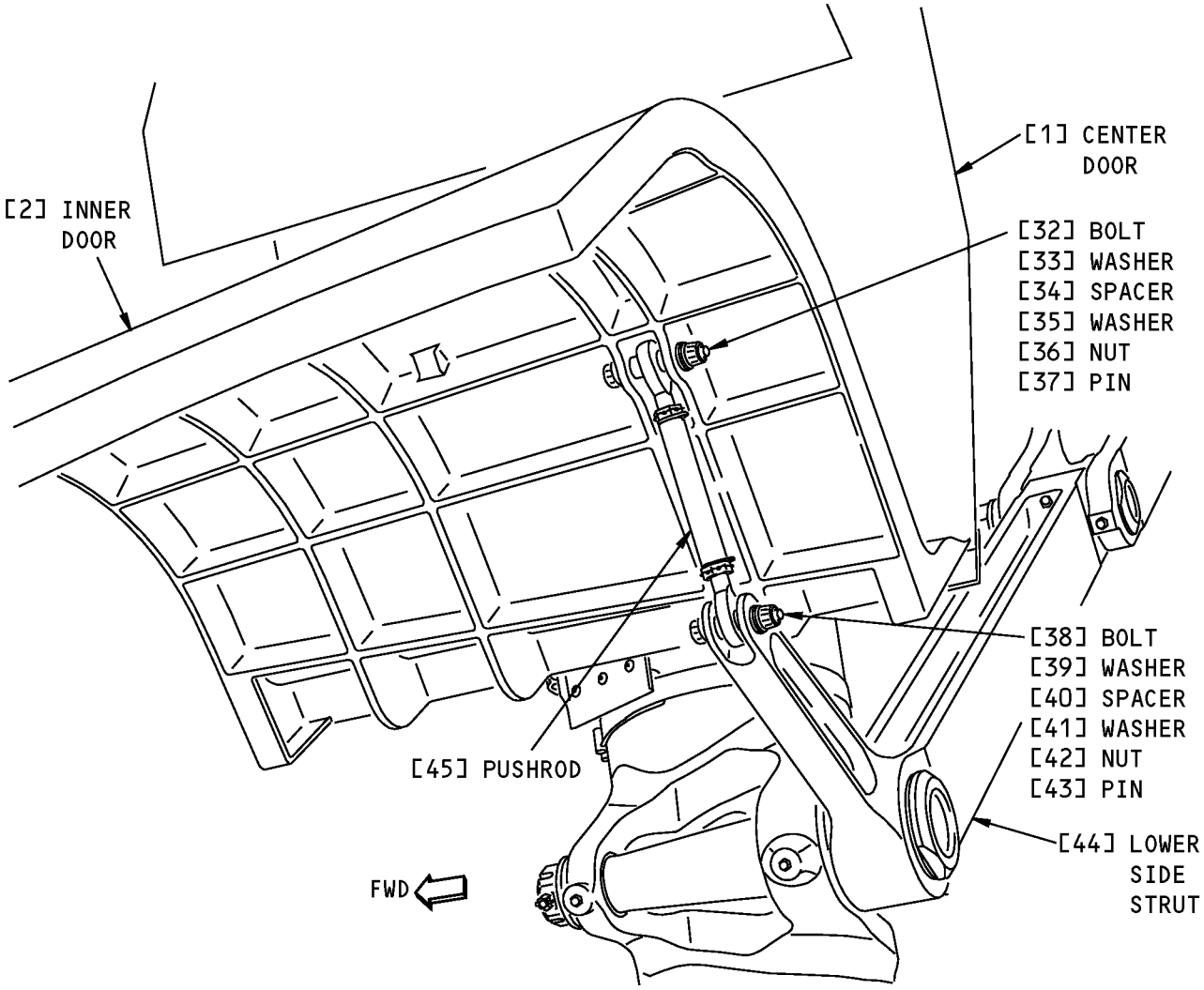


INNER DOOR PUSHROD CONNECTION
(RIGHT SIDE)

F

Main Landing Gear Shock Strut Doors Installation
Figure 401 (Sheet 4 of 5)/32-13-11-990-801

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INNER DOOR PUSHROD CONNECTION
(LEFT SIDE)

G

Main Landing Gear Shock Strut Doors Installation
Figure 401 (Sheet 5 of 5)/32-13-11-990-801

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TASK 32-13-11-420-802

3. Main Landing Gear Center Door Installation

(Figure 401)

A. General

(1) This task provides instructions to install the center door.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-13-11-820-801	Main Landing Gear Shock Strut Door Adjustment (P/B 501)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
10	Pin	32-13-21-03-020	HAP ALL
12	Pin	32-13-21-03-020	HAP ALL
24	Pin	32-13-21-03-205	HAP ALL

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
732	Left Main Landing Gear - Center Door
733	Left Main Landing Gear - Inboard Door
734	Left Main Landing Gear
742	Right Main Landing Gear - Center Door
743	Right Main Landing Gear - Inboard Door
744	Right Main Landing Gear

E. Prepare for the Installation

SUBTASK 32-13-11-480-004

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-13-11-480-009

(2) Put chocks around the tires of all the landing gear.

F. Main Landing Gear Center Door Installation

SUBTASK 32-13-11-420-017

(1) Do these steps to install the center door assy [1]:

(a) Put the center door assy [1] in its position for connection to the shock strut [8] and the inner door assy [2].

(b) Install the anti-rotation clip assembly [52].

(c) Install the bolts [17, 29], washers [18, 30] and the laminated washers [19, 31].

(d) Do these steps to install the anti-rotation clips:

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1) Install the antirotation clip [60], spacer [61], shim [62], nuts [66], bolts [63] and washers [64, 65].

2) Install the antirotation clip [51], nuts [56], bolts [53] and washers [54].

3) Install the bolts [4, 16], washers [5, 15], spacers [7, 14], and the nuts [9, 13] to connect the tie rods [3, 11] to the tray assembly [6].

NOTE: Do not tighten the nuts [9, 13]. Final torque to the nuts and installation of the cotter pin [10] and cotter pin [12] will be done after final adjustments to the doors are made in the subsequent step.

(e) Install the bolts [21] to attach the center door assy [1] to the inner door assy [2]:

NOTE: If the bolts [26, 27] are installed, remove them and pull the seal [25] slightly to the down position for easy installation of the bolts [21].

(f) Install the washers [22] and the nuts [23] on the bolts [21].

NOTE: Do not tighten the nuts [23]. Final torque to the nuts and installation of the cotter pins [24] will be done after final adjustments to the doors are made in the subsequent step.

(g) Connect the jumper cable [28] to the center door assy [1].

SUBTASK 32-13-11-820-002

(2) Do this task: Main Landing Gear Shock Strut Door Adjustment, TASK 32-13-11-820-801.

SUBTASK 32-13-11-420-005

(3) Tighten the bolt [17] and the bolt [29] to 220 in-lb (25 N·m) – 410 in-lb (46 N·m).

SUBTASK 32-13-11-420-006

(4) Tighten the nut [9] and install the cotter pin [10] in the hole in the bolt [4]. If it is necessary, loosen the nut [9] to the nearest castellation to align the holes for the cotter pin [10].

SUBTASK 32-13-11-420-007

(5) Tighten the nut [13] and install the cotter pin [12] in the hole in the bolt [16]. If it is necessary, loosen the nut [13] to the nearest castellation to align the holes for the cotter pin [12].

SUBTASK 32-13-11-420-008

(6) Tighten the nut [23] and install the cotter pin [24] in the hole in the bolt [21]. If it is necessary, loosen the nut [23] to the nearest castellation to align the holes for the cotter pin [24].

——————— END OF TASK ———————

TASK 32-13-11-000-804

4. Main Landing Gear Inner Door Removal

(Figure 401)

A. General

(1) This task provides instructions to remove the inner door.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

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C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
732	Left Main Landing Gear - Center Door
733	Left Main Landing Gear - Inboard Door
734	Left Main Landing Gear
742	Right Main Landing Gear - Center Door
743	Right Main Landing Gear - Inboard Door
744	Right Main Landing Gear

D. Prepare for the Removal

SUBTASK 32-13-11-480-010

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-13-11-480-011

(2) Put chocks around the tires of all the landing gear.

E. Main Landing Gear Inner Door Removal

SUBTASK 32-13-11-020-004

(1) Do these steps to remove the inner door assy [2]:

(a) Disconnect the jumper cable [28] from the inner door assy [2].

(b) Examine the condition of the pushrod [45] for wear.

(c) If you need to replace the pushrod [45], do this step:

1) Remove the cotter pin [43], nut [42], washer [41], bushing [40], washer [39] and the bolt [38] to disconnect the pushrod [45] from the lower side strut [44].

(d) If you do not need to replace the pushrod [45], do this step:

1) Remove the cotter pin [37], nut [36], washer [35], bushing [34], washer [33] and the bolt [32] to disconnect the inner door assy [2] from the pushrod [45].

(e) Remove the cotter pins [24], nuts [23], washers [22] and the bolts [21] from the forward and aft hinges [20] to disconnect the inner door assy [2] from the center door assy [1].

NOTE: If it is necessary, remove the bolts [26, 27] and pull the seal [25] slightly to the down position for easy removal of the bolts [21].

(f) Remove the inner door assy [2] from the airplane.

END OF TASK

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TASK 32-13-11-420-804

5. Main Landing Gear Inner Door Installation

(Figure 401)

A. General

(1) This task provides instructions to install the inner door.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-13-11-820-801	Main Landing Gear Shock Strut Door Adjustment (P/B 501)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
24	Pin	32-13-21-03-205	HAP ALL
37	Pin	32-13-21-01-203	HAP ALL
43	Pin	32-13-21-01-203	HAP ALL

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
732	Left Main Landing Gear - Center Door
733	Left Main Landing Gear - Inboard Door
734	Left Main Landing Gear
742	Right Main Landing Gear - Center Door
743	Right Main Landing Gear - Inboard Door
744	Right Main Landing Gear

E. Prepare for the Installation

SUBTASK 32-13-11-480-012

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-13-11-480-013

(2) Put chocks around the tires of all the landing gear.

F. Main Landing Gear Inner Door Installation

SUBTASK 32-13-11-420-004

(1) Do these steps to install the inner door assy [2]:

(a) Put the inner door assy [2] in its position for connection to the center door assy [1].

(b) Install the bolts [21] to hold the inner door assy [2] to the center door assy [1].

NOTE: If the bolts [26, 27] are installed, remove them and pull the seal [25] slightly to the down position for easy installation of the bolts [21].

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(c) Install the washers [22] and the nuts [23] to the bolts [21].

NOTE: Do not tighten the nuts [23]. Final torque to the nuts and installation of the cotter pins [24] will be done after final adjustments to the doors are made in the subsequent step.

(d) If you need to connect the inner door assy [2] to the pushrod [45], do these steps:

1) Install the bolt [32], washer [33], bushing [34], washer [35] and the nut [36] to hold the inner door assy [2] to the pushrod [45].

NOTE: Do not tighten the nut [36]. Final torque to the nut and installation of the cotter pin [37] will be done after final adjustments to the doors are made in the subsequent step.

(e) If you need to connect the pushrod [45] to the lower side strut [44], do these steps:

1) Install the bolt [38], washer [39], bushing [40], washer [41] and the nut [42] to connect the pushrod [45] to the lower side strut [44].

NOTE: Do not tighten the nut [42]. Final torque to the nut and installation of the cotter pin [43] will be done after final adjustments to the doors are made in the subsequent step.

(f) Connect the jumper cable [28] to the inner door assy [2].

SUBTASK 32-13-11-820-009

(2) Do this task: Main Landing Gear Shock Strut Door Adjustment, TASK 32-13-11-820-801.

SUBTASK 32-13-11-420-009

(3) Tighten the nut [23] and install the cotter pin [24] in the hole in the bolt [21]. If it is necessary, loosen the nut [23] to the nearest castellation to align the holes for the cotter pin [24].

SUBTASK 32-13-11-420-010

(4) Tighten the nut [36] and install the cotter pin [37] in the hole in the bolt [32]. If it is necessary, loosen the nut [36] to the nearest castellation to align the holes for the cotter pin [37].

SUBTASK 32-13-11-420-011

(5) Tighten the nut [42] and install the cotter pin [43] in the hole in the bolt [38]. If it is necessary, loosen the nut [42] to the nearest castellation to align the holes for the cotter pin [43].

——————— END OF TASK ———————

TASK 32-13-11-000-803

6. Main Landing Gear Door Assembly Removal

(Figure 401)

A. General

(1) This task provides instructions to remove the door assembly.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

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C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
732	Left Main Landing Gear - Center Door
733	Left Main Landing Gear - Inboard Door
734	Left Main Landing Gear
742	Right Main Landing Gear - Center Door
743	Right Main Landing Gear - Inboard Door
744	Right Main Landing Gear

D. Prepare for the Removal

SUBTASK 32-13-11-480-005

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-13-11-480-014

(2) Put chocks around the tires of all the landing gear.

E. Main Landing Gear Door Assembly Removal

SUBTASK 32-13-11-020-003

(1) Do the steps to remove the door assembly (center door assy [1] and inner door assy [2]):

(a) Examine the condition of the pushrod [45] for wear.

(b) If you need to replace the pushrod [45], do this step:

1) Remove the cotter pin [43], nut [42], washer [41], bushing [40], washer [39] and the bolt [38] to disconnect the pushrod [45] from the lower side strut [44].

(c) If you do not need to replace the pushrod [45], do this step:

1) Remove the cotter pin [37], nut [36], washer [35], bushing [34], washer [33] and the bolt [32] to disconnect the inner door assy [2] from the pushrod [45].

(d) Remove the cotter pin [10], cotter pin [12], nuts [9, 13], spacers [7, 14], washers [5, 15] and the bolts [4, 16] to disconnect the tie rods [3, 11] from the shock strut [8].

(e) Remove the bolts [17, 29], washers [18, 30] and the laminated washers [19, 31] to disconnect the center door assy [1] from the shock strut [8].

(f) Remove the door assembly (center door assy [1] and inner door assy [2]) from the airplane.

——————— END OF TASK ———————

TASK 32-13-11-420-803

7. Main Landing Gear Door Assembly Installation

(Figure 401)

A. General

(1) This task provides instructions to install the door assembly.

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B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-13-11-820-801	Main Landing Gear Shock Strut Door Adjustment (P/B 501)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
10	Pin	32-13-21-03-020	HAP ALL
12	Pin	32-13-21-03-020	HAP ALL
37	Pin	32-13-21-01-203	HAP ALL
43	Pin	32-13-21-01-203	HAP ALL

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
732	Left Main Landing Gear - Center Door
733	Left Main Landing Gear - Inboard Door
734	Left Main Landing Gear
742	Right Main Landing Gear - Center Door
743	Right Main Landing Gear - Inboard Door
744	Right Main Landing Gear

E. Prepare for the Installation

SUBTASK 32-13-11-480-006

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-13-11-480-015

(2) Put chocks around the tires of all the landing gear.

F. Main Landing Gear Door Assembly Installation

SUBTASK 32-13-11-420-003

(1) Do these steps to install the door assembly (center door assy [1] and inner door assy [2]):

(a) Put the door assembly (center door assy [1] and inner door assy [2]) in their position for connection to the shock strut [8] and the lower side strut [44].

(b) Install the bolts [17, 29], washers [18, 30] and the laminated washers [19, 31] to hold the center door assy [1] to the shock strut [8].

(c) Install the bolts [4, 16], washers [5, 15], spacers [7, 14] and the nuts [9, 13] to connect the tie rods [3, 11] to the tray assembly [6].

NOTE: Do not tighten the nuts [9, 13]. Final torque to the nuts and installation of the cotter pin [10] and cotter pin [12] will be done after final adjustments to the doors are made in the subsequent step.

(d) If you need to connect the inner door assy [2] to the pushrod [45], do these steps:

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1) Install the bolt [32], washer [33], bushing [34], washer [35] and the nut [36] to hold the inner door assy [2] to the pushrod [45].

NOTE: Do not tighten the nut [36]. Final torque to the nut and installation of the cotter pin [37] will be done after final adjustments to the doors are made in the subsequent step.

(e) If you need to connect the pushrod [45] to the lower side strut [44], do these steps:

1) Install the bolt [38], washer [39], bushing [40], washer [41] and the nut [42] to connect the pushrod [45] to the lower side strut [44].

NOTE: Do not tighten the nut [42]. Final torque to the nut and installation of the cotter pin [43] will be done after final adjustments to the doors are made in the subsequent step.

SUBTASK 32-13-11-820-003

(2) Do this task: Main Landing Gear Shock Strut Door Adjustment, TASK 32-13-11-820-801.

SUBTASK 32-13-11-420-012

(3) Tighten the bolt [17] and the bolt [29] to 220 in-lb (25 N·m) – 410 in-lb (46 N·m).

SUBTASK 32-13-11-420-013

(4) Tighten the nut [9] and install the cotter pin [10] in the hole in the bolt [4]. If it is necessary, loosen the nut [9] to the nearest castellation to align the holes for the cotter pin [10].

SUBTASK 32-13-11-420-014

(5) Tighten the nut [13] and install the cotter pin [12] in the hole in the bolt [16]. If it is necessary, loosen the nut [13] to the nearest castellation to align the holes for the cotter pin [12].

SUBTASK 32-13-11-420-015

(6) Tighten the nut [36] and install the cotter pin [37] in the hole in the bolt [32]. If it is necessary, loosen the nut [36] to the nearest castellation to align the holes for the cotter pin [37].

SUBTASK 32-13-11-420-016

(7) Tighten the nut [42] and install the cotter pin [43] in the hole in the bolt [38]. If it is necessary, loosen the nut [42] to the nearest castellation to align the holes for the cotter pin [43].

——————— END OF TASK ———————

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MAIN LANDING GEAR SHOCK STRUT DOOR - ADJUSTMENT/TEST

1. General

A. This procedure has these tasks:

(1) An adjustment of the shock strut door for the main landing gear

B. The assembly of the inner door and the center door is referred to as the "door assembly" in this procedure.

TASK 32-13-11-820-801

2. Main Landing Gear Shock Strut Door Adjustment

(Figure 501, Figure 502)

A. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-802	Hydraulic System A or B Pressurization with a Portable Hydraulic Cart (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-13-21-000-801	Main Landing Gear Wing Door Adjustment (P/B 501)

B. Tools/Equipment

Reference	Description
STD-163	Portable Hydraulic Cart, Systems Test, Capable of 3000 PSI and a minimum flow of 30 GPM.

C. Consumable Materials

Reference	Description	Specification
G00440	Lockwire - Corrosion Resistant Steel (0.041 inch Dia.)	NASM20995~ C41

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
731	Left Main Landing Gear - Outboard Door
734	Left Main Landing Gear
741	Right Main Landing Gear - Outboard Door
744	Right Main Landing Gear

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E. Prepare for the Adjustment

SUBTASK 32-13-11-480-007

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-13-11-860-001

(2) Lift the airplane with jacks until the main landing gear wheels are above the ground and there is enough clearance to retract the main landing gear (TASK 07-11-01-580-815).

SUBTASK 32-13-11-860-002

(3) To supply electric power, do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-13-11-840-001

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF ALL CONTROL SURFACE BEFORE YOU SUPPLY HYDRAULIC POWER. AILERONS, RUDDERS, ELEVATORS, FLAPS, SPOILERS, SLATS, AND THRUST REVERSERS CAN MOVE QUICKLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) Pressurize the hydraulic system A with a portable hydraulic cart, STD-163. To pressurize it, do this task: Hydraulic System A or B Pressurization with a Portable Hydraulic Cart, TASK 29-11-00-860-802.

SUBTASK 32-13-11-080-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR BUT THE ONE TO BE ADJUSTED. WHEN YOU MOVE THE CONTROL LEVER FOR THE LANDING GEAR, THE LANDING GEAR CAN RETRACT AND CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(5) Remove the downlock pin from the main landing gear for the door which is to be adjusted (TASK 32-00-01-080-801).

F. Main Landing Gear Shock Strut Door Adjustment

SUBTASK 32-13-11-860-003

(1) Do the steps that follow to retract the main landing gear:

(a) Remove the DO-NOT-OPERATE tag from the control lever for the landing gear.

(b) For the applicable main landing gear for the door you are adjusting, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF THE RETRACTION PATH FOR THE APPLICABLE MAIN LANDING GEAR. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR IF THE AREA IS NOT CLEAR.

(c) Move the control lever for the landing gear to the UP position to retract the main landing gear.

(d) Attach a DO-NOT-OPERATE tag to the control lever for the landing gear.

(e) Do the steps that follow to close the main landing gear door:

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1) To retract the main landing gear, slowly increase the hydraulic pressure that is supplied by portable hydraulic cart, STD-163 until the main landing gear is in the up and locked position.
2) Make sure the hydraulic pressure supplied by the portable hydraulic cart, STD-163 does not go above 3200 psi (22063 kPa).
3) With the gear in the up and locked position, decrease the hydraulic pressure supplied by the portable hydraulic cart, STD-163 to zero.

SUBTASK 32-13-11-820-004

(2) Calculate the Net Effect Value (NEV) of the center door [21]:

(a) Measure and record the fit or clearance values at each of the measurement locations shown in (Table 501).

NOTE: Record ALL of the fit or clearance values that are measured.

(b) Use the "ALL" tolerances, in (Table 501), for all airplane main landing gear center door clearance and flushness checks.

Table 501/32-13-11-993-804 MAIN LANDING GEAR CENTER DOOR CLEARANCE AND FLUSHNESS VALUES

AIRPLANE EFFECTIVITY	EDGE ZONE	CLEARANCE	FLUSHNESS
ALL	A	0.40 +0.23/-0.23 inch 10.16 +5.84/-5.84 mm	+0.03/-0.05 inch +0.76/-1.27 mm
ALL	B	0.33 +0.32/-0.17 inch 8.38 +8.12/-4.32 mm	NO ADJUSTMENT NECESSARY
ALL	C	0.40+0.23/-0.23 inch 10.16+5.84/-5.84 mm	+0.03/-0.05 inch +0.76/-1.27 mm
DOOR FLUSHNESS DIAGRAM			
-		(NEGATIVE MISFAIR)	A negative tolerance (-) indicates the face of the mismatch faces aft.
------> Air Stream (V)			
+		(POSITIVE MISFAIR)	A positive tolerance (+) indicates the face of the mismatch is into the air stream.
------> Air Stream (V)			

(c) Compare the measured fit values to (Table 501).

(d) If all of the measured fit values are within the tolerance limits shown in (Table 501), then the fit interface NEV meets the aerosmoothness requirement, and no NEV calculation is required.

SUBTASK 32-13-11-970-001

(3) If one or more of the measured values at each measurement location in (Figure 501) are more than the tolerances shown in the chart, then, find and convert all of the measured step (misfair) or clearance values into a net effect value (NEV).

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(a) Calculate the NEV for the interface:

1) Add all of the calculated NEV values, both those in tolerance and those that are not in the tolerance and divide the result by the total number of measurements.

NOTE: The result is the total NEV for the interface.

(b) Check the NEV result against net effect limit (NEL) for the interface given in the chart.

NOTE: This value is usually 1.0. If the NEV for the interface is less than or equal to the NEL, the interface is aerodynamically acceptable.

(c) If the calculated NEV is greater than the NEL, the interface does not meet the aerosmoothness requirements. Do the steps below.

SUBTASK 32-13-11-840-002

(4) If the fit is not in tolerance, do the steps that follow:

(a) Extend the main landing gear:

1) Remove the DO-NOT-OPERATE tag from the control lever for the landing gear.

2) Operate the portable hydraulic cart, STD-163 to supply hydraulic pressure to the main landing gear.

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF THE RETRACTION PATH FOR THE APPLICABLE MAIN LANDING GEAR. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR IF THE AREA IS NOT CLEAR.

3) Move the control lever for the landing gear to the DOWN position to extend the main landing gear.

4) Attach a DO-NOT-OPERATE tag to the control lever for the landing gear.

5) Adjust the hydraulic pressure supplied by the portable hydraulic cart, STD-163 to zero.

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEARS COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

6) Install the downlock pins on all the landing gears, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801

SUBTASK 32-13-11-820-005

(5) Adjust the center door [21]:

NOTE: A change in the adjustment of the center door can have an effect on the adjustment of the wing door. To do a check of the wing door, (TASK 32-13-21-000-801).

(a) Remove the lockwire and loosen the jamnuts [24] at either end of the pushrods [23].

(b) Turn the pushrods [23] in either direction until the fit is in tolerance.

(c) Tighten the washers [25] and jamnuts [24].

(d) Install the lockwires.

SUBTASK 32-13-11-220-001

(6) Make sure the center door [21] is still in tolerance (Table 501).

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SUBTASK 32-13-11-820-006

(7) Measure and record the fit or clearance values for the inner door [22] at each of the measurement locations shown in (Table 502)

NOTE: Write the fit values that are not in tolerance.

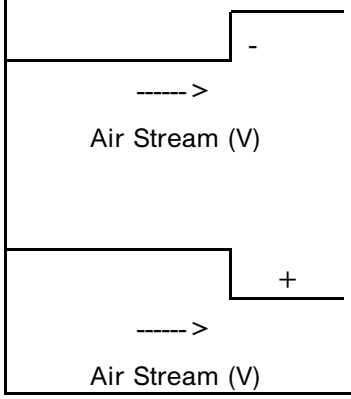
(a) Use the "ALL" tolerances in (Table 502), for all airplane main landing gear inner door clearance and flushness checks.

NOTE: After the inboard door rigging has been completed and with the door in the stowed position. The leading and trailing edges of the exterior surface of the inboard Main Landing Gear Door zones D and E inboard, should lie inside the exterior surface of the Wing to Body Fairing.

Table 502/32-13-11-993-805 MAIN LANDING GEAR INNER DOOR CLEARANCE AND FLUSHNESS VALUES

AIRPLANE EFFECTIVITY	EDGE ZONE	CLEARANCE	FLUSHNESS
ALL	D(1) D(2)	0.40 +0.12/-0.12 inch 10.16 +3.05/-3.05 mm (For All of Edge Zone D)	+0.0809/+0.1809 inch +2.05/+4.59 mm +0.1052/+0.2052 inch +2.67/+5.21 mm
ALL	E(1) E(2)	0.40 +0.12/-0.12 inch 10.16 +3.05/-3.05 mm (For All of Edge Zone E)	-0.1918/-0.2918 inch -4.87/-7.41 mm -0.2294/-0.3294 inch -5.83/-8.37 mm
ALL	F	0.60 +0.08/-0.08 inch 15.24 +2.03/-2.03 mm	NO ADJUSTMENT NECESSARY

DOOR FLUSHNESS DIAGRAM



(NEGATIVE MISFAIR)

A negative tolerance (-) indicates the face of the mismatch faces aft.

(POSITIVE MISFAIR)

A positive tolerance (+) indicates the face of the mismatch is into the air stream.

SUBTASK 32-13-11-840-003

(8) If the fit is not in tolerance, do the steps that follow:

(a) Extend the main landing gear:

1) Remove the DO-NOT-OPERATE tag from the control lever for the landing gear.

2) Operate the portable hydraulic cart, STD-163 to supply hydraulic pressure to the main landing gear.

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WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF THE RETRACTION PATH FOR THE APPLICABLE MAIN LANDING GEAR. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR IF THE AREA IS NOT CLEAR.

3) Move the control lever for the landing gear to the DOWN position to extend the main landing gear.

4) Attach a DO-NOT-OPERATE tag to the control lever for the landing gear.

5) Adjust the hydraulic pressure supplied by the portable hydraulic cart, STD-163 to zero.

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEARS. WITHOUT THE DOWNLOCK PINS, THE LANDING GEARS COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

6) Install the downlock pins on all the landing gears (TASK 32-00-01-480-801).

SUBTASK 32-13-11-820-007

(9) Adjust the push rod [37] (Figure 502):

(a) Loosen the jamnuts [35] on the push rod [37] at either end and turn the rod on either direction.

(b) After the final adjustment of the push rod [37], insert a 0.050 pin or wire into the inspection hole.

NOTE: Make sure the wire stopped by the rod end for adjustment to be acceptable.

(c) Tighten the washers [36] and jamnuts [35].

(d) Install the lockwire, G00440.

SUBTASK 32-13-11-220-002

(10) Make sure the inner door [22] is still in tolerance (Table 502).

SUBTASK 32-13-11-820-008

(11) If it is necessary, adjust the push rods until the fit tolerances meet the tolerances (Table 501) (Table 502).

G. Put the Airplane In Its Usual Condition

SUBTASK 32-13-11-840-004

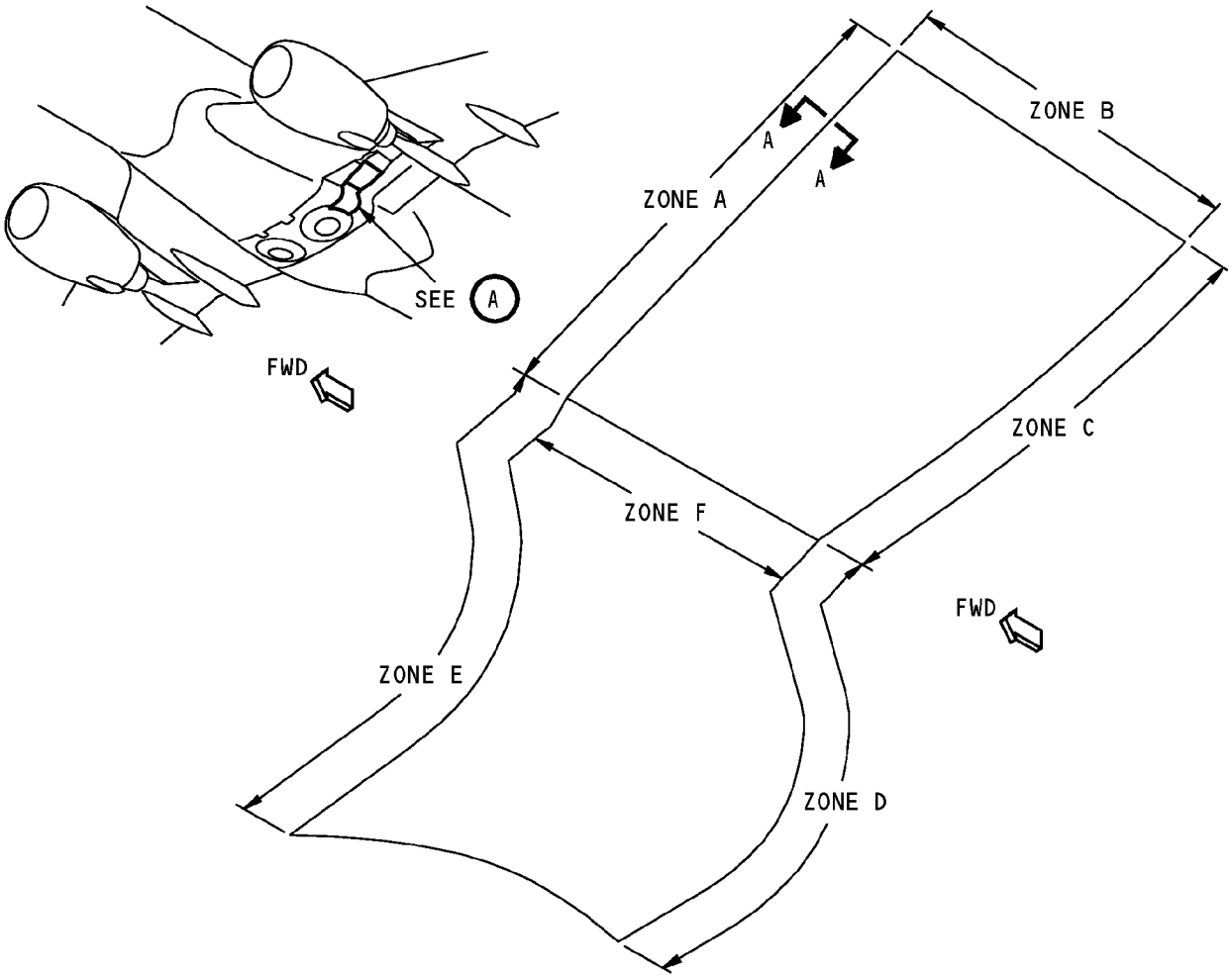
(1) Do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

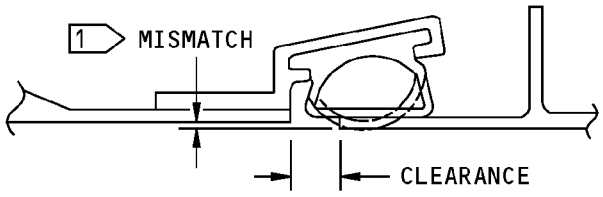
SUBTASK 32-13-11-580-001

(2) To lower the airplane and remove the jacks, do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

——————— END OF TASK ———————

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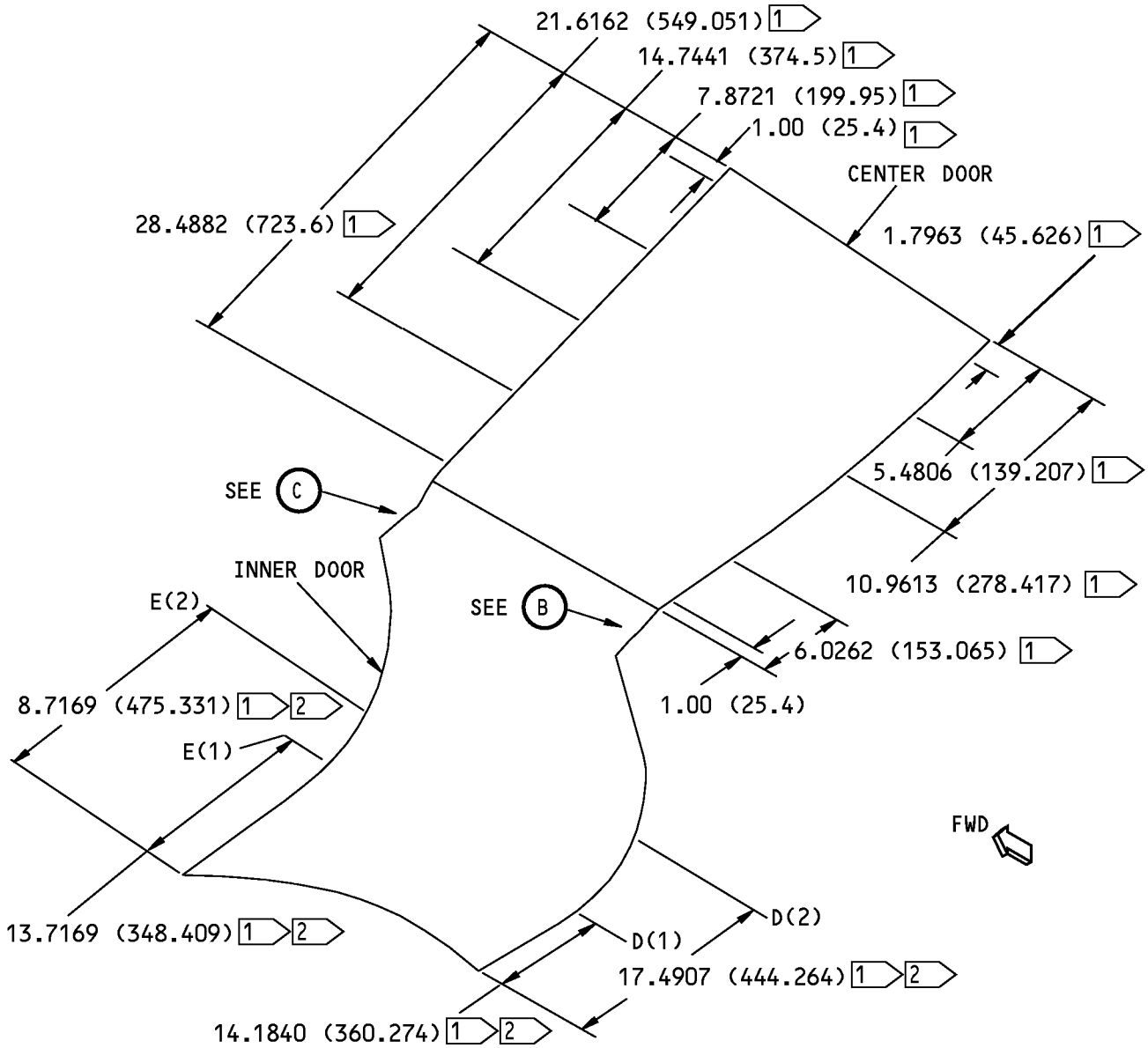


ZONE A
(ALL OTHER ZONES ARE EQUIVALENT)
A-A

1 A POSITIVE TOLERANCE (+) INDICATES THE FACE OF THE MISMATCH IS FORWARD (INTO THE AIRSTREAM). A NEGATIVE TOLERANCE (-) INDICATES THE FACE OF THE MISMATCH FACES AFT.

Main Landing Gear Shock Strut Doors Fit Tolerances
Figure 501 (Sheet 1 of 4)/32-13-11-990-802

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DIMENSIONS

A

NOTE: ALL DIMENSIONS ARE IN INCHES (MILLIMETERS ARE IN PARENTHESES). THESE MEASUREMENTS LOCATIONS ARE FOR STEP/MISFAIR BETWEEN THE DOOR AND THE PANEL.

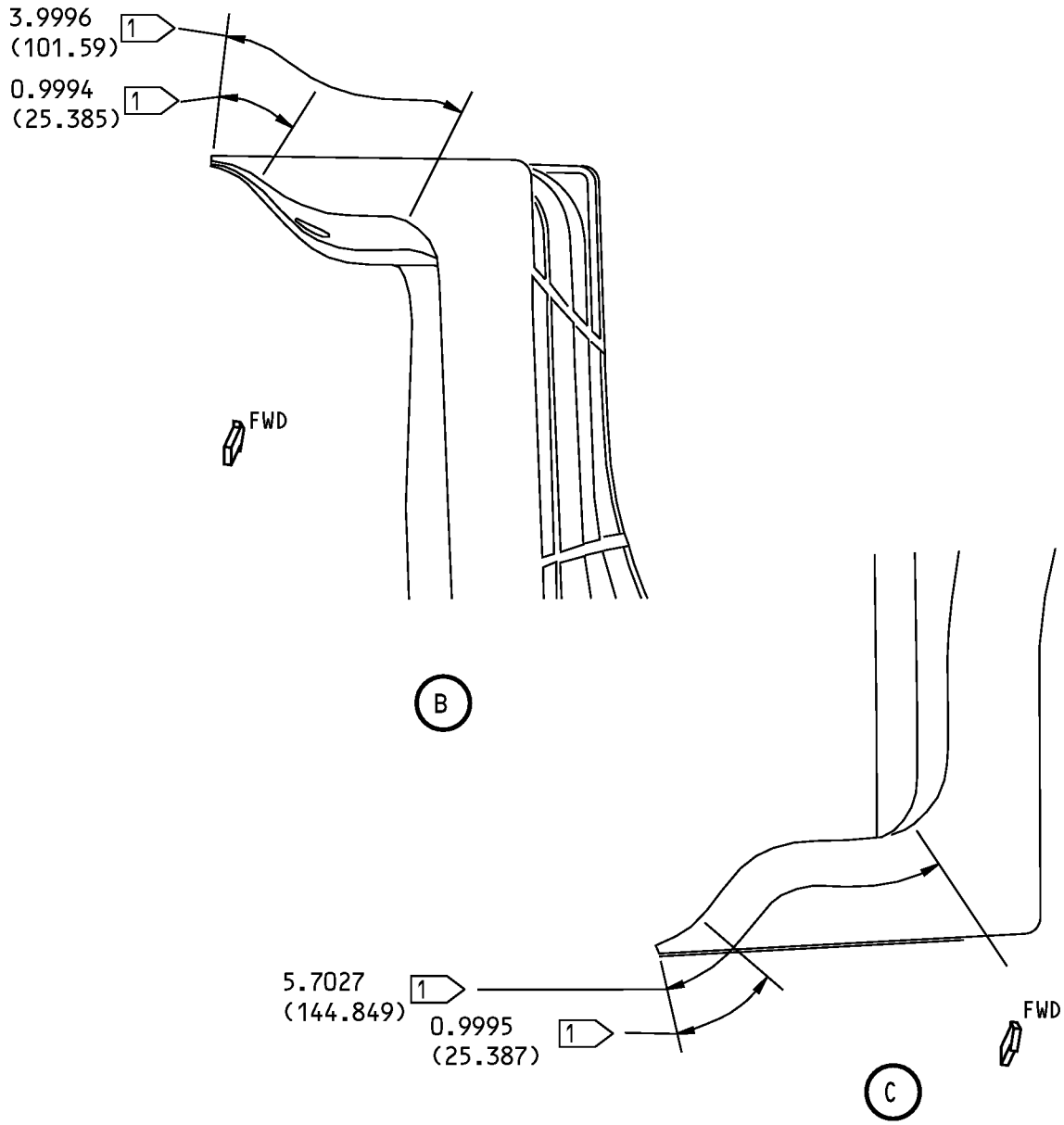
1 THE DIMENSIONAL TOLERANCE IS ±0.5000 INCH (12.7 mm).

2 NEV CALCULATIONS ARE NOT REQUIRED.

G33284 S0006574941_V2

Main Landing Gear Shock Strut Doors Fit Tolerances
Figure 501 (Sheet 2 of 4)/32-13-11-990-802

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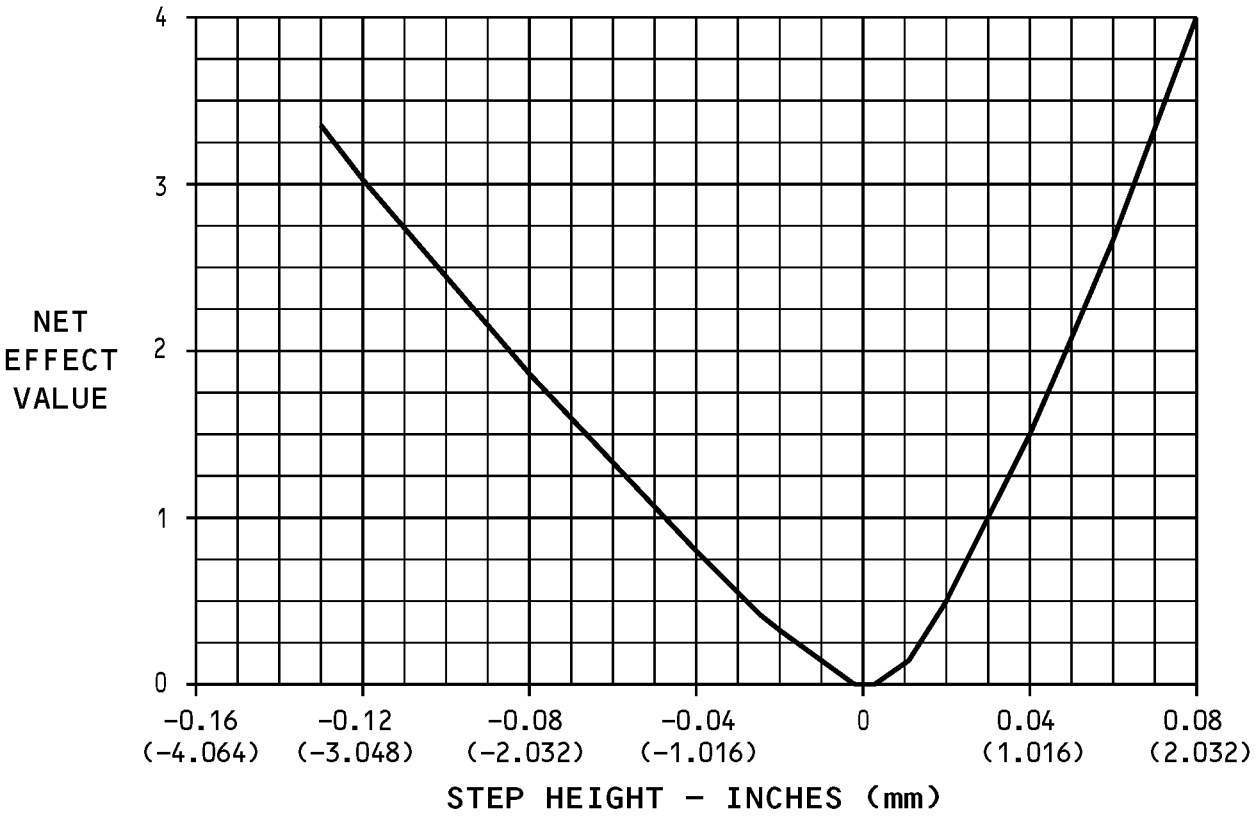


NOTE: ALL DIMENSIONS ARE IN INCHES (MILLIMETER ARE IN PARENTHESES). THESE MEASUREMENT LOCATIONS ARE FOR STEP/MISFAIR BETWEEN THE DOOR AND THE PANEL.

1 THE DIMENSIONAL TOLERANCE IS ±0.5000 INCH (12.7 mm).

Main Landing Gear Shock Strut Doors Fit Tolerances
Figure 501 (Sheet 3 of 4)/32-13-11-990-802

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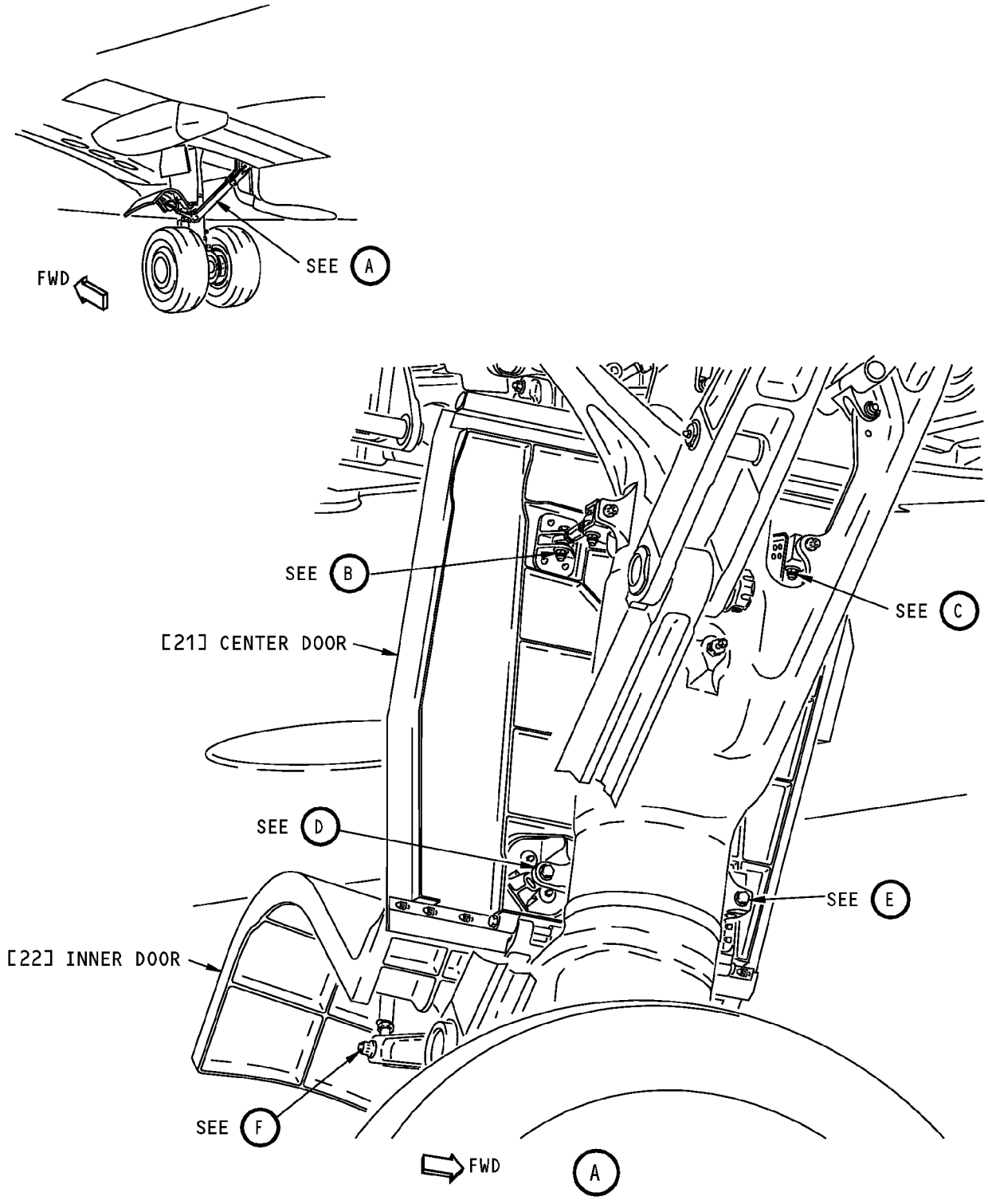
MAIN LANDING GEAR WING DOOR NET EFFECT VALUE CHART

NOTE: THE NET EFFECT LIMIT (N.E.L.) FOR THIS ITEM IS 1.0.

IF ALL MEASURED STEP VALUES FOR THIS ITEM ARE BETWEEN -0.05 INCH (-1.27 mm) AND +0.03 INCH (+0.762 mm) THEN PASSAGE OF N.E.L. IS ASSURED AND AN ACTUAL N.E.L. CALCULATION IS NOT REQUIRED.

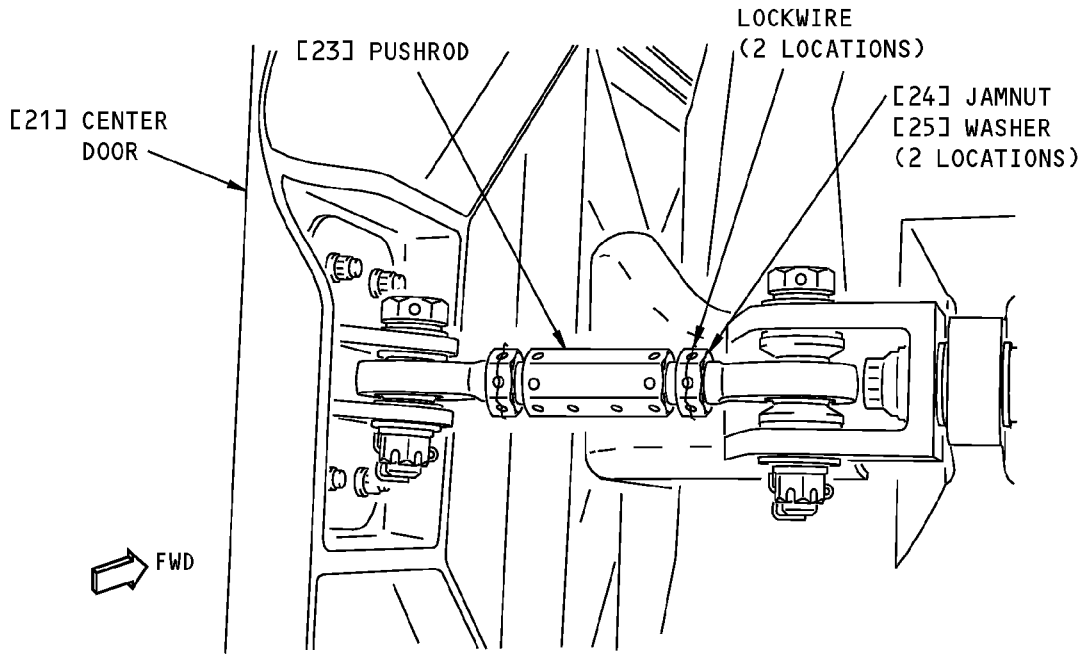
Main Landing Gear Shock Strut Doors Fit Tolerances
Figure 501 (Sheet 4 of 4)/32-13-11-990-802

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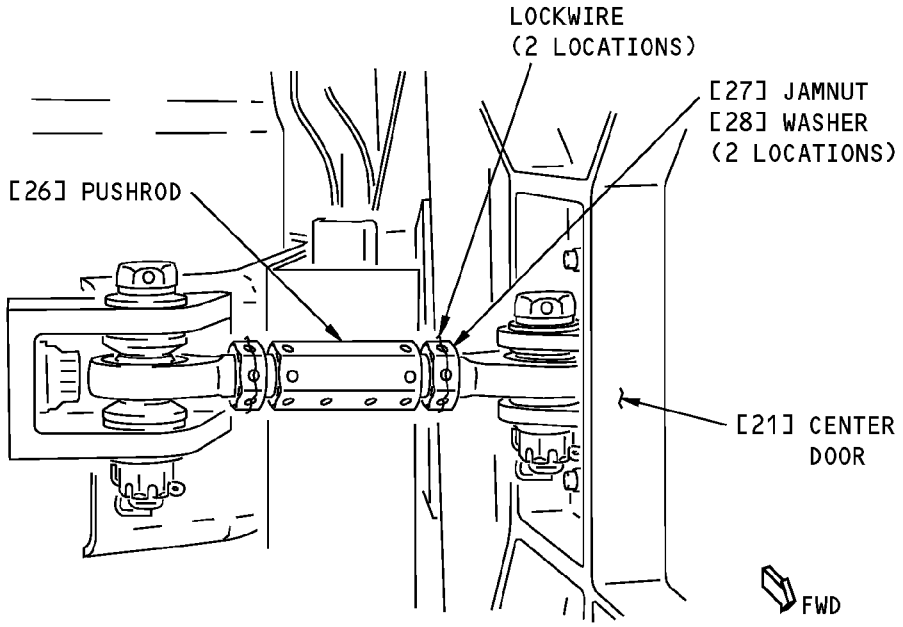
Main Landing Gear Shock Strut Doors Adjustment
Figure 502 (Sheet 1 of 4)/32-13-11-990-803

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CENTER DOOR TOP AFT HINGE

B

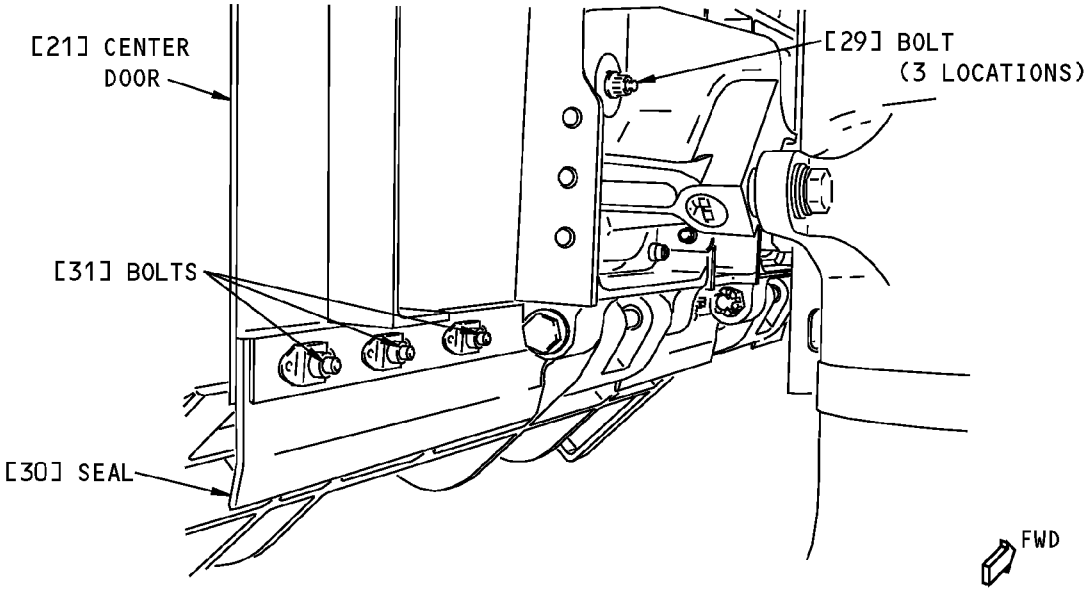


CENTER DOOR TOP FORWARD HINGE

C

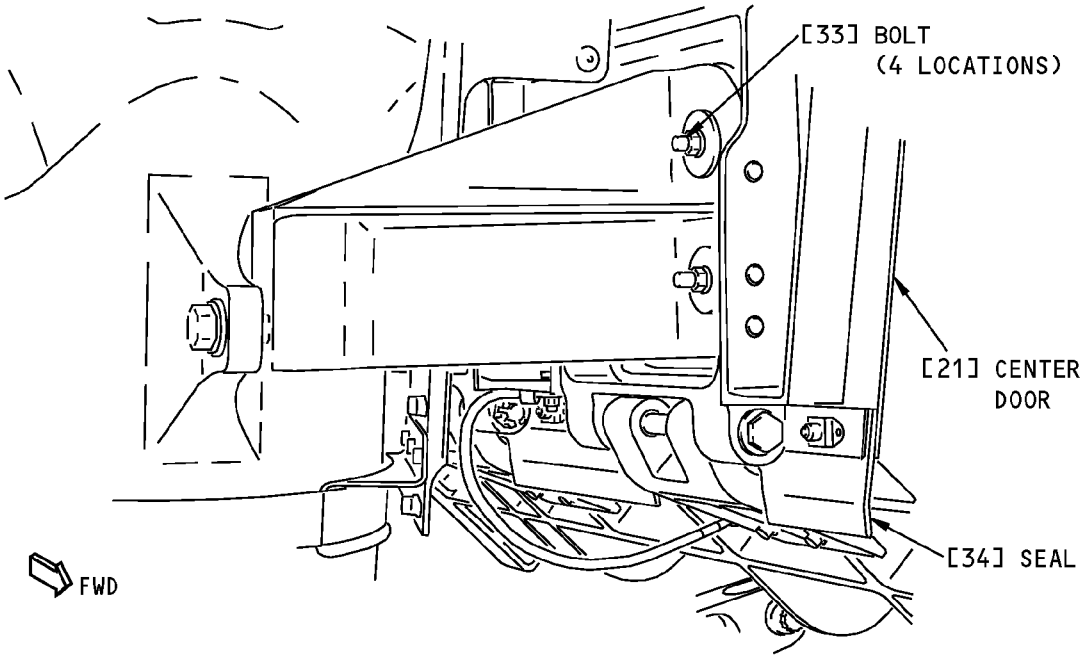
Main Landing Gear Shock Strut Doors Adjustment
Figure 502 (Sheet 2 of 4)/32-13-11-990-803

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CENTER DOOR BOTTOM AFT HINGE

D

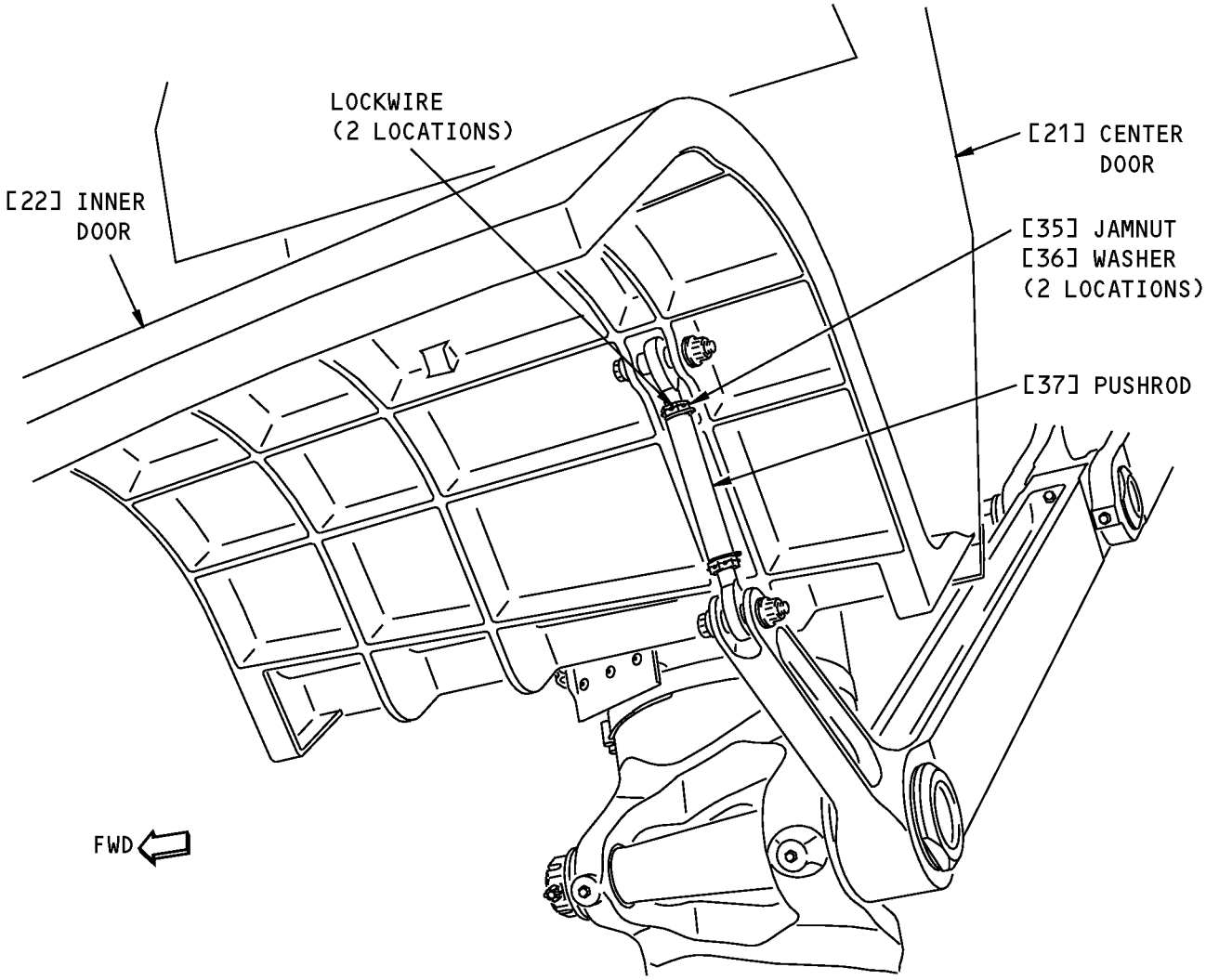


CENTER DOOR BOTTOM FORWARD HINGE

E

Main Landing Gear Shock Strut Doors Adjustment
Figure 502 (Sheet 3 of 4)/32-13-11-990-803

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INNER DOOR PUSHROD

F

Main Landing Gear Shock Strut Doors Adjustment
Figure 502 (Sheet 4 of 4)/32-13-11-990-803

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MAIN LANDING GEAR AXLE SLEEVE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the axle sleeve [3] on the main landing gear axle shaft.

(2) An installation of the axle sleeve [3] on the main landing gear axle shaft.

TASK 32-13-12-000-801

2. Main Landing Gear Axle Sleeve Removal

(Figure 401)

A. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
32-41-41-000-801	Main Landing Gear Brake Removal (P/B 401)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1864	Equipment - Puller, MLG Axle Sleeve Assembly (Part #: C32032-57, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Removal

SUBTASK 32-13-12-580-001

(1) Do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

E. Main Landing Gear Axle Sleeve Removal

SUBTASK 32-13-12-020-001

(1) Do this task: Main Landing Gear Brake Removal, TASK 32-41-41-000-801.

NOTE: This procedure will also remove the wheel and tire assemblies.

SUBTASK 32-13-12-020-002

(2) Do these steps to remove the axle sleeve [3] from the axle [1]:

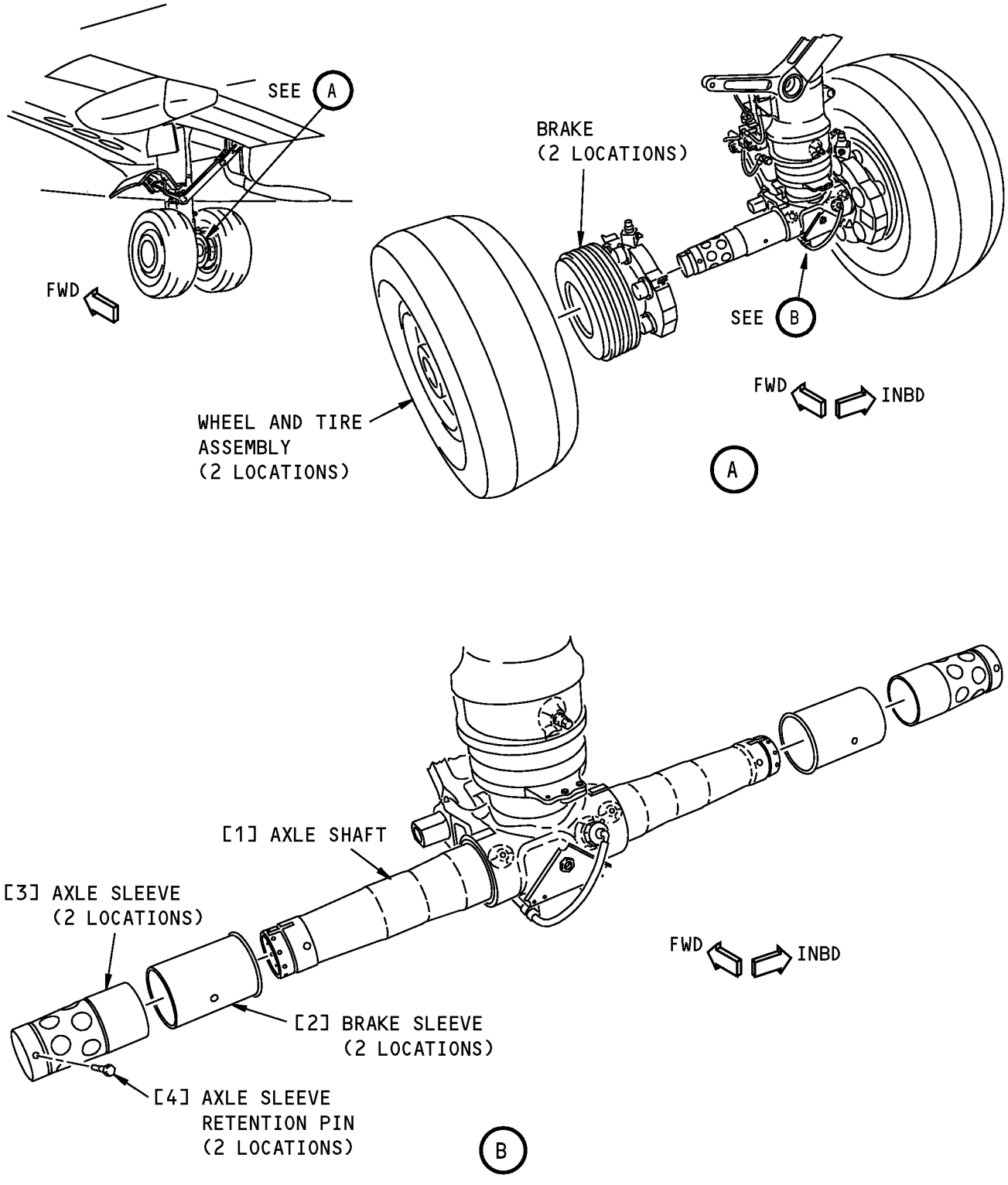
(a) Remove the brake sleeve [2]. Use equipment, SPL-1864.

(b) Remove the axle sleeve retention pin [4]. Use equipment, SPL-1864, RC-50 assembly to push out the pin.

(c) Remove the sleeve [3]. Use equipment, SPL-1864.

END OF TASK

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Main Landing Gear Axle Sleeve Installation
Figure 401/32-13-12-990-801

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TASK 32-13-12-420-801

3. Main Landing Gear Axle Sleeve Installation

(Figure 401)

A. References

Reference	Title
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-41-41-400-801	Main Landing Gear Brake Installation (P/B 401)

B. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00015	Grease - Aircraft Bearing (Use BMS 3-24 until existing stocks are depleted, BMS 3-33 supersedes BMS 3-24)	BMS3-24 (Superseded by BMS 3-33)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	Pin	32-11-85-01-050	HAP 001-013, 015-026, 028-030

D. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

E. Prepare for the Installation

SUBTASK 32-13-12-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

F. Main Landing Gear Axle Sleeve Installation

SUBTASK 32-13-12-420-001

(1) Do the following steps to install the sleeve [3]:

(a) Apply a light coating of grease, D00015 to the lands of the axle [1], where the axle sleeve [3] inside diameters set. Do not use excessive grease.

(b) Heat the axle sleeve [3] to 375 degrees +/- 25 degrees farenheit.

(c) Align the retention pin holes in the axle sleeve [3] and the axle [1] before installing the sleeve on the axle [1].

NOTE: The axle sleeve will rapidly shrink to normal size and sieze the axle, preventing further pin alignment efforts.

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SUBTASK 32-13-12-420-002

(2) Do the following steps to install the axle sleeve retention pin [4]:

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST BMS 3-27 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(a) Apply corrosion preventive compound, C00913, or sealant, A00247 to the axle sleeve retention pin [4] hole in the axle [1], and the hole in the axle sleeve [3].

(b) Install the axle sleeve retention pin [4] by lightly pressing or tapping the pin into place. The head of the pin must be flush or below the outside diameter of the axle sleeve [3].

SUBTASK 32-13-12-020-003

(3) Remove all unwanted corrosion preventive compound, C00913.

SUBTASK 32-13-12-420-003

(4) Do the following steps to install the brake sleeve [2]:

(a) Apply a light coating of grease, D00015 to the lands of the axle [1] and axle sleeve [3], where the brake sleeve [2] inside diameters set.

(b) Heat the brake sleeve [2] to 375 degrees +/- 25 degrees farenheit.

(c) Install the brake sleeve [2] on the axle [1] and the axle sleeve [3].

NOTE: The brake sleeve will rapidly shrink to normal size and sieze the axle and axle sleeve, preventing further movement.

SUBTASK 32-13-12-420-004

(5) Do this task: Main Landing Gear Brake Installation, TASK 32-41-41-400-801.

NOTE: This procedure will also install the wheel and tire assemblies.

NOTE: Make sure you connect the correct wires to the correct in-axle assembly.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 32-13-12-580-002

(1) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

———————— END OF TASK ————————

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MAIN LANDING GEAR BRAKE SLEEVE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the brake sleeve [2] for the main landing gear

(2) An installation of the brake sleeve [2] for the main landing gear.

TASK 32-13-13-000-801

2. Main Landing Gear Brake Sleeve Removal

(Figure 401)

A. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
32-41-41-000-801	Main Landing Gear Brake Removal (P/B 401)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1864	Equipment - Puller, MLG Axle Sleeve Assembly (Part #: C32032-57, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Removal

SUBTASK 32-13-13-580-001

(1) Do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

E. Main Landing Gear Brake Sleeve Removal

SUBTASK 32-13-13-020-001

(1) Do this task: Main Landing Gear Brake Removal, TASK 32-41-41-000-801.

NOTE: This procedure will also remove the wheel and tire assemblies.

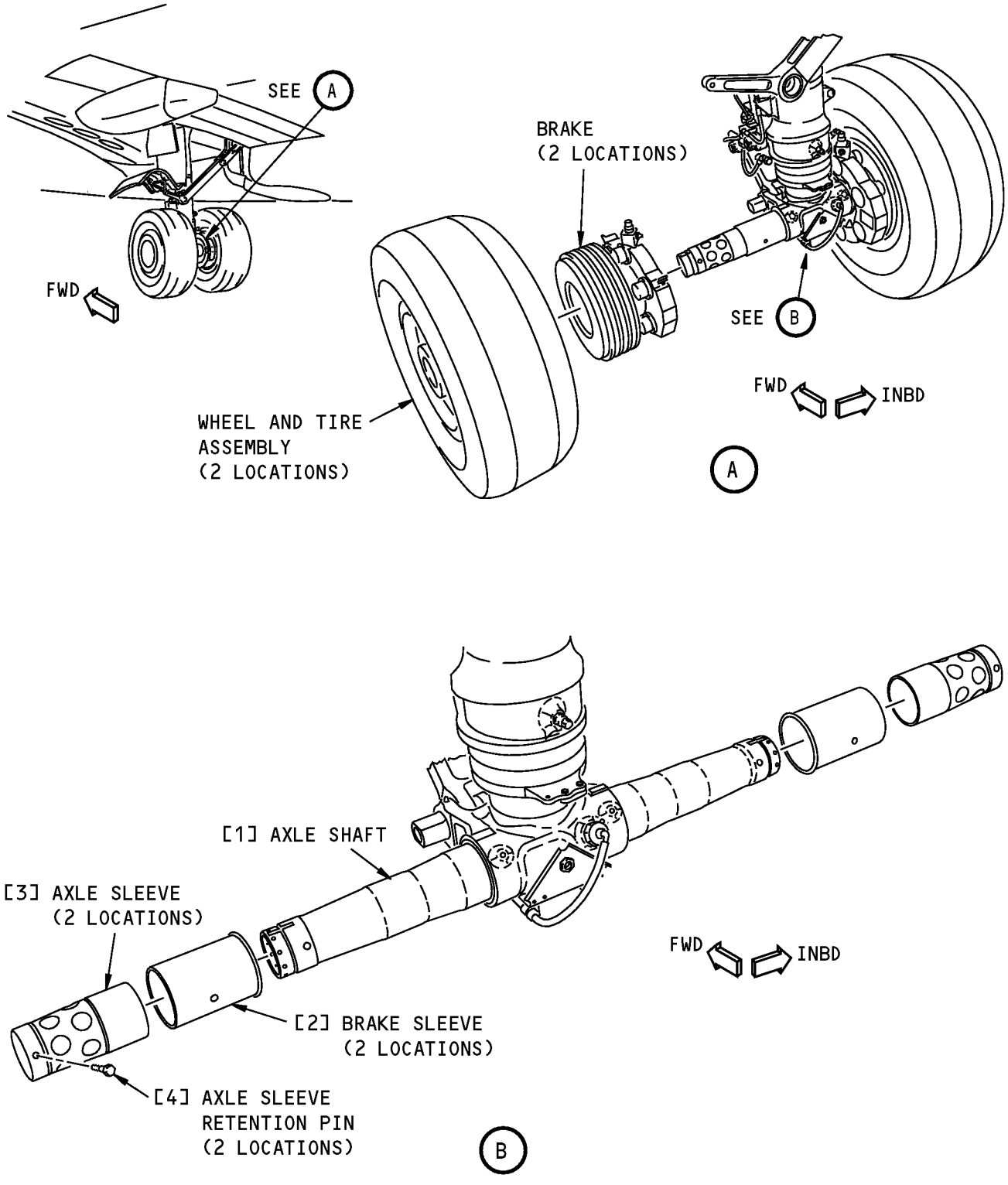
SUBTASK 32-13-13-020-002

(2) Do these steps to remove the brake sleeve [2] from the axle assembly [1]:

(a) Remove the brake sleeve [2]. Use equipment, SPL-1864.

END OF TASK

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Main Landing Gear Brake Sleeve Installation
Figure 401/32-13-13-990-801

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TASK 32-13-13-420-801

3. Main Landing Gear Axle Sleeve Installation

(Figure 401)

A. References

Reference	Title
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-41-41-400-801	Main Landing Gear Brake Installation (P/B 401)

B. Consumable Materials

Reference	Description	Specification
D00015	Grease - Aircraft Bearing (Use BMS 3-24 until existing stocks are depleted, BMS 3-33 supersedes BMS 3-24)	BMS3-24 (Superseded by BMS 3-33)

C. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Installation

SUBTASK 32-13-13-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

E. Main Landing Gear Brake Sleeve Installation

SUBTASK 32-13-13-420-001

(1) Do the following steps to install the brake sleeve [2]:

(a) Apply a light coating of grease, D00015 to the lands of the axle assembly [1] and axle sleeve [3], where the brake sleeve [2] inside diameters set.

(b) Heat the brake sleeve [2] to 375 degrees +/- 25 degrees farenheit.

(c) Install the brake sleeve [2] on the axle assembly [1] and the axle sleeve [3].

NOTE: The brake sleeve will rapidly shrink to normal size and sieze the axle, preventing further movement.

SUBTASK 32-13-13-420-002

(2) Do this task: Main Landing Gear Brake Installation, TASK 32-41-41-400-801.

NOTE: This procedure will also install the wheel and tire assemblies.

NOTE: Make sure you connect the correct wires to the correct in-axle assembly.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 32-13-13-580-002

(1) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

END OF TASK

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MAIN LANDING GEAR WING DOOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the outer door for the main landing gear

(2) An installation of the outer door for the main landing gear.

B. The wing door is referred to as the "outer door assy" in this procedure.

TASK 32-13-21-000-802

2. Main Landing Gear Wing Door Removal

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
731	Left Main Landing Gear - Outboard Door
734	Left Main Landing Gear
741	Right Main Landing Gear - Outboard Door
744	Right Main Landing Gear

C. Access Panels

Number	Name/Location
551DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel
651DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

D. Prepare for the Removal

SUBTASK 32-13-21-480-002

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-13-21-480-003

(2) Put chocks around the tires of all the landing gear.

SUBTASK 32-13-21-010-001

(3) For the left main landing gear, do this step:

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Open this access panel:

Number	Name/Location
551DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

SUBTASK 32-13-21-010-002

(4) For the right main landing gear, do this step:

Open this access panel:

Number	Name/Location
651DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

E. Main Landing Gear Wing Door Removal

SUBTASK 32-13-21-020-001

(1) Disconnect the outer door assembly [16].

(a) Examine the condition of the pushrod [3] for wear and do the subsequent steps for disconnecting the outer door assembly [16].

(b) If you need to replace the pushrod [3], do the steps that follow:

1) Remove the cotter pin [5], nut [4] and the washer [6] from the bolt [9].

2) Remove the bolt [9], washer [8] and the bushing [7] to disconnect the pushrod [3] from the door actuator bracket [10].

3) Remove the washer [8] from the bolt [9].

(c) If you do not need to replace the pushrod [3], do the steps that follow:

1) Remove the cotter pin [13], nut [12] and the washer [11] from the bolt [2].

2) Remove the bolt [2] and the washer [1] to disconnect the forward hinge [14] from the pushrod [3].

3) Remove the washer [1] from the bolt [2].

SUBTASK 32-13-21-020-002

(2) Disconnect the outer door assembly [16] from the hinge fittings [19], and [23]:

(a) Remove the nut [33], the washers [31] and the bolt [30] to disconnect the jumper cable [32] from the outer door assembly [16].

(b) Remove the cotter pin [15], nut [17] and the washer [18] from the bolt [22].

(c) Remove the bolt [22], washer [21] and the bushing [20] to disconnect the forward hinge [14] from the hinge fitting [19].

(d) Remove the washer [21] from the bolt [22].

(e) Remove the cotter pin [29], nut [28] and the washer [27] from the bolt [25].

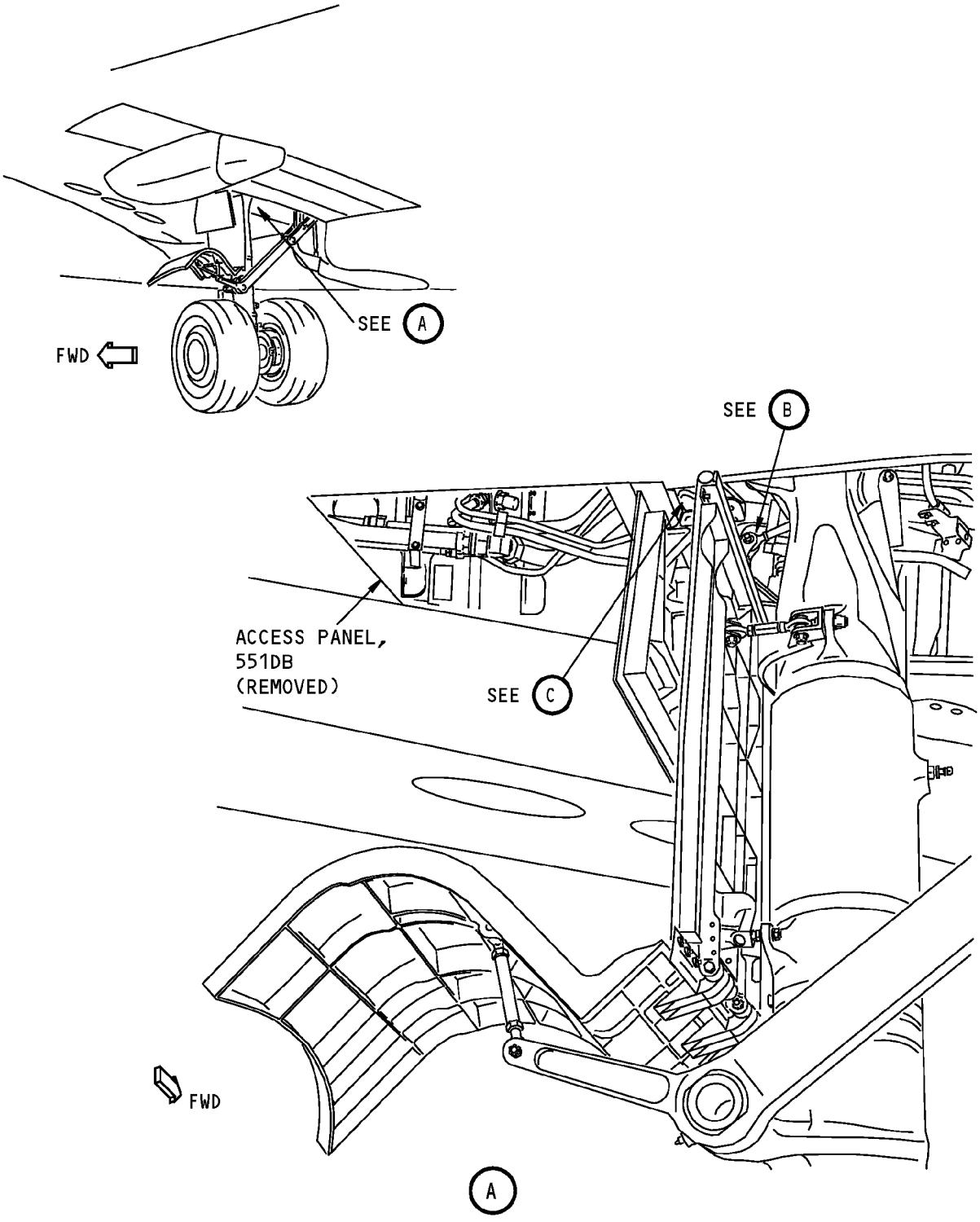
(f) Remove the bolt [25] and the washer [24] to disconnect the aft hinge [26] from the hinge fitting [23].

(g) Remove the washer [24] from the bolt [25].

(h) Remove the outer door assembly [16] from the airplane.

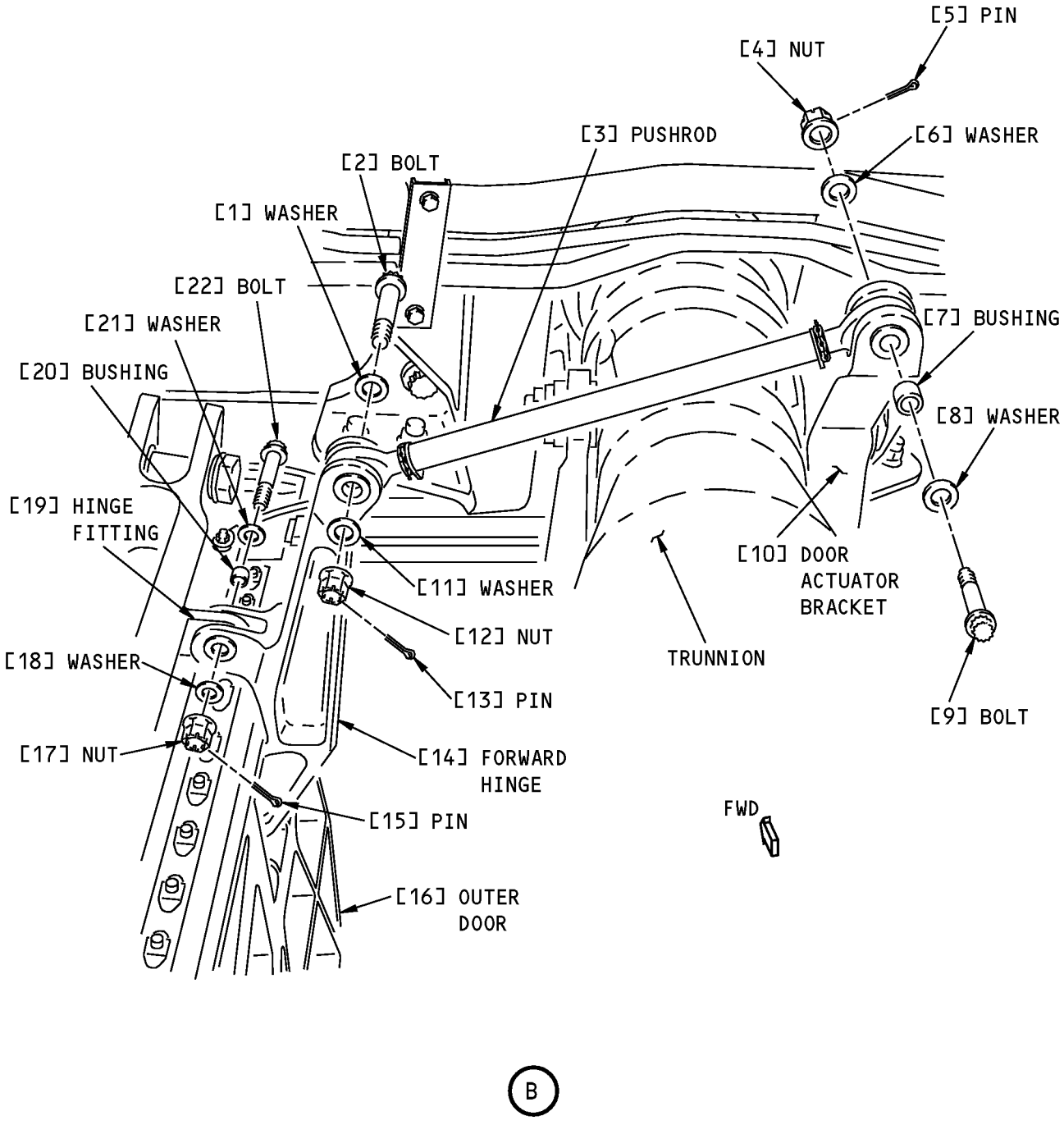
END OF TASK

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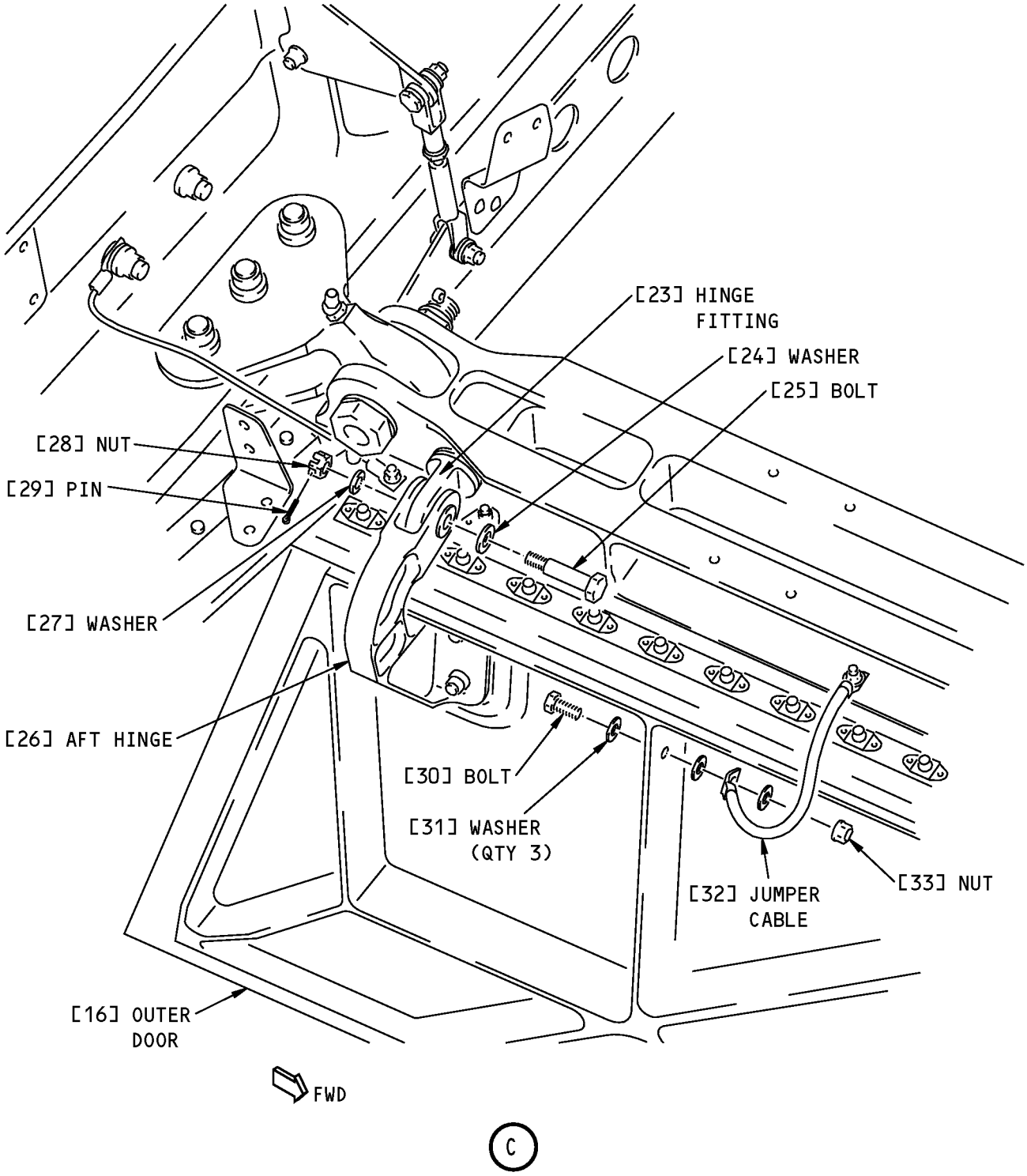
Main Landing Gear Wing Door Installation
Figure 401 (Sheet 1 of 3)/32-13-21-990-804

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Main Landing Gear Wing Door Installation
Figure 401 (Sheet 2 of 3)/32-13-21-990-804

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Main Landing Gear Wing Door Installation
Figure 401 (Sheet 3 of 3)/32-13-21-990-804

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TASK 32-13-21-420-801

3. Main Landing Gear Wing Door Installation

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-13-21-000-801	Main Landing Gear Wing Door Adjustment (P/B 501)

B. Consumable Materials

Reference	Description	Specification
D00633	Grease - Aircraft General Purpose	BMS3-33

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
5	Pin	32-13-21-01-093	HAP ALL
13	Pin	32-13-21-01-092	HAP ALL
15	Pin	32-13-21-01-092	HAP ALL
16	Door assembly	32-13-21-01-380	HAP ALL
		32-13-21-01-385	HAP ALL
		32-13-21-01-390	HAP 001-013, 015-026, 028-030
29	Pin	32-13-21-01-070	HAP ALL

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
731	Left Main Landing Gear - Outboard Door
734	Left Main Landing Gear
741	Right Main Landing Gear - Outboard Door
744	Right Main Landing Gear

E. Access Panels

Number	Name/Location
551DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel
651DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

F. Prepare for the Installation

SUBTASK 32-13-21-480-004

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

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G. Main Landing Gear Wing Door Installation

SUBTASK 32-13-21-420-001

(1) Connect the outer door assembly [16] to the hinge fittings [23] and [19]:

(a) Put the outer door assembly [16] in its position in the hinge fittings [23], and [19].

(b) Install the washer [24] on the bolt [25].

(c) Align the hole in the aft hinge [26] to the hole in the hinge fitting [23].

(d) Put the bolt [25] through the aft hinge [26] and the hinge fitting [23].

(e) Install the washer [27] and the nut [28] on the bolt [25].

(f) Install the washer [21] on the bolt [22].

(g) Align the hole in the forward hinge [14] to the hole in the hinge fitting [19].

(h) Put the bolt [22] through the forward hinge [14] and the hinge fitting [19].

(i) Install the washer [18] and the nut [17] on the bolt [22].

(j) Hand tighten the nuts [28] and [17] until final adjustment to the outer door assembly [16] is made in the subsequent step.

NOTE: After final adjustment to the outer door assembly [16], and final torques to the nuts [28] and [17] are applied, you can install the cotter pin [29] and cotter pin [15] in the bolts [25] and [22].

SUBTASK 32-13-21-420-002

(2) Connect the outer door assembly [16]:

(a) If you need to connect the outer door assembly [16] to the pushrod [3], do the steps that follow:

1) Put the outer door assembly [16] in its position for connection to the pushrod [3].

2) Install the washer [1] on the bolt [2].

3) Align the hole in the forward hinge [14] to the hole in the pushrod [3].

4) Apply grease, D00633, to the shank of the bolt [2].

5) Put the bolt [2] through the forward hinge [14] and the pushrod [3].

6) Install the washer [11] and the nut [12] on the bolt [2].

7) Hand tighten the nut [12] until final adjustment to the outer door assembly [16] is made in the subsequent step.

NOTE: After final adjustment to the outer door assembly [16] and final torque to the nut [12] is applied, you can install the cotter pin [13] in the bolt [2].

(b) If you need to connect the pushrod [3] to the door actuator bracket [10], do the steps that follow:

1) Put the pushrod [3] in its position for connection to the door actuator bracket [10].

2) Install the washer [8] on the bolt [9].

3) Align the hole in the pushrod [3] to the hole in the door actuator bracket [10].

4) Apply grease, D00633, to the shank of the bolt [9].

5) Put the bushing [7] through the door actuator bracket [10] and the pushrod [3].

6) Put the bolt [9] through the door actuator bracket [10] and the pushrod [3].

7) Install the washer [6] and the nut [4] on the bolt [9].

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8) Hand tighten the nut [4] until final adjustment to the outer door assembly [16] is made in the subsequent step.

NOTE: After final adjustment to the outer door assembly [16] and final torque to the nut [4] is applied, you can install the cotter pin [5] in the bolt [9].

(c) Install the bolt [30], the washers [31] and the nut [33] to connect the jumper cable [32] to the outer door assembly [16].

NOTE: Make sure there is one washer under the head of the bolt, one washer under the jumper cable, and one washer under the nut when connecting the jumper cable to the outer door assembly.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 32-13-21-820-005

(1) Do this task: Main Landing Gear Wing Door Adjustment, TASK 32-13-21-000-801.

SUBTASK 32-13-21-420-003

(2) Tighten the nut [4] and install the cotter pin [5] in the hole in the bolt [9]. If it is necessary, loosen the nut [4] to the nearest castellation to align the hole for the cotter pin [5].

SUBTASK 32-13-21-420-004

(3) Tighten the nut [12] and install the cotter pin [13] in the hole in the bolt [2]. If it is necessary, loosen the nut [12] to the nearest castellation to align the hole for the cotter pin [13].

SUBTASK 32-13-21-420-005

(4) Tighten the nut [17] and install the cotter pin [15] in the hole in the bolt [22]. If it is necessary, loosen the nut [17] to the nearest castellation to align the hole for the cotter pin [15].

SUBTASK 32-13-21-420-006

(5) Tighten the nut [28] and install the cotter pin [29] in the hole in the bolt [25]. If it is necessary, loosen the nut [28] to the nearest castellation to align the hole for the cotter pin [29].

SUBTASK 32-13-21-410-001

(6) For the left main landing gear, do this step:

Close this access panel:

Number	Name/Location
551DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

SUBTASK 32-13-21-410-002

(7) For the right main landing gear, do this step:

Close this access panel:

Number	Name/Location
651DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

——————— END OF TASK ———————

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MAIN LANDING GEAR WING DOOR - ADJUSTMENT/TEST

1. General

A. This procedure has these tasks:

(1) An adjustment of the wing door for the main landing gear.

TASK 32-13-21-000-801

2. Main Landing Gear Wing Door Adjustment

(Figure 501, Figure 502)

A. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-802	Hydraulic System A or B Pressurization with a Portable Hydraulic Cart (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-13-11-820-801	Main Landing Gear Shock Strut Door Adjustment (P/B 501)

B. Tools/Equipment

Reference	Description
STD-163	Portable Hydraulic Cart, Systems Test, Capable of 3000 PSI and a minimum flow of 30 GPM.

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
731	Left Main Landing Gear - Outboard Door
734	Left Main Landing Gear
741	Right Main Landing Gear - Outboard Door
744	Right Main Landing Gear

D. Prepare for the Adjustment

SUBTASK 32-13-21-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-13-21-860-001

(2) Lift the airplane with jacks until the main landing gear wheels are above the ground and there is enough clearance to retract the main landing gear. To lift it, (Lift the Airplane with the Jacks, TASK 07-11-01-580-815).

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SUBTASK 32-13-21-860-002

(3) To supply electric power, do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-13-21-840-001

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES AND THE NOSE WHEN HYDRAULIC POWER IS SUPPLIED. THE AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, STABILIZER, AND THE NOSE GEAR ARE SUPPLIED WITH POWER BY THE HYDRAULIC SYSTEMS. INJURIES TO PERSON OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

(4) Pressurize the hydraulic system A with a portable hydraulic cart, STD-163. To pressurize it, do this task: Hydraulic System A or B Pressurization with a Portable Hydraulic Cart, TASK 29-11-00-860-802.

SUBTASK 32-13-21-080-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEARS BUT THE ONE TO BE ADJUSTED. WHEN YOU MOVE THE CONTROL LEVER FOR THE LANDING GEAR, THE LANDING GEAR CAN RETRACT AND CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(5) Remove the downlock pin from the main landing gear for the door which is to be adjusted (Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801).

E. Main Landing Gear Wing Door Adjustment

SUBTASK 32-13-21-860-003

(1) Do the steps that follow to retract the main landing gear:

(a) Remove the DO-NOT-OPERATE tag from the control lever for the landing gear.

(b) For the applicable main landing gear for the door you are adjusting, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF THE RETRACTION PATH FOR THE APPLICABLE MAIN LANDING GEAR. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR IF THE AREA IS NOT CLEAR.

(c) Move the control lever for the landing gear to the UP position to retract the main landing gear.

(d) Attach a DO-NOT-OPERATE tag to the control lever for the landing gear.

(e) Do the steps that follow to close the main landing gear wing door:

1) To retract the main landing gear, slowly increase the hydraulic pressure that is supplied by portable hydraulic cart, STD-163 until the main landing gear is in the up and locked position.

2) Make sure the hydraulic pressure supplied by the portable hydraulic cart, STD-163 does not go above 3200 psi (22,063 kPa).

3) With the gear in the up and locked position, adjust the hydraulic pressure supplied by the portable hydraulic cart, STD-163 to zero.

SUBTASK 32-13-21-820-001

(2) Make sure the fit of the wing door [28] is in tolerance (Table 501).

NOTE: Write the fit values that are not in tolerance.

(a) Use the "ALL" tolerances, in (Table 501), for all airplane main landing gear wing door clearance and flushness checks.

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Table 501/32-13-21-993-803 MAIN LANDING GEAR WING DOOR CLEARANCE AND FLUSHNESS VALUES

AIRPLANE EFFECTIVITY	EDGE ZONE	CLEARANCE	FLUSHNESS
ALL	A	.3400 +.1200/-.1200 inch 8.63 +3.05/-3.05 mm	
ALL	B	.4000 +.2300/-.2300 inch 10.16 +5.84/-5.84 mm	+0.03/-0.05 inch +0.76/-1.27 mm (NEL = 1.0)
ALL	C	.3300 +.3200/-.1700 inch 8.38 +8.13/-4.32 mm	
ALL	D	.400 +.2300/-.2300 inch 10.16 +5.84/ -5.84 mm	+0.03/-0.05 inch +0.76/-1.27 mm (NEL = 1.0)

DOOR FLUSHNESS DIAGRAM



(b) Compare the fit values that are not in tolerance with the (NEV) net effect value chart (Figure 501).

SUBTASK 32-13-21-840-002

(3) If the fit is not in tolerance, do the steps that follow:

(a) Extend the main landing gear:

1) Remove the DO-NOT-OPERATE tag from the control lever for the landing gear.

2) Operate the portable hydraulic cart, STD-163 to supply hydraulic pressure to the main landing gear.

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF THE RETRACTION PATH FOR THE APPLICABLE MAIN LANDING GEAR. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR IF THE AREA IS NOT CLEAR.

3) Move the control lever for the landing gear to the DOWN position to extend the main landing gear.

4) Attach a DO-NOT-OPERATE tag to the control lever for the landing gear.

5) For the applicable main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

6) Adjust the hydraulic pressure supplied by the portable hydraulic cart, STD-163 to zero.

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WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

7) Install the downlock pins on the main landing gear (Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801).

SUBTASK 32-13-21-820-002

(4) Adjust the eyebolts of the hinge fittings [34] (Figure 501):

NOTE: A change in the adjustment of the outer door can have an effect on the adjustment of the shock strut doors. If it is necessary, do a check on the adjustment of the shock strut doors (Main Landing Gear Shock Strut Door Adjustment, TASK 32-13-11-820-801).

(a) Remove the pins [27], nuts [26], washers [25], washers [24], bushing [23], and bolts [22] to disconnect the wing door [28] from the lower stabilizer link [35].

(b) Remove the pins [39], washers [38], washers [37] and nuts [36] from the hinge fittings [34].

(c) Remove the washers [32] located on the shank of the eyebolt from the inboard side, under the lug, of the lower stabilizing beam to the outboard side, under the nut [36].

(d) Install the washers [37], washers [38], and nut [36] to the hinge fittings [34].

1) Tighten the nuts [34] to 700 in-lb (79.1 N·m) – 920 in-lb (103.9 N·m).

2) Install the pin [39].

(e) Install the bushing [23], bolts [22], washers [24], washers [25], and nuts [26] to connect the wing door [28] to the lower stabilizer link [35].

SUBTASK 32-13-21-220-001

(5) Make sure the wing door [28] is still in tolerance (Table 501).

SUBTASK 32-13-21-970-001

(6) If one or more of the measured values are more than the tolerances shown in the chart (Figure 501), convert the measured step (misfair) or clearance values into a net effect value (NEV) shown in chart (Figure 501).

(a) Find the NEV for the interface:

1) Add all the NEV that are not in the tolerance and divide by the number of measurements.

NOTE: The result is the NEV for the interface.

(b) Check the NEV result against net effect limit (NEL) for the interface given in the chart (Figure 501).

NOTE: This value is usually 1.0. If the NEV for the interface is less than or equal to the NEL, the interface is aerodynamically acceptable.

(c) If the calculated NEV is greater than the NEL, the interface does not meet the aerosmoothness requirements. Do the steps below.

SUBTASK 32-13-21-820-003

(7) Adjust the length of the push rod [29] (Figure 502):

(a) Loosen the jamnut [30] on the push rod [29] at either end and turn the rod on either direction.

(b) After the final adjustment of the push rod [29], insert a 0.050 pin or wire into the inspection hole.

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(c) Make sure the wire that you insert into the inspection hole touches and is stopped by the rod end.

NOTE: The wire must be stopped by the rod end for the adjustment to be acceptable.

(d) Tighten the jamnuts [30] and washers [31].

(e) Install the lockwire.

SUBTASK 32-13-21-820-004

(8) Make sure the wing door [28] is still in tolerance (Table 501).

(a) If it is necessary, re-adjust the push rod [29] or the eyebolts of the hinge fittings [34].

F. Put the Airplane In Its Usual Condition

SUBTASK 32-13-21-840-003

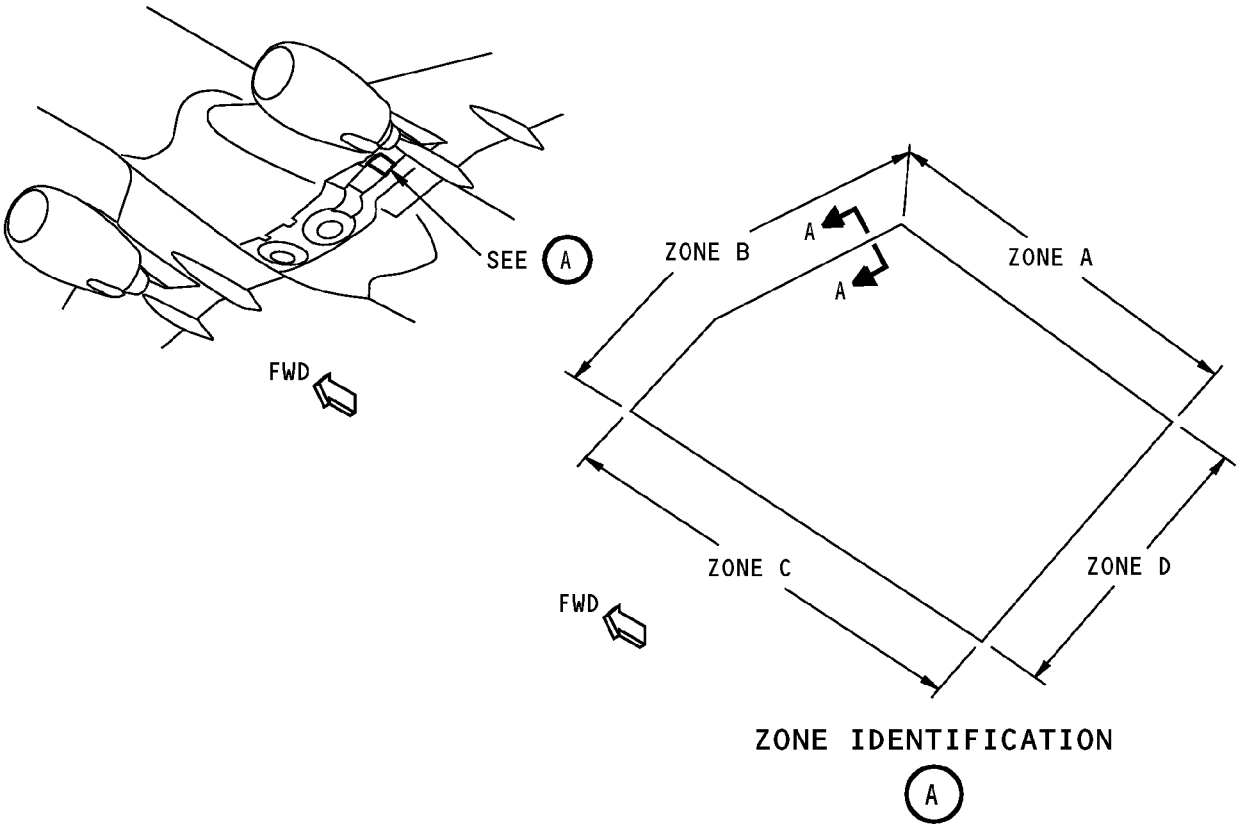
(1) Do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

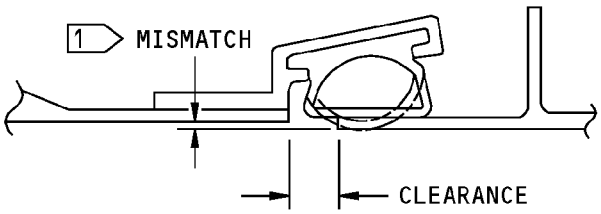
SUBTASK 32-13-21-580-001

(2) To lower the airplane and remove the jacks, do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

END OF TASK

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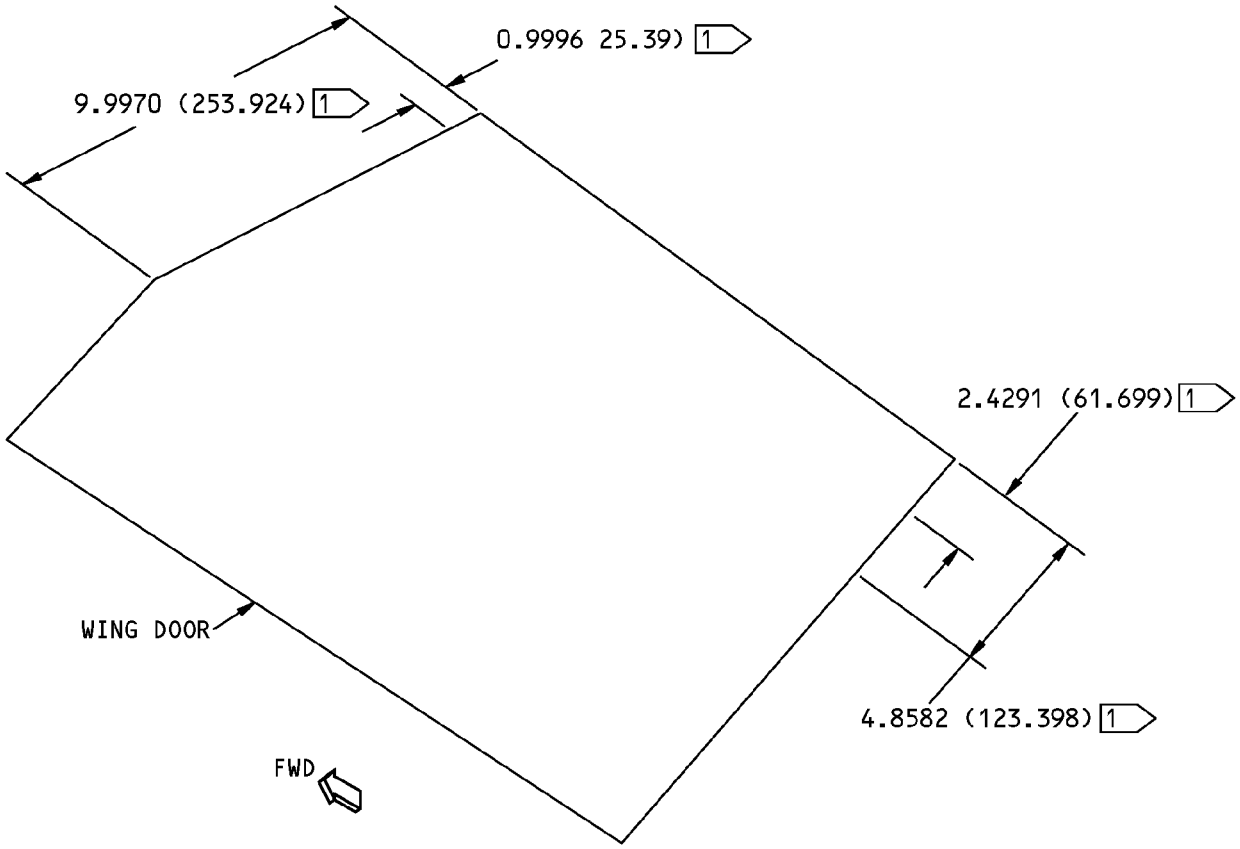


ZONE B
(ALL OTHER ZONES ARE EQUIVALENT)
A-A

1 A POSITIVE TOLERANCE (+) INDICATES THE FACE OF THE MISMATCH IS FORWARD (INTO THE AIRSTREAM). A NEGATIVE TOLERANCE (-) INDICATES THE FACE OF THE MISMATCH FACES AFT.

Main Landing Gear Wing Door Fit Tolerances
Figure 501 (Sheet 1 of 3)/32-13-21-990-801

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MAIN LANDING GEAR WING DOOR DIMENSIONAL TOLERANCES

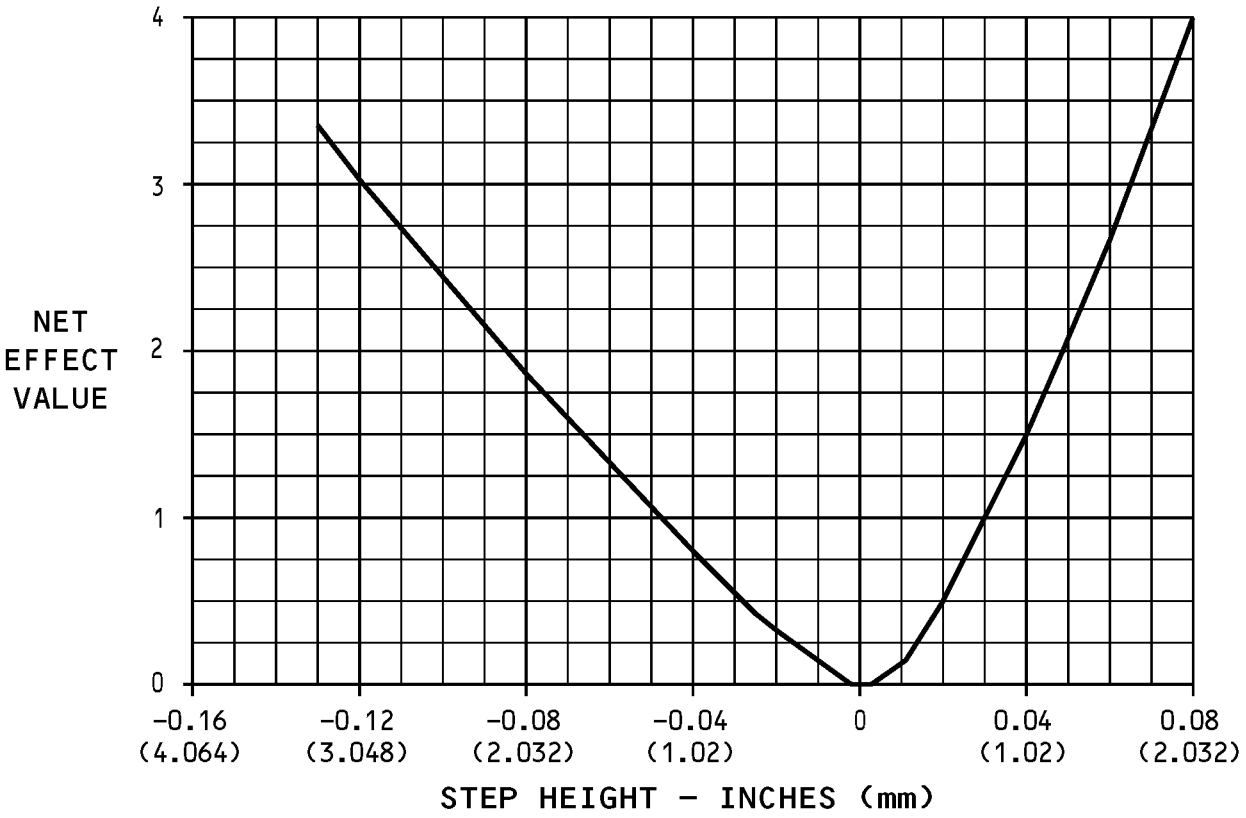
A

NOTE: ALL DIMENSIONS ARE IN INCHES (MILLIMETERS ARE IN PARENTHESES).

1 THE DIMENTIONAL TOLERANCE IS ±0.5000 INCH (12.7 mm).

Main Landing Gear Wing Door Fit Tolerances
Figure 501 (Sheet 2 of 3)/32-13-21-990-801

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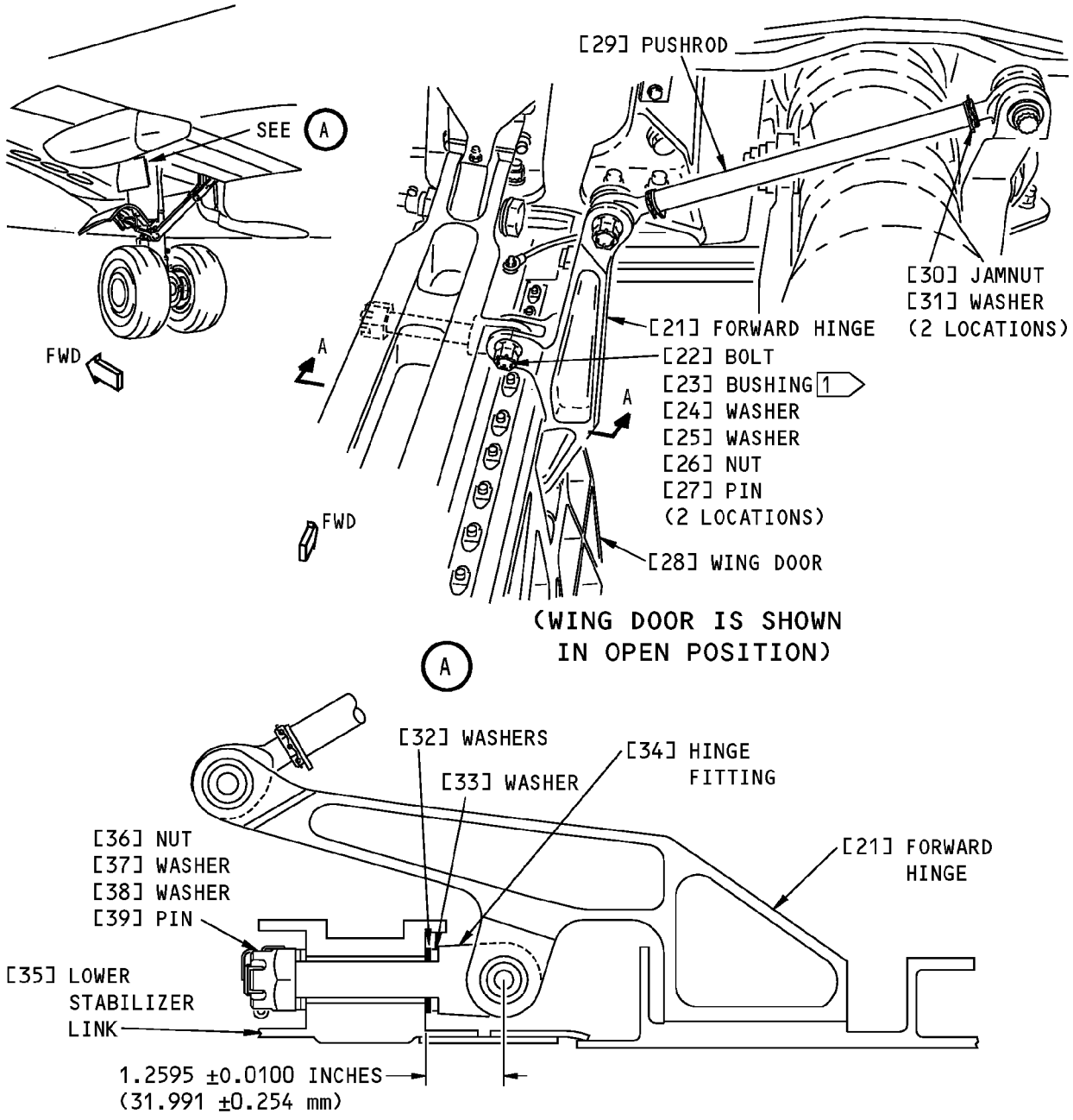
MAIN LANDING GEAR WING DOOR NET EFFECT VALUE CHART

NOTE: THE NET EFFECT LIMIT (N.E.L.) FOR THIS ITEM IS 1.0.

IF ALL MEASURED STEP VALUES FOR THIS ITEM ARE BETWEEN -0.05 (1.27 mm) AND +0.03 (0.762 mm) THEN PASSAGE OF N.E.L. IS ASSURED AND AN ACTUAL N.E.L. CALCULATION IS NOT REQUIRED.

Main Landing Gear Wing Door Fit Tolerances
Figure 501 (Sheet 3 of 3)/32-13-21-990-801

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Main Landing Gear Wing Door Adjustment
Figure 502/32-13-21-990-802

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NOSE LANDING GEAR - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) A removal of the nose landing gear

(2) An installation of the nose landing gear.

TASK 32-21-00-000-801

2. Nose Landing Gear Removal

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
07-11-21-580-802	Lower the Airplane Nose Off of the Jack (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1821	Wrench - Spanner, Nose Landing Gear Trunnion Pin Retainer Nut (Part #: F72959-40, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1863	Puller - NLG Trunnion Pin (Part #: C32033-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1871	Strap - Retention, NLG/MLG Inner Cylinder (Part #: C32030-10, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-10305	Outrigger Equipment - Nose Landing Gear Installation/Removal (Part #: C32049-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
STD-4938	Insertion/Removal - contact (size 16, backshell side)

D. Location Zones

Zone	Area
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right
713	Nose Landing Gear

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E. Access Panels

Number	Name/Location
113AC	Fwd Nose Wheel Well Upper Access Panel

F. Prepare for the Removal

SUBTASK 32-21-00-480-006

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-21-00-860-003

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-21-00-860-004

(3) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	14	C00123	EXT LIGHTING NOSE GEAR TAXI

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	15	C01401	LANDING GEAR AIR/GND RELAY
D	16	C01432	LANDING GEAR ALTN EXTEND SOL
D	17	C01027	LANDING GEAR NOSE GEAR STEER
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 32-21-00-020-002

(4) Disconnect the NWSA/NWSB cables [49]:

(a) To get access to the cable turnbuckle [1], do this step:

Open this access panel:

Number	Name/Location
113AC	Fwd Nose Wheel Well Upper Access Panel

(b) Remove the locking clip [2] for the cable turnbuckle [1].

(c) Loosen the tension at the cable turnbuckle [1].

SUBTASK 32-21-00-020-003

(5) Disconnect the flexible conduits [73]:

(a) Remove the screws [10] and washers [3] for the junction box cover [9].

(b) Disconnect the terminal block [72] from the junction box [5], and pull it out to make the wires more accessible during removal.

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(c) Identify the wires in the terminal block [72] that go to the landing gear and label them or make a drawing to be used during installation.

(d) Use a Contact Insertion / Removal, STD-4938 tool to remove the wires from the terminal block [72] inside the junction box [5].

(e) Attach a string, long enough to feed through the rigid conduits [4] to point ''A'', to each wire removed from the terminal block [72].

(f) Disconnect the flexible conduit [73] after at point ''A'' and pull the wires through.

NOTE: Do not pull the string all the way through the conduit or it will be more difficult to re-insert the wires later.

(g) Untie the string from the wires and leave hanging.

G. Nose Landing Gear Removal

SUBTASK 32-21-00-020-015

(1) Disconnect the hydraulic line [25]:

(a) Loosen the swivel nut to disconnect the hydraulic line [25] from the swivel [24].

(b) Put caps on the hydraulic line [25].

(c) Install plugs on each of the hydraulic ports of the swivel [24].

(d) Put a tag to identify the swivel port and the hydraulic line [25] that will prevent the crossing of the lines during the installation.

SUBTASK 32-21-00-020-006

(2) Disconnect the right upper rod assembly [26]:

(a) Remove the pin [31], nut [32], and washer [30].

(b) Remove the, bolt [27], washer [28], and bushing [29] from the clevis of the right trunnion [23].

(c) Use a rope to hold the upper rod assembly [26] away from the work area.

SUBTASK 32-21-00-020-007

(3) Disconnect the left upper rod assembly [41]:

(a) Remove the pin [43], nut [42], and washer [44].

(b) Remove the bolt [47], washer [46], and bushing [45] from the clevis of the left trunnion [40].

(c) Use a rope to hold the upper rod assembly [41] away from the work area.

SUBTASK 32-21-00-020-008

(4) Remove the pulley [50]:

(a) Remove the nut [52] and washer [53] from the bolt [47].

(b) Remove the bolt [47] and washer [48] that hold the pulley [50] and cable guard [54] from the bracket [51].

(c) Remove the washer [48] from the bolt [47].

(d) Remove the pulley [50] and the cable guard [54] from the bracket [51].

(e) Remove the cable [49] from the groove of the pulley [50].

SUBTASK 32-21-00-020-009

(5) Remove the seal [65]:

(a) Remove the lockwire from the screw [58] and the lock [57].

(b) Remove the screw [58] that holds the lock [57] to the left trunnion pin [63].

(c) Remove the lock [57] from the left trunnion pin [63].

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(d) Use spanner wrench, SPL-1821 (face lug adapter), to remove the trunnion pin nut [68] from the left trunnion pin [63].

(e) Pull the seal ring [69] and seal [65] from the left trunnion pin [63].

NOTE: If it is difficult to pull the seal [65], hold the eyebolt [67] and pull the seal [65] out of the left trunnion pin [63].

(f) Remove the nut [64], washer [56] and inboard retainer [66] from the eyebolt [67].

(g) Remove the eyebolt [67] from the left trunnion pin [63].

(h) Remove the outboard retainer [66] from the eyebolt [67].

(i) Isolate the segments of the seal [65] from the cables [49].

(j) Pull the cables [49] from the trunnion pin nut [68], seal ring [69] and left trunnion pin [63].

(k) Attach identification tags to the cables [49].

(l) Wind the cables [49] into a coil and attach it to the trunnion of the gear with a tape.

SUBTASK 32-21-00-020-010

WARNING: DO NOT REMOVE THE VALVE BODY UNTIL THE SHOCK STRUT IS FULLY DEFLATED. IF YOU REMOVE THE VALVE BODY WHEN THERE IS PRESSURE, THE PRESSURE CAN BLOW THE VALVE BODY OUT AND CAUSE INJURY TO PERSONS.

(6) Deflate the shock strut [17]:

(a) Remove the dust cap [14] for the gas charging valve [16].

(b) Loosen the swivel nut [15] a maximum of two turns.

NOTE: Fluid in the shock strut [17] will have bubbles when you release the pressure. Deflate the shock strut slowly to prevent the leakage of the fluid through the gas valve.

(c) Loosen the swivel nut [15] fully when all of the pressure in the shock strut [17] is released.

SUBTASK 32-21-00-480-007

(7) Install the retention strap, SPL-1871, with the marker facing up, to hold the shock strut [17] in its compressed position.

SUBTASK 32-21-00-580-002

(8) Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

NOTE: You can lower the jack that supports the tail of the airplane while you lift the nose landing gear.

SUBTASK 32-21-00-020-016

(9) Disconnect the lower drag strut assembly [19]:

(a) Remove the pin [11], nut [22], washer [21] and bolt [13] from the pin [18].

(b) Remove the nut [12], and washer [20] from the pin [18].

(c) Holds the lower drag strut assembly [19] in position and remove the pin [18].

NOTE: This drag strut assembly [19] will move forward if you don't hold it in position when the pin is removed.

(d) Use a rope to hold the lower drag strut assembly [19] away from the work area.

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SUBTASK 32-21-00-580-003

(10) If it is necessary to lift the gear with an axle jack to reduce the weight of the gear when you remove the left trunnion pin [63] and right trunnion pin [37], do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

SUBTASK 32-21-00-020-011

(11) Remove the right trunnion pin [37]:

(a) Remove the pin [35], nut [36], washer [34], and bolt [33].

(b) Remove the swivel [24] from the right trunnion pin [37].

(c) Use trunnion pin pin puller, SPL-1863, to remove the right trunnion pin [37] from the right trunnion [23].

NOTE: Make sure that you catch the spacer [39] that is between the sidewall of the nose wheel well and the right trunnion [23].

SUBTASK 32-21-00-020-012

(12) Remove the left trunnion pin [63]:

(a) Remove the pin [59], nut [60], wahser [61], and bolt [62].

(b) Use trunnion pin pin puller, SPL-1863, to remove the left trunnion pin [63] from the left trunnion [40].

NOTE: Make sure that you catch the spacer [71] that is between the sidewall of the nose wheel well and the left trunnion [40].

(c) Remove the cable guard [70] from the left trunnion pin [63].

SUBTASK 32-21-00-860-005

(13) Measure the thickness of the spacers [39] and [71] that were between the sidewalls of the wheel well and the nose landing gear trunnion.

NOTE: The thickness of the washer stacks are special for each airplane. Record the measurement of the washer stack for use when installing the washer stack.

SUBTASK 32-21-00-020-013

(14) Remove the nose landing gear from the airplane:

(a) Move the nose landing gear forward in the wheel well.

(b) Turn the gear approximately 90 degrees such that it is clear of the wheel well sidewalls and nose wheel well doors.

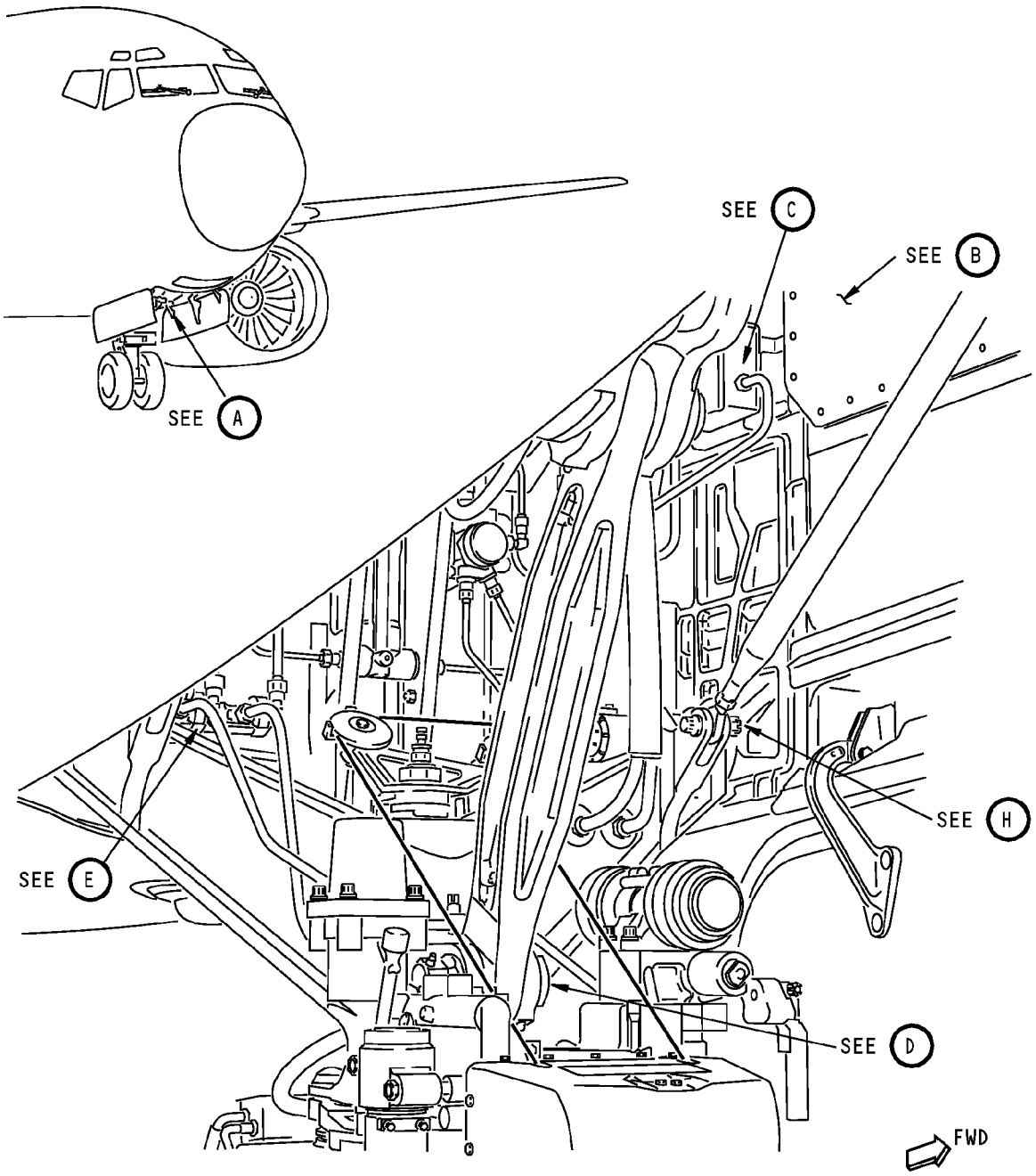
(c) Lower the axle jack, do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

(d) If it is necessary, use a dolly or the Outrigger R/I Equipment, SPL-10305, to transport the nose landing gear.

NOTE: When the Outrigger R/I Equipment, SPL-10305 is installed and will be left unattended, chock the nose landing gear tires and lock the caster brake.

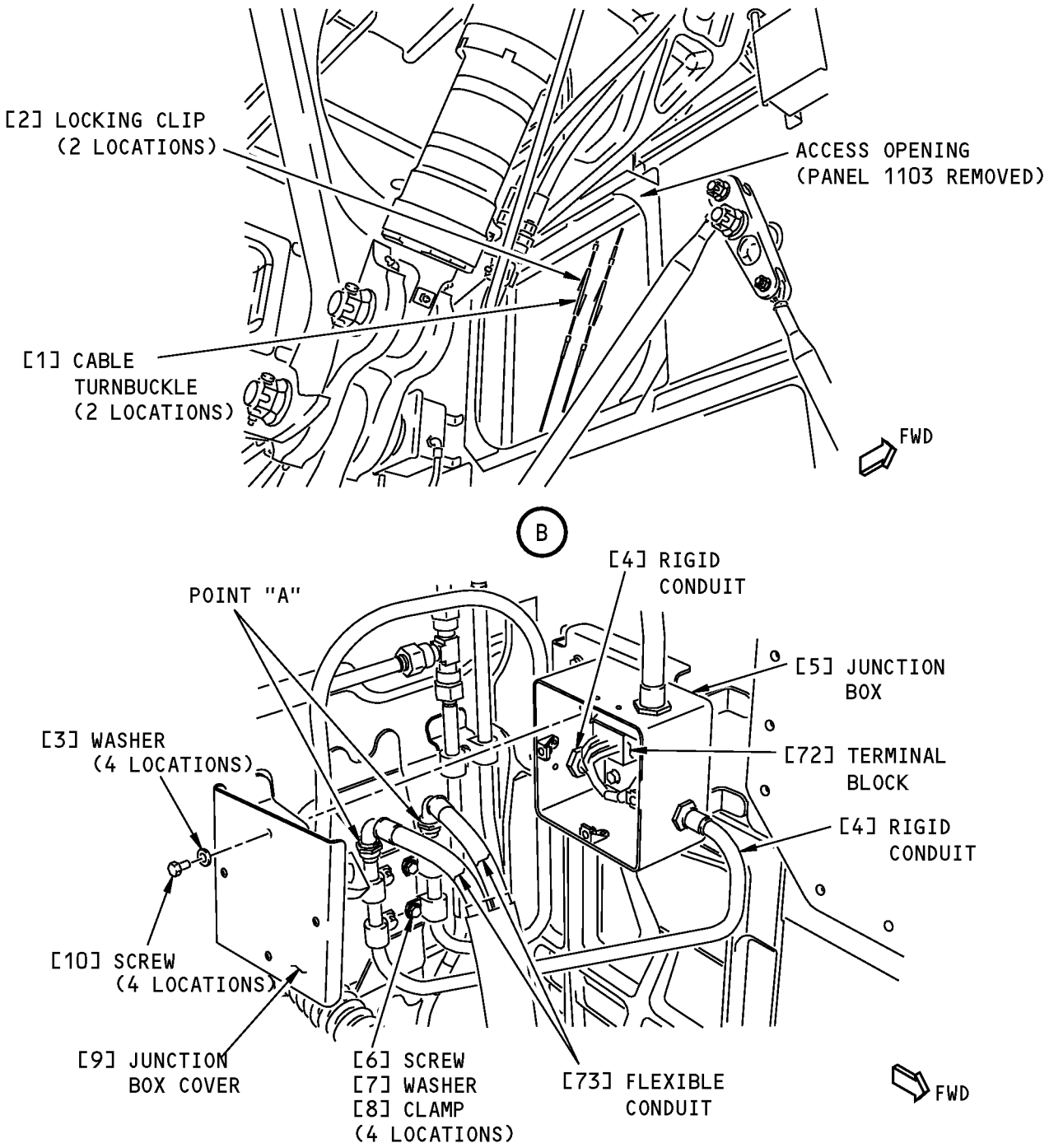
——————— END OF TASK ———————

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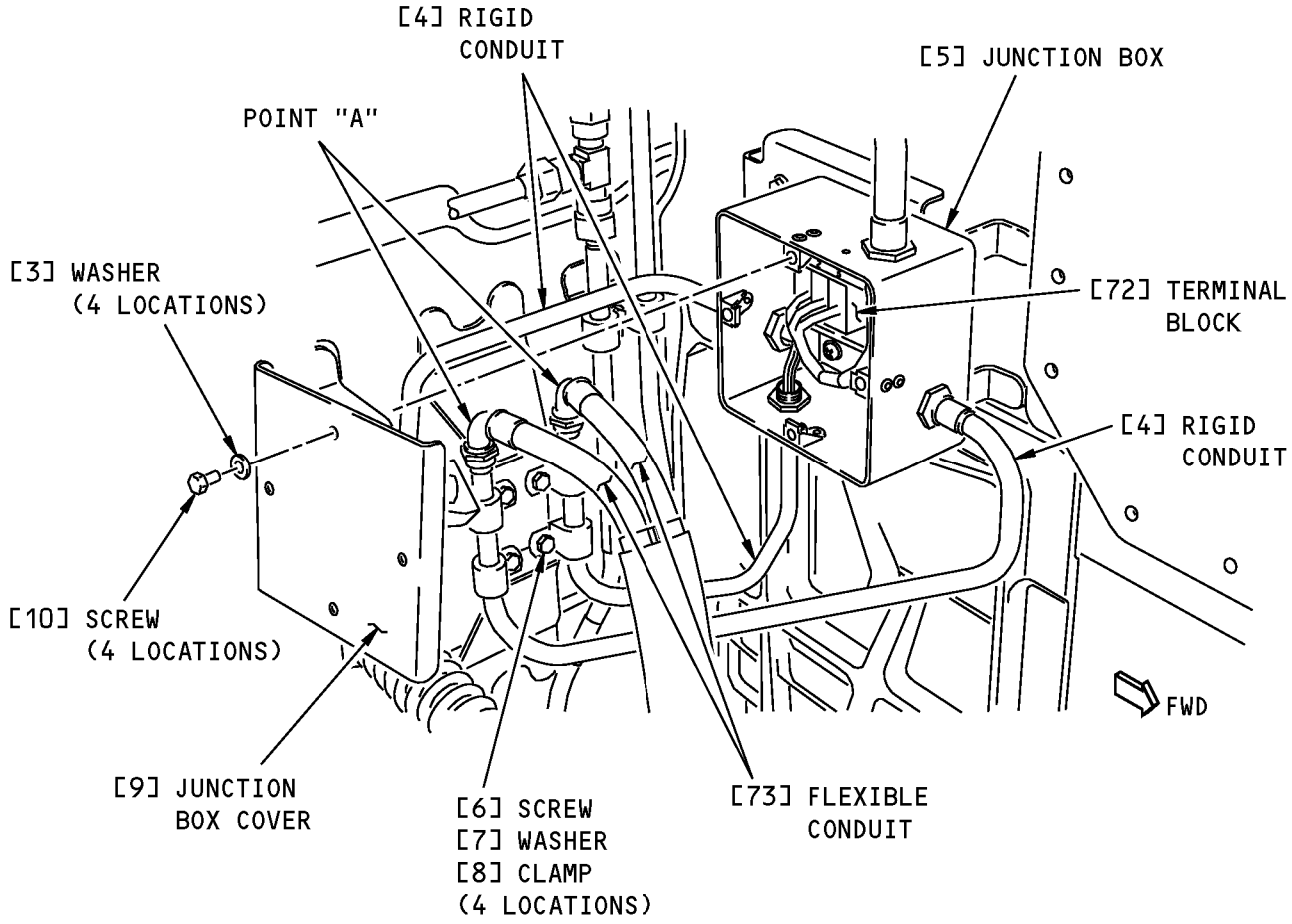
Nose Landing Gear Installation
Figure 401 (Sheet 1 of 7)/32-21-00-990-802

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Nose Landing Gear Installation
Figure 401 (Sheet 2 of 7)/32-21-00-990-802

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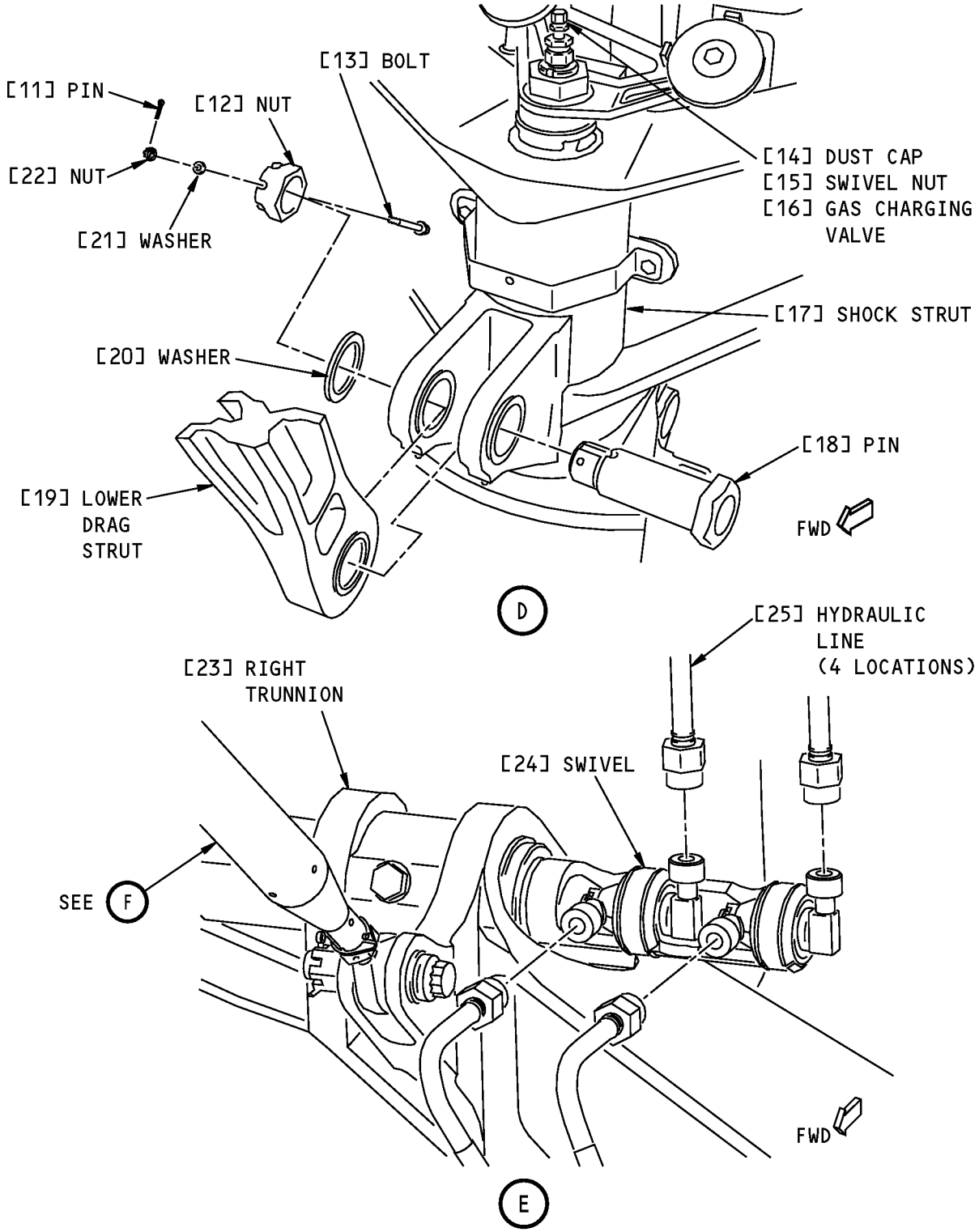


(AIRPLANES WITH 4 CONDUITS TO THE JUNCTION BOX)

C

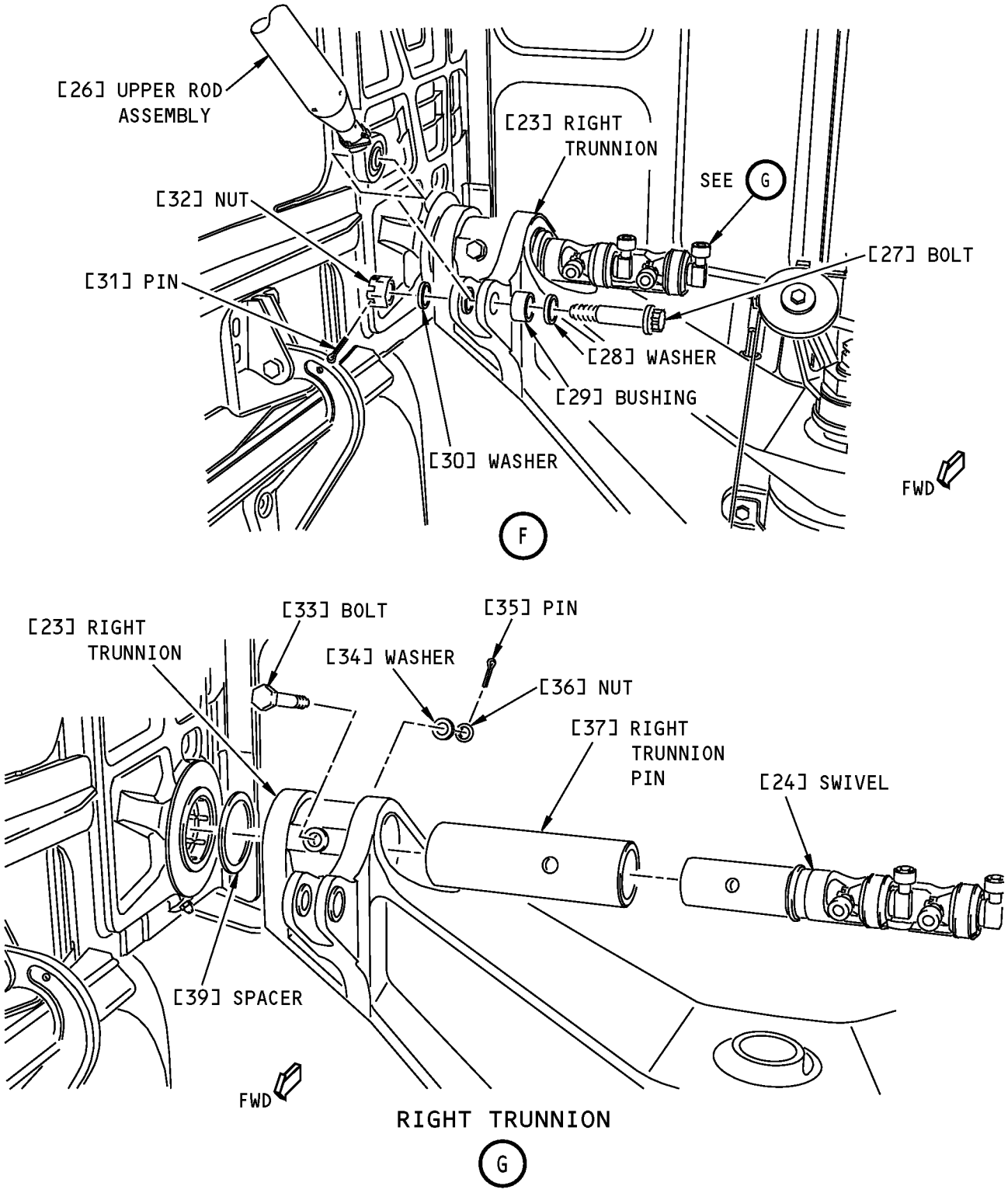
Nose Landing Gear Installation
Figure 401 (Sheet 3 of 7)/32-21-00-990-802

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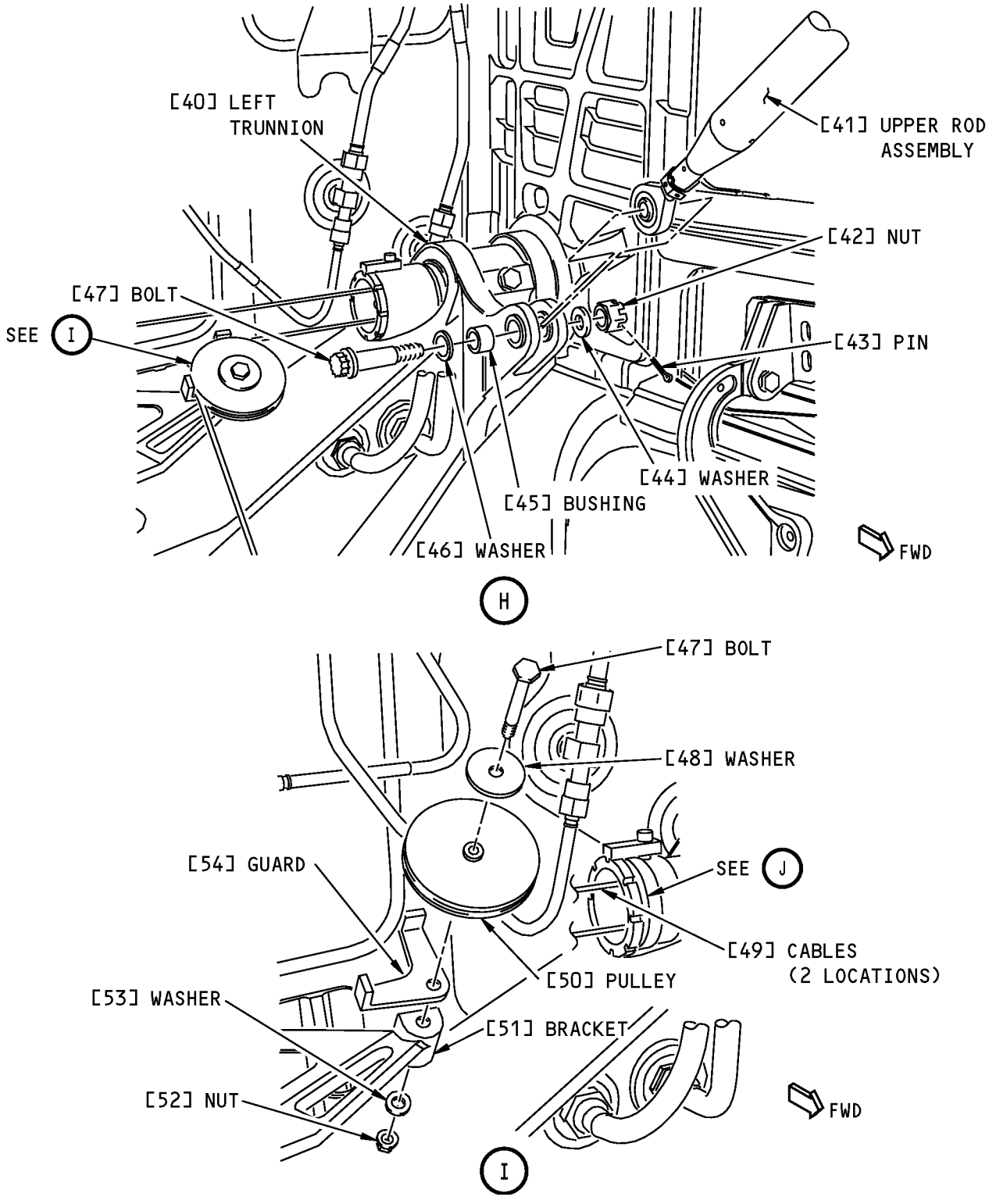
Nose Landing Gear Installation
Figure 401 (Sheet 4 of 7)/32-21-00-990-802

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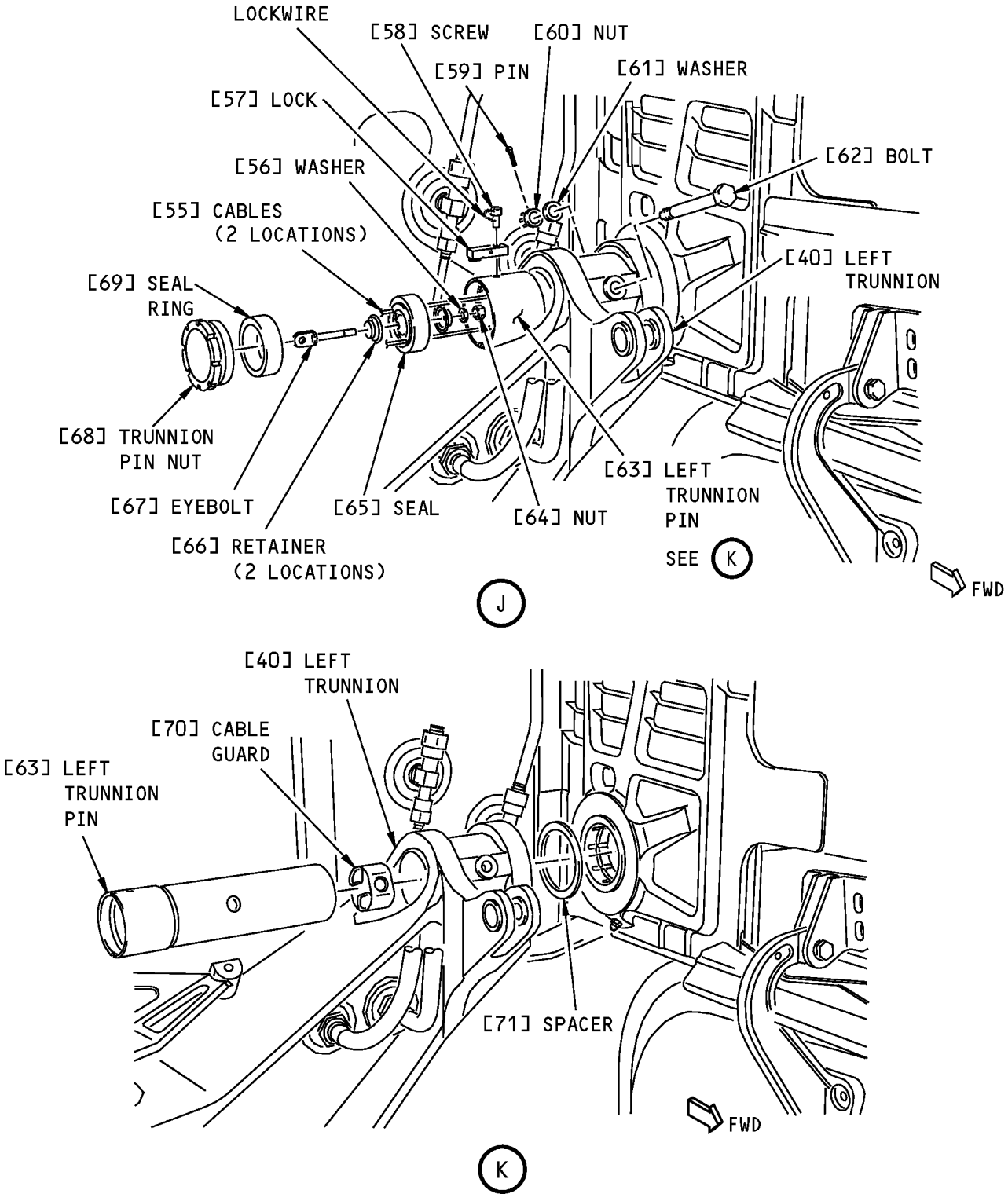
Nose Landing Gear Installation
Figure 401 (Sheet 5 of 7)/32-21-00-990-802

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Nose Landing Gear Installation
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Nose Landing Gear Installation
Figure 401 (Sheet 7 of 7)/32-21-00-990-802

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TASK 32-21-00-400-801

3. Nose Landing Gear Installation

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
07-11-21-580-802	Lower the Airplane Nose Off of the Jack (P/B 201)
12-15-41-610-802	Nose Landing Gear Shock Strut Servicing (P/B 301)
12-15-41-990-802	Figure: Nose Landing Gear Shock Strut Servicing Chart (P/B 301)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-33-00-710-801	Operational Test for the Nose Landing Gear (P/B 501)
32-35-00-730-801	Nose Gear Manual Extension System Test - Airplane on Jacks (P/B 501)
32-51-00-700-801	Nose Wheel Steering System Test (P/B 501)
32-51-00-820-802	Nose Wheel Steering System Adjustment (P/B 501)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1484	Jack - Axle, Nose Gear (Part #: 2150-8.5, Supplier: 00994, A/P Effectivity: 737-100, -200, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Part #: 5923-010, Supplier: 00994, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Part #: 642S, Supplier: 94861, A/P Effectivity: 737-ALL) (Part #: 8842, Supplier: 94861, A/P Effectivity: 737-ALL)
SPL-1521	Tool - Strut Inflation, Landing Gear (Part #: F70200-1, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1821	Wrench - Spanner, Nose Landing Gear Trunnion Pin Retainer Nut (Part #: F72959-40, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1871	Strap - Retention, NLG/MLG Inner Cylinder (Part #: C32030-10, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-10305	Outrigger Equipment - Nose Landing Gear Installation/Removal (Part #: C32049-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
STD-4938	Insertion/Removal - contact (size 16, backshell side)

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D. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00467	Fluid - Landing Gear Shock Strut	BMS3-32, Type II
D00633	Grease - Aircraft General Purpose	BMS3-33
G00018	Nitrogen - Gaseous, Pressurizing, 99.5 Percent Pure	A-A-59503, Type I, Grade B
G50136	Paste - Corrosion Inhibiting, Non-drying	BMS 3-38

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
11	Pin	32-21-00-02-005	HAP ALL
19	Strut assembly	32-21-21-01-160	HAP 001-013, 015-026, 028-030
		32-21-21-02-155	HAP 031-054, 101-999
31	Pin	32-22-11-01-005	HAP 001-013, 015-026, 028-030
		32-22-11-01A-005	HAP 031-054, 101-999
35	Pin	32-21-00-02-040	HAP ALL
43	Pin	32-22-11-01-005	HAP 001-013, 015-026, 028-030
		32-22-11-01A-005	HAP 031-054, 101-999
59	Pin	32-21-00-02-040	HAP ALL

F. Location Zones

Zone	Area
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right
713	Nose Landing Gear

G. Access Panels

Number	Name/Location
113AC	Fwd Nose Wheel Well Upper Access Panel

H. Prepare for the Installation

SUBTASK 32-21-00-480-011

(1) If it is necessary, use a dolly or the Outrigger R/I Equipment, SPL-10305, to move the nose landing gear.

NOTE: When the Outrigger R/I Equipment, SPL-10305 is installed and will be left unattended, chock the nose landing gear tires and lock the caster brake.

SUBTASK 32-21-00-480-008

(2) Install the retention strap, SPL-1871, with the marker facing up, to hold the shock strut [17] in its compressed position.

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SUBTASK 32-21-00-620-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(3) Apply a thin layer of the corrosion preventive corrosion inhibiting non-drying paste, G50136 or compound, C00913 (alternate) to these items:

(a) The threads and thread reliefs of the bolts [62] and [33]

(b) The threads of the nuts [60] and [36]

(c) The faces of the washers [61] and [34].

SUBTASK 32-21-00-160-001

(4) Remove all unwanted corrosion preventive, compound, C00913.

SUBTASK 32-21-00-640-002

(5) Lubricate the following items with, grease, D00633.

(a) The shank of the bolts [62] and [33]

(b) The shank of pins [63] and [37]

(c) The spacers [39] and [71]

(d) The cable guard [70].

SUBTASK 32-21-00-160-002

(6) Remove all unwanted, grease, D00633.

I. Nose Landing Gear Installation

SUBTASK 32-21-00-560-002

(1) You may optionally measure the net freeplay between the wheel well trunnion bushing faces and the strut trunnion bushing faces, before installation, as follows:

NOTE: This measurement will assist in reduction of extra gear removals because the net freeplay requirement of 0.008 in. (0.20 mm) – 0.015 in. (0.38 mm) is not met after installation.

(a) Measure the distance between the wheel well trunnion bushing faces, and make a record of it. [Value 1] _____.

(b) Measure the distance over the strut trunnion bushing faces and make a record of it. [Value 2] _____.

(c) Measure the thickness of the spacers [39], [71] removed as value 3, and [Value 3] _____

(d) Subtract the three measurements. Value 1 - Value 2 - Value 3 = Value 4 _____

(e) Make sure that value 4 equals 0.008 in. (0.20 mm) – 0.015 in. (0.38 mm) total axial freeplay.

(f) If needed, use a different spacer [39], [71] thickness to obtain the required freeplay dimension.

NOTE: Make the spacers [39], [71] of equal thickness, if possible.

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SUBTASK 32-21-00-560-001

(2) Put the nose landing gear in its position for installation on the sidewall of the nose wheel well.

SUBTASK 32-21-00-580-004

(3) Lift the nose landing gear with an axle jack until the right trunnion [23] and the left trunnion [40] align with the mating hole in the sidewall of the nose wheel well, do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

SUBTASK 32-21-00-420-001

(4) Install the right trunnion pin [37]:

(a) Put the spacer [39] in its position between the right trunnion [23] and the sidewall of the nose wheel well.

(b) Put the right trunnion pin [37] through the right trunnion [23], spacer [39] and the sidewall of the nose wheel well.

NOTE: Make sure the hole in the right trunnion pin [37] for the bolt [33] aligns with the mating hole in the right trunnion [23].

(c) Put the swivel [24] through the right trunnion pin [37].

NOTE: Make sure the hole in the swivel [24] for the bolt [33] aligns with the mating hole in the right trunnion pin [37] and the right trunnion [23].

(d) Put the bolt [33] through the right trunnion [23], right trunnion pin [37] and the swivel [24].

(e) Install the washer [34] and the nut [36] on the bolt [33].

(f) Tighten the nut [36] to 20 in-lb (2 N·m) — 24 in-lb (3 N·m) more than the run-on torque.

(g) Install the cotter pin [35] in the bolt [33]. If it is necessary, loosen the nut [36] to the nearest castellation to align the holes for the cotter pin [35].

SUBTASK 32-21-00-420-002

(5) Install the left trunnion pin [63]:

(a) Put the spacer [71] in its position between the left trunnion [40] and the sidewall of the nose wheel well.

(b) Put the left trunnion pin [63] through the left trunnion [40], spacers [71] and in the left sidewall of the nose wheel well.

NOTE: Make sure the hole in the left trunnion pin [63] for the bolt [62] aligns with the mating hole in the left trunnion [40].

(c) Put the cable guard [70] into the left trunnion pin [63].

NOTE: Make sure the hole in the cable guard [70] for the bolt [62] aligns with the mating hole in the left trunnion pin [63] and the left trunnion [40].

(d) Put the bolt [62] through the left trunnion [40], left trunnion pin [63] and the cable guard [70].

(e) Install the washer [61] and the nut [60] on the bolt [62].

(f) Tighten the nut [60] to 20 in-lb (2 N·m) — 24 in-lb (3 N·m) more than the run-on torque.

(g) Install the cotter pin [59] in the bolt [62]. If it is necessary, loosen the nut [60] to the nearest castellation to align the holes for the cotter pin [59].

SUBTASK 32-21-00-220-002

(6) Measure the total axial free play in the trunnion:

NOTE: If the total axial free play is not correct, this will not cause any damage to the landing gear structure, but there may be a loud noise during landing gear extension/retraction.

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(a) Use a thickness gage to measure the clearance between the spacers [39] and [71] and the bushing faces of the sidewall or the trunnion on the two sides of the nose landing gear.

(b) Make sure the combined clearance of the two trunnions is 0.008- 0.015 inches (0.20-0.40 millimeters).

(c) Adjust the spacer stack thickness if it is necessary to get the correct clearance.

SUBTASK 32-21-00-080-003

(7) If it is not necessary, remove the axle jack.

SUBTASK 32-21-00-420-003

(8) Install the pulley [50]:

(a) Put the cable [49] in its position on the groove of the pulley [50].

(b) Put the cable guard [54] and pulley [50] in their position on the bracket [51].

(c) Install the washer [48] on the bolt [47].

(d) Put the bolt [47] through the pulley [50], cable guard [54] and bracket [51].

(e) Install the washer [53] and nut [52] on the bolt [47].

SUBTASK 32-21-00-420-004

(9) Connect the cables [49]:

(a) Put the cables [49] through the inboard side of the trunnion pin nut [68], seal ring [69] and left trunnion pin [63].

NOTE: Make sure that one cable goes over the trunnion pin bolt and one goes under the trunnion pin bolt where the cables go through the trunnion.

(b) Connect the cables [49] to the cable turnbuckles [1].

(c) Remove the identification tags attached to the cables [49].

(d) Install the locking clips [2] on the cable turnbuckles [1].

SUBTASK 32-21-00-410-001

(10) Install the seal [65]:

(a) Assemble the seal [65] around the cables [49] at the inboard end of the left trunnion pin [63].

(b) Install one retainer [66] on the eyebolt [67].

(c) Put the eyebolt [67] through the seal [65].

(d) Install the other retainer [66], washer [56] and nut [64] on the eyebolt [67].

(e) Tighten the nut [64] sufficiently to clamp the seal [65].

(f) Loosen the nut [64] to approximately 1/4 turn until you can turn the eyebolt [67] with your fingers.

(g) Put the seal [65] into the left trunnion pin [63] until it touches the stop.

(h) Install the seal ring [69] into the left trunnion pin [63].

SUBTASK 32-21-00-620-002

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

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(WARNING PRECEDES)

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(11) Apply a thin layer of the corrosion preventive corrosion inhibiting non-drying paste, G50136 or compound, C00913 (alternate) to the trunnion pin nut [68].

SUBTASK 32-21-00-420-005

(12) Install the trunnion pin nut [68]:

(a) Install the trunnion pin nut [68] on the inboard side of the left trunnion pin [63].

(b) Use spanner wrench, SPL-1821, to tighten the trunnion pin nut [68] to 100 in-lb (11 N·m) – 150 in-lb (17 N·m) lube torque.

(c) If it is necessary, loosen the trunnion pin nut [68] to align with the vernier of the lock holes.

(d) Install the lock [57] on the inboard side of the left trunnion pin [63].

(e) Install the screw [58] that holds the lock [57] to the left trunnion pin [63].

(f) Install the lockwire on the screw [58].

SUBTASK 32-21-00-710-001

(13) Examine that the seal [65] will turn freely from the extended cable position of the gear to a simulated gear retracted cable position.

NOTE: This step will verify that the cables will not become twisted when the gear is retracted.

SUBTASK 32-21-00-620-003

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH SILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(14) Apply a thin layer of the corrosion preventive corrosion inhibiting non-drying paste, G50136 or compound, C00913 (alternate) to these items:

(a) The threads and thread reliefs of the bolts [27] and [47]

(b) The threads of the nuts [32] and [42]

(c) The faces of the washers [28], [30], [44] and [46]

SUBTASK 32-21-00-160-005

(15) Remove all unwanted corrosion preventive compound, C00913.

SUBTASK 32-21-00-640-003

(16) Lubricate the chrome plated surfaces of the bolts [27] and [47] and the bushings [29] and [45] with, grease, D00633.

SUBTASK 32-21-00-160-006

(17) Remove all unwanted grease grease, D00633.

SUBTASK 32-21-00-420-006

(18) Connect the left upper rod assembly [41]:

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(a) Put the upper rod assembly [41] in its position on the clevis of the left trunnion [40].

(b) Put the bushing [45] through the clevis of the left trunnion [40] and the rod end of the upper rod assembly [41].

(c) Install the washer [46] on the bolt [47].

(d) Put the bolt [47] through the clevis of the left trunnion [40] and the rod end of the upper rod assembly [41].

(e) Install the washer [44] and nut [42] on the bolt [47].

(f) Install the cotter pin [43] in the bolt [47]. If it is necessary, loosen the nut [42] to the nearest castellation to align the holes for the cotter pin [43].

SUBTASK 32-21-00-420-007

(19) Connect the right upper rod assembly [26]:

(a) Put the upper rod assembly [26] in its position on the clevis of the right trunnion [23].

(b) Put the bushing [29] through the clevis of the right trunnion [23] and the rod end of the upper rod assembly [26].

(c) Install the washer [28] on the bolt [27].

(d) Put the bolt [27] through the clevis of the right trunnion [23] and the rod end of the upper rod assembly [26].

(e) Install the washer [30] and nut [32] on the bolt [27].

(f) Install the cotter pin [31] in the bolt [27]. If it is necessary, loosen the nut [32] to the nearest castellation to align the holes for the cotter pin [31].

SUBTASK 32-21-00-420-008

(20) Connect the hydraulic line [25]:

(a) Remove the plug from the hydraulic ports of the swivel [24].

(b) Remove the caps from the hydraulic line [25].

(c) Connect the hydraulic line [25] to the swivel [24].

(d) Remove the tags from the swivel ports and the hydraulic lines.

SUBTASK 32-21-00-620-004

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(21) Apply a thin layer of the corrosion preventive corrosion inhibiting non-drying paste, G50136 or compound, C00913 (alternate) to these items:

(a) The threads and thread reliefs of the pin [18]

(b) The threads of the nut [12]

(c) The faces of the washers [20] and [21].

SUBTASK 32-21-00-160-003

(22) Remove all unwanted corrosion preventive, compound, C00913.

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SUBTASK 32-21-00-640-004

(23) Lubricate the shank of the pin [18] and bolt [13] with, grease, D00633.

SUBTASK 32-21-00-160-004

(24) Remove all unwanted, grease, D00633.

SUBTASK 32-21-00-420-009

(25) Connect the lower drag strut assembly [19]:

(a) Put the lower drag strut assembly [19] in its position on the clevis of the cylinder assembly [17].

(b) Put the pin [18] through the clevis of the cylinder assembly [17] and the lower drag strut assembly [19].

(c) Install the washer [20] and the nut [12] on the pin [18].

(d) Tighten the nut [12] to 600 in-lb (68 N·m) – 700 in-lb (79 N·m). Loosen the nut [12] to the nearest castellation to align the holes for the bolt [13].

(e) Install the bolt [13] in the pin [18].

(f) Install the washer [21] on the bolt [13].

(g) Install the nut [22] on the bolt [13]

(h) Install the cotter pin [11] in the bolt [13]. If it is necessary, loosen the nut [22] to the nearest castellation to align the holes for the cotter pin [11].

SUBTASK 32-21-00-420-011

(26) Connect the wires to the terminal block [72]:

(a) For airplanes that have three rigid conduits on the junction box [5], open the tee fitting on the aft side of the junction box.

(b) Pull the wires through the conduit.

1) Attach the strings hanging out of the end of the rigid conduits [4] that lead to the junction box [5] to the wires coming out of the flexible conduits [4].

2) Pull the wires all the way through the rigid conduit [4] leading to the junction box [5] and connect the flexible conduits [4] after the clamp [8] at point ''A''.

(c) Connect the wires to the terminal block [72] with a Contact Insertion / Removal, STD-4938 tool using the drawing you made during the removal.

(d) Connect the terminal block [72] to the junction box [5].

(e) Install the screw [10] and washer [3] to close the junction box cover [9] on the junction box [5].

J. Put the Airplane Back to Its Usual Condition

SUBTASK 32-21-00-410-002

(1) Close this access panel:

Number	Name/Location
113AC	Fwd Nose Wheel Well Upper Access Panel

SUBTASK 32-21-00-080-004

(2) Remove the retention strap, SPL-1871, from the nose landing gear.

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SUBTASK 32-21-00-610-001

(3) To fully service the shock strut with the airplane on jacks, do these steps to service the shock strut with fluid:

NOTE: Hold the shock strut in a vertical position to do these steps.

(a) Make sure the shock strut is fully deflated, refer to service placard for the fully deflated dimensions (Figure 12-15-41-990-802).

(b) Do these steps to ''fill the shock strut with fluid'': SUBTASK 12-15-41-600-001.

(c) Slowly lift the shock strut with a axle jack, COM-1484 through one complete compressions and extension cycle.

(d) Remove the axle jack, COM-1484.

(e) Attach the oil charging line.

(f) Fill the shock strut with fluid, D00467 until the hydraulic fluid that flows out of the gas valve is free of bubbles.

(g) Remove the oil charging line.

(h) Close the valves and install their caps.

SUBTASK 32-21-00-610-002

(4) To inflate the shock strut with the airplane on jacks, do these steps:

NOTE: To do these steps, you must have accomplished the steps to add fluid to the strut at the start of this task.

(a) Install the tool, SPL-1521 on the gas valve.

(b) Inflate the shock strut with nitrogen, G00018 until you reach the fully extended pressure, refer to the servicing placard for the correct pressure (Figure 12-15-41-990-802).

(c) Close the gas valve.

(d) Remove the tool, SPL-1521 from the gas valve.

(e) Install the cap on the gas valve.

SUBTASK 32-21-00-860-006

(5) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-21-00-790-001

(6) Check the swivel [24] for leakage.

SUBTASK 32-21-00-860-007

(7) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	14	C00123	EXT LIGHTING NOSE GEAR TAXI

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	1	C01399	PSEU PRI

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Row	Col	Number	Name
D	2	C01400	PSEU ALTN
D	15	C01401	LANDING GEAR AIR/GND RELAY
D	16	C01432	LANDING GEAR ALTN EXTEND SOL
D	17	C01027	LANDING GEAR NOSE GEAR STEER
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 32-21-00-710-003

(8) Do this task: Operational Test for the Nose Landing Gear, TASK 32-33-00-710-801.

SUBTASK 32-21-00-710-004

(9) Do this task: Nose Gear Manual Extension System Test - Airplane on Jacks, TASK 32-35-00-730-801.

SUBTASK 32-21-00-820-001

(10) Adjust the cables [49], do this task: Nose Wheel Steering System Adjustment, TASK 32-51-00-820-802.

SUBTASK 32-21-00-710-005

(11) Do this task: Nose Wheel Steering System Test, TASK 32-51-00-700-801.

SUBTASK 32-21-00-860-008

(12) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-21-00-860-009

(13) Do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

SUBTASK 32-21-00-200-001

(14) Check the pressure and extension of the shock strut:

(a) Measure the pressure and extension of the shock strut.

1) Make sure the pressure you measure is still correct for the extension of the shock strut (Figure 12-15-41-990-802).

2) If the pressure is not correct for the extension of the shock strut, then the shock strut does not have the proper amount of fluid and you must fully service the shock strut (Nose Landing Gear Shock Strut Servicing, TASK 12-15-41-610-802).

——————— END OF TASK ———————

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NOSE LANDING GEAR - INSPECTION/CHECK

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure contains the task to examine the nose landing gear.

C. This procedure does not remove or install the nose landing gear. Refer to (Main Landing Gear Removal, TASK 32-11-00-000-801) and (Main Landing Gear Installation, TASK 32-11-00-400-801) to remove and install the nose landing gear.

TASK 32-21-00-200-801

2. Nose Landing Gear Inspection

(Figure 601)

A. General

(1) This procedure is a scheduled maintenance task.

(2) This task provides the regular inspection of the nose landing gear.

(3) Refer to (Phase I Inspection, TASK 05-51-01-210-801), (High Energy Stop, TASK 05-51-07-210-801), (Brake Seizure Conditional Inspection, TASK 05-51-15-210-801) and (Phase I Inspection, TASK 05-51-35-210-801) for special inspection procedure on the following conditions:

(a) After a hard or overweight landing

(b) After a brake seizure when you tow the airplane, or is moving at high speed on the ground

(c) After the gear has collided with an obstacle

(d) After a high energy stop.

B. References

Reference	Title
05-51-01-210-801	Phase I Inspection (P/B 201)
05-51-07-210-801	High Energy Stop (P/B 201)
05-51-15-210-801	Brake Seizure Conditional Inspection (P/B 201)
05-51-35-210-801	Phase I Inspection (P/B 201)
12-15-41-610-801	Nose Landing Gear Shock Strut Fluid Check (P/B 301)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-45-00-700-801	Wheels Fast Check (Wheel Installed on the Airplane) (P/B 601)
32-45-00-700-803	Tires Inspection (P/B 601)

C. Location Zones

Zone	Area
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right
713	Nose Landing Gear

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D. Procedure

SUBTASK 32-21-00-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801

SUBTASK 32-21-00-480-002

(2) Put chocks around the tires of all the landing gear.

SUBTASK 32-21-00-210-001

(3) Examine the upper components of the nose landing gear:

(a) Examine the drag strut for cracks, damage, and worn areas on the attach points.

(b) Examine the trunnion pins of the drag strut for worn areas and looseness.

(c) Examine the retract actuator as follows:

1) Damage, looseness and security of actuator components and attachment bolts.

2) Dirt, scratches and debris on exposed piston chrome and actuator body rod end nut.

3) Leaks and loose hydraulic connections.

(d) Examine the lock links for cracks, damage, and worn areas on the attach points.

(e) Examine the lock link springs for worn areas, damage, and security of attachments.

(f) Examine the lock actuator and the hydraulic transfer cylinder for loose mounting bolts and leaks.

(g) Examine the shock strut as follows:

1) For leaks and specified extension

2) For cracks on the outer cylinder lugs

3) The external surface of the inner cylinder for dirt, scratches, or galling.

4) The hydraulic fluid and inflation pressure of the strut for correct level, do this task: Nose Landing Gear Shock Strut Fluid Check, TASK 12-15-41-610-801.

(h) Examine the manual extension release mechanism.

(i) Make sure that the wheel well doors are correctly attached to the push rods and the door hinges.

(j) Examine the door linkage for worn areas, damage and security of attachments.

SUBTASK 32-21-00-210-002

(4) Examine the lower end components of the nose landing gear:

(a) Remove the summing mechanism cover and do the steps that follow;

1) Examine the summing mechanism cover for cracks, damage, and worn areas on the attach points.

2) Examine the summing mechanism for damage and worn areas.

3) Examine the steering metering valve for damage, leaks and security of attachments.

4) Examine the steering actuators as follows:

a) Damage, looseness and security of actuator components and attachment bolts.

b) Dirt, scratches and debris on exposed piston chrome and actuator body rod end nut.

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c) Leaks at the rod end seal and trunnion swivels.

5) Examine the hydraulic connections for leaks.

6) Examine the steering cables to cable pulleys attachment.

(b) Examine the upper and lower steering sleeve as follows:

1) Make sure that the top steering sleeve is securely attached to the outer cylinder.

a) Examine the mounting bolts which attach the top steering sleeve to the outer cylinder for looseness or wear below the bolt heads.

b) Look for cracks in the tamper proof putty at the mounting nuts which attach the top steering sleeve to the outer cylinder.

c) Look for cracks in the sealant at the interface between the top steering sleeve and the outer cylinder.

NOTE: Cracks in the sealant at the interface between the top steering sleeve and the outer cylinder could let moisture enter and cause corrosion.

2) Make sure that the lower steering plate and the retainer nut on the steering collar are tightly attached with no unusual or excessive play in the assembled joint.

a) Examine the lower steering plate for cracks, dirt or worn areas.

(c) Install the summing mechanism cover.

(d) Examine the tires and the wheels of the nose landing gear, do this task: Tires Inspection, TASK 32-45-00-700-803 and, do this task: Wheels Fast Check (Wheel Installed on the Airplane), TASK 32-45-00-700-801.

(e) Examine the taxi light wire harness for chafing, and security of attachments.

(f) Examine the safety sensors and all the electrical wiring for security and chafing.

(g) Examine the torsion links as follows:

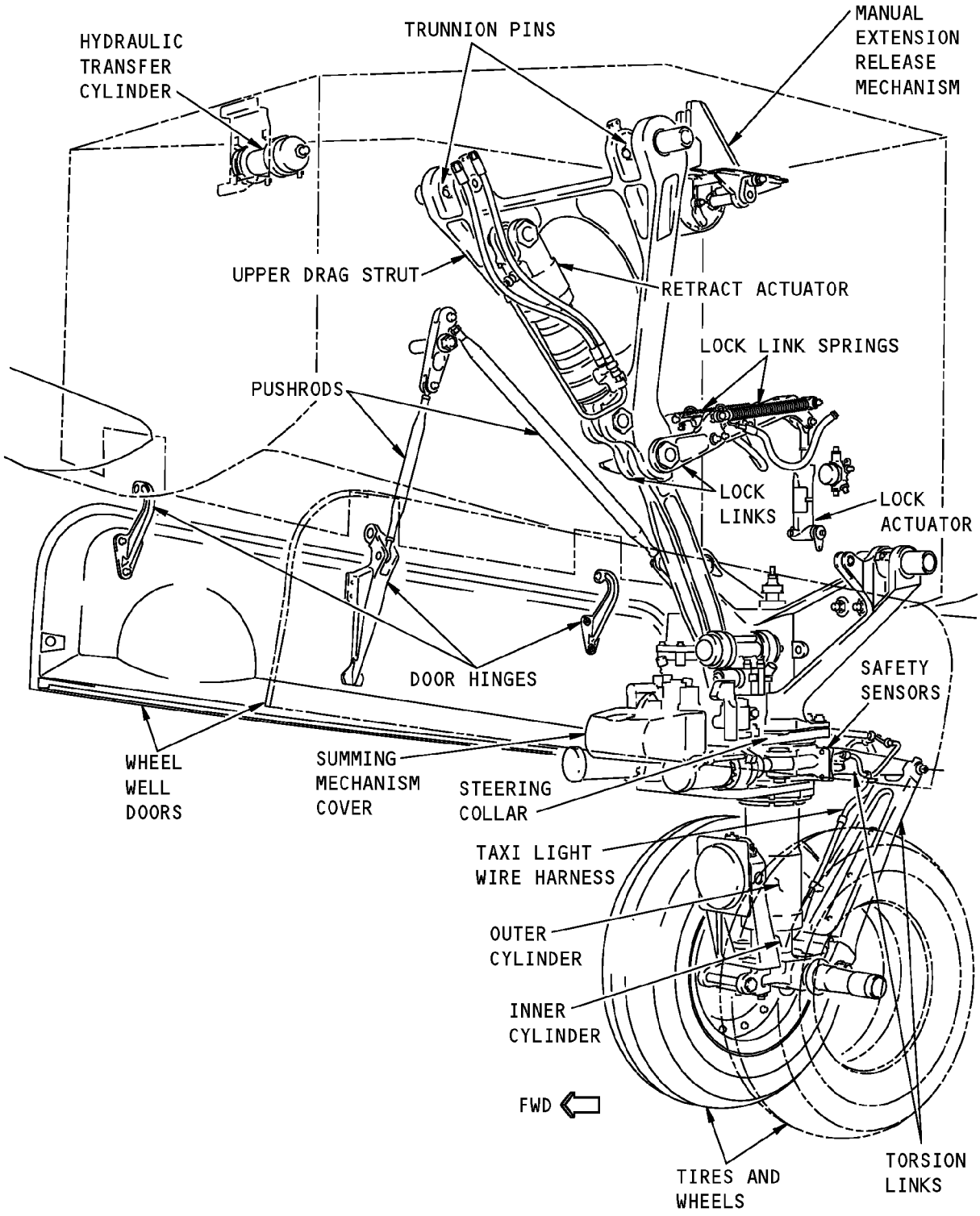
1) Attachment to the shock strut are correct

2) Examine the attachment lugs of the torsion links for cracks

3) Examine the torsion links, for cracks and loose mounting bolts.

END OF TASK

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Nose Landing Gear Inspection
Figure 601/32-21-00-990-801

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TASK 32-21-00-700-801

3. Nose Landing Gear Torsional Freeplay Inspection

(Figure 601, Figure 602)

A. References

Reference	Title
07-11-03-580-802	Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E (P/B 201)
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
12-15-41-610-801	Nose Landing Gear Shock Strut Fluid Check (P/B 301)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
FIM 32-51 TASK 804	Nose Wheel Vibrates at Taxi, Takeoff, or Landing - Fault Isolation

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1557	Gauge - Force (Part #: DG-200, Supplier: 92456, A/P Effectivity: 737-ALL) (Part #: DPP-500G, Supplier: 92456, A/P Effectivity: 737-ALL) (Part #: DPPH-150, Supplier: 92456, A/P Effectivity: 737-ALL) (Part #: DPPH-200, Supplier: 92456, A/P Effectivity: 737-ALL) (Part #: DPPH-50, Supplier: 92456, A/P Effectivity: 737-ALL) (Part #: FDIX 100, Supplier: 0BFD9, A/P Effectivity: 737-ALL) (Part #: FDIX 50, Supplier: 0BFD9, A/P Effectivity: 737-ALL) (Part #: FDV 50, Supplier: 0BFD9, A/P Effectivity: 737-ALL) (Part #: LG-050, Supplier: 92456, A/P Effectivity: 737-ALL) (Opt Part #: FDI 100, Supplier: 0BFD9, A/P Effectivity: 737-ALL)
SPL-1891	Equipment - Freeplay, NLG (Part #: C32044-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Prepare to Examine the Torsional Free Play

SUBTASK 32-21-00-860-001

(1) Remove the pressure from the hydraulic systems A and B, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-21-00-860-010

(2) Lift the nose of the airplane with jacks until the shock strut is fully extended, to lift the nose of the airplane with jacks, do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

SUBTASK 32-21-00-020-001

WARNING: CLEAR THE AREA BELOW THE NOSE BEFORE YOU DEFLATE THE SHOCK STRUT. IF YOU DEFLATE SHOCK STRUT, THE NOSE CAN MOVE DOWN AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(3) Deflate the shock strut for the nose landing gear:

(a) Remove the cap for the gas valve which is on the top of the shock strut.

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WARNING: DO NOT REMOVE THE VALVE BODY UNLESS YOU DEFLATE THE SHOCK STRUT FULLY. THE AIR PRESSURE CAN BLOW THE VALVE BODY OUT AND CAUSE INJURY TO PERSONS.

(b) Loosen the gas valve swivel nut a maximum of two turns.

NOTE: Fluid in the shock strut will have bubbles when you release the pressure. Deflate the shock strut slowly to prevent the leakage of the fluid through the gas valve.

(c) Loosen the gas valve swivel nut fully when all of the pressure in the shock strut is released.

NOTE: The shock strut is fully deflated when the dimension "X" is 13.9 in. (35.3 cm).

SUBTASK 32-21-00-580-001

(4) Lift the nose landing gear with the axle jack until you see approximately 4 in. (10.2 cm) of the chrome surface on the inner cylinder, do this task: Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E, TASK 07-11-03-580-802.

SUBTASK 32-21-00-480-003

(5) Install the equipment, SPL-1891 on the nose landing gear.

(a) Install the collar assemblies, C32044-4 and C323044-5 on the two actuator rods of the steering cylinders.

(b) Set the collar assemblies, C32044-4 and C32044-5 tightly against the actuator end plates to prevent any movement of the actuator rods.

SUBTASK 32-21-00-480-004

(6) Set the dial indicator gage on the platform to read the front and the aft motion of the right wheel rim.

NOTE: The gage must be installed on the forward side of the wheel on the axle centerline as near to the outboard edge of the rim as possible.

SUBTASK 32-21-00-480-005

(7) Install the lever arm assembly, C32044-2 on the tow fitting between the wheels on the nose landing gear.

D. Procedure to Examine the Torsional Free Play

SUBTASK 32-21-00-720-001

(1) Do these steps to examine the torsional free play of the nose landing gear:

(a) Measure 60 inches on the lever arm assembly, C32044-2 from the shock strut centerline.

(b) From the 60 inches (154.4 cm) you measured on the lever arm assembly, C32044-2, use the force gauge, COM-1557 to apply a clockwise pull of 30 lbf (133 N).

(c) Set the dial indicator gage to "0" and loosen the load.

(d) Apply a counterclockwise pull on the lever arm assembly, C32044-2 as in step (b).

(e) Write the value that you get on the dial indicator gage and loosen the load.

(f) Do the above five steps for a total of five cycles.

(g) Get the average value of the torsional free play.

NOTE: The average value must be less than 0.200 inch (5.8 mm). The 0.095 in. (2.4 mm) free play agrees with 0.0172 radian.

SUBTASK 32-21-00-700-001

(2) If the torsional free play is satisfactory, put the airplane in its usual condition.

SUBTASK 32-21-00-700-002

(3) If the torsional free play stays more than the approved maximum, refer to: FIM 32-51 TASK 804.

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E. Put the Airplane Back to Its Usual Condition

SUBTASK 32-21-00-080-001

(1) Remove the dial indicator gage, dial indicator platform, and the lever arm assembly, C32044-2.

SUBTASK 32-21-00-080-002

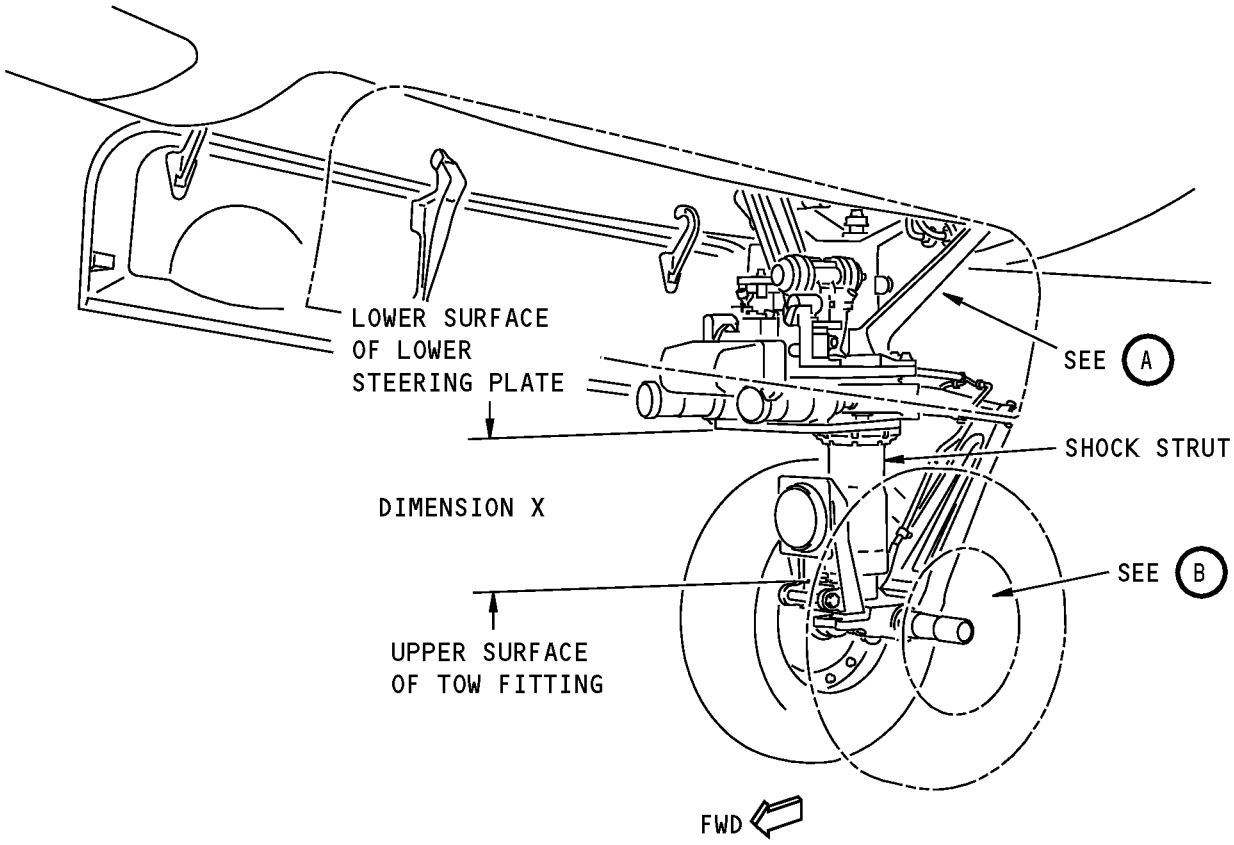
(2) Remove the collar assemblies, C32044-4 and C32044-5 from the two actuator rods of the steering cylinders.

SUBTASK 32-21-00-860-002

(3) Do this task: Nose Landing Gear Shock Strut Fluid Check, TASK 12-15-41-610-801.

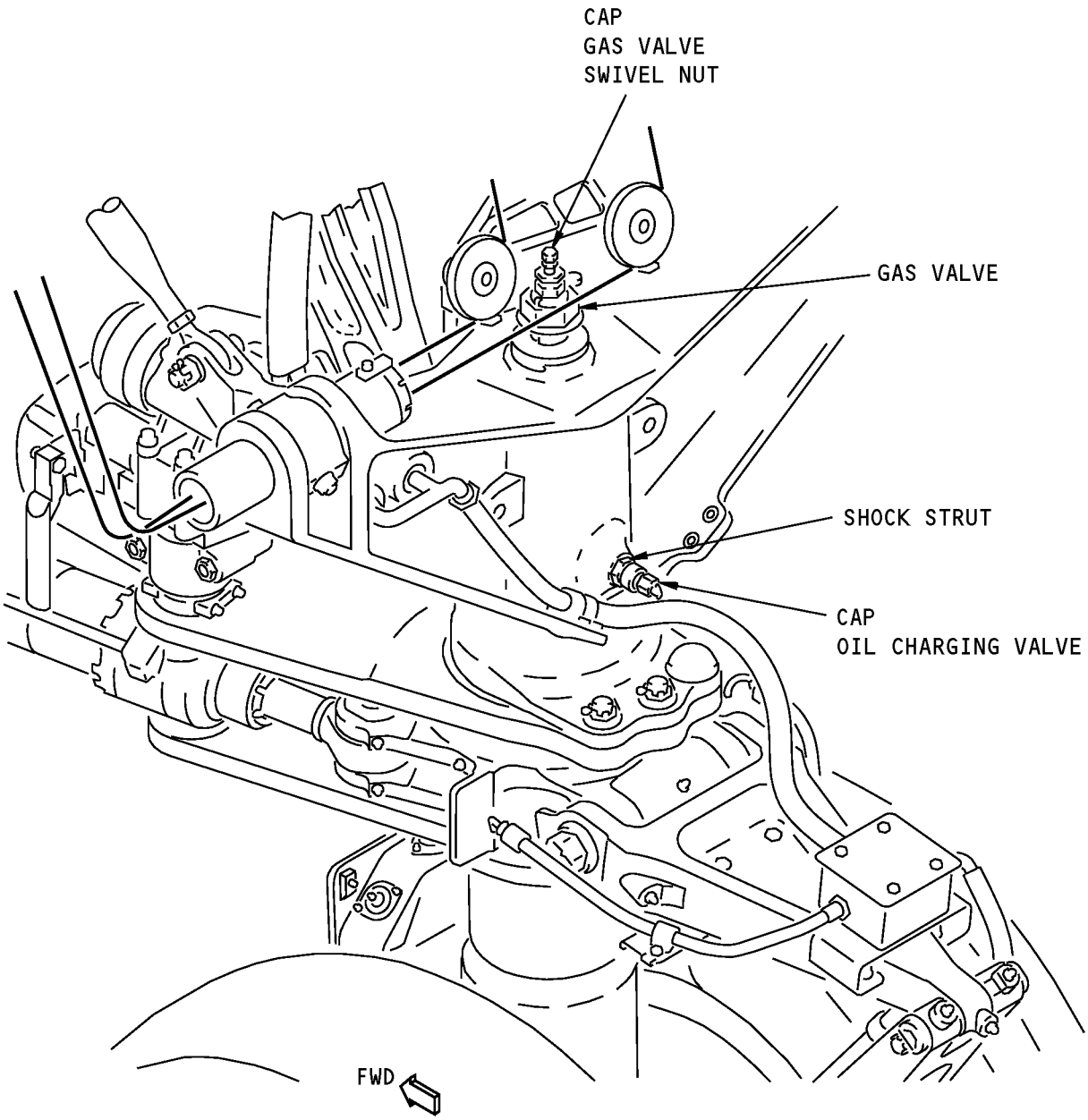
END OF TASK

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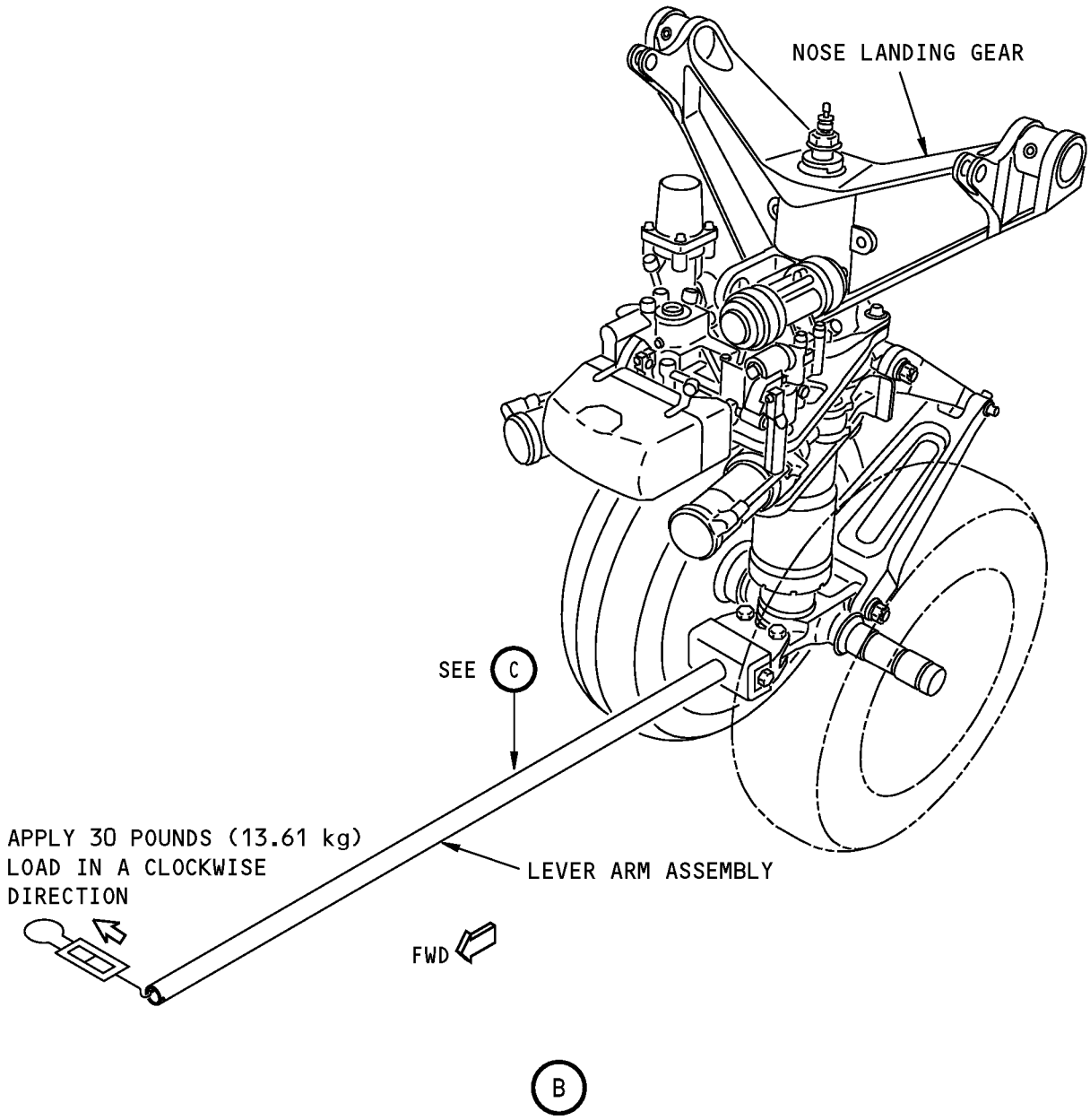
Nose Landing Gear Torsional Free Play Inspection
Figure 602 (Sheet 1 of 4)/32-21-00-990-803

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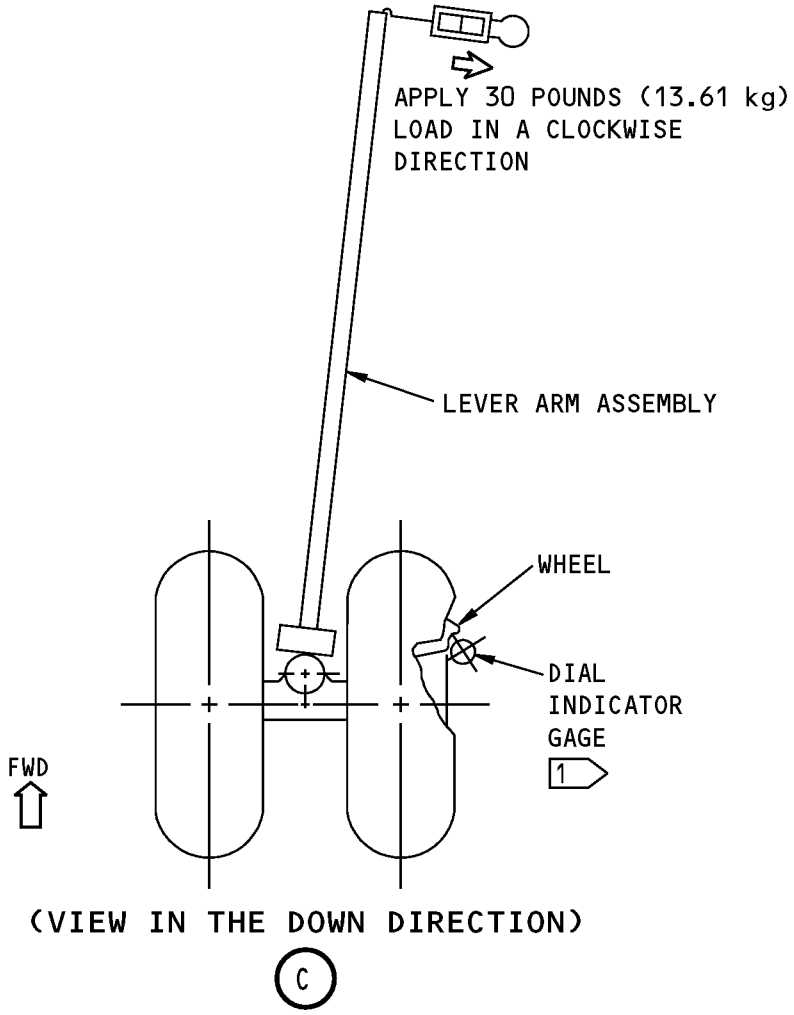
Nose Landing Gear Torsional Free Play Inspection
Figure 602 (Sheet 2 of 4)/32-21-00-990-803

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Nose Landing Gear Torsional Free Play Inspection
Figure 602 (Sheet 3 of 4)/32-21-00-990-803

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1 POSITION GAGE IN FORE AND AFT DIRECTION

Nose Landing Gear Torsional Free Play Inspection
Figure 602 (Sheet 4 of 4)/32-21-00-990-803

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NOSE LANDING GEAR - APPROVED REPAIRS

1. General

A. This procedure contains these tasks:

(1) Repair of the flexible conduit of the Nose Landing Gear.

TASK 32-21-00-300-801

2. Repair of the Flexible Conduit on the Nose Landing Gear

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Consumable Materials

Reference	Description	Specification
B00067	Alcohol - Ethyl (Ethanol)	21CFR21.35
B50073	Alcohol - Isopropyl	
G00150	Tape - Teflon Film With Silicon Adhesive, 5 mil - Permacel P-421	
G50392	Sleeving - Expandable, Braided (Teflon, PFA)	BMS13-52 Type IV

C. Prepare for the Repair of the Flexible Conduit of the Nose Landing Gear

SUBTASK 32-21-00-480-009

WARNING: MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT. THIS CAN CAUSE INJURIES TO PERSONS, AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-21-00-480-010

(2) Put chocks around the tires of all the landing gear.

D. Procedure to Repair the Flexible Conduit of the Nose Landing Gear

SUBTASK 32-21-00-960-001

(1) To replace the Teflon tape [4], do these steps:

(a) Remove the tape wrapping which extends approximately 12 inches on the flexible conduit [1].

(b) Clean the conduit with alcohol, B00067 or alcohol, B50073 to remove oils, Skydrol and unwanted material.

(c) Wind Permacel P-421 tape, G00150 on the area where the flexible conduit [1] touches the bracket [2].

NOTE: The tape must not extend more than three inches from the bracket [2].

(d) Apply a second layer of Teflon tape [4] in which the wrapping has an opposite start/end.

(e) Attach a string at the two ends of the Teflon tape [4].

SUBTASK 32-21-00-300-001

(2) Use these steps to find the necessary repair if the conduit is damaged:

(a) Clean the conduit with alcohol, B00067 or alcohol, B50073 to remove oils, Skydrol and unwanted material.

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(b) Examine the worn area.

1) Replace the conduit if damage extends through the outer silicone rubber, through the stainless steel and into the Teflon tubing at the subsequent maintenance opportunity.

2) Replace or repair the conduit if there are worn or broken strands to the stainless steel braid.

3) The repair is not necessary if there are tears or cuts which do not extend through the outer silicone rubber layer.

SUBTASK 32-21-00-300-002

(3) Follow these steps if a repair of the conduit is necessary:

NOTE: A protective outer sleeve, G50392 with a 0.75 inch diameter and natural color can be installed on the flexible conduit [1] at this time if desired.

(a) Cut frayed material from the damaged area of the flexible conduit [1] to prevent damage to the inner conduit layers.

(b) Wind the area with Permacel P-421 tape, G00150 with a minimum of three wrappings.

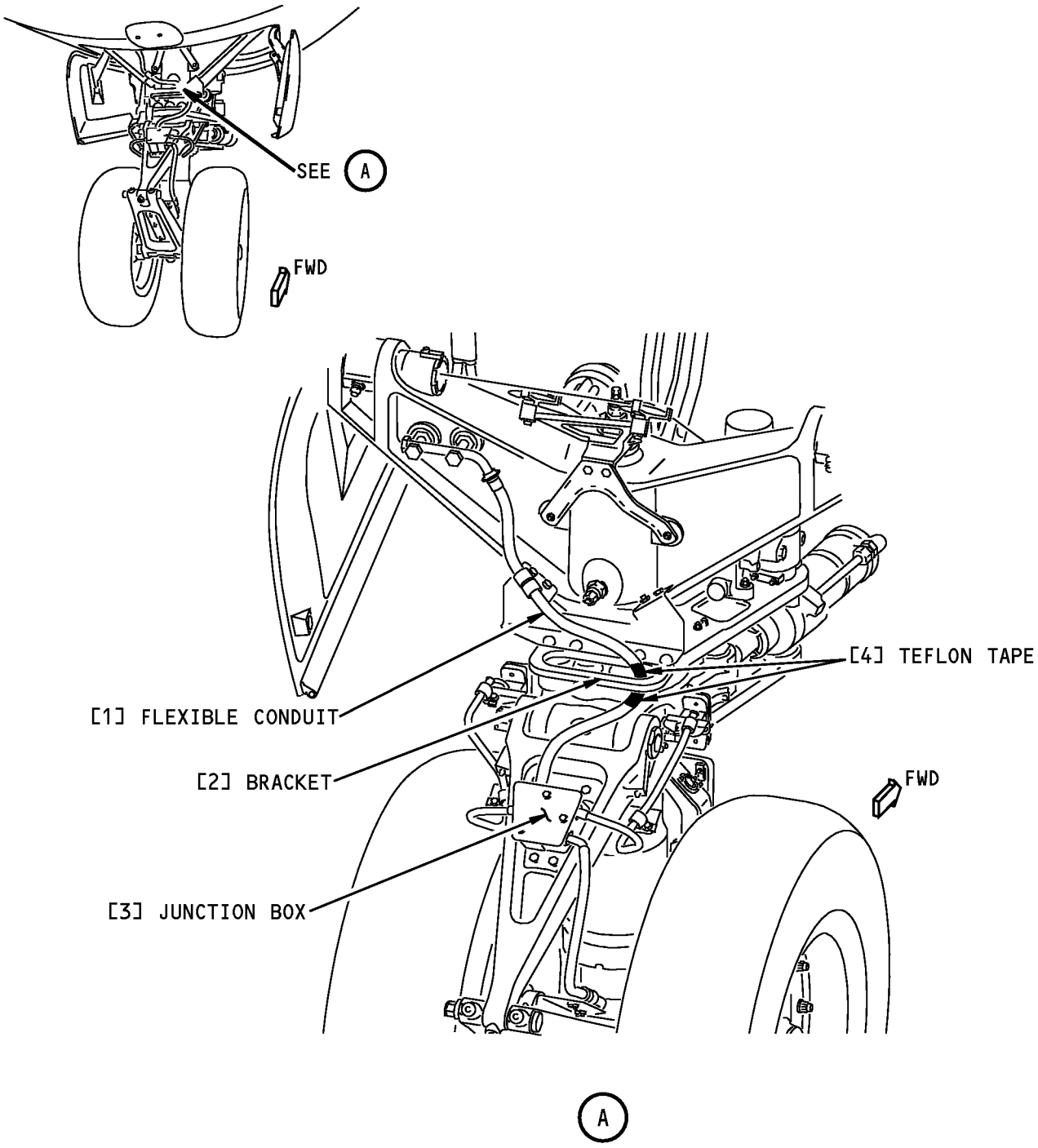
(c) Wind each layer in the opposite direction of the previous layer.

(d) Extend the Teflon tape [4] wrapping a minimum of more than one inch at each end of the worn or damaged area.

(e) Attach a string around the two ends of the Teflon tape [4].

——————— END OF TASK ———————

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Nose Gear Flexible Conduit
Figure 801/32-21-00-990-804

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NOSE LANDING GEAR SHOCK STRUT SEALS - REPAIRS

1. General

A. There are three tasks in this procedure that supply instructions to replace the seals on the shock strut of the nose landing gear.

(1) The first task is to replace the active seals with the spare seals on the lower bearing carrier. The inner cylinder is partly removed from the outer cylinder; the leaky, active seals are removed; and, the spare seals are installed.

(2) The second task is to install new dynamic seals, new static seals, and new spare seals on the lower bearing carrier. The inner cylinder is fully removed from the outer cylinder; the lower bearing carrier is removed; and, all of the seals are removed and replaced.

(3) The third task is to check hydraulic leaks on the shock strut of the nose landing gear.

B. Make sure all working areas, tools, and your hands are clean when you handle the elastomer seals. Some greases can cause the elastomer seals to swell too much. This can cause the seals to leak.

TASK 32-21-11-960-801

2. Replace the Active Seals with the Spare Seals

(Figure 801, Figure 802, Figure 803, Figure 804)

A. General

(1) This task replaces the active static seals and the active dynamic seals with the spare seals on the lower bearing carrier of the nose landing gear.

(2) For this task you will partly disassemble the nose gear strut inner cylinder from the outer cylinder, pull the lower bearing carrier out of the outer cylinder and replace the active seals with the spare seals that are already installed.

B. References

Reference	Title
07-11-03-580-802	Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E (P/B 201)
07-11-06-580-803	Lower the Airplane Nose (P/B 201)
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
07-11-21-580-802	Lower the Airplane Nose Off of the Jack (P/B 201)
12-15-41-610-802	Nose Landing Gear Shock Strut Servicing (P/B 301)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-21-31-000-803	Nose Landing Gear Torsion Link Disconnection (P/B 401)
32-21-31-400-803	Nose Landing Gear Torsion Link Connection (P/B 401)
32-45-21-000-801	Nose Landing Gear Wheel and Tire Assembly Removal (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

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Reference	Description
SPL-1376	Plunger - Scraper (C32016-2 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1377	Reducer - Scraper (C32016-3 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1378	Retainer - Scraper (C32016-4 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1379	Assembly - Scraper Lock (C32016-5 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1381	Stuffer - Ring Seal (C32016-7 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1829	Valve - Drain, Landing Gear Shock Strut Oil (Part #: J32060-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A32066-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1867	Wrench - Nose Landing Gear Oleo Gland Nut (Part #: C32025-7, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32025-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-3927	Assembly - Strap (751069-007 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-4047	Assembly - Seal Puller (C32016-6 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
STD-1110	Container - Hydraulic Fluid Resistant, 5 Gallon (19 Liters)

D. Consumable Materials

Reference	Description	Specification
A00226	Compound - Tamper-Proof Putty	BMS8-45
D00013	Grease - Aircraft And Instrument Grease	MIL-PRF-23827 (NATO G-354) (Supersedes MIL-G-23827)
D00467	Fluid - Landing Gear Shock Strut	BMS3-32, Type II

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(Continued)

Reference	Description	Specification
D00589	Lubricant - Hydraulic Assembly - AFS-682	
G50136	Paste - Corrosion Inhibiting, Non-drying	BMS 3-38

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Cap assembly	32-21-00-01-025	HAP 001-013, 015-026, 028-030
		32-21-00-01A-050	HAP 031-054, 101-999
5	Cap assembly	32-21-00-01-025	HAP 001-013, 015-026, 028-030
		32-21-00-01A-050	HAP 031-054, 101-999
6	Valve	32-21-00-01-035	HAP 001-013, 015-026, 028-030
		32-21-00-01A-060	HAP 031-054, 101-999
7	Packing	32-21-00-01-030	HAP 001-013, 015-026, 028-030
		32-21-00-01A-055	HAP 031-054, 101-999
24	Scraper ring	32-21-00-01-195	HAP 001-013, 015-026, 028-030
		32-21-00-01A-195	HAP 031-054, 101-999
26	Spare dynamic seal	32-21-00-01-205	HAP 001-013, 015-026, 028-030
		32-21-00-01A-205	HAP 031-054, 101-999
27	Spare static seal	32-21-00-01-210	HAP 001-013, 015-026, 028-030
		32-21-00-01A-210	HAP 031-054, 101-999

F. Location Zones

Zone	Area
711	Nose Landing Gear Door - Left

G. Prepare for the Replacement

SUBTASK 32-21-11-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-21-11-860-001

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-21-11-020-001

WARNING: CLEAR THE AREA BELOW THE NOSE BEFORE YOU DEFLATE THE SHOCK STRUT. IF YOU DEFLATE SHOCK STRUT, THE NOSE CAN MOVE DOWN AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(3) Deflate the shock strut [4] for the nose landing gear:

(a) Remove the cap [1] for the gas valve [2] which is on the top of the shock strut [4].

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WARNING: DO NOT REMOVE THE VALVE BODY UNLESS YOU DEFLATE THE SHOCK STRUT FULLY. THE AIR PRESSURE CAN BLOW THE VALVE BODY OUT AND CAUSE INJURY TO PERSONS.

(b) Loosen the swivel nut [3] a maximum of two turns.

NOTE: Fluid in the shock strut [4] can have bubbles when you release the pressure. Deflate the shock strut slowly to prevent the leakage of the fluid through the gas valve [2].

(c) Loosen the swivel nut [3] fully when all of the pressure in the shock strut [4] is released.

NOTE: The shock strut [4] is fully deflated when the dimension "X" is 13.9 in. (353 mm)1.

SUBTASK 32-21-11-680-001

(4) Drain the hydraulic fluid from the shock strut [4]:

(a) Remove the cap [5] from the oil charging valve [6].

(b) Put a 5 gallon (19 liters) hydraulic fluid resistant container, STD-1110 in a position to catch the hydraulic fluid when the oil charging valve [6] is opened.

(c) Install the drain equipment on the oil charging valve [6]:

NOTE: The tool, landing gear shock strut drain valve, SPL-1829, could also be used, but it will take much longer to drain the shock strut.

1) Cut a length of plastic tubing, sufficiently long to reach the container on the floor.

2) Insert a small allen wrench in the end of the length of tubing so that the long end of the allen wrench is flush with the end of the tube and the short end goes through the wall of the tube.

3) Install the tubing on the oil charging valve [6] so that the allen wrench goes into the check valve and holds it open to drain the hydraulic fluid.

(d) Remove the drain equipment when you have removed all of the hydraulic fluid.

SUBTASK 32-21-11-020-002

(5) Do this task: Nose Landing Gear Torsion Link Disconnection, TASK 32-21-31-000-803.

SUBTASK 32-21-11-480-002

(6) Lift the nose of the airplane until there is more than enough room to install the seal puller assembly, SPL-4047 [73] on the inner cylinder [12] after the gland nut [17] has been removed, do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

SUBTASK 32-21-11-580-003

(7) Use axle jack to hold the inner cylinder [12] in its position in the outer cylinder [9], (Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E, TASK 07-11-03-580-802).

SUBTASK 32-21-11-020-022

(8) Do this task: Nose Landing Gear Wheel and Tire Assembly Removal, TASK 32-45-21-000-801.

SUBTASK 32-21-11-020-003

(9) Disconnect the gland nut [17] from the outer cylinder [9]:

(a) Remove the bolt [14], washer [15], and the lockplate [16] to release the gland nut [17].

(b) Use the wrench, SPL-1867 to disconnect the gland nut [17] from the outer cylinder [9].

NOTE: Keep the gland nut in its position against the outer cylinder after you have disconnected it from the outer cylinder.

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SUBTASK 32-21-11-580-004

(10) Lift the nose of the airplane until there is enough room to install the scraper retainer, SPL-1378 [79] and the scraper lock assembly, SPL-1379 [74] on the gland nut [17], do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

SUBTASK 32-21-11-480-005

(11) Install the scraper retainer, SPL-1378 [79] and the scraper lock assembly, SPL-1379 [74] on the gland nut [17].

NOTE: This will make sure the scraper ring [24] for the gland nut [17] does not come out of its groove.

(a) Install the scraper retainer, SPL-1378 [79] on the gland nut [17].

(b) Install the scraper lock assembly, SPL-1379 [74] to hold the scraper retainer, SPL-1378 [79] in its position on the gland nut [17].

SUBTASK 32-21-11-020-023

(12) Move the gland nut [17] down at the inner cylinder [12].

NOTE: If the scraper ring [24] comes out of its groove, use the scraper plunger, SPL-1376 [80] and the scraper reducer, SPL-1377 [81] to install the scraper ring [24] back in its groove.

SUBTASK 32-21-11-020-024

(13) Move the lower bearing carrier [23]:

(a) Loosely install the seal puller assembly, SPL-4047 [73] around the inner cylinder [12].

(b) Push the seal puller assembly, SPL-4047 [73] up, so that you can install it correctly at the bottom of the outer cylinder [9].

(c) Align the holes in the seal puller assembly, SPL-4047 [73] with the holes in the lower bearing carrier [23] for the puller screws [78].

(d) Install the carrier puller screws [52] to hold the seal puller assembly, SPL-4047 [73] to the lower bearing carrier [23].

(e) Tighten the retainer screws on each side of the seal puller assembly, SPL-4047 [73].

(f) Install the strap assembly, SPL-3927 [75] around the axle and connect the ends to the shoulder bolts on each side of the seal puller assembly, SPL-4047 [73].

SUBTASK 32-21-11-580-005

(14) Lift the airplane until the lower bearing carrier [23] is completely out of the outer cylinder [9], (TASK 07-11-21-580-801).

H. Procedure to Replace the Active Static and Active Dynamic Seal with the Spare Seals

SUBTASK 32-21-11-900-001

(1) Replace the active static seal [28] with a spare seal [27] (Figure 801, Figure 802, Figure 803):

NOTE: Make sure your hands are clean when you handle the elastomer seals. Some greases can cause the elastomer seals to swell too much. This can cause the seals to leak.

(a) Remove the two backup rings [29] from the active static seal [28].

(b) Make sure the two backup rings [29] are serviceable.

NOTE: Replace the two backup rings [29] if they have nicks, scratches or other damage. The recommended installation is to replace all the old backup rings with new backup rings. Use the old backup rings only after a full inspection, and new rings are not available.

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(c) Use a plastic cutting tool with a backup strip to cut the active static seal [28] from its outer groove in the lower bearing carrier [23].

(d) Move the spare static seal [27] out of the spare seal groove in the lower bearing carrier [23].

CAUTION: DO NOT APPLY VASELINE OR PETROLATUM TO THE SEALS. THIS CAN CAUSE TOO MUCH SWELLING OF THE SEAL MATERIAL.

(e) Apply a thin layer of fluid, D00467 or AFS-682 lubricant, D00589 to the spare static seal [27] and the backup rings [29].

NOTE: The AFS-682 lubricant, D00589 will help keep the backup rings [29] in their positions.

(f) Put the spare static seal [27] in the static seal groove in the lower bearing carrier [23].

(g) Put the white backup rings [29] on the spare static seal [27] with the rounded edge of the backup rings [29] against the seal.

SUBTASK 32-21-11-020-005

(2) Remove the seal retainer [18]:

(a) Remove the bearing carrier pin [30] for the seal retainer [18].

(b) Move the seal retainer [18] away from the lower bearing carrier [23] to get access to the active dynamic seal [19].

(c) Use tape to hold the seal retainer [18] in position on the inner cylinder [12], and to prevent it from moving down on the lower bearing carrier [23].

SUBTASK 32-21-11-900-002

(3) Replace the active dynamic seal [19] with the spare dynamic seal [26]:

NOTE: Make sure your hands are clean when you handle the elastomer seals. Some greases can cause the elastomer seals to swell too much. This can cause the seals to leak.

(a) Move the lower bearing carrier [23] up and down the inner cylinder [12] to move the active dynamic seal [19], backup ring [21], and the cap [20] from the inner groove of the lower bearing carrier [23].

(b) If the active dynamic seal [19] does not come out of the inner groove of the lower bearing carrier [23], remove it with a tool which is not sharp.

NOTE: Hardened steel cotter pin removal tools work well for removing the dynamic seal.

1) Remove the backup ring [21], and the cap [20] from the active dynamic seal [19].

2) Use a plastic cutting tool with a back-up strip to cut the active dynamic seal [19] from the inner groove of the lower bearing carrier [23].

(c) Remove the backup ring [21], and the cap [20].

NOTE: The recommended installation is to replace all the old backup rings with new backup rings. Use the old backup rings only after a full inspection and new rings are not available. Do not use the backup ring [21], and the cap [20] if they have nicks, scratches or other damage.

(d) Remove the spare dynamic seal [26] from its groove in the lower bearing carrier [23] and move it down on the inner cylinder [12].

NOTE: The round sealing surface of the seal must be against the chrome on the inner cylinder.

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CAUTION: DO NOT APPLY VASELINE OR PETROLATUM TO THE SEALS. THIS CAN CAUSE TOO MUCH SWELLING OF THE SEAL MATERIAL.

(e) Apply a thin layer of fluid, D00467 or AFS-682 lubricant, D00589 to the spare dynamic seal [26] and the backup rings [22].

NOTE: The AFS-682 lubricant, D00589 will help keep the backup rings [22] in their positions.

(f) Put the white backup rings [22] on the spare dynamic seal [26] with the rounded edge of the white backup rings [22] against the spare dynamic seal [26].

CAUTION: MAKE SURE THAT THE BACKUP RINGS AND THE SEAL STAY TOGETHER WHEN YOU INSTALL THE SEAL. IF THE BACKUP RINGS AND THE SEAL MOVE APART, THEY WILL NOT INSTALL CORRECTLY. THIS CAN CAUSE DAMAGE TO THE SEAL AND THE BACKUP RINGS.

(g) Use ring seal stuffer, SPL-1381 [82] to install the spare dynamic seal [26], and the backup rings [22] in the active seal location in the lower bearing carrier [23] as shown in View B (Figure 803).

I. Put the Airplane Back to Its Usual Condition.

SUBTASK 32-21-11-420-003

(1) Move the lower bearing carrier [23] up the inner cylinder [12] into the outer cylinder [9].

SUBTASK 32-21-11-640-001

WARNING: DO NOT GET THE CORROSION-INHIBITING COMPOUND ON YOUR SKIN, IN YOUR EYES, OR ON YOUR CLOTHES. THE COMPOUND IS POISONOUS AND FLAMMABLE. USE APPROVED GLOVES, AND EYE PROTECTION. MAKE SURE THAT THERE IS GOOD AIRFLOW IN THE WORK AREA. KEEP THE COMPOUND AWAY FROM SPARKS AND FLAMES. THE COMPOUND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(2) Apply a thin layer of corrosion inhibiting non-drying paste, G50136 to the threads of the gland nut [17] and to the threads of the outer cylinder [9].

SUBTASK 32-21-11-420-004

(3) Install the gland nut [17]:

(a) Move the gland nut [17] up to the outer cylinder [9] and engage the threads.

(b) Use the wrench, SPL-1867 for the gland nut [17] to tighten the gland nut [17] to 100 ft-lb (136 N·m) – 125 ft-lb (169 N·m).

SUBTASK 32-21-11-420-005

(4) Install the locktab [16] for the gland nut [17] (Figure 803):

(a) Apply a thin layer of grease, D00013 to the shank and threads of bolts [14] and washers [15].

(b) Install the locktab [16] in the holes which will put the tab of the locktab [16] as close to a gland nut [17] slot as possible.

NOTE: If it is necessary, loosen the gland nut [17] slightly to align slot in the gland nut [17] with the locktab [16].

(c) Install the bolts [14] and washers [15].

(d) Tighten the bolts [14].

(e) Install lockwire on the bolts [14].

SUBTASK 32-21-11-420-006

(5) Install the oil charging valve [6]:

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(a) Remove and discard the old packing [7].

(b) Apply a thin layer of fluid, D00467 a new packing [7].

(c) Install the new packing [7] on the valve [6].

(d) Install the oil charging valve [6] and tighten it to 22 ft-lb (30 N·m) – 25 ft-lb (34 N·m).

(e) Install the cap assembly [5] loosely.

NOTE: You will tighten it in the shock strut servicing task.

(f) Apply compound, A00226 to the valve [6].

NOTE: Apply it to make sure the seal made by the compound, A00226 must break if the valve [6] becomes loose.

SUBTASK 32-21-11-080-001

(6) Lower and remove the axle jack, do this task: Lower the Airplane Nose, TASK 07-11-06-580-803.

SUBTASK 32-21-11-080-002

(7) Lower the airplane nose and remove the jacks, do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

SUBTASK 32-21-11-420-007

(8) Do this task: Nose Landing Gear Torsion Link Connection, TASK 32-21-31-400-803.

SUBTASK 32-21-11-600-001

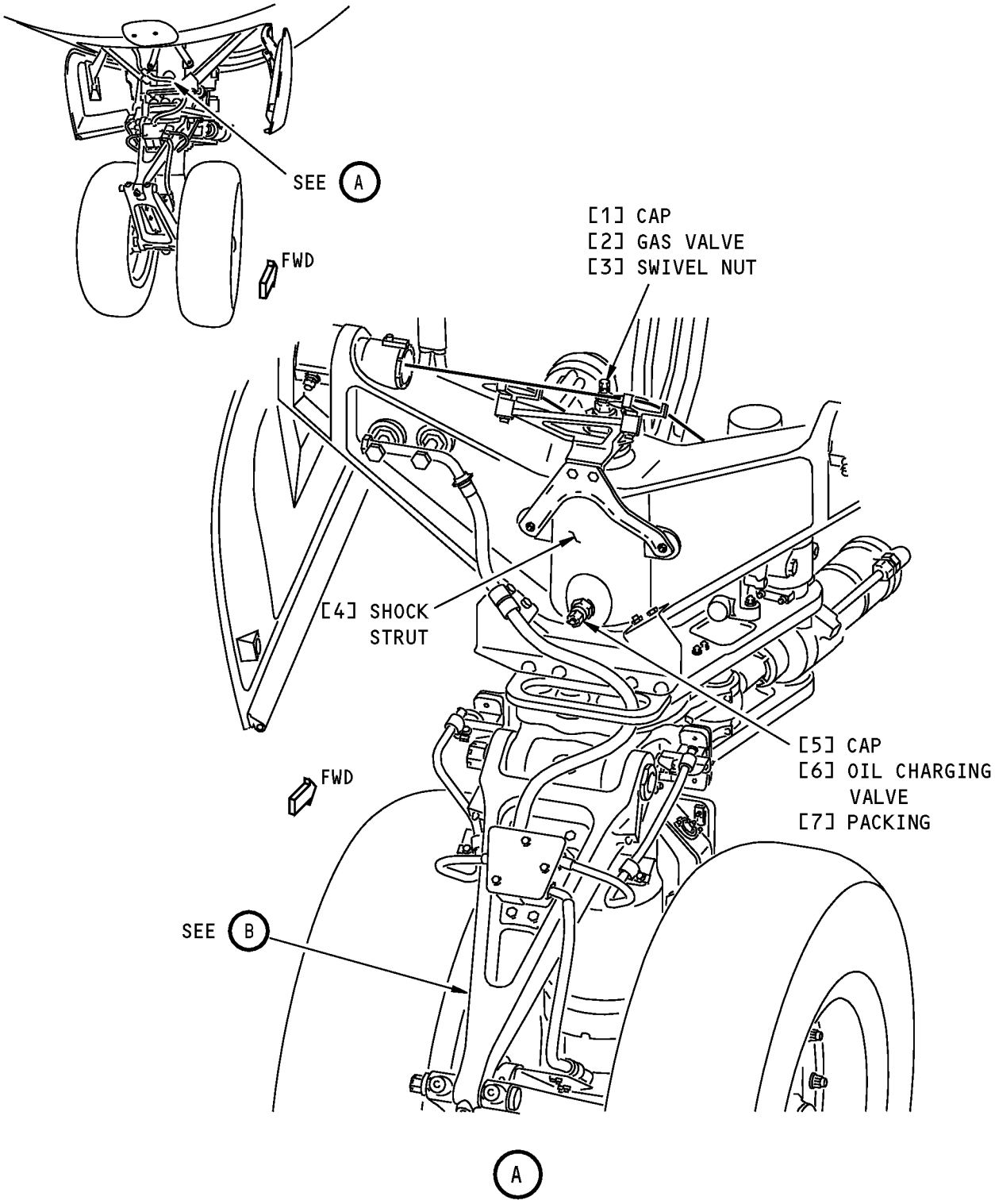
(9) Do this task: Nose Landing Gear Shock Strut Servicing, TASK 12-15-41-610-802.

SUBTASK 32-21-11-420-008

(10) Make sure the swivel nut [3] is tightened to 5 ft-lb (7 N·m) – 7 ft-lb (9 N·m) and the cap assembly [1] is installed for the gas valve [2].

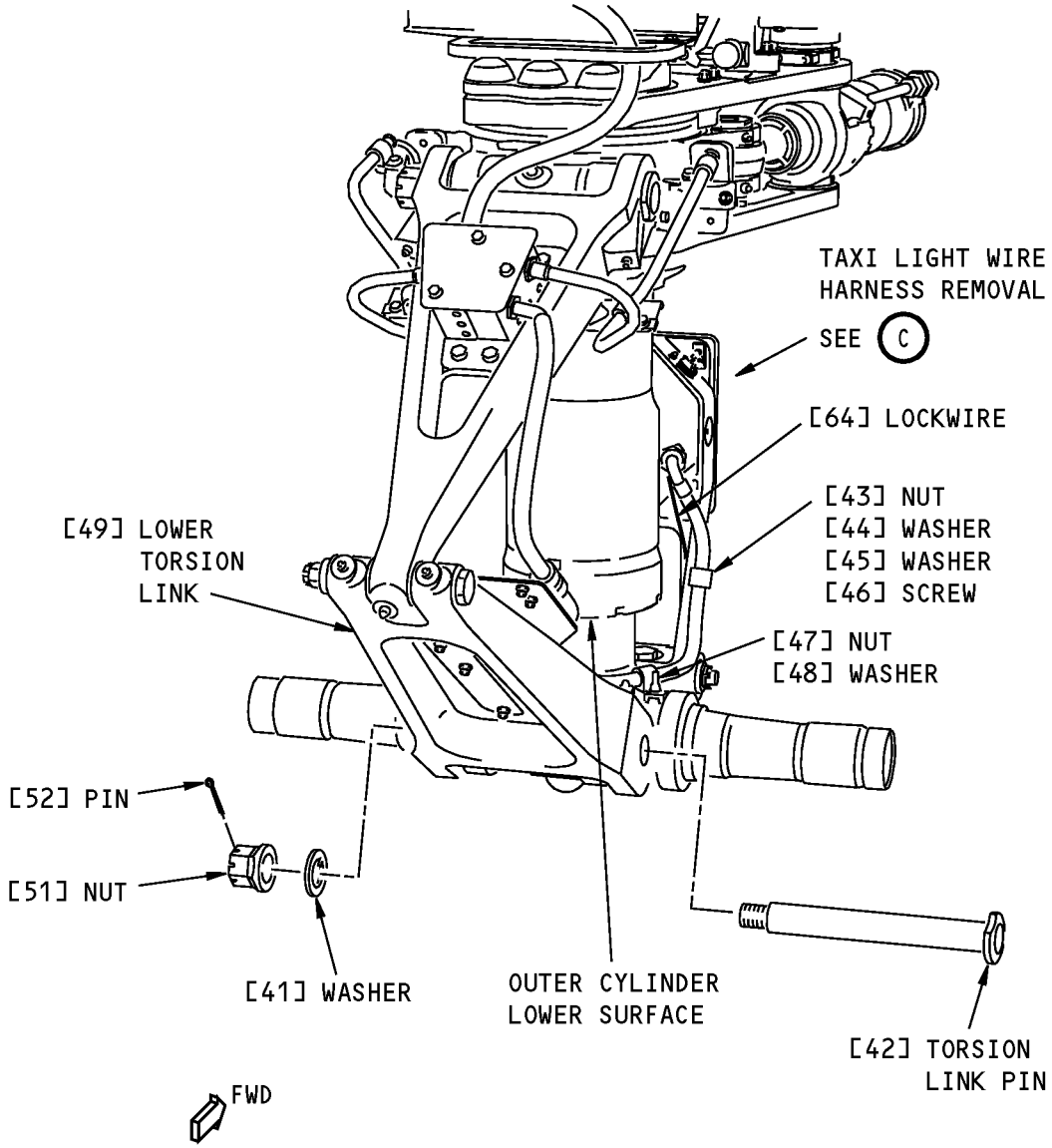
——————— END OF TASK ———————

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Nose Landing Gear Shock Strut Seal Replacement
Figure 801 (Sheet 1 of 3)/32-21-11-990-801

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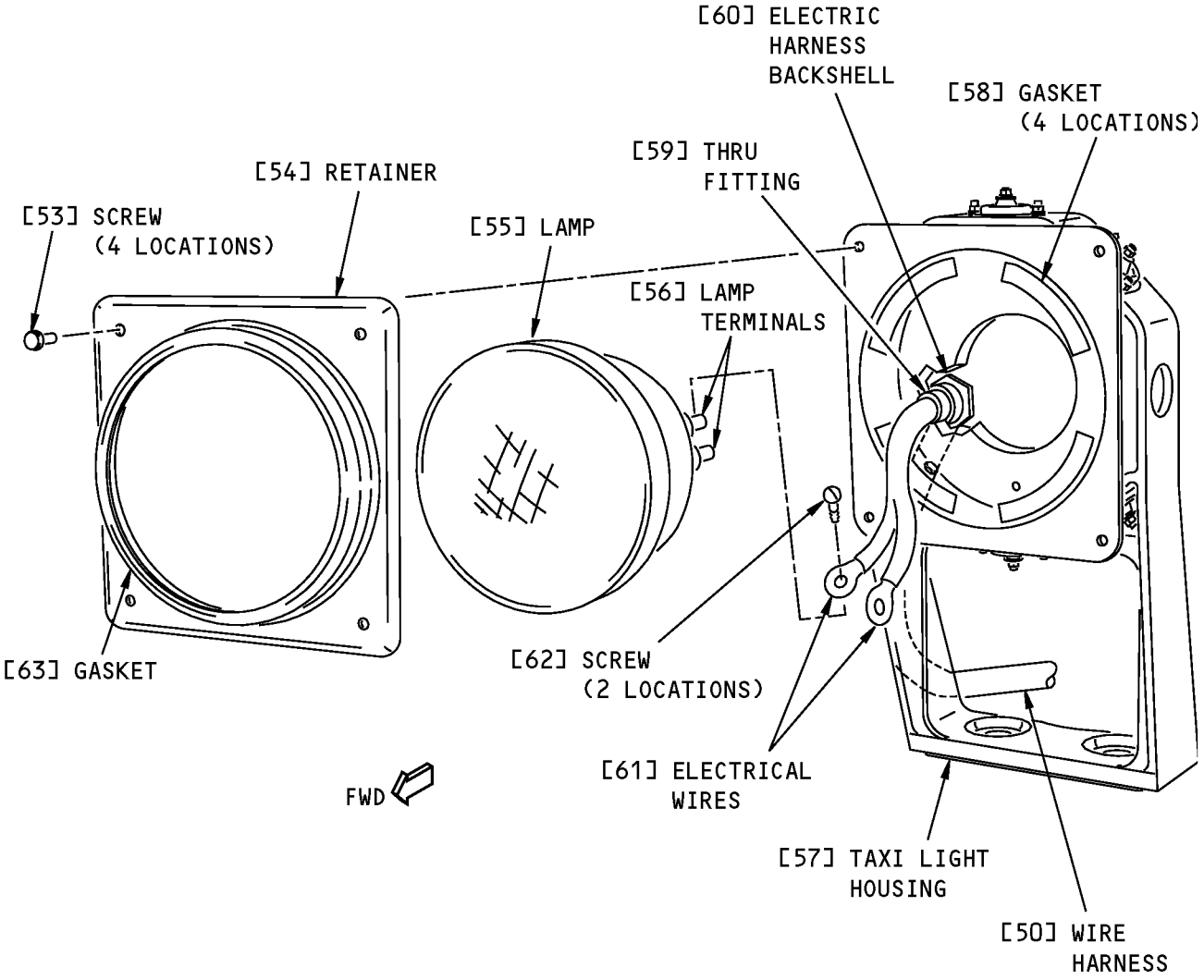


(COMPONENTS REMOVED FOR ACCESS)

B

Nose Landing Gear Shock Strut Seal Replacement
Figure 801 (Sheet 2 of 3)/32-21-11-990-801

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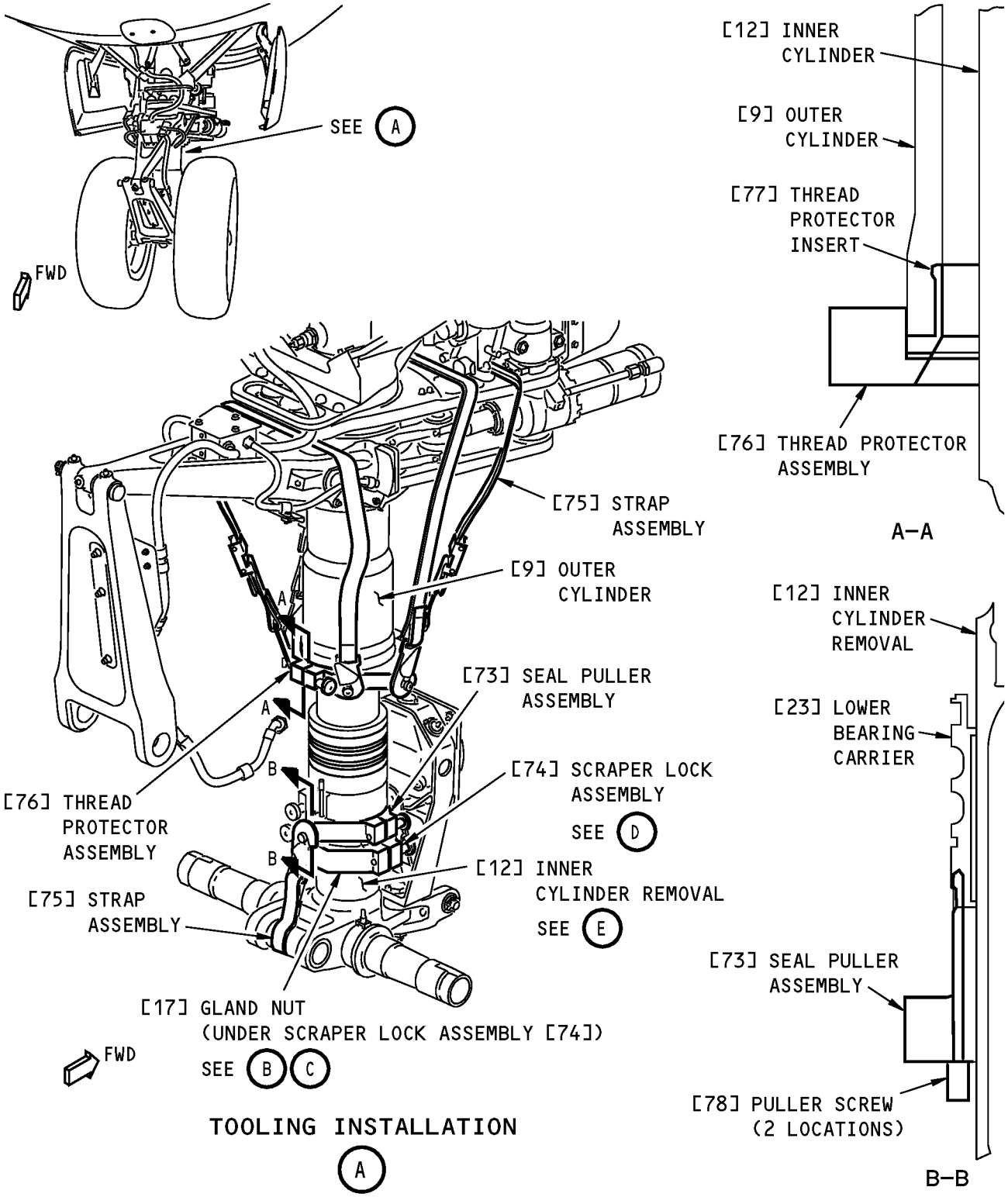


TAXI LIGHT WIRE HARNESS REMOVAL

C

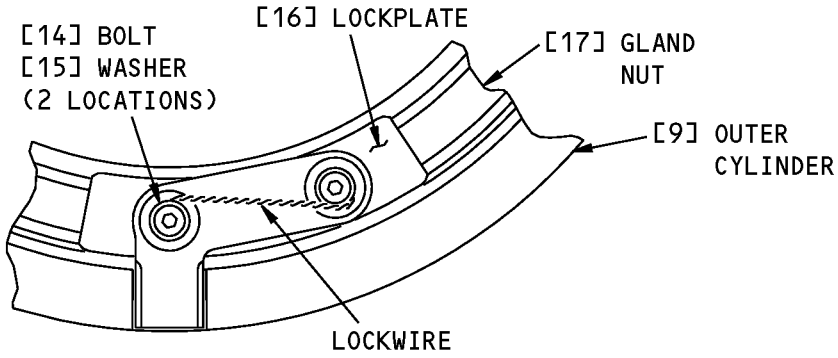
Nose Landing Gear Shock Strut Seal Replacement
Figure 801 (Sheet 3 of 3)/32-21-11-990-801

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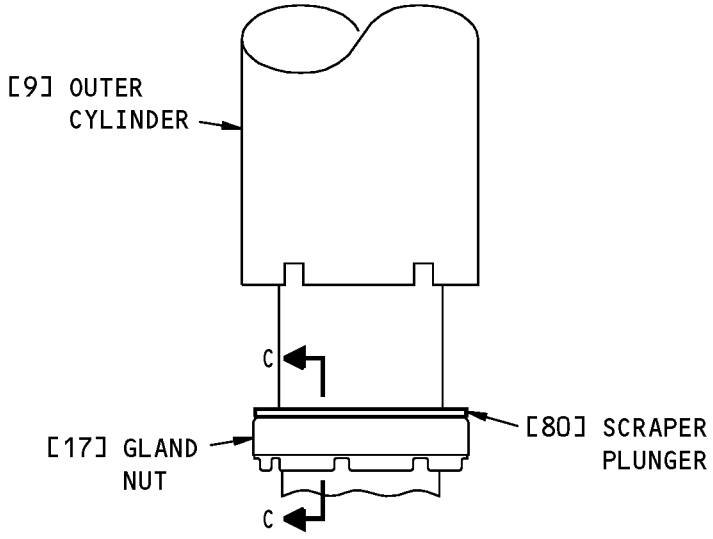


Removal of the Inner Cylinder from the Outer Cylinder
Figure 802 (Sheet 1 of 6)/32-21-11-990-802

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B

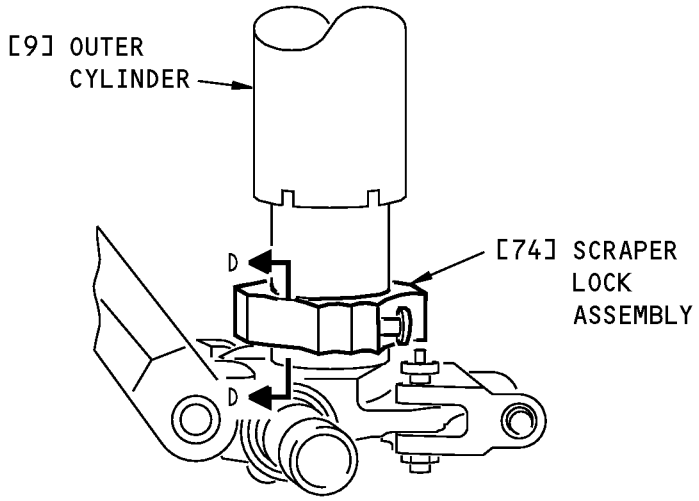


OPTIONAL – USE SCRAPER PLUNGER
TO REINSTALL SCRAPER RING [24]

C

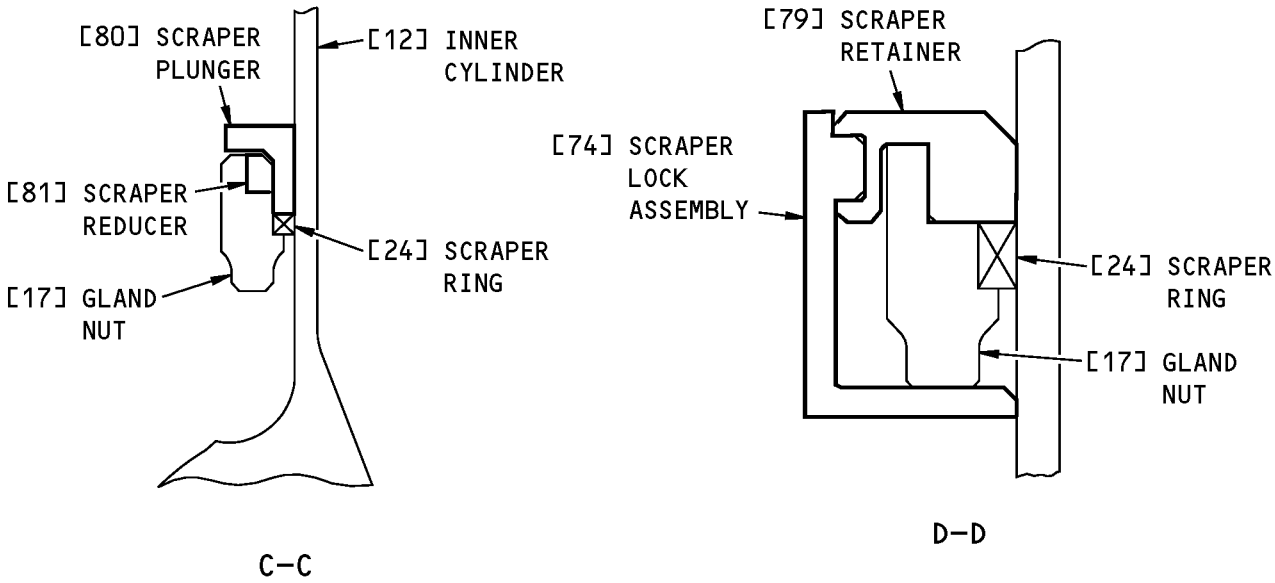
Removal of the Inner Cylinder from the Outer Cylinder
Figure 802 (Sheet 2 of 6)/32-21-11-990-802

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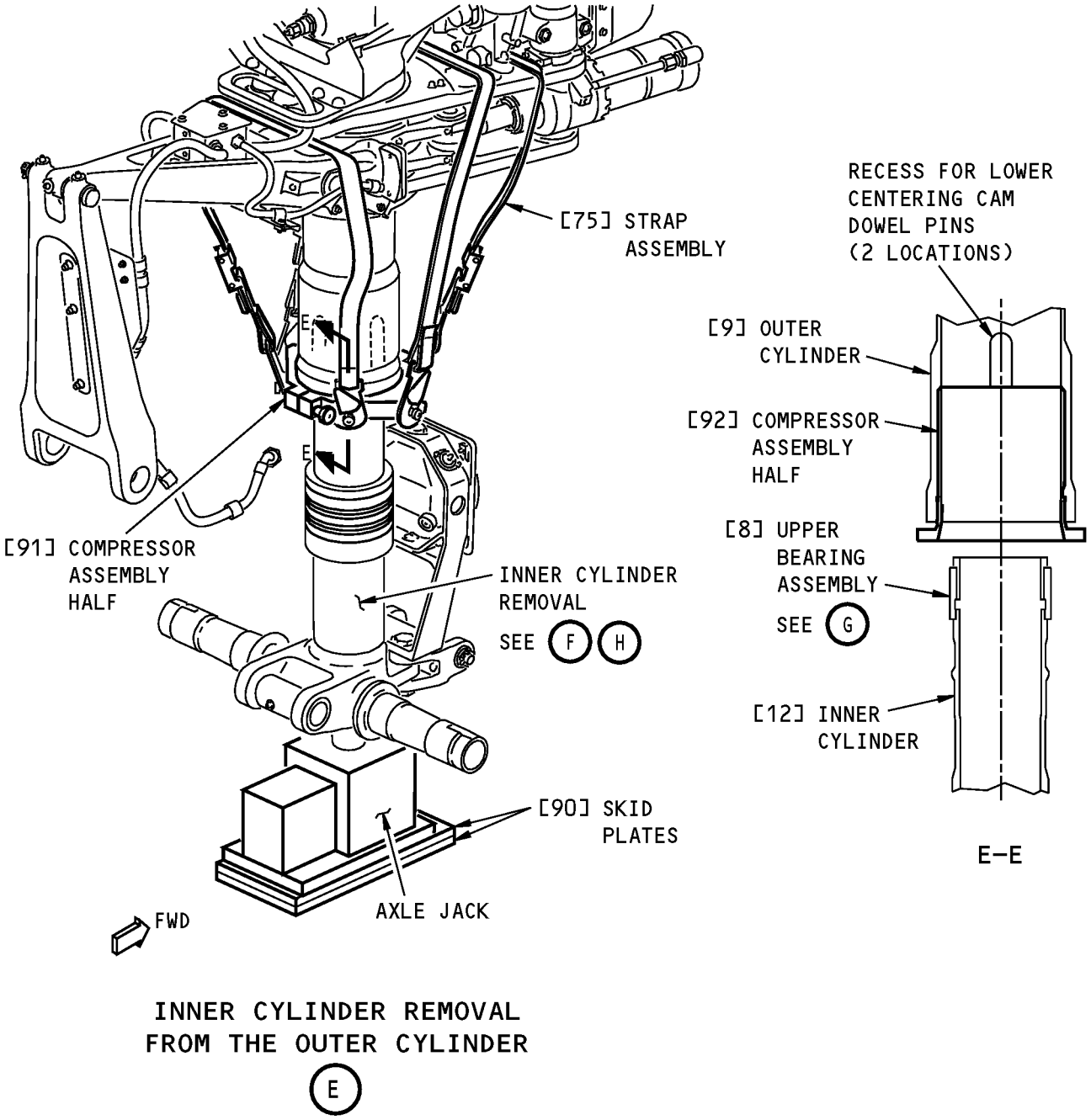
INSTALL THE GLAND NUT SCRAPER RING RETAINER

(D)



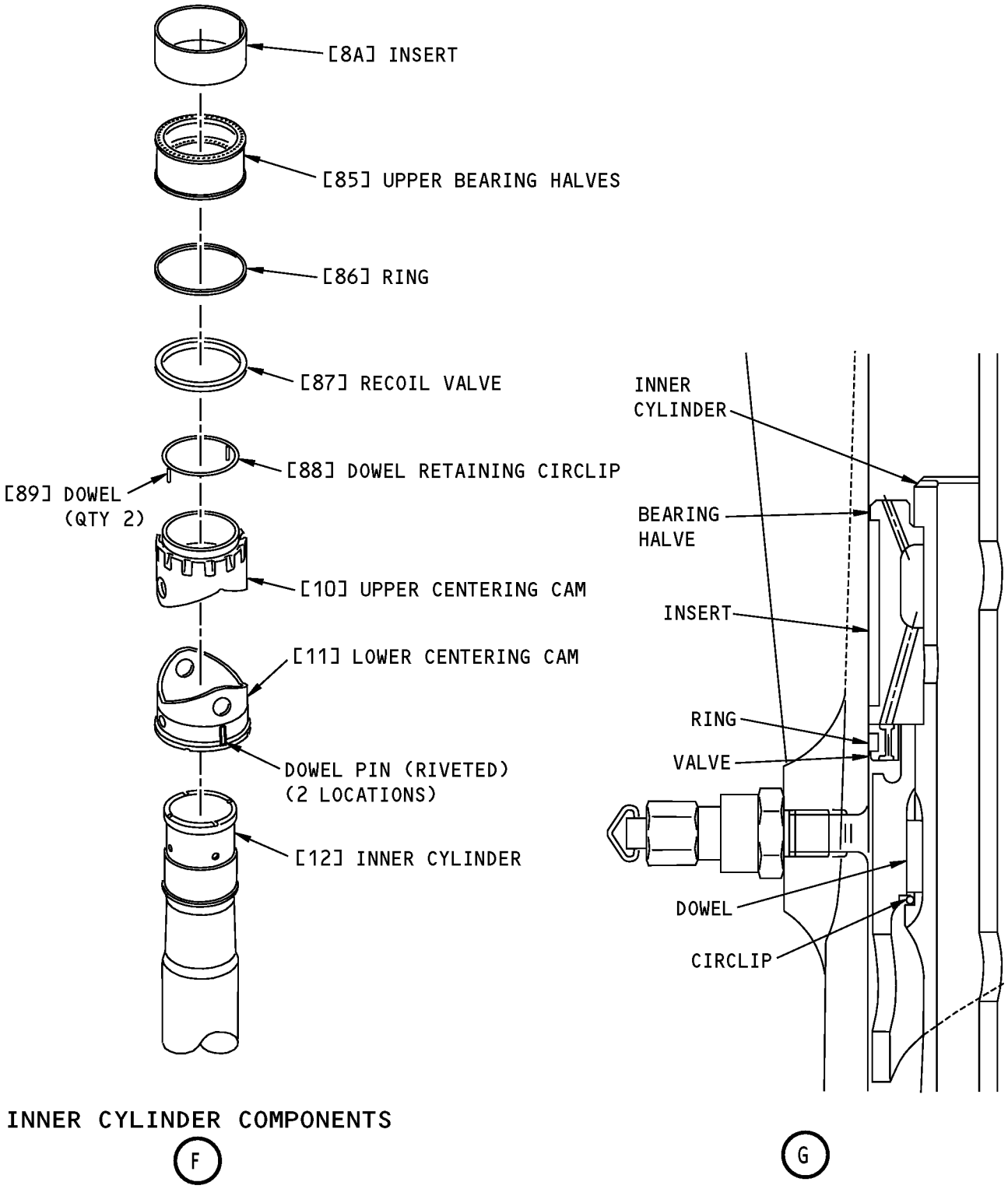
Removal of the Inner Cylinder from the Outer Cylinder
Figure 802 (Sheet 3 of 6)/32-21-11-990-802

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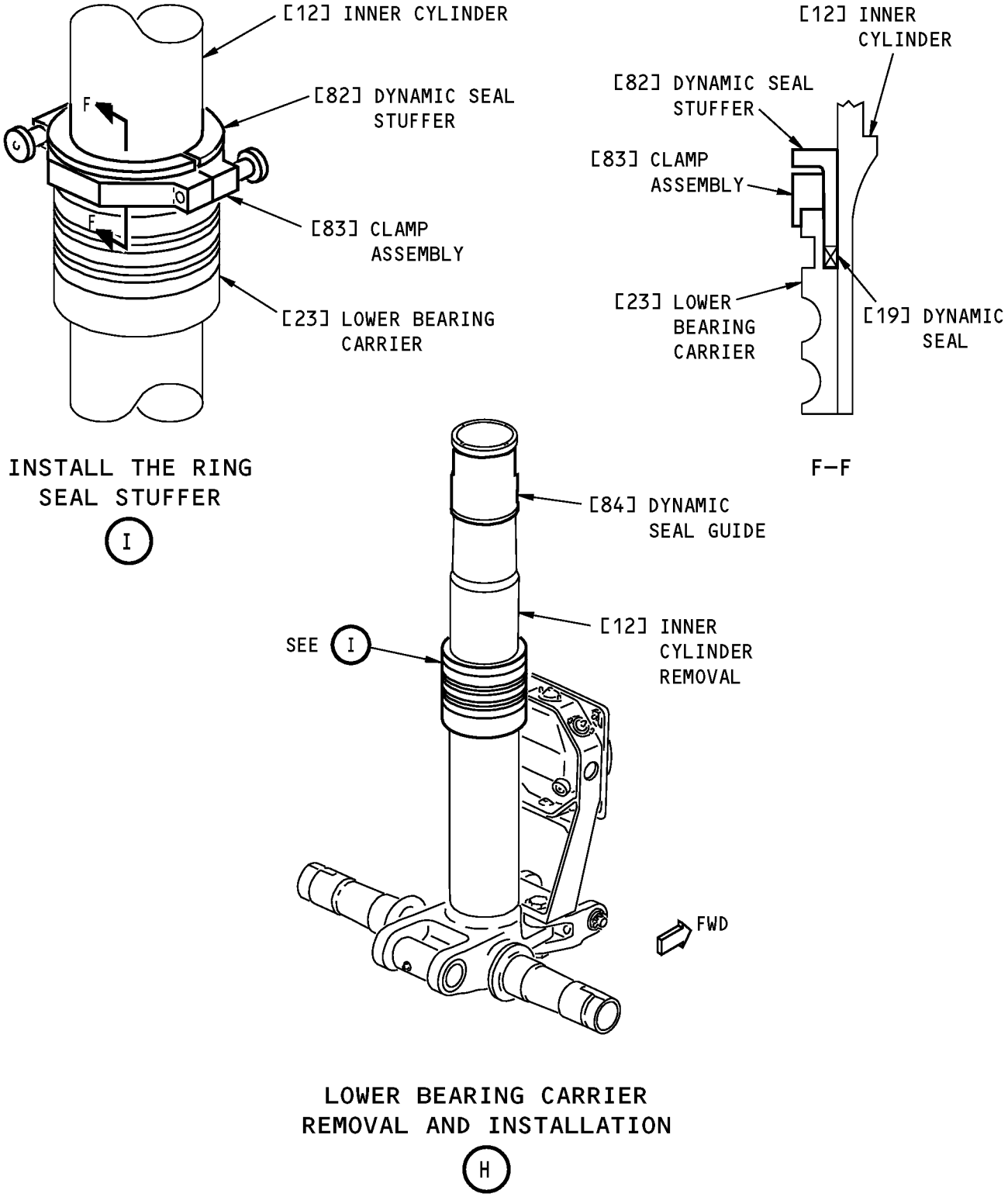
Removal of the Inner Cylinder from the Outer Cylinder
Figure 802 (Sheet 4 of 6)/32-21-11-990-802

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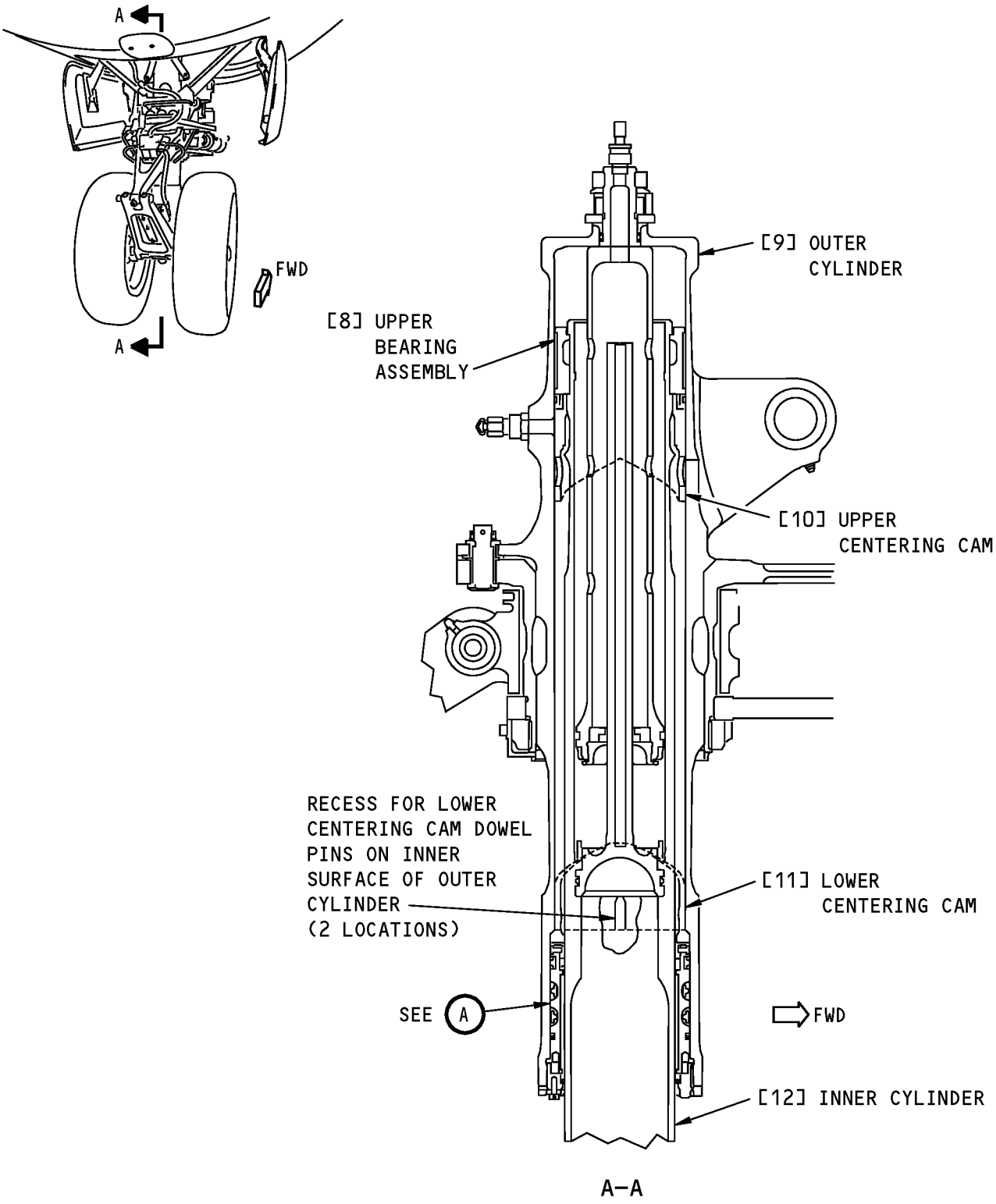
Removal of the Inner Cylinder from the Outer Cylinder
Figure 802 (Sheet 5 of 6)/32-21-11-990-802

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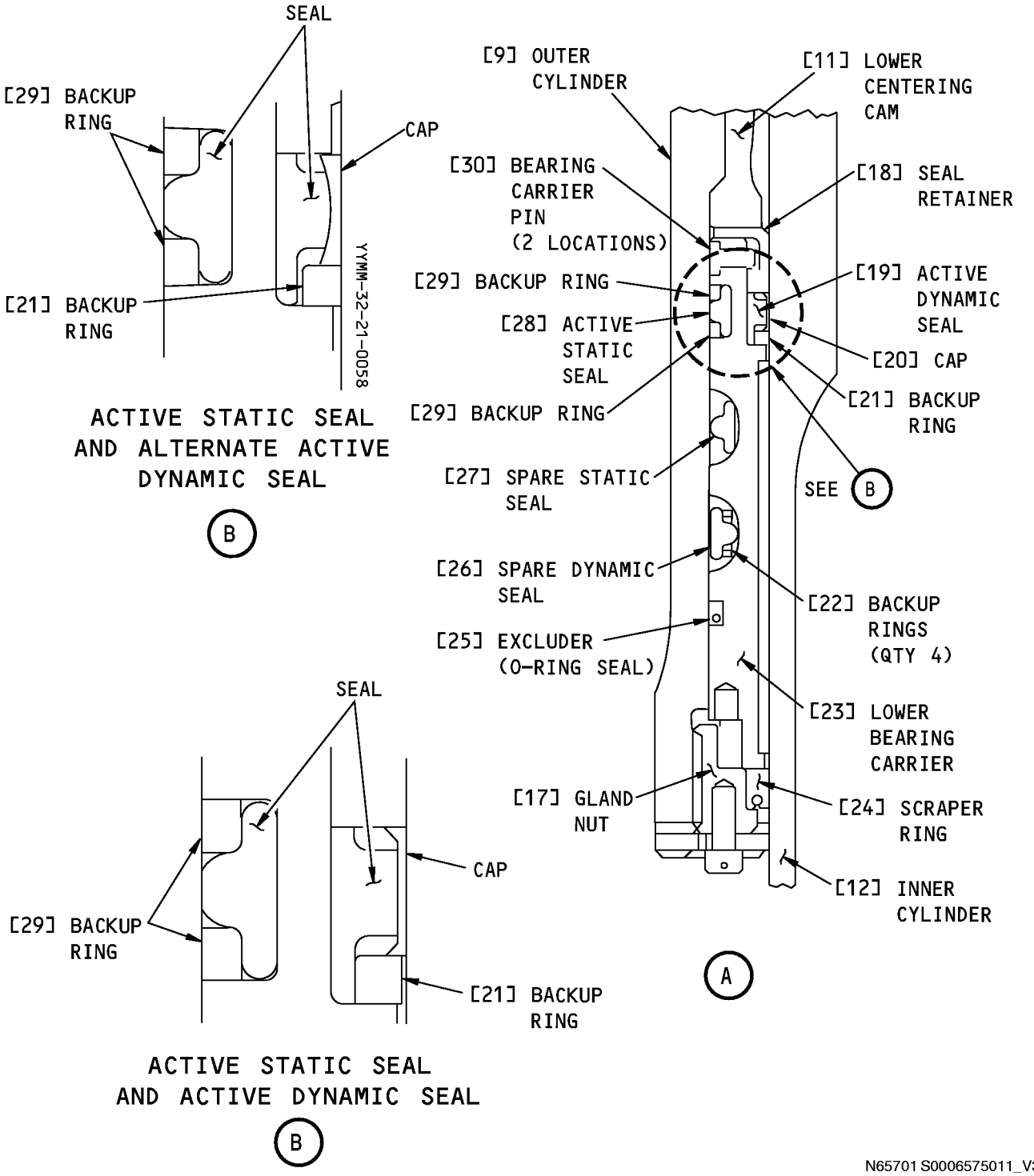
Removal of the Inner Cylinder from the Outer Cylinder
Figure 802 (Sheet 6 of 6)/32-21-11-990-802

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Lower Bearing Carrier Seal Replacement
Figure 803 (Sheet 1 of 2)/32-21-11-990-803

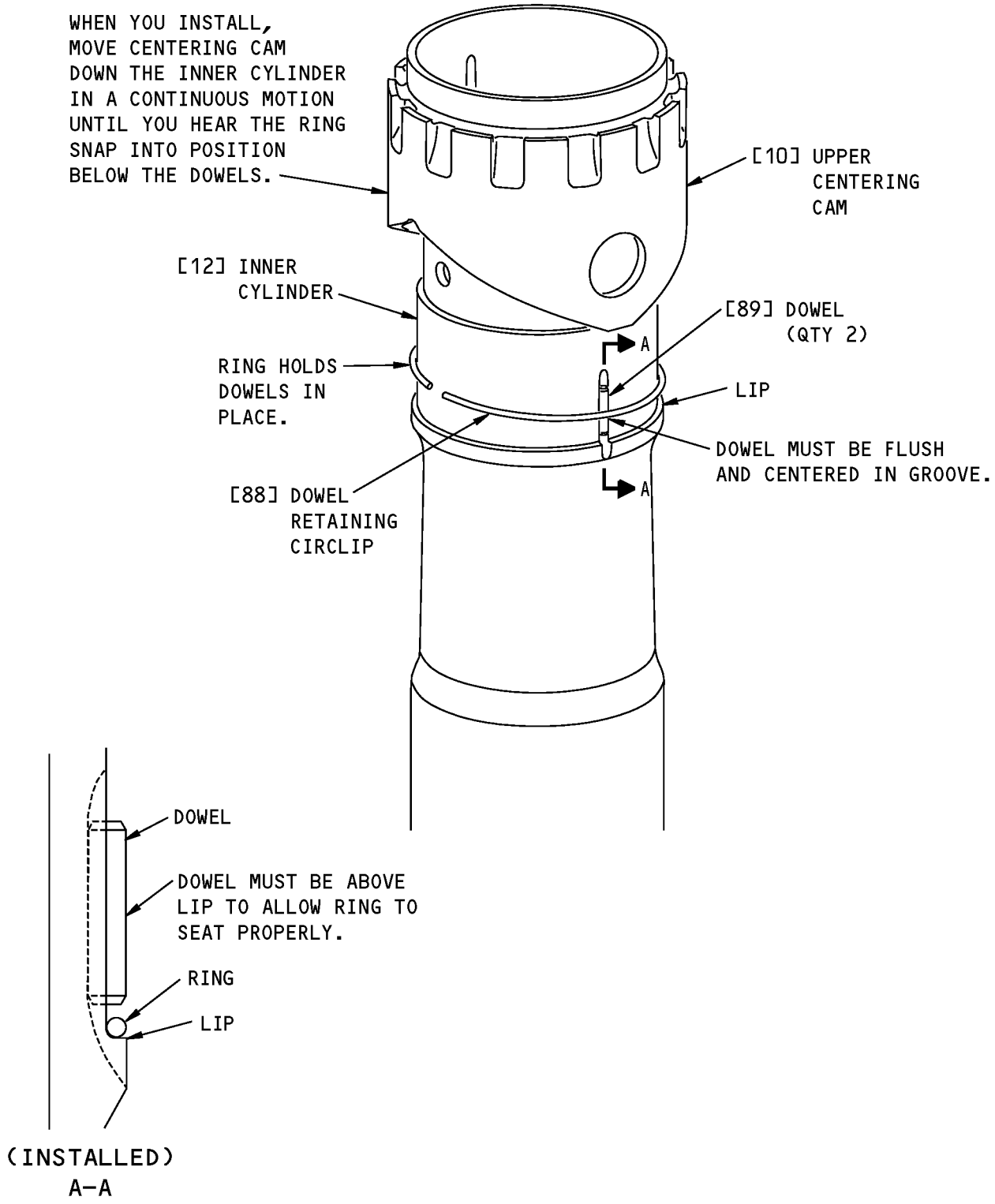
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N65701 S0006575011_V3

Lower Bearing Carrier Seal Replacement
Figure 803 (Sheet 2 of 2)/32-21-11-990-803

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Upper Centering Cam Replacement
Figure 804/32-21-11-990-804

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TASK 32-21-11-960-802

3. Replace the Active Seals and Spare Seals

(Figure 801, Figure 802, Figure 803, Figure 804)

A. General

(1) This task provides instructions to replace the active seals and the spare seals of the nose landing gear.

NOTE: To complete this task it is necessary to disassemble the inner cylinder from the outer cylinder.

(2) Use this procedure when there are no spare seals available on the lower bearing carrier to replace the active seals, and you will install a new 3-piece active dynamic seal.

B. References

Reference	Title
07-11-03-580-802	Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E (P/B 201)
07-11-06-580-803	Lower the Airplane Nose (P/B 201)
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
07-11-21-580-802	Lower the Airplane Nose Off of the Jack (P/B 201)
12-15-41-610-802	Nose Landing Gear Shock Strut Servicing (P/B 301)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-45-21-000-801	Nose Landing Gear Wheel and Tire Assembly Removal (P/B 401)
32-45-21-400-801	Nose Landing Gear Wheel and Tire Assembly Installation (P/B 401)
32-51-00-700-801	Nose Wheel Steering System Test (P/B 501)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1376	Plunger - Scraper (C32016-2 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1377	Reducer - Scraper (C32016-3 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1378	Retainer - Scraper (C32016-4 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1379	Assembly - Scraper Lock (C32016-5 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

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(Continued)

Reference	Description
SPL-1382	Guide - Dynamic Seal (C32016-9 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1383	Half - Compressor Assembly (C32016-10 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1384	Assembly - Thread Protector (C32016-11 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1385	Half - Thread Protector (C32016-21 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1829	Valve - Drain, Landing Gear Shock Strut Oil (Part #: J32060-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A32066-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1867	Wrench - Nose Landing Gear Oleo Gland Nut (Part #: C32025-7, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32025-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-3927	Assembly - Strap (751069-007 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-4047	Assembly - Seal Puller (C32016-6 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
STD-1110	Container - Hydraulic Fluid Resistant, 5 Gallon (19 Liters)

D. Consumable Materials

Reference	Description	Specification
A00226	Compound - Tamper-Proof Putty	BMS8-45
D00467	Fluid - Landing Gear Shock Strut	BMS3-32, Type II
D00589	Lubricant - Hydraulic Assembly - AFS-682	
D00633	Grease - Aircraft General Purpose	BMS3-33
D50022	Fluid - Landing Gear Shock Strut (Specifically For Preservation)	BMS3-32, Type I
G50136	Paste - Corrosion Inhibiting, Non-drying	BMS 3-38

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E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Cap assembly	32-21-00-01-025	HAP 001-013, 015-026, 028-030
		32-21-00-01A-050	HAP 031-054, 101-999
5	Cap assembly	32-21-00-01-025	HAP 001-013, 015-026, 028-030
		32-21-00-01A-050	HAP 031-054, 101-999
6	Valve	32-21-00-01-035	HAP 001-013, 015-026, 028-030
		32-21-00-01A-060	HAP 031-054, 101-999
7	Packing	32-21-00-01-030	HAP 001-013, 015-026, 028-030
		32-21-00-01A-055	HAP 031-054, 101-999
19	Active dynamic seal	32-21-00-01-225	HAP 001-013, 015-026, 028-030
		32-21-00-01A-225	HAP 031-054, 101-999
24	Scraper ring	32-21-00-01-195	HAP 001-013, 015-026, 028-030
		32-21-00-01A-195	HAP 031-054, 101-999
26	Spare dynamic seal	32-21-00-01-205	HAP 001-013, 015-026, 028-030
		32-21-00-01A-205	HAP 031-054, 101-999
27	Spare static seal	32-21-00-01-210	HAP 001-013, 015-026, 028-030
		32-21-00-01A-210	HAP 031-054, 101-999
28	Active static seal	32-21-00-01-215	HAP 001-013, 015-026, 028-030
		32-21-00-01A-215	HAP 031-054, 101-999
		32-21-00-01A-345	HAP 031-054, 101-999
		32-21-00-01A-350	HAP 031-054, 101-999

F. Location Zones

Zone	Area
711	Nose Landing Gear Door - Left

G. Prepare for the Replacement

SUBTASK 32-21-11-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-21-11-710-003

(2) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	14	C00123	EXT LIGHTING NOSE GEAR TAXI

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SUBTASK 32-21-11-860-002

(3) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-21-11-020-006

WARNING: CLEAR THE AREA BELOW THE NOSE BEFORE YOU DEFLATE THE SHOCK STRUT. IF YOU DEFLATE SHOCK STRUT, THE NOSE CAN MOVE DOWN AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(4) Deflate the shock strut [4] for the nose landing gear:

(a) Remove the cap [1] for the gas valve [2] which is on the top of the shock strut [4].

WARNING: DO NOT REMOVE THE VALVE BODY UNLESS YOU DEFLATE THE SHOCK STRUT FULLY. THE AIR PRESSURE CAN BLOW THE VALVE BODY OUT AND CAUSE INJURY TO PERSONS.

(b) Loosen the swivel nut [3] a maximum of two turns.

NOTE: Fluid in the shock strut [4] can have bubbles when you release the pressure. Deflate the shock strut slowly to prevent the leakage of the fluid through the gas valve [2].

(c) Loosen the swivel nut [3] fully when all of the pressure in the shock strut [4] is released.

SUBTASK 32-21-11-680-002

(5) Drain the hydraulic fluid from the shock strut [4]:

(a) Remove the cap [5] from the oil charging valve [6].

(b) Put a 5 gallon (19 liters) hydraulic fluid resistant container, STD-1110 in a position to catch the hydraulic fluid when the oil charging valve [6] is opened.

(c) Install the drain equipment on the oil charging valve [6]:

NOTE: The tool, landing gear shock strut drain valve, SPL-1829, could also be used, but it will take much longer to drain the shock strut.

1) Cut a length of plastic tubing, sufficiently long to reach the container on the floor.

2) Insert a small allen wrench in the end of the length of tubing, so that the long end of the allen wrench is flush with the end of the tube and the short end goes through the wall of the tube.

3) Install the tubing on the oil charging valve [6] so that the allen wrench goes into the check valve and holds it open to drain the hydraulic fluid.

(d) Remove the drain equipment when you have removed all of the hydraulic fluid.

SUBTASK 32-21-11-580-011

CAUTION: IF LIFTING THE NOSE OUTSIDE; IN WINDY CONDITIONS; OR IF OTHER MAINTENANCE IS BEING PERFORMED AT THE SAME TIME AS LIFTING THE AIRPLANE NOSE, YOU MAY WANT TO USE A TAIL SUPPORT TO STABILIZE THE AIRPLANE. DO NOT LIFT THE NOSE OF THE AIRPLANE MORE THAN 84 INCHES (2.13 METERS). THE AIRPLANE WILL NOT BE STABLE IF YOU LIFT THE NOSE MORE THAN 84 INCHES (2.13 METERS).

(6) Lift the nose of the airplane until the lower surface of the shock strut outer cylinder [9] is approximately 36 inches above the ground, do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

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SUBTASK 32-21-11-010-002

(7) Remove the wheels. do this task: Nose Landing Gear Wheel and Tire Assembly Removal, TASK 32-45-21-000-801.

SUBTASK 32-21-11-960-001

(8) Remove the taxi light lamp as follows:

(a) Remove the screws [53] and the retainer [54].

NOTE: Retain the hardware for reinstallation.

(b) Pull out the lamp [55].

(c) Examine the gaskets, [58] and [63], on the housing [57] and the retainer [54].

1) If a gasket is damaged, replace it, [58] or [63].

(d) Remove the screws [62], and the electrical wires [61] from the terminals [56] behind the lamp.

NOTE: Retain the hardware for reinstallation.

1) Remove all dirt and corrosion from the ends of the electrical wires.

SUBTASK 32-21-11-020-025

(9) Disconnect and remove the taxi light wiring harness assembly [50] from the taxi light housing [57] and lower torsion link [49] as follows:

(a) Remove the lockwire [64] from the wire harness backshell [60].

(b) Loosen the wire harness backshell [60] from the housing through-fitting [59] and pull the wire harness [50] wires from the taxi light housing [57].

(c) Remove the screw [46], washers [44 and 45], and the nut [43] to disconnect the clamp from the taxi light assembly.

NOTE: Disconnect the clamp with the electrical conduit attached.

(d) Remove the nut [47], and the washer [48] to disconnect the clamp from the inner cylinder [12].

NOTE: Disconnect the clamp with the electrical conduit attached.

SUBTASK 32-21-11-420-031

(10) Use a rope to hold the wire harness for the taxi light so that it is not in the way.

H. Disassemble the Strut Torsion Links and Install tooling.

SUBTASK 32-21-11-020-010

(1) Disconnect the lower torsion link [49] from the inner cylinder [12] as follows:

NOTE: Use a jack to hold the inner cylinder [12] in its position in the outer cylinder [9], (Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E, TASK 07-11-03-580-802) or when moving the inner cylinder out of or into the outer cylinder unless otherwise directed.

(a) Remove the pin [52], nut [51], and the washer [41] from the torsion link pin [42].

(b) Remove the torsion link pin [42] to disconnect the lower torsion link [49] from the inner cylinder [12].

(c) Supply a rope or other suitable tieback for the torsion links to hold them out of the work area.

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SUBTASK 32-21-11-020-029

WARNING: SHOCK STRUT FLUID MAY LEAK FROM THE GLAND NUT AREA WHEN THE GLAND NUT IS LOOSENED AND MOVED DOWN THE INNER CYLINDER. SHOCK STRUT FLUID MAY CAUSE HARM TO PERSONNEL. USE LINT FREE CLOTH PADS TO ABSORB LEAKAGE.

(2) Disconnect the gland nut [17] from the outer cylinder [9] as follows:

(a) Measure and write down, the dimension from the gland nut [17] lower surface to the outer cylinder [9] lower surface.

NOTE: This measurement will be used to make sure of the proper stackup of the lower bearing carrier components upon reinstallation in the outer cylinder.

(b) Remove the bolt [14], washer [15], and the lockplate [16] to release the gland nut [17].

(c) Wrap towels around the inner cylinder, one on top of the other, to absorb fluid when you slowly loosen the gland nut. Let the fluid drip from the towels into a bucket.

(d) Use the wrench, SPL-1867 to slowly loosen the gland nut [17] until the fluid begins to flow from the outer cylinder [9].

1) When the fluid flow stops, disconnect the gland nut from the outer cylinder [9].

(e) Hold the gland nut in its position against the outer cylinder after you have disconnected it from the outer cylinder.

SUBTASK 32-21-11-580-006

(3) Install the scraper retainer, SPL-1378 [79] and the scraper lock assembly, SPL-1379 [74] on the gland nut [17].

SUBTASK 32-21-11-480-006

(4) Install the scraper retainer, SPL-1378 [79] and the scraper lock assembly, SPL-1379 [74] on the gland nut [17] as follows.

NOTE: This will make sure the scraper ring [24] for the gland nut [17] does not come out of its groove.

(a) Install the scraper retainer, SPL-1378 [79] on the gland nut [17].

(b) Install the scraper lock assembly, SPL-1379 [74] to hold the scraper retainer, SPL-1378 [79] in its position on the gland nut [17].

SUBTASK 32-21-11-020-030

(5) Move the gland nut [17] down to the bottom of the inner cylinder [12].

NOTE: If the scraper ring [24] comes out of its groove, use the scraper plunger, SPL-1376 [80] and the scraper reducer, SPL-1377 [81] to install the scraper ring [24] back in its groove.

SUBTASK 32-21-11-020-031

(6) Move and lower the lower bearing carrier [23] as follows:

(a) Loosely install the seal puller assembly, SPL-4047 [73] around the inner cylinder [12].

(b) Push the seal puller assembly, SPL-4047 [73] up, such that it will install correctly at the bottom of the outer cylinder [9].

(c) Align the holes in the seal puller assembly, SPL-4047 [73] with the holes in the lower bearing carrier [23] for the puller screws [78].

(d) Install the carrier puller screws [52] to hold the seal puller assembly, SPL-4047 [73] to the lower bearing carrier [23].

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(e) Tighten the retainer screws on each side of the seal puller assembly, SPL-4047 [73].

(f) Use the jack to lift the inner cylinder until the Scraper Lock Assembly is approximately 6 inches below the Seal Puller Assembly.

(g) Install the strap assembly, SPL-3927 [75] around the axle and connect the ends to the shoulder bolts on each side of the seal puller assembly, SPL-4047 [73].

(h) Use the jack to lower the inner cylinder [12] until the lower bearing carrier [23] is completely out of the outer cylinder [9].

1) Do not lower more than necessary.

(i) Move the lower bearing carrier [23] by hand down on top of the gland nut.

NOTE: The seal retainer pins [30] may fall to ground during the movement of the lower bearing carrier down the inner cylinder.

(j) Remove the seal retainer pins [30], and retain for re-installation.

(k) Remove the inner cylinder from the outer cylinder:

WARNING: MAKE SURE A MINIMUM OF TWO PERSONS WILL HOLD THE INNER CYLINDER WHEN YOU DO THE SUBSEQUENT STEPS. THE INNER CYLINDER IS HEAVY. INJURY TO PERSONS OR DAMAGE TO THE EQUIPMENT CAN OCCUR IF THE INNER CYLINDER IS NOT HELD PROPERLY.

1) Use two people to lift the inner cylinder off of the jack.

2) Move the jack away from the area.

WARNING: KEEP THE CYLINDER UP RIGHT. THE INNER CYLINDER CONTAINS SHOCK STRUT FLUID WHICH MAY FLOW OUT. USE A CONTAINER TO CAPTURE ANY REMAINING FLUID. THE FLUID CAN CAUSE INJURY TO PERSONNEL OR EQUIPMENT.

3) Lower the inner cylinder out of the outer cylinder.

(l) Pour the remaining shock strut fluid into a suitable 5 gal (19 l) container.

NOTE: Total strut fluid is approximately 0.88 gal (3.3 l).

NOTE: Debris from normal operation sometimes accumulates in the shock strut fluid. If necessary, the inner cylinder may flushed with BMS 3-32, Type II fluid to ensure there is no debris upon reassembly.

(m) Move the inner cylinder, bearing carrier and gland nut to a suitable location for further disassembly.

NOTE: Two persons can transport the inner cylinder by holding the assembly by the axles and holding cylinder upright.

SUBTASK 32-21-11-840-003

(7) Use a plastic bag of suitable proportions to cover the open inner cylinder and outer cylinder when you are not directly working on them, to exclude the possibility of dirt or debris getting inside the cylinders.

I. Disassemble the Inner Cylinder Components.

SUBTASK 32-21-11-020-014

(1) Remove the upper bearing assembly [8] and the recoil valve assembly from the top of the inner cylinder [12]:

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(a) Remove the insert [8A] from the upper bearing halves [85].

NOTE: Pull the insert [8A] apart slightly and slide it up and off the upper bearing halves [85].

1) Inspect the insert [8A] for damage and excessive wear.

a) The insert [8A] thickness must be greater than or equal to 0.0895 in. (2.2733 mm).

b) Replace the insert [8A] if necessary.

(b) Remove the upper bearing halves [85] from the inner cylinder [12].

(c) Remove the recoil valve [87] and ring [86].

SUBTASK 32-21-11-020-015

(2) Remove the upper and lower centering cams [10] and [11] from the inner cylinder [12].

(a) Remove the dowel retaining circlip [88] and the dowels [89] from the inner cylinder [12].

SUBTASK 32-21-11-020-032

(3) Remove the lower bearing carrier [23] from the inner cylinder [12]:

(a) Use rubber mallet and lightly hit the bottom of the seal puller assembly, SPL-4047 [73] until the lower bearing carrier [23] can be pulled off at the top of the inner cylinder [12].

NOTE: The lower bearing carrier is coated with a dry lubricant film. The film may be worn and appear uneven, this is not cause for bearing carrier replacement.

(b) Remove the puller screw [78] to disconnect the seal puller assembly, SPL-4047 [73] from the lower bearing carrier [23].

(c) Remove the seal puller assembly, SPL-4047 [73] from the lower bearing carrier [23].

(d) Put the lower bearing carrier [23] on a table or bench.

1) Inspect the lower bearing insert for damage and excessive wear.

a) The lower bearing insert thickness must be greater than or equal to 0.0895 in. (2.273 mm).

b) Replace the lower bearing insert if necessary.

SUBTASK 32-21-11-020-033

(4) Remove the seal retainer [18]:

(a) Move the seal retainer [18] away from the lower bearing carrier [23] to get access to the active dynamic seal [19].

J. Replace the active dynamic seal, the active static seal, and the spare seals.

NOTE: Perform this task in a sheltered and clean environment. Make sure all fay surfaces of components have been cleaned and are free of debris before re-assembly.

NOTE: You may disassemble the lower bearing carrier components all at once to aid in cleaning of the lower bearing carrier before reassembly.

SUBTASK 32-21-11-900-007

(1) Install a new scraper ring [24] on the gland nut [17] if there is any sign of damage or wear on the old scraper ring:

NOTE: The scraper ring [24] prevents dirt and debris from entering the shock strut when the inner and outer cylinders compress.

(a) Remove the gland nut [17] from the inner cylinder [12].

(b) Remove the scraper retainer, SPL-1378 [79] and the scraper lock assembly, SPL-1379 [74] from the gland nut [17].

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(c) Remove the old scraper ring [24] from its groove on the gland nut [17].

(d) Install the new scraper ring [24] in its groove on the gland nut [17].

NOTE: Make sure you install the scraper ring [24] with the retainer spring opening down and solid face up.

SUBTASK 32-21-11-480-007

(2) Install the scraper retainer, SPL-1378 [79] and the scraper lock assembly, SPL-1379 [74] on the gland nut [17].

NOTE: This will make sure the new scraper ring [24] for the gland nut [17] does not come out of its groove.

(a) Install the scraper retainer, SPL-1378 [79] on the gland nut [17].

(b) Install the scraper lock assembly, SPL-1379 [74] to hold the scraper retainer, SPL-1378 [79] in its position on the gland nut [17].

SUBTASK 32-21-11-900-009

(3) Replace the excluder [25] on the lower bearing carrier [23] if there is a sign of damage or wear:

NOTE: The excluder [25] prevents dirt and debris from damaging the active static seal.

(a) Remove the excluder [25] from its groove in the lower bearing carrier [23].

(b) Install the new excluder [25] in its groove in the lower bearing carrier [23].

1) Put the excluder [25] in a sealed plastic bag and submerge the bag in hot water (not boiling) for 3-5 minutes.

2) Apply a thin layer of fluid, D50022 onto the excluder [25].

3) Put shock fluid, D50022 on the surface on which the excluder will move.

4) Position the excluder [25] evenly on the carrier with the spring facing down (toward the gland nut).

a) Zip ties can be used to help with this step.

5) Carefully slide the excluder [25] into position in it's carrier grove.

6) Make sure you move the seal evenly down the carrier and do not allow it to roll over.

7) Make sure the excluder stay in it's proper position until it reaches room temperature and has conformed to it's original shape.

a) A compression ring can be used to lightly hold the excluder [25] in it's place until it reaches room temperature.

SUBTASK 32-21-11-900-003

(4) Replace the active static seal (Figure 803):

NOTE: Make sure your hands are clean when you handle the elastomer seals. Some greases can cause the elastomer seals to swell too much. This can cause the seals to leak.

(a) Replace the backup rings [29] from the active static seal [28].

(b) Remove the active static seal [28] from its groove on the lower bearing carrier [23].

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CAUTION: DO NOT APPLY VASELINE OR PETROLATUM TO THE SEALS. THIS CAN CAUSE TOO MUCH SWELLING OF THE SEAL MATERIAL.

(c) You may apply a very thin layer of fluid, D00467 or AFS-682 lubricant, D00589 to the new active static seal [28] and the backup rings [29] to aid in keeping the rings in position during installation.

NOTE: Use very sparingly, the AFS-682 lubricant, D00589 will help keep the backup rings [29] in their positions. Use the minimum amount of AFS-682 lubricant, D00589 needed to retain the parts in position. Remove excess AFS-682 lubricant, D00589. The material is a very thick, sticky material and heavy amounts can cause the bearing carrier to be difficult to re-install. Use of excess AFS-682 lubricant, D00589 can cause problems with asembly of the components.

(d) Install the new active static seal [28] in its groove on the lower bearing carrier [23].

CAUTION: MAKE SURE THE RADIUSED EDGE OF THE BACKUP RING IS INSTALLED AGAINST THE SEAL. IF NOT INSTALLED WITH THE RADIUSED EDGE AGAINST THE SEAL, THE SEALS WILL LEAK AFTER ASSEMBLY.

(e) Install the first backup rings [29] on the active static seal [28] with the rounded edge of the backup rings [29] against the seal.

(f) Install the second backup rings [29] with the split in the opposite positions on the diameter of the lower bearing carrier [11] as of the split of the first backup rings [29] installed.

SUBTASK 32-21-11-900-004

(5) Replace the spare static seals [27]:

NOTE: Make sure your hands are clean when you handle the elastomer seals. Some greases can cause the elastomer seals to swell too much. This can cause the seals to leak.

(a) Install the new spare static seals [27] in its groove on the lower bearing carrier [23].

NOTE: The spare static seals [27] should be installed as shown in (Figure 803).

SUBTASK 32-21-11-900-005

CAUTION: MAKE SURE THAT THE BACKUP RING, THE CAP, AND THE SEAL STAY TOGETHER WHILE YOU INSTALL THE SEAL. IF THE BACKUP RING, THE CAP, AND THE SEAL MOVE APART, THEY WILL NOT INSTALL CORRECTLY. THIS CAN CAUSE DAMAGE TO THE SEAL, THE CAP, AND THE BACKUP RING.

(6) Replace the active dynamic seal [19]:

(a) Remove the cap [20], backup ring [21], and the active dynamic seal [19] from the inner groove on the lower bearing carrier [23].

CAUTION: DO NOT APPLY VASELINE OR PETROLATUM TO THE SEALS. THIS CAN CAUSE TOO MUCH SWELLING OF THE SEAL MATERIAL.

(b) You may apply a thin layer of fluid, D00467 or AFS-682 lubricant, D00589 to the active dynamic seal [19], cap [20], and the backup ring [21] to aid in keeping the backup rings in position during installation.

NOTE: Use very sparingly, the AFS-682 lubricant, D00589 will help keep the backup ring [21] in its position. Use the minimum amount of AFS-682 lubricant, D00589 needed to retain the parts in position. Remove excess AFS-682 lubricant, D00589. The material is a very thick, sticky material and heavy amounts can cause the bearing carrier to be difficult to re-install. Use of excess AFS-682 lubricant, D00589 can cause problems with assembly of the components.

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(c) Install the active dynamic seal [19], as shown in view B, (Figure 803), in its groove on the lower bearing carrier [23].

(d) Install the backup ring [21] of the new active dynamic seal [19] in the inner groove for the active dynamic seal.

(e) Make sure the backup ring radiused edge is towards the seal; and, the wide seal edge is pointed toward the bottom of the lower bearing carrier [23], as shown in view B, (Figure 803),

(f) Install the cap [20] of the new active dynamic seal [19] in inner groove for the active dynamic seal.

SUBTASK 32-21-11-900-008

(7) Replace the spare dynamic seal [26]:

(a) Install a spare dynamic seal [26] if there is no spare dynamic seal in the spare seal groove on the lower bearing carrier [23].

(b) Install the spare dynamic seal [26] and the backup rings [22] in the spare seal groove on the lower bearing carrier [23].

SUBTASK 32-21-11-420-021

(8) Install the seal retainer [18]:

(a) Put the seal retainer [18] in its position on the lower bearing carrier [23].

(b) Make sure the seal retainer [18] is flush to the lower bearing carrier [23] all around the circumference before installing the retention pins [30] in place.

NOTE: If the retainer is not flush, the active dynamic seal and backup rings may not be installed correctly.

(c) You may apply a thin layer of AFS-682 lubricant, D00589 to the seal retainer pins [30] to hold them in place while the lower bearing carrier is re-installed into the outer cylinder.

NOTE: The AFS-682 lubricant, D00589 will help keep the seal retainer pins [30] in position. Use the minimum amount of AFS-682 lubricant, D00589 needed to retain the pins. Remove excess AFS-682 lubricant, D00589. The material is a very thick, sticky material and heavy amounts can cause the bearing carrier to be difficult to re-install.

CAUTION: DO NOT FORCE THE RETENTION PINS [30] INTO PLACE. THE PINS SHOULD FIT FREELY. FORCING THE PINS INTO PLACE CAN CAUSE DAMAGE TO THE SEAL RETAINER [18].

(d) Install the bearing carrier seal retainer pins [30] to retain the seal retainer [18] to the lower bearing carrier [23].

NOTE: If the pins [30] are not free during installation, make sure the seal retainer [18] is flush to the bearing carrier, then reinsert the pins. If the seal retainer [18] is not flush, the active dynamic seal [19] may have not been installed correctly.

SUBTASK 32-21-11-840-002

WARNING: MAKE SURE A MINIMUM OF TWO PERSONS WILL HOLD THE INNER CYLINDER WHEN YOU DO THE SUBSEQUENT STEPS. THE INNER CYLINDER IS HEAVY. INJURY TO PERSONS OR DAMAGE TO THE EQUIPMENT CAN OCCUR IF THE INNER CYLINDER IS NOT HELD PROPERLY.

(9) Hold the inner cylinder [12] in a vertical position.

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SUBTASK 32-21-11-480-011

(10) Coat the dynamic seal guide, SPL-1382 [84] and the lower bearing carrier [23] with fluid, D00467.

SUBTASK 32-21-11-480-008

(11) Install the dynamic seal guide, SPL-1382 [84] at the top of the inner cylinder [12].

SUBTASK 32-21-11-420-022

(12) Install the lower bearing carrier [23]:

CAUTION: MAKE SURE THE BACKUP RINGS AND THE SEAL STAY TOGETHER AS YOU MOVE THE LOWER BEARING CARRIER. IF THE BACKUP RINGS AND THE SEAL MOVE APART THEY WILL NOT INSTALL CORRECTLY. THIS CAN CAUSE DAMAGE TO THE SEAL AND THE BACKUP RING.

(a) Put the lower bearing carrier [23] in its position for installation on the inner cylinder [12].

(b) Use a rubber mallet and lightly hit the top of the lower bearing carrier [23] until it passes the dynamic seal guide, SPL-1382 [84].

(c) Move the lower bearing carrier [23] down to the bottom of the inner cylinder [12].

SUBTASK 32-21-11-020-035

(13) Remove the dynamic seal guide, SPL-1382 [84] from the inner cylinder [12].

K. Assemble the Inner Cylinder Components.

SUBTASK 32-21-11-420-023

(1) Install the following items:

(a) Install the lower centering cam [11] on the inner cylinder [12].

NOTE: There are two dowel pins loosely attached to the lower centering cam. These dowel pins must be aligned with the recesses inside the outer cylinder when you assemble the inner and outer cylinder assemblies in the subsequent steps. Align the centering cam dowel pins with the strut axle, or the gland nut locktab recesses on the outer cylinder to align the pins to the pin recesses. The dowel pins are designed to be loosely held in place with 0.005 in. (0.13 mm) – 0.015 in. (0.38 mm) dowel movement after the rivet is in place.

(b) Put the upper centering cam dowels [89] in position on the inner cylinder [12] (Figure 804).

NOTE: Make sure each dowel is centered and flush in it's centering cam groove. The dowels should also be positioned above the lip, on the inner cylinder, to allow the circlip [88] to later move into it's installed position.

(c) Put the circlip [88] approximately mid-point on the dowels [89] to hold the dowels [89] in position on the inner cylinder [12].

(d) Install the upper centering cam [10] on the inner cylinder [12].

NOTE: Carefully push the circlip [88] down the dowels [89], with the upper centering cam [10], until the dowels are in place in the upper centering cam [10]. The circlip [88] will snap over the bottom of the dowels into the circlip groove, which retains the dowels up inside the upper centering cam [10].

(e) Install the upper bearing assembly [8] and the recoil valve [87] on the inner cylinder [12]:

1) Install the ring [86] on the recoil valve [87], if it was removed.

2) Install the recoil valve [87] and ring [86] on top of the upper centering cam [10].

3) Install the upper bearing halves [85] on the inner cylinder [12].

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(f) Install the insert [8A] on the upper bearing halves [85].

NOTE: Use hand pressure to make an overlap of $\frac{1}{4}$ in. (6.4 mm) to the insert [8A] to keep its round shape. This will keep the insert snug against the upper bearing carrier halves.

NOTE: Use the compressor assembly half, SPL-1383 [92] to hold the bearing closed during inner cylinder [12] installation.

SUBTASK 32-21-11-420-024

CAUTION: MAKE SURE YOU INSTALL THE COMPRESSOR ASSEMBLY [92], BEFORE ATTEMPTING TO INSTALL THE INNER CYLINDER. NOT INSTALLING THE TOOL CAN CAUSE DAMAGE TO THE THREADS OF THE OUTER CYLINDER AND/OR THE UPPER BEARING ASSEMBLY.

(2) Install the compressor assembly half, SPL-1383 [92]:

(a) Install the compressor assembly half, SPL-1383 [92], such that it fits at the bottom of the outer cylinder [9].

(b) Install the strap assembly, SPL-3927 [75] around the outer cylinder [9] and connect the ends to the shoulder bolts on the side of the compressor assembly half, SPL-1383 [92].

1) Tighten the strap assembly, SPL-3927 [75].

SUBTASK 32-21-11-420-014

CAUTION: DO NOT LIFT THE AIRPLANE WITH THE AXLE JACK. LIFTING THE AIRPLANE WITH THE AXLE JACK CAN CAUSE DAMAGE TO EQUIPMENT.

(3) Install the inner cylinder [12] in the outer cylinder [9]:

WARNING: MAKE SURE A MINIMUM OF TWO PERSONS WILL HOLD THE INNER CYLINDER WHEN YOU DO THE SUBSEQUENT STEPS. THE INNER CYLINDER IS HEAVY. INJURY TO PERSONS OR DAMAGE TO THE EQUIPMENT CAN OCCUR IF THE INNER CYLINDER IS NOT HELD PROPERLY.

CAUTION: BE CAREFUL NOT TO CAUSE DAMAGE TO THE INNER CYLINDER OR THE METERING PIN. DAMAGE TO THESE PARTS CAN CAUSE DAMAGE TO THE SEALS.

CAUTION: MAKE SURE THE DOWEL PINS ON THE LOWER CENTERING CAM ARE ALIGNED WITH THE RECESSES IN THE OUTER CYLINDER.

(a) Put the inner cylinder [12] in position to install in the outer cylinder [9].

NOTE: You can use the Centering Assembly C32016-35, or manually move the lower centering cam, to assist in aligning the lower centering cam dowel pins with the dowel pin recesses inside the outer cylinder. Align the dowel pins with the axle centerline or the gland nut tablock recesses on the outer cylinder.

(b) Manually lift the inner cylinder assembly [12], into the outer cylinder [9], until the top edge of the chrome surface of the inner cylinder [12] is level with the lower surface of the compressor assembly half, SPL-1383 [92].

NOTE: Use great care in installing the inner cylinder into the outer cylinder to keep from damaging the lower bearing carrier dowel pins which are loosely riveted to the carrier, and are easily caused to be detached from the carrier if acted upon with much force.

(c) Use a floor jack to hold the inner cylinder assembly [12] in position.

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SUBTASK 32-21-11-080-004

(4) Remove the compressor assembly half, SPL-1383 [92]:

(a) Remove the strap assembly, SPL-3927 [75] from the outer cylinder [9] and the compressor assembly half, SPL-1383 [92].

(b) Remove the compressor assembly half, SPL-1383 [92], from the outer cylinder [9].

SUBTASK 32-21-11-420-025

CAUTION: MAKE SURE THE DOWEL PINS ON THE LOWER CENTERING CAM ARE ALIGNED WITH THE RECESSES IN THE OUTER CYLINDER OR THE AXLE CENTERLINE. IF NOT ALIGNED DAMAGE TO THE DOWEL PINS AND/OR THE INNER CYLINDER MAY OCCUR.

(5) Carefully put the thread protector half, SPL-1385 [77] between the outer cylinder [9] and the inner cylinder [12].

NOTE: The thread protector will expand and press against the outer cylinder [9], this will protect the static seals from the gland nut threads on the outer cylinder [9].

SUBTASK 32-21-11-480-009

(6) Install the thread protector assembly, SPL-1384 [76]:

(a) Install the thread protector assembly, SPL-1384 [76], so that it fits at the bottom of the outer cylinder [9].

(b) Install the strap assembly, SPL-3927 [75] around the outer cylinder [9] and connect the ends to the shoulder bolts on the side of the thread protector assembly, SPL-1384 [76].

1) Tighten th strap assembly, SPL-3927 [75].

SUBTASK 32-21-11-480-010

(7) Install the seal puller assembly C32016-6 [73] around the inner cylinder to support the bearing carrier.

NOTE: You do not need to install the puller screws 2 places, as the inner cylinder will push on the puller assembly and the lower bearing carrier as the inner cylinder is pushed into place. The two plastic skid plates can be placed up right between the bearing carrier and the scraper lock assembly to provide extra height to move the bearing carrier up into the outer cylinder.

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SUBTASK 32-21-11-580-008

CAUTION: MAKE SURE THE DOWEL PINS ON THE LOWER CENTERING CAM ARE ALIGNED WITH THE RECESSES IN THE OUTER CYLINDER BEFORE LIFTING THE INNER CYLINDER.

(8) Use two people to lift the inner cylinder assembly until you feel the dowels of the lower centering cam engage the groves in the outer cylinder.

NOTE: If needed, with the lower centering cam dowel pins engaged in their recesses, use a jack to push on and fully seat the lower bearing carrier in the outer cylinder.

NOTE: Make sure the static seals and backup rings stay in their positions as the lower bearing carrier [11] is installed. You may apply a thin layer of fluid, D00467 or AFS-682 lubricant, D00589 to the active dynamic seal [19], cap [20], and the backup ring [21] to aid in keeping the backup rings in position during installation. Use very sparingly, the AFS-682 lubricant, D00589 will help keep the backup ring [21] in its position. Use the minimum amount of AFS-682 lubricant, D00589 needed to retain the parts in position. Remove excess AFS-682 lubricant, D00589. The material is a very thick, sticky material and heavy amounts can cause the bearing carrier to be difficult to re-install. Use of excess AFS-682 lubricant, D00589 can cause problems with assembly of the components.

NOTE: The dowels are engaged when the lower surface of the lower bearing carrier is aligned with the upper surface of the slots on the outer cylinder. If not aligned, damage to the dowels, inner cylinder, seals or outer cylinder may occur.

CAUTION: DO NOT ALLOW THE INNER CYLINDER TO LOWER BACK DOWN, WITHOUT THE THREAD PROTECTOR INSTALLED. DAMAGE TO THE SEALS MAY OCCUR.

(a) Remove the thread protector [76] when the lower surface of the bearing carrier [23], is aligned with the lower surface of the thread protector [76].

NOTE: As you lift the inner cylinder, adjust the supporting jack to stay within $\frac{1}{2}$ in. (13 mm) of the inner cylinder.

SUBTASK 32-21-11-020-019

(9) Remove the puller assembly and skid plates.

SUBTASK 32-21-11-020-020

(10) Remove the scraper retainer, SPL-1378 [79], and the scraper lock assembly, SPL-1379 from the gland nut [17].

SUBTASK 32-21-11-640-002

WARNING: DO NOT GET THE CORROSION-INHIBITING COMPOUND ON YOUR SKIN, IN YOUR EYES, OR ON YOUR CLOTHES. THE COMPOUND IS POISONOUS AND FLAMMABLE. USE APPROVED GLOVES, AND EYE PROTECTION. MAKE SURE THAT THERE IS GOOD AIRFLOW IN THE WORK AREA. KEEP THE COMPOUND AWAY FROM SPARKS AND FLAMES. THE COMPOUND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(11) Apply a liberal amount of corrosion inhibiting non-drying paste, G50136 to the threads of the gland nut [17] and to the threads of the outer cylinder [9].

SUBTASK 32-21-11-420-015

(12) Install the gland nut [17]:

(a) Move the gland nut [17] up on the inner cylinder [12] and engage the threads to the outer cylinder [9].

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(b) Use the wrench, SPL-1867 for the gland nut [17] to tighten the gland nut [17] to 100 ft-lb (136 N·m) – 125 ft-lb (169 N·m).

SUBTASK 32-21-11-420-016

(13) Install the locktab [16] for the gland nut [17] (Figure 803):

(a) Apply a thin layer of grease, D00633 to the shank and threads of bolt [14] and washer [15].

(b) Install the locktab [16] in the holes which will put the tab of the locktab [16] as close as possible to a slot in the gland nut [17].

NOTE: If it is necessary, loosen the gland nut [17] slightly to align the slot in the gland nut [17] with the locktab [16].

(c) Install the bolt [14] and washer [15].

(d) Tighten the bolt [14].

(e) Install lockwire on the bolt [14].

SUBTASK 32-21-11-420-032

(14) Install components removed for access.

SUBTASK 32-21-11-420-026

(15) Connect the lower torsion link [49] to the inner cylinder [12]:

(a) Apply a thin layer of the corrosion inhibiting non-drying paste, G50136, to these items:

1) The threads and thread reliefs of the torsion link pin [42]

2) The threads of the nut [51]

3) The faces of the washer [41]

4) The mating surfaces of the upper torsion link [42].

(b) Remove all unwanted corrosion preventive corrosion inhibiting non-drying paste, G50136.

(c) Put the lower torsion link [49] in its position on the inner cylinder assembly [12].

(d) Put the torsion link pin [42] through the lower torsion link [49] and the inner cylinder assembly [12].

(e) Install the washer [41], and the nut [51] on the torsion link pin [42].

(f) Tighten the nut [51] to 250 in-lb (28 N·m) – 300 in-lb (34 N·m) more than the run-on torque.

(g) If it is necessary, loosen the nut [51] to the nearest castellation to align the holes for the cotter pin [52].

1) If there is no clearance, loosen the nut [51] to one more castellation and check again.

(h) Install the pin [52] in the torsion link pin [42].

SUBTASK 32-21-11-980-002

CAUTION: DO NOT LIFT THE AIRPLANE NOSE OFF THE AIRPLANE NOSE JACK WHEN MOVING THE INNER CYLINDER TO THE FULLY COMPRESSED POSITION. STOP MOVING THE INNER CYLINDER IF ANY RESISTANCE IS FELT. DAMAGE TO EQUIPMENT CAN RESULT.

(16) If not fully compressed, use a jack to move the inner cylinder [12] from the fully extended to the fully compressed position.

NOTE: There is a total travel is 15.50 in. (39.4 cm) for a fully compressed strut.

SUBTASK 32-21-11-080-007

(17) Lower and remove the axle jack, do this task: Lower the Airplane Nose, TASK 07-11-06-580-803.

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SUBTASK 32-21-11-020-040

(18) Install and connect the taxi light wiring harness assembly [50] to the lower torsion link [49] and taxi light housing [57] as follows:

(a) Install the clamp to the inner cylinder using the nut [47], and the washer [48].

(b) Install the clamp to the taxi light housing [57] using the screw [46], washers [44 and 45], and the nut [43].

(c) Pull the wire harness [50] wires through the taxi light housing [57].

(d) Attach the wire harness backshell [60] to the housing through-fitting [59].

(e) Install the lockwire [64] from the wire harness backshell [60] to the head of the clamp screw [46].

SUBTASK 32-21-11-960-002

(19) Install the taxi light lamp as follows:

(a) Examine the gaskets, [58] and [63], on the housing [57] and the retainer [54].

1) If a gasket is damaged, replace it, [58] or [63].

2) Remove all dirt and corrosion from the ends of the electrical wires.

(b) Connect the electrical wires [61] to the lamp [55] using screws [62].

(c) Align the retainer [54] and lamp [55] against the housing.

CAUTION: IF THE RETAINER AND LAMP ARE NOT ALIGNED CORRECTLY, THE LAMP WILL BREAK WHEN YOU TIGHTEN THE SCREWS ON THE RETAINER.

(d) Install the screws [53].

SUBTASK 32-21-11-410-002

(20) Install the wheels. do this task: Nose Landing Gear Wheel and Tire Assembly Installation, TASK 32-45-21-400-801.

SUBTASK 32-21-11-080-006

(21) Lower the airplane nose and remove the jacks, do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

SUBTASK 32-21-11-420-017

(22) If removed, install the oil charging valve [6]:

(a) Remove and discard the old packing [7].

(b) Apply a thin layer of fluid, D00467 on the new packing [7].

(c) Install the new packing [7] on the oil charging valve [6].

(d) Install the oil charging valve [6] and tighten it to 22-25 pound-feet (30-34 Newton-meters).

(e) Install the cap assembly [5] loosely.

NOTE: You will tighten it in the shock strut servicing task.

(f) Apply compound, A00226 to the oil charging valve [6].

NOTE: Apply it to make sure the seal made by the compound, A00226 must break if the valve [6] becomes loose.

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SUBTASK 32-21-11-710-004

(23) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	14	C00123	EXT LIGHTING NOSE GEAR TAXI

SUBTASK 32-21-11-600-002

(24) Do this task: Nose Landing Gear Shock Strut Servicing, TASK 12-15-41-610-802.

SUBTASK 32-21-11-420-020

(25) Make sure the swivel nut [3] is tightened to 5 ft-lb (7 N·m) – 7 ft-lb (9 N·m) and the cap assembly [1] is installed for the gas valve [2].

SUBTASK 32-21-11-710-005

(26) Do the following paragraphs of this task, do this task: Nose Wheel Steering System Test, TASK 32-51-00-700-801

to perform a test of the taxi light on the nose gear.

(a) Do the paragraph, "General";

(b) Do the paragraph, "Prepare to Test the Steering System of the Nose Wheel";

(c) Do the paragraph, "Do the Centering Test";

(d) Do the paragraph, "Put the Airplane in its Usual Condition".

———————— END OF TASK ————————

TASK 32-21-11-200-801

4. Nose Landing Gear Shock Strut Seal Leakage Check

(Figure 801, Figure 802, Figure 803)

A. General

(1) This task gives the instructions to make sure a shock strut is serviceable when you find fluid leakage on the inner cylinder.

NOTE: During the initial landing cycles of a new landing gear it is usual to have hydraulic fluid streaks on the shock strut. These streaks are caused by hydraulic fluid applied to the shock strut seals during seal installation and will stop after more landing cycles occur. These streaks are different from the actual continuous drips that are the indication of shock strut seal leakage.

B. References

Reference	Title
05-51-01-210-801	Phase I Inspection (P/B 201)
07-11-21-580-802	Lower the Airplane Nose Off of the Jack (P/B 201)
09-11-00-580-801	Towing (P/B 201)
12-15-41-610-801	Nose Landing Gear Shock Strut Fluid Check (P/B 301)
12-21-21-640-802	Nose Landing Gear Lower End Components Servicing (P/B 301)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

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C. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
711	Nose Landing Gear Door - Left

D. Shock Strut Seal Leak Inspection

NOTE: If the inspection finds a fault on the scraper ring you must replace the damaged scraper ring.

NOTE: The inner cylinder must be removed from the outer cylinder shock strut to replace the scraper ring.

SUBTASK 32-21-11-480-004

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-21-11-210-001

(2) Inspect the shock struts for leakage.

SUBTASK 32-21-11-210-002

(3) If you find leakage of the shock strut fluid on the inner cylinder, do the steps that follow to make sure the shock strut is serviceable:

(a) Check for leaks for 5 minutes:

1) Wipe the surface of the inner cylinder with a clean cloth to remove all of the fluid from the leak.

2) Monitor the inner cylinder where it touches the outer cylinder for 5 minutes.

NOTE: Make sure the extension of the inner cylinder does not change during this time.

3) Make a record of the location and the number of drops which come from the seals during the 5 minutes.

(b) Tow the airplane to cause movement between the inner cylinder and the outer cylinder, do this task: Towing, TASK 09-11-00-580-801.

NOTE: The minimum distance the airplane must be moved is two airplane lengths.

(c) Check for leaks for 5 minutes:

1) Wipe the surface of the inner cylinder with a clean cloth to remove all of the fluid from the leak.

2) Monitor the inner cylinder where it touches the outer cylinder for 5 minutes.

NOTE: Make sure the extension of the inner cylinder does not change during this time.

3) Make a record of the location and the number of drops which come from the seals during the 5 minutes.

(d) Calculate the average of the number of drops which came from the seals during both of the 5 minute measurements.

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SUBTASK 32-21-11-210-003

(4) If the leakage stopped, do the steps that follow:

(a) Continue to monitor the strut for leakage on subsequent landings.

1) If you see more signs of leakage, do the entire leak check procedure again.

NOTE: If you find a continuous leakage flow on subsequent landings the shock strut is not serviceable.

CAUTION: A DEFLATED OR FLAT STRUT CAN CAUSE DAMAGE DURING LANDING. IF THE AIRPLANE LANDED WITH A DEFLATED OR FLAT STRUT, DO THE HARD LANDING INSPECTION AS GIVEN IN AMM 05-51-01/201 TO MAKE SURE THERE IS NO DAMAGE.

(b) If you do not find leakage on subsequent landings, examine the fluid level of the shock strut within 3 days or 10 flight cycles, (Nose Landing Gear Shock Strut Fluid Check, TASK 12-15-41-610-801).

NOTE: If the leakage has stopped, there is no addition action necessary.

1) If the shock strut has low pressure or is deflated, do this task: Phase I Inspection, TASK 05-51-01-210-801.

SUBTASK 32-21-11-210-004

(5) If there was leakage but the average was less than 20 drops during the two 5 minute periods, do the steps that follow:

NOTE: 20 drops is equal to 1.0 cc.

(a) Continue to monitor the strut for leakage on subsequent landings until you replace the seals.

1) If the leakage continues or increases, do the entire seal leak check procedure again.

CAUTION: A DEFLATED OR FLAT STRUT CAN CAUSE DAMAGE DURING LANDING. IF THE AIRPLANE LANDED WITH A DEFLATED OR FLAT STRUT, DO THE HARD LANDING INSPECTION AS GIVEN IN AMM 05-51-01/201 TO MAKE SURE THERE IS NO DAMAGE.

(b) If you do not find leakage on subsequent landings, examine the fluid level of the shock strut within 3 days or 10 flight cycles, (Nose Landing Gear Shock Strut Fluid Check, TASK 12-15-41-610-801).

1) If the shock strut has low pressure or is deflated, do this task: Phase I Inspection, TASK 05-51-01-210-801.

(c) Continue to monitor the fluid level of the shock strut at no more than 3 day or 10 flight cycle intervals, until you replace the seals, (Nose Landing Gear Shock Strut Fluid Check, TASK 12-15-41-610-801).

SUBTASK 32-21-11-210-005

(6) If the average leakage was more than 20 drops during the two 5 minute periods, but was not continuous, do the steps that follow:

NOTE: 20 drops is equal to 1.0 cc.

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CAUTION: A DEFLATED OR FLAT STRUT CAN CAUSE DAMAGE DURING LANDING. IF THE AIRPLANE LANDED WITH A DEFLATED OR FLAT STRUT, DO THE HARD LANDING INSPECTION AS GIVEN IN AMM 05-51-01/201 TO MAKE SURE THERE IS NO DAMAGE.

(a) Do this task: Nose Landing Gear Shock Strut Fluid Check, TASK 12-15-41-610-801.

1) If the shock strut has low pressure or is deflated, do this task: Phase I Inspection, TASK 05-51-01-210-801.

(b) Continue to monitor the fluid level of the shock strut after each flight until you replace the seals.

SUBTASK 32-21-11-210-006

(7) If the fluid leaked continuously during the 5 minute period, the shock strut is not serviceable and you must replace the shock strut seals.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 32-21-11-580-009

(1) Do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

SUBTASK 32-21-11-640-003

(2) Apply the lubricant to the lubrication fittings on the upper torsion link [13] and the collar assembly, do this task: Nose Landing Gear Lower End Components Servicing, TASK 12-21-21-640-802.

END OF TASK

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NOSE LANDING GEAR TOW FITTING - REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks. The first task removes the tow fitting from the nose landing gear. The second task installs the tow fitting on the nose landing gear.

TASK 32-21-14-000-801

2. Nose Landing Gear Tow Fitting Removal

A. References

Reference	Title
32-00-01 P/B 201	LANDING GEAR DOWNLOCK PINS - MAINTENANCE PRACTICES

B. Location Zones

Zone	Area
713	Nose Landing Gear

C. General

SUBTASK 32-21-14-020-001

(1) This procedure supplies instructions to remove the tow fitting (fitting assembly [1]).

D. Prepare for the Removal of the Tow Fitting

SUBTASK 32-21-14-480-001

WARNING: MAKE CERTAIN LANDING GEAR DOWNLOCK PINS ARE INSTALLED TO PREVENT INADVERTENT RETRACTION OF LANDING GEAR, WITH POSSIBLE INJURY TO PERSONNEL.

(1) Make sure the downlocks are installed on the nose and main landing gear LANDING GEAR DOWNLOCK PINS - MAINTENANCE PRACTICES, PAGEBLOCK 32-00-01/201

E. Nose Gear Tow Fitting Removal

SUBTASK 32-21-14-020-002

(1) Remove these parts:

(a) The pins [8]

(b) The nuts [9]

(c) The washers [10]

(d) The bolts [3] and the washers [4].

SUBTASK 32-21-14-020-003

(2) If removal of the tow fitting bolt is necessary, remove these parts:

(a) The pin [7]

(b) The nut [6]

(c) The washer [5]

(d) The bolt [1] and the washer [2].

SUBTASK 32-21-14-020-004

(3) Remove the tow fitting assembly [11] from the inner cylinder assembly.

END OF TASK

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TASK 32-21-14-400-801

3. Nose Landing Gear Tow Fitting Installation

A. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00013	Grease - Aircraft And Instrument Grease	MIL-PRF-23827 (NATO G-354) (Supersedes MIL-G-23827)
D00633	Grease - Aircraft General Purpose	BMS3-33

B. Location Zones

Zone	Area
713	Nose Landing Gear

C. General

SUBTASK 32-21-14-400-001

(1) This procedure supplies instructions to install the tow fitting (fitting assembly [11]) and tow fitting bolt.

D. Nose Gear Tow Fitting and Tow Fitting Bolt Installation

SUBTASK 32-21-14-916-001

(1) If the tow fitting bolt [1] installation is necessary, do these steps:

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(a) Apply a thin coat of compound, C00913 to the shank of the unplated bolt, bolt threads and thread reliefs of the bolt [1], and to the faces of the washers [2] and [5] prior to installation. Wipe off the excess.

(b) Insert the tow fitting bolt [1] into the washer [2] and then into the tow fitting assembly [11].

(c) Install the washer [5] and the nut [6] to connect the tow fitting bolt [1] to the tow fitting assembly [11].

(d) Tighten the nut to 160-190 pound-inches above run-on torque and back off to align the nearest castellation.

(e) Install the pin [7].

(f) Lubricate the two lube fittings [12] with grease, D00633, or alternate grease, D00013.

SUBTASK 32-21-14-916-002

(2) Do the steps that follow to install the tow fitting assembly [11] on the inner cylinder assembly:

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WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(a) Apply a thin coat of compound, C00913 to the shank of the unplated bolts [3], the bolt threads and bolt reliefs, and to the faces of the washers [4] and [10] prior to installation. Wipe off the excess compound, C00913.

(b) Hold the fitting assembly [11] in position.

(c) Install the bolts [3] into the washers [4] and then into the tow fitting assembly [11].

(d) Install the washers [10], the nuts [9] to the bolts [3].

(e) If you installed castellated nuts [9], do these steps:

1) Tighten the nut [9] to within the torque range of 250-300 inch-pounds above the run-on torque.

2) Back-off the nut [9] to the nearest castellation.

3) Make sure the gap, under the bolt head [3], is 0.001-0.015 inchs.

NOTE: Back-off nut to next castellation until gap is met.

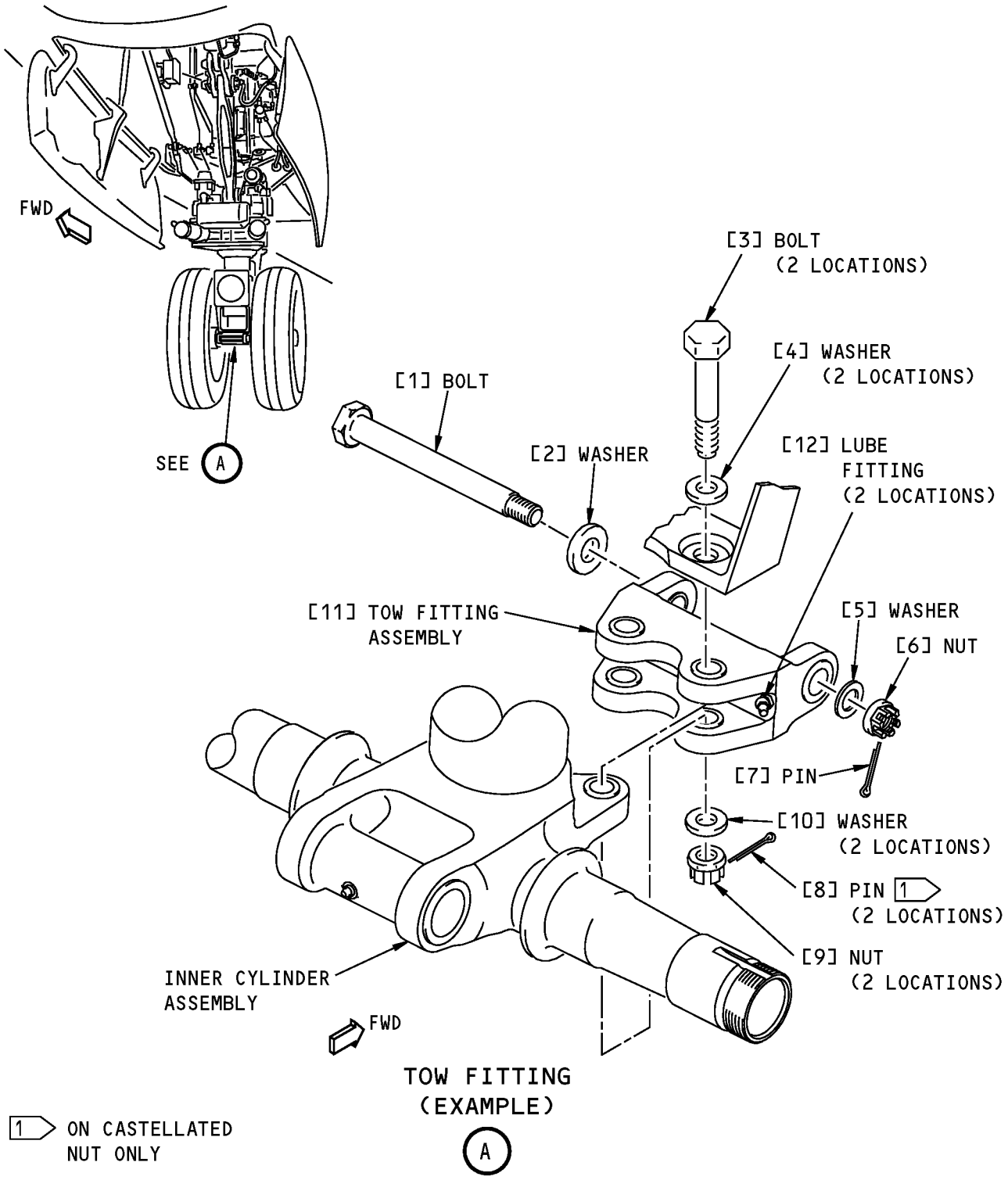
4) Install the pins [8].

(f) If you installed self-locking nuts [9], tighten the nuts [9] to within the torque range of 250-300 inch-pounds above the run-on torque.

E. Put the airplane back to its usual condition.

END OF TASK

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Nose Landing Gear Tow Fitting Installation
Figure 401/32-21-14-990-801

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NOSE LANDING GEAR DRAG STRUT - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) A removal of the drag strut for the nose landing gear

(2) An installation of the drag strut for the nose landing gear.

TASK 32-21-21-000-801

2. Nose Landing Gear Drag Strut Removal

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
07-11-03-580-802	Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E (P/B 201)
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-33-52-000-801	Nose Gear Lock Spring Removal (P/B 401)

C. Location Zones

Zone	Area
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right
713	Nose Landing Gear

D. Prepare for the Removal

SUBTASK 32-21-21-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-21-21-580-001

(2) Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

NOTE: Lower the jack that supports the tail of the airplane while you lift the nose landing gear.

SUBTASK 32-21-21-580-002

(3) If it is necessary to lift the gear with an axle jack to reduce the weight of the gear when you remove the right trunnion pin [1], and the left trunnion pin [2], do this task: Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E, TASK 07-11-03-580-802.

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SUBTASK 32-21-21-860-001

(4) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-21-21-860-002

(5) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	14	C00123	EXT LIGHTING NOSE GEAR TAXI

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	15	C01401	LANDING GEAR AIR/GND RELAY
D	16	C01432	LANDING GEAR ALTN EXTEND SOL
D	17	C01027	LANDING GEAR NOSE GEAR STEER
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 32-21-21-480-002

(6) Install chocks around the tires of all the landing gear.

SUBTASK 32-21-21-020-001

(7) Do this task: Nose Gear Lock Spring Removal, TASK 32-33-52-000-801.

SUBTASK 32-21-21-080-001

(8) Remove the downlock pin for the nose landing gear, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

E. Nose Landing Gear Drag Strut Removal

SUBTASK 32-21-21-020-002

(1) Disconnect the hydraulic hose connection from the rod end of the retract actuator [3]:

(a) Disconnect the hydraulic UP-hose at the bracket on the retract actuator [3].

(b) Disconnect the hydraulic DOWN-hose at the fitting on the retract actuator [3].

(c) Install caps on the hydraulic hoses and the fittings on the retract actuator [3].

SUBTASK 32-21-21-020-003

(2) Disconnect the rod end of the retract actuator [3]:

(a) Remove the cotter pin [13] from the bolt [16].

(b) Remove the nut [12], and the washer [14] from the bolt [16].

(c) Remove the bolt [16] from the pin [9].

(d) Remove the nut [15], and the washer [11] from the pin [9].

(e) Remove the pin [9] that holds the rod end of the retract actuator [3] and the washer(s) [18] from the upper drag strut assembly [17].

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SUBTASK 32-21-21-020-004

(3) Disconnect the forward lock link assembly [20]:

NOTE: This step will also disconnect the lower drag strut assembly [10] from the upper drag strut assembly [17].

(a) Remove the cotter pin [13] from the bolt [22].

(b) Remove the nut [25], and the washer [24] from the bolt [22].

(c) Remove the bolt [22] from the pin [19].

(d) Remove the nut [23] and the washer [21] from the pin [19].

(e) Remove the pin [19] to disconnect the forward lock link assembly [20] from the upper drag strut assembly [17] and lower drag strut assembly [10].

SUBTASK 32-21-21-020-005

WARNING: MAKE SURE THAT THE SHOCK STRUT FOR THE NOSE LANDING GEAR IS FULLY EXTENDED BEFORE YOU DISCONNECT THE DRAG STRUT. A SHOCK STRUT THAT IS PARTIALLY COMPRESSED CAN MOVE QUICKLY IF THE SHOCK STRUT IS NOT FULLY EXTENDED. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) Disconnect the lower drag strut assembly [10] from the shock strut [29]:

(a) Remove the cotter pin [26] from the bolt [28].

(b) Remove the nut [33] and the washer [32] from the bolt [28].

(c) Remove the bolt [28] from the pin [30].

(d) Remove the nut [27] and the washer [31] from the pin [30].

(e) Remove the pin [30] that holds the lower drag strut assembly [10] from the shock strut [29].

SUBTASK 32-21-21-480-003

(5) Use the shock strut strap, C32030-10, to hold the shock strut [29] in the compressed position.

SUBTASK 32-21-21-020-006

(6) Disconnect the upper drag strut assembly [17] from the bracket:

(a) Remove the nut [34] and the washer [35] from the bolt [36].

(b) Remove the bolt [36] and the washer [35] to disconnect the upper drag strut assembly [17] from the bracket.

(c) Remove the washer [35] from the bolt [36].

SUBTASK 32-21-21-020-007

(7) Remove the trunnion pins [1, 2]:

(a) Remove the cotter pin [38] from the bolt [40].

(b) Remove the nut [37] and the washer [39] from bolt [40].

(c) Remove the bolt [40] that hold the trunnion pins [1, 2] to the sidewall of the nose wheel well.

(d) Remove the trunnion pins [1, 2] to disconnect the upper drag strut assembly [17] from the sidewall of the nose wheel well.

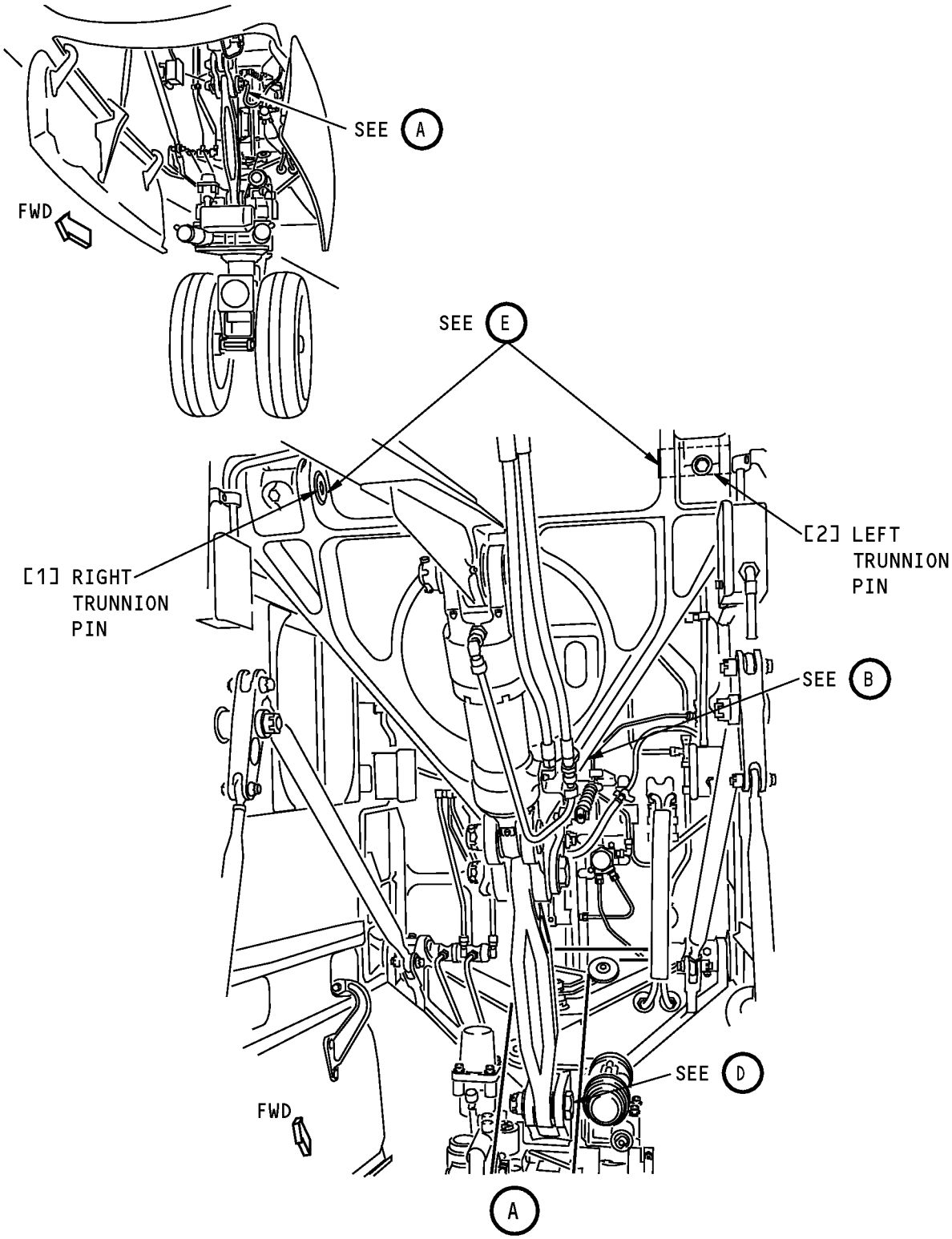
NOTE: Use puller, C32033, to remove the trunnion pins [1, 2] from inboard side of the upper drag strut assembly [17].

SUBTASK 32-21-21-020-008

(8) Remove the upper drag strut assembly [17] from the airplane

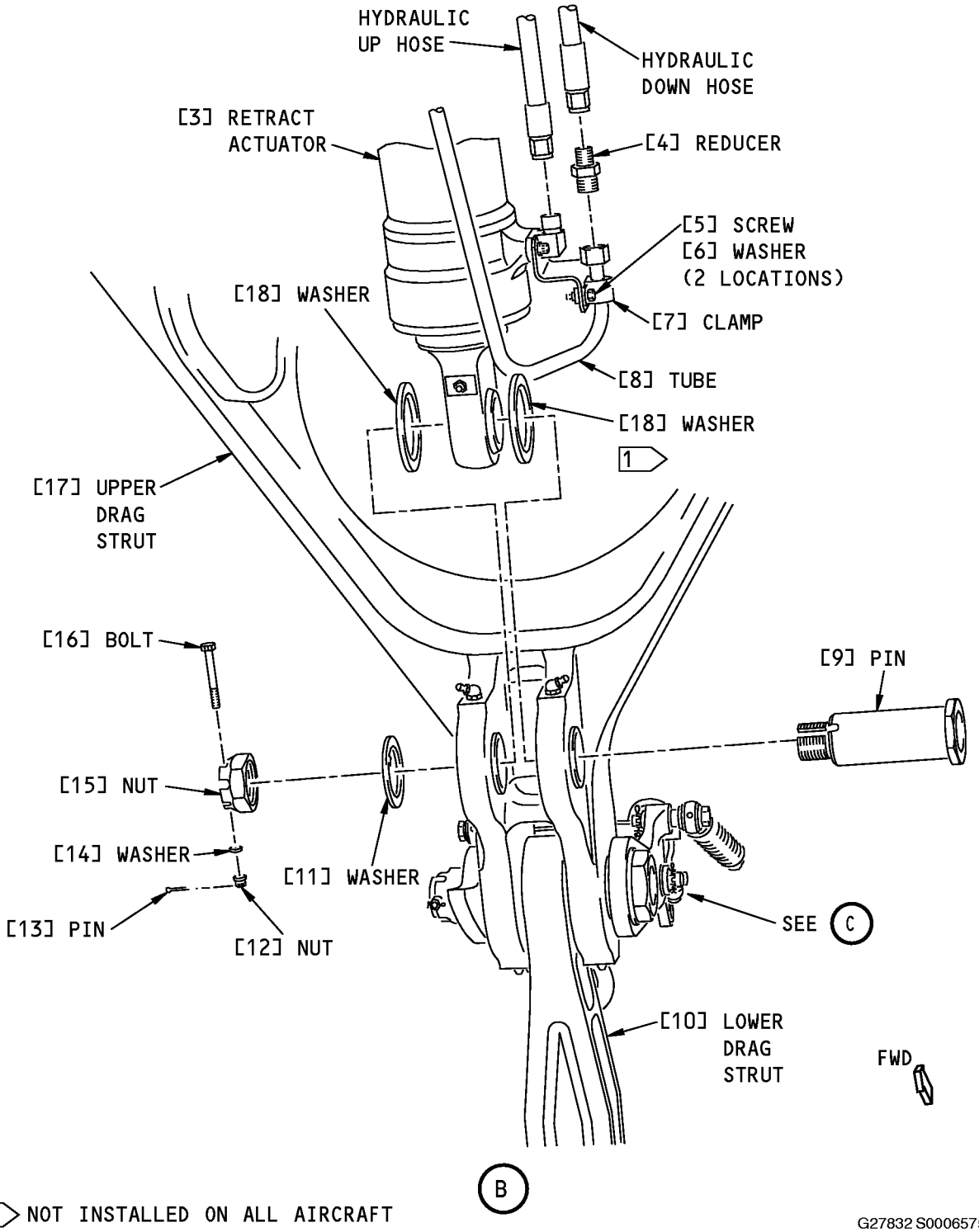
END OF TASK

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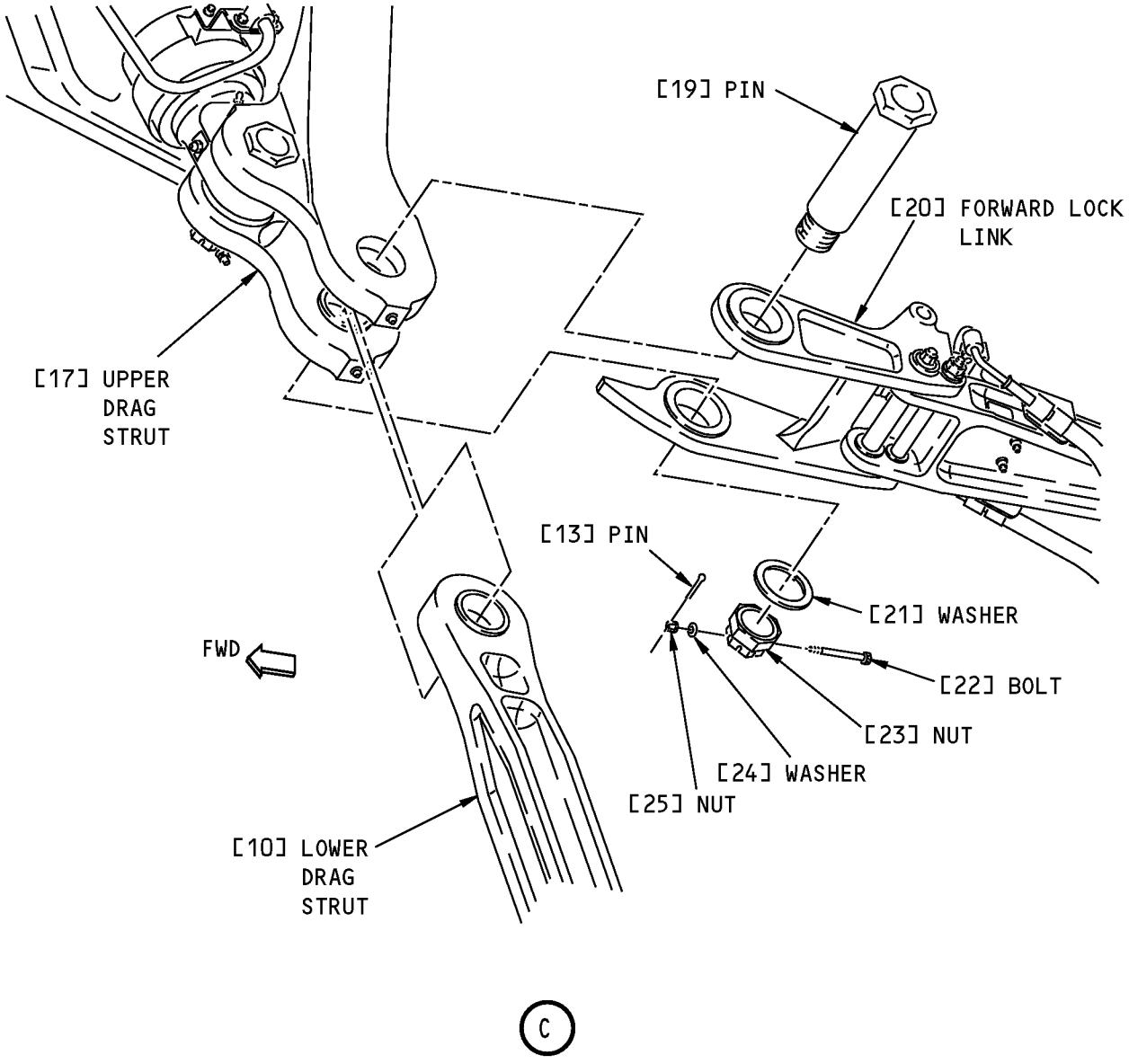
Nose Landing Gear Drag Strut Installation
Figure 401 (Sheet 1 of 5)/32-21-21-990-801

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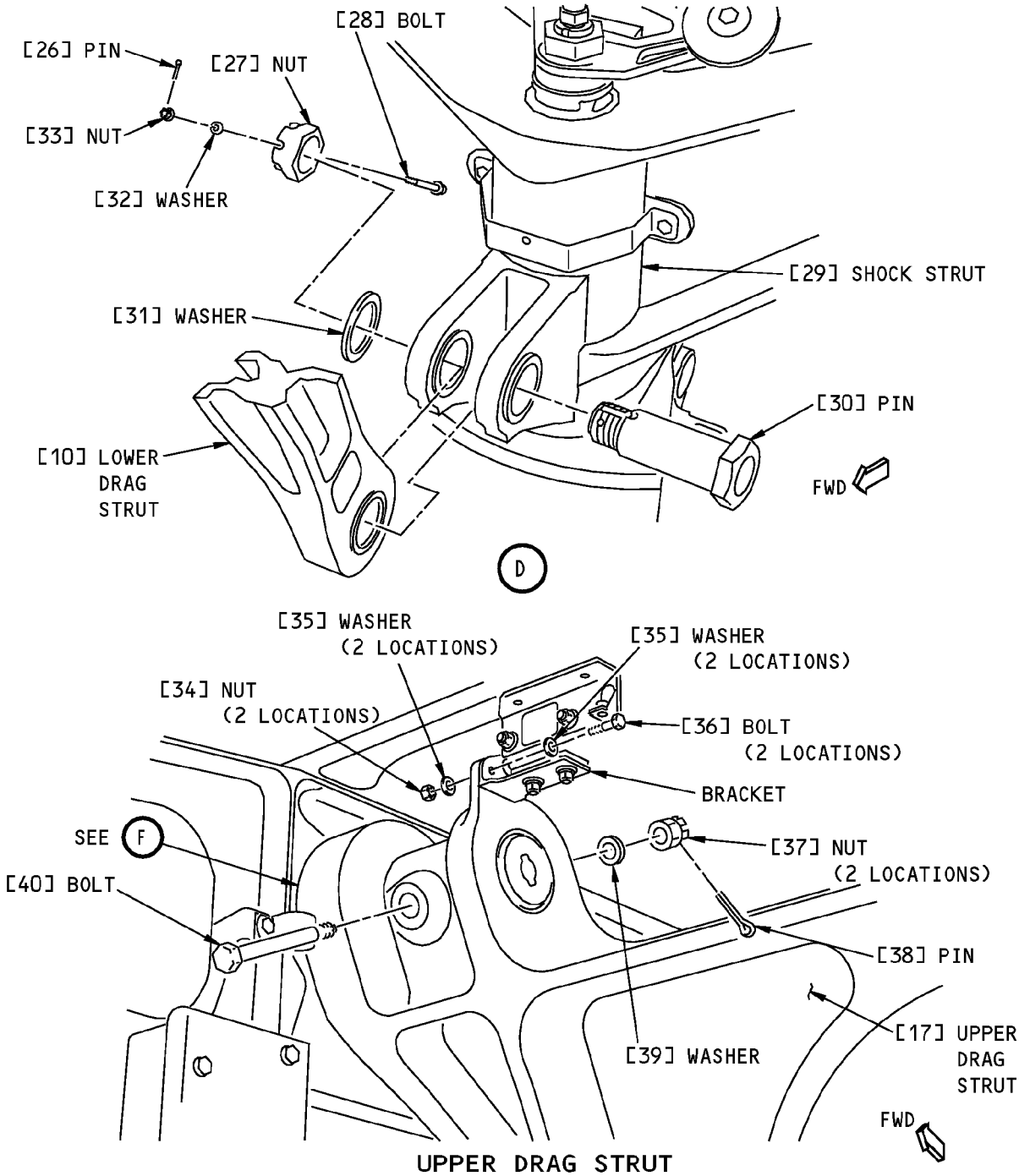
Nose Landing Gear Drag Strut Installation
Figure 401 (Sheet 2 of 5)/32-21-21-990-801

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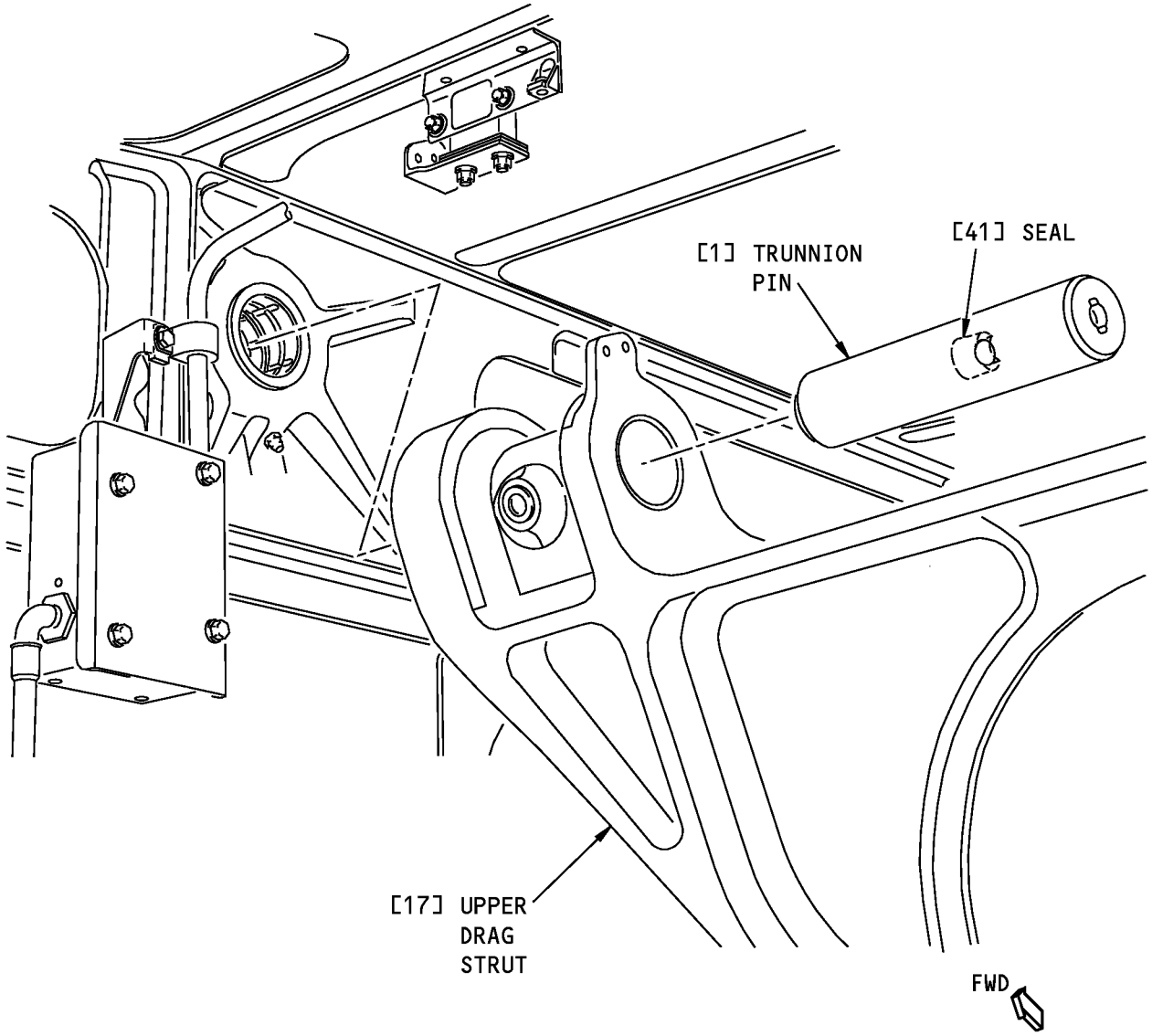
Nose Landing Gear Drag Strut Installation
Figure 401 (Sheet 3 of 5)/32-21-21-990-801

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Nose Landing Gear Drag Strut Installation
Figure 401 (Sheet 4 of 5)/32-21-21-990-801

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UPPER DRAG STRUT
(RIGHT SIDE IS SHOWN, LEFT SIDE IS EQUIVALENT)

F

G27839 S0006575022_V2

Nose Landing Gear Drag Strut Installation
Figure 401 (Sheet 5 of 5)/32-21-21-990-801

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TASK 32-21-21-400-801

3. Nose Landing Gear Drag Strut Installation

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
07-11-21-580-802	Lower the Airplane Nose Off of the Jack (P/B 201)
12-21-21-640-801	Nose Landing Gear Upper End Components Servicing (P/B 301)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
32-33-00-710-801	Operational Test for the Nose Landing Gear (P/B 501)
32-33-52-400-801	Nose Gear Lock Spring Installation (P/B 401)
32-35-00-730-801	Nose Gear Manual Extension System Test - Airplane on Jacks (P/B 501)
32-51-00-700-801	Nose Wheel Steering System Test (P/B 501)

C. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00633	Grease - Aircraft General Purpose	BMS3-33

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
10	Strut assembly	32-21-21-01-160	HAP 001-013, 015-026, 028-030
		32-21-21-02-155	HAP 031-054, 101-999
13	Pin	32-21-21-01-080	HAP 001-013, 015-026, 028-030
		32-33-11-01-017	HAP ALL
17	Strut assembly	32-21-21-01-120	HAP 001-013, 015-026, 028-030, 039, 040, 042, 043, 101
		32-21-21-02-115	HAP 031-054, 101-999
		32-21-21-02-120	HAP 031-054, 101-999
		32-21-21-02-125	HAP 031-054, 101-999
		32-21-21-02-130	HAP 031-054, 101-999
		32-21-21-02-135	HAP 031-054, 101-999
		32-21-21-02-140	HAP 031-054, 101-999
		32-21-21-02-145	HAP 031-054, 101-999
		32-21-21-02-150	HAP 031-038
		32-21-21-02-160	HAP 031-054, 101-999
		32-21-21-02-165	HAP 031-054, 101-999
		32-21-21-02-170	HAP 031-054, 101-999
		32-21-21-02-175	HAP 031-054, 101-999
20	Link assembly	32-21-21-01-115	HAP 001-013, 015-026, 028-030

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(Continued)

AMM Item	Description	AIPC Reference	AIPC Effectivity
20 (cont.)		32-21-21-02-110	HAP 031-054, 101-999
26	Pin	32-21-00-02-005	HAP ALL
38	Pin	32-21-21-01-005	HAP 001-013, 015-026, 028-030
		32-21-21-02-005	HAP 031-054, 101-999

E. Location Zones

Zone	Area
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right
713	Nose Landing Gear

F. Prepare for the Installation

SUBTASK 32-21-21-620-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(1) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

(a) The shank and the threads of the bolts [40]

NOTE: Apply a thick layer of the compound to the bolts [40].

(b) The threads and thread reliefs of the nuts [37]

(c) The faces of the washers [39]

(d) The cotter pin [38].

SUBTASK 32-21-21-160-001

(2) Remove all unwanted corrosion preventive, compound, C00913.

SUBTASK 32-21-21-640-001

(3) Lubricate the chrome plated surfaces of the trunnion pins [1,2] with, grease, D00633.

SUBTASK 32-21-21-160-002

(4) Remove all unwanted, grease, D00633.

G. Nose Landing Gear Drag Strut Installation

SUBTASK 32-21-21-560-001

(1) Put the upper drag strut assembly [17] in its position for installation on the sidewall of the nose wheel well.

SUBTASK 32-21-21-580-003

(2) Align the upper drag strut assembly [17] with the mating hole in the sidewall of the nose wheel well.

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SUBTASK 32-21-21-420-001

(3) Install the trunnion pins [1, 2]:

(a) Make sure that the trunnion pin seal [41] is installed in the trunnion pin.

(b) Put the trunnion pins [1, 2] through the upper drag strut assembly [17] and the sidewall of the nose wheel well.

NOTE: Make sure the hole in the trunnion pins [1, 2] for the bolts [40] are aligned.

(c) Put the bolt [40] through the trunnion pins [1, 2].

(d) Install the washer [39] and the nut [37] on the bolt [40].

(e) Tighten the nut [37] to 20 in-lb (2.3 N·m) – 24 in-lb (2.7 N·m) more than the run-on torque.

(f) If it is necessary, loosen the nut [37] to the nearest castellation to align the holes for the cotter pin [38].

(g) Install the cotter pin [38] in the bolt [40].

(h) Rotate seal [41] as required to fully seat seal against crossbolt.

CAUTION: WEAR SAFETY GLASSES DURING APPLICATION, AND IF APPLICATION OF SOLVENT RESULTS IN IRRITATION, USE AN AIR PURIFYING ORGANIC VAPOR CARTRIDGE RESPIRATOR. USE NITRILE GLOVES AND WASH YOUR HANDS WITH MOISTURE CREAM AFTER APPLICATION. STORE DPM 6380-4 CLEANER/ SOLVENT IN FLAMMABLE RESISTANT CONTAINERS IN QUANTITIES NO LARGER THAN 1 GALLON.

(i) Reapply Mastinox as required to coat the interior surface of the trunnion pin.

SUBTASK 32-21-21-420-002

(4) Connect the upper drag strut assembly [17] to the bracket:

(a) Put the washer [35] on the bolt [36].

(b) Align the hole in the upper drag strut assembly [17] to the hole in the bracket.

(c) Put the bolt [36] through the bracket and the upper drag strut assembly [17].

(d) Install the washer [35] and the nut [34] on the bolt [36].

SUBTASK 32-21-21-620-002

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(5) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

(a) The threads and thread reliefs of the pin [30] and bolt [28]

(b) The threads of the nut [27] and nut [33]

(c) The faces of the washers [31] and washer [32]

(d) To the cotter pin [26].

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SUBTASK 32-21-21-160-003

(6) Remove all unwanted corrosion preventive, compound, C00913.

SUBTASK 32-21-21-640-002

(7) Lubricate the shank of the pin [30] and bolt [28] with grease, D00633.

SUBTASK 32-21-21-160-004

(8) Remove all unwanted grease, D00633.

SUBTASK 32-21-21-420-003

(9) Connect the lower drag strut assembly [10]:

(a) Put the lower drag strut assembly [10] in its position on the shock strut [29].

(b) Put the pin [30] through the shock strut [29] and the lower drag strut assembly [10].

(c) Install the washer [31] and the nut [27] on the pin [30].

(d) Tighten the nut [27] to 600 in-lb (67.8 N·m) – 700 in-lb (79.1 N·m).

(e) Loosen the nut [27] to the nearest castellation to align the holes for the bolt [28].

(f) Install the bolt [28] in the pin [30].

(g) Install the washer [32] on the bolt [28].

(h) Install the nut [33] on the bolt [28].

(i) If it is necessary, loosen the nut [33] to the nearest castellation to align the holes for the cotter pin [26].

(j) Install the cotter pin [26] in the bolt [28].

SUBTASK 32-21-21-620-003

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(10) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

(a) The threads and thread reliefs of the pin [19] and the bolt [22]

(b) The threads of the nut [23] and nut [25]

(c) The faces of the washers [21] and washer [24]

(d) The cotter pin [13].

SUBTASK 32-21-21-160-005

(11) Remove all unwanted corrosion preventive, compound, C00913.

SUBTASK 32-21-21-640-003

(12) Lubricate the shank of the pin [19] and bolt [22] with grease, D00633.

SUBTASK 32-21-21-160-006

(13) Remove all unwanted grease, D00633.

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SUBTASK 32-21-21-420-004

(14) Connect the forward lock link assembly [20] and the lower drag strut assembly [10]:

NOTE: This step will also connect the lower drag strut assembly [10] to the upper drag strut assembly [17].

(a) Put the lower drag strut assembly [10] and the forward lock link assembly [20] in their positions on the upper drag strut assembly [17].

(b) Put the pin [19] through the forward lock link assembly [20], upper drag strut assembly [17] and the lower drag strut assembly [10].

(c) Install the washer [21] and the nut [23] on the pin [19].

(d) Tighten the nut [23] to95 in-lb (10.7 N·m) –115 in-lb (13.0 N·m) more than the run-on torque.

(e) Loosen the nut [23] to the nearest castellation to align the hole for the bolt [22].

(f) Install the bolt [22] in the pin [19].

(g) Install the washer [24] and the nut [25] on the bolt [22].

(h) If it is necessary, loosen the nut [25] to the nearest castellation to align the holes for the cotter pin [13].

(i) Install the cotter pin [13] in the bolt [22].

SUBTASK 32-21-21-420-005

(15) Hold the retract actuator [3] and do these steps to connect the actuator to the upper drag strut assembly [17]:

(a) Put the rod end of the retract actuator [3] and the washer(s) [18] in their position on the upper drag strut assembly [17].

(b) Put the pin [9] through the upper drag strut assembly [17], the rod end of the retract actuator [3] and the washer(s) [18].

(c) Install the washer [11], and the castellated nut [15] on the pin [9].

(d) Tighten the nut [15] to 50 ft-lb (68 N·m) – 58 ft-lb (79 N·m).

(e) If it is necessary, loosen the nut [15] to the nearest castellation to align the hole for the bolt [16].

(f) Install the bolt [16] in the pin [9].

(g) Install the washer [14] and the nut [12].

(h) If it is necessary, loosen the nut [12] to the nearest castellation to align the hole for the cotter pin [13].

(i) Install the cotter pin [13] in the bolt [16].

SUBTASK 32-21-21-080-002

(16) Remove the caps from the hydraulic hoses.

SUBTASK 32-21-21-420-006

(17) Connect the hydraulic hoses to the retract actuator [3].

H. Put the Airplane Back to Its Usual Condition

SUBTASK 32-21-21-420-007

(1) Do this task: Nose Gear Lock Spring Installation, TASK 32-33-52-400-801.

SUBTASK 32-21-21-610-001

(2) Lubricate the upper components of the nose Landing Gear. To lubricate them, do this task: Nose Landing Gear Upper End Components Servicing, TASK 12-21-21-640-801.

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SUBTASK 32-21-21-860-005

(3) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	14	C00123	EXT LIGHTING NOSE GEAR TAXI

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	15	C01401	LANDING GEAR AIR/GND RELAY
D	16	C01432	LANDING GEAR ALTN EXTEND SOL
D	17	C01027	LANDING GEAR NOSE GEAR STEER
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 32-21-21-860-003

(4) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-21-21-710-001

(5) Do this task: Operational Test for the Nose Landing Gear, TASK 32-33-00-710-801.

SUBTASK 32-21-21-710-002

(6) Do this task: Nose Gear Manual Extension System Test - Airplane on Jacks, TASK 32-35-00-730-801.

SUBTASK 32-21-21-710-003

(7) Do this task: Nose Wheel Steering System Test, TASK 32-51-00-700-801.

SUBTASK 32-21-21-860-004

(8) Do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

——————— END OF TASK ———————

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NOSE LANDING GEAR DRAG STRUT - INSPECTION/CHECK

1. General

A. This task is a visual inspection of the upper drag strut of the nose landing gear.

B. This task does not remove or install the drag strut. Refer to the Nose Landing Gear Drag Strut - Removal/Installation for procedures to remove and install the drag strut of the nose landing gear.

TASK 32-21-21-200-801

2. Nose Landing Gear Drag Strut Inspection

A. General

(1) This procedure give wear limits and repair data for the drag strut of the nose landing gear.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-21-21-000-801	Nose Landing Gear Drag Strut Removal (P/B 401)
SRM 53-10-90	Allowable Damage 1

C. Location Zones

Zone	Area
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right
713	Nose Landing Gear

D. Procedure

SUBTASK 32-21-21-480-004

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-21-21-020-009

(2) Examine the upper drag brace bushings for these forms of damage:

NOTE: It is not necessary to remove the nose landing gear drag brace strut assembly for a visual inspection for the following conditions:

(a) corrosion

(b) cracks in bushing or fillet seal

(c) scratches along the rim of the bushing

SUBTASK 32-21-21-410-001

(3) Use a feeler gage to check for 0.156 in. (3.962 mm) to 0.200 in. (5.080 mm) clearance between the structure support bushings and the nose landing gear drag strut upper trunnion bushings assemblies.

NOTE: To have satisfactory results the feeler gage must display smooth transition while being installed or removed.

(a) If the feeler gage can be installed and removed without force the check is satisfactory.

(b) If the check is satisfactory, put the airplane back to its usual condition.

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(c) If the bushing display damage or smooth transition of the feeler gage can not be satisfied, do this task: Nose Landing Gear Drag Strut Removal, TASK 32-21-21-000-801.

SUBTASK 32-21-21-200-001

(4) Refer to SRM 53-10-90 for the inspection and removal of damage to the nose landing gear drag strut fittings.

——————— END OF TASK ———————

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NLG SHOCK STRUT INNER CYLINDER - REMOVAL/INSTALLATION

1. General

A. This procedure has these two tasks:

(1) A removal of the inner cylinder for the nose landing gear

(2) An installation of the inner cylinder for the nose landing gear

TASK 32-21-24-000-801

2. NLG Inner Cylinder Removal

(Figure 401)

A. References

Reference	Title
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1376	Plunger - Scraper (C32016-2 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1377	Reducer - Scraper (C32016-3 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1378	Retainer - Scraper (C32016-4 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1379	Assembly - Scraper Lock (C32016-5 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1829	Valve - Drain, Landing Gear Shock Strut Oil (Part #: J32060-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A32066-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1867	Wrench - Nose Landing Gear Oleo Gland Nut (Part #: C32025-7, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32025-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

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(Continued)

Reference	Description
SPL-1895	Equipment - Removal/Installation, Metering Pin and Retainer Ring, NLG (Part #: C32035-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-3927	Assembly - Strap (751069-007 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-4047	Assembly - Seal Puller (C32016-6 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
STD-1110	Container - Hydraulic Fluid Resistant, 5 Gallon (19 Liters)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
21	Scraper ring	32-21-00-01-195	HAP 001-013, 015-026, 028-030
		32-21-00-01A-195	HAP 031-054, 101-999

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

E. Prepare for the Removal

SUBTASK 32-21-24-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-21-24-860-001

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-21-24-020-001

WARNING: CLEAR THE AREA BELOW THE NOSE BEFORE YOU DEFLATE THE SHOCK STRUT. IF YOU DEFLATE SHOCK STRUT, THE NOSE CAN MOVE DOWN AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(3) Deflate the shock strut [4] for the nose landing gear:

(a) Remove the cap [1] for the gas valve [2] which is on the top of the shock strut [4].

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WARNING: DO NOT REMOVE THE VALVE BODY UNLESS YOU DEFLATE THE SHOCK STRUT FULLY. THE AIR PRESSURE CAN BLOW THE VALVE BODY OUT AND CAUSE INJURY TO PERSONS.

(b) Loosen the swivel nut [3] a maximum of two turns.

NOTE: Fluid in the shock strut [4] can have bubbles when you release the pressure. Deflate the shock strut slowly to prevent the leakage of the fluid through the gas valve [2].

(c) Loosen the swivel nut [3] fully when all of the pressure in the shock strut [4] is released.

NOTE: The shock strut [4] is fully deflated when the dimension "X" is 13.9 in. (353 mm).

SUBTASK 32-21-24-680-001

(4) Drain the hydraulic fluid from the shock strut [4]:

(a) Remove the cap [5] from the oil charging valve [6].

(b) Put a 5 gallon (19 liters) hydraulic fluid resistant container, STD-1110 in a position to catch the hydraulic fluid when the oil charging valve [6] is opened.

(c) Install the drain equipment on the oil charging valve [6]:

NOTE: The tool, landing gear shock strut drain valve, SPL-1829, could also be used, but it will take much longer to drain the shock strut.

1) Cut a length of plastic tubing, long enough to reach the container on the floor.

2) Insert a small allen wrench in the end of the length of tubing, such that the long end of the allen wrench is flush with the end of the tube and the short end penetrates the wall of the tube.

3) Install the tubing on the oil charging valve [6] such that the allen wrench goes into the check valve and holds it open to drain the hydraulic fluid.

(d) Remove the drain equipment when you have removed all of the hydraulic fluid.

SUBTASK 32-21-24-580-001

(5) Lift the nose of the airplane until the shock strut [4] extends approximately ten inches, do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

SUBTASK 32-21-24-020-002

(6) Disconnect the sensor bracket [36] from the upper torsion link [31]:

NOTE: Disconnect the bracket with the sensors and the electrical conduits attached.

(a) Remove the nut [40], and the washer [39] from the bolt [37].

(b) Remove the bolt [37] that holds the sensor bracket [36] to the upper torsion link [31].

(c) Remove the washer [38] from the bolt [37].

(d) Isolate the sensor bracket [36] from the upper torsion link [31].

SUBTASK 32-21-24-020-003

(7) Disconnect the box assembly [32] from the upper torsion link [31]:

NOTE: Disconnect the box assembly with the electrical conduits attached.

(a) Remove the nut [49], and the washer [48] from the bolt [46].

(b) Remove the bolt [46], and the washer [47] from the upper torsion link [31].

SUBTASK 32-21-24-020-004

(8) Disconnect the electrical conduit [41] from the bracket [45]:

(a) Remove the screw [42] that holds the clamp [44] to the bracket [45].

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(b) Move the electrical conduit [41] away from the bracket [45].

SUBTASK 32-21-24-020-005

(9) Remove the screw [28], washers [26 and 27], and the nut [25] to disconnect the clamp from the taxi light assembly.

NOTE: Disconnect the clamp with the electrical conduit attached.

SUBTASK 32-21-24-020-006

(10) Remove the nut [29], and the washer [30] to disconnect the clamp from the inner cylinder [14].

NOTE: Disconnect the clamp with the electrical conduit attached.

SUBTASK 32-21-24-020-007

(11) Remove the screw [50], washer [51], and the nut [52] to disconnect the clamp from the lower torsion link [53].

NOTE: Disconnect the clamp with the electrical conduit attached.

SUBTASK 32-21-24-020-008

(12) Disconnect the wire harness plug from the taxi light.

SUBTASK 32-21-24-800-001

(13) Attach the electrical conduits, box assembly [32], and the wire harness plug for the taxi light to the outer cylinder [9] so that it is not in the way.

SUBTASK 32-21-24-020-009

(14) Disconnect the upper torsion link [31] from the inner cylinder [14]:

(a) Remove the pin [34], nut [33], and the washer [23] from the torsion link pin [24].

(b) Remove the torsion link pin [24] to disconnect the upper torsion link [31] from the inner cylinder [14].

F. Inner Cylinder Removal

(Figure 401)

SUBTASK 32-21-24-020-010

(1) Disconnect the gland nut [18] from the outer cylinder [9]:

(a) Remove the bolt [15], washer [16], and the lockplate [17] to release the gland nut [18].

(b) Use the wrench, SPL-1867 to disconnect the gland nut [18] from the outer cylinder [9].

NOTE: Keep the gland nut in its position against the outer cylinder after you have disconnected it from the outer cylinder.

SUBTASK 32-21-24-580-002

(2) Lift the nose of the airplane until there is enough room to install the scraper retainer, SPL-1378 [61] and the scraper lock assembly, SPL-1379 [56] on the gland nut [18], do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

SUBTASK 32-21-24-480-002

(3) Install the scraper retainer, SPL-1378 [61] and the scraper lock assembly, SPL-1379 [56] on the gland nut [18].

NOTE: This will make sure the scraper ring [21] for the gland nut [18] does not come out of its groove.

(a) Install the scraper retainer, SPL-1378 [61] on the gland nut [18].

(b) Install the scraper lock assembly, SPL-1379 [56] to hold the scraper retainer, SPL-1378 [61] in its position on the gland nut [18].

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SUBTASK 32-21-24-020-011

(4) Move the gland nut [18] down at the inner cylinder [14].

NOTE: If the scraper ring [21] comes out of its groove, use the scraper plunger, SPL-1376 [62] and the scraper reducer, SPL-1377 [63] to install the scraper ring [21] back in its groove.

SUBTASK 32-21-24-020-012

(5) Move the lower bearing carrier [20]:

(a) Loosely install the seal puller assembly, SPL-4047 [55] around the inner cylinder [14].

(b) Push the seal puller assembly, SPL-4047 [55] up, such that it will install correctly at the bottom of the outer cylinder [9].

(c) Align the holes in the seal puller assembly, SPL-4047 [55] with the holes in the lower bearing carrier [20] for the puller screws [60].

(d) Install the carrier puller screws [60] to hold the seal puller assembly, SPL-4047 [55] to the lower bearing carrier [20].

(e) Tighten the retainer screws on each side of the seal puller assembly, SPL-4047 [55].

(f) Install the strap assembly, SPL-3927 [57] around the axle and connect the ends to the shoulder bolts on each side of the seal puller assembly, SPL-4047 [55].

SUBTASK 32-21-24-580-003

(6) Lift the airplane until the lower bearing carrier [20] is completely out of the outer cylinder [9], (TASK 07-11-21-580-801).

SUBTASK 32-21-24-020-013

(7) Remove the inner cylinder [14] from the outer cylinder [9]:

(a) Remove the downlock pin from the nose landing gear, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

WARNING: DO NOT PUT A PLUG IN THE OPEN PORTS OF THE RETRACT ACTUATOR. THE HYDRAULIC LINES CAN BREAK AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(b) Disconnect the hydraulic lines from the retract actuator.

(c) Put a cap on the hydraulic lines.

(d) Push up on the lock link to move it from the locked overcenter position.

(e) Optional: Connect a hydraulic pump to the retract actuator.

NOTE: The pressure line from the pump must be connected to the Up port of the actuator. The return line to the pump must be connected to the Down port of the actuator.

WARNING: HOLD THE INNER CYLINDER WITH ROPE BEFORE YOU REMOVE THE INNER CYLINDER FROM THE OUTER CYLINDER. THE INNER CYLINDER IS HEAVY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

CAUTION: BE CAREFUL NOT TO CAUSE DAMAGE TO THE INNER CYLINDER OR THE METERING PIN. DAMAGE TO THESE PARTS CAN CAUSE DAMAGE TO THE SEALS.

(f) Slowly apply pressure to the retract actuator to remove the inner cylinder [14] from the outer cylinder [9]. This will move the nose landing gear forward.

(g) Remove the inner cylinder [14].

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SUBTASK 32-21-24-840-001

WARNING: MAKE SURE A MINIMUM OF TWO PERSON WILL HOLD THE INNER CYLINDER WHEN YOU DO THE SUBSEQUENT STEPS. THE INNER CYLINDER IS HEAVY. INJURY TO PERSONS OR DAMAGE TO THE EQUIPMENT CAN OCCUR IF THE INNER CYLINDER IS NOT HELD PROPERLY.

(8) Hold the inner cylinder [14] in a vertical position.

SUBTASK 32-21-24-040-001

(9) Move the control lever for the landing gear to OFF.

NOTE: This will release the hydraulic pressure from the lock actuator of the nose landing gear.

G. Remove the Components From the Inner Cylinder

NOTE: Do these steps if the inner cylinder you will install does not have these components installed.

SUBTASK 32-21-24-020-014

(1) Remove the metering pin [11] from the inner cylinder [14]:

(a) Use the metering pin and retainer ring equipment, SPL-1895, Nose Landing Gear Metering Pin and Retainer Ring Installation Tool, to remove the nut [12] and the retaining ring [67] from the inner cylinder

(b) Remove the metering pin [11] from the inner cylinder [14].

SUBTASK 32-21-24-020-015

(2) Remove the upper bearing carrier [8] and the recoil valve assembly from the top of the inner cylinder [14]:

(a) Remove the upper bearing [8] from the upper bearing carrier [68].

NOTE: Pull the bearing apart slightly and slide it up and off the upper bearing carrier [68].

(b) Remove the upper bearing carrier [68] halves from the inner cylinder [14].

(c) Remove the recoil valve ring [69].

(d) Remove the recoil valve [70] from the upper centering cam [10].

SUBTASK 32-21-24-020-016

(3) Remove the upper and lower centering cams [10, 13] from the inner cylinder [14].

(a) Remove the dowel retaining circlip [71] and the dowel [72] from the inner cylinder [14].

SUBTASK 32-21-24-020-017

(4) Remove the lower bearing carrier [20] from the inner cylinder [14]:

(a) Use rubber mallet and lighty hit the bottom of the seal puller assembly, SPL-4047 [55] until the lower bearing carrier [20] can be pulled out off the top of the inner cylinder [14].

NOTE: The lower bearing carrier is coated with a dry lube film. The film may be worn and appear uneven, this is not cause for bearing carrier replacement.

(b) Remove the puller screw [60] to disconnect the seal puller assembly, SPL-4047 [55] from the lower bearing carrier [20].

(c) Remove the seal puller assembly, SPL-4047 [55] from the lower bearing carrier [20].

(d) Put the lower bearing carrier [20] on a table or bench.

SUBTASK 32-21-24-020-018

(5) Remove the seal retainer [19]:

(a) Remove the bearing carrier pin [22] for the seal retainer [19].

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(b) Move the seal retainer [19] away from the lower bearing carrier [20] to get access to the active dynamic seal.

SUBTASK 32-21-24-900-001

(6) Install a new scraper ring [21] on the gland nut [18] if there is any sign of damage or wear on the old scraper ring:

NOTE: The scraper ring [21] prevents dirt and debris from entering the shock strut when the inner and outer cylinder compress.

(a) Remove the gland nut [18] from the inner cylinder [14].

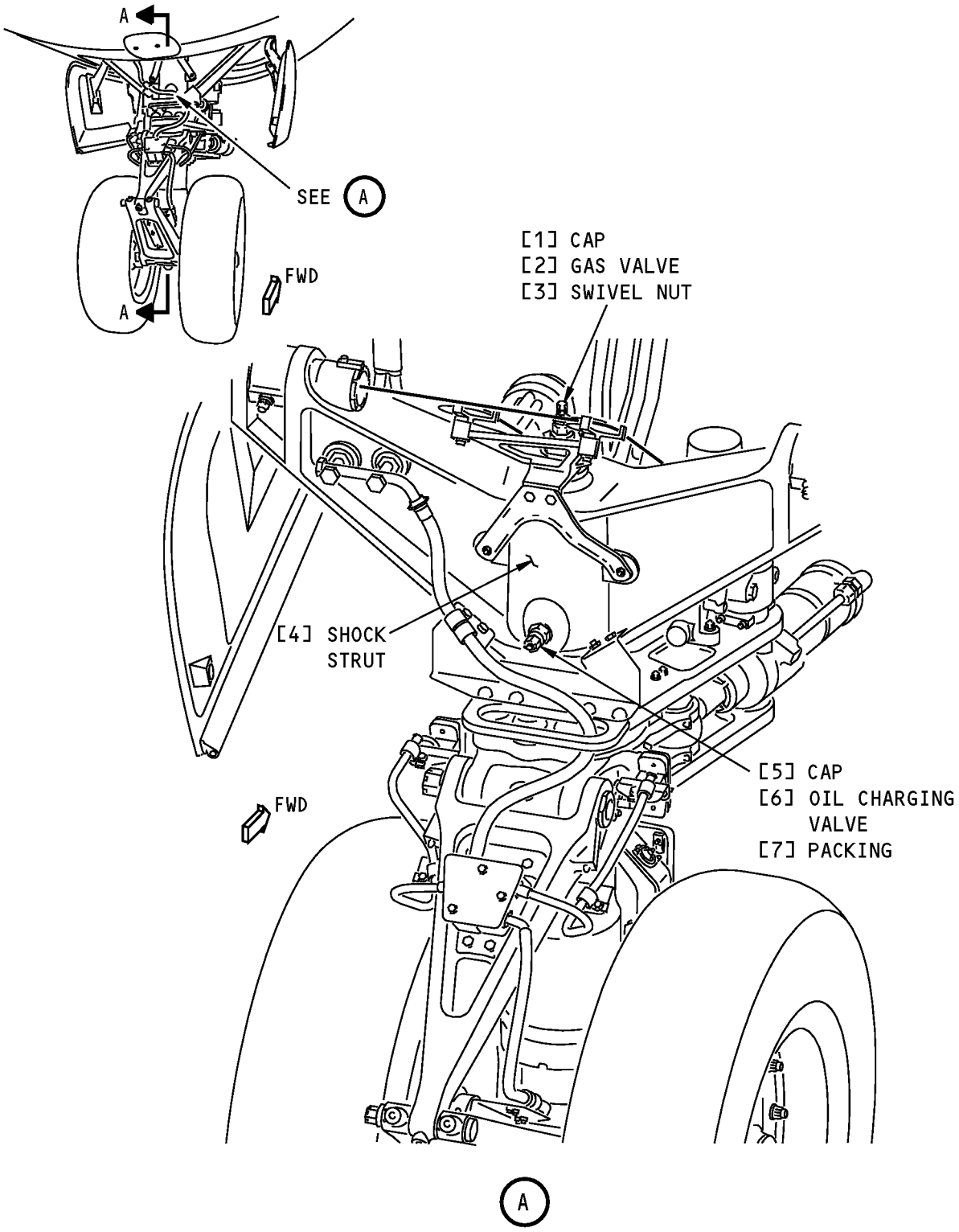
(b) Remove the scraper retainer, SPL-1378 [61] and the scraper lock assembly, SPL-1379 [56] from the gland nut [18].

(c) Remove the old scraper ring [21] in its groove on the gland nut [18].

(d) Install the new scraper ring [21] in its groove on the gland nut [18].

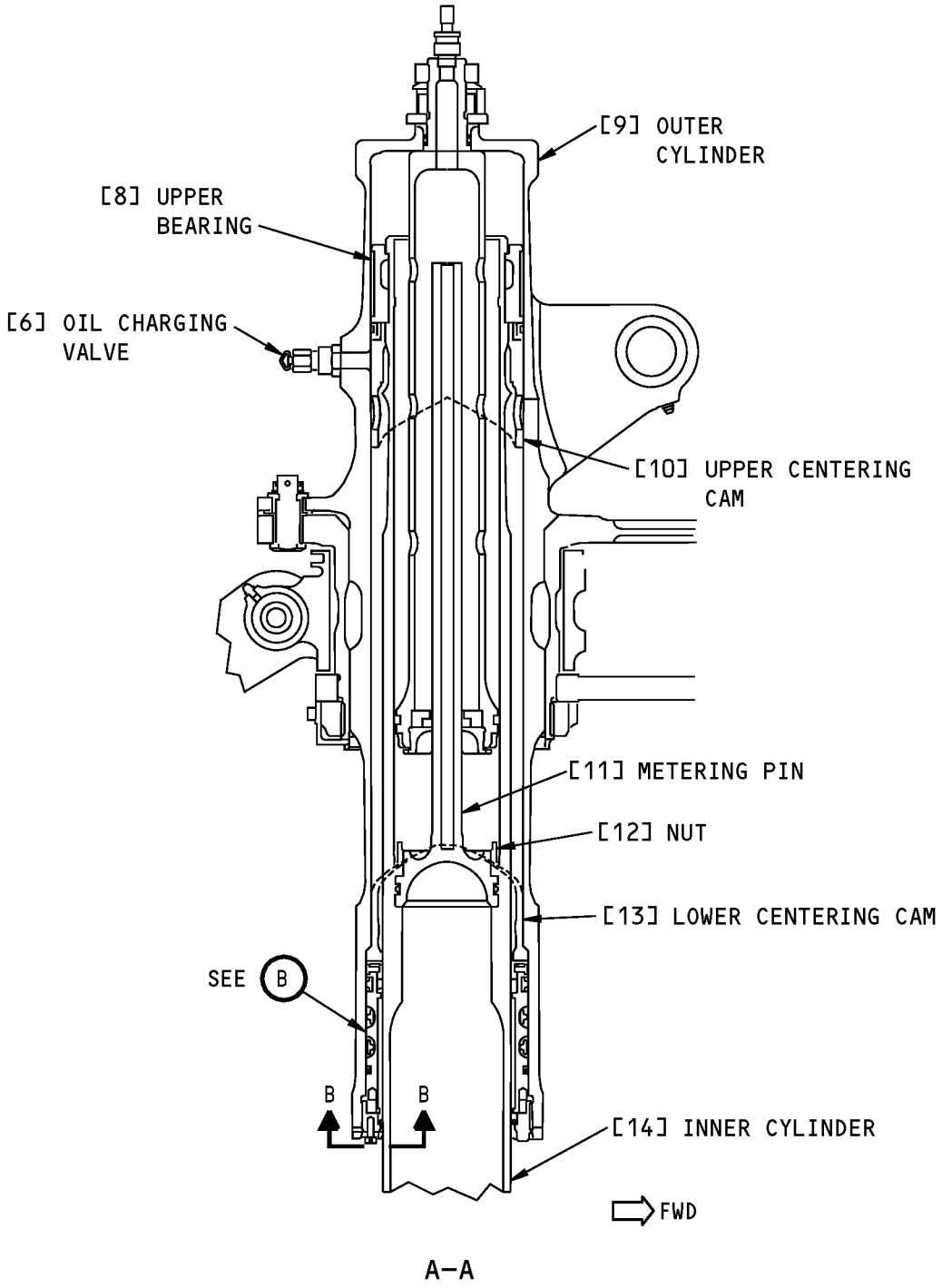
——————— END OF TASK ———————

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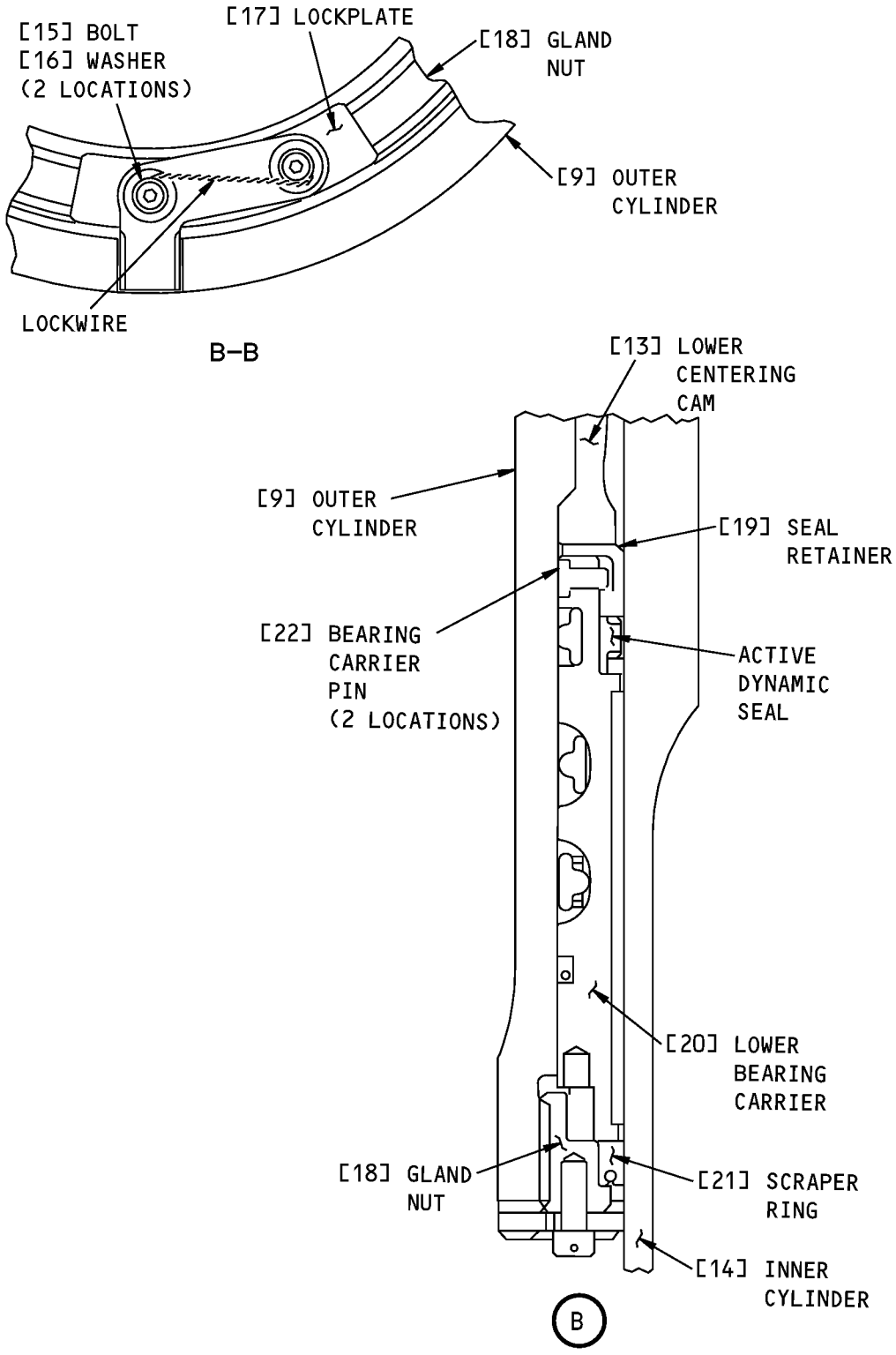
Nose Landing Gear Shock Strut Inner Cylinder Installation
Figure 401 (Sheet 1 of 11)/32-21-24-990-801

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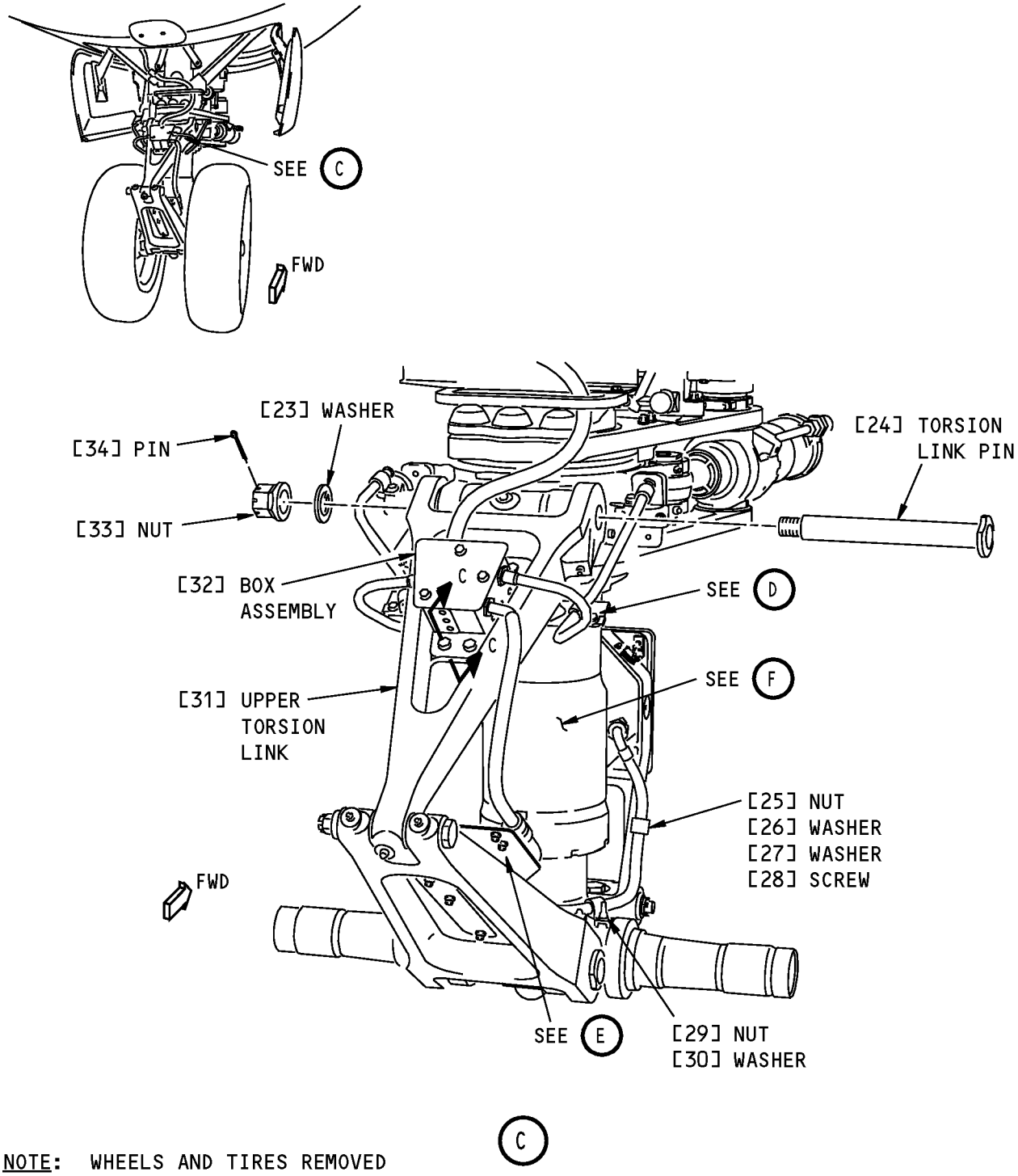
Nose Landing Gear Shock Strut Inner Cylinder Installation
Figure 401 (Sheet 2 of 11)/32-21-24-990-801

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Nose Landing Gear Shock Strut Inner Cylinder Installation
Figure 401 (Sheet 3 of 11)/32-21-24-990-801

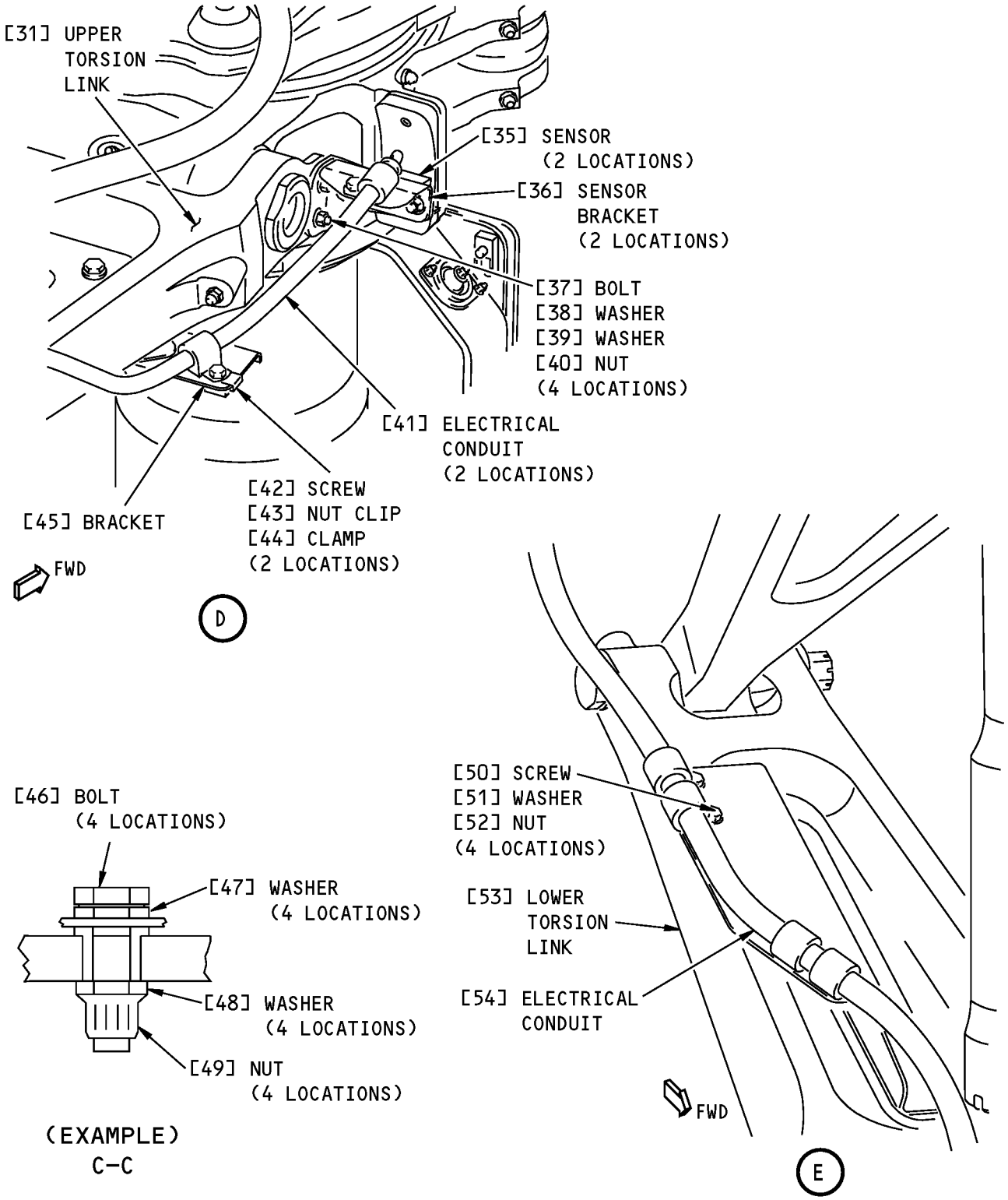
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NOTE: WHEELS AND TIRES REMOVED FOR CLARITY.

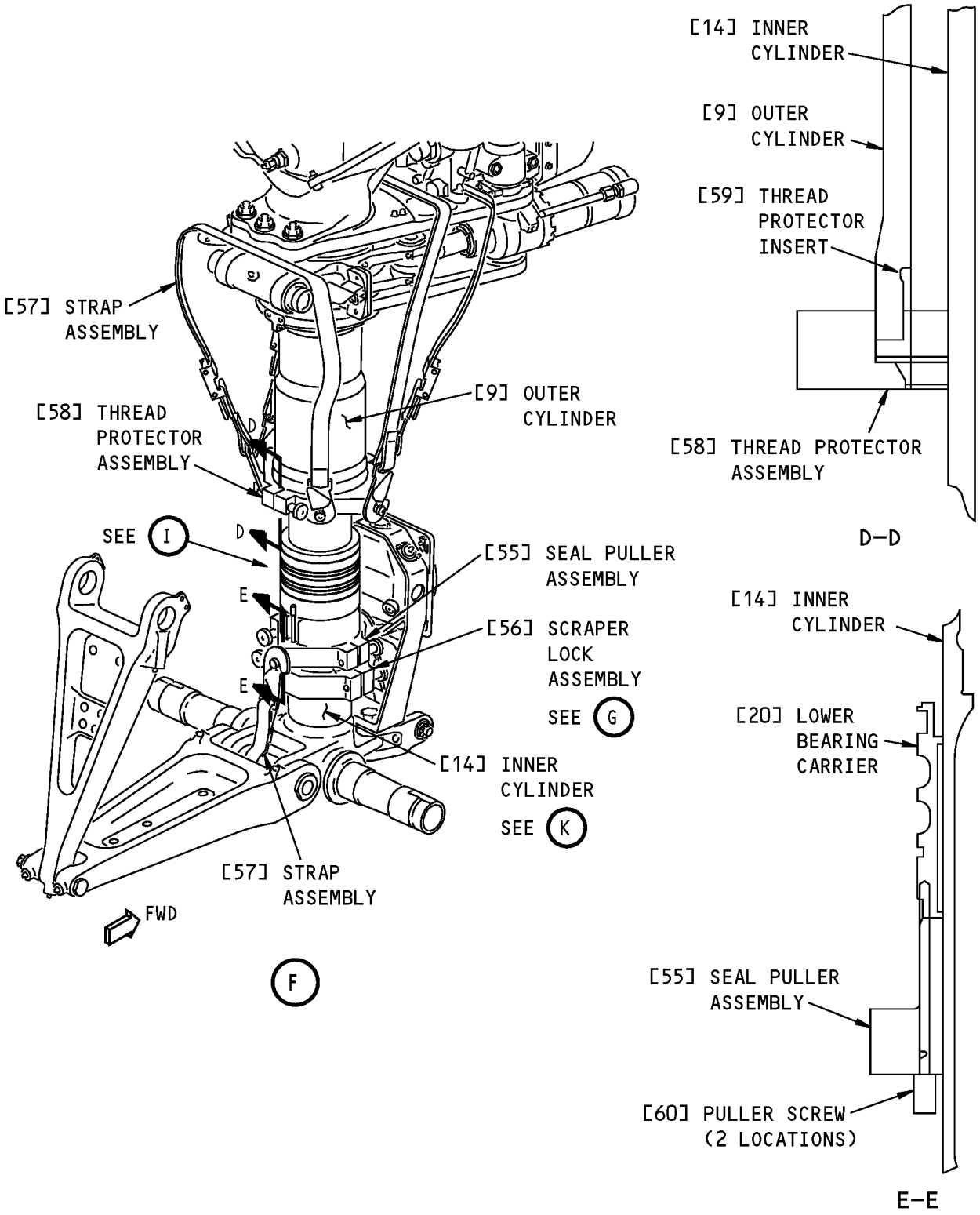
Nose Landing Gear Shock Strut Inner Cylinder Installation
Figure 401 (Sheet 4 of 11)/32-21-24-990-801

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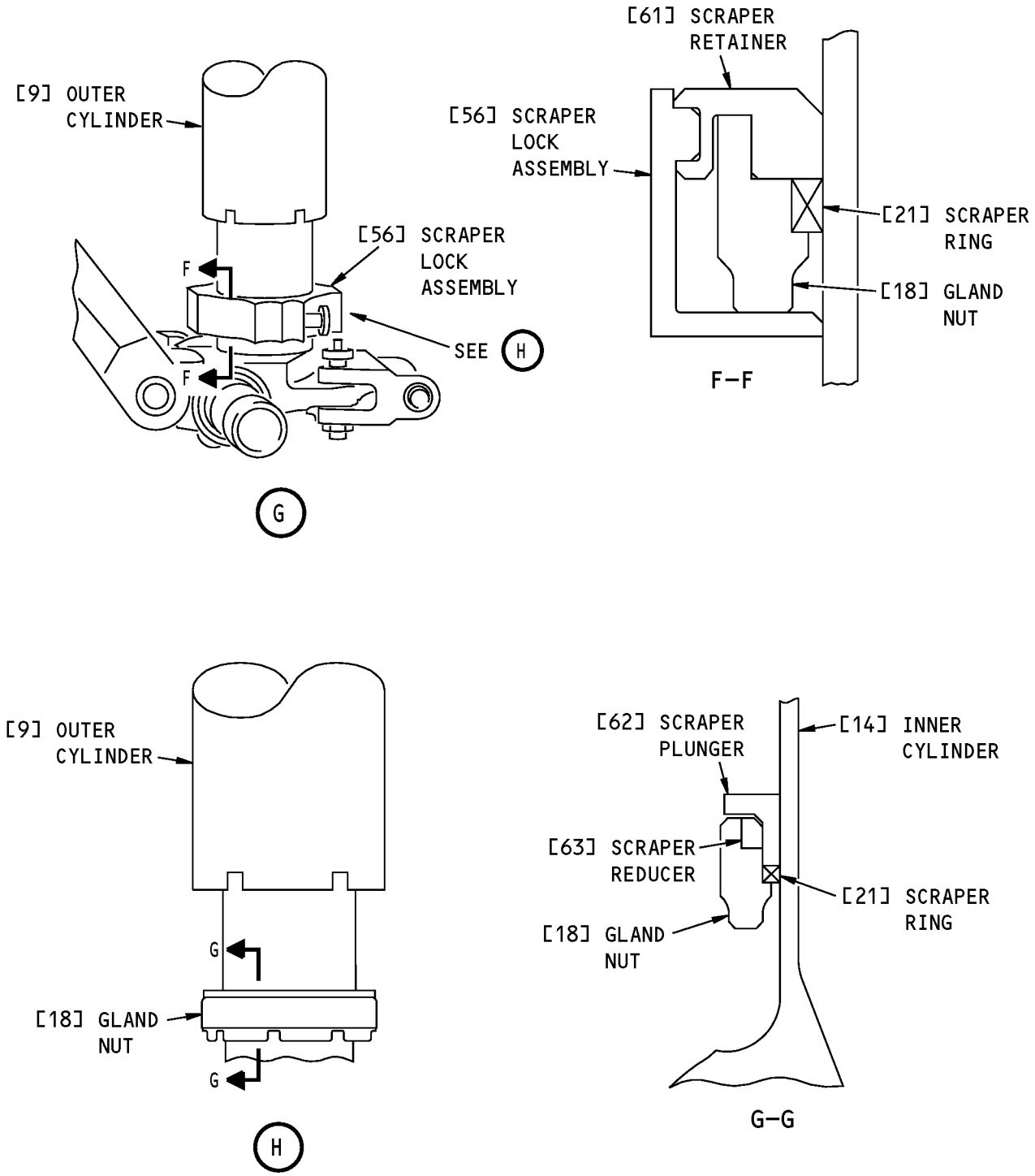
Nose Landing Gear Shock Strut Inner Cylinder Installation
Figure 401 (Sheet 5 of 11)/32-21-24-990-801

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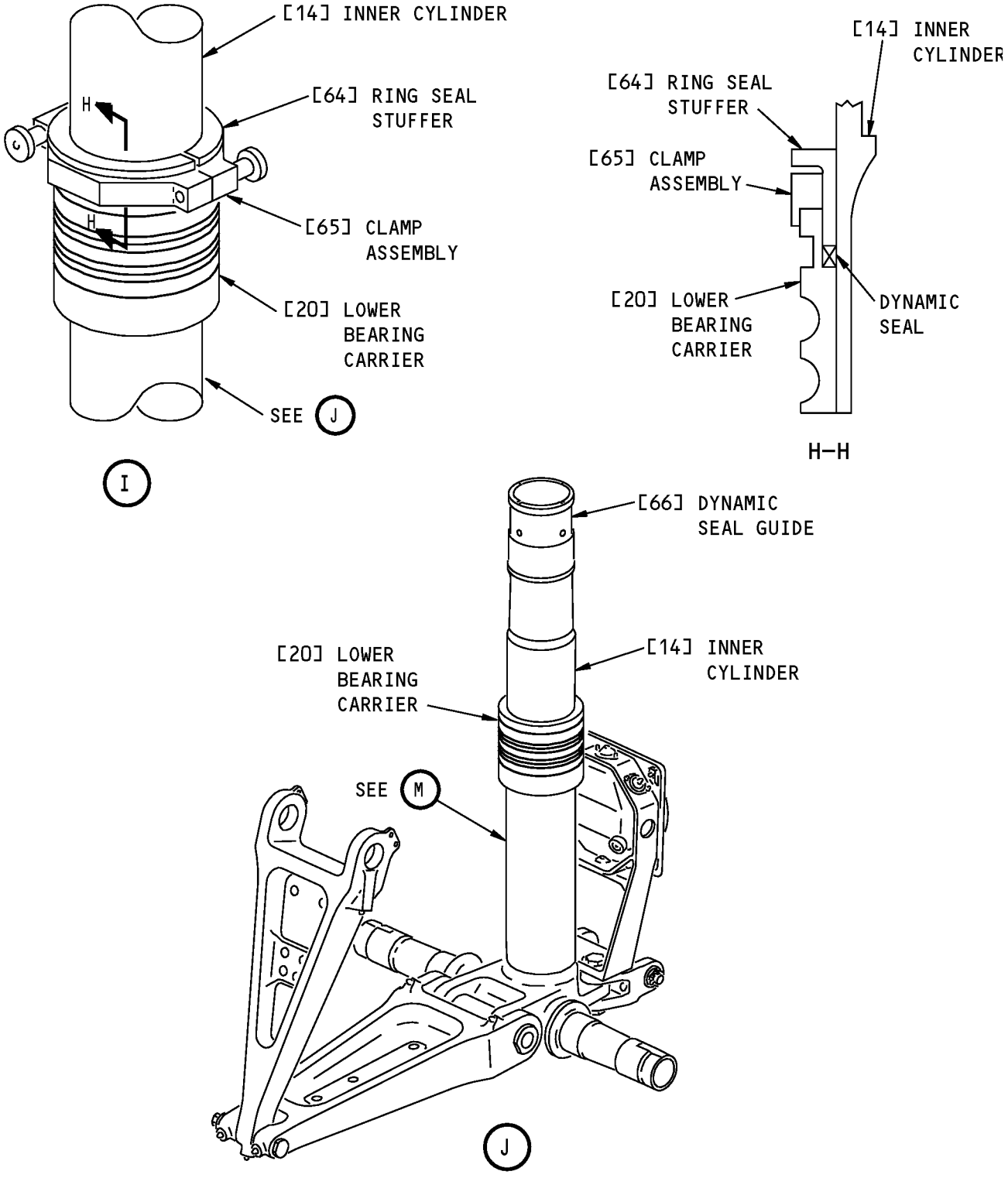
Nose Landing Gear Shock Strut Inner Cylinder Installation
Figure 401 (Sheet 6 of 11)/32-21-24-990-801

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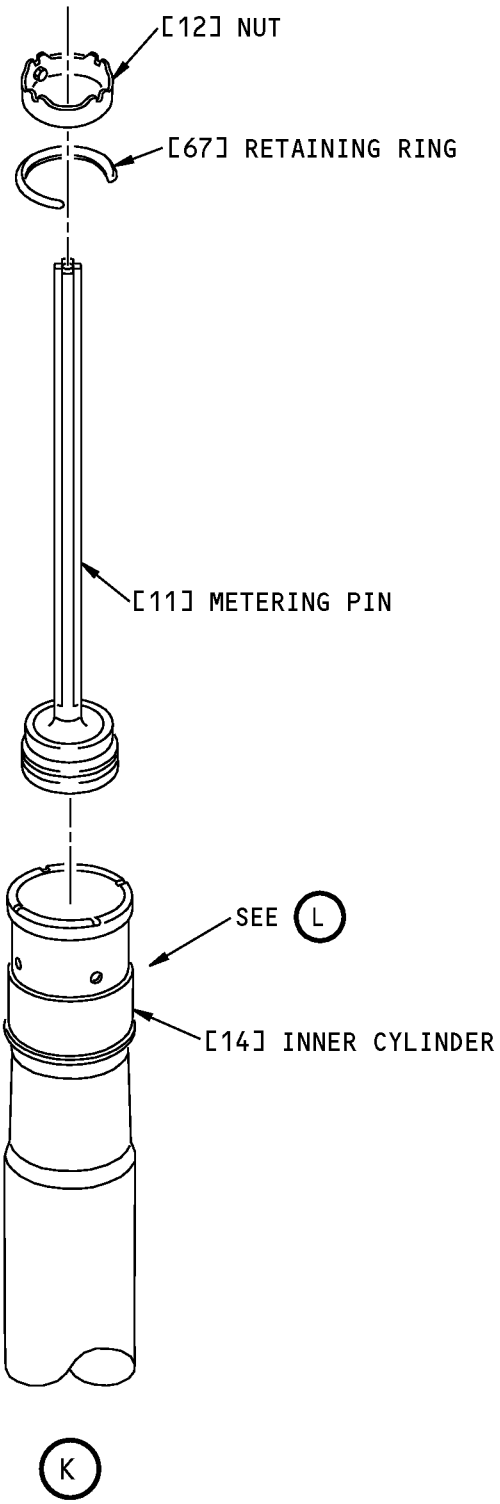
Nose Landing Gear Shock Strut Inner Cylinder Installation
Figure 401 (Sheet 7 of 11)/32-21-24-990-801

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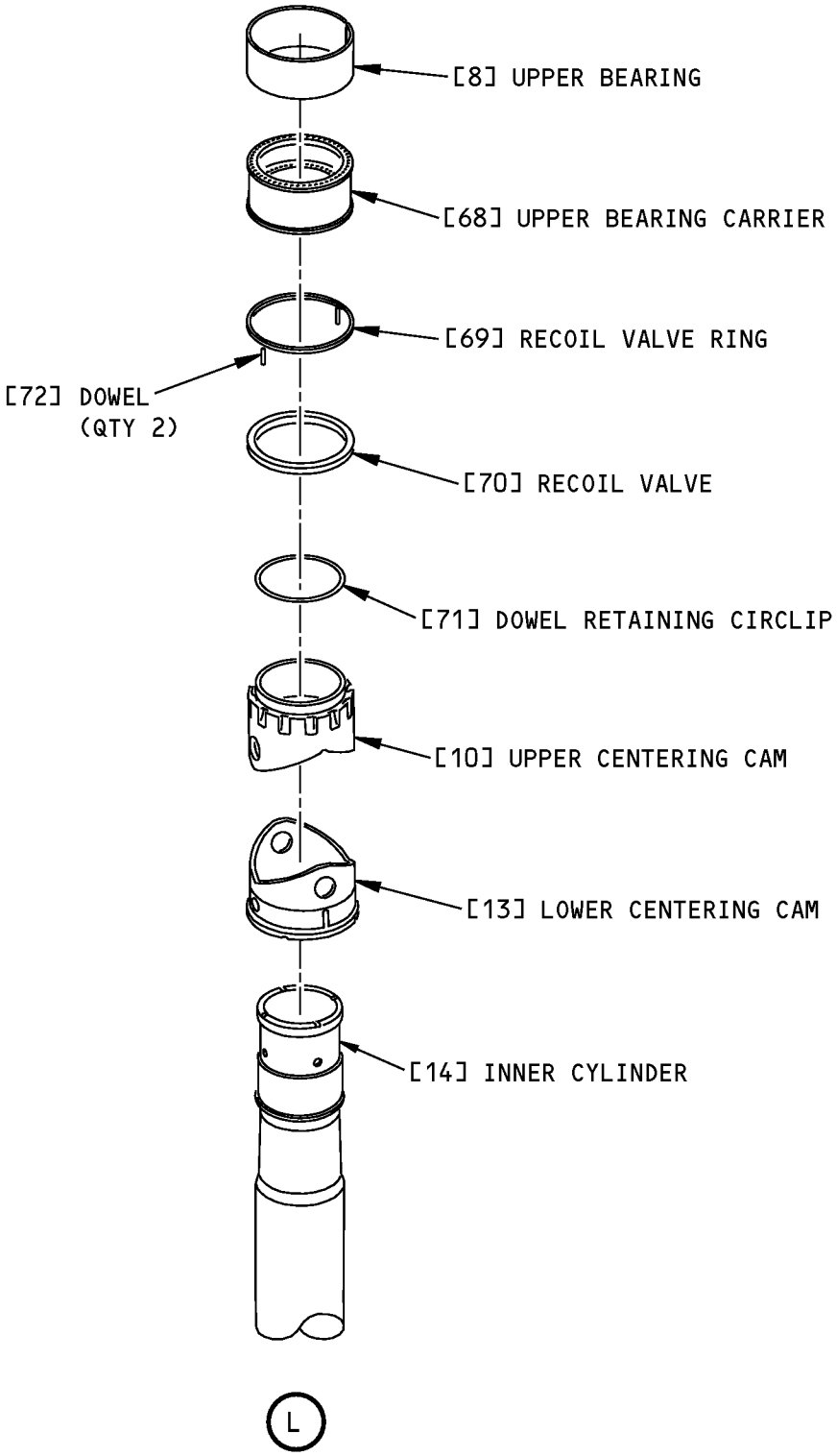
Nose Landing Gear Shock Strut Inner Cylinder Installation
Figure 401 (Sheet 8 of 11)/32-21-24-990-801

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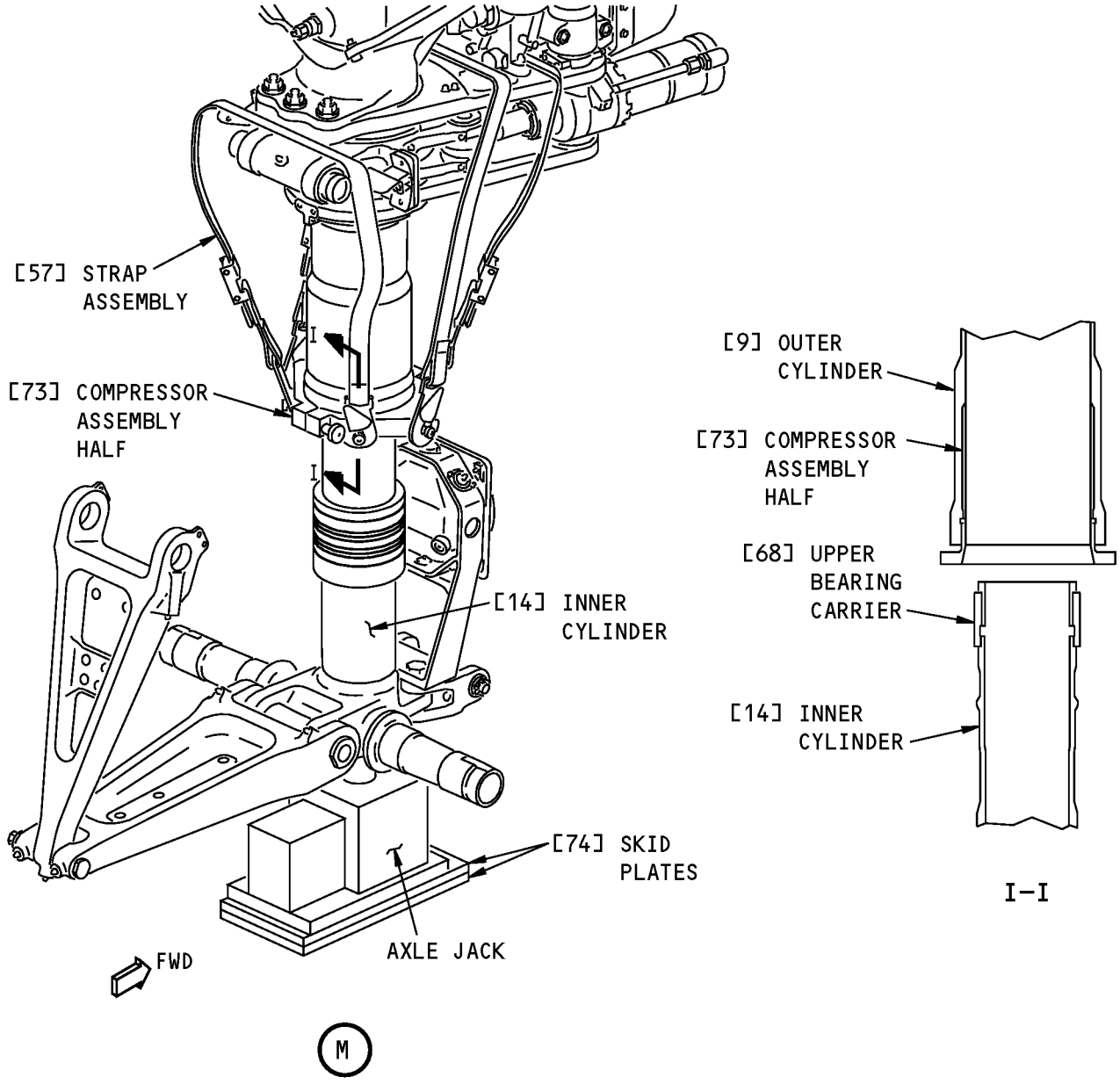
Nose Landing Gear Shock Strut Inner Cylinder Installation
Figure 401 (Sheet 9 of 11)/32-21-24-990-801

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Nose Landing Gear Shock Strut Inner Cylinder Installation
Figure 401 (Sheet 10 of 11)/32-21-24-990-801

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Nose Landing Gear Shock Strut Inner Cylinder Installation
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TASK 32-21-24-400-801

3. NLG Inner Cylinder Installation

(Figure 401)

A. References

Reference	Title
07-11-03-580-802	Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E (P/B 201)
07-11-21-580-802	Lower the Airplane Nose Off of the Jack (P/B 201)
12-15-41-610-802	Nose Landing Gear Shock Strut Servicing (P/B 301)
12-21-21-640-802	Nose Landing Gear Lower End Components Servicing (P/B 301)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-51-00-700-801	Nose Wheel Steering System Test (P/B 501)
33-45-01-960-801	Taxi Light - Lamp Replacement (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1376	Plunger - Scraper (C32016-2 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1377	Reducer - Scraper (C32016-3 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1378	Retainer - Scraper (C32016-4 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1379	Assembly - Scraper Lock (C32016-5 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1382	Guide - Dynamic Seal (C32016-9 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1383	Half - Compressor Assembly (C32016-10 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1384	Assembly - Thread Protector (C32016-11 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

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(Continued)

Reference	Description
SPL-1385	Half - Thread Protector (C32016-21 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1499	Pin - Lock, NLG Towing Lever (Part #: A09003-2, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A09003-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1867	Wrench - Nose Landing Gear Oleo Gland Nut (Part #: C32025-7, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32025-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1895	Equipment - Removal/Installation, Metering Pin and Retainer Ring, NLG (Part #: C32035-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-3927	Assembly - Strap (751069-007 Part of Kit C32017-1 and -43) (Part #: C32017-43, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32017-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
A00226	Compound - Tamper-Proof Putty	BMS8-45
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00013	Grease - Aircraft And Instrument Grease	MIL-PRF-23827 (NATO G-354) (Supersedes MIL-G-23827)
D00467	Fluid - Landing Gear Shock Strut	BMS3-32, Type II
G50136	Paste - Corrosion Inhibiting, Non-drying	BMS 3-38

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
17	Locktab	32-21-00-01-175	HAP 001-013, 015-026, 028-030
		32-21-00-01A-175	HAP 031-054, 101-999

E. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

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F. Install the Components on the Inner Cylinder

NOTE: Do these steps if the inner cylinder you will install does not have these components installed.

SUBTASK 32-21-24-420-001

(1) Install the gland nut [18] on the inner cylinder [14].

NOTE: If the scraper ring [21] comes out of its groove, use the scraper plunger, SPL-1376 [62] and the scraper reducer, SPL-1377 [63] to install the scraper ring [21] back in its groove.

SUBTASK 32-21-24-420-002

(2) Install the seal retainer [19]:

(a) Put the seal retainer [19] in its position on the lower bearing carrier [20].

(b) Align the pin holes in the seal retainer [19] with the pin holes in the lower bearing carrier [20].

(c) Install the bearing carrier pins [22] to connect the seal retainer [19] to the lower bearing carrier [20].

SUBTASK 32-21-24-840-002

WARNING: MAKE SURE A MINIMUM OF TWO PERSON WILL HOLD THE INNER CYLINDER WHEN YOU DO THE SUBSEQUENT STEPS. THE INNER CYLINDER IS HEAVY. INJURY TO PERSONS OR DAMAGE TO THE EQUIPMENT CAN OCCUR IF THE INNER CYLINDER IS NOT HELD PROPERLY.

(3) Hold the inner cylinder [14] in a vertical position.

SUBTASK 32-21-24-480-003

(4) Install the dynamic seal guide, SPL-1382 [66] at the top of the inner cylinder [14].

SUBTASK 32-21-24-420-003

(5) Install the lower bearing carrier [20]:

CAUTION: MAKE SURE THE BACKUP RINGS AND THE SEAL STAY TOGETHER AS YOU MOVE THE LOWER BEARING CARRIER. IF THE BACKUP RINGS AND THE SEAL MOVE APART THEY WILL NOT INSTALL CORRECTLY. THIS CAN CAUSE DAMAGE TO THE SEAL AND THE BACKUP RING.

(a) Put the lower bearing carrier [20] in its position for installation on the inner cylinder [14].

(b) Use rubber mallet and lighty hit the top of the lower bearing carrier [20] until it passes the dynamic seal guide, SPL-1382 [66].

(c) Move the lower bearing carrier [20] down to the bottom of the inner cylinder [14].

SUBTASK 32-21-24-020-019

(6) Remove the dynamic seal guide, SPL-1382 [66] from the inner cylinder [14].

SUBTASK 32-21-24-420-004

(7) Install the following items:

(a) Install the lower centering cam [13] on the inner cylinder [14].

(b) Install the dowels [72] in its position on the inner cylinder [14].

(c) Install the dowel retaining circlip [71] on the inner cylinder [14] and on the dowels [72] to hold the dowels in their place.

(d) Install the upper centering cam [10] on the inner cylinder [14].

(e) Install the upper bearing carrier [68] and the recoil valve [70] on the inner cylinder [14]:

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1) Install the recoil valve [70] on the top of the upper centering cam [10].

2) Install the recoil valve ring [69] on the recoil valve [70] if it was removed.

3) Install the upper bearing carrier [68] on the inner cylinder [14].

(f) Install the upper bearing [8] on the upper bearing carrier [68] halves.

NOTE: If the upper bearing [8] does not fit tightly around the bearing carrier [68], use the compressor assembly half, SPL-1383 [74] to hold the bearing closed during inner cylinder [14] installation.

NOTE: Make an overlap of 1/4 inch to the upper bearing to keep its round shape.

SUBTASK 32-21-24-420-005

(8) Install the metering pin [11] in the inner cylinder [14]:

(a) Install the metering pin [11], retaining ring [67], and nut [12] in the inner cylinder [14].

(b) Use the metering pin and retainer ring equipment, SPL-1895, Nose Landing Gear Metering Pin and Retainer Ring Installation Tool, to loosen the nut [12] and allow the retaining ring [67] to expand into the groove in the inner cylinder.

(c) Use the metering pin and retainer ring equipment, SPL-1895, Nose Landing Gear Metering Pin and Retainer Ring Installation Tool, to tighten the nut [12] to 75-100 foot-pounds (102-136 newton-meters).

G. Install the Inner Cylinder in the Outer Cylinder

SUBTASK 32-21-24-420-006

(1) Install the compressor assembly half, SPL-1383 [74]:

(a) Install the compressor assembly half, SPL-1383 [74], such that it fits at the bottom of the outer cylinder [9].

(b) Install the strap assembly, SPL-3927 [57] around the outer cylinder [9] and connect the ends to the shoulder bolts on the side of the compressor assembly half, SPL-1383 [74].

1) Tighten the strap assembly, SPL-3927 [57].

SUBTASK 32-21-24-420-007

(2) Install the inner cylinder [14] in the outer cylinder [9]:

CAUTION: BE CAREFUL NOT TO CAUSE DAMAGE TO THE INNER CYLINDER OR THE METERING PIN. DAMAGE TO THESE PARTS CAN CAUSE DAMAGE TO THE SEALS.

(a) Put the inner cylinder [14] in position to install in the outer cylinder [9].

(b) Disconnect the hydraulic pump from the retract actuator

(c) Remove the caps from the hydraulic lines

(d) Connect the hydraulic lines to the retract actuator

(e) Move the nose landing gear aft while you put the inner cylinder [14] into the outer cylinder [9].

(f) Push down on the lock link to move it to the locked overcenter position.

(g) Install the downlock pin in the nose landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-21-24-080-001

(3) Remove the compressor assembly half, SPL-1383 [74]:

(a) Remove the strap assembly, SPL-3927 [57] around the outer cylinder [9] and to the shoulder bolts on the side of the compressor assembly half, SPL-1383 [74].

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(b) Remove the compressor assembly half, SPL-1383 [74], from the outer cylinder [9].

SUBTASK 32-21-24-420-008

(4) Carefully put the thread protector half, SPL-1385 [59] between the outer cylinder [9] and the inner cylinder [14].

NOTE: The thread protector will expand and press against the outer cylinder [9], this will protect the static seals from the gland nut threads on the outer cylinder [9].

SUBTASK 32-21-24-480-004

(5) Install the thread protector assembly, SPL-1384 [58]:

(a) Install the thread protector assembly, SPL-1384 [58], such that it fits at the bottom of the outer cylinder [9].

(b) Install the strap assembly, SPL-3927 [57] around the outer cylinder [9] and connect the ends to the shoulder bolts on the side of the thread protector assembly, SPL-1384 [58].

1) Tighten the strap assembly, SPL-3927 [57].

SUBTASK 32-21-24-580-004

(6) Lift the nose landing gear with an axle jack, do this task: Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E, TASK 07-11-03-580-802 until the lower bearing carrier [20] moves into the recess between the inner and outer cylinder [14, 9].

NOTE: Make sure the static seals stay in their positions as the lower bearing carrier [20] is installed.

(a) Continue to lift the nose landing gear with an axle jack, do this task: Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E, TASK 07-11-03-580-802 until the shock strut extension is reduced to three or four inches.

SUBTASK 32-21-24-020-020

(7) Remove the thread protector assembly, SPL-1384 [58], and the thread protector half, SPL-1385 [59].

SUBTASK 32-21-24-020-021

(8) Remove the scraper retainer, SPL-1378 [61], and the scraper lock assembly, SPL-1379 from the gland nut [18].

SUBTASK 32-21-24-640-001

WARNING: DO NOT GET THE CORROSION-INHIBITING COMPOUND ON YOUR SKIN, IN YOUR EYES, OR ON YOUR CLOTHES. THE COMPOUND IS POISONOUS AND FLAMMABLE. USE APPROVED GLOVES, AND EYE PROTECTION. MAKE SURE THAT THERE IS GOOD AIRFLOW IN THE WORK AREA. KEEP THE COMPOUND AWAY FROM SPARKS AND FLAMES. THE COMPOUND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(9) Apply a liberal amount of corrosion inhibiting non-drying paste, G50136 to the threads of the gland nut [18] and the threads of the outer cylinder [9].

SUBTASK 32-21-24-420-009

(10) Install the gland nut [18]:

(a) Move the gland nut [18] up on the inner cylinder [14] and engage the threads to the outer cylinder [9].

(b) Use the wrench, SPL-1867 for the gland nut to tighten the gland nut [18] to 100-125 pound-feet.

SUBTASK 32-21-24-420-010

(11) Install the locktab [17] for the gland nut [18]:

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(a) Apply a thin layer of grease, D00013 to the shank and threads of bolts [15] and washers [16].

(b) Install the locktab [17] in the holes which will put the tab of the locktab [17] as close to a gland nut [18] slot as possible.

NOTE: If it is necessary, loosen the gland nut [18] slightly to align slot in the gland nut [18] with the locktab [17].

(c) Install the bolts [15] and washers [16].

(d) Tighten the bolts [15].

(e) Install lockwire on the bolts [15].

SUBTASK 32-21-24-420-011

(12) Connect the upper torsion link [31]:

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(a) Apply a thin layer of the corrosion inhibiting non-drying paste, G50136, to these items:

1) The threads and thread reliefs of the torsion link pin [24].

2) The threads of the nut [33].

3) The faces of the washer [23].

4) The mating surfaces of the upper torsion link [31].

WARNING: DO NOT GET THE CORROSION-INHIBITING COMPOUND ON YOUR SKIN, IN YOUR EYES, OR ON YOUR CLOTHES. THE COMPOUND IS POISONOUS AND FLAMMABLE. USE APPROVED GLOVES, AND EYE PROTECTION. MAKE SURE THAT THERE IS GOOD AIRFLOW IN THE WORK AREA. KEEP THE COMPOUND AWAY FROM SPARKS AND FLAMES. THE COMPOUND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(b) Remove all unwanted corrosion inhibiting non-drying paste, G50136.

(c) Put the upper torsion link [31] in its position on the collar assembly.

(d) Put the torsion link pin [24] through the upper torsion link [31] and the collar assembly.

(e) Install the washer [23], and the nut [33] on the torsion link pin [24].

(f) Tighten the nut [33] to 250 in-lb (28 N·m) – 300 in-lb (34 N·m) more than the run-on torque.

(g) If it is necessary, loosen the nut [33] to the nearest castellation to align the holes for the pin [34].

(h) Install the pin [34] in the torsion link pin [24].

SUBTASK 32-21-24-020-022

(13) Connect the sensor bracket [36] to the upper torsion link [31]:

(a) Apply a thin layer of the corrosion inhibiting non-drying paste, G50136 (preferred) or corrosion preventive compound, C00913 (alternate), to these items:

1) The threads and thread reliefs of the bolt [37]

2) The threads of the nuts [40]

3) The faces of the washers [38 and 39]

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(b) Remove all unwanted corrosion inhibiting non-drying paste, G50136 or corrosion preventive compound, C00913.

(c) If a string is attached to the sensor bracket [36], and the outer cylinder, remove the string

(d) Put the sensor bracket [36] in its position on the upper torsion link [31]

(e) Install the washer [38] on the bolt [37]

(f) Put the bolt [37] through the upper torsion link [31], and the sensor brackets [36]

(g) Install the washers [39], and the nut [40] on the bolt [37]

(h) Tighten the nut [40].

SUBTASK 32-21-24-020-023

(14) Connect the box assembly [32] to the upper torsion link [31]:

WARNING: DO NOT GET THE CORROSION-INHIBITING COMPOUND ON YOUR SKIN, IN YOUR EYES, OR ON YOUR CLOTHES. THE COMPOUND IS POISONOUS AND FLAMMABLE. USE APPROVED GLOVES, AND EYE PROTECTION. MAKE SURE THAT THERE IS GOOD AIRFLOW IN THE WORK AREA. KEEP THE COMPOUND AWAY FROM SPARKS AND FLAMES. THE COMPOUND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(a) Apply a thin layer of the corrosion inhibiting non-drying paste, G50136 (preferred) or corrosion preventive compound, C00913 (alternate), to these items:

1) The threads and shank of the bolt [46]

2) The threads of the nut [49]

3) The faces of the washers [47 and 48]

WARNING: DO NOT GET THE CORROSION-INHIBITING COMPOUND ON YOUR SKIN, IN YOUR EYES, OR ON YOUR CLOTHES. THE COMPOUND IS POISONOUS AND FLAMMABLE. USE APPROVED GLOVES, AND EYE PROTECTION. MAKE SURE THAT THERE IS GOOD AIRFLOW IN THE WORK AREA. KEEP THE COMPOUND AWAY FROM SPARKS AND FLAMES. THE COMPOUND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(b) Remove all unwanted corrosion inhibiting non-drying paste, G50136 or corrosion preventive compound, C00913.

(c) If a string is attached to the box assembly [32], and the outer cylinder, remove the string

(d) Put the box assembly [32] in its position on the upper torsion link [31]

(e) Install the washer [47] on the bolt [46]

(f) Put the bolt [46] through the upper torsion link [31], and the the box assembly [32].

(g) Install the washer [48], and the nut [49] on the bolt [46].

SUBTASK 32-21-24-420-012

(15) Install the clamps that hold the electrical conduit [54] to the bracket on the lower torsion link [53]:

(a) Put the electrical conduit [54] in its position on the bracket.

(b) Install the screw [50], washer [51], and nut [52] to attach the clamps to the bracket.

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SUBTASK 32-21-24-420-013

(16) Install the screw [28], washers [26, 27], and nuts [25] to connect the electrical conduit to the inner cylinder [14].

SUBTASK 32-21-24-420-014

(17) Install the screw [42], and nut clip [43] to connect the electrical conduit [41] and the clamp [44] to the bracket [45].

SUBTASK 32-21-24-420-015

(18) Connect the electrical conduit plug to the taxi light on the inner cylinder [14].

SUBTASK 32-21-24-980-001

(19) Move the inner cylinder [14] from the fully extended to the fully compressed position.

NOTE: Make sure the total travel is 15.50 in. (39.4 cm).

SUBTASK 32-21-24-860-002

(20) Remove the NLG towing lever pin, SPL-1499 from the towing lever.

SUBTASK 32-21-24-420-016

(21) Install the oil charging valve [6]:

(a) Remove and discard the old packing [7].

(b) Apply a thin layer of fluid, D00467 on the new packing [7].

(c) Install the new packing [7] on the oil charging valve [6].

(d) Install the oil charging valve [6] and tighten it to 22 ft-lb (30 N·m) – 25 ft-lb (34 N·m).

(e) Install the cap assy [5] loosely.

NOTE: You will tighten it in the shock strut servicing task.

(f) Apply compound, A00226 to the oil charging valve [6].

NOTE: Apply it to make sure the seal made by the compound, A00226 must break if the valve [6] becomes loose.

SUBTASK 32-21-24-710-001

(22) Do a test of the taxi light on the nose gear. To do this, do this task: Taxi Light - Lamp Replacement, TASK 33-45-01-960-801

SUBTASK 32-21-24-600-001

(23) Do this task: Nose Landing Gear Shock Strut Servicing, TASK 12-15-41-610-802.

SUBTASK 32-21-24-420-017

(24) Make sure the swivel nut [3] is tightened to 5 ft-lb (7 N·m) – 7 ft-lb (9 N·m) and the cap assy [1] is installed for the gas valve [2].

SUBTASK 32-21-24-710-002

(25) Do a test on the steering system of the nose wheel. To do this, do this task: Nose Wheel Steering System Test, TASK 32-51-00-700-801.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 32-21-24-580-005

(1) Do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

SUBTASK 32-21-24-640-002

(2) Lubricate the lube fittings on the upper torsion link [31], do this task: Nose Landing Gear Lower End Components Servicing, TASK 12-21-21-640-802.

——————— END OF TASK ———————

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NOSE LANDING GEAR TORSION LINKS - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the upper torsion link (referred to as the link assembly [15]) from the nose landing gear

(2) An installation of the upper torsion link on the nose landing gear.

(3) A removal of the lower torsion link (referred to as the link assembly [11]) from the nose landing gear

(4) An installation of the lower torsion link on the nose landing gear.

(5) The disconnection of the torsion links of the nose landing gear

(6) The connection of the torsion links of the nose landing gear.

TASK 32-21-31-000-801

2. Nose Landing Gear Upper Torsion Link Removal

(Figure 401)

A. General

(1) This procedure supplies instructions to remove the upper torsion link.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
713	Nose Landing Gear

D. Prepare for the Removal

SUBTASK 32-21-31-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

E. Nose Landing Gear Upper Torsion Link Removal

SUBTASK 32-21-31-020-001

(1) Disconnect the box assembly [38] from the upper torsion link assembly [15]:

NOTE: Disconnect the box assembly [38] with the electrical conduits attached.

(a) Remove the screws [44] and washers [45] and remove the cover [46] from the box assembly [38].

(b) Remove the nuts [33] and the washers [34] from the bolts [36].

(c) Remove the bolts [36] and the washers [35] from the upper torsion link assembly [15].

(d) Remove the washers [35] from the bolts [36].

SUBTASK 32-21-31-020-002

(2) Remove the clamps [25] that hold the electrical conduits [22] to the bracket [26]:

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(a) Remove the screws [23] that hold the clamps [25] to the bracket [26].

(b) Remove the clamps [25] and the nut clips [24] from the bracket [26].

SUBTASK 32-21-31-020-003

(3) Remove the bracket [26] from the upper torsion link assembly [15]:

(a) Remove the nuts [43] and the washers [42] from the bolts [39].

(b) Remove the bracket [26] and the washers [41] from the bolts [39].

(c) Remove the bolts [39] and the washers [40] from the upper torsion link assembly [15].

(d) Remove the washers [40] from the bolts [39].

SUBTASK 32-21-31-020-004

(4) Disconnect the sensor brackets [17] from the upper torsion link assembly [15]:

NOTE: Disconnect the brackets [17] with the sensors [16] and the electrical conduits [22] attached.

(a) Remove the nuts [21] and the washers [20] from the bolts [18].

(b) Remove the bolts [18] that hold the sensor brackets [17] to the upper torsion link assembly [15].

(c) Remove the washers [19] from the bolts [18].

(d) Isolate the sensor brackets [17] from the upper torsion link assembly [15].

1) If it is necessary, use a string to hold the sensor brackets [17] and attach the string over the top of the outer cylinder.

SUBTASK 32-21-31-480-002

(5) Use a rope to hold the upper end of the lower torsion link assembly [11] to the outer cylinder.

NOTE: This task will hold the lower torsion link assembly [11] in its position when you remove and install the upper torsion link assembly [15] in the subsequent steps.

SUBTASK 32-21-31-020-005

(6) Remove the upper torsion link assembly [15] from the nose landing gear:

(a) Remove the cotter pin [14], nut [13] and the washer [12] from the apex pin [6].

(b) Remove the apex pin [6] to disconnect the upper torsion link assembly [15] from the lower torsion link assembly [11].

(c) Remove the cotter pin [2], nut [1] and the washer [3] from the torsion link pin [5].

(d) Remove the torsion link pin [5] to disconnect the upper torsion link assembly [15] from the steering collar [4].

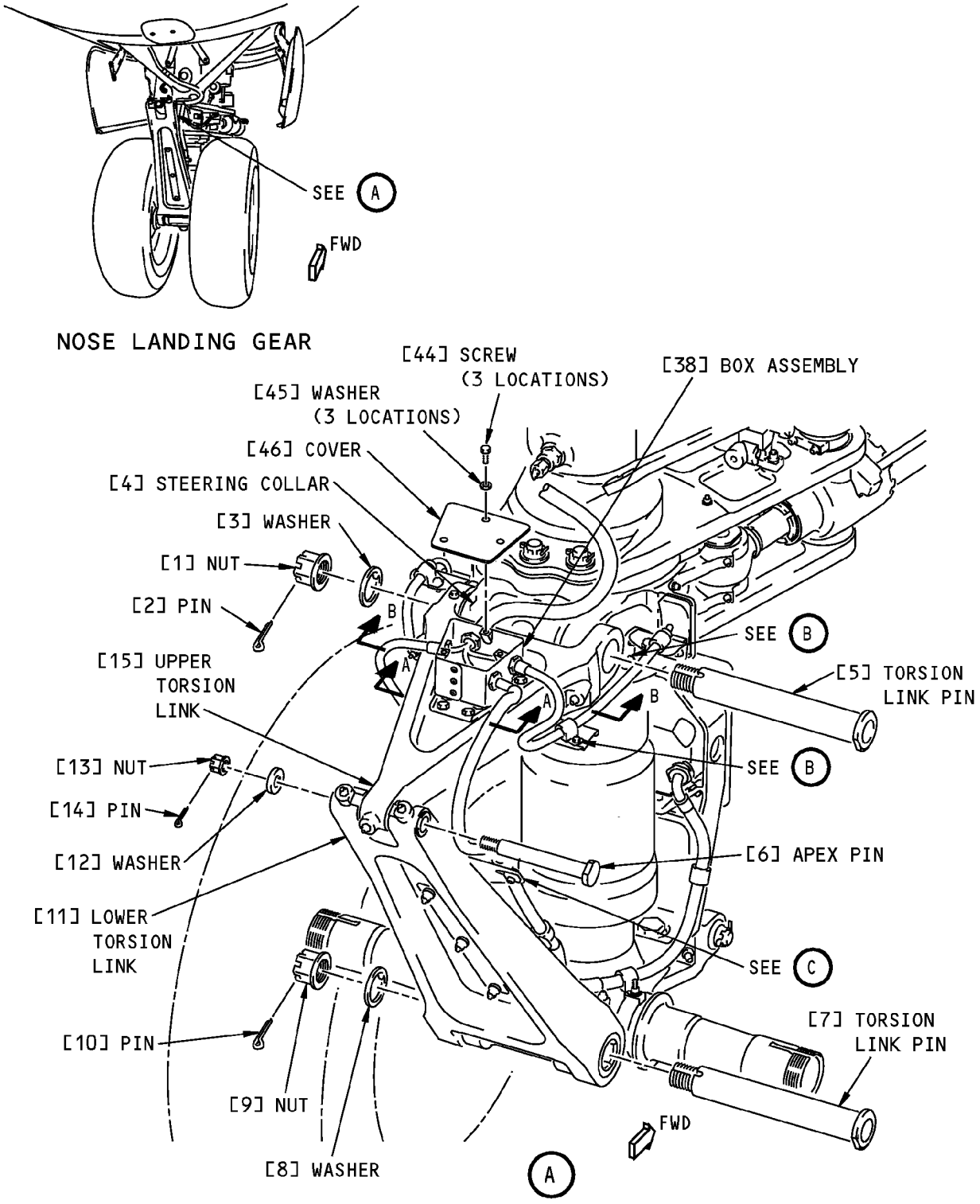
(e) Isolate the box assembly [38] from the upper torsion link assembly [15].

1) If it is necessary use a string to hold the box assembly [38] and attach the string to the outer cylinder.

(f) Remove the upper torsion link assembly [15] from the airplane.

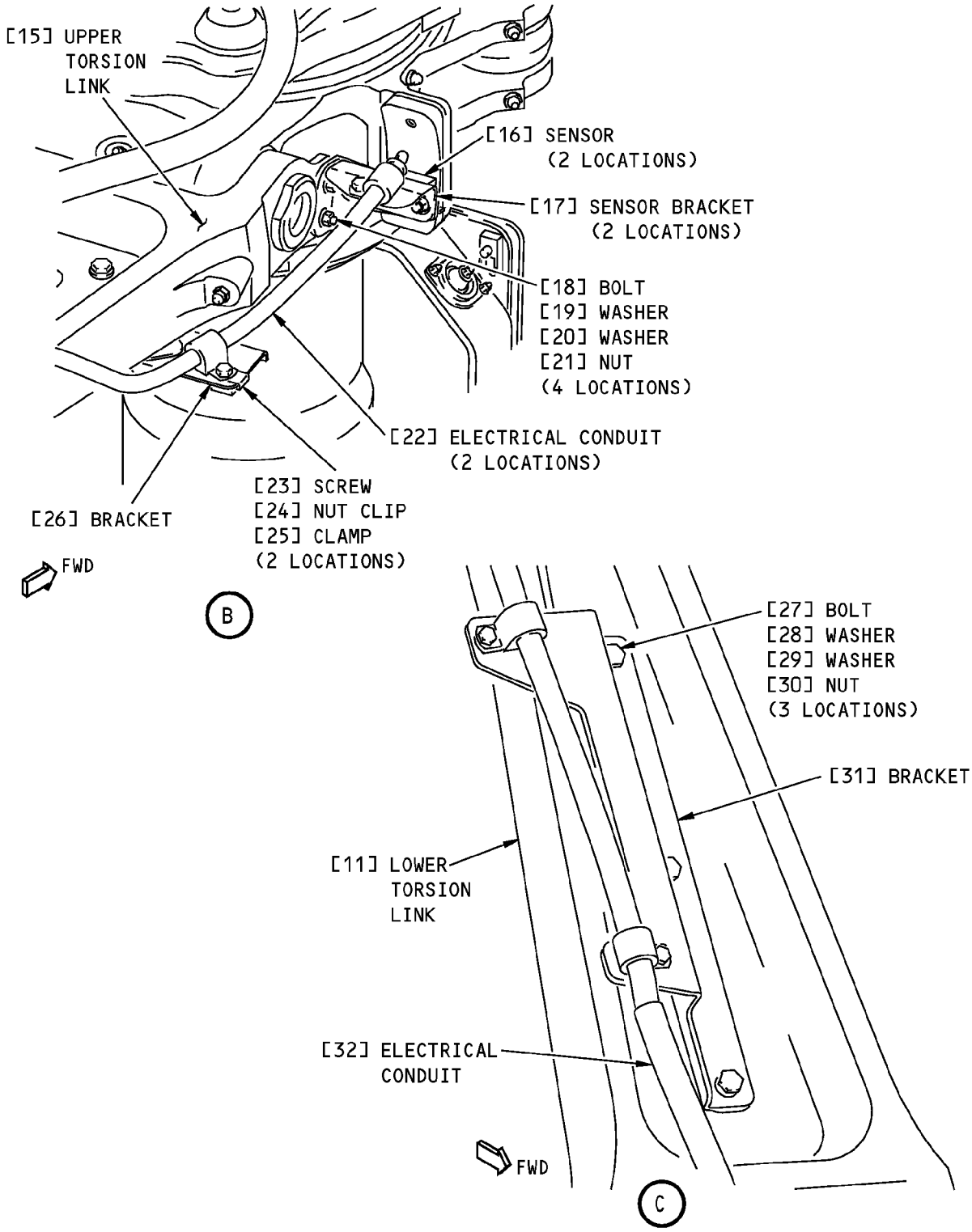
END OF TASK

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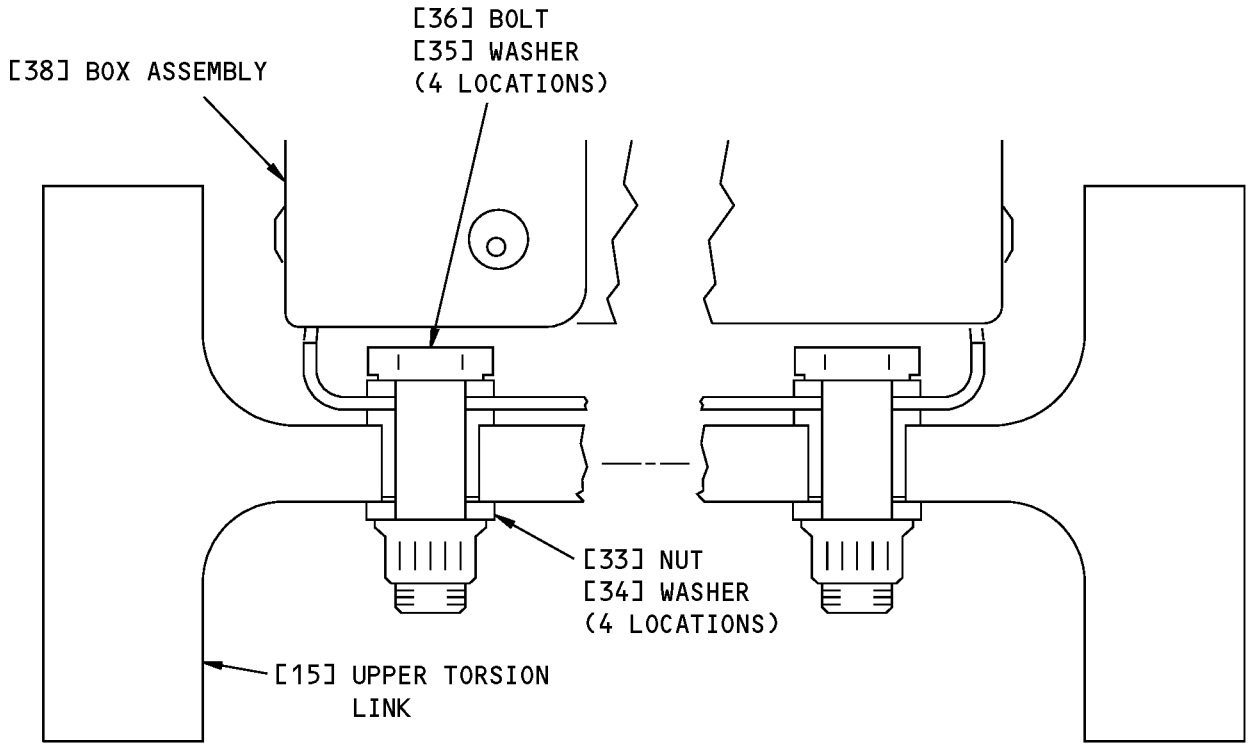
Nose Landing Gear Torsion Links Installation
Figure 401 (Sheet 1 of 3)/32-21-31-990-801

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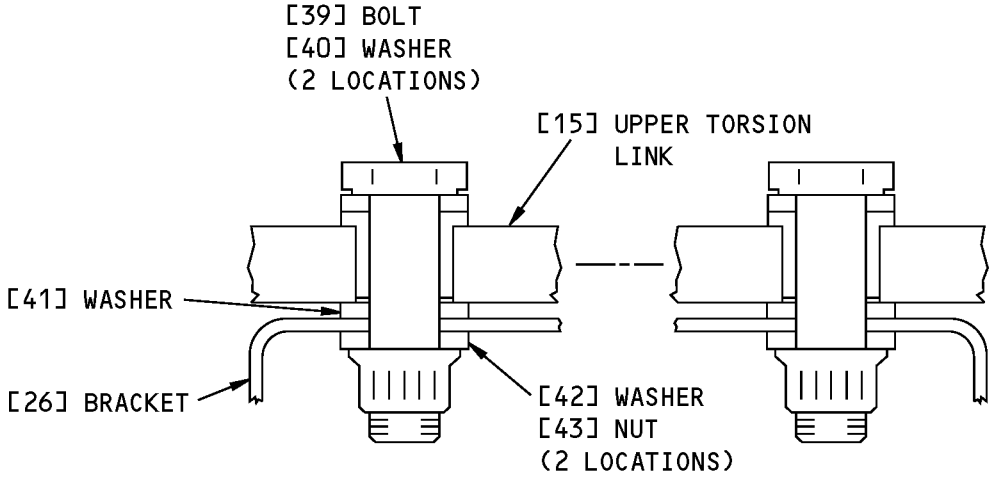


Nose Landing Gear Torsion Links Installation
Figure 401 (Sheet 2 of 3)/32-21-31-990-801

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A–A



B–B

Nose Landing Gear Torsion Links Installation
Figure 401 (Sheet 3 of 3)/32-21-31-990-801

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TASK 32-21-31-400-801

3. Nose Landing Gear Upper Torsion Link Installation

(Figure 401)

A. General

(1) This procedure supplies instructions to install the upper torsion link.

B. References

Reference	Title
12-21-21-640-802	Nose Landing Gear Lower End Components Servicing (P/B 301)

C. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27

D. Location Zones

Zone	Area
713	Nose Landing Gear

E. Nose Landing Gear Upper Torsion Link Installation

SUBTASK 32-21-31-420-001

(1) Connect the upper torsion link assembly [15] to the steering collar [4]:

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(a) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

1) The threads and thread reliefs of the torsion link pin [5]
2) The threads of the nut [1]
3) The faces of the washer [3]
4) The mating surfaces of the upper torsion link assembly [15] and the steering collar [4].

(b) Remove any excess corrosion preventive compound, C00913.

(c) Put the upper torsion link assembly [15] in its position on the steering collar [4].

(d) Put the torsion link pin [5] through the upper torsion link assembly [15] and the steering collar [4].

(e) Install the washer [3] and the nut [1] on the torsion link pin [5].

(f) Tighten the nut [1] to 250-300 pound-inches (23-34 newton-meters) more than the run-on torque.

(g) If it is necessary, loosen the nut [1] to the nearest castellation to align the holes for the cotter pin [2].

(h) Install the cotter pin [2] in the torsion link pin [5].

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SUBTASK 32-21-31-420-002

(2) Connect the upper torsion link assembly [15] to the lower torsion link assembly [11]:

HAP 002-005

(a) Make sure the apex pin [6] is chrome plated under the head of the pin, replace if needed.

HAP ALL

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(b) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

1) The threads and thread reliefs of the apex pin [6]
2) The threads of the nut [13]
3) The faces of the washer [12]
4) The mating surfaces of the upper torsion link assembly [15] and the lower torsion link assembly [11].

(c) Remove any excess corrosion preventive compound, C00913.

(d) Align the apex holes in the upper torsion link assembly [15], and the lower torsion link assembly [11].

(e) Put the apex pin [6] through the lower torsion link assembly [11] and the upper torsion link assembly [15].

(f) Install the washer [12] and the nut [13] on the apex pin [6].

(g) Tighten the nut [13] to 160 in-lb (18.1 N·m) – 190 in-lb (21.5 N·m) more than the run-on torque.

(h) Install the cotter pin [14] in the apex pin [6]. If it is necessary, loosen the nut [13] to the nearest castellation to align the holes for the cotter pin [14].

SUBTASK 32-21-31-080-001

(3) Remove the rope that holds the upper end of the lower torsion link assembly [11] to the outer cylinder.

SUBTASK 32-21-31-020-006

(4) Connect the sensor brackets [17] to the upper torsion link assembly [15]:

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(a) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

1) The threads and thread reliefs of the bolts [18]
2) The threads of the nuts [21]

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3) The faces of the washers [19] and [20]

(b) Remove any excess corrosion preventive compound, C00913.

(c) If a string is attached to the sensor brackets [17] and the outer cylinder, remove the string.

(d) Put the sensor bracket [17] in its position on the upper torsion link assembly [15].

(e) Install the washers [19] on the bolts [18].

(f) Put the bolts [18] through the upper torsion link assembly [15], and the sensor brackets [17].

(g) Install the washers [20] and the nuts [21] on the bolts [18].

(h) Tighten the nuts [21].

SUBTASK 32-21-31-020-007

(5) Connect the box assembly [38] to the upper torsion link assembly [15]:

WARNING: USE NITRILE GLOVES FOR PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(a) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

1) The threads and shank of the bolts [36]

2) The threads of the nuts [33]

3) The faces of the washers [34] and [35].

(b) Remove any excess corrosion preventive compound, C00913.

(c) If a string is attached to the box assembly [38] and the outer cylinder, remove the string.

(d) Put the box assembly [38] in its position on the upper torsion link assembly [15].

(e) Install the washers [35] on the bolts [36].

(f) Put the bolts [36] through the box assembly [38] and the upper torsion link assembly [15].

(g) Install the washers [34] and the nuts [33] on the bolts [36].

(h) Install the cover [46] on the box assembly [38].

(i) Install the screws [44] and the washers [45].

SUBTASK 32-21-31-020-008

(6) Install the bracket [26] on the upper torsion link assembly [15]:

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(a) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

1) The threads and shank of the bolts [39]

2) The threads of the nuts [43]

3) The faces of the washers [40], [41] and [42].

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(b) Remove any excess corrosion preventive compound, C00913.

(c) Install the washers [40] on the bolts [39].

(d) Put the bolts [39] through the upper torsion link assembly [15], washers [41] and the bracket [26].

(e) Install the washers [42], and the nuts [43] on the bolts [39].

SUBTASK 32-21-31-420-003

(7) Install the clamps [25] that hold the electrical conduits [22] to the bracket [26]:

(a) Put the electrical conduit [22] in its position on the bracket [26].

(b) Install the clamps [25] and the nut clips [24] on the bracket [26].

(c) Put the screws [23] through the clamps [25], nut clips [24] and the bracket [26].

F. Put the Airplane Back to Its Usual Condition

SUBTASK 32-21-31-640-001

(1) Lubricate the lube fittings on the upper torsion link assembly [15], do this task: Nose Landing Gear Lower End Components Servicing, TASK 12-21-21-640-802.

——————— END OF TASK ———————

TASK 32-21-31-000-802

4. Nose Landing Gear Lower Torsion Link Removal

(Figure 401)

A. General

(1) This procedure supplies instructions to remove the lower torsion link.

B. References

Reference	Title
07-11-03-580-802	Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-45-21-000-801	Nose Landing Gear Wheel and Tire Assembly Removal (P/B 401)

C. Location Zones

Zone	Area
713	Nose Landing Gear

D. Prepare for the Removal

SUBTASK 32-21-31-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-21-31-580-001

(2) Lift the nose landing gear with an axle jack, do this task: Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E, TASK 07-11-03-580-802.

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SUBTASK 32-21-31-010-001

(3) Remove the left or right wheel and tire of the nose landing gear, do this task: Nose Landing Gear Wheel and Tire Assembly Removal, TASK 32-45-21-000-801.

E. Nose Landing Gear Lower Torsion Link Removal

SUBTASK 32-21-31-020-009

(1) Disconnect the bracket [31] from the lower torsion link assembly [11]:

NOTE: Disconnect the bracket [31] with the electrical conduits [32] attached.

(a) Remove the nuts [30] and the washers [29] from the bolts [27].

(b) Remove the bolts [27] and the washers [28] from the bracket [31] and the lower torsion link assembly [11].

(c) Remove the washers [28] from the bolts [27].

SUBTASK 32-21-31-480-004

(2) Use a rope to hold the aft end of the upper torsion link assembly [15] to the outer cylinder.

NOTE: This step will hold the upper torsion link assembly [15] in its position when you remove and install the lower torsion link assembly [11] in the subsequent steps.

SUBTASK 32-21-31-020-010

(3) Remove the lower torsion link assembly [11] from the nose landing gear:

(a) Remove the cotter pin [14], nut [13] and the washer [12] from the apex pin [6].

(b) Remove the apex pin [6] to disconnect the lower torsion link assembly [11] from the upper torsion link assembly [15].

(c) Remove the cotter pin [10], nut [9] and the washer [8] from the torsion link pin [7].

(d) Remove the torsion link pin [7] to disconnect the lower torsion link assembly [11] from the inner cylinder.

(e) Remove the lower torsion link assembly [11] from the airplane.

——————— END OF TASK ———————

TASK 32-21-31-400-802

5. Nose Landing Gear Lower Torsion Link Installation

(Figure 401)

A. General

(1) This procedure supplies instructions to install the lower torsion link.

B. References

Reference	Title
07-11-21-580-802	Lower the Airplane Nose Off of the Jack (P/B 201)
12-21-21-640-802	Nose Landing Gear Lower End Components Servicing (P/B 301)
32-45-21-400-801	Nose Landing Gear Wheel and Tire Assembly Installation (P/B 401)

C. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27

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(Continued)

Reference	Description	Specification
D00633	Grease - Aircraft General Purpose	BMS3-33

D. Location Zones

Zone	Area
713	Nose Landing Gear

E. Nose Landing Gear Lower Torsion Link Installation

SUBTASK 32-21-31-420-004

(1) Connect the lower torsion link assembly [11] to the inner cylinder:

(a) Lubricate the chrome plated surfaces of the torsion link pin [7], lower torsion link assembly [11], and the mating surfaces of the inner cylinder with grease, D00633.

(b) Remove any excess grease, D00633.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(c) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to the threads of the nut [9] and the faces of the washer [8].

(d) Remove any excess corrosion preventive compound, C00913.

(e) Put the lower torsion link assembly [11] in its position on the inner cylinder.

(f) Put the torsion link pin [7] through the lower torsion link assembly [11] and the inner cylinder.

(g) Install the washer [8] and the nut [9] on the torsion link pin [7].

(h) Tighten the nut [9] to 250 in-lb (28.2 N·m) – 300 in-lb (33.9 N·m) more than the run-on torque.

(i) If it is necessary, loosen the nut [9] to the nearest castellation to align the holes for the cotter pin [10].

(j) Install the cotter pin [10] in the torsion link pin [7].

SUBTASK 32-21-31-420-005

(2) Connect the lower torsion link assembly [11] to the upper torsion link assembly [15]:

HAP 002-005

(a) Make sure the apex pin [6] is chrome plated under the head of the pin, replace if needed.

HAP ALL

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(b) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

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1) The threads and thread reliefs of the apex pin [6]
2) The threads of the nut [13]
3) The faces of the washer [12]
4) The mating surfaces of the lower torsion link assembly [11] and the upper torsion link assembly [15].

(c) Remove any excess corrosion preventive compound, C00913.

(d) Align the apex holes in the lower torsion link assembly [11] and the upper torsion link assembly [15].

(e) Put the apex pin [6] through the lower torsion link assembly [11] and the upper torsion link assembly [15].

(f) Install the washer [12] and the nut [13] on the apex pin [6].

(g) Tighten the nut [13] to 160 in-lb (18.1 N·m) – 190 in-lb (21.5 N·m) more than the run-on torque.

(h) Install the cotter pin [14] in the apex pin [6]. If it is necessary, loosen the nut [13] to the nearest castellation to align the holes for the cotter pin [14].

SUBTASK 32-21-31-420-006

(3) Connect the bracket [31] to the lower torsion link assembly [11]:

(a) Align the holes in the bracket [31] to the holes in the lower torsion link assembly [11].

(b) Install the washers [28] on the bolts [27].

(c) Put the bolts [27] through the bracket [31] and the lower torsion link assembly [11].

(d) Install the washers [29] and the nuts [30] on the bolts [27].

F. Put the Airplane Back to Its Usual Condition

SUBTASK 32-21-31-420-007

(1) Do this task: Nose Landing Gear Wheel and Tire Assembly Installation, TASK 32-45-21-400-801.

SUBTASK 32-21-31-080-002

(2) lower the axle jack for the nose landing gear and remove the jack, do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802

SUBTASK 32-21-31-640-002

(3) Lubricate the lube fittings on the lower torsion link assembly [11], do this task: Nose Landing Gear Lower End Components Servicing, TASK 12-21-21-640-802.

——————— END OF TASK ———————

TASK 32-21-31-000-803

6. Nose Landing Gear Torsion Link Disconnection

(Figure 401)

A. General

(1) This procedure supplies instructions to disconnect the torsion links.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

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C. Location Zones

Zone	Area
713	Nose Landing Gear

D. Prepare for the Disconnection

SUBTASK 32-21-31-480-005

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

E. Nose Landing Gear Torsion Link Disconnection

SUBTASK 32-21-31-020-011

(1) Disconnect the apex joint of the upper torsion link assembly [15] and the lower torsion link assembly [11]:

(a) Remove the cotter pin [14], nut [13] and the washer [12] from the apex pin [6].

(b) Remove the apex pin [6] to disconnect the lower torsion link assembly [11] from the upper torsion link assembly [15].

———————— END OF TASK ————————

TASK 32-21-31-400-803

7. Nose Landing Gear Torsion Link Connection

(Figure 401)

A. General

(1) This procedure supplies instructions to connect the torsion links.

B. References

Reference	Title
12-21-21-640-802	Nose Landing Gear Lower End Components Servicing (P/B 301)

C. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27

D. Location Zones

Zone	Area
713	Nose Landing Gear

E. Nose Landing Gear Torsion Link Connection

SUBTASK 32-21-31-420-008

(1) Connect the apex joint of the upper torsion link assembly [15], and the lower torsion link assembly [11]:

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HAP 002-005

(a) Make sure the apex pin [6] is chrome plated under the head of the pin, replace if needed.

HAP ALL

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(b) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

1) The threads and thread reliefs of the apex pin [6]
2) The threads of the nut [13]
3) The faces of the washer [12]
4) The mating surfaces of the upper torsion link assembly [15] and the lower torsion link assembly [11].

(c) Remove any excess corrosion preventive compound, C00913.

(d) Align the apex holes in the upper torsion link assembly [15] and the lower torsion link assembly [11].

(e) Put the apex pin [6] through the lower torsion link assembly [11] and the upper torsion link assembly [15].

(f) Install the washer [12] and the nut [13] on the apex pin [6].

(g) Tighten the nut [13] to 160 in-lb (18.1 N·m) – 190 in-lb (21.5 N·m) more than the run-on torque.

(h) Install the cotter pin [14] in the apex pin [6]. If it is necessary, loosen the nut [13] to the nearest castellation to align the holes for the cotter pin [14].

F. Put the Airplane Back to Its Usual Condition

SUBTASK 32-21-31-640-003

(1) Lubricate the lube fittings on the apex joint of the lower torsion link assembly [11] and the upper torsion link assembly [15], do this task: Nose Landing Gear Lower End Components Servicing, TASK 12-21-21-640-802.

END OF TASK

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NOSE LANDING GEAR TORSION LINKS - INSPECTION/CHECK

1. General

A. This task supplies the data for a dimensional inspection of the torsion links for the nose landing gear.

B. This task does not remove or install the torsion links. Refer to the Nose Landing Gear Torsion Links - Removal/Installation for procedures to remove and install the torsion links of the nose landing gear.

TASK 32-21-31-200-801

2. Nose Landing Gear Torsion Links Inspection

(Figure 601)

A. General

(1) This procedure gives wear limits and repair data for the torsion links of the nose landing gear.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-21-31-000-801	Nose Landing Gear Upper Torsion Link Removal (P/B 401)
32-21-31-000-802	Nose Landing Gear Lower Torsion Link Removal (P/B 401)
32-21-31-400-801	Nose Landing Gear Upper Torsion Link Installation (P/B 401)
32-21-31-400-802	Nose Landing Gear Lower Torsion Link Installation (P/B 401)

C. Location Zones

Zone	Area
713	Nose Landing Gear

D. Procedure

SUBTASK 32-21-31-480-006

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-21-31-020-012

(2) To remove or to get access to the torsion links of the nose landing gear do the tasks that follows (Figure 601):

(a) Do this task: Nose Landing Gear Upper Torsion Link Removal, TASK 32-21-31-000-801.

(b) Do this task: Nose Landing Gear Lower Torsion Link Removal, TASK 32-21-31-000-802.

SUBTASK 32-21-31-020-013

(3) Use these tools to check for wear on the parts of the nose landing gear torsion links:

(a) 0-1 inch (0-25 mm) micrometer.

(b) 1-2 inch (25-51 mm) micrometer.

SUBTASK 32-21-31-020-014

(4) Examine the parts of the nose landing gear torsion links for worn areas:

(a) Remove the parts to be checked.

(b) Measure the parts.

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(c) Compare the dimensions you measured with the permitted wear dimensions in (Table 601).

(d) If the parts are not in the tolerance, replace or repair the parts.

Table 601/32-21-31-993-803

NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MAXIMUM SERVICE DIAMETRIC CLEARANCE
#1 BUSHING	I.D.	1.2500 in (31.75) mm	1.2512 in (31.78) mm	1.2544 in (31.86) mm	0.0049 in (0.12) mm
#1 PIN	O.D.	1.2485 in (31.71) mm	1.2495 in (31.73) mm	1.2463 in (31.65) mm	
#2 BUSHING	I.D.	1.2500 in (31.75) mm	1.2512 in (31.78) mm	1.2544 in (31.86) mm	0.0049 in (0.12) mm
#2 PIN	O.D.	1.2485 in (31.71) mm	1.2495 in (31.73) mm	1.2463 in (31.65) mm	
#3 BUSHING	I.D.	0.6250 in (15.86) mm	0.6258 in (15.90) mm	0.6284 in (15.96) mm	0.0039 in (0.10) mm
#3 PIN	O.D.	0.6235 in (15.84) mm	0.6245 in (15.86) mm	0.6219 in (15.80) mm	
#4 BUSHING	I.D.	0.6250 in (15.86) mm	0.6258 in (15.90) mm	0.6284 in (15.96) mm	0.0039 in (0.10) mm
#4 PIN	O.D.	0.6235 in (15.84) mm	0.6245 in (15.86) mm	0.6219 in (15.80) mm	
#5 BUSHING	I.D.	1.2500 in (31.75) mm	1.2512 in (31.78) mm	1.2544 in (31.86) mm	0.0049 in (0.12) mm
#5 PIN	O.D.	1.2485 in (31.71) mm	1.2495 in (31.73) mm	1.2463 in (31.65) mm	
#6 BUSHING	I.D.	1.2500 in (31.75) mm	1.2512 in (31.78) mm	1.2544 in (31.86) mm	0.0049 in

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(Continued)

NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MAXIMUM SERVICE DIAMETRIC CLEARANCE
#6 PIN	O.D.	1.2485 in (31.71) mm	1.2495 in (31.73) mm	1.2463 in (31.65) mm	(0.12) mm
#7 TORSION LINK BUSHING	I.D.	5.7550 in (146.18) mm	5.7570 in (146.23) mm	5.7640 in (146.41) mm	0.010 in (0.25) mm
#7 STEERING COLLAR BUSHING	O.D.	5.7520 in (146.10) mm	5.7540 in (146.15) mm	5.7470 in (145.97) mm	
#8 TORSION LINK BUSHING	I.D.	5.2500 in (133.35) mm	5.2520 in (133.40) mm	5.2590 in (133.58) mm	0.010 in (0.25) mm
#8 INNER CYLINDER BUSHING	O.D.	5.2470 in (133.27) mm	5.2490 in (133.32) mm	5.2420 in (133.15) mm	
#9 LOWER TORSION LINK BUSHING	I.D.	1.3160 in (33.43) mm	1.3180 in (33.48) mm	1.3250 in (33.65) mm	0.010 in (0.25) mm
#9 UPPER TORSION LINK BUSHING	O.D.	1.3130 in (33.35) mm	1.3150 in (33.40) mm	1.3080 in (33.22) mm	

SUBTASK 32-21-31-020-015

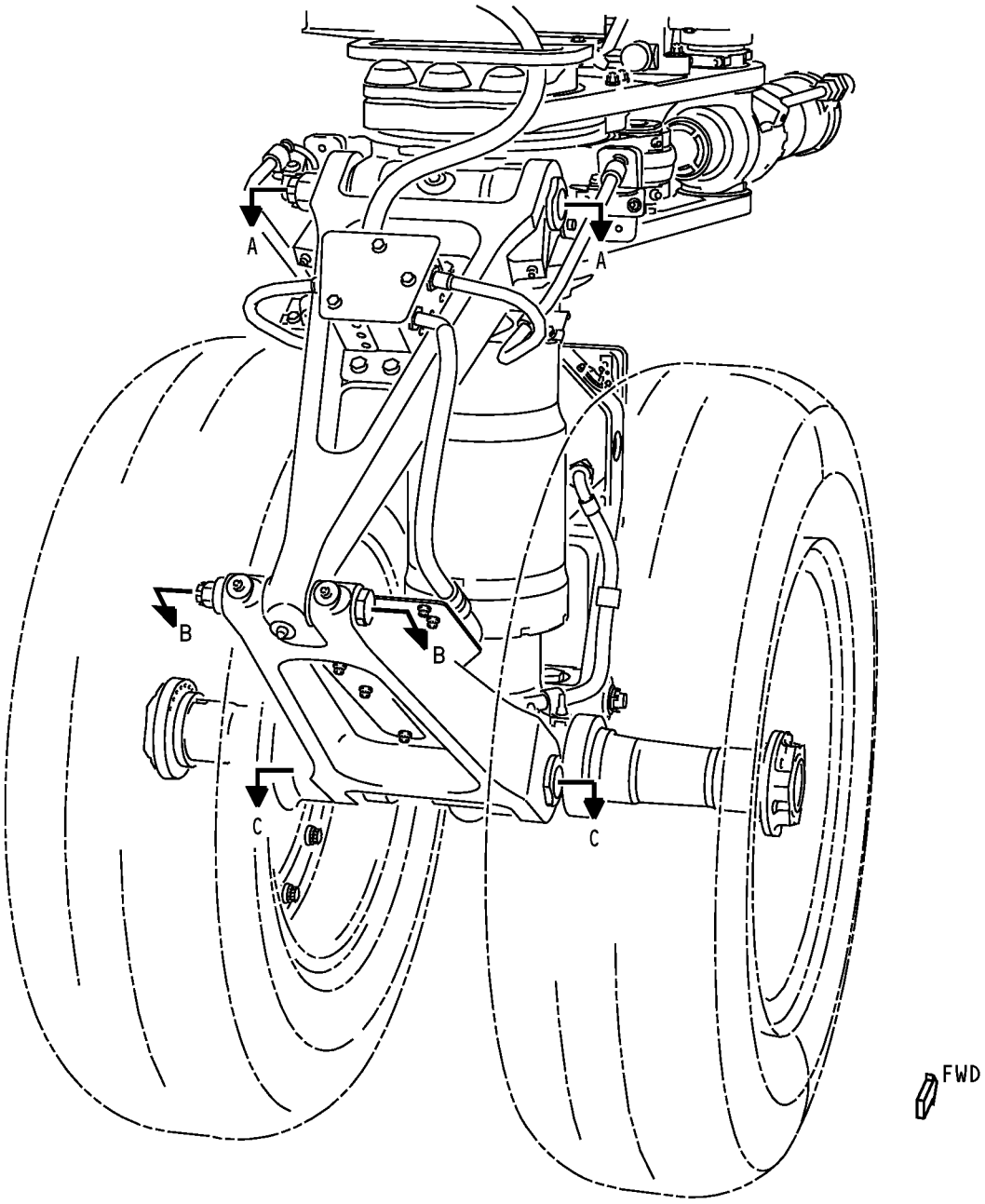
(5) To install the torsion links or parts for the nose landing gear do the task that follows:

(a) Do this task: Nose Landing Gear Upper Torsion Link Installation, TASK 32-21-31-400-801.

(b) Do this task: Nose Landing Gear Lower Torsion Link Installation, TASK 32-21-31-400-802.

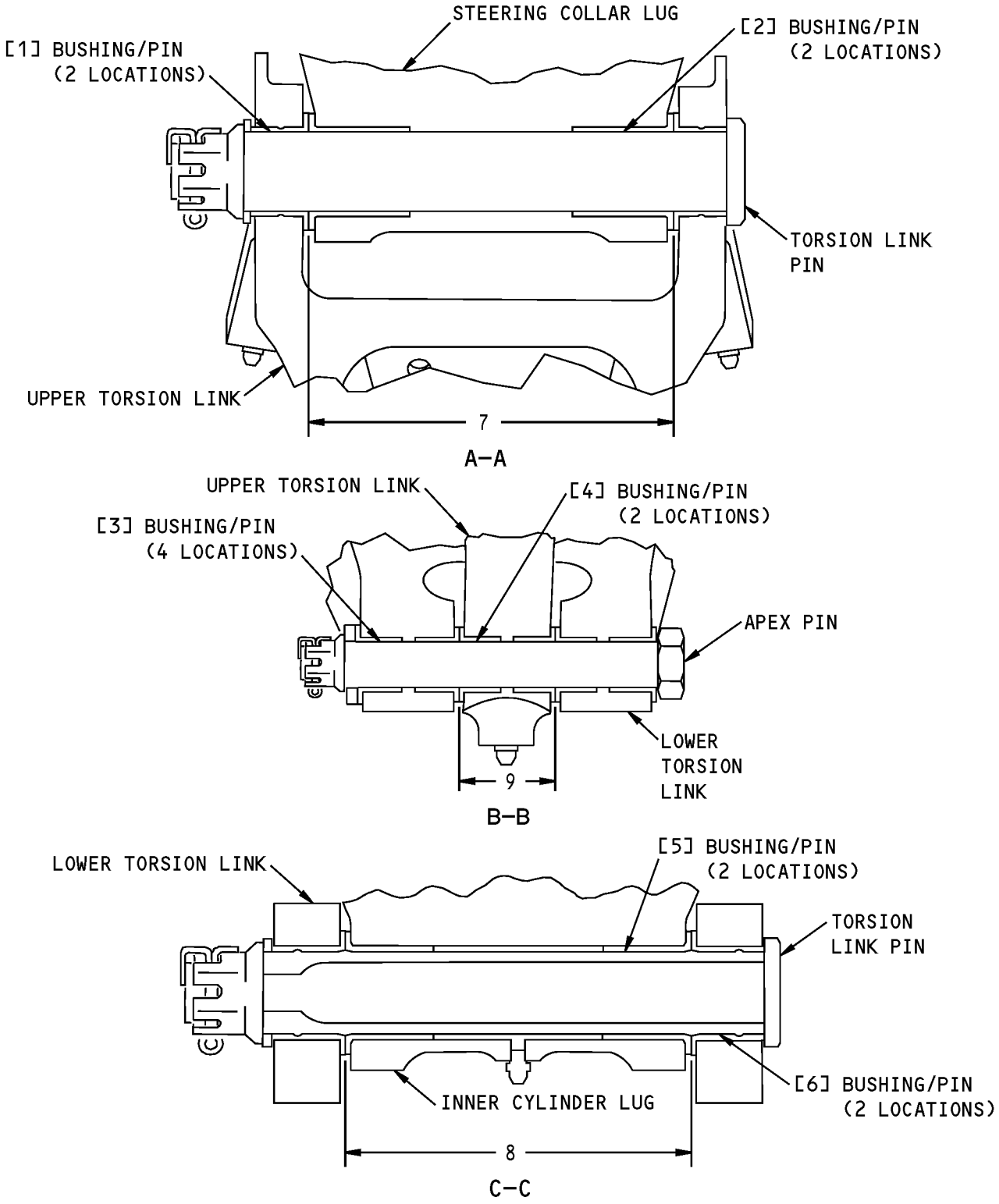
END OF TASK

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Nose Landing Gear Torsion Wear Limits
Figure 601 (Sheet 1 of 2)/32-21-31-990-802

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Nose Landing Gear Torsion Wear Limits
Figure 601 (Sheet 2 of 2)/32-21-31-990-802

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NOSE LANDING GEAR CORROSION PREVENTION - MAINTENANCE PRACTICES

1. General

A. The nose landing gear fittings, especially at the attachment lugs, have been found susceptible to corrosion. Damaged paint finishes and plating are attributed to exposure to the weather elements and runway debris. Service wear and hard landings contribute to the galling of tile lugs at the fittings.

B. Anti-rotation lugs on the nose steering collar bearing assembly have been reported to shear resulting in excessive wear and corrosion. Improved bearing assemblies have been incorporated on airplanes from cum line No. 271. Corrosion has been reported on the steering collars on airplanes with the improved bearing assemblies and is attributed to lubrication escaping between the steering collar halves. On production airplanes, cum line No. 535 and on, the improved steering collars have been further modified by bonding a shim onto the aft steering collar and sealing with sealant, A00247 to prevent the grease running out. .

C. Stress corrosion cracks have been reported on the nose landing gear lock brace assembly. All cracks originated at the intersection of the 0.875 and 0.250 inch diameter holes and propagated along the forging parting plane. A lock brace assembly of 7075-T73 material is the preferred replacement for those assemblies manufactured from 7073-T6 (Figure 201).

D. Stress corrosion has been the cause of a fractured nose gear piston fitting assembly. The improper shimming between the two lower legs of the fitting assembly and nose gear strut, permitted a hinge fit-up stress to develop in the fitting assembly and cause stress corrosion cracking (Figure 201).

E. Corrosion has been reported on the piston position spring cartridge assembly. The spring cartridge assembly separated from the upper rod end fitting. Bearing corrosion, believed to be the cause of bearing separation, is attributed to moisture collecting in the spring cartridge assembly (Figure 201).

F. Stress corrosion fracture has been reported on hydraulic transfer cylinder end caps. Aluminum is the material used on the fractured end caps.

G. Excessive corrosion has been reported on the nose landing gear torsion link pin and shaft (Figure 201) .

TASK 32-21-37-600-801

2. CORROSION PREVENTION

A. Consumable Materials

Reference	Description	Specification
G50136	Paste - Corrosion Inhibiting, Non-drying	BMS 3-38
G50348	Tape - Mylar, Mystik Number 7355	

B. General Philosophy

SUBTASK 32-21-37-210-001

(1) The basic corrosion prevention philosophy is to make periodic inspections to preclude or detect the early stages of corrosion. Missing fasteners, white powdery or discolored deposits are evidence of the existence of corrosion which should alert operators that some corrective action is required. A corrosion prevention program should be initiated to prevent the accumulation of corrosive products in order to minimize the occurrence of corrosion.

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C. After the suspected areas are cleaned, a thorough inspection helps to ensure that protective finishes provided during manufacture remain intact.

D. Where corrosion exists (noticeable bulges of the skin or white deposits of corrosion products at fastener heads of joint edges), refer to Structural Repair Manual for details of corrosion removal.

E. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to slow the corrosion process. The finish system should be restored at the first opportunity consistent with the maintenance schedule.

F. Prevention Treatment

SUBTASK 32-21-37-610-001

(1) At earliest opportunity consistent with the maintenance activity, corrosion prevention treatment should be accomplished to the nose landing gear.

SUBTASK 32-21-37-610-004

CAUTION: DO NOT APPLY CORROSION INHIBITING COMPOUND ON GREASE JOINTS OR SEALED BEARINGS. THESE COMPOUNDS DISSOLVE GREASE AND OTHER LUBRICANTS. THEY ARE PENETRATING COMPOUNDS AND CAN GET AROUND THE SEALS AND INTO THE BEARINGS.

(2) Do preventive measures to these components Figure 201).

(a) Shock struts (Oleo). Apply corrosion inhibiting non-drying paste, G50136 to exterior areas of the inner and outer cylinder with broken finish systems. All lugs, lug faces, connecting pins and fasteners should be sprayed with corrosion inhibiting compound. Remove nameplates, covers, and easily accessible noncritical (does not affect adjustments) fasteners to reveal tapped holes. Spray steering cable pulley brackets, miscellaneous equipment attached to the outer and inner cylinders, and the inside of tapped holes with corrosion inhibiting compound. Reinstall parts removed after application.

(b) Drag Brace Links. Apply corrosion inhibiting non-drying paste, G50136 to exterior surface areas with broken finish systems. All lugs, lug faces, connecting pins, and fasteners should be sprayed with corrosion inhibiting non-drying paste, G50136.

(c) Axle. Apply corrosion inhibiting non-drying paste, G50136 to outside surface areas of the axle. Make suitable nozzle extension and spray the inside surfaces of the axle. At wheel removal spray the exterior surfaces of axle cover by wheel except at bearing or journal surfaces.

(d) Torsion Links. Apply corrosion inhibiting non-drying paste, G50136 to surface areas with broken finish systems. Lugs, lug faces, and connecting pins should be sprayed with corrosion inhibiting compound.

(e) Nose Gear Actuator. Apply corrosion inhibiting non-drying paste, G50136 to surface areas with broken finish systems. Lugs, lug faces, and connecting pins should be sprayed with corrosion inhibiting non-drying paste, G50136.

(f) Steering assembly. Apply corrosion inhibiting non-drying paste, G50136 to surface areas with broken finish systems and around the outer cylinder of the shock strut. Lugs, lug faces, and connecting pins should also be sprayed.

(g) Trunnion. Apply corrosion inhibiting non-drying paste, G50136 to exterior surface areas with broken finish systems. Lugs, lug faces, connecting pins, fasteners, and trunnion bearing caps should be sprayed with corrosion inhibiting non-drying paste, G50136.

(h) Lock Brace Assembly. Apply corrosion inhibiting non-drying paste, G50136 to surface areas of all components of the locking linkages with broken finish systems. Lugs, lug faces, and connecting pins should also be sprayed.

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SUBTASK 32-21-37-610-005

(3) The installation of mylar tape, G50348 under corrosion resistant steel clamps is recommended at overhaul to minimize the risk of galvanic corrosion should the finish be damaged.

G. Frequency of Application

SUBTASK 32-21-37-610-002

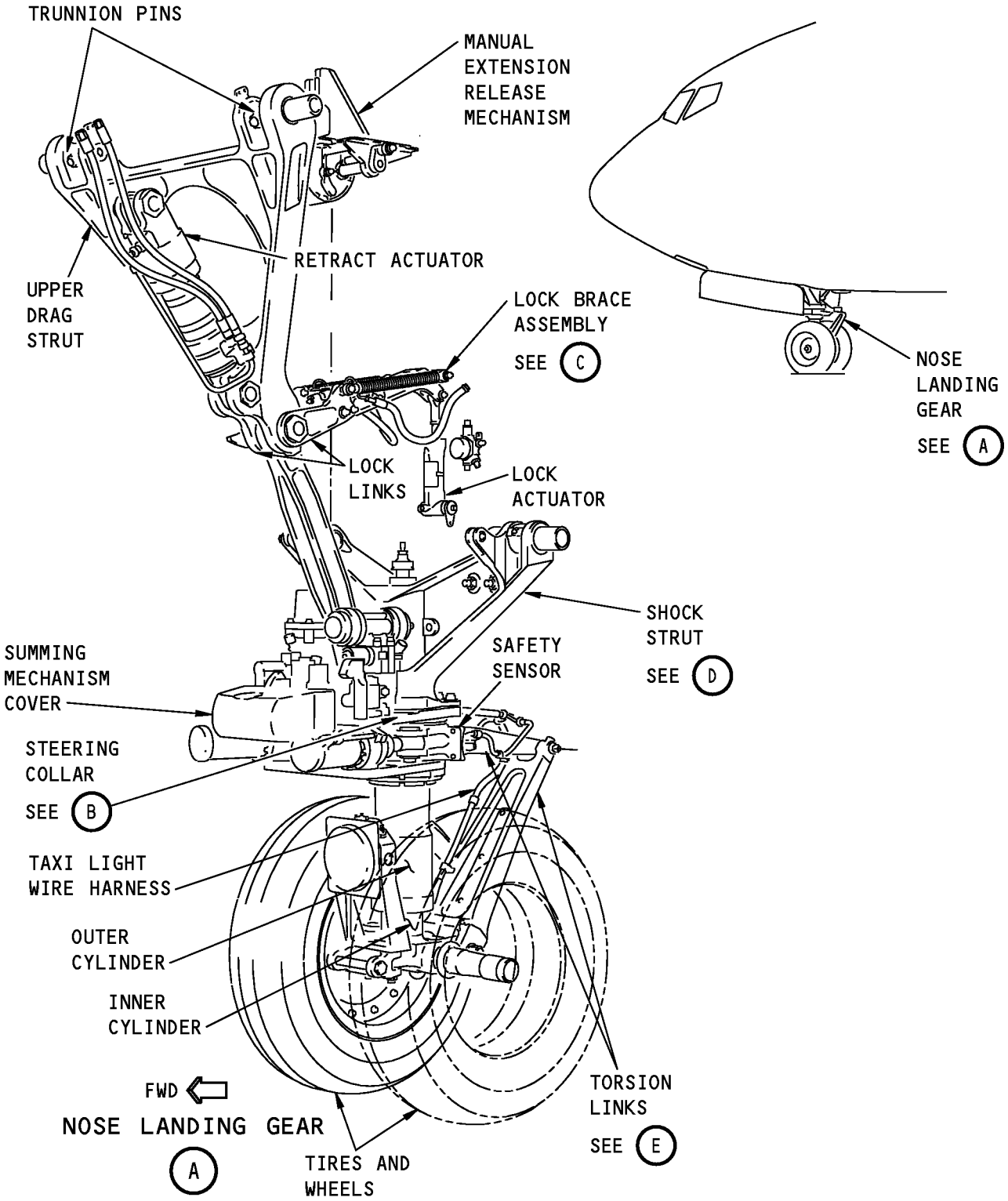
(1) Periodic inspection is required to areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

SUBTASK 32-21-37-610-006

(2) Periodic application of corrosion inhibiting non-drying paste, G50136 is necessary to areas identified and should be consistent to the scheduled specified in the Maintenance Planning Document.

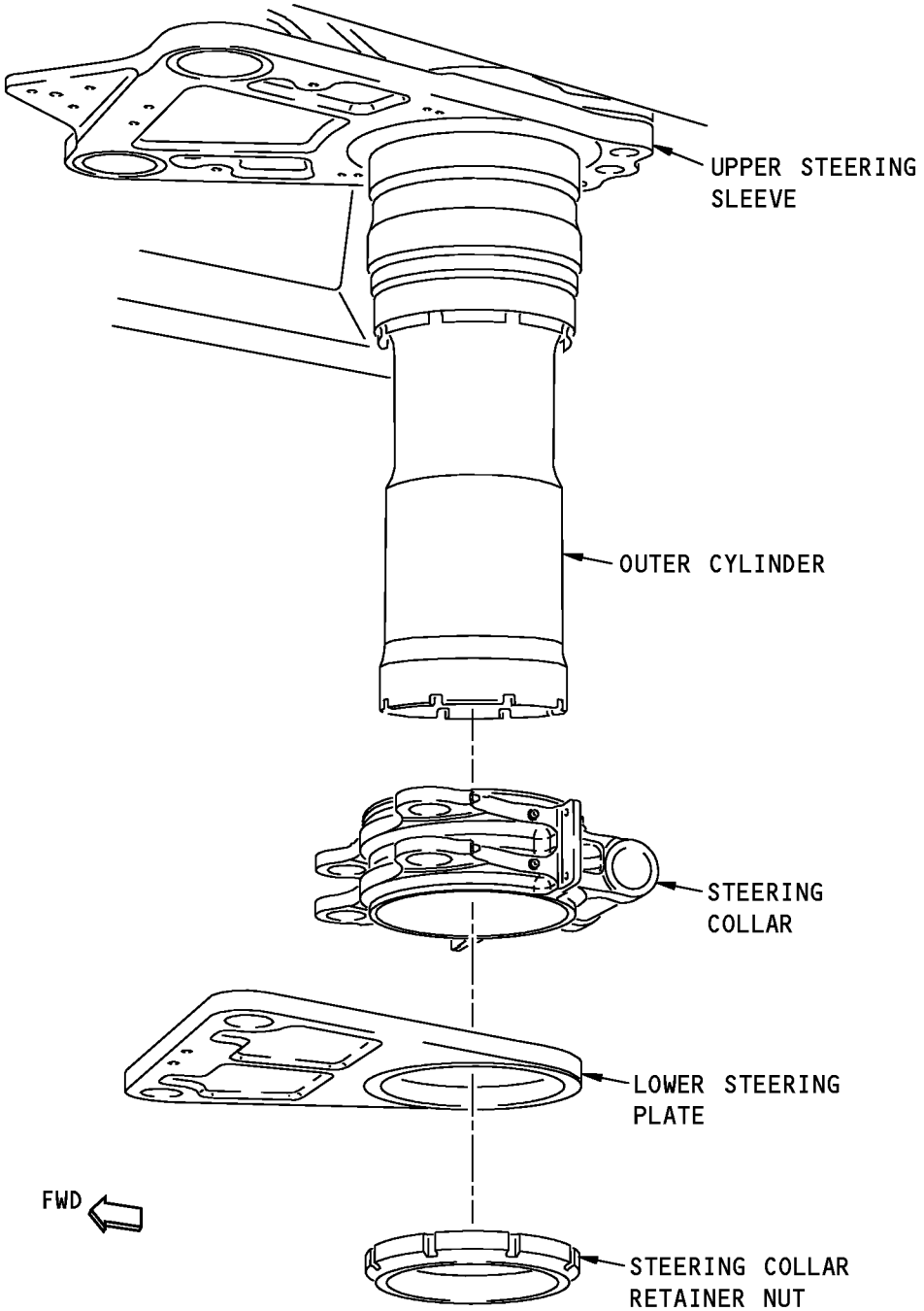
——————— END OF TASK ———————

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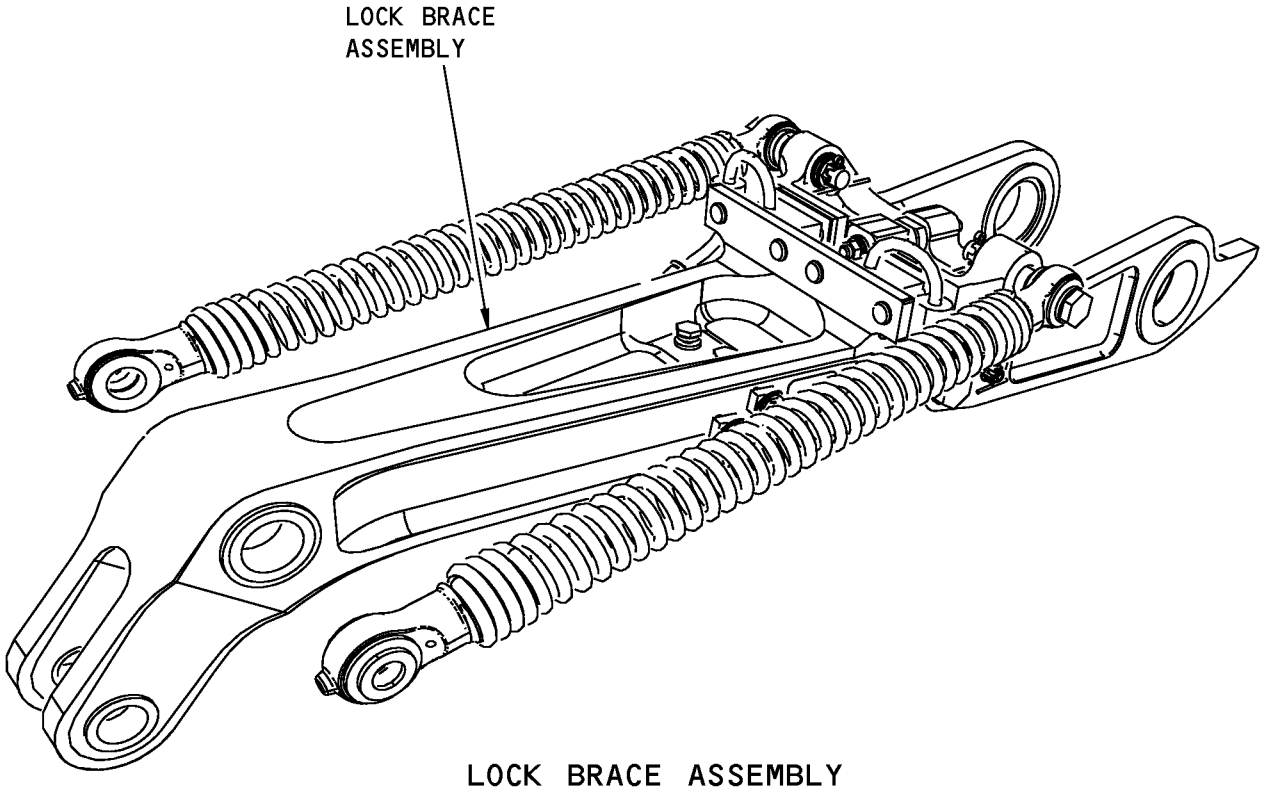
Nose Landing Gear Corrosion Prevention
Figure 201 (Sheet 1 of 5)/32-21-37-990-801

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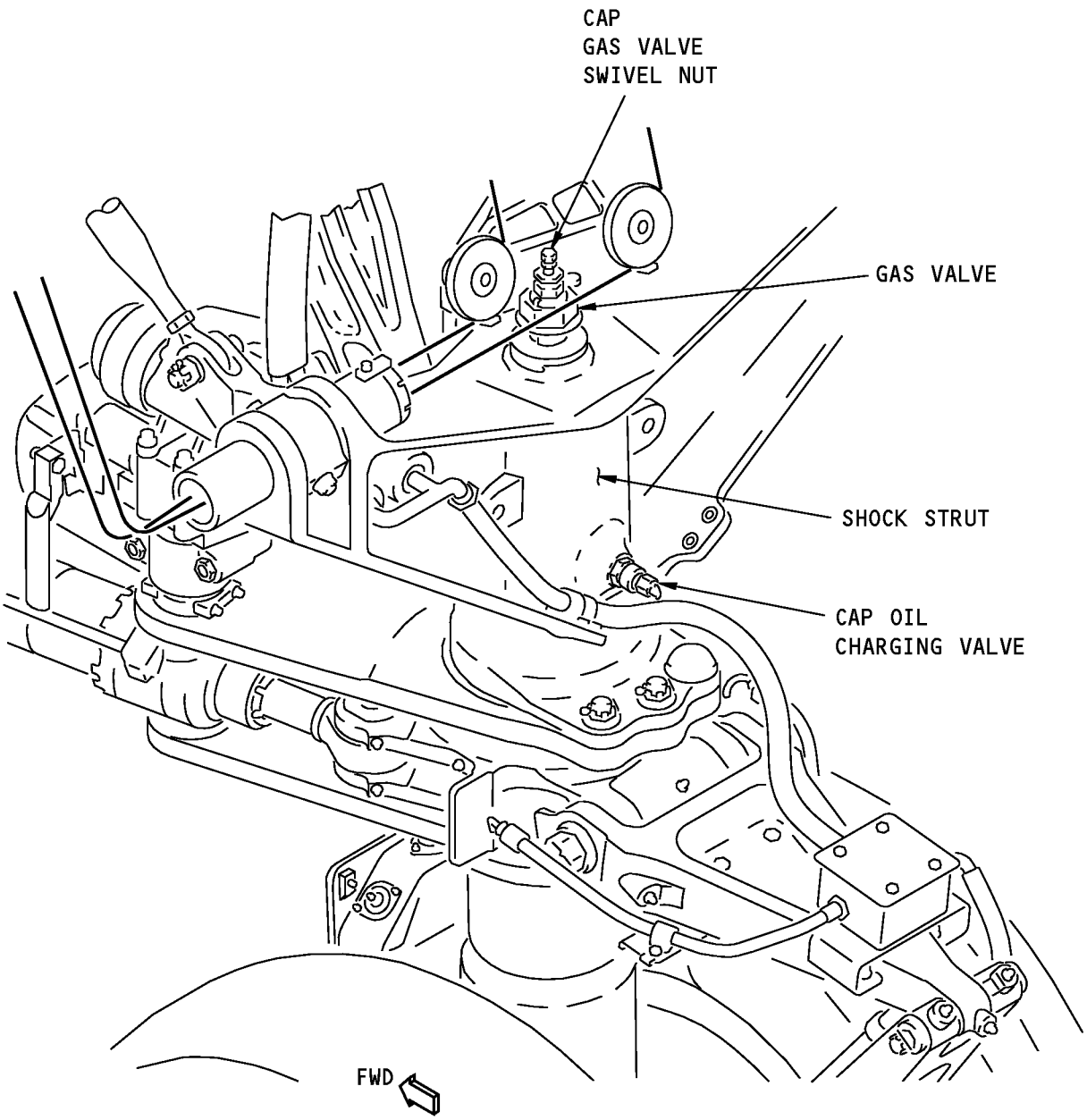
Nose Landing Gear Corrosion Prevention
Figure 201 (Sheet 2 of 5)/32-21-37-990-801

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Nose Landing Gear Corrosion Prevention
Figure 201 (Sheet 3 of 5)/32-21-37-990-801

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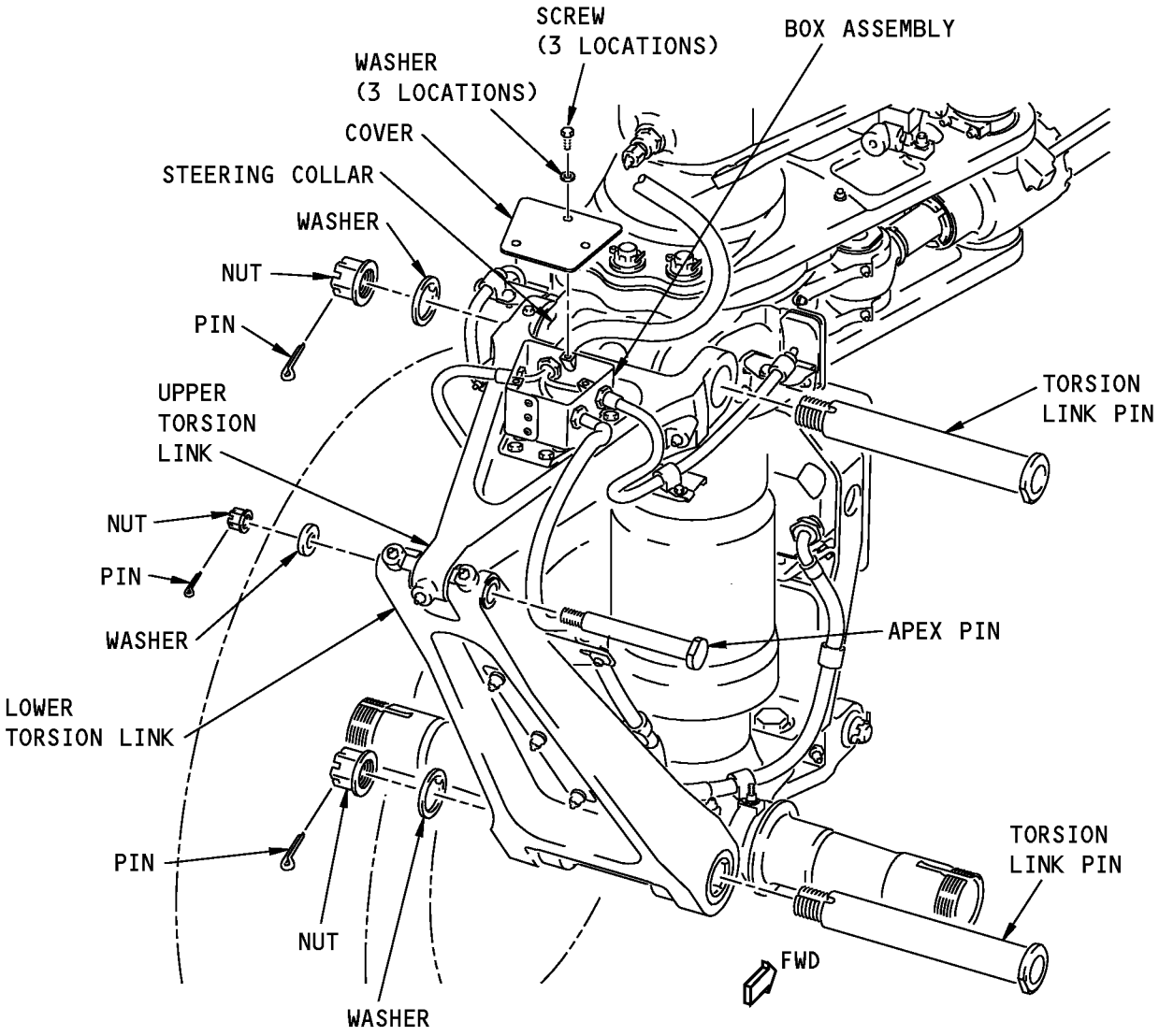


SHOCK STRUT

D

Nose Landing Gear Corrosion Prevention
Figure 201 (Sheet 4 of 5)/32-21-37-990-801

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TORSION LINK

E

Nose Landing Gear Corrosion Prevention
Figure 201 (Sheet 5 of 5)/32-21-37-990-801

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NOSE LANDING GEAR AXLE - INSPECTION/CHECK

1. General

A. This procedure contains scheduled maintenance task data.

B. This task supplies the inspection of the nose landing gear axles for corrosion.

TASK 32-21-71-200-803

2. Nose Gear Axle Inspection for Corrosion

A. General

(1) This procedure is a scheduled maintenance task.

(2) This procedure gives the inspection of the nose gear axles for corrosion.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-45-21-000-801	Nose Landing Gear Wheel and Tire Assembly Removal (P/B 401)
32-45-21-400-801	Nose Landing Gear Wheel and Tire Assembly Installation (P/B 401)
51-00-51	INSPECTION AND DETECTION
51-00-53	CORROSION REMOVAL

C. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
G50237	Compound - Corrosion Inhibiting, Non-drying - Cor-Ban 27L	BMS 3-38

D. Location Zones

Zone	Area
713	Nose Landing Gear

E. Procedure

SUBTASK 32-21-71-490-001

WARNING: MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT. THIS CAN CAUSE INJURIES TO PERSONS, AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-21-71-000-001

(2) To remove the nose landing gear wheel and tire assembly, do this task: Nose Landing Gear Wheel and Tire Assembly Removal, TASK 32-45-21-000-801.

SUBTASK 32-21-71-000-002

(3) Remove the cotter pins in the axle spacer and remove the spacer from the axle.

SUBTASK 32-21-71-200-001

(4) Examine the nose gear axles.

NOTE: Make sure the spacer is removed when you inspect for corrosion on the nose landing gear axle. Corrosion can cause the axle to fracture and the wheel to depart the airplane.

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(a) Use a clean cloth to remove grease and debris from the axle. Do not use solvents or detergents to clean the axle.

(b) Do a general visual inspection of the axle for corrosion. Pay special attention to the area that was under the axle spacer, and most importantly, at the 6 o'clock position on the axle.

(c) Do a visual inspection aided with a magnifying glass for cracks in the NLG axles due to corrosion.

(d) If visual inspection of the axle is not adequate, use nondestructive inspection (NDI) procedures, do this: INSPECTION AND DETECTION, SUBJECT 51-00-51.

(e) If corrosion is detected on a nose landing gear axle, repair or replace the axle or inner cylinder.

NOTE: If corrosion is found on the axle, the corrosion must be removed. Corrosion can cause the axle to fracture and the wheel to depart the airplane.

1) For corrosion removal, do this: CORROSION REMOVAL, SUBJECT 51-00-53.

SUBTASK 32-21-71-600-001

CAUTION: DO NOT APPLY CORROSION-INHIBITING COMPOUND ON GREASE JOINTS, OR SEALED BEARINGS. THESE COMPOUNDS REMOVE GREASE AND OTHER LUBRICANTS. THEY ARE PENETRATING COMPOUNDS. THEY WILL MOVE AROUND THE SEALS AND INTO THE BEARINGS. THIS WILL CAUSE DAMAGE TO THE BEARINGS, AND JOINTS.

(5) Apply a light layer of BMS 3-27compound, C00913 or BMS 3-38 Cor-Ban 27L Compound, G50237 to the area underneath the axle spacer.

SUBTASK 32-21-71-420-001

(6) Install the axle spacers and cotter pins.

SUBTASK 32-21-71-400-001

(7) To install the nose landing gear wheel and tire assembly, do this task: Nose Landing Gear Wheel and Tire Assembly Installation, TASK 32-45-21-400-801.

——————— END OF TASK ———————

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NOSE LANDING GEAR WHEEL WELL DOORS - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the wheel well doors referred to as door assembly [3] for the nose landing gear

(2) An installation of the wheel well doors for the nose landing gear.

TASK 32-22-11-000-801

2. Nose Landing Gear Wheel Well Doors Removal

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right

C. Prepare for the Removal

SUBTASK 32-22-11-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-22-11-480-002

(2) Install chocks around the tires of the nose landing gear.

D. Nose Wheel Well Doors Removal

SUBTASK 32-22-11-020-001

(1) Disconnect the bonding jumper [13] from the door hinge assembly [1]:

(a) Remove the nut [12] from the bolt [10].

(b) Remove the washers [11], and the bonding jumper [13] from the bolt [10].

(c) Remove the bolt [10], and the washer [9] from the door hinge assembly [1].

(d) Remove the washer [9] from the bolt [10].

SUBTASK 32-22-11-020-002

(2) Disconnect the center hinge assembly [2] from the lower pushrod assembly [17]:

(a) Remove the cotter pin [22], nut [21], and the washer [20] from the bolt [18].

(b) Remove the bolt [18] to disconnect the center hinge assembly [2] from the lower pushrod assembly [17].

SUBTASK 32-22-11-480-003

(3) Use a rope and attach the lower pushrod assembly [17] to the upper rod assembly.

SUBTASK 32-22-11-020-003

(4) Disconnect the door assembly [3] from the center hinge bracket [24]:

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(a) Remove the cotter pin [16], nut [15], and the washer [14] from the bolt [23].

(b) Remove the bolt [23] to disconnect the center hinge assembly [2] from the center hinge bracket [24].

SUBTASK 32-22-11-020-004

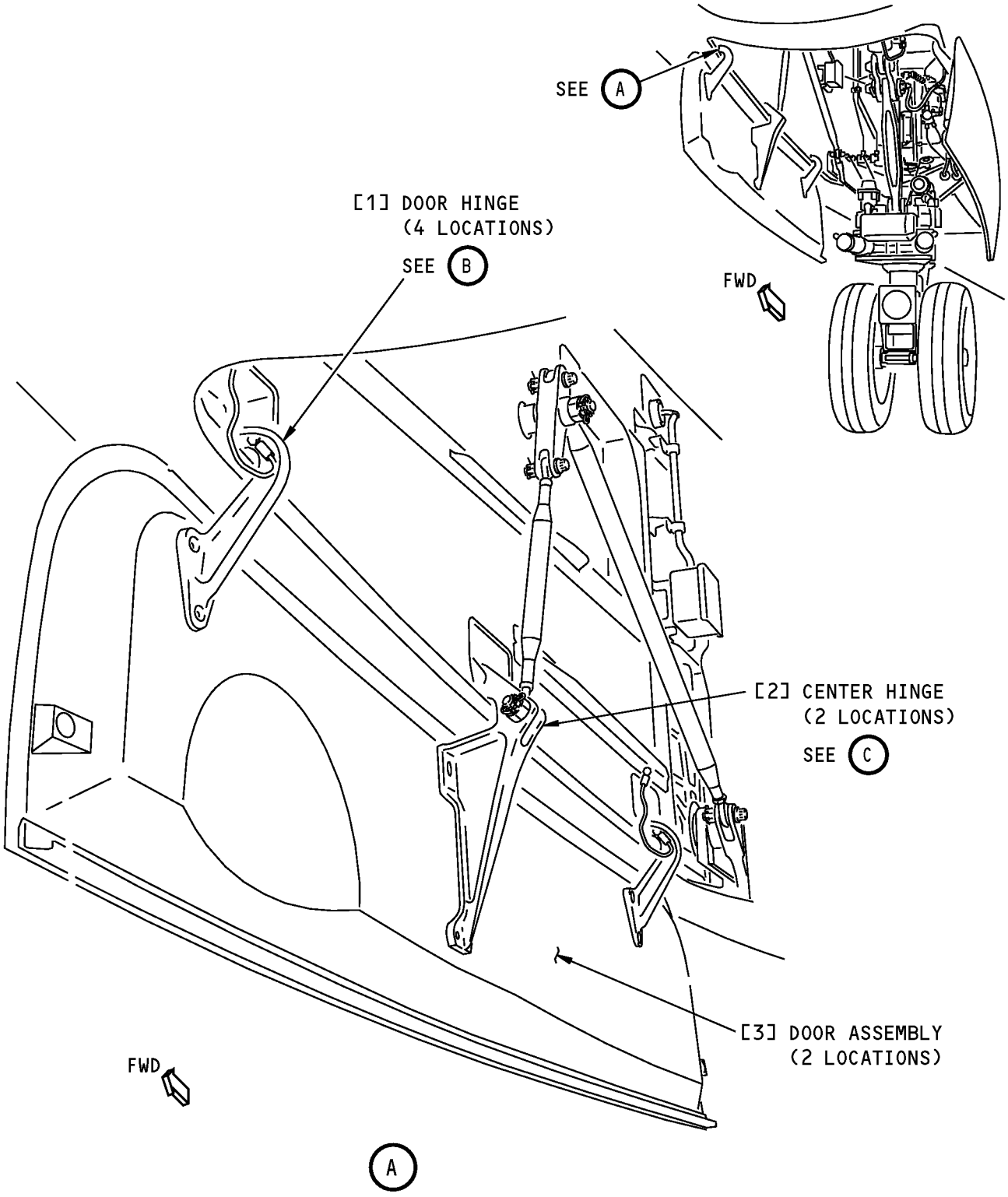
(5) Disconnect the door assembly [3] from the forward, and the aft hinge bracket [8]:

(a) Remove the cotter pin [6], nut [7], and the washer [5] from the bolt [4].

(b) Remove the bolt [4] to disconnect the door hinge assembly [1] from the hinge bracket [8].

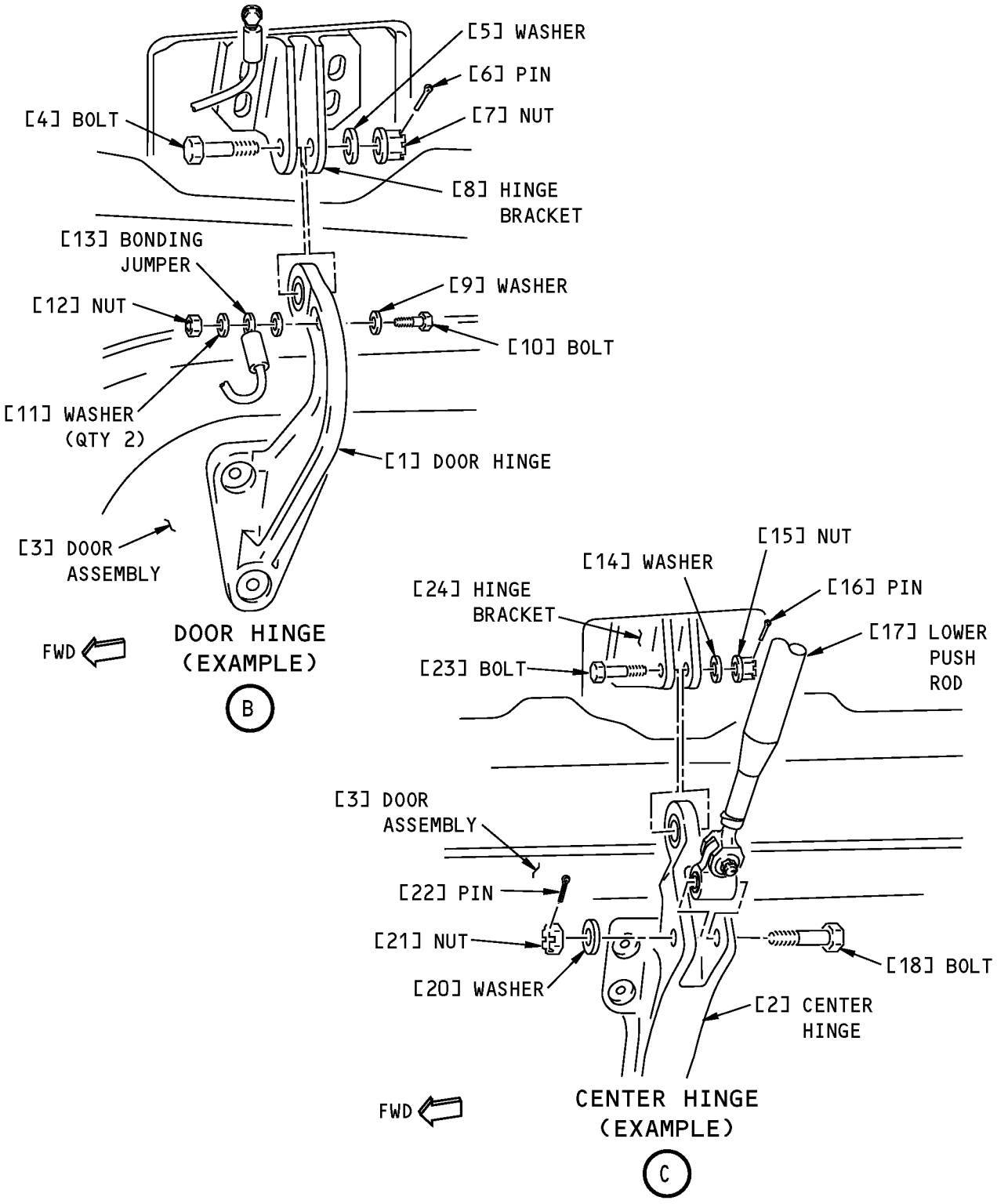
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Nose Landing Gear Wheel Well Doors Installation
Figure 401 (Sheet 1 of 2)/32-22-11-990-801

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Nose Landing Gear Wheel Well Doors Installation
Figure 401 (Sheet 2 of 2)/32-22-11-990-801

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TASK 32-22-11-400-801

3. Nose Landing Gear Wheel Well Doors Installation

(Figure 401)

A. References

Reference	Title
20-10-34-120-801	Hand Clean Metal Surfaces with Abrasives (P/B 701)
32-22-11-000-802	Nose Landing Gear Wheel Well Doors Adjustment (P/B 501)
32-33-61-820-802	Nose Gear Wheel Well Door Linkage Adjustment (P/B 501)

B. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	Door assembly	32-22-11-04-080	HAP 008-013, 015-020
		32-22-11-04-085	HAP 008-013, 015-020
		32-22-11-04-310	HAP 021-026
		32-22-11-04-315	HAP 021-026
		32-22-11-05-085	HAP 031-054, 101-999
		32-22-11-05-090	HAP 031-054, 101-999
6	Pin	32-22-11-03-035	HAP 001-007
		32-22-11-04-035	HAP 008-013, 015-026, 028-030
		32-22-11-05-035	HAP 031-054, 101-999
16	Pin	32-22-11-03-040	HAP 001-007
		32-22-11-04-055	HAP 008-013, 015-026, 028-030
		32-22-11-05-055	HAP 031-054, 101-999
22	Pin	32-22-11-01-049	HAP 001-013, 015-026, 028-030
		32-22-11-01A-065	HAP 031-054, 101-999

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

E. Nose Wheel Well Doors Installation

NOTE: A NLG door rigging check is not necessary if reinstalling the same NLG door that was removed and no changes to the adjustments to the door stops, door seals, door hinges, or door pushrods were made.

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SUBTASK 32-22-11-420-001

(1) Connect the door assembly [3] to the forward, and the aft hinge bracket [8]:

(a) Hold the door assembly [3] in its position in the hinge bracket [8].

(b) Align the hole in the door hinge assembly [1] to the hole in the hinge bracket [8].

(c) Put the bolt [4] through the hinge bracket [8], and the door hinge assembly [1].

(d) Install the washer [5], and the nut [7] on the bolt [4].

NOTE: The pin [6] will installed after final adjustments to the door assembly [3] are made in the subsequent step.

(e) Hand tighten the nut [7] until after final adjustments to the door assembly [3] are made in the subsequent step.

SUBTASK 32-22-11-420-002

(2) Connect the door assembly [3] to the center hinge bracket [24]:

(a) Put the center hinge assembly [2] in its position in the center hinge bracket [24].

(b) Align the hole in the center hinge assembly [2] to the hole in the center hinge bracket [24].

(c) Put the bolt [23] through the center hinge bracket [24], and the center hinge assembly [2].

(d) Install the washer [14], and the nut [15] on the bolt [23].

NOTE: The pin [16] will installed after final adjustments to the door assembly [3] are made in the subsequent step.

(e) Hand tighten the nut [15] until after final adjustments to the door assembly [3] are made in the subsequent step.

SUBTASK 32-22-11-420-003

(3) Connect the center hinge assembly [2] to the lower pushrod assembly [17]:

(a) Put the end of the lower pushrod assembly [17] in its position on the center hinge assembly [2].

(b) Align the end of the lower pushrod assembly [17] to the hole in the center hinge assembly [2].

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST BMS 3-27 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(c) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) to these items:

1) The threads and thread reliefs of the bolt [18] and the nut [21] and the faces of the washer [20].

(d) Put the bolt [18] through the center hinge assembly [2] and the lower pushrod assembly [17].

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(e) Install the washer [20], and the nut [21] on the bolt [18].

NOTE: The pin [22] will installed after final adjustments to the door assembly [3] are made in the subsequent step.

(f) Hand tighten the nut [21] until after final adjustments to the door assembly [3] are made in the subsequent step.

SUBTASK 32-22-11-120-001

(4) Prepare the mating surface of the bonding jumper [13], and the door hinge assembly [1]:

(a) To fully clean the mating surface of the bonding jumper [13], and the door hinge assembly [1], do this task: Hand Clean Metal Surfaces with Abrasives, TASK 20-10-34-120-801.

SUBTASK 32-22-11-020-005

(5) Connect the bonding jumper [13] to the door hinge assembly [1]:

(a) Put the bonding jumper [13] in its position on the door hinge assembly [1].

(b) Install the washer [9] on the bolt [10].

(c) Put the bolt [10] through the door hinge assembly [1], washer [11], bonding jumper [13], and the washer [11].

NOTE: There are 3 washers per jumper.

(d) Install the nut [12] on the bolt [10], and tighten the nut [12].

(e) Apply sealant, A00247 to the bolt [10], washers [9], [11], and the nut [12] to seal them.

SUBTASK 32-22-11-420-004

(6) Adjust the wheel well doors for the nose landing gear. To adjust it, do this task: Nose Landing Gear Wheel Well Doors Adjustment, TASK 32-22-11-000-802.

SUBTASK 32-22-11-420-005

(7) Adjust the lower pushrod assembly [17]. To adjust it, do this task: Nose Gear Wheel Well Door Linkage Adjustment, TASK 32-33-61-820-802.

SUBTASK 32-22-11-420-010

(8) Tighten the nut [7] and install the cotter pin [6] in the hole in the bolt [4]. If it is necessary, loosen the nut [7] to the nearest castellation to align the hole in the bolt [4].

SUBTASK 32-22-11-420-011

(9) Tighten the nut [15] and install the cotter pin [16] in the hole in the bolt [23]. If it is necessary, loosen the nut [15] to the nearest castellation to align the hole in the bolt [23].

SUBTASK 32-22-11-420-012

(10) Tighten the nut [21] and install the cotter pin [22] in the hole in the bolt [18]. If it is necessary, loosen the nut [21] to the nearest castellation to align the hole in the bolt [18].

F. Put the Airplane Back to its Usual Condition

SUBTASK 32-22-11-080-001

(1) Remove chocks around the tires of the nose landing gear.

END OF TASK

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NOSE LANDING GEAR WHEEL WELL DOORS - ADJUSTMENT/TEST

1. General

A. This procedure has this task:

(1) An adjustment of the wheel well doors for the nose landing gear.

TASK 32-22-11-000-802

2. Nose Landing Gear Wheel Well Doors Adjustment

(Figure 501)

A. References

Reference	Title
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-33-00-710-801	Operational Test for the Nose Landing Gear (P/B 501)
32-33-61-820-802	Nose Gear Wheel Well Door Linkage Adjustment (P/B 501)

B. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
G50136	Paste - Corrosion Inhibiting, Non-drying	BMS 3-38

C. Location Zones

Zone	Area
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right

D. Prepare for the Adjustment

SUBTASK 32-22-11-480-004

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-22-11-580-001

(2) Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

NOTE: Lower the jack that supports the tail of the airplane while you lift the nose landing gear.

SUBTASK 32-22-11-480-005

(3) Install chocks around the tires of the main landing gear.

SUBTASK 32-22-11-020-006

(4) Disconnect the push rod [12] from the center door hinge [24]:

(a) Remove the cotter pin [19], the nut [18], and the washer [17] from the bolt [16].

(b) Remove the bolt [16] to disconnect the push rod [12] from the center door hinge [24].

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SUBTASK 32-22-11-080-003

(5) Remove the downlock pin for the nose landing gear, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

SUBTASK 32-22-11-860-002

(6) Retract the nose landing gear. To retract the nose landing gear, do this task: Operational Test for the Nose Landing Gear, TASK 32-33-00-710-801.

E. Nose Wheel Well Doors Adjustment

NOTE: No adjustments will be made to the hinge fittings mounted on the doors.

SUBTASK 32-22-11-210-001

(1) Make sure that you can turn the bolt [20] by hand. If not, adjust the center hinge bracket [25] as follows:

(a) Loosen the bolts [10] in the center hinge bracket [25].

(b) Move the center hinge bracket [25] up or down until you can move the bolt [20] by hand.

(c) Tighten the bolts [10] in the center hinge bracket [25].

NOTE: The bolt [20] must be free to move with hand pressure after you tighten the bolts [10].

SUBTASK 32-22-11-210-003

(2) Make sure that you can turn the bolt [20] by hand. If not, adjust the center hinge bracket [25] as follows:

(a) Remove the cotter pin [22], the nut [21] and the washer [23] from the bolt [20].

(b) Remove the bolt [20] connecting the center door hinge [24] to the center hinge bracket [25].

(c) Remove the bolts [10] and washers [11] to disconnect the center hinge bracket [25] from the bulkhead.

NOTE: The nutplates [7] for the bolts [10] are on the opposite side of the bulkhead.

(d) Remove the plate [9] and the shim [8] from the bulkhead.

NOTE: If the shim [8] was not installed, install a shim [8] to get the proper adjustment. If the shim [8] was installed, remove the shim to get the proper adjustment.

(e) Install the shim [8] if it is necessary, the plate [9] and the center hinge bracket [25] on the bulkhead.

(f) Install the bolts [10] and the washers [11].

NOTE: Make sure the bolts [10] are only hand tight. The bolts [10] will be tightened after the center hinge bracket [25] is adjusted.

(g) Install the bolt [20], the washer [23] and the nut [21] connecting the center door hinge [24] to the center hinge bracket [25].

(h) Tighten the nut [21] and install the cotter pin [22] in the hole in the bolt [20]. If it is necessary, loosen the nut [21] to the nearest castellation to align the hole in the bolt [20].

(i) If it is necessary, move the center hinge bracket [25] up or down until you can turn the bolt [20] by hand.

(j) Tighten the bolts [10] in the center hinge bracket [25].

NOTE: The bolt [20] must be free to move with hand pressure after you tighten the bolts [10].

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SUBTASK 32-22-11-820-001

(3) Manually close the door assembly [4] that you will adjust.

SUBTASK 32-22-11-820-002

(4) Make sure the fit on the forward edge and aft edge of the door assembly [4], and the surrounding structure is in the tolerance as follows:

NOTE: Write the fit values that are not in tolerance.

(a)

HAP 001-013, 015-026, 029-054, 101-999

Use the "ALL" tolerances, in, (Table 501) for all airplane forward door flushness checks.

HAP 028

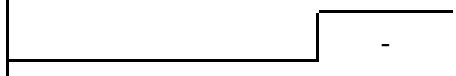
Use the "ALL" tolerances, in (Table 501), for all airplane forward door flushness checks. If you cannot obtain the correct tolerance you can use the expanded tolerance for the specific airplane that is listed.

HAP ALL

Table 501/32-22-11-993-801 Nose Landing Gear Wheel Well Door Flushness Values

AIRPLANE EFFECTIVITY	EDGE ZONE	FLUSHNESS (MISMATCH) IN INCHES (mm)
ALL	A-A	0.0 ± 0.06 inch (± 1.52 mm) (In Streamwise Direction)
ALL	B	0.0 ± 0.06 inch (± 1.52 mm) (In Streamwise Direction)
HAP 028		
	B	0.0 + 0.06 inch (+1.52 mm) (In Streamwise Direction) - -0.03 inch (-0.76 mm) (-0.118 inch [-2.99 mm] in any 7 inch [177.8 mm] length)
HAP ALL		
ALL	C	0.0 + 0.03 inch (+0.76 mm) (Door outside wheel well) - -0.06 inch (-1.52 mm) (Door inside wheel well)
ALL	D	0.0 + 0.03 inch (+0.76 mm) (Door inside wheel well) - -0.06 inch (-1.52 mm) (Door outside wheel well)

WHEEL WELL DOOR FLUSHNESS DIAGRAM



A negative tolerance (-) indicates the face of the mismatch faces aft.

------ >

Air Stream (V)

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(Continued)

AIRPLANE EFFECTIVITY	EDGE ZONE	FLUSHNESS (MISMATCH) IN INCHES (mm)
+ ------ > Air Stream (V)	(POSITIVE MISFAIR)	A positive tolerance (+) indicates the face of the mismatch is into the air stream.

SUBTASK 32-22-11-020-007

(5) If the mismatch along the forward and aft edge is not in tolerance, do the steps that follow:

(a) Remove the pin retainer spring [2] from the stop pin [1].

NOTE: The stop pin [1] is on the wheel well bulk head.

(b) Retract the stop pin [1] for the door assembly [4].

(c) Adjust the stop pin [1] on the forward wheel well bulkhead until it just touches the forward/inboard door stop pad on the forward edge of the door assembly [4].

SUBTASK 32-22-11-420-006

(6) Install the pin retainer spring [2] on the stop pin [1].

SUBTASK 32-22-11-210-002

(7) Make sure the fit along the outboard edges of the door assembly [4], and the surrounding structure is in the tolerance as follows:

NOTE: Write the fit values that are not in tolerance.

SUBTASK 32-22-11-820-003

(8) Make sure the fit around the door assembly [4] is in the tolerance shown (Figure 501).

NOTE: This should only be necessary for a new door.

(a) Use the "ALL" tolerances, in (Table 502), for the airplane door clearance checks.

Table 502/32-22-11-993-804 Nose Landing Gear Wheel Well Door Clearance Values

AIRPLANE EFFECTIVITY	EDGE ZONE	CLEARANCE
ALL	A-A	0.10 +0.10/-0.05 in 2.54 +2.54/-1.27 mm
ALL	B	0.20 +0.05/-0.02 in 5.08 +1.27/-0.51 mm
ALL	C	0.15 +0.06/-0.09 in 3.81 +1.52/-2.29 mm
ALL	D	0.10 +0.06/-0.04 in 2.54 +1.52/-1.02 mm
ALL	E	0.31 +0.04/-0.25 in 7.87 +1.02/-6.35 mm

SUBTASK 32-22-11-820-007

(9) If the mismatch along the outboard edge is not in tolerance, do the steps that follow:

(a) Remove the bolts [29], and the washers [30] for the forward hinge bracket [36].

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(b) Remove the shims [27] or add the correct thickness of the shims below the plate [28] of the forward hinge bracket [36].

(c) Put the bolt [31] through the forward hinge bracket [36], and the door hinge [35].

(d) Install the washer [32] and the nut [33] on the bolt [31].

(e) Tighten the nut [33] and install the pin [34].

(f) Close the door assembly [4] with your hand.

SUBTASK 32-22-11-820-005

(10) Do the same steps for the aft hinge bracket.

SUBTASK 32-22-11-820-006

(11) Align the external outboard surface of the door with the fuselage skin surface.

SUBTASK 32-22-11-020-008

(12) Loosen the four bolts [29] in each of the forward [36], and the aft hinge brackets or the aft door.

(a) Move each hinge bracket until the serrations of the hinge bracket align with the serrations in the plate [28].

NOTE: The outboard external edge of the door must align with the adjacent fuselage skin.

SUBTASK 32-22-11-420-007

(13) Tighten the four bolts [29] in each of the forward and the aft hinge brackets.

SUBTASK 32-22-11-420-008

(14) If not connected, connect the center door hinge [24] to the push rod [12] as follows:

(a) Put the end of the push rod [12] in its position on the center door hinge [24].

(b) Align the end of the push rod [12] to the hole in the center door hinge [24].

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST BMS 3-27 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(c) Apply a thin layer of corrosion inhibiting non-drying paste, G50136 or compound, C00913 (alternate) to these items:

1) The threads and thread reliefs of the bolt [16], the nut [18] and the faces of the washer [17].

(d) Put the bolt [16] through the center door hinge [24], and the push rod [12].

(e) Install the washer [17] and the nut [18] on the bolt [16].

(f) Hand tighten the nut [18] until after final adjustments to the push rod [12] are made in the subsequent step.

(g) Threads of the rods ends do not need to cover the witness holes. If 30.77 inch (781.59 mm) is met and threads are visible through the witness holes then adjustments values are reached.

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SUBTASK 32-22-11-420-009

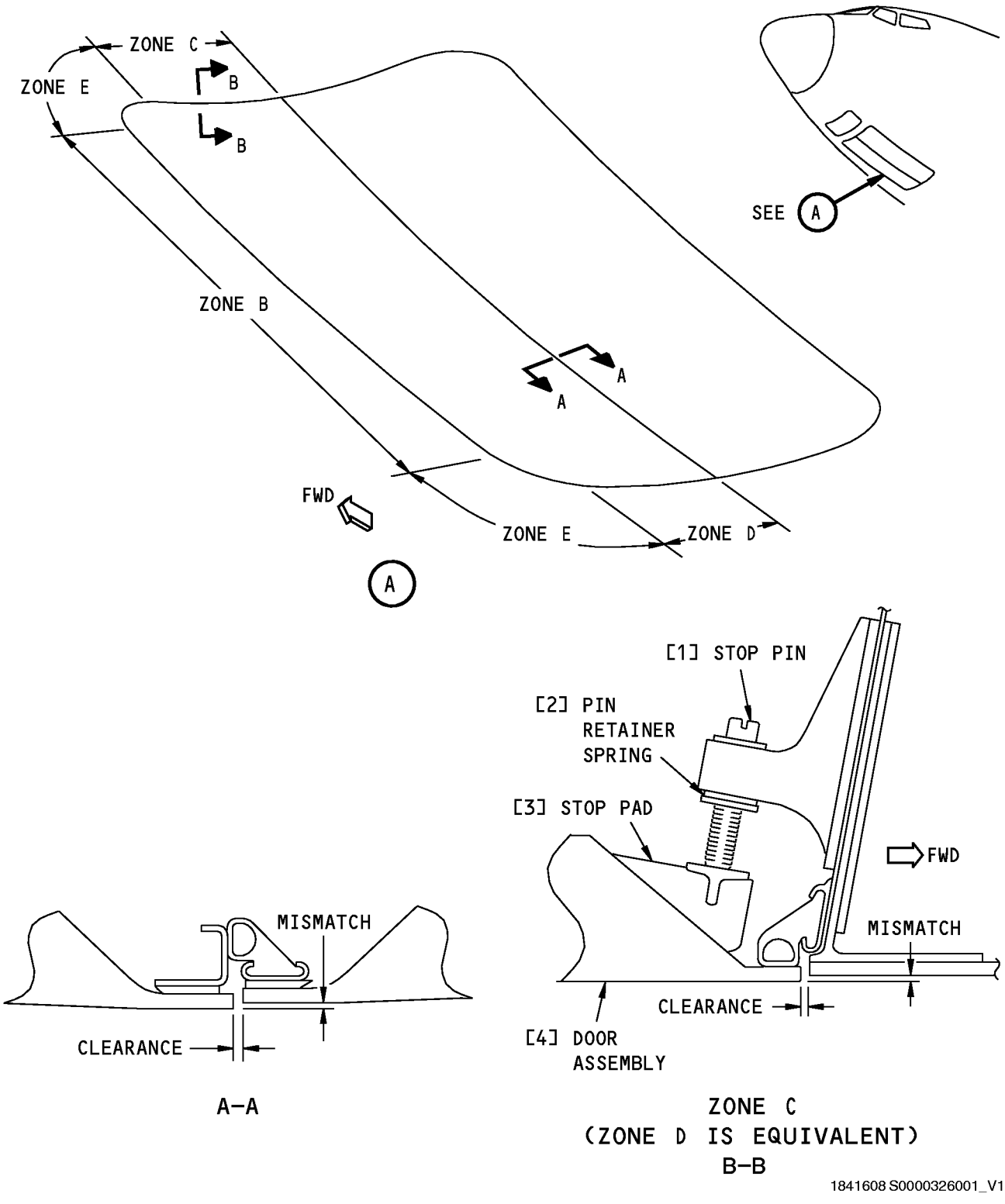
(15) Do this task: Nose Gear Wheel Well Door Linkage Adjustment, TASK 32-33-61-820-802.

SUBTASK 32-22-11-420-013

(16) Tighten the nut [18] and install the cotter pin [19] in the hole in the bolt [16]. If it is necessary, loosen the nut [18] to the nearest castellation to align the hole in the bolt [16].

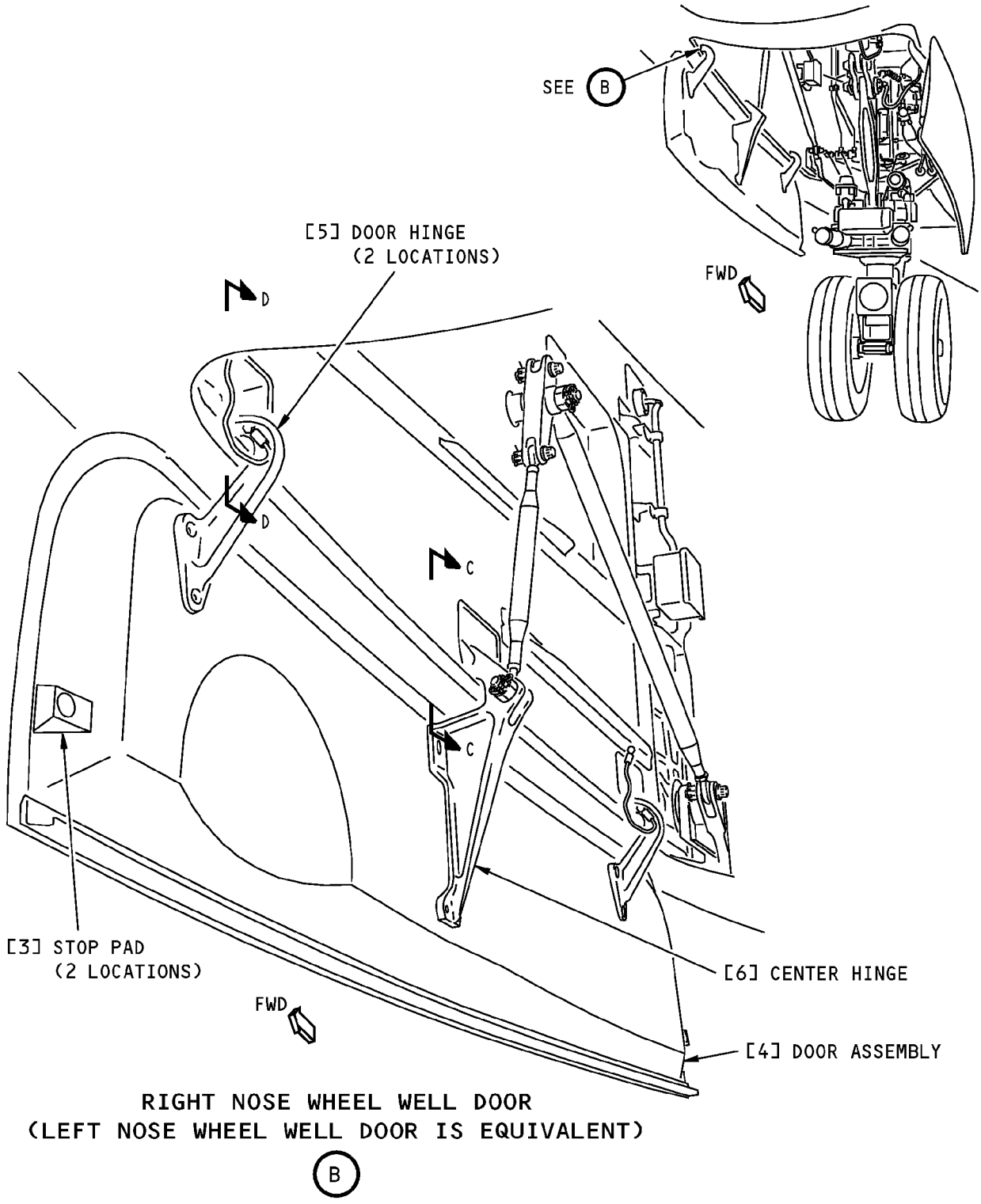
——————— END OF TASK ———————

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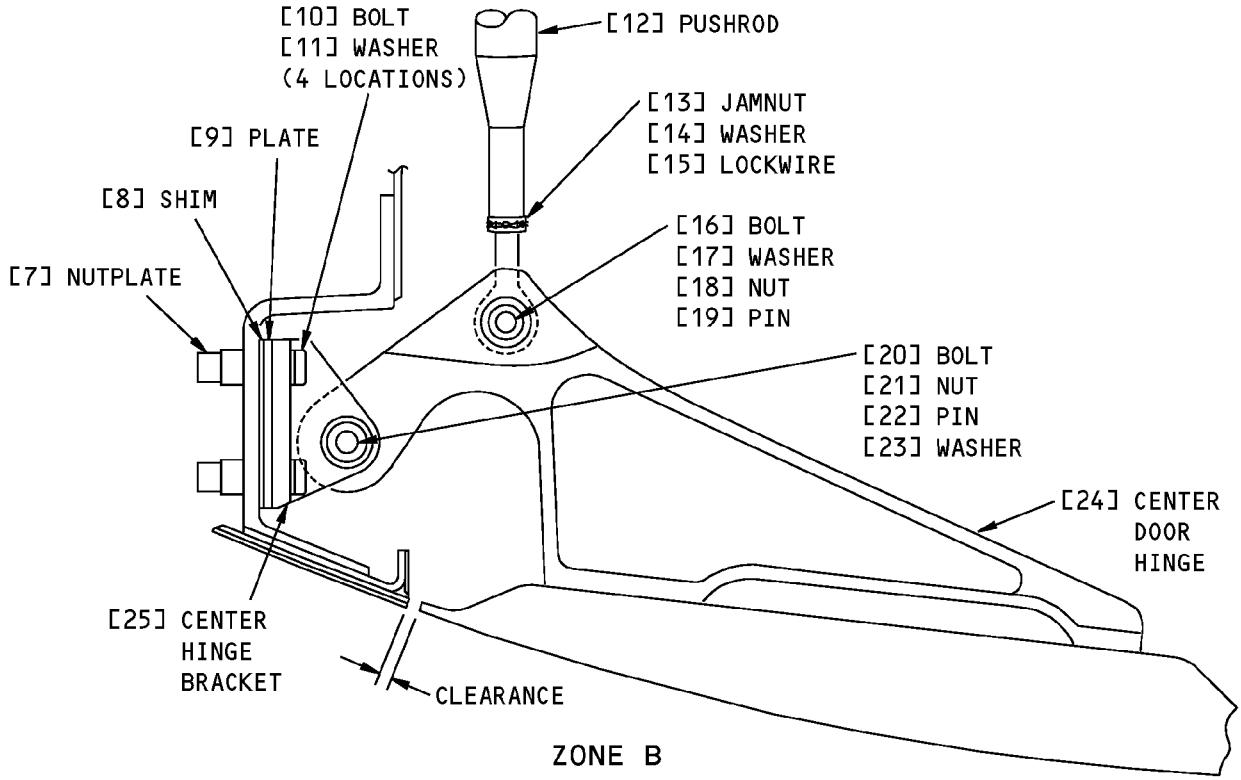
Nose Landing Gear Wheel Well Doors Adjustment
Figure 501 (Sheet 1 of 3)/32-22-11-990-802

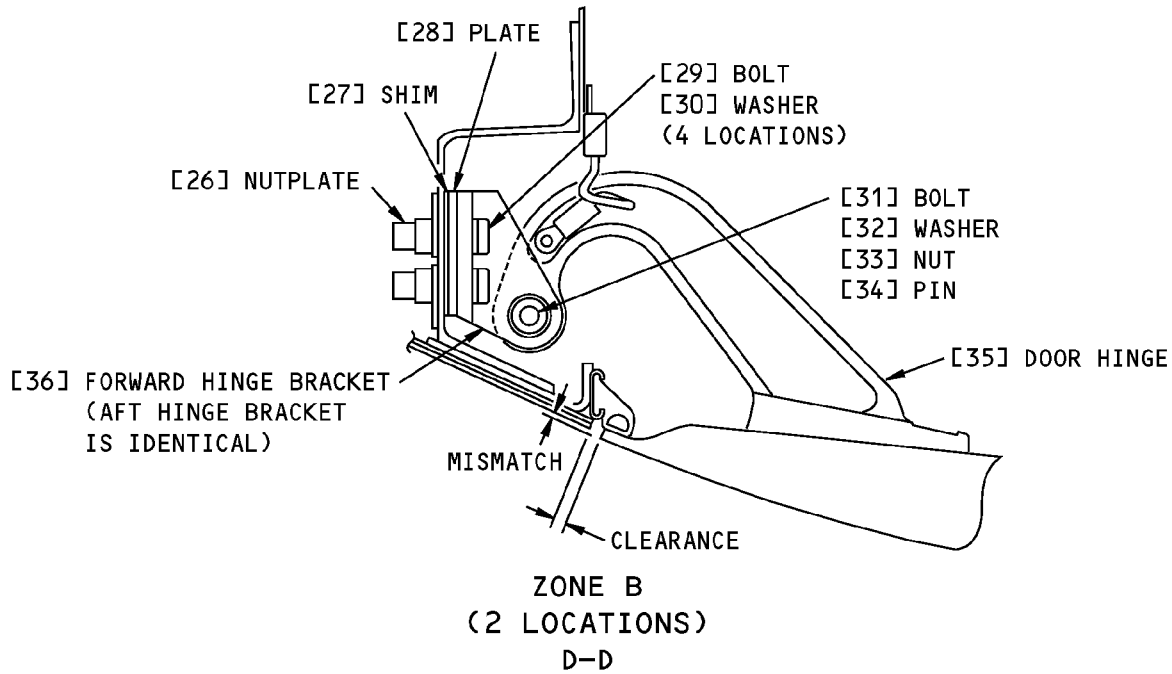
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Nose Landing Gear Wheel Well Doors Adjustment
Figure 501 (Sheet 2 of 3)/32-22-11-990-802

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Nose Landing Gear Wheel Well Doors Adjustment
Figure 501 (Sheet 3 of 3)/32-22-11-990-802

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LANDING GEAR CONTROL SYSTEM - ADJUSTMENT/TEST

1. General

A. You will adjust the control system for the landing gear when you have one of these conditions:

(1) A component is replaced

(2) The cable tension is more than +/- 15 pounds (+/- 67 newtons) from the in Table: Rer to Figure 501 (Sheet 5).

NOTE: The push/pull cable and gearbox assembly (Teleflex cable) adjustment is done in a separate procedure. This assembly connects the Landing Gear Control Lever in the flight deck to the forward quadrant housing assembly. It does not require adjustment under normal operating conditions.

TASK 32-31-00-820-801

2. Landing Gear Control System Adjustment

(Figure 501)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1553	Tensiometer - Cable (20 - 200 LB) (Part #: 102-03110, Supplier: 21844, A/P Effectivity: 737-ALL) (Part #: ACM-200, Supplier: 13331, A/P Effectivity: 737-ALL) (Part #: T60-1001-C8-1A, Supplier: 0N8U4, A/P Effectivity: 737-ALL)
COM-1554	Tensiometer - Cable (40-600 LB) (Part #: ACM-600, Supplier: 13331, A/P Effectivity: 737-ALL) (Part #: T5-8008-106-00, Supplier: 0N8U4, A/P Effectivity: 737-ALL) (Part #: T60-1001-C9-1A, Supplier: 0N8U4, A/P Effectivity: 737-ALL)
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

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D. Access Panels

Number	Name/Location
112A	Forward Access Door

E. Prepare for the Adjustment

SUBTASK 32-31-00-860-001

(1) For hydraulic systems A and B, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-31-00-820-005

(2) Final control cable adjustments can only be performed on a temperature stabilized airplane. An airplane is considered temperature stabilized when the following requirements are met:

(a) The outside ambient temperature has not changed by more than 5 degrees F over the last hour.

(b) The outside ambient temperature does not change at a rate greater than 5 degrees F per hour while the cables are being tensioned.

(c) The airplane is not in direct sunlight OR the following procedure indicates temperatures are stabilized.

1) Measure temperatures at the following locations:

- Inside: Near the center of each compartment that the cable run passed through or is adjacent to including passenger cabin, EE bay, and forward cargo compartment.
- Outside: Within five inches of the fuselage skin on both the left and right sides just below the forward entry doors (Two locations)

2) The airplane can be considered temperature stabilized if the difference between the lowest and highest recorded temperature is less than five degrees F.

(d) The entry doors, cargo doors, and the EE bay access hatch have been open for at least one hour and will remain open while the cables are being tensioned OR measured temperatures inside are within 5 degrees F of the measured outside temperatures.

(e) There are no significant sources of heat inside the airplane that may cause the internal temperature in any compartment to be five degrees F or more above the ambient temperature.

SUBTASK 32-31-00-010-001

(3) To get access to the turnbuckles, do this step:

Open this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-31-00-480-001

(4) Make sure that the downlock pins are installed on the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

F. Adjust the control system for the Landing Gear

SUBTASK 32-31-00-020-001

(1) Remove the nut [3], washers [2, 4] and bolt [1] to disconnect the link assembly between the selector valve and the bellcrank.

SUBTASK 32-31-00-860-002

(2) Put the control lever for the landing gear in the OFF position.

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SUBTASK 32-31-00-480-002

(3) Install the rig pin LGE1 from rig pin kit, SPL-1585 in the bellcrank and the structure.

SUBTASK 32-31-00-820-001

(4) If you installed new cables, before final adjustment of the cable rig loads, do the following steps:

(a) Use the 40 - 600 lb cable tensiometer, COM-1554 to adjust the cables LGVA and LGVB at the turnbuckles to 300 pounds.

(b) Make sure the rig pin LGE1 has a free fit and remove the rig pin.

(c) Operate the control lever for the landing gear from OFF to DN to UP and back to DN 25 times.

(d) Put the control lever to the OFF position and make sure the rig pin LGE1 has a free fit.

SUBTASK 32-31-00-820-002

(5) Adjust the cable tension in the cables LGVA and LGVB:

(a) Use the 20 - 200 lb cable tensiometer, COM-1553 to adjust the cables LGVA and LGVB at the turnbuckles to the values in Table A.

(b) Adjust to get a free fit of the rig pin LGE1.

NOTE: Rig cable loads when the temperature of the airplane inside and outside is the same. The temperature of the airplane should be stable for one hour before you adjust the cables.

SUBTASK 32-31-00-080-001

(6) Remove the rig pin LGE1.

SUBTASK 32-31-00-860-003

(7) Operate the control lever for the landing gear from OFF to DN to UP and back to OFF.Verify that the landing gear control lever moves freely without sticking or binding.

SUBTASK 32-31-00-480-003

(8) Install the rig pin LGE1.

SUBTASK 32-31-00-820-003

(9) Use the 20 - 200 lb cable tensiometer, COM-1553 to do a check on the cable tension per Table A again.

SUBTASK 32-31-00-820-004

(10) Adjust the cables LGVA and LGVB if it is necessary.

SUBTASK 32-31-00-420-001

(11) Install the bolt [1], washers [2, 4] and nut [3] to connect the link assembly between the selector valve and the bellcrank.

SUBTASK 32-31-00-080-002

(12) Remove the rig pin LGE1.

SUBTASK 32-31-00-410-001

(13) Install panel that were removed to access the turnbuckles, do this step:

Close this access panel:

Number	Name/Location
112A	Forward Access Door

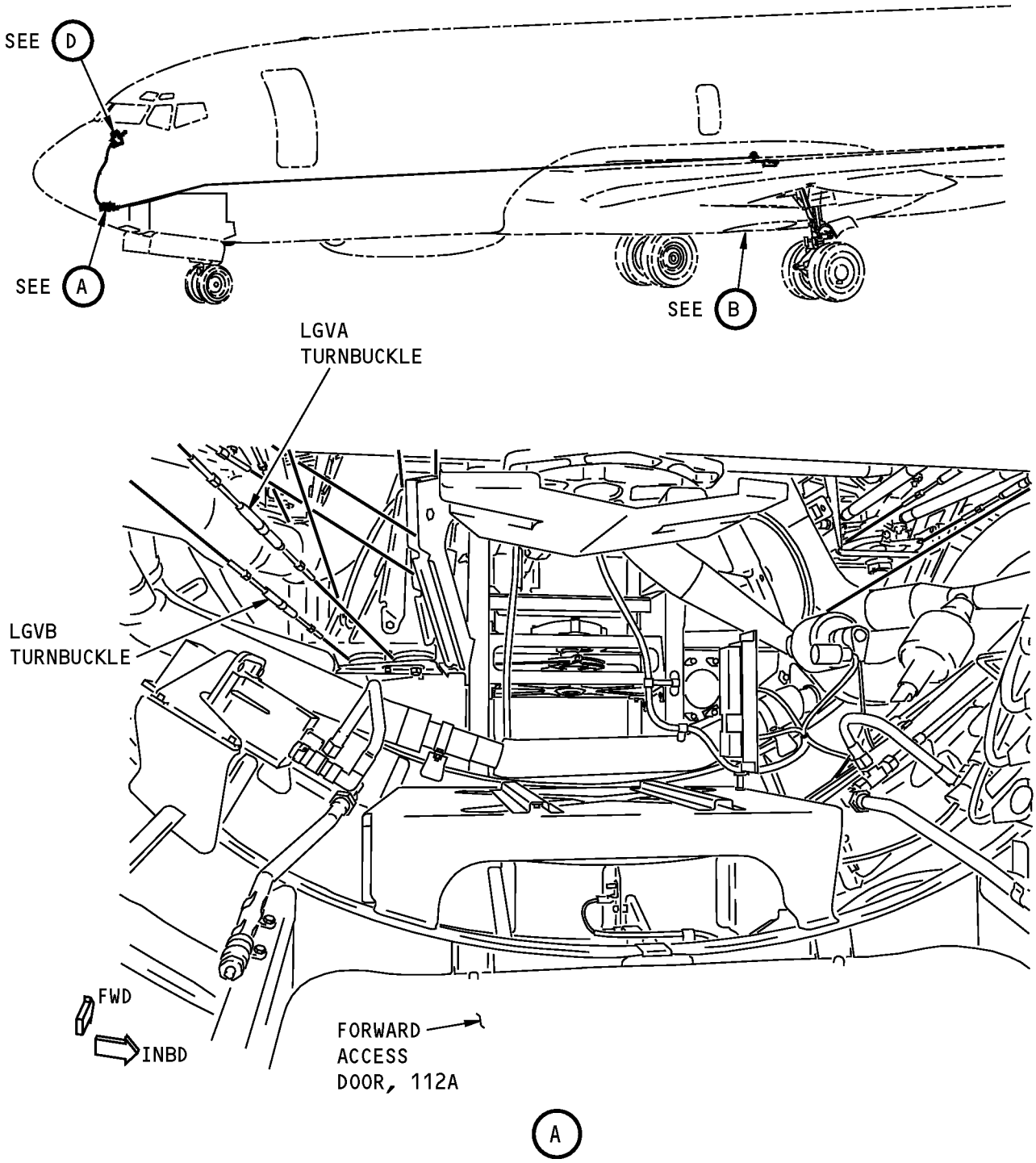
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SUBTASK 32-31-00-730-009

(14) Do this task: System Test - Landing Gear Control System, TASK 32-31-00-730-802.

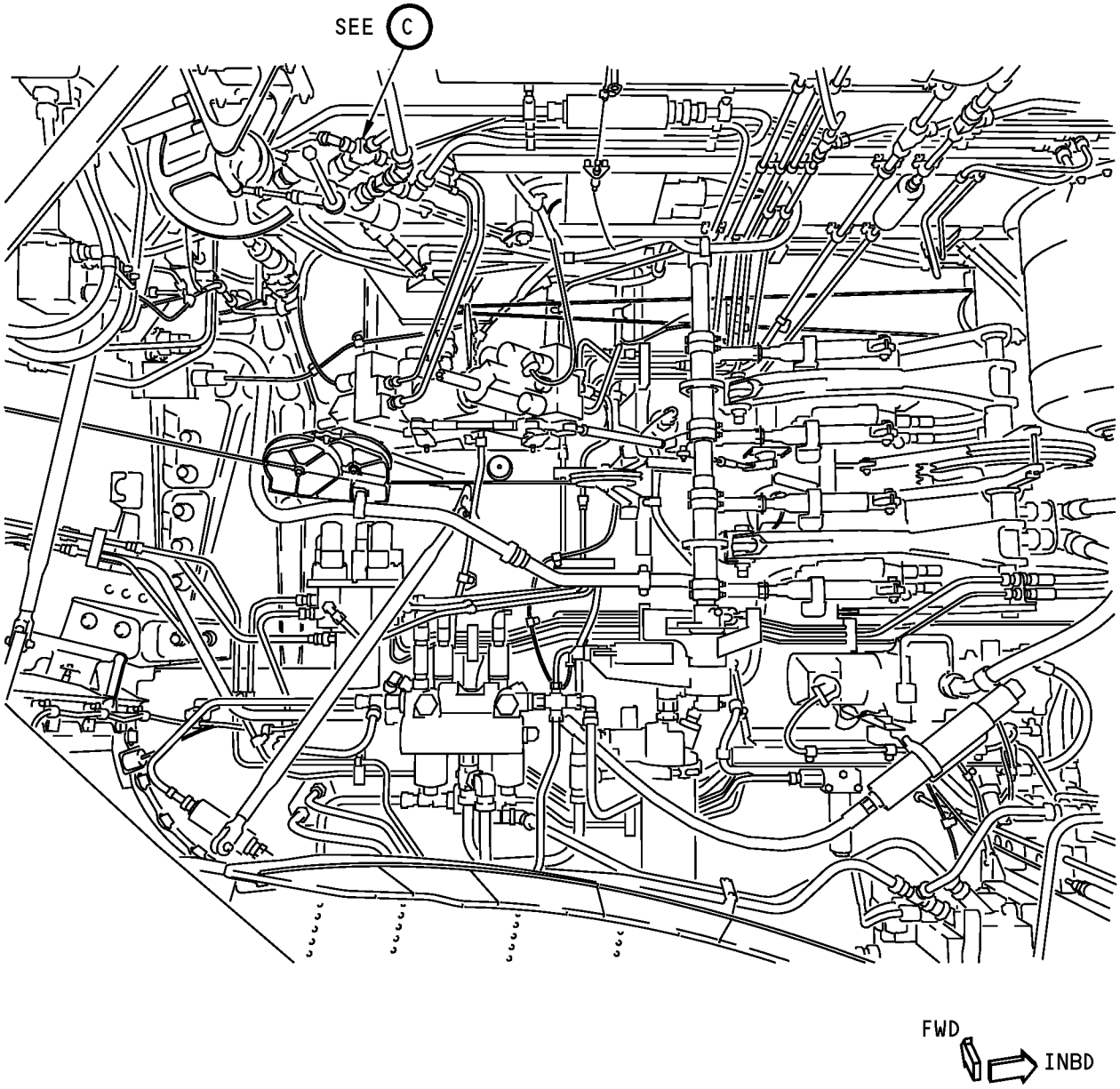
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Landing Gear Control System Adjustment
Figure 501 (Sheet 1 of 5)/32-31-00-990-801

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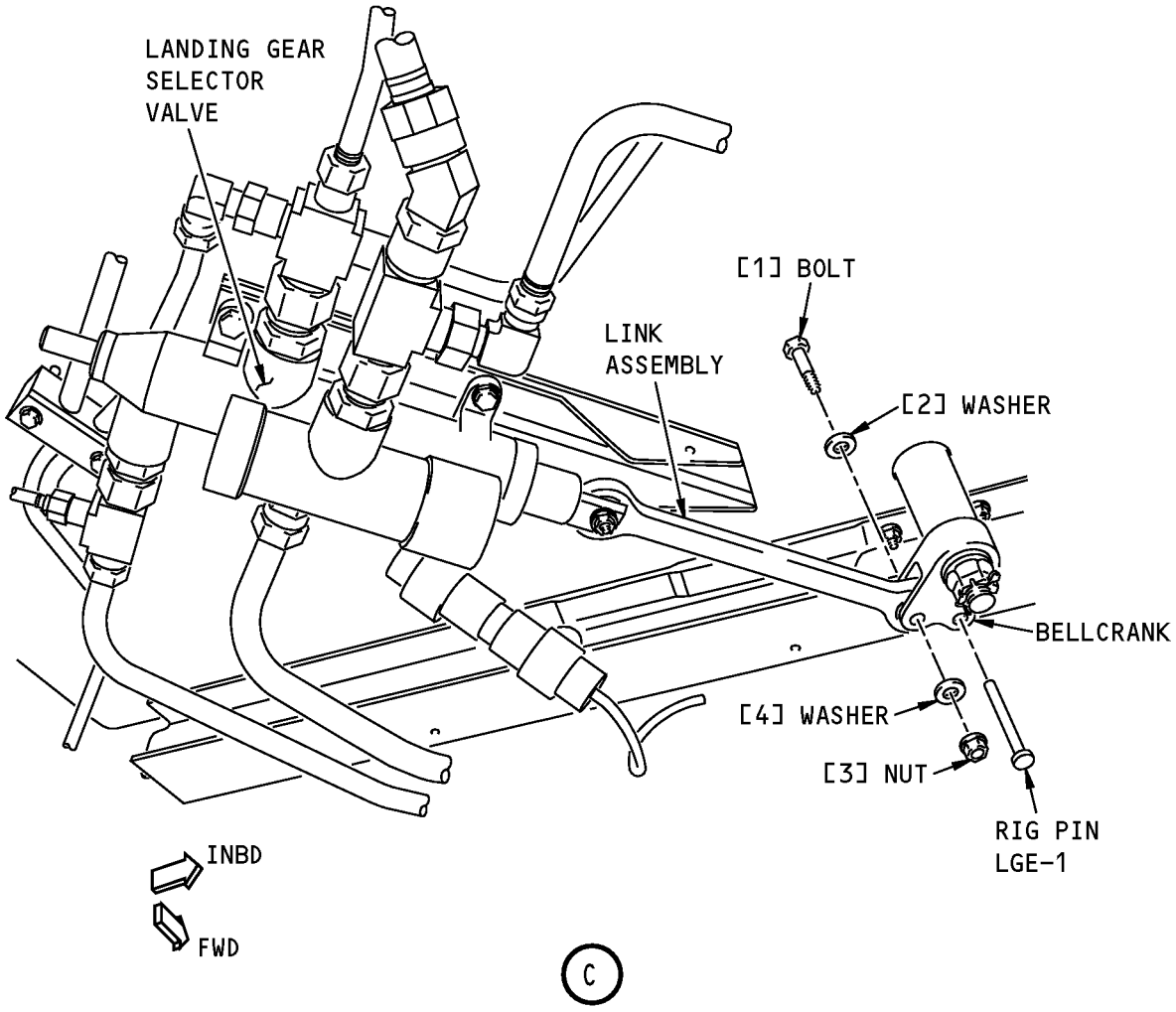


MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE)

B

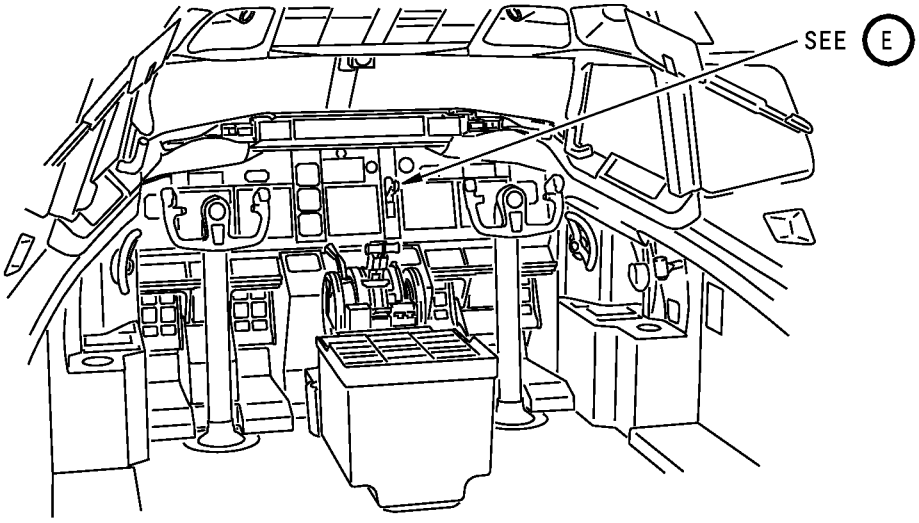
Landing Gear Control System Adjustment
Figure 501 (Sheet 2 of 5)/32-31-00-990-801

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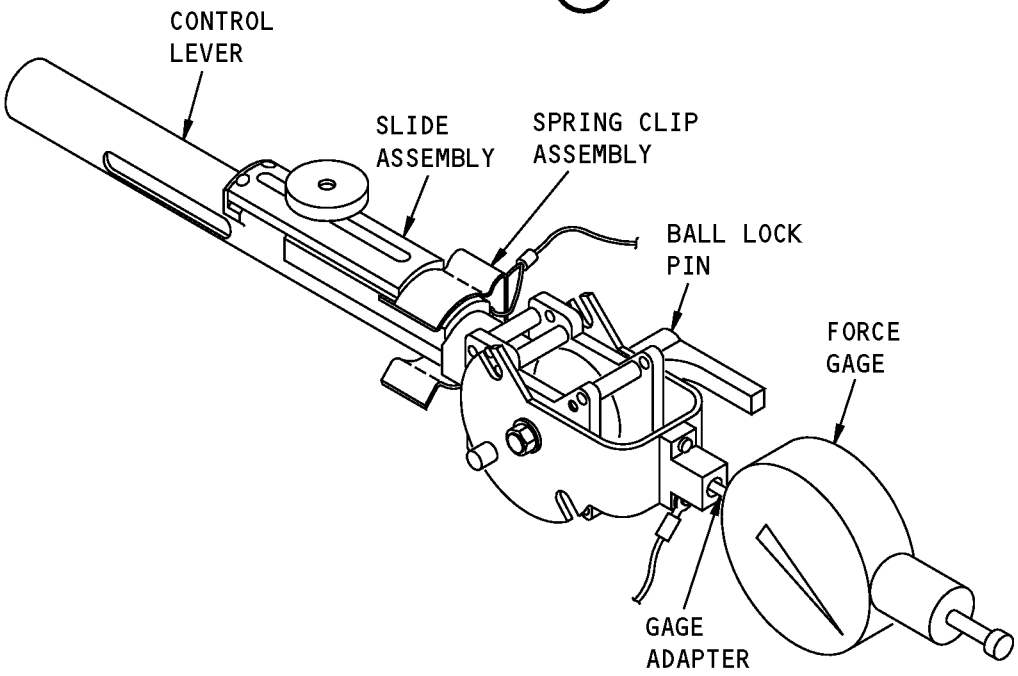
Landing Gear Control System Adjustment
Figure 501 (Sheet 3 of 5)/32-31-00-990-801

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FLIGHT COMPARTMENT

D



FORCE GAGE EQUIPMENT INSTALLED ON CONTROL LEVER

E

Landing Gear Control System Adjustment
Figure 501 (Sheet 4 of 5)/32-31-00-990-801

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MLG CABLE TENSION CHART	
TEMP °F ±5°	RIGGING LOAD LBS (+10/-0)
130 (54.444° C)	176 (79.834 kg)
110 (43.333° C)	167 (75.751 kg)
90 (32.22° C)	158 (71.669 kg)
70 (21.111° C)	150 (68.04 kg)
50 (10° C)	141 (63.958 kg)
30 (-1.111° C)	133 (60.329 kg)
10 (-12.22° C)	124 (56.246 kg)
-10 (-23.33° C)	115 (52.164 kg)
-30 (-34.44° C)	107 (48.535 kg)
-40 (-40° C)	102 (46.267 kg)

TABLE A

NOTE: CABLE RIG LOADS MUST BE WITHIN 0 TO +10 POUNDS OF TABLE A VALUES WHEN THE SYSTEM IS BEING RIGGED. SYSTEM MUST BE RE-RIGGED WHEN CABLE LOADS DEVIATE MORE THAN ±15 POUNDS FROM TABLE A VALUES.

CABLE CODE	FUNCTION
LGVA	LANDING GEAR UP
LGVB	LANDING GEAR DOWN

TABLE B

Landing Gear Control System Adjustment
Figure 501 (Sheet 5 of 5)/32-31-00-990-801

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TASK 32-31-00-730-802

3. System Test - Landing Gear Control System

(Figure 501)

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
24-22-00-860-812	Remove Electrical Power (P/B 201)
27-62-61-400-806	Ground Spoiler Interlock Valve Proximity Sensor Functional Test (P/B 501)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1690	Set - Actuators/Deactuators, Proximity Sensor Test (Part #: 8-758-01, Supplier: 08748, A/P Effectivity: 737-ALL) (Part #: A27092-106, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A27092-84, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-6190	Equipment - Force Gage, Landing Gear Lever (Part #: G32021-18, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Procedure

SUBTASK 32-31-00-860-004

(1) For hydraulic systems A and B, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-31-00-860-005

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-31-00-480-004

(3) Make sure that the downlock pins are installed on the nose and main landing gear. If it is necessary, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

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SUBTASK 32-31-00-860-007

(4) Do this task: Put the Airplane in the Air Mode, TASK 32-09-00-860-801.

NOTE: You must use the deactuators to put the airplane in the air mode or put the airplane on jacks. You cannot use the PSEU BITE for this test.

SUBTASK 32-31-00-860-019

(5) Put an actuator on the Ground Spoiler Interlock Valve Close Sensor (S1050).

NOTE: The actuator is part of this test set: proximity sensor test set, SPL-1690. For information on the Ground Spoiler Interlock Valve Close Sensor, refer to this task: (Ground Spoiler Interlock Valve Proximity Sensor Functional Test, TASK 27-62-61-400-806).

SUBTASK 32-31-00-860-008

(6) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-31-00-860-009

(7) Put the control handle for the landing gear in the DN position.

SUBTASK 32-31-00-480-005

(8) Install the force gage equipment, SPL-6190 on the control lever for the landing gear.

SUBTASK 32-31-00-720-001

(9) Pull the control lever for the landing gear out of the DN detent.

(a) Make sure that the force necessary to pull the control lever out of the detent is not more than 12 lbf (53 N).

SUBTASK 32-31-00-720-002

(10) Move the control lever for the landing gear to the UP position.

(a) Make sure that the tangential force, the force that is perpendicular to the in and out movement of the control lever, necessary to move the control lever is not more than 12 lbf (53 N).

SUBTASK 32-31-00-080-003

(11) Remove the force gage equipment, SPL-6190 from the control lever.

SUBTASK 32-31-00-730-003

(12) Pull completely out and release the control lever in the UP detent.

(a) Make sure the control lever goes freely into the detent and to the bottom of the detent without a push.

SUBTASK 32-31-00-860-010

(13) Move the control lever to the OFF position.

SUBTASK 32-31-00-730-004

(14) Pull completely out and release the control lever in the OFF detent.

(a) Make sure the control lever goes freely into the detent and to the bottom of the detent without a push.

SUBTASK 32-31-00-860-011

(15) Move the control lever to the DN position.

SUBTASK 32-31-00-730-005

(16) Pull completely out and release the control lever in the DN detent

(a) Make sure the control lever goes freely into the detent and to the bottom of the detent without a push.

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SUBTASK 32-31-00-860-012

(17) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

SUBTASK 32-31-00-730-006

(18) Do not use the lock override trigger and try to move the control lever for the landing gear to the UP position.

(a) Make sure the control lever will not move to the UP position.

SUBTASK 32-31-00-730-007

(19) Operate the lock override trigger and move the control lever for the landing gear to the UP position.

SUBTASK 32-31-00-860-013

(20) Put the control lever to the OFF position.

SUBTASK 32-31-00-860-020

(21) Do this task: Put the Airplane in the Air Mode, TASK 32-09-00-860-801.

NOTE: You must use the deactuators to put the airplane in the air mode or put the airplane on jacks. You cannot use the PSEU BITE for this test.

SUBTASK 32-31-00-860-021

(22) Make sure that the actuator is still installed on the Ground Spoiler Interlock Valve Close Sensor (S1050).

SUBTASK 32-31-00-730-008

(23) Do not use the lock override trigger and try to move the control lever for the landing gear to the UP position.

(a) Make sure the control lever will move to the UP position.

SUBTASK 32-31-00-860-015

(24) Put the control lever to the DN position.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 32-31-00-860-016

(1) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

SUBTASK 32-31-00-860-017

(2) For hydraulic systems A and B, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-31-00-860-022

(3) Remove the actuator from the Ground Spoiler Interlock Valve Sensor (S1050).

SUBTASK 32-31-00-860-018

(4) Remove the electrical power if it is not necessary. To do this, do this task: Remove Electrical Power, TASK 24-22-00-860-812.

——————— END OF TASK ———————

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LANDING GEAR CONTROL LEVER MODULE - REMOVAL/INSTALLATION

1. General

A. This procedure has these two tasks:

(1) A removal of the landing gear control lever module (referred to as module assembly [1]).

(2) An installation of the module assembly [1].

TASK 32-31-11-020-801

2. Landing Gear Control Lever Module Removal

(Figure 401)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
34-61-01-000-802	FMCS Control Display Unit (CDU) Removal (P/B 401)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare for the Removal

SUBTASK 32-31-11-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-31-11-860-001

(2) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN

SUBTASK 32-31-11-860-002

(3) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

D. Control Lever Module Removal

SUBTASK 32-31-11-010-001

(1) Turn the two quick-release fasteners on the front of the module assembly [1] and remove the lightplate/baseplate assembly [2].

SUBTASK 32-31-11-010-002

(2) Remove the P2-2 CDS Display Control Panel.

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SUBTASK 32-31-11-010-003

(3) Remove the First Officer's FMC CDU from the forward aisle stand, do this task: FMCS Control Display Unit (CDU) Removal, TASK 34-61-01-000-802.

SUBTASK 32-31-11-010-004

(4) Turn the quick-release fasteners to remove the plate [5] from the forward side of the FMC CDU space in the aisle stand.

NOTE: This will give you access to the bolt [7] that is at the back of the module assembly [1], on the bottom.

SUBTASK 32-31-11-020-001

(5) Remove the screws [3] and washers [4] that attach the module assembly [1] to the panel structure.

SUBTASK 32-31-11-020-002

(6) Remove the bolts [7] and washers [6] that attach the module assembly [1] to the structure.

SUBTASK 32-31-11-020-003

(7) Remove the screws [13] and washers [14] to disconnect the teleflex cable [12] from the module assembly [1].

SUBTASK 32-31-11-020-004

(8) Remove the bolts [11], washers [8], pin retainer [10], and pin [9] to disconnect the teleflex cable [12] from the module assembly [1].

SUBTASK 32-31-11-020-005

(9) Move the module assembly [1] out of the panel structure to get access to the electrical connector on its top.

SUBTASK 32-31-11-020-006

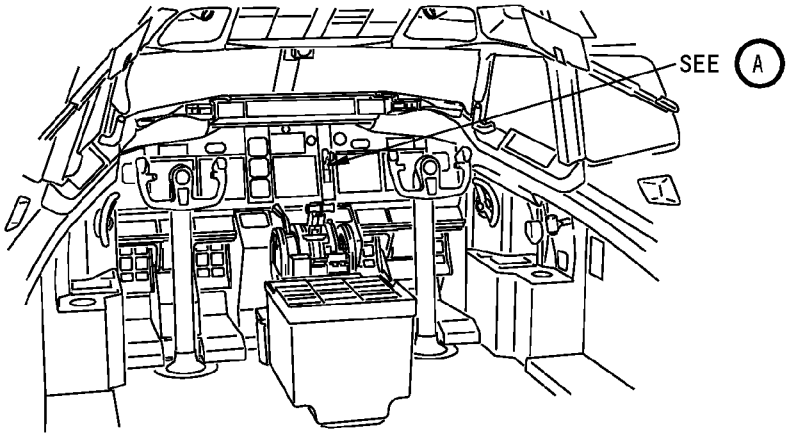
(10) Disconnect the electrical connector from the module assembly [1].

SUBTASK 32-31-11-020-007

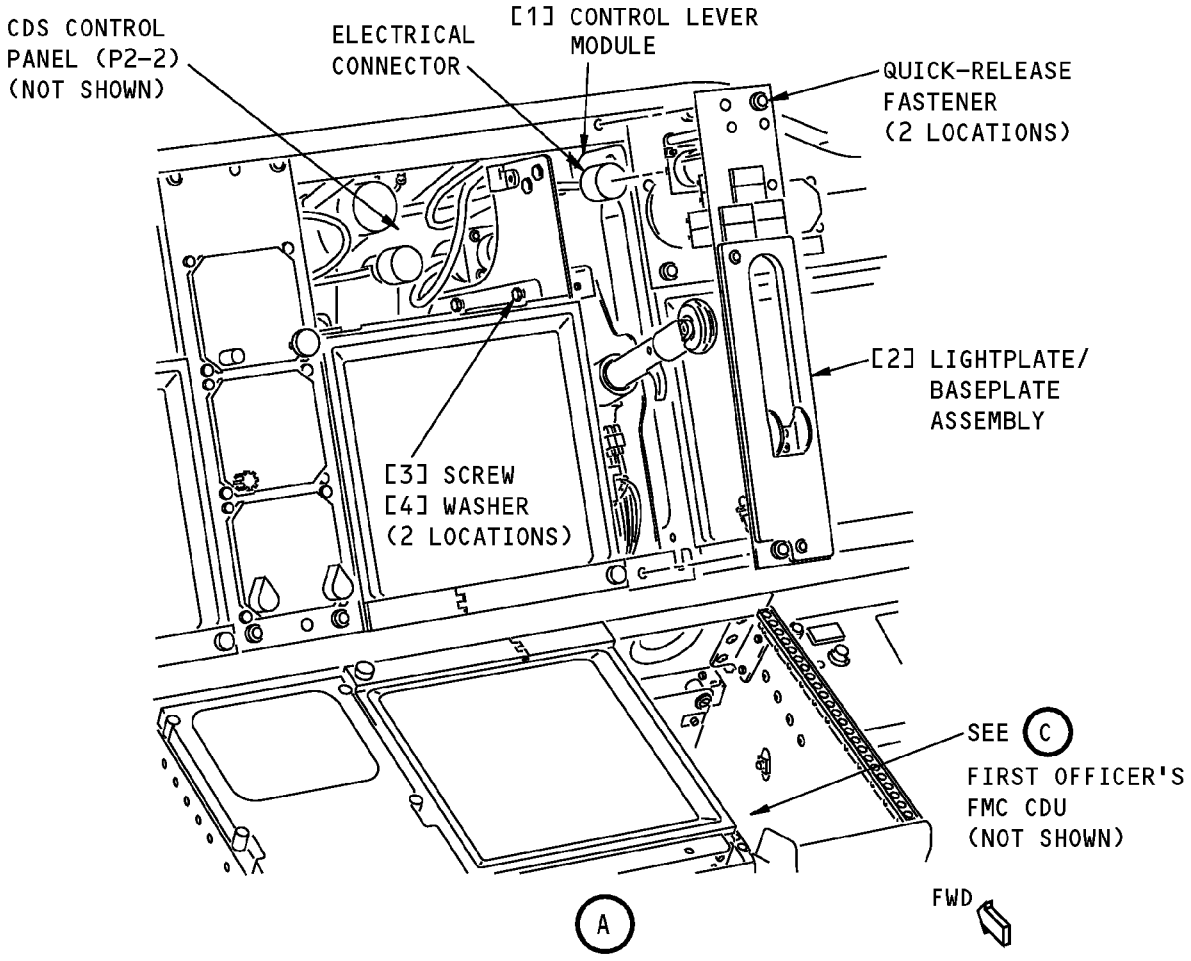
(11) Remove the module assembly [1] from the airplane.

END OF TASK

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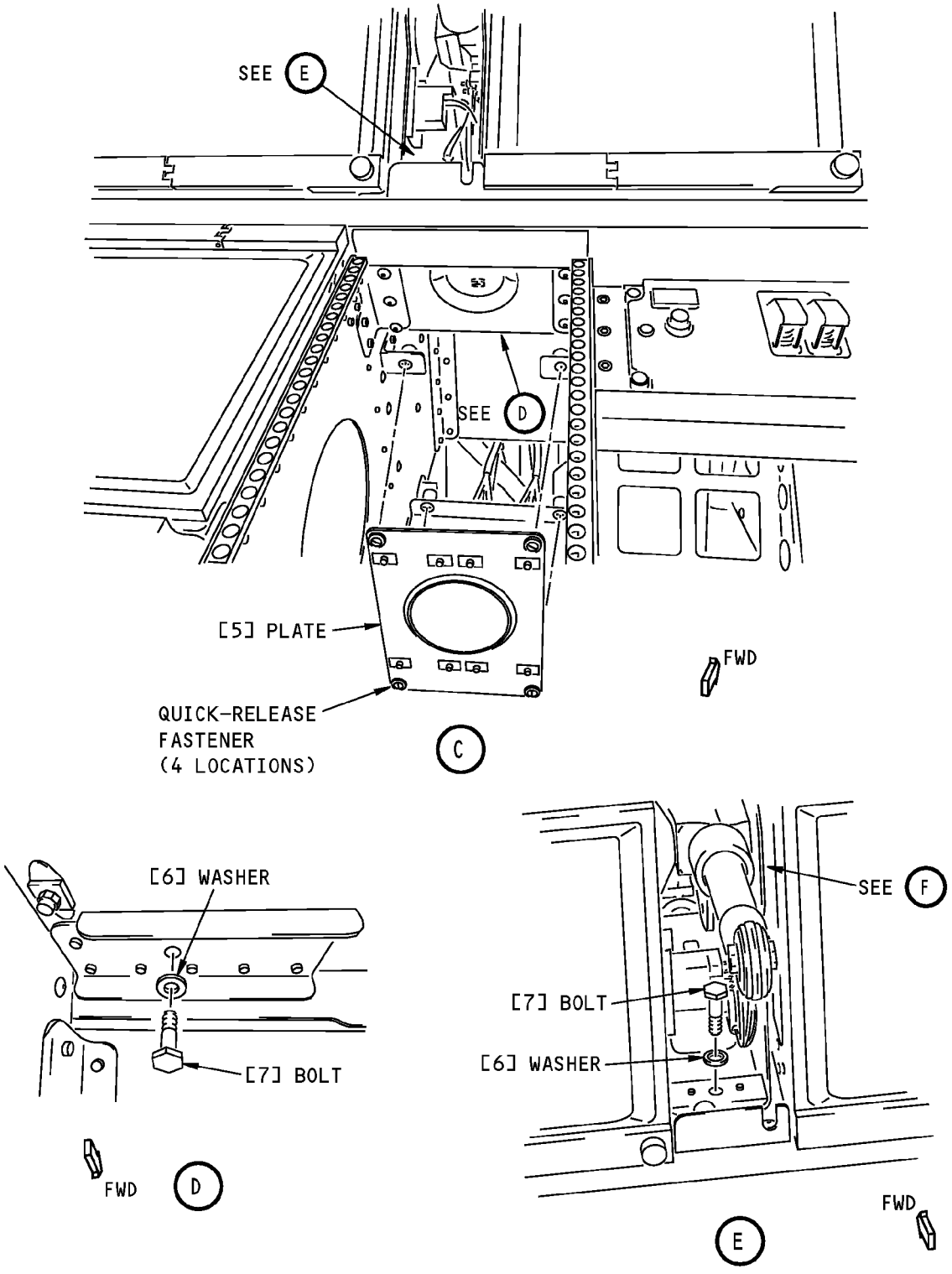


FLIGHT COMPARTMENT



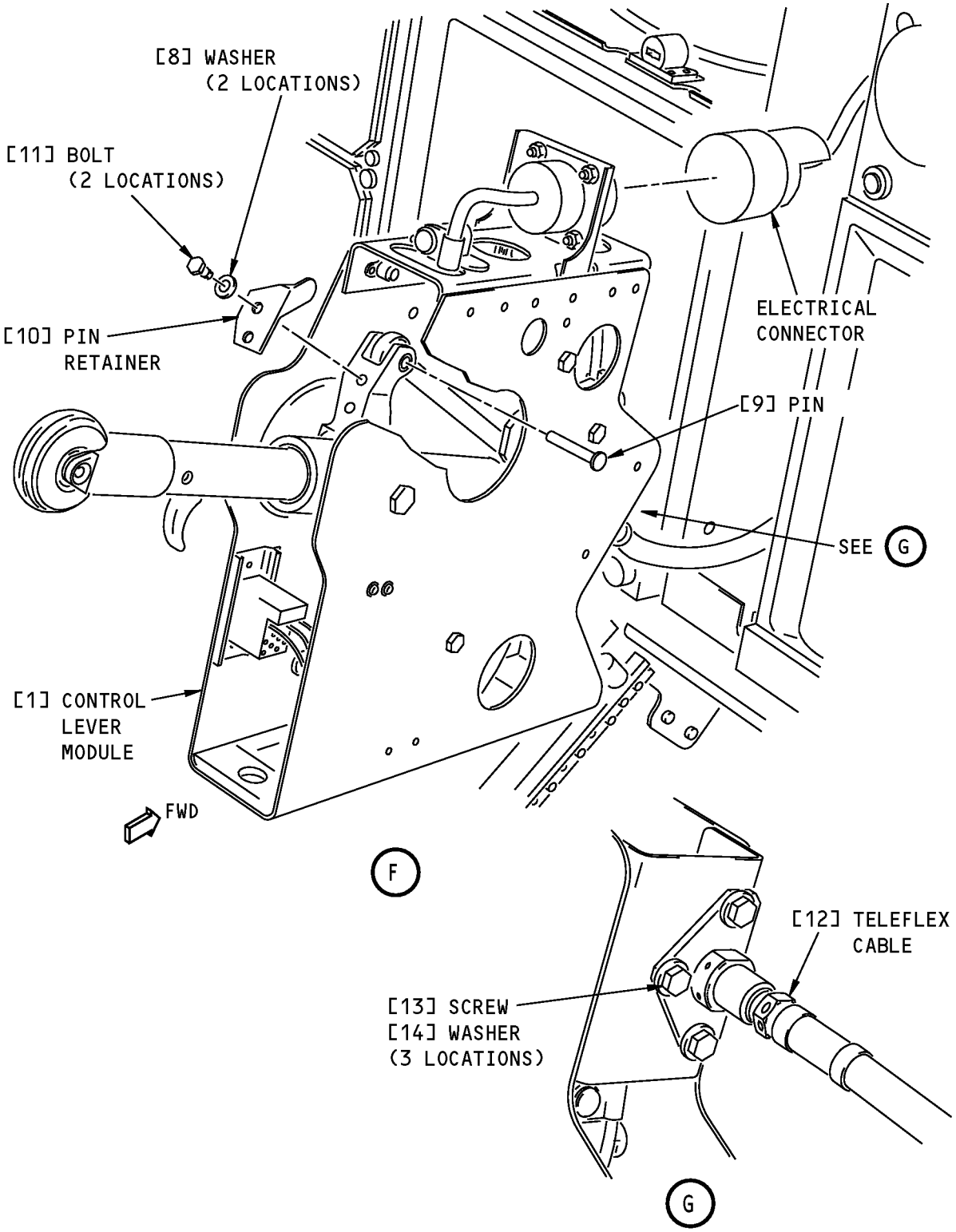
Landing Gear Control Lever Module Installation
Figure 401 (Sheet 1 of 3)/32-31-11-990-801

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Landing Gear Control Lever Module Installation
Figure 401 (Sheet 2 of 3)/32-31-11-990-801

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Landing Gear Control Lever Module Installation
Figure 401 (Sheet 3 of 3)/32-31-11-990-801

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TASK 32-31-11-400-801

3. Landing Gear Control Lever Module Installation

(Figure 401)

A. References

Reference	Title
24-22-00-860-813	Supply External Power (P/B 201)
32-31-00-730-802	System Test - Landing Gear Control System (P/B 501)
34-61-01-400-802	FMCS Control Display Unit (CDU) Installation (P/B 401)
SWPM 20-60-03	Special Protection of Electrical Connectors

B. Consumable Materials

Reference	Description	Specification
G50171	Compound - Corrosion Inhibiting Compound, Interior Application - D5026NS or ZC-026	

C. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Control Lever Module Installation

SUBTASK 32-31-11-420-001

(1) Put the module assembly [1] in a position to attach the teleflex cable [12].

SUBTASK 32-31-11-420-002

(2) Before you connect the electrical connector to the module assembly [1], examine the connector for corrosion.

WARNING: DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

(a) If there was corrosion, refer to (SWPM 20-60-03) to correct the problem.

(b) Apply the D5026NS or ZC-026 compound, G50171 to the connector (SWPM 20-60-03).

SUBTASK 32-31-11-430-001

(3) Connect the electrical connector to the module assembly [1].

SUBTASK 32-31-11-420-003

(4) Put the teleflex cable [12] through the back of the module assembly [1].

SUBTASK 32-31-11-420-010

(5) Install the screws [13] and washers [14] to attach the flange to the back of the module assembly [1].

SUBTASK 32-31-11-420-004

(6) Install the pin [9] to attach the teleflex cable [12] to the control lever.

SUBTASK 32-31-11-420-005

(7) Install the pin retainer [10], washers [8], and bolts [11].

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SUBTASK 32-31-11-420-006

(8) Move the module assembly [1] into position in the panel structure.

SUBTASK 32-31-11-420-007

(9) Install the bolts [7] and washers [6] that attach the bottom of the module assembly [1] to the panel structure.

SUBTASK 32-31-11-420-008

(10) Install the screws [3] and washers [4] that attach the top of module assembly [1] to the panel structure.

SUBTASK 32-31-11-420-009

(11) Install the lightplate/baseplate assembly [2] on the module assembly [1].

SUBTASK 32-31-11-860-003

(12) Do this task: Supply External Power, TASK 24-22-00-860-813.

SUBTASK 32-31-11-860-004

(13) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN

SUBTASK 32-31-11-710-001

(14) Do the test of the landing gear control system. To do this, do this task: System Test - Landing Gear Control System, TASK 32-31-00-730-802.

SUBTASK 32-31-11-410-001

(15) Install the plate [5] that you removed from the forward side of the FMC CDU space in the aisle stand.

SUBTASK 32-31-11-410-002

(16) Install the First Officer's FMC CDU in the forward aisle stand, do this task: FMCS Control Display Unit (CDU) Installation, TASK 34-61-01-400-802.

SUBTASK 32-31-11-410-003

(17) Install the P2-2 CDS Display Control Panel.

END OF TASK

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LANDING GEAR FORWARD QUADRANT HOUSING ASSEMBLY - REMOVAL/INSTALLATION

1. General

A. This procedure has these two tasks:

(1) A removal of the forward quadrant housing assembly (referred to as the housing assembly [1]) for the landing gear

(2) An installation of the housing assembly [1] for the landing gear.

TASK 32-31-21-020-801

2. Landing Gear Forward Quadrant Housing Assembly Removal

(Figure 401)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Access Panels

Number	Name/Location
112A	Forward Access Door

D. Prepare for the Removal

SUBTASK 32-31-21-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) For the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-31-21-580-001

(2) Install chocks around the tires of the main landing gear.

SUBTASK 32-31-21-860-001

(3) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

E. Forward Quadrant Housing Assembly Removal

SUBTASK 32-31-21-020-001

(1) Open this access panel:

Number	Name/Location
112A	Forward Access Door

NOTE: You can find the turnbuckles in the area in front of the nose wheel well behind the forward access door panel.

(2) Remove the clips from the turnbuckles and loosen the cables LGVA and LGVB.

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SUBTASK 32-31-21-020-002

(3) Remove the pins [2] that hold cables LGVA and LGVB to the housing assembly [1].

SUBTASK 32-31-21-020-003

(4) Remove the bolts [9] and washers [6] from teleflex cable assembly.

SUBTASK 32-31-21-020-004

(5) Remove the teleflex cable assembly from the housing assembly [1].

SUBTASK 32-31-21-020-005

(6) Loosen the nuts [5], washers [7], and bolts [4] to permit removal of the brackets [3] that are part of the housing assembly [1].

SUBTASK 32-31-21-020-006

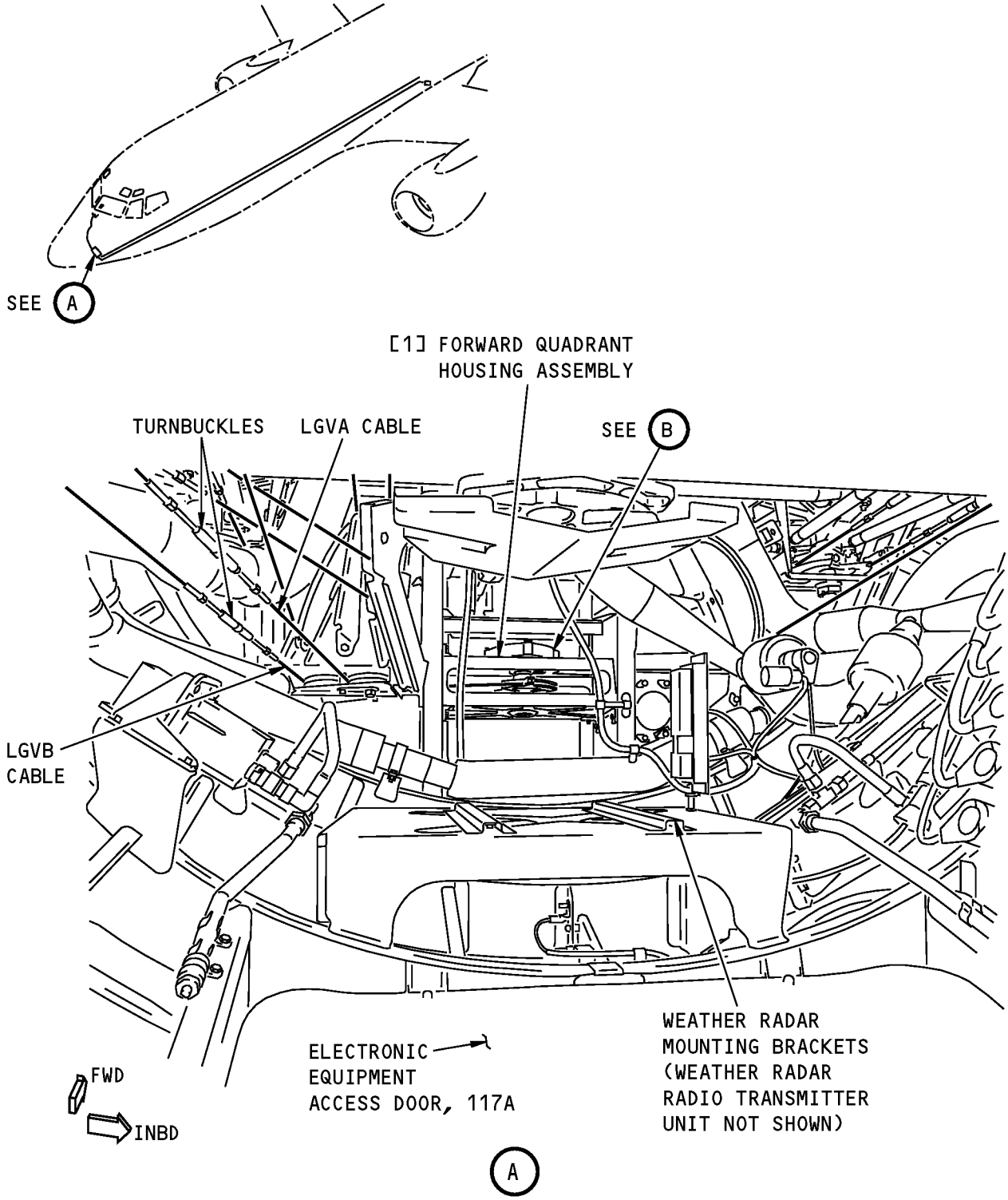
(7) Remove the nuts [5], washers [6], and bolts [4, 8] from the housing assembly [1].

SUBTASK 32-31-21-020-007

(8) Remove the housing assembly [1].

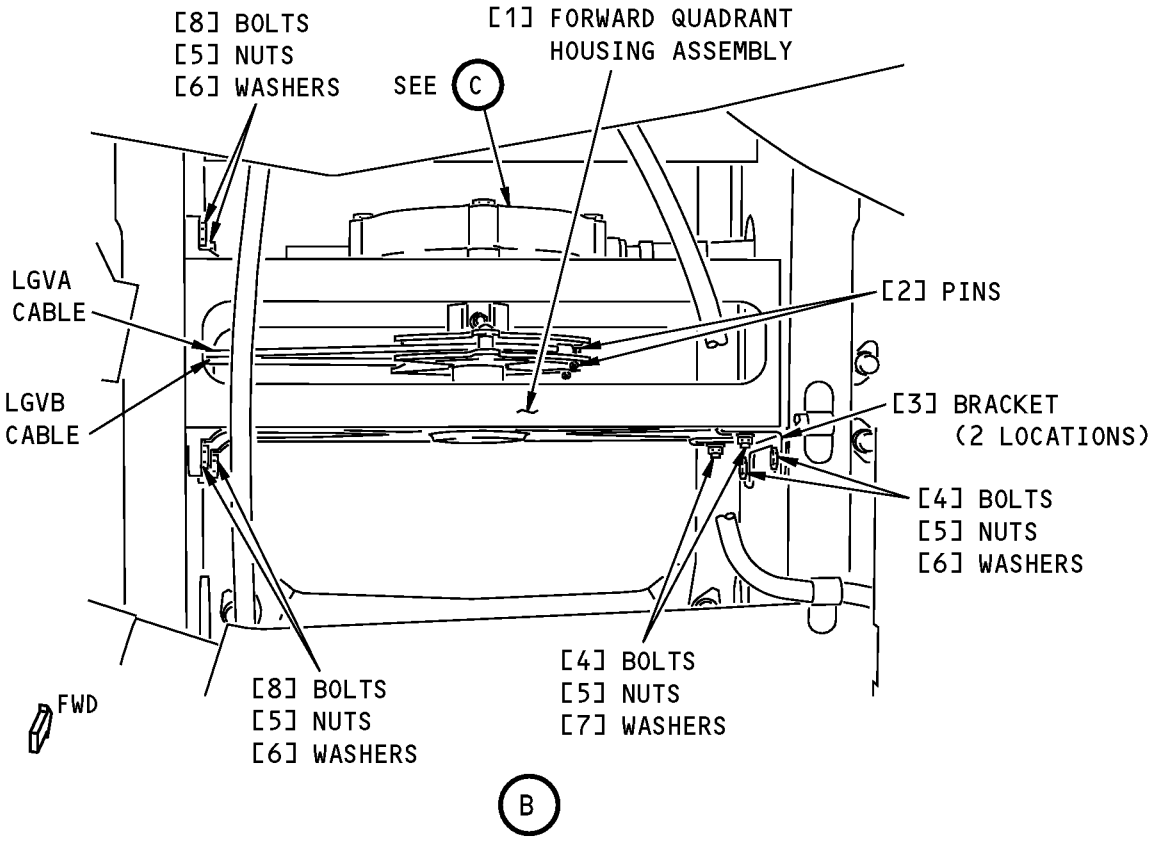
——————— END OF TASK ———————

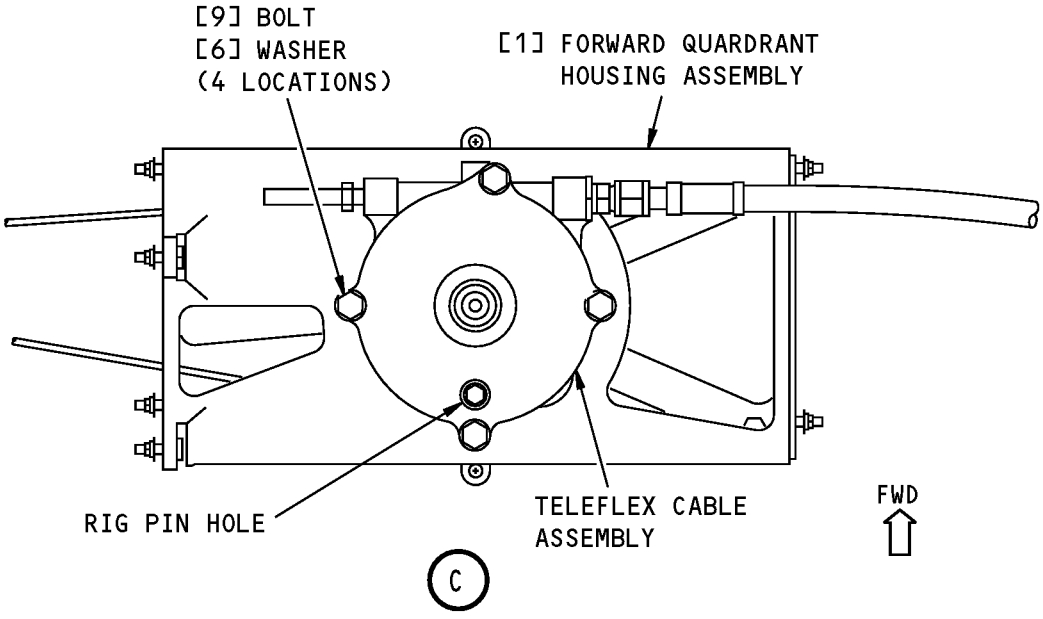
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Landing Gear Forward Quadrant Housing Installation
Figure 401 (Sheet 1 of 2)/32-31-21-990-801

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Landing Gear Forward Quadrant Housing Installation
Figure 401 (Sheet 2 of 2)/32-31-21-990-801

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TASK 32-31-21-400-801

3. Landing Gear Forward Quadrant Housing Assembly Installation

(Figure 401)

A. References

Reference	Title
32-31-00-820-801	Landing Gear Control System Adjustment (P/B 501)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Access Panels

Number	Name/Location
112A	Forward Access Door

D. Forward Quadrant Housing Assembly Installation

SUBTASK 32-31-21-420-001

(1) Put the housing assembly [1] in position for installation.

SUBTASK 32-31-21-420-002

(2) Loosen the nuts [5], washers [7], and bolts [4] to permit installation of the brackets [3], that are part of the housing assembly [1], to the structure.

SUBTASK 32-31-21-420-003

(3) Install the bolts [4, 8], washers [6], and nuts [5] which attach the housing assembly [1] to the structure.

SUBTASK 32-31-21-860-002

(4) Make sure the Landing Gear Control Lever is in the OFF position.

SUBTASK 32-31-21-420-004

(5) Align the teleflex cable assembly with the housing assembly [1].

SUBTASK 32-31-21-480-003

(6) Insert the rig pin F70207-7, from kit, F70207-109, through the gearbox and forward quadrant.

SUBTASK 32-31-21-420-005

(7) Install the bolts [9] and washers [6] to attach the teleflex cable assembly to the housing assembly [1].

SUBTASK 32-31-21-420-006

(8) Install the pins [2] to attach cables LGVA and LGVB to the quadrant in the housing assembly [1].

SUBTASK 32-31-21-820-001

(9) Adjust the control system for the landing gear. To do this, do this task: Landing Gear Control System Adjustment, TASK 32-31-00-820-801.

SUBTASK 32-31-21-410-001

(10) Make sure this access panel is closed:

Number Name/Location

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(Continued)

Number	Name/Location
112A	Forward Access Door

—————— END OF TASK ——————

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PUSH/PULL CABLE AND GEARBOX - REMOVAL/INSTALLATION

1. General

A. This procedure has these two tasks:

(1) A removal of the push/pull cable [2] and the gear box [1] assembly for the landing gear.

(2) An installation of the push/pull cable [2] and the gear box [1] assembly for the landing gear.

NOTE: Both the push/pull cable and the gear box must be replaced together. You can not replace only one of the components.

TASK 32-31-22-020-802

2. Push/Pull Cable and Gearbox Removal

(Figure 401)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-31-11-020-801	Landing Gear Control Lever Module Removal (P/B 401)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare for the Removal

SUBTASK 32-31-22-480-002

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) For the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-31-22-580-002

(2) Install chocks around the tires of the main landing gear.

SUBTASK 32-31-22-860-003

(3) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

D. Push/Pull Cable and Gearbox Removal

SUBTASK 32-31-22-000-001

(1) In this procedure you will disconnect the cable from the gearbox, remove the gearbox from the forward quadrant housing installation, disconnect the cable from the control lever, then remove the cable from the airplane.

SUBTASK 32-31-22-020-002

(2) Disconnect the coupling nut [15] from the gearbox [1] and slide back the outer casing of the cable [2] to expose the inner cable.

(a) Disconnect the inner cable from the rack inside the gearbox.

NOTE: The inner cable end fits onto the end of the rack. There are no connecting clips.

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SUBTASK 32-31-22-020-003

(3) Remove the four bolts [13] and the washers [14] that attach the gearbox [1] to the forward quadrant.

(a) Remove the gearbox [1] from the airplane.

SUBTASK 32-31-22-020-004

(4) To disconnect the cable [2] from the control lever module, do this task: Landing Gear Control Lever Module Removal, TASK 32-31-11-020-801.

NOTE: The illustration in this procedure is for reference only. Use the Landing Gear Control Lever Module procedure to disconnect the cable [2].

SUBTASK 32-31-22-020-005

(5) To remove the cable [2] from the airplane, remove the three brackets that connect the cable to the airplane structure:

(a) Remove the two bolts [4] and the washers [5] from bracket [3].

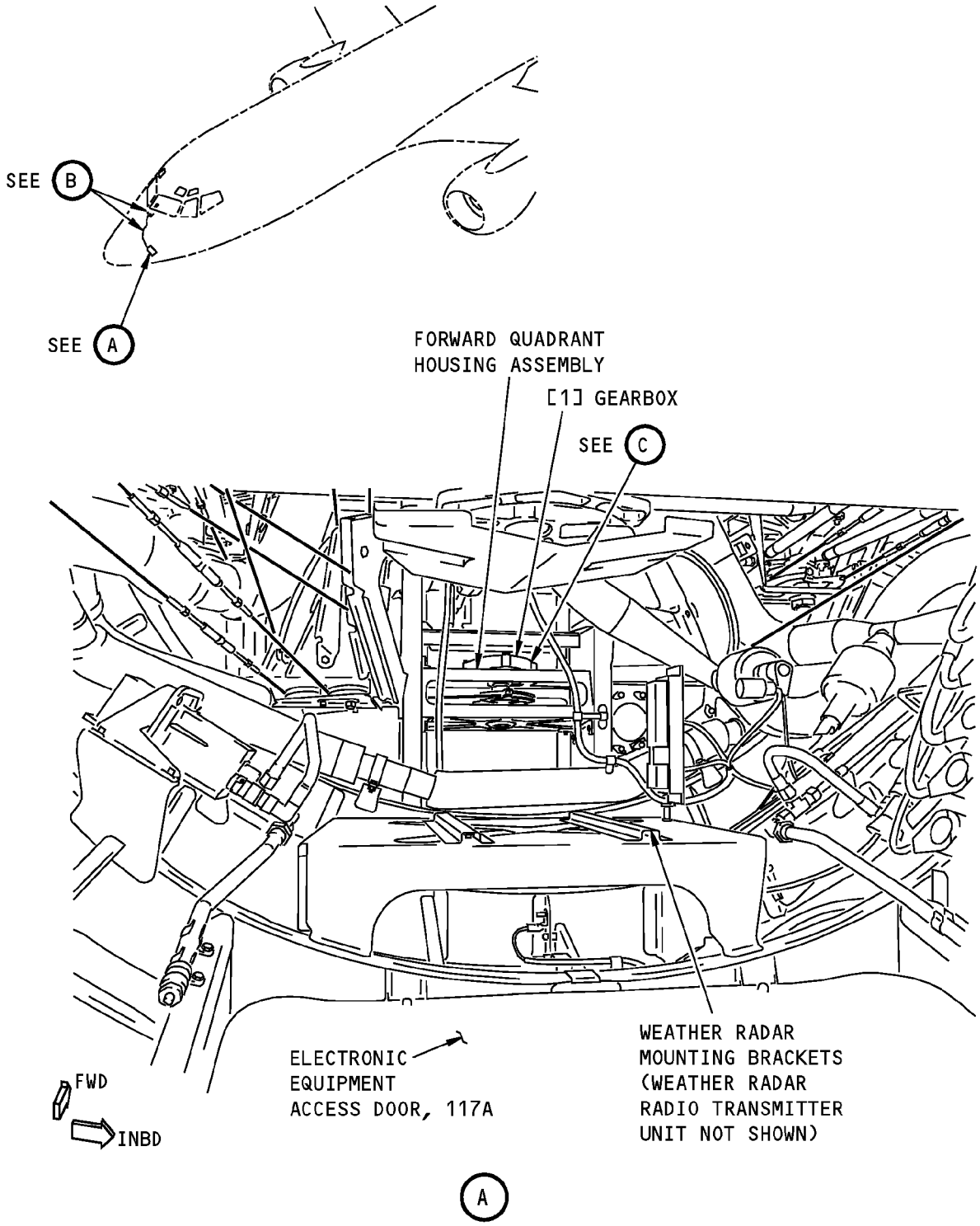
(b) Remove the one bolt [7] and the washer [8] from bracket [6].

(c) Remove the two bolts [10] and the washers [11] from bracket [9].

(d) Remove the cable [2] from the airplane.

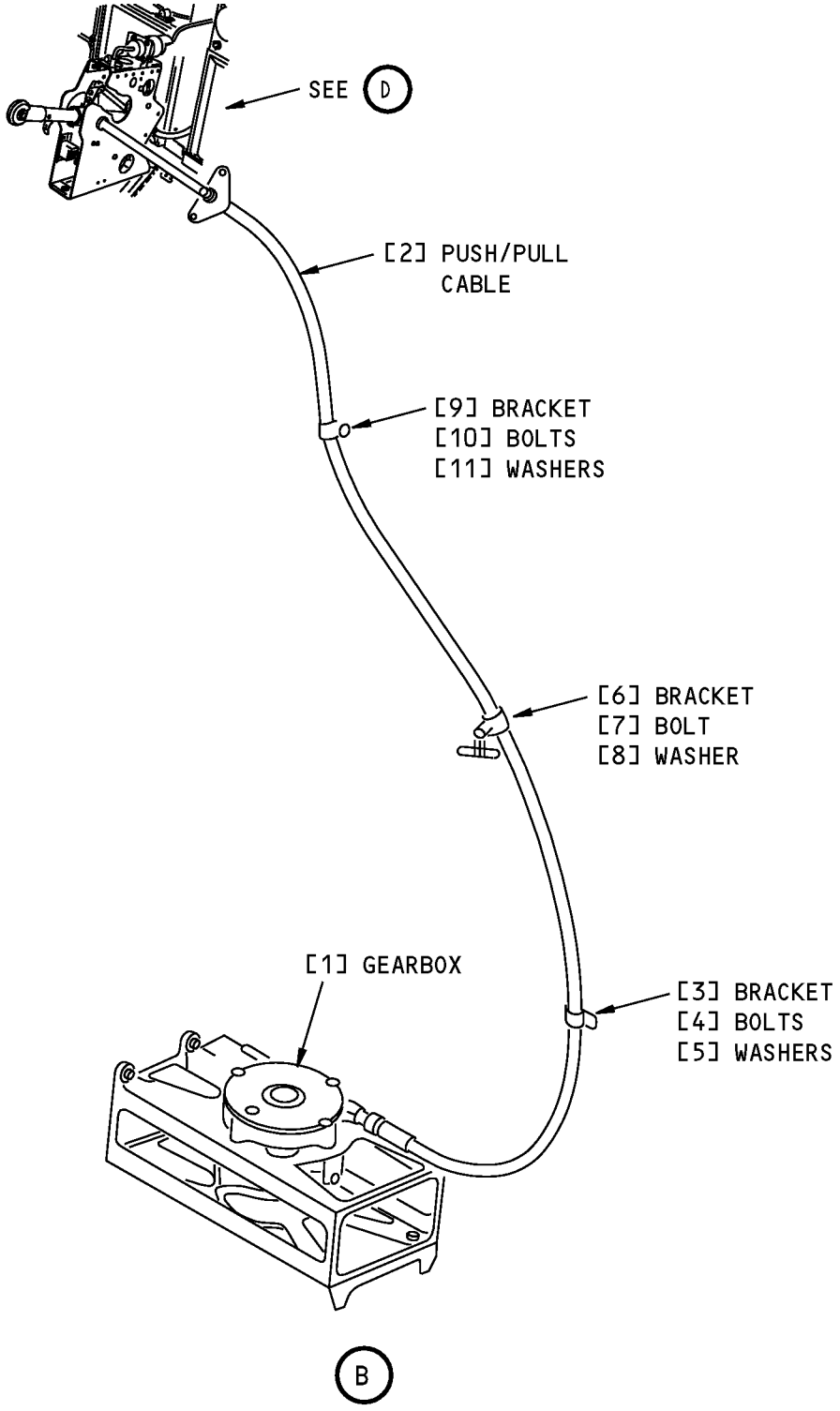
——————— END OF TASK ———————

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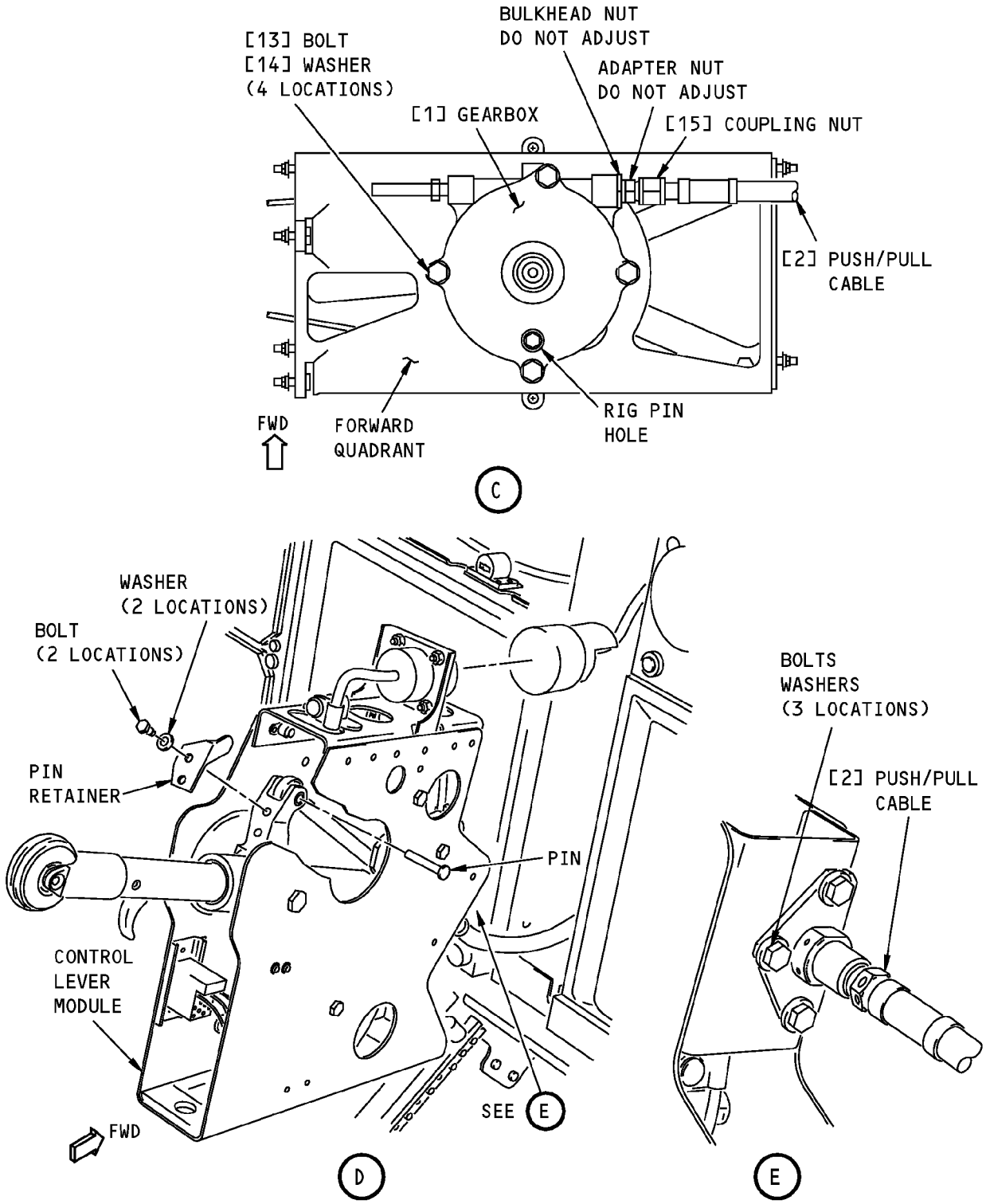
Push/Pull Cable and Gearbox Installation
Figure 401 (Sheet 1 of 3)/32-31-22-990-802

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Push/Pull Cable and Gearbox Installation
Figure 401 (Sheet 2 of 3)/32-31-22-990-802

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Push/Pull Cable and Gearbox Installation
Figure 401 (Sheet 3 of 3)/32-31-22-990-802

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TASK 32-31-22-400-801

3. Push/Pull Cable and Gearbox Installation

(Figure 401)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-31-11-020-801	Landing Gear Control Lever Module Removal (P/B 401)
32-31-11-400-801	Landing Gear Control Lever Module Installation (P/B 401)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare for the Installation

SUBTASK 32-31-22-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) For the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-31-22-580-003

(2) Install chocks around the tires of the main landing gear.

SUBTASK 32-31-22-860-004

(3) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

E. Push/Pull Cable and Gearbox Installation

SUBTASK 32-31-22-420-002

(1) In this procedure you will route the cable through the airplane structure, attach the cable to the control lever, attach the cable to the airplane structure with the brackets, connect the cable to the gearbox, and install the gearbox on the forward quadrant housing.

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SUBTASK 32-31-22-020-006

(2) If the control lever module is not removed, do this task: Landing Gear Control Lever Module Removal, TASK 32-31-11-020-801.

NOTE: The illustration in this procedure is for reference only. Use the Landing Gear Control Lever Module procedure to remove the control lever module.

SUBTASK 32-31-22-020-007

(3) If the cable [2] is not disconnected from the gearbox [1], disconnect the coupling nut [15] from the gearbox and slide the outer casing of the cable back to expose the inner cable.

(a) Disconnect the inner cable from the rack inside the gearbox.

NOTE: The inner cable end fits onto the end of the rack. There are no connecting clips.

SUBTASK 32-31-22-420-003

(4) Route the cable [2] down from the flight deck to the forward quadrant and align the cable to the airplane structure.

(a) Connect the three brackets [3,6,9] at the indicated stripes on the cable [2], do not attach the brackets to the airplane structure.

SUBTASK 32-31-22-420-004

(5) Connect the cable [2] to the control lever module and install the module into the airplane, do this task: Landing Gear Control Lever Module Installation, TASK 32-31-11-400-801.

NOTE: The illustration in this procedure is for reference only. Use the Landing Gear Control Lever Module procedure to connect the cable [2].

SUBTASK 32-31-22-420-005

(6) Connect the cable [2] to the airplane structure with the three brackets [3,6,9]:

(a) Connect the bracket [3] with the two bolts [4] and the washers [5].

(b) Connect the bracket [6] with the one bolt [7] and the washer [8].

(c) Connect the bracket [9] with the two bolts [10] and the washers [11].

SUBTASK 32-31-22-420-006

(7) Connect the cable [2] to the gearbox [1]:

(a) Connect the inner cable from the cable assembly to the rack inside the gearbox.

NOTE: The inner cable end fits onto the end of the rack. The are no connecting clips.

(b) Slide the outer casing of the cable assembly down to the gearbox and connect the coupling nut [15] to the gearbox.

(c) Tighten the coupling nut to 125 in-lb (14 N·m) – 150 in-lb (17 N·m).

NOTE: Hold the adapter nut to stop it from moving when you tighten the coupling nut.

(d) Install lockwire on the coupling nut and the adapter nut.

SUBTASK 32-31-22-420-007

(8) Install the gearbox [1] on the forward quadrant:

(a) Move the landing gear control lever to the OFF position.

(b) Align the gearbox [1] with the forward quadrant.

(c) Insert the rig pin F70207-7, from rig pin kit, SPL-1585, through the gearbox and forward quadrant.

NOTE: The pin must fit without binding.

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(d) Install the four washers [14] and the bolts [13] to attach the gearbox [1] to the forward quadrant.

(e) Remove the rig pin.

SUBTASK 32-31-22-420-008

(9) Move the landing gear lever five times to check for smooth operation with no binding.

NOTE: You must use the override button to move the lever.

——————— END OF TASK ———————

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PUSH/PULL CABLE AND GEARBOX - ADJUSTMENT/TEST

1. General

A. This procedure has one task:

(1) An adjustment of the push/pull cable [2] and the gearbox [1] assembly for the landing gear.

NOTE: This assembly does not require normal adjustment and does not need to be adjusted when the Main Gear Extension and Retraction Adjustment/Test procedure is done. Only adjust the push/pull (Teleflex) assembly when the adjustment marks on the gearbox top are out of alignment. The landing gear handle must be in the OFF position to check the alignment.

TASK 32-31-22-020-801

2. Push/Pull Cable and Gearbox Adjustment

(Figure 501)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-31-00-820-801	Landing Gear Control System Adjustment (P/B 501)
32-31-11-020-801	Landing Gear Control Lever Module Removal (P/B 401)
32-31-11-400-801	Landing Gear Control Lever Module Installation (P/B 401)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare for the Adjustment

SUBTASK 32-31-22-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) For the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-31-22-580-001

(2) Install chocks around the tires of the main landing gear.

SUBTASK 32-31-22-860-001

(3) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

D. Push/Pull Cable and Gearbox Adjustment

SUBTASK 32-31-22-860-002

(1) To disconnect the cable [2] from the control lever module, do this task: (Landing Gear Control Lever Module Removal, TASK 32-31-11-020-801).

(2) Move the cable at the landing gear lever end to align the marks on the gearbox cover and hub.

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(3) Check that the distance from the mounting plate to the center of the rod end bearing of the cable assembly at the landing gear lever end measures 6.700 ±0.005 in. (170.180 ±0.127 mm).

(4) If the cable does not measure6.700 ±0.005 in. (170.180 ±0.127 mm) when the marks on the gearbox are aligned, then do the following steps:

(a) Remove the lock wire from the jam nut [3], the adapter nut [4] and the coupling nut.

NOTE: Do not loosen the coupling nut.

(b) Loosen the jam nut [3].

(c) Align the marks on the gearbox.

NOTE: The outer mark is on the cover of the gearbox and is stationary. The inner mark is on the gear and will move.

(d) Turn the adapter nut [4] until the distance from the mounting plate to the center of the rod end bearing of the cable assembly measures 6.700 ±0.005 in. (170.180 ±0.127 mm).

NOTE: When adjusting the adapter nut [4], make sure that the drain hole on the sleeve of the casing assembly is located towards the bottom of the gearbox.

(e) Tighten the jam nut [3] to 220 ±20 in-lb (25 ±2 N·m) while making sure the adapter nut [4] does not move.

(f) Lockwire the jam nut [3] to the gearbox [1], the adapter nut [4] to the jam nut [3], and the coupling nut to the adapter nut [4].

(5) Connect the cable [2] to the control lever module and install the module into the airplane (Landing Gear Control Lever Module Installation, TASK 32-31-11-400-801).

SUBTASK 32-31-22-700-001

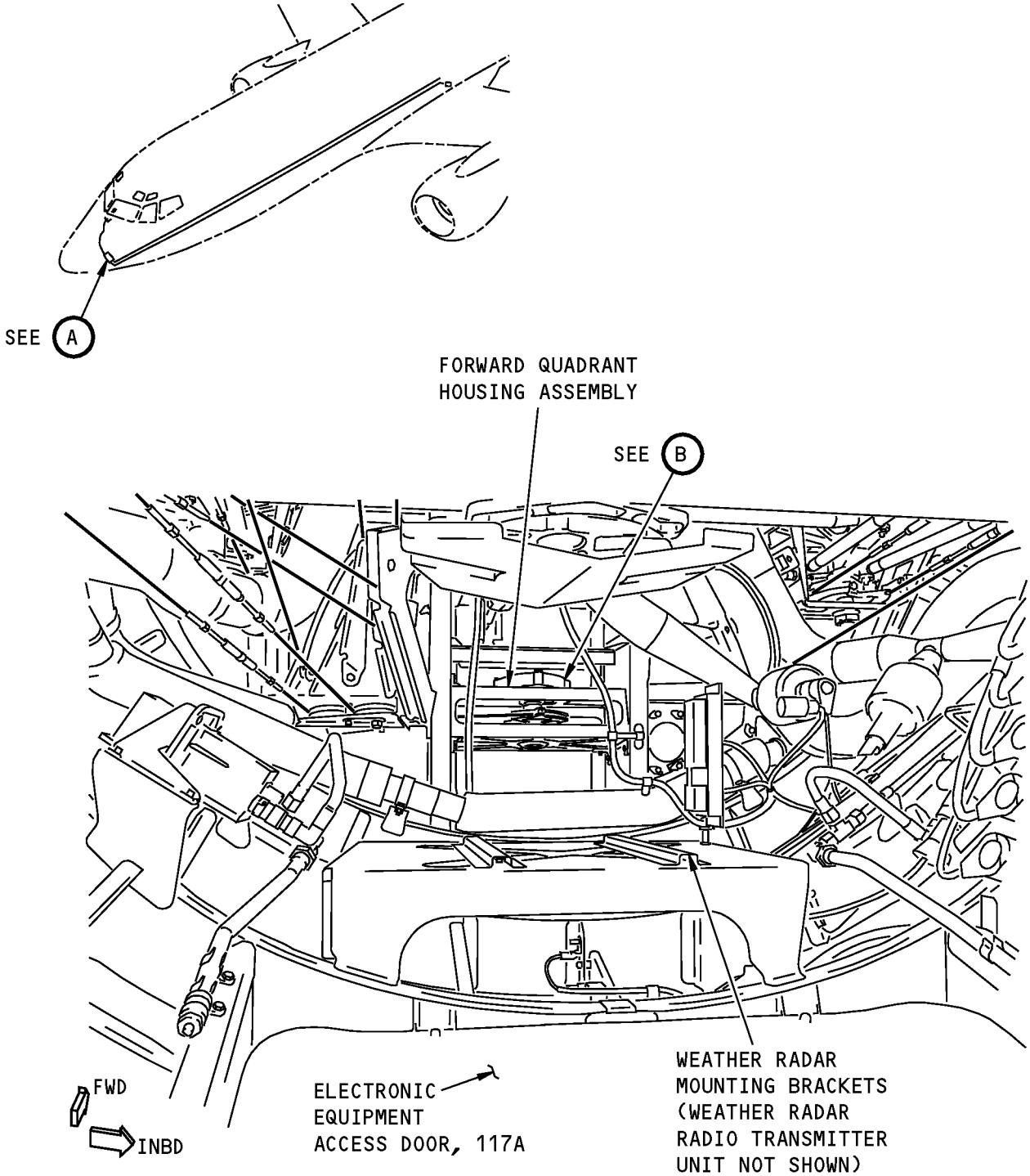
(6) Cycle the landing gear lever five times to check for smooth operation with no binding. You must use the override button to cycle the lever.

SUBTASK 32-31-22-700-002

(7) If the operation of the landing gear lever is not smooth after adjusting the push/pull cable and gearbox assembly, do this task: Landing Gear Control System Adjustment, TASK 32-31-00-820-801.

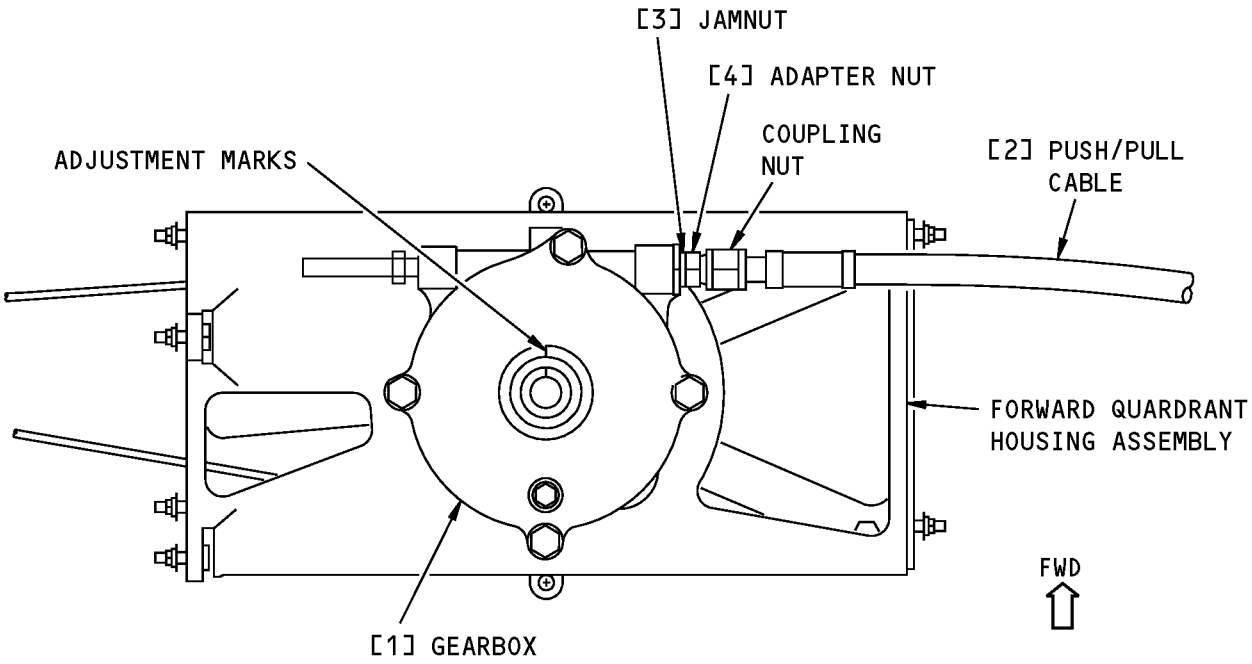
——————— END OF TASK ———————

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Push/Pull Cable and Gearbox Adjustment
Figure 501 (Sheet 1 of 2)/32-31-22-990-801

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Push/Pull Cable and Gearbox Adjustment
Figure 501 (Sheet 2 of 2)/32-31-22-990-801

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PUSH/PULL CABLE - INSPECTION/CHECK

1. General

A. This procedure contains scheduled maintenance task data.

B. This task has the data for the detailed visual inspection of the Push/Pull Cable.

TASK 32-31-22-211-801

2. Push Pull Cable Inspection

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
31-62-11-000-801	Display Unit Removal (P/B 401)
31-62-11-400-801	Display Unit Installation (P/B 401)

C. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Access Panels

Number	Name/Location
112A	Forward Access Door

E. Push/Pull Cable Inspection-Flight Deck

SUBTASK 32-31-22-010-005

(1) Remove the Display Unit to the right of the Landing Gear Control Lever. Do this task: Display Unit Removal, TASK 31-62-11-000-801.

SUBTASK 32-31-22-200-001

(2) Do a check of the crank assembly between the Landing Gear Lever and the Push/Pull cable.

(3) Examine the crank assembly for loose ends and wear.

(4) Examine the crank assembly for damage and security of attachments.

(5) Make sure the crank assembly is correctly attached to the Push/Pull cable.

(6) Examine the link between the Landing Gear Control Lever Module and Push/Pull cable for corrosion, damage or missing pins and cross bolts.

SUBTASK 32-31-22-840-001

(7) Install the Display Unit to the right of the Landing Gear Control Lever. Do this task:Display Unit Installation, TASK 31-62-11-400-801

F. Push/Pull Cable Inspection - Forward Quadrant

SUBTASK 32-31-22-010-006

(1) Open this access panel:

Number Name/Location

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(Continued)

Number	Name/Location
112A	Forward Access Door

NOTE: You can find the lower end of the Push/Pull Cable (Teleflex cable) in the forward quadrant on the aft side of the forward pressure bulkhead in the forward equipment compartment.

SUBTASK 32-31-22-860-009

(2) Do a detailed visual examination of the Push/Pull Cable and the Push/Pull Gearbox:

(a) Look at the visible part of the Push/Pull Gearbox to make sure there are no damages.

(b) Look at the Push/Pull Cable for damage and security of attachments.

G. Return the Airplane to its normal configuration

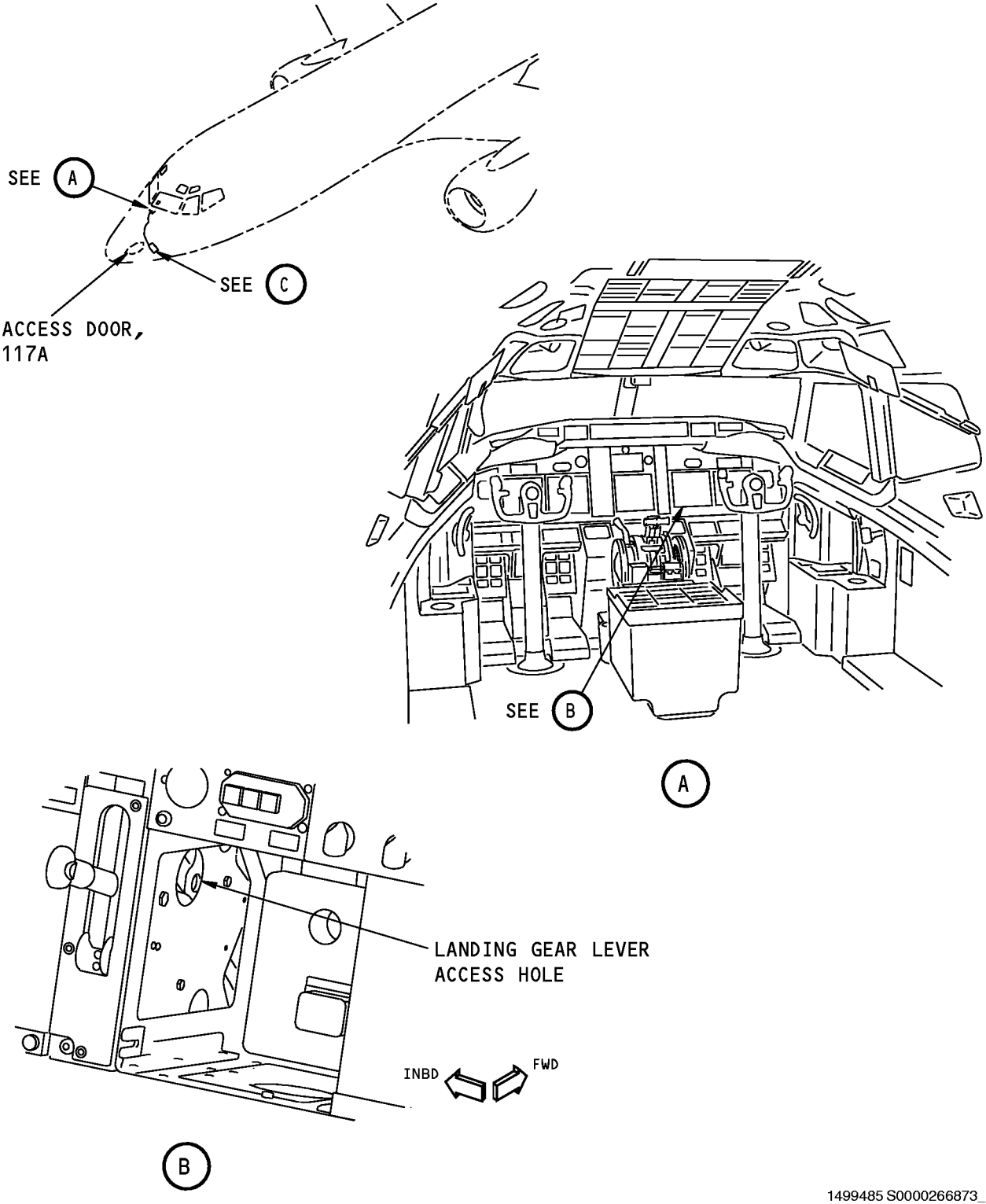
SUBTASK 32-31-22-840-002

(1) Make sure this access panel is closed:

Number	Name/Location
112A	Forward Access Door

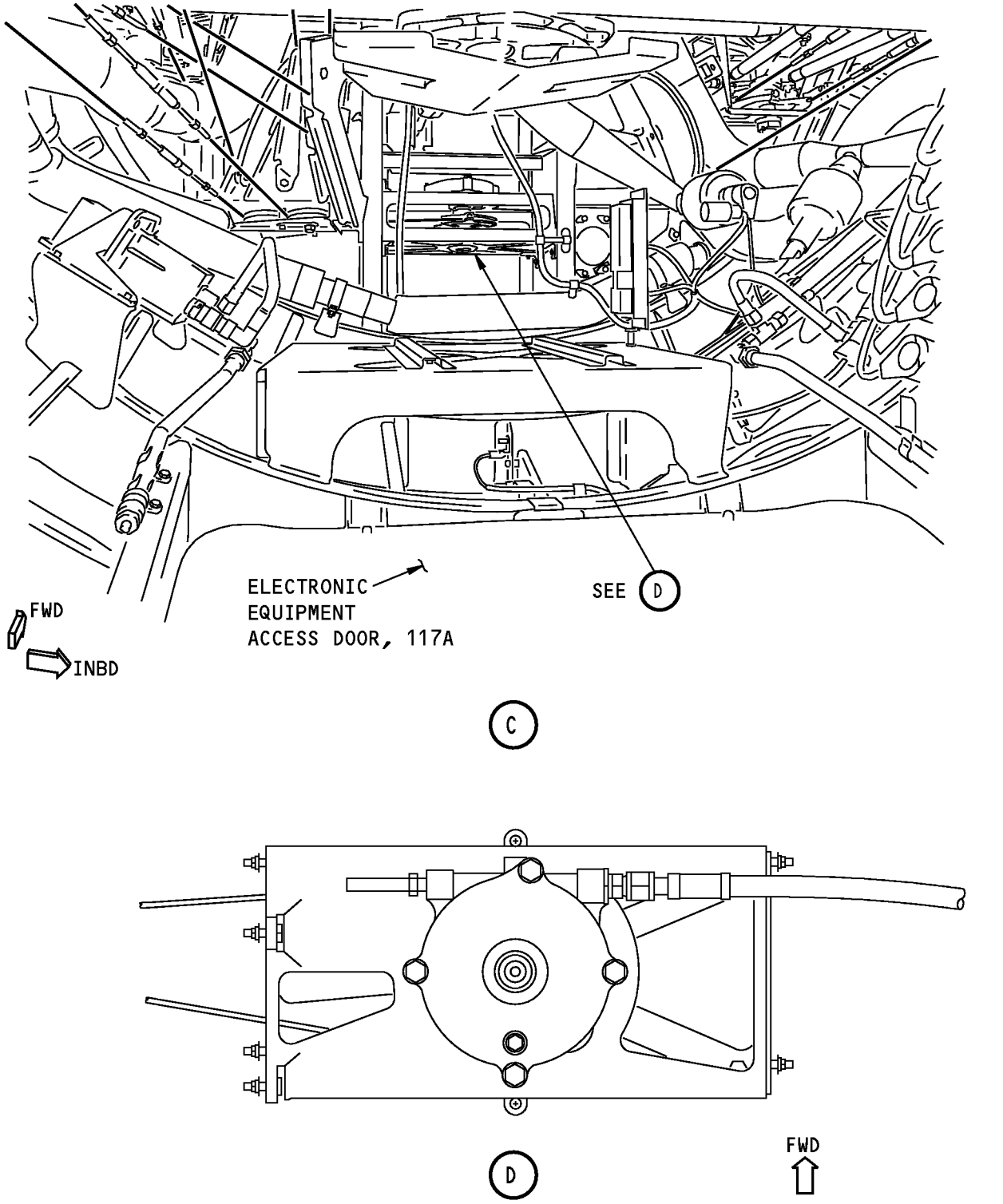
END OF TASK

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Push/Pull Cable Inspection
Figure 601 (Sheet 1 of 2)/32-31-22-990-803

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Push/Pull Cable Inspection
Figure 601 (Sheet 2 of 2)/32-31-22-990-803

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LANDING GEAR CONTROL LEVER LOCK SOLENOID - REMOVAL/INSTALLATION

1. General

A. This procedure has these two tasks:

(1) A removal of the lock solenoid for the landing gear control lever (referred to as the solenoid [3])

(2) An installation of the lock solenoid for the landing gear control lever.

TASK 32-31-31-020-801

2. Landing Gear Control Lever Lock Solenoid Removal

(Figure 401)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-31-11-020-801	Landing Gear Control Lever Module Removal (P/B 401)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare for the Removal

SUBTASK 32-31-31-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-31-31-860-001

(2) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN

SUBTASK 32-31-31-860-002

(3) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-31-31-010-001

(4) Remove the landing gear control module from the panel structure to get access to the solenoid [3]. To do this, do this task: Landing Gear Control Lever Module Removal, TASK 32-31-11-020-801.

D. Solenoid Removal

SUBTASK 32-31-31-020-001

(1) Disconnect the electrical leads for the solenoid [3].

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SUBTASK 32-31-31-020-002

(2) Remove the cotter pin [1], washer [2], and pin [4] to disconnect the solenoid [3] from the control lever assembly.

SUBTASK 32-31-31-020-003

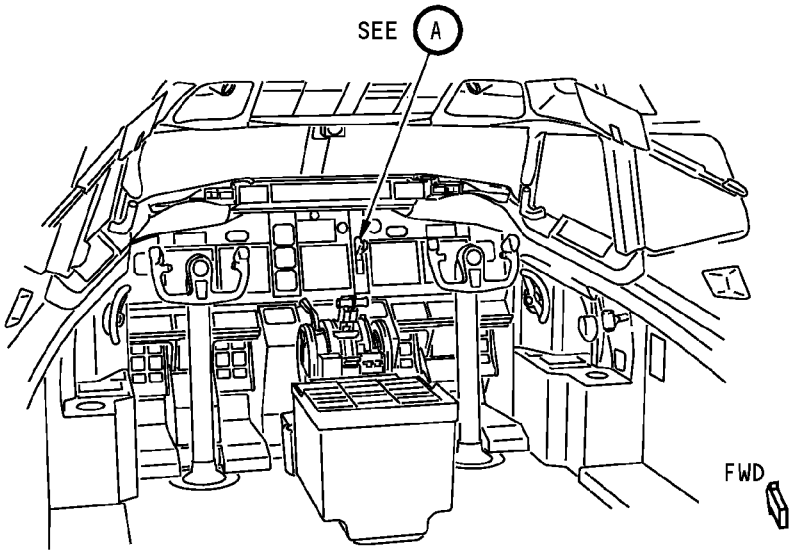
(3) Remove the nuts [7], washers [6], and screws [5] which attach the solenoid [3] to the control lever module.

SUBTASK 32-31-31-020-004

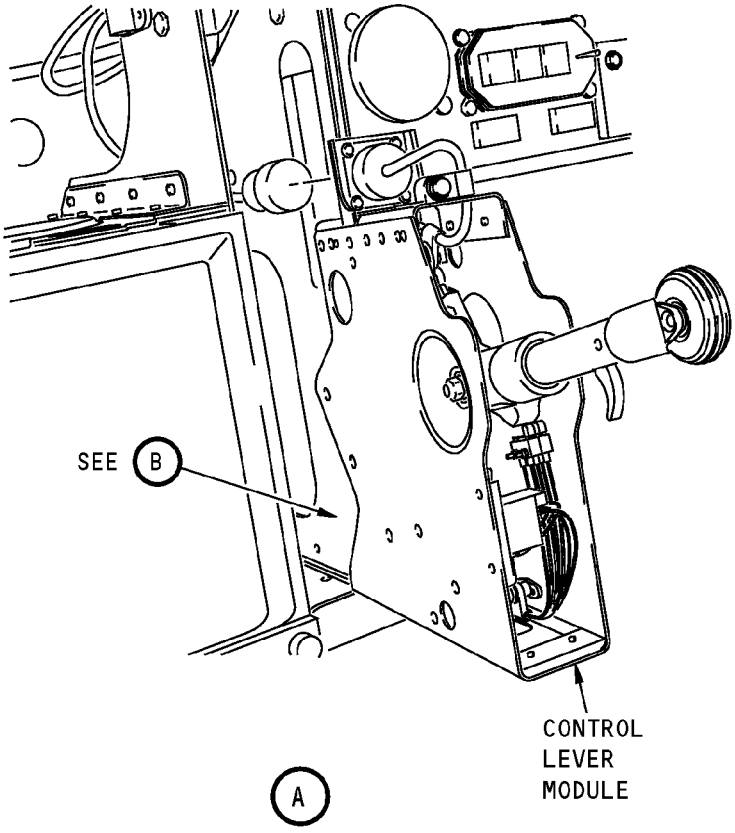
(4) Remove the solenoid [3] from the control lever module assembly.

——————— END OF TASK ———————

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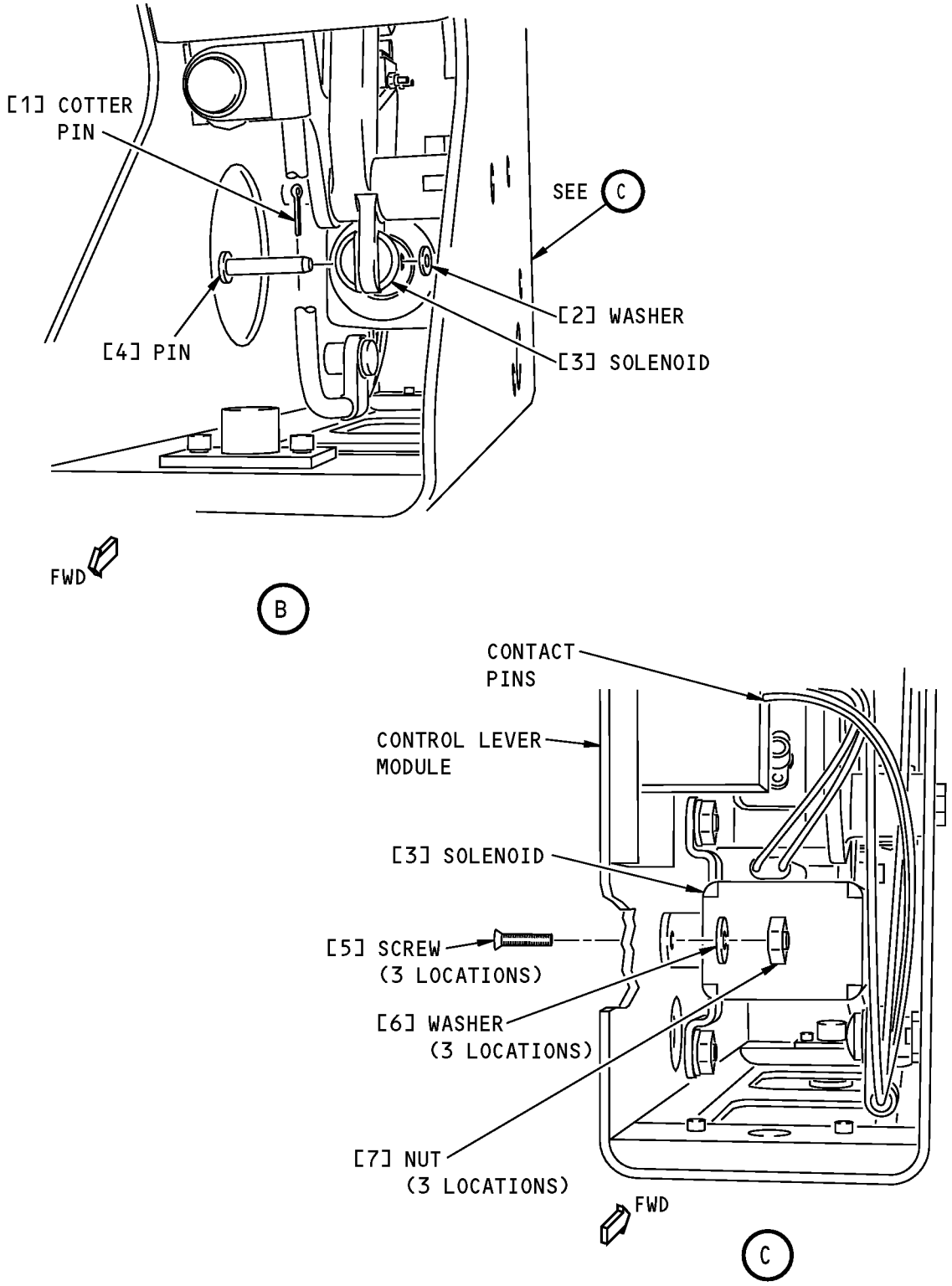


FLIGHT COMPARTMENT



Landing Gear Control Lever Lock Solenoid Installation
Figure 401 (Sheet 1 of 2)/32-31-31-990-801

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Landing Gear Control Lever Lock Solenoid Installation
Figure 401 (Sheet 2 of 2)/32-31-31-990-801

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TASK 32-31-31-400-801

3. Landing Gear Control Lever Lock Solenoid Installation

(Figure 401)

A. References

Reference	Title
32-31-11-400-801	Landing Gear Control Lever Module Installation (P/B 401)

B. Consumable Materials

Reference	Description	Specification
D00013	Grease - Aircraft And Instrument Grease	MIL-PRF-23827 (NATO G-354) (Supersedes MIL-G-23827)
D00633	Grease - Aircraft General Purpose	BMS3-33

C. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Lock Solenoid Installation

SUBTASK 32-31-31-420-001

(1) Put the solenoid [3] in its position in the control lever module and install the screws [5], washers [6], and nuts [7].

SUBTASK 32-31-31-640-001

(2) Apply a thin layer of, grease, D00633 or, grease, D00013 to the outside diameter of the pin [4].

SUBTASK 32-31-31-420-002

(3) Install the pin [4], washer [2], and new cotter pin [1] which attach the solenoid [3] to the control lever module.

SUBTASK 32-31-31-420-003

(4) Connect the electrical leads to the solenoid [3].

SUBTASK 32-31-31-410-001

(5) Move the control lever module into position in the panel structure.

SUBTASK 32-31-31-410-002

(6) Install the landing gear control lever module. To do this, do this task: Landing Gear Control Lever Module Installation, TASK 32-31-11-400-801.

SUBTASK 32-31-31-860-003

(7) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN

——————— END OF TASK ———————

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LANDING GEAR CONTROL CABLES - REMOVAL/INSTALLATION

1. General

A. This procedure has these two tasks:

(1) A removal of the control cables for the landing gear

(2) An installation of the control cables for the landing gear.

TASK 32-31-41-020-801

2. Landing Gear Control Cable Removal

(Figure 401)

A. References

Reference	Title
25-22-00-000-801	Passenger Seat Removal (P/B 401)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
117	Electrical and Electronics Compartment - Left
121	Forward Cargo Compartment - Left
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left

C. Access Panels

Number	Name/Location
112A	Forward Access Door

D. Prepare for the Removal

SUBTASK 32-31-41-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) For the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-31-41-580-001

(2) Install chocks around the tires of the main landing gear.

SUBTASK 32-31-41-860-001

(3) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-31-41-010-001

(4) Remove the passenger seats, do this task: Passenger Seat Removal, TASK 25-22-00-000-801.

SUBTASK 32-31-41-010-002

(5) Remove the left inboard floor panel which is between stations 663 and 685.

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E. Landing Gear Control Cable Removal

SUBTASK 32-31-41-020-001

(1) Open this access panel:

Number	Name/Location
112A	Forward Access Door

NOTE: You can find the turnbuckles [1] in the area in front of the nose wheel well behind the, forward access door panel.

(2) Remove the clips and disconnect the turnbuckles [1] for the LGVA cable assembly [2] and cable assembly [7], and LGVB cable assembly [3] and cable assembly [6].

SUBTASK 32-31-41-020-002

(3) Remove the pins [4] that attach cable assembly [2] and cable assembly [3] to the forward quadrant.

SUBTASK 32-31-41-020-003

(4) Remove the pins [5] that attach cable assembly [7] (cable A) and cable assembly [6] (cable B) to the control quadrant above the main landing gear wheel well upper bulkhead.

SUBTASK 32-31-41-480-002

(5) Attach cords to the ends of the cable assembly [7] (cable A) and cable assembly [6] (cable B) that you disconnected from the control quadrant.

NOTE: This will help to install new cables.

SUBTASK 32-31-41-020-004

(6) From the turnbuckle locations, pull the cable assembly [7] (cable A) and cable assembly [6] (cable B) off the pulleys and floor beams.

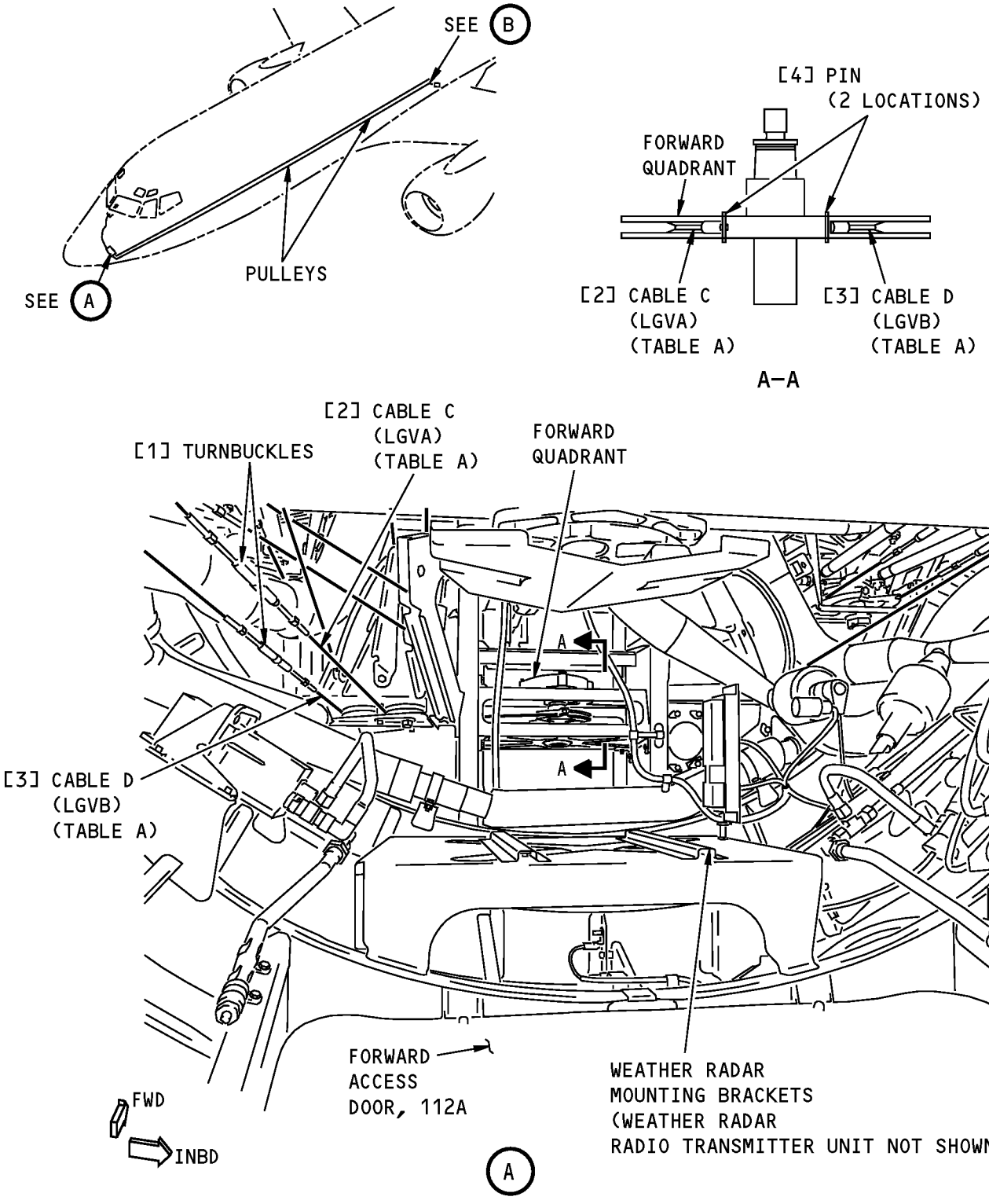
NOTE: Do not pull the cords out fully.

SUBTASK 32-31-41-020-005

(7) Pull the cable assembly [2] (cables C) and cable assembly [3] (cable D) off the pulleys and the forward quadrant.

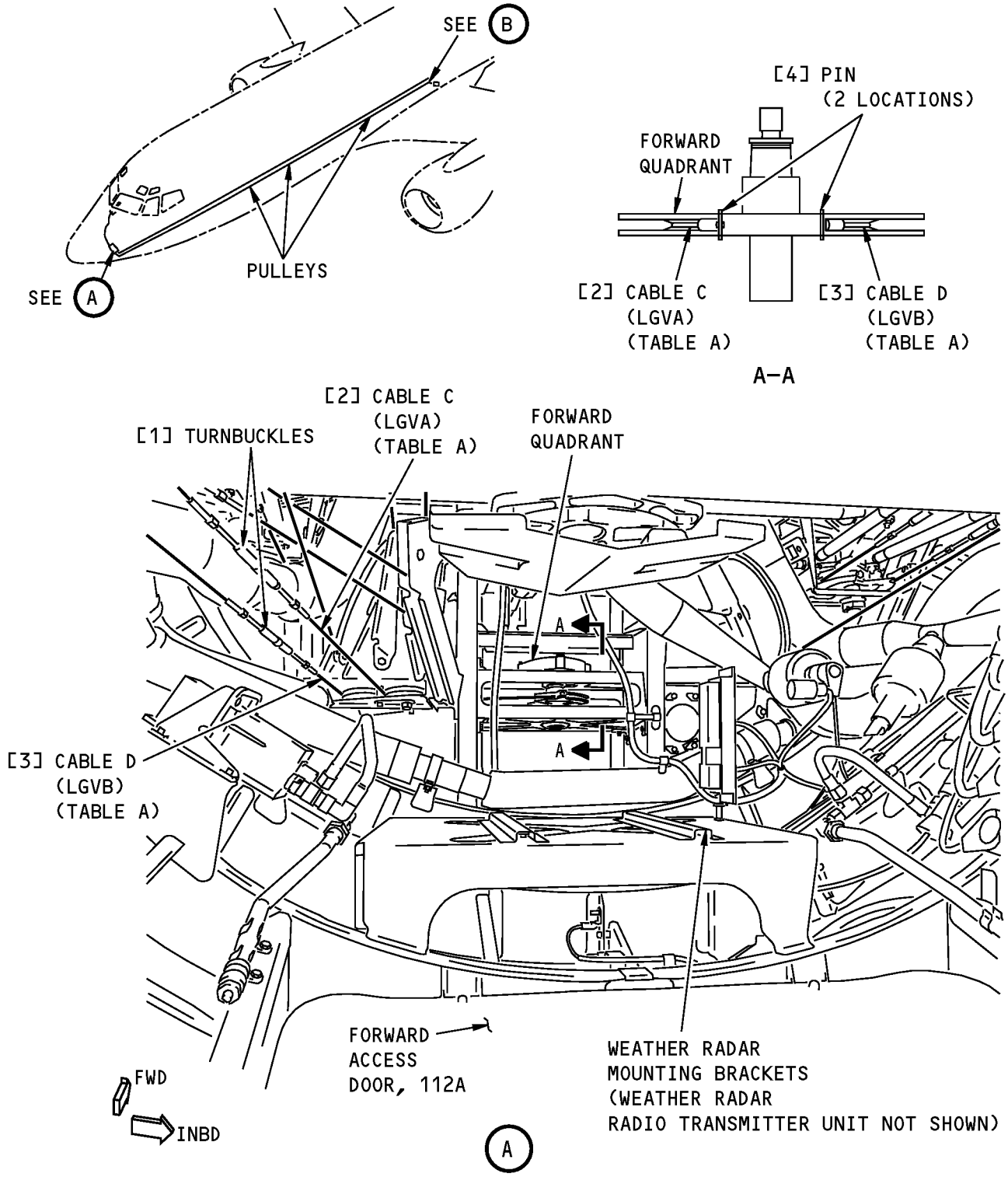
END OF TASK

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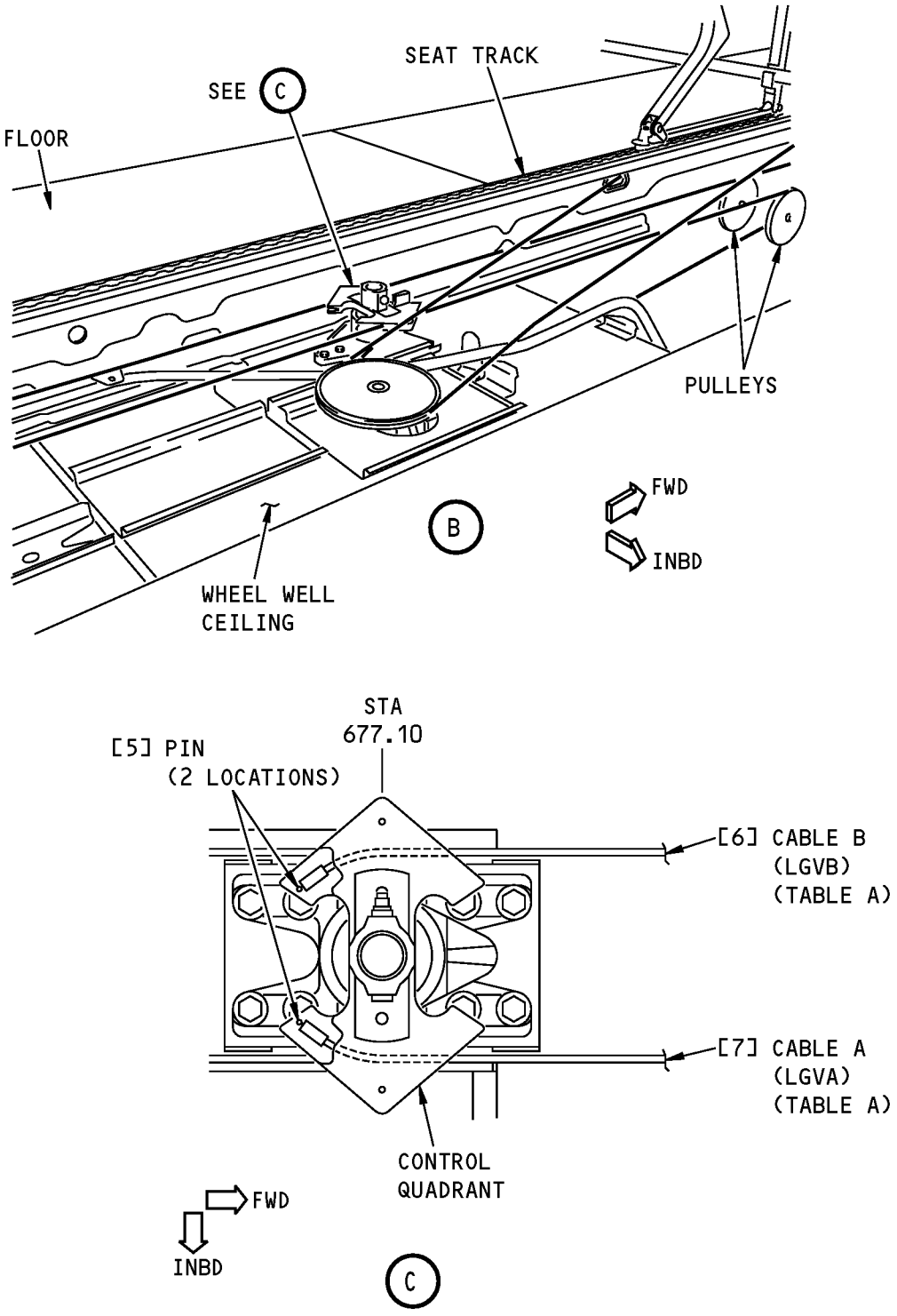
Landing Gear Control Cable Installation
Figure 401 (Sheet 1 of 5)/32-31-41-990-801

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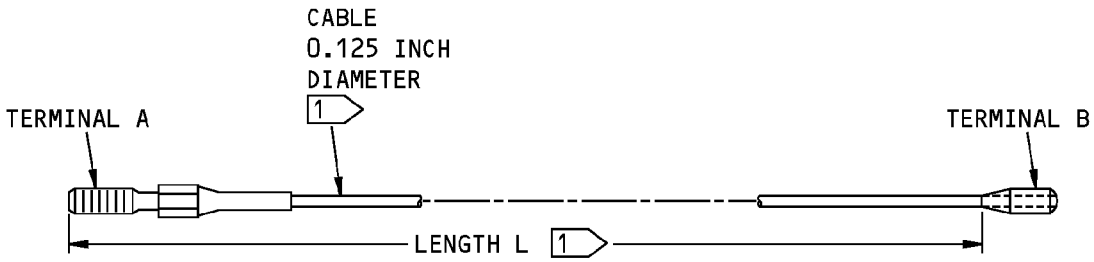
Landing Gear Control Cable Installation
Figure 401 (Sheet 2 of 5)/32-31-41-990-801

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Landing Gear Control Cable Installation
Figure 401 (Sheet 3 of 5)/32-31-41-990-801

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CABLES A, B, C AND D

CABLE NAME	FUNCTION VA-UP VB-DN	LENGTH L*	TERMINAL A	TERMINAL B
A	LGVA	559.0	MS21260-L4RH	BACT14A4
B	LGVB	569.5	MS21260-L4RH	BACT14A4
C	LGVA	32.2	MS21260-L4LH	BACT14A4
D	LGVB	26.1	MS21260-L4LH	BACT14A4

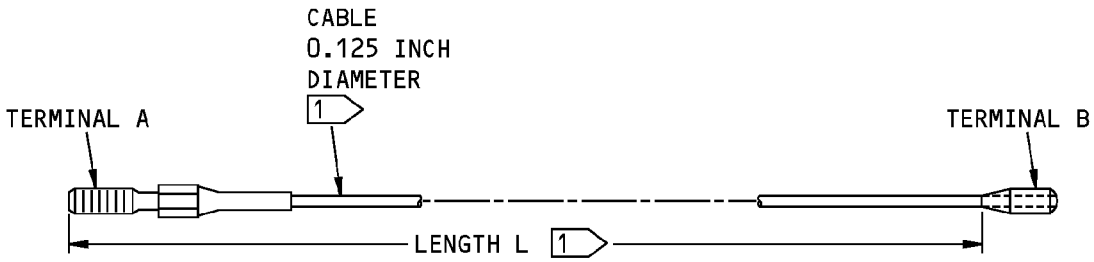
* LENGTHS ARE IN INCHES

TABLE A

1 CABLE CONSTRUCTION IS CARBON STEEL:
BMS 7-265, TYPE 1, COMPOSITION A (TIN OVER ZINC), 7 X 19.

Landing Gear Control Cable Installation
Figure 401 (Sheet 4 of 5)/32-31-41-990-801

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CABLES A, B, C AND D

CABLE NAME	FUNCTION VA-UP VB-DN	LENGTH L*	TERMINAL A	TERMINAL B
A	LGVA	677.2	MS21260-L4RH	BACT14A4
B	LGVB	687.7	MS21260-L4RH	BACT14A4
C	LGVA	32.2	MS21260-L4LH	BACT14A4
D	LGVB	26.1	MS21260-L4LH	BACT14A4

* LENGTHS ARE IN INCHES

TABLE A

1 CABLE CONSTRUCTION IS CARBON STEEL:
BMS 7-265, TYPE 1, COMPOSITION A (TIN OVER ZINC), 7 X 19.

Landing Gear Control Cable Installation
Figure 401 (Sheet 5 of 5)/32-31-41-990-801

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TASK 32-31-41-400-801

3. Landing Gear Control Cable Installation

(Figure 401)

A. References

Reference	Title
25-22-00-400-802	Passenger Seat Installation (P/B 401)
32-31-00-820-801	Landing Gear Control System Adjustment (P/B 501)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Cable assembly	32-31-21-01-015	HAP ALL
3	Cable assembly	32-31-21-01-010	HAP ALL
4	Pin	32-31-21-01-005	HAP ALL
5	Pin	32-31-41-01-055	HAP 001-013, 015-026, 028-054
		32-31-41-01C-005	HAP 101-999
6	Cable assembly	32-31-41-01-060	HAP 001-013, 015-026, 028-054
		32-31-41-01C-025	HAP 101-999
7	Cable assembly	32-31-41-01-065	HAP 001-013, 015-026, 028-054
		32-31-41-01C-020	HAP 101-999

C. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
117	Electrical and Electronics Compartment - Left
121	Forward Cargo Compartment - Left
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left

D. Access Panels

Number	Name/Location
112A	Forward Access Door

E. Landing Gear Control Cable Installation

SUBTASK 32-31-41-420-001

(1) Install the new cable assembly [7] (cable A) and cable assembly [6] (cable B) through the floor beams and on the pulleys.

SUBTASK 32-31-41-080-001

(2) Remove the cords from the ends of the cable assembly [7] (cable A) and cable assembly [6] (cable B) that you will attach to the control quadrant.

SUBTASK 32-31-41-420-002

(3) Install the pins [5] for the cable assembly [7] (cable A) and cable assembly [6] (cable B) at the control quadrant above the main landing gear wheel well upper bulkhead.

SUBTASK 32-31-41-420-003

(4) Install the new cable assembly [2] (cable C) and cable assembly [3] (cable D) through the pulleys to the forward quadrant.

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SUBTASK 32-31-41-420-004

(5) Install the pins [4] for the cable assembly [2] (cable C) and cable assembly [3] (cable D) at the forward quadrant.

SUBTASK 32-31-41-420-005

(6) Connect the LGVA cable assembly [2] and cable assembly [7], and LGVB cable assembly [3], cable assembly [6] at the turnbuckles [1].

SUBTASK 32-31-41-820-001

(7) Adjust the control system for the landing gear, do this task: Landing Gear Control System Adjustment, TASK 32-31-00-820-801.

SUBTASK 32-31-41-410-003

(8) Make sure this access panel is closed:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-31-41-410-001

(9) Install the left inboard floor panel which is between stations 663 and 685.

SUBTASK 32-31-41-410-002

(10) Install the passenger seats, do this task: Passenger Seat Installation, TASK 25-22-00-400-802.

END OF TASK

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LANDING GEAR SELECTOR VALVE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the selector valve for the landing gear (referred to as the valve [8])

(2) An installation of the selector valve for the landing gear.

(3) A visual inspection of the selector valve for the landing gear.

TASK 32-31-51-020-801

2. Landing Gear Selector Valve Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-31-51-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-31-51-860-001

(2) For hydraulic system A, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-31-51-580-001

(3) Install chocks around the tires of the main landing gear.

D. Landing Gear Selector Valve Removal

SUBTASK 32-31-51-020-001

(1) Remove the nut [3], washers [4, 6], and bolt [5] to disconnect the link assembly at the valve [8].

SUBTASK 32-31-51-480-002

(2) Disconnect the hydraulic lines from the valve [8].

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SUBTASK 32-31-51-480-003

(3) Install caps on the hydraulic lines and the ports on the valve [8].

SUBTASK 32-31-51-480-004

(4) Disconnect the electrical connector from the valve [8].

SUBTASK 32-31-51-020-002

(5) Remove the nuts [3], washers [4, 6], and bolts [7] which attach the valve [8] to the structure.

SUBTASK 32-31-51-020-003

(6) Remove the valve [8] from the airplane.

SUBTASK 32-31-51-080-001

(7) Remove the caps from the ports on the valve [8] and drain the hydraulic fluid.

SUBTASK 32-31-51-020-004

(8) Do these steps if the replacement valve [8] does not have the unions installed:

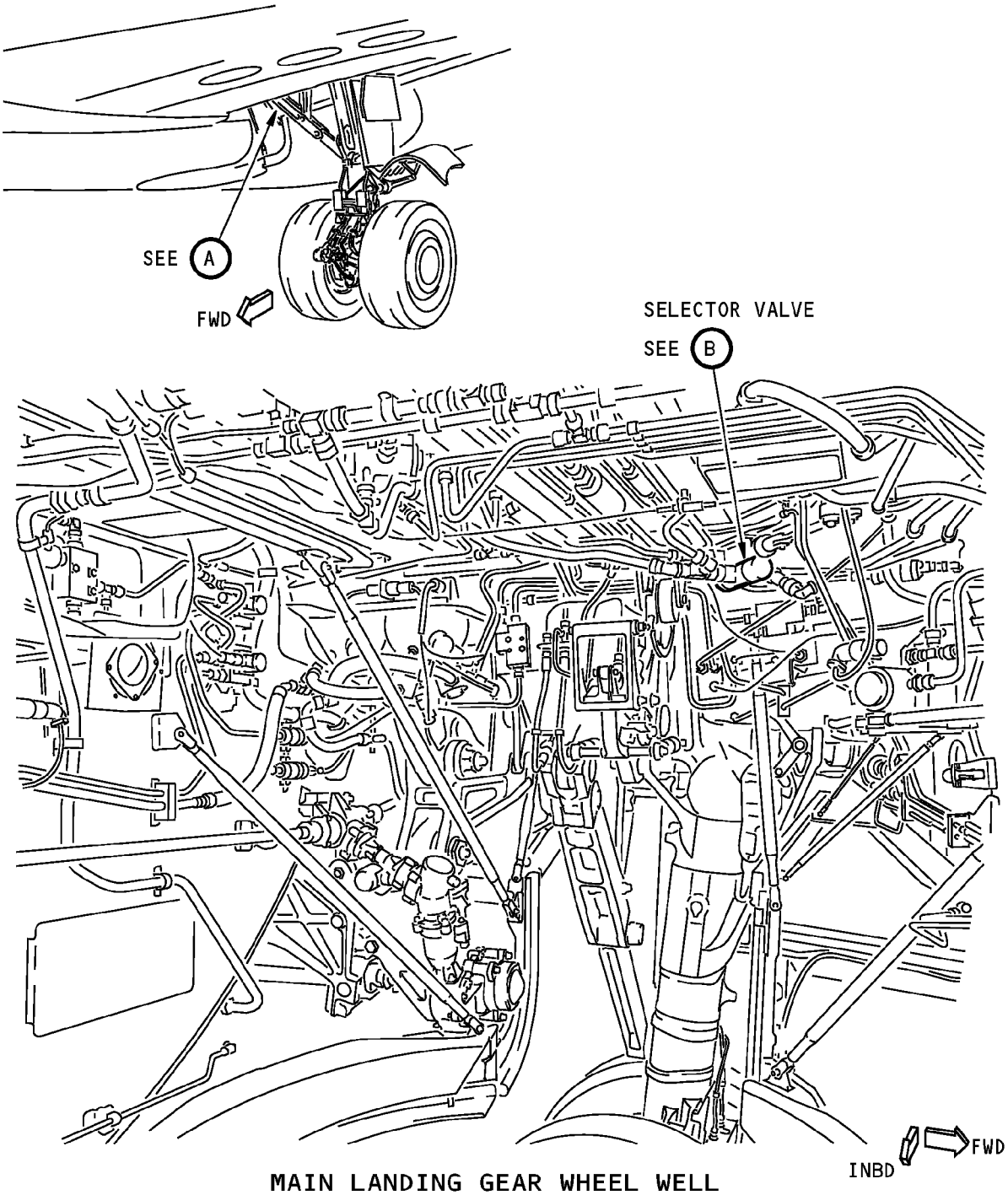
(a) Remove the unions [1] from the valve [8].

(b) Remove and discard the packings [2].

(c) Install plugs in the ports on the valve [8].

———————— END OF TASK ————————

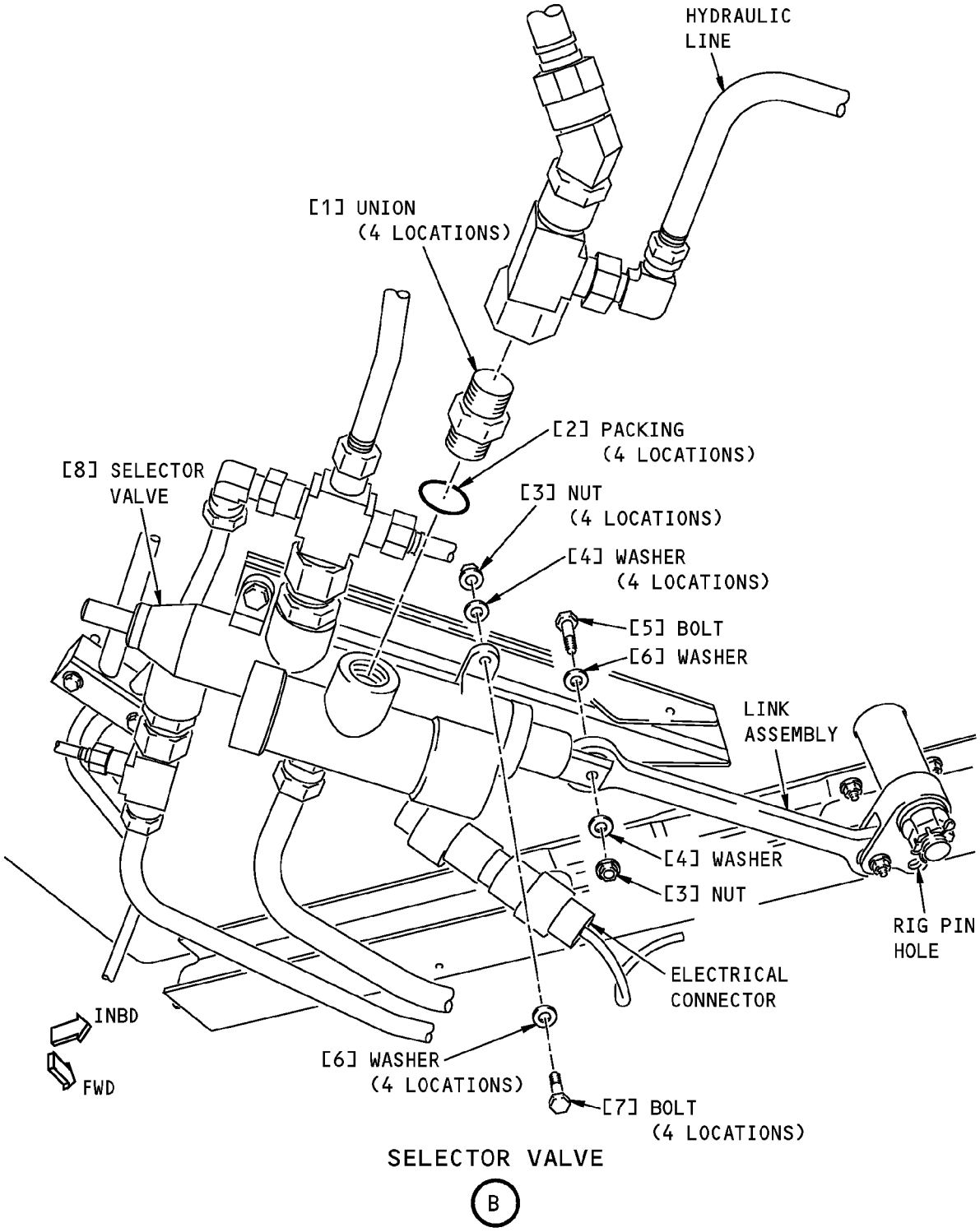
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MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE IS SHOWN, RIGHT SIDE IS EQUIVALENT)
A

Landing Gear Selector Valve Installation
Figure 401 (Sheet 1 of 2)/32-31-51-990-801

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Landing Gear Selector Valve Installation
Figure 401 (Sheet 2 of 2)/32-31-51-990-801

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TASK 32-31-51-400-801

3. Landing Gear Selector Valve Installation

(Figure 401)

A. References

Reference	Title
20-10-34-120-801	Hand Clean Metal Surfaces with Abrasives (P/B 701)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-31-00-730-802	System Test - Landing Gear Control System (P/B 501)
32-31-00-820-801	Landing Gear Control System Adjustment (P/B 501)
32-32-00-710-801	Main Landing Gear Operational Test (P/B 501)
SWPM 20-60-03	Special Protection of Electrical Connectors

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Meter - Bonding (Approved Explosion Proof & Intrinsically Safe) (Part #: C15292 (MODEL T477W), Supplier: 01014, A/P Effectivity: 737-ALL) (Part #: M1, Supplier: 3AD17, A/P Effectivity: 737-ALL) (Part #: M1B, Supplier: 3AD17, A/P Effectivity: 737-ALL)

C. Consumable Materials

Reference	Description	Specification
A02315	Sealant - Low Density, Synthetic Rubber. 2 Part	BMS5-142
C00064	Coating - Aluminum Chemical Conversion	BAC5719, Type II, Class A (MIL-C-5541, Class A)
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)
G50171	Compound - Corrosion Inhibiting Compound, Interior Application - D5026NS or ZC-026	

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

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(Continued)

Zone	Area
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

E. Landing Gear Selector Valve Installation

SUBTASK 32-31-51-420-001

(1) Do these steps if the replacement valve [8] does not have the unions [1] installed:

(a) Lubricate these items with fluid, D00153:

1) The packings [2]

2) The unions [1].

(b) Remove the plugs from the ports on the valve [8].

(c) Install the packing [2] and the unions [1] in the valve [8].

SUBTASK 32-31-51-610-001

(2) Fill the valve [8] with fluid, D00153.

NOTE: Put a cap on the unions [1].

SUBTASK 32-31-51-100-001

(3) Clean the surface of the bracket where the valve [8] will attach, do this task: Hand Clean Metal Surfaces with Abrasives, TASK 20-10-34-120-801.

SUBTASK 32-31-51-100-002

(4) Clean the surface of the valve [8] that will attach to the bracket, do this task: Hand Clean Metal Surfaces with Abrasives, TASK 20-10-34-120-801.

SUBTASK 32-31-51-110-001

(5) Apply coating, C00064 to all of the areas that you cleaned on the bracket and the valve [8].

SUBTASK 32-31-51-420-002

(6) Put the valve [8] in its position on the bracket.

SUBTASK 32-31-51-420-003

(7) Install the bolts [7], washers [4, 6], and nuts [3].

SUBTASK 32-31-51-760-001

(8) Use an bonding meter, COM-1550 to measure the electrical resistance between the valve [8] and the bracket.

NOTE: The resistance you measure must be less than 0.0025 ohms. If the measured resistance is not less than 0.0025 ohms, do the steps to clean the mating surfaces of the bracket and valve [8] and apply the coating, C00064 again.

SUBTASK 32-31-51-110-002

(9) If it is necessary, repair damaged finish on the valve [8] with a manual application of coating, C00064.

SUBTASK 32-31-51-390-001

(10) Apply a fillet seal of sealant, A02315 to the joints between the valve [8] and bracket, the heads and exposed threads of the bolts [7], and the nuts [3].

SUBTASK 32-31-51-600-001

(11) Apply compound, C00913 to the hole on the clevis of the valve [8] where you will attach the link assembly.

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SUBTASK 32-31-51-420-004

(12) Install the bolt [5], washers [4, 6], and nut [3] to connect the link assembly to the valve [8].

SUBTASK 32-31-51-080-002

(13) Remove the caps from the unions [1] and connect the hydraulic lines to the valve [8].

SUBTASK 32-31-51-420-005

(14) Tighten the hydraulic lines.

SUBTASK 32-31-51-420-006

(15) Before you connect the electrical connector to the valve [8], examine the connector for corrosion.

WARNING: DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

(a) If there was corrosion, refer to (SWPM 20-60-03) to correct the problem.

(b) Apply the D5026NS or ZC-026 compound, G50171 to the connector (SWPM 20-60-03).

(16) Connect the electrical connector to the valve [8].

SUBTASK 32-31-51-700-001

(17) Do the test of the control system for the landing gear. To do this, do this task: System Test - Landing Gear Control System, TASK 32-31-00-730-802.

SUBTASK 32-31-51-860-002

(18) Move the control lever for the landing gear to the OFF position.

SUBTASK 32-31-51-480-005

(19) Install the rig pin through the link and the structure.

(a) Make sure the rig pin has a free fit.

1) If the rig pin does not have a free fit, do the adjustment of the landing gear control system, do this task: Landing Gear Control System Adjustment, TASK 32-31-00-820-801.

SUBTASK 32-31-51-710-001

(20) Do a test of the main landing gear only, do this task: Main Landing Gear Operational Test, TASK 32-32-00-710-801.

NOTE: If you cannot lift the airplane for the test, do the alternate landing gear test.

F. Alternate Landing Gear Test

NOTE: If you cannot lift the airplane to do a test of the main landing gear do this alternate test.

SUBTASK 32-31-51-700-002

(1) Make sure these parts are correctly installed:

(a) valve [8]

(b) Link assy

(c) Hydraulic lines.

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SUBTASK 32-31-51-480-006

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-31-51-860-003

(3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-31-51-700-003

(4) Move the control lever for the landing gear from DN to UP and back three times.

NOTE: You must use the override trigger to do this.

NOTE: Hold the lever in each position for three seconds before you move the lever to the subsequent position.

SUBTASK 32-31-51-860-004

(5) Move the control lever for the landing gear to DN.

SUBTASK 32-31-51-700-004

(6) Make sure the rod end of the actuator for the main landing gear tries to extend when you move the control lever from DN to OFF.

SUBTASK 32-31-51-860-005

(7) Move the control lever for the landing gear to DN.

SUBTASK 32-31-51-210-001

(8) Do a check for leakage with the hydraulic pressure applied.

SUBTASK 32-31-51-860-006

(9) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

——————— END OF TASK ———————

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LANDING GEAR SELECTOR VALVE - INSPECTION/CHECK

1. General

A. This procedure contains scheduled maintenance task data.

B. This task has the data for a detailed visual inspection of the landing gear selector valve link assembly and quadrant crank.

TASK 32-31-51-200-801

2. Landing Gear Selector Valve Inspection

(Figure 601)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

D. Procedure

SUBTASK 32-31-51-480-007

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-31-51-860-007

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-31-51-200-001

(3) Do a detailed visual examination of the landing gear selector valve and quadrant:

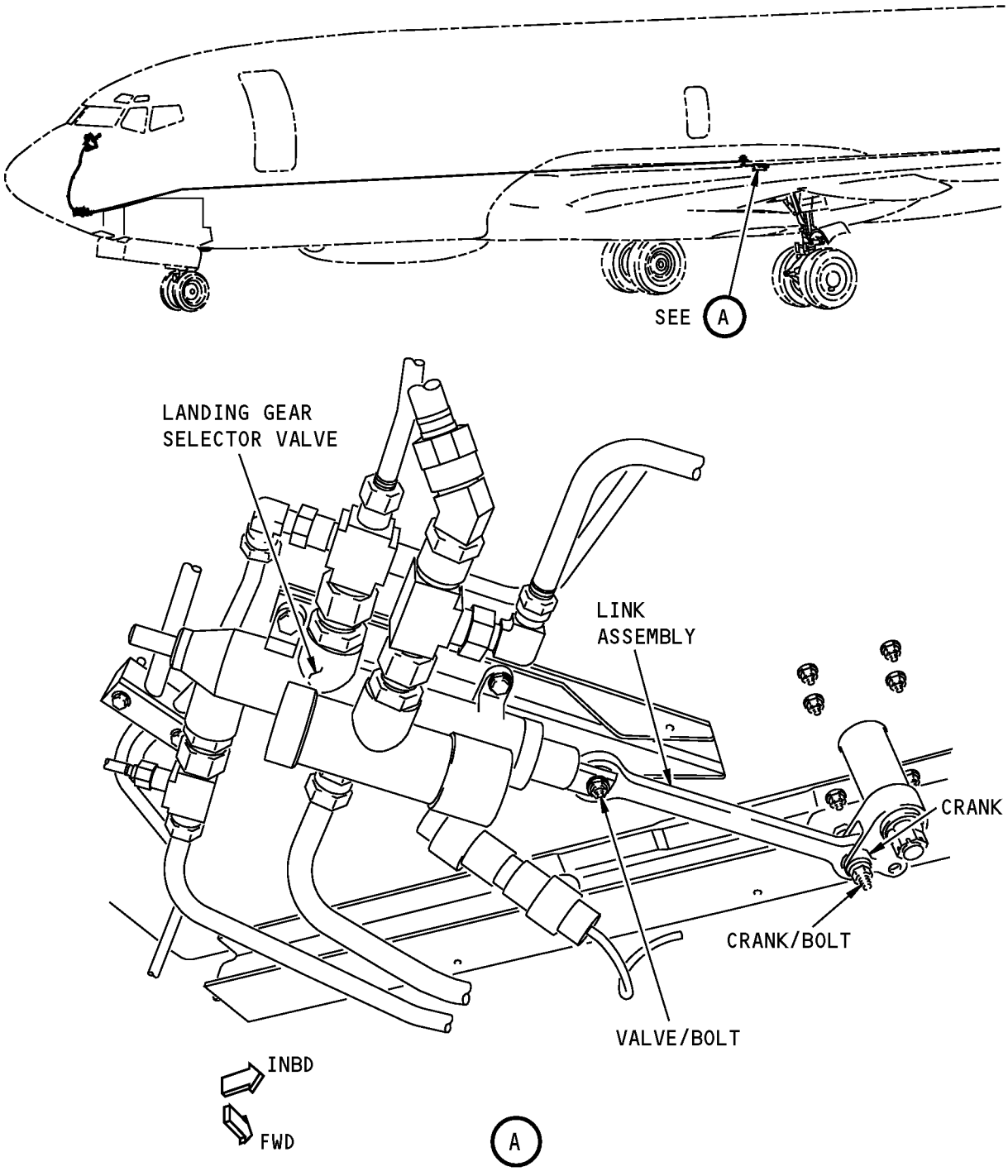
(a) Look at the visible part of the valve piston to make sure there are no leaks or damage.

(b) Look at the link assembly to make sure it is attached correctly to the valve and the crank.

(c) Look at the quadrant crank and attaching bolt to make sure it is attached correctly to the shaft and the link assembly.

END OF TASK

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Landing Gear Selector Valve Inspection
Figure 601/32-31-51-990-802

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LANDING GEAR SELECTOR VALVE QUADRANT - REMOVAL/INSTALLATION

1. General

A. This procedure has these two tasks:

(1) A removal of the quadrant for the landing gear selector valve (called the quadrant assembly [11])

(2) An installation of the quadrant for the landing gear selector valve.

TASK 32-31-61-020-801

2. Landing Gear Selector Valve Quadrant Removal

(Figure 401)

A. References

Reference	Title
25-22-00-000-801	Passenger Seat Removal (P/B 401)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
117	Electrical and Electronics Compartment - Left
121	Forward Cargo Compartment - Left
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left

C. Access Panels

Number	Name/Location
112A	Forward Access Door

D. Prepare for the Removal

SUBTASK 32-31-61-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-31-61-860-001

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-31-61-010-001

(3) In the area above the landing gear selector valve, remove the passenger seats, do this task: Passenger Seat Removal, TASK 25-22-00-000-801.

NOTE: The landing gear selector valve is in the main gear wheel well.

SUBTASK 32-31-61-010-002

(4) Remove the left inboard floor panel that is above the landing gear selector valve.

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E. Quadrant Removal

SUBTASK 32-31-61-020-001

(1) Open this access panel:

Number	Name/Location
112A	Forward Access Door

NOTE: You can find the turnbuckles in the area in front of the nose wheel well behind the forward access door.

(2) Remove the turnbuckle clips [1] and disconnect the turnbuckles for the cables.

SUBTASK 32-31-61-020-002

(3) Remove the pins [10] that attach cables LGVA and LGVB to the control quadrant above the main landing gear wheel well upper bulkhead.

SUBTASK 32-31-61-020-003

(4) Remove the cables LGVA and LGVB from the quadrant assembly [11].

SUBTASK 32-31-61-020-004

(5) Remove the nut [8], washers [3, 9], and bolt [2] to disconnect the actuating link of the selector valve from the bellcrank on the shaft of the quadrant assembly [11].

SUBTASK 32-31-61-020-005

(6) Remove the pin [6], nut [7] and washer [5] from the shaft of the quadrant assembly [11].

SUBTASK 32-31-61-020-006

(7) Remove the bellcrank [4] from the shaft of the quadrant assembly [11].

SUBTASK 32-31-61-020-007

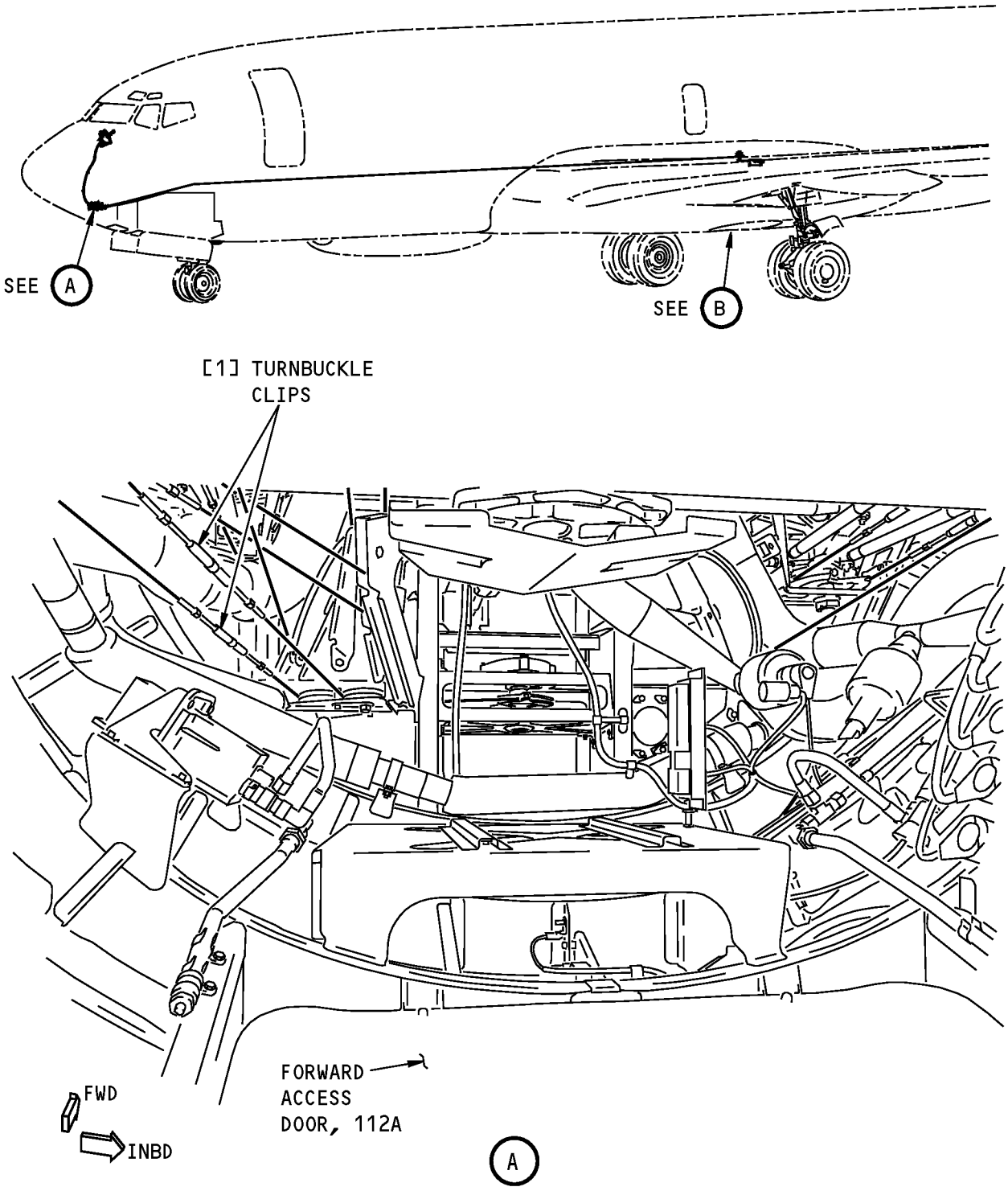
(8) Remove the nuts [8], washers [9], bolts [12], and washers [3] that hold the quadrant assembly [11] to the structure.

SUBTASK 32-31-61-020-008

(9) Remove the quadrant assembly [11] from the airplane.

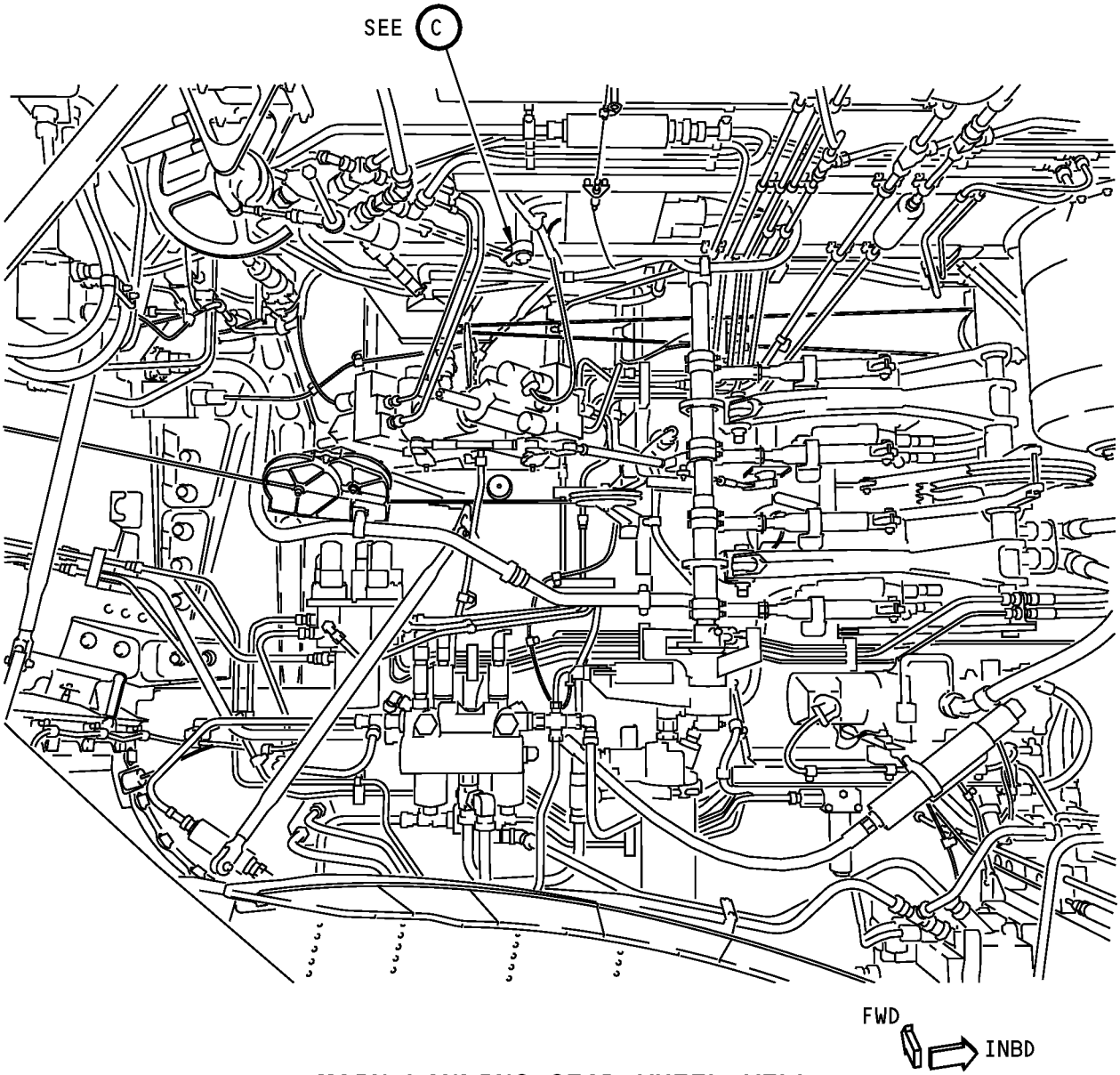
END OF TASK

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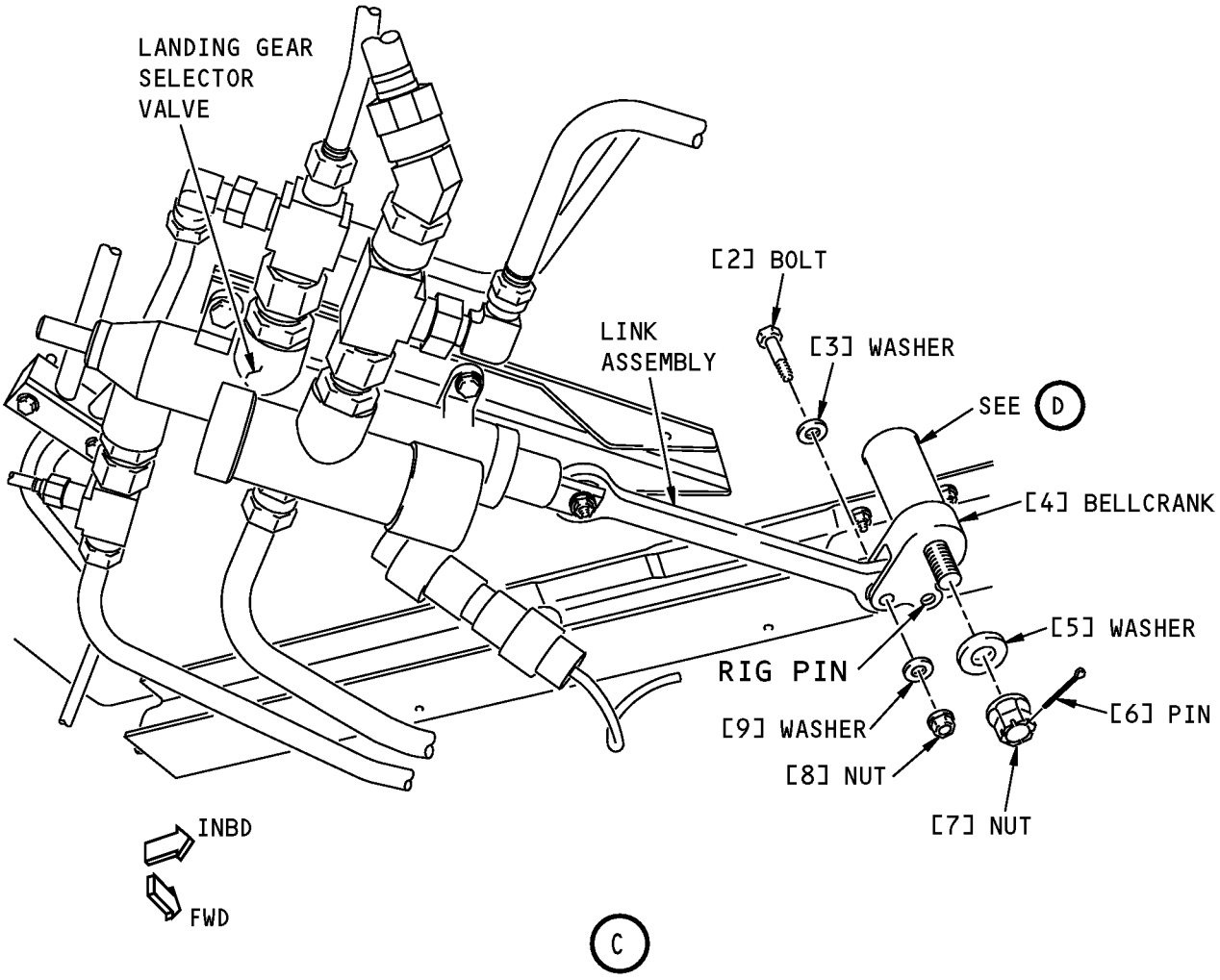
Landing Gear Selector Valve Quadrant Installation
Figure 401 (Sheet 1 of 4)/32-31-61-990-801

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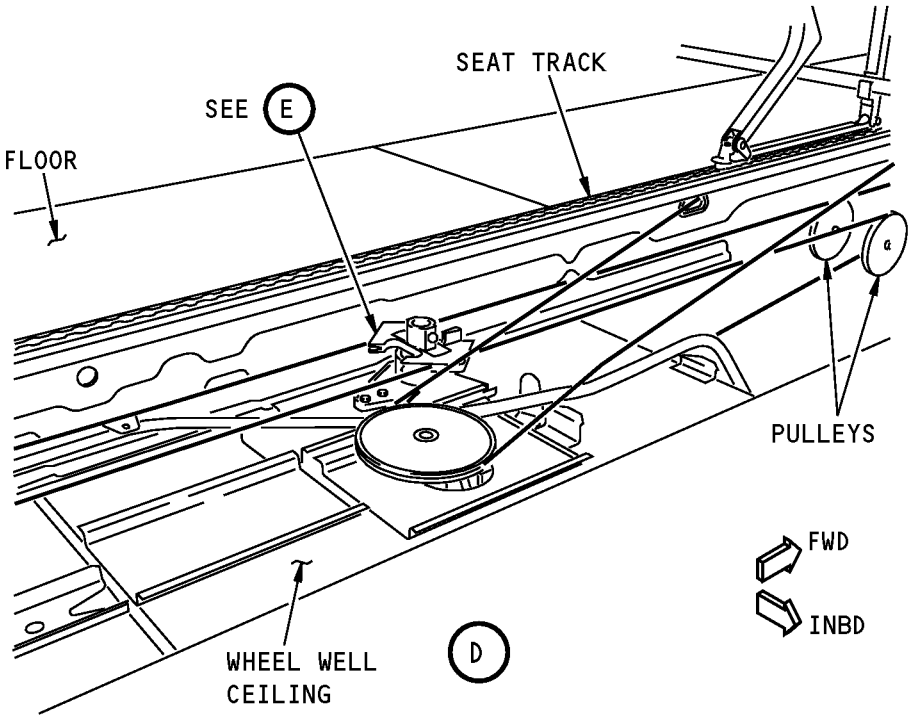
Landing Gear Selector Valve Quadrant Installation
Figure 401 (Sheet 2 of 4)/32-31-61-990-801

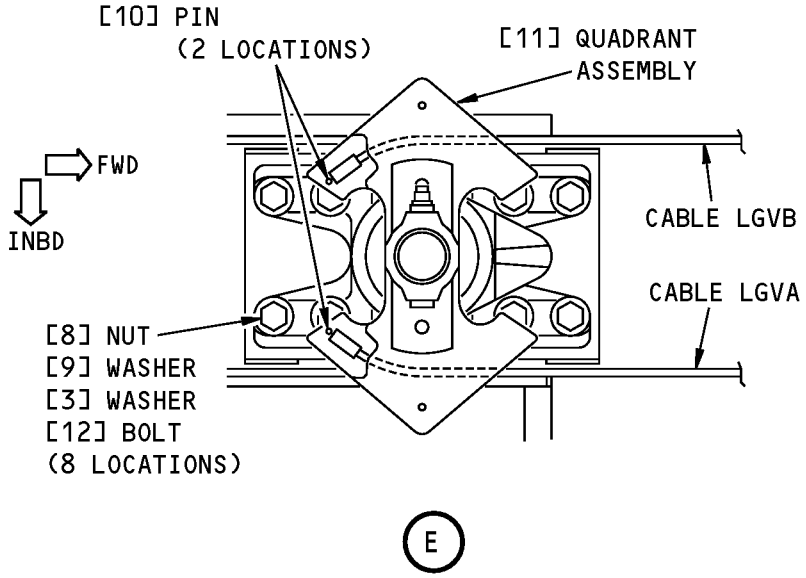
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Landing Gear Selector Valve Quadrant Installation
Figure 401 (Sheet 3 of 4)/32-31-61-990-801

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Landing Gear Selector Valve Quadrant Installation
Figure 401 (Sheet 4 of 4)/32-31-61-990-801

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TASK 32-31-61-400-801

3. Landing Gear Selector Valve Quadrant Installation

(Figure 401)

A. References

Reference	Title
25-22-00-400-802	Passenger Seat Installation (P/B 401)
32-31-00-730-802	System Test - Landing Gear Control System (P/B 501)
32-31-00-820-801	Landing Gear Control System Adjustment (P/B 501)
51-31-00-390-804	Fillet Seal Application (P/B 201)

B. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
6	Pin	32-31-61-01-010	HAP ALL
10	Pin	32-31-41-01-055	HAP 001-013, 015-026, 028-054
		32-31-41-01C-005	HAP 101-999
11	Quadrant assembly	32-31-61-01-075	HAP 001-013, 015-026, 028-030
		32-31-61-01-130	HAP ALL

D. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
117	Electrical and Electronics Compartment - Left
121	Forward Cargo Compartment - Left
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left

E. Access Panels

Number	Name/Location
112A	Forward Access Door

F. Selector Valve Quadrant Installation

SUBTASK 32-31-61-420-001

(1) Put the quadrant assembly [11] in its position on top of the wheel well ceiling.

SUBTASK 32-31-61-100-001

(2) Install the bolts [12], washers [3, 9], and nuts [8].

SUBTASK 32-31-61-100-002

(3) Apply a fillet seal around the bottom of the support housing for the quadrant assembly [11], do this task: Fillet Seal Application, TASK 51-31-00-390-804.

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SUBTASK 32-31-61-110-001

(4) Install the bellcrank [4] on the shaft of the quadrant assembly [11].

SUBTASK 32-31-61-420-004

(5) Install the washer [5] and nut [7].

SUBTASK 32-31-61-420-008

(6) Tighten the nut [7] to 480 in-lb (54.2 N·m) – 600 in-lb (67.8 N·m).

SUBTASK 32-31-61-420-009

(7) Install a new pin [6].

SUBTASK 32-31-61-600-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST BMS 3-27 COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(8) Apply compound, C50056 or compound, C00913 (alternate) to the hole on the clevis of the bellcrank [4] where you will attach the link assembly.

SUBTASK 32-31-61-420-005

(9) Install the bolt [2], washers [3, 9], and nut [8] to connect the link assembly to the bellcrank [4].

SUBTASK 32-31-61-420-006

(10) Attach the cables LGVA and LGVB to the quadrant assembly [11] and install the pins [10].

SUBTASK 32-31-61-420-007

(11) Tighten the cables LGVA and LGVB.

SUBTASK 32-31-61-820-001

(12) Adjust and do a test of the control system for the landing gear. To do this, do this task: Landing Gear Control System Adjustment, TASK 32-31-00-820-801 and, do this task: System Test - Landing Gear Control System, TASK 32-31-00-730-802.

SUBTASK 32-31-61-940-001

(13) Close this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-31-61-410-001

(14) Install the left inboard floor panel that you removed.

SUBTASK 32-31-61-410-002

(15) Install the passenger seats, do this task: Passenger Seat Installation, TASK 25-22-00-400-802.

——————— END OF TASK ———————

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LANDING GEAR SELECTOR VALVE QUADRANT - INSPECTION/CHECK

1. General

A. This task has the data for a dimensional inspection of the quadrant for the landing gear selector valve. No procedure is given in this section to get access to permit the inspection. The quadrant must be removed to do the inspection. To do this,

These are the tasks:

Landing Gear Selector Valve Quadrant Removal, TASK 32-31-61-020-801,

Landing Gear Selector Valve Quadrant Installation, TASK 32-31-61-400-801.

TASK 32-31-61-200-801

2. Landing Gear Selector Valve Quadrant Inspection

(Figure 601)

A. General

(1) This procedure gives wear limits and repair data for the landing gear selector valve quadrant.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-31-61-020-801	Landing Gear Selector Valve Quadrant Removal (P/B 401)
32-31-61-400-801	Landing Gear Selector Valve Quadrant Installation (P/B 401)

C. Tools/Equipment

Reference	Description
STD-1096	Micrometer - Depth, 0-1 Inch, Readable to 1/1000 Inch
STD-1097	Caliper - Vernier, 0-6 Inch, Readable to 1/1000 Inch

D. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
117	Electrical and Electronics Compartment - Left
121	Forward Cargo Compartment - Left
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left

E. Procedure

SUBTASK 32-31-61-480-002

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-31-61-020-009

(2) Remove parts to get access to the quadrant assembly for the landing gear selector valve (Figure 601), do this task: Landing Gear Selector Valve Quadrant Removal, TASK 32-31-61-020-801.

SUBTASK 32-31-61-020-010

(3) Use these tools to check for wear on the parts of the landing gear selector valve quadrant:

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(a) micrometer (0-1 Inch, readable to 1/1000 Inch), STD-1096

(b) readable to 1/1000 inch vernier 0 - 6 inch caliper, STD-1097

SUBTASK 32-31-61-020-011

(4) Examine the parts of the quadrant assembly for worn areas:

(a) Remove the parts that need a check.

(b) Measure the parts as necessary with a micrometer (0-1 Inch, readable to 1/1000 Inch), STD-1096 or a readable to 1/1000 inch vernier 0 - 6 inch caliper, STD-1097.

(c) Compare the dimensions you measured with the permitted wear dimensions in the table below (Table 601).

(d) If the parts are not in the tolerance, replace or repair the part as necessary.

Table 601/32-31-61-993-803

NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MINIMUM SERVICE DIAMETRIC CLEARANCE
#1 CRANK	I.D.	0.250 in 6.350 mm	0.254 in 6.452 mm	0.261 in 6.629 mm	0.0115 in 0.2921 mm
#1 BOLT	O.D.	0.2485 in 6.3119 mm	0.2495 in 6.3373 mm	0.2475 in 6.2865 mm	
#2 VALVE	I.D.	0.250 in 6.350 mm	0.254 in 6.452 mm	0.261 in 6.629 mm	0.0115 in 0.2921 mm
#2 BOLT	O.D.	0.2485 in 6.3119 mm	0.2495 in 6.3373 mm	0.2475 in 6.2865 mm	
#3 BEARING	I.D.	0.9995 in 25.387 mm	1.0000 in 25.400 mm	1.0005 in 25.413 mm	0.0005 in 0.0127 mm
#3 SHAFT	O.D.	1.0001 in 25.402 mm	1.0004 in 25.410 mm	0.9999 in 25.397 mm	
#4 SUPPORT	I.D.	1.9997 in 50.792 mm	2.0003 in 50.808 mm	2.0010 in 50.825 mm	0.002 in 0.051 mm
#4 BEARING	O.D.	1.9995 in 50.787 mm	2.0000 in 50.800 mm	1.9990 in 50.775 mm	
#5 SUPPORT	I.D.	1.9988 in 50.770 mm	1.9993 in 50.782 mm	2.0000 in 50.800 mm	0.001 in

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(Continued)

NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MINIMUM SERVICE DIAMETRIC CLEARANCE
#5 BEARING	O.D.	1.9995 in 50.787 mm	2.0000 in 50.800 mm	1.9990 in 50.775 mm	0.025 mm
#6 CRANK	I.D.	in mm	in mm	in mm	0.005 in
#6 SHAFT	O.D.	in mm	in mm	in mm	0.0127 mm *[1]
#7 BEARING	I.D.	0.9995 in 25.837 mm	1.0000 in 25.400 mm	1.0015 in 25.438 mm	0.002 in
#7 SHAFT	O.D.	0.9992 in 25.380 mm	0.9997 in 25.392 mm	0.9985 in 25.362 mm	0.051 mm

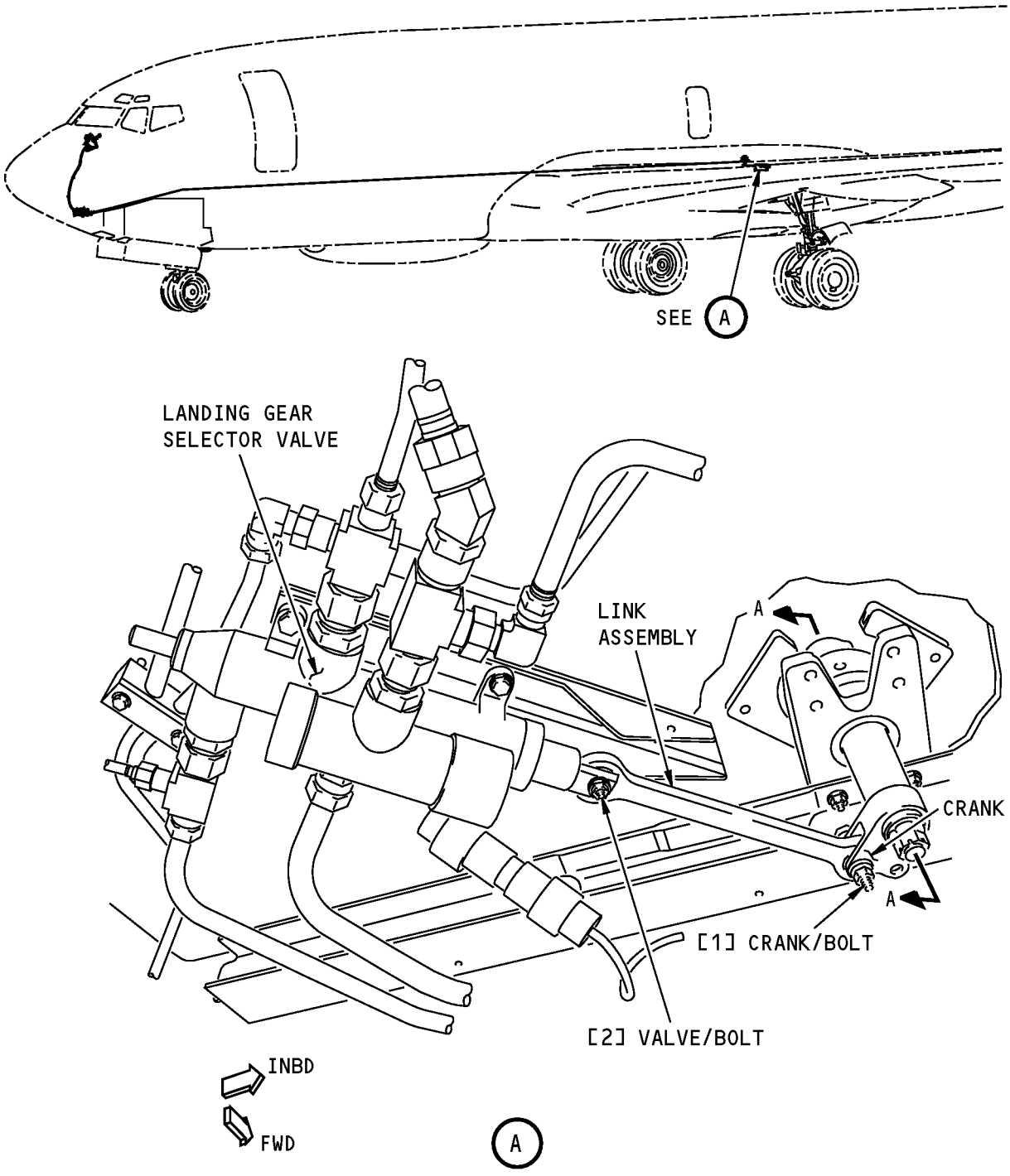
*[1] Spline backlash measured at the pitch diameter of the spline.

SUBTASK 32-31-61-020-012

(5) Install the parts on the quadrant assembly for the landing gear selector valve. To do this, do this task: Landing Gear Selector Valve Quadrant Installation, TASK 32-31-61-400-801.

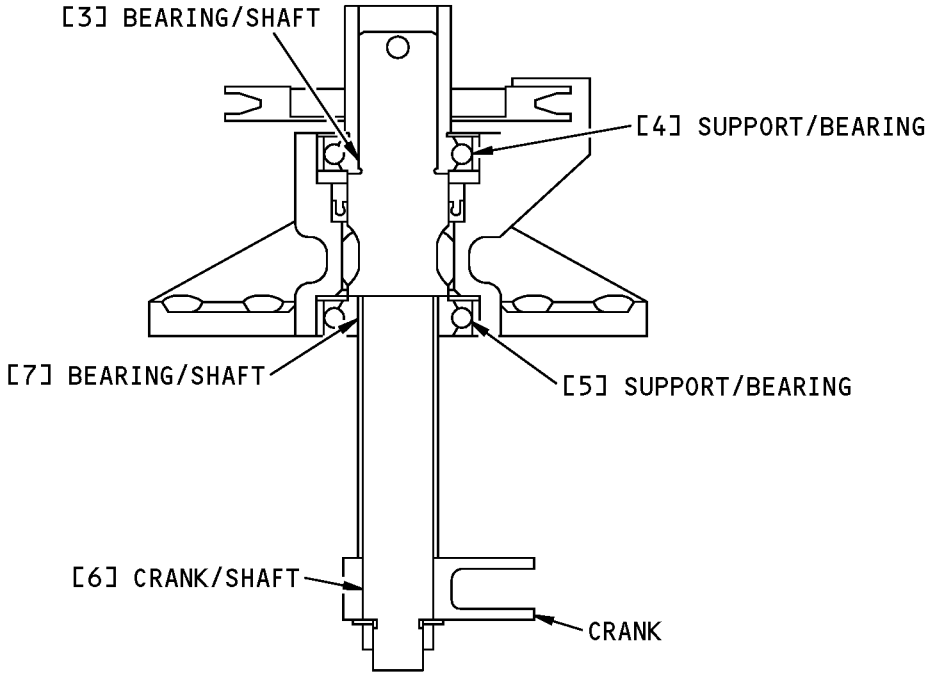
——————— END OF TASK ———————

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Landing Gear Selector Valve Quadrant Wear Limits
Figure 601 (Sheet 1 of 2)/32-31-61-990-802

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Landing Gear Selector Valve Quadrant Wear Limits
Figure 601 (Sheet 2 of 2)/32-31-61-990-802

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LANDING GEAR TRANSFER VALVE - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these three tasks:

(1) A removal of the transfer valve for the landing gear

(2) An installation of the transfer valve for the landing gear

(3) An operational test of the transfer valve.

TASK 32-31-71-020-801

2. Landing Gear Transfer Valve Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare for the Removal

SUBTASK 32-31-71-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-31-71-860-001

(2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

SUBTASK 32-31-71-860-002

(3) Remove the pressure from hydraulic system A, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-31-71-580-001

(4) Install chocks around the tires of the main landing gear.

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D. Landing Gear Transfer Valve Removal

SUBTASK 32-31-71-020-001

(1) Disconnect the electrical connector [11] from the valve assembly [1].

SUBTASK 32-31-71-930-001

(2) Put tags on the hydraulic lines [2] to identify the correct locations of the lines.

SUBTASK 32-31-71-020-002

(3) Disconnect the hydraulic lines [2] from the valve assembly [1].

SUBTASK 32-31-71-480-003

(4) Install caps on the hydraulic lines [2] and the ports on the valve assembly [1].

SUBTASK 32-31-71-020-003

(5) Remove the bolt [5] and washers [6, 8] to disconnect the jumper assembly [7] from the valve assembly [1].

SUBTASK 32-31-71-020-004

(6) Remove the washers [12] and bolts [13] which attach the valve assembly [1] to the bracket [9].

SUBTASK 32-31-71-020-005

(7) Remove the valve assembly [1] from the airplane.

SUBTASK 32-31-71-080-001

(8) Remove the caps from the ports on the valve assembly [1] and drain the hydraulic fluid.

SUBTASK 32-31-71-020-006

(9) Do these steps if the replacement valve assembly [1] does not have unions [10] or a reducer [3] installed:

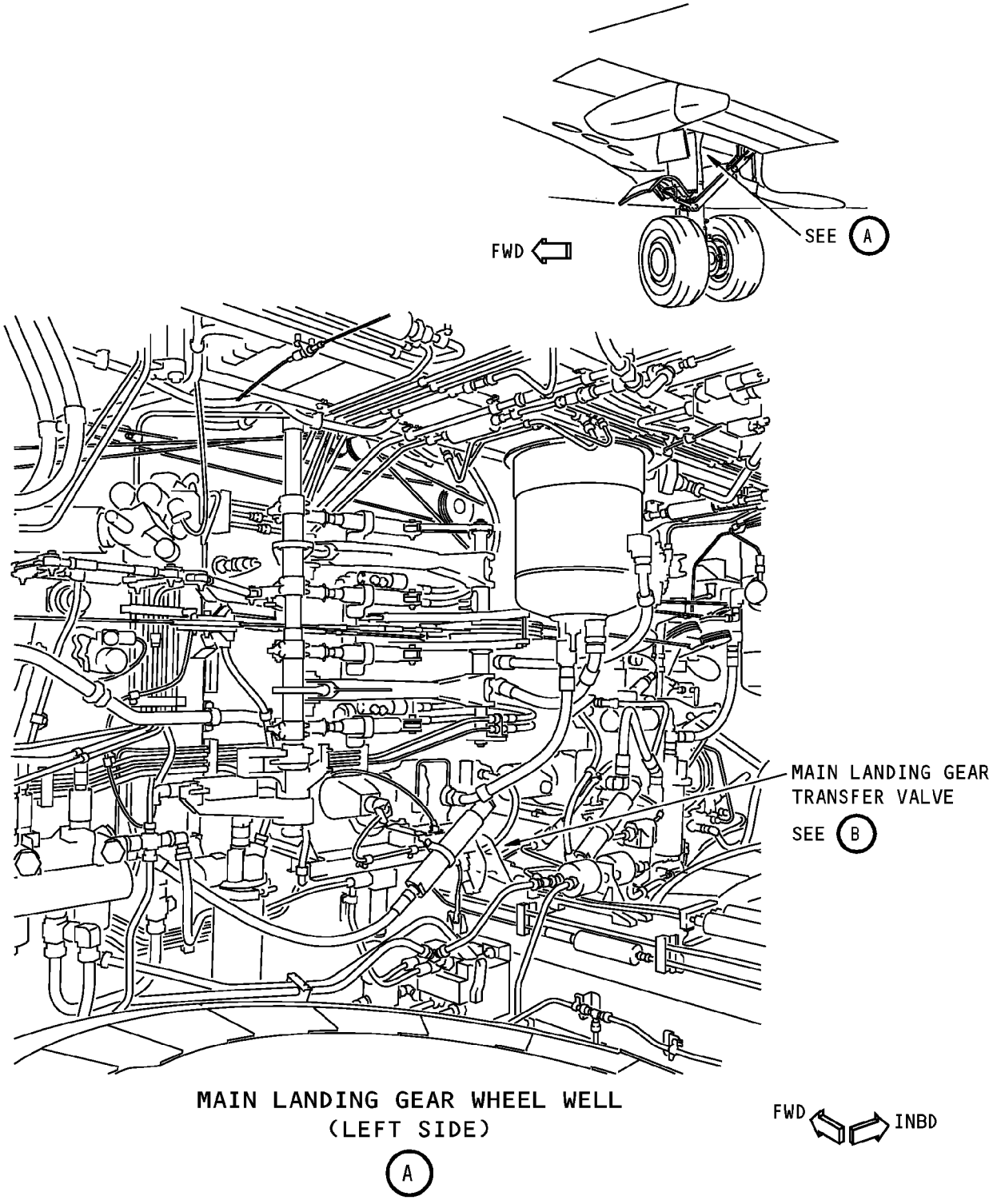
(a) Remove the unions [10] and the reducer [3].

(b) Remove and discard the packings [4].

(c) Install plugs in the ports on the valve assembly [1].

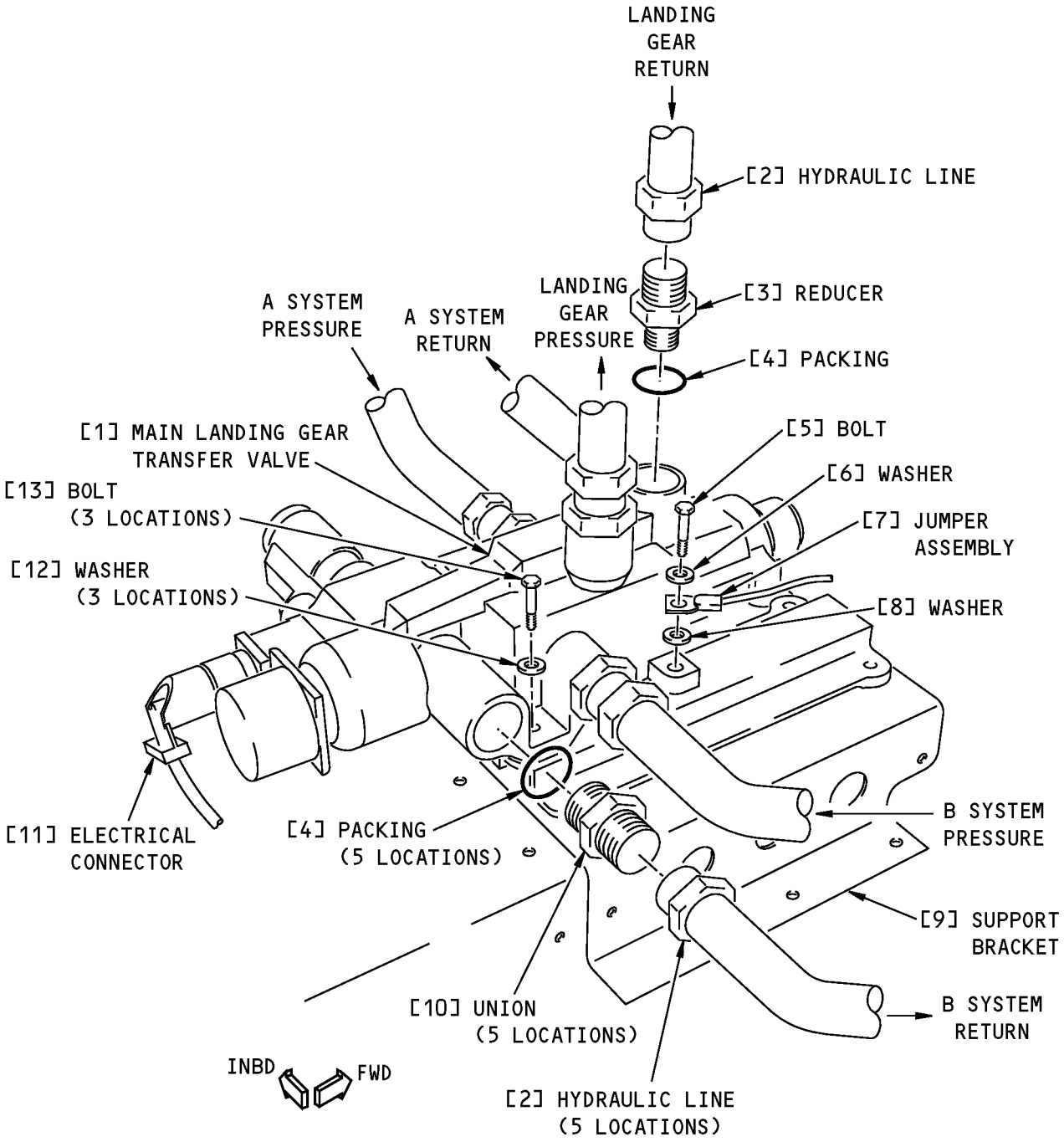
——————— END OF TASK ———————

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Main Landing Gear Transfer Valve Installation
Figure 401 (Sheet 1 of 2)/32-31-71-990-801

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MAIN LANDING GEAR TRANSFER VALVE

B

Main Landing Gear Transfer Valve Installation
Figure 401 (Sheet 2 of 2)/32-31-71-990-801

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TASK 32-31-71-400-801

3. Landing Gear Transfer Valve Installation

(Figure 401)

A. References

Reference	Title
20-10-34-120-801	Hand Clean Metal Surfaces with Abrasives (P/B 701)
20-10-37-120-801	Electrical Bonding Inspection (P/B 601)
20-30-11-910-801	Adhesives, Cements, and Sealants (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
SWPM 20-60-03	Special Protection of Electrical Connectors

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Meter - Bonding (Approved Explosion Proof & Intrinsically Safe) (Part #: C15292 (MODEL T477W), Supplier: 01014, A/P Effectivity: 737-ALL) (Part #: M1, Supplier: 3AD17, A/P Effectivity: 737-ALL) (Part #: M1B, Supplier: 3AD17, A/P Effectivity: 737-ALL)

C. Consumable Materials

Reference	Description	Specification
A02315	Sealant - Low Density, Synthetic Rubber. 2 Part	BMS5-142
C00064	Coating - Aluminum Chemical Conversion	BAC5719, Type II, Class A (MIL-C-5541, Class A)
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)
G50171	Compound - Corrosion Inhibiting Compound, Interior Application - D5026NS or ZC-026	

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Valve assembly	32-31-71-01-045	HAP ALL
3	Reducer	32-31-71-01-055	HAP ALL
4	Packing	32-31-71-01-060	HAP ALL
10	Union	32-31-71-01-050	HAP ALL

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E. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

F. General

SUBTASK 32-31-71-710-001

(1) After you do the installation task for the landing gear transfer valve assembly [1], you must do an operational test.

G. Landing Gear Transfer Valve Installation

SUBTASK 32-31-71-420-001

(1) Do these steps if the replacement valve assembly [1] does not have the unions [10] or reducer [3] installed:

(a) Lubricate these items with fluid, D00153:

1) The new packings [4]

2) The reducer [3]

3) The unions [10].

(b) Remove the plugs from the ports on the valve assembly [1].

(c) Install the packings [4], the reducer [3], and the unions [10] in the valve assembly [1].

SUBTASK 32-31-71-100-001

(2) Clean the surface of the bracket [9] where the valve assembly [1] will be attached, do this task: Hand Clean Metal Surfaces with Abrasives, TASK 20-10-34-120-801.

SUBTASK 32-31-71-100-002

(3) Clean the surface of the valve assembly [1] that will attach to the bracket, do this task: Hand Clean Metal Surfaces with Abrasives, TASK 20-10-34-120-801.

SUBTASK 32-31-71-110-001

(4) Apply coating, C00064 to all of the areas that you cleaned on the bracket [9] and the valve assembly [1].

SUBTASK 32-31-71-600-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(5) Apply compound, C00913 to the shank and threads of the bolts [5, 13].

SUBTASK 32-31-71-420-003

(6) Install the bolts [13] and washers [12] which attach the valve assembly [1] to the bracket [9].

SUBTASK 32-31-71-100-003

(7) Clean the surface of the valve assembly [1] where the jumper assembly [7] connects, do this task: Hand Clean Metal Surfaces with Abrasives, TASK 20-10-34-120-801.

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SUBTASK 32-31-71-100-004

(8) Clean the surface of the jumper assembly [7] that will attach to the valve assembly [1], do this task: Hand Clean Metal Surfaces with Abrasives, TASK 20-10-34-120-801.

SUBTASK 32-31-71-110-002

(9) Apply coating, C00064 to all of the areas that you cleaned on the jumper assembly and the valve assembly [1].

SUBTASK 32-31-71-420-004

(10) Install the washers [6, 8] and bolt [5] to attach the jumper assembly [7] to the valve assembly [1].

SUBTASK 32-31-71-760-002

(11) Use an bonding meter, COM-1550 to measure the electrical resistance between the valve assembly [1] and the bracket [9]. The resistance you measure must be 0.001 ohms or less, do this task: Electrical Bonding Inspection, TASK 20-10-37-120-801.

SUBTASK 32-31-71-420-009

(12) Apply a fillet seal along the edges of the joint between the valve assembly [1] and the bracket, do this task: Adhesives, Cements, and Sealants, TASK 20-30-11-910-801.

SUBTASK 32-31-71-390-001

(13) Apply a fillet seal of sealant, A02315 to the bonding jumper terminal connections, do this task: Adhesives, Cements, and Sealants, TASK 20-30-11-910-801.

SUBTASK 32-31-71-080-002

(14) Remove the caps from the unions [10] and the reducer [3] on the valve assembly [1].

SUBTASK 32-31-71-420-005

(15) Connect the hydraulic lines [2] to the valve assembly [1].

SUBTASK 32-31-71-420-006

(16) Tighten the hydraulic lines [2].

SUBTASK 32-31-71-840-001

(17) Remove the tags that you put on the hydraulic lines to identify the correct location.

SUBTASK 32-31-71-420-007

(18) Before you connect the electrical connector [11] to the valve assembly [1], examine the connector for corrosion.

WARNING: DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

(a) If there was corrosion, refer to (SWPM 20-60-03) to correct the problem.

(b) Apply the D5026NS or ZC-026 compound, G50171 to the connector (SWPM 20-60-03).

(c) Connect the electrical connector [11] to the valve assembly [1].

SUBTASK 32-31-71-860-003

(19) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

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SUBTASK 32-31-71-860-004

(20) For hydraulic systems A and B, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-31-71-210-001

(21) Make sure there are no leaks at the hydraulic line connections.

SUBTASK 32-31-71-710-002

(22) Do the Operational Test of the valve assembly [1], Do this task: Operational Test of the Transfer Valve, TASK 32-31-71-400-802.

——————— END OF TASK ———————

TASK 32-31-71-400-802

4. Operational Test of the Transfer Valve

(Figure 402)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-10-740-801	Proximity Switch Electronics Unit (PSEU) BITE Test - Ground Test (P/B 501)

C. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

D. Test of the Transfer Valve Solenoids

SUBTASK 32-31-71-480-006

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-31-71-860-016

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

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SUBTASK 32-31-71-860-017

(3) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

SUBTASK 32-31-71-860-018

(4) Make sure the control lever for the landing gear is in the DN position.

SUBTASK 32-31-71-860-019

(5) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-31-71-860-029

(6) For hydraulic system B, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-31-71-860-020

(7) Push the ON/OFF switch on the PSEU panel to turn on the PSEU.

SUBTASK 32-31-71-710-010

(8) Push the down arrow until GROUND TESTS? is displayed, then press YES.

SUBTASK 32-31-71-710-011

(9) Push the down arrow until LGTV TEST? is displayed, then press YES.

SUBTASK 32-31-71-710-015

(10) Make sure the transfer valve passes the test.

SUBTASK 32-31-71-710-012

(11) Push the ON/OFF switch on the PSEU panel to turn off the PSEU.

E. Test of Transfer Valve Operation Which Uses Alternate Steering

SUBTASK 32-31-71-480-008

WARNING: MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE CONTROL SURFACES, CABLES, AND LANDING GEAR AREAS. PRESSURIZATION OF A HYDRAULIC SYSTEM CAN MOVE CONTROL SURFACES, CABLES, AND LANDING GEAR. THIS MOVEMENT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Move the towing lever to the TOW position and Install the lock pin.

SUBTASK 32-31-71-480-009

(2) Install greased plates under the nose wheels.

SUBTASK 32-31-71-860-021

(3) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	15	C01355	LANDING GEAR AIR/GND SYS 2
D	17	C01027	LANDING GEAR NOSE GEAR STEER

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SUBTASK 32-31-71-860-022

(4) Make sure the ALT NOSE WHEEL STEERING switch on the P-1 Captain's panel is in the NORM position.

SUBTASK 32-31-71-080-004

(5) Remove the lock pin from the towing lever.

NOTE: Removing the lock pin from the towing lever moves the lever to the NORMAL position.

SUBTASK 32-31-71-860-023

(6) For Hydraulic System A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-31-71-860-025

(7) Move the ALT NOSE WHEEL STEERING switch on the P-1 Captain's panel to the ALT position.

SUBTASK 32-31-71-710-013

(8) Make sure the nose wheel steering operates:

(a) Turn the nose gear steering wheel full travel in one direction, then the other direction, and then return it to center.

SUBTASK 32-31-71-860-026

(9) Move the ALT NOSE WHEEL STEERING switch on the P-1 Captain's panel to the NORM position.

SUBTASK 32-31-71-710-014

(10) Make sure the nose wheel steering does not operate.

SUBTASK 32-31-71-860-027

(11) For Hydraulic System B, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-31-71-080-005

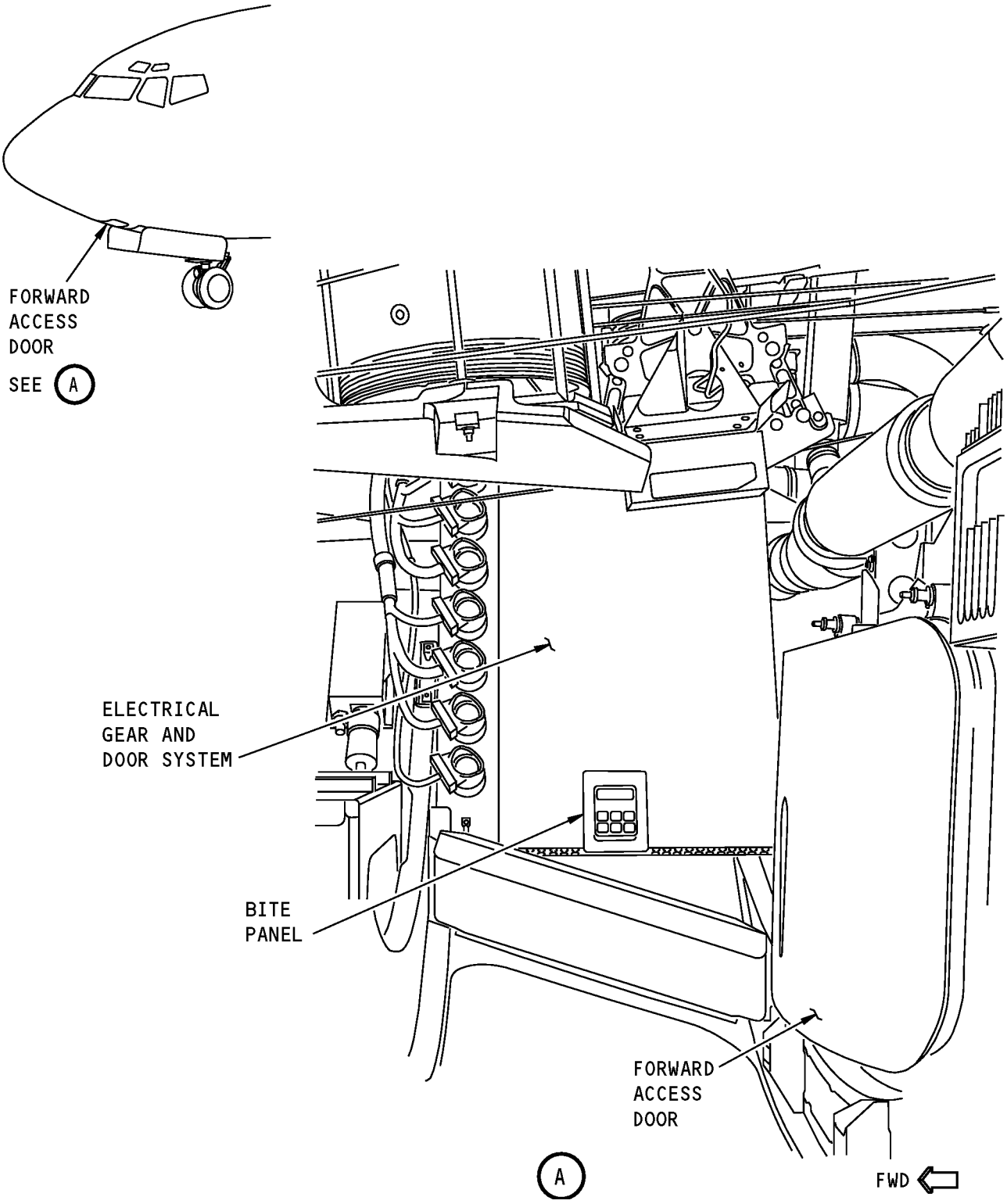
(12) Remove the greased plates from under the nose wheels.

SUBTASK 32-31-71-070-001

(13) To check the PSEU for stored faults using the self test, do this task: Proximity Switch Electronics Unit (PSEU) BITE Test - Ground Test, TASK 32-09-10-740-801.

——————— END OF TASK ———————

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Electrical Gear and Door System
Figure 402/32-31-71-990-802

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MAIN GEAR EXTENSION AND RETRACTION - ADJUSTMENT/TEST

1. General

A. This procedure has these two tasks:

(1) The first task does an extension/retraction test of the main landing gear after you replaced or adjusted a landing gear component.

(2) The second task does an operational test of the main landing gear.

B. The times for gear retraction in the operational test depend on the hydraulic flow rate. The retraction times given in this procedure are based on a minimum flow rate of 19 gpm at a hydraulic system pressure of 3000 +/-150 psi. Hydraulic pressure can be supplied by a hydraulic test bench or the engine driven pumps to give this minimum flow rate.

NOTE: System losses due to pressure drops and overall hydraulic system internal leakage may require a higher flow rate to achieve optimum retraction times. A hydraulic cart with a higher flow rate capacity is necessary to achieve the stated retraction times.

C. The electric motor driven pump (EMDP) can be used for the component replacement test. When you use the EMDP operate only one landing gear at a time. The EMDP provides a hydraulic flow rate of approximately 6 gpm. This lower rate causes slower landing gear operation, especially if you operate more than one gear at the same time. Do not use the EMDP to measure extension/retraction times.

TASK 32-32-00-710-802

2. Main Landing Gear Test - Component Replacement

(Figure 501)

A. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-10-740-801	Proximity Switch Electronics Unit (PSEU) BITE Test - Ground Test (P/B 501)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

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C. Prepare for the Test

SUBTASK 32-32-00-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-00-860-055

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-32-00-580-003

(3) Do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-32-00-860-034

(4) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
B	3	C01312	ENGINE 1 RUN/PWR

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	16	C01432	LANDING GEAR ALTN EXTEND SOL
E	12	C00314	INDICATOR MASTER DIM SECT 2
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	13	C01179	INDICATOR MASTER DIM SECT 7

SUBTASK 32-32-00-860-036

(5) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 32-32-00-080-002

(6) Remove the downlock pin from the main landing gear that you will test. To do this, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

SUBTASK 32-32-00-860-037

(7) Make sure the control lever for the landing gear is in the DN position.

SUBTASK 32-32-00-860-038

(8) Make sure that all the gear red lights on the P2-3 panel are off.

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SUBTASK 32-32-00-860-039

(9) Make sure that all the gear green lights on the P2-3 panel are on.

SUBTASK 32-32-00-860-040

(10) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-32-00-860-041

WARNING: MAKE SURE THE CIRCUIT BREAKER FOR THE WEATHER RADAR SYSTEM IS OPEN BEFORE YOU MOVE THE THRUST LEVERS. THE FORWARD MOVEMENT OF A THRUST LEVER CAN CAUSE THE AUTOMATIC OPERATION OF THE WEATHER RADAR SYSTEM. THE OPERATION OF THIS SYSTEM CAN CAUSE SERIOUS INJURY TO PERSONS AND DAMAGE TO EQUIPMENT IN THE AREA OF THE NOSE RADOME.

(11) Move the two thrust levers to the full forward position.

D. Test of Normal Extension and Retraction

SUBTASK 32-32-00-710-007

WARNING: MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE MAIN LANDING GEAR. FAST MOVEMENT OF THE MAIN LANDING GEAR CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Move the control lever for the landing gear to UP and make sure the landing gear retracts.

NOTE: Do not use the lever lock override trigger.

SUBTASK 32-32-00-860-042

(2) Make sure the green and red lights for the landing gear you retracted are off.

SUBTASK 32-32-00-860-043

(3) Move the control lever for the landing gear to the OFF position.

SUBTASK 32-32-00-860-044

(4) Make sure the green and red lights for the landing gear you retracted are off.

SUBTASK 32-32-00-710-008

(5) Move the control lever to the DN position and make sure the landing gear extends.

SUBTASK 32-32-00-700-001

(6) Make sure the landing gear is down and locked and the three green lights for the landing gear are on.

SUBTASK 32-32-00-480-004

(7) Install the down lock pin in the main landing gear that you tested. To do this, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-00-580-004

(8) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

SUBTASK 32-32-00-860-045

(9) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

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F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 32-32-00-860-054

(10) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-00-070-001

(11) To check the PSEU for stored faults using the self test, do this task: Proximity Switch Electronics Unit (PSEU) BITE Test - Ground Test, TASK 32-09-10-740-801.

——————— END OF TASK ———————

TASK 32-32-00-710-801

3. Main Landing Gear Operational Test

(Figure 501)

A. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
12-12-00-610-801	Hydraulic Reservoir Servicing (P/B 301)
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-10-740-801	Proximity Switch Electronics Unit (PSEU) BITE Test - Ground Test (P/B 501)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare for the Test

SUBTASK 32-32-00-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-00-860-056

NOTE: Do not use the electric motor driven pump (EMDP) to measure extension / retraction times.

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

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SUBTASK 32-32-00-580-001

(3) Do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-32-00-860-003

(4) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
B	3	C01312	ENGINE 1 RUN/PWR

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	16	C01432	LANDING GEAR ALTN EXTEND SOL
E	12	C00314	INDICATOR MASTER DIM SECT 2
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	13	C01179	INDICATOR MASTER DIM SECT 7

SUBTASK 32-32-00-860-005

(5) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 32-32-00-080-001

(6) Remove the downlock pins from the nose and main landing gear. To do this, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

SUBTASK 32-32-00-860-007

(7) Make sure the control lever for the landing gear is in the DN position.

SUBTASK 32-32-00-860-008

(8) Make sure that all the gear red lights on the P2-3 panel are off.

SUBTASK 32-32-00-860-009

(9) Make sure that all the gear green lights on the P2-3 panel are on.

SUBTASK 32-32-00-860-010

(10) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

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SUBTASK 32-32-00-860-011

WARNING: MAKE SURE THE CIRCUIT BREAKER FOR THE WEATHER RADAR SYSTEM IS OPEN BEFORE YOU MOVE THE THRUST LEVERS. THE FORWARD MOVEMENT OF A THRUST LEVER CAN CAUSE THE AUTOMATIC OPERATION OF THE WEATHER RADAR SYSTEM. THE OPERATION OF THIS SYSTEM CAN CAUSE SERIOUS INJURY TO PERSONS AND DAMAGE TO EQUIPMENT IN THE AREA OF THE NOSE RADOME.

(11) Move the two thrust levers to the full forward position.

D. Test of Normal Extension and Retraction

SUBTASK 32-32-00-710-001

WARNING: MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE MAIN LANDING GEAR. FAST MOVEMENT OF THE MAIN LANDING GEAR CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Move the control lever for the landing gear to UP and measure the time for the retraction.

NOTE: Measure the landing gear retraction time from the time the control lever is put in the UP position until all the landing gear red "disagree" lights go off. Use the right main gear red "disagree" light to measure the retraction time.

NOTE: Do not use the lever lock override trigger during the operational test.

NOTE: Do not use the Electric Motor Driven Pump (EMDP) to measure extension / retraction times.

(a) Make sure the landing gear is up and locked in 9.0 seconds or less.

SUBTASK 32-32-00-860-013

(2) Make sure the three green lights and three red lights for the landing gear are off.

SUBTASK 32-32-00-860-014

(3) Move the control lever for the landing gear to the OFF position.

SUBTASK 32-32-00-860-015

(4) Make sure the three green lights and three red lights for the landing gear are off.

SUBTASK 32-32-00-710-002

(5) Move the control lever the DN position and measure the time for extension.

NOTE: Measure the landing gear extension time from the time the control lever is put in the DN position until all the landing gear green lights come on. Use the right main gear green light to measure the extension time.

(a) Make sure the landing gear is down and locked in 13.0 seconds or less.

SUBTASK 32-32-00-860-017

(6) Move the control lever for the landing gear to the OFF position.

E. Test of the Transfer Valve for Landing Gear Retraction

SUBTASK 32-32-00-860-046

(1) Close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

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SUBTASK 32-32-00-860-047

(2) For hydraulic systems A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-00-860-048

(3) For hydraulic systems B, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-32-00-860-049

(4) Move the control lever for the landing gear to the DN position.

SUBTASK 32-32-00-720-001

WARNING: MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE MAIN LANDING GEAR. FAST MOVEMENT OF THE MAIN LANDING GEAR CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

CAUTION: 0.5 GALLONS OF HYDRAULIC FLUID WILL MOVE FROM THE B HYDRAULIC SYSTEM RESERVOIR TO THE A SYSTEM RESERVOIR THROUGH THE TRANSFER VALVE FOR EACH RETRACTION OF THE LANDING GEAR. THIS CONDITION CAN CAUSE THE A SYSTEM RESERVOIR TO FILL MORE THAN ITS MAXIMUM QUANTITY.

(5) Move the control lever for the landing gear to UP and measure the time for the retraction.

NOTE: Measure the landing gear retraction time from the time the control lever is put in the UP position until all the landing gear red "disagree" lights go off. Use the right main gear red "disagree" light to measure the retraction time.

NOTE: Do not use the lever lock override trigger during the operational test.

(a) Make sure the landing gear is up and locked in 9.0 seconds or less.

SUBTASK 32-32-00-210-001

(6) Make sure the three green lights and three red lights for the landing gear are off.

SUBTASK 32-32-00-720-002

(7) Move the control lever for the landing gear to the DN position.

(a) Make sure the landing gear does not extend.

SUBTASK 32-32-00-860-050

(8) Move the control lever for the landing gear to the OFF position.

SUBTASK 32-32-00-860-051

(9) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-32-00-710-009

(10) Move the control lever for the landing gear to the DN position.

(a) Make sure the landing gear is down and locked and the three green lights for the landing gear come on.

SUBTASK 32-32-00-860-052

(11) For hydraulic systems A and B, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-00-480-005

(12) Install the down lock pins in the nose and main landing gear. To do this, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

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SUBTASK 32-32-00-610-002

(13) If it is necessary, fill the two hydraulic reservoirs with hydraulic fluid. To do this, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

SUBTASK 32-32-00-910-001

(14) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

SUBTASK 32-32-00-860-053

(15) Close this circuit breaker:

F/O Electrical System Panel, P6-3

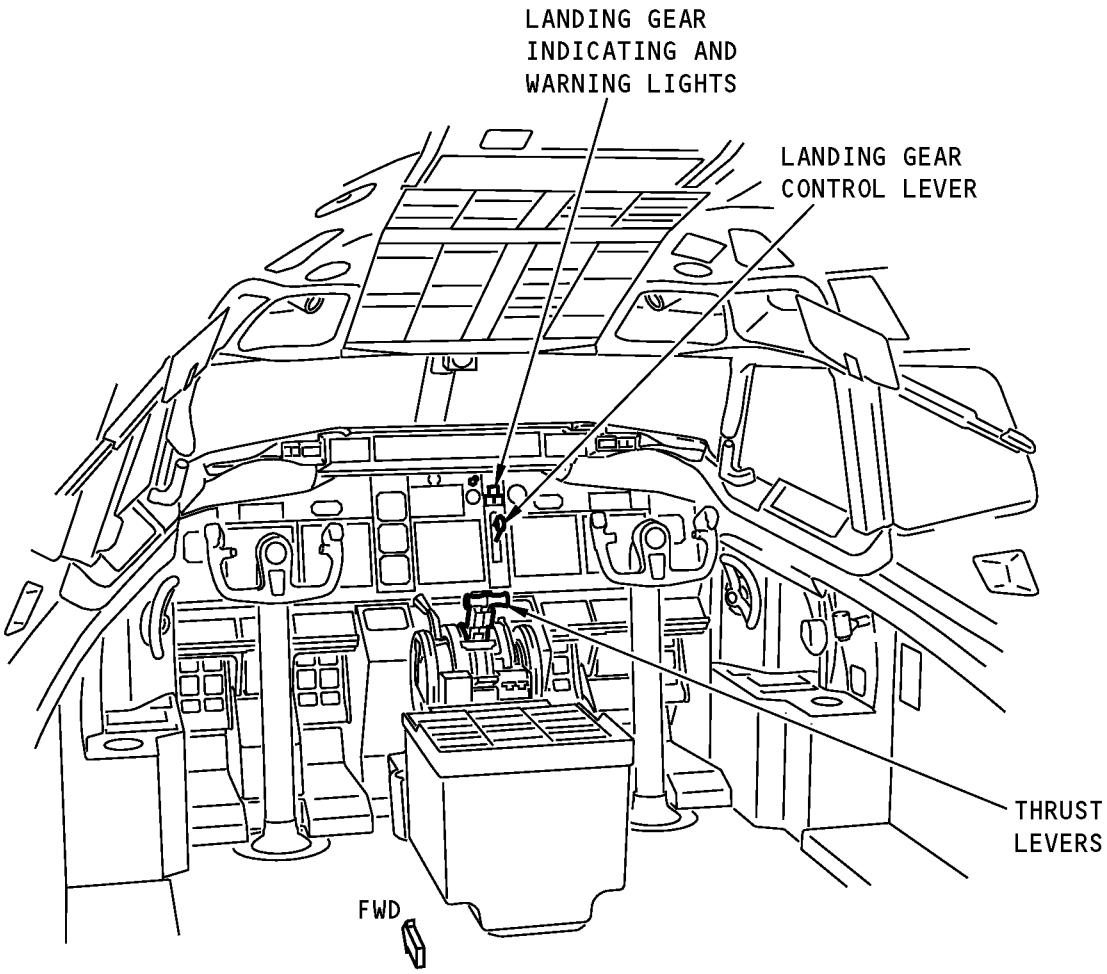
Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 32-32-00-070-002

(16) To check the PSEU for stored faults using the self test, do this task: Proximity Switch Electronics Unit (PSEU) BITE Test - Ground Test, TASK 32-09-10-740-801.

END OF TASK

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FLIGHT COMPARTMENT

Main Gear Extension and Retraction Test
Figure 501/32-32-00-990-801

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MAIN GEAR ACTUATOR ASSEMBLY - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these two tasks:

(1) A removal of the actuator assembly for the main landing gear (referred to as the actuator assy [2]))

(2) An installation of the actuator assembly

TASK 32-32-11-000-801

2. Removal of the Actuator Assembly for the Main Gear

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-13-21-000-802	Main Landing Gear Wing Door Removal (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1870	Hoist - Main Landing Gear Retract Actuator (Part #: C32028-56, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Part #: C32028-58, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Part #: C32028-59, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32028-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32028-3, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Actuator assembly	32-32-11-01-135	HAP ALL

E. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
551	Left Wing - Rear Spar To Landing Gear Support Beam
651	Right Wing - Rear Spar to Landing Gear Support Beam
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

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F. Access Panels

Number	Name/Location
551BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
551DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel
651BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
651DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

G. Prepare for the Removal

SUBTASK 32-32-11-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-11-860-001

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-11-580-001

(3) Install chocks around the tires of the main landing gear.

SUBTASK 32-32-11-010-001

(4) Open the applicable access panels:

Number	Name/Location
551BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
551DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel
651BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
651DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

SUBTASK 32-32-11-010-003

(5) Remove the wing door from the main gear for the actuator you will remove. To do this, do this task: Main Landing Gear Wing Door Removal, TASK 32-13-21-000-802.

H. Actuator Assembly Removal

SUBTASK 32-32-11-020-001

(1) Disconnect the hydraulic UP and DN hoses from the actuator assy [2].

SUBTASK 32-32-11-480-002

(2) Install plugs in the hydraulic hoses.

SUBTASK 32-32-11-480-003

(3) Install the hoist, SPL-1870.

SUBTASK 32-32-11-980-001

(4) Hold the head end of the actuator assembly [2] in position with the hoist, SPL-1870.

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SUBTASK 32-32-11-020-002

(5) Remove these parts to disconnect the beam hanger [3] from the structure:

(a) pin [5]

(b) nut [6]

(c) washer [7]

(d) bolt [4].

SUBTASK 32-32-11-020-003

(6) Hold the beam assembly [1] and actuator assy [2] and remove these parts to disconnect the beam assembly [1] from the main gear trunnion:

(a) pin [12], nut [11], washer [10], and bolt [17]

(b) nut [18] and washer [19]

(c) walking beam attach pin [16].

SUBTASK 32-32-11-020-004

(7) Hold the beam assembly [1] and actuator assy [2] and remove these parts to disconnect the actuator assy [2] from the main gear trunnion:

(a) pin [12], nut [11], washer [10], and bolt [8]

(b) nut [9] and washer [13]

(c) spacers [14]

(d) actuator attach pin [15].

SUBTASK 32-32-11-020-005

(8) Remove the beam assembly [1] and actuator assy [2] with the hoist, SPL-1870.

SUBTASK 32-32-11-080-001

(9) Remove the hoist, SPL-1870 from the beam assembly [1] and actuator assy [2].

SUBTASK 32-32-11-020-006

(10) Do these steps to remove the actuator assy [2] from the beam assembly [1] and the beam hanger [3]:

(a) Remove the pin [12], nut [11], washer [10], and bolt [17].

(b) Remove the nut [21] and washer [22].

(c) Remove the pin [20].

(d) Remove the actuator assy [2].

SUBTASK 32-32-11-020-007

(11) Do these steps if the replacement actuator assy [2] does not have a union [23] and restrictor [26] installed:

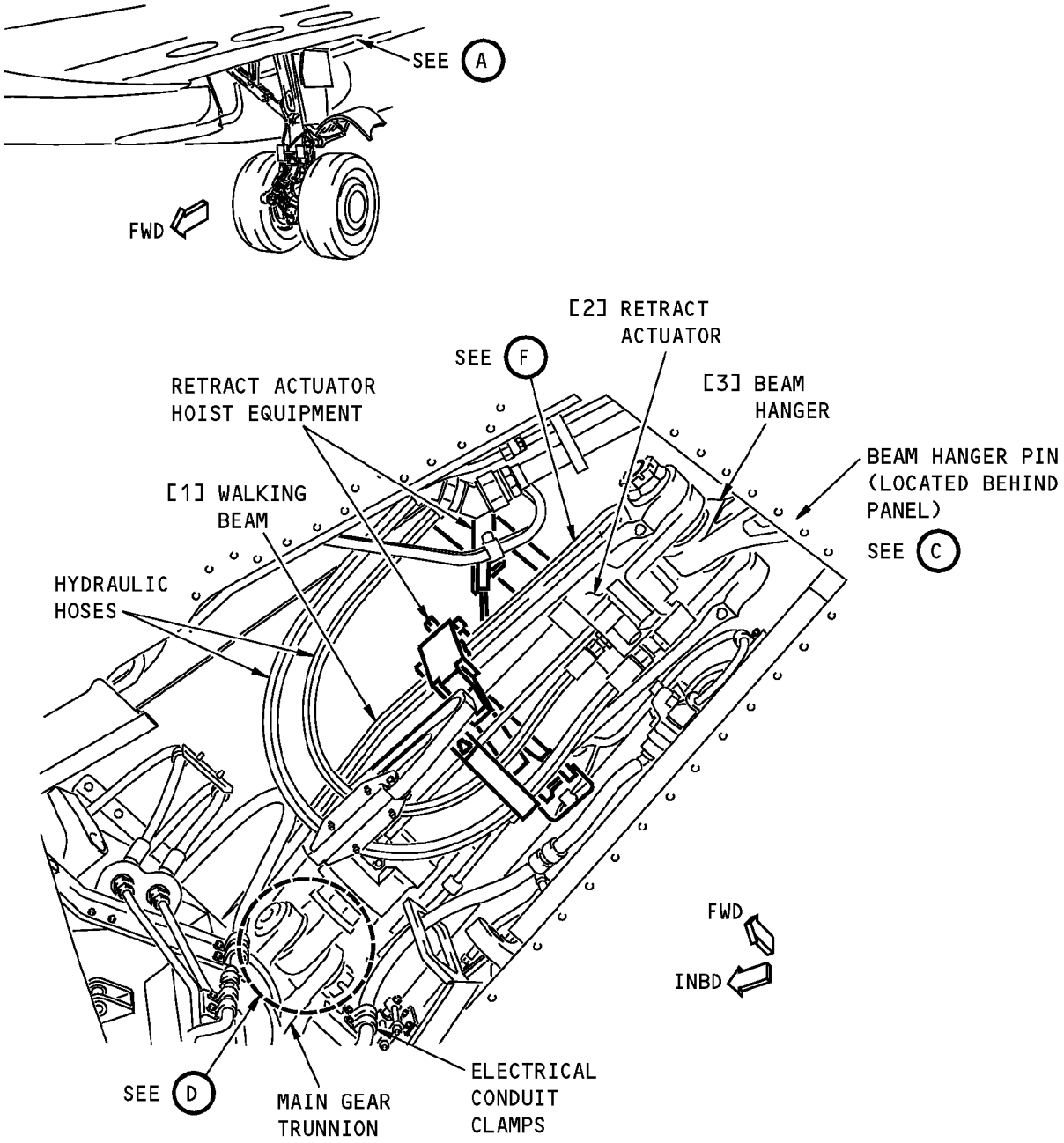
(a) Remove the union [23] and the restrictor [26] from the actuator assy [2].

(b) Remove and discard the packing [24], and packing [25].

(c) Install plugs in the ports on the actuator assy [2].

END OF TASK

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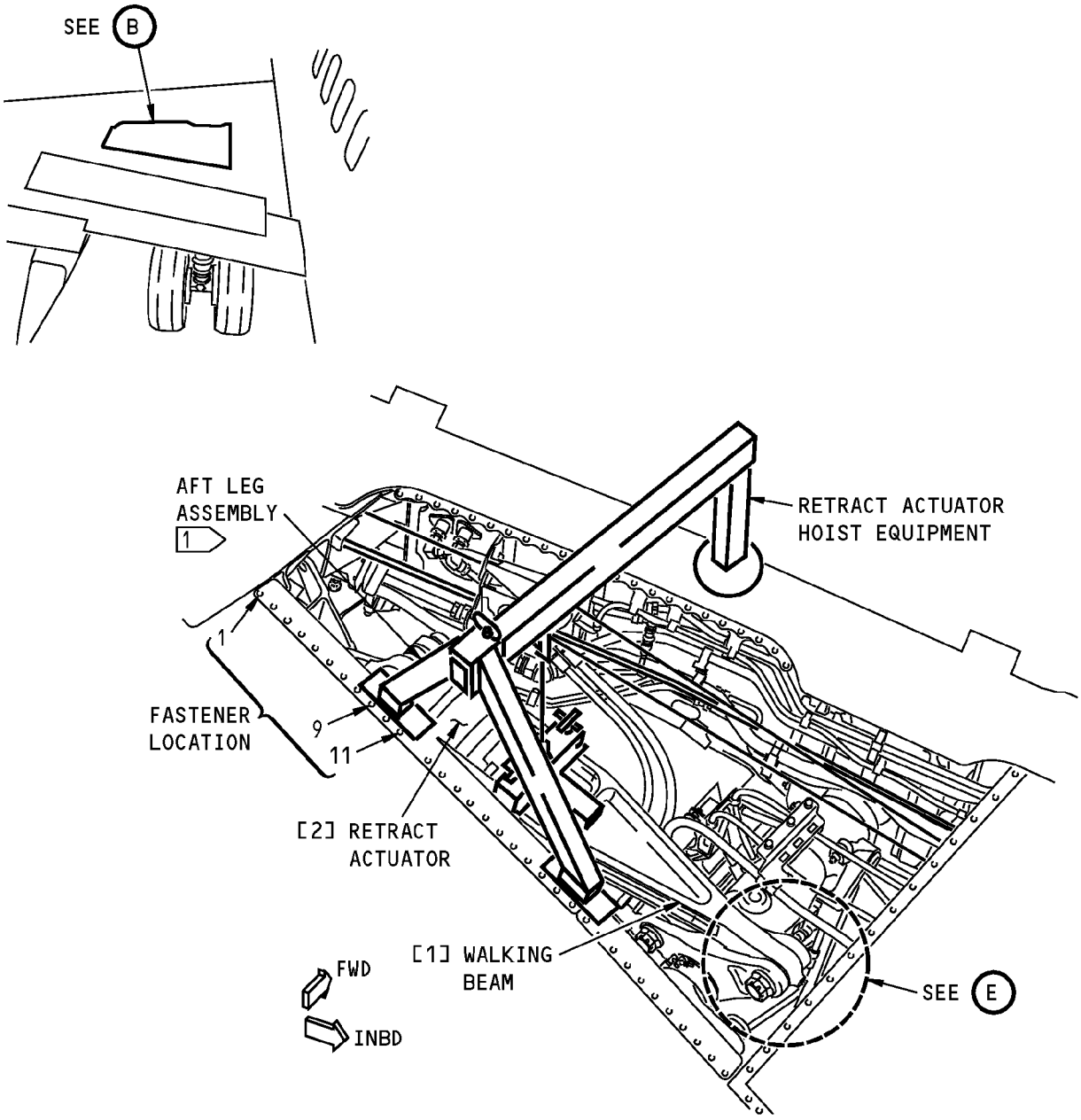


MAIN LANDING GEAR ACTUATOR
(ACCESS PANEL, OUTER WING DOOR,
AND SHOCK STRUT DOOR REMOVED)

A

Main Gear Actuator Assembly Installation
Figure 401 (Sheet 1 of 5)/32-32-11-990-801

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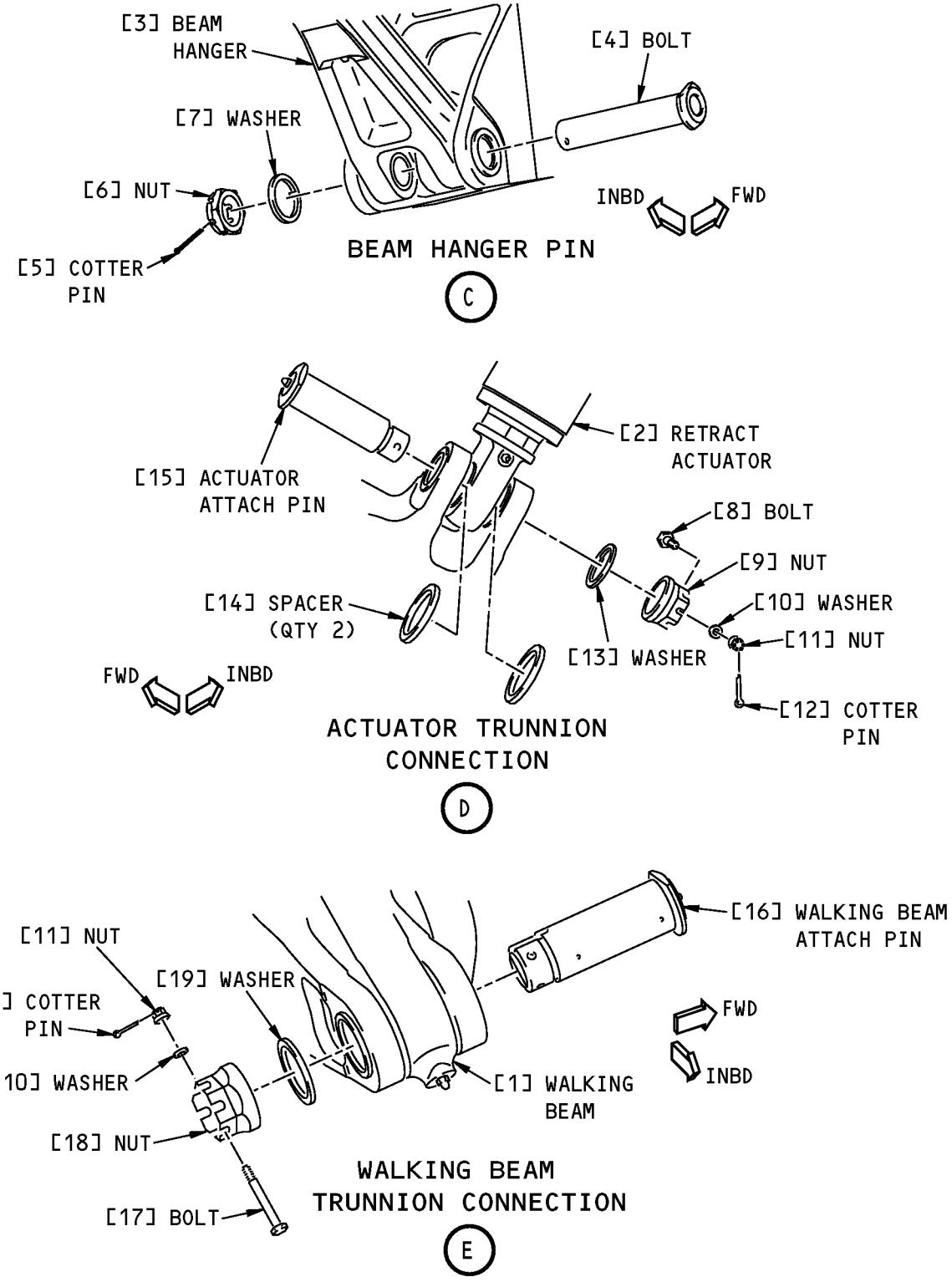
MAIN LANDING GEAR ACTUATOR
(ACCESS PANEL REMOVED AND RETRACT ACTUATOR HOIST TOOL INSTALLED)

B

1 USE FASTENER LOCATIONS NUMBERS 9 AND 11 FOR THE AFT OUTBOARD LEG OF THE HOIST EQUIPMENT.

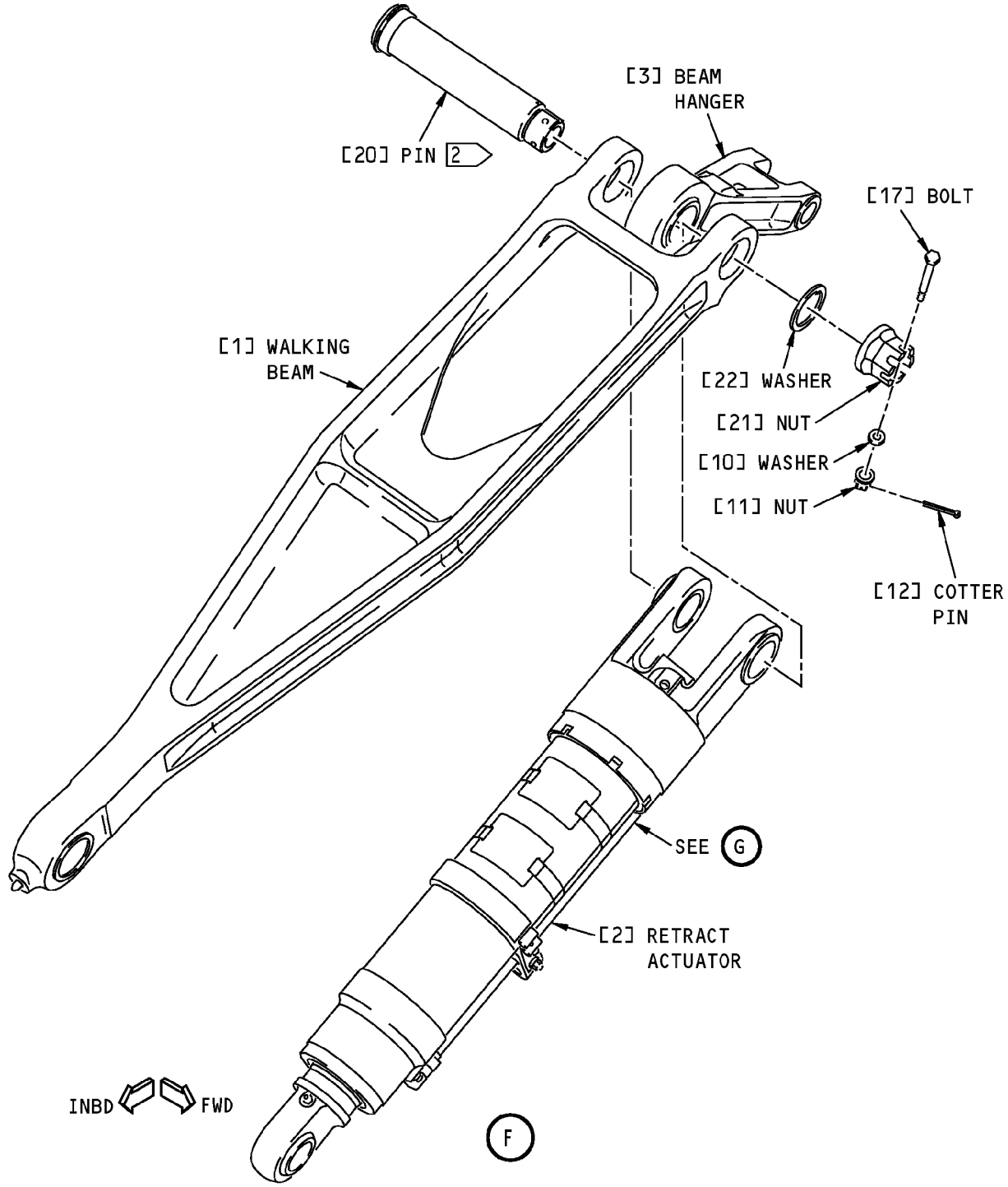
Main Gear Actuator Assembly Installation
Figure 401 (Sheet 2 of 5)/32-32-11-990-801

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Main Gear Actuator Assembly Installation
Figure 401 (Sheet 3 of 5)/32-32-11-990-801

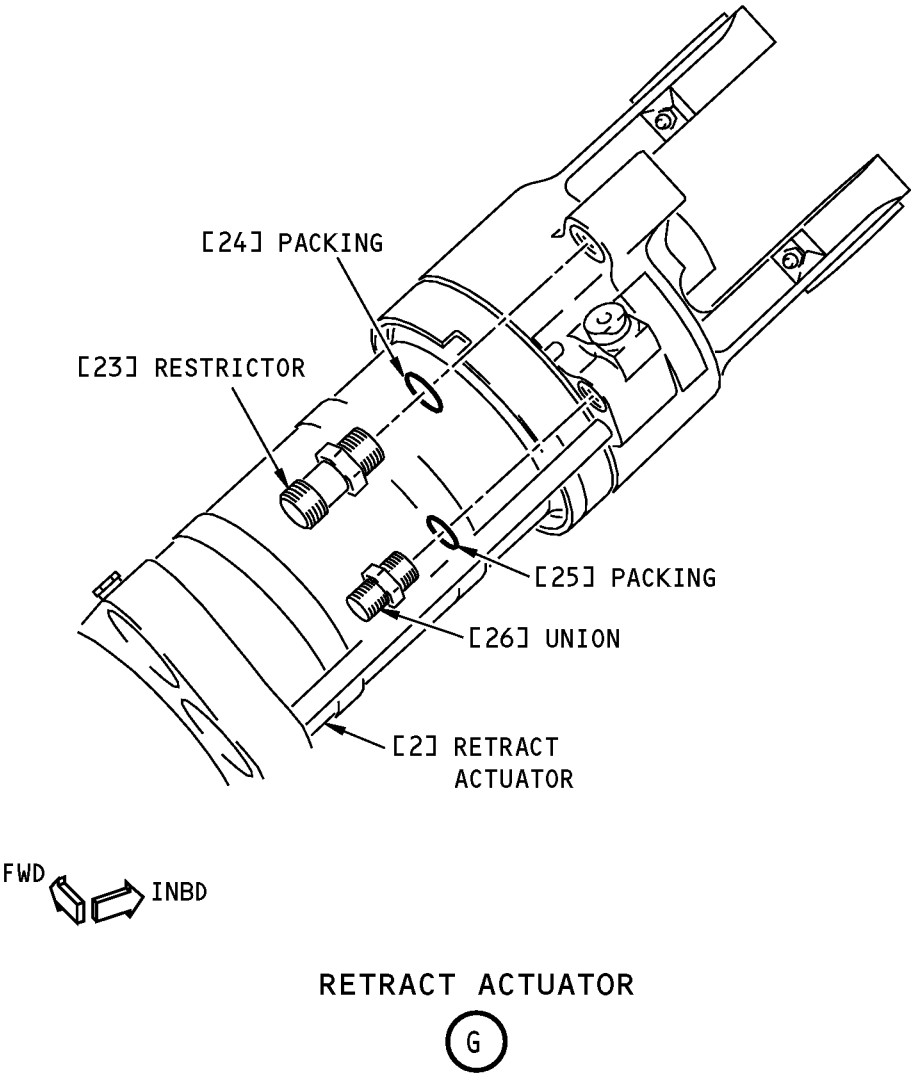
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2 MAKE SURE THE HEAD OF THE PIN IS POINTED AFT.

Main Gear Actuator Assembly Installation
Figure 401 (Sheet 4 of 5)/32-32-11-990-801

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Main Gear Actuator Assembly Installation
Figure 401 (Sheet 5 of 5)/32-32-11-990-801

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TASK 32-32-11-400-801

3. Installation of the Actuator Assembly for the Main Gear

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-13-21-420-801	Main Landing Gear Wing Door Installation (P/B 401)
32-32-00-710-801	Main Landing Gear Operational Test (P/B 501)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1870	Hoist - Main Landing Gear Retract Actuator (Part #: C32028-56, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Part #: C32028-58, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Part #: C32028-59, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32028-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32028-3, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)
D00633	Grease - Aircraft General Purpose	BMS3-33

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
5	Pin	32-32-93-01-010	HAP ALL
12	Pin	32-32-11-01-010	HAP ALL
		32-32-11-01-095	HAP ALL
		32-32-93-01-030	HAP ALL

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(Continued)

AMM Item	Description	AIPC Reference	AIPC Effectivity
23	Union	32-32-11-01-155	HAP ALL
24	Packing	32-32-11-01-165	HAP ALL
25	Packing	32-32-11-01-170	HAP ALL
26	Restrictor	32-32-11-01-160	HAP ALL

F. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
551	Left Wing - Rear Spar To Landing Gear Support Beam
651	Right Wing - Rear Spar to Landing Gear Support Beam
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

G. Access Panels

Number	Name/Location
551BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
551DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel
651BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
651DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

H. Prepare for the Installation

SUBTASK 32-32-11-100-001

(1) Clean the surfaces of these items that will attach the beam hanger [3] to the structure:

(a) attachment fitting on the beam hanger [3]

(b) bolt [4], washer [7], nut [6].

SUBTASK 32-32-11-100-002

(2) Clean these items that will attach the actuator assy [2] to the main gear trunnion:

(a) attachment fitting on the main gear trunnion

(b) actuator attach pin [15]

(c) spacers [14], washer [13], and nut [9]

(d) pin [12], nut [11], washer [10], and bolt [8].

SUBTASK 32-32-11-100-003

(3) Clean the surfaces of these items that will attach the beam assembly [1] and actuator assy [2] to the main gear trunnion:

(a) attachment fitting on the main gear trunnion

(b) walking beam attach pin [16]

(c) washer [19], and nut [18]

(d) pin [12], nut [11], washer [10], and bolt [17].

SUBTASK 32-32-11-600-004

(4) Apply grease, D00633 to the chrome-plated surfaces of the bolt [4], pin [20], actuator attach pin [15], and the walking beam attach pin [16].

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SUBTASK 32-32-11-600-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(5) Apply a thin layer of compound, C00913 to the thread reliefs and threads of the bolt [4] and nut [6], and to the face of the washer [7].

SUBTASK 32-32-11-600-003

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(6) Apply a thin layer of compound, C00913 to these parts:

(a) the faces of the washers [13, 19]

(b) the threads and thread reliefs on the actuator attach pin [15] and walking beam attach pin [16]

(c) the threads and thread reliefs of the bolts [8, 17], faces of the washers [10], threads and thread reliefs of the nuts [11], and the pin [12].

SUBTASK 32-32-11-420-001

(7) Do these steps if the replacement actuator assy [2] does not have the union [23] and restrictor [26] installed:

(a) Lubricate these items with fluid, D00153:

1) packing [24]

2) packing [25]

3) union [23]

4) restrictor [26].

(b) Remove the plugs from the ports on the actuator assy [2].

(c) Install the packing [24], packing [25], the union [23], and the restrictor [26] in the actuator assy [2].

I. Actuator Assembly Installation

SUBTASK 32-32-11-420-002

(1) Do these steps to connect the actuator assy [2] to the beam assembly [1]:

(a) Install the actuator assy [2] between the beam hanger [3] and the beam assembly [1] with the hydraulic ports down.

CAUTION: MAKE SURE THE HEAD OF THE PIN [20] IS POINTED AFT. INCORRECT ORIENTATION OF PIN MAY CAUSE GOUGING OF THE MAIN LANDING GEAR SUPPORT BEAM.

(b) Install the pin [20].

(c) Install the washer [22] and nut [21].

(d) Tighten the nut [21] to 35-50 pound-feet (47.4-67.8 newton-meters).

(e) If it is necessary, loosen the nut [21] to align the nearest castellation.

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(f) Install the bolt [17], washer [10], and nut [11].

(g) Tighten the nut [11] to 50-75 pound-inches (5.6-8.5 newton-meters).

(h) If it is necessary, loosen the nut [11] to align the nearest castellation.

(i) Install the pin [12].

SUBTASK 32-32-11-480-004

(2) Connect the beam assembly [1] and actuator assy [2] to the hoist, SPL-1870.

SUBTASK 32-32-11-420-003

(3) Put the beam hanger [3] in its position in the bracket on the structure.

SUBTASK 32-32-11-420-004

(4) Install these parts to connect the beam hanger [3] to the bracket on the wing structure:

(a) bolt [4], washer [7], and nut [6]

1) Tighten the nut [6] to 250-300 pound-inches (28.2-33.9 newton-meters) above the run-on torque.

2) If it is necessary, loosen the nut [6] to align the nearest castellation.

(b) Install the pin [5].

SUBTASK 32-32-11-420-005

(5) Install these parts to connect the actuator assy [2] to the main gear trunnion:

(a) actuator attach pin [15], spacers [14], washer [13], and nut [9]

1) Remove the clamps for the electrical conduit on the inboard side of the nut [9] and move the conduit to get clearance to tighten the nut [9].

2) Tighten the nut [9] to 95-115 pound-feet (128.8-155.9 newton-meters) above the run-on torque.

3) If it is necessary, loosen the nut [9] to align the nearest castellation.

(b) bolt [8], washer [10], and nut [11]

1) Tighten the nut [11] to 20-24 pound-inches (2.2-2.7 newton-meters) above the run-on torque.

2) If it is necessary, loosen the nut [11] to align the nearest castellation.

(c) pin [12].

SUBTASK 32-32-11-410-004

(6) Put the electrical conduit back in its position and install the clamps.

SUBTASK 32-32-11-420-006

(7) Hold the beam assembly [1] and actuator assy [2] and install these parts to connect the beam assembly [1] to the main gear trunnion:

(a) walking beam attach pin [16] with the pin head forward

(b) washer [19], nut [18]

1) Tighten the nut [18] to 170-200 pound-feet (230.5-271.2 newton-meters) above the run-on torque.

2) If it is necessary, loosen the nut [18] to align the nearest castellation.

(c) bolt [17], washer [10], and nut [11]

1) Tighten the nut [11] to 20-24 pound-inches (2.2-2.7 newton-meters) above the run-on torque.

2) If it is necessary, loosen the nut [11] to align the nearest castellation.

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(d) pin [12].

SUBTASK 32-32-11-080-002

(8) Remove the hoist, SPL-1870.

SUBTASK 32-32-11-080-003

(9) Remove the plugs from the hydraulic hoses.

SUBTASK 32-32-11-420-007

(10) Connect the hydraulic UP and DN hoses to the actuator assy [2].

J. Put the Airplane Back to Its Usual Condition

SUBTASK 32-32-11-580-002

WARNING: REMOVE PERSONS AND EQUIPMENT FROM THE LANDING GEAR PATH. WHEN THE LANDING GEARS RETRACT, THEY CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Lift the airplane for landing gear retraction, do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-32-11-860-002

(2) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-32-11-080-004

(3) Remove the down lock pins from the main landing gear, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

SUBTASK 32-32-11-700-001

WARNING: MAKE SURE YOU INSTALL THE DOWN LOCK PINS IN THE NOSE LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT IF THE GEAR RETRACTS.

(4) Do a retraction test of the main landing gear, do this task: Main Landing Gear Operational Test, TASK 32-32-00-710-801.

SUBTASK 32-32-11-480-005

(5) Extend the main landing gear and install the down lock pins, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-11-210-001

(6) Examine the hydraulic connections for leaks.

SUBTASK 32-32-11-210-002

(7) Make sure there is no interference of the hoses and actuator assy [2] during gear operation.

SUBTASK 32-32-11-860-003

(8) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-11-580-003

(9) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

SUBTASK 32-32-11-410-001

(10) Install the wing door, do this task: Main Landing Gear Wing Door Installation, TASK 32-13-21-420-801.

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SUBTASK 32-32-11-410-003

(11) Close the applicable access panel:

Number	Name/Location
551BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
551DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel
651BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
651DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

——————— END OF TASK ———————

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MAIN GEAR ACTUATOR ASSEMBLY - INSPECTION/CHECK

1. General

A. This task has the data for a dimensional inspection of the actuator assembly for the main landing gear. No procedure is given in this section to get access to permit the inspection. The actuator assembly must be removed to do the inspection. These are the tasks:

- Removal of the Actuator Assembly for the Main Gear, TASK 32-32-11-000-801
- Installation of the Actuator Assembly for the Main Gear, TASK 32-32-11-400-801

HAP 001-013, 015-026, 028-030 POST 737-SL-32-119

B. This task gives you the procedure to examine the main landing gear actuator for internal leakage.

HAP ALL

TASK 32-32-11-200-801

2. Main Gear Actuator Assembly Inspection

(Figure 601)

A. General

(1) This procedure gives wear limits and repair data for the main gear actuator assembly.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-32-11-000-801	Removal of the Actuator Assembly for the Main Gear (P/B 401)
32-32-11-400-801	Installation of the Actuator Assembly for the Main Gear (P/B 401)

C. Tools/Equipment

Reference	Description
STD-1096	Micrometer - Depth, 0-1 Inch, Readable to 1/1000 Inch
STD-1097	Caliper - Vernier, 0-6 Inch, Readable to 1/1000 Inch

D. Location Zones

Zone	Area
551	Left Wing - Rear Spar To Landing Gear Support Beam
651	Right Wing - Rear Spar to Landing Gear Support Beam
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

E. Procedure

SUBTASK 32-32-11-480-006

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-11-020-008

(2) To remove parts to get access to the actuator assembly for the main landing gear, do the task that follows (Figure 601):

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(a) Do this task: Removal of the Actuator Assembly for the Main Gear, TASK 32-32-11-000-801.

SUBTASK 32-32-11-020-009

(3) Use these tools to check for wear on the parts of the main gear actuator assembly:

(a) micrometer (0-1 Inch, readable to 1/1000 Inch), STD-1096

(b) readable to 1/1000 inch vernier 0 - 6 inch caliper, STD-1097

SUBTASK 32-32-11-020-010

(4) Examine the parts of the actuator assembly for worn areas:

(a) Remove the parts to be checked.

(b) Measure the parts as necessary with a micrometer (0-1 Inch, readable to 1/1000 Inch), STD-1096 or a readable to 1/1000 inch vernier 0 - 6 inch caliper, STD-1097.

(c) Compare the dimensions you measured with the permitted wear dimensions that follow.

(d) If the parts are not in the tolerance, replace or repair the part as required.

Table 601/32-32-11-993-801

NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MAXIMUM SERVICE DIAMETRIC CLEARANCE
[1] BEARING	I.D.	1.4995 in 38.087 mm	1.5000 in 38.100 mm	1.5020 in 38.151 mm	.004 in .102 mm
[1] PIN	O.D.	1.4980 in 38.049 mm	1.4990 in 38.075 mm	1.4970 in 38.024 mm	
[2] BUSHING	I.D.	1.5007 in 38.118 mm	1.5020 in 38.151 mm	in mm	.004 in .102 mm
[2] PIN	O.D.	1.4980 in 38.049 mm	1.4990 in 38.075 mm	1.4970 in 38.024 mm	
[3] BUSHING	I.D.	1.7000 in 43.180 mm	1.7010 in 43.205 mm	1.7030 in 43.256 mm	.006 in .152 mm
[3] PIN	O.D.	1.6980 in 43.129 mm	1.6990 in 43.155 mm	1.6970 in 43.104 mm	
[4] BEARING	I.D.	1.7000 in 43.180 mm	1.7015 in 43.218 mm	1.7030 in 43.256 mm	.006 in .152 mm
[4] PIN	O.D.	1.6980 in 43.129 mm	1.6990 in 43.155 mm	1.6970 in 43.104 mm	

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(Continued)

NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MAXIMUM SERVICE DIAMETRIC CLEARANCE
[5] BUSHING	I.D.	1.7000 in 43.180 mm	1.7014 in 43.205 mm	1.7030 in 43.256 mm	.004 in
[5] PIN	O.D.	1.6980 in 43.129 mm	1.6990 in 43.155 mm	1.6974 in 43.113 mm	.102 mm
[6] BUSHING	I.D.	1.7008 in 43.200 mm	1.7022 in 43.236 mm	1.7030 in 43.256 mm	.004 in
[6] PIN	O.D.	1.6980 in 43.129 mm	1.6990 in 43.155 mm	1.6970 in 43.104 mm	.102 mm
[7] BUSHING	I.D.	1.7013 in 43.213 mm	1.7027 in 43.249 mm	1.7060 in 43.332 mm	.007 in
[7] PIN	O.D.	1.6980 in 43.129 mm	1.6990 in 43.155 mm	1.6970 in 43.104 mm	.178 mm
[8] BUSHING	I.D.	1.1875 in 30.162 mm	1.1881 in 30.178 mm	in mm	.000 in
[8] BUSHING	O.D.	1.1893 in 30.208 mm	1.1898 in 30.221 mm	in mm	.000 mm
[9] BUSHING	I.D.	1.0005 in 25.413 mm	1.0015 in 25.438 mm	1.0040 in 25.502 mm	.005 in
[9] PIN	O.D.	0.9985 in 25.362 mm	0.9990 in 25.375 mm	0.9965 in 25.311 mm	.127 mm
[10] BUSHING	I.D.	1.0005 in 25.413 mm	1.0015 in 25.438 mm	1.0040 in 25.502 mm	.005 in
[10] PIN	O.D.	0.9985 in 25.362 mm	0.9990 in 25.375 mm	0.9965 in 25.311 mm	.127 mm

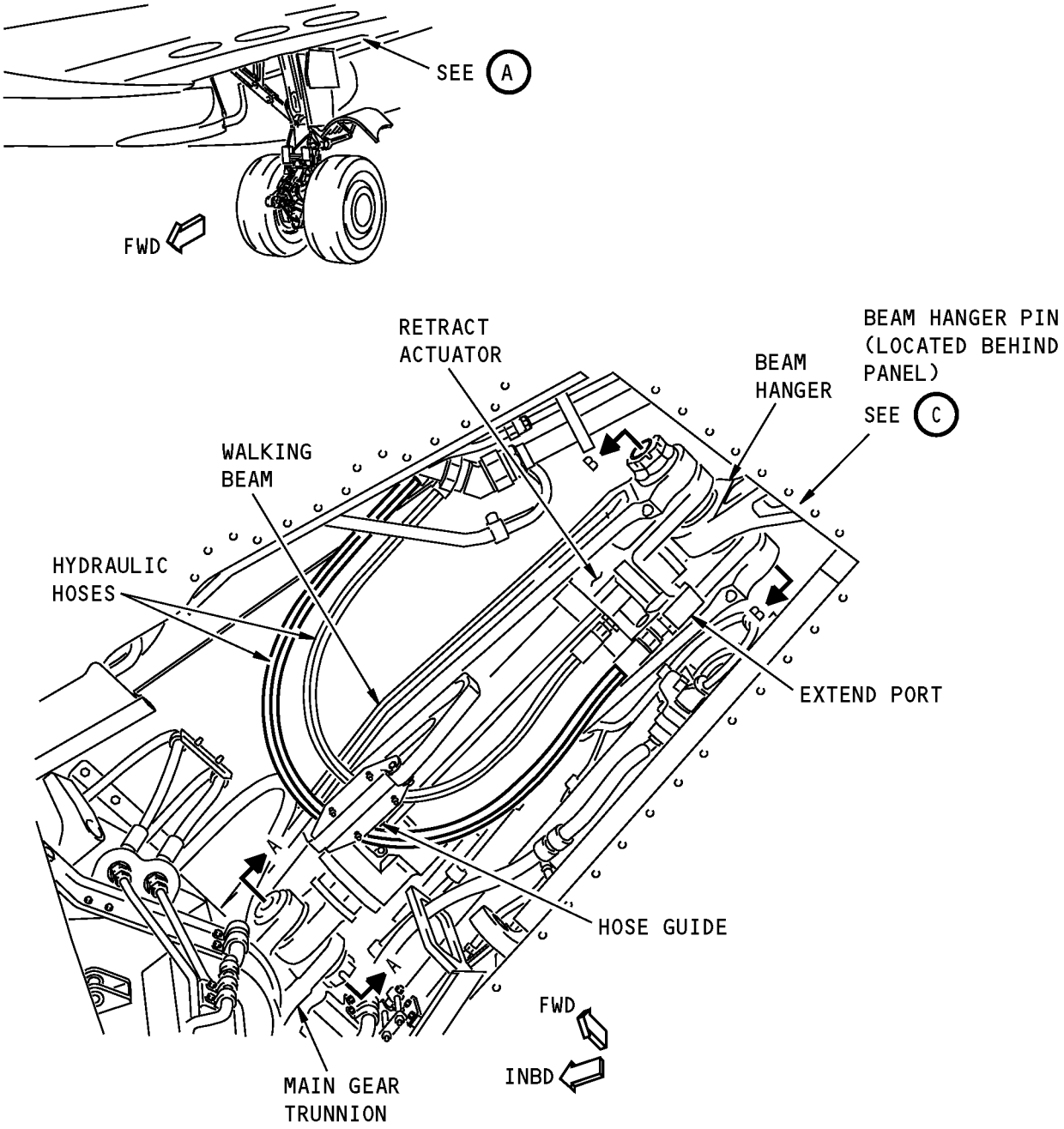
SUBTASK 32-32-11-020-011

(5) To install parts on the actuator assembly for the main gear do the task that follows:

(a) Do this task: Installation of the Actuator Assembly for the Main Gear, TASK 32-32-11-400-801.

END OF TASK

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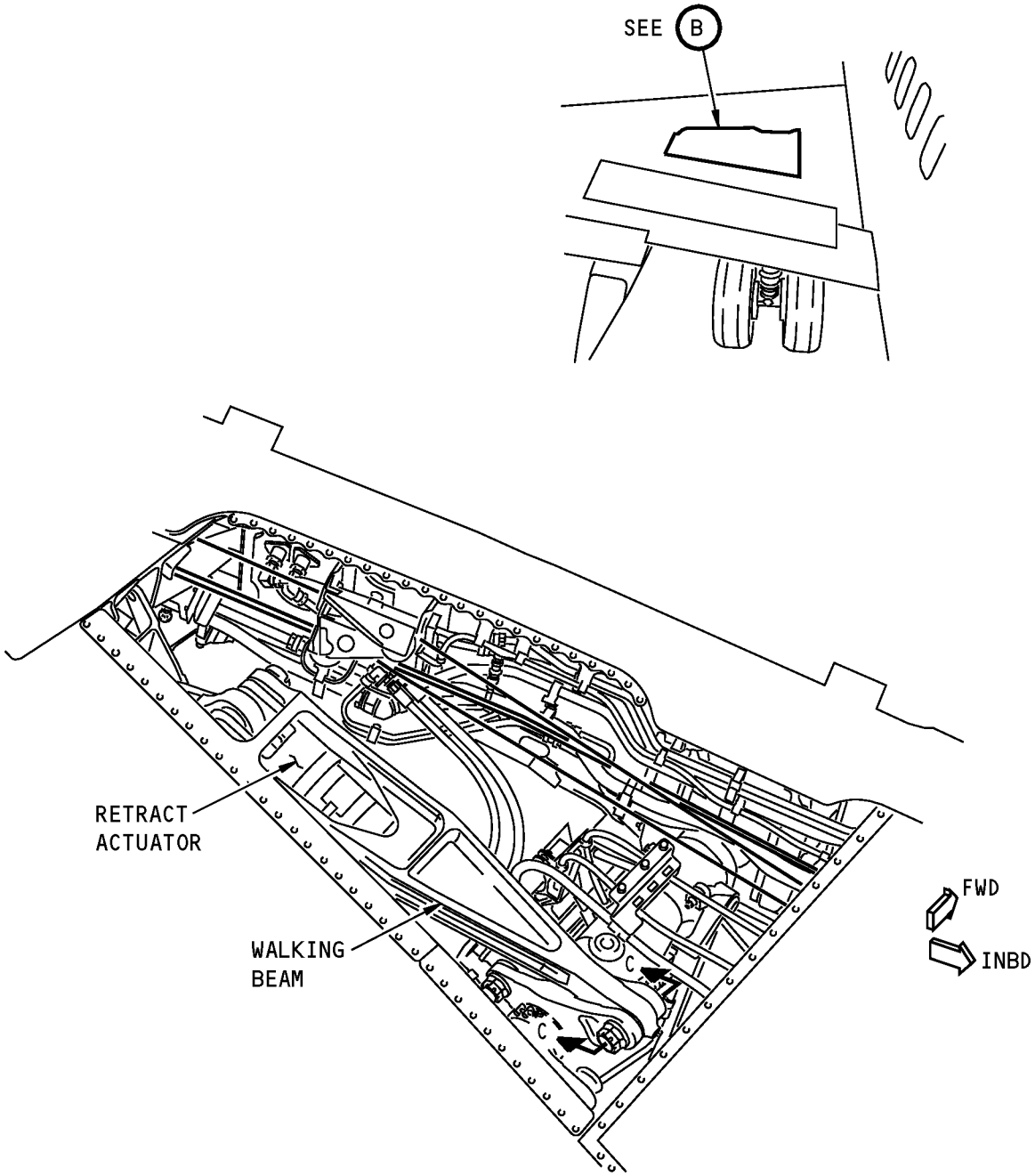


MAIN LANDING GEAR ACTUATOR
(ACCESS PANEL 551DB (651DB), OUTER WING DOOR,
AND SHOCK STRUT DOOR REMOVED)

A

Main Gear Actuator Assembly Wear Limits
Figure 601 (Sheet 1 of 4)/32-32-11-990-802

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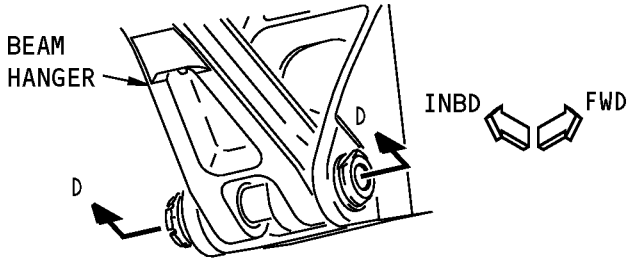


MAIN LANDING GEAR ACTUATOR
(ACCESS PANEL REMOVED)

B

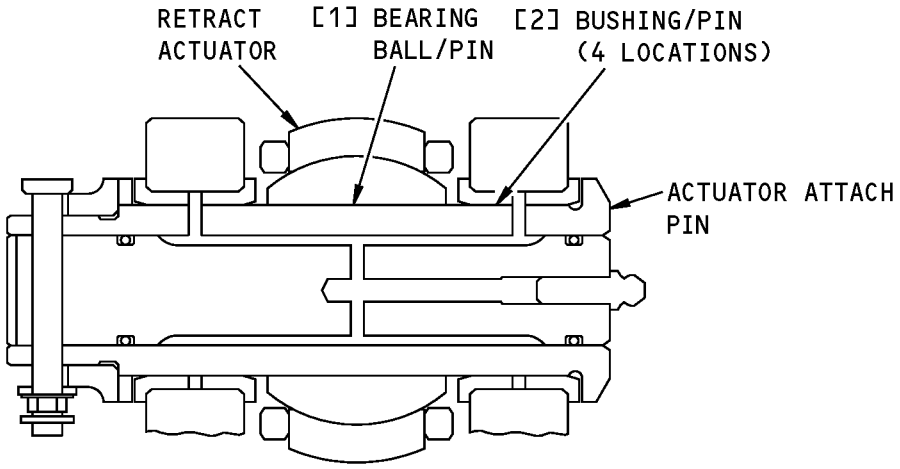
Main Gear Actuator Assembly Wear Limits
Figure 601 (Sheet 2 of 4)/32-32-11-990-802

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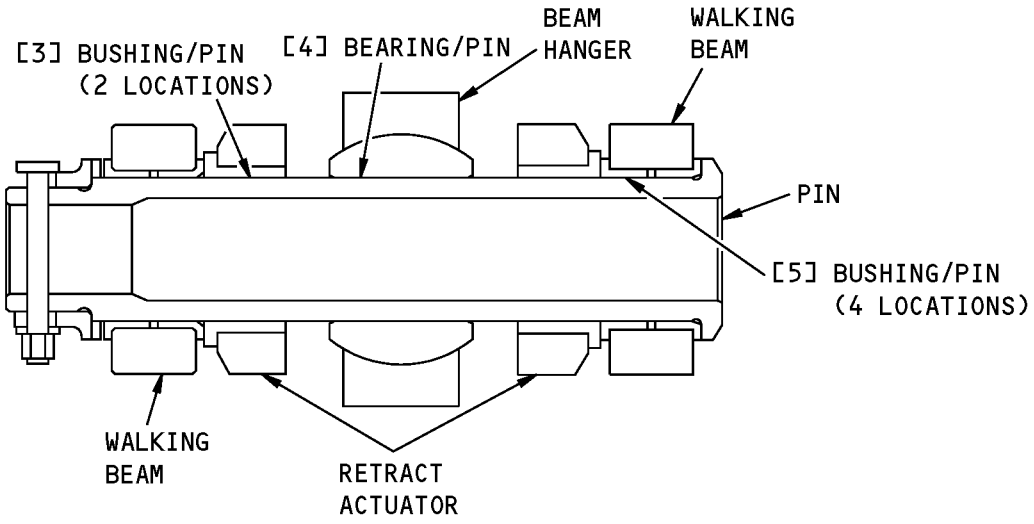


BEAM HANGER PIN

C



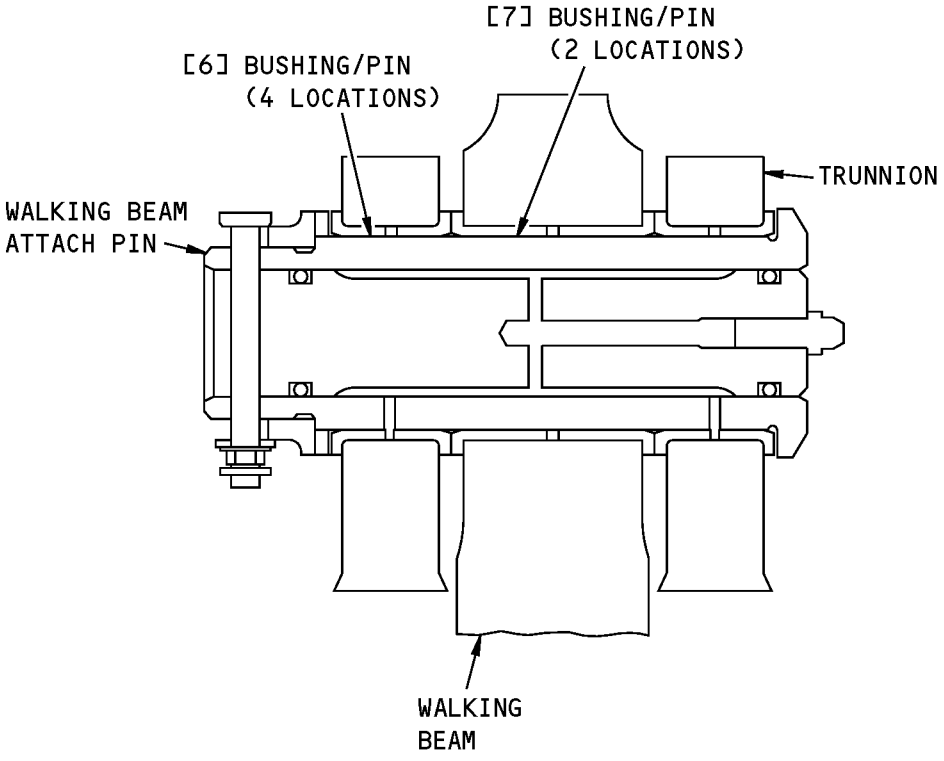
A–A

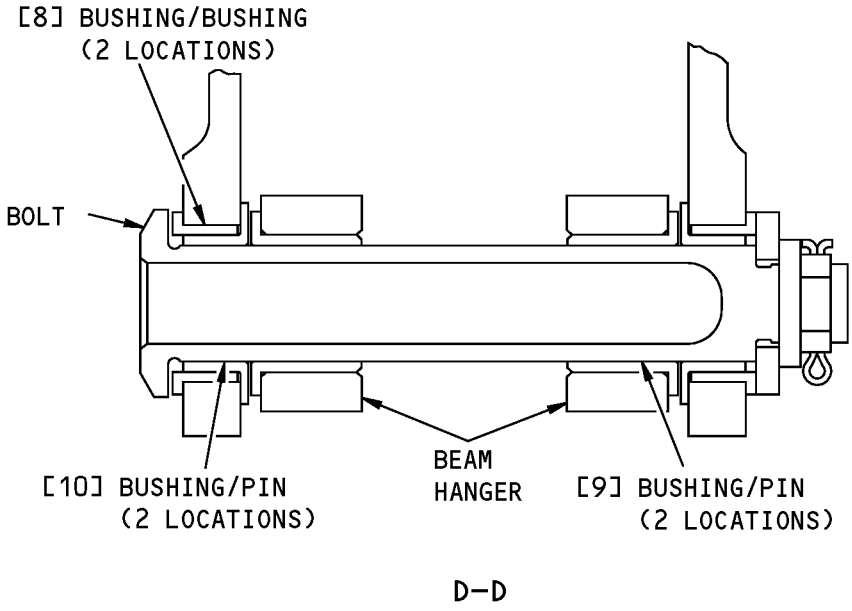


B–B

Main Gear Actuator Assembly Wear Limits
Figure 601 (Sheet 3 of 4)/32-32-11-990-802

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Main Gear Actuator Assembly Wear Limits
Figure 601 (Sheet 4 of 4)/32-32-11-990-802

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HAP 001-013, 015-026, 028-030 POST 737-SL-32-119

TASK 32-32-11-200-802

3. Main Gear Actuator Assembly Internal Leakage Check

Figure 601

A. General

(1) This task gives you the procedure to examine the main landing gear actuator for internal leakage.

B. References

Reference	Title
29-11-00 P/B 201	HYDRAULIC SYSTEMS A AND B - MAINTENANCE PRACTICES
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-32-11 P/B 401	MAIN GEAR ACTUATOR ASSEMBLY - REMOVAL/INSTALLATION

C. Location Zones

Zone	Area
551	Left Wing - Rear Spar To Landing Gear Support Beam
651	Right Wing - Rear Spar to Landing Gear Support Beam
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

D. Access Panels

Number	Name/Location
551DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel
651DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

E. Procedure

SUBTASK 32-32-11-480-007

WARNING: MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-11-864-001

(2) Do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805

SUBTASK 32-32-11-010-004

(3) Gain access to the main gear actuators by removing these access panels:

Number	Name/Location
551DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel
651DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

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SUBTASK 32-32-11-030-001

WARNING: MAKE SURE THAT YOU DISCONNECT THE GEAR-UP HOSE ASSEMBLY. THE GEAR-UP HOSE ASSEMBLY CONNECTS TO THE EXTEND (EXT) PORT OF THE MAIN GEAR ACTUATOR. IF YOU DISCONNECT THE INCORRECT HOSE, HIGH-PRESSURE HYDRAULIC FLUID WILL COME OUT OF THE HOSE. HIGH-PRESSURE HYDRAULIC FLUID CAN CAUSE INJURIES TO PERSONNEL.

(4) Disconnect the gear UP hose assembly that connects to the actuator at the fitting in the wing root area.

NOTE: The gear UP hose assembly is the one that is connected to the extend port (EXT) of the main landing gear actuator.

(5) Make sure that the actuator end of the hose is connected to the actuator.

(6) Put a cap on the open hydraulic fitting.

SUBTASK 32-32-11-616-001

(7) Direct the open end of the gear UP hose assembly into a suitable container and drain the hose until no more fluid drips out of it.

SUBTASK 32-32-11-863-001

(8) Make sure that the landing gear lever is in the DOWN position.

(9) Do this task to pressurize hydraulic system A: HYDRAULIC SYSTEMS A AND B - MAINTENANCE PRACTICES, PAGEBLOCK 29-11-00/201

SUBTASK 32-32-11-790-001

(10) Measure the quantity of fluid that leaks out of the gear UP hose assembly.

NOTE: You should wait a minimum two minutes after you apply pressure before you start the measurement. This is to let the fluid flow stabilize to a constant rate.

(a) If the amount of fluid that leaks out of the gear UP hose assembly is equal to or less than 30 cc/min, replace the main landing gear actuator assembly at the earliest maintenance opportunity. Do this task: MAIN GEAR ACTUATOR ASSEMBLY - REMOVAL/INSTALLATION, PAGEBLOCK 32-32-11/401.

(b) If the amount of the fluid that leaks out of the gear UP hose assembly is less than 30 cc/min but more than 5cc/min, repeat the internal leakage test at 1000 cycles until the main landing gear is replaced.

(c) If the amount of fluid that leaks out of the gear UP hose assembly equal to or less than 5cc/min, repeat the internal leakage test at 3000 cycles until the main landing gear is replaced.

SUBTASK 32-32-11-864-002

(11) Remove pressure from hydraulic system A: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-11-430-001

(12) Reconnect the hose assembly to the hydraulic fitting in the wing root area. Make sure that the hose is put through the hose guide before you tighten the hose fitting.

SUBTASK 32-32-11-863-002

(13) Do this task to pressurize hydraulic system A: HYDRAULIC SYSTEMS A AND B - MAINTENANCE PRACTICES, PAGEBLOCK 29-11-00/201

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SUBTASK 32-32-11-870-001

(14) Operate the landing gear lever from DOWN to UP to DOWN ten times to bleed air from the hydraulic lines and actuator. Wait a minimum three seconds between each lever movement.

(a) Examine the hydraulic connections for leakage.

SUBTASK 32-32-11-864-003

(15) Remove pressure from hydraulic system A: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-11-410-006

(16) Close these access panels:

Number	Name/Location
551DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel
651DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

SUBTASK 32-32-11-840-001

(17) Put the airplane back to Its usual condition.

——————— END OF TASK ———————

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MAIN GEAR RETRACT PRESSURE FUSES - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) A removal of the retract pressure fuses for the main landing gear

(2) An installation of the retract pressure fuses for the main landing gear

TASK 32-32-21-000-801

2. Removal of the Retract Pressure Fuses for the Main Gear

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

D. Prepare for the Removal

SUBTASK 32-32-21-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-21-860-001

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-21-580-001

(3) Install chocks around the tires of the main landing gear.

E. Retract Pressure Fuse Removal

SUBTASK 32-32-21-020-001

(1) Remove the screws [1], washers [2], and nuts [3] that hold the hydraulic lines to the structure on the two ends of the fuse assembly [4].

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SUBTASK 32-32-21-020-002

(2) Disconnect the hydraulic lines from the fuse assembly [4].

SUBTASK 32-32-21-480-002

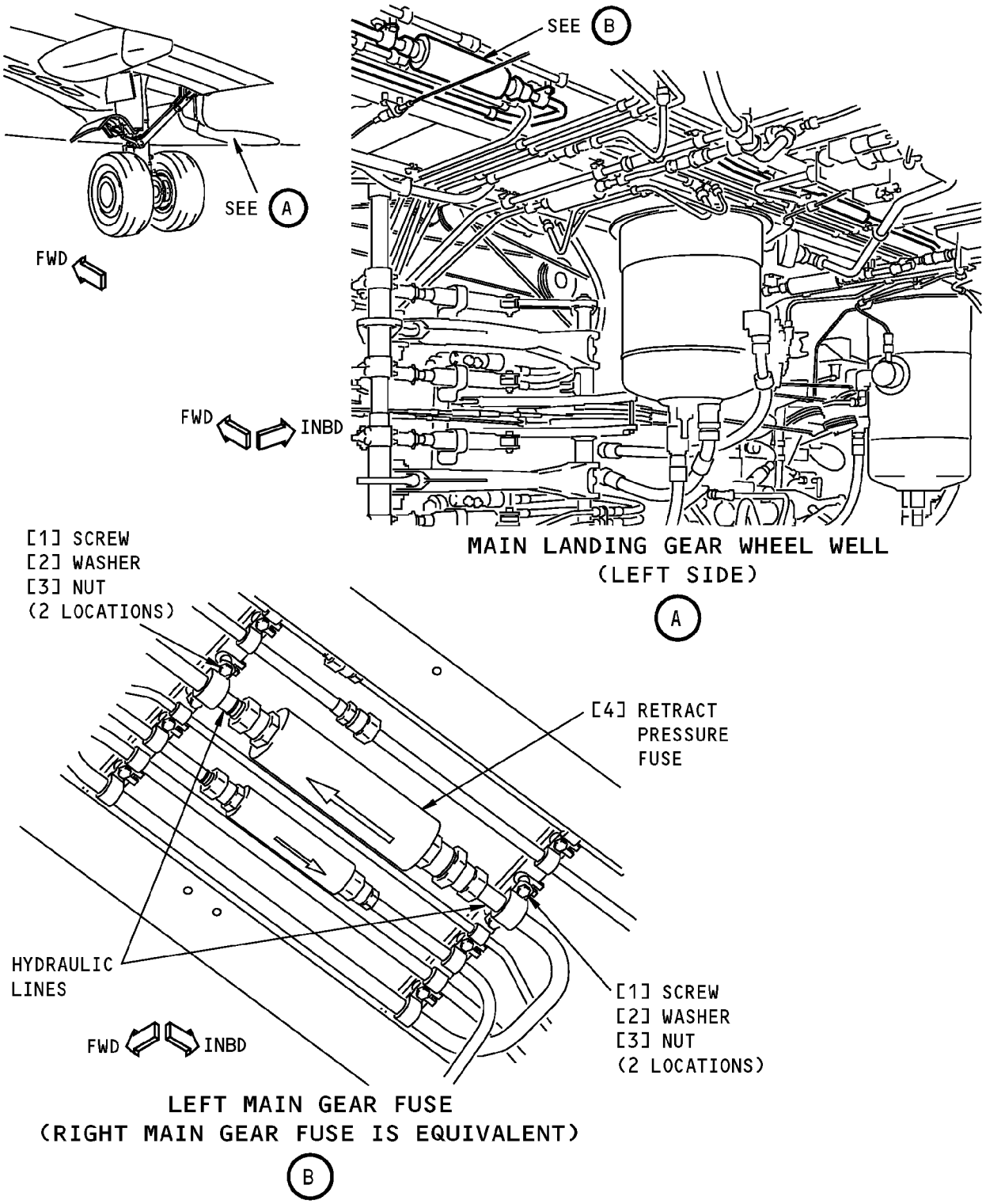
(3) Install caps on the hydraulic lines.

SUBTASK 32-32-21-020-003

(4) Remove the fuse assembly [4] from the airplane.

——————— END OF TASK ———————

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Main Gear Retract Pressure Fuse Installation
Figure 401/32-32-21-990-801

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TASK 32-32-21-400-801

3. Installation of the Retract Pressure Fuses for the Main Gear

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
29-11-00-200-801	Hydraulic Fluid Check (P/B 601)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	Fuse assembly	29-11-52-12-760	HAP 001-013, 015-026, 028-043, 101
		29-11-52-12-762	HAP 044-054, 102-999

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

E. Retract Pressure Fuse Installation

SUBTASK 32-32-21-080-002

(1) Remove the caps from the unions and the hydraulic lines that will connect to the fuse assembly [4].

SUBTASK 32-32-21-420-001

(2) Put the fuse assembly [4] in position to align it with the hydraulic lines.

SUBTASK 32-32-21-420-004

(3) Connect the hydraulic lines to the fuse assembly [4].

SUBTASK 32-32-21-420-002

(4) Tighten the hydraulic lines.

SUBTASK 32-32-21-420-003

(5) Install the screws [1], washers [2], and nuts [3] for the clamps that hold the hydraulic lines to the structure on the two ends of the fuse assembly [4].

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F. Installation Test of the Retract Pressure Fuse

SUBTASK 32-32-21-480-003

WARNING: MAKE SURE YOU INSTALL THE DOWNLOCK PINS IN THE LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IF THE LANDING GEARS RETRACT, IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO STRUCTURE.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-21-860-002

(2) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-32-21-700-001

(3) Use the override trigger to move the control lever for the landing gear from the DN position to the UP position.

SUBTASK 32-32-21-710-001

(4) Make sure the UP hose of the main gear retract actuator moves to show that hydraulic pressure is applied when the control lever is moved to the UP position.

SUBTASK 32-32-21-700-002

(5) Move the control lever to the DN position.

SUBTASK 32-32-21-700-003

(6) Make sure the DOWN hose on the main gear retract actuator moves when you move the control lever from the UP position to the DOWN position.

SUBTASK 32-32-21-210-001

(7) Do a check for leakage with the hydraulic pressure applied.

SUBTASK 32-32-21-210-004

(8) Make sure there are no leaks in the hydraulic connections.

SUBTASK 32-32-21-860-003

(9) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-21-840-001

(10) Examine the hydraulic reservoirs for the correct servicing, do this task: Hydraulic Fluid Check, TASK 29-11-00-200-801.

(a) Do a servicing if it is necessary.

——————— END OF TASK ———————

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MAIN GEAR UPLOCK ASSEMBLY - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these two tasks:

(1) A removal of the uplock assembly for the main landing gear

(2) An installation of the uplock assembly for the main landing gear.

TASK 32-32-31-000-801

2. Main Gear Uplock Assembly Removal

(Figure 401, Figure 402)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-61-21-020-801	Main Landing Gear Uplock Sensor Removal (P/B 401)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

D. Prepare for the Removal

SUBTASK 32-32-31-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear. To do this, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-31-860-001

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-31-580-001

(3) Install chocks around the tires of the main landing gear.

SUBTASK 32-32-31-020-001

(4) Remove the uplock sensors from the uplock assembly [9]. To do this, do this task: Main Landing Gear Uplock Sensor Removal, TASK 32-61-21-020-801.

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E. Main Gear Uplock Assembly Removal

SUBTASK 32-32-31-020-009

(1) Put tags on the two hydraulic lines to show their connection locations.

SUBTASK 32-32-31-020-002

(2) Disconnect the two hydraulic lines from the uplock actuator.

SUBTASK 32-32-31-480-002

(3) Install plugs in the two hydraulic lines.

SUBTASK 32-32-31-020-003

(4) If it is necessary to remove the hanger assembly [19], remove the pins [13], nuts [12], uplock washers [11], and uplock hanger pins [10] to disconnect the hanger assembly [19].

SUBTASK 32-32-31-020-004

(5) Remove the pin [8], nut [7], uplock washer [6], and uplock attach pin [14] to disconnect the uplock assembly [9] from the structure.

SUBTASK 32-32-31-020-005

(6) Remove uplock assembly [9].

SUBTASK 32-32-31-020-006

(7) Remove the pin [5], nut [4], washer [3], bolt [1] and bushing [2] to disconnect the hanger assembly [19] from the structure.

SUBTASK 32-32-31-020-007

(8) Remove the hanger assembly [19].

SUBTASK 32-32-31-020-008

(9) If the uplock actuator on the replacement uplock assembly does not have hydraulic fittings installed, do these steps:

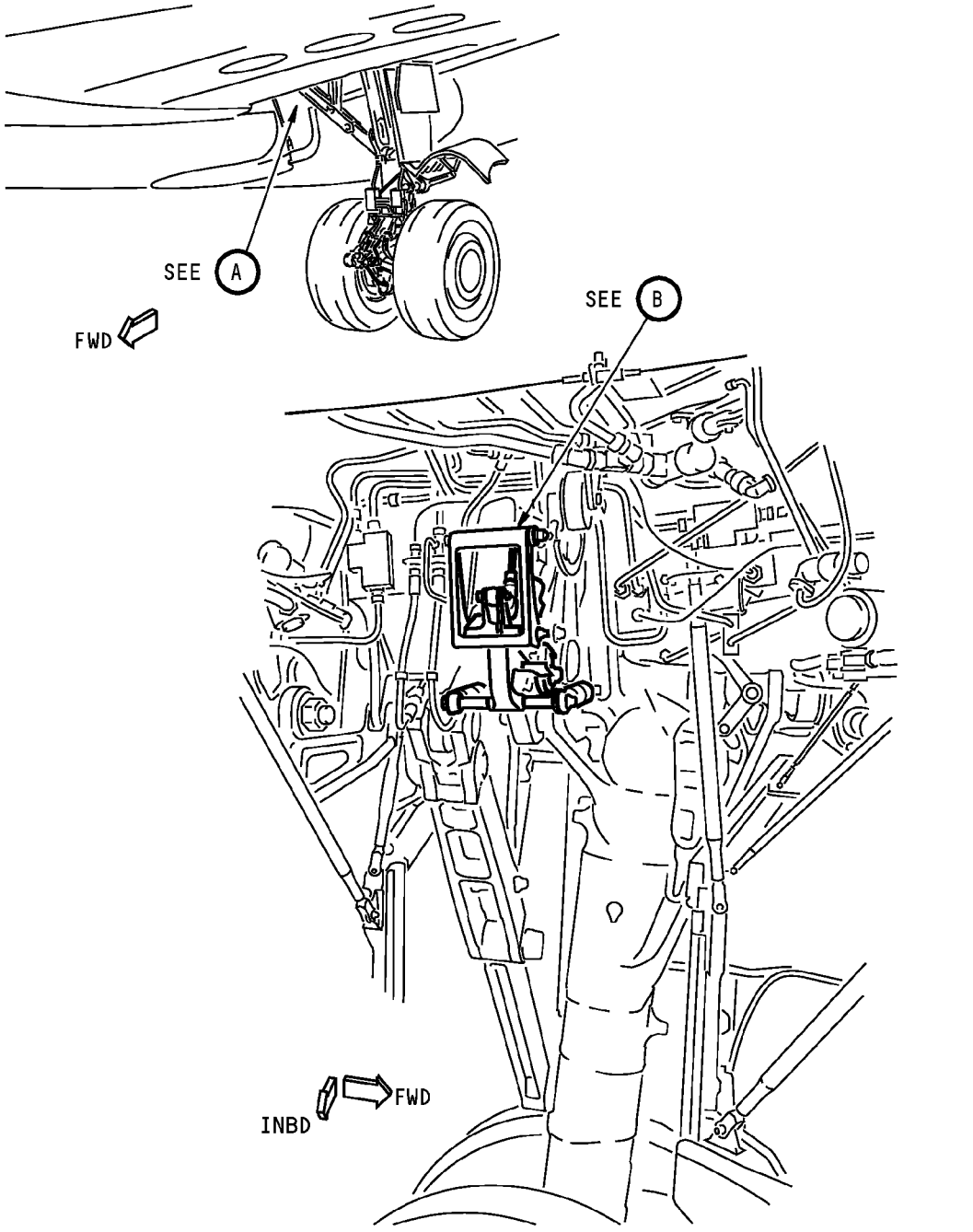
(a) Remove the union [18] and the restrictor [16] from the uplock actuator.

(b) Remove and discard the packing [15], and packing [17].

(c) Install plugs in the ports on the uplock actuator.

——————— END OF TASK ———————

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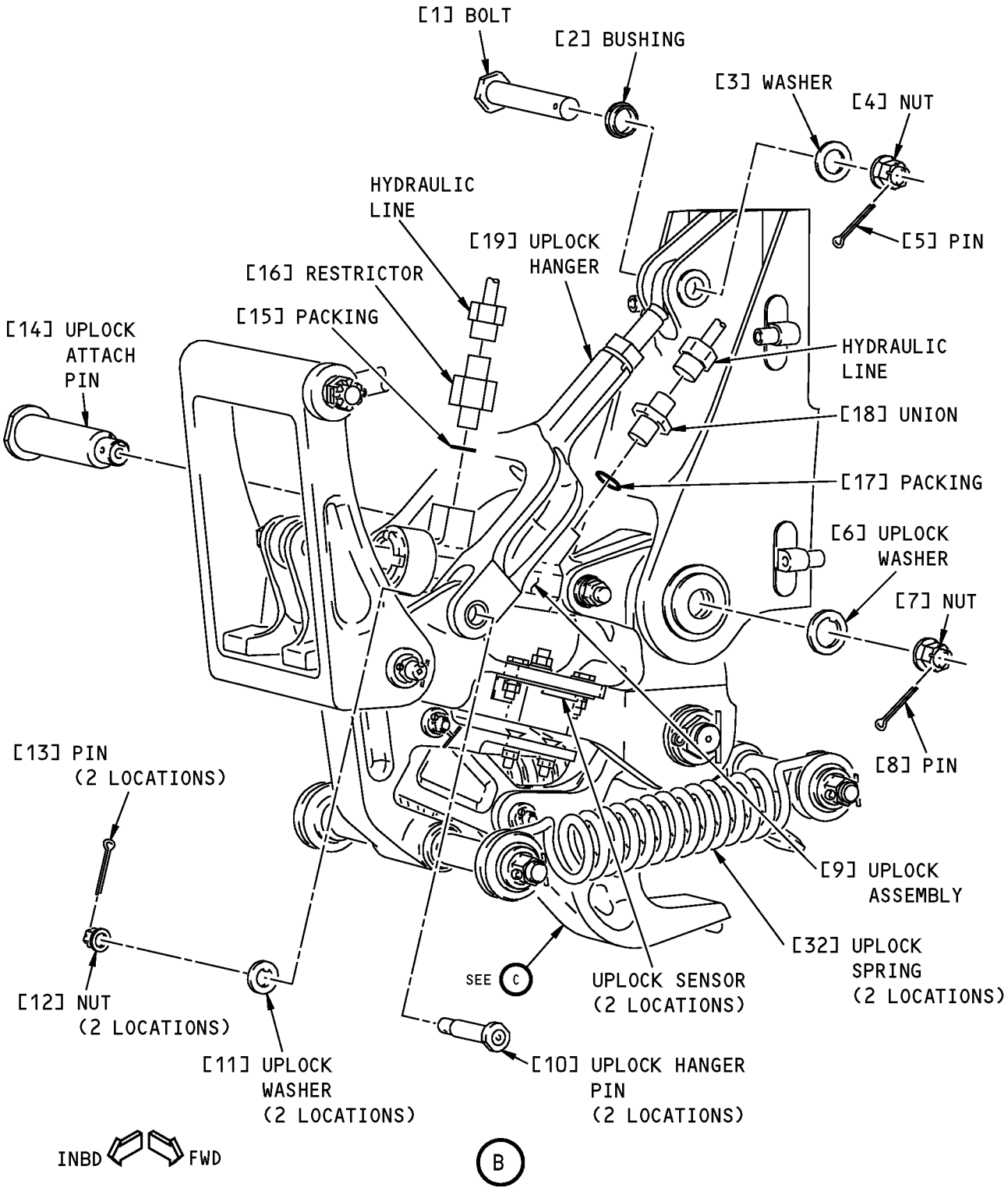


MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE IS SHOWN, RIGHT SIDE IS EQUIVALENT)

A

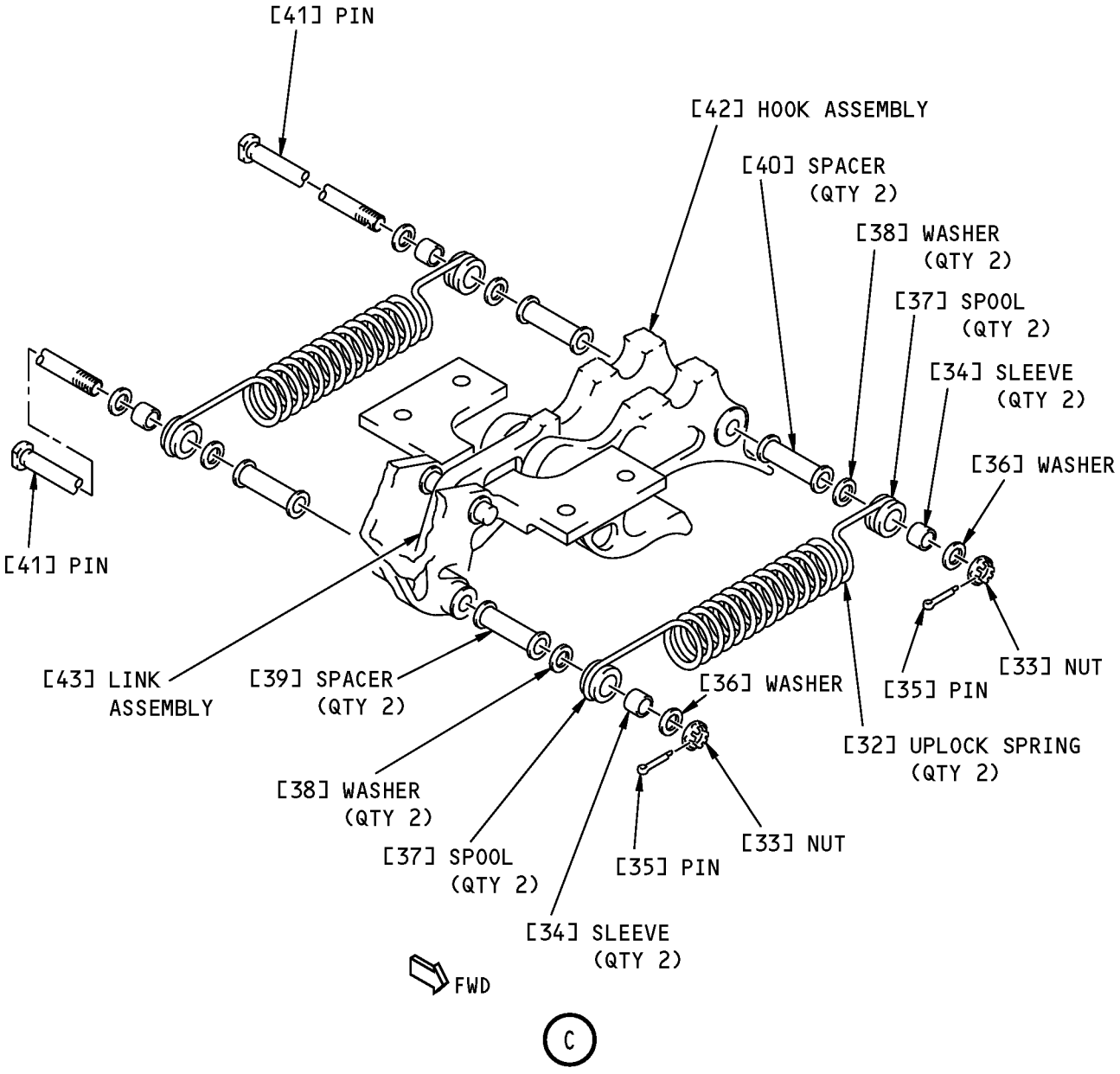
Main Landing Gear Uplock Assembly Installation
Figure 401 (Sheet 1 of 3)/32-32-31-990-801

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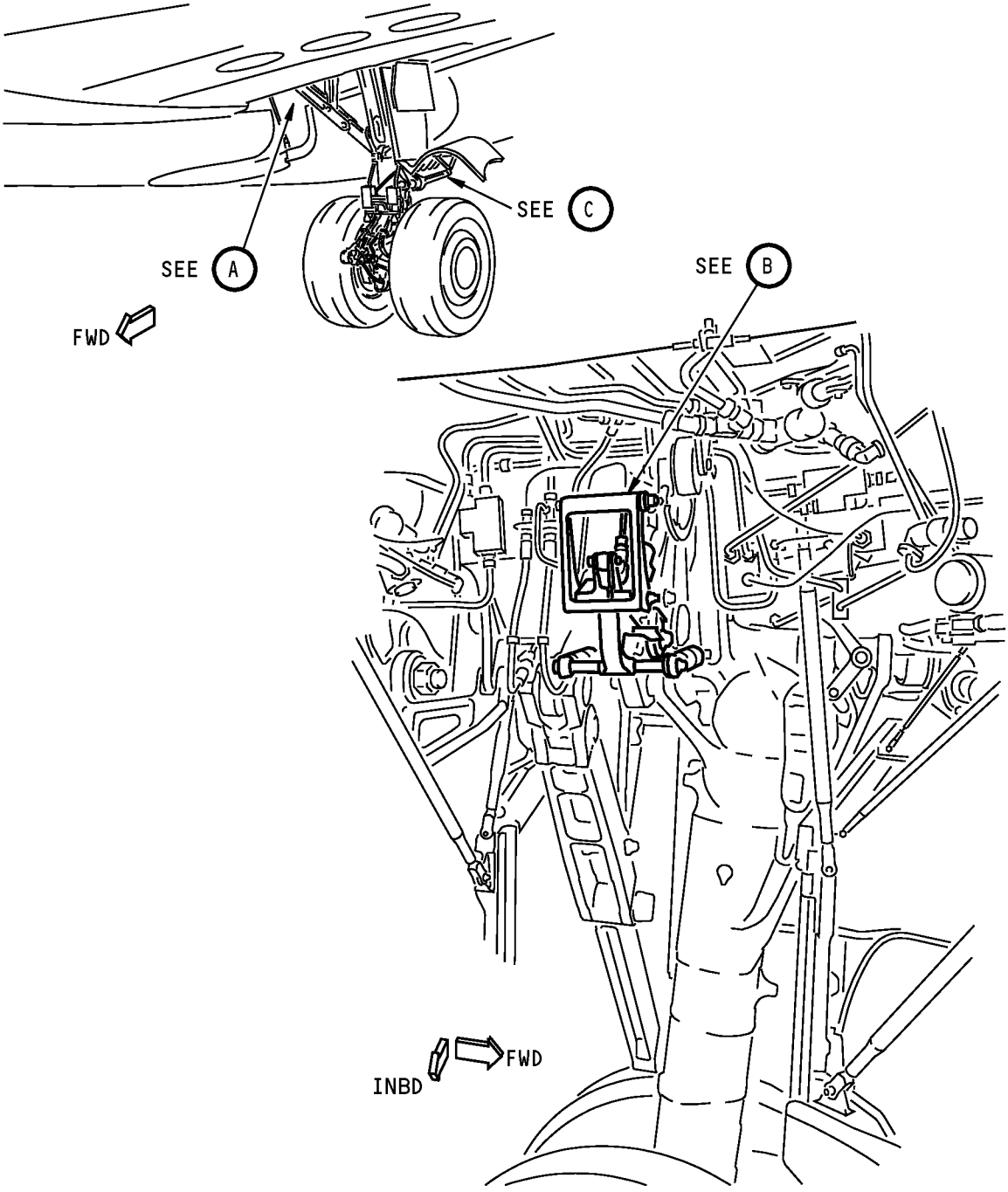
Main Landing Gear Uplock Assembly Installation
Figure 401 (Sheet 2 of 3)/32-32-31-990-801

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Main Landing Gear Uplock Assembly Installation
Figure 401 (Sheet 3 of 3)/32-32-31-990-801

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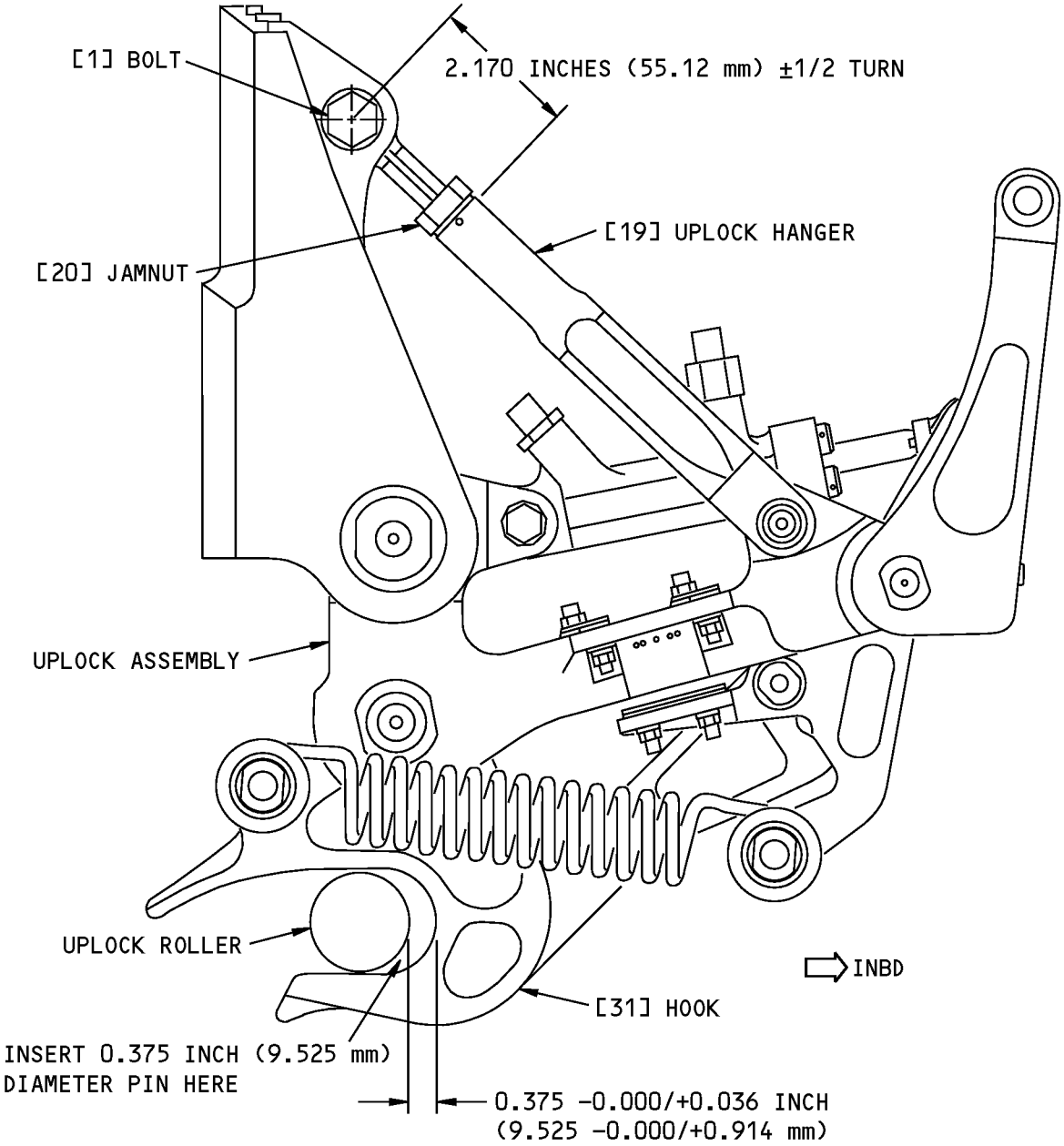


MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE IS SHOWN, RIGHT SIDE IS EQUIVALENT)

A

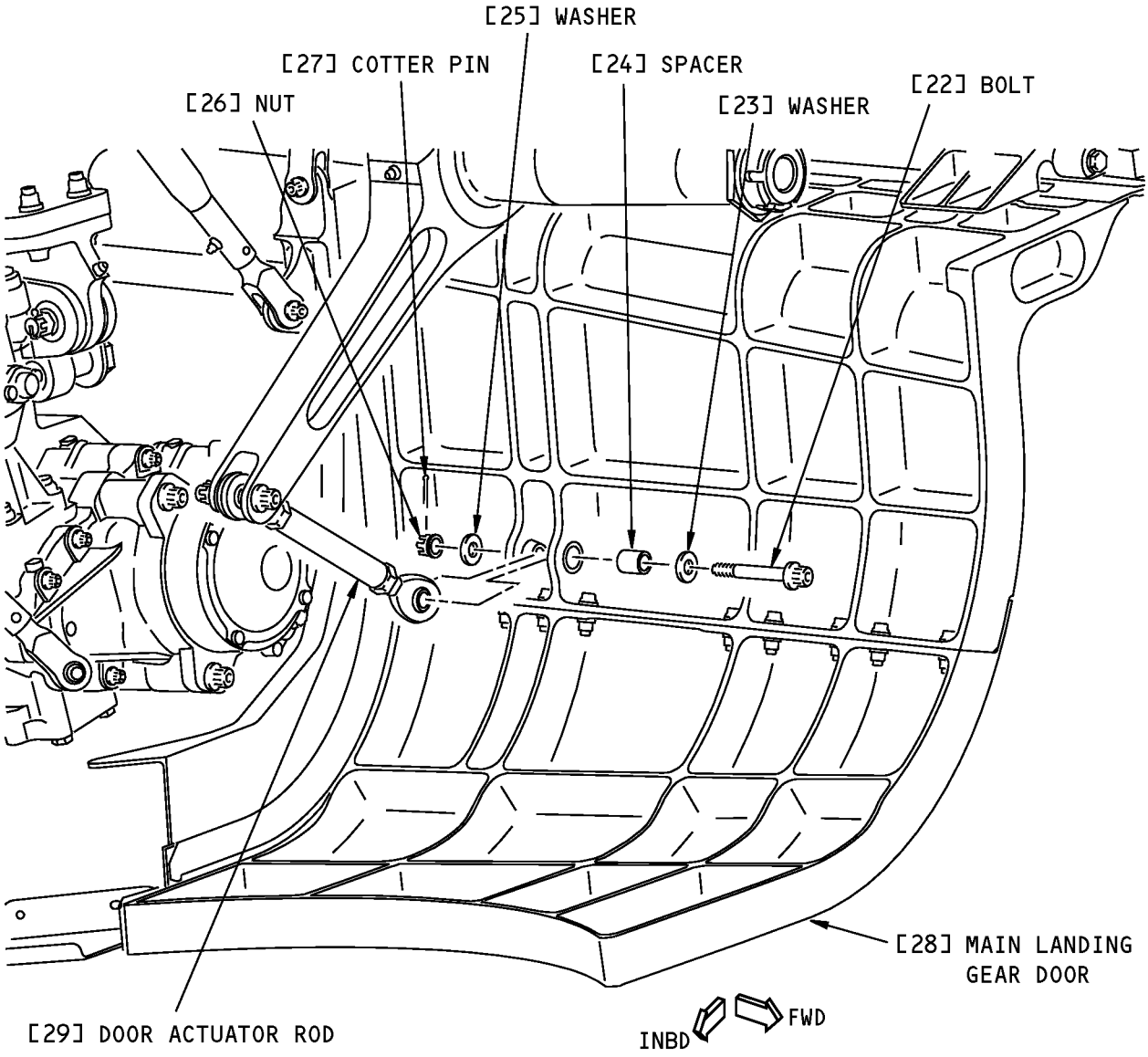
Main Landing Gear Uplock Assembly Adjustment
Figure 402 (Sheet 1 of 3)/32-32-31-990-803

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Main Landing Gear Uplock Assembly Adjustment
Figure 402 (Sheet 2 of 3)/32-32-31-990-803

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Main Landing Gear Uplock Assembly Adjustment
Figure 402 (Sheet 3 of 3)/32-32-31-990-803

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TASK 32-32-31-400-801

3. Main Gear Uplock Assembly Installation

(Figure 402)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
29-11-00-200-801	Hydraulic Fluid Check (P/B 601)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-13-21-000-801	Main Landing Gear Wing Door Adjustment (P/B 501)
32-61-21-400-801	Main Landing Gear Uplock Sensor Installation (P/B 401)
32-61-21-820-801	Main Landing Gear Uplock Sensor Clearance Adjustment (P/B 501)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1872	Equipment - Removal/Installation, MLG and NLG Springs (Part #: J32037-106, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00013	Grease - Aircraft And Instrument Grease	MIL-PRF-23827 (NATO G-354) (Supersedes MIL-G-23827)
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)
D00633	Grease - Aircraft General Purpose	BMS3-33

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
15	Packing	32-32-41-01-035	HAP ALL
16	Restrictor	32-32-41-01-025	HAP ALL
17	Packing	32-32-41-01-030	HAP ALL
18	Union	32-32-41-01-020	HAP ALL

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(Continued)

AMM Item	Description	AIPC Reference	AIPC Effectivity
19	Hanger assembly	32-32-31-02-150	HAP ALL

F. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

G. Main Gear Uplock Assembly Installation

SUBTASK 32-32-31-420-001

(1) Do these steps if the replacement uplock actuator on the uplock assembly [9] does not have the union [18] or restrictor [16] installed:

(a) Lubricate these items with fluid, D00153:

1) packing [15], packing [17]

2) union [18], restrictor [16]

(b) Remove the plugs from the ports on the uplock actuator

(c) Install the packing [15], packing [17], the union [18], and the restrictor [16] in the uplock actuator.

SUBTASK 32-32-31-600-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(2) Apply a thin layer of compound, C00913 on the parts that follow:

(a) The threads and thread reliefs of the uplock attach pin [14] and the nut [7]

(b) The faces of the uplock washer [6]

(c) The pin [8].

SUBTASK 32-32-31-640-001

(3) Lubricate the shank of the uplock attach pin [14] with grease, D00633.

SUBTASK 32-32-31-420-002

(4) Put the uplock assembly [9] in position on the structure.

SUBTASK 32-32-31-420-003

(5) Install the uplock attach pin [14], uplock washer [6], and nut [7] to attach the uplock assembly [9] to the structure.

SUBTASK 32-32-31-420-004

(6) Tighten the nut [7] to 50-100 pound-inches (5.6-11.3 newton-meters) above the run-on torque. Loosen to the nearest castellation, if it is necessary, and install the pin [8].

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SUBTASK 32-32-31-600-002

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(7) Apply a thin layer of, compound, C00913 to the parts that follow:

(a) The threads and thread reliefs of the uplock hanger pins [10] and the nuts [12]

(b) The faces of the uplock washers [11]

(c) The pins [13].

SUBTASK 32-32-31-640-002

(8) Lubricate the shank of the uplock hanger pins [10] with grease, D00633.

SUBTASK 32-32-31-420-005

(9) Install uplock hanger pins [10], uplock washers [11], and the nuts [12] to connect the hanger assembly [19] to the uplock assembly [9].

SUBTASK 32-32-31-420-006

(10) Tighten the nuts [12] to 20-24 pound-inches (2.2-2.7 newton-meters) above the run-on torque. Loosen to the nearest castellation, if it is necessary, and install the pins [13].

SUBTASK 32-32-31-820-001

(11) Loosen the jamnut [20] on the rod end of the hanger assembly [19]. Adjust the rod end until the distance from the center of the bolt [1] to the top of the threaded end of the hanger assembly [19] is 2.17 in. (55.1 mm).

SUBTASK 32-32-31-600-003

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(12) Apply a thin layer of compound, C00913 on the parts that follow:

(a) The threads and thread reliefs of the bolt [1] and the nut [4]

(b) The faces of the washer [3]

(c) The pin [5].

SUBTASK 32-32-31-640-003

(13) Lubricate the shank of the bolt [1] with grease, D00633.

SUBTASK 32-32-31-420-007

(14) Install the bolt [1], bushing [2], washer [3], nut [4], and pin [5] to attach the hanger assembly [19] to the structure.

SUBTASK 32-32-31-420-013

(15) Verify, and adjust if needed, the 2.17 inch (55.1 mm) dimension from the center of bolt [1], to the top of the threaded end of the hanger under the jamnut [20].

SUBTASK 32-32-31-420-008

(16) Tighten the jamnut [20] on the rod end of the hanger assembly [19] to 200-250 pound-inches (22.6-28.2 newton-meters).

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SUBTASK 32-32-31-420-009

(17) Install lockwire on the jamnut [20].

SUBTASK 32-32-31-420-012

(18) Do these steps to connect the two hydraulic lines to the uplock actuator:

(a) Remove the plugs from the two hydraulic lines.

(b) Connect the two hydraulic lines to the uplock actuator.

(c) Remove the tags from the two hydraulic lines.

SUBTASK 32-32-31-420-010

(19) Install uplock sensors on the uplock assembly [9], do this task: Main Landing Gear Uplock Sensor Installation, TASK 32-61-21-400-801.

SUBTASK 32-32-31-420-011

(20) Do the adjustment for the uplock sensors on the uplock assembly [9], do this task: Main Landing Gear Uplock Sensor Clearance Adjustment, TASK 32-61-21-820-801.

H. Main Landing Gear Uplock Spring and Spool Replacement with spring removal tool.

SUBTASK 32-32-31-020-015

(1) Remove the uplock spring

WARNING: MAKE SURE THAT YOU REMOVE THE TWO SPRINGS TOGETHER. IF YOU ONLY REMOVE THE SPRING FROM THE END OF THE BOLTS WITH THE NUTS, THE SPRING PIVOT BOLTS CAN DISENGAGE FROM THE UPLOCK HOOK. THIS CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

(a) Install the spring removal tool from MLG and NLG springs equipment, SPL-1872 on the uplock springs [32]

(b) Extend the uplock springs [32] a small amount to remove the tension from the springs [32] and remove the springs from the spring removal tools.

(c) Remove uplock spring spool [37] from uplock spring hook.

(2) Remove the uplock spring and spool.

WARNING: MAKE SURE THAT YOU REMOVE THE TWO SPRINGS TOGETHER. IF YOU ONLY REMOVE THE SPRING FROM THE END OF THE BOLTS WITH THE NUTS, THE SPRING PIVOT BOLTS CAN DISENGAGE FROM THE UPLOCK HOOK. THIS CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

(a) Install the spring removal tool from MLG and NLG springs equipment, SPL-1872 on the uplock springs [32].

(b) Extend the uplock springs [32] a small amount to remove pressure from the pins [41].

(c) Remove the pin [35], the nut [33], and the washers [36] from the pin [41].

(d) Remove the pins [41] to disconnect the uplock springs from the uplock assembly.

NOTE: Make sure you catch the spacers [39] spacers [40], washers [36], washers [38], and sleeves [34] that come loose when the pins [41] are removed.

(e) Remove the tension from the springs [32] and remove the springs from the spring removal tools.

(f) Remove uplock spring spool [37] from uplock spring hook.

SUBTASK 32-32-31-420-017

(3) Install Uplock Spring.

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WARNING: MAKE SURE YOU INSTALL THE TWO SPRINGS TOGETHER. IF YOU DO NOT INSTALL THE SPRINGS TOGETHER, THE SPRING PIVOT BOLTS CAN DISENGAGE FROM THE UPLOCK HOOK AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) Put the springs [32] in the spring removal tool from MLG and NLG springs equipment, SPL-1872.

(b) Install one end of the uplock spring [32] over one spool assembly and extend the other end of the uplock spring [32] a small amount over the other spool assembly.

(4) Install Uplock Spring and Spool.

WARNING: MAKE SURE THAT YOU INSTALL THE TWO SPRINGS TOGETHER. IF YOU DO NOT INSTALL THEM TOGETHER, THE SPRING PIVOT BOLTS CAN DISENGAGE FROM THE UPLOCK HOOK. THIS CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

(a) Put the springs [32] in the spring removal tool from MLG and NLG springs equipment, SPL-1872.

(b) Lubricate the chromed surfaces of the pins [41] with grease, D00013 or grease, D00633.

(c) Put one of the washers [36] and one of the sleeves [34] on each of the pins [41].

(d) Put the pins [41] through the uplock spring spools [37] on the uplock springs [32].

(e) Install one of the washers [38] and one of the spacers on each of the pins [41].

(f) Use the spring removal tools to align the spools [37] in the ends of the uplock springs [32] with the holes in the uplock hook [42] and link assembly [43].

(g) Push the pins [41] through the uplock hook [42] and the link assembly [43] such that you can install the second set of spacers and washers [38].

(h) Push the pins [41] completely through the spools [37] on the other spring.

(i) Install the sleeves [34], the washers [36], and the nuts [33] on the pins [41].

(j) Remove the spring removal tool.

(k) Tighten the nuts to 100 in-lb (11 N·m).

(l) Tighten the nuts to the nearest castellation and install the pins [35].

SUBTASK 32-32-31-420-022

(5) If only the uplock spring [32] is replaced, it is not necessary to perform a landing gear retraction test if the spring is replaced per this procedure.

I. Main Landing Gear Uplock Spring and Spool Replacement without spring removal tool.

SUBTASK 32-32-31-020-016

(1) Remove the broken or fractured uplock spring.

SUBTASK 32-32-31-020-017

(2) Remove the uplock spring [32].

(a) Do not use metallic objects which could nick or damage the spring surface.

(b) With one uplock spring [32] end over one spool assembly.

(c) Wrap a rope or cloth around the other spring end [32].

(d) Pull the free spring end over the other spool assembly (approximately 30 pounds of force per inch of spring extension is required).

(e) Remove the rope or cloth (rag) from under the spring end [32], carefully, so as to not inadvertently remove the spring end.

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(f) Discard the removed springs [32] to prevent them from being re-used on another airplane.

(g) It is not necessary to perform a landing gear retraction test if the uplock spring [32] is replaced per the above procedure.

(3) Remove uplock spring and spools [37].

(a) Remove the pin [35], the nut [33], and the washers [36] from the pin [41].

(b) Remove the pins [41].

NOTE: Make sure you catch the spacers [39] spacers [40], washers [36], washers [38], sleeves [34], and uplock spring spools [37] that come loose when the pins [41] are removed.

SUBTASK 32-32-31-420-023

(4) Replace the Uplock Spring spools.

(a) Lubricate the chromed surfaces of the pins [41] with grease, D00013 or grease, D00633.

(b) Put one of the washers [36], one of the sleeves [34], and one of the uplock spring spools [37] on each of the pins [41].

(c) Install one of the washers [38] and one of the spacers on each of the pins [41].

(d) Push the pins [41] through the uplock hook assembly [42] and the link assembly [43] such that you can install the second set of spacers and washers [38].

(e) Push the pins [41] completely through the uplock hook assembly [42] and the link assembly [43].

(f) Install the uplock spring spools [37], the sleeves [34], the washers [36], and the nuts [33] on the pins [41].

(g) Tighten the nuts to 100 in-lb (11 N·m).

(h) Tighten the nuts to the nearest castellation and install the pins [35].

SUBTASK 32-32-31-420-029

(5) If only the uplock spring [32] is replaced, it is not necessary to perform a landing gear retraction test if the spring is replaced per this procedure.

J. Installation Test for the Main Gear Uplock Assembly

SUBTASK 32-32-31-580-002

WARNING: REMOVE PERSONS AND EQUIPMENT FROM THE LANDING GEAR PATH. WHEN THE LANDING GEARS RETRACT, THEY CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-32-31-020-014

(2) Disconnect the main gear door clevis rods [29] from the main gear doors [28], by removing the pin [27], nut [26], washers [25] and [23], spacer [26] and bolt [22].

NOTE: The main gear doors will remain hanging during the installation test.

SUBTASK 32-32-31-860-002

(3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-32-31-080-001

(4) For the main landing gear, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801

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SUBTASK 32-32-31-870-001

WARNING: MAKE SURE YOU INSTALL THE DOWN LOCK PINS IN THE NOSE LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT IF THE GEAR RETRACTS.

(5) Extend and retract the main landing gear several times.

NOTE: It will bleed the air from the uplock actuator and the lines. Examine for the correct gear operation.

SUBTASK 32-32-31-040-001

(6) Retract the landing gear:

NOTE: The main gear doors will remain hanging during the installation test.

(a) Install the downlock pin in the locklink assembly of the main landing gear assembly you are working on.

NOTE: This will prevent the landing gear from accidental movement.

(b) Move the landing gear lever to the OFF position.

NOTE: This will depressurize the landing gear system while personnel are in the wheel well.

(c) Place a Do-Not-Move Tag on the landing gear handle.

SUBTASK 32-32-31-200-001

WARNING: MAKE SURE THAT YOU HAVE DONE THE PREVIOUS STEP BEFORE ENTERING THE WHEEL WELL AREA. ACCIDENTAL MOVEMENT OF THE LANDING GEAR COULD CAUSE INJURY TO PERSONNEL.

(7) Verify the 0.375 +0.036 / -0.000 in. (9.52 +0.92 / -0.00 mm) gap as follows (Figure 402):

(a) Use a 0.375 inch (9.525 mm) diameter pin, or equivalent, inserted between the uplock roller and the back of the uplock assembly hook.

(b) If required, adjust the length of the hanger assembly [19], plus or minus one half turn, until the gap requirement is met.

1) Loosen the hanger assembly [19] jamnut [20].

2) Adjust the hanger assembly [19] length one half turn longer or shorter.

3) Tighten the hanger assembly [19] jamnut [20] to 200-250 pound-inches (22.6 - 28.2 newton meters).

4) Repeat this step until the gap requirement is met.

SUBTASK 32-32-31-800-001

(8) Extend the landing gear:

(a) Remove the downlock pin in the locklink assembly of the main landing gear assembly you are working on.

(b) Remove the Do-Not-Move Tag from the landing gear handle.

(c) Move the landing gear lever to the DOWN position.

SUBTASK 32-32-31-420-014

(9) Reconnect the main gear door clevis rods [29] to the main gear doors [28], by installing the spacer [26], washers [23] and [25], bolt [22], nut [26] and pin [27].

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SUBTASK 32-32-31-420-015

(10) Verify the main gear door adjustment. To adjust the door, do this task: Main Landing Gear Wing Door Adjustment, TASK 32-13-21-000-801.

SUBTASK 32-32-31-210-001

(11) Examine the hydraulic connections for leaks.

SUBTASK 32-32-31-480-004

(12) Extend the main landing gear and install the down lock pins, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-31-860-003

(13) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-31-580-003

(14) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

SUBTASK 32-32-31-840-001

(15) Examine the hydraulic reservoirs for the correct servicing, do this task: Hydraulic Fluid Check, TASK 29-11-00-200-801.

(a) Do a servicing if it is necessary.

——————— END OF TASK ———————

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MAIN LANDING GEAR UPLOCK ASSEMBLY - INSPECTION/CHECK

1. General

A. This task has the data for a dimensional inspection of the uplock assembly for the main landing gear. No procedure is given in this section to get access to permit the inspection. The uplock assembly must be removed to do the inspection. These are the tasks:

- Main Gear Uplock Assembly Removal, TASK 32-32-31-000-801
- Main Gear Uplock Assembly Installation, TASK 32-32-31-400-801

TASK 32-32-31-200-801

2. Main Landing Gear Uplock Assembly Inspection

(Figure 601)

A. General

(1) This procedure gives wear limits and repair data for the main landing gear uplock assembly.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-32-31-000-801	Main Gear Uplock Assembly Removal (P/B 401)
32-32-31-400-801	Main Gear Uplock Assembly Installation (P/B 401)

C. Tools/Equipment

Reference	Description
STD-1096	Micrometer - Depth, 0-1 Inch, Readable to 1/1000 Inch
STD-1097	Caliper - Vernier, 0-6 Inch, Readable to 1/1000 Inch

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

E. Procedure

SUBTASK 32-32-31-480-005

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-31-020-010

(2) To remove parts to get access to the uplock assembly for the main landing gear do the task that follows (Figure 601):

(a) Do this task: Main Gear Uplock Assembly Removal, TASK 32-32-31-000-801.

SUBTASK 32-32-31-020-011

(3) Use these tools to check for wear on the parts of the main landing gear uplock assembly:

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(a) micrometer (0-1 Inch, readable to 1/1000 Inch), STD-1096

(b) readable to 1/1000 inch vernier 0 - 6 inch caliper, STD-1097

SUBTASK 32-32-31-020-012

(4) Examine the parts of the uplock assembly for worn areas:

(a) Remove the parts to be checked.

(b) Measure the parts as necessary with a micrometer (0-1 Inch, readable to 1/1000 Inch), STD-1096 or a readable to 1/1000 inch vernier 0 - 6 inch caliper, STD-1097.

(c) Compare the dimensions you measured with the permitted wear dimensions that follow.

(d) If the parts are not in the tolerance, replace or repair the part as required.

Table 601/32-32-31-993-801

NAME OF THE PARTS THAT AR IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MAXIMUM SERVICE CLEARANCE
#1 BUSHING	I.D.	0.6870 in 17.450 mm	0.6875 in 17.462 mm	in mm	in mm
#1 BUSHING	O.D.	0.6860 in 17.424 mm	0.6865 in 17.437 mm	in mm	
#2 BUSHING	I.D.	0.5005 in 12.713 mm	0.5010 in 12.827 mm	0.5031 in 12.779 mm	0.003 in 0.086 mm
#2 BOLT	O.D.	0.4990 in 12.675 mm	0.4997 in 12.692 mm	0.4976 in 12.639 mm	
#3 BUSHING	I.D.	0.9949 in 25.270 mm	0.9956 in 25.288 mm	in mm	in mm
#3 BUSHING	O.D.	0.9964 in 25.308 mm	0.9970 in 25.324 mm	in mm	
#4 BUSHING	I.D.	0.4375 in 11.112 mm	0.4381 in 11.128 mm	in mm	in mm
#4 BUSHING	O.D.	0.4384 in 11.135 mm	0.4389 in 11.148 mm	in mm	
#5 BUSHING	I.D.	0.3125 in 7.938 mm	0.3130 in 7.950 mm	0.3150 in 8.001 mm	0.003 in 0.076 mm
#5 BOLT	O.D.	0.3115 in 7.912 mm	0.3120 in 7.925 mm	0.3100 in 7.874 mm	

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(Continued)

NAME OF THE PARTS THAT AR IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MAXIMUM SERVICE CLEARANCE
#6 BUSHING	I.D.	0.4375 in 11.112 mm	0.4382 in 11.130 mm	in mm	in mm
#6 BUSHING	O.D.	0.4365 in 11.087 mm	0.4370 in 11.100 mm	in mm	
#7 BUSHING	I.D.	0.3125 in 7.938 mm	0.3130 in 7.950 mm	0.3150 in 8.001 mm	0.003 in 0.076 mm
#7 BOLT	O.D.	0.3115 in 7.912 mm	0.3120 in 7.925 mm	0.3100 in 7.874 mm	
#8 BUSHING	I.D.	0.8755 in22.238 mm	0.8765 in 22.263 mm	0.8790 in 22.327 mm	0.005 in 0.127 mm
#8 PIN	O.D.	0.8735 in 22.187 mm	0.8740 in 22.200 mm	0.8715 in 22.136 mm	
#9 BUSHING	I.D.	1.0625 in 26.988 mm	1.0632 in 27.005 mm	in mm	in mm
#9 BUSHING	O.D.	1.0640 in 27.026 mm	1.0645 in 27.038 mm	in mm	
#10 BUSHING	I.D.	0.8745 in 22.212 mm	0.8753 in 22.233 mm	0.8780 in 22.301 mm	0.004 in 0.102 mm
#10 PIN	O.D.	0.8735 in 22.187 mm	0.8740 in 22.200 mm	0.8713 in 22.131 mm	
#11 BUSHING	I.D.	0.3750 in 9.525 mm	0.3756 in 9.540 mm	0.3775 in 9.588 mm	0.003 in 0.076 mm
#11 BOLT	O.D.	0.3740 in 9.500 mm	0.3745 in 9.512 mm	0.3726 in 9.464 mm	

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(Continued)

NAME OF THE PARTS THAT AR IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MAXIMUM SERVICE CLEARANCE
#12 BUSHING	I.D.	0.5000 in 12.700 mm	0.5006 in 12.715 mm	in mm	in mm
#12 BUSHING	O.D.	0.5010 in 12.725 mm	0.5015 in 12.738 mm	in mm	
#13 BUSHING	I.D.	in mm	in mm	in mm	in mm
#13 BOLT	O.D.	0.3740 in 9.500 mm	0.3745 in 9.512 mm	in mm	

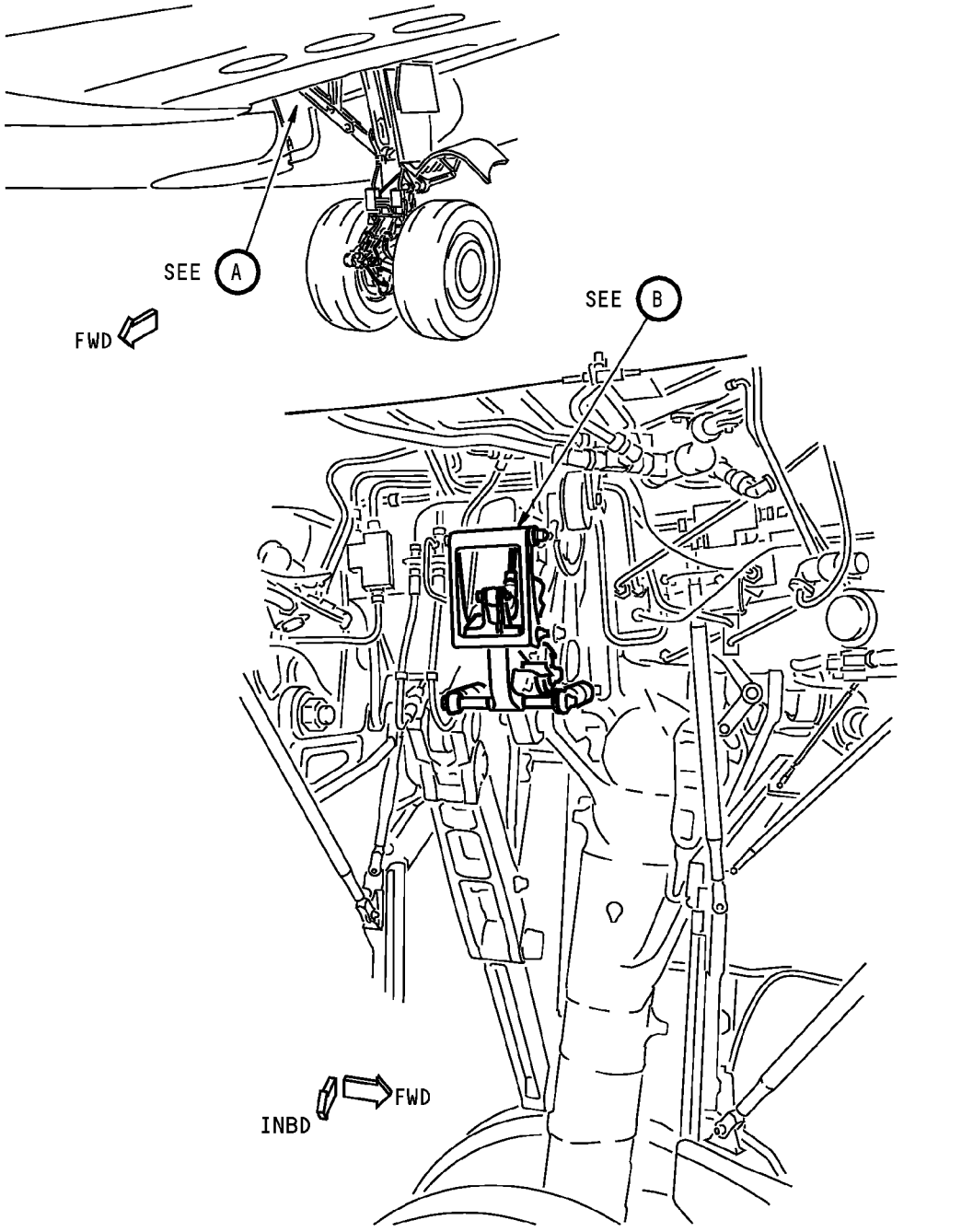
SUBTASK 32-32-31-020-013

(5) To install parts on the uplock assembly for the main landing gear do the task that follows:

(a) Do this task: Main Gear Uplock Assembly Installation, TASK 32-32-31-400-801.

——————— END OF TASK ———————

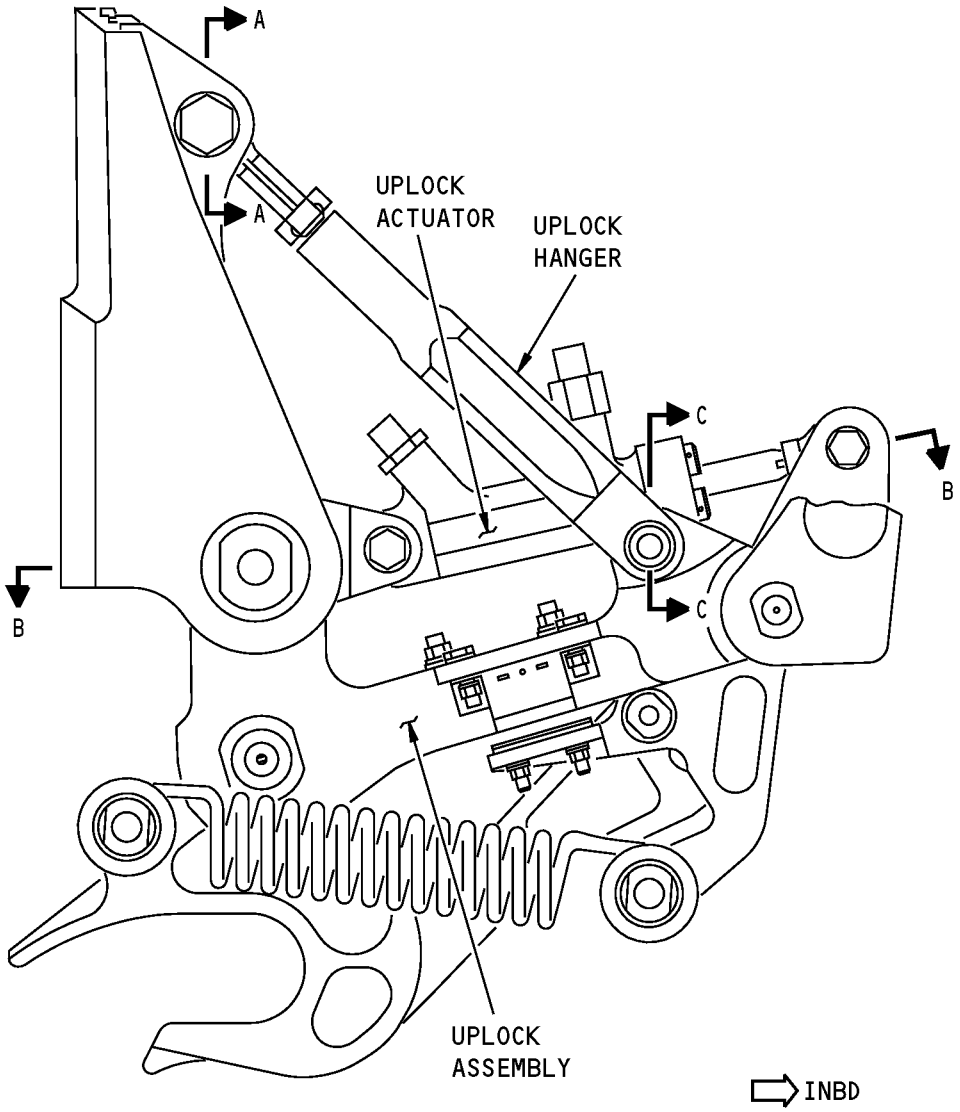
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MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE IS SHOWN, RIGHT SIDE IS EQUIVALENT)
A

Main Landing Gear Uplock Assembly Wear Limits
Figure 601 (Sheet 1 of 4)/32-32-31-990-802

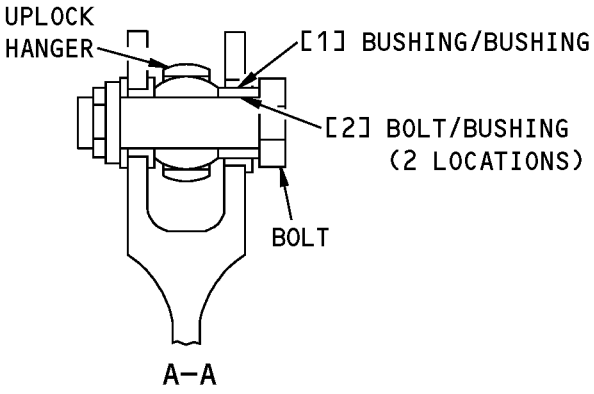
BOEING PROPRIETARY - Copyright © Unpublished Work - See title page for details

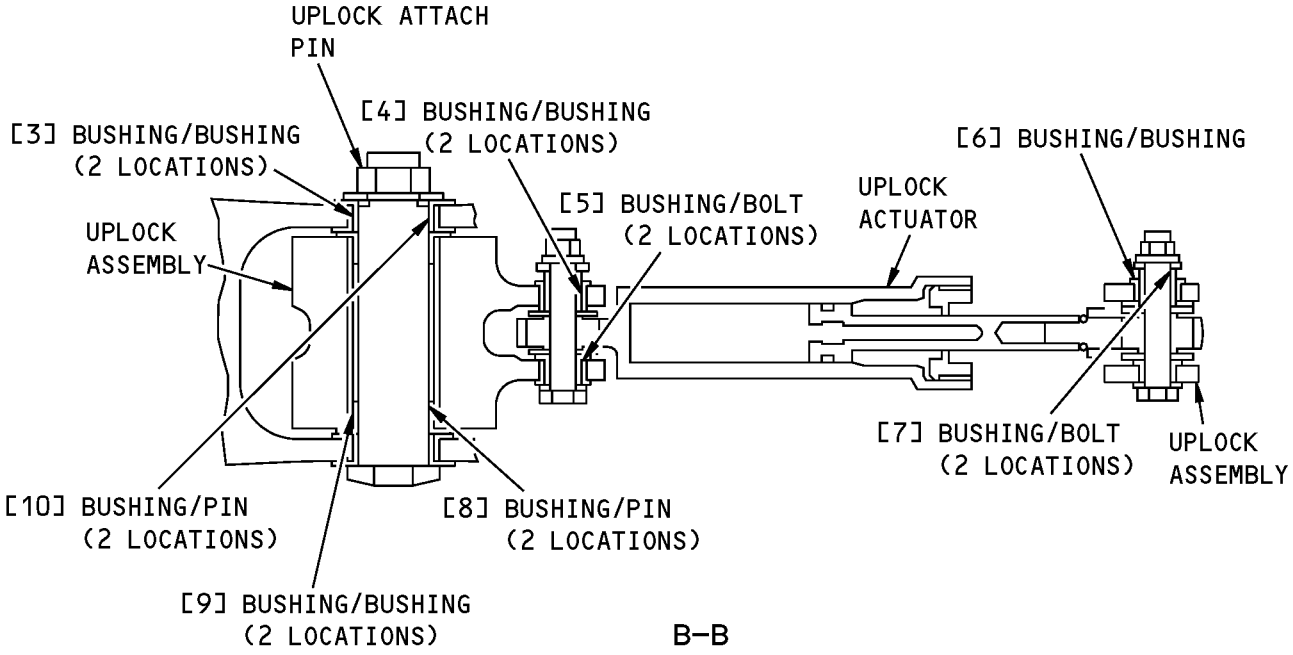


B

Main Landing Gear Uplock Assembly Wear Limits
Figure 601 (Sheet 2 of 4)/32-32-31-990-802

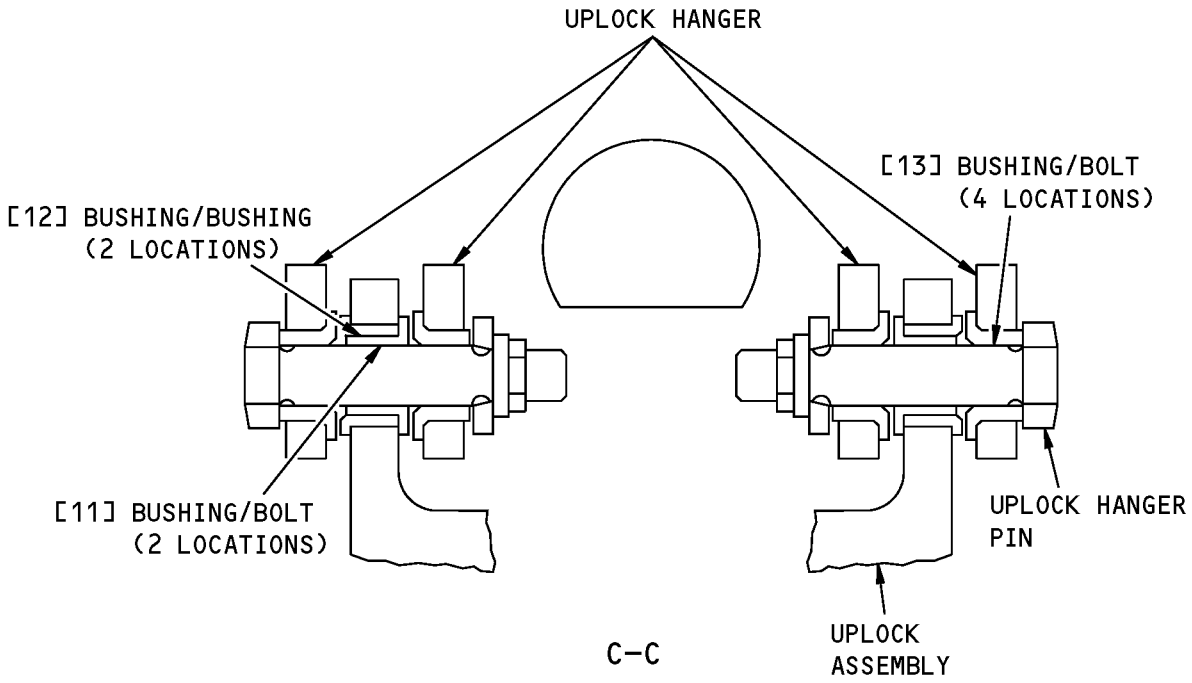
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Main Landing Gear Uplock Assembly Wear Limits
Figure 601 (Sheet 3 of 4)/32-32-31-990-802

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Main Landing Gear Uplock Assembly Wear Limits
Figure 601 (Sheet 4 of 4)/32-32-31-990-802

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MAIN GEAR UPLOCK ACTUATOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these two tasks:

(1) A removal of the uplock actuator for the main landing gear (referred to as the actuator assy [13])

(2) An installation of the uplock actuator for the main landing gear.

TASK 32-32-41-000-801

2. Main Gear Uplock Actuator Removal

(Figure 401)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-32-41-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-41-860-001

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-41-580-001

(3) Install chocks around the tires of the main landing gear.

D. Main Gear Uplock Actuator Removal

SUBTASK 32-32-41-480-004

(1) Put tags on the lines to show their connection locations.

SUBTASK 32-32-41-020-001

(2) Disconnect the hydraulic lines from the actuator assy [13].

SUBTASK 32-32-41-480-002

(3) Install plugs in the hydraulic lines.

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SUBTASK 32-32-41-020-002

(4) Remove these items to disconnect the rod end of the actuator assy [13]:

(a) Nut [10] and washers [6, 9]

(b) Bolt [8] and washers [2, 9]

(c) Sleeve [3].

SUBTASK 32-32-41-020-003

(5) Remove these items to disconnect the head end of the actuator assy [13]:

(a) Nut [10] and washers [4, 6]

(b) Bolt [1] and washers [2, 4]

(c) Sleeve [3].

SUBTASK 32-32-41-020-004

(6) Remove the actuator assy [13] from the airplane.

SUBTASK 32-32-41-020-005

(7) Do these steps if the replacement actuator assy [13] does not have the union [7] or restrictor [12]:

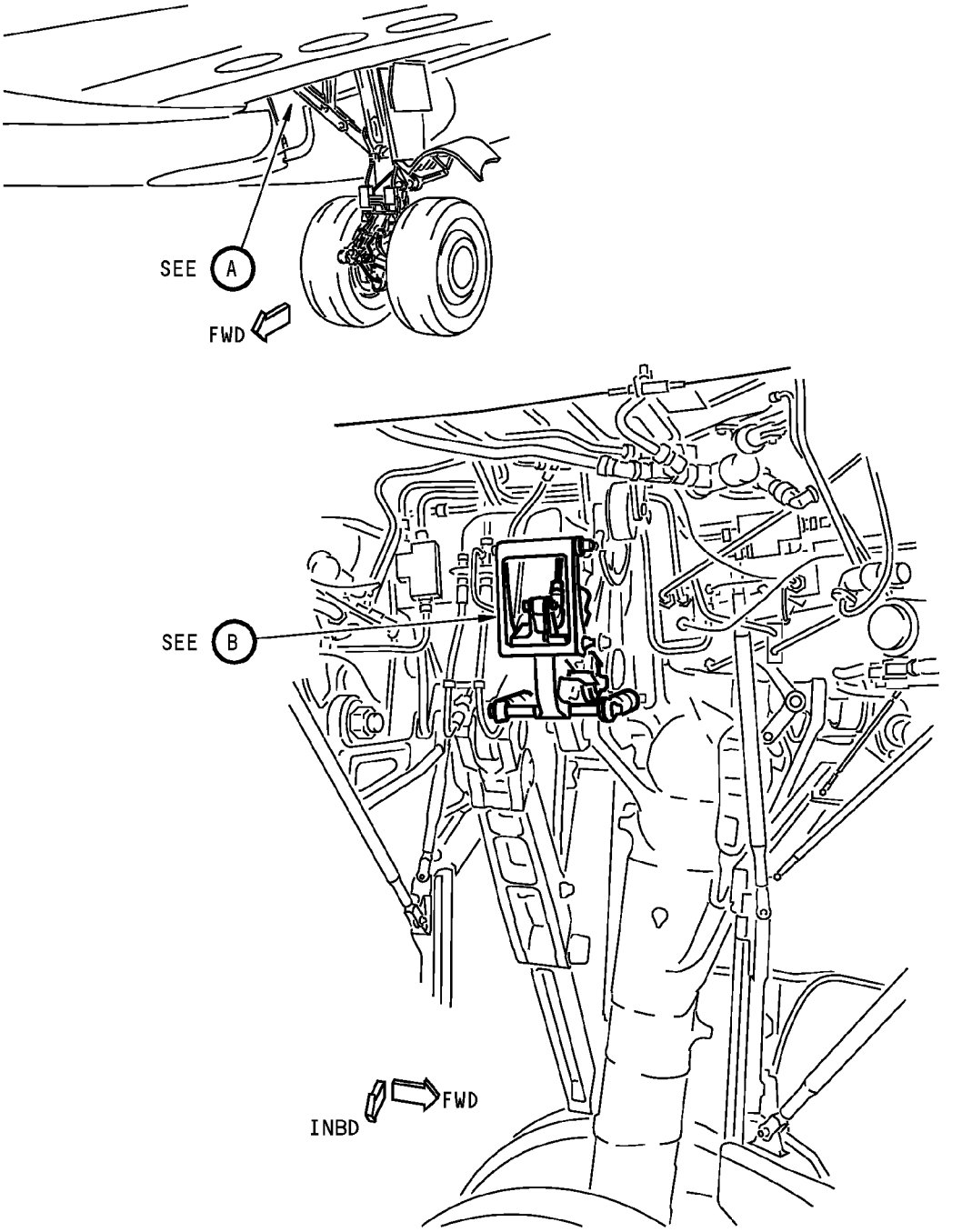
(a) Remove the union [7] and restrictor [12] from the actuator assy [13].

(b) Remove and discard the packing [5] and packing [11].

(c) Install plugs in the ports on the actuator assy [13].

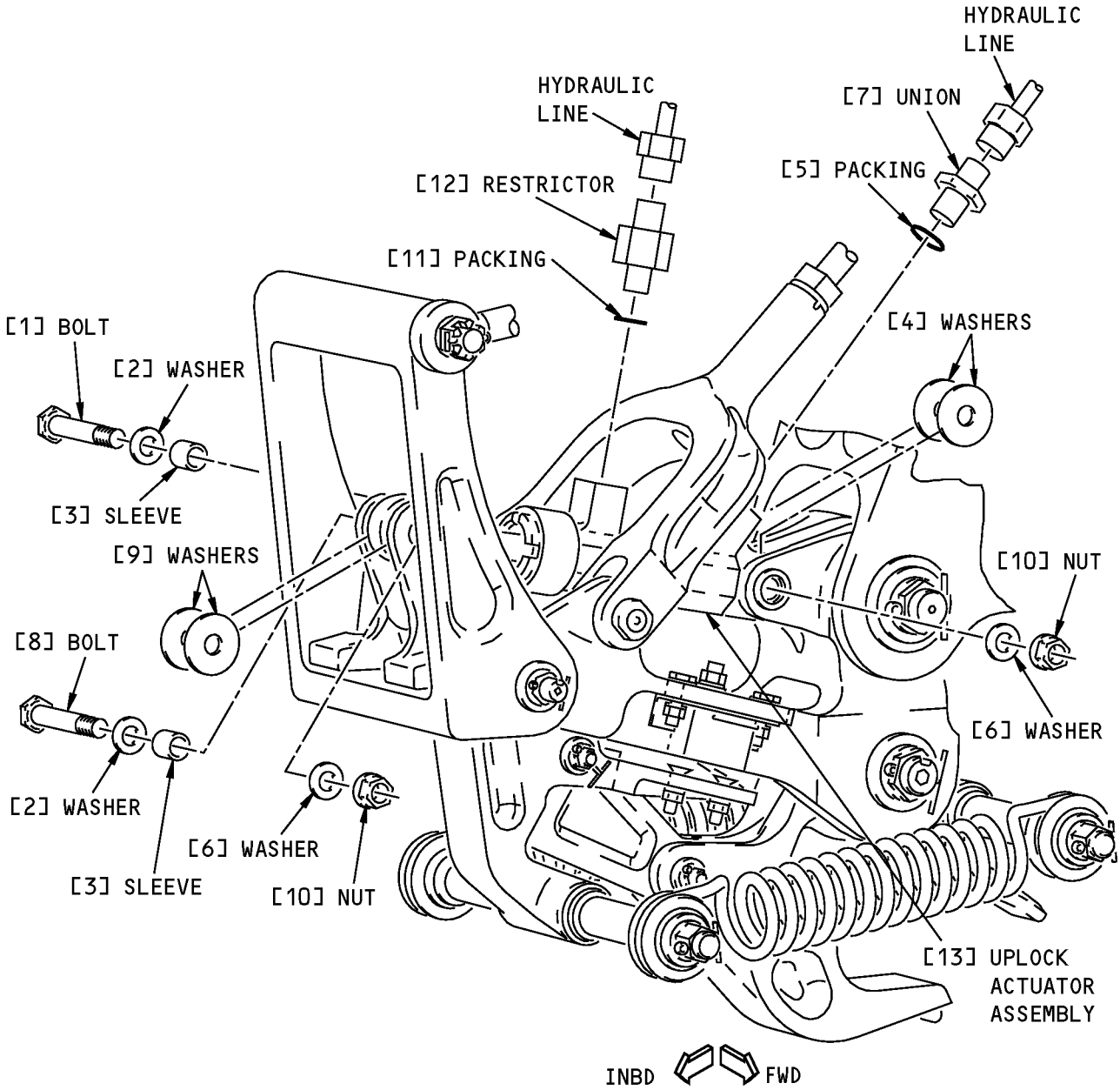
———————— END OF TASK ————————

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Main Landing Gear Uplock Actuator Installation
Figure 401 (Sheet 1 of 2)/32-32-41-990-801

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Main Landing Gear Uplock Actuator Installation
Figure 401 (Sheet 2 of 2)/32-32-41-990-801

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TASK 32-32-41-400-801

3. Main Gear Uplock Actuator Installation

(Figure 401)

A. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
12-12-00-610-801	Hydraulic Reservoir Servicing (P/B 301)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-4896	Adapter Assembly - Uplock, MLG (Part #: C32048-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)
D00633	Grease - Aircraft General Purpose	BMS3-33

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
5	Packing	32-32-41-01-030	HAP ALL
7	Union	32-32-41-01-020	HAP ALL
11	Packing	32-32-41-01-035	HAP ALL
12	Restrictor	32-32-41-01-025	HAP ALL

E. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

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F. Main Gear Uplock Actuator Installation

SUBTASK 32-32-41-420-001

(1) Do these steps if the replacement actuator assy [13] does not have the union [7] or restrictor [12] installed:

(a) Lubricate these items with fluid, D00153:

1) packing [5], packing [11]

2) union [7], restrictor [12]

(b) Remove the plugs from the ports on the actuator assy [13].

(c) Install the packing [5], packing [11], union [7], and restrictor [12] in the actuator assy [13].

SUBTASK 32-32-41-610-001

(2) Extend the actuator assy [13]. Fill the actuator assy [13] from the two ends with fluid, D00153, and then put caps on the union [7] and restrictor [12].

SUBTASK 32-32-41-420-002

(3) Put the actuator assy [13] in its position with the rod end inboard.

SUBTASK 32-32-41-640-001

(4) Lubricate the chrome plated surfaces of the sleeves [3] with grease, D00633.

SUBTASK 32-32-41-420-003

(5) Install these items to connect the head end of the actuator assy [13] to the uplock assembly:

(a) Sleeve [3]

(b) Bolt [1] and washers [2, 4]

(c) Washers [4, 6] and nut [10]

(d) Tighten the nut [10] to 90-125 pound-inches (10.2-14.1 newton-meters).

SUBTASK 32-32-41-420-004

(6) Install these items to connect the rod end of the actuator assy [13] to the uplock assembly:

(a) Sleeve [3]

(b) Bolt [8] and washers [2,9]

(c) Washers [6] and nut [10]

(d) Tighten the nut [10] to 90-125 pound-inches (10.2-14.1 newton-meters).

SUBTASK 32-32-41-420-005

(7) Remove the caps from the union [7] and the restrictor [12] and connect the hydraulic lines to the actuator assy [13].

G. Installation Test for the Main Gear Uplock Actuator (Airplane on Jacks)

SUBTASK 32-32-41-580-002

WARNING: REMOVE PERSONS AND EQUIPMENT FROM THE LANDING GEAR PATH. WHEN THE LANDING GEARS RETRACT, THEY CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-32-41-860-002

(2) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

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SUBTASK 32-32-41-080-001

(3) For the main landing gear, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801

SUBTASK 32-32-41-870-001

WARNING: MAKE SURE YOU INSTALL THE DOWN LOCK PINS IN THE NOSE LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT IF THE GEAR RETRACTS.

(4) Extend and retract the main landing gear several times.

NOTE: It will bleed the air from the uplock actuator and the lines. Examine for the correct gear operation.

SUBTASK 32-32-41-210-001

(5) Examine the hydraulic connections for leaks.

SUBTASK 32-32-41-480-003

(6) Extend the main landing gear and install the down lock pins. To do this, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-41-860-003

(7) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-41-580-003

(8) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

H. Installation Test for the Main Gear Uplock Actuator (Airplane not on Jacks)

NOTE: This test gives does a check of the uplock actuator with the airplane on the ground, if jacks are not available.

SUBTASK 32-32-41-210-002

(1) Make sure you installed the hydraulic hoses correctly.

SUBTASK 32-32-41-860-004

WARNING: MAKE SURE YOU INSTALL THE GROUND LOCK ASSEMBLIES IN ALL LANDING GEAR. ACCIDENTAL RETRACTION OF THE LANDING GEAR CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-32-41-700-001

(3) Use the override trigger to move the landing gear lever from the DN position to the UP position for three times.

NOTE: Hold the lever in each position for three seconds before you move the landing gear lever to the subsequent position.

SUBTASK 32-32-41-700-004

(4) Move the landing gear lever to the UP position.

SUBTASK 32-32-41-860-006

(5) Rotate the uplock hook to the closed position, using MLG uplock adapter assembly, SPL-4896.

SUBTASK 32-32-41-700-002

(6) Move the landing gear lever to the DN position.

(a) Make sure the uplock hook rotates to the open position.

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SUBTASK 32-32-41-210-003

(7) Do a check for leakage with the hydraulic pressure applied.

SUBTASK 32-32-41-860-005

(8) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-41-210-004

(9) Make sure there are no leaks in the hydraulic connections.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 32-32-41-200-001

(1) Service the reservoirs if it is necessary, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

——————— END OF TASK ———————

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MAIN GEAR DOWNLOCK ACTUATOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these two tasks:

(1) A removal of the downlock actuator for the main landing gear (referred to as the actuator assy [1])

(2) An installation of the downlock actuator for the main landing gear.

TASK 32-32-51-000-801

2. Main Gear Downlock Actuator Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-32-91-000-801	Main Gear Downlock Springs Removal (P/B 401)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-32-51-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801

SUBTASK 32-32-51-860-001

(2) For hydraulic system A, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-32-51-580-001

(3) Install chocks around the tires of the main landing gear.

D. Main Gear Downlock Actuator Removal

SUBTASK 32-32-51-480-004

(1) Put tags on the lines to show their connection locations.

SUBTASK 32-32-51-020-001

(2) Disconnect the hydraulic lines from the actuator assy [1].

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SUBTASK 32-32-51-480-002

(3) Install plugs in the hydraulic lines.

SUBTASK 32-32-51-020-002

(4) Remove the downlock springs [6]. To do this, do this task: Main Gear Downlock Springs Removal, TASK 32-32-91-000-801.

SUBTASK 32-32-51-020-003

(5) Remove the rod end pin [5], spacers [4, 10], and washers [11] that attach the rod end of the actuator assy [1] to the side strut assembly.

SUBTASK 32-32-51-020-004

(6) Remove the pin [7], nut [13], special washer [14], washers [15, 16], and head end pin [12] that attach the head end of the actuator assy [1] to the side strut assembly.

SUBTASK 32-32-51-020-005

(7) Remove the actuator assy [1] from the airplane.

SUBTASK 32-32-51-020-006

(8) Do these steps if the replacement downlock actuator assy [1] does not have union [2] installed:

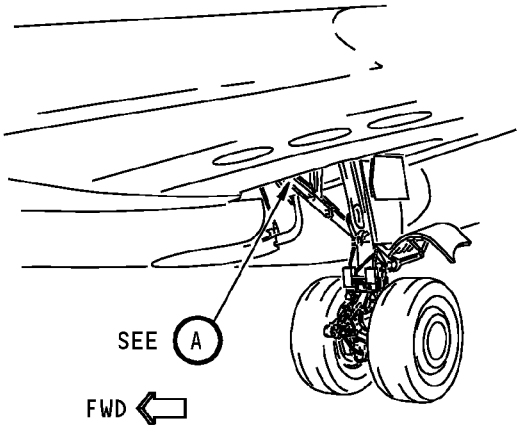
(a) Remove the union [2] from the actuator assy [1].

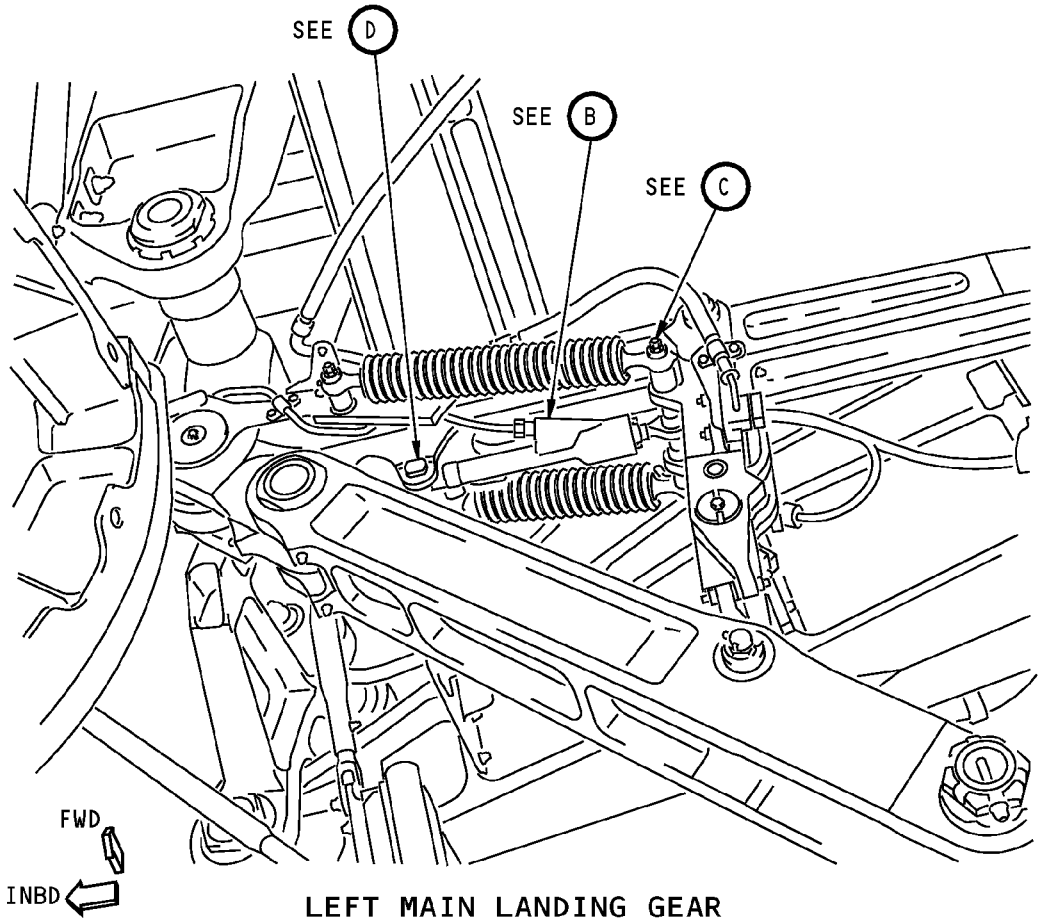
(b) Remove and discard the packing [3].

(c) Install plugs in the ports on the actuator assy [1].

———————— END OF TASK ————————

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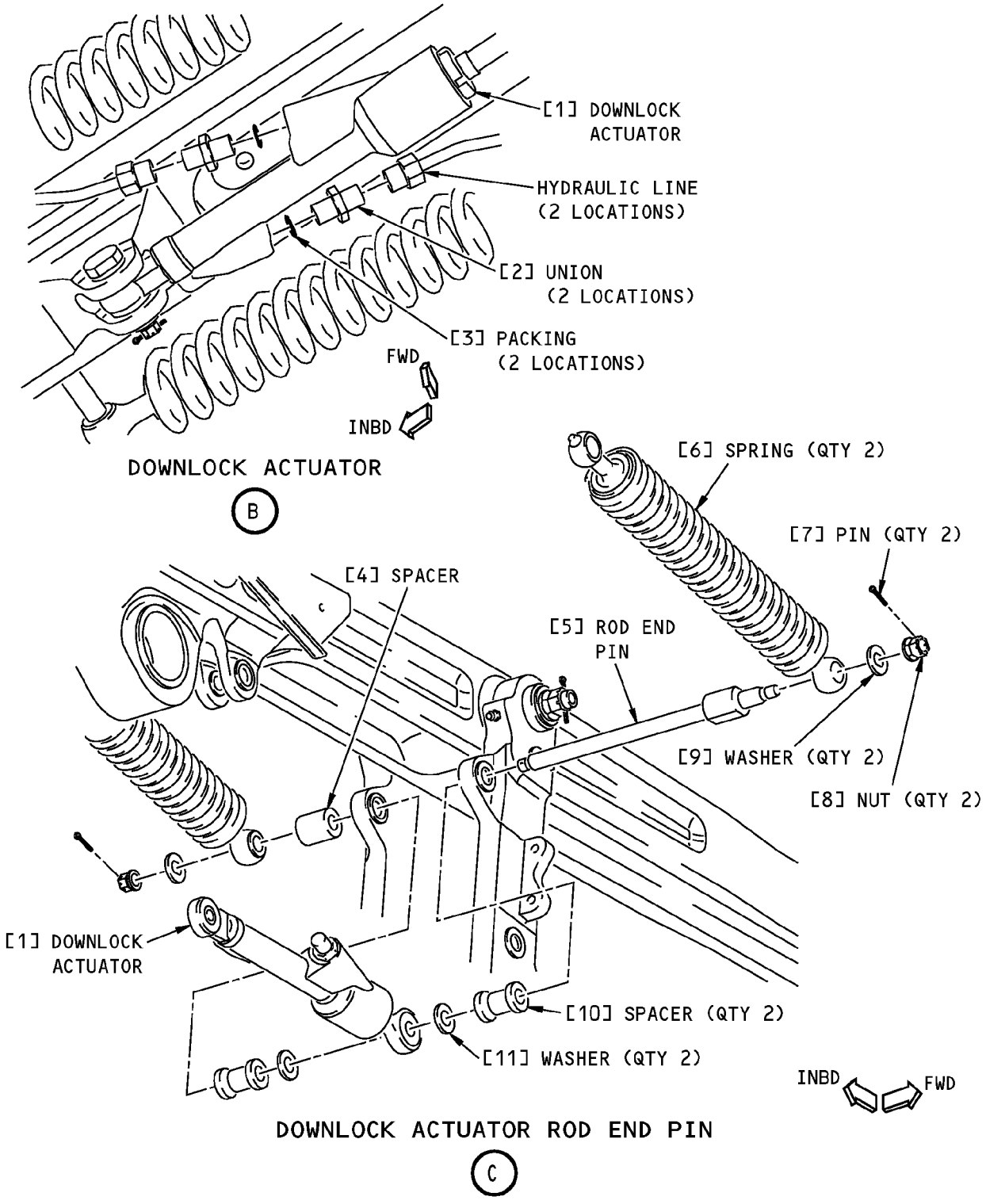


LEFT MAIN LANDING GEAR
(RIGHT MAIN LANDING GEAR IS EQUIVALENT)

A

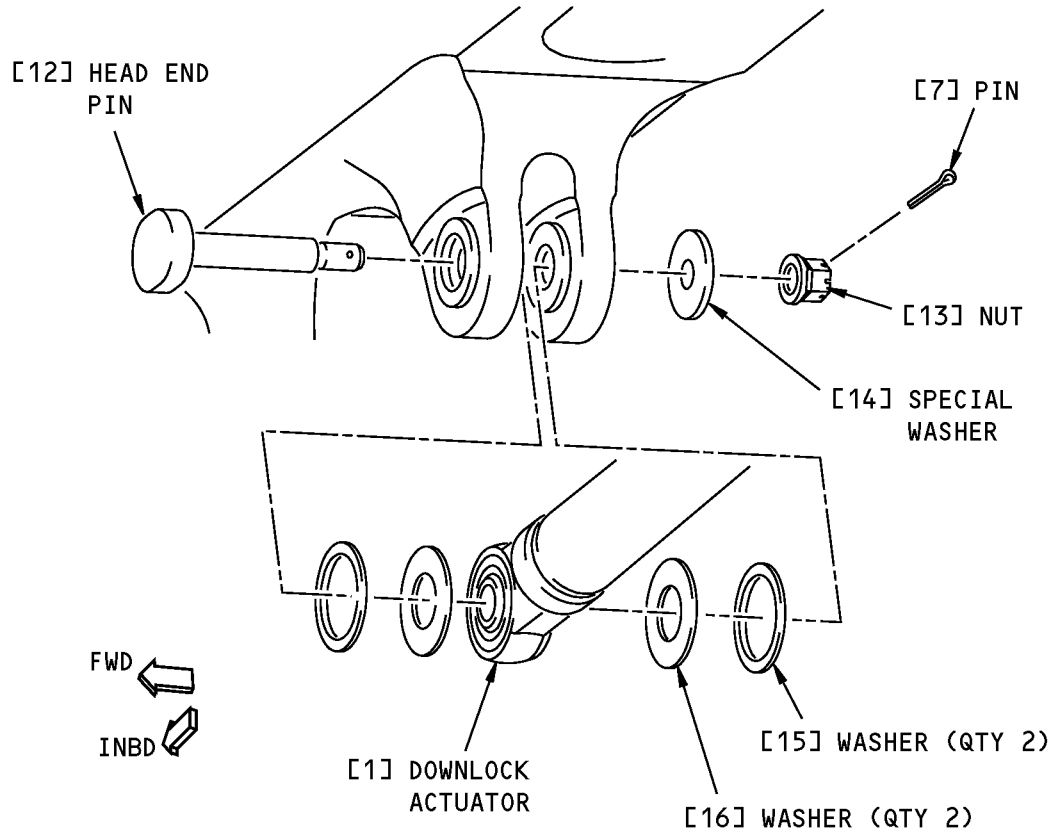
Main Landing Gear Downlock Actuator Installation
Figure 401 (Sheet 1 of 3)/32-32-51-990-801

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Main Landing Gear Downlock Actuator Installation
Figure 401 (Sheet 2 of 3)/32-32-51-990-801

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DOWNLOCK ACTUATOR HEAD END PIN

D

Main Landing Gear Downlock Actuator Installation
Figure 401 (Sheet 3 of 3)/32-32-51-990-801

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TASK 32-32-51-400-801

3. Main Gear Downlock Actuator Installation

(Figure 401)

A. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
12-12-00-610-801	Hydraulic Reservoir Servicing (P/B 301)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-32-91-400-801	Main Gear Downlock Spring Installation (P/B 401)

B. Consumable Materials

Reference	Description	Specification
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)
D00633	Grease - Aircraft General Purpose	BMS3-33

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Union	32-32-51-01-022	HAP ALL
3	Packing	32-32-51-01-024	HAP ALL
7	Pin	32-32-51-01-003	HAP ALL

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

E. Main Gear Downlock Actuator Installation

SUBTASK 32-32-51-420-001

(1) Do these steps if the replacement actuator assy [1] does not have the unions [2] installed:

(a) Lubricate these items with fluid, D00153:

1) packings [3]

2) unions [2].

(b) Remove the plugs from the ports on the actuator assy [1].

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(c) Install the packings [3] and the unions [2] in the actuator assy [1].

SUBTASK 32-32-51-610-001

(2) Retract the actuator assy [1] and fill it with fluid, D00153. Then put caps on the unions [2].

SUBTASK 32-32-51-640-001

(3) Apply grease, D00633 to the inside surface of the lug, the head end of the actuator assy [1], and the head end pin [12].

SUBTASK 32-32-51-420-002

(4) Put the actuator assy [1] in position with the head end inboard and the ports on the top part of the actuator.

SUBTASK 32-32-51-420-003

(5) Install the head end pin [12], washers [15, 16], special washer [14], and nut [13].

SUBTASK 32-32-51-420-004

(6) Tighten the nut [13] to 15-25 pound-inches (1.7-2.8 newton-meters).

SUBTASK 32-32-51-420-005

(7) Loosen the nut [13] to the nearest castellation if it is necessary and install the pin [7].

SUBTASK 32-32-51-640-002

(8) Apply grease, D00633 to the inside surface of the rod end of the actuator assy [1], and the rod end pin [5].

SUBTASK 32-32-51-420-006

(9) Install the rod end pin [5], spacers [4, 10], and washers [11].

SUBTASK 32-32-51-080-001

(10) Install the downlock springs [6], washers [9], nuts [8], and pins [7], do this task: Main Gear Downlock Spring Installation, TASK 32-32-91-400-801.

SUBTASK 32-32-51-080-002

(11) Remove the caps from the unions [2] and connect the hydraulic lines to the actuator assy [1].

F. Installation Test for the Main Gear Downlock Actuator (Airplane on Jacks)

NOTE: This test does a check of the actuator with the airplane lifted on jacks.

SUBTASK 32-32-51-580-002

WARNING: REMOVE PERSONS AND EQUIPMENT FROM THE LANDING GEAR PATH. WHEN THE LANDING GEARS RETRACT, THEY CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-32-51-860-002

(2) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-32-51-080-003

(3) Remove the downlock pins for the main landing gear, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

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SUBTASK 32-32-51-870-001

WARNING: MAKE SURE YOU INSTALL THE DOWNLOCK PINS IN THE NOSE LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT IF THE GEAR RETRACTS.

(4) Extend and retract the main landing gear several times.

NOTE: It will bleed the air from the downlock actuator and the lines. Examine for the correct gear operation.

SUBTASK 32-32-51-210-001

(5) Examine the hydraulic connections for leaks.

SUBTASK 32-32-51-480-003

(6) Extend the main landing gear and install the downlock pins, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-51-860-003

(7) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-51-580-003

(8) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

G. Installation Test for the Main Gear Downlock Actuator (Airplane not on Jacks)

NOTE: This test gives does a check of the downlock actuator with the airplane on the ground, if jacks are not available.

SUBTASK 32-32-51-210-002

(1) Make sure you installed the hydraulic hoses correctly.

SUBTASK 32-32-51-860-004

WARNING: MAKE SURE YOU INSTALL THE GROUND LOCK ASSEMBLIES IN THE LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IF THE LANDING GEARS RETRACT, IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO STRUCTURE.

(2) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-32-51-700-002

(3) Use the override trigger to move the landing gear lever from the DN position to the UP position for three times.

NOTE: Hold the lever in each position for three seconds before you move the landing gear lever to the subsequent position.

SUBTASK 32-32-51-700-003

(4) Make sure the rod end of the downlock actuator tries to extend when you move the landing gear lever from the OFF position to the UP position.

SUBTASK 32-32-51-700-004

(5) Move the landing gear lever to the DN position.

SUBTASK 32-32-51-210-003

(6) Do a check for leakage with the hydraulic pressure applied.

SUBTASK 32-32-51-860-005

(7) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

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SUBTASK 32-32-51-210-004

(8) Make sure there is no leaks in the hydraulic connections.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 32-32-51-200-001

(1) Service the reservoirs if it is necessary, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

END OF TASK

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MAIN GEAR FRANGIBLE FITTING ASSEMBLY - REMOVAL/INSTALLATION

1. General

A. This procedure has these four tasks:

NOTE: You only have to replace the entire assembly if the entire assembly is damaged. If only the frangible fitting is broken you can replace it alone.

(1) A removal of the frangible fitting assembly [1] for the main landing gear

(2) An installation of the frangible fitting assembly [1] for the main landing gear.

(3) A removal of the frangible fitting [8] for the main landing gear

(4) An installation of the frangible fitting [8] for the main landing gear.

NOTE: You may change the frangible fitting alone only if the assembly is not damaged.

TASK 32-32-52-000-801

2. Main Gear Frangible Fitting Assembly Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-32-52-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-52-860-001

(2) For hydraulic system A, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-32-52-580-001

(3) Install chocks around the tires of the main landing gear.

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D. Removal of the Frangible Fitting Assembly

SUBTASK 32-32-52-020-003

(1) Disconnect the hydraulic line [6] from the frangible fitting assembly [1].

SUBTASK 32-32-52-480-002

(2) Install a cap on the hydraulic line [6].

SUBTASK 32-32-52-020-004

(3) Remove the fitting [5] from the frangible fitting assembly [1] and discard the packing [4].

SUBTASK 32-32-52-480-003

(4) Install a plug in the port on the frangible fitting assembly [1].

SUBTASK 32-32-52-020-006

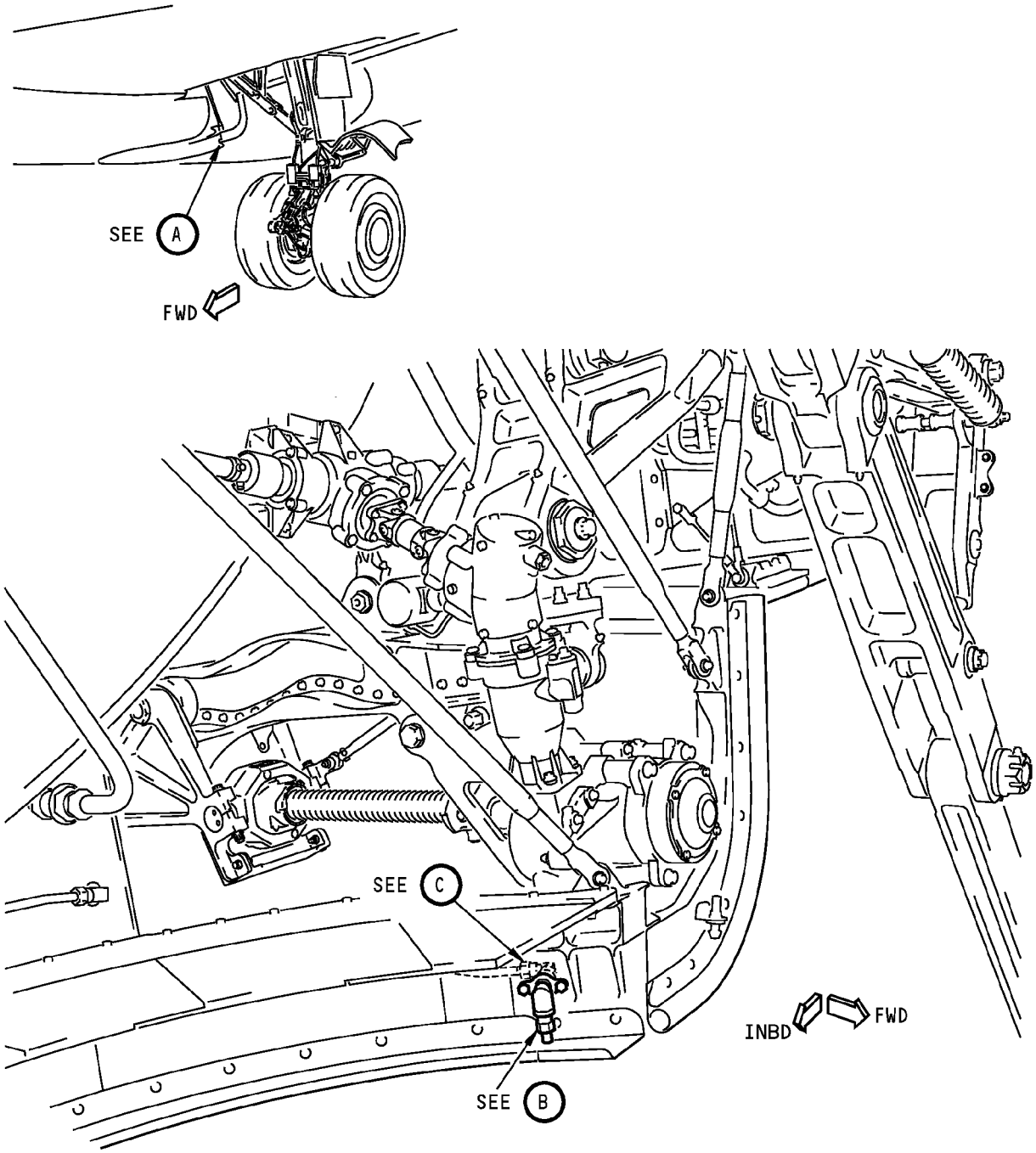
(5) Remove the bolts [3] and washers [2] that attach the frangible fitting assembly [1] to the structure.

SUBTASK 32-32-52-020-007

(6) Remove the frangible fitting assembly [1] from the airplane.

——————— END OF TASK ———————

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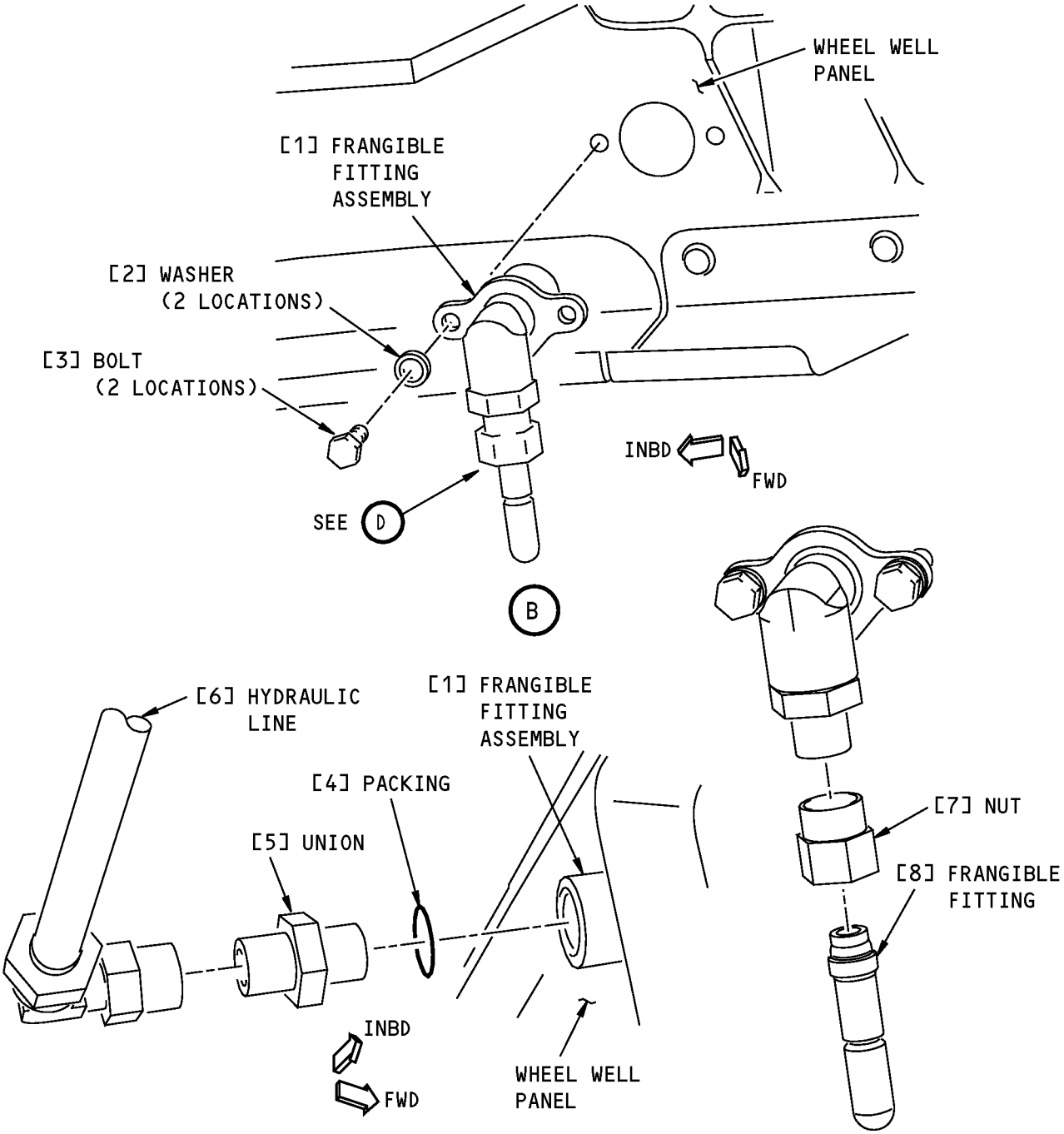


MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE IS SHOWN, RIGHT SIDE IS EQUIVALENT)

A

Main Gear Frangible Fitting Assembly
Figure 401 (Sheet 1 of 2)/32-32-52-990-801

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Main Gear Frangible Fitting Assembly
Figure 401 (Sheet 2 of 2)/32-32-52-990-801

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TASK 32-32-52-400-802

3. Main Gear Frangible Fitting Assembly Installation

(Figure 401)

A. References

Reference	Title
12-12-00-610-801	Hydraulic Reservoir Servicing (P/B 301)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	Packing	32-32-52-02-040	HAP ALL
5	Fitting	32-32-52-02-035	HAP ALL

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

E. Frangible Fitting Assembly Installation

SUBTASK 32-32-52-420-007

(1) Lubricate these items with fluid, D00153:

(a) packing [4]

(b) fitting [5].

SUBTASK 32-32-52-420-008

(2) Put the frangible fitting assembly [1] in its position in the structure.

SUBTASK 32-32-52-420-009

(3) Install the bolts [3] and washers [2].

SUBTASK 32-32-52-390-002

(4) Fay surface seal the frangible fitting assembly [1] with sealant, A00247.

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SUBTASK 32-32-52-080-003

(5) Remove the plug from the port on the frangible fitting assembly [1].

SUBTASK 32-32-52-420-010

(6) Install the packings [4] and the fittings [5] in the frangible fitting assembly [1].

(a) Tighten the fitting [5] to 215 ± 10.8 pound-inches (24.3 ± 1.2 newton-meters).

SUBTASK 32-32-52-080-004

(7) Remove the cap from the hydraulic line [6] and connect the hydraulic line [6] to the fitting [5].

SUBTASK 32-32-52-480-005

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(8) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-52-860-004

(9) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-32-52-700-003

(10) Use the override trigger to move the landing gear lever from the DN position to the UP position for three times.

NOTE: Hold the lever in each position for three seconds before you move the landing gear lever to the subsequent position.

SUBTASK 32-32-52-700-004

(11) Move the landing gear lever to the DN position.

SUBTASK 32-32-52-210-003

(12) Do a check for leakage with the hydraulic pressure applied.

SUBTASK 32-32-52-860-005

(13) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-52-210-004

(14) Make sure there are no leaks in the hydraulic connections.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 32-32-52-200-002

(1) Service the reservoirs if it is necessary, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

——————— END OF TASK ———————

TASK 32-32-52-000-802

4. Main Gear Frangible Fitting Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)

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(Continued)

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-32-52-480-006

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-52-860-006

(2) For hydraulic system A, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-32-52-580-002

(3) Install chocks around the tires of the main landing gear.

D. Removal of the Frangible Fitting

NOTE: Inspect the entire Frangible Fitting Assembly for damage. If the assembly is damaged, you must replace the entire assembly, not just the fitting.

SUBTASK 32-32-52-020-008

(1) Disconnect the nut [7] from the frangible fitting assembly [1].

SUBTASK 32-32-52-020-009

(2) Remove the frangible fitting [8] from the frangible fitting assembly [1].

SUBTASK 32-32-52-480-007

(3) Install a plug in the port on the frangible fitting assembly [1].

——————— END OF TASK ———————

TASK 32-32-52-400-803

5. Main Gear Frangible Fitting Installation

(Figure 401)

A. References

Reference	Title
12-12-00-610-801	Hydraulic Reservoir Servicing (P/B 301)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)

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(Continued)

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

C. Frangible Fitting Installation

SUBTASK 32-32-52-080-005

(1) Remove the plug from the port on the frangible fitting assembly [1].

SUBTASK 32-32-52-420-011

(2) Put the frangible fitting [8] in to the frangible fitting assembly [1].

SUBTASK 32-32-52-420-012

(3) Install the nut [7].

SUBTASK 32-32-52-420-013

(4) Tighten the nut [7] on the frangible fitting [8] to 270 ± 13.5 pound-inches (30.5 ± 1.5 newton-meters).

SUBTASK 32-32-52-480-008

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(5) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-52-860-007

(6) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-32-52-700-005

(7) Use the override trigger to move the landing gear lever from the DN position to the UP position for three times.

NOTE: Hold the lever in each position for three seconds before you move the landing gear lever to the subsequent position.

SUBTASK 32-32-52-700-006

(8) Move the landing gear lever to the DN position.

SUBTASK 32-32-52-210-005

(9) Do a check for leakage with the hydraulic pressure applied.

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SUBTASK 32-32-52-860-008

(10) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-52-210-006

(11) Make sure there are no leaks in the hydraulic connections.

D. Put the Airplane Back to Its Usual Condition

SUBTASK 32-32-52-200-003

(1) Service the reservoirs if it is necessary, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

END OF TASK

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MAIN GEAR TRANSFER CYLINDER - REMOVAL/INSTALLATION

1. General

A. This procedure has these two tasks:

(1) A removal of the transfer cylinder assy [1] for the main landing gear

(2) An installation of the transfer cylinder assy [1] for the main landing gear.

TASK 32-32-71-000-801

2. Main Gear Transfer Cylinder Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-32-71-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-71-860-001

(2) For hydraulic system A, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-32-71-580-001

(3) Install chocks around the tires of the main landing gear.

D. Main Gear Transfer Cylinder Removal

SUBTASK 32-32-71-020-001

(1) Disconnect the hydraulic lines from the transfer cylinder assy [1].

SUBTASK 32-32-71-480-002

(2) Install caps on the hydraulic lines and plugs in the transfer cylinder assy [1].

SUBTASK 32-32-71-020-002

(3) Remove the screws [3] and washers [4] from the clamps [2].

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SUBTASK 32-32-71-020-003

(4) Remove the clamps [2].

SUBTASK 32-32-71-020-004

(5) Remove the transfer cylinder assy [1] from the airplane.

SUBTASK 32-32-71-020-005

(6) Do these steps if the replacement transfer cylinder assy [1] does not have the unions [6] installed:

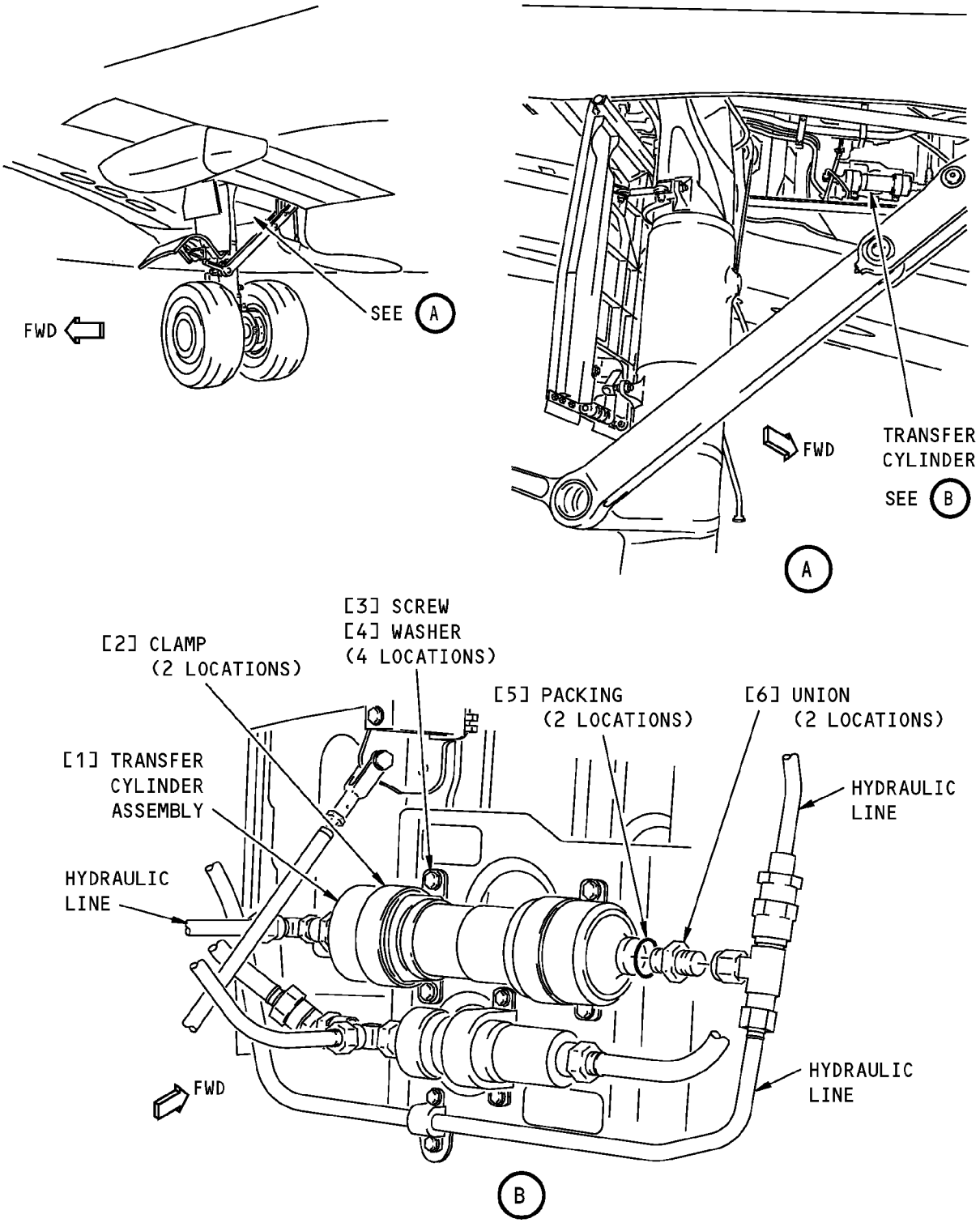
(a) Remove the unions [6] from the transfer cylinder assy [1].

(b) Remove and discard the packing [5].

(c) Install plugs in the ports on the transfer cylinder assy [1].

——————— END OF TASK ———————

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Main Landing Gear Transfer Cylinder Installation
Figure 401/32-32-71-990-801

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TASK 32-32-71-400-801

3. Main Gear Transfer Cylinder Installation

(Figure 401)

A. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
12-12-00-610-801	Hydraulic Reservoir Servicing (P/B 301)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Consumable Materials

Reference	Description	Specification
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Cylinder assembly	32-32-71-01A-045	HAP 001-013, 015-026, 028-030
		32-32-71-03-040	HAP 031-054, 101-999
5	Packing	32-32-71-01-060	HAP 031-054, 101-999
		32-32-71-01A-065	HAP 001-013, 015-026, 028-030
		32-32-71-03-060	HAP 031-054, 101-999
6	Union	32-32-71-01-055	HAP 031-054, 101-999
		32-32-71-01A-060	HAP 001-013, 015-026, 028-030
		32-32-71-03-055	HAP 031-054, 101-999

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

E. Main Gear Transfer Cylinder Installation

SUBTASK 32-32-71-420-001

(1) Do these steps if the replacement transfer cylinder does not have the unions installed:

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(a) Lubricate these items with fluid, D00153:

1) packings [5]

2) unions [6].

(b) Remove the plugs from the ports on the transfer cylinder assy [1].

(c) Install the cylinder assy [1] packings [5] and the cylinder assy [1]unions [6] in the transfer .

SUBTASK 32-32-71-610-001

(2) Fill the transfer cylinder assembly [1] from the two ends with fluid, D00153 and then put caps on the unions [6].

SUBTASK 32-32-71-420-002

(3) Put the transfer cylinder assy [1] in the clamps [2].

SUBTASK 32-32-71-420-003

(4) Adjust the position of the transfer cylinder assy [1] to align it with the hydraulic lines.

SUBTASK 32-32-71-080-001

(5) Remove the caps from the cylinder assy [1]unions [6] and connect the hydraulic lines to the transfer .

SUBTASK 32-32-71-420-004

(6) Install the screws [3] and washers [4] in the clamps [2].

SUBTASK 32-32-71-420-005

(7) Tighten the hydraulic lines.

F. Installation Test For the Main Gear Transfer Cylinder (Airplane on Jacks)

NOTE: This test does a check of the transfer cylinder with the airplane lifted on jacks.

SUBTASK 32-32-71-580-002

WARNING: REMOVE PERSONS AND EQUIPMENT FROM THE LANDING GEAR PATH. WHEN THE LANDING GEARS RETRACT, THEY CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-32-71-860-002

(2) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-32-71-480-004

WARNING: MAKE SURE THE DOWNLOCK PIN IS INSTALLED IN THE NOSE LANDING GEAR. WITHOUT THE DOWNLOCK PIN, THE NOSE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(3) Keep the downlock pin installed in the nose landing gear if maintenance work is necessary in the nose wheel well area or on the nose landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-71-080-003

(4) Remove the downlock pin for the nose landing gear if no maintenance work is necessary in the nose wheel well area or on the nose landing gear, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

SUBTASK 32-32-71-080-002

(5) Remove the downlock pins for the main landing gear. To do this, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

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SUBTASK 32-32-71-870-001

(6) Extend and retract the main landing gear several times.

NOTE: It will bleed the air from the transfer cylinder and the lines. Examine for the correct gear operation.

SUBTASK 32-32-71-210-001

(7) Examine the hydraulic connections for leaks.

SUBTASK 32-32-71-480-003

(8) Extend the main landing gear and install the downlock pins. To do this, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-71-860-003

(9) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-71-580-003

(10) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

G. Installation Test For the Main Gear Transfer Cylinder (Airplane not on Jacks)

NOTE: This test does a check of the transfer cylinder with the airplane on the ground, if jacks are not available.

SUBTASK 32-32-71-860-004

WARNING: MAKE SURE YOU INSTALL THE DOWNLOCK PINS IN THE LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IF THE LANDING GEARS RETRACT, IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO STRUCTURE.

(1) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-32-71-700-002

(2) Use the override trigger to move the landing gear lever from the DN position to the UP position for three times.

NOTE: Hold the lever in each position for three seconds before you move the landing gear lever to the subsequent position.

SUBTASK 32-32-71-700-003

(3) Move the landing gear lever to the DN position.

SUBTASK 32-32-71-210-002

(4) Do a check for leakage with the hydraulic pressure applied.

SUBTASK 32-32-71-860-005

(5) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-71-210-003

(6) Make sure there is no leaks in the hydraulic connections.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 32-32-71-200-001

(1) Service the reservoirs if it is necessary. To do this, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

END OF TASK

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MAIN LANDING GEAR HYDRAULIC FLOW REGULATOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the hydraulic flow regulator for the main landing gear

(2) An installation of the hydraulic flow regulator for the main landing gear

(a) The installation of the hydraulic flow regulator for the main landing gear includes an installation test of the hydraulic flow regulator.

TASK 32-32-72-000-801

2. Removal of the Hydraulic Flow Regulator for the Main Gear

Figure 401

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-32-72-480-001

WARNING: MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR AND THE TAIL SKID. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT, AND THE TAIL SKID CAN EXTEND. THIS CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-72-860-001

(2) For hydraulic system A, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

D. Hydraulic Flow Regulator Removal

SUBTASK 32-32-72-020-001

(1) Loosen the hydraulic lines to the hydraulic flow regulator [3].

SUBTASK 32-32-72-020-004

(2) Remove the screw [1]and the washer [2] that hold the hydraulic lines to the structure on both ends of the hydraulic flow regulator.

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SUBTASK 32-32-72-020-002

(3) Disconnect the hydraulic lines from the hydraulic flow regulator [3].

SUBTASK 32-32-72-480-002

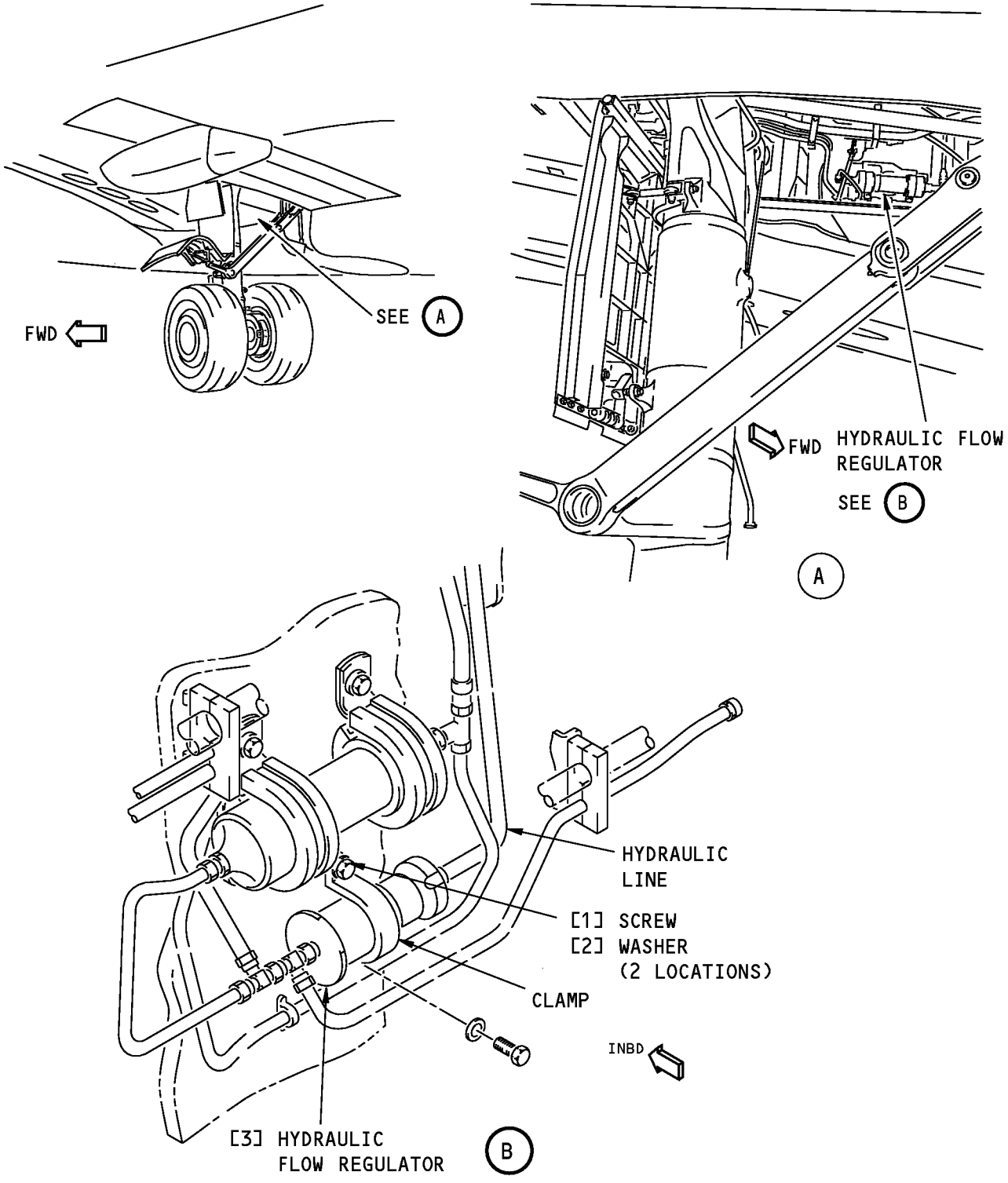
(4) Install caps on the hydraulic lines.

SUBTASK 32-32-72-020-005

(5) Remove the hydraulic flow regulator [3] from the airplane.

—————— END OF TASK ——————

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Main Gear Flow Regulator Installation
Figure 401/32-32-72-990-801

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TASK 32-32-72-400-801

3. Installation of the Hydraulic Flow Regulator for the Main Gear

A. References

Reference	Title
29-11-00-200-801	Hydraulic Fluid Check (P/B 601)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

C. Hydraulic Flow Regulator Installation

SUBTASK 32-32-72-420-001

(1) Put the hydraulic flow regulator [3] in position to align it with the hydraulic lines.

SUBTASK 32-32-72-080-001

(2) Remove the caps from the hydraulic lines and connect the hydraulic lines to the hydraulic flow regulator [3] .

SUBTASK 32-32-72-420-002

(3) Install the screws [1] and the washers [2] in the clamps for the hydraulic lines.

SUBTASK 32-32-72-420-003

(4) Tighten the hydraulic lines.

D. Installation Test of the Hydraulic Flow Regulator

SUBTASK 32-32-72-480-003

WARNING: MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR AND THE TAIL SKID. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT, AND THE TAIL SKID CAN EXTEND. THIS CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-72-860-002

(2) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

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SUBTASK 32-32-72-700-001

(3) Move the landing gear lever to the UP position, then to the DN position three times to cycle the hydraulic pressure.

NOTE: Hold the lever in each position for three seconds before you move the landing gear lever to the next position. This will bleed the air from the regulator and the lines.

NOTE: Use the override for the landing gear lever lock to allow you to move the control lever for the landing gear from the DN position to the UP position.

(a) Make sure the UP hose of the retract actuator moves to show that hydraulic pressure is applied when the control lever is moved to the UP position.

(b) Move the control lever to the DN position.

(c) Make sure the DOWN hose on the retract actuator actuator moves when you move the control lever from the UP position to the DOWN position.

SUBTASK 32-32-72-210-001

(4) Do a check for leakage with the hydraulic pressure applied.

SUBTASK 32-32-72-860-003

(5) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-72-210-002

(6) Make sure there are no leaks in the hydraulic connections.

SUBTASK 32-32-72-840-001

(7) Examine the hydraulic reservoirs for the correct servicing, do this task: Hydraulic Fluid Check, TASK 29-11-00-200-801.

(a) Service the reservoir if it is necessary.

END OF TASK

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MAIN GEAR DOWNLOCK SPRINGS - REMOVAL/INSTALLATION

1. General

A. This procedure has these two tasks:

(1) A removal of the downlock spring assy [1] for the main landing gear

(2) An installation of the downlock spring assy [1] for the main landing gear.

TASK 32-32-91-000-801

2. Main Gear Downlock Springs Removal

(Figure 401)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1866	Expander Set - Spring, Main Landing Gear (Part #: C32014-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

D. Prepare for the Removal

SUBTASK 32-32-91-480-001

WARNING: MAKE SURE THE DOWN LOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWN LOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the down lock pins are installed in the nose and main landing gear. To do this, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-91-860-001

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-91-580-001

(3) Install chocks around the tires of the main landing gear.

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E. Main Gear Downlock Springs Removal

SUBTASK 32-32-91-020-001

(1) Remove the pin [3], nut [4], and washer [2] from the outboard attachment end of the downlock spring assy [1].

SUBTASK 32-32-91-480-002

(2) Install the expander set, SPL-1866 on the forward downlock spring assy [1] to release the tension.

SUBTASK 32-32-91-020-002

(3) Remove the pin [3], nut [4], and washer [2] from the inboard attachment end of the forward downlock spring assy [1].

SUBTASK 32-32-91-480-003

(4) Install a plastic cap or tape on the threads on the inboard and outboard pins. This will protect the threads when you remove the forward downlock spring assy [1].

SUBTASK 32-32-91-020-003

(5) Disconnect the inboard and outboard ends of the forward downlock spring assy [1].

SUBTASK 32-32-91-020-004

(6) Install the, expander set, SPL-1866 on the aft downlock spring assy [1] and release the tension.

SUBTASK 32-32-91-020-005

(7) Remove the pin [3], nut [4], and washer [2] from the inboard attachment end of the aft downlock spring assy [1].

SUBTASK 32-32-91-020-006

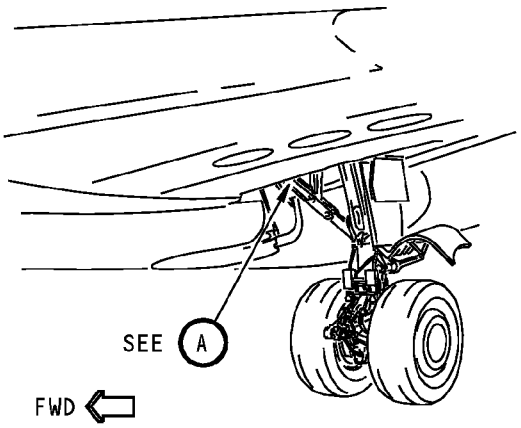
(8) Slide the two pins forward to disconnect the inboard and outboard ends of the aft downlock spring assy [1].

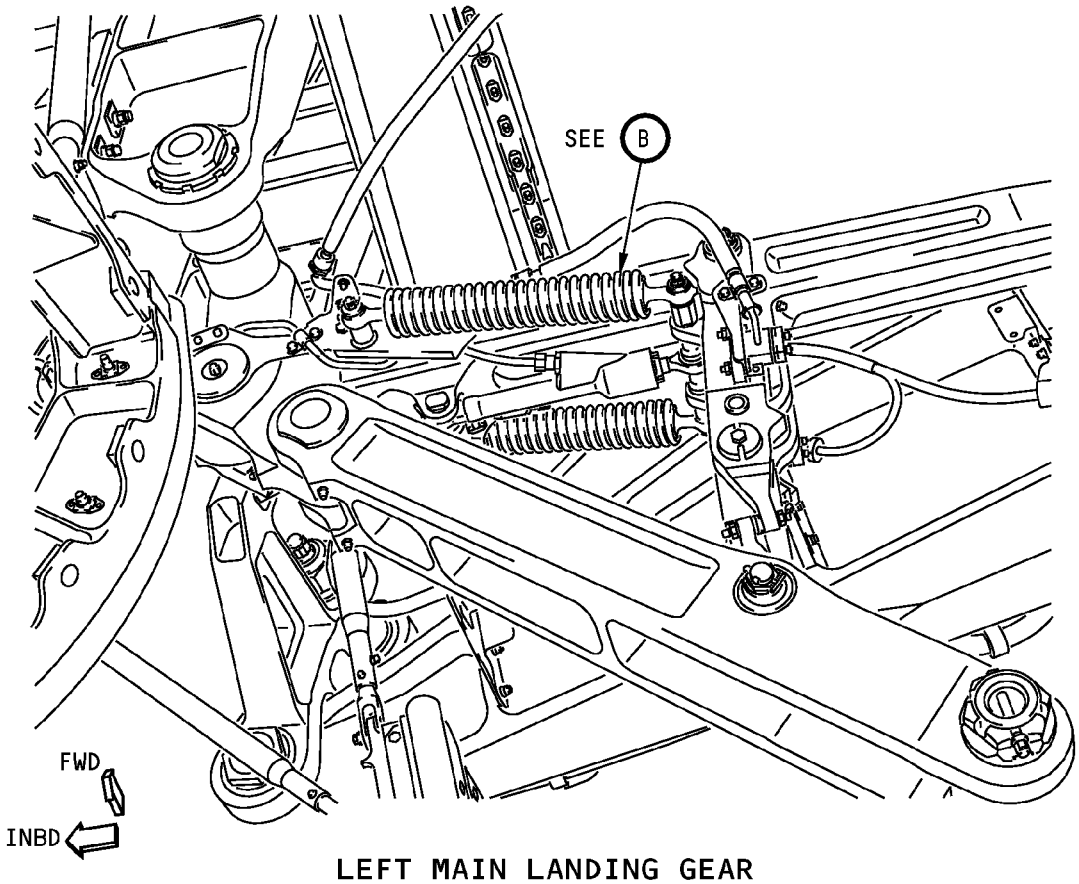
SUBTASK 32-32-91-020-007

(9) Remove aft downlock spring assy [1].

———————— END OF TASK ————————

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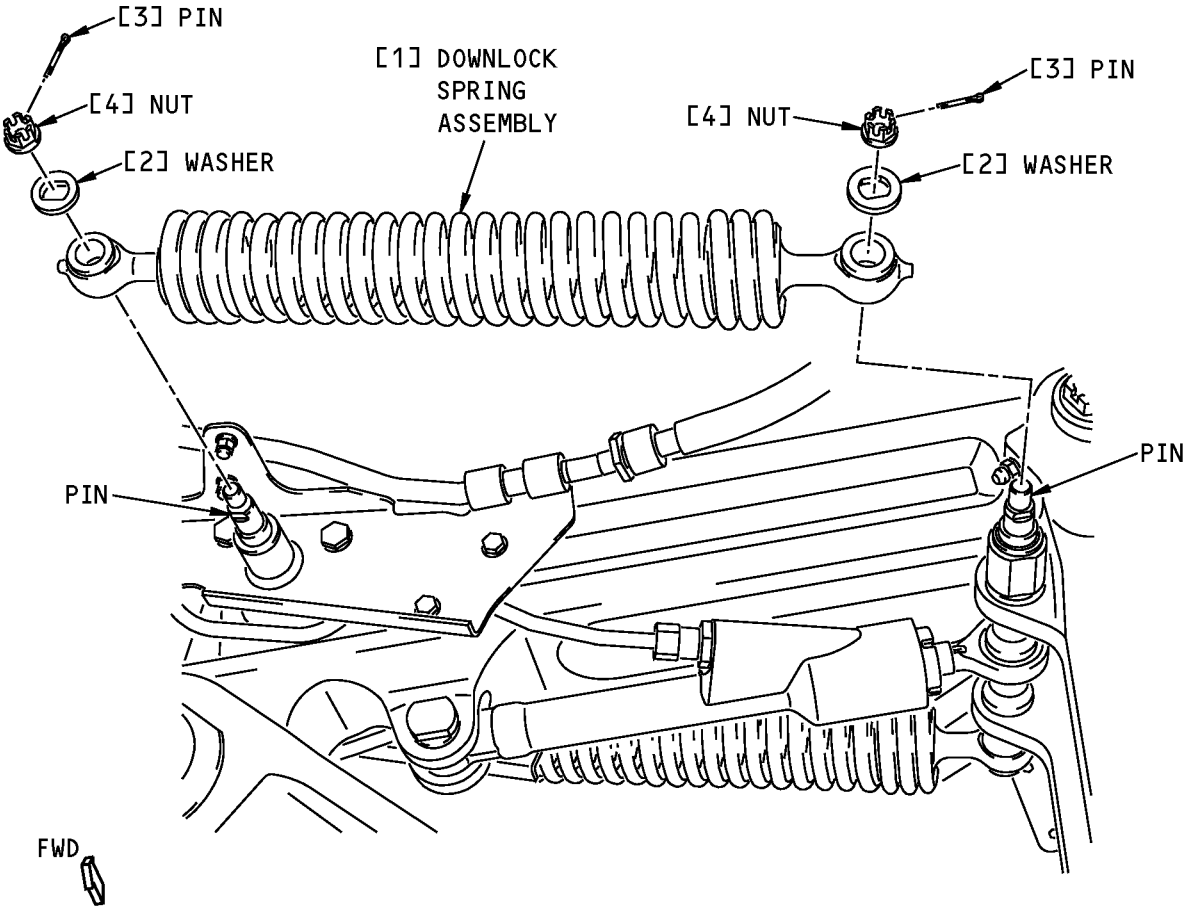


LEFT MAIN LANDING GEAR
(RIGHT MAIN LANDING GEAR IS EQUIVALENT)

A

Main Landing Gear Downlock Springs Installation
Figure 401 (Sheet 1 of 2)/32-32-91-990-801

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Main Landing Gear Downlock Springs Installation
Figure 401 (Sheet 2 of 2)/32-32-91-990-801

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TASK 32-32-91-400-801

3. Main Gear Downlock Spring Installation

(Figure 401)

A. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1866	Expander Set - Spring, Main Landing Gear (Part #: C32014-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

B. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

D. Main Gear Downlock Spring Installation

SUBTASK 32-32-91-600-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST BMS 3-27 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(1) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) on the parts for the forward downlock spring assy [1] that follow:

(a) the threads and thread reliefs of the inboard and outboard attach points

(b) washers [2]

(c) nuts [4].

SUBTASK 32-32-91-610-001

(2) Install the expander set, SPL-1866 on the forward downlock spring assy [1].

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SUBTASK 32-32-91-420-001

(3) Put the forward downlock spring assy [1] in position at the inboard and outboard attach points.

SUBTASK 32-32-91-420-002

(4) Install the washers [2] and nuts [4] on the inboard and outboard attach points for the forward downlock spring assy [1].

SUBTASK 32-32-91-420-007

(5) Tighten the nuts [4] to 15-25 pound-inches (1.7-2.8 newton-meters).

SUBTASK 32-32-91-420-003

(6) Loosen to the nearest castellation, if it is necessary, and install the pins [3].

SUBTASK 32-32-91-600-003

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST BMS 3-27 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(7) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) on the parts for the aft downlock spring assy [1] that follow:

(a) the threads and thread reliefs of the inboard and outboard attach points

(b) washers [2]

(c) nuts [4].

SUBTASK 32-32-91-480-005

(8) Install the expander set, SPL-1866 on the aft downlock spring assy [1] and extend it to attach on the outboard end.

SUBTASK 32-32-91-420-004

(9) Put the aft downlock spring assy [1] in position at the inboard and outboard attach points.

SUBTASK 32-32-91-420-005

(10) Install the washers [2] and nuts [4] on the inboard and outboard attach points for the aft downlock spring assy [1].

SUBTASK 32-32-91-420-008

(11) Tighten the nuts [4] to 15-25 pound-inches (1.7-2.8 newton-meters).

SUBTASK 32-32-91-420-006

(12) Loosen to the nearest castellation, if it is necessary, and install the pins [3].

——————— END OF TASK ———————

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MAIN GEAR BEAM HANGER PIN - REMOVAL/INSTALLATION

1. General

A. This procedure has these two tasks:

(1) A removal of the beam hanger pin for the main landing gear

(2) An installation of the beam hanger pin for the main landing gear.

TASK 32-32-93-000-801

2. Main Gear Beam Hanger Pin Removal

(Figure 401)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1870	Hoist - Main Landing Gear Retract Actuator (Part #: C32028-56, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Part #: C32028-58, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Part #: C32028-59, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32028-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32028-3, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

D. Access Panels

Number	Name/Location
551BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
551DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel
651BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
651DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

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E. Prepare for the Removal

SUBTASK 32-32-93-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear. To do this, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-93-860-001

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-93-580-001

(3) Install chocks around the tires of the main landing gear.

SUBTASK 32-32-93-010-001

(4) Open the applicable access panel:

Number	Name/Location
551BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
551DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel
651BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
651DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

F. Main Gear Beam Hanger Pin Removal

SUBTASK 32-32-93-980-001

(1) Use the hoist, SPL-1870 to hold the head end of the retract actuator in position.

SUBTASK 32-32-93-020-001

(2) Remove these parts to disconnect the pin [1] from the structure:

(a) pin [4]

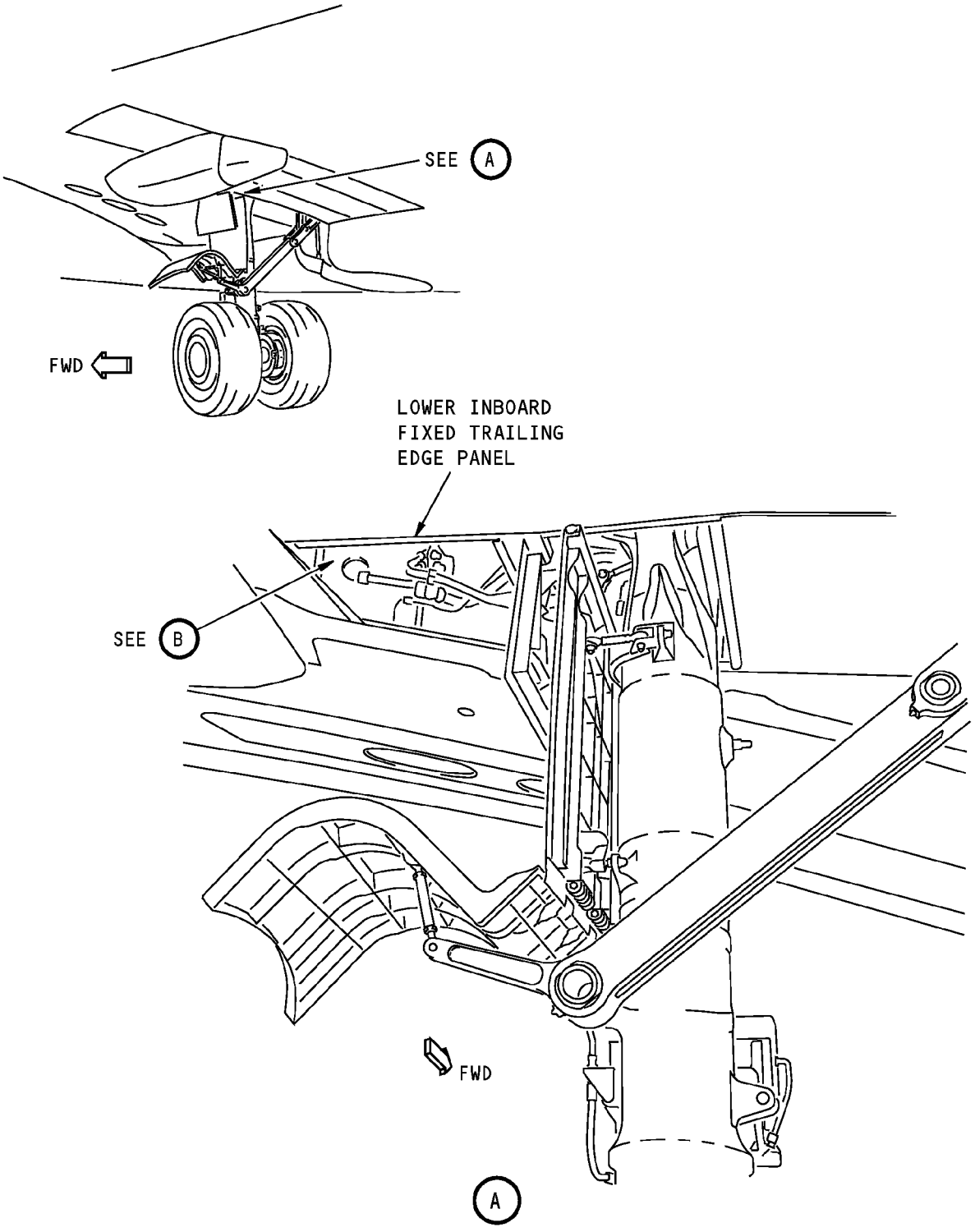
(b) nut [3]

(c) washer [2]

(d) pin [1].

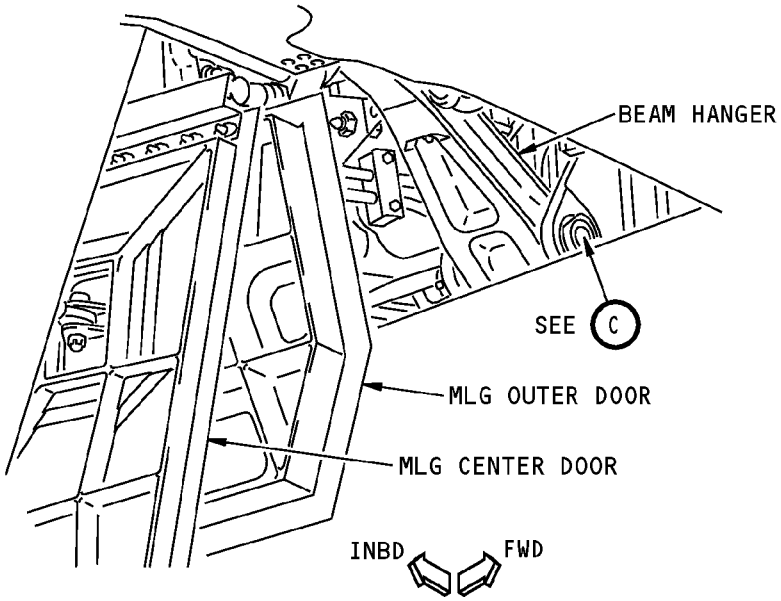
END OF TASK

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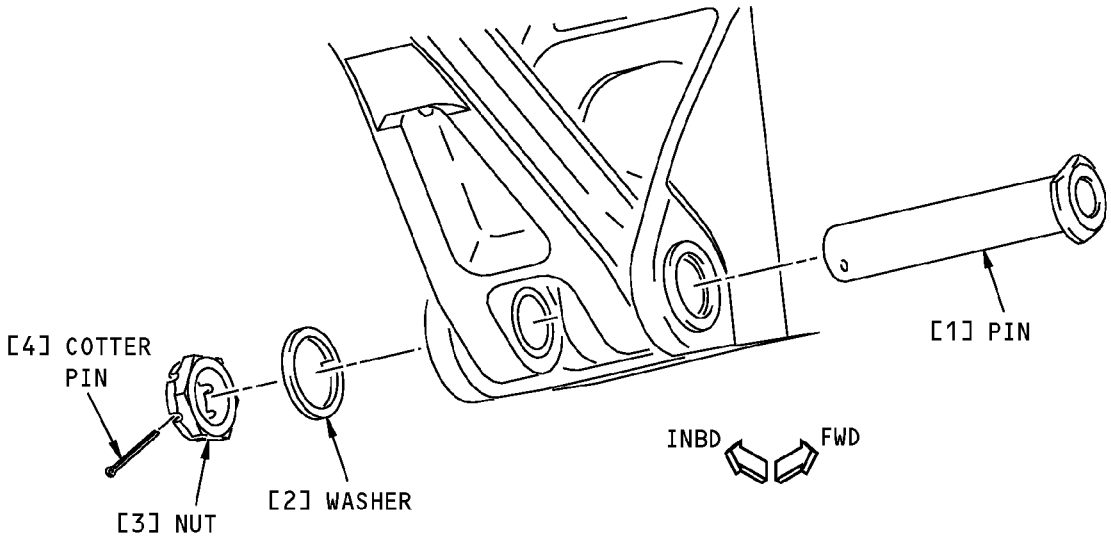


Main Landing Gear Beam Hanger Pin Installation
Figure 401 (Sheet 1 of 2)/32-32-93-990-801

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B



C

Main Landing Gear Beam Hanger Pin Installation
Figure 401 (Sheet 2 of 2)/32-32-93-990-801

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TASK 32-32-93-400-801

3. Main Gear Beam Hanger Pin Installation

(Figure 401)

A. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-32-00-710-801	Main Landing Gear Operational Test (P/B 501)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1870	Hoist - Main Landing Gear Retract Actuator (Part #: C32028-56, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Part #: C32028-58, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Part #: C32028-59, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32028-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32028-3, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00633	Grease - Aircraft General Purpose	BMS3-33

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Pin	32-11-51-03-015	HAP 001-013, 015-026, 028-030
		32-32-93-01-015	HAP ALL
4	Pin	32-11-51-03-010	HAP 001-013, 015-026, 028-052, 054, 101-999
		32-32-93-01-010	HAP ALL

E. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

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(Continued)

Zone	Area
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

F. Access Panels

Number	Name/Location
551BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
551DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel
651BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
651DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

G. Main Gear Beam Hanger Pin Installation

SUBTASK 32-32-93-100-001

(1) Clean the surfaces of these items:

(a) Attachment fitting on the beam hanger

(b) pin [1]

(c) washer [2]

(d) nut [3].

SUBTASK 32-32-93-600-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST BMS 3-27 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(2) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) to the thread reliefs and threads on the pin [1] and nut [3], and the face of the washer [2].

SUBTASK 32-32-93-640-001

(3) Apply grease, D00633 to the chrome surface on the pin [1].

SUBTASK 32-32-93-420-001

(4) Put the beam hanger in its position in the bracket on the structure.

SUBTASK 32-32-93-420-002

(5) Install these parts that connect the beam hanger to the bracket on the wing structure:

(a) pin [1]

(b) washer [2]

(c) nut [3].

1) Tighten the nut [3] to 250-300 pound-inches (28-34 newton-meters) above the run-on torque.

2) If it is necessary, loosen the nut [3] to align the nearest castellation.

(d) Install the new pin [4].

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SUBTASK 32-32-93-080-001

(6) Remove the hoist, SPL-1870.

SUBTASK 32-32-93-410-001

(7) Close the applicable access panel:

Number	Name/Location
551BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel
651BT	Upper Inboard Fixed Trailing Edge, MLG Actuator Access Panel

H. Put the Airplane Back to Its Usual Condition

SUBTASK 32-32-93-580-002

WARNING: REMOVE PERSONS AND EQUIPMENT FROM THE LANDING GEAR PATH. WHEN THE LANDING GEARS RETRACT, THEY CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-32-93-860-002

(2) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-32-93-080-002

(3) For the main landing gear, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

SUBTASK 32-32-93-870-001

WARNING: MAKE SURE YOU INSTALL THE DOWNLOCK PINS IN THE NOSE LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT IF THE GEAR RETRACTS.

(4) For the main landing gear, do this task: Main Landing Gear Operational Test, TASK 32-32-00-710-801.

SUBTASK 32-32-93-480-002

(5) For the main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-32-93-860-003

(6) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-32-93-580-003

(7) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

SUBTASK 32-32-93-410-002

(8) Close the applicable access panel:

Number	Name/Location
551DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel
651DB	Lower Inboard Fixed Trailing Edge, Lube Actuator & MLG Beam Outboard Attach Pin Access Panel

END OF TASK

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NOSE GEAR EXTENSION AND RETRACTION - ADJUSTMENT/TEST

1. General

A. This procedure has these two tasks:

(1) The first task does an extension/retraction test of the nose landing gear after you replaced a component in the extension/retraction system.

(2) The second task does an operational test of the nose landing gear.

B. The times for gear retraction in the operational test depend on the hydraulic flow rate. The retraction times given in this procedure are based on a minimum flow rate of 19 gpm at a hydraulic system pressure of 3000 +/-150 psi. Hydraulic power can be supplied by a hydraulic test bench or the engine driven pumps to give this minimum flow rate.

NOTE: System losses due to pressure drops and overall hydraulic system internal leakage may require a higher flow rate to achieve optimum retraction times. A hydraulic cart with a higher flow rate capacity is necessary to achieve the stated retraction times.

C. The electric motor driven pump (EMDP) can be used for the component replacement test. When you use the EMDP, operate only one landing gear at a time. The EMDP provides a hydraulic flow rate of approximately 6 gpm. This lower rate causes slower landing gear operation, especially if you operate more than one gear at the same time. Do not use the EMDP to measure extension/retraction times.

TASK 32-33-00-710-802

2. Nose Landing Gear Test - Component Replacement

(Figure 501)

A. References

Reference	Title
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
07-11-21-580-802	Lower the Airplane Nose Off of the Jack (P/B 201)
20-40-11-910-801	Static Grounding (P/B 201)
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-10-740-801	Proximity Switch Electronics Unit (PSEU) BITE Test - Ground Test (P/B 501)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

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C. Prepare for the Test

SUBTASK 32-33-00-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-00-760-002

(2) Do this task: Static Grounding, TASK 20-40-11-910-801.

SUBTASK 32-33-00-580-003

(3) Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

SUBTASK 32-33-00-860-026

(4) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-33-00-860-027

(5) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
B	3	C01312	ENGINE 1 RUN/PWR

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	16	C01432	LANDING GEAR ALTN EXTEND SOL
E	12	C00314	INDICATOR MASTER DIM SECT 2
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	13	C01179	INDICATOR MASTER DIM SECT 7

SUBTASK 32-33-00-860-029

(6) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 32-33-00-080-002

(7) For the nose landing gear, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

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SUBTASK 32-33-00-860-030

(8) Make sure the control lever for the landing gear is in the DN position.

SUBTASK 32-33-00-860-031

(9) Make sure that all the gear red lights on the P2-3 panel are off.

SUBTASK 32-33-00-860-032

(10) Make sure that all the gear green lights on the P2-3 panel are on.

SUBTASK 32-33-00-710-007

(11) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-33-00-860-033

WARNING: MAKE SURE THE CIRCUIT BREAKER FOR THE WEATHER RADAR SYSTEM IS OPEN BEFORE YOU MOVE THE THRUST LEVERS. THE FORWARD MOVEMENT OF A THRUST LEVER CAN CAUSE THE AUTOMATIC OPERATION OF THE WEATHER RADAR SYSTEM. THE OPERATION OF THIS SYSTEM CAN CAUSE SERIOUS INJURY TO PERSONS AND DAMAGE TO EQUIPMENT IN THE AREA OF THE NOSE RADOME.

(12) Move the two thrust levers to the full forward position.

D. Test of Normal Extension and Retraction

SUBTASK 32-33-00-710-008

WARNING: MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE NOSE LANDING GEAR. FAST MOVEMENT OF THE NOSE LANDING GEAR CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Operate the override trigger and move the control lever for the landing gear to UP. Make sure the nose gear retracts.

SUBTASK 32-33-00-860-034

(2) Make sure the green light and the red light for the nose landing gear are off.

SUBTASK 32-33-00-860-035

(3) Move the control lever for the landing gear to the OFF position.

SUBTASK 32-33-00-860-036

(4) Make sure the green light and the red light for the nose landing gear are off.

SUBTASK 32-33-00-710-009

(5) Move the control lever to the DN position and make sure the nose gear extends.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 32-33-00-840-001

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

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SUBTASK 32-33-00-860-038

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-33-00-480-004

(3) For the nose landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-00-580-004

(4) Do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

SUBTASK 32-33-00-070-001

(5) To check the PSEU for stored faults using the self test, do this task: Proximity Switch Electronics Unit (PSEU) BITE Test - Ground Test, TASK 32-09-10-740-801.

——————— END OF TASK ———————

TASK 32-33-00-710-801

3. Operational Test for the Nose Landing Gear

(Figure 501)

A. References

Reference	Title
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
07-11-21-580-802	Lower the Airplane Nose Off of the Jack (P/B 201)
12-12-00-610-801	Hydraulic Reservoir Servicing (P/B 301)
20-40-11-910-801	Static Grounding (P/B 201)
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-10-740-801	Proximity Switch Electronics Unit (PSEU) BITE Test - Ground Test (P/B 501)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare for the Test

SUBTASK 32-33-00-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

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SUBTASK 32-33-00-760-001

(2) Do this task: Static Grounding, TASK 20-40-11-910-801.

SUBTASK 32-33-00-580-001

(3) Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

SUBTASK 32-33-00-860-001

(4) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-33-00-860-002

(5) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
B	3	C01312	ENGINE 1 RUN/PWR

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	16	C01432	LANDING GEAR ALTN EXTEND SOL
E	12	C00314	INDICATOR MASTER DIM SECT 2
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	13	C01179	INDICATOR MASTER DIM SECT 7

SUBTASK 32-33-00-860-004

(6) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 32-33-00-080-001

(7) For the nose landing gear, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

SUBTASK 32-33-00-860-006

(8) Make sure the control lever for the landing gear is in the DN position.

SUBTASK 32-33-00-860-007

(9) Make sure that all the gear red lights on the P2-3 panel are off.

SUBTASK 32-33-00-860-008

(10) Make sure that all the gear green lights on the P2-3 panel are on.

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SUBTASK 32-33-00-710-001

(11) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-33-00-860-009

WARNING: MAKE SURE THE CIRCUIT BREAKER FOR THE WEATHER RADAR SYSTEM IS OPEN BEFORE YOU MOVE THE THRUST LEVERS. THE FORWARD MOVEMENT OF A THRUST LEVER CAN CAUSE THE AUTOMATIC OPERATION OF THE WEATHER RADAR SYSTEM. THE OPERATION OF THIS SYSTEM CAN CAUSE SERIOUS INJURY TO PERSONS AND DAMAGE TO EQUIPMENT IN THE AREA OF THE NOSE RADOME.

(12) Move the two thrust levers to the full forward position.

D. Do the Test

SUBTASK 32-33-00-710-002

WARNING: MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE NOSE LANDING GEAR. FAST MOVEMENT OF THE NOSE LANDING GEAR CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Operate the override trigger and move the control lever for the landing gear to UP. Measure the time for retraction of the nose gear.

NOTE: Measure the nose gear retraction time from the time the control lever is put in the UP position until the red "disagree" light for the nose gear goes off. Use the nose gear red "disagree" light to measure the retraction time.

(a) Make sure the nose landing gear is up and locked in 9.0 seconds or less.

SUBTASK 32-33-00-860-010

(2) Make sure the green light and the red light for the nose landing gear are off.

SUBTASK 32-33-00-860-011

(3) Move the control lever for the landing gear to the OFF position.

SUBTASK 32-33-00-860-012

(4) Make sure the green light and the red light for the nose landing gear are off.

SUBTASK 32-33-00-710-003

(5) Move the control lever to the DN position and measure the time for extension of the nose gear.

NOTE: Measure the nose gear extension time from the time the control lever is put in the DN position until the landing gear green light for the nose gear comes on. Use the nose gear green light to measure the extension time.

(a) Make sure the nose landing gear is down and locked in 13.0 seconds or less.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 32-33-00-860-024

(1) For hydraulic systems A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-33-00-480-002

(2) For the nose landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-00-610-001

(3) If it is necessary, fill the hydraulic reservoir with hydraulic fluid. To do this, do this task: (Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

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SUBTASK 32-33-00-580-002

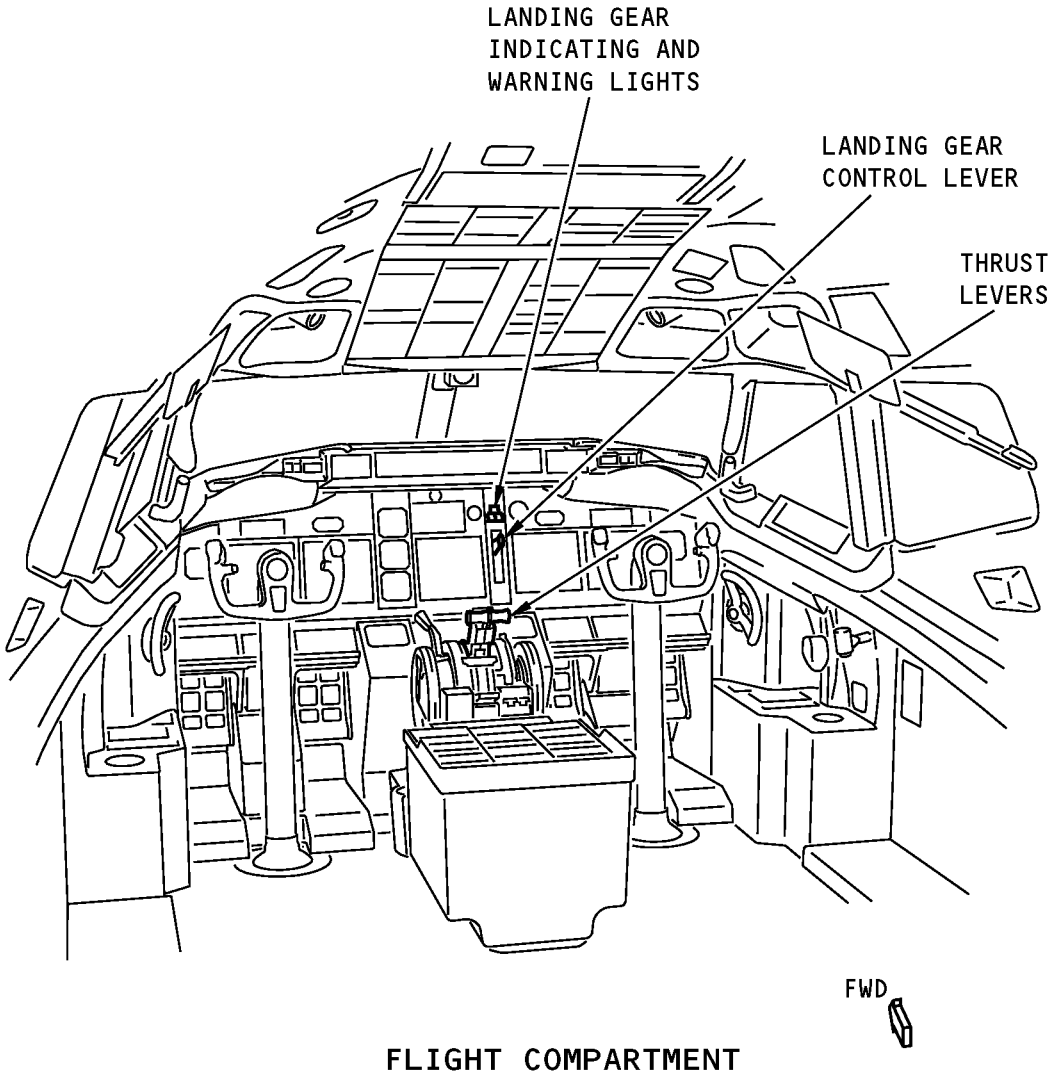
(4) Do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

SUBTASK 32-33-00-070-002

(5) To check the PSEU for stored faults using the self test, do this task: Proximity Switch Electronics Unit (PSEU) BITE Test - Ground Test, TASK 32-09-10-740-801.

END OF TASK

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Nose Gear Extension and Retraction Test
Figure 501/32-33-00-990-801

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NOSE GEAR RETRACT ACTUATOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the retract actuator (referred to at the actuator [1]) for the nose gear

(2) An installation of the retract actuator [1] for the nose gear.

(a) The installation of the retract actuator [1] for the nose gear includes two installation tests. An installation test with the airplane on jacks or an installation test with the airplane off jacks. You can choose to use either of the installation test methods.

TASK 32-33-11-000-801

2. Nose Gear Retract Actuator Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-33-11-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-11-860-001

(2) For hydraulic system A, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-33-11-580-001

(3) Install chocks around the tires of the nose landing gear.

D. Nose Gear Retract Actuator Removal

SUBTASK 32-33-11-020-001

(1) Disconnect the hydraulic UP-hose at the bracket on the retract actuator [1].

SUBTASK 32-33-11-020-002

(2) Disconnect the hydraulic DOWN-hose at the fitting on the retract actuator [1].

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SUBTASK 32-33-11-480-002

(3) Install caps on the hydraulic hoses and the fittings on the retract actuator [1].

SUBTASK 32-33-11-020-003

(4) Hold the retract actuator [1] in position and remove these parts to disconnect the rod end of the actuator [1] from the drag brace upper link (Detail B):

(a) pin [11], nut [10], washer [12], and bolt [14]

(b) castellated nut [13], washer [9], pin [8], and washers [15].

SUBTASK 32-33-11-020-004

(5) Hold the retract actuator [1] and remove these parts to disconnect the head end of the actuator [1] from the top fitting (Detail C):

(a) pin [11], nut [10], washer [12], and bolt [14]

(b) castellated nut [13], washer [9], pin [16], and washers [17].

SUBTASK 32-33-11-020-005

(6) Remove the retract actuator [1] from the airplane.

SUBTASK 32-33-11-020-006

(7) If the replacement retract actuator [1] does not have the tube assembly installed, remove these parts from the retract actuator [1] you removed:

(a) reducer [2]

(b) screws [4], washers [5], and clamp [3]

(c) tube assembly [6]

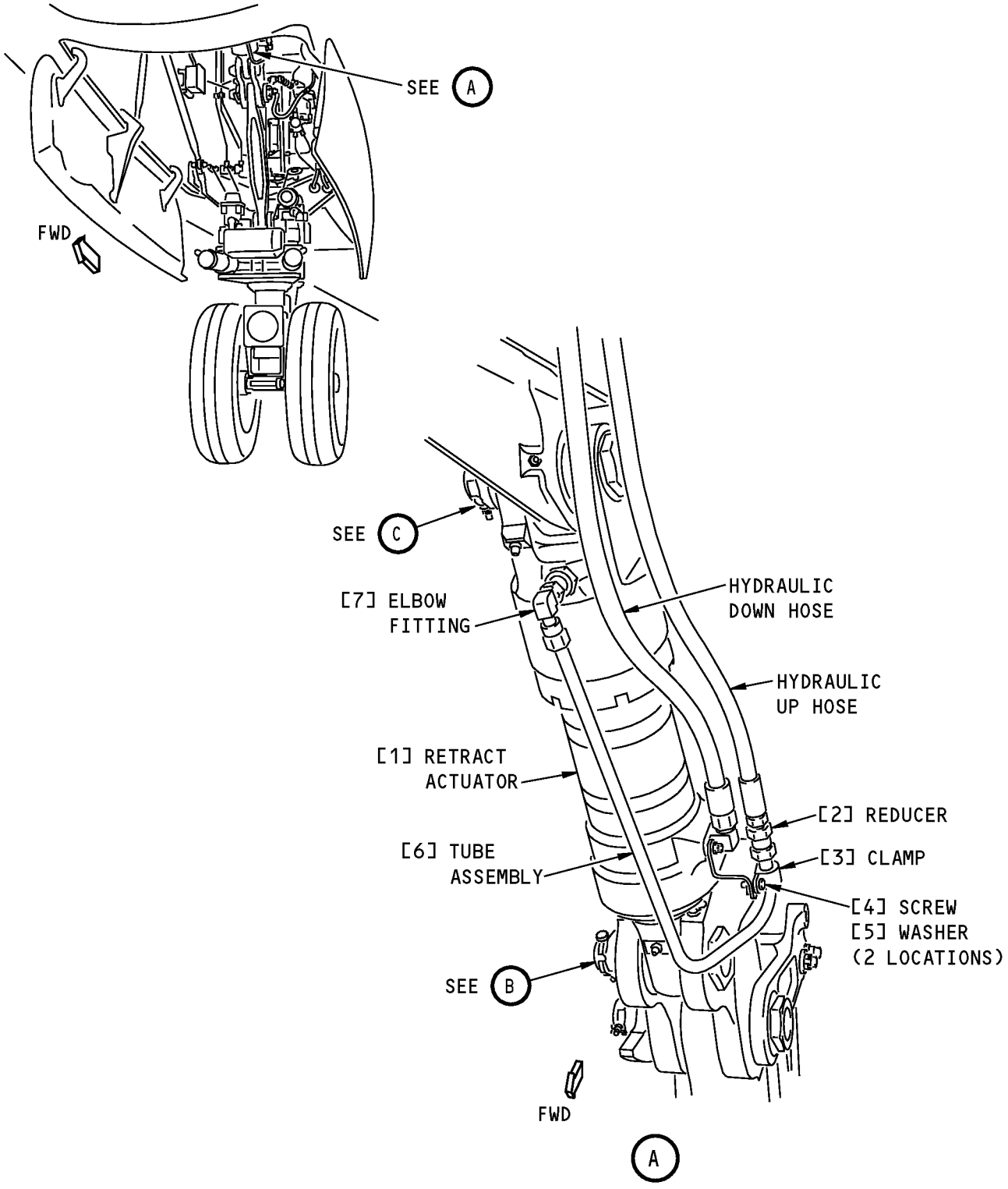
(d) elbow fitting [7].

SUBTASK 32-33-11-480-003

(8) Install a plug in the extend port of the retract actuator [1].

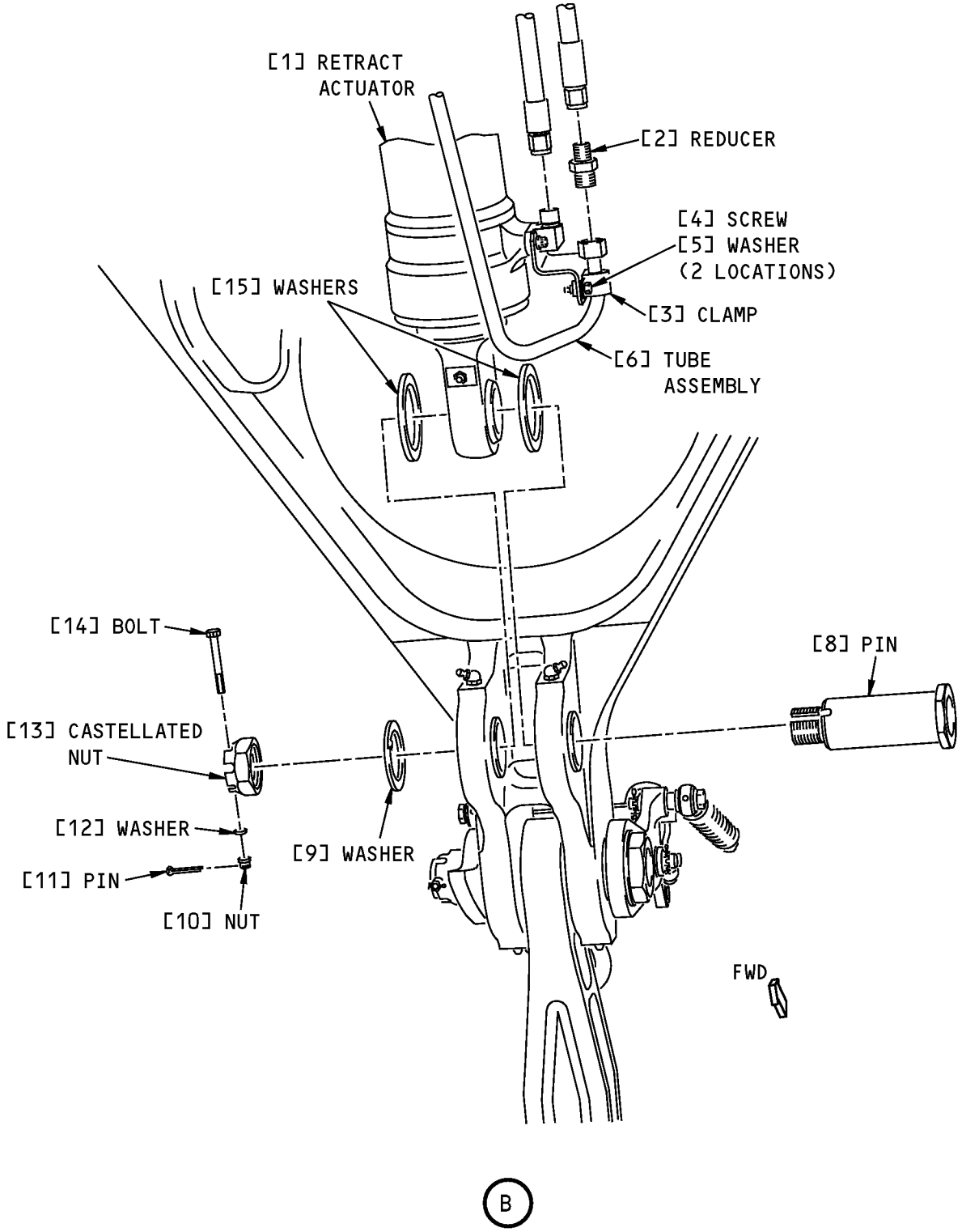
END OF TASK

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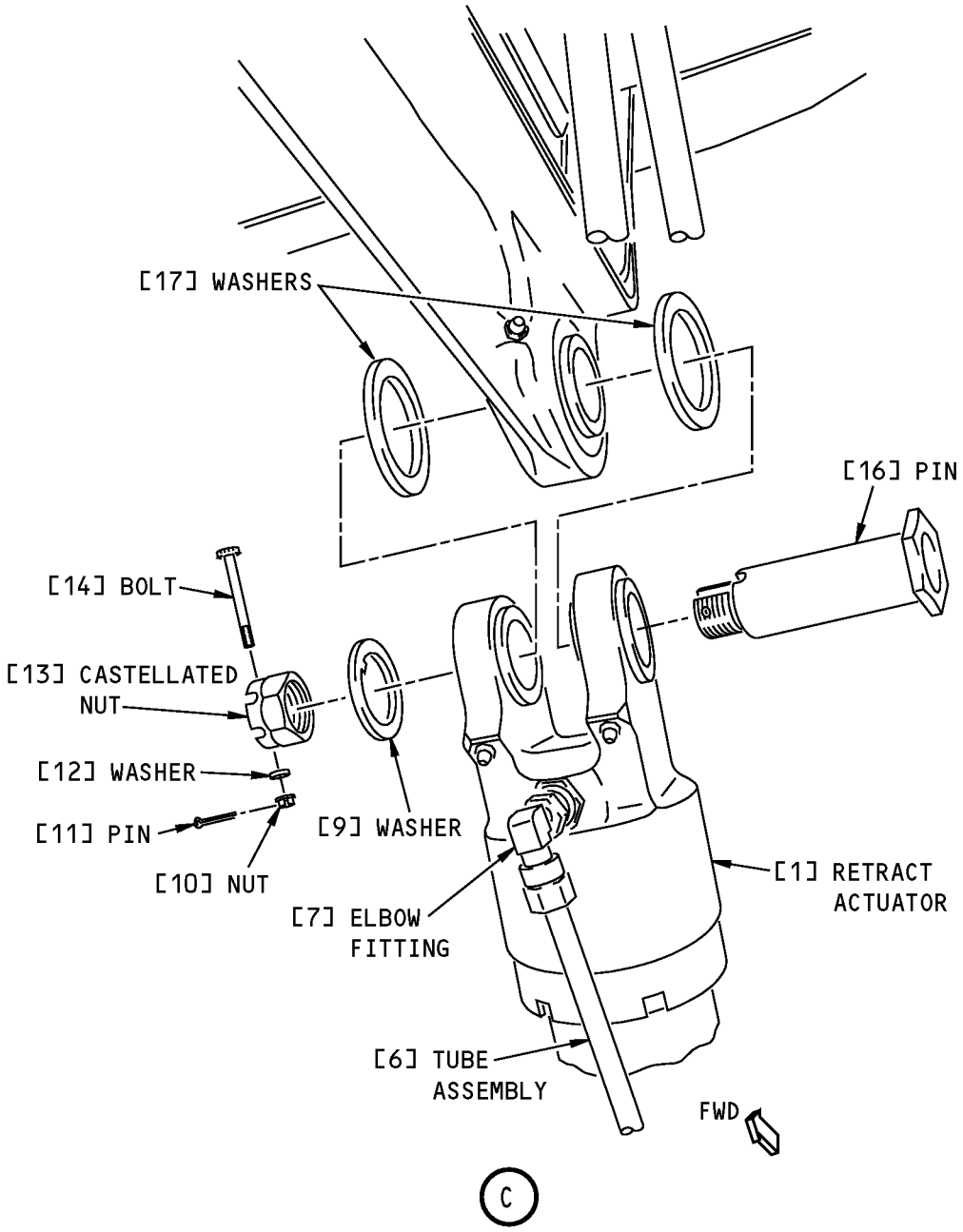
Nose Gear Retract Actuator Installation
Figure 401 (Sheet 1 of 3)/32-33-11-990-801

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Nose Gear Retract Actuator Installation
Figure 401 (Sheet 2 of 3)/32-33-11-990-801

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Nose Gear Retract Actuator Installation
Figure 401 (Sheet 3 of 3)/32-33-11-990-801

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TASK 32-33-11-400-801

3. Nose Gear Retract Actuator Installation

(Figure 401)

A. References

Reference	Title
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
07-11-21-580-802	Lower the Airplane Nose Off of the Jack (P/B 201)
12-12-00-610-801	Hydraulic Reservoir Servicing (P/B 301)
29-11-00-200-801	Hydraulic Fluid Check (P/B 601)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)
D00633	Grease - Aircraft General Purpose	BMS3-33

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Actuator	32-33-11-01-036	HAP ALL
11	Pin	32-33-11-01-017	HAP ALL

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

E. Procedure

SUBTASK 32-33-11-080-001

(1) Remove the plugs from the port and the fitting on the retract actuator [1].

SUBTASK 32-33-11-020-007

(2) If the replacement retract actuator [1] does not have the tube assembly installed, install these parts from the actuator [1] you removed:

(a) elbow fitting [7]

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(b) tube assembly [6]

(c) screws [4], washers [5], and clamp [3]

(d) reducer [2].

SUBTASK 32-33-11-600-001

(3) Apply grease, D00633 to these areas before installation:

(a) The bushing bore on the head end of the retract actuator [1] and the upper fitting

(b) The outer diameter of the pins [8, 16]

(c) The attach fitting bushing bore on the drag brace upper link.

SUBTASK 32-33-11-980-001

(4) Make sure the retract actuator [1] is in the retracted position.

SUBTASK 32-33-11-610-001

(5) Make sure the retract actuator [1] is full of fluid, D00153.

(a) Put a cap on the hydraulic fitting on the retract actuator [1] where the DOWN-hose will attach.

(b) Put a cap on the fitting on the retract actuator [1] where the UP-hose will attach.

SUBTASK 32-33-11-980-002

(6) Put the retract actuator [1] in its position on the nose landing gear.

SUBTASK 32-33-11-420-004

(7) Hold the retract actuator [1] and do these steps to connect the head end of the retract actuator [1] to the top fitting (Detail C):

(a) Install the pin [16] and washers [17].

NOTE: The head end of pin [16] must be on the same side as the hydraulic hoses to prevent physical interference.

(b) Install the washer [9].

SUBTASK 32-33-11-620-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(8) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

(a) The threads and thread reliefs of the pin [16]

(b) The threads and thread reliefs of the castellated nut [13]

(c) The outside face of the washer [9].

SUBTASK 32-33-11-420-005

(9) Install the castellated nut [13]

(a) Tighten the castellated nut [13] to 50 ft-lb (68 N·m) – 58 ft-lb (79 N·m).

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(b) Loosen the castellated nut [13] to align the nearest castellations with the hole in the pin [16].

SUBTASK 32-33-11-420-009

(10) Install the bolt [14], washer [12], and nut [10]

SUBTASK 32-33-11-420-010

(11) Install a new pin [11].

SUBTASK 32-33-11-800-001

(12) Wipe off the excess compound, C00913.

SUBTASK 32-33-11-420-002

(13) Hold the retract actuator [1] and do these steps to connect the rod end of the actuator [1] to the drag brace upper link (Detail B):

(a) Install the pin [8] and washers [15]

(b) Install the washer [9].

SUBTASK 32-33-11-620-002

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(14) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to these items:

(a) The threads and thread reliefs of the pin [8]

(b) The threads and thread reliefs of the castellated nut [13]

(c) The outside face of the washer [9].

SUBTASK 32-33-11-420-006

(15) Install the castellated nut [13]

(a) Tighten the castellated nut [13] to 50 ft-lb (68 N·m) - 58 ft-lb (79 N·m).

(b) Loosen the castellated nut [13] to align the nearest castellations with the hole in the pin [8].

SUBTASK 32-33-11-420-007

(16) Install the bolt [14], washer [12], and nut [10].

SUBTASK 32-33-11-420-008

(17) Install the pin [11].

SUBTASK 32-33-11-800-002

(18) Wipe off the excess compound, C00913.

SUBTASK 32-33-11-080-002

(19) Remove the caps from the hydraulic hoses.

SUBTASK 32-33-11-420-003

(20) Connect the hydraulic hoses to the retract actuator [1].

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SUBTASK 32-33-11-600-002

(21) Apply grease, D00633 to the lubrication fittings to lubricate these items:

(a) The head end bushings of the retract actuator [1]

(b) The bearing of the attach fitting for the head end

(c) The rod end bearing of the retract actuator [1]

(d) The bushings of the attach fitting for the rod end.

F. Installation Test for the Nose Gear Retract Actuator

NOTE: This test gives two methods to do a check of the nose gear retract actuator [1]. Method one is with the airplane lifted on jacks and method two is with the airplane on the ground if jacks are not available.

SUBTASK 32-33-11-700-005

(1) Installation test with the airplane on jacks (method one).

WARNING: REMOVE PERSONS AND EQUIPMENT FROM THE NOSE GEAR PATH. WHEN THE NOSE GEAR RETRACTS, IT CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) Lift the airplane for nose gear retraction, do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

(b) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

(c) Remove the downlock pin for the nose landing gear, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

WARNING: MAKE SURE YOU INSTALL THE DOWNLOCK PINS IN THE MAIN LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT IF THE GEAR RETRACTS.

(d) Use the override trigger and move the control lever for the landing gear from the DN position to the UP position and back to DN seven times.

NOTE: It will bleed the air from the actuator [1] and the lines. Examine for the correct gear operation.

(e) Examine the hydraulic connections for leaks.

(f) Extend the nose landing gear and install the downlock pin, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

(g) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

(h) Do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

(i) Examine the hydraulic reservoirs for the correct servicing, do this task: Hydraulic Fluid Check, TASK 29-11-00-200-801.

1) Do a servicing if it is necessary, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

SUBTASK 32-33-11-700-006

(2) Installation test with the airplane off jacks (method two).

(a) Make sure you installed the hydraulic hoses correctly.

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WARNING: MAKE SURE YOU INSTALL THE DOWNLOCK PINS IN THE LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IF THE LANDING GEARS RETRACT, IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO STRUCTURE.

(b) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

(c) Use the override trigger to move the control lever for the landing gear from the DN position to the UP position for three times.

NOTE: Hold the lever in each position for three seconds before you move the landing gear lever to the subsequent position.

(d) Make sure the retract actuator [1] tries to extend when you select the UP position.

(e) Move the control lever for the landing gear to the DN position.

(f) Do a check for leakage with the hydraulic pressure applied.

(g) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

(h) Make sure there are no leaks in the hydraulic connections.

(i) Examine the hydraulic reservoirs for the correct servicing, do this task: Hydraulic Fluid Check, TASK 29-11-00-200-801.

1) Do a servicing if it is necessary, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

——————— END OF TASK ———————

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NOSE GEAR LOCK ACTUATOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the lock actuator [2] for the nose landing gear

(2) An installation of the lock actuator [2] for the nose landing gear.

(a) The installation of the lock actuator [2] for the nose landing gear includes an installation test of the lock actuator [2] for the nose landing gear with the airplane on jacks or off jacks.

TASK 32-33-21-000-801

2. Nose Landing Gear Lock Actuator Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-33-21-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-21-860-001

(2) For hydraulic system A, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-33-21-580-001

(3) Install chocks around the tires of the nose landing gear.

D. Nose Landing Gear Lock Actuator Removal

SUBTASK 32-33-21-020-001

(1) Disconnect the hydraulic lines from the lock actuator [2].

SUBTASK 32-33-21-480-002

(2) Install caps on the hydraulic lines.

SUBTASK 32-33-21-020-002

(3) Remove the bolt [8], washer [9] and nut [10] from the bottom pin [7].

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SUBTASK 32-33-21-020-003

(4) Remove the bottom pin [7].

SUBTASK 32-33-21-020-004

(5) Remove the pin [4], nut [3] and washers [5, 6] for the top pin [1].

SUBTASK 32-33-21-020-005

(6) Remove the top pin [1].

SUBTASK 32-33-21-020-007

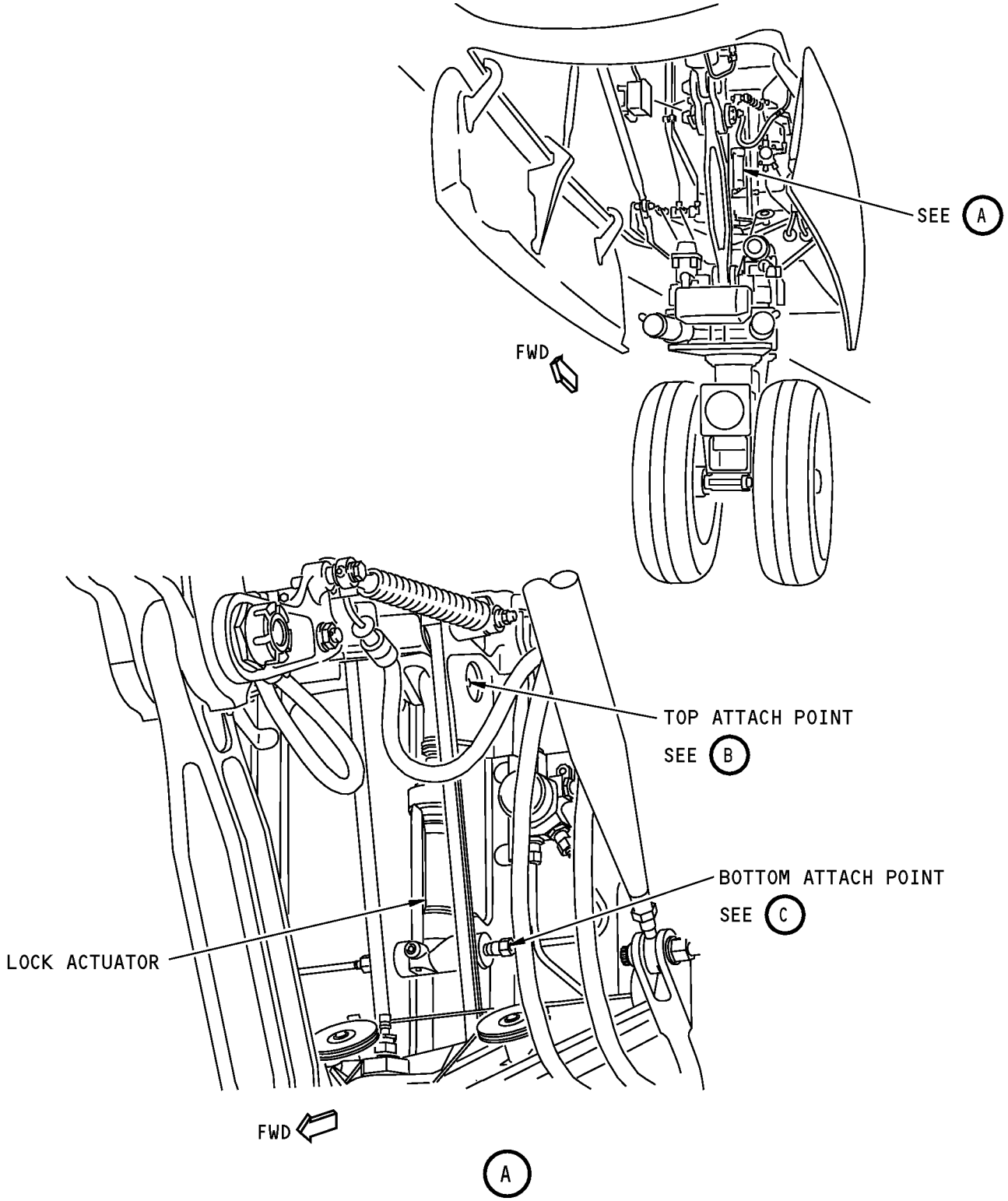
(7) Remove the two washers [11].

SUBTASK 32-33-21-020-006

(8) Remove the lock actuator [2].

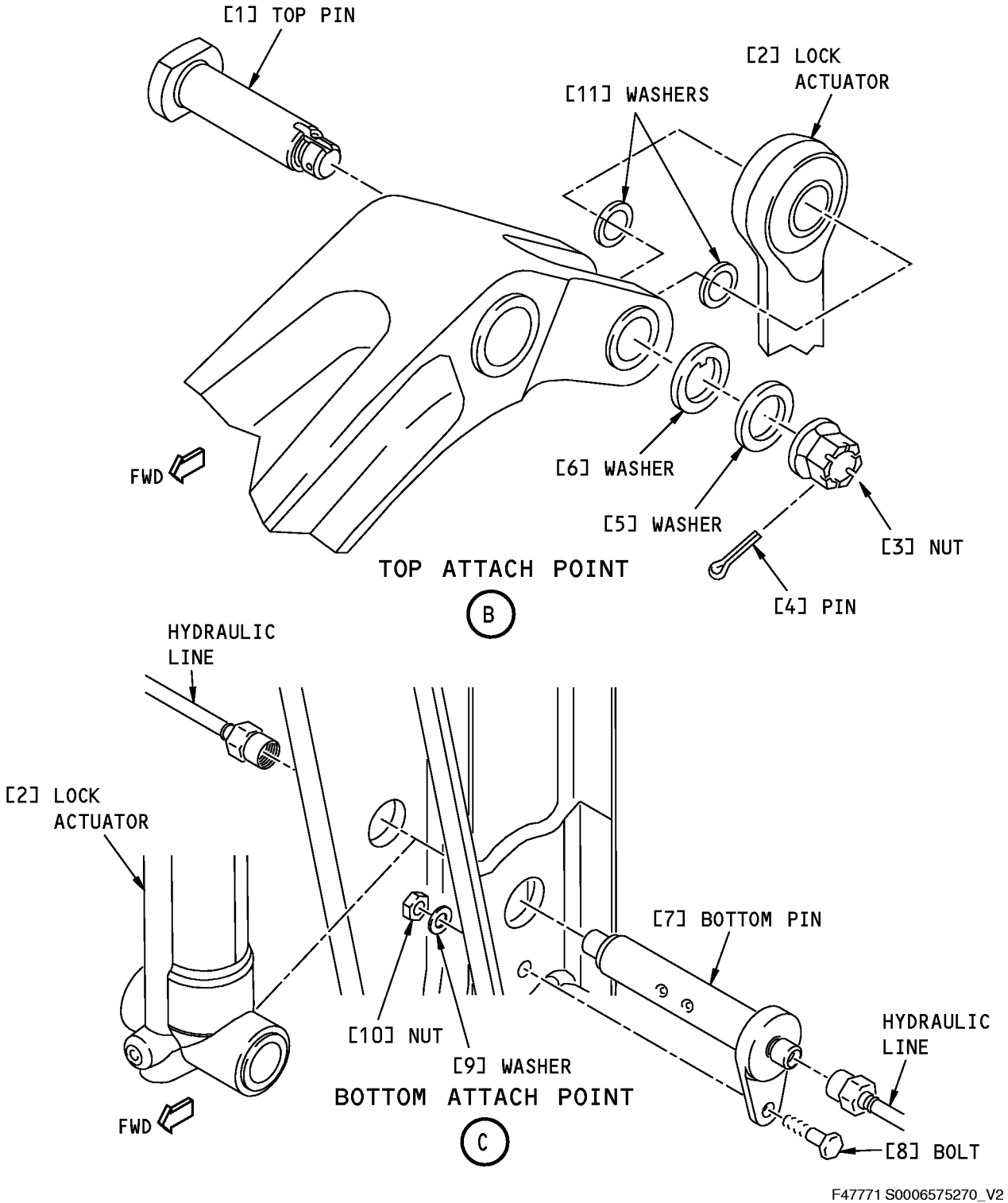
——————— END OF TASK ———————

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Nose Landing Gear Lock Actuator Installation
Figure 401 (Sheet 1 of 2)/32-33-21-990-801

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Nose Landing Gear Lock Actuator Installation
Figure 401 (Sheet 2 of 2)/32-33-21-990-801

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TASK 32-33-21-400-801

3. Nose Landing Gear Lock Actuator Installation

(Figure 401)

A. References

Reference	Title
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
07-11-21-580-802	Lower the Airplane Nose Off of the Jack (P/B 201)
12-12-00-610-801	Hydraulic Reservoir Servicing (P/B 301)
29-11-00-200-801	Hydraulic Fluid Check (P/B 601)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00013	Grease - Aircraft And Instrument Grease	MIL-PRF-23827 (NATO G-354) (Supersedes MIL-G-23827)
D00054	Fluid - Hydraulic Assembly Lubricant - MCS 352B (Formerly Monsanto MCS 352B)	

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Actuator	32-33-21-01-020	HAP 001-013, 015-026, 028-030
4	Pin	32-33-21-01-016	HAP ALL

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

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E. Nose Landing Gear Lock Actuator Installation

SUBTASK 32-33-21-620-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUE EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(1) Put a thin layer of compound, C50056 or compound, C00913 (alternate) to these items:

(a) The thread relief and threads of the top pin [1].

(b) The face of the washer [5].

(c) The new pin [4].

SUBTASK 32-33-21-640-001

(2) Apply a layer of grease, D00013, to the top pin [1] and the mating surfaces. Do not apply it to the threads or thread relief.

SUBTASK 32-33-21-420-009

(3) Put the two washers [11] in their positions.

SUBTASK 32-33-21-420-001

(4) Put the lock actuator [2] in its position with the hydraulic boss in the forward direction (Figure 401).

SUBTASK 32-33-21-420-002

(5) Install the top pin [1].

SUBTASK 32-33-21-420-003

(6) Install the nut [3] and washers [5, 6].

SUBTASK 32-33-21-210-001

(7) Make sure the bottom pin [7] and the holes in the bottom pin [7] are clean.

SUBTASK 32-33-21-640-002

(8) Apply a thin layer of assembly lubricant, MCS 352B fluid, D00054, to these parts:

(a) The bottom pin [7]

(b) Inside the bore of the trunnion on the lock actuator [2]

1) Make sure the seals in the trunnion of the lock actuator [2] are lubricated and in the correct position.

SUBTASK 32-33-21-420-004

(9) Install the bottom pin [7].

SUBTASK 32-33-21-420-005

(10) Install the bolt [8], washer [9] and nut [10].

SUBTASK 32-33-21-080-001

(11) Remove the caps from the hydraulic lines.

SUBTASK 32-33-21-420-006

(12) Connect the hydraulic lines to the lock actuator [2].

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SUBTASK 32-33-21-420-007

(13) Tighten the nut [3] to 18 ft-lb (24 N·m) – 24 ft-lb (33 N·m).

SUBTASK 32-33-21-420-008

(14) Install the pin [4].

NOTE: Loosen the nut [3] if it is necessary to align the nut [3] with the hole for the pin [4].

F. Installation Test for the Lock Actuator Assy [2]

NOTE: This test gives two methods to do a check of the lock actuator [2]. Method one is an installation test with the airplane lifted on jacks and method two is an installation test with the airplane on the ground if jacks are not available. Choose one method to test the lock actuator [2].

SUBTASK 32-33-21-700-006

(1) Installation test of the lock actuator [2] with the airplane on jacks (method one).

WARNING: REMOVE PERSONS AND EQUIPMENT FROM THE NOSE GEAR PATH. WHEN THE NOSE GEAR RETRACTS, IT CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

(b) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

(c) Remove the downlock pin for the nose landing gear, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

WARNING: MAKE SURE YOU INSTALL THE GROUND LOCK PINS IN THE MAIN LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT IF THE GEAR RETRACTS.

(d) Extend and retract the nose landing gear several times.

NOTE: It will bleed the air from the actuator and the lines. Examine for the correct gear operation.

(e) Examine the hydraulic connections for leaks.

(f) Extend the nose landing gear and install the downlock pin, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

(g) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

(h) Do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

(i) Examine the hydraulic reservoirs for the correct servicing, do this task: Hydraulic Fluid Check, TASK 29-11-00-200-801.

1) Do a servicing if it is necessary, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

SUBTASK 32-33-21-700-007

(2) Installation test of the lock actuator [2] with the airplane off jacks (method two).

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WARNING: MAKE SURE YOU INSTALL THE DOWNLOCK PINS IN THE LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IF THE LANDING GEARS RETRACT, IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO STRUCTURE.

(a) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

(b) Use the override trigger to move the landing gear lever from the DN position to the UP position for three times.

NOTE: Hold the lever in each position for three seconds before you move the landing gear lever to the subsequent position.

(c) Move the landing gear lever to the DN position.

(d) Make sure the rod end of the lock actuator [2] tries to retract when you move the landing gear lever from the DN position to the OFF position.

(e) Move the landing gear lever to the DN position.

(f) Do a check for leakage with the hydraulic pressure applied.

(g) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

(h) Examine the hydraulic reservoirs for the correct servicing, do this task: Hydraulic Fluid Check, TASK 29-11-00-200-801.

1) Do a servicing if it is necessary, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

——————— END OF TASK ———————

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NOSE GEAR LOCK VALVE MANIFOLD - REMOVAL/INSTALLATION

1. General

A. This procedure has these two tasks:

(1) A removal of the lock valve manifold assembly [1] for the nose landing gear

(2) An installation of the lock valvemanifold assembly [1] for the nose landing gear.

TASK 32-33-31-000-801

2. Nose Gear Lock Valve Manifold Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-33-31-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-31-860-001

(2) Remove the pressure from hydraulic system A, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-33-31-580-001

(3) Install chocks around the tires of the nose landing gear.

D. Nose Gear Lock Valve Manifold Removal

SUBTASK 32-33-31-020-001

(1) Disconnect the hydraulic lines from the manifold assembly [1].

SUBTASK 32-33-31-480-002

(2) Install caps on the hydraulic lines.

SUBTASK 32-33-31-020-002

(3) Remove the bolts [2] and washers [3] that hold the manifold assembly [1] on the structure.

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SUBTASK 32-33-31-020-003

(4) Remove the manifold assembly [1] from the airplane.

SUBTASK 32-33-31-020-004

(5) Do these steps if the replacement manifold assembly [1] does not have hydraulic unions [5] installed:

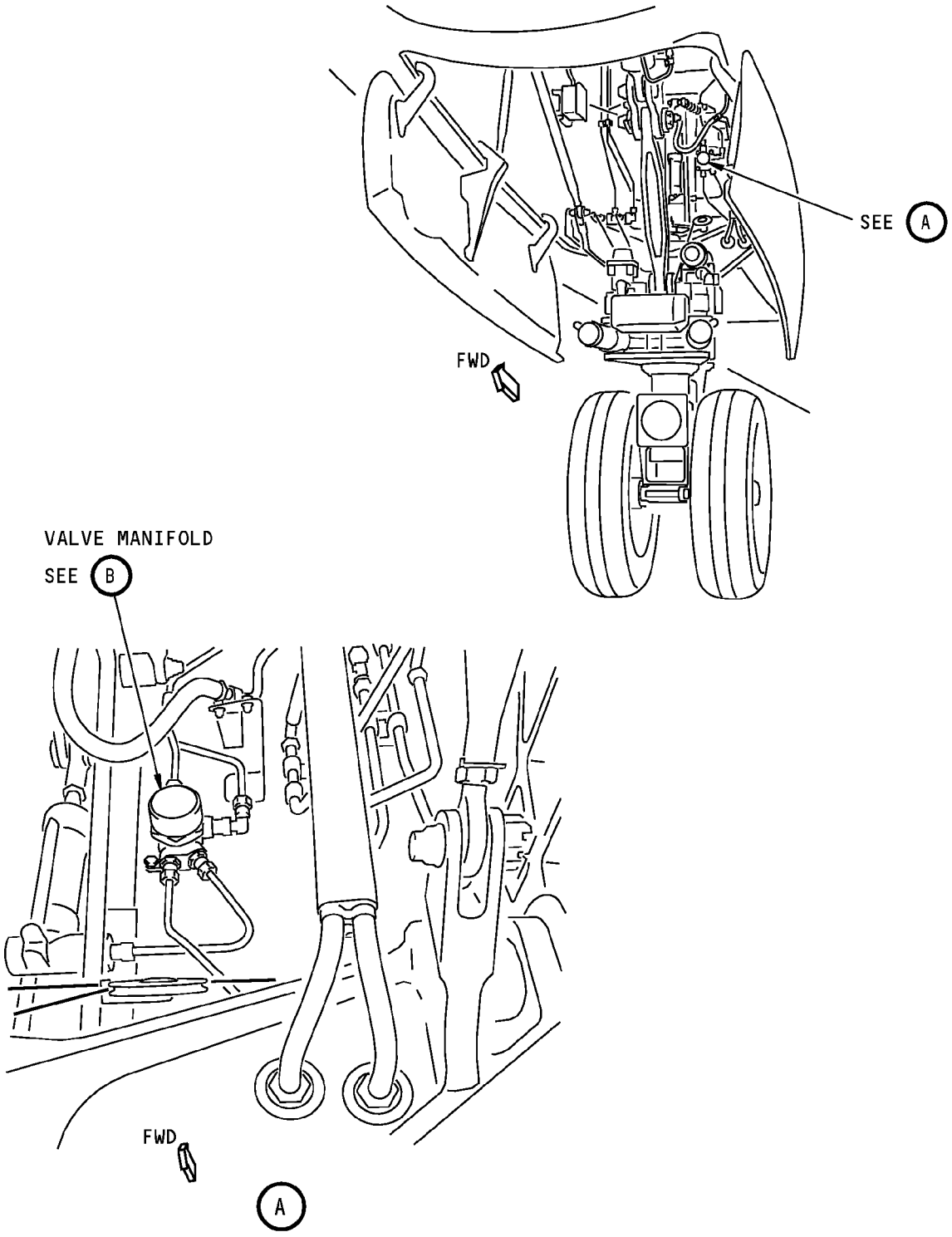
(a) Remove the hydraulic unions [5] from the manifold assembly [1].

(b) Remove and discard the packings [4].

(c) Install plugs in the ports of the manifold assembly [1].

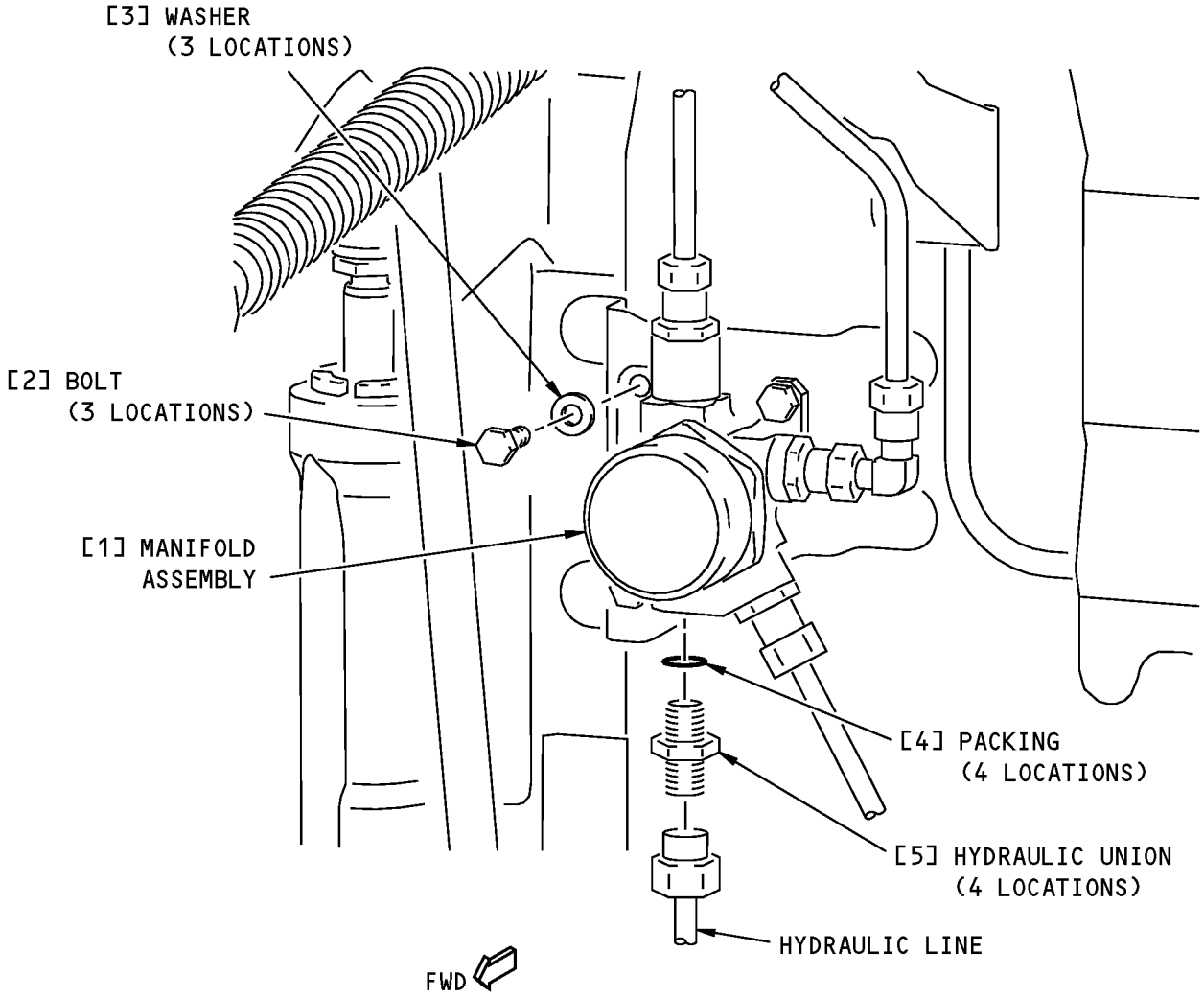
——————— END OF TASK ———————

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Nose Landing Gear Valve Manifold Installation
Figure 401 (Sheet 1 of 2)/32-33-31-990-801

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Nose Landing Gear Valve Manifold Installation
Figure 401 (Sheet 2 of 2)/32-33-31-990-801

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TASK 32-33-31-400-801

3. Nose Gear Lock Valve Manifold Installation

(Figure 401)

A. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
12-12-00-610-801	Hydraulic Reservoir Servicing (P/B 301)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Consumable Materials

Reference	Description	Specification
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Manifold assembly	32-33-21-02-005	HAP 001-013, 015-026, 028-030
		32-33-21-02A-005	HAP 031-054, 101-999
4	Packing	32-33-21-02-040	HAP 001-013, 015-026, 028-030
		32-33-21-02A-040	HAP 031-054, 101-999
5	Union	32-33-21-02-035	HAP 001-013, 015-026, 028-030
		32-33-21-02A-035	HAP 031-054, 101-999

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

E. Nose Gear Lock Valve Manifold Installation

SUBTASK 32-33-31-420-001

(1) Do these steps if the manifold assembly [1] you will install does not have the hydraulic unions [5] installed:

(a) Lubricate these items with fluid, D00153:

1) The packings [4]

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2) The hydraulic unions [5].

(b) Remove the plugs from the ports on the manifold assembly [1].

(c) Install the packings [4] and the hydraulic unions [5] in the manifold assembly [1].

SUBTASK 32-33-31-610-001

(2) Fill the manifold assembly [1] with fluid, D00153.

NOTE: Put a cap on the hydraulic unions [5].

SUBTASK 32-33-31-420-002

(3) Put the manifold assembly [1] in its position.

SUBTASK 32-33-31-420-003

(4) Adjust the position of the manifold assembly [1] to align it with the hydraulic lines.

SUBTASK 32-33-31-080-001

(5) Remove the caps from the hydraulic unions [5] and connect the hydraulic lines to the manifold assembly [1].

SUBTASK 32-33-31-420-004

(6) Install a washer [3] on each bolt [2].

SUBTASK 32-33-31-420-005

(7) Install the bolts [2] and washers [3] that attach the manifold assembly [1] to the structure.

SUBTASK 32-33-31-420-006

(8) Tighten the hydraulic lines.

F. Nose Gear Lock Valve Manifold Assy [1] Installation Test (Airplane on Jacks)

NOTE: This test does a check of the manifold assembly [1] with the airplane lifted on jacks.

SUBTASK 32-33-31-580-002

WARNING: REMOVE PERSONS AND EQUIPMENT FROM THE NOSE GEAR PATH. WHEN THE NOSE GEARS RETRACT, THEY CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Lift the airplane for nose gear retraction, do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-33-31-860-002

(2) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-33-31-080-002

(3) Remove the downlock pin for the nose landing gear, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

SUBTASK 32-33-31-870-001

WARNING: MAKE SURE YOU INSTALL THE DOWNLOCK PINS IN THE MAIN LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT IF THE GEAR RETRACTS.

(4) Extend and retract the nose landing gear several times.

NOTE: This will bleed the air from the manifold assembly [1] and the lines. Look for the correct gear operation.

SUBTASK 32-33-31-210-001

(5) Examine the hydraulic connections for leaks.

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SUBTASK 32-33-31-480-003

(6) Extend the nose landing gear and install the downlock pin, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-31-860-003

(7) Remove the power from hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-33-31-580-003

(8) Lower the airplane and remove the jacks, do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

G. Nose Gear Lock Valve Manifold Assy [1] Installation Test (Airplane not on Jacks)

NOTE: This test gives does a check of the manifold assembly [1] with the airplane on the ground, if jacks are not available.

SUBTASK 32-33-31-860-004

WARNING: MAKE SURE YOU INSTALL THE DOWNLOCK PINS IN THE LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IF THE LANDING GEARS RETRACT, IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO STRUCTURE.

(1) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-33-31-700-001

(2) Use the override trigger to move the landing gear lever from the DN position to the UP position for three times.

NOTE: Hold the lever in each position for three seconds before you move the landing gear lever to the subsequent position.

SUBTASK 32-33-31-700-002

(3) Move the landing gear lever to the DN position.

SUBTASK 32-33-31-700-003

(4) Make sure the rod end of the lock actuator tries to retract when you move the landing gear lever from the DN position to the OFF position.

SUBTASK 32-33-31-700-004

(5) Move the landing gear lever to the DN position.

SUBTASK 32-33-31-210-002

(6) Do a check for leakage with the hydraulic pressure applied.

SUBTASK 32-33-31-860-005

(7) Remove the power from hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-33-31-210-003

(8) Make sure there is no leaks in the hydraulic connections.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 32-33-31-200-001

(1) Service the reservoirs if it is necessary, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

END OF TASK

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NOSE GEAR TRANSFER CYLINDER - REMOVAL/INSTALLATION

1. General

A. This procedure has these two tasks:

(1) A removal of the transfer cylinder (referred to as the transfer cyl assembly [1]) for the nose landing gear

(2) An installation of the transfer cyl assembly [1] for the nose landing gear.

TASK 32-33-41-000-801

2. Nose Gear Transfer Cylinder Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-33-41-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-41-860-001

(2) For hydraulic system A, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-33-41-580-001

(3) Install chocks around the tires of the nose landing gear.

D. Nose Gear Transfer Cylinder Removal

SUBTASK 32-33-41-020-001

(1) Disconnect the hydraulic lines from the transfer cyl assembly [1].

SUBTASK 32-33-41-480-002

(2) Install caps on the hydraulic lines and plugs in the ports on the transfer cyl assembly [1].

SUBTASK 32-33-41-020-002

(3) Remove the screws [3] and washers [4] from the clamps [2].

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SUBTASK 32-33-41-020-003

(4) Remove the clamps [2].

SUBTASK 32-33-41-020-004

(5) Remove the transfer cyl assembly [1] from the airplane.

SUBTASK 32-33-41-020-005

(6) Do these steps if the transfer cyl assembly [1] you will install does not have unions [6] installed:

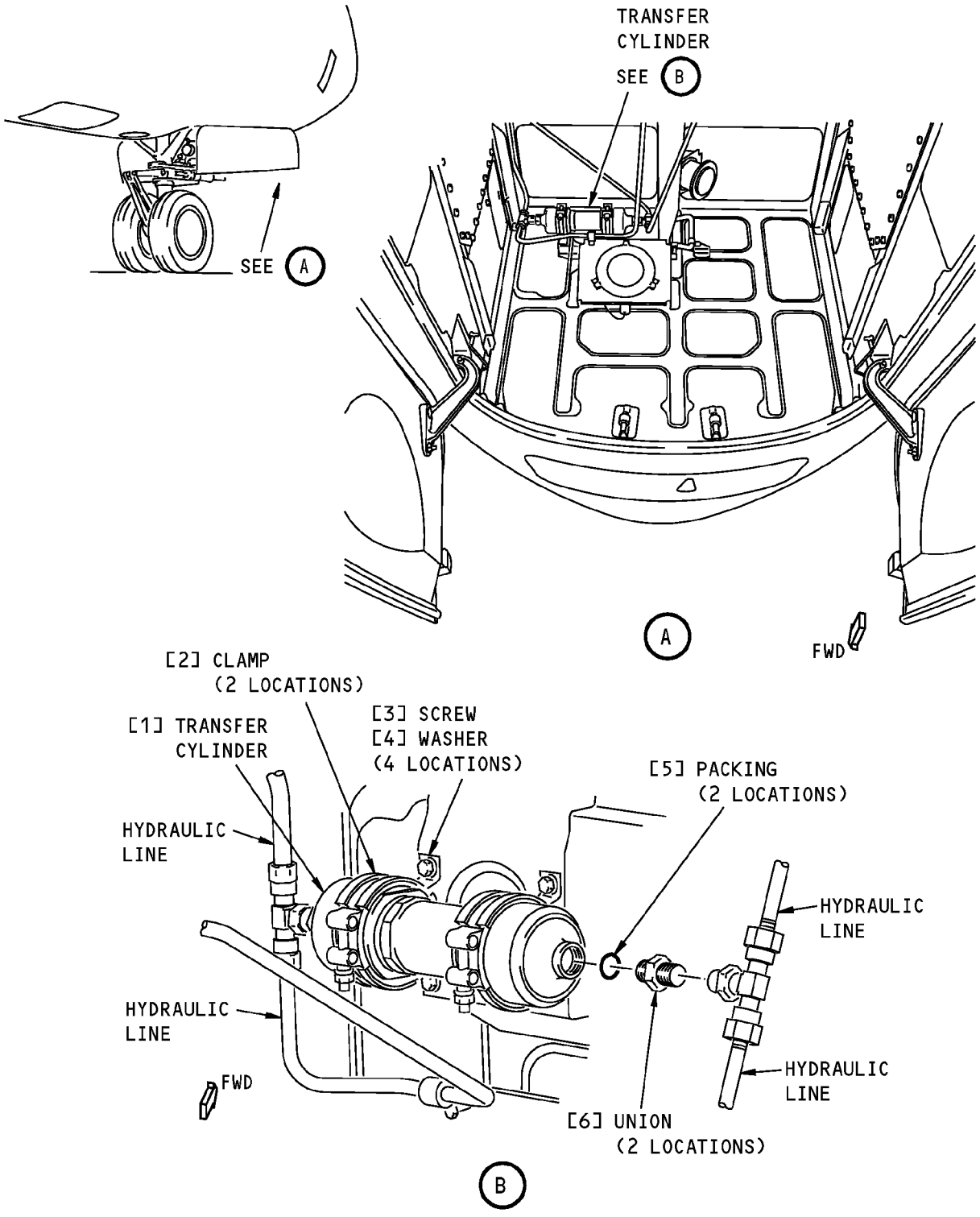
(a) Remove the unions [6] from the transfer cyl assembly [1].

(b) Remove and discard the packings [5].

(c) Install plugs in the ports of the transfer cyl assembly [1].

———————— END OF TASK ————————

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Nose Landing Gear Transfer Cylinder Installation
Figure 401/32-33-41-990-801

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TASK 32-33-41-400-801

3. Nose Gear Transfer Cylinder Installation

(Figure 401)

A. References

Reference	Title
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
07-11-21-580-802	Lower the Airplane Nose Off of the Jack (P/B 201)
12-12-00-610-801	Hydraulic Reservoir Servicing (P/B 301)
29-11-00-200-801	Hydraulic Fluid Check (P/B 601)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Consumable Materials

Reference	Description	Specification
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Transfer cyl assembly	32-33-41-01-025	HAP 001-013, 015-026, 028-030
5	Packing	32-33-41-01-035	HAP ALL
6	Union	32-33-41-01-030	HAP ALL

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

E. Nose Gear Transfer Cylinder Installation

SUBTASK 32-33-41-420-001

(1) Do these steps if the transfer cyl assembly [1] you will install does not have the unions [6] installed:

(a) Lubricate these items with fluid, D00153:

1) The packings [5]

2) The union [6].

(b) Remove the plugs from the ports of the transfer cyl assembly [1].

(c) Install the packings [5] and the unions [6] in the transfer cyl assembly [1].

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SUBTASK 32-33-41-610-001

(2) Fill the transfer cyl assembly [1] from the two ends with fluid, D00153.

NOTE: Put a cap on the union [6].

SUBTASK 32-33-41-420-002

(3) Put the transfer cyl assembly [1] in the clamps [2].

SUBTASK 32-33-41-420-003

(4) Adjust the position of the transfer cyl assembly [1] to align it with the hydraulic lines.

SUBTASK 32-33-41-080-001

(5) Remove the caps from the unions [6] and connect the hydraulic lines to the transfer cyl assembly [1].

SUBTASK 32-33-41-420-004

(6) Install the screws [3] and washers [4] in the clamps [2].

SUBTASK 32-33-41-420-005

(7) Tighten the hydraulic lines.

F. Nose Gear Transfer Cylinder Installation Test

SUBTASK 32-33-41-580-002

WARNING: REMOVE PERSONS AND EQUIPMENT FROM THE NOSE GEAR PATH. WHEN THE NOSE GEARS RETRACT, THEY CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

SUBTASK 32-33-41-860-002

(2) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-33-41-080-002

(3) Remove the downlock pin for the nose landing gear, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

SUBTASK 32-33-41-870-001

WARNING: MAKE SURE YOU INSTALL THE DOWNLOCK PINS IN THE MAIN LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT IF THE GEAR RETRACTS.

(4) Extend and retract the nose landing gear several times.

NOTE: This will bleed the air from the transfer cyl assy and the hydraulic lines. Look for the correct gear operation.

SUBTASK 32-33-41-210-001

(5) Examine the hydraulic connections for leaks.

SUBTASK 32-33-41-480-003

(6) Extend the nose landing gear and install the downlock pin, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-41-860-003

(7) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

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SUBTASK 32-33-41-580-003

(8) Do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

SUBTASK 32-33-41-840-001

(9) Examine the hydraulic reservoirs for the correct servicing, do this task: Hydraulic Fluid Check, TASK 29-11-00-200-801.

(a) Do a servicing if it is necessary, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

——————— END OF TASK ———————

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NOSE GEAR LOCK MECHANISM - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these two tasks:

(1) A removal of the lock mechanism (referred to as the link assembly [1], the spring assembly [2], and the link assembly [3]) for the nose landing gear

(2) An installation of the lock mechanism for the nose landing gear.

TASK 32-33-51-000-801

2. Nose Landing Gear Lock Mechanism Removal

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1866	Expander Set - Spring, Main Landing Gear (Part #: C32014-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

E. Prepare for the Removal

SUBTASK 32-33-51-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

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SUBTASK 32-33-51-580-001

WARNING: REMOVE PERSONS AND EQUIPMENT FROM THE NOSE GEAR PATH. WHEN THE NOSE GEARS RETRACT, THEY CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

SUBTASK 32-33-51-860-001

(3) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

F. Nose Landing Gear Lock Mechanism Removal

SUBTASK 32-33-51-020-001

(1) Do these steps to disconnect the spring assembly [2] from the aft lock link assembly [3] and the wheel well fitting:

(a) Remove the pins [8], nuts [4], and washers [5] from shaft [6] where the spring assembly [2] are attached to the aft lock link assembly [3] and the wheel well fitting (Detail B).

(b) Use the expander set, SPL-1866 to extend the spring assembly [2].

(c) Remove the pins [8], nuts [9] and washers [5] from the bolts [10] that hold the spring assembly [2] to the forward lock link assembly [1] (Detail D).

(d) Remove the spring assembly [2], bolts [10], washers [11], and sleeves [12] from the forward lock link assembly [1].

(e) Remove the spring assembly [2] from the aft lock link assembly [3].

(f) Install the bolts [10], washers [11], spring assembly [2], and sleeves [12] to attach the spring assembly [2] to the forward lock link assembly [1].

(g) Install the washers [5] and nuts [9], but do not tighten it.

SUBTASK 32-33-51-020-002

(2) Remove the pin [18], nut [19], washers [20, 21, 28], and pin [22] to disconnect the rod end of the lock actuator from the aft lock link assembly [3] (Detail C).

SUBTASK 32-33-51-020-003

(3) Remove the pin [29], nut [28], washer [27] and bolt [25] from the pin [23] that connects the forward lock link assembly [1] to the drag strut (Detail F).

SUBTASK 32-33-51-020-004

(4) Remove the nut [26], washer [24], and pin [23] to disconnect the forward lock link assembly [1] from the drag strut.

SUBTASK 32-33-51-020-005

(5) Do the steps that follow to remove the lock sensor [14] from the aft lock link assembly [3] (Detail E):

(a) Remove the screws [17] from the clamps that attach the wire bundle to the aft lock link assembly [3].

(b) Remove the nuts [13], washers [15], and screws [16] from the lock sensor [14].

(c) Remove the lock sensor [14] from the aft lock link assembly [3].

SUBTASK 32-33-51-020-006

(6) Remove the bushing [7] and shaft [6] to disconnect the aft lock link assembly [3] from the wheel well fitting (Detail C).

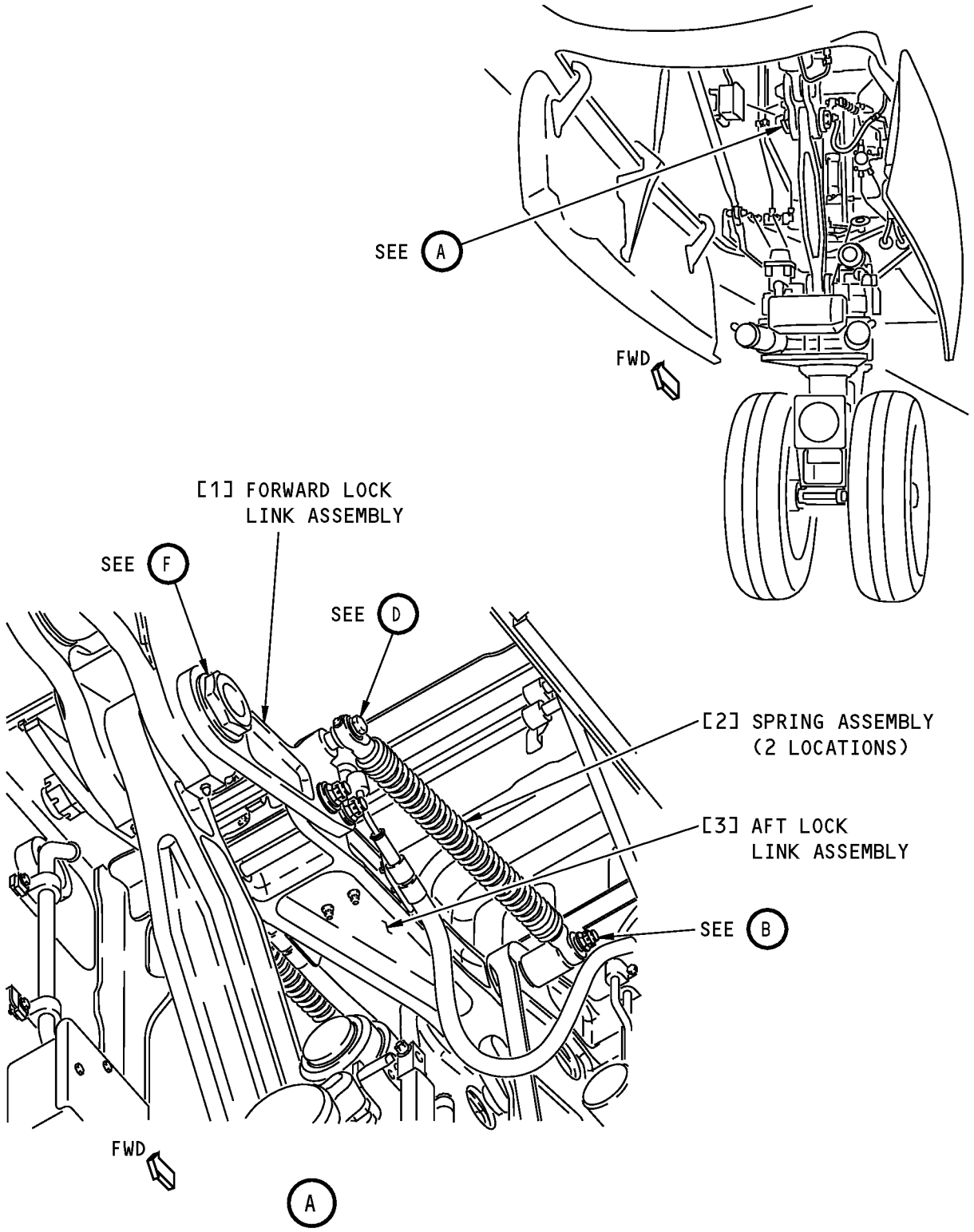
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SUBTASK 32-33-51-020-007

(7) Remove the lock mechanism as a complete assembly.

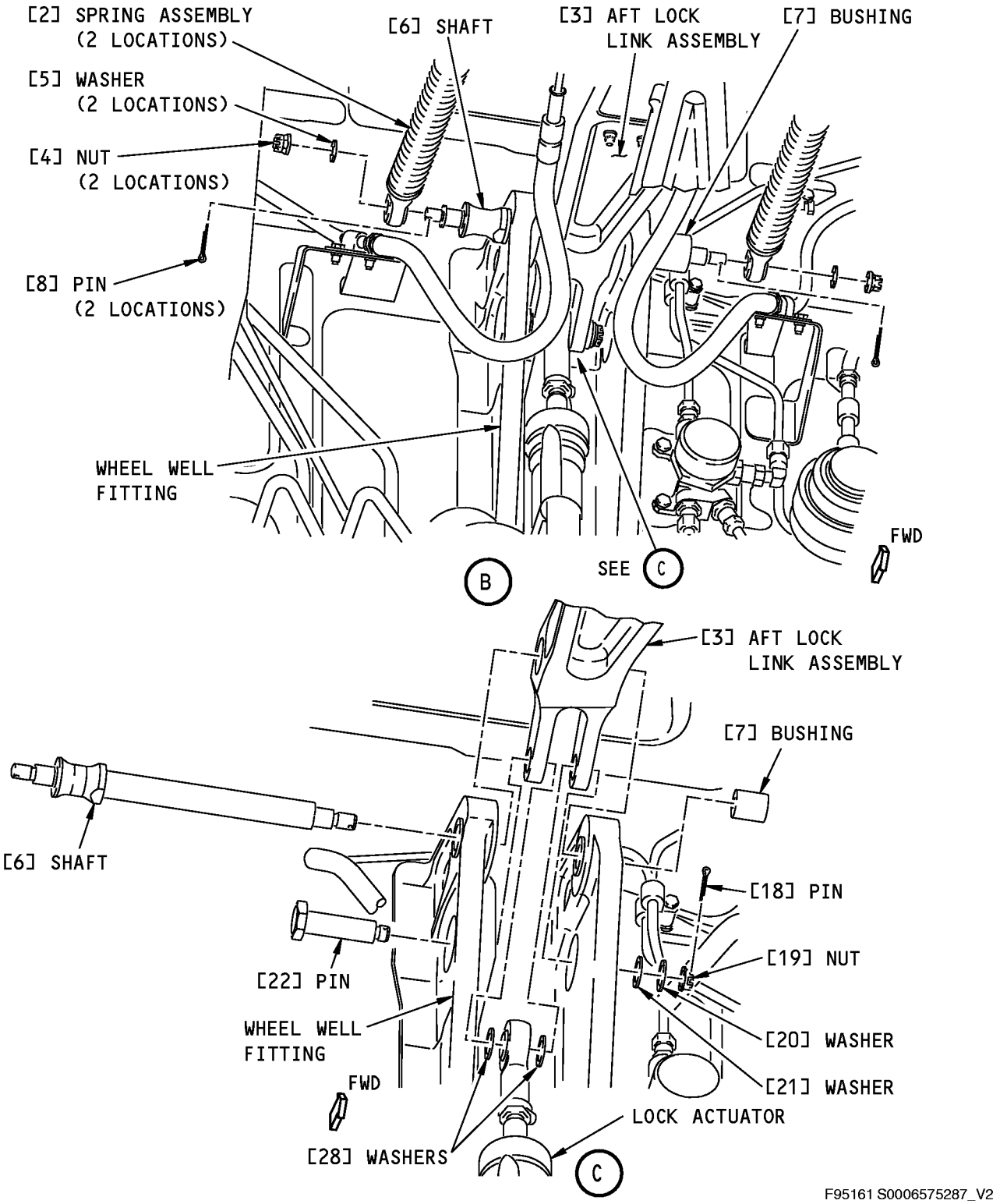
END OF TASK

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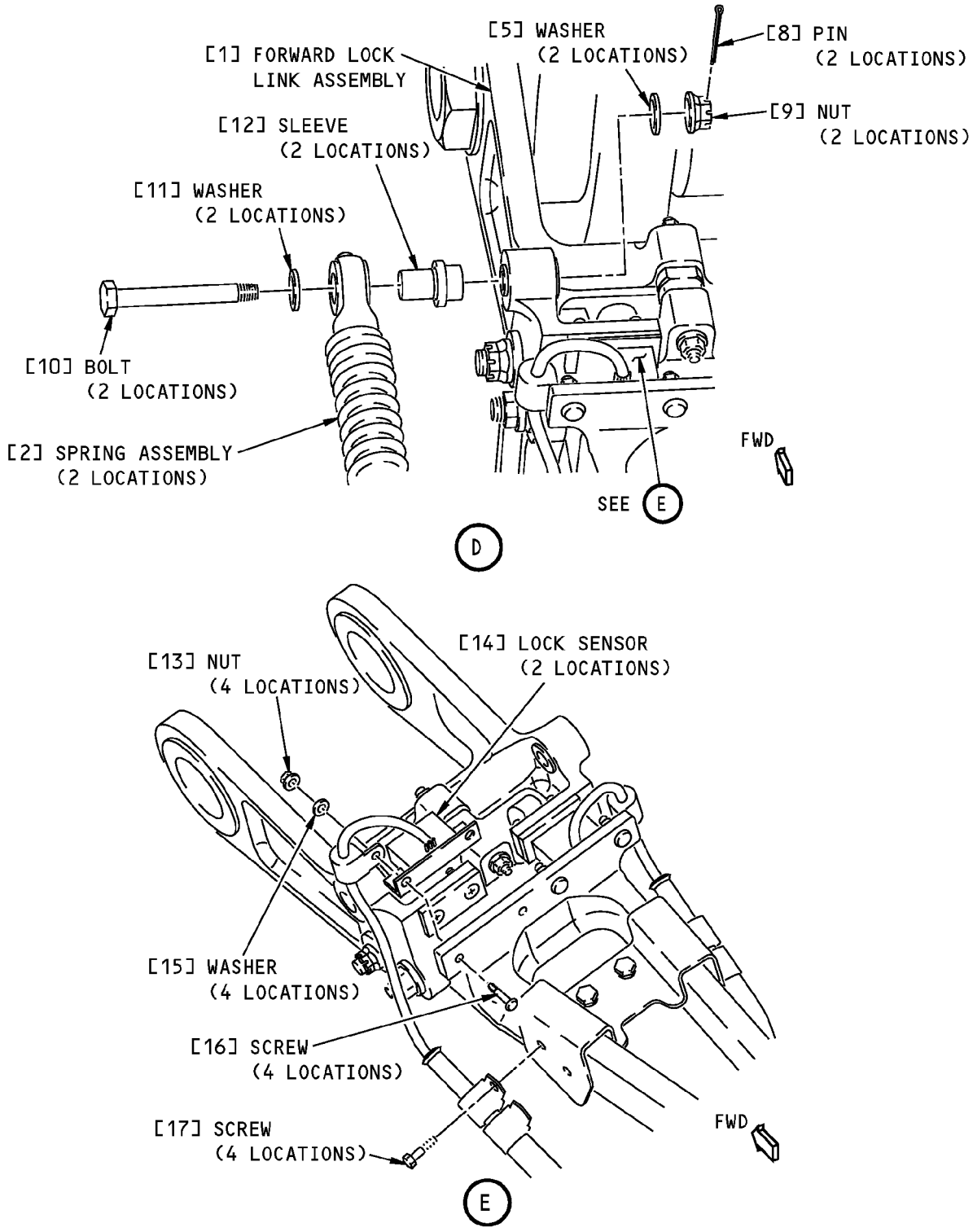
Nose Gear Lock Mechanism Installation
Figure 401 (Sheet 1 of 4)/32-33-51-990-801

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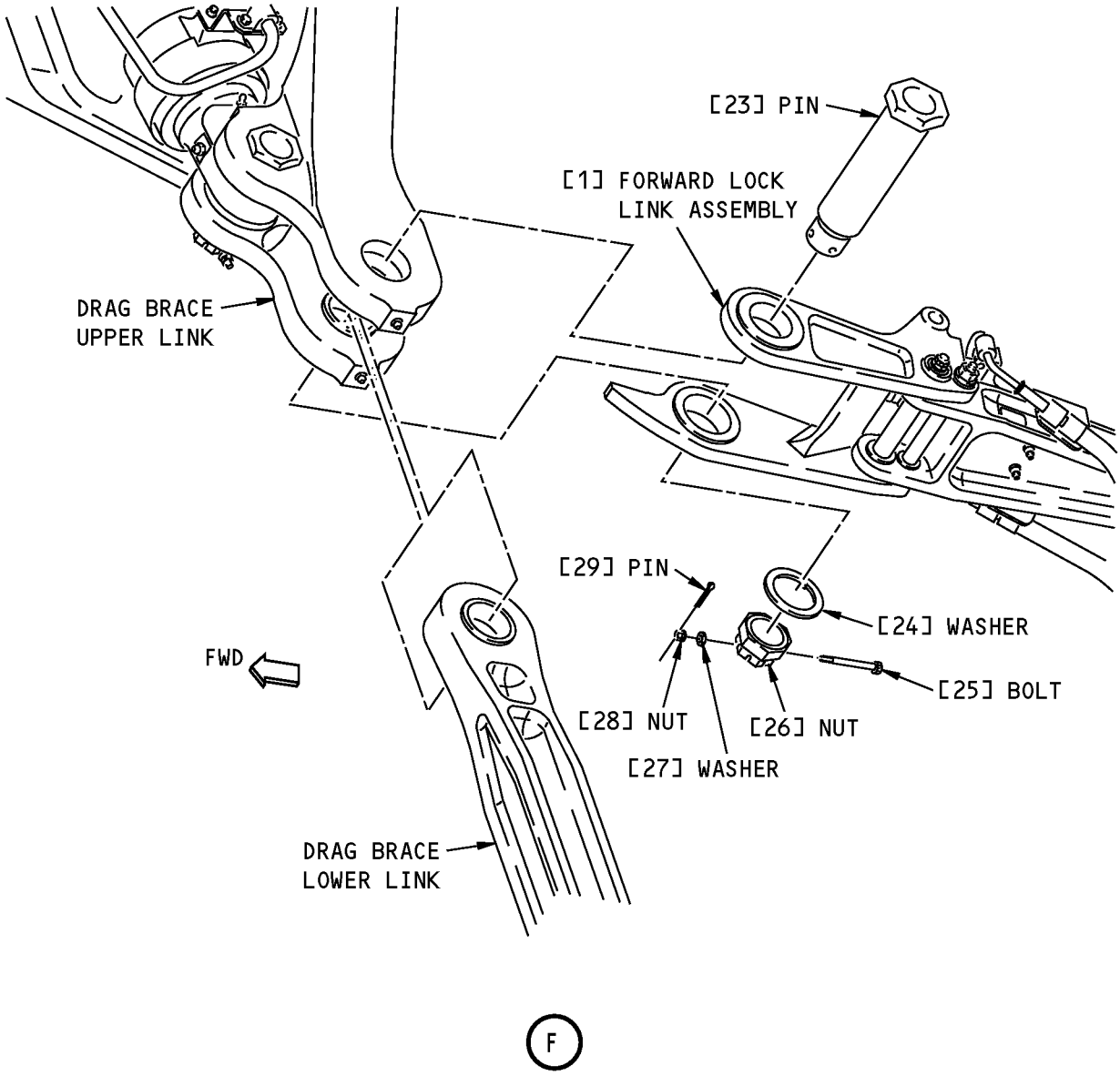
Nose Gear Lock Mechanism Installation
Figure 401 (Sheet 2 of 4)/32-33-51-990-801

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Nose Gear Lock Mechanism Installation
Figure 401 (Sheet 3 of 4)/32-33-51-990-801

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Nose Gear Lock Mechanism Installation
Figure 401 (Sheet 4 of 4)/32-33-51-990-801

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TASK 32-33-51-400-801

3. Nose Gear Lock Mechanism Installation

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-61-41-400-801	Nose Landing Gear Lock Sensor Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1866	Expander Set - Spring, Main Landing Gear (Part #: C32014-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00013	Grease - Aircraft And Instrument Grease	MIL-PRF-23827 (NATO G-354) (Supersedes MIL-G-23827)
D00633	Grease - Aircraft General Purpose	BMS3-33

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Link assembly	32-33-51-01-120	HAP 001-013, 015-026, 028-030
		32-33-51-02-120	HAP 031-054, 101-999
3	Link assembly	32-33-51-01-160	HAP 001-013, 015-026, 028-030
		32-33-51-02-155	HAP 031-054, 101-999
8	Pin	32-21-21-01-040	HAP 001-013, 015-026, 028-030
		32-21-21-02-045	HAP 031-054, 101-999
18	Pin	32-33-21-01-016	HAP ALL
29	Pin	32-21-21-01-080	HAP 001-013, 015-026, 028-030
		32-21-21-02-075	HAP 031-054, 101-999

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F. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

G. Procedure

SUBTASK 32-33-51-420-001

WARNING: USE NITRILE GLOVES TO PROTECT THE SKIN AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF THE MASTINOX GETS ON YOUR SKIN, REMOVE IT WITH WATER IMMEDIATELY. IF THE MASTINOX GETS IN YOUR EYES, FLUSH YOUR EYES WITH WATER IMMEDIATELY AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURY TO PERSONS.

CAUTION: REMOVE THE UNWANTED MASTINOX FROM SURFACES WHERE YOU LUBRICATE. IF YOU APPLY MASTINOX TO THE JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT CAN OCCUR.

CAUTION: THE LOCK MECHANISM IS AN ASSEMBLY WITH A MATCHED FORWARD AND AFT LOCK LINK. THE OVERCENTER DIMENSION IS SET ON THE ASSEMBLY. IF YOU REPLACE ONE OF THE LOCK LINKS, YOU MUST INSTALL OR REMOVE SHIMS ON THE COMPLETED LOCK MECHANISM ASSEMBLY TO ADJUST THE OVERCENTER DIMENSION IF IT IS NECESSARY.

(1) Do the steps that follow to connect the aft lock link assembly [3] to the fitting on the aft wheel well wall (Detail B, C):

(a) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) to the threads and thread reliefs of the shaft [6] and the nuts [4].

(b) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) to the faces of the washers [5].

(c) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) to the new pins [8].

(d) Move the aft lock link assembly [3] into the fitting.

(e) Install the shaft [6] and bushing [7] to connect the aft lock link assembly [3] to the fitting.

SUBTASK 32-33-51-420-002

(2) Do the steps that follow to connect the forward lock link assembly [1] to the drag strut (Detail F):

WARNING: USE THE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF THE MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THE MASTINOX GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURY TO PERSONS.

(a) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) to the threads and thread reliefs of the pin [23] and the nut [26], and to the faces of the washer [24].

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CAUTION: REMOVE THE UNWANTED MASTINOX FROM THE SURFACES WHERE YOU LUBRICATE. IF YOU APPLY MASTINOX TO THE JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT CAN OCCUR.

(b) Apply grease, D00633, to the chrome plate on the pin [23].

(c) Install the pin [23], washer [24], and nut [26].

(d) Tighten the nut [26] to95 in-lb (10.7 N·m) –115 in-lb (13.0 N·m) bove the run-on torque.

1) If it is necessary, loosen the nut [26] to align the nearest castellation with the hole in the pin [23].

WARNING: USE THE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF THE MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THE MASTINOX GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURY TO PERSONS.

(e) Apply a thick layer of compound, C50056 or compound, C00913 (alternate) to the shank and threads of the bolt [25].

(f) Apply a thin layer of compound, C00913, to the threads of the nut [28], the faces of the washer [27], and the new pin [29].

(g) Install the bolt [25], washer [27], and nut [28].

(h) Tighten the nut [28] to 18 in-lb (2.0 N·m) – 25 in-lb (2.8 N·m) above the run-on torque.

1) If it is necessary, loosen the nut [28] to align the nearest castellation with the hole in the bolt [25].

(i) Install the new pin [29].

SUBTASK 32-33-51-420-003

(3) Do the steps that follow to connect the aft lock link assembly [3] of the lock mechanism to the rod end of the lock actuator (Detail C):

(a) Apply grease, D00633, or grease, D00013 (Optional), to the bore of the rod end and aft lock link assembly [3], and the pin [22]

(b) Install the pin [22], washers [20, 21,28], and nut [19]

(c) Tighten the nut [19] to 18 ft-lb (24.4 N·m) - 24 ft-lb (32.5 N·m).

1) If it is necessary, loosen the nut [19] to align the nearest castellation with the hole on the pin [22].

(d) Install the new pin [18].

SUBTASK 32-33-51-420-004

(4) Do these steps to connect the spring assembly [2] to the forward lock link assembly [1] and the wheel well fitting (Detail B, D):

(a) Remove the washers [5] and nuts [9] that attach the spring assembly [2] to the forward lock link assembly [1].

(b) Remove the spring assembly [2], bolts [10], washers [11], and sleeves [12] from the link assembly [1].

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WARNING: USE THE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF THE MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THE MASTINOX GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURY TO PERSONS.

(c) Apply a thick layer of compound, C50056 or compound, C00913 (alternate) to the shank and threads of the bolts [10]

(d) Apply a thin layer of compound, C00913, to the threads of the nuts [9], the faces of the washers [5] and sleeves [12], and the new pins [8]

(e) Apply grease, D00633, to the chrome plated surfaces of the sleeves [12] and the bolts [10].

WARNING: USE THE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF THE MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THE MASTINOX GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURY TO PERSONS.

(f) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) to the threads and thread reliefs of the nuts [4], the faces of the washers [5], and the pins [8].

(g) Apply grease, D00633, to the chrome plated surfaces of the shaft [6].

(h) Use the expander set, SPL-1866 to extend the spring assembly [2].

(i) Connect the spring assembly [2] to the forward lock link assembly [1] (Detail D):

1) Put the spring assembly [2] in its location at the forward lock link assembly [1].

2) Install the bolts [10], sleeves [12], and the washers [11] to connect the spring assembly [2] to the forward lock link assembly [1].

3) Install the washers [5] and the nuts [9] on the bolts [10]

4) Tighten the nuts [9] to 20 in-lb (2.3 N·m) – 24 in-lb (2.7 N·m) above the run-on torque

a) Install the new pins [8].

(j) Connect the spring assy [2] to the shaft [6] in the wheel well fitting (Detail B):

1) Install the shaft [6] in the wheel well fitting.

2) Put the spring assembly [2] in its location on the shaft [6].

3) Install the washers [5] and nuts [4] on the shaft [6]

4) Tighten the nuts [4] to 20 in-lb (2.3 N·m) – 24 in-lb (2.7 N·m) above the run-on torque

a) Install the new pins [8].

(k) Remove the expander set, SPL-1866 from spring assembly [2].

SUBTASK 32-33-51-420-005

(5) Do the steps that follow to install the lock sensors [14] on the aft lock link assembly [3] (Detail E):

(a) Put the lock sensors [14] on the aft lock link assembly [3].

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WARNING: USE THE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF THE MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THE MASTINOX GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURY TO PERSONS.

(b) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) to the threads and thread reliefs of the screws [16], and the faces of the washers [15].

(c) Install the screws [16], washers [15], and nuts [13] on the lock sensor [14].

(d) Install the screws [17] to attach clamps for the wire bundles to the aft lock link assembly [3].

SUBTASK 32-33-51-820-001

(6) Do the adjustment of the nose gear lock sensors, do this task: Nose Landing Gear Lock Sensor Installation, TASK 32-61-41-400-801.

H. Nose Gear Lock Mechanism Installation Test

SUBTASK 32-33-51-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON THE MAIN LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-51-860-002

(2) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-33-51-580-002

WARNING: REMOVE PERSONS AND EQUIPMENT FROM THE NOSE GEAR PATH. WHEN THE NOSE GEARS RETRACT, THEY CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(3) Extend and retract the nose landing gear several times.

NOTE: Examine the nose gear and lock mechanism for the correct operation.

I. Put the Airplane Back to its Usual Condition

SUBTASK 32-33-51-480-004

(1) Extend the nose landing gear and install the ground lock assembly, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-51-860-003

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-33-51-580-003

(3) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

END OF TASK

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NOSE GEAR LOCK MECHANISM - INSPECTION/CHECK

1. General

A. This task has the data for a dimensional inspection of the lock mechanism for the nose landing gear. No procedure is given in this section to get access to permit the inspection. These are the tasks:

These are the tasks:

Nose Landing Gear Lock Mechanism Removal, TASK 32-33-51-000-801,

Nose Gear Lock Mechanism Installation, TASK 32-33-51-400-801.

TASK 32-33-51-200-801

2. Nose Gear Lock Mechanism Inspection

(Figure 601)

A. General

(1) This procedure gives wear limits and repair data for the nose gear lock mechanism.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-33-51-000-801	Nose Landing Gear Lock Mechanism Removal (P/B 401)
32-33-51-400-801	Nose Gear Lock Mechanism Installation (P/B 401)

C. Tools/Equipment

Reference	Description
STD-1096	Micrometer - Depth, 0-1 Inch, Readable to 1/1000 Inch
STD-1097	Caliper - Vernier, 0-6 Inch, Readable to 1/1000 Inch

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

E. Procedure

SUBTASK 32-33-51-480-005

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-51-020-008

(2) To remove parts to get access to the lock mechanism for the nose landing gear do the task that follows (Figure 601):

(a) Do this task: Nose Landing Gear Lock Mechanism Removal, TASK 32-33-51-000-801.

SUBTASK 32-33-51-020-009

(3) Use these tools to check for wear on the parts of the main landing gear axle:

(a) micrometer (0-1 Inch, readable to 1/1000 Inch), STD-1096

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(b) readable to 1/1000 inch vernier 0 - 6 inch caliper, STD-1097.

SUBTASK 32-33-51-020-010

(4) Examine the parts of the lock mechanism for worn areas:

(a) Remove the parts to be checked.

(b) Measure the parts as necessary with a micrometer (0-1 Inch, readable to 1/1000 Inch), STD-1096 or a readable to 1/1000 inch vernier 0 - 6 inch caliper, STD-1097.

(c) Compare the dimensions you measured with the permitted wear dimensions that follow.

(d) If the parts are not in the tolerance, replace or repair the part as required.

Table 601/32-33-51-993-801

NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MINIMUM SERVICE DIAMETRIC CLEARANCE
#1 BUSHING	I.D.	1.7500 in 44.450 mm	1.7509 in 44.473 mm	in mm	in
#1 BUSHING	O.D.	1.7526 in 44.516 mm	1.7536 in 44.541 mm	in mm	mm
#2 BUSHING	I.D.	1.5000 in 38.100 mm	1.5010 in 38.125 mm	1.5040 in 38.202 mm	0.003 in
#2 PIN	O.D.	1.4980 in 38.050 mm	1.4990 in 38.075 mm	1.4960 in 37.998 mm	0.076 mm
#3 SLEEVE	I.D.	0.3750 in 9.525 mm	0.3755 in 9.538 mm	0.3775 in 9.588 mm	0.002 in
#3 BOLT	O.D.	0.3740 in 9.500 mm	0.3745 in 9.512 mm	0.3725 in 9.462 mm	0.508 mm
#4 BUSHING	I.D.	0.3750 in 9.525 mm	0.3755 in 9.538 mm	0.3775 in 9.588 mm	0.002 in
#4 BOLT	O.D.	0.3740 in 9.500 mm	0.3745 in 9.512 mm	0.3725 in 9.462 mm	0.508 mm
#5 BUSHING	I.D.	0.5000 in 12.700 mm	0.5015 in 12.738 mm	0.5035 in 12.789 mm	0.002 in
#5 SLEEVE	O.D.	0.4985 in 12.662 mm	0.4995 in 12.687 mm	0.4975 in 12.636 mm	0.508 mm
#6 BUSHING	I.D.	0.7500 in 19.050 mm	0.7508 in 19.070 mm	0.7540 in 19.152 mm	0.003 in

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(Continued)

NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MINIMUM SERVICE DIAMETRIC CLEARANCE
#6 PIN	O.D.	0.7480 in 18.999 mm	0.7490 in 19.025 mm	0.7458 in 18.943 mm	0.076 mm
#7 BUSHING	I.D.	0.7515 in 19.088 mm	0.7530 in 19.126 mm	0.7570 in 19.228 mm	0.004 in
#7 SHAFT	O.D.	0.7475 in 18.986 mm	0.7490 in 19.025 mm	0.7450 in 18.923 mm	0.102 mm
#8 BUSHING	I.D.	0.7500 in 19.050 mm	0.7505 in 19.063 mm	0.7540 in 19.152 mm	0.003 in
#8 SHAFT	O.D.	0.7475 in 18.986 mm	0.7490 in 19.025 mm	0.7455 in 18.936 mm	0.076 mm

Table 602/32-33-51-993-802

NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MINIMUM SERVICE DIAMETRIC INTERFERENCE
#9 BUSHING	I.D.	0.8750 in 22.225 mm	0.8757 in 22.243 mm	in mm	in
#9 BUSHING	O.D.	0.8765 in 22.263 mm	0.8770 in 22.276 mm	in mm	mm
#10 BUSHING	I.D.	0.5000 in 12.700 mm	0.5015 in 12.738 mm	0.5035 in 12.789 mm	0.002 in
#10 SHAFT	O.D.	0.4985 in 12.662 mm	0.4995 in 12.687 mm	0.4975 in 12.636 mm	0.508 mm
#11 BUSHING	I.D.	0.5625 in 14.288 mm	0.5630 in 14.300 mm	0.5655 in 14.364 mm	0.002 in
#11 PIN	O.D.	0.5610 in 14.249 mm	0.5615 in 14.262 mm	0.5590 in 14.199 mm	0.051 mm
#12 ROD END	I.D.	in mm	in mm	in mm	in

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(Continued)

NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MINIMUM SERVICE DIAMETRIC INTERFERENCE
#12 PIN	O.D.	0.5610 in 14.249 mm	0.5615 in 14.262 mm	0.5590 in 14.199 mm	mm

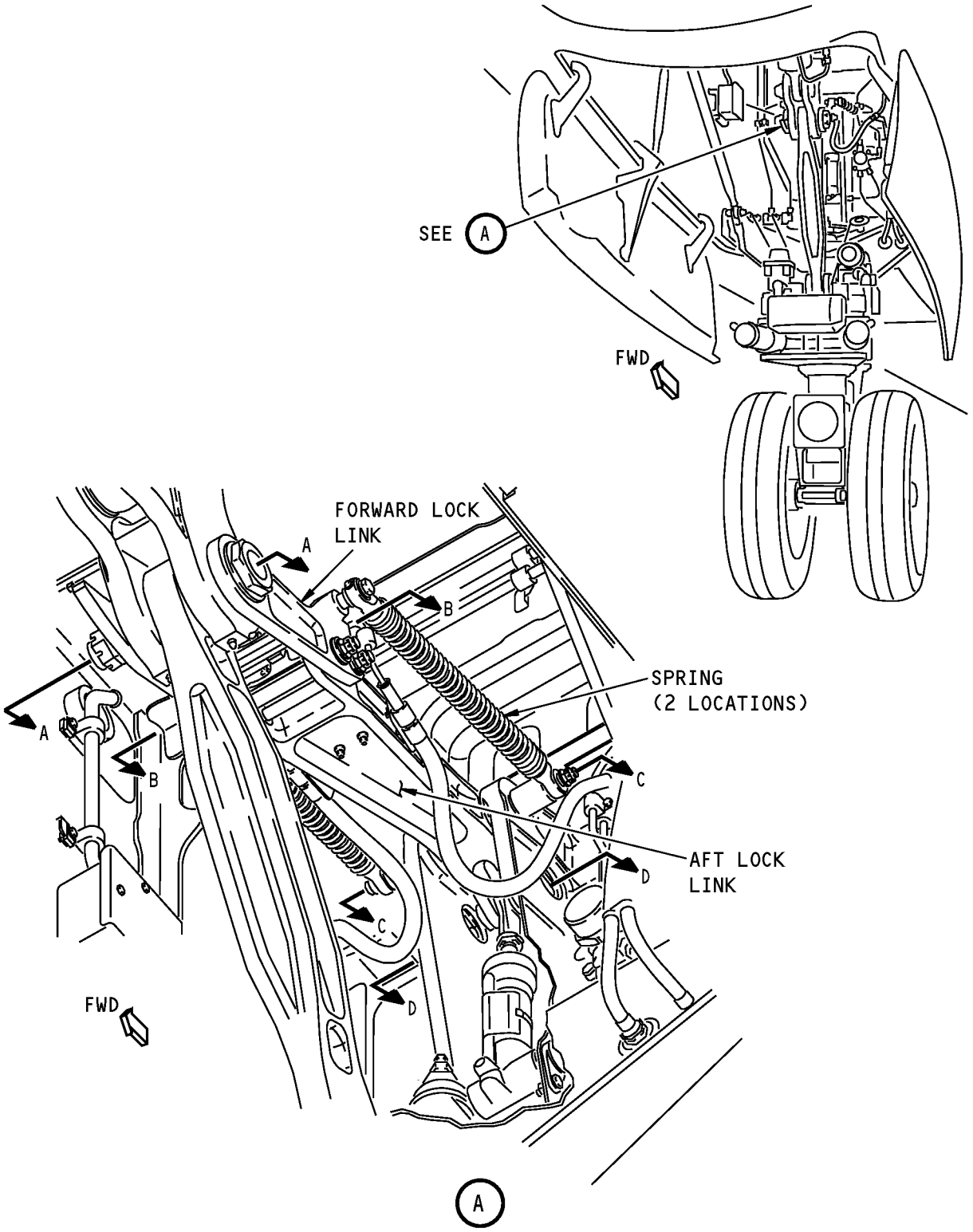
SUBTASK 32-33-51-020-011

(5) To install parts on the lock mechanism for the nose landing gear do the task that follows:

(a) Do this task: Nose Gear Lock Mechanism Installation, TASK 32-33-51-400-801.

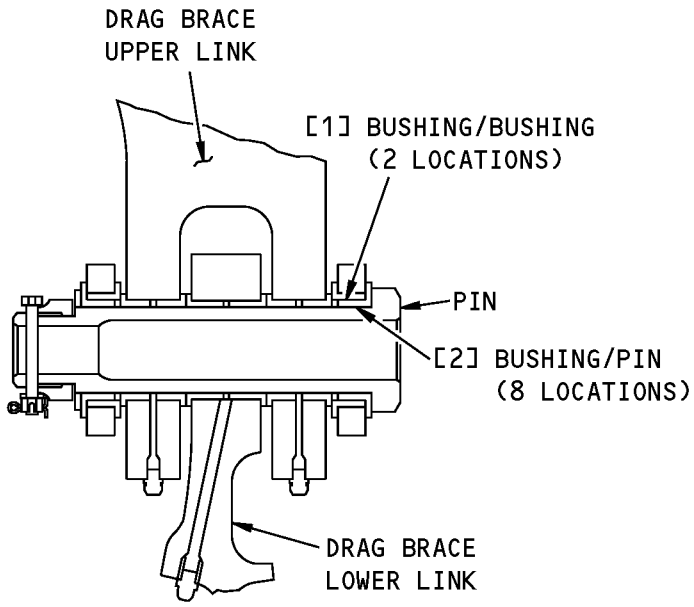
——————— END OF TASK ———————

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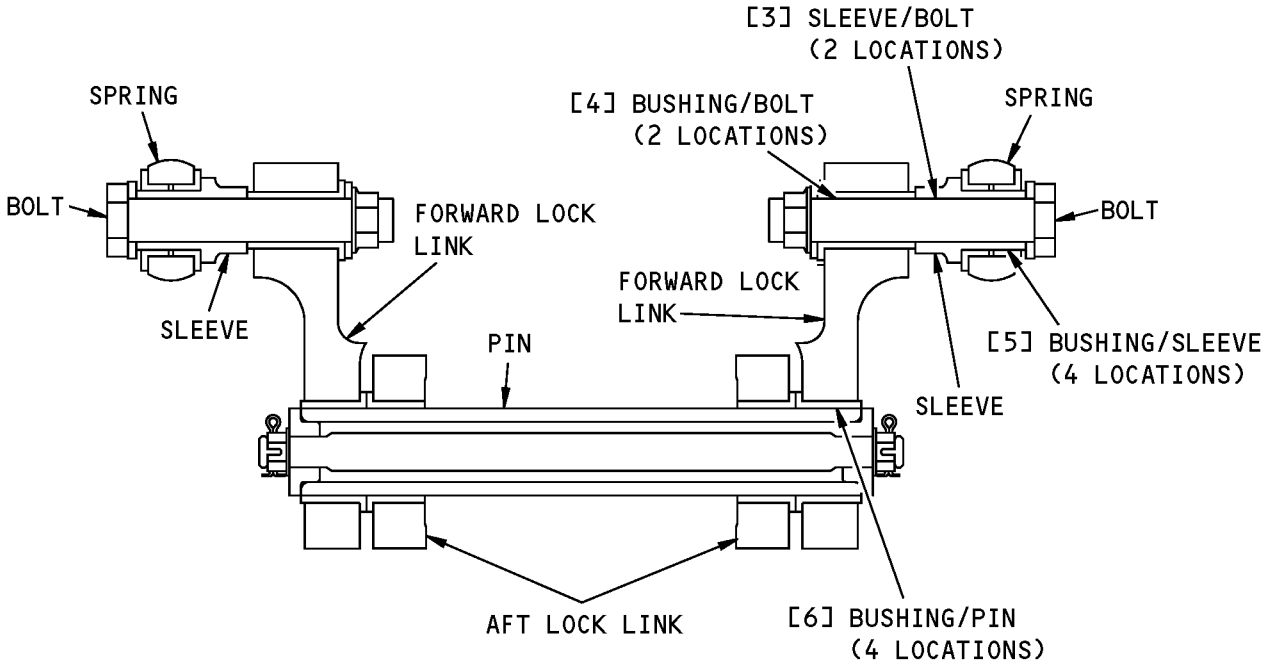


Nose Gear Lock Mechanism Wear Limits
Figure 601 (Sheet 1 of 3)/32-33-51-990-802

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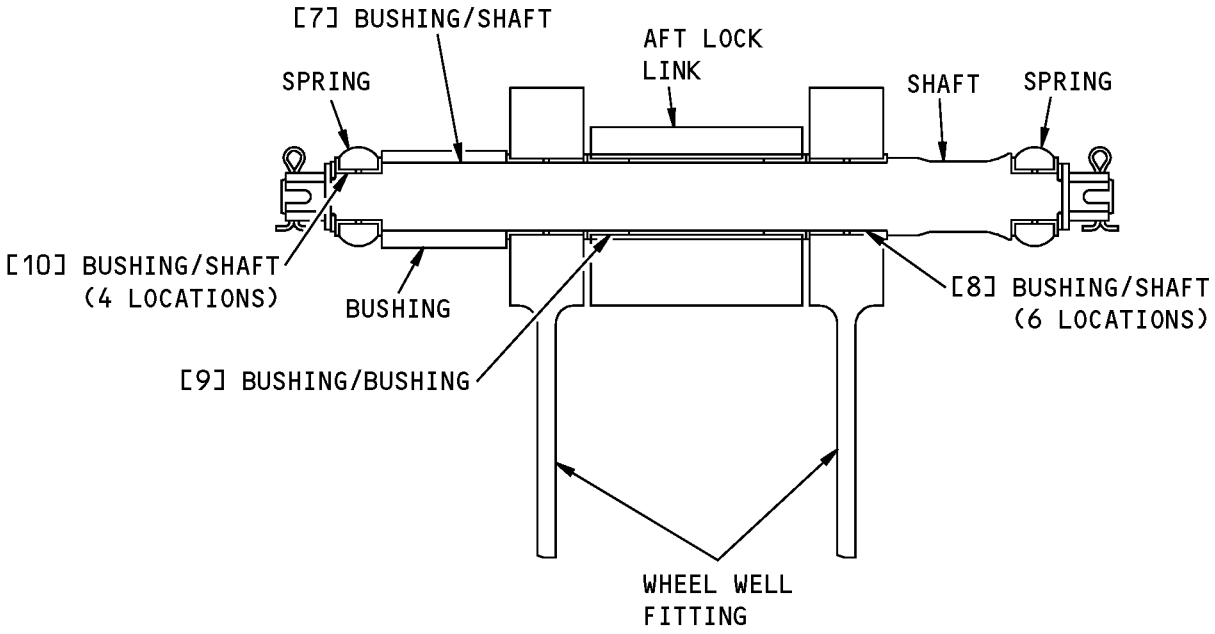
A–A



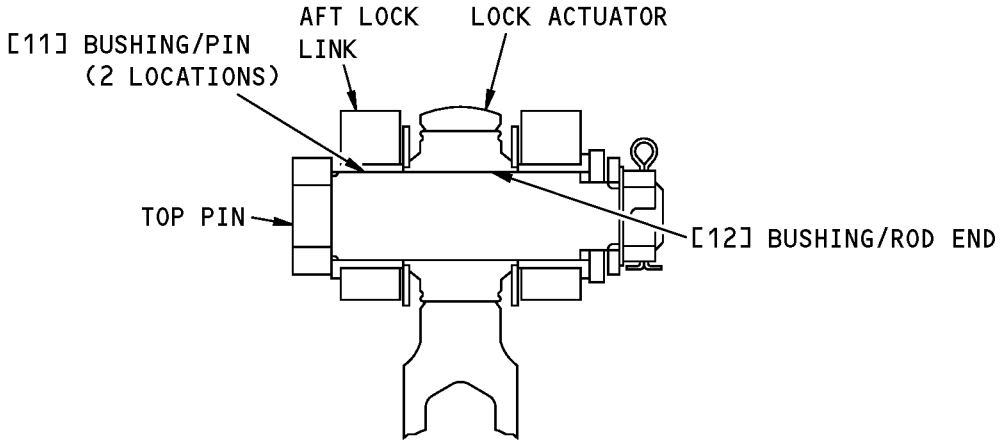
B–B

Nose Gear Lock Mechanism Wear Limits
Figure 601 (Sheet 2 of 3)/32-33-51-990-802

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C–C



D–D

Nose Gear Lock Mechanism Wear Limits
Figure 601 (Sheet 3 of 3)/32-33-51-990-802

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NOSE GEAR LOCK SPRING - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the lock spring (referred to as the spring assembly [6]) for the nose landing gear

(2) An installation of the lock spring for the nose landing gear.

TASK 32-33-52-000-801

2. Nose Gear Lock Spring Removal

(Figure 401)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1866	Expander Set - Spring, Main Landing Gear (Part #: C32014-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

D. Prepare for the Removal

SUBTASK 32-33-52-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON THE NOSE AND MAIN LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-52-860-001

(2) For the hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

E. Nose Gear Lock Spring Removal

SUBTASK 32-33-52-020-001

(1) Remove the pin [1], nut [7], and washer [3] from shaft where the spring assembly [6] is attached to the aft lock link and the wheel well fitting.

SUBTASK 32-33-52-480-002

(2) Use the expander set, SPL-1866, to extend the spring assembly [6].

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SUBTASK 32-33-52-020-002

(3) Remove the pin [1], nut [2] and washer [3] from the bolt [4] that holds thespring assembly [6] to the forward lock link.

SUBTASK 32-33-52-020-003

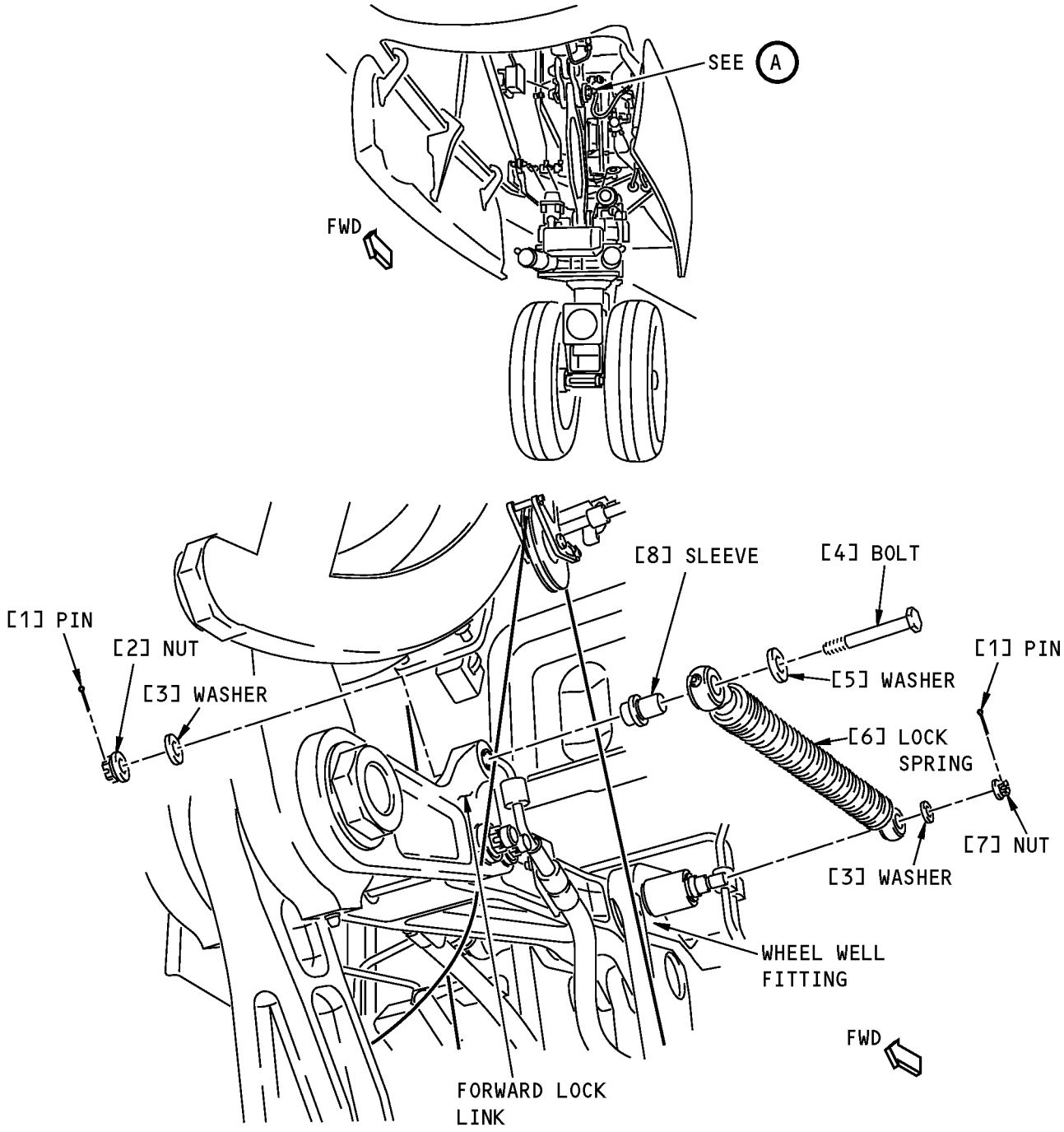
(4) Remove the spring assembly [6] , bolt [4], washer [5], and sleeve [8].

SUBTASK 32-33-52-020-004

(5) Remove the spring assembly [6].

———————— END OF TASK ————————

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Nose Gear Lock Spring Installation
Figure 401/32-33-52-990-801

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TASK 32-33-52-400-801

3. Nose Gear Lock Spring Installation

A. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1866	Expander Set - Spring, Main Landing Gear (Part #: C32014-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

B. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00633	Grease - Aircraft General Purpose	BMS3-33

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Pin	32-21-21-01-040	HAP 001-013, 015-026, 028-030
		32-21-21-02-045	HAP 031-054, 101-999
6	Spring assembly	32-33-51-01-035	HAP 001-013, 015-026, 028-030
		32-33-51-02-030	HAP 031-054, 101-999

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

E. Procedure

SUBTASK 32-33-52-600-001

WARNING: USE THE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF THE MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THE MASTINOX GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURY TO PERSONS.

(1) Apply a thick layer of compound, C50056 or compound, C00913 (alternate) to the shank and threads of the bolt [4]. Apply a thin layer of compound, C00913, to the threads of the nut [2], the faces of the washer [5] and sleeve [8], and the new pin [1].

SUBTASK 32-33-52-600-002

(2) Apply grease, D00633, to the chrome plated surfaces of the sleeve [8] and the bolt [4].

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SUBTASK 32-33-52-600-003

WARNING: USE THE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF THE MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THE MASTINOX GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURY TO PERSONS.

(3) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) to the threads and thread reliefs of the nut [7], the faces of the washer [3], and the new pin [1].

SUBTASK 32-33-52-600-004

(4) Apply grease, D00633, to the chrome plated surface of the shaft on the wheel well fitting.

SUBTASK 32-33-52-480-003

(5) Use the expander set, SPL-1866 to extend the spring assembly [6].

SUBTASK 32-33-52-420-001

(6) Do the steps that follow to connect the spring assy [6] to the shaft on the wheel well fitting.

(a) Put the spring assembly [6] in its location on the shaft on the wheel well fitting.

(b) Install the washer [3] and nut [7] to attach the spring assembly [6] to the wheel well fitting and aft lock link.

1) Tighten the nut [7] to 20 in-lb (2 N·m) – 24 in-lb (3 N·m) above the run-on torque.

(c) Install the pin [1].

SUBTASK 32-33-52-420-004

(7) Do the steps that follow to connect the spring assembly [6] to the forward lock link:

(a) Put the spring assembly [6] in its location on the forward lock link.

(b) Install bolt [4], washer [5], and the sleeve [8] to connect the spring assy [6] to the forward lock link.

(c) Install the washer [3] and nut [2] on the bolt [4].

1) Tighten the nut [2] to 20 in-lb (2 N·m) – 24 in-lb (3 N·m) above the run-on torque.

(d) Install the pin [1].

SUBTASK 32-33-52-080-001

(8) Remove the expander set, SPL-1866 from the spring assembly [6].

———————— END OF TASK ————————

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NOSE GEAR WHEEL WELL DOOR LINKAGE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the wheel well door linkage for the nose gear.

(2) An installation of the wheel well door linkage for the nose gear.

B. This linkage, called the door mechanism assembly [1], has these parts:

(1) an upper pushrod assembly [2]

(2) a lower pushrod assembly [3]

(3) and a bellcrank assembly [4].

TASK 32-33-61-000-801

2. Nose Gear Wheel Well Door Linkage Removal

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-33-61-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-61-580-001

(2) Install chocks around the tires of the nose landing gear.

D. Removal

SUBTASK 32-33-61-020-001

(1) Remove the pin [8], nut [7], washer [9], and bolt [5] to disconnect the universal [10] on the lower pushrod assembly [3] from the door hinge (Detail B).

SUBTASK 32-33-61-020-002

(2) Remove the pin [16], nut [14], washer [15], bolt [11], washer [12], and bushing [13] to disconnect the lowerpushrod assembly [3] from the bellcrank assembly [4] (Detail C).

SUBTASK 32-33-61-020-003

(3) Remove the pin [16], nut [20], washer [21], bolt [19], washer [18], and bushing [17] to disconnect the upper pushrod assembly [2] from the trunnion clevis (Detail D).

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SUBTASK 32-33-61-020-004

(4) Remove the pin [16], nut [20], washer [21], bolt [19], washer [18], and bushing [17] to disconnect the upper pushrod assembly [2] from the bellcrank assembly [4] (Detail E).

SUBTASK 32-33-61-020-005

(5) Do these steps to remove the bellcrank assembly [4] (Detail G):

(a) Remove the lockwire from the pin [24] at the inboard end of the door operator bolt [23] and remove the pin [24].

(b) Remove the nut [25] from the door operator bolt [23].

(c) Remove the bellcrank assembly [4] from the door operator bolt [23].

SUBTASK 32-33-61-020-006

(6) Do these steps to remove the door operator bolt [23]:

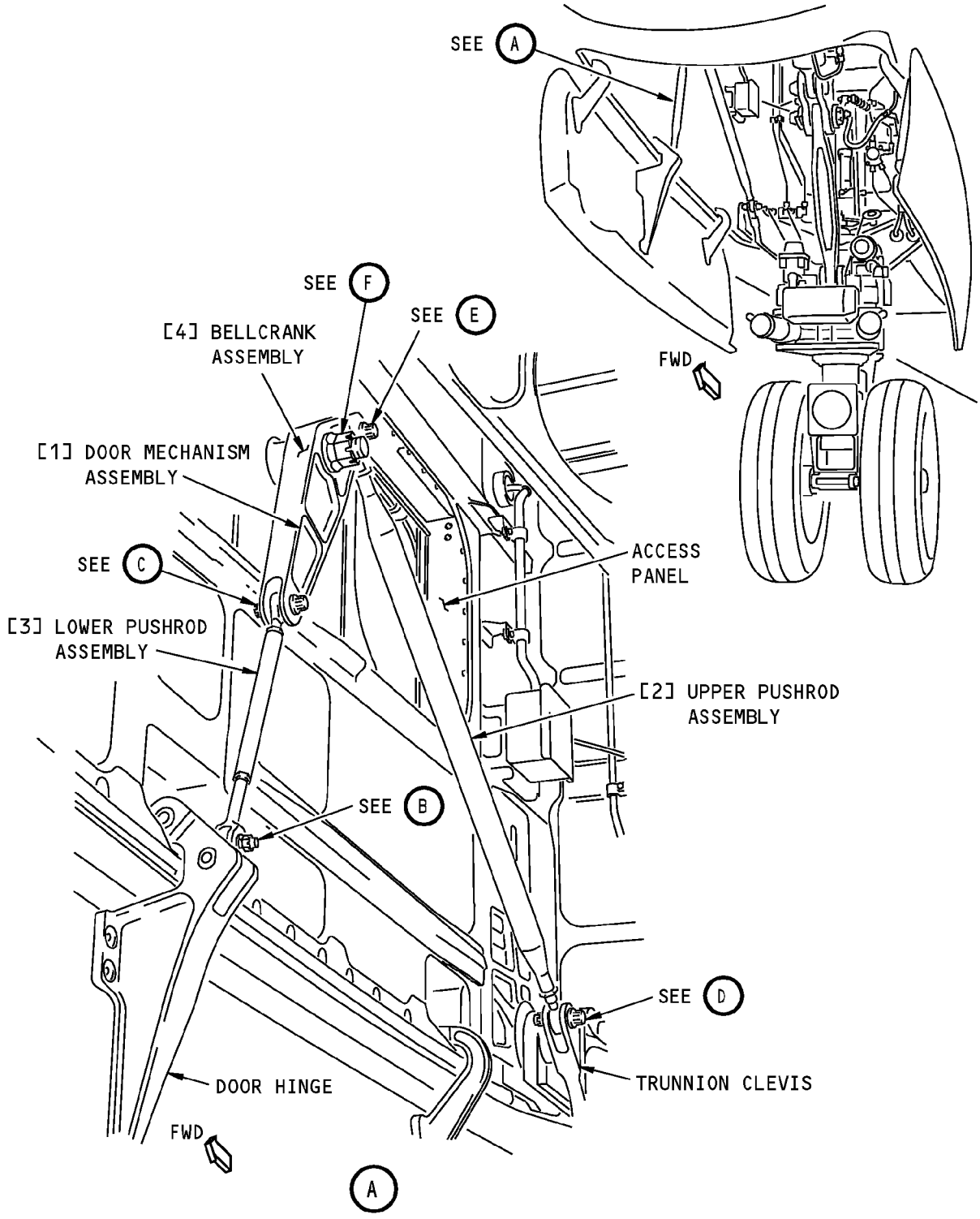
(a) Remove the aft access panel in the nose gear wheel well from the side on which you will remove the wheel well door linkage.

(b) Remove the nut [26], washer [27], and cross bolt [22] at the outboard end of the door operator bolt [23].

(c) Remove the door operator bolt [23] from the bulkhead fitting.

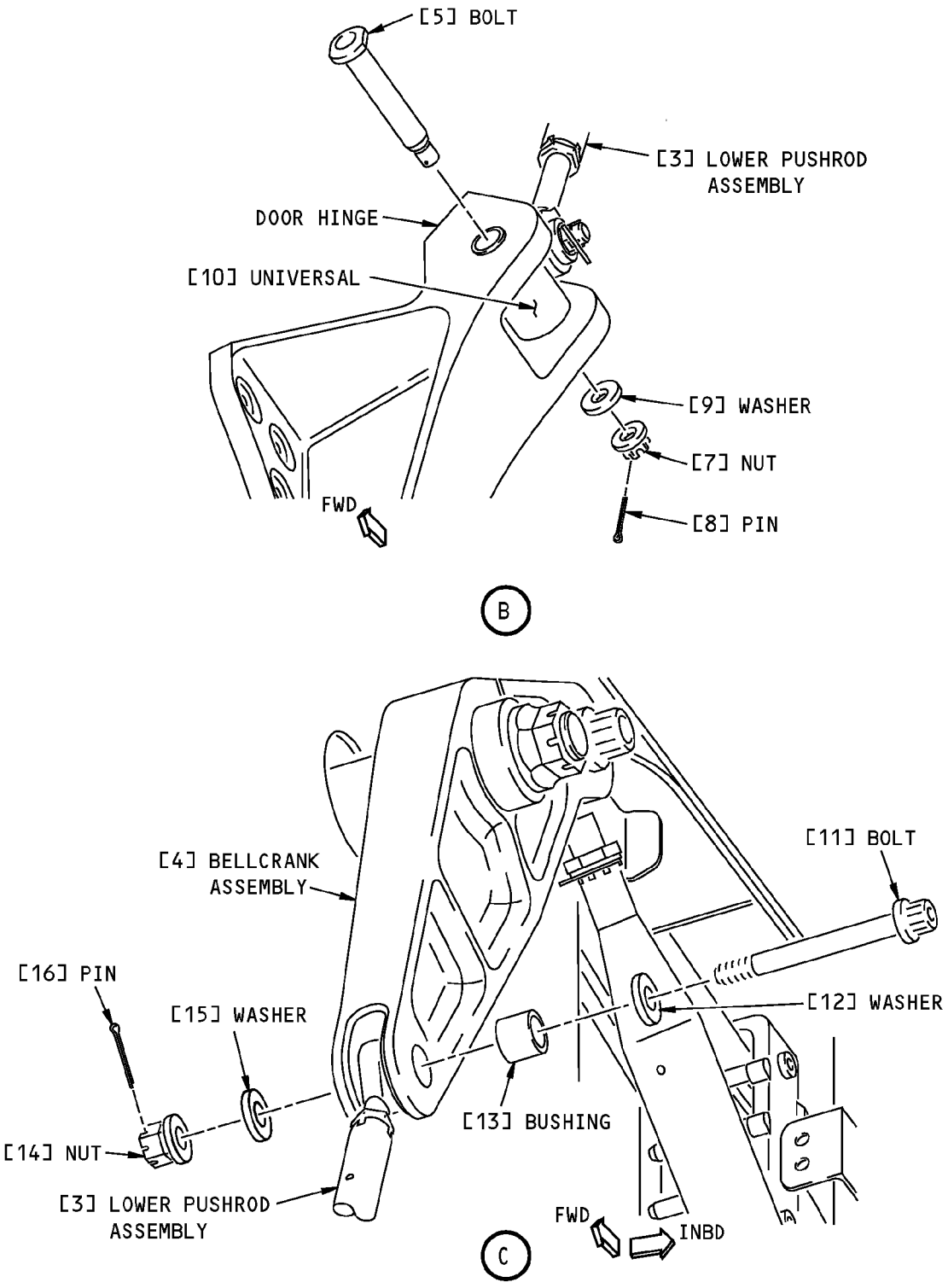
——————— END OF TASK ———————

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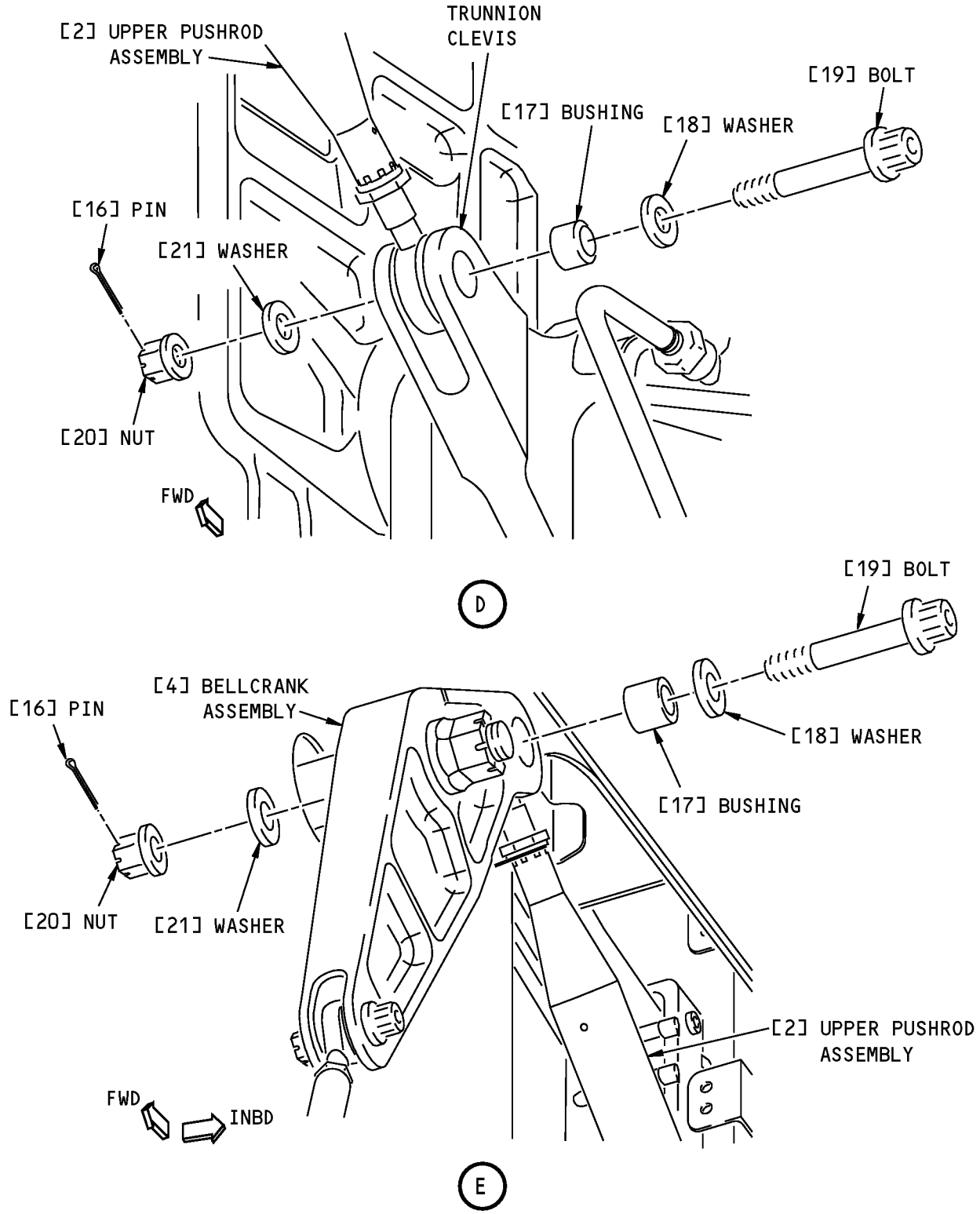
Nose Gear Wheel Well Door Linkage Installation
Figure 401 (Sheet 1 of 4)/32-33-61-990-801

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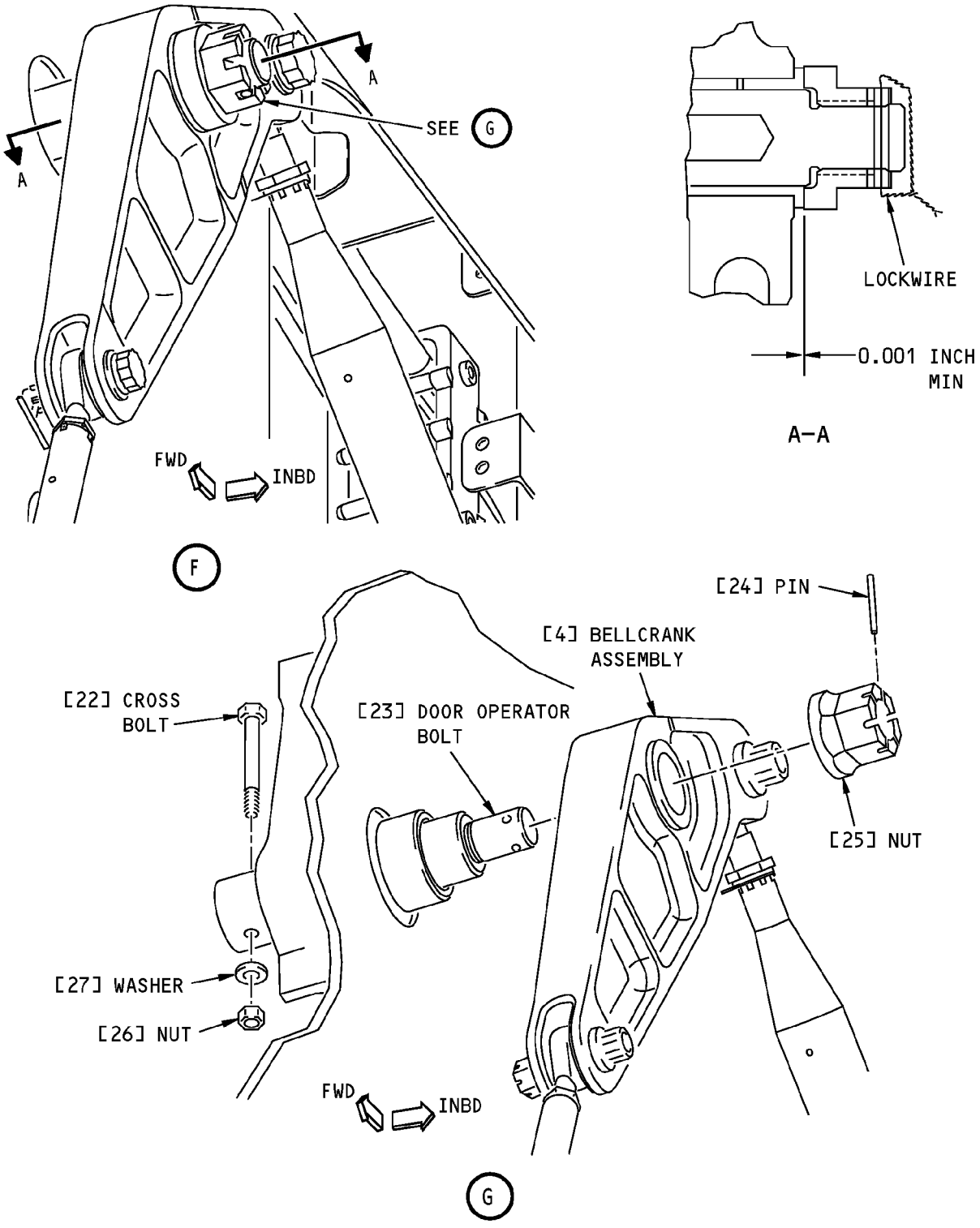
Nose Gear Wheel Well Door Linkage Installation
Figure 401 (Sheet 2 of 4)/32-33-61-990-801

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Nose Gear Wheel Well Door Linkage Installation
Figure 401 (Sheet 3 of 4)/32-33-61-990-801

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Nose Gear Wheel Well Door Linkage Installation
Figure 401 (Sheet 4 of 4)/32-33-61-990-801

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TASK 32-33-61-400-801

3. Nose Gear Wheel Well Door Linkage Installation

(Figure 401)

A. References

Reference	Title
32-33-61-820-802	Nose Gear Wheel Well Door Linkage Adjustment (P/B 501)

B. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00633	Grease - Aircraft General Purpose	BMS3-33

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Pushrod assembly	32-33-61-01-035	HAP 001-013, 015-026, 028-030
		32-33-61-01A-040	HAP 031-054, 101-999
3	Pushrod assembly	32-33-61-01-165	HAP 001-013, 015-026, 028-030
		32-33-61-01A-180	HAP 031-054, 101-999
4	Bellcrank assembly	32-33-61-01-100	HAP 001-013, 015-026, 028-030
		32-33-61-01A-110	HAP 031-054, 101-999
8	Pin	32-22-11-01-005	HAP 001-013, 015-026, 028-030
		32-22-11-01A-005	HAP 031-054, 101-999
16	Pin	32-22-11-01-005	HAP 001-013, 015-026, 028-030
		32-22-11-01A-005	HAP 031-054, 101-999
		32-33-61-01-005	HAP 001-013, 015-026, 028-030
		32-33-61-01-070	HAP 001-013, 015-026, 028-030
24	Pin	32-22-11-01-042	HAP 001-013, 015-026, 028-030
		32-22-11-01A-050	HAP 031-054, 101-999

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

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E. Installation of the Door Mechanism Assembly for the Nose Gear

SUBTASK 32-33-61-620-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(1) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) to the thread relief and threads of the door operator bolt [23]] and the nut [25] (Detail G).

SUBTASK 32-33-61-640-001

(2) Apply a layer of grease, D00633, to the chrome plated surfaces of the door operator bolt [23].

SUBTASK 32-33-61-930-001

(3) Put a reference line on the unthreaded end of the door operator bolt [23] to align with the center of the hole for the cross bolt [22].

SUBTASK 32-33-61-420-001

(4) Install the door operator bolt [23] from the inboard side.

NOTE: Make sure the reference line for the center of the bolt is aligned with the bolt hole in the bulkhead fitting.

SUBTASK 32-33-61-600-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(5) Put a thick layer of compound, C50056 or compound, C00913 (alternate) to the shank and threads of the cross bolt [22], and on the nut [26] and the face of the washer [27].

SUBTASK 32-33-61-420-002

(6) Align the bolt holes in the door operator bolt [23] and the bulkhead fitting and install the cross bolt [22].

(a) Wipe off the unwanted compound, C00913 from the cross bolt [22] after you install it.

SUBTASK 32-33-61-420-003

(7) Install the washer [27] and nut [26] on the cross bolt [22].

SUBTASK 32-33-61-420-004

(8) Install the bellcrank assembly [4] on the door operator bolt [23].

SUBTASK 32-33-61-420-005

(9) Install the nut [25] and tighten until a gap of at least 0.001 in. (0.025 mm) is measured between the nut [25] and the bushing in the bellcrank assembly [4].

SUBTASK 32-33-61-420-015

(10) Loosen the nut [25] only enough to align the hole in the door operator bolt [23] with the castellations in the nut [25].

SUBTASK 32-33-61-420-006

(11) Install the pin [24] to lock the nut [25].

SUBTASK 32-33-61-410-001

(12) Install lockwire on the pin [24].

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SUBTASK 32-33-61-100-001

(13) Remove the excess compound, C00913 from the bellcrank assembly [4] and the door operator bolt [23] and nut [25].

SUBTASK 32-33-61-420-007

(14) Do these steps to connect the upper pushrod assembly [2] to the bellcrank assembly [4] (Detail E):

(a) Apply grease, D00633 to the chrome plated surfaces of the bolt [19], and the bushing [17].

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(b) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) to the threads on the bolt [19] and nut [20], and the faces of the washers [18, 21].

(c) Install the bolt [19], washer [18], bushing [17], washer [21], nut [20], and a new pin [16] to connect the upper pushrod assembly [2] to the bellcrank assembly [4].

SUBTASK 32-33-61-420-008

(15) Do these steps to connect the lower pushrod assembly [3] to the bellcrank assembly [4] (Detail C):

(a) Apply grease, D00633 to the chrome plated surfaces of the bolt [11], and the bushing [13].

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(b) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) to the threads on the bolt [11] and nut [14], and the faces of the washers [12, 15].

(c) Install the bolt [11], washer [12], bushing [13], washer [15], nut [14], and a new pin [16] to connect the lower pushrod assembly [3] to the bellcrank assembly [4].

SUBTASK 32-33-61-620-002

(16) Do these steps to connect the upper pushrod assembly [2] to the trunnion clevis (Detail D):

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(a) Put a thin layer of compound, C50056 (alternate) compound, C00913, to the threads and thread relief of the bolt [19] and the nut [20] and on the faces of the washers [18, 21].

(b) Apply a layer of grease, D00633, to the wear surfaces of the bolt [19] and the bushing [17].

(c) Install the bolt [19], washer [18], bushing [17], washer [21] and nut [20] to connect the upper pushrod assembly [2] to the trunnion clevis.

(d) Tighten the nut [20] to 90 in-lb (10 N·m) – 125 in-lb (14 N·m).

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(e) Loosen the nut [20] only enough to align the hole in the bolt [19] with the castellations in the nut [20].

(f) Install the new pin [16] in the nut [20].

SUBTASK 32-33-61-820-005

(17) Do the adjustment of the nose gear wheel well door linkage, do this task: Nose Gear Wheel Well Door Linkage Adjustment, TASK 32-33-61-820-802.

SUBTASK 32-33-61-420-010

(18) Do these steps to connect the lower pushrod assembly [3] to the door hinge (Detail B):

(a) Apply grease, D00633 to the chrome plated surfaces of the bolt [5].

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(b) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) to the threads and thread relief of the bolt [5] and the nut [7] and on the face of the washer [9].

(c) Install the bolt [5], washer [9], nut [7], and a new pin [8] to connect the lower pushrod assembly [3] to the door hinge.

———————— END OF TASK ————————

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NOSE GEAR WHEEL WELL DOOR LINKAGE - ADJUSTMENT/TEST

1. General

A. This procedure includes the instructions to adjust the linkage for the nose gear wheel well doors.

TASK 32-33-61-820-802

2. Nose Gear Wheel Well Door Linkage Adjustment

(Figure 501)

A. References

Reference	Title
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
07-11-21-580-802	Lower the Airplane Nose Off of the Jack (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-802	Hydraulic System A or B Pressurization with a Portable Hydraulic Cart (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

Reference	Description
STD-1184	Scale - Spring, 0-100 Lbs, Tension

C. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

E. Prepare for the Adjustment

NOTE: A NLG door rigging check is not necessary if reinstalling the same NLG door that was removed and no changes to the door stops, door seals, door hinges, or door pushrods were made.

SUBTASK 32-33-61-480-005

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

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SUBTASK 32-33-61-580-005

(2) Lift the airplane nose until the nose wheel is clear, do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

NOTE: Lower the tail support jack as the nose is raised.

SUBTASK 32-33-61-860-008

(3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization with a Portable Hydraulic Cart, TASK 29-11-00-860-802.

SUBTASK 32-33-61-020-007

(4) Remove the lockwire from the jamnuts on each end of the lower rod assembly.

SUBTASK 32-33-61-020-008

(5) Loosen the jamnut on each end of the lower rod assembly.

NOTE: Loosen the jamnut only if you will turn the lower rod assembly, for adjustment. If you loosen the jamnut too much, it will disengage the rod end lock from the rod barrel.

NOTE: Do not adjust the length of upper rod assembly. Adjustment of the upper rod assembly can cause problems to the gear retraction or extension.

SUBTASK 32-33-61-020-009

(6) If it is not disconnected already, remove these parts to disconnect the universal on the lower rod assembly from the hinges:

(a) Pin [4]

(b) Nut [3] and washer [2]

(c) Bolt [1].

SUBTASK 32-33-61-210-001

(7) Make sure the tamper proof seals are on the upper rod assembly.

F. Adjustment For the Nose Gear Wheel Well Door Linkage

SUBTASK 32-33-61-080-004

(1) Remove the downlock pin from the nose landing gear, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

SUBTASK 32-33-61-870-003

WARNING: MAKE SURE YOU INSTALL THE DOWNLOCK PINS IN THE MAIN LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT IF THE GEAR RETRACTS.

(2) Retract the nose landing gear.

NOTE: Extend and retract the nose landing gear as necessary to do the adjustment.

SUBTASK 32-33-61-860-009

(3) Put the control lever for the landing gear to the OFF position.

SUBTASK 32-33-61-600-003

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST COMPOUND, C00913 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

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(WARNING PRECEDES)

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(4) Apply a thin layer of compound, C00913 to these items:

(a) The threads and thread reliefs of the bolt [1], the nut [3] and the faces of the washer [2].

SUBTASK 32-33-61-420-013

CAUTION: MAKE SURE THE HEAD OF THE BOLT THAT ATTACHES THE UNIVERSAL TO THE LOWER ROD ASSEMBLY IS OUTBOARD. IF THE HEAD IS NOT OUTBOARD THERE WILL NOT BE ENOUGH CLEARANCE WITH THE DOOR HINGE AND DAMAGE CAN RESULT.

(5) Install the bolt [1], washer [2], nut [3], and pin [4] to connect the lower rod assembly to the door hinge.

(a) Adjust the length of the lower rod assembly to permit a free fit of the bolt [1] with no preload on the door.

NOTE: Adjust one door at a time. Make sure the opposite door is disconnected from the lower rod assembly. You will have to disconnect the first door after its adjusted, then do the opposite door adjustment.

SUBTASK 32-33-61-820-004

(6) Shorten the length of the lower rod assembly until the door touches the forward stop fitting.

SUBTASK 32-33-61-700-001

CAUTION: MAKE SURE THE SPRING SCALE IS SECURELY ATTACHED TO THE DOOR. THE SCALE COULD SLIP OFF THE DOOR AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(7) Use the spring scale (0-100 Lbs), STD-1184 to apply a 60 lb (27 kg) – 90 lb (41 kg) down load approximately 1.0 in. (25.4 mm) aft and 1.0 inch outboard of the forward inboard corner of the door or a 75-95 pound 75 lb (34 kg) — 95 lb (43 kg) load at the forward stop fitting on the door with the nose landing gear retracted.

(a) Connect the scale to the inside of the landing gear door at the correct location.

(b) Pull down on the scale to apply the correct load.

(c) Keep this load applied while you take the door measurements.

SUBTASK 32-33-61-820-003

(8) Measure the dimension of the door below the body contour at the forward inboard corner on the door. If the dimension is not 0.14 in. (3.56 mm) – 0.18 in. (4.57 mm), do these steps to adjust the lower rod assembly to get 0.14-0.18 inch:

NOTE: The lower rod assembly is adjustable as a turnbuckle.

(a) Extend the nose gear slowly.

CAUTION: DO NOT SHORTEN THE LENGTH OF THE LOWER ROD ASSEMBLY MORE THAN 0.50 IN. (12.7 MM) AFTER THE DOOR TOUCHES THE STOP.

(b) Shorten the length of the lower rod assembly one thread at a time.

NOTE: One half turn of the barrel or one turn of the clevis rod end will give one thread of adjustment.

(c) Retract the nose gear and measure the dimension of the door below the body contour.

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(d) Do these steps again, if it is necessary, until you get the correct dimension.

SUBTASK 32-33-61-080-003

(9) Remove the weight from the door.

SUBTASK 32-33-61-860-004

(10) Extend the nose landing gear.

SUBTASK 32-33-61-420-011

(11) Tighten the jamnut on each end of the lower rod assembly.

(a) Threads of the rods ends do not need to cover the witness holes. If 10.47 in. (266 mm) is met and threads are visible through the witness holes then adjustment values are reached.

SUBTASK 32-33-61-420-012

(12) Install the lockwire on the jamnuts on each end of the lower rod assembly.

SUBTASK 32-33-61-020-010

(13) Disconnect the door that you adjusted to get access and do the adjustment for the other door.

SUBTASK 32-33-61-420-014

(14) Connect the doors and do the check of door operation.

G. Check of the Door Operation

SUBTASK 32-33-61-860-005

(1) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-33-61-710-002

WARNING: MAKE SURE YOU INSTALL THE DOWNLOCK PINS IN THE MAIN LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT IF THE GEAR RETRACTS.

(2) Retract and extend the nose landing gear and look for correct operation of the nose gear doors.

SUBTASK 32-33-61-860-006

(3) Extend the nose landing gear.

SUBTASK 32-33-61-480-003

(4) Install the downlock pin from the nose landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-61-580-004

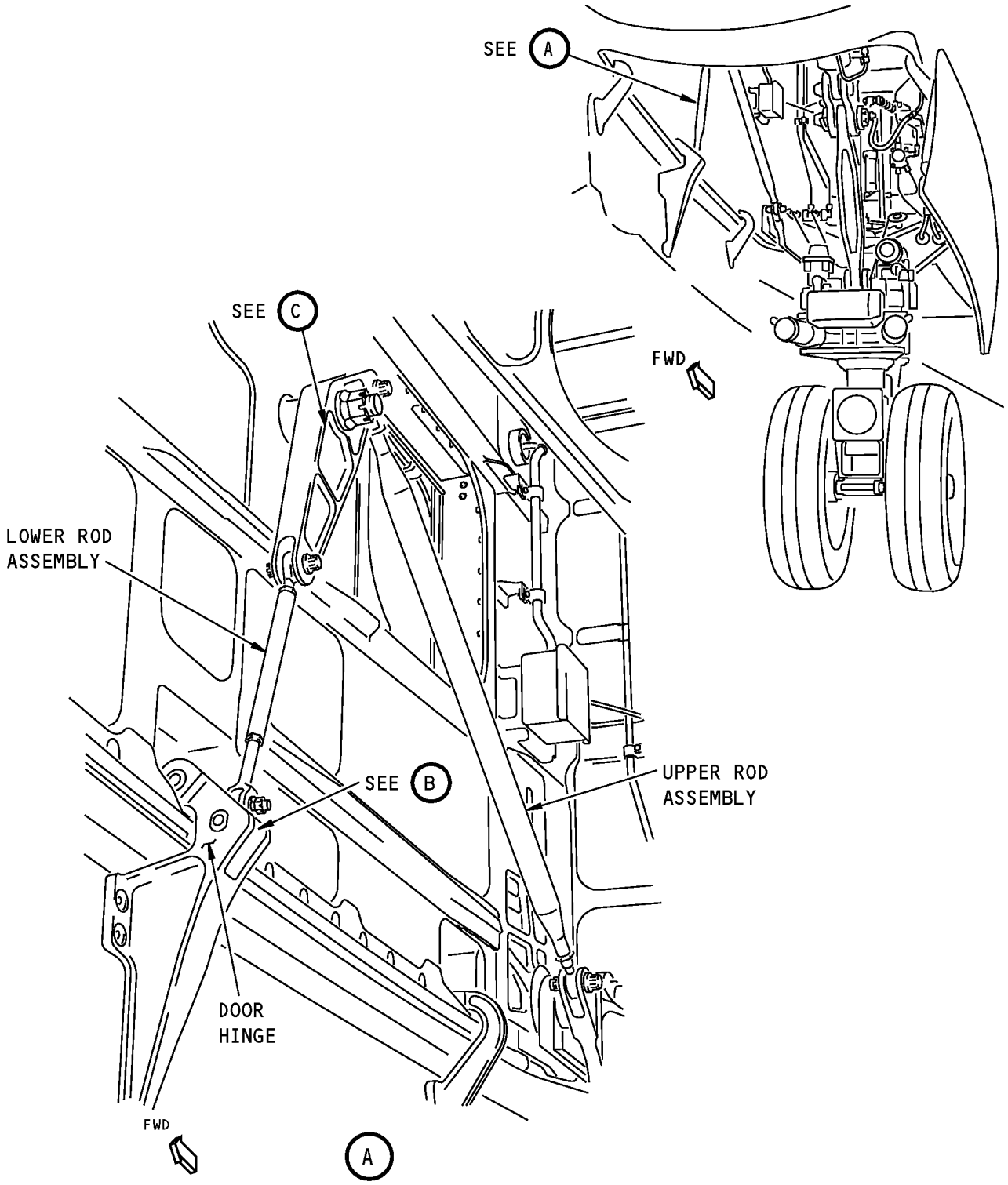
(5) Lower the airplane nose and remove the jacks, do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

SUBTASK 32-33-61-860-007

(6) Remove the power from hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

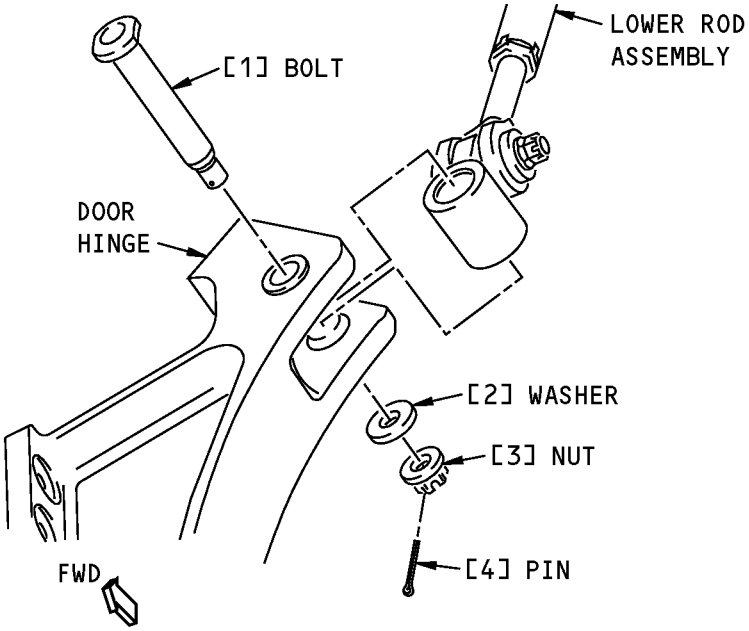
——————— END OF TASK ———————

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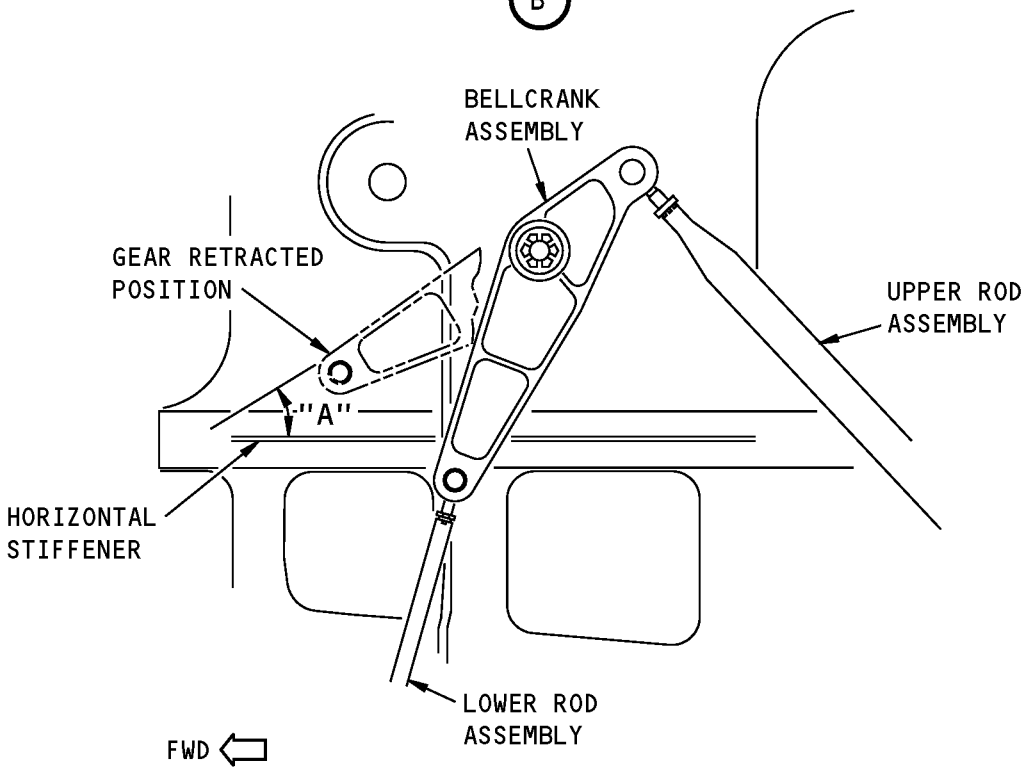


Nose Gear Wheel Well Door Linkage Adjustment
Figure 501 (Sheet 1 of 2)/32-33-61-990-802

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B



C

Nose Gear Wheel Well Door Linkage Adjustment
Figure 501 (Sheet 2 of 2)/32-33-61-990-802

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NOSE GEAR WHEEL WELL DOOR LINKAGE - INSPECTION/CHECK

1. General

A. This task has the data for a dimensional inspection of the linkage for the wheel well doors on the nose landing gear. No procedure is given in this section to get access to permit the inspection. The door linkage must be removed to do the inspection.

These are the tasks:

Nose Gear Wheel Well Door Linkage Removal, TASK 32-33-61-000-801,

Nose Gear Wheel Well Door Linkage Installation, TASK 32-33-61-400-801.

TASK 32-33-61-200-801

2. Nose Gear Wheel Well Door Linkage Inspection

(Figure 601)

A. General

(1) This procedure gives wear limits and repair data for the linkage for the wheel well doors on the nose landing gear.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-33-61-000-801	Nose Gear Wheel Well Door Linkage Removal (P/B 401)
32-33-61-400-801	Nose Gear Wheel Well Door Linkage Installation (P/B 401)

C. Tools/Equipment

Reference	Description
STD-1096	Micrometer - Depth, 0-1 Inch, Readable to 1/1000 Inch
STD-1097	Caliper - Vernier, 0-6 Inch, Readable to 1/1000 Inch

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

E. Procedure

SUBTASK 32-33-61-480-004

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-61-020-011

(2) To remove parts to get access to the linkage for the wheel well doors on the nose landing gear do the task that follows (Figure 601):

(a) Do this task: Nose Gear Wheel Well Door Linkage Removal, TASK 32-33-61-000-801.

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SUBTASK 32-33-61-020-012

(3) Use these tools to check for wear on the parts of the linkage for the wheel well doors on the nose landing gear:

(a) micrometer (0-1 Inch, readable to 1/1000 Inch), STD-1096

(b) readable to 1/1000 inch vernier 0 - 6 inch caliper, STD-1097.

SUBTASK 32-33-61-020-013

(4) Examine the parts of the linkage for worn areas:

(a) Remove the parts to be checked.

(b) Measure the parts as necessary with a micrometer (0-1 Inch, readable to 1/1000 Inch), STD-1096 or a readable to 1/1000 inch vernier 0 - 6 inch caliper, STD-1097.

(c) Compare the dimensions you measured with the permitted wear dimensions that follow.

(d) If the parts are not in the tolerance, replace or repair the part as required.

Table 601/32-33-61-993-801

NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MAXIMUM SERVICE DIAMETRIC CLEARANCE
#1 BUSHING	I.D.	0.4375 in 11.112 mm	0.4381 in 11.128 mm	0.4405 in 11.189 mm	0.004 in
#1 BOLT	O.D.	0.4355 in 11.062 mm	0.4365 in 11.087 mm	0.4341 in 11.026 mm	0.102 mm
#2 BUSHING	I.D.	0.4375 in 11.112 mm	0.4381 in 11.128 mm	0.4405 in 11.189 mm	0.004 in
#2 BOLT	O.D.	0.4355 in 11.062 mm	0.4365 in 11.087 mm	0.4341 in 11.026 mm	0.102 mm
#3 BEARING	I.D.	in mm	in mm	in mm	in
#3 BOLT	O.D.	0.3740 in 9.500 mm	0.3745 in 9.512 mm	in mm	mm
#4 BUSHING	I.D.	0.3750 in 9.525 mm	0.3755 in 9.538 mm	0.3775 in 9.588 mm	0.003 in
#4 BOLT	O.D.	0.3740 in 9.500 mm	0.3745 in 9.512 mm	0.3725 in 9.462 mm	0.076 mm
#5 BUSHING	I.D.	0.3750 in 9.525 mm	0.3755 in 9.538 mm	0.3775 in 9.588 mm	0.003 in

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(Continued)

NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MAXIMUM SERVICE DIAMETRIC CLEARANCE
#5 BOLT	O.D.	0.3740 in 9.500 mm	0.3745 in 9.512 mm	0.3725 in 9.462 mm	0.076 mm
#6 BUSHING	I.D.	0.5625 in 14.288 mm	0.5630 in 14.300 mm	0.5655 in 14.363 mm	0.004 in
#6 BUSHING	O.D.	0.5610 in 14.249 mm	0.5615 in 14.262 mm	0.5590 in 14.199 mm	0.102 mm
#7 BUSHING	I.D.	in mm	in mm	in mm	in
#7 BOLT	O.D.	1.122 in 28.50 mm	1.124 in 28.55 mm	in mm	mm
#8 BEARING	I.D.	in mm	in mm	in mm	in
#8 BOLT	O.D.	0.4990 in 12.675 mm	0.4995 in 12.687 mm	in mm	mm

Table 602/32-33-61-993-802

NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MAXIMUM SERVICE DIAMETRIC CLEARANCE
#9 BUSHING	I.D.	0.6875 in 17.462 mm	0.6880 in 17.475 mm	0.6905 in 17.539 mm	0.004 in
#9 BUSHING	O.D.	0.6860 in 17.424 mm	0.6865 in 17.437 mm	0.6840 in 17.374 mm	0.102 mm
#10 BUSHING	I.D.	0.5000 in 12.700 mm	0.5005 in 12.713 mm	0.5025 in 12.764 mm	0.003 in
#10 BOLT	O.D.	0.4990 in 12.675 mm	0.4995 in 12.687 mm	0.4975 in 12.636 mm	0.076 mm
#11 BUSHING	I.D.	0.5000 in 12.700 mm	0.5005 in 12.713 mm	0.5025 in 12.764 mm	0.003 in

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(Continued)

NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MAXIMUM SERVICE DIAMETRIC CLEARANCE
#11 BOLT	O.D.	0.4990 in 12.675 mm	0.4995 in 12.687 mm	0.4975 in 12.636 mm	0.076 mm
#12 BUSHING	I.D.	0.6875 in 17.462 mm	0.6880 in 17.475 mm	0.6905 in 17.539 mm	0.004 in
#12 BUSHING	O.D.	0.6860 in 17.424 mm	0.6865 in 17.437 mm	0.6840 in 17.374 mm	0.102 mm
#13 BEARING	I.D.	in mm	in mm	in mm	in
#13 BOLT	O.D.	0.4990 in 12.675 mm	0.4995 in 12.687 mm	in mm	mm

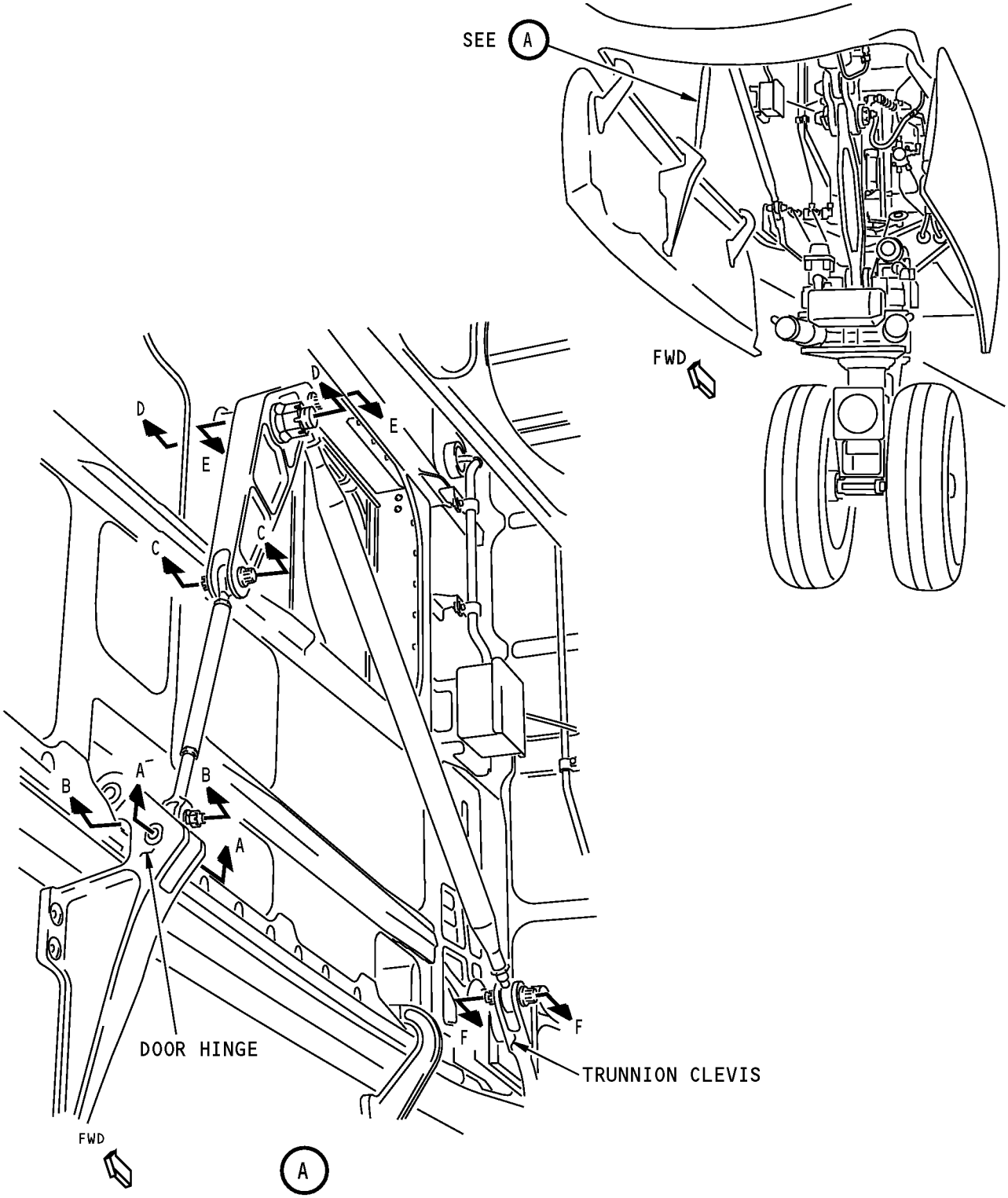
SUBTASK 32-33-61-020-014

(5) To install parts on the linkage for the wheel well doors on the nose landing gear do the task that follows:

(a) Do this task: Nose Gear Wheel Well Door Linkage Installation, TASK 32-33-61-400-801.

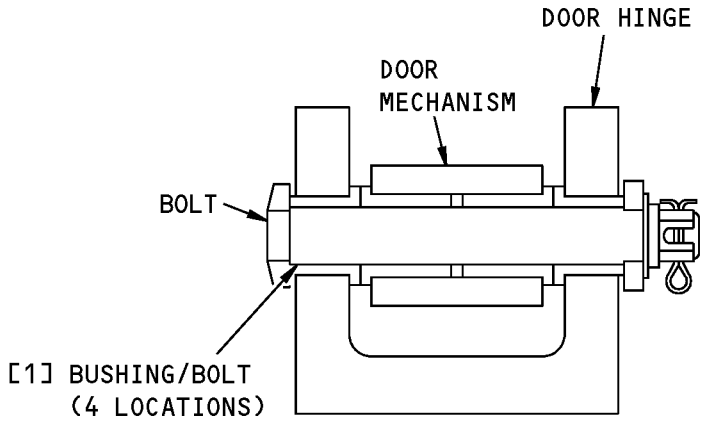
END OF TASK

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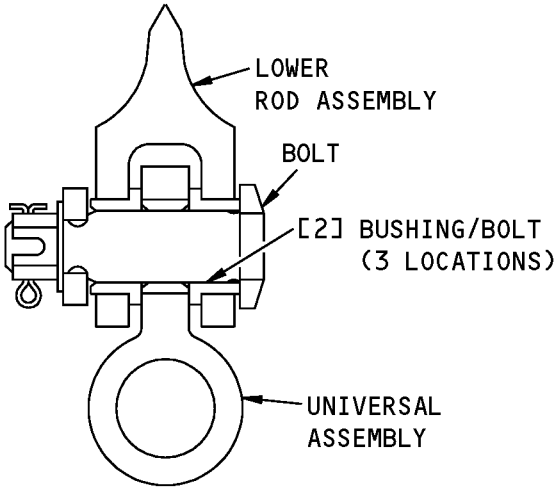


Nose Gear Wheel Well Door Linkage Wear Limits
Figure 601 (Sheet 1 of 4)/32-33-61-990-803

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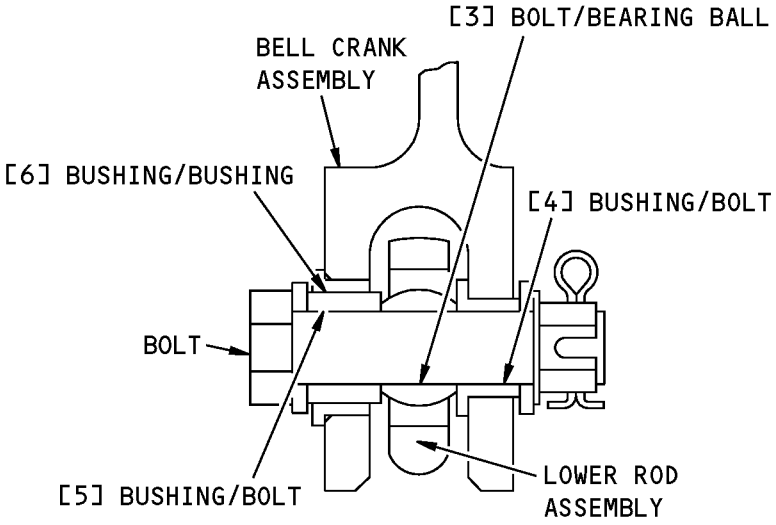
A–A



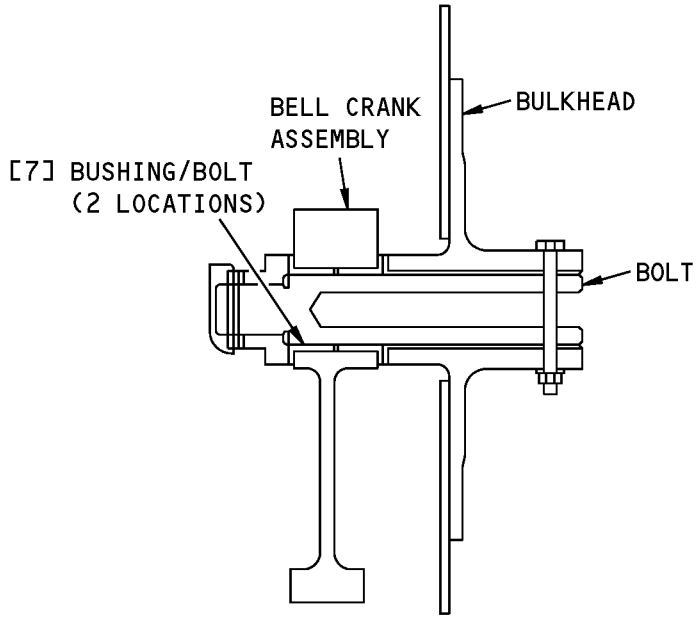
B–B

Nose Gear Wheel Well Door Linkage Wear Limits
Figure 601 (Sheet 2 of 4)/32-33-61-990-803

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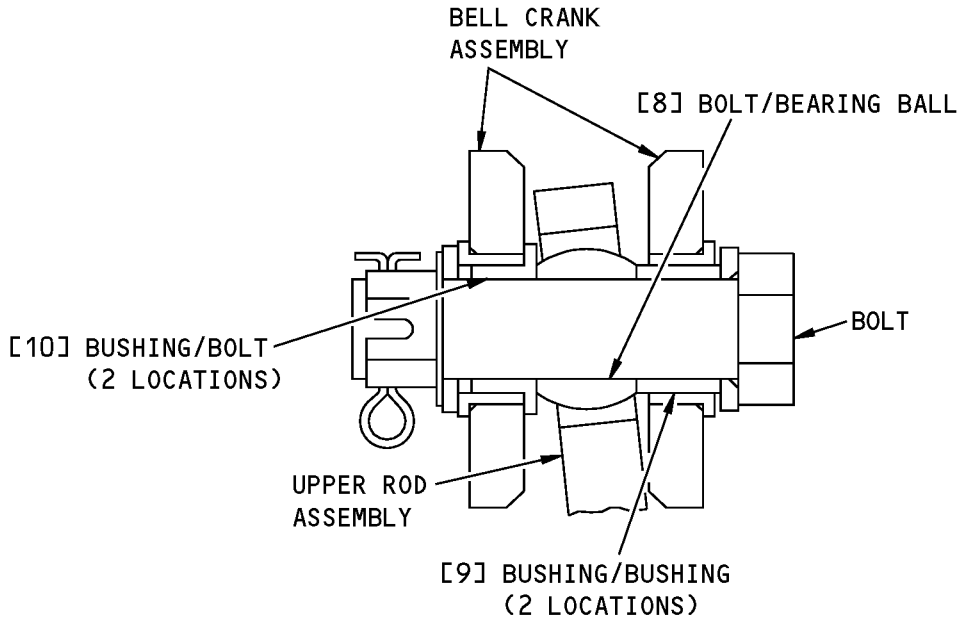
C–C



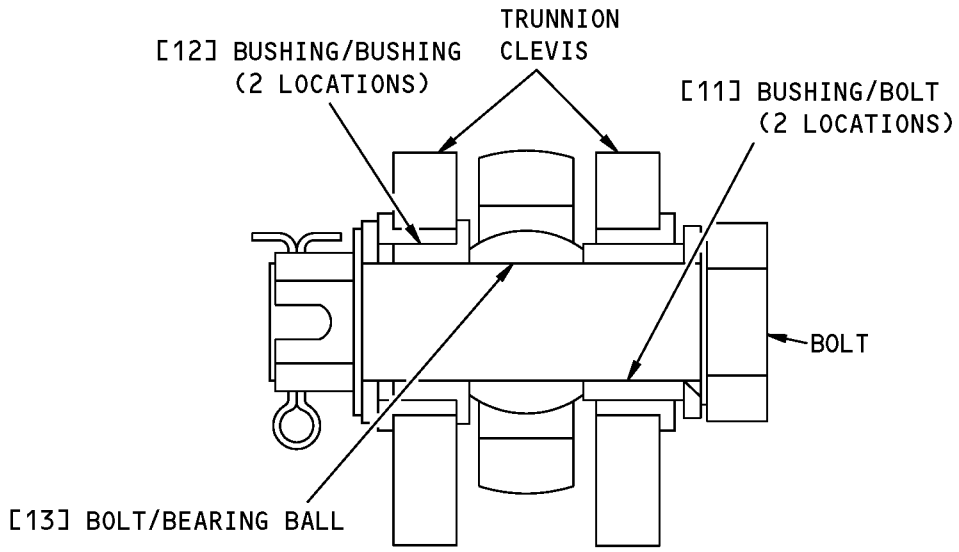
D–D

Nose Gear Wheel Well Door Linkage Wear Limits
Figure 601 (Sheet 3 of 4)/32-33-61-990-803

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E-E



F-F

Nose Gear Wheel Well Door Linkage Wear Limits
Figure 601 (Sheet 4 of 4)/32-33-61-990-803

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NOSE GEAR PRESSURE FUSE - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) A removal of the retract pressure fuse (referred to as the fuse assembly [4]) for the nose landing gear

(2) An installation of the fuse assembly [4] for the nose landing gear

(a) The installation of the fuse assembly [4] for the nose landing gear includes an installation test of the retract pressure fuse.

(3) A removal of the extend pressure fuse for the nose landing gear

(4) An installation of the extend pressure fuse for the nose landing gear

(a) The installation of the extend pressure fuse for the nose landing gear includes an installation test for the extend pressure fuse.

TASK 32-33-71-000-801

2. Removal of the Retract Pressure Fuse for the Nose Gear

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

D. Prepare for the Removal

SUBTASK 32-33-71-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-71-860-001

(2) For hydraulic system A, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

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SUBTASK 32-33-71-580-001

(3) Install chocks around the tires of the main landing gear.

E. Retract Pressure Fuse Removal

SUBTASK 32-33-71-020-007

(1) Loosen the nuts connecting the hydraulic lines to the fuse assembly [4].

SUBTASK 32-33-71-020-001

(2) Remove the screws [1], washers [2], and nuts [3] that hold the hydraulic lines to the structure on the two ends of the fuse assembly [4].

SUBTASK 32-33-71-020-002

(3) Disconnect the hydraulic lines from the fuse assembly [4].

SUBTASK 32-33-71-480-002

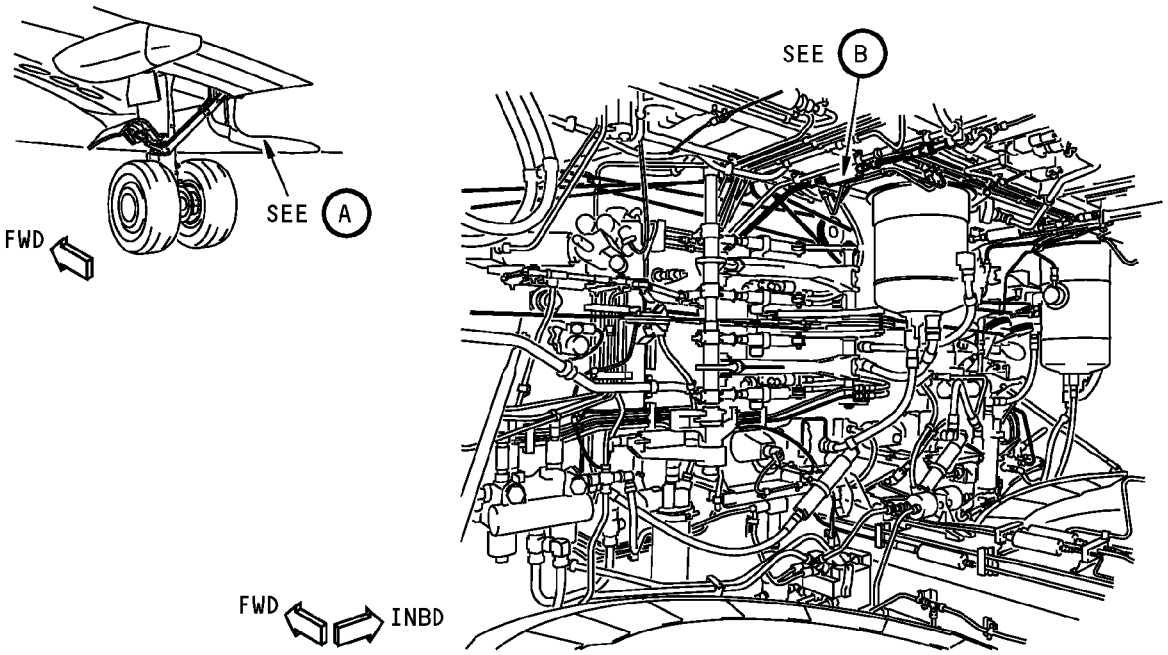
(4) Install caps on the hydraulic lines.

SUBTASK 32-33-71-020-003

(5) Remove the fuse assembly [4] from the airplane.

END OF TASK

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Nose Gear Retract Pressure Fuse Installation
Figure 401/32-33-71-990-801

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TASK 32-33-71-400-801

3. Installation of the Retract Pressure Fuse for the Nose Gear

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
29-11-00-200-801	Hydraulic Fluid Check (P/B 601)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	Fuse assembly	29-11-52-12A-644	HAP ALL

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

E. Retract Pressure Fuse Installation

SUBTASK 32-33-71-420-001

(1) Put the fuse assembly [4] in position to align it with the hydraulic lines.

SUBTASK 32-33-71-080-001

(2) Remove the caps from the hydraulic lines and connect the hydraulic lines to the fuse assembly [4].

SUBTASK 32-33-71-420-003

(3) Install the screws [1], washers [2], and nuts [3] for the clamps that hold the hydraulic lines to the structure on the two ends of the fuse assembly [4].

SUBTASK 32-33-71-420-007

(4) Tighten the hydraulic lines.

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F. Installation Test of the Retract Pressure Fuse

SUBTASK 32-33-71-480-003

WARNING: MAKE SURE YOU INSTALL THE DOWNLOCK PINS IN THE LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IF THE LANDING GEARS RETRACT, IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO STRUCTURE.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-71-860-002

(2) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-33-71-700-001

(3) Use the override trigger to move the control lever for the landing gear from the DN position to the UP position.

SUBTASK 32-33-71-710-001

(4) Make sure the UP hose of the retract actuator moves to show that hydraulic pressure is applied when the control lever is moved to the UP position.

SUBTASK 32-33-71-700-002

(5) Move the control lever to the DN position.

SUBTASK 32-33-71-700-003

(6) Make sure the DOWN hose on the retract actuator actuator moves when you move the control lever from the UP position to the DOWN position.

SUBTASK 32-33-71-210-001

(7) Do a check for leakage with the hydraulic pressure applied.

SUBTASK 32-33-71-860-003

(8) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-33-71-210-002

(9) Make sure there are no leaks in the hydraulic connections.

SUBTASK 32-33-71-840-001

(10) Examine the hydraulic reservoirs for the correct servicing. To do this, do this task: Hydraulic Fluid Check, TASK 29-11-00-200-801.

(a) Service them if it is necessary.

——————— END OF TASK ———————

TASK 32-33-71-000-803

4. Removal of the Extend Pressure Fuse for the Nose Gear

(Figure 402)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)

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(Continued)

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

D. Prepare for the Removal

SUBTASK 32-33-71-480-004

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-71-860-004

(2) For hydraulic system A, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-33-71-580-002

(3) Install chocks around the tires of the main landing gear.

E. Extend Pressure Fuse Removal

HAP 020; HAP 001-013, 015-019 PRE SB 737-32-1332

SUBTASK 32-33-71-020-008

(1) Loosen the nuts connecting the hydraulic lines to the fuse assembly [24].

HAP 021-026, 028-054, 101-999; HAP 001-013, 015-019 POST SB 737-32-1332

SUBTASK 32-33-71-020-009

(2) Loosen the nuts connecting the hydraulic lines to the fuse assembly [25].

HAP 020; HAP 001-013, 015-019 PRE SB 737-32-1332

SUBTASK 32-33-71-020-004

(3) Remove the screws [21], washers [22], and nuts [23] that hold the hydraulic lines to the structure on the two ends of the fuse assembly [24].

SUBTASK 32-33-71-020-005

(4) Disconnect the hydraulic lines from the fuse assembly [24].

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HAP 021-026, 028-054, 101-999; HAP 001-013, 015-019 POST SB 737-32-1332

SUBTASK 32-33-71-020-010

(5) Disconnect the hydraulic lines from the fuse assembly [25].

HAP ALL

SUBTASK 32-33-71-480-005

(6) Install caps on the hydraulic lines.

HAP 020; HAP 001-013, 015-019 PRE SB 737-32-1332

SUBTASK 32-33-71-020-006

(7) Remove the fuse assembly [24] from the airplane.

HAP 021-026, 028-054, 101-999; HAP 001-013, 015-019 POST SB 737-32-1332

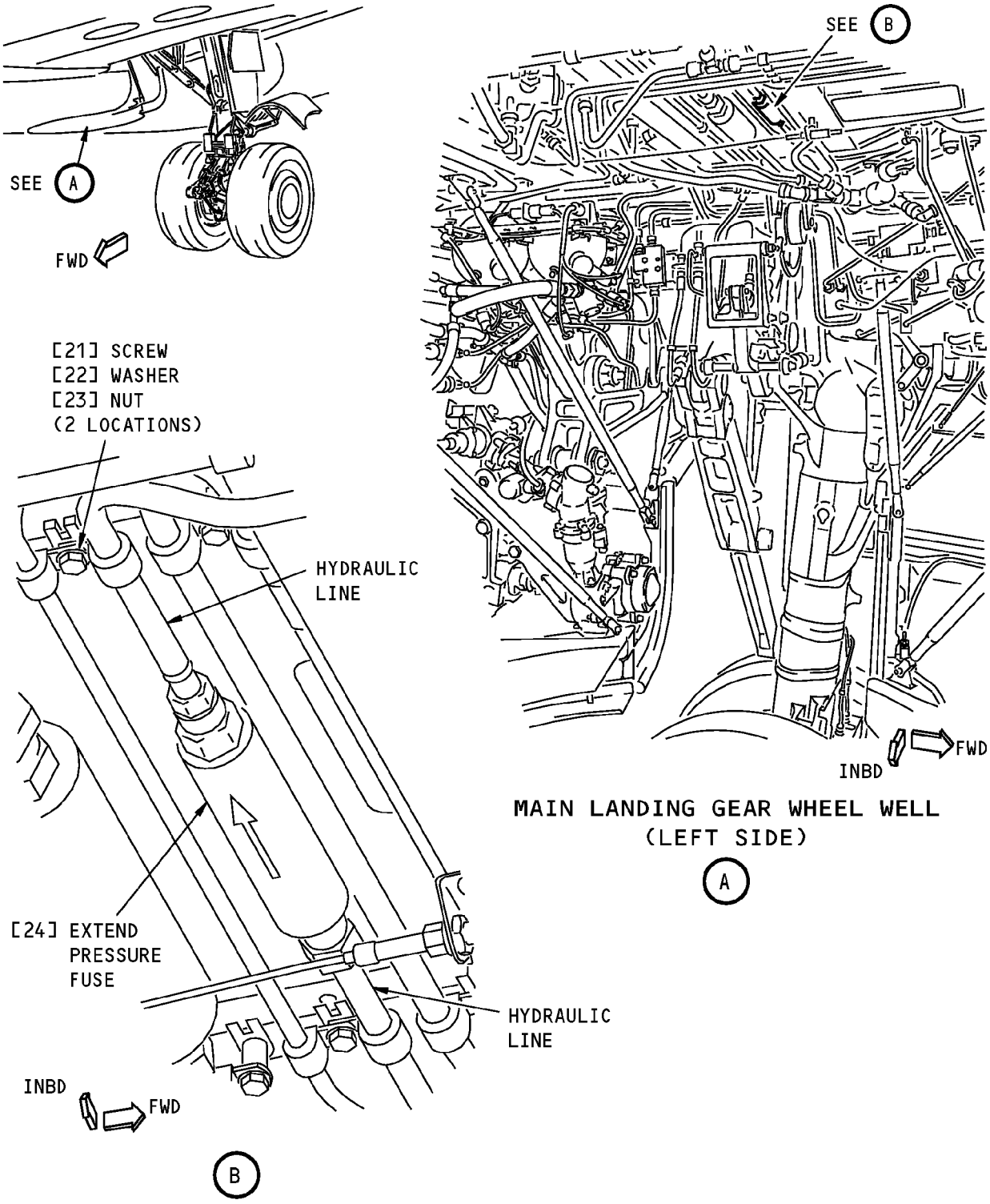
SUBTASK 32-33-71-020-011

(8) Remove the fuse assembly [25] from the airplane.

HAP ALL

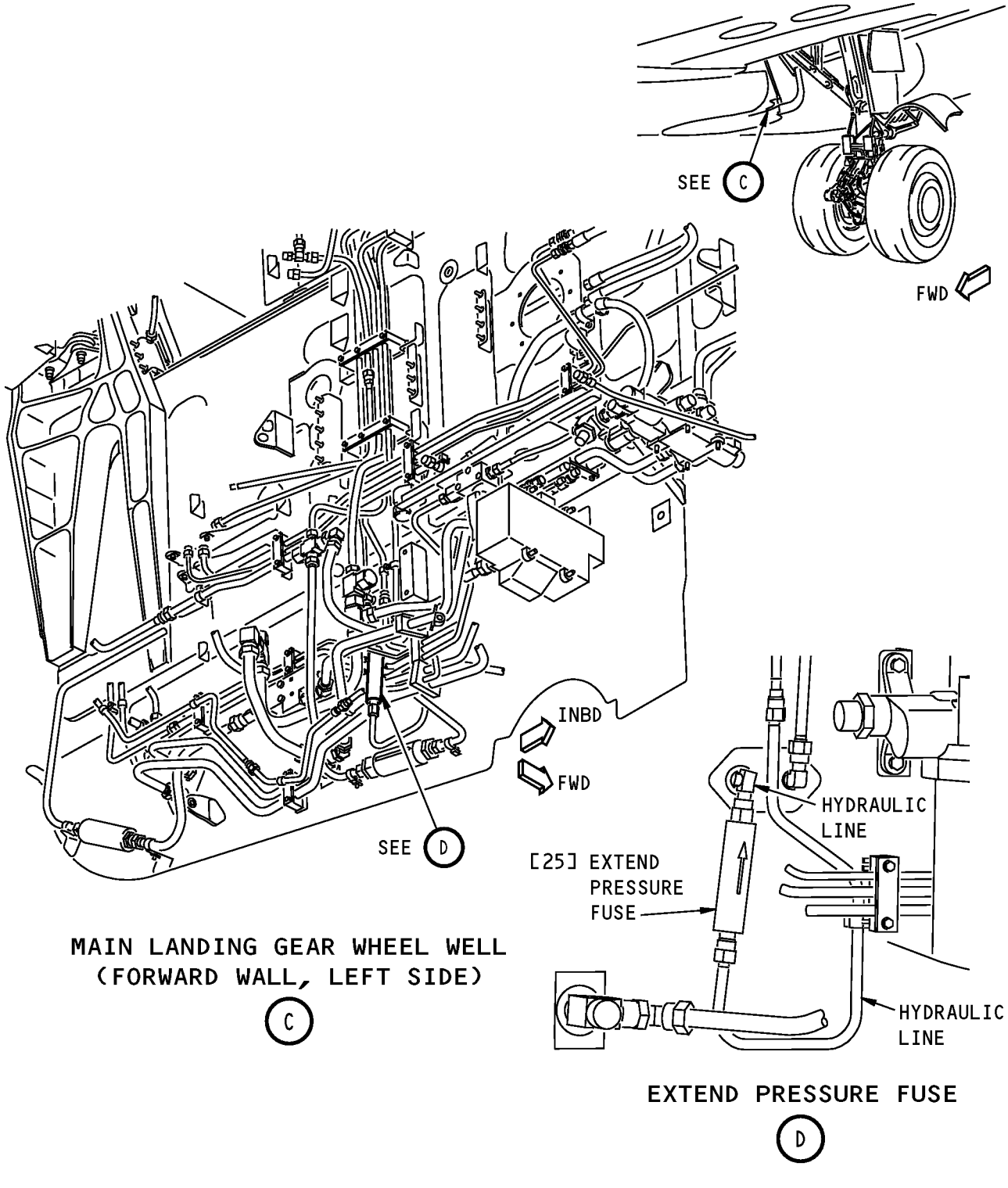
———————— END OF TASK ————————

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Nose Gear Extend Pressure Fuse Installation
Figure 402 (Sheet 1 of 2)/32-33-71-990-802

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Nose Gear Extend Pressure Fuse Installation
Figure 402 (Sheet 2 of 2)/32-33-71-990-802

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TASK 32-33-71-400-802

5. Installation of the Extend Pressure Fuse for the Nose Gear

(Figure 402)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
29-11-00-200-801	Hydraulic Fluid Check (P/B 601)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
24	Fuse assembly	29-11-52-12-765	HAP 001-013, 015-020
25	Fuse assembly	29-11-61-05-400	HAP 001, 005-011, 021-026, 028-054, 101-999
		29-11-61-05-401	HAP 012, 013, 015-019
		29-11-61-05-402	HAP 002-004

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

E. Extend Pressure Fuse Installation

HAP 020; HAP 001-013, 015-019 PRE SB 737-32-1332

SUBTASK 32-33-71-420-004

(1) Put the fuse assembly [24] in position to align it with the hydraulic lines.

HAP 021-026, 028-054, 101-999; HAP 001-013, 015-019 POST SB 737-32-1332

SUBTASK 32-33-71-420-009

(2) Put the fuse assembly [25] in position to align it with the hydraulic lines.

HAP 020; HAP 001-013, 015-019 PRE SB 737-32-1332

SUBTASK 32-33-71-080-002

(3) Remove the caps from the hydraulic lines and connect the hydraulic lines to the fuse assembly [24].

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HAP 021-026, 028-054, 101-999; HAP 001-013, 015-019 POST SB 737-32-1332

SUBTASK 32-33-71-080-003

(4) Remove the caps from the hydraulic lines and connect the hydraulic lines to the fuse assembly [25].

HAP 020; HAP 001-013, 015-019 PRE SB 737-32-1332

SUBTASK 32-33-71-420-006

(5) Install the screws [21], washers [22], and nuts [23] for the clamps that hold the hydraulic lines to the structure on the two ends of the fuse assembly [24].

HAP ALL

SUBTASK 32-33-71-420-008

(6) Tighten the hydraulic lines.

F. Installation Test of the Extend Pressure Fuse

SUBTASK 32-33-71-480-006

WARNING: MAKE SURE YOU INSTALL THE DOWNLOCK PINS IN THE LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IF THE LANDING GEARS RETRACT, IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO STRUCTURE.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-71-860-005

(2) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-33-71-700-004

(3) Use the override trigger to move the control lever for the landing gear from the DN position to the UP position.

SUBTASK 32-33-71-710-002

(4) Make sure the UP hose of the retract actuator moves to show that hydraulic pressure is applied when the control lever is moved to the UP position.

SUBTASK 32-33-71-700-005

(5) Move the control lever to the DN position.

SUBTASK 32-33-71-700-006

(6) Make sure the DOWN hose on the retract actuator moves when you move the control lever from the UP position to the DOWN position.

SUBTASK 32-33-71-210-004

(7) Do a check for leakage with the hydraulic pressure applied.

SUBTASK 32-33-71-210-005

(8) Make sure there are no leaks in the hydraulic connections.

SUBTASK 32-33-71-860-006

(9) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

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SUBTASK 32-33-71-840-002

(10) Examine the hydraulic reservoirs for the correct servicing. To do this, do this task: Hydraulic Fluid Check, TASK 29-11-00-200-801.

(a) Service them if it is necessary.

——————— END OF TASK ———————

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NOSE GEAR HYDRAULIC FLOW REGULATOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the hydraulic flow regulator for the nose landing gear

(2) An installation of the hydraulic flow regulator for the nose landing gear

(a) The installation of the hydraulic flow regulator for the nose landing gear includes an installation test of the hydraulic flow regulator.

TASK 32-33-72-000-801

2. Removal of the Hydraulic Flow Regulator for the Nose Gear

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-33-72-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-72-860-001

(2) For hydraulic system A, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

D. Hydraulic Flow Regulator Removal

SUBTASK 32-33-72-020-001

(1) Loosen the hydraulic lines to the hydraulic flow regulator [3].

SUBTASK 32-33-72-020-002

(2) Remove the screws [1] and the washers [2] that hold the hydraulic lines to the structure on both ends of the hydraulic flow regulator.

SUBTASK 32-33-72-020-003

(3) Disconnect the hydraulic lines from the hydraulic flow regulator [3].

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SUBTASK 32-33-72-480-002

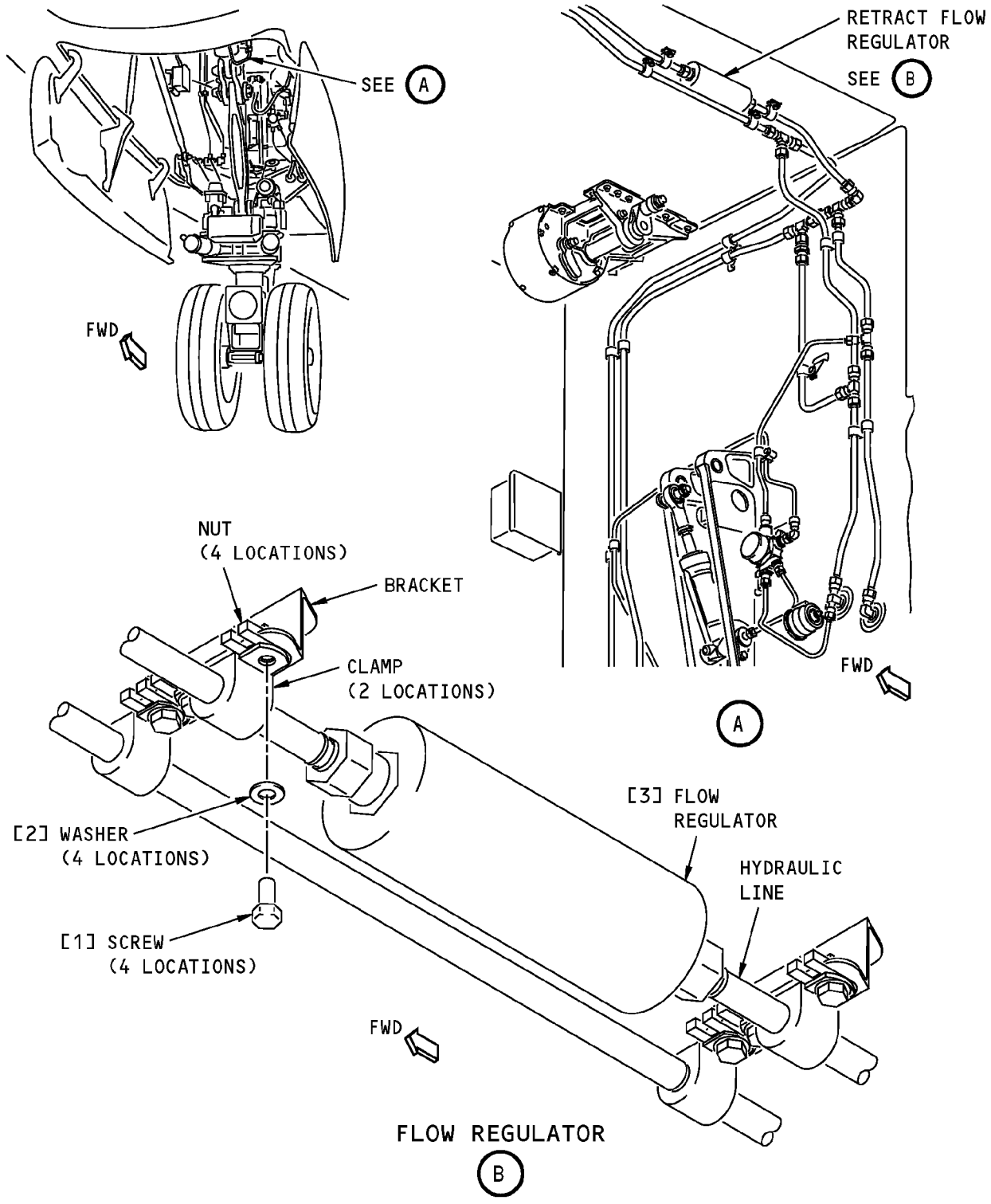
(4) Install caps on the hydraulic lines.

SUBTASK 32-33-72-020-004

(5) Remove the hydraulic flow regulator [3] from the airplane.

END OF TASK

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Nose Gear Flow Regulator Installation
Figure 401/32-33-72-990-801

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TASK 32-33-72-400-801

3. Installation of the Hydraulic Flow Regulator for the Nose Gear

(Figure 401)

A. References

Reference	Title
29-11-00-200-801	Hydraulic Fluid Check (P/B 601)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

C. Hydraulic Flow Regulator Installation

SUBTASK 32-33-72-420-001

(1) Put the hydraulic flow regulator [3] in position to align it with the hydraulic lines.

SUBTASK 32-33-72-080-001

(2) Remove the caps from the hydraulic lines and connect the hydraulic lines to the hydraulic flow regulator [3].

SUBTASK 32-33-72-420-002

(3) Install the screws [1] and the washers [2] in the clamps for the hydraulic lines.

SUBTASK 32-33-72-420-003

(4) Tighten the hydraulic lines.

D. Installation Test of the Hydraulic Flow Regulator

SUBTASK 32-33-72-480-003

WARNING: MAKE SURE YOU INSTALL THE DOWNLOCK PINS IN THE LANDING GEAR TO PREVENT THE ACCIDENTAL OPERATION OF THE GEAR. IF THE LANDING GEARS RETRACT, IT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO STRUCTURE.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-33-72-860-002

(2) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

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SUBTASK 32-33-72-700-001

(3) Move the landing gear lever to the UP position, then to the DOWN position three times to cycle the gear.

NOTE: Hold the lever in each position for three seconds before you move the landing gear lever to the next position. This will bleed the air from the regulator and the lines.

NOTE: Use the override for the landing gear lever lock to allow you to move the control lever for the landing gear from the DN position to the UP position.

(a) Make sure the UP hose of the retract actuator moves to show that hydraulic pressure is applied when the control lever is moved to the UP position.

(b) Move the control lever to the DN position.

(c) Make sure the DOWN hose on the retract actuator actuator moves when you move the control lever from the UP position to the DOWN position.

SUBTASK 32-33-72-210-001

(4) Do a check for leakage with the hydraulic pressure applied.

SUBTASK 32-33-72-860-003

(5) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-33-72-210-002

(6) Make sure there are no leaks in the hydraulic connections.

SUBTASK 32-33-72-840-001

(7) Examine the hydraulic reservoirs for the correct servicing, do this task: Hydraulic Fluid Check, TASK 29-11-00-200-801.

(a) Service the reservoirm if it is necessary.

END OF TASK

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MAIN GEAR MANUAL EXTENSION SYSTEM - ADJUSTMENT/TEST

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure contains these tasks:

(1) Adjustment of the manual extension system for the main gear

(2) System test of the manual extension system for the main gear, with the airplane on jacks.

(3) System test of the manual extension system for the main gear, with the airplane not on jacks.

(4) Adjustment of the manual extension system access door switch.

TASK 32-34-00-820-801

2. Adjustment of the Manual Extension System for the Main Gear

(Figure 501, Figure 502)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. General

SUBTASK 32-34-00-820-001

(1) This procedure adjusts (rigs) the left or right manual extension system for the main landing gears. Use this procedure to get the cable tensions and the clearances between the components for the correct system operation.

SUBTASK 32-34-00-820-006

(2) In this procedure the rig pin used for the left side Main Landing Gear is LGEA2, and for the right hand side, LGEA3.

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E. Procedure

SUBTASK 32-34-00-860-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear. To do this, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-34-00-860-002

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-34-00-580-001

(3) Install chocks around the tires of the main landing gear.

SUBTASK 32-34-00-480-001

(4) Install the rig pin LGEA2 (L/H), or LGEA3 (R/H) from rig pin kit, SPL-1585 in the cable guard bracket and quadrant on the manual extension mechanism.

SUBTASK 32-34-00-010-001

(5) Remove the ceiling panels in the forward cargo compartment that are at approximately body station 420.

SUBTASK 32-34-00-020-001

(6) Remove the locking clips from the turnbuckle.

SUBTASK 32-34-00-020-002

(7) Loosen the cable MLGEA at the turnbuckle.

SUBTASK 32-34-00-820-005

(8) Make sure the uplock link is in the up and locked position using a suitable tool.

SUBTASK 32-34-00-020-003

(9) Remove the pin [1] and loosen the nut [2] and bolt [3].

SUBTASK 32-34-00-820-002

(10) Loosen the jamnut on the control rod on the manual extension mechanism.

SUBTASK 32-34-00-820-003

(11) Adjust the control rod to get the 0.0625 in. (1.59 mm) to 0.220 in. (5.59 mm) between the kicker arm on the uplock and the upper lock link, (Figure 502).

SUBTASK 32-34-00-420-001

(12) Tighten the jamnut to 95 in-lb (10.73 N·m) – 160 in-lb (18.08 N·m).

SUBTASK 32-34-00-080-001

(13) Remove the rig pin LGEA2, or LGEA3 from the mechanism.

SUBTASK 32-34-00-700-001

(14) Turn the cable quadrant to make sure the control rod does not rub against the kicker arm on the uplock. Install the rig pin LGEA2, or LGEA3.

SUBTASK 32-34-00-420-002

(15) Do these steps to tighten the bolt [3] and nut [2] to 80 in-lb (9.04 N·m) plus run on torque to 240 in-lb (27.12 N·m) maximum:

(a) Begin at the lower torque value and increase as necessary to align the castellation in the nut [2] with the hole in the bolt [3].

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(b) Do not use more than 240 in-lb (27.12 N·m) applied torque.

(c) Install the pin [1].

SUBTASK 32-34-00-420-003

CAUTION: MAKE SURE THE MAIN GEAR MANUAL EXTENSION HANDLES ARE IN THEIR V-SLOTS WHEN THE CABLES ARE ADJUSTED. IF THE HANDLES ARE NOT IN THEIR V-SLOTS THEN DAMAGE CAN OCCUR WHEN THE CONTROL HANDLE IS MOVED TO THE UP POSITION.

(16) Tighten the cable MLGEA at the turnbuckle.

SUBTASK 32-34-00-820-004

(17) Make sure the rig pin LGEA2, or LGEA3 fits freely in the manual extension mechanism and the cable guard.

SUBTASK 32-34-00-080-002

(18) Remove the rig pin LGEA2 or LGEA3 from the manual extension mechanism and cable guard.

SUBTASK 32-34-00-710-001

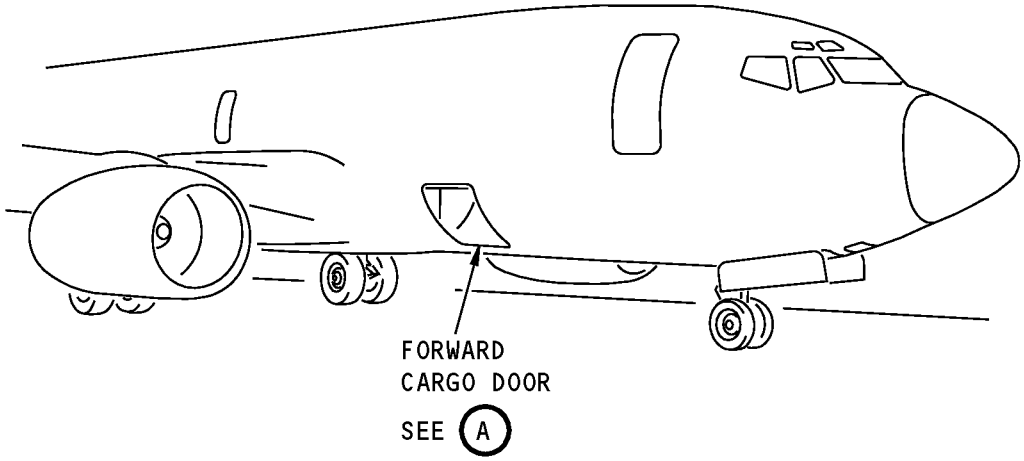
(19) Do a test on the manual extension system for the main gear.

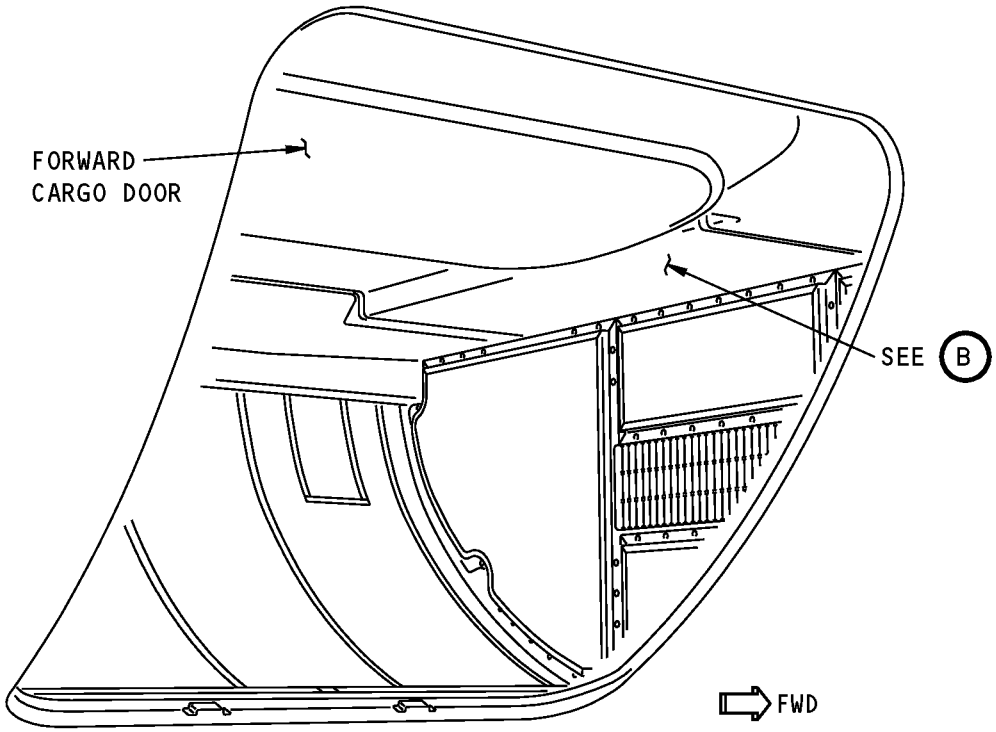
SUBTASK 32-34-00-410-001

(20) Install the ceiling panels that you removed in the forward cargo compartment.

END OF TASK

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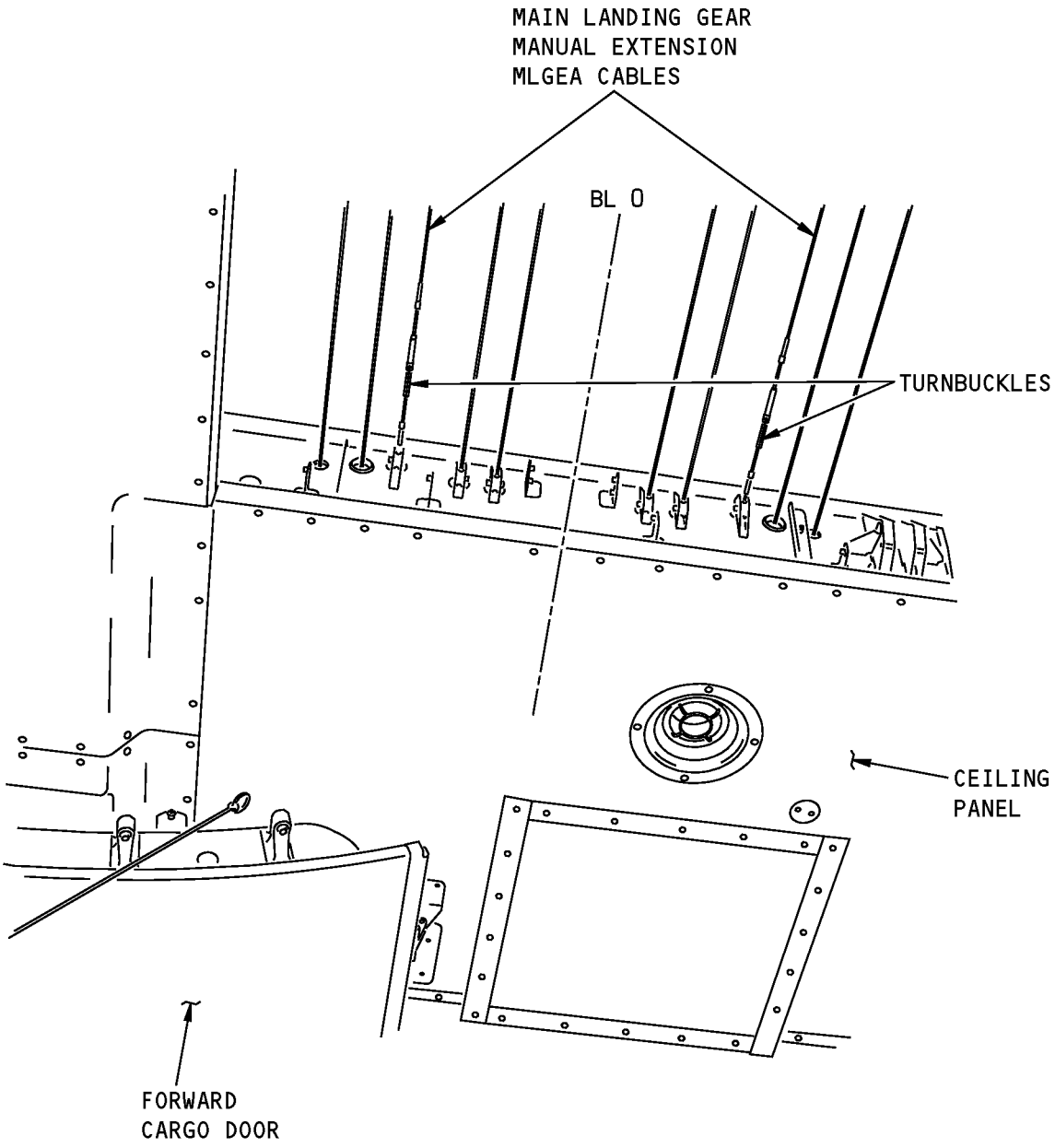




FORWARD CARGO COMPARTMENT
(CEILING PANEL INSTALLED)
A

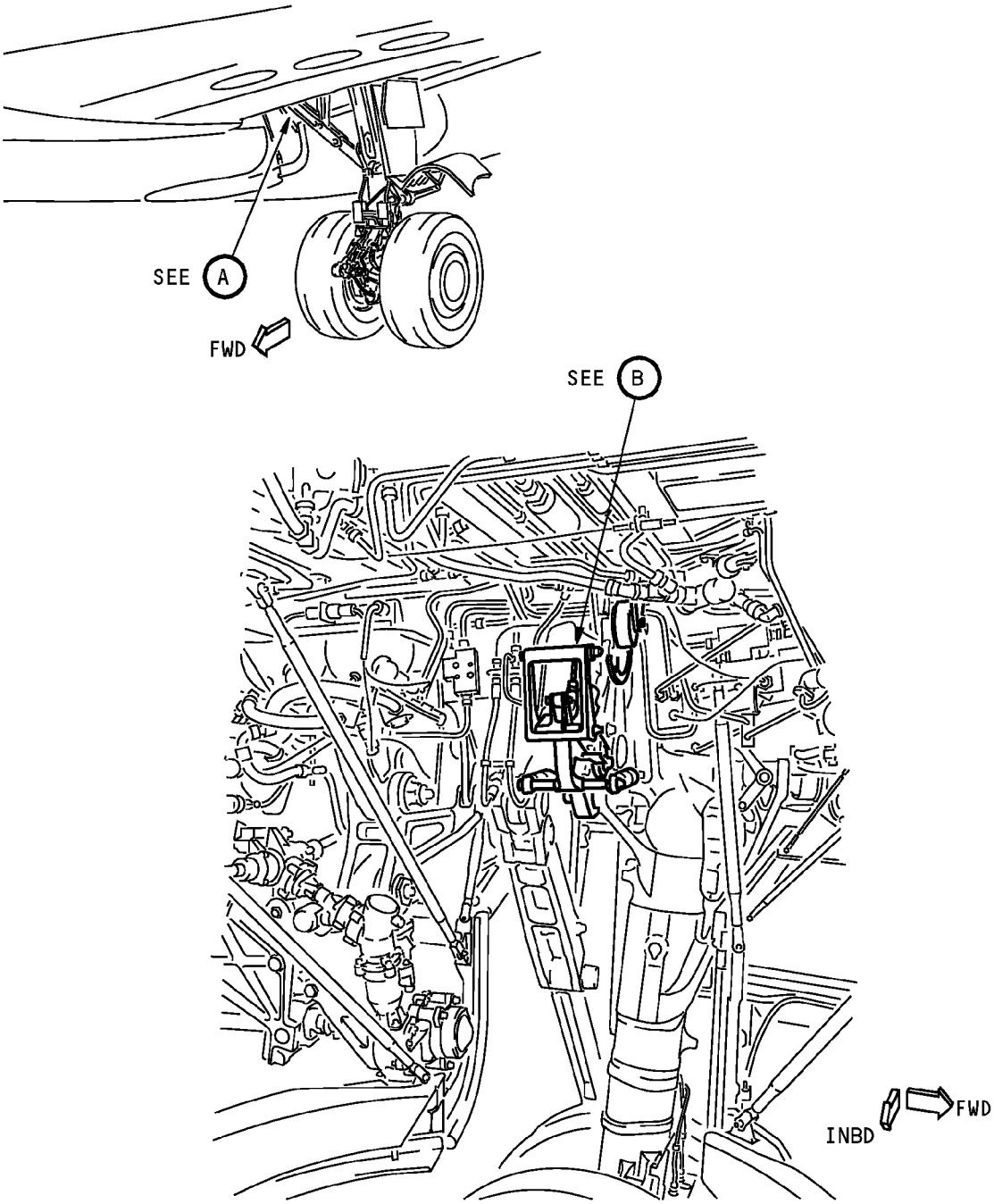
Main Gear Manual Extension System - Turnbuckle Location
Figure 501 (Sheet 1 of 2)/32-34-00-990-801

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Main Gear Manual Extension System - Turnbuckle Location
Figure 501 (Sheet 2 of 2)/32-34-00-990-801

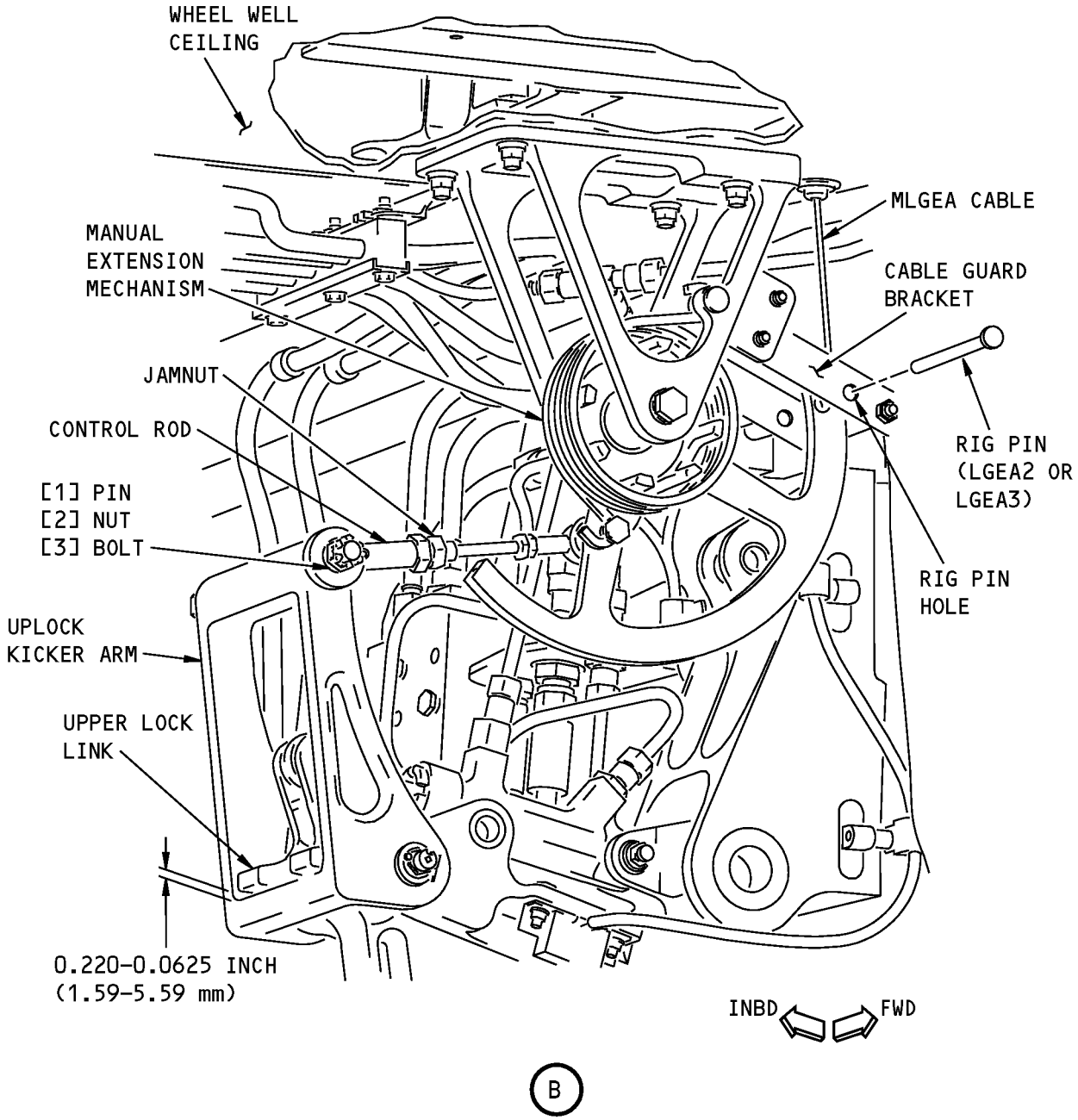
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MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE IS SHOWN, RIGHT SIDE IS EQUIVALENT)
A

Main Gear Manual Extension System - Adjustment
Figure 502 (Sheet 1 of 2)/32-34-00-990-802

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Main Gear Manual Extension System - Adjustment
Figure 502 (Sheet 2 of 2)/32-34-00-990-802

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TASK 32-34-00-730-801

3. Main Gear Manual Extension System Test - Airplane on Jacks

(Figure 503)

A. General

(1) This procedure is a scheduled maintenance task.

(2) The normal extension/retraction system will not operate with the cover for the alternate extend T handle open; make sure the cover is closed when you will extend or retract the landing gear with the landing gear control handle.

B. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
24-22-00-860-811	Supply Electrical Power (P/B 201)
24-22-00-860-812	Remove Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-10-740-801	Proximity Switch Electronics Unit (PSEU) BITE Test - Ground Test (P/B 501)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare for the Test

SUBTASK 32-34-00-480-002

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-34-00-860-004

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

NOTE: The ground circuit must operate correctly. The airplane must not be staticly grounded as the static ground cable will interfere with main gear movement.

SUBTASK 32-34-00-580-004

(3) Do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-34-00-860-005

(4) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

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SUBTASK 32-34-00-860-006

(5) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
B	3	C01312	ENGINE 1 RUN/PWR

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	16	C01432	LANDING GEAR ALTN EXTEND SOL
E	12	C00314	INDICATOR MASTER DIM SECT 2
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	13	C01179	INDICATOR MASTER DIM SECT 7

SUBTASK 32-34-00-860-008

(6) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	13	C00120	WEATHER RADAR RT

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 32-34-00-860-010

(7) Make sure the control lever for the landing gear is in the DN position.

SUBTASK 32-34-00-860-025

WARNING: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO PUT THE SPEEDBRAKE HANDLE TO THE DOWN POSITION. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT CAN OCCUR.

(8) Put the speedbrake handle to the down position.

SUBTASK 32-34-00-860-011

(9) Move the No. 1 and No. 2 throttle levers to the full forward position.

E. Procedure

SUBTASK 32-34-00-860-012

(1) Put the control lever in the OFF position.

SUBTASK 32-34-00-700-002

(2) Pull the manual extension handle for the left main gear.

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(a) Make sure the full travel of the T handle is at least 18.5 in. (469.9 mm).

SUBTASK 32-34-00-700-003

(3) Release the manual extension handle for the left main gear.

(a) Make sure the handle returns to the stowed position without hesitation or binding.

SUBTASK 32-34-00-480-003

(4) Attach a spring scale to the manual extension T handle for the left main gear.

SUBTASK 32-34-00-730-001

(5) Pull the manual extension handle for the left main gear.

(a) Make sure the load to start the T handle from the seat has a minimum of 3.0 lbf (13.3 N).

(b) Make sure the load during the full travel of the T handle is not more than 18.0 lbf (80.1 N).

NOTE: The T handle must be pulled upward and forward when you measure the load. This will simulate a person seated in the First Officer's seat. Do not pull the handle straight up.

(c) Make sure the manual extension mechanism operates freely.

SUBTASK 32-34-00-700-004

(6) Pull the manual extension handle for the right main gear.

(a) Make sure the full travel of the T handle is at least 18.5 in. (469.9 mm).

SUBTASK 32-34-00-700-005

(7) Release the manual extension handle for the right main gear.

(a) Make sure the handle returns to the stowed position without hesitation or binding.

SUBTASK 32-34-00-480-004

(8) Attach a spring scale to the manual extension T handle for the right main gear.

SUBTASK 32-34-00-730-002

(9) Pull the manual extension handle for the right main gear.

(a) Make sure the load to start the T handle from the seat has a minimum of 3.0 lbf (13.3 N).

(b) Make sure the load during the full travel of the T handle is not more than 18.0 lbf (80.1 N).

NOTE: The T handle must be pulled upward and forward when you measure the load. This will simulate a person seated in the First Officer's seat. Do not pull the handle straight up.

(c) Make sure the manual extension mechanism operates freely.

SUBTASK 32-34-00-080-004

(10) Remove the downlock pin from the left and right main gears, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

SUBTASK 32-34-00-860-031

(11) Remove the spring scale from the manual extension T handle for the right main gear.

SUBTASK 32-34-00-860-019

(12) Make sure the cover for the T handle is closed.

NOTE: The extension/retraction system will not operate with the cover for the alternate extend T handle open.

SUBTASK 32-34-00-860-017

(13) Move the control lever for the landing gear to the DN position.

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SUBTASK 32-34-00-730-003

WARNING: MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE MAIN LANDING GEAR. FAST MOVEMENT OF THE MAIN LANDING GEAR CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(14) Move the control lever for the landing gear to UP and wait while the main gear retracts.

SUBTASK 32-34-00-860-026

(15) Open the access door to the manual extension T handles.

SUBTASK 32-34-00-730-007

(16) Pull the manual extension handle of the left main gear.

NOTE: The T handle must be pulled upward and forward. This will simulate a person seated in the First Officer's seat. Do not pull the handle straight up.

SUBTASK 32-34-00-700-011

(17) Make sure the left main gear free falls to the down and locked position.

(a) Make sure the green light for the left main gear is on

(b) Make sure the red light for the left main gear is on.

NOTE: The red light for the main gear will stay on to show that the landing gear control lever and landing gear positions disagree.

SUBTASK 32-34-00-700-012

(18) Release the manual extension handle for the left main gear.

SUBTASK 32-34-00-730-008

(19) Pull the manual extension handle of the right main gear.

NOTE: The T handle must be pulled upward and forward. This will simulate a person seated in the First Officer's seat. Do not pull the handle straight up.

SUBTASK 32-34-00-700-013

(20) Make sure the right main gear free falls to the down and locked position.

(a) Make sure the green light for the right main gear is on

(b) Make sure the red light for the right main gear is on.

NOTE: The red light for the main gear will stay on to show that the landing gear control lever and landing gear positions disagree.

SUBTASK 32-34-00-700-014

(21) Release the manual extension handle for the right main gear.

SUBTASK 32-34-00-860-029

(22) Move the control lever for the landing gear to the DOWN position.

(a) Make sure the red light for the main gear is off.

SUBTASK 32-34-00-860-037

(23) Make sure the cover for the T-handle is closed.

SUBTASK 32-34-00-860-027

(24) Move the control lever for the landing gear to the OFF position.

SUBTASK 32-34-00-730-009

(25) Move the control lever for the landing gear to UP and wait while the main gear retracts.

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SUBTASK 32-34-00-860-024

(26) Put the landing gear control lever in the OFF position.

SUBTASK 32-34-00-860-030

(27) Open the access door to the manual extension T handles.

SUBTASK 32-34-00-700-015

(28) Attach a spring scale to the manual extension T handle for the left main gear.

SUBTASK 32-34-00-730-004

(29) Pull the manual extension handle for the left main gear.

(a) Make sure the maximum load when you pull the T handle is not more than 50.0 lbf (222.4 N).

NOTE: The T handle must be pulled upward and forward when you measure the load. This will simulate a person seated in the First Officer's seat. Do not pull the handle straight up.

SUBTASK 32-34-00-700-006

(30) Make sure the left main gear free falls to the down and locked position.

(a) Make sure the green light for the left main gear is on

(b) Make sure the red light for the left main gear is on.

NOTE: The red light for the main gear will stay on to show that the landing gear control lever and landing gear positions disagree.

SUBTASK 32-34-00-860-020

(31) Move the control lever for the landing gear to the DOWN position.

(a) Make sure the red light for the main gear is off.

SUBTASK 32-34-00-080-005

(32) Remove the spring scale from the manual extension T handles for the left main gear.

SUBTASK 32-34-00-860-032

(33) Make sure the cover for the T-handles is closed.

SUBTASK 32-34-00-730-010

(34) Move the control lever for the landing gear to UP and wait while the main gear retracts.

SUBTASK 32-34-00-860-033

(35) Put the landing gear control lever in the OFF position.

SUBTASK 32-34-00-860-034

(36) Open the access door to the manual extension T handles.

SUBTASK 32-34-00-700-016

(37) Attach a spring scale to the manual extension T handle for the right main gear.

SUBTASK 32-34-00-700-017

(38) Pull the manual extension handle for the right main gear.

(a) Make sure the maximum load when you pull the T handle is not more than 50.0 lbf (222.4 N).

NOTE: The T handle must be pulled upward and forward when you measure the load. This will simulate a person seated in the First Officer's seat. Do not pull the handle straight up.

SUBTASK 32-34-00-700-018

(39) Make sure the right main gear free falls to the down and locked position.

(a) Make sure the green light for the right main gear is on

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(b) Make sure the red light for the right main gear is on.

NOTE: The red light for the main gear will stay on to show that the landing gear control lever and landing gear positions disagree.

SUBTASK 32-34-00-860-035

(40) Move the control lever for the landing gear to the DOWN position.

(a) Make sure the red light for the right main gear is off.

SUBTASK 32-34-00-080-008

(41) Remove the spring scale from the manual extension T handles for the right main gear.

SUBTASK 32-34-00-860-036

(42) Make sure the cover for the T-handles is closed.

F. Put the Airplane Back to its Usual Condition.

SUBTASK 32-34-00-480-005

(1) Install the downlock pin on the main gear that you tested, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-34-00-840-001

(2) Close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 32-34-00-860-015

(3) For Hydraulic System A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-34-00-860-021

(4) Move the No. 1 and No. 2 throttle levers back to the idle position (full aft).

SUBTASK 32-34-00-840-004

(5) Close this circuit breaker:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	13	C00120	WEATHER RADAR RT

SUBTASK 32-34-00-860-022

(6) If electrical power is not necessary, do this task: Remove Electrical Power, TASK 24-22-00-860-812.

SUBTASK 32-34-00-580-003

(7) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

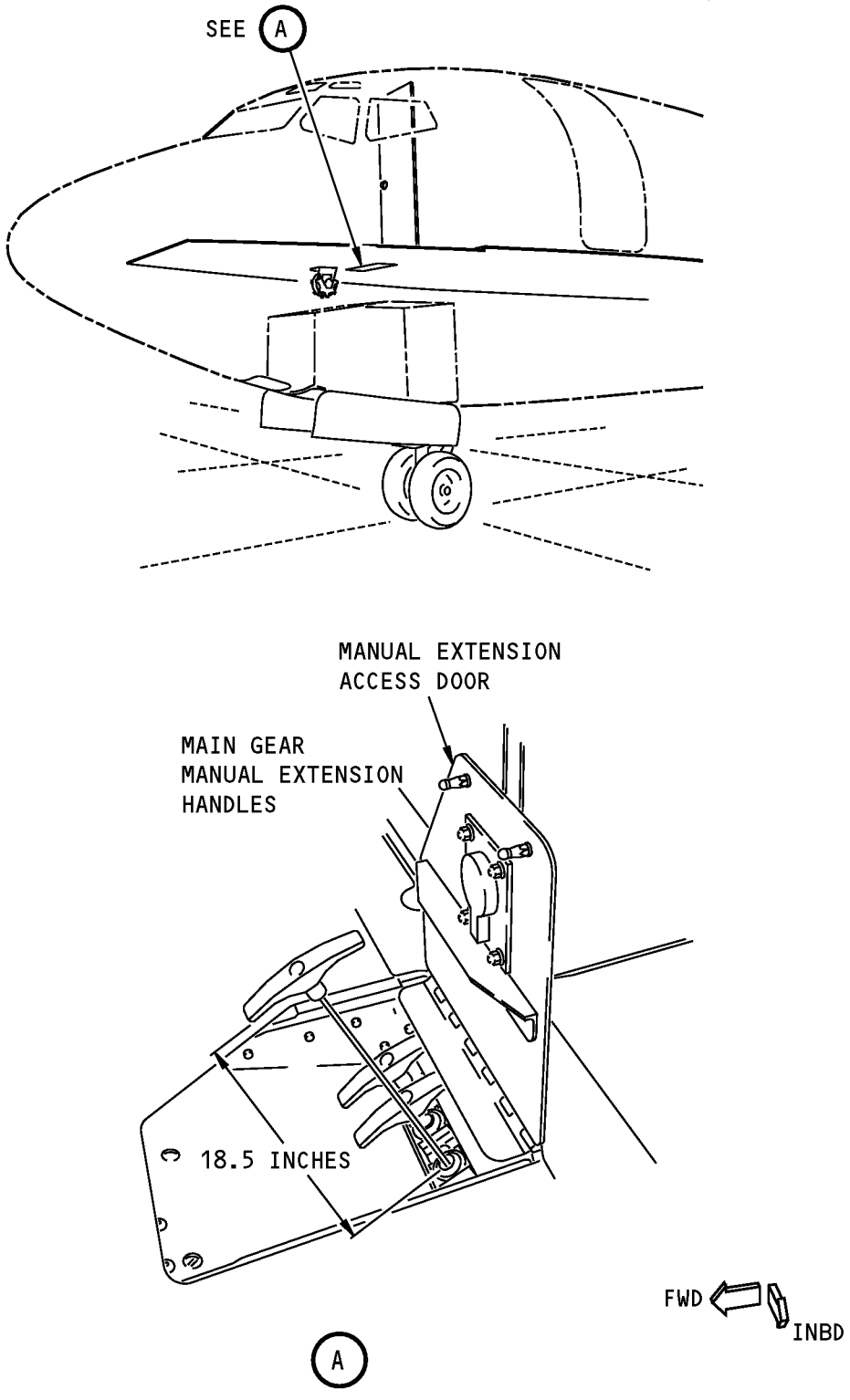
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SUBTASK 32-34-00-200-002

(8) Check the PSEU for stored faults using the self test, do this task: Proximity Switch Electronics Unit (PSEU) BITE Test - Ground Test, TASK 32-09-10-740-801.

——————— END OF TASK ———————

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Main Gear Manual Extension System - System Test
Figure 503/32-34-00-990-803

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TASK 32-34-00-730-802

4. Main Gear Manual Extension System Test - Airplane not on Jacks

(Figure 503)

A. General

(1) The normal extension/retraction system will not operate with the cover for the alternate extend T handle open; make sure the cover is closed when you will extend or retract the landing gear with the landing gear control handle.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare for the Test

SUBTASK 32-34-00-480-006

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-34-00-860-018

(2) Put the control lever for the landing gear in the OFF position.

E. Procedure

SUBTASK 32-34-00-700-007

(1) Pull the manual extension handle for the left main gear.

(a) Make sure the full travel of the T handle is at least 18.5 in. (469.9 mm).

SUBTASK 32-34-00-700-008

(2) Release the manual extension handle for the left main gear.

(a) Make sure the handle returns to the stowed position without hesitation or binding.

SUBTASK 32-34-00-480-007

(3) Attach a spring scale to the manual extension T handle for the left main gear.

SUBTASK 32-34-00-730-005

(4) Pull the manual extension handle for the left main gear.

(a) Make sure the load to start the T handle from the seat has a minimum of 3.0 lbf (13.3 N).

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(b) Make sure the load during the full travel of the T handle is not more than 18.0 lbf (80.1 N).

NOTE: The T handle must be pulled upward and forward when you measure the load. This will simulate a person seated in the First Officer's seat. Do not pull the handle straight up.

(c) Make sure the manual extension mechanism operates freely.

SUBTASK 32-34-00-700-009

(5) Pull the manual extension handle for the right main gear.

(a) Make sure the full travel of the T handle is at least 18.5 in. (469.9 mm).

SUBTASK 32-34-00-700-010

(6) Release the manual extension handle for the right main gear.

(a) Make sure the handle returns to the stowed position without hesitation or binding.

SUBTASK 32-34-00-480-008

(7) Attach a spring scale to the manual extension T handle for the right main gear.

SUBTASK 32-34-00-730-006

(8) Pull the manual extension handle for the right main gear.

(a) Make sure the load to start the T handle from the seat has a minimum of 3.0 lbf (13.3 N).

(b) Make sure the load during the full travel of the T handle is not more than 18.0 lbf (80.1 N).

NOTE: The T handle must be pulled upward and forward when you measure the load. This will simulate a person seated in the First Officer's seat. Do not pull the handle straight up.

(c) Make sure the manual extension mechanism operates freely.

SUBTASK 32-34-00-080-006

(9) Remove the spring scale from the manual extension T handles for the main gear.

END OF TASK

TASK 32-34-00-820-802

5. Adjustment of the Manual Extension System Access Door Switch

(Figure 501, Figure 502, Figure 504)

A. General

(1) This procedure adjusts (rigs) the manual extension system access door switch for the main landing gears. Use this procedure to get the access switch into the correct operating range for the door switch to operate correctly.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

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D. Procedure

SUBTASK 32-34-00-860-023

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear. To do this, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-34-00-840-002

(2) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	16	C01432	LANDING GEAR ALTN EXTEND SOL

SUBTASK 32-34-00-480-009

(3) Open the manual extension system access door [1] located in the Flight Compartment.

SUBTASK 32-34-00-160-001

(4) Clean the area around the manual extension system access door switch with alcohol and a dry brush.

NOTE: The location of the manual extension system access door [1] makes it likely to collect dirt and residue found in the cockpit.

SUBTASK 32-34-00-010-003

(5) Make sure that the switch actuator arm [4] is not bent downward. If the arm is bent downward, bend it so that it is straight or replace the actuator with a new one. If the actuator arm is twisted, replace the actuator with a new one.

SUBTASK 32-34-00-820-007

(6) Make sure that the adjustment tab is not bent and is even with the actuator arm. If the adjustment tab is bent, bend it down so that it is flat and even with the actuator arm.

SUBTASK 32-34-00-820-008

(7) Make sure that the switch operates, clicks audibly, at a door open clearance of 2 inches or greater at the forward edge of the door.

SUBTASK 32-34-00-820-009

(8) If the switch does not have sufficient over-travel and the access door does not completely close, or it requires too much force to close the access door, bend the adjustment tab upward slightly to provide the necessary over-travel. Use a flat screwdriver blade of the correct size to make the adjustment.

SUBTASK 32-34-00-820-010

(9) Make sure that the switch still operates, clicks audibly, at a door open clearance of 2 inches or greater after any adjustments.

NOTE: Switches that operate at a minimum of 1.25 inches of door open clearance are acceptable, but this can cause erratic operation and service problems. The above adjustment procedure will make sure that the switch always operates at a door clearance of 2 inches or greater.

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SUBTASK 32-34-00-840-003

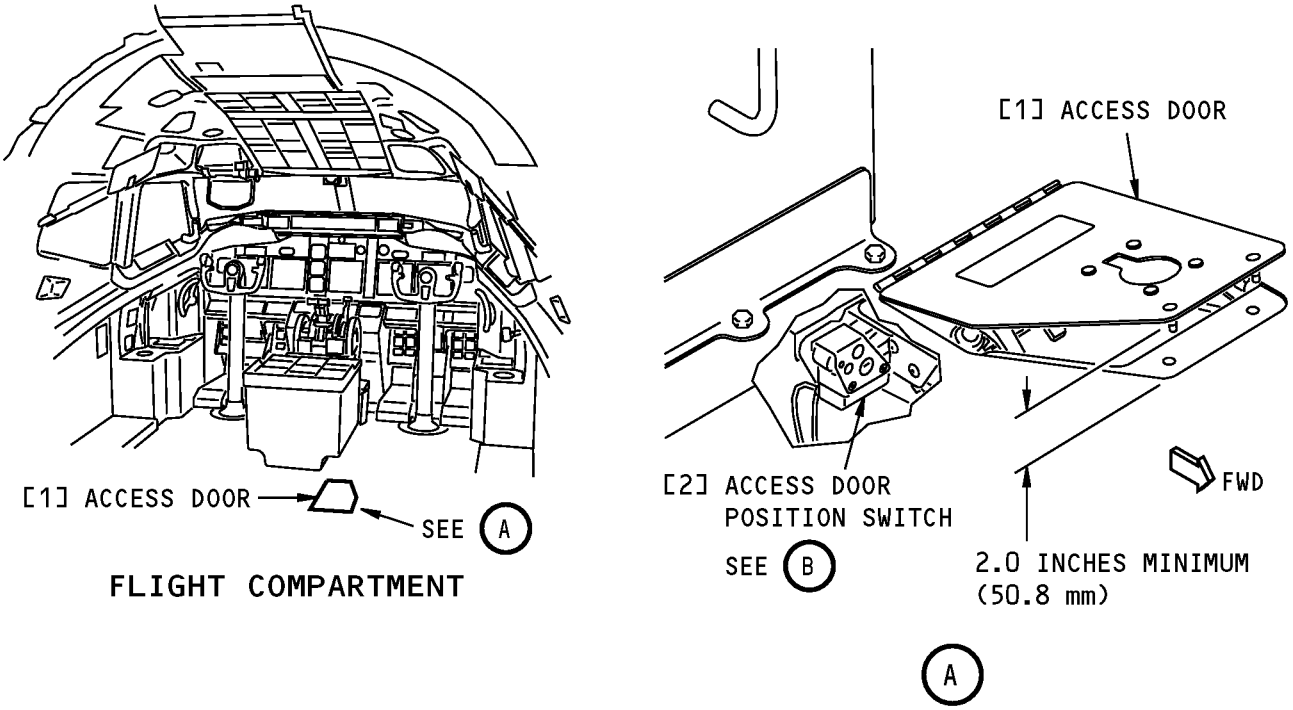
(10) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	16	C01432	LANDING GEAR ALTN EXTEND SOL

END OF TASK

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Landing Gear Manual Extension Access Door Switch Adjustment
Figure 504/32-34-00-990-804

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MAIN GEAR MANUAL EXTENSION CONTROL MECHANISM - REMOVAL/INSTALLATION

1. General

A. The manual extension control mechanism provides controls for the nose gear manual extension system and each main gear manual extension system. The complete mechanism must be removed and installed when you do maintenance on a part of the drum assembly for the nose or main gear manual extension systems.

B. This procedure has these tasks:

(1) A removal of the manual extension control mechanism (referred to as the mechanism assembly [38]) for the landing gear

(2) An installation of the mechanism assembly [38] for the landing gear.

(3) A removal of the manual extension system access door switch.

(4) An installation of the manual extension system access door switch.

TASK 32-34-11-000-801

2. Main Gear Manual Extension Control Mechanism Removal

(Figure 401, Figure 402)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
53-21-00-000-801	Passenger Cabin Floor Panel Removal (P/B 401)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
116	Nose Landing Gear Wheel Well - Right
122	Forward Cargo Compartment - Right
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
211	Flight Compartment - Left
212	Flight Compartment - Right
220	Subzone - Passenger Compartment - Body Station 259.50 to 360.00

C. Access Panels

Number	Name/Location
114AC	Fwd Nose Wheel Well Upper Access Panel

D. Prepare for the Removal

SUBTASK 32-34-11-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear. To do this, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

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SUBTASK 32-34-11-860-001

(2) For hydraulic system A, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-34-11-580-001

(3) Install chocks around the tires of the main landing gear.

SUBTASK 32-34-11-010-001

(4) To get access to the turnbuckle locking clips, do this task: Passenger Cabin Floor Panel Removal, TASK 53-21-00-000-801.

SUBTASK 32-34-11-010-003

(5) Disconnect the cable MNGEA [3] at the turnbuckle.

SUBTASK 32-34-11-010-002

(6) Remove the cargo compartment ceiling panels at approximately body station 420 to remove the turnbuckle locking clips.

(a) Disconnect the cables MLGEA [1, 2] at the turnbuckles.

E. Main Gear Manual Extension Control Mechanism Removal

SUBTASK 32-34-11-010-004

(1) To get access to the mechanism assembly [38], do this task:

Open this access panel:

Number	Name/Location
114AC	Fwd Nose Wheel Well Upper Access Panel

SUBTASK 32-34-11-020-002

(2) Remove the pins [34] and disconnect the manual extension handle cables [29] from the drum assemblies [23], (Figure 402).

SUBTASK 32-34-11-020-003

(3) Remove the cable retainer bolts [35] and disconnect the manual extension cables [1, 2, 3] from the drum assemblies [23].

SUBTASK 32-34-11-020-004

(4) Remove the nuts [26], washers [25], bolts [22], and the cable guard standoffs spacers [24] from the outboard guard assembly [27] and inboard guard assembly [21].

SUBTASK 32-34-11-020-005

(5) Remove the pin [32], the nut [33], and the washer [28] from the shaft [30].

SUBTASK 32-34-11-020-006

(6) Remove the shaft [30] from the mechanism assembly [38].

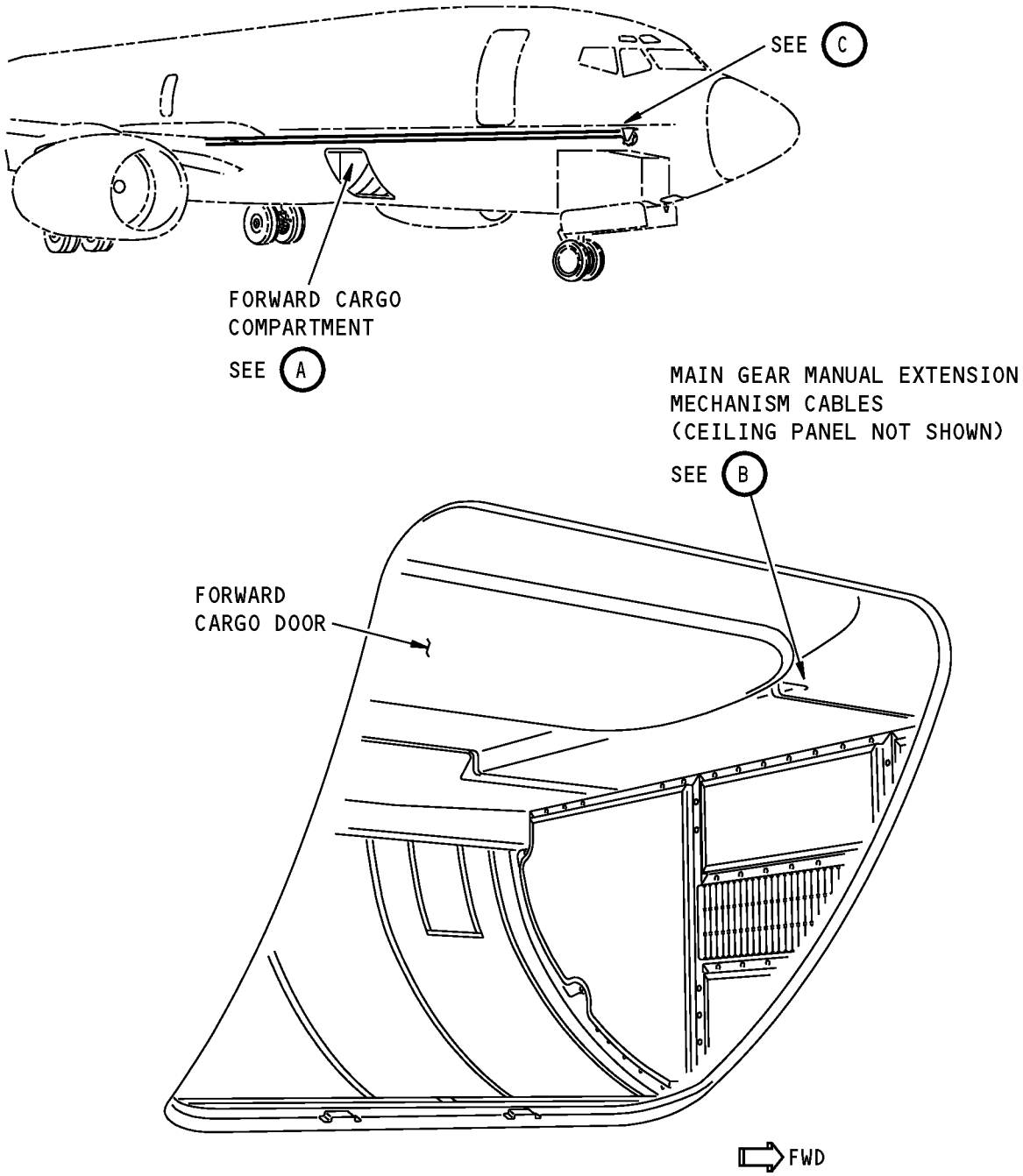
NOTE: When you pull the shaft [30] from the mechanism assembly [38] make sure you catch the spacer [31] and spacer [36].

SUBTASK 32-34-11-000-001

(7) Remove the mechanism assembly [38], with the drum assemblies [23] and outboard guard assembly [27] and inboard guard assembly [21], from the airplane structure. Move the outboard end of the mechanism assembly [38] forward to remove it.

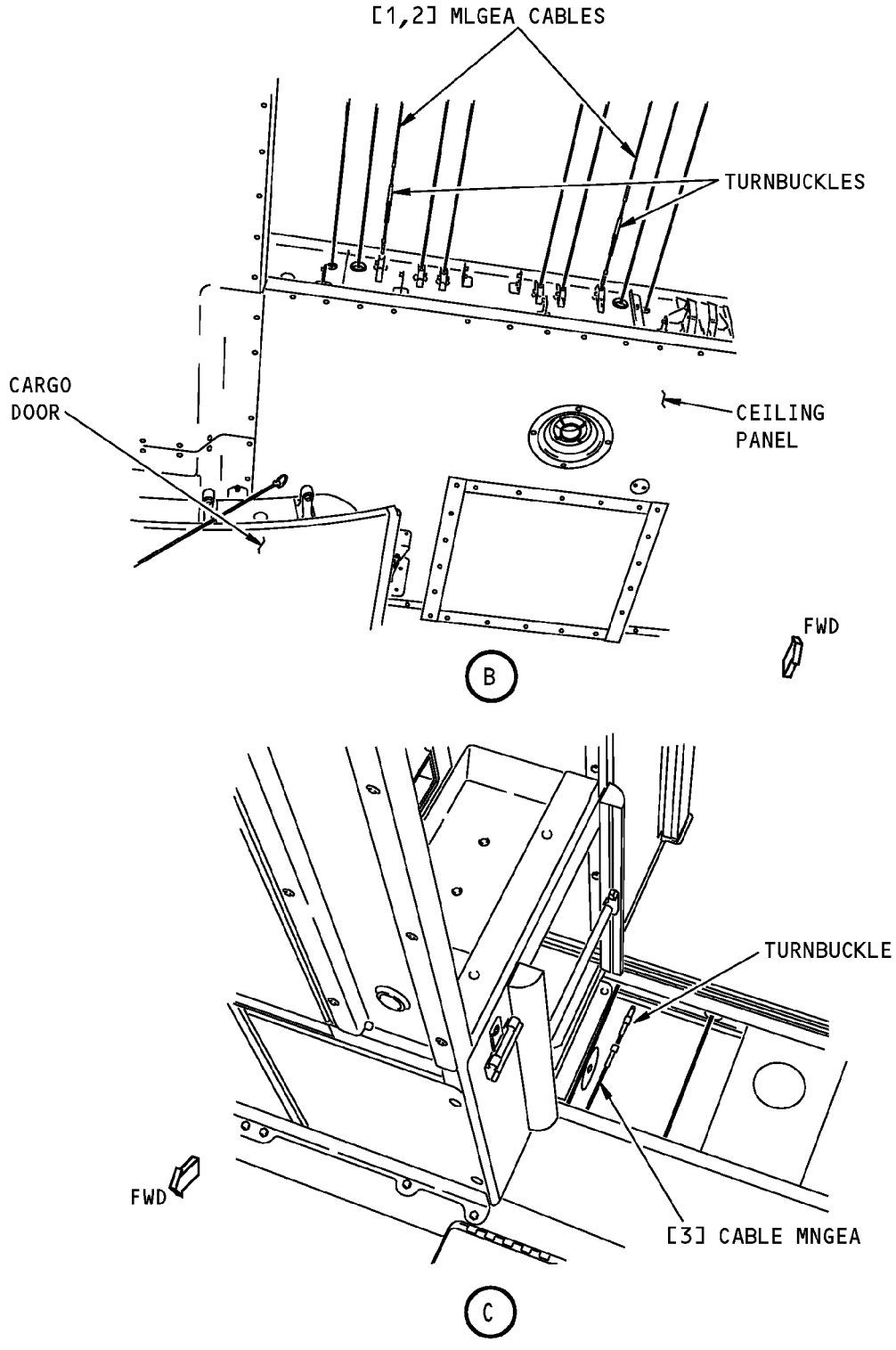
——————— END OF TASK ———————

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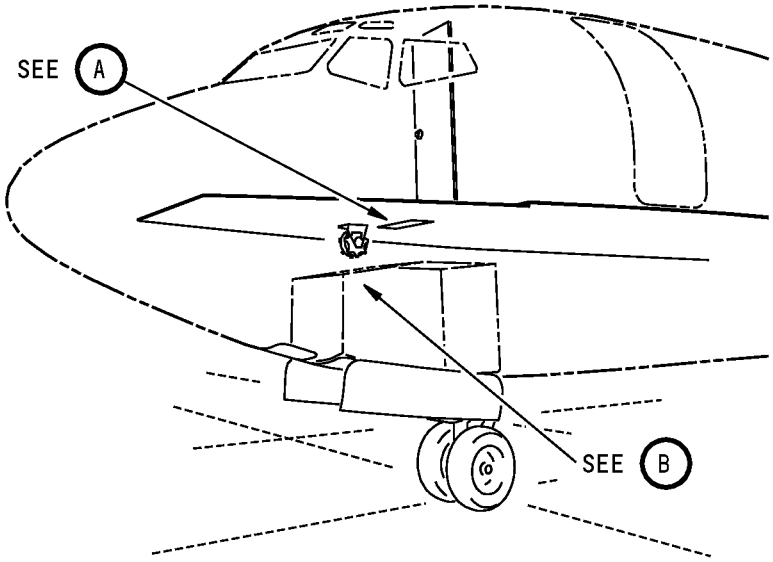
Manual Extension Cable Turnbuckle Locations
Figure 401 (Sheet 1 of 2)/32-34-11-990-801

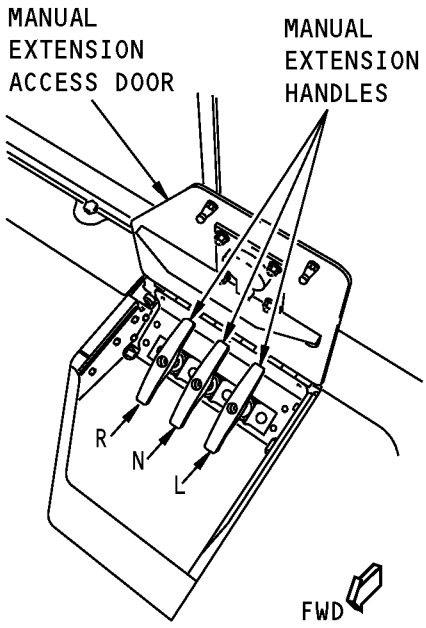
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Manual Extension Cable Turnbuckle Locations
Figure 401 (Sheet 2 of 2)/32-34-11-990-801

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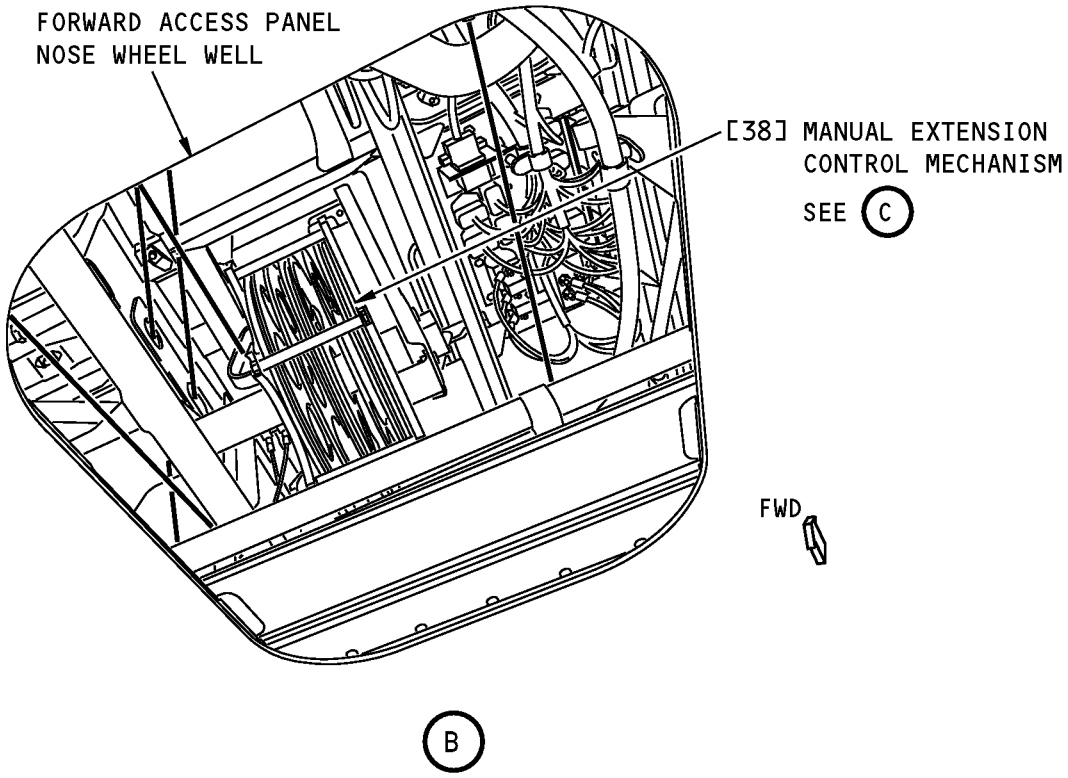




A

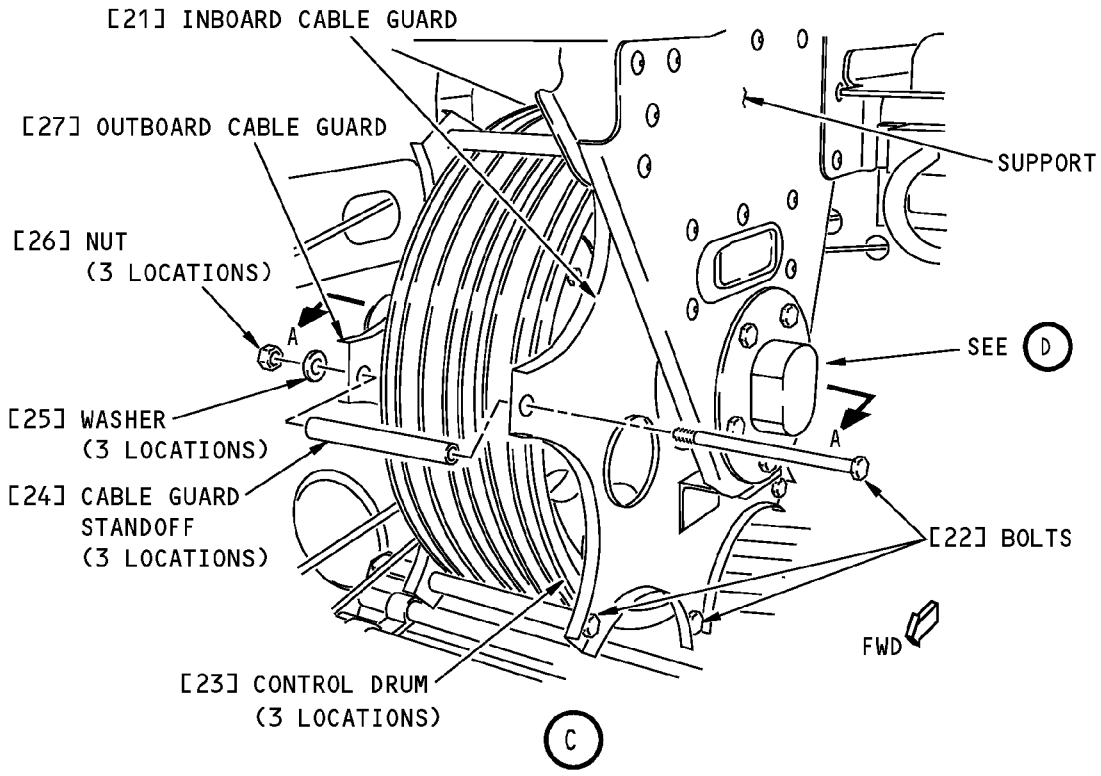
Manual Extension Control Mechanism Installation
Figure 402 (Sheet 1 of 4)/32-34-11-990-802

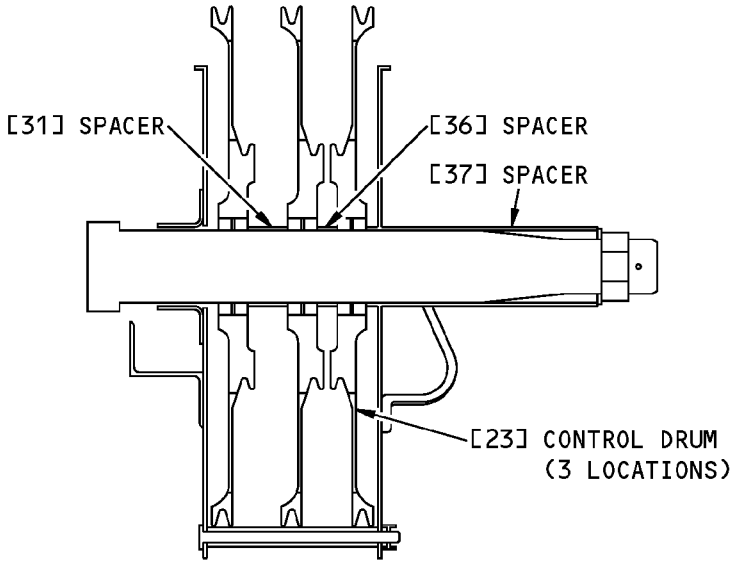
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Manual Extension Control Mechanism Installation
Figure 402 (Sheet 2 of 4)/32-34-11-990-802

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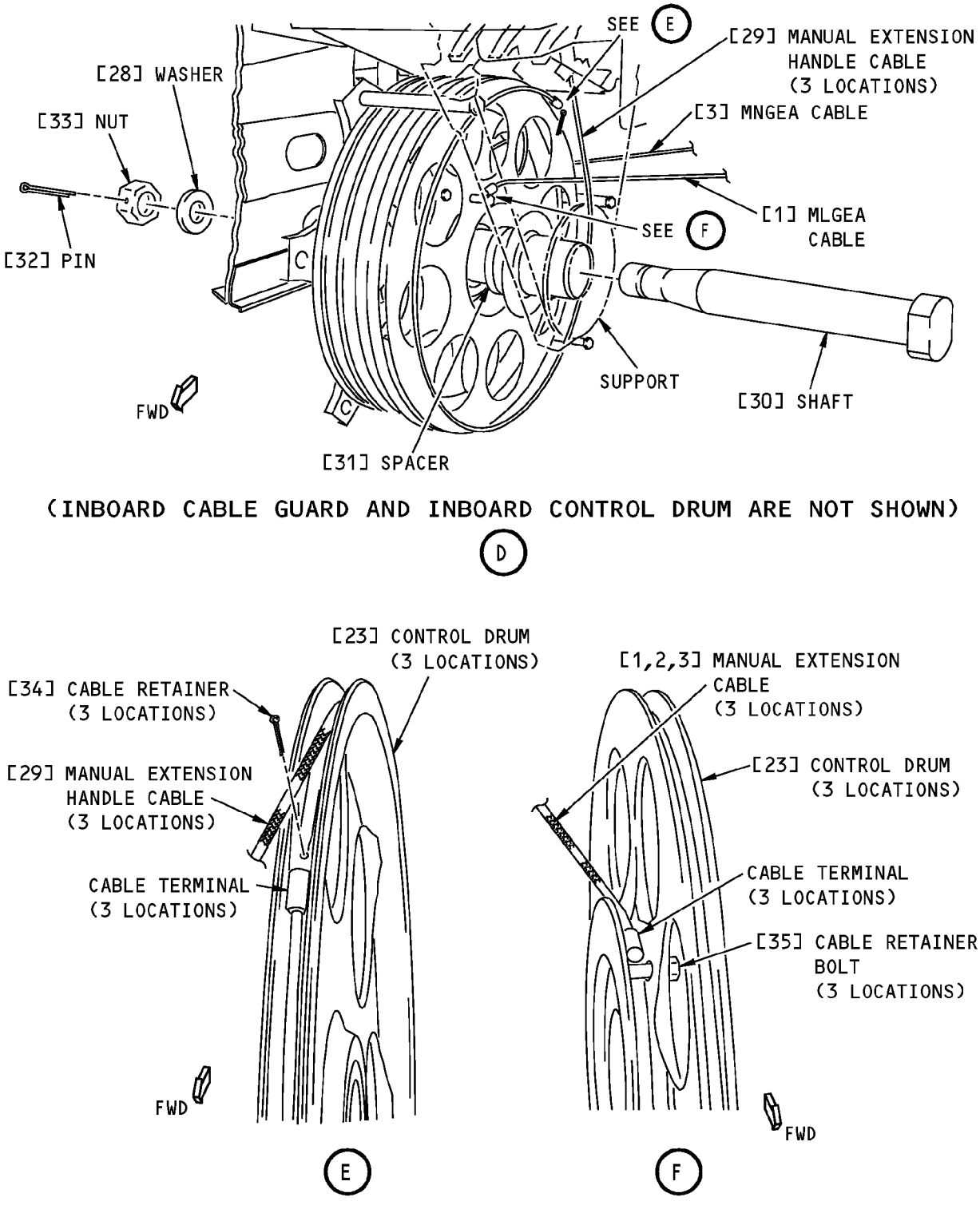




CONTROL DRUM ORIENTATION
A–A

Manual Extension Control Mechanism Installation
Figure 402 (Sheet 3 of 4)/32-34-11-990-802

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Manual Extension Control Mechanism Installation
Figure 402 (Sheet 4 of 4)/32-34-11-990-802

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TASK 32-34-11-400-801

3. Main Gear Manual Extension Control Mechanism Installation

(Figure 401, Figure 402)

A. References

Reference	Title
32-34-00-730-801	Main Gear Manual Extension System Test - Airplane on Jacks (P/B 501)
32-34-00-820-801	Adjustment of the Manual Extension System for the Main Gear (P/B 501)
32-35-00-730-801	Nose Gear Manual Extension System Test - Airplane on Jacks (P/B 501)
32-35-00-820-801	Adjustment of the Manual Extension System for the Nose Gear (P/B 501)
53-21-00-400-801	Passenger Cabin Floor Panel Installation (P/B 401)

B. Consumable Materials

Reference	Description	Specification
D50180	Grease - Aircraft General Purpose (AeroShell Grease 33)	BMS 3-33, MIL-PRF-23827

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
21	Guard assembly	32-34-11-02-205	HAP ALL
23	Drum assembly	32-34-11-02-160	HAP ALL
		32-34-11-02-165	HAP ALL
27	Guard assembly	32-34-11-02-225	HAP ALL
30	Shaft	32-34-11-02-142	HAP ALL
32	Pin	32-34-11-02-045	HAP ALL
34	Pin	32-34-11-03-075	HAP 101-999
		32-34-11-04-005	HAP 001-013, 015-026, 028-054

D. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
116	Nose Landing Gear Wheel Well - Right
122	Forward Cargo Compartment - Right
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
211	Flight Compartment - Left
212	Flight Compartment - Right
220	Subzone - Passenger Compartment - Body Station 259.50 to 360.00

E. Access Panels

Number	Name/Location
114AC	Fwd Nose Wheel Well Upper Access Panel

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F. Main Gear Manual Extension Control Mechanism Installation

SUBTASK 32-34-11-400-001

(1) Put the drum assemblies [23], the spacer [31] and spacer [36] in position between the inboard guard assembly [21] and outboard guard assembly [27].

SUBTASK 32-34-11-420-001

(2) Put the shaft [30] through the support, the inboard guard assembly [21], the outboard guard assembly [27], the spacer [31], spacer [36], the drum assemblies [23], and the structure.

SUBTASK 32-34-11-420-002

(3) Apply a thin coat of AeroShell Grease 33, D50180 to the threads of the shaft [30].

(4) Install the spacer [37], the washer [28], and the nut [33] on the shaft [30].

SUBTASK 32-34-11-420-007

(5) Tighten the nut [33] to 50 in-lb (6 N·m) – 180 in-lb (20 N·m).

SUBTASK 32-34-11-420-008

(6) Install the pin [32].

SUBTASK 32-34-11-420-003

(7) Install the manual extension cables [1, 2, 3] on the control drum assemblies [23].

(a) Install the cable retainer bolt [35] to attach the cables [1, 2, 3] to the drum assemblies [23].

SUBTASK 32-34-11-420-004

(8) Install the manual extension handle cables [29] on the drum assemblies [23].

(a) Install the pins [34] to attach the manual extension handle cables [29] to the drum assemblies [23].

1) Bend the end of the pins [34] into the drum assemblies [23].

SUBTASK 32-34-11-420-005

(9) Connect the cables MLGEA [1, 2] at the turnbuckles, located at approximately body station 420.

SUBTASK 32-34-11-420-006

(10) Connect the cable MNGEA [3] at the turnbuckle.

SUBTASK 32-34-11-820-001

(11) Do the adjustment of the manual extension system for the main landing gear, do this task: Adjustment of the Manual Extension System for the Main Gear, TASK 32-34-00-820-801.

SUBTASK 32-34-11-710-001

(12) Do a test on the manual extension system for the main landing gear, do this task: Main Gear Manual Extension System Test - Airplane on Jacks, TASK 32-34-00-730-801.

SUBTASK 32-34-11-820-002

(13) Do the adjustment of the manual extension system for the nose landing gear, do this task: Adjustment of the Manual Extension System for the Nose Gear, TASK 32-35-00-820-801.

SUBTASK 32-34-11-710-002

(14) Do a test on the manual extension system for the nose landing gear, do this task: Nose Gear Manual Extension System Test - Airplane on Jacks, TASK 32-35-00-730-801.

SUBTASK 32-34-11-410-003

(15) Install this access panel:

Number	Name/Location
114AC	Fwd Nose Wheel Well Upper Access Panel

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SUBTASK 32-34-11-410-001

(16) Install the cargo compartment ceiling panels at approximately body station 420.

SUBTASK 32-34-11-410-002

(17) Install the cabin floor panel, do this task: Passenger Cabin Floor Panel Installation, TASK 53-21-00-400-801.

——————— END OF TASK ———————

TASK 32-34-11-820-801

4. Removal of the Manual Extension System Access Door Switch

(Figure 403)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
116	Nose Landing Gear Wheel Well - Right
122	Forward Cargo Compartment - Right
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
211	Flight Compartment - Left
212	Flight Compartment - Right
220	Subzone - Passenger Compartment - Body Station 259.50 to 360.00

C. General

SUBTASK 32-34-11-820-003

(1) This procedure removes the manual extension system access door switch for the main landing gears.

D. Procedure

SUBTASK 32-34-11-860-002

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear. To do this, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-34-11-840-001

(2) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	16	C01432	LANDING GEAR ALTN EXTEND SOL

SUBTASK 32-34-11-480-002

(3) Locate the switch [52] and associated wiring [57].

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SUBTASK 32-34-11-010-005

(4) Remove the screws [55] and washers [54].

SUBTASK 32-34-11-010-006

(5) Remove the switch [52] and actuator [53] assembly for the mounting location.

SUBTASK 32-34-11-010-007

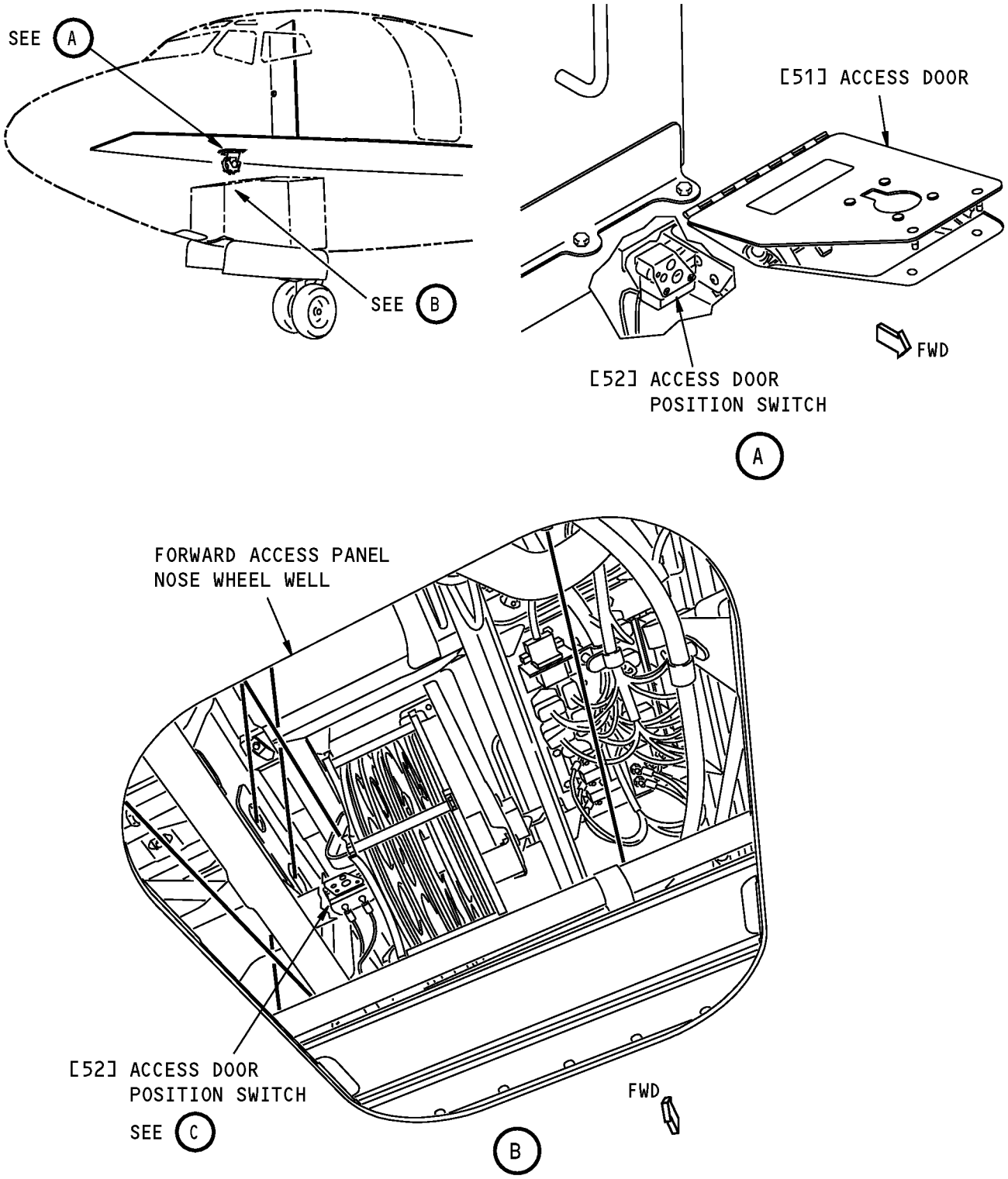
(6) Note and tag the wire [57] positions relative to the switch [52].

SUBTASK 32-34-11-010-008

(7) Unscrew the terminal screws [56] and disconnect the wires [57].

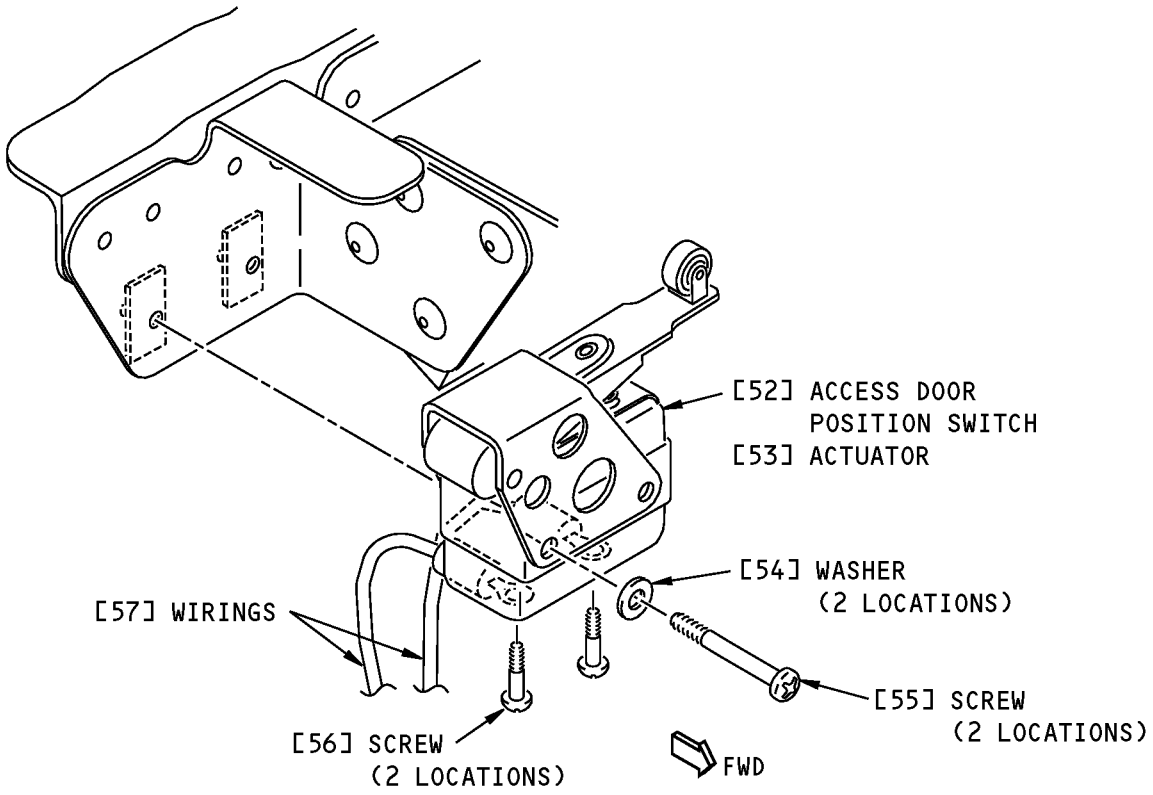
——————— END OF TASK ———————

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Landing Gear Manual Extension Access Door Switch Installation
Figure 403 (Sheet 1 of 2)/32-34-11-990-803

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ACCESS DOOR POSITION SWITCH

C

Landing Gear Manual Extension Access Door Switch Installation
Figure 403 (Sheet 2 of 2)/32-34-11-990-803

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TASK 32-34-11-820-802

5. Installation of the Manual Extension System Access Door Switch

(Figure 403)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-34-00-820-802	Adjustment of the Manual Extension System Access Door Switch (P/B 501)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
116	Nose Landing Gear Wheel Well - Right
122	Forward Cargo Compartment - Right
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
211	Flight Compartment - Left
212	Flight Compartment - Right
220	Subzone - Passenger Compartment - Body Station 259.50 to 360.00

C. General

SUBTASK 32-34-11-820-004

(1) This procedure installs the manual extension system access door switch for the main landing gears.

D. Procedure

SUBTASK 32-34-11-860-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear. To do this, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-34-11-840-002

(2) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	16	C01432	LANDING GEAR ALTN EXTEND SOL

SUBTASK 32-34-11-480-003

(3) Locate the switch [52], actuator [53] and associated wiring [57].

SUBTASK 32-34-11-010-009

(4) Note the wire [57] positions and connect the wires [57] to the switch [52]. Install the terminal screws [56].

SUBTASK 32-34-11-010-010

(5) Assemble and mount the switch [52] and actuator [53] assembly to their mounting position and install the screws [55] and washers [54].

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SUBTASK 32-34-11-840-003

(6) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	16	C01432	LANDING GEAR ALTN EXTEND SOL

SUBTASK 32-34-11-010-011

(7) Do the adjustment of the manual extension system door access switch. do this task: Adjustment of the Manual Extension System Access Door Switch, TASK 32-34-00-820-802

—————— END OF TASK ——————

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MAIN GEAR MANUAL EXTENSION MECHANISM - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks that apply to the left or right main landing gear:

(1) A removal of the manual extension mechanism (referred to as the mechanism assembly [21]), for the main gear

(2) An installation of the mechanism assembly [21] for the main gear.

TASK 32-34-21-000-801

2. Removal of the Manual Extension Mechanism for the Main Gear

(Figure 401, Figure 402)

A. References

Reference	Title
25-22-00-000-801	Passenger Seat Removal (P/B 401)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
241	Aft Passenger Compartment - Station 663.75 to Aft Pressure Bulkhead - Left
242	Aft Passenger Compartment - Station 663.75 to Aft Pressure Bulkhead - Right

D. Prepare for the Removal

SUBTASK 32-34-21-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-34-21-860-001

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

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SUBTASK 32-34-21-580-001

(3) Install chocks around the tires of the main landing gear.

SUBTASK 32-34-21-480-002

WARNING: MAKE SURE THE RIG PIN IS INSTALLED IN THE MANUAL EXTENSION MECHANISM. WITHOUT THE RIG PIN, THE SPRING IN THE MANUAL EXTENSION MECHANISM COULD UNWIND AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) Install the rig pin LGEA1 from rig pin kit, SPL-1585 through the rig pin holes in the mechanism assembly [21].

SUBTASK 32-34-21-010-001

(5) Remove the ceiling panels in the forward cargo compartment that are at approximately body station 420.

SUBTASK 32-34-21-020-001

(6) Remove the locking clips from the turnbuckle [2].

SUBTASK 32-34-21-020-002

(7) Loosen the cable MLGEA [1] at the turnbuckle [2].

SUBTASK 32-34-21-010-002

(8) For the passenger seats that are at approximately body station 692, do this task: Passenger Seat Removal, TASK 25-22-00-000-801.

SUBTASK 32-34-21-010-003

(9) Remove the floor panels at approximately body station 692.

E. Manual Extension Mechanism Removal

SUBTASK 32-34-21-020-003

(1) Remove the pin [33], nut [32], washer [31], bolt [29], and washer [30] to disconnect the control rod from the uplock kicker arm.

SUBTASK 32-34-21-020-004

(2) Remove the nut [28], washers [26], bolt [25], and spacer [27] from the cable guard bracket on the mechanism assembly [21].

SUBTASK 32-34-21-020-005

(3) Remove the nuts [24], washers [23], and bolts [22] to disconnect the mechanism assembly [21] from the structure.

SUBTASK 32-34-21-020-006

(4) Remove the pin [34].

SUBTASK 32-34-21-020-009

(5) Disconnect the cable assy [1] from the mechanism assembly [21].

SUBTASK 32-34-21-020-007

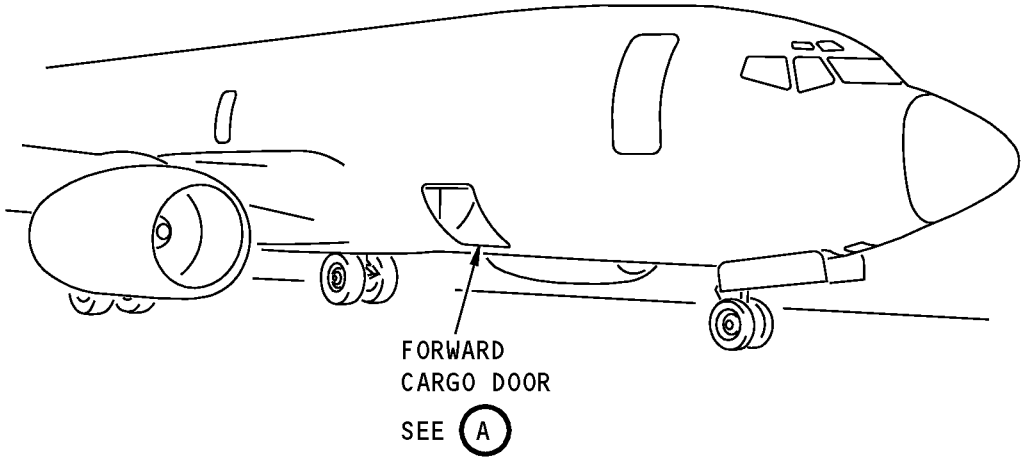
(6) Remove the mechanism assembly [21] from the airplane.

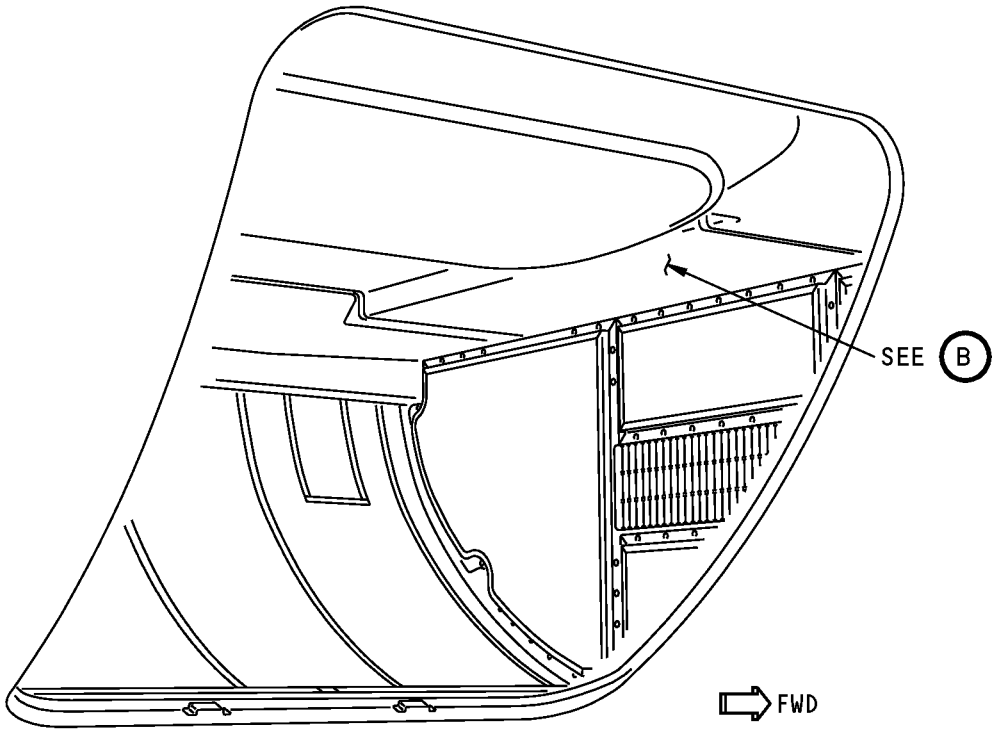
SUBTASK 32-34-21-420-001

(7) Install the bolt [25], spacer [27], washers [26], and nut [28] on the cable guard bracket on the mechanism assembly [21].

——————— END OF TASK ———————

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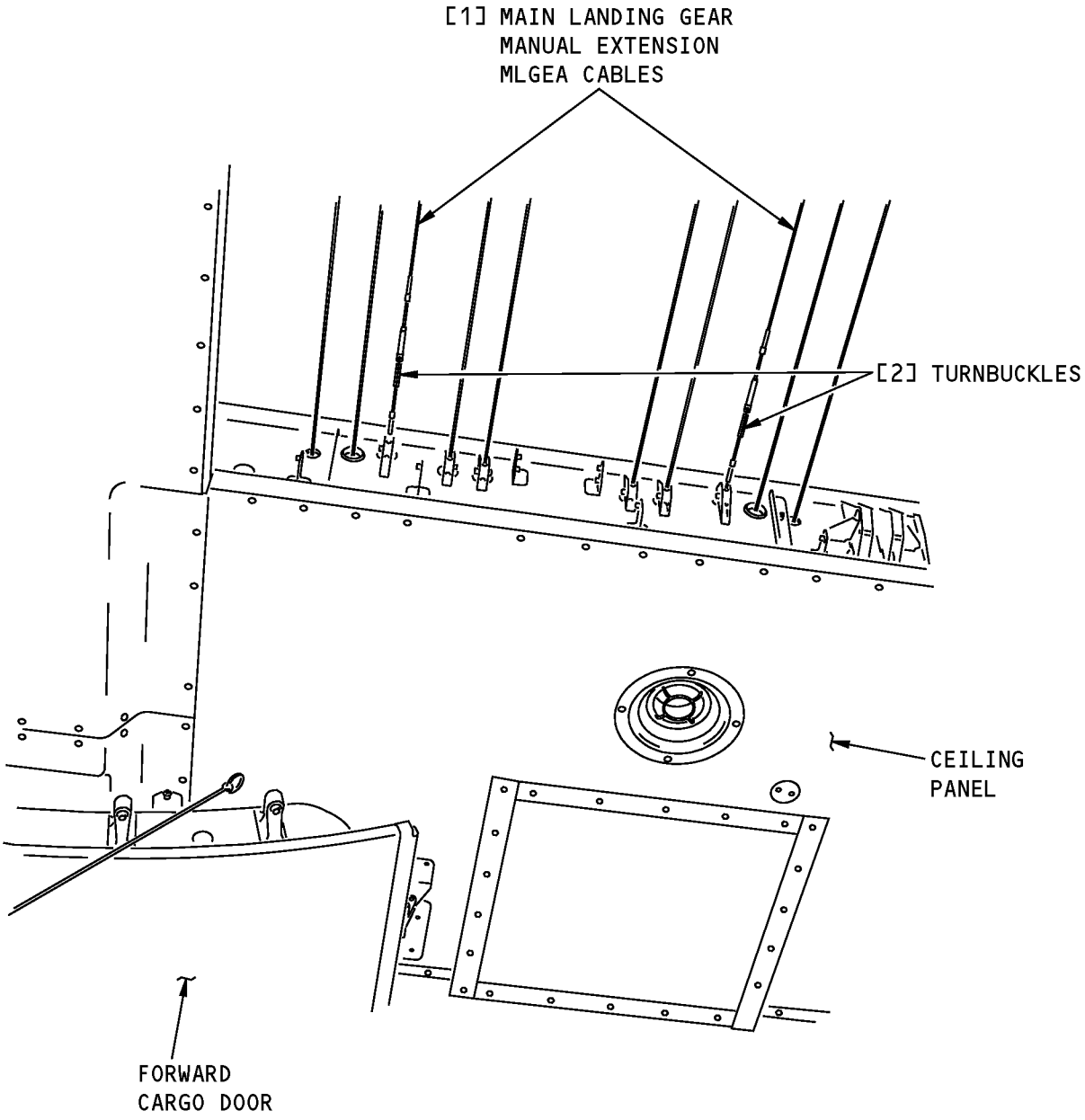




FORWARD CARGO COMPARTMENT
(CEILING PANEL INSTALLED)
A

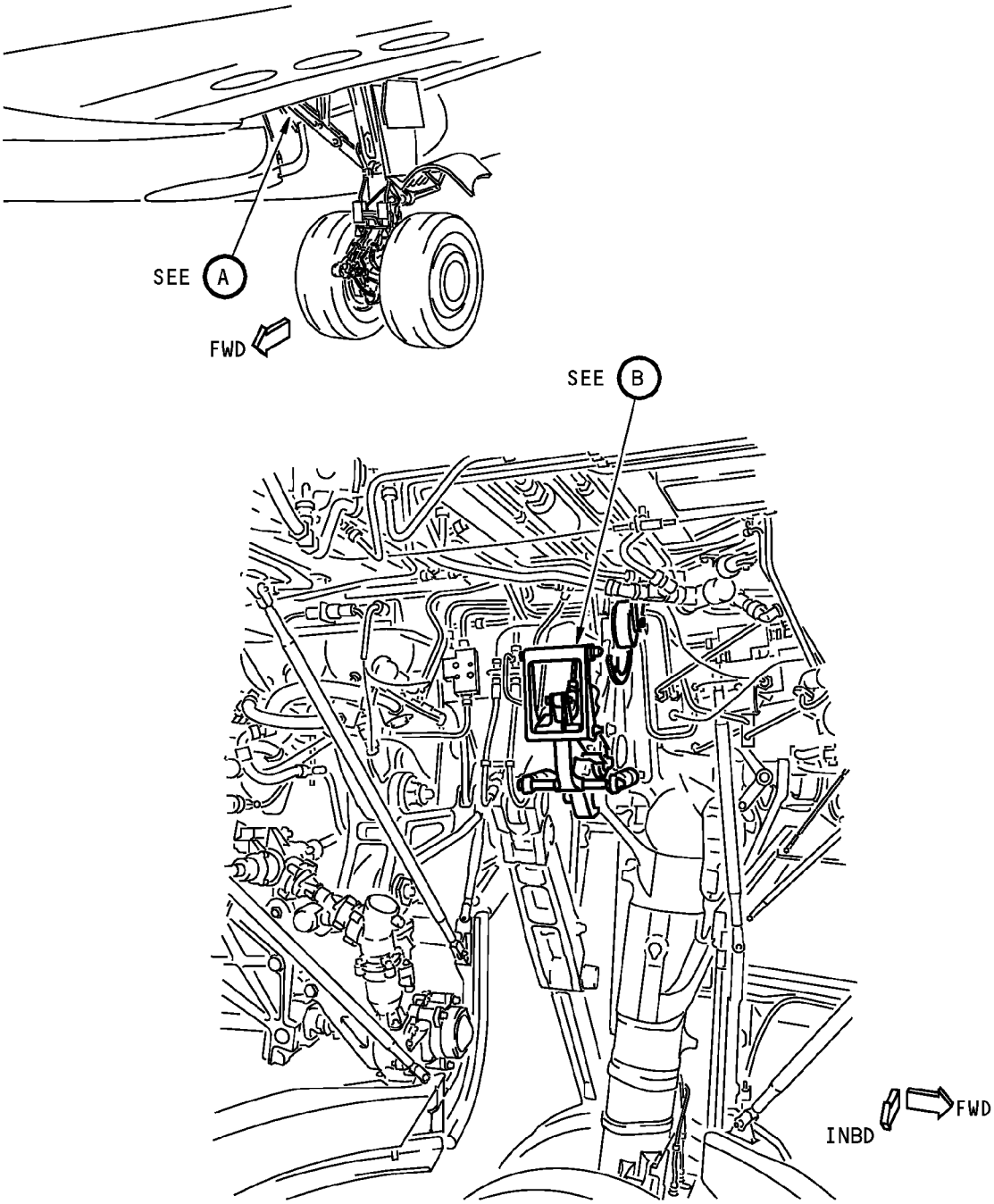
Manual Extension Cable Turnbuckle Locations
Figure 401 (Sheet 1 of 2)/32-34-21-990-801

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Manual Extension Cable Turnbuckle Locations
Figure 401 (Sheet 2 of 2)/32-34-21-990-801

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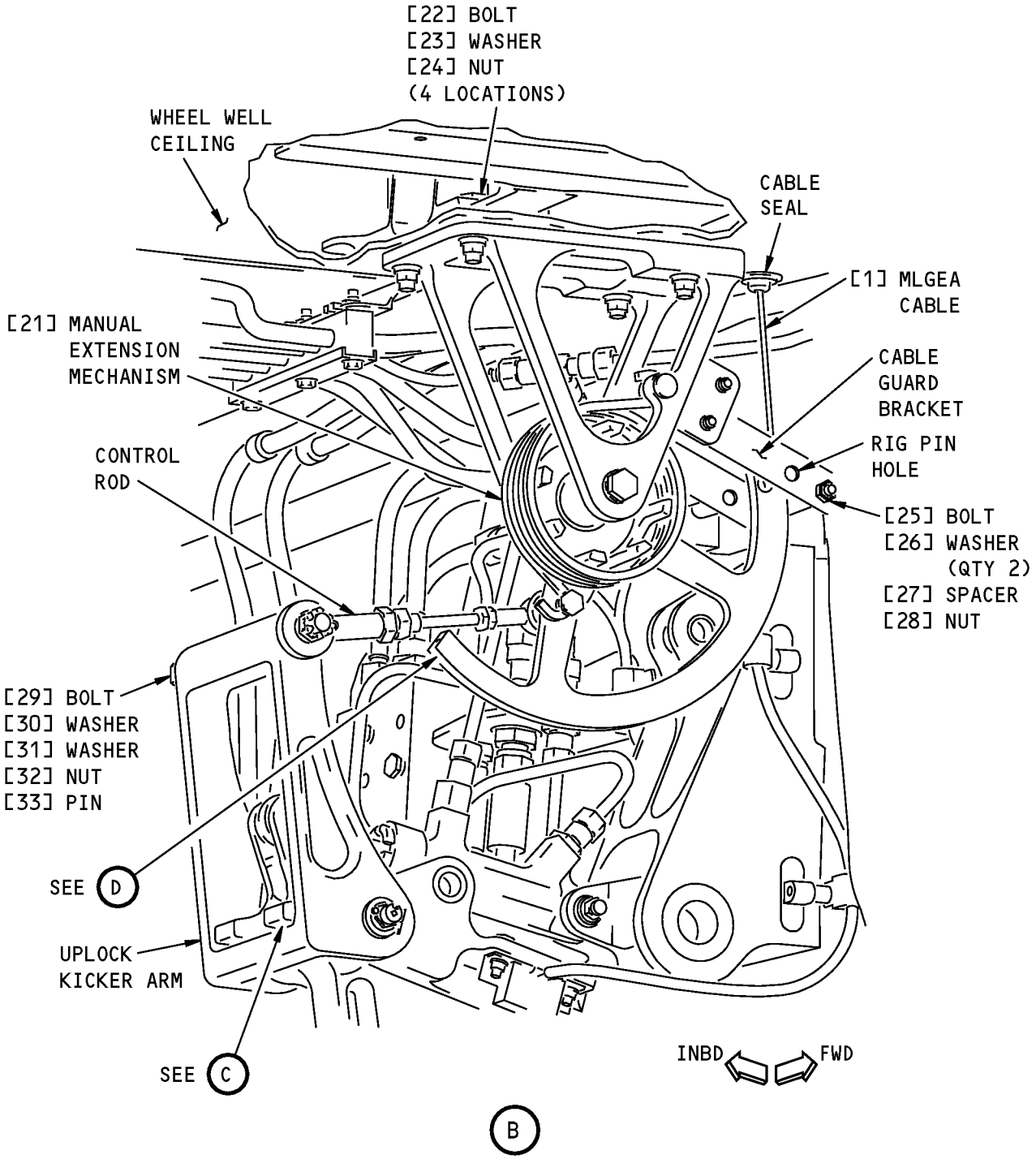


MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE IS SHOWN, RIGHT SIDE IS EQUIVALENT)

A

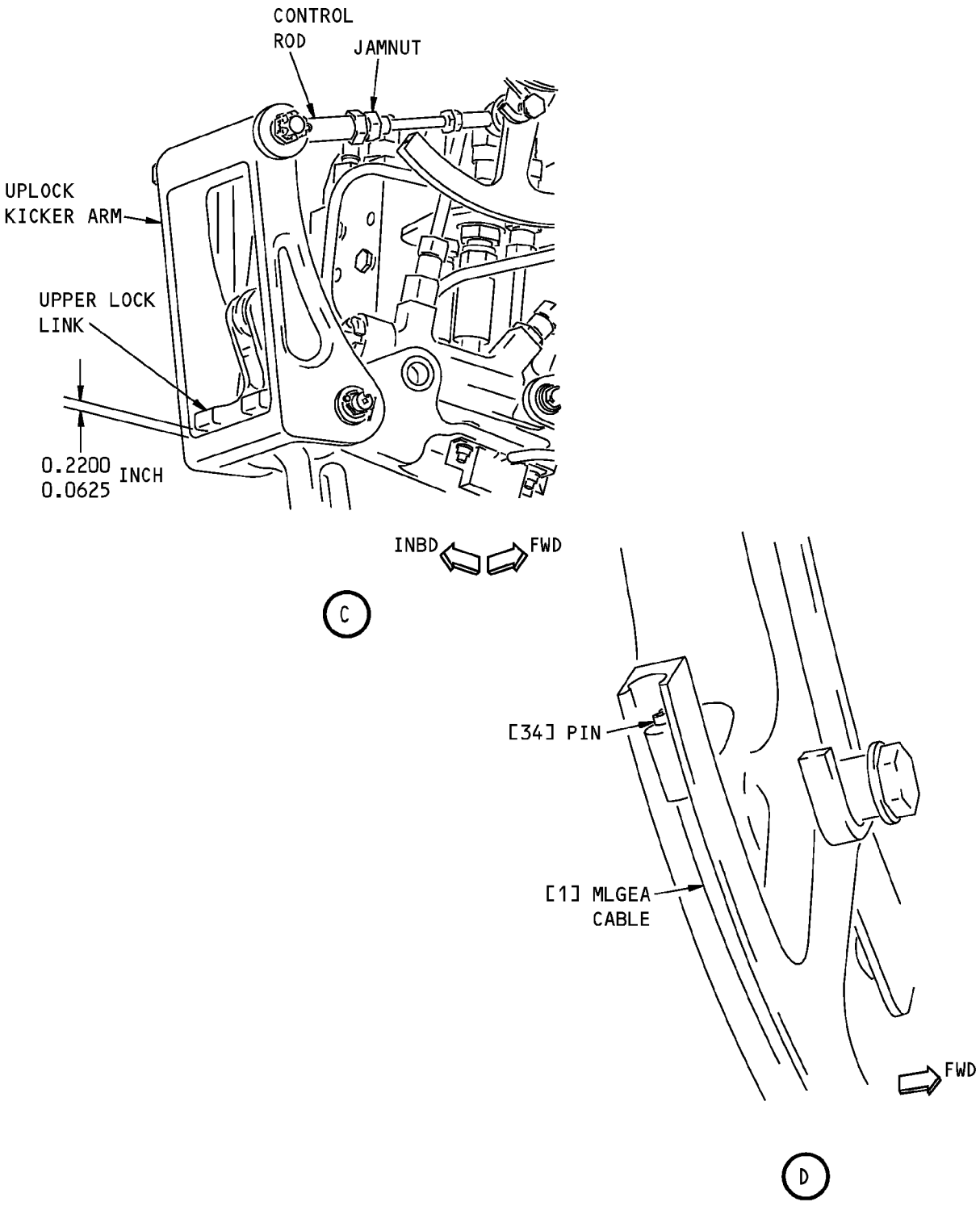
Main Landing Gear Manual Extension Mechanism Installation
Figure 402 (Sheet 1 of 3)/32-34-21-990-802

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Main Landing Gear Manual Extension Mechanism Installation
Figure 402 (Sheet 2 of 3)/32-34-21-990-802

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Main Landing Gear Manual Extension Mechanism Installation
Figure 402 (Sheet 3 of 3)/32-34-21-990-802

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TASK 32-34-21-400-801

3. Installation of the Manual Extension Mechanism for the Main Gear

(Figure 401, Figure 402)

A. References

Reference	Title
25-22-00-400-802	Passenger Seat Installation (P/B 401)
32-32-31-400-801	Main Gear Uplock Assembly Installation (P/B 401)
32-34-00-730-801	Main Gear Manual Extension System Test - Airplane on Jacks (P/B 501)
32-34-00-730-802	Main Gear Manual Extension System Test - Airplane not on Jacks (P/B 501)
32-34-00-820-801	Adjustment of the Manual Extension System for the Main Gear (P/B 501)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
21	Mechanism assembly	Not Specified	
33	Pin	32-34-11-01-018	HAP ALL
34	Pin	32-34-11-03-075	HAP 101-999
		32-34-11-04-005	HAP 001-013, 015-026, 028-054

E. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
241	Aft Passenger Compartment - Station 663.75 to Aft Pressure Bulkhead - Left
242	Aft Passenger Compartment - Station 663.75 to Aft Pressure Bulkhead - Right

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F. Manual Extension Mechanism Installation

SUBTASK 32-34-21-600-001

(1) Apply sealant, A00247 to the entire top surface of the bracket on the mechanism assembly [21].

SUBTASK 32-34-21-420-002

(2) Put the mechanism assembly [21] in its position on the main wheel well ceiling.

SUBTASK 32-34-21-600-002

(3) Apply sealant, A00247 to the threads and below the head of the bolts [22], and the washers [23].

SUBTASK 32-34-21-420-003

(4) Install the bolts [22], washers [23], and nuts [24].

SUBTASK 32-34-21-020-008

(5) Connect the cable assy [1] to the mechanism assembly [21].

SUBTASK 32-34-21-020-010

(6) Install the pin [34].

SUBTASK 32-34-21-420-004

(7) Install the bolt [29] and washer [30] to connect the control rod of the mechanism assembly [21] to the uplock kicker arm. Put the countersink on the washer [30] against the head of the bolt [29].

SUBTASK 32-34-21-420-005

(8) Install the washer [31] and nut [32].

NOTE: Do not tighten the nut [32] fully.

SUBTASK 32-34-21-820-001

(9) Make sure the uplock assembly is correctly adjusted to engage the uplock roller on the main gear when the gear is retracted, do this task: Main Gear Uplock Assembly Installation, TASK 32-32-31-400-801.

SUBTASK 32-34-21-980-001

(10) Put the uplock hook in the up and locked position.

SUBTASK 32-34-21-820-002

(11) Install the rig pin LGEA1 from rig pin kit, SPL-1585 through the rig pin holes in the mechanism assembly [21].

SUBTASK 32-34-21-820-003

(12) Loosen the jamnut on the control rod on the mechanism assembly [21].

SUBTASK 32-34-21-820-004

(13) Adjust the control rod to get the 0.0625 in. (1.59 mm) to 0.220 in. (5.59 mm) between the uplock kicker arm and the upper lock link, (Figure 402).

SUBTASK 32-34-21-420-006

(14) Tighten the jamnut on the control rod to 95 in-lb (11 N·m) – 160 in-lb (18 N·m).

SUBTASK 32-34-21-420-009

(15) Install a lockwire on the jamnut on the control rod.

SUBTASK 32-34-21-080-001

(16) Remove the rig pin LGEA1 from the mechanism assembly [21].

SUBTASK 32-34-21-980-002

(17) Put the uplock hook in the down and locked position before performing a gear retraction.

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SUBTASK 32-34-21-700-002

(18) Turn the cable quadrant to make sure the control rod does not rub against the uplock kicker arm. Install the rig pin LGEA1.

SUBTASK 32-34-21-420-007

(19) Do these steps to tighten the bolt [29] and nut [32] to a torque of between 80 in-lb (9 N·m) plus run-on torque (minimum) to 240 in-lb (27 N·m) (maximum):

(a) Begin at the minimum torque value and increase the torque as necessary to align the castellation in the nut [32] with the hole in the bolt [29]

(b) Make sure you do not use more than 240 in-lb (27 N·m) applied torque.

(c) Install the pin [33].

SUBTASK 32-34-21-420-008

(20) Tighten the cable assy [1] at the turnbuckle [2].

SUBTASK 32-34-21-820-005

(21) Do the adjustment of the manual extension system for the main gear, do this task: Adjustment of the Manual Extension System for the Main Gear, TASK 32-34-00-820-801.

SUBTASK 32-34-21-710-001

(22) Do a test on the manual extension system for the main gear, do this task: Main Gear Manual Extension System Test - Airplane on Jacks, TASK 32-34-00-730-801. If the airplane is not on jacks, you can do this task: (Main Gear Manual Extension System Test - Airplane not on Jacks, TASK 32-34-00-730-802 TASK 32-34-00-730-802).

SUBTASK 32-34-21-410-001

(23) Install the ceiling panels that you removed in the forward cargo compartment.

SUBTASK 32-34-21-410-002

(24) Install the floor panels that you removed at approximately body station 692.

SUBTASK 32-34-21-410-003

(25) Install the passenger seats that you removed at approximately body station 692, do this task: Passenger Seat Installation, TASK 25-22-00-400-802.

———————— END OF TASK ————————

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MAIN GEAR MANUAL EXTENSION SYSTEM CABLES - REMOVAL/INSTALLATION

1. General

A. This procedure has these two tasks:

(1) A removal of the manual extension system cables (referred to as cable assembly [1], cable assembly [3], cable assembly [4], or cable assembly [5]) for the main landing gear

(2) An installation of the manual extension system cables for the main landing gear.

TASK 32-34-31-000-801

2. Main Gear Manual Extension System Cables Removal

(Figure 401)

A. References

Reference	Title
20-10-04-000-801	Control Cable Air Seal Removal (P/B 401)
20-10-91-000-801	Control Cables Removal (P/B 401)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
220	Subzone - Passenger Compartment - Body Station 259.50 to 360.00

C. Manual Extension Cable Removal

SUBTASK 32-34-31-010-001

(1) Remove the cargo compartment ceiling panels [6] at approximately body station 420 to remove the turnbuckle locking clips [7].

(a) Disconnect the cable assembly [1] from the cable assembly [3] or the cable assembly [4] from the cable assembly [5] at the turnbuckle [2].

SUBTASK 32-34-31-010-002

(2) Remove the forward access panel from the ceiling of the nose wheel well.

SUBTASK 32-34-31-010-003

(3) Remove the nuts [11], washers [10], cable guard standoffs [9], and bolts [8] from the manual extension control mechanism.

SUBTASK 32-34-31-020-001

(4) Remove the pins [12] to disconnect the manual extension handle cable from the MLGEA control drum on the manual extension control mechanism (Detail E).

SUBTASK 32-34-31-020-002

(5) Remove the cable retainer bolt [13] (Detail F).

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SUBTASK 32-34-31-020-005

(6) Disconnect the cable assembly [3] or cableassembly [4] from the MLGEA control drum on the manual extension control mechanism.

SUBTASK 32-34-31-020-003

(7) Remove the pressure seal [14] on the wheel well of the main landing gear, do this task: Control Cable Air Seal Removal, TASK 20-10-04-000-801.

SUBTASK 32-34-31-020-004

(8) Remove the pin [15].

SUBTASK 32-34-31-020-006

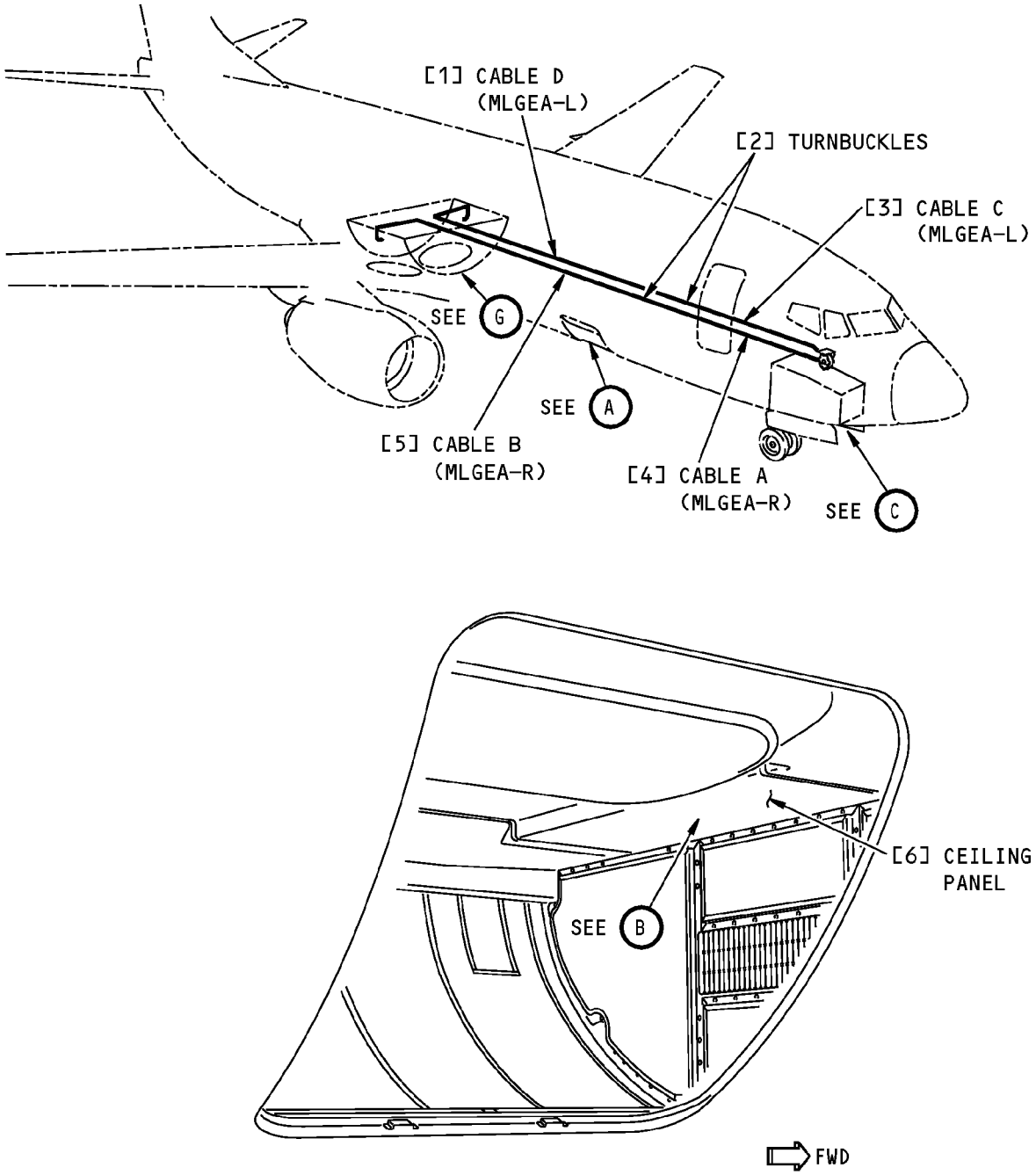
(9) Disconnect the cable assy [1] or the cable assy [5] from the quadrant assembly on the main landing gear manual extension mechanism.

SUBTASK 32-34-31-000-001

(10) Remove the cable assembly [1] from the cable assembly [3] or the cable assembly [4] from the cable assembly [5], do this task: Control Cables Removal, TASK 20-10-91-000-801.

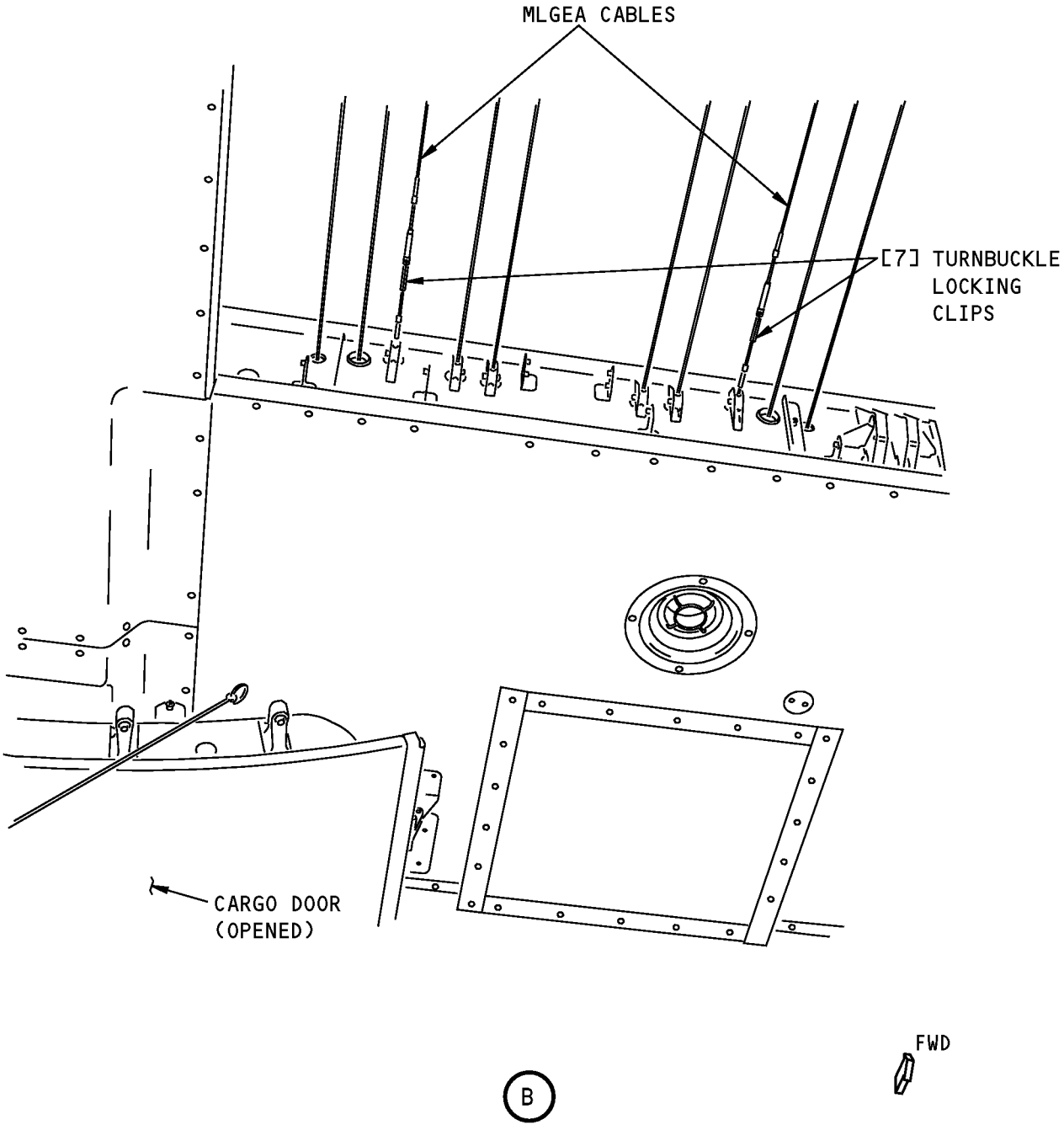
END OF TASK

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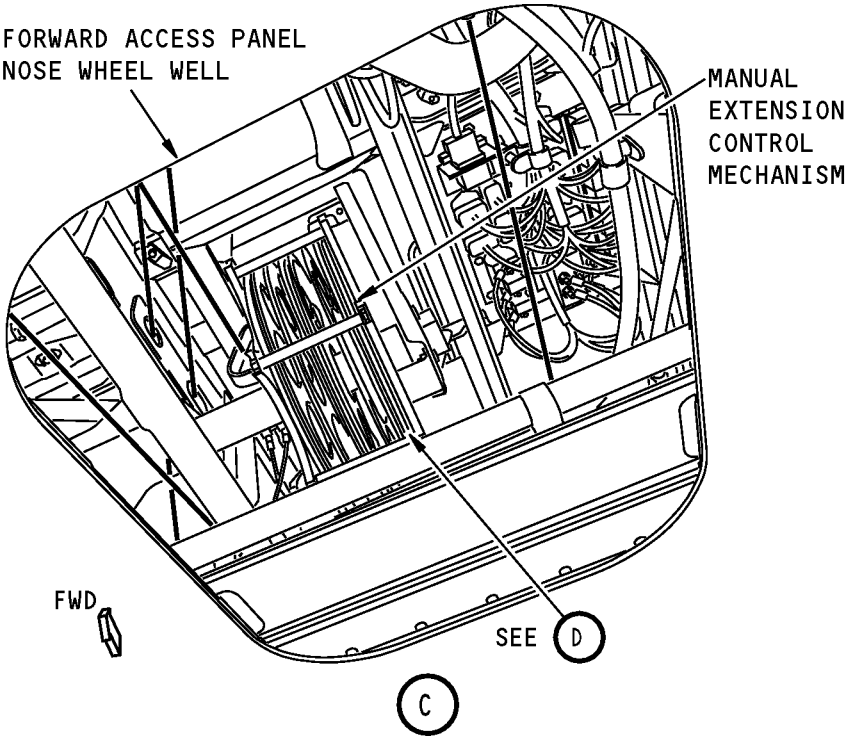
Main Gear Manual Extension System Cable Installation
Figure 401 (Sheet 1 of 7)/32-34-31-990-801

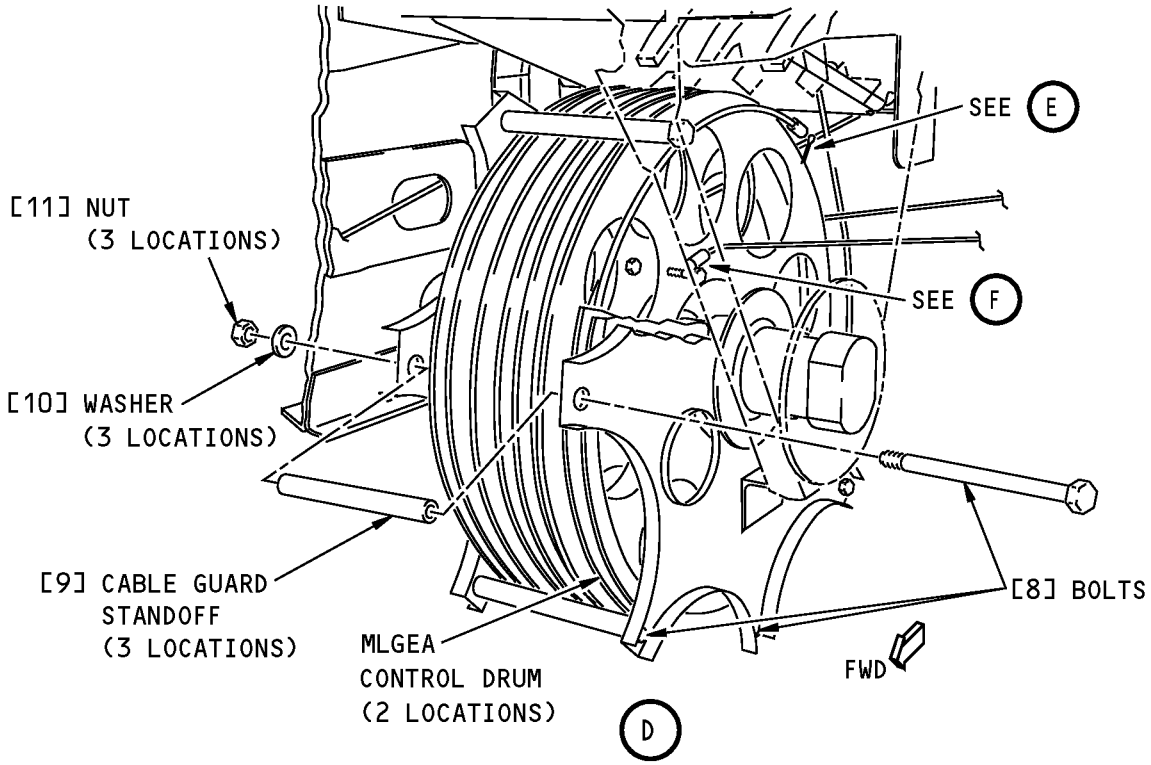
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Main Gear Manual Extension System Cable Installation
Figure 401 (Sheet 2 of 7)/32-34-31-990-801

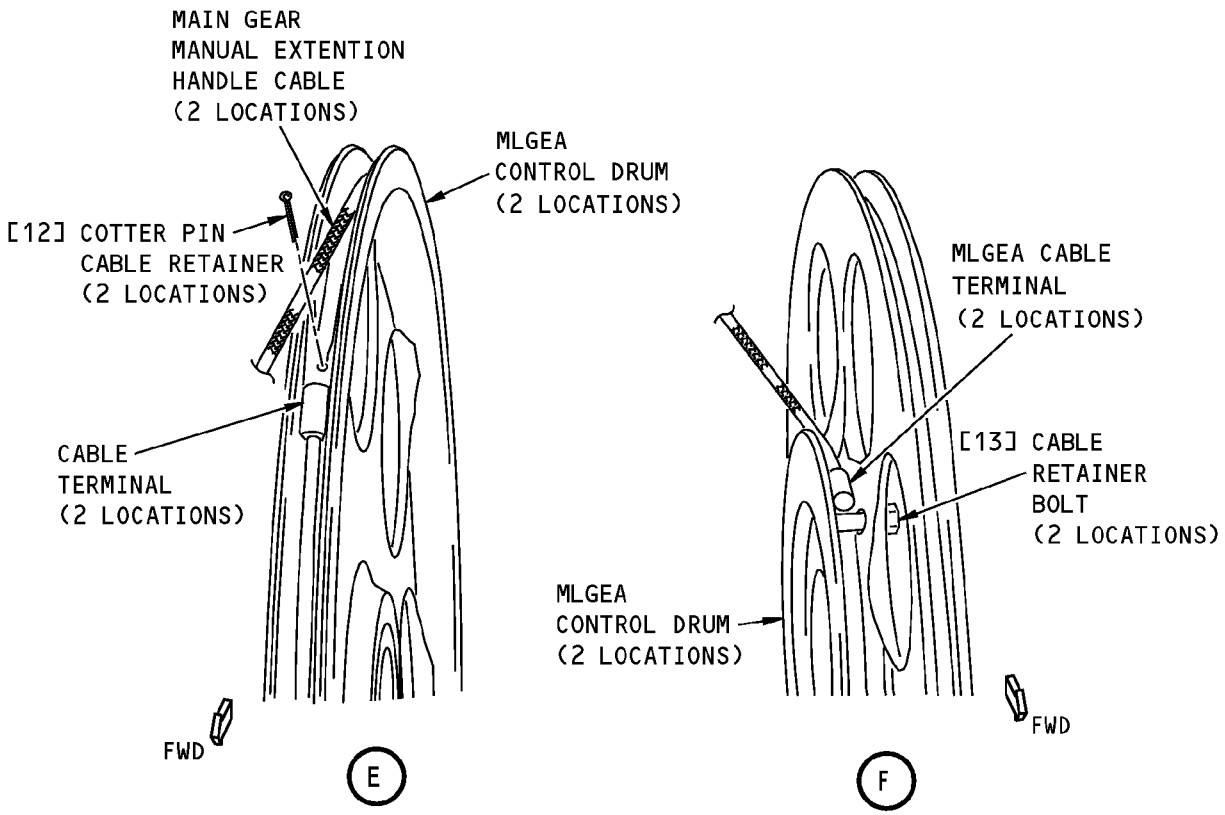
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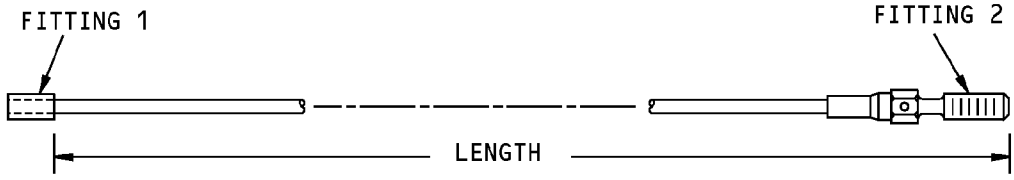




Main Gear Manual Extension System Cable Installation
Figure 401 (Sheet 3 of 7)/32-34-31-990-801

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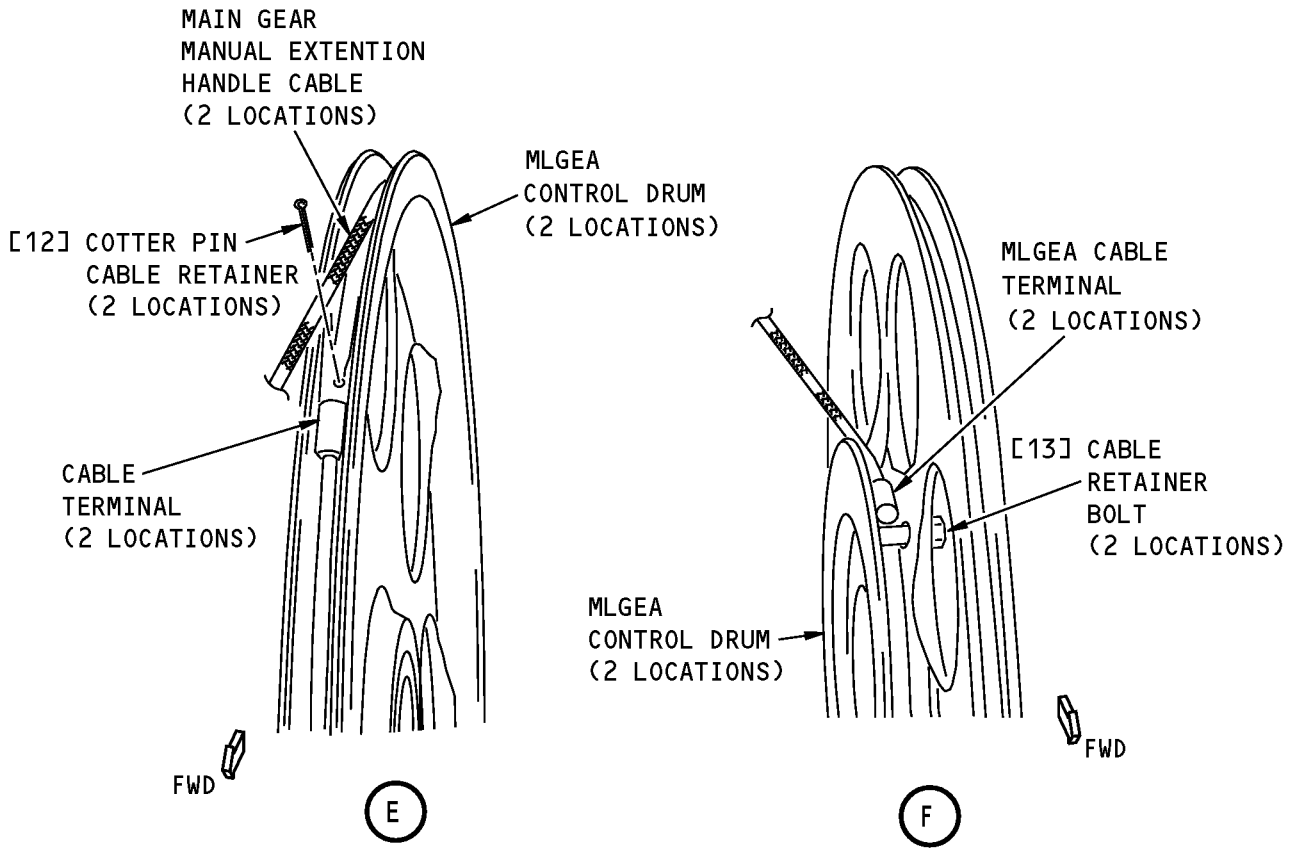
CABLES A, B, C AND D

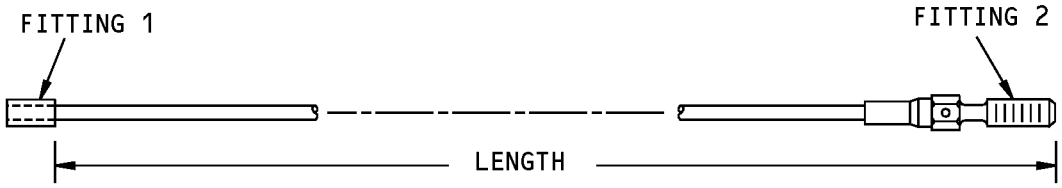
CABLE REF	FUNCTION	NO. REQ	LENGTH (INCHES)	CABLE SIZE	FITTINGS	
					1	2
A	MLGEA-R	1	163.7	3/32 7x7	BACT14A3	MS21260L3 RH
B	MLGEA-R	1	426.0	3/32 7x7	BACT14A3	MS21260L3 LH
C	MLGEA-L	1	182.4	3/32 7x7	BACT14A3	MS21260L3 LH
D	MLGEA-L	1	426.0	3/32 7x7	BACT14A3	MS21260L3 RH

MATERIAL: CABLE - CARBON STEEL PER BMS 7-265, TYPE I, COMPOSITION A, TIN-ZINC (TZ)

Main Gear Manual Extension System Cable Installation
Figure 401 (Sheet 4 of 7)/32-34-31-990-801

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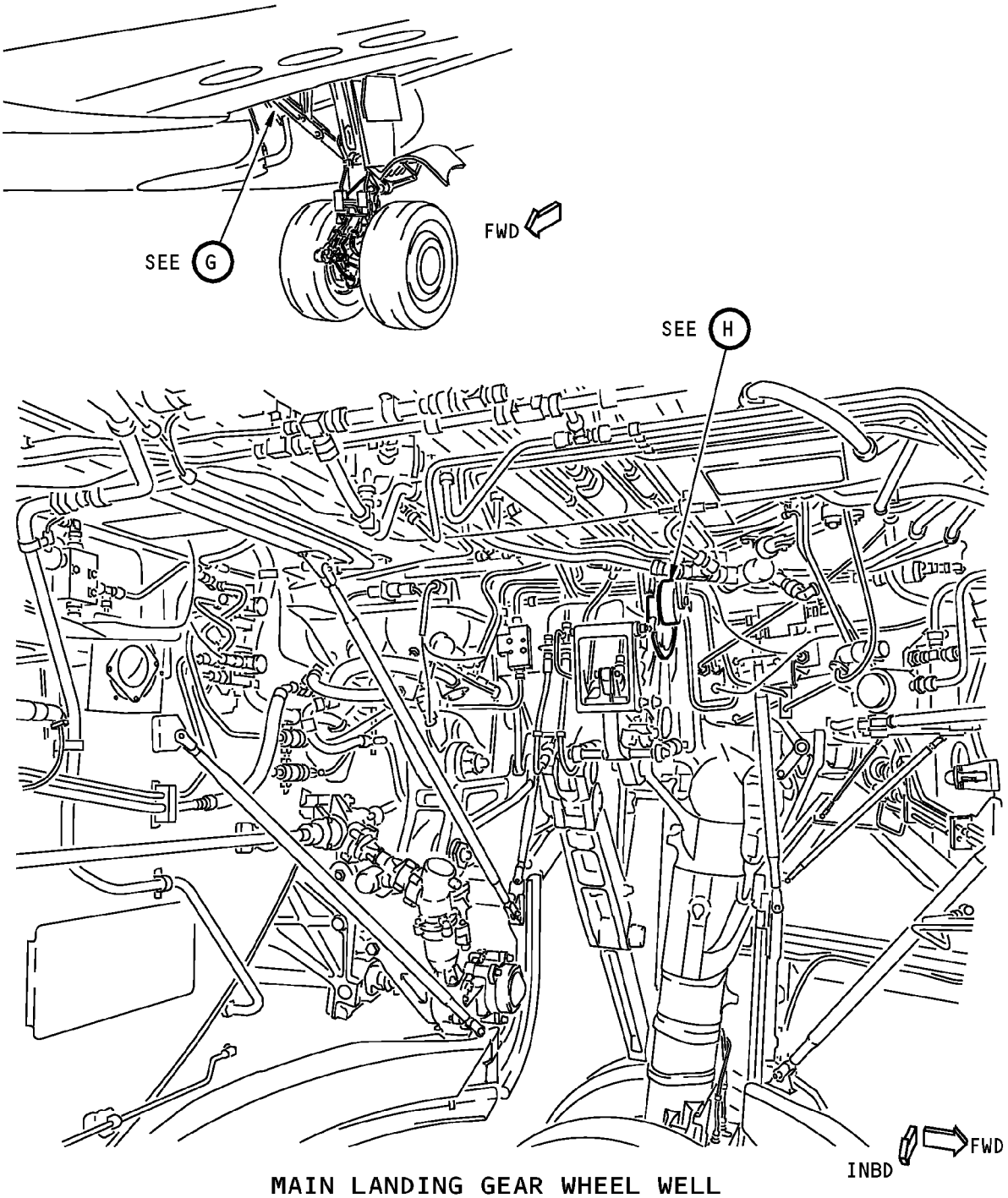
CABLES A, B, C AND D

CABLE REF	FUNCTION	NO. REQ	LENGTH INCHES (METERS)	CABLE SIZE	FITTINGS	
					1	2
A	MLGEA-R	1	163.7 (4.158)	3/32 7x7	BACT14A3	MS21260L3 LH
B	MLGEA-R	1	543.9 (13.815)	3/32 7x7	BACT14A3	MS21260L3 RH
C	MLGEA-L	1	182.4 (4.633)	3/32 7x7	BACT14A3	MS21260L3 LH
D	MLGEA-L	1	543.9 (13.815)	3/32 7x7	BACT14A3	MS21260L3 RH

MATERIAL: CABLE - CARBON STEEL PER BMS 7-265, TYPE I, COMPOSITION A, TIN-ZINC (TZ)

Main Gear Manual Extension System Cable Installation
Figure 401 (Sheet 5 of 7)/32-34-31-990-801

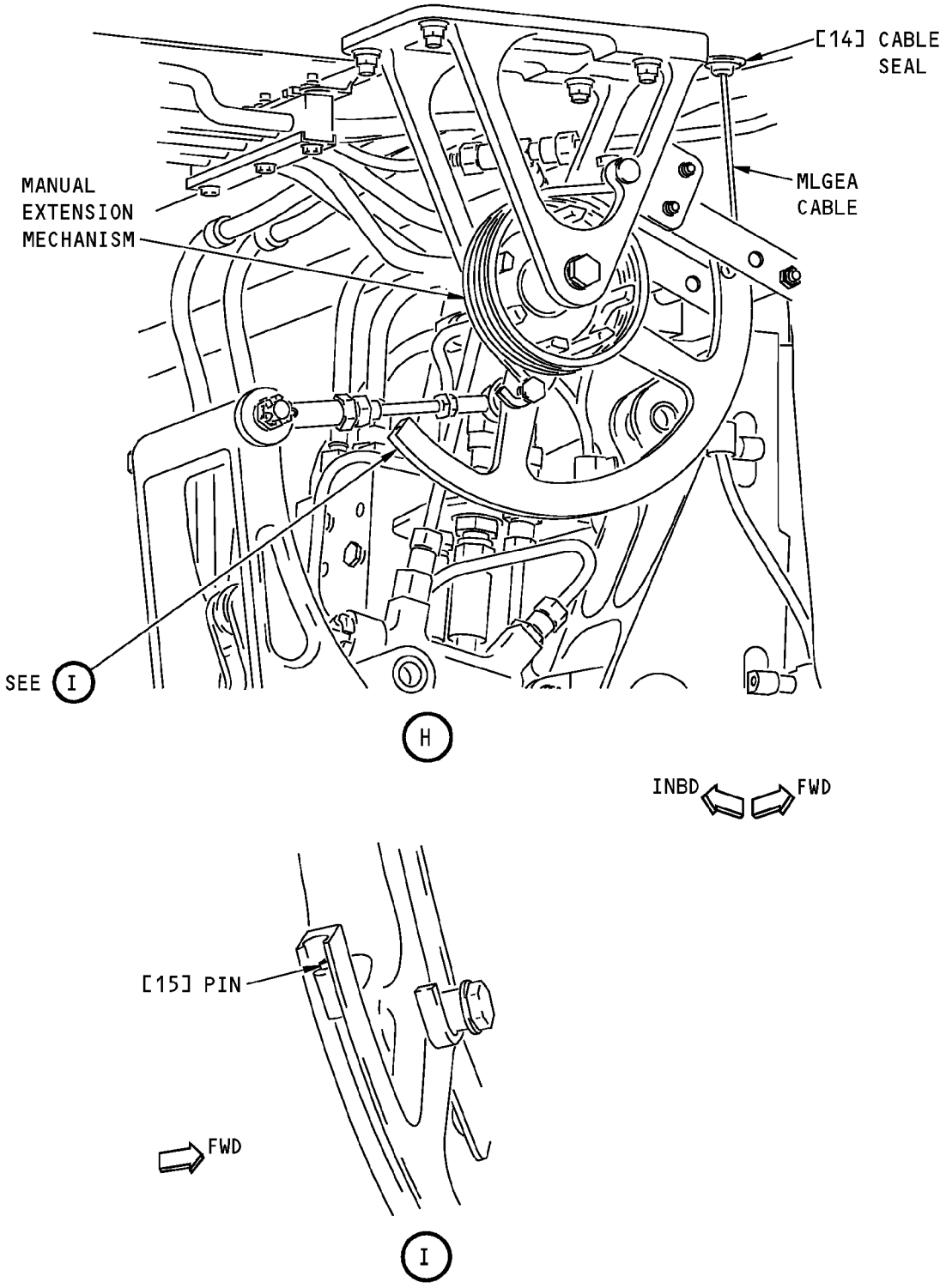
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MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE IS SHOWN, RIGHT SIDE IS EQUIVALENT)
G

Main Gear Manual Extension System Cable Installation
Figure 401 (Sheet 6 of 7)/32-34-31-990-801

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Main Gear Manual Extension System Cable Installation
Figure 401 (Sheet 7 of 7)/32-34-31-990-801

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TASK 32-34-31-400-801

3. Main Gear Manual Extension System Cables Installation

A. References

Reference	Title
20-10-04-400-801	Control Cable Air Seal Installation (P/B 401)
20-10-91-400-801	Control Cables Installation (P/B 401)
32-34-00-730-802	Main Gear Manual Extension System Test - Airplane not on Jacks (P/B 501)
32-34-00-820-801	Adjustment of the Manual Extension System for the Main Gear (P/B 501)

B. Consumable Materials

Reference	Description	Specification
C00174	Compound - Corrosion Preventive, Solvent Cutback, Cold Application	MIL-PRF-16173 (Supersedes MIL-C-16173)
C00528	Compound - Corrosion Preventive, Petroleum Hot Application (Soft Film)	MIL-C-11796, Class III

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Cable assembly	32-34-11-04-105	HAP 001-013, 015-026, 028-054
3	Cable assembly	32-34-11-04-100	HAP 001-013, 015-026, 028-054
4	Cable assembly	32-34-11-04-095	HAP 001-013, 015-026, 028-054
5	Cable assembly	32-34-11-04-105	HAP 001-013, 015-026, 028-054
12	Pin	32-34-11-03-075	HAP 101-999
		32-34-11-04-005	HAP 001-013, 015-026, 028-054
15	Pin	32-34-11-03-075	HAP 101-999
		32-34-11-04-005	HAP 001-013, 015-026, 028-054

D. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
220	Subzone - Passenger Compartment - Body Station 259.50 to 360.00

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E. Manual Extension Cable Installation

SUBTASK 32-34-31-420-001

(1) Install the cable assembly [1] and the cable assembly [3] or the cable assembly [4] and the cable assembly [5], do this task: Control Cables Installation, TASK 20-10-91-400-801.

NOTE: The turnbuckles [2] are located at approximately body station 420.

(a) Apply a thin layer of compound, C00174 or compound, C00528 to the threads on the internal and external surfaces of the mating adjustable parts on the turnbuckles [2].

SUBTASK 32-34-31-420-002

(2) Install the cable assembly [1] or the cable assembly [5] on the quadrant assembly of the main landing gear extension mechanism.

(a) Install the pin [15].

SUBTASK 32-34-31-420-003

(3) Connect the cable assembly [3] or the cable assembly [4] on the control drum on the control mechanism.

(a) Install the bolt [13] that connects the cable assembly [3] or the cable assembly [4] to the control drum on the manual extension control mechanism.

SUBTASK 32-34-31-410-001

(4) Install the cable guard standoffs [9], washers [10], and nuts [11] on the control drum on the manual extension control mechanism.

SUBTASK 32-34-31-420-005

(5) Put the terminal end of the manual extension handle cable in its position on the MLGEA control drum.

(a) Attach the manual extension handle cable on the control drum of the control mechanism and install the pins [12].

(b) Bend one end of the pins [12] into the drum.

(c) Connect the cable assembly [1] to the cable assembly [3] or the cable assembly [4] to the cable assembly [5] at the turnbuckle [2].

F. Put the Airplane Back to its Usual Condition

SUBTASK 32-34-31-820-001

(1) Do the adjustment of the manual extension system for the main landing gear, do this task: Adjustment of the Manual Extension System for the Main Gear, TASK 32-34-00-820-801.

SUBTASK 32-34-31-710-001

(2) Do a test on the manual extension system for the main landing gear, do this task: Main Gear Manual Extension System Test - Airplane not on Jacks, TASK 32-34-00-730-802.

SUBTASK 32-34-31-420-007

(3) Install the pressure seal [14] on the wheel well ceiling of the main landing gear, do this task: Control Cable Air Seal Installation, TASK 20-10-04-400-801.

SUBTASK 32-34-31-410-002

(4) Install the cargo compartment ceiling panels [6] at approximately body station 420.

END OF TASK

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NOSE GEAR MANUAL EXTENSION SYSTEM - ADJUSTMENT/TEST

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure contains these three tasks:

(1) Adjustment of the manual extension system for the nose gear

(2) System test of the manual extension system for the nose gear, with the airplane on jacks

(3) System test of the manual extension system for the nose gear, with the airplane not on jacks.

TASK 32-35-00-820-801

2. Adjustment of the Manual Extension System for the Nose Gear

(Figure 501)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
53-21-00-000-801	Passenger Cabin Floor Panel Removal (P/B 401)
53-21-00-400-801	Passenger Cabin Floor Panel Installation (P/B 401)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

D. Procedure

SUBTASK 32-35-00-860-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-35-00-860-002

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

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SUBTASK 32-35-00-580-001

(3) Install chocks around the tires of the main landing gear.

SUBTASK 32-35-00-010-001

(4) Remove the screws [2] and cover [1] from the nose gear manual release mechanism (Detail A).

SUBTASK 32-35-00-980-001

(5) Align the rig pin holes on the nose gear manual release mechanism.

SUBTASK 32-35-00-480-001

(6) Install the rig pin LGEA1 from rig pin kit, SPL-1585, through the quadrant and the side cover on the manual release mechanism.

SUBTASK 32-35-00-010-002

(7) Remove the cabin floor panel at approximately body station 270. To do this, do this task: Passenger Cabin Floor Panel Removal, TASK 53-21-00-000-801.

SUBTASK 32-35-00-020-001

(8) Remove the turnbuckle locking clips from the cable MNGEA (Detail B).

SUBTASK 32-35-00-820-001

(9) Adjust the turnbuckle on cable MNGEA until the cable tension equals the spring tension.

NOTE: When you do this, make sure you correctly set the release handle in the V-slot of the manual extension control. When the cable tension is equal, rig pin 1 will fit freely in the manual extension mechanism.

SUBTASK 32-35-00-820-002

(10) Make sure rig pin LGEA1 fits freely in the manual extension mechanism.

SUBTASK 32-35-00-080-001

(11) Remove the rig pin LGEA1 from the nose gear manual extension mechanism.

SUBTASK 32-35-00-410-001

(12) Install the screws [2] and the cover [1] on the nose gear manual release mechanism.

SUBTASK 32-35-00-420-001

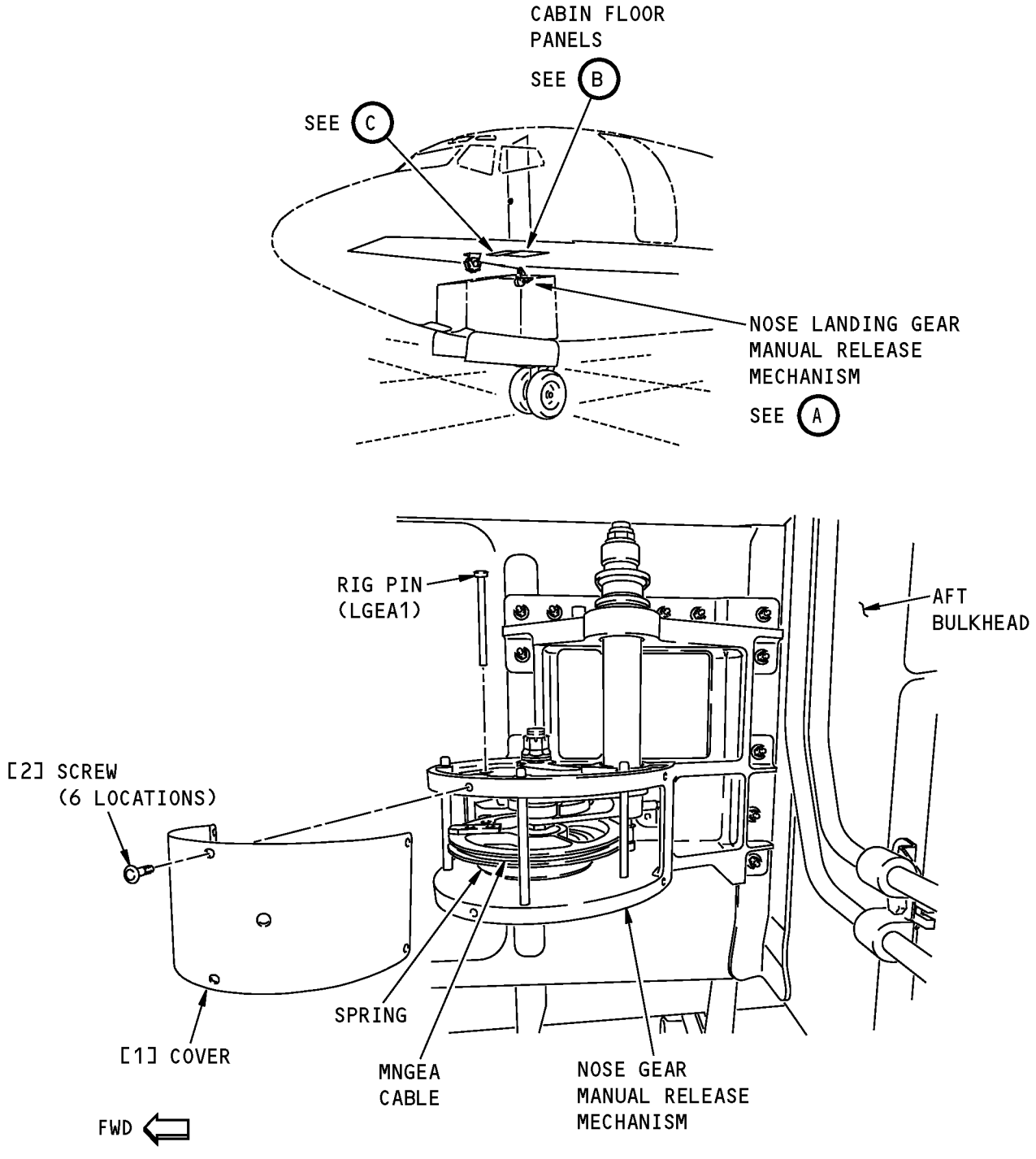
(13) Install the turnbuckle locking clips on the cable MNGEA.

SUBTASK 32-35-00-410-002

(14) Install the cabin floor panel at approximately body station 270. To do this, do this task: Passenger Cabin Floor Panel Installation, TASK 53-21-00-400-801.

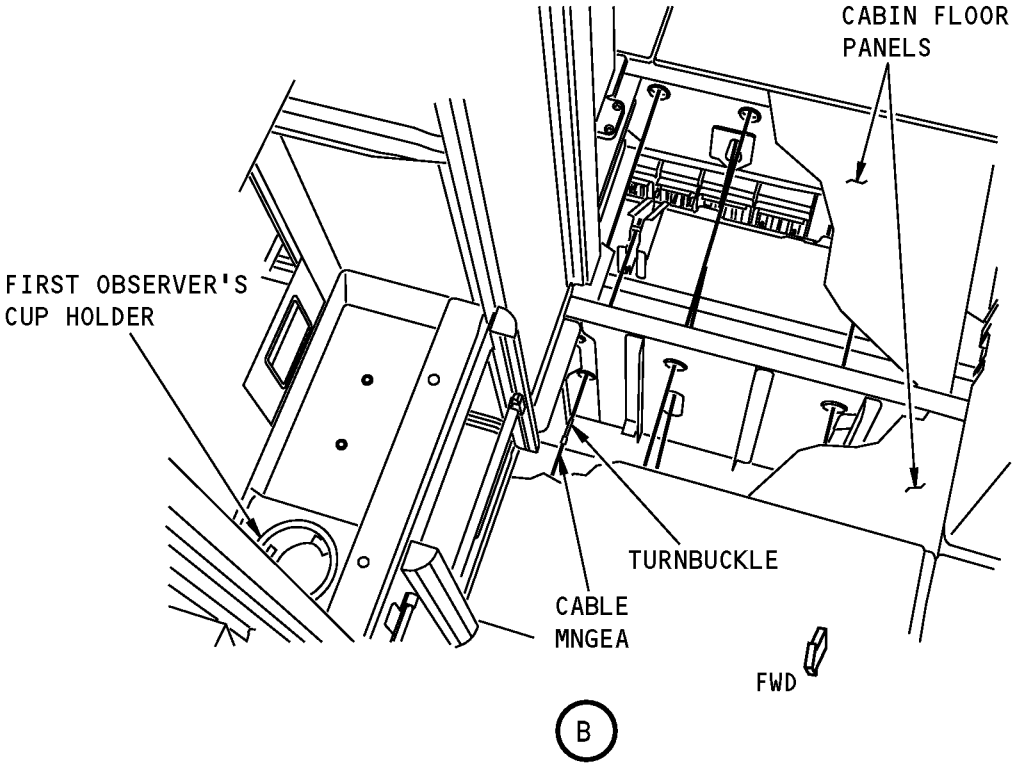
———————— END OF TASK ————————

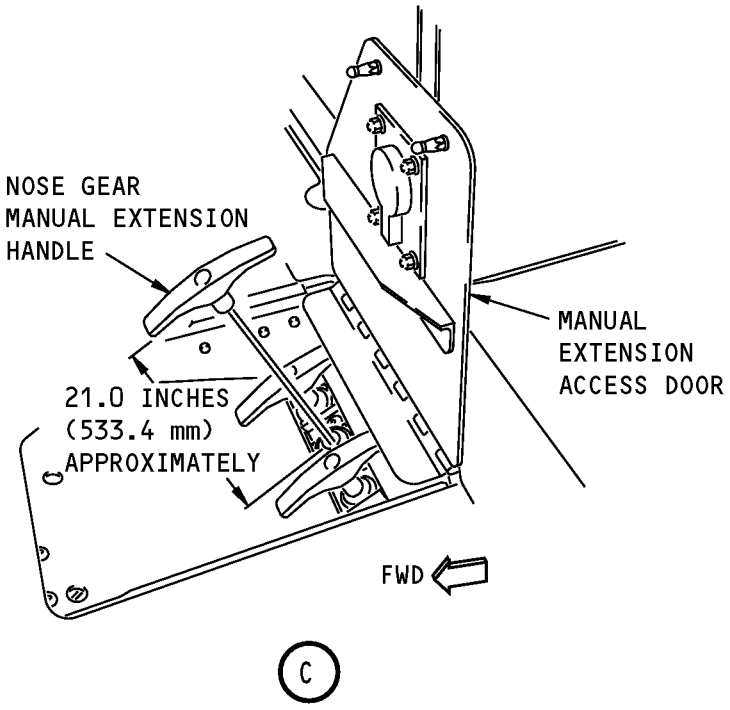
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Nose Gear Manual Extension System
Figure 501 (Sheet 1 of 2)/32-35-00-990-801

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Nose Gear Manual Extension System
Figure 501 (Sheet 2 of 2)/32-35-00-990-801

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TASK 32-35-00-730-801

3. Nose Gear Manual Extension System Test - Airplane on Jacks

(Figure 501)

A. General

(1) This procedure is a scheduled maintenance task.

(2) The normal extension/retraction system will not operate with the cover for the alternate extend T handle open; make sure the cover is closed when you will extend or retract the landing gear with the landing gear control handle.

B. References

Reference	Title
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
07-11-21-580-802	Lower the Airplane Nose Off of the Jack (P/B 201)
24-22-00-860-811	Supply Electrical Power (P/B 201)
24-22-00-860-812	Remove Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)
32-09-10-710-801	Proximity Switch Electronics Unit (PSEU) - Operational Test (P/B 501)
32-33-00-710-801	Operational Test for the Nose Landing Gear (P/B 501)

C. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

D. Prepare for the Test

SUBTASK 32-35-00-480-002

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-35-00-860-004

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-35-00-580-004

(3) Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

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SUBTASK 32-35-00-860-005

(4) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-35-00-860-006

(5) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
B	3	C01312	ENGINE 1 RUN/PWR

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	16	C01432	LANDING GEAR ALTN EXTEND SOL
E	12	C00314	INDICATOR MASTER DIM SECT 2
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	13	C01179	INDICATOR MASTER DIM SECT 7

SUBTASK 32-35-00-860-008

(6) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	13	C00120	WEATHER RADAR RT

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 32-35-00-860-010

(7) Make sure the control lever for the landing gear is in the DN position.

SUBTASK 32-35-00-860-011

(8) Do this task: Put the Airplane in the Air Mode, TASK 32-09-00-860-801.

SUBTASK 32-35-00-080-002

(9) For the nose gear, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

SUBTASK 32-35-00-860-012

(10) Move the No. 1 and No. 2 throttle levers to the full forward position.

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E. Procedure

SUBTASK 32-35-00-860-013

(1) Put the control lever for the landing gear in the OFF position.

SUBTASK 32-35-00-700-001

(2) Pull the manual extension handle for the nose gear.

(a) Make sure the full travel of the T handle is at least 21.0 inches (533.4 millimeters) (Detail C).

SUBTASK 32-35-00-700-002

(3) Release the manual extension handle for the nose gear.

(a) Make sure the handle returns to the stowed position without hesitation or binding.

SUBTASK 32-35-00-480-003

(4) Attach a spring scale to the manual extension T handle for the nose gear.

SUBTASK 32-35-00-730-002

(5) Pull the manual extension handle for the nose gear.

(a) Make sure the load to start the T handle from the seat has a minimum of 3.0 pounds (13.3 newtons) and a maximum of 7.0 pounds (31.2 newtons).

(b) Make sure the load during the full travel of the T handle is not more than 15.0 pounds (66.7 newtons).

NOTE: The T handle must be pulled upward and forward when you measure the load. This will simulate a person seated in the First Officer's seat. Do not pull the handle straight up.

(c) Make sure the manual extension mechanism operates freely.

SUBTASK 32-35-00-860-034

(6) Remove the spring scale to the manual extension T handle for the nose gear.

SUBTASK 32-35-00-860-026

(7) Make sure the cover for the T handle is closed.

NOTE: The extension retraction system will not operate with the cover for the alternate extend T handle open.

SUBTASK 32-35-00-860-019

(8) Move the control lever for the landing gear to the DN position.

SUBTASK 32-35-00-730-003

WARNING: MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE NOSE LANDING GEAR. FAST MOVEMENT OF THE NOSE LANDING GEAR CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(9) Move the control lever for the landing gear to UP and wait while the nose gear retracts.

SUBTASK 32-35-00-860-029

(10) Open the access door to the manual extension T handles.

SUBTASK 32-35-00-730-006

(11) Pull the manual extension T handle of the nose gear.

NOTE: The T handle must be pulled upward and forward. This will simulate a person seated in the First Officer's seat. Do not pull the handle straight up.

SUBTASK 32-35-00-700-006

(12) Make sure the nose gear free falls to the down and locked position.

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(a) Make sure the green light for the nose gear is on

NOTE: The nose landing gear may require additional force to lock into the down position. It is allowed to apply 115 pounds (511 Newtons) of force to the torsion link apex pin (The pin may be pushed or pulled) or 80 pounds (355 Newtons) of force to the axle.

(b) Make sure the red light for the nose gear is on.

NOTE: The red light for the nose gear will stay on to show that the landing gear control lever and landing gear positions disagree.

SUBTASK 32-35-00-700-007

(13) Release the manual extension handle for the nose gear.

SUBTASK 32-35-00-860-030

(14) Move the control lever for the landing gear to the DOWN position.

(a) Make sure the red light for the nose gear is off.

SUBTASK 32-35-00-860-031

(15) Make sure the cover for the T-handle is closed.

SUBTASK 32-35-00-730-008

(16) Make sure that persons and equipment are clear of the nose gear.

SUBTASK 32-35-00-730-007

(17) Move the control lever for the landing gear to the UP position and wait while the nose gear retracts.

SUBTASK 32-35-00-860-014

(18) Put the control lever to the OFF position.

SUBTASK 32-35-00-860-032

(19) Open the access door to the manual extension T handles.

SUBTASK 32-35-00-820-003

(20) Attach a spring scale to the manual extension T handle for the nose gear.

SUBTASK 32-35-00-730-004

(21) Pull the manual extension handle for the nose gear.

(a) Make sure the maximum load when you pull the T handle is not more than 40.0 pounds (177.9 newtons).

NOTE: The T handle must be pulled upward and forward when you measure the load. This will simulate a person seated in the First Officer's seat. Do not pull the handle straight up.

SUBTASK 32-35-00-700-003

(22) Make sure the nose gear free falls to the down and locked position.

(a) While the nose landing gear is in free fall, the red light should be on, and the green light should be off.

NOTE: The red light for the nose gear will stay on to show that the landing gear control lever and the landing gear positions disagree.

(b) When the nose landing gear locks into the down position the green light should be on and the red light should remain on.

NOTE: The nose landing gear may require additional force to lock into the down position. It is allowed to apply 115 pounds (511 Newtons) of force to the torsion link apex pin (The pin may be pushed or pulled) or 80 pounds (355 Newtons) of force to the axle.

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(c) Move the landing gear control lever to the Down position.

1) Make sure the red light for the nose gear is off.

SUBTASK 32-35-00-080-003

(23) Remove the spring scale from the manual extension T handle for the nose gear.

SUBTASK 32-35-00-860-033

(24) Close the access door to the manual extension T handles.

SUBTASK 32-35-00-860-035

(25) Do an operational test of the nose landing gear mechanism. Do this task:Operational Test for the Nose Landing Gear, TASK 32-33-00-710-801

NOTE: Normal operation of the nose landing gear mechanism confirms that the release roller of the nose gear manual extension system has correctly reset to its retracted position.

(26) As an alternative, you can do that steps below to make sure the release roller of nose landing gear manual extension system has reset to its retracted position:

(a) For the nose gear: Do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

(b) Open the access door to the manual extension T handles.

(c) Pull the manual extension handle for the nose gear.

NOTE: One person needs to be stationed in the nose landing gear wheel well.

(d) Release the manual extension handle for the nose gear.

NOTE: Observe the manual extension mechanism to make sure the release roller correctly resets to its retracted position.

(e) Make sure the handle returns to the stowed position without hesitation or binding.

SUBTASK 32-35-00-860-039

(27) Close the access door to the manual extension T handles.

F. Put the Airplane Back to its Usual Condition.

SUBTASK 32-35-00-480-004

(1) For the nose gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-35-00-860-015

(2) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

SUBTASK 32-35-00-860-028

(3) Move the No. 1 and No. 2 throttle levers to the idle (full aft) position.

SUBTASK 32-35-00-860-016

(4) Close these circuit breakers:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	13	C00120	WEATHER RADAR RT

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

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F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 32-35-00-200-001

(5) Check for the PSEU warning light, if it is illuminated, do this task: Proximity Switch Electronics Unit (PSEU) - Operational Test, TASK 32-09-10-710-801

SUBTASK 32-35-00-860-017

(6) For Hydraulic System A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-35-00-860-018

(7) If electrical power is not necessary, do this task: Remove Electrical Power, TASK 24-22-00-860-812.

SUBTASK 32-35-00-580-003

(8) Do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

——————— END OF TASK ———————

TASK 32-35-00-730-802

4. Nose Gear Manual Extension System Test - Airplane Not on Jacks

(Figure 501)

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
24-22-00-860-812	Remove Electrical Power (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

C. Prepare for the Test

SUBTASK 32-35-00-480-005

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-35-00-860-020

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

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SUBTASK 32-35-00-860-021

(3) Make sure the control lever for the landing gear is in the DN position.

D. Procedure

SUBTASK 32-35-00-860-022

(1) Put the control lever in the OFF position.

SUBTASK 32-35-00-700-004

(2) Pull the manual extension handle for the nose gear.

(a) Make sure the full travel of the T handle is at least 21.0 inches (533.4 millimeters) (Detail C).

SUBTASK 32-35-00-700-005

(3) Release the manual extension handle for the nose gear.

(a) Make sure the handle returns to the stowed position without hesitation or binding.

SUBTASK 32-35-00-480-006

(4) Attach a spring scale to the manual extension T handle for the nose gear.

SUBTASK 32-35-00-730-005

(5) Pull the manual extension handle for the nose gear.

(a) Make sure the load to start the T handle from the seat has a minimum of 3.0 pounds (13.3 newtons) and a maximum of 7.0 pounds (31.2 newtons)

(b) Make sure the load during the full travel of the T handle is not more than 15.0 pounds (66.7 newtons).

NOTE: The T handle must be pulled upward and forward when you measure the load. This will simulate a person seated in the First Officer's seat. Do not pull the handle straight up.

(c) Make sure the manual extension mechanism operates freely.

SUBTASK 32-35-00-860-023

(6) Move the control lever for the landing gear to the DN position.

SUBTASK 32-35-00-080-004

(7) Remove the spring scale from the manual extension T handle for the nose gear.

SUBTASK 32-35-00-860-037

(8) Pull the manual extension handle for the nose gear.

NOTE: One person needs to be stationed in the nose landing gear wheel well.

(9) Release the manual extension handle for the nose gear.

NOTE: Observe the manual extension mechanism to make sure the release roller correctly resets to its retracted position.

(a) Make sure the handle returns to the stowed position without hesitation or binding.

SUBTASK 32-35-00-860-038

(10) Close the access door to the manual extension T handles.

E. Put the Airplane Back to its Usual Condition.

SUBTASK 32-35-00-860-024

(1) For Hydraulic System A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

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SUBTASK 32-35-00-860-025

(2) If electrical power is not necessary, do this task: Remove Electrical Power, TASK 24-22-00-860-812.

——————— END OF TASK ———————

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NOSE GEAR MANUAL EXTENSION RELEASE MECHANISM - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the manual extension release mechanism (referred to as the release assy [7] for the nose landing gear

(2) An installation of the manual extension release mechanism for the nose landing gear.

TASK 32-35-11-000-801

2. Nose Gear Manual Extension Release Mechanism Removal

(Figure 401)

A. References

Reference	Title
20-10-04-000-801	Control Cable Air Seal Removal (P/B 401)
53-21-00-000-801	Passenger Cabin Floor Panel Removal (P/B 401)

B. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

C. Manual Extension Release Mechanism Removal

SUBTASK 32-35-11-010-001

(1) Remove the cabin floor panel to get access to the turnbuckle, do this task: Passenger Cabin Floor Panel Removal, TASK 53-21-00-000-801.

SUBTASK 32-35-11-010-002

(2) Disconnect the MNGEA cable assembly [2] at the turnbuckle [1].

SUBTASK 32-35-11-020-001

(3) Remove the nut [5], washer [4], bolt [3]. This will permit you to move the pulley when you remove the MNGEA cable assembly [2] that is attached to the release assy [7].

SUBTASK 32-35-11-020-002

(4) Remove the nuts [10], washers [9], and bolts [8, 11] which attach the release assy [7] to the wheel well ceiling.

SUBTASK 32-35-11-020-003

(5) Remove the release assy [7] from the wheel well ceiling.

SUBTASK 32-35-11-020-004

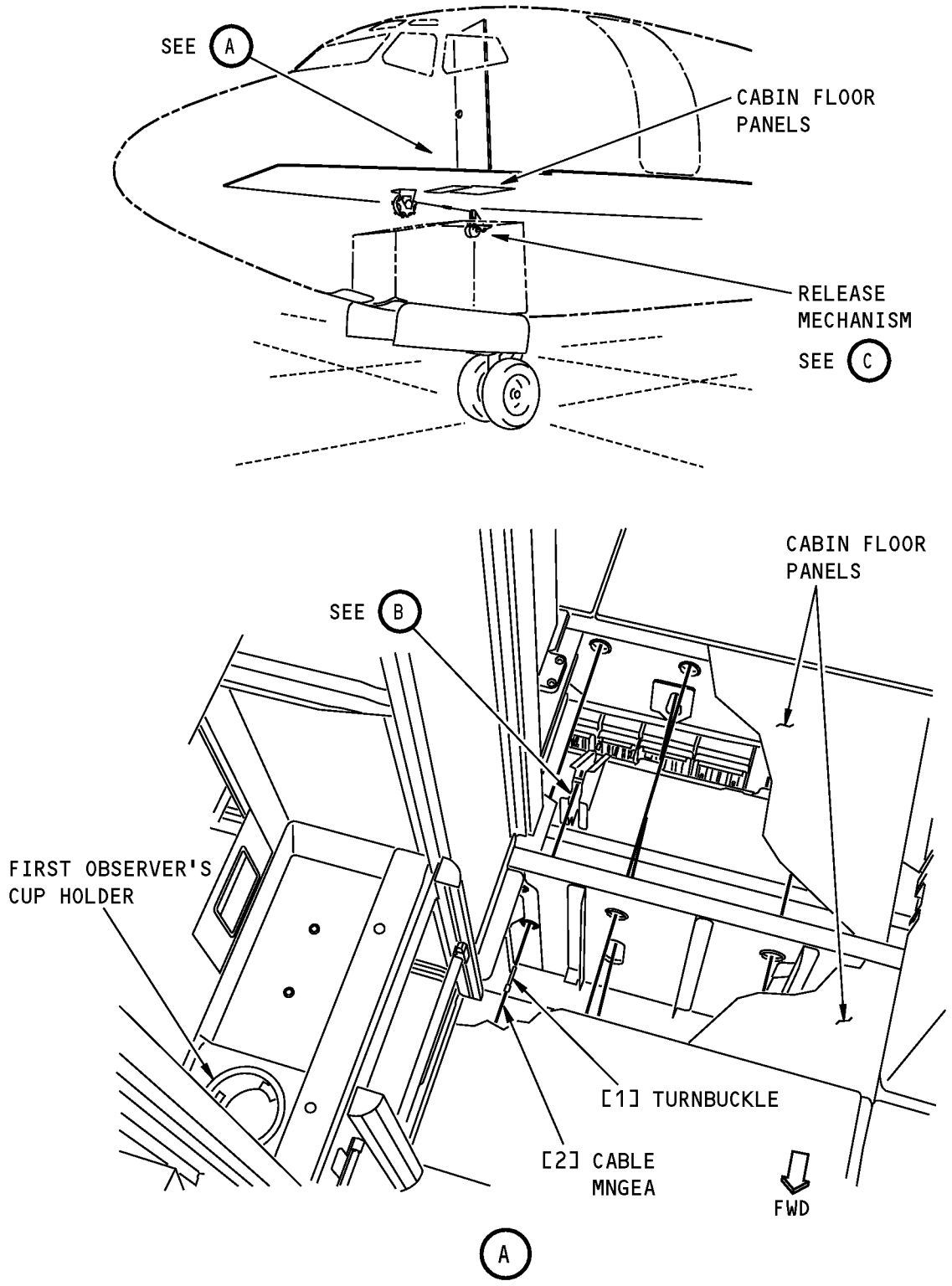
(6) Remove the seal [6] on the ceiling of the nose wheel well, do this task: Control Cable Air Seal Removal, TASK 20-10-04-000-801.

SUBTASK 32-35-11-020-005

(7) Remove the release assy [7], with the cable MNGEA, from the airplane.

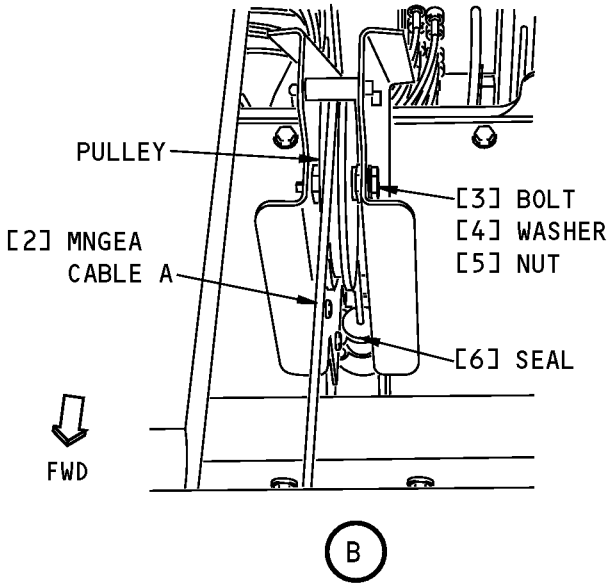
——————— END OF TASK ———————

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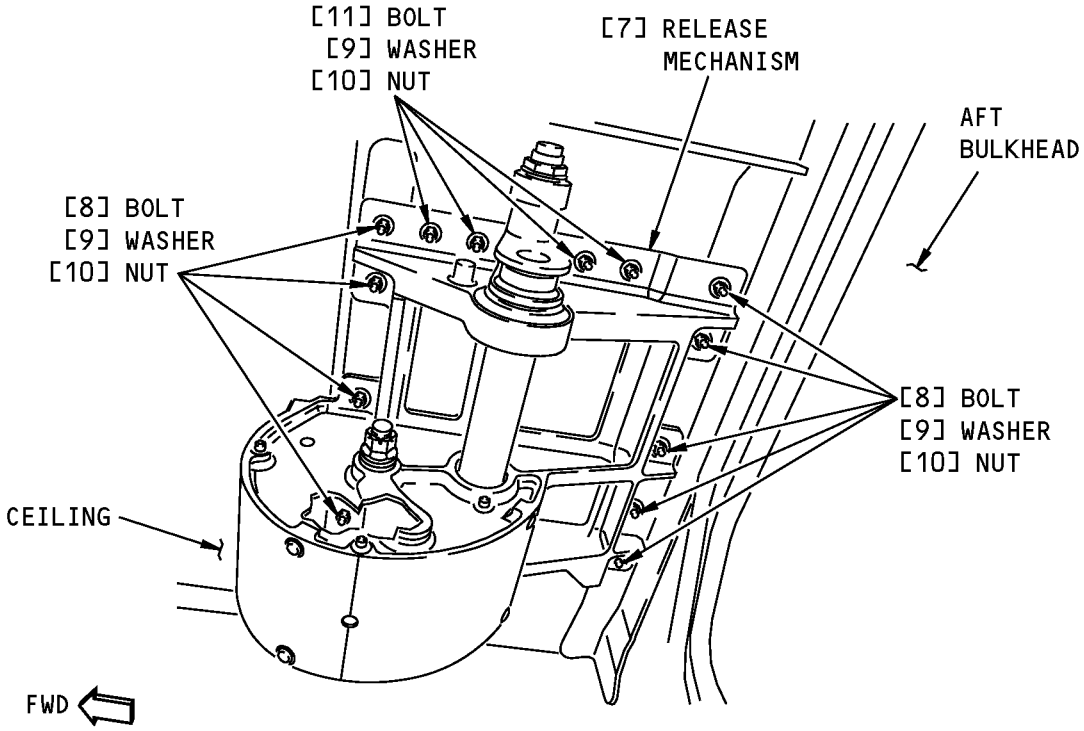


Nose Landing Gear Manual Extension Release Mechanism Installation
Figure 401 (Sheet 1 of 2)/32-35-11-990-801

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B



(VIEW FROM NOSE LANDING GEAR WHEEL WHEEL)

C

Nose Landing Gear Manual Extension Release Mechanism Installation
Figure 401 (Sheet 2 of 2)/32-35-11-990-801

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TASK 32-35-11-400-801

3. Nose Gear Manual Extension Release Mechanism Installation

(Figure 401)

A. References

Reference	Title
20-10-04-400-801	Control Cable Air Seal Installation (P/B 401)
20-10-91-400-801	Control Cables Installation (P/B 401)
32-35-00-730-801	Nose Gear Manual Extension System Test - Airplane on Jacks (P/B 501)
32-35-00-820-801	Adjustment of the Manual Extension System for the Nose Gear (P/B 501)
53-21-00-400-801	Passenger Cabin Floor Panel Installation (P/B 401)

B. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00174	Compound - Corrosion Preventive, Solvent Cutback, Cold Application	MIL-PRF-16173 (Supersedes MIL-C-16173)
C00528	Compound - Corrosion Preventive, Petroleum Hot Application (Soft Film)	MIL-C-11796, Class III

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Cable assembly	32-35-11-01-155	HAP ALL
6	Seal	32-35-11-01-040	HAP ALL

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

E. Manual Extension Release Mechanism Installation

SUBTASK 32-35-11-100-001

(1) Clean the surface where the release assy [7] will contact the ceiling of the nose wheel well.

SUBTASK 32-35-11-600-001

(2) Apply sealant, A00247 to the entire top surface of the release assy [7] to fay seal where it will contact the ceiling of the nose wheel well.

SUBTASK 32-35-11-420-001

(3) Install the MNGEA cable assembly [2], do this task: Control Cables Installation, TASK 20-10-91-400-801.

NOTE: The turnbuckle [1] is located at approximately body station 270.

(a) Apply a thin layer of compound, C00174 or compound, C00528 to the threads on the internal and external surfaces of the mating adjustable parts on the turnbuckle [1].

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SUBTASK 32-35-11-420-002

(4) Install the bolt [3], washer [4], and nut [5] to attach the pulley, with the MNGEA cable assembly [2] installed, to the bracket.

SUBTASK 32-35-11-420-003

(5) Install the seal [6] on the ceiling of the nose wheel well, do this task: Control Cable Air Seal Installation, TASK 20-10-04-400-801.

SUBTASK 32-35-11-420-004

(6) Put the release assy [7] in its position on the wheel well ceiling.

SUBTASK 32-35-11-600-002

(7) Apply sealant, A00247 to the bolts [8, 11], washers [9], and nuts [10].

SUBTASK 32-35-11-420-005

(8) Install the bolts [8, 11], washers [9], and nuts [10] to attach the release assy [7] to the wheel well ceiling.

SUBTASK 32-35-11-420-006

(9) Connect the MNGEA cable assembly [2] at the turnbuckle [1].

SUBTASK 32-35-11-410-001

(10) Do this task: Passenger Cabin Floor Panel Installation, TASK 53-21-00-400-801.

SUBTASK 32-35-11-820-001

(11) Do the adjustment of the manual extension system, do this task: Adjustment of the Manual Extension System for the Nose Gear, TASK 32-35-00-820-801.

SUBTASK 32-35-11-710-001

(12) Do a test on the manual extension system, do this task: Nose Gear Manual Extension System Test - Airplane on Jacks, TASK 32-35-00-730-801.

——————— END OF TASK ———————

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NOSE GEAR MANUAL EXTENSION SPRING - REMOVAL/INSTALLATION

1. General

A. This procedure these tasks:

(1) A removal of the nose landing gear manual extension spring.

(2) An installation of the nose landing gear manual extension spring.

TASK 32-35-20-000-801

2. Nose Gear Manual Extension Spring Removal

Figure 401

A. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

B. Manual Extension Spring Removal

SUBTASK 32-35-20-010-001

(1) Remove screws [3] and cover [2] from the housing assembly [1].

SUBTASK 32-35-20-000-001

(2) Remove cotter pins [4], the washers [5], and the guard pins [6] from the housing assembly [1].

SUBTASK 32-35-20-000-002

(3) Pull follower arm [9] away from the cam assembly [8] to remove the spring [7] preload.

SUBTASK 32-35-20-000-003

(4) Remove cotter pin [10], the pin [11], the washer [12], and the spacer [13].

SUBTASK 32-35-20-000-004

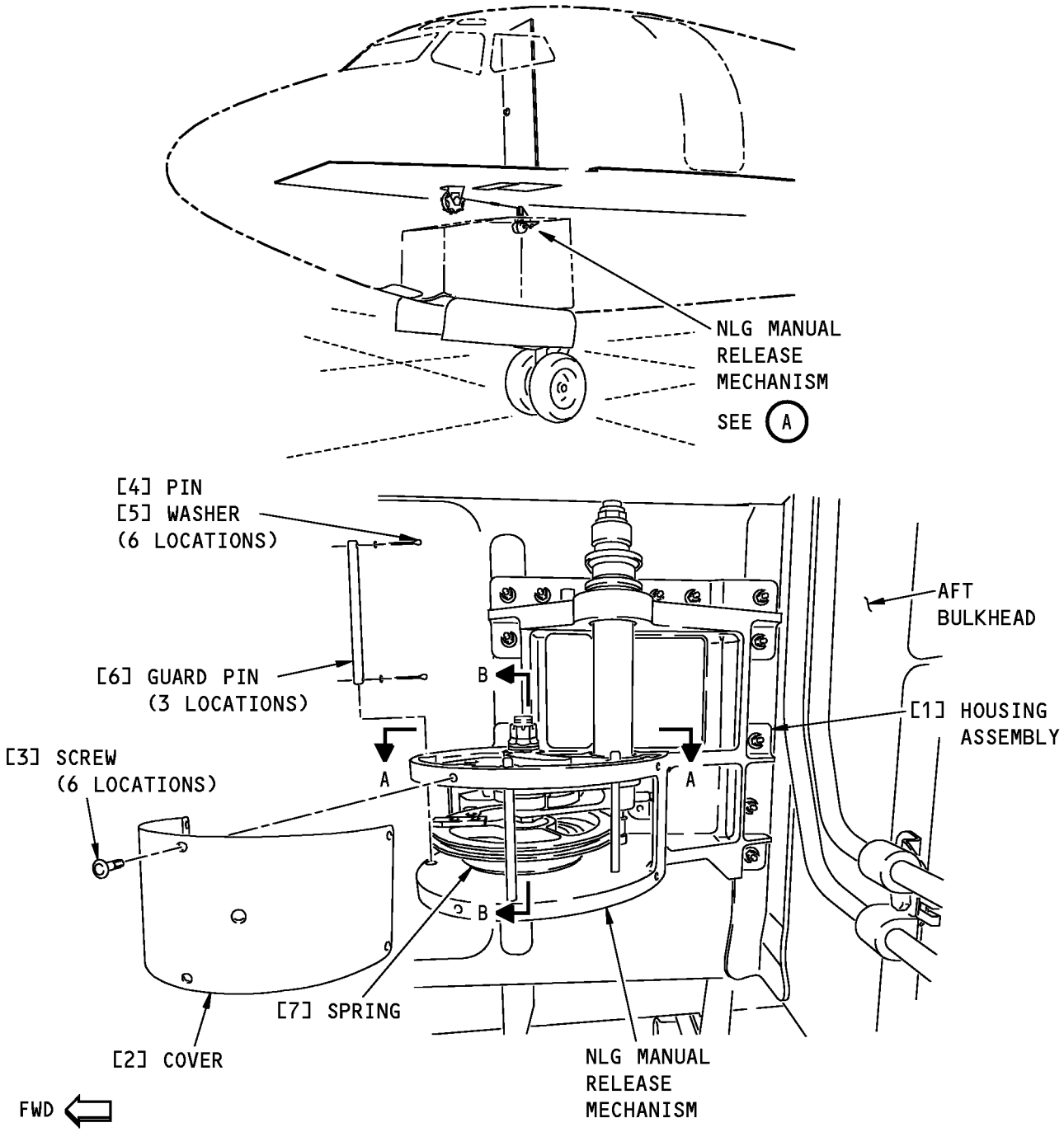
(5) Remove the cotter pin [14], the nut [15], the washer, [16], and the bolt [17].

SUBTASK 32-35-20-020-001

(6) Remove the cam assembly [8] with the spring [7].

———————— END OF TASK ————————

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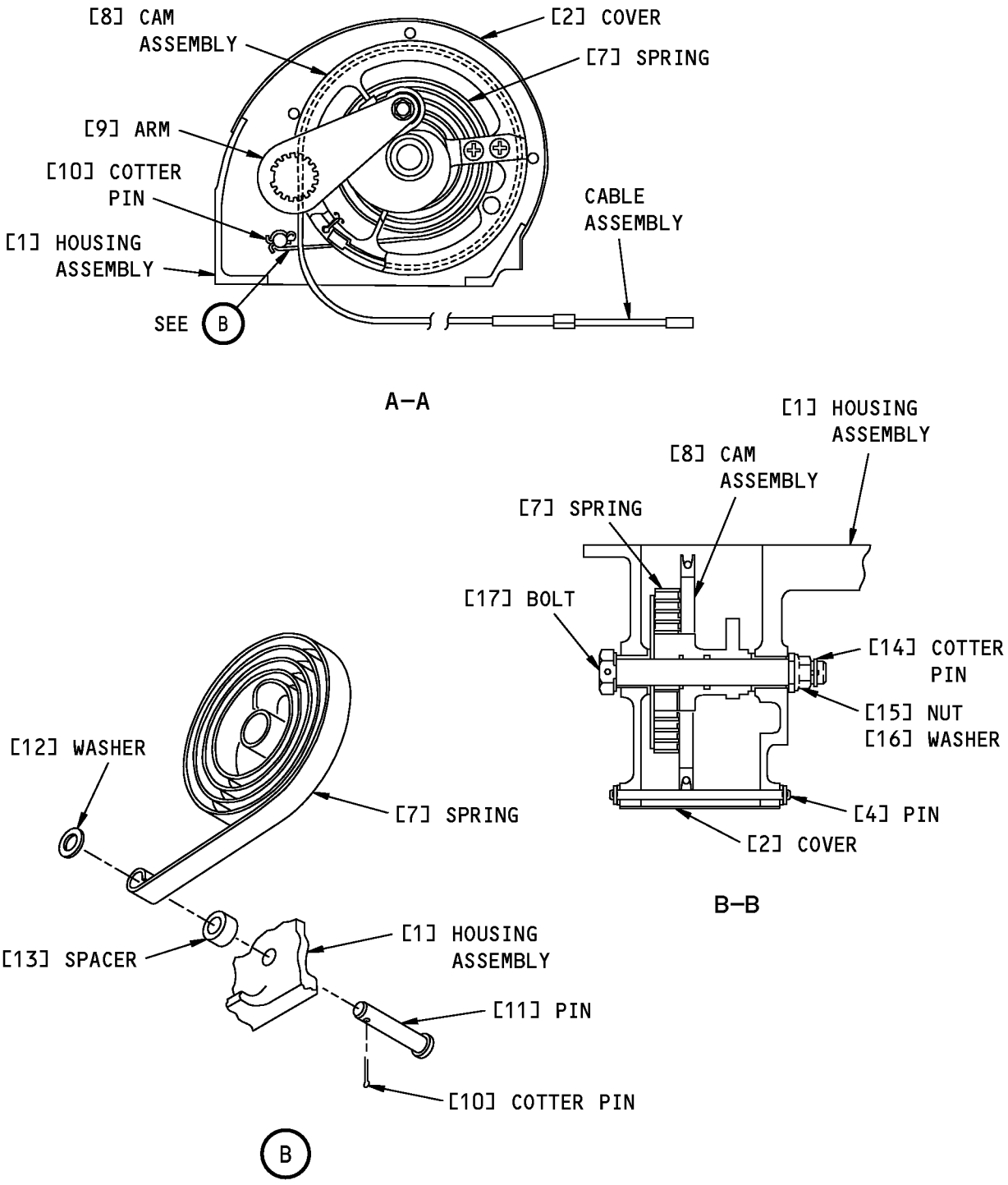


NLG MANUAL RELEASE MECHANISM
(VIEW IN THE UP DIRECTION)

A

Nose Gear Manual Extension Spring - Removal/Installation
Figure 401 (Sheet 1 of 2)/32-35-20-990-801

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Nose Gear Manual Extension Spring - Removal/Installation
Figure 401 (Sheet 2 of 2)/32-35-20-990-801

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TASK 32-35-20-400-801

3. Nose Gear Manual Extension Spring Installation

Figure 401

A. References

Reference	Title
32-35-00 P/B 501	NOSE GEAR MANUAL EXTENSION SYSTEM - ADJUSTMENT/TEST

B. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

C. Manual Extension Spring Installation

SUBTASK 32-35-20-420-001

(1) Install the cam assembly [8] with the spring [7] into the housing assembly [1].

SUBTASK 32-35-20-400-001

(2) Install the bolt [17], the washer [16], the nut [15] and the cotter pin [14].

SUBTASK 32-35-20-400-002

(3) Install one end of the spring [7] onto the housing assembly [1] with the pin [11], the spacer [13, the washer [12] and the cotter pin [10].

SUBTASK 32-35-20-400-003

(4) Install the guard pins [6], the washers [5], and the cotter pins [4] onto the housing assembly [1].

SUBTASK 32-35-20-410-001

(5) Install the cover [2] with the screws [3] onto the housing assembly [1].

SUBTASK 32-35-20-700-001

(6) Do a test of the nose landing gear manual release, do this task:NOSE GEAR MANUAL EXTENSION SYSTEM - ADJUSTMENT/TEST, PAGEBLOCK 32-35-00/501.

——————— END OF TASK ———————

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NOSE GEAR MANUAL EXTENSION SYSTEM CABLES - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the manual extension system cables for the nose landing gear

(2) An installation of the manual extension system cables for the nose landing gear.

TASK 32-35-21-000-801

2. Nose Gear Manual Extension System Cables Removal

(Figure 401)

A. References

Reference	Title
20-10-04-000-801	Control Cable Air Seal Removal (P/B 401)
20-10-91-000-801	Control Cables Removal (P/B 401)
53-21-00-000-801	Passenger Cabin Floor Panel Removal (P/B 401)

B. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
220	Subzone - Passenger Compartment - Body Station 259.50 to 360.00

C. Access Panels

Number	Name/Location
114AC	Fwd Nose Wheel Well Upper Access Panel

D. Manual Extension Cable Removal

SUBTASK 32-35-21-010-001

(1) Remove the cabin floor panel [1], to get access to the pulley on the nose landing gear release mechanism. To do this, do this task: Passenger Cabin Floor Panel Removal, TASK 53-21-00-000-801.

SUBTASK 32-35-21-010-005

(2) Remove the flight deck floor panel [18] to get access to the turnbuckle [2].

SUBTASK 32-35-21-020-007

(3) Disconnect the MNGEA cable assembly [16] and the MNGEA cable assembly [3] at the turnbuckle [2].

SUBTASK 32-35-21-020-008

(4) Remove the nut [6], washer [5], and bolt [4] that attaches the pulley for the MNGEA cable assembly [3] to the bracket.

SUBTASK 32-35-21-010-002

(5) Remove this access panel from the ceiling of the nose wheel well:

Number	Name/Location
114AC	Fwd Nose Wheel Well Upper Access Panel

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SUBTASK 32-35-21-020-001

(6) Remove the pin [15] to disconnect the nose gear manual extension handle cable from the MNGEA control drum on the manual extension control mechanism.

SUBTASK 32-35-21-020-002

(7) Open the manual extension access door and remove the handle assembly [14].

NOTE: The handle assy includes the nose gear manual extension handle and cable.

SUBTASK 32-35-21-020-003

(8) Remove the cable retainer bolt [17] and disconnect the cable assembly [16] from the MNGEA control drum on the manual extension control mechanism.

SUBTASK 32-35-21-010-003

(9) Remove the screws [10] and the cover [9] from the NLG manual release mechanism.

SUBTASK 32-35-21-010-004

(10) Remove the pins [12], washers [13], and guide pins [11] from the NLG manual release mechanism to give clearance for cable removal.

SUBTASK 32-35-21-020-005

(11) Remove the pressure seal [7] on the ceiling of the nose wheel well. To do this, do this task: Control Cable Air Seal Removal, TASK 20-10-04-000-801.

SUBTASK 32-35-21-020-006

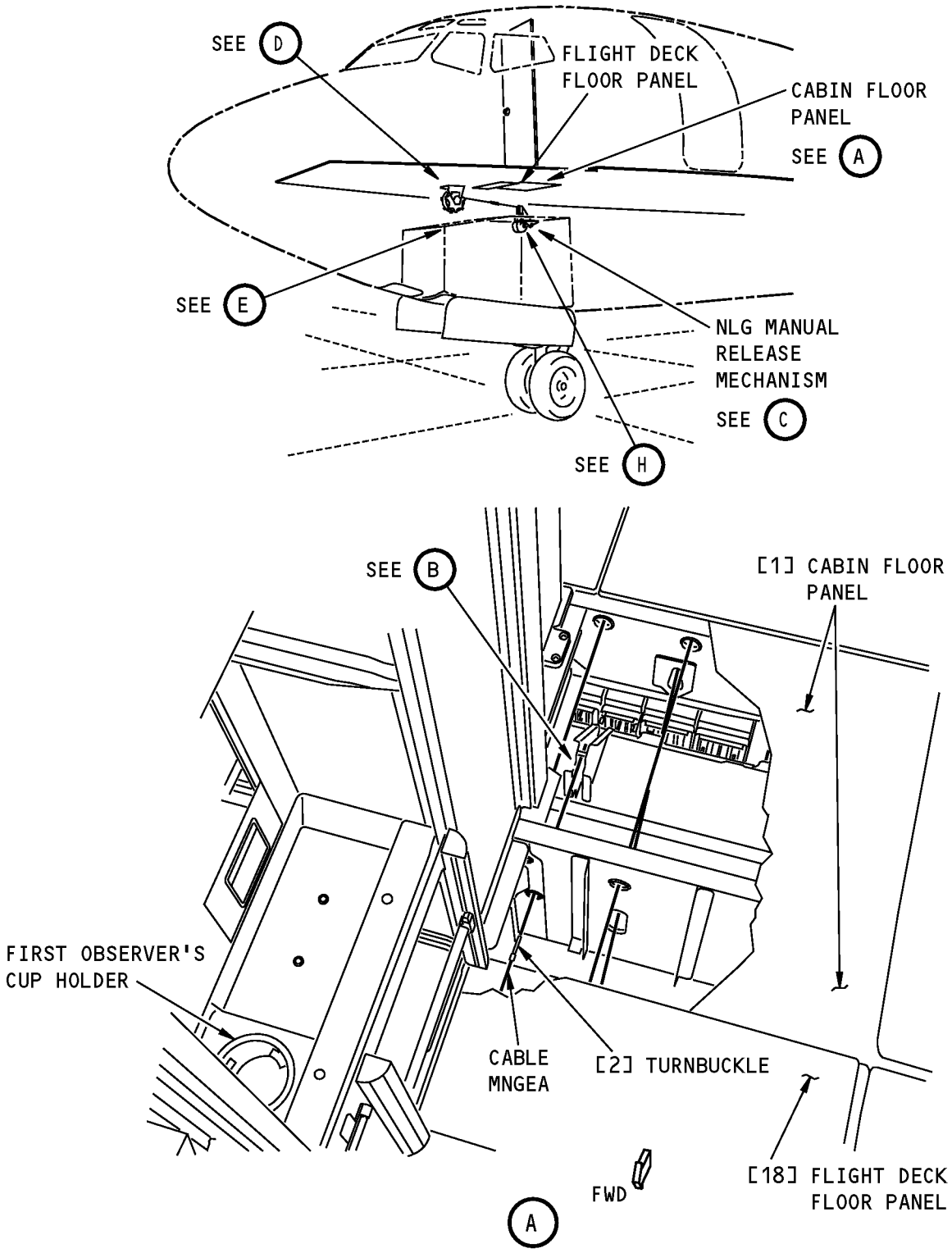
(12) Remove the pin [8] and disconnect the MNGEA cable assembly [3] from the quadrant on the NLG manual release mechanism.

SUBTASK 32-35-21-000-001

(13) Remove the MNGEA cable assembly [16], do this task: Control Cables Removal, TASK 20-10-91-000-801.

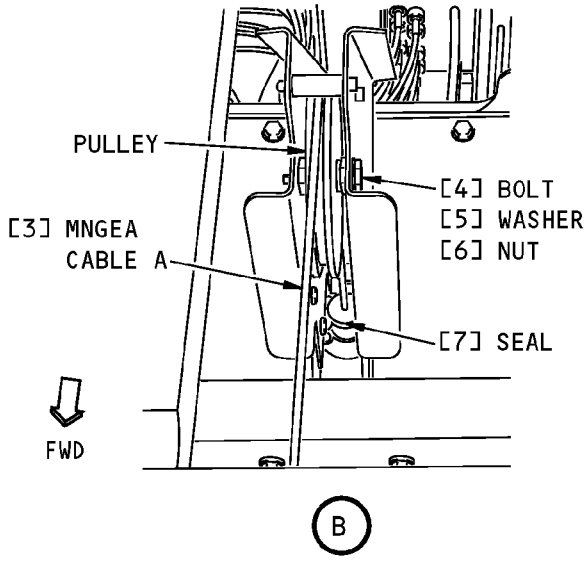
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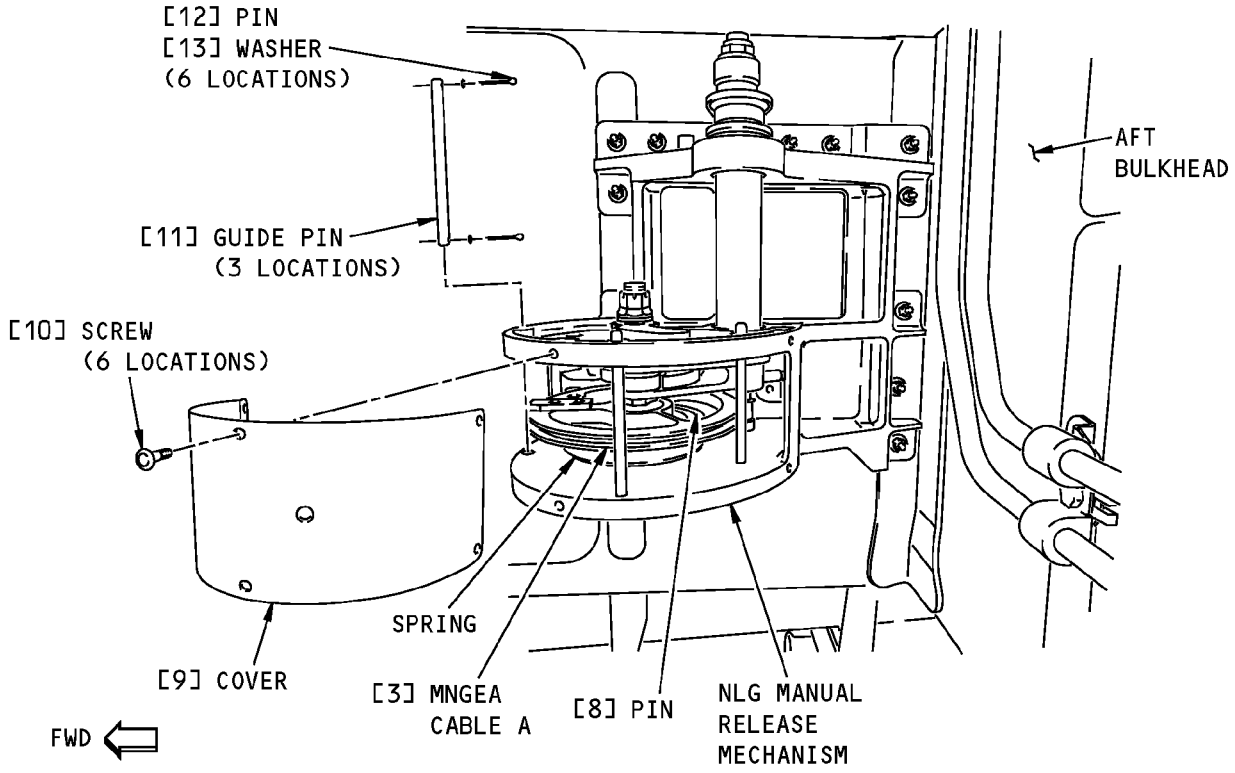


Nose Gear Manual Extension System Cable Installation
Figure 401 (Sheet 1 of 6)/32-35-21-990-801

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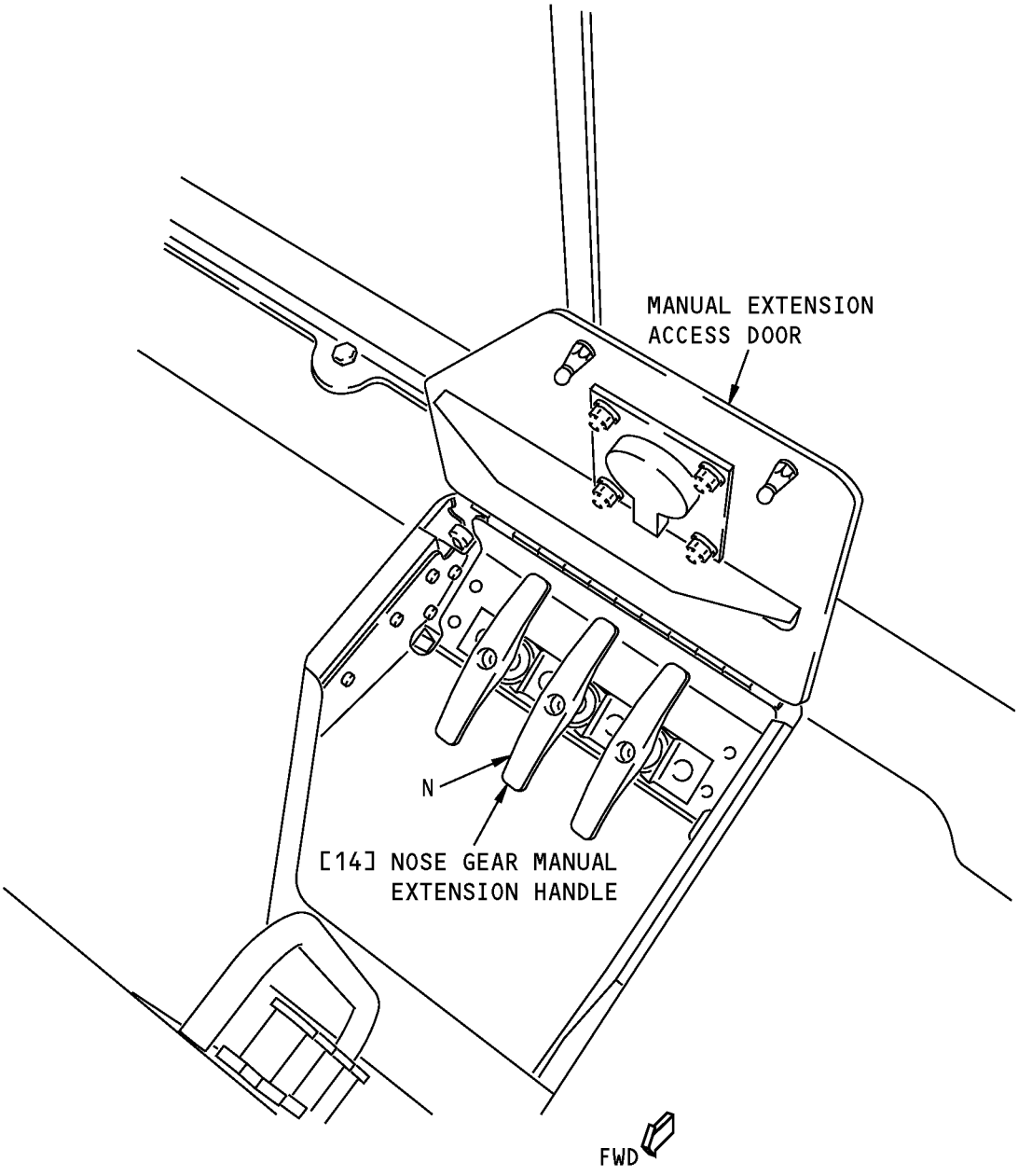


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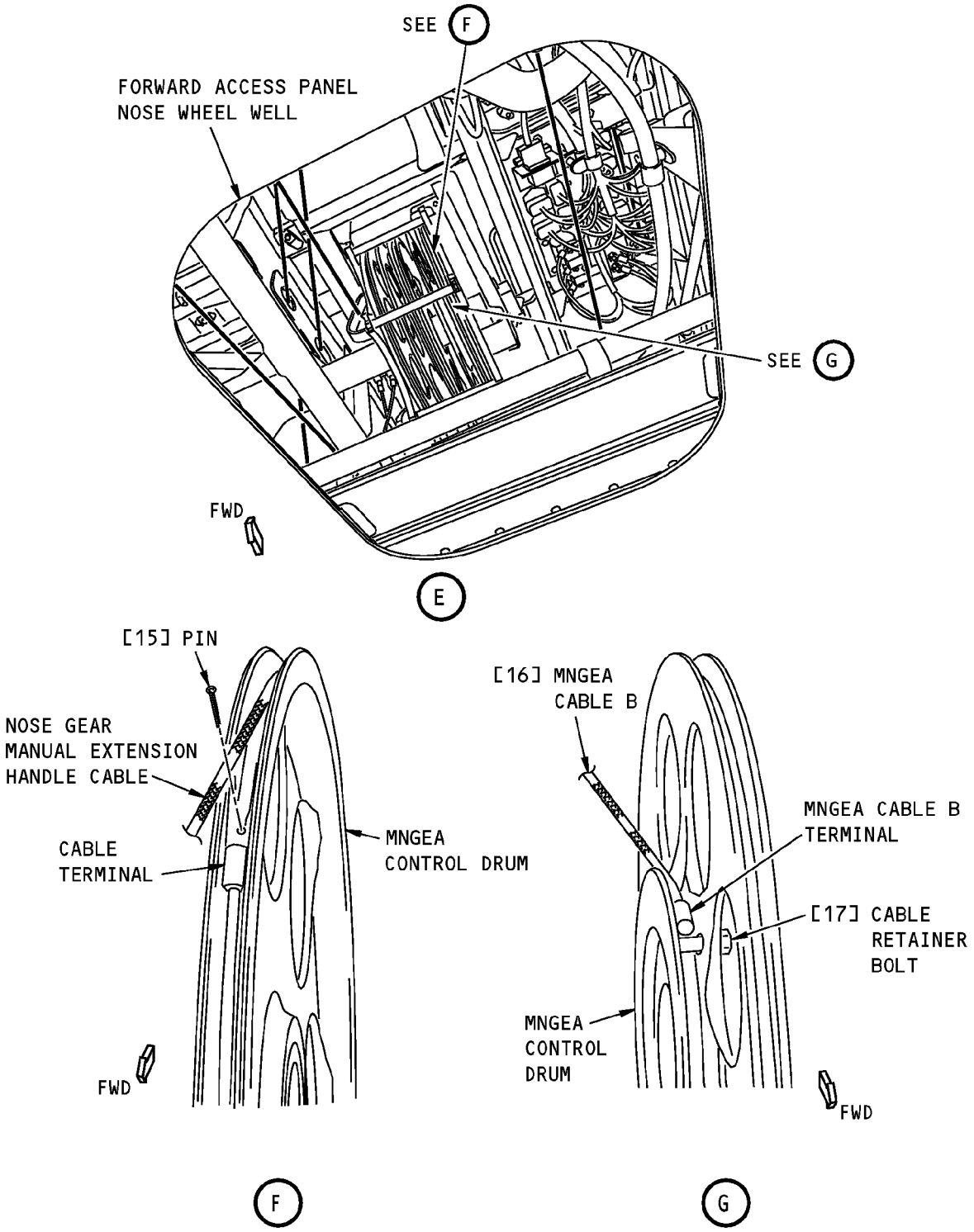
Nose Gear Manual Extension System Cable Installation
Figure 401 (Sheet 2 of 6)/32-35-21-990-801

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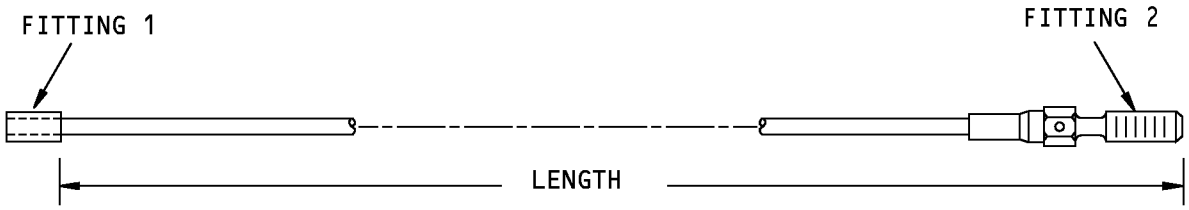
Nose Gear Manual Extension System Cable Installation
Figure 401 (Sheet 3 of 6)/32-35-21-990-801

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Nose Gear Manual Extension System Cable Installation
Figure 401 (Sheet 4 of 6)/32-35-21-990-801

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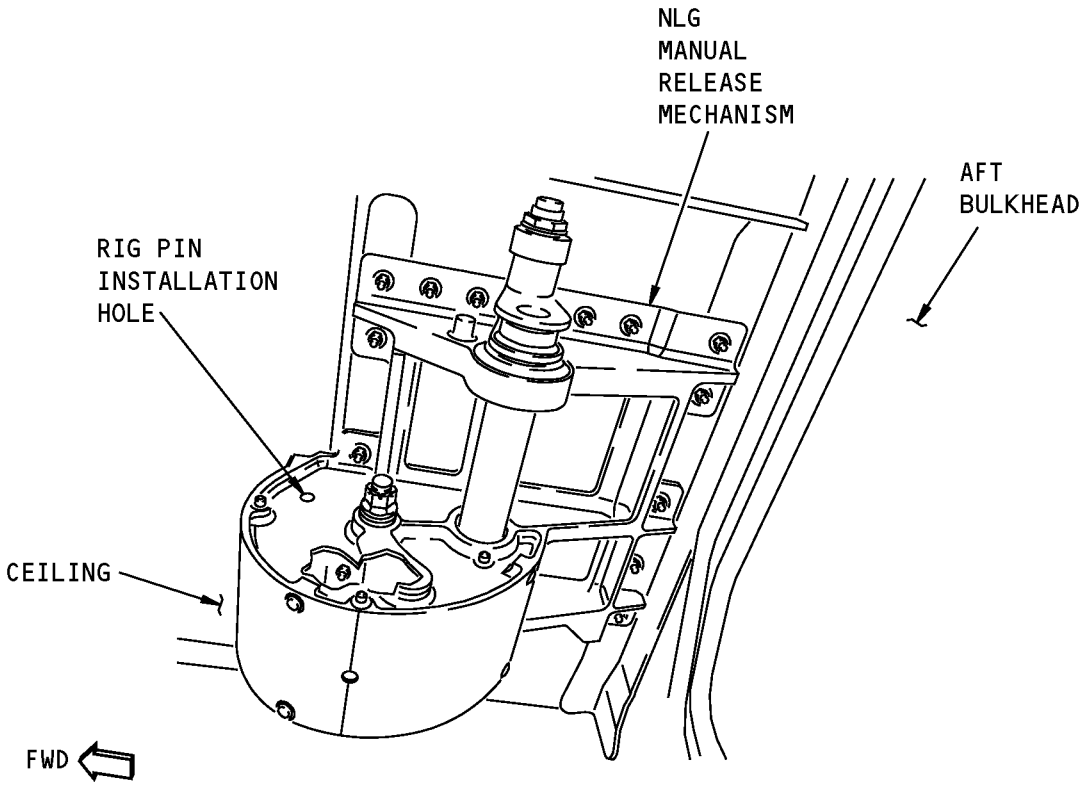
CABLE NAME	FUNCTION	NO. REQ	LENGTH (INCHES)	CABLE SIZE	FITTINGS	
					1	2
A	MNGEA	1	38.2	3/32 7x7	BACT14A3	MS21260L3(RH)
B	MNGEA	1	21.7	3/32 7x7	BACT14A3	MS21260L3(LH)

MATERIAL: CABLE - CORROSION RESISTANT STEEL PER
BMS 7-265, TYPE I, COMPOSITION B

G05523 S0006575414_V2

Nose Gear Manual Extension System Cable Installation
Figure 401 (Sheet 5 of 6)/32-35-21-990-801

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Nose Gear Manual Extension System Cable Installation
Figure 401 (Sheet 6 of 6)/32-35-21-990-801

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TASK 32-35-21-400-801

3. Nose Gear Manual Extension System Cables Installation

(Figure 401)

A. References

Reference	Title
20-10-04-400-801	Control Cable Air Seal Installation (P/B 401)
20-10-91-400-801	Control Cables Installation (P/B 401)
32-35-00-730-801	Nose Gear Manual Extension System Test - Airplane on Jacks (P/B 501)
32-35-00-820-801	Adjustment of the Manual Extension System for the Nose Gear (P/B 501)
53-21-00-400-801	Passenger Cabin Floor Panel Installation (P/B 401)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1553	Tensiometer - Cable (20 - 200 LB) (Part #: 102-03110, Supplier: 21844, A/P Effectivity: 737-ALL) (Part #: ACM-200, Supplier: 13331, A/P Effectivity: 737-ALL) (Part #: T60-1001-C8-1A, Supplier: 0N8U4, A/P Effectivity: 737-ALL)
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
C00174	Compound - Corrosion Preventive, Solvent Cutback, Cold Application	MIL-PRF-16173 (Supersedes MIL-C-16173)
C00528	Compound - Corrosion Preventive, Petroleum Hot Application (Soft Film)	MIL-C-11796, Class III

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	Cable assembly	32-35-11-01-155	HAP ALL
8	Pin	32-35-11-01-150	HAP ALL
12	Pin	32-35-11-01-170	HAP ALL
15	Pin	32-34-11-03-075	HAP 101-999
		32-34-11-04-005	HAP 001-013, 015-026, 028-054
16	Cable assembly	32-34-11-03-090	HAP 101-999
		32-34-11-04-090	HAP 001-013, 015-026, 028-054

E. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right

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(Continued)

Zone	Area
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
220	Subzone - Passenger Compartment - Body Station 259.50 to 360.00

F. Access Panels

Number	Name/Location
114AC	Fwd Nose Wheel Well Upper Access Panel

G. Manual Extension Cable Installation

SUBTASK 32-35-21-420-001

(1) Install the MNGEA cable assembly [16], do this task: Control Cables Installation, TASK 20-10-91-400-801.

NOTE: The turnbuckle [2] is located at approximately body station 270.

SUBTASK 32-35-21-420-009

(2) Apply a thin layer of compound, C00174 or compound, C00528 to the threads on the internal and external surfaces of the mating adjustable parts on the turnbuckle [2].

SUBTASK 32-35-21-420-002

(3) Install the bolt [4], washer [5], and nut [6] to attach the pulley, with the MNGEA cable assembly [3] installed, to the bracket.

SUBTASK 32-35-21-480-001

(4) Install the rig pin LGEA1 from rig pin kit, SPL-1585 in the NLG manual release mechanism.

SUBTASK 32-35-21-420-003

(5) Install the MNGEA cable assembly [3] on the quadrant on the NLG manual release mechanism.

(a) Install the pin [8] to attach the cable to the quadrant.

SUBTASK 32-35-21-420-004

(6) Install the pressure seal [7] on the ceiling of the nose wheel well, do this task: Control Cable Air Seal Installation, TASK 20-10-04-400-801.

SUBTASK 32-35-21-410-001

(7) Install the guide pins [11], washers [13], and pins [12] on the NLG manual release mechanism.

SUBTASK 32-35-21-410-002

(8) Install the screws [10] and the cover [9] on the NLG manual release mechanism.

SUBTASK 32-35-21-420-006

(9) Attach the MNGEA cable assembly [16] on the control drum on the control mechanism.

(a) Install the cable retainer bolt [17] that connects the MNGEA cable assembly [16] to the control drum on the manual extension control mechanism.

SUBTASK 32-35-21-420-007

(10) Put the terminal end of the handle assembly [14] through the hole in the V-slot on the control drum.

(a) Attach the nose gear manual extension handle cable on the control drum of the control mechanism and install the pin [15].

(b) Bend one end of the pin [15] into the drum.

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SUBTASK 32-35-21-420-008

(11) Connect the MNGEA cable assembly [3] and the MNGEA cable assembly [16] at the turnbuckle [2].

SUBTASK 32-35-21-820-001

(12) Use the 20 - 200 lb cable tensiometer, COM-1553 to adjust the tension in the MNGEA cable to 100 pounds (444.8 newtons). Make sure there are the equal threads of the cable threaded ends engaged in the turnbuckle. Hold this tension for at least 3 minutes.

SUBTASK 32-35-21-820-002

(13) Reduce the tension in the MNGEA cable until you can easily remove the rig pin LGEA1 from rig pin kit, SPL-1585 from the NLG manual release mechanism.

SUBTASK 32-35-21-080-001

(14) Remove the rig pin LGEA1 from rig pin kit, SPL-1585 from the NLG manual release mechanism.

H. Put the Airplane Back to its Usual Condition

SUBTASK 32-35-21-820-003

(1) Do the adjustment of the manual extension system for the nose landing gear, do this task: Adjustment of the Manual Extension System for the Nose Gear, TASK 32-35-00-820-801.

SUBTASK 32-35-21-710-001

(2) Do a test on the manual extension system for the nose landing gear, do this task: Nose Gear Manual Extension System Test - Airplane on Jacks, TASK 32-35-00-730-801.

SUBTASK 32-35-21-410-004

(3) Close this access panel:

Number	Name/Location
114AC	Fwd Nose Wheel Well Upper Access Panel

SUBTASK 32-35-21-410-005

(4) Install the flight deck floor panel [18].

SUBTASK 32-35-21-410-003

(5) Install the cabin floor panel [1] at approximately body station 270, do this task: Passenger Cabin Floor Panel Installation, TASK 53-21-00-400-801.

———————— END OF TASK ————————

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HYDRAULIC BRAKE SYSTEM - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

(1) Bleed the brake system upstream of the antiskid valves.

NOTE: This will not remove the air that may be in the system downstream of the antiskid valves.

(2) Bleed the normal (System B) hydraulic brake system.

(3) Bleed the alternate (System A) hydraulic brake system.

(4) A test of the normal hydraulic system brake fuses (System B).

(5) A test of the alternate hydraulic system brake fuses (System A).

B. When you bleed the hydraulic systems, the hydraulic fuses can set. You can reset the fuses one of these two ways:

(1) You can use the fuse bypass lever on each fuse to reset the fuse.

(2) Or, you can release and reset the parking brake to reset the fuse.

TASK 32-41-00-870-801

2. Hydraulic Brake System - Bleeding Upstream of the Antiskid Valves

A. General

(1) This task has instructions to bleed the brake system upstream of the antiskid valves. When the system is bled, the air in the brake lines or a component of the brake system is sent through the brake metering valves to the hydraulic reservoir by the return lines.

B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Bleed the Hydraulic Brake System Upstream of the Antiskid Valves

SUBTASK 32-41-00-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-00-480-002

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

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SUBTASK 32-41-00-790-001

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(3) For the normal (System B) hydraulic system, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-41-00-480-003

(4) Make sure the tires have chocks installed around them.

SUBTASK 32-41-00-860-001

(5) Release the parking brake.

SUBTASK 32-41-00-840-001

(6) Do the steps that follow to bleed the normal brake system through the normal brake metering valves to return:

(a) Push the brake pedals slowly through approximately one-half of their total travel and slowly release them.

NOTE: Repeat this step several times.

(b) Push both of the brake pedals fully to the stops and hold them there for 2 to 4 seconds and then release them.

NOTE: Repeat this step 5 more times.

(c) Make sure the brakes apply when you push on the brakes.

(d) Push the brake pedals fully to the stops and set the parking brake.

SUBTASK 32-41-00-860-002

(7) For the normal (System B) hydraulic system, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-41-00-790-002

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(8) For the alternate (System A) hydraulic system, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-41-00-840-002

(9) Do the steps that follow to bleed the alternate brake system through the alternate brake metering valves to return:

(a) Push the brake pedals slowly through approximately one-half of their total travel and slowly release them.

NOTE: Repeat this step several times.

(b) Push both of the brake pedals fully to the stops and hold them there for 2 to 4 seconds and then release them.

NOTE: Repeat this step 5 more times.

(c) Make sure the brakes apply when you push on the brakes.

(d) Push the brake pedals fully to the stops and set the parking brake.

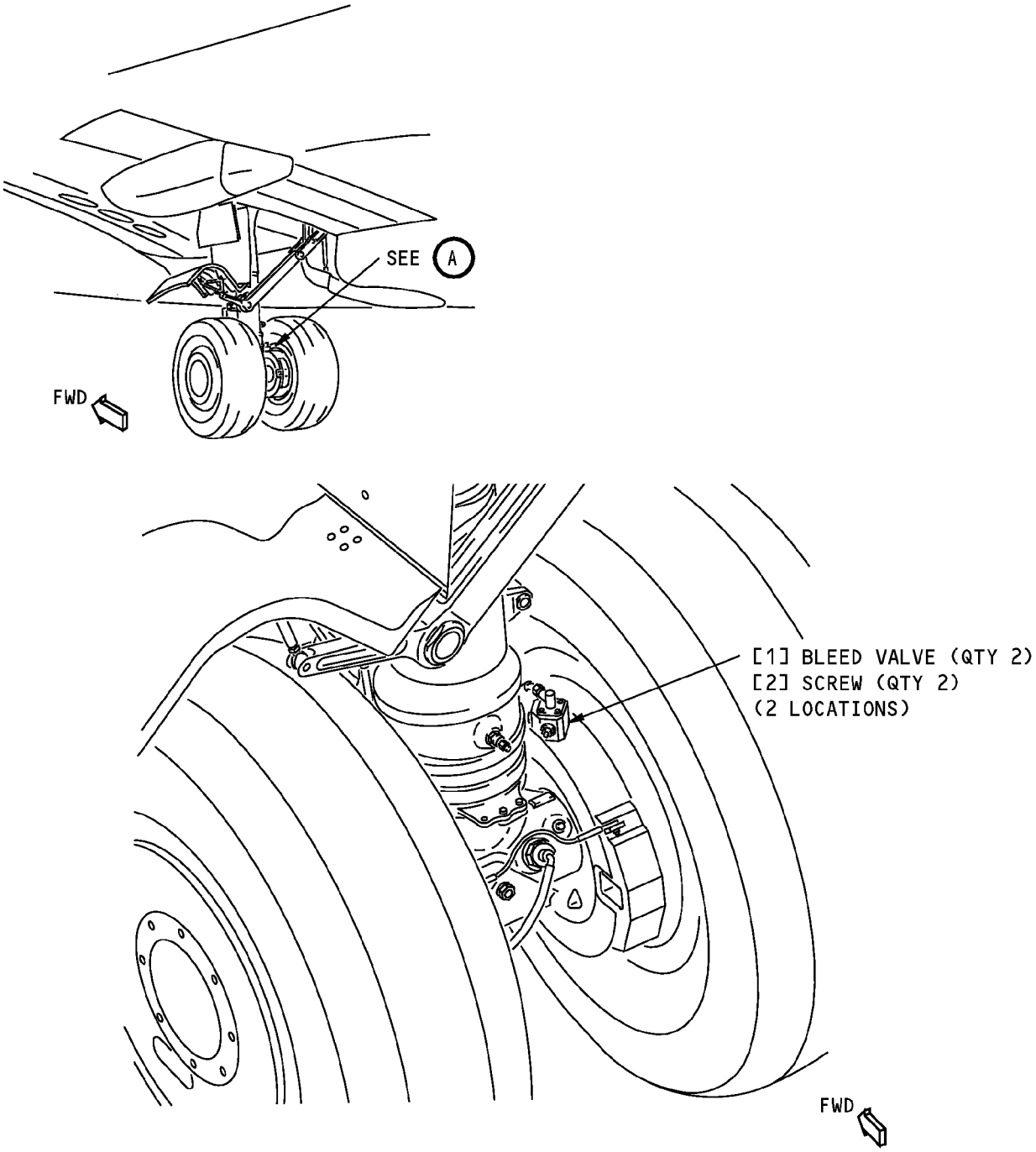
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SUBTASK 32-41-00-860-003

(10) For the alternate (System A) hydraulic system, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

——————— END OF TASK ———————

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Brake Hydro-Mechanical Control System - Bleeding
Figure 201/32-41-00-990-801

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TASK 32-41-00-870-802

3. Normal (System B) Hydraulic Brake System - Bleeding

(Figure 201, Figure 202)

A. References

Reference	Title
12-12-00-610-801	Hydraulic Reservoir Servicing (P/B 301)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

Reference	Description
STD-1055	Container - Oil Resistant, 5 Gallon (19 Liters)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Procedure

SUBTASK 32-41-00-480-004

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-00-480-005

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-41-00-860-004

(3) Release the parking brake.

E. Normal (System B) Hydraulic Brake System Bleeding

SUBTASK 32-41-00-710-001

(1) To prepare to bleed the normal (System B) hydraulic brake system, do these steps:

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(a) Use the hydraulic service cart to pressurize the normal (System B) hydraulic system to 800 psig (5500 KPa). To do this, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

NOTE: We recommend that you use the hydraulic service cart because of the large volume of hydraulic fluid this procedure removes from the normal hydraulic system.

NOTE: If you use the airplane's hydraulic supply, monitor the quantity of hydraulic fluid in the reservoir when you bleed the system.

(b) Push the brake pedals slowly through approximately one-half of their total travel and slowly release them.

NOTE: Repeat this step several times to remove the air from the brake lines upstream of the antiskid valves.

(c) Push the two brake pedals fully to the stops and hold them there for 2 to 4 seconds and then release them.

NOTE: Repeat this step 5 more times.

(d) Push the brake pedals fully to the stops and set the parking brake.

SUBTASK 32-41-00-710-002

(2) To bleed the air from each brake, do these steps for all four brakes (Figure 201):

NOTE: We recommend you do all of the steps below for one brake before you start the steps again for the next brake.

NOTE: There are two bleed valves on each brake, use the bleed valve to which you can get easy access.

(a) Remove the screw [2] and washer from the center of the bleed valve [1].

(b) Remove the lockwire from the bleed valve [1].

(c) Install the bleed hose on the end of the bleed valve [1].

(d) Put the free end of the bleed hose into a oil resistant container (5 gal)(19 Liters), STD-1055.

(e) Slowly loosen the bleed valve [1] about one half turn.

NOTE: This will let hydraulic fluid flow out of the bleed hose.

(f) Let hydraulic fluid flow out of the bleed hose until there are no air bubbles in the flow of hydraulic fluid.

NOTE: The fluid can flow out of the hose very quickly and intermittently.

(g) If the fluid flow stops, the brake fuse has set, to reset the fuse, do the steps that follow:

1) Close the bleed valve [1].

2) Do one of the steps that follow to reset the fuse:

a) On the normal system fuse for the brake being bled, pull the fuse bypass lever and hold it in this bypass position for 5 seconds minimum (Figure 201).

b) Or, release the parking brake until the fuse resets, then reset the parking brake.

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(h) Open the bleed valve [1] and continue to bleed the brake until there are no air bubbles in the flow of hydraulic fluid.

(i) If you will not bleed the alternate (System A) hydraulic system, do the steps that follow:

1) Remove the bleed hose from the bleed valve [1].

2) Tighten the bleed valve [1] to 35-55 pound-inches (4 - 6 newton meters).

3) Install the washer and the screw [2] in the center of the bleed valve [1].

4) Install a lockwire on the bleed valve [1].

SUBTASK 32-41-00-870-001

(3) Release the brake pedals or the parking brake if it is set.

SUBTASK 32-41-00-870-002

(4) Make sure all of the normal (System B) hydraulic fuses are not set:

(a) Operate the brake pedals several times.

(b) Look for movement of the brake wear indicator pins to make sure all of the brakes operate.

SUBTASK 32-41-00-860-005

(5) Remove the external hydraulic pressure for the normal (System B) hydraulic system. To do this, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

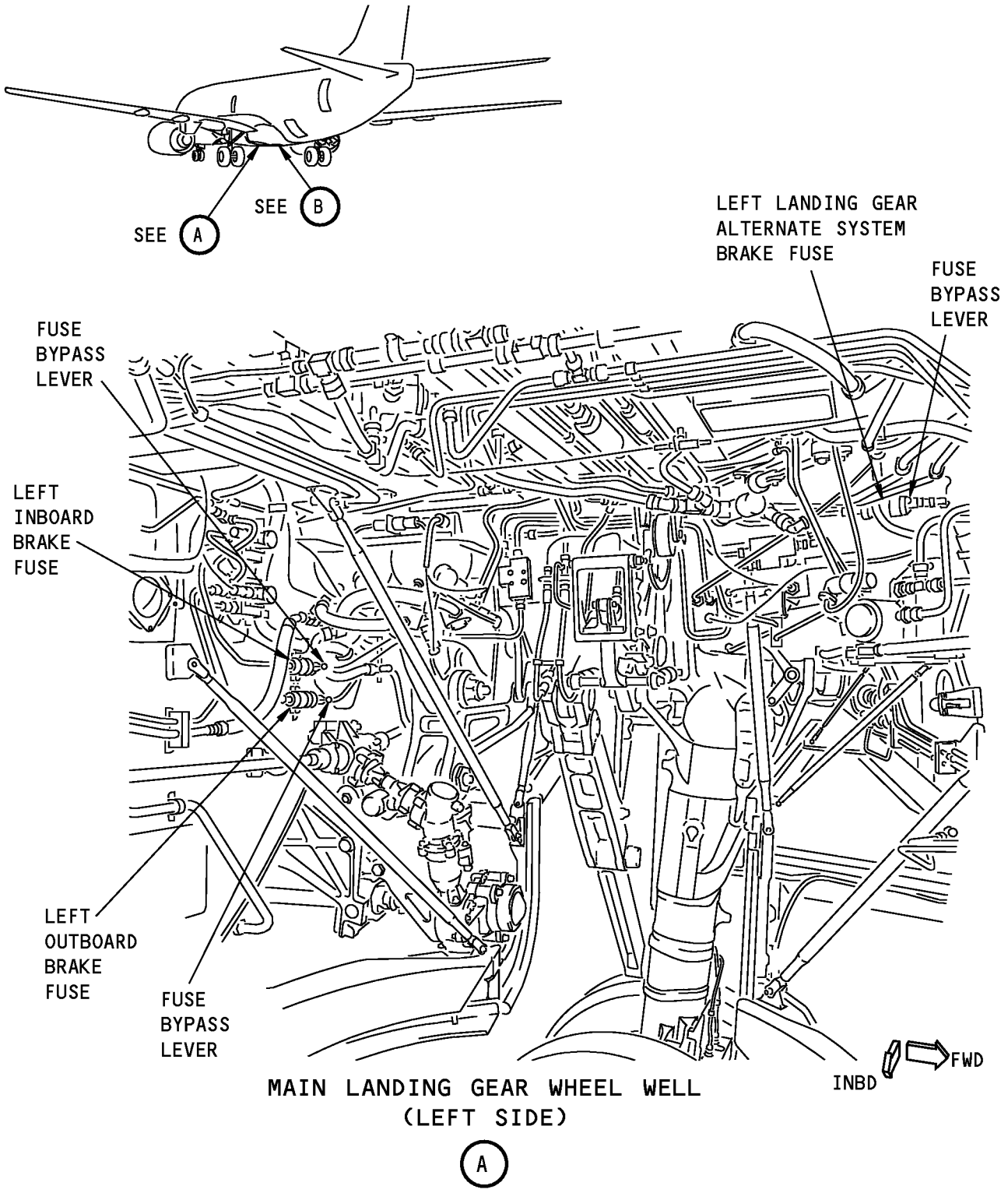
SUBTASK 32-41-00-870-003

(6) Make sure the fluid in the normal (System B) hydraulic reservoir is at the correct level. To do this, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

(a) If the normal (System B) hydraulic reservoir needs to be filled, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

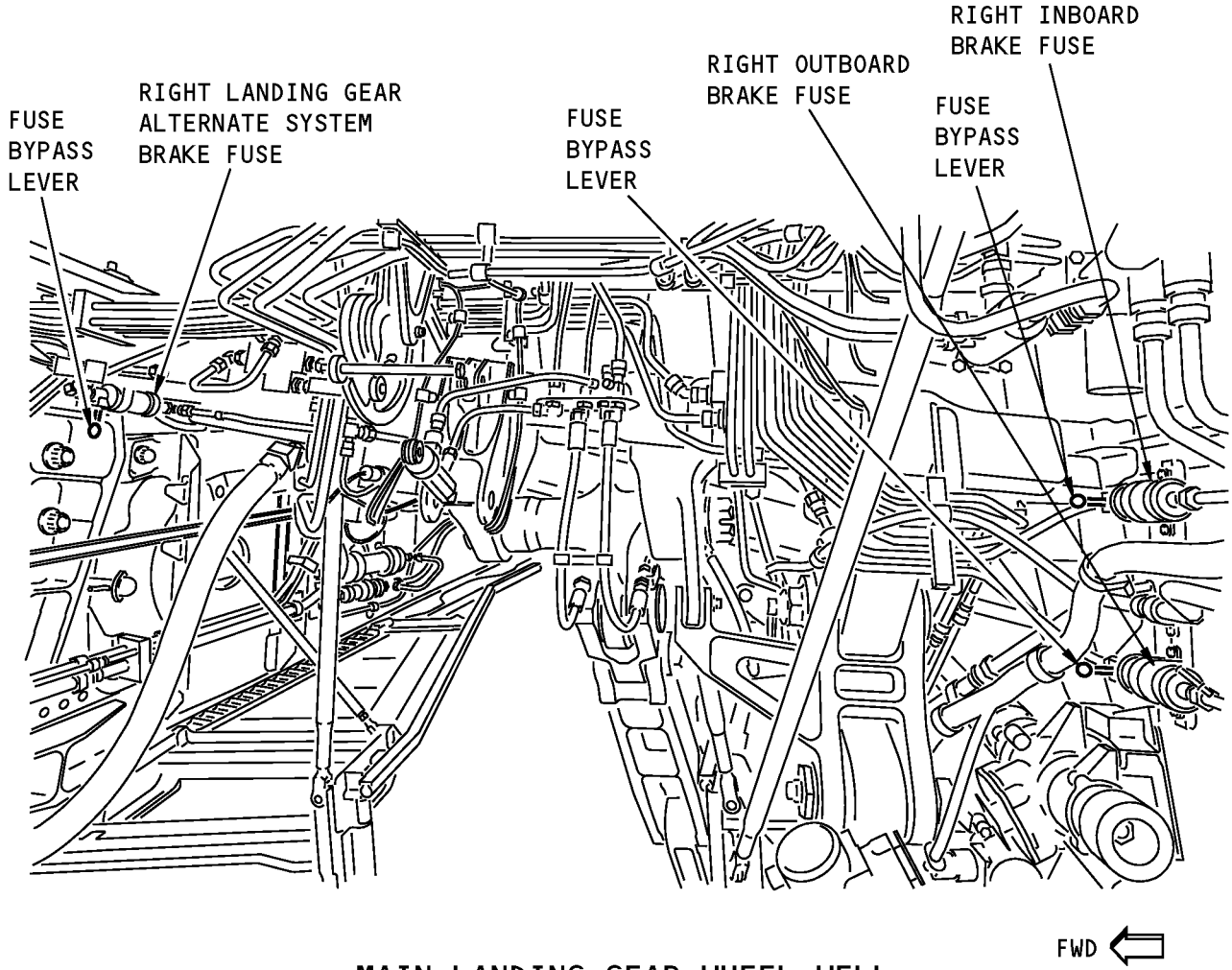
END OF TASK

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Brake Hydro-Mechanical Control System - Fuse Locations
Figure 202 (Sheet 1 of 2)/32-41-00-990-802

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Brake Hydro-Mechanical Control System - Fuse Locations
Figure 202 (Sheet 2 of 2)/32-41-00-990-802

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TASK 32-41-00-870-803

4. Alternate (System A) Hydraulic Brake System - Bleeding

(Figure 201, Figure 202)

A. References

Reference	Title
12-12-00-610-801	Hydraulic Reservoir Servicing (P/B 301)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

Reference	Description
STD-1055	Container - Oil Resistant, 5 Gallon (19 Liters)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Procedure

SUBTASK 32-41-00-480-006

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-00-480-007

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-41-00-860-006

(3) Release the parking brake.

E. Alternate (System A) Hydraulic Brake System Bleeding

SUBTASK 32-41-00-710-003

(1) To prepare to bleed the alternate (System A) hydraulic brake system, do these steps:

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(a) Use the hydraulic service cart to pressurize the alternate (System A) hydraulic system to 800 psig (5500 KPa). To do this, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

NOTE: We recommend that you use the hydraulic service cart because of the large volume of hydraulic fluid this procedure removes from the alternate hydraulic system.

NOTE: If you use the airplane's hydraulic supply, monitor the quantity of hydraulic fluid in the reservoir when you bleed the system.

(b) Push the brake pedals slowly through approximately one-half of their total travel and slowly release them.

NOTE: Repeat this step several times to remove the air from the brake lines upstream of the antiskid valve.

(c) Push the two brake pedals fully to the stops and hold them there for 2 to 4 seconds and then release them.

NOTE: Repeat this step 5 more times.

(d) Push the brake pedals fully to the stops and set the parking brake.

SUBTASK 32-41-00-710-004

(2) To bleed the air from each brake, do these steps for all four brakes (Figure 201):

NOTE: We recommend you do all of the steps below for one brake before you start the steps again for the next brake.

NOTE: There are two bleed valves on each brake, use the bleed valve to which you can get easy access.

(a) Remove the screw [2] and washer from the center of the bleed valve [1].

(b) Remove the lockwire from the bleed valve [1].

(c) Install the bleed hose on the end of the bleed valve [1].

(d) Put the free end of the bleed hose into a oil resistant container (5 gal)(19 Liters), STD-1055.

(e) Slowly loosen the bleed valve [1] about one half turn.

NOTE: This will let hydraulic fluid flow out of the bleed hose.

(f) Let hydraulic fluid flow out of the bleed hose until there are no air bubbles in the flow of hydraulic fluid.

NOTE: The fluid can flow out of the hose very quickly and intermittently.

(g) If the fluid flow stops, the brake fuse has set, to reset the fuse, do the steps that follow:

1) Close the bleed valve [1].

2) Do one of the steps that follow to reset the fuse:

a) On the alternate system fuse for the landing gear brake pair being bled, pull the fuse bypass lever and hold it in this bypass position for 5 seconds minimum (Figure 201).

b) Or, release the parking brake until the fuse resets, then reset the parking brake.

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(h) Open the bleed valve [1] and continue to bleed the brake until there are no air bubbles in the flow of hydraulic fluid.

(i) If you will not bleed the normal (System B) hydraulic system, do the steps that follow:

1) Remove the bleed hose from the bleed valve [1].

2) Tighten the bleed valve [1] to 35-55 pound-inches (4 - 6 newton meters).

3) Install the washer and screw [2] in the center of the bleed valve [1].

4) Install a lockwire on the bleed valve [1].

SUBTASK 32-41-00-870-004

(3) Release the brake pedals or the parking brake if it is set.

SUBTASK 32-41-00-870-005

(4) Make sure all of the alternate (System A) hydraulic fuses are not set:

(a) Operate the brake pedals several times.

(b) Look for movement of the brake wear indicator pins to make sure all of the brakes operate.

SUBTASK 32-41-00-860-007

(5) Remove the external hydraulic pressure for the alternate (System A) hydraulic system, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-41-00-870-006

(6) Make sure the fluid in the alternate (System A) hydraulic reservoir is at the correct level, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

——————— END OF TASK ———————

TASK 32-41-00-870-804

5. Normal (System B) Hydraulic System Brake Fuse Test

(Figure 201, Figure 202)

A. General

(1) This task provides instructions to test each hydraulic brake fuse for the normal hydraulic brake system. There is one fuse for each brake for the normal hydraulic system. Each fuse must pass a specific quantity of hydraulic fluid before it closes. For this task, each brake for the main landing gear must be bled to check the fuse for that brake.

B. References

Reference	Title
12-12-00-610-801	Hydraulic Reservoir Servicing (P/B 301)
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Tools/Equipment

Reference	Description
STD-1055	Container - Oil Resistant, 5 Gallon (19 Liters)

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D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

E. Normal Brake System Fuse Test

SUBTASK 32-41-00-480-008

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-00-860-008

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-41-00-860-009

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(3) Use the hydraulic service cart to pressurize the normal (System B) hydraulic system to 800 psig (5500 KPa), To do this, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

NOTE: We recommend that you use the hydraulic service cart because of the large volume of hydraulic fluid this procedure removes from the normal hydraulic system.

NOTE: If you use the airplane's hydraulic supply, monitor the quantity of hydraulic fluid in the reservoir when you bleed the system.

SUBTASK 32-41-00-480-009

(4) Set the parking brake.

SUBTASK 32-41-00-480-010

(5) Make sure the tires have chocks installed around them.

SUBTASK 32-41-00-710-005

(6) To do a check of the fuse for each brake, do these steps for all four brakes:

(a) Remove the screw [2] from the center of the bleed valve [1].

(b) Remove the lockwire from the bleed valve [1].

(c) Install the bleed hose on the end of the bleed valve [1].

(d) Put the free end of the bleed hose into a oil resistant container (5 gal)(19 Liters), STD-1055.

(e) Slowly loosen the bleed valve [1] about one half turn.

NOTE: This will let hydraulic fluid flow out of the bleed hose.

(f) Let the hydraulic fluid flow until the fuse closes and the flow stops.

(g) Make sure that the quantity collected in the oil resistant container (5 gal)(19 Liters), STD-1055 is 60 - 95 cubic inches or approximately 0.26 - 0.41 gallons (0.98 - 1.55 liters).

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(h) Close the bleed valve [1].

(i) Remove the bleed hose from the bleed valve [1].

(j) Tighten the bleed valve [1] to 35-55 pound-inches (4 - 6 newton meters).

(k) Install the screw [2] in the center of the bleed valve [1].

(l) Install a lockwire on the bleed valve [1].

(m) On the normal system fuse for the brake being bled, pull the fuse bypass lever and hold it in this bypass position for 5 seconds minimum.

SUBTASK 32-41-00-870-007

(7) Do the steps that follow when you have checked all of the fuses for the normal (System B) hydraulic system:

(a) Make sure all of the normal (System B) hydraulic fuses are not set:

1) Operate the brake pedals several times.

2) Look for movement of the brake wear indicator pins to make sure all of the brakes operate.

(b) Remove the external hydraulic pressure for the normal (System B) hydraulic system. To do this, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

(c) Make sure the fluid in the normal (System B) hydraulic reservoir is at the correct level, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

(d) If the normal (System B) hydraulic reservoir needs to be filled, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

——————— END OF TASK ———————

TASK 32-41-00-870-805

6. Alternate (System A) Hydraulic System Brake Fuse Test

(Figure 201, Figure 202)

A. General

(1) This task provides instructions to test each hydraulic brake fuse for the alternate hydraulic brake system. There is one fuse for the two brakes on each main landing gear for the alternate hydraulic system. Each fuse must pass a specific quantity of hydraulic fluid before it closes. For this task, only one brake for the each main landing gear must be bled to check the fuse for that brake.

B. References

Reference	Title
12-12-00-610-801	Hydraulic Reservoir Servicing (P/B 301)
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Tools/Equipment

Reference	Description
STD-1055	Container - Oil Resistant, 5 Gallon (19 Liters)

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D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

E. Alternate Brake System Fuse Test

SUBTASK 32-41-00-480-011

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-00-860-010

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-41-00-860-011

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(3) Use the hydraulic service cart to pressurize the alternate (System A) hydraulic system to 800 psig. To do this, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

NOTE: We recommend that you use the hydraulic service cart because of the large volume of hydraulic fluid this procedure removes from the alternate hydraulic system.

NOTE: If you use the airplane's hydraulic supply, monitor the quantity of hydraulic fluid in the reservoir when you bleed the system.

SUBTASK 32-41-00-480-012

(4) Set the parking brake.

SUBTASK 32-41-00-480-013

(5) Make sure the tires have chocks installed around them.

SUBTASK 32-41-00-710-006

(6) To do a check of the fuse for both brakes on each main landing gear, do these steps for one brake on each main landing gear:

(a) Remove the screw [2] from the center of the bleed valve [1].

(b) Remove the lockwire from the bleed valve [1].

(c) Install the bleed hose on the end of the bleed valve [1].

(d) Put the free end of the bleed hose into a oil resistant container (5 gal)(19 Liters), STD-1055.

(e) Slowly loosen the bleed valve [1] about one half turn.

NOTE: This will let hydraulic fluid flow out of the bleed hose.

(f) Let the hydraulic fluid flow until the fuse closes and the flow stops.

(g) Make sure that the quantity collected in the oil resistant container (5 gal)(19 Liters), STD-1055 is 60 - 95 cubic inches or approximately 0.26 - 0.41 gallons (0.98 - 1.55 gallons).

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(h) Close the bleed valve [1].

(i) Remove the bleed hose from the bleed valve [1].

(j) Tighten the bleed valve [1] to 35-55 pound-inches (4 - 6 newton meters).

(k) Install the screw [2] in the center of the bleed valve [1].

(l) Install a lockwire on the bleed valve [1].

(m) On the alternate system fuse for the main landing gear being bled, pull the fuse bypass lever and hold it in this bypass position for 5 seconds minimum.

SUBTASK 32-41-00-870-008

(7) Do the steps that follow when you have checked the fuses for the alternate (System A) hydraulic system:

(a) Make sure the two alternate (System A) hydraulic fuses are not set:

1) Operate the brake pedals several times.

2) Look for movement of the brake wear indicator pins to make sure all of the brakes operate.

(b) Remove the external hydraulic pressure for the alternate (System A) hydraulic system, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

(c) Make sure the fluid in the alternate (System A) hydraulic reservoir is at the correct level, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

(d) If the alternate (System A) hydraulic reservoir needs to be filled, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

——————— END OF TASK ———————

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HYDRAULIC BRAKE SYSTEM - ADJUSTMENT/TEST

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) An adjustment of the hydraulic brake system

NOTE: After repair or replacement of the linkage or cables, the mechanical portion of the brake control system must be adjusted (rigged).

(2) An functional test of the normal and alternate brake application.

(3) An operational test of the landing gear retract braking.

(4) An operational test of the hydraulic brake accumulator.

(5) An operational test of the alternate brake system.

C. To do a functional test of the hydraulic brake system, do all of the tasks in this procedure.

TASK 32-41-00-820-801

2. Hydraulic Brake System Adjustment

(Figure 501)

A. General

(1) Make sure that internal and external airplane temperatures are equal within 5 degrees Fahrenheit (3° C) while you adjust the cables and are stable for a period of one hour before you adjust the cables.

(2) The landing gear brake system can be adjusted with the airplane on or off jacks.

(3) The hydraulic pressure can be 'On' or 'Off' during adjustment.

(4) The landing gear brake system must be adjusted with the brakes off.

(5) If rig pin tools are not available, you can use pins that are 0.309-0.311 inch (7.85-7.89 mm) in diameter.

B. References

Reference	Title
20-10-10-000-801	Turnbuckle Locking Clips Removal (P/B 401)
20-10-10-400-801	Turnbuckle Lock Installation (P/B 401)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1553	Tensiometer - Cable (20 - 200 LB) (Part #: 102-03110, Supplier: 21844, A/P Effectivity: 737-ALL) (Part #: ACM-200, Supplier: 13331, A/P Effectivity: 737-ALL) (Part #: T60-1001-C8-1A, Supplier: 0N8U4, A/P Effectivity: 737-ALL)
COM-1554	Tensiometer - Cable (40-600 LB) (Part #: ACM-600, Supplier: 13331, A/P Effectivity: 737-ALL) (Part #: T5-8008-106-00, Supplier: 0N8U4, A/P Effectivity: 737-ALL) (Part #: T60-1001-C9-1A, Supplier: 0N8U4, A/P Effectivity: 737-ALL)

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(Continued)

Reference	Description
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-9118	Pin - Rig (required for line number 1736 and on to rig the brake metering valve, F70207-128 is used with F70207-109 kit) (Part #: F70207-128, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

E. Prepare for the Adjustment

SUBTASK 32-41-00-480-014

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-00-480-015

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-41-00-860-012

(3) Release the parking brake.

SUBTASK 32-41-00-860-024

(4) Final control cable adjustments can only be performed on a temperature stabilized airplane. An airplane is considered temperature stabilized when the following requirements are met:

(a) The outside ambient temperature has not changed by more than 5 degrees F over the last hour.

(b) The outside ambient temperature does not change at a rate greater than 5 degrees F per hour while the cables are being tensioned.

(c) The airplane is not in direct sunlight OR the following procedure indicates temperatures are stabilized.

1) Measure temperatures at the following locations:

- Inside: Near the center of each compartment that the cable run passed through or is adjacent to including passenger cabin, EE bay, and forward cargo compartment
- Outside: Within five inches of the fuselage skin on both the left and right sides just below the forward entry doors (Two locations)

2) The airplane can be considered temperature stabilized if the difference between the lowest and highest recorded temperature is less than five degrees F.

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(d) The entry doors, cargo doors, and the EE bay access hatch have been open for atleast one hour and will remain open while the cables are being tensioned OR measured temperatures inside are within 5 degrees F of the measured outside temperatures.

(e) There are no significant sources of heat inside the airplane that may cause the internal temperature in any compartment to be five degrees F or more above the ambient temperature.

SUBTASK 32-41-00-860-025

(5) Cable system shall be rigged so that the rig pins can be inserted and removed without binding in the rig pin holes.

SUBTASK 32-41-00-860-026

(6) One system cycle is defined as alternately depressing the toe pad portion of the pedals to their stop (full on) and fully releasing (full off).

F. Brake Control System - Adjustment

HAP 001-013, 015-026, 028-030

SUBTASK 32-41-00-820-001

(1) Do the steps that follow to adjust the brake pedal bus [1]:Figure 501 (Sheet 3)

(a) Disconnect the right ends of the pushrods [2] from the brake pedal bus [1].

1) Remove the nuts [13], the washers [12], the bolts [8], and the bushings [9] to disconnect the pushrods [2] from the crank arm clevis [11].

NOTE: The forward control rod has a centerline slip fit joint that is used for installation/removal only.

2) You may remove the two bolts in the center of the forward control rod to adjust the length of the forward control rod.

(b) Install rig pin LGB1, F70207-14, from rig pin kit, SPL-1585, through the left beam structure and brake control bellcranks [4].

NOTE: The rig pin must remain installed for the cable adjustment.

(c) Install rig pin LGB2, F70207-14, from rig pin kit, SPL-1585, through the right beam structure and brake control bellcranks [4].

NOTE: The rig pin must remain installed for the cable adjustment.

(d) Loosen the jamnuts [7] on the ends of the pushrods [2].

(e) Adjust the length of the pushrods [2] by turning the rod ends [10], until the bolts [8] for the pushrods [2] can be installed freely through the crank arm clevis [11].

1) Make sure the threads of the rod ends [10] can be seen for at least half of the inspection holes, or there are no more than 15 exposed threads between the jam nut and the bearing. This will make sure that the threads of the rod ends correctly engage the pushrods [2].

(f) Install the bushings [9], the bolts [8], the washers [12], and the nuts [13], to connect the pushrods [2] to the crank arm clevis [11].

(g) Make sure the rig pins LGB1 and LGB2 move freely through the rig pin holes.

(h) Tighten the jamnuts [7] on the rod ends [10].

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WARNING: IF THE TWO BOLTS IN THE CENTER OF THE FORWARD CONTROL ROD WERE REMOVED, YOU MUST REINSTALL AND TIGHTEN THE TWO BOLTS IN THE CENTER OF THE FORWARD CONTROL ROD TO PREVENT INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

1) If the two bolts at the center of the forward control rod were removed to adjust the control rod, reinstall and tighten the two bolts in the center of the forward control rod when adjustment of the control rod is complete.

(i) If you will not adjust the brake cables, remove rig pins LGB1 and LGB2 from the brake control bellcrank [4].

HAP 031-054, 101-999

SUBTASK 32-41-00-820-004

(2) Do the steps that follow to adjust the brake pedal bus [1]:

(a) Reduce the cable tension in all four cables to zero by removing the turnbuckle locking clips [5] from the turnbuckles [6] and rotate the turnbuckles to reduce the tension. Alternate the adjustment between the cables to ensure the tension in each cable does not differ by more than 50 lbs at any time.

(b) Adjust the rear push rod [2] on the brake pedal bus [1] by:

1) Loosen the jamnut [7] on the right end.

2) Remove the nut [13], the washer [12], the bolt [8], and the bushing [9] to disconnect the rear push rod [2] from the crank arm clevis [11].

(c) Adjust the forward push rod [2] on the brake pedal bus [1] by:

1) Creating a cross hair consisting of two lines with a fine tip felt pen at the junction of the two rods. Place one line horizontally across both tubes, 1/2 way between the screw head and nut. Place the other line around the tube where the smaller tube meets the larger tube to complete the cross hair. This will be a refernce point for future adjustments. Do not remove the NAS screws prior to creating the cross hair. Check that the rod end inspection hole is not open.

2) Loosen the jamnut [7] on the right end of the forward pushrod [2].

3) Remove the two NAS 623 screws. Retain the screws for reassembly after rod adjustment.

(d) Install rig pin LGB1, F70207-14, from rig pin kit, SPL-1585through the left beam structure and brake control bellcranks [4],

NOTE: The rig pin must remain installed for the cable adjustment.

(e) Install rig pin LGB2, F70207-14, from rig pin kit, SPL-1585, through the right beam structure and brake control bellcranks [4]

NOTE: The rig pin must remain installed for the cable adjustment.

(f) Push the aft rod to the left to take up the tolerance. Push the right side crank arm [11] to the left to take up the tolerance. Align the right rod end [10] fastener with the right side crank arm [11] clevis by rotating the rod end [10] and install the fastener. Do not install the washer or nut at this time.

(g) Lengthen or shorten the forward rod by rotating the rod [2] to obtain the original cross hair position. Install one NAS623 screw only at this time.

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(h) With the left rig pin installed, slowly remove the right rig pin and observe the forward and aft rods for movement. If the rods move, lengthen the aft rod one turn. Install the right rig pin again and repeat the right rig pin removal. If the rod movement is greater than before, shorten the aft rod to the previous length, then one turn shorter. Repeat rig pin insertion and removal. Select the position that has the least rod movement.

(i) Check the rig pin fit. The rig pins will be biased in the hole. That is, the rig pins will support the weight of the pedals and bus structure and not be not be entirely free. The rig pin shall not bind or require excessive force to install or remove it.

(j) Complete the installation of the forward and aft rod by installing the remaining fasteners. Torque the rod end nuts and clevis bolts. Tighten both jamnuts. Install the remaining NAS 623 screw and tighten both nuts to snug plus 1/4 turn.

1) Make sure the threads of the rod ends [10] can be seen for at least half of the inspection holes, or there are no more than 15 exposed threads between the jam nut and bearing. This will make sure that the threads of the rod ends correctly engage the pushrods [2].

2) If no further adjustments are required, increase the tension in the cables per the tension value in Table 501, Brake Cable Rigging Loads. When increasing the tension with the rig pins in place, alternate the adjustment between tne cables to ensure the tension in each cable does not differ by more than 50 lbs at any time to avoid bending the rig pins.

(k) If you will not adjust the brake cables, remove rig pins LGB1 and LGB2 from the brake control bellcrank [4].

HAP 001-013, 015-026, 028-030

SUBTASK 32-41-00-820-002

(3) Do the steps that follow to adjust the left brake metering valve [21] and then the right brake metering valve [27]:

(a) Disconnect the control rod [20] from the crank [25] for the brake metering valve [21], [27].

1) Remove the nut [18], the washer [26], and the bolt [23] to disconnect the control rod [20] from the crank [25] for the brake metering valve [22], [27].

2) Remove the retainer [23] and then the bushing [24] from the crank [25].

(b) Install the rig pin in the brake metering valve you will adjust:

1) Install rig pin LGB3, rig pin, SPL-9118, through the rig pin hole for the left brake metering [27].

NOTE: The rig pin must remain installed for the cable adjustment.

2) Install rig pin LGB4, rig pin, SPL-9118, through the rig pin hole for the right brake metering [21].

NOTE: The rig pin must remain installed for the cable adjustment.

(c) Loosen the jamnuts [19] on the two ends of the control rod [20].

(d) To adjust the length of the control rod [20], turn the threaded rod only, until the bolt [22] that you removed installs freely through the crank [25].

(e) Install the bushing [24] in the crank [25] and then install the retainer [23] to hold the bushing.

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(f) Install the the bolt [22], the washer [26], and the nut [18] to connect the control rod [20] to the crank [25] for the brake metering valve [21], [27].

(g) Make sure the rig pins LGB3 or LGB4 moves freely through the rig pin holes.

(h) Tighten the jamnuts [19] on the two ends of the control rod [20].

(i) If you will not adjust the brake cables, remove rig pin LGB3 or LGB4 from the rig pin holes for the brake metering valves [21], [27].

HAP 031-054, 101-999

SUBTASK 32-41-00-820-005

(4) Do the steps that follow to adjust the left brake metering valve [21] and then the right brake metering valve [27]:

(a) Disconnect the brake rod [20] from the crank [25] for the brake metering valves [21] and [27]. The brake metering valve is spring loaded to the brakes off position. This will position the brake metering valve.

1) Remove the control rod nut [18], the washer [26], and the bolt [22] to disconnect the control rod [20] from the crank [25] for the brake metering valves [21] and [27].

2) Loosen the jamnuts [19] on the two ends of the control rod [20].

(b) With the brake pedals in the off position, install rig tool RIGT274A2800 between the crank [25] and the rig pin structure hole.

1) Install the rig pin LGB3, rig pin, SPL-9118 through the rig pin hole for the left brake metering valve [21].

2) Install the rig pin LGB4,rig pin, SPL-9118 through the rig pin hole for the right brake metering valve [27].

3) Adjust the control rod to obtain a rig pin slip fit.

(c) Install the bushing [24] in the crank [25] and then install the retainer [23] to hold the bushing.

(d) Install the bolt [22], the washer [26], and the nut [18] to connect the control rod [20] to the crank [25] for the brake metering valves [21] and [27].

(e) Make sure the rig pins LGB3 or LGB4 moves freely through the rig pin holes.

(f) If the RIGT274A2800 tool is not available, install fasteners noted in (c) and (d). Insert the rig pin. Adjust the control rod by turning the threaded rod [20] only, all the way in one direction until the rig pin contacts the crank. Then reverse the adjustment direction and count the turns until the rig pin contacts the other side of the crank [20]. Divide the number of turns by 2 and reverse the rod adjustment direction again. This will position the rig pin in the neutral position in the crank [20].

(g) Tighten the jamnuts [19] on the two ends of the control rod [20].

(h) If you will not adjust the brake cables, remove rig pin LGB3 or LGB4 from the rig pin holes for the brake metering valves [21] and [27].

HAP ALL

SUBTASK 32-41-00-820-003

(5) Do these steps to adjust the brake cables for the left side and the right side:

(a) Make sure the rig pins LGB1 and LGB2, are installed in the bellcrank rig pin holes [3], and the rig pins LGB3 and LGB4, are installed in the brake metering valve rig pin holes.

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(b) For the lock clips [5] on the brake cables, do this task: Turnbuckle Locking Clips Removal, TASK 20-10-10-000-801.

(c) Adjust the brake cable tension, by turning the turnbuckles [6] with the 20 - 200 lb cable tensiometer, COM-1553, to the value shown in Table 501.

1) Alternate the adjustment between the LGB1A cable and the LGB1B cable for the left side, and the LGB2A cable and the LGB2B cable for the right side.

NOTE: Make sure the tension in each cable does not differ by more than 50 pounds (222 newtons) at any time so the rig pins do not bend.

Table 501/32-41-00-993-804 Brake Cable Rigging Loads

Ambient Temperature Degrees Fahrenheit (Degrees Celsius)	Rigging Load (±10 lbs)(±44 N)
-20 (-29 C)	150 (668 newtons)
-10 (-23 C)	155 (690 newtons)
0 (-18 C)	160 (712 newtons)
10 (-12 C)	165 (734 newtons)
20 (-7 C)	170 (757 newtons)
30 (-1 C)	175 (779 newtons)
40 (4 C)	180 (801newtons)
50 (10 C)	185 (823 newtons)
60 (16 C)	190 (846 newtons)
70 (21 C)	195 (868 newtons)
80 (27 C)	200 (890 newtons)
90 (32 C)	205 (912 newtons)
100 (38 C)	210 (935 newtons)
110 (43 C)	215 (957 newtons)
120 (49 C)	220 (979 newtons)

(d) Make sure the rig pins LGB1 and LGB2 move freely in the rig pin holes for the brake pedal bus [1] and the rig pins LGB3 and LGB4 move freely in the rig pin holes for the brake metering valves [21], [27].

(e) Do these steps if you installed new brake cables:

1) Increase the tension of the brake cables to 340-360 pounds (1513-1601 newtons) with the 40 - 600 lb cable tensiometer, COM-1554.

a) Alternate the adjustment between the LGB1A cable and the LGB1B cable for the left side, and the LGB2A cable and the LGB2B cable for the right side.

NOTE: Make sure the tension in each cable does not differ by more than 50 pounds (222 newtons) at any time so the rig pins do not bend.

2) Make sure the rig pins LGB1 and LGB2 move freely in the rig pin holes for the brake pedal bus [1] and the rig pins LGB3 and LGB4 move freely in the rig pin holes for the brake metering valves [21], [27].

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3) Remove the rig pins LGB1 and LGB2 from the brake pedal bus [1] and the rig pins LGB3 and LGB4 from the brake metering valve assemblies [21], [27].

4) Push the left brake pedals to their stops and then fully release them 25 times.

5) Push the right brake pedals to their stops and then fully release them 25 times.

6) Install the rig pins LGB1 and LGB2, in the rig pin holes for the brake pedal bus [1] and the rig pins LGB3 and LGB4, in the rig pin holes for the brake metering valves [21], [27].

NOTE: LGB1 is for the captain' brake pedal bus and LGB2 is for the first officer's brake pedal bus.

7) Adjust the brake cable tension with the 20 - 200 lb cable tensiometer, COM-1553 to the value shown in the brake cable tension vs. temperature chart Table 501.

8) Make sure the rig pins LGB1 and LGB2 move freely in the rig pin holes for the brake pedal bus [1] and the rig pins LGB3 and LGB4 move freely in the rig pin holes for the brake metering valves [21], [27].

(f) Remove the rig pins LGB1 and LGB2 from the brake pedal bus [1] and the rig pins LGB3 and LGB4 from the brake metering valve assemblies [21], [27].

(g) Push the left brake pedals to their stops and then fully release them 3 times.

(h) Push the right brake pedals to their stops and then fully release them 3 times.

(i) Install the rig pins LGB1 and LGB2, in the rig pin holes for the brake pedal bus [1] and the rig pins LGB3 and LGB4, in the rig pin holes for the brake metering valves [21], [27].

NOTE: LGB1 is for the captain' brake pedal bus and LGB2 is for the first officer's brake pedal bus.

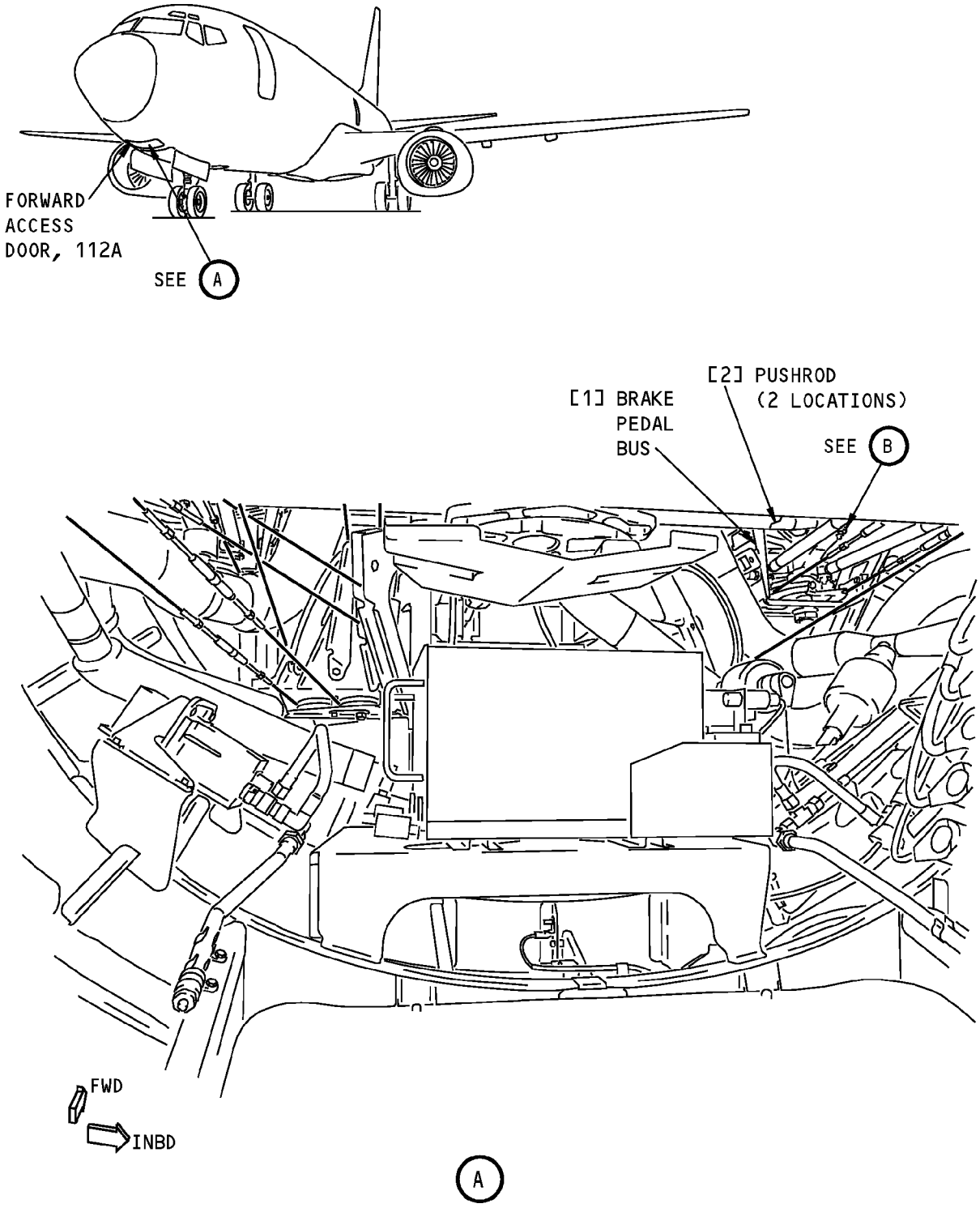
(j) Make sure the rig pins LGB1 and LGB2 move freely in the rig pin holes for the brake pedal bus [1] and the rig pins LGB3 and LGB4 move freely in the rig pin holes for the brake metering valves [21], [27].

(k) Remove the rig pins LGB1 and LGB2 from the brake pedal bus [1] and the rig pins LGB3 and LGB4 from the brake metering valve assemblies [21], [27].

(l) For the lock clips on the brake cables, do this task: Turnbuckle Lock Installation, TASK 20-10-10-400-801.

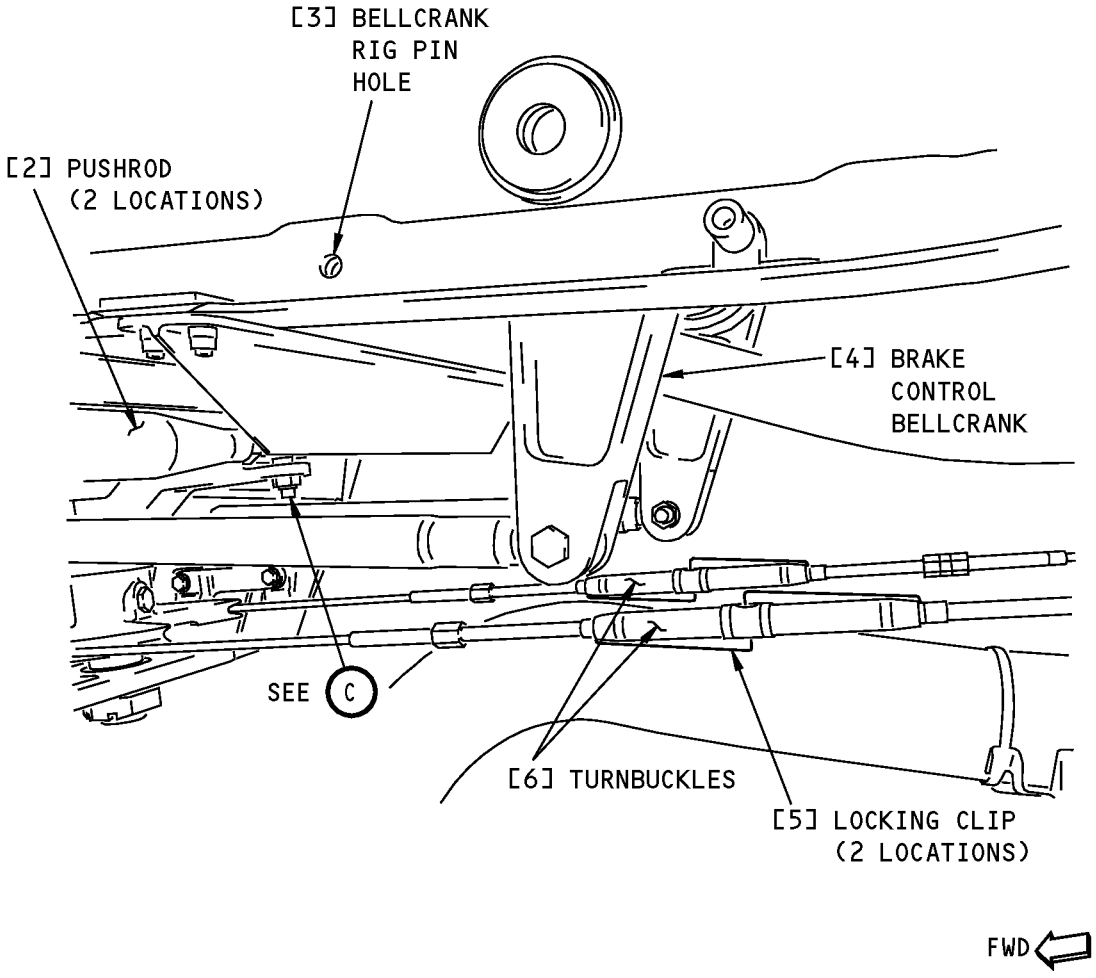
——————— END OF TASK ———————

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Hydraulic Brake System Adjustment
Figure 501 (Sheet 1 of 5)/32-41-00-990-803

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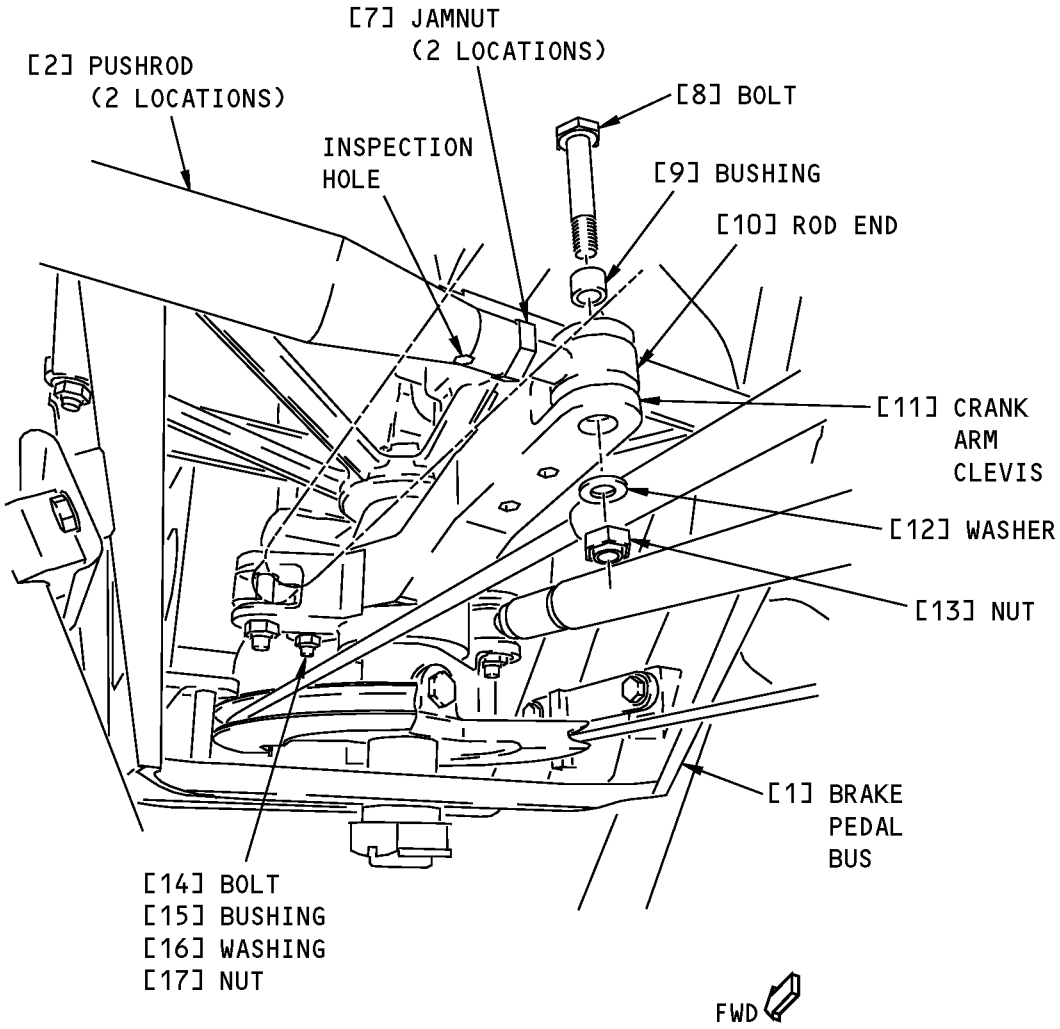


RIGHT CABLE INSTALLATION
(LEFT CABLE INSTALLATION IS EQUIVALENT)

B

Hydraulic Brake System Adjustment
Figure 501 (Sheet 2 of 5)/32-41-00-990-803

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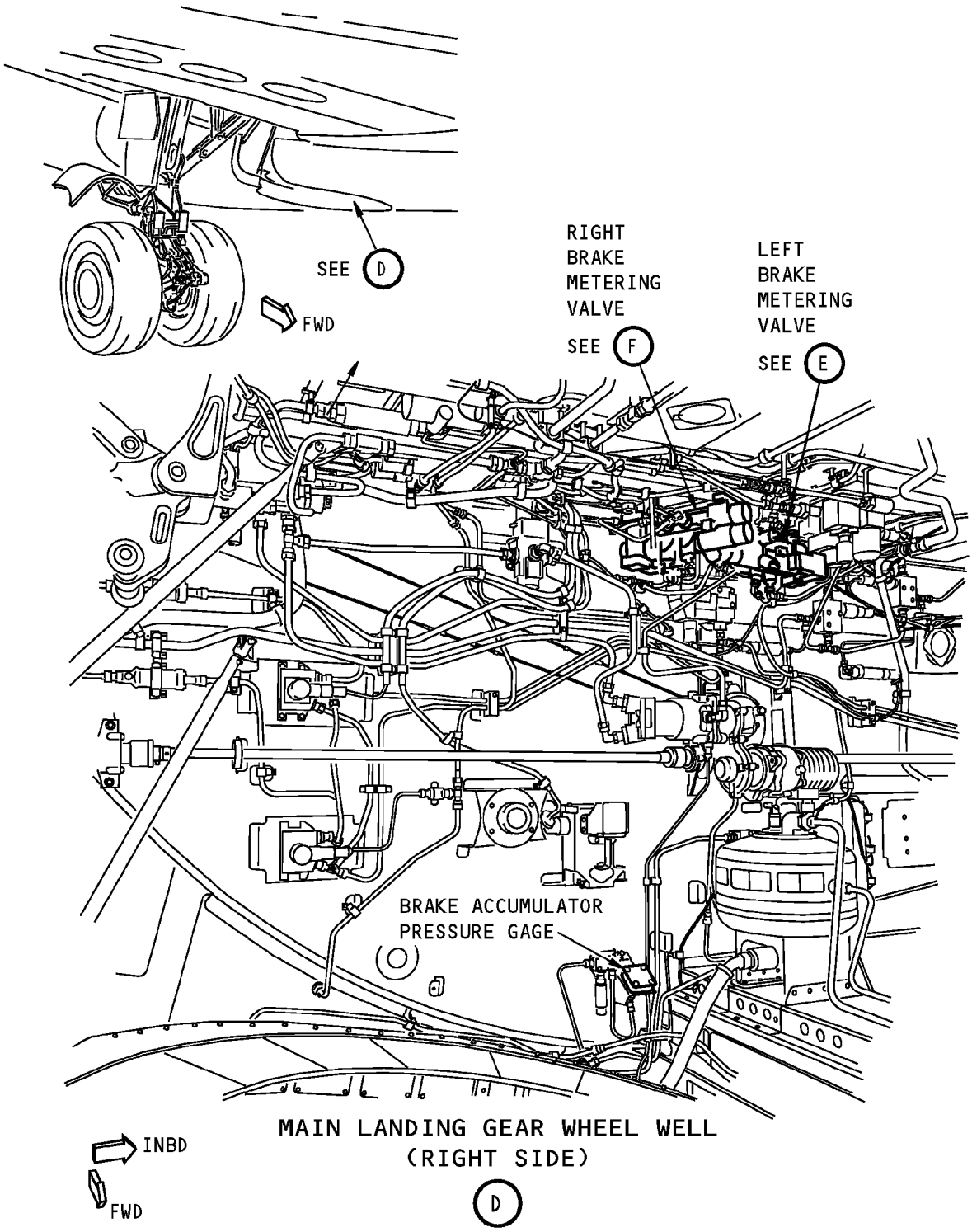


RIGHT BRAKE PEDAL BUS
(LEFT BRAKE PEDAL BUS IS EQUIVALENT)

C

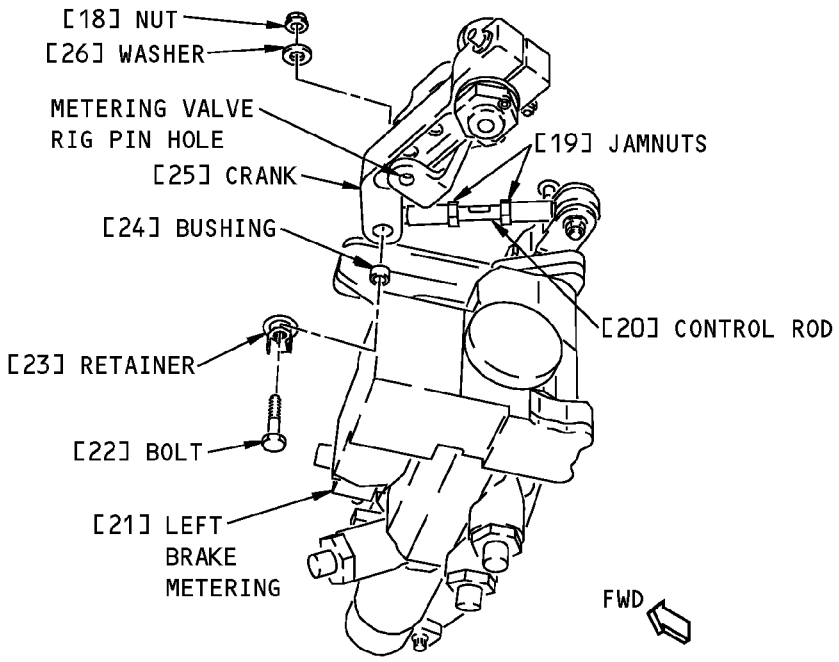
Hydraulic Brake System Adjustment
Figure 501 (Sheet 3 of 5)/32-41-00-990-803

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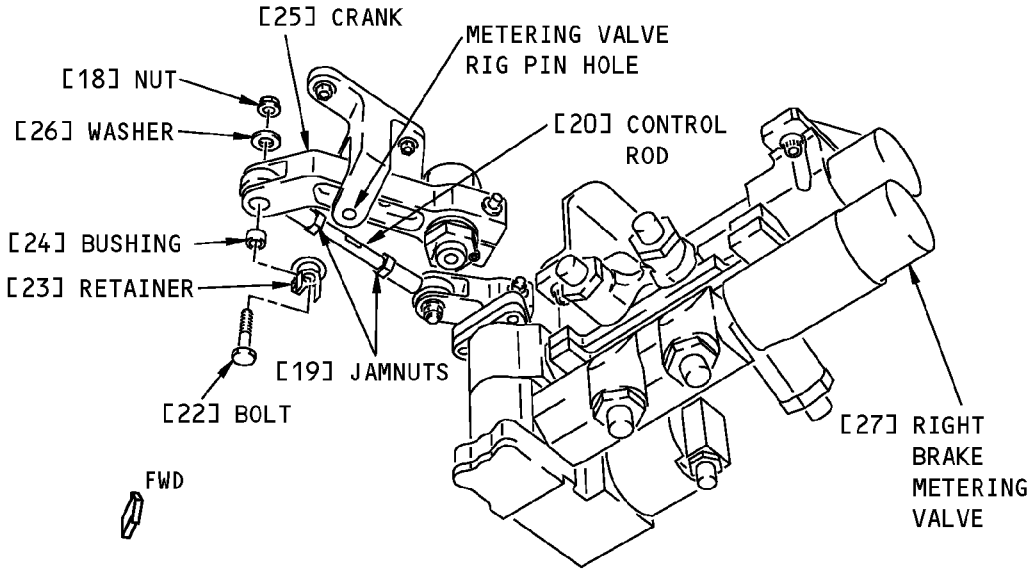
Hydraulic Brake System Adjustment
Figure 501 (Sheet 4 of 5)/32-41-00-990-803

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LEFT BRAKE METERING VALVE

E



RIGHT BRAKE METERING VALVE

F

Hydraulic Brake System Adjustment
Figure 501 (Sheet 5 of 5)/32-41-00-990-803

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TASK 32-41-00-710-801

3. Normal and Alternate Brake Application - Functional Test

A. General

(1) This procedure does an operation test of these systems:

(a) The operation of the brakes with hydraulic power supplied by the NORMAL (System B) brake hydraulic system

(b) The operation of the brakes with hydraulic power supplied by the ALTERNATE (System A) brake hydraulic system.

(2) The brake pedal force and angle will also be checked in this task.

B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1822	Gauge - Digital Force, Push-Pull (100 Lb Capacity, 0.125 Lb Resolution or better) (Part #: DFGS100, Supplier: 11710, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Part #: FDIX 100, Supplier: 0BFD9, A/P Effectivity: 737-ALL) (Opt Part #: FDI 100, Supplier: 0BFD9, A/P Effectivity: 737-ALL)
SPL-1819	Gauge Set - Hydraulic Brake System, Pressure Checking (Part #: F72977-62, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: F72977-45, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: F72977-46, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: F72977-47, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
STD-1232	Protractor - Digital

D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

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E. Prepare for the Procedure

SUBTASK 32-41-00-480-016

(1) Make sure the tires have chocks installed around them.

SUBTASK 32-41-00-860-013

(2) Release the parking brake.

SUBTASK 32-41-00-480-017

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(3) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-00-480-018

(4) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-41-00-480-019

(5) Install a brake force push-pull digital force gauge, COM-1822 or equivalent on the captain's and the first officer brake pedals.

SUBTASK 32-41-00-480-020

(6) Install a pressure gage, from the gauge set, SPL-1819, on each brake.

SUBTASK 32-41-00-710-007

(7) Use a digital digital protractor, STD-1232 to measure the angle of the brake pedals.

SUBTASK 32-41-00-790-003

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(8) For the A or the B hydraulic systems, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

(a) To test the normal (System B) brake system, only pressurize the system B hydraulic system.

(b) To test the alternate (System A) brake system, only pressurize the system A hydraulic system.

NOTE: The normal hydraulic system (System B) must not be pressurized for this test.

F. Procedure

NOTE: The steps that follow are applicable for the normal and alternate brake systems. The system that is tested depends on which hydraulic system is pressurized.

SUBTASK 32-41-00-710-008

(1) Make sure the digital protractors and brake force gages are set to zero.

SUBTASK 32-41-00-720-001

(2) Push the captain's left and right brake pedals until the brake force gage shows 23 ±2 pounds (102.3 ± 9 newtons) at each pedal.

NOTE: The pedal force must be applied as perpendicular to the pedal surface as possible, at the tip of the pedal, 8.25 inches (209.6 mm) from the brake pedal pivot.

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SUBTASK 32-41-00-710-009

(3) Hold the brake pedals in this position.

SUBTASK 32-41-00-720-002

(4) Make sure the hydraulic pressure at each brake is 275 ± 75 psig (1896 ± 517 Kpa).

SUBTASK 32-41-00-710-010

(5) Make sure the angle of the captain's left and right brake pedals are 3.5 ± 1.0 degrees.

SUBTASK 32-41-00-720-003

(6) Release the captain's brake pedals.

SUBTASK 32-41-00-720-013

(7) Make sure the brakes fully release by observing that the brake pistons retract away from the heat sink.

SUBTASK 32-41-00-710-011

(8) Make sure the angle of the captain's left and right brake pedals are 0.0 ± 0.50 degrees.

SUBTASK 32-41-00-710-012

(9) Make sure the digital protractors and brake force gages are set to zero.

SUBTASK 32-41-00-720-004

(10) Push the captain's left and right brake pedals until the brake force gage shows 58.3 ± 3 pounds (258 ± 13 newtons) at each pedal.

NOTE: The pedal force must be applied as perpendicular to the pedal surface as possible, at the tip of the pedal, and 8.25 inches (209.6 mm) from the brake pedal pivot.

SUBTASK 32-41-00-710-013

(11) Hold the brake pedals in this position.

SUBTASK 32-41-00-720-005

(12) Make sure the hydraulic pressure at each brake is 2100 ± 500 psig (14479 ± 3447 kPa).

SUBTASK 32-41-00-710-014

(13) Make sure the angle of the captain's left and right brake pedals are 10.5 ± 1.0 degrees.

SUBTASK 32-41-00-720-014

(14) Push the captain's brake pedals fully down. Make sure that the hydraulic pressure at each brake is 3000 ± 150 psi (20684 ± 1034 Kpa).

SUBTASK 32-41-00-720-006

(15) Release the captain's brake pedals.

SUBTASK 32-41-00-720-015

(16) Make sure the brakes fully release by observing that the brake pistons retract away from the brake heat sink.

SUBTASK 32-41-00-710-015

(17) Make sure the digital protractors and brake force gages are set to zero.

SUBTASK 32-41-00-720-007

(18) Push the first officer's left and right brake pedals until the brake force gage shows 23 ± 2 pounds (102.3 ± 9 newtons) at each pedal.

NOTE: The pedal force must be applied as perpendicular to the pedal surface as possible, at the tip of the pedal, 8.25 inches (209.6 mm) from the brake pedal pivot.

SUBTASK 32-41-00-710-016

(19) Hold the brake pedals in this position.

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SUBTASK 32-41-00-720-008

(20) Make sure the hydraulic pressure at each brake is 275 ± 75 psig (1896 ± 517 Kpa).

SUBTASK 32-41-00-710-017

(21) Make sure the angle of the first officer's left and right brake pedals are 3.5 ± 1.0 degrees.

SUBTASK 32-41-00-720-009

(22) Release the first officer's brake pedals.

SUBTASK 32-41-00-720-016

(23) Make sure that the brakes fully release by observing that the brake pistons retract away from the brake heat sink.

SUBTASK 32-41-00-710-018

(24) Make sure the angle of the first officer's left and right brake pedals are 0.0 ± 0.50 degrees.

SUBTASK 32-41-00-710-019

(25) Make sure the digital protractors and brake force gages are set to zero.

SUBTASK 32-41-00-720-010

(26) Push the first officer's left and right brake pedals until the brake force gage shows 58 ± 3 pounds (258 ± 13 newtons) at each pedal.

NOTE: The pedal force must be applied as perpendicular to the pedal surface as possible, at the tip of the pedal, and 8.25 inches (209.6 mm) from the brake pedal pivot.

SUBTASK 32-41-00-710-020

(27) Hold the brake pedals in this position.

SUBTASK 32-41-00-720-011

(28) Make sure the hydraulic pressure at each brake is 2100 ± 500 psig (14479 ± 3447 kPa).

SUBTASK 32-41-00-710-021

(29) Make sure the angle of the first officer's left and right brake pedals are 10.5 ± 1.0 degrees.

SUBTASK 32-41-00-720-017

(30) Push the first officer's brake pedals fully down. Make sure that the hydraulic pressure at each brake is 3000 ± 150 psi (20684 ± 1034 Kpa).

SUBTASK 32-41-00-720-012

(31) Release the first officer's brake pedals.

SUBTASK 32-41-00-720-018

(32) Make sure that the brakes fully release by observing that the brake pistons retract away from the brake heat sink.

SUBTASK 32-41-00-860-014

(33) For the A or the B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

——————— END OF TASK ———————

TASK 32-41-00-710-802

4. Gear Retract Braking - Operational Test

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)

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(Continued)

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

C. Procedure

SUBTASK 32-41-00-480-021

(1) Make sure the tires have chocks installed around them.

SUBTASK 32-41-00-860-015

(2) Release the parking brake.

SUBTASK 32-41-00-480-022

(3) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-41-00-480-023

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-00-790-004

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(5) For the A and the B hydraulic systems, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-41-00-860-016

WARNING: MAKE SURE THE LANDING GEAR ARE DOWN AND LOCKED. INSTALL GROUND LOCK PINS IN ALL LANDING GEAR TO PREVENT LANDING GEAR OPERATION. IF YOU DO NOT INSTALL GROUND LOCK PINS, INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(6) Put the landing gear control lever in the UP position.

SUBTASK 32-41-00-710-023

(7) Look at the wear pin indictor on each brake to make sure that the hydraulic pressure has been applied (brake has set).

SUBTASK 32-41-00-710-024

(8) Put the landing gear control lever in the DOWN position.

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SUBTASK 32-41-00-710-025

(9) Look at the wear pin indicators on each brake to make sure that the brakes have released (brakes not set).

SUBTASK 32-41-00-860-017

(10) For the A and B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-41-00-480-026

(11) If you are done with the maintenance, then remove the chocks from around the tires.

END OF TASK

TASK 32-41-00-720-801

5. Accumulator - Operational Test

A. General

(1) This procedure is a scheduled maintenance task.

(2) This task has instructions to test the operation of the brake accumulator system. This will test the operation of the accumulator charging valve, the pressure transmitter, the accumulator isolation valve, and the accumulator pressure gage.

B. References

Reference	Title
12-15-11-610-801	Check of the Brake Accumulator Precharge Pressure (P/B 301)
24-22-00-860-811	Supply Electrical Power (P/B 201)
24-22-00-860-812	Remove Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Procedure

SUBTASK 32-41-00-480-027

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-00-480-028

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-41-00-480-029

(3) Make sure the tires have chocks installed around them.

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SUBTASK 32-41-00-860-018

(4) Release the parking brake.

SUBTASK 32-41-00-860-019

(5) For the A and B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-41-00-840-003

(6) Fully push the brake pedals 12 times to remove hydraulic pressure from the brake accumulator.

NOTE: You can look at the wear pin indicators on each brake to see that the brakes no longer actuate when the brake pedals are pushed.

SUBTASK 32-41-00-710-026

(7) Permit approximately 5 minutes for the accumulator hydraulic pressure to become stabilized.

SUBTASK 32-41-00-700-001

(8) To make sure the brake accumulator has the correct pressure precharge, do this task: Check of the Brake Accumulator Precharge Pressure, TASK 12-15-11-610-801.

SUBTASK 32-41-00-790-005

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(9) For the A and the B hydraulic systems, for at least 2 minutes, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-41-00-710-027

(10) Make sure the pressure shown by the HYD BRAKE PRESS gage on the First Officer's panel reads within 100 psig (689 kPa) of the hydraulic system 'B' pressure.

SUBTASK 32-41-00-710-028

(11) Make sure the HYD BRAKE PRESS gage on the First Officer's panel reads within 100 psig (689 kPa) of the brake accumulator pressure gage on the rear bulkhead in the right main gear wheel well.

SUBTASK 32-41-00-860-020

(12) For the B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-41-00-710-033

(13) Wait approximately one minute until the B hydraulic system pressure drops to less than 1000 psi.

SUBTASK 32-41-00-710-029

(14) Push the brake pedals to the stops 7 times while you observe the brake accumulator pressure.

NOTE: Wait approximately 3 seconds after each time you apply the brakes.

(a) Make sure the brake accumulator pressure does not decrease with each brake application.

SUBTASK 32-41-00-860-021

(15) For the A hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-41-00-710-031

(16) Make sure the HYD BRAKE PRESS gauge on the First Officer's panel reads 3000 ± 150 psig.

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SUBTASK 32-41-00-710-032

(17) Push the brake pedals to the stops 7 times while you observe the brake accumulator pressure.

NOTE: Wait approximately 3 seconds after each time you apply the brakes.

(a) Make sure the brake accumulator pressure decreases with each brake application.

SUBTASK 32-41-00-700-002

(18) To make sure the brake accumulator has the correct pressure precharge, do this task: Check of the Brake Accumulator Precharge Pressure, TASK 12-15-11-610-801.

SUBTASK 32-41-00-860-022

(19) Set the parking brake.

SUBTASK 32-41-00-860-023

(20) If it is not necessary, remove electrical power. To do this, do this task: Remove Electrical Power, TASK 24-22-00-860-812.

——————— END OF TASK ———————

TASK 32-41-00-710-803

6. Alternate Brake System - Operational Test

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Procedure

SUBTASK 32-41-00-790-006

(1) Do these steps that follow to do an operational test of the alternate (System A) brake system:

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) For the system A (alternate), do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

(b) Fully push the captain's brake pedals.

(c) Examine the brake wear indicators on the brakes to make sure that the brakes engaged.

(d) Release the brake pedals.

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(e) Examine the brake wear indicators on the brakes to make sure that the brakes released.

(f) Do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

——————— END OF TASK ———————

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BRAKE DISCONNECT - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the brake disconnect

(2) An installation of the brake disconnect.

B. The brake disconnects are installed on each main landing gear brake.

TASK 32-41-11-000-801

2. Brake Disconnect Removal

(Figure 401)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

C. Prepare for the Removal

SUBTASK 32-41-11-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-11-860-001

(2) For the A and B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-41-11-480-002

(3) Make sure the tires have chocks installed around them.

SUBTASK 32-41-11-860-002

(4) Release the parking brake.

SUBTASK 32-41-11-860-003

(5) Fully push the captain's brake pedals twelve times to remove the pressure from the brake accumulator.

SUBTASK 32-41-11-020-001

(6) Disconnect the hose half [1] of the quick disconnect from the brake half [7] of the quick disconnect:

(a) Push the barrel toward the brake and turn the barrel clockwise to disengage the brake half from the hose half.

(b) Pull up on the barrel [2] of the hose half [1] of the quick disconnect until the threads of the two halves are engaged.

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(c) Turn the barrel [2] counterclockwise to disconnect the hose half [1] from the brake half [7] of the quick disconnect.

D. Brake Disconnect Removal (Hose Half)

SUBTASK 32-41-11-020-002

(1) Disconnect the hydraulic hose from the hose half [1] of the quick disconnect.

SUBTASK 32-41-11-480-003

(2) Install a plug on the hydraulic hose.

E. Brake Disconnect Removal (Brake Half)

SUBTASK 32-41-11-020-003

(1) Remove the bolts [3] and washers [4] that hold the brake half [7] of the quick disconnect to the brake.

SUBTASK 32-41-11-020-004

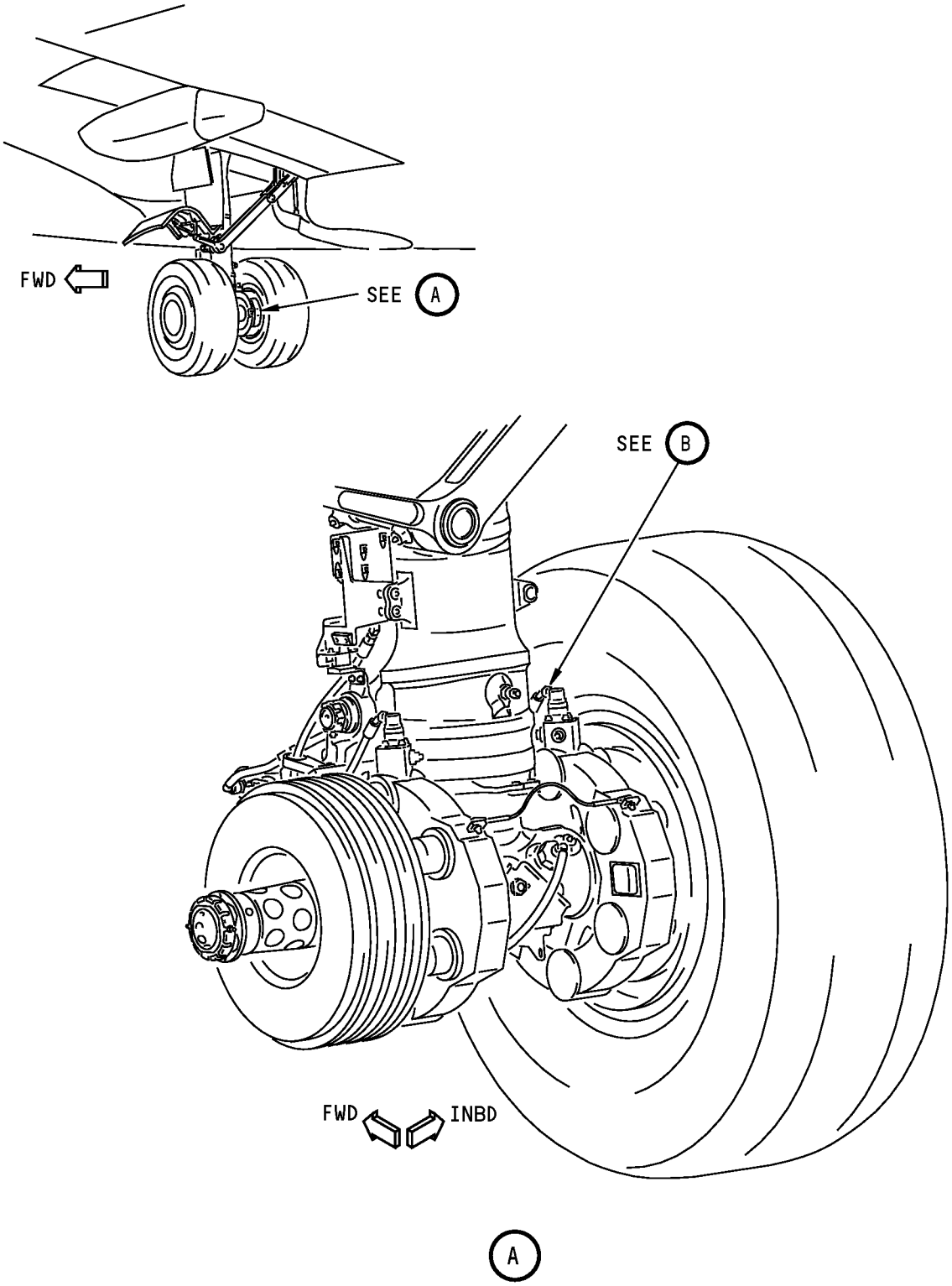
(2) Remove the brake half [7] of the quick disconnect from the brake.

SUBTASK 32-41-11-020-005

(3) Remove and discard the packing [6] and the backup rings [5] from the brake half [7] of the quick disconnect.

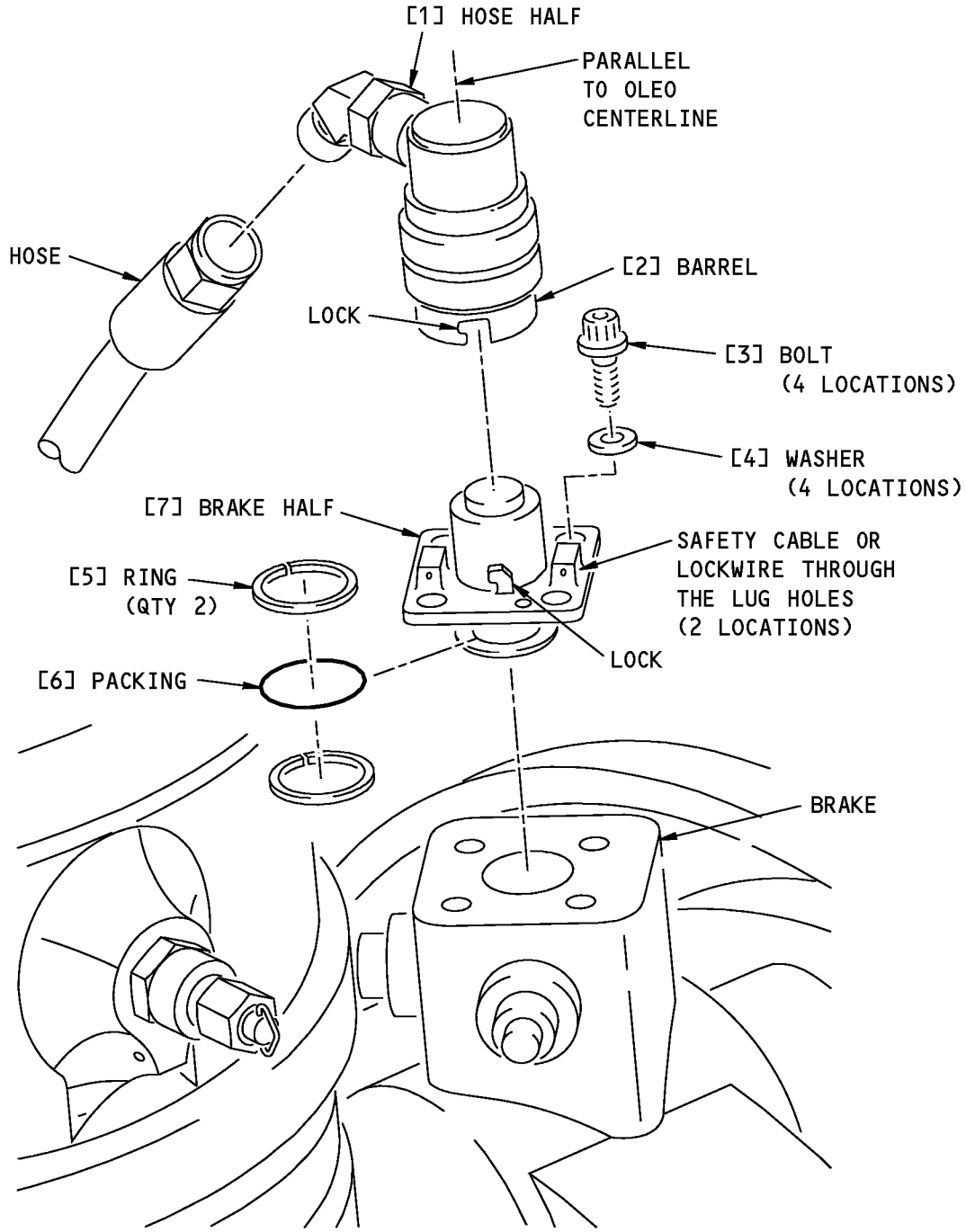
——————— END OF TASK ———————

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Brake Disconnect Installation
Figure 401 (Sheet 1 of 2)/32-41-11-990-801

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Brake Disconnect Installation
Figure 401 (Sheet 2 of 2)/32-41-11-990-801

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TASK 32-41-11-400-801

3. Brake Disconnect Installation

(Figure 401)

A. References

Reference	Title
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)

B. Consumable Materials

Reference	Description	Specification
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)
D00571	Grease - Polyalkylene Glycol, Lithium - Batco X8401-2	

C. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Brake Disconnect Installation

SUBTASK 32-41-11-420-001

(1) Brake Disconnect Installation (Hose Half):

(a) Remove the plug from the hydraulic hose.

(b) Connect the hydraulic hose to the hose half [1] of the quick disconnect.

SUBTASK 32-41-11-420-002

(2) Brake Disconnect Installation (Brake Half):

(a) Lubricate the new packing [6] and the backup rings [5] with fluid, D00153.

(b) Install the new packing [6] and the backup rings [5] on the brake half [7] of the quick disconnect.

(c) Apply a thin layer of Batco X8401-2 grease, D00571 to the brake half of the disconnect.

(d) Make sure the Batco X8401-2 grease, D00571 is on the diametral surface above the upper retaining ring and the lower surface of the mounting flange.

(e) Install the brake half [7] of the quick disconnect on the brake.

1) Make sure the alignment pin on the brake goes into the alignment hole in the brake half [7] of the quick disconnect.

(f) Apply Batco X8401-2 grease, D00571 to the bolts [3].

(g) Install the bolts [3] and washers [4] that hold the brake half [7] of the quick disconnect to the brake.

(h) Tighten the bolts [3] to 72 - 82 pound-inches (8.1 - 9.2 newton-meters).

(i) Install lockwire on the bolts [3] in pairs.

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(j) Make sure the lockwire or cable passes through the lug hole to the other bolt head on each side of the disconnect (Figure 401).

SUBTASK 32-41-11-420-003

(3) Install the hose half [1] of the quick disconnect to the brake half [7] of the quick disconnect on the brake:

(a) Install the hose half [1] on the brake half [7]:

1) Turn the hose half [1] until the internal tangs align with the slots inside the brake half [7] and you can push the hose half down.

2) Push down on the barrel [2] and turn it clockwise to engage the threads.

3) Turn the barrel [2] clockwise until the lock in the bottom of the barrel snaps onto the external lock on the brake half [7].

4) Make sure the elbow fitting is parallel to the oleo centerline or up to twenty degree toward the shock strut to avoid hoses rubbing on the brake housing.

(b) Do a visual check to make sure the lock on hose half [1] is fully and correctly engaged with the lock on the brake half [7].

E. Brake Disconnect Installation Test

SUBTASK 32-41-11-790-001

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) For the A and the B hydraulic systems, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-41-11-860-004

(2) Fully push and hold the captain's brake pedals.

NOTE: You can set the parking brake to hold the pedals.

SUBTASK 32-41-11-790-002

(3) Do a check of the hose half [1] and brake half [7] for leaks.

SUBTASK 32-41-11-790-003

(4) Release the captain's brake pedals (or parking brake).

F. Put the Airplane Back to Its Usual Condition

SUBTASK 32-41-11-860-005

(1) For the A and B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

——————— END OF TASK ———————

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BRAKE METERING VALVE CONTROL QUADRANT - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the brake metering valve control quadrant (referred to as quad and shaft assy [22]).

(2) An installation of the brake metering valve control quadrant.

B. There are two brake metering valve control quadrants on the airplane. One control quadrant is for the captain's brake system. The other control quadrant is for the first officer's brake system. This procedure is applicable to the two control quadrants.

TASK 32-41-21-000-801

2. Brake Metering Valve Control Quadrant Removal

(Figure 401)

A. References

Reference	Title
20-10-10-000-801	Turnbuckle Locking Clips Removal (P/B 401)
25-22-00-000-801	Passenger Seat Removal (P/B 401)
25-27-15-000-801	Carpet Removal (P/B 401)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
53-21-00-000-801	Passenger Cabin Floor Panel Removal (P/B 401)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1569	Clamp - Control Cable (Part #: A20005-9, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

D. Access Panels

Number	Name/Location
112A	Forward Access Door

E. Prepare for the Removal

SUBTASK 32-41-21-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

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SUBTASK 32-41-21-840-001

(2) To get access to the cables and the turnbuckles (forward of the nose wheel well), do this step:

(a) Open this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-41-21-840-002

(3) Remove the passenger seats from station 706 through station 727, do this task: Passenger Seat Removal, TASK 25-22-00-000-801.

NOTE: Do this step to get access to the control quadrant assemblies of the brake metering valves.

SUBTASK 32-41-21-840-003

(4) For the area that is below the seats you removed, do this task: Carpet Removal, TASK 25-27-15-000-801.

SUBTASK 32-41-21-840-004

(5) Remove the center floor panels to get access to the control quadrant assemblies for the brake metering valve, do this task: Passenger Cabin Floor Panel Removal, TASK 53-21-00-000-801.

F. Brake Metering Valve Control Quadrant Removal

SUBTASK 32-41-21-020-001

(1) Install a control cable clamp, SPL-1569, on the two cables that are connected to the control quad and shaft assy [22] that you will remove, this will keep light tension on the cables.

NOTE: Light tension on the cables will prevent wind off on the cable drums and also make sure they do not move out from the pulley guides.

SUBTASK 32-41-21-020-002

(2) Go to the access opening that is forward of the nose wheel well and do the following:

(a) To remove the locking clip [1] from the turnbuckle [2] on the brake forward control cables [3] for the brake metering control quad and shaft assy [22] you will remove, do this task: Turnbuckle Locking Clips Removal, TASK 20-10-10-000-801.

(b) Loosen the turnbuckle [2] for the forward control cable [3] to release the tension in the cable.

SUBTASK 32-41-21-020-003

(3) Go to the access opening in the passenger floor and do the steps that follow:

(a) Disconnect the forward control cable [3] from the control quad and shaft assy [22]:

1) Remove the pins [38], that holds the ends of the forward control cables [3], from the quad and shaft assy [22].

2) Pull the fittings on the end of the forward control cables [3] from the control quad and shaft assy [22].

SUBTASK 32-41-21-020-004

(4) Go to the wheel well and remove components from the quadrant shaft as follows:

(a) Do the steps that follow to disconnect the rod [6] from the crank [5].

1) Remove the nut [4], the bolt [9], the washer [12], retainer [10], and the bushing [11].

2) Remove the rod [6] end from its position in the crank [5].

(b) Do the steps that follow to remove the crank [5] from the quadrant shaft:

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1) Remove the cotter pin [30], the nut [29], the washers [27], [28], and the spacer [26] from the quadrant shaft.
2) Remove the bolt [20], the washer [21], and the nut [23] from the crank [5] on the quadrant shaft.
3) Remove the crank [5] and the spacer [25] from the quadrant shaft.
4) Install the spacer [25], the spacer [26], the washers [27], [28], and the nut [29] back on to the quadrant shaft.

NOTE: These parts are reinstalled to help keep the quadrant assembly in the support when you remove it.

(c) Remove the four bolts [14], [17], and their washers [18], [15] that hold the control quad and shaft assy [22] to the pressure deck.

SUBTASK 32-41-21-020-005

(5) Go to the access opening in the passenger floor and do the steps that follow:

NOTE: It is necessary to have a person in the wheel well to turn the nuts [31], [33] while you hold the bolts [36], [37].

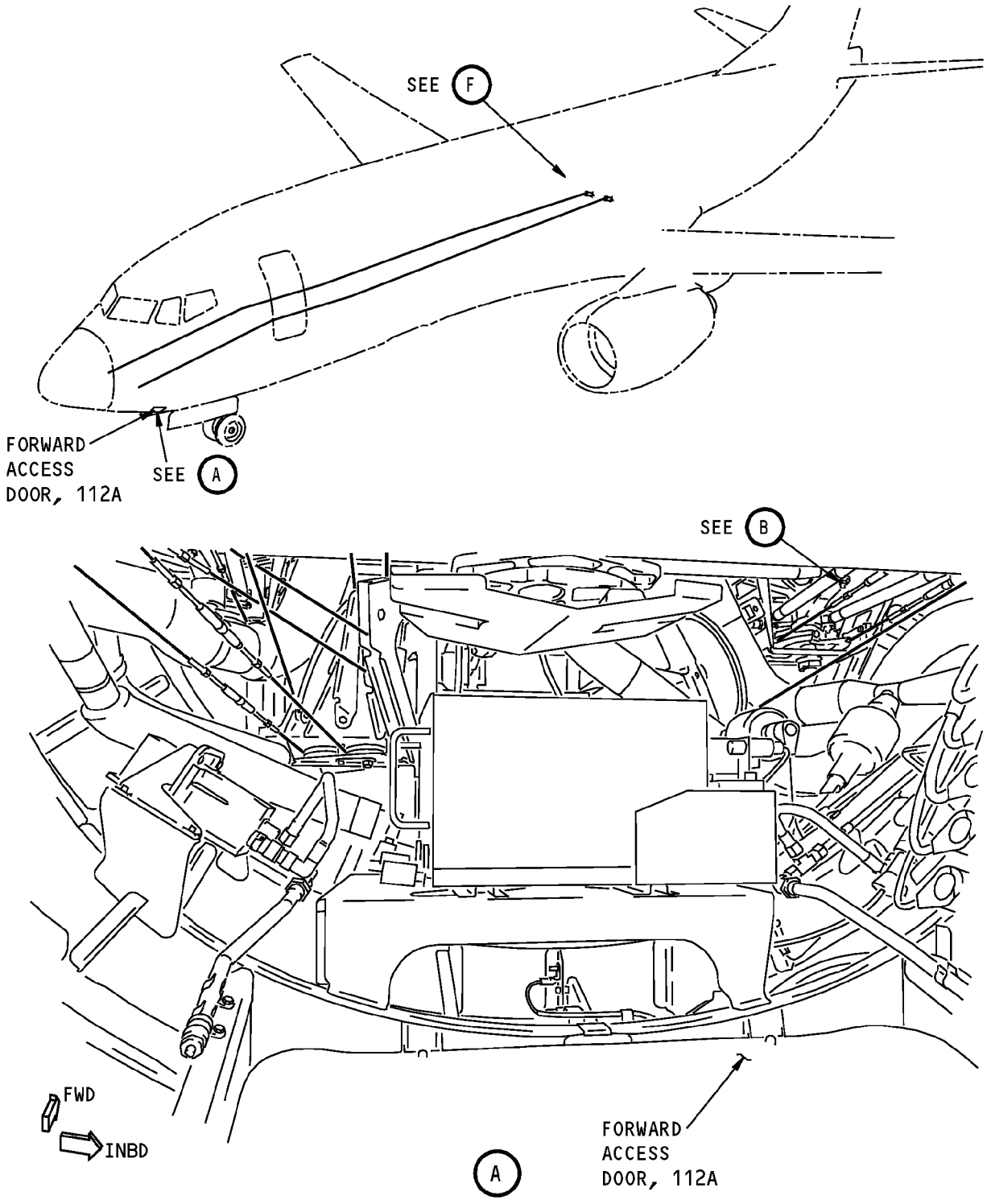
(a) Remove the four bolts [36], [37], their washers [32], [34], and their nuts [31], [33] that hold the control quad and shaft assy [22] to the pressure deck.

1) Make sure the person in the wheel well holds the rig pin bracket [13] and removes it when the bolts [36], [37] are removed.

(b) Remove the control quad and shaft assembly [22] from the pressure deck.

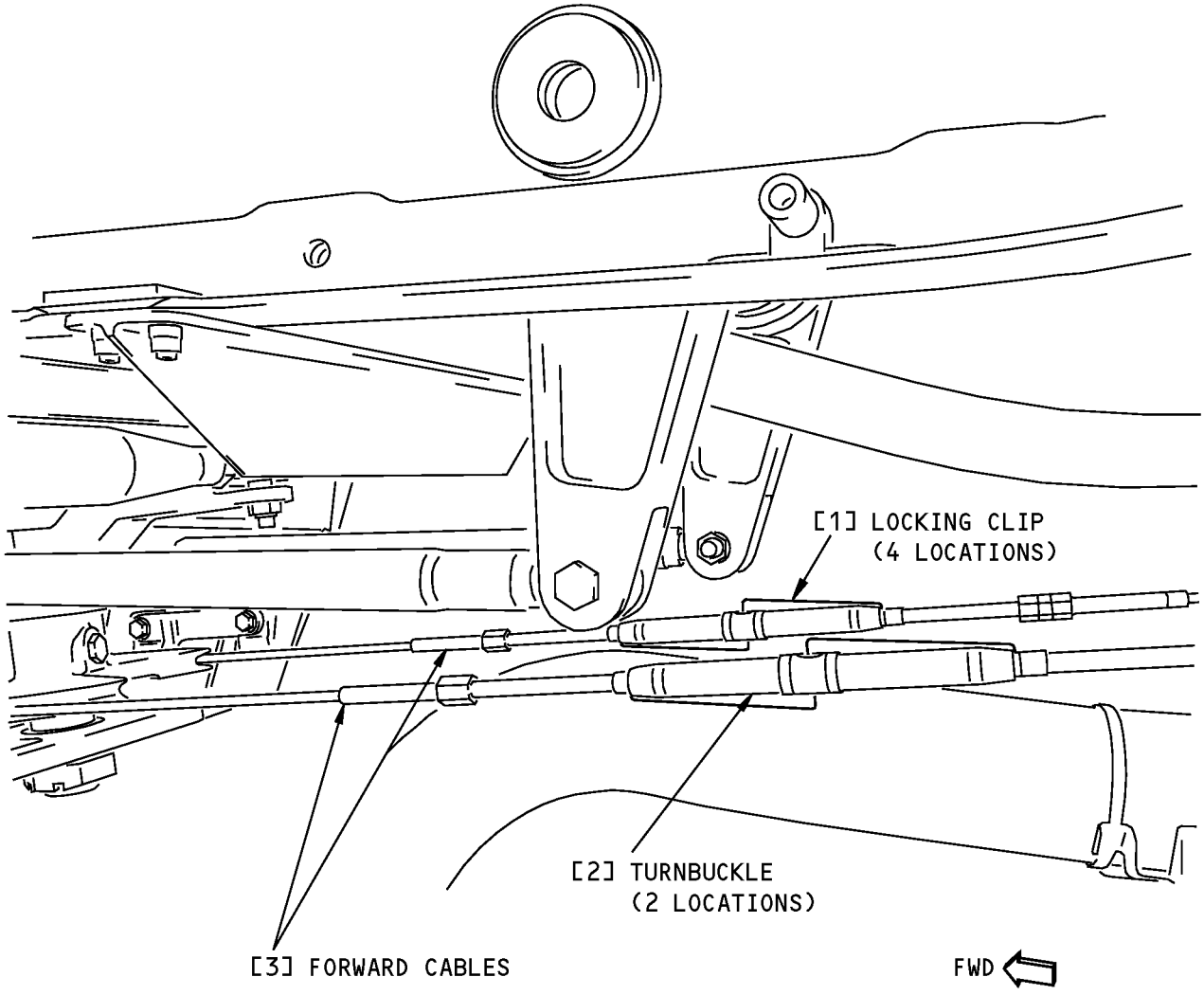
——————— END OF TASK ———————

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Brake Metering Valve Control Quadrant Installation
Figure 401 (Sheet 1 of 6)/32-41-21-990-801

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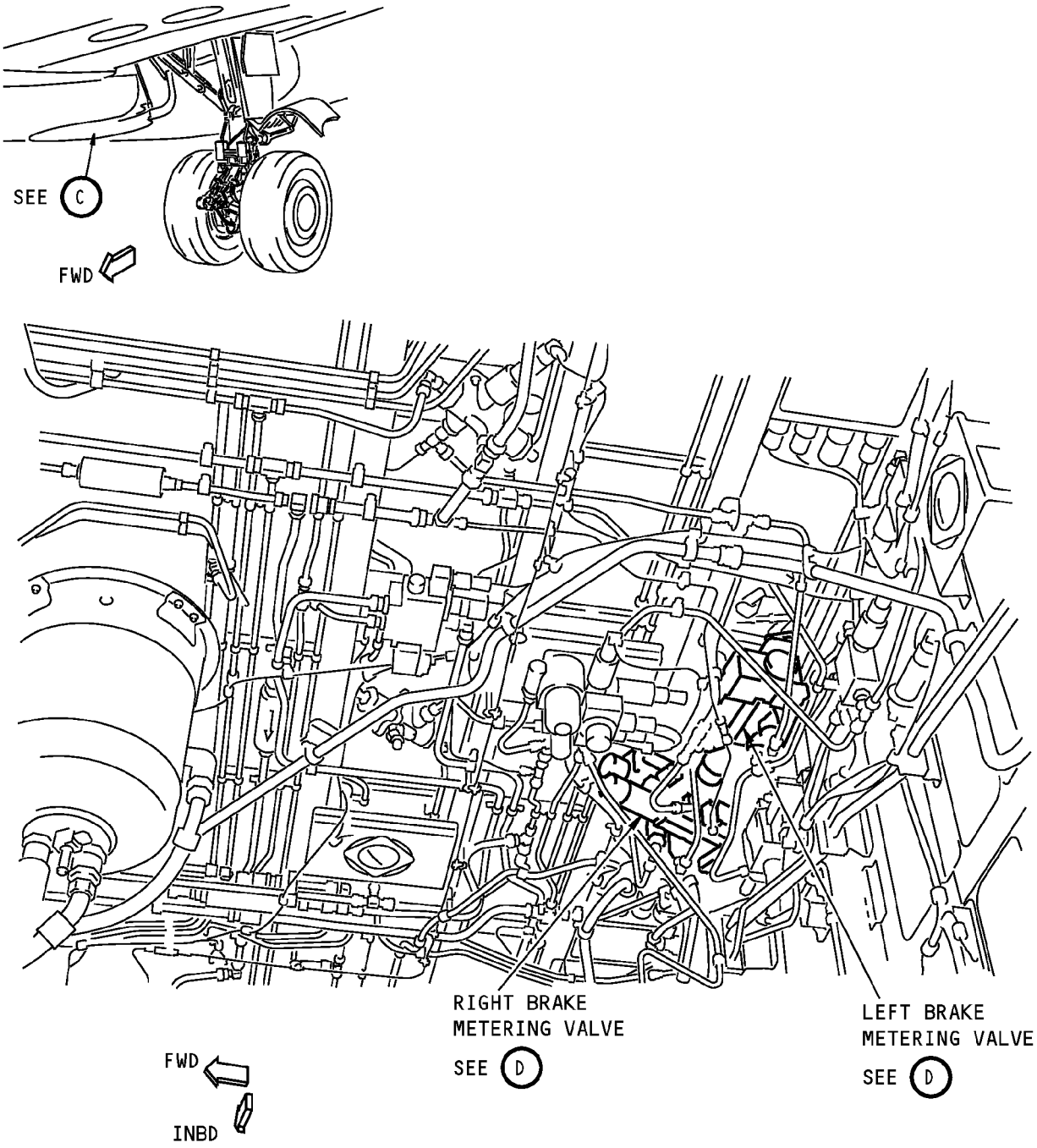


RIGHT BRAKE CABLES
(LEFT BRAKE CABLES ARE EQUIVALENT)

B

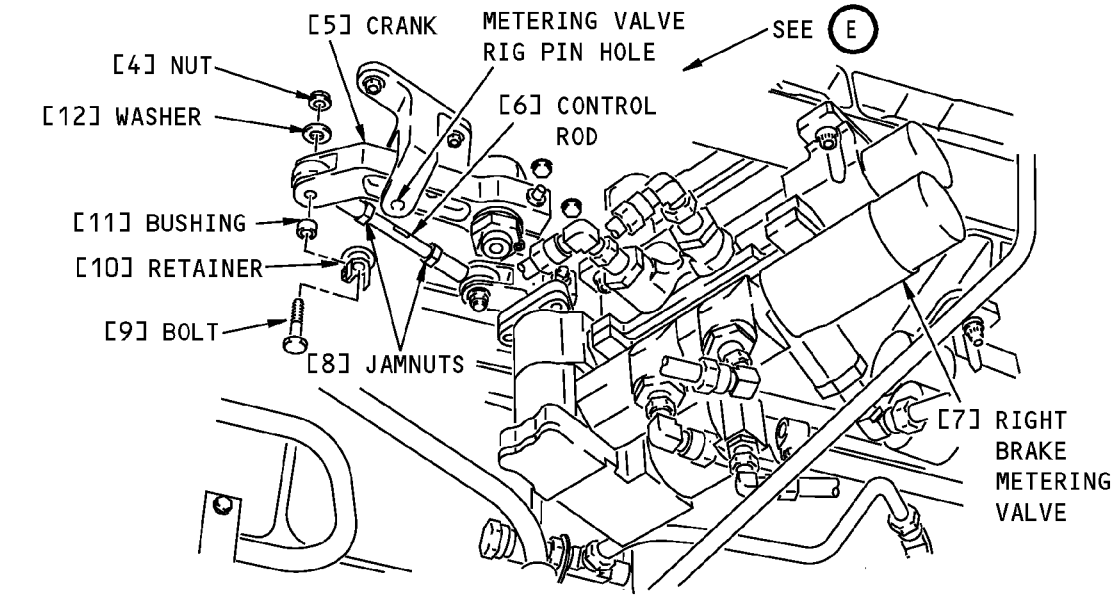
Brake Metering Valve Control Quadrant Installation
Figure 401 (Sheet 2 of 6)/32-41-21-990-801

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Brake Metering Valve Control Quadrant Installation
Figure 401 (Sheet 3 of 6)/32-41-21-990-801

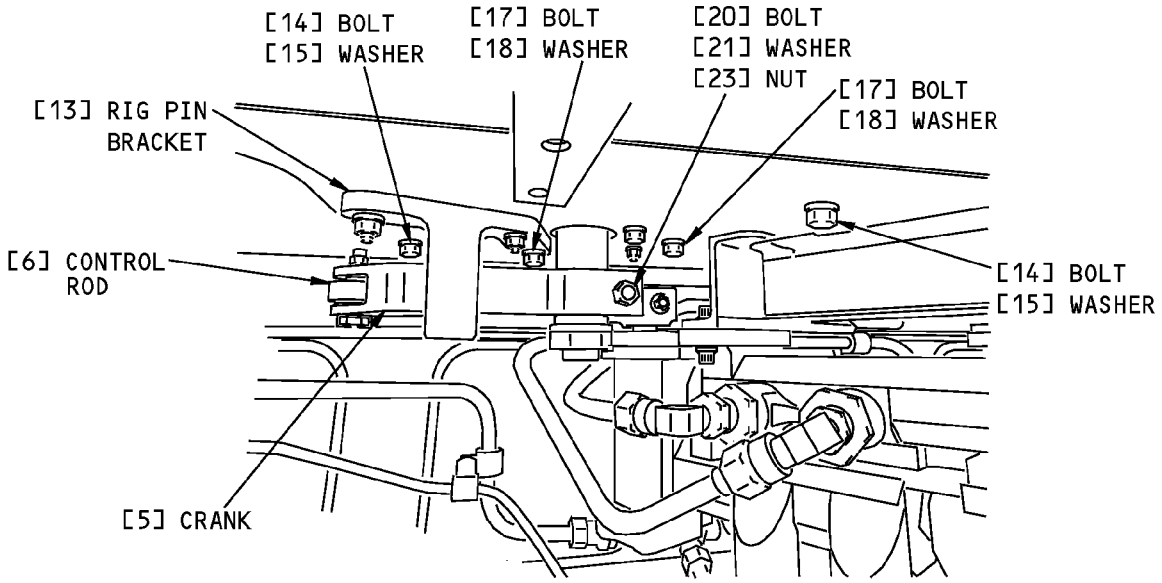
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FWD

RIGHT BRAKE METERING VALVE
(LEFT BRAKE METERING VALVE IS EQUIVALENT)

D

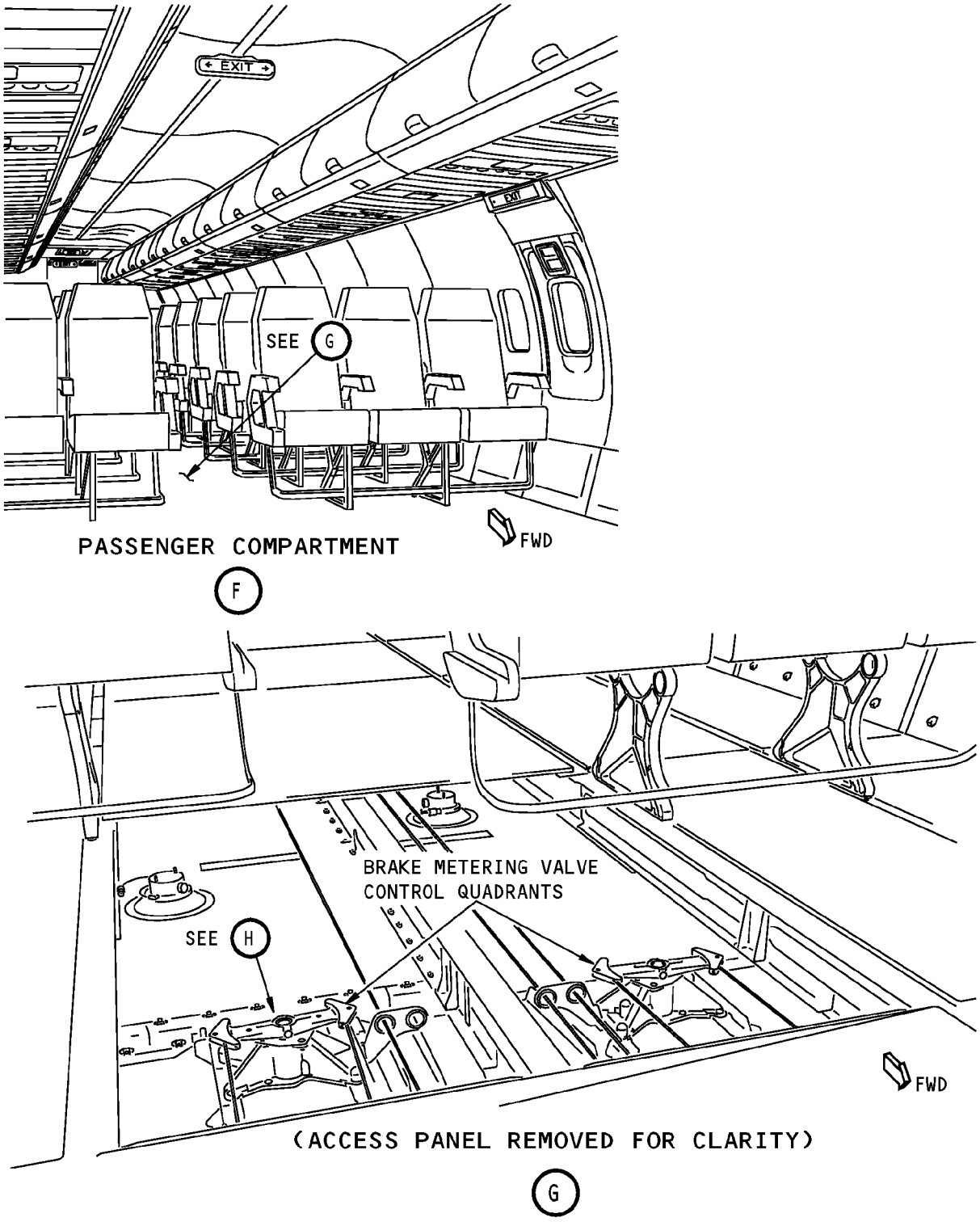


(VIEW IN AFT DIRECTION)

E

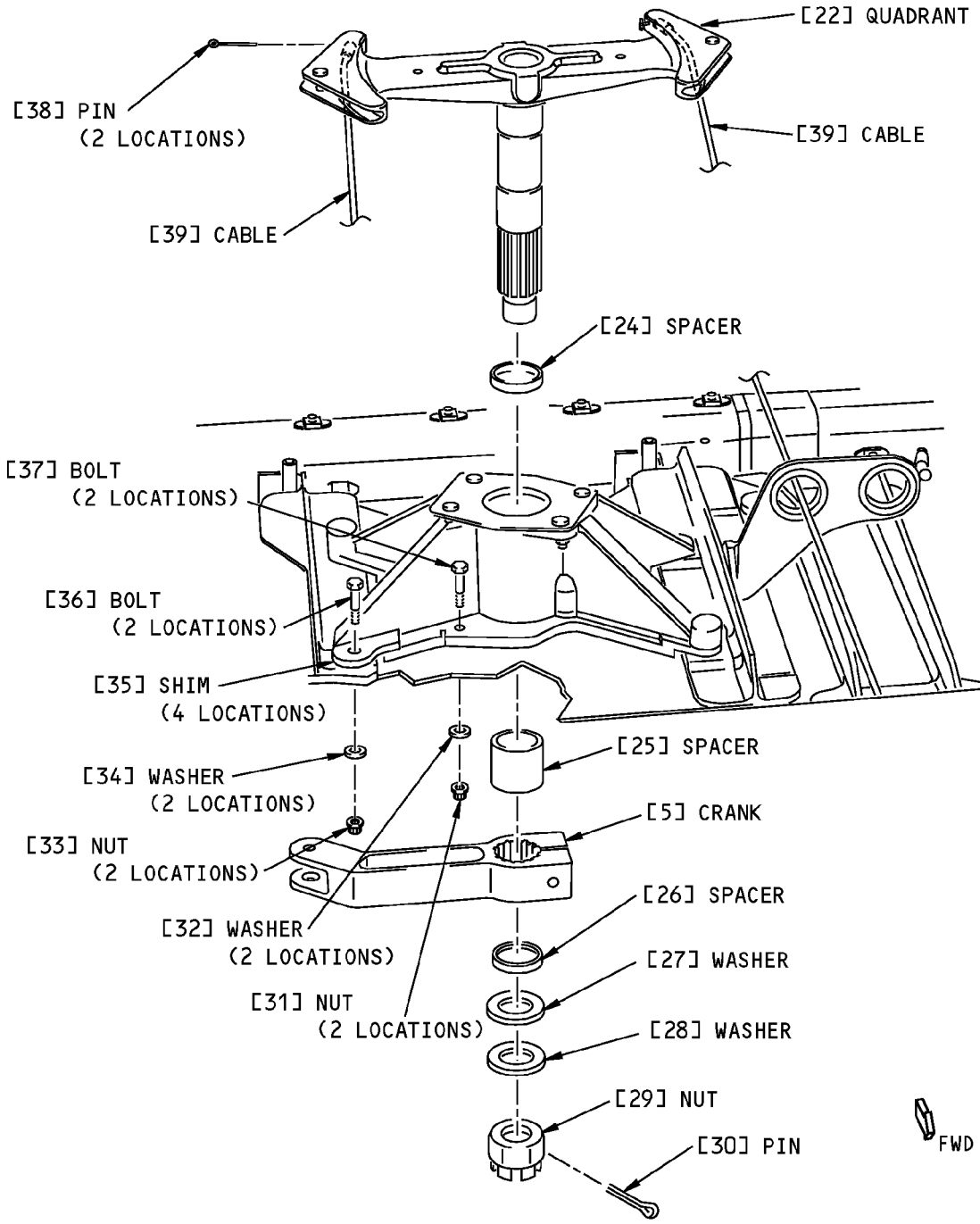
Brake Metering Valve Control Quadrant Installation
Figure 401 (Sheet 4 of 6)/32-41-21-990-801

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Brake Metering Valve Control Quadrant Installation
Figure 401 (Sheet 5 of 6)/32-41-21-990-801

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RIGHT BRAKE METERING VALVE CONTROL QUADRANT

H

Brake Metering Valve Control Quadrant Installation
Figure 401 (Sheet 6 of 6)/32-41-21-990-801

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TASK 32-41-21-400-801

3. Brake Metering Valve Control Quadrant Installation

(Figure 401)

A. References

Reference	Title
20-10-10-400-801	Turnbuckle Lock Installation (P/B 401)
25-22-00-400-802	Passenger Seat Installation (P/B 401)
25-27-15-400-801	Carpet Installation (P/B 401)
32-41-00-820-801	Hydraulic Brake System Adjustment (P/B 501)
53-21-00-400-801	Passenger Cabin Floor Panel Installation (P/B 401)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1569	Clamp - Control Cable (Part #: A20005-9, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
22	Quad and shaft assembly	Not Specified	
30	Pin	32-41-21-03-070	HAP ALL
38	Pin	32-41-81-01-005	HAP 001-013, 015-026, 028-054
		32-41-81-01C-005	HAP 101-999

E. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

F. Access Panels

Number	Name/Location
112A	Forward Access Door

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G. Brake Metering Valve Control Quadrant Installation

SUBTASK 32-41-21-160-001

(1) Make sure the pressure deck is clean in the area where the control quad and shaft assy [22] is installed.

SUBTASK 32-41-21-020-006

(2) Do the steps that follow to install shims [35] at the four outer bolt locations for the control quad and shaft assy [22]:

(a) Put shims [35] on the pressure deck at the four outer bolt locations for the control quad and shaft assy [22].

(b) Put the control quad and shaft assy [22] in its location on the shims [35] and pressure deck.

(c) Make sure there is no clearance greater than 0.005 (0.127 mm) between any shim [35] and the control quad and shaft assy [22].

(d) If the clearance at a shim [35] is too large, remove laminations from the other shims to get the tolerance at that shim.

(e) Remove the control quad and shaft assy [22] from its position.

(f) Re-install the shims [35] with wet primer, C00259.

SUBTASK 32-41-21-390-001

(3) Use sealant, A00247 to apply a fay surface seal to the surface between the control quad and shaft assy [22], the pressure deck and around the shims [35].

NOTE: Make sure there is no obstructions that cover the drain hole for the control quadrant assembly.

SUBTASK 32-41-21-420-001

(4) Put the quad and shaft assembly [22] in its location on the shims [35] and pressure deck.

SUBTASK 32-41-21-390-002

(5) In the wheel well, use sealant, A00247 to apply a fay surface seal to the surface between the rig pin bracket [13] and the ceiling of the wheel well.

SUBTASK 32-41-21-420-002

(6) Put the rig pin bracket [13] in its location on the wheel well ceiling when you install the bolts in the next step.

SUBTASK 32-41-21-020-007

(7) Do the steps that follow to install the bolts [36], [37] in the passenger compartment for the control quad and shaft assy [22]:

NOTE: It is necessary to have a person in the wheel well to turn the nuts while you hold the bolts.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(a) Apply compound, C00913 to the four bolts [36], [37], the washers [32], [34], and the nuts [31], [33].

(b) Install the four bolts [36], [37], the washers [32], [34], and the nuts [31], [33] which hold the control quad and shaft assy [22] to the pressure deck.

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1) Make sure the person in the wheel well holds the rig pin bracket [13] to the wheel well ceiling when you install the bolts.

SUBTASK 32-41-21-420-003

(8) Go to the wheel well and install the components for the control quad and shaft assy [22] as follows:

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(a) Apply compound, C00913 to the 4 bolts [14], [17] and the washers [15], [18].

(b) Install the four bolts [14], [17] and the washers [15], [18] that hold the control quad and shaft assy [22] to the pressure deck.

(c) Remove the cotter pin [30], the nut [29], the washers [27], [28], and the spacers [25], [26] if they are installed on the quadrant shaft.

(d) Install the the spacer [25] on the quadrant shaft.

(e) Install the crank [5] on the shaft with the chamfer side of the spline toward the spacer [25].

(f) Install the spacer [26], the washer [27], [28], and the nut [29] on the control quadrant shaft.

(g) Tighten the nut [29] to 10-35 pound-inches (1.1-4 newton-meters).

(h) Install the new cotter pin [30] in the nut [29] and the shaft.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(i) Apply compound, C00913 to the bolt [20] for the crank [5].

(j) Install the bolt [20], the washer [21], and the nut [23] on the crank [5] to hold it to the control quadrant shaft.

SUBTASK 32-41-21-420-004

(9) Do the steps that follow to connect the rod [6] to the crank [5].

(a) Put the rod [6] in its position in the crank [5].

(b) Install the bushing [11] and then the retainer [10] on the crank [5].

(c) Install the the bolt [9], the washer [12], and the nut [4] to connect the rod [6] to the crank [5].

SUBTASK 32-41-21-420-005

(10) Go to the access opening in the passenger floor and do the steps that follow:

(a) Connect the forward control cable [3] to the control quad and shaft assy [22]:

1) Put the fittings on the end of the control cables [3] in their position in the control quad and shaft assy [22].

2) Install the new pins [38] that hold the ends of the control cables in the quad and shaft assy [22].

SUBTASK 32-41-21-020-008

(11) Go to the access opening that is forward of the nose wheel well and do the following:

(a) Tighten the turnbuckle [2] for the forward control cable [3] to put the cables in light tension.

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SUBTASK 32-41-21-020-009

(12) Do this task: Hydraulic Brake System Adjustment, TASK 32-41-00-820-801.

(a) Make sure you remove the control cable clamp, SPL-1569 from the two cables that are connected to the control quad and shaft assy [22] before you adjust the control cables.

(b) Make sure that a locking clips [1] are installed on the turnbuckles [2] when you have adjusted the control cables [3], do this task: Turnbuckle Lock Installation, TASK 20-10-10-400-801.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 32-41-21-840-005

(1) Close this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-41-21-840-006

(2) Install the floor panels, do this task: Passenger Cabin Floor Panel Installation, TASK 53-21-00-400-801.

SUBTASK 32-41-21-840-007

(3) Do this task: Carpet Installation, TASK 25-27-15-400-801.

SUBTASK 32-41-21-840-008

(4) Do this task: Passenger Seat Installation, TASK 25-22-00-400-802.

——————— END OF TASK ———————

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BRAKE METERING VALVE ASSEMBLY - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these three tasks:

(1) A removal of the brake metering valve

(2) An installation of the brake metering valve.

(3) A visual inspection of the brake metering valve.

C. There are two brake metering valve assemblies. There is one for each main landing gear. Each brake metering valve assembly supplies normal system braking and alternate system braking.

D. This procedure gives instructions to remove one brake metering valve assembly, it is applicable for the two brake metering valves.

E. The brake metering valves are in the aft section of the main landing gear wheel well on the ceiling.

F. In this procedure the brake metering valve will be referred to as the valve assy [1].

TASK 32-41-31-000-801

2. Brake Metering Valve Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Valve assembly	32-41-31-01-135	HAP 001-013, 015-026, 028-030

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare for the Removal

SUBTASK 32-41-31-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-31-480-002

(2) Make sure the tires have chocks installed around them.

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SUBTASK 32-41-31-860-001

(3) Release the parking brake.

SUBTASK 32-41-31-860-002

(4) To release the pressure from the normal brake (System B) and the alternate brake (System A) hydraulic system, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-41-31-840-001

(5) Fully push the brake pedals 12 times to remove hydraulic pressure from the brake accumulator.

E. Brake Metering Valve Removal

SUBTASK 32-41-31-020-001

(1) Install labels on the hydraulic lines to make the installation easier.

SUBTASK 32-41-31-020-002

(2) Disconnect the hydraulic lines from the valve assembly [1]]:

SUBTASK 32-41-31-480-003

(3) Install plugs in the hydraulic lines and caps on the hydraulic fittings on the valve.

SUBTASK 32-41-31-020-003

(4) Remove the nut [10], washer [9], and the bolt [8] that holds the crank to the shaft [11] on the brake metering valve assy [1].

SUBTASK 32-41-31-020-004

(5) Remove the nuts [12], the washers [13], [5], the bolts [3], [4], [6], [7], and the radius filler [2] that hold the brake metering valve to the wheel well ceiling.

SUBTASK 32-41-31-020-005

(6) If the replacement brake metering valve assy [1] does not have hydraulic fittings installed, do these steps:

(a) Remove the hydraulic adapters [20], [24], [29], packings [14], packings [16], packings [17], packings [19], packing [21], packing [23], and the rings [15], [18], [22], from the removed valve assy [1].

(b) Remove the hydraulic filters [25], packings [26], packings [28], and the rings [27] from the removed valve assy [1].

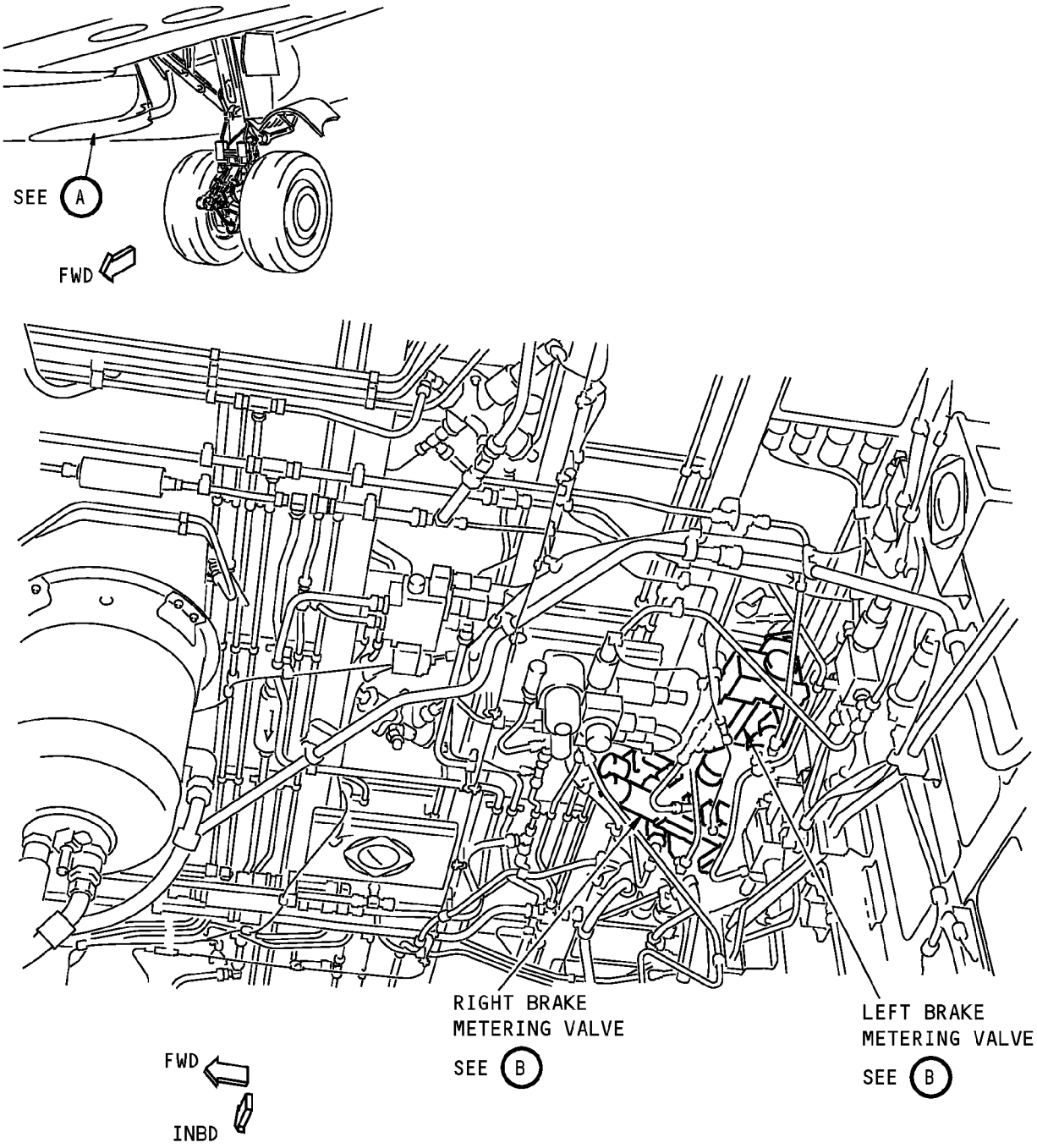
(c) Discard the packings and the rings.

SUBTASK 32-41-31-480-004

(7) Install plugs in the ports of the brake metering valve assy [1].

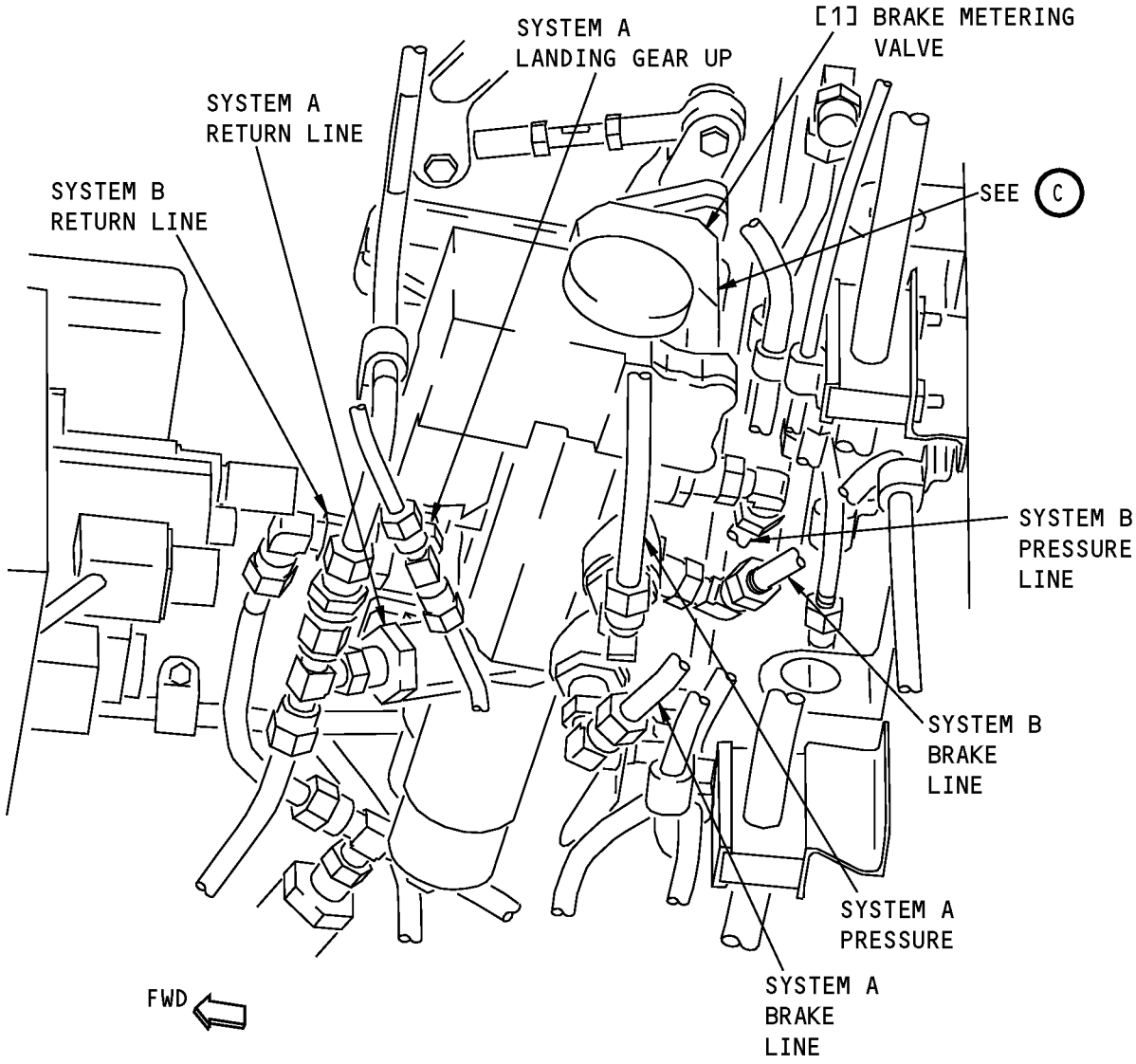
——————— END OF TASK ———————

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Brake Metering Valve Installation
Figure 401 (Sheet 1 of 4)/32-41-31-990-801

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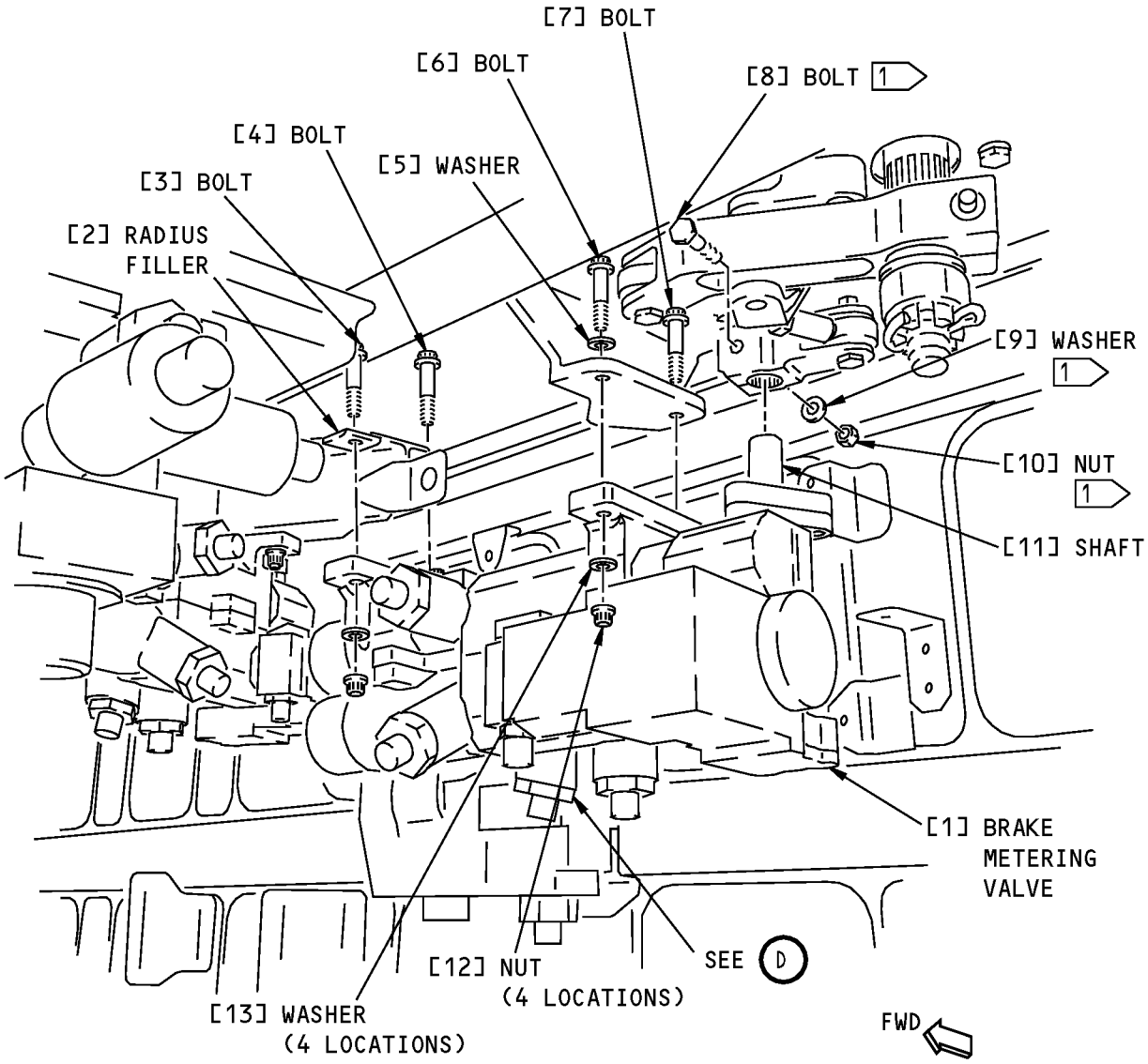


LEFT BRAKE METERING VALVE
(RIGHT BRAKE METERING VALVE IS EQUIVALENT)

B

Brake Metering Valve Installation
Figure 401 (Sheet 2 of 4)/32-41-31-990-801

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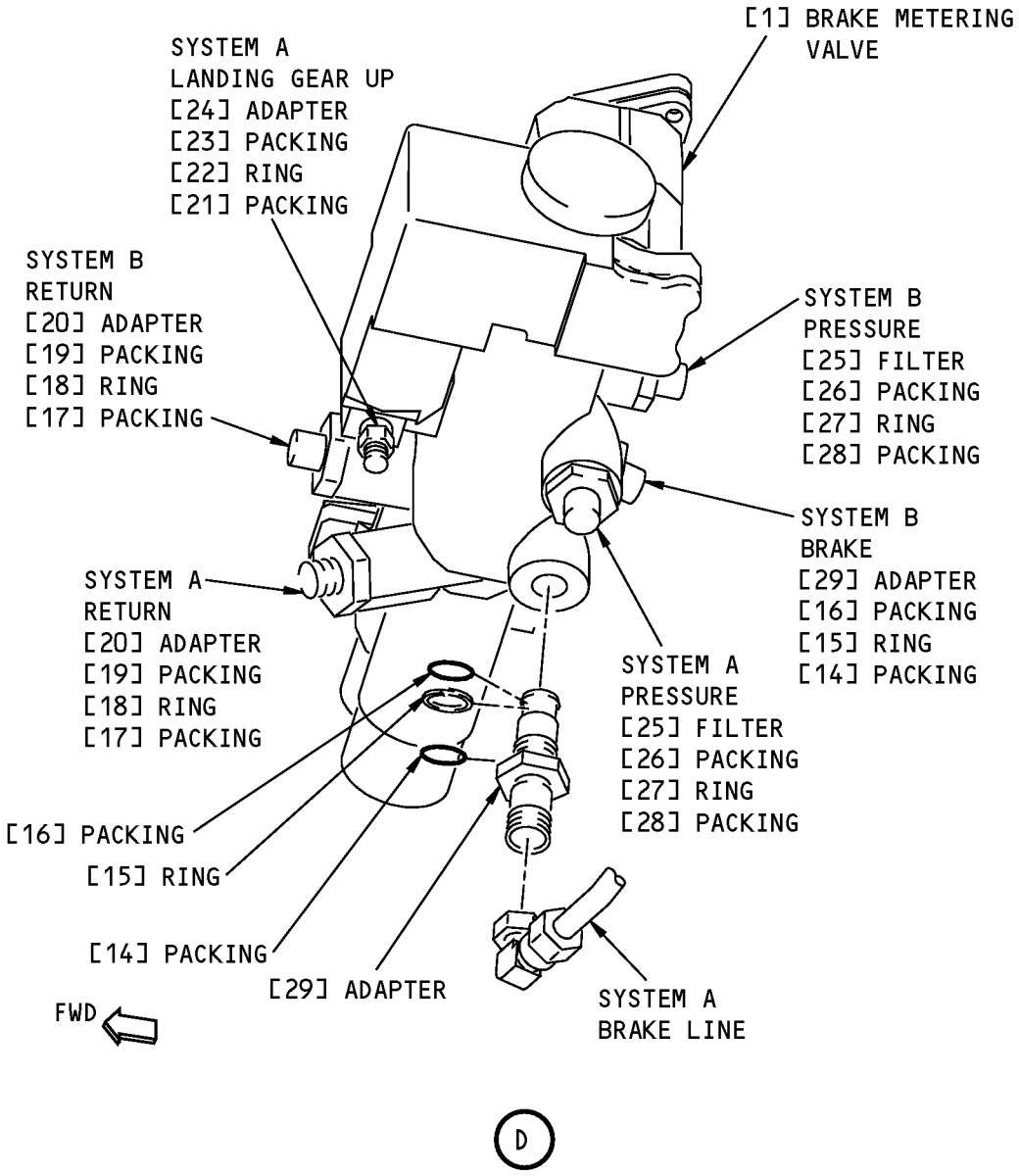
LEFT BRAKE METERING VALVE INSTALLATION

C

1 LEFT SIDE BOLT HEAD FACES FORWARD AS SHOWN, RIGHT SIDE BOLT HEAD FACES AFT

Brake Metering Valve Installation
Figure 401 (Sheet 3 of 4)/32-41-31-990-801

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Brake Metering Valve Installation
Figure 401 (Sheet 4 of 4)/32-41-31-990-801

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TASK 32-41-31-400-801

3. Brake Metering Valve Installation

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-41-00-820-801	Hydraulic Brake System Adjustment (P/B 501)
32-41-00-870-801	Hydraulic Brake System - Bleeding Upstream of the Antiskid Valves (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Valve assembly	32-41-31-01-135	HAP 001-013, 015-026, 028-030
14	Packing	32-41-31-01-195	HAP ALL
		32-41-31-01-210	HAP ALL
16	Packing	32-41-31-01-190	HAP ALL
		32-41-31-01-195	HAP ALL
		32-41-31-01-215	HAP ALL
17	Packing	32-41-31-01-175	HAP ALL
19	Packing	32-41-31-01-170	HAP ALL
21	Packing	32-41-31-01-155	HAP ALL
23	Packing	32-41-31-01-150	HAP ALL
26	Packing	32-41-31-01-210	HAP ALL
28	Packing	32-41-31-01-210	HAP ALL
		32-41-31-01-215	HAP ALL

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E. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

F. Brake Metering Valve Installation

SUBTASK 32-41-31-080-001

(1) Remove any plugs that are in the ports of the brake metering valve assy [1].

SUBTASK 32-41-31-420-001

(2) If the replacement brake metering valve assy [1] does not have hydraulic fittings installed, do these steps:

(a) Lubricate the hydraulic adapters, filters, packings, and rings with fluid, D00153.

(b) Install the ring [18], packings [17], and the packings [19] on the hydraulic adapter [20].

(c) Install the ring [22], packing [21], and the packing [23] on the hydraulic adapter [24].

(d) Install the ring [15], packings [14], and the packings [16] on the hydraulic adapter [29].

(e) Install the ring [27], the packings [26], and the packings [28] on the hydraulic filters [25].

(f) Install the fittings in the valve assy [1].

SUBTASK 32-41-31-420-006

(3) Install rig pin LGB3 (left side) or rig pin LGB4 (right side), F70207-88, from rig pin kit, SPL-1585, through the rig pin hole for the brake metering valve [1].

SUBTASK 32-41-31-420-002

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(4) Apply compound, C00913 to the bolts [3], [4], [6], [7], washers [13], [5], and the nuts [12] for the brake metering valve assy [1].

SUBTASK 32-41-31-420-003

(5) Hold the valve assembly [1] in its position on the airplane such that the shaft [11] goes into the crank.

SUBTASK 32-41-31-020-006

(6) Install the bolts [3], [4], [6], [7], the washers [13], [5], and the nuts [12, to hold the brake metering valve assy [1] to the wheel well ceiling.

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SUBTASK 32-41-31-420-004

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(7) Apply compound, C00913 to the bolt [8], washer [9], and the nut [10] that hold the crank to the shaft [11].

SUBTASK 32-41-31-020-007

WARNING: MAKE SURE THAT THE BOLT [8], WASHER [9] AND NUT [10], FOR THE RIGHT BRAKE METERING VALVE INSTALLATION ARE INSTALLED SO THE BOLT HEADS POINTS IN THE AFT DIRECTION. IF THE BOLT HEAD POINTS IN THE FORWARD DIRECTION, ON THE RIGHT SIDE INSTALLATION, DAMAGE TO HYDRAULIC LINES AND/OR PERSONS CAN OCCUR.

(8) Install the nut [10], washer [9], and the bolt [8] to hold the crank to the shaft [11] on the brake metering valve assy [1].

SUBTASK 32-41-31-820-001

(9) Make sure the rig pin LGB3 or LGB4 moves freely through the rig pin hole.

(a) If you can not move the rig pin freely, do the adjustment of the brake metering valve.

1) Do this task: Hydraulic Brake System Adjustment, TASK 32-41-00-820-801.

SUBTASK 32-41-31-080-003

(10) Remove the rig pin LGB3 or LGB4.

SUBTASK 32-41-31-080-002

(11) Remove the plugs from the hydraulic lines.

SUBTASK 32-41-31-420-005

(12) Connect the hydraulic lines to the brake metering valve assy [1].

G. Brake Metering Valve Installation Test

SUBTASK 32-41-31-790-001

(1) Do these steps to do a leak check and an operational check of the brake metering valve:

(a) For the normal (System B) hydraulic system:

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

1) Do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

2) Fully push the captain's brake pedals twelve times.

3) Look for leaks around the brake metering valve.

4) Examine the brake wear indicators on the brakes to make sure that the brakes engaged.

5) Do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

(b) For the alternate (System A) hydraulic system:

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WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

1) Do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.
2) Fully push the captain's brake pedals twelve times.
3) Look for leaks around the brake metering valve.
4) Examine the brake wear indicators on the brakes to make sure that the brakes engaged.

SUBTASK 32-41-31-710-001

(2) Do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-41-31-710-002

(3) Bleed the hydraulic systems:

(a) For the normal brake metering valves, do this task: Hydraulic Brake System - Bleeding Upstream of the Antiskid Valves, TASK 32-41-00-870-801.

(b) For the alternate brake metering valves, do this task: Hydraulic Brake System - Bleeding Upstream of the Antiskid Valves, TASK 32-41-00-870-801.

——————— END OF TASK ———————

TASK 32-41-31-000-802

4. Brake Metering Valve Visual Inspection

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Brake Metering Valve Inspection

SUBTASK 32-41-31-210-001

(1) Do a detail visual inspection of the brake metering valve.

——————— END OF TASK ———————

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MAIN LANDING GEAR BRAKE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the main landing gear brake referred to as brake assy [1]

(2) An installation of the main landing gear brake.

TASK 32-41-41-000-801

2. Main Landing Gear Brake Removal

(Figure 401)

A. References

Reference	Title
05-51-07-210-801	High Energy Stop (P/B 201)
07-11-03-580-801	Lift the Main Landing Gear Axles with the Axle Jacks (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-41-11-000-801	Brake Disconnect Removal (P/B 401)
32-45-11-000-801	Main Landing Gear Wheel and Tire Assembly Removal (P/B 401)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1816	Sling - Hot Brake, 6 Foot Mesh Length, 6 Inch Mesh Width (Part #: LIFTALLMESH7FT, Supplier: 23755, A/P Effectivity: 737-ALL)
COM-1818	Dolly - Wheel/Brake Change (Part #: 175, Supplier: 94861, A/P Effectivity: 737-ALL) (Part #: 175S-2, Supplier: 94861, A/P Effectivity: 737-ALL) (Part #: 9092-015, Supplier: 00994, A/P Effectivity: 737-ALL) (Part #: IA3201A-500, Supplier: 3D5B2, A/P Effectivity: 737-ALL) (Opt Part #: 9092-010, Supplier: 00994, A/P Effectivity: 737-ALL) (Opt Part #: PF32-002-1, Supplier: 3D5B2, A/P Effectivity: 737-ALL) (Opt Part #: TB900, Supplier: 56535, A/P Effectivity: 737-ALL)
COM-1823	Cradle - Brake (Part #: BC300, Supplier: 94861, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500) (Part #: BC400, Supplier: 94861, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
COM-1874	Bar - Tow, Dolly, Wheel and Brake (Part #: 9092F, Supplier: 00994, A/P Effectivity: 737-ALL)
SPL-1876	Protector - Thread, Eqpt. MLG/NLG Axle (MLG Axle Thread Protector and Anti-Skid Transducer Protector) (Part #: C32022-17, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32022-15, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

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D. Prepare for the Removal

SUBTASK 32-41-41-840-001

(1) For ground safety precautions necessary in the handling of hot brakes, refer to this task: TASK 05-51-07-210-801.

SUBTASK 32-41-41-480-010

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-41-860-007

(3) For the A and B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-41-41-480-011

(4) Make sure the tires for the nose landing gear and for the other main landing gear have chocks installed around them.

SUBTASK 32-41-41-860-008

(5) Release the parking brake.

SUBTASK 32-41-41-860-009

(6) Fully push the captain's brake pedals twelve times to remove the pressure from the brake accumulator.

E. Main Landing Gear Brake Removal

SUBTASK 32-41-41-580-001

(1) Lift the wheel and tire assemblies with jacks until they are clear of the ground, do this task: Lift the Main Landing Gear Axles with the Axle Jacks, TASK 07-11-03-580-801.

SUBTASK 32-41-41-020-001

(2) Do this task: Main Landing Gear Wheel and Tire Assembly Removal, TASK 32-45-11-000-801.

NOTE: This procedure will install the equipment to protect the axle. Leave the equipment installed for the brake removal in subsequent steps.

SUBTASK 32-41-41-020-002

(3) Disconnect the brake hose from the brake assy [1] at the brake disconnect:

(a) Push the barrel toward the brake and rotate the barrel clockwise to disengage the brake half from the hose half.

(b) Pull up on the barrel of the brake disconnect [3] away from the brake until the threads of the two halves are engaged.

(c) Turn the barrel counterclockwise to disconnect the brake hose from the brake assy [1].

SUBTASK 32-41-41-020-003

(4) If you will use the brake disconnect [3] from the old brake assy [1] on a new brake assy [1], do this task: Brake Disconnect Removal, TASK 32-41-11-000-801.

SUBTASK 32-41-41-020-006

(5) Remove the bolt [4], washer [5], washer [6], and the nut [7] to disconnect the brake retention cable [2] from the brake assy [1].

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SUBTASK 32-41-41-480-012

(6) Make sure the axle protector, SPL-1876, is installed.

NOTE: This equipment was installed during the wheel and tire removal steps.

SUBTASK 32-41-41-020-007

(7) Do these steps to remove the steel brake assy [1]:

WARNING: DO NOT PUT FINGERS IN THE LIGHTENING HOLES OF THE WHEEL RETAINING NUT SOCKET TOOL WHEN YOU REMOVE OR INSTALL THE WHEEL RETAINING NUT. THIS CAN CAUSE INJURIES TO PERSONS.

(a) Use one of the following to remove the steel brake assy [1] from the axle.

1) wheel/brake changer dolly, COM-1818 with the optional tow bar, COM-1874 or;
2) cradle, COM-1823 and the dolly,175S-2 or;
3) Dolly, PF32-002-1 and the hot brake sling, COM-1816 or;
4) Dolly, TB900 with the cradle, COM-1823.

SUBTASK 32-41-41-160-001

(8) Remove the old grease from the axle and the sleeve [9].

SUBTASK 32-41-41-020-008

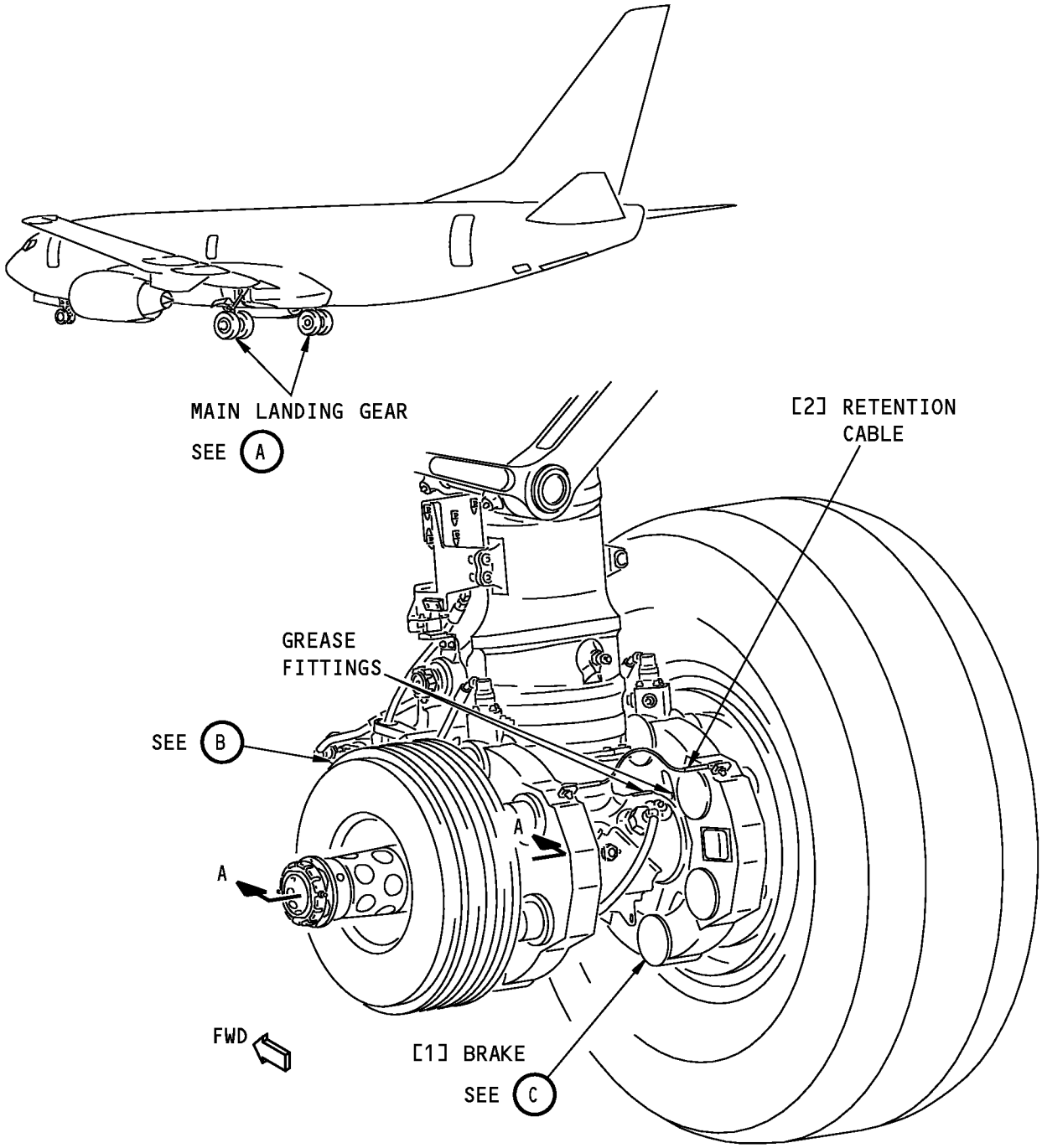
(9) If the sleeve [9] remained in the brake assy [1], remove the sleeve [9] from the brake assy [1] and install it back on the axle.

SUBTASK 32-41-41-020-009

(10) Remove and discard the grease seal [8]only if it had leaks or if the greaseseal [8] looks unservicable.

——————— END OF TASK ———————

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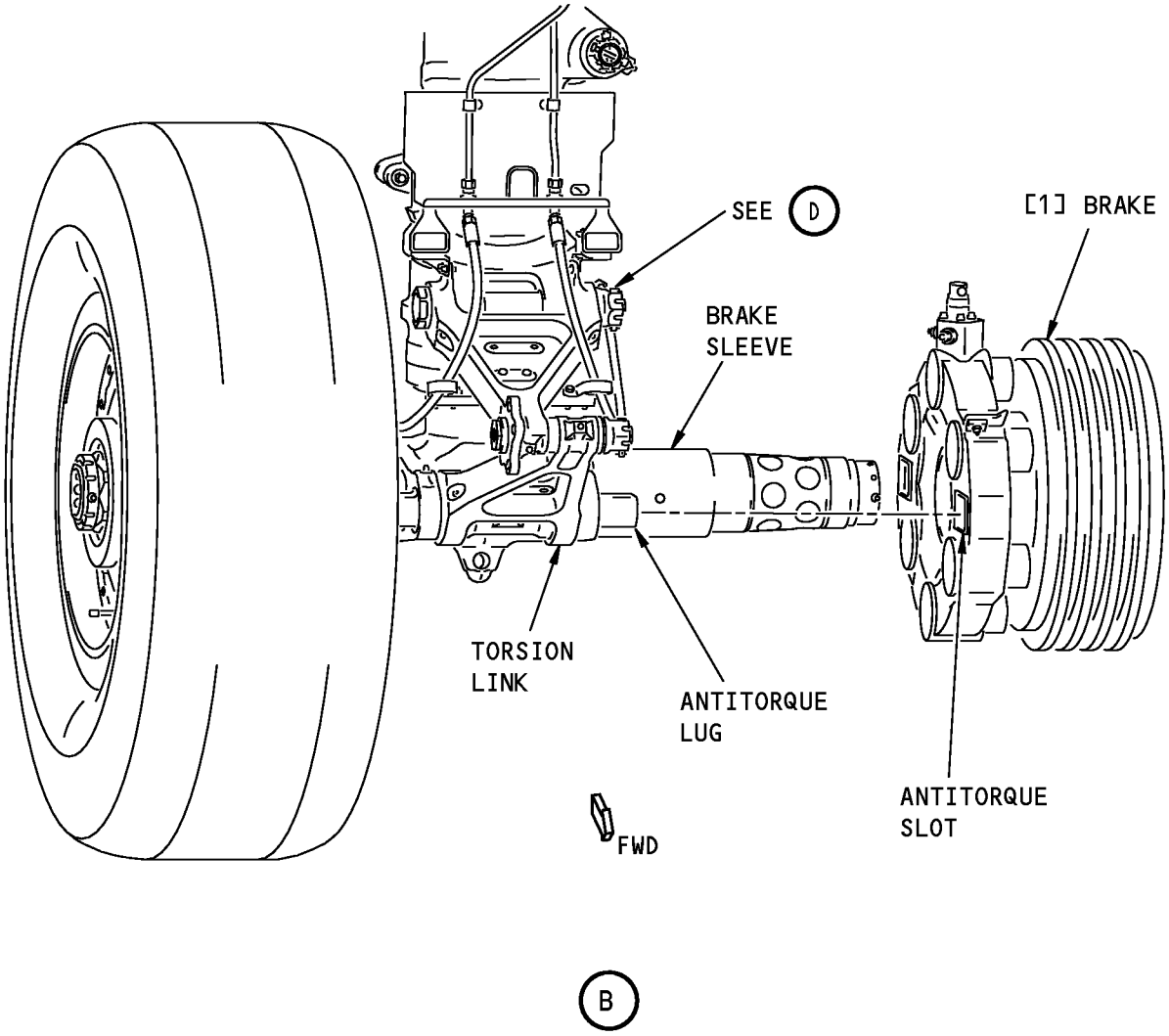


MAIN LANDING GEAR
(EXAMPLE)
A

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Main Landing Gear Brake Installation
Figure 401 (Sheet 1 of 5)/32-41-41-990-803

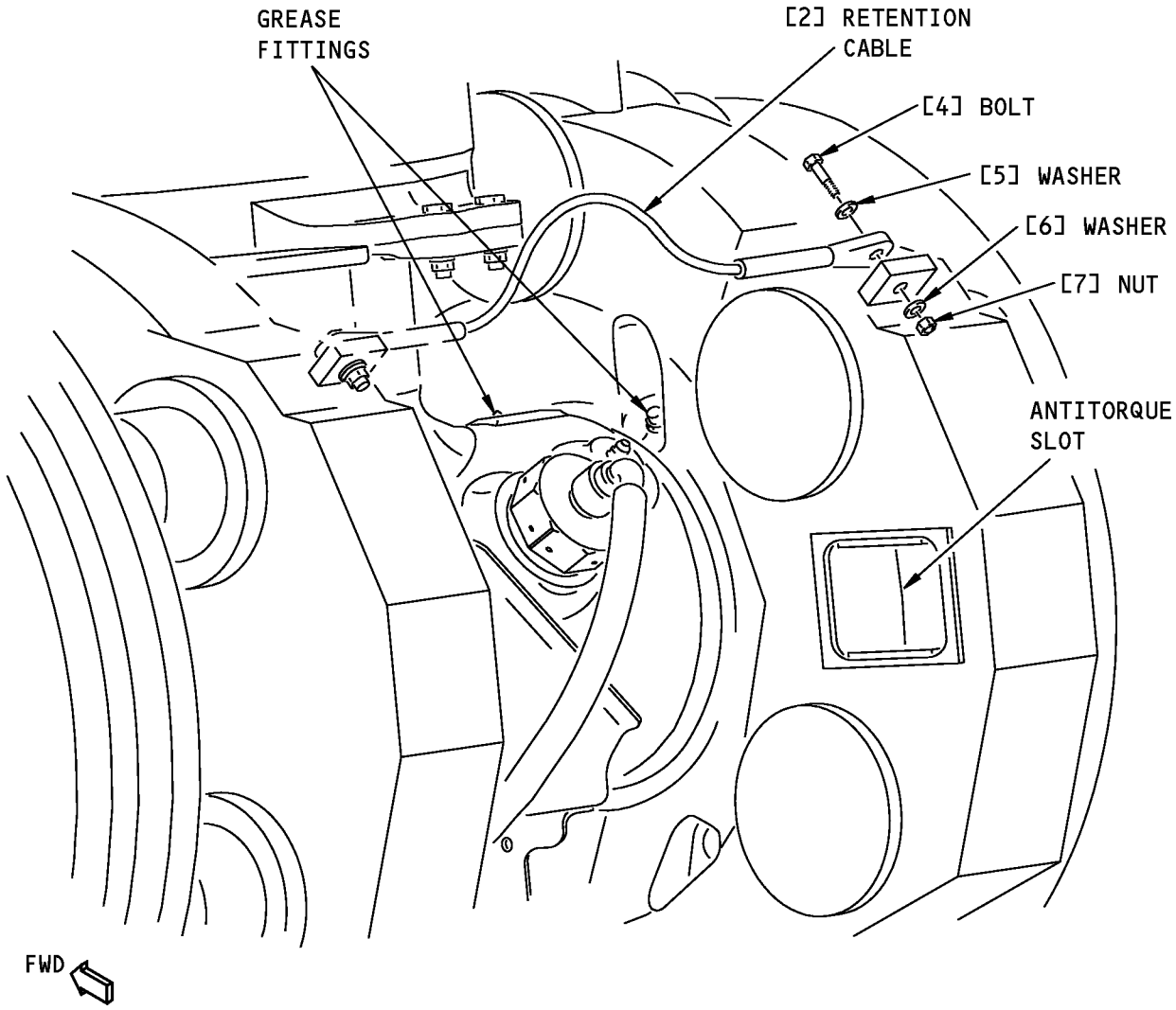
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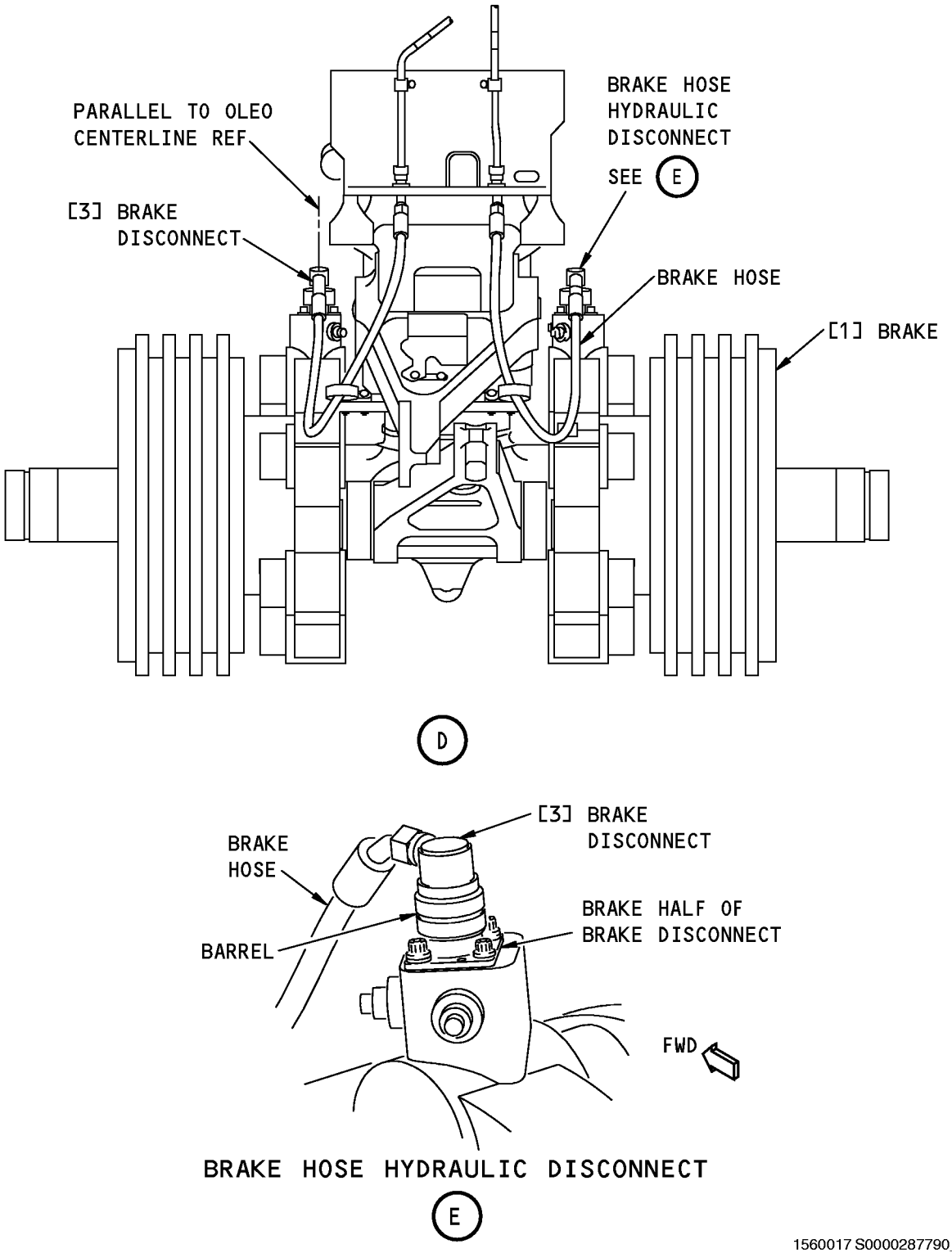
Main Landing Gear Brake Installation
Figure 401 (Sheet 2 of 5)/32-41-41-990-803

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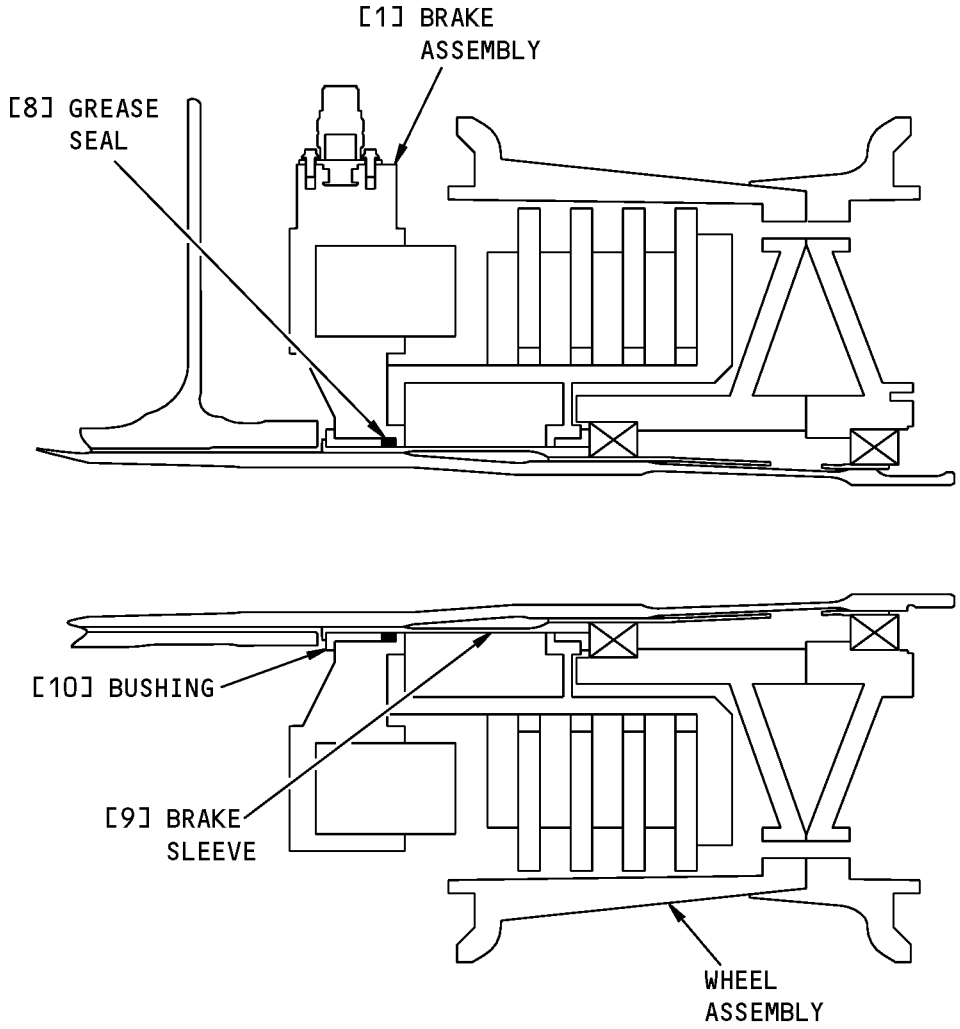
Main Landing Gear Brake Installation
Figure 401 (Sheet 3 of 5)/32-41-41-990-803

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Main Landing Gear Brake Installation
Figure 401 (Sheet 4 of 5)/32-41-41-990-803

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(EXAMPLE)
A-A

Main Landing Gear Brake Installation
Figure 401 (Sheet 5 of 5)/32-41-41-990-803

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TASK 32-41-41-400-801

3. Main Landing Gear Brake Installation

(Figure 401)

A. General

(1) It is only necessary to lubricate the MLG brake housing bushing with grease at brake installation. There is no scheduled lubrication requirement. More Aeroshell 22 grease, D00378 or Mobil 28 grease, D00233 or Mobil Aviation Grease SHC 100 grease, D50005 can be applied to the MLG brake housing bushing using the grease fittings on the brake after brake installation. If too much grease is applied, a fire can occur when the brake becomes hot.

B. References

Reference	Title
07-11-03-580-801	Lift the Main Landing Gear Axles with the Axle Jacks (P/B 201)
12-21-11-990-802	Figure: Main Landing Gear Lower End Components Servicing (P/B 301)
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-41-00-870-802	Normal (System B) Hydraulic Brake System - Bleeding (P/B 201)
32-41-11-400-801	Brake Disconnect Installation (P/B 401)
32-45-11-400-801	Main Landing Gear Wheel and Tire Assembly Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1816	Sling - Hot Brake, 6 Foot Mesh Length, 6 Inch Mesh Width (Part #: LIFTALLMESH7FT, Supplier: 23755, A/P Effectivity: 737-ALL)
COM-1818	Dolly - Wheel/Brake Change (Part #: 175, Supplier: 94861, A/P Effectivity: 737-ALL) (Part #: 175S-2, Supplier: 94861, A/P Effectivity: 737-ALL) (Part #: 9092-015, Supplier: 00994, A/P Effectivity: 737-ALL) (Part #: IA3201A-500, Supplier: 3D5B2, A/P Effectivity: 737-ALL) (Opt Part #: 9092-010, Supplier: 00994, A/P Effectivity: 737-ALL) (Opt Part #: PF32-002-1, Supplier: 3D5B2, A/P Effectivity: 737-ALL) (Opt Part #: TB900, Supplier: 56535, A/P Effectivity: 737-ALL)
COM-1823	Cradle - Brake (Part #: BC300, Supplier: 94861, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500) (Part #: BC400, Supplier: 94861, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
COM-1874	Bar - Tow, Dolly, Wheel and Brake (Part #: 9092F, Supplier: 00994, A/P Effectivity: 737-ALL)
SPL-1876	Protector - Thread, Eqpt. MLG/NLG Axle (MLG Axle Thread Protector and Anti-Skid Transducer Protector) (Part #: C32022-17, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32022-15, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

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D. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00233	Grease - Aircraft, General Purpose, Wide Temperature - Mobil 28	MIL-PRF-81322
D00378	Grease - Aircraft, General Purpose, Wide Temperature - Aeroshell 22	MIL-PRF-81322
D00633	Grease - Aircraft General Purpose	BMS3-33
D50005	Grease - Wheel Bearing - Mobil Aviation Grease SHC 100	
G50237	Compound - Corrosion Inhibiting, Non-drying - Cor-Ban 27L	BMS 3-38

E. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

F. Prepare for Installation

SUBTASK 32-41-41-020-010

CAUTION: MAKE SURE THAT THE BRAKE SLEEVE IS INSTALLED BEFORE YOU INSTALL THE BRAKE. THE BRAKE SLEEVE CAN COME OFF WHEN YOU REMOVE THE BRAKE. IF YOU INSTALL THE BRAKE AND THE BRAKE SLEEVE IS NOT ON THE AXLE, DAMAGE CAN OCCUR TO THE AIRCRAFT.

(1) Make sure the brake sleeve [9] is installed on the axle.

SUBTASK 32-41-41-480-013

(2) Make sure the axle protector, SPL-1876 is installed on the axle.

SUBTASK 32-41-41-640-001

WARNING: APPLY THIN LAYER OF GREASE TO THE INTERFACE SURFACES OF THE BRAKE AND AXLE SLEEVES ONLY. DO NOT APPLY GREASE IN THE SPACE BETWEEN THE AXLE BUSHINGS ON THE BRAKE. IF YOU APPLY TOO MUCH GREASE, A FIRE CAN OCCUR WHEN THE BRAKE BECOMES HOT.

(3) Apply a thin layer of Mobil 28 grease, D00233 or Aeroshell 22 grease, D00378 or Mobil Aviation Grease SHC 100 grease, D50005 to the sleeve [9] and bushing [10] on the brake assy [1].

NOTE: This will let the brake assy [1] slide easily onto the axle.

G. Main Landing Gear Brake Installation

SUBTASK 32-41-41-420-001

(1) If the brake half of the brake disconnect [3] is not installed on the brake assy [1], do this task: Brake Disconnect Installation, TASK 32-41-11-400-801.

SUBTASK 32-41-41-410-001

(2) If a new grease seal [8] is needed, install the grease seal [8] in the brake assy [1]:

(a) Apply a thin layer of Aeroshell 22 grease, D00378 or Mobil 28 grease, D00233 or Mobil Aviation Grease SHC 100 grease, D50005 to the new grease seal [8].

(b) Install the new grease seal [8] in its groove next to the brake bushing [10].

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SUBTASK 32-41-41-410-002

(3) Apply a thin layer of grease, D00633, to the anti-torque lug of the lower torsion link pin and the anti-torque slot on the brake assy [1].

SUBTASK 32-41-41-420-003

(4) Do this step to install the steel brake assy [1] on the axle:

NOTE: Make sure the anti-torque lug on the lower torsion link goes into the anti-torque slot in the brake assy [1].

WARNING: DO NOT PUT FINGERS IN THE LIGHTENING HOLES OF THE WHEEL RETAINING NUT SOCKET TOOL WHEN YOU REMOVE OR INSTALL THE WHEEL RETAINING NUT. THIS CAN CAUSE INJURIES TO PERSONS.

(a) Use one of the following to install the brake assy [1] in its position on the axle.

1) wheel/brake changer dolly, COM-1818 with the optional tow bar, COM-1874 or;
2) cradle, COM-1823 and the dolly, 175S-2 or;
3) Dolly, PF32-002-1 and thehot brake sling, COM-1816 or;
4) Dolly, TB900 with the cradle, COM-1823.

SUBTASK 32-41-41-410-003

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(5) Apply a layer of compound, C00913 or Cor-Ban 27L Compound, G50237 to the bolt [4], washer [5], washer [6], and the nut [7] for the brake retention cable [2].

NOTE: BMS3-38 is preferred to the alternate BMS3–27 corrosion protective compound.

SUBTASK 32-41-41-410-004

(6) Install the bolt [4], washer [5], washer [6], and the nut [7] to connect the brake retention cable [2] to the brake assy [1].

SUBTASK 32-41-41-420-004

(7) Connect the brake hose to the brake assy [1] at the brake disconnect [3]:

(a) Install the hose half of the brake disconnect [3] on the brake half of the brake disconnect [3]:

1) Turn the hose half of the brake disconnect [3] until the internal tangs align with the slots inside the brake half of the brake disconnect [3] and you can push the hose half down.
2) Push down on the barrel and turn it clockwise to engage the threads.
3) Turn the barrel clockwise until the slots in the bottom of the barrel snap onto the external tangs on the brake half of the brake disconnect [3].
4) Make sure the elbow fitting on the brake disconnect is parallel to the oleo centerline or up to ten degrees toward the shock strut to avoid hoses rubbing on the brake housing.

(b) Do a visual check to make sure the slots on the barrel are fully and correctly engaged with the tangs on the brake half of the brake disconnect [3].

SUBTASK 32-41-41-420-005

(8) Visually check the two halves of the brake disconnect [3] to make sure they are correctly engaged.

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SUBTASK 32-41-41-420-007

(9) Do this task: Main Landing Gear Wheel and Tire Assembly Installation, TASK 32-45-11-400-801.

SUBTASK 32-41-41-640-002

(10) Lubricate the main landing gear brake housing bushing with Aeroshell 22 grease, D00378, Mobil Aviation Grease SHC 100 grease, D50005 or Mobil 28 grease, D00233 using the grease fittings after brake installation only, see graphic Figure 12-21-11-990-802.

H. Main Gear Wheel Brakes Bleeding and Installation Test

SUBTASK 32-41-41-860-010

(1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-41-41-860-011

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) For the normal (System B) hydraulic system, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-41-41-790-005

(3) Do these steps to do an operational check of the brake:

(a) Push one set of brake pedals to the limit of travel to fully operate the brake assy [1].

(b) Set the parking brake.

(c) Examine each brake's pistons to make sure that the brake assy [1] engaged.

(d) Wait two minutes.

(e) Look for leaks around the brake assy [1] and at the brake disconnect [3].

(f) Release the parking brake.

(g) Examine each brake's pistons to make sure that the brake assy [1] released.

SUBTASK 32-41-41-870-002

(4) If the brakes do not feel normal, do this task: Normal (System B) Hydraulic Brake System - Bleeding, TASK 32-41-00-870-802.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 32-41-41-860-012

(1) For the normal (System B) hydraulic system, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-41-41-580-002

(2) Lower the wheel and tire assemblies and remove the jacks, do this task: Lift the Main Landing Gear Axles with the Axle Jacks, TASK 07-11-03-580-801.

END OF TASK

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MAIN LANDING GEAR BRAKE - INSPECTION/CHECK

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) An examination of the brakes for wear

(2) A fast check of the main gear wheel brakes (wheel installed on the airplane)

(3) An inspection of the main gear wheel brakes (wheel removed from the airplane).

TASK 32-41-41-700-801

2. Examine the Brakes for Wear

(Figure 601)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for Procedure

SUBTASK 32-41-41-480-001

(1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-41-41-480-002

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-41-480-003

(3) Make sure the tires have chocks installed around them.

SUBTASK 32-41-41-860-001

(4) Release the parking brake.

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SUBTASK 32-41-41-790-001

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(5) For the normal (System B) hydraulic system, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

E. Procedure

SUBTASK 32-41-41-210-001

(1) Do these steps to examine the brakes for wear:

(a) Fully push the captain's left and right brake pedals and hold.

NOTE: You can set the parking brake to hold the brake pedals.

(b) For each brake (4 locations), make sure the wear indicator pins [2] extend out of the guides [3].

NOTE: For accuracy, the wear indicator pins should be checked after the brakes have cooled.

(c) Replace the brake [4] if the end of a wear indicator pin [2] is level with, or below the face of a guide [3].

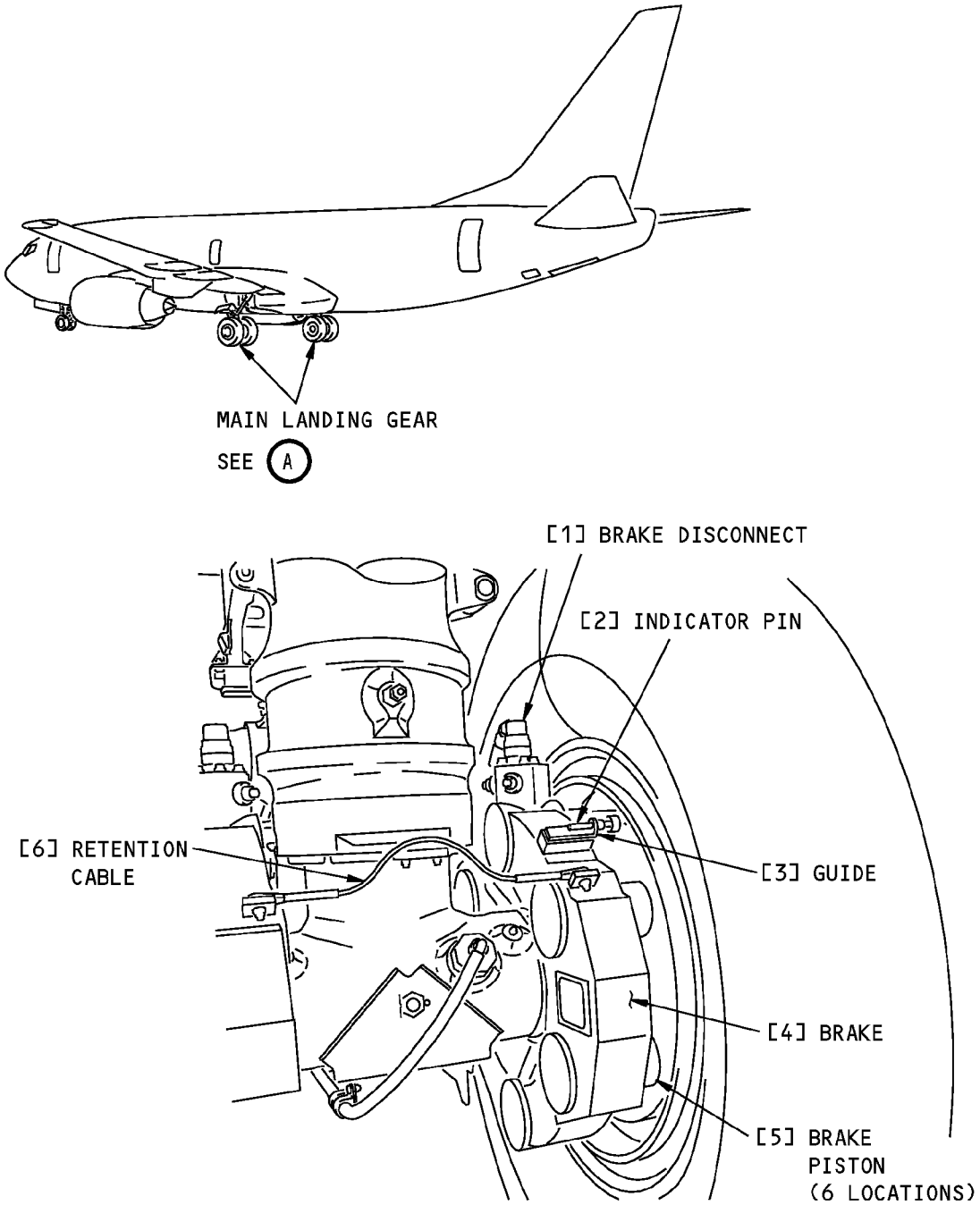
F. Put the Airplane Back to Its Usual Condition

SUBTASK 32-41-41-860-002

(1) For the normal (System B) hydraulic system, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

———————— END OF TASK ————————

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Main Landing Gear Brake Inspection (Wheel Installed)
Figure 601/32-41-41-990-801

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TASK 32-41-41-700-802

3. Main Landing Gear Brake Fast Check (Wheel Installed on the Airplane)

(Figure 601)

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

C. Prepare for Procedure

SUBTASK 32-41-41-480-004

(1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-41-41-480-005

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-41-480-006

(3) Make sure the tires have chocks installed around them.

SUBTASK 32-41-41-860-003

(4) Release the parking brake.

SUBTASK 32-41-41-790-002

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(5) For the normal (System B) hydraulic system, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

D. Procedure

SUBTASK 32-41-41-860-004

(1) Fully apply and release the left and right captain's or first officer's brake pedals five times.

SUBTASK 32-41-41-860-013

(2) With the brake pedals not applied, do a check of the brakes for fluid leaks at these locations:

(a) brake pistons [5]

(b) brake disconnect [1]

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(c) brake housing ports

(d) inlet and drain ports

(e) bleed ports

SUBTASK 32-41-41-790-003

(3) If the total leakage per brake at the above locations is greater than 1 drop/minute with the brake pedals not applied, repair the leak(s) or replace the brake prior to dispatch.

SUBTASK 32-41-41-720-001

(4) Slowly apply the brake pedals to the stops.

NOTE: You can set the parking brake to hold the brake pedals.

SUBTASK 32-41-41-790-006

(5) While you apply the brake pedals, do a check of the brakes for fluid leaks at the same locations as in step (2) above.

SUBTASK 32-41-41-790-007

(6) If the total leakage per brake at the above locations is greater than five drops/minute while the brakes are being applied, repair the leak(s) or replace the brake prior to dispatch.

SUBTASK 32-41-41-790-008

(7) Brakes with leaks below these limits must be rechecked prior to each flight, and should be repaired or replaced at the next opportunity that manpower and material allow.

SUBTASK 32-41-41-790-009

(8) The brake must be removed, inspected and cleaned in accordance with the brake supplier component maintenance manual if it is suspected that a brake has been exposed to significant levels of contamination. Signs of contamination include a wet or oily appearance, buildup of charred residue, or heavy smoke after landing.

SUBTASK 32-41-41-790-010

(9) Release the captain's brake pedals (or parking brake).

SUBTASK 32-41-41-790-004

(10) Do a check for missing brake wear indicator pins [2].

NOTE: Each brake has two brake wear indicator pins.

(a) If the two wear indicator pins [2] are missing, you must replace the brake [4] prior to the next flight.

(b) If one wear indicator pin [2] is missing, then the brake [4] can stay in service if the remaining wear indicator pin operation is satisfactory.

SUBTASK 32-41-41-210-002

(11) Examine all of the brakes [4] for these conditions:

(a) chips

(b) cracks or broken parts

(c) severe oxidation exhibited by porosity

(d) inconsistent appearance/form, distortion

(e) softness and/or exposed fibers

(f) parts that show a large amount of wear

(g) other damage that can cause a malfunction or a leak.

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E. Put the Airplane Back to Its Usual Condition

SUBTASK 32-41-41-860-005

(1) For the normal (System B) hydraulic system, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

——————— END OF TASK ———————

TASK 32-41-41-700-803

4. Main Landing Gear Brake Inspection (Wheel Removed from the Airplane)

(Figure 602)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

C. Prepare for Procedure

SUBTASK 32-41-41-480-008

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-41-480-009

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-41-41-860-006

(3) Release the parking brake.

D. Procedure

SUBTASK 32-41-41-210-003

(1) For each brake (4 locations), do a check for these conditions:

(a) cracks

(b) broken parts

(c) distortion

(d) parts that show too much wear

(e) loose rotor drive clips [22]

(f) pieces of that have broken off of the rotor disks [23] or stator disks [24]

(g) damage that can cause a malfunction or a leak

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(h) corrosion on and around the brake [4]

NOTE: Make sure the surface finishes are in good condition because corrosion can occur quickly in some climates.

(i) Do a check for missing brake wear indicator pins [2].

NOTE: Each brake has two brake wear indicator pins.

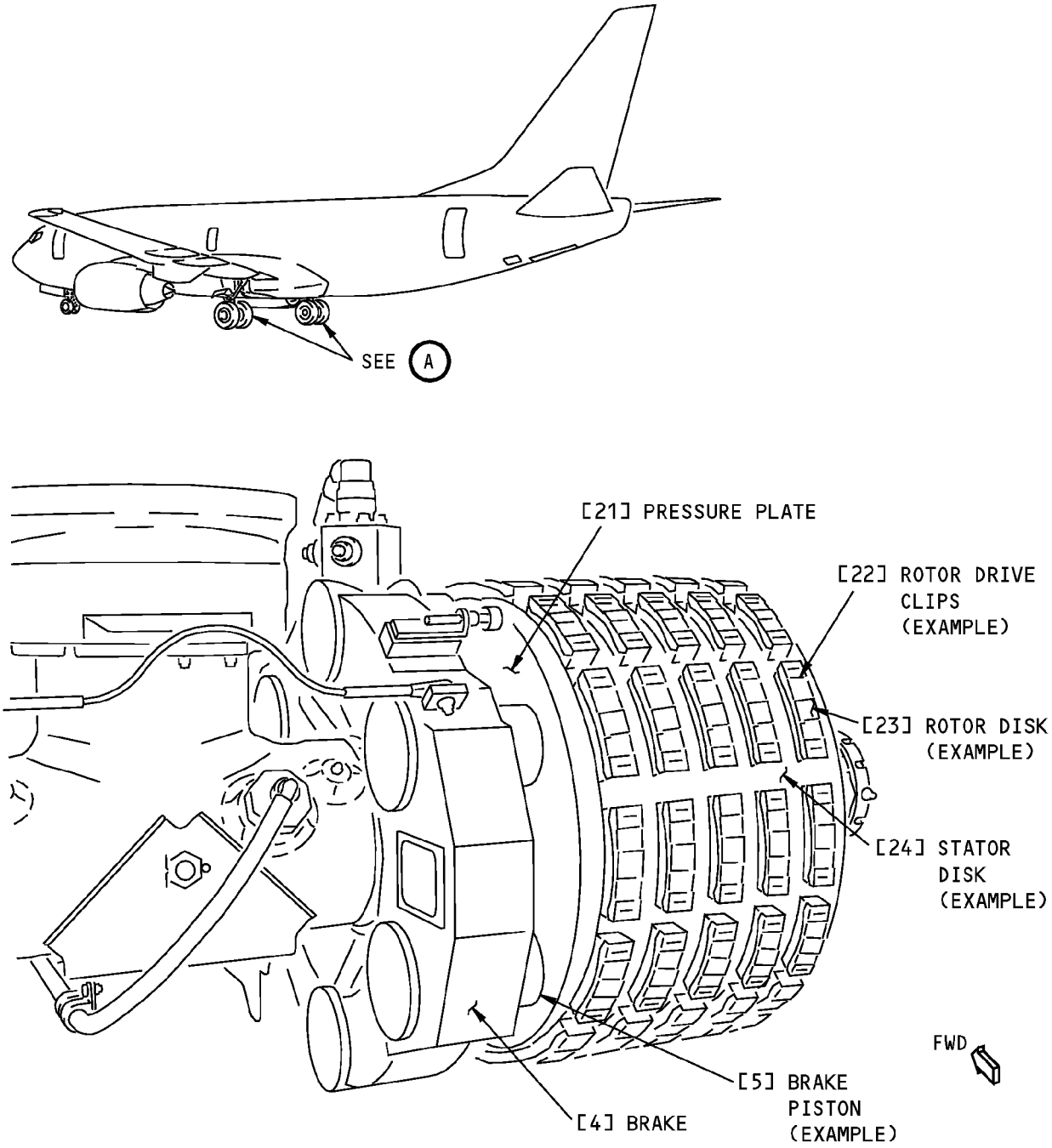
1) If the two wear indicator pins [2] are missing, you must replace the brake [4] prior to the next flight.

2) If one wear indicator pin [2] is missing, the brake [4] can stay in service if the remaining wear indicator pin operation is satisfactory.

(j) Look for the same brake running clearance between the pressure plate [21] and the first rotor assembly at four equally spaced distances around the brake.

——————— END OF TASK ———————

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Main Landing Gear Brake Inspection (Wheel Removed)
Figure 602/32-41-41-990-802

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HYDRAULIC BRAKE ACCUMULATOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the hydraulic brake accumulator

(2) An installation of the hydraulic brake accumulator

B. The brake accumulator is above the Aft Wing To Body Fairing Panel, 194DR, which is aft of the right wheel well.

TASK 32-41-51-000-801

2. Hydraulic Brake Accumulator Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Access Panels

Number	Name/Location
194DR	Aft Wing To Body Fairing Panel

D. Prepare for the Removal

SUBTASK 32-41-51-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-51-480-002

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-41-51-860-001

(3) Release the parking brake.

SUBTASK 32-41-51-010-001

(4) To get access to the brake accumulator [1], do this step:

(a) Open this access panel:

Number	Name/Location
194DR	Aft Wing To Body Fairing Panel

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SUBTASK 32-41-51-860-002

(5) For the A and B hydraulic systems, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-41-51-870-001

(6) Fully push the brake pedals 12 times to remove the hydraulic pressure from the brake accumulator.

SUBTASK 32-41-51-870-002

(7) Do these steps to remove the gas pressure from the brake accumulator [1]:

(a) Remove the cap [6] from the charging valve [8].

WARNING: LOOSEN THE SWIVEL NUT ONLY. DO NOT LOOSEN THE VALVE. PRESSURE ON THE VALVE CAN BLOW THE VALVE OFF AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(b) Loosen the swivel nut [7] on the charging valve [8] a maximum of one complete turn counter-clockwise to release the gas pressure from the brake accumulator [1].

E. Brake Accumulator Removal

SUBTASK 32-41-51-020-001

(1) Do these steps to remove the brake accumulator [1]:

(a) Disconnect the hydraulic line from the forward end of the brake accumulator [1].

(b) Install a plug on the hydraulic line and a cap on the hydraulic port of the brake accumulator [1].

(c) Disconnect the gas line from the aft end of the brake accumulator [1].

(d) Install a plug on the gas line and a cap in the gas port of the brake accumulator [1].

(e) Loosen the clamp nuts for the accumulator clamps (two locations).

(f) Open the clamps.

(g) Remove the brake accumulator [1] from the airplane.

SUBTASK 32-41-51-020-002

(2) If the brake accumulator [1] you will install does not have the reducer [3] and the reducer [5] installed, do these steps:

(a) Remove the reducer [3] and the reducer [5] from the brake accumulator [1].

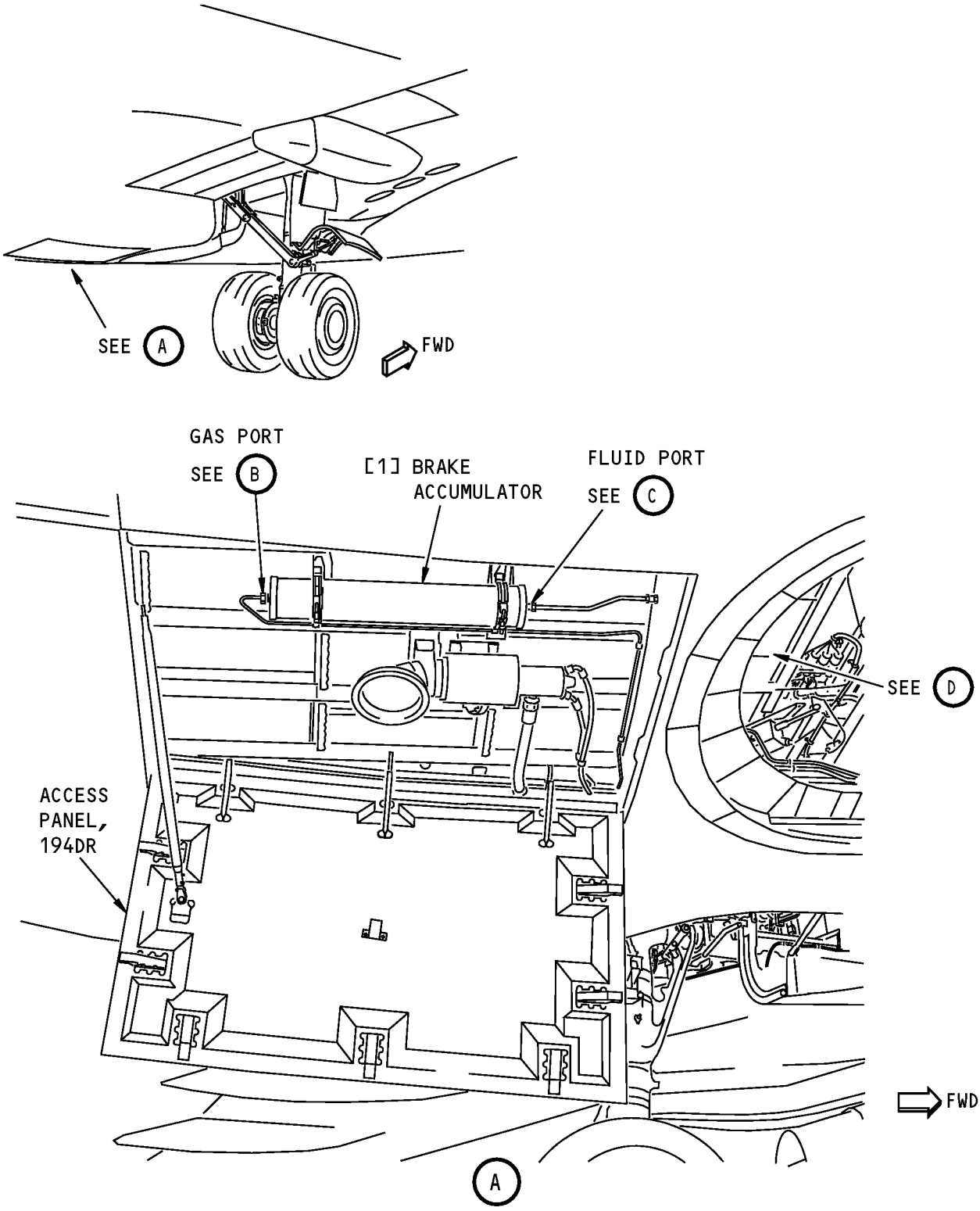
(b) Remove and discard the packing [2] and the packing [4] from the applicable fitting.

SUBTASK 32-41-51-480-003

(3) Install plugs in the ports of the brake accumulator [1].

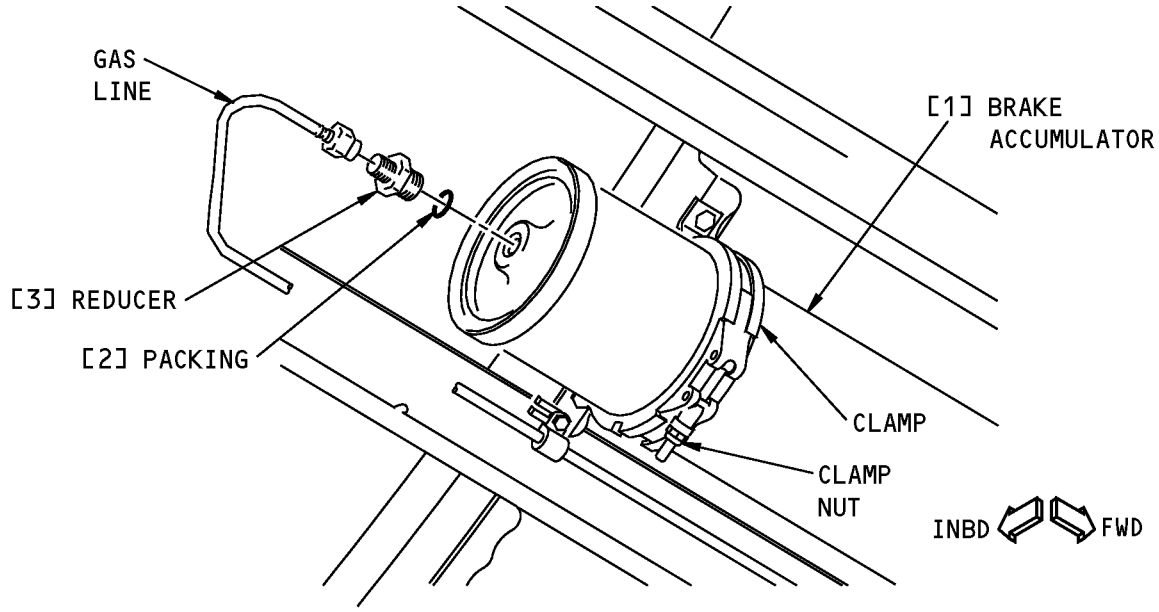
END OF TASK

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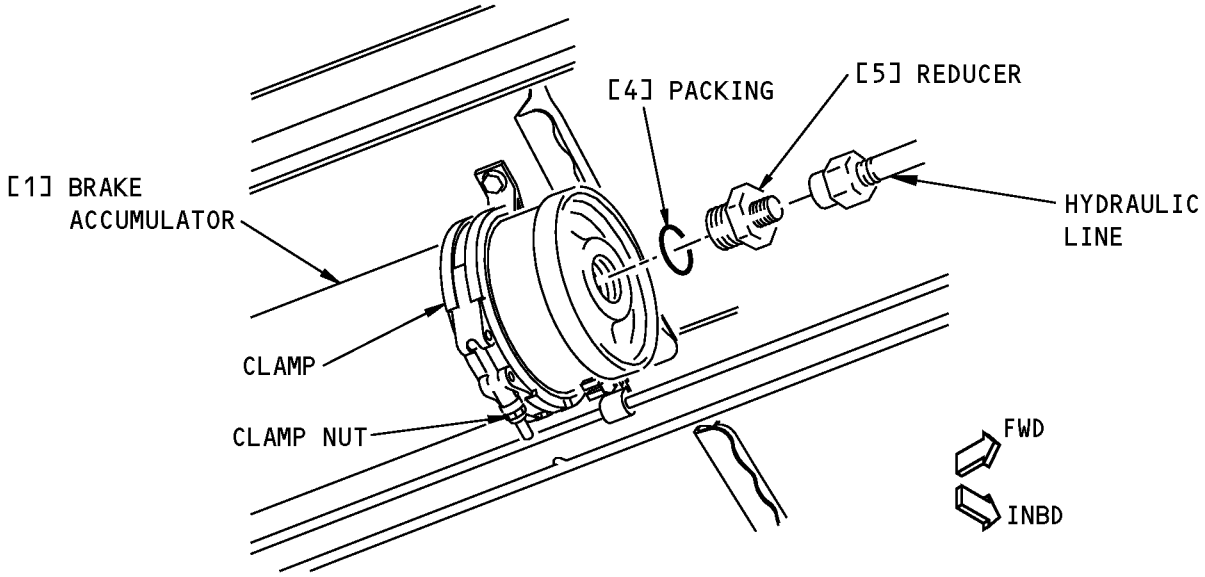
Hydraulic Brake Accumulator Installation
Figure 401 (Sheet 1 of 3)/32-41-51-990-801

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GAS PORT OF THE BRAKE ACCUMULATOR

B

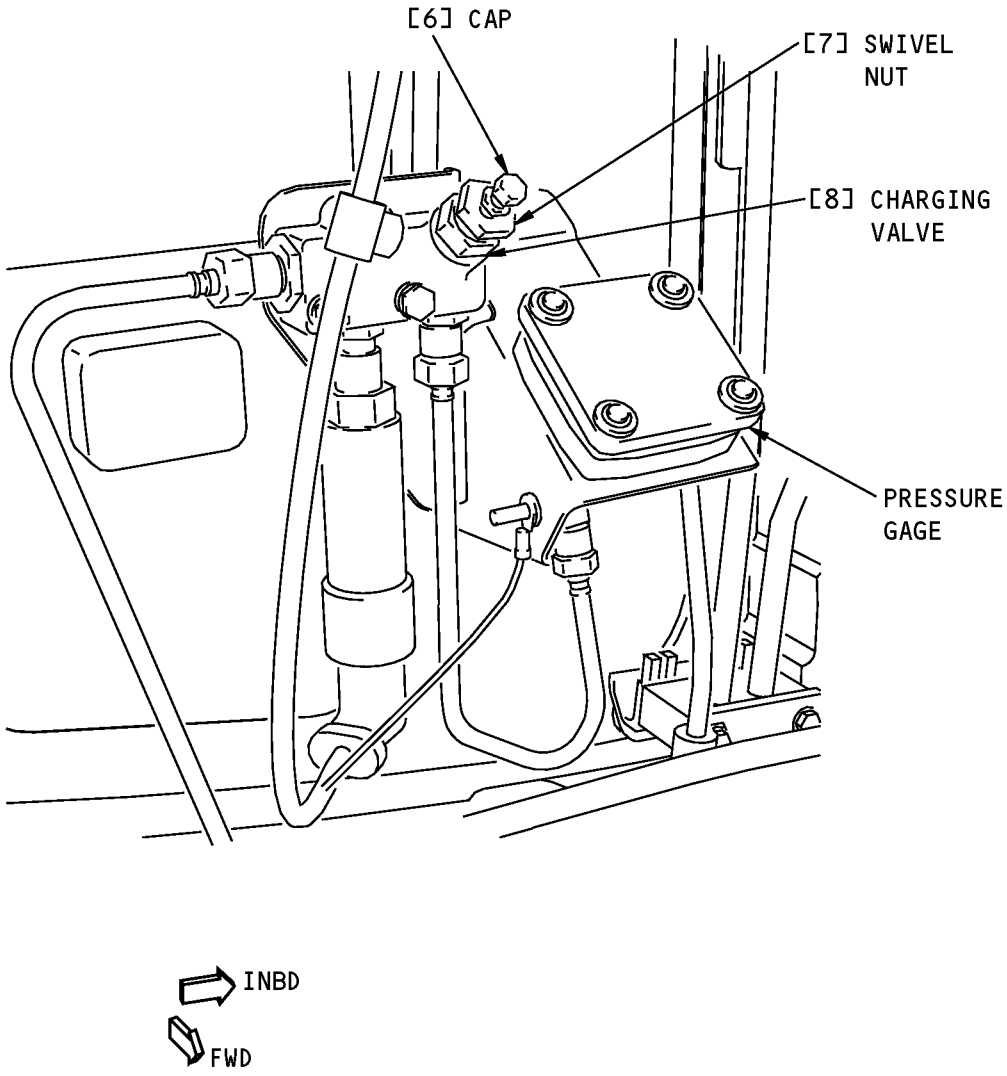


FLUID PORT OF THE BRAKE ACCUMULATOR

C

Hydraulic Brake Accumulator Installation
Figure 401 (Sheet 2 of 3)/32-41-51-990-801

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Hydraulic Brake Accumulator Installation
Figure 401 (Sheet 3 of 3)/32-41-51-990-801

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TASK 32-41-51-420-801

3. Hydraulic Brake Accumulator Installation

(Figure 401)

A. References

Reference	Title
12-15-11-420-801	Hydraulic Brake Accumulator Servicing (P/B 301)
20-10-44-400-801	Lockwires Installation (P/B 401)
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-41-00-870-801	Hydraulic Brake System - Bleeding Upstream of the Antiskid Valves (P/B 201)

B. Consumable Materials

Reference	Description	Specification
D00054	Fluid - Hydraulic Assembly Lubricant - MCS 352B (Formerly Monsanto MCS 352B)	
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)
G01505	Lockwire - Safety And Lock	NASM20995

C. Location Zones

Zone	Area
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Access Panels

Number	Name/Location
194DR	Aft Wing To Body Fairing Panel

E. Brake Accumulator Installation

SUBTASK 32-41-51-020-003

(1) Remove the caps or plugs from the ports of the brake accumulator [1].

SUBTASK 32-41-51-410-001

(2) If the reducers [3], [5] are not installed in the brake accumulator [1], do these steps:

(a) Lubricate the packing [2], the packing [4], the reducer [3], and the reducer [5] with fluid, D00153 or MCS 352B fluid, D00054.

(b) For the GAS end of the brake accumulator [1]:

1) Install the packing [2] on the reducer [3].

2) Install the reducer [3] in the GAS PORT of the brake accumulator [1].

(c) For the HYDRAULIC end of the brake accumulator [1]:

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1) Install the packing [4] on the reducer [5].

2) Install the reducer [5] in the FLUID PORT of the brake accumulator [1].

SUBTASK 32-41-51-420-001

(3) Do the steps that follow to install the brake accumulator [1]:

(a) Align the gas line with the reducer [3] on the brake accumulator [1] when you put the brake accumulator in its position in the clamps.

(b) Tighten the clamp nuts.

(c) Connect the gas line from the brake accumulator charging valve [8] to the GAS PORT of the brake accumulator [1].

(d) Connect the hydraulic line to the FLUID PORT of the brake accumulator [1].

SUBTASK 32-41-51-420-002

(4) Do the steps that follow to put the brake accumulator [1] back to its usual condition:

(a) Do this task: Hydraulic Brake Accumulator Servicing, TASK 12-15-11-420-801.

1) Make sure the cap [6] is installed on the charging valve [8] and it has lockwire, G01505 on it, do this task Lockwires Installation, TASK 20-10-44-400-801.

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(b) For the normal (System B) hydraulic system, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

(c) Make sure that the gages for normal (System B) hydraulic system and the brake accumulator indicate approximately 3000 psig.

(d) Make sure that there is no leak at the connection for the hydraulic line on the brake accumulator.

(e) Apply a soap solution to the connection at the charging line.

1) Examine the connection for air bubbles.

(f) To bleed the normal (System B) hydraulic system, do this task: Hydraulic Brake System - Bleeding Upstream of the Antiskid Valves, TASK 32-41-00-870-801.

F. Brake Accumulator Installation Test

SUBTASK 32-41-51-420-003

(1) Do these steps to do an operational check of the brake accumulator [1]:

(a) Depressurize the normal (System B) hydraulic system. To do this, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

(b) Push and release the brake pedals fully a minimum of seven times.

(c) Monitor the movement of the brake-wear indicators on each brake to make sure the brakes work properly.

SUBTASK 32-41-51-010-002

(2) Close this access panel:

Number	Name/Location
194DR	Aft Wing To Body Fairing Panel

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SUBTASK 32-41-51-860-003

(3) Set the parking brake.

——————— END OF TASK ———————

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BRAKE ACCUMULATOR PRESSURE TRANSMITTER - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the brake accumulator pressure transmitter

(2) An installation of the brake accumulator pressure transmitter.

TASK 32-41-53-000-801

2. Brake Accumulator Pressure Transmitter Removal

(Figure 401)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

C. Prepare for the Removal

SUBTASK 32-41-53-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-53-860-001

(2) For the A and B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-41-53-480-002

(3) Make sure the tires have chocks installed around them.

SUBTASK 32-41-53-860-002

(4) Release the parking brake.

SUBTASK 32-41-53-860-003

(5) Fully push the brake pedals twelve times to remove the hydraulic pressure from the brake accumulator.

D. Brake Accumulator Pressure Transmitter Removal

(Figure 401)

SUBTASK 32-41-53-840-001

(1) Do these steps to remove the gas pressure from the brake accumulator:

(a) Remove the cap [2] from the brake accumulator charging valve [4].

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WARNING: DO NOT LOOSEN THE BODY OF THE BRAKE ACCUMULATOR CHARGING VALVE. THE PRESSURE IN THE BRAKE ACCUMULATOR CAN QUICKLY PUSH THE GAS CHARGING VALVE OFF THE MANIFOLD. THIS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(b) Turn the swivel nut [3] of the brake accumulator charging valve [4] one turn counterclockwise.

NOTE: This will release the gas pressure from the brake accumulator.

(c) Make sure the brake accumulator pressure gage [5] goes to zero.

SUBTASK 32-41-53-020-001

(2) Do these steps to remove the transmitter [7]:

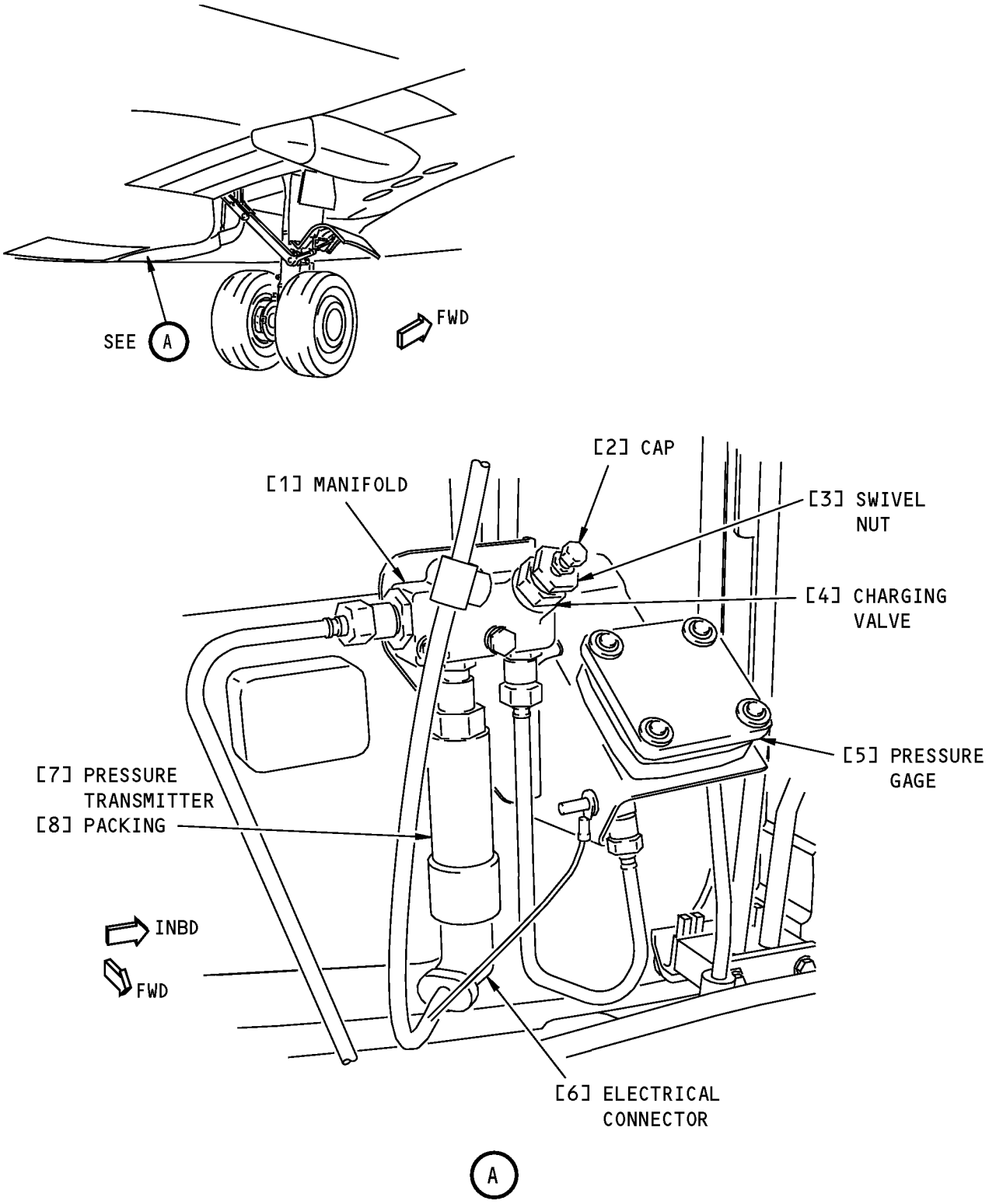
(a) Disconnect the electrical connector [6] from the transmitter [7].

(b) Remove the transmitter [7] from the manifold [1].

(c) Remove the packing [8] from the transmitter [7] and discard it.

——————— END OF TASK ———————

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Hydraulic Brake Accumulator Pressure Transmitter Installation
Figure 401/32-41-53-990-801

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TASK 32-41-53-400-801

3. Brake Accumulator Pressure Transmitter Installation

(Figure 401)

A. References

Reference	Title
12-15-11-420-801	Hydraulic Brake Accumulator Servicing (P/B 301)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
SWPM 20-60-03	Special Protection of Electrical Connectors

B. Consumable Materials

Reference	Description	Specification
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)
G50171	Compound - Corrosion Inhibiting Compound, Interior Application - D5026NS or ZC-026	

C. Location Zones

Zone	Area
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

D. Brake Accumulator Pressure Transmitter Installation

SUBTASK 32-41-53-420-001

(1) Do these steps to install the transmitter [7]:

(a) Lubricate a new packing [8] with fluid, D00153.

(b) Install the packing [8] on the transmitter [7].

(c) Install the transmitter [7] in its location on the accumulator manifold [1].

(d) Before you connect the electrical connector [6] to the transmitter [7], examine the connector for corrosion.

WARNING: DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

(e) If there was corrosion, refer to (SWPM 20-60-03) to correct the problem.

(f) Apply theD5026NS or ZC-026 compound, G50171 to the connector, refer to (SWPM 20-60-03).

(g) Connect the electrical connector [6] to the transmitter [7].

SUBTASK 32-41-53-610-001

(2) Do this task: Hydraulic Brake Accumulator Servicing, TASK 12-15-11-420-801.

SUBTASK 32-41-53-410-001

(3) Make sure the cap [2] is installed after you service the accumulator.

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E. Brake Accumulator Pressure Transmitter Installation Test

SUBTASK 32-41-53-860-004

(1) For the B hydraulic system, do this task: do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-41-53-720-001

(2) Measure the brake accumulator pressure with the direct reading gage.

NOTE: The direct reading gage is in the wheel well for the right main landing gear, next to the pressure transmitter.

SUBTASK 32-41-53-720-002

(3) Measure the brake accumulator pressure with the BRAKE ACCUM PRESS gage.

NOTE: The BRAKE ACCUM PRESS gage is in the flight compartment on the first officer's instrument panel (P3).

SUBTASK 32-41-53-710-001

(4) Make sure the pressure shown by the BRAKE ACCUM PRESS gage is approximately the same as the pressure shown by the direct reading pressure gage.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 32-41-53-860-005

(1) For the B hydraulic system, do this task: do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

——————— END OF TASK ———————

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BRAKE ACCUMULATOR PRESSURE GAGE (FLIGHT COMPARTMENT) - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the brake accumulator pressure gage (flight compartment).

(2) An installation of the brake accumulator pressure gage (flight compartment).

TASK 32-41-54-000-801

2. Brake Accumulator Pressure Gage (Flight Compartment) Removal

(Figure 401)

A. Location Zones

Zone	Area
212	Flight Compartment - Right

B. Prepare for the Removal

SUBTASK 32-41-54-860-001

(1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	13	C00306	HYDRAULIC SYSTEM BRAKE PRESS IND

C. Brake Accumulator Pressure Gage Assembly Removal

SUBTASK 32-41-54-020-001

(1) Loosen the quick-release fasteners [5] that hold the P3-1 panel to the airplane.

SUBTASK 32-41-54-020-002

(2) Pull the P3-1 panel away from the right forward panel.

SUBTASK 32-41-54-020-003

(3) Disconnect the electrical connector [7] from the pressure gage [3].

SUBTASK 32-41-54-020-004

(4) Loosen the clamp [1] that holds the pressure gage [3]:

NOTE: The clamp has two bolts, one bolt [6] holds the clamp [1] to the P3-1 panel, the other bolt [2] loosens the clamp.

(a) Loosen the bolt [2] that holds the clamp [1] to the pressure gage [3] until the pressure gage can be removed from the P3-1 panel.

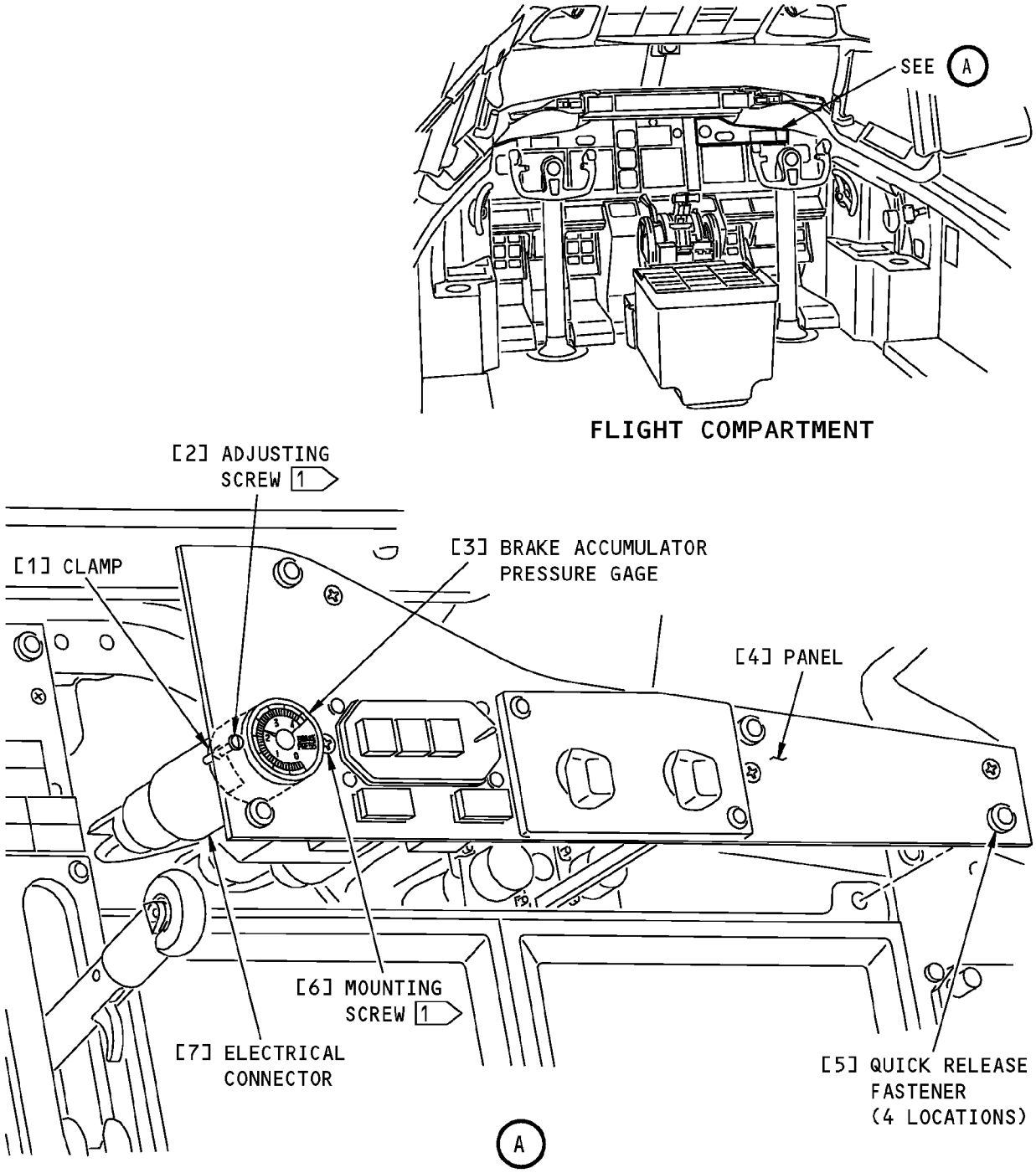
NOTE: Do not loosen the bolt [6] that holds the clamp [1] to the P3-1 panel.

SUBTASK 32-41-54-020-005

(5) Remove the pressure gage [3].

——————— END OF TASK ———————

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1 SCREW LOCATIONS CAN BE DIFFERENT.

Brake Accumulator Pressure Gage Installation
Figure 401/32-41-54-990-801

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TASK 32-41-54-400-801

3. Brake Accumulator Pressure Gage (Flight Compartment) Installation

(Figure 401)

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
SWPM 20-60-03	Special Protection of Electrical Connectors

B. Consumable Materials

Reference	Description	Specification
G50171	Compound - Corrosion Inhibiting Compound, Interior Application - D5026NS or ZC-026	

C. Location Zones

Zone	Area
212	Flight Compartment - Right

D. Brake Accumulator Pressure Gage Assembly Installation

SUBTASK 32-41-54-420-001

(1) Put the pressure gage [3] in its location in the P3-1 panel.

SUBTASK 32-41-54-020-006

(2) Tighten the bolt [2] on the clamp [1] that holds the pressure gage [3]:

(a) Tighten the bolt [6] on the clamp [1] until the pressure gage [3] is firmly held to the P3-1 panel.

SUBTASK 32-41-54-420-002

(3) Before you connect the electrical connector [7] to the pressure gage [3], examine the connector for corrosion.

WARNING: DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

(a) If there was corrosion, refer to (SWPM 20-60-03) to correct the problem.

(b) Apply the D5026NS or ZC-026 compound, G50171 to the connector (SWPM 20-60-03).

(4) Connect the electrical connector [7] to the pressure gage [3].

SUBTASK 32-41-54-420-003

(5) Hold the P3-1 panel on the forward panel.

SUBTASK 32-41-54-420-004

(6) Tighten the quick-release fasteners [5] which hold the P3-1 panel to the airplane.

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SUBTASK 32-41-54-860-002

(7) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	13	C00306	HYDRAULIC SYSTEM BRAKE PRESS IND

E. Brake Accumulator Pressure Gage Assembly Installation Test

SUBTASK 32-41-54-480-001

(1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-41-54-790-001

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) For the B hydraulic system, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-41-54-710-001

(3) Make sure the pressure gage [3] shows approximately 3000 psig.

SUBTASK 32-41-54-860-003

(4) For the B hydraulic system, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-41-54-480-002

(5) Make sure the tires have chocks installed around them.

SUBTASK 32-41-54-860-004

(6) Release the parking brake.

SUBTASK 32-41-54-860-005

(7) Fully push the captain's brake pedals twelve times to remove the pressure from the brake accumulator.

SUBTASK 32-41-54-710-002

(8) Make sure the brake accumulator pressure gage (flight compartment) shows approximately 1000 psig.

END OF TASK

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BRAKE ACCUMULATOR PRESSURE RELIEF VALVE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the brake accumulator pressure relief valve

(2) An installation of the brake accumulator pressure relief valve

B. The relief valve is on the aft wall of the right wheel well.

TASK 32-41-71-000-801

2. Brake Accumulator Pressure Relief Valve Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare for the Removal

SUBTASK 32-41-71-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-71-480-002

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-41-71-860-001

(3) Release the parking brake.

SUBTASK 32-41-71-860-002

(4) For the A and B hydraulic systems, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-41-71-870-001

(5) Fully push the brake pedals twelve times to remove the hydraulic pressure from the brake accumulator (Figure 401).

D. Brake Accumulator Pressure Relief Valve Removal

SUBTASK 32-41-71-020-001

(1) Do these steps to remove the brake Accumulator Pressure relief valve [1]:

(a) Remove the bolts [4] and the washers [3] and the clamp [2] from the airplane.

(b) Disconnect the outboard hydraulic line from the relief valve [1].

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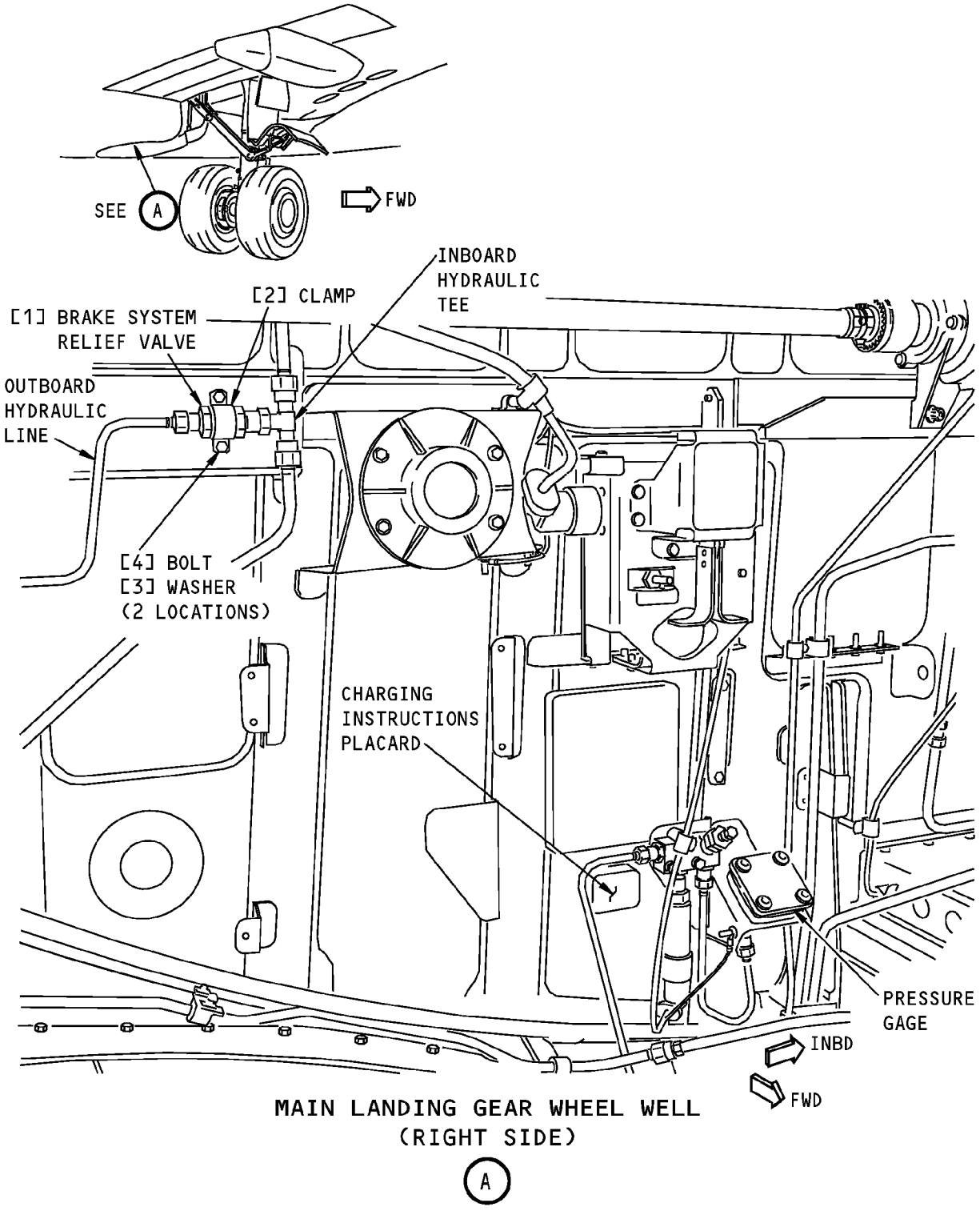
(c) Disconnect the inboard hydraulic tee from the relief valve [1].

(d) Install caps or plugs on the hydraulic lines.

(e) Remove the relief valve [1] from the airplane.

———————— END OF TASK ————————

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Brake System Relief Valve Installation
Figure 401/32-41-71-990-801

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TASK 32-41-71-420-801

3. Brake Accumulator Pressure Relief Valve Installation

(Figure 401)

A. References

Reference	Title
12-15-11-420-801	Hydraulic Brake Accumulator Servicing (P/B 301)
20-10-44-400-801	Lockwires Installation (P/B 401)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)

B. Consumable Materials

Reference	Description	Specification
G01505	Lockwire - Safety And Lock	NASM20995

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Valve	29-21-52-01-603	HAP ALL

D. Location Zones

Zone	Area
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Brake System Relief Valve Installation

SUBTASK 32-41-71-420-001

(1) Do these steps to install the brake accumulator pressure relief valve [1]:

(a) Remove the caps or plugs from the hydraulic lines.

(b) Put the relief valve [1] in its position in the hydraulic line.

(c) Connect the inboard hydraulic tee to the relief valve [1].

(d) Connect the outboard hydraulic line to the relief valve [1].

(e) Put the clamp [2] in its position on the relief valve [1].

(f) Install the bolts [4] and the washers [3] to connect the clamp [2] to the airplane.

SUBTASK 32-41-71-420-002

(2) Do the steps that follow to make sure the brake accumulator is in its usual condition:

(a) Make sure the brake accumulator charge pressure is correct.

NOTE: The brake accumulator charge pressure can be found on the placard located next to the brake accumulator pressure gage.

(b) If the brake accumulator needs to be serviced, do this task: Hydraulic Brake Accumulator Servicing, TASK 12-15-11-420-801.

1) Make sure the cap is installed on the charging valve and it has lockwire, G01505 on it, do this task Lockwires Installation, TASK 20-10-44-400-801.

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F. Brake Accumulator Pressure Relief Valve Leakage Test

SUBTASK 32-41-71-870-002

(1) Do the steps that follow to do a leakage check of the brake accumulator pressure relief valve:

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) For the normal (System B) hydraulic system, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

(b) Fully push the brake pedals twelve times to bleed the air out through the brake metering valves.

NOTE: Wait approximately 5 seconds between each time that you push the brake pedals.

(c) Make sure there are no leaks from the relief valve [1] when you bleed the brake system.

(d) For the normal (System B) hydraulic system, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

——————— END OF TASK ———————

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BRAKE HYDRAULIC FUSES - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has two tasks:

(1) A removal of the hydraulic fuses for the brake system for the main landing gear

(2) An installation of the hydraulic fuses for the brake system for the main landing gear.

C. There are two fuses for the left normal brake hydraulic system and two fuses for the right normal hydraulic system. There is one fuse for the left alternate brake hydraulic system and one fuse for the right brake alternate system. The fuses are in the airplane main landing gear wheel well.

D. This procedure shows one of the hydraulic fuse for the brake system for the left main landing gear. This procedure also applies to the other three normal brake system hydraulic fuses and the other two alternate brake system hydraulic fuses.

TASK 32-41-72-020-801

2. Brake Hydraulic Fuse Removal

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Fuse assembly	29-11-52-12-755	HAP ALL
		29-11-52-17-715	HAP ALL
5	Fuse assembly	29-21-52-01-609	HAP ALL

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

E. Prepare for the Removal

SUBTASK 32-41-72-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-72-480-002

(2) Make sure the tires have chocks installed around them.

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SUBTASK 32-41-72-860-001

(3) Release the parking brake.

SUBTASK 32-41-72-860-002

(4) For the A and B hydraulic systems, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-41-72-870-001

(5) Fully push the brake pedals 12 times to remove the hydraulic pressure from the brake accumulator.

F. Hydraulic Fuse Removal

SUBTASK 32-41-72-020-001

(1) Disconnect the hydraulic tubes from the two fuse assemblies [1] and four fuse assemblies [5].

SUBTASK 32-41-72-480-003

(2) Install plugs in the tubes and fittings.

SUBTASK 32-41-72-020-002

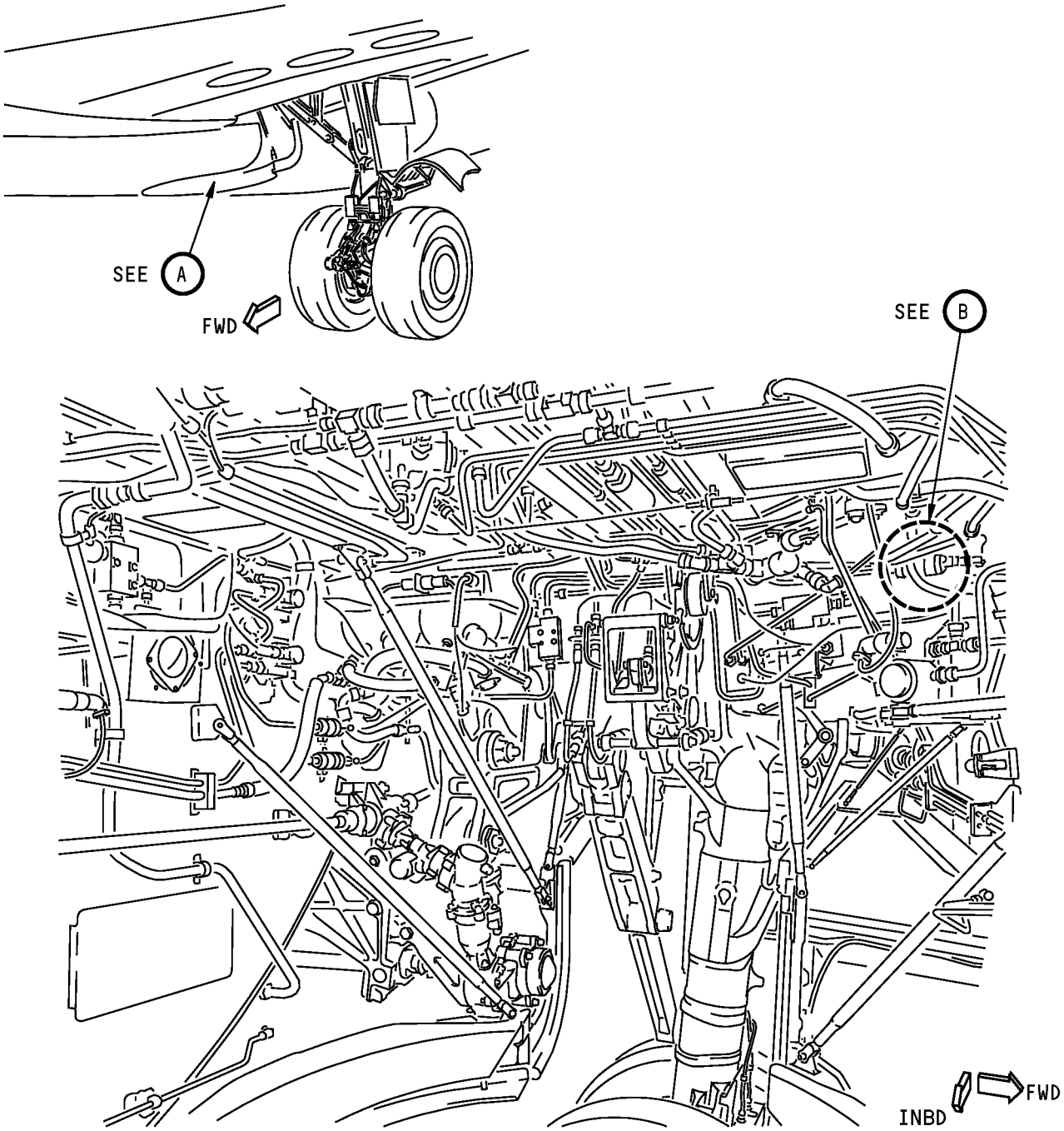
(3) Remove the bolts [2], washers [3], and the clamp [4] that holds the two fuse assemblies [1] and four fuse assemblies [5] to the structure.

SUBTASK 32-41-72-020-003

(4) Remove the two fuse assemblies [1] and four fuse assemblies [5].

———————— END OF TASK ————————

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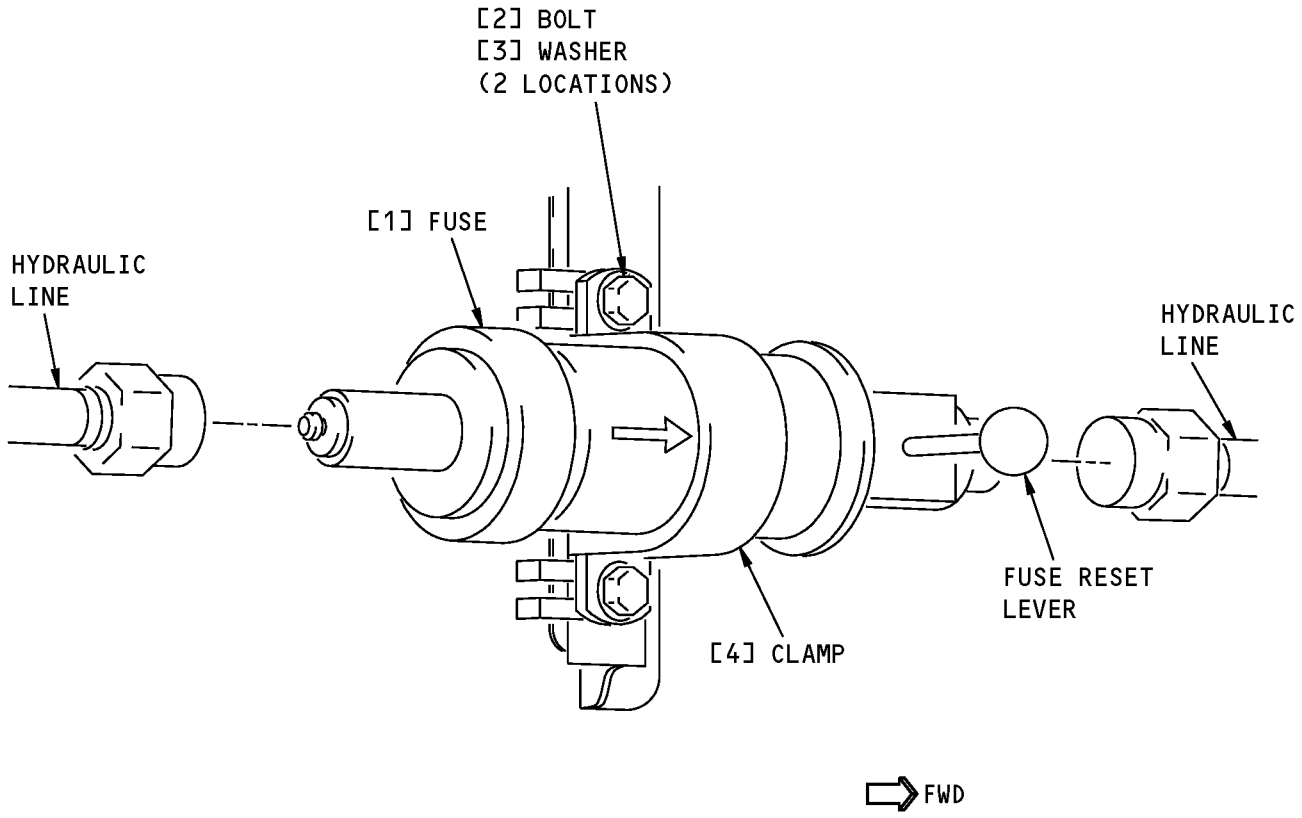


MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE IS SHOWN, RIGHT SIDE IS EQUIVALENT)

A

Brake Hydraulic Fuses Installation
Figure 401 (Sheet 1 of 4)/32-41-72-990-801

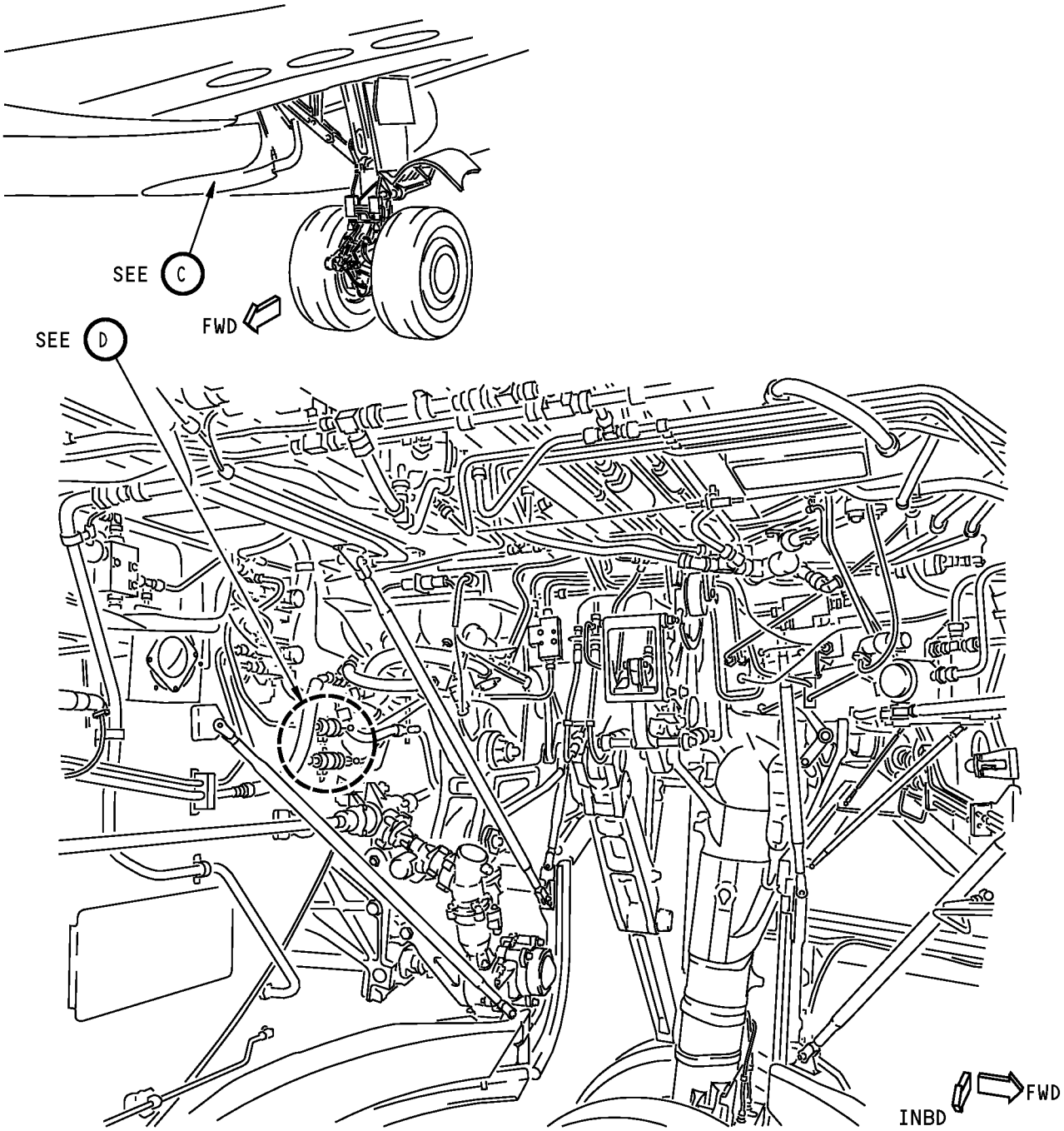
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ALTERNATE BRAKE HYDRAULIC FUSE
(EXAMPLE)
B

Brake Hydraulic Fuses Installation
Figure 401 (Sheet 2 of 4)/32-41-72-990-801

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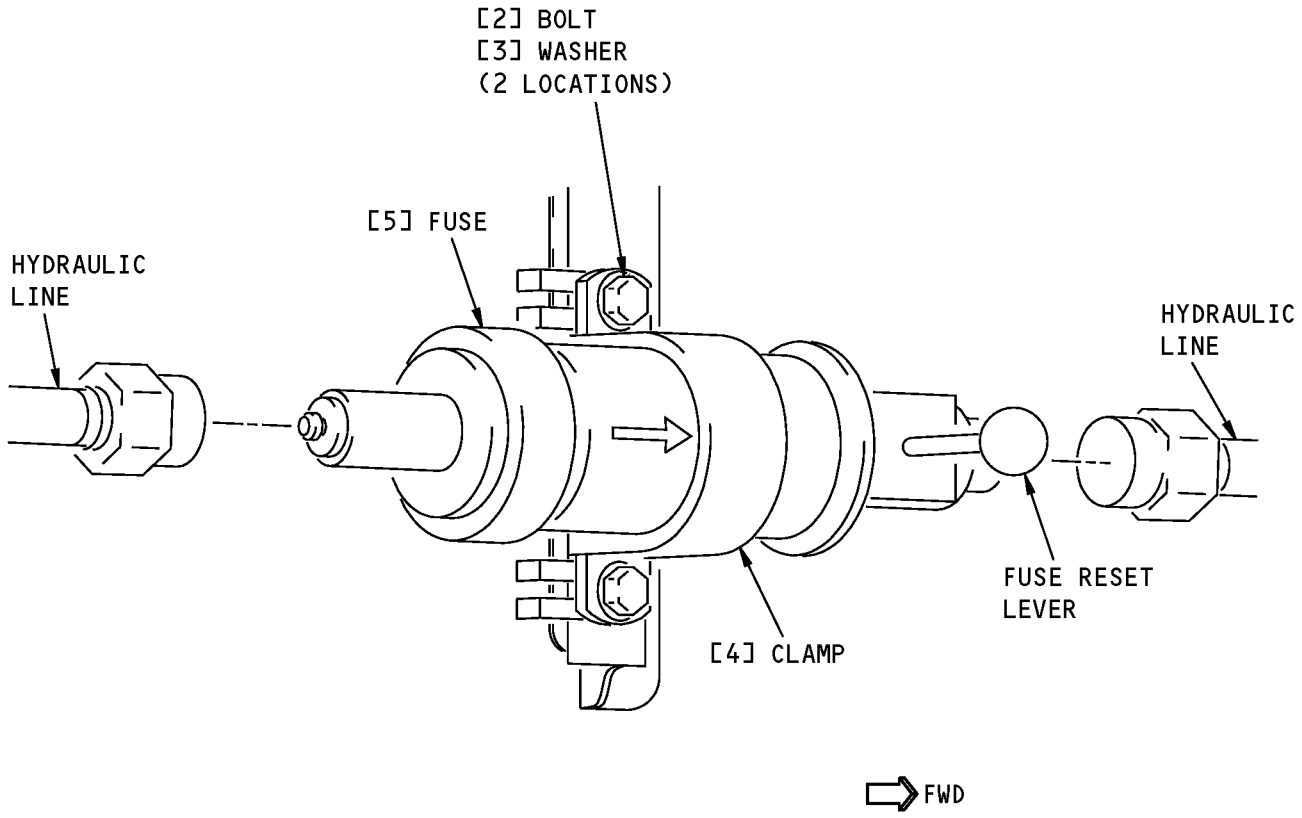


MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE IS SHOWN, RIGHT SIDE IS EQUIVALENT)

C

Brake Hydraulic Fuses Installation
Figure 401 (Sheet 3 of 4)/32-41-72-990-801

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NORMAL BRAKE HYDRAULIC FUSE
(EXAMPLE)
B

Brake Hydraulic Fuses Installation
Figure 401 (Sheet 4 of 4)/32-41-72-990-801

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TASK 32-41-72-420-801

3. Brake Hydraulic Fuse Installation

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-41-00-870-802	Normal (System B) Hydraulic Brake System - Bleeding (P/B 201)
32-41-00-870-803	Alternate (System A) Hydraulic Brake System - Bleeding (P/B 201)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Fuse assembly	29-11-52-12-755	HAP ALL
		29-11-52-17-715	HAP ALL
5	Fuse assembly	29-21-52-01-609	HAP ALL

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

E. Hydraulic Fuse Installation

SUBTASK 32-41-72-420-001

(1) Hold the two fuse assemblies [1] and four fuse assemblies [5] in its position and install the clamp [4], the washers [3], the bolts [2].

SUBTASK 32-41-72-080-001

(2) Remove the plugs from the hydraulic tubes and fittings.

SUBTASK 32-41-72-420-003

(3) Connect the hydraulic tubes to the two fuse assemblies [1] and four fuse assemblies [5].

F. Hydraulic Fuse Installation Test

SUBTASK 32-41-72-790-001

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) For the A or the B hydraulic systems, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

(a) If you replaced an alternate brake hydraulic fuse, you will need to pressurize the hydraulic System A.

(b) If you replaced a normal brake hydraulic fuse, you will need to pressurize the hydraulic System B.

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SUBTASK 32-41-72-790-002

(2) Do a visual check of the two fuse assemblies [1] and four fuse assemblies [5] for hydraulic leaks.

SUBTASK 32-41-72-870-002

(3) To bleed the normal (System B) hydraulic system, do this task: Normal (System B) Hydraulic Brake System - Bleeding, TASK 32-41-00-870-802.

SUBTASK 32-41-72-870-003

(4) To bleed the alternate (System A) hydraulic system, do this task: Alternate (System A) Hydraulic Brake System - Bleeding, TASK 32-41-00-870-803.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 32-41-72-860-003

(1) Do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-41-72-860-004

(2) Set the parking brakes.

——————— END OF TASK ———————

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HYDRAULIC BRAKE CONTROL CABLE - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these three tasks:

(1) A removal of the hydraulic brake control cables.

(2) An installation of the hydraulic brake control cables.

(3) A visual inspection of the brake control system.

TASK 32-41-81-000-801

2. Hydraulic Brake Control Cable Removal

(Figure 401)

A. References

Reference	Title
20-10-10-000-801	Turnbuckle Locking Clips Removal (P/B 401)
25-22-00-000-801	Passenger Seat Removal (P/B 401)
25-27-15-000-801	Carpet Removal (P/B 401)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
53-21-00-000-801	Passenger Cabin Floor Panel Removal (P/B 401)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1569	Clamp - Control Cable (Part #: A20005-9, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
D00015	Grease - Aircraft Bearing (Use BMS 3-24 until existing stocks are depleted, BMS 3-33 supersedes BMS 3-24)	BMS3-24 (Superseded by BMS 3-33)

D. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well

E. Access Panels

Number	Name/Location
112A	Forward Access Door

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F. Prepare for the Removal

SUBTASK 32-41-81-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-81-480-002

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-41-81-860-001

(3) Release the parking brake.

SUBTASK 32-41-81-840-001

(4) To get access to the cables, the turnbuckles, and the pulleys.(forward of nose wheel well), do this step:

(a) Open this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-41-81-840-002

(5) Remove the passenger seats from station 706 through station 727. To do this, do this task: Passenger Seat Removal, TASK 25-22-00-000-801.

NOTE: Do this step to get access to the control quadrant assemblies of the brake metering valves.

SUBTASK 32-41-81-840-003

(6) Do this task: Carpet Removal, TASK 25-27-15-000-801.

SUBTASK 32-41-81-840-004

(7) Remove the center floor panels to get access to the control quadrant assemblies of the brake metering valve. To do this, do this task: Passenger Cabin Floor Panel Removal, TASK 53-21-00-000-801.

G. Hydraulic Brake Control Cable Removal

NOTE: The steps that follow are applicable for all of the brake control cables.

SUBTASK 32-41-81-020-001

(1) In the forward compartment, forward of the nose wheel well, do these steps:

(a) Install a control cable clamp, SPL-1569, on the cable opposite the one you will remove to keep light tension on the cable.

NOTE: Light tension on the cable will prevent wind off on the cable drums. Light tension will also make sure the cables do not move out of the pulley guides.

(b) To remove the locking clip [1] from the turnbuckle [3] on the brake control cable assemblies [2], cable assemblies [4]. To do this, do this task: Turnbuckle Locking Clips Removal, TASK 20-10-10-000-801.

(c) Loosen the turnbuckle [3] for the brake control cable assemblies [2], cable assemblies [4] to release the tension in the cable.

NOTE: Make sure you keep light tension on the cable to keep the cable in the pulley guides.

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(d) Disconnect the brake control cable assemblies [4] from the quadrant [5]:

1) Remove the pins [7], that holds the ends of the control cable, from the quadrant assemblies [5].

2) Pull the fittings on the ends of the control cable assemblies [4] from the control quadrant [5].

3) Remove the forward cable assemblies [4] from the quadrant [5].

SUBTASK 32-41-81-020-002

(2) In the passenger compartment, do these steps:

(a) Disconnect the brake control cable assemblies [2] from the quadrant [8]:

1) Remove the pins [9] that holds the ends of the control cable, from the quadrants [8].

2) Pull the fittings on the ends of the control cable assemblies [2] from the control quadrants [8].

SUBTASK 32-41-81-020-003

(3) Attach the new cable or a piece of string to the old cable assemblies [2].

NOTE: The new cable must be pulled through the system to make the new cable installation easy. If you remove the old cable without attaching anything to it, installation of the new cable will be very difficult.

SUBTASK 32-41-81-020-004

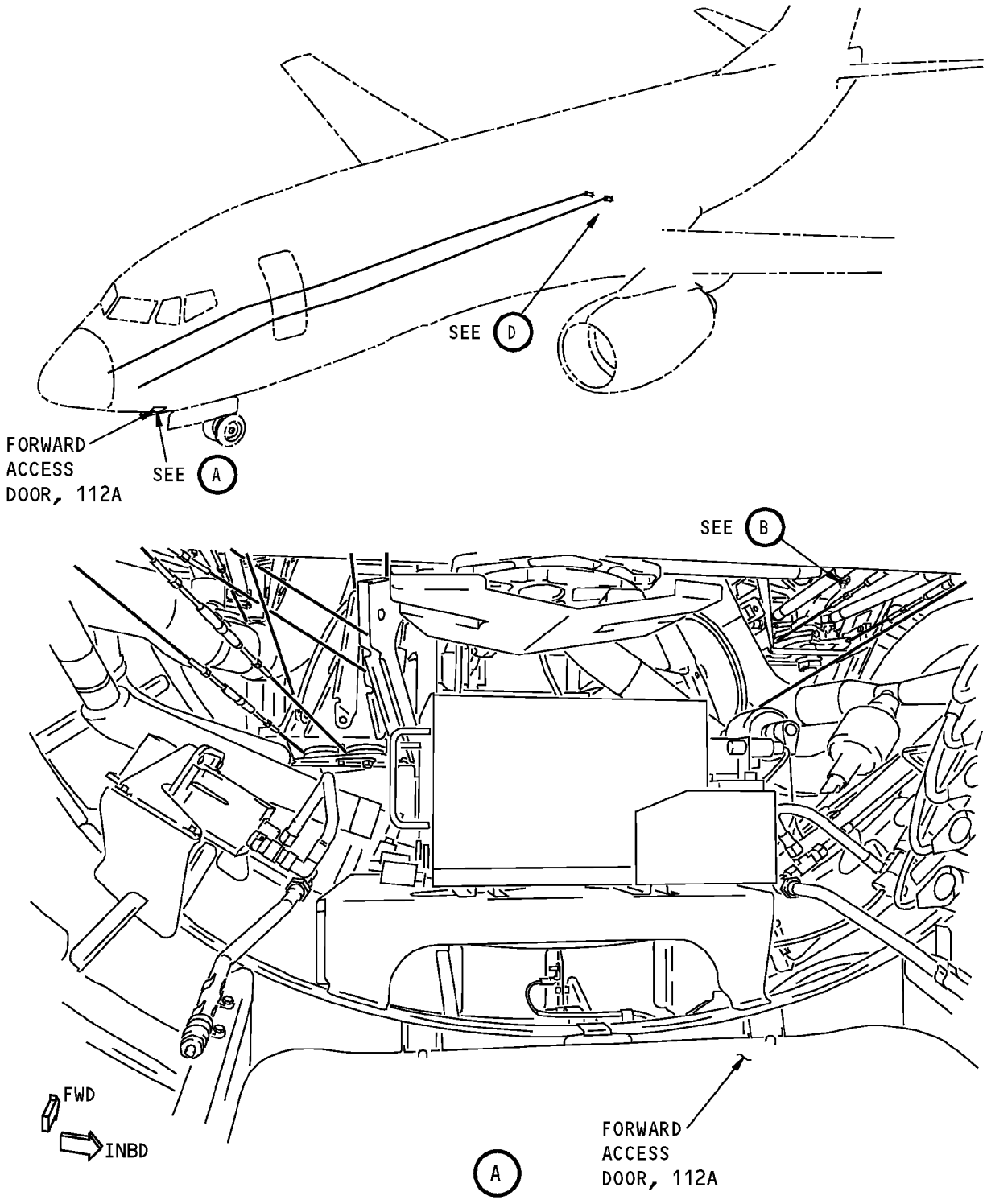
(4) Remove the cable assemblies [2]:

(a) Pull the old cable out, which will pull the new cable or string through the cable system at the same time.

NOTE: Make sure the new cable has grease, D00015 applied to it before it is installed.

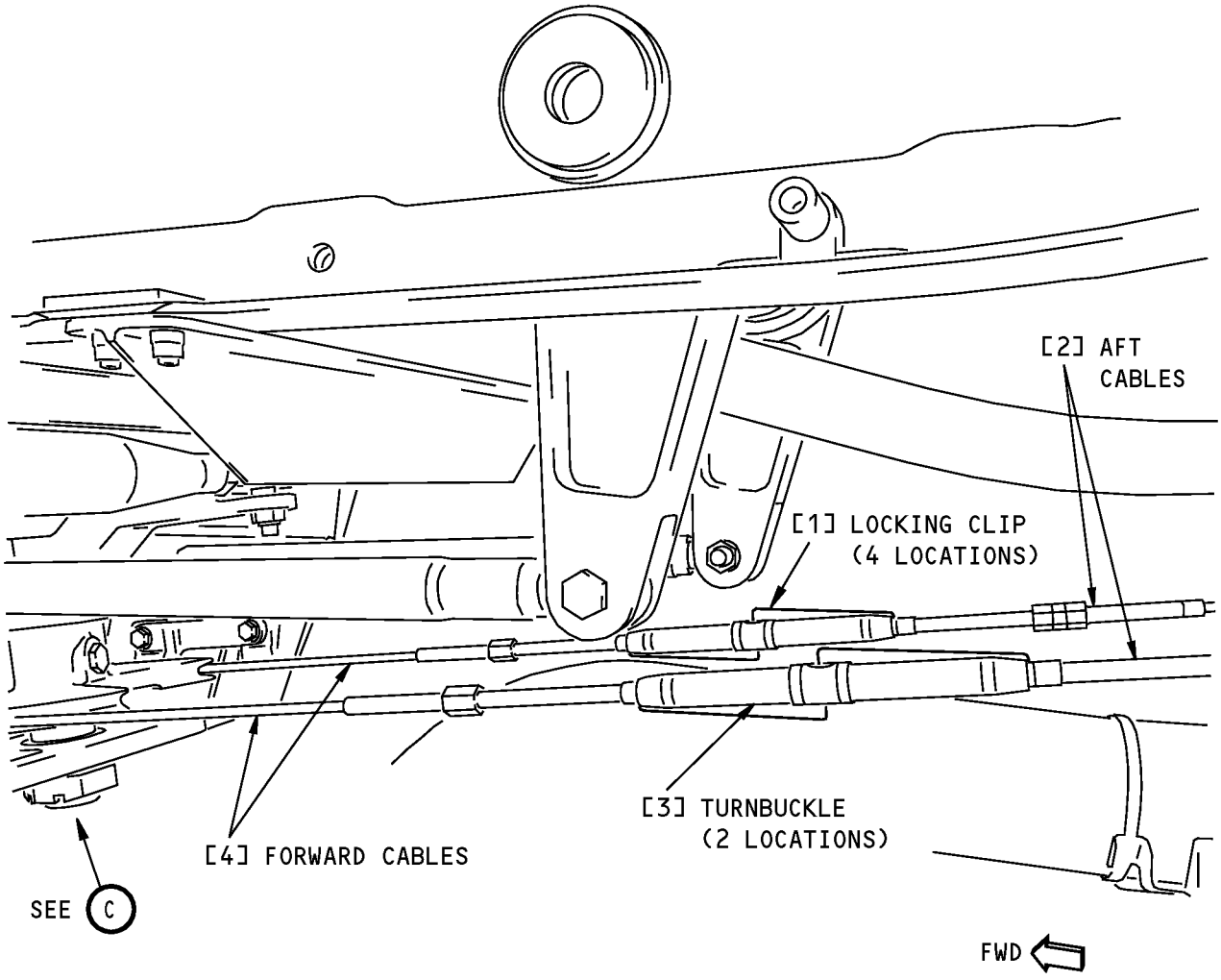
——————— END OF TASK ———————

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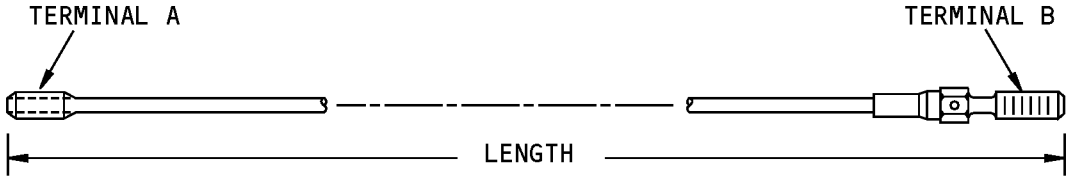
Hydraulic Brake Control Cable Installation
Figure 401 (Sheet 1 of 5)/32-41-81-990-801

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RIGHT CABLE INSTALLATION
(LEFT CABLE INSTALLATION IS EQUIVALENT)

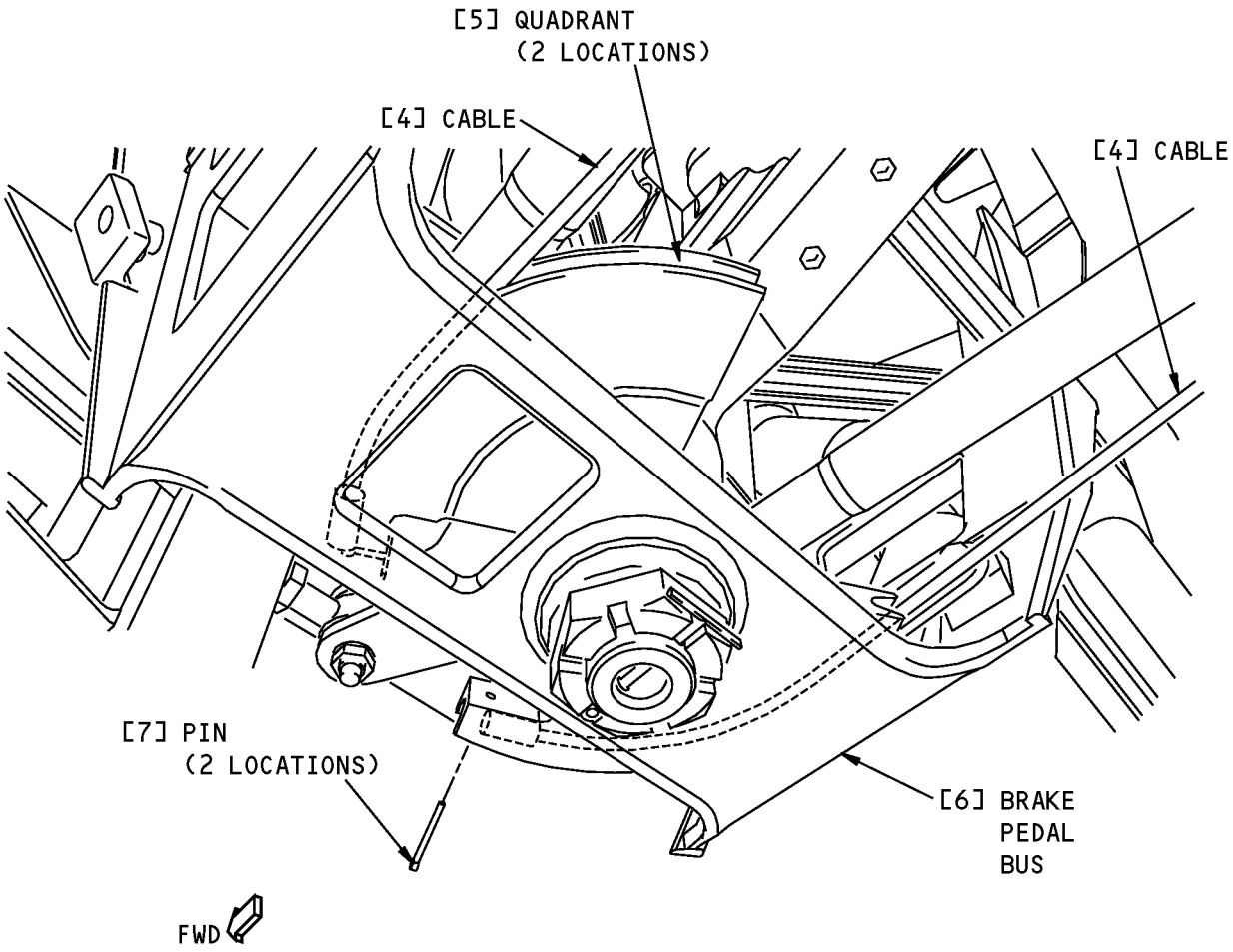
B



LGB1A, LGB1B, LGB2A, LGB2B

Hydraulic Brake Control Cable Installation
Figure 401 (Sheet 2 of 5)/32-41-81-990-801

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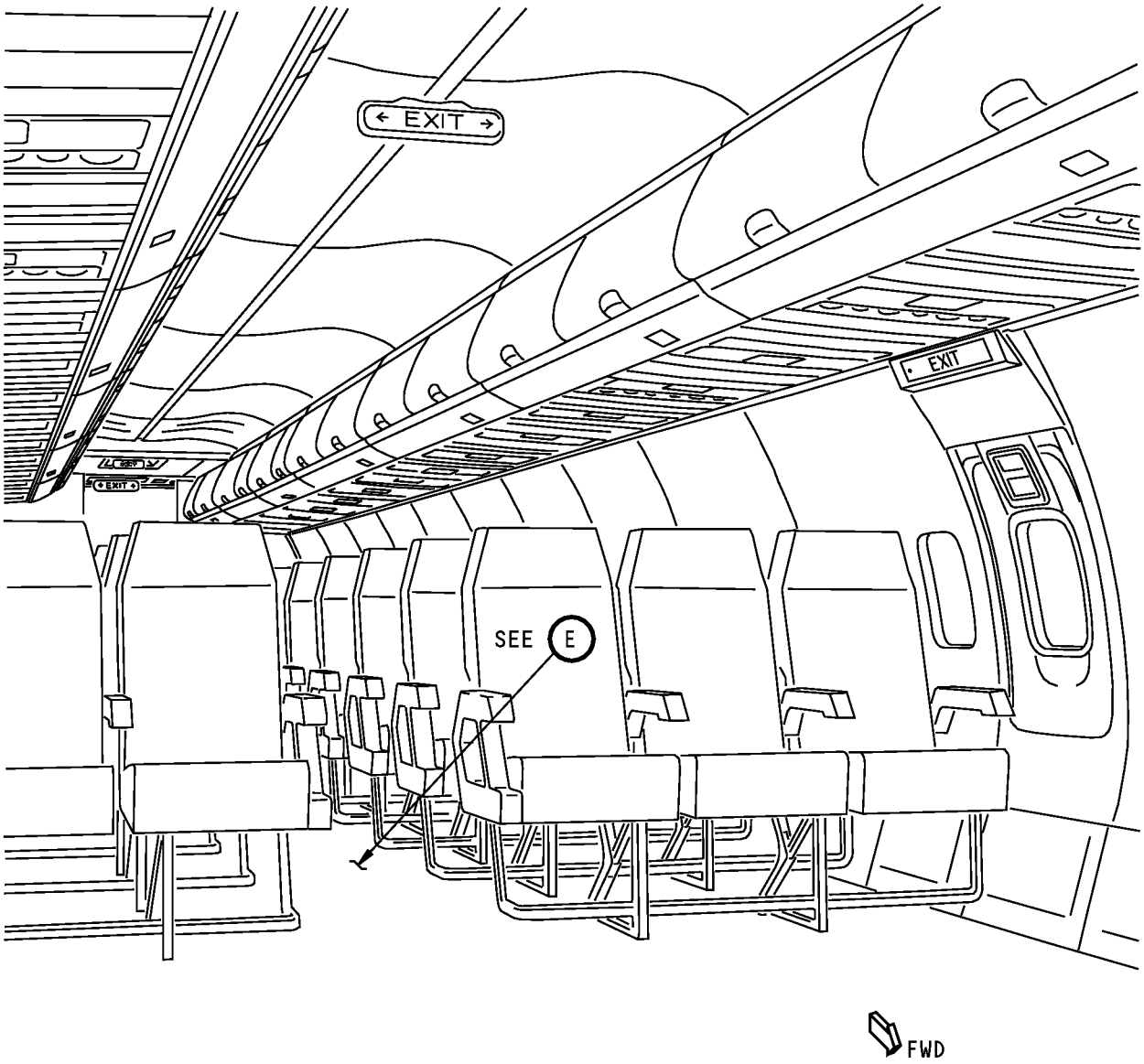


RIGHT BUS INSTALLATION
(LEFT BUS INSTALLATION IS EQUIVALENT)

C

Hydraulic Brake Control Cable Installation
Figure 401 (Sheet 3 of 5)/32-41-81-990-801

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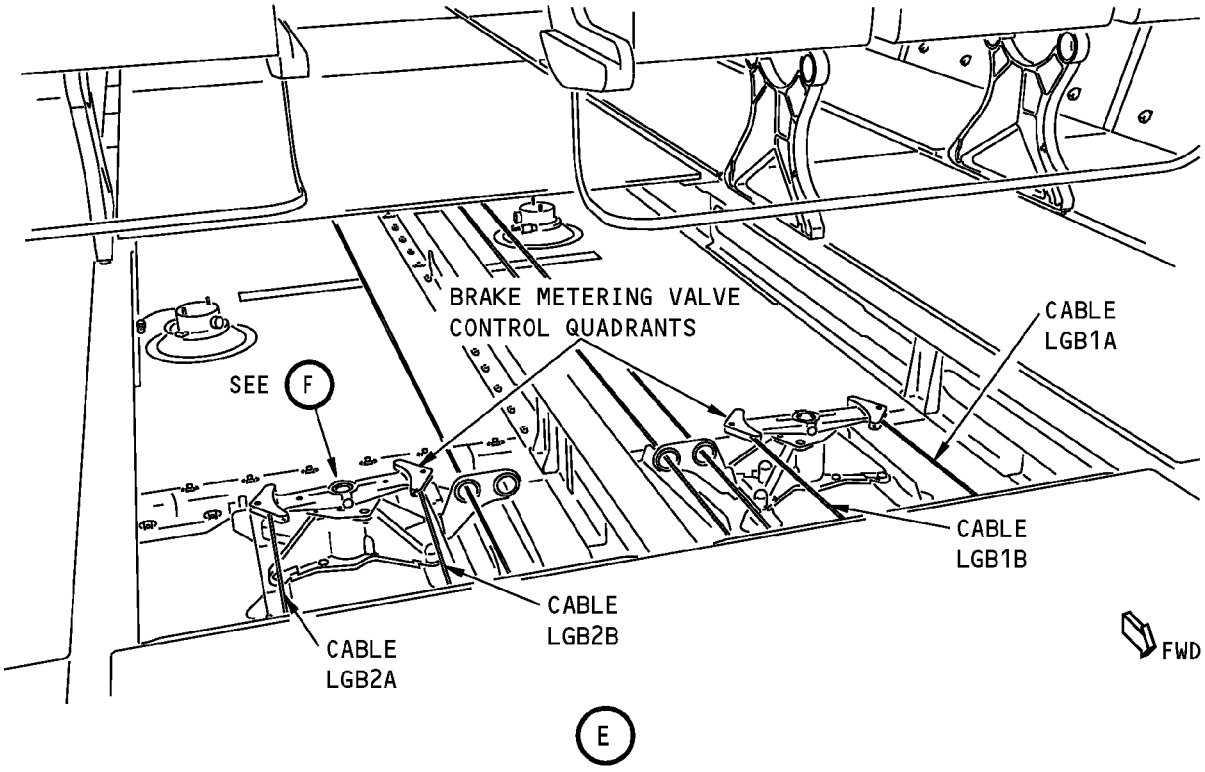


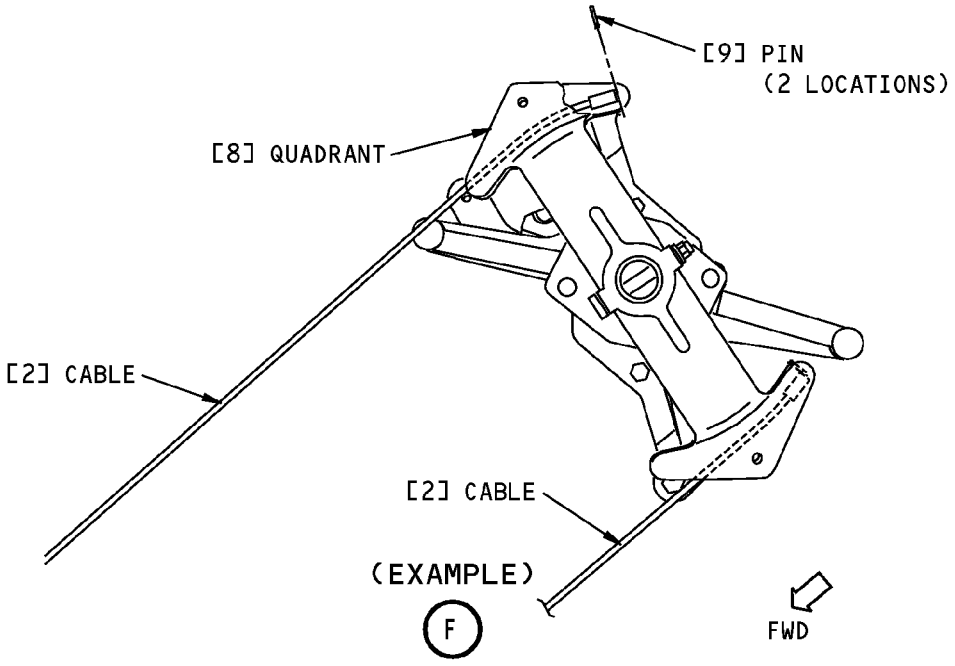
PASSENGER COMPARTMENT

D

Hydraulic Brake Control Cable Installation
Figure 401 (Sheet 4 of 5)/32-41-81-990-801

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Hydraulic Brake Control Cable Installation
Figure 401 (Sheet 5 of 5)/32-41-81-990-801

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TASK 32-41-81-400-801

3. Hydraulic Brake Control Cable Installation

(Figure 401)

A. References

Reference	Title
20-10-10-400-801	Turnbuckle Lock Installation (P/B 401)
25-22-00-400-802	Passenger Seat Installation (P/B 401)
25-27-15-400-801	Carpet Installation (P/B 401)
32-41-00-710-801	Normal and Alternate Brake Application - Functional Test (P/B 501)
32-41-00-820-801	Hydraulic Brake System Adjustment (P/B 501)
53-21-00-400-801	Passenger Cabin Floor Panel Installation (P/B 401)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1553	Tensiometer - Cable (20 - 200 LB) (Part #: 102-03110, Supplier: 21844, A/P Effectivity: 737-ALL) (Part #: ACM-200, Supplier: 13331, A/P Effectivity: 737-ALL) (Part #: T60-1001-C8-1A, Supplier: 0N8U4, A/P Effectivity: 737-ALL)

C. Consumable Materials

Reference	Description	Specification
D00015	Grease - Aircraft Bearing (Use BMS 3-24 until existing stocks are depleted, BMS 3-33 supersedes BMS 3-24)	BMS3-24 (Superseded by BMS 3-33)

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Cable assembly	32-31-41-01-060	HAP 001-013, 015-026, 028-054
		32-31-41-01-065	HAP 001-013, 015-026, 028-054
		32-31-41-01C-020	HAP 101-999
		32-31-41-01C-025	HAP 101-999
7	Pin	32-41-21-01-030	HAP ALL
9	Pin	32-31-41-01-055	HAP 001-013, 015-026, 028-054
		32-31-41-01C-005	HAP 101-999

E. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well

F. Access Panels

Number	Name/Location
112A	Forward Access Door

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G. Hydraulic Brake Control Cable Installation

SUBTASK 32-41-81-020-005

(1) Apply grease, D00015, to the new cable before it is installed.

SUBTASK 32-41-81-420-001

(2) If the new cable was not pulled through the cable system with the old cable (IPC 32-41-81-01), do the steps that follow:

(a) Attach the new cable to the string that was pulled through the cable system (Table 401, Table 402, Table 403, Table 405, Table 404).

(b) Pull the string out, which will pull the new cable through the cable system.

NOTE: Make sure you keep light tension on the cable to keep the cable in the pulley guides.

(c) The cable type of material and construction are BMS 7-265, Type I, Composition A (TZ), TIN over ZINC coated. The applicable cable size can be found on the cable length table.

(d) FOR 737-600 AIRPLANES use the 737-600 cable length table applicable cable can be found in (IPC 32-41-81-01B).

(e) FOR 737-700 AIRPLANES use the 737-700 cable length table applicable cable can be found in (IPC 32-41-81-01C).

(f) FOR 737-800 AIRPLANES use the 737-800 cable length table applicable cable can be found in (IPC 32-41-81-01).

(g) FOR 737-900 AIRPLANES use the 737-900 cable length table applicable cable can be found in (IPC 32-41-81-01A).

Table 401/32-41-81-993-808 BRAKE CONTROL CABLE LENGTHS

CABLE REFERENCE FORWARD AND AFT	LENGTH INCHES/MM FWD CABLES	LENGTH INCHES/MM AFT CABLES	CABLE SIZES	FITTING ON THE ENDS OF THE CABLE		
				FWD CABLE 1	AFT CABLE 1	FWD & AFT 2
LGB1A 737-600	13.0 in 330.2 mm	550.9 in 13993 mm	1/8 x 7x19	MS21260L4RH	MS21260L4LH	BACT14A4
LGB1B 737-600	13.0 in 330.2 mm	549.9 in 13967 mm	1/8 x 7x19	MS21260L4LH	MS21260L4RH	BACT14A4
LGB2A 737-600	13.0 in 330.2 mm	550.9 in 13993 mm	1/8 x 7x19	MS21260L4RH	MS21260L4LH	BACT14A4
LGB2B 737-600	13.0 in 330.2 mm	549.9 in 13967 mm	1/8 x 7x19	MS21260L4LH	MS21260L4RH	BACT14A4

Table 402/32-41-81-993-804 BRAKE CONTROL CABLE LENGTHS

CABLE REFERENCE FORWARD AND AFT	LENGTH INCHES/MM FWD CABLES	LENGTH INCHES/MM AFT CABLES	CABLE SIZES	FITTING ON THE ENDS OF THE CABLE		
				FWD CABLE 1	AFT CABLE 1	FWD & AFT 2
LGB1A 737-700	13.0 in 330.2 mm	604.9 in 15364 mm	1/8 x 7x19	MS21260L4RH	MS21260L4LH	BACT14A4

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(Continued)

CABLE REFERENCE FORWARD AND AFT	LENGTH INCHES/MM FWD CABLES	LENGTH INCHES/MM AFT CABLES	CABLE SIZES	FITTING ON THE ENDS OF THE CABLE		
				FWD CABLE 1	AFT CABLE 1	FWD & AFT 2
LGB1B 737-700	13.0 in 330.2 mm	603.9 in 15339 mm	1/8 x 7x19	MS21260L4LH	MS21260L4RH	BACT14A4
LGB2A 737-700	13.0 in 330.2 mm	604.9 in 15364 mm	1/8 x 7x19	MS21260L4RH	MS21260L4LH	BACT14A4
LGB2B 737-700	13.0 in 330.2 mm	603.9 in 15364 mm	1/8 x 7x19	MS21260L4LH	MS21260L4RH	BACT14A4

Table 403/32-41-81-993-805 BRAKE CONTROL CABLE LENGTHS

CABLE REFERENCE FORWARD AND AFT	LENGTH INCHES/MM FWD CABLES	LENGTH INCHES/MM AFT CABLES	CABLE SIZES	FITTING ON THE ENDS OF THE CABLE		
				FWD CABLE 1	AFT CABLE 1	FWD & AFT 2
LGB1A 737-800	13.0 in 330.2 mm	723.1 in 18367 mm	1/8 x 7x19	MS21260L4RH	MS21260L4LH	BACT14A4
LGB1B 737-800	13.0 in 330.2 mm	722.2 in 18344 mm	1/8 x 7x19	MS21260L4LH	MS21260L4RH	BACT14A4
LGB2A 737-800	13.0 in 330.2 mm	723.1 in 18367 mm	1/8 x 7x19	MS21260L4RH	MS21260L4LH	BACT14A4
LGB2B 737-800	13.0 in 330.2 mm	723.2 in 18344 mm	1/8 x 7x19	MS21260L4LH	MS21260L4RH	BACT14A4

Table 404/32-41-81-993-806 BRAKE CONTROL CABLE LENGTHS

CABLE REFERENCE FORWARD AND AFT	LENGTH INCHES/MM FWD CABLES	LENGTH INCHES/MM AFT CABLES	CABLE SIZES	FITTING ON THE ENDS OF THE CABLE		
				FWD CABLE 1	AFT CABLE 1	FWD & AFT 2
LGB1A 737-800	13.0 in 330.2 mm	722.8 in 18359 mm	1/8 x 7x19	MS21260L4RH	MS21260L4LH	BACT14A4
LGB1B 737-800	13.0 in 330.2 mm	721.9 in 18336 mm	1/8 x 7x19	MS21260L4LH	MS21260L4RH	BACT14A4
LGB2A 737-800	13.0 in 330.2 mm	722.8 in 18359 mm	1/8 x 7x19	MS21260L4RH	MS21260L4LH	BACT14A4
LGB2B 737-800	13.0 in 330.2 mm	722.9 in 18336 mm	1/8 x 7x19	MS21260L4LH	MS21260L4RH	BACT14A4

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Table 405/32-41-81-993-807 BRAKE CONTROL CABLE LENGTHS

CABLE REFERENCE FORWARD AND AFT	LENGTH INCHES/MM FWD CABLES	LENGTH INCHES/MM AFT CABLES	CABLE SIZES	FITTING ON THE ENDS OF THE CABLE		
				FWD CABLE 1	AFT CABLE 1	FWD & AFT 2
LGB1A 737-900	13.0 in 330.2 mm	784.8 in 19934 mm	1/8 x 7x19	MS21260L4RH	MS21260L4LH	BACT14A4
LGB1B 737-900	13.0 in 330.2 mm	783.9 in 19911 mm	1/8 x 7x19	MS21260L4LH	MS21260L4RH	BACT14A4
LGB2A 737-900	13.0 in 330.2 mm	784.8 in 19934 mm	1/8 x 7x19	MS21260L4RH	MS21260L4LH	BACT14A4
LGB2B 737-900	13.0 in 330.2 mm	783.9 in 19911 mm	1/8 x 7x19	MS21260L4LH	MS21260L4RH	BACT14A4

SUBTASK 32-41-81-020-006

(3) In the passenger compartment, do these steps:

(a) Connect the brake control cable assemblies [2] to the quadrant [8]:

1) Put the cable assemblies [2] in its position in the control quadrant [8].

2) Install the new pins [9] to hold the end of the control cable in the quadrant [8].

SUBTASK 32-41-81-020-007

(4) In the forward compartment, forward of the nose wheel well, do these steps:

(a) Connect the forward brake control cable assembly [4] to the quadrant [5]:

1) Put the cable assemblies [4] in its position in the control quadrant [5].

2) Install the new pins [7] to hold the end of the control cable in the quadrant [5].

(b) Install the turnbuckle [3].

NOTE: This will connect the forward brake cable assemblies [4] to the aft brake control cable assemblies [2].

SUBTASK 32-41-81-420-003

(5) Adjust the brake cable tension with the 20 - 200 lb cable tensiometer, COM-1553, to 200 ± 10 pounds (889.6 ± 44.5 newtons) tension.

SUBTASK 32-41-81-420-004

(6) Operate the brake cables through full travel 25 times.

SUBTASK 32-41-81-420-005

(7) Do this task: Hydraulic Brake System Adjustment, TASK 32-41-00-820-801.

SUBTASK 32-41-81-420-006

(8) Make sure that a locking clip [1] is installed on the turnbuckle [3] when you have adjusted the control cable assemblies [2], cable assemblies [4]. To do this, do this task: Turnbuckle Lock Installation, TASK 20-10-10-400-801.

SUBTASK 32-41-81-420-007

(9) Do this task: Normal and Alternate Brake Application - Functional Test, TASK 32-41-00-710-801.

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H. Put the Airplane Back to Its Usual Condition

SUBTASK 32-41-81-840-005

(1) Close this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-41-81-840-007

(2) Install the floor panels. To do this, do this task: Passenger Cabin Floor Panel Installation, TASK 53-21-00-400-801.

SUBTASK 32-41-81-840-008

(3) Do this task: Carpet Installation, TASK 25-27-15-400-801.

SUBTASK 32-41-81-840-009

(4) Do this task: Passenger Seat Installation, TASK 25-22-00-400-802.

SUBTASK 32-41-81-840-010

(5) Set the parking brakes.

END OF TASK

TASK 32-41-81-000-802

4. Brake Control System Visual Inspection

A. General

(1) This procedure is a scheduled maintenance task.

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

C. Access Panels

Number	Name/Location
112A	Forward Access Door

D. Forward Brake Control Mechanism Inspection

SUBTASK 32-41-81-840-020

(1) To get access to the pilots and copilots brake/rudder pedals and visible brake control components (forward of nose wheel well), do this step:

(a) Open this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-41-81-210-002

(2) Do a detail visual inspection of the brake cable quadrants, bell cranks, control rods.

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E. Aft Brake Control Mechanisms Inspection

SUBTASK 32-41-81-840-021

(1) Go to the main landing gear wheel well.

SUBTASK 32-41-81-210-003

(2) Do a detail visual inspection of the visible part of the brake control mechanism to the brake metering valve.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 32-41-81-840-015

(1) Close this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-41-81-840-022

(2) Set the parking brakes.

END OF TASK

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BRAKE ACCUMULATOR ISOLATION VALVE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the accumulator isolation valve assembly [13].

(2) An installation of the accumulator isolation valve

(3) An operational test of the accumulator isolation valve.

TASK 32-41-91-000-801

2. Accumulator Isolation Valve Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-41-91-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-91-480-002

(2) Put chocks around the tires of all the landing gear.

SUBTASK 32-41-91-860-001

(3) Release the parking brake.

SUBTASK 32-41-91-860-002

(4) For the A and B hydraulic systems, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-41-91-870-001

(5) Bleed the pressure from the brake accumulator:

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(a) Operate the brake pedals for approximately 12 times or until the gage on the brake accumulator shows no change in the pressure.

NOTE: This step will make sure the pressure is fully released from the brake accumulator.

D. Brake Accumulator Isolation Valve Removal

SUBTASK 32-41-91-020-001

(1) Do these steps to remove the accumulator isolation valve assembly [13]:

(a) Disconnect the hydraulic lines [1], [8], and the elbow [11] from the accumulator isolation valve assembly [13].

(b) Install plugs in the hydraulic lines [1], [8], and elbow [11].

(c) Install caps on the reducers [2], [7], and [10] in the ports of the accumulator isolation valve assembly [13].

(d) Remove the bolts [4], and the washers [5] that attach the accumulator isolation valve assembly [13] to the mating surface.

(e) Remove the accumulator isolation valve assembly [13] from the airplane.

SUBTASK 32-41-91-020-002

(2) If the replacement accumulator isolation valve assembly [13] does not have hydraulic fittings installed, do these steps:

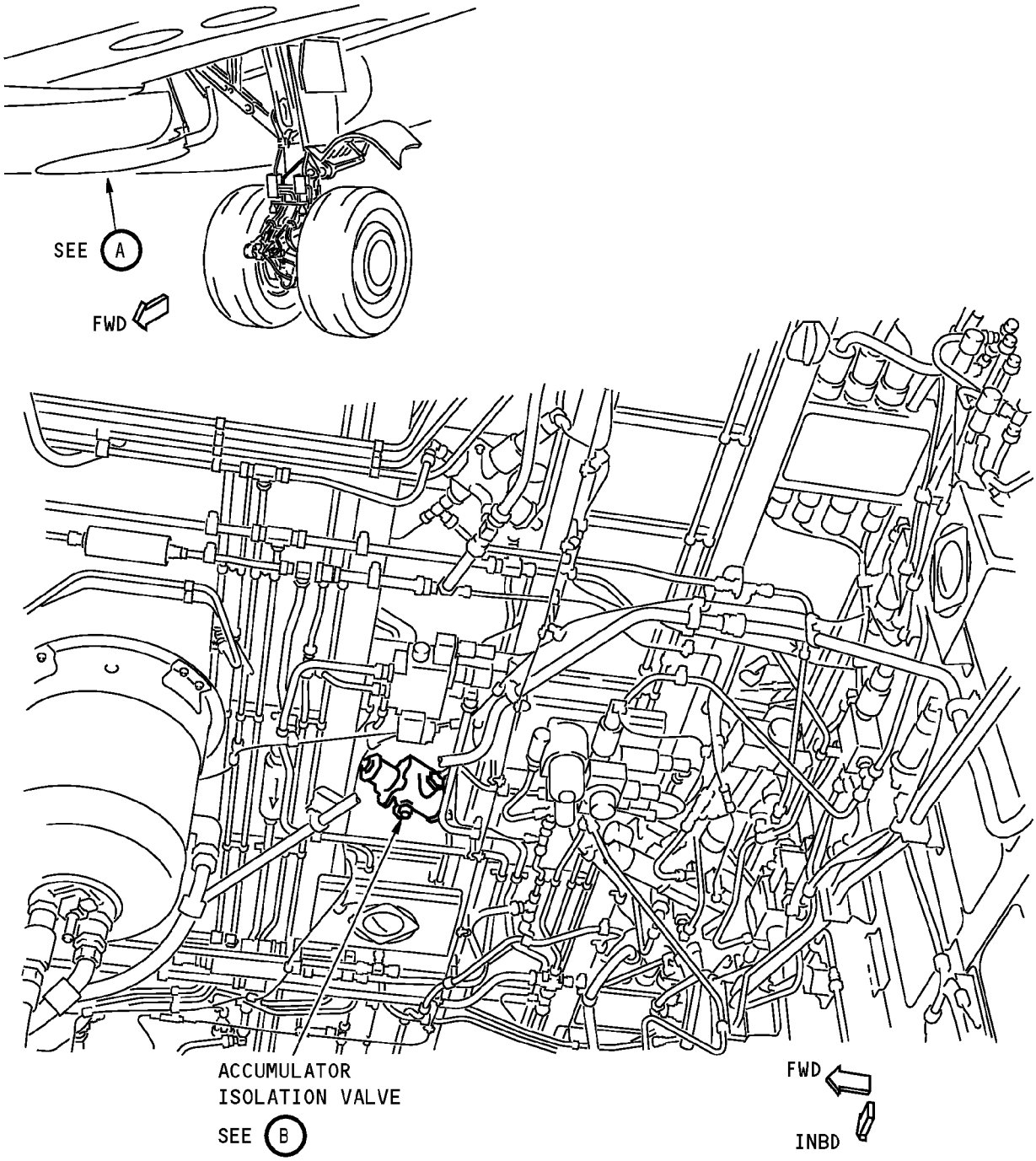
(a) Remove the reducers [2], [7], and [10] from the ports of the accumulator isolation valve assembly [13].

(b) Remove and discard the packing [3], packing [6], and packing [9].

(c) Install plugs in the hydraulic ports of the accumulator isolation valve assembly [13].

——————— END OF TASK ———————

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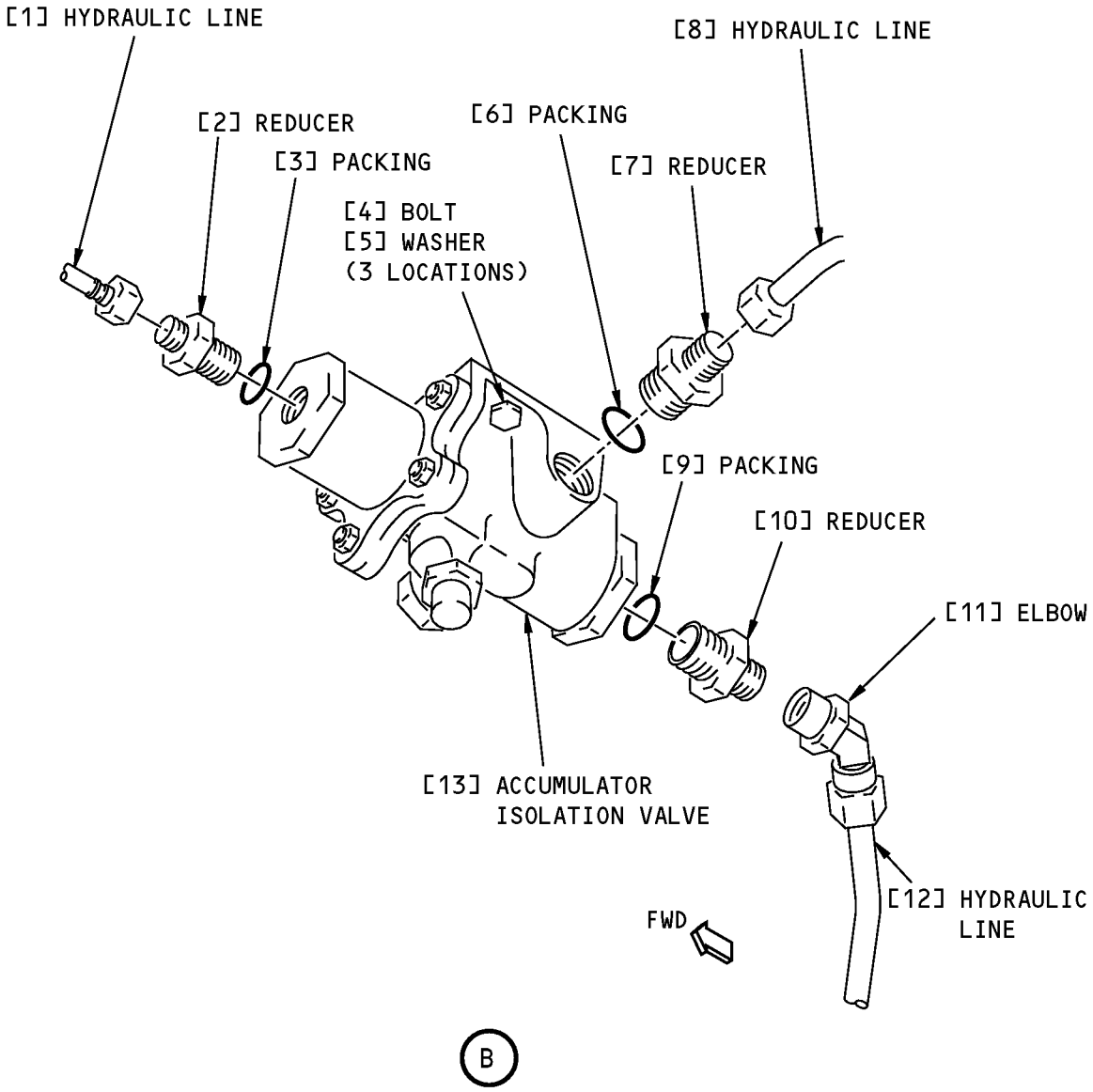


MAIN LANDING GEAR WHEEL WELL

A

Accumulator Isolation Valve Installation
Figure 401 (Sheet 1 of 2)/32-41-91-990-801

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Accumulator Isolation Valve Installation
Figure 401 (Sheet 2 of 2)/32-41-91-990-801

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TASK 32-41-91-420-801

3. Accumulator Isolation Valve Installation

(Figure 401)

A. References

Reference	Title
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)

B. Consumable Materials

Reference	Description	Specification
B00083	Solvent - Aliphatic Naphtha (For Acrylic Plastics)	TT-N-95 Type II, ASTM D-3735 Type III
D00054	Fluid - Hydraulic Assembly Lubricant - MCS 352B (Formerly Monsanto MCS 352B)	
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange~able & intermixable with Type V)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	Packing	32-41-91-01-055	HAP ALL
6	Packing	32-41-91-01-050	HAP ALL
9	Packing	32-41-91-01-050	HAP ALL
13	Valve assembly	32-41-91-01-065	HAP 001-013, 015-026, 028-030

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

E. Prepare for the Installation

SUBTASK 32-41-91-110-001

(1) Prepare the mating surfaces for installation of the accumulator isolation (Figure 401).

(a) Clean the mating surface of the accumulator isolation valve assembly [13] with the solvent, B00083.

(b) Clean the mating surface for the accumulator isolation valve assembly [13] with the solvent, B00083.

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F. Brake Accumulator Isolation Valve Installation

SUBTASK 32-41-91-640-001

(1) If the reducers [2], [7], [10] and the packings [3], [6], [9] are not installed, do these steps:

(a) Lubricate the reducers [2], [7], [10], and the new packing [3], packing [6], packing [9] with fluid, D00153 or MCS 352B fluid, D00054.

(b) Install the reducers [2], [7], [10], and the new packing [3], packing [6], and packing [9] in their location on the accumulator isolation valve assembly [13].

SUBTASK 32-41-91-420-001

(2) Do these steps to install the accumulator isolation valve assembly [13]:

(a) Put the accumulator isolation valve assembly [13] on the mating surface.

(b) Install the bolts [4], and the washers [5] to attach the accumulator isolation valve assembly [13] on the mating surface.

(c) Remove the caps from the hydraulic ports of the accumulator isolation valve assembly [13].

(d) Remove the plugs from the hydraulic lines [1], [8], and elbow [11].

(e) Connect the hydraulic lines [1], [8], and the elbow [11] to the accumulator isolation valve assembly [13].

G. Accumulator Isolation Valve Test

SUBTASK 32-41-91-870-003

(1) Do the steps that follow to make sure the valve assembly does not leak:

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) For the normal and alternate brake hydraulic systems, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

(b) Make sure the PRESS A, PRESS B, and BRAKE hydraulic connections on the valve assembly [13] do not leak.

SUBTASK 32-41-91-870-002

(2) Bleed the brake hydraulic system:

(a) Operate the brake pedals 6 times.

NOTE: Operate the pedals slowly and wait a minimum of 5 seconds between each time you push the pedals.

SUBTASK 32-41-91-860-003

(3) For the normal and alternate hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-41-91-840-002

(4) Set the parking brakes.

SUBTASK 32-41-91-840-003

(5) Remove the chocks from around the tires of all the landing gear.

END OF TASK

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ALTERNATE BRAKE SELECTOR VALVE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the alternate brake selector valve (referred to as the valve assembly [1])

(2) An installation of the alternate brake selector valve

(3) An operational test of the alternate brake selector valve.

(4) An operational test of the landing gear retract braking.

TASK 32-41-93-000-801

2. Alternate Brake Selector Valve Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-41-93-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-93-480-002

(2) Put chocks around the tires of all the landing gear.

SUBTASK 32-41-93-860-001

(3) Release the parking brake.

SUBTASK 32-41-93-860-002

(4) For the A and B hydraulic systems, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-41-93-870-001

(5) Bleed the pressure from the brake accumulator:

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(a) Operate the brake pedals for approximately 12 times or until the gage on the brake accumulator shows no change in the pressure.

NOTE: This step will make sure the pressure is fully released from the brake accumulator.

D. Alternate Brake Selector Valve Removal

SUBTASK 32-41-93-020-001

(1) Do these steps to remove the alternate brake selector valve assembly [1]:

(a) Disconnect the electrical connector [3] from the pressure switch [2] on the alternate brake selector valve assembly [1].

(b) Disconnect the hydraulic line [6] from the normal port on the alternate brake selector valve assembly [1].

(c) Disconnect the T-fitting [7] from the return port on the alternate brake selector valve assembly [1].

(d) Disconnect the T-fitting [10] from the brake port on the alternate brake selector valve assembly [1].

(e) Disconnect the elbow [13] from the alt pressure port on the alternate brake selector valve assembly [1].

(f) Install caps on the hydraulic line [6], T-fittings [7], [10] and the elbow [13].

(g) Install plugs in the hydraulic ports of the alternate brake selector valve assembly [1].

(h) Remove the nuts [16] and the washers [17] that attach the alternate brake selector valve assembly [1] to the mating surface.

(i) Remove the alternate brake selector valve assembly [1] from the airplane.

SUBTASK 32-41-93-020-002

(2) If you will install a new alternate brake selector valve assembly [1] without the unions or reducers, do these steps:

(a) Remove the union [8] and the reducers [5], [11], and [14] from the alternate brake selector valve assembly [1].

(b) Remove and discard the packing [4], packing [9], packing [12], and packing [15].

SUBTASK 32-41-93-020-003

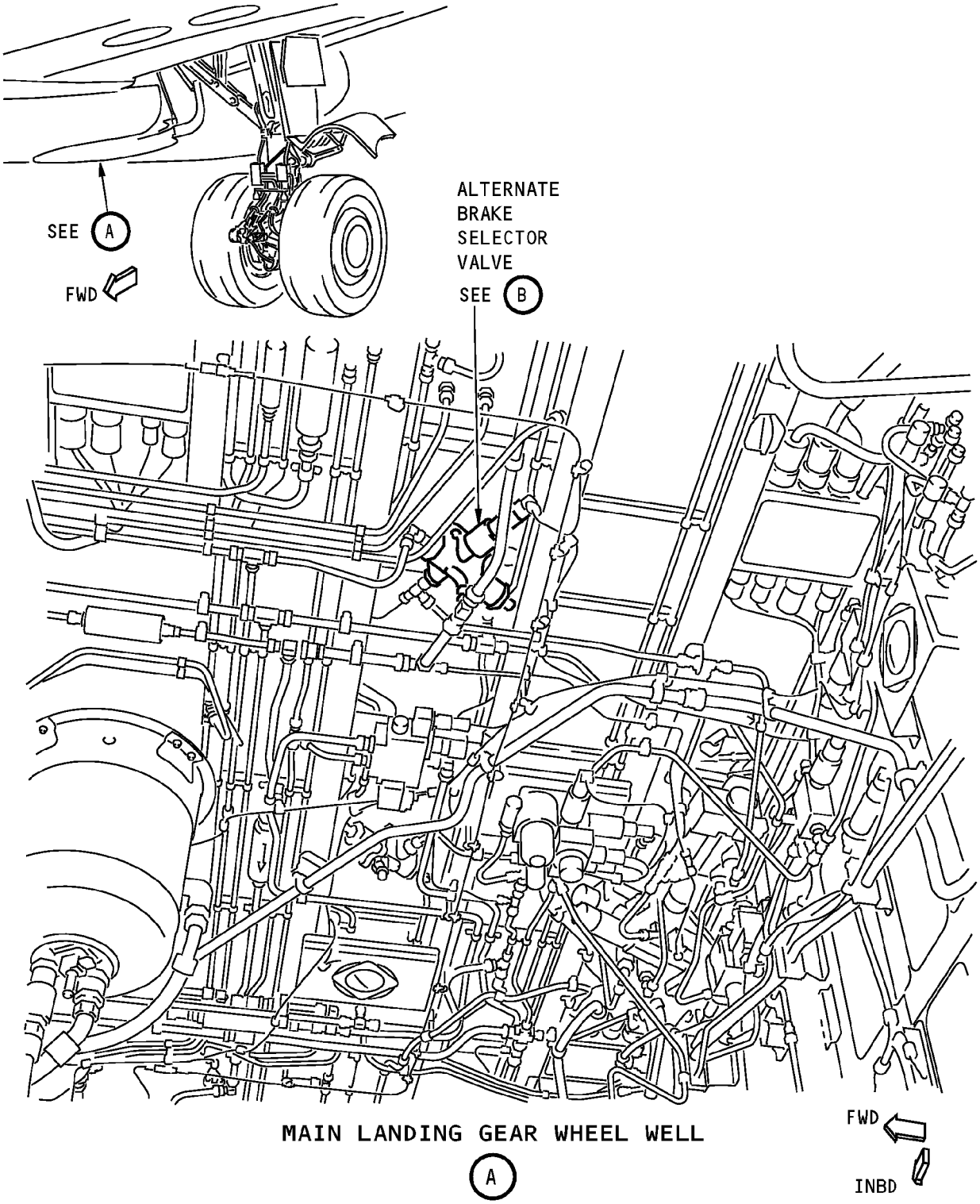
(3) Do the steps that follow to remove the pressure switch from the alternate brake selector valve assembly [1]:

(a) Remove the pressure switch [2] from the alternate brake selector valve assembly [1].

(b) Remove and discard the packing from the switch [2].

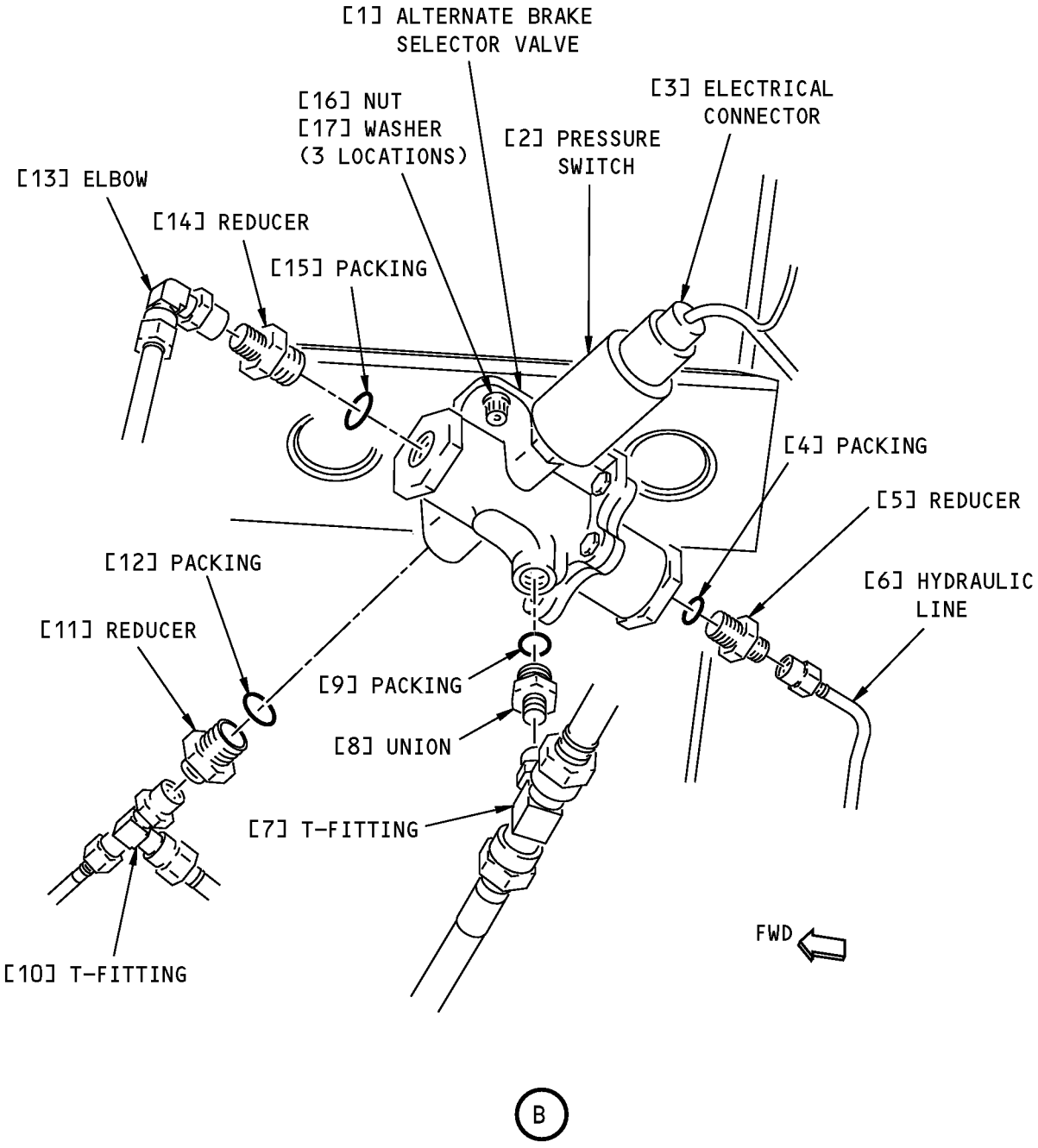
———————— END OF TASK ————————

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Alternate Brake Selector Valve Installation
Figure 401 (Sheet 1 of 2)/32-41-93-990-801

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Alternate Brake Selector Valve Installation
Figure 401 (Sheet 2 of 2)/32-41-93-990-801

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TASK 32-41-93-420-801

3. Alternate Brake Selector Valve Installation

(Figure 401)

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
SWPM 20-60-03	Special Protection of Electrical Connectors

B. Consumable Materials

Reference	Description	Specification
B00083	Solvent - Aliphatic Naphtha (For Acrylic Plastics)	TT-N-95 Type II, ASTM D-3735 Type III
D00054	Fluid - Hydraulic Assembly Lubricant - MCS 352B (Formerly Monsanto MCS 352B)	
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)
G50171	Compound - Corrosion Inhibiting Compound, Interior Application - D5026NS or ZC-026	

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

D. Prepare for the Installation

SUBTASK 32-41-93-110-001

(1) Prepare the mating surfaces for installation of the alternate brake selector valve assembly [1].

(a) Clean the mating surface of the alternate brake selector valve assembly [1] with solvent, B00083.

(b) Clean the mating surface for the alternate brake selector valve assembly [1] with solvent, B00083.

E. Alternate Brake Selector Valve Installation

SUBTASK 32-41-93-640-001

(1) If the union, reducers, and the packings are not installed, do these steps:

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(a) Lubricate the union [8], reducers [5], [11], [14] and the new packing [4], packing [9], packing [12], packing [15] with fluid, D00153 or MCS 352B fluid, D00054.

(b) Install the union [8], reducers [5], [11], [14], and the new packing [4], packing [9], packing [12], packing [15], in their location on the alternate brake selector valve assembly [1].

SUBTASK 32-41-93-420-001

(2) If the pressure switch is not installed in the alternate brake selector valve assembly [1], do these steps:

(a) Install the packing on the pressure switch [2].

(b) Install the pressure switch [2] on the alternate brake selector valve assembly [1].

SUBTASK 32-41-93-080-001

(3) Do these steps to install the alternate brake selector valve assembly [1]:

(a) Position the alternate brake selector valve assembly [1] on the mating surface.

(b) Install the washers [17], and the nuts [16] to attach the alternate brake selector valve assembly [1] on the mating surface.

(c) Remove the plugs from the hydraulic ports of the alternate brake selector valve assembly [1].

(d) Remove the caps from the hydraulic line [6], T-fittings [7], [10] and the elbow [13].

(e) Connect the hydraulic line [6] to the normal port on the alternate brake selector valve assembly [1].

(f) Connect the T-fitting [7] to the return port on the alternate brake selector valve assembly [1].

(g) Connect the T-fitting [10] to the brake port on the alternate brake selector valve assembly [1].

(h) Connect the elbow [13] to the alt pressure port on the alternate brake selector valve assembly [1].

(i) Before you connect the electrical connector [3] to the pressure switch [2] on the alternate brake selector valve assembly [1], examine the connector for corrosion.

WARNING: DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

(j) If there was corrosion, refer to (SWPM 20-60-03) to correct the problem.

(k) Apply the D5026NS or ZC-026 compound, G50171 to the connector (SWPM 20-60-03).

(l) Connect the electrical connector [3] to the pressure switch [2] on the alternate brake selector valve assembly [1].

SUBTASK 32-41-93-480-003

(4) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

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SUBTASK 32-41-93-790-001

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(5) For the A and the B hydraulic systems, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-41-93-870-002

(6) Bleed the brake hydraulic system:

(a) Operate the brake pedals 6 times.

NOTE: Operate the pedals slowly and wait a minimum of 5 seconds between each operation.

SUBTASK 32-41-93-710-005

(7) Do this task: Alternate Brake Selector Valve Test, TASK 32-41-93-700-801.

END OF TASK

TASK 32-41-93-700-801

4. Alternate Brake Selector Valve Test

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

C. Prepare for the Test

SUBTASK 32-41-93-480-004

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

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SUBTASK 32-41-93-480-005

(2) Make sure the chocks are installed around the tires of all the landing gear.

SUBTASK 32-41-93-480-006

(3) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-41-93-790-002

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) Make sure the A and the B hydraulic systems are pressurized. If they are not pressurized, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-41-93-760-001

(5) Make sure the parking brake is released.

D. Alternate Brake Selector Valve Operation Test (Hydraulic System B)

SUBTASK 32-41-93-720-001

(1) Push the brake pedals 5 times to apply and release the brakes.

NOTE: Wait approximately 3 seconds each time the brakes are applied.

SUBTASK 32-41-93-720-002

(2) Make sure the brake pistons move to show that the brakes operate correctly.

E. Alternate Brake Selector Valve Operation Test (Hydraulic System A)

SUBTASK 32-41-93-860-003

(1) For hydraulic system B, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-41-93-210-001

(2) Make sure that the BRAKE PRESS indicator gage on the P3-1 panel shows 3000 +/-100 psi and stays constant during the brake operation when you do the steps that follow.

SUBTASK 32-41-93-720-003

(3) Push the brake pedals 5 times to apply and release the brakes.

SUBTASK 32-41-93-720-004

(4) Make sure the brake pistons move to show that the brakes operate correctly.

SUBTASK 32-41-93-710-001

(5) Do this test of the ANTISKID INOP light:

(a) Remove the connector from one of the alternate antiskid valves.

(b) Make sure that the ANTISKID INOP light on the P2 panel comes on.

(c) Attach the connector to the alternate antiskid valve.

SUBTASK 32-41-93-860-004

(6) After five to ten minutes, do a check for leaks around the alternate brake selector valve assembly [1].

END OF TASK

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TASK 32-41-93-710-801

5. Gear Retract Braking - Operational Test

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1819	Gauge Set - Hydraulic Brake System, Pressure Checking (Part #: F72977-62, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: F72977-45, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: F72977-46, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: F72977-47, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Procedure

SUBTASK 32-41-93-480-008

(1) Make sure the tires have chocks installed around them.

SUBTASK 32-41-93-860-006

(2) Release the parking brake.

SUBTASK 32-41-93-480-009

(3) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-41-93-480-010

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

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SUBTASK 32-41-93-480-011

(5) Install a pressure gage, from the gauge set, SPL-1819, on each brake.

SUBTASK 32-41-93-790-003

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(6) For the A and the B hydraulic systems, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-41-93-860-007

WARNING: MAKE SURE THE LANDING GEAR ARE DOWN AND LOCKED. INSTALL GROUND LOCK PINS IN ALL LANDING GEAR TO PREVENT LANDING GEAR OPERATION. IF YOU DO NOT INSTALL GROUND LOCK PINS, INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(7) Put the landing gear control lever in the UP position.

SUBTASK 32-41-93-870-003

(8) Wait 2 seconds.

SUBTASK 32-41-93-710-002

(9) Make sure the hydraulic pressure at all brakes is 500 -575 psig (3447-3964 kPa).

SUBTASK 32-41-93-710-003

(10) Put the landing gear control lever in the DOWN position.

SUBTASK 32-41-93-710-004

(11) Make sure the hydraulic pressure at all of the brakes is less than 60 psig (414 kPa).

SUBTASK 32-41-93-860-008

(12) For the A and B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-41-93-480-012

(13) Remove the pressure gage from on each brake.

SUBTASK 32-41-93-480-013

(14) Remove the chocks from around the tires.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 32-41-93-840-002

(1) Set the parking brakes.

SUBTASK 32-41-93-860-009

(2) For the A hydraulic system, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-41-93-480-014

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(3) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

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SUBTASK 32-41-93-860-010

(4) Set the parking brake.

END OF TASK

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BRAKE SHUTTLE VALVES - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the brake shuttle valves

(2) An installation of the brake shuttle valves

B. There are four brake shuttle valves, two on the right and the two on the left, on the sides of the main gear wheel well. The procedure that follows gives the removal and installation for each of the brake shuttle valves.

C. In this procedure the brake shuttle valve will be referred to as the valve assembly [5].

TASK 32-41-95-000-801

2. Brake Shuttle Valve Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare for the Removal

SUBTASK 32-41-95-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-41-95-860-001

(2) For the A and B hydraulic systems, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-41-95-480-002

(3) Make sure the tires have chocks installed around them.

SUBTASK 32-41-95-860-002

(4) Release the parking brake.

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SUBTASK 32-41-95-840-001

(5) Operate the brake pedals until the gage at the brake accumulator shows no change in the pressure.

NOTE: You will have to operate the brake pedals approximately 12 times to fully release the pressure from the accumulator.

D. Brake Shuttle Valve Removal

SUBTASK 32-41-95-020-001

(1) Do the steps that follow to remove the valve assembly [5]:

(a) Disconnect the hydraulic tubes from the valve assembly [5].

(b) Install caps or plugs on the hydraulic tubes.

(c) Remove the bolt [3] or bolt [7] and the washer [4].

(d) Remove the valve assembly [5] from the airplane.

SUBTASK 32-41-95-020-002

(2) If the valve assembly [5] you will install does not have the unions [1] installed, do these steps:

(a) Remove the unions [1] from the old valve assembly [5].

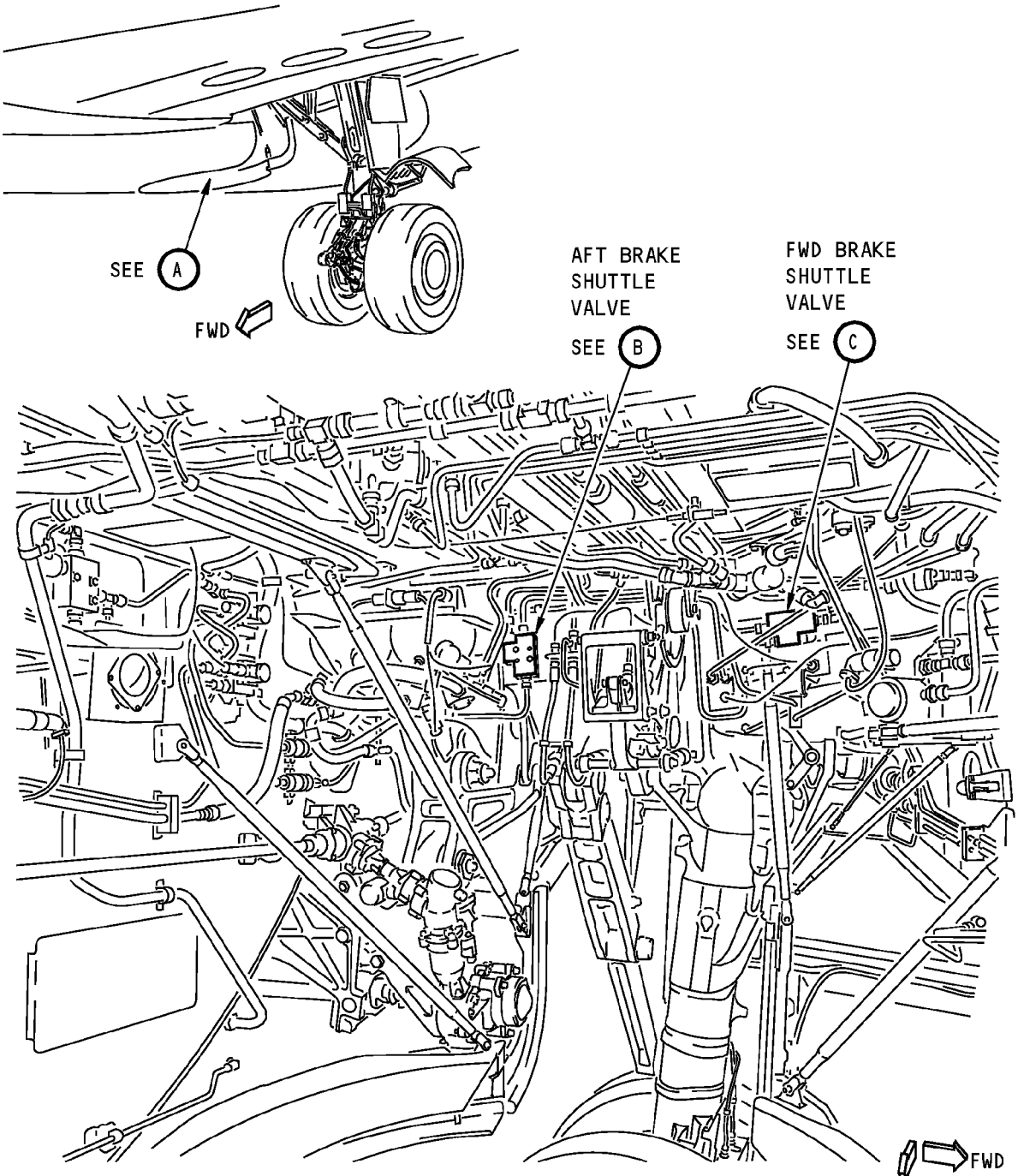
(b) Remove and discard the packings [2] from the applicable fitting.

SUBTASK 32-41-95-480-003

(3) Install caps or plugs on the ports of the valve assembly [5].

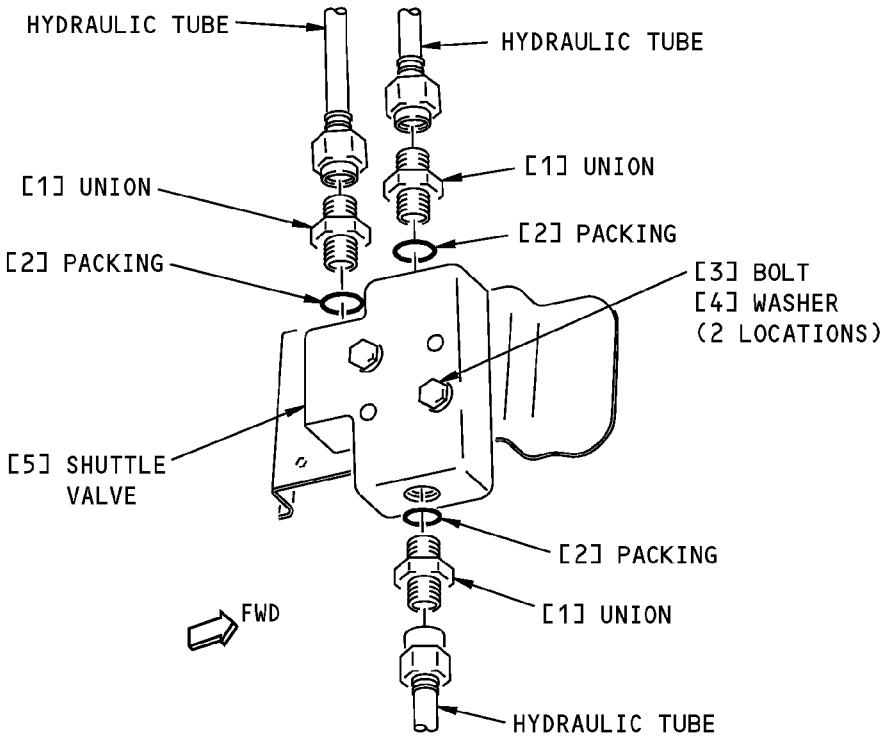
———————— END OF TASK ————————

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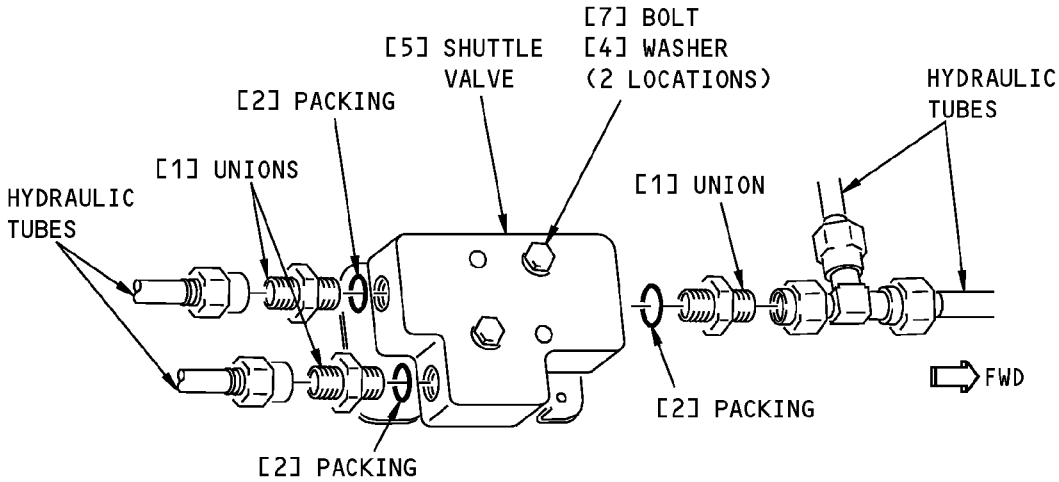
Brake Shuttle Valves Installation
Figure 401 (Sheet 1 of 2)/32-41-95-990-801

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AFT BRAKE SHUTTLE VALVE

B



FORWARD BRAKE SHUTTLE VALVE

C

Brake Shuttle Valves Installation
Figure 401 (Sheet 2 of 2)/32-41-95-990-801

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TASK 32-41-95-400-801

3. Brake Shuttle Valve Installation

(Figure 401)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-41-00-870-802	Normal (System B) Hydraulic Brake System - Bleeding (P/B 201)
32-41-00-870-803	Alternate (System A) Hydraulic Brake System - Bleeding (P/B 201)

B. Consumable Materials

Reference	Description	Specification
D00054	Fluid - Hydraulic Assembly Lubricant - MCS 352B (Formerly Monsanto MCS 352B)	
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Brake Shuttle Valve Installation

SUBTASK 32-41-95-020-003

(1) Remove the caps or plugs from the ports of the valve assembly [5].

SUBTASK 32-41-95-410-001

(2) If the union [1] are not installed in the valve assembly [5], do these steps:

(a) Lubricate the packings [2] and the union [1] with fluid, D00153 or MCS 352B fluid, D00054.

(b) Install the packings [2] on the union [1].

(c) Install the union [1] in the ports of the valve assembly [5].

SUBTASK 32-41-95-420-001

(3) Do the steps that follow to install the valve assembly [5]:

(a) Make sure the valve assembly [5] and the mounting bracket are clean.

(b) Hold the valve assembly [5] on the mounting bracket.

(c) Install the bolt [3] or bolt [7] and washer [4].

(d) Remove the caps or plugs from the applicable hydraulic tubes.

(e) Connect the hydraulic tubes to the valve assembly [5].

SUBTASK 32-41-95-790-001

(4) To bleed the brake hydraulic systems,

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These are the tasks:

Normal (System B) Hydraulic Brake System - Bleeding, TASK 32-41-00-870-802,

Alternate (System A) Hydraulic Brake System - Bleeding, TASK 32-41-00-870-803.

(a) Make sure there is no leakage from the valve assembly [5] as you bleed the brake hydraulic system.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 32-41-95-860-003

(1) Do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-41-95-860-004

(2) Set the parking brake.

——————— END OF TASK ———————

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ANTISKID/AUTOBRAKE SYSTEM - ADJUSTMENT/TEST

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) An Antiskid/Autobrake Control Unit Functional Test

(2) A Normal and Alternate Antiskid Valve Functional Test

(3) An Antiskid Transducer Functional Test

(4) A Normal and Alternate Antiskid Valve Operational Test

(5) An Autobrake Pressure Control Module Operational Test

(6) An Autobrake Shuttle Valve Operational Test

(7) You must do the functional tests in this procedure one of these conditions is true:

(a) If a component of the Antiskid/Autobrake Control System is removed and reinstalled or replaced.

(b) If a component's electrical connector of the Antiskid/Autobrake Control System is disconnected.

(c) If aircraft wiring related to the Antiskid/Autobrake Control System is reworked or modified.

TASK 32-42-00-720-801

2. Antiskid/Autobrake Control Unit Functional Test

(Figure 501)

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left

C. Prepare for the Test

SUBTASK 32-42-00-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-42-00-860-001

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

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SUBTASK 32-42-00-480-002

(3) Make sure the tires have chocks installed around them.

SUBTASK 32-42-00-860-002

(4) Release the parking brake.

SUBTASK 32-42-00-790-001

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(5) For the A and B hydraulic systems, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-42-00-860-003

(6) Make sure the two thrust levers are in the IDLE position.

SUBTASK 32-42-00-860-004

(7) Make sure the landing gear control lever is in the DN position.

SUBTASK 32-42-00-860-005

(8) Make sure the spoilers are stowed.

SUBTASK 32-42-00-860-006

(9) Make sure the Right and Left ADIRSs are in the NAV mode.

(a) Align the ADIRS. To do this, do this task: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801.

SUBTASK 32-42-00-860-007

(10) Make sure the BRAKE TEST selector switch on the Antiskid/Autobrake Control Unit is in the NORM position.

D. Antiskid/Autobrake Control Unit Functional Test

SUBTASK 32-42-00-860-008

(1) Do the steps that follow for Antiskid/Autobrake Control Unit:

(a) Push and then release the RESET switch on the Antiskid/Autobrake Control Unit.

(b) Make sure the display on the front panel of the Antiskid/Autobrake Control Unit shows MEM CLR and then clears.

(c) Set the AUTOBRAKE selector switch on the P2-2 panel to "OFF" then to position "1".

NOTE: If the AUTOBRAKE light is on when you perform steps (d), (e) and (f), the test will not successfully complete and one or more faults will be displayed on the front panel of the Antiskid/Autobrake Control Unit.

(d) Push and hold the ENABLE/VERIFY switch on the Antiskid/Autobrake Control Unit.

(e) While you hold the ENABLE/VERIFY switch, push and hold the VERIFY switch on the Antiskid/Autobrake Control Unit.

(f) Release the ENABLE/VERIFY switch and the VERIFY switch at the same time.

NOTE: The Antiskid/Autobrake Control Unit display will flash WAIT during the test.

(g) Make sure you see the indications that follow:

1) Make sure the antiskid control unit display shows TEST END after 10 - 20 seconds.

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2) Make sure the ANTISKID INOP light on the P2-2 panel flashes ON/OFF.

3) Make sure the AUTOBRAKE DISARM light on the P2-2 panel flashes ON/OFF and remains ON at the end of the test.

(h) Set the autobrake selector switch to OFF.

SUBTASK 32-42-00-860-009

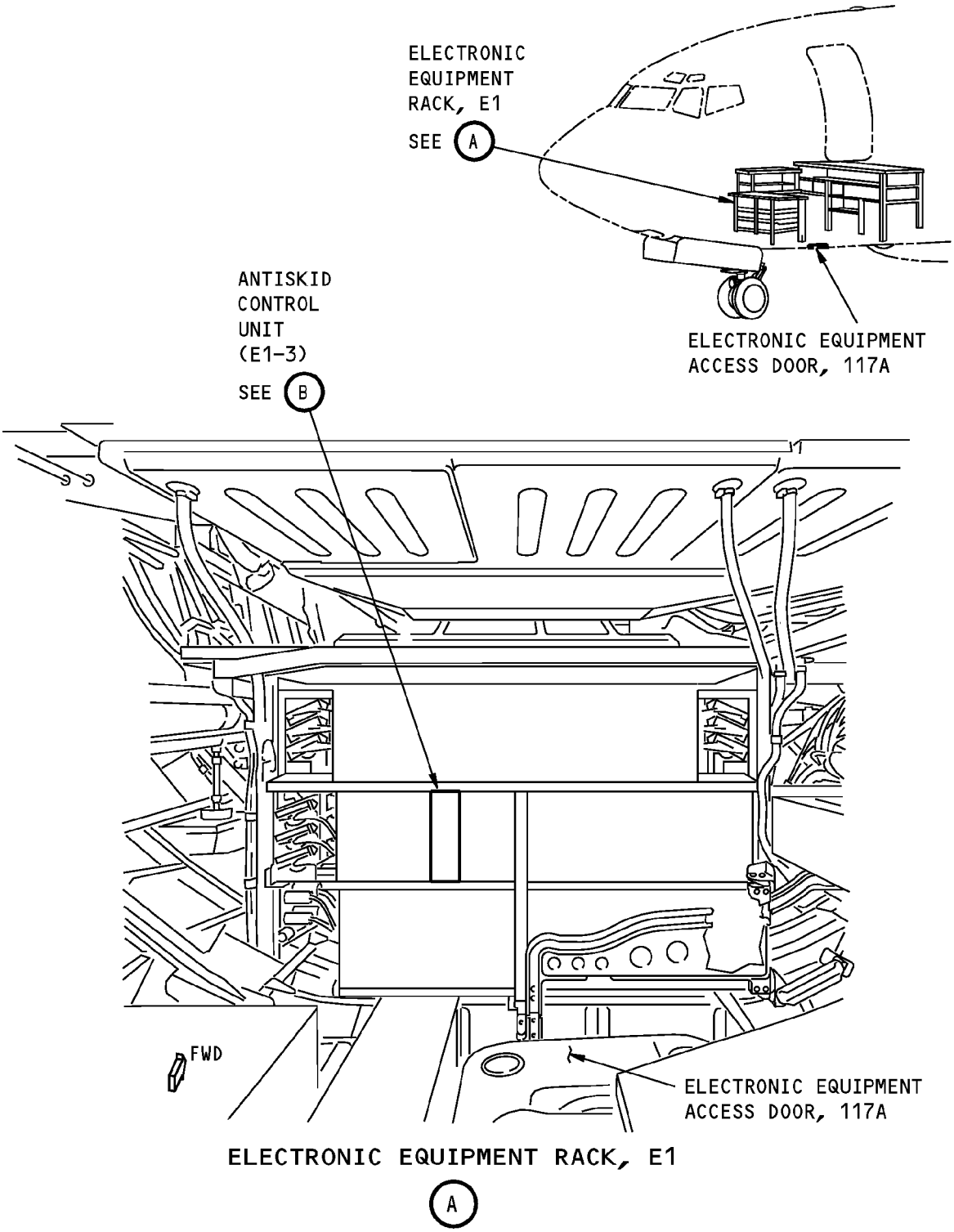
(2) For the A and B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-42-00-860-010

(3) Set the parking brake.

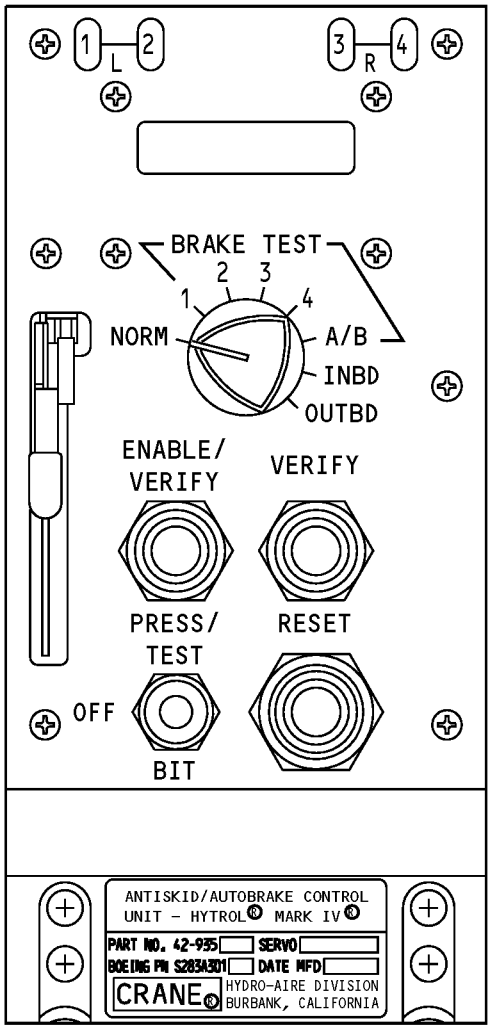
END OF TASK

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Antiskid/Autobrake Control Unit Test
Figure 501 (Sheet 1 of 2)/32-42-00-990-801

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ANTISKID/AUTOBRAKE CONTROL UNIT

B

Antiskid/Autobrake Control Unit Test
Figure 501 (Sheet 2 of 2)/32-42-00-990-801

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TASK 32-42-00-720-802

3. Antiskid Valve Functional Test

(Figure 501, Figure 502)

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)

B. Tools/Equipment

Reference	Description
STD-1157	Gauge - Pressure, 0-3000 PSIG (0-20685 KPa)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare For the Functional Test

SUBTASK 32-42-00-480-004

(1) Make sure the tires have chocks installed around them.

SUBTASK 32-42-00-860-011

(2) Release the parking brake.

SUBTASK 32-42-00-480-005

(3) Do these steps to install a pressure gage at each brake:

(a) Disconnect the brake at the brake disconnect:

1) Push the barrel toward the brake and rotate the barrel clockwise to disengage the brake half from the hose half.

2) Pull up on the barrel of the brake disconnect away from the brake until the threads of the two halves are engaged.

3) Turn the barrel counterclockwise to disconnect the brake hose from the brake assembly.

(b) Remove the brake bleeder assembly from the brake.

NOTE: Each brake bleeder assembly has a bleeder valve installed in an adapter. The adapter is installed in the brake.

(c) Install the pressure gauge (0-3000 PSIG), STD-1157 on the brake bleed port.

(d) Connect the brake at the brake disconnect:

1) Turn the hose half of the brake disconnect until the internal tangs align with the slots inside the brake half of the brake disconnect and you can push the hose half down.

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2) Push down on the barrel and turn it clockwise to engage the threads.

3) Turn the barrel clockwise until the slots in the bottom of the barrel snap into place on the external tangs on the brake half of the brake disconnect.

(e) Do a visual check to make sure the slots on the barrel are fully and correctly engaged with the tangs on the brake half of the brake disconnect.

SUBTASK 32-42-00-860-012

(4) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-42-00-860-013

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(5) For the normal (system B) hydraulic systems, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-42-00-860-014

(6) Disable the parking brake indication:

(a) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

SUBTASK 32-42-00-860-015

(7) Set the parking brake.

E. Normal Antiskid Valve Functional Test

SUBTASK 32-42-00-860-016

(1) Make sure the hydraulic pressure at the controlled brake is within 200 psi of B hydraulic supply pressure.

SUBTASK 32-42-00-860-017

(2) Do these steps for each antiskid valve that you removed:

(a) Move the BRAKE TEST selector switch on the Antiskid/Autobrake Control Unit to the wheel position for the brake valve that you will test.

NOTE: See the top of the Antiskid/Autoskid Control Unit for the brake number.

(b) Push and hold the ENABLE/VERIFY switch on the Antiskid/Autobrake Control Unit.

(c) Push and hold the VERIFY switch on the Antiskid/Autobrake Control Unit.

(d) Release the ENABLE/VERIFY and the VERIFY switches at the same time.

NOTE: The Antiskid/Autobrake Control Unit display will show BRK X during the test, where X = the wheel number selected by the BRAKE TEST selector switch.

(e) Make sure the hydraulic pressure at the controlled brake is less than or equal to 150 psi for 5 seconds and then applies to within 200 psi of B hydraulic supply pressure.

(f) Move the BRAKE TEST selector switch to the NORM position.

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F. Alternate Antiskid Valve Functional Test

SUBTASK 32-42-00-860-018

(1) For the normal (system B) hydraulic systems, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-42-00-860-019

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) For the alternate (system A) hydraulic systems, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-42-00-860-020

(3) Do these steps for each alternate antiskid valve that you removed:

(a) Move the BRAKE TEST selector switch on the Antiskid/Autobrake Control Unit to the position for the brake valve that you will test.

NOTE: Either 1 or 2 for the left alternate antiskid control valve, or 3 or 4 for the right alternate antiskid control valve.

(b) Push and hold the ENABLE/VERIFY switch on the Antiskid/Autobrake Control Unit.

(c) Push and hold the VERIFY switch on the Antiskid/Autobrake Control Unit.

(d) Release the ENABLE/VERIFY and the VERIFY switches at the same time.

NOTE: The Antiskid/Autobrake Control Unit display will show BRK X during the test, where X = the wheel number selected by the BRAKE TEST selector switch.

(e) Make sure that the hydraulic pressures at the controlled brakes are less than or equal to 150 psi for 5 seconds and then applies to within 200 psi of A hydraulic supply pressure.

(f) Move the BRAKE TEST selector switch to the NORM position.

SUBTASK 32-42-00-080-001

(4) Do these steps to remove the pressure gages at each brake:

(a) Disconnect the brake at the brake disconnect:

1) Pull up on the barrel of the brake disconnect.

2) Turn the barrel counterclockwise to disconnect the brake hose from the brake assembly.

(b) Remove the pressure gauge (0-3000 PSIG), STD-1157 from the brake bleed port.

(c) Install the brake bleeder assembly on the brake.

NOTE: Each brake bleeder assembly has a bleeder valve installed in an adapter. The adapter is installed in the brake.

(d) Connect the brake at the brake disconnect:

1) Turn the hose half of the brake disconnect until the internal tangs align with the slots inside the brake half of the brake disconnect and you can push the hose half down.

2) Push down on the barrel and turn it clockwise to engage the threads.

3) Turn the barrel clockwise until the slots in the bottom of the barrel snap into place on the external tangs on the brake half of the brake disconnect.

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(e) Do a visual check to make sure the slots on the barrel are fully and correctly engaged with the tangs on the brake half of the brake disconnect.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 32-42-00-710-001

(1) Enable the parking brake indication:

(a) Release the parking brake.

(b) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

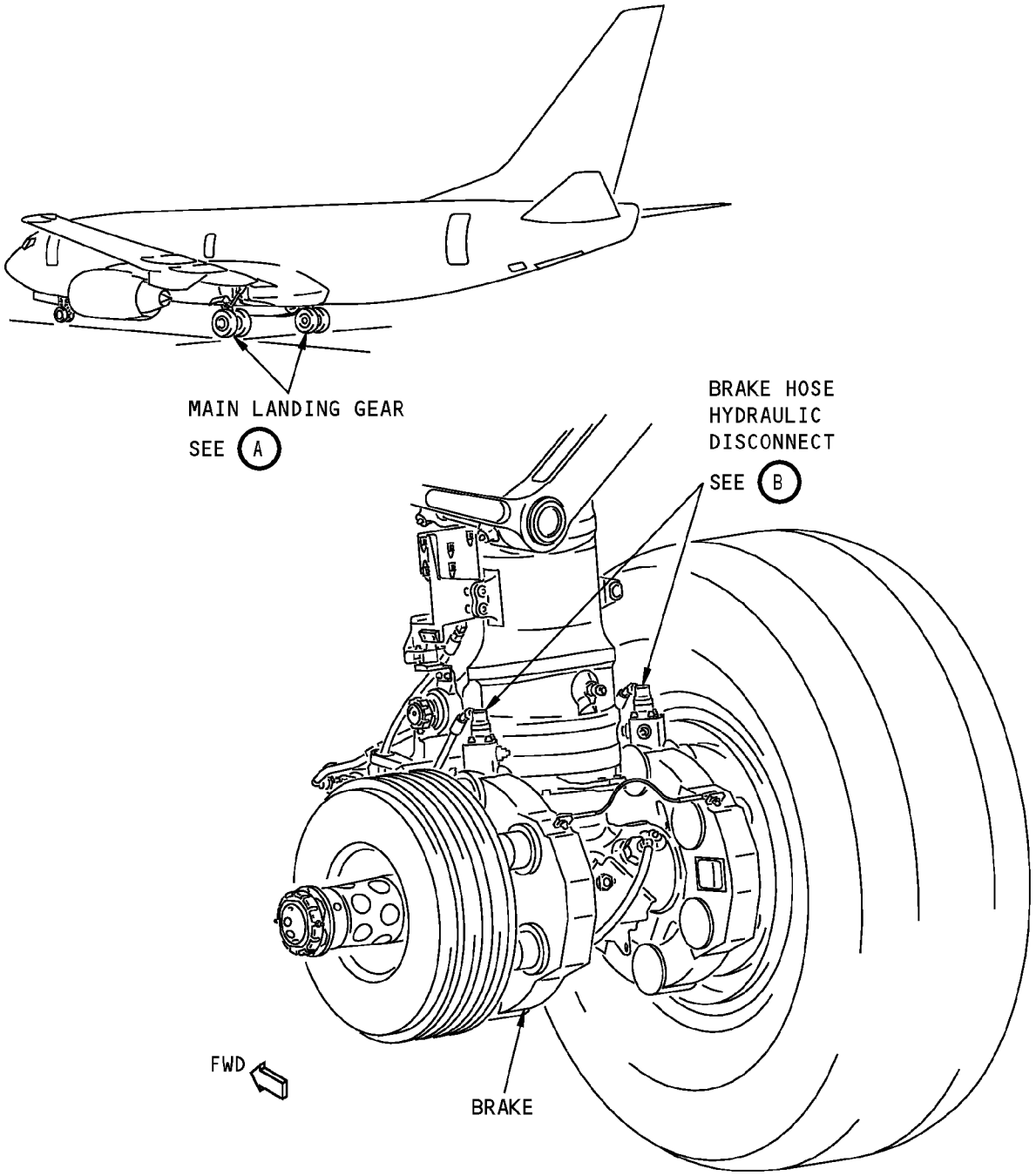
(c) Set the parking brake.

SUBTASK 32-42-00-860-021

(2) Do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

END OF TASK

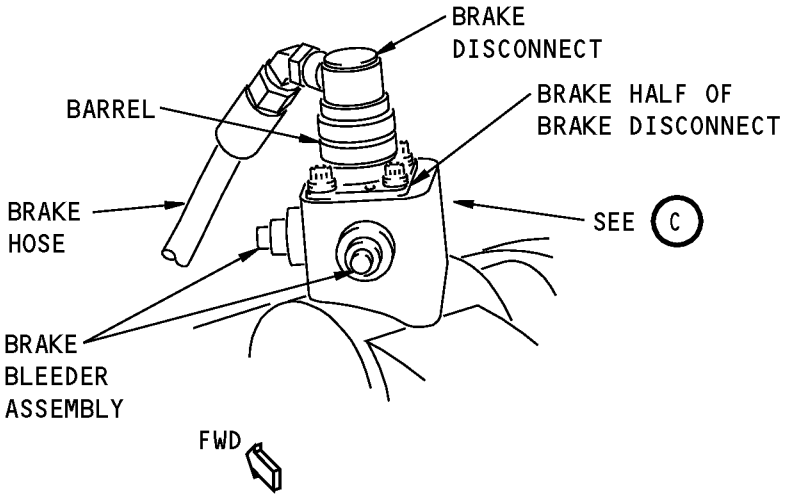
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MAIN LANDING GEAR
(EXAMPLE)
A

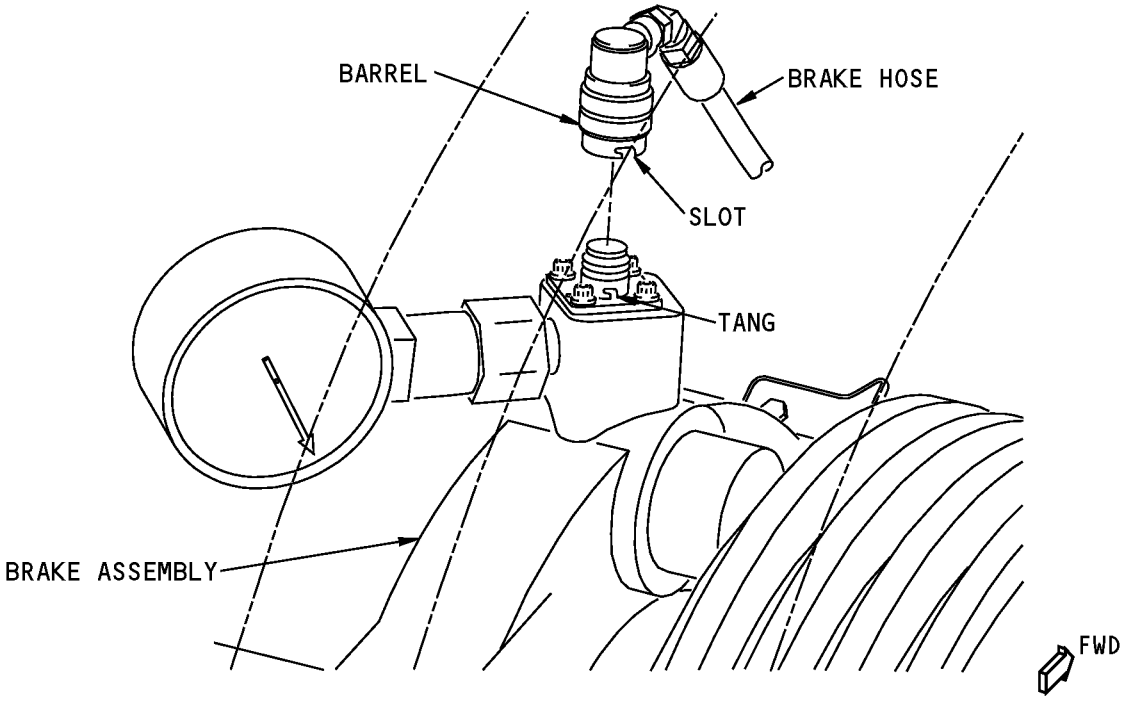
Brake Line Disconnection and Pressure Gage Installation
Figure 502 (Sheet 1 of 2)/32-42-00-990-802

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BRAKE HOSE HYDRAULIC DISCONNECT

B



PRESSURE GAGE INSTALLATION
(EXAMPLE)

C

Brake Line Disconnection and Pressure Gage Installation
Figure 502 (Sheet 2 of 2)/32-42-00-990-802

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TASK 32-42-00-710-801

4. Transducer Functional Test

(Figure 502, Figure 503)

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1831	Adapter - Spin Up, Wheel Speed Transducer, Anti-Skid System (Part #: A32075-10, Supplier: 81205, A/P Effectivity: 737-200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A32075-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A32075-9, Supplier: 81205, A/P Effectivity: 737-200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
STD-1157	Gauge - Pressure, 0-3000 PSIG (0-20685 KPa)

C. Transducer Functional Test

SUBTASK 32-42-00-480-006

(1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-42-00-480-007

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-42-00-860-022

(3) Release the parking brake.

SUBTASK 32-42-00-790-002

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) For the normal (system B) hydraulic system, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-42-00-860-023

(5) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

SUBTASK 32-42-00-860-024

(6) Set the parking brake.

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SUBTASK 32-42-00-480-008

(7) Do these steps to install a pressure gage at each brake (Figure 502):

(a) Disconnect the brake at the brake disconnect:

1) Pull up on the barrel of the brake disconnect.

2) Turn the barrel counterclockwise to disconnect the brake hose from the brake assembly.

(b) Remove the brake bleeder assembly from the brake.

NOTE: Each brake bleeder assembly has a bleeder valve installed in an adapter. The adapter is installed in the brake.

(c) Install the pressure gauge (0-3000 PSIG), STD-1157 on the brake bleed port.

(d) Connect the brake at the brake disconnect:

1) Turn the hose half of the brake disconnect until the internal tangs align with the slots inside the brake half of the brake disconnect and you can push the hose half down.

2) Push down on the barrel and turn it clockwise to engage the threads.

3) Turn the barrel clockwise until the slots in the bottom of the barrel snap into place on the external tangs on the brake half of the brake disconnect.

(e) Do a visual check to make sure the slots on the barrel are fully and correctly engaged with the tangs on the brake half of the brake disconnect.

SUBTASK 32-42-00-020-001

(8) Do these steps to remove the hubcap (Figure 503):

(a) For an outboard wheel, turn the Cam-Loc fasteners 1/4-turn to disconnect the fairing from the outboard hubcap.

(b) Remove the bolts and washers to disconnect the outboard hubcap or inboard hubcap from the wheel.

(c) Remove the outboard hubcap or inboard hubcap from the wheel.

SUBTASK 32-42-00-860-025

(9) Install the spin up wheel speed transducer anti-skid system adapter, SPL-1831 in a drill.

SUBTASK 32-42-00-860-026

(10) Make sure the hydraulic pressure at all brakes is equal to the system B pressure +/- 200 psi (1379 kPa).

NOTE: This is to make sure that the antiskid system is not inadvertently releasing the brakes.

SUBTASK 32-42-00-710-002

(11) Do these steps for each transducer that you will test:

(a) Use the spin up wheel speed transducer anti-skid system adapter, SPL-1831 and a variable speed drill to turn the wheel speed transducer between 250 and 2200 RPM.

(b) Make sure the brake at the paired wheel is less than or equal to 150 psi (1034 kPa) (Table 501).

NOTE: The wheels are numbered from the left to the right.

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Table 501/32-42-00-993-804 ANTISKID TRANSDUCER PAIR WHEELS

TRANSDUCER	CONTROLLED WHEEL	PAIRED WHEEL
1	1	4
2	2	3
3	3	2
4	4	1

(c) Stop the movement of the transducer as quickly as possible.

(d) Make sure the controlled brake for the transducer you check is less than or equal to 150 psi (1034 kPa).

(e) Wait 5 to 10 seconds.

(f) Make sure the hydraulic pressure at all brakes is equal to the system B pressure +/- 200 psi (1379 kPa).

SUBTASK 32-42-00-420-001

(12) Do these steps to install the hubcap:

(a) Turn the antiskid transducer dog inside the wheel such that the drive on the hubcap and the dog in the wheel will connect when the hubcap is installed.

(b) Put the hubcap in its position on the wheel.

(c) Install the bolts and washers to connect the hubcap to the wheel.

(d) Install lockwire on the bolts.

(e) Do these steps for the outboard wheel:

1) Put the hubcap fairing on the hubcap.

2) Turn the Cam-Loc fasteners 1/4-turn to attach the fairing to the hubcap.

SUBTASK 32-42-00-860-027

(13) For the A and B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-42-00-860-028

(14) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

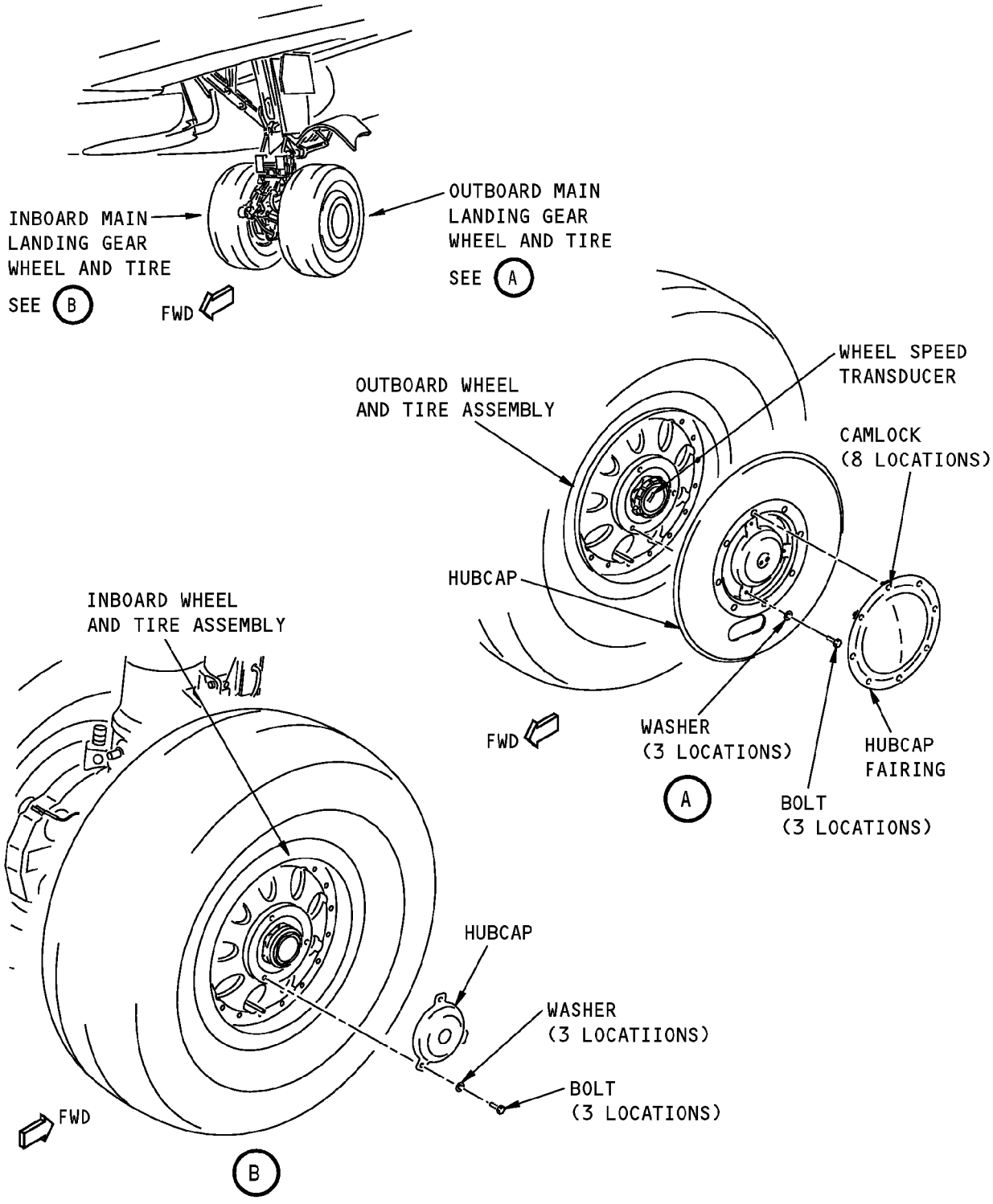
Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

SUBTASK 32-42-00-860-029

(15) Release the parking brake.

END OF TASK

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Main Landing Gear Hubcap Installation
Figure 503/32-42-00-990-803

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TASK 32-42-00-720-803

5. Antiskid Valve Operational Test

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare to do an operational test of the antiskid valves:

SUBTASK 32-42-00-480-009

(1) Make sure the tires have chocks installed around them.

SUBTASK 32-42-00-860-030

(2) Release the parking brake.

SUBTASK 32-42-00-860-031

(3) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-42-00-860-032

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) For the normal (system B) hydraulic systems, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-42-00-860-033

(5) Disable the parking brake indication:

(a) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

SUBTASK 32-42-00-860-034

(6) Set the parking brake.

D. Normal Antiskid Valve Operational Test

SUBTASK 32-42-00-860-035

(1) Do these steps for each antiskid valve that you removed:

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(a) Move the BRAKE TEST selector switch on the Antiskid/Autobrake Control Unit to the wheel position for the brake valve that you will test.

NOTE: See the top of the Antiskid/Autobrake Control Unit for the brake number.

(b) Push and hold the ENABLE/VERIFY switch on the Antiskid/Autobrake Control Unit.

(c) Push and hold the VERIFY switch on the Antiskid/Autobrake Control Unit.

(d) Release the ENABLE/VERIFY and the VERIFY switches at the same time.

NOTE: The Antiskid/Autobrake Control Unit display will show BRK X during the test, where X = the wheel number selected by the BRAKE TEST selector switch.

(e) If there are no failures, the selected brake will release and then receive pressure again.

(f) Move the BRAKE TEST selector switch to the NORM position.

E. Alternate Antiskid Valve Operational Test

SUBTASK 32-42-00-860-036

(1) For the normal (system B) hydraulic systems, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-42-00-860-037

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) For the alternate (system A) hydraulic systems, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-42-00-860-038

(3) Do these steps for each alternate antiskid valve that you removed:

(a) Move the BRAKE TEST selector switch on the Antiskid/Autobrake Control Unit to the position for the brake valve that you will test.

NOTE: Either 1 or 2 for the left alternate antiskid control valve, or 3 or 4 for the right alternate antiskid control valve.

(b) Push and hold the ENABLE/VERIFY switch on the Antiskid/Autobrake Control Unit.

(c) Push and hold the VERIFY switch on the Antiskid/Autobrake Control Unit.

(d) Release the ENABLE/VERIFY and the VERIFY switches at the same time.

NOTE: The Antiskid/Autobrake Control Unit display will show BRK X during the test, where X = the wheel number selected by the BRAKE TEST selector switch.

(e) If there are no failures, the selected main landing gear brake pairs will release and then receive pressure again.

(f) Move the BRAKE TEST selector switch to the NORM position.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 32-42-00-710-003

(1) Enable the parking brake indication:

(a) Release the parking brake.

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(b) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

(c) Set the parking brake.

SUBTASK 32-42-00-860-039

(2) Do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

END OF TASK

TASK 32-42-00-400-801

6. Autobrake Pressure Control Module Operational Test

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1819	Gauge Set - Hydraulic Brake System, Pressure Checking (Part #: F72977-62, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: F72977-45, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: F72977-46, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: F72977-47, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

D. Autobrake Pressure Control Module Operational Test

SUBTASK 32-42-00-860-040

(1) Make sure the two thrust levers are in the IDLE position.

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SUBTASK 32-42-00-860-041

(2) Make sure the landing gear control lever is in the DN position.

SUBTASK 32-42-00-860-042

(3) Make sure the spoilers are stowed.

SUBTASK 32-42-00-860-043

(4) Make sure the Right and Left ADIRSs are in the NAV mode.

(a) Align the ADIRS. To do this, do this task: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801.

SUBTASK 32-42-00-480-010

(5) Make sure the tires have chocks installed around them.

SUBTASK 32-42-00-860-044

(6) Release the parking brake.

SUBTASK 32-42-00-860-045

(7) Install a pressure gage, from the gauge set, SPL-1819, on each brake for the two main landing gear.

SUBTASK 32-42-00-860-046

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(8) For the normal (system B) hydraulic system, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-42-00-860-047

(9) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-42-00-860-048

(10) Set the BRAKE TEST selector switch on the Antiskid/Autobrake Control Unit to A/B.

NOTE: In Steps (11) through (15), if the AUTOBRAKE disarm light is on when you push the enable/verify switches, the test will not successfully complete and the display on the front panel of the Antiskid on the of the Antiskid/Autobrake Control Unit will show "BRK ####."

SUBTASK 32-42-00-860-049

(11) Do the steps that follow for autobrake selector position "1".

(a) Set the autobrake selector switch on the P2-2 panel to "OFF" then to "1" position.

(b) Push and then release the RESET switch on the Antiskid/Autobrake Control Unit.

NOTE: The display on the front panel of the Antiskid/Autobrake Control Unit will show "MEM CLR".

(c) Push and hold the ENABLE/VERIFY switch on the Antiskid/Autobrake Control Unit.

(d) While you hold the ENABLE/VERIFY switch, push and hold the VERIFY switch on the Antiskid/Autobrake Control Unit.

(e) Release the ENABLE/VERIFY switch and the VERIFY switch at the same time.

NOTE: The Antiskid/Autobrake Control Unit display will show BRK A/B1 during the test.

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(f) Make sure the hydraulic pressure at any brake is 1250 +/- 250 psi for approximately 10 seconds, then is 300 +/- 250 psi for approximately 5 seconds, and then is less than 150 psi.

(g) Make sure the AUTOBRAKE DISARM light on the P2-2 panel come on.

(h) Set the autobrake selector switch on the P2-2 panel to "OFF".

SUBTASK 32-42-00-860-050

(12) Do the steps that follow for autobrake selector position "2".

(a) Set the autobrake selector switch on the P2-2 panel to "2".

(b) Push and hold the ENABLE/VERIFY switch on the Antiskid/Autobrake Control Unit.

(c) While you hold the ENABLE/VERIFY switch, push and hold the VERIFY switch on the Antiskid/Autobrake Control Unit.

(d) Release the ENABLE/VERIFY switch and the VERIFY switch at the same time.

NOTE: The Antiskid/Autobrake Control Unit display will show BRK A/B2 during the test.

(e) Make sure the hydraulic pressure at any brake is 1500 +/- 250 psi for approximately 10 seconds, then is 300 +/- 250 psi for approximately 5 seconds, and then is less than 150 psi.

(f) Make sure the AUTOBRAKE DISARM light on the P2-2 panel come on.

(g) Set the autobrake selector switch on the P2-2 panel to "OFF".

SUBTASK 32-42-00-860-051

(13) Do the steps that follow for autobrake selector position "3".

(a) Set the autobrake selector switch on the P2-2 panel to "3".

(b) Push and hold the ENABLE/VERIFY switch on the Antiskid/Autobrake Control Unit.

(c) While you hold the ENABLE/VERIFY switch, push and hold the VERIFY switch on the Antiskid/Autobrake Control Unit.

(d) Release the ENABLE/VERIFY switch and the VERIFY switch at the same time.

NOTE: The Antiskid/Autobrake Control Unit display will show BRK A/B3 during the test.

(e) Make sure the hydraulic pressure at any brake is 2000 +/- 250 psi for approximately 10 seconds, then is 300 +/- 250 psi for approximately 5 seconds, and then is less than 150 psi.

(f) Make sure the AUTOBRAKE DISARM light on the P2-2 panel come on.

(g) Set the autobrake selector switch on the P2-2 panel to "OFF".

SUBTASK 32-42-00-860-052

(14) Do the steps that follow for autobrake selector position "MAX".

(a) Set the autobrake selector switch on the P2-2 panel to "MAX".

(b) Push and hold the ENABLE/VERIFY switch on the Antiskid/Autobrake Control Unit.

(c) While you hold the ENABLE/VERIFY switch, push and hold the VERIFY switch on the Antiskid/Autobrake Control Unit.

(d) Release the ENABLE/VERIFY switch and the VERIFY switch at the same time.

NOTE: The Antiskid/Autobrake Control Unit display will show BRK A/B4 during the test.

(e) Make sure the hydraulic pressure at any brake is 3000 +/- 250 psi for approximately 10 seconds, then is 300 +/- 250 psi for approximately 5 seconds, and then is less than 150 psi.

(f) Make sure the AUTOBRAKE DISARM light on the P2-2 panel come on.

(g) Set the autobrake selector switch on the P2-2 panel to "OFF".

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SUBTASK 32-42-00-860-053

(15) Do the steps that follow for autobrake selector position "RTO".

(a) Set the autobrake selector switch on the P2-2 panel to "RTO".

(b) Push and hold the ENABLE/VERIFY switch on the Antiskid/Autobrake Control Unit.

(c) While you hold the ENABLE/VERIFY switch, push and hold the VERIFY switch on the Antiskid/Autobrake Control Unit.

(d) Release the ENABLE/VERIFY switch and the VERIFY switch at the same time.

NOTE: The Antiskid/Autobrake Control Unit display will show BRK RTO during the test.

(e) Make sure the hydraulic pressure at any brake is 3000 +/- 250 psi for approximately 15 seconds, then decays to less than 150 psi in less than or equal to 2 second.

(f) Make sure the AUTOBRAKE DISARM light on the P2-2 panel come on.

(g) Set the autobrake selector switch on the P2-2 panel to "OFF".

SUBTASK 32-42-00-860-079

(16) Do the steps that follow to test the brake metered pressure switches.

(a) Set the autobrake selector switch on the P2-2 panel to "1".

(b) Push and hold the left brake pedal to the stop.

(c) Verify that the AUTOBRAKE DISARM light on the P2-2 panel comes on.

(d) Set the autobrake selector switch on the P2-2 panel to "OFF" and then set it back to "1".

(e) Push and hold the right brake pedal to the stop.

(f) Verify that the AUTOBRAKE DISARM light on the P2-2 panel comes on.

SUBTASK 32-42-00-860-054

(17) Set the autobrake selector switch on the P2-2 panel to "OFF".

SUBTASK 32-42-00-860-055

(18) Set the BRAKE TEST selector switch on the Antiskid/Autobrake Control Unit to NORM.

SUBTASK 32-42-00-860-056

(19) Remove the pressure gages from each brake on the two main landing gear.

SUBTASK 32-42-00-860-057

(20) Do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

END OF TASK

TASK 32-42-00-400-802

7. Autobrake Shuttle Valve Operational Test

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)

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B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

C. Prepare For the Operational Test

SUBTASK 32-42-00-860-058

(1) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

SUBTASK 32-42-00-480-011

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-42-00-860-059

(3) Release the parking brake.

SUBTASK 32-42-00-860-060

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) For the normal (system B) hydraulic system, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-42-00-860-061

(5) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

D. Operational Test of the Autobrake Shuttle Valve

SUBTASK 32-42-00-860-062

(1) Set the BRAKE TEST selector switch on the Antiskid/Autobrake Control Unit to A/B.

SUBTASK 32-42-00-860-063

(2) Set the autobrake selector switch on the P2-2 panel to RTO.

SUBTASK 32-42-00-860-064

(3) Push and then release the RESET switch on the Antiskid/Autobrake Control Unit.

NOTE: The display on the front panel of the Antiskid/Autobrake Control Unit will show "MEM CLR".

SUBTASK 32-42-00-860-065

(4) Push and hold the ENABLE/VERIFY switch on the Antiskid/Autobrake Control Unit.

SUBTASK 32-42-00-860-066

(5) While you hold the ENABLE/VERIFY switch, push and hold the VERIFY switch on the Antiskid/Autobrake Control Unit.

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SUBTASK 32-42-00-860-067

(6) Release the ENABLE/VERIFY switch and the VERIFY switch at the same time.

SUBTASK 32-42-00-480-012

(7) Make sure that all of the brakes apply and then release after approximately 10 seconds.

SUBTASK 32-42-00-860-068

(8) Set the autobrake selector switch on the P2-2 panel to OFF.

SUBTASK 32-42-00-860-069

(9) Set the BRAKE TEST switch on the Antiskid/Autobrake Control Unit to NORM.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 32-42-00-860-070

(1) Push the brake pedals fully to the stops and then release them after approximately 10 seconds.

SUBTASK 32-42-00-860-071

(2) Do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

——————— END OF TASK ———————

TASK 32-42-00-710-802

8. Transducer Operational Test

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1831	Adapter - Spin Up, Wheel Speed Transducer, Anti-Skid System (Part #: A32075-10, Supplier: 81205, A/P Effectivity: 737-200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A32075-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A32075-9, Supplier: 81205, A/P Effectivity: 737-200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Transducer Operational Test

SUBTASK 32-42-00-480-013

(1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-42-00-480-014

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-42-00-860-072

(3) Release the parking brake.

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SUBTASK 32-42-00-790-003

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) For the normal (system B) hydraulic system, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-42-00-860-073

(5) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

SUBTASK 32-42-00-860-074

(6) Set the parking brake.

SUBTASK 32-42-00-020-002

(7) If the hubcap is installed, do these steps to remove the hubcap:

(a) For an outboard wheel, turn the eight Cam-Loc fasteners 1/4 turn to disconnect the outboard hubcap fairing from the hubcap.

(b) Remove the three bolts and the washers to disconnect the hubcap from the wheel.

(c) Remove the hubcap from the wheel.

SUBTASK 32-42-00-020-003

(8) Do the steps that follow to check the mechanical condition of the transducer and drive coupling:

(a) Turn the transducer drive coupling while you do a check to make sure that you do not have these conditions:

1) Free play in the bearing for the transducer drive coupling.

2) A drive shaft for the transducer drive coupling that is bent.

SUBTASK 32-42-00-860-075

(9) Install the spin up wheel speed transducer anti-skid system adapter, SPL-1831 in a drill.

SUBTASK 32-42-00-710-004

(10) Do these steps for each transducer that you will test:

(a) Use the spin up wheel speed transducer anti-skid system adapter, SPL-1831 and a variable speed drill to turn the wheel speed transducer between 250 and 2200 RPM.

(b) Make sure the brake at the paired wheel releases (Table 502).

NOTE: The wheels are numbered from the left to the right.

Table 502/32-42-00-993-805 ANTISKID TRANSDUCER PAIR WHEELS

TRANSDUCER	CONTROLLED WHEEL	PAIRED WHEEL
1	1	4
2	2	3
3	3	2
4	4	1

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(c) Stop the movement of the transducer as quickly as possible.

(d) Make sure the controlled brake releases momentarily and then reapplies again in 5 to 10 seconds.

NOTE: You can see the brake apply and release if you watch the brake wear pins move.

SUBTASK 32-42-00-420-002

(11) Do these steps to install the hubcap (Figure 503):

(a) Turn the antiskid transducer dog inside the wheel such that the drive on the hubcap and the dog in the wheel will connect when the hubcap is installed.

(b) Put the hubcap in its position on the wheel.

(c) Install the bolts and washers to connect the hubcap to the wheel.

(d) Install lockwire on the bolts.

(e) Do these steps for the outboard wheel:

1) Put the hubcap fairing on the hubcap.

2) Turn the Cam-Loc fasteners 1/4 turn to attach the fairing to the hubcap.

SUBTASK 32-42-00-860-076

(12) For the A and B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-42-00-860-077

(13) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

SUBTASK 32-42-00-860-078

(14) Release the parking brake.

END OF TASK

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ANTISKID WHEEL SPEED TRANSDUCER - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the transducer

(2) An installation of the transducer

TASK 32-42-11-000-801

2. Transducer Removal

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1873	Set - Tool, MLG Antiskid Transducer Retainer Nut (Part #: C32021-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Removal

SUBTASK 32-42-11-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-42-11-860-001

(2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

E. Transducer Removal

SUBTASK 32-42-11-020-001

(1) Do these steps to remove the hubcap [3]:

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(a) For an outboard wheel, turn the eight Cam-Loc [4] fasteners 1/4 turn to disconnect the outboard hubcap fairing [5] from the hubcap [3].

(b) Remove the three bolts [6] and the washers [7] to disconnect the hubcap [3] from the wheel [1].

(c) Remove the hubcap [3] from the wheel [1].

SUBTASK 32-42-11-020-002

(2) Remove the two nuts [8], washers [9], and bolts [10] that hold the support [11] to the axle.

SUBTASK 32-42-11-020-003

(3) Do these steps to remove the transducer [14]:

NOTE: The transducer is held inside of the support with a locknut [13].

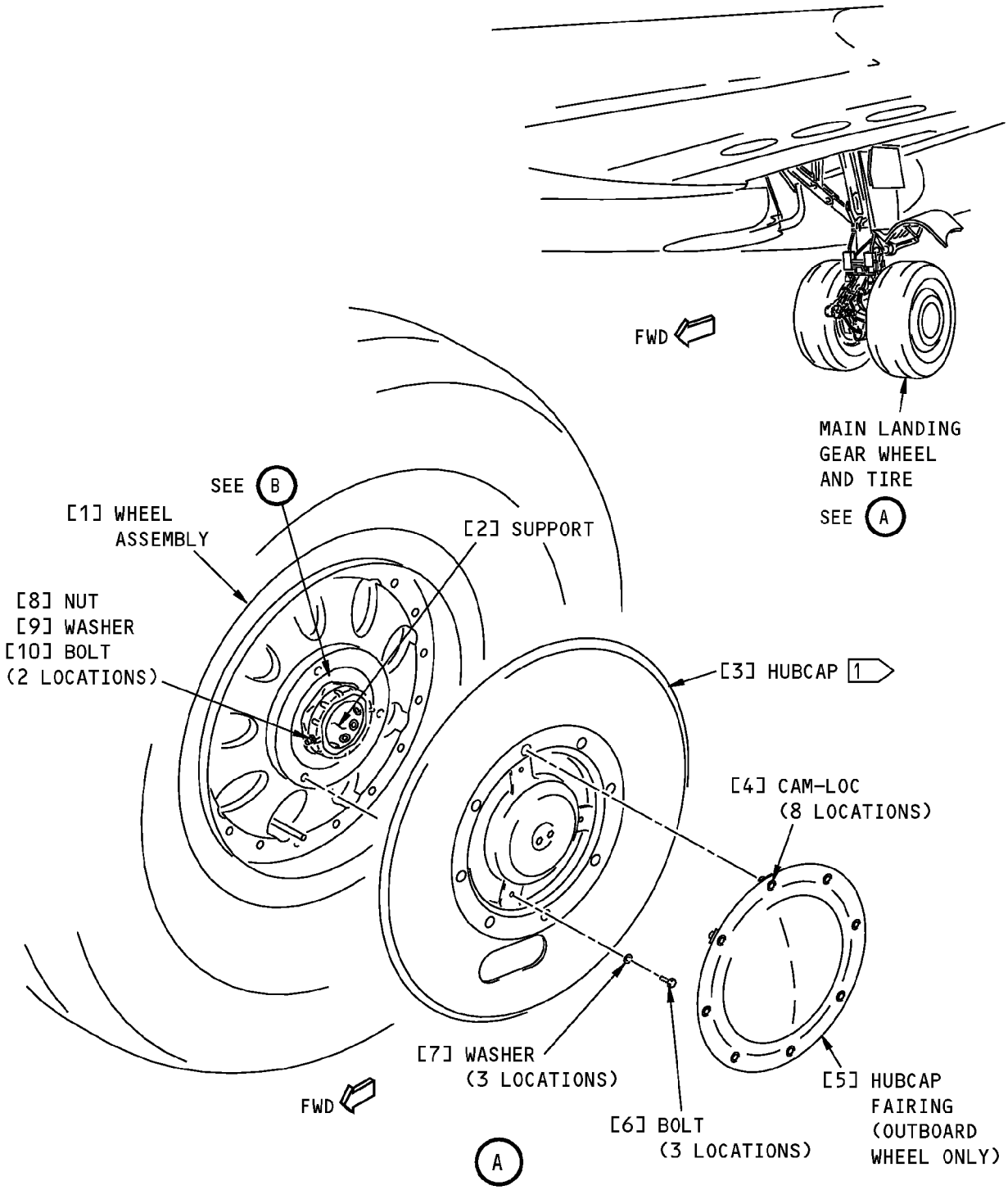
(a) Remove the locknut [13] from the support [11] with locknut set, SPL-1873.

(b) Remove the transducer [14] from the axle.

(c) Disconnect the eletrical connector [12] from the transducer [14].

———————— END OF TASK ————————

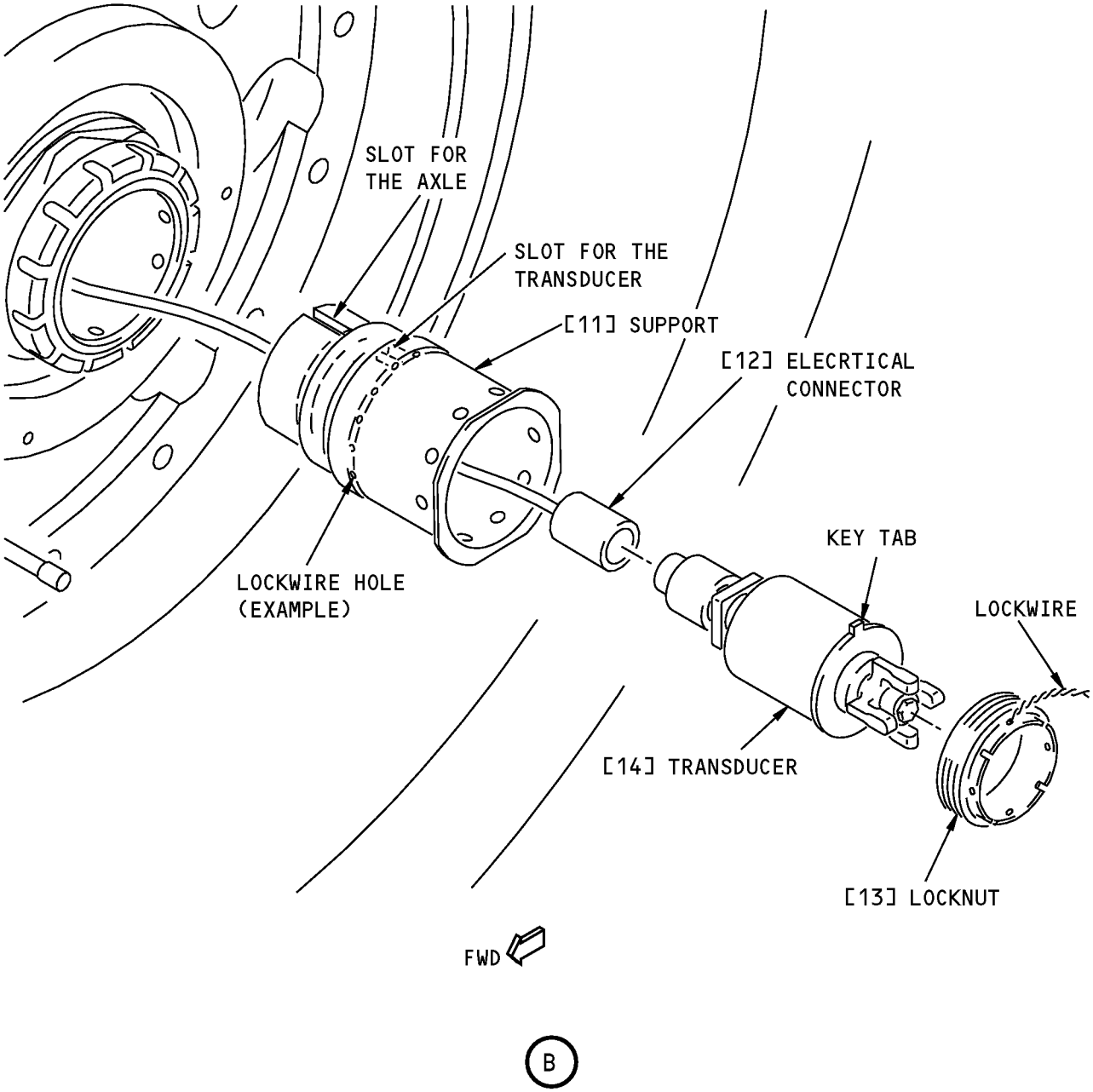
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1 INBOARD HUBCAP IS SMALLER

Transducer Installation
Figure 401 (Sheet 1 of 2)/32-42-11-990-801

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Transducer Installation
Figure 401 (Sheet 2 of 2)/32-42-11-990-801

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TASK 32-42-11-400-801

3. Transducer Installation

(Figure 401)

A. References

Reference	Title
32-42-00-710-802	Transducer Operational Test (P/B 501)
SWPM 20-60-03	Special Protection of Electrical Connectors

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1873	Set - Tool, MLG Antiskid Transducer Retainer Nut (Part #: C32021-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
G01048	Lockwire - Corrosion Resistant Steel (0.032 In. Dia.)	NASM20995~ C32
G50171	Compound - Corrosion Inhibiting Compound, Interior Application - D5026NS or ZC-026	

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
14	Transducer	32-42-11-01-020	HAP ALL

E. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

F. Transducer Installation

SUBTASK 32-42-11-860-002

(1) If the support [11] came out of the axle, install the support in the axle with the slot on the back of the support aligned with the tab inside the axle.

SUBTASK 32-42-11-420-001

(2) Do these steps to install the transducer [14]:

(a) Before you connect the electrical connector [12] to the back of the transducer [14], examine the connector for corrosion.

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WARNING: DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

(b) If there was corrosion, refer to (SWPM 20-60-03) to correct the problem.

(c) Apply the D5026NS or ZC-026 compound, G50171 to the connector (SWPM 20-60-03).

(d) Connect the electrical connector [12] to the back of the transducer [14].

CAUTION: DO NOT PULL OR TWIST THE WIRE HARNESS WHEN YOU INSTALL THE TRANSDUCER IN THE AXLE. YOU CAN CAUSE DAMAGE TO THE WIRES AND THE ANTISKID TRANSDUCER.

(e) Install the transducer [14] in the axle.

1) Install the transducer [14] in the assembly with the tab on the back of the transducer aligned with the slot inside the support [11].

(f) Install the locknut [13]:

1) Install the locknut [13] its position in the support.

2) Tighten the locknut [13] to 40-60 pound-feet (54-81 newton-meters) with the locknut set, SPL-1873.

3) Loosen the locknut [13] to 0 pound-feet.

4) Tighten the locknut [13] to 30 pound-feet (41 newton-meters).

5) Install lockwire, G01048 between the locknut [13] and the lockwire holes in the support [11].

SUBTASK 32-42-11-860-003

(3) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

SUBTASK 32-42-11-860-004

(4) Do this task: Transducer Operational Test, TASK 32-42-00-710-802.

SUBTASK 32-42-11-420-002

(5) Do these steps to install the bolts [10] to lock the support [11] to the wheel [1]:

(a) Install the bolts [10] with the head to the inside of the axle.

(b) Install the washers [9] and nuts [8].

SUBTASK 32-42-11-420-003

(6) Do these steps to install the hubcap [3]:

(a) Turn the transducer drive coupling the inside the wheel [1] such that the drive on the hubcap [3] and the dog in the wheel will connect when the hubcap is installed.

(b) Put the hubcap [3] in its position on the wheel [1] and turn it if it is necessary to engage the drive on the hubcap with the drive coupling on the transducer [14].

(c) Install the bolts [6] and washers [7] to attach the hubcap [3] to the wheel [1].

(d) Install lockwire, G01048 on the bolts [6].

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(e) Do these steps for the outboard wheel:

1) Put the hubcap fairing [5] on the hubcap [3].

2) Turn the Cam-Loc fasteners [4] 1/4 turn to attach the hubcap fairing [5] to the hubcap [3].

END OF TASK

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ANTISKID/AUTOBRAKE CONTROL UNIT - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the antiskid/autobrake control unit

(2) An installation of the antiskid/autobrake control unit.

B. The Antiskid/Autobrake Control unit [1] is in the electronic equipment rack, E1-3, which is in the left side of the main equipment center.

TASK 32-42-21-000-801

2. Antiskid/Autobrake Control Unit Removal

(Figure 401)

A. References

Reference	Title
20-10-07-000-801	E/E Box Removal (P/B 201)
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-40-12-400-804	Conductive Dust Cap and Connector Cover Installation (P/B 201)

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left

C. Prepare for the Removal

SUBTASK 32-42-21-860-001

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

D. Antiskid/Autobrake Control Unit Removal

SUBTASK 32-42-21-840-001

CAUTION: DO NOT TOUCH THE ANTISKID/AUTOBRAKE CONTROL UNIT BEFORE YOU DO THE PROCEDURE FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE ANTISKID/AUTOBRAKE CONTROL UNIT.

(1) Do this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802.

SUBTASK 32-42-21-020-001

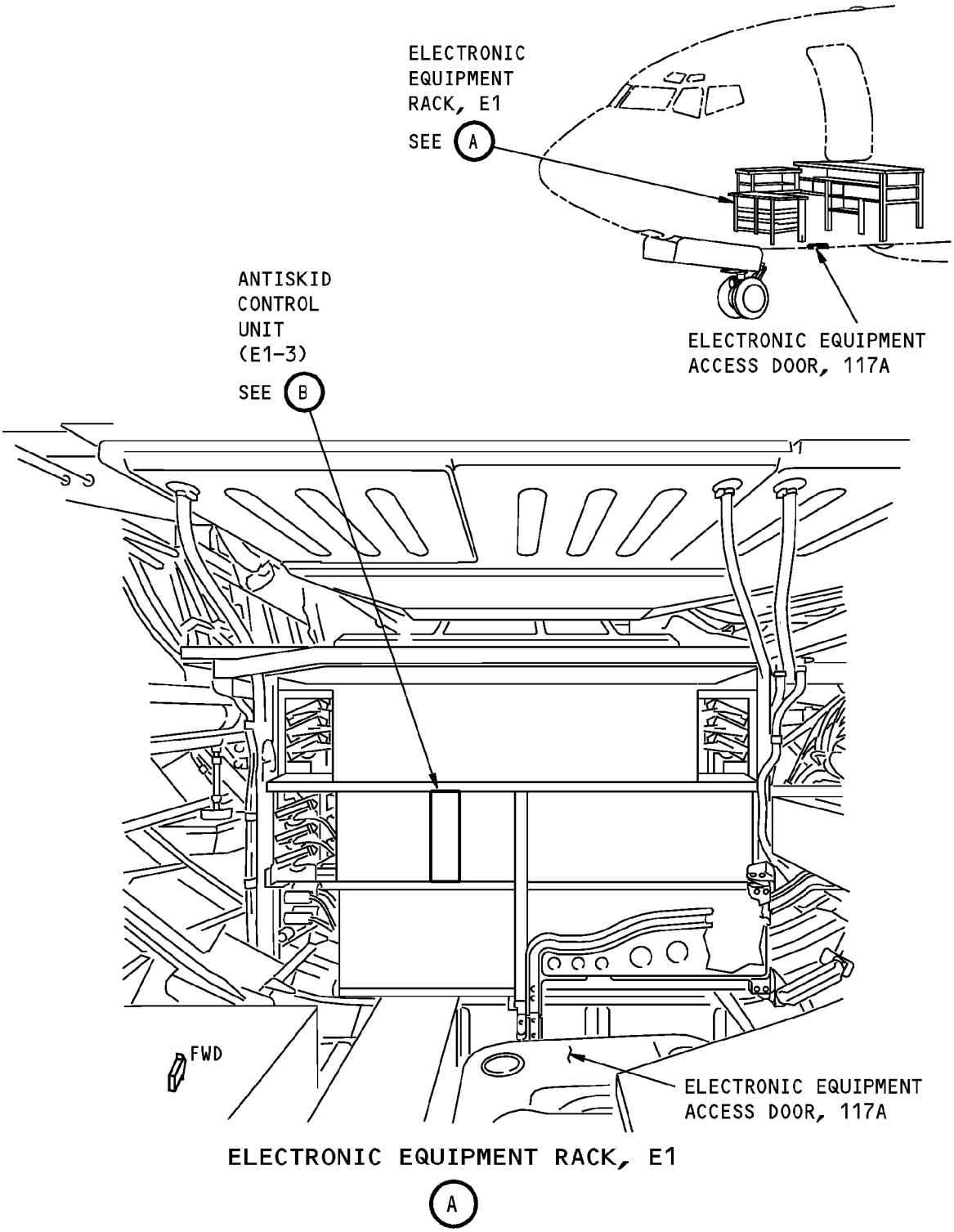
(2) To Remove the antiskid/autobrake control unit [1] from the airplane, do this task: E/E Box Removal, TASK 20-10-07-000-801.

SUBTASK 32-42-21-840-002

(3) Do this task: Conductive Dust Cap and Connector Cover Installation, TASK 20-40-12-400-804.

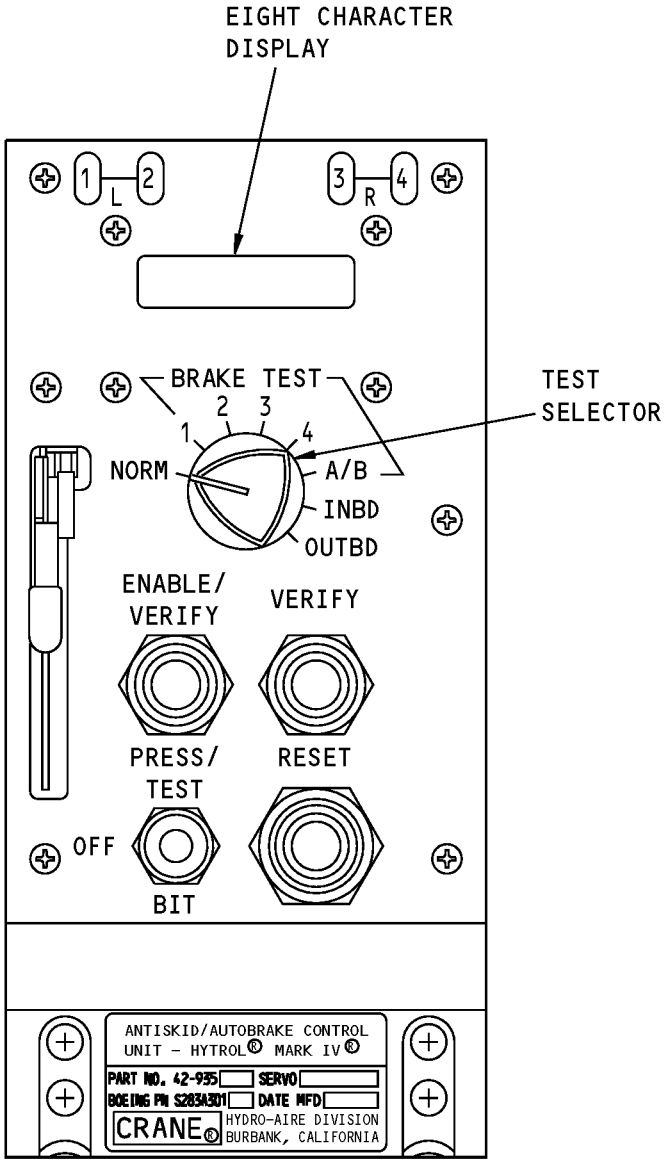
END OF TASK

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Antiskid Control Unit Installation
Figure 401 (Sheet 1 of 2)/32-42-21-990-801

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[1] ANTISKID CONTROL UNIT

B

Antiskid Control Unit Installation
Figure 401 (Sheet 2 of 2)/32-42-21-990-801

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TASK 32-42-21-400-801

3. Antiskid/Autobrake Control Unit Installation

(Figure 401)

A. References

Reference	Title
20-10-07-400-801	E/E Box Installation (P/B 201)
20-40-12-000-804	Conductive Dust Cap and Conductor Cover Removal (P/B 201)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
32-42-00-720-801	Antiskid/Autobrake Control Unit Functional Test (P/B 501)

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left

C. Antiskid/Autobrake Control Unit Installation

SUBTASK 32-42-21-840-003

CAUTION: DO NOT TOUCH THE ANTISKID CONTROL UNIT BEFORE YOU DO THE PROCEDURE FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE ANTISKID CONTROL UNIT.

(1) Do this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

SUBTASK 32-42-21-840-004

(2) Do this task: Conductive Dust Cap and Conductor Cover Removal, TASK 20-40-12-000-804.

SUBTASK 32-42-21-420-001

(3) To install the antiskid/autobrake control unit [1], do this task: E/E Box Installation, TASK 20-10-07-400-801.

SUBTASK 32-42-21-860-002

(4) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

SUBTASK 32-42-21-710-001

(5) Do this task: Antiskid/Autobrake Control Unit Functional Test, TASK 32-42-00-720-801.

END OF TASK

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ANTISKID VALVE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the antiskid valve

(2) An installation of the antiskid valve.

B. There are four normal antiskid valves, one for each brake, located on the aft wall of the main landing gear wheel well.

C. There are two alternate antiskid valves, one for each main landing gear, located on the outboard walls of the main landing gear wheel well.

D. This procedure is applicable for all six antiskid valves.

E. In this procedure the antiskid valve will be referred to as the valve assembly [6].

TASK 32-42-31-000-801

2. Antiskid Valve Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare for the Removal

SUBTASK 32-42-31-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-42-31-860-001

(2) For the normal (system B) and the alternate (system A) hydraulic system, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-42-31-480-002

(3) Make sure the tires have chocks installed around them.

SUBTASK 32-42-31-860-002

(4) Release the parking brake.

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SUBTASK 32-42-31-840-001

(5) Operate the brake pedals until the gage at the brake accumulator shows no change in the pressure.

NOTE: You will have to operate the brake pedals approximately 12 times to fully release the pressure from the accumulator.

SUBTASK 32-42-31-860-003

(6) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

D. Antiskid Valve Removal

NOTE: Be careful when disconnecting hydraulic lines, unions, filters, and check valves from the antiskid valves to prevent damage to the antiskid valves.

SUBTASK 32-42-31-020-001

(1) Disconnect the electrical connector [14] from the antiskid valve assembly [6].

SUBTASK 32-42-31-020-002

(2) For the Normal antiskid valve assembly, do the these steps:

(a) Disconnect the hydraulic lines from the antiskid valve assembly [6].

(b) Disconnect the brake line from the union [12].

(c) Disconnect the return line from the union [12]. .

(d) Disconnect the pressure line from the filter [4].

SUBTASK 32-42-31-020-005

(3) For the Alternate antiskid valve assembly, do these steps:

(a) Disconnect the hydraulic lines from the antiskid valve assembly [6].

(b) Disconnect the brake line from the union [12].

(c) Disconnect the return line from the check valve [13].

(d) Disconnect the pressure line from the filter [4].

SUBTASK 32-42-31-420-007

(4) Install caps or plugs on the hydraulic lines.

SUBTASK 32-42-31-020-003

(5) Remove the bolt [8] and washer [7] to remove the antiskid valve assembly [6] from the airplane.

SUBTASK 32-42-31-020-004

(6) If the replacement antiskid valve assembly [6] does not have hydraulic fittings installed, do these steps:

(a) Remove the union [12] and the packing [5].

(b) Remove the filter [11] and the packing [10].

(c) Remove the check valve [13] and the packing [5].

(d) Remove the filter [4] and the packing [5].

(e) Discard the packings [5] and packing [10].

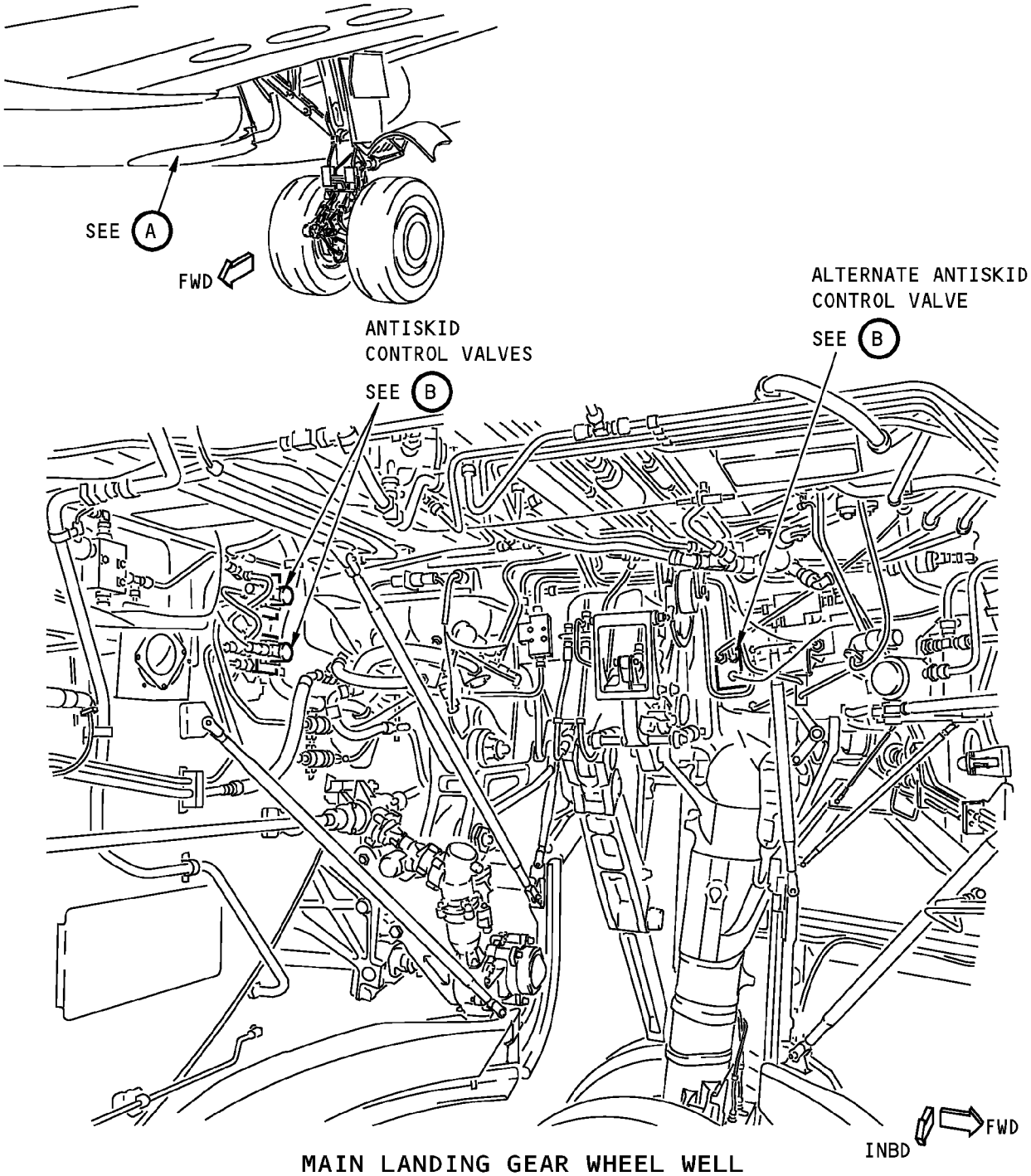
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SUBTASK 32-42-31-480-004

(7) Install plugs in the ports of the antiskid valve assembly [6].

END OF TASK

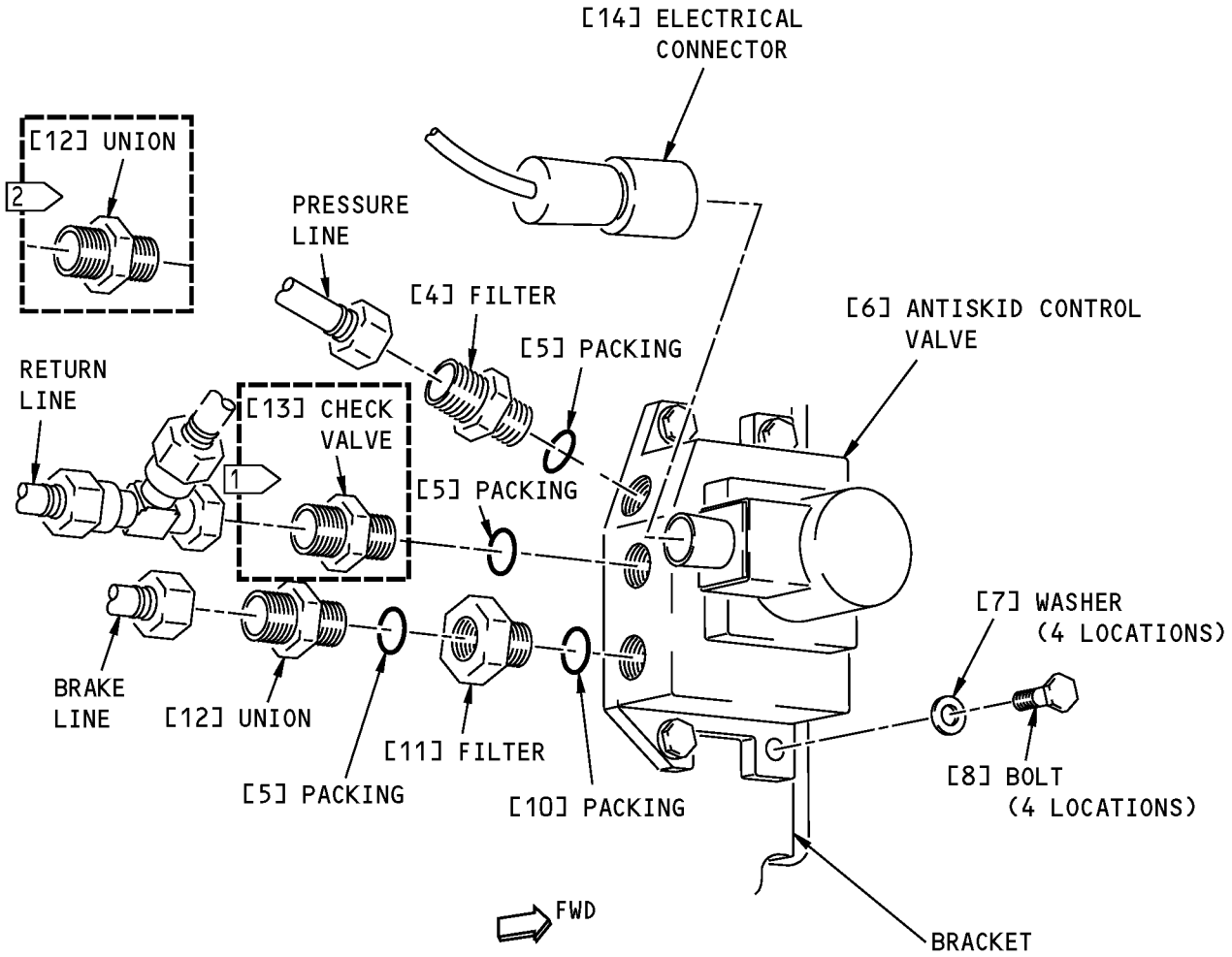
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MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE IS SHOWN, RIGHT SIDE IS EQUIVALENT)
A

Antiskid Valve Installation
Figure 401 (Sheet 1 of 2)/32-42-31-990-801

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ANTISKID CONTROL VALVE
(EXAMPLE)

B

1 INSTALLED IN THE RETURN PORT ON THE ALTERNATE ANTISKID VALVE.

2 INSTALLED IN THE RETURN PORT ON THE NORMAL ANTISKID VALVE.

Antiskid Valve Installation
Figure 401 (Sheet 2 of 2)/32-42-31-990-801

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TASK 32-42-31-400-801

3. Antiskid Valve Installation

(Figure 401)

A. References

Reference	Title
20-10-34-120-801	Hand Clean Metal Surfaces with Abrasives (P/B 701)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-41-00-870-802	Normal (System B) Hydraulic Brake System - Bleeding (P/B 201)
32-41-00-870-803	Alternate (System A) Hydraulic Brake System - Bleeding (P/B 201)
32-42-00-720-803	Antiskid Valve Operational Test (P/B 501)
SWPM 20-60-03	Special Protection of Electrical Connectors

B. Consumable Materials

Reference	Description	Specification
C00064	Coating - Aluminum Chemical Conversion	BAC5719, Type II, Class A (MIL-C-5541, Class A)
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)
G50171	Compound - Corrosion Inhibiting Compound, Interior Application - D5026NS or ZC-026	

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
6	Valve assembly	32-42-31-01-015	HAP ALL
		32-42-31-01-045	HAP ALL
		32-42-31-02-030	HAP ALL
		32-42-31-02-330	HAP ALL
		32-42-52-50-010	HAP ALL
10	Packing	32-42-52-50-070	HAP ALL

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

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E. Antiskid Valve Installation

SUBTASK 32-42-31-080-001

(1) Remove the plugs from the ports of the antiskid valve assembly [6].

SUBTASK 32-42-31-420-001

(2) If the replacement antiskid valve assembly [6] does not have hydraulic fittings installed, do these steps:

(a) Lubricate the hydraulic union [12], check valve [13], filter [4], reducer [11], packing [10], and packings [5] for the antiskid valve assembly [6] with fluid, D00153.

(b) Install the packings [5] on the hydraulic fittings and install the packing [10] on the filter [11].

(c) Install the fittings in the valve assembly [6]:

1) Install the filter [11] in the brake port of the antiskid valve assembly [6].

2) Install the hydraulic union [12] in the brake port of the antiskid valve assembly [6].

3) Install the fitting in the return port:

a) For the normal antiskid valves, install the hydraulic union [12] in the return port of the normal antiskid valve assembly [6]

b) For the alternate antiskid valves, install the hydraulic check valve [13] in the return port of the alternate antiskid valve assembly [6].

4) Install the hydraulic filter [4] in the pressure port of the antiskid valve assembly [6].

SUBTASK 32-42-31-100-001

(3) Do the steps below to help get a good electrical bond between the valve assembly [6] and the bracket:

(a) To fully clean the mating surface of the bracket and the valve assembly [6], do this task: Hand Clean Metal Surfaces with Abrasives, TASK 20-10-34-120-801.

(b) For all cleaned areas, and if there is any damage to the finish on the valve assy [6], manually apply coating, C00064.

SUBTASK 32-42-31-420-002

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(4) Apply compound, C00913 to all of the areas of the fastener hole.

NOTE: Make sure you install the bolts and washers immediately.

SUBTASK 32-42-31-420-006

(5) Hold the antiskid valve assembly [6] in its position on the airplane.

SUBTASK 32-42-31-420-003

(6) Install the bolt [8] and washer [7] which hold the antiskid valve assembly [6] to the airplane.

SUBTASK 32-42-31-080-003

(7) Make sure the resistance between the body of the valve assy [6] and the bracket is less than 0.0025 ohms.

SUBTASK 32-42-31-080-002

(8) Remove the caps or plugs from the hydraulic lines.

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SUBTASK 32-42-31-420-008

(9) For the Normal antiskid valve assyblem, do these steps:

(a) Connect the hydraulic lines to the antiskid valve assembly [6]:

(b) Connect the brake hydraulic line to the union [12].

(c) Connect the return hydraulic line to the union [12].

(d) Connect the pressure hydraulic line to the filter [4].

SUBTASK 32-42-31-420-004

(10) For the alternate antiskid valve assyblem, do these steps:

(a) Connect the hydraulic lines to the antiskid valve assembly [6]:

(b) Connect the brake hydraulic line to the union [12].

(c) Connect the return hydraulic line to the check valve [13].

(d) Connect the pressure hydraulic line to the filter [4].

SUBTASK 32-42-31-420-005

(11) Before you connect the electrical connector [14] to the antiskid valve assembly [6], examine the connector [14] for corrosion.

WARNING: DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

(a) If there was corrosion, refer to (SWPM 20-60-03) to correct the problem.

(b) Apply the D5026NS or ZC-026 compound, G50171 to the connector (SWPM 20-60-03).

(12) Connect the electrical connector [14] to the antiskid valve assembly [6].

SUBTASK 32-42-31-860-004

(13) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

F. Antiskid Valve Installation Test

SUBTASK 32-42-31-790-001

(1) Do these steps to do a leak check of the antiskid valve:

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) For the normal (system B) and the alternate (system A) hydraulic systems, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

(b) Fully push the captain's brake pedals twelve times.

(c) Look for leaks around the antiskid valve.

SUBTASK 32-42-31-710-001

(2) Bleed the hydraulic system.

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(a) For the normal antiskid valves, do this task: Normal (System B) Hydraulic Brake System - Bleeding, TASK 32-41-00-870-802.

(b) For the alternate antiskid valves, do this task: Alternate (System A) Hydraulic Brake System - Bleeding, TASK 32-41-00-870-803.

SUBTASK 32-42-31-860-015

(3) Do this task: Antiskid Valve Operational Test, TASK 32-42-00-720-803.

SUBTASK 32-42-31-860-016

(4) Do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

——————— END OF TASK ———————

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ANTISKID LANDING GEAR LEVER UP SWITCH - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the antiskid landing gear lever up switch

(2) An installation of the antiskid landing gear lever up switch

B. The antiskid landing gear lever up switch is located in the control cabin.

TASK 32-42-51-000-801

2. Antiskid Landing Gear Lever Up Switch Removal

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-31-11-020-801	Landing Gear Control Lever Module Removal (P/B 401)

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare for the Removal

SUBTASK 32-42-51-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-42-51-480-002

(2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

D. Antiskid Landing Gear Lever Up Switch Removal

SUBTASK 32-42-51-480-003

(1) Do this task: Landing Gear Control Lever Module Removal, TASK 32-31-11-020-801.

SUBTASK 32-42-51-420-005

(2) Remove the switch [4] and [5]:

NOTE: The switch [4] is referred to as switch S3 [4] S3 and the switch [5] is referred to as switch S4 [5] in some portions of this procedure.

(a) Disconnect the electrical terminals [8] from the switch S3 [4] and switch S4 [5].

(b) Attach labels to the terminals to make the switch installation easier.

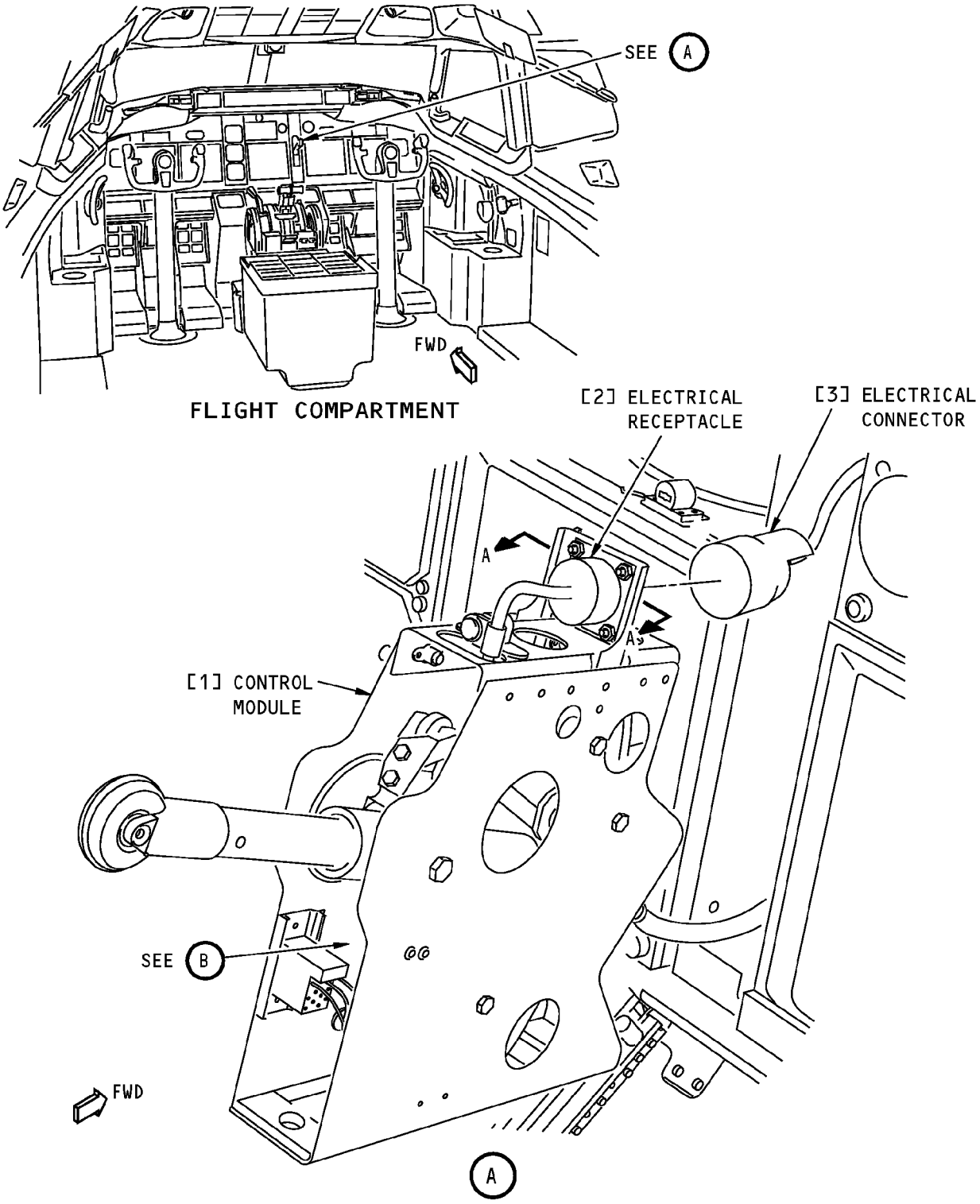
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(c) Remove the bolts [6], the washers [7], [9], and the nuts [10] that hold the switch S3 [4], switch S4 [5], to the control module [1].

(d) Remove the switch S3 [4], switch S4 [5] from the airplane.

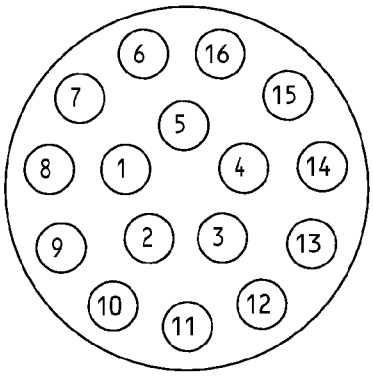
END OF TASK

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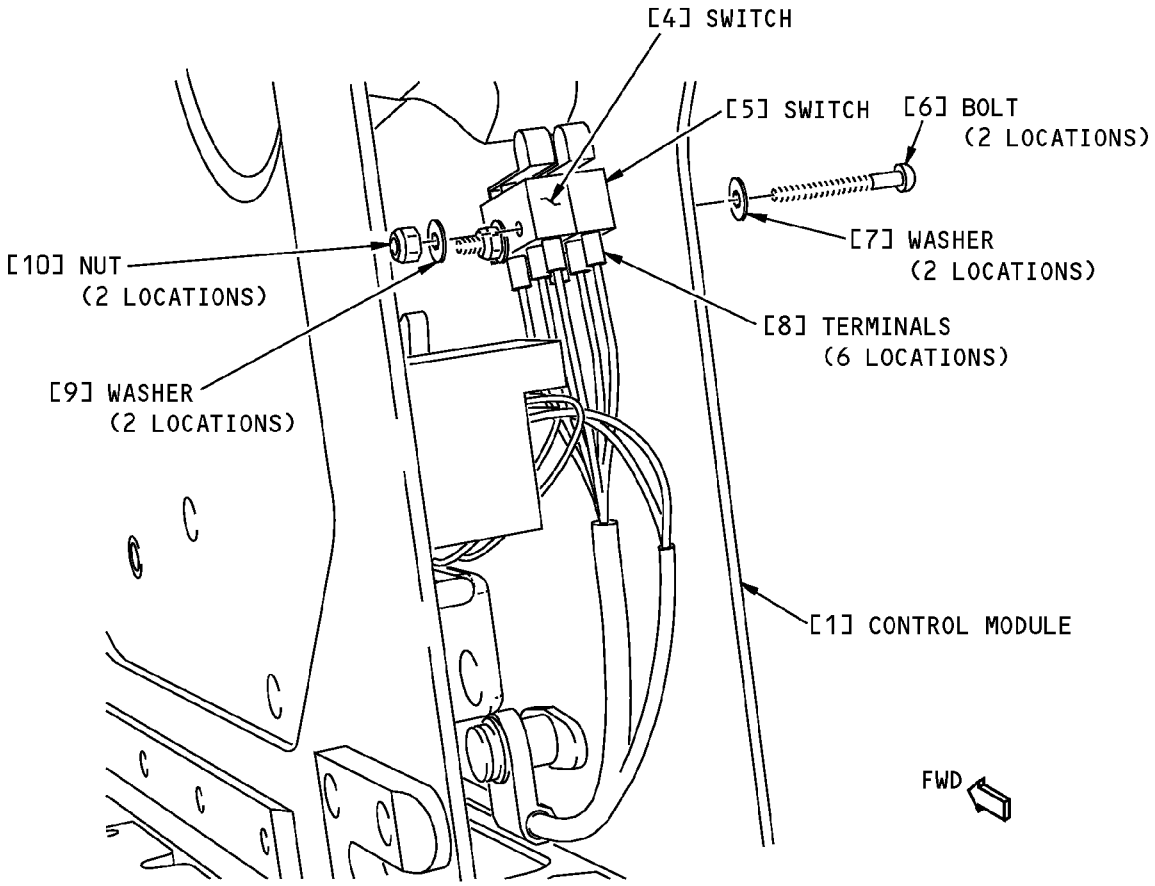


Antiskid Landing Gear Lever Up Switch Installation
Figure 401 (Sheet 1 of 2)/32-42-51-990-801

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ELECTRICAL RECEPTACLE
A-A



ANTISKID LANDING GEAR LEVER UP SWITCH
B

Antiskid Landing Gear Lever Up Switch Installation
Figure 401 (Sheet 2 of 2)/32-42-51-990-801

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TASK 32-42-51-420-801

3. Antiskid Landing Gear Lever Up Switch Installation

(Figure 401)

A. References

Reference	Title
32-31-11-400-801	Landing Gear Control Lever Module Installation (P/B 401)
SWPM 20-60-03	Special Protection of Electrical Connectors

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Meter - Bonding (Approved Explosion Proof & Intrinsically Safe) (Part #: C15292 (MODEL T477W), Supplier: 01014, A/P Effectivity: 737-ALL) (Part #: M1, Supplier: 3AD17, A/P Effectivity: 737-ALL) (Part #: M1B, Supplier: 3AD17, A/P Effectivity: 737-ALL)

C. Consumable Materials

Reference	Description	Specification
G50171	Compound - Corrosion Inhibiting Compound, Interior Application - D5026NS or ZC-026	

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	Switch S3	32-31-11-01-040	HAP 001-013, 015-026, 028-030
		32-31-11-02-040	HAP 031-054, 101-999
5	Switch S4	32-31-11-01-040	HAP 001-013, 015-026, 028-030
		32-31-11-02-040	HAP 031-054, 101-999

E. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

F. Antiskid Landing Gear Lever Up Switch Installation

NOTE: The switch [4] is referred to as switch S3 [4] and the switch [5] is referred to as switch S4 [5] in some portions of this procedure.

SUBTASK 32-42-51-420-001

(1) Put the switch S3 [4], and switch S4 [5], in their positions in the landing gear control lever module [1].

SUBTASK 32-42-51-420-002

(2) Install the bolts [6], the washers [7], [9], and the nuts [10].

NOTE: These parts hold the switch S3 [4] and switch S4 [5], to the control module [1].

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SUBTASK 32-42-51-420-003

(3) Connect the electrical terminals [8] to the switch S3 [4] and switch S4 [5].

G. Do a Continuity check of the Switches

SUBTASK 32-42-51-020-004

(1) Disconnect the electrical connector [3] from the electrical receptical [2] on the control module [1].

SUBTASK 32-42-51-480-004

(2) Use an bonding meter, COM-1550, to measure the continuity between the connector pins, in the electrical receptical [2], listed in this table (Table 401):

NOTE: See Figure 401 for the pin locations.

NOTE: Use the lever lock override to move the landing gear lever to the UP position.

(a) Make sure the ohmmeter shows continuity between the pins or an open circuit between the pins for the corresponding lever positions.

Table 401/32-42-51-993-802 Landing Gear lever Up Switches Continuity Check

SWITCH TEST ITEM	D12114 CONNECTOR PINS	LANDING GEAR CONTROL LEVER POSITION		
		"UP"	"OFF" (CENTER)	"DN"
S3	14 - 16	OPEN	CONT	CONT
	14 - 15	CONT	OPEN	OPEN
S4	11 - 13	OPEN	CONT	CONT
	11 - 12	CONT	OPEN	OPEN

SUBTASK 32-42-51-420-004

(3) Before you connect the electrical connector [3] to the electrical receptical [2] on the control module [1], examine the connector for corrosion.

WARNING: DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

(a) If there was corrosion, refer to (SWPM 20-60-03) to correct the problem.

(b) Apply theD5026NS or ZC-026 compound, G50171 to the connector (SWPM 20-60-03).

H. Put the Airplane Back to its Usual Condition

SUBTASK 32-42-51-480-005

(1) Do this task: Landing Gear Control Lever Module Installation, TASK 32-31-11-400-801.

SUBTASK 32-42-51-480-006

(2) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

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END OF TASK

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AUTOBRAKE SELECTOR SWITCH - REMOVAL/INSTALLATION

1. General

A. The Autobrake Selector Switch (S4) is installed on the P2-2 panel.

B. This procedure contains the following tasks:

(1) Autobrake Selector Switch - Removal

(2) Autobrake Selector Switch - Installation

TASK 32-42-61-000-801

2. Autobrake Selector Switch - Removal

A. References

Reference	Title
24-22-00-860-812	Remove Electrical Power (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare for Removal

SUBTASK 32-42-61-490-001

WARNING: MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlocks are not installed on all of the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-42-61-860-023

(2) Do Task: Remove Electrical Power, TASK 24-22-00-860-812.

SUBTASK 32-42-61-490-002

(3) Put chocks around the tires of all of the landing gear wheels.

SUBTASK 32-42-61-860-002

(4) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1

D. Autobrake Selector Switch Removal

SUBTASK 32-42-61-020-004

(1) Remove the selector switch knob [6] from the shaft of the autobrake selector switch [7].

SUBTASK 32-42-61-020-005

(2) Remove the knobs [8] and [9].

SUBTASK 32-42-61-020-007

(3) Remove the lightplate [10].

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SUBTASK 32-42-61-020-008

(4) Loosen the fasteners that attach the engine/autobrake control panel assembly, P2-2 [5] to the P2 panel.

SUBTASK 32-42-61-020-001

(5) Remove the engine/autobrake control panel assembly, P2-2 [5] from the P2 panel.

SUBTASK 32-42-61-020-002

(6) Disconnect the electrical connector [1] from the autobrake selector switch [2].

SUBTASK 32-42-61-020-003

(7) Remove the autobrake selector switch [2] from the control panel [5] with these steps.

(a) Remove the nut [3] and the washer [4] which holds the autobrake selector switch in the control panel [5].

(b) Remove the autobrake selector switch [2] from the control panel [5].

——————— END OF TASK ———————

TASK 32-42-61-400-801

3. Autobrake Selector Switch - Installation

Figure 401

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Autobrake Selector Switch Installation

SUBTASK 32-42-61-420-001

(1) Install the autobrake selector switch [2] in the P2-2 panel with these steps:

(a) Install the electrical connector [1] on the autobrake selector switch [2].

(b) Install the autobrake selector switch [2] in the control panel [5].

(c) Install the washer [4] and nut [3] on the shaft of the autobrake selector switch [7] that hold the autobrake selector switch [2] to the panel and tighten the nut.

(d) Install the lightplate [10].

(e) Install the switch knob [6] on the shaft of the the autobrake selector switch [7].

(f) Install the knobs [8] and [9].

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SUBTASK 32-42-61-420-002

(2) Install the P2-2 panel [5] in the P2 panel and tighten the fasteners.

SUBTASK 32-42-61-865-001

(3) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1

D. Autobrake Selector Switch Installation Test

SUBTASK 32-42-61-860-004

(1) Make sure the two thrust levers are in the IDLE position.

SUBTASK 32-42-61-860-007

(2) Make sure the landing gear control lever is in the DN position.

SUBTASK 32-42-61-860-008

(3) Make sure the spoilers are stowed.

SUBTASK 32-42-61-860-009

(4) Make sure the Right and Left ADIRSs are in the NAV mode.

(a) Align the ADIRS. To do this, do this task: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801 or do this task: Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801.

SUBTASK 32-42-61-480-001

(5) Make sure the tires have chocks installed around them.

SUBTASK 32-42-61-860-010

(6) Release the parking brake.

SUBTASK 32-42-61-860-011

WARNING: KEEP PERSONNEL AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(7) For the normal (system B) hydraulic system, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-42-61-860-012

(8) Do this task: Supply Electrical Power, TASK 24-22-00-860-811

SUBTASK 32-42-61-860-013

(9) Set the BRAKE TEST selector switch on the Antiskid/Autobrake Control Unit to A/B.

NOTE: In Steps (10) through (14), if the AUTOBRAKE disarm light is on when you push the enable/verify switches, the test will not successfully complete and the display on the front panel of the Antiskid/Autobrake Control Unit will show ''BRK ####''.

SUBTASK 32-42-61-860-014

(10) Do the steps that follow for autobrake selector position ''1''.

(a) Set the autobrake selector switch on the P2-2 panel to ''OFF'' then to the ''1'' position.

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(b) Push and then release the RESET switch on the Antiskid/Autobrake Control Unit.

NOTE: The display on the front panel of the Antiskid/Autobrake Control Unit will show ''MEM CLR''.

(c) Push and hold the ENABLE/VERIFY switch on the Antiskid/Autobrake Control Unit.

(d) While you hold the ENABLE/VERIFY switch, push and hold the VERIFY switch on the Antiskid/Autobrake Control Unit.

(e) Release the ENABLE/VERIFY switch and the VERIFY switch at the same time.

NOTE: The Antiskid/Autobrake Control Unit display will show BRK A/B1 during the test.

(f) Make sure the AUTOBRAKE DISARM light on the P2-2 panel comes on.

(g) Set the autobrake selector switch on the P2-2 panel to''OFF''.

SUBTASK 32-42-61-860-015

(11) Do the steps that follow for autobrake selector position ''2''.

(a) Set the autobrake selector switch on the P2-2 panel to ''2''.

(b) Push and hold the ENABLE/VERIFY switch on the Antiskid/Autobrake Control Unit.

(c) While you hold the ENABLE/VERIFY switch, push and hold the VERIFY switch on the Antiskid/Autobrake Control Unit.

(d) Release the ENABLE/VERIFY switch and the VERIFY switch at the same time.

NOTE: The Antiskid/Autobrake Control Unit display will show BRK A/B2 during the test.

(e) Make sure the AUTOBRAKE DISARM light on the P2-2 panel comes on.

(f) Set the autobrake selector switch on the P2-2 panel to ''OFF''.

SUBTASK 32-42-61-860-016

(12) Do the steps that follow for autobrake selector switch ''3''.

(a) Set the autobrake selector switch on the P2-2 panel to ''3''.

(b) Push an hold the ENABLE/VERIFY switch on the Antiskid/Autobrake Control Unit.

(c) While you hold the ENABLE/VERIFY switch, push and hold the VERIFY switch on the Antiskid/Autobrake Control Unit.

(d) Release the ENABLE/VERIFY switch and the VERIFY switch at the same time.

NOTE: The Antiskid/Autobrake Control Unit display will show BRK A/B3 during the test.

(e) Make sure the AUTOBRAKE DISARM light on the P2-2 panel comes on.

(f) Set the autobrake selector switch on the P2-2 panel to ''OFF''.

SUBTASK 32-42-61-860-017

(13) Do the steps that follow for the autobrake selector position ''MAX''.

(a) Set the autobrake selector switch on the P2-2 panel to ''MAX''.

(b) Push and hold the ENABLE/VERIFY switch on the Antiskid/Autobrake Control Unit.

(c) While you hold the ENABLE/VERIFY switch, push and hold the VERIFY switch on the Antiskid/Autobrake Control Unit.

(d) Release the ENABLE/VERIFY switch and the VERIFY switch at the same time.

NOTE: The Antiskid/Autobrake Control Unit display will show BRK A/B4 during the test.

(e) Make sure the AUTOBRAKE DISARM light on the P2-2 panel comes on.

(f) Set the autobrake selector switch on the P2-2 panel to ''OFF''.

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SUBTASK 32-42-61-860-018

(14) Do the steps that follow for autobrake selector position ''RTO''.

(a) Set the autobrake selector switch on the P2-2 panel to ''RTO''.

(b) Push and hold the ENABLE/VERIFY switch on the Antiskid/Autobrake Control Unit.

(c) While you hold the ENABLE/VERIFY switch, push and hold the VERIFY switch on the Antiskid/Autobrake Control Unit.

(d) Release the ENABLE/VERIFY switch and the VERIFY switch at the same time.

NOTE: The Antiskid/Autobrake Control Unit display will show BRK RTO during the test.

(e) Make sure the AUTOBRAKE DISARM light on the P2-2 panel comes on.

(f) Set the autobrake selector switch on the P2-2 panel to ''OFF''.

SUBTASK 32-42-61-860-019

(15) Do the steps that follow to test the brake metered pressure switches.

(a) Set the autobrake selector switch on the P2-2 panel to ''1''.

(b) Push and hold the left brake pedal to the stop.

(c) Verify that the AUTOBRAKE DISARM light on the P2-2 panel comes on.

(d) Set the autobrake selector switch on the P2-2 panel to ''OFF'' and then set it back to ''1''.

(e) Push and hold the right brake pedal to the stop.

(f) Verify that the AUTOBRAKE DISARM light on the P2-2 panel comes on.

SUBTASK 32-42-61-860-020

(16) Set the autobrake selector switch on the P2-2 panel to ''OFF''.

SUBTASK 32-42-61-860-021

(17) Set the BRAKE TEST selector switch on the Antiskid/Autobrake Control Unit to NORM.

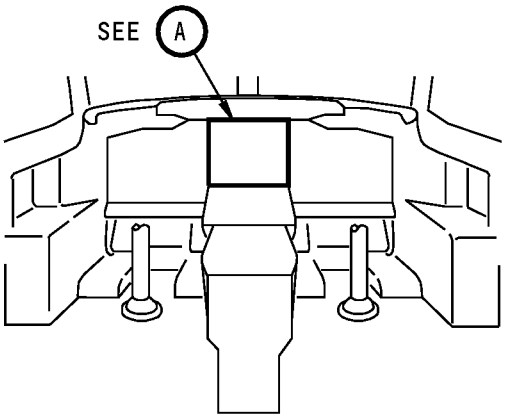
E. Put the Airplane Back to Its Usual Condition

SUBTASK 32-42-61-860-022

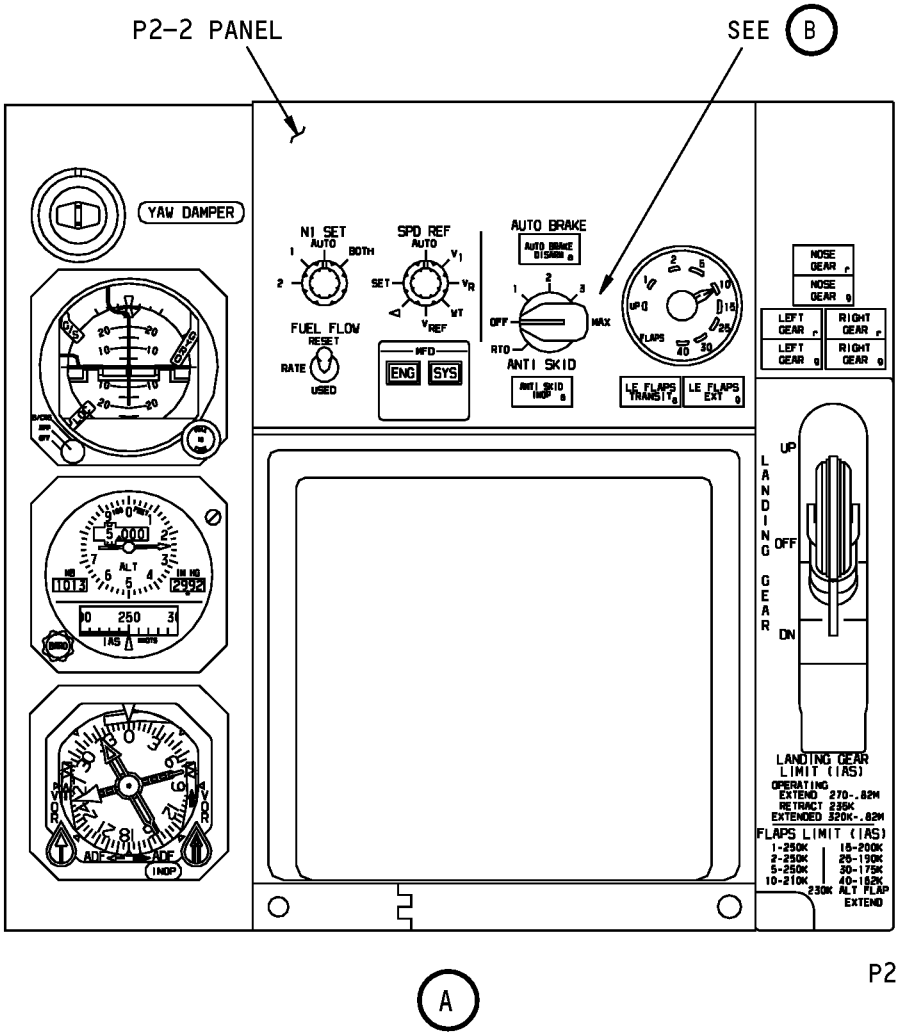
(1) Do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

END OF TASK

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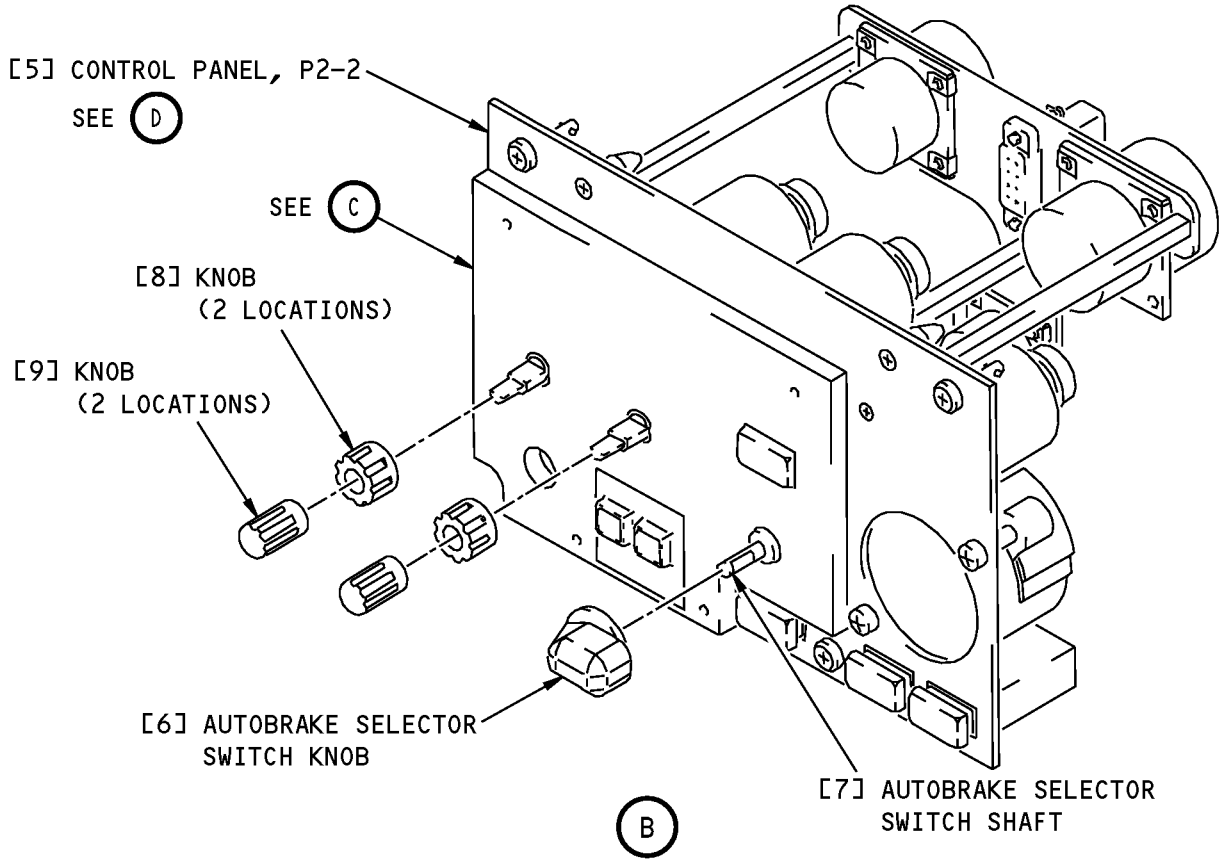


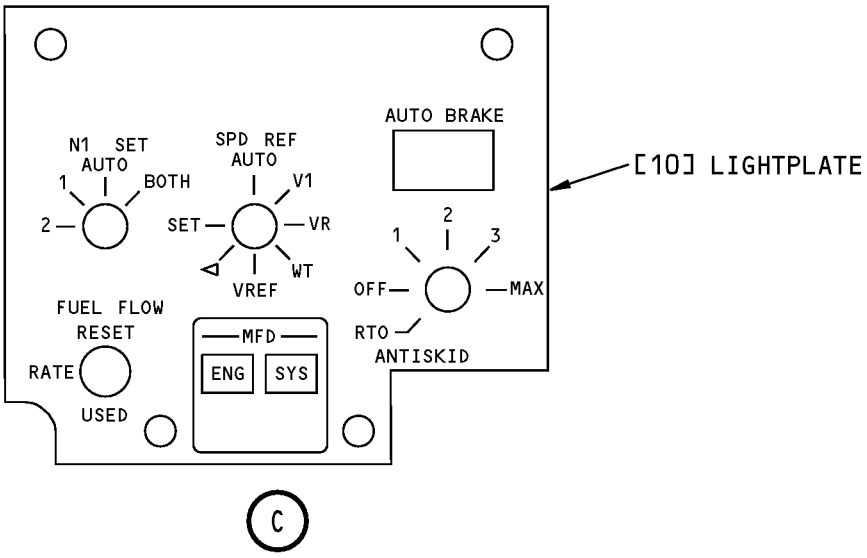
FLIGHT COMPARTMENT



Autobrake Selector Switch Installation
Figure 401 (Sheet 1 of 3)/32-42-61-990-801

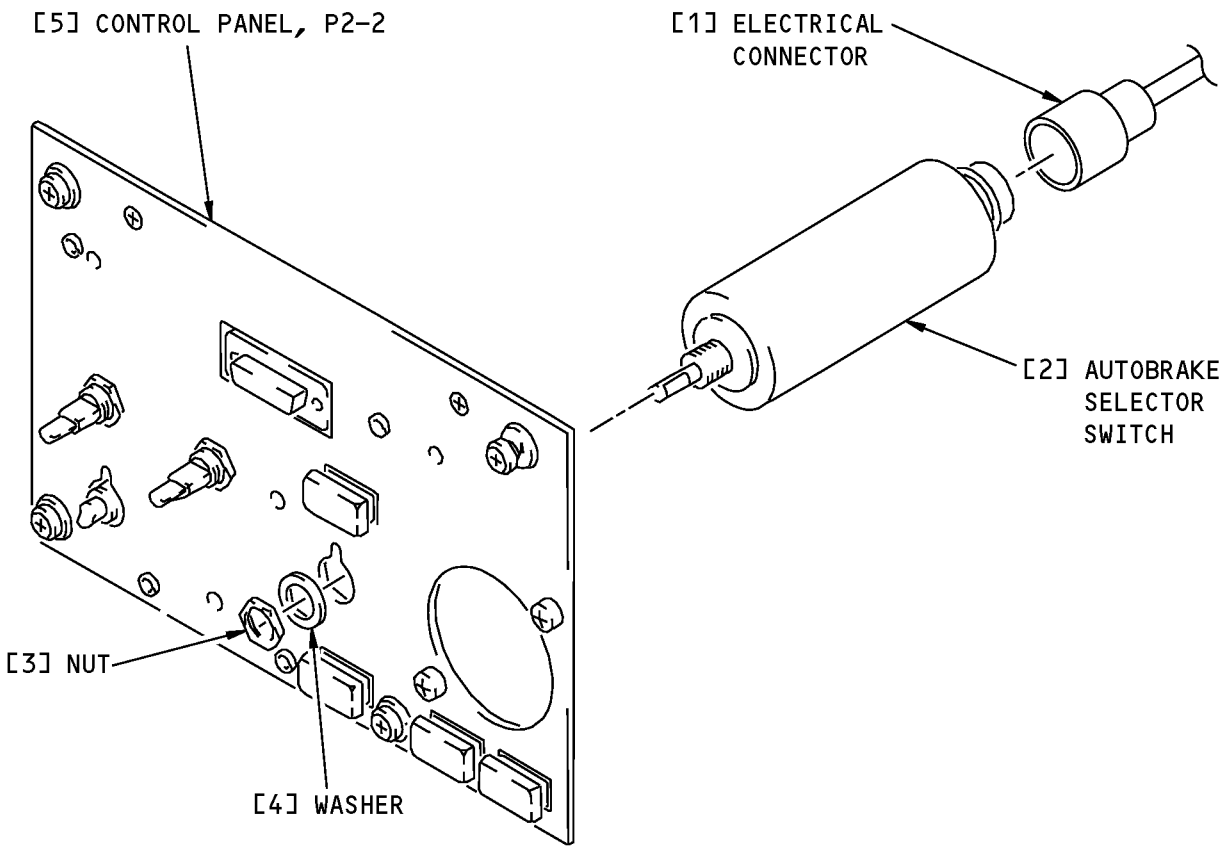
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Autobrake Selector Switch Installation
Figure 401 (Sheet 2 of 3)/32-42-61-990-801

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Autobrake Selector Switch Installation
Figure 401 (Sheet 3 of 3)/32-42-61-990-801

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AUTOBRAKE SHUTTLE VALVE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the autobrake shuttle valve

(2) An installation of the autobrake shuttle valve.

B. The pressure switch removal and installation steps will be given as a part of the valve removal and installation task.

C. There are two autobrake shuttle valves, one for each landing gear, located on the aft wall of the main landing gear wheel well.

D. This procedure is applicable for the two shuttle valves.

TASK 32-42-71-000-801

2. Autobrake Shuttle Valve Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

C. Prepare for the Removal

SUBTASK 32-42-71-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-42-71-860-001

(2) To remove pressure from the normal (system B) hydraulic system, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-42-71-480-002

(3) Make sure the tires have chocks installed around them.

SUBTASK 32-42-71-860-002

(4) Release the parking brake.

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SUBTASK 32-42-71-840-001

(5) Operate the brake pedals until the gage at the brake accumulator shows no change in the pressure.

NOTE: You will have to operate the brake pedals approximately 12 times to fully release the pressure from the accumulator.

SUBTASK 32-42-71-860-005

(6) Set the parking brake.

SUBTASK 32-42-71-860-003

(7) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

D. Autobrake Shuttle Valve Removal

(Figure 401)

SUBTASK 32-42-71-020-001

(1) Disconnect the electrical connector [1] from the pressure switch [2] on the autobrake shuttle valve [3].

SUBTASK 32-42-71-020-002

(2) Disconnect the hydraulic lines from the autobrake shuttle valve [3]:

(a) Disconnect the hydraulic tube [4] from the union [5].

(b) Disconnect the hydraulic tube [9] from the union [5].

(c) Disconnect the hydraulic tubes [7] from the union [5].

SUBTASK 32-42-71-480-003

(3) Install plugs in the hydraulic lines.

SUBTASK 32-42-71-020-003

(4) Remove the bolts [11] and washers [10] which hold the autobrake shuttle valve [3] to the airplane.

SUBTASK 32-42-71-020-004

(5) If the replacement autobrake shuttle valve [3] does not have hydraulic fittings installed, then do these steps:

(a) Remove the hydraulic unions [5] and the packings [6].

(b) Discard the packings [6].

SUBTASK 32-42-71-020-005

(6) Do the steps that follow to remove the pressure switch [2] from the autobrake shuttle valve [3]:

(a) Remove the pressure switch [2] from the autobrake shuttle valve [3].

(b) Remove the packing [12] from the pressure switch [2].

(c) Discard the packing [12].

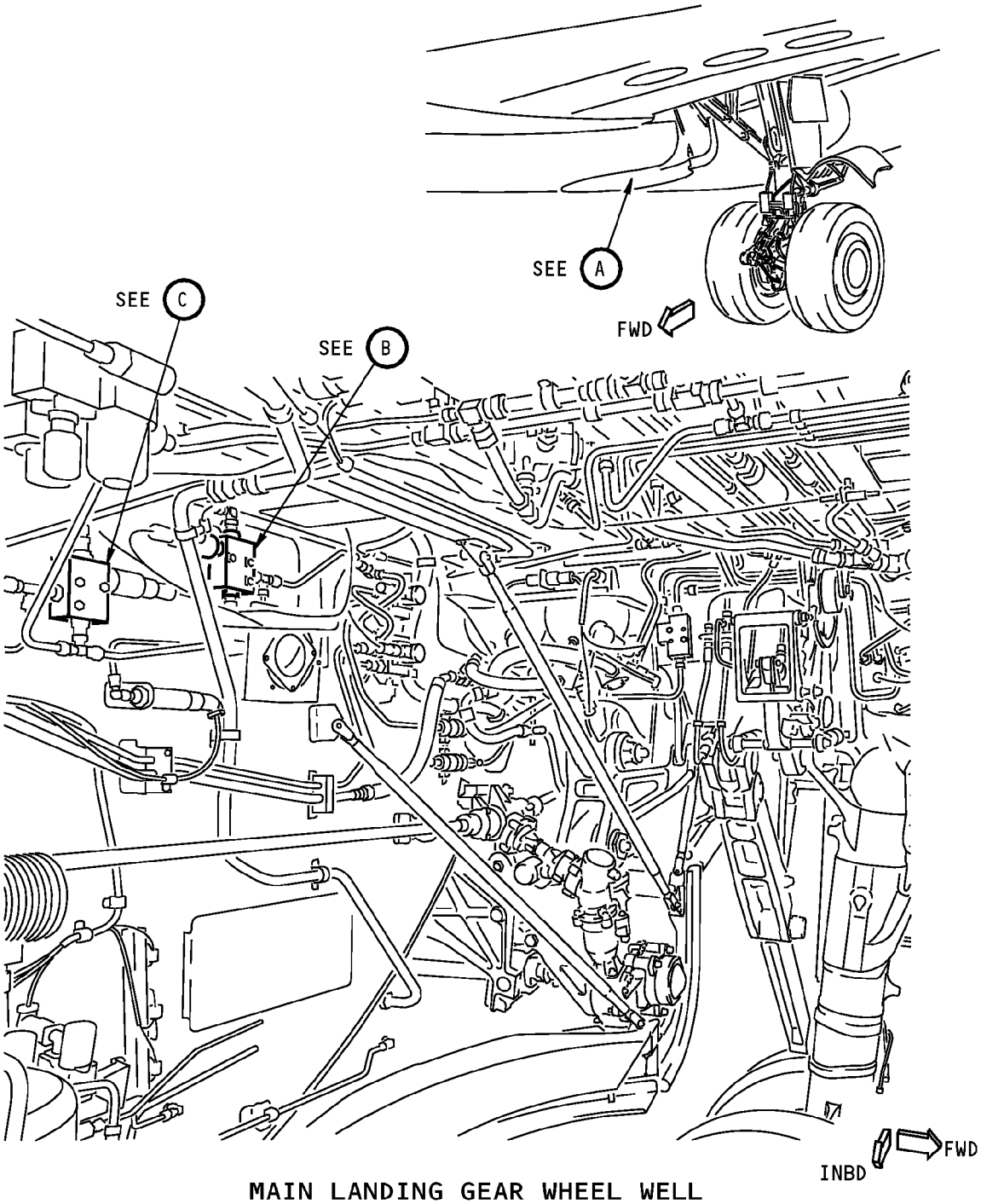
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SUBTASK 32-42-71-480-004

(7) Install plugs in the ports of the autobrake shuttle valve [3].

END OF TASK

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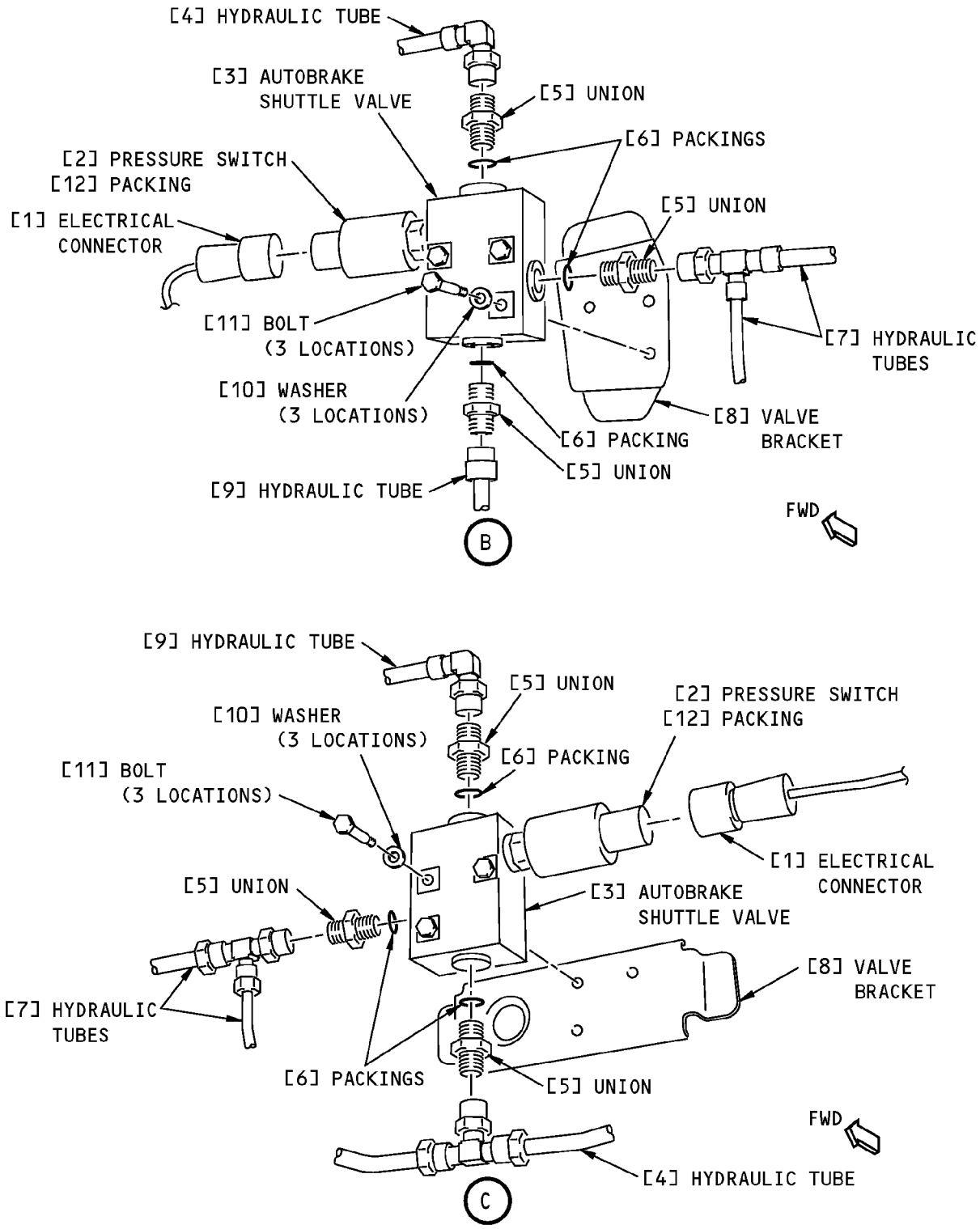


MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE)

A

Autobrake Shuttle Valve Installation
Figure 401 (Sheet 1 of 2)/32-42-71-990-801

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Autobrake Shuttle Valve Installation
Figure 401 (Sheet 2 of 2)/32-42-71-990-801

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TASK 32-42-71-400-801

3. Autobrake Shuttle Valve Installation

(Figure 401)

A. References

Reference	Title
20-10-34-120-801	Hand Clean Metal Surfaces with Abrasives (P/B 701)
32-41-00-870-801	Hydraulic Brake System - Bleeding Upstream of the Antiskid Valves (P/B 201)
32-42-00-400-802	Autobrake Shuttle Valve Operational Test (P/B 501)
SWPM 20-60-03	Special Protection of Electrical Connectors

B. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00064	Coating - Aluminum Chemical Conversion	BAC5719, Type II, Class A (MIL-C-5541, Class A)
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)
G50171	Compound - Corrosion Inhibiting Compound, Interior Application - D5026NS or ZC-026	

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

D. Autobrake Shuttle Valve Installation

SUBTASK 32-42-71-080-001

(1) Remove the plugs from the ports of the autobrake shuttle valve [3].

SUBTASK 32-42-71-420-001

(2) If the replacement autobrake shuttle valve [3] does not have hydraulic fittings installed, do these steps:

(a) Lubricate the hydraulic unions [5] and packings [6] for the autobrake shuttle valve [3] with fluid, D00153.

(b) Install the packings [6] on the hydraulic unions [5].

(c) Install the unions [5] in the three hydraulic ports in the valve [3]:

SUBTASK 32-42-71-420-002

(3) Do the steps that follow to install the pressure switch [2] on the autobrake shuttle valve [3]:

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(a) Lubricate the threads of the pressure switch [2] and the packing [12] with fluid, D00153.

(b) Install the packing [12] on the pressure switch [2].

(c) Install the pressure switch [2] on the autobrake shuttle valve [3]:

SUBTASK 32-42-71-100-001

(4) Do the steps below to help get a good electrical bond between the autobrake shuttle valve [3] and valve bracket [8]:

(a) To fully clean the mating surface of the bracket [8] and the autobrake shuttle valve [3], do this task: Hand Clean Metal Surfaces with Abrasives, TASK 20-10-34-120-801.

(b) Manually apply coating, C00064 to all of the cleaned areas of the bracket [8].

(c) Fay surface seal the autobrake shuttle valve [3] to the bracket [8] with sealant, A00247.

SUBTASK 32-42-71-420-003

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(5) Apply compound, C00913 to the bolts [11] and the washers [10] that hold the autobrake shuttle valve [3] to the bracket [8].

SUBTASK 32-42-71-420-004

(6) Install the bolts [11] and the washers [10] to hold the autobrake shuttle valve [3] to the airplane.

SUBTASK 32-42-71-080-002

(7) Remove plugs from the hydraulic lines.

SUBTASK 32-42-71-420-005

(8) Connect the hydraulic lines to the unions [5] on the autobrake shuttle valve [3].

SUBTASK 32-42-71-420-006

(9) Before you connect the electrical connector [1] to the autobrake shuttle valve [3], examine the connector for corrosion.

WARNING: DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

(a) If there was corrosion, refer to (SWPM 20-60-03) to correct the problem.

(b) Apply theD5026NS or ZC-026 compound, G50171 to the connector (SWPM 20-60-03).

(10) Connect the electrical connector [1] to the autobrake shuttle valve [3].

SUBTASK 32-42-71-860-004

(11) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

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SUBTASK 32-42-71-710-001

(12) For the normal brake system, do this task: Hydraulic Brake System - Bleeding Upstream of the Antiskid Valves, TASK 32-41-00-870-801.

SUBTASK 32-42-71-710-002

(13) Do this task: Autobrake Shuttle Valve Operational Test, TASK 32-42-00-400-802.

——————— END OF TASK ———————

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AUTOBRAKE PRESSURE CONTROL MODULE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the autobrake pressure control module

(2) An installation of the autobrake pressure control module

(3) A removal of the control module line replaceable units, (the servo valve, the solenoid valve, and the pressure switches).

(4) An installation of the control module line replaceable units, (the servo valve, the solenoid valve, and the pressure switches).

B. The autobrake pressure control module is on the ceiling of the main landing gear wheel well.

C. The autobrake pressure control module is referred to as the control module in this procedure.

TASK 32-42-81-000-801

2. Autobrake Pressure Control Module Valve Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

C. Prepare for the Removal

SUBTASK 32-42-81-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-42-81-860-001

(2) To remove pressure from the normal (system B) and the alternate (system A) hydraulic systems, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-42-81-480-002

(3) Make sure the tires have chocks installed around them.

SUBTASK 32-42-81-860-002

(4) Release the parking brake.

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SUBTASK 32-42-81-840-001

(5) Operate the brake pedals until the gage at the brake accumulator shows no change in the pressure.

NOTE: You will have to operate the brake pedals approximately 12 times to fully release the pressure from the accumulator.

SUBTASK 32-42-81-860-009

(6) Set the parking brake.

SUBTASK 32-42-81-860-003

(7) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

D. Autobrake Pressure Control Module Removal

SUBTASK 32-42-81-020-001

(1) Disconnect the hydraulic lines [2], [9], [11] from the control module [20] or [29].

SUBTASK 32-42-81-480-003

(2) Install plugs in the hydraulic lines and caps on the hydraulic unions.

SUBTASK 32-42-81-020-002

(3) Disconnect the electrical connectors [1], [6], [7], [8] from the control module [20] or [29].

SUBTASK 32-42-81-020-003

(4) Remove the bolts [3] and washers [4] which hold the control module [20] or [29] to the airplane.

SUBTASK 32-42-81-020-004

(5) If the replacement control module [20] or [29] does not have hydraulic fittings installed, do these steps:

(a) Remove the hydraulic unions [13] and [18] and the packings [14] and [19].

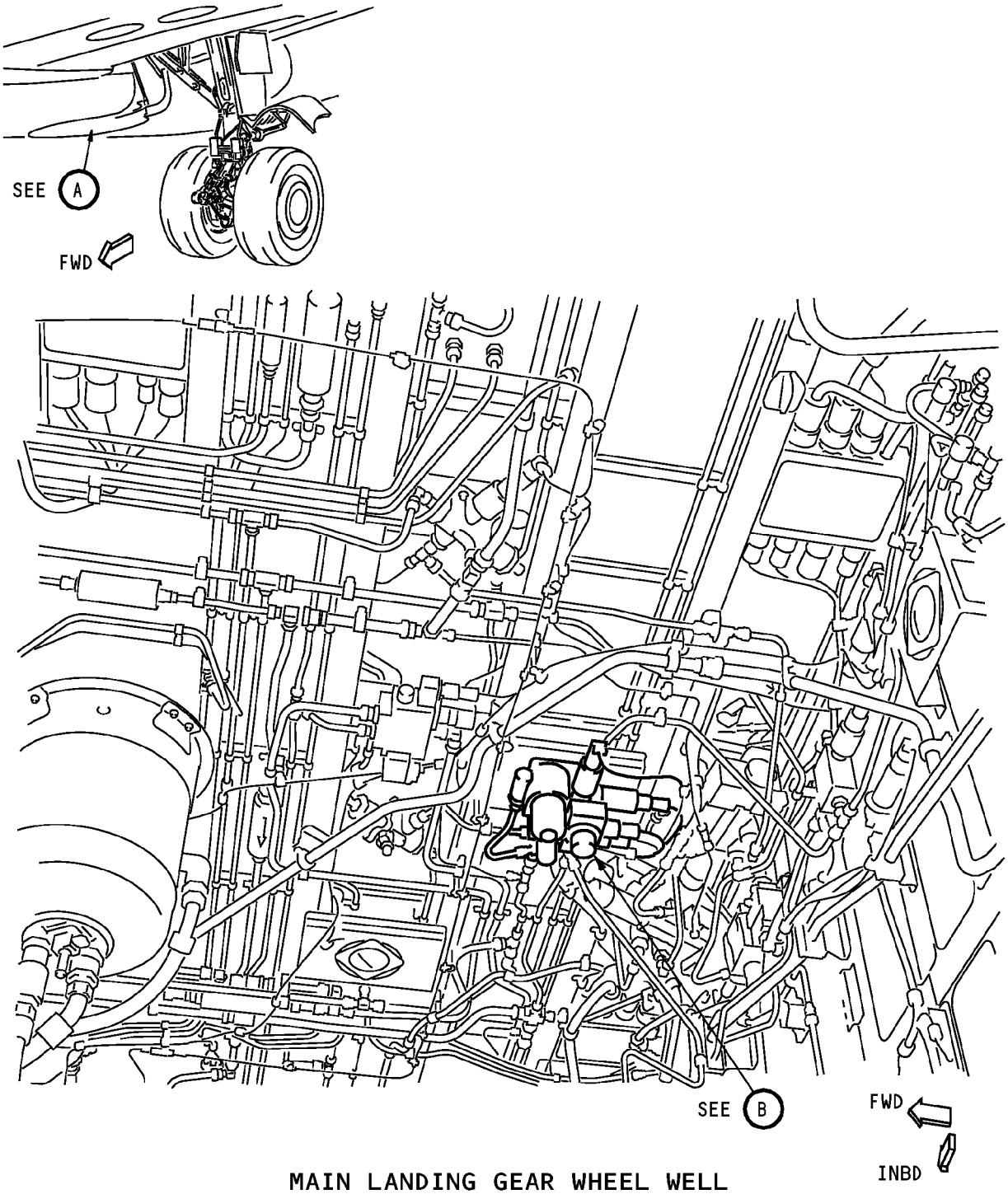
(b) Discard the packings [14] and [19].

SUBTASK 32-42-81-480-004

(6) Install plugs in the hydraulic ports of the control module.

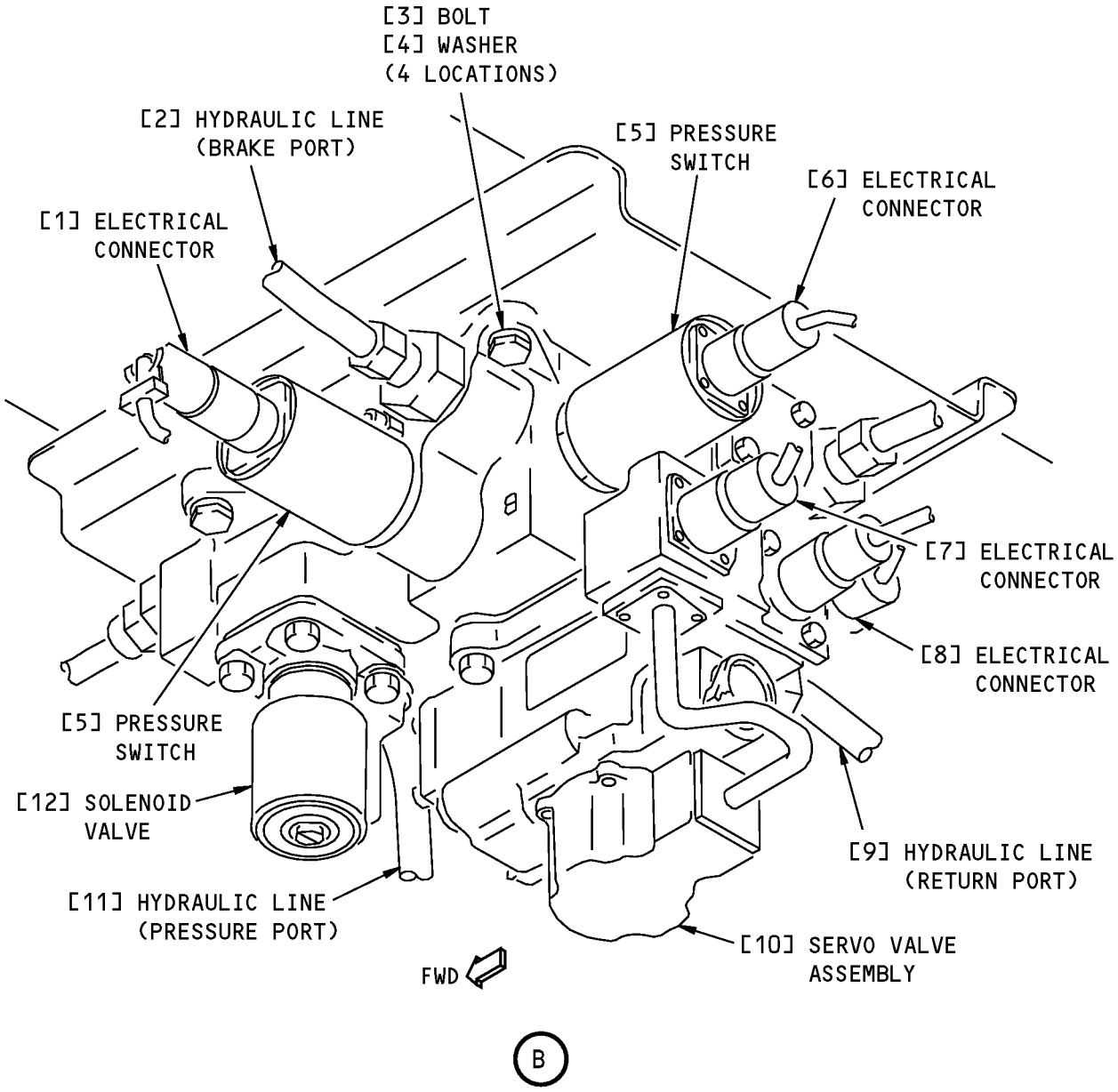
END OF TASK

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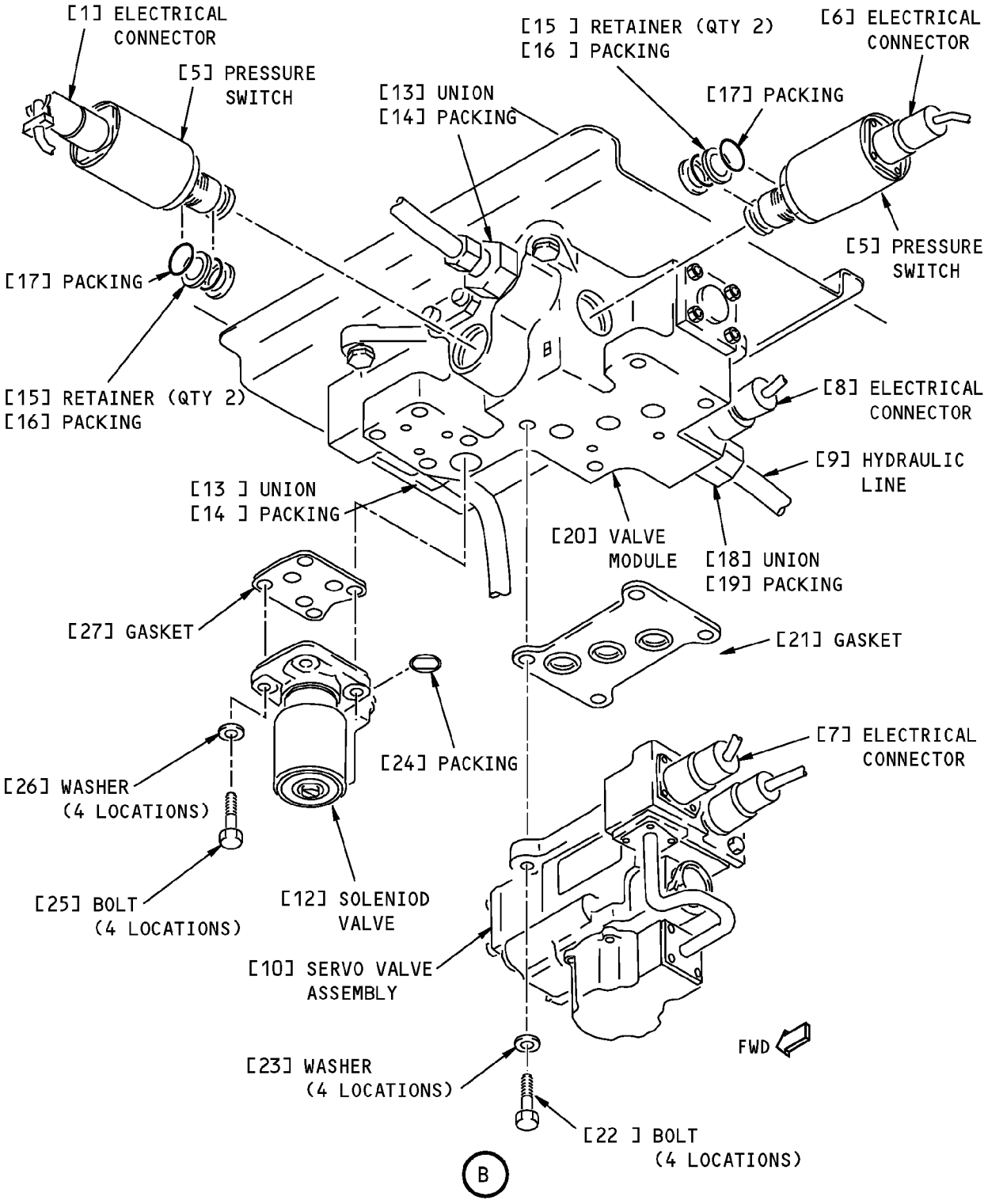
Autobrake Pressure Control Module Installation
Figure 401 (Sheet 1 of 5)/32-42-81-990-801

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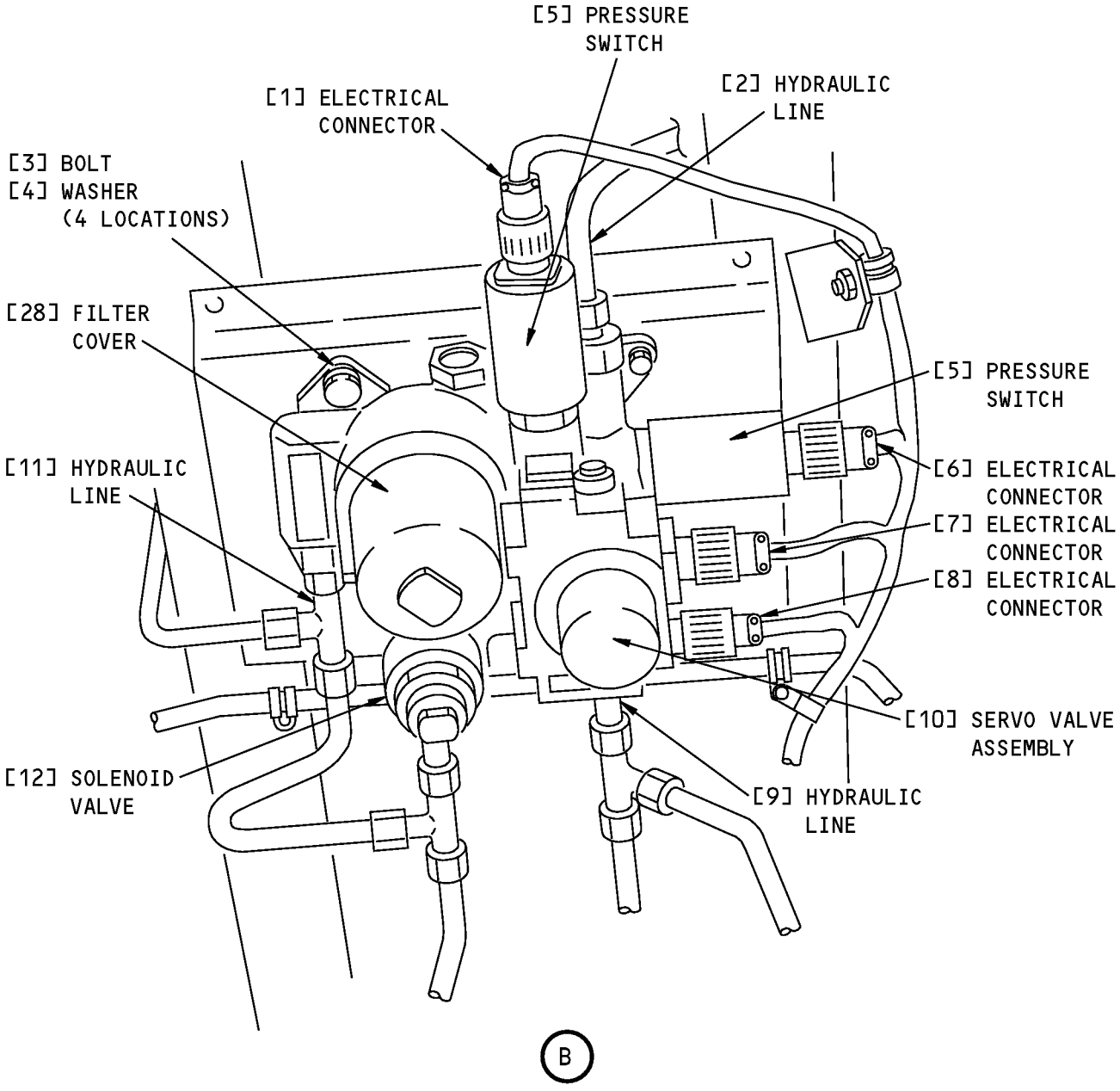
Autobrake Pressure Control Module Installation
Figure 401 (Sheet 2 of 5)/32-42-81-990-801

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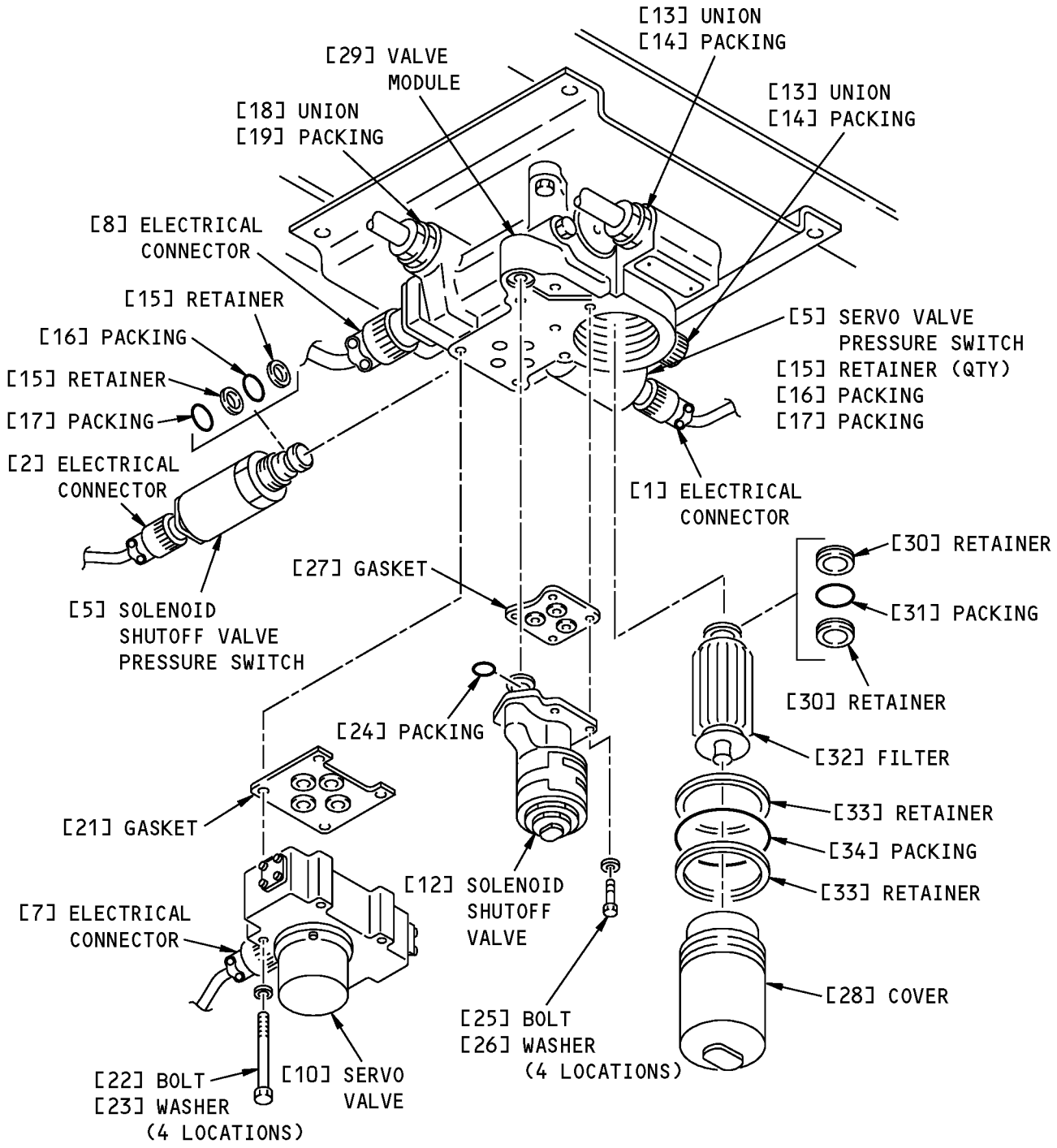
Autobrake Pressure Control Module Installation
Figure 401 (Sheet 3 of 5)/32-42-81-990-801

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Autobrake Pressure Control Module Installation
Figure 401 (Sheet 4 of 5)/32-42-81-990-801

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Autobrake Pressure Control Module Installation
Figure 401 (Sheet 5 of 5)/32-42-81-990-801

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TASK 32-42-81-400-801

3. Autobrake Pressure Control Module Installation

(Figure 401)

A. References

Reference	Title
20-10-34-120-801	Hand Clean Metal Surfaces with Abrasives (P/B 701)
32-42-00-400-801	Autobrake Pressure Control Module Operational Test (P/B 501)
SWPM 20-60-03	Special Protection of Electrical Connectors

B. Consumable Materials

Reference	Description	Specification
A02315	Sealant - Low Density, Synthetic Rubber. 2 Part	BMS5-142
C00064	Coating - Aluminum Chemical Conversion	BAC5719, Type II, Class A (MIL-C-5541, Class A)
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)
G50171	Compound - Corrosion Inhibiting Compound, Interior Application - D5026NS or ZC-026	

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

D. Autobrake Pressure Control Module Installation

SUBTASK 32-42-81-080-001

(1) Remove the plugs from the ports of the control module assembly [20] or [29].

SUBTASK 32-42-81-420-001

(2) If the replacement control module does not have hydraulic fittings installed, do these steps:

(a) Lubricate the hydraulic unions [13] and [18] and packings [14] and [19] for the control module with fluid, D00153.

(b) Install the packings [14] and [19] on the hydraulic unions [13] and [18].

(c) Install the unions [13] and [18] in the autobrake pressure control module.

SUBTASK 32-42-81-100-001

(3) Do the steps below to help get a good electrical bond between the control module and module bracket:

(a) To fully clean the mating surface of the bracket and the control module, do this task: Hand Clean Metal Surfaces with Abrasives, TASK 20-10-34-120-801.

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(b) Manually apply coating, C00064 to all of the cleaned areas of the bracket.

(c) Fay surface seal the valve assembly to the bracket with sealant, A02315.

SUBTASK 32-42-81-420-002

(4) Install the control module [20] or [29]:

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(a) Apply compound, C00913 to the bolts [3] and the washers [4] that hold the control module [20] or [29] to the bracket.

(b) Install the bolts [3] and the washers [4] to hold the control module [20] or [29] to the bracket.

(c) Remove plugs from the hydraulic lines [2], [9], and [11].

(d) Connect the hydraulic lines to the unions [13] and [18] on the control module.

(e) Before you connect the electrical connectors [1], [6], [7], and [8] to the control module, examine the connector for corrosion.

WARNING: DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

1) If there is corrosion, refer to (SWPM 20-60-03) to correct the problem.

2) Apply theD5026NS or ZC-026 compound, G50171 to the connectors (SWPM 20-60-03).

3) Connect the electrical connectors [1], [6], [7], and [8] to the control module.

SUBTASK 32-42-81-860-004

(5) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

SUBTASK 32-42-81-710-002

(6) Do this task: Autobrake Pressure Control Module Operational Test, TASK 32-42-00-400-801.

———————— END OF TASK ————————

TASK 32-42-81-000-802

4. Autobrake Pressure Control Module Line Replaceable Units Removal

(Figure 401)

A. General

(1) This procedure has the removal of these components on the control module:

(a) Solenoid Valve

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(b) Servo Valve

(c) Pressure Switch

(d) Filter (If the module is equipped with a filter)

B. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

D. Prepare for the Removal

SUBTASK 32-42-81-480-005

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-42-81-860-005

(2) To remove pressure from the normal (system B) and the alternate (system A) hydraulic systems, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-42-81-480-006

(3) Make sure the tires have chocks installed around them.

SUBTASK 32-42-81-860-006

(4) Release the parking brake.

SUBTASK 32-42-81-840-002

(5) Operate the brake pedals until the gage at the brake accumulator shows no change in the pressure.

NOTE: You will have to operate the brake pedals approximately 12 times to fully release the pressure from the accumulator.

SUBTASK 32-42-81-860-010

(6) Set the parking brake.

SUBTASK 32-42-81-860-007

(7) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1
E	16	C00196	LANDING GEAR ANTISKID INBD

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Row	Col	Number	Name
E	18	C00195	LANDING GEAR ANTISKID OUTBD

E. Solenoid Valve Removal

SUBTASK 32-42-81-020-005

(1) Remove the bolts [25] and the washers [26] that connect the solenoid valve [12] to the control module [20] or [29].

SUBTASK 32-42-81-480-007

CAUTION: WHEN YOU REMOVE THE SOLENOID VALVE AND THE GASKET, MAKE SURE NO CONTAMINANTS GO INTO THE OPEN PORTS ON THE MODULE. DAMAGE TO THE VALVE CAN OCCUR IF CONTAMINANTS GO INTO THE PORTS.

(2) Remove the solenoid valve [12] from the control module [20] or [29].

SUBTASK 32-42-81-480-008

(3) Remove the packing [24] from the solenoid valve [12].

SUBTASK 32-42-81-020-006

(4) Remove the solenoid valve gasket [27] from the control module [20] or [29].

SUBTASK 32-42-81-480-009

(5) Install a plug in the port for the solenoid valve [12].

F. Servo Valve Removal

SUBTASK 32-42-81-020-007

(1) Disconnect the electrical connector [7] from the servo valve [10].

SUBTASK 32-42-81-020-008

(2) Remove the bolts [22] and the washers [23] that connect the servo valve [10] to the control module [20] or [29].

SUBTASK 32-42-81-480-010

CAUTION: WHEN YOU REMOVE THE SERVO VALVE AND THE GASKET, MAKE SURE NO CONTAMINANTS GO INTO THE OPEN PORTS ON THE MODULE. DAMAGE TO THE VALVE CAN OCCUR IF CONTAMINANTS GO INTO THE PORTS.

(3) Remove the servo valve [10] from the control module [20] or [29].

SUBTASK 32-42-81-020-009

(4) Remove the gasket [21].

SUBTASK 32-42-81-480-011

(5) Install plugs in the ports for the servo valve [10].

G. Pressure Switch Removal

NOTE: These steps apply to the pressure switch of the solenoid valve and the pressure switch of the servo valve.

SUBTASK 32-42-81-020-010

(1) Disconnect the electrical connector [1] or [6] from the pressure switch [5].

SUBTASK 32-42-81-480-012

(2) Remove the pressure switch [5] from the control module.

SUBTASK 32-42-81-480-013

(3) Remove the packings [16], [17] and the retainers [15] from the pressure switch [5].

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SUBTASK 32-42-81-480-014

(4) Install a plug in the port for the pressure switch [5].

H. Filter Removal (If the module is equipped with a filter)

SUBTASK 32-42-81-020-011

(1) Remove the filter cover [28] from the control module.

SUBTASK 32-42-81-020-017

(2) Remove the retainers [33] and the packing [34] from the filter cover [28] and discard them.

SUBTASK 32-42-81-020-018

(3) Remove the filter [32] from the control module.

SUBTASK 32-42-81-020-019

(4) Remove the retainers [30] and the packing [31] from the filter [32].

SUBTASK 32-42-81-020-020

(5) Discard of the packing [31].

——————— END OF TASK ———————

TASK 32-42-81-000-803

5. Autobrake Pressure Control Module Line Replaceable Units Installation

(Figure 401)

A. General

(1) The procedure that follows installs these components of the autobrake pressure control module:

(a) Solenoid Valve

(b) Servo Valve

(c) Pressure Switch

(d) Filter (If the module is equipped with a filter)

B. References

Reference	Title
32-42-00-400-801	Autobrake Pressure Control Module Operational Test (P/B 501)
SWPM 20-60-03	Special Protection of Electrical Connectors

C. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)
G50171	Compound - Corrosion Inhibiting Compound, Interior Application - D5026NS or ZC-026	

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D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

E. Solenoid Valve Installation

SUBTASK 32-42-81-420-006

(1) Install the packing [24] on the solenoid valve [12].

SUBTASK 32-42-81-480-018

(2) Remove the plug from the port for the solenoid valve [12].

SUBTASK 32-42-81-480-019

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(3) Apply compound, C00913 to the bolts [25].

SUBTASK 32-42-81-020-012

(4) Install the solenoid valve gasket [27] on the control module [20] or [29].

SUBTASK 32-42-81-020-013

(5) Put the solenoid valve [12] in its position on the control module [20] or [29].

SUBTASK 32-42-81-420-007

(6) Install the bolts [25] and the washers [26] to connect the solenoid valve [12] to the control module [20] or [29].

SUBTASK 32-42-81-420-008

(7) Tighten the bolts [25] to 75-80 pound-inches (8.5-9.0 newton-meters) in a crisscross sequence.

(a) Start with the bolt [25] closest to the nearest mounting bolt [3] for the control module. Tighten all bolts to 5-10 pound-inches (0.56-1.1 newton-meters), then 35-40 pound-inches (4.0-4.5 newton-meters), and then to the final torque.

SUBTASK 32-42-81-420-009

(8) Use a 0.0015 inch (0.038 mm) shim to measure the clearance between the solenoid valve [12] and the control module [20] or [29].

NOTE: No clearance greater than 0.0015 inch (0.038 mm) is allowed.

F. Servo Valve Installation

SUBTASK 32-42-81-480-020

(1) Remove the plug from the port for the servo valve [10].

SUBTASK 32-42-81-480-021

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(2) Apply compound, C00913 to the bolts [22].

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SUBTASK 32-42-81-020-014

(3) Install the servo valve gasket [21] on the control module [20] or [29].

SUBTASK 32-42-81-020-015

(4) Put the servo valve [10] in its position on the control module [20] or [29].

SUBTASK 32-42-81-420-010

(5) Install the bolts [22] and the washers [23] to connect the servo valve [10] to the control module [20] or [29].

SUBTASK 32-42-81-420-011

(6) Tighten the bolts [22] to 75-80 pound-inches (8.5-9.0 newton-meters) in a crisscross sequence.

(a) Start with the bolt [22] closest to the solenoid valve [12], tighten all bolts to 5-10 pound-inches (0.56-1.1 newton-meters), then 35-40 pound-inches (4.0-4.5 newton-meters), and then to the final torque.

SUBTASK 32-42-81-420-012

(7) Use a 0.0015 inch (0.038 mm) shim to measure the clearance between the servo valve [10] and the control module [20] or [29].

NOTE: No clearance greater than 0.0015 inch (0.038 mm) is allowed.

SUBTASK 32-42-81-020-016

(8) Before you connect the electical connector [7] to the servo valve [10], examine the connector for corrosion.

WARNING: DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

(a) If there was corrosion, refer to (SWPM 20-60-03) to correct the problem.

(b) Apply theD5026NS or ZC-026 compound, G50171 to the connector (SWPM 20-60-03).

(9) Connect the electrical connector [7] to the servo valve [10].

G. Pressure Switch Installation

NOTE: These steps apply to the pressure switch of the solenoid valve and the pressure switch of the servo valve.

SUBTASK 32-42-81-420-013

(1) Lubricate the packing [16], [17] and the retainers [15] with fluid, D00153.

SUBTASK 32-42-81-420-014

(2) Install the packing [17] in the middle groove of the pressure switch [5].

SUBTASK 32-42-81-420-015

(3) Install a retainer [15], a packing [16], and a retainer [15] in the end groove of the pressure switch [5].

SUBTASK 32-42-81-480-022

(4) Install the pressure switch [5] on the control module.

SUBTASK 32-42-81-420-016

(5) Tighten the pressure switch [5] to 342-378 pound-inches (39-43 newton-meters).

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SUBTASK 32-42-81-420-017

(6) Before you connect the electrical connector [1], [2] to the pressure switch [5], examine the connector for corrosion.

WARNING: DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

(a) If there was corrosion, refer to (SWPM 20-60-03) to correct the problem.

(b) Apply theD5026NS or ZC-026 compound, G50171 to the connectors (SWPM 20-60-03).

(c) Connect the electrical connector [1], [2] to the pressure switch [5].

H. Filter Installation (If the module is equipped with a filter)

SUBTASK 32-42-81-420-018

(1) Lubricate the packings [31], [34] and the retainers [30], [33] for the filter [32] and cover [28] with fluid, D00153.

SUBTASK 32-42-81-420-019

(2) Install the packing [31] and the retainers [30] on the filter [32].

SUBTASK 32-42-81-420-020

(3) Install the filter [32] in the control module [20] or [29].

SUBTASK 32-42-81-420-021

(4) Install the packing [34] and the retainers [33] on the cover [28].

SUBTASK 32-42-81-420-022

(5) Tighten the cover [28] to 240 - 360 pound-inches (27-40 newton-meters) and install the lockwire.

I. Put the Airplane Back to its Usual Condition

SUBTASK 32-42-81-860-008

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	16	C01345	LANDING GEAR AUTOBRAKE BITE CONT 2
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

SUBTASK 32-42-81-710-004

(2) Do this task: Autobrake Pressure Control Module Operational Test, TASK 32-42-00-400-801.

——————— END OF TASK ———————

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PARKING BRAKE SYSTEM - ADJUSTMENT/TEST

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) An adjustment of the parking brake system

(2) An operational test of the parking brake system

(3) A parking brake hold check.

TASK 32-44-00-820-801

2. Parking Brake System Adjustment

(Figure 501, Figure 502)

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
211	Flight Compartment - Left

D. Access Panels

Number	Name/Location
112A	Forward Access Door

E. Prepare for the Adjustment

SUBTASK 32-44-00-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-44-00-860-001

(2) Open this access panel:

Number	Name/Location
112A	Forward Access Door

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to get access to the parking brake system.

SUBTASK 32-44-00-860-002

(3) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-44-00-480-002

(4) Make sure the tires have chocks installed around them.

SUBTASK 32-44-00-860-003

(5) Release the parking brake.

F. Parking Brake System - Adjustment

SUBTASK 32-44-00-820-005

(1) Adjust the pawls [11] of the parking brake:

(a) Extend the pawls [11] one turn at a time until the parking brake can not be set.

(b) Retract the pawls [11] 1 to 2 turns to set adjustment.

(c) Make sure that the parking brake can be set from the captain's and first officer's seat.

(d) If it is necessary, adjust the pawls [11] (retract one turn at a time) until the parking brake can be set from the captain's or first officer's seat.

NOTE: The more the pawls are retracted, the larger the parking brake bleed-down rate will be.

(e) Lock the adjustment.

SUBTASK 32-44-00-820-002

(2) Adjust the pawl stop:

(a) Turn the bellcranks [13] until the bushings [12] are at their closest point to the aft edge of the pawls [11].

(b) Adjust the pawl stop until the clearance between the aft edge of the pawls [11] and the bushings [12] is 0.16 - 0.20 inch (4.1 - 5.1 mm):

1) Remove the nut [7] from the pawl stop assembly.

2) Remove the pawl stop assembly (the bumper [4], screw [5], and washers [6]) from the pawl stop bracket [8].

3) Add or remove washers [6] until you get the correct clearance.

4) Install the pawl stop assembly (the bumper [4], screw [5], and washers [6]) on the pawl stop bracket [8].

5) Install the nut [7] on the pawl stop assembly.

(c) Release the bellcranks [13].

SUBTASK 32-44-00-820-003

(3) Adjust the parking brake lever [42] (Figure 501, Figure 502):

(a) Install a rig pin LGB2, from rig pin kit, SPL-1585, through the jackshaft [15] and switch support bracket.

(b) Install rig pin LGB1, from rig pin kit, SPL-1585, through the left beam structure and brake control bell cranks [3].

(c) Remove the cotter pin [47], the washer [46], and the pin [45] from the parking brake lever assembly [42] and the rod [44].

(d) Loosen the jamnut [48] on the bottom of the rod [44].

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(e) Adjust the length of the rod [44] until the stop surface of the parking brake lever [42] is against the top of the control stand when the pin [45] is installed.

NOTE: If the parking brake rod is adjusted with this method, the rod itself must be turned in full 360 degree turns. The rod assembly is orientation sensitive.

(f) Tighten the jamnut [48] on the rod [44].

(g) Install the pin [45], the washer [46], and the cotter pin [47] to hold the parking brake lever [42] to the rod [44].

(h) Make sure the parking brake lever [42] moves smoothly.

(i) Remove the rig pin, from rig pin kit, SPL-1585, from the jackshaft [15] and the switch support bracket [18].

(j) Remove the rig pin LGB1, from rig pin kit, SPL-1585, from the left beam structure and the brake control bellcranks [3].

SUBTASK 32-44-00-820-004

(4) Adjust the parking brake latch switch [17] (Figure 501, Figure 502):

(a) Make sure the rudder pedals are released.

(b) Pull the parking brake lever [42] on the control stand, until it stops, and hold it in this position.

(c) Make sure the switch actuator [16] lightly contacts the rod end.

(d) Make sure that the parking brake light [43], next to the parking brake lever [42], does not turn on.

(e) If the switch [17] does not operate in the correct range, do these steps:

1) Loosen the screws [19] and the nuts [20] that hold the switch actuator [16] and the switch [17] to the airplane.

2) Turn the switch actuator [16] so that the switch actuator lightly touches the rod end and the parking brake light [43], next to the parking brake lever [42], does not turn on.

(f) Push the two rudder pedals and set the parking brake.

(g) Make sure the parking brake light [43] next to the parking brake lever [42] turns on.

NOTE: The parking brake light should turn on between 35 and 45 degrees of parking brake lever travel from the released position.

(h) Release the parking brake.

(i) Make sure the parking brake light [43] goes out.

(j) Make sure that the parking brake lever [42] returns to its usual position without assistance.

(k) Set the parking brake.

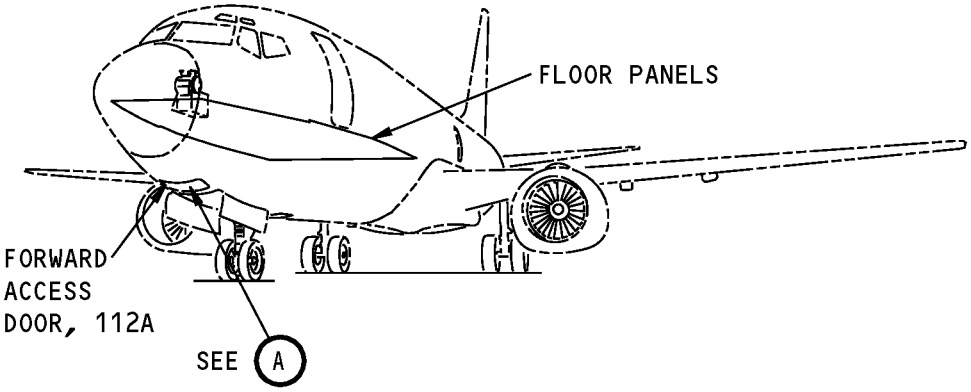
SUBTASK 32-44-00-860-004

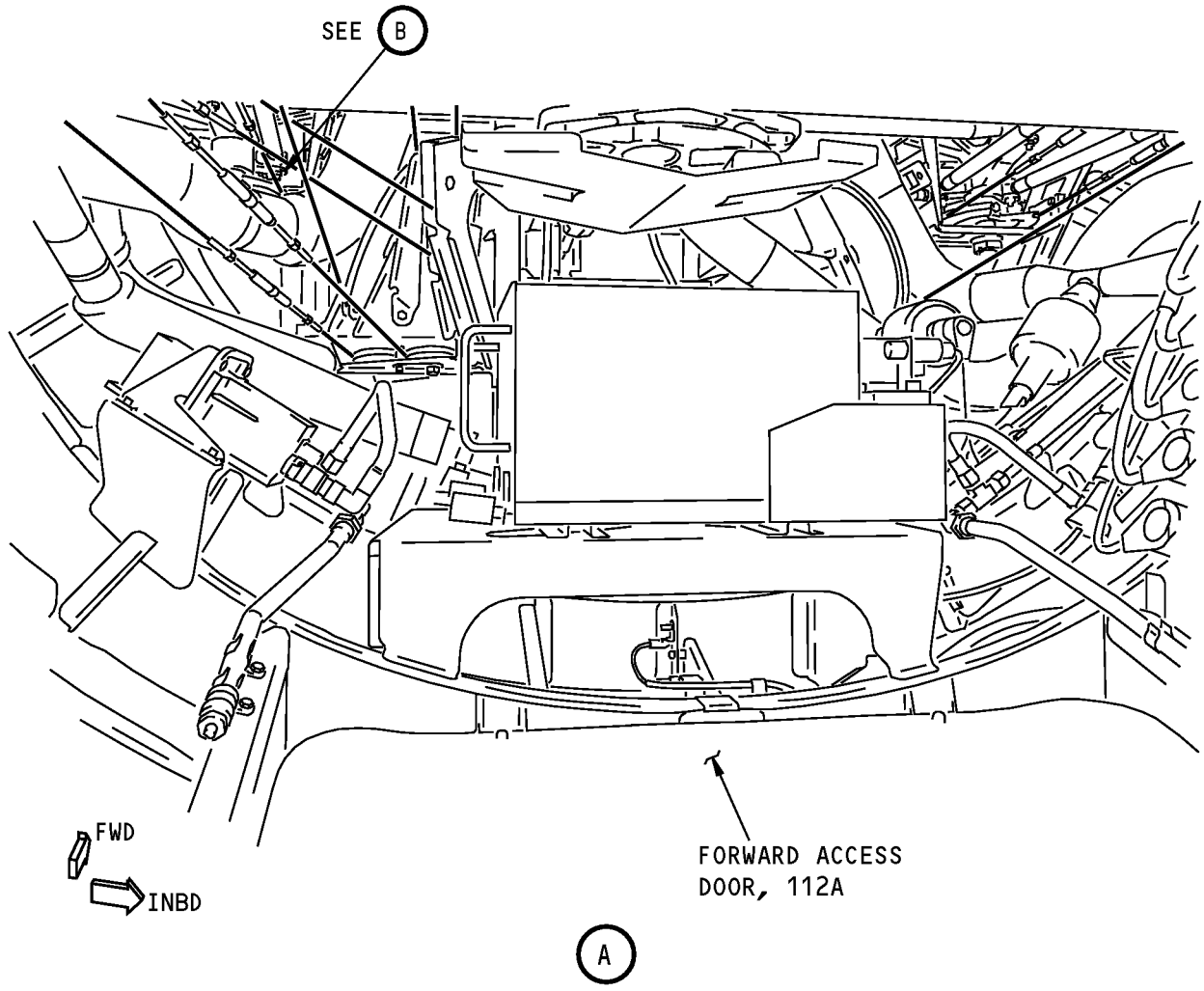
(5) Close this access panel:

Number	Name/Location
112A	Forward Access Door

END OF TASK

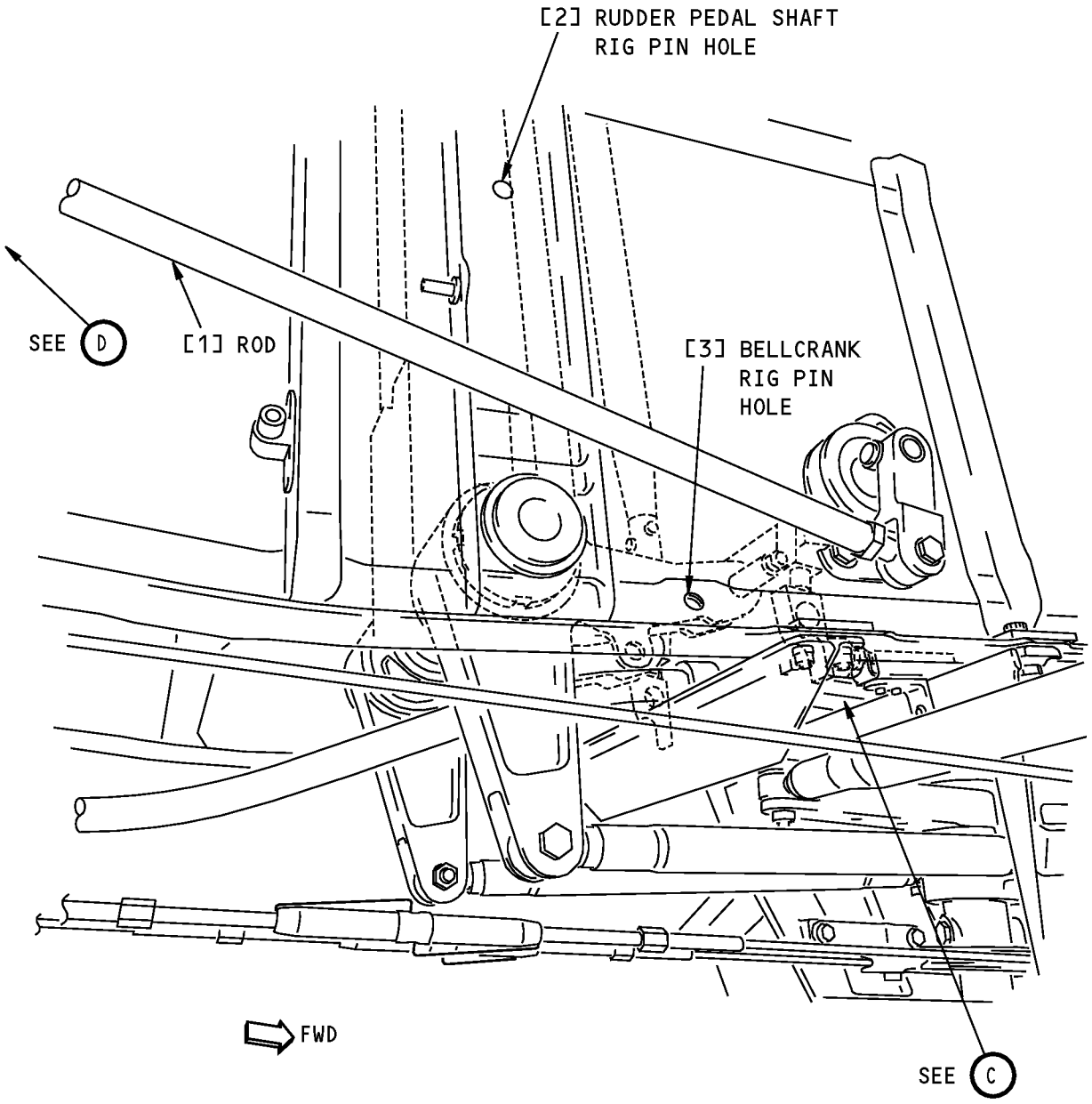
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Parking Brake System Adjustment
Figure 501 (Sheet 1 of 6)/32-44-00-990-801

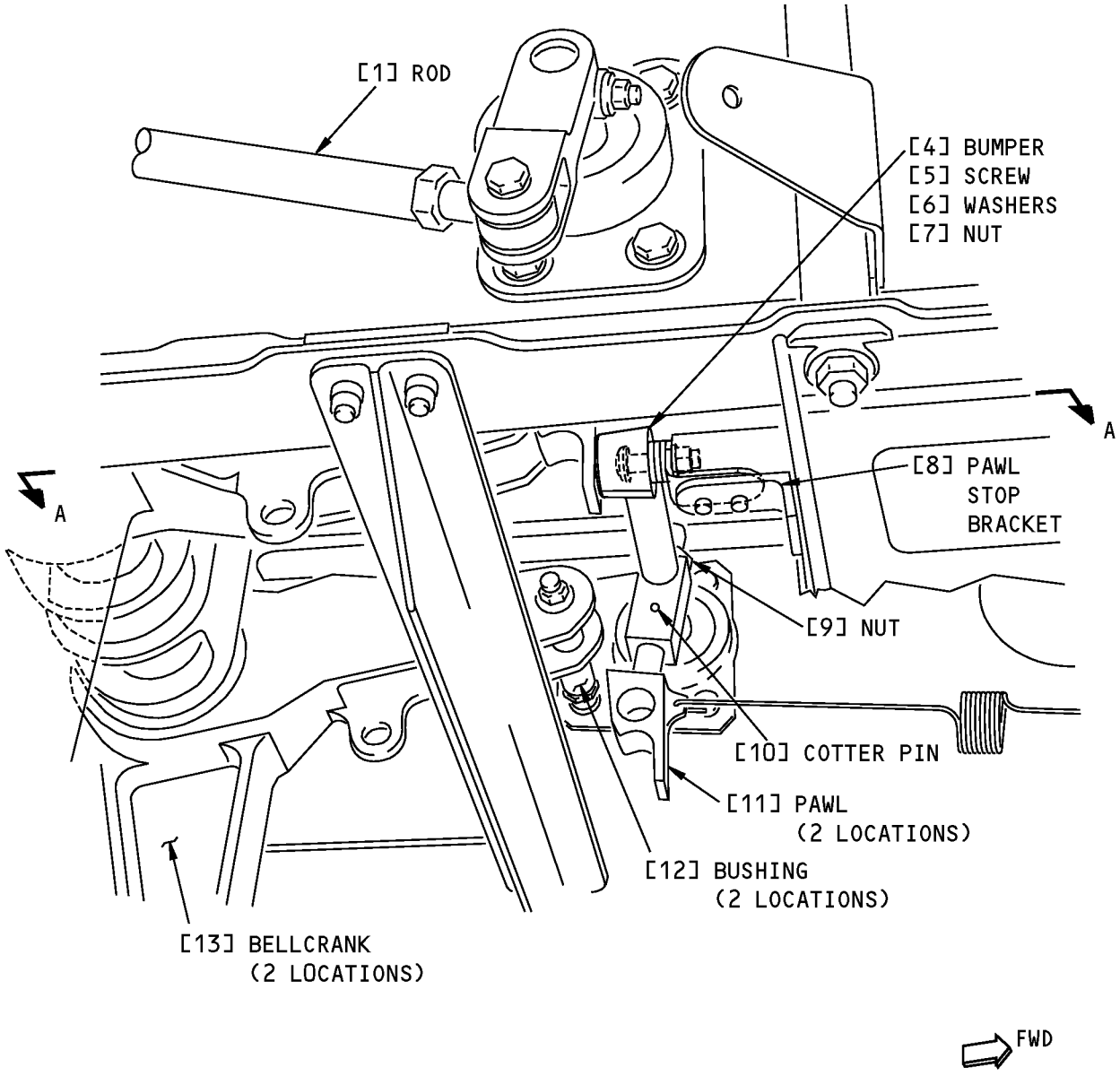
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RIG PIN LOCATION
B

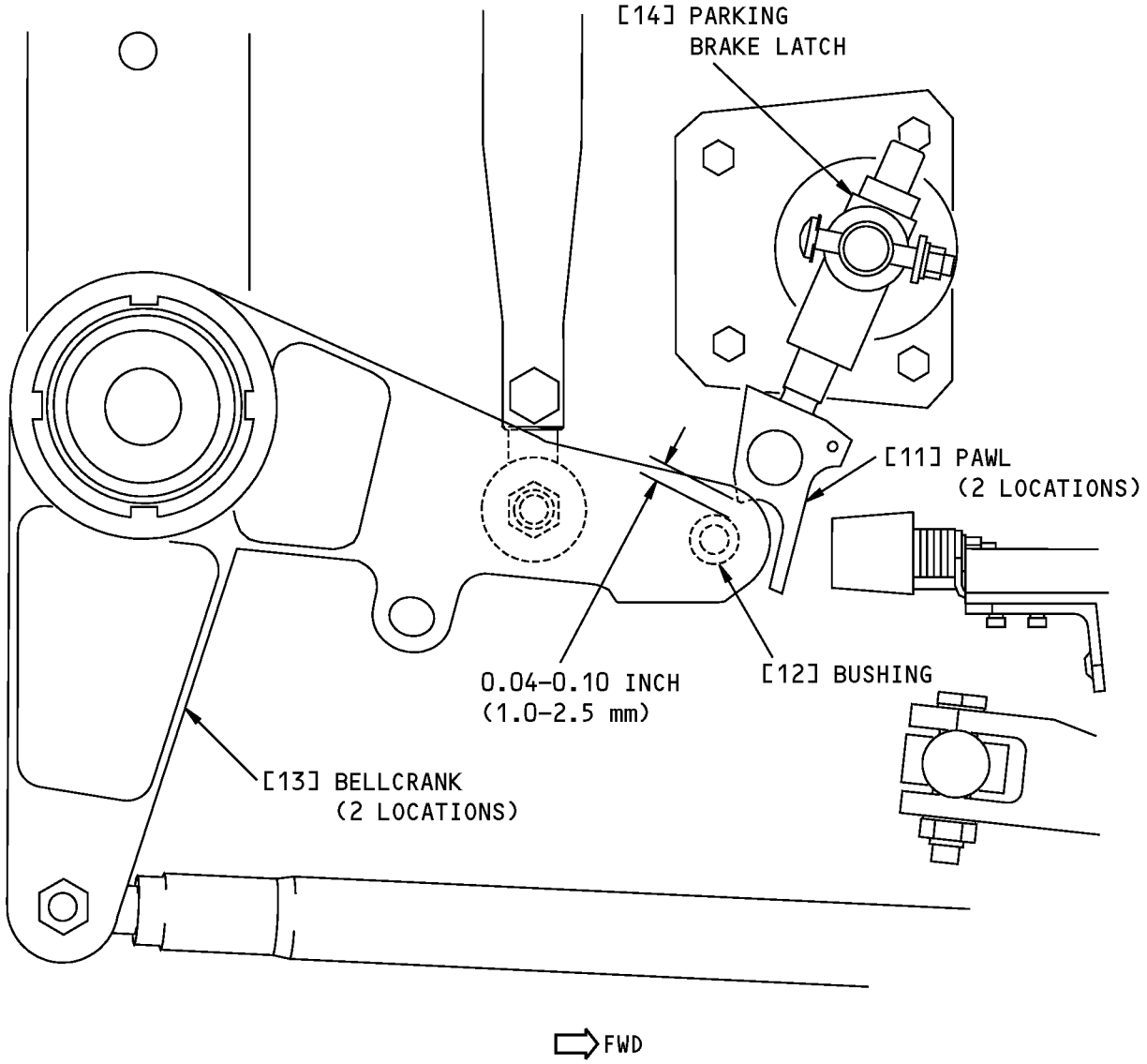
Parking Brake System Adjustment
Figure 501 (Sheet 2 of 6)/32-44-00-990-801

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Parking Brake System Adjustment
Figure 501 (Sheet 3 of 6)/32-44-00-990-801

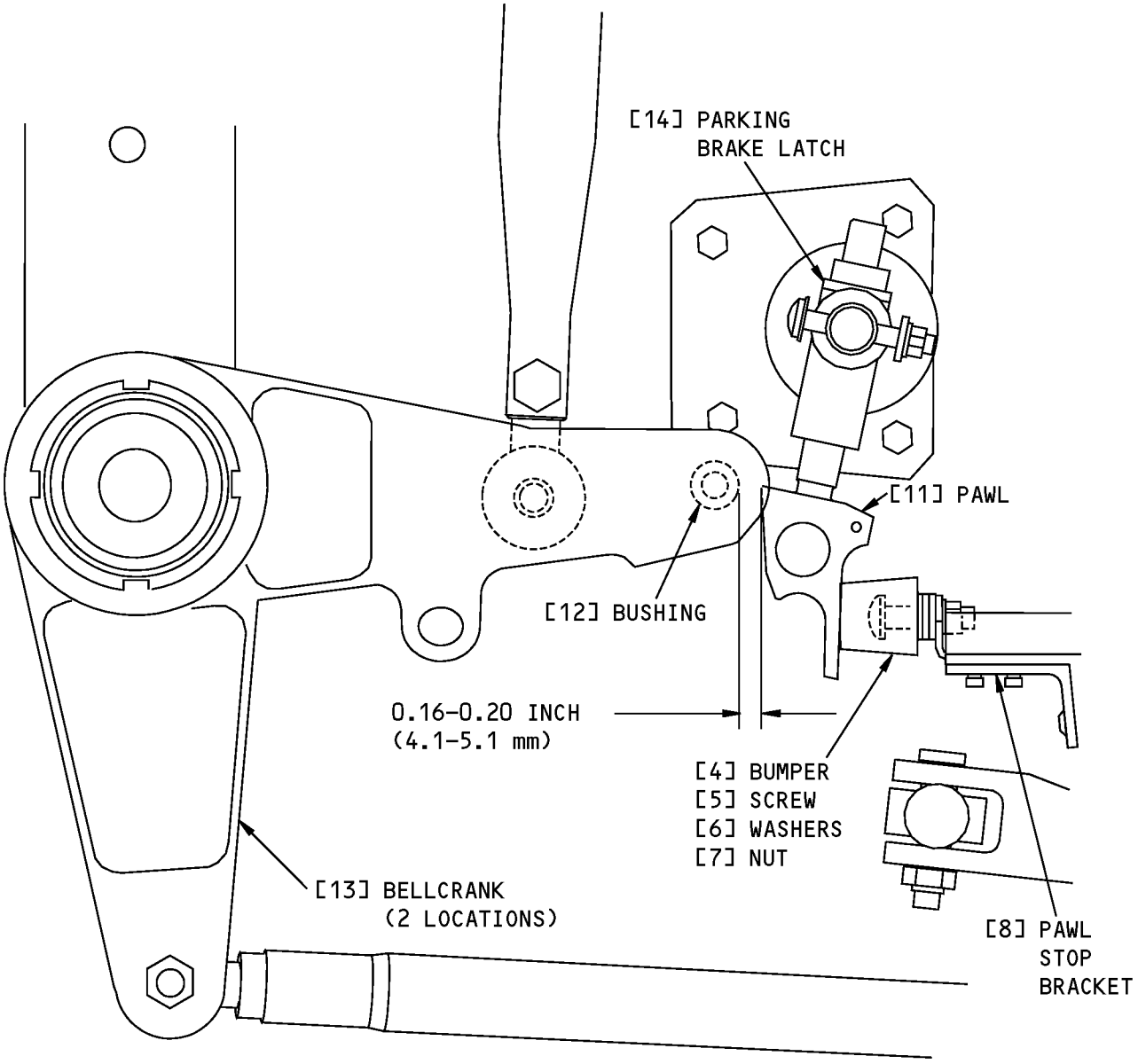
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PAWL ADJUSTMENT
(PEDALS AGAINST THE STOP POSITION)
A-A

Parking Brake System Adjustment
Figure 501 (Sheet 4 of 6)/32-44-00-990-801

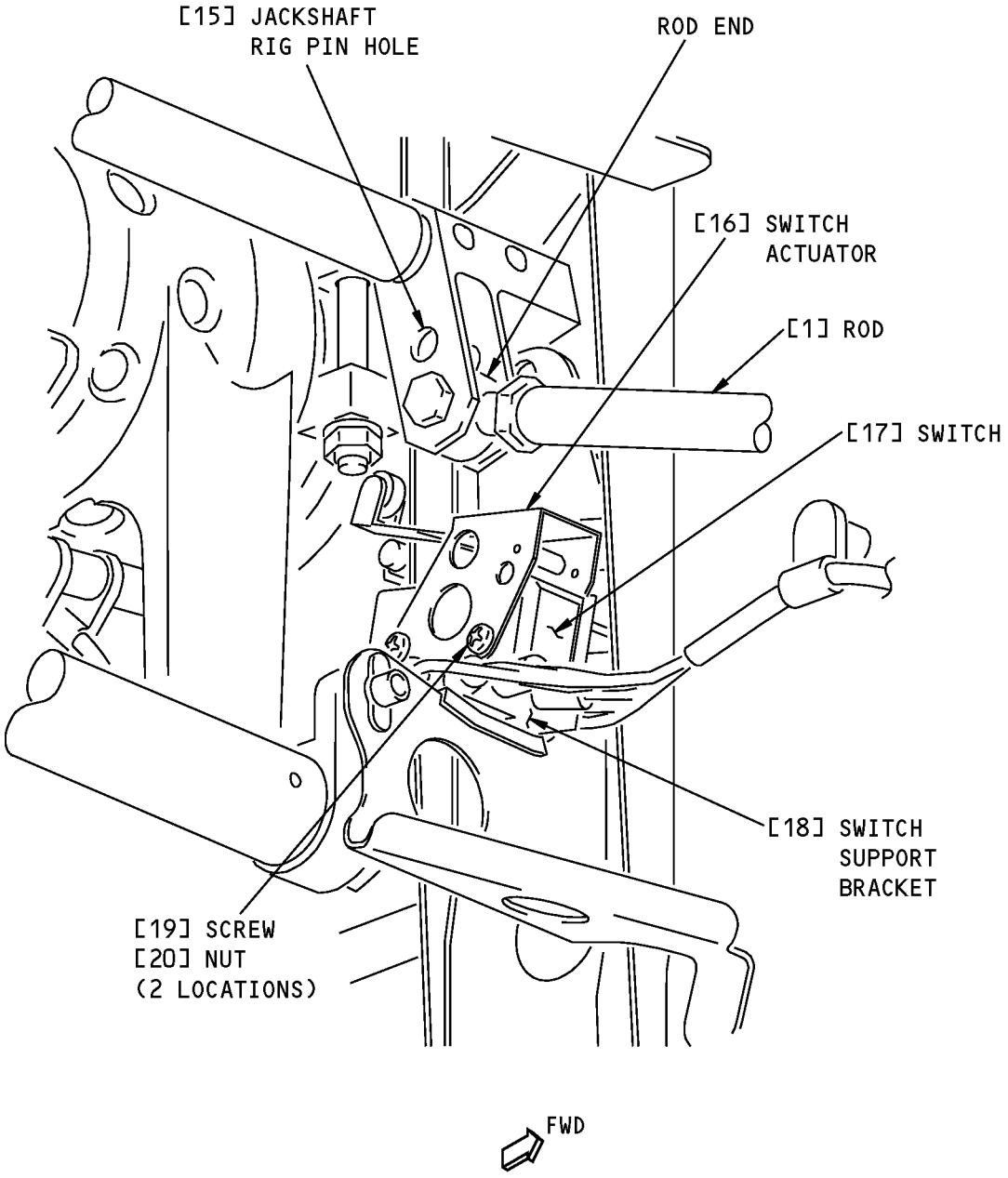
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PAWL ADJUSTMENT
(BELLCRANK TURNED SLIGHTLY)
A-A

Parking Brake System Adjustment
Figure 501 (Sheet 5 of 6)/32-44-00-990-801

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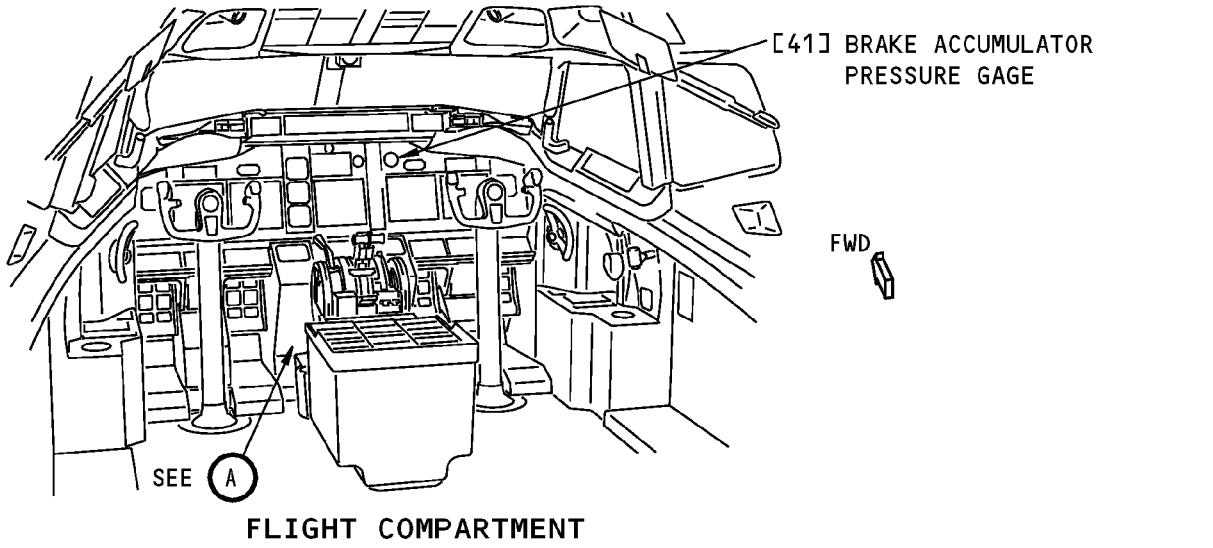


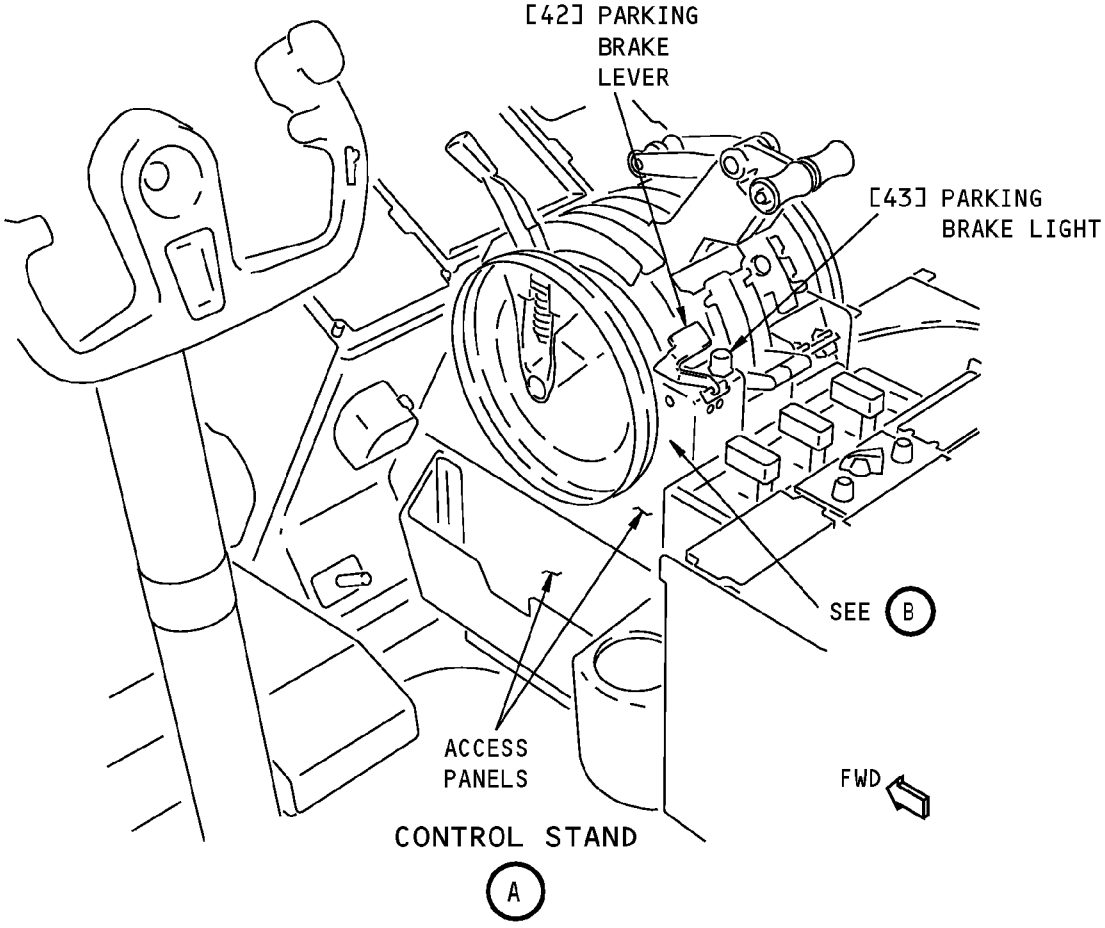
SWITCH ADJUSTMENT

D

Parking Brake System Adjustment
Figure 501 (Sheet 6 of 6)/32-44-00-990-801

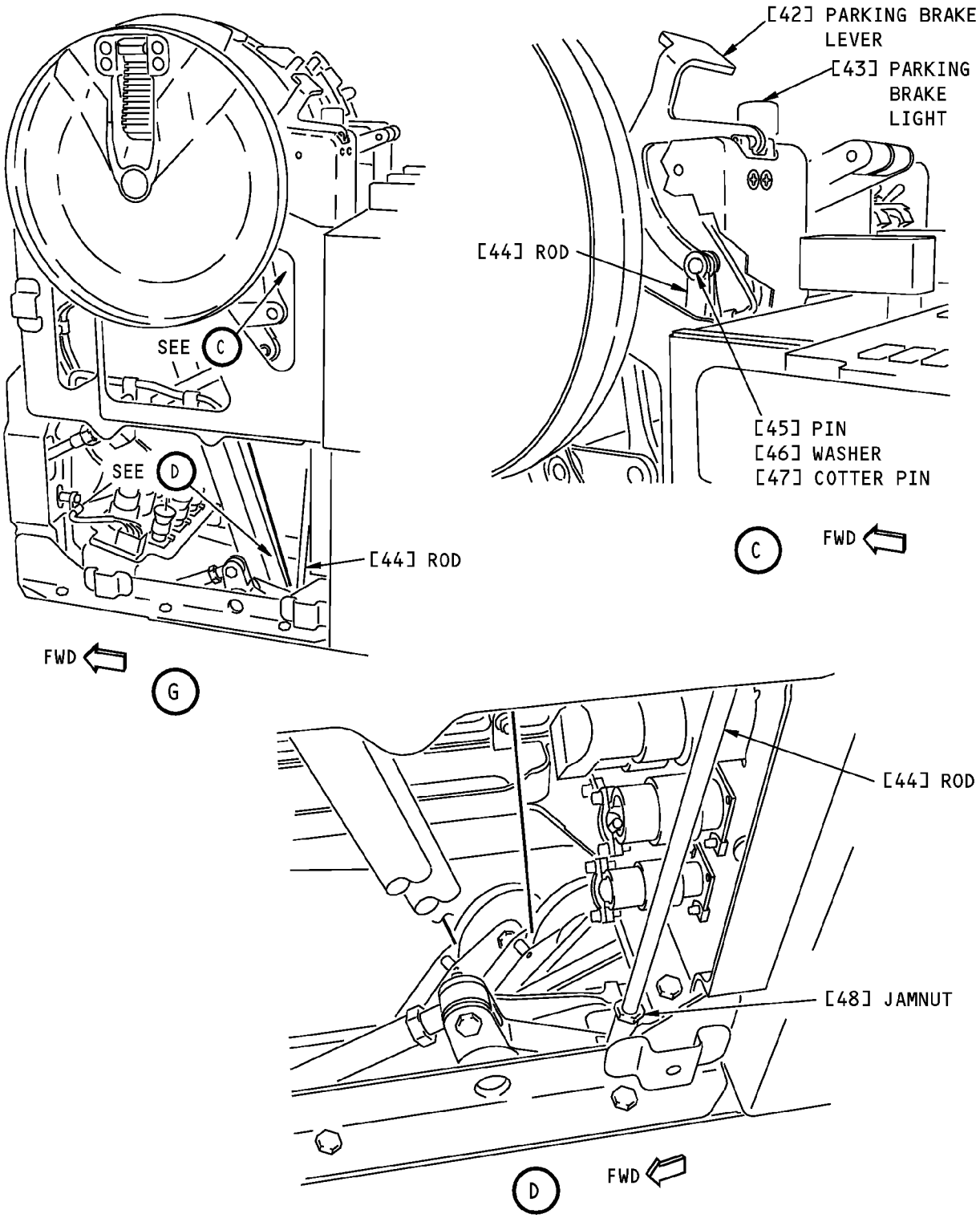
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Parking Brake Lever Adjustment
Figure 502 (Sheet 1 of 2)/32-44-00-990-802

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Parking Brake Lever Adjustment
Figure 502 (Sheet 2 of 2)/32-44-00-990-802

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TASK 32-44-00-710-801

3. Parking Brake System - Operational Test

(Figure 501, Figure 502)

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
211	Flight Compartment - Left
212	Flight Compartment - Right
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Test

SUBTASK 32-44-00-480-003

(1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-44-00-480-004

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-44-00-860-005

(3) For the system A and system B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-44-00-480-005

(4) Make sure the tires have chocks installed around them.

SUBTASK 32-44-00-860-006

(5) Release the parking brake.

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SUBTASK 32-44-00-840-001

(6) Fully push the brake pedals 12 times to remove hydraulic pressure from the brake accumulator.

NOTE: You can look at the brake pistons to see that the brakes no longer actuate when the brake pedals are pushed.

SUBTASK 32-44-00-480-006

(7) Install rig pins R1 and R2 through the captain's and first officer's rudder pedal shaft rig pin holes [2] and into the structure. The rigging pins are from rig pin kit, SPL-1585.

NOTE: The placard on the inside of the box for the rigging pin kit identifies the different rigging pins.

E. Procedure

SUBTASK 32-44-00-790-001

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) For the B hydraulic system, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-44-00-720-001

(2) Make sure that the pressure shown on the HYD BRAKE PRESS gage is approximately the same as the B hydraulic system pressure.

NOTE: The HYD BRAKE PRESS gage is in the flight compartment on the main instrument panel for the first officer.

SUBTASK 32-44-00-710-001

(3) Do these steps for the captain's brake pedals:

(a) Push the two brake pedals fully to their stops and set the parking brake.

(b) Release the brake pedals.

(c) Make sure the parking brake engages.

(d) Make sure the parking brake light on the control stand is on.

(e) Make sure the parking brake light on the external power panel is on.

(f) Look at the pistons on each brake to see that the brakes are engaged.

(g) Release the parking brake.

(h) Make sure the parking brake light on the control stand is off.

(i) Make sure the parking brake light on the external power panel is off.

(j) Look at the pistons on each brake to see that the brakes are not engaged.

(k) For the B hydraulic system, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805

(l) Fully push the captain's brake pedals twelve times to remove the pressure from the brake accumulator.

(m) Push the two brake pedals fully to their stops and set the parking brake.

(n) Release the brake pedals.

(o) Make sure the parking brake engages.

(p) Make sure the parking brake light on the control stand is on.

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(q) Make sure the parking brake light on the external power panel is on.

(r) Look at the pistons on each brake to see that the brakes are not engaged.

(s) Release the parking brake.

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(t) For the B hydraulic system, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

(u) Push the left brake pedal fully to the stop.

(v) Pull the parking brake lever on the control stand.

(w) Make sure the parking brake will not engage.

(x) Make sure the parking brake light on the control stand is off.

(y) Make sure the parking brake light on the external power panel is off.

(z) Look at the pistons on each brake to see that the brakes on the left gear are engaged and the brakes on the right gear are not engaged.

(aa) Release the left brake pedal.

(ab) Push the right brake pedal fully to the stop.

(ac) Pull the parking brake lever on the control stand.

(ad) Make sure the parking brake will not engage.

(ae) Make sure the parking brake light on the control stand is off.

(af) Make sure the parking brake light on the external power panel is off.

(ag) Look at the pistons on each brake to see that the brakes on the right gear are engaged and the brakes on the left gear are not engaged.

(ah) Release the right brake pedal.

SUBTASK 32-44-00-710-002

(4) Do these steps for the first officer's brake pedals:

(a) Push the two brake pedals fully to their stops and set the parking brake.

(b) Release the brake pedals.

(c) Make sure the parking brake engages.

(d) Release the parking brake.

(e) Push the left brake pedal fully to the stop.

(f) Pull the parking brake lever on the control stand.

(g) Make sure the parking brake will not engage.

(h) Release the left brake pedal.

(i) Push the right brake pedal fully to the stop.

(j) Pull the parking brake lever on the control stand.

(k) Make sure the parking brake will not engage.

(l) Release the right brake pedal.

SUBTASK 32-44-00-080-001

(5) Remove rig pins R1 and R2 from the rudder pedal shaft [2].

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SUBTASK 32-44-00-720-002

(6) Do this task: Parking Brake Hold Check, TASK 32-44-00-790-801.

END OF TASK

TASK 32-44-00-790-801

4. Parking Brake Hold Check

A. General

(1) This procedure is a scheduled maintenance task.

(2) This procedure includes:

(a) Parking brake system bleed down test - Parking brake set

(b) Parking brake system bleed down test - Parking brake released

B. References

Reference	Title
24-22-00-860-812	Remove Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Procedure

SUBTASK 32-44-00-480-007

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-44-00-480-008

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-44-00-860-007

(3) Release the parking brake.

SUBTASK 32-44-00-860-008

(4) For the A and B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-44-00-870-001

(5) Push the Captain's or the First Officer's left and right toe brake pedals to the stops several times until the brakes no longer actuate.

NOTE: This will release the hydraulic pressure at the accumulator.

(a) You can look at the pistons on each brake to see that the brakes no longer actuate when the brake pedals are pushed.

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SUBTASK 32-44-00-860-009

(6) Make sure the brake accumulator Nitrogen/Dry Air charge is correct.

NOTE: You can find the correct charge pressure from the accumulator placard located on the rear bulkhead in the right main gear wheel well.

SUBTASK 32-44-00-790-002

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(7) To pressurize B hydraulic system to 3000 +/- 150 psig, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-44-00-860-010

(8) Set the parking brake.

NOTE: This step keeps the brake system pressurized with the accumulator.

SUBTASK 32-44-00-720-003

(9) Wait at least 10 minutes for the accumulator temperature to stabilize.

E. Parking Brake Hold Check - Parking Brake Set

SUBTASK 32-44-00-720-004

(1) Write down the pressure shown on the PRESS gage for the brake accumulator.

NOTE: The PRESS gage is located on the rear bulkhead in the right main gear wheel well.

SUBTASK 32-44-00-860-011

(2) For the B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

NOTE: This will leave the accumulator charged and pressurized.

(a) Record the initial time when the B hydraulic system pressure is removed.

SUBTASK 32-44-00-710-003

(3) Do a check of the brake pressure at the end of any of the time periods that follow. If the necessary pressure drop for one time period is not within the limits, you can use the next time period.

NOTE: It is permitted to read the brake pressures from the brake pressure gage in the cockpit, or the brake accumulator gage in the wheel well.

(a) After 10 minutes, the pressure drop shoud be less than 100 psi (690 kPa).

(b) After 30 minutes, the pressure drop should be less than 300 psi (2000 kPa).

(c) After 1 hour, the pressure drop should be less than 500 psi (3400 kPa).

(d) After 8 hours, the pressure should be greater than 1200 psi (8274 kPa) minimum.

SUBTASK 32-44-00-780-001

(4) If the brake accumulator pressure drops faster than permitted, check for leaks in the accumulator system.

SUBTASK 32-44-00-780-002

(5) The trouble shooting of the brake system can be delayed until the next convenient maintenance period if the conditions that follow are met:

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(a) With the parking brake set, the brake accumulator pressure drop must be less than 800 psi (5500 kPa) in the first 30 minutes.

(b) The system passes the Parking Brake Hold Check - Parking Brake Released.

SUBTASK 32-44-00-860-012

(6) Release the parking brake.

SUBTASK 32-44-00-720-005

(7) Push the Captain's or First Officer's left and right toe brake pedals to the stops 7 times while observing the brake pistons on all of the brakes.

NOTE: Wait approximately 3 seconds each time you apply the brakes.

(a) Make sure the brake pistons compress and release each of the 7 times the pedals are pushed.

F. Parking Brake Hold Check - Parking Brake Released

SUBTASK 32-44-00-790-003

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Pressurize B hydraulic system to 3000 +/- 150 psig, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-44-00-720-006

(2) Wait at least 10 minutes for the accumulator temperature to stabilize.

SUBTASK 32-44-00-720-007

(3) Write down the pressure shown on the PRESS gage for the brake accumulator.

NOTE: The PRESS gage is located on the rear bulkhead in the right main gear wheel well.

SUBTASK 32-44-00-860-013

(4) For the B hydraulic systems, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

NOTE: This will leave the accumulator charged and pressurized.

(a) Record the initial time when the B hydraulic system pressure is removed.

SUBTASK 32-44-00-780-003

(5) Do a check of the brake pressure at 30 minutes after the test start. The pressure decrease of the brake accumulator should be less than 450 psi (3100 kPa).

SUBTASK 32-44-00-780-004

(6) If the brake accumulator pressure drops faster than permitted, check the accumulator system for leaks.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 32-44-00-790-004

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Pressurize B hydraulic system to 3000 +/- 150 psig, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

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SUBTASK 32-44-00-720-009

(2) Set the parking brake.

SUBTASK 32-44-00-860-014

(3) For the B hydraulic system, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-44-00-480-009

(4) Do this task: Remove Electrical Power, TASK 24-22-00-860-812.

——————— END OF TASK ———————

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PARKING BRAKE LINKAGE - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these nine tasks:

(1) A removal of the parking brake lever.

(2) An installation of the parking brake lever.

(3) A removal of the parking brake jackshaft mechanism.

(4) An installation of the parking brake jackshaft mechanism.

(5) A removal of the parking brake latch mechanism.

(6) An installation of the parking brake latch mechanism.

(7) A removal of the parking brake latch switch.

(8) An installation of the parking brake latch switch.

(9) A visual inspection of the parking brake mechanism.

TASK 32-44-11-000-801

2. Parking Brake Lever Removal

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
211	Flight Compartment - Left

C. Prepare for the Removal

SUBTASK 32-44-11-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-44-11-480-002

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-44-11-860-001

(3) Release the parking brake.

SUBTASK 32-44-11-860-002

(4) Open the access panels on the left side of the control stand to get access to the parking brake linkage.

D. Parking Brake Lever Removal

SUBTASK 32-44-11-020-001

(1) Remove the cotter pin [5], washer [4], and pin [3] which hold the parking brake lever [1] to the rod [6].

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SUBTASK 32-44-11-020-002

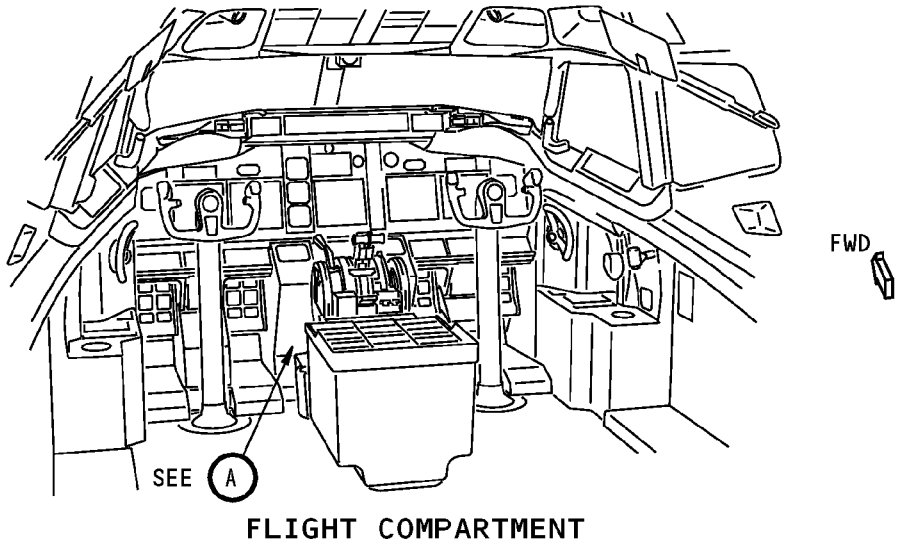
(2) Remove the screw [2] which hold the parking brake lever [1] to the control stand.

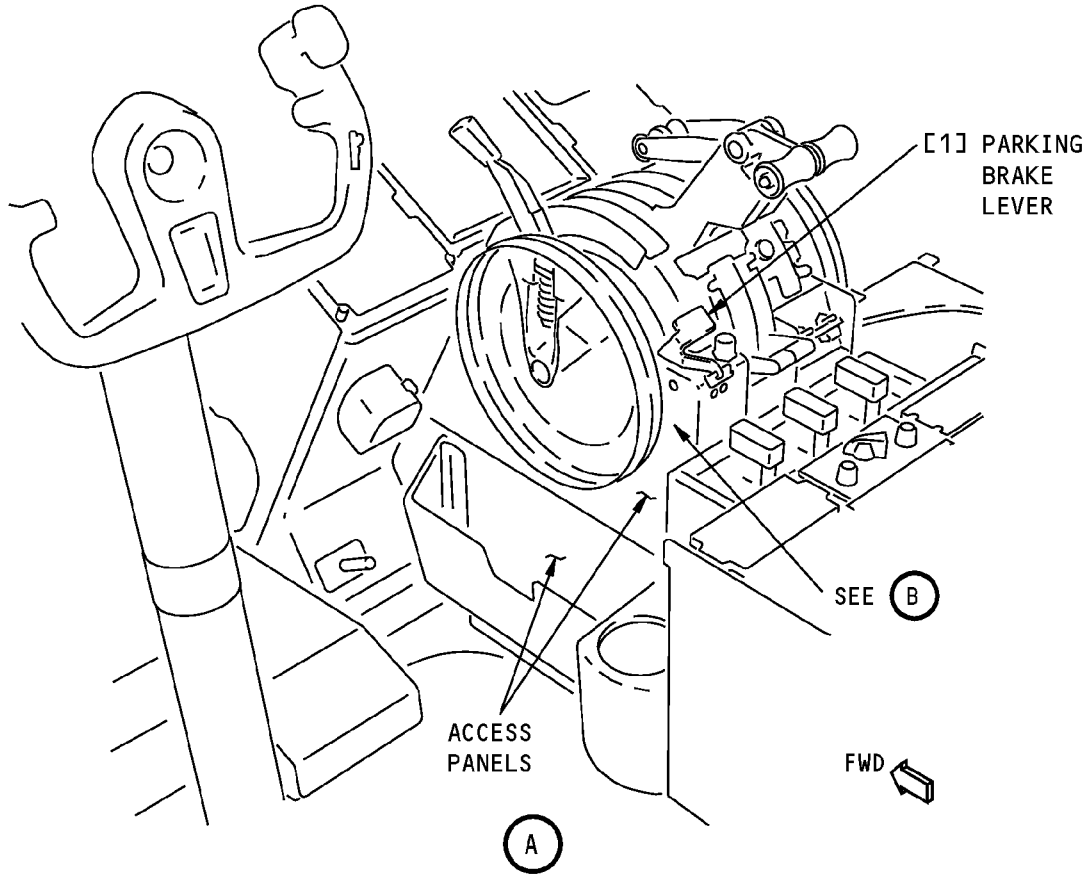
SUBTASK 32-44-11-020-003

(3) Remove the parking brake lever [1].

——————— END OF TASK ———————

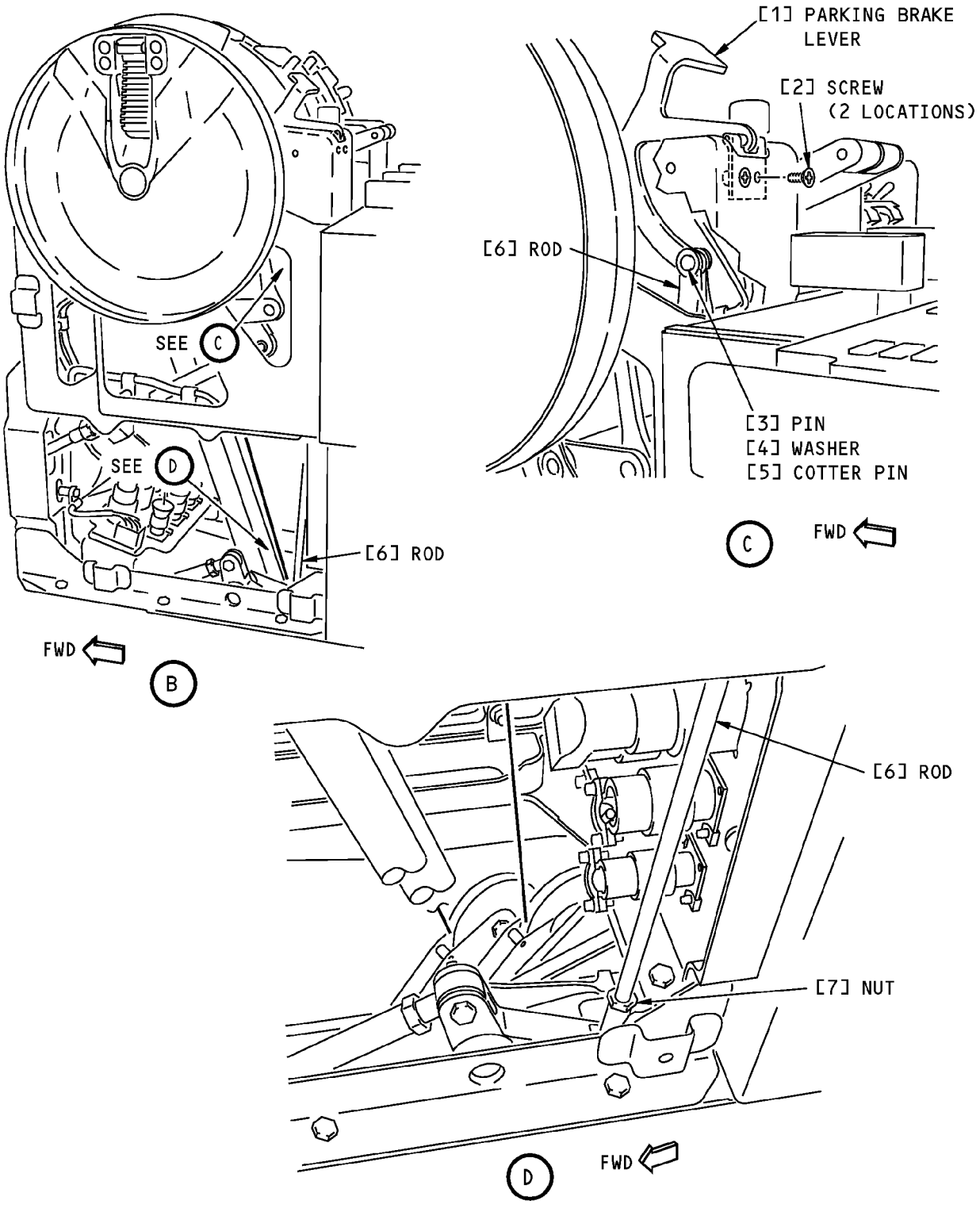
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Parking Brake Lever Installation
Figure 401 (Sheet 1 of 2)/32-44-11-990-801

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Parking Brake Lever Installation
Figure 401 (Sheet 2 of 2)/32-44-11-990-801

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TASK 32-44-11-400-801

3. Parking Brake Lever Installation

(Figure 401)

A. References

Reference	Title
32-44-00-820-801	Parking Brake System Adjustment (P/B 501)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
5	Cotter pin	32-44-11-01-050	HAP ALL

C. Location Zones

Zone	Area
211	Flight Compartment - Left

D. Parking Brake Lever Installation

SUBTASK 32-44-11-420-001

(1) Install the parking brake lever [1] on the control stand.

SUBTASK 32-44-11-420-002

(2) Install the screw [2] which hold the parking brake lever [1] to the control stand.

SUBTASK 32-44-11-020-004

(3) Install the pin [3] to hold the parking brake lever [1] to the rod [6].

SUBTASK 32-44-11-820-001

(4) If the parking brake lever [1] is not flush with the control stand, adjust the length of the rod [6], do this task: Parking Brake System Adjustment, TASK 32-44-00-820-801.

SUBTASK 32-44-11-020-005

(5) Install the washer [4] and new cotter pin [5] to hold the pin [3] in the rod [6].

SUBTASK 32-44-11-410-001

(6) Close the access panels on the left side of the control stand.

SUBTASK 32-44-11-860-017

(7) Set the parking brake.

(a) Make sure that the parking brake light comes on.

———————— END OF TASK ————————

TASK 32-44-11-000-802

4. Parking Brake Jackshaft Removal

(Figure 402)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
211	Flight Compartment - Left

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C. Access Panels

Number	Name/Location
112A	Forward Access Door

D. Prepare for the Removal

SUBTASK 32-44-11-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-44-11-480-004

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-44-11-860-003

(3) Release the parking brake.

SUBTASK 32-44-11-860-004

(4) Open this access panel:

Number	Name/Location
112A	Forward Access Door

to get access to the parking brake jackshaft mechanism.

E. Parking Brake Jackshaft Mechanism Removal

SUBTASK 32-44-11-020-006

(1) Remove the bolt [30], washer [31], and nut [32] to disconnect the rod [29] from the outboard jackshaft lever.

SUBTASK 32-44-11-020-007

(2) Remove the bolt [33], washer [4], and nut [35] to disconnect the rod [21] from the inboard jackshaft lever.

SUBTASK 32-44-11-020-008

(3) Do these steps to remove the jackshaft [28]:

(a) Remove the cotter pin [23], nut [24], and washer [25] from the inboard end of the stud [22] that goes through the jackshaft [28].

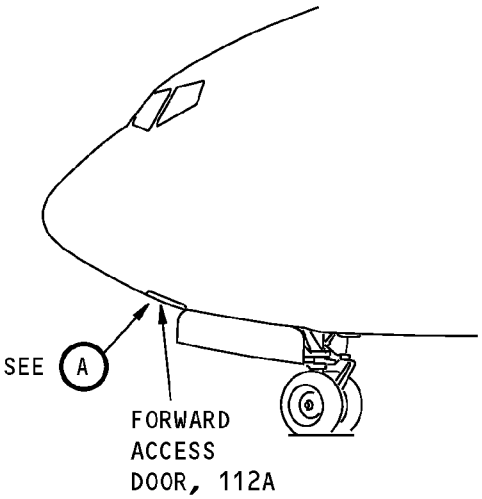
(b) Remove the stud [22] from the other side of the jackshaft [28].

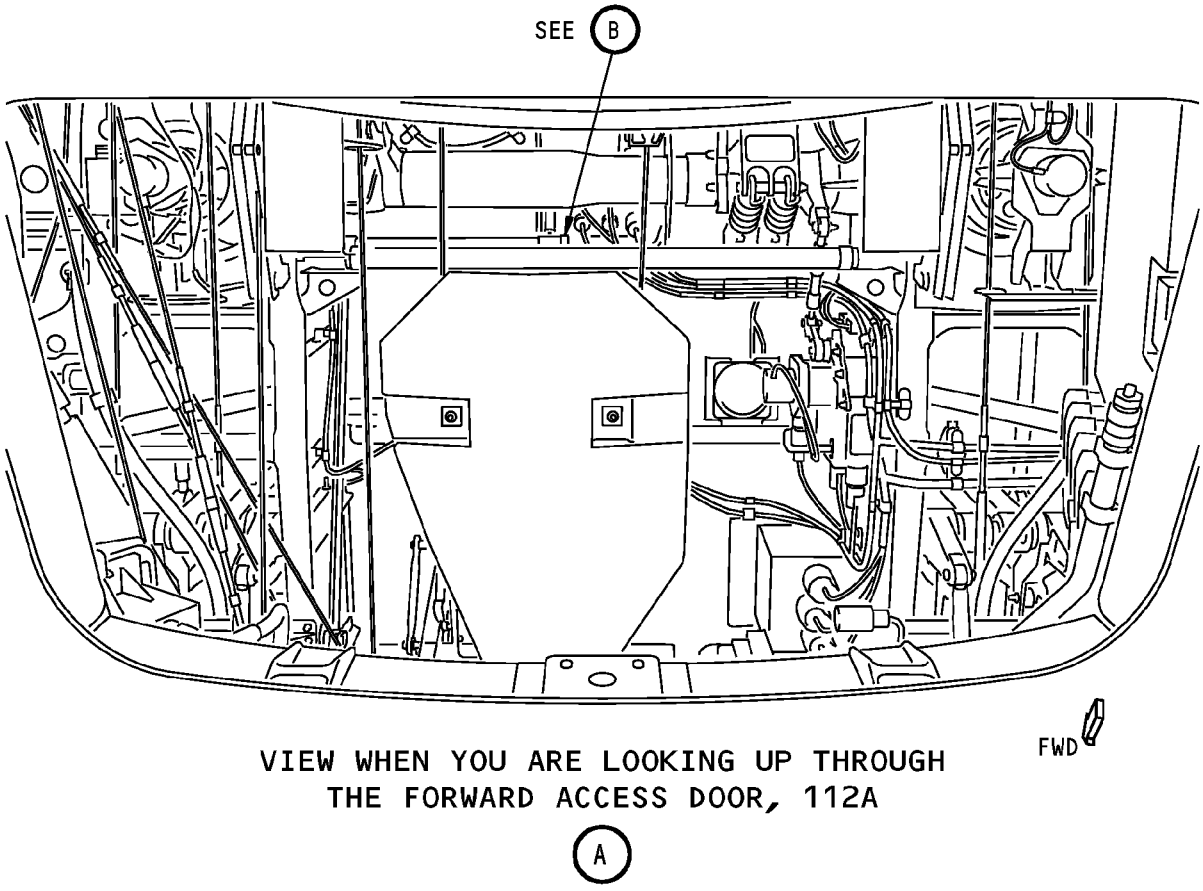
(c) Remove the jackshaft [28] from the airplane.

1) Remove the bearings [26] and the bushing [27] if it is necessary.

——————— END OF TASK ———————

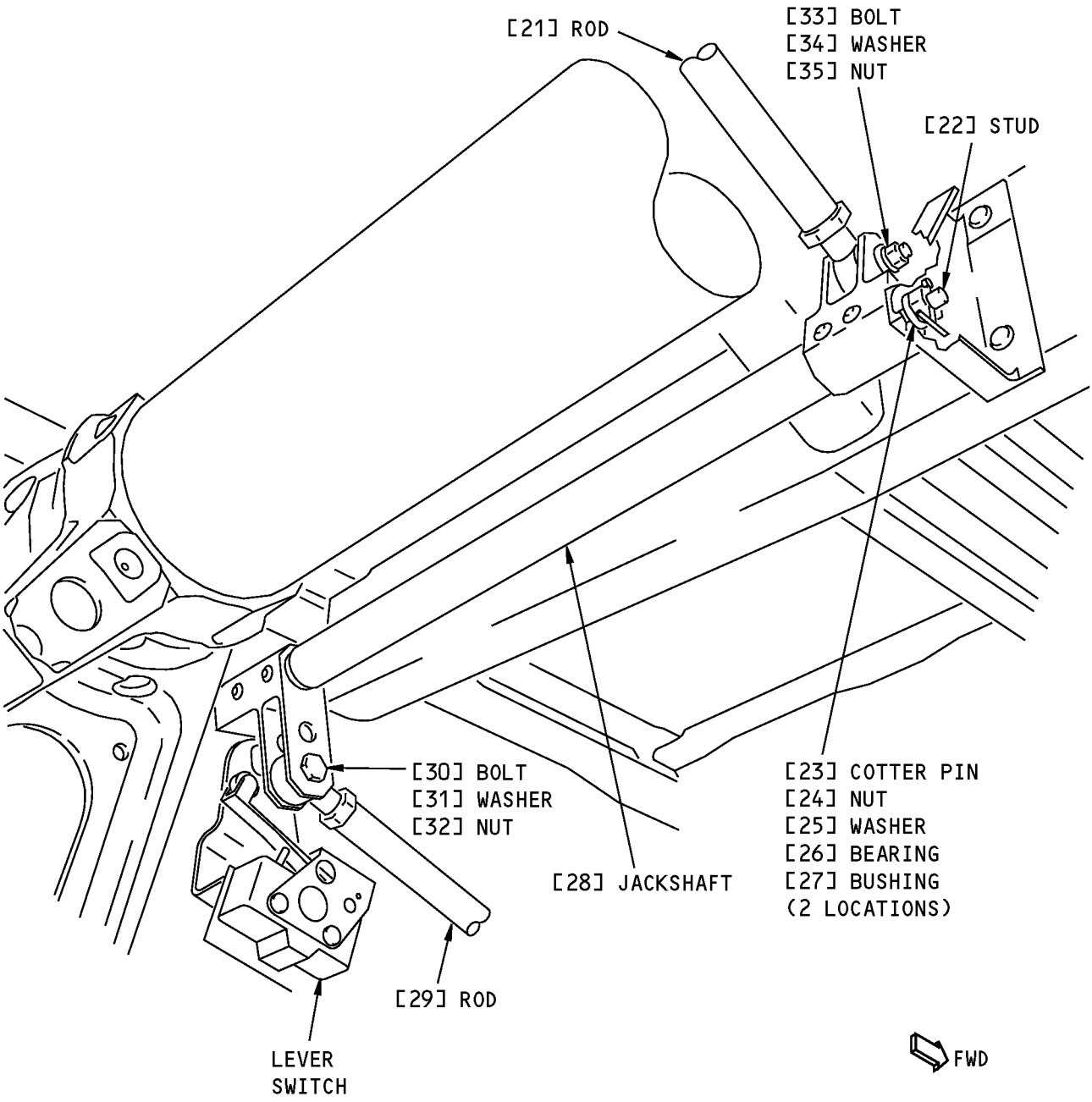
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Parking Brake Jackshaft Mechanism Installation
Figure 402 (Sheet 1 of 2)/32-44-11-990-802

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Parking Brake Jackshaft Mechanism Installation
Figure 402 (Sheet 2 of 2)/32-44-11-990-802

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TASK 32-44-11-400-802

5. Parking Brake Jackshaft Installation

(Figure 402)

A. References

Reference	Title
32-44-00-820-801	Parking Brake System Adjustment (P/B 501)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
23	Cotter pin	32-44-11-01-115	HAP ALL

C. Location Zones

Zone	Area
211	Flight Compartment - Left

D. Access Panels

Number	Name/Location
112A	Forward Access Door

E. Parking Brake Jackshaft Mechanism Installation

SUBTASK 32-44-11-420-003

(1) Install new bearings [26] and the bushing [27] if they were removed.

SUBTASK 32-44-11-420-004

(2) Do these steps to install the jackshaft [28]:

(a) Put the jackshaft [28] in its position in the airplane.

1) Make sure the jackshaft lever with the rig pin hole is above the lever switch.

(b) Install the stud [22] in the jackshaft [28].

(c) Install the washer [25], nut [24], and new cotter pin [23] on the end of the stud [22].

SUBTASK 32-44-11-420-005

(3) Install the bolt [30], washer [31], and nut [32] to connect the rod [29] to the outboard jackshaft lever.

SUBTASK 32-44-11-020-009

(4) Install the bolt [33], washer [34], and nut [35] to connect the rod [21] to the inboard jackshaft lever.

(a) Make sure the end of the bolt [33] has clearance with the adjacent bracket.

SUBTASK 32-44-11-820-002

(5) If the length of any of the connecting rods were changed, do this task: Parking Brake System Adjustment, TASK 32-44-00-820-801.

SUBTASK 32-44-11-860-005

(6) Close this access panel that you opened to get access to the parking brake jackshaft mechanism:

Number	Name/Location
112A	Forward Access Door

——————— END OF TASK ———————

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TASK 32-44-11-000-803

6. Parking Brake Latch Removal

(Figure 403)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
211	Flight Compartment - Left

C. Access Panels

Number	Name/Location
112A	Forward Access Door

D. Prepare for the Removal

SUBTASK 32-44-11-480-005

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-44-11-480-006

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-44-11-860-006

(3) Release the parking brake.

SUBTASK 32-44-11-860-007

(4) Open this access panel to get access to the parking brake latch:

Number	Name/Location
112A	Forward Access Door

E. Parking Brake Latch Removal

SUBTASK 32-44-11-020-010

(1) Do these steps to remove the arm [55]:

(a) Remove the nut [54], washer [52], washer [53], and bolt [51] which holds the rod [29] to the arm [55].

NOTE: This step is optional.

(b) Remove the nut [59], washer [58], washer [57], and bolt [56] which holds the arm [55] to the latch [63].

(c) Remove the arm [55] from the latch [63].

SUBTASK 32-44-11-020-011

(2) Disconnect the return spring [64] from the pawl.

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SUBTASK 32-44-11-020-012

(3) Do these steps to remove the inboard housing [66] from the latch [63]:

(a) Remove the nut [62], washer [61], and bolt [60] which hold the inboard housing [66] to the airplane.

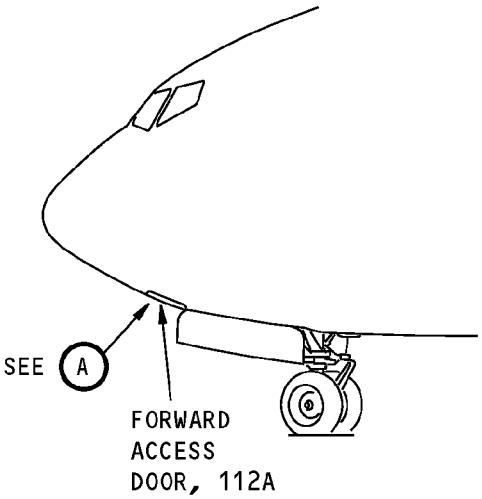
(b) Remove the inboard housing [66] with the bearing [67] from the latch [63].

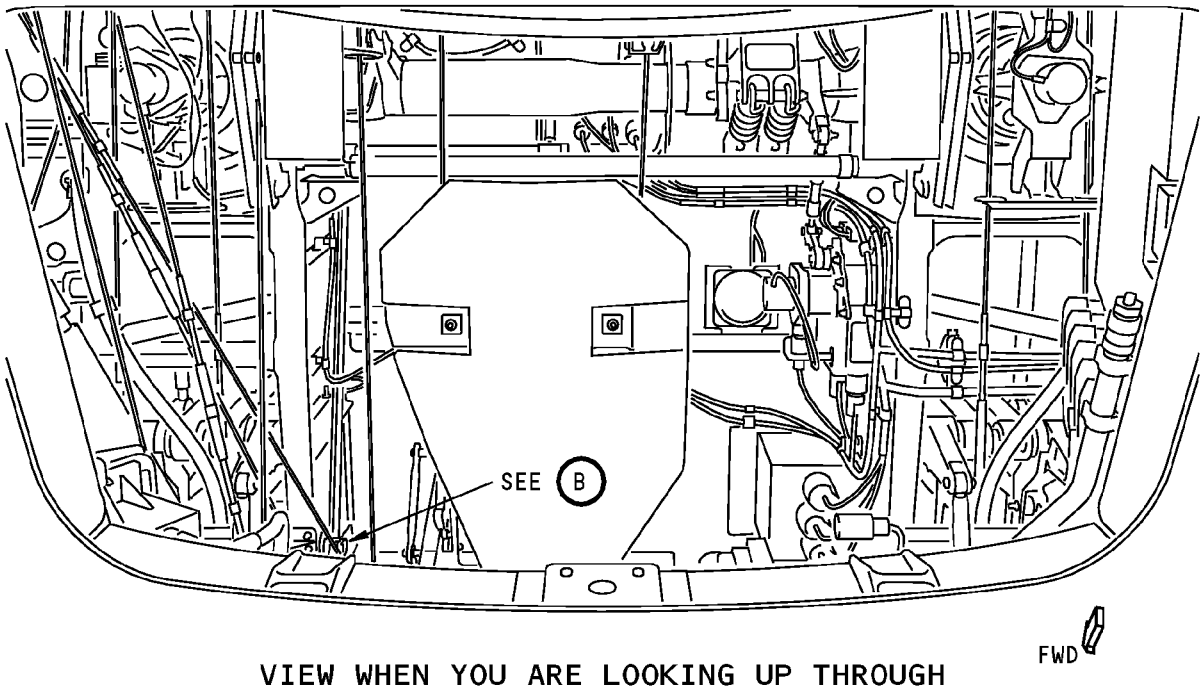
SUBTASK 32-44-11-020-013

(4) Remove the latch [63] from the outboard housing [65].

END OF TASK

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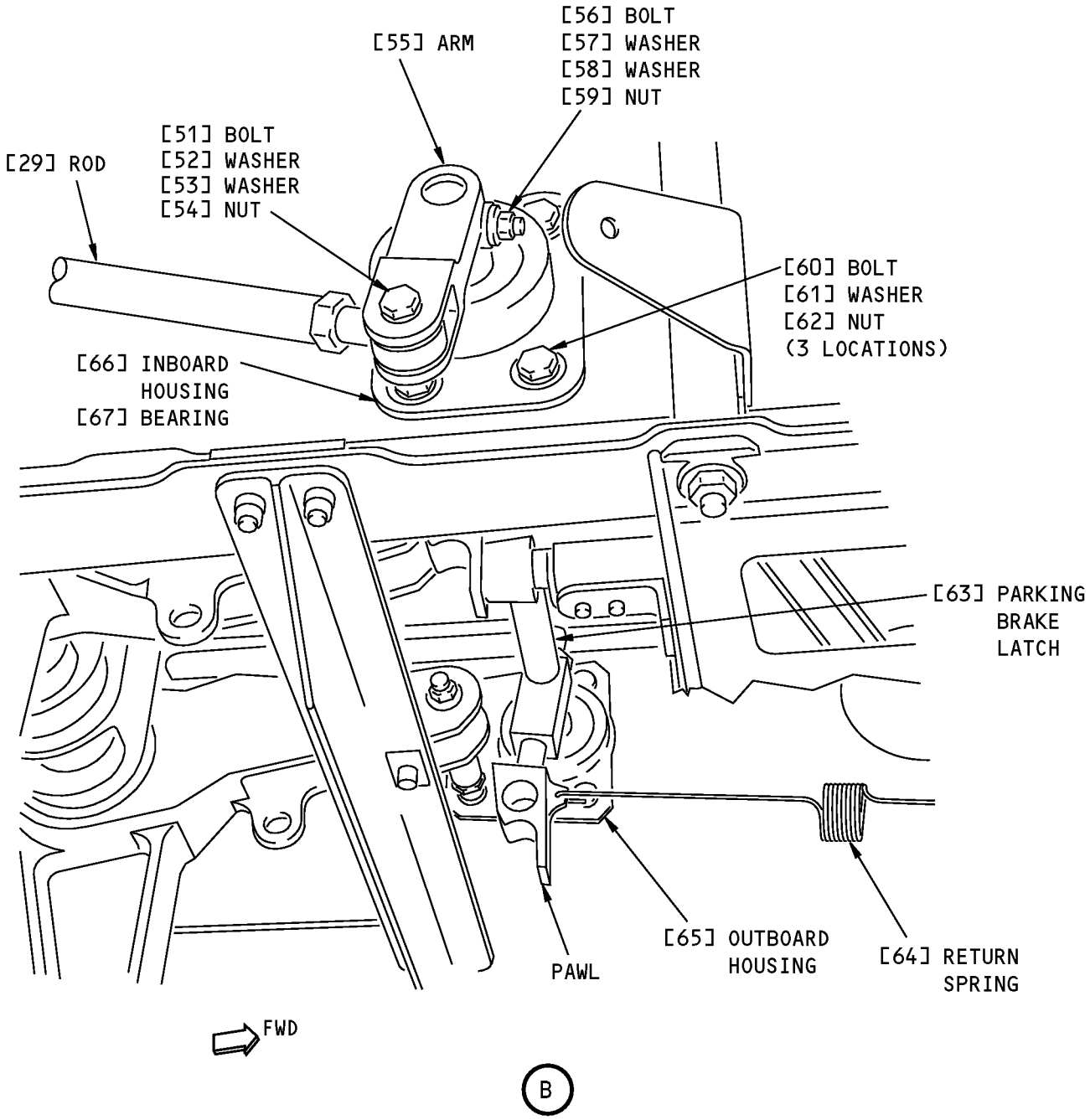


VIEW WHEN YOU ARE LOOKING UP THROUGH
THE FORWARD ACCESS DOOR, 112A

A

Parking Brake Latch Mechanism Installation
Figure 403 (Sheet 1 of 2)/32-44-11-990-803

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Parking Brake Latch Mechanism Installation
Figure 403 (Sheet 2 of 2)/32-44-11-990-803

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TASK 32-44-11-400-803

7. Parking Brake Latch Installation

(Figure 403)

A. References

Reference	Title
32-44-00-820-801	Parking Brake System Adjustment (P/B 501)

B. Location Zones

Zone	Area
211	Flight Compartment - Left

C. Access Panels

Number	Name/Location
112A	Forward Access Door

D. Parking Brake Latch Mechanism Installation

SUBTASK 32-44-11-420-006

(1) Install the latch [63] in the outboard housing [65].

SUBTASK 32-44-11-420-007

(2) Do these steps to install the inboard housing [66] for the latch [63]:

(a) Install the inboard housing [66] and bearing [67] on the latch [63].

(b) Install the bolt [56], washer [57], washer [58], and nut [59] which hold the inboard housing [66] to the airplane.

SUBTASK 32-44-11-020-014

(3) Connect the return spring [64] to the pawl.

SUBTASK 32-44-11-420-008

(4) Do these steps to install the arm [55]:

(a) Install the arm [55] on the latch [63] such that the bolt holes in the arm [55] and the latch [63] are aligned.

1) Make sure the flat surface of the arm [55] is on the side that is opposite the bearing and the yoke for the rod is pointing down (Figure 403).

(b) Install the bolt [56], washer [57], washer [58], and nut [59] which holds the arm [55] to the latch [63].

(c) Install the bolt [51], washer [52], washer [53], and nut [54] which hold the rod [29] to the arm [55].

NOTE: Install the thin washer [53] under the head of the bolt [51].

SUBTASK 32-44-11-820-003

(5) If you replaced the pawls, the length of the pawls was changed, or the length of the connecting rod was changed, do this task: Parking Brake System Adjustment, TASK 32-44-00-820-801.

SUBTASK 32-44-11-860-008

(6) Close this access panel that you opened to get access to the parking brake latch mechanism:

Number Name/Location

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(Continued)

Number	Name/Location
112A	Forward Access Door

——————— END OF TASK ———————

TASK 32-44-11-000-804

8. Parking Brake Latch Switch Removal

(Figure 404)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
211	Flight Compartment - Left

C. Access Panels

Number	Name/Location
112A	Forward Access Door

D. Prepare for the Removal

SUBTASK 32-44-11-480-007

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-44-11-480-008

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-44-11-860-009

(3) Release the parking brake.

SUBTASK 32-44-11-860-010

(4) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

SUBTASK 32-44-11-860-011

(5) Open this access panel to get access to the parking brake latch mechanism:

Number	Name/Location
112A	Forward Access Door

E. Parking Brake Latch Switch Removal

SUBTASK 32-44-11-020-015

(1) Disconnect the wires [82] from the switch [81].

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SUBTASK 32-44-11-020-016

(2) Remove the screw [83] and nut [84] which hold the switch [81] to the mounting bracket.

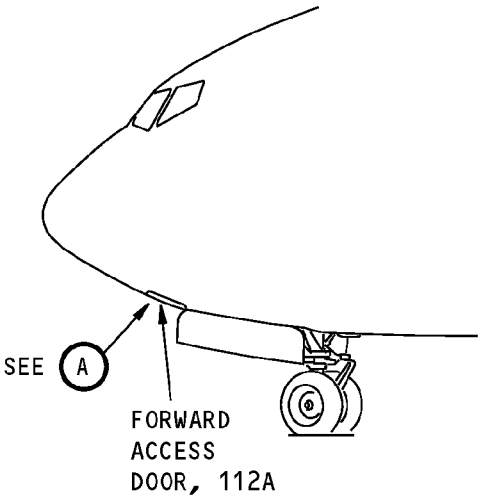
NOTE: The switch and the switch actuator are held together by the mounting screws.

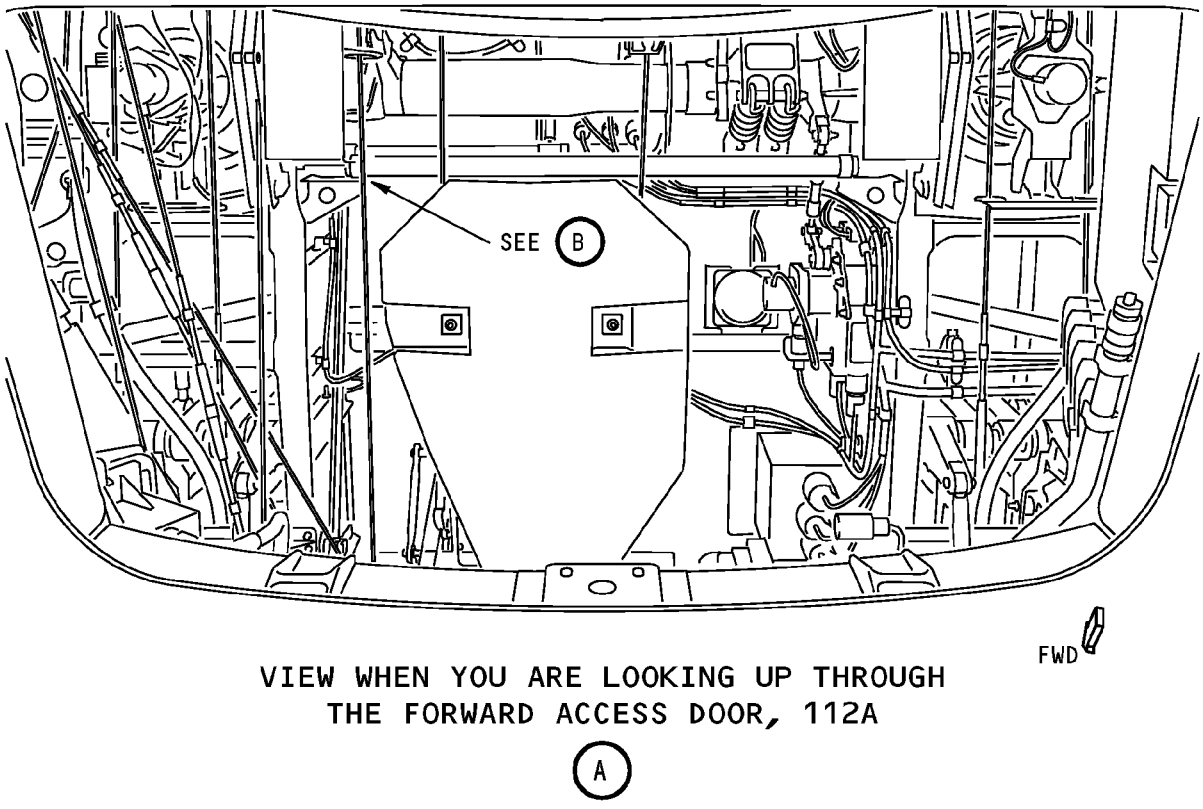
SUBTASK 32-44-11-020-017

(3) Remove the switch [81] from the airplane.

——————— END OF TASK ———————

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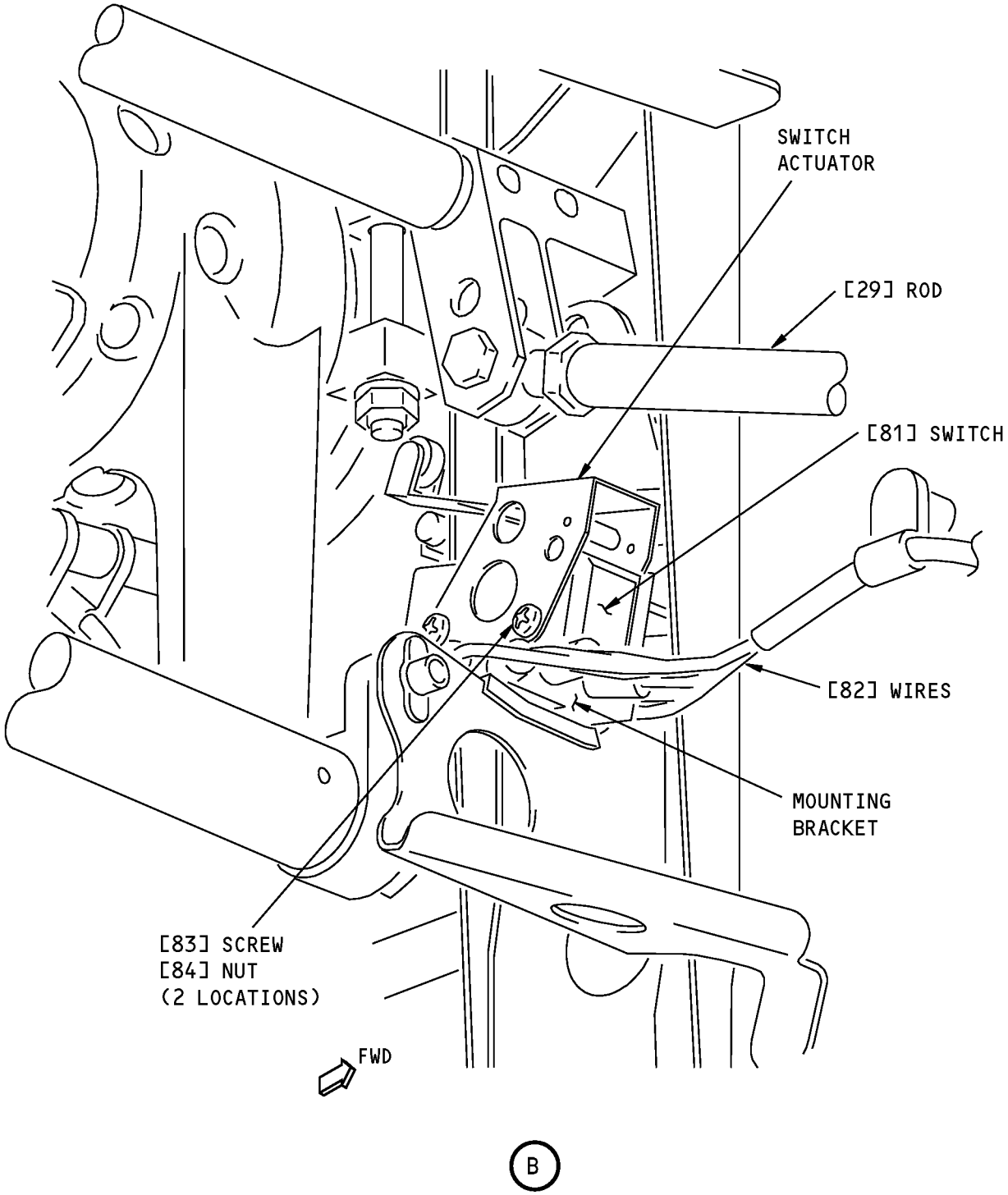


VIEW WHEN YOU ARE LOOKING UP THROUGH
THE FORWARD ACCESS DOOR, 112A

A

Parking Brake Latch Switch Installation
Figure 404 (Sheet 1 of 2)/32-44-11-990-804

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Parking Brake Latch Switch Installation
Figure 404 (Sheet 2 of 2)/32-44-11-990-804

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TASK 32-44-11-400-804

9. Parking Brake Latch Switch Installation

(Figure 404)

A. References

Reference	Title
32-44-00-820-801	Parking Brake System Adjustment (P/B 501)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
81	Switch	32-44-11-01-070	HAP ALL

C. Location Zones

Zone	Area
211	Flight Compartment - Left

D. Access Panels

Number	Name/Location
112A	Forward Access Door

E. Parking Brake Latch Switch Installation

SUBTASK 32-44-11-420-009

(1) Make sure the switch actuator is correctly mated to the switch plunger on the switch [81].

SUBTASK 32-44-11-420-010

(2) Hold the switch [81] in its position on the airplane.

SUBTASK 32-44-11-420-011

(3) Install the screw [83] and nut [84] which hold the switch [81] to the mounting bracket.

SUBTASK 32-44-11-420-012

(4) Connect the wires [82] to the switch [81].

SUBTASK 32-44-11-860-012

(5) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

F. Parking Brake Latch Switch Adjustment

SUBTASK 32-44-11-820-004

(1) Adjust the parking brake latch switch [81], do this task: Parking Brake System Adjustment, TASK 32-44-00-820-801.

NOTE: Do not bend the switch actuator arm to adjust the switch.

SUBTASK 32-44-11-860-013

(2) Close this access panel that you opened to get access to the parking brake latch mechanism:

Number	Name/Location
112A	Forward Access Door

END OF TASK

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TASK 32-44-11-000-805

10. Parking Brake Mechanism Visual Inspection

A. General

(1) This procedure is a scheduled maintenance task.

B. Location Zones

Zone	Area
211	Flight Compartment - Left

C. Access Panels

Number	Name/Location
112A	Forward Access Door

D. Parking Brake Mechanism Inspection

SUBTASK 32-44-11-860-014

(1) Open the access panels on the left side of the control stand to get access to the parking brake mechanism.

SUBTASK 32-44-11-860-015

(2) Open this access panel to get access to the parking brake mechanism:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-44-11-210-001

(3) Do a detail visual inspection of the mechanical control path for the parking brake mechanism.

SUBTASK 32-44-11-410-002

(4) Close the access panels on the left side of the control stand.

SUBTASK 32-44-11-860-016

(5) Close this access panel that you opened to get access to the parking brake latch mechanism:

Number	Name/Location
112A	Forward Access Door

——————— END OF TASK ———————

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PARKING BRAKE SHUTOFF VALVE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the parking brake shutoff valve

(2) An installation of the parking brake shutoff valve.

B. The parking brake shutoff valve is located on the aft wall of the main landing gear wheel well.

C. In this procedure the parking brake shutoff valve will be referred to as the valve assy [5].

TASK 32-44-21-000-801

2. Parking Brake Shutoff Valve Removal

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare for the Removal

SUBTASK 32-44-21-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-44-21-860-001

(2) Remove the pressure from the normal (system B) and the alternate (system A) hydraulic systems. To do this, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-44-21-480-002

(3) Make sure the tires have chocks installed around them.

SUBTASK 32-44-21-860-002

(4) Release the parking brake.

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SUBTASK 32-44-21-840-001

(5) Operate the brake pedals until the gage at the brake accumulator shows no change in the pressure.

NOTE: You will have to operate the brake pedals approximately 12 times to fully release the pressure from the accumulator.

SUBTASK 32-44-21-860-003

(6) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

D. Parking Brake Shutoff Valve Removal

SUBTASK 32-44-21-020-001

(1) Disconnect the electrical connector [6] from the parking brake shutoff valve assy [5].

SUBTASK 32-44-21-020-002

(2) Disconnect the tee fitting from the reducer [3] on the parking brake shutoff valve assy [5].

SUBTASK 32-44-21-020-003

(3) Disconnect the elbow from the reducer [3] on the the parking brake shutoff valve assy [5].

SUBTASK 32-44-21-480-003

(4) Install caps or plugs on the elbow and the tee fitting.

SUBTASK 32-44-21-020-004

(5) Remove the bolt [2] and washer [1] which hold the parking brake shutoff valve assy [5] to the airplane.

SUBTASK 32-44-21-020-005

(6) If the replacement parking brake shutoff valve assy [5] does not have hydraulic fittings installed, do these steps:

(a) Remove the hydraulic reducer [3] and packings [4].

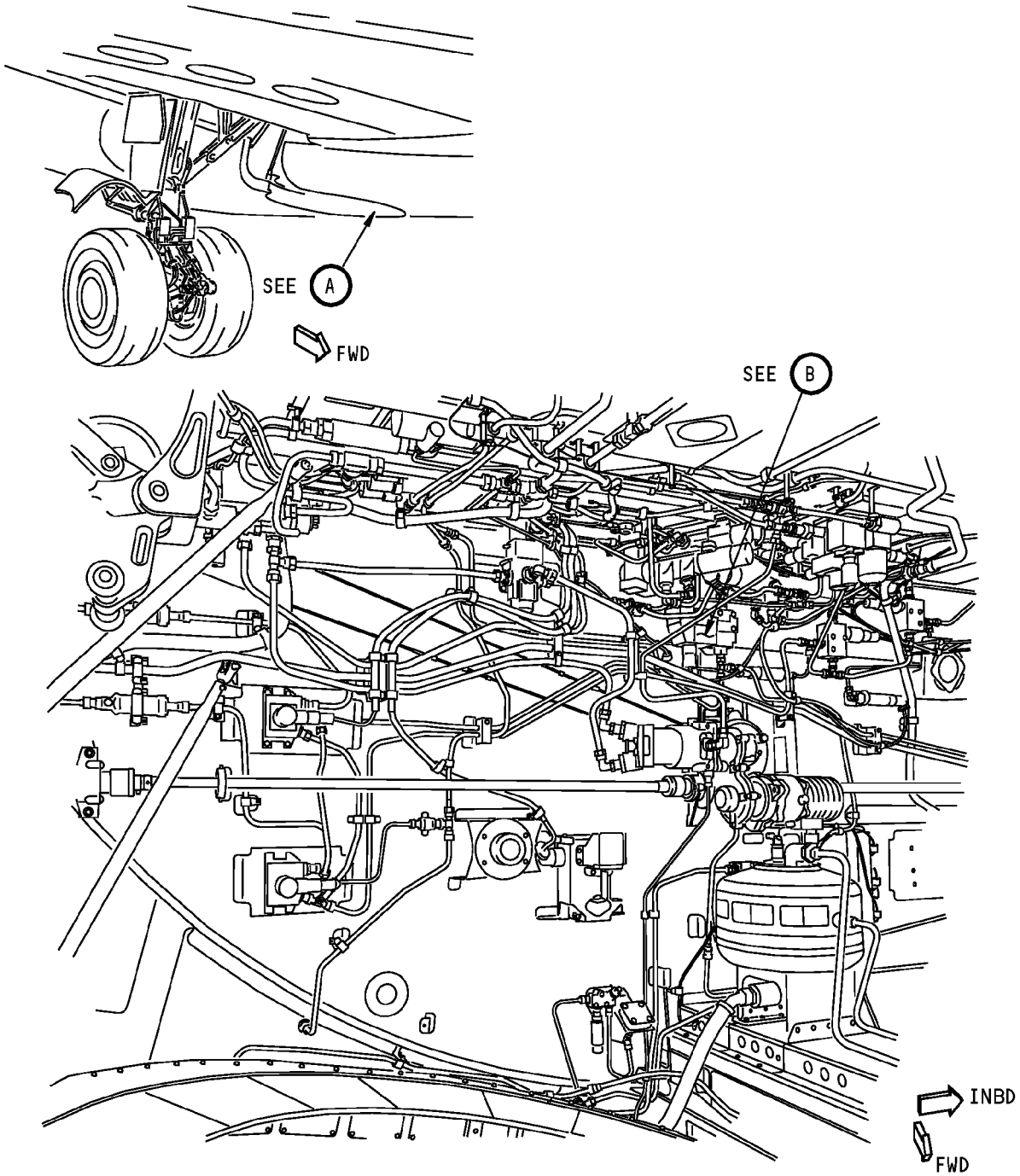
(b) Discard the packings [4].

SUBTASK 32-44-21-480-004

(7) Install plugs in the ports of the parking brake shutoff valve assy [5].

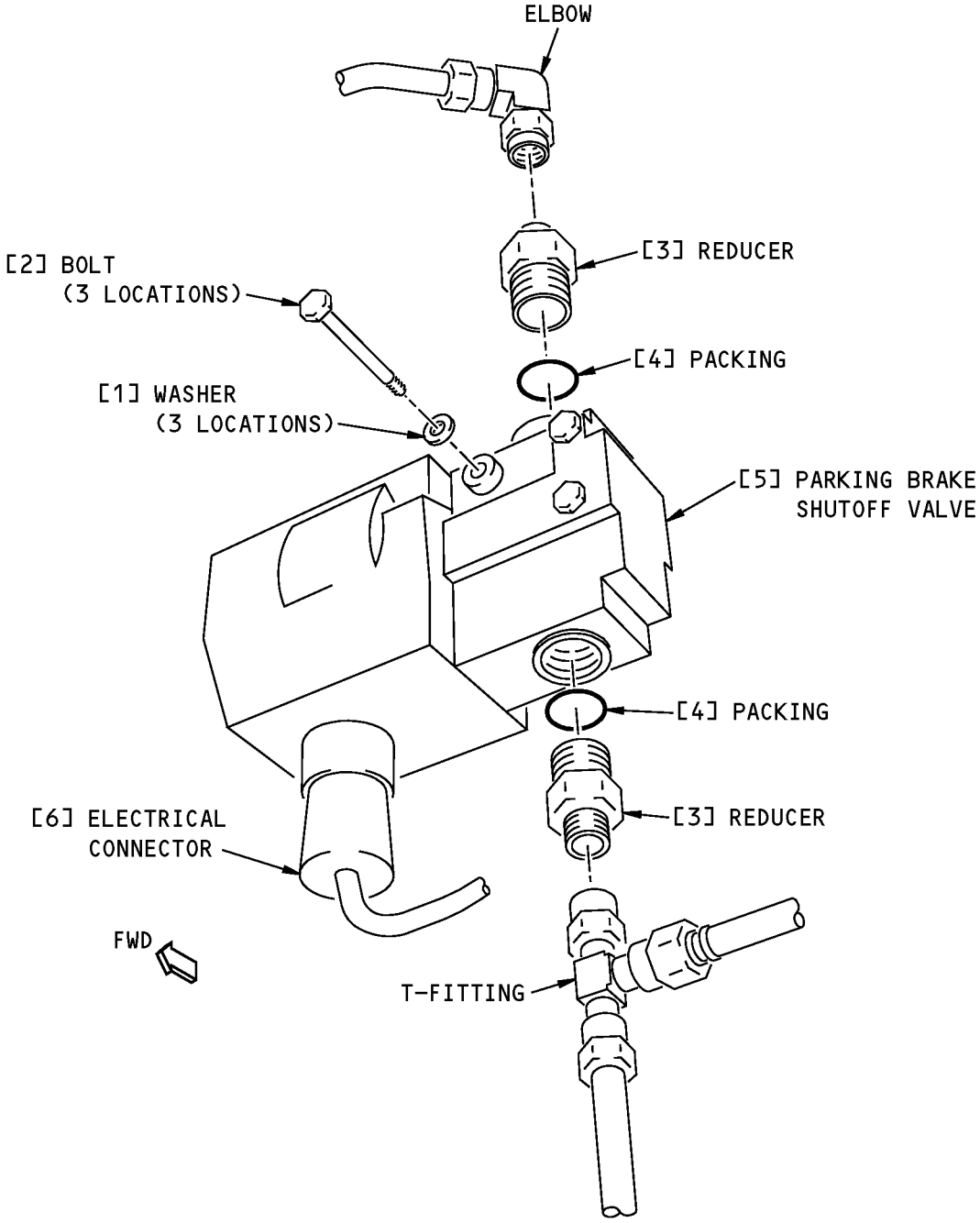
END OF TASK

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Parking Brake Shutoff Valve Installation
Figure 401 (Sheet 1 of 2)/32-44-21-990-801

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Parking Brake Shutoff Valve Installation
Figure 401 (Sheet 2 of 2)/32-44-21-990-801

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TASK 32-44-21-400-801

3. Parking Brake Shutoff Valve Installation

(Figure 401)

A. References

Reference	Title
20-10-34-120-801	Hand Clean Metal Surfaces with Abrasives (P/B 701)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-41-00-870-801	Hydraulic Brake System - Bleeding Upstream of the Antiskid Valves (P/B 201)
SWPM 20-60-03	Special Protection of Electrical Connectors

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Meter - Bonding (Approved Explosion Proof & Intrinsically Safe) (Part #: C15292 (MODEL T477W), Supplier: 01014, A/P Effectivity: 737-ALL) (Part #: M1, Supplier: 3AD17, A/P Effectivity: 737-ALL) (Part #: M1B, Supplier: 3AD17, A/P Effectivity: 737-ALL)

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
A02315	Sealant - Low Density, Synthetic Rubber. 2 Part	BMS5-142
C00064	Coating - Aluminum Chemical Conversion	BAC5719, Type II, Class A (MIL-C-5541, Class A)
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00054	Fluid - Hydraulic Assembly Lubricant - MCS 352B (Formerly Monsanto MCS 352B)	
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)
G50171	Compound - Corrosion Inhibiting Compound, Interior Application - D5026NS or ZC-026	

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	Packing	32-44-21-01-033	HAP ALL
5	Valve assy	32-44-21-01-010	HAP 001-013, 015-026, 028-030
		32-44-21-01-035	HAP ALL

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(Continued)

AMM Item	Description	AIPC Reference	AIPC Effectivity
5 (cont.)		32-44-21-01-105	HAP ALL

E. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

F. Parking Brake Shutoff Valve Installation

SUBTASK 32-44-21-080-001

(1) Remove the plugs or caps from the ports of the parking brake shutoff valve assy [5].

SUBTASK 32-44-21-420-001

(2) If the replacement parking brake shutoff valve assy [5] does not have hydraulic fittings installed, do these steps:

(a) Lubricate the hydraulic reducer [3] and packings [4] for the parking brake shutoff valve assy [5] with fluid, D00153 or MCS 352B fluid, D00054.

(b) Install the packings [4] on the hydraulic reducer [3].

(c) Install the hydraulic reducer [3] in the parking brake shutoff valve assy [5].

SUBTASK 32-44-21-100-001

(3) Do the steps below to help get a good electrical bond between the valve assy [5] and the support bracket:

(a) To fully clean the mating surface of the support bracket and the valve assy [5], do this task: Hand Clean Metal Surfaces with Abrasives, TASK 20-10-34-120-801.

(b) Chemically prepare the mating surface of the support bracket with the coating, C00064.

SUBTASK 32-44-21-390-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(4) Apply a layer of the compound, C00913, to the threads and the shank of each bolt [2].

NOTE: Do not let the compound, C00913, dry before you install the bolts. You must install the bolts when the compound, C00913, is wet.

SUBTASK 32-44-21-420-002

(5) Hold the parking brake shutoff valve assy [5] in its position on the airplane.

SUBTASK 32-44-21-420-003

(6) Install the bolt [2] and washer [1] which hold the parking brake shutoff valve assy [5] to the airplane.

SUBTASK 32-44-21-390-002

(7) Use sealant, A00247 or sealant, A02315 to apply a fillet seal around the area where the valve assy [5] touches the support bracket and to the heads of the bolt [2].

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SUBTASK 32-44-21-760-001

(8) Use an bonding meter, COM-1550 to measure the electrical resistance between the valve assy [5] and the bracket.

NOTE: The resistance you measure must be less than 0.0025 ohms. If the measured resistance is not less than 0.0025 ohms, do the steps to clean the mating surfaces of the bracket and valve assy [5] and apply the coating, C00064 again.

SUBTASK 32-44-21-080-002

(9) Remove the caps or plugs from the elbow and the tee fitting.

SUBTASK 32-44-21-420-004

(10) Connect the tee fitting to the reducer [3] on the parking brake shutoff valve assy [5].

SUBTASK 32-44-21-420-005

(11) Connect the elbow to the reducer [3] on the the parking brake shutoff valve assy [5].

SUBTASK 32-44-21-420-006

(12) Before you connect the electrical connector [6] to the parking brake shutoffvalve assy [5],examine the connector for corrosion.

WARNING: DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

(a) If there was corrosion, refer to (SWPM 20-60-03) to correct the problem.

(b) Apply theD5026NS or ZC-026 compound, G50171 to the connector (SWPM 20-60-03).

(13) Connect the electrical connector [6] to the parking brake shutoff valve assy [5].

SUBTASK 32-44-21-860-004

(14) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

G. Parking Brake Shutoff Valve Installation Test

SUBTASK 32-44-21-790-001

(1) Do these steps to do a leak check of the parking brake shutoff valve assy [5]:

WARNING: KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) For the normal (system B) hydraulic system, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

(b) Fully push the captain's brake pedals twelve times.

(c) Look for leaks around the parking brake shutoff valve assy [5].

SUBTASK 32-44-21-710-001

(2) Do this task: Hydraulic Brake System - Bleeding Upstream of the Antiskid Valves, TASK 32-41-00-870-801.

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SUBTASK 32-44-21-710-002

(3) Do these steps to do a check of the parking brake shutoff valve assy [5] installation:

(a) Set the parking brake.

(b) Make sure the parking brake light on the captain's control stand comes on.

(c) Release the parking brake.

(d) Make sure the parking brake light is off.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 32-44-21-860-005

(1) For the normal (system B) hydraulic system, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

——————— END OF TASK ———————

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TIRES AND WHEELS - MAINTENANCE PRACTICES

1. General

A. This procedure tells you how to deflate and inflate the main and nose landing gear tires.

TASK 32-45-00-000-801

2. Tires and Wheels - Deflation/Inflation

(Figure 201)

A. References

Reference	Title
07-11-03-580-801	Lift the Main Landing Gear Axles with the Axle Jacks (P/B 201)
07-11-03-580-802	Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E (P/B 201)
12-15-51-610-802	Add Nitrogen or Air to the Tire (P/B 301)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-4046	Deflator - Tire, Valve Core Removal and Installation (Small Bore) and Tire Deflation (Part #: 320008B, Supplier: SB968, A/P Effectivity: 737-ALL) (Part #: 968RB, Supplier: 51579, A/P Effectivity: 737-ALL)

C. Location Zones

Zone	Area
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Deflate the Tire

SUBTASK 32-45-00-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-45-00-480-005

(2) Make sure the wheel and tire assembly is clear of the ground before you deflate the tire, do the task that applies for the nose or the main landing gear:

(a) Do this task: Lift the Main Landing Gear Axles with the Axle Jacks, TASK 07-11-03-580-801.

(b) Do this task: Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E, TASK 07-11-03-580-802.

SUBTASK 32-45-00-480-002

(3) Remove the valve cap [1] from the wheel and tire.

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SUBTASK 32-45-00-840-001

WARNING: YOU MUST DEFLATE THE TIRE BEFORE YOU REMOVE THE WHEEL AND TIRE ASSY. A DEFECTIVE WHEEL AND TIRE CAN EXPLODE IF YOU DO NOT DEFLATE THE TIRE BEFORE YOU REMOVE THE ASSEMBLY. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

WARNING: MAKE SURE ALL PERSONS ARE CLEAR OF THE INFLATION VALVE PATH. IF THE VALVE BLOWS OFF WHILE YOU REMOVE IT, INJURY TO PERSONS CAN OCCUR.

(4) Deflate the tire with the small bore tire deflator, COM-4046.

NOTE: Always go near the wheels from the front or rear.

NOTE: If the tire is hot, let the tire cool before you deflate it.

WARNING: DO NOT REMOVE THE VALVE CORE UNTIL YOU FULLY DEFLATE THE TIRE. IF YOU REMOVE THE VALVE CORE BEFORE THE TIRE IS FULLY DEFLATED, THE VALVE CORE WILL BE EJECTED AT A HIGH VELOCITY. THIS CAN CAUSE INJURY TO PERSONS.

(a) If you cannot use the usual procedure to deflate the tire because the valve core is damaged, do these steps:

1) Turn the valve assembly slowly in a counterclockwise direction until there is gas leakage through the boss.

2) At the same time, push lightly on the valve assembly.

3) After all of the gas has been released, remove the valve assembly from the tire.

E. Inflate the Tire

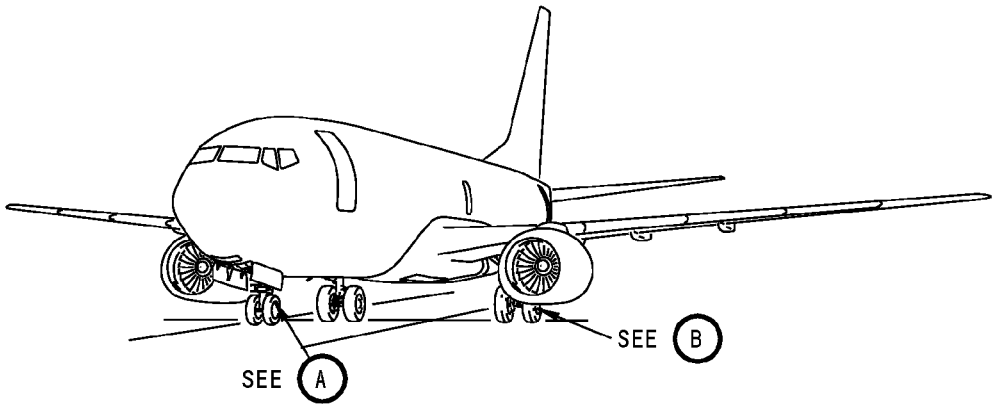
SUBTASK 32-45-00-600-001

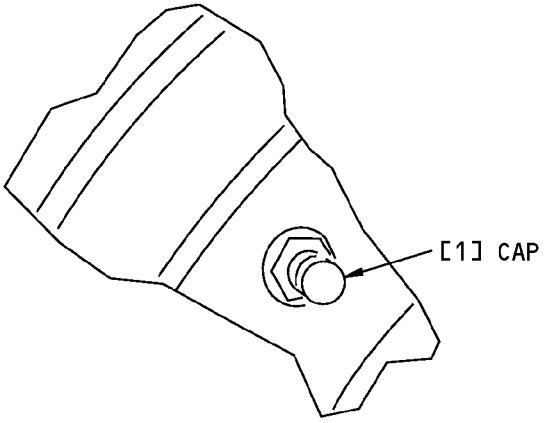
WARNING: DO NOT INFLATE A TIRE TOO MUCH. IF YOU INFLATE A TIRE TOO MUCH, A TIRE AND/OR WHEEL FAILURE CAN OCCUR. THIS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Do this task: Add Nitrogen or Air to the Tire, TASK 12-15-51-610-802.

——————— END OF TASK ———————

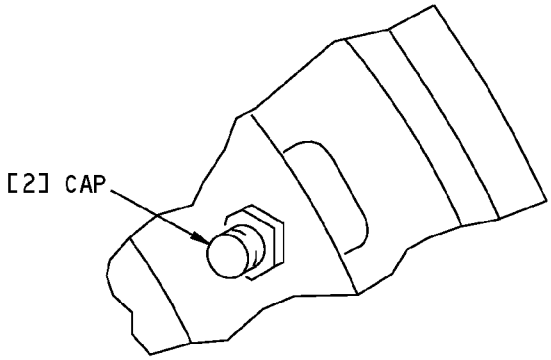
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TIRE INFLATION VALVE
(EXAMPLE, 2 WHEELS)

A

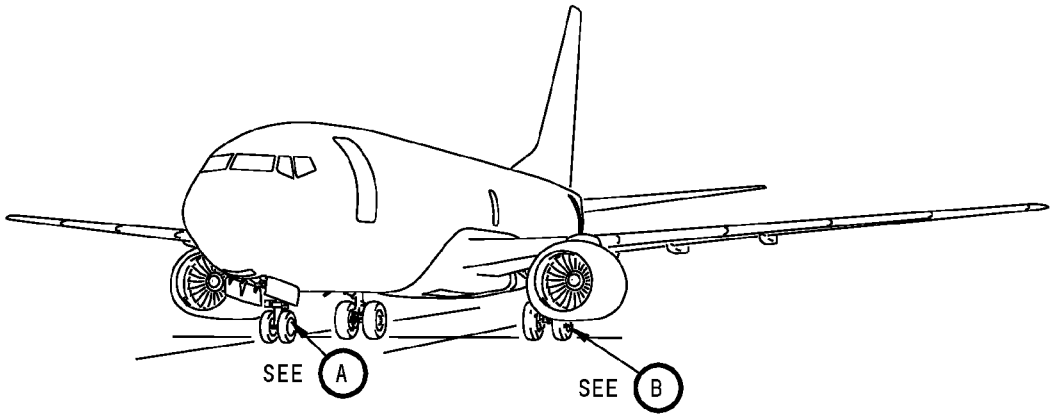


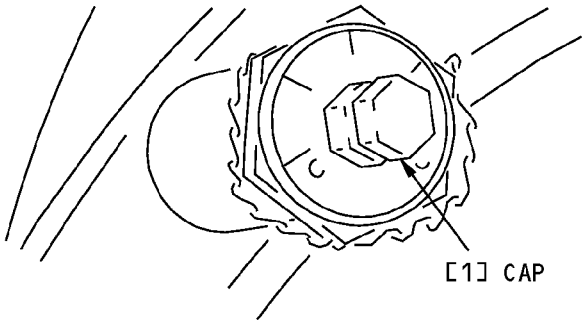
TIRE INFLATION VALVE
(EXAMPLE, 4 WHEELS)

B

Landing Gear Tire Servicing
Figure 201 (Sheet 1 of 2)/32-45-00-990-801

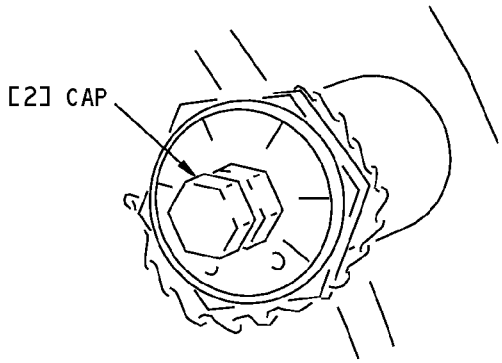
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TIRE INFLATION VALVE
(EXAMPLE, 2 WHEELS)

A



TIRE INFLATION VALVE
(EXAMPLE, 4 WHEELS)

B

Landing Gear Tire Servicing
Figure 201 (Sheet 2 of 2)/32-45-00-990-801

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TIRES AND WHEELS - INSPECTION/CHECK

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) A fast check of the wheels

(2) An inspection of the wheels

(3) An inspection of the tires.

TASK 32-45-00-700-801

2. Wheels Fast Check (Wheel Installed on the Airplane)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Procedure

SUBTASK 32-45-00-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-45-00-210-001

(2) Examine the wheels for these forms of damage:

(a) corrosion

(b) cracks

(c) flaked or blistered paint

(d) heat shield damage

(e) loose, damaged, or missing tiebolts and tiebolt nuts that you can see

(f) overheat damage

(g) scratches along the rim of a wheel that show that the wheel rolled without a tire.

NOTE: It is not necessary to remove the hubcap to examine the wheels for damage unless the examination reveals a condition that makes a more detailed check of the area hidden by the hubcap necessary.

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SUBTASK 32-45-00-210-002

(3) Make sure the hubcaps are not loose.

END OF TASK

TASK 32-45-00-700-802

3. Wheels Inspection (Wheel Removed from the Airplane)

A. References

Reference	Title
05-51-07-210-801	High Energy Stop (P/B 201)

B. Location Zones

Zone	Area
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

C. Procedure

SUBTASK 32-45-00-210-003

(1) Examine the wheel for:

(a) breaks
(b) corrosion
(c) cracks
(d) distortion
(e) flaked or blistered paint
(f) heat shield damage
(g) loose, damaged, or missing tiebolts and tiebolt nuts
(h) nicks or gouges
(i) overheat damage
(j) scratches along the rim of a wheel that show the wheel rolled without a tire
(k) worn plating
(l) other damage.

SUBTASK 32-45-00-210-004

(2) Examine the grease seals for:

(a) nicks
(b) gouges
(c) overheat damage.

SUBTASK 32-45-00-210-005

(3) Examine the bearing and bearing surfaces for:

(a) distortion
(b) flat spots
(c) sufficient lubrication
(d) wear.

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SUBTASK 32-45-00-210-006

(4) Examine the brake keyway inserts for wear.

SUBTASK 32-45-00-210-007

(5) Examine the wheel heat shield for:

(a) cracks

(b) wear

(c) other damage.

SUBTASK 32-45-00-210-008

(6) Make sure the wheel balance weights are tightly installed.

SUBTASK 32-45-00-220-001

(7) If a wheel has a blown thermal fuse, do this task: High Energy Stop, TASK 05-51-07-210-801.

——————— END OF TASK ———————

TASK 32-45-00-700-803

4. Tires Inspection

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
12-15-51-780-801	Landing Gear Tire Pressure Check and Tire Servicing (P/B 301)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Procedure

SUBTASK 32-45-00-480-004

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-45-00-220-002

(2) Do this task: Landing Gear Tire Pressure Check and Tire Servicing, TASK 12-15-51-780-801.

SUBTASK 32-45-00-210-009

(3) Do the steps that follow and examine the tires (Figure 601, Figure 602):

(a) Examine the tires for air leaks, abrasions, unusual worn areas, cuts, and flat spots.

(b) Examine the tires for the presence of contaminants.

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1) Keep the tires clean of contaminants such as oils, fuels, hydraulic fluids, aircraft cleaning agents, and greases. Cover the tire if these or other potentially harmful chemicals spill on the tire.
2) Wipe off the tire with a soapy solution if the tire becomes contaminated.
3) The tire should be removed from service as soon as practical if the surface of the tire appears soft, spongy, or there are bulges present.

(c) Remove the tires that have the conditions that follow:

1) Cuts or weather cracks in the grooves, the tread, shoulders or sidewalls that exceed the limits in (Figure 602).
2) Blisters, bulges, or other signs of ply separation in the tread, shoulder or sidewall area.
3) Tires with a flat spot which shows the tread reinforcement ply (bias) or cut protector (radial).

NOTE: If the tread reinforcement ply (bias) or the cut protector (radial) shows, the tire should be replaced as soon as possible. If necessary, the tire may be used for a small number of landings until it is replaced. However, you may not be able to retread the tire if you leave the tire in service too long with this condition.

4) Other types of damage which can cause tire problems.

(d) Examine the tires for worn areas:

1) Measure the depth of the tire tread groove at three points that are equally apart.
2) If the average depth of any groove is 1/32 inch (0.79 mm) or less, the tire must be replaced at the next convenient maintenance opportunity.
3) If the tread belt ply (radial) or carcass ply (bias) shows at any location, the tire is not serviceable and must be replaced.
4) If the tread is worn so that the cut protector (radial) or tread reinforcement ply (bias) shows at any location, the tire must be replaced at the next convenient maintenance opportunity.

NOTE: If the cut protector (radial) or tread reinforcement ply (bias) shows, the tire should be replaced as soon as possible. If necessary, the tire may be used for a small number of landings until it is replaced. However, you may not be able to retread the tire if you leave the tire in service too long with this condition.

E. Tire Tread Conditions and Service

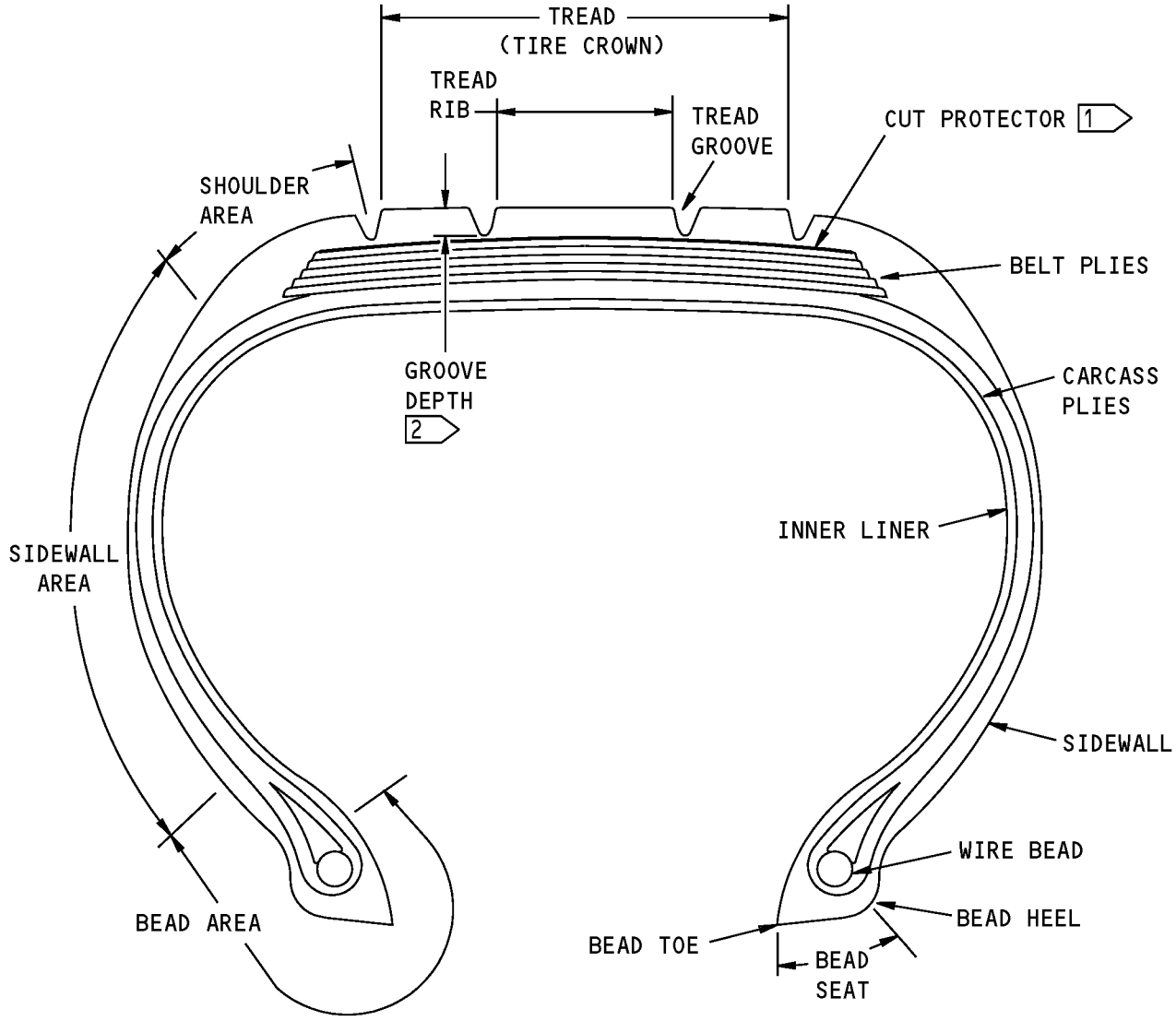
SUBTASK 32-45-00-220-003

WARNING: DO NOT PUSH ON THE TIRE WITH TOOLS OR OTHER OBJECTS. A DAMAGED TIRE CAN EXPLODE AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) See (Figure 602) for the tire tread conditions:

——————— END OF TASK ———————

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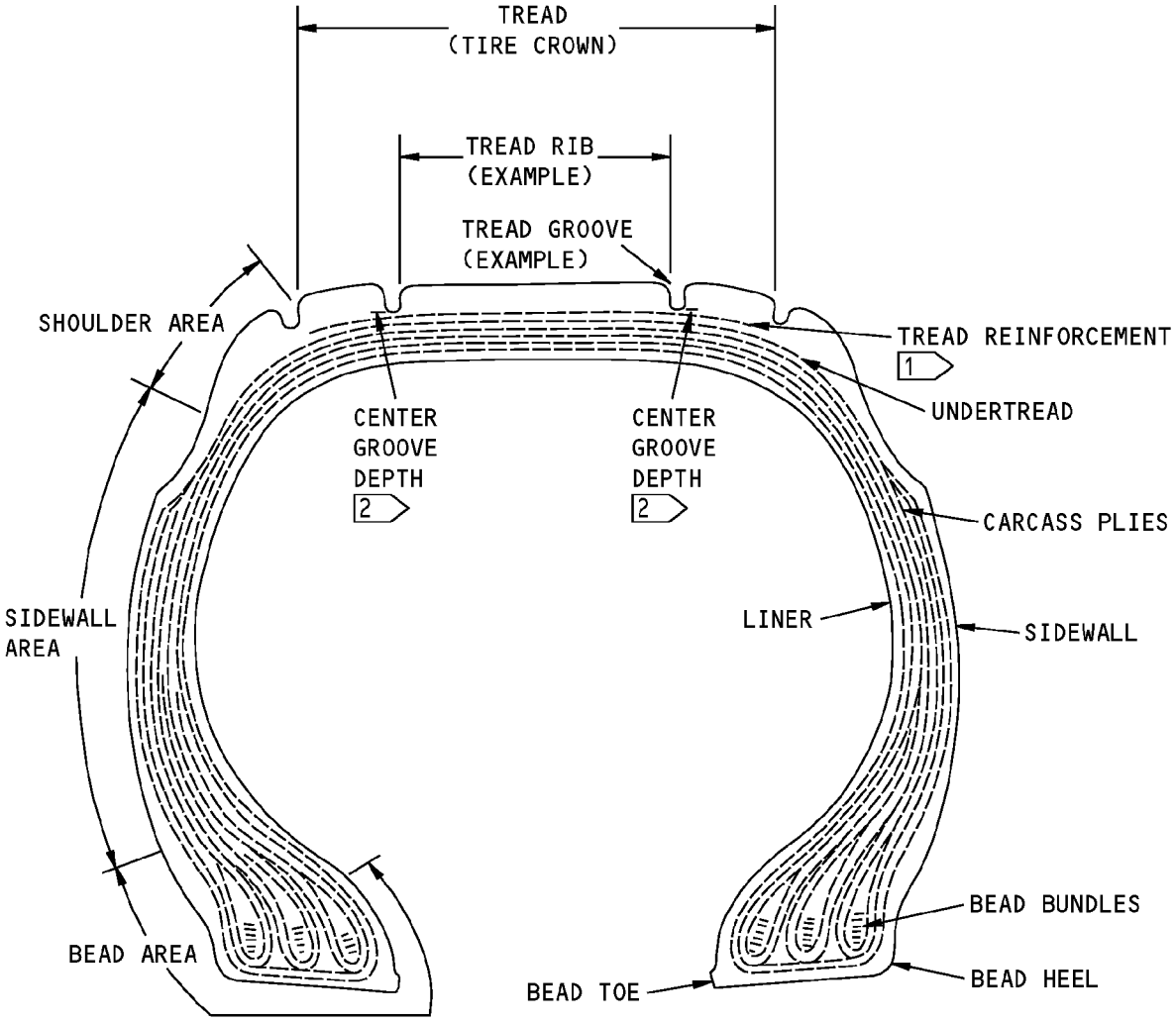


RADIAL TIRE

1 THE TREAD REINFORCEMENT/CUT PROTECTOR CAN BE METAL OR KEVLAR.

Tire Nomenclature (Example)
Figure 601 (Sheet 1 of 2)/32-45-00-990-802

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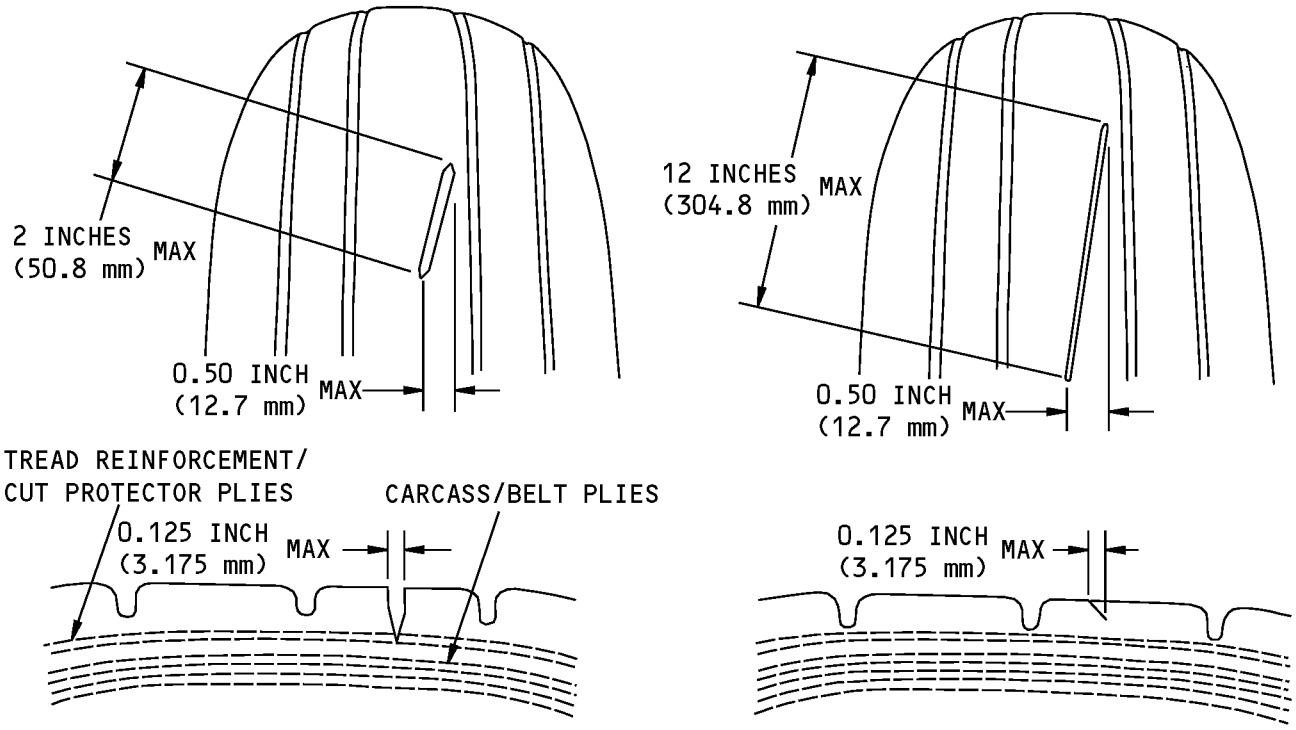


BIAS PLY TIRE

2 MEASURE AT THE CENTER GROOVES
(MOLD SKID DEPTH)

Tire Nomenclature (Example)
Figure 601 (Sheet 2 of 2)/32-45-00-990-802

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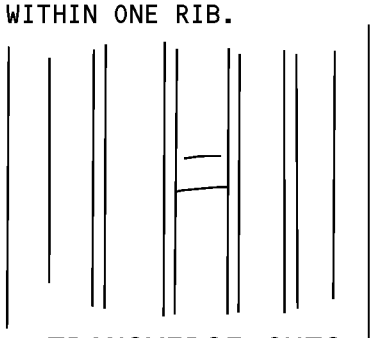


CIRCUMFERENTIAL CUTS

CUTS THAT PENETRATE THE TREAD REINFORCEMENT/CUT PROTECTOR PLIES ARE NOT SERVICEABLE IF:

(A) CUT EXCEEDS THE ABOVE LIMITS.
(B) CUT PENETRATES THE CARCASS PLIES (BIAS) OR BELT PLIES (RADIAL)
(C) CUT IS NOT CONTAINED WITHIN ONE RIB.

CUTS THAT DO NOT EXPOSE FABRIC ARE NOT SERVICEABLE IF THEY EXCEED THE ABOVE LIMITS.



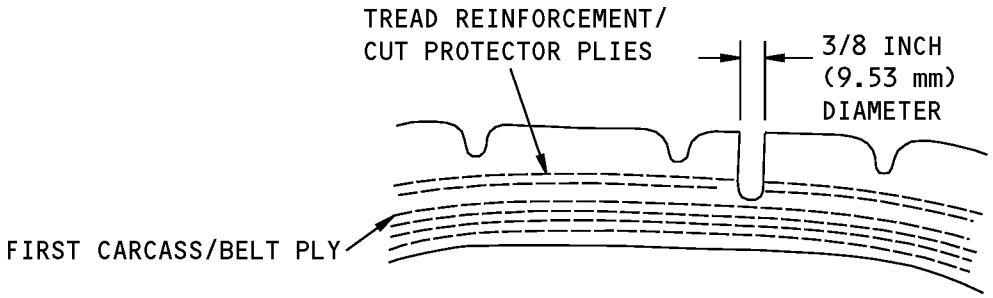
TRANSVERSE CUTS

(A) TRANSVERSE CUTS THAT ARE CONTAINED WITHIN A RIB AND PENETRATE INTO THE CARCASS PLIES (BIAS) OR BELT PLIES (RADIAL) ARE NOT SERVICEABLE.

(B) CUTS THAT EXTEND ACROSS A RIB FROM GROOVE TO GROOVE WHICH ARE DEEPER THAN THE GROOVE ARE NOT SERVICEABLE.

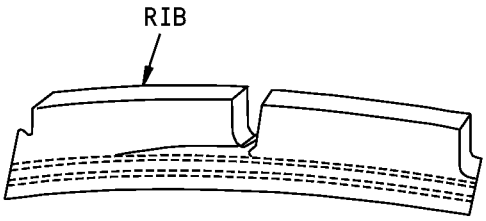
Tire Wear Conditions (Example)
Figure 602 (Sheet 1 of 8)/32-45-00-990-803

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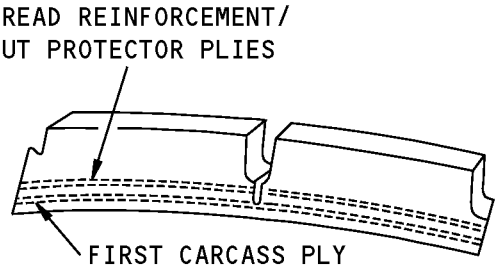
PUNCTURE

TIRES WITH HOLES LARGER THAN 3/8 INCH (9.53 mm) DIAMETER OR HOLES THAT PENETRATE INTO THE CARCASS PLIES (BIAS) OR BELT PLIES (RADIAL) ARE NOT SERVICEABLE.



RIB UNDERCUTS

TIRES WITH A CRACK THAT EXTENDS BELOW A TREAD RIB ARE NOT SERVICEABLE.

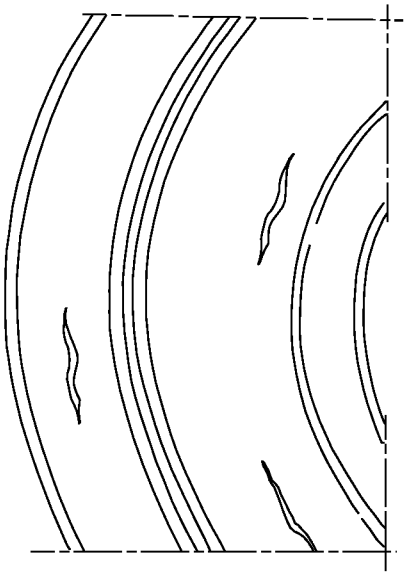


GROOVE CRACKS

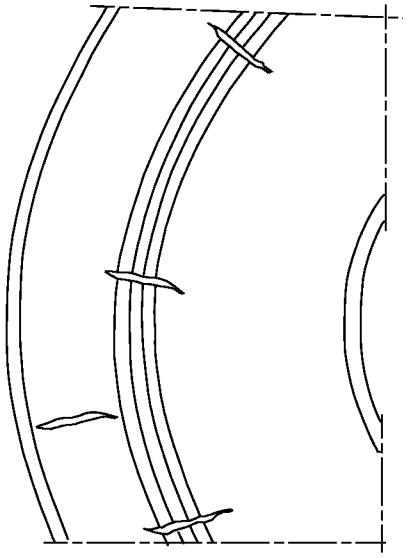
TIRES WITH CIRCUMFERENTIAL CRACKS AT THE BOTTOM OF THE GROOVES ARE NOT SERVICEABLE IF THE CRACKS EXPOSE ANY FABRIC.

Tire Wear Conditions (Example)
Figure 602 (Sheet 2 of 8)/32-45-00-990-803

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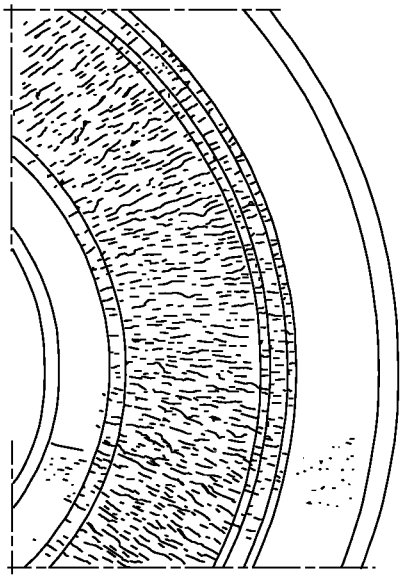


CIRCUMFERENTIAL SIDEWALL CUTS
OR CRACKS



RADIAL SIDEWALL CUTS
OR CRACKS

TIRES WITH CIRCUMFERENTIAL OR RADIAL CUTS OR CRACKS IN THE SIDEWALL OR SHOULDER AREA THAT EXPOSE THE FABRIC ARE NOT SERVICEABLE.



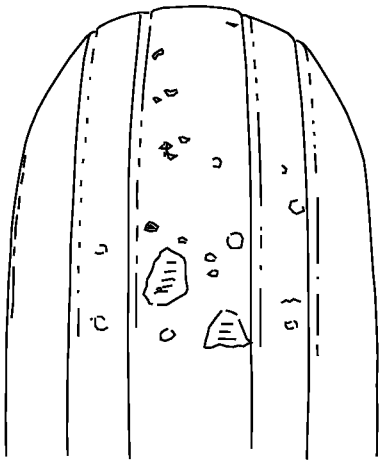
OZONE AND/OR WEATHER CUTS OR CRACKS

TIRES WITH CUTS OR CRACKS IN THE SIDEWALL WHICH ARE CAUSED BY AGE/WEATHER DETERIORATION ARE NOT SERVICEABLE IF THE FABRIC IS EXPOSED.

F98061 S0006575656_V2

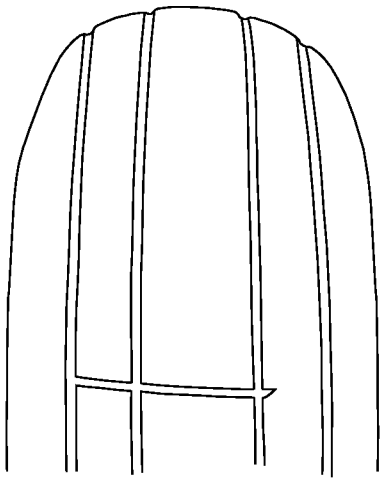
Tire Wear Conditions (Example)
Figure 602 (Sheet 3 of 8)/32-45-00-990-803

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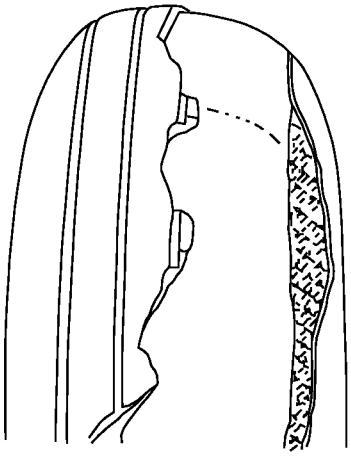
TREAD FLAKING, CHIPPING OR CHUNKING

TIRES WITH FLAKING, CHIPPING OR CHUNKING TREADS ARE NOT SERVICEABLE IF ANY FABRIC IS EXPOSED.



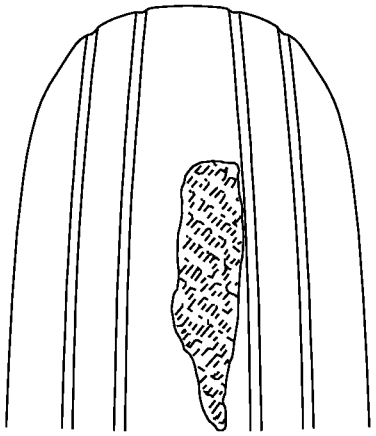
OPEN TREAD SPLICE

TIRES WITH AN OPEN TREAD SPLICE ARE NOT SERVICEABLE. A CLOSED TREAD SPLICE WILL APPEAR AS A THIN LINE THAT CROSSES THE TREAD RIBS.



THROWN TREAD

TIRES WITH THROWN TREADS ARE NOT SERVICEABLE.

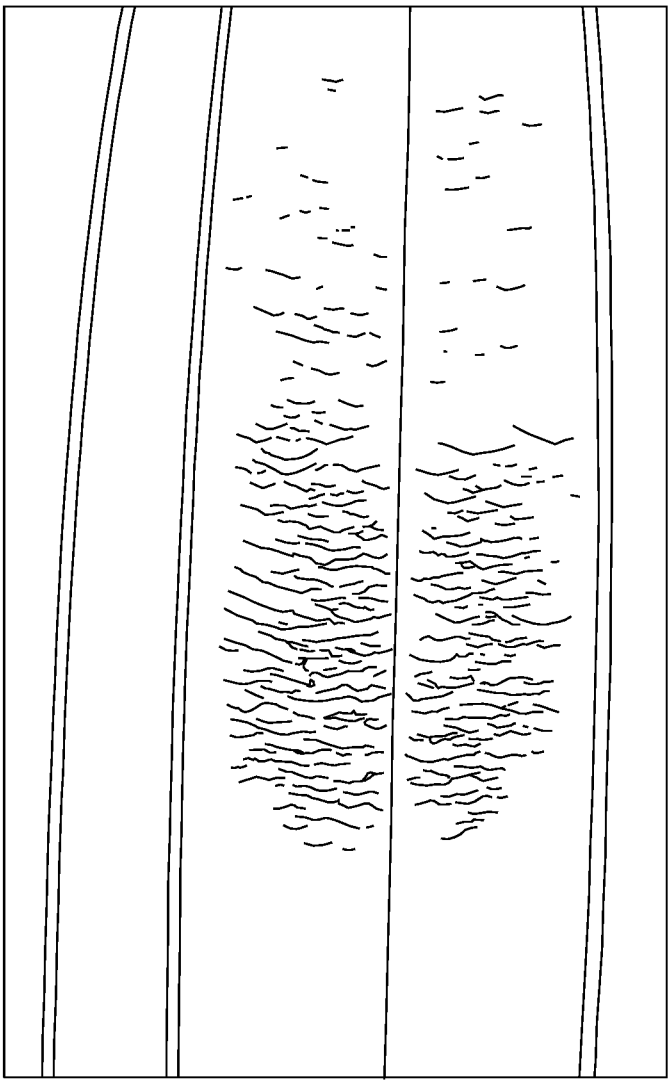


PEELED RIB

TIRES WITH PEELED RIBS ARE NOT SERVICEABLE.

Tire Wear Conditions (Example)
Figure 602 (Sheet 4 of 8)/32-45-00-990-803

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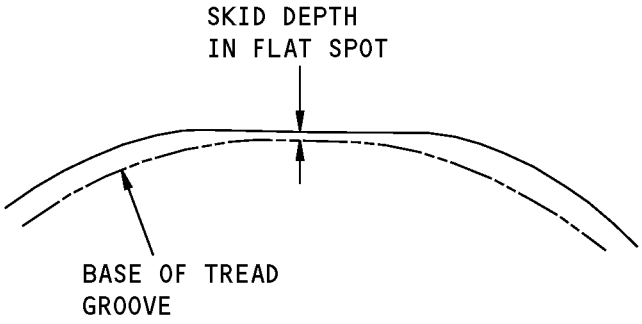


CHEVRON CUTS

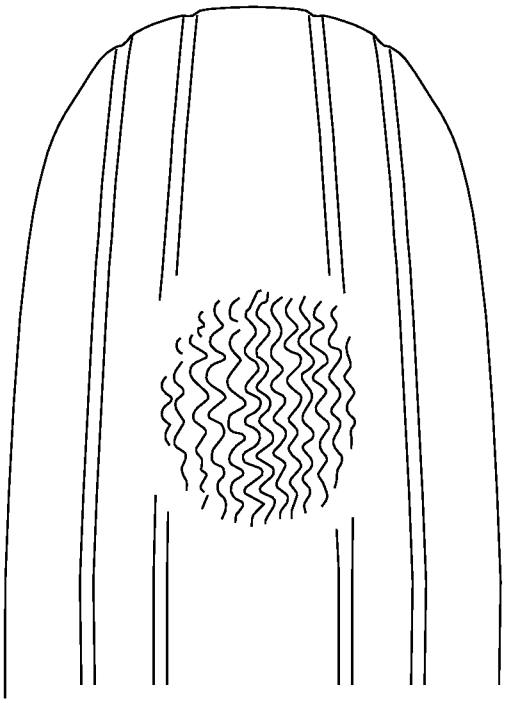
TIRES WITH CHEVRON CUTS IN THE TREAD ARE NOT SERVICEABLE IF ANY OF THE SINGLE CUT LIMITS ARE EXCEEDED OR CHUNKING OCCURS WHICH EXPOSES THE FABRIC.

Tire Wear Conditions (Example)
Figure 602 (Sheet 5 of 8)/32-45-00-990-803

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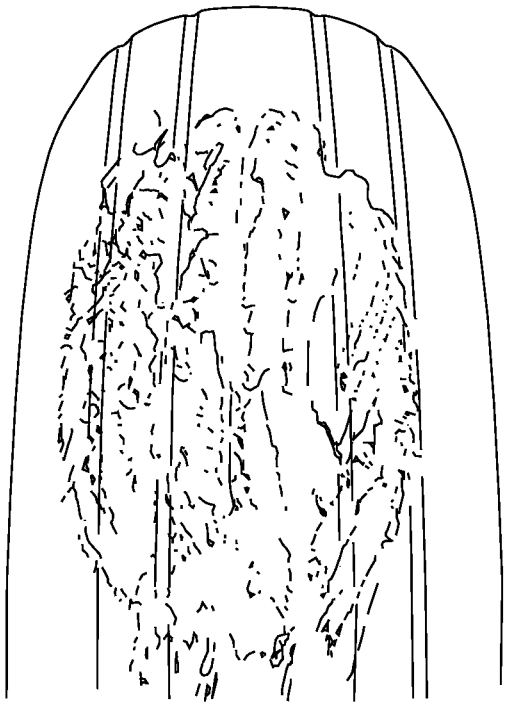


TREAD FLAT SPOTS



FLAT SPOT

TIRES WITH FLAT SPOTS ARE NOT SERVICEABLE IF THE FLAT SPOT EXPOSES THE TREAD REINFORCEMENT OR CUT PROTECTOR PLIES OR TIRE BALANCE IS AFFECTED.

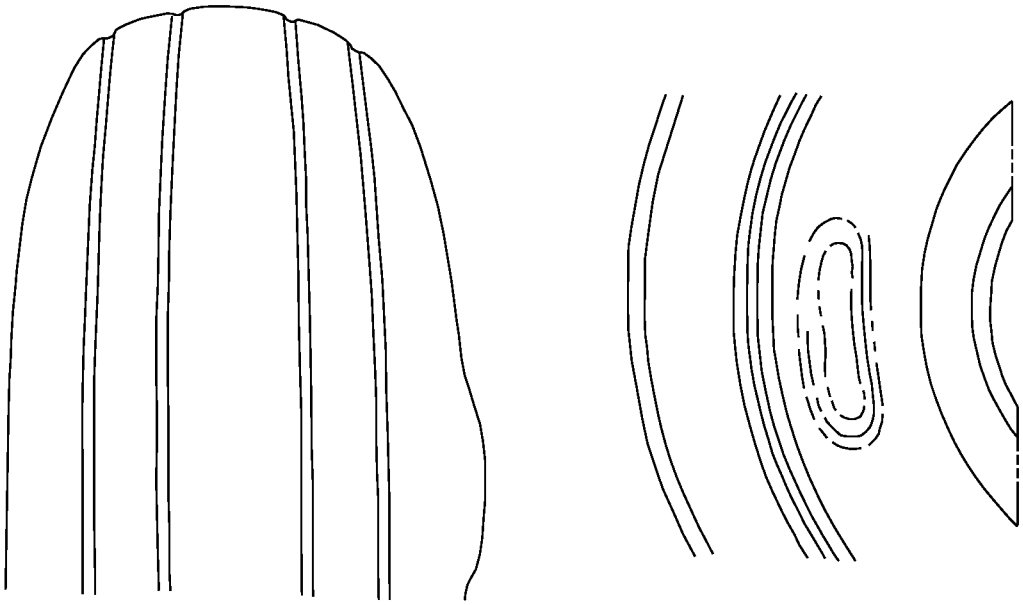


ICE SKID BURN/TREAD RUBBER REVERSION

TIRES WITH ICE BURN/TREAD RUBBER REVERSION ARE NOT SERVICEABLE IF THE DAMAGE EXPOSES THE TREAD REINFORCEMENT OR CUT PROTECTOR PLIES OR TIRE BALANCE IS AFFECTED.

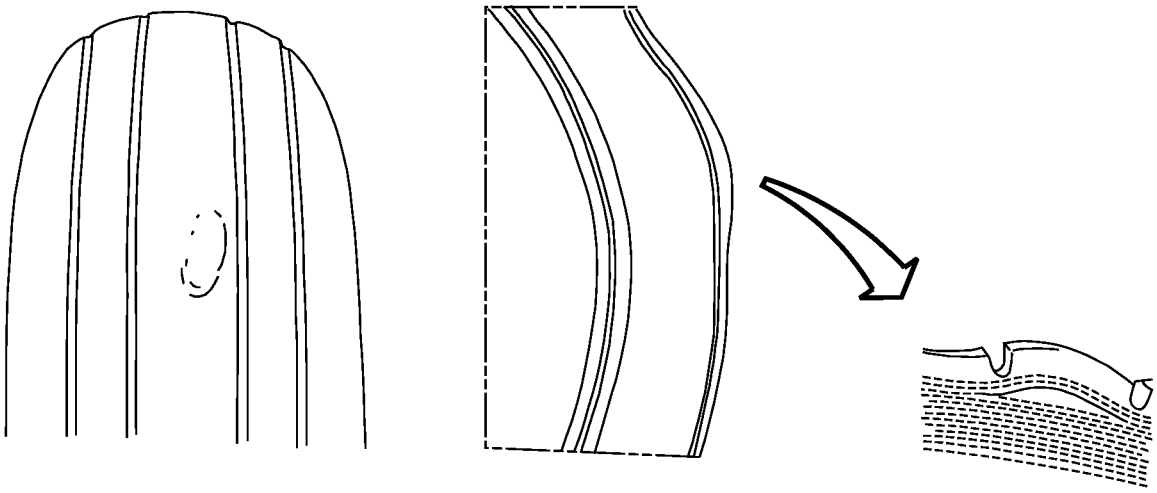
Tire Wear Conditions (Example)
Figure 602 (Sheet 6 of 8)/32-45-00-990-803

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SIDEWALL SEPARATION

TIRES WITH BLISTERS OR BULGES IN THE SIDEWALL ARE NOT SERVICEABLE. REMOVE TIRE IMMEDIATELY.

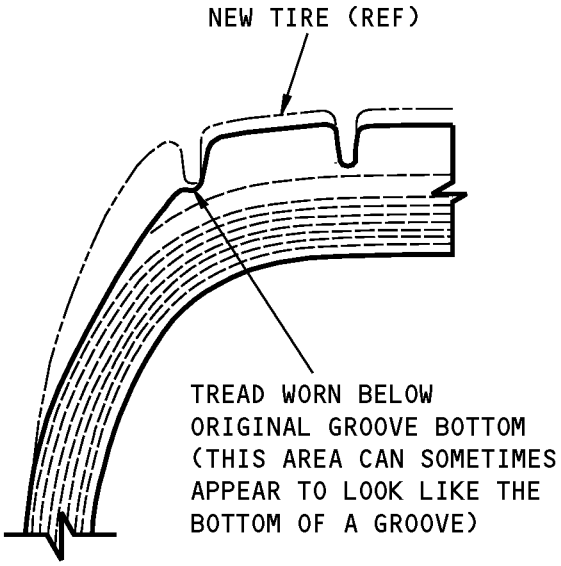


TREAD SEPARATION

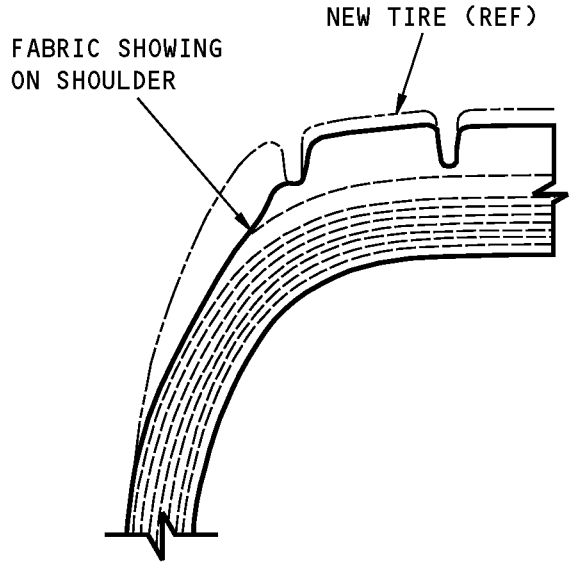
TIRES WITH BLISTERS OR BULGES IN THE TREAD ARE NOT SERVICEABLE. REMOVE TIRE IMMEDIATELY.

Tire Wear Conditions (Example)
Figure 602 (Sheet 7 of 8)/32-45-00-990-803

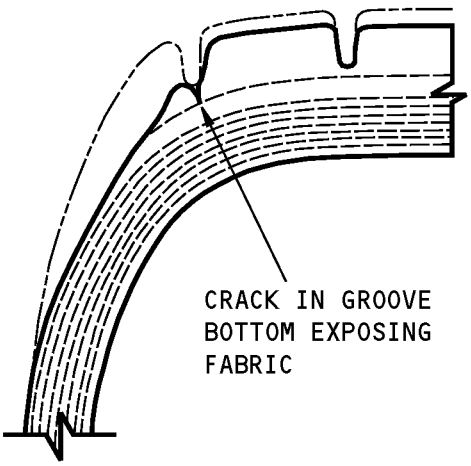
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TIRE SHOULD BE REMOVED
IF TREAD WEARS BELOW
BOTTOM OF TREAD GROOVE



TIRE SHOULD BE REMOVED
IF ANY FABRIC IS SHOWING
ON SHOULDER



TIRE SHOULD BE REMOVED
IF BLISTERS OR CRACKS ARE
FOUND IN A GROOVE BOTTOM
WHICH EXPOSES FABRIC

SHOULDER WEAR CONDITIONS

Tire Wear Conditions (Example)
Figure 602 (Sheet 8 of 8)/32-45-00-990-803

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TIRE INFLATION VALVE - REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks for both the main and nose landing gear tires.

(1) Tire inflation valve removal.

(2) Tire inflation valve installation.

TASK 32-45-08-000-801

2. Tire Inflation Valve Removal

(Figure 401)

A. References

Reference	Title
07-11-03-580-801	Lift the Main Landing Gear Axles with the Axle Jacks (P/B 201)
12-15-51-610-802	Add Nitrogen or Air to the Tire (P/B 301)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-4046	Deflator - Tire, Valve Core Removal and Installation (Small Bore) and Tire Deflation (Part #: 320008B, Supplier: SB968, A/P Effectivity: 737-ALL) (Part #: 968RB, Supplier: 51579, A/P Effectivity: 737-ALL)

C. Location Zones

Zone	Area
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Procedure

SUBTASK 32-45-08-420-001

(1) Install landing gear downlocks, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-45-08-420-002

(2) Install chocks around all tires.

SUBTASK 32-45-08-580-001

(3) Raise axle on jack so that there is clearance between the wheel and tire assembly and the ground, do this task: Lift the Main Landing Gear Axles with the Axle Jacks, TASK 07-11-03-580-801.

SUBTASK 32-45-08-840-001

WARNING: MAKE SURE YOU DEFLATE THE TIRE BEFORE YOU REMOVE THE VALVE. IF YOU DO NOT DEFLATE THE TIRE, VALVE PARTS CAN COME OUT OF THE VALVE AT HIGH VELOCITY AND CAUSE INJURY TO PERSONS WHEN YOU TRY TO REMOVE THE VALVE.

(4) Deflate the tire, do this task: Add Nitrogen or Air to the Tire, TASK 12-15-51-610-802

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with small bore tire deflator, COM-4046.

HAP 001-013, 015-026, 028-030

SUBTASK 32-45-08-020-002

(5) Remove the lockwire from the valve.

HAP ALL

SUBTASK 32-45-08-020-003

(6) Remove valve from wheel.

——————— END OF TASK ———————

TASK 32-45-08-400-801

3. Tire Inflation Valve Installation

(Figure 401)

A. References

Reference	Title
07-11-03-580-801	Lift the Main Landing Gear Axles with the Axle Jacks (P/B 201)
12-15-51-610-802	Add Nitrogen or Air to the Tire (P/B 301)

B. Location Zones

Zone	Area
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

C. Procedure

SUBTASK 32-45-08-210-001

(1) Check port in wheel half for cracks, burrs, or scratches propagating from port.

(a) If cracks, burrs, or scratches are present, remove wheel and tire.

SUBTASK 32-45-08-420-003

(2) Using new or reusable o-ring, install tire inflation valve into port; tighten to torque of 150-200 inch-pounds (17-23 NEWTON METERS).

HAP 001-013, 015-026, 028-030

SUBTASK 32-45-08-420-005

(3) Safety the tire inflation valve with lockwire.

HAP ALL

SUBTASK 32-45-08-580-002

(4) Inflate tire, do this task: Add Nitrogen or Air to the Tire, TASK 12-15-51-610-802.

SUBTASK 32-45-08-210-002

(5) Using bubble soap solution, check for leaks around base of tire inflation valve.

SUBTASK 32-45-08-580-003

(6) Lower aircraft, (TASK 07-11-03-580-801).

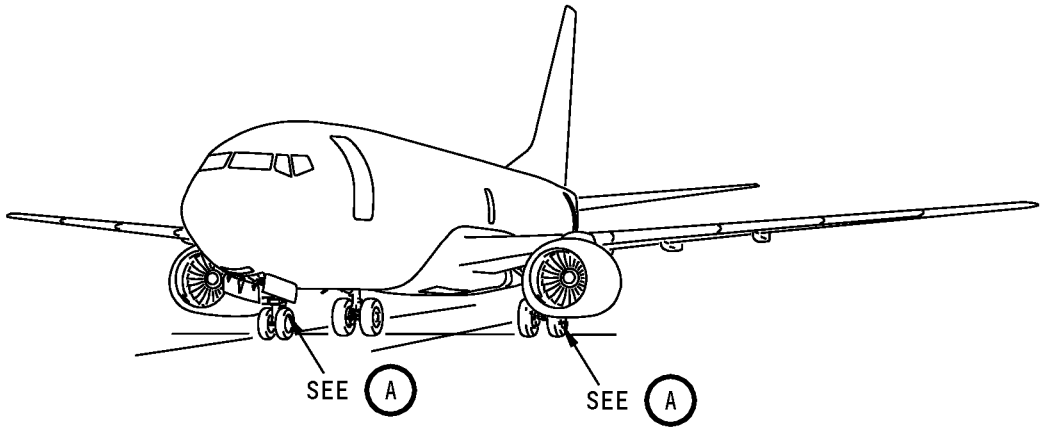
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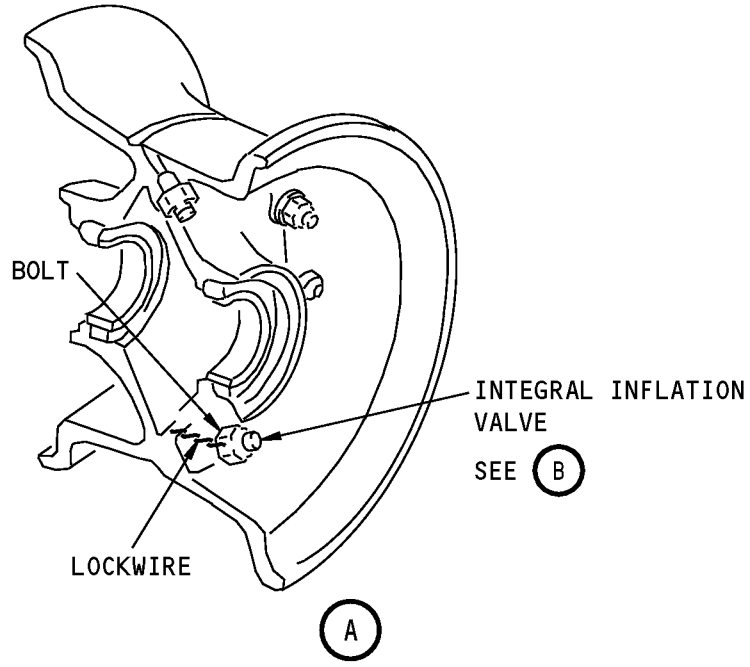
SUBTASK 32-45-08-500-001

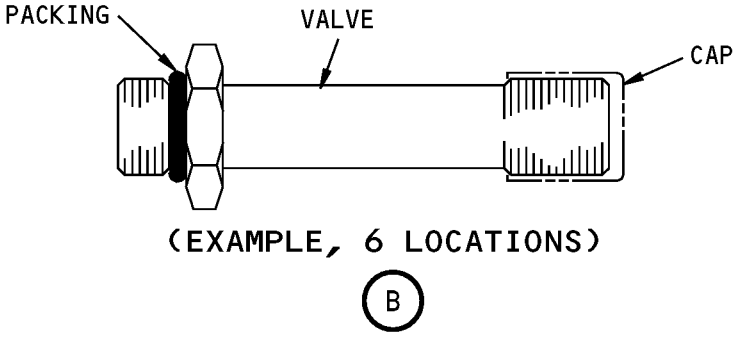
(7) Put the airplane back to its usual condition.

END OF TASK

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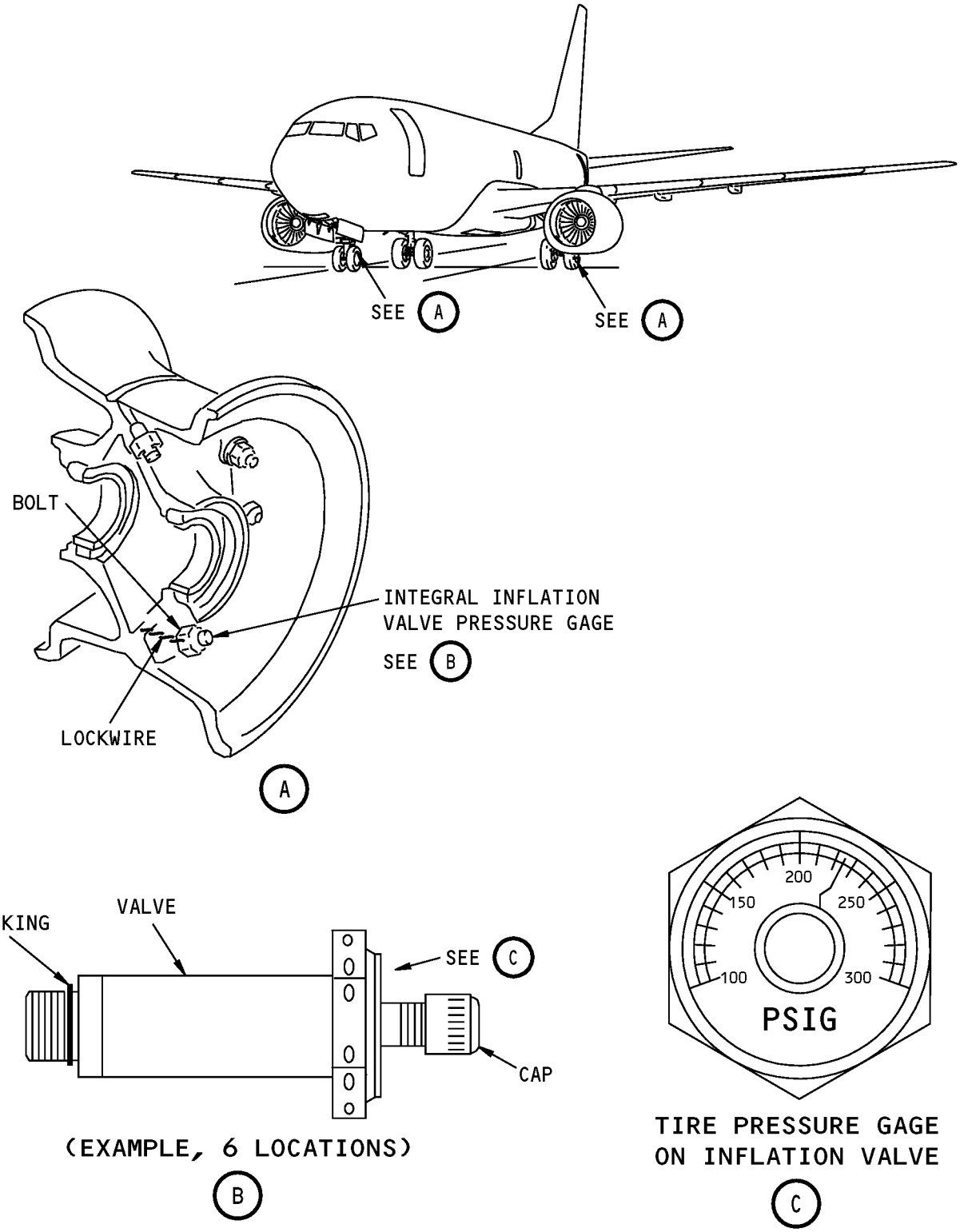






Tire Inflation Valve
Figure 401 (Sheet 1 of 2)/32-45-08-990-801

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Tire Inflation Valve
Figure 401 (Sheet 2 of 2)/32-45-08-990-801

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MAIN LANDING GEAR WHEEL AND TIRE ASSEMBLY - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) A removal of the main landing gear wheel and tire assembly.

(2) An installation of the main landing gear wheel and tire assembly.

TASK 32-45-11-000-801

2. Main Landing Gear Wheel and Tire Assembly Removal

(Figure 401 or Figure 402)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
07-11-03-580-801	Lift the Main Landing Gear Axles with the Axle Jacks (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-45-00-700-801	Wheels Fast Check (Wheel Installed on the Airplane) (P/B 601)
32-45-00-700-803	Tires Inspection (P/B 601)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1818	Dolly - Wheel/Brake Change (Part #: 175, Supplier: 94861, A/P Effectivity: 737-ALL) (Part #: 175S-2, Supplier: 94861, A/P Effectivity: 737-ALL) (Part #: 9092-015, Supplier: 00994, A/P Effectivity: 737-ALL) (Part #: IA3201A-500, Supplier: 3D5B2, A/P Effectivity: 737-ALL) (Opt Part #: 9092-010, Supplier: 00994, A/P Effectivity: 737-ALL) (Opt Part #: PF32-002-1, Supplier: 3D5B2, A/P Effectivity: 737-ALL) (Opt Part #: TB900, Supplier: 56535, A/P Effectivity: 737-ALL)
COM-4046	Deflator - Tire, Valve Core Removal and Installation (Small Bore) and Tire Deflation (Part #: 320008B, Supplier: SB968, A/P Effectivity: 737-ALL) (Part #: 968RB, Supplier: 51579, A/P Effectivity: 737-ALL)
SPL-1865	Socket Kit - MLG Axle Nut (Part #: C32012-12, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1876	Protector - Thread, Eqpt. MLG/NLG Axle (MLG Axle Thread Protector and Anti-Skid Transducer Protector) (Part #: C32022-17, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32022-15, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

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E. Prepare for the Removal

SUBTASK 32-45-11-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-45-11-480-002

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-45-11-860-001

(3) Make sure the parking brake is set.

NOTE: When you set the parking brake, the brake rotors will be aligned for wheel installation.

SUBTASK 32-45-11-580-001

(4) Lift the wheel and tire assemblies with jacks until they are clear of the ground, do this task: Lift the Main Landing Gear Axles with the Axle Jacks, TASK 07-11-03-580-801.

SUBTASK 32-45-11-840-001

WARNING: FULLY DEFLATE THE TIRE BEFORE YOU REMOVE THE WHEEL AND TIRE ASSEMBLY. OR, DO AN INSPECTION OF THE WHEEL AND TIRE TO MAKE SURE THAT THEY ARE SAFE. AIR PRESSURE CAN CAUSE AN EXPLOSION OF THE DAMAGED WHEEL AND TIRE COMPONENTS. INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT CAN OCCUR.

WARNING: IT IS RECOMMENDED THAT YOU REMOVE ONLY ONE WHEEL AND TIRE ASSEMBLY FROM THE MAIN LANDING GEAR AT A TIME. IF YOU REMOVE THE TWO WHEEL AND TIRE ASSEMBLIES AT THE SAME TIME, STRUCTURAL DAMAGE AND INJURY TO PERSONS CAN OCCUR IF THE AIRPLANE FALLS.

(5) Do one of the steps that follow:

(a) Inspect the wheel and tire assembly [1] and/or [17] :

1) Do this task: Wheels Fast Check (Wheel Installed on the Airplane), TASK 32-45-00-700-801.

2) Do this task: Tires Inspection, TASK 32-45-00-700-803.

WARNING: MAKE SURE ALL PERSONS ARE CLEAR OF THE INFLATION VALVE PATH. IF THE VALVE BLOWS OFF WHILE YOU REMOVE IT, INJURY TO PERSONS CAN OCCUR.

(b) Deflate the tire with the small bore tire deflator, COM-4046.

(c) If you cannot use the usual procedure to deflate the tire because the valve core is damaged, do these steps:

1) Turn the valve assembly slowly in a counterclockwise direction until there is gas leakage through the boss.

2) At the same time, push lightly on the valve assembly.

3) After all of the gas has been released, remove the valve assembly from the tire.

F. Main Landing Gear Wheel and Tire Assembly Removal

SUBTASK 32-45-11-020-001

(1) Do these steps to remove the hubcap:

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(a) For an outboard wheel, turn the eight Cam-Loc [4] fasteners 1/4 turn to disconnect the hubcap fairing [5] from the outboard hubcap [3].

(b) Remove the three bolts [6] and the washers [7] to disconnect the outboard hubcap [3] or inboard hubcap [18] from the wheel and tire assembly [1].

(c) Remove the outboard hubcap [3] or inboard hubcap [18] from the wheel and tire assembly [1].

SUBTASK 32-45-11-020-002

(2) Do these steps to remove the wheel and tire assembly:

(a) Remove the two nuts [8], washers [9], and bolts [10] that hold the axle nut [16] to the axle.

WARNING: DO NOT PUT FINGERS IN THE LIGHTENING HOLES OF THE WHEEL RETAINING NUT SOCKET TOOL WHEN YOU REMOVE OR INSTALL THE WHEEL RETAINING NUT. THIS CAN CAUSE INJURIES TO PERSONS.

(b) Remove the nut [16] with the socket, SPL-1865.

(c) Remove the retention washer [15].

(d) Install the thread protector assembly, of the protector, SPL-1876, on the axle threads.

(e) Use the wheel/brake changer dolly, COM-1818, to lift and remove the wheel and tire assembly [1].

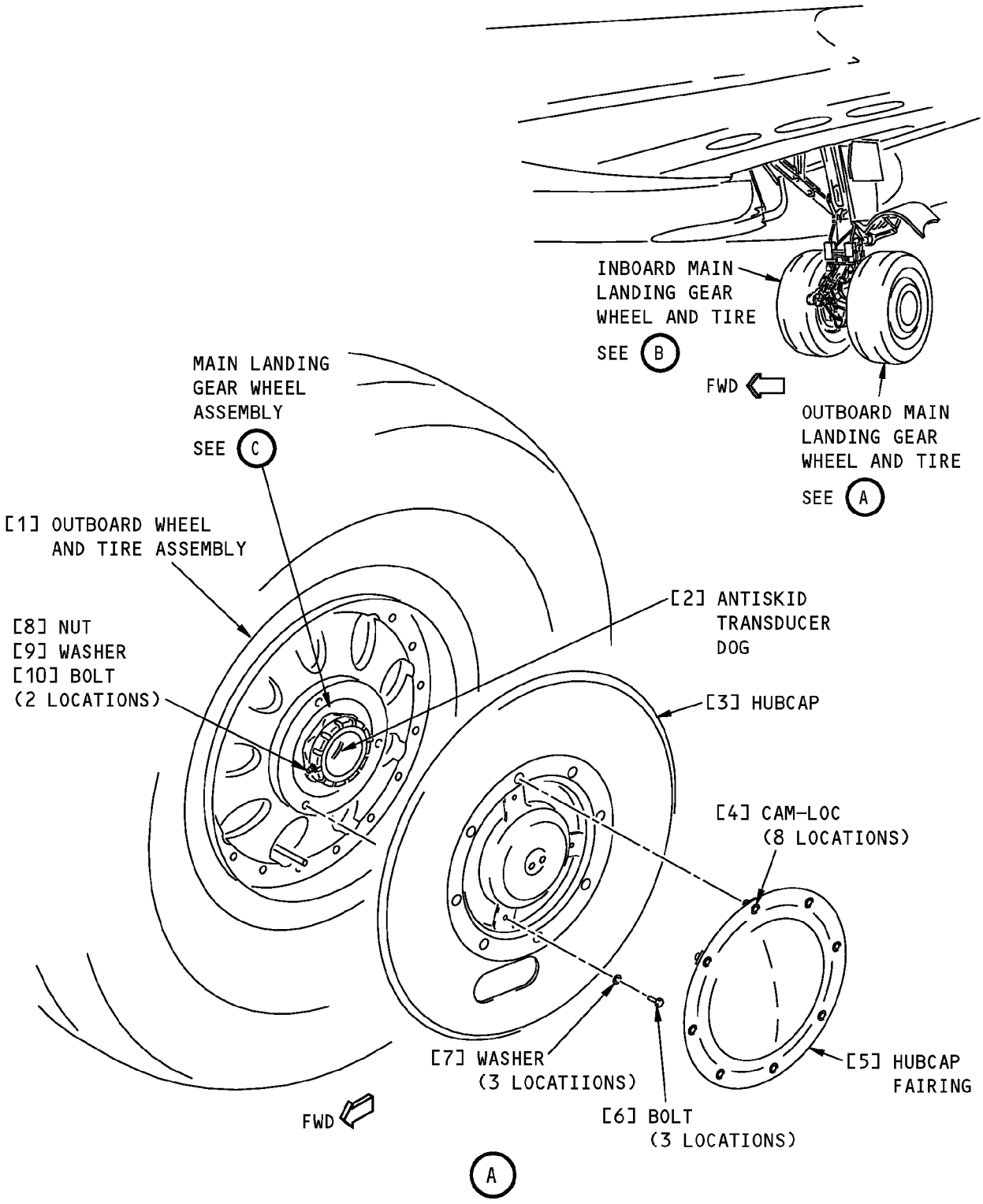
(f) Mark the reason for the tire removal on the tire to aid the inspectors when they examine the tire.

(g) Install the axle protector assembly, of the protector, SPL-1876, on the axle.

(h) Remove the wheel and tire assembly.

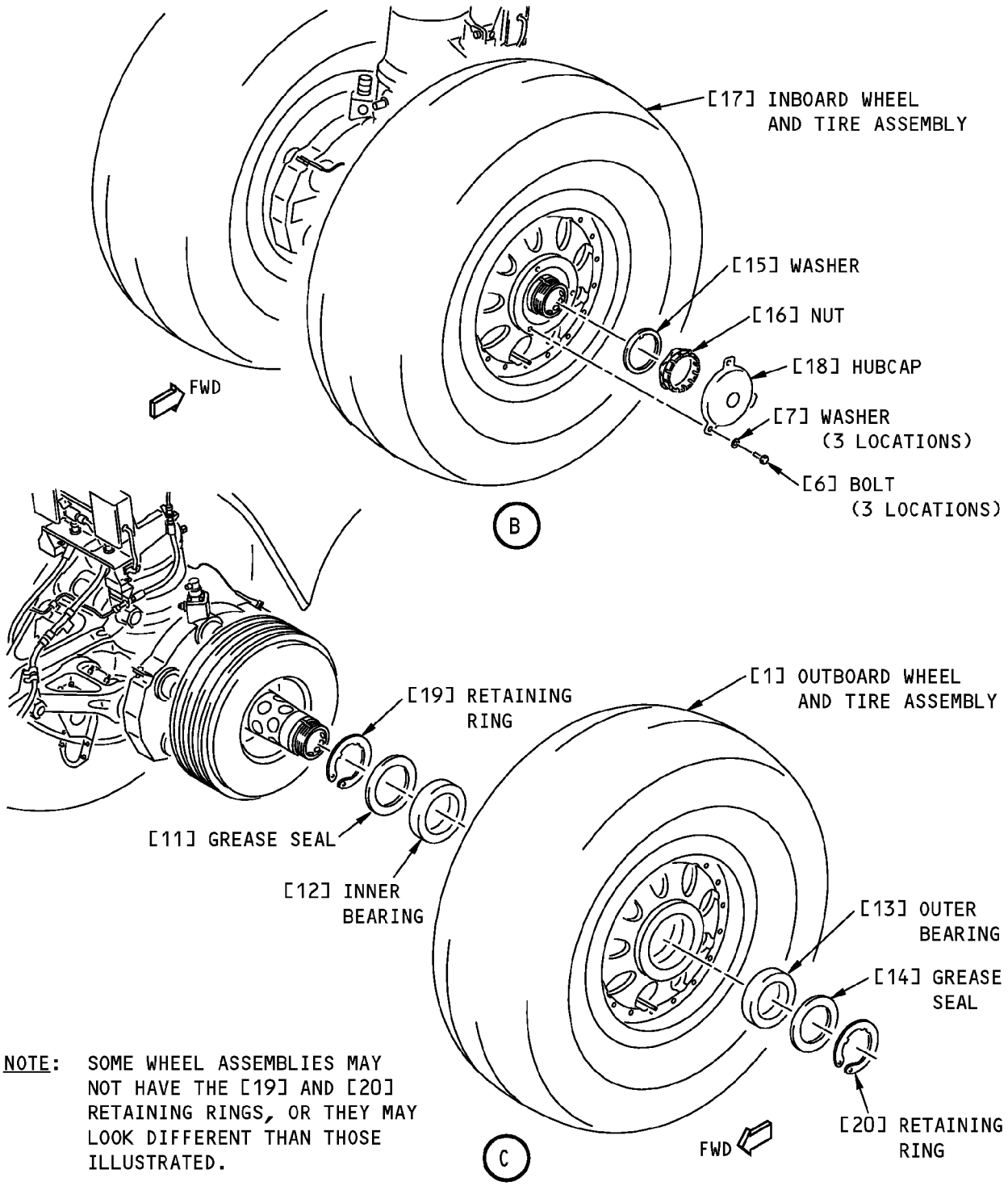
——————— END OF TASK ———————

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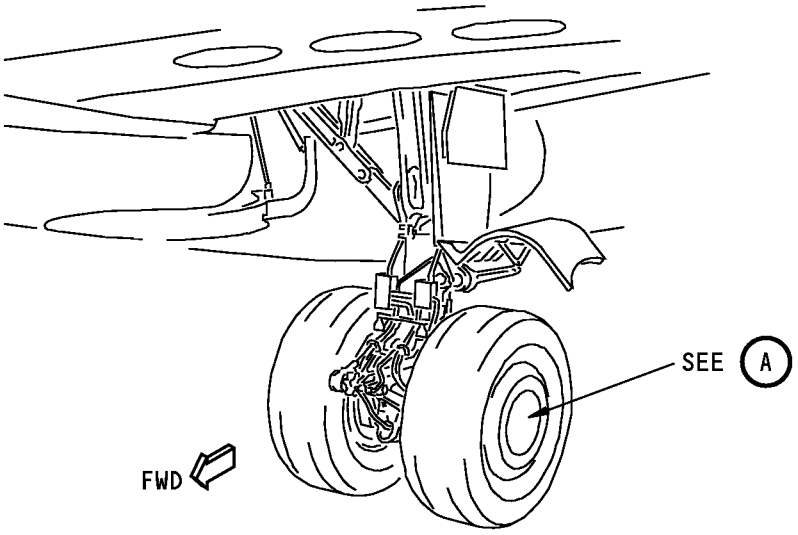
Main Landing Gear Wheel and Tire Assembly Installation
Figure 401 (Sheet 1 of 2)/32-45-11-990-801

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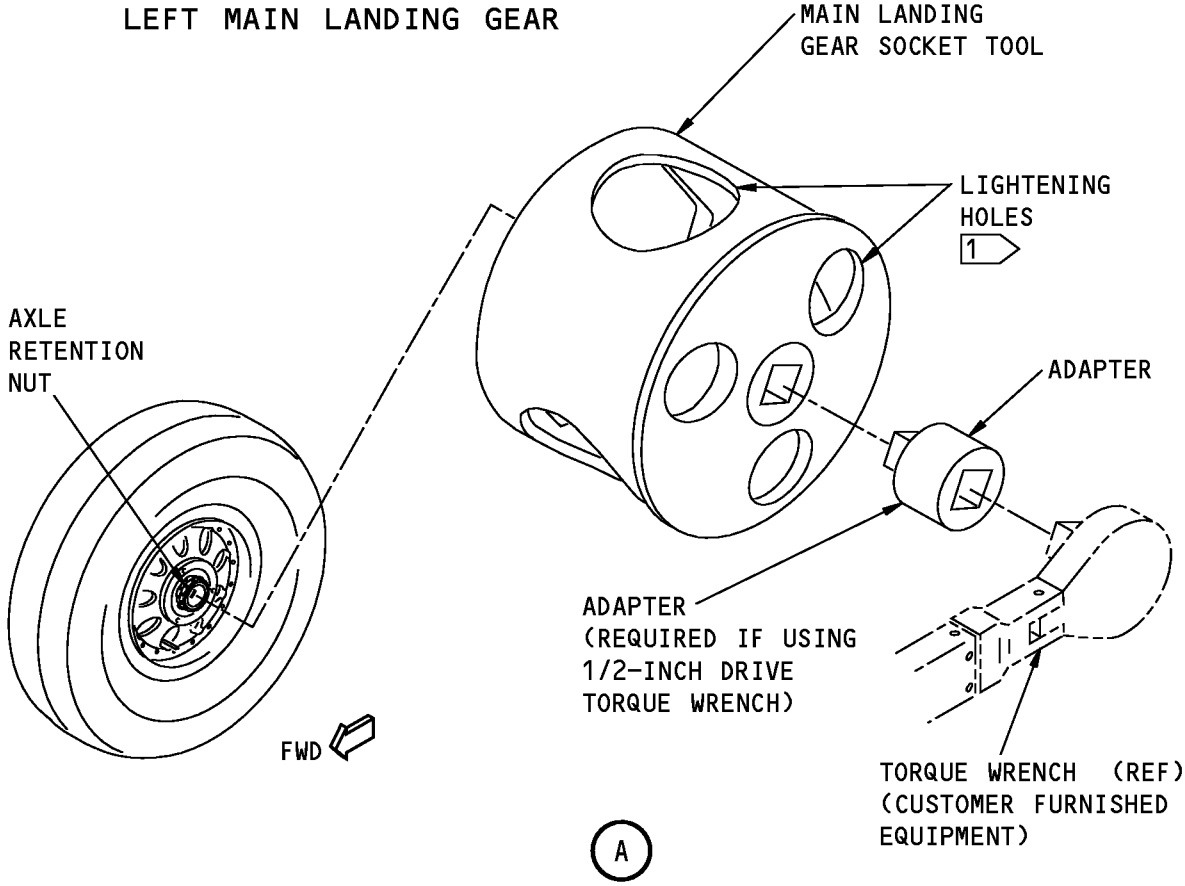


Main Landing Gear Wheel and Tire Assembly Installation
Figure 401 (Sheet 2 of 2)/32-45-11-990-801

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LEFT MAIN LANDING GEAR



1 WARNING: DO NOT PUT FINGERS IN THE LIGHTENING HOLES.

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Main Landing Gear Axle Nut Socket Tool
Figure 402/32-45-11-990-802

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TASK 32-45-11-400-801

3. Main Landing Gear Wheel and Tire Assembly Installation

(Figure 401 or Figure 402)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
07-11-03-580-801	Lift the Main Landing Gear Axles with the Axle Jacks (P/B 201)
12-15-51-780-801	Landing Gear Tire Pressure Check and Tire Servicing (P/B 301)
20-50-11 P/B 201	STANDARD TORQUE VALUES - MAINTENANCE PRACTICES
32-41-41-700-803	Main Landing Gear Brake Inspection (Wheel Removed from the Airplane) (P/B 601)
32-45-00-700-803	Tires Inspection (P/B 601)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1818	Dolly - Wheel/Brake Change (Part #: 175, Supplier: 94861, A/P Effectivity: 737-ALL) (Part #: 175S-2, Supplier: 94861, A/P Effectivity: 737-ALL) (Part #: 9092-015, Supplier: 00994, A/P Effectivity: 737-ALL) (Part #: IA3201A-500, Supplier: 3D5B2, A/P Effectivity: 737-ALL) (Opt Part #: 9092-010, Supplier: 00994, A/P Effectivity: 737-ALL) (Opt Part #: PF32-002-1, Supplier: 3D5B2, A/P Effectivity: 737-ALL) (Opt Part #: TB900, Supplier: 56535, A/P Effectivity: 737-ALL)
SPL-1865	Socket Kit - MLG Axle Nut (Part #: C32012-12, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1876	Protector - Thread, Eqpt. MLG/NLG Axle (MLG Axle Thread Protector and Anti-Skid Transducer Protector) (Part #: C32022-17, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32022-15, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
STD-1021	Wrench - Torque, 100 to 600 ft-lbs (135.58 to 813.48 N·m)

D. Consumable Materials

Reference	Description	Specification
D00233	Grease - Aircraft, General Purpose, Wide Temperature - Mobil 28	MIL-PRF-81322
D00378	Grease - Aircraft, General Purpose, Wide Temperature - Aeroshell 22	MIL-PRF-81322
D50005	Grease - Wheel Bearing - Mobil Aviation Grease SHC 100	

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Wheel and tire assembly	Not Specified	

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F. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

G. Main Landing Gear Wheel and Tire Assembly Installation

SUBTASK 32-45-11-840-002

(1) Do these steps to prepare for installation:

(a) Remove the axle protector assembly, of the protector, SPL-1876, from the axle.

(b) Remove all the old grease from the axle.

(c) Remove all the old grease from the inner diameter of the brake.

(d) Do an inspection of the brake.

1) Do this task: Main Landing Gear Brake Inspection (Wheel Removed from the Airplane), TASK 32-41-41-700-803.

(e) Do an inspection of the axle.

(f) Examine the antiskid transducer drive components in the axle and hubcap [3], [18] for damage.

(g) If the wheel is not new, inspect the bearings, the seals, and other parts of the wheel assembly.

(h) If the tire is not new, do a tire inspection.

1) Do this task: Tires Inspection, TASK 32-45-00-700-803.

(i) Do these steps if the wheel inboard and outboard bearing assemblies need to be installed:

1) Apply Aeroshell 22 grease, D00378, or Mobil 28 grease, D00233 or Mobil Aviation Grease SHC 100 grease, D50005 to all of the parts of the bearing assemblies.

CAUTION: MAKE SURE THE CORRECT BEARING IS INSTALLED IN THE OUTSIDE OF THE WHEEL. INSTALLATION OF THE INNER BEARING IN THE OUTER BEARING WHEEL LOCATION CAN CAUSE WHEEL DAMAGE.

2) Install the inner bearing [12] in the inner side of the wheel and the outer bearing [13] in the outer side of the wheel.

CAUTION: MAKE SURE THE CORRECT GREASE SEAL IS INSTALLED IN THE OUTSIDE OF THE WHEEL. INSTALLATION OF THE INNER GREASE SEAL IN THE OUTER GREASE SEAL WHEEL LOCATION CAN CAUSE SEAL DAMAGE.

3) Install the grease seal [11] in the inner side of the wheel and the grease seal [14] in the outer side of the wheel.

4) If part of the assembly, install the retention ring [19] in the inner side of the wheel and the retention ring [20] in the outer side of the wheel.

NOTE: Some wheel assemblies may not have the [19] and [20] retaining rings as part of the configuration, or they may look different from those illustrated. If you have any question concerning the configuration of your wheel assemblies, refer to the Component Maintenance Manual (CMM) for your assemblies.

SUBTASK 32-45-11-420-001

(2) Do these steps to install the wheel and tire assembly [1]:

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CAUTION: DO NOT APPLY GREASE TO THE AREA BETWEEN THE AXLE BEARINGS. HIGH TEMPERATURES IN THIS AREA DURING A LANDING CAN CAUSE ALL GREASE IN THIS AREA TO BURN. THIS CAN CAUSE DAMAGE TO WHEELS, TIRES, AND BRAKES.

(a) Apply a thin layer of Aeroshell 22 grease, D00378, or Mobil 28 grease, D00233, or Mobil Aviation Grease SHC 100 grease, D50005, to the inner diameter surface of the two bearings where they will touch the axle.

(b) Apply a thin layer of Aeroshell 22 grease, D00378, Mobil 28 grease, D00233 or Mobil Aviation Grease SHC 100 grease, D50005 to the faces of the washer [15] and the nut [16], and to the axle threads.

(c) Apply a thin layer of Aeroshell 22 grease, D00378, Mobil 28 grease, D00233 or Mobil Aviation Grease SHC 100 grease, D50005 on the axle where the axle will touch the wheel bearings.

(d) If you need to align the brake disks, do these steps:

1) Release the parking brake.

CAUTION: MAKE SURE THE BRAKE ROTORS ARE ALIGNED. DAMAGE TO THE ROTORS CAN OCCUR IF THE DRIVE KEYS ON THE WHEEL HIT THE ROTORS DURING INSTALLATION.

2) Align the brake disks.

3) Set the parking brake.

NOTE: This will keep the brake rotors aligned.

(e) Make sure the thread protector assembly, of the protector, SPL-1876, is installed.

(f) Install the wheel and tire assembly [1] with the wheel/brake changer dolly, COM-1818.

NOTE: Make sure the rotor drive keys on the wheel fully engage the key slots in the brake rotors.

(g) Remove the thread protector assembly, of the protector, SPL-1876, from the axle threads.

CAUTION: MAKE SURE YOU FIRMLY PUSH BOTH THE WHEEL AND LOCK WASHER ALL THE WAY ONTO THE AXLE UNTIL THE WHEEL IS SEATED PRIOR TO INSTALLING AND TIGHTENING THE AXLE NUT. MAKE SURE THE LOCK TANG IS FIRMLY ENGAGED IN THE KEYWAY GROOVE IN THE AXLE. DO NOT USE THE AXLE NUT TO PUSH THE WHEEL AND LOCK WASHER INTO PLACE. FAILURE TO FOLLOW THIS CAN CAUSE THE WHEEL TO BE LOOSE AND CAUSE DAMAGE TO THE EQUIPMENT.

(h) Install the washer [15].

(i) Install the nut [16].

(j) Release the parking brake.

WARNING: DO NOT PUT FINGERS IN THE LIGHTENING HOLES OF THE WHEEL RETAINING NUT SOCKET TOOL WHEN YOU REMOVE OR INSTALL THE WHEEL RETAINING NUT. THIS CAN CAUSE INJURIES TO PERSONS.

(k) Do these steps to tighten the nut [16] with the socket, SPL-1865 and the torque wrench, 100 to 600 ft-lbs (135.58 to 813.48N·m), STD-1021:

1) While you turn the wheel, tighten the nut [16] to 500-600 pound-feet (678-813 newton-meters).

a) Stop the wheel.

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b) Loosen the nut [16] to 10-30 pound-feet (14-41 newton-meters).

c) While you turn the wheel, tighten the nut [16] to 150 pound-feet (203 newton-meters).

d) If the holes for bolt [10] do not align, continue to tighten the nut [16] to align the holes.

NOTE: The holes will align every 6 degrees that you turn the nut.

NOTE: Do not tighten the nut to more than 300 pound-feet (407 newton-meters).

(l) Do these steps to install the two bolts [10] to lock the nut [16] to the wheel and tire assembly [1]:

1) Install the two bolts [10] with the heads to the inside of the axle.

2) Install the washers [9] and nuts [8].

3) Tighten the lockbolts [10] to 75-85 pound-inches, above run-on torque.

NOTE: Check the self locking nut per (STANDARD TORQUE VALUES - MAINTENANCE PRACTICES, PAGEBLOCK 20-50-11/201).

SUBTASK 32-45-11-420-002

CAUTION: DO NOT TIGHTEN THE HUBCAP BOLTS TOO MUCH. MAKE SURE THAT THE HUBCAP IS IN THE CORRECT POSITION BEFORE YOU TIGHTEN THE BOLTS. TOO MUCH TORQUE WILL CAUSE DAMAGE TO THE BOLTS AND THE HUBCAP.

(3) Do these steps to install the hubcaps [3] and [18]:

(a) Turn the antiskid transducer dog [2] inside the wheel and tire assembly [1] such that the drive on the hubcaps [3], [18], and the dog [2] in the wheel will connect when the hubcap is installed.

(b) Put the hubcap [3] and [18] in its position on the wheel and tire assembly [1].

(c) Install the three bolts [6] and washers [7] to connect the hubcaps [3] and [18] to the wheel and tire assembly [1] and torque the three bolts [6] to 50 to 80 in-lbs.

(d) Install lockwire on the bolts [6].

(e) Do these steps for the outboard wheel:

1) Put the hubcap fairing [5] on the hubcap [3].

2) Turn the eight Cam-Loc fasteners [4], 1/4 turn to attach the fairing [5] to the hubcap [3].

SUBTASK 32-45-11-610-001

(4) Do this task: Landing Gear Tire Pressure Check and Tire Servicing, TASK 12-15-51-780-801.

NOTE: The tire must be inflated to at least half of the normal tire inflation pressure before you remove the jacks.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 32-45-11-580-002

(1) Lower the axle and remove the jacks (TASK 07-11-03-580-801).

——————— END OF TASK ———————

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NOSE LANDING GEAR WHEEL AND TIRE ASSEMBLY - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) A removal of the nose landing gear wheel and tire assembly

(2) An installation of the nose landing gear wheel and tire assembly.

TASK 32-45-21-000-801

2. Nose Landing Gear Wheel and Tire Assembly Removal

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
07-11-03-580-802	Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-45-00-700-801	Wheels Fast Check (Wheel Installed on the Airplane) (P/B 601)
32-45-00-700-803	Tires Inspection (P/B 601)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1818	Dolly - Wheel/Brake Change (Part #: 175, Supplier: 94861, A/P Effectivity: 737-ALL) (Part #: 175S-2, Supplier: 94861, A/P Effectivity: 737-ALL) (Part #: 9092-015, Supplier: 00994, A/P Effectivity: 737-ALL) (Part #: IA3201A-500, Supplier: 3D5B2, A/P Effectivity: 737-ALL) (Opt Part #: 9092-010, Supplier: 00994, A/P Effectivity: 737-ALL) (Opt Part #: PF32-002-1, Supplier: 3D5B2, A/P Effectivity: 737-ALL) (Opt Part #: TB900, Supplier: 56535, A/P Effectivity: 737-ALL)
COM-4046	Deflator - Tire, Valve Core Removal and Installation (Small Bore) and Tire Deflation (Part #: 320008B, Supplier: SB968, A/P Effectivity: 737-ALL) (Part #: 968RB, Supplier: 51579, A/P Effectivity: 737-ALL)
SPL-1817	Socket - Axle Nut, Nose Landing Gear (Part #: 1922, Supplier: 45225, A/P Effectivity: 737-ALL) (Part #: F80168-1, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1865	Socket Kit - MLG Axle Nut (Part #: C32012-12, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1877	Protector - Thread, Eqpt, MLG/NLG Axle (NLG Axle Thread Protector) (Part #: C32022-20, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32022-2, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

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D. Location Zones

Zone	Area
713	Nose Landing Gear

E. Prepare for the Removal

SUBTASK 32-45-21-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-45-21-480-002

(2) Make sure the tires have chocks installed around them.

SUBTASK 32-45-21-860-001

(3) Make sure the parking brake is set.

SUBTASK 32-45-21-580-001

(4) For the nose landing gear, lift the wheel and tire assembly with jacks until they are clear of the ground. To do this, do this task: Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E, TASK 07-11-03-580-802.

SUBTASK 32-45-21-840-001

WARNING: FULLY DEFLATE THE TIRE BEFORE YOU REMOVE THE WHEEL AND TIRE ASSEMBLY. OR, DO AN INSPECTION OF THE WHEEL AND TIRE TO MAKE SURE THAT THEY ARE SAFE. AIR PRESSURE CAN CAUSE AN EXPLOSION OF THE DAMAGED WHEEL AND TIRE COMPONENTS. INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT CAN OCCUR.

(5) Do one of the steps that follow:

(a) Inspect the wheel and tire assembly [1]:

1) Do this task: Wheels Fast Check (Wheel Installed on the Airplane), TASK 32-45-00-700-801.

2) Do this task: Tires Inspection, TASK 32-45-00-700-803.

WARNING: MAKE SURE ALL PERSONS ARE CLEAR OF THE INFLATION VALVE PATH. IF THE VALVE BLOWS OFF WHILE YOU REMOVE IT, INJURY TO PERSONS CAN OCCUR.

(b) Deflate the tire with the small bore tire deflator, COM-4046.

(c) If you cannot use the usual procedure to deflate the tire because the valve core is damaged, do these steps:

1) Turn the valve assembly slowly in a counterclockwise direction until there is gas leakage through the boss.

2) At the same time, push lightly on the valve assembly.

3) After all of the gas has been released, remove the valve assembly from the tire.

F. Nose Landing Gear Wheel and Tire Assembly Removal

SUBTASK 32-45-21-020-001

(1) Do these steps to remove the wheel and tire assembly [1]:

(a) Remove the lock bolts [4] that hold the nut [3] to the axle.

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(b) Remove the axle nut [3] with the socket, SPL-1817, from kit socket, SPL-1865.

(c) Remove the retention washer [2].

(d) Install the thread protector assembly, of the protector, SPL-1877, on the axle threads.

NOTE: You can use tape to hold the thread protector to the axle if it is necessary.

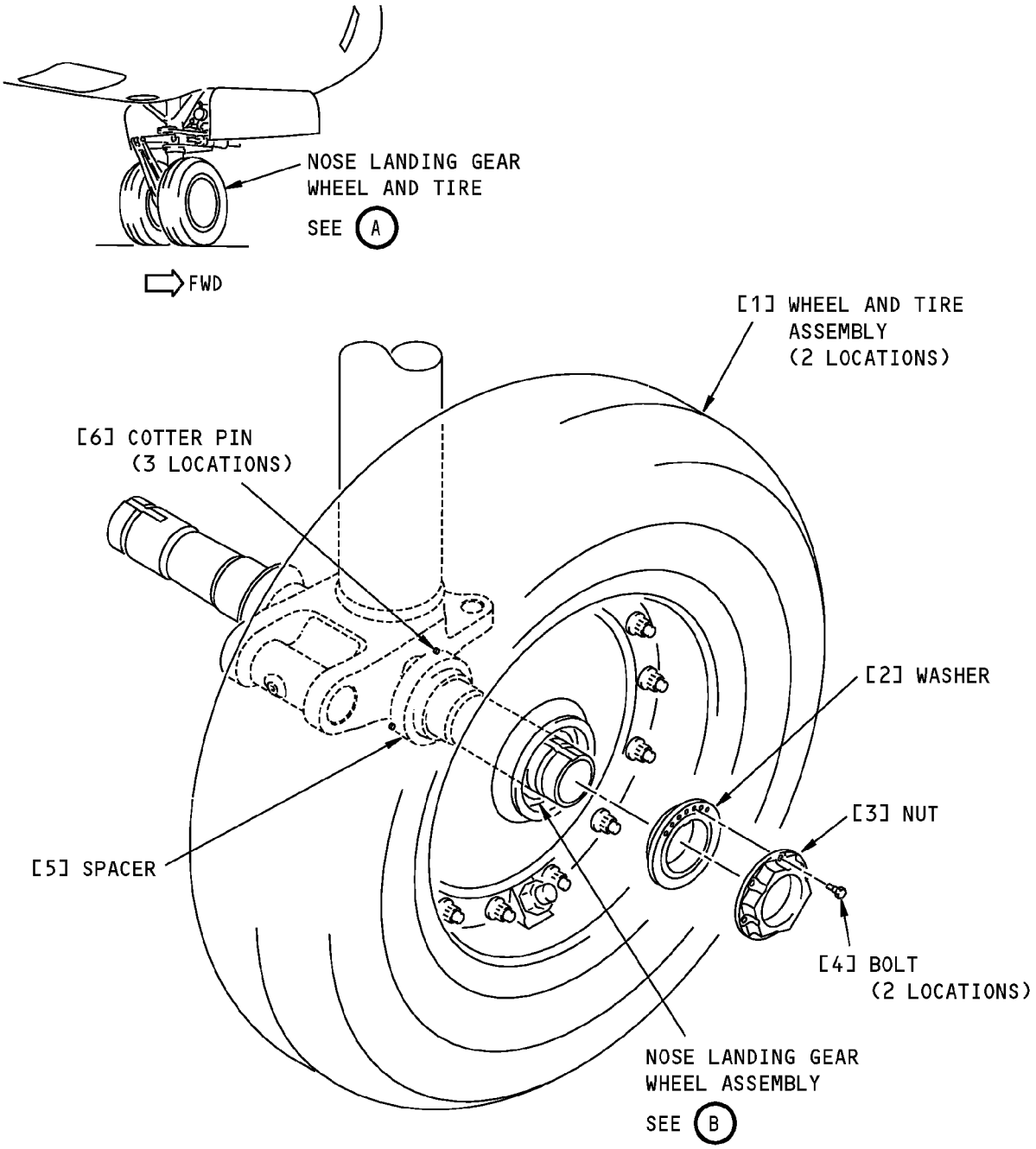
(e) Use the wheel/brake changer dolly, COM-1818, to lift and remove the wheel and tire assembly [1].

(f) Mark the reason for the tire removal on the tire to aid the inspectors when they examine the tire.

(g) Install the axle protector assembly, of the protector, SPL-1877, on the axle.

END OF TASK

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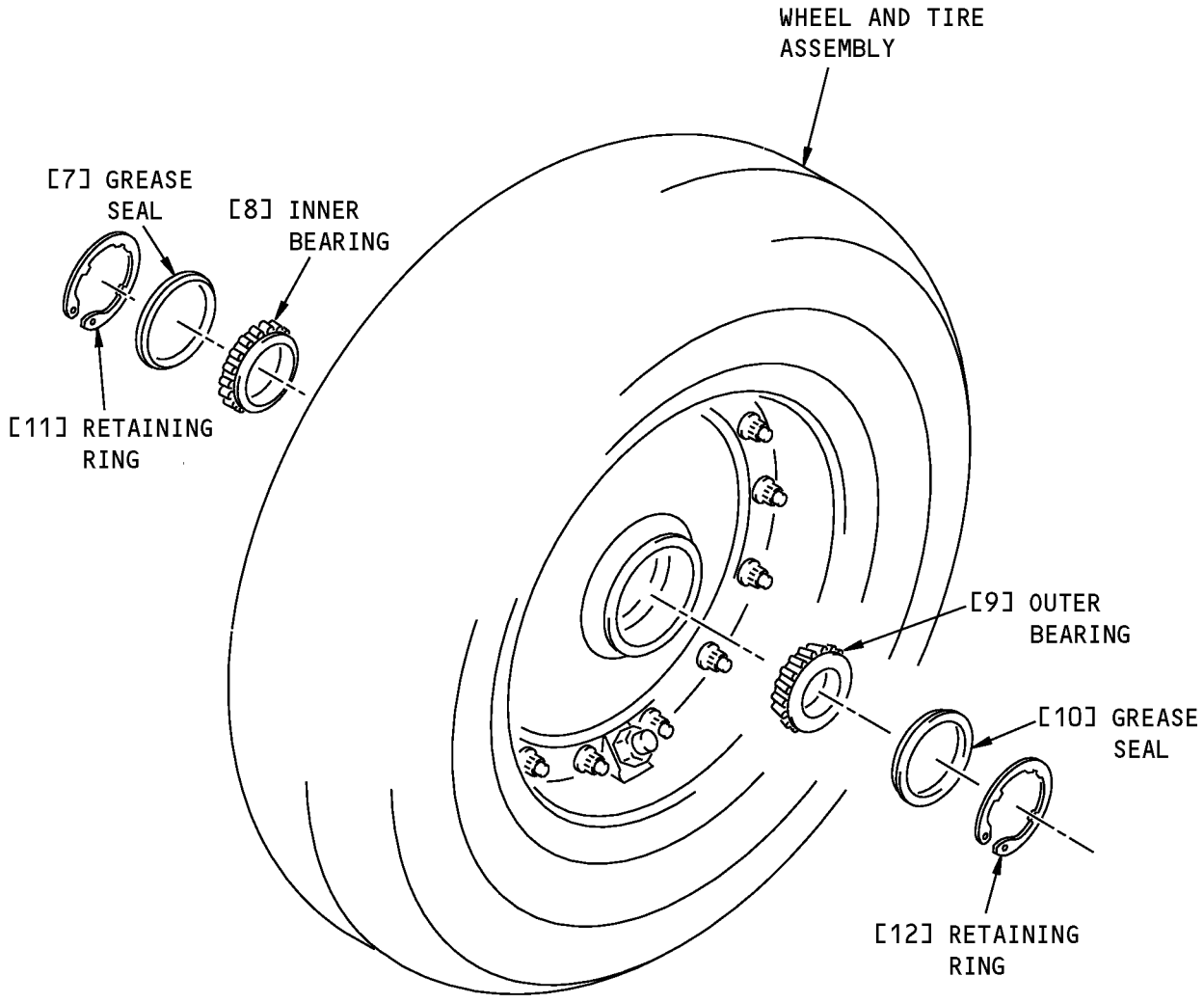


NOSE LANDING GEAR WHEEL AND TIRE
(EXAMPLE)

A

Nose Landing Gear Wheel and Tire Assemblies Installation
Figure 401 (Sheet 1 of 3)/32-45-21-990-801

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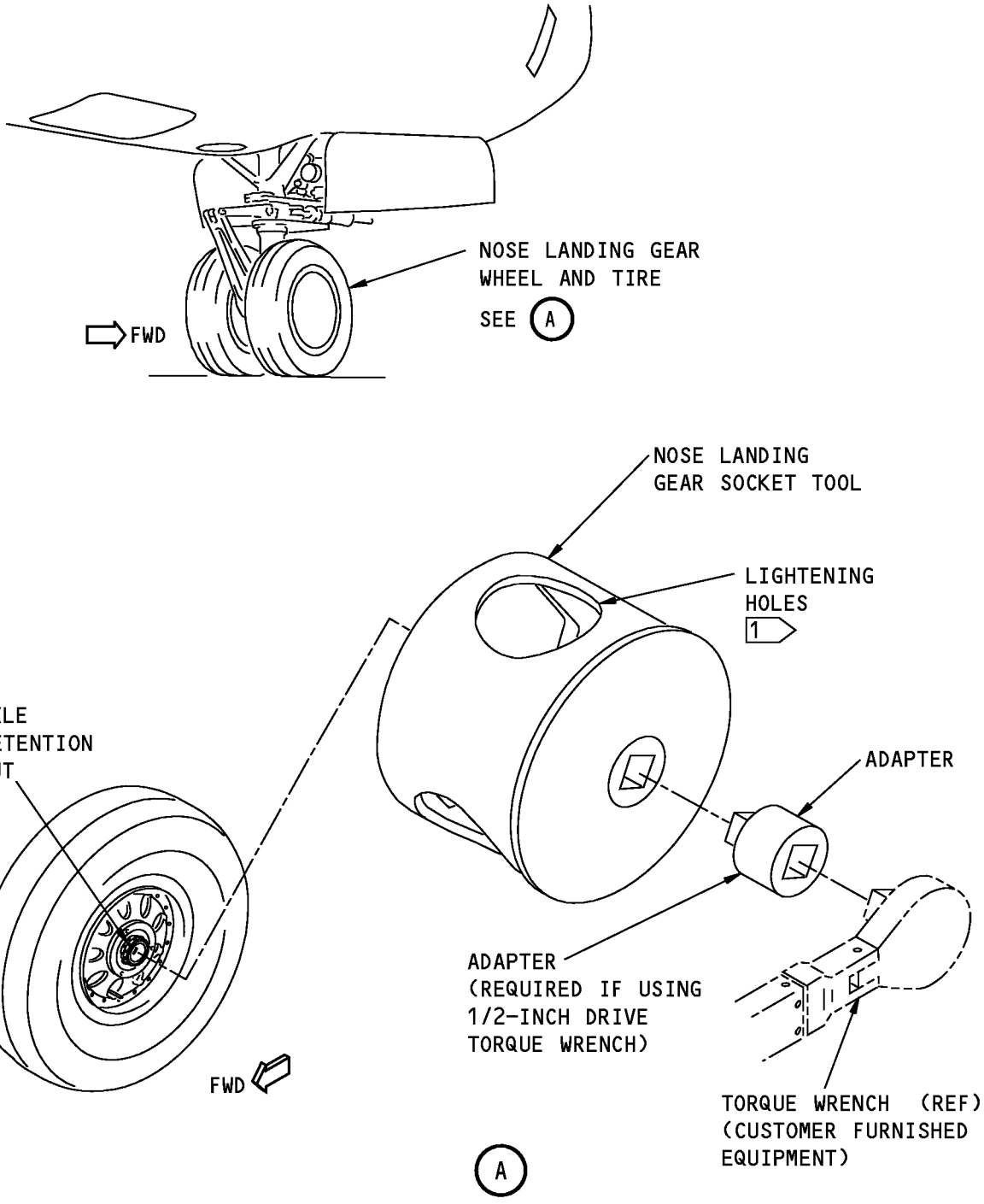
NOSE LANDING GEAR WHEEL ASSEMBLY

B

NOTE: RETAINING RINGS CAN LOOK DIFFERENT.

Nose Landing Gear Wheel and Tire Assemblies Installation
Figure 401 (Sheet 2 of 3)/32-45-21-990-801

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1 WARNING: DO NOT PUT FINGERS IN THE LIGHTENING HOLES.

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Nose Landing Gear Wheel and Tire Assemblies Installation
Figure 401 (Sheet 3 of 3)/32-45-21-990-801

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TASK 32-45-21-400-801

3. Nose Landing Gear Wheel and Tire Assembly Installation

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
07-11-03-580-802	Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E (P/B 201)
12-15-51-780-801	Landing Gear Tire Pressure Check and Tire Servicing (P/B 301)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1818	Dolly - Wheel/Brake Change (Part #: 175, Supplier: 94861, A/P Effectivity: 737-ALL) (Part #: 175S-2, Supplier: 94861, A/P Effectivity: 737-ALL) (Part #: 9092-015, Supplier: 00994, A/P Effectivity: 737-ALL) (Part #: IA3201A-500, Supplier: 3D5B2, A/P Effectivity: 737-ALL) (Opt Part #: 9092-010, Supplier: 00994, A/P Effectivity: 737-ALL) (Opt Part #: PF32-002-1, Supplier: 3D5B2, A/P Effectivity: 737-ALL) (Opt Part #: TB900, Supplier: 56535, A/P Effectivity: 737-ALL)
SPL-1817	Socket - Axle Nut, Nose Landing Gear (Part #: 1922, Supplier: 45225, A/P Effectivity: 737-ALL) (Part #: F80168-1, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1865	Socket Kit - MLG Axle Nut (Part #: C32012-12, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1877	Protector - Thread, Eqpt, MLG/NLG Axle (NLG Axle Thread Protector) (Part #: C32022-20, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32022-2, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Consumable Materials

Reference	Description	Specification
D00233	Grease - Aircraft, General Purpose, Wide Temperature - Mobil 28	MIL-PRF-81322
D00378	Grease - Aircraft, General Purpose, Wide Temperature - Aeroshell 22	MIL-PRF-81322
D50005	Grease - Wheel Bearing - Mobil Aviation Grease SHC 100	

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Wheel and tire assembly	32-45-21-01-005	HAP ALL

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F. Location Zones

Zone	Area
713	Nose Landing Gear

G. Nose Landing Gear Wheel and Tire Assembly Installation

SUBTASK 32-45-21-840-002

(1) Do these steps to prepare for installation:

(a) Remove the axle protector assembly, of the protector, SPL-1877, from the axle.

(b) Remove all the old grease from the axle.

(c) If the wheel is not new, inspect the bearings, the seals, and other parts of the wheel assembly.

(d) If the tire is not new, do a tire inspection.

(e) Do these steps if the component of the nose wheel assembly (the bearings, the seals, and other parts) need to be installed:

1) Apply Aeroshell 22 grease, D00378, or Mobil 28 grease, D00233, or Mobil Aviation Grease SHC 100 grease, D50005 to bearing [8], bearing [9], grease seal [7], and the grease seal [10].

CAUTION: MAKE SURE THE CORRECT BEARING IS INSTALLED ON THE OUTSIDE OF THE WHEEL. INCORRECT INSTALLATION CAN CAUSE DAMAGE.

2) Install the inner bearing [8] on the inner side of the wheel and the outer bearing [9] on the outer side of the wheel.

NOTE: Check that inner bearing is installed on the wheel side opposite inflation valve.

CAUTION: MAKE SURE THE CORRECT GREASE SEAL IS INSTALLED ON THE OUTSIDE OF THE WHEEL. INCORRECT INSTALLATION CAN CAUSE DAMAGE.

3) Install the grease seal [7] on the inner side of the wheel and the grease seal [10] on the outer side of the wheel.

NOTE: Check that tab of grease seal fits indentation of cutout in wheel housing.

4) Install the retention ring [11] on the inner side of the wheel and the retention ring [12] on the outer side of the wheel.

SUBTASK 32-45-21-420-001

(2) Do these steps to install the wheel and tire assembly [1]:

CAUTION: MAKE SURE THAT THE SPACER IS CORRECTLY INSTALLED ON THE AXLE. THE SPACER CAN MOVE WHEN THE WHEEL AND TIRE ASSEMBLY IS REMOVED. IF IT IS NOT IN ITS CORRECT POSITION, THE WHEEL AND TIRE ASSEMBLY WILL NOT INSTALL CORRECTLY. THIS CAN CAUSE DAMAGE TO EQUIPMENT.

(a) Make sure the axle spacer [5] is installed on the axle.

NOTE: The axle spacer [5] is inboard of the wheel on the axle. The inner bearing will touch the spacer when the wheel is installed.

1) Make sure the three cotter pins [6] are installed to hold the spacer on the axle.

NOTE: Make sure that there is no interference between the three cotter pins [6] installed on the spacer and the lower torsion link lug during wheel installation.

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CAUTION: DO NOT APPLY GREASE TO THE AREA BETWEEN THE AXLE BEARINGS. HIGH TEMPERATURES IN THIS AREA DURING A LANDING CAN CAUSE ALL GREASE IN THIS AREA TO BURN. THIS CAN CAUSE DAMAGE TO WHEELS, TIRES, AND BRAKES.

(b) Apply a thin layer of Aeroshell 22 grease, D00378, or Mobil 28 grease, D00233, or Mobil Aviation Grease SHC 100 grease, D50005 to the face and outer diameter of the spacer [5].

(c) Apply a thin layer of Aeroshell 22 grease, D00378, or Mobil 28 grease, D00233, or Mobil Aviation Grease SHC 100 grease, D50005, to the inner diameter surface of the two bearings where they will touch the axle.

(d) Apply a thin layer of Aeroshell 22 grease, D00378, or Mobil 28 grease, D00233, or Mobil Aviation Grease SHC 100 grease, D50005 to the faces of the washer [2] and the nut [3], and to the axle threads.

(e) Apply a thin layer of Aeroshell 22 grease, D00378, or Mobil 28 grease, D00233, or Mobil Aviation Grease SHC 100 grease, D50005 on the axle where the axle will touch the wheel bearings.

(f) Make sure the thread protector assembly, of the protector, SPL-1877, is installed.

(g) Use the wheel/brake changer dolly, COM-1818, to install the wheel and tire assembly [1].

(h) Remove the thread protector assembly, of the protector, SPL-1877, from the axle threads.

(i) Align the key of the washer with the keyway of the axle and install the washer [2].

(j) Install the nut [3].

(k) Do these steps to tighten the nut [3] with the socket, SPL-1817, from kit socket, SPL-1865:

1) While you turn the wheel, tighten the nut [3] to 80-100 pound-feet (108-136 newton-meters).

a) Stop the wheel.

b) While you turn the wheel, loosen the nut [3] to almost zero torque.

c) While you turn the wheel, tighten the nut [3] to 30 pound-feet (41 newton-meters).

d) Continue to tighten the nut [3] until two bolt holes in the nut align with two threaded holes in the washer [2].

NOTE: Do not tighten the nut over 60 pound-feet (81 newton-meters).

(l) Install the two lock bolts [4] to lock the nut [3] to the washer [2].

(m) Install lockwire on the lock bolts [4].

SUBTASK 32-45-21-580-002

(3) Make sure the tire is inflated to at least half of the normal inflation pressure before you remove the jacks (Landing Gear Tire Pressure Check and Tire Servicing, TASK 12-15-51-780-801).

SUBTASK 32-45-21-580-003

(4) Lower the axle and remove the jacks (TASK 07-11-03-580-802).

SUBTASK 32-45-21-610-001

(5) Do this task: Landing Gear Tire Pressure Check and Tire Servicing, TASK 12-15-51-780-801.

END OF TASK

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NOSE WHEEL SPIN BRAKE LINING - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks for the nose wheel spin brake lining.

(1) A removal of the nose wheel spin brake lining

(2) An installation of the nose wheel spin brake lining

(3) An inspection of the nose wheel spin brakes lining.

B. There are two nose wheel spin brake linings, one for each nose landing gear tire.

TASK 32-45-31-000-801

2. Nose Wheel Spin Brake Lining - Removal

(Figure 201)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right

C. Procedure

SUBTASK 32-45-31-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-45-31-860-001

(2) Set the parking brake.

SUBTASK 32-45-31-020-001

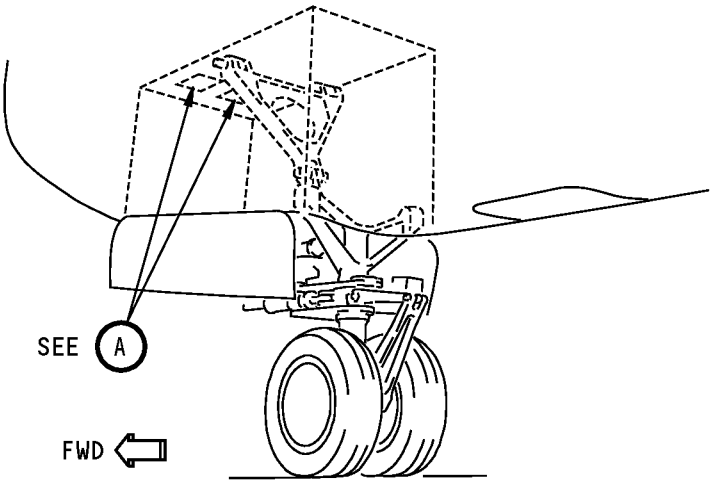
(3) Remove the screws [6], washers [1], and the nuts [2] which hold the spin brake lining [5] to the spin brake spring [3].

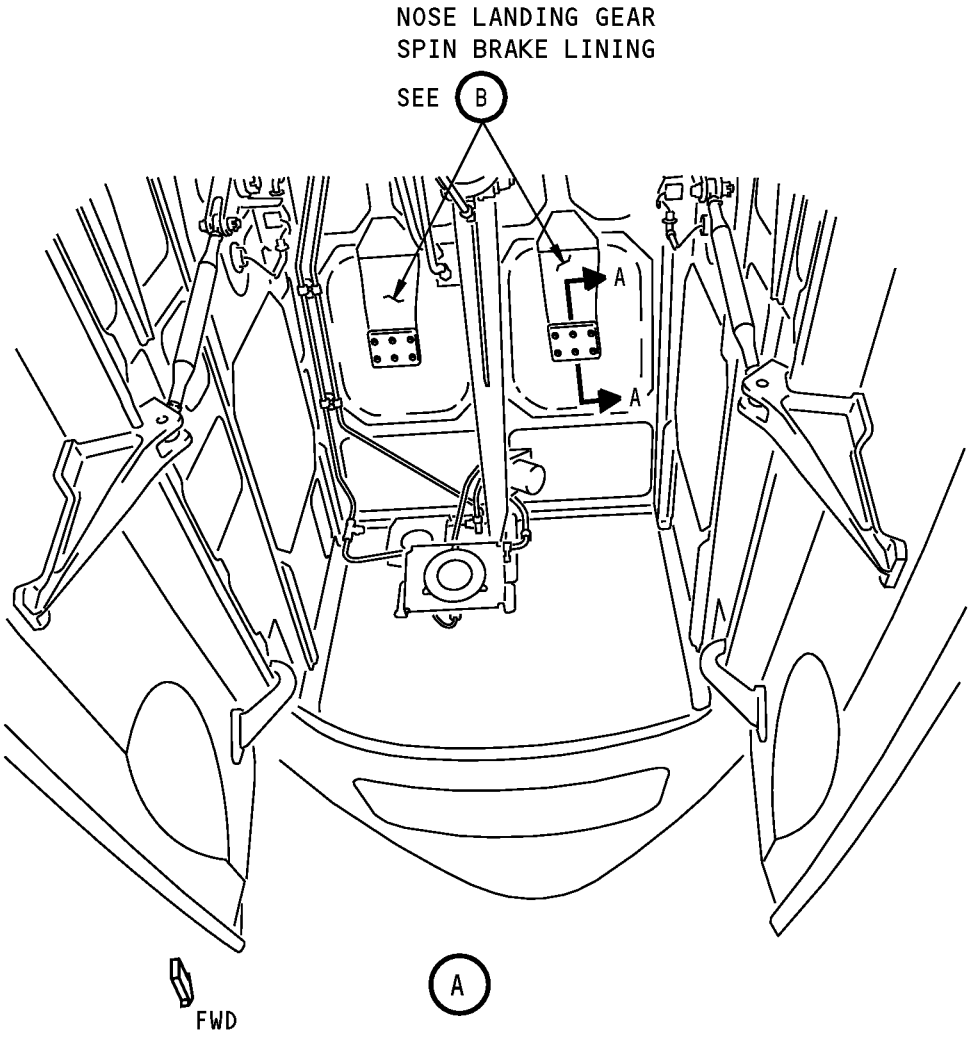
SUBTASK 32-45-31-020-002

(4) Remove the spin brake lining [5] and the spacers [4].

———————— END OF TASK ————————

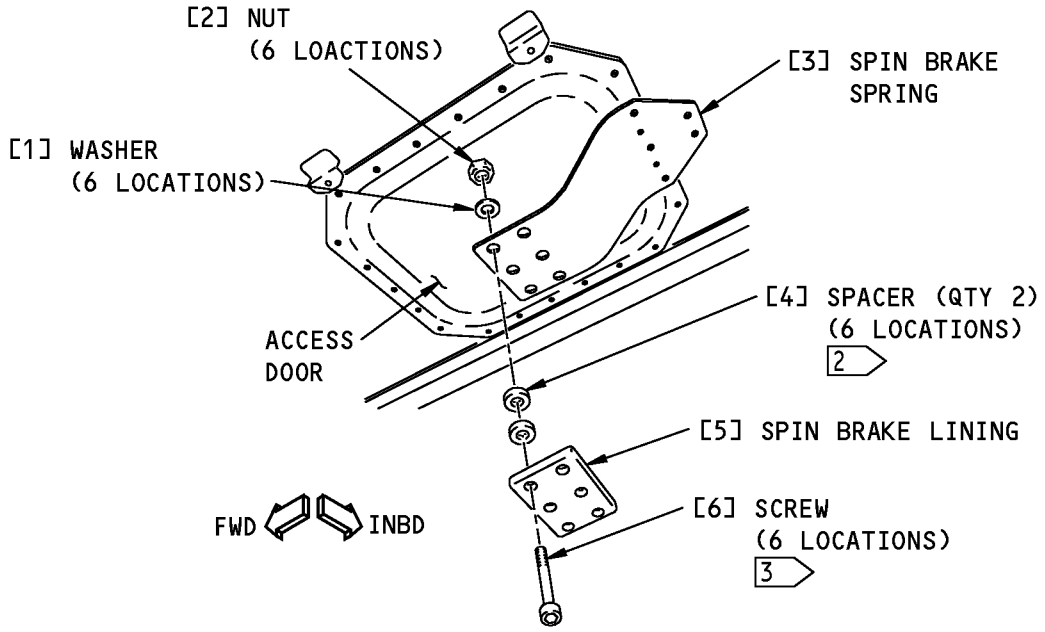
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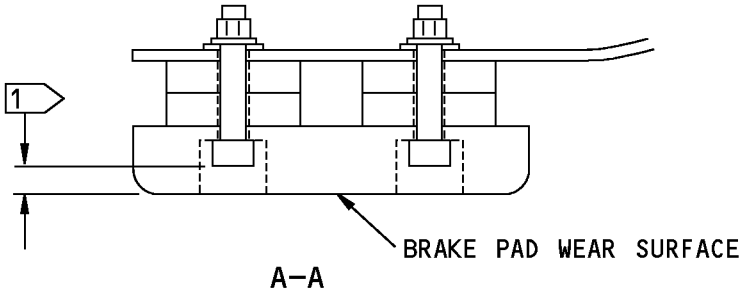
Nose Landing Gear Spin Brake Lining Installation
Figure 201 (Sheet 1 of 2)/32-45-31-990-801

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NOSE LANDING GEAR SPIN BRAKE LINING
(LEFT SIDE IS SHOWN, RIGHT SIDE IS EQUIVALENT)

B



A–A

1 REPLACE BRAKE PAD IF THICKNESS IS EQUAL TO OR LESS THAN 0.060 INCH (1.524 mm).

2 TWO SPACERS IS THE STANDARD CONFIGURATION. HOWEVER, SOME AIRPLANES HAVE EITHER ONE OR THREE SPACERS THAT SEPARATE THE PAD AND THE SPRING.

3 FOR ONE OR TWO SPACERS, 1-INCH BOLTS ARE USED. IF THREE SPACERS ARE REQUIRED, 1.25-INCH BOLTS MUST BE USED.

F95291 S0006575687_V2

Nose Landing Gear Spin Brake Lining Installation
Figure 201 (Sheet 2 of 2)/32-45-31-990-801

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TASK 32-45-31-400-801

3. Nose Wheel Spin Brake Lining - Installation

(Figure 201)

A. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95

B. Location Zones

Zone	Area
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right

C. Procedure

SUBTASK 32-45-31-420-001

(1) Apply sealant, A00247 to the six locations on the spin brake spring [3] where you will install the spacers [4].

SUBTASK 32-45-31-420-002

(2) Hold the spin brake lining [5] in its position on the spin brake spring [3].

SUBTASK 32-45-31-420-003

(3) Do these steps for each screw [6]:

(a) Install two spacers [4] between the block and the spin brake spring [3] where you will install the screw [6].

(b) Install the screw [6] through the spin brake lining [5], spacers [4], and the spin brake spring [3].

(c) Install the washer [1] and the nut [2] on the screw [6].

——————— END OF TASK ———————

TASK 32-45-31-700-801

4. Nose Wheel Spin Brake Lining Inspection

(Figure 201)

A. Location Zones

Zone	Area
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right

B. Procedure

SUBTASK 32-45-31-220-001

(1) Measure the distance from the head of each bolt [6] to the wear surface of the spin brake lining [5].

SUBTASK 32-45-31-350-001

(2) If this distance you measured is less than 0.060 inches (1.524 mm) you must replace that spin brake lining [5]:

These are the tasks:

- Nose Wheel Spin Brake Lining - Removal, TASK 32-45-31-000-801,

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- Nose Wheel Spin Brake Lining - Installation, TASK 32-45-31-400-801.

END OF TASK

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NOSE WHEEL STEERING SYSTEM - ADJUSTMENT/TEST

1. General

A. This procedure contains these tasks:

(1) The general check of the adjustment of the steering system on the nose wheel

(2) The check of the adjustment of the interconnect mechanism for the rudder pedals

(3) The adjustment of the interconnect mechanism for the rudder pedals

(4) The check of the adjustment of the steering system on the nose wheel

(5) The adjustment of the steering system on the nose wheel

(6) The test of the steering system on the nose wheel.

B. Nose wheel steering system adjustment has two parts that must be done in sequence. The first part is an adjustment of the interconnect mechanism for the rudder pedals that includes the nose gear piston position (NGPP) cable loop. The second part is an adjustment of the cable loop for the nose wheel steering (NWS) and rudder input. In general, it is necessary to adjust the cables when the rig loads disagree with the loads given in Table I by more than +15/-5 pounds. You must let the cable temperatures become stable at least 1 hour before you try to adjust and/or check the cable load.

C. Hydraulic pressure to the nose wheel steering system is necessary for this adjustment procedure.

D. The rig load for the cables change with the ambient temperature per Table I.

E. Use the shock strut centering cam to get the centered position for the nose gear. Manual assistance can be necessary to make sure the cam is correctly centered.

F. When the cables are adjusted to the correct rig loads all the rig pins can be inserted in their rig pin holes and removed freely, without binding.

TASK 32-51-00-820-803

2. General Check of the Adjustment of the Nose Wheel Steering System

(Figure 501)

A. General

(1) This procedure provides instructions to do a general check of the adjustment of the nose wheel steering system. If the cable tension is within limits, the rig pin fit is good, and the system test is satisfactory, then the nose wheel steering system is fully operable.

B. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

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D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

E. Prepare for the General Check of the Adjustment of the Nose Wheel Steering System

SUBTASK 32-51-00-480-014

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-51-00-860-051

WARNING: MAKE SURE YOU REMOVE THE HYDRAULIC POWER FOR THE NOSE WHEEL STEERING BEFORE YOU DO THE CHECK. HYDRAULIC POWER CAN CAUSE MOVEMENT TO THE NOSE WHEELS AND INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-51-00-860-080

(3) Final control cable adjustments can only be performed on a temperature stabilized airplane. An airplane is considered temperature stabilized when the requirements that follow are met:

(a) The outside ambient temperature has not changed by more than 5 degrees F over the last hour.

(b) The outside ambient temperature does not change at a rate greater than 5 degrees F per hour while you adjust the tension of the cables.

(c) The airplane is not in direct sunlight OR the procedure that follows indicates temperatures are stabilized.

1) Measure the temperatures at these locations:
- Inside: Near the center of each compartment that the cable run passed through or is adjacent to including the passenger cabin, EE bay, and forward cargo compartment
- Outside: Within five inches of the fuselage skin on both the left and right sides just below the forward entry doors (Two locations)

2) The airplane can be considered temperature stabilized if the difference between the lowest and highest recorded temperature is less than five degrees F.

(d) The entry doors, cargo doors, and the EE bay access hatch have been open for at least one hour and will remain open while you adjust the tension of the cables OR the measured temperatures inside are within 5 degrees F of the measured outside temperatures.

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(e) There are no significant sources of heat inside the airplane that can cause the internal temperature in any compartment to be five degrees F or more above the ambient temperature.

F. General Check of the Adjustment of the Nose Wheel Steering System

SUBTASK 32-51-00-820-014

(1) Make sure the tension in the cables NGPP-A and NGPP-B is such that the load necessary to deflect the cable 0.50 +/- 0.05 inch (12.7 +/- 1.3 millimeters) downward at the turnbuckle is 16-22 pounds (71.2-97.9 newtons) (as measured with a spring scale).

SUBTASK 32-51-00-820-015

(2) Make sure the tension in the cables NWS-A and NWS-B is in tolerance (see Table I).

SUBTASK 32-51-00-480-015

(3) Install these rig pins, rig pin kit, SPL-1585, as follows:

(a) Rig pin NWS2 in the Captain's control wheel drum.

(b) Rig pin NWS1 in the interconnect quadrant.

(c) Rig pin NWS5 in the interconnect eccentric drum. Do the following steps:

1) Do this task: Put the Airplane in the Air Mode, TASK 32-09-00-860-801.

2) Make sure the interconnect eccentric drum rig pin hole and bracket rig pin slot line up.

3) Install rig pin NWS5.

(d) Rig pin R3 in the rudder forward quadrant.

(e) Rig pin NWS4 in the summing mechanism bracket at the steering metering valve.

SUBTASK 32-51-00-820-016

(4) Make sure all the rig pins have a free fit.

NOTE: The rig pins have a free fit if you can install or remove them with two fingers. Some resistance is permitted.

SUBTASK 32-51-00-080-010

(5) Remove all the rig pins.

SUBTASK 32-51-00-080-015

(6) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

SUBTASK 32-51-00-730-037

(7) With the control wheel in the center position, make sure the steering angle is 0 +/-1.5 degrees on the decal that is on the nose gear shock strut.

NOTE: If the decal is not on the nose gear shock strut, then use the illustration in Figure 501 to make a decal with tape.

SUBTASK 32-51-00-210-003

(8) Examine all of the adjustable rod ends to make sure there is correct thread engagement.

NOTE: The end of the rod end must cover at least 50 percent of the inspection hole.

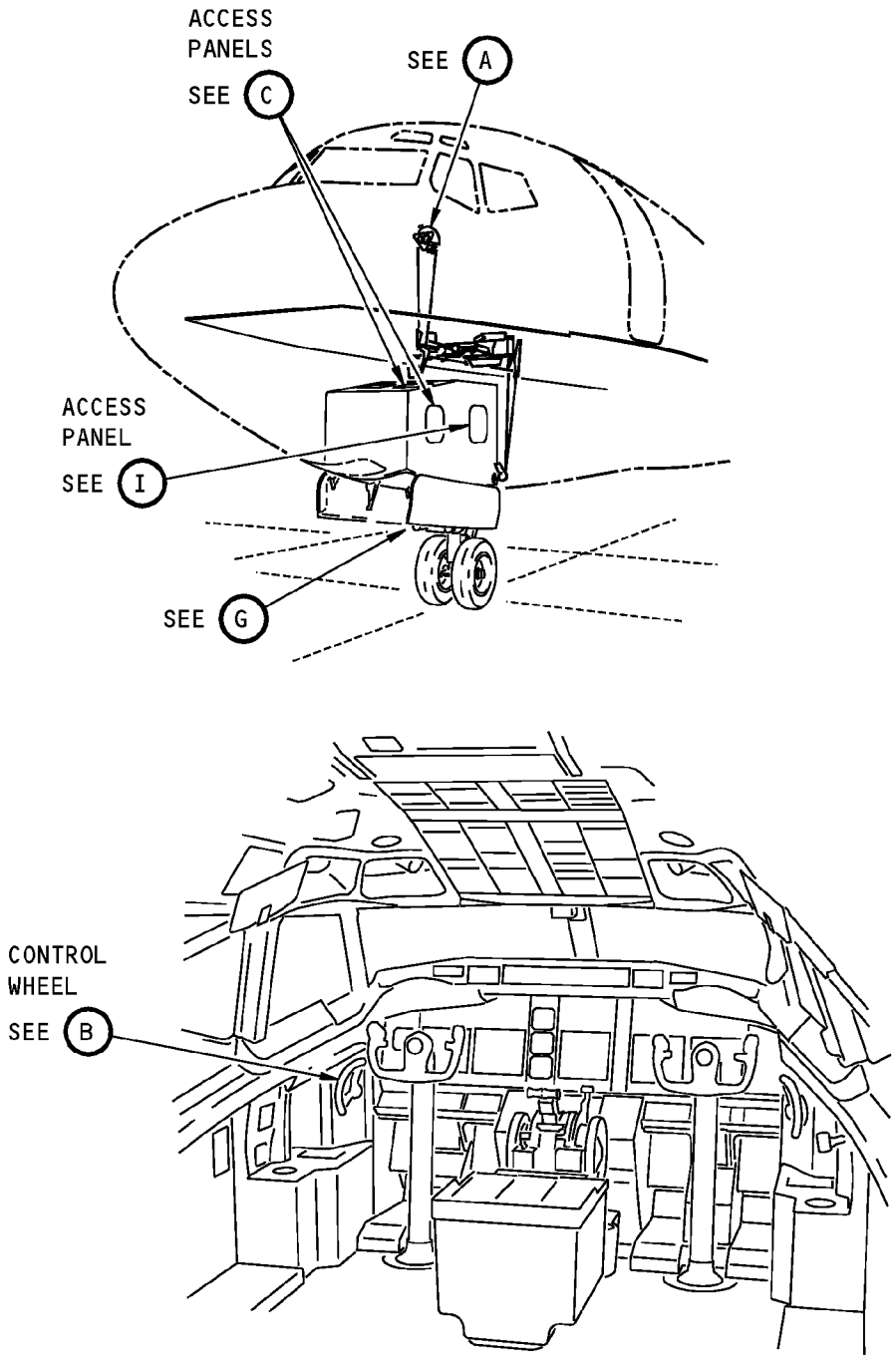
SUBTASK 32-51-00-210-004

(9) After the cables are adjusted, the cable cannot touch the pulley or quadrant flanges for the full travel of the cables.

NOTE: The cables must stay in the plane of the pulley or quadrant within +/-2 degrees.

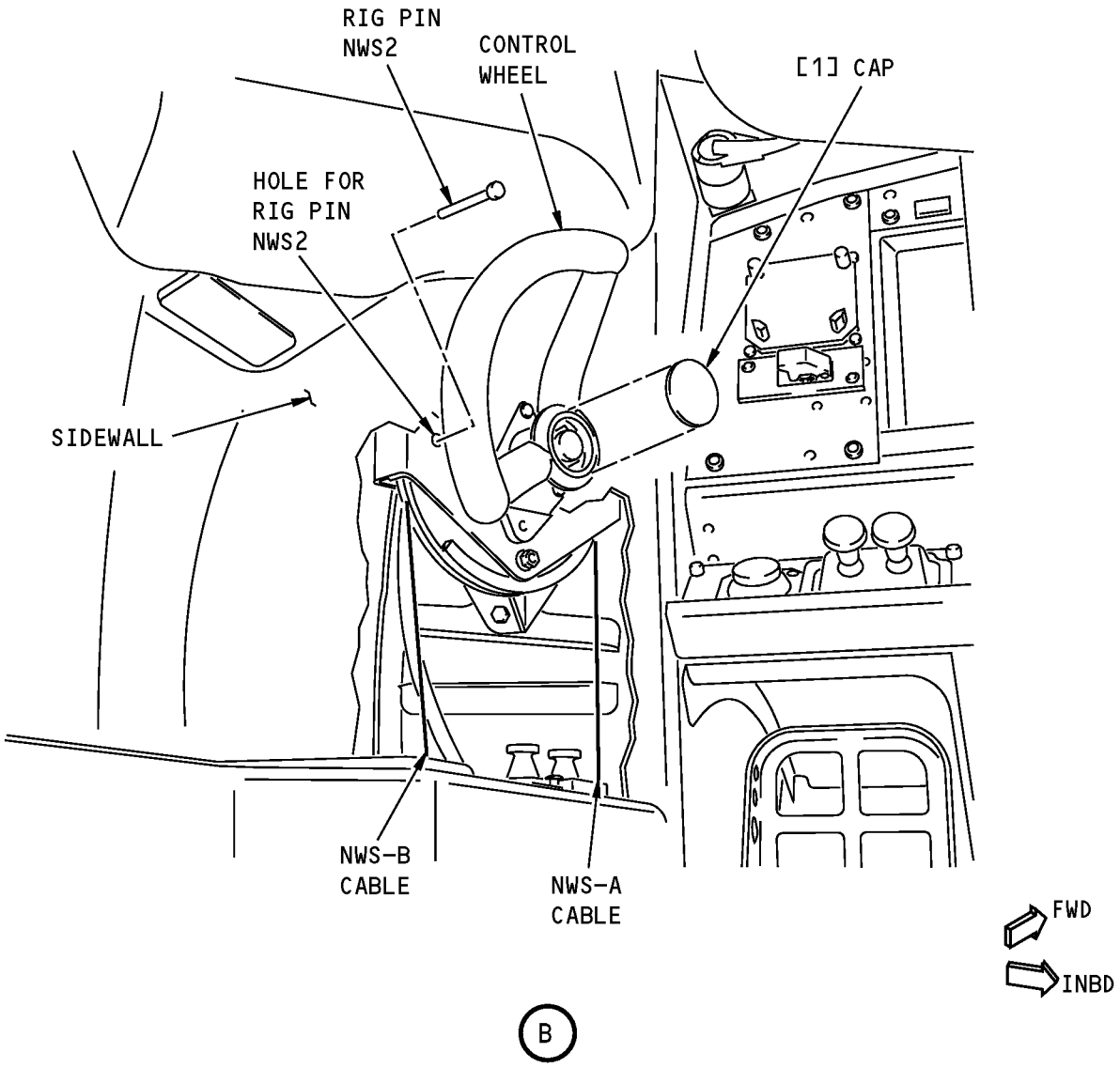
END OF TASK

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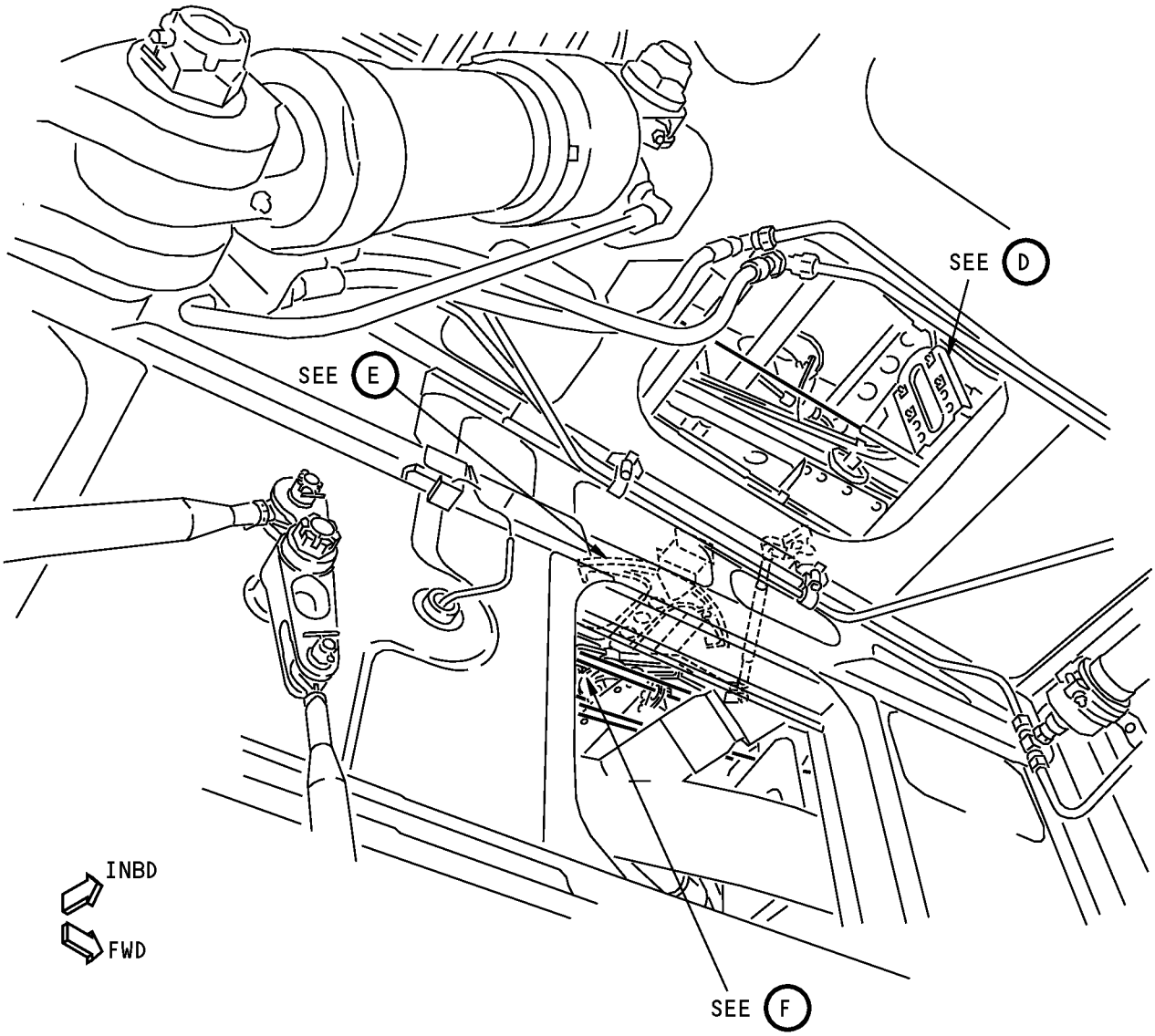
Nose Wheel Steering System Adjustment
Figure 501 (Sheet 1 of 9)/32-51-00-990-804

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Nose Wheel Steering System Adjustment
Figure 501 (Sheet 2 of 9)/32-51-00-990-804

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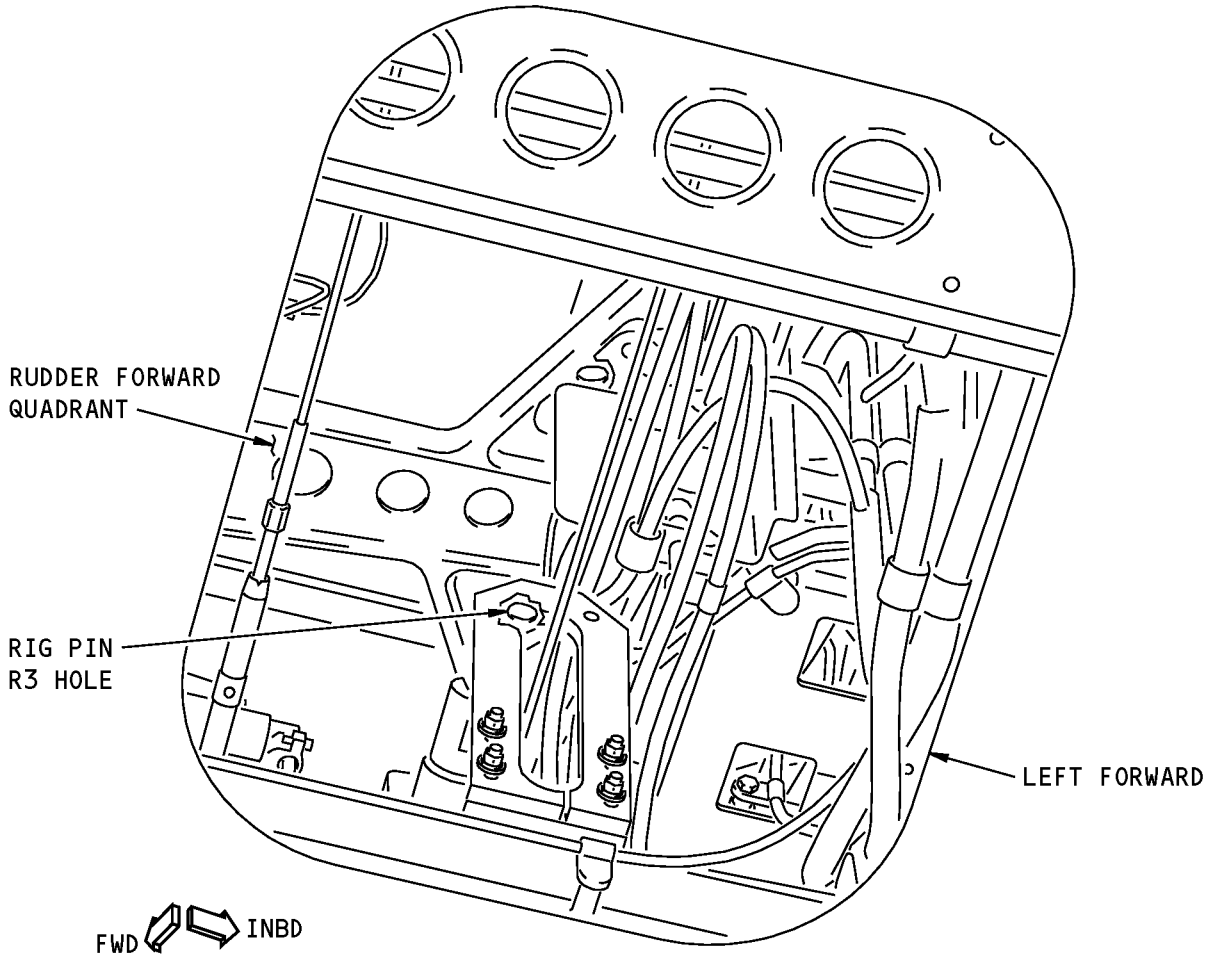


NOSE LANDING GEAR WHEEL WELL

C

Nose Wheel Steering System Adjustment
Figure 501 (Sheet 3 of 9)/32-51-00-990-804

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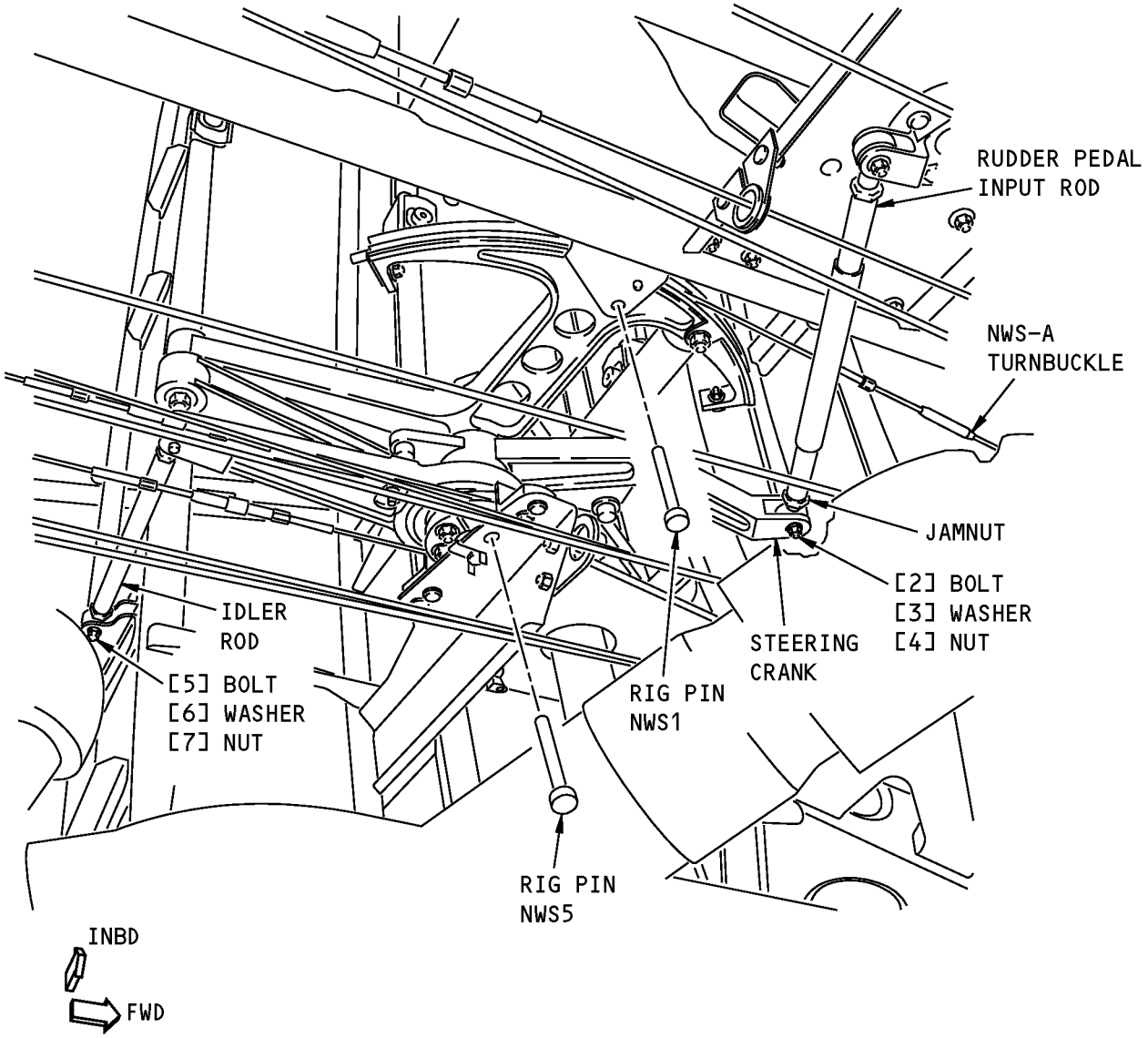


CAPTAIN'S RUDDER FORWARD QUADRANT

D

Nose Wheel Steering System Adjustment
Figure 501 (Sheet 4 of 9)/32-51-00-990-804

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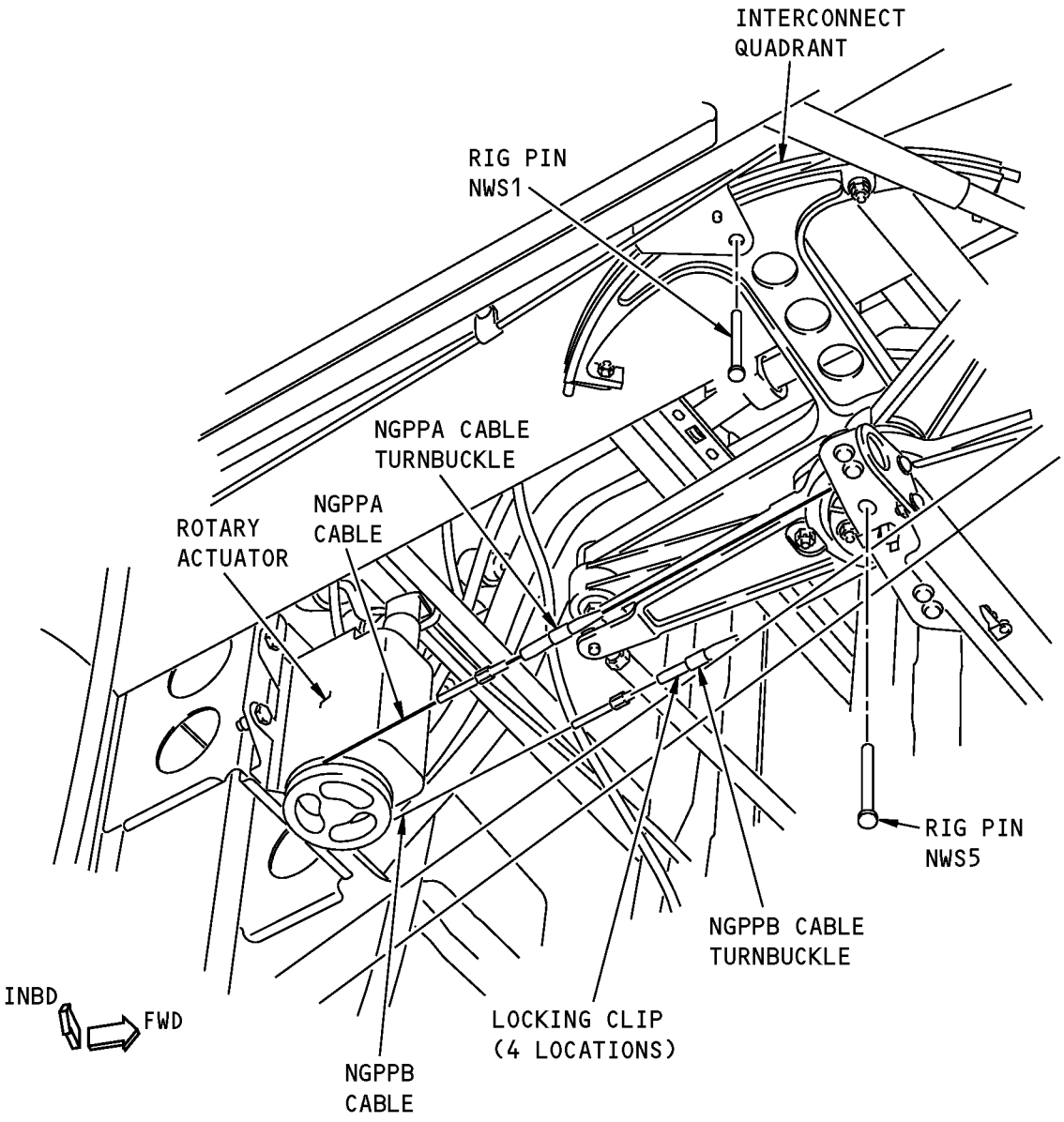


RUDDER PEDAL STEERING
INTERCONNECT MECHANISM

E

Nose Wheel Steering System Adjustment
Figure 501 (Sheet 5 of 9)/32-51-00-990-804

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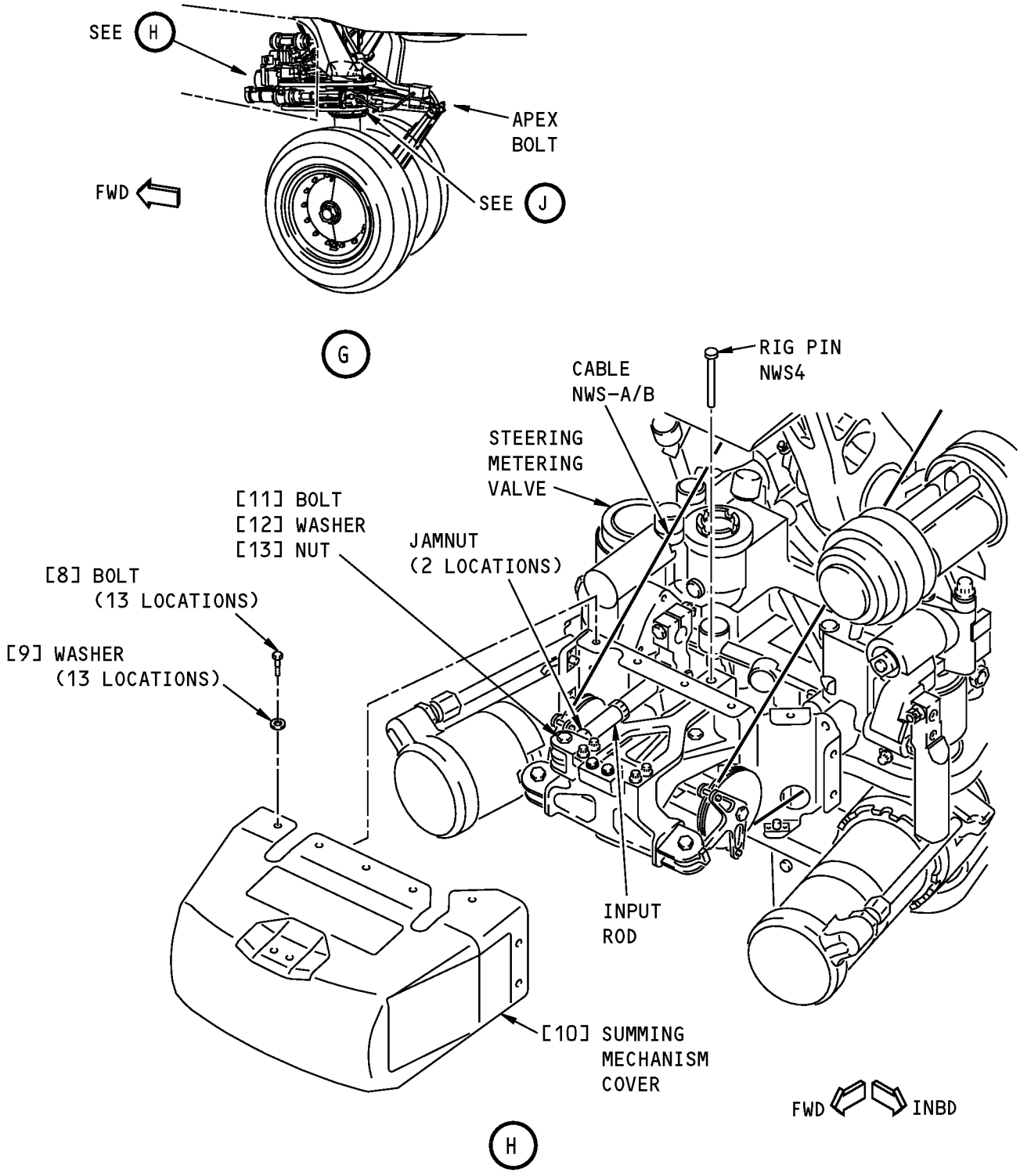


RUDDER PEDAL STEERING INTERCONNECT
MECHANISM AND ROTARY ACTUATOR

F

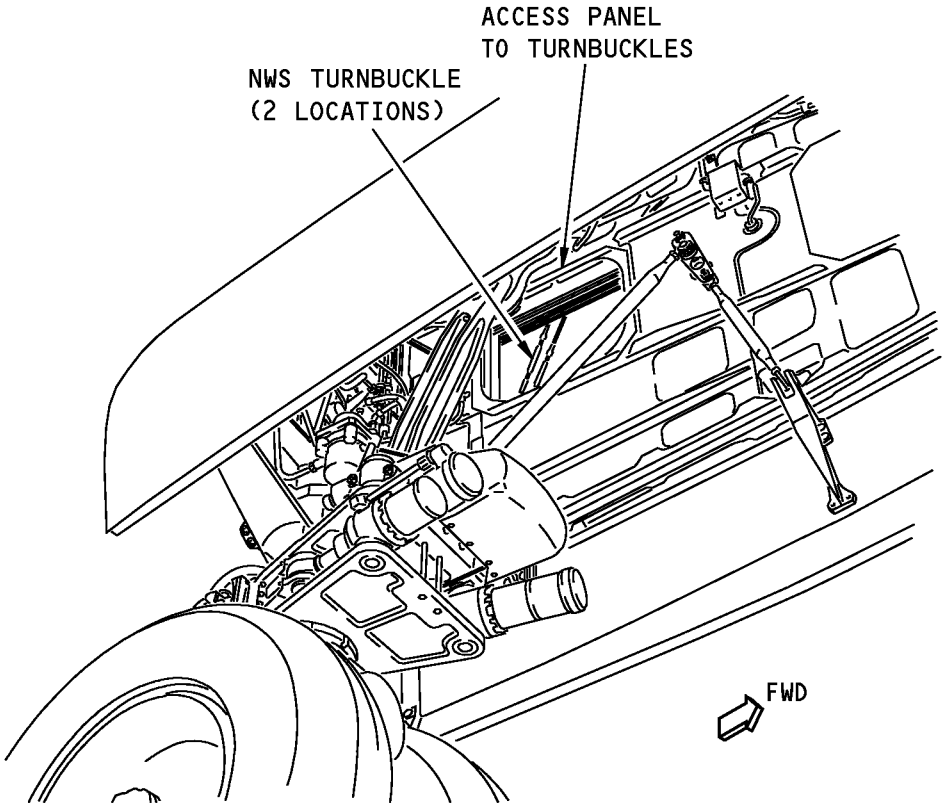
Nose Wheel Steering System Adjustment
Figure 501 (Sheet 6 of 9)/32-51-00-990-804

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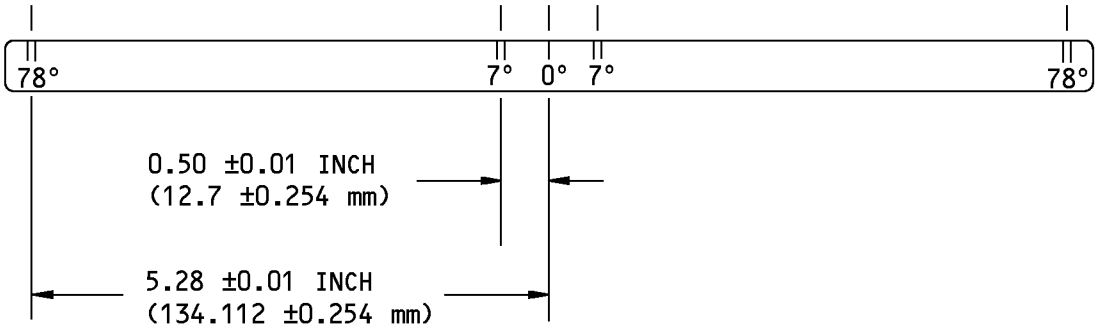


Nose Wheel Steering System Adjustment
Figure 501 (Sheet 7 of 9)/32-51-00-990-804

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I



STEERING ANGLE TAPE

J

G14355 S0006575736_V2

Nose Wheel Steering System Adjustment
Figure 501 (Sheet 8 of 9)/32-51-00-990-804

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TEMPERATURE °F [1]	RIG LOAD (LBS) [2]
130	56
110	51
90	46
70	40
50	35
30	29
10	24
-10	18
-22	15 [3]
-30	13 [3]
-40	10 [3]

TABLE I

[1] AMBIENT TEMPERATURES (°F) INSIDE AND OUTSIDE THE AIRPLANE WITHIN ±5°F. AMBIENT TEMPERATURE SHOULD BE STABLE FOR ONE HOUR BEFORE ADJUSTMENT.

[2] CABLE LOADS MUST BE WITHIN +10/-00 POUNDS OF TABLE I VALUES WHEN YOU ADJUST THE SYSTEM. AFTER INITIAL ADJUSTMENT ANY DEVIATION FROM TABLE I VALUES +15/-5 POUNDS, AT -22°F OR ABOVE, SHALL REQUIRE THAT THE SYSTEM ADJUSTED AGAIN.

[3] AT TEMPERATURES BELOW -22°F, THE MINIMUM CABLE LOAD SHALL BE 10 POUNDS.

Nose Wheel Steering System Adjustment
Figure 501 (Sheet 9 of 9)/32-51-00-990-804

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TASK 32-51-00-820-804

3. Rudder Pedal Interconnect Mechanism Adjustment Check

(Figure 501)

A. General

(1) This procedure provides instructions to check the adjustment of the interconnect mechanism for the rudder pedals.

B. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

E. Prepare to Check the Adjustment of the Interconnect Mechanism for the Rudder Pedals

SUBTASK 32-51-00-480-016

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-51-00-860-052

WARNING: MAKE SURE YOU REMOVE THE HYDRAULIC POWER FOR THE NOSE WHEEL STEERING BEFORE YOU DO THE CHECK. HYDRAULIC POWER CAN CAUSE MOVEMENT TO THE NOSE WHEELS AND INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

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F. Check the Adjustment of the Interconnect Mechanism for the Rudder Pedals

SUBTASK 32-51-00-820-017

(1) Make sure the conditions of this check are satisfactory. If they are not, do this task (TASK 32-51-00-820-801).

SUBTASK 32-51-00-820-018

(2) Make sure you can install the rig pin NWS1, rig pin kit, SPL-1585, in the interconnect quadrant.

NOTE: The rig pins have a free fit if you can install or remove them with two fingers. Some resistance is permitted.

SUBTASK 32-51-00-820-027

(3) Make sure you can install the rig pin NWS5, rig pin kit, SPL-1585, in the interconnect eccentric drum. Do the following steps:

NOTE: The rig pins have a free fit if you can install or remove them with two fingers. Some resistance is permitted.

(a) Do this task: Put the Airplane in the Air Mode, TASK 32-09-00-860-801.

(b) Make sure the interconnect eccentric drum rig pin hole and bracket rig pin slot line up.

(c) Install rig pin NWS5

SUBTASK 32-51-00-080-011

(4) Remove the rig pins NWS1 and NWS5.

SUBTASK 32-51-00-840-001

(5) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

SUBTASK 32-51-00-820-019

(6) Make sure the tension in the cables NGPP-A and NGPP-B is such that the load necessary to move the cable 0.50 +/- 0.05 inch (12.7 +/- 1.3 millimeters) at the turnbuckle is 16-22 pounds (71.2-97.9 newtons) (as measured with a spring scale).

NOTE: If correct tension cannot be achieved, make sure that the cable terminal ends are started equally into the threads of the turnbuckle barrel.

SUBTASK 32-51-00-210-005

(7) Examine all of the adjustable rod ends to make sure there is correct thread engagement.

NOTE: The end of the rod end must cover at least 50 percent of the inspection hole.

SUBTASK 32-51-00-210-006

(8) After the cables are adjusted, the cable cannot touch the pulley or quadrant flanges for the full travel of the cables.

NOTE: The cables must stay in the plane of the pulley or quadrant within +/-2 degrees.

———————— END OF TASK ————————

TASK 32-51-00-820-801

4. Rudder Pedal Interconnect Mechanism Adjustment

(Figure 501)

A. General

(1) This procedure provides instructions to do the adjustment of the interconnect mechanism for the rudder pedals.

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B. References

Reference	Title
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1499	Pin - Lock, NLG Towing Lever (Part #: A09003-2, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A09003-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

E. Prepare to Adjust the Interconnect Mechanism for the Rudder Pedals

SUBTASK 32-51-00-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-51-00-580-001

(2) Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

SUBTASK 32-51-00-860-001

(3) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

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SUBTASK 32-51-00-860-002

(4) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	17	C01027	LANDING GEAR NOSE GEAR STEER

SUBTASK 32-51-00-860-003

WARNING: ONLY USE THE CORRECT PIN FOR THE AIRPLANE MODEL. IF YOU USE AN INCORRECT PIN, THE HYDRAULIC STEERING CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(5) Move the towing lever to the tow position and install the NLG towing lever pin, SPL-1499.

SUBTASK 32-51-00-820-001

(6) Make sure the nose wheels are in the center position.

NOTE: The inner cylinder centering cam will put the nose wheels in the center position when the airplane is lifted on jacks. Manual assistance may be necessary to make sure the nose gear and cam is in the center position.

F. Adjust the Interconnect Mechanism for the Rudder Pedals

SUBTASK 32-51-00-020-001

(1) Remove the turnbuckle locking clips from the turnbuckles on the NGPP-A and NGPP-B cables.

SUBTASK 32-51-00-020-002

(2) Remove the nut [7], washer [6], and bolt [5] to disconnect the idler rod on the rudder pedal interconnect mechanism from the structure.

SUBTASK 32-51-00-220-001

(3) Make sure the rotary actuator is turned in the counter-clockwise direction with the index marks aligned to show that it is in the air mode.

SUBTASK 32-51-00-480-021

(4) Install rig pins NWS1 and NWS5. Do the following steps:

(a) Install the rig pin NWS1, rig pin kit, SPL-1585.

(b) Do this task: Put the Airplane in the Air Mode, TASK 32-09-00-860-801.

1) Make sure the interconnect eccentric drum rig pin hole and bracket rig pin slot line up.

(c) Install rig pin NWS5

SUBTASK 32-51-00-820-002

(5) Adjust the length of the idler rod, if it is necessary, so that the bolt [5] fits freely when it is installed through the rod end and the structure.

(a) Install the bolt [5], washer [6], and nut [7] to attach the idler rod to the structure.

SUBTASK 32-51-00-080-013

(6) Make sure the the rig pin NWS1 fits freely.

SUBTASK 32-51-00-080-014

(7) Remove rig pin NWS1.

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SUBTASK 32-51-00-820-003

(8) Adjust the tension in cables NGPP-A and NGPP-B until the load necessary to move the cable 0.50 +/- 0.05 inch (12.7 +/- 1.3 millimeters) downward at the turnbuckle is 16-22 pounds (71.2-97.9 newtons) (as measured with a spring scale).

NOTE: It is not necessary to allow for the temperature because the NGPP cables are very short.

SUBTASK 32-51-00-080-001

(9) Remove the rig pin NWS5.

SUBTASK 32-51-00-710-001

(10) Operate the rotary actuator five times from the air mode, (do this task: Put the Airplane in the Air Mode, TASK 32-09-00-860-801), back to the ground mode, (do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802), and back again.

(a) Make sure the rotary actuator changes from the air mode to the ground mode, and back again each time.

SUBTASK 32-51-00-210-001

(11) Make sure that the rig pin NWS5 fits freely. Do the following steps:

(a) Do this task: Put the Airplane in the Air Mode, TASK 32-09-00-860-801.

(b) Make sure the interconnect eccentric drum rig pin hole and bracket rig pin slot line up.

(c) Make sure rig pin NWS5 can be installed and removed freely.

SUBTASK 32-51-00-820-024

(12) Make sure the tension in the cables NGPP-A and NGPP-B is such that the load necessary to move the cable 0.50 +/- 0.05 inch (12.7 +/- 1.3 millimeters)at the turnbuckle is 16-22 pounds (71.2-97.9 newtons) (as measured with a spring scale).

(a) If it is necessary, adjust the cable turnbuckles until the rig pin NWS5 is free and the tension in the cables is correct.

SUBTASK 32-51-00-420-008

(13) Install the turnbuckle locking clips on the turnbuckles for the NGPP-A and NGPP-B cables.

SUBTASK 32-51-00-860-044

(14) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

——————— END OF TASK ———————

TASK 32-51-00-820-805

5. Nose Wheel Steering System Adjustment Check

(Figure 501)

A. General

(1) This procedure provides instructions to check the adjustment of the steering system of the nose wheel.

B. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
24-22-00-860-811	Supply Electrical Power (P/B 201)
24-22-00-860-812	Remove Electrical Power (P/B 201)

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(Continued)

Reference	Title
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

E. Prepare to Check the Adjustment of the Steering System of the Nose Wheel

SUBTASK 32-51-00-480-017

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-51-00-580-008

(2) Lift the airplane on jacks, until the nose gear shock strut is fully extended and the wheels do not touch the ground. To do this, do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-51-00-860-053

(3) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-51-00-860-054

(4) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-51-00-860-055

(5) Make sure the control lever for the landing gear is in the DN position.

SUBTASK 32-51-00-860-056

(6) Make sure the NOSE WHEEL STEERING ALTERNATE switch is in the NORM position.

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SUBTASK 32-51-00-860-057

(7) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	15	C01355	LANDING GEAR AIR/GND SYS 2
D	17	C01027	LANDING GEAR NOSE GEAR STEER

F. Check the Adjustment of the Steering System of the Nose Wheel

SUBTASK 32-51-00-820-020

(1) Make sure the conditions of this check are satisfactory. If they are not, do this task (TASK 32-51-00-820-802).

SUBTASK 32-51-00-730-038

(2) Make sure the steering angle is 0 +/-1.5 degrees on the decal that is on the nose gear shock.

NOTE: The inner cylinder centering cam will put the nose wheels in the center position when the airplane is lifted on jacks. Manual assistance may be necessary to make sure the nose gear and cam is in the center position.

NOTE: If the decal is not on the nose gear shock strut, then use the illustration in Figure 501 to make a decal with tape.

SUBTASK 32-51-00-860-058

WARNING: MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF CONTROL SURFACES, CABLES, AND LANDING GEAR AREAS. WHEN YOU PRESSURIZE A HYDRAULIC SYSTEM IT CAN MOVE CONTROL SURFACES, CABLES, LANDING GEAR, AND LANDING GEAR DOORS. THIS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-51-00-730-039

(4) Make sure the nose gear stays centered.

NOTE: If the nose gear moves when the hydraulic system is pressurized, the nose gear steering is not adjusted correctly. There is a disagreement between the steering system and the mechanical centerline position of the nose gear centering cams.

SUBTASK 32-51-00-820-021

(5) Make sure the tension in the cables NWS-A and NWS-B is in tolerance (see Table I of Figure 501).

SUBTASK 32-51-00-010-004

(6) Remove the screws [8], washers [9], and the summing mechanism cover [10].

SUBTASK 32-51-00-480-018

(7) Make sure that you can install the rig pins, rig pin kit, SPL-1585, that follow:

NOTE: The steering system has a 1 - 2 degree dead band in the center position.

(a) Rig pin NWS2 in the Captain's control wheel drum.

(b) Rig pin NWS1 in the interconnect quadrant.

(c) Rig pin R3 in the rudder forward quadrant.

(d) Rig pin NWS4 in the summing mechanism bracket at the steering metering valve.

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SUBTASK 32-51-00-820-022

(8) Make sure all the rig pins have a free fit.

NOTE: The rig pins have a free fit if you can install or remove them with two fingers. Some resistance is permitted.

SUBTASK 32-51-00-080-012

(9) Remove all the rig pins.

G. Check the Travel Operation of the Nose Wheel to the Center with the Hydraulic Power On

SUBTASK 32-51-00-860-059

WARNING: MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF CONTROL SURFACES, CABLES, AND LANDING GEAR AREAS. WHEN YOU PRESSURIZE A HYDRAULIC SYSTEM IT CAN MOVE CONTROL SURFACES, CABLES, LANDING GEAR, AND LANDING GEAR DOORS. THIS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-51-00-480-019

(2) Make sure the greased plates are under the nose wheels.

NOTE: Plates made of steel are suggested. Plates made of a soft material such as aluminum can be destroyed by the test.

SUBTASK 32-51-00-580-009

(3) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

SUBTASK 32-51-00-730-040

(4) Do the steps that follow to make sure the Captain's control wheel operates correctly:

(a) Turn the Captain's control wheel to operate the nose wheel steering through at least 6 complete cycles, and make sure that it operates freely and smoothly.

NOTE: One cycle of the system is from center to full right, then to full left, then back to center.

(b) Make sure there is no leakage of hydraulic fluid from the nose gear steering tubing and fittings from the landing gear selector valve to the valves on the steering actuators.

(c) Turn the nose wheels with the Captain's control wheel from the center position to the LEFT (CCW) stop position.

1) Make sure the steering angle is 78 +/-2 degrees on the decal that is on the nose gear shock strut.

(d) Release the Captain's control wheel and let it return to the center position.

1) Make sure the steering angle is at 0 +/-1 degree.

(e) Turn the nose wheels with the Captain's control wheel from the center position to the RIGHT (CW) stop position.

1) Make sure the steering angle is 78 +/-2 degrees on the decal that is on the nose gear shock strut.

(f) Release the Captain's control wheel and let it return to the center position.

1) Make sure the steering angle is at 0 +/-1 degree.

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SUBTASK 32-51-00-210-008

(5) Examine all of the adjustable rod ends to make sure there is correct thread engagement.

NOTE: The end of the rod end must cover at least 50 percent of the inspection hole.

SUBTASK 32-51-00-210-009

(6) After the cables are adjusted, the cable cannot touch the pulley or quadrant flanges for the full travel of the cables.

NOTE: The cables must stay in the plane of the pulley or quadrant within +/-2 degrees.

SUBTASK 32-51-00-410-003

(7) Install the summing mechanism cover [10] with screws [8] and washers [9].

SUBTASK 32-51-00-860-060

(8) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-51-00-860-061

(9) Do this task: Remove Electrical Power, TASK 24-22-00-860-812.

SUBTASK 32-51-00-860-062

(10) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	15	C01355	LANDING GEAR AIR/GND SYS 2
D	17	C01027	LANDING GEAR NOSE GEAR STEER

END OF TASK

TASK 32-51-00-820-802

6. Nose Wheel Steering System Adjustment

(Figure 501)

A. General

(1) This procedure provides instructions to do the adjustment of the steering system of the nose wheel.

(a) There are two methods to perform this task:

1) Method 1: On Ground/Grease Plates

2) Method 2: Airplane on Jacks

B. References

Reference	Title
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
07-11-21-580-802	Lower the Airplane Nose Off of the Jack (P/B 201)
24-22-00-860-811	Supply Electrical Power (P/B 201)
24-22-00-860-812	Remove Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-21-31-000-803	Nose Landing Gear Torsion Link Disconnection (P/B 401)
32-51-11-400-801	Steering Metering Valve Installation (P/B 401)

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C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1553	Tensiometer - Cable (20 - 200 LB) (Part #: 102-03110, Supplier: 21844, A/P Effectivity: 737-ALL) (Part #: ACM-200, Supplier: 13331, A/P Effectivity: 737-ALL) (Part #: T60-1001-C8-1A, Supplier: 0N8U4, A/P Effectivity: 737-ALL)
SPL-1499	Pin - Lock, NLG Towing Lever (Part #: A09003-2, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A09003-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

E. Prepare to Adjust the Steering System of the Nose Wheel

SUBTASK 32-51-00-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-51-00-860-082

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-51-00-860-088

(3) Do this task: Supply Electrical Power, TASK 24-22-00-860-811

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SUBTASK 32-51-00-580-002

(4) Lift the airplane on jacks, until the nose gear shock strut is fully extended and the wheels do not touch the ground. To do this, do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

NOTE: The nose of the airplane is lifted on jacks to find the center position of the nose landing gear and the steering collar. The internal centering cam of the shock strut is used to do this. If the jacks are not available you can use grease plates under the nose wheels to put the nose gear and steering collar in the center position. If you will do this procedure without jacks, make sure the airplane is towed at least 12 feet in a straight line before it is parked.

SUBTASK 32-51-00-860-083

(5) Make sure the steering angle is 0 +/-1.5 degrees on the decal that is on the nose gear shock.

SUBTASK 32-51-00-860-006

(6) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	17	C01027	LANDING GEAR NOSE GEAR STEER

SUBTASK 32-51-00-860-046

WARNING: ONLY USE THE CORRECT PIN FOR THE AIRPLANE MODEL. IF YOU USE AN INCORRECT PIN, THE HYDRAULIC STEERING CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(7) Move the towing lever to the "TOW" position and install the NLG towing lever pin, SPL-1499.

SUBTASK 32-51-00-820-031

(8) Adjust the cable guard to clear the steering collar pulley by 0.015 to 0.045 inch.

(a) If it is necessary, loosen the attach bolt and adjust the cable guard in its slotted hole.

SUBTASK 32-51-00-020-003

(9) Remove the nut [4], washer [3], and bolt [2] to disconnect the rudder pedal input rod from the steering crank.

SUBTASK 32-51-00-730-046

(10) Make sure the steering angle is 0 +/-1.5 degrees on the decal that is on the nose gear shock.

NOTE: The inner cylinder centering cam will put the nose wheels in the center position when the airplane is lifted on jacks. Manual assistance may be necessary to make sure the nose gear and cam is in the center position.

NOTE: If the decal is not on the nose gear shock strut, then use the illustration in Figure 501 to make a decal with tape.

SUBTASK 32-51-00-010-001

(11) Remove the screws [8], washers [9], and summing mechanism cover [10].

SUBTASK 32-51-00-010-003

(12) Do the steps that follow to get access to the Captain's rig pin hole for the control wheels:

(a) Remove the clocking fastener in the tiller cover plate.

(b) Turn the coverplate clockwise to get access to the rig pin hole at the control wheel.

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F. Adjust the Steering System of the Nose Wheel

SUBTASK 32-51-00-820-006

(1) Disconnect the Steering Valve input rod from the Steering Metering Valve Summing Mechanism.

(2) Install the rig pin NWS4 in the summing mechanism bracket at the steering metering valve.

NOTE: This step checks rig pin NWS4 against only the centering springs inside the steering valve. A step will follow that checks the rig pin against the steering cables. These steps must be performed in this order.

(a) If the removed bolt does not fit freely, do these steps to adjust the length of the steering valve input rod such that you can install the bolt freely:

1) Loosen the jamnuts to disengage the locking keys.

2) Adjust the length of the steering valve input rod.

3) Tighten the jamnuts and install safety wire.

4) Make sure the safety wire tail is on the aft end of the steering valve input rod when installed.

SUBTASK 32-51-00-840-002

(3) Connect the Steering Valve input rod from the Steering Metering Valve Summing Mechanism.

SUBTASK 32-51-00-480-004

(4) Install rig pin NWS2, rig pin kit, SPL-1585, in the Captain's control wheel drum.

SUBTASK 32-51-00-490-002

(5) Install the rig pin NWS1 in the interconnect quadrant.

SUBTASK 32-51-00-020-004

(6) Remove the locking clips from the turnbuckles on the NWS-A and NWS-B cables.

SUBTASK 32-51-00-820-007

(7) For new cables only, do these steps:

(a) Use the 20 - 200 lb cable tensiometer, COM-1553 to adjust the load on NWS-A and NWS-B cables to 85 +/- 5 pounds (378 +/- 22 newtons).

(b) Remove all rig pins.

(c) For method 1, make sure the greased plates are under the nose wheels.

NOTE: Plates made of steel are suggested. Plates made of a soft material such as aluminum can be destroyed by the test.

CAUTION: REMOVE ALL RIG PINS BEFORE YOU LOWER THE AIRPLANE. IF YOU DO NOT REMOVE THE RIG PINS, DAMAGE TO EQUIPMENT CAN OCCUR.

(d) For method 1, Do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

(e) For method 2, Disconnect the clamps, brackets and conduit attached to the Nose Landing Gear/Taxi light.

NOTE: Clamps on torsion links are removed to prevent damage to the conduit.

(f) Disconnect the torsion link apex joint. Do this task Nose Landing Gear Torsion Link Disconnection, TASK 32-21-31-000-803

(g) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

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(h) Remove the NLG towing lever pin, SPL-1499 and move the towing lever to the "PRESSURE ON" position.

CAUTION: MAKE SURE THE SHOCK STRUT IS COMPRESSED. THE CENTERING CAMS WILL BE ENGAGED IF THE SHOCK STRUT IS NOT COMPRESSED THE MINIMUM AMOUNT. THIS CAN CAUSE DAMAGE TO THE AIRCRAFT.

(i) For method 1, make sure the shock strut for the nose landing gear is compressed a minimum of 3.5 inches (89 mm).

(j) For method 2, hold the upper torsion link to set airplane nose to ground mode.

NOTE: Be careful to avoid damage to the conduit during operation.

(k) Use the steering tiller to operate the steering system of the nose wheel through 25 cycles (center-full left-full right-center).

WARNING: ONLY USE THE CORRECT PIN FOR THE AIRPLANE MODEL. IF YOU USE AN INCORRECT PIN, THE HYDRAULIC STEERING CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(l) Move the towing lever to the "TOW" position and install the NLG towing lever pin, SPL-1499.

(m) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805

(n) For method 1, do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

(o) Ensure that the gear is steered to the straight ahead position before rigging.

(p) Install the rigging pins NWS1, NWS2, and NWS4.

SUBTASK 32-51-00-820-009

(8) Adjust the tension of all the segments of cables NWS-A and NWS-B (see Table l) until the rig pins NWS1, NWS2, and NWS4 fit freely.

SUBTASK 32-51-00-420-005

(9) Install rig pin R3 in the rudder forward quadrant.

NOTE: This step is necessary to ensure that rudder system rigging will not affect the steering system rigging. If you are unable to install R3 rig pin, then the rudder system needs to be adjusted to align this rig pin hole to avoid a possible steering problem in the future.

SUBTASK 32-51-00-212-002

(10) For method 1, make sure the greased plates are under the nose wheels.

NOTE: Plates made of steel are suggested. Plates made of a soft material such as aluminum can be destroyed by the test.

SUBTASK 32-51-00-580-016

CAUTION: REMOVE ALL RIG PINS BEFORE YOU LOWER THE AIRPLANE. IF YOU DO NOT REMOVE THE RIG PINS, DAMAGE TO EQUIPMENT CAN OCCUR.

(11) For method 1, do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

SUBTASK 32-51-00-860-086

(12) For method 2, hold the upper torsion link up to set the airplane nose to ground mode.

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SUBTASK 32-51-00-820-023

CAUTION: MAKE SURE THE END OF THE INPUT ROD WILL COVER AT LEAST ONE HALF OF THE INSPECTION HOLE. A MINIMUM OF THREE THREADS MUST BE OPEN OUTSIDE THE LOCKNUT ON THE CONTROL ROD AT THE CRANK END. INCORRECT THREAD ENGAGEMENT OF THE INPUT ROD CAN CAUSE AN INTERFERENCE AND A POSSIBLE FAILURE OF THE INPUT ROD CAN OCCUR.

(13) Do the steps below:

(a) Adjust the length of the input rod of the rudder pedal so that the bolt [2], which attaches the input rod to the steering crank fits freely.

(b) Install the bolt [2], washer [3] and the nut [4]

(c) Tighten the jamnut on the input rod.

SUBTASK 32-51-00-080-003

(14) Remove all of the rig pins.

SUBTASK 32-51-00-860-081

(15) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-51-00-860-047

(16) Remove the NLG towing lever pin, SPL-1499 and allow the towing lever to move the "PRESSURE ON" position.

SUBTASK 32-51-00-820-011

(17) Do the steps that follow to check the steering adjustment:

(a) Use the steering tiller to operate the steering system of the nose wheel full left and full right.

NOTE: The steering system has a 1 - 2 degree dead band in the center position.

NOTE: For method 2, be careful to avoid damage to the conduit during operation.

(b) If not within the dead band, then do this task: Rudder Pedal Interconnect Mechanism Adjustment, TASK 32-51-00-820-801.

(c) If it is necessary, adjust the length of the rudder input rod so the steering system returns equally on both sides of the "0" mark after turns to the right and left.

SUBTASK 32-51-00-420-007

(18) Verify that the rudder pedal input rod is correctly connected to the steering crank.

NOTE: If you are completing this task as a result of installing the steering metering valve (Steering Metering Valve Installation, TASK 32-51-11-400-801), the subsequent steps do not apply and you are not required to complete.

SUBTASK 32-51-00-420-010

(19) Install the locking clips on the turnbuckles of the cables NWS-A and NWS-B.

SUBTASK 32-51-00-730-058

(20) Do this task: Remove Electrical Power, TASK 24-22-00-860-812

SUBTASK 32-51-00-730-001

(21) Do the system test for the Nose Wheel Steering System, do this task: Nose Wheel Steering System Test, TASK 32-51-00-700-801

END OF TASK

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TASK 32-51-00-700-801

7. Nose Wheel Steering System Test

(Figure 501, Figure 502)

A. References

Reference	Title
07-11-03-580-802	Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E (P/B 201)
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
07-11-21-580-802	Lower the Airplane Nose Off of the Jack (P/B 201)
12-12-00-610-801	Hydraulic Reservoir Servicing (P/B 301)
24-22-00-860-811	Supply Electrical Power (P/B 201)
24-22-00-860-812	Remove Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-21-31-000-803	Nose Landing Gear Torsion Link Disconnection (P/B 401)
32-21-31-400-803	Nose Landing Gear Torsion Link Connection (P/B 401)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1499	Pin - Lock, NLG Towing Lever (Part #: A09003-2, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A09003-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-7306	Extension Bar - NLG Steering (Part #: C32020-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

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D. General

SUBTASK 32-51-00-800-001

(1) This procedure provides instructions to do the test of the steering system of the nose wheel.

(a) There are two methods to perform this task:

1) Method 1: On Ground/Grease Plates

2) Method 2: Airplane on Jacks

(2) The test of the steering system of the nose wheel includes the tests that follow:

(a) A steering centering test to make sure the steering metering valve is in the null position when the nose gear is mechanically centered

(b) An normal steering response test

(c) A control wheel torque test

(d) A test of nose gear turn radius and response to full rudder pedal input

(e) A tow test of the nose gear steering to make sure the nose gear will turn freely with the tow lever in the tow position

(f) A test of the alternate steering system.

(g) An air/ground mode test

SUBTASK 32-51-00-610-001

(3) Do a servicing on the hydraulic system before you do the test, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

SUBTASK 32-51-00-820-013

(4) The steering system of the nose wheel must be adjusted correctly before you do the system test.

SUBTASK 32-51-00-820-026

(5) The rig pins are from the rig pin kit, SPL-1585.

E. Prepare to Test the Steering System of the Nose Wheel

SUBTASK 32-51-00-480-006

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-51-00-580-013

(2) Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

SUBTASK 32-51-00-730-057

(3) For Method 2, Make sure that the torsion links are connected at apex. It is not necessary to connect conduit and clamps at this time if they are already loose or disconnected.

SUBTASK 32-51-00-860-011

(4) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-51-00-860-012

(5) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-51-00-860-013

(6) Make sure the control lever for the landing gear is in the DN position.

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SUBTASK 32-51-00-860-014

(7) Make sure the NOSE WHEEL STEERING ALTERNATE switch is in the NORM position.

SUBTASK 32-51-00-860-015

(8) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	17	C01027	LANDING GEAR NOSE GEAR STEER

F. Do the Steering Centering Test

SUBTASK 32-51-00-860-016

(1) Remove the NLG towing lever pin, SPL-1499 from the towing lever and permit the lever to move to the PRESSURE ON position.

SUBTASK 32-51-00-860-017

(2) Make sure the rig pin R3 fits freely in the rudder quadrant. This will show that the rudder pedals are in the neutral position.

SUBTASK 32-51-00-730-002

(3) Make sure the steering angle is 0 +/-1.5 degrees on the decal that is on the nose gear shock.

NOTE: The inner cylinder centering cam will put the nose wheels in the center position when the airplane is lifted on jacks. Manual assistance may be necessary to make sure the nose gear and cam is in the center position.

NOTE: If the decal is not on the nose gear shock strut, then use the illustration in Figure 501 to make a decal with tape.

SUBTASK 32-51-00-860-018

WARNING: MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE FLIGHT CONTROLS SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-51-00-730-003

(5) Make sure the nose gear stays centered.

NOTE: If the nose gear moves when the hydraulic system is pressurized, the nose gear steering is not adjusted correctly. There is a disagreement between the steering system and the mechanical centerline position of the nose gear centering cams.

SUBTASK 32-51-00-860-079

(6) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

G. Do the Test of the Normal Steering Response

SUBTASK 32-51-00-480-012

(1) For method 1, make sure the greased plates are under the nose wheels.

(2) For method 1, do this task:Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802

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(3) For method 2, disconnect the torsion link apex joint: Do this task: Nose Landing Gear Torsion Link Disconnection, TASK 32-21-31-000-803

(a) Put the airplane in ground mode.

NOTE: To avoid damage during operation, remove the bracket that attaches the conduit to the NLG landing/taxi light, and the other clamps on torsion links.

NOTE: Secure the torsion link assembly to avoid damage during the operation.

SUBTASK 32-51-00-860-078

WARNING: MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE FLIGHT CONTROLS SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

NOTE: Make sure at least one of the main gears is in ground mode. The air/ground system needs two inputs to transition into the ground mode.

SUBTASK 32-51-00-730-047

(5) Do the steps that follow to make sure the Captain's control wheel operates correctly:

(a) Turn the Captain's control wheel to operate the nose wheel steering through at least 6 complete cycles, and make sure that it operates freely and smoothly.

NOTE: One cycle of the system is from center to full right, then to full left, then back to center.

(b) Make sure there is no leakage of hydraulic fluid from the nose gear steering tubing and fittings from the landing gear selector valve to the valves on the steering actuators.

(c) Turn the nose wheels with the Captain's control wheel from the center position to the LEFT (CCW) stop position.

1) Make sure the steering angle is 78 +/-2 degrees on the decal that is on the nose gear shock strut.

(d) Release the Captain's control wheel and let it return to the center position.

1) Make sure the steering angle is at 0 +/-1 degree.

(e) Turn the nose wheels with the Captain's control wheel from the center position to the RIGHT (CW) stop position.

1) Make sure the steering angle is 78 +/-2 degrees on the decal that is on the nose gear shock strut.

(f) Release the Captain's control wheel and let it return to the center position.

1) Make sure the steering angle is at 0 +/-1 degree.

H. Do the Test for Control Wheel Torque

SUBTASK 32-51-00-010-002

(1) Use the control wheel to turn the nose wheels from the center position to the LEFT (CCW) until the steering angle is 70 +/-7 degrees.

NOTE: Secure the torsion link assembly to avoid damage during the operation.

(a) Hold this position.

SUBTASK 32-51-00-480-007

(2) Install a spring scale at a 5.0 inch (127.0 millimeters) radius on the control wheel.

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SUBTASK 32-51-00-730-014

(3) Measure the tangential force that is necessary to turn the control wheel to the left (CCW, 78 degrees) and stop just before you touch the control wheel stop. Make sure the force on the control wheel is between 9 and 15 pounds (40.0 - 66.7 newtons).

SUBTASK 32-51-00-080-008

(4) Remove the spring scale from the control wheel.

SUBTASK 32-51-00-730-035

(5) Use the control wheel to turn the nose wheels from the center position to the RIGHT (CW) until the steering angle is 70 +/-7 degrees.

(a) Hold this position.

SUBTASK 32-51-00-480-013

(6) Install the spring scale at a 5.0 inch (127.0 millimeters) radius on the control wheel.

SUBTASK 32-51-00-730-036

(7) Measure the tangential force that is necessary to turn the control wheel to the right (CW, 78 degrees) and stop just before you touch the control wheel stop. Make sure the force on the control wheel is between 9 and 15 pounds (40.0 - 66.7 newtons).

SUBTASK 32-51-00-730-016

(8) Release the control wheel and let it go back to the neutral (center) position.

SUBTASK 32-51-00-080-004

(9) Remove the spring scale from the Control Wheel.

I. Do the Test of Nose Gear Turn Radius and Response to Full Rudder Pedal Input

SUBTASK 32-51-00-480-008

(1) For method 2, Make sure airplane nose gear is in ground mode.

NOTE: Make sure at least one of the main gears is in ground mode. The air/ground system needs two inputs to transition into the ground mode. Both of the nose gear sensors are in ground mode by installing actuator (target) on ground proximity sensor or holding the upper torsion link in the ground position.

WARNING: MAKE SURE THE AREA NEAR THE RUDDER IS CLEAR OF PERSONS AND EQUIPMENT. OPERATION OF THE RUDDER CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Push the Captain's left rudder pedal fully.

(a) Make sure the steering angle is 7 +/- 1 degrees left turn on the decal that is on the nose gear shock strut.

SUBTASK 32-51-00-730-018

(3) Release the rudder pedals.

(a) Make sure the steering angle is at the center, 0 +/- 1 degrees, on the decal that is on the nose gear shock strut.

SUBTASK 32-51-00-730-019

WARNING: MAKE SURE THE AREA NEAR THE RUDDER IS CLEAR OF PERSONS AND EQUIPMENT. OPERATION OF THE RUDDER CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) Push the Captain's right rudder pedal fully.

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(a) Make sure the steering angle is 7 +/- 1 degrees right turn on the decal that is on the nose gear shock strut.

SUBTASK 32-51-00-730-020

(5) Release the rudder pedals.

(a) Make sure the steering angle is at the center, 0 +/- 1 degrees, on the decal that is on the nose gear shock strut.

J. Do the Nose Gear Steering Tow Test

SUBTASK 32-51-00-860-048

WARNING: ONLY USE THE CORRECT PIN FOR THE AIRPLANE MODEL. IF YOU USE AN INCORRECT PIN, THE HYDRAULIC STEERING CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(1) Move the towing lever to the "TOW" position and install the NLG towing lever pin, SPL-1499.

SUBTASK 32-51-00-860-063

(2) For method 1, remove the apex pin from the torsion links.

SUBTASK 32-51-00-730-021

(3) Install the extension bar, SPL-7306 on the Nose Landing Gear

(4) Move the steering system manually with the upper torsion link, approximately 10 degrees to the left and right, and then return it to the center position.

NOTE: If the towing valve does not remove pressure from the steering valve, you cannot move the steering system manually with the upper torsion link. You must then replace the steering valve.

SUBTASK 32-51-00-080-005

WARNING: MAKE SURE THE NOSE WHEEL STEERING SYSTEM IS IN THE CENTER POSITION. WHEN HYDRAULIC POWER IS ON AND THE TOWING LEVER LOCKPIN IS REMOVED, THE STEERING COLLAR AND UPPER TORSION LINK WILL TURN RAPIDLY TO CENTER.

(5) Remove the extension bar, SPL-7306 from the Nose Landing Gear

Remove the NLG towing lever pin, SPL-1499 from the towing lever and permit the lever to move to the PRESSURE ON position.

SUBTASK 32-51-00-860-089

(6) For method 1, install the apex pin in the torsion links.

SUBTASK 32-51-00-730-022

(7) Make sure the steering system operates normally with the control wheel.

K. Do the Test of the Alternate Steering System

SUBTASK 32-51-00-860-049

(1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-51-00-860-035

(2) Open this circuit breaker and install safety tag:

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
F	2	C01449	STANDBY HYDRAULIC PUMP

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SUBTASK 32-51-00-860-036

(3) Make sure the hydraulic system B reservoir is full, do this task: Hydraulic Reservoir Servicing, TASK 12-12-00-610-801.

SUBTASK 32-51-00-860-037

(4) For hydraulic system B, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 32-51-00-860-038

(5) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

SUBTASK 32-51-00-730-024

(6) Put the NOSE WHEEL STEERING ALTERNATE switch, on the Captain's P1 Panel, to the ALT position.

SUBTASK 32-51-00-730-026

(7) Make sure the steering system operates normally with the control wheel.

SUBTASK 32-51-00-730-027

(8) Put the NOSE WHEEL STEERING ALTERNATE switch, on the Captain's P1 Panel, to the NORM position.

SUBTASK 32-51-00-730-029

(9) Make sure the steering system does not operate normally with the control wheel.

L. Do the Test of Air/Ground Mode and Normal Steering Response

SUBTASK 32-51-00-580-017

(1) For method 1, do this task; Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801

SUBTASK 32-51-00-430-001

(2) For method 2, connect the torsion link apex pin. Do this task: Nose Landing Gear Torsion Link Connection, TASK 32-21-31-400-803

SUBTASK 32-51-00-730-050

(3) With the nose gear shock strut fully extended, make sure the steering rotary actuator is in the air mode as follows:

(a) The index marks on the rotary actuator pulley and the housing are aligned

(b) The pulley on the rotary actuator is turned fully counter-clockwise

SUBTASK 32-51-00-730-051

(4) With the airplane on jacks Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E, TASK 07-11-03-580-802, use the nose gear axle jack to compress the nose gear shock strut 2.00 +/-0.1 inches (50.8 +/- 2.5 mm) and make sure the rotary actuator stays in the air mode.

NOTE: The dimensions given in this test are all measured from the bottom of the inner diameter of the outer cylinder.

NOTE: Nose gear axle jack required only for testing while the airplane is jacked.

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SUBTASK 32-51-00-730-052

(5) Compress the nose gear shock strut further to 3.50 +/-0.1 inches (89 +/- 2.5 mm) and make sure the rotary actuator changes to the ground mode in 3 seconds or less.

SUBTASK 32-51-00-730-053

(6) Extend the nose gear shock strut back to 2.00 +/-0.1 inches (50.8 +/- 2.5 mm) of compression and make sure the rotary actuator moves back to the air mode in 8 seconds or less.

SUBTASK 32-51-00-430-002

(7) Install bracket and clamps for NLG landing/taxi light conduit.

SUBTASK 32-51-00-730-055

(8) Do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

SUBTASK 32-51-00-730-056

(9) Make sure the rotary actuator changes to the ground mode.

M. Put the Airplane in its Usual Condition.

SUBTASK 32-51-00-860-040

(1) For hydraulic system B, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-51-00-860-041

(2) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	17	C01027	LANDING GEAR NOSE GEAR STEER

SUBTASK 32-51-00-860-087

(3) Do this task:Remove Electrical Power, TASK 24-22-00-860-812.

SUBTASK 32-51-00-410-002

(4) Install the summing mechanism cover [10] with screws [8] and washers [9].

SUBTASK 32-51-00-860-042

WARNING: ONLY USE THE CORRECT PIN FOR THE AIRPLANE MODEL. IF YOU USE AN INCORRECT PIN, THE HYDRAULIC STEERING CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(5) Move the towing lever to the TOW position and install the NLG towing lever pin, SPL-1499.

SUBTASK 32-51-00-860-050

(6) Remove the safety tag and close this circuit breaker:

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
F	2	C01449	STANDBY HYDRAULIC PUMP

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SUBTASK 32-51-00-580-007

(7) For method 1, do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

SUBTASK 32-51-00-860-084

(8) For method 2, connect the torsion link apex pin. Do this task:Nose Landing Gear Torsion Link Connection, TASK 32-21-31-400-803

(a) Reconnect the clamps, brackets and conduit attached to the Nose Landing Gear/Taxi light.

SUBTASK 32-51-00-080-009

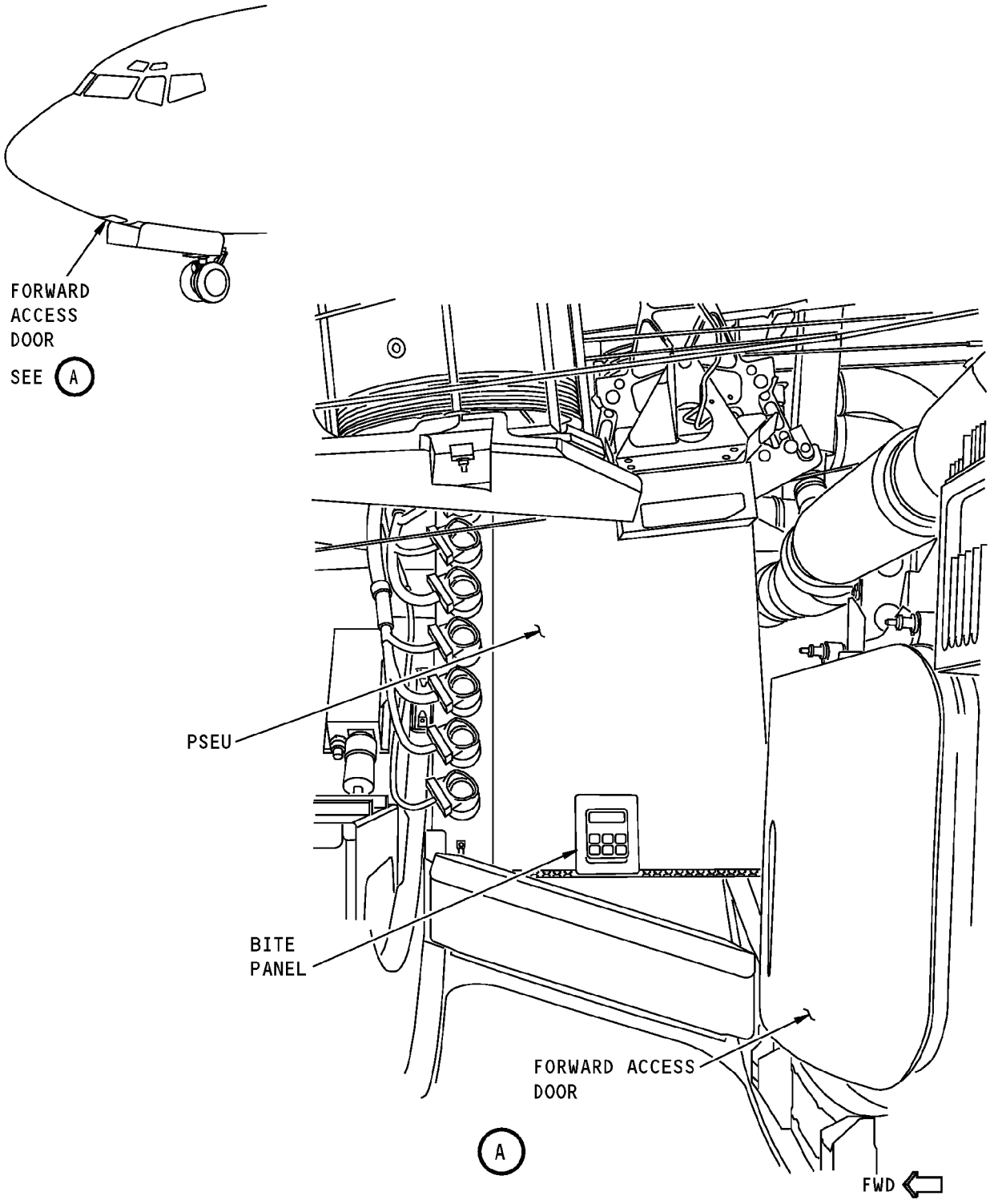
(9) For method 1, remove the greased plates from under the nose wheels.

SUBTASK 32-51-00-580-004

(10) Do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

END OF TASK

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Proximity Switch Eelectronics Unit (PSEU)
Figure 502/32-51-00-990-802

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NOSE WHEEL STEERING SYSTEM - INSPECTION/CHECK

1. General

A. This procedure contains scheduled maintenance task data.

B. This task has the data for a detailed visual inspection of the nose wheel steering system mechanism.

TASK 32-51-00-200-801

2. Nose Wheel Steering System Mechanism Inspection

(Figure 601)

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

D. Prepare for the detailed visual inspection of the Nose Wheel Steering System Mechanism

SUBTASK 32-51-00-480-024

WARNING: MAKE SURE THE LANDING GEAR DOWNLOCK PINS ARE INSTALLED. THIS WILL PREVENT ACCIDENTAL RETRACTION OF THE LANDING GEAR, INJURY TO PERSONS, AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-51-00-860-077

WARNING: REMOVE HYDRAULIC POWER FOR THE NOSE WHEEL STEERING BEFORE YOU DO THE CHECK. HYDRAULIC POWER CAN CAUSE THE NOSE WHEELS TO MOVE. INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

E. Nose Wheel Steering System Mechanism Visual Inspection

SUBTASK 32-51-00-010-009

(1) Open the access panels on the left sidewall and the top of the nose wheel well to get access to the nose wheel steering system mechanism and cable turnbuckles.

SUBTASK 32-51-00-010-010

(2) Remove the screws [8], washers [9], and the summing mechanism cover [10].

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SUBTASK 32-51-00-210-010

(3) Do a detailed visual inspection of the mechanical control path for the nose wheel steering system mechanism.

SUBTASK 32-51-00-410-004

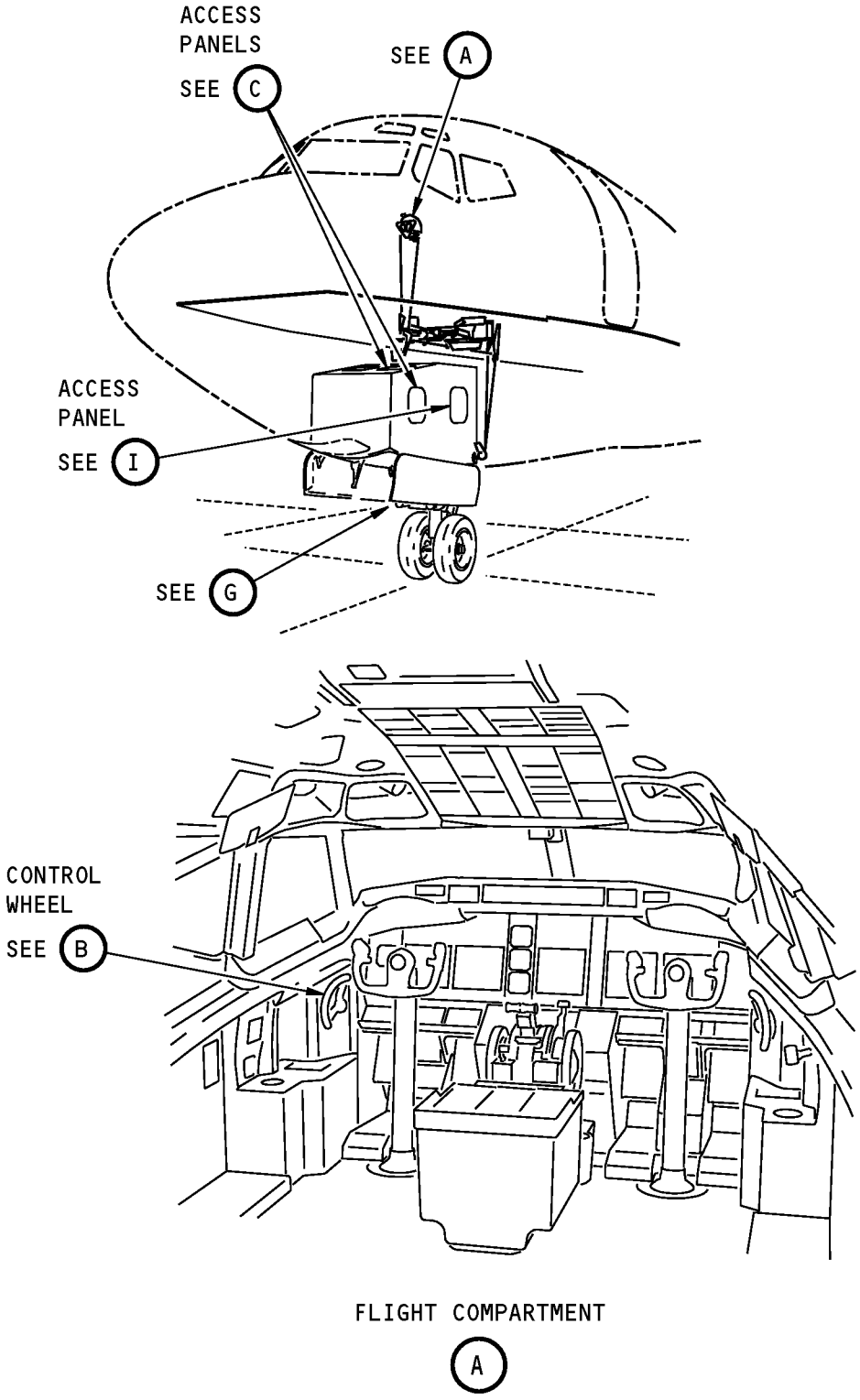
(4) Install the summing mechanism cover [10] with screws [8] and washers [9].

SUBTASK 32-51-00-410-005

(5) Close the access panels in the wheel well that you opened to get access to the nose wheel steering system mechanism and cable turnbuckles.

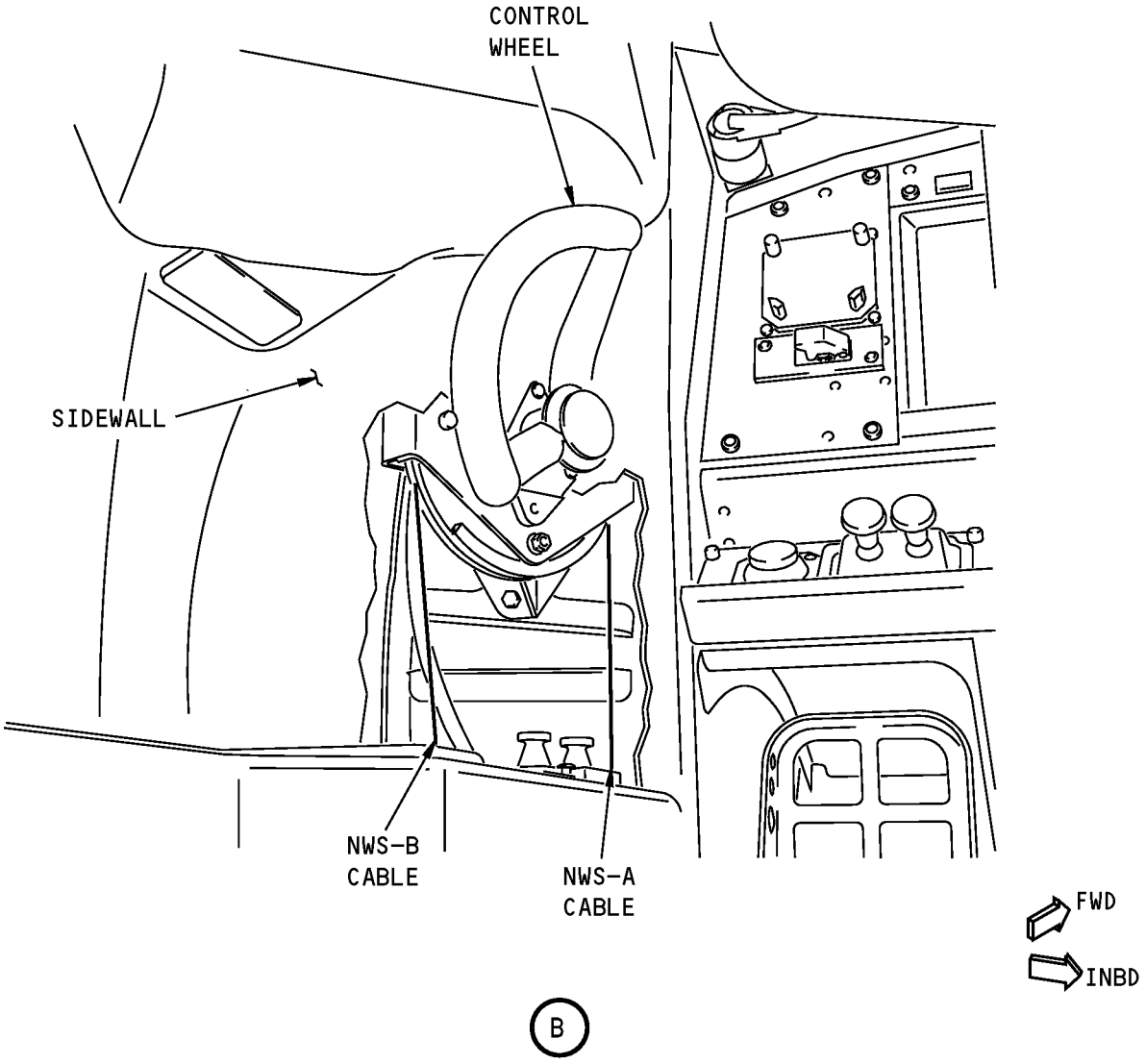
END OF TASK

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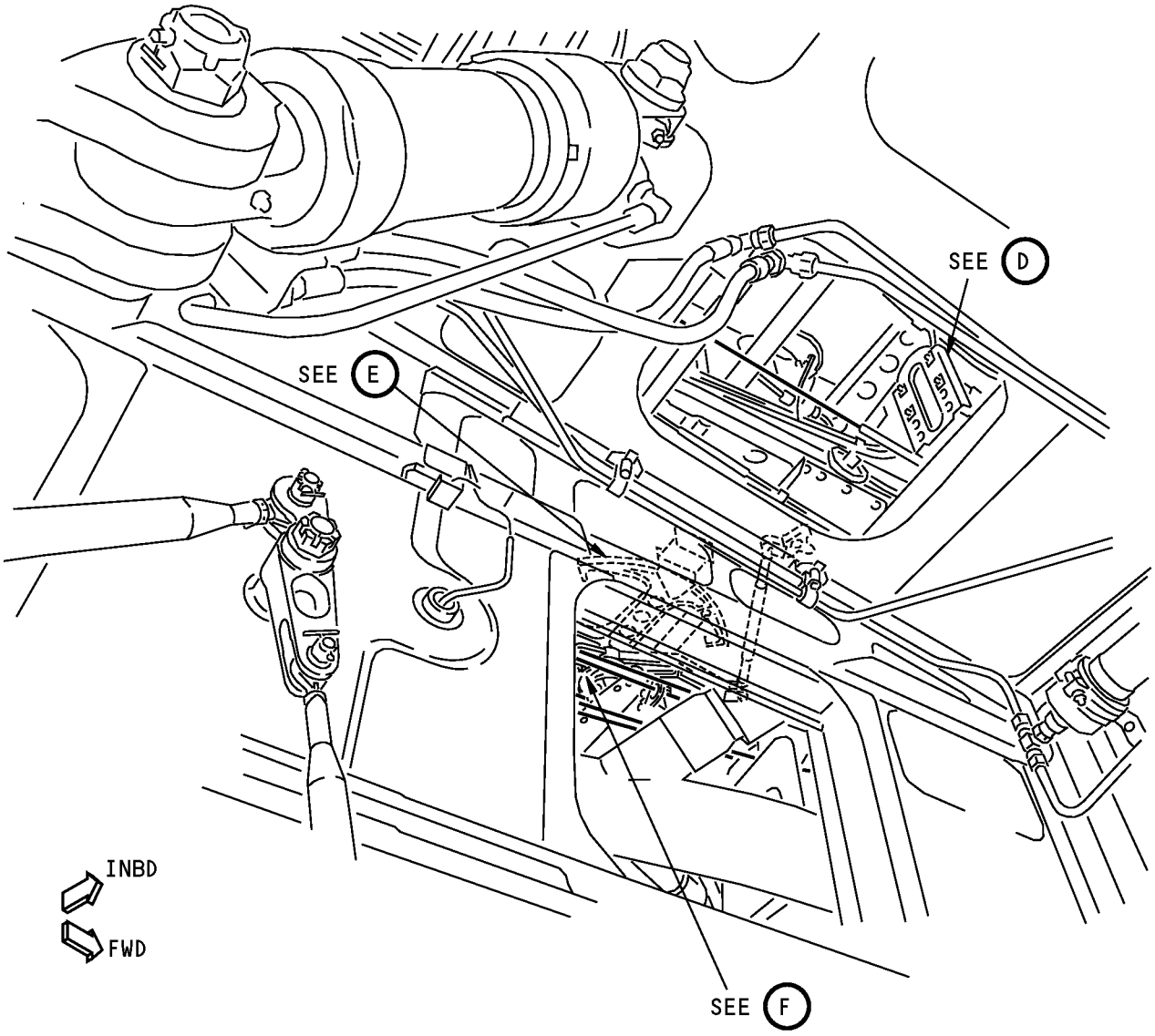
Nose Wheel Steering System Mechanism Inspection
Figure 601 (Sheet 1 of 8)/32-51-00-990-803

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Nose Wheel Steering System Mechanism Inspection
Figure 601 (Sheet 2 of 8)/32-51-00-990-803

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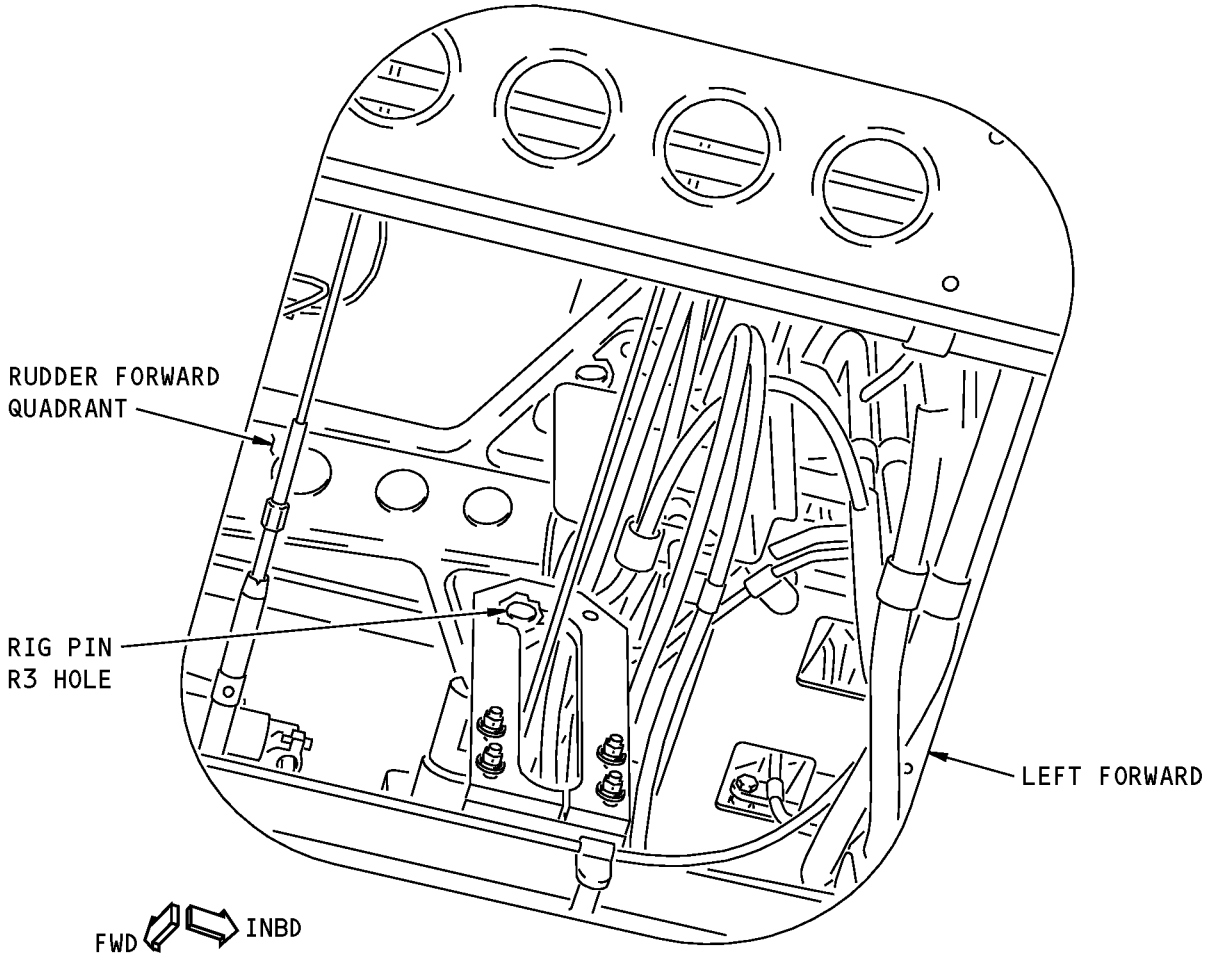


NOSE LANDING GEAR WHEEL WELL

C

Nose Wheel Steering System Mechanism Inspection
Figure 601 (Sheet 3 of 8)/32-51-00-990-803

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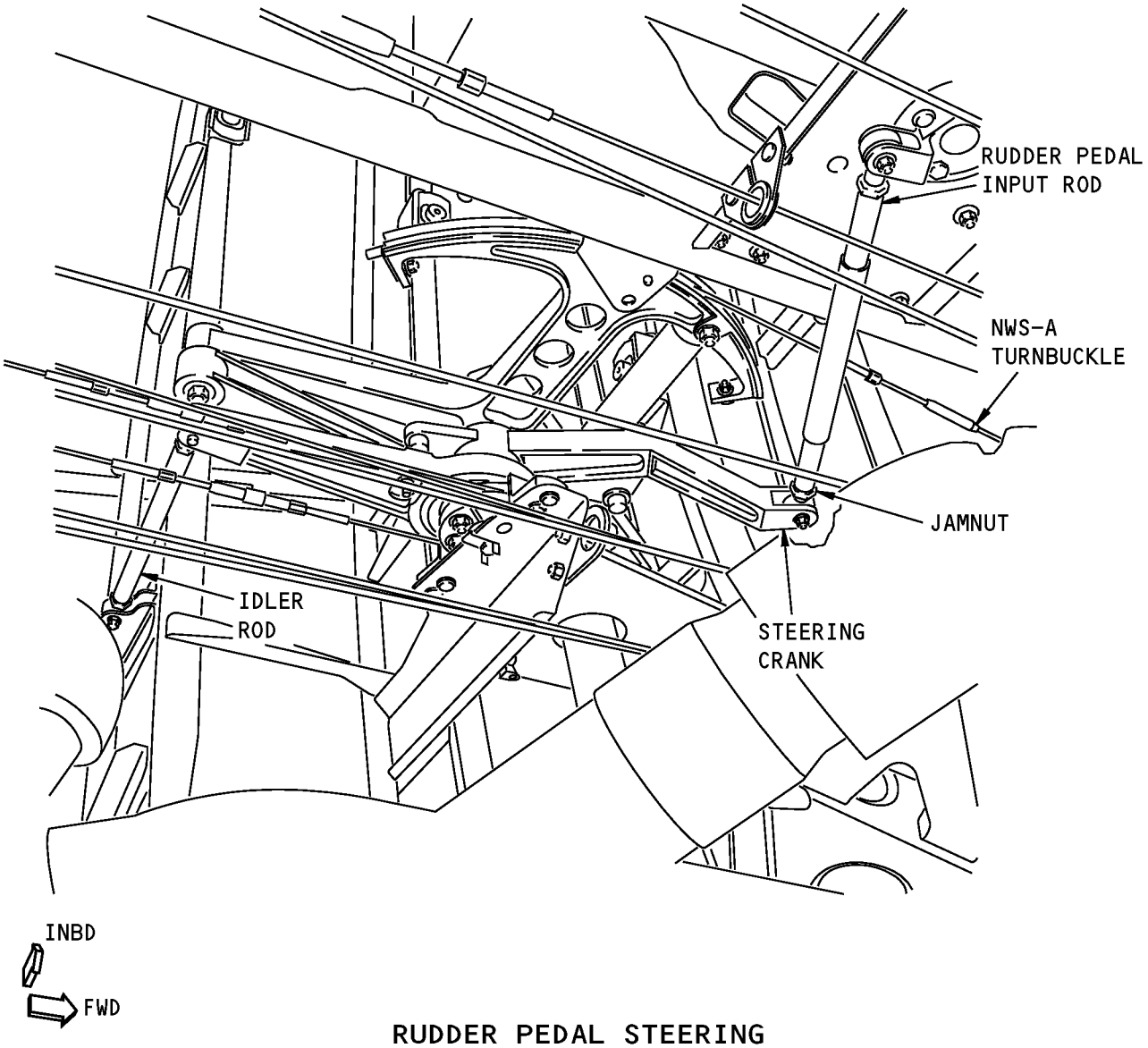


CAPTAIN'S RUDDER FORWARD QUADRANT

D

Nose Wheel Steering System Mechanism Inspection
Figure 601 (Sheet 4 of 8)/32-51-00-990-803

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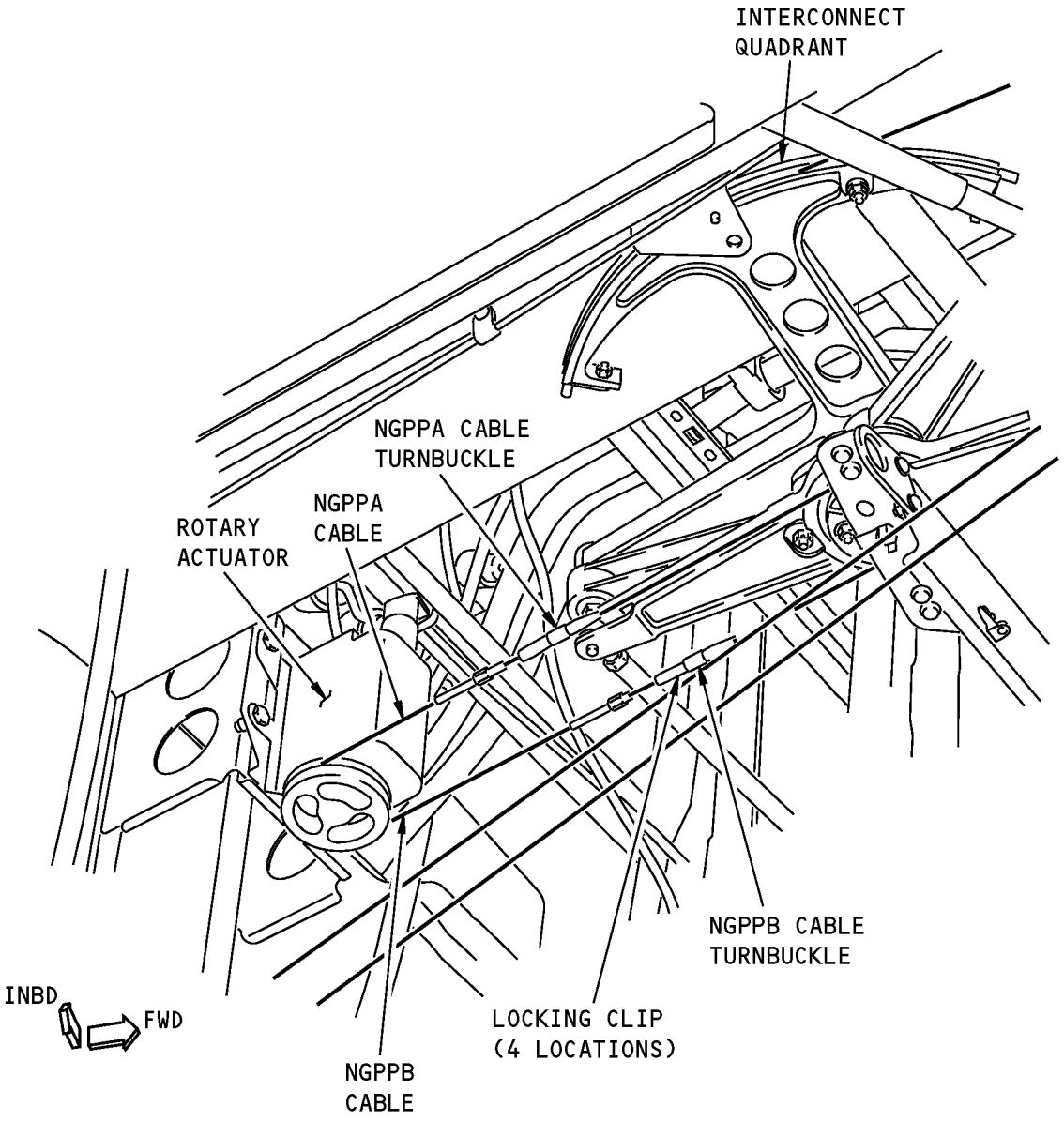


RUDDER PEDAL STEERING
INTERCONNECT MECHANISM

E

Nose Wheel Steering System Mechanism Inspection
Figure 601 (Sheet 5 of 8)/32-51-00-990-803

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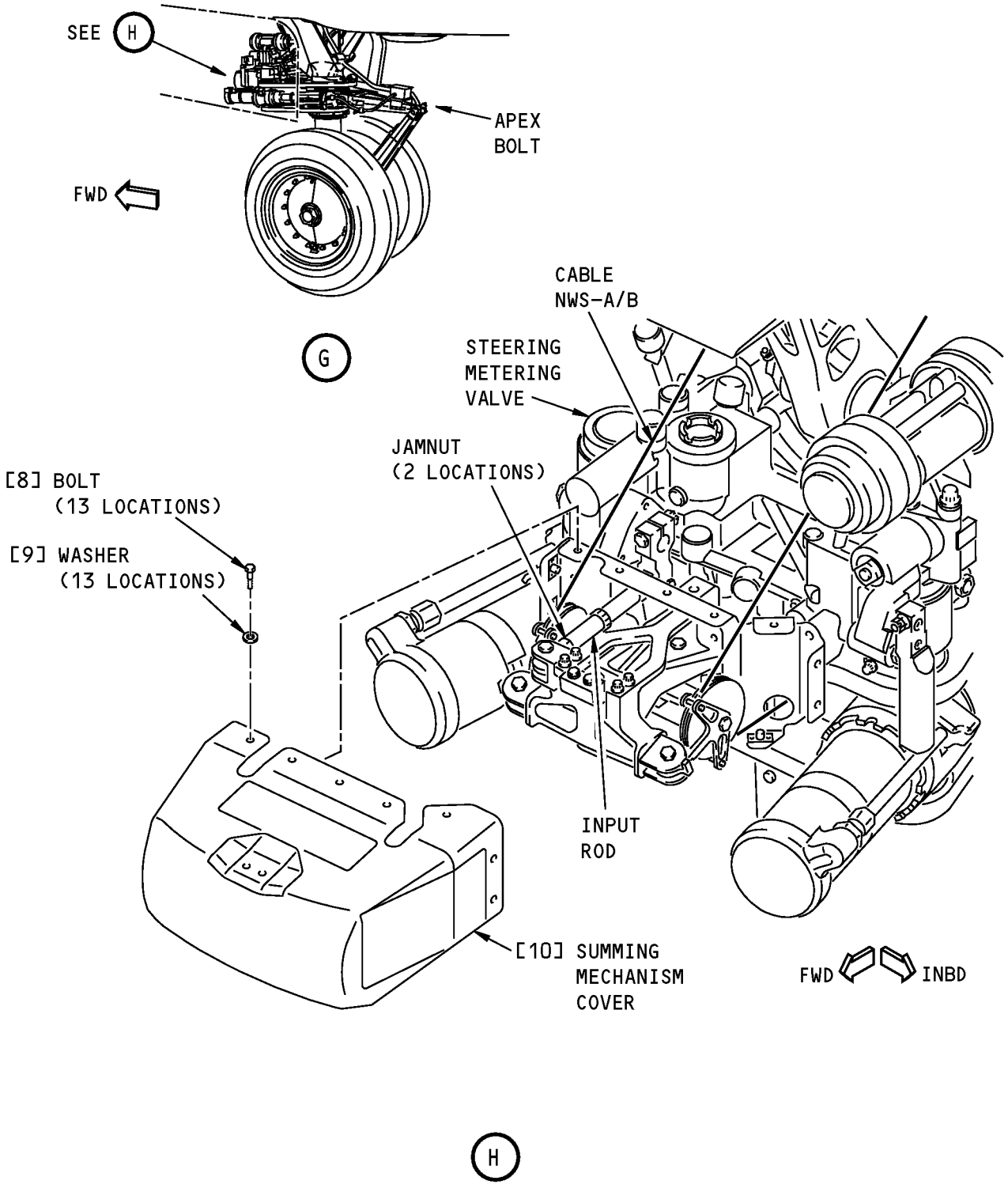


RUDDER PEDAL STEERING INTERCONNECT
MECHANISM AND ROTARY ACTUATOR

F

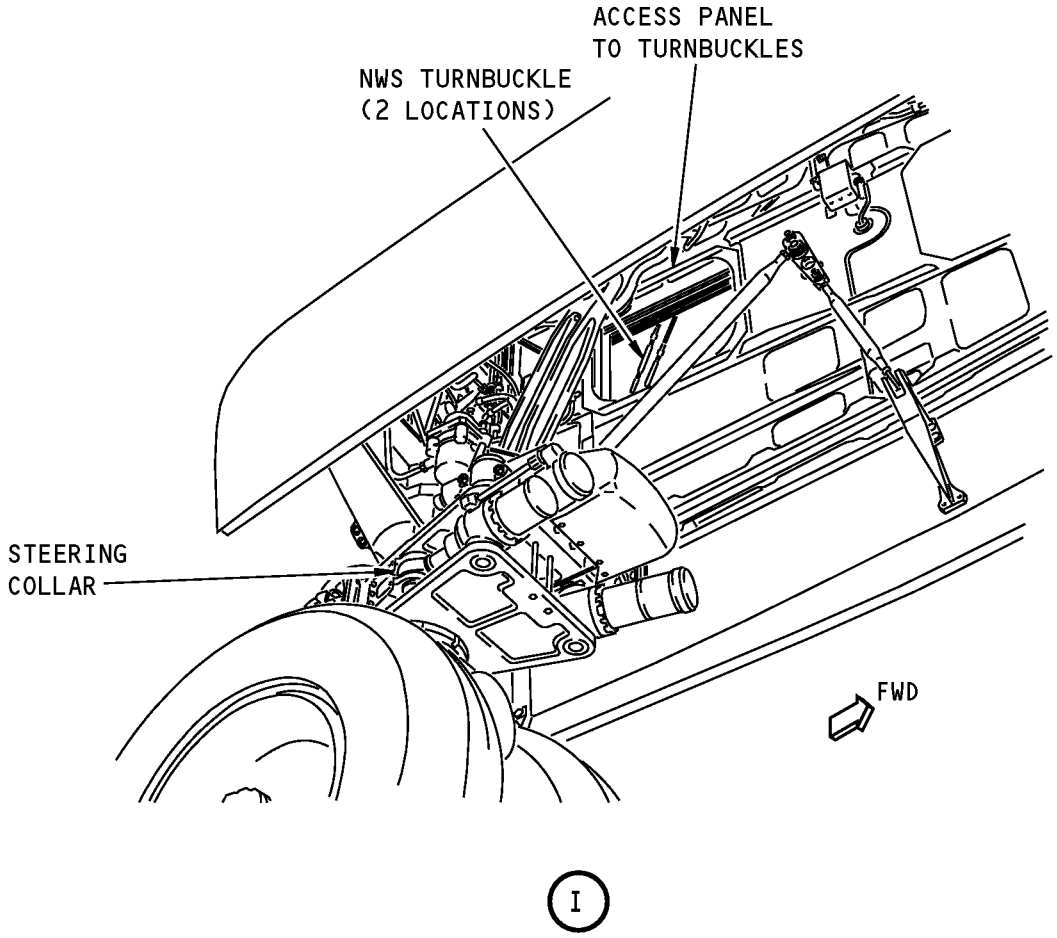
Nose Wheel Steering System Mechanism Inspection
Figure 601 (Sheet 6 of 8)/32-51-00-990-803

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Nose Wheel Steering System Mechanism Inspection
Figure 601 (Sheet 7 of 8)/32-51-00-990-803

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Nose Wheel Steering System Mechanism Inspection
Figure 601 (Sheet 8 of 8)/32-51-00-990-803

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NOSE WHEEL STEERING - MAINTENANCE PRACTICES

1. General

A. This procedure provides instructions to clean the nose wheel steering towing lever [1], crank [2] and plunger [3].

TASK 32-51-11-100-801

2. Clean the Exterior Surfaces of the Towing Lever Assembly

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

Reference	Description
STD-4233	Pin, Rig, 0.3125 in (7.938 mm)

C. Consumable Materials

Reference	Description	Specification
B00130	Alcohol - Isopropyl	TT-I-735

D. Prepare for Cleaning

SUBTASK 32-51-11-480-008

WARNING: MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlocks are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801

E. Clean the Towing Lever Assembly.

SUBTASK 32-51-11-100-001

CAUTION: DO NOT TRY TO DISASSEMBLE THE TOWING LEVER PLUNGER TO CLEAN IT. DAMAGE TO INTERNAL COMPONENTS WILL OCCUR.

(1) Use a clean cloth, moistened in isopropyl alcohol, B00130, to clean the towing lever [1], crank [2] and plunger [3] to remove dirt, grease and grime. Be sure to remove the debris that is stuck between the bushings in the valve housing, where the most stickiness occurs.

NOTE: Isopropyl alcohol is the most effective cleaner that will not damage the valve seals and finishes.

(a) If necessary disassemble towing crank and towing lever as follows:

1) Remove nut, washer and bolt from tow lever crank and remove tow lever.
2) Remove towing crank and cup washer, (if installed), from valve housing.
3) Clean bushings in the valve housing and area in between them.
4) Install towing crank into valve housing.
5) Install the cup washer (if installed) and towing lever onto towing crank splines. Orient splines so that the bolt can be installed though the hole in the towing lever. Use a 0.3125 in (7.938 mm) rig pin, STD-4233 to line up the holes in the manifold and towing crank.
6) Install the bolt with washer under head through the towing lever and towing crank.

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7) Install remaining washer onto bolt, then install nut. Install a 0.3125 in (7.938 mm) rig pin, STD-4233 to hold the towing lever in place.

8) Tighten nut to a torque value of 40 to 45 inch-pounds (4.5 to 5.1 N-m), as required to line up the slot in the nut with the hole in the bolt.

9) Install cotter pin.

SUBTASK 32-51-11-212-001

(2) Check the operation of the towing lever [1] and plunger [3].

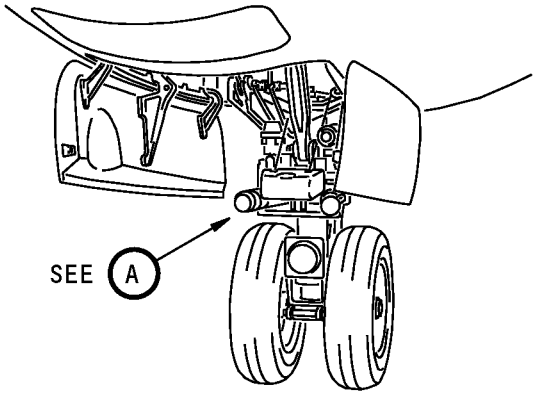
NOTE: Lubrication of the towing lever or plunger is not recommended as this will attract dirt and grime.

(a) The towing lever [1] and plunger [3] must return to the normal position when released.

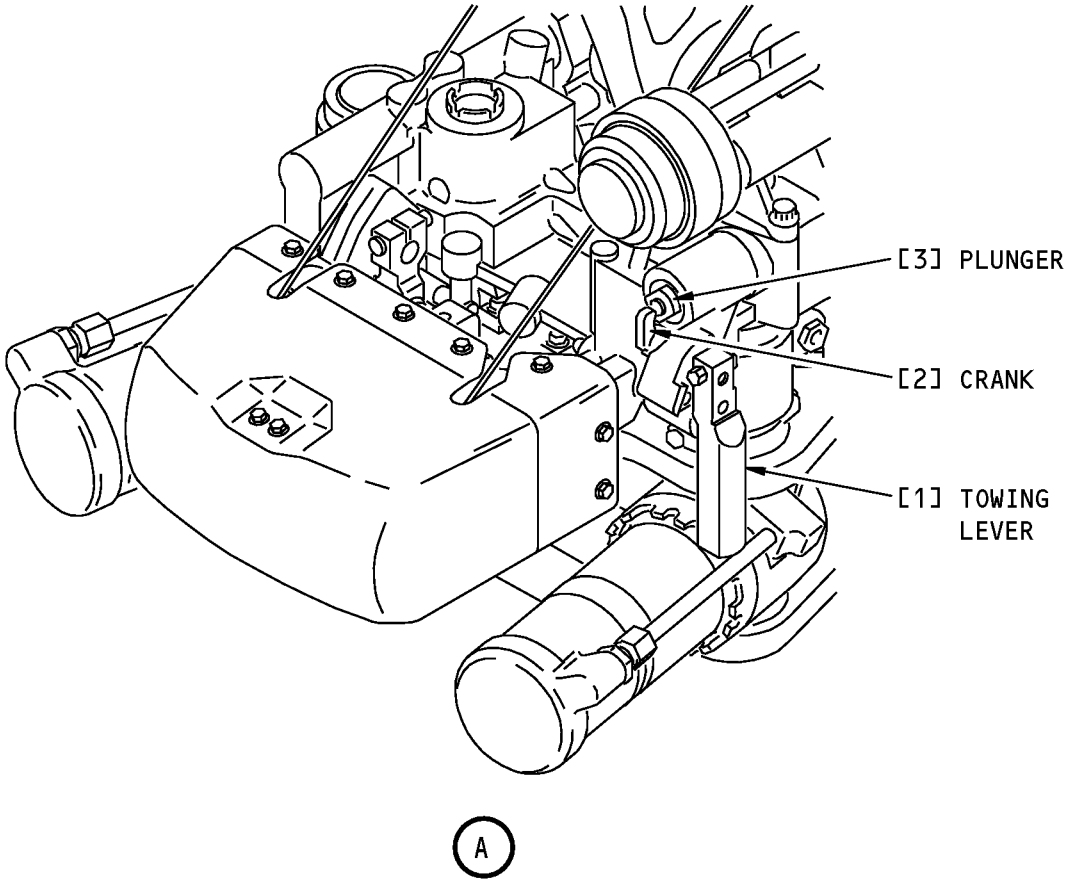
(b) There must be no external leakage or evidence of instability, sticking or binding of the towing lever [1].

END OF TASK

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NOSE LANDING GEAR



Nose Wheel Steering System - Towing Lever Assembly
Figure 201/32-51-11-990-802

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STEERING METERING VALVE - REMOVAL/INSTALLATION

1. General

A. This procedure has these two tasks:

(1) A removal of the steering metering valve (referred to as the valve assy [7]).

(2) An installation of the steering metering valve.

TASK 32-51-11-000-801

2. Steering Metering Valve Removal

(Figure 401)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1499	Pin - Lock, NLG Towing Lever (Part #: A09003-2, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A09003-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

D. Prepare for the Removal

SUBTASK 32-51-11-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-51-11-860-001

(2) Make sure the wheels of the nose landing gear are in the centered position.

SUBTASK 32-51-11-480-007

(3) Install these rig pins from the rig pin rig pin kit, SPL-1585 set:

(a) Rig pin 2 in the nose wheel steering tiller

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(b) Rig pins NWS 1 in the rudder pedal interconnect quadrant

(c) Rig pin 4 in the summing mechanism.

SUBTASK 32-51-11-860-002

(4) Remove the pressure from hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-51-11-860-003

(5) Move the towing lever, on the forward side of the nose landing gear, to the TOW position.

SUBTASK 32-51-11-860-004

WARNING: ONLY USE THE CORRECT PIN FOR THE AIRPLANE MODEL. IF YOU USE AN INCORRECT PIN, THE HYDRAULIC STEERING CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(6) Install the NLG towing lever pin, SPL-1499 through the towing lever.

NOTE: You use the NLG Towing Lever Lock Pin to hold the towing lever in the TOW position.

E. Steering Metering Valve Removal

SUBTASK 32-51-11-010-001

(1) Remove the screws [4] and washers [5] that hold the summing mechanism cover [10] to the summing mechanism bracket.

SUBTASK 32-51-11-010-002

(2) Remove the screws [9] and washers [5] that hold the support bracket to the valve assembly [7].

SUBTASK 32-51-11-020-002

(3) Loosen the cables NWS-A [1], NWS-B [2], and NWS-A/B [8] at the turnbuckles [3].

SUBTASK 32-51-11-020-003

(4) Remove the nut [23], washer [5], bushing [24], and bolt [25] to disconnect the link assy [6] from the input lever on the valve assembly [7].

SUBTASK 32-51-11-020-004

(5) Disconnect the hydraulic lines [11] from the valve assembly [7].

SUBTASK 32-51-11-480-003

(6) Install caps in the lines [11] and plugs in the ports on the valve assembly [7].

SUBTASK 32-51-11-020-010

(7) Remove the lockwire from the bolts [20].

SUBTASK 32-51-11-020-005

(8) Remove the bolts [20] and washers [18] that hold the valve assembly [7] to the top and bottom support plates.

SUBTASK 32-51-11-020-006

(9) Remove the nuts [14], washers [15, 18], and bolts [19] that hold the valve assembly [7]to the top support plate.

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SUBTASK 32-51-11-020-007

CAUTION: THE STEERING METERING VALVE IS TOP HEAVY. THE VALVE TENDS TO WANT TO FLIP OUT OF YOUR GRIP. USE CARE IN HANDLING TO PREVENT DROPPING OF, AND DAMAGE TO, THE VALVE UNIT.

(10) Remove the nuts [16], bolts [22], washers [21], and clamps [17] that attach the swivel valves to the steering actuator trunnions. Be careful when you remove the valve assembly [7]to prevent contamination of the open hydraulic ports.

NOTE: The hydraulic ports will be open when you remove the swivel valves from the actuator trunnions. Make sure the area around and in the trunnions is clean before the hydraulic ports are open to prevent contamination.

(a) Install lockwire in the top of the swivel valves to keep them in the valve assembly [7].

NOTE: Do not remove the swivels from the steering metering valve. If the swivels are removed from the steering metering valve, damage to the mating surfaces of the swivel and the steering metering valve can occur.

SUBTASK 32-51-11-480-004

(11) Install caps in the open hydraulic ports for the swivel valves (which are part of the valve assy [7]) and the actuator trunnions.

SUBTASK 32-51-11-020-008

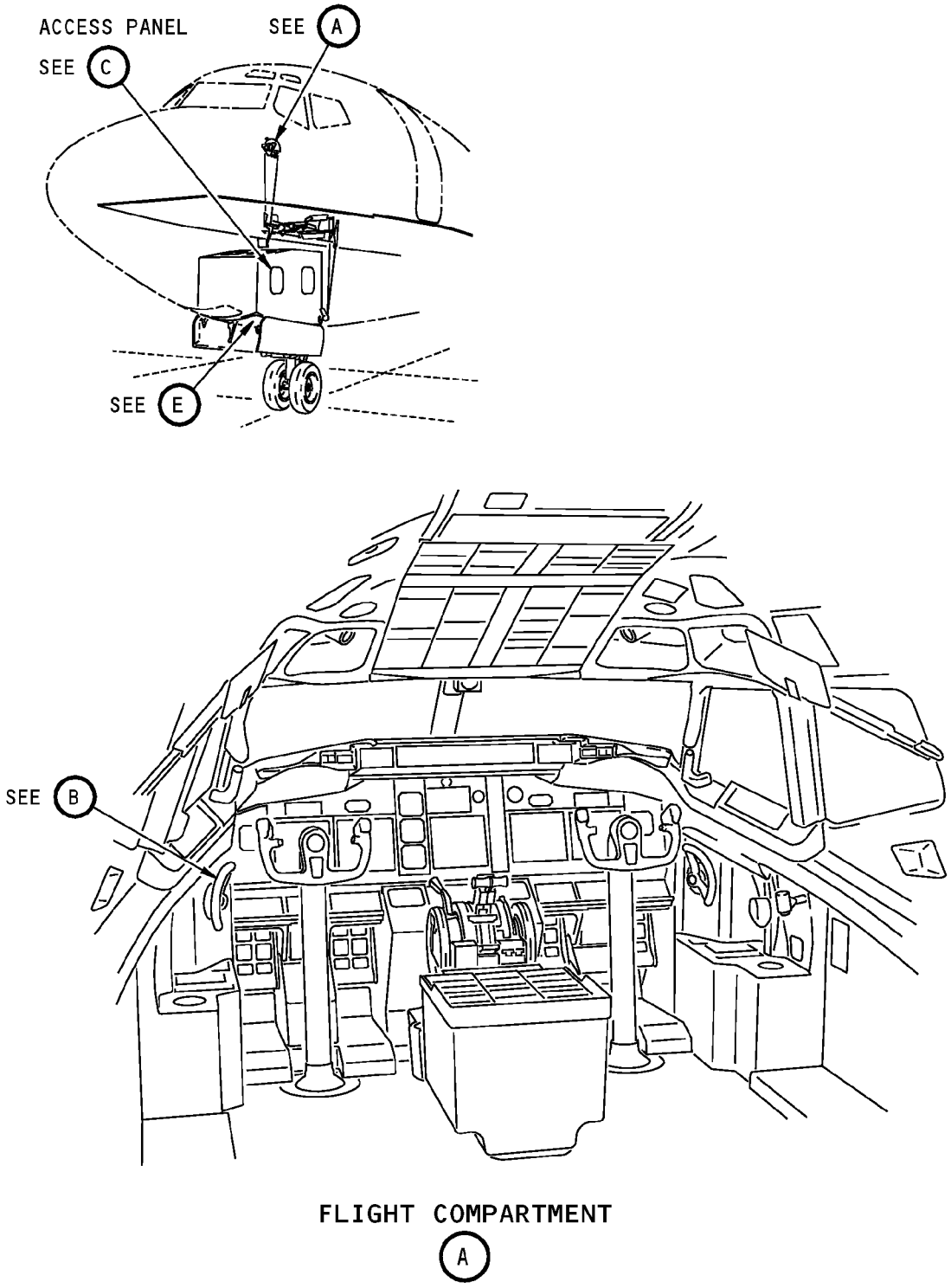
(12) Remove the union [12] and packings [13] from the valve assembly [7].

SUBTASK 32-51-11-480-005

(13) Install plugs in the ports.

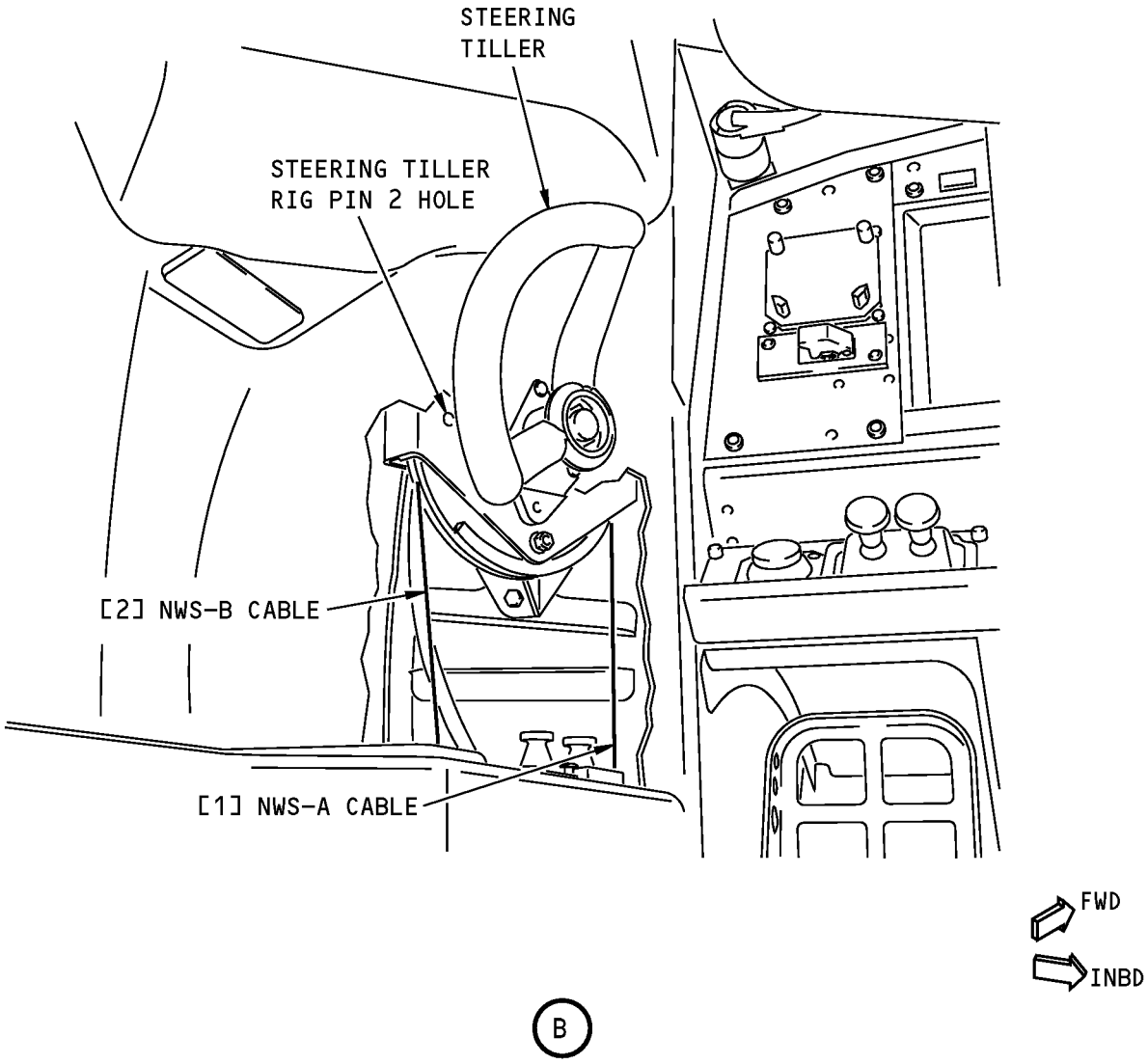
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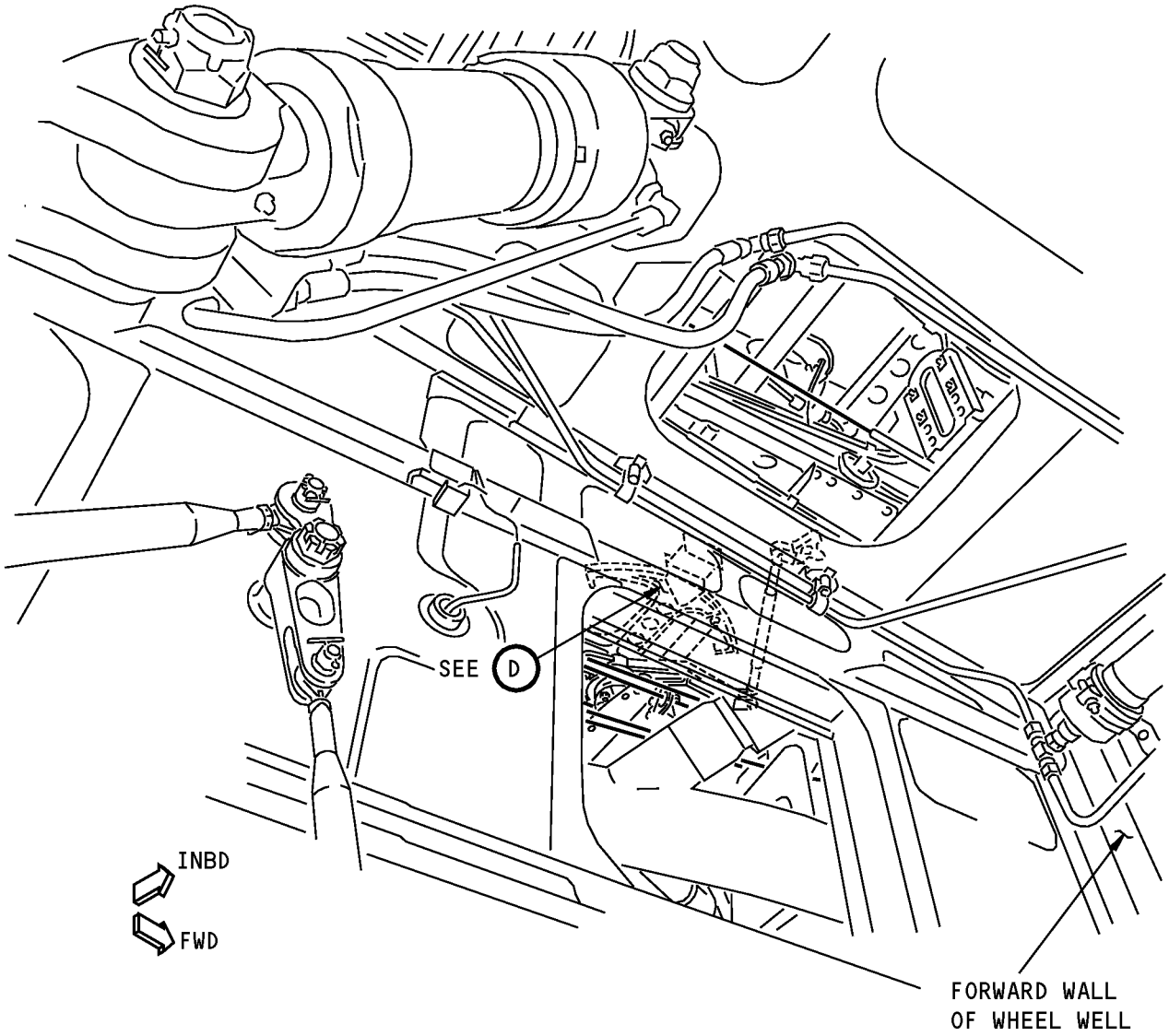
Steering Metering Valve Installation
Figure 401 (Sheet 1 of 6)/32-51-11-990-801

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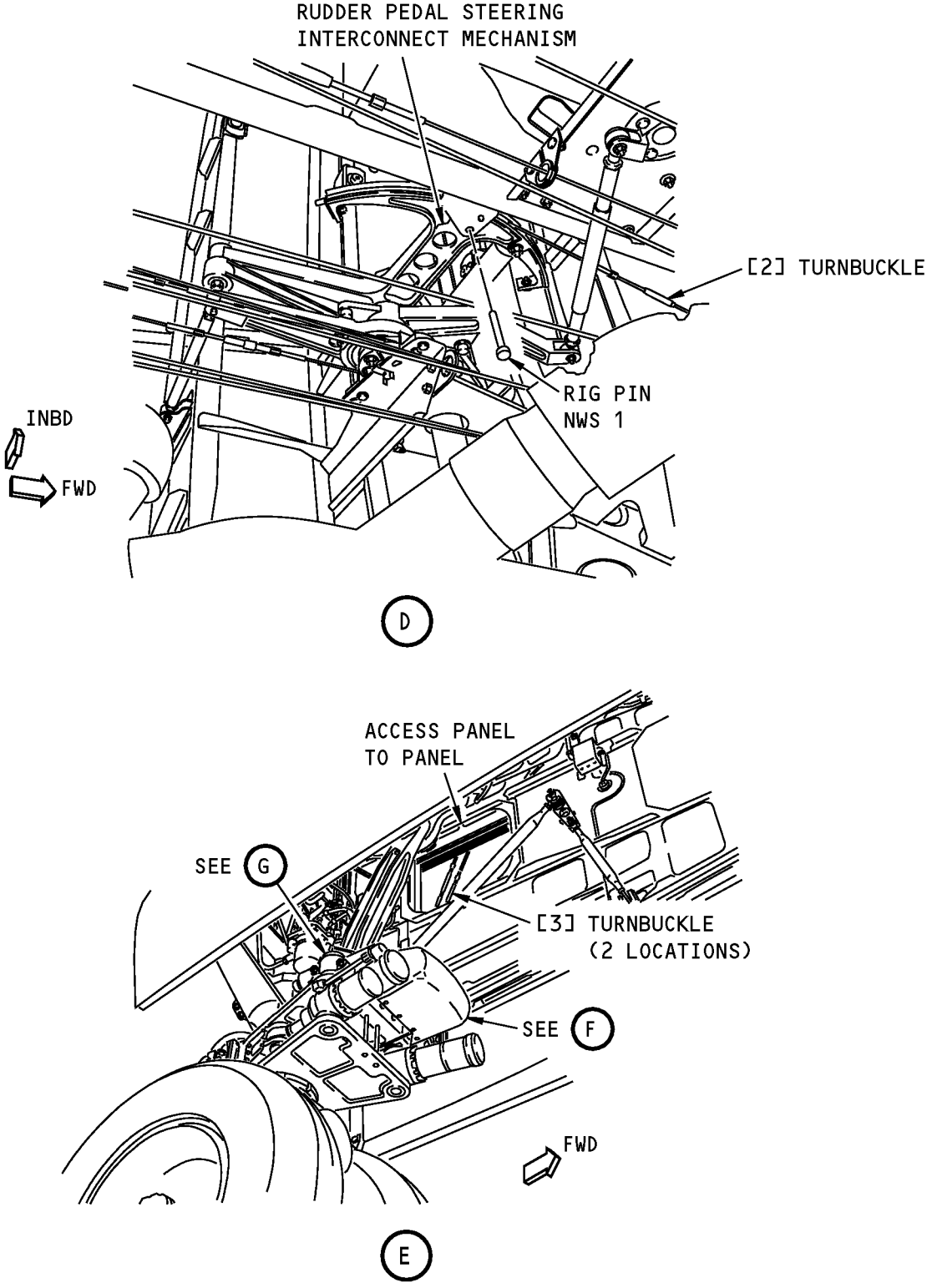
Steering Metering Valve Installation
Figure 401 (Sheet 2 of 6)/32-51-11-990-801

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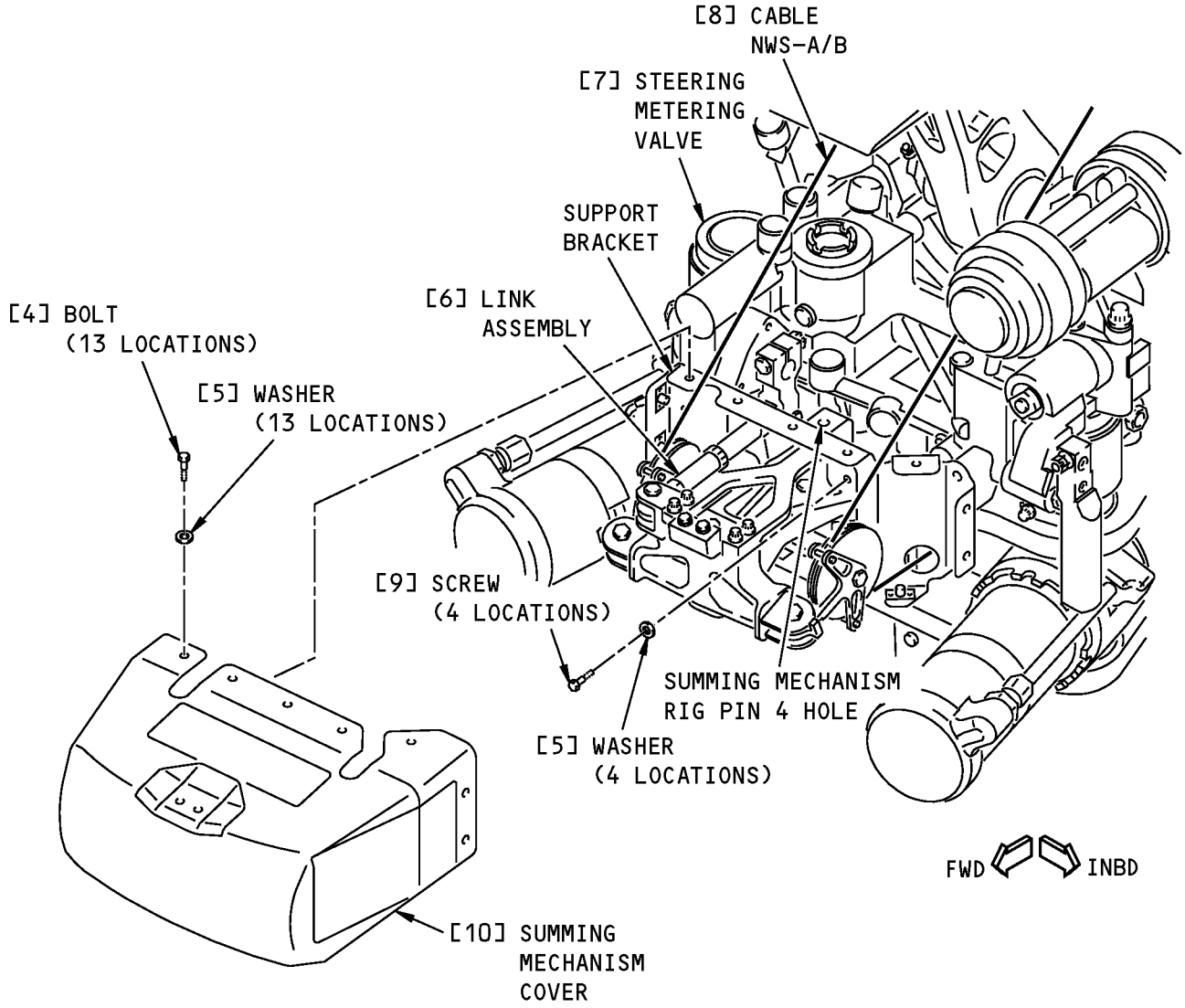
Steering Metering Valve Installation
Figure 401 (Sheet 3 of 6)/32-51-11-990-801

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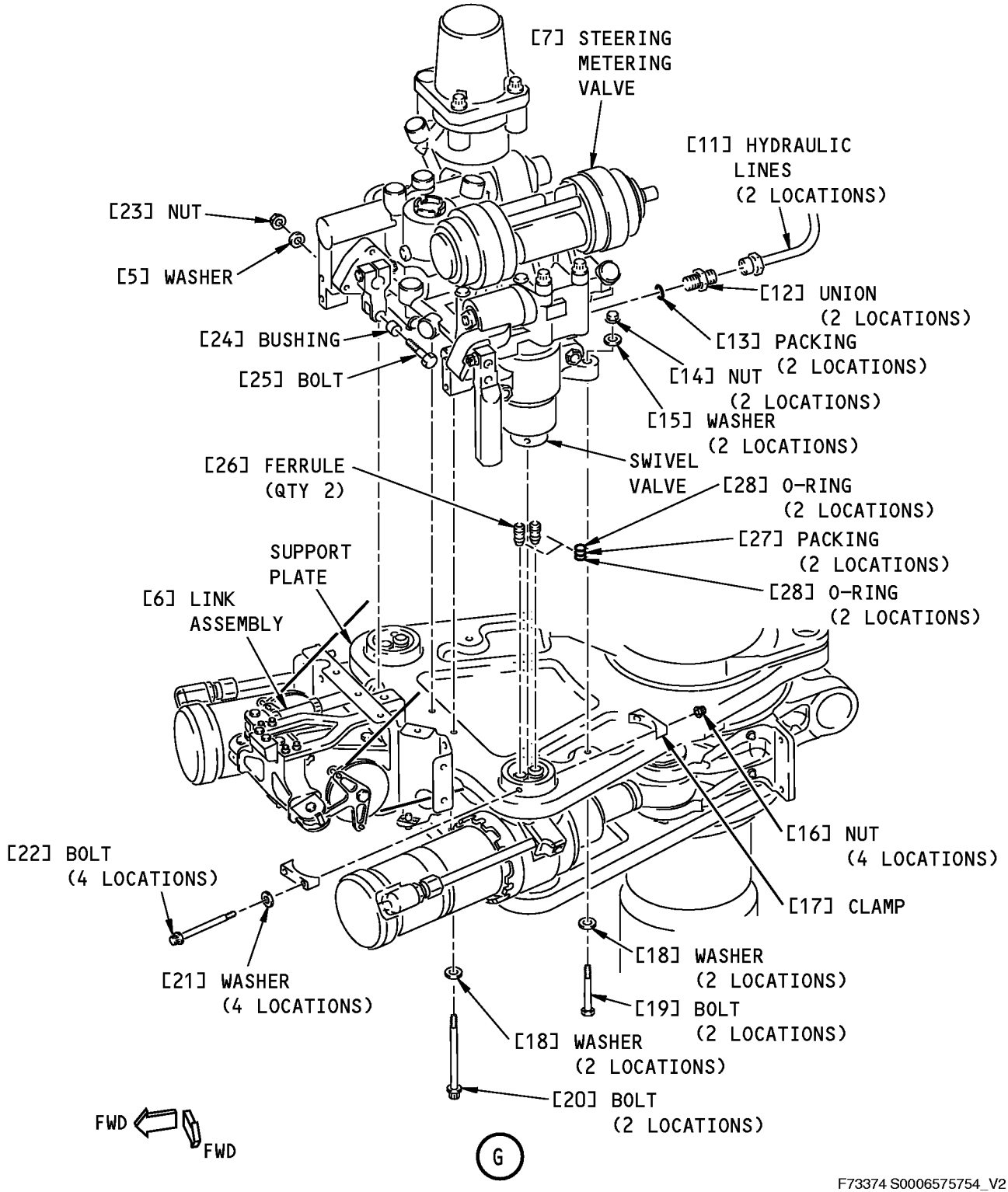
Steering Metering Valve Installation
Figure 401 (Sheet 4 of 6)/32-51-11-990-801

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Steering Metering Valve Installation
Figure 401 (Sheet 5 of 6)/32-51-11-990-801

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Steering Metering Valve Installation
Figure 401 (Sheet 6 of 6)/32-51-11-990-801

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TASK 32-51-11-400-801

3. Steering Metering Valve Installation

(Figure 401)

A. References

Reference	Title
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
29-11-01-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
32-51-00-700-801	Nose Wheel Steering System Test (P/B 501)
32-51-00-820-802	Nose Wheel Steering System Adjustment (P/B 501)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
7	Valve assembly	32-51-11-01-060	HAP 001-013, 015-026, 028-030
		32-51-11-01A-055	HAP 031-054, 101-999
12	Union	32-51-51-01-070	HAP 001-013, 015-026, 028-030
		32-51-51-01A-080	HAP 031-054, 101-999
13	Packing	32-51-11-01-070	HAP 001-013, 015-026, 028-030
		32-51-11-01A-065	HAP 031-054, 101-999
		32-51-51-01-075	HAP 001-013, 015-026, 028-030
27	Packing	32-51-51-01-170	HAP 001-013, 015-026, 028-030
		32-51-51-01A-175	HAP 031-054, 101-999
28	Ring	32-51-51-01-175	HAP 001-013, 015-026, 028-030
		32-51-51-01A-180	HAP 031-054, 101-999

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E. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

F. Steering Metering Valve Installation

SUBTASK 32-51-11-860-005

(1) For hydraulic system A, do this task: Hydraulic Reservoirs Depressurization, TASK 29-11-01-860-802 or Hydraulic Reservoirs Depressurization, TASK 29-09-00-860-802.

SUBTASK 32-51-11-600-001

CAUTION: THE STEERING METERING VALVE IS TOP HEAVY. THE VALVE TENDS TO WANT TO FLIP OUT OF YOUR GRIP. USE CARE IN HANDLING TO PREVENT DROPPING OF, AND DAMAGE TO, THE VALVE UNIT.

(2) Do these steps to prepare the valve assembly [7] for installation:

(a) Lubricate the new packings [13] and the union [12] with fluid, D00153.

(b) Install the packings [13] and unions [12] in the valve assembly [7].

(c) Apply fluid, D00153 to the transfer tubes in the actuator trunnions.

(d) Install the new ring [28] and the new packing [27] on both of the tube [26] between the valve assembly [7] and the steering cylinders.

SUBTASK 32-51-11-620-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST BMS 3-27 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

CAUTION: REMOVE UNWANTED MASTINOX FROM SURFACES WHICH WILL BE LUBRICATED. IF YOU APPLY MASTINOX TO JOINTS THAT TURN, FAILURE OF THE LANDING GEAR TO EXTEND OR RETRACT COULD OCCUR.

(3) Apply corrosion preventive compound, C50056 or compound, C00913 (alternate) to the faying surfaces of all four mounting feet on the valve assembly [7].

SUBTASK 32-51-11-620-002

(4) Apply a thin layer of the corrosion preventive compound, C00913, to these items:

(a) The shank of the bolts [19]

(b) The shank, threads, and thread reliefs of the bolts [20]

(c) The threads of the nuts [14]

(d) The splines, and faces of the washers [15], and [18].

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SUBTASK 32-51-11-020-009

CAUTION: MAKE SURE THE OFFSET HOLE PATTERN IN THE SWIVEL VALVES FOR THE VALVE ASSEMBLY ARE CORRECTLY ALIGNED WITH THE MATING HOLE PATTERN IN THE ACTUATOR TRUNNION. IF THEY ARE NOT ALIGNED CORRECTLY, IT IS POSSIBLE THE STEERING SYSTEM WILL NOT OPERATE CORRECTLY, OR YOU CAN CAUSE DAMAGE TO THE STEERING SYSTEM.

(5) Put the swivel valves for the valve assembly [7]into the steering actuator trunnions. Make sure the offset hole pattern in the swivel valves is aligned with the mating hole pattern in the left and right trunnions.

SUBTASK 32-51-11-420-002

(6) Install the clamps [17], washers [5], bolts [22], and nuts [16] to attach the valve assembly [7]to the actuator trunnions.

(a) Remove the lockwire from the swivel valves, if it is installed.

SUBTASK 32-51-11-420-003

(7) Install the bolts [19], washers [15, 18], and nuts [14] to attach the valve assembly [7]to the top support plate.

SUBTASK 32-51-11-420-004

(8) Install the bolts [20] and washers [18] to attach the valve assembly [7] to the top and bottom support plates.

SUBTASK 32-51-11-420-010

(9) Install the screws [9] and washers [5] that hold the support bracket to the valve assembly [7].

SUBTASK 32-51-11-480-006

(10) Make sure these rig pins from the rig pin rig pin kit, SPL-1585 set are installed:

(a) Rig pin 2 in the steering tiller for the nose wheel

(b) Rig pin NWS1 in the rudder pedal interconnect quadrant

(c) Rig pin 4 in the summing mechanism.

SUBTASK 32-51-11-420-005

(11) Install the bushing [24], bolt [25], washer [5], and nut [23] to attach the link assy [6] to the input lever on the valve assy [7].

(a) Adjust the link assy [6] until you can easily install the rig pin 4.

(b) Remove the rig pin 4 from the summing mechanism.

SUBTASK 32-51-11-080-001

(12) Remove the caps from the hydraulic lines [11] and the ports on the valve assembly [7].

SUBTASK 32-51-11-420-006

(13) Connect the hydraulic lines [11] to the valve assembly [7].

SUBTASK 32-51-11-420-007

(14) Tighten the cables NWS-A [1], NWS-B [2], NWS-A/B [8] at the turnbuckles [3] and adjust the tension.

NOTE: This task will make you perform the required system test. Look for hydraulic leaks when you do this.

(a) Tighten the cables and adjust the tension. Do this task: Nose Wheel Steering System Adjustment, TASK 32-51-00-820-802.

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SUBTASK 32-51-11-420-011

(15) Do a test on the steering system of the nose wheel. Do the following steps from this task, do this task: Nose Wheel Steering System Test, TASK 32-51-00-700-801

- General
- Prepare the Airplane for Testing
- Do the Test of the Normal Steering Response
- Do the Test for the Control Wheel Torque
- Do the Test of Nose Gear Turn Radius and Response to Full Rudder Pedal Input
- Do the Nose Gear Steering Tow Test
- Put the Airplane in its Usual Condition

(a) Make sure that there is no leakage.

SUBTASK 32-51-11-080-002

(16) Remove these rig pins:

(a) Rig pin 2 in the steering tiller for the nose wheel

(b) Rig pin NWS 1 in the rudder pedal interconnect quadrant.

SUBTASK 32-51-11-420-008

(17) Put the summing mechanism cover [10] in position and install the screws [4] and washers [5].

END OF TASK

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RUDDER PEDAL STEERING MECHANISM - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) A removal of the rudder pedal steering mechanism (referred to as the pedal instl [1]) and the nose gear position cables (referred to as the cable assy [19] or the cable assy [20]).

(2) An installation of the rudder pedal steering mechanism and the nose gear position cables.

(3) A visual inspection of the rudder pedal steering mechanism.

TASK 32-51-21-000-801

2. Rudder Pedal Steering Mechanism Removal

(Figure 401)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-51-21-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-51-21-860-001

(2) Make sure the wheels of the nose landing gear are in the centered position.

SUBTASK 32-51-21-860-002

(3) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

D. Steering Mechanism Removal

SUBTASK 32-51-21-010-001

(1) Open the access panels on the left sidewall and the top of the nose wheel well to get access to the pedal instl [1] and cable turnbuckles.

SUBTASK 32-51-21-020-009

(2) Remove the clips from the turnbuckles.

SUBTASK 32-51-21-020-001

(3) Loosen the NWS-A cable, the cable assy [19], and the cable assy [20] at the turnbuckles.

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SUBTASK 32-51-21-020-002

(4) Remove the nut [10], washer [11], and bolt [12] to disconnect the idler rod at the structure.

SUBTASK 32-51-21-020-003

(5) Remove the nuts [2], washers [3], and screws [5] on the ends of the quadrant for the pedal instl [1].

SUBTASK 32-51-21-480-002

(6) Remove the plates [4] from the cable ends on the quadrant to disconnect the NWS-A cable.

SUBTASK 32-51-21-020-004

(7) Disconnect the cable assy [19] and the cable assy [20] at the turnbuckles.

SUBTASK 32-51-21-020-005

(8) Remove the lockwire [15], washers [14], and bolts [13] to disconnect the pedal instl [1] from the rudder pedal jack shaft assembly.

SUBTASK 32-51-21-020-006

(9) Remove the nut [9] and washer [8] from the bolt [6] on the upper support bracket.

SUBTASK 32-51-21-020-007

(10) Hold the bolt [6], straighten the tabs on the retainer [7], and remove the bolt [6].

SUBTASK 32-51-21-000-001

(11) Remove the pedal instl [1] complete with the cable assy [19] and the cable assy [20].

SUBTASK 32-51-21-020-008

(12) Remove and discard the retainer [7].

SUBTASK 32-51-21-020-010

(13) To remove the cable assy [19] and the cable assy [20] from the eccentric [18] on the pedal instl [1], do these steps:

(a) Remove the nut [21] and washer [22] from the shaft [15].

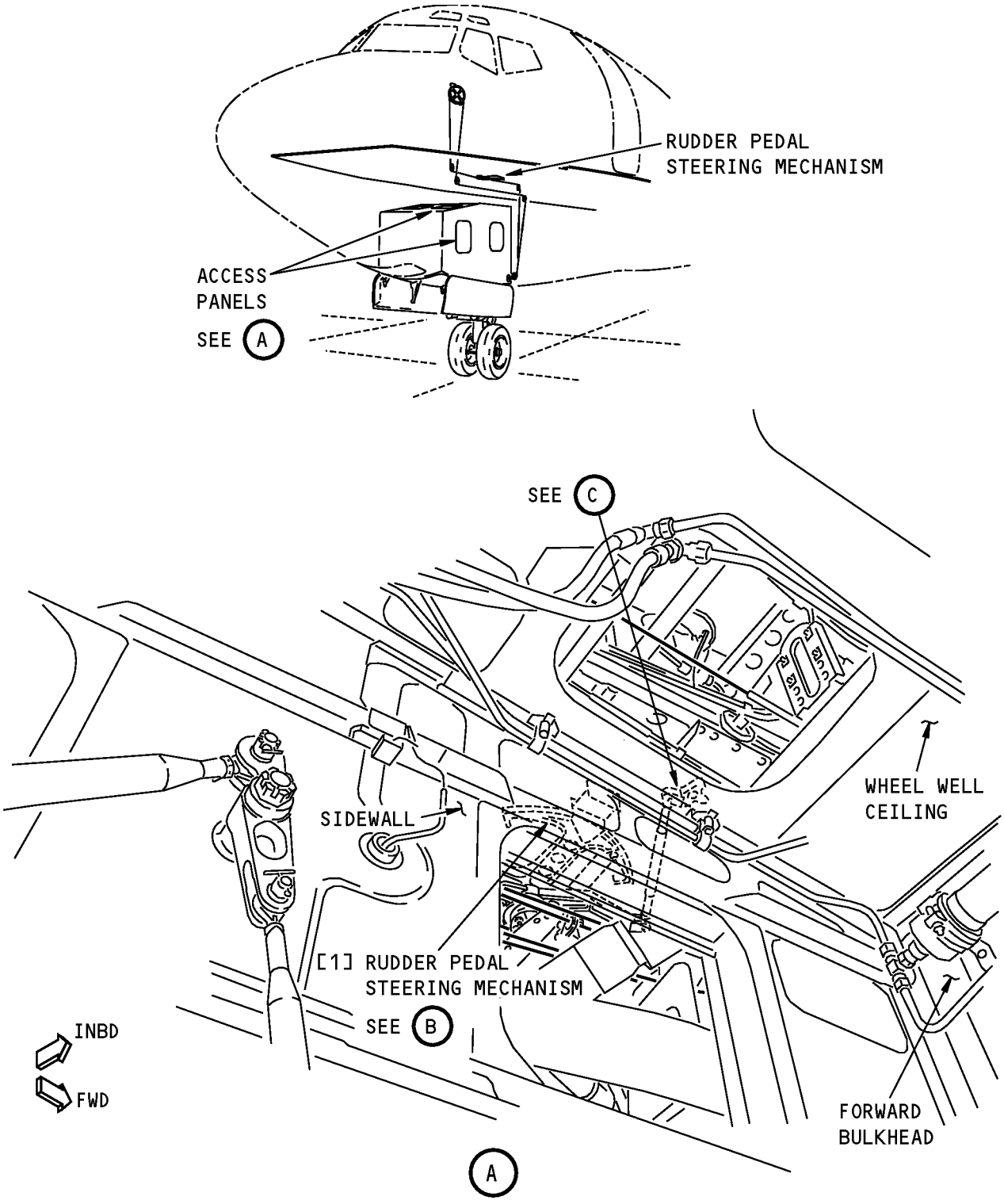
(b) Move the shaft [15] out far enough to get access to the bolts [16] and nuts [17].

(c) Remove the nuts [17] and bolts [16].

(d) Move the eccentric [18] out and remove the cable assy [19] and the cable assy [20].

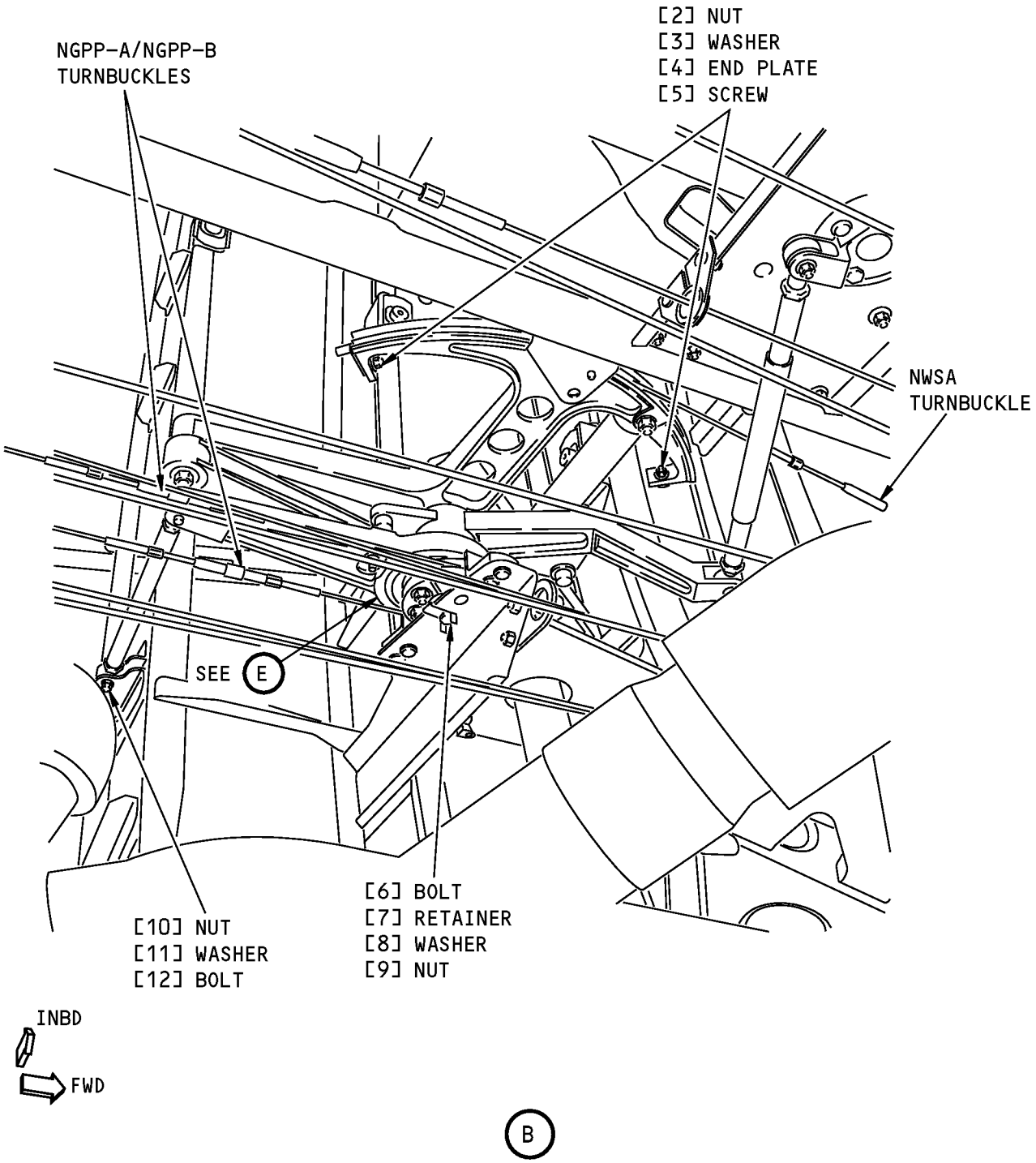
——————— END OF TASK ———————

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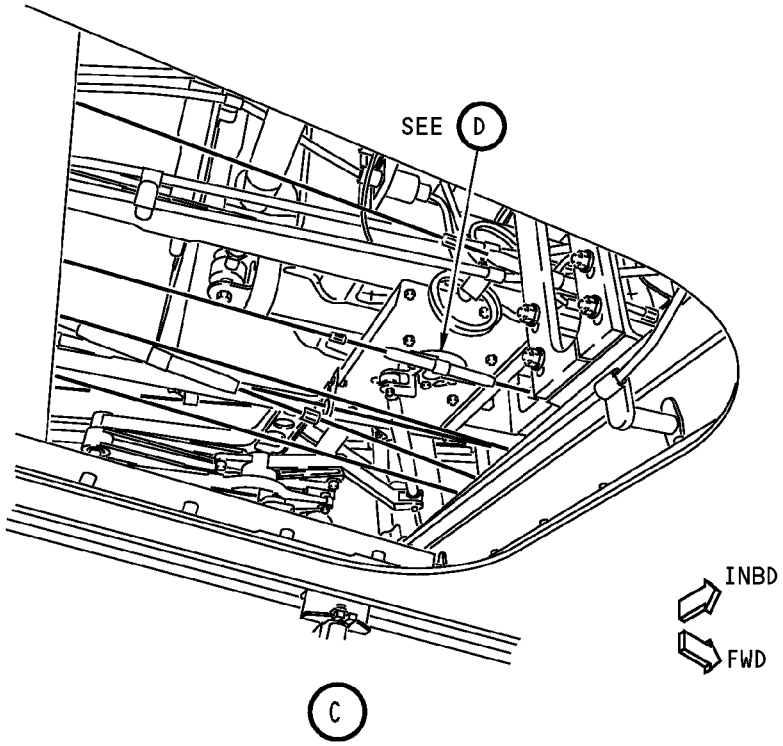
Rudder Pedal Steering Mechanism
Figure 401 (Sheet 1 of 4)/32-51-21-990-801

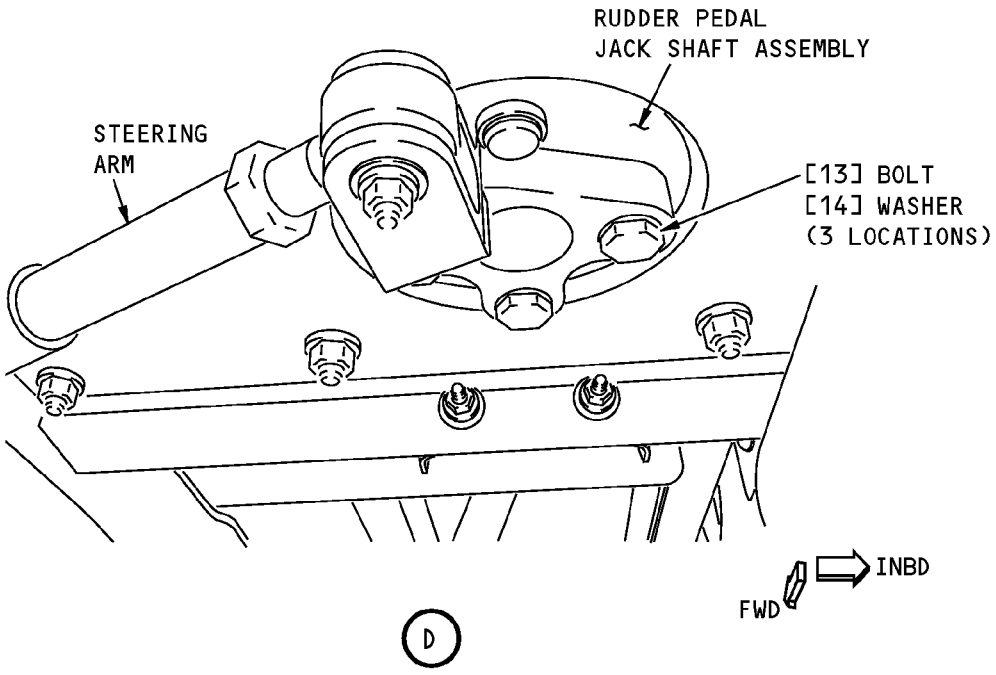
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Rudder Pedal Steering Mechanism
Figure 401 (Sheet 2 of 4)/32-51-21-990-801

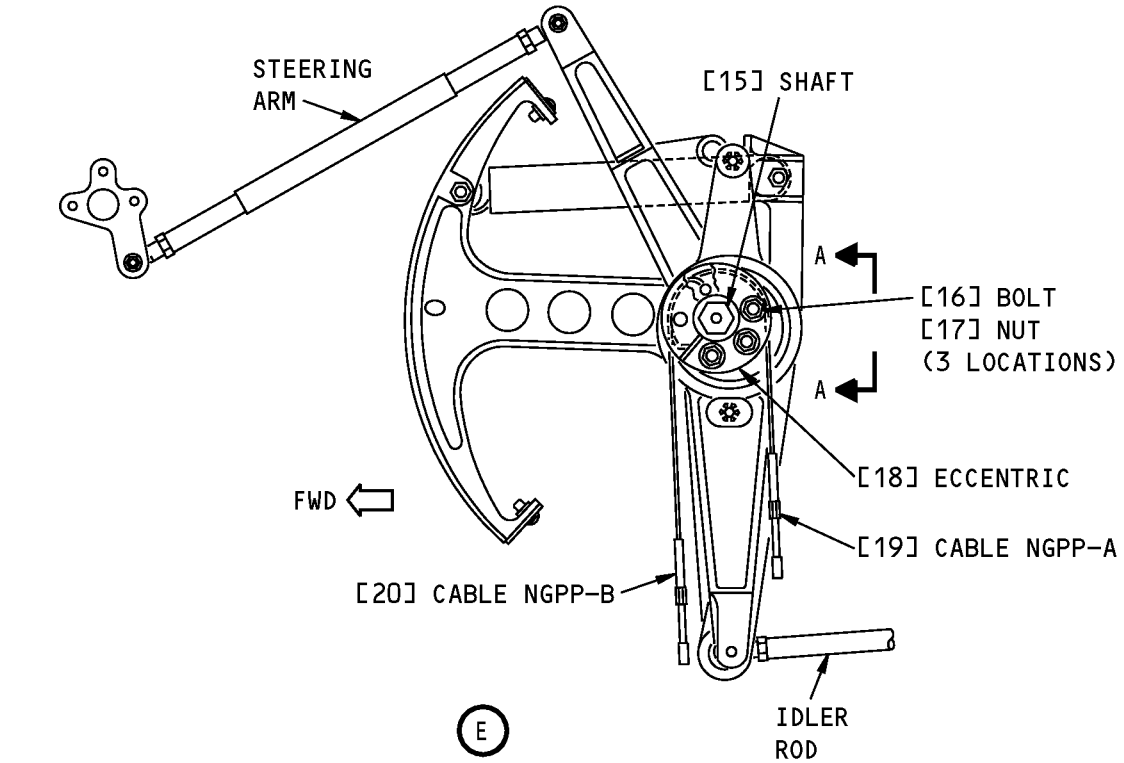
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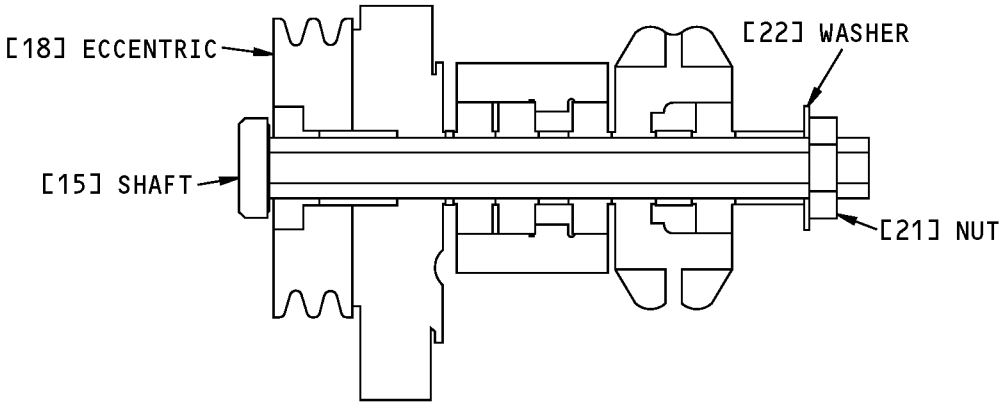




Rudder Pedal Steering Mechanism
Figure 401 (Sheet 3 of 4)/32-51-21-990-801

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A-A

Rudder Pedal Steering Mechanism
Figure 401 (Sheet 4 of 4)/32-51-21-990-801

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TASK 32-51-21-400-801

3. Rudder Pedal Steering Mechanism Installation

(Figure 401)

A. References

Reference	Title
32-51-00-700-801	Nose Wheel Steering System Test (P/B 501)
32-51-00-820-801	Rudder Pedal Interconnect Mechanism Adjustment (P/B 501)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

C. Steering Mechanism Installation

SUBTASK 32-51-21-420-009

(1) To install cable assy [19] and the cable assy [20], on the eccentric [18] on the pedal instl [1], do these steps:

(a) Move the eccentric [18] out and install the cable assy [19] and cable assy [20].

(b) Move the eccentric [18] into its position and install the nuts [17] and bolts [16].

(c) Install the shaft [15].

(d) Install the washer [22] and the nut [21] on the shaft [15].

1) Tighten the nut [21] to 100 pound-inches (11.3 newton-meters) above the run-on torque.

SUBTASK 32-51-21-420-001

(2) Install a new retainer [7].

SUBTASK 32-51-21-420-002

(3) Put the pedal instl [1], complete with the cable assy [19] and the cable assy [20], in position.

NOTE: Make sure there is clearance between the clutch crank and the end of the bolt that holds the rudder pedal steering quadrant to the clutch arm.

SUBTASK 32-51-21-420-003

(4) Install the bolt [6], washer [8], and nut [9] through the pedal instl [1] and the upper support bracket.

(a) Tighten the nut [9] to approximately 65 pound-inches (7.34 newton-meters) above the run-on torque.

SUBTASK 32-51-21-420-004

(5) Bend the tabs on the retainer [7] to hold the bolt [6].

SUBTASK 32-51-21-420-005

(6) Put the cable assy [19] and the cable assy [20], through the fairleads and connect them at the turnbuckles.

SUBTASK 32-51-21-420-006

(7) Put the NWS-A cable in the plates [4] and install the screws [5], washers [3], and nuts [2] to attach the cable ends to the quadrant.

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SUBTASK 32-51-21-420-007

(8) Install the bolt [12], washer [11], and nut [10] to attach the idler rod to the structure.

SUBTASK 32-51-21-420-008

(9) Install the bolts [13] and washers [14] to attach the steering arm to the rudder pedal jack shaft assembly.

SUBTASK 32-51-21-420-010

(10) Install lockwire on the bolt [13].

SUBTASK 32-51-21-820-001

(11) Tighten the NWS-A cable, the cable assy [19] and the cable assy [20] and adjust the tension, do this task: Rudder Pedal Interconnect Mechanism Adjustment, TASK 32-51-00-820-801.

SUBTASK 32-51-21-700-001

(12) Do a test of the steering system of the nose wheel, do this task: Nose Wheel Steering System Test, TASK 32-51-00-700-801.

SUBTASK 32-51-21-420-011

(13) Install the clips on the turnbuckles.

SUBTASK 32-51-21-410-001

(14) Close the access panels in the wheel well that you opened to get access to the pedal instl [1] and turnbuckles.

——————— END OF TASK ———————

TASK 32-51-21-000-802

4. Rudder Pedal Steering Mechanism Visual Inspection

(Figure 401)

A. General

(1) This procedure is a scheduled maintenance task.

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

C. Steering Mechanism Inspection

SUBTASK 32-51-21-010-002

(1) Open the access panels on the left sidewall and the top of the nose wheel well to get access to the rudder pedal steering mechanism and cable turnbuckles.

SUBTASK 32-51-21-210-001

(2) Do a detail visual inspection of the mechanical control path for the rudder pedal steering mechanism.

SUBTASK 32-51-21-410-002

(3) Close the access panels in the wheel well that you opened to get access to the rudder pedal steering mechanism and cable turnbuckles.

——————— END OF TASK ———————

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STEERING SYSTEM CABLES - REMOVAL/INSTALLATION

1. General

A. This procedure has these four tasks:

(1) A removal of the position cables for the nose gear steering (referred to as the cable assy [4] and the cable assy [3])

(2) An installation of the position cables for the nose gear steering

(3) A removal of the steering system cables for the nose gear (referred to as the cable assy [14], the cable assy [25], the cable assy [8], the cable assy [7] and the cable assy [9].

(4) An installation of the steering system cables for the nose gear.

B. The position cables have four segments. This procedure can be used to replace two of the segments attached to the rotary actuator pulley. You must use the Maintenance Manual RUDDER PEDAL STEERING MECHANISM, SUBJECT 32-51-21 to replace the two segments attached to the drum on the rudder pedal steering mechanism.

C. The steering system cables have five segments. This procedure can be used to replace all of the segments. The steering cables (referred to as the cable assy [14] and the cable assy [7]) are attached to the drum that is part of the control wheel assembly. You must remove the control wheel and the drum to replace the steering cables.

TASK 32-51-31-000-801

2. Removal of the Position Cables for the Nose Gear Steering

(Figure 401)

A. References

Reference	Title
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	Cable assembly	32-51-31-15-015	HAP ALL
4	Cable assembly	32-51-31-15-010	HAP ALL

C. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

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D. Prepare for Position Cable Removal

SUBTASK 32-51-31-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-51-31-860-001

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-51-31-580-001

(3) Lift the nose of the airplane with jacks until the nose gear tires are clear of the ground, do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

SUBTASK 32-51-31-010-001

(4) Remove the forward access panel from the left sidewall of the nose wheel well to get access to the turnbuckles [2] of the cable assy [4] and the cable assy [3].

SUBTASK 32-51-31-480-002

(5) Install the rig pin NWS5 in the drum on the interconnect mechanism.

E. Position Cable Removal

SUBTASK 32-51-31-010-002

(1) Remove the cable assembly [3] and the cable assembly [4]]:

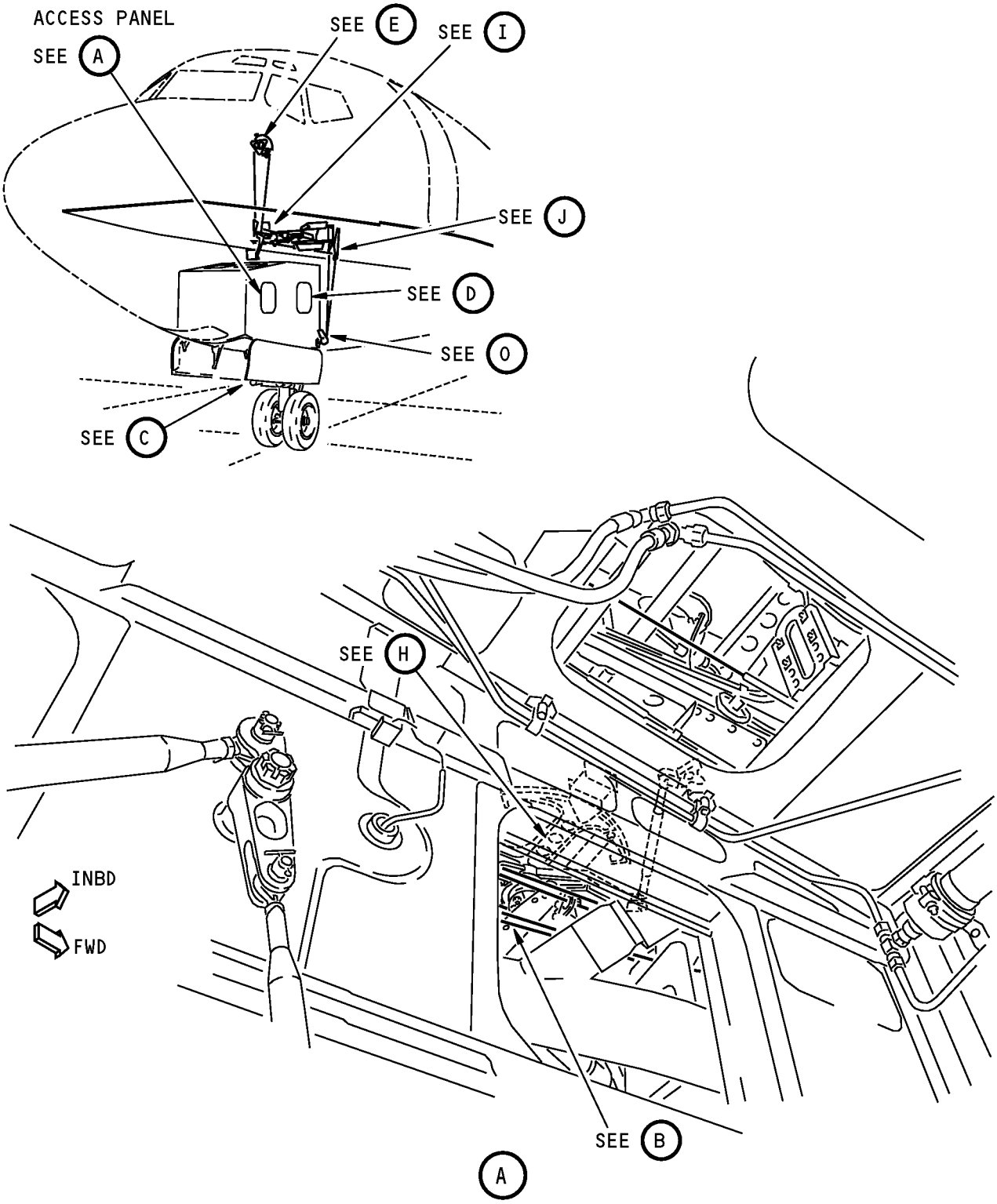
(a) Remove the clips [1] from the turnbuckles [2]

(b) Disconnect the cable assy [4] and the cable assy [3] at the turnbuckles [2]

(c) Remove the pins [5] to disconnect the cable assy [4] and the cable assy [3] from the rotary actuator pulley.

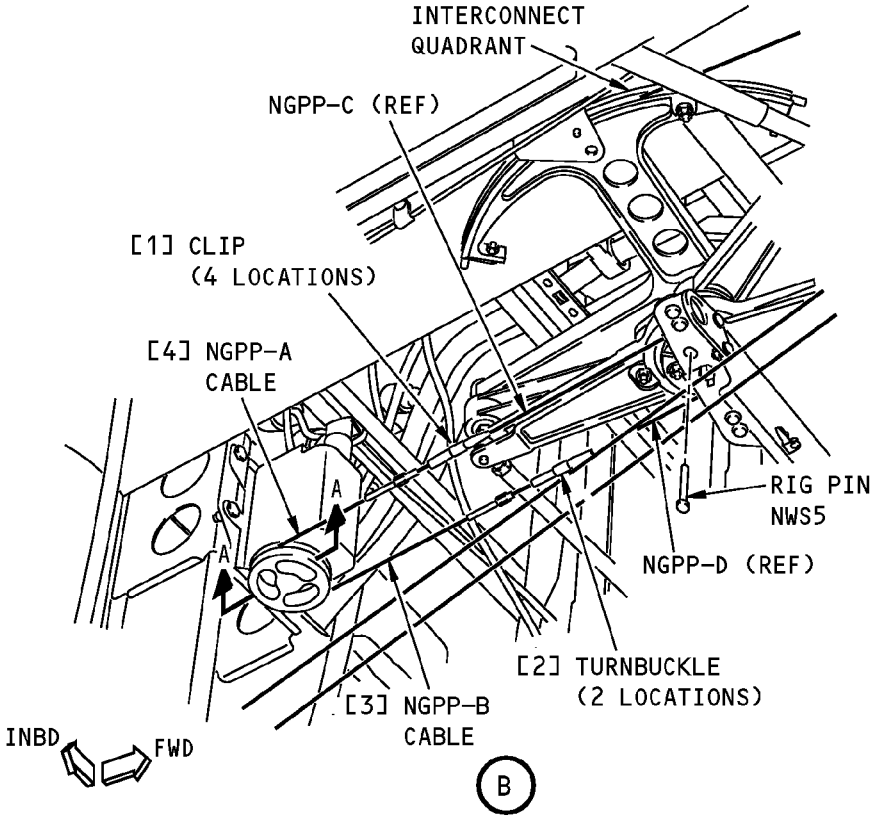
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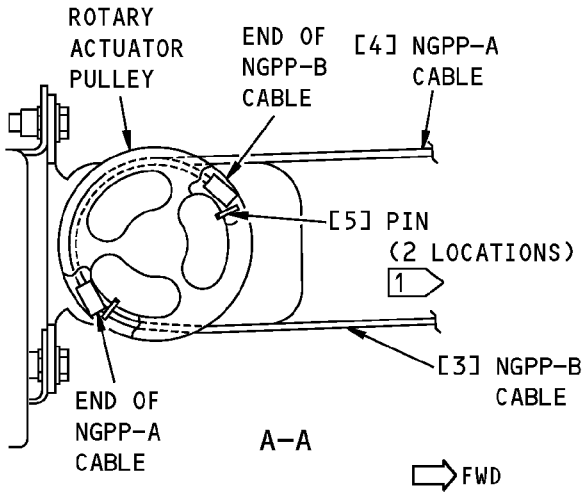
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Steering System Cables Installation
Figure 401 (Sheet 1 of 10)/32-51-31-990-801

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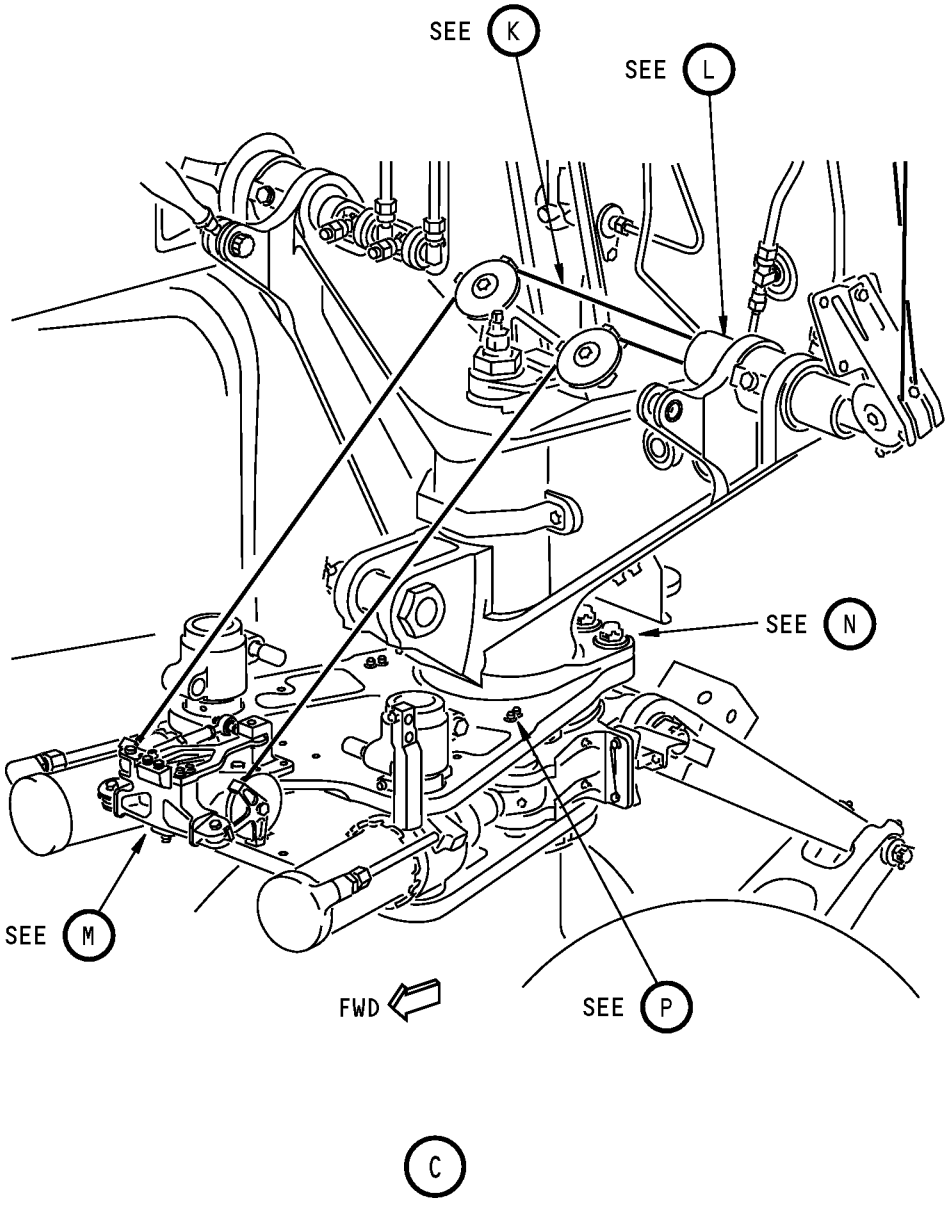




1 CAUTION: MAKE SURE THE ENDS OF THE PINS [5] DO NOT TOUCH THE HOUSING OF THE ROTARY ACTUATOR AFTER INSTALLATION. IF THE PINS TOUCH THE HOUSING, DAMAGE TO EQUIPMENT CAN OCCUR.

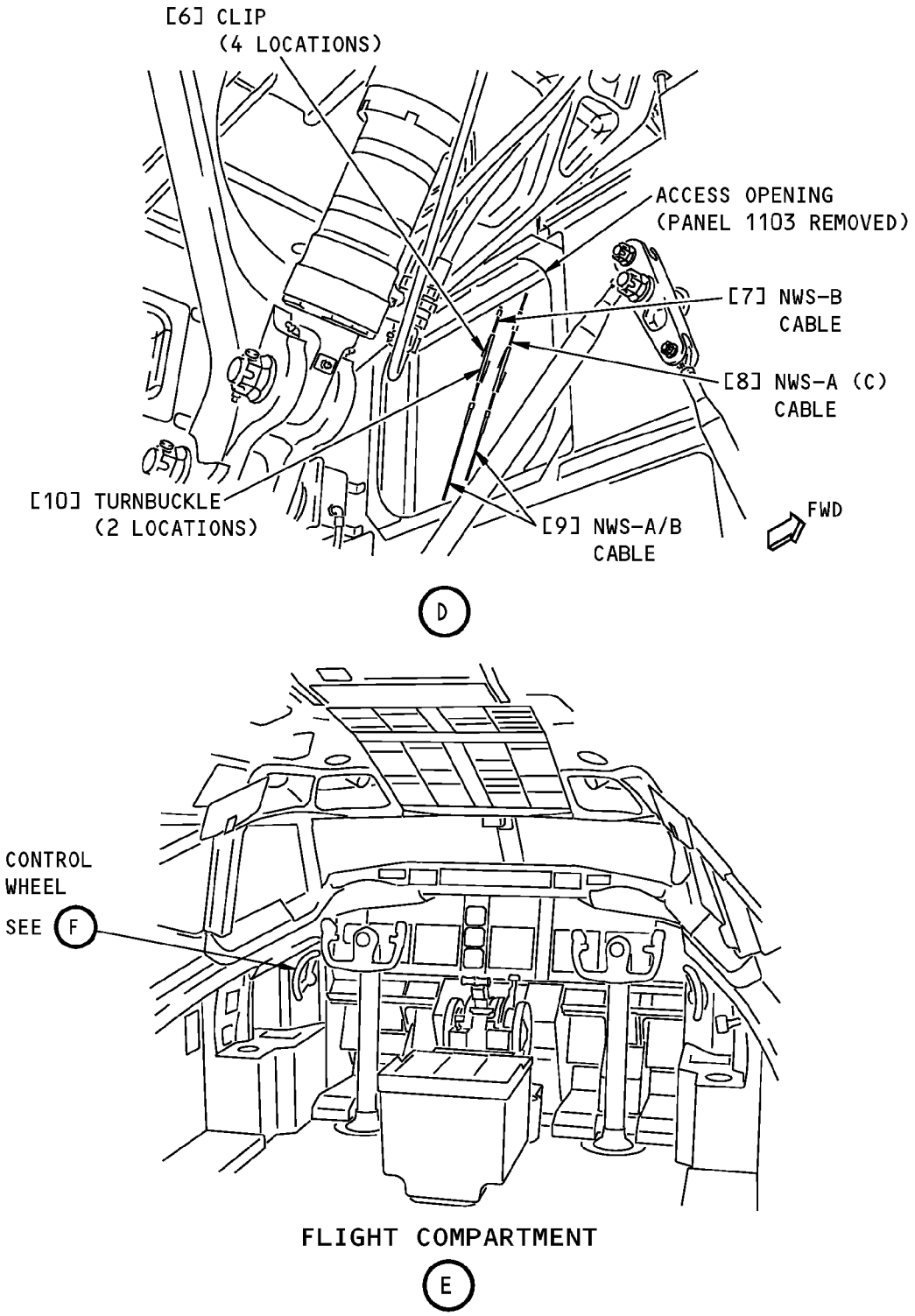
Steering System Cables Installation
Figure 401 (Sheet 2 of 10)/32-51-31-990-801

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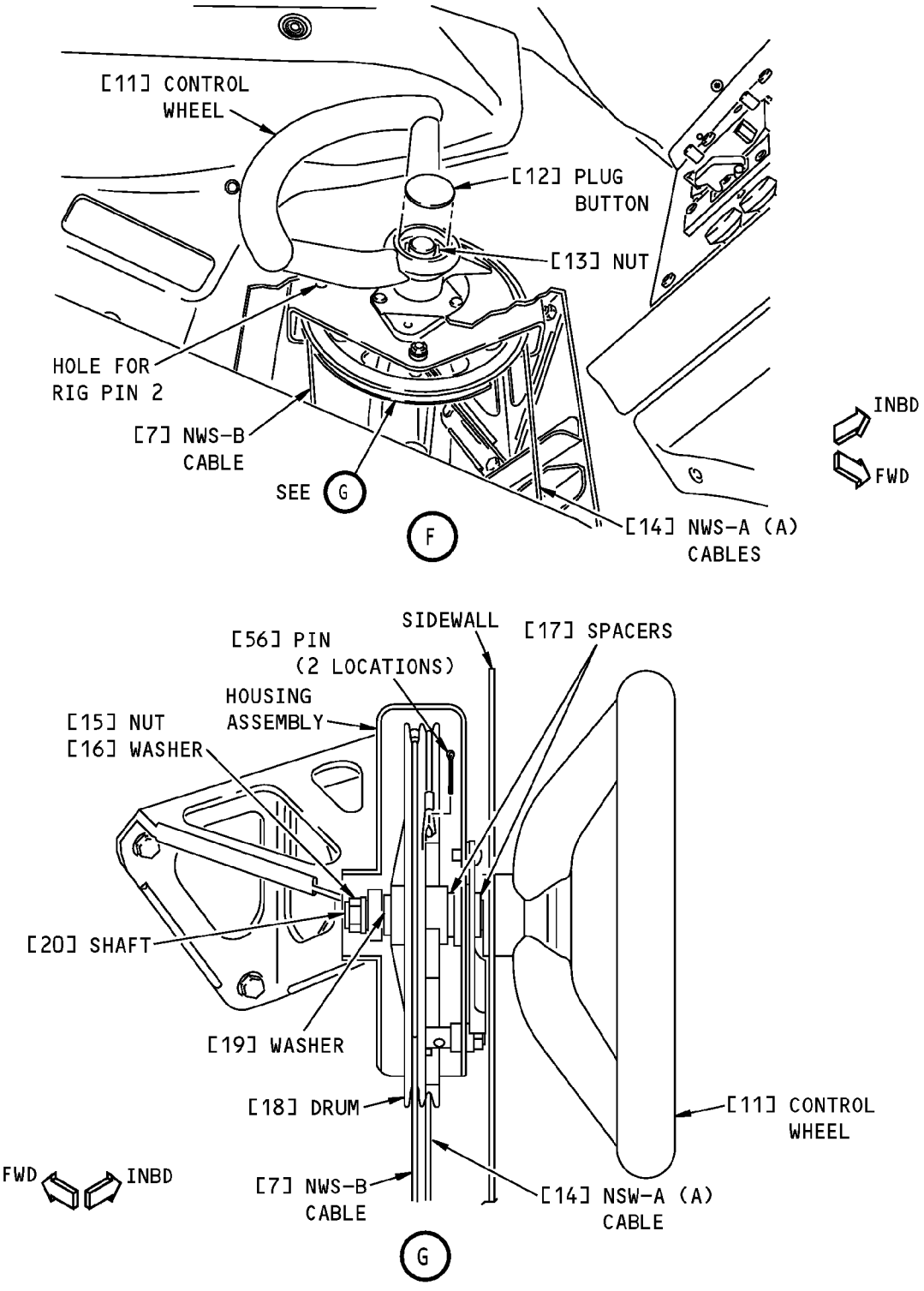
Steering System Cables Installation
Figure 401 (Sheet 3 of 10)/32-51-31-990-801

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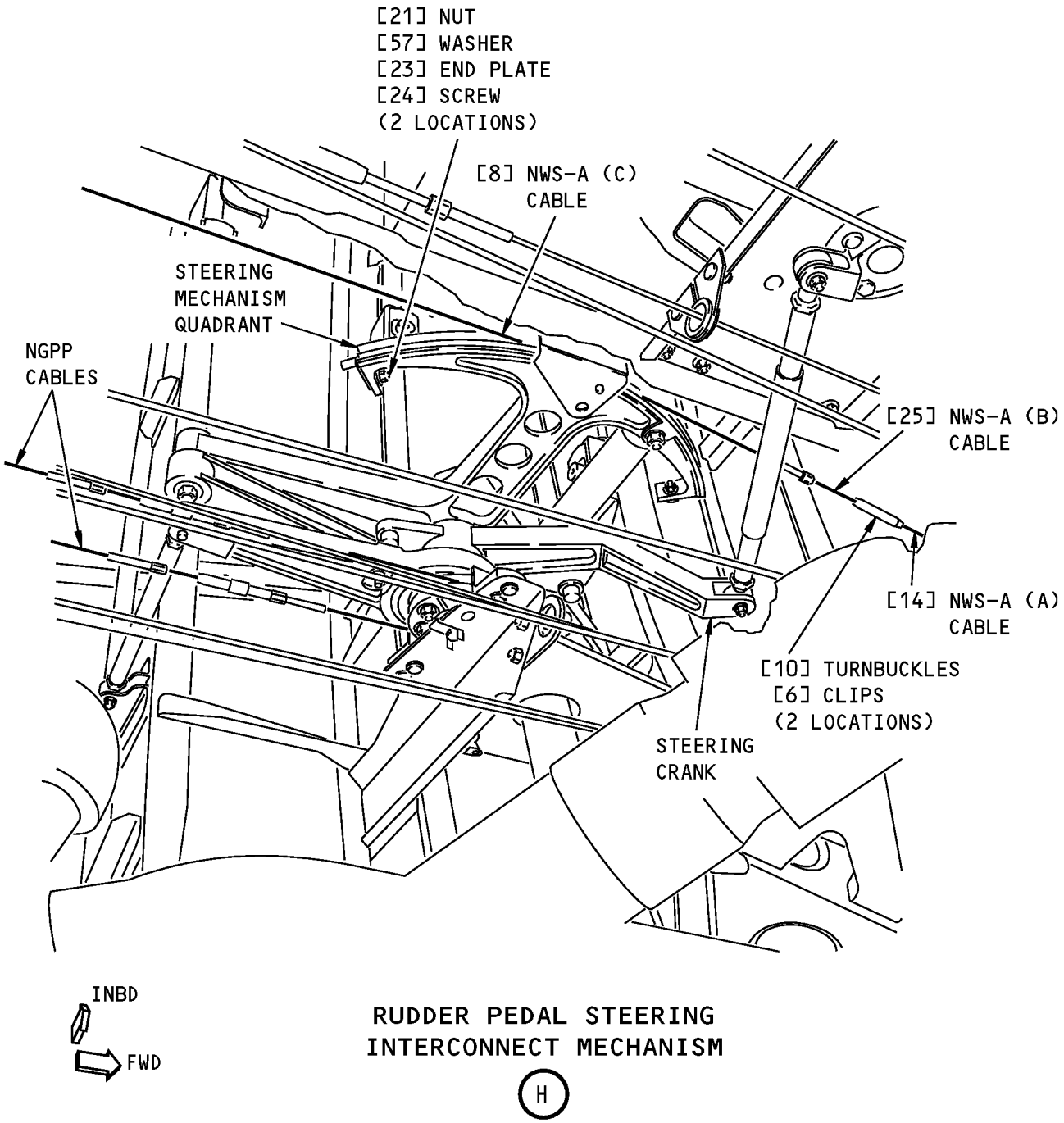
Steering System Cables Installation
Figure 401 (Sheet 4 of 10)/32-51-31-990-801

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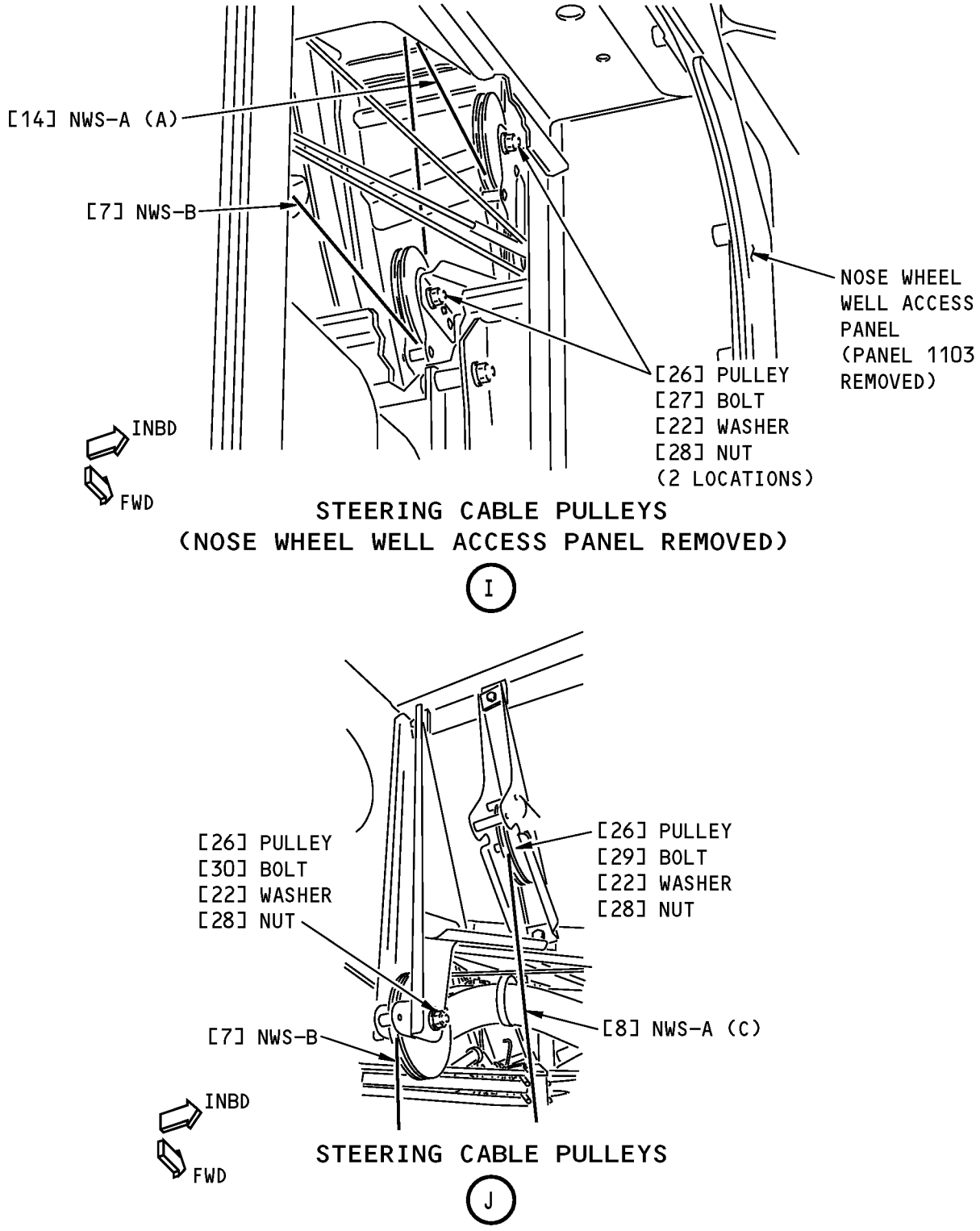
Steering System Cables Installation
Figure 401 (Sheet 5 of 10)/32-51-31-990-801

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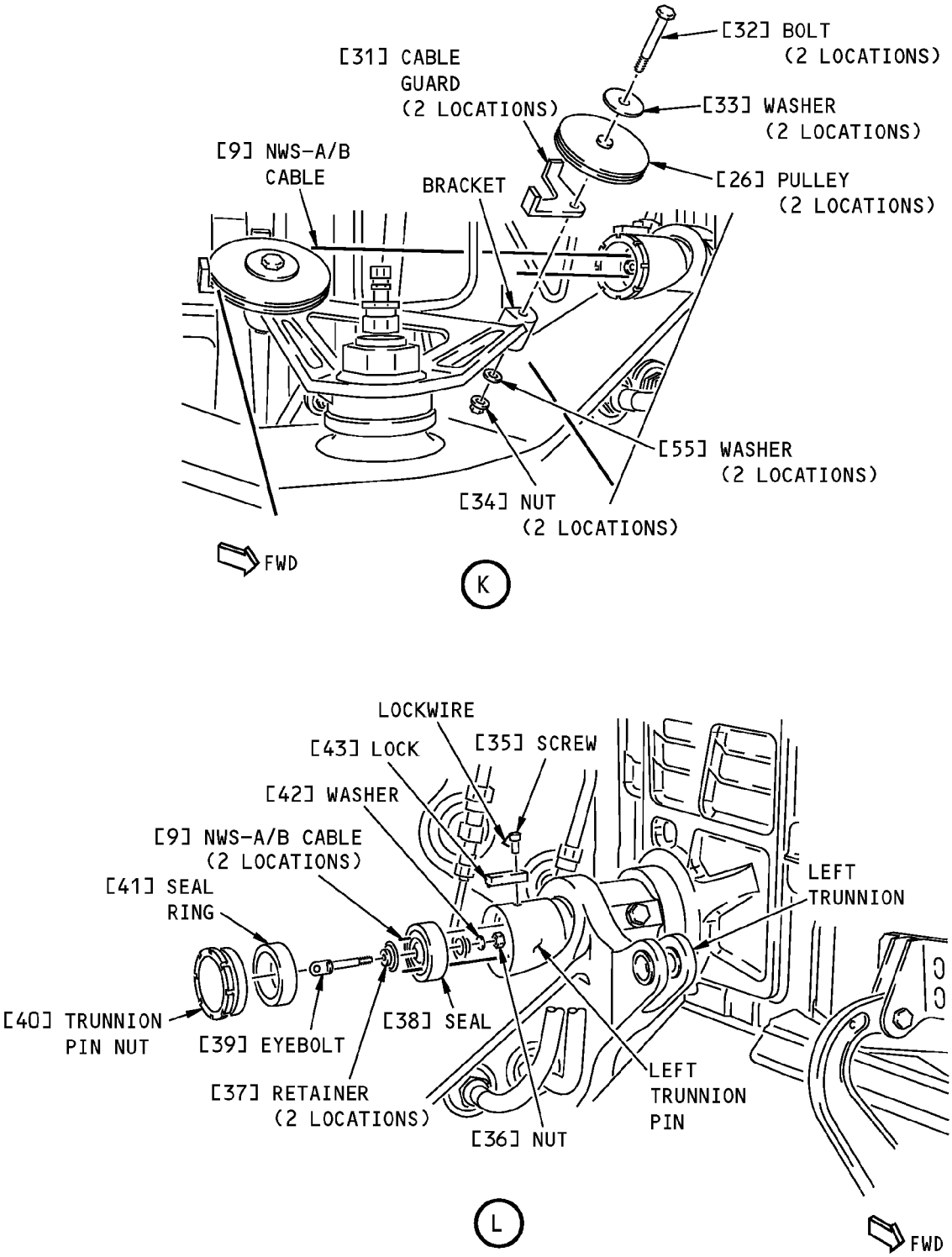
Steering System Cables Installation
Figure 401 (Sheet 6 of 10)/32-51-31-990-801

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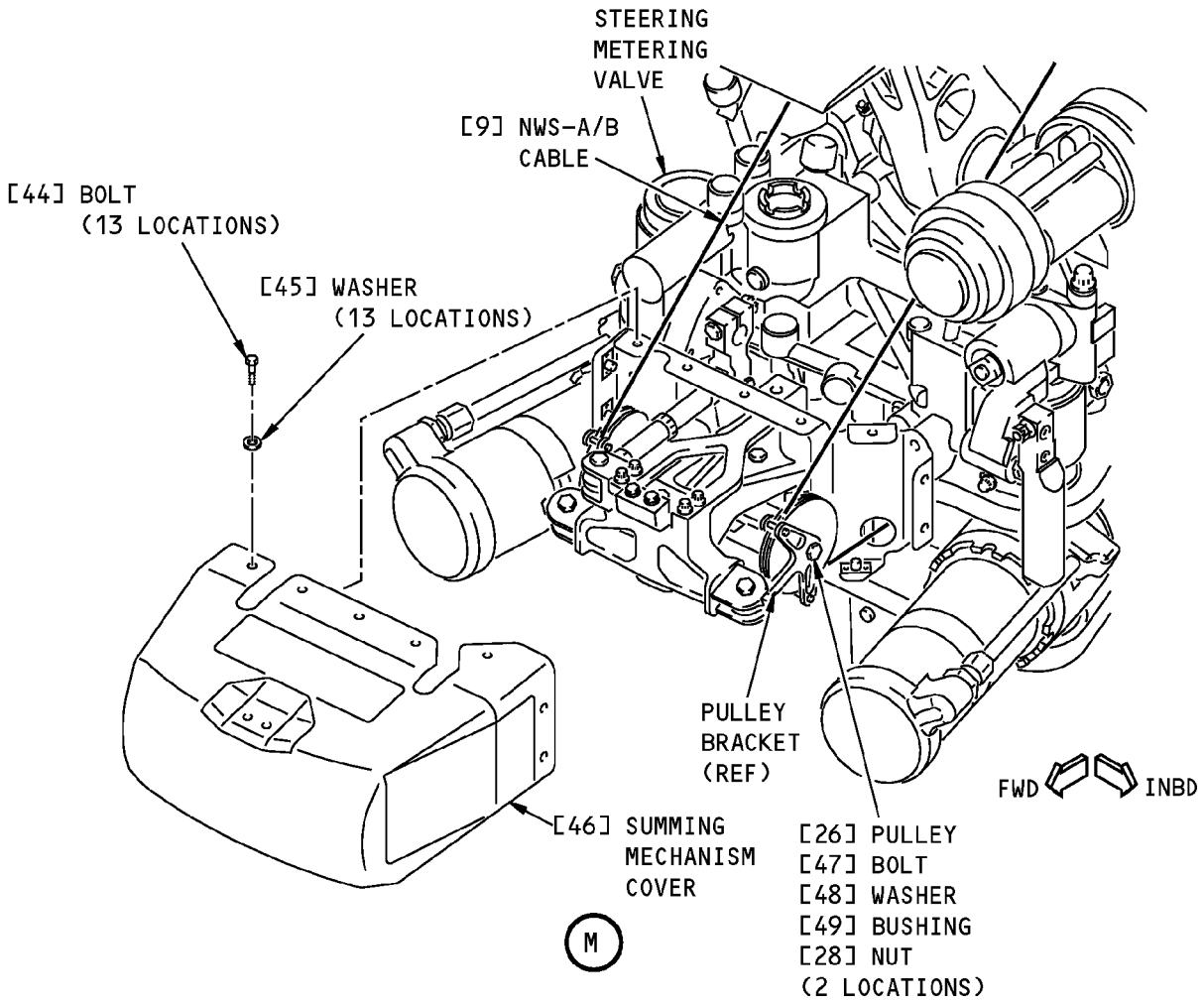
Steering System Cables Installation
Figure 401 (Sheet 7 of 10)/32-51-31-990-801

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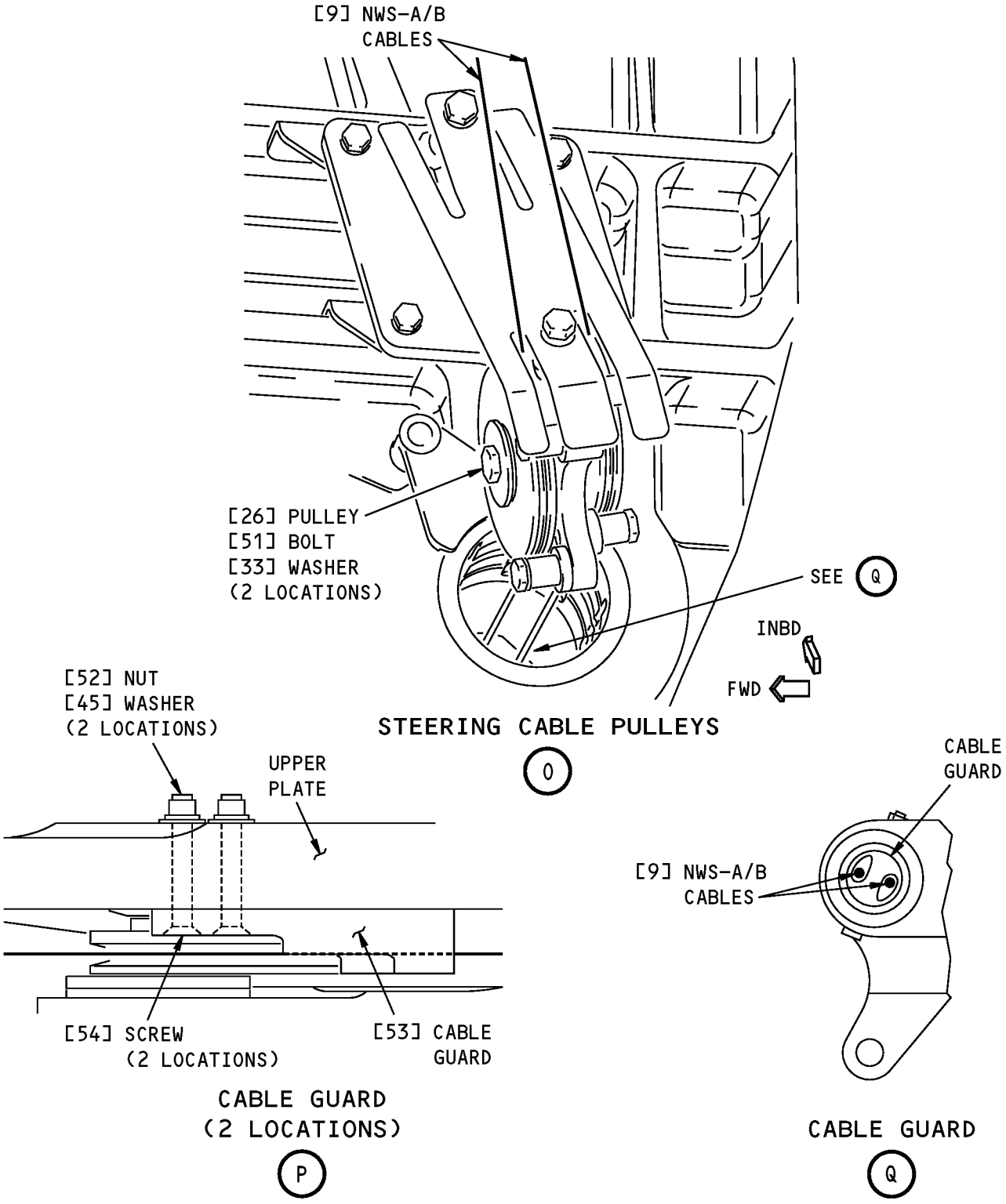
Steering System Cables Installation
Figure 401 (Sheet 8 of 10)/32-51-31-990-801

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Steering System Cables Installation
Figure 401 (Sheet 9 of 10)/32-51-31-990-801

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Steering System Cables Installation
Figure 401 (Sheet 10 of 10)/32-51-31-990-801

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TASK 32-51-31-400-801

3. Installation of Position Cables for the Nose Gear Steering

(Figure 401, Figure 402)

A. References

Reference	Title
07-11-21-580-802	Lower the Airplane Nose Off of the Jack (P/B 201)
20-10-91-400-801	Control Cables Installation (P/B 401)
32-51-00-820-801	Rudder Pedal Interconnect Mechanism Adjustment (P/B 501)
32-51-00-820-804	Rudder Pedal Interconnect Mechanism Adjustment Check (P/B 501)

B. Consumable Materials

Reference	Description	Specification
C00308	Compound - Corrosion Preventive, Petrolatum Hot Application	MIL-C-11796
C00528	Compound - Corrosion Preventive, Petroleum Hot Application (Soft Film)	MIL-C-11796, Class III

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	Cable assembly	32-51-31-15-015	HAP ALL
4	Cable assembly	32-51-31-15-010	HAP ALL
5	Pin	32-51-31-15-005	HAP ALL

D. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Position Cable Installation

SUBTASK 32-51-31-420-001

(1) Install the cable assembly [3] and the cable assembly [4]. To do this, do this task: Control Cables Installation, TASK 20-10-91-400-801.

NOTE: The cable length and fittings are shown in, (Figure 402).

(a) Apply a thin layer of corrosion preventive compound, C00308 or compound, C00528 to the threads on the internal and external surfaces of the mating adjustable parts on the turnbuckles [2].

SUBTASK 32-51-31-420-002

(2) Connect the cable assy [4] and the cable assy [3] to the rotary actuator pulley.

CAUTION: DO NOT LET THE ENDS OF THE PINS TOUCH THE HOUSING OF THE ACTUATOR WHEN THE CABLES ARE INSTALLED. THIS CAN CAUSE DAMAGE TO THE ROTARY ACTUATOR.

(a) Install the pins [5] in the rotary actuator pulley.

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SUBTASK 32-51-31-420-003

(3) Connect the cable assy [4] and the cable assy [3] at the turnbuckles [2].

SUBTASK 32-51-31-820-001

(4) Adjust the cable assy [4] and the cable assy [3]. To do this, do this task: Rudder Pedal Interconnect Mechanism Adjustment Check, TASK 32-51-00-820-804.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 32-51-31-820-002

(1) Do the adjustment for the rudder pedal interconnect mechanism. To do this, do this task: Rudder Pedal Interconnect Mechanism Adjustment, TASK 32-51-00-820-801.

SUBTASK 32-51-31-420-004

(2) Install the locking clips [1] on the turnbuckles [2].

SUBTASK 32-51-31-580-002

(3) Lower the nose of the airplane and remove the jacks, do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

SUBTASK 32-51-31-410-001

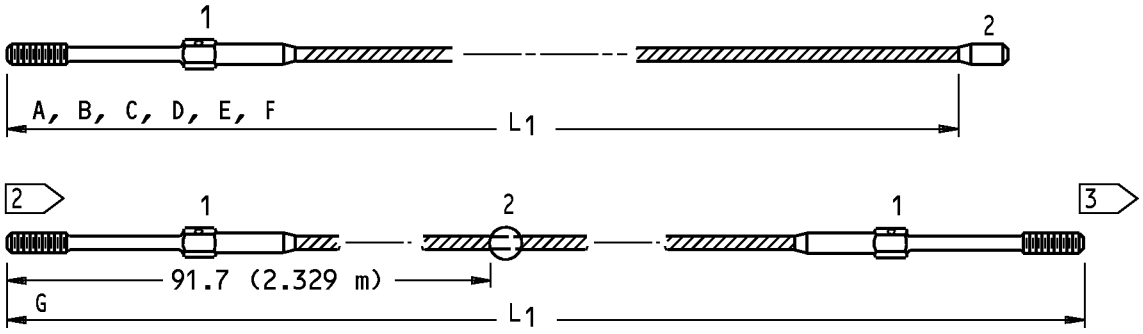
(4) Install the forward access panel on the left sidewall of the nose wheel.

SUBTASK 32-51-31-080-001

(5) Remove the rig pin NWS5 from the drum on the interconnect mechanism.

——————— END OF TASK ———————

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CABLE REFERENCE	FUNCTION	NUMBER REQUIRED	LENGTH INCHES [1]	FITTINGS [1]	
				1	2
A [5]	NWSA (A)	1	L1 52.3 (1.328 m)	MS21260L3LH	BACT14A3
B [5]	NWSA (B)	1	L1 16.8 (426.7 mm)	MS21260L3RH	BACT14A3
C [5]	NGPPB	1	L1 11.6 (294.6 mm)	MS21260S3LH	BACT14A3
D [5]	NGPPA	1	L1 11.2 (284.5 mm)	MS21260S3RH	BACT14A3
E [5]	NWSA (C)	1	L1 68.0 (1.727 m)	MS21260L3RH	BACT14A3
F [5]	NWSB	1	L1 127.2 (3.231 m)	MS21260L3LH	BACT14A3
G [4]	NWSA/B	1	L1 190.2 (4.831 m)	MS21260L3RH/LH	BACT14B3

[1] REFERENCE ONLY. REFER TO CURRENT IPC FOR SPECIFIC PART NUMBER, LENGTH, MATERIAL AND END FITTING ASSEMBLY FABRICATION TENSIONING LOADS, AND TOLERANCES.

[2] THIS END TAKES A RIGHT HAND THREADED FITTING.

[3] THIS END TAKES A LEFT HAND THREADED FITTING.

[4] CABLE MATERIAL: 3/32 CRES 7X7 PER MIL-W-83420, TYPE IB, NO FINISH.

[5] CABLE MATERIAL: 3/32 TIN OVER ZINC CARBON STEEL, 7X7 PER BMS 7-265, TYPE 1, COMPOSITION A.

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Steering System Cables Installation
Figure 402/32-51-31-990-802

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TASK 32-51-31-000-802

4. Removal of the Steering System Cables for the Nose Gear

(Figure 401)

A. References

Reference	Title
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
25-21-46-000-801	Sidewall Panel Removal (P/B 401)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1821	Wrench - Spanner, Nose Landing Gear Trunnion Pin Retainer Nut (Part #: F72959-40, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
8	Cable assembly	32-51-31-15-045	HAP ALL
9	Cable assembly	32-51-52-03-005	HAP ALL
14	Cable assembly	32-51-31-12-010	HAP ALL
25	Cable assembly	32-51-31-15-040	HAP ALL

D. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

E. Prepare for Removal of the Steering System Cables

SUBTASK 32-51-31-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

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SUBTASK 32-51-31-860-002

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-51-31-480-004

(3) Install the rig pin NWS2 in the drum for the Captain's control wheel.

SUBTASK 32-51-31-580-003

(4) Lift the nose of the airplane with jacks until the nose gear tires are clear of the ground, do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

SUBTASK 32-51-31-010-003

(5) Remove the forward access panel from the left sidewall of the nose wheel well to get access to the turnbuckle [10] of the cable assy [14] and the cable assy [25].

SUBTASK 32-51-31-010-004

(6) Remove the aft access panel from the left sidewall of the nose wheel well to get access to the turnbuckles [10] for the cable assy [7], the cable assy [8], and the cable [9].

F. Removal of the Steering System Cables

SUBTASK 32-51-31-020-002

(1) Remove the cable assembly [8]], the cable assembly [14] and the cable assembly [25]:

(a) Remove the clips [6] from the turnbuckles [10].

(b) Disconnect the cable assy [8], the cable assy [14] and the cable assy [25] at the turnbuckles [10].

(c) Do these steps to disconnect the cable assy [14] from the drum [18]:

1) Remove the plug button [12] from the control wheel [11].

2) Remove the nut [13] that holds the control wheel [11] to the tiller assembly.

3) Remove the control wheel [11].

4) Remove the sidewall to get access to the drum [18] on the tiller assembly. To do this, do this task: Sidewall Panel Removal, TASK 25-21-46-000-801.

5) Remove the nut [15] and washer [16] from the shaft [20].

6) Remove the shaft [20], washer [19], and spacers [17].

7) Remove the drum [18].

8) Remove the pin [56] from the drum [18].

(d) Remove the nut [28], washer [22], bolt [27], and pulley [26] from the bracket.

(e) Remove the cable assy [14].

(f) Remove the nuts [21], washers [57], endplates [23], and screws [24] that attach the cable assy [25] and the cable assy [8], to the quadrant for the steering mechanism.

(g) Remove the cable assy [25].

(h) Remove the nut [28], washer [22], bolt [29], and pulley [26] from the bracket.

(i) Remove the cable assy [8].

SUBTASK 32-51-31-020-003

(2) Remove the cable assy [7]:

(a) Remove the turnbuckle clips [6] from the turnbuckles [10].

(b) Disconnect the cable assy [7], and the cable [9], at the turnbuckle [10].

(c) Do these steps to disconnect the cable assy [7] at the drum [18]:

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1) Remove the plug button [12] from the control wheel [11].
2) Remove the nut [13] that holds the control wheel [11] to the tiller assembly.
3) Remove the control wheel [11].
4) Remove the sidewall to get access to the drum [18]. To do this, do this task: Sidewall Panel Removal, TASK 25-21-46-000-801.
5) Remove the nut [15] and washer [16] from the shaft [20].
6) Remove the shaft [20], washer [19], and spacers [17].
7) Remove the drum [18].
8) Remove the pin [56] from the drum [18].

(d) Remove the nut [28], washer [22], bolt [27], and pulley [26] from the bracket.

(e) Remove the nut [28], washer [22], bolt [30], and pulley [26] from the bracket.

(f) Remove the cable assy [7].

SUBTASK 32-51-31-020-004

(3) Remove the cable assembly [9]:

(a) Remove the bolts [44], the washers [45], and the cover for the summing mechanism [46].

(b) Remove the pins [50] from the steering collar.

(c) Remove the nuts [52], washers [45], and screws [54] to remove the cable guards [53].

(d) Remove the nuts [34], washers [55, 33], bolts [32], cable guards [31], and pulleys [26] from their brackets.

(e) Remove the bolts [51], washers [33], and pulleys [26] from the bracket behind the trunnion.

(f) Remove the nuts [28], bolts [47], washers [48], bushings [49], and pulleys [26] from the pulley brackets on the summing mechanism.

(g) Remove the seal [38] from the left trunnion of the nose gear.

1) Remove the lockwire from the screw [35], and the lock [43].
2) Remove the screw [35] that holds the lock [43] to the left trunnion pin.
3) Remove the lock [43] from the left trunnion pin.
4) Use wrench, SPL-1821 to remove the trunnion pin nut [40] from the left trunnion pin.
5) Pull the seal ring [41], and seal [38] from the left trunnion pin.

NOTE: If it is difficult to pull the seal [38], hold the eyebolt [39] and pull the seal [38] out of the left trunnion pin.

6) Remove the nut [36], washer [42], and inboard retainer [37] from the eyebolt [39].
7) Remove the eyebolt [39] from the left trunnion pin.
8) Remove the outboard retainer [37] from the eyebolt [39].
9) Separate the segments of the seal [38] from the cable [9].
10) Pull the cable [9], through the trunnion pin nut [40], seal ring [41], and left trunnion pin.

(h) Remove the cable [9].

END OF TASK

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TASK 32-51-31-400-802

5. Installation of the Steering System Cables for the Nose Gear

(Figure 401, Figure 402)

A. References

Reference	Title
25-21-46-400-801	Sidewall Panel Installation (P/B 401)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-51-00-820-801	Rudder Pedal Interconnect Mechanism Adjustment (P/B 501)
32-51-00-820-802	Nose Wheel Steering System Adjustment (P/B 501)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1821	Wrench - Spanner, Nose Landing Gear Trunnion Pin Retainer Nut (Part #: F72959-40, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
C00308	Compound - Corrosion Preventive, Petrolatum Hot Application	MIL-C-11796
C00528	Compound - Corrosion Preventive, Petroleum Hot Application (Soft Film)	MIL-C-11796, Class III
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
8	Cable assembly	32-51-31-15-045	HAP ALL
9	Cable assembly	32-51-52-03-005	HAP ALL
14	Cable assembly	32-51-31-12-010	HAP ALL
25	Cable assembly	32-51-31-15-040	HAP ALL
50	Pin	32-51-52-03-075	HAP ALL

E. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

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(Continued)

Zone	Area
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

F. Prepare for Installation of the Steering System Cables

SUBTASK 32-51-31-480-005

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-51-31-860-003

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-51-31-480-006

(3) Make sure the rig pin NWS2 is in the drum for the Captain's control wheel.

G. Installation of the Steering System Cables

CAUTION: MAKE SURE THAT THE STEERING CABLES ARE IN THE GROOVES OF THE PULLEYS WHEN YOU ASSEMBLE THEM. CABLES THAT ARE NOT IN THE CABLE GUARDS CAN CAUSE DAMAGE.

CAUTION: DO NOT APPLY SOLVENTS, GREASE, OR OIL TO STAINLESS STEEL CONTROL CABLES. THESE MATERIALS CAN COLLECT CONTAMINATION THAT CAN CAUSE DAMAGE TO THE INTERNAL SURFACES OF THE CRES CABLE STRANDS. THIS CAN DECREASE THE SERVICE LIFE OF THE CABLE.

SUBTASK 32-51-31-420-005

(1) Install the cable assembly [8], the cable assembly [14] and the cable assembly [25]:

NOTE: For the cable length and fittings, use the Table on, (Figure 402).

(a) Apply a thin layer of corrosion preventive compound, C00308, or compound, C00528 to the threads on the internal and external surfaces of the mating adjustable parts on the turnbuckles [10].

(b) Do these steps to install the cable assy [14] on the drum [18]:

1) Put the end of the cable assy [14] in the groove on the drum [18].
2) Put the end of the cable assy [7A] and the cable assy [14A] in the groove on the drum [18].
3) Install the pin [56] in the drum [18].
4) Install the drum [18] on the steering tiller assembly.
5) Install the shaft [20], washer [19], and spacers [17].
   a) Install the shaft [20] with the missing tooth aligned in the drum [18].
6) Install the nut [15] and washer [16] on the shaft [20].
7) Install the control wheel [11].
8) Install the nut [13] that holds the control wheel [11] to the tiller assembly.

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9) Tighten the nut [13] to 100 - 150 pound-inches (11.3 - 16.9 newton-meters) above the running torque.

10) Install the plug button [12] on the control wheel [11].

11) Install the sidewall you removed to get access to the drum [18] on the tiller assembly. To do this, do this task: Sidewall Panel Installation, TASK 25-21-46-400-801.

(c) Connect the cable assy [14] to the pulley [26].

(d) Install the bolt [27], washer [22], nut [28], and pulley [26] on the bracket.

(e) Install the cable assy [25].

(f) Connect the cable assy [8] and the cable assy [25] to the quadrant for the steering mechanism.

1) Install the endplates [23], screws [24], washers [57], and nuts [21].

(g) Install the cable assy [8] in the groove of the pulley [26].

(h) Install the bolt [29], washer [22], nut [28], and pulley [26], on the bracket.

(i) Connect the cables cable assy [14] and the cable assy [25] at the turnbuckles [10].

(j) Connect the cable assy [7A] and [8A] at the turnbuckles [10].

(k) Connect the cable assy [14A] and [8] at the turnbuckles [10].

SUBTASK 32-51-31-420-006

(2) Install the cable assy [7]:

NOTE: For the cable length and fittings, use the Table on, (Figure 402).

(a) Apply a thin layer of corrosion preventive compound, C00308, or compound, C00528 to the threads on the internal and external surfaces of the mating adjustable parts on the turnbuckles [10].

(b) Do these steps to install the cable assy [7] on the drum [18]:

1) Put the end of cable assy [7] in the groove on the drum [18].

2) Install the pin [56] in the drum [18].

3) Install the drum [18] in the steering tiller assembly.

4) Install the shaft [20], washer [19], and spacers [17].

a) Install the shaft [20] with the missing tooth aligned in the drum [18].

5) Install the nut [15] and washer [16] on the shaft [20].

6) Install the control wheel [11].

7) Install the nut [13] that holds the control wheel [11] to the tiller assembly.

8) Tighten the nut [13] to 100 - 150 pound-inches (11.3 - 16.9 newton-meters) above the running torque.

9) Install the plug button [12] on the control wheel [11].

10) Install the sidewall you removed to get access to the drum [18] on the tiller assembly. To do this, do this task: Sidewall Panel Installation, TASK 25-21-46-400-801.

(c) Put the cable assy [7] in the groove of the pulleys [26].

(d) Install the bolt [27], washer [22], nut [28], and pulley [26] on the bracket.

(e) Install the bolt [30], washer [22], nut [28], and pulley [26], on the bracket.

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SUBTASK 32-51-31-420-007

(3) Install the cable assembly [9]:

NOTE: For the cable length and fittings, use the Table on, (Figure 402).

(a) Apply a thin layer of corrosion preventive compound, C00308, or compound, C00528 to the threads on the internal and external surfaces of the mating adjustable parts on the turnbuckles [10].

(b) Install the seal [38] and cable [9] through the left trunnion of the nose gear:

1) Install the cable [9] through the trunnion pin nut [40], the seal ring [41], the left trunnion pin, the pulleys [26] outside the left trunnion, pulley brackets on the summing mechanism, and around the steering collar.

NOTE: Make sure the ends of the cable are not more than 1 inch (25.4 mm) apart when they are pulled tight where they come out of the left trunnion pin.

2) Install the segments of the seal [38] on the cable [9].

3) Install the outboard retainer [37] on the eyebolt [39].

4) Install the inboard retainer [37], the washer [42], and the nut [36], on the eyebolt [39].

NOTE: Make sure that one cable goes over the trunnion pin bolt and one goes under the trunnion pin bolt where the cables go through the left trunnion.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

5) Apply compound, C00913 to the threads of the trunnion pin nut [40], the seal ring [41], and seal [38].

6) Put the seal ring [41], and seal [38] into the left trunnion pin.

7) Use wrench, SPL-1821 to install the trunnion pin nut [40] on the left trunnion pin.

8) Tighten the nut [40] to 100 - 150 pound-inches (11.3 - 16.9 newton-meters) then loosen the nut to align the slots on the nut with the bolt holes.

9) Install the lock [43] on the left trunnion pin.

10) Install the screw [35] to hold the lock [43] on the left trunnion pin.

11) Install lockwire on the screw [35] and the lock [43].

(c) Install the pin [50] on the steering collar.

(d) For the pulleys on the top of the outer cylinder do this:

1) Put the cable assembly [9] in the groove on the pullys [26].

2) Install the pulleys [26], cable guards [31], bolts [32], washers [55, 33], and nuts [34] on their brackets on the top of the outer cylinder.

(e) For the pulleys on the bracket behind the trunnion do this:

1) Put the cable assembly [9] in the groove on the pulleys [26].

2) Install the pulleys [26], the bolts [51], and washers [33] on the bracket behind the trunnion.

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WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

a) Install the bolt [51] with compound, C00913.

b) Tighten the bolt [51] to 25 - 30 pound-inches (2.8 -3.4 newton-meters).

(f) For the pulleys on the summing mechanism do this:

1) Put the cable assembly [9] in the groove on the pulleys [26].

2) Install the nuts [28], bolts [47], washers [48], bushings [49], and pulleys [26] on the pulley brackets on the summing mechanism.

a) Tighten the nuts [28] to 50 - 75 pound-inches (5.6 - 8.5 newton-meters) above run-on torque.

(g) Install the nuts [52], washers [45], and screws [54] to attach the cable guards [53] to the upper plate.

1) Install the cable guard [53] so there is 0.032 +0.013/-0.017 inch (0.81 +0.33/-0.43 mm) clearance with the steering collar.

2) Tighten the nuts [52] to 20 - 25 pound-inches (2.3 - 2.8 newton-meters).

(h) Connect the cable assy [8], the cable assy [7] and the cable [9] at the turnbuckles [10].

H. Put the Airplane Back to Its Usual Condition

SUBTASK 32-51-31-210-005

(1) Visually examine the steering cables to make sure that the cables are routed correctly around the pulleys and are not outside the cable gaurds.

SUBTASK 32-51-31-820-003

(2) Do the adjustment for the rudder pedal interconnect mechanism. To do this, do this task: Rudder Pedal Interconnect Mechanism Adjustment, TASK 32-51-00-820-801.

SUBTASK 32-51-31-820-004

(3) Do the adjustment for the nose wheel steering system. To do this, do this task: Nose Wheel Steering System Adjustment, TASK 32-51-00-820-802.

SUBTASK 32-51-31-420-008

(4) Install the turnbuckle clips [6] on the turnbuckles [10].

SUBTASK 32-51-31-410-004

(5) Install the cover for the summing mechanism [46].

(a) Install the bolts [44] and washers [45].

SUBTASK 32-51-31-410-002

(6) Install the forward access panel that you removed from the left sidewall of the nose wheel well.

SUBTASK 32-51-31-410-003

(7) Install the aft access panel that you removed from the left sidewall of the nose wheel well.

END OF TASK

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STEERING SYSTEM CABLES - INSPECTION/CHECK

1. General

A. This procedure only has a wear limits table which shows the data for wear limits. There are no procedures for access, removal, or installation of the cables. Refer to the Steering System Cables - Removal/Installation for procedures to do these tasks.

TASK 32-51-31-220-801

2. Inspect Nose Gear Steering Cables

A. References

Reference	Title
12-26-00-600-801	Control Cable Lubrication (P/B 301)
20-20-31-200-801	Inspection of the Control Cable Wire Rope (P/B 601)
20-20-31-200-802	Inspection of the Control Cable Fittings (P/B 601)
20-20-31-200-805	Inspection of Pulleys (P/B 601)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-35-00-820-801	Adjustment of the Manual Extension System for the Nose Gear (P/B 501)
32-35-00-990-801	Figure: Nose Gear Manual Extension System (P/B 501)
32-35-11-400-801	Nose Gear Manual Extension Release Mechanism Installation (P/B 401)
32-35-11-990-801	Figure: Nose Landing Gear Manual Extension Release Mechanism Installation (P/B 401)
32-51-11-400-801	Steering Metering Valve Installation (P/B 401)
32-51-11-990-801	Figure: Steering Metering Valve Installation (P/B 401)
32-51-31-000-802	Removal of the Steering System Cables for the Nose Gear (P/B 401)
32-51-31-990-801	Figure: Steering System Cables Installation (P/B 401)
32-51-52-020-801	Summing Mechanism Removal (P/B 401)
32-51-52-990-801	Figure: Nose Landing Gear Steering Summing Mechanism Installation (P/B 401)

B. Prepare for the inspection

SUBTASK 32-51-31-840-001

(1) Make sure the downlock pins are installed for the Nose and Main Landing Gear. If they are not, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-51-31-010-007

(2) Do the steps to remove the Nose Gear Manual Release Mechanism cover [1], as shown in (TASK 32-35-00-820-801), Figure 32-35-00-990-801.

SUBTASK 32-51-31-010-008

(3) Do the steps to remove the Nose Landing Gear Steering Summing Mechanism cover [46], as shown in (TASK 32-51-52-020-801), Figure 32-51-52-990-801.

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C. Inspect the Steering Cables

SUBTASK 32-51-31-210-004

CAUTION: DO NOT APPLY SOLVENTS, GREASE, OR OIL TO STAINLESS STEEL CONTROL CABLES. THESE MATERIALS CAN COLLECT CONTAMINATION THAT CAN CAUSE DAMAGE TO THE INTERNAL SURFACES OF THE CRES CABLE STRANDS. THIS CAN DECREASE THE SERVICE LIFE OF THE CABLE.

(1) Examine the interior of the LH trunnion pin, the area around the pressure seal, the steering cable and cable guard for grease and dirt. If dirt or grease is found, do this task: Control Cable Lubrication, TASK 12-26-00-600-801.

SUBTASK 32-51-31-210-001

(2) Examine the steering cables for correct routing, broken wires, fraying and corrosion. To examine them, do this task: Inspection of the Control Cable Wire Rope, TASK 20-20-31-200-801. Refer to (TASK 32-51-31-000-802), Figure 32-51-31-990-801, to find where the cables run.

NOTE: In order to examine the part of the cables in the trunion pin it will be necessary to turn the wheels fully in both directions.

SUBTASK 32-51-31-210-002

(3) Examine the control cable fittings and cable seals for these conditions; deterioration; out-of-round wear; mounting rings that are not secure. To examine them, do this task: Inspection of the Control Cable Fittings, TASK 20-20-31-200-802 Refer to (TASK 32-51-31-000-802), Figure 32-51-31-990-801, to find where the cable fittings and seals are located. Remove all grease that you find on the pressure seals.

SUBTASK 32-51-31-210-003

(4) Examine the cable pulley brackets, pulleys and fairleads for these conditions; cracks; distortion; loose mounting, cracks or misalignment. To examine them, do this task: Inspection of Pulleys, TASK 20-20-31-200-805. Refer to (TASK 32-51-31-000-802), Figure 32-51-31-990-801, to find where the cable brackets, pulleys and fairleads are located.

D. Restore the Airplane to its Usual Condition

SUBTASK 32-51-31-010-009

(1) Do the steps to install the Nose Landing Gear Steering Summing Mechanism Cover [46], as shown in (TASK 32-51-11-400-801), Figure 32-51-11-990-801.

SUBTASK 32-51-31-010-010

(2) Do the steps to install the Nose Gear Manual Release Mechanism Cover [1], as shown in (TASK 32-35-11-400-801), Figure 32-35-11-990-801.

END OF TASK

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NOSE LANDING GEAR CONTROL WHEEL AND TILLER ASSEMBLY - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the control wheel for the steering system of the nose landing gear

(2) A removal of the tiller assembly for the steering system of the nose landing gear

(3) An installation of the tiller assembly for the steering system of the nose landing gear

(4) An installation of the control wheel for the steering system of the nose landing gear.

TASK 32-51-41-000-801

2. Nose Landing Gear Steering Control Wheel Removal

(Figure 401)

A. General

(1) This procedure provides instructions to remove the control wheel.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
115	Nose Landing Gear Wheel Well - Left
211	Flight Compartment - Left
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Removal

SUBTASK 32-51-41-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

E. Nose Landing Gear Steering Control Wheel Removal

SUBTASK 32-51-41-020-001

(1) Remove the control wheel [7] from the tiller assembly [13]:

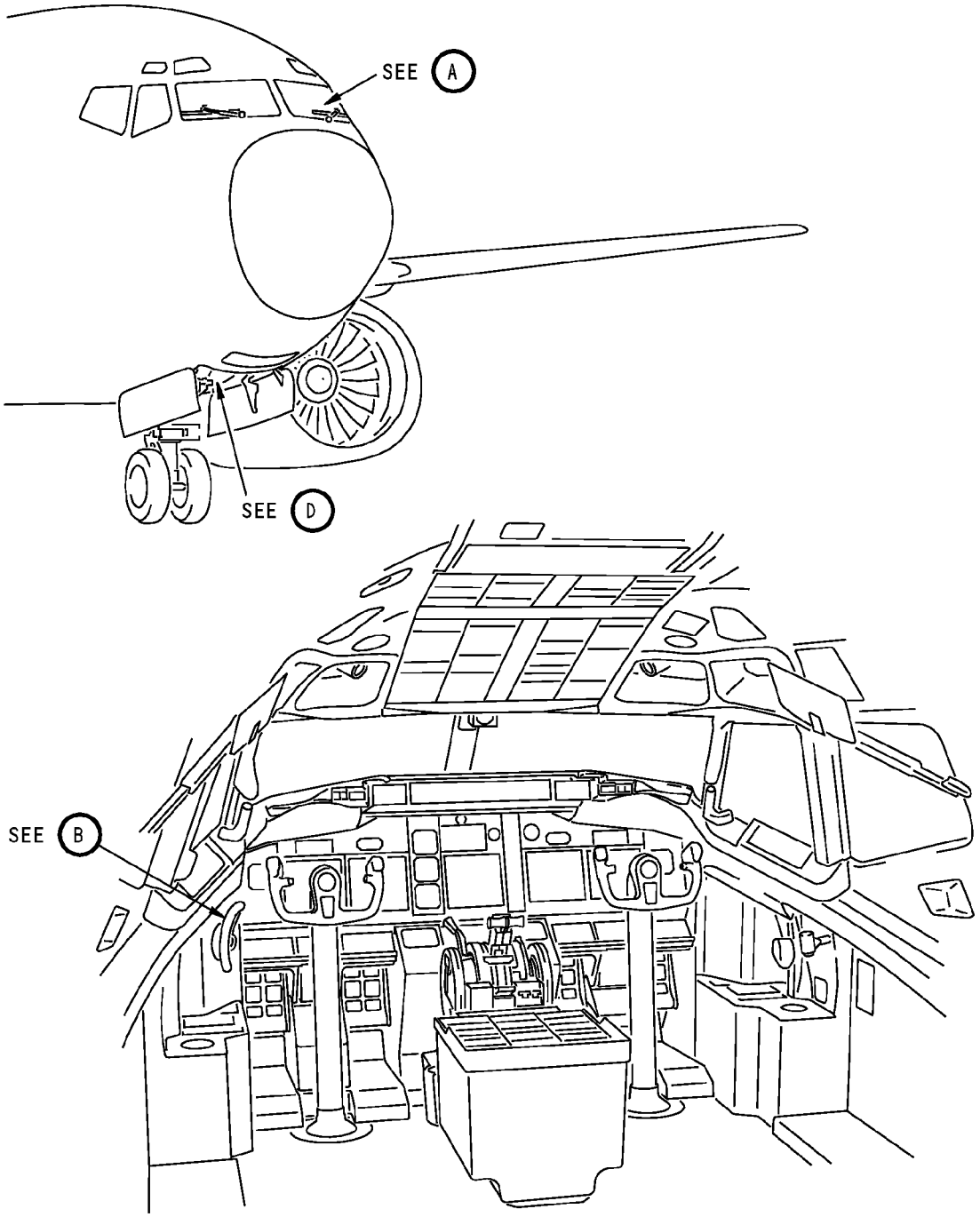
(a) Remove the plug button [1] from the control wheel [7].

(b) Remove the nut [2] that holds the control wheel [7] to the tiller assembly [13].

(c) Remove the control wheel [7] from the airplane.

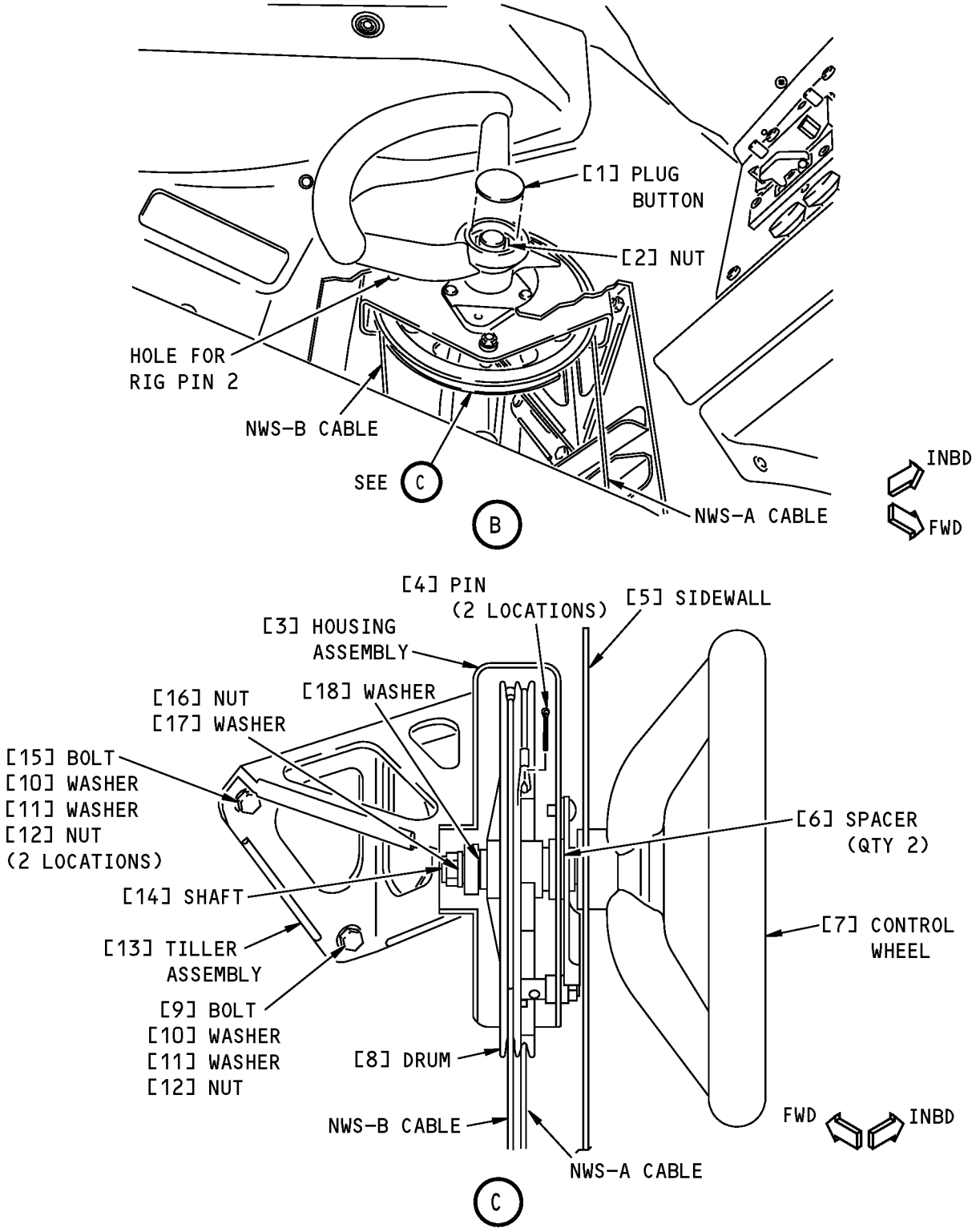
———————— END OF TASK ————————

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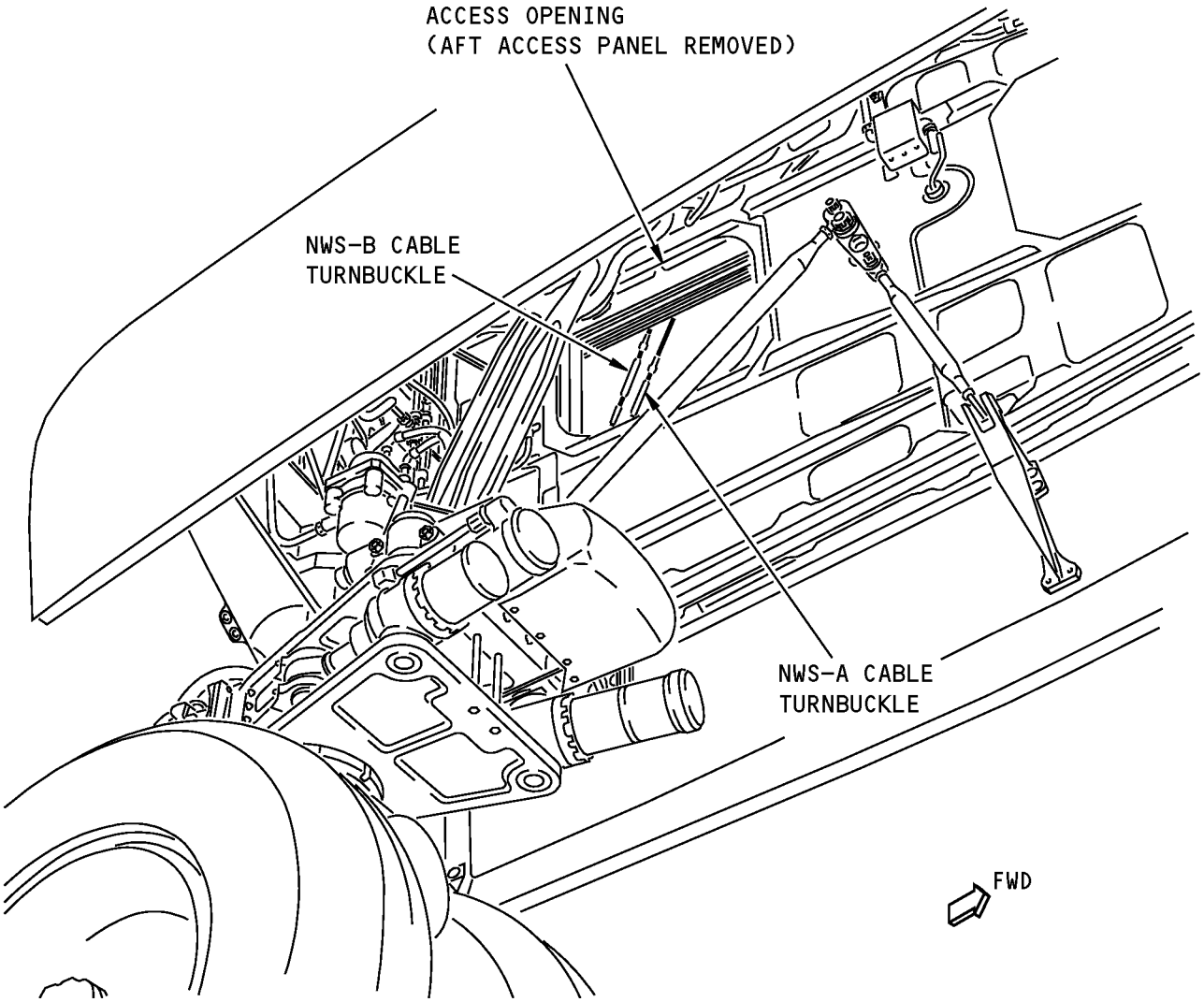
Nose Landing Gear Steering Control Wheel and Tiller Installation
Figure 401 (Sheet 1 of 3)/32-51-41-990-801

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Nose Landing Gear Steering Control Wheel and Tiller Installation
Figure 401 (Sheet 2 of 3)/32-51-41-990-801

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Nose Landing Gear Steering Control Wheel and Tiller Installation
Figure 401 (Sheet 3 of 3)/32-51-41-990-801

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TASK 32-51-41-000-802

3. Nose Landing Gear Tiller Assembly Removal

(Figure 401)

A. General

(1) This procedure provides instructions to remove the tiller assembly.

B. References

Reference	Title
25-11-22-000-801	Flight Compartment Forward Side Panel Removal (P/B 401)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Location Zones

Zone	Area
115	Nose Landing Gear Wheel Well - Left
211	Flight Compartment - Left
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare for the Removal

SUBTASK 32-51-41-480-002

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-51-41-010-001

(2) Remove the aft access panel from the wheel well for the nose landing gear to get access to the turnbuckles for the NWS-A cable and the NWS-B cable.

SUBTASK 32-51-41-020-002

(3) Remove the control wheel [7], to remove it, do this task: Nose Landing Gear Steering Control Wheel Removal, TASK 32-51-41-000-801.

SUBTASK 32-51-41-020-003

(4) Remove the sidewall [5] to get access to the tiller assembly [13], do this task: Flight Compartment Forward Side Panel Removal, TASK 25-11-22-000-801.

E. Nose Landing Gear Tiller Assembly Removal

SUBTASK 32-51-41-020-004

(1) Disconnect the NWS-A cable and the NWS-B cable from the drum [8]:

(a) Remove the nut [16] and washer [17].

(b) Loosen the tension at the turnbuckles for the NWS-A cable and the NWS-B cable.

(c) Remove the shaft [14], washer [18], and spacers [6].

(d) Remove the drum [8] from the housing assembly [3].

(e) Remove the pins [4] that hold the cable ends to the drum [8].

(f) Attach identification tags on the NWS-A cable and the NWS-B cable.

(g) Isolate the NWS-A cable and the NWS-B from the tiller assembly [13].

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SUBTASK 32-51-41-020-005

(2) Remove the tiller assembly [13]:

(a) Remove the nuts [12], washers [11] from the bolts [9, 15].

(b) Remove the bolts [9, 15] that attach the tiller assembly [13] to the mating structure.

(c) Remove the washers [10] from the bolts [9, 15].

(d) Remove the tiller assembly [13] from the airplane.

—————— END OF TASK ——————

TASK 32-51-41-400-801

4. Nose Landing Gear Tiller Assembly Installation

(Figure 401)

A. General

(1) This procedure provides instructions to install the tiller assembly.

B. References

Reference	Title
25-11-22-400-801	Flight Compartment Forward Side Panel Installation (P/B 401)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
D00013	Grease - Aircraft And Instrument Grease	MIL-PRF-23827 (NATO G-354) (Supersedes MIL-G-23827)

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	Pins	32-51-41-03-045	HAP ALL
7	Control wheel	32-51-41-03-030	HAP ALL
13	Tiller assembly	32-51-31-12-005	HAP ALL
		32-51-41-03-040	HAP ALL

E. Location Zones

Zone	Area
115	Nose Landing Gear Wheel Well - Left
211	Flight Compartment - Left
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

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F. Prepare for the Installation

SUBTASK 32-51-41-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

G. Nose Landing Gear Tiller Assembly Installation

SUBTASK 32-51-41-420-001

(1) Install the tiller assembly [13]:

(a) Put the tiller assembly [13] in its position for attachment to the mating structure.

(b) Align the holes in the tiller assembly [13] with the holes in the mating structure.

(c) Install the washers [10] on the bolts [9, 15].

(d) Put the inboard bolt [15] through the hole in the mating structure and the hole in the tiller assembly [13].

(e) Put the outboard bolts [9, 15] through the holes in the tiller assembly [13] and the holes in the mating structure.

(f) Install the washers [11], and the nuts [12] on the bolts [9, 15].

(g) Apply sealant, A00247 around the area of the bolts [9] to seal them.

SUBTASK 32-51-41-420-002

(2) Connect the the NWS-A cable and the NWS-B cable to the drum [7]:

(a) Put the cable fairleads of the NWS-A cable and the NWS-B cable in their position for attachment to the drum [8].

(b) Install the pins [4] to hold the cable ends to the drum [8].

(c) Remove the identification tags attached to the NWS-A cable and the NWS-B cable.

(d) Apply grease, D00013 to the bearings in the housing assembly.

(e) Install the drum [8] in the housing assembly [3].

(f) Install the shaft [14], spacers [6], and washer [18].

NOTE: Install the shaft [14] with the missing tooth aligned in the drum.

(g) Install the washer [17], and nut [16].

(h) Tighten the nut [16].

SUBTASK 32-51-41-410-001

(3) Install the sidewall [5], do this task: Flight Compartment Forward Side Panel Installation, TASK 25-11-22-400-801.

SUBTASK 32-51-41-420-003

(4) Install the control wheel [7]. To install it, do this task: Nose Landing Gear Steering Control Wheel Installation, TASK 32-51-41-400-802.

END OF TASK

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TASK 32-51-41-400-802

5. Nose Landing Gear Steering Control Wheel Installation

(Figure 401)

A. General

(1) This procedure provides instructions to install the control wheel.

B. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-51-00-700-801	Nose Wheel Steering System Test (P/B 501)
32-51-00-820-802	Nose Wheel Steering System Adjustment (P/B 501)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
7	Control wheel	32-51-41-03-030	HAP ALL

E. Location Zones

Zone	Area
115	Nose Landing Gear Wheel Well - Left
211	Flight Compartment - Left
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

F. Prepare for the Installation

SUBTASK 32-51-41-480-004

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on all the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

G. Nose Landing Gear Control Wheel Installation

SUBTASK 32-51-41-420-004

(1) Install the control wheel [7] on the tiller assembly [13]:

(a) Install Rig pin NWS2, from rig pin kit, SPL-1585, in the Captain's control wheel drum.

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(b) Put the control wheel [7] in its position for attachment to the tiller assembly [13].

NOTE: With the rig pin installed, the arrow on the control wheel must align with the arrow on the sidewall when you install the control wheel.

(c) Install the nut [2] that holds the control wheel [7] to the tiller assembly [13].

(d) Tighten the nut [2] to 100-150 inch-pounds (11-17 newton-meters) more than the run on torque.

(e) Install the plug button [1] on the control wheel [7].

SUBTASK 32-51-41-480-005

(2) Remove the rig pin from the control wheel drum.

SUBTASK 32-51-41-820-001

(3) Adjust the steering system on the nose wheel, to adjust it, do this task: Nose Wheel Steering System Adjustment, TASK 32-51-00-820-802.

NOTE: It is not necessary to perform the adjustment and system test of the Nose Wheel Steering System if no other part has been disturbed.

SUBTASK 32-51-41-820-002

(4) Test the steering system on the nose wheel, to test it, do this task: Nose Wheel Steering System Test, TASK 32-51-00-700-801.

SUBTASK 32-51-41-410-003

(5) Install the aft access panel in the wheel well for the nose landing gear.

——————— END OF TASK ———————

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NOSE GEAR STEERING ACTUATOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these four tasks:

(1) A removal of the steering actuator (referred to as the actuator assy [3])

(2) An installation of the steering actuator.

(3) A removal of the hydraulic swivel assembly.

(4) An Installation of the hydraulic swivel.

B. There are two identical actuator assy [3] installed on the nose landing gear, just above the wheels.

C. The actuator assy [3] weighs 22 pounds (10 Kilos) when it is filled with hydraulic fluid.

TASK 32-51-51-000-801

2. Nose Gear Steering Actuator Removal

(Figure 401)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-21-31-000-803	Nose Landing Gear Torsion Link Disconnection (P/B 401)
32-51-00-700-801	Nose Wheel Steering System Test (P/B 501)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1499	Pin - Lock, NLG Towing Lever (Part #: A09003-2, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A09003-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1901	Wrench - Spanner, Steering Collar Retainer, Nose Landing Gear (Part #: C32040-6, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32040-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

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D. Prepare for the Removal

SUBTASK 32-51-51-860-007

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-51-51-860-010

(2) Make sure the wheels of the nose landing gear are in the centered position. If they are not in the centered position, do this task: Nose Wheel Steering System Test, TASK 32-51-00-700-801.

SUBTASK 32-51-51-860-011

(3) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-51-51-860-012

(4) Move the towing lever, on the forward side of the nose landing gear, to the TOW position.

SUBTASK 32-51-51-860-013

WARNING: ONLY USE THE CORRECT PIN FOR THE AIRPLANE MODEL. IF YOU USE AN INCORRECT PIN, THE HYDRAULIC STEERING CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(5) Install the NLG Towing Lever lock NLG towing lever pin, SPL-1499 through the towing lever.

NOTE: You use the NLG Towing Lever lock NLG towing lever pin, SPL-1499 to hold the towing lever in the TOW position.

E. Actuator Assembly Removal

(Figure 401)

SUBTASK 32-51-51-020-001

(1) Disconnect the torsion links at the apex joint, do this task: Nose Landing Gear Torsion Link Disconnection, TASK 32-21-31-000-803.

SUBTASK 32-51-51-980-001

(2) Turn the steering collar far enough to permit access to the rod end of the actuator assy [3] that you will remove.

SUBTASK 32-51-51-020-002

(3) Remove the cotter pin [6], nut [5], washer [4], bushings [2], anti-rotation washers [22] (not on all airplanes), and pin [1] to disconnect the rod end of the actuator assy [3] from the steering collar.

SUBTASK 32-51-51-020-009

(4) Remove the lockwire from the bolts [9] that attach the upper sleeve and the lower steering plate [18].

SUBTASK 32-51-51-020-010

(5) Remove the bolts [9], washers [7], and standoffs [8] that hold the two front feet of the metering valve assy to the upper sleeve and lower steering plate [18].

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SUBTASK 32-51-51-020-003

(6) Remove the nuts [13], bolts [11], washers [12], and clamps [10] that attach the trunnion of the actuator assy [3] to the bushed hole in the upper steering sleeve and the steering valve swivel.

NOTE: The hydraulic ports will be open when you remove the trunnion of the actuator assembly from the steering valve swivel. Make sure the area around trunnion is clean before the hydraulic ports are open to atmospere, to prevent contamination.

SUBTASK 32-51-51-020-013

(7) Remove the lockwire from the bolts [14].

SUBTASK 32-51-51-020-005

(8) Remove the bolts [14], washers [15], and lock tab [16] from the steering collar retainer nut [17].

SUBTASK 32-51-51-800-001

(9) Hold the lower steering plate [18] in its position while you loosen the steering collar retainer nut [17], using spanner wrench, SPL-1901, and lower it down the outer cylinder.

SUBTASK 32-51-51-010-001

(10) Hold the actuator assy [3] in its position and lower the lower steering plate [18] down the outer cylinder.

SUBTASK 32-51-51-020-007

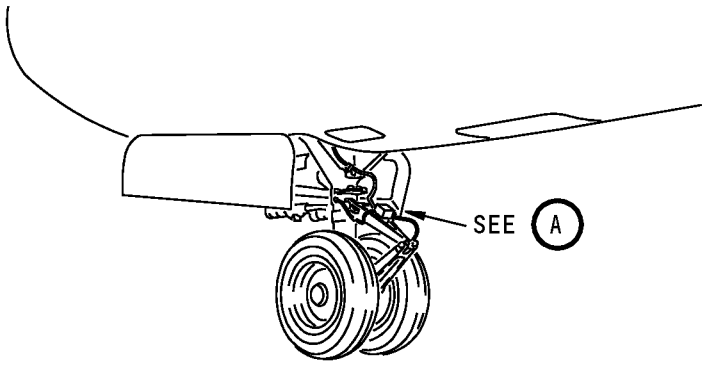
(11) Remove the actuator assy [3] from the cavity in the steering valve swivel and the bushed hole in the upper steering sleeve.

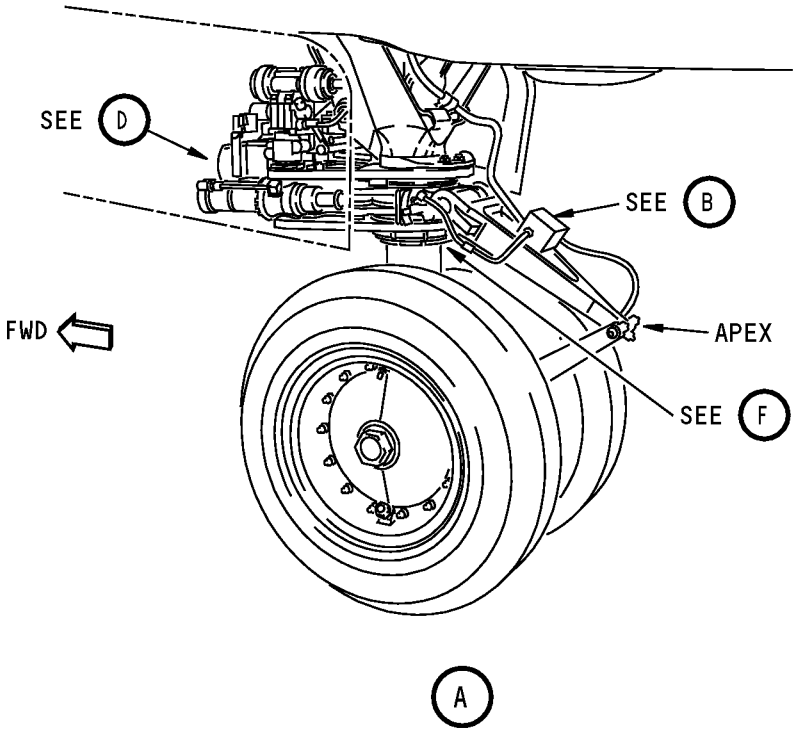
SUBTASK 32-51-51-480-002

(12) Install caps in the open hydraulic ports of the steering valve swivel and the trunnion of the actuator assy [3].

——————— END OF TASK ———————

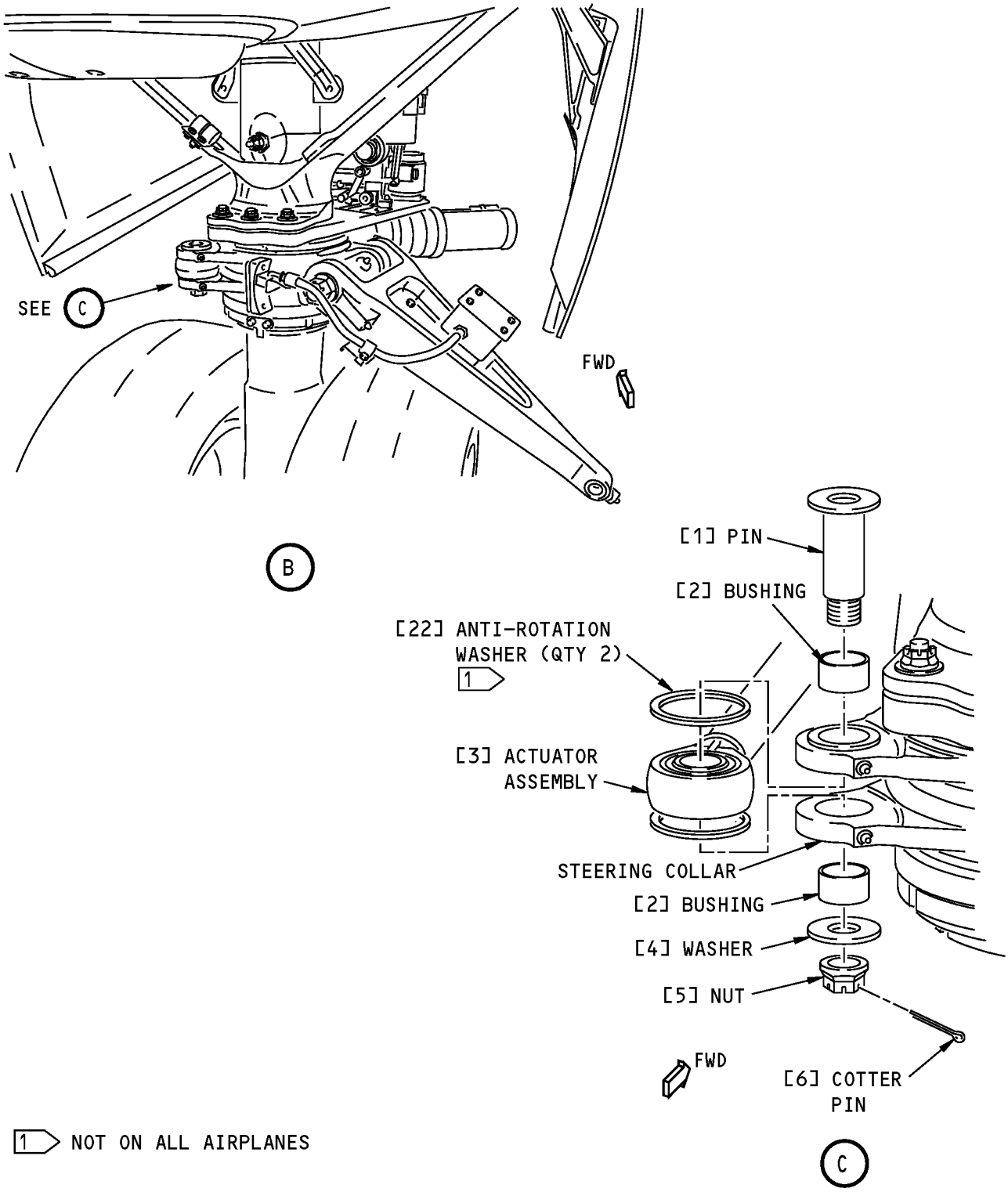
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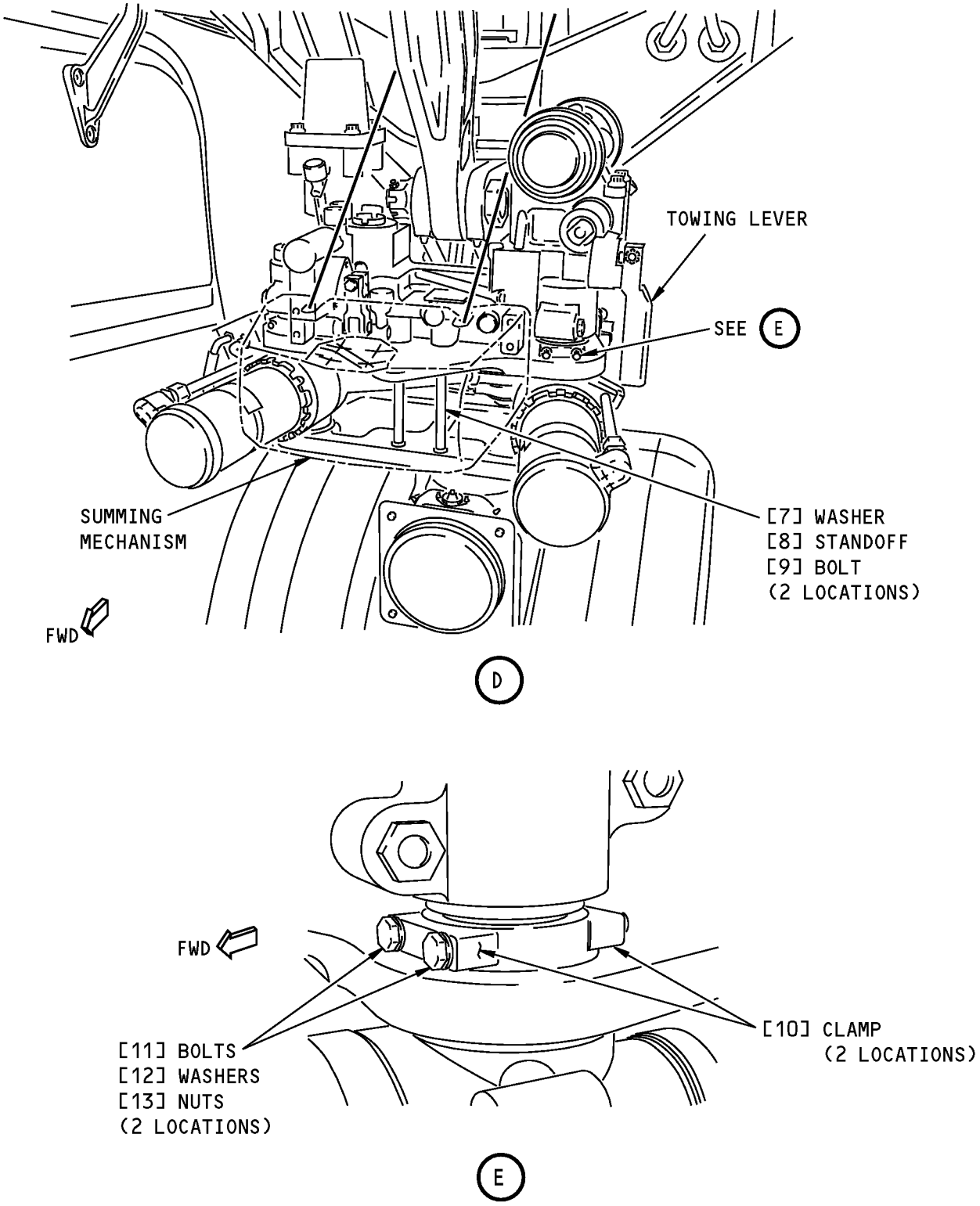
Nose Gear Steering Actuator Installation
Figure 401 (Sheet 1 of 5)/32-51-51-990-801

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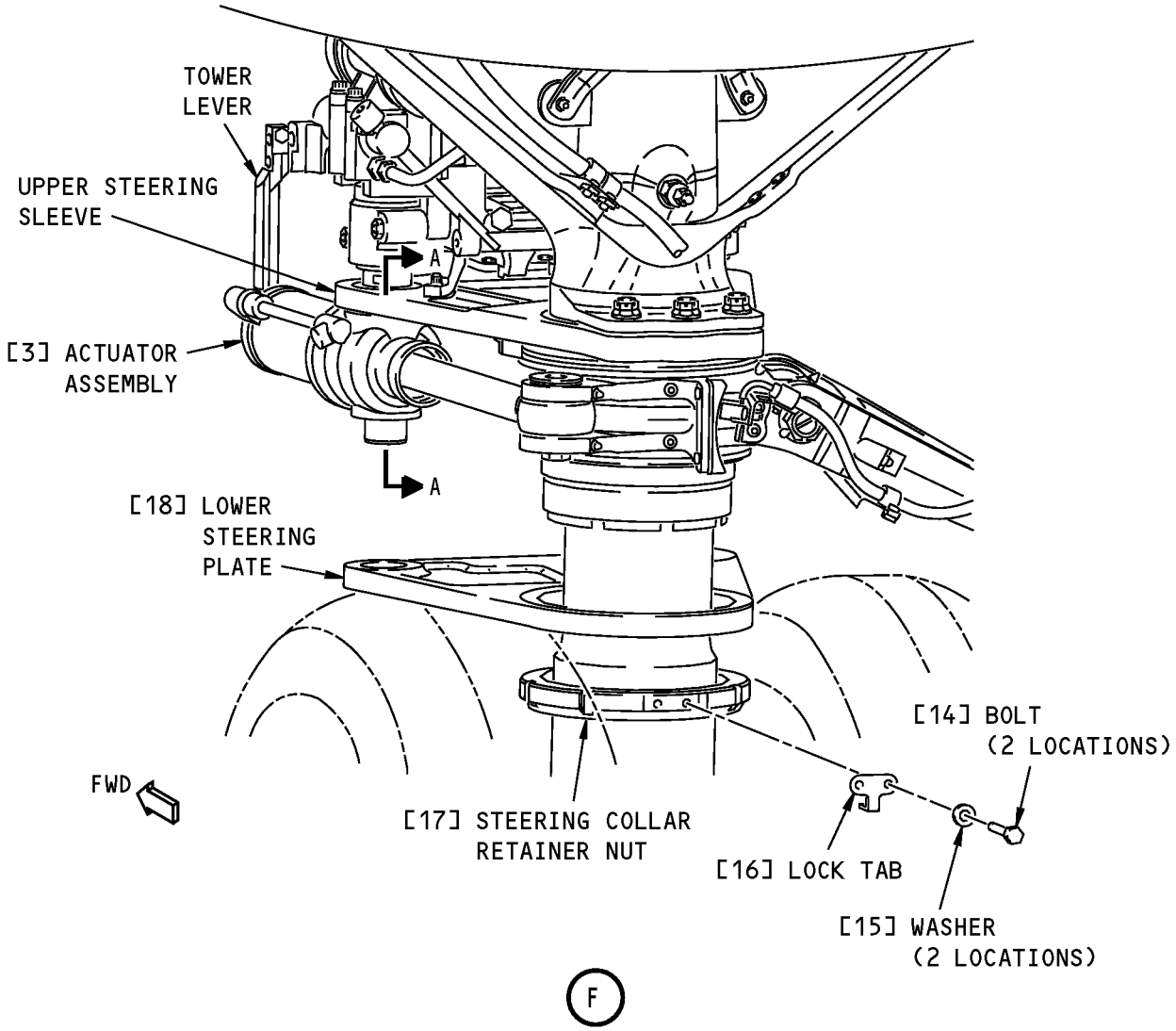
Nose Gear Steering Actuator Installation
Figure 401 (Sheet 2 of 5)/32-51-51-990-801

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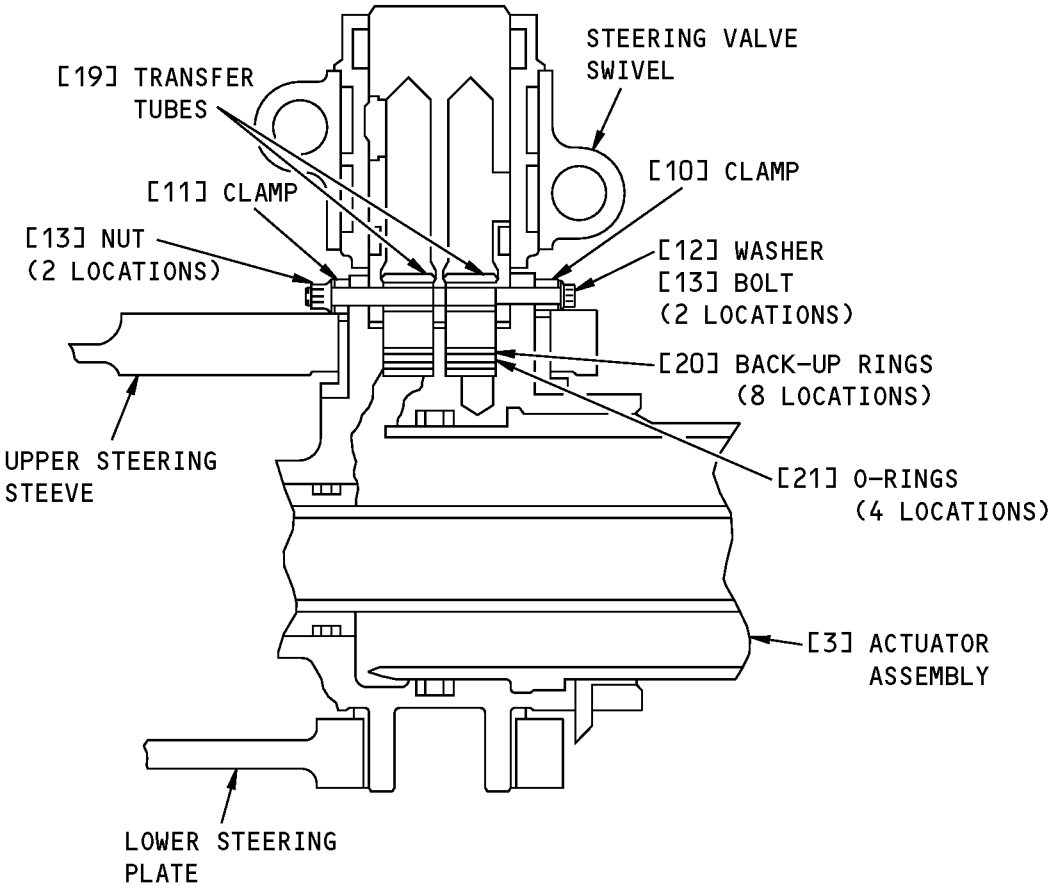
Nose Gear Steering Actuator Installation
Figure 401 (Sheet 3 of 5)/32-51-51-990-801

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Nose Gear Steering Actuator Installation
Figure 401 (Sheet 4 of 5)/32-51-51-990-801

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Nose Gear Steering Actuator Installation
Figure 401 (Sheet 5 of 5)/32-51-51-990-801

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TASK 32-51-51-400-801

3. Nose Gear Steering Actuator Installation

(Figure 401)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-21-31-400-803	Nose Landing Gear Torsion Link Connection (P/B 401)
32-51-00-700-801	Nose Wheel Steering System Test (P/B 501)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1499	Pin - Lock, NLG Towing Lever (Part #: A09003-2, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A09003-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1901	Wrench - Spanner, Steering Collar Retainer, Nose Landing Gear (Part #: C32040-6, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32040-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
6	Pin	32-51-51-01-235	HAP 001-013, 015-026, 028-030
		32-51-51-01A-215	HAP 031-054, 101-999

E. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

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F. Prepare for Installation

(Figure 401)

SUBTASK 32-51-51-860-005

(1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-51-51-080-002

(2) Remove the caps from the open hydraulic ports of the steering valve swivel and the trunnion of the actuator assy [3].

NOTE: Make sure the area around the trunnion and the steering valve is clean. When the hydraulic ports are open you can contaminate the trunnion of the actuator assembly and the cavity on the steering valve swivel.

SUBTASK 32-51-51-600-001

(3) Do these steps to prepare the actuator assy [3] for installation:

(a) Fill the actuator assy [3] with fluid, D00153 until it is full.

(b) Apply fluid, D00153 to the transfer tubes [19], backup rings [20], and O-rings [21] in the trunnion of the actuator assy [3].

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST BMS 3-27 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(c) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) to the threads, thread reliefs, and mating surfaces of the steering collar retainer nut [17].

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST BMS 3-27 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(d) Apply a thin layer of compound, C50056 or compound, C00913 (alternate) to the threads, thread reliefs, and mating surfaces of the nuts [5, 13], bushings [2], pins [1], bolts [9, 11, 14], and standoffs [8].

G. Actuator Assembly Installation

(Figure 401)

SUBTASK 32-51-51-420-001

(1) Put the trunnion of the actuator assy [3] into the bushed hole in the upper steering sleeve and the cavity of the steering valve swivel.

NOTE: The Left Hand actuator should be installed on the Left side and the Right Hand actuator should be installed on the right side. (See Figure 401).

(a) Be careful to align the transfer tubes [19] as you lift the actuator assy [3] into position.

(b) Hold the actuator assy [3] after the trunnion shoulder is in full contact with the flange of the bushing in the upper steering sleeve.

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SUBTASK 32-51-51-410-001

(2) Hold the actuator assy [3] in its position and raise the lower steering plate [18] up the outer cylinder. Put the lower trunnion of the actuator assy [3] into the hole in the lower steering plate [18].

SUBTASK 32-51-51-420-002

(3) Hold the lower steering plate [18] in its position and move the steering collar retainer nut [17] up the outer cylinder to install it on the threads below the lower steering plate [18].

(a) Tighten the nut [17] to 50 - 75 pound-feet (68-102 newton-meters), using spanner wrench, SPL-1901.

(b) If it is necessary, loosen the nut [17] a minimum amount to install the lock tab [16], washers [15], and bolts [14].

(c) Install lockwire on the bolts [14].

SUBTASK 32-51-51-420-006

(4) Install the clamps [10], bolts [11], washers [12], and nuts [13] that attach the trunnion of the actuator assy [3] to the steering valve swivel.

SUBTASK 32-51-51-020-008

(5) Install the standoffs [8], bolts [9], and washers [7] that hold the upper sleeve and the lower steering plate [18].

(a) Install lockwire on the bolts [9].

SUBTASK 32-51-51-980-002

(6) Turn the steering collar far enough to permit access to the rod end of the actuator assy [3] that you will install.

SUBTASK 32-51-51-420-004

(7) Install the anti-rotation washers [22] (not on all airplanes), bushings [2], pin [1], washer [4], and nut [5] to connect the rod end of the actuator assy [3] to the steering collar.

(a) Tighten the nut [5] to 50 - 58 pound-feet (68-79 newton-meters).

(b) If it is necessary, loosen the nut [5] to the nearest castellation to align the hole in the pin [1].

(c) Install the cotter pin [6].

NOTE: Make sure the ends of the cotter pin are not closer than 0.10 inch (2.54 mm) to the steering collar when they are bent.

SUBTASK 32-51-51-420-005

(8) Connect the torsion links at the apex joint. To do this, do this task: Nose Landing Gear Torsion Link Connection, TASK 32-21-31-400-803.

SUBTASK 32-51-51-860-006

(9) Remove the NLG towing lever pin, SPL-1499 from the towing lever.

SUBTASK 32-51-51-710-001

(10) Do a test on the steering system of the nose wheel. Do the following steps from this task, do this task: Nose Wheel Steering System Test, TASK 32-51-00-700-801

- General
- Prepare the Airplane for Testing
- Do the Test of the Normal Steering Response after replacing a steering actuator
- Put the Airplane in its Usual Condition

(a) Examine for leaks.

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(b) Make sure that there is no leakage.

END OF TASK

TASK 32-51-51-000-802

4. Nose Gear Hydraulic Swivel Removal

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01 P/B 201	LANDING GEAR DOWNLOCK PINS - MAINTENANCE PRACTICES
32-21-00-990-802	Figure: Nose Landing Gear Installation (P/B 401)

B. Location Zones

Zone	Area
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

C. General

SUBTASK 32-51-51-000-001

(1) This task contains steps to replace either the entire swivel assembly or the individual swivels from the assembly.

D. Prepare for Removal

SUBTASK 32-51-51-940-001

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: LANDING GEAR DOWNLOCK PINS - MAINTENANCE PRACTICES, PAGEBLOCK 32-00-01/201

(2) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805

E. Remove the Hydraulic Swivel (Individual Swivels)

SUBTASK 32-51-51-020-015

(1) Remove the hydraulic lines [3] from the swivel assembly [10]. Figure 32-21-00-990-802

(2) Remove the band clamps [4] from the swivel assembly [10].

(3) Remove the swivel [2] from the assembly.

F. Remove the Hydraulic Swivel Assembly

SUBTASK 32-51-51-020-016

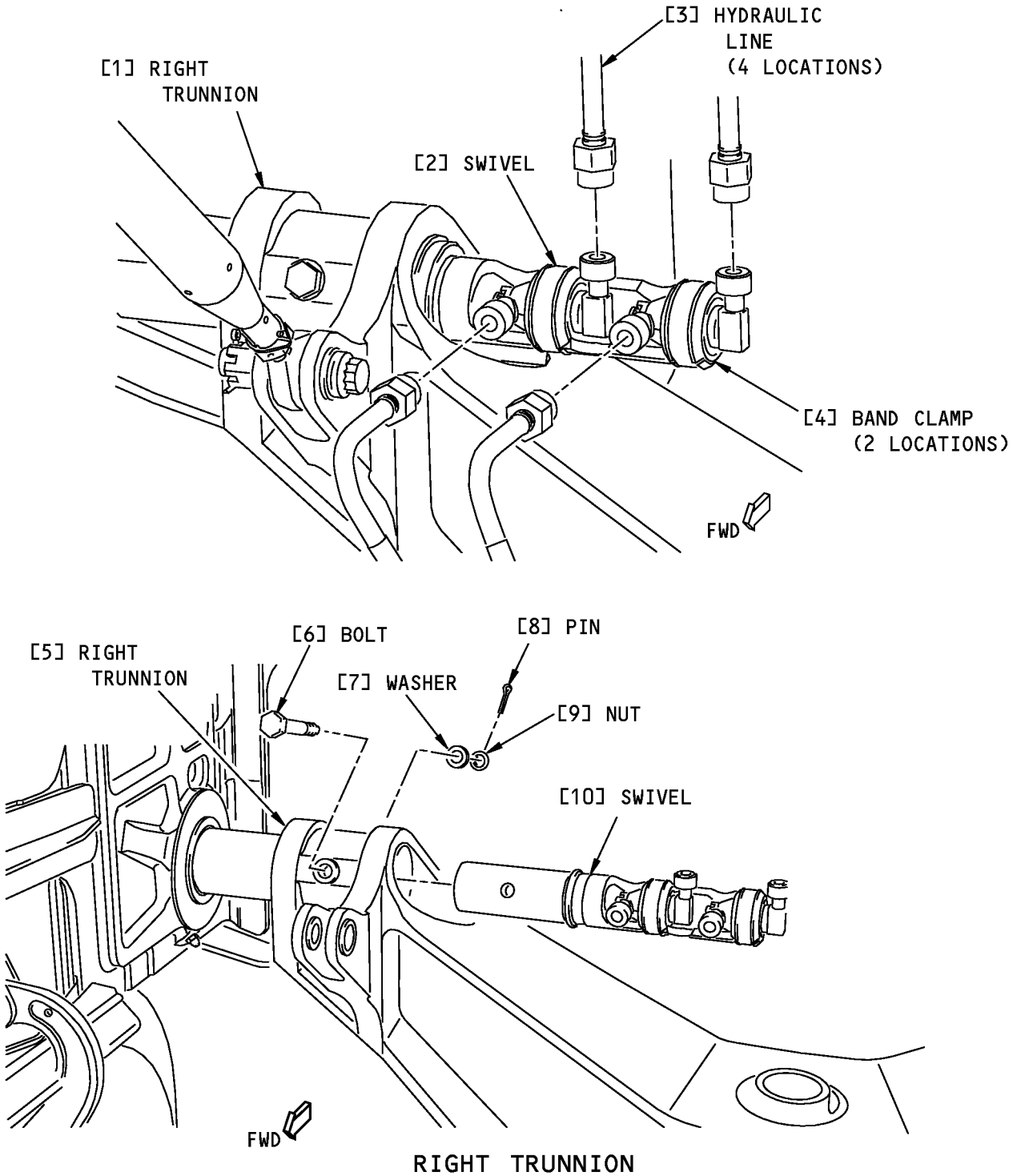
(1) Remove the hydraulic lines [3] from the swivel assembly [10].Figure 32-21-00-990-802

(2) Remove the cross bolt [6] from the Nose Gear Right Trunnion [1].

(3) Remove the Swivel Assembly [10].

END OF TASK

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Nose Landing Gear Hydraulic Swivel
Figure 402/32-51-51-990-803

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TASK 32-51-51-400-802

5. Nose Gear Hydraulic Swivel Installation

A. References

Reference	Title
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)

B. Consumable Materials

Reference	Description	Specification
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
D50180	Grease - Aircraft General Purpose (AeroShell Grease 33)	BMS 3-33, MIL-PRF-23827

C. Location Zones

Zone	Area
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

D. Installation of Swivel Assembly.

SUBTASK 32-51-51-640-001

(1) Lubricate the I.D. of the Trunnion Pin and the O.D. of the Swivel Bracket with AeroShell Grease 33, D50180.

(2) Place the Swivel Bracket in the Trunnion Pin and align the hole for the cross bolt [6].

(3) Install the cross bolt [6].

(a) Apply a thin coat of compound, C50056 to the shank and threads of the cross bolt [6].

(b) Install the cross bolt [6], washer [7], and nut [9].

(c) Tighten the nut [9] to 20-24 in-lbs above run-on torque and loosen to align the nearest castellation.

(d) Install the cotter pin [8].

(4) Connect the hydraulic tubes [3].

(5) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

(6) Maintain pressure for two minutes and check for leaks.

E. Installation of Swivels

SUBTASK 32-51-51-420-009

(1) Install swivel [2] in assembly.

(a) Position swivels [2] in the assembly.

(b) Install the band clamps [4].

(2) Connect the hydraulic tubes [3].

(3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

(4) Maintain pressure for two minutes and make sure there are no leaks.

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F. Return the Airplane to Normal

SUBTASK 32-51-51-040-001

(1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805

if hydraulic power is no longer required.

——————— END OF TASK ———————

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NOSE GEAR STEERING ACTUATOR - INSPECTION/CHECK

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) An external, non-disassembled detailed visual inspection of the steering actuator rod ends on the nose gear.

(2) A detailed dimensional inspection of the steering actuator trunnions and associated steering plate bushings on the nose gear.

C. There are two identical steering actuators installed on the nose landing gear, just above the wheels.

TASK 32-51-51-200-801

2. Nose Gear Steering Actuator Rod End Visual Inspection

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-21-31-000-803	Nose Landing Gear Torsion Link Disconnection (P/B 401)
32-21-31-400-803	Nose Landing Gear Torsion Link Connection (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1499	Pin - Lock, NLG Towing Lever (Part #: A09003-2, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A09003-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

E. Prepare for the Visual Inspection

SUBTASK 32-51-51-860-008

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

(a) Make sure the wheels of the nose landing gear are in the centered position.

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(b) Depressurize hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

(c) Move the towing lever, on the forward side of the nose landing gear, to the TOW position.

WARNING: ONLY USE THE CORRECT PIN FOR THE AIRPLANE MODEL. IF YOU USE AN INCORRECT PIN, THE HYDRAULIC STEERING CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(d) Install the NLG towing lever pin, SPL-1499 through the towing lever.

NOTE: You use the NLG Towing Lever Lock Pin to hold the towing lever in the TOW position.

F. Actuator Rod End Visual Inspection

SUBTASK 32-51-51-020-011

(1) If necessary, disconnect the torsion links at the apex joint. To do this, do this task: Nose Landing Gear Torsion Link Disconnection, TASK 32-21-31-000-803.

SUBTASK 32-51-51-980-003

(2) Turn the steering collar far enough to permit visual access to the rod end that you will inspect.

SUBTASK 32-51-51-020-012

(3) Do an external, non-disassembled, visual inspection of the nut, washer, bushings, and pin that attach the rod end to the steering collar.

(a) Make sure the rod end is secure and that there is no damage.

(b) Make sure there is no excessive or unusual movement in the rod end bushings and the rod end pin.

SUBTASK 32-51-51-420-007

(4) If necessary, connect the torsion links at the apex joint. To do this, do this task: Nose Landing Gear Torsion Link Connection, TASK 32-21-31-400-803.

SUBTASK 32-51-51-860-009

(5) Remove the NLG towing lever pin, SPL-1499 from the towing lever.

——————— END OF TASK ———————

TASK 32-51-51-200-802

3. Nose Gear Steering Actuator Trunnion and Trunnion Bushing Dimensional Inspection

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-51-51-000-801	Nose Gear Steering Actuator Removal (P/B 401)
32-51-51-400-801	Nose Gear Steering Actuator Installation (P/B 401)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

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Reference	Description
SPL-1499	Pin - Lock, NLG Towing Lever (Part #: A09003-2, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A09003-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

D. Prepare for the Inspection

(Figure 601)

SUBTASK 32-51-51-860-014

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

(a) Make sure the wheels of the nose landing gear are in the centered position.

(b) Depressurize hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

(c) Move the towing lever, on the forward side of the nose landing gear, to the TOW position.

WARNING: ONLY USE THE CORRECT PIN FOR THE AIRPLANE MODEL. IF YOU USE AN INCORRECT PIN, THE HYDRAULIC STEERING CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(d) Install the NLG towing lever pin, SPL-1499 through the towing lever.

NOTE: You use the NLG Towing Lever Lock Pin to hold the towing lever in the TOW position.

E. Actuator Trunnion and Trunnion Bushing Inspection

SUBTASK 32-51-51-020-014

(1) Remove the Steering Actuator, do this task: Nose Gear Steering Actuator Removal, TASK 32-51-51-000-801.

SUBTASK 32-51-51-220-001

(2) Inspect and measure the Steering Actuator Upper and Lower Trunnions outside diameter for wear or galling.

SUBTASK 32-51-51-220-002

(3) Inspect and measure the trunnion bushings installed in the Upper and Lower Steering Plates for wear on the bushing inside diameter.

NOTE: Wear through the KARON coating is acceptable if not mechanically worn beyond limits shown in Table 601

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SUBTASK 32-51-51-220-004

(4) Compare the dimensions you measured with the permitted wear limits given in Table 601. If the measured parts are not in tolerance, replace or repair the part as shown in the Component Maintenance Manual.

Table 601/32-51-51-993-802

NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MAXIMUM SERVICE DIAMETRIC CLEARANCE
#1 UPPER TRUNNION BUSHING	I.D.	2.1250 in 53.975 mm	2.1294 in 54.087 mm	2.1305 in 54.115 mm*[1]	0.0073 in
#1 UPPER ACTUATOR TRUNNION	O.D.	2.1230 in 53.924 mm	2.1250 in 53.975 mm	2.1200 in 53.848 mm	0.1854 mm
#2 LOWER TRUNNION BUSHING	I.D	1.3750 in 34.925 mm	1.3790 in 35.027 mm	1.3802 in 35.057 mm*[1]	0.0073 in
#2 LOWER ACTUATOR TRUNNION	O.D.	1.3730 in 34.874 mm	1.3750 in 34.925 mm	1.3710 in 34.823 mm	0.1854 mm

*[1]
Wear through the KARON coating is acceptable if not mechanically worn beyond limits shown above.

SUBTASK 32-51-51-420-008

(5) Install the Steering Actuator. To do this, do this task: Nose Gear Steering Actuator Installation, TASK 32-51-51-400-801.

SUBTASK 32-51-51-080-003

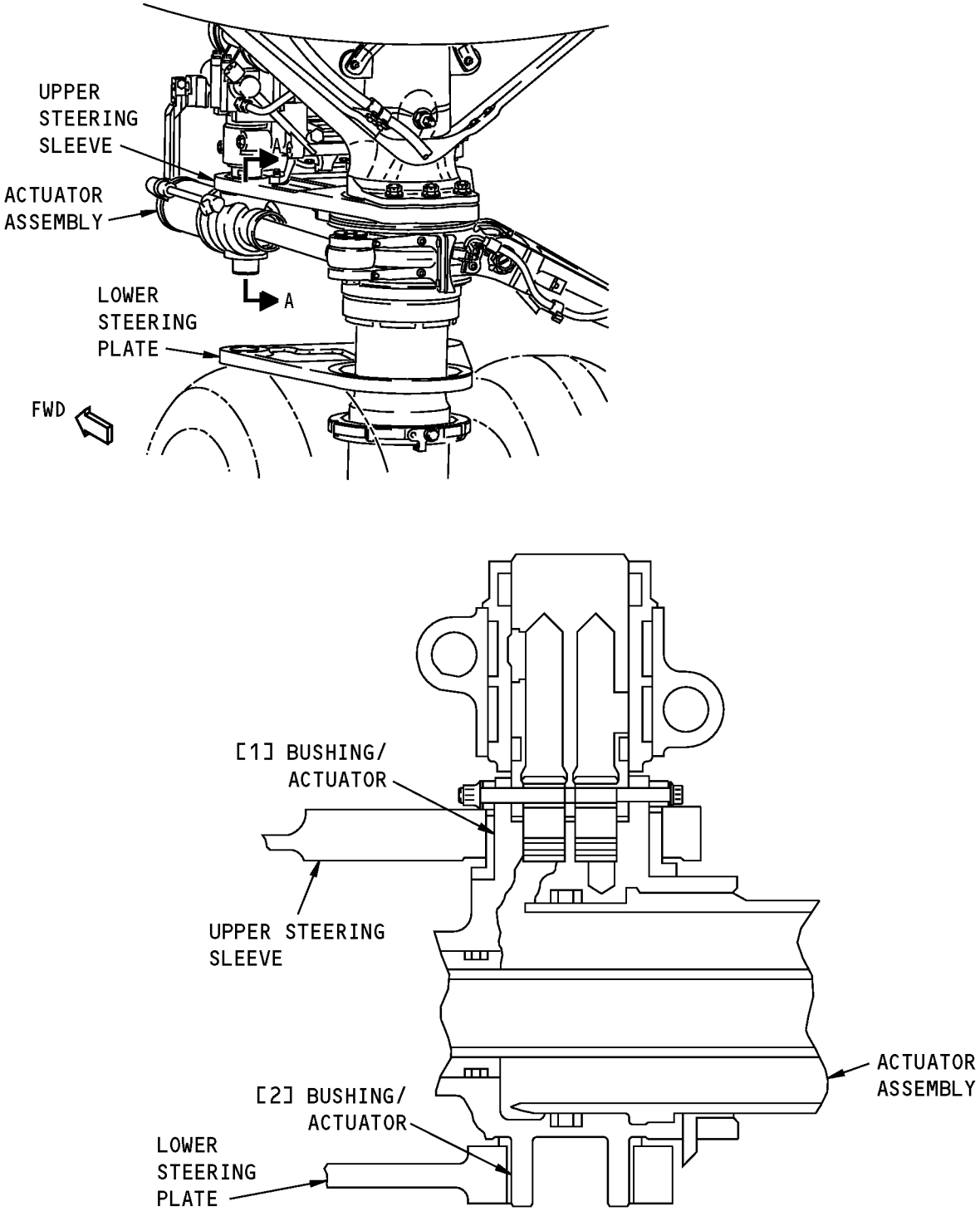
(6) Remove the NLG towing lever pin, SPL-1499 from the towing lever.

SUBTASK 32-51-51-080-004

(7) If the downlock pins are installed in the nose and main landing gear, then remove them, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

———————— END OF TASK ————————

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Nose Gear Steering Actuator Trunnion Wear Limits
Figure 601/32-51-51-990-802

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NOSE LANDING GEAR STEERING SUMMING MECHANISM - REMOVAL/INSTALLATION

1. General

A. This procedure has two tasks:

(1) A removal of the summing mechanism for the steering system for the nose landing gear

(2) An installation of the summing mechanism for the steering system for the nose landing gear.

TASK 32-51-52-020-801

2. Summing Mechanism Removal

(Figure 401)

A. References

Reference	Title
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-51-00-820-803	General Check of the Adjustment of the Nose Wheel Steering System (P/B 501)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1499	Pin - Lock, NLG Towing Lever (Part #: A09003-2, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A09003-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

D. Prepare for the Removal

SUBTASK 32-51-52-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-51-52-860-001

(2) Make sure the wheels of the nose landing gear are in the centered position.

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SUBTASK 32-51-52-010-001

(3) Remove the aft access panel from the left sidewall of the nose wheel well to get access to the turnbuckles [3] for the NWSA and NWSB cables.

SUBTASK 32-51-52-480-002

(4) Install these rig pins from the rig pin kit, SPL-1585 (TASK 32-51-00-820-803):

(a) The rig pin in the Captain's steering tiller.

(b) The rig pin in the rudder pedal interconnect quadrant

SUBTASK 32-51-52-860-002

(5) Remove the pressure from hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-51-52-860-003

(6) Move the towing lever, on the forward side of the nose landing gear, to the TOW position.

SUBTASK 32-51-52-860-004

WARNING: ONLY USE THE CORRECT PIN FOR THE AIRPLANE MODEL. IF YOU USE AN INCORRECT PIN, THE HYDRAULIC STEERING CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(7) Install the NLG towing lever pin, SPL-1499 through the towing lever.

NOTE: You use the NLG Towing Lever Lock Pin to hold the towing lever in the TOW position.

E. Nose Landing Gear Steering Summing Mechanism Removal

SUBTASK 32-51-52-010-002

(1) Remove the bolts [5] and washers [6] that hold the summing mechanism cover [10] to the summing mechanism bracket.

SUBTASK 32-51-52-020-001

(2) Remove the clips [4] from the turnbuckles [3].

SUBTASK 32-51-52-020-002

(3) Loosen the cables NWS-A [1] and NWS-B [2] at the turnbuckles [3].

SUBTASK 32-51-52-020-003

(4) Remove the nuts [24], bolts [21], washers [22], bushings [23], and pulleys [20] from the pulley brackets on the summing mechanism assembly [11].

SUBTASK 32-51-52-020-004

(5) Remove the nut [15], washer[14], bushing [13] and bolt [12] to disconnect the link assembly [16] from the summing mechanism assembly [11].

SUBTASK 32-51-52-020-005

(6) Remove the nuts [19], bolts [17] and washers [18] to disconnect summing mechanism assmebly [11] from the bracket assembly.

SUBTASK 32-51-52-000-001

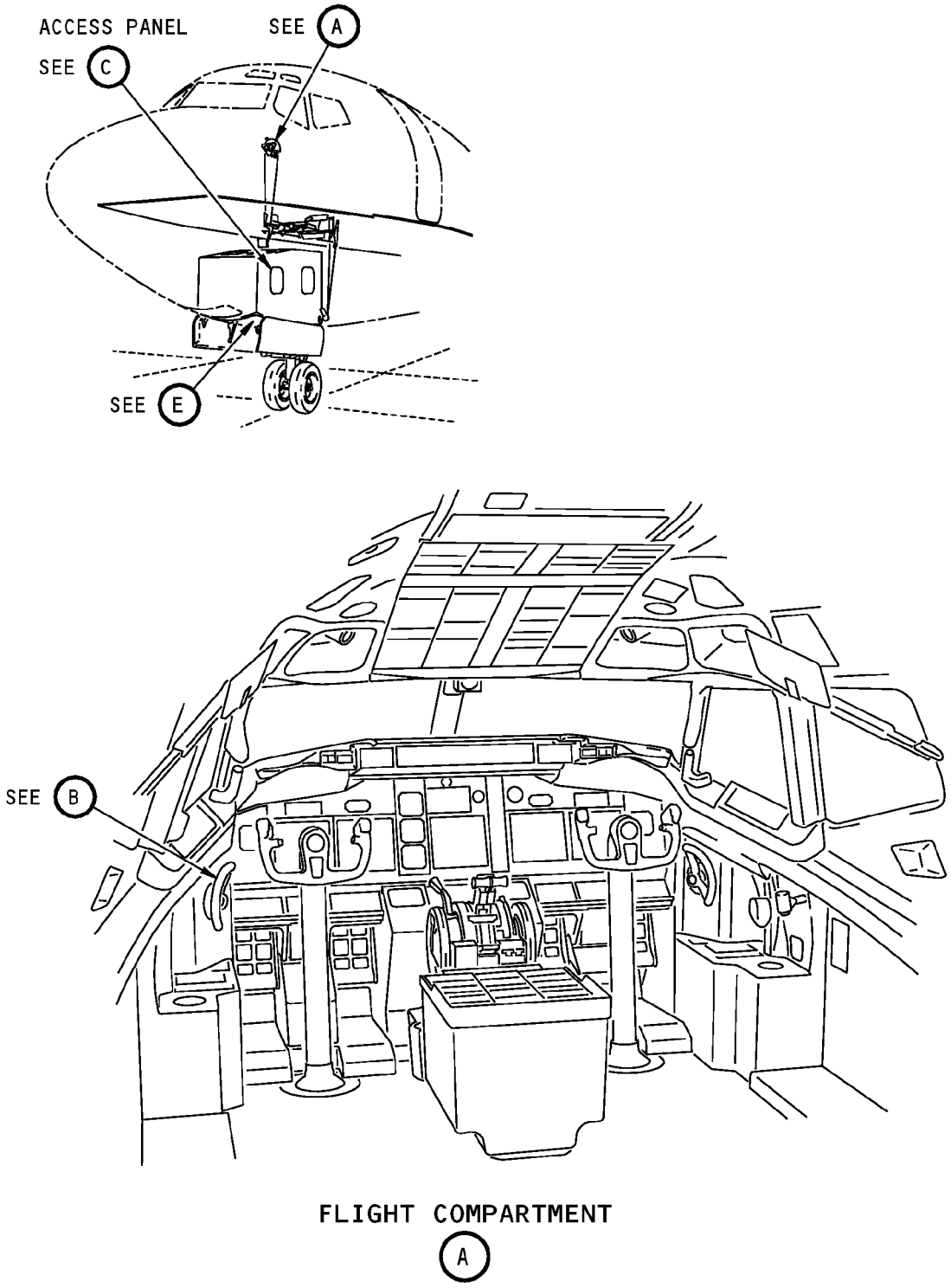
(7) Remove the summing mechanism assembly [11].

SUBTASK 32-51-52-020-006

(8) If it is necessary to remove the pulley bracket assembly from the summing mechanism assembly remove the nuts [27], bushings [26], bolts [25] and washers [14].

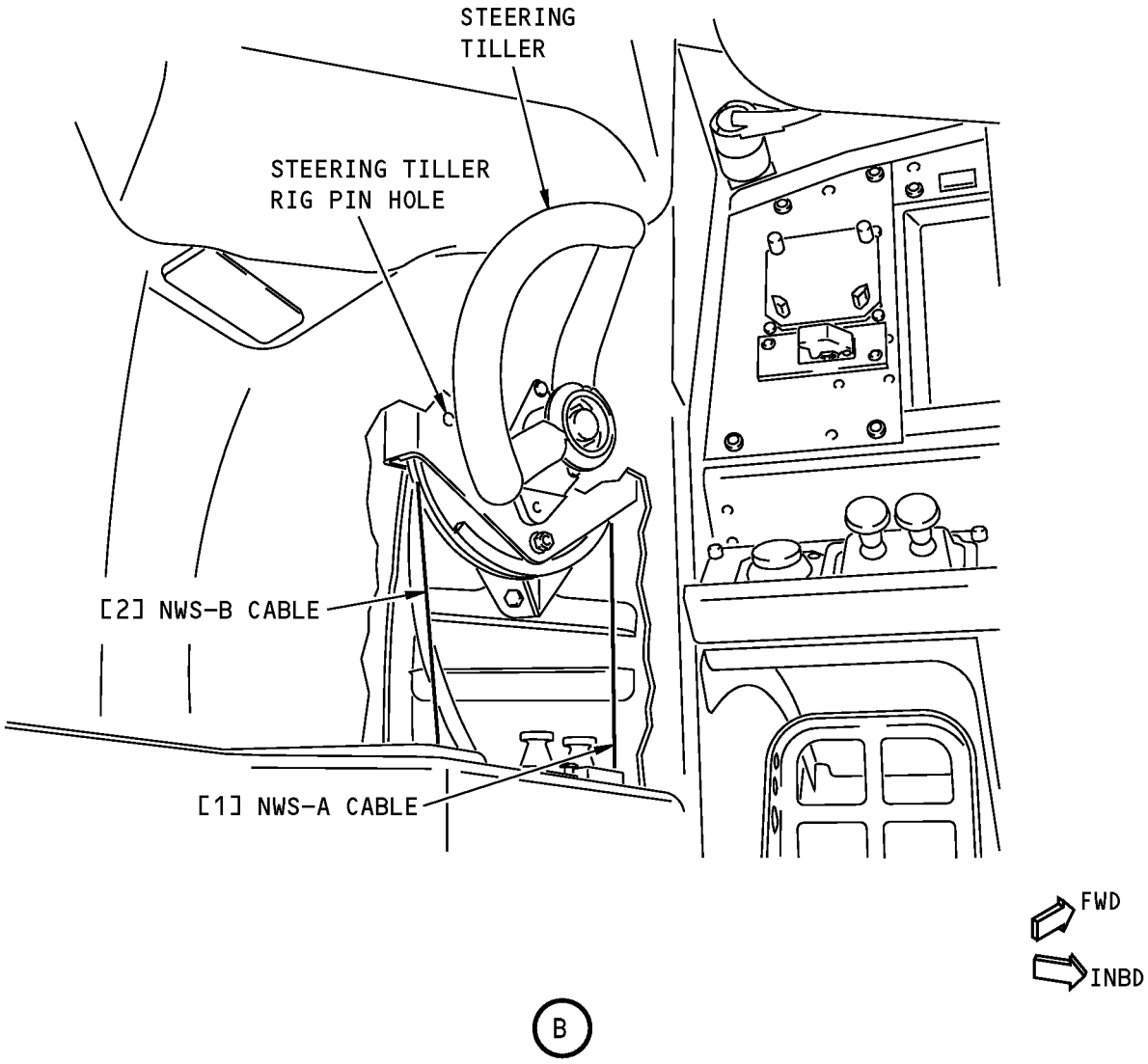
END OF TASK

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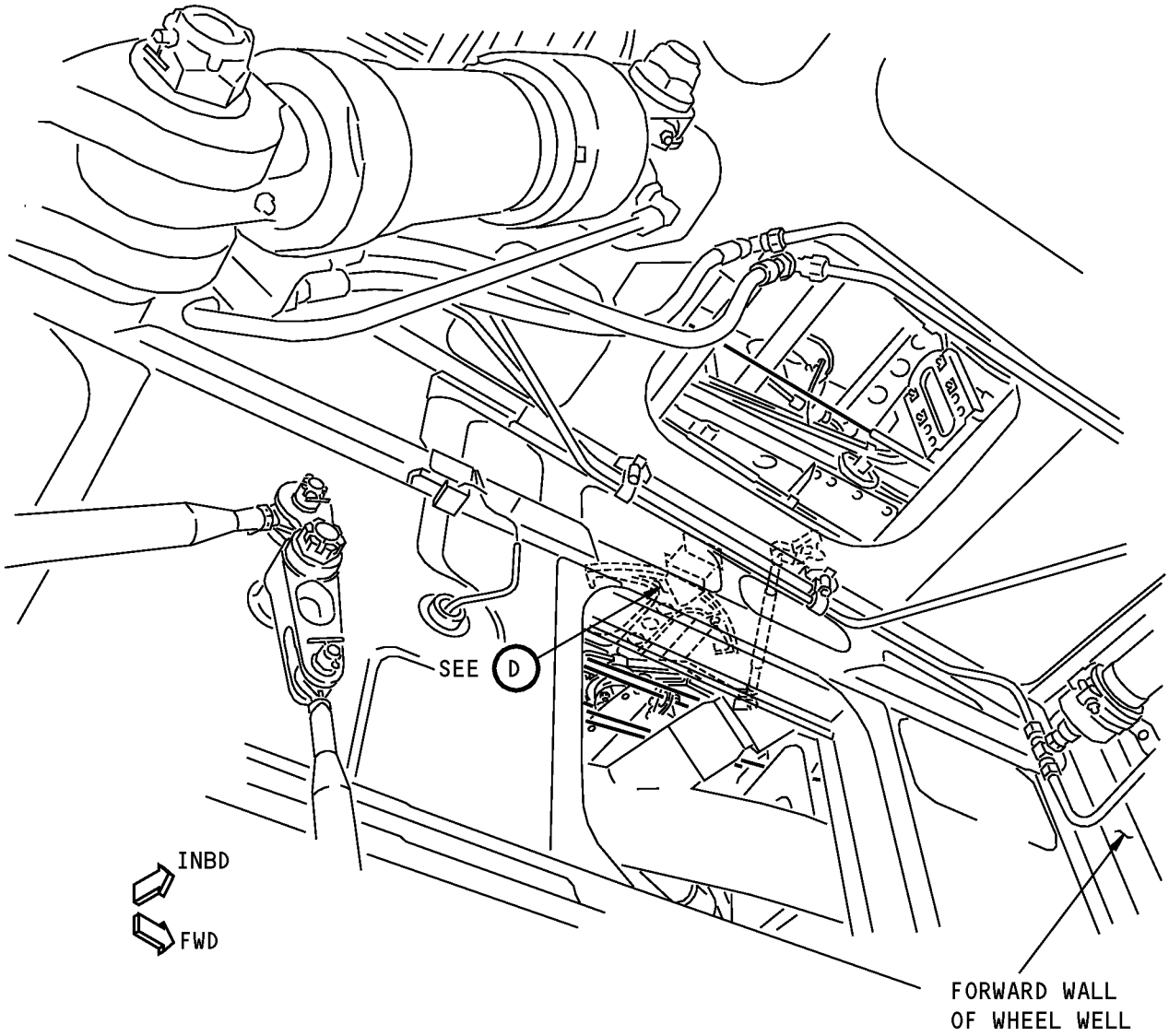
Nose Landing Gear Steering Summing Mechanism Installation
Figure 401 (Sheet 1 of 6)/32-51-52-990-801

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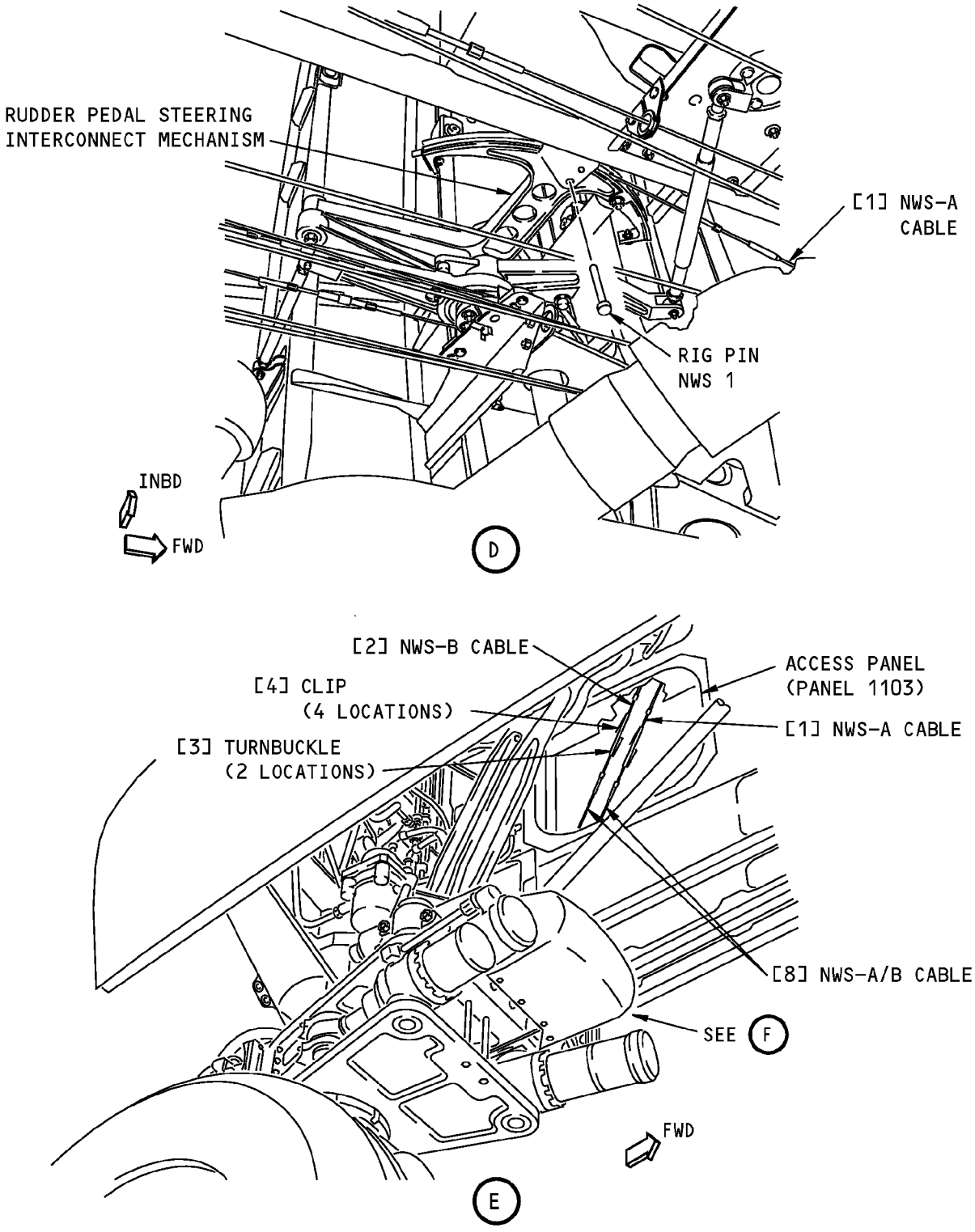
Nose Landing Gear Steering Summing Mechanism Installation
Figure 401 (Sheet 2 of 6)/32-51-52-990-801

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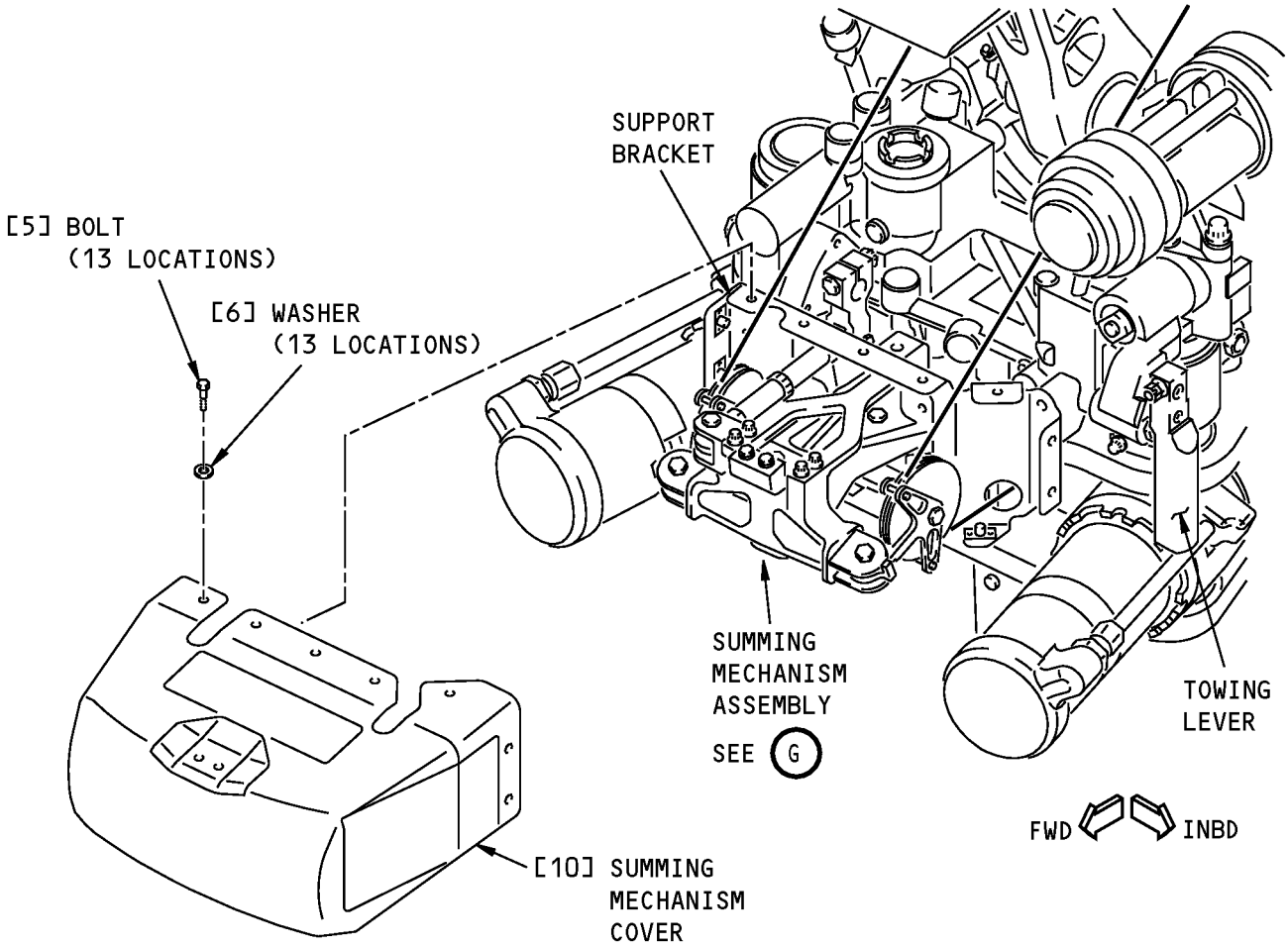
Nose Landing Gear Steering Summing Mechanism Installation
Figure 401 (Sheet 3 of 6)/32-51-52-990-801

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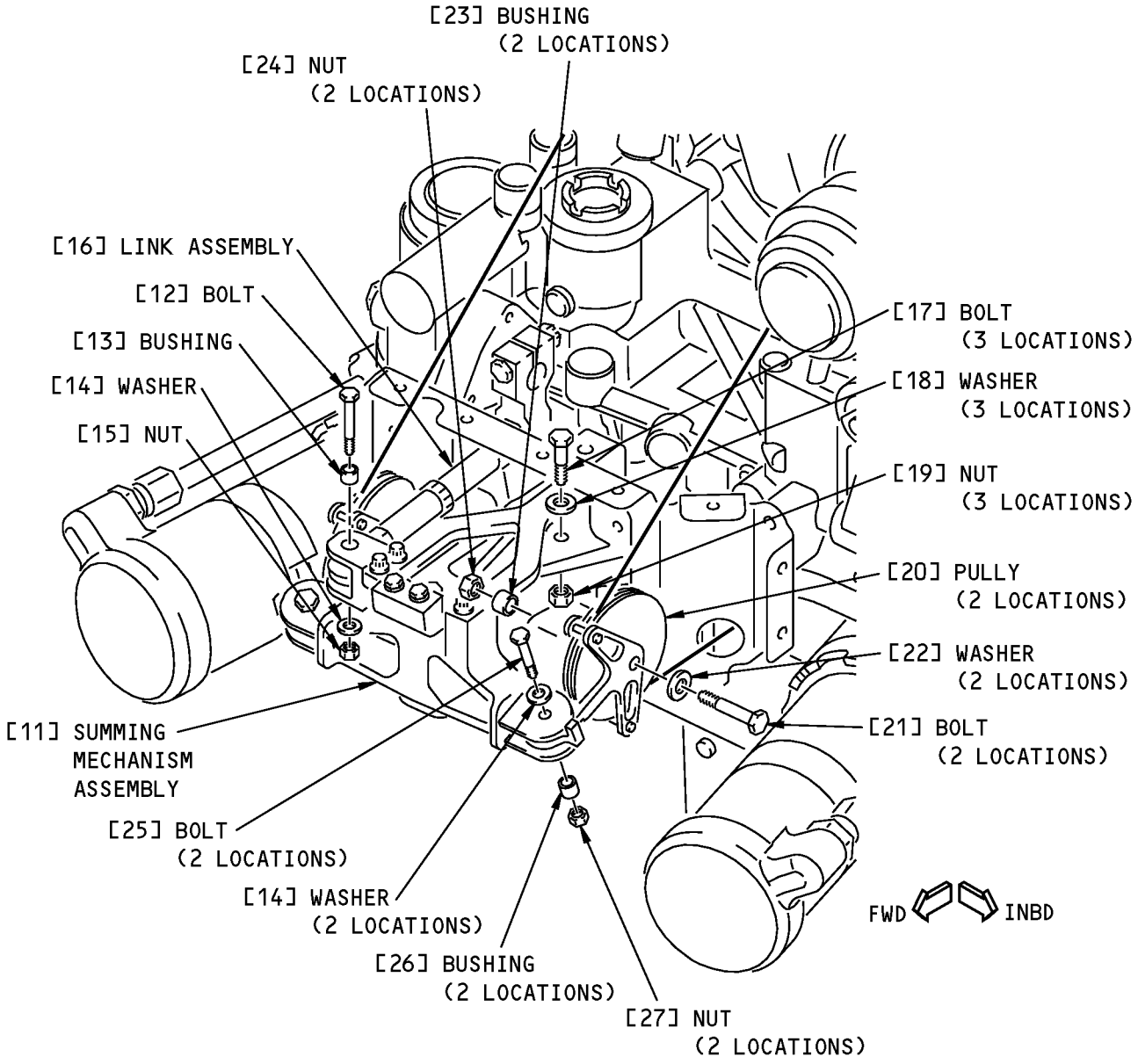
Nose Landing Gear Steering Summing Mechanism Installation
Figure 401 (Sheet 4 of 6)/32-51-52-990-801

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Nose Landing Gear Steering Summing Mechanism Installation
Figure 401 (Sheet 5 of 6)/32-51-52-990-801

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SUMMING MECHANISM ASSEMBLY

G

Nose Landing Gear Steering Summing Mechanism Installation
Figure 401 (Sheet 6 of 6)/32-51-52-990-801

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TASK 32-51-52-420-801

3. Summing Mechanism Installation

A. References

Reference	Title
32-51-00-700-801	Nose Wheel Steering System Test (P/B 501)
32-51-00-820-802	Nose Wheel Steering System Adjustment (P/B 501)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1499	Pin - Lock, NLG Towing Lever (Part #: A09003-2, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A09003-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

D. Summing Mechanism Installation

SUBTASK 32-51-52-210-001

(1) Make sure the wheels of the nose landing gear are in the centered position (Figure 401).

NOTE: The graduated scales on the steering collar and arrows on the lower plate show the angular position of the wheels when the torsion links are connected.

SUBTASK 32-51-52-400-001

(2) Do the steps below to attach the summing mechanism assembly [11] to the bracket assembly.

(a) Align the summing mechanism assembly [11] with the plate.

(b) Align the link assembly [16] with the summing mechanism assembly [11].

(c) Install the bolts [17], washers [18] and nuts [19] to connect the summing mechanism assembly [11] to the bracket assembly.

SUBTASK 32-51-52-420-001

(3) Do the steps below to install the pulley bracket assembly:

(a) Put the pulley bracket assembly in its location.

(b) Install the bushing [26], washer [14], bolt [25] and the nut [27].

(c) Tighten the bolt [25] 20-25 pound-inches (2-3 newton-meters) above the run-on torque.

SUBTASK 32-51-52-420-002

(4) If it is necessary to install the pulley on the pulley bracket assembly, do the steps below:

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(a) Install the bushing [23].

(b) Align the pulley with the pulley bracket assembly.

(c) Install the bolt [21], washer [22] and nut [24].

(d) Tighten the bolt [21] 50 - 75 pound-inches (6-8 newton-meters) above the run-on torque.

SUBTASK 32-51-52-480-003

WARNING: ONLY USE THE CORRECT PIN FOR THE AIRPLANE MODEL. IF YOU USE AN INCORRECT PIN, THE HYDRAULIC STEERING CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(5) Make sure the NLG towing lever pin, SPL-1499, is installed through the towing lever.

SUBTASK 32-51-52-480-004

(6) Make sure these rig pins from the rig pin kit, SPL-1585 pin set are installed:

(a) The rig pin in the Captain's steering tiller.

(b) The rig pin in the rudder pedal interconnect quadrant

SUBTASK 32-51-52-420-003

(7) Install the bushing [13], bolt [12], washer [14] and nut [15] to connect the link assembly [16] to the summing mechanism assembly [11].

(a) Adjust the link assy [16] until you can easily install the rig pin in the summing mechanism rig pin hole.

(b) Remove the rig pin from the summing mechanism.

SUBTASK 32-51-52-420-004

(8) Tighten the cables NWS-A [1] and NWS-B [2] at the turnbuckles [3] and adjust the tension, do this task: Nose Wheel Steering System Adjustment, TASK 32-51-00-820-802.

SUBTASK 32-51-52-420-005

(9) Install the turnbuckle clips [4] on the turnbuckles [3].

SUBTASK 32-51-52-080-001

(10) Remove these rig pins:

(a) The rig pin in the Captain's steering tiller.

(b) The rig pin in the rudder pedal interconnect quadrant

SUBTASK 32-51-52-710-001

(11) Do a test on the steering system of the nose wheel, do this task: Nose Wheel Steering System Test, TASK 32-51-00-700-801.

SUBTASK 32-51-52-420-006

(12) Put the summing mechanism cover [10] in position and install the bolts [5] and washers [6].

END OF TASK

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STEERING COLLAR - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the steering collar (referred to as the collar assy [5])

(2) An installation of the steering collar.

(3) A removal of the upper steering sleeve.

(4) An installation of the upper steering sleeve.

TASK 32-51-61-000-801

2. Steering Collar Removal

(Figure 401)

A. References

Reference	Title
07-11-03-580-802	Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E (P/B 201)
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
12-15-41-610-802	Nose Landing Gear Shock Strut Servicing (P/B 301)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1867	Wrench - Nose Landing Gear Oleo Gland Nut (Part #: C32025-7, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32025-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1901	Wrench - Spanner, Steering Collar Retainer, Nose Landing Gear (Part #: C32040-6, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32040-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-4047	Assembly - Seal Puller (C32016-6 Part of C32016-33) (Part #: C32016-46, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32016-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right

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(Continued)

Zone	Area
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

D. Prepare for the Removal

SUBTASK 32-51-61-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-51-61-860-001

(2) Make sure the wheels of the nose landing gear are in the centered position.

SUBTASK 32-51-61-860-002

(3) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-51-61-860-003

(4) Move the towing lever, on the forward side of the nose landing gear, to the TOW position.

SUBTASK 32-51-61-860-004

(5) Install the rig pin kit, SPL-1585 through the towing lever.

NOTE: You use the NLG Towing Lever Lock Pin to hold the towing lever in the TOW position.

SUBTASK 32-51-61-480-002

(6) Install these rig pins from the rig pin set, rig pin kit, SPL-1585:

(a) Rig pin in the nose wheel steering tiller

(b) Rig pin in the rudder pedal interconnect quadrant

(c) Rig pin in the summing mechanism.

SUBTASK 32-51-61-020-001

(7) Remove the clips [34] from the turnbuckles [36].

SUBTASK 32-51-61-020-002

(8) Loosen the cable NWS-A/B [35] at the turnbuckles [36].

SUBTASK 32-51-61-020-003

(9) Remove the pins [37] to disconnect the cable NWS-A/B from the collar assy [5].

E. Steering Collar Removal

(Figure 401)

SUBTASK 32-51-61-680-001

WARNING: DO NOT LOOSEN THE VALVE BODY UNLESS THE SHOCK STRUT IS COMPLETELY DEFLATED. AIR PRESSURE CAN BLOW THE VALVE BODY OUT AND CAUSE INJURY TO PERSONNEL. THE CHARGING VALVE MUST BE LEFT OPEN. PRESSURE INSIDE THE STRUT CAN CAUSE A LOOSE GLAND NUT TO BLOW OFF AND CAUSE INJURY TO PERSONNEL.

(1) Deflate the shock strut for the nose gear, do this task: Nose Landing Gear Shock Strut Servicing, TASK 12-15-41-610-802.

(a) Remove the valve cap from the charging valve at the top of the shock strut.

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(b) Loosen the outer hexnut two turns maximum.

NOTE: The fluid from the shock strut will begin to foam as soon as the pressure drops to ambient. Deflate the shock strut slowly to prevent loss of fluid through the air valve.

SUBTASK 32-51-61-580-001

(2) Lift the nose of the airplane until the shock strut is extended about ten inches, do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, TASK 07-11-21-580-801.

SUBTASK 32-51-61-020-004

(3) Disconnect the box assembly [1] from the upper torsion link [13]:

NOTE: Disconnect the box assembly [1] with the electrical conduits attached.

(a) Remove the nuts [33], and the washers [32] from the bolts [30].

(b) Remove the bolts [30] and washers [31] from the upper torsion link [13].

SUBTASK 32-51-61-020-005

(4) Remove the clamps [23] that hold the electrical conduits [20] to the bracket [24]:

(a) Remove the screws [21] that hold the clamps [23] to the bracket [24].

(b) Remove the clamps [23], and the nut clips [22] from the bracket [24].

SUBTASK 32-51-61-020-007

(5) Disconnect the sensor brackets [15] from the upper torsion link [13]:

NOTE: Disconnect the brackets [15] with the sensors [14] and the electrical conduits [20] attached.

(a) Remove the nuts [19], and the washers [18] from the bolts [16].

(b) Remove the bolts [16] that hold the sensor brackets [15] to the upper torsion link [13].

(c) Remove the washers [17] from the bolts [16].

(d) Isolate the sensor brackets [15] from the upper torsion link [13].

1) If it is necessary, use a string to hold the sensor brackets [15] and attach the string over the top of the outer cylinder.

SUBTASK 32-51-61-020-008

(6) Disconnect the electrical conduit [29] from the bracket on the lower torsion link [28]:

(a) Remove the nuts [27], washers [26], and screws [25] from the bracket on the lower torsion link.

(b) Remove the electrical conduit [29] from the bracket on the lower torsion link.

SUBTASK 32-51-61-020-024

(7) Remove the nuts [7, 11], washers [8, 9, 12], and screw [10] to disconnect the electrical conduit [29] from the inner cylinder.

SUBTASK 32-51-61-020-009

(8) Disconnect the electrical conduit plug from the light on the inner cylinder.

SUBTASK 32-51-61-800-001

(9) Attach the electrical conduit and box to the outer cylinder so that it is not in the way.

SUBTASK 32-51-61-020-010

(10) Disconnect the upper torsion link [13] from the collar assy [5] and attach it the inner cylinder of the shock strut.

(a) Remove the pin [3], nut [2], and the washer [4] from the torsion link pin [6].

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(b) Remove the torsion link pin [6] to disconnect the upper torsion link [13] from the collar assy [5].

SUBTASK 32-51-61-010-001

(11) Remove the inner cylinder from the outer cylinder of the nose gear shock strut:

(a) Lift the nose gear axle with a jack, do this task: Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E, TASK 07-11-03-580-802

until the shock strut extension is reduced to three or four inches.

(b) Put a cloth around the inner cylinder below the gland nut [41] to prevent damage to the inner cylinder.

(c) Put a drip tray in position to catch hydraulic fluid when the gland nut [41] is removed.

(d) Remove the lockwire, bolts [38], washers [39], and lockplate [40] from the gland nut [41].

(e) Use the wrench, SPL-1867 to loosen the gland nut [41] and move the gland nut [41] and scraper reducer [42] to the bottom of the inner cylinder.

(f) Move the scraper ring [43] down the inner cylinder into the gland nut [41].

(g) Use the seal puller assembly, SPL-4047 to pull the lower carrier [44] out of the outer cylinder.

(h) Lower the jack under the nose gear axle, do this task: Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E, TASK 07-11-03-580-802

until the lower carrier [44] moves out of the recess between the inner and outer cylinder.

(i) Remove the downlock pin from the nose landing gear, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

WARNING: DO NOT PUT A PLUG IN THE OPEN PORTS OF THE RETRACT ACTUATOR. THE THE HYDRAULIC LINES CAN BREAK AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(j) Disconnect the hydraulic lines from the retract actuator.

(k) Put a cap on the hydraulic lines.

(l) Push up on the lock link to move it from the locked overcenter position.

(m) Connect a hydraulic pump to the retract actuator.

NOTE: The pressure line from the pump must be connected to the Up port of the actuator. The return line to the pump must be connected to the Down port of the actuator.

WARNING: HOLD THE INNER CYLINDER WITH ROPE BEFORE YOU REMOVE THE INNER CYLINDER FROM THE OUTER CYLINDER. THE INNER CYLINDER IS HEAVY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

CAUTION: BE CAREFUL NOT TO CAUSE DAMAGE TO THE INNER CYLINDER OR THE METERING PIN. DAMAGE TO THESE PARTS CAN CAUSE DAMAGE TO THE SEALS.

(n) Slowly apply pressure to the retract actuator to remove the inner cylinder from the outer cylinder. This will move the nose landing gear forward.

(o) Remove the inner cylinder.

SUBTASK 32-51-61-980-001

(12) Turn the collar assy [5] far enough to permit access to the rod end of the steering actuators [47].

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SUBTASK 32-51-61-020-011

(13) Remove the pin [50], nut [49], washer [48], bushings [46], anti-rotation washers [65] (not on all airplanes), and pin [45] to disconnect the rod end of the actuators [47] from the collar assy [5].

SUBTASK 32-51-61-020-012

(14) Remove the bolts [53], washers [51], and standoffs [52] that hold the two front feet of the metering valve assy to the upper and lower steering plates.

SUBTASK 32-51-61-020-013

(15) Remove the bolts [55], washers [56], and lock tab [57] from the steering collar retainer nut [58].

SUBTASK 32-51-61-800-002

(16) Hold the lower steering plate [54] in its position.

SUBTASK 32-51-61-020-014

(17) Loosen the steering collar retainer nut [58] and remove it from the outer cylinder, using spanner wrench, SPL-1901.

SUBTASK 32-51-61-800-003

(18) Hold the collar assy [5] in its position.

SUBTASK 32-51-61-010-002

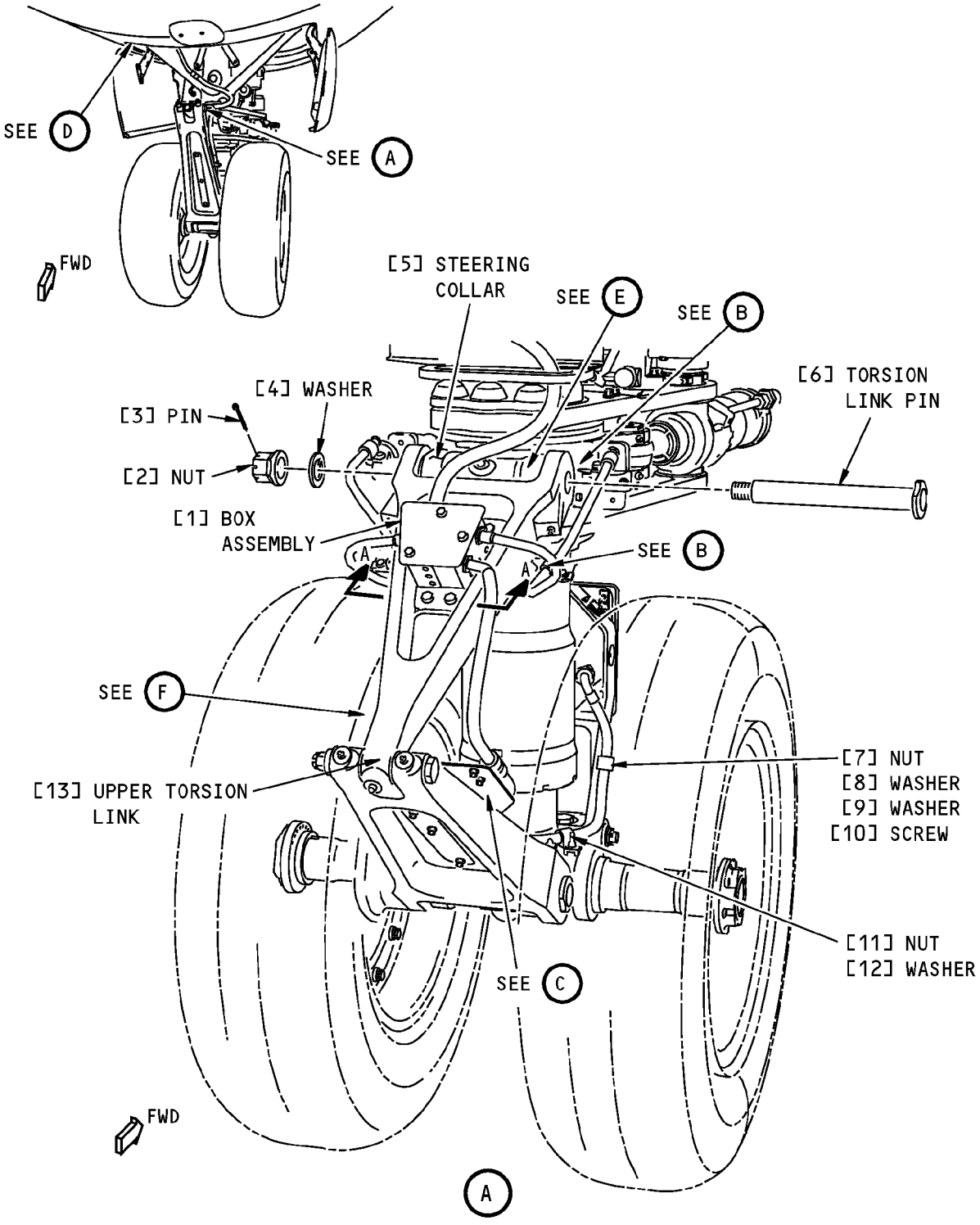
(19) Remove the lower steering plate [54] from the outer cylinder.

SUBTASK 32-51-61-020-015

(20) Remove the collar assy [5] from the outer cylinder.

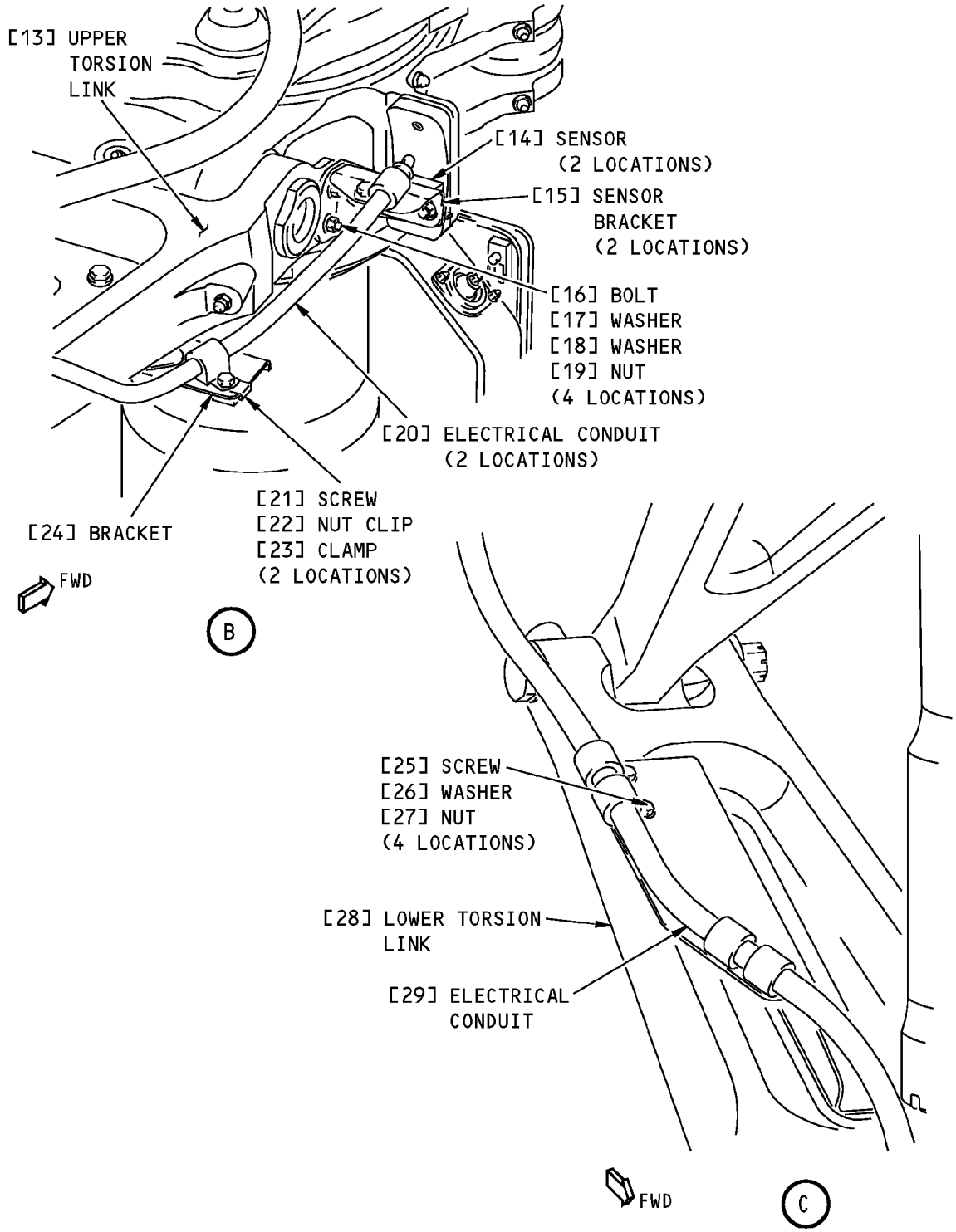
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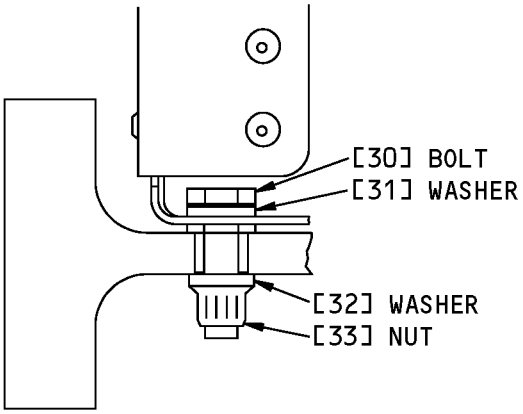
Nose Gear Steering Collar Installation
Figure 401 (Sheet 1 of 10)/32-51-61-990-801

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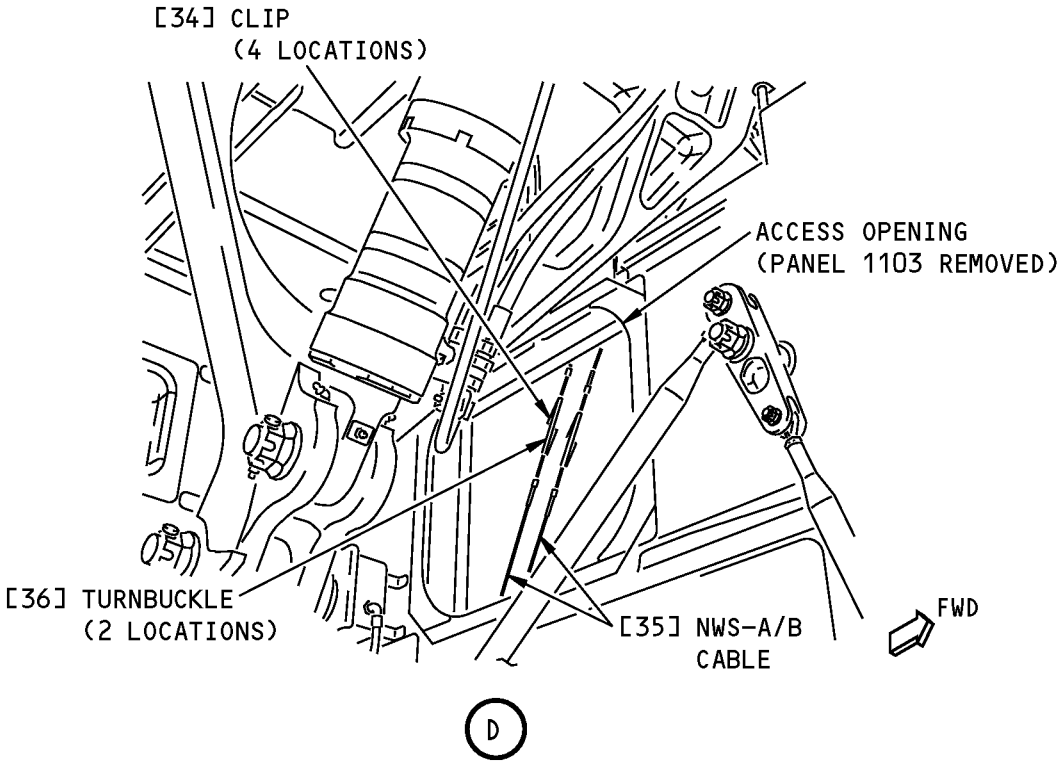


Nose Gear Steering Collar Installation
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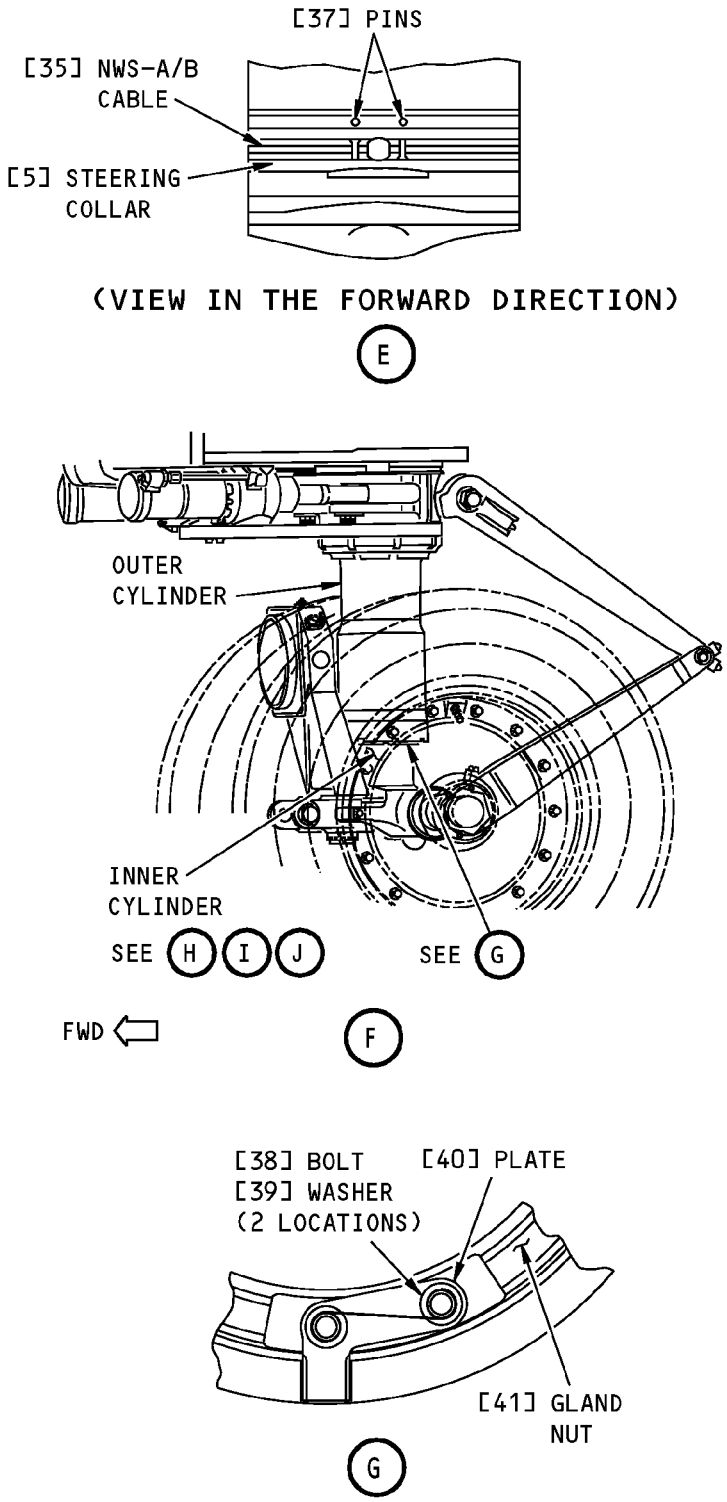


(VIEW IN THE FORWARD DIRECTION)
A-A



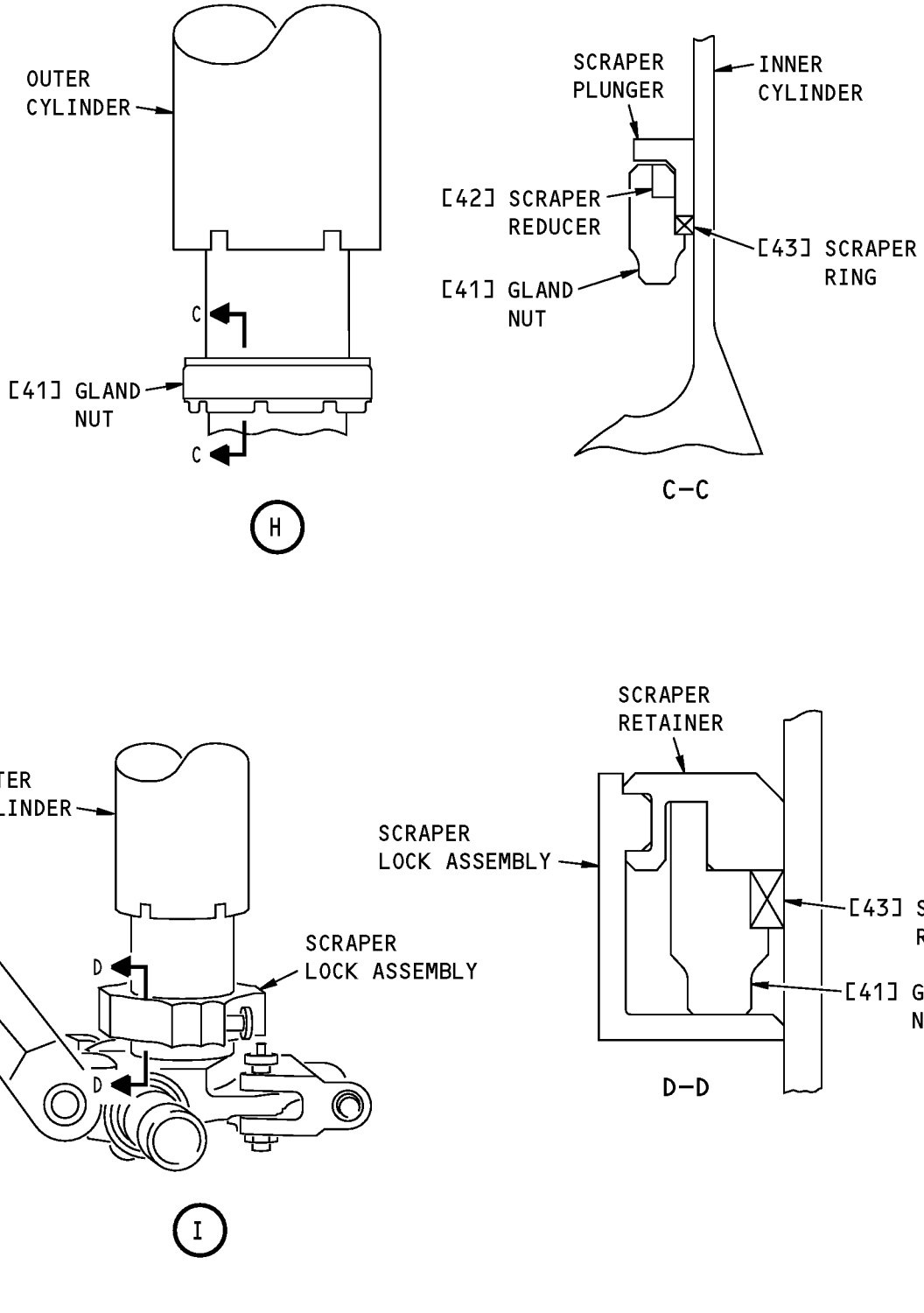
Nose Gear Steering Collar Installation
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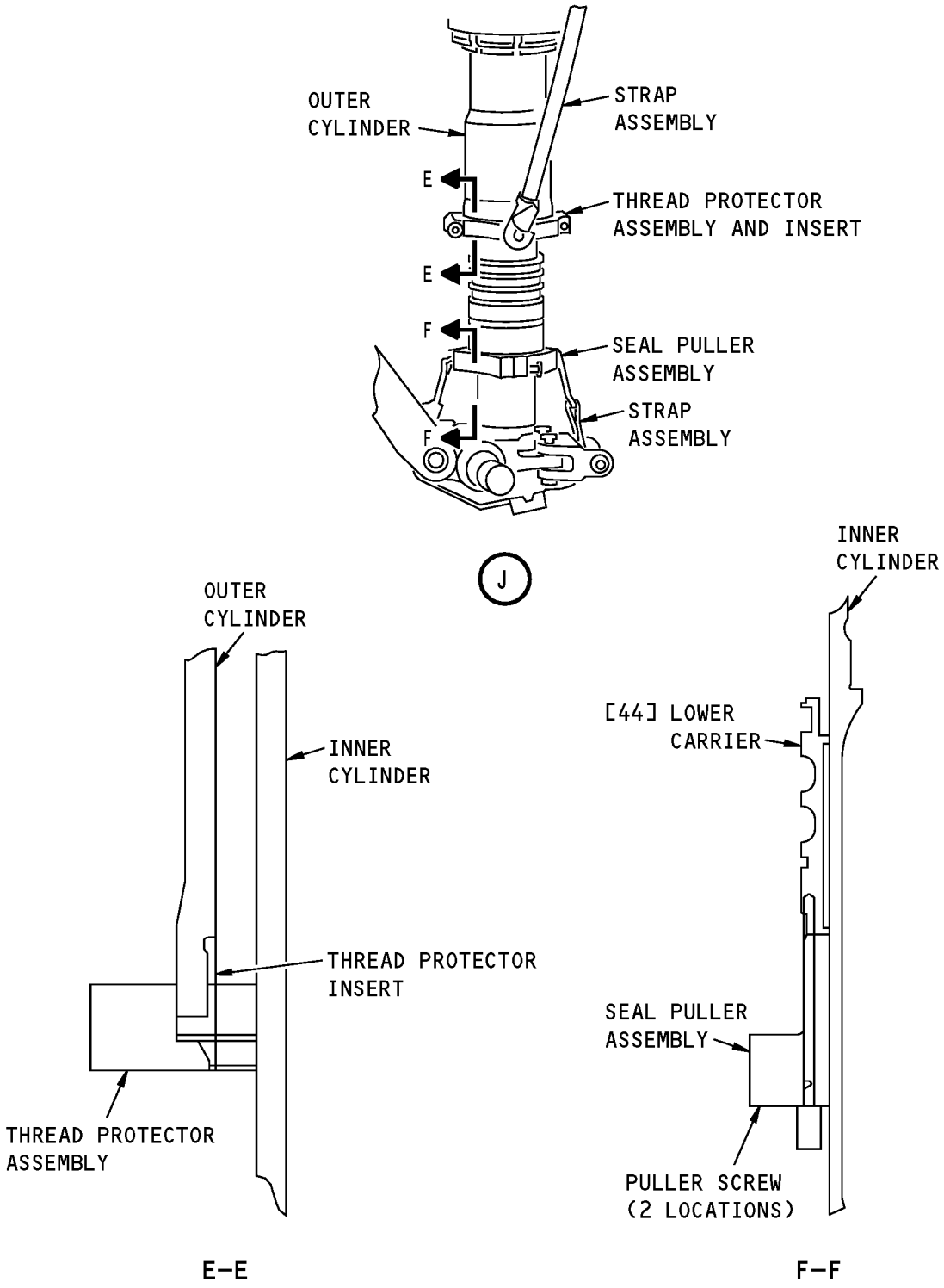
Nose Gear Steering Collar Installation
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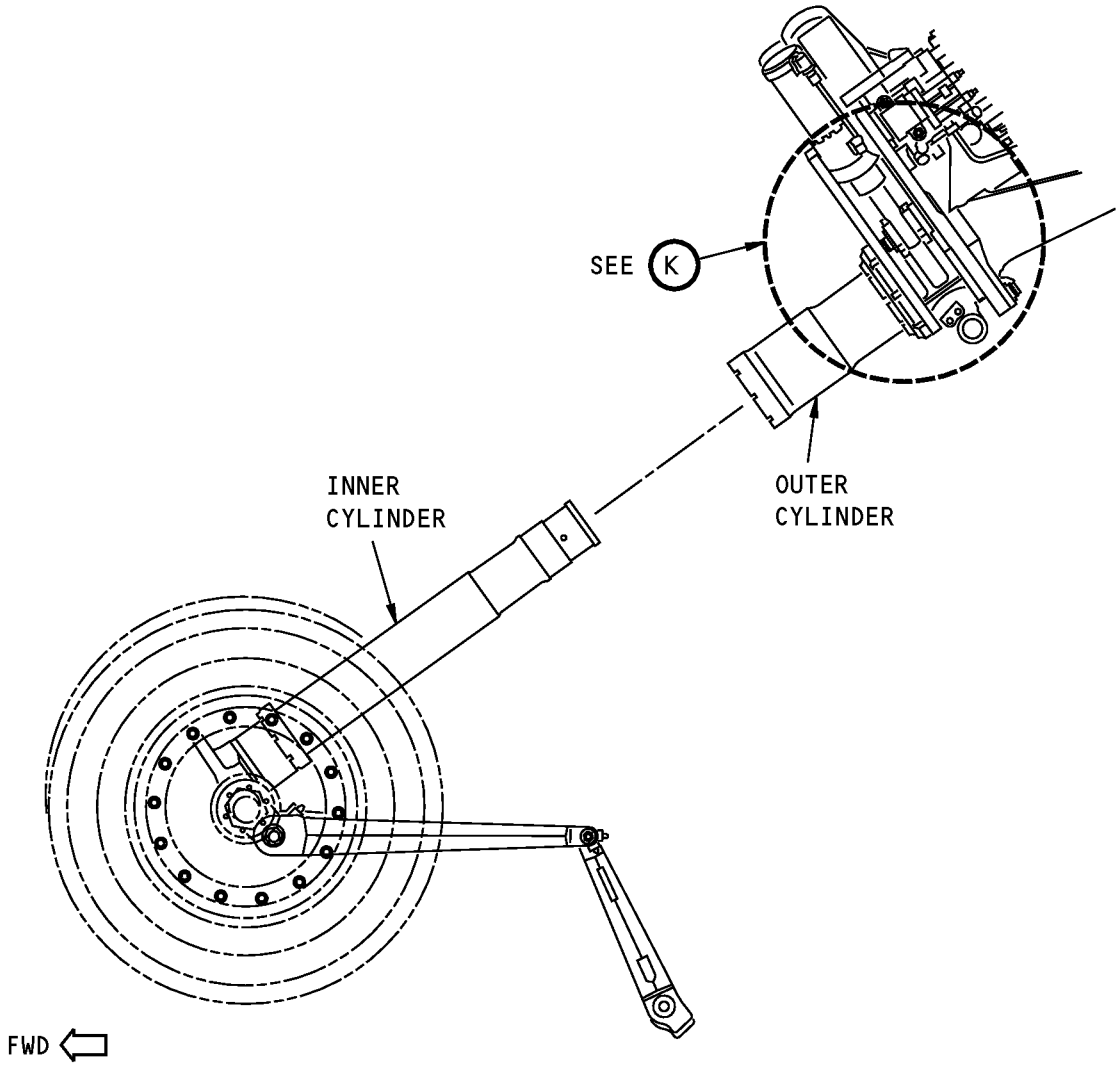
Nose Gear Steering Collar Installation
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Nose Gear Steering Collar Installation
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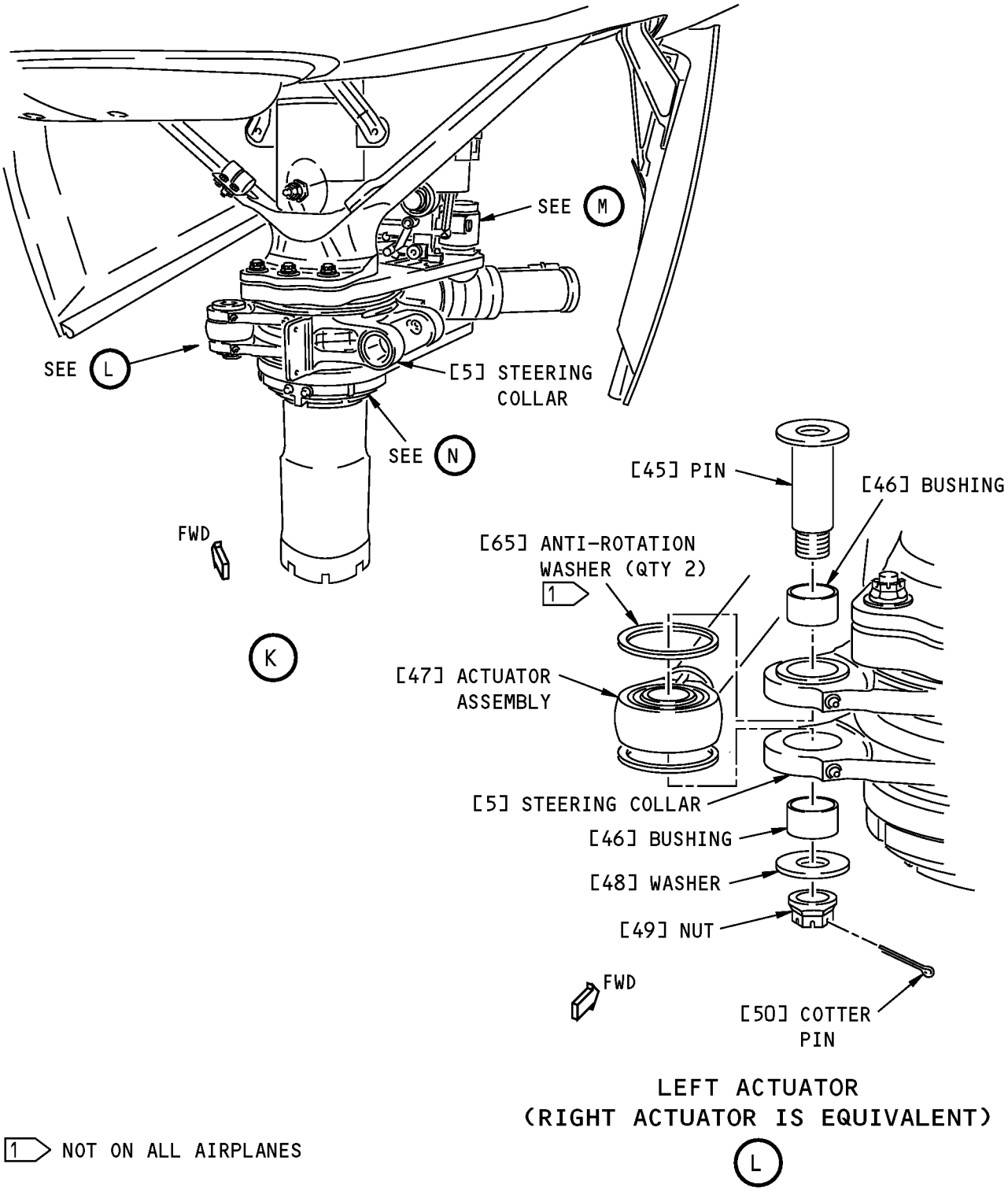
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INNER CYLINDER REMOVAL

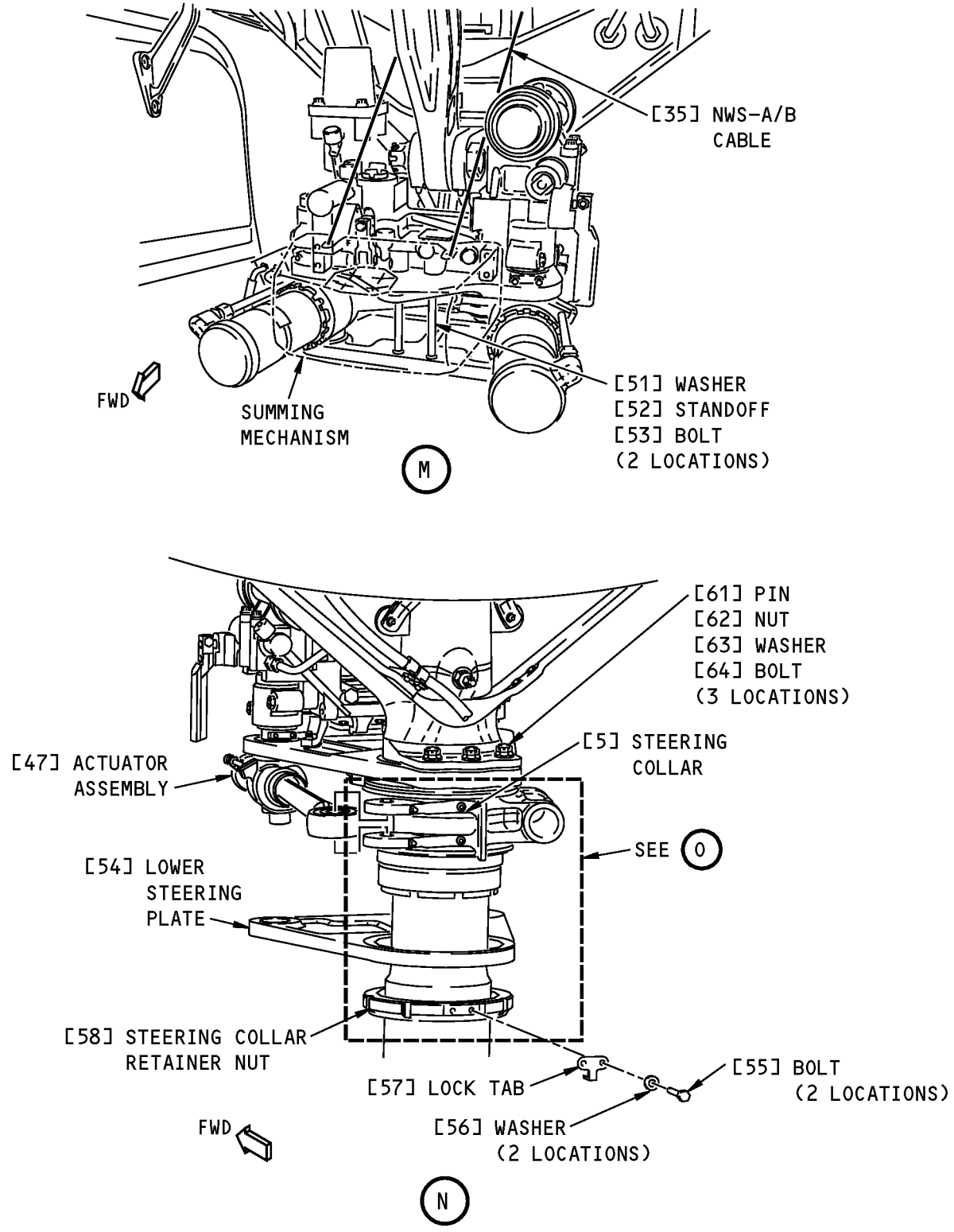
Nose Gear Steering Collar Installation
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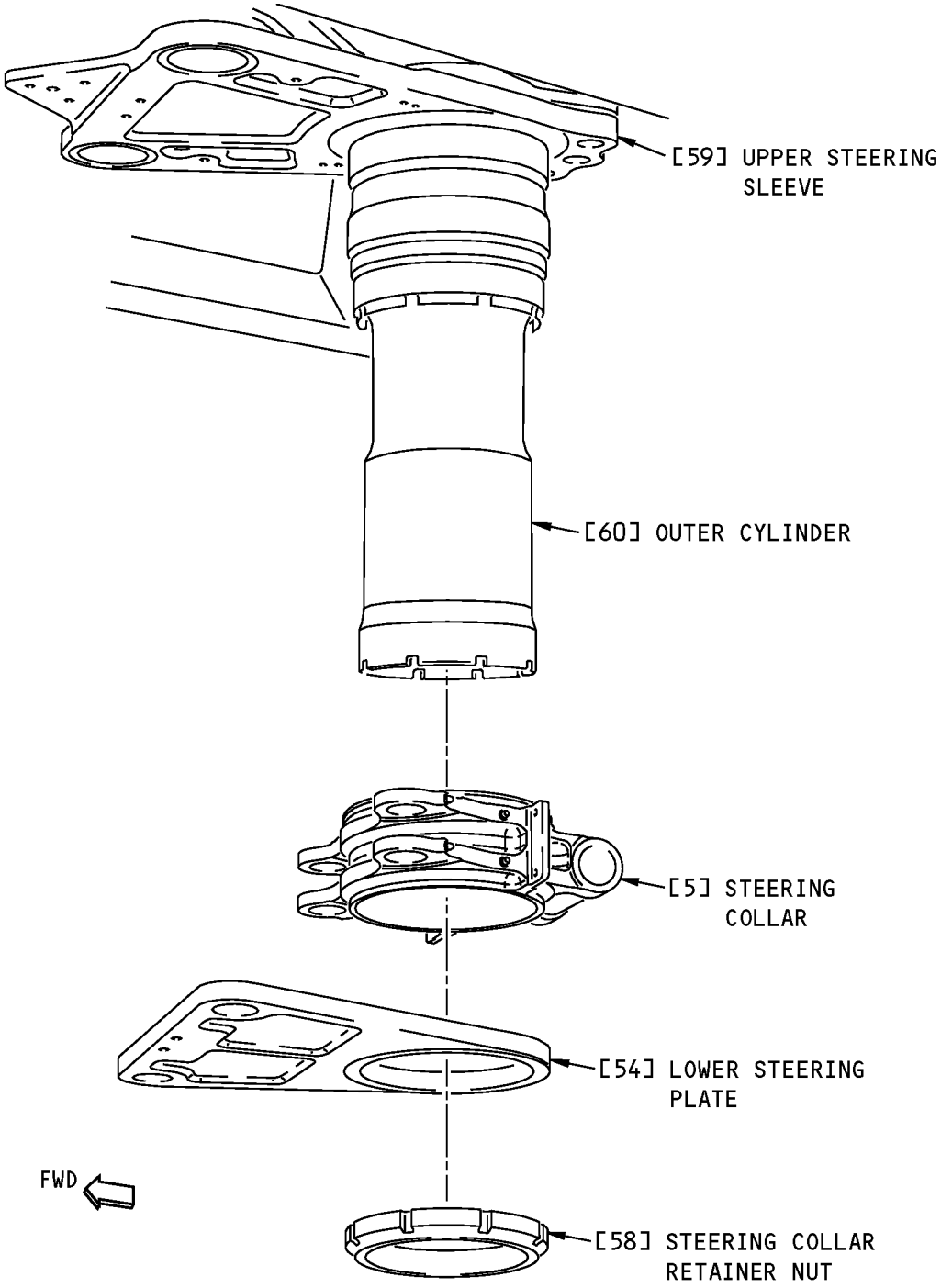
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Nose Gear Steering Collar Installation
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Nose Gear Steering Collar Installation
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TASK 32-51-61-400-801

3. Steering Collar Installation

(Figure 401)

A. References

Reference	Title
07-11-03-580-802	Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E (P/B 201)
07-11-21-580-802	Lower the Airplane Nose Off of the Jack (P/B 201)
12-15-41-610-802	Nose Landing Gear Shock Strut Servicing (P/B 301)
12-21-21-640-802	Nose Landing Gear Lower End Components Servicing (P/B 301)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-51-00-700-801	Nose Wheel Steering System Test (P/B 501)
32-51-31-400-802	Installation of the Steering System Cables for the Nose Gear (P/B 401)
33-45-01-960-801	Taxi Light - Lamp Replacement (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-1901	Wrench - Spanner, Steering Collar Retainer, Nose Landing Gear (Part #: C32040-6, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C32040-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00633	Grease - Aircraft General Purpose	BMS3-33

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

E. Steering Collar Installation

NOTE: Make sure that you install the matching Steering Collar for the Steering Sleeve installed. If you installed the Steering Sleeve 162A1405-5 you must install the Steering Collar 162A1404-3. If you installed the Steering Sleeve 162A1421-1 you must install the Steering Collar 162A1420-1.

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SUBTASK 32-51-61-860-005

(1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-51-61-600-001

(2) Apply a thin layer of grease, D00633 to the bushing faces and grooves on the collar assy [5].

SUBTASK 32-51-61-420-001

(3) Install the collar assy [5] on the outer cylinder.

SUBTASK 32-51-61-420-009

(4) Install the lower steering plate [57] on the outer cylinder and hold it in position.

SUBTASK 32-51-61-600-002

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(5) Apply a thin layer of compound, C00913 to the threads, thread reliefs, and mating surfaces of the steering collar retainer nut [58].

SUBTASK 32-51-61-420-002

(6) Move the steering collar retainer nut [58] up the outer cylinder and install it below the lower steering plate [54].

(a) Tighten the nut [58] to 50 - 75 pound-feet (68-102 newton-meters), using spanner wrench, SPL-1901.

(b) If it is necessary, loosen the nut [58] a minimum amount to install the lock tab [57], washers [56], and bolts [55].

SUBTASK 32-51-61-020-016

(7) Install the standoffs [52], bolts [53], and washers [51] that hold the metering valve assy to the upper and lower steering plates.

SUBTASK 32-51-61-980-002

(8) Turn the collar assy [5] far enough to permit access to the rod end of the steering actuator [47] that you will install.

SUBTASK 32-51-61-420-003

(9) Install the bushings [46], anti-rotation washers [65] (not on all airplanes), pin [45], washer [48], and nut [49] to connect the rod end of the actuator [47] to the collar assy [5].

NOTE: Make sure that the flange bushing is placed face-up in the direction towards the steering actuator.

(a) Tighten the nut [49] to 50 - 58 pound-feet (68-79 newton-meters).

(b) If it is necessary, loosen the nut [49] to align the castellations on the nut [49] with the hole on the pin [45].

(c) Install the pin [50].

SUBTASK 32-51-61-410-001

(10) Install the inner cylinder in the outer cylinder of the nose gear shock strut:

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CAUTION: BE CAREFUL NOT TO CAUSE DAMAGE TO THE INNER CYLINDER OR THE METERING PIN. DAMAGE TO THESE PARTS CAN CAUSE DAMAGE TO THE SEALS.

(a) Put the inner cylinder in position to install in the outer cylinder.

(b) Disconnect the hydraulic pump from the retract actuator.

(c) Remove the caps from the hydraulic lines.

(d) Connect the hydraulic lines to the retract actuator.

(e) Move the nose gear aft while you put the inner cylinder into the outer cylinder.

(f) Push down on the lock link to move it to the locked overcenter position.

(g) Install the downlock pin on the nose landing gear. To do this, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

(h) Raise the jack under the nose gear axle, do this task: Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E, TASK 07-11-03-580-802 until the lower carrier [44] moves into the recess between the inner and outer cylinder.

(i) Lift the nose gear axle with a jack, do this task: Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E, TASK 07-11-03-580-802 until the shock strut extension is reduced to three or four inches.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(j) Apply a thin layer of compound, C00913 to the threads and thread reliefs of the gland nut [41].

(k) Install the scraper ring [43], gland nut [41], and scraper reducer [42] on the outer cylinder.

(l) Use the pin spanner adapter to tighten the gland nut [41] to 100-125 pound-feet. Loosen the nut [41] the minimum amount that is necessary to align the holes for the lockplate [40].

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(m) Apply a thin layer of compound, C00913 these items:

1) The unplated shank of bolts [38]
2) The threads and thread reliefs of the bolts [38]
3) The faces of the washers [39]
4) The lockwire.

(n) Install the lockplate [40], washers [39], bolts [38], and lockwire on the gland nut [41].

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WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

1) Remove the excess compound, C00913.

(o) Remove the cloth that was around the inner cylinder below the gland nut.

SUBTASK 32-51-61-420-004

(11) Connect the upper torsion link [13] to the collar assy [5]:

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(a) Apply a thin layer of the corrosion preventive compound, C00913, to these items:

1) The chrome surface on the shank of the torsion link pin [6].

2) The threads of the nut [2].

3) The faces of the washer [4].

4) The mating surfaces of the upper torsion link [13] and the collar assy [5].

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(b) Remove all unwanted corrosion preventive compound, C00913.

(c) Put the upper torsion link [13] in its position on the collar assy [5].

(d) Put the torsion link pin [6] through the upper torsion link [13] and the collar assy [5].

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(e) Apply a thin layer of the corrosion preventive compound, C00913, to the threads and thread reliefs of the torsion link pin [6].

(f) Install the washer [4], and the nut [2] on the torsion link pin [6].

(g) Tighten the nut [2] to 250-300 inch-pounds (28-34 newton-meters) more than the run-on torque.

(h) If it is necessary, loosen the nut [2] to the nearest castellation to align the holes for the pin [6].

(i) Install the pin [3] in the torsion link pin [6].

SUBTASK 32-51-61-020-017

(12) Connect the sensor brackets [15] to the upper torsion link [13]:

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(a) Apply a thin layer of the corrosion preventive compound, C00913, to these items:

1) The threads and thread reliefs of the bolts [16]
2) The threads of the nuts [19]
3) The faces of the washers [17], and [18]

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(b) Remove all unwanted corrosion preventive compound, C00913

(c) If a string is attached to the sensor brackets [15], and the outer cylinder, remove the string

(d) Put the sensor bracket [15] in its position on the upper torsion link [13]

(e) Install the washers [17] on the bolts [16]

(f) Put the bolts [16] through the upper torsion link [13], and the sensor brackets [15]

(g) Install the washers [18], and the nuts [19] on the bolts [16]

(h) Tighten the nuts [19].

SUBTASK 32-51-61-020-018

(13) Connect the box assembly [1] to the upper torsion link [13]:

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(a) Apply a thin layer of the corrosion preventive compound, C00913, to these items:

1) The threads and shank of the bolts [30]
2) The threads of the nuts [33]
3) The faces of the washers [31] and [32]

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(b) Remove all unwanted corrosion preventive compound, C00913

(c) If a string is attached to the box assembly [1], and the outer cylinder, remove the string

(d) Put the box assembly [1] in its position on the upper torsion link [13]

(e) Install the washers [31] on the bolts [30]

(f) Put the bolts [30] through the bracket for the box assembly [1] and the upper torsion link [13]

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(g) Install the washers [32], and the nuts [33] on the bolts [30].

SUBTASK 32-51-61-420-005

(14) Install the clamps that hold the electrical conduit [29] to the bracket on the lower torsion link [28]:

(a) Put the electrical conduit [29] in its position on the bracket

(b) Install the screws [25], washers [26], and nuts [27] to attach the clamps to the bracket.

SUBTASK 32-51-61-420-008

(15) Install the screw [10], washers [8, 9, 12], and nuts [7, 11] to connect the electrical conduit [29] to the inner cylinder.

SUBTASK 32-51-61-420-007

(16) Connect the electrical conduit plug to the light on the inner cylinder.

SUBTASK 32-51-61-410-015

(17) Reconnect the steering cable NWS-A/B to the steering collar. To reconnect it, do this task: Installation of the Steering System Cables for the Nose Gear, TASK 32-51-31-400-802

SUBTASK 32-51-61-980-003

(18) Move the inner cylinder from the fully extended to the fully compressed position. Make sure the total travel is 15.50 inches (39.4 cm).

SUBTASK 32-51-61-860-006

(19) Remove the rig pin kit, SPL-1585 from the towing lever.

SUBTASK 32-51-61-610-001

(20) Service the shock strut for the nose gear. To do this, do this task: Nose Landing Gear Shock Strut Servicing, TASK 12-15-41-610-802.

SUBTASK 32-51-61-710-003

(21) Do a test on the steering system of the nose wheel. Do the following steps from this task, do this task: Nose Wheel Steering System Test, TASK 32-51-00-700-801

- General
- Prepare the Airplane for Testing
- Do the test of the Normal Steering Response
- Do the test of Nose Gear Turn Radius and Response to full Rudder pedal Input
- Put the Airplane in its Usual Condition

(a) Make sure that there is no leakage.

SUBTASK 32-51-61-710-002

(22) Do a test of the taxi light on the nose gear. To do this, do this task: Taxi Light - Lamp Replacement, TASK 33-45-01-960-801

F. Put the Airplane Back to Its Usual Condition

SUBTASK 32-51-61-580-002

(1) Do this task: Lower the Airplane Nose Off of the Jack, TASK 07-11-21-580-802.

SUBTASK 32-51-61-640-001

(2) Lubricate the lube fittings on the upper torsion link [13] and the collar assy [5], do this task: Nose Landing Gear Lower End Components Servicing, TASK 12-21-21-640-802.

END OF TASK

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TASK 32-51-61-000-802

4. Upper Steering Sleeve Removal

(Figure 401)

A. References

Reference	Title
32-51-11-000-801	Steering Metering Valve Removal (P/B 401)
32-51-51-000-801	Nose Gear Steering Actuator Removal (P/B 401)

B. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-51-61-010-003

(1) Remove the Steering Metering Valve. To remove it, do this task: Steering Metering Valve Removal, TASK 32-51-11-000-801.

SUBTASK 32-51-61-010-004

(2) Remove both steering actuators [47] from the upper steering sleeve. To remove them, do this task: Nose Gear Steering Actuator Removal, TASK 32-51-51-000-801

SUBTASK 32-51-61-010-005

(3) Remove the Steering Collar [5]. To remove it, do this task: Steering Collar Removal, TASK 32-51-61-000-801.

D. Upper Steering Sleeve Removal

(Figure 401)

SUBTASK 32-51-61-010-006

(1) Scrape carefully, to remove the fillet seal of sealant from the Upper steering sleeve [59] and the outer cylinder [60].

SUBTASK 32-51-61-010-007

(2) Remove the pins [61], nuts [62], washers [63] and bolts [64] from the upper steering sleeve [59] and outer cylinder [60].

NOTE: You may have to remove sealant from the cotter pins, nuts and attachment pin threads to remove the attachment bolts.

SUBTASK 32-51-61-010-008

(3) Remove, by lowering, the upper steering sleeve [59] from the outer cylinder [60].

SUBTASK 32-51-61-010-009

(4) Remove any remaining sealant or grease from the upper steering sleeve [59] and from the outer cylinder [60].

——————— END OF TASK ———————

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TASK 32-51-61-000-803

5. Upper Steering Sleeve Installation

(Figure 401)

A. References

Reference	Title
32-51-11-400-801	Steering Metering Valve Installation (P/B 401)
32-51-51-400-801	Nose Gear Steering Actuator Installation (P/B 401)

B. Consumable Materials

Reference	Description	Specification
A00226	Compound - Tamper-Proof Putty	BMS8-45
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
A02315	Sealant - Low Density, Synthetic Rubber. 2 Part	BMS5-142
B00571	Coating - Clear Hydraulic Fluid Resistant Topcoat	BAC5710, Type 41
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27

C. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

D. Upper Steering Sleeve Installation

SUBTASK 32-51-61-410-002

(1) Fill the radius below the outer cylinder [60] aft flange with sealant, A00247.

SUBTASK 32-51-61-410-003

(2) Apply a coating of sealant, A00247 to the upper steering sleeve [59] upper aft flange surface, slightly thicker than twice the attachment pin bushings flange thickness.

SUBTASK 32-51-61-410-004

(3) Raise the upper steering sleeve [59] on the outer cylinder [60] until the attachment pin bushings in the two flanges meet.

SUBTASK 32-51-61-410-005

(4) Install the bolts [64], washers [63], nuts [62] through the upper steering sleeve [59] into the outer cylinder [60].

SUBTASK 32-51-61-410-006

(5) Tighten the attachment bolt nuts to 160 - 190 inch pounds (18.0 - 21.5 Newton meters) above run-on torque, and back off to the nearest castellation.

SUBTASK 32-51-61-410-007

(6) Install the cotter pins [61] and apply compound, A00226 to fully cover the nuts [62], washers [63] and cotter pins [61]. Apply so that any tampering will cause the seal to break.

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SUBTASK 32-51-61-410-008

(7) Fill the void between the outer cylinder [60] and upper steering plate [59] with sealant, A00247 and form a fillet seal.

SUBTASK 32-51-61-410-012

(8) Apply a capseal of sealant, A02315 or sealant, A00247 to the bolts [64], washers [63], nuts [62], and cotter pins [61] such that the entire end of the assembly, above the flange, is covered with sealant.

NOTE: The purpose of the sealant is to prevent the adjacent conduit from catching on the attachment bolt assembly during nose gear steering activites.

(a) Form the sealant as flat and smooth as possible to allow the conduit to easily pass over the bolt assembly.

(b) No bumps, ridges or sharp edges greater than 0.50 inches (12.7 mm) are allowed.

SUBTASK 32-51-61-410-013

(9) Install the lock tab [57], using washer [56] and bolt [55].

(a) Apply a thin coat of compound, C00913 to the shank of unplated bolts, threads, thread reliefs, and washer faces prior to installation.

(b) Wipe off excess corrosion preventative compund.

(c) Install lockwire to the bolt heads using the double twist method.

(d) If not present, install the nose gear steering angle marker to the lower steering plate.

1) Center the enamel stripe on the marker within 1 degree.

2) Overcoat the marker installation with coating, B00571 to extend a minimum of 0.10 inches (.275 mm) beyond the edges of the marker.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 32-51-61-410-011

(1) Install the Steering Collar. To install it, do this task: Steering Collar Installation, TASK 32-51-61-400-801.

SUBTASK 32-51-61-010-010

(2) Install both steering actuators [47] to the upper steering sleeve. To install them, do this task: Nose Gear Steering Actuator Installation, TASK 32-51-51-400-801

SUBTASK 32-51-61-410-014

(3) Install the Steering Metering Valve. To install it, do this task: Steering Metering Valve Installation, TASK 32-51-11-400-801.

END OF TASK

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STEERING COLLAR - INSPECTION/CHECK

1. General

A. This task has the data for a dimensional inspection of the steering collar. The intent of this section is to provide dimensional wear data in the event you have the components disassembled. There are no procedures for access, removal, or installation of the components. Refer to STEERING COLLAR - REMOVAL/INSTALLATION, PAGEBLOCK 32-51-61/401 Steering Collar - Removal/Installation for procedures to do these tasks.

B. Wear of the steering collar beyond limits can sometimes result in nose wheel vibration. If you are inspecting because of nose wheel vibration, you should first go perform the troubleshooting section of the 737-678 Fault Isolation Manual, ATA 32-51 TASK 804. This will ensure that the vibration experienced is not the result of other causes.

TASK 32-51-61-220-801

2. Steering Collar Inspection

(Figure 601)

A. References

Reference	Title
32-51-51-000-801	Nose Gear Steering Actuator Removal (P/B 401)
32-51-51-400-801	Nose Gear Steering Actuator Installation (P/B 401)
32-51-61-000-801	Steering Collar Removal (P/B 401)
32-51-61-400-801	Steering Collar Installation (P/B 401)

B. Tools/Equipment

Reference	Description
STD-1096	Micrometer - Depth, 0-1 Inch, Readable to 1/1000 Inch
STD-1097	Caliper - Vernier, 0-6 Inch, Readable to 1/1000 Inch

C. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

D. Procedure

HAP 001-013, 015-026 PRE SB 737-32-1342

SUBTASK 32-51-61-200-001

(1) Inspect for the axial (vertical) clearance between the steering collar bushing lower flange and the lower steering plate (inspection item [2]):

NOTE: Disassembly is not required to do this part of the steering collar inspection.

(a) Raise the steering collar, to the extent possible, against the upper steering plate lower surface.

(b) Use a non-marring device (wood or plastic) to pry UP between the Lower Steering Plate and the lower lug of the Steering Collar Assembly, in the location show in Figure 601.

NOTE: The intent is to lift and tilt the Steering Collar Assembly to measure the combined diametric and axial wear.

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(c) Use a feeler gage to measure the clearance at the location shown in Figure 601.

SUBTASK 32-51-61-020-025

(2) Compare the measurements with dimensions in ().

(a) If the clearance dimension exceeds the maximum permitted axial clearance dimension in (Table 601), do these steps:

1) Do this task: Nose Gear Steering Actuator Removal, TASK 32-51-51-000-801.

2) Do this task: Steering Collar Removal, TASK 32-51-61-000-801.

3) Use a micrometer (0-1 Inch, readable to 1/1000 Inch), STD-1096 or a readable to 1/1000 inch vernier 0 - 6 inch caliper, STD-1097 to check for wear on the parts of the nose landing gear steering collar, steering actuators, and top torsion link pin for worn areas.

HAP ALL

SUBTASK 32-51-61-220-001

(3) Compare the dimensions you measured with the permitted wear dimensions in (Table 601).

(a) If the parts are not in the tolerance, replace or repair the part.

SUBTASK 32-51-61-840-001

(4) Put the airplane back to usual condition:

(a) Install the steering actuator for the nose landing gear if it was removed.

1) Do this task: Nose Gear Steering Actuator Installation, TASK 32-51-51-400-801.

(b) To install the steering collar for the nose landing gear if it was removed.

1) Do this task: Steering Collar Installation, TASK 32-51-61-400-801.

SUBTASK 32-51-61-020-022

(5) Use the table below to see the wear limits.

Table 601/32-51-61-993-803

NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MAXIMUM SERVICE DIAMETRIC CLEARANCE
#1 STEERING COLLAR BEARING	I.D.	6.6175 in 168.08 mm	6.6190 in 168.12 mm	6.6500 in 168.91 mm	0.035 in 0.889 mm
#1 UPPER STEERING PLATE SLEEVE	O.D.	6.6148 in 168.02 mm	6.6160 in 168.05 mm	6.6100 in 167.89 mm	
#2 STEERING COLLAR BUSHING FLANGE		N/A	N/A	N/A	0.070 in

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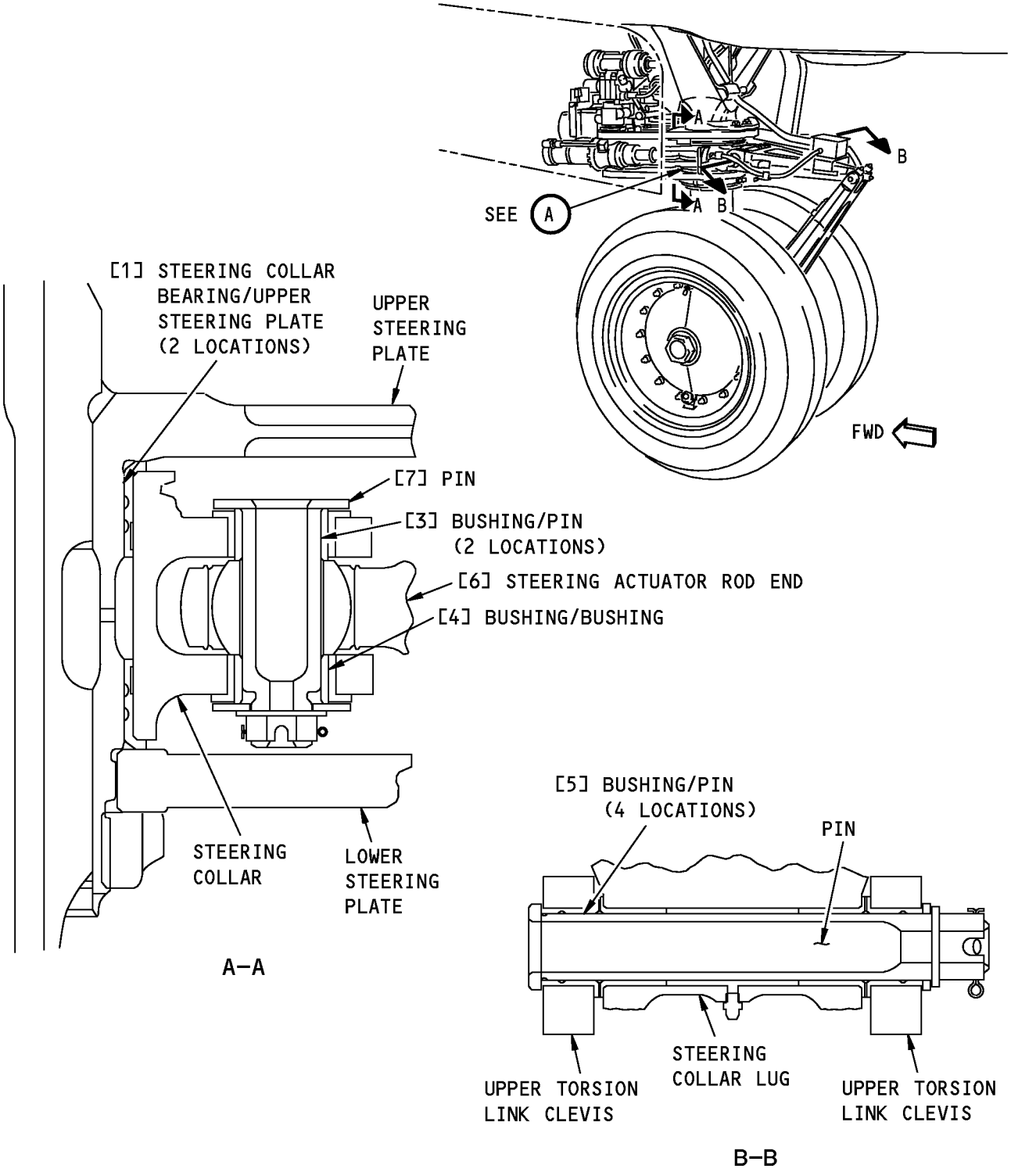
(Continued)

NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
		MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED MAXIMUM I.D./ MINIMUM O.D. OF WORN PART	MAXIMUM SERVICE DIAMETRIC CLEARANCE
#2 LOWER STEERING PLATE		N/A	N/A	N/A	01.778mm (AXIAL) (CLEARANCE)
#3 BUSHING	I.D.	0.9995 in 25.387 mm	1.0005 in 25.413 mm	1.0030 in 25.476 mm*[1]	0.002 in 0.051 mm
#3 PIN	O.D.	0.9980 in 25.349 mm	0.9990 in 25.375 mm	0.9965 in 25.311 mm	
#4 COLLAR	I.D.	1.1875 in 30.162 mm	1.1886 in 30.190 mm	1.1920 in 30.277 mm	0.003 in 0.076 mm
#4 BUSHING	O.D.	1.1860 in 30.124 mm	1.1870 in 30.150 mm	1.1836 in 30.063 mm	
#5 BUSHING	I.D.	1.2500 in 31.750 mm	1.2512 in 31.780 mm	1.2545 in 31.864 mm	0.003 in 0.076 mm
#5 PIN	O.D.	1.2485 in 31.712 mm	1.2495 in 31.737 mm	1.2462 in 31.653 mm	

*[1]
Wear through the KARON coating is acceptable if not mechanically worn beyond limits shown above.

END OF TASK

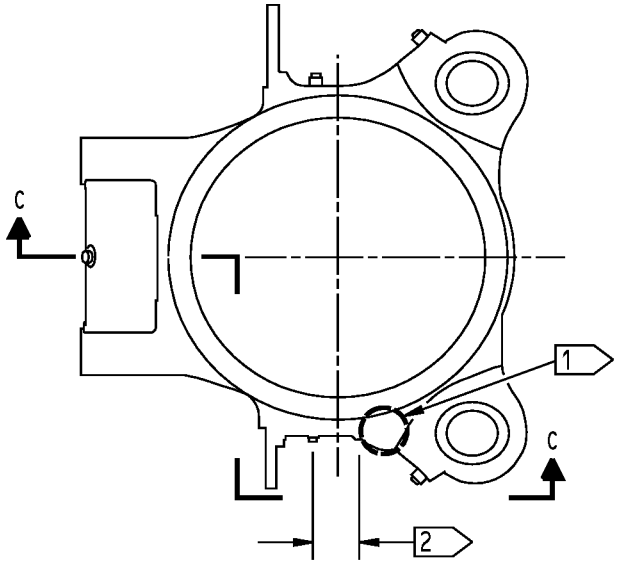
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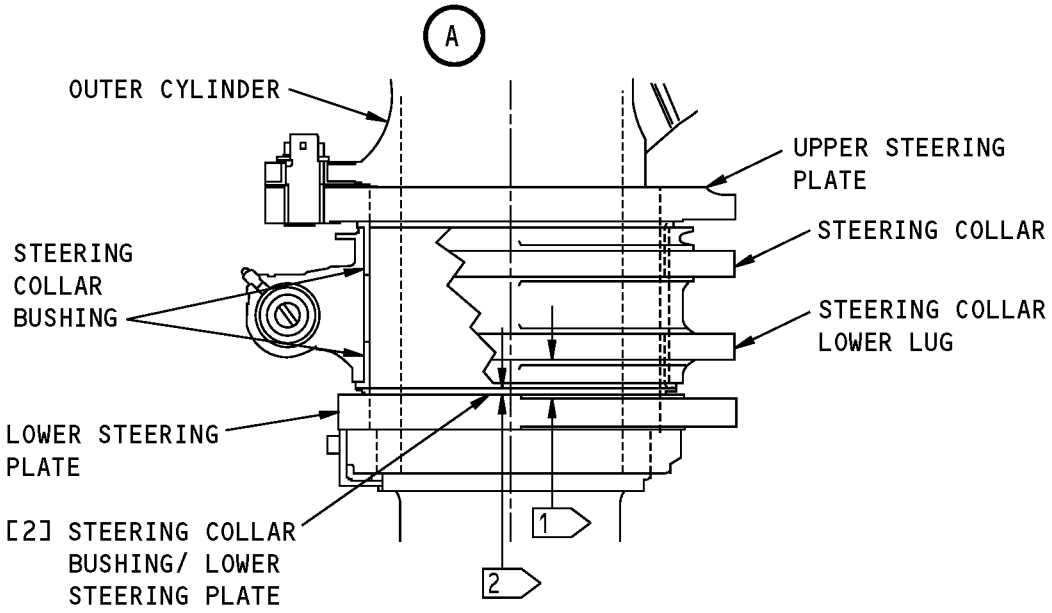


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Steering Collar Wear Limits
Figure 601 (Sheet 1 of 2)/32-51-61-990-802

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1 LIFT AND TILT AT THIS APPROXIMATE LOCATION ON EITHER SIDE, BETWEEN THE STEERING COLLAR LOWER LUG AND THE LOWER STEERING PLATE.

2 MEASURE THE VERTICAL (AXIAL) CLEARANCE, BETWEEN THE BUSHING FLANGE AND THE LOWER STEERING PLATE, AT THIS APPROXIMATE LOCATION ON EITHER SIDE OF THE COLLAR.

Steering Collar Wear Limits
Figure 601 (Sheet 2 of 2)/32-51-61-990-802

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RUDDER PEDAL STEERING ROTARY ACTUATOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the rotary actuator (referred to as the actuator instl [3]) for the rudder pedal steering

(2) An installation of the rotary actuator for the rudder pedal steering.

TASK 32-51-81-000-801

2. Rudder Pedal Steering Rotary Actuator Removal

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
115	Nose Landing Gear Wheel Well - Left
117	Electrical and Electronics Compartment - Left

D. Prepare for the Removal

SUBTASK 32-51-81-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON THE NOSE AND MAIN LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed on the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-51-81-480-002

(2) Make sure the tires of landing gear have chocks installed around them.

SUBTASK 32-51-81-010-001

(3) Remove the forward access panel from the nose wheel well to get access to the turnbuckles of cables NGPP-A and NGPP-B, and the actuator instl [3].

SUBTASK 32-51-81-480-003

(4) Install the following rig pins:

(a) rig pin NS1, from rig pin kit, SPL-1585 in the interconnect quadrant [2]

(b) Rig pin NWS5 in the interconnect eccentric drum [1]. Do the following steps:

1) Do this task: Put the Airplane in the Air Mode, TASK 32-09-00-860-801.

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2) Make sure the interconnect eccentric drum rig pin hole and bracket rig pin slot line up.

3) Install rig pin NWS5.

SUBTASK 32-51-81-860-002

(5) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	17	C01027	LANDING GEAR NOSE GEAR STEER

E. Rudder Pedal Steering Rotary Actuator Removal

SUBTASK 32-51-81-020-001

(1) Disconnect the cables NGPP-A and NGPP-B:

(a) Remove the locking clips from the turnbuckles of cables NGPP-A and NGPP-B.

(b) Loosen the tension at the turnbuckles of cables NGPP-A and NGPP-B.

(c) Remove the pins [4] that hold the ends of cables NGPP-A and NGPP-B on each side of the pulley of the actuator instl [3].

(d) Remove the cables NGPP-A and NGPP-B from the pulley of the actuator instl [3].

SUBTASK 32-51-81-020-002

(2) Disconnect the electrical connector [5] from the top of the actuator instl [3].

SUBTASK 32-51-81-020-003

(3) Remove the actuator instl [3]:

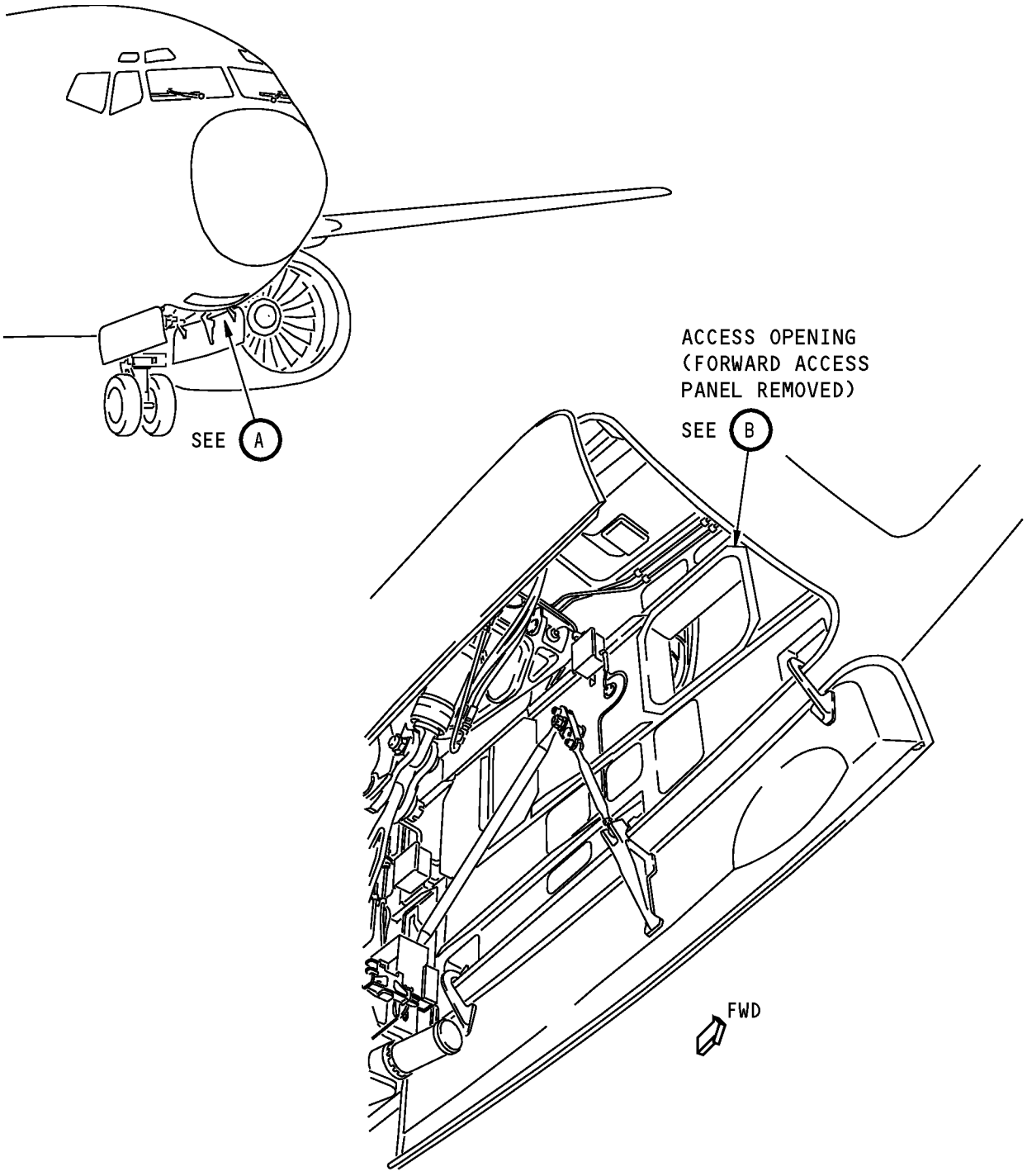
(a) Remove the bolts [6], and the washers [7] that hold the actuator instl [3] to the support bracket.

(b) Remove the washers [7] from the bolts [6].

(c) Remove the actuator instl [3] from the airplane.

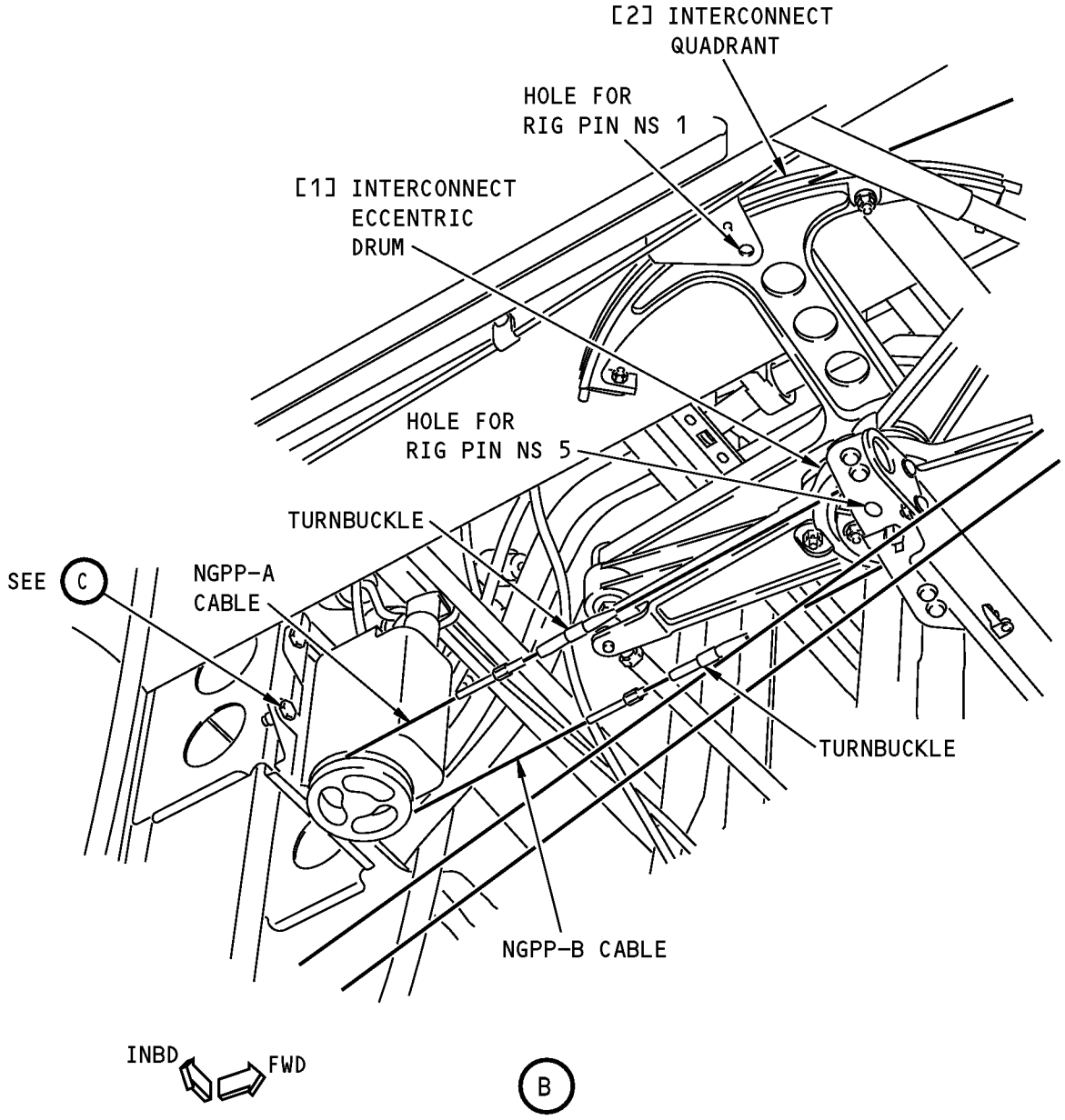
——————— END OF TASK ———————

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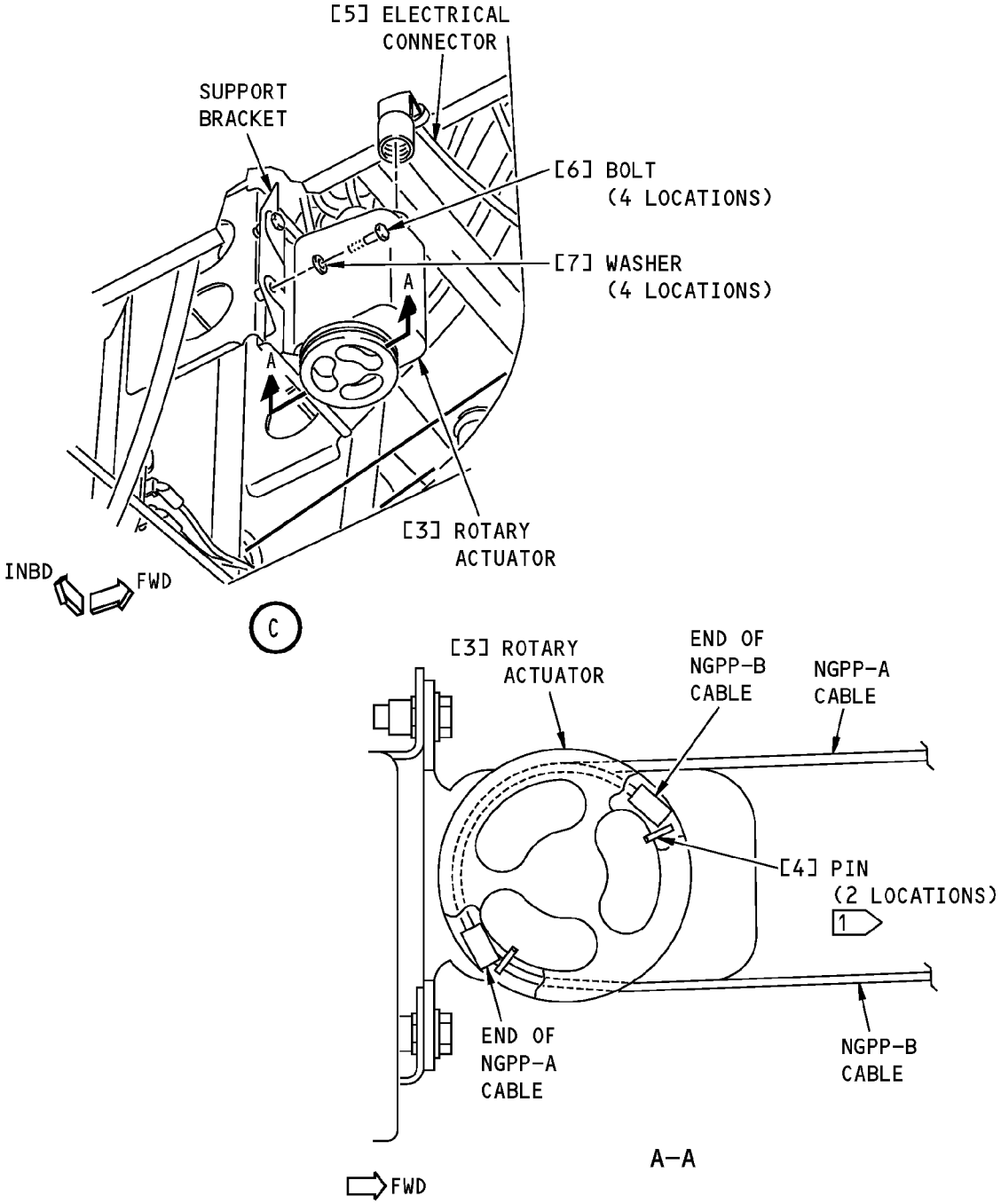
Rudder Pedal Steering Rotary Actuator Installation
Figure 401 (Sheet 1 of 3)/32-51-81-990-801

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Rudder Pedal Steering Rotary Actuator Installation
Figure 401 (Sheet 2 of 3)/32-51-81-990-801

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1 CAUTION: MAKE SURE THE ENDS OF THE PINS [4] DO NOT TOUCH THE HOUSING OF THE ACTUATOR [3] IF THE PINS [4] TOUCH THE HOUSING, DAMAGE TO EQUIPMENT CAN OCCUR.

Rudder Pedal Steering Rotary Actuator Installation
Figure 401 (Sheet 3 of 3)/32-51-81-990-801

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TASK 32-51-81-400-801

3. Rudder Pedal Steering Rotary Actuator Installation

(Figure 401)

A. References

Reference	Title
20-10-34-120-801	Hand Clean Metal Surfaces with Abrasives (P/B 701)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)
32-51-00-820-801	Rudder Pedal Interconnect Mechanism Adjustment (P/B 501)
51-21-41-370-801	Apply Alodine 1000 Solution (P/B 701)
SWPM 20-60-03	Special Protection of Electrical Connectors

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1585	Kit - Rigging Pins, All Systems (Part #: F70207-109, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
C00064	Coating - Aluminum Chemical Conversion	BAC5719, Type II, Class A (MIL-C-5541, Class A)
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27
G50171	Compound - Corrosion Inhibiting Compound, Interior Application - D5026NS or ZC-026	

D. Location Zones

Zone	Area
115	Nose Landing Gear Wheel Well - Left
117	Electrical and Electronics Compartment - Left

E. Prepare for the Installation

SUBTASK 32-51-81-100-001

(1) Do these steps to help supply a good electrical bond between the support bracket and the actuator instl [3]:

(a) To fully clean the mating surfaces of the support bracket and the actuator instl [3]. To do this, do this task: Hand Clean Metal Surfaces with Abrasives, TASK 20-10-34-120-801.

(b) To chemically prepare the mating surfaces of the support bracket and the actuator instl [3] with the coating, C00064. To do this, do this task: Apply Alodine 1000 Solution, TASK 51-21-41-370-801.

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F. Rudder Pedal Steering Rotary Actuator Installation

SUBTASK 32-51-81-420-001

(1) Install the actuator instl [3]:

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST BMS 3-27 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(a) Apply a thin layer of the corrosion preventive compound, C50056 or compound, C00913 (alternate) to all the areas of the fastener holes in the support bracket.

(b) Put the actuator instl [3] in its position for attachment to the support bracket.

(c) Align the holes in the actuator instl [3] to the holes in the support bracket.

(d) Install the bolts [6] and washers [7] that attach the actuator instl [3] to the support bracket.

SUBTASK 32-51-81-760-001

(2) Measure the resistance between the actuator instl [3] and the support bracket.

NOTE: The resistance value must be less than 0.0025 ohms.

SUBTASK 32-51-81-410-001

(3) Before you connect the electrical connector [5] at the top of the actuator instl [3], examine the connector for corrosion.

WARNING: DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

(a) If there was corrosion, refer to (SWPM 20-60-03) to correct the problem.

(b) Apply theD5026NS or ZC-026 compound, G50171 to the connector (SWPM 20-60-03).

(4) Connect the electrical connector [5] at the top of the actuator instl [3].

SUBTASK 32-51-81-420-002

(5) Connect the cables NGPP-A and NGPP-B:

(a) Put the ends of cables NGPP-A and NGPP-B in their position for connection to the pulley of the actuator instl [3].

CAUTION: MAKE SURE THE ENDS OF THE PINS DO NOT TOUCH THE HOUSING OF THE ACTUATOR AFTER INSTALLATION. IF THE PINS TOUCH THE HOUSING, DAMAGE TO EQUIPMENT CAN OCCUR.

(b) Install the pins [4] to hold the ends of the cables NGPP-A and NGPP-B on each side of the pulley of the actuator instl [3].

SUBTASK 32-51-81-820-001

(6) Adjust the cables NGPP-A and NGPP-B. To do this, do this task: Rudder Pedal Interconnect Mechanism Adjustment, TASK 32-51-00-820-801.

SUBTASK 32-51-81-080-001

(7) Remove rig pin NS1, from rig pin kit, SPL-1585 from the interconnect quadrant [2], and rig pin NS5, from rig pin kit, SPL-1585 from the interconnect eccentric drum [1].

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SUBTASK 32-51-81-840-001

(8) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

SUBTASK 32-51-81-480-004

(9) Install the locking clips on the turnbuckles of cables NGPP-A and NGPP-B.

SUBTASK 32-51-81-410-002

(10) Install the forward access panel in the nose wheel well.

SUBTASK 32-51-81-410-003

(11) Close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	17	C01027	LANDING GEAR NOSE GEAR STEER

——————— END OF TASK ———————

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LANDING GEAR POSITION INDICATING AND WARNING SYSTEM - ADJUSTMENT/TEST

1. General

A. This task does a test of the position indication and warning for the landing gear. It is necessary to lift the airplane on jacks to let the landing gear retract and extend.

TASK 32-61-00-710-801

2. Landing Gear Position Indicating and Warning System - Test

(Figure 501)

A. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
24-22-00-860-813	Supply External Power (P/B 201)
24-22-00-860-814	Remove External Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-840-801	Prepare to Put the Airplane in the Air Mode (P/B 201)
32-09-00-840-802	Return the Airplane Systems Back to Their Normal On Ground Condition (P/B 201)
32-09-10-740-801	Proximity Switch Electronics Unit (PSEU) BITE Test - Ground Test (P/B 501)

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

C. Prepare for the Test

SUBTASK 32-61-00-860-001

(1) Do this task: Supply External Power, TASK 24-22-00-860-813.

SUBTASK 32-61-00-860-002

(2) Make sure hydraulic systems A and B are not pressurized. If they are, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-61-00-580-003

(3) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-00-840-002

WARNING: OBEY THE PROCEDURE THAT PREPARES TO PUT THE AIRPLANE IN THE AIR MODE. IN THE AIR MODE, MANY OF THE AIRPLANE SYSTEMS CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(4) Do this task: Prepare to Put the Airplane in the Air Mode, TASK 32-09-00-840-801.

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SUBTASK 32-61-00-580-001

(5) Do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-61-00-860-020

WARNING: MAKE SURE THE CIRCUIT BREAKER FOR THE WEATHER RADAR SYSTEM IS OPEN BEFORE YOU MOVE THE THRUST LEVERS. THE FORWARD MOVEMENT OF A THRUST LEVER CAN CAUSE THE AUTOMATIC OPERATION OF THE WEATHER RADAR SYSTEM. THE OPERATION OF THIS SYSTEM CAN CAUSE SERIOUS INJURY TO PERSONS AND DAMAGE TO EQUIPMENT IN THE AREA OF THE NOSE RADOME.

(6) Move the engine thrust levers to the full forward position.

NOTE: You will keep the thrust levers in this position until the tests are complete.

D. Test of the Indicator Lights

SUBTASK 32-61-00-860-004

(1) Put the landing gear control lever in the DN position.

(a) Make sure the green landing gear indicator lights above the landing gear lever and on the overhead panel are on for each gear.

SUBTASK 32-61-00-860-005

(2) Move the landing gear control lever to the OFF position.

(a) Make sure the red warning lights come on and the green indicator lights stay on.

SUBTASK 32-61-00-860-006

(3) Put the LIGHTS test switch on the P2 panel in the DIM position.

(a) Make sure the green indicator lights and red warning lights go dim.

E. Test the Nose Landing Gear and Indication

SUBTASK 32-61-00-860-007

(1) Do these steps to raise the nose landing gear.

(a) Move the landing gear lever to the DN position.

(b) Remove the downlock pin from the nose landing gear only. To remove the downlock pin, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

WARNING: MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE LANDING GEAR AREA. THE LANDING GEAR WILL RETRACT WHEN HYDRAULIC POWER IS SUPPLIED WITH THE LANDING GEAR CONTROL LEVER IN THE UP POSITION.

(c) Make sure all persons and equipment are clear of the landing gear area.

(d) Do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

(e) Move the landing gear lever to the UP position.

SUBTASK 32-61-00-210-001

(2) Look at the landing gear indicator lights.

NOTE: The green down-and-locked light may not be illuminated for the gear that has the downlock pin installed, during pressurized operation of the unpinned gear.

(a) Make sure the green indicator lights for the nose landing gear go off when the lock braces unlock.

(b) Make sure the red warning lights for the nose landing gear go off when the gear retracts to the up and locked position.

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(c) Make sure the green indicator lights for the main landing gear stay on.

(d) Make sure the red warning lights for the main landing gear go on.

SUBTASK 32-61-00-860-008

(3) Lower the nose landing gear.

WARNING: MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE LANDING GEAR AREA. THE NOSE LANDING GEAR WILL EXTEND WHEN THE LANDING GEAR CONTROL LEVER IN THE DN POSITION.

(a) Make sure all persons and equipment are clear of the landing gear area.

(b) Move the landing gear lever to the DN position.

SUBTASK 32-61-00-580-004

(4) Install the downlock pin on the nose landing gear. To install the pin, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

F. Test the Left Main Landing Gear and Indication

SUBTASK 32-61-00-860-009

(1) Do these steps to raise the left main landing gear.

(a) Remove the downlock pin from the left main landing gear. To remove the downlock pin, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

WARNING: MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE LANDING GEAR AREA. THE LANDING GEAR WILL RETRACT WHEN HYDRAULIC POWER IS SUPPLIED WITH THE LANDING GEAR CONTROL LEVER IN THE UP POSITION.

(b) Make sure all persons and equipment are clear of the landing gear area.

(c) Move the landing gear lever to the UP position.

SUBTASK 32-61-00-210-002

(2) Look at the landing gear indicator lights.

NOTE: The green down-and-locked light may not be illuminated for the gear that has the downlock pin installed, during pressurized operation of the unpinned gear.

(a) Make sure the green indicator lights for the left main landing gear go off when the lock braces unlock.

(b) Make sure the red warning lights for the left main landing gear go off when the gears retract to the up and locked position.

(c) Make sure the green indicator lights for the nose and right main landing gear stay on.

(d) Make sure the red warning lights for the nose and right main landing gear go on.

SUBTASK 32-61-00-860-010

(3) Lower the left main landing gear.

WARNING: MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE LANDING GEAR AREA. THE NOSE LANDING GEAR WILL EXTEND WHEN THE LANDING GEAR CONTROL LEVER IN THE DN POSITION.

(a) Make sure all persons and equipment are clear of the landing gear area.

(b) Move the landing gear lever to the DN position.

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SUBTASK 32-61-00-580-005

(4) Install the downlock pin on the left main landing gear. To install the pin, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

G. Test the Right Main Landing Gear and Indication

SUBTASK 32-61-00-860-018

(1) Do these steps to raise the right main landing gear.

(a) Remove the downlock pin from the right main landing gear. To remove the downlock pin, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

WARNING: MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE LANDING GEAR AREA. THE LANDING GEAR WILL RETRACT WHEN HYDRAULIC POWER IS SUPPLIED WITH THE LANDING GEAR CONTROL LEVER IN THE UP POSITION.

(b) Make sure all persons and equipment are clear of the landing gear area.

(c) Move the landing gear lever to the UP position

SUBTASK 32-61-00-210-004

(2) Look at the landing gear indicator lights.

NOTE: The green down-and-locked light may not be illuminated for the gear that has the downlock pin installed, during pressurized operation of the unpinned gear.

(a) Make sure the green indicator lights for the right main landing gear go off when the lock braces unlock.

(b) Make sure the red warning lights for the right main landing gear go off when the gears retract to the up and locked position.

(c) Make sure the green indicator lights for the nose and left main landing gear stay on.

(d) Make sure the red warning lights for the nose and left main landing gear go on.

SUBTASK 32-61-00-860-019

(3) Lower the right main landing gear.

WARNING: MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE LANDING GEAR AREA. THE NOSE LANDING GEAR WILL EXTEND WHEN THE LANDING GEAR CONTROL LEVER IN THE DN POSITION.

(a) Make sure all persons and equipment are clear of the landing gear area.

(b) Move the landing gear lever to the DN position.

SUBTASK 32-61-00-580-006

(4) Install the downlock pin on the right main landing gear. To install the pin, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

H. Test All the Landing Gear and Indication

SUBTASK 32-61-00-860-011

(1) Do these steps to raise all the landing gear:

(a) Remove the downlock pins from the landing gear. To remove the downlock pins, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

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WARNING: MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE LANDING GEAR AREA. THE LANDING GEAR WILL RETRACT WHEN HYDRAULIC POWER IS SUPPLIED WITH THE LANDING GEAR CONTROL LEVER IN THE UP POSITION.

(b) Make sure all persons and equipment are clear of the landing gear area.

(c) Move the landing gear lever to the UP position.

SUBTASK 32-61-00-210-003

(2) Look at the landing gear indicator lights.

(a) Make sure all the green indicator lights for the landing gear go off when the lock braces unlock.

(b) Make sure the red warning lights for all the landing gear go off when the gears retract to the up and locked position.

SUBTASK 32-61-00-730-001

(3) Put the LIGHTS test switch, on panel P2, in the TEST position.

(a) Make sure the green and red lights for the landing gear come on.

SUBTASK 32-61-00-730-002

(4) Release the LIGHTS test switch.

(a) Make sure the green and red lights for the landing gear go off.

SUBTASK 32-61-00-860-012

(5) Move the landing gear control lever to the OFF position.

(a) Make sure the red warning lights for the landing gear stay off.

SUBTASK 32-61-00-860-013

(6) Lower the landing gear.

WARNING: MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE LANDING GEAR AREA. THE NOSE LANDING GEAR WILL EXTEND WHEN THE LANDING GEAR CONTROL LEVER IN THE DN POSITION.

(a) Make sure all persons and equipment are clear of the landing gear area.

(b) Move the control lever for the landing gear to the DN position.

(c) Make sure all three red warning lights above the gear lever come on while the gear moves to the down position.

(d) Look for these indications when the landing gear goes to the down and locked position:

1) Make sure the red warning lights go off.

2) Make sure the green indicator lights come on.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 32-61-00-860-014

WARNING: INSTALL GROUND LOCK PINS ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Install the ground lock pins. To install the pins, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-00-860-015

(2) If hydraulic power is no longer necessary, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

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SUBTASK 32-61-00-860-021

(3) Move the engine thrust levers to the idle position.

SUBTASK 32-61-00-860-016

(4) Do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

SUBTASK 32-61-00-740-003

(5) Check the PSEU for stored faults using the self test, do this task: Proximity Switch Electronics Unit (PSEU) BITE Test - Ground Test, TASK 32-09-10-740-801.

SUBTASK 32-61-00-860-022

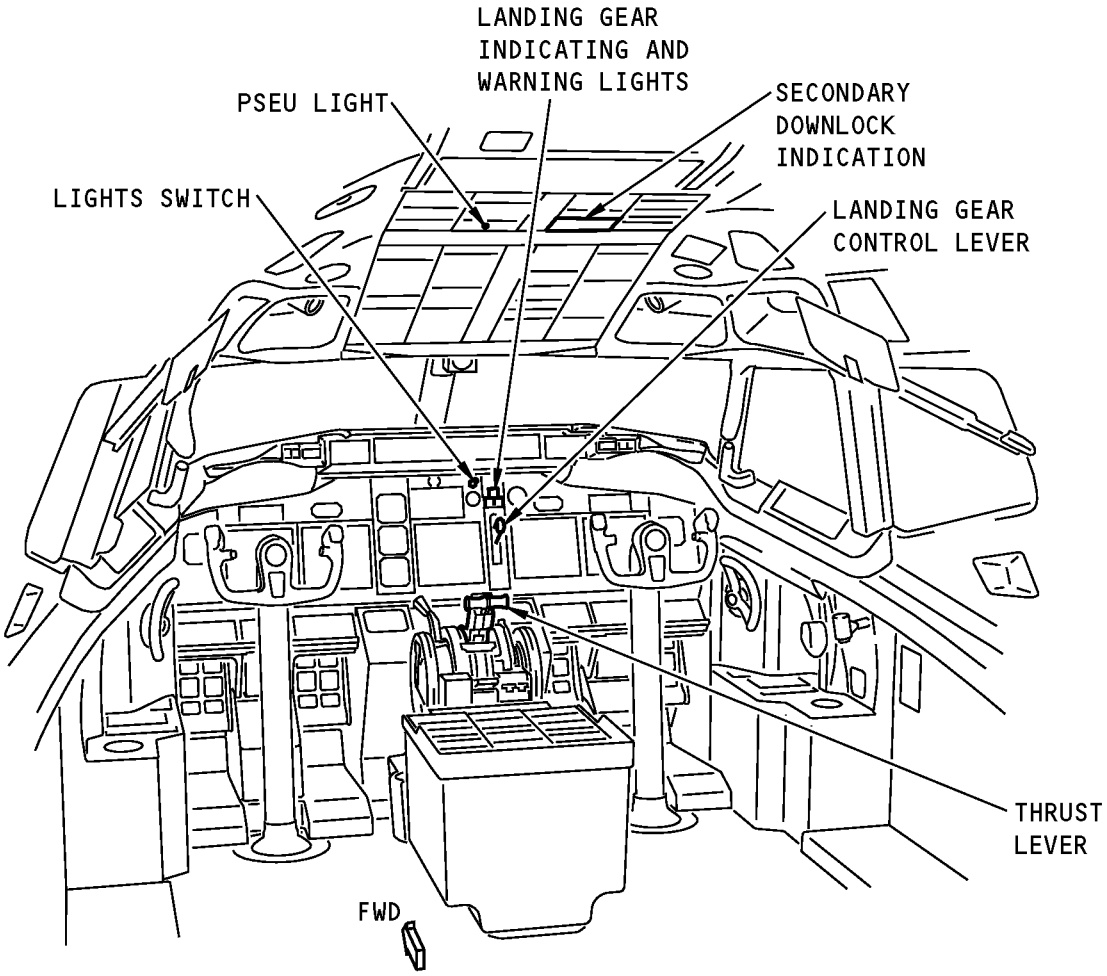
(6) Do this task: Return the Airplane Systems Back to Their Normal On Ground Condition, TASK 32-09-00-840-802

SUBTASK 32-61-00-860-017

(7) If electrical power is no longer necessary, then, do this task: Remove External Power, TASK 24-22-00-860-814.

———————— END OF TASK ————————

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FLIGHT COMPARTMENT

Landing Gear Position Indicating and Warning Test
Figure 501/32-61-00-990-801

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MAIN LANDING GEAR UPLOCK SENSOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) Removal of the main landing gear uplock sensor.

(2) Installation of the main landing gear uplock sensor.

B. The procedures for the left and right installations are similar.

TASK 32-61-21-020-801

2. Main Landing Gear Uplock Sensor Removal

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-840-801	Prepare to Put the Airplane in the Air Mode (P/B 201)

B. Location Zones

Zone	Area
731	Left Main Landing Gear - Outboard Door
741	Right Main Landing Gear - Outboard Door

C. Prepare for the Removal

SUBTASK 32-61-21-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-21-480-002

(2) Make sure chocks are installed at the wheels.

SUBTASK 32-61-21-840-004

WARNING: OBEY THE PROCEDURE THAT PREPARES TO PUT THE AIRPLANE IN THE AIR MODE. IN THE AIR MODE, MANY OF THE AIRPLANE SYSTEMS CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(3) Do this task: Prepare to Put the Airplane in the Air Mode, TASK 32-09-00-840-801.

SUBTASK 32-61-21-860-001

(4) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Main Landing Gear Uplock Sensor Removal

SUBTASK 32-61-21-020-001

(1) Remove the splices from the sensor wires.

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SUBTASK 32-61-21-020-002

(2) Do these steps to remove the sensor [5]:

(a) Remove the nuts [4], washers [2], [3] and bolts [1] that secure the sensor [5] to the mounting bracket.

(b) Remove the sensor [5] from the mounting bracket.

SUBTASK 32-61-21-210-001

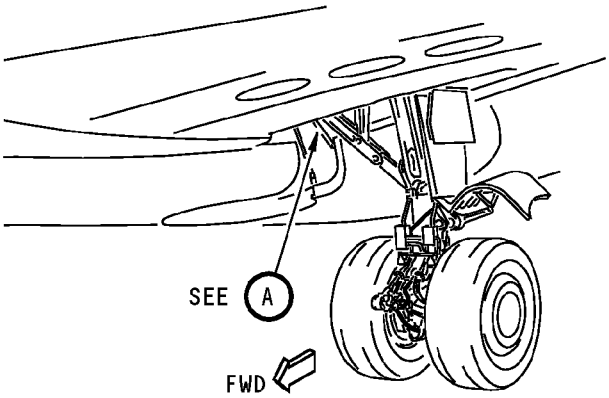
(3) Examine the sensor [5] and adjacent areas for signs of damage.

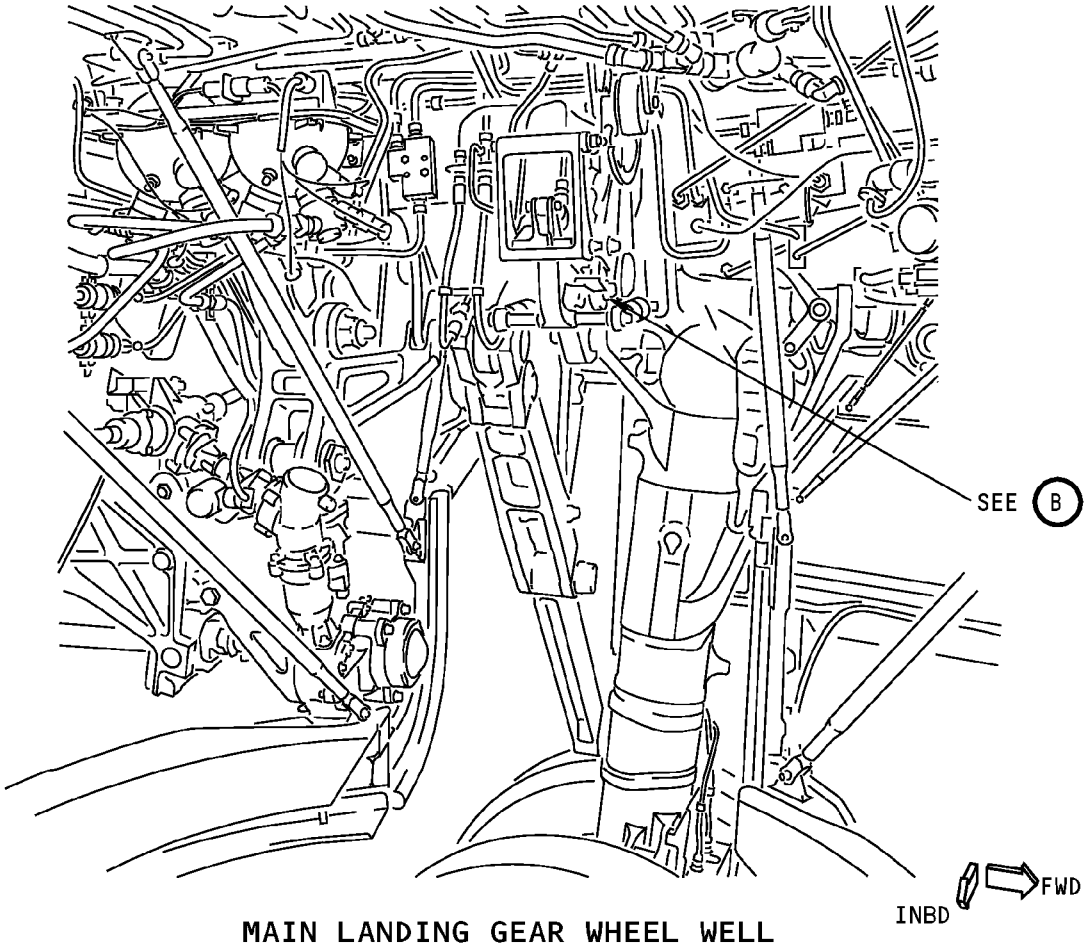
NOTE: Damage to the sensor may be an indication of an incorrect clearance between the sensor and the target.

(a) If you find damage, make a note of the damage for the installation procedure.

——————— END OF TASK ———————

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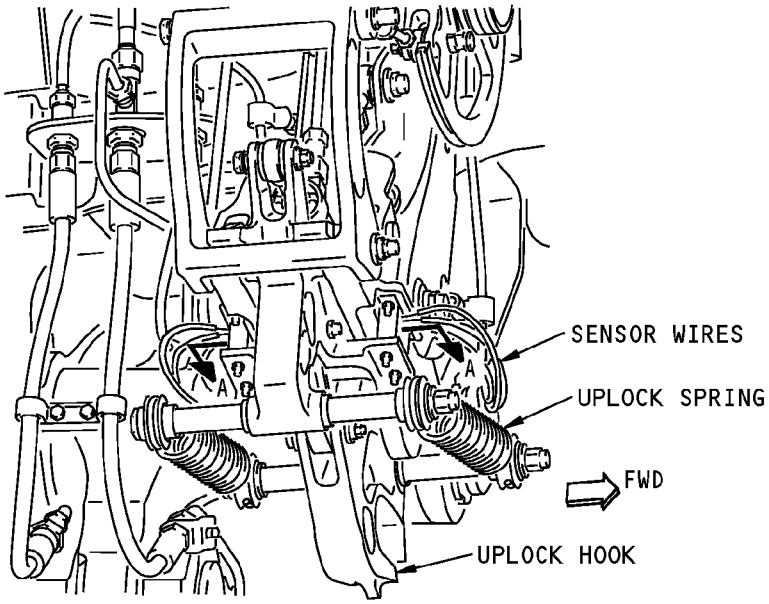




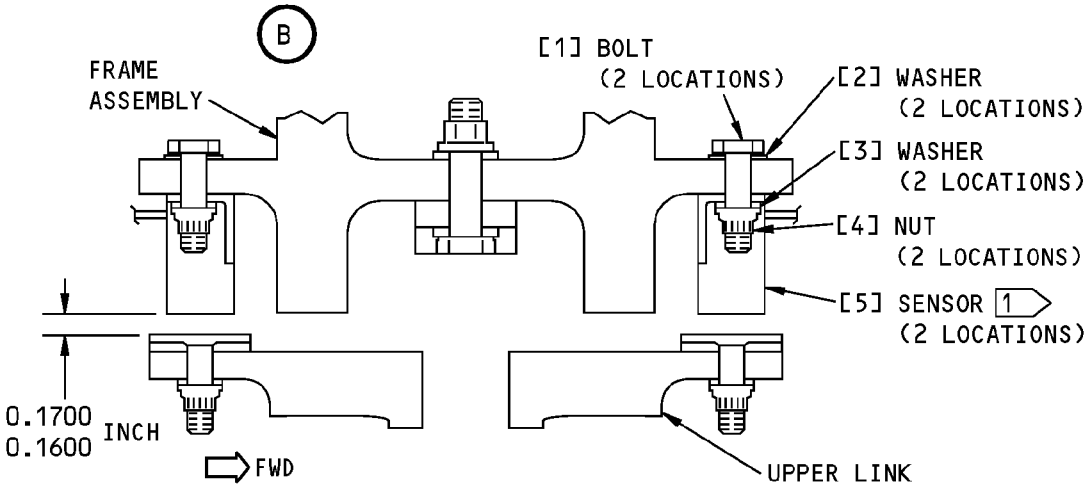
MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE IS SHOWN, RIGHT SIDE IS EQUIVALENT)
A

Main Landing Gear Up-and-Locked Sensor Installation
Figure 401 (Sheet 1 of 2)/32-61-21-990-801

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LEFT MAIN LANDING GEAR UPLOCK
(RIGHT MAIN LANDING GEAR UPLOCK IS EQUIVALENT)



UP-AND-LOCKED SENSORS
A-A

1

ITEM	SENSOR NO.	MLG	LOCATION
[5]	S0072	L	FWD
[5]	S0074	R	FWD
[5]	S1016	L	AFT
[5]	S1017	R	AFT

Main Landing Gear Up-and-Locked Sensor Installation
Figure 401 (Sheet 2 of 2)/32-61-21-990-801

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TASK 32-61-21-400-801

3. Main Landing Gear Uplock Sensor Installation

(Figure 401)

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-840-801	Prepare to Put the Airplane in the Air Mode (P/B 201)
32-09-00-840-802	Return the Airplane Systems Back to Their Normal On Ground Condition (P/B 201)
32-61-21-400-802	Main Landing Gear Uplock Sensor Clearance Measurement (Airplane on Jacks) (P/B 501)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1690	Set - Actuators/Deactuators, Proximity Sensor Test (Part #: 8-758-01, Supplier: 08748, A/P Effectivity: 737-ALL) (Part #: A27092-106, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: A27092-84, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27

D. Location Zones

Zone	Area
731	Left Main Landing Gear - Outboard Door
741	Right Main Landing Gear - Outboard Door

E. Access Panels

Number	Name/Location
112A	Forward Access Door

F. Prepare for the Installation

SUBTASK 32-61-21-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

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SUBTASK 32-61-21-480-004

(2) Make sure chocks are installed at the wheels.

SUBTASK 32-61-21-840-005

WARNING: OBEY THE PROCEDURE THAT PREPARES TO PUT THE AIRPLANE IN THE AIR MODE. IN THE AIR MODE, MANY OF THE AIRPLANE SYSTEMS CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(3) If the airplane systems are not prepared for air mode simulation, then, do this task: Prepare to Put the Airplane in the Air Mode, TASK 32-09-00-840-801.

SUBTASK 32-61-21-860-002

(4) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

G. Main Landing Gear Uplock Sensor Installation

SUBTASK 32-61-21-960-001

(1) If you found damage to the sensor [5] or the adjacent area during the removal procedure, do these steps:

(a) Repair or replace all damaged components or areas.

NOTE: Damage to the sensor, the target, or the adjacent areas may be an indication of an incorrect sensor clearance.

(b) Measure the sensor [5] clearance. To measure the clearance, do this task: Main Landing Gear Uplock Sensor Clearance Measurement (Airplane on Jacks), TASK 32-61-21-400-802.

SUBTASK 32-61-21-410-001

(2) Fay seal the bottom of the sensor with sealant, A00247.

(3) Install the sensor [5]:

(a) Position the sensor [5] on the bracket.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(b) Apply a thin coat of compound, C00913 to thread reliefs, threads, and washer faces before the assemble.

(c) Install the bolts [1], washers [2], [3], and nuts [4].

SUBTASK 32-61-21-420-002

(4) Connect the sensor leads to the airplane:

(a) If it is necessary, cut the sensor leads to the correct length.

(b) Connect the leads with splices.

SUBTASK 32-61-21-740-003

(5) Do this check of the main landing gear uplock sensor:

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(a) If it is necessary, supply electrical power. To do this, do this task: Supply Electrical Power, TASK 24-22-00-860-811

(b) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

(c) Do this task: Return the Airplane Systems Back to Their Normal On Ground Condition, TASK 32-09-00-840-802.

(d) Do these steps to display the sensor status:

1) To get access to the PSEU, do this step:

Open this access panel:

Number	Name/Location
112A	Forward Access Door

2) Push the ON/OFF switch to turn on the PSEU BITE.
3) Push the down switch until OTHER FUNCTNS? shows.
4) Push the YES switch to select OTHER FUNCTNS?.
5) Push the down switch until I/O MONITOR? shows.
6) Push the YES switch to select I/O MONITOR.
7) Push the down switch until SENSORS? shows.
8) Push the YES switch to select SENSORS.
9) Push the down switch until the sensor number shows.

NOTE: See (Figure 401) for the sensor number and location.

10) Make sure the display shows the sensor number and TGT FAR.
11) Insert an actuator.

NOTE: The actuator is part of the proximity sensor test set, SPL-1690.

12) Make sure the display shows the sensor number and TGT NEAR.
13) Remove the actuator.
14) Push the ON/OFF switch to turn off the PSEU BITE.

(e) Close this access panel:

Number	Name/Location
112A	Forward Access Door

END OF TASK

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MAIN LANDING GEAR UPLOCK SENSOR - ADJUSTMENT/TEST

1. General

A. This procedure has these tasks:

(1) Measurement of the main landing gear uplock sensor clearance (Airplane on Jacks).

(2) Measurement of the main landing gear uplock sensor clearance (Airplane not on Jacks).

(3) Adjustment of the main landing gear uplock sensor clearance.

(4) Operational test of the main landing gear uplock sensor.

B. The procedures for the left and right installations are similar.

TASK 32-61-21-400-802

2. Main Landing Gear Uplock Sensor Clearance Measurement (Airplane on Jacks)

(Figure 501)

A. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Consumable Materials

Reference	Description	Specification
G02020	Clay, Modeling	

C. Location Zones

Zone	Area
731	Left Main Landing Gear - Outboard Door
741	Right Main Landing Gear - Outboard Door

D. Measure the Main Landing Gear Up-and-Locked Sensor Clearance

SUBTASK 32-61-21-580-001

(1) Put the airplane on jacks. To jack the airplane, do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-61-21-480-005

(2) Attach some clay, G02020 to the face of the sensor.

SUBTASK 32-61-21-860-003

(3) Do these steps to raise the main landing gear:

(a) For the landing gear that the sensor is attached to, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

NOTE: Refer to (Figure 501) for the sensor location.

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WARNING: MAKE SURE ALL PERSONNEL AND EQUIPMENT ARE AWAY FROM THE LANDING GEAR BEFORE HYDRAULIC POWER IS APPLIED. THE LANDING GEAR CAN MOVE SUDDENLY WHEN HYDRAULIC POWER IS APPLIED TO THE AIRPLANE. INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

(b) Supply hydraulic power to operate the landing gear. To do this, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

(c) Put the landing gear lever in the up position.

SUBTASK 32-61-21-860-004

(4) Put the landing gear lever in the down position after the the main landing gear has retracted fully.

SUBTASK 32-61-21-580-002

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(5) Install downlock pins on all the landing gear. To do this, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-21-220-001

(6) Measure the compressed thickness of the clay, G02020.

SUBTASK 32-61-21-820-001

(7) If the sensor clearance is outside the tolerance shown in Figure 501, then, do this task: Main Landing Gear Uplock Sensor Clearance Adjustment, TASK 32-61-21-820-801.

NOTE: Write down the measured clearance so you will know what adjustments must be made.

SUBTASK 32-61-21-840-001

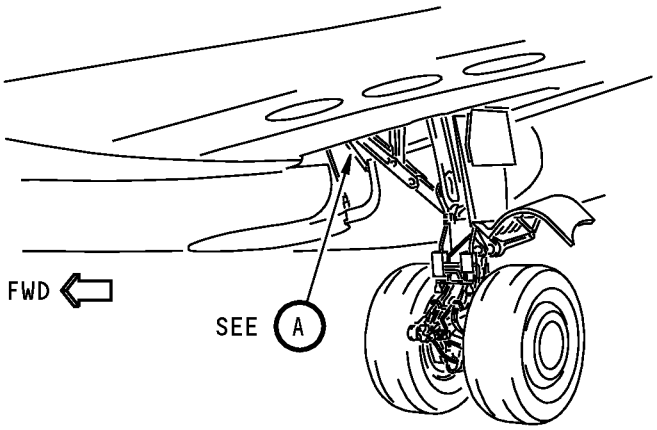
(8) If the sensor clearance is acceptable, do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

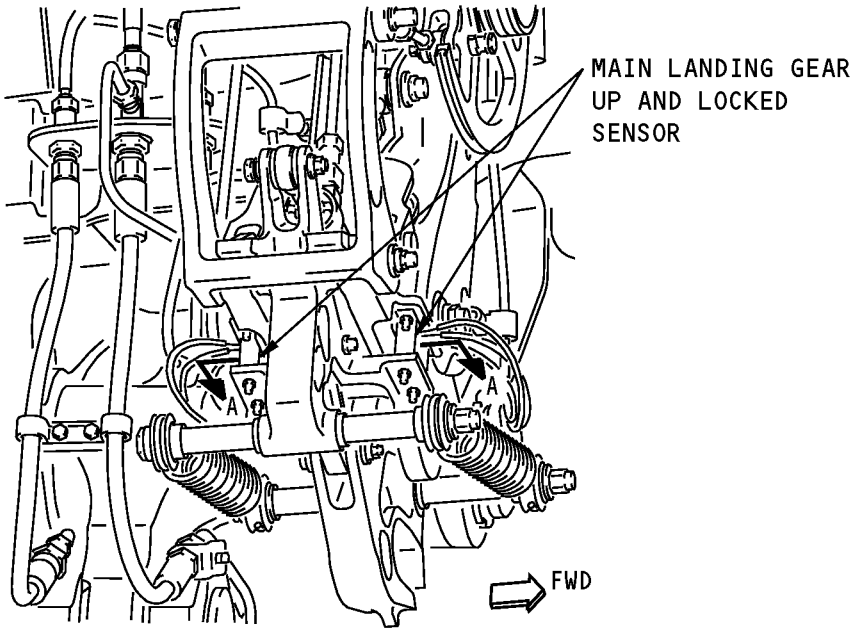
SUBTASK 32-61-21-860-008

(9) If hydraulic power is no longer needed, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

——————— END OF TASK ———————

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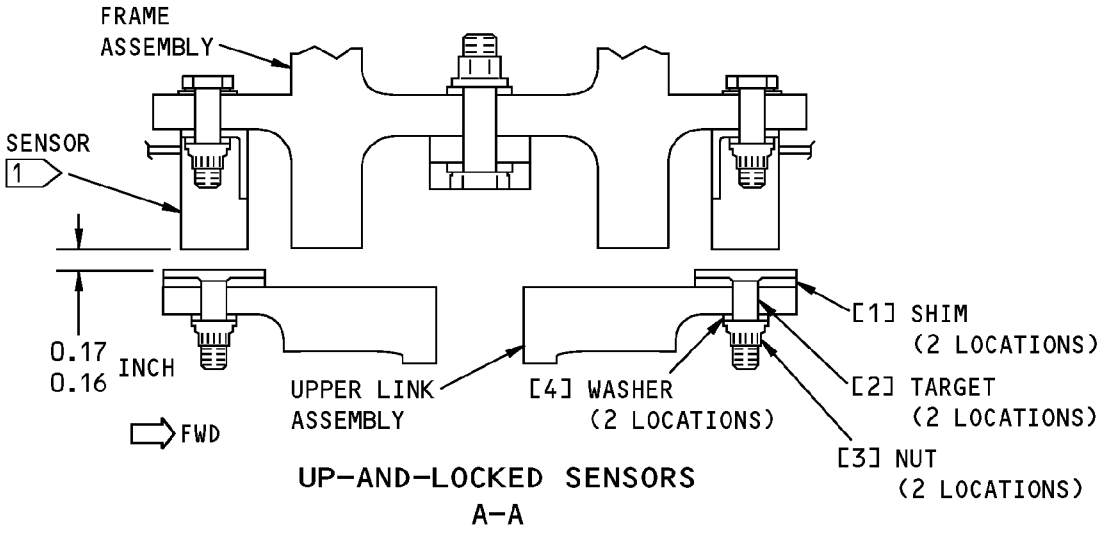


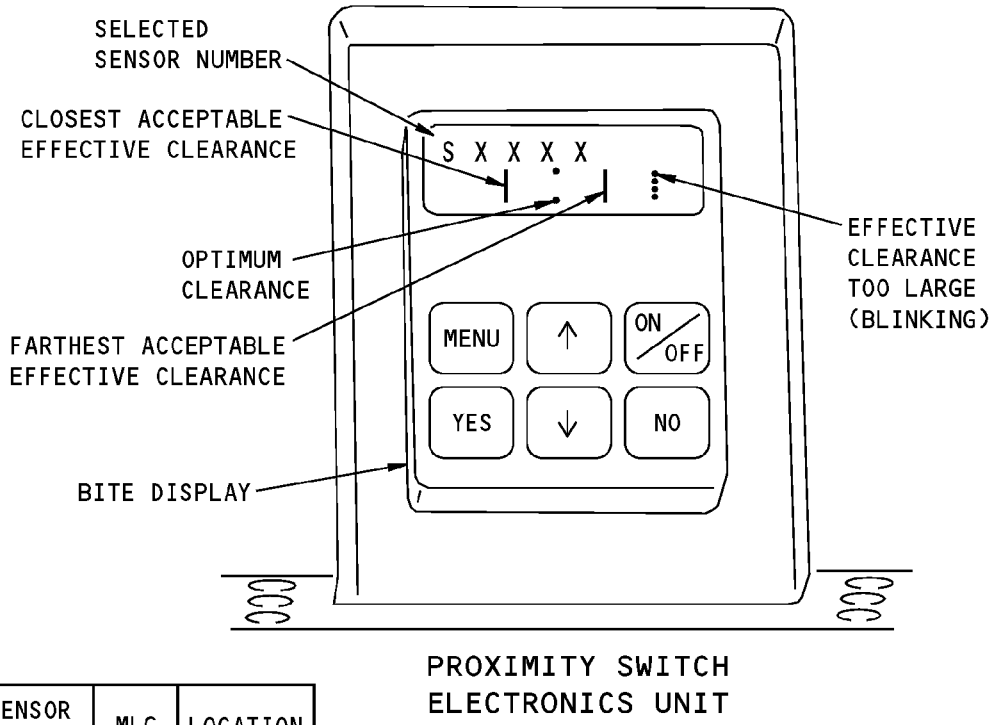
LEFT MAIN LANDING GEAR UPLOCK
(RIGHT MAIN LANDING GEAR UPLOCK IS EQUIVALENT)

A

Main Landing Gear Up-and-Locked Sensor Adjustment
Figure 501 (Sheet 1 of 2)/32-61-21-990-802

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1

SYSTEM NO.	SENSOR NO.	MLG	LOCATION
1	S72	L	FWD
2	S1016	L	AFT
1	S74	R	FWD
2	S1017	R	AFT

Main Landing Gear Up-and-Locked Sensor Adjustment
Figure 501 (Sheet 2 of 2)/32-61-21-990-802

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TASK 32-61-21-400-803

3. Main Landing Gear Uplock Sensor Clearance Measurement (Airplane not on Jacks)

(Figure 501)

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
24-22-00-860-812	Remove Electrical Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-4896	Adapter Assembly - Uplock, MLG (Part #: C32048-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
G02020	Clay, Modeling	

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
731	Left Main Landing Gear - Outboard Door
741	Right Main Landing Gear - Outboard Door

E. Prepare for the Removal

SUBTASK 32-61-21-860-013

(1) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

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SUBTASK 32-61-21-860-014

WARNING: MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) If the downlocks are not installed on all of the landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-21-860-015

(3) Make sure the control lever for the landing gear is in the OFF position.

F. Measure the Main Landing Gear Up-and-Locked Sensor Clearance

WARNING: MAKE SURE THAT THERE IS NO PRESSURE IN THE HYDRAULIC SYSTEM. PRESSURE IN THE HYDRAULIC SYSTEM CAN MOVE THE CONTROL SURFACES, CABLES, LANDING GEARS, AND LANDING GEAR DOORS QUICKLY. THEIR MOVEMENT CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

SUBTASK 32-61-21-860-009

(1) Insert the MLG uplock adapter assembly, SPL-4896 in the MLG Uplock hook. .

(2) Attach a square drive torque wrench or breaker bar to the MLG uplock adapter assembly and turn the MLG Uplock hook until it turns to the latched position

SUBTASK 32-61-21-220-003

(3) Measure the sensor gap using a feeler gage.

SUBTASK 32-61-21-820-003

(4) If the sensor clearance is outside the tolerance shown in Figure 501, then, do this task: Main Landing Gear Uplock Sensor Clearance Adjustment, TASK 32-61-21-820-801.

NOTE: Write down the measured clearance so you will know what adjustments must be made.

G. Measure the Main Landing Gear Up-and-Locked Sensor Clearance (Alternate Method)

SUBTASK 32-61-21-480-007

(1) Attach some clay, G02020 to the face of the sensor.

NOTE: Refer to (Figure 501) for the sensor location.

SUBTASK 32-61-21-860-011

(2) Rotate the uplock hook into the closed position, using MLG uplock adapter assembly, MLG uplock adapter assembly, SPL-4896.

SUBTASK 32-61-21-860-012

(3) Rotate the uplock hook into the open position, using MLG uplock adapter assembly, MLG uplock adapter assembly, SPL-4896.

SUBTASK 32-61-21-220-004

(4) Measure the compressed thickness of the clay, G02020.

SUBTASK 32-61-21-820-004

(5) If the sensor clearance is outside the tolerance shown in Figure 501, then, do this task: Main Landing Gear Uplock Sensor Clearance Adjustment, TASK 32-61-21-820-801.

NOTE: Write down the measured clearance so you will know what adjustments must be made.

H. Return the Airplane to its normal configuration

SUBTASK 32-61-21-860-016

(1) Remove the MLG uplock adapter assembly

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SUBTASK 32-61-21-865-001

(2) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	15	C00799	HYD SYS LDG GR SYS XFR VALVE SEC
C	16	C00781	HYD SYS LDG GR SYS XFR VALVE PRI

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 32-61-21-860-017

(3) Do this task: Supply Electrical Power, Supply Electrical Power, TASK 24-22-00-860-811

(4) For hydraulic system A, do this task:Hydraulic System A or B Pressurization, TASK 29-11-00-860-801

(5) Put the control lever for the landing gear in the Up position.

(6) Put the control lever for the landing gear in the Down position.

(7) For hydraulic system A, do this task:Hydraulic System A or B Power Removal, TASK 29-11-00-860-805

(8) If electrical power is not necessary, do this task:Remove Electrical Power, TASK 24-22-00-860-812

——————— END OF TASK ———————

TASK 32-61-21-820-801

4. Main Landing Gear Uplock Sensor Clearance Adjustment

A. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27

B. Location Zones

Zone	Area
731	Left Main Landing Gear - Outboard Door
741	Right Main Landing Gear - Outboard Door

C. Adjust the Main Landing Gear Uplock Sensor Clearance

SUBTASK 32-61-21-820-002

(1) Adjust the sensor clearance.

(a) Remove the nuts [3] and washers [4] which hold the target in place.

(b) Remove the target [2] and shims [1].

(c) Clean the shims [1] and mounting surfaces.

(d) Remove or add shims [1] as required to get the necessary clearance.

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WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST BMS 3-27 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(e) Apply a thin coat of compound, C50056 or compound, C00913 (alternate) to the thread reliefs, threads, and washer faces prior to assembly. Wipe off the excess.

(f) Replace the nuts [3] and washers [4] which hold the shim stack.

SUBTASK 32-61-21-220-002

(2) Measure the sensor clearance and compare the clearance to (Figure 501).

(a) If the sensor clearance is not correct, do the steps to adjust the sensor clearance again.

SUBTASK 32-61-21-390-001

(3) Seal the shim stack.

(a) Clean the shims [1].

(b) Apply sealant, A00247 on the shim surfaces.

END OF TASK

TASK 32-61-21-710-801

5. Main Landing Gear Up-and-Locked Sensor Operational Test

(Figure 501)

A. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-01-580-816	Lower the Airplane Off the Jacks (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
731	Left Main Landing Gear - Outboard Door
741	Right Main Landing Gear - Outboard Door

C. Access Panels

Number	Name/Location
112A	Forward Access Door

D. Procedure

SUBTASK 32-61-21-010-002

(1) Open this access panel:

Number	Name/Location
112A	Forward Access Door

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SUBTASK 32-61-21-580-003

(2) Lift the airplane on jacks. To jack the airplane, do this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

SUBTASK 32-61-21-860-005

(3) Raise the main landing gear.

(a) For the landing gear that the sensor is attached to, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

NOTE: Refer to (Figure 501) for the sensor location.

WARNING: MAKE SURE ALL PERSONNEL AND EQUIPMENT ARE AWAY FROM THE LANDING GEAR BEFORE HYDRAULIC POWER IS APPLIED. THE LANDING GEAR CAN MOVE SUDDENLY WHEN HYDRAULIC POWER IS APPLIED TO THE AIRPLANE. INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

(b) Supply hydraulic power to operate the landing gear. To do this, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

(c) Put the landing gear lever in the up position.

SUBTASK 32-61-21-740-001

(4) Use the PSEU BITE to test the sensor.

(a) Push the ON/OFF switch on the PSEU BITE display.

(b) Push the down arrow until OTHER FUNCTNS? shows.

(c) Push the YES switch to select OTHER FUNCTNS?.

(d) Push the down arrow until SENSOR RIGGING? shows.

(e) Push the YES switch to select SENSOR RIGGING?.

(f) Push the down arrow until the applicable sensor identification shows.

NOTE: See the table in (Figure 501) for the sensor identification and location.

(g) Push the YES switch to show the sensor number and inductance meter.

1) Make sure the PSEU display shows the sensor clearance within tolerance.

NOTE: For a description of the sensor clearance display see (Figure 501).

E. Return the airplane to its normal configuration

SUBTASK 32-61-21-740-002

(1) Push the ON/OFF switch on the PSEU module to turn off the PSEU BITE.

(a) Push the YES switch to confirm that you want to turn off the display.

SUBTASK 32-61-21-840-002

(2) Close this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-61-21-860-006

WARNING: MAKE SURE ALL PERSONNEL AND EQUIPMENT ARE AWAY FROM THE LANDING GEAR BEFORE YOU LOWER THE LANDING GEAR. INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

(3) Put the landing gear lever in the down position.

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SUBTASK 32-61-21-860-007

(4) If hydraulic power is no longer needed, do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 32-61-21-580-004

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(5) Install downlock pins on the landing gear. To do this, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-21-840-003

(6) Lower the airplane from the jack. To lower the airplane, do this task: Lower the Airplane Off the Jacks, TASK 07-11-01-580-816.

—————— END OF TASK ——————

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MAIN LANDING GEAR DOWN-AND-LOCKED SENSOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) Removal of the main landing gear down-and-locked sensor.

(2) Installation of the main landing gear down-and-locked sensor.

B. The procedures for the left and right installations are similar.

TASK 32-61-31-020-801

2. Main Landing Gear Down-and-Locked Sensor Removal

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-840-801	Prepare to Put the Airplane in the Air Mode (P/B 201)

B. Location Zones

Zone	Area
731	Left Main Landing Gear - Outboard Door
741	Right Main Landing Gear - Outboard Door

C. Prepare for Maintenance Near the Main Landing Gear

SUBTASK 32-61-31-480-009

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-31-480-010

(2) Make sure chocks are installed at the wheels.

SUBTASK 32-61-31-840-005

WARNING: OBEY THE PROCEDURE THAT PREPARES TO PUT THE AIRPLANE IN THE AIR MODE. IN THE AIR MODE, MANY OF THE AIRPLANE SYSTEMS CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(3) Do this task: Prepare to Put the Airplane in the Air Mode, TASK 32-09-00-840-801.

SUBTASK 32-61-31-860-003

(4) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Main Landing Gear Down-and-Locked Sensor Removal

SUBTASK 32-61-31-020-001

(1) Remove the sensor connector from the airplane connector.

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SUBTASK 32-61-31-020-006

(2) Remove the sensor contact pins from the connector.

SUBTASK 32-61-31-480-011

(3) Tie a string at least 8 feet (2.4 meters) long to the sensor wires.

NOTE: This string will be used to pull wire of the new sensor through the conduit. The string can be tied to the landing gear structure to make sure that the string is not pulled through the conduit.

SUBTASK 32-61-31-020-002

(4) Remove the sensor [4].

(a) Remove the bolts [1], nuts [2], and washers [3] which attach the sensor [4] to the side strut assembly.

(b) Remove the sensor [4] from the side strut assembly.

NOTE: Make sure you do not pull the string through the conduit.

(c) Remove the string from the sensor [4].

SUBTASK 32-61-31-210-001

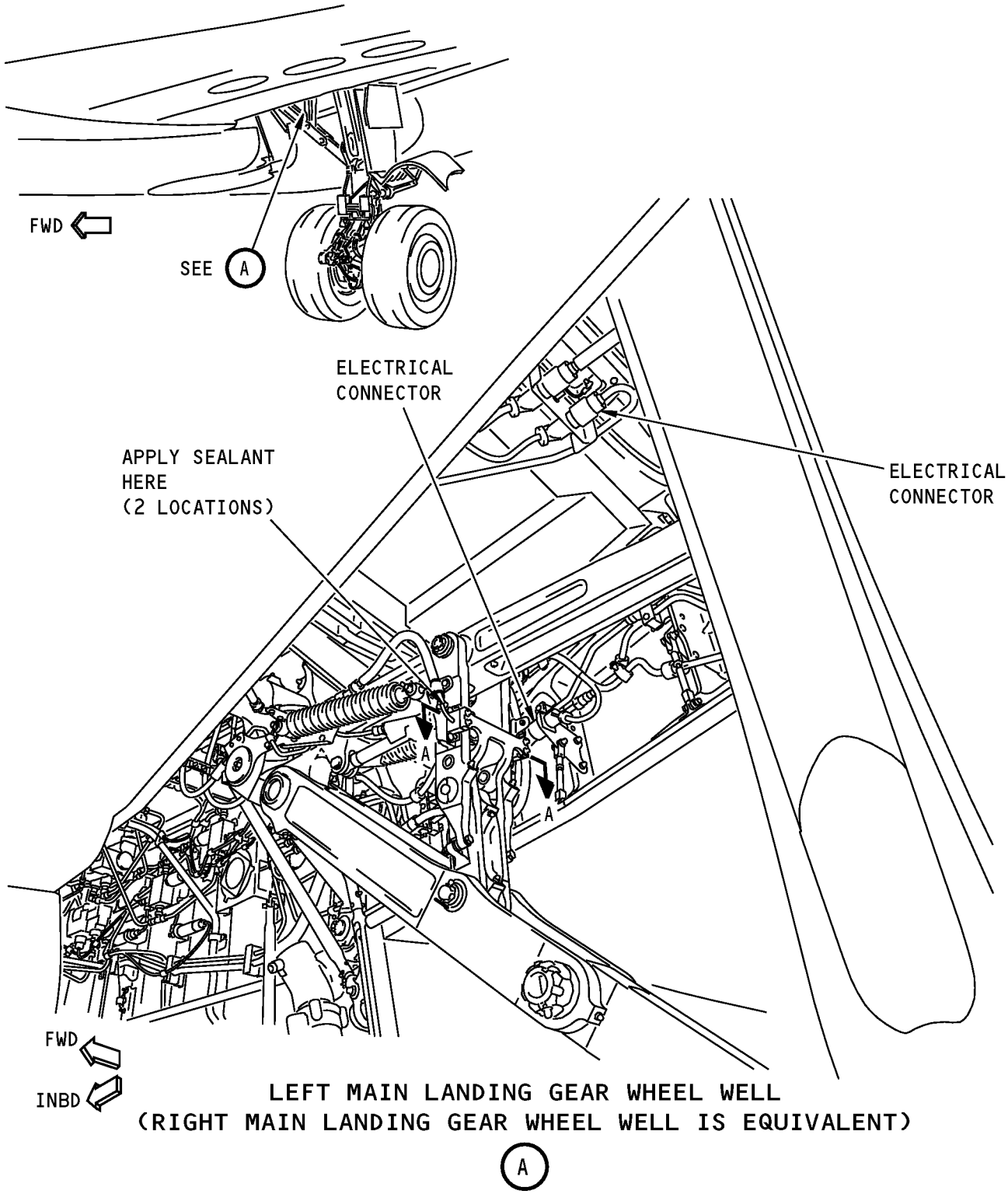
(5) Examine the sensor [4], the side strut assembly, and adjacent areas for signs of damage.

NOTE: Damage to the sensor may be an indication of an incorrect clearance between the sensor and the target.

(a) If you find damage, make a note of the damage for the installation procedure.

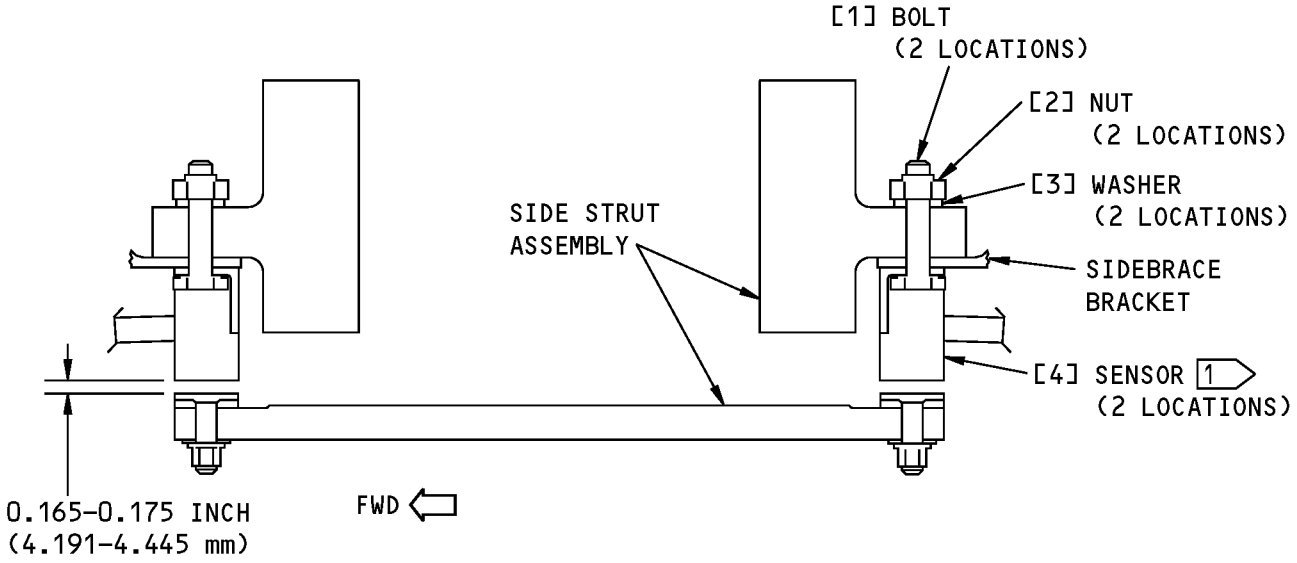
———————— END OF TASK ————————

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Main Landing Gear Down-and-Locked Sensor Installation
Figure 401 (Sheet 1 of 2)/32-61-31-990-801

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DOWN-AND-LOCKED SENSORS
A-A

1

ITEM	SENSOR NO.	MLG	LOCATION
[4]	S0071	L	FWD
[4]	S0073	R	FWD
[4]	S0301	R	AFT
[4]	S0302	L	AFT

Main Landing Gear Down-and-Locked Sensor Installation
Figure 401 (Sheet 2 of 2)/32-61-31-990-801

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TASK 32-61-31-400-801

3. Main Landing Gear Down-and-Locked Sensor Installation

(Figure 401)

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
24-22-00-860-812	Remove Electrical Power (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-840-801	Prepare to Put the Airplane in the Air Mode (P/B 201)
32-09-00-840-802	Return the Airplane Systems Back to Their Normal On Ground Condition (P/B 201)
32-61-31-220-801	Main Landing Gear Down-and-Locked Sensor Clearance Measurement (P/B 501)
32-61-31-710-801	Main Landing Gear Down-and-Locked Sensor Operational Test (P/B 501)
SWPM Ch 20	Standard Wiring Practices Manual

B. Consumable Materials

Reference	Description	Specification
A00027	Adhesive - Silicone Rubber, 1 Part, RTV	BAC5010, Type 60
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27

C. Location Zones

Zone	Area
731	Left Main Landing Gear - Outboard Door
741	Right Main Landing Gear - Outboard Door

D. Access Panels

Number	Name/Location
112A	Forward Access Door

E. Prepare for Maintenance Near the Main Landing Gear

SUBTASK 32-61-31-480-012

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-31-480-013

(2) Make sure chocks are installed at the wheels.

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SUBTASK 32-61-31-840-006

WARNING: OBEY THE PROCEDURE THAT PREPARES TO PUT THE AIRPLANE IN THE AIR MODE. IN THE AIR MODE, MANY OF THE AIRPLANE SYSTEMS CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(3) Make sure that the airplane is prepared for air mode simulation. If it is not, then, do this task: Prepare to Put the Airplane in the Air Mode, TASK 32-09-00-840-801.

SUBTASK 32-61-31-860-004

(4) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

F. Main Landing Gear Down-and-Locked Sensor Installation

SUBTASK 32-61-31-350-001

(1) If you found damage to the sensor [5] or the adjacent area during the removal procedure, do these steps:

(a) Repair or replace all damaged components or areas.

NOTE: Damage to the sensor, the target, or the adjacent areas may be an indication of an incorrect sensor clearance.

(b) Measure the sensor [5] clearance. To measure the clearance, do this task: Main Landing Gear Down-and-Locked Sensor Clearance Measurement, TASK 32-61-31-220-801.

SUBTASK 32-61-31-420-001

(2) Prepare the replacement sensor [5] for installation on the airplane.

(a) Cut the sensor leads to the correct length:

1) S0071 - #1 L Gear Down & Locked Sensor: 64 inches (1.6 meters)

2) S0073 - #1 R Gear Down & Locked Sensor: 64 inches (1.6 meters)

3) S0301 - #2 L Gear Down & Locked Sensor: 52 inches (1.3 meters)

4) S0302 - #2 R Gear Down & Locked Sensor: 52 inches (1.3 meters)

(b) Attach the contact pins to the sensor leads.

NOTE: Refer to SWPM Ch 20, if it is necessary.

SUBTASK 32-61-31-420-002

(3) Install the main landing gear down-and-locked sensor [4].

(a) Attach the string to the new sensor leads.

(b) Pull the sensor leads through the conduit.

(c) Position the sensor [4] and the bracket on the side strut assembly.

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WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST BMS 3-27 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(d) Apply a thin coat of compound, C50056 or compound, C00913 (alternate) to thread reliefs, threads, and washer faces prior to assembly.

(e) Install the bolts [1], washers [3], and nuts [2].

SUBTASK 32-61-31-420-003

(4) Connect the sensor leads to the airplane.

(a) Insert the connector pins into the connector.

(b) Attach the plug side of the connector to the jack side of the connector at the disconnect bracket.

SUBTASK 32-61-31-390-002

(5) Seal the end of the conduit near the sensor with 1 inch (25.4 mm) of adhesive, A00027.

NOTE: Make sure that the sensor wiring is not touching the flared end of the conduit.

G. Main Landing Gear Down-and-Locked Sensor Installation Test

SUBTASK 32-61-31-860-002

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

SUBTASK 32-61-31-860-006

(2) Do this task: Return the Airplane Systems Back to Their Normal On Ground Condition, TASK 32-09-00-840-802.

SUBTASK 32-61-31-860-007

(3) If it is necessary, supply electrical power. To do this, do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 32-61-31-010-001

(4) Open this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-61-31-740-001

(5) Use the PSEU BITE to test the sensor.

(a) Push the ON/OFF switch on the PSEU BITE display.

(b) Push the down arrow until OTHER FUNCTNS? shows.

(c) Push the YES switch to select OTHER FUNCTNS?.

(d) Push the down arrow until SENSOR RIGGING? shows.

(e) Push the YES switch to select SENSOR RIGGING?.

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(f) Push the down arrow until the applicable sensor identification shows.

NOTE: See the table in (Figure 401) for the sensor identification and location.

(g) Push the YES switch to show the sensor number and inductance meter.

1) Make sure the PSEU display shows the sensor clearance within tolerance.

NOTE: For a description of the sensor clearance display see (TASK 32-61-31-710-801).

H. Put the Airplane Back to Its Usual Condition

SUBTASK 32-61-31-860-005

(1) Push the ON/OFF switch on PSEU BITE display to turn the PSEU BITE off.

SUBTASK 32-61-31-860-008

(2) If it is not necessary, remove electrical power. To do this, do this task: Remove Electrical Power, TASK 24-22-00-860-812.

SUBTASK 32-61-31-840-002

(3) Close this access panel:

Number	Name/Location
112A	Forward Access Door

END OF TASK

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MAIN LANDING GEAR DOWN-AND-LOCKED SENSOR - ADJUSTMENT/TEST

1. General

A. This procedure has these tasks:

(1) Main landing gear down-and-locked sensor clearance measurement.

(2) Main landing gear down-and-locked sensor clearance adjustment.

(3) Main landing gear down-and-locked sensor operational test.

B. The procedures for the left and right installations are similar.

TASK 32-61-31-220-801

2. Main Landing Gear Down-and-Locked Sensor Clearance Measurement

(Figure 501)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

C. Prepare to Measure the Clearance

SUBTASK 32-61-31-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-31-480-004

(2) Make sure chocks are installed at the wheels.

D. Measure the Main Landing Gear Down-and-Locked Sensor Clearance

SUBTASK 32-61-31-220-001

(1) Measure the clearance between the sensor and target.

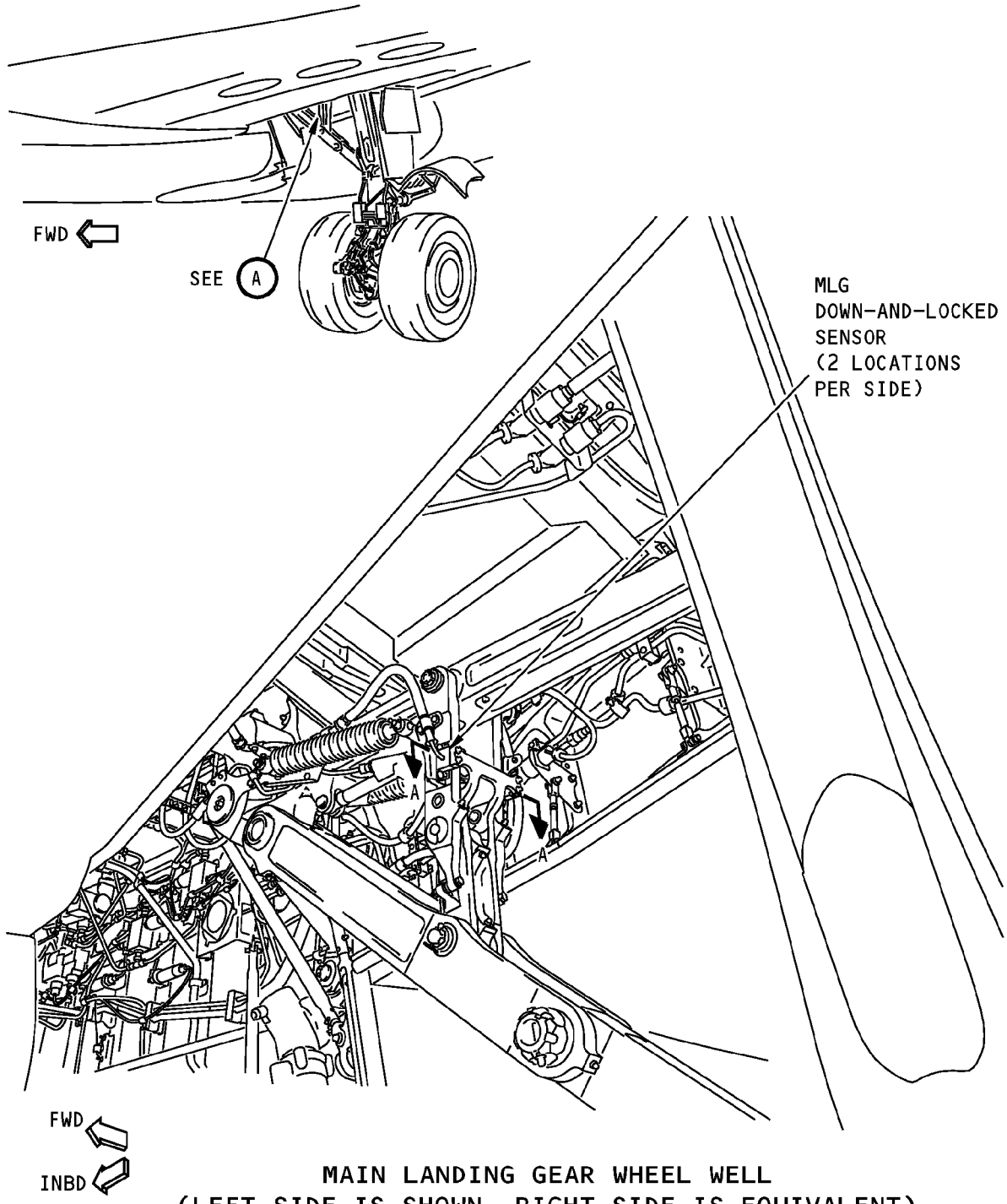
SUBTASK 32-61-31-820-001

(2) If the sensor clearance is outside the tolerance shown in (Figure 501), do this task: Main Landing Gear Down-and-Locked Sensor Clearance Adjustment, TASK 32-61-31-400-802.

NOTE: Write down the measured clearance so you will know what adjustments must be made.

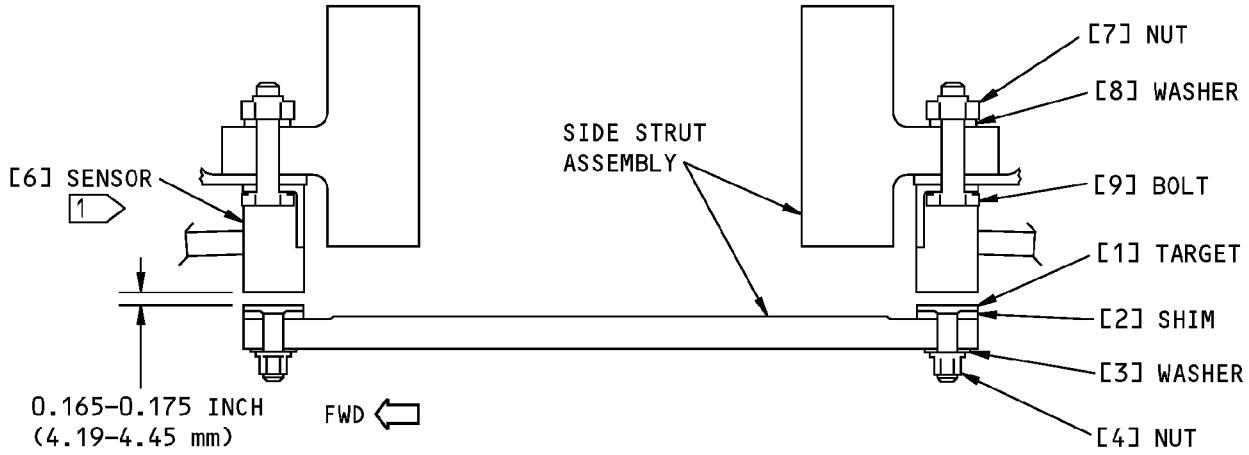
END OF TASK

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Main Landing Gear Down-and-Locked Sensor Adjustment
Figure 501 (Sheet 1 of 2)/32-61-31-990-802

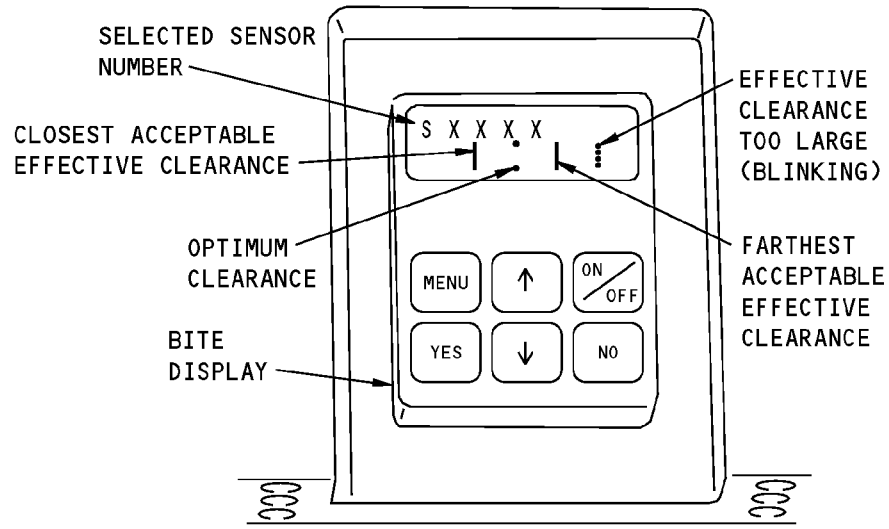
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DOWN-AND-LOCKED SENSORS
A-A

1

SYSTEM NO.	SENSOR NO.	MLG	LOCATION
[1]	S0071	L	FWD
[1]	S0073	R	FWD
[2]	S0301	R	AFT
[2]	S0302	L	AFT



PROXIMITY SWITCH
ELECTRONICS UNIT (PSEU)

Main Landing Gear Down-and-Locked Sensor Adjustment
Figure 501 (Sheet 2 of 2)/32-61-31-990-802

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TASK 32-61-31-400-802

3. Main Landing Gear Down-and-Locked Sensor Clearance Adjustment

(Figure 501)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27

C. Location Zones

Zone	Area
734	Left Main Landing Gear
744	Right Main Landing Gear

D. Prepare to Adjust the Clearance

SUBTASK 32-61-31-480-005

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-31-480-006

(2) Make sure chocks are installed at the wheels.

E. Adjust the Main Landing Gear Down-and-Locked Sensor Clearance

SUBTASK 32-61-31-020-005

(1) Do these steps to move the sensor [6] out of the way.

(a) Remove the nuts [7], washers [8], and bolts [9] which secure the sensor [6] to the side strut assembly.

(b) Remove the sensor [6] from the side strut assembly.

SUBTASK 32-61-31-020-003

(2) Remove the nuts [4] and washers [3].

SUBTASK 32-61-31-020-004

(3) Remove the target [1] and shims [2].

SUBTASK 32-61-31-110-001

(4) Clean the shims [2] and mounting surfaces.

SUBTASK 32-61-31-820-002

(5) Remove or add shims [2] as required to get the necessary clearance.

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SUBTASK 32-61-31-620-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(6) Apply a thin coat of compound, C00913 to the thread reliefs, threads, and washer faces. Wipe off the excess.

SUBTASK 32-61-31-420-004

(7) Assemble the target assembly:

(a) Position the shims [2] and target [1] on the mounting bracket.

(b) Install the nuts [4] and washers [3].

SUBTASK 32-61-31-420-005

(8) Do these steps to re-attach the main landing gear down-and-locked sensor to the side strut assembly.

(a) Position the sensor [6] and the bracket on the side strut assembly.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(b) Apply a thin coat of compound, C00913 to thread reliefs, threads, and washer faces prior to assembly.

(c) Install the nuts [7], washers [8], and bolts [9].

SUBTASK 32-61-31-220-002

(9) Measure the sensor clearance and compare the measurement to (Figure 501).

(a) If the sensor clearance is not correct, then do the steps to adjust the sensor clearance again.

SUBTASK 32-61-31-390-001

(10) Seal the shim stack.

(a) Clean the shims.

(b) Brush primer, C00259 on the shim surfaces.

(c) Apply sealant, A00247 to the shim surfaces.

END OF TASK

TASK 32-61-31-710-801

4. Main Landing Gear Down-and-Locked Sensor Operational Test

(Figure 501)

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
24-22-00-860-812	Remove Electrical Power (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

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B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well

C. Access Panels

Number	Name/Location
112A	Forward Access Door

D. Prepare for the Operational Test

SUBTASK 32-61-31-480-007

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-31-480-008

(2) Make sure chocks are installed at the wheels.

SUBTASK 32-61-31-860-009

(3) If it is necessary, supply electrical power. To do this, do this task: Supply Electrical Power, TASK 24-22-00-860-811.

E. Procedure

SUBTASK 32-61-31-010-002

(1) Open this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-61-31-740-002

(2) Use the PSEU BITE to test the sensor.

(a) Push the ON/OFF switch on the PSEU BITE display.

(b) Push the down arrow until OTHER FUNCTNS? shows.

(c) Push the YES switch to select OTHER FUNCTNS?.

(d) Push the down arrow until SENSOR RIGGING? shows.

(e) Push the YES switch to select SENSOR RIGGING?.

(f) Push the down arrow until the applicable sensor identification shows.

NOTE: See the table in (Figure 501) for the sensor identification and location.

(g) Push the YES switch to select the sensor.

1) Make sure the PSEU display shows the sensor clearance within tolerance.

NOTE: For a description of the sensor clearance display see (Figure 501).

F. Return the airplane to its normal condition.

SUBTASK 32-61-31-840-003

(1) Push the ON/OFF switch on the PSEU module to turn off the PSEU BITE.

(a) Push the YES switch to confirm that you want to turn off the display.

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SUBTASK 32-61-31-840-004

(2) Close this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-61-31-860-010

(3) If it is not necessary, remove electrical power. To do this, do this task: Remove Electrical Power, TASK 24-22-00-860-812.

——————— END OF TASK ———————

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NOSE LANDING GEAR LOCK SENSOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) Removal of the nose landing gear lock sensor.

(2) Installation of the nose landing gear lock sensor.

B. The procedures for the number 1 and number 2 installations are similar.

TASK 32-61-41-020-801

2. Nose Landing Gear Lock Sensor Removal

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-840-801	Prepare to Put the Airplane in the Air Mode (P/B 201)

B. Location Zones

Zone	Area
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-61-41-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-41-480-002

(2) Make sure chocks are installed at the wheels.

SUBTASK 32-61-41-840-001

WARNING: OBEY THE PROCEDURE THAT PREPARES TO PUT THE AIRPLANE IN THE AIR MODE. IN THE AIR MODE, MANY OF THE AIRPLANE SYSTEMS CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(3) Do this task: Prepare to Put the Airplane in the Air Mode, TASK 32-09-00-840-801.

SUBTASK 32-61-41-860-001

(4) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Nose Landing Gear Lock Sensor Removal

SUBTASK 32-61-41-020-001

(1) Disconnect the sensor wires in the junction box:

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(a) Remove the screws [1], and washers [2] that secure the junction box cover [3].

(b) Remove the junction box cover [3].

(c) Remove the sensor wire contacts from the terminal block in the junction box.

(d) Attach a string 5 feet long to the sensor wire.

NOTE: This string will be used to pull wire of the new sensor through the conduit. The string can be tied to the landing gear structure to ensure that the string is not pulled through the conduit.

SUBTASK 32-61-41-020-002

(2) Remove the sensor [4]:

(a) Remove the nuts [7], washers [6], bolts [5], and clamps [8] which secure the sensor [4] to the mounting bracket.

(b) Remove the sensor [4] from the mounting bracket.

(c) Pull the sensor wires out of the conduit.

NOTE: Make sure you do not pull the string through the conduit.

(d) Remove the string from the sensor [4].

(e) Remove the sealant from the conduit end.

SUBTASK 32-61-41-210-001

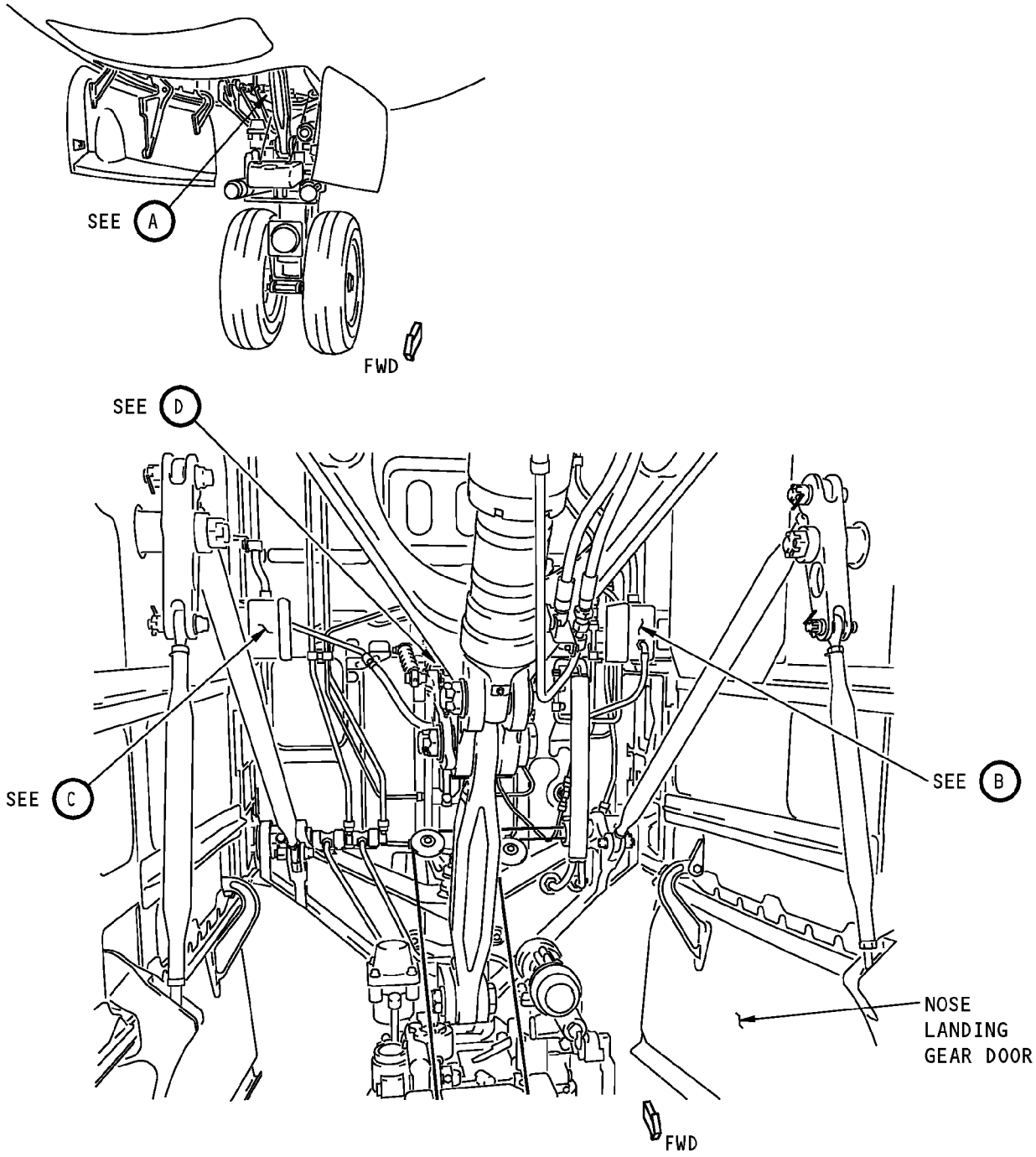
(3) Examine the sensor [4] and adjacent areas for signs of damage.

NOTE: Damage to the sensor may be an indication of an incorrect clearance between the sensor and the target.

(a) If you find damage, make a note of the damage for the installation procedure.

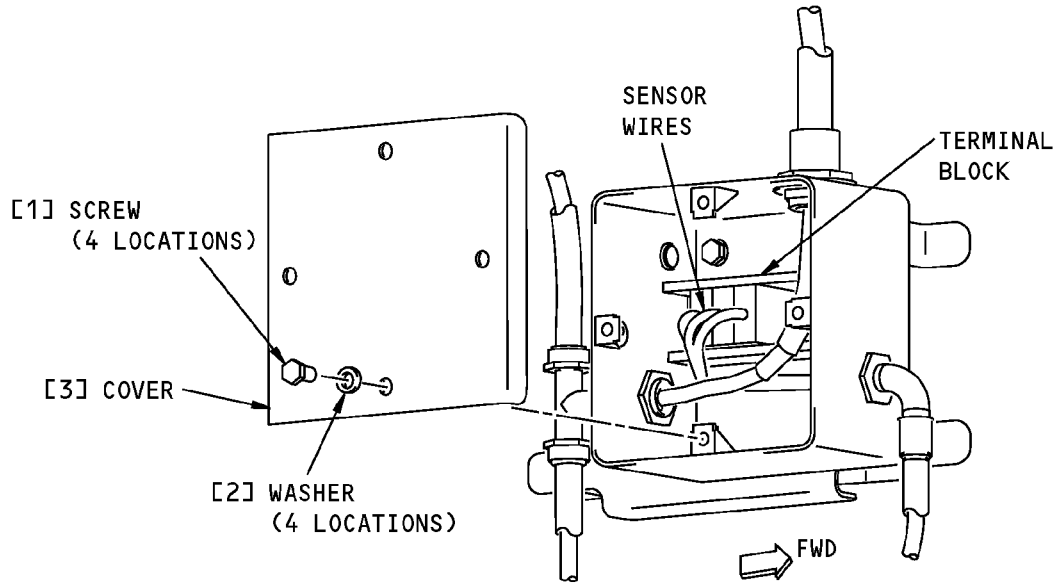
———————— END OF TASK ————————

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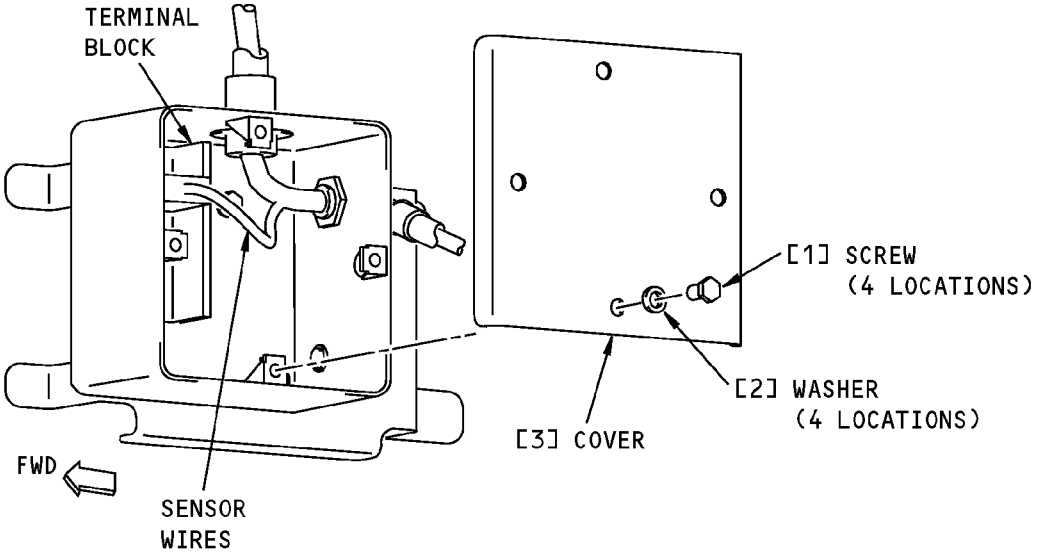
Nose Landing Gear Lock Sensor Installation
Figure 401 (Sheet 1 of 3)/32-61-41-990-801

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LEFT JUNCTION BOX

B

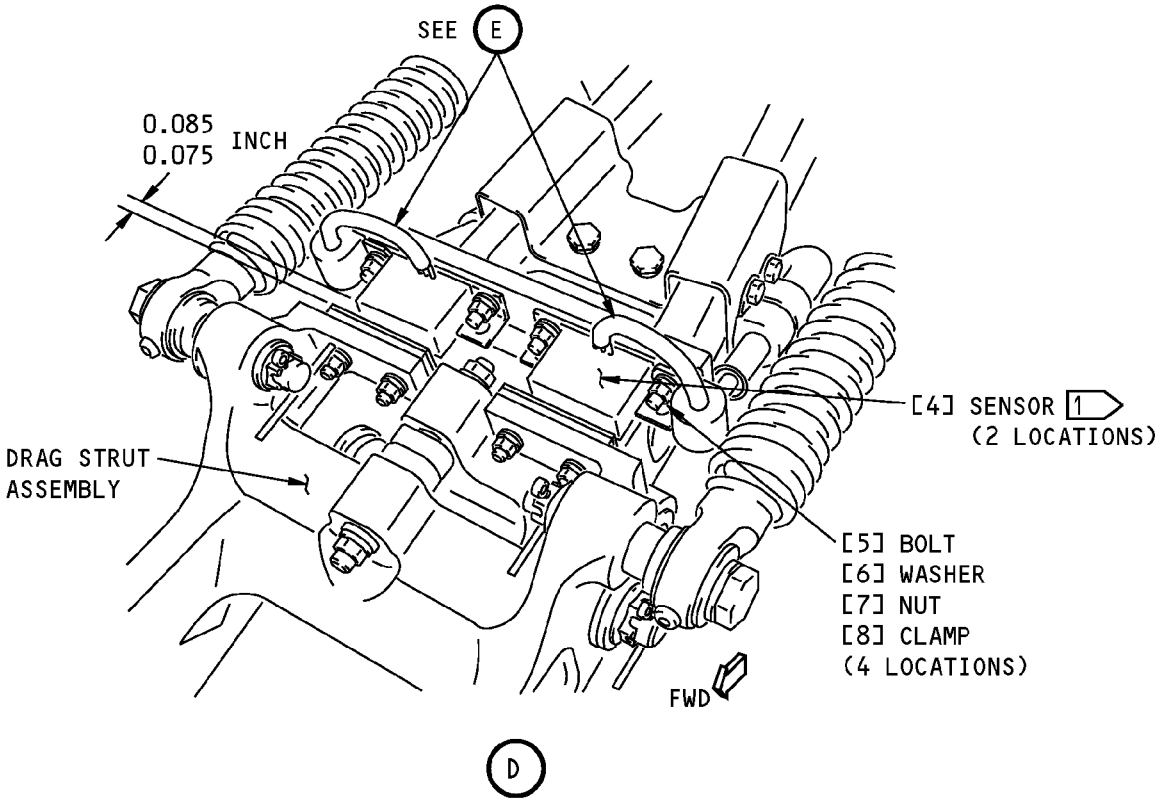


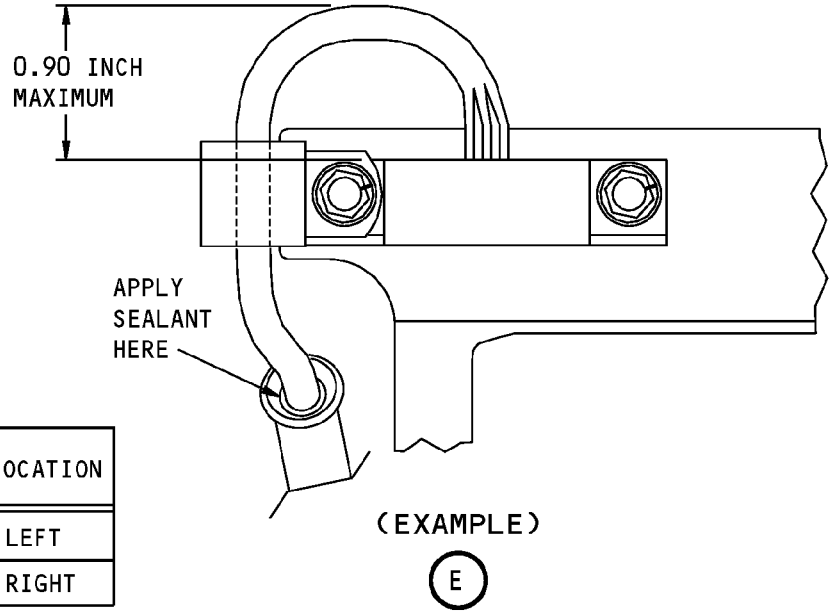
RIGHT JUNCTION BOX

C

Nose Landing Gear Lock Sensor Installation
Figure 401 (Sheet 2 of 3)/32-61-41-990-801

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1

SYSTEM NO.	SENSOR NO.	LOCATION
1	S846	LEFT
2	S854	RIGHT

Nose Landing Gear Lock Sensor Installation
Figure 401 (Sheet 3 of 3)/32-61-41-990-801

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TASK 32-61-41-400-801

3. Nose Landing Gear Lock Sensor Installation

(Figure 401)

A. References

Reference	Title
24-22-00-860-812	Remove Electrical Power (P/B 201)
24-22-00-860-813	Supply External Power (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-840-801	Prepare to Put the Airplane in the Air Mode (P/B 201)
32-09-00-840-802	Return the Airplane Systems Back to Their Normal On Ground Condition (P/B 201)
32-61-41-220-801	Nose Landing Gear Lock Sensor Clearance Measurement (P/B 501)
32-61-41-400-802	Nose Landing Gear Lock Sensor Clearance Adjustment (P/B 501)
SWPM 20-83-01/001	Standard Wiring Practices Manual

B. Consumable Materials

Reference	Description	Specification
A00230	Compound - Electrical Insulating Coating	BMS 5-37
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27

C. Location Zones

Zone	Area
731	Left Main Landing Gear - Outboard Door
741	Right Main Landing Gear - Outboard Door

D. Prepare for the Installation

SUBTASK 32-61-41-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-41-480-004

(2) Make sure chocks are installed at the wheels.

SUBTASK 32-61-41-840-002

WARNING: OBEY THE PROCEDURE THAT PREPARES TO PUT THE AIRPLANE IN THE AIR MODE. IN THE AIR MODE, MANY OF THE AIRPLANE SYSTEMS CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(3) Make sure the airplane systems have been prepared for air mode simulation. If they are not, then, do this task: Prepare to Put the Airplane in the Air Mode, TASK 32-09-00-840-801.

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SUBTASK 32-61-41-860-002

(4) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

E. Nose Landing Gear Lock Sensor Installation

SUBTASK 32-61-41-400-001

(1) If you found damage to the sensor [4] or the adjacent area during the removal procedure, do these steps:

(a) Repair or replace all damaged components or areas.

NOTE: Damage to the sensor, the target, or the adjacent areas may be an indication of an incorrect sensor clearance.

(b) Measure the sensor [4] clearance. To measure the clearance, do this task: Nose Landing Gear Lock Sensor Clearance Measurement, TASK 32-61-41-220-801.

SUBTASK 32-61-41-350-001

(2) Cut the sensor leads to the correct length:

(a) S846 - #1 Nose Landing Gear Lock: 42.5 inches (1.2 meters)

(b) S854 - #2 Nose Landing Gear Lock: 37.5 inches (95.3 cm)

SUBTASK 32-61-41-420-001

(3) Attach the contacts to the sensor wires (SWPM 20-83-01/001).

SUBTASK 32-61-41-420-002

(4) Install the sensor [4]:

(a) Position the sensor [4] on the bracket.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST BMS 3-27 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(b) Apply a thin coat of compound, C50056 or compound, C00913 (alternate) to the thread reliefs, threads, and washer faces. Wipe off the excess.

(c) Install the bolts [5], washers [6], and nuts [7].

SUBTASK 32-61-41-420-003

(5) Attach the sensor wiring to the landing gear structure:

(a) Position the sensor wiring in the clamp [8].

(b) Loosely attach the clamp to the landing gear structure.

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(c) Make sure the sensor wiring loop is a maximum of 0.9 inches (22.9 mm) as shown in (Figure 401).

(d) Tighten the clamp [8].

SUBTASK 32-61-41-410-001

(6) Attach the sensor wires to the airplane:

(a) Attach the string to the sensor wires.

(b) Pull the wires through the conduit to the junction box.

(c) Remove the string from the sensor wires.

(d) Install the sensor contacts into the terminal block:

1) Red wire goes into position A.

2) Yellow wire goes into position E.

3) Blue wire goes into position C.

SUBTASK 32-61-41-410-002

(7) Install the junction box cover [3].

SUBTASK 32-61-41-410-003

(8) Install the washers [2] and screws [1] that secure the junction box cover [3].

F. Nose Landing Gear Lock Sensor Installation Test

SUBTASK 32-61-41-720-001

(1) Do a post installation check of the nose gear lock sensor:

(a) Measure the clearance between the sensor and target with a feeler gage.

1) If the clearance is not as shown in Figure 401, then, do this task: Nose Landing Gear Lock Sensor Clearance Adjustment, TASK 32-61-41-400-802.

(b) If it is necessary, then, do this task: Supply External Power, TASK 24-22-00-860-813.

(c) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

(d) Do this task: Return the Airplane Systems Back to Their Normal On Ground Condition, TASK 32-09-00-840-802.

(e) Make sure nose gear lock sensor sends a NEAR status to the PSEU.

1) Turn on the PSEU BITE by pushing the ON/OFF switch.

2) Push the down switch until OTHER FUNCTNS? is displayed.

3) Push the YES switch to select OTHER FUNCTNS?.

4) Push the down switch until I/O MONITOR? is displayed.

5) Push the YES switch to select I/O MONITOR.

6) Push the down switch until SENSORS? is displayed.

7) Push the YES switch to select SENSORS.

8) Push the down switch until the sensor number is displayed.

NOTE: S846 is the number 1 sensor. S854 is the number 2 sensor.

9) Make sure the display shows the sensor number and TGT NEAR.

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10) Turn off the PSEU BITE by pushing the ON/OFF switch.

SUBTASK 32-61-41-390-001

(2) Seal the sensor wires in the conduit end.

(a) Fill the conduit end with compound, A00230 [E, Type 1, class B2].

(b) Make sure the sealant enters the conduit so that it is visible through the inspection holes on the conduit.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 32-61-41-860-003

(1) If it is not necessary, remove electrical power. To do this, do this task: Remove Electrical Power, TASK 24-22-00-860-812.

END OF TASK

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NOSE LANDING GEAR LOCK SENSOR - ADJUSTMENT/TEST

1. General

A. This procedure has these tasks:

(1) Nose landing gear lock sensor clearance measurement.

(2) Nose landing gear lock sensor clearance adjustment.

(3) Nose landing gear lock sensor operational test.

B. The procedures for both sensor installations are similar.

TASK 32-61-41-220-801

2. Nose Landing Gear Lock Sensor Clearance Measurement

(Figure 501)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
713	Nose Landing Gear

C. Prepare to Measure the Clearance

SUBTASK 32-61-41-480-005

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-41-480-006

(2) Make sure chocks are installed at the wheels.

D. Measure the Nose Landing Gear Lock Sensor Clearance

SUBTASK 32-61-41-220-001

(1) Measure the clearance between the sensor and target.

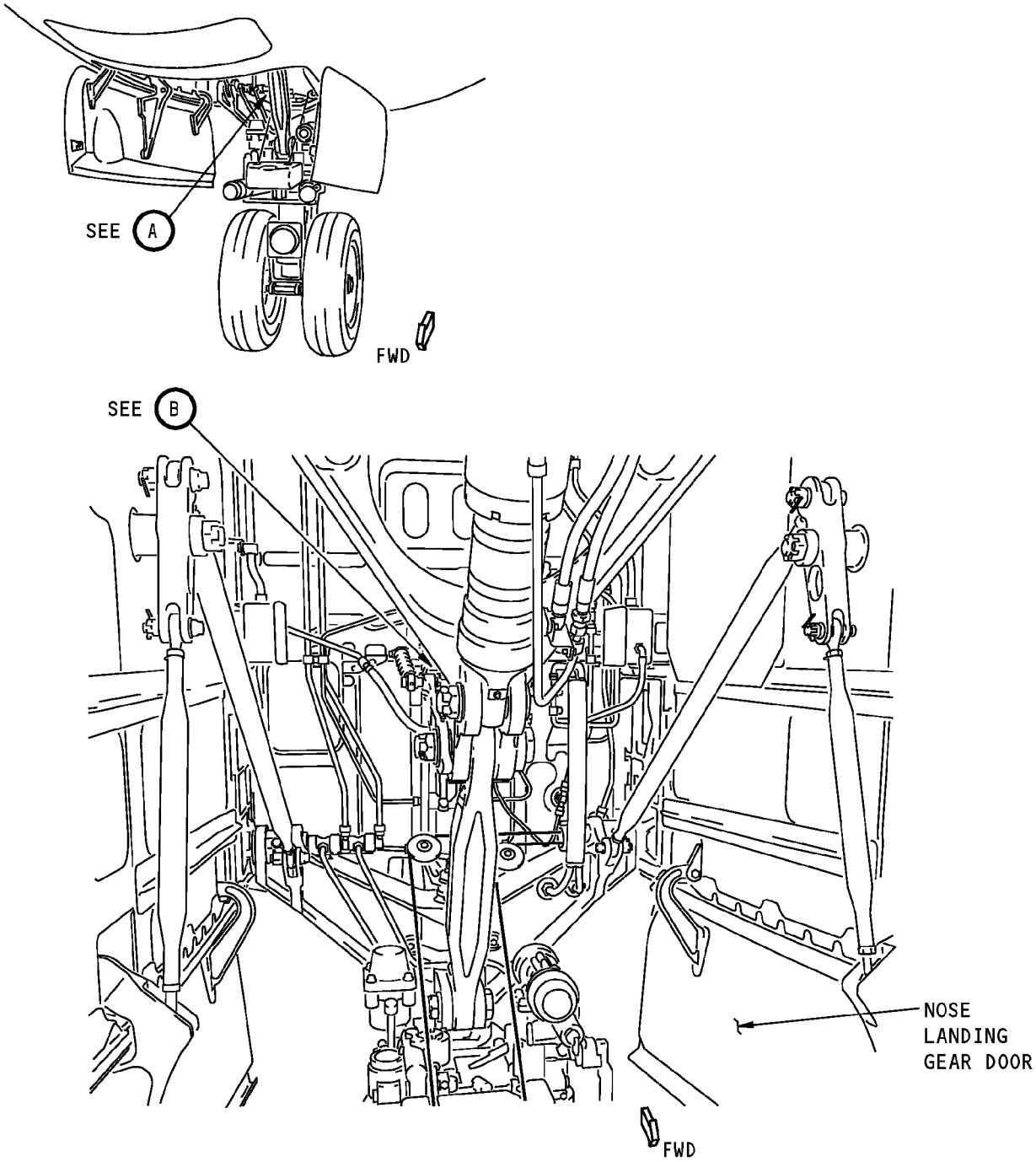
SUBTASK 32-61-41-820-001

(2) If the sensor clearance is outside the tolerance shown in (Figure 501), then, do this task: Nose Landing Gear Lock Sensor Clearance Adjustment, TASK 32-61-41-400-802.

NOTE: Write down the measured clearance so you will know what adjustments must be made.

END OF TASK

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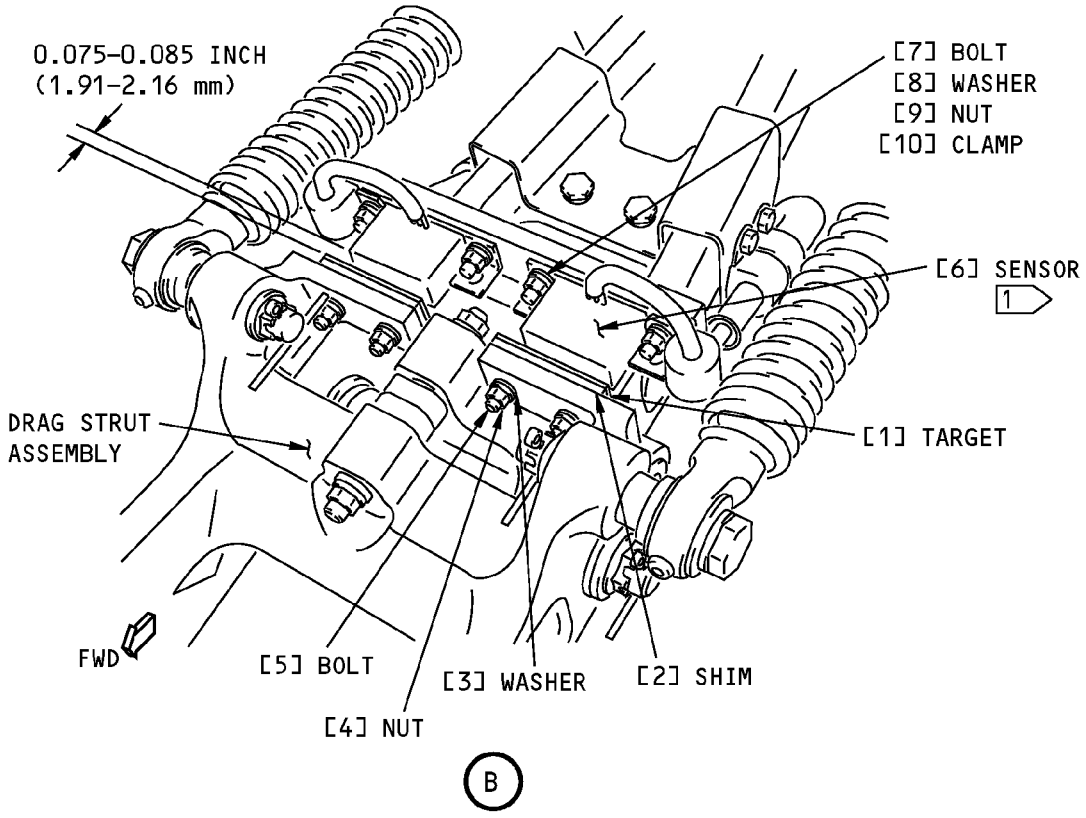


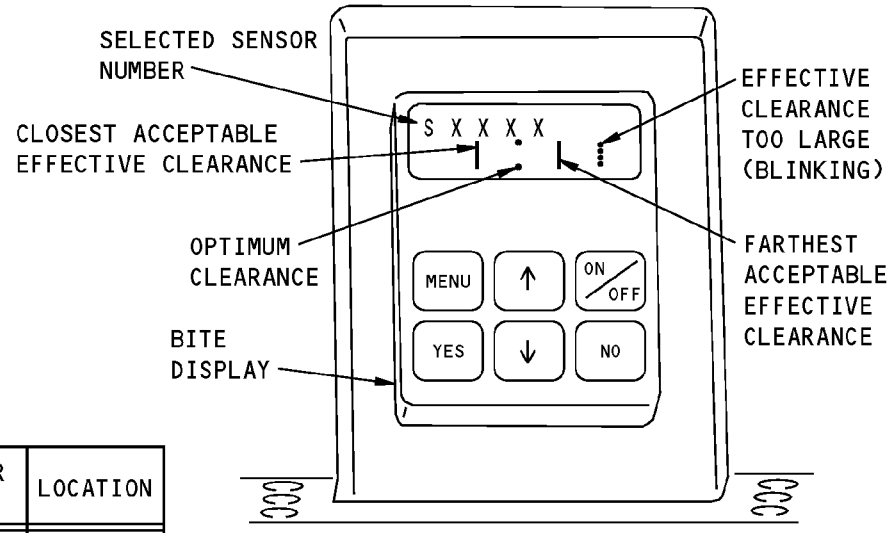
NOSE LANDING GEAR WHEEL WELL

A

Nose Landing Gear Lock Sensor Adjustment
Figure 501 (Sheet 1 of 2)/32-61-41-990-802

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1

SYSTEM NO.	SENSOR NO.	LOCATION
1	S846	L
2	S854	R

Nose Landing Gear Lock Sensor Adjustment
Figure 501 (Sheet 2 of 2)/32-61-41-990-802

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TASK 32-61-41-400-802

3. Nose Landing Gear Lock Sensor Clearance Adjustment

(Figure 501)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27

C. Location Zones

Zone	Area
713	Nose Landing Gear

D. Prepare for Maintenance

SUBTASK 32-61-41-480-007

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, then, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-41-480-008

(2) Make sure chocks are installed at the wheels.

E. Adjust the Nose Landing Gear Lock Sensor Clearance

SUBTASK 32-61-41-020-005

(1) Do these steps to remove the nose landing gear locked sensor [6] from the drag strut:

(a) Remove the bolts [7], washers [8], nuts [9], and clamp [10] from the sensor [6].

(b) Move the sensor [6] away from the drag strut.

SUBTASK 32-61-41-020-003

(2) Do these steps to remove the target [1] and shims [2]:

(a) Remove the bolts [5], nuts [4], and washers [3].

(b) Remove the target [1] and shims [2].

SUBTASK 32-61-41-110-001

(3) Clean the shims [2] and mounting surfaces.

SUBTASK 32-61-41-820-002

(4) Remove or add shims [2] as required to get the necessary clearance.

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SUBTASK 32-61-41-620-001

(5) Apply a thin coat of compound, C00913 to the thread reliefs, threads, and washer faces. Wipe off the excess.

SUBTASK 32-61-41-420-004

(6) Do these steps to assemble the target:

(a) Position the shims [2] and target [1] on the mounting bracket.

(b) Install the bolts [5], nuts [4], and washers [3].

SUBTASK 32-61-41-420-005

(7) Do these steps to re-install the sensor:

(a) Position the sensor on the mounting bracket.

(b) Apply a thin coat of compound, C00913 to the thread reliefs, threads, and washer faces. Wipe off the excess.

(c) Attach the sensor to the drag strut with the bolts [7], washers [8], nuts [9], and clamp [10]attaching hardware.

SUBTASK 32-61-41-220-002

(8) Measure the sensor clearance and compare the clearance to (Figure 501).

(a) If the sensor clearance is not correct, then do the steps to adjust the sensor clearance again.

SUBTASK 32-61-41-390-002

(9) Do these steps to seal the shim stack:

(a) Clean the shims.

(b) Brush primer, C00259 on the shim surfaces.

(c) Apply sealant, A00247 to the shim surfaces.

END OF TASK

TASK 32-61-41-710-801

4. Nose Landing Gear Lock Sensor Operational Test

(Figure 501)

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
24-22-00-860-812	Remove Electrical Power (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well

C. Access Panels

Number	Name/Location
112A	Forward Access Door

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D. Prepare for the Operational Test

SUBTASK 32-61-41-480-009

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-41-480-010

(2) Make sure chocks are installed at the wheels.

SUBTASK 32-61-41-860-004

(3) If it is necessary, supply electrical power. To do this, do this task: Supply Electrical Power, TASK 24-22-00-860-811.

E. Operational Test of the Nose Landing Gear Lock Sensor

SUBTASK 32-61-41-010-001

(1) Open this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-61-41-740-001

(2) Use the PSEU BITE to test the sensor.

(a) Push the ON/OFF switch on the PSEU BITE display.

(b) Push the down arrow until OTHER FUNCTNS? shows.

(c) Push the YES switch to select OTHER FUNCTNS?.

(d) Push the down arrow until SENSOR RIGGING? shows.

(e) Push the YES switch to select SENSOR RIGGING?.

(f) Push the down arrow until the applicable sensor identification shows.

NOTE: See the table in (Figure 501) for the sensor identification and location.

(g) Push the YES switch to select the sensor.

1) Make sure the PSEU display shows the sensor clearance within tolerance.

NOTE: For a description of the sensor clearance display see (Figure 501).

F. Return the airplane to its normal condition.

SUBTASK 32-61-41-840-003

(1) Push the ON/OFF switch on the PSEU BITE display to turn off the PSEU BITE.

(a) Push the YES switch to confirm that you want to turn off the display.

SUBTASK 32-61-41-840-004

(2) Close this access panel:

Number	Name/Location
112A	Forward Access Door

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SUBTASK 32-61-41-860-005

(3) If it is not necessary, remove electrical power. To do this, do this task: Remove Electrical Power, TASK 24-22-00-860-812.

END OF TASK

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NOSE LANDING GEAR DOWN POSITION SENSOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) Removal of the nose landing gear down position sensor.

(2) Installation of the nose landing gear down position sensor.

B. The procedures for the #1 and #2 sensor installations are similar.

TASK 32-61-51-020-801

2. Nose Landing Gear Down Position Sensor Removal

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-840-801	Prepare to Put the Airplane in the Air Mode (P/B 201)

B. Location Zones

Zone	Area
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

C. Prepare for the Removal

SUBTASK 32-61-51-480-005

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-51-480-006

(2) Make sure chocks are installed at the wheels.

SUBTASK 32-61-51-840-003

WARNING: OBEY THE PROCEDURE THAT PREPARES TO PUT THE AIRPLANE IN THE AIR MODE. IN THE AIR MODE, MANY OF THE AIRPLANE SYSTEMS CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(3) Do this task: Prepare to Put the Airplane in the Air Mode, TASK 32-09-00-840-801.

SUBTASK 32-61-51-860-001

(4) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Nose Landing Gear Down Position Sensor Removal

SUBTASK 32-61-51-020-003

(1) Disconnect the sensor wires in the junction box:

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(a) Remove the screws [1] and washers [2] that hold the junction box cover [3].

(b) Remove the junction box cover [3].

(c) Remove the sensor wire contacts from the terminal block in the junction box.

(d) Attach a string 5 feet long to the sensor wire.

NOTE: This string will be used to pull wire of the new sensor through the conduit. You can tied the string to the landing gear structure to make sure the string is not pulled through the conduit.

SUBTASK 32-61-51-020-004

(2) Remove the sensor [6]:

(a) Remove the bolts [4] and washers [5] that hold the sensor [6] to the mounting bracket.

(b) Remove the sensor [6] from the bracket.

(c) Pull the sensor wires out of the conduit.

NOTE: Make sure you do not pull the string through the conduit.

(d) Remove the string from the sensor [6].

SUBTASK 32-61-51-210-001

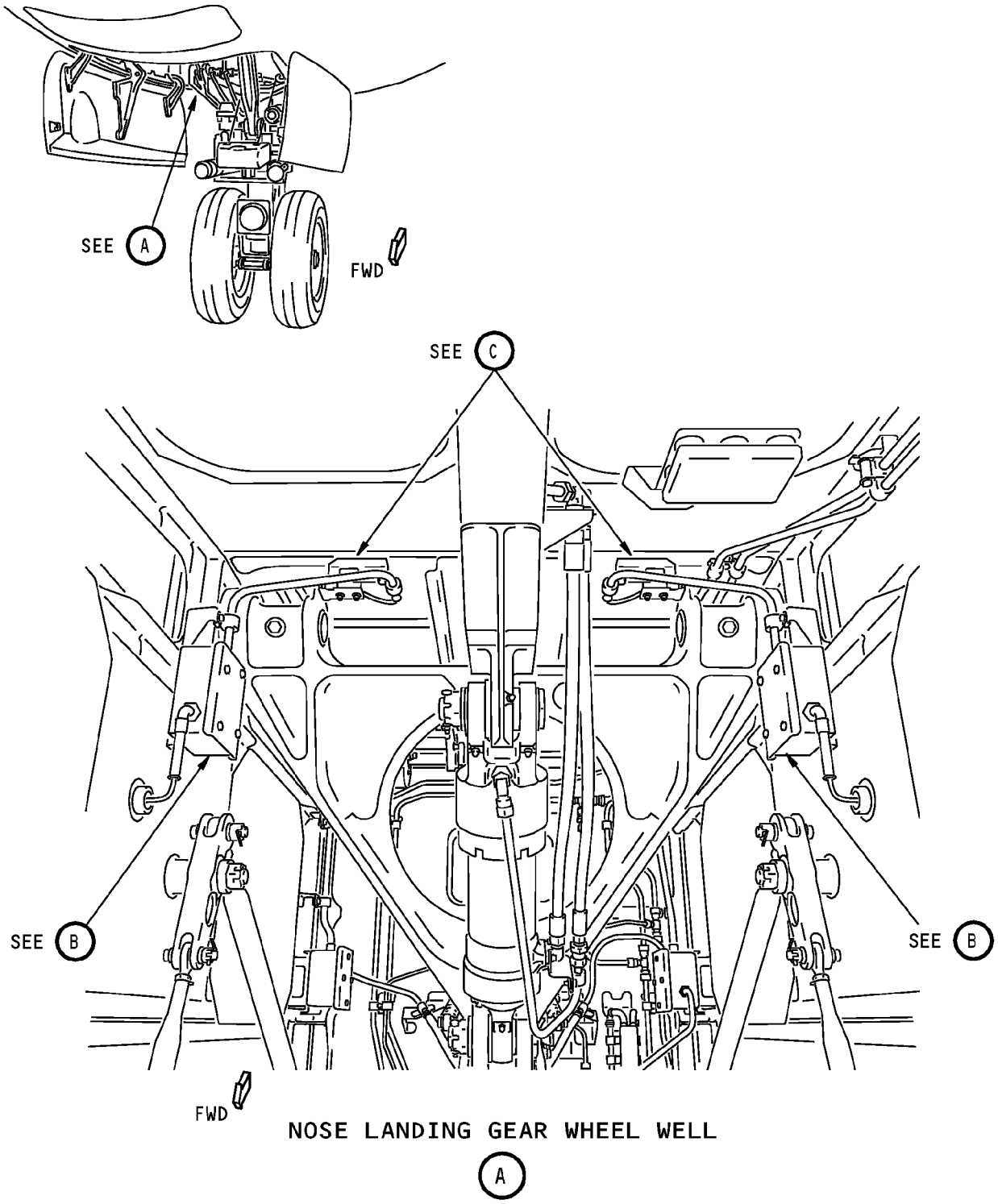
(3) Examine the sensor [6] and adjacent areas for signs of damage.

NOTE: Damage to the sensor [6] can be an indication of an incorrect clearance between the sensor [6] and the target.

(a) If you find damage, make a note of the damage for the installation procedure.

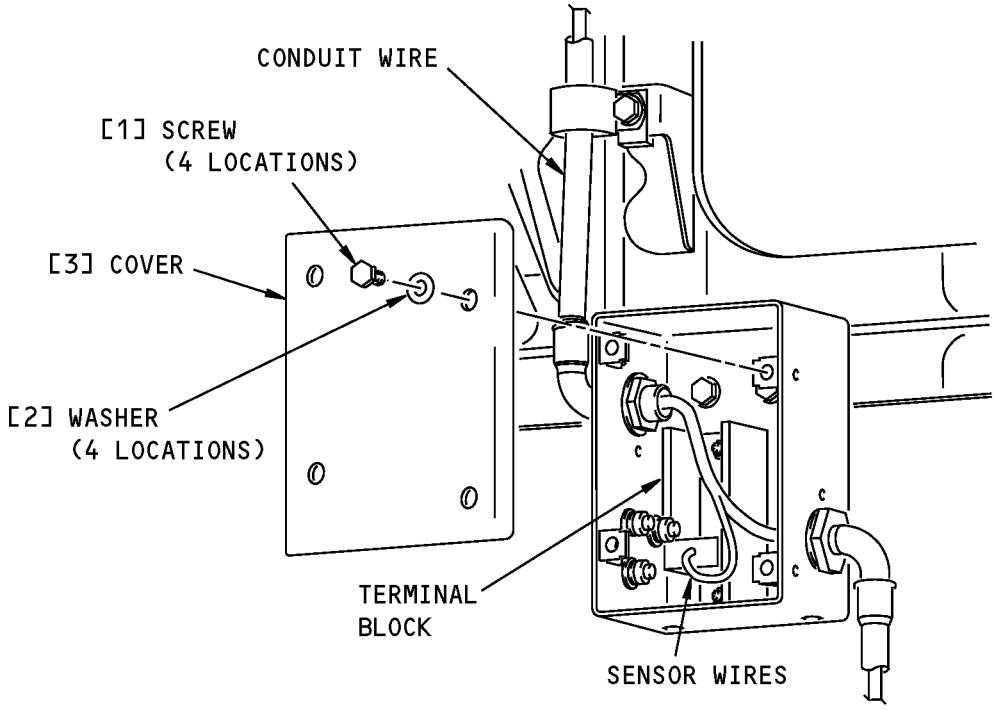
—————— END OF TASK ——————

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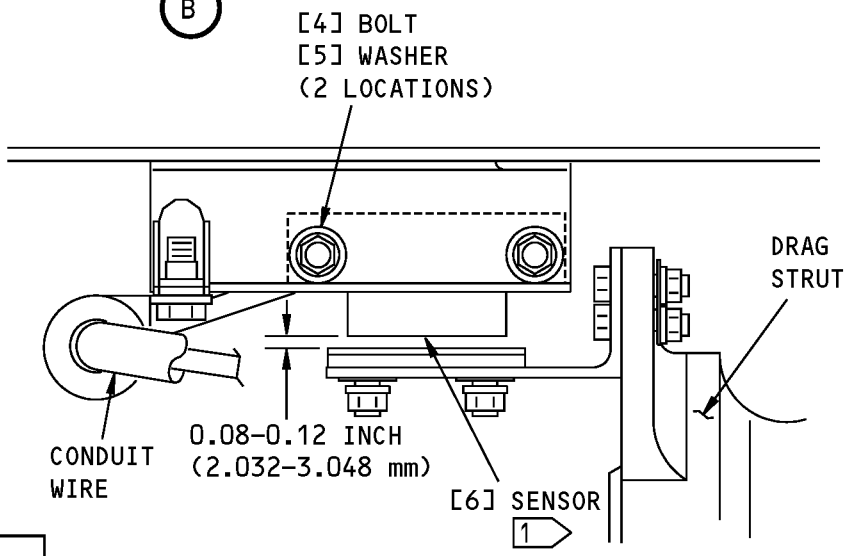
Nose Landing Gear Down Sensor Installation
Figure 401 (Sheet 1 of 2)/32-61-51-990-802

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(EXAMPLE)

B



(EXAMPLE)

C

1

SYSTEM NO.	SENSOR NO.	LOCATION
1	S845	LEFT
2	S853	RIGHT

Nose Landing Gear Down Sensor Installation
Figure 401 (Sheet 2 of 2)/32-61-51-990-802

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TASK 32-61-51-400-802

3. Nose Landing Gear Down Position Sensor Installation

(Figure 401)

A. References

Reference	Title
24-22-00-860-812	Remove Electrical Power (P/B 201)
24-22-00-860-813	Supply External Power (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-840-801	Prepare to Put the Airplane in the Air Mode (P/B 201)
32-09-00-840-802	Return the Airplane Systems Back to Their Normal On Ground Condition (P/B 201)
32-61-51-220-801	Nose Landing Gear Down Position Sensor Clearance Measurement (P/B 501)
32-61-51-400-801	Nose Landing Gear Down Position Sensor Clearance Adjustment (P/B 501)
SWPM 20-83-01/001	Standard Wiring Practices Manual

B. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
C50056	Compound - Nondrying Resin Mix Corrosion Inhibiting Material	BMS 3-27

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
6	Sensor	32-61-51-01-005	HAP ALL

D. Location Zones

Zone	Area
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors

E. Prepare for the Installation

SUBTASK 32-61-51-480-007

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-51-480-008

(2) Make sure chocks are installed at the wheels.

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SUBTASK 32-61-51-840-004

WARNING: OBEY THE PROCEDURE THAT PREPARES TO PUT THE AIRPLANE IN THE AIR MODE. IN THE AIR MODE, MANY OF THE AIRPLANE SYSTEMS CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(3) If it is necessary, do this task: Prepare to Put the Airplane in the Air Mode, TASK 32-09-00-840-801.

SUBTASK 32-61-51-860-002

(4) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

F. Nose Landing Gear Down Position Sensor Installation

SUBTASK 32-61-51-400-001

(1) If you found damage to the sensor [6] or the adjacent area during the removal procedure, do these steps:

(a) Repair or replace all damaged components or areas.

NOTE: Damage to the sensor, the target, or the adjacent areas can be an indication of an incorrect sensor clearance.

(b) Measure the sensor [6] clearance. To measure the clearance, do this task: Nose Landing Gear Down Position Sensor Clearance Measurement, TASK 32-61-51-220-801.

SUBTASK 32-61-51-420-003

(2) Attach the sensor [6] to the mounting bracket:

(a) Put the sensor [6] in its position on the mounting bracket.

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION AGAINST BMS 3-27 (MASTINOX 6856K). IF MASTINOX GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER AND GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONS.

(b) Apply a thin coat compound, C50056 or compound, C00913 (alternate) to the thread reliefs, threads, and washer faces. Wipe off the excess.

(c) Install the washers [5] and bolts [4].

SUBTASK 32-61-51-410-001

(3) Attach the sensor wires to the airplane:

(a) Attach the string to the sensor wires.

(b) Pull the wires through the conduit to the junction box.

(c) Remove the string from the sensor wires.

SUBTASK 32-61-51-350-002

(4) Cut the sensor wires to the correct length.

SUBTASK 32-61-51-420-004

(5) Attach the contacts to the sensor wires (SWPM 20-83-01/001).

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SUBTASK 32-61-51-420-005

(6) Install the sensor contacts into the terminal block.

(a) Red wire goes into position A.

(b) Yellow wire goes into position E.

(c) Blue wire goes into position C.

SUBTASK 32-61-51-410-002

(7) Re-install the junction box cover [3].

SUBTASK 32-61-51-410-003

(8) Install the washers [2] and screws [1] that hold the junction box cover [3].

SUBTASK 32-61-51-720-001

(9) Do a post installation check of the nose landing gear down position sensor:

(a) Measure the clearance between the sensor [6] and target with a feeler gage.

1) If the clearance is not as shown in (Figure 401), then, do this task: Nose Landing Gear Down Position Sensor Clearance Adjustment, TASK 32-61-51-400-801.

(b) Do this task: Supply External Power, TASK 24-22-00-860-813.

(c) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

(d) Do this task: Return the Airplane Systems Back to Their Normal On Ground Condition, TASK 32-09-00-840-802.

(e) Make sure nose gear lock sensor sends a NEAR status to the PSEU.

1) Turn on the PSEU BITE by pushing the ON/OFF switch.

2) Push the down switch until OTHER FUNCTNS? is displayed.

3) Push the YES switch to select OTHER FUNCTNS?.

4) Push the down switch until I/O MONITOR? is displayed.

5) Push the YES switch to select I/O MONITOR.

6) Push the down switch until SENSORS? is displayed.

7) Push the YES switch to select SENSORS.

8) Push the down switch until the sensor number is displayed.

NOTE: S845 is the number 1 sensor. S853 is the number 2 sensor.

9) Make sure the display shows the sensor number and TGT NEAR.

10) Turn off the PSEU BITE by pushing the ON/OFF switch.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 32-61-51-860-005

(1) If it is not necessary, remove electrical power. To do this, do this task: Remove Electrical Power, TASK 24-22-00-860-812.

END OF TASK

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NOSE LANDING GEAR DOWN POSITION SENSOR - ADJUSTMENT/TEST

1. General

A. This procedure has these tasks:

(1) Nose landing gear down position sensor clearance measurement.

(2) Nose landing gear down position sensor clearance adjustment.

(3) Nose landing gear down position sensor operational test.

B. The procedures for both installations are similar.

TASK 32-61-51-220-801

2. Nose Landing Gear Down Position Sensor Clearance Measurement

(Figure 501)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
713	Nose Landing Gear

C. Prepare to Measure the Clearance

SUBTASK 32-61-51-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-51-480-002

(2) Make sure chocks are installed at the wheels.

D. Measure the Nose Landing Gear Down-and-Locked Sensor Clearance

SUBTASK 32-61-51-220-001

(1) Measure the clearance between the sensor and target.

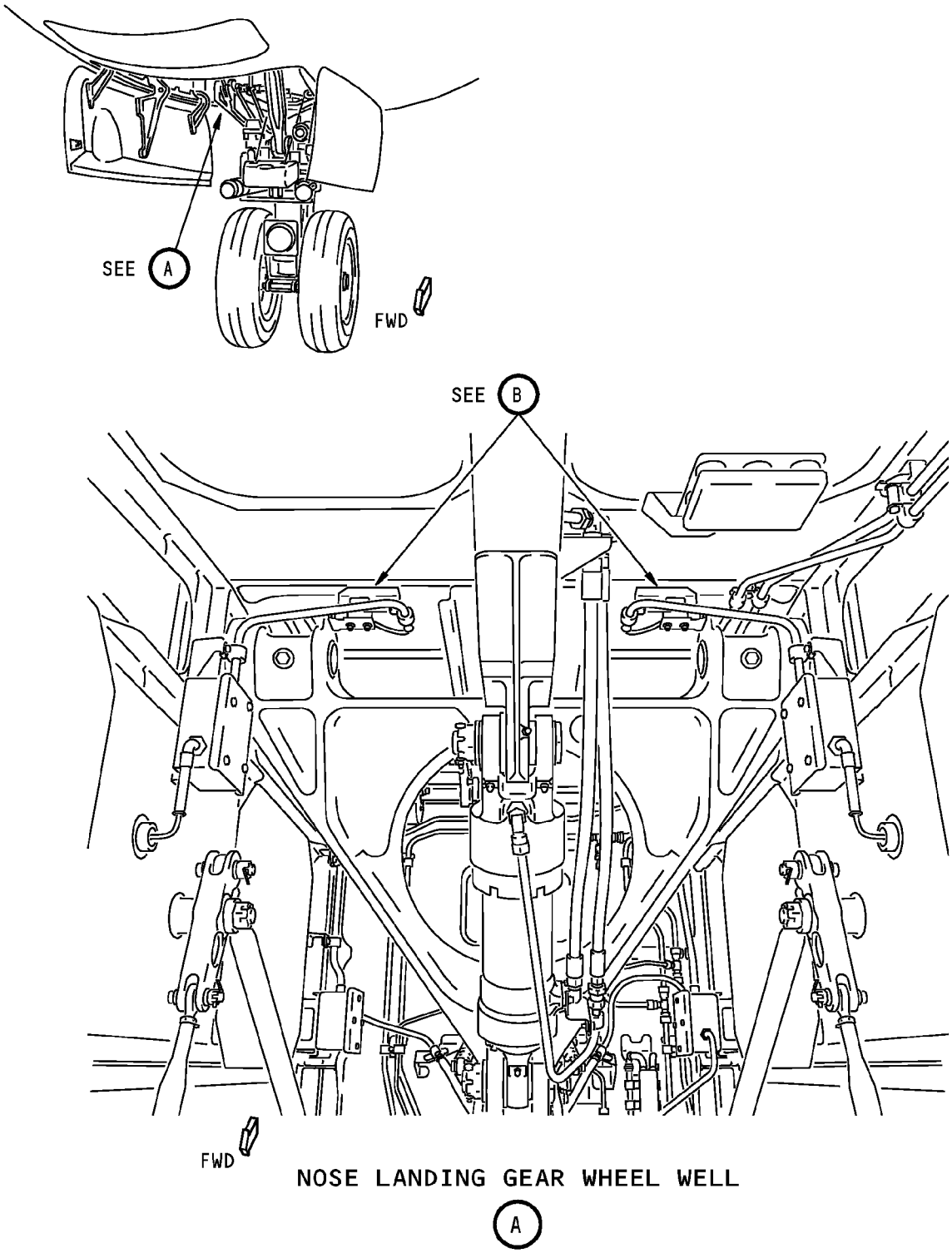
SUBTASK 32-61-51-820-001

(2) If the sensor clearance is outside the tolerance shown in (Figure 501), then, do this task: Nose Landing Gear Down Position Sensor Clearance Adjustment, TASK 32-61-51-400-801.

NOTE: Write down the measured clearance so you will know what adjustments must be made.

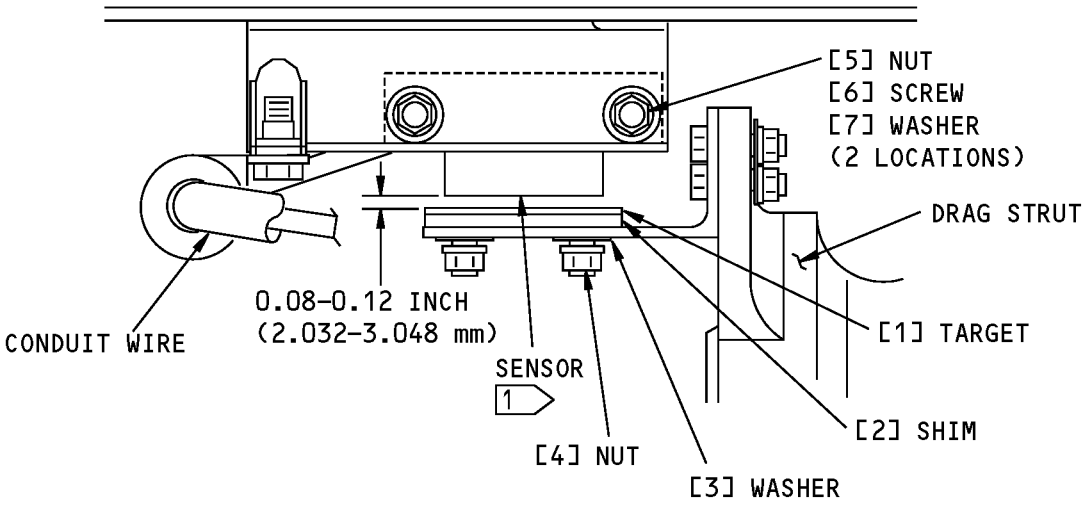
END OF TASK

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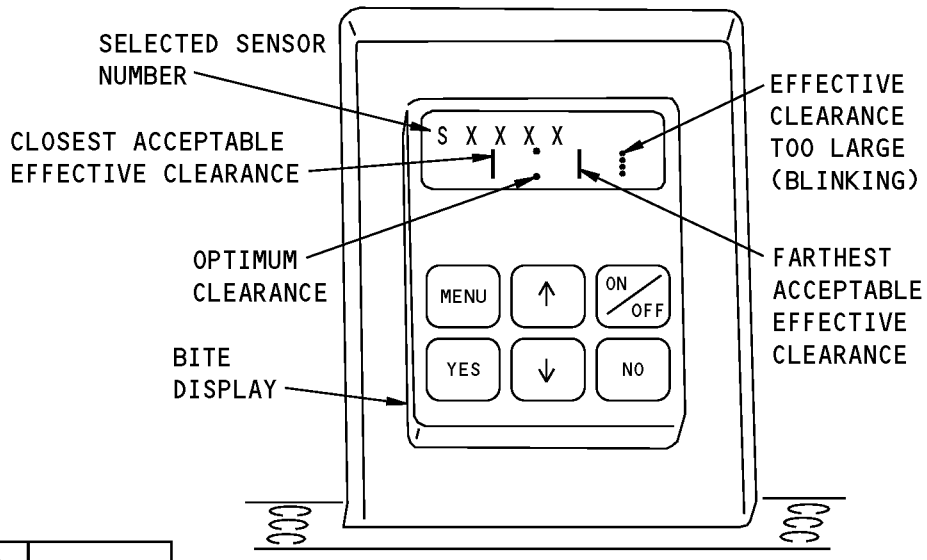
Nose Landing Gear Down Position Sensor Adjustment
Figure 501 (Sheet 1 of 2)/32-61-51-990-801

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(EXAMPLE)

B



PROXIMITY SWITCH ELECTRONICS UNIT (PSEU)

1

SYSTEM NO.	SENSOR NO.	LOCATION
1	S845	L
2	S853	R

Nose Landing Gear Down Position Sensor Adjustment
Figure 501 (Sheet 2 of 2)/32-61-51-990-801

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TASK 32-61-51-400-801

3. Nose Landing Gear Down Position Sensor Clearance Adjustment

(Figure 501)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27

C. Location Zones

Zone	Area
713	Nose Landing Gear

D. Prepare for the Adjustment

SUBTASK 32-61-51-480-009

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-51-480-010

(2) Make sure chocks are installed at the wheels.

E. Adjust the Nose Landing Gear Down Position Sensor Clearance

SUBTASK 32-61-51-010-002

(1) To loosen the sensor from the mounting bracket, remove the nuts [5], screws [6], and washers [7].

SUBTASK 32-61-51-020-001

(2) Remove the nuts [4] and washers [3].

SUBTASK 32-61-51-020-002

(3) Remove the target [1] and shims [2].

SUBTASK 32-61-51-110-001

(4) Clean the shims and mounting surfaces.

SUBTASK 32-61-51-820-002

(5) Remove or add shims [2] as required to get the necessary clearance.

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SUBTASK 32-61-51-620-001

WARNING: USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COMPOUND, C00913. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS VERY POISONOUS AND FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(6) Apply a thin coat of compound, C00913 to the thread reliefs, threads, and washer faces. Wipe off the excess.

SUBTASK 32-61-51-420-001

(7) Assemble the target assembly:

(a) Position the shims [2] and target [1] on the mounting bracket.

(b) Install the nuts [4] and washers [3].

SUBTASK 32-61-51-410-004

(8) Re-install the sensor on the mounting bracket with the nuts [5], screws [6], and washers [7].

SUBTASK 32-61-51-220-002

(9) Measure the sensor clearance and compare the clearance to (Figure 501).

(a) If the sensor clearance is not correct, do the steps to adjust the sensor clearance again.

SUBTASK 32-61-51-390-001

(10) Seal the shim stack:

(a) Clean the shims.

(b) Apply sealant, A00247 to the shim surfaces.

——————— END OF TASK ———————

TASK 32-61-51-710-801

4. Nose Landing Gear Down Position Sensor Operational Test

(Figure 501)

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
24-22-00-860-812	Remove Electrical Power (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well

C. Access Panels

Number	Name/Location
112A	Forward Access Door

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D. Prepare for the Operational Test

SUBTASK 32-61-51-480-003

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlock pins are installed on the nose and main landing gear. If the downlock pins are not installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-61-51-480-004

(2) Make sure chocks are installed at the wheels.

SUBTASK 32-61-51-860-003

(3) If it is necessary, supply electrical power. To do this, do this task: Supply Electrical Power, TASK 24-22-00-860-811.

E. Operational Test of the Nose Landing Gear Down Position Sensor

SUBTASK 32-61-51-010-001

(1) Open this access panel:

Number	Name/Location
112A	Forward Access Door

SUBTASK 32-61-51-740-001

(2) Use the PSEU BITE to test the sensor.

(a) Push the ON/OFF switch on the PSEU BITE display.

(b) Push the down arrow until OTHER FUNCTNS? shows.

(c) Push the YES switch to select OTHER FUNCTNS?.

(d) Push the down arrow until SENSOR RIGGING? shows.

(e) Push the YES switch to select SENSOR RIGGING?.

(f) Push the down arrow until the applicable sensor identification shows.

NOTE: See the table in (Figure 501) for the sensor identification and location.

(g) Push the YES switch to select the sensor.

1) Make sure the PSEU display shows the sensor clearance within tolerance.

NOTE: For a description of the sensor clearance display see (Figure 501).

F. Return the airplane to its normal configuration

SUBTASK 32-61-51-840-001

(1) Push the ON/OFF switch on the PSEU BITE display to turn off the PSEU BITE.

(a) Push the YES switch to confirm that you want to turn off the display.

SUBTASK 32-61-51-840-002

(2) Close this access panel:

Number	Name/Location
112A	Forward Access Door

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SUBTASK 32-61-51-860-004

(3) If it is not necessary, remove electrical power. To do this, do this task: Remove Electrical Power, TASK 24-22-00-860-812.

END OF TASK

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TAILSKID ASSEMBLY - MAINTENANCE PRACTICES

1. General

A. This procedure has this task:

(1) Replacement of the tailskid cartridge core assembly.

(2) Replacement of the tailskid shoe.

TASK 32-71-00-960-801

2. Replacement of the Tailskid Cartridge Core Assembly

(Figure 201)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
SRM 51-40-04	Structural Repair Manual

B. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95

C. Tailskid Cartridge Core Assembly Replacement

SUBTASK 32-71-00-480-019

WARNING: MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-71-00-000-005

(2) Remove and discard the core assembly [1]:

(a) Remove the bolts [2], washers [3], and nuts [4] that hold the male telescoping rod assembly [5] to the core assembly [1].

(b) Remove the male telescoping rod assembly [5] from the core assembly [1].

(c) Remove the bolts [2], washers [3], and nuts [4]that hold the female telescoping rod assembly [6] to the core assembly [1].

(d) Remove the female telescoping rod assembly [6] from the core assembly [1].

(e) Discard the used core assembly [1].

SUBTASK 32-71-00-200-001

CAUTION: DISCARD TAIL SKID PARTS IF THEY ARE DAMAGED. IF YOU USE A PART THAT IS DAMAGED, THE TAIL SKID WILL NOT OPERATE CORRECTLY. THIS CAN CAUSE DAMAGE TO THE AIRCRAFT.

(3) Inspect the male telescoping rod assembly [5] and female telescoping rod assembly [6]:

(a) Visually inspect the male telescoping rod assembly [5]and female telescoping rod assembly [6] to verify that they have not been damaged and meet the drawing dimensional requirements.

(b) Make sure that the male telescoping rod assembly [5]and female telescoping rod assembly [6] halves slide together freely.

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SUBTASK 32-71-00-400-001

(4) Install new core assembly [1]:

(a) Assemble the female telescoping rod assembly [6] to the core assembly [1].

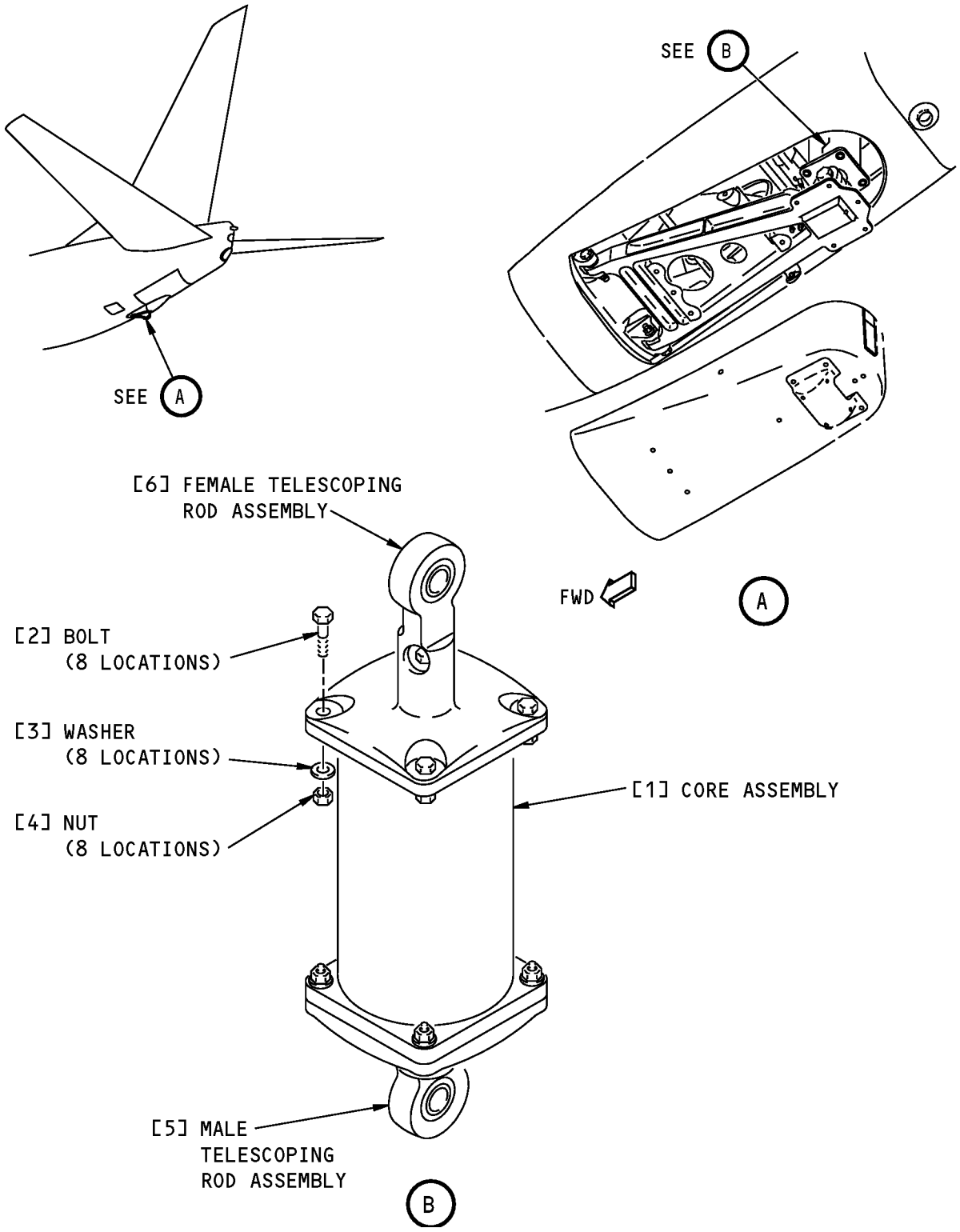
(b) Install bolts [2], washers [3], and nuts [4] wet with sealant, A00247 and torque to 25-35 in-lbs per SRM 51-40-04.

(c) Assemble the male telescoping rod assembly [5] to the core assembly [1].

(d) Install bolts [2], washers [3], and nuts [4] wet with sealant, A00247 and torque to 25-35 in-lbs per SRM 51-40-04.

——————— END OF TASK ———————

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Replacement of Tailskid Cartridge Core Assembly
Figure 201/32-71-00-990-803

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TASK 32-71-00-960-802

3. Replacement of the Tailskid Shoe.

()

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Consumable Materials

Reference	Description	Specification
D00633	Grease - Aircraft General Purpose	BMS3-33

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
12	Shoe	Not Specified	

D. Tailskid Shoe Replacement

SUBTASK 32-71-00-480-020

WARNING: MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR AND THE TAIL SKID. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT, AND THE TAIL SKID CAN EXTEND. THIS CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear and tail skid, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-71-00-020-016

(2) Remove and discard the shoe [12]:

(a) Remove the bolts [11] that hold the shoe [12] to the skirt [10] and the drag lever [9].

(b) Remove the shoe [12] from the skirt [10].

SUBTASK 32-71-00-420-017

(3) Install the new shoe [12]:

(a) Put the new shoe [12] in its position on the skirt [10].

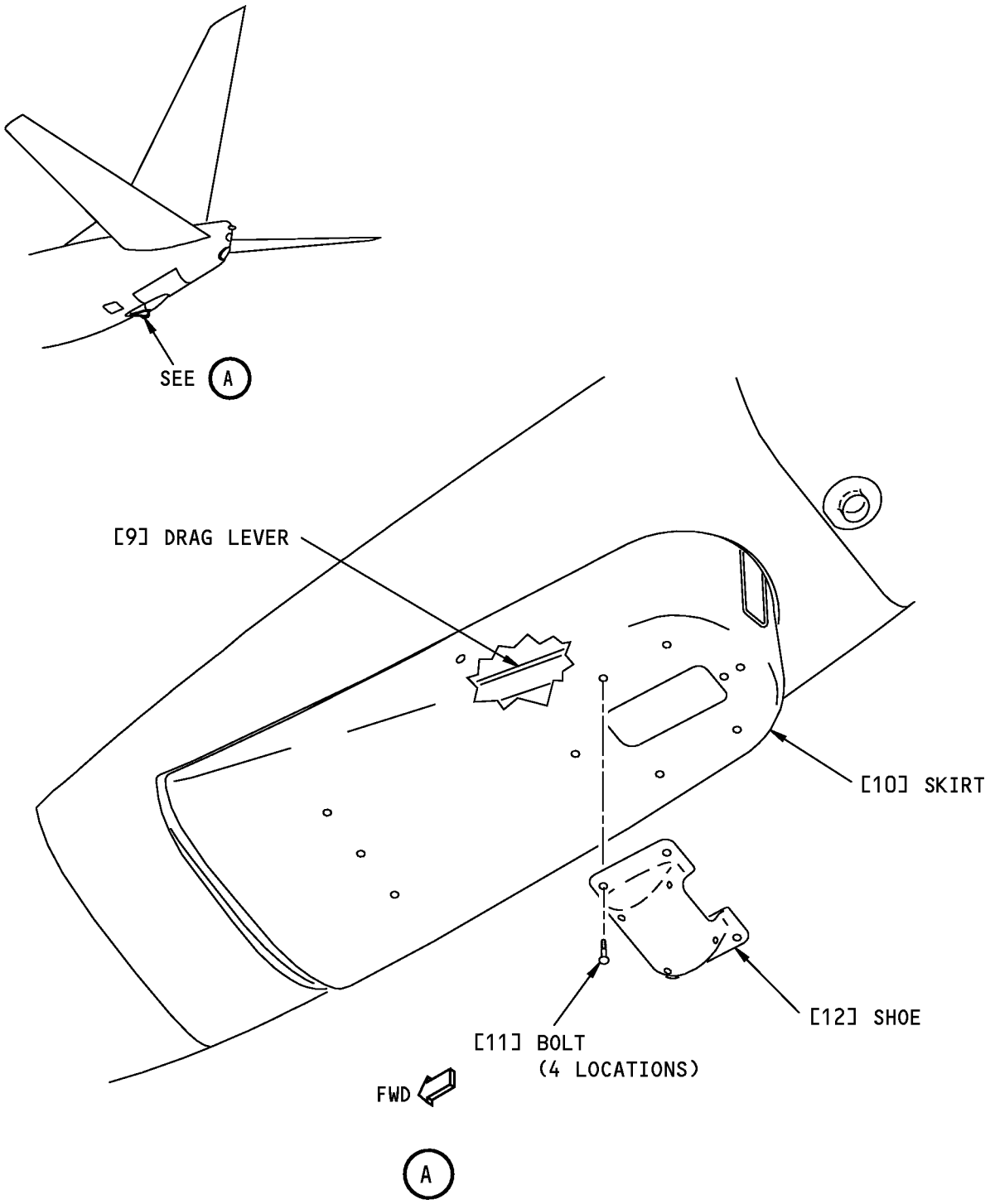
(b) From the outer side of the new shoe [12], put grease, D00633 into the holes of the new shoe [12].

(c) Put the new bolts [11] through the new shoe [12], skirt [10], and into the drag lever [9].

(d) Tighten the new bolts [11].

——————— END OF TASK ———————

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Replacement of the Tailskid Shoe
Figure 202/32-71-00-990-810

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TAILSKID ASSEMBLY - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the drag lever

(2) An installation of the drag lever

(3) A removal of the cartridge assembly

(4) An installation of the cartridge assembly

TASK 32-71-00-000-801

2. Drag Lever Removal

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
311	Area Aft of Pressure Bulkhead - Left
312	Area Aft of Pressure Bulkhead - Right

C. Drag Lever Removal

SUBTASK 32-71-00-480-009

WARNING: MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task:Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-71-00-490-004

(2) Use a ladder or equivalent to get access to the tail skid assembly.

SUBTASK 32-71-00-030-004

(3) Remove the shoe [6]:

(a) Remove the bolts [7] that hold the shoe [6] to the skirt [5] and the drag lever [1].

(b) Remove the shoe [6] from the skirt [5].

SUBTASK 32-71-00-030-005

(4) Remove the skirt [5]:

(a) Remove the bolts [8] that hold the skirt [5] to the drag lever [1].

(b) Remove the skirt [5] from the drag lever [1].

SUBTASK 32-71-00-030-006

CAUTION: MAKE SURE THAT THE DRAG LEVER DOES NOT MOVE DOWN QUICKLY WHEN YOU DISCONNECT THE PIN ASSEMBLY. THE PIN ASSEMBLY THAT YOU REMOVE HOLDS THE DRAG LEVER IN ITS POSITION. THE DRAG LEVER CAN CAUSE DAMAGE IF IT HITS THE AIRPLANE.

(5) Disconnect the cartridge assembly [2] from the drag lever [1]:

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(a) Remove the nut [16], and washer [17] from the bolt [15].

(b) Remove the bolt [15], washer [18], and end caps [30] from the pin [31].

(c) Remove the pin [31] to disconnect the cartridge assembly [2] from the drag lever [1].

(d) Slowly lower the drag lever [1].

SUBTASK 32-71-00-030-007

(6) Disconnect the lanyard [14]:

(a) Remove the nuts [3], and washers [4] from the u-bolt [13].

(b) Remove the u-bolt [13] to disconnect the lanyard [14] from the drag lever [1].

SUBTASK 32-71-00-020-010

(7) Disconnect the drag lever [1] from the tailskid support fitting:

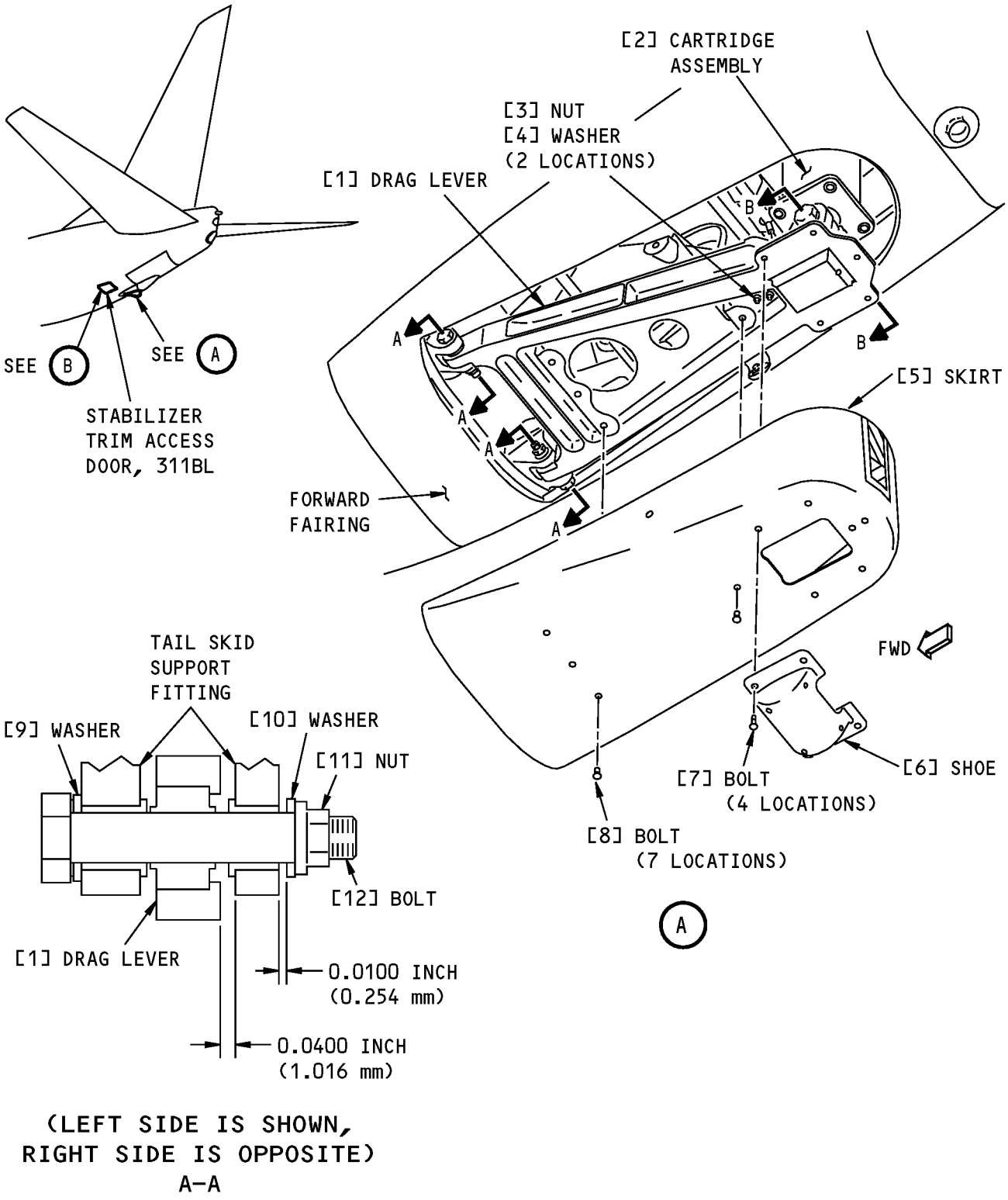
(a) Remove the nuts [11], and washers [10] from the bolts [12].

(b) Remove the bolts [12], and washers [9] that hold the forward side of the drag lever [1] to the tailskid support fitting.

(c) Remove the drag lever [1] from the airplane.

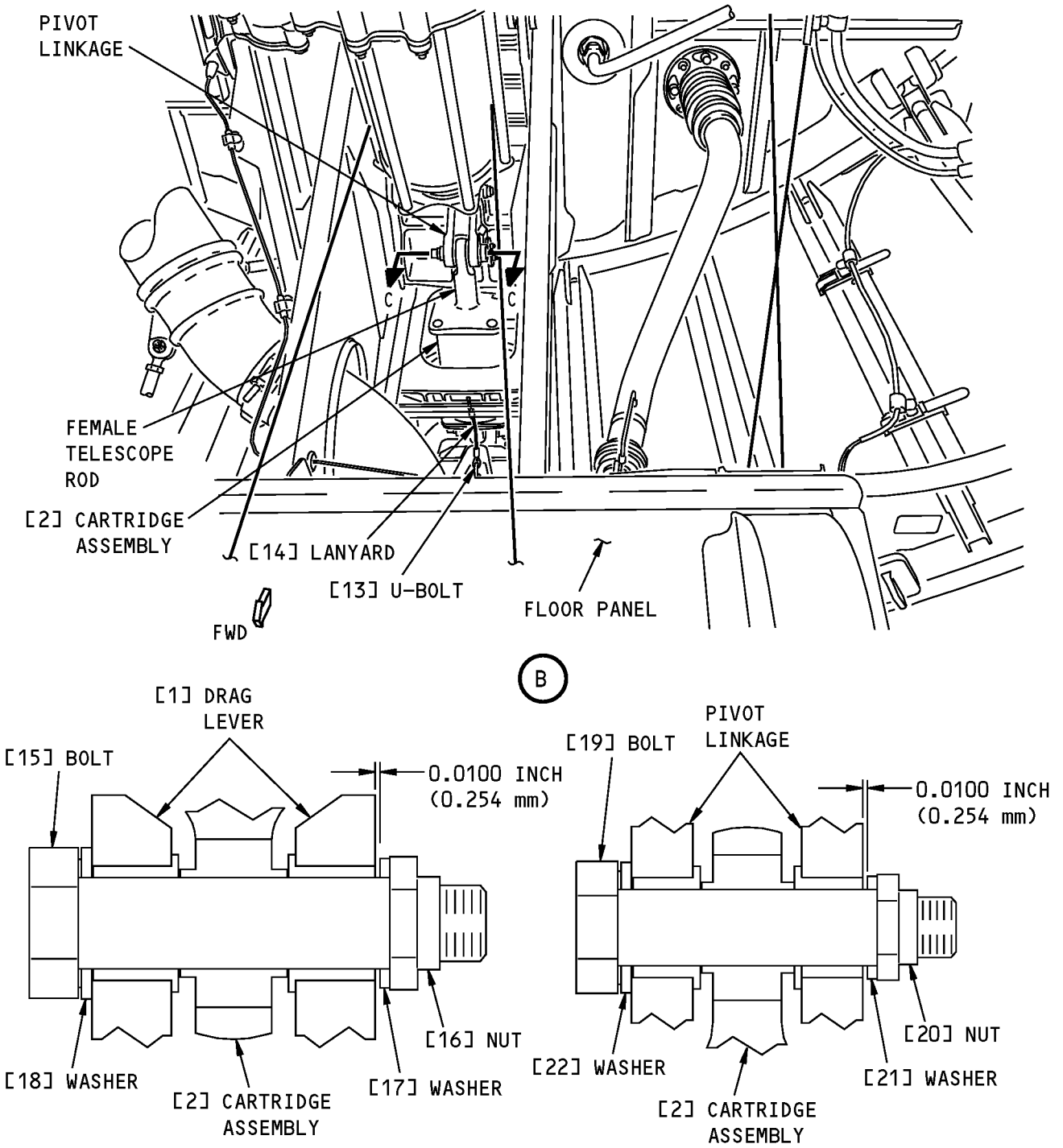
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Tailskid Installation
Figure 401 (Sheet 1 of 2)/32-71-00-990-805

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Tailskid Installation
Figure 401 (Sheet 2 of 2)/32-71-00-990-805

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TASK 32-71-00-400-801

3. Drag Lever Installation

(Figure 401)

A. Consumable Materials

Reference	Description	Specification
D00633	Grease - Aircraft General Purpose	BMS3-33

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Cartridge assembly	Not Specified	

C. Location Zones

Zone	Area
311	Area Aft of Pressure Bulkhead - Left
312	Area Aft of Pressure Bulkhead - Right

D. Drag Lever Installation

SUBTASK 32-71-00-490-005

(1) Use a ladder or equivalent to get access to the tail skid assembly.

SUBTASK 32-71-00-420-002

(2) Connect the forward end of the drag lever [1] to the tailskid support fitting:

(a) Align the hole in the forward end of the drag lever [1] to the hole in the tailskid support fitting.

(b) Install the washers [9] on the bolts [12].

(c) Put the bolts [12] through the tailskid support fitting, and the drag lever [1].

(d) Install the washers [10], and the nuts [11] on the bolts [12].

NOTE: Do not tighten the nuts [11].

(e) Move the drag lever [1] to the left until the left spherical bearing is against the outboard lug of the tailskid support fitting.

(f) Make sure there is a minimum clearance of 0.0400 inch (1.016 millimeter) between the lug on the drag lever [1], and the inboard lug on the right support fitting.

(g) Move the drag lever [1] to the right until the right spherical bearing is against the outboard lug of the tailskid support fitting.

(h) Make sure there is a minimum clearance of 0.0400 inch (1.016 millimeter) between the lug on the drag lever [1], and the inboard lug on the left support fitting.

(i) Tighten the nuts [11].

(j) Make sure there is a minimum clearance of 0.0100 inch (0.254 millimeter) between the inboard lug on the left support fitting, and the washer [10].

SUBTASK 32-71-00-420-003

(3) Connect the lanyard [14]:

(a) Examine the lanyard [14] for dirt and damage.

(b) Put the u-bolt [13] in its position on the drag lever [1].

(c) Install the washers [4], and the nuts [3] on the u-bolt [13].

(d) Tighten the nuts [3].

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SUBTASK 32-71-00-420-012

(4) Connect the cartridge assembly [2] to the drag lever [1]:

(a) Align the male telescope rod side of the cartridge assembly [2] to the drag lever [1].

(b) Install the washer [18] on the bolt [15].

(c) Put the bolt [15] through the drag lever [1], and the male telescope rod side of the cartridge assembly [2].

(d) Install the washer [17], and the nut [16] on the bolt [15].

(e) Make sure there is a minimum clearance of 0.0100 inch (0.254 millimeter) between the inboard lug on the drag lever [1], and the washer [17].

(f) Tighten the nut [16].

SUBTASK 32-71-00-420-005

(5) Install the skirt [5]:

(a) Put the skirt [5] in its position on the drag lever [1].

(b) Install the bolts [8] that hold the skirt [5] to the drag lever [1].

SUBTASK 32-71-00-420-006

(6) Install the shoe [6]:

(a) Put the shoe [6] in its position on the skirt [5].

(b) From the outer side of the shoe [6], put grease, D00633 into the holes of the shoe [6].

(c) Put the bolts [7] through the shoe [6], skirt [5], and into the drag lever [1].

(d) Tighten the bolts [7].

——————— END OF TASK ———————

TASK 32-71-00-000-802

4. Cartridge Assembly Removal

(Figure 401)

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Location Zones

Zone	Area
311	Area Aft of Pressure Bulkhead - Left
312	Area Aft of Pressure Bulkhead - Right

C. Access Panels

Number	Name/Location
311BL	Stabilizer Trim Access Door

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D. Cartridge Assembly Removal

SUBTASK 32-71-00-480-013

WARNING: MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 32-71-00-490-002

(2) Use a ladder or equivalent to get access to the tail skid assembly.

SUBTASK 32-71-00-000-003

(3) To access the lower attach point of the cartridge assembly [2] do this:

(a) Remove the bolts [7] and shoe [6] from the skirt [5].

(b) Remove the bolts [8] and skirt [5] from the drag lever [1]].

SUBTASK 32-71-00-010-002

(4) Open this access panel:

Number	Name/Location
311BL	Stabilizer Trim Access Door

SUBTASK 32-71-00-020-005

CAUTION: MAKE SURE THAT THE DRAG LEVER DOES NOT MOVE DOWN QUICKLY WHEN YOU DISCONNECT THE PIN ASSEMBLY. THE PIN ASSEMBLY THAT YOU REMOVE HOLDS THE DRAG LEVER IN ITS POSITION. THE DRAG LEVER CAN CAUSE DAMAGE IF IT HITS THE AIRPLANE.

(5) Disconnect the cartridge assembly [2] from the drag lever [1]:

(a) Remove the cotter pin [24], nut [16], and washer [17] from the bolt [15].

(b) Remove the bolt [15] that holds the male telescope rod side of the cartridge assembly [2] to the drag lever [1].

(c) Remove the washer [18] from the bolt [15].

SUBTASK 32-71-00-020-004

(6) Disconnect the cartridge assembly [2] from the pivot linkage:

(a) Remove the nut [20], and the washer [21] from the bolt [19].

(b) Remove the bolt [19] that holds the female telescope rod side of the cartridge assembly [2] to the pivot linkage.

(c) Remove the washer [22] from the bolt [19].

(d) Remove the cartridge assembly [2] from the airplane.

END OF TASK

TASK 32-71-00-400-802

5. Cartridge Assembly Installation

(Figure 401)

A. Consumable Materials

Reference	Description	Specification
D00633	Grease - Aircraft General Purpose	BMS3-33

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B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Cartridge assembly	Not Specified	

C. Location Zones

Zone	Area
311	Area Aft of Pressure Bulkhead - Left
312	Area Aft of Pressure Bulkhead - Right

D. Access Panels

Number	Name/Location
311BL	Stabilizer Trim Access Door

E. Cartridge Assembly Installation

SUBTASK 32-71-00-490-003

(1) Use a ladder or equivalent to get access to the tail skid assembly.

SUBTASK 32-71-00-420-007

(2) Connect the cartridge assembly [2] to the drag lever [1]:

(a) Align the male telescope rod side of the cartridge assembly [2] to the drag lever [1].

(b) Install the washer [18] on the bolt [15].

(c) Put the bolt [15] through the drag lever [1], and the male telescope rod side of the cartridge assembly [2].

(d) Install the washer [17], and the nut [16] on the bolt [15].

(e) Make sure there is a minimum clearance of 0.0100 inch (0.254 millimeter) between the inboard lug on the drag lever [1], and the washer [17].

(f) Tighten the nut [16].

SUBTASK 32-71-00-420-008

(3) Connect the cartridge assembly [2] to the pivot linkage:

(a) Align the female telescope rod side of the cartridge assembly [2] to the hole in the pivot linkage.

(b) Install the washer [22] on the bolt [19].

(c) Put the bolt [19] through the pivot linkage, and the female telescope rod side of the cartridge assembly [2].

(d) Install the washer [21], and the nut [20] on the bolt [19].

(e) Make sure there is a minimum clearance of 0.0100 inch (0.254 millimeter) between the inboard lug on the pivot linkage, and the washer [21].

(f) Tighten the nut [20].

SUBTASK 32-71-00-420-009

(4) Install the skirt [5]:

(a) Put the skirt [5] in its position on the drag lever [1].

(b) Install the bolts [8] that hold the skirt [5] to the drag lever [1].

SUBTASK 32-71-00-420-010

(5) Install the shoe [6]:

(a) Put the shoe [6] in its position on the skirt [5].

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(b) From the outer side of the shoe [6], put grease, D00633 into the holes of the shoe [6].

(c) Put the bolts [7] through the shoe [6], skirt [5], and the drag lever [1].

(d) Tighten the bolts [7].

F. Put the Airplane Back to Its Usual Condition

SUBTASK 32-71-00-410-003

(1) Close this access panel:

Number	Name/Location
311BL	Stabilizer Trim Access Door

END OF TASK

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TAILSKID - INSPECTION/CHECK

1. General

A. This procedure contains scheduled maintenance task data.

B. It is necessary to do an inspection of the tailskid assembly after there has been a tail strike.

C. This procedure has these tasks:

(1) An inspection of the tailskid cartridge assembly.

(2) An inspection of the tailskid shoe.

D. This task does not remove or install the tailskid assembly.

TASK 32-71-00-200-801

2. Tailskid Cartridge Assembly - Inspection/Check

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
05-51-32-210-801	Tail Strike Inspection (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-71-00-000-802	Cartridge Assembly Removal (P/B 401)
32-71-00-400-802	Cartridge Assembly Installation (P/B 401)

C. Location Zones

Zone	Area
311	Area Aft of Pressure Bulkhead - Left
312	Area Aft of Pressure Bulkhead - Right

D. Prepare for the Inspection/Check

SUBTASK 32-71-00-480-001

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

E. Tailskid Cartridge Assembly Inspection

(Figure 601)

SUBTASK 32-71-00-210-001

(1) Do a general visual inspection of the tailskid crushable cartridge for evidence of tail strike (TASK 05-51-32-210-801).

SUBTASK 32-71-00-210-002

(2) If there has been a tail strike, do these steps to inspect the tailskid cartridge assembly:

NOTE: The tailskid assembly is in normal position if the upper edge of the warning decal is in line with the fairing.

(a) Look at the warning decal [4] on the aft side of the skirt [5].

1) If you see any of the green part of the warning decal [4], the crushable cartridge is still acceptable.

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2) If you can not see any of the green part of the warning decal [4], then replace the crushable cartridge, These are the tasks:
   - Cartridge Assembly Removal, TASK 32-71-00-000-802,
   - Cartridge Assembly Installation, TASK 32-71-00-400-802.

——————— END OF TASK ———————

TASK 32-71-00-900-801

3. Tailskid Shoe Inspection

A. References

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-71-00-960-802	Replacement of the Tailskid Shoe. (P/B 201)
51-21-99-300-802	Decorative Exterior Paint System Repair (P/B 701)

B. Location Zones

Zone	Area
311	Area Aft of Pressure Bulkhead - Left
312	Area Aft of Pressure Bulkhead - Right

C. Prepare for the Inspection

SUBTASK 32-71-00-480-002

WARNING: MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

D. Tailskid Shoe Inspection

(Figure 601)

SUBTASK 32-71-00-210-003

(1) Do these steps to inspect the tailskid shoe [6] after a tail strike:

NOTE: The tailskid assembly is in normal position if the upper edge of the warning decal is in line with the fairing.

(a) Check the shoe [6] for cracks or chips:

1) If there are cracks in the shoe [6] or pieces of the shoe are gone, outboard of the bolt holes, the shoe is servicable.

2) If there are cracks that start at the bolt holes, you must replace the shoe [6]. These are the tasks:
   - Replacement of the Tailskid Shoe., TASK 32-71-00-960-802,

(b) When the shoe [6] is worn to the WEAR DIMPLES, replace the shoe. These are the tasks:
   - Replacement of the Tailskid Shoe., TASK 32-71-00-960-802,

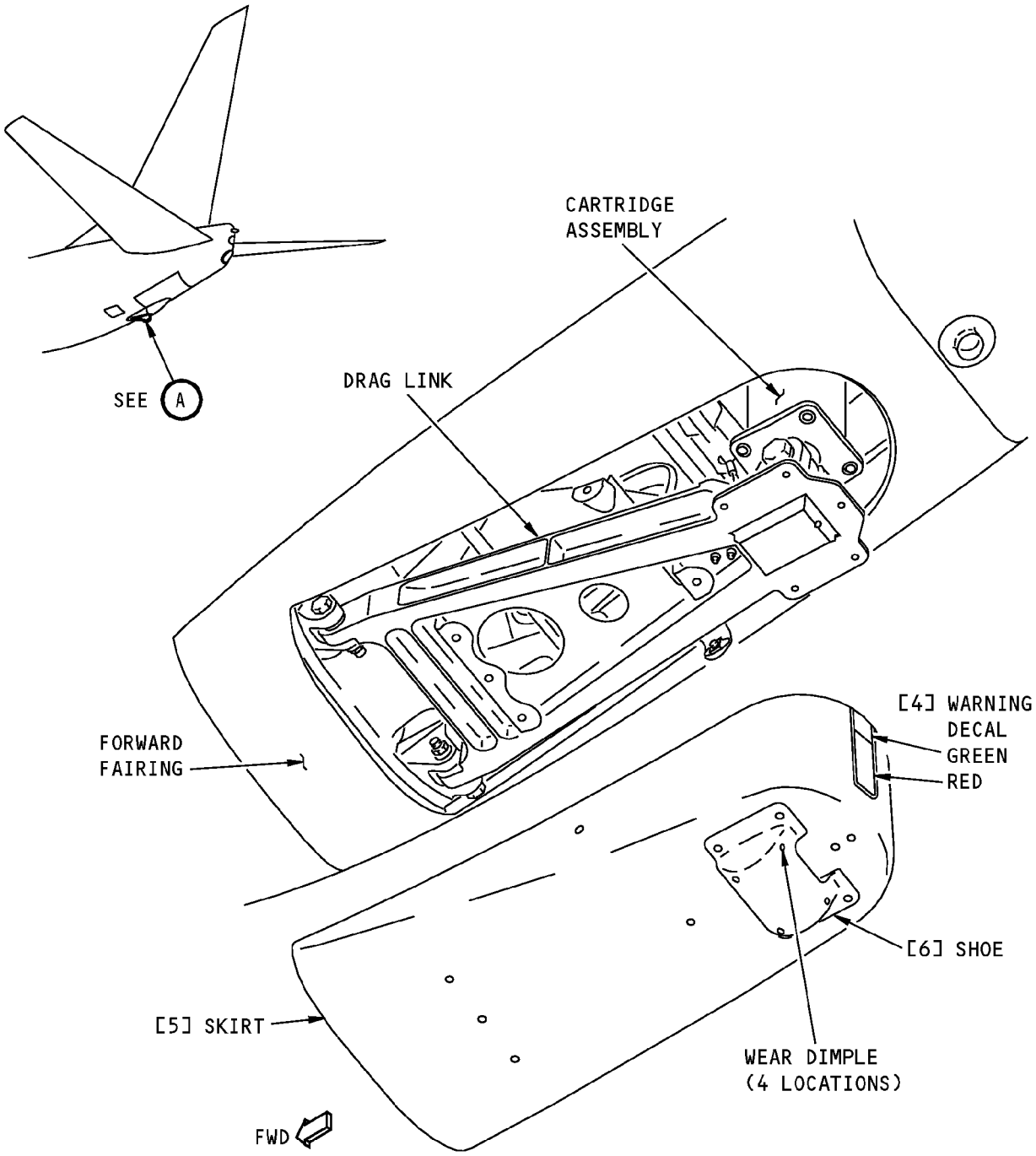
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(c) If the tail skid drag shoe is within tolerance and the paint finish on the lower surface of the tail skid drag shoe has been gouged or scratched by contact with the runway, paint the skid drag shoe in accordance with the Decorative Exterior Finishes procedure, do this task: Decorative Exterior Paint System Repair, TASK 51-21-99-300-802.

NOTE: If the tail skid drag shoe scratch or gouge damage is not painted over, a person may interpret the damage as new and request an unnecessary inspection. The addition of paint can help to determine when new tail strikes have occured.

——————— END OF TASK ———————

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Tailskid Inspection
Figure 601/32-71-00-990-802

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TAILSKID PIVOT LINKAGE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the tailskid pivot linkage

(2) An installation of the tailskid pivot linkage.

TASK 32-71-21-000-801

2. Tailskid Pivot Linkage Removal

(Figure 401)

A. Location Zones

Zone	Area
311	Area Aft of Pressure Bulkhead - Left
312	Area Aft of Pressure Bulkhead - Right

B. Access Panels

Number	Name/Location
311BL	Stabilizer Trim Access Door

C. Tailskid Pivot Linkage Removal

SUBTASK 32-71-21-010-001

(1) Open the access door for the stabilizer trim, do this step:

Open this access panel:

Number	Name/Location
311BL	Stabilizer Trim Access Door

SUBTASK 32-71-21-020-001

CAUTION: MAKE SURE THAT YOU DISCONNECT THE CARTRIDGE ASSEMBLY [2] CAREFULLY. FAILURE TO DO CAN CAUSE DAMAGE TO THE ALUMINUM CARTRIDGE.

(2) Disconnect the cartridge assembly [2] from the pivot linkage [1]:

(a) Remove the nut [13], and the washer [12] from the bolt [10].

(b) Remove the bolt [10] that holds the female telescope rod side of the cartridge assembly [2] to the pivot linkage [1].

(c) Remove the washer [11] from the bolt [10].

SUBTASK 32-71-21-020-002

(3) Remove the pivot linkage [1]:

(a) Remove the nut [4], and the washer [3] from the shoulder bolt [19].

(b) Remove the shoulder bolt [19] to disconnect the pivot linkage [1] from the support fitting.

(c) Remove the nut [9], and the washer [8] from the shoulder bolt [15].

(d) Remove the shoulder bolt assembly [15] from the fuse pin [16].

(e) If needed, remove the bushings [17] and washer [14] from the bolt assembly [15].

NOTE: The bushings [17] are plastic spacers intended to center the bolt in the fuse pin. Removal is not normally required.

(f) Remove the fuse pin [16] to disconnect the pivot linkage [1] from the fuse link [7].

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(g) Remove the pivot linkage [1] from the airplane.

SUBTASK 32-71-21-020-003

(4) If you need to remove the fuse link [7], do the steps that follow;

(a) Remove the nut [6], and the washer [5] from the shoulder bolt [18].

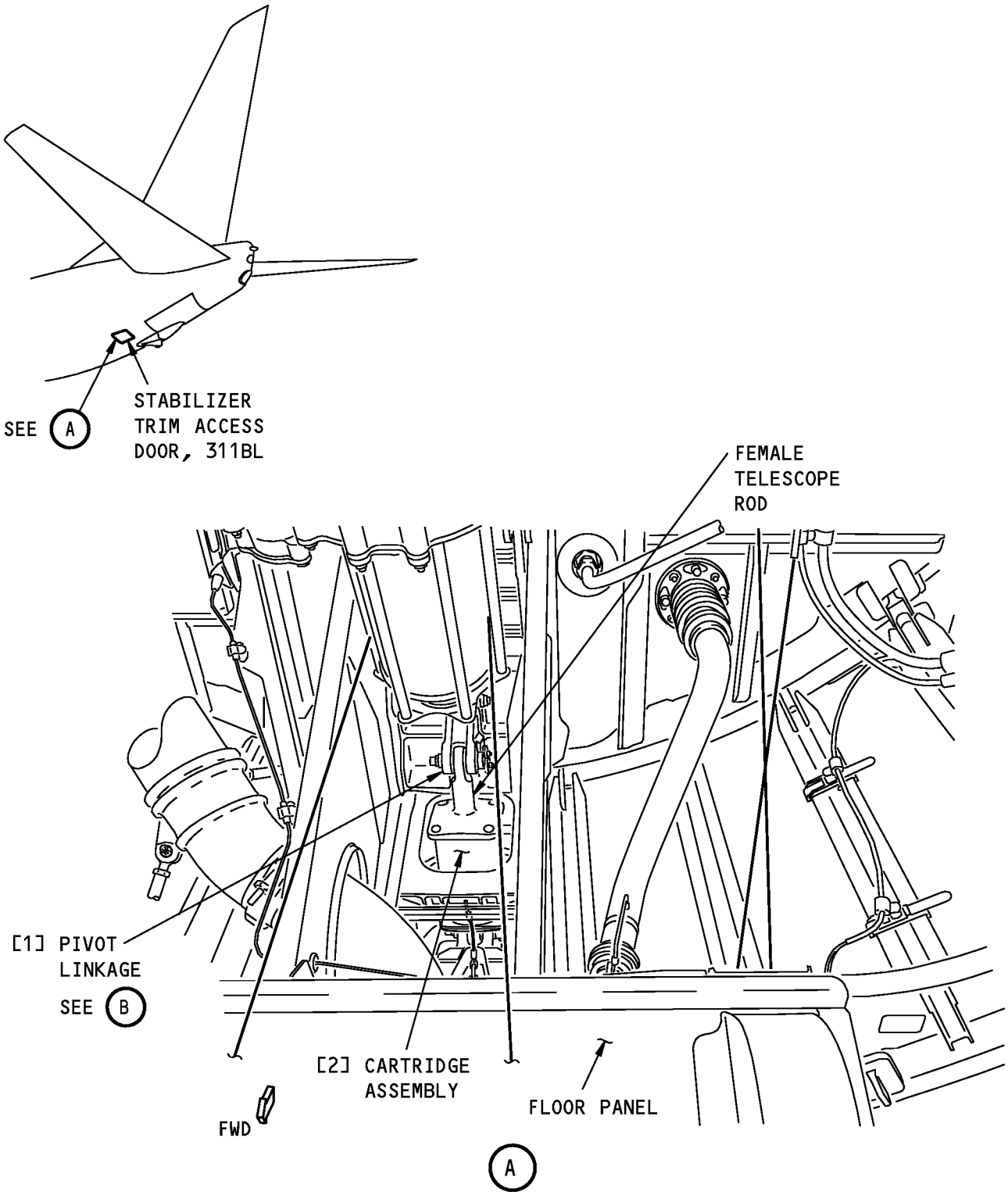
(b) Remove the shoulder bolt [18] from the shear pin [17].

(c) Remove the shear pin [17] to disconnect the fuse link [7] from the support fitting.

(d) Remove the fuse link [7] from the airplane.

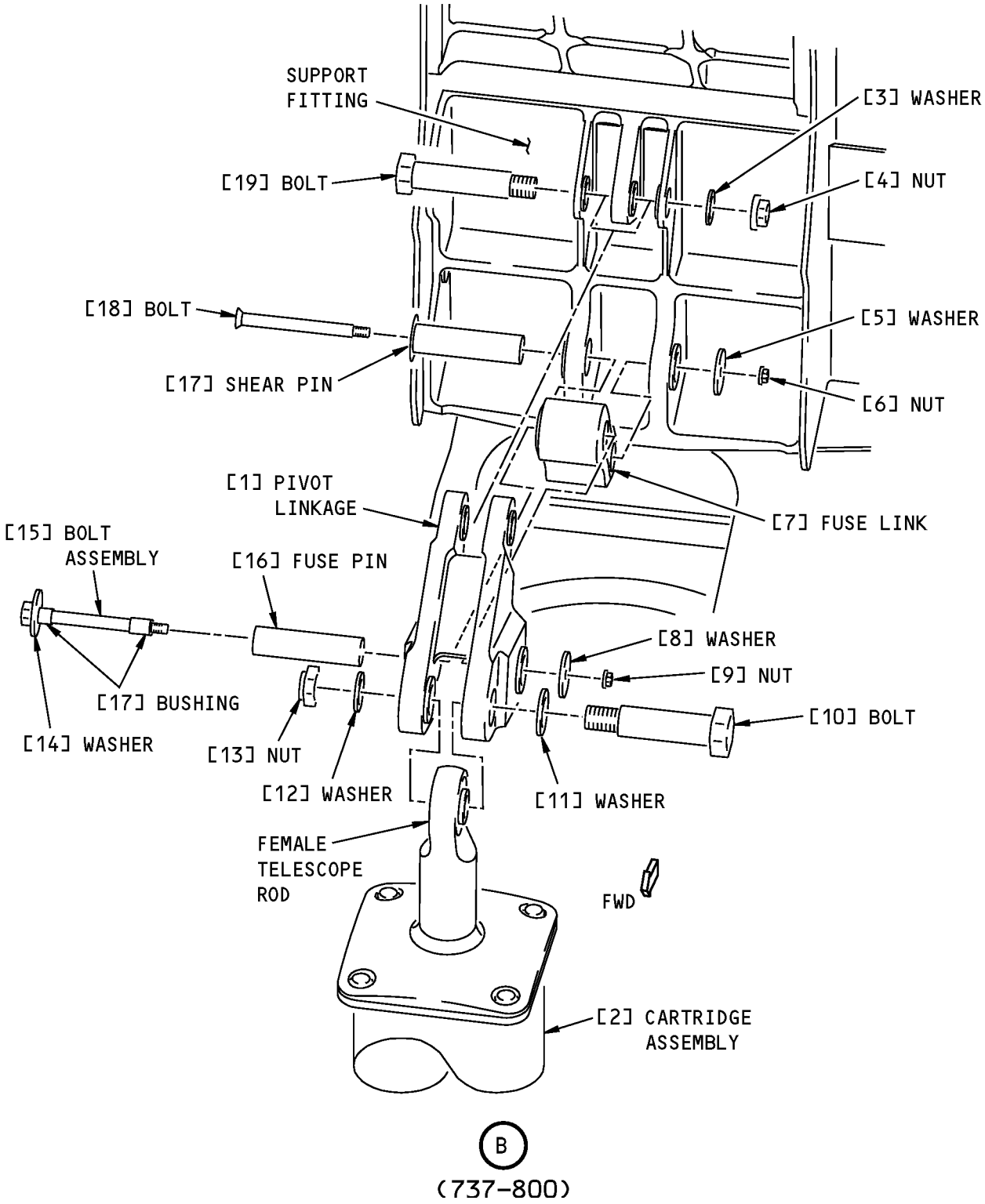
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Tail Skid Pivot Linkage Installation
Figure 401 (Sheet 1 of 2)/32-71-21-990-801

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Tail Skid Pivot Linkage Installation
Figure 401 (Sheet 2 of 2)/32-71-21-990-801

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TASK 32-71-21-400-801

3. Tailskid Pivot Linkage Installation

(Figure 401)

A. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
D00015	Grease - Aircraft Bearing (Use BMS 3-24 until existing stocks are depleted, BMS 3-33 supersedes BMS 3-24)	BMS3-24 (Superseded by BMS 3-33)

B. Location Zones

Zone	Area
311	Area Aft of Pressure Bulkhead - Left
312	Area Aft of Pressure Bulkhead - Right

C. Access Panels

Number	Name/Location
311BL	Stabilizer Trim Access Door

D. Tailskid Pivot Linkage Installation

SUBTASK 32-71-21-420-001

(1) If you need to install the fuse link [7], do the steps that follow;

(a) Put the fuse link [7] in its position on the support fitting.

(b) Align the holes in the fuse link [7] to the holes in the support fitting.

(c) Put the shear pin [17] through the support fitting, and the fuse link [7].

(d) Put the shoulder bolt [18] through shear pin [17].

(e) Install the washer [5], and the nut [6] on the shoulder bolt [18].

(f) Tighten the nut [6] to 20-25 in-lbs (2.26-2.82 newton-meters).

SUBTASK 32-71-21-420-002

(2) Install the pivot linkage [1]:

CAUTION: MAKE SURE NOT TO DAMAGE THE DRY FILM LUBRICATION ON THE SURFACES OF THE FUSE PIN [16], SHEAR PIN [17], AND THE SHOULDER BOLT [19]. THE SHEAR PIN [17] CAN BE INSTALLED LAST. IF THERE IS NOT SUFFICIENT CLEARANCE BETWEEN THE FUSE LINK [7], AND THE SUPPORT FITTING, YOU CAN SMOOTH THE SURFACE OF THE FUSE LINK [7]. MAKE SURE THERE IS A FINISH OF 32AA MICROINCHES ON THE SURFACE.

(a) Put the pivot linkage [1] in its position on the support fitting.

(b) Align the upper hole in the pivot linkage [1] to the hole in the support fitting.

(c) Put the shoulder bolt [19] through support fitting, and the pivot linkage [1].

(d) Install the washer [3], and the nut [4] on the shoulder bolt [19].

(e) Tighten the nut [4] to 240-300 in-lbs (27.12-33.90 newton-meters).

(f) Align the lower hole in the pivot linkage [1] to the hole in the fuse link [7].

(g) Put the fuse pin [16] through the pivot linkage [1], and the fuse link [7].

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(h) If removed from the shoulder bolt assembly [15], install the washer [14] and bushings [17] on the shoulder bolt [15] using wet sealant, A00247.

(i) Apply grease, D00015 to all surfaces of the washer [14] and bushings [17] on the shoulder bolt [15], and pack the cavity between bushings.

(j) Put the shoulder bolt assembly [15] through the fuse pin [16].

(k) Install the washer [8], and the nut [9] on the shoulder bolt [15].

(l) Tighten the nut [9].

SUBTASK 32-71-21-420-003

CAUTION: MAKE SURE THAT YOU CONNECT THE CARTRIDGE ASSEMBLY [2] CAREFULLY. FAILURE TO DO CAN CAUSE DAMAGE TO THE ALUMINUM CARTRIDGE.

(3) Connect the cartridge assembly [2] to the pivot linkage [1]:

(a) Align the female telescope rod side of the cartridge assembly [2] to the forward hole in the pivot linkage [1].

(b) Install the washer [11] on the bolt [10].

(c) Put the bolt [10] through the pivot linkage [1], and the female telescope rod side of the cartridge assembly [2].

(d) Install the washer [12], and the nut [13] on the bolt [10].

(e) Tighten the nut [13].

SUBTASK 32-71-21-410-001

(4) Close the access door for the stabilizer trim, do this step:

Close this access panel:

Number	Name/Location
311BL	Stabilizer Trim Access Door

——————— END OF TASK ———————

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