CHAPTER

32

LANDING GEAR

CHAPTER 32
LANDING GEAR

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated

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LANDING GEAR

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32-30 TASKS (cont)		
206	Feb 10/2005	
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32-32 TASKS		
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R 202	Jun 15/2009	
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32-51 TASKS		
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32-61 TASKS		
O 201	Jun 15/2009	
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32-61 TASKS (cont)		
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O 227	Jun 15/2009	
O 228	Jun 15/2009	
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32-61 TASKS (cont)								
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32-61 TASK SUPPORT								
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307	Oct 10/2005							
308	Oct 10/2005							

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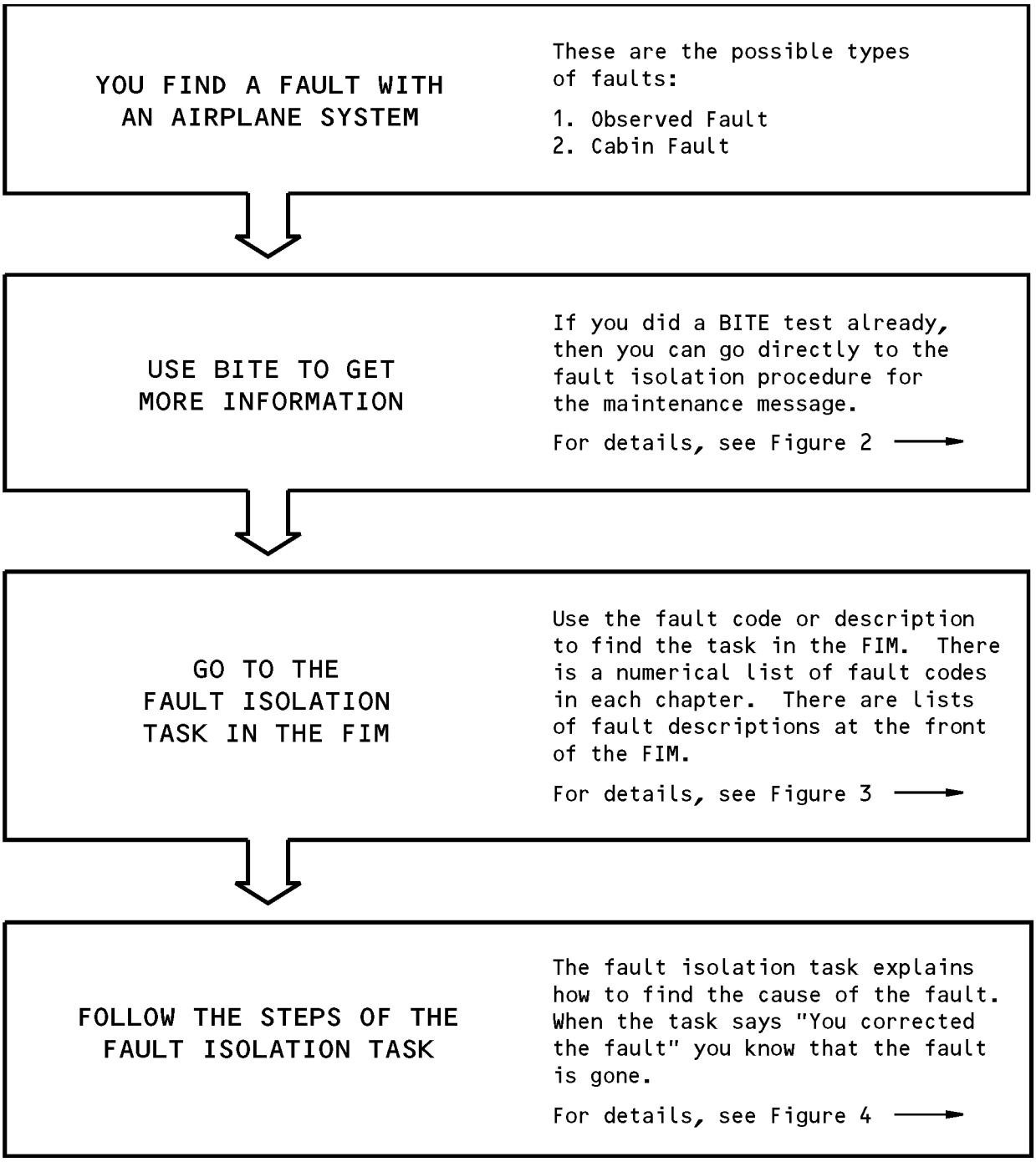
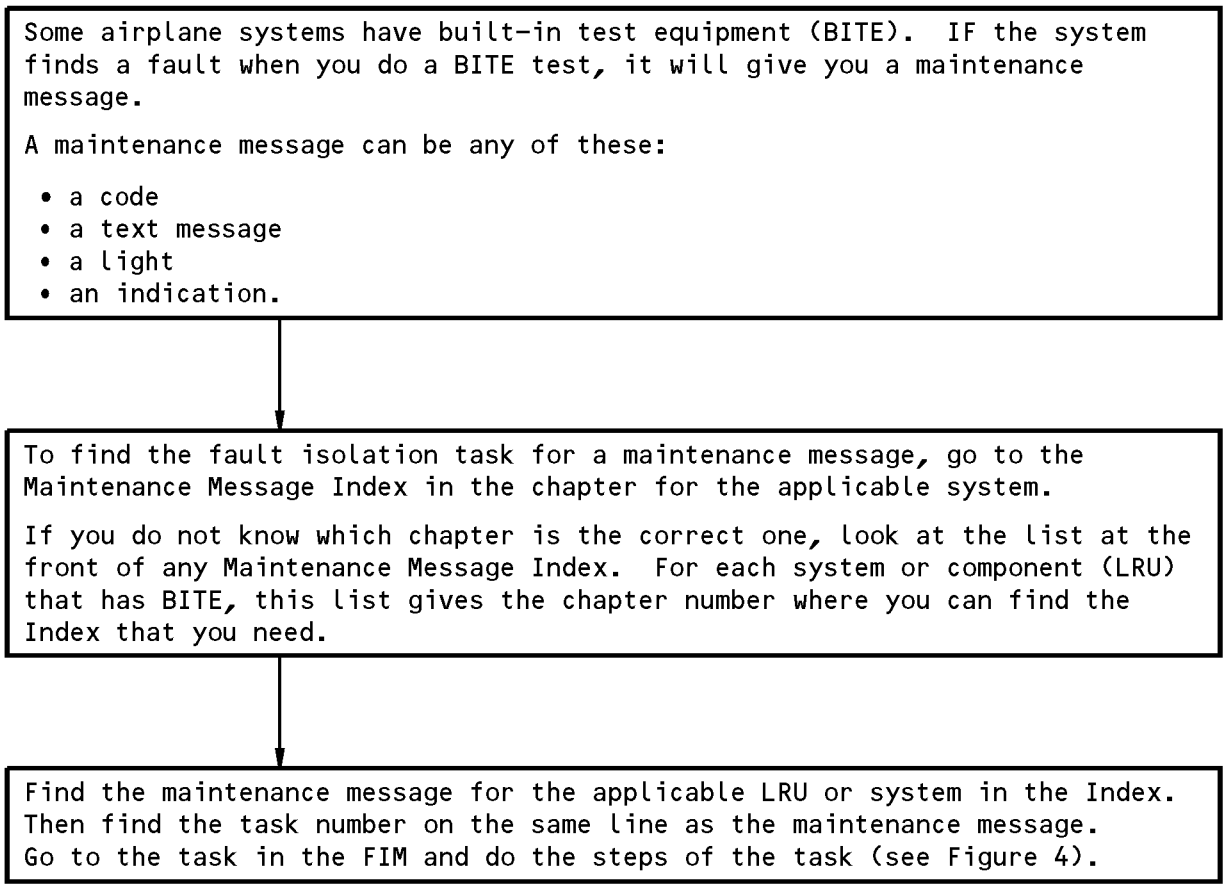
32-EFFECTIVE PAGES



Basic Fault Isolation Process
Figure 1



Getting Fault Information from BITE
Figure 2

IF YOU HAVE:	THEN DO THIS TO FIND THE TASK IN THE FIM:
FAULT CODE	1. The first two digits of the fault code are the FIM chapter that you need. Go to the Fault Code Index in that chapter and find the fault code. If the fault code starts with a letter, then go to the Cabin Fault Code Index at the front of the FIM. 2. Find the task number on the same line as the fault code. Go to the task in the FIM and do the steps in the task (see Figure 4).
OBSERVED FAULT DESCRIPTION	1. Go to the Observed Fault List at the front of the FIM and find the best description for the fault. 2. Find the task number on the same line as the fault description. Go to the task in the FIM and do the steps of the task (see Figure 4).
CABIN FAULT DESCRIPTION	1. Go to the Cabin Fault List at the front of the FIM and find the best description for the fault. 2. Find the task number on the same line as the fault description. Go to the task in the FIM and do the steps of the task (see Figure 4).
MAINTENANCE MESSAGE (FROM BITE)	1. Go to the Maintenance Message Index in the chapter for the LRU (the front of each Index gives you the chapter number for all LRUs). Find the maintenance message in the Index. 2. Find the task number on the same line as the maintenance message. Go to the task in the FIM and do the steps in the task (see Figure 4).

Finding the Fault Isolation Task in the FIM
Figure 3

ASSUMED CONDITIONS AT START OF TASK

- External electrical power is ON
- Hydraulic power and pneumatic power are OFF
- Engines are shut down
- No equipment in the system is deactivated

POSSIBLE CAUSES

- The list of possible causes has the most likely cause first and the least likely cause last.
- You can use the maintenance records of your airline to determine if the fault occurred before. Compare the list of possible causes to the past maintenance actions. This will help prevent repetition of the same maintenance actions.

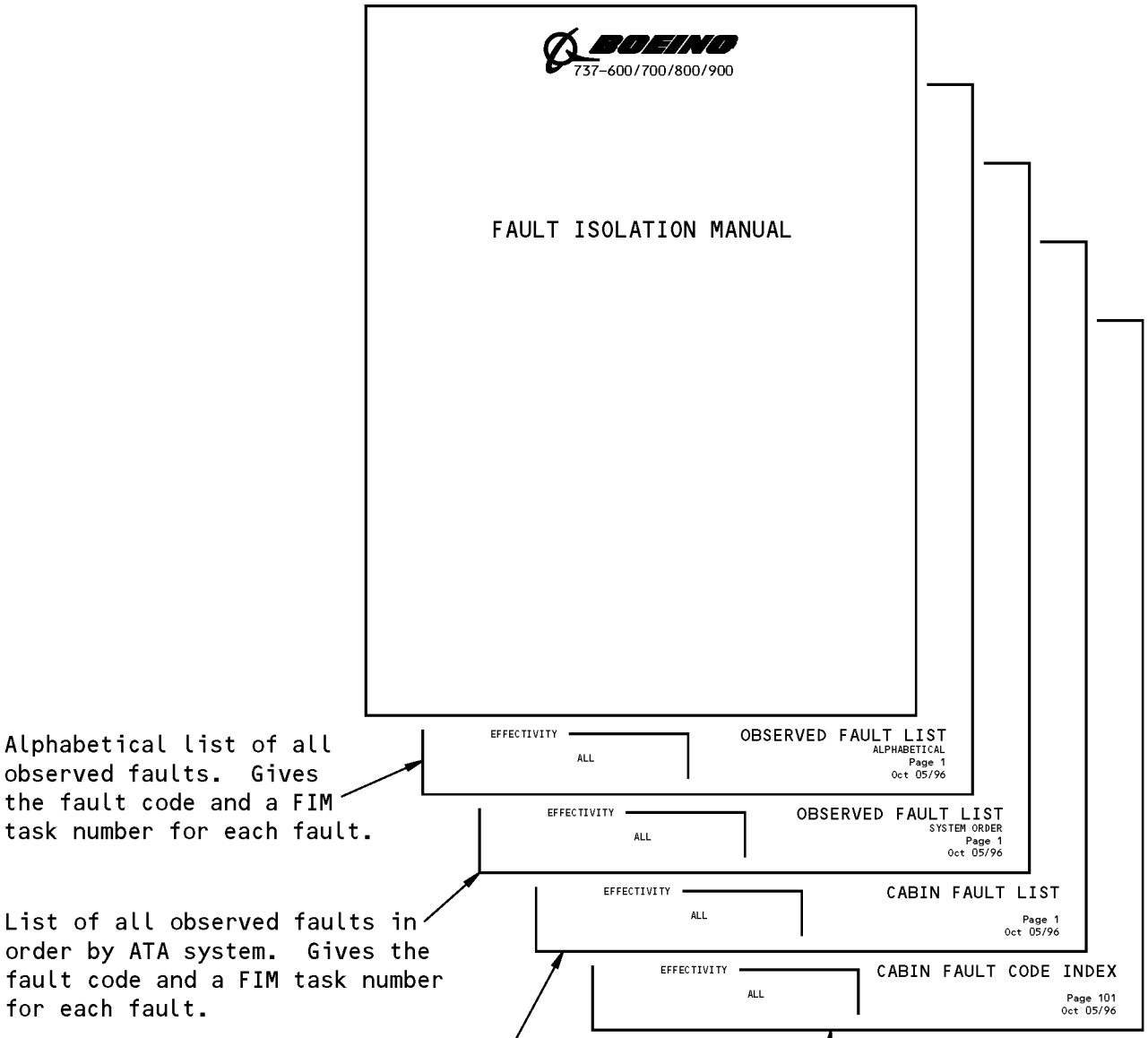
INITIAL EVALUATION PARAGRAPH

- The primary purpose of the Initial Evaluation paragraph at the start of the task is to help you find out if you can detect the fault right now:
  - If you cannot detect the fault right now, then the task cannot isolate the fault and the Initial Evaluation paragraph will say that there was an intermittent fault.
  - If you have an intermittent fault, you must use your judgement (and follow your airline's policy) to decide which maintenance action to take. Then monitor the airplane to see if the fault happens again on subsequent flights.
- The Initial Evaluation paragraph can also help you find out which Fault Isolation Procedure to use to isolate and correct the fault.

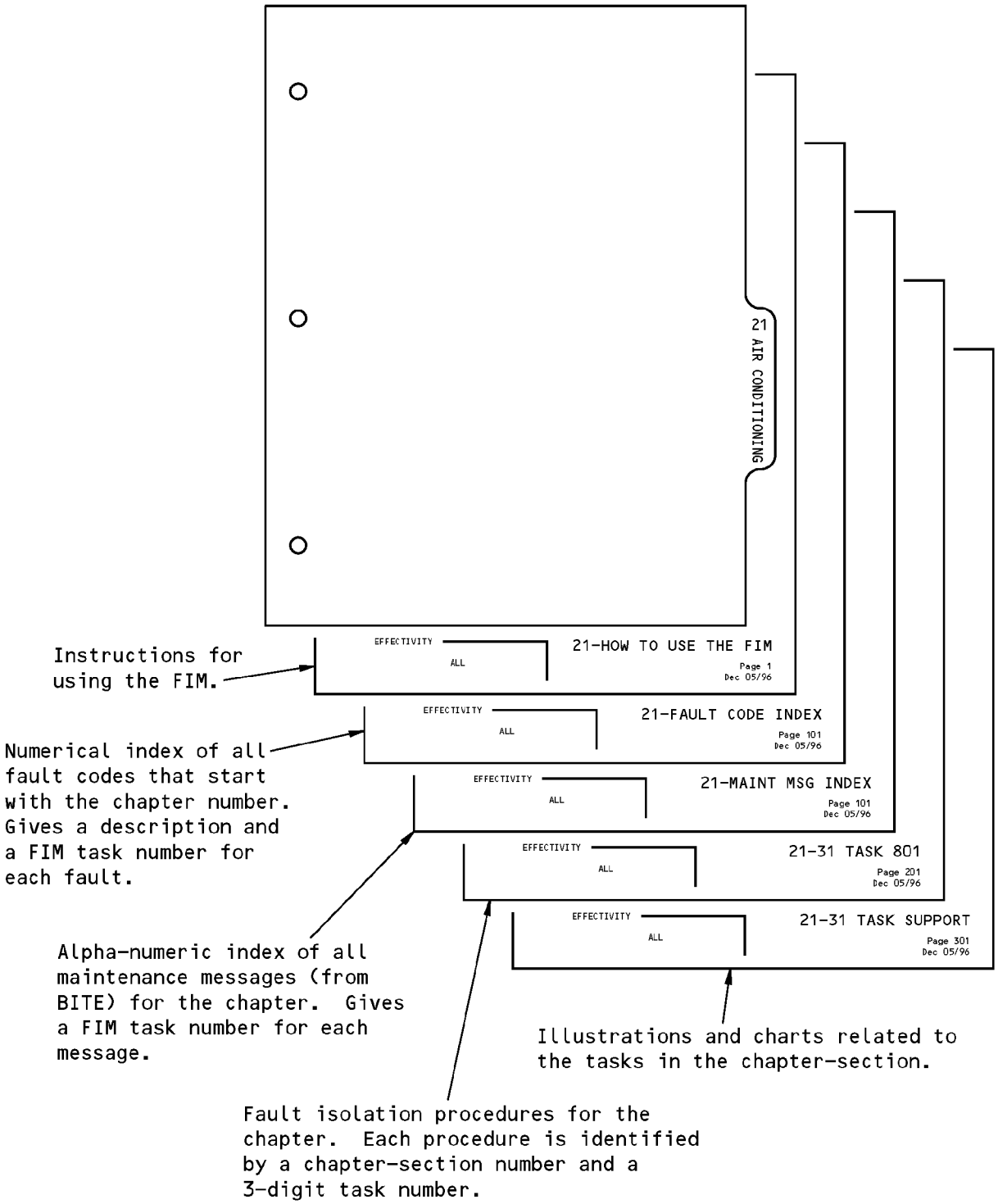
FAULT ISOLATION STEPS

- Do the steps of the task in the specified order. The "If ... then" statements that you see will guide you along the correct path.
- When you are at the endpoint of the path, the step says "...you corrected the fault." Complete the step and exit the procedure.

Doing the Fault Isolation Task
Figure 4



Subjects at Front of FIM
Figure 5



Subjects in Each FIM Chapter
Figure 6

FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
320 020 00	Air mode: shows with the airplane on the ground.	32-09 TASK 801
320 030 00	Ground mode: shows with airplane in the air.	32-09 TASK 801
320 040 00	PSEU: BITE display is blank.	32-09 TASK 811
320 050 00	PSEU light: light on.	32-09 TASK 801
320 060 00	PSEU light: light does not come on during test.	33-10 TASK 801
323 010 00	Landing gear lever: does not move to the UP position in flight, is free to move to the UP position when the lock override is used.	32-30 TASK 813
323 080 41	Main landing gear: slow to retract - left.	32-32 TASK 804
323 080 42	Main landing gear: slow to retract - right.	32-32 TASK 804
323 080 48	Main landing gear: slow to retract - left and right.	32-32 TASK 803
323 090 41	Main landing gear: slow to extend - left.	32-32 TASK 804
323 090 42	Main landing gear: slow to extend - right.	32-32 TASK 804
323 090 48	Main landing gear: slow to extend - left and right.	32-32 TASK 803
323 120 00	Nose landing gear: slow to extend.	32-30 TASK 806
323 130 00	Nose landing gear: slow to retract.	32-30 TASK 806
323 140 00	Nose landing gear: NOSE GEAR red light on, airplane on ground.	32-30 TASK 814
324 010 00	Brake pressure indicator: low/zero with parking brake released.	32-42 TASK 814
324 020 00	Brake pressure indicator: does not operate.	32-42 TASK 815
324 030 00	Brakes: grab, drag, or lock.	32-42 TASK 816
324 040 00	Brakes: pull to the left.	32-42 TASK 817
324 050 00	Brakes: pull to the right.	32-42 TASK 817
324 070 00	ANTISKID INOP light: light on.	32-42 TASK 829
324 080 00	AUTO BRAKE DISARM light: light on.	32-42 TASK 828
324 090 00	Auto brake: deceleration rate is not correct.	32-42 TASK 807
324 110 00	Brake pressure indicator: low/zero with parking brake set.	32-42 TASK 814
324 120 00	Parking brake: lever does not release.	32-42 TASK 818
324 130 00	Parking brake: lever does not set.	32-42 TASK 818
324 140 00	Parking brake: warning light does not operate - flight compartment.	32-42 TASK 819
324 145 00	Parking brake: warning light does not operate - external power receptacle panel.	32-42 TASK 830
324 150 01	Tire problem - main gear left outboard.	32-42 TASK 820

FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
324 150 02	Tire problem - main gear left inboard.	32-42 TASK 820
324 150 03	Tire problem - main gear right inboard.	32-42 TASK 820
324 150 04	Tire problem - main gear right outboard.	32-42 TASK 820
324 150 05	Tire problem - nose gear left.	32-42 TASK 820
324 150 06	Tire problem - nose gear right.	32-42 TASK 820
325 010 00	Nose wheel: makes a loud noise in the wheel well.	32-51 TASK 801
325 020 00	Nose wheel: strut bottoms during taxi.	32-51 TASK 802
325 030 00	Nose wheel: vibrates at gear retraction.	32-51 TASK 803
325 040 00	Nose wheel: vibrates at landing.	32-51 TASK 804
325 045 00	Nose wheel: vibrates during taxi.	32-51 TASK 804
325 050 00	Nose wheel: vibrates at takeoff.	32-51 TASK 804
325 060 00	Rudder pedal steering: does not operate, tiller steering normal.	32-51 TASK 805
325 061 00	Rudder pedal steering: does not steer straight.	32-51 TASK 810
325 070 00	Tiller steering: does not operate.	32-51 TASK 806
325 080 00	Tiller steering: response is sluggish.	32-51 TASK 807
325 090 00	Tiller steering: steers in left direction only.	32-51 TASK 808
325 100 00	Tiller steering: steers in right direction only.	32-51 TASK 808
326 010 00	Landing gear position lights: lights not correct.	32-09 TASK 801
326 040 41	Main landing gear: LEFT GEAR green light does not come on with landing gear lever at DN, LEFT GEAR red light on, alternate gear extension was attempted.	32-32 TASK 805
326 040 42	Main landing gear: RIGHT GEAR green light does not come on with landing gear lever at DN, RIGHT GEAR red light on, alternate gear extension was attempted.	32-32 TASK 805
326 050 41	Main landing gear: LEFT GEAR green light does not come on with landing gear lever at DN, LEFT GEAR red light on, indications normal after alternate gear extension.	32-32 TASK 802
326 050 42	Main landing gear: RIGHT GEAR green light does not come on with landing gear lever at DN, RIGHT GEAR red light on, indications normal after alternate gear extension.	32-32 TASK 802
326 060 41	Main landing gear: LEFT GEAR green light does not go off with landing gear lever at UP, LEFT GEAR red light on.	32-32 TASK 801
326 060 42	Main landing gear: RIGHT GEAR green light does not go off with landing gear lever at UP, RIGHT GEAR red light on.	32-32 TASK 801
326 070 00	Landing gear, main and nose: all gear extends with landing gear lever at OFF, NOSE GEAR, RIGHT GEAR, and LEFT GEAR green lights on.	32-30 TASK 809

FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
326 072 00	Landing gear: all LEFT GEAR, RIGHT GEAR, and NOSE GEAR red and green lights are on at the same time.	32-30 TASK 816
326 075 00	Landing gear, main and nose: does not retract when landing gear lever moved to UP position.	32-30 TASK 815
326 076 00	Landing gear, main and nose: does not extend when landing gear lever moved to DN position.	32-30 TASK 816
326 080 00	Nose landing gear: NOSE GEAR green light does not come on with landing gear lever at DN, NOSE GEAR red light on, alternate gear extension was attempted.	32-30 TASK 807
326 090 00	Nose landing gear: NOSE GEAR green light does not go off with landing gear lever at UP, NOSE GEAR red light on.	32-30 TASK 810
326 110 00	Nose landing gear: NOSE GEAR green light does not come on with landing gear lever at DN, NOSE GEAR red light on.	32-30 TASK 812
326 115 00	Nose landing gear: NOSE GEAR green light off with landing gear lever at UP, NOSE GEAR red light on.	32-30 TASK 811

LRU/SYSTEM	SHORT NAME	CHAPTER
Air Data Inertial Reference System	ADIRS	34
Air Traffic Controller Transponder - 1 (Left)	ATC XPDR - 1 (L)	34
Air Traffic Controller Transponder - 2 (Right)	ATC XPDR - 2 (R)	34
Airborne Vibration Monitor System Signal Conditioner	AVM SIG COND	77
Antiskid Control Unit	ANTISKID	32
Automatic Direction Finder Receiver - 1	ADF RECVR - 1	34
Autothrottle System	A/T	22
Auxiliary Power Unit	APU	49
Auxiliary Power Unit Generator Control Unit	APU GCU	24
Bus Power Control Unit	BPCU	24
Cabin Pressure Controller	CAB PRESS CON	21
Cabin Temperature Controller	CAB TEMP CONT	21
Cargo Electronic Unit - Forward	CEU - FWD	26
Cargo Electronic Unit - Lower	CEU - LOWER	26
Cargo Electronic Unit - Main Aft	CEU - MAIN AFT	26
Cargo Electronic Unit - Main Forward	CEU - MAIN FWD	26
Common Display System	CDS	31
Compartment Overheat Detection Control Module	WING/BODY OHT	26
Digital Flight Control System	DFCS	22
Distance Measurement Equipment Interrogator	DME INTRROGTR	34
Electrical Meters, Battery, and Galley Power Module	P5-13	24
Electronic Engine Controller - 1	ENGINE - 1	73
Electronic Engine Controller - 2	ENGINE - 2	73
Emergency Locator Transmitter	ELT	23
Engine Accessory Unit	ENG ACCY UNIT	78
Engine and Auxiliary Power Unit Fire Detection Control Module	ENG/APU FIRE	26
Flap/Slat Electronics Unit	FSEU	27
Flight Data Acquisition Unit	FDAU	31
Flight Management Computer System	FMCS	34
Fuel Quantity Indicating System	FQIS	28
Generator Control Unit - 1	GCU - 1	24
Generator Control Unit - 2	GCU - 2	24
Ground Proximity Computer	GROUND PROX	34
Head Up Display	HUD	34

LRU/SYSTEM	SHORT NAME	CHAPTER
High Frequency Transceiver	HF XCVR	23
Low Limit (35 Degree F) Controller - Left	35 DEG CONT L	21
Low Limit (35 Degree F) Controller - Right	35 DEG CONT R	21
Multi-Mode Receiver	MMR	34
Pack/Zone Temperature Controller - Left	PACK/ZN CON - L	21
Pack/Zone Temperature Controller - Right	PACK/ZN CON - R	21
Proximity Switch Electronics Unit	PSEU	32
Radio Altimeter Receiver/Transmitter	RADIO ALTIMTR	34
Stall Management Yaw Damper Computer - 1	SMYD - 1	27
Stall Management Yaw Damper Computer - 2	SMYD - 2	27
Traffic Alert and Collision Avoidance System Computer	TCAS COMPUTER	34
VHF Omnidirectional Ranging Marker Beacon Receiver	VOR/MKR RCVR	34
Very High Frequency Transceiver	VHF XCVR	23
Waste Tank Logic Control Module	WASTE TANK	38
Weather Radar Receiver/Transmitter	WEATHER RADAR	34
Window Heat Control Unit - Left Forward	WHCU - L FWD	30
Window Heat Control Unit - Left Side	WHCU - L SIDE	30
Window Heat Control Unit - Right Forward	WHCU - R FWD	30
Window Heat Control Unit - Right Side	WHCU - R SIDE	30

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
ANTISKID	A/B CONT	32-42 TASK 807
ANTISKID	A/B SEL	32-42 TASK 821
ANTISKID	A/B SOL	32-42 TASK 808
ANTISKID	A/B SYS	32-42 TASK 803
ANTISKID	A/G 1	32-42 TASK 823
ANTISKID	A/G 2	32-42 TASK 823
ANTISKID	A/G SW	32-42 TASK 823
ANTISKID	ADIRU L	32-42 TASK 824
ANTISKID	ADIRU R	32-42 TASK 825
ANTISKID	BOX 1-4	32-42 TASK 803
ANTISKID	BOX 1	32-42 TASK 803
ANTISKID	BOX 2-3	32-42 TASK 803
ANTISKID	BOX 2	32-42 TASK 803
ANTISKID	BOX 3	32-42 TASK 803
ANTISKID	BOX 4	32-42 TASK 803
ANTISKID	BOX A/B	32-42 TASK 803
ANTISKID	BOX BITE	32-42 TASK 803
ANTISKID	CNTLP SW	32-42 TASK 810
ANTISKID	GEARSW1	32-42 TASK 812
ANTISKID	GEARSW2	32-42 TASK 812
ANTISKID	PARKBRK	32-42 TASK 811
ANTISKID	PRESL	32-42 TASK 822
ANTISKID	PRESR	32-42 TASK 822
ANTISKID	PWR 1-4	32-42 TASK 802
ANTISKID	PWR 2-3	32-42 TASK 802
ANTISKID	PWR A/B	32-42 TASK 826
ANTISKID	PWR BITE	32-42 TASK 826
ANTISKID	SOL P SW	32-42 TASK 809

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
ANTISKID	SP CO LI	32-42 TASK 803
ANTISKID	SP CO RO	32-42 TASK 803
ANTISKID	SP SW LI	32-42 TASK 806
ANTISKID	SP SW LO	32-42 TASK 806
ANTISKID	SP SW RI	32-42 TASK 806
ANTISKID	SP SW RO	32-42 TASK 806
ANTISKID	SPLRHDL	32-42 TASK 827
ANTISKID	THR L 1	32-42 TASK 813
ANTISKID	THR L 2	32-42 TASK 813
ANTISKID	THR R 1	32-42 TASK 813
ANTISKID	THR R 2	32-42 TASK 813
ANTISKID	THR SW	32-42 TASK 813
ANTISKID	VLV 1-2	32-42 TASK 805
ANTISKID	VLV 1	32-42 TASK 804
ANTISKID	VLV 2	32-42 TASK 804
ANTISKID	VLV 3-4	32-42 TASK 805
ANTISKID	VLV 3	32-42 TASK 804
ANTISKID	VLV 4	32-42 TASK 804
ANTISKID	XDCR 1	32-42 TASK 806
ANTISKID	XDCR 2	32-42 TASK 806
ANTISKID	XDCR 3	32-42 TASK 806
ANTISKID	XDCR 4	32-42 TASK 806
PSEU	27-62001 SPDBRK DN FAULT	27-62 TASK 808
PSEU	27-62002 SBRK GT ARMD FLT	27-62 TASK 809
PSEU	27-62003 ALT L LT 800 FLT	32-61 TASK 823
PSEU	27-62004 ALT R LT 800 FLT	32-61 TASK 823
PSEU	27-62101 SPDBRK DN FAULT	27-62 TASK 808
PSEU	27-62102 SBRK GT ARMD FLT	27-62 TASK 809

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PSEU	27-62103 ALT L LT 800 FLT	32-61 TASK 823
PSEU	27-62104 ALT R LT 800 FLT	32-61 TASK 823
PSEU	27-62203 ALT L LT 800 FLT	32-61 TASK 823
PSEU	27-62204 ALT R LT 800 FLT	32-61 TASK 823
PSEU	27-65001 ALT L LT 800	32-61 TASK 823
PSEU	27-65002 ALT R LT 800	32-61 TASK 823
PSEU	27-65003 SBRK GT ARMED	27-62 TASK 809
PSEU	27-65004 SPDBRK DOWN	27-62 TASK 808
PSEU	27-66001 SPDBRK EXT FLT	27-62 TASK 810
PSEU	29-20001 NO LGTV PRI PWR	29-20 TASK 807
PSEU	29-20002 NO LGTV SEC PWR	29-20 TASK 808
PSEU	29-22001 ENG RUN L FAULT	29-20 TASK 809
PSEU	29-22002 HYD QTY B FAULT	29-20 TASK 810
PSEU	29-22003 HYD QTY BITE FLT	29-20 TASK 811
PSEU	29-22004 ALT NOSE STRG FLT	29-20 TASK 812
PSEU	29-22005 LGTV SET FAULT	29-20 TASK 813
PSEU	29-22105 LGTV SET FAULT	29-20 TASK 813
PSEU	29-23001 ENG NOT RUNNING	29-20 TASK 809
PSEU	29-23002 ALT NOSE STRG SEL	29-20 TASK 812
PSEU	29-24001 PRI LGTV FAIL	29-20 TASK 805
PSEU	29-24002 SEC LGTV FAIL	29-20 TASK 806
PSEU	29-24003 LGTV RESET	29-20 TASK 813
PSEU	31-51001 GSBV CL FAULT	32-61 TASK 825
PSEU	31-51101 GSBV CL FAULT	32-61 TASK 825
PSEU	31-52001 TOW INHB FAULT	32-09 TASK 810
PSEU	31-52002 TRA L LT 53 FAULT	32-09 TASK 815
PSEU	31-52003 TRA R LT 53 FAULT	32-09 TASK 815
PSEU	31-52004 STAB TRIM DISAGREE	32-09 TASK 817

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PSEU	31-52005 LE FLAPS EXT FLT	32-09 TASK 812
PSEU	31-52006 T/O FLPS A FAULT	32-09 TASK 814
PSEU	31-52007 T/O FLPS B FAULT	32-09 TASK 814
PSEU	31-52008 GS PRESS A FAULT	32-61 TASK 824
PSEU	31-52009 GS PRESS B FAULT	32-61 TASK 824
PSEU	31-52010 SPDBRK UP FAULT	27-62 TASK 808
PSEU	31-52011 LE FP EX BITE FLT	32-09 TASK 812
PSEU	31-52012 LE EXT IN FAULT	32-09 TASK 812
PSEU	31-52102 TRA L LT 53 FAULT	32-09 TASK 815
PSEU	31-52103 TRA R LT 53 FAULT	32-09 TASK 815
PSEU	31-52105 LE FLAPS EXT FLT	32-09 TASK 812
PSEU	31-52106 T/O FLPS A FAULT	32-09 TASK 814
PSEU	31-52107 T/O FLPS B FAULT	32-09 TASK 814
PSEU	31-52108 GS PRESS A FAULT	32-61 TASK 824
PSEU	31-52109 GS PRESS B FAULT	32-61 TASK 824
PSEU	31-52111 LE FP EX BITE FLT	32-09 TASK 812
PSEU	31-52208 GS PRESS A FAULT	32-61 TASK 824
PSEU	31-52209 GS PRESS B FAULT	32-61 TASK 824
PSEU	31-53001 GS PRESS A GT 750	31-51 TASK 804
PSEU	31-53002 GS PRESS B GT 750	31-51 TASK 804
PSEU	31-53003 NOT STAB TRM GRN	31-51 TASK 821
PSEU	31-53007 SPDBRK HDL UP or NOT SBRK HDL DOWN	27-62 TASK 808
PSEU	31-53008 NOT T/O FLAPS A	32-09 TASK 814
PSEU	31-53009 NOT T/O FLAPS B	32-09 TASK 814
PSEU	31-53010 LE FLAPS NOT EXT	32-09 TASK 812
PSEU	31-55001 GS PRESS A	31-51 TASK 804
PSEU	31-55002 GS PRESS B	31-51 TASK 804
PSEU	31-55003 GSBV CLOSED	31-51 TASK 805

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PSEU	31-55004 LE FLAPS EXTEND	32-09 TASK 812
PSEU	31-55005 SPDBRK UP	31-51 TASK 806
PSEU	31-55006 STAB TRM GREEN	31-51 TASK 820
PSEU	31-55007 STAB TRM NOT GRN	31-51 TASK 821
PSEU	31-55008 T/O WARN INHIBIT	31-51 TASK 809
PSEU	31-55009 TAKEOFF FLAPS A	31-51 TASK 810
PSEU	31-55010 TAKEOFF FLAPS B	31-51 TASK 811
PSEU	31-55011 TRA LT 53 LEFT	32-09 TASK 815
PSEU	31-55012 TRA LT 53 RIGHT	32-09 TASK 815
PSEU	31-56001 GSBV CL OUT FLT	32-09 TASK 813
PSEU	31-56002 T/O WARN 1 FAULT	31-51 TASK 801
PSEU	31-56003 T/O WARN 2 FAULT	31-51 TASK 801
PSEU	32-01001 L ON GND A FAULT	32-09 TASK 803
PSEU	32-01002 N ON GND A FAULT	32-09 TASK 802
PSEU	32-01003 R ON GND A FAULT	32-09 TASK 803
PSEU	32-01004 L ON GND B FAULT	32-09 TASK 803
PSEU	32-01005 N ON GND B FAULT	32-09 TASK 802
PSEU	32-01006 R ON GND B FAULT	32-09 TASK 803
PSEU	32-01007 AIR/GND FAIL	32-09 TASK 819
PSEU	32-01101 L ON GND A FAULT	32-09 TASK 803
PSEU	32-01102 n ON GND A FAULT	32-09 TASK 802
PSEU	32-01103 R ON GND A FAULT	32-09 TASK 803
PSEU	32-01104 L ON GND B FAULT	32-09 TASK 803
PSEU	32-01105 N ON GND B FAULT	32-09 TASK 802
PSEU	32-01106 R ON GND B FAULT	32-09 TASK 803
PSEU	32-02001 PARK BRK FAULT	32-09 TASK 806
PSEU	32-02002 PARK BRK A FAULT	32-09 TASK 806
PSEU	32-02003 PARK BRK B FAULT	32-09 TASK 806

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PSEU	32-03001 PARK BRK A SET	32-09 TASK 806
PSEU	32-03002 PARK BRK B SET	32-09 TASK 806
PSEU	32-04001 AIR/GND OVERRIDE	32-09 TASK 818
PSEU	32-05001 PARK A	32-09 TASK 806
PSEU	32-05002 PARK B	32-09 TASK 806
PSEU	32-06001 AIR/GND R584 FLT	32-09 TASK 804
PSEU	32-06002 AIR/GND R593 FLT	32-09 TASK 804
PSEU	32-06003 AIR/GND R587 FLT	32-09 TASK 804
PSEU	32-06004 AIR/GND R583 FLT	32-09 TASK 804
PSEU	32-06005 AIR/GND R589 FLT	32-09 TASK 804
PSEU	32-06006 AIR/GND R592 FLT	32-09 TASK 804
PSEU	32-06007 AIR/GND R594 FLT	32-09 TASK 804
PSEU	32-06008 LG LVR LCH FLT	32-09 TASK 807
PSEU	32-06009 AIR/GND R585 FLT	32-09 TASK 804
PSEU	32-06010 AIR/GND R588 FLT	32-09 TASK 804
PSEU	32-06011 AIR/GND R595 FLT	32-09 TASK 804
PSEU	32-06012 AIR/GND R586 FLT	32-09 TASK 804
PSEU	32-06013 AIR/GND R590 FLT	32-09 TASK 804
PSEU	32-06014 AIR/GND R591 FLT	32-09 TASK 804
PSEU	32-06015 AIR/GND R597 FLT	32-09 TASK 804
PSEU	32-06016 NGS RLY FAULT	32-61 TASK 813
PSEU	32-60001 NO 28V A POWER	32-09 TASK 808
PSEU	32-60002 NO 28V B POWER	32-09 TASK 822
PSEU	32-61001 L DN LKD A FAULT	32-61 TASK 801
PSEU	32-61002 L UP LKD A FAULT	32-61 TASK 802
PSEU	32-61003 NOSE LKD A FAULT	32-61 TASK 804
PSEU	32-61004 NOSE DN A FAULT	32-61 TASK 803
PSEU	32-61005 R DN LKD A FAULT	32-61 TASK 801

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PSEU	32-61006 R UP LKD A FAULT	32-61 TASK 802
PSEU	32-61007 L DN LKD B FAULT	32-61 TASK 801
PSEU	32-61008 L UP LKD B FAULT	32-61 TASK 802
PSEU	32-61009 NOSE DN B FAULT	32-61 TASK 803
PSEU	32-61010 NOSE LKD B FAULT	32-61 TASK 804
PSEU	32-61011 R DN LKD B FAULT	32-61 TASK 801
PSEU	32-61012 R UP LKD B FAULT	32-61 TASK 802
PSEU	32-61013 NOSE DN DISAGREE	32-61 TASK 803
PSEU	32-61101 L DN LKD A FAULT	32-61 TASK 801
PSEU	32-61102 L UP LKD A FAULT	32-61 TASK 802
PSEU	32-61103 NOSE LKD A FAULT	32-61 TASK 804
PSEU	32-61104 NOSE DN A FAULT	32-61 TASK 803
PSEU	32-61105 R DN LKD A FAULT	32-61 TASK 801
PSEU	32-61106 R UP LKD A FAULT	32-61 TASK 802
PSEU	32-61107 L DN LKD B FAULT	32-61 TASK 801
PSEU	32-61108 L UP LKD B FAULT	32-61 TASK 802
PSEU	32-61109 NOSE DN B FAULT	32-61 TASK 803
PSEU	32-61110 NOSE LKD B FAULT	32-61 TASK 804
PSEU	32-61111 R DN LKD B FAULT	32-61 TASK 801
PSEU	32-61112 R UP LKD B FAULT	32-61 TASK 802
PSEU	32-62001 TRA L LT 44 FAULT	32-09 TASK 816
PSEU	32-62002 TRA R LT 44 FAULT	32-09 TASK 816
PSEU	32-62003 TRA L LT 64 FAULT	32-09 TASK 820
PSEU	32-62004 TRA R LT 64 FAULT	32-09 TASK 820
PSEU	32-62005 ALT L LT 200 FLT	32-61 TASK 805
PSEU	32-62006 ALT R LT 200 FLT	32-61 TASK 806
PSEU	32-62007 LEVER DN FAULT	32-61 TASK 809
PSEU	32-62008 LEVER UP FAULT	32-61 TASK 809

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PSEU	32-62009 LDG FLAP A FAULT	32-61 TASK 815
PSEU	32-62010 LDG FLAP B FAULT	32-61 TASK 815
PSEU	32-62011 LDG WARN INHB FLT	32-61 TASK 822
PSEU	32-62014 LDG FLAP DISAGREE	32-61 TASK 815
PSEU	32-62101 TRA L LT 44 FAULT	32-09 TASK 816
PSEU	32-62102 TRA R LT 44 FAULT	32-09 TASK 816
PSEU	32-62105 ALT L LT 200 FLT	32-61 TASK 805
PSEU	32-62106 ALT R LT 200 FLT	32-61 TASK 806
PSEU	32-62107 LEVER DN FAULT	32-61 TASK 809
PSEU	32-62108 LEVER UP FAULT	32-61 TASK 809
PSEU	32-62109 LDG FLAP A FAULT	32-61 TASK 815
PSEU	32-62110 LDG FLAP B FAULT	32-61 TASK 815
PSEU	32-62205 ALT L LT 200 FLT	32-61 TASK 805
PSEU	32-62206 ALT R LT 200 FLT	32-61 TASK 806
PSEU	32-64001 INTERNAL FAULT	32-09 TASK 809
PSEU	32-64003 DISPATCH PER MEL	32-09 TASK 818
PSEU	32-64004 NO DISP FAULT	32-09 TASK 818
PSEU	32-65001 LANDING FLAPS A	32-61 TASK 815
PSEU	32-65002 LANDING FLAPS B	32-61 TASK 815
PSEU	32-66001 L GRN LT 1 FAULT	32-61 TASK 810
PSEU	32-66002 NOSE GRN LT 1 FLT	32-61 TASK 810
PSEU	32-66003 R GRN LT 1 FAULT	32-61 TASK 810
PSEU	32-66004 L RED LT 1 FAULT	32-61 TASK 810
PSEU	32-66005 NOSE RED LT 1 FLT	32-61 TASK 810
PSEU	32-66006 R RED LT 1 FAULT	32-61 TASK 810
PSEU	32-66007 DISPATCH 1 FAULT	32-61 TASK 818
PSEU	32-66010 NO DISP 1 FAULT	32-61 TASK 818
PSEU	32-66011 L GRN LT 2 FAULT	32-61 TASK 811

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PSEU	32-66012 NOSE GRN LT 2 FLT	32-61 TASK 811
PSEU	32-66013 R GRN LT 2 FAULT	32-61 TASK 811
PSEU	32-66014 L RED LT 2 FAULT	32-61 TASK 812
PSEU	32-66015 NOSE RED LT 2 FLT	32-61 TASK 812
PSEU	32-66016 R RED LT 2 FAULT	32-61 TASK 812
PSEU	32-66017 DISPATCH 2 FAULT	32-61 TASK 818
PSEU	32-66018 LDG WARN FAULT	32-61 TASK 816
PSEU	32-66020 NO DISP 2 FAULT	32-61 TASK 818
PSEU	52-71001 FWD ENTR DR OPEN	52-10 TASK 801
PSEU	52-71002 FWD SERV DR OPEN	52-10 TASK 801
PSEU	52-71003 AFT ENTR DR OPEN	52-10 TASK 801
PSEU	52-71004 AFT SER DR OPEN	52-10 TASK 801
PSEU	52-71005 AIRSTAIR UNLOCKED	Reference Not Currently Available
PSEU	52-72001 FWD CGO DR OPEN	52-30 TASK 803
PSEU	52-72002 AFT CGO DR OPEN	52-30 TASK 803
PSEU	52-72003 FWD ACC DR OPEN	52-40 TASK 801
PSEU	52-72004 EE ACC DR OPEN	52-40 TASK 802
PSEU	52-72005 L FL SW FAULT	52-20 TASK 801
PSEU	52-72006 L FWD FL SW FAULT	52-20 TASK 801
PSEU	52-72007 L FL SW FAULT	52-20 TASK 801
PSEU	52-72008 R FL SW FAULT	52-20 TASK 801
PSEU	52-72009 R FWD FL SW FAULT	52-20 TASK 801
PSEU	52-72010 L OW SW A FAULT	52-20 TASK 802
PSEU	52-72011 L OW SW B FAULT	52-20 TASK 802
PSEU	52-72012 L FWD OW SW A FLT	52-20 TASK 802
PSEU	52-72013 L FWD OW SW B FLT	52-20 TASK 802
PSEU	52-72014 R OW SW A FAULT	52-20 TASK 802

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PSEU	52-72015 R OW SW B FAULT	52-20 TASK 802
PSEU	52-72016 R FWD OW SW A FLT	52-20 TASK 802
PSEU	52-72017 R FWD OW SW B FLT	52-20 TASK 802
PSEU	52-72018 ENG RUN R FAULT	52-20 TASK 803
PSEU	52-72019 OVWG OPT FAULT	52-20 TASK 804
PSEU	52-72020 L OW SW DISAGREE	52-20 TASK 805
PSEU	52-72021 L FWD OW SW DSGR	52-20 TASK 805
PSEU	52-72022 R OW SW DISAGREE	52-20 TASK 805
PSEU	52-72023 R FWD OW SW DSGR	52-20 TASK 805
PSEU	52-72024 FOUR OW OPT FLT	52-20 TASK 804
PSEU	52-72106 L FWD FL SW FAULT	52-20 TASK 801
PSEU	52-72107 L FL SW FAULT	52-20 TASK 801
PSEU	52-72108 R FL SW FAULT	52-20 TASK 801
PSEU	52-72109 R FWD FL SW FAULT	52-20 TASK 801
PSEU	52-74001 L OVWG OPEN	52-20 TASK 806
PSEU	52-74002 L FWD OW OPEN	52-20 TASK 806
PSEU	52-74003 R OVWG OPEN	52-20 TASK 806
PSEU	52-74004 R FWD OW OPEN	52-20 TASK 806
PSEU	52-76001 EQPT WARN FLT	52-10 TASK 802
PSEU	52-76002 AFT LDR RLY FLT	25-51 TASK 801
PSEU	52-76003 AFT CGO WARN FLT	52-10 TASK 802
PSEU	52-76004 AFT ENTR WARN FLT	52-10 TASK 802
PSEU	52-76005 AFT SERV WARN FLT	52-10 TASK 802
PSEU	52-76012 AIRSTAIR WARN FLT	52-10 TASK 802
PSEU	52-76014 FWD CGO WARN FLT	52-10 TASK 802
PSEU	52-76015 FWD ENTR WARN FLT	52-10 TASK 802
PSEU	52-76016 FWD SERV WARN FLT	52-10 TASK 802
PSEU	52-76017 FL RELAY 1 FAULT	52-20 TASK 807

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PSEU	52-76018 FL RELAY 2 FAULT	52-20 TASK 807
PSEU	52-76019 LOW WARN FLT	52-20 TASK 808
PSEU	52-76020 L FWD OW WARN FLT	52-20 TASK 808
PSEU	52-76021 R OW WARN FLT	52-20 TASK 808
PSEU	52-76022 R FWD OW WARN FLT	52-20 TASK 808

801. Proximity Switch Electronics Unit (PSEU) BITE Procedure

A. General

(1) You do the Proximity Switch Electronics Unit (PSEU) BITE test at the front of the PSEU module. The PSEU is in the forward electrical equipment bay. These are the menu items in the PSEU display panel that you will use in this task to read out stored faults or test for faults

(a) EXISTING FAULTS

(b) FAULT HISTORY

(c) GROUND TEST -> SELF TEST

(2) If the PSEU light is currently ON in the flight deck, the EXISTING FAULTS report will list both active and latched faults resulting from the PSEU continuous testing of discrete inputs and outputs, sensor interfaces, and PSEU internal testing. Do the steps in the ''B'' BITE Procedure to see EXISTING FAULTS. These faults generate fault messages on the PSEU display. A maintenance message identifies a specific failure which is found by the PSEU. The maintenance messages have English text and a seven digit number.

(3) (3) If the PSEU light was ON during the most recent flight, but is currently OFF, the EXISTING FAULTS will display NO FAULTS. Check for inactive faults in the most recent flight leg of the FAULT HISTORY report. The faults are grouped by flight leg. Flight leg 0 (LEG 0) is the most recent flight and includes faults that occurred on the ground after the most recent flight. Do the steps in the ''C'' BITE Procedure to see FAULT HISTORY.

(4) Do the steps in the ''D'' Repair Confirmation if you performed maintenance for a PSEU fault message to see if the fault still exists. The PSEU SELF TEST is used for this purpose.

B. BITE Procedure to display Existing Faults

(1) Check for Existing Faults. Use the PSEU BITE panel: (Figure 201, Figure 202)

(a) Open this access panel:

Number	Name/Location
112A	Forward Access Door

(b) Push the ON/OFF switch.

NOTE: The display will show EXISTING FAULTS?

1) If the BITE display stays blank, then, do this task: No BITE Display on the PSEU - Fault Isolation, 32-09 TASK 811.

(c) Push the YES switch. The display will show:

1) Either the number of faults.

2) Or the display will show NO FAULTS.

(d) If there are existing faults, then the display will show the number of faults in the PSEU. Do these steps:

NOTE: You should display and record all the existing faults before you perform any fault isolation. Maintenance messages could be added to, or removed, from the existing faults list when you perform the fault isolation.

1) Push the down arrow to show the first fault.

2) Push the down arrow to show MORE DETAILS?.

3) Do these steps to show the details on the fault:

a) Push the YES switch.

b) Record the maintenance message numbers.

c) Refer to the table at the end of this task to find the fault isolation task for the maintenance message.

NOTE: Some maintenance messages report status of the PSEU. These maintenance messages, 32-04001, 32-64003, and 32-64004, are not faults. Continue to show the other existing maintenance messages to perform fault isolation.

d) Push the down arrow to see if the message is latched.

e) Push the down arrow to see if there is any additional information on the fault.

f) RETURN TO LIST will show when there are no more details for the fault. Push the YES button to return to the fault message list.

4) The next fault will show on the BITE display. Repeat the previous steps to show all the existing faults and details.

(e) If the test shows NO FAULTS, then do these steps then continue.

1) Push the MENU switch to return to the EXISTING FAULTS display.

2) Push the down arrow switch until the display shows FAULT HISTORY?.

3) Push the YES switch.

NOTE: The display will show FLIGHT LEG 0?

4) Push the YES switch.

5) Write the maintenance message details.

6) Push the down arrow switch to look for faults in FLIGHT LEG 0.

7) Refer to the table at the end of this task to find the fault isolation task for the applicable maintenance message.

C. BITE Procedure to display FAULT HISTORY

(1) Check for Existing Faults. Use the PSEU BITE panel: (Figure 201, Figure 202)

(a) Open this access panel:

Number	Name/Location
112A	Forward Access Door

(b) Push the ON/OFF switch.

NOTE: The display will show EXISTING FAULTS?

1) If the BITE display stays blank, then, do this task: No BITE Display on the PSEU - Fault Isolation, 32-09 TASK 811.

(c) Push the NO switch.

(d) Push the down arrow switch until the display shows FAULT HISTORY?.

NOTE: The display will show FLIGHT LEG 0?

1) Push the YES switch.

2) Write the maintenance message details.

3) Push the down arrow switch.

4) Write the fault type data. These are the possible fault types:

a) HARD

b) INTERMITTENT

c) REPEAT

5) Push the MENU Switch

NOTE: This will return you to the FLIGHT LEG 0? display

6) Push the down arrow switch to look for faults in other flight legs.

7) Refer to the table at the end of this task to find the fault isolation task for the applicable maintenance message.

D. Repair Confirmation using PSEU Self Test.

(1) Close this door: Forward Entry Door, FORWARD ENTRY DOOR - MAINTENANCE PRACTICES, AMM 52-11-00/201.

(2) Prepare to do the SELF TEST for the PSEU:

(a) If it is necessary, open the

Number	Name/Location
112A	Forward Access Door

(b) If the PSEU is not on, then push the ON/OFF switch.

NOTE: The display will show EXISTING FAULTS?

(c) If it is necessary, push the MENU switch until EXISTING FAULTS? shows.

(3) Do the SELF TEST for the PSEU:

(a) Push the down arrow until GROUND TEST? shows.

(b) Push the YES switch. The display will show REPLACE TEST.

(c) Push the down arrow until SELF TEST? shows.

(d) Push the YES switch to start the SELF TEST.

(e) SEE WARNINGS will show on the BITE display.

(f) ARE YOU SURE? 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.

(g) Make sure that all persons and equipment are clear on the flight control surfaces.

(h) Push the YES switch after you completed the previous step.

(i) TEST IN PROGRESS will show while the test runs.

(j) When the self test is complete either:

1) The number of faults will show.

2) Or, TEST PASS will show.

3) If the faults show, then repeat these steps until END OF LIST shows:

NOTE: RESET LATCHES will display before you reach the END OF LIST. Push the down arrow or NO switch. Do not push the YES switch unless you want to reset the latched faults.

a) Push the down arrow to show the first fault.

b) Push the down arrow to show MORE DETAILS?.

c) Push the YES switch to show the message number.

d) Record the message number.

e) Push the MENU switch to return to the fault list.

f) Push the down arrow to show the next fault.

4) IF TEST PASS shows, then the self test passed with no faults found. You corrected the condition which caused the PSEU fault.

(k) If you recorded faults, then examine the faults to determine if the original fault still exists.

(l) If the original fault still exists, then return to the fault isolation procedure.

(m) If other faults exist, then refer to the table at the end of this task to find the fault isolation task for the maintenance message.

NOTE: Some maintenance messages report status of the PSEU. These maintenance messages, 32-04001, 32-64003, and 32-64004, are not faults.

——————— END OF TASK ———————

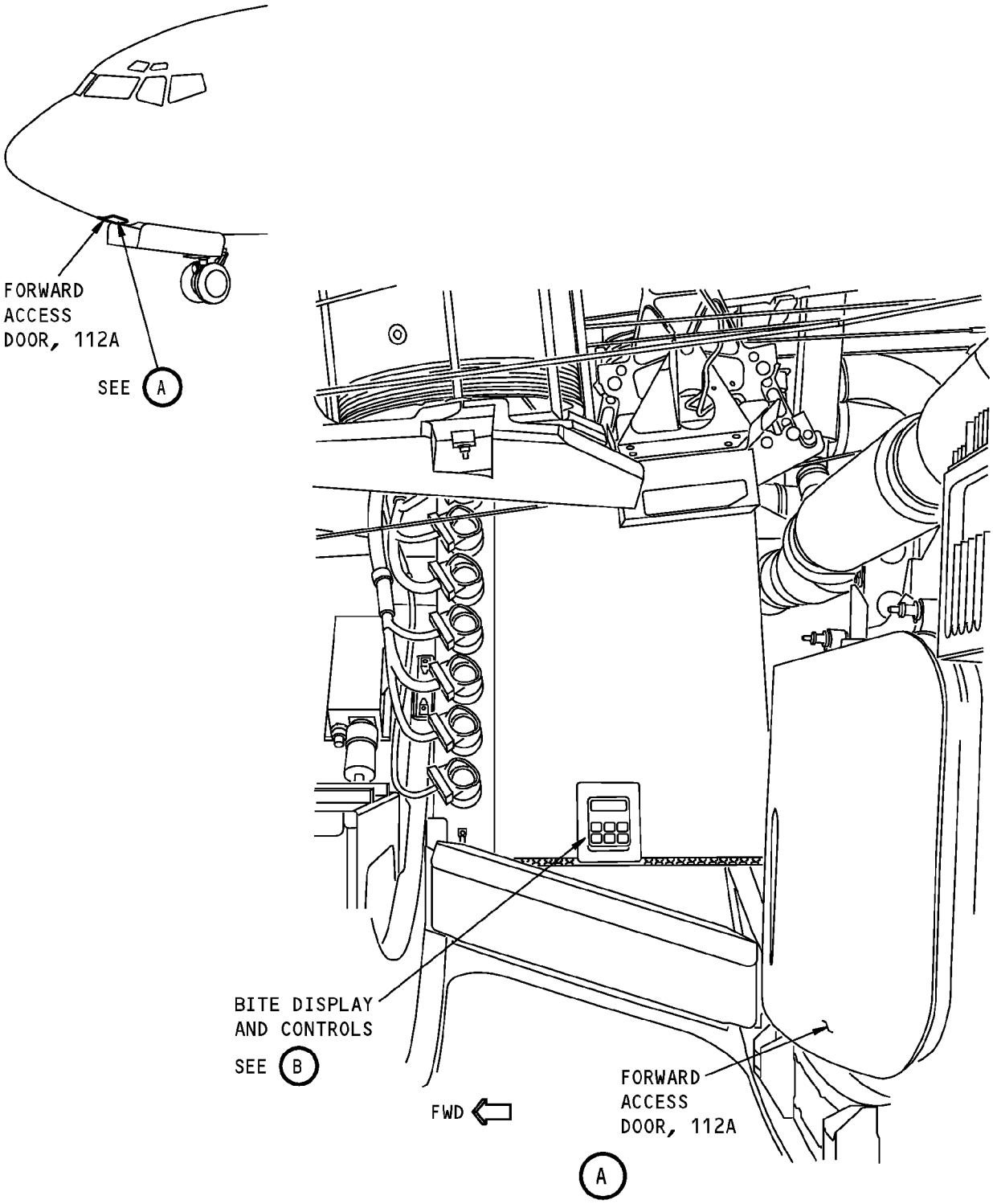
LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PSEU	32-01001 L ON GND A FAULT	32-09 TASK 803
PSEU	32-01002 N ON GND A FAULT	32-09 TASK 802
PSEU	32-01003 R ON GND A FAULT	32-09 TASK 803
PSEU	32-01004 L ON GND B FAULT	32-09 TASK 803
PSEU	32-01005 N ON GND B FAULT	32-09 TASK 802
PSEU	32-01006 R ON GND B FAULT	32-09 TASK 803
PSEU	32-01007 AIR/GND FAIL	32-09 TASK 819
PSEU	32-01101 L ON GND A FAULT	32-09 TASK 803
PSEU	32-01102 n ON GND A FAULT	32-09 TASK 802
PSEU	32-01103 R ON GND A FAULT	32-09 TASK 803
PSEU	32-01104 L ON GND B FAULT	32-09 TASK 803
PSEU	32-01105 N ON GND B FAULT	32-09 TASK 802
PSEU	32-01106 R ON GND B FAULT	32-09 TASK 803
PSEU	32-02001 PARK BRK FAULT	32-09 TASK 806
PSEU	32-02002 PARK BRK A FAULT	32-09 TASK 806
PSEU	32-02003 PARK BRK B FAULT	32-09 TASK 806
PSEU	32-03001 PARK BRK A SET	32-09 TASK 806
PSEU	32-03002 PARK BRK B SET	32-09 TASK 806
PSEU	32-04001 AIR/GND OVERRIDE	32-09 TASK 818
PSEU	32-05001 PARK A	32-09 TASK 806

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PSEU	32-05002 PARK B	32-09 TASK 806
PSEU	32-06001 AIR/GND R584 FLT	32-09 TASK 804
PSEU	32-06002 AIR/GND R593 FLT	32-09 TASK 804
PSEU	32-06003 AIR/GND R587 FLT	32-09 TASK 804
PSEU	32-06004 AIR/GND R583 FLT	32-09 TASK 804
PSEU	32-06005 AIR/GND R589 FLT	32-09 TASK 804
PSEU	32-06006 AIR/GND R592 FLT	32-09 TASK 804
PSEU	32-06007 AIR/GND R594 FLT	32-09 TASK 804
PSEU	32-06008 LG LVR LCH FLT	32-09 TASK 807
PSEU	32-06009 AIR/GND R585 FLT	32-09 TASK 804
PSEU	32-06010 AIR/GND R588 FLT	32-09 TASK 804
PSEU	32-06011 AIR/GND R595 FLT	32-09 TASK 804
PSEU	32-06012 AIR/GND R586 FLT	32-09 TASK 804
PSEU	32-06013 AIR/GND R590 FLT	32-09 TASK 804
PSEU	32-06014 AIR/GND R591 FLT	32-09 TASK 804
PSEU	32-06015 AIR/GND R597 FLT	32-09 TASK 804
PSEU	32-06016 NGS RLY FAULT	32-61 TASK 813
PSEU	32-60001 NO 28V A POWER	32-09 TASK 808
PSEU	32-60002 NO 28V B POWER	32-09 TASK 822
PSEU	32-61001 L DN LKD A FAULT	32-61 TASK 801
PSEU	32-61002 L UP LKD A FAULT	32-61 TASK 802
PSEU	32-61003 NOSE LKD A FAULT	32-61 TASK 804
PSEU	32-61004 NOSE DN A FAULT	32-61 TASK 803
PSEU	32-61005 R DN LKD A FAULT	32-61 TASK 801
PSEU	32-61006 R UP LKD A FAULT	32-61 TASK 802
PSEU	32-61007 L DN LKD B FAULT	32-61 TASK 801
PSEU	32-61008 L UP LKD B FAULT	32-61 TASK 802

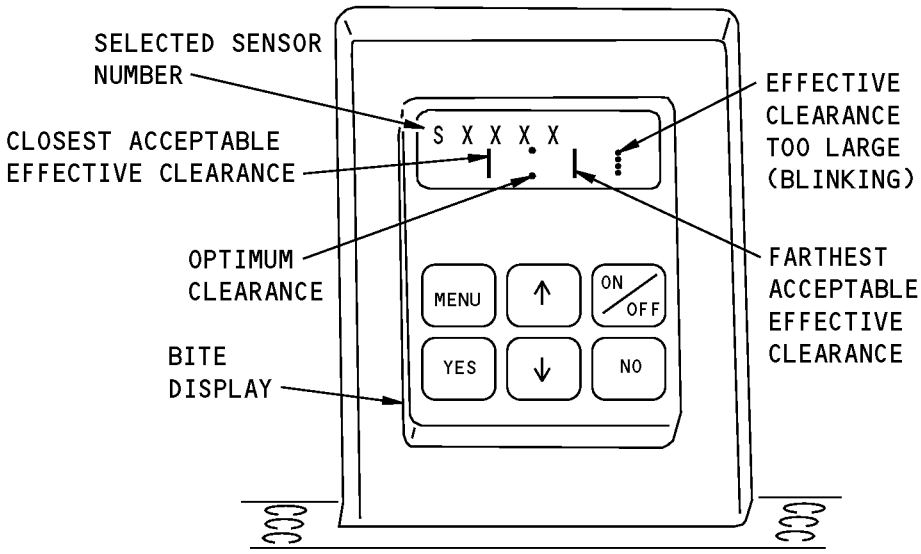
LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PSEU	32-61009 NOSE DN B FAULT	32-61 TASK 803
PSEU	32-61010 NOSE LKD B FAULT	32-61 TASK 804
PSEU	32-61011 R DN LKD B FAULT	32-61 TASK 801
PSEU	32-61012 R UP LKD B FAULT	32-61 TASK 802
PSEU	32-61013 NOSE DN DISAGREE	32-61 TASK 803
PSEU	32-61101 L DN LKD A FAULT	32-61 TASK 801
PSEU	32-61102 L UP LKD A FAULT	32-61 TASK 802
PSEU	32-61103 NOSE LKD A FAULT	32-61 TASK 804
PSEU	32-61104 NOSE DN A FAULT	32-61 TASK 803
PSEU	32-61105 R DN LKD A FAULT	32-61 TASK 801
PSEU	32-61106 R UP LKD A FAULT	32-61 TASK 802
PSEU	32-61107 L DN LKD B FAULT	32-61 TASK 801
PSEU	32-61108 L UP LKD B FAULT	32-61 TASK 802
PSEU	32-61109 NOSE DN B FAULT	32-61 TASK 803
PSEU	32-61110 NOSE LKD B FAULT	32-61 TASK 804
PSEU	32-61111 R DN LKD B FAULT	32-61 TASK 801
PSEU	32-61112 R UP LKD B FAULT	32-61 TASK 802
PSEU	32-62001 TRA L LT 44 FAULT	32-09 TASK 816
PSEU	32-62002 TRA R LT 44 FAULT	32-09 TASK 816
PSEU	32-62003 TRA L LT 64 FAULT	32-09 TASK 820
PSEU	32-62004 TRA R LT 64 FAULT	32-09 TASK 820
PSEU	32-62005 ALT L LT 200 FLT	32-61 TASK 805
PSEU	32-62006 ALT R LT 200 FLT	32-61 TASK 806
PSEU	32-62007 LEVER DN FAULT	32-61 TASK 809
PSEU	32-62008 LEVER UP FAULT	32-61 TASK 809
PSEU	32-62009 LDG FLAP A FAULT	32-61 TASK 815
PSEU	32-62010 LDG FLAP B FAULT	32-61 TASK 815

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PSEU	32-62011 LDG WARN INHB FLT	32-61 TASK 822
PSEU	32-62014 LDG FLAP DISAGREE	32-61 TASK 815
PSEU	32-62101 TRA L LT 44 FAULT	32-09 TASK 816
PSEU	32-62102 TRA R LT 44 FAULT	32-09 TASK 816
PSEU	32-62105 ALT L LT 200 FLT	32-61 TASK 805
PSEU	32-62106 ALT R LT 200 FLT	32-61 TASK 806
PSEU	32-62107 LEVER DN FAULT	32-61 TASK 809
PSEU	32-62108 LEVER UP FAULT	32-61 TASK 809
PSEU	32-62109 LDG FLAP A FAULT	32-61 TASK 815
PSEU	32-62110 LDG FLAP B FAULT	32-61 TASK 815
PSEU	32-62205 ALT L LT 200 FLT	32-61 TASK 805
PSEU	32-62206 ALT R LT 200 FLT	32-61 TASK 806
PSEU	32-64001 INTERNAL FAULT	32-09 TASK 809
PSEU	32-64003 DISPATCH PER MEL	32-09 TASK 818
PSEU	32-64004 NO DISP FAULT	32-09 TASK 818
PSEU	32-65001 LANDING FLAPS A	32-61 TASK 815
PSEU	32-65002 LANDING FLAPS B	32-61 TASK 815
PSEU	32-66001 L GRN LT 1 FAULT	32-61 TASK 810
PSEU	32-66002 NOSE GRN LT 1 FLT	32-61 TASK 810
PSEU	32-66003 R GRN LT 1 FAULT	32-61 TASK 810
PSEU	32-66004 L RED LT 1 FAULT	32-61 TASK 810
PSEU	32-66005 NOSE RED LT 1 FLT	32-61 TASK 810
PSEU	32-66006 R RED LT 1 FAULT	32-61 TASK 810
PSEU	32-66007 DISPATCH 1 FAULT	32-61 TASK 818
PSEU	32-66010 NO DISP 1 FAULT	32-61 TASK 818
PSEU	32-66011 L GRN LT 2 FAULT	32-61 TASK 811
PSEU	32-66012 NOSE GRN LT 2 FLT	32-61 TASK 811

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PSEU	32-66013 R GRN LT 2 FAULT	32-61 TASK 811
PSEU	32-66014 L RED LT 2 FAULT	32-61 TASK 812
PSEU	32-66015 NOSE RED LT 2 FLT	32-61 TASK 812
PSEU	32-66016 R RED LT 2 FAULT	32-61 TASK 812
PSEU	32-66017 DISPATCH 2 FAULT	32-61 TASK 818
PSEU	32-66018 LDG WARN FAULT	32-61 TASK 816
PSEU	32-66020 NO DISP 2 FAULT	32-61 TASK 818



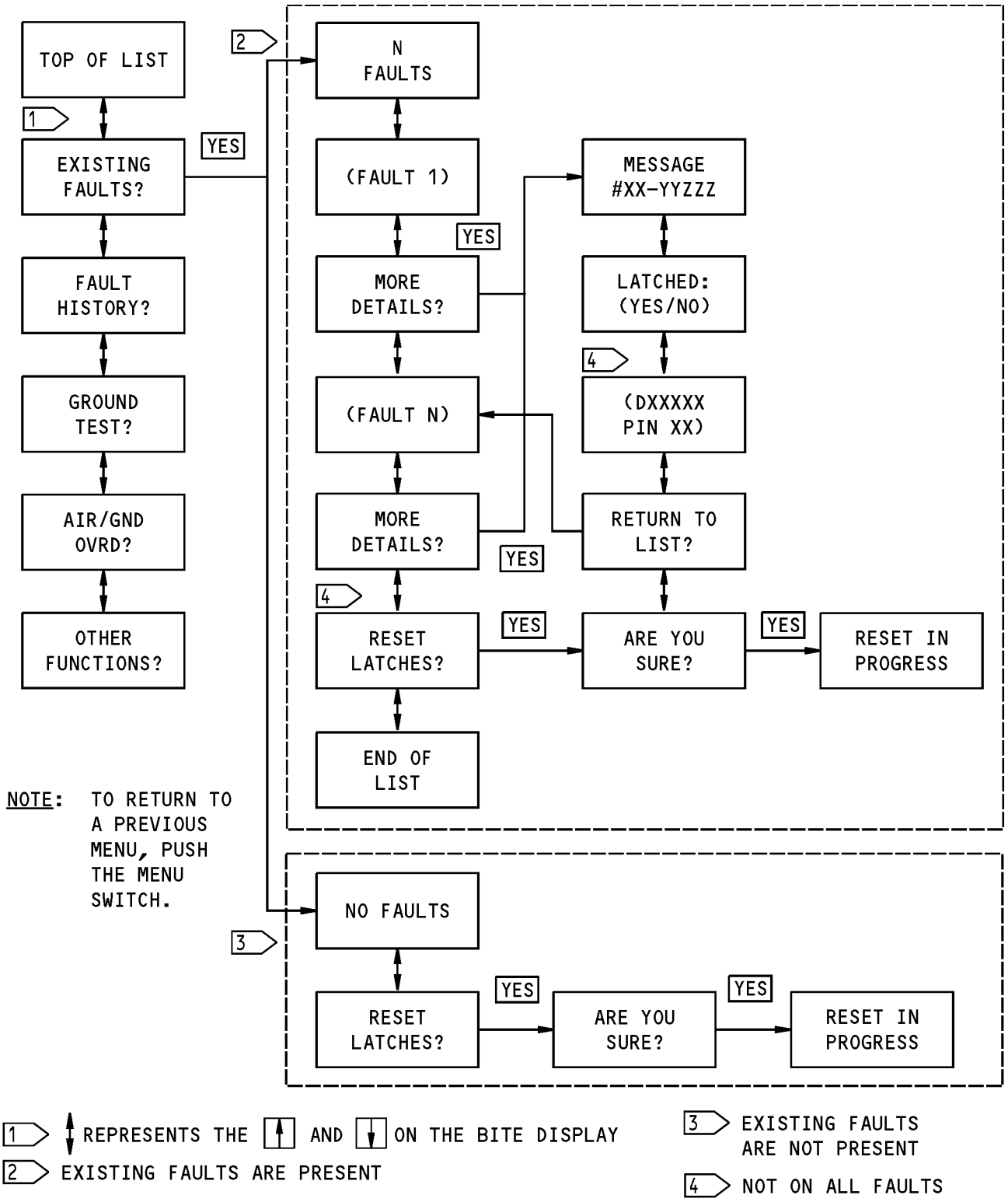
Proximity Switch Electronics Unit (PSEU) BITE
Figure 201 (Sheet 1 of 2)/ 32-09-00-990-808



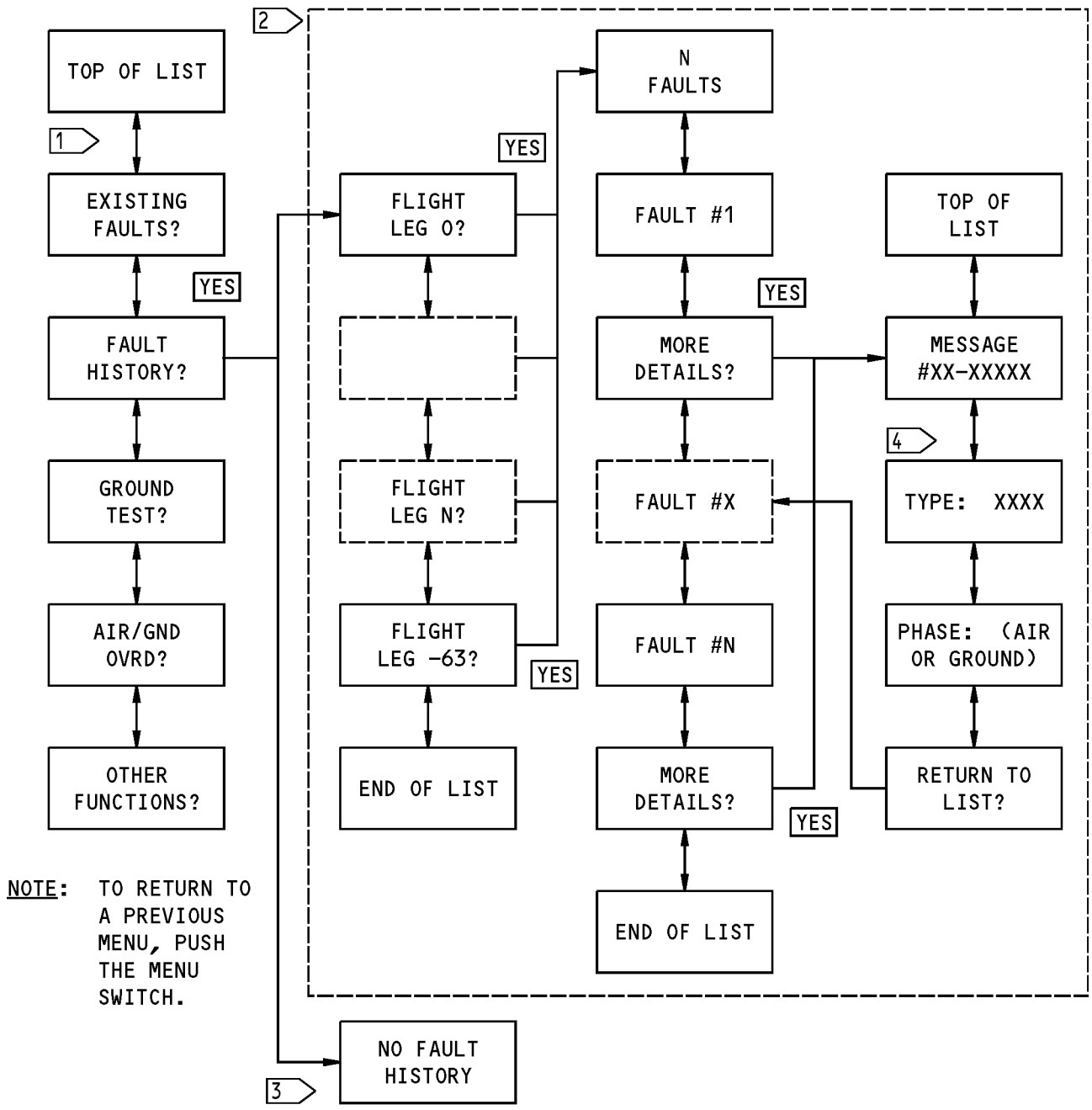
BITE DISPLAY AND CONTROLS

B

Proximity Switch Electronics Unit (PSEU) BITE
Figure 201 (Sheet 2 of 2)/ 32-09-00-990-808



PSEU Bite Tree - Display Existing Fault Data
Figure 202 (Sheet 1 of 2)/ 32-09-00-990-809



1 ↕ REPRESENTS THE ↑ AND ↓ ON THE BITE DISPLAY

2 FAULTS ARE PRESENT IN FAULT HISTORY

3 FAULTS ARE NOT PRESENT IN FAULT HISTORY

4 FAULT TYPES ARE HARD, INTERMITTENT, AND REPEAT

PSEU Bite Tree - Display Existing Fault Data
Figure 202 (Sheet 2 of 2)/ 32-09-00-990-809

802. Nose Landing Gear Air/Ground Sensor Fault - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 32-01002 N ON GND A FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) 32-01102 N ON GND A FAULT

HAP ALL

(c) 32-01005 N ON GND B FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(d) 32-01105 N ON GND B FAULT

HAP ALL

(2) These maintenance messages show that there is a problem with a nose landing gear air/ground sensor.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(a) Maintenance message number 32-01002 is set for one of these conditions:

1) Sensor S1014 does not show the airplane on the ground with the airplane on the ground and the trailing edge flaps are up.
2) Sensor S1014 shows the airplane on the ground with the airplane in the air mode.
3) There is sensor S1014 wiring fault.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) Maintenance message number 32-01002 is set for this condition:

1) Sensor S1014 does not show the airplane on the ground with the airplane on the ground and the trailing edge flaps are up.
2) There is sensor S1014 wiring fault.

(c) Maintenance message number 32-01102 is set for this condition:

1) Sensor S1014 shows the airplane on the ground with the airplane in the air mode.
2) There is sensor S1014 wiring fault.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(d) Maintenance message number 32-01005 is set for one of these conditions:

1) Sensor S1015 does not show the airplane on the ground with the airplane on the ground and the trailing edge flaps are up.
2) Sensor S1015 shows the airplane on the ground with the airplane in the air mode.
3) There is sensor S1015 wiring fault.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(e) Maintenance message number 32-01005 is set for this condition:

1) Sensor S1015 does not show the airplane on the ground with the airplane on the ground and the trailing edge flaps are up.

2) There is sensor S1015 wiring fault.

(f) Maintenance message number 32-01105 is set for this condition:

1) Sensor S1015 shows the airplane on the ground with the airplane in the air mode.

2) There is sensor S1015 wiring fault.

HAP ALL

B. Possible Causes

(1) Nose landing gear air/ground sensor, S1014 or S1015

(2) Wiring problem

(3) Proximity switch electronics unit (PSEU), M2061

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Related Data

(1) Component Location (Figure 301)

(2) (SSM 32-09-11)

(3) (SSM 32-09-12)

(4) (WDM 32-31-11)

(5) (WDM 32-31-12)

E. Initial Evaluation

(1) Look for any obvious damage to the applicable sensor, target, and adjacent structure.

(a) If you find any damage, then do the Fault Isolation Procedure below.

(b) If there is no obvious damage, then continue.

(2) Do these steps to show the status of the applicable air/ground sensor:

(a) Push the MENU switch until EXISTING FAULTS? shows.

(b) Push the down switch until OTHER FUNCTNS? shows.

(c) Push the YES switch to select OTHER FUNCTNS.

(d) Push the down switch until I/O MONITOR? shows.

(e) Push the YES switch to select I/O MONITOR.

(f) Push the down switch until SENSORS? shows.

(g) Push the YES switch to select SENSORS.

(h) Push the down or up switch until the sensor number shows.

1) For maintenance message number 32-01002, show sensor S1014.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

2) For maintenance message number 32-01102, show sensor S1014.

HAP ALL

3) For maintenance message number 32-01005, show sensor S1015.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

4) For maintenance message number 32-01105, show sensor S1015.

HAP ALL

(i) If the sensor status is TGT NEAR, then do this test of the other sensor state:

1) Put a deactuator on the face of the sensor face.

NOTE: The deactuator is part of this tool set: proximity sensor test set, SPL-1690.

2) If the display shows TGT FAR, then there was an intermittent fault.

NOTE: You may measure the clearance between the sensor and target. This can help you determine if the sensor clearance is incorrect, (AMM TASK 32-09-02-220-801). An incorrect clearance can cause intermittent faults.

3) If the display shows TGT NEAR, then do the Fault Isolation Procedure below.

(j) If the sensor status is TGT FAR or FAILSAFE, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) If you found any obvious damage to the applicable sensor, target, and adjacent structure, then do these steps:

(a) Repair the damage.

(b) Do the Repair Confirmation at the end of this task.

(c) If the Repair Confirmation is not satisfactory, then continue.

(2) If the sensor status is TGT NEAR, with a deactuator installed, then do these steps:

(a) Perform a resistance check of the sensor and wires, these are the steps:

1) For maintenance message number 32-01002, disconnect connector D11142 from the PSEU.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

2) For maintenance message number 32-01102, disconnect connector D11142 from the PSEU.

HAP ALL

3) For maintenance message number 32-01005, disconnect connector D10988 from the PSEU.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

4) For maintenance message number 32-01105, disconnect connector D10988 from the PSEU.

HAP ALL

5) Verify that the resistance values for the sensor connections listed in the table below are within these limits:
   a) Between the blue and yellow leads: 350 ± 35 Ohm.
   b) Between the red and yellow leads: 30 ± 6 Ohm.
6) Re-connect connector D11142 or D10988 to the PSEU.
7) If the resistance values are out of tolerance then cut the wires at the sensor splices and recheck the resistance of the sensors.
8) These are the connections on the sensor and the PSEU to check the resistances at:

Table 201

SENSOR	SENSOR LEAD		PSEU CONNECTOR
S1014	YELLOW	————	GROUND
			D11142
	BLUE	————	pin 36
			D11142
	RED	————	pin 60
S1015	YELLOW	————	GROUND
			D10988
	BLUE	————	pin 23
			D10988
	RED	————	pin 42

(b) If the resistances values for the sensors are out of tolerance, then do a check of the bonding resistance between the sensor ground and the airplane structure (SWPM 20-20-00).
   1) Make sure that the resistance is less than 0.001 ohm.
   2) If the resistance is greater than 0.001 ohm, then inspect and repair the ground between the sensor connection and structure ground.
   3) If you do not find a problem with the sensor ground, then continue.

(c) If the resistance values are out of tolerance and there are no problems with the sensor ground then replace the sensor. These are the tasks:
   - Nose Landing Gear Air/Ground Sensor Removal, AMM TASK 32-09-02-000-801
   - Nose Landing Gear Air/Ground Sensor Installation, AMM TASK 32-09-02-400-802

   1) Do the Repair Confirmation at the end of this task.

(d) If the resistance values for the sensor are in tolerance and there are no problems with the sensor ground then you have determined that the wiring is faulty. Do the wiring check below.

(3) If the sensor status is TGT FAR without a deactuator installed, then do these steps:
   (a) Measure the clearance between the sensor and target. To measure the clearance, do this task: Nose Landing Gear Air/Ground Sensor Clearance Measurement, AMM TASK 32-09-02-220-801.
   (b) If the sensor clearance is not correct, then do these steps:

1) Adjust the sensor clearance. To adjust the clearance, do this task: Nose Landing Gear Air/Ground Sensor Clearance Adjustment, AMM TASK 32-09-02-400-801.
2) Do the Repair Confirmation at the end of this task.
   a) If the Repair Confirmation is not satisfactory, then continue.

(c) If the sensor clearance is correct, then do these steps:
1) Replace the applicable sensor, S1014 or S1015. These are the tasks:
   - Nose Landing Gear Air/Ground Sensor Removal, AMM TASK 32-09-02-000-801
   - Nose Landing Gear Air/Ground Sensor Installation, AMM TASK 32-09-02-400-802
2) Do the Repair Confirmation at the end of this task.
   a) If the Repair Confirmation is not satisfactory, then continue.

(4) If the sensor status is FAILSAFE, then do this test of the wiring:
(a) Disconnect the sensor leads from the applicable junction box. See AMM TASK 32-09-02-000-801 for details.
(b) Temporarily install the leads from a replacement sensor to the applicable junction box connector. See AMM TASK 32-09-02-400-802 for details.
(c) Make sure the sensor is away from all metal objects.
(d) Do the steps to show the sensor status again.
(e) If the sensor status is TGT FAR, then the installed sensor has a fault. Do these steps:
1) Replace the applicable sensor, S1014 or S1015. These are the tasks:
   - Nose Landing Gear Air/Ground Sensor Removal, AMM TASK 32-09-02-000-801
   - Nose Landing Gear Air/Ground Sensor Installation, AMM TASK 32-09-02-400-802
2) Do the Repair Confirmation at the end of this task.
(f) If the sensor status is FAILSAFE, then do these steps and continue:
1) Remove the replacement sensor leads from the junction box connector.
2) Re-install the leads from the current air/ground sensor.

(5) Do this check of the wiring:
(a) Do a wiring check between these connections on the sensor and the PSEU:

Table 202

SENSOR	SENSOR LEAD		PSEU CONNECTOR
S1014	YELLOW	————	GROUND
			D11142
	BLUE	————	pin 36
			D11142
	RED	————	pin 60
S1015	YELLOW	————	GROUND
			D10988
	BLUE	————	pin 23
			D10988
	RED	————	pin 42

(b) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Do the Repair Confirmation at the end of this task.

(c) If you do not find a problem with the wiring, then continue.

(6) Do these steps to replace the PSEU, M2061:

(a) These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

(b) Do the post installation test in the PSEU installation procedure.

(c) If the test operates correctly, then you corrected the fault.

G. Repair Confirmation

(1) Do this test of the applicable air/ground sensor:

(a) Put a deactuator on the face of the sensor face.

(b) Remove the deactuator from the face of the sensor face.

(c) Do the EXISTING FAULTS test on the PSEU BITE display. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

1) If you do not find the maintenance message, then you corrected the fault.

—————— END OF TASK ——————

803. Main Landing Gear Air/Ground Sensor Fault - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 32-01001 L ON GND A FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) 32-01101 L ON GND A FAULT

HAP ALL

(c) 32-01003 R ON GND A FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(d) 32-01103 R ON GND A FAULT

HAP ALL

(e) 32-01004 L ON GND B FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(f) 32-01104 L ON GND B FAULT

HAP ALL

(g) 32-01006 R ON GND B FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(h) 32-01106 R ON GND B FAULT

HAP ALL

(2) These maintenance messages show that there is a problem with a main landing gear air/ground sensor.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(a) Maintenance message number 32-01001 is set for one of these conditions:

1) Sensor S1012 does not show the airplane on the ground with the airplane on the ground and the trailing edge flaps are up.
2) Sensor S1012 shows the airplane on the ground with the airplane in the air mode.
3) There is sensor S1012 wiring fault.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) Maintenance message number 32-01001 is set for this condition:

1) Sensor S1012 does not show the airplane on the ground with the airplane on the ground and the trailing edge flaps are up.
2) There is sensor S1012 wiring fault.

(c) Maintenance message number 32-01101 is set for this condition:

1) Sensor S1012 shows the airplane on the ground with the airplane in the air mode.
2) There is sensor S1012 wiring fault.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(d) Maintenance message number 32-01003 is set for one of these conditions:

1) Sensor S1010 does not show the airplane on the ground with the airplane on the ground and the trailing edge flaps are up.
2) Sensor S1010 shows the airplane on the ground with the airplane in the air mode.
3) There is sensor S1010 wiring fault.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(e) Maintenance message number 32-01003 is set for this condition:

1) Sensor S1010 does not show the airplane on the ground with the airplane on the ground and the trailing edge flaps are up.
2) There is sensor S1010 wiring fault.

(f) Maintenance message number 32-01103 is set for this condition:

1) Sensor S1010 shows the airplane on the ground with the airplane in the air mode.
2) There is sensor S1010 wiring fault.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(g) Maintenance message number 32-01004 is set for one of these conditions:

1) Sensor S1013 does not show the airplane on the ground with the airplane on the ground and the trailing edge flaps are up.
2) Sensor S1013 shows airplane on the ground with the airplane in the air mode.
3) There is sensor S1013 wiring fault.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(h) Maintenance message number 32-01004 is set for this condition:

1) Sensor S1013 does not show the airplane on the ground with the airplane on the ground and the trailing edge flaps are up.

2) There is sensor S1013 wiring fault.

(i) Maintenance message number 32-01104 is set for this condition:

1) Sensor S1013 shows airplane on the ground with the airplane in the air mode.

2) There is sensor S1013 wiring fault.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(j) Maintenance message number 32-01006 is set for one of these conditions:

1) Sensor S1011 does not show the airplane on the ground with the airplane on the ground and the trailing edge flaps are up.

2) Sensor S1011 shows airplane on the ground with the airplane in the air mode.

3) There is sensor S1011 wiring fault.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(k) Maintenance message number 32-01006 is set for this condition:

1) Sensor S1011 does not show the airplane on the ground with the airplane on the ground and the trailing edge flaps are up.

2) There is sensor S1011 wiring fault.

(l) Maintenance message number 32-01106 is set for this condition:

1) Sensor S1011 shows airplane on the ground with the airplane in the air mode.

2) There is sensor S1011 wiring fault.

HAP ALL

B. Possible Causes

(1) Left main landing gear air/ground sensor, S1012 or S1013

(2) Right main landing gear air/ground sensor, S1010 or S1011

(3) Wiring problem

(4) Proximity switch electronics unit (PSEU), M2061

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Related Data

(1) Component Location (Figure 302)

(2) (SSM 32-09-11)

(3) (SSM 32-09-12)

(4) (WDM 32-31-11)

(5) (WDM 32-31-12)

E. Initial Evaluation

(1) Look for any obvious damage to the applicable sensor, target, and adjacent structure.

(a) If you find any damage, then do the Fault Isolation Procedure below.

(b) If there is no obvious damage, then continue.

(2) Do these steps to show the status of the applicable air/ground sensor:

(a) Push the MENU switch until EXISTING FAULTS? shows.

(b) Push the down switch until OTHER FUNCTNS? shows.

(c) Push the YES switch to select OTHER FUNCTNS.

(d) Push the down switch until I/O MONITOR? shows.

(e) Push the YES switch to select I/O MONITOR.

(f) Push the down switch until SENSORS? shows.

(g) Push the YES switch to select SENSORS.

(h) Push the down or up switch until the sensor number shows:

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

1) For maintenance message number 32-01001, show sensor S1012.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

2) For maintenance message number 32-01001 or 32-01101, show sensor S1012.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

3) For maintenance message number 32-01003, show sensor S1010.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

4) For maintenance message number 32-01003 or 32-01103, show sensor S1010.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

5) For maintenance message number 32-01004, show sensor S1013.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

6) For maintenance message number 32-01004 or 32-01104, show sensor S1013.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

7) For maintenance message number 32-01006, show sensor S1011.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

8) For maintenance message number 32-01006 or 32-01106, show sensor S1011.

HAP ALL

(i) If the sensor status is TGT NEAR, then do this test of the other sensor states:

1) Put a deactuator on the face of the sensor face.

NOTE: The deactuator is part of this tool set: proximity sensor test set, SPL-1690.

2) If the display shows TGT FAR, then there was an intermittent fault.

NOTE: You may measure the clearance between the sensor and target. This can help you determine if the sensor clearance is incorrect, (AMM TASK 32-09-02-220-801). An incorrect clearance can cause intermittent faults.

3) If the display shows TGT NEAR, then do the Fault Isolation Procedure below.

(j) If the sensor status is TGT FAR or FAILSAFE, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) If you found any obvious damage to the applicable sensor, target, and adjacent structure, then do these steps:

(a) Repair the damage.

(b) Do the Repair Confirmation at the end of this task.

(c) If the Repair Confirmation is not satisfactory, then continue.

(2) If the sensor status is TGT NEAR, with a deactuator installed, then do these steps:

(a) Perform a resistance check of the sensor and wires, these are the steps:

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

1) For maintenance message number 32-01001 or 32-01003, disconnect connector D11142 from the PSEU.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

2) For maintenance message number 32-01001, 32-01101 or 32-01003 or 32-01103, disconnect connector D11142 from the PSEU.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

3) For maintenance message number 32-01004 or 32-01006, disconnect connector D10988 from the PSEU.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

4) For maintenance message number 32-01004, 32-01104, 32-01006 or 32-01106, disconnect connector D10988 from the PSEU.

HAP ALL

5) Verify that the resistance values for the sensor connections listed in the table below are within these limits:

a) Between the blue and yellow leads: 350 ± 35 Ohm.

b) Between the red and yellow leads: 30 ± 6 Ohm.

6) Re-connect connector D11142 or D10988 to the PSEU.

7) If the resistance values are out of tolerance then cut the wires at the sensor splices and recheck the resistance of the sensors.

8) These are the connections on the sensor and the PSEU to check the resistances at:

Table 203

SENSOR	SENSOR LEAD		PSEU CONNECTOR
S1010	YELLOW	————	GROUND
			D11142
	BLUE	————	pin 35
			D11142
	RED	————	pin 18
HAP 001-013, 015-020 POST SB 737-32-1317			
S1011	YELLOW *[1]	————	GROUND
HAP 021-026, 028-054, 101-999; HAP 001-013, 015-020 PRE SB 737-32-1317			
S1011	YELLOW	————	GROUND
HAP ALL			
			D10988
	BLUE	————	pin 10
			D10988
	RED	————	pin 24
S1012	YELLOW	————	GROUND
			D11142
	BLUE	————	pin 61
			D11142
	RED	————	pin 38
HAP 001-013, 015-020 POST SB 737-32-1317			
S1013	YELLOW *[2]	————	GROUND
HAP 021-026, 028-054, 101-999; HAP 001-013, 015-020 PRE SB 737-32-1317			
S1013	YELLOW	————	GROUND
HAP ALL			
			D10988
	BLUE	————	pin 40
			D10988
	RED	————	pin 41

*[1] The ground path for sensor S1011 includes an additional jumper wire between ground stud GD2062AC and connector D46016.

*[2] The ground path for sensor S1013 includes an additional jumper wire between ground stud GD2052AC and connector D46006.

(b) If the resistances values for the sensors are out of tolerance, then do a check of the bonding resistance between the sensor ground and the airplane structure (SWPM 20.

1) Make sure that the resistance is less than 0.001 ohm.
2) If the resistance is greater than 0.001 ohm, then inspect and repair the ground between the sensor connection and structure ground.
3) If you do not find a problem with the sensor ground, then continue.

(c) If the resistance values are out of tolerance and there are no problems with the sensor ground then replace the sensor. These are the tasks:
- Main Landing Gear Air/Ground Sensor Removal, AMM TASK 32-09-01-020-801
- Main Landing Gear Air/Ground Sensor Installation, AMM TASK 32-09-01-400-801

1) Do the Repair Confirmation at the end of this task.

(d) If the resistance values for the sensor are in tolerance and there are no problems with the sensor ground then you have determined that the wiring is faulty. Do the wiring check below.

(3) If the sensor status is TGT FAR without a deactuator installed, then do these steps:

(a) Measure the clearance between the sensor and target. To measure the clearance, do this task: Main Landing Gear Air/Ground Sensor Clearance Measurement, AMM TASK 32-09-01-400-802.

(b) If the sensor clearance is not correct, then do these steps:

1) Adjust the sensor clearance. To adjust the clearance, do this task: Main Landing Gear Air/Ground Sensor Clearance Adjustment, AMM TASK 32-09-01-820-801.
2) Do the Repair Confirmation at the end of this task.
a) If the Repair Confirmation is not satisfactory, then continue.

(c) If the sensor clearance is correct, then do these steps:

1) Replace the applicable sensor. These are the tasks:
- Main Landing Gear Air/Ground Sensor Removal, AMM TASK 32-09-01-020-801
- Main Landing Gear Air/Ground Sensor Installation, AMM TASK 32-09-01-400-801

2) Do the Repair Confirmation at the end of this task.
a) If the Repair Confirmation is not satisfactory, then continue.

(4) If the sensor status is FAILSAFE, then do this test of the wiring:

(a) Disconnect the sensor leads from the applicable junction box. See (AMM TASK 32-09-01-020-801) for details.

(b) Temporarily install the leads from a replacement sensor to the applicable junction box connector. See (AMM TASK 32-09-01-400-801) for details.

(c) Make sure the sensor is away from all metal objects.

(d) Do the steps to show the sensor status again.

(e) If the sensor status is TGT FAR, then the installed sensor has a fault. Do these steps:

1) Replace the applicable sensor. These are the tasks:
- Main Landing Gear Air/Ground Sensor Removal, AMM TASK 32-09-01-020-801
- Main Landing Gear Air/Ground Sensor Installation, AMM TASK 32-09-01-400-801

2) Do the Repair Confirmation at the end of this task.

(f) If the sensor status is FAILSAFE, then do these steps and continue:

1) Remove the replacement sensor leads from the junction box connector.
2) Re-install the leads from the current air/ground sensor.

(5) Do this check of the wiring:

(a) Do a wiring check between these connections on the sensor and the PSEU:

Table 204

SENSOR	SENSOR LEAD		PSEU CONNECTOR
S1010	YELLOW	————	GROUND
			D11142
	BLUE	————	pin 35
			D11142
	RED	————	pin 18
HAP 001-013, 015-020 POST SB 737-32-1317			
S1011	YELLOW *[1]	————	GROUND
HAP 021-026, 028-054, 101-999; HAP 001-013, 015-020 PRE SB 737-32-1317			
S1011	YELLOW	————	GROUND
HAP ALL			
			D10988
	BLUE	————	pin 10
			D10988
	RED	————	pin 24
S1012	YELLOW	————	GROUND
			D11142
	BLUE	————	pin 61
			D11142
	RED	————	pin 38
HAP 001-013, 015-020 POST SB 737-32-1317			
S1013	YELLOW *[2]	————	GROUND
HAP 021-026, 028-054, 101-999; HAP 001-013, 015-020 PRE SB 737-32-1317			
S1013	YELLOW	————	GROUND
HAP ALL			
			D10988
	BLUE	————	pin 40
			D10988
	RED	————	pin 41

*[1] The ground path for sensor S1011 includes an additional jumper wire between ground stud GD2062AC and connector D46016.

*[2] The ground path for sensor S1013 includes an additional jumper wire between ground stud GD2052AC and connector D46006.

(b) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Do the Repair Confirmation at the end of this task.

(c) If you do not find a problem with the wiring, then continue.

(6) Do these steps to replace the PSEU, M2061:

(a) These are the tasks:
- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

(b) Do the post installation test in the PSEU installation procedure.

(c) If the test operates correctly, then you corrected the fault.

G. Repair Confirmation

(1) Do this test of the applicable air/ground sensor:

(a) Put a deactuator on the face of the sensor face.

(b) Remove the deactuator from the face of the sensor face.

(c) Do the EXISTING FAULTS test on the PSEU BITE display. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

1) If you do not find the maintenance message, then you corrected the fault.

———————— END OF TASK ————————

804. Air/Ground Relay Fault - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 32-06001 AIR/GND R584 FLT
(b) 32-06002 AIR/GND R593 FLT
(c) 32-06003 AIR/GND R587 FLT
(d) 32-06004 AIR/GND R583 FLT
(e) 32-06005 AIR/GND R589 FLT
(f) 32-06006 AIR/GND R592 FLT
(g) 32-06007 AIR/GND R594 FLT
(h) 32-06009 AIR/GND R585 FLT
(i) 32-06010 AIR/GND R588 FLT
(j) 32-06011 AIR/GND R595 FLT
(k) 32-06012 AIR/GND R586 FLT
(l) 32-06013 AIR/GND R590 FLT
(m) 32-06014 AIR/GND R591 FLT
(n) 32-06015 AIR/GND R597 FLT

(2) These maintenance messages show that there is a problem with a air/ground relay.

(a) The PSEU does not sense the expected load from the applicable air/ground relay.

B. Possible Causes

(1) System 1 air/ground relay, R584, R587, R589, R592, R593, or R594

(2) System 2 air/ground relay, R585, R588, R590, R591, R595, or R596

(3) Wiring problem

(4) Proximity switch electronics unit (PSEU), M2061

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	15	C01355	LANDING GEAR AIR/GND SYS 2
D	15	C01401	LANDING GEAR AIR/GND RELAY

D. Related Data

(1) (SSM 32-09-11)

(2) (SSM 32-09-12)

(3) (WDM 32-31-11)

(4) (WDM 32-31-12)

E. Initial Evaluation

(1) 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	15	C01401	LANDING GEAR AIR/GND RELAY

(a) If a circuit breaker opens, continue to troubleshoot.

(b) If the circuit breaker was open and stays closed, do the Repair Confirmation steps at the end of the procedure.

(2) Make sure the relay is installed tightly in the J20 or J22 panel.

(a) If the relay is loose, then do these steps:

1) Tighten the relay.

2) Do the Repair Confirmation at the end of this task.

(b) If the relay is secure, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check for power to the applicable relay:

(a) Remove the applicable relay.

(b) Do a check for 28 VDC between pin X1 of the relay socket and structure ground.

1) If there is not 28 VDC at pin X1, then do these steps:

a) Repair the wiring between the circuit breaker and relay.

b) Re-install the relay.

c) Do the Repair Confirmation at the end of this task.

2) If there is 28 VDC at pin X1, then continue.

(2) Install a new relay.

(a) Do the Repair Confirmation at the end of this task.

1) If the Repair Confirmation is not satisfactory, then continue.

(3) Do this check of the wiring:

(a) Do a wiring check between these connections on the relay and PSEU:

NOTE: Relays R583, R586, and R597 are not installed.

Table 205

RELAY	RELAY LOCATION	RELAY CONNECTOR	INTERFACE
R583	SEE NOTE	SEE NOTE	PSEU - D11138 - PIN 36 CONNECTED TO PIN 39
R584	J22	X1	C1356 - PANEL P6-3 C16
		X2	PSEU - D11138 - PIN 59
R585	J24	X1	C1401 - PANEL P6-3 D15
		X2	PSEU - D11140 - PIN 39
R586	SEE NOTE	SEE NOTE	PSEU - D11140 - PIN 20 CONNECTED TO PIN 9
R587	J22	X1	C1356 - PANEL P6-3 C16
		X2	PSEU - D11138 - PIN 35
R588	J20	X1	C1401 - PANEL P6-3 D15
		X2	PSEU - D11140 - PIN 43
R589	J22	X1	C1356 - PANEL P6-3 C16
		X2	PSEU - D11138 - PIN 21
R590	J20	X1	C1401 - PANEL P6-3 D15
		X2	PSEU - D11140 - PIN 9
R591	J20	X1	C1401 - PANEL P6-3 D15
		X2	PSEU - D11140 - PIN 44
R592	J22	X1	C1355 - PANEL P6-3 C15
		X2	PSEU - D11138 - PIN 39
R593	J22	X1	C1356 - PANEL P6-3 C16
		X2	PSEU - D11138 - PIN 20
R594	J22	X1	C1356 - PANEL P6-3 C16
		X2	PSEU - D11138 - PIN 58
R595	J20	X1	C1355 - PANEL P6-3 C15
		X2	PSEU - D11140 - PIN 21
R596	J20	X1	C1355 - PANEL P6-3 C15
		X2	PSEU - D11140 - PIN 24
R597	SEE NOTE	SEE NOTE	PSEU - D11140 - PIN 23 CONNECTED TO PIN 44

(b) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Do the Repair Confirmation at the end of this task.

(c) If you do not find a problem with the wiring, then continue.

(4) Replace the PSEU, M2061. These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

(a) Do the post installation test in the PSEU installation procedure.

(b) If the test operates correctly, then you corrected the fault.

G. Repair Confirmation

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) Prepare to put the airplane in the air mode. Do this task: Prepare to Put the Airplane in the Air Mode, AMM TASK 32-09-00-840-801.

(2) Put the airplane in the air mode. Do this task: Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801.

(3) Put the airplane back to the ground mode. Do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(4) Do the EXISTING FAULTS test on the PSEU BITE display. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If you do not find the maintenance message, then you corrected the fault.

——————— END OF TASK ———————

806. Parking Brake Switch Problem - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 32-02001 PARK BRK FAULT

(b) 32-02002 PARK BRK A FAULT

(c) 32-02003 PARK BRK B FAULT

(d) 32-03001 PARK BRK A SET

(e) 32-03002 PARK BRK B SET

(f) 32-05001 PARK A

(g) 32-05002 PARK B

(2) These maintenance messages show that there is a problem with a parking brake switch.

(a) Maintenance message number 32-02001 shows that the parking brake A and B switch conditions are not both true or both false.

NOTE: The parking brake A input is true when the input is grounded. The parking brake B input is true when the input is open.

(b) Maintenance message number 32-02002 shows that the parking brake A switch was set with the airplane in the air.

(c) Maintenance message number 32-02003 shows that the parking brake B switch was set with the airplane in the air.

(d) Maintenance message numbers 32-03001 and 32-03002 are not faults. These messages show the cause of the last takeoff warning.

(e) Maintenance message numbers 32-05001 and 32-05002 will show when input from the parking brake switch has not been cycled between the on and off state during the current flight leg.

B. Possible Causes

(1) Parking brake switch, S100

(2) Wiring problem

(3) Proximity switch electronics unit (PSEU), M2061

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

D. Related Data

(1) (SSM 32-44-11)

(2) (WDM 32-44-11)

E. Initial Evaluation

(1) Make sure chocks are installed at the landing gear wheels.

(a) If chocks are not installed, install the chocks.

(2) Do this test of the parking brake switch in the "not set" position:

(a) Make sure that the parking brake lever is not set:

(b) Show the input status for these parking brake switch outputs on the PSEU display:

NOTE: If you need instructions on how to show the input status, then go to this task: (32-09 TASK 821).

1) D10984 pin 28 (Parking Brake B)

2) D10982 pin 61 (Parking Brake A)

3) Make sure that the status of D10984 pin 28 is GND.

4) Make sure that the status of D10982 pin 61 is NO GND.

(c) If the status of the pins are not correct, then do the Fault Isolation Procedure below.

(d) If the status of the pins are correct, then continue.

(3) Do this test of the parking brake switch with the parking brake lever in the SET position:

(a) Put the parking brake lever in the SET position.

(b) Show the input status for these parking brake switch outputs on the PSEU display:

1) D10984 pin 28

2) D10982 pin 61

3) Make sure that the status of D10984 pin 28 is NO GND.

4) Make sure that the status of D10982 pin 61 is GND.

(c) If the status of the pins are correct, then there was an intermittent fault.

(d) If the status of the pins are not correct, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

NOTE: You must do the steps in the Initial Evaluation before you do these steps.

(1) Do this test of the parking brake switch:

(a) Remove the connector from the parking brake switch.

(b) Examine the connector and socket for damage and unwanted material.

(c) If the Initial Evaluation failed with the parking brake lever in the "not set" position, then do these steps:

1) Put the parking brake lever in the "not set" position.

2) Measure the resistance between these pins on the parking brake switch:

Table 206

PARKING BRAKE SWITCH			EXPECTED CONDITION
pin 2C	————	pin 2NC	continuity
pin 2C	————	pin 2NO	open

(d) If the Initial Evaluation failed with the parking brake lever in the SET position, then do these steps:

1) Put the parking brake lever in the SET position.

2) Measure the resistance between these pins on the parking brake switch:

Table 207

PARKING BRAKE SWITCH			EXPECTED CONDITION
pin 2C	————	pin 2NC	open
pin 2C	————	pin 2NO	continuity

(e) If the conditions in the tables do not exist, then do these steps:

1) Replace the parking brake switch, S100. These are the tasks:
- Parking Brake Latch Switch Removal, AMM TASK 32-44-11-000-804
- Parking Brake Latch Switch Installation, AMM TASK 32-44-11-400-804

2) Do the Repair Confirmation at the end of this task.

(f) If the conditions in the tables exist, then continue.

(2) Do this test to make sure the parking brake switch is grounded:

(a) Do a continuity check between pin 2C on the connector to the parking brake switch and structure ground.

(b) If there is not continuity, then do these steps:

1) Repair the wiring between the connector and structure ground.

2) Re-connect the connector on the parking brake switch.

3) Do the Repair Confirmation at the end of this task.

(c) If there is continuity, then continue.

(3) Do this check of the PSEU:

(a) Remove the connectors, D10984 and D10982 from the PSEU.

(b) Show the input status for these parking brake switch outputs on the PSEU display:

1) D10984 pin 28

2) D10982 pin 61

(c) If the status of both pins are NO GND, then do these steps:

1) Ground the pins with jumpers.

2) Show the input status for the parking brake switch outputs on the PSEU display.

3) If the input status of both pins show GND, then do these steps:

a) Repair the wiring between the parking brake switch and the PSEU.

b) Re-connect the connector on the parking brake switch.

c) Re-connect the connectors on the PSEU.

d) Do the Repair Confirmation at the end of this task.

4) If the input status of either pin is NO GND, then continue.

(d) If the status of either pin is GND, then continue.

(4) Replace the PSEU, M2061. These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

(a) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

(1) Do this test of the parking brake switch:

(a) If it is necessary, re-connect the connector on the parking brake switch.

(b) If it is necessary, re-connect the connectors on the PSEU.

(c) Put the parking brake lever in the "not set" position.

(d) Put the parking brake lever in the set position.

(e) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

1) If you do not find the maintenance message, then you corrected the fault.

——————— END OF TASK ———————

807. Landing Gear Lever Latch Fault - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) 32-06008 LG LVR LCH FLT

(2) This maintenance message shows that there is a problem with the landing gear lever latch solenoid. The PSEU does not sense the expected load from the solenoid.

B. Possible Causes

(1) Landing gear control lever, M1952

(2) Wiring problem

(3) Proximity switch electronics unit (PSEU), M2061

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN

D. Related Data

(1) (SSM 32-09-11)

(2) (WDM 32-31-11)

E. Initial Evaluation

(1) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If you do not find the maintenance message, then there was an intermittent fault.

(b) If you find the maintenance message, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

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, AMM TASK 32-00-01-480-801.

(2) Do this test of the landing gear control lever and wiring:

(a) Remove the connector D11138 from the PSEU.

(b) Do a check for 28 VDC between pin 19 of connector D11138 and structure ground.

(c) If there is 28 VDC at pin 19 of D11138, then do these steps:

1) Replace the PSEU, M2061. These are the tasks:
- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

2) Do the post installation test in the PSEU installation procedure.

3) If the test operates correctly, you corrected the fault.

(d) If there is not 28 VDC at pin 19 of D11138, then continue.

(3) Do this test for power to the landing gear control lever lock solenoid:

(a) Do the applicable steps in (AMM TASK 32-31-31-020-801) to remove the connector D11990 from the landing gear control lever.

(b) Do a check for 28 VDC between pin 9 of connector D11990 and structure ground.

(c) If there is not 28 VDC at pin 9 of D11990, then do these steps:

1) Do a check of the wiring between the control lever lock solenoid and the following circuit breaker:

a) This is the circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN

2) If you find a problem with the wiring, then do these steps:
   a) Repair the wiring.
   b) Re-connect the connector on the PSEU.
   c) Re-connect the connector on the control lever.
   d) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.
   e) If you do not find the maintenance message, then you corrected the fault.
3) If you do not find a problem with the wiring, then do these steps:
   a) Replace this circuit breaker:
      <1> This is the circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN

   b) Re-connect the connector on the PSEU.
   c) Re-connect the connector on the control lever.
   d) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.
   e) If you do not find the maintenance message, then you corrected the fault.

(d) If there is 28 VDC at pin 9 of D11990, then continue:

(4) Replace the landing gear lever lock solenoid, M1952. These are the tasks:
- Landing Gear Control Lever Lock Solenoid Removal, AMM TASK 32-31-31-020-801
- Landing Gear Control Lever Lock Solenoid Installation, AMM TASK 32-31-31-400-801

(a) Re-connect the connector on the PSEU.
(b) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.
(c) If you do not find the maintenance message, then you corrected the fault.
(d) If you find the maintenance message, then continue.

(5) Do this wiring check between the landing gear lever lock solenoid and the PSEU:
(a) Do the applicable steps in (AMM TASK 32-31-31-020-801) to remove the connector D11990 from the landing gear control lever.
(b) Remove the connector D11138 from the PSEU.
(c) Do a check for continuity between these pins:

Table 208

LG LEVER LATCH SOLENOID - D11990		PSEU - D11138
pin 8	———————	pin 19

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-connect the connector on the PSEU.
3) Re-connect the connector on the lever latch solenoid.
4) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.
5) If you do not find the maintenance message, then you corrected the fault.

——————— END OF TASK ———————

808. No 28 VDC A Input Power to PSEU - Fault Isolation

A. Description

(1) This task is for this maintenance message:
(a) 32-60001 NO 28V A POWER

(2) This maintenance message shows that there is not 28 VDC primary input power to the PSEU.

B. Possible Causes

(1) Wiring problem

(2) Proximity switch electronics unit (PSEU), M2061

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI

D. Related Data

(1) (SSM 32-64-11)

(2) (SSM 32-64-12)

(3) (WDM 32-64-11)

(4) (WDM 32-64-12)

E. Initial Evaluation

(1) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.
(a) If you do not find the maintenance message, then there was an intermittent fault.
(b) If you find the maintenance message, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the 28 VDC input to the PSEU:
(a) Remove the connector D11138 from the PSEU.
(b) Examine the connector and socket for damage or unwanted material.
(c) Do a check for 28 VDC between pin 61 of the connector and structure ground.
(d) If there is not 28 VDC at pin 61, then do these steps:

1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI

2) Do a check for continuity between these pins:

Table 209

CIRCUIT BREAKER C1399 - P6-3 D1		PSEU - D11138
pin 1	———————	pin 61

3) If you find a problem with the wiring, then do these steps:
   a) Repair the wiring.
   b) Re-connect the connector on the PSEU.
   c) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI

   d) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.
   e) If you do not find the maintenance message, then you corrected the fault.
4) If you do not find a problem with the wiring, then do these steps:
   a) Replace this circuit breaker:
      <1> This is the circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI

   b) Re-connect the connector on the PSEU.
   c) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.
   d) If you do not find the maintenance message, then you corrected the fault.

(e) If there is 28 VDC at pin 61, then continue.

(2) Do this test of the primary ground for the PSEU:
   (a) Do a check for continuity between pin 41 of the connector and structure ground.
   (b) If pin 41 does not have continuity to ground, then do these steps:
      1) Repair the wiring between D11138 pin 41 and structure ground.
      2) Re-connect the connector on the PSEU.
      3) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.
      4) If you do not find the maintenance message, then you corrected the fault.
   (c) If pin 41 has continuity to structure ground, then continue.

(3) Replace the PSEU, M2061. These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

(a) Do the post installation test in the PSEU installation procedure.

(b) If the test operates correctly, then you corrected the fault.

END OF TASK

809. Proximity Switch Electronics Unit (PSEU) Internal Fault - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) 32-64001 INTERNAL FAULT

B. Possible Causes

(1) Proximity switch electronics unit (PSEU), M2061(Internal Fault).

(2) Wiring from PSEU power circuit breakers or ground return.

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Related Data

(1) SSM 32-61-11, 12

(2) (WDM 32-64-11, 12)

E. Fault Isolation Procedure

(1) Replace the PSEU, M2061. These are the tasks:
- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

(2) Do the post installation test in the PSEU installation procedure.

(3) If you do not find the maintenance message, then you corrected the fault.

(4) If you find the maintenance message then continue.

(5) Remove connectors D11138 and D1140 from the PSEU.

(a) Examine the socket and respective connector for damage or unwanted material.

(b) Re-connect the connectors on the PSEU

(6) Do this check of the wiring:

(a) Refer to the table below for resistance values. Veriify that the resistance values are within the limits below.

NOTE: Use an Ohm Meter capable of making accurate resistance measurements at low resistances.

Table 210

BUNDLE	WIRE	FROM	TO	RESISTANCE (OHMS)
C01399	PSEU PRIMARY POWER			
286A0044	274	C01399	D40820J	0.23
286A6208	575	D40820P	D40818P	0.20
286A0111	745	D40818J	D40452J	0.10
286A5156	544	D40452P	D11138 (Pin 61)	0.32
286A5156	545	D11138 (Pin 41)	GD00044	0.03
Contacts				0.25
Airframe				0.25
Meter				1.00
			Total	2.39
			Limit	2.75
C1400	PSEU ALTERNATE POWER			
286A0044	275	C01400	D40750J	0.13
286A5158	589	D40750P	D11140 (Pin 41)	0.22
286A5158	590	D11140 (Pin 61)	GD00034	0.04
Contacts				0.15
Airframe				0.25
Meter				1.00
			Total	1.79
			Limit	2.00

(b) If you find a problem with the wiring, then do these steps:

1) Repair the wiring:

2) Do the Repair Confirmation at the end of this task.

(c) If the test operates correctly, then you corrected the fault.

F. Repair Confirmation

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

(2) Put the airplane in the air mode. Do this task: Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801.

(3) Put the airplane back to the ground mode. Do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(4) Do the EXISTING FAULTS test on the PSEU BITE display. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If you do not find the maintenance message, then you corrected the fault.

——————— END OF TASK ———————

810. Take Off Warning (TOW) Inhibit Fault - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) 31-52001 TOW INHB FAULT

(2) This maintenance message shows that TOW INHIBIT (Landing Gear Takeoff Warning Cutoff) is true.

B. Possible Causes

(1) Circuit breaker, C1398

(2) Wiring problem

(3) Proximity switch electronics unit (PSEU), M2061

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

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

D. Related Data

(1) (SSM 31-53-11)

(2) (WDM 31-53-11)

E. Initial Evaluation

(1) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-3

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

(2) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If you do not find the maintenance message, then there was an intermittent fault or the circuit breaker was open.

(b) If you find the maintenance message, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this test of the input from the landing gear takeoff warning switch:

(a) Show the input status for these pins on the PSEU display:

NOTE: If you need instructions on how to show the input status, then go to this task: (32-09 TASK 821).

(b) Show D10982 pin 52.

(c) If the status of the pin is GND, then do these steps:

1) Replace the PSEU, M2061. These are the tasks:
   - Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
   - Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801
2) Do the post installation test in the PSEU installation procedure.
3) If the test operates correctly, then you corrected the fault.

(d) If the status of the pin is NO GND, then continue.

(2) Do this check of the PSEU:

(a) Remove the connector D10982 from the PSEU.

(b) Make sure pin 52 on the connector has continuity to structure ground.

(c) If the pin is grounded, then do these steps:

1) Replace the PSEU, M2061. These are the tasks:
   - Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
   - Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801
2) Do the post installation test in the PSEU installation procedure.
3) If the test operates correctly, then you corrected the fault.

(d) If the pin is not grounded, then continue.

(3) Do this check of the circuit breaker:

(a) Get access to the circuit breaker terminals.

(b) Do a check for continuity between the two terminals on the circuit breaker.

(c) If there is not continuity, then do these steps:

1) Replace this circuit breaker:

a) This is the circuit breaker:

F/O Electrical System Panel, P6-3

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

2) Re-connect connector D10982 to the PSEU.
3) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.
4) If you do not find the maintenance message, then you corrected the fault.

(d) If there is continuity, then continue.

(4) Do this check of the wiring:

(a) Get access to the circuit breaker terminals.

(b) Do a check for continuity between pin L on the circuit breaker and structure ground.

(c) If the pin does not have continuity to ground, then do these steps:

1) Repair the wiring between the circuit breaker and structure ground.
2) Re-connect connector D10982 to the PSEU.
3) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.
4) If you do not find the maintenance message, then you corrected the fault.

(d) If the pin has continuity to ground, then continue.

(5) Do this wiring check between the PSEU and this circuit breaker:

(a) This is the circuit breaker:

F/O Electrical System Panel, P6-3

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

(b) Remove the connector D10982 from the PSEU.

(c) Do a check for continuity between these pins on the circuit breaker and connector D10982 for the PSEU:

Table 211

CIRCUIT BREAKER C1398		PSEU
terminal B	————————	pin 52

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the connector on the PSEU.

3) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

4) If you do not find the maintenance message, then you corrected the fault.

———————— END OF TASK ————————

811. No BITE Display on the PSEU - Fault Isolation

A. Description

(1) The PSEU BITE display does not come on when the ON/OFF switch on the PSEU is pushed.

B. Possible Causes

(1) Forward access door switch, S196

(2) Wiring problem

(3) Proximity switch electronics unit (PSEU), M2061

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Related Data

(1) (SSM 52-71-12)

(2) (WDM 52-71-12)

E. Initial Evaluation

(1) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

(2) Push the ON/OFF switch on the PSEU BITE display.

(a) If the display comes on then there was an intermittent fault or the circuit breakers were open.

(b) If the display does not come on, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this test of the forward access door switch:

(a) Remove the terminal lug from the common terminal of the forward access door switch.

(b) Push the ON/OFF switch on the PSEU BITE panel.

(c) If the display comes on, then do these steps:

1) Replace the forward access door switch, S196. These are the tasks:
- Forward Access Door Indication Switch Removal, AMM TASK 52-71-41-000-801
- Forward Access Door Indication Switch Installation, AMM TASK 52-71-41-400-801

2) Push the ON/OFF switch on the PSEU BITE.

3) If the BITE display comes on, then you corrected the fault.

(d) If the display does not come on, then continue.

(2) Do this wiring check between the forward access door switch and the PSEU:

(a) Remove the connector D10988 from the PSEU.

(b) Do a check for continuity between these pins:

FORWARD ACCESS DOOR SWITCH		PSEU
COMMON	- - - - - - - - - - - - - - - -	pin 6

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the connector on the PSEU.

3) Push the ON/OFF switch on the PSEU BITE.

4) If the BITE display comes on, then you corrected the fault.

(d) If you did not find a problem with the wiring, then continue.

(3) Replace the PSEU, M2061. These are the tasks:
- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

(a) Do the post installation test in the PSEU installation procedure.

(b) If the test operates correctly, then you corrected the fault.

——————— END OF TASK ———————

812. Leading Edge Flaps Position Fault - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 31-52005 LE FLAPS EXT FLT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) 31-52105 LE FLAPS EXT FLT

HAP ALL

(c) 31-52011 LE FP EX BITE FLT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(d) 31-52111 LE FP EX BITE FLT

HAP ALL

(e) 31-52012 LE EXT IN FLT

(f) 31-53010 LE FLAPS NOT EXT

(g) 31-55004 LE FLAPS EXTEND

(2) These maintenance messages show that there is a fault with a flap position sensor.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(a) Maintenance message number 31-52005 is set for one of these conditions:

1) A leading edge did not go to the not extended position while in the air and the flight was longer than 25 minutes.

2) The leading edges are not detected as extended and these conditions exist:

a) The thrust lever resolver angles are not less than 53.

b) Takeoff flaps A or Takeoff flaps B is true.

c) The airplane is on the ground.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) Maintenance message number 31-52005 is set for this condition:

1) A leading edge did not go to the not extended position while in the air and the flight was longer than 25 minutes.

(c) Maintenance message number 31-52105 is set for this condition:

1) The leading edges are not detected as extended and these conditions exist:

a) The thrust lever resolver angles are not less than 53.

b) Takeoff flaps A or Takeoff flaps B is true.

c) The airplane is on the ground.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(d) Maintenance message number 31-52011 is set for one of these conditions:

1) The leading edge flaps extension BITE did not go FALSE since the last takeoff and the flight was longer than 25 minutes.

2) The leading edges flaps extension BITE is false and these conditions exist:

a) The thrust lever resolver angles are not less than 53.

b) Takeoff flaps A or Takeoff flaps B is true.

c) The airplane is on the ground.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(e) Maintenance message number 31-52011 is set for this condition:

1) The leading edge flaps extension BITE did not go FALSE since the last takeoff and the flight was longer than 25 minutes.

(f) Maintenance message number 31-52111 is set for this condition:

1) The leading edges flaps extension BITE is false and these conditions exist:

a) The thrust lever resolver angles are not less than 53.

b) Takeoff flaps A or Takeoff flaps B is true.

c) The airplane is on the ground.

HAP ALL

(g) Maintenance message number 31-52012 shows that there is a problem with the signal from the FSEU.

(h) Maintenance message number 31-53010 is not a fault. This shows the cause of the last takeoff warning.

(i) Maintenance message number 32-55004 shows that the input has not toggled since the last take off.

B. Possible Causes

(1) Flap slat electronics unit (FSEU), M1746

(2) Wiring

(3) Proximity switch electronics unit (PSEU), M2061

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	7	C01208	STALL WARN ASYM MODE

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	8	C00211	FLIGHT CONTROL FSEU DC 1
A	9	C01468	FLIGHT CONTROL FSEU DC 2

D. Related Data

(1) (SSM 27-81-11)

(2) (SSM 31-53-11)

(3) (WDM 27-81-11)

(4) (WDM 31-53-11)

E. Initial Evaluation

(1) Do this test of the leading edge flaps position indication:

(a) Make sure that the leading edge flaps are not extended.

(b) Show the input status for these pins on the PSEU display:

NOTE: If you need instructions on how to show the input status, then go to this task: (32-09 TASK 821).

1) D10986 pin 27

2) D10986 pin 48

(c) Make sure that the status of both pins is GND.

(d) Extend the leading edge slats.

(e) Make sure that the status of these pins is NO GND:

1) D10986 pin 27

2) D10986 pin 48

(f) If the status of the pins are not correct, then do the Fault Isolation Procedure below.

(g) If the status of the pins are correct, then there was an intermittent fault.

F. Fault Isolation Procedure

(1) Do the EXISTING FAULTS test on the FSEU. Do this task: Flap/Slat Electronics Unit (FSEU) BITE Procedure, 27-51 TASK 801.

(a) If any FSEU maintenance messages show, then go to the fault isolation task for the applicable maintenance message to correct the fault.

1) Do the Repair Confirmation at the end of this task.

a) If the Repair Confirmation is not satisfactory, then continue.

(b) If no FSEU maintenance messages show, then continue.

(2) Do this test of the FSEU:

(a) Remove the FSEU. To remove the FSEU, do this task: Flap/Slat Electronics Unit Removal, AMM TASK 27-51-01-000-801.

(b) Examine the connector pins and sockets for damage and unwanted material.

(c) Show the input status for these pins on the PSEU display:

NOTE: If you need instructions on how to show the input status, then go to this task: (32-09 TASK 821).

1) D10986 pin 27

2) D10986 pin 48

(d) If the status of both pins is NO GND, then do these steps:

1) Ground pin B12 on the FSEU connector with a jumper wire.

2) Show the input status for the pins again.

3) If the status of both pins is GND, then do these steps:

a) Install a new FSEU, M1746. Do this task: Flap/Slat Electronics Unit Installation, AMM TASK 27-51-01-400-801.

b) Do the Repair Confirmation at the end of this task.

4) If the status of either pin is NO GND, then continue.

(e) If the status of either pin is GND, then continue.

(3) Do this test of the PSEU:

(a) Remove the connector D10986 from the PSEU.

(b) Examine the connector pins and sockets for damage and unwanted material.

(c) Show the input status for these pins on the PSEU display:

NOTE: If you need instructions on how to show the input status, then go to this task: (32-09 TASK 821).

1) D10986 pin 27

2) D10986 pin 48

(d) If the status of either pin is GND, then continue.

1) Replace the PSEU, M2061. These are the tasks:
- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

2) Do the Repair Confirmation at the end of this task.

(e) If the status of both pins is NO GND, then do these steps:

1) Ground pins 27 and 48 on the PSEU with a jumper wire.

2) Show the input status for the pins again.

3) If the status of either pin is NO GND, then do these steps:

a) Replace the PSEU, M2061. These are the tasks:
- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

b) Do the Repair Confirmation at the end of this task.

4) If the status of both pins is GND, then continue.

(4) Do this check of the wiring between the PSEU and the FSEU:

(a) Do a wiring check between these pins of connector D728A at the FSEU and connector D10986 at the PSEU:

D728A		D10986
pin B12	- - - - - - - - - - - - - - - - - -	pin 27
pin B12	- - - - - - - - - - - - - - - - - -	pin 48

(b) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the connector on the PSEU.

3) Re-install the FSEU. To install the FSEU, do this task: Flap/Slat Electronics Unit Installation, AMM TASK 27-51-01-400-801.

4) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

(1) Do this test of the leading edge flaps position indication:

(a) If it is necessary, re-install the FSEU. Do this task: Flap/Slat Electronics Unit Installation, AMM TASK 27-51-01-400-801.

(b) If it is necessary, re-connect the connectors on the PSEU.

(c) Extend the leading edge flaps. Do this task: Extend the Trailing Edge Flaps, AMM TASK 27-51-00-860-803.

(d) Retract the leading edge flaps. Do this task: Retract the Trailing Edge Flaps, AMM TASK 27-51-00-860-804.

(e) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

1) If you do not find the maintenance message, then you corrected the fault.

END OF TASK

813. Ground Spoiler Interlock Valve Position Test Connector - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) 31-56001 GSBV CL OUT FLT

(2) There is a fault with the ground spoiler interlock valve position test connector on the E1-1 shelf.

B. Possible Causes

(1) Wiring problem

(2) Proximity switch electronics unit (PSEU), M2061

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Related Data

(1) (SSM 31-53-11)

(2) (WDM 31-53-11)

E. Initial Evaluation

(1) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If you do not find the maintenance message, then there was an intermittent fault.

(b) If you find the maintenance message, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this wiring check between the test connector D10064 on the E1-1 shelf and the PSEU:

(a) Remove the connector D11142 from the PSEU.

(b) Do a check for continuity between these pins of the test connector D10064 and connector D11142:

D10064	D11142
pin 45 - - - - - - - - - - - - - - - - - -	pin 7

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the connector on the PSEU.

3) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

4) If the maintenance message does not show, then you corrected the fault.

(d) If you do not find a problem with the wiring, then continue.

(2) Replace the PSEU, M2061. These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

(a) Do the post installation test in the PSEU installation procedure.

(b) If the test operates correctly, then you corrected the fault.

——————— END OF TASK ———————

814. Takeoff Flaps - Fault Isolation

A. Description

(1) These tasks are for these maintenance messages:

(a) 31-52006 T/O FLPS A FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) 31-52106 T/O FLPS A FAULT

HAP ALL

(c) 31-52007 T/O FLPS B FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(d) 31-52107 T/O FLPS B FAULT

HAP ALL

(e) 31-53008 NOT T/O FLAPS A

(f) 31-53009 NOT T/O FLAPS B

(2) There is a fault with the trailing edge takeoff flaps signal from the stall management yaw damper (SMYD).

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(a) Maintenance message number 31-52006 is set for one of these conditions:

1) The TAKEOFF FLAPS A did not go false during the last flight. The time between takeoff and landing was greater than 25 minutes.

2) The TAKEOFF FLAPS A is false when these conditions exist:

a) The thrust lever resolver angles are greater than 53.

b) The leading edge flaps are extended or TAKEOFF FLAPS B is true.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5 (Continued)

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) Maintenance message number 31-52006 is set for this condition:

1) The TAKEOFF FLAPS A did not go false during the last flight. The time between takeoff and landing was greater than 25 minutes.

(c) Maintenance message number 31-52106 is set for this condition:

1) The TAKEOFF FLAPS A is false when these conditions exist:

a) The thrust lever resolver angles are greater than 53.

b) The leading edge flaps are extended or TAKEOFF FLAPS B is true.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(d) Maintenance message number 31-52007 is set for one of these conditions:

1) The TAKEOFF FLAPS B did not go false during the last flight. The time between takeoff and landing was greater than 25 minutes.

2) The TAKEOFF FLAPS B is false when these conditions exist:

a) The thrust lever resolver angles are greater than 53.

b) The leading edge flaps are extended or TAKEOFF FLAPS A is true.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(e) Maintenance message number 31-52007 is set for this condition:

1) The TAKEOFF FLAPS B did not go false during the last flight. The time between takeoff and landing was greater than 25 minutes.

2) The TAKEOFF FLAPS B is false when these conditions exist:

a) The thrust lever resolver angles are greater than 53.

b) The leading edge flaps are extended or TAKEOFF FLAPS A is true.

(f) Maintenance message number 31-52107 is set for this condition:

1) The TAKEOFF FLAPS B did not go false during the last flight. The time between takeoff and landing was greater than 25 minutes.

2) The TAKEOFF FLAPS B is false when these conditions exist:

a) The thrust lever resolver angles are greater than 53.

b) The leading edge flaps are extended or TAKEOFF FLAPS A is true.

HAP ALL

(g) Maintenance message numbers 31-53008 and 31-53009 are not faults. These show the cause of the last takeoff warning.

B. Possible Causes

(1) Wiring problem

(2) Stall management yaw damper M1747 (SMYD 1), or M1748 (SMYD 2)

(3) Proximity switch electronics unit (PSEU), M2061

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Related Data

(1) (SSM 27-32-11)

(2) (SSM 27-32-21)

(3) (SSM 31-53-11)

(4) (SSM 32-61-21)

(5) (WDM 27-32-11)

(6) (WDM 27-32-21)

(7) (WDM 31-53-11)

(8) (WDM 32-64-21)

E. Initial Evaluation

(1) Do this test of the trailing edge flaps position indication:

(a) Make sure that the trailing edge flaps are not extended.

(b) Show the input status for these pins on the PSEU display:

NOTE: If you need instructions on how to show the input status, then go to this task: (32-09 TASK 821).

1) D10982 pin 15

2) D10982 pin 31

(c) Make sure that the status of both pins is GND.

(d) Put the trailing edge flaps in a takeoff configuration. Do this task: Extend the Trailing Edge Flaps, AMM TASK 27-51-00-860-803.

(e) Make sure that the status of these pins is NO GND:

1) D10982 pin 15

2) D10982 pin 31

(f) If the status of the pins are not correct, then do the Fault Isolation Procedure below.

(g) If the status of the pins are correct, then there was an intermittent fault.

(h) Return the trailing edge flaps to their usual configuration. Do this task: Retract the Trailing Edge Flaps, AMM TASK 27-51-00-860-804.

F. Fault Isolation Procedure

(1) Do a takeoff warning test on the PSEU BITE. Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.

(a) If you find this maintenance message, 31-55009, then, do this task: Takeoff Flap A Input Problem - Fault Isolation, 31-51 TASK 810.

(b) If you find this maintenance message, 31-55010, then, do this task: Takeoff Flap B Input Problem - Fault Isolation, 31-51 TASK 811.

(c) If you do not find either maintenance message, then continue.

(2) Replace the PSEU, M2061. These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

(a) Do the post installation test in the PSEU installation procedure.

(b) If the test operates correctly, then you corrected the fault.

———————— END OF TASK ————————

815. TRA Sensor Input for Take Off Warning Problem - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 31-52002 TRA L LT 53 FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) 31-52102 TRA L LT 53 FAULT

HAP ALL

(c) 31-52003 TRA R LT 53 FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(d) 31-52103 TRA R LT 53 FAULT

HAP ALL

(e) 31-55011 TRA LT 53 LEFT

(f) 31-55012 TRA LT 53 RIGHT

(2) These maintenance messages show that there is a problem with an autothrottle switchpack or associated wiring.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(a) Maintenance message number 31-52002 is set for one of these conditions:

1) The left thrust lever resolver angle is less than 53 during takeoff.

2) The left thrust lever resolver angle is not less than 53 while landing.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) Maintenance message number 31-52002 is set for this condition:

1) The left thrust lever resolver angle is less than 53 during takeoff.

(c) Maintenance message number 31-52102 is set for this condition:

1) The left thrust lever resolver angle is not less than 53 while landing.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(d) Maintenance message number 31-52003 is set for one of these conditions:

1) The right thrust lever resolver angle is less than 53 during takeoff.

2) The right thrust lever resolver angle is not less than 53 while landing.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(e) Maintenance message number 31-52003 is set for this condition:

1) The right thrust lever resolver angle is less than 53 during takeoff.

(f) Maintenance message number 31-52103 is set for this condition:

1) The right thrust lever resolver angle is not less than 53 while landing.

HAP ALL

(g) Maintenance message number 31-55011 shows that the input the left thrust lever less than 53 switch did not change condition since the last takeoff.

(h) Maintenance message number 31-55012 shows that the right thrust lever less than 53 switch did not change condition since the last takeoff.

B. Possible Causes

(1) Autothrottle microswitch pack, M1766 (left) or M1767 (right)

(2) Wiring problem

(3) Proximity switch electronics unit (PSEU), M2061

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

D. Related Data

(1) (SSM 31-53-11)

(2) (WDM 31-53-11)

E. Initial Evaluation

(1) Do this test of the TRA outputs:

(a) Make sure the throttles are in the idle position.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(b) Show the input status for these pins on the PSEU display:

NOTE: If you need instructions on how to show the input status, then go to this task: (32-09 TASK 821).

1) For maintenance messages 31-52002 and 31-55011, show the status of D10982 pin 42.

2) For maintenance messages 31-52003 and 31-55012, show the status of D10984 pin 42.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(c) Show the input status for these pins on the PSEU display:

NOTE: If you need instructions on how to show the input status, then go to this task: (32-09 TASK 821).

1) For maintenance messages 31-52002, 31-52102, and 31-55011, show the status of D10982 pin 42.
2) For maintenance messages 31-52003, 31-52103, and 31-55012, show the status of D10984 pin 42.

HAP ALL

(d) Make sure that the status of the pin is NO GND.
(e) Put the throttles in a position greater than 53 degrees.
(f) Make sure that the status of the pin is GND.
(g) If the status of the pins are not correct, then do the Fault Isolation Procedure below.
(h) If the status of the pins are correct, then there was an intermittent fault.

F. Fault Isolation Procedure

WARNING: OPEN THE CIRCUIT BREAKER FOR THE WEATHER RADAR SYSTEM. WHEN YOU MOVE THE THRUST LEVER FORWARD, THE WEATHER RADAR SYSTEM COMES ON AUTOMATICALLY WHILE THE CIRCUIT BREAKER IS CLOSED. MAKE SURE THAT ALL PERSONNEL ARE MORE THAN 15 FT (5 M) FROM THE ANTENNA WHEN IT TRANSMITS RF ENERGY. RF ENERGY CAN KILL OR CAUSE INJURIES TO PERSONS, AND CAUSE DAMAGE TO EQUIPMENT.

NOTE: You must do the steps in the Initial Evaluation before you can do these steps.

(1) If the Initial Evaluation failed in the idle position, then do this check of the autothrottle switch pack:

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(a) For maintenance messages 31-52002 and 31-55011, remove the connector D11128 from the left autothrottle switch pack.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) For maintenance messages 31-52002, 31-52102, and 31-55011, remove the connector D11128 from the left autothrottle switch pack.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(c) For maintenance messages 31-52003 and 31-55012, remove the connector D11132 from the right autothrottle switch pack.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(d) For maintenance messages 31-52003, 31-52103, and 31-55012, remove the connector D11132 from the right autothrottle switch pack.

HAP ALL

(e) Examine the connector and socket for damage or unwanted material.
(f) Make sure the throttles are in the idle position.
(g) Make sure pin 17 on the connector has continuity to ground.
(h) If there is not continuity, then do these steps:
1) Repair the wiring between pin 17 and structure ground

2) Re-connect the connector on the autothrottle switch pack.

3) Do the Repair Confirmation at the end of this task.

(i) If there is continuity, then continue.

(j) Do a check for continuity between pins 16 and 17 on the autothrottle switch pack.

(k) If there is continuity, then do these steps:

1) Replace the switch in the applicable autothrottle switch pack, M1766 (left) or M1767 (right). These are the tasks:

- AMM TASK 76-11-07-020-802-F00
- AMM TASK 76-11-07-400-802-F00

2) Do the Repair Confirmation at the end of this task.

(l) If there is not continuity, then continue.

(2) If the Initial Evaluation failed in a throttle position greater than 53, then do this check of the autothrottle switch pack:

(a) Put the throttles in a position greater than 53 degrees.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(b) For maintenance messages 31-52002 and 31-55011, remove the connector D11128 from the left autothrottle switch pack.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(c) For maintenance messages 31-52002, 31-52102, and 31-55011, remove the connector D11128 from the left autothrottle switch pack.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(d) For maintenance messages 31-52003 and 31-55012, remove the connector D11132 from the right autothrottle switch pack.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(e) For maintenance messages 31-52003, 31-52103, and 31-55012, remove the connector D11132 from the right autothrottle switch pack.

HAP ALL

(f) Examine the connector and socket for damage or unwanted material.

(g) Do a check for continuity between pins 16 and 17 on the autothrottle switch pack.

(h) If there is not continuity, then do these steps:

1) Replace the switch in the applicable autothrottle switch pack, M1766 (left) or M1767 (right). These are the tasks:

- AMM TASK 76-11-07-020-802-F00
- AMM TASK 76-11-07-400-802-F00

2) Do the Repair Confirmation at the end of this task.

(i) If there is continuity, then continue.

(3) Do this test of the wiring to the autothrottle switchpack:

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(a) For maintenance messages 31-52002 and 31-55011, remove the connector D10982 from the PSEU.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) For maintenance messages 31-52002, 32-52102, and 31-55011, remove the connector D10982 from the PSEU.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(c) For maintenance messages 31-52003 and 31-55012, remove the connector D10984 from the PSEU.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(d) For maintenance messages 31-52003, 32-52103, and 31-55012, remove the connector D10984 from the PSEU.

HAP ALL

(e) Examine the connector and socket for damage or unwanted material.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(f) For maintenance messages 31-52002 and 31-55011, show the input status for connector D11182 pin 42.

NOTE: If you need instructions on how to show the input status, then go to this task: (32-09 TASK 821).

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(g) For maintenance messages 31-52002, 32-52102, and 31-55011, show the input status for connector D11182 pin 42.

NOTE: If you need instructions on how to show the input status, then go to this task: (32-09 TASK 821).

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(h) For maintenance messages 31-52003 and 31-55012, show the input status for connector D11184 pin 42.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(i) For maintenance messages 31-52003, 32-52103, and 31-55012, show the input status for connector D11184 pin 42.

HAP ALL

(j) If the status of the pin is NO GND, then do these steps:

1) Ground pin 42 with a jumper.
2) If the status changes to GND, then do these steps:
   a) Repair the wiring between pin 42 on the PSEU and pin 16 on the autothrottle switchpack.
   b) Do the Repair Confirmation at the end of this task.
3) If the status is NO GND, then do these steps:
   a) Replace the PSEU, M2061. These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

b) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

(1) Do this test of the autothrottle switch packs:

(a) Re-connect the connectors on the PSEU and autothrottle switch pack.

(b) Put the throttles in the idle position.

(c) Put the throttles in a position greater than 53 degrees.

(d) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

1) If you do not find the maintenance message, then you corrected the fault.

——————— END OF TASK ———————

816. TRA Greater Than 44 Problem - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 32-62001 TRA L LT 44 FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) 32-62101 TRA L LT 44 FAULT

HAP ALL

(c) 32-62002 TRA R LT 44 FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(d) 32-62102 TRA R LT 44 FAULT

HAP ALL

(2) These maintenance messages show that there is a problem with an autothrottle switchpack or associated wiring.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(a) Maintenance message number 32-62001 is set for one of these conditions:

1) The left thrust lever resolver angle is less than 44 during takeoff.

2) The left thrust lever resolver angle is not less than 44 while landing.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) Maintenance message number 32-62001 is set for this condition:

1) The left thrust lever resolver angle is less than 44 during takeoff.

(c) Maintenance message number 32-62101 is set for this condition:

1) The left thrust lever resolver angle is not less than 44 while landing.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5 (Continued)

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(d) Maintenance message number 32-62002 is set for one of these conditions:

1) The right thrust lever resolver angle is less than 44 during takeoff.

2) The right thrust lever resolver angle is not less than 44 while landing.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(e) Maintenance message number 32-62002 is set for this condition:

1) The right thrust lever resolver angle is less than 44 during takeoff.

(f) Maintenance message number 32-62102 is set for this condition:

1) The right thrust lever resolver angle is not less than 44 while landing.

HAP ALL

B. Possible Causes

(1) Autothrottle microswitch pack, M1766 (left) or M1767 (right)

(2) Wiring problem

(3) Proximity switch electronics unit (PSEU), M2061

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

D. Related Data

(1) (SSM 32-61-21)

(2) (WDM 32-64-21)

E. Initial Evaluation

(1) Do this test of the TRA outputs:

(a) Make sure the throttles are in the idle position.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(b) Show the input status for these pins on the PSEU display:

NOTE: If you need instructions on how to show the input status, then go to this task: (32-09 TASK 821).

1) For maintenance message 32-62001, show the status of D10982 pin 40.

2) For maintenance message 32-62002, show the status of D10984 pin 40.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(c) Show the input status for these pins on the PSEU display:

NOTE: If you need instructions on how to show the input status, then go to this task: (32-09 TASK 821).

1) For maintenance message 32-62001 and 32-62101, show the status of D10982 pin 40.
2) For maintenance message 32-62002 and 32-62102, show the status of D10984 pin 40.

HAP ALL

(d) Make sure that the status of the pin is GND.
(e) Put the throttles in a position greater than 44 degrees.
(f) Make sure that the status of the pin is NO GND.
(g) If the status of the pins are not correct, then do the Fault Isolation Procedure below.
(h) If the status of the pins are correct, then there was an intermittent fault.

F. Fault Isolation Procedure

WARNING: OPEN THE CIRCUIT BREAKER FOR THE WEATHER RADAR SYSTEM. WHEN YOU MOVE THE THRUST LEVER FORWARD, THE WEATHER RADAR SYSTEM COMES ON AUTOMATICALLY WHILE THE CIRCUIT BREAKER IS CLOSED. MAKE SURE THAT ALL PERSONNEL ARE MORE THAN 15 FT (5 M) FROM THE ANTENNA WHEN IT TRANSMITS RF ENERGY. RF ENERGY CAN KILL OR CAUSE INJURIES TO PERSONS, AND CAUSE DAMAGE TO EQUIPMENT.

NOTE: You must do the steps in the Initial Evaluation before you can do these steps.

(1) If the Initial Evaluation failed in the idle position, then do this check of the autothrottle switch pack:

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(a) For maintenance message 32-62001, remove the connector D11128 from the left autothrottle switch pack.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) For maintenance message 32-62001 and 32-62101, remove the connector D11128 from the left autothrottle switch pack.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(c) For maintenance message 32-62002, remove the connector D11132 from the right autothrottle switch pack.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(d) For maintenance message 32-62002 and 32-62102, remove the connector D11132 from the right autothrottle switch pack.

HAP ALL

(e) Examine the connector and socket for damage or unwanted material.
(f) Make sure the throttles are in the idle position.
(g) Make sure pin 2 on the connector has continuity to ground.
(h) If there is not continuity, then do these steps:
1) Repair the wiring between pin 2 and structure ground
2) Re-connect the connector on the autothrottle switch pack.

3) Do the Repair Confirmation at the end of this task.

(i) If there is continuity, then continue.

(j) Do a check for continuity between pins 2 and 3 on the autothrottle switch pack.

(k) If there is not continuity, then do these steps:

1) Replace the applicable autothrottle switch pack, M1766 (left) or M1767 (right). These are the tasks:
- AMM TASK 76-11-07-020-802-F00
- AMM TASK 76-11-07-400-802-F00

2) Do the Repair Confirmation at the end of this task.

(l) If there is continuity, then continue.

(2) If the Initial Evaluation failed in a position greater than 44, then do this check of the autothrottle switch pack:

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(a) For maintenance message 32-62001, remove the connector D11128 from the left autothrottle switch pack.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) For maintenance message 32-62001 and 32-62101, remove the connector D11128 from the left autothrottle switch pack.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(c) For maintenance message 32-62002, remove the connector D11132 from the right autothrottle switch pack.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(d) For maintenance message 32-62002 and 32-62102, remove the connector D11132 from the right autothrottle switch pack.

HAP ALL

(e) Examine the connector and socket for damage or unwanted material.

(f) Put the throttles in a position greater than 44 degrees.

(g) Do a check for continuity between pins 2 and 3 on the autothrottle switch pack.

(h) If there is continuity, then do these steps:

1) Replace the applicable autothrottle switch pack, M1766 (left) or M1767 (right). These are the tasks:
- AMM TASK 76-11-07-020-802-F00
- AMM TASK 76-11-07-400-802-F00

2) Do the Repair Confirmation at the end of this task.

(i) If there is not continuity, then continue.

(3) Do this test of the wiring to the autothrottle switchpack:

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(a) For maintenance message 32-62001, remove the connector D10982 from the PSEU.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5 (Continued)

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) For maintenance message 32-62001 and 32-62101, remove the connector D10982 from the PSEU.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(c) For maintenance message 32-62002, remove the connector D10984 from the PSEU.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(d) For maintenance message 32-62002 and 32-62102, remove the connector D10984 from the PSEU..

HAP ALL

(e) Examine the connector and socket for damage or unwanted material.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(f) For maintenance message 32-62001, show the input status for connector D10982 pin 40.

NOTE: If you need instructions on how to show the input status, then go to this task: (32-09 TASK 821).

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(g) For maintenance message 32-62001 and 32-62101, show the input status for connector D10982 pin 40.

NOTE: If you need instructions on how to show the input status, then go to this task: (32-09 TASK 821).

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(h) For maintenance message 32-62002, show the input status for connector D10984 pin 40.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(i) For maintenance message 32-62002 and 32-62102, show the input status for connector D10984 pin 40.

HAP ALL

(j) If the status of the pin is NO GND, then do these steps:

1) Ground pin 40 with a jumper.
2) If the status changes to GND, then do these steps:
   a) Repair the wiring between pin 40 on the PSEU and pin 3 on the autothrottle switchpack.
   b) Do the Repair Confirmation at the end of this task.
3) If the status is NO GND, then do these steps:
   a) Replace the PSEU, M2061. These are the tasks:
      - Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
      - Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

b) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

(1) Do this test of the autothrottle switch packs:

(a) Re-connect the connectors on the PSEU and autothrottle switch pack.

(b) Put the throttles in the idle position.

(c) Put the throttles in a position greater than 44 degrees.

(d) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

1) If you do not find the maintenance message, then you corrected the fault.

END OF TASK

817. Stab Trim Position Disagree - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) 31-52004 STAB TRM DISAGREE

(2) This message will show on the proximity switch electronic units (PSEU) BITE display when the input from the stabilizer take off warning switches, S546 or S132, are both true or both false.

B. Possible Causes

(1) Stabilizer take off warning nose down switch, S546

(2) Stabilizer take off warning nose up switch, S132

(3) Proximity switch electronics unit (PSEU), M2061

(4) Wiring problem

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

(1) (SSM 31-53-11)

(2) (WDM 31-53-11)

E. Initial Evaluation

(1) Do this test of the stabilizer trim switches:

(a) Make sure the stabilizer trim position is in the green band.

(b) If the trim position is not in the green band, then do these steps:

WARNING: MAKE SURE ALL PERSONNEL AND EQUIPMENT ARE CLEAR OF THE CONTROL SURFACES AND LANDING GEAR AREAS. THE CONTROL SURFACES AND LANDING GEAR DOORS CAN MOVE WHEN YOU PRESSURIZE THE HYDRAULIC SYSTEMS. THIS CAN CAUSE INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT.

1) Pressurize the hydraulic systems. To do this, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.
2) Put the trim position in the green band.

(c) Do these steps to find the status of the stabilizer trim inputs with the trim lever in the green band:

NOTE: You will use the status of the inputs for the fault isolation procedure below. Make sure you record the input status that you find.

1) Show the input status for connector D10982 pin 51 on the PSEU display.

NOTE: If you need instructions on how to show the input status, then go to this task: (32-09 TASK 821).

2) Write down the status of the pin.
3) Show the input status for connector D10984 pin 51 on the PSEU display.
4) Write down the status of the pin.

(d) Do these steps to find the status of the stabilizer trim inputs with the trim lever in the NOSE UP position:

1) Put the trim position in the NOSE UP position.
2) Show the input status for connector D10982 pin 51 on the PSEU display.
3) Write down the status of the pin.
4) Show the input status for connector D10984 pin 51 on the PSEU display.
5) Write down the status of the pin.

(e) Do these steps to find the status of the stabilizer trim inputs with the trim lever in the NOSE DOWN position:

1) Put the trim position in the NOSE DOWN position.
2) Show the input status for connector D10982 pin 51 on the PSEU display.
3) Write down the status of the pin.
4) Show the input status for connector D10984 pin 51 on the PSEU display.
5) Write down the status of the pin.

(f) Compare the inputs to this table:

Table 212

STAB TRIM POSITION	D10982 PIN 51	D10984 PIN 51
GREEN BAND	NO GND	GND
UP	GND	NO GND
DOWN	GND	NO GND

(g) If the status of the pins are not correct, then do the applicable Fault Isolation Procedure below.

NOTE: The fault isolation is divided into 3 parts: Green Band Disagree, Up Position Disagree, and Down Position Disagree. If the status of the pins disagree with the table for more than one stab trim position, then do the fault isolation in the order below.

(h) If the status of the pins are correct, then there was an intermittent fault.

F. Fault Isolation Procedure - Green Band Disagree

NOTE: You must do the steps in the Initial Evaluation before you can do these steps.

(1) Do these steps to prepare for fault isolation:

(a) Put the trim position in the green band.

(b) Remove the pressure from the hydraulic systems. Do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(2) Examine the stabilizer take off warning switches and surrounding area:

(a) If there is damage, then do these steps:

1) Repair the damage that you find.

2) Do the Repair Confirmation at the end of this task.

(b) If either of the switches appear to be actuated, then do these steps:

1) Remove and re-install the switch. These are the tasks:
- Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801
- Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801

2) Do the Repair Confirmation at the end of this task.

(c) If there is no damage and the switches are not actuated, then continue.

(3) If the input status of connector D10984 pin 51 is NO GND, then do this test:

(a) Disconnect the splice SP54 from the take off warning nose down switch S546.

(b) Ground the wire from the PSEU at the splice SP54 with a jumper wire.

(c) Show the input status for connector D10984 pin 51 on the PSEU display.

(d) If the status of the pin is GND, then do this test of the take off warning nose switches:

1) Disconnect the splice SP58 from the take off warning nose down switch S546.

2) Do a check for continuity between A-C and A-F on the take off warning nose down switch S546.

3) If there is not continuity, then do these steps:

a) Replace the take off warning nose down switch, S546. These are the tasks:
- Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801
- Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801

b) Re-connect the splices on the take off warning switch.

c) Do the Repair Confirmation at the end of this task.

4) If there is continuity, then continue.

5) Do a check for continuity between B-C and ground on the take off warning nose up switch S132.

6) If there is not continuity, then do these steps:

a) Replace the take off warning nose up switch, S132. These are the tasks:
- Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801
- Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801

b) Re-connect the splices on the take off warning switches.

c) Do the Repair Confirmation at the end of this task.

7) If there is continuity, then do these steps:

a) Re-connect the splices on the take off warning switches.

b) Do the Repair Confirmation at the end of this task.

c) If the repair confirmation operates correctly, then there may have been an open splice or other wiring problem.

(e) If the status of the pin is NO GND, then do this test of the PSEU:

1) Remove the connector D10984 from the PSEU.

2) Examine the connector and socket for damage or unwanted material.

3) Ground pin 51 on the PSEU connector with a jumper wire.

4) If the status of the pin is NO GND, then do these steps:

a) Replace the PSEU, M2061. These are the tasks:
- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

b) Re-connect the splice on the take off warning nose down switch.

c) Do the Repair Confirmation at the end of this task.

5) If the status of the pin is GND, then do these steps:

a) Repair the wiring between the PSEU pin 51 and the take off warning nose down switch, S546.

b) Re-connect the connector on the PSEU.

c) Re-connect the splice on the take off warning nose down switch.

d) Do the Repair Confirmation at the end of this task.

(4) If the input status of connector D10982 pin 51 is GND, then do this test:

(a) Remove the splice SP56 from the take off warning down switches.

(b) Show the input status for connector D10982 pin 51 on the PSEU display.

(c) If the status of the pin is NO GND, then do these steps:

1) Do a check for continuity between the take off warning nose down switch S546 terminal A-B and structure ground.

2) If there is continuity, then do these steps:

a) Replace the take off warning nose up switch, S546. These are the tasks:
- Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801
- Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801

b) Do the Repair Confirmation at the end of this task.

3) If there is not continuity, then do a check for continuity between the take off warning nose up switch S132 terminal B-B and structure ground.

4) If there is continuity, then do these steps:

a) Replace the take off warning nose down switch, S132. These are the tasks:
- Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801
- Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801

b) Do the Repair Confirmation at the end of this task.

(d) If the status of the pin is GND, then do these steps:

1) Remove the connector D10982 from the PSEU.

2) Examine the connector and socket for damage or unwanted material.

3) Show the input status for connector D10982 pin 51 on the PSEU display.

4) If the status of the pin is GND, then do these steps:

a) Replace the PSEU, M2061. These are the tasks:
- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

b) Re-connect the splices for the take off warning switches.

c) Do the Repair Confirmation at the end of this task.

5) If the status of the pin is NO GND, then do a check of the wiring between the PSEU connector D10982 pin 51 and the splice SP56.

6) If you find a problem with the wiring, then do these steps:

a) Repair the wiring.

b) Re-connect the connector on the PSEU.

c) Re-connect the splice for the take off warning switches.

d) Do the Repair Confirmation at the end of this task.

G. Fault Isolation Procedure - Up Position Disagree

NOTE: You must do the steps in the Initial Evaluation before you can do these steps.

(1) Do these steps to move the stabilizer to the NOSE UP trim position:

WARNING: MAKE SURE ALL PERSONNEL AND EQUIPMENT ARE CLEAR OF THE CONTROL SURFACES AND LANDING GEAR AREAS. THE CONTROL SURFACES AND LANDING GEAR DOORS CAN MOVE WHEN YOU PRESSURIZE THE HYDRAULIC SYSTEMS. THIS CAN CAUSE INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT.

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

(b) Put the trim position in the NOSE UP position.

(c) Remove the pressure from the hydraulic systems. Do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(2) Examine the stabilizer take off warning switches and surrounding area:

(a) If there is damage, then do these steps:

1) Repair the damage that you find.

2) Do the Repair Confirmation at the end of this task.

(b) If the take off warning nose up switch S132 is not actuated, then do these steps:

1) Remove and re-install the switch. These are the tasks:

- Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801
- Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801

2) Do the Repair Confirmation at the end of this task.

(c) If the take off warning nose down switch S546 is actuated, then do these steps:

1) Remove and re-install the switch. These are the tasks:
   - Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801
   - Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801
2) Do the Repair Confirmation at the end of this task.

(d) If there is no damage and the switches are in the correct position, then continue.

(3) If the input status of connector D10984 pin 51 is GND, then do this test:

(a) Remove the splice SP58 from the take off warning nose up switch S132.

(b) Show the input status for connector D10984 pin 51 on the PSEU display.

(c) If the status of the pin is NO GND, then do these steps:

1) Replace the take off warning nose up switch, S132. These are the tasks:
   - Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801
   - Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801
2) Do the Repair Confirmation at the end of this task.

(d) If the status of the pin is GND, then do these steps:

1) Remove the splice SP54 from the take off warning nose up switch S132.
2) Show the input status for connector D10984 pin 51 on the PSEU display.
3) If the status of the pin is NO GND, then do these steps:
   a) Replace the take off warning nose down switch, S546. These are the tasks:
      - Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801
      - Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801
   b) Do the Repair Confirmation at the end of this task.
4) If the status of the pin is GND, then continue.
5) Remove the connector D10984 from the PSEU.
6) Examine the connector and socket for damage or unwanted material.
7) Show the input status for connector D10984 pin 51 on the PSEU display.
8) If the status of the pin is GND, then do these steps:
   a) Replace the PSEU, M2061. These are the tasks:
      - Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
      - Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801
   b) Re-connect the connector on the PSEU.
   c) Re-connect the splices on the take off warning down switches.
   d) Do the Repair Confirmation at the end of this task.
9) If the status of the pin is NO GND, then do these steps:
   a) Repair the wiring between the PSEU pin 51 and the splice SP54 for the take off warning nose down switches.
   b) Re-connect the connector on the PSEU.

c) Re-connect the splices on the take off warning down switches.

d) Do the Repair Confirmation at the end of this task.

(4) If the input status of connector D10982 pin 51 is NO GND, then do this test:

(a) Remove the splice SP56 from the take off warning nose up switch S132.

(b) Ground the wire from the PSEU with a jumper wire.

(c) Show the input status for connector D10982 pin 51 on the PSEU display.

(d) If the status of the pin is GND, then do this check of the switch S132:

1) Do a check for continuity between pin B-B on the switch, S132 and structure ground.

2) If there is not continuity, then do these steps:

a) Replace the take off warning up switch, S132. These are the tasks:

- Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801
- Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801

b) Do the Repair Confirmation at the end of this task.

3) If there is continuity, then do these steps:

a) Re-connect the splice on the take off warning switches.

b) Do the Repair Confirmation at the end of this task.

c) If the repair confirmation operates correctly, then there may have been an open splice or another wiring problem.

(e) If the status of the pin is NO GND, then do these steps:

1) Remove the connector D10982 from the PSEU.

2) Examine the connector and socket for damage or unwanted material.

3) Ground pin 51 on the PSEU connector with a jumper wire.

4) Show the input status for connector D10982 pin 51 on the PSEU display.

5) If the status of the pin is NO GND, then do these steps:

a) Replace the PSEU, M2061. These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

b) Re-connect the connector on the PSEU.

c) Re-connect the splice on the take off warning up switches.

d) Do the Repair Confirmation at the end of this task.

6) If the status of the pin is GND, then do these steps:

a) Repair the wiring between the PSEU and the take off warning up switch, S132 pin 5.

b) Re-connect the connector on the PSEU.

c) Re-connect the splice on the take off warning up switches.

d) Do the Repair Confirmation at the end of this task.

H. Fault Isolation Procedure - Down Position Disagree

NOTE: You must do the steps in the Initial Evaluation before you can do these steps.

(1) Do these steps to move the stabilizer to the NOSE DOWN trim position:

WARNING: MAKE SURE ALL PERSONNEL AND EQUIPMENT ARE CLEAR OF THE CONTROL SURFACES AND LANDING GEAR AREAS. THE CONTROL SURFACES AND LANDING GEAR DOORS CAN MOVE WHEN YOU PRESSURIZE THE HYDRAULIC SYSTEMS. THIS CAN CAUSE INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT.

(a) Pressurize the hydraulic systems. Do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(b) Put the trim position in the NOSE DOWN position.

(c) Remove the pressure from the hydraulic systems. Do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(2) Examine the stabilizer take off warning switches and surrounding area:

(a) If there is damage, then do these steps:

1) Repair the damage that you find.

2) Do the Repair Confirmation at the end of this task.

(b) If the take off warning nose up switch, S132 is actuated, then do these steps:

1) Remove and re-install the switch. These are the tasks:
- Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801
- Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801

2) Do the Repair Confirmation at the end of this task.

(c) If the take off warning nose down switch, S546 is not actuated, then do these steps:

1) Remove and re-install the switch. These are the tasks:
- Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801
- Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801

2) Do the Repair Confirmation at the end of this task.

(d) If there is no damage and the switches are in the correct position, then continue.

(3) If the input status of connector D10984 pin 51 is GND, then do these steps:

(a) Replace the take off warning nose down switch, S546. These are the tasks:
- Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801
- Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801

(b) Do the Repair Confirmation at the end of this task.

(4) If the input status of connector D10982 pin 51 is NO GND, then do this test:

(a) Remove the splice SP56 from the switch S546.

(b) Do a check for continuity between terminal A-B on the switch S546 and structure ground.

(c) If there is not continuity, then do these steps:

1) Replace the take off warning nose down switch, S546. These are the tasks:
- Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801
- Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801

2) Do the Repair Confirmation at the end of this task.

(d) If there is continuity, then do these steps:

1) Re-connect the splice on the take off warning switches.

2) Do the Repair Confirmation at the end of this task.

3) If the repair confirmation operates correctly, then there may have been an open splice or another wiring problem.

I. Repair Confirmation

(1) If it is necessary, re-connect the connectors on the PSEU and the splices on the take off warning nose up and down switches.

WARNING: MAKE SURE ALL PERSONNEL AND EQUIPMENT ARE CLEAR OF THE CONTROL SURFACES AND LANDING GEAR AREAS. THE CONTROL SURFACES AND LANDING GEAR DOORS CAN MOVE WHEN YOU PRESSURIZE THE HYDRAULIC SYSTEMS. THIS CAN CAUSE INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT.

(2) Pressurize the hydraulic systems. Do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(3) Set the stabilizer trim outside the green band toward nose down.

(4) Set the stabilizer trim outside the green band toward nose up.

(5) Set the stabilizer trim inside the green band.

(6) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If the maintenance message does not show, then you corrected the fault.

(7) If hydraulic pressure is no longer needed, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

———————— END OF TASK ————————

818. PSEU Status Messages - Fault Isolation

A. Description

(1) This task is for these status messages:

(a) 32-04001 AIR/GND OVERRIDE

(b) 32-64003 DISPATCH PER MEL

(c) 32-64004 NO DISP FAULT

(2) These messages are status messages which show these conditions:

(a) Message 32-04001 - AIR/GND OVERRIDE shows that the PSEU outputs are in the override condition. This is not a fault.

(b) Message 32-64003 - DISPATCH PER MEL shows that there is an existing dispatch type fault (the PSEU light can be turned off).

(c) Message 32-64004 - NO DISP FAULT shows that there is an existing no dispatch type fault (the fault must be corrected to turn off the PSEU light).

B. Initial Evaluation

(1) Maintenance message 32-04001 - AIR/GND OVERRIDE shows that the PSEU outputs are in the override condition. If the override condition is not necessary, then you can put the PSEU back in the normal condition. To put the PSEU back to the normal condition, do this task: Return the Airplane Systems Back to Their Normal On Ground Condition, AMM TASK 32-09-00-840-802.

(2) Maintenance messages 32-64003 and 32-64004 are status messages. There are other maintenance messages in the PSEU which must be corrected before you can remove the status message. Continue to show the other fault messages to perform fault isolation. To show the other fault messages, do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

END OF TASK

819. More Than One Air/Ground Sensor Faults - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) 32-01007 AIR/GND FAIL

(2) This maintenance message shows that there are more than one air/ground sensor faults. This message shows if one of these conditions are correct:

(a) Maintenance message numbers 32-01002 and 32-01005 are both set.

(b) Maintenance message numbers 32-01001 and 32-01004 are both set.

(c) Maintenance message numbers 32-01003 and 32-01006 are both set.

B. Possible Causes

(1) Nose landing gear air/ground sensor, S1014 or S1015

(2) Left main landing gear air/ground sensor, S1012 or S1013

(3) Right main landing gear air/ground sensor, S1010 or S1011

(4) Wiring problem

(5) Proximity switch electronics unit (PSEU), M2061

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Related Data

(1) Component Location (Figure 301)

(2) Component Location (Figure 302)

(3) (SSM 32-09-11)

(4) (SSM 32-09-12)

(5) (WDM 32-31-11)

(6) (WDM 32-31-12)

E. Initial Evaluation

(1) Do the EXISTING FAULTS test on the PSEU BITE display. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If you do not find any maintenance messages, then there was an intermittent fault.

(b) If you find the maintenance message, then show and record all the maintenance messages in the PSEU.

(c) Look for these PSEU maintenance messages:

1) For maintenance message numbers 32-01002 and 32-01005, do this task: Nose Landing Gear Air/Ground Sensor Fault - Fault Isolation, 32-09 TASK 802.

2) For maintenance message numbers 32-01001, 30-01003, 32-01004, and 32-01006, do this task: Main Landing Gear Air/Ground Sensor Fault - Fault Isolation, 32-09 TASK 803.

——————— END OF TASK ———————

820. TRA Greater Than 64 Problem - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 32-62003 TRA L LT 64 FAULT

(b) 32-62004 TRA R LT 64 FAULT

(2) These maintenance messages show that there is a problem with an autothrottle switchpack or associated wiring.

(a) Maintenance message number 32-62003 is set for one of these conditions:

1) The left and right TRA LT64 switches disagree during takeoff.

2) The left thrust lever resolver angle is not less than 64 while landing.

(b) Maintenance message number 32-62004 is set for one of these conditions:

1) The left and right TRA LT64 switches disagree during takeoff.

2) The right thrust lever resolver angle is not less than 64 while landing.

B. Possible Causes

(1) Autothrottle microswitch pack, M1766 (left) or M1767 (right)

(2) Wiring problem

(3) Proximity switch electronics unit (PSEU), M2061

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

D. Related Data

(1) (SSM 32-61-21

(2) (WDM 32-64-21)

E. Initial Evaluation

WARNING: OPEN THE CIRCUIT BREAKER FOR THE WEATHER RADAR SYSTEM. WHEN YOU MOVE THE THRUST LEVER FORWARD, THE WEATHER RADAR SYSTEM COMES ON AUTOMATICALLY WHILE THE CIRCUIT BREAKER IS CLOSED. MAKE SURE THAT ALL PERSONNEL ARE MORE THAN 15 FT (5 M) FROM THE ANTENNA WHEN IT TRANSMITS RF ENERGY. RF ENERGY CAN KILL OR CAUSE INJURIES TO PERSONS, AND CAUSE DAMAGE TO EQUIPMENT.

(1) Do this test of the TRA outputs:

(a) Make sure the throttles are in the idle position.

(b) Show the input status for these pins on the PSEU display:

NOTE: If you need instructions on how to show the input status, then go to this task: (32-09 TASK 821).

1) For maintenance message 32-62003, show the status of D10982 pin 41.

2) For maintenance message 32-62004, show the status of D10984 pin 41.

(c) Make sure that the status of the pin is GND.

(d) Put the throttles in a position greater than 64 degrees.

(e) Make sure that the status of the pin is NO GND.

(f) If the status of the pins are not correct, then do the Fault Isolation Procedure below.

(g) If the status of the pins are correct, then there was an intermittent fault.

F. Fault Isolation Procedure

NOTE: You must do the steps in the Initial Evaluation before you can do these steps.

(1) If the Initial Evaluation failed in the idle position, then do this check of the autothrottle switch pack:

(a) For maintenance message 32-62003, remove the connector D11128 from the left autothrottle switch pack.

(b) For maintenance message 32-62004, remove the connector D11132 from the right autothrottle switch pack.

(c) Examine the connector and socket for damage or unwanted material.

(d) Make sure the throttles are in the idle position.

(e) Make sure pin 23 on the connector has continuity to ground.

(f) If there is not continuity, then do these steps:

1) Repair the wiring between pin 23 and structure ground

2) Re-connect the connector on the autothrottle switch pack.

3) Do the Repair Confirmation below.

(g) If there is continuity, then continue.

(h) Use a multimeter, STD-1231 to measure for continuity between pins 23 and 24 on the autothrottle switch pack.

(i) If there is not continuity, then do these steps:

1) Replace the applicable autothrottle switch pack, M1766 (left) or M1767 (right). These are the tasks:

- AMM TASK 76-11-07-020-802-F00
- AMM TASK 76-11-07-400-802-F00

2) Do the Repair Confirmation at the end of this task.

(j) If there is continuity, then continue.

(2) If the Initial Evaluation failed in a position greater than 64, then do this check of the autothrottle switch pack:

(a) For maintenance message 32-62003, remove the connector D11128 from the left autothrottle switch pack.

(b) For maintenance message 32-62004, remove the connector D11132 from the right autothrottle switch pack.

(c) Examine the connector and socket for damage or unwanted material.

(d) Put the throttles in a position greater than 64 degrees.

(e) Do a check for continuity between pins 23 and 24 on the autothrottle switch pack.

(f) If there is continuity, then do these steps:

1) Replace the autothrottle switch pack, M1766 (left) or M1767 (right). These are the tasks:
- AMM TASK 76-11-07-020-802-F00
- AMM TASK 76-11-07-400-802-F00

2) Do the Repair Confirmation at the end of this task.

(g) If there is not continuity, then continue.

(3) Do this test of the wiring to the autothrottle switchpack:

(a) For maintenance message 32-62003, remove the connector D10982 from the PSEU.

(b) For maintenance message 32-62004, remove the connector D10984 from the PSEU.

(c) Examine the connector and socket for damage or unwanted material.

(d) For maintenance message 32-62003, show the input status for connector D10982 pin 41.

NOTE: If you need instructions on how to show the input status, then go to this task: (32-09 TASK 821).

(e) For maintenance message 32-62004, show the input status for connector D10984 pin 41.

(f) If the status of the pin is NO GND, then do these steps:

1) Ground pin 41 with a jumper.

2) If the status changes to GND, then do these steps:

a) Repair the wiring between pin 41 on the PSEU and pin 24 on the autothrottle switchpack.

b) Do the Repair Confirmation at the end of this task.

3) If the status is NO GND, then do these steps:

a) Replace the PSEU, M2061. These are the tasks:
- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

b) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

(1) Do this test of the autothrottle switch packs:

(a) Re-connect the connectors on the PSEU and autothrottle switch pack.

(b) Put the throttles in the idle position.

(c) Put the throttles in a position greater than 64 degrees.

(d) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

1) If you do not find the maintenance message, then you corrected the fault.

——————— END OF TASK ———————

821. Proximity Switch Electronics Unit (PSEU) Input Monitoring Procedure

A. General

(1) You do the Proximity Switch Electronics Unit (PSEU) input monitoring at the front of the PSEU module. The PSEU is in the forward electrical equipment bay.

B. Procedure

(1) Do the input monitoring procedure for the PSEU: (Figure 203)

(a) Open this access panel:

Number	Name/Location
112A	Forward Access Door

(b) Push the ON/OFF switch.

NOTE: The display will show EXISTING FAULTS?

(c) Push the down arrow until OTHER FUNCTNS? shows.

(d) Push the YES switch.

NOTE: The display will show T/O WARN REPORT?.

(e) Push the down arrow until I/O MONITOR? shows.

(f) Push the YES switch.

NOTE: The display will show SENSORS?.

(g) Push the down arrow until INPUTS? shows.

(h) Push the YES switch.

NOTE: The display will show CONN Dxxxxx? where Dxxxxx is a connector number.

(i) Push the down arrow or up arrow until the required connector shows.

(j) Push the YES switch.

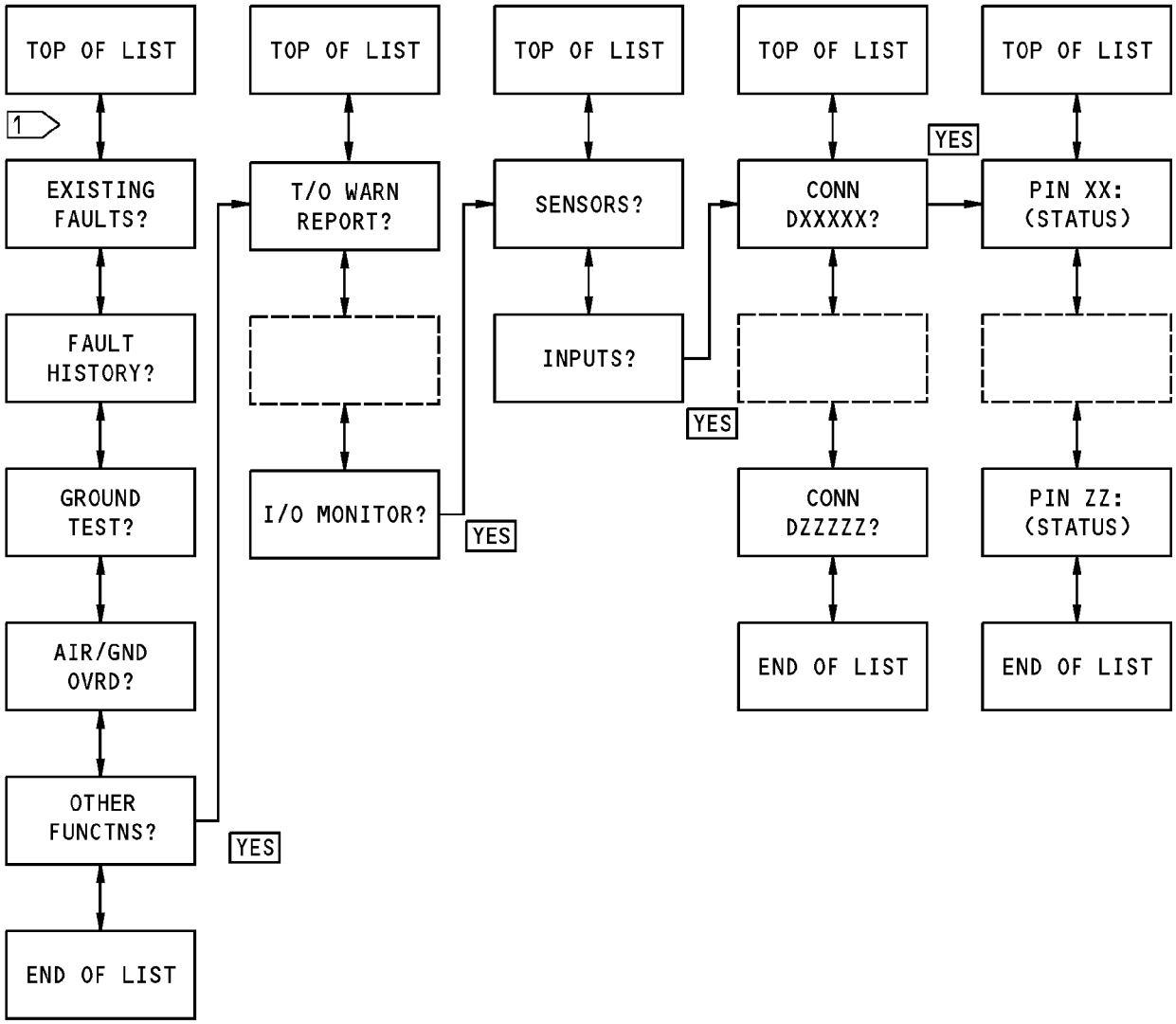
NOTE: The display will show a pin number and status. The status can be GND, NO GND, or a voltage.

(k) Push the down arrow or up arrow until the required pin shows.

(l) Use the connector/pin status as required for fault isolation.

(m) In the course of this procedure use the MENU switch to go to a previous menu level.

——————— END OF TASK ———————



NOTE: TO RETURN TO A PREVIOUS MENU, PUSH THE MENU SWITCH.

1 REPRESENTS THE AND ON THE BITE DISPLAY

PSEU Bite Tree - Display Input/Output Status
Figure 203 / 32-09-00-990-803

822. No 28 VDC B Input Power to PSEU - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) 32-60002 NO 28V B POWER

(2) These maintenance messages show that there is not 28 VDC input power to the PSEU.

B. Possible Causes

(1) Wiring problem

(2) Proximity switch electronics unit (PSEU), M2061

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	2	C01400	PSEU ALTN

D. Related Data

(1) (SSM 32-64-11)

(2) (SSM 32-64-12)

(3) (WDM 32-64-11)

(4) (WDM 32-64-12)

E. Initial Evaluation

(1) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If you do not find the maintenance message, then there was an intermittent fault.

(b) If you find the maintenance message, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the 28 VDC input to the PSEU:

(a) Remove the connector D11140 from the PSEU.

(b) Examine the connector and socket for damage or unwanted material.

(c) Do a check for 28 VDC between pin 41 of connector D11140 and structure ground.

(d) If there is not 28 VDC at pin 41, then do these steps:

1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	2	C01400	PSEU ALTN

2) Do a check for continuity between these pins:

Table 213

CIRCUIT BREAKER C1400 - P6-3 D2		PSEU - D11140
pin 1	————	pin 41

3) If you find a problem with the wiring, then do these steps:
   a) Repair the wiring.
   b) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	2	C01400	PSEU ALTN

   c) Re-connect the connector on the PSEU.
   d) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.
   e) If you do not find the maintenance message, then you corrected the fault.
4) If you do not find a problem with the wiring, then do these steps:
   a) Replace this circuit breaker:
      <1> This is the circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	2	C01400	PSEU ALTN

   b) Re-connect the connector on the PSEU.
   c) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.
   d) If you do not find the maintenance message, then you corrected the fault.

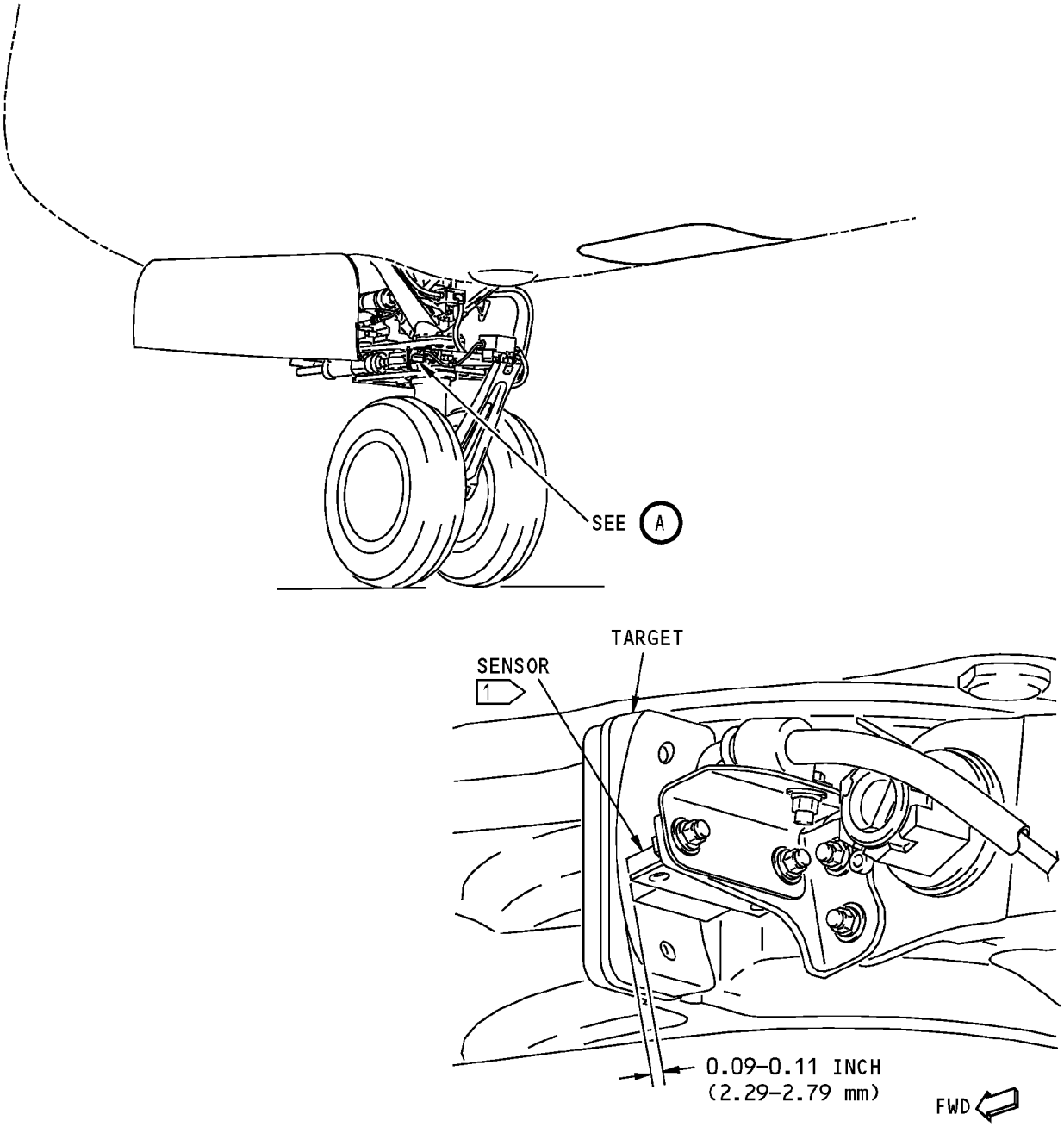
(e) If there is 28 VDC at pin 41, then continue.

(2) Do this test of the primary ground for the PSEU:
   (a) Do a check for continuity between pin 61 of connector D11140 and structure ground.
   (b) If pin 61 does not have continuity to ground, then do these steps:
      1) Repair the wiring.
      2) Re-connect the connector on the PSEU.
      3) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.
      4) If you do not find the maintenance message, then you corrected the fault.
   (c) If pin 61 has continuity to structure ground, then continue.

(3) Replace the PSEU, M2061. These are the tasks:
- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

   (a) Do the post installation test in the PSEU installation procedure.
   (b) If the test operates correctly, then you corrected the fault.

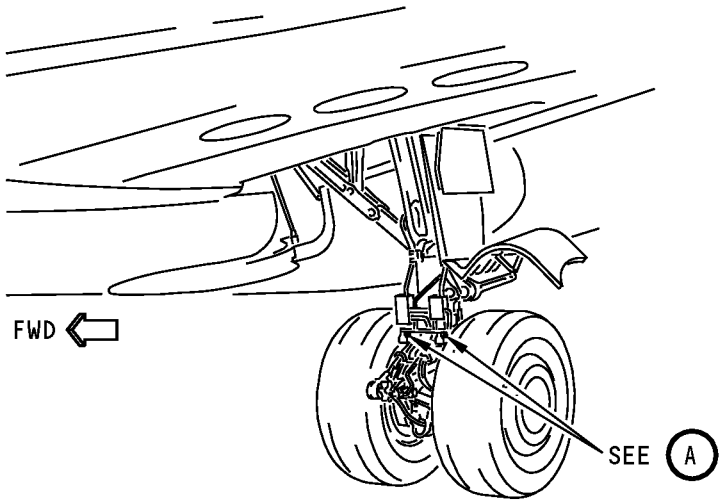
——————— END OF TASK ———————



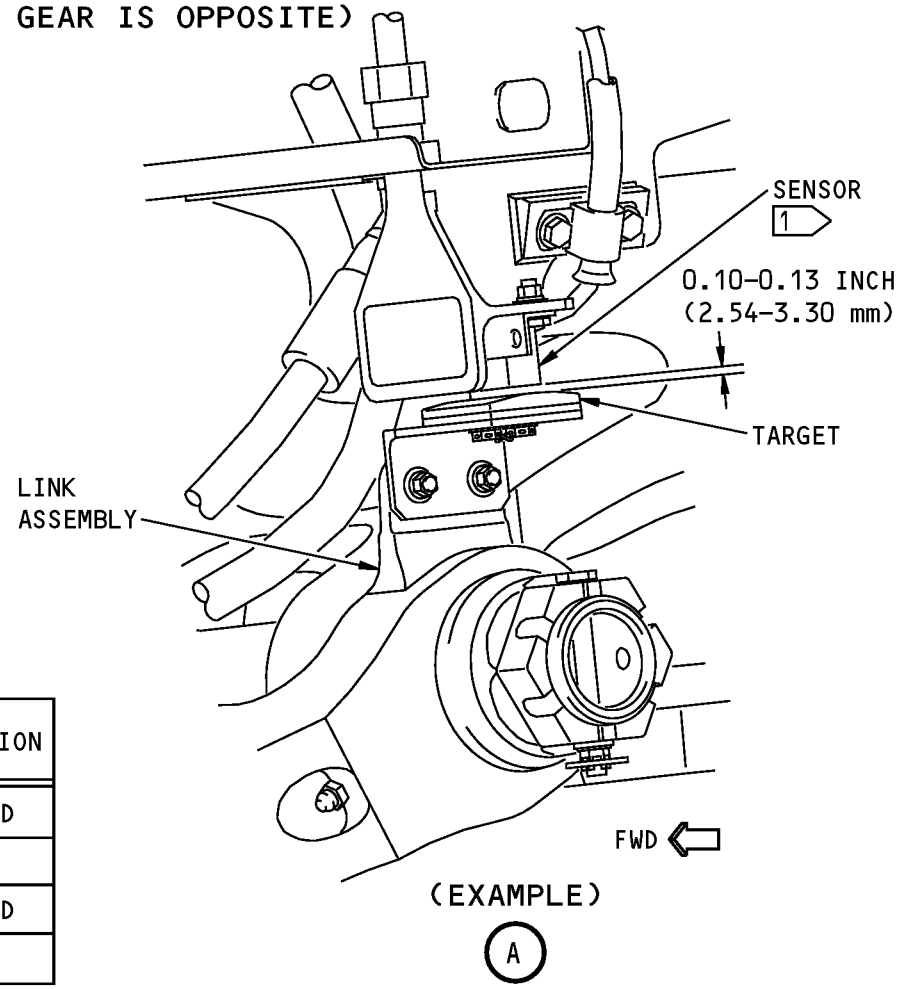
1 SYSTEM NO.	SENSOR NO.	LOCATION
1	S1014	L
2	S1015	R

LEFT SENSOR
(RIGHT SENSOR IS OPPOSITE)
A

Nose Landing Gear Air/Ground Sensor Component Location
Figure 301 / 32-09-00-990-801



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



1

SENSOR NO.	MLG	LOCATION
S1010	R	OUTBD
S1011	R	INBD
S1012	L	OUTBD
S1013	L	INBD

Main Landing Gear Air/Ground Sensor Component Location
Figure 302 / 32-09-00-990-802

801. NOSE GEAR, LEFT GEAR, and RIGHT GEAR Red Lights On (On Ground Only) - Fault Isolation

A. Description

(1) The landing gear position indicating and warning system uses lights in the flight compartment to show indications for these landing gear conditions:

(a) Landing gear down and locked

(b) Disagree

(c) Gear not down warning.

(2) The red NOSE GEAR, LEFT GEAR, and RIGHT GEAR lights comes on for these conditions:

(a) Disagree: lever down, nose, left, and right gear not down and locked

(b) Disagree: lever not down, nose, left, and right gear not up and locked

(c) Gear not down warning.

(3) (SDS SUBJECT 32-61-00)

B. Possible Causes

(1) Wiring problem

(2) Proximity switch electronics unit (PSEU), M2061

(3) Landing gear control lever module, M1952

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Related Data

(1) (SSM 32-30-00)

(2) (SSM 32-64-11)

(3) (SSM 32-64-12)

(4) (WDM 32-64-11)

(5) (WDM 32-64-12)

E. Initial Evaluation

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 main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(2) Make sure the control lever for the landing gear is fully in the detent for the DN position.

(3) If the red NOSE GEAR, LEFT GEAR, and RIGHT GEAR lights are on then do the Fault Isolation Procedure below.

(4) If the red NOSE GEAR, LEFT GEAR, and RIGHT GEAR lights do not come on, and the green NOSE GEAR, LEFT GEAR, and RIGHT GEAR lights are on, then you corrected the fault.

F. Fault Isolation Procedure

(1) Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If the PSEU BITE shows a PSEU internal fault or NOSE, L, or R RED LT FLT, then go to the fault isolation task for the applicable maintenance message to correct the fault.

1) Do the Repair Confirmation at the end of this task.

(b) If the PSEU BITE does not show a PSEU internal fault or NOSE, L, or R RED LT FLT, then continue.

(2) Do this check for power at the landing gear control lever module:

(a) Remove the landing gear control lever module, M1952. To remove it, do this task: Landing Gear Control Lever Module Removal, AMM TASK 32-31-11-020-801.

(b) Do a check for 28 VDC, from the PSEU, at pin 2 of connector D11990 in the flight compartment.

NOTE: The connector D11990 is located at the control lever module, M1952, on the P2-3 panel.

(c) If there is not 28 VDC at pin 2 of connector D11990, then do these steps:

1) Disconnect connector D10982 for the landing gear lever switch.

NOTE: The connector D10982 is located on the PSEU, M2061 on the E-11 rack in the forward electrical equipment bay.

2) Repair the wiring between these pins of connector D11990 in the flight compartment and connector D10982 at the E-11 rack:

D10982		D11990
pin 1	- - - - - - - - - - - - - - - - - -	pin 2

3) Re-connect the connector D10982 to the PSEU, M2061.

4) Re-connect the connector D11990 at the control lever module, M1952.

5) Re-install the control lever module. To install it, do this task: Landing Gear Control Lever Module Installation, AMM TASK 32-31-11-400-801.

6) Do the Repair Confirmation at the end of this task.

(d) If there is 28 VDC at pin 2 of connector D11990, then continue.

(3) Do this check of the switch and wiring on the control lever module, M1952:

(a) Do a check for an open circuit between pin 1 and pin 2 of connector D11990 on the control lever module, M1952.

(b) If there is not continuity between pin 1 and pin 2 of connector D11990 on the control lever module, then do these steps:

1) Replace the control lever module. These are the tasks:
- Landing Gear Control Lever Module Removal, AMM TASK 32-31-11-020-801
- Landing Gear Control Lever Module Installation, AMM TASK 32-31-11-400-801

2) Do the Repair Confirmation at the end of this task.

(c) If there is continuity between pin 1 and pin 2 of connector D11990 on the control lever module, then do these steps:

1) Clean the connector D11990 and make sure the pins are not damaged

2) Re-connect the connector D11990

3) Re-install the control lever module, do this task: Landing Gear Control Lever Module Installation, AMM TASK 32-31-11-400-801

4) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

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

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.

(2) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(3) If the red NOSE GEAR, LEFT GEAR, and RIGHT GEAR lights are not on, and the green NOSE GEAR, LEFT GEAR, and RIGHT GEAR lights are on, then you corrected the fault.

——————— END OF TASK ———————

806. Nose Landing Gear Slow to Retract or Extend - Fault Isolation

A. Description

(1) The nose landing gear extension and retraction system has these hydraulic components:

(a) Retract actuator

(b) Lock mechanism

(c) Lock actuator

(d) Lock valve manifold

(e) Transfer cylinder

(f) Selector/bypass valve

(g) Landing gear control cable system

(2) The sequence for nose gear retraction is as follows:

(a) The landing gear selector/bypass valve supplies up pressure when the control lever for the landing gear is moved to the UP position.

(b) Up pressure goes to the transfer cylinder and moves the piston in the transfer cylinder to the down side. This gives a time delay to let the lock actuator unlock the lock mechanism before the retract actuator gets up pressure.

(c) Up pressure goes to the lock actuator. The lock actuator retracts and unlocks the lock mechanism.

(d) When the piston in the transfer cylinder gets to the end of the up side, up pressure goes to the up side of the retract actuator. The retract actuator moves to retract the nose gear.

(e) When the nose gear moves into the up position the lock mechanism moves to the lock position.

(f) The lock springs hold the lock mechanism in the overcenter locked position.

(3) The sequence for nose gear extension is as follows:

(a) The landing gear selector valve supplies down pressure when the control lever for the landing gear is moved to the DN position.

(b) Down pressure moves the piston in the transfer cylinder to the up side. This momentarily applies an up force to the nose landing gear to decrease the forces in the lock mechanism. Then the lock actuator can unlock the lock mechanism.

(c) Down pressure goes to the lock actuator. The lock actuator extends and unlocks the lock mechanism.

(d) When the piston in the transfer cylinder gets to the end of the up side, down pressure goes to the down side of the gear actuator. The gear actuator moves to extend the nose gear.

(e) When the nose gear moves into the down position the lock actuator extends to move the lock mechanism to the lock position.

(f) The lock springs hold the lock mechanism in the overcenter locked position.

(4) (SDS SUBJECT 32-32-00)

B. Possible Causes

(1) Rigging of the landing gear selector/bypass valve

(2) A restriction in the hydraulic lines from/to the selector valve

(3) A restriction in one of these components for the nose gear:

(a) Transfer cylinder

(b) Lock actuator

(c) Retract actuator

(d) Lock valve manifold

(4) The attach points for the drag strut assembly on the nose gear

(5) Nose gear trunnion bushings

(6) Landing gear selector/bypass valve

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	16	C01432	LANDING GEAR ALTN EXTEND SOL

D. Related Data

(1) (SSM 32-30-00)

(2) (SSM 32-64-11, 12)

(3) (WDM 32-64-11, 12)

E. Initial Evaluation

(1) Do the operational test for the nose landing gear. Do this task: Operational Test for the Nose Landing Gear, AMM TASK 32-33-00-710-801.

(2) If the nose landing gear extends or retracts very slowly, then do the Fault Isolation Procedure below.

(3) If the retraction/extension time for the nose landing gear is acceptable, then there was an intermittent fault. Do these steps to complete this task:

(a) Make sure the downlock pin is installed on the nose landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(b) Make sure the control lever for the landing gear is in the DN position.

(c) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(d) Do this task: Lower the Airplane Off the Jacks, AMM TASK 07-11-01-580-816.

F. Fault Isolation Procedure

(1) Make sure the landing gear control system is adjusted correctly. Do this task: Landing Gear Control System Adjustment, AMM TASK 32-31-00-820-801.

(a) If the landing gear control system is not adjusted correctly, then do these steps:

1) Do the adjustment of the landing gear control system. To adjust it, do this task: Landing Gear Control System Adjustment, AMM TASK 32-31-00-820-801.

2) Do the Repair Confirmation at the end of this task.

(b) If the landing gear control system is adjusted correctly, then continue.

(2) Make sure there are no restrictions in the hydraulic lines from the landing gear selector/bypass valve.

(a) If there is a restriction in the hydraulic lines from the selector/bypass valve to the components for nose landing gear extension/retraction, then do these steps:

1) Flush or change the hydraulic lines.

2) Do the Repair Confirmation at the end of this task.

(b) If there is not a restriction in the hydraulic lines, then continue.

(3) Make sure there are no restrictions in the transfer cylinder, the lock actuator, the lock valve manifold, or the retract actuator for the nose gear.

(a) If there is a restriction in one of the above components then do these steps, as applicable:

1) Replace the nose gear transfer cylinder. These are the tasks:
- Nose Gear Transfer Cylinder Removal, AMM TASK 32-33-41-000-801
- Nose Gear Transfer Cylinder Installation, AMM TASK 32-33-41-400-801

2) Replace the nose gear lock actuator. These are the tasks:
- Nose Landing Gear Lock Actuator Removal, AMM TASK 32-33-21-000-801
- Nose Landing Gear Lock Actuator Installation, AMM TASK 32-33-21-400-801

3) Replace the nose gear lock valve manifold. These are the tasks:
- Nose Gear Lock Valve Manifold Removal, AMM TASK 32-33-31-000-801
- Nose Gear Lock Valve Manifold Installation, AMM TASK 32-33-31-400-801

4) Replace the nose gear retract actuator. These are the tasks:
- Nose Gear Retract Actuator Removal, AMM TASK 32-33-11-000-801
- Nose Gear Retract Actuator Installation, AMM TASK 32-33-11-400-801

5) Do the Repair Confirmation at the end of this task.

(b) If there is not a restriction in the transfer cylinder, the downlock actuator, the lock valve manifold, or the retract actuator, then continue.

(4) Inspect the pins and bushings at the attach points for the drag strut on the nose landing gear.

(a) If the pins or bushings are damaged, then do these steps:

1) Replace the drag strut for the nose landing gear. To do this, these are the tasks:
- Nose Landing Gear Drag Strut Removal, AMM TASK 32-21-21-000-801
- Nose Landing Gear Drag Strut Installation, AMM TASK 32-21-21-400-801

2) Do the Repair Confirmation at the end of this task.

(b) If the pins or bushings at the hinge points for the side strut are not damaged, make sure they are well lubricated and then continue.

(5) Inspect the trunnion pin installation on the nose landing gear, do this task: Nose Landing Gear Inspection, AMM TASK 32-21-00-200-801.

(a) If the trunnion pin freeplay is not correct or a trunnion pin is damaged, then do these steps:

1) Make sure the trunnion pin freeplay is correct or replace the damaged trunnion pin These are the tasks:
- Nose Landing Gear Removal, AMM TASK 32-21-00-000-801
- Nose Landing Gear Installation, AMM TASK 32-21-00-400-801

2) Do the Repair Confirmation at the end of this task.

(b) If the trunnion pin freeplay is correct or the pins are not damaged, make sure they are well lubricated and then continue.

(6) Replace the landing gear selector/bypass valve. These are the tasks:
- Landing Gear Selector Valve Removal, AMM TASK 32-31-51-020-801
- Landing Gear Selector Valve Installation, AMM TASK 32-31-51-400-801

(a) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

(1) Do the operational test for the nose landing gear. Do this task: Operational Test for the Nose Landing Gear, AMM TASK 32-33-00-710-801.

(a) If the operational test for the nose landing gear is satisfactory, then you corrected the fault.

——————— END OF TASK ———————

807. NOSE GEAR Green Light Not On With Gear Lever DN, NOSE GEAR Red Light On, Alternate Gear Extension Attempted - Fault Isolation

A. Description

(1) The landing gear position indicating and warning system uses lights in the flight compartment to show indications for these nose gear conditions:

(a) Nose gear down and locked

(b) Disagree

(c) Not down warning.

(2) The red NOSE GEAR light comes on for these conditions:

(a) Disagree: lever down, nose gear not down and locked

(b) Disagree: lever not down, nose gear not up and locked

(c) Gear not down warning.

(3) The manual extension system for the nose landing gear permits you to lower the nose landing gear from the up and locked position when hydraulic system A pressure fails.

(4) The manual extension system for the nose landing gear has these components:

(a) Manual extension control mechanism.

(b) Manual extension release mechanism

(c) System cable

(5) The manual extension system for the nose landing gear operates independently of the normal extension and retraction system.

(6) To operate the system pull on the nose gear manual extension handle in the manual extension control mechanism. This pulls on the NLG manual extension system cable and turns the release mechanism.

(7) When the release mechanism turns it moves the nose gear lock link to the unlock position. The nose landing gear extends by airloads and its own weight.

(8) (SDS SUBJECT 32-35-00)

(9) (SDS SUBJECT 32-61-00)

B. Possible Causes

(1) Nose gear manual extension system out of adjustment

(2) Damage to, or jammed, manual extension cable, pulley, drums, or release mechanism

C. Related Data

(1) (SSM 32-30-00)

D. Fault Isolation Procedure

(1) Do the nose gear manual extension system test. Do this task: Nose Gear Manual Extension System Test - Airplane on Jacks, AMM TASK 32-35-00-730-801.

(a) If the nose gear did not freefall to the down and locked position, then do these steps:

1) Put the control lever for the landing gear in the OFF position.

2) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

3) Put the control lever to the DN position to hydraulically extend the nose gear.

4) If the nose gear did not extend to the down and locked position, then do these steps:

a) Visually examine the cables, pulleys, drums, and release mechanism to see if they are jammed or there is damage.

b) Remove the obstruction, if it is necessary.

c) If it is damaged, replace the manual extension control mechanism, these are the tasks:

- Main Gear Manual Extension Control Mechanism Removal, AMM TASK 32-34-11-000-801
- Main Gear Manual Extension Control Mechanism Installation, AMM TASK 32-34-11-400-801

d) If it is damaged, replace the nose gear manual extension release mechanism, these are the tasks:

- Nose Gear Manual Extension Release Mechanism Removal, AMM TASK 32-35-11-000-801
- Nose Gear Manual Extension Release Mechanism Installation, AMM TASK 32-35-11-400-801

e) If they are damaged, replace the nose gear manual extension system cables, these are the tasks:
- Nose Gear Manual Extension System Cables Removal, AMM TASK 32-35-21-000-801
- Nose Gear Manual Extension System Cables Installation, AMM TASK 32-35-21-400-801

f) Do the adjustment of the nose gear manual extension, do this task: Adjustment of the Manual Extension System for the Nose Gear, AMM TASK 32-35-00-820-801

and the system test of the nose gear manual extension, do this task: Nose Gear Manual Extension System Test - Airplane on Jacks, AMM TASK 32-35-00-730-801

to complete the task.

5) If the nose gear did extend to the down and locked position, then do the adjustment of the nose gear manual extension, do this task: Adjustment of the Manual Extension System for the Nose Gear, AMM TASK 32-35-00-820-801 and the system test of the nose gear manual extension, do this task: Nose Gear Manual Extension System Test - Airplane on Jacks, AMM TASK 32-35-00-730-801 to complete the task.

(b) If the nose gear did freefall to the down and locked position, but the force required to release the nose gear was too high, then continue.

(2) Do these steps to look for damaged or jammed components in the manual extension system for the nose gear:

(a) Do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(b) Cycle the system several times, then do the nose gear manual extension system test again. To do the test, do this task: Nose Gear Manual Extension System Test - Airplane on Jacks, AMM TASK 32-35-00-730-801.

(c) If the force required to release the nose gear was still too high, then do these steps to complete the task:

1) Visually examine the cables, pulleys, drums, and release mechanism to see if they are jammed or there is damage.

2) Remove the obstruction, if it is necessary.

3) If it is damaged, then replace the manual extension control mechanism, these are the tasks:
- Main Gear Manual Extension Control Mechanism Removal, AMM TASK 32-34-11-000-801
- Main Gear Manual Extension Control Mechanism Installation, AMM TASK 32-34-11-400-801

4) If it is damaged, then replace the nose gear manual extension release mechanism, these are the tasks:
- Nose Gear Manual Extension Release Mechanism Removal, AMM TASK 32-35-11-000-801
- Nose Gear Manual Extension Release Mechanism Installation, AMM TASK 32-35-11-400-801

5) If they are damaged, then replace the nose gear manual extension system cables, these are the tasks:
- Nose Gear Manual Extension System Cables Removal, AMM TASK 32-35-21-000-801

- Nose Gear Manual Extension System Cables Installation, AMM TASK 32-35-21-400-801

6) Do the adjustment of the nose gear manual extension system. Do this task: Adjustment of the Manual Extension System for the Nose Gear, AMM TASK 32-35-00-820-801.

7) Do the system test of the nose gear manual extension system. Do this task: Nose Gear Manual Extension System Test - Airplane on Jacks, AMM TASK 32-35-00-730-801.

8) If the system test for manual extension of the nose gear was satisfactory, then you corrected the fault. Do these steps to complete the task:

   a) Make sure the downlock pin is installed on the nose landing gear, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

   b) Make sure the control lever for the landing gear is in the DN position.

   c) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

   d) Do this task: Lower the Airplane Nose Off of the Jack, AMM TASK 07-11-21-580-802.

———————— END OF TASK ————————

809. Landing Gear Extends With Landing Gear Lever at OFF, NOSE GEAR, LEFT GEAR, RIGHT GEAR Green Lights on - Fault Isolation

A. Description

(1) The landing gear control system controls the extension and retraction of the nose and main landing gear.

(2) The landing gear control system has these components:

   (a) Landing gear control lever assembly

   (b) Landing gear push/pull control cable

   (c) Forward quadrant and system cables

   (d) Selector valve

   (e) Transfer valve

(3) Move the landing gear control lever to control the extension and retraction of the landing gear. The control lever moves the selector valve through cables.

(4) The control lever operates a push/pull cable which moves the forward quadrant assembly. The forward quadrant assembly is below the flight compartment floor.

(5) The forward quadrant moves the landing gear selector valve through control cables and the selector valve quadrant.

(6) The landing gear selector valve supplies hydraulic pressure to extend and retract the nose and main landing gear. The selector valve is in the main landing gear wheel well on the upper bulkhead.

(7) The three positions of the landing gear selector valve are as follows:

   (a) UP - pressurized to retract

   (b) OFF - extension and retraction components are not pressurized

   (c) DN - pressurized to extend

(8) (SDS SUBJECT 32-31-00)

B. Possible Causes

(1) Rigging of the landing gear control system cables

(2) Landing gear selector valve

(3) Landing gear control lever assembly

C. Related Data

(1) (SSM 32-30-00)

(2) (SSM 32-64-11)

(3) (SSM 32-64-12)

(4) (WDM 32-64-11)

(5) (WDM 32-64-12)

D. Fault Isolation Procedure

(1) Do these steps to prepare for fault isolation:

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.

(a) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(b) Electrically ground the airplane. Do this task: Static Grounding, AMM TASK 20-40-11-910-801.

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

(d) 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

(e) Make sure the control lever for the landing gear is in the DN position.

(f) Remove the downlock pins from the nose and main landing gear. To remove the downlock pins, do this task: Landing Gear Downlock Pins Removal, AMM TASK 32-00-01-080-801.

(g) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(h) Move the two thrust levers to the full forward position.

WARNING: MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE NOSE AND MAIN LANDING GEAR. FAST MOVEMENT OF THE LANDING GEAR CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(i) Move the control lever for the landing gear to UP to retract the landing gear.

(j) Make sure the NOSE, LEFT GEAR, and RIGHT GEAR green lights and red lights are off.

(2) Do these steps to make sure the landing gear control system is adjusted correctly:

(a) Move the control lever for the landing gear to the OFF position.

(b) If the landing gear extended and the NOSE, LEFT GEAR, and RIGHT GEAR green lights came on when you put the control lever to the OFF position, then do these steps:

1) Put the control lever for the landing gear to the DN position.

2) Do the landing gear control system adjustment. Do this task: Landing Gear Control System Adjustment, AMM TASK 32-31-00-820-801.

3) Do the Repair Confirmation at the end of this task.

4) If the Repair Confirmation is not satisfactory, then continue.

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

- Landing Gear Selector Valve Removal, AMM TASK 32-31-51-020-801
- Landing Gear Selector Valve Installation, AMM TASK 32-31-51-400-801

(a) Do the Repair Confirmation at the end of this task.

(b) If the Repair Confirmation is not satisfactory, then continue.

(4) Replace the landing gear control lever assembly. These are the tasks:

- Landing Gear Control Lever Module Removal, AMM TASK 32-31-11-020-801
- Landing Gear Control Lever Module Installation, AMM TASK 32-31-11-400-801

(a) Do the Repair Confirmation at the end of this task.

E. Repair Confirmation

(1) Remove the downlock pins from the nose and main landing gear. To remove the downlock pins, do this task: Landing Gear Downlock Pins Removal, AMM TASK 32-00-01-080-801.

(2) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

WARNING: MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE NOSE AND MAIN LANDING GEAR. FAST MOVEMENT OF THE LANDING GEAR CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(3) Move the control lever for the landing gear to UP to retract the landing gear.

(4) Move the control lever for the landing gear to the OFF position.

(5) If the landing gear did not extend when you put the control lever to the OFF position, then you corrected the fault. Do these steps to complete this task:

(a) Move the control lever to the DN position to extend the landing gear.

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

(c) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(d) Do this task: Lower the Airplane Off the Jacks, AMM TASK 07-11-01-580-816.

END OF TASK

810. Nose Gear Commanded Up, NOSE GEAR Green Light and NOSE GEAR Red Light On - Fault Isolation

A. Description

(1) This task is for this observed fault:

(a) Nose Landing Gear: NOSE GEAR green light does not go off with landing gear lever at UP. NOSE GEAR red light on.

(2) The landing gear position indicating and warning system uses lights in the flight compartment to show indications for these nose gear conditions:

(a) Gear position (Up, Down, In-transit)

(b) Landing gear control lever and gear position disagree

(c) Throttle position and gear position disagree.

(d) The red NOSE GEAR light comes on for these conditions:

(e) Disagree: lever down, nose gear not down and locked

(f) Disagree: lever not down, nose gear not up and locked

(g) Disagree: nose gear not down, throttle retarded and altitude below 800 feet

(3) (SDS SUBJECT 32-61-00)

B. Possible Causes

(1) Position sensors damaged or not adjusted correctly

(2) Proximity switch electronics unit (PSEU), M2061

(3) Nose gear lock valve manifold

(4) Nose gear lock actuator

(5) Nose gear transfer cylinder

(6) Nose gear lock mechanism

(7) A blocked hydraulic line

(8) High internal leakage in the steering system for the nose gear

C. Related Data

(1) (SSM 32-30-00)

(2) (SSM 32-64-11, 12)

(3) (WDM 32-64-11, 12)

D. Initial Evaluation

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

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.

(2) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(3) Examine these components on the nose gear and in the nose wheel well for damage:

(a) Wiring and sensors

(b) Sensor brackets

(c) Lock links

(d) Lock springs

WARNING: REMOVE PERSONS AND EQUIPMENT FROM THE NOSE GEAR PATH. WHEN THE NOSE GEAR RETRACTS, THEY CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, AMM TASK 07-11-21-580-801.

(5) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(6) Remove the downlock pin for the nose landing gear. To remove the downlock pin, do this task: Landing Gear Downlock Pins Removal, AMM TASK 32-00-01-080-801.

(7) Operate the override trigger and move the control lever for the landing gear to the UP position.

(a) If the red NOSE GEAR light and the green NOSE GEAR lights stay on, then do the Fault Isolation Procedure - Nose Gear Retraction.

(b) If the red NOSE GEAR light goes out, and the green NOSE GEAR light is not on, then there was an intermittent fault. Do these steps to complete this task:

1) Move the control lever for the landing gear to the DN position.

2) Install the downlock pin for the nose landing gear. To install the downlock pin, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

3) Do this task: Lower the Airplane Nose Off of the Jack, AMM TASK 07-11-21-580-802.

E. Fault Isolation Procedure - Nose Gear Retraction

(1) Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If the PSEU BITE shows a PSEU internal fault or NOSE RED LT FLT, then go to the fault isolation task for the applicable maintenance message to correct the fault.

1) Do the Repair Confirmation at the end of this task.

(b) If the PSEU BITE does not show a PSEU internal fault or NOSE RED LT FLT, then continue.

(2) Do these steps to see the pressure changes in the Up and Down lines both upstream and downstream of the lock valve manifold:

NOTE: This procedure does a check of pressure changes in the Up and Down hydraulic lines both upstream and downstream of the nose gear lock valve manifold. Use a pressure gage clamp-on, COM-1804 or install an in-line pressure gage.

Table 201

TUBE OD - MATERIAL	WALL THICKNESS	CPG1000 GAIN
0.25 inch - CRES	0.016 inch	4085
0.375 inch - CRES	0.020 inch	2200
0.50 inch - CRES	0.026 inch	1605

(a) Move the control lever for the landing gear to the DN position.

WARNING: MAKE SURE THE DOWNLOCK PIN FOR THE NOSE LANDING GEAR IS INSTALLED. IF THE DOWNLOCK PIN IS NOT INSTALLED THE NOSE GEAR CAN RETRACT AND CAUSE INJURY TO PERSONS.

1) Install the downlock pin for the nose landing gear. To install the downlock pin, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(b) If the pressure gage clamp-on, COM-1804 is available, then install it on the gear Up hydraulic tube near the nose gear lock actuator.

NOTE: Install the pressure transducer at least 2.5 inches away from bends or fittings. Use the instructions with the gage.

(c) If you will use an in-line pressure gage Gauge, STD-10311, then do these steps:

1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

2) Install an in-line pressure gage Gauge, STD-10311 in the gear Up hydraulic line near the nose gear lock actuator.

3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(d) Put the control lever for the landing gear to the OFF position.

(e) If you use the pressure gage, clamp-on, COM-1804, then set the gage to zero.

(f) Operate the override trigger and move the control lever for the landing gear to the UP position.

(g) Read the maximum pressure that is stable on the pressure gage and write it in Table I.

(h) Put the control lever for the landing gear to the DN position.

(i) Read the maximum pressure that is stable on the pressure gage and write it in Table I.

(j) If you used the pressure gage, clamp-on, COM-1804, then remove the gage and install it on the gear Down hydraulic tube near the nose gear lock actuator.

NOTE: Install the pressure transducer at least 2.5 inches away from bends or fittings.

(k) If you used an in-line pressure gage, then do these steps:

1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

2) Remove the in-line pressure gage and install it in the gear Down hydraulic line near the nose gear lock actuator.

3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(l) Put the control lever for the landing gear to the OFF position.

(m) If you use the pressure gage, clamp-on, COM-1804, then set the gage to zero.

(n) Operate the override trigger and move the control lever for the landing gear to the UP position.

(o) Read the maximum pressure that is stable on the pressure gage and write it in Table I.

(p) Put the control lever for the landing gear to the DN position.

(q) Read the maximum pressure that is stable on the pressure gage and write it in Table I.

(r) If you used the pressure gage, clamp-on, COM-1804, then remove the gage and install it on the gear Down hydraulic tube between the nose gear lock valve manifold and the nose gear retract actuator.

NOTE: Install the pressure transducer at least 2.5 inches away from bends or fittings. Install the transducer on the largest diameter tubing that is accessible.

(s) If you used an in-line pressure gage Gauge, STD-10311, then do these steps:

1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.
2) Remove the in-line pressure gage and install it in the gear Down hydraulic line between the nose gear lock valve manifold and the nose gear retract actuator.
3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(t) Put the control lever for the landing gear to the OFF position.

(u) If you use the pressure gage, clamp-on, COM-1804, then set the gage to zero.

(v) Operate the override trigger and move the control lever for the landing gear to the UP position.

(w) Read the maximum pressure that is stable on the pressure gage and write it in Table I.

(x) Put the control lever for the landing gear to the DN position.

(y) Read the maximum pressure that is stable on the pressure gage and write it in Table I.

(z) If you used the pressure gage, clamp-on, COM-1804, then remove the gage and install it on the gear Up hydraulic tube between the nose gear lock valve manifold and the nose gear retract actuator.

NOTE: Install the pressure transducer at least 2.5 inches away from bends or fittings. Install the transducer on the largest diameter tubing that is accessible.

(aa) If you used an in-line pressure gage, then do these steps:

1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.
2) Remove the in-line pressure gage and install it in the gear Up hydraulic line between the nose gear lock valve manifold and the nose gear retract actuator.
3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(ab) Put the control lever for the landing gear to the OFF position.

(ac) If you use the pressure gage, clamp-on, COM-1804, then set the gage to zero.

(ad) Operate the override trigger and move the control lever for the landing gear to the UP position.

(ae) Read the maximum pressure that is stable on the pressure gage and write it in Table I.

(af) Put the control lever for the landing gear to the DN position.

(ag) Read the maximum pressure that is stable on the pressure gage and write it in Table I.

(ah) If you used the pressure gage, clamp-on, COM-1804, then remove the gage.

(ai) If you used an in-line pressure gage, then do these steps:

1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.
2) Remove the in-line pressure gage.

3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

Table 202 PRESSURE CHANGES IN UP AND DOWN LINES

Row	Step	Down Pressure	Up Pressure
1	E(2)(f)	N/A	
2	E(2)(h)	N/A	
3	E(2)(m)		N/A
4	E(2)(o)		N/A
5	E(2)(t)		N/A
6	E(2)(v)		N/A
7	E(2)(aa)	N/A	
8	E(2)(cc)	N/A	

(aj) If Row 1 pressure was 3000 +/-600 psi and Row 3 pressure was less than 300 psi, then do these steps:

1) Replace the nose gear lock mechanism. To do this, these are the tasks:
   - Nose Landing Gear Lock Mechanism Removal, AMM TASK 32-33-51-000-801
   - Nose Gear Lock Mechanism Installation, AMM TASK 32-33-51-400-801
2) If the nose gear operated correctly when you did the installation test for the lock mechanism, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.
3) If the nose gear did not operate correctly when you did the installation test for the nose gear lock mechanism, then make sure the linkage for the nose gear doors is adjusted correctly. Do this task: Nose Gear Wheel Well Door Linkage Adjustment, AMM TASK 32-33-61-820-802.
4) If the nose gear did not operate correctly when you did the adjustment for the linkage on the nose gear doors, then do the Fault Isolation Procedure - Internal Leakage Check.

(ak) If Row 1 pressure was 3000 +/-600 psi and Row 3 pressure was greater than 500 psi, and Row 5 pressure was less than 500 psi, then do these steps:

1) Replace the nose gear lock valve manifold. These are the tasks:
   - Nose Gear Lock Valve Manifold Removal, AMM TASK 32-33-31-000-801
   - Nose Gear Lock Valve Manifold Installation, AMM TASK 32-33-31-400-801
2) If the nose gear operated correctly when you did the installation test for the lock valve manifold, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.
3) If the nose gear did not operate correctly when you did the installation test for the lock valve manifold, then replace the nose gear lock actuator. These are the tasks:
   - Nose Landing Gear Lock Actuator Removal, AMM TASK 32-33-21-000-801
   - Nose Landing Gear Lock Actuator Installation, AMM TASK 32-33-21-400-801
4) If the nose gear did not operate correctly when you did the installation test for the lock actuator, then do Fault Isolation Procedure - Internal Leakage Check.

(al) If Row 1 pressure was 3000 +/-600 psi and Row 3 pressure was greater than 500 psi, and Row 5 pressure was greater than 500 psi, then do these steps:

1) Replace the check valve in the UP line to the steering system.
2) If the nose gear retracts and extends correctly after you replaced the check valve, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.
3) If the nose gear did not operate correctly after you replaced the check valve, then replace the nose gear transfer cylinder. These are the tasks:
   - Nose Gear Transfer Cylinder Removal, AMM TASK 32-33-41-000-801
   - Nose Gear Transfer Cylinder Installation, AMM TASK 32-33-41-400-801
4) If the nose gear operated correctly when you did the installation test for the nose gear transfer cylinder, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.
5) If the nose gear did not operate correctly when you did the installation test for the transfer cylinder, then replace the nose gear lock actuator. These are the tasks:
   - Nose Landing Gear Lock Actuator Removal, AMM TASK 32-33-21-000-801
   - Nose Landing Gear Lock Actuator Installation, AMM TASK 32-33-21-400-801

   Do the Repair Confirmation to put the airplane back to normal.
6) If the nose gear did not operate correctly when you did the installation test for the lock actuator, then do the Fault Isolation Procedure - Internal Leakage Check.

(am) If Row 1 pressure was 0 to 2400 psi and Row 7 pressure was greater than 3000 +/-500 psi, and Row 3 pressure was less than 500 psi, and Row 5 pressure was less than 500 psi, then do these steps:

1) Replace the nose gear lock valve manifold. These are the tasks:
   - Nose Gear Lock Valve Manifold Removal, AMM TASK 32-33-31-000-801
   - Nose Gear Lock Valve Manifold Installation, AMM TASK 32-33-31-400-801
2) If the nose gear operated correctly when you did the installation test for the lock valve manifold, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.
3) If the nose gear did not operate correctly when you did the installation test for the lock valve manifold, then replace the nose gear lock actuator. These are the tasks:
   - Nose Landing Gear Lock Actuator Removal, AMM TASK 32-33-21-000-801
   - Nose Landing Gear Lock Actuator Installation, AMM TASK 32-33-21-400-801
4) If the nose gear did not operate correctly when you did the installation test for the lock actuator, then do the Fault Isolation Procedure - Internal Leakage Check.

(an) If Row 1 pressure was 0 to 2400 psi and Row 7 pressure was 0 to 2400 psi, and Row 3 pressure was greater than 500 psi, and Row 5 pressure was greater than 500 psi, then do these steps:

1) Replace the check valve in the UP line to the steering system.
2) If the nose gear retracts and extends correctly after you replaced the check valve, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.
3) If the nose gear did not operate correctly after you replaced the check valve, then replace the nose gear lock actuator. These are the tasks:
   - Nose Landing Gear Lock Actuator Removal, AMM TASK 32-33-21-000-801
   - Nose Landing Gear Lock Actuator Installation, AMM TASK 32-33-21-400-801
4) If the nose gear operated correctly when you did the installation test for the nose gear lock actuator, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

5) If the nose gear did not operate correctly when you did the installation test for the lock actuator, then replace the nose gear transfer cylinder. These are the tasks:
   - Nose Gear Transfer Cylinder Removal, AMM TASK 32-33-41-000-801
   - Nose Gear Transfer Cylinder Installation, AMM TASK 32-33-41-400-801

6) If the nose gear did not operate correctly when you did the installation test for the transfer cylinder, then do the Fault Isolation Procedure - Internal Leakage Check.

(ao) If Row 1 pressure was 0 to 2400 psi and Row 7 pressure was 0 to 2400 psi, and Row 3 pressure was greater than 500 psi, and Row 5 pressure was less than 300 psi, then do these steps:

1) Replace the nose gear lock valve manifold. These are the tasks:
   - Nose Gear Lock Valve Manifold Removal, AMM TASK 32-33-31-000-801
   - Nose Gear Lock Valve Manifold Installation, AMM TASK 32-33-31-400-801

2) If the nose gear operated correctly when you did the installation test for the lock valve manifold, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

3) If the nose gear did not operate correctly when you did the installation test for the lock valve manifold, then replace the nose gear lock actuator. These are the tasks:
   - Nose Landing Gear Lock Actuator Removal, AMM TASK 32-33-21-000-801
   - Nose Landing Gear Lock Actuator Installation, AMM TASK 32-33-21-400-801

4) If the nose gear did not operate correctly when you did the installation test for the lock actuator, then do the Fault Isolation Procedure - Internal Leakage Check.

(ap) If Row 1 pressure was 0 to 300 psi and Row 7 pressure was 0 to 300 psi, and Row 5 pressure was 0 to 300 psi, then do these steps:

1) Replace the nose gear retract pressure fuse. These are the tasks:
   - Removal of the Retract Pressure Fuse for the Nose Gear, AMM TASK 32-33-71-000-801
   - Installation of the Retract Pressure Fuse for the Nose Gear, AMM TASK 32-33-71-400-801

2) If the nose gear operated correctly when you did the installation test for the nose gear retract pressure fuse, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

3) If the nose gear did not operate correctly when you did the installation test for the pressure fuse, then replace the check valve in the UP line for the steering system.

4) If the nose gear did not operate correctly when you replaced the pressure fuse, then do Fault Isolation Procedure - Internal Leakage Check.

(aq) If the pressures you wrote down do not agree with any of the above, then do the Fault Isolation Procedure - Internal Leakage Check.

F. Fault Isolation Procedure - Internal Leakage Check

WARNING: MAKE SURE YOU CONNECT A HOSE TO HYDRAULIC PORTS THAT ARE OPENED TO THE ATMOSPHERE FOR THIS CHECK AND THAT IT GOES TO A SUITABLE CONTAINER FOR EXCESS FLOW. HYDRAULIC FLUID THAT SPRAYS FREELY INTO THE AIR CAN CAUSE DAMAGE TO EQUIPMENT OR INJURY TO PERSONNEL.

NOTE: One procedure to use to find internal leakage without component removal is to disconnect the hydraulic line from the port on that component that will not have flow. If there is flow, the component is bad.

(1) Do this check for internal leakage:

(a) Make sure the control lever for the landing gear is in the DN position.

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.

(b) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(c) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805

(d) Disconnect the Gear Down line that connects the lock valve manifold and the nose gear lock actuator.

(e) Install a hose on the open ports and put the other end in a suitable container.

(f) Disconnect the Gear Down line on the supply side of the lock valve manifold.

(g) Install a cap in the Gear Down line that was disconnected.

(h) Install a hose on the open port of the lock valve manifold and put the other end in a suitable container.

(i) Disconnect the Gear Down line from the nose gear retract actuator and the transfer cylinder.

(j) Install a hose on the open ports and put the other end in a suitable container.

(k) Operate the override trigger and move the control lever for the landing gear to the UP position.

WARNING: KEEP ALL PERSONNEL AWAY FROM DISCONNECTED HYDRAULIC LINES. PRESSURIZED HYDRAULIC FLUID CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

(l) For hydraulic system A, slowly increase the pressure to 3000 psi, do this task: Hydraulic System A or B Pressurization with a Portable Hydraulic Cart, AMM TASK 29-11-00-860-802

Hold this pressure for 5 minutes, unless you see heavy leakage.

(m) Examine the flow from the components that you disconnected.

1) If the flow is more than 10 cc/min from any of the components except the transfer cylinder, then replace the component that has the leakage.

2) If the flow is more than 100 cc/min from the transfer cylinder, then replace the transfer cylinder.

(n) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805

(o) Remove the vent hose and connect the Gear Down line from the nose gear retract actuator and the transfer cylinder.

(p) Remove the vent hose and connect the Gear Down line on the supply side of the lock valve manifold.

(q) Remove the vent hoses and connect the Gear Down line that connects the lock valve manifold and the nose gear lock actuator.

(r) Put the control lever for the landing gear to the DN position.

(s) Do the Repair Confirmation to put the airplane back to the usual condition.

G. Repair Confirmation

(1) Make sure the control lever for the landing gear is in the OFF position.

(2) Install the downlock pin in the nose landing gear. To install the downlock pin, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

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.

(3) Make sure the downlock pins are installed in the main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(4) Move the control lever for the landing gear to the DN position.

(5) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805

(6) Do this task: Lower the Airplane Nose, AMM TASK 07-11-06-580-803.

——————— END OF TASK ———————

811. Nose Gear Commanded Up, NOSE GEAR Green Light Off, NOSE GEAR Red Light On - Fault Isolation

A. Description

(1) This task is for this observed fault:

(a) Nose Landing Gear: NOSE GEAR green light goes off with landing gear lever at UP. NOSE GEAR red light on.

(2) The landing gear position indicating and warning system uses lights in the flight compartment to show indications for these nose gear conditions:

(a) Gear position (Up, Down, In-transit)

(b) Landing gear control lever and gear position disagree

(c) Throttle position and gear position disagree.

(d) The red NOSE GEAR light comes on for these conditions:

(e) Disagree: lever down, nose gear not down and locked

(f) Disagree: lever not down, nose gear not up and locked

(g) Disagree: nose gear not down, throttle retarded and altitude below 800 feet

(3) (SDS SUBJECT 32-61-00)

B. Possible Causes

(1) Position sensors damaged or not adjusted correctly

(2) Proximity switch electronics unit (PSEU), M2016

(3) Nose gear doors are not adjusted correctly

(4) Nose gear retract actuator

(5) Nose gear transfer cylinder

(6) Nose gear retract pressure fuse

(7) Check valves in the gear Up and Down lines for steering Return pressure

(8) Nose gear lock valve manifold

(9) High internal leakage in the steering system for the nose gear

C. Related Data

(1) (SSM 32-30-00)

(2) (SSM 32-64-11, 12)

(3) (WDM 32-64-11, 12)

D. Initial Evaluation

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

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.

(2) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(3) Examine these components on the nose gear and in the nose wheel well for damage:

(a) Wiring and sensors

(b) Sensor brackets

(c) Lock links

(d) Lock springs

WARNING: REMOVE PERSONS AND EQUIPMENT FROM THE NOSE GEAR PATH. WHEN THE NOSE GEAR RETRACTS, THEY CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, AMM TASK 07-11-21-580-801.

(5) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(6) Remove the downlock pin for the nose landing gear. To remove the downlock pin, do this task: Landing Gear Downlock Pins Removal, AMM TASK 32-00-01-080-801.

(7) Place the thrust levers in the fully forward position.

(8) Operate the override trigger and move the control lever for the landing gear to the UP position.

(a) If the green NOSE GEAR light goes out and the red NOSE GEAR light stays on, then do the Fault Isolation Procedure - Nose Gear Retraction.

(b) If the red NOSE GEAR light goes out, and the green NOSE GEAR light is not on, then there was an intermittent fault. Do these steps to complete this task:

1) Move the control lever for the landing gear to the DN position.

2) Install the downlock pin for the nose landing gear. To install the downlock pin, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

3) Do this task: Lower the Airplane Nose Off of the Jack, AMM TASK 07-11-21-580-802.

E. Fault Isolation Procedure - Nose Gear Retraction

(1) Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If the PSEU BITE shows a PSEU internal fault or NOSE RED LT FLT, then go to the fault isolation task for the applicable maintenance message to correct the fault.

1) Do the Repair Confirmation at the end of this task.

(b) If the PSEU BITE does not show for a PSEU internal fault or NOSE RED LT FLT, then continue.

(2) Do this check of the nose gear door adjustment:

(a) Move the control lever for the landing gear to the DN position to extend the nose gear.

(b) Install the downlock pin for the nose landing gear. To install the downlock pin, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(c) Disconnect the nose gear doors from the trunnion clevis on the nose gear. Tie the door linkage so it is out of the way of the nose gear.

(d) Remove the downlock pin for the nose landing gear. To remove the downlock pin, do this task: Landing Gear Downlock Pins Removal, AMM TASK 32-00-01-080-801.

(e) Operate the override trigger and move the control lever for the landing gear to the UP position.

(f) If the red NOSE GEAR light goes out, and the green NOSE GEAR light is not on, then do these steps:

NOTE: The nose gear doors are not adjusted correctly.

1) Move the control lever for the landing gear to the DN position.

2) Install the downlock pin for the nose landing gear. To install the downlock pin, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

3) Do the adjustment for the door linkage on the nose wheel well doors. To to this, do this task: Nose Gear Wheel Well Door Linkage Adjustment, AMM TASK 32-33-61-820-802.

(g) If the red NOSE GEAR light is on, then do these steps and continue:

1) Move the control lever for the landing gear to the DN position to extend the nose gear.

2) Install the downlock pin for the nose landing gear. To install the downlock pin, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

3) Re-connect the nose gear doors to the trunnion clevis on the nose gear. Do this task: Nose Gear Wheel Well Door Linkage Installation, AMM TASK 32-33-61-400-801.

(3) Replace these components one at a time and do a check of nose gear operation after you replace each component, or, do the Fault Isolation Procedure - Internal Leakage Check to find the bad component:

(a) Replace the nose gear retract actuator. These are the tasks:
- Nose Gear Retract Actuator Removal, AMM TASK 32-33-11-000-801
- Nose Gear Retract Actuator Installation, AMM TASK 32-33-11-400-801

(b) If the nose gear operated correctly when you did the installation test for the nose gear retract actuator, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal

(c) If the nose gear did not operate correctly when you replaced the retract actuator, then replace the nose gear transfer cylinder. These are the tasks:
- Nose Gear Transfer Cylinder Removal, AMM TASK 32-33-41-000-801

- Nose Gear Transfer Cylinder Installation, AMM TASK 32-33-41-400-801

(d) If the nose gear operated correctly when you did the installation test for the nose gear transfer cylinder, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

(e) If the nose gear did not operate correctly when you replaced the transfer cylinder, then replace the nose gear retract pressure fuse. These are the tasks:
- Removal of the Retract Pressure Fuse for the Nose Gear, AMM TASK 32-33-71-000-801
- Installation of the Retract Pressure Fuse for the Nose Gear, AMM TASK 32-33-71-400-801

(f) If the nose gear operated correctly when you did the installation test for the nose gear retract pressure fuse, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

(g) If the nose gear did not operate correctly when you replaced the pressure fuse, then replace the check valves in the gear Up and Down lines for steering Supply and Return pressure.

(h) If the nose gear operated correctly when you replaced the check valves, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

(i) If the nose gear did not operate correctly when you replaced the check valves, then replace the nose gear lock valve manifold. These are the tasks:
- Nose Gear Lock Valve Manifold Removal, AMM TASK 32-33-31-000-801
- Nose Gear Lock Valve Manifold Installation, AMM TASK 32-33-31-400-801

(j) Do the Repair Confirmation to put the airplane back to normal.

F. Fault Isolation Procedure - Internal Leakage Check

WARNING: MAKE SURE YOU CONNECT A HOSE TO HYDRAULIC PORTS THAT ARE OPENED TO THE ATMOSPHERE FOR THIS CHECK AND THAT IT GOES TO A SUITABLE CONTAINER FOR EXCESS FLOW. HYDRAULIC FLUID THAT SPRAYS FREELY INTO THE AIR CAN CAUSE DAMAGE TO EQUIPMENT OR INJURY TO PERSONNEL.

NOTE: One procedure to use to find internal leakage without component removal is to disconnect the hydraulic line from the port on that component that will not have flow. If there is flow, the component is bad.

(1) Do this check for internal leakage:

(a) Make sure the control lever for the landing gear is in the DN position.

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.

(b) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(c) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805

(d) Disconnect the Gear Down line that connects the lock valve manifold and the nose gear lock actuator.

(e) Install a hose on the open ports and put the other end in a suitable container.

(f) Disconnect the Gear Down line on the supply side of the lock valve manifold.

(g) Install a cap in the Gear Down line that was disconnected.

(h) Install a hose on the open port of the lock valve manifold and put the other end in a suitable container.

(i) Disconnect the Gear Down line from the nose gear retract actuator and the transfer cylinder.

(j) Install a hose on the open ports and put the other end in a suitable container.

(k) Operate the override trigger and move the control lever for the landing gear to the UP position.

WARNING: KEEP ALL PERSONNEL AWAY FROM DISCONNECTED HYDRAULIC LINES. PRESSURIZED HYDRAULIC FLUID CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

(l) For hydraulic system A, slowly increase the pressure to 3000 psi, do this task: Hydraulic System A or B Pressurization with a Portable Hydraulic Cart, AMM TASK 29-11-00-860-802

Hold this pressure for 5 minutes, unless you see heavy leakage.

(m) Examine the flow from the components that you disconnected.

1) If the flow is more than 10 cc/min from any of the components except the transfer cylinder, then replace the component that has the leakage.

2) If the flow is more than 100 cc/min from the transfer cylinder, then replace the transfer cylinder.

(n) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805

(o) Remove the vent hose and re-connect the Gear Down line from the nose gear retract actuator and the transfer cylinder.

(p) Remove the vent hose and re-connect the Gear Down line on the supply side of the lock valve manifold.

(q) Remove the vent hoses and re-connect the Gear Down line that connects the lock valve manifold and the nose gear lock actuator.

(r) Put the control lever for the landing gear to the DN position.

(s) Do the Repair Confirmation to put the airplane back to the usual condition.

G. Repair Confirmation

(1) Make sure the control lever for the landing gear is in the OFF position.

(2) Make sure the thrust levers are in the fully aft position.

(3) Install the downlock pin in the nose landing gear. To install the downlock pin, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

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.

(4) Make sure the downlock pins are installed in the main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(5) Move the control lever for the landing gear to the DN position.

(6) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805

(7) Do this task: Lower the Airplane Nose, AMM TASK 07-11-06-580-803.

—————— END OF TASK ——————

812. Nose Gear Commanded Down, NOSE GEAR Green Light Off, NOSE GEAR Red Light On - Fault Isolation

A. Description

(1) This task is for this observed fault:

(a) Nose Landing Gear: NOSE GEAR green light does not go on with landing gear lever at DOWN. NOSE GEAR red light on.

(2) The landing gear position indicating and warning system uses lights in the flight compartment to show indications for these nose gear conditions:

(a) Gear position (Up, Down, In-transit)

(b) Landing gear control lever and gear position disagree

(c) Throttle position and gear position disagree.

(d) The red NOSE GEAR light comes on for these conditions:

(e) Disagree: lever down, nose gear not down and locked

(f) Disagree: lever not down, nose gear not up and locked

(3) (SDS SUBJECT 32-61-00)

B. Possible Causes

(1) Nose gear doors are not adjusted correctly

(2) Nose gear lock mechanism

(3) Nose gear lock valve manifold

(4) Nose gear lock actuator

(5) Check valves in the gear Up and Down lines for steering Return pressure

(6) Nose gear transfer cylinder

(7) Nose gear retract pressure fuse

(8) High internal leakage in the steering system for the nose gear

C. Related Data

(1) (SSM 32-30-00)

(2) (SSM 32-64-11, 12)

(3) (WDM 32-64-11, 12)

D. Initial Evaluation

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

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.

(2) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(3) Examine these components on the nose gear and in the nose wheel well for damage:

(a) Wiring and sensors

(b) Sensor brackets

(c) Lock links

(d) Lock springs

WARNING: REMOVE PERSONS AND EQUIPMENT FROM THE NOSE GEAR PATH. WHEN THE NOSE GEAR RETRACTS, THEY CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, AMM TASK 07-11-21-580-801.

(5) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(6) Remove the downlock pin for the nose landing gear. To remove the downlock pin, do this task: Landing Gear Downlock Pins Removal, AMM TASK 32-00-01-080-801.

(7) Operate the override trigger and move the control lever for the landing gear to the UP position to retract the nose gear.

(a) Move the control lever for the landing gear to the DN position.

(b) If the red NOSE GEAR light is on, and the NOSE GEAR green light does not come on, then do the Fault Isolation Procedure - Nose Gear Retraction.

(c) If the red NOSE GEAR light goes out, and the green NOSE GEAR light is on, then there was an intermittent fault. Do these steps to complete this task:

1) Install the downlock pin for the nose landing gear. To install the downlock pin, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

2) Do this task: Lower the Airplane Nose Off of the Jack, AMM TASK 07-11-21-580-802.

E. Fault Isolation Procedure - Nose Gear Retraction

(1) Do this load check of the manual extension T-handle:

(a) Operate the override trigger and move the control lever for the landing gear to the UP position to retract the nose gear.

(b) Attach a spring scale to the manual extension T-handle for the nose gear.

(c) Pull the manual extension handle for the nose gear.

1) Measure the maximum load when you pull the T-handle and write it down.

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.

2) If the maximum load you measured was more than 40 pounds, then do these steps:

a) Move the control lever for the landing gear to the DN position.

b) Install the downlock pin for the nose landing gear. To install the downlock pin, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

c) Remove the spring scale from the manual extension T-handle for the nose gear.

d) Do the adjustment for the door linkage on the nose wheel well doors. Do this task: Nose Gear Wheel Well Door Linkage Adjustment, AMM TASK 32-33-61-820-802.

e) If the nose gear operated correctly after you did the adjustment for the door linkage, then you corrected the fault.

f) If the nose gear did not operate correctly after you did the adjustment for the door linkage, then replace the nose gear lock mechanism. These are the tasks:
- Nose Landing Gear Lock Mechanism Removal, AMM TASK 32-33-51-000-801
- Nose Gear Lock Mechanism Installation, AMM TASK 32-33-51-400-801

g) Do the Repair Confirmation to put the airplane back to normal.

3) If the maximum load you measured was 40 pounds or less, then remove the spring scale from the manual extension T-handle for the nose gear and continue.

(2) Do these steps to see the pressure changes in the Up and Down lines both upstream and downstream of the lock valve manifold:

NOTE: This procedure does a check of pressure changes in the Up and Down hydraulic lines both upstream and downstream of the nose gear lock valve manifold. Use a pressure gage, clamp-on, COM-1804, or install an in-line pressure gage.

Table 203

TUBE OD - MATERIAL	WALL THICKNESS	CPG1000 GAIN
0.25 inch - CRES	0.016 inch	4085
0.375 inch - CRES	0.020 inch	2200
0.50 inch - CRES	0.026 inch	1605

(a) Move the control lever for the landing gear to the DN position.

WARNING: MAKE SURE THE DOWNLOCK PIN FOR THE NOSE LANDING GEAR IS INSTALLED. IF THE DOWNLOCK PIN IS NOT INSTALLED THE NOSE GEAR CAN RETRACT AND CAUSE INJURY TO PERSONS.

1) Install the downlock pin for the nose landing gear. To install the downlock pin, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(b) If the pressure gage, clamp-on, COM-1804 is available, then install it on the gear Up hydraulic tube near the nose gear lock actuator.

NOTE: Install the pressure transducer at least 2.5 inches away from bends or fittings. Use the instructions with the gage.

(c) If you will use an in-line pressure gage, then do these steps:

1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

2) Install an in-line pressure gage in the gear Up hydraulic line near the nose gear lock actuator.

3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(d) Put the control lever for the landing gear to the OFF position.

(e) If you use the pressure gage, clamp-on, COM-1804, then set the gage to zero.

(f) Operate the override trigger and move the control lever for the landing gear to the UP position.

(g) Read the maximum pressure that is stable on the pressure gage and write it in Table I.

(h) Put the control lever for the landing gear to the DN position.

(i) Read the maximum pressure that is stable on the pressure gage and write it in Table 202.

(j) If you used the pressure gage, clamp-on, COM-1804, then remove the gage and install it on the gear Down hydraulic tube near the nose gear lock actuator.

NOTE: Install the pressure transducer at least 2.5 inches away from bends or fittings.

(k) If you used an in-line pressure gage, then do these steps:

1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

2) Remove the in-line pressure gage and install it in the gear Down hydraulic line near the nose gear lock actuator.

3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(l) Put the control lever for the landing gear to the OFF position.

(m) If you use the pressure gage, clamp-on, COM-1804, then set the gage to zero.

(n) Operate the override trigger and move the control lever for the landing gear to the UP position.

(o) Read the maximum pressure that is stable on the pressure gage and write it in Table I.

(p) Put the control lever for the landing gear to the DN position.

(q) Read the maximum pressure that is stable on the pressure gage and write it in .

(r) If you used the pressure gage, clamp-on, COM-1804, then remove the gage and install it on the gear Down hydraulic tube between the nose gear lock valve manifold and the nose gear retract actuator.

NOTE: Install the pressure transducer at least 2.5 inches away from bends or fittings. Install the transducer on the largest diameter tubing that is accessible.

(s) If you used an in-line pressure gage, then do these steps:

1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

2) Remove the in-line pressure gage and install it in the gear Down hydraulic line between the nose gear lock valve manifold and the nose gear retract actuator.

3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(t) Put the control lever for the landing gear to the OFF position.

(u) If you use the pressure gage, clamp-on, COM-1804, then set the gage to zero.

(v) Operate the override trigger and move the control lever for the landing gear to the UP position.

(w) Read the maximum pressure that is stable on the pressure gage and write it in Table 202.

(x) Put the control lever for the landing gear to the DN position.

(y) Read the maximum pressure that is stable on the pressure gage and write it in Table 202.

(z) If you used the pressure gage, clamp-on, COM-1804, then remove the gage and install it on the gear Up hydraulic tube between the nose gear lock valve manifold and the nose gear retract actuator.

NOTE: Install the pressure transducer at least 2.5 inches away from bends or fittings. Install the transducer on the largest diameter tubing that is accessible.

(aa) If you used an in-line pressure gage, then do these steps:

1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.
2) Remove the in-line pressure gage and install it in the gear Up hydraulic line between the nose gear lock valve manifold and the nose gear retract actuator.
3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(ab) Put the control lever for the landing gear to the OFF position.

(ac) If you use the pressure gage, clamp-on, COM-1804, then set the gage to zero.

(ad) Operate the override trigger and move the control lever for the landing gear to the UP position.

(ae) Read the maximum pressure that is stable on the pressure gage and write it in Table 202.

(af) Put the control lever for the landing gear to the DN position.

(ag) Read the maximum pressure that is stable on the pressure gage and write it in Table 202.

(ah) If you used the pressure gage, clamp-on, COM-1804, then remove the gage.

(ai) If you used an in-line pressure gage, then do these steps:

1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.
2) Remove the in-line pressure gage.
3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

Table 204 PRESSURE CHANGES IN UP AND DOWN LINES

Row	Step	Down Pressure	Up Pressure
1	E(7)(f)	N/A	
2	E(7)(h)	N/A	
3	E(7)(m)		N/A
4	E(7)(o)		N/A
5	E(7)(t)		N/A
6	E(7)(v)		N/A
7	E(7)(aa)	N/A	
8	E(7)(cc)	N/A	

(aj) If Row 4 pressure was 3000 +/-600 psi and Row 2 and Row 8 pressures were less than 300 psi, then do these steps:

1) Replace the nose gear lock mechanism. These are the tasks:
   - Nose Landing Gear Lock Mechanism Removal, AMM TASK 32-33-51-000-801
   - Nose Gear Lock Mechanism Installation, AMM TASK 32-33-51-400-801
2) If the nose gear operated correctly when you did the installation test for the lock mechanism, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

3) If the nose gear did not operate correctly when you did the installation test for the nose gear lock mechanism, then make sure the linkage for the nose gear doors is adjusted correctly. To do this, do this task: Nose Gear Wheel Well Door Linkage Adjustment, AMM TASK 32-33-61-820-802.

4) If the nose gear did not operate correctly when you did the adjustment for the linkage on the nose gear doors, then do the Fault Isolation Procedure - Internal Leakage Check.

(ak) If Row 4 pressure was 3000 +/-600 psi and Row 2 pressure was greater than 500 psi, and Row 8 pressure was less than 500 psi, then do these steps:

1) Replace the nose gear lock valve manifold. These are the tasks:
   - Nose Gear Lock Valve Manifold Removal, AMM TASK 32-33-31-000-801
   - Nose Gear Lock Valve Manifold Installation, AMM TASK 32-33-31-400-801

2) If the nose gear operated correctly when you did the installation test for the lock valve manifold, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

3) If the nose gear did not operate correctly when you did the installation test for the lock valve manifold, then replace the nose gear lock actuator. These are the tasks:
   - Nose Landing Gear Lock Actuator Removal, AMM TASK 32-33-21-000-801
   - Nose Landing Gear Lock Actuator Installation, AMM TASK 32-33-21-400-801

4) If the nose gear did not operate correctly when you did the installation test for the lock actuator, then do Fault Isolation Procedure - Internal Leakage Check.

(al) If Row 4 pressure was 3000 +/-600 psi and Row 2 pressure was greater than 500 psi, and Row 8 pressure was greater than 500 psi, then do these steps:

1) Replace the check valve in the DOWN line to the steering system.

2) If the nose gear retracts and extends correctly after you replaced the check valve, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

3) If the nose gear did not operate correctly after you replaced the check valve, then replace the nose gear transfer cylinder. These are the tasks:
   - Nose Gear Transfer Cylinder Removal, AMM TASK 32-33-41-000-801
   - Nose Gear Transfer Cylinder Installation, AMM TASK 32-33-41-400-801

4) If the nose gear operated correctly when you did the installation test for the nose gear transfer cylinder, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

5) If the nose gear did not operate correctly when you did the installation test for the transfer cylinder, then replace the nose gear lock actuator. These are the tasks:
   - Nose Landing Gear Lock Actuator Removal, AMM TASK 32-33-21-000-801
   - Nose Landing Gear Lock Actuator Installation, AMM TASK 32-33-21-400-801

   Do the Repair Confirmation to put the airplane back to normal.

6) If the nose gear did not operate correctly when you did the installation test for the lock actuator, then do the Fault Isolation Procedure - Internal Leakage Check.

(am) If Row 4 pressure was 0 to 2400 psi and Row 6 pressure was 3000 +/-500 psi, and Row 2 pressure was less than 500 psi, and Row 8 pressure was less than 500 psi, then do these steps:

1) Replace the nose gear lock valve manifold. These are the tasks:
   - Nose Gear Lock Valve Manifold Removal, AMM TASK 32-33-31-000-801
   - Nose Gear Lock Valve Manifold Installation, AMM TASK 32-33-31-400-801

2) If the nose gear operated correctly when you did the installation test for the lock valve manifold, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

3) If the nose gear did not operate correctly when you did the installation test for the lock valve manifold, then replace the nose gear lock actuator. These are the tasks:
   - Nose Landing Gear Lock Actuator Removal, AMM TASK 32-33-21-000-801
   - Nose Landing Gear Lock Actuator Installation, AMM TASK 32-33-21-400-801

4) If the nose gear did not operate correctly when you did the installation test for the lock actuator, then do the Fault Isolation Procedure - Internal Leakage Check.

(an) If Row 4 pressure was 0 to 2400 psi and Row 6 pressure was 0 to 2400 psi, then do these steps:

1) Replace the check valve in the DOWN line to the steering system.

2) If the nose gear retracts and extends correctly after you replaced the check valve, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

3) If the nose gear did not operate correctly after you replaced the check valve, then put the towing lever on the steering metering valve to the "TOW" position. This will isolate the nose wheel steering.

   a) Retract and extend the nose gear.

4) If the nose gear operated correctly when you did the extension and retraction with the towing lever in the "TOW", then move the towing lever out of the "TOW" position and do the Fault Isolation Procedure - Internal Leakage Check.

5) If the nose gear did not operate correctly when you did the extension and retraction with the towing lever in the "TOW", then move the towing lever out of the "TOW" position and replace the nose gear transfer cylinder. These are the tasks:
   - Nose Gear Transfer Cylinder Removal, AMM TASK 32-33-41-000-801
   - Nose Gear Transfer Cylinder Installation, AMM TASK 32-33-41-400-801

6) If the nose gear did not operate correctly when you did the installation test for the transfer cylinder, then do the Fault Isolation Procedure - Internal Leakage Check.

(ao) If Row 4 pressure was 0 to 2400 psi and Row 6 pressure was 0 to 2400 psi, and Row 2 pressure was greater than 500 psi, and Row 8 pressure was less than 300 psi, then do these steps:

1) Replace the nose gear lock valve manifold. These are the tasks:
   - Nose Gear Lock Valve Manifold Removal, AMM TASK 32-33-31-000-801
   - Nose Gear Lock Valve Manifold Installation, AMM TASK 32-33-31-400-801

2) If the nose gear operated correctly when you did the installation test for the lock valve manifold, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

3) If the nose gear did not operate correctly when you did the installation test for the lock valve manifold, then replace the nose gear lock actuator. These are the tasks:
   - Nose Landing Gear Lock Actuator Removal, AMM TASK 32-33-21-000-801
   - Nose Landing Gear Lock Actuator Installation, AMM TASK 32-33-21-400-801

4) If the nose gear did not operate correctly when you did the installation test for the lock actuator, then do the Fault Isolation Procedure - Internal Leakage Check.

(ap) If Row 4 pressure was 0 to 300 psi and Row 6 pressure was 0 to 300 psi, and Row 8 pressure was 0 to 300 psi, then do these steps:

1) Replace the nose gear retract pressure fuse. These are the tasks:

- Removal of the Retract Pressure Fuse for the Nose Gear, AMM TASK 32-33-71-000-801
- Installation of the Retract Pressure Fuse for the Nose Gear, AMM TASK 32-33-71-400-801

2) If the nose gear operated correctly when you did the installation test for the nose gear retract pressure fuse, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

3) If the nose gear did not operate correctly when you did the installation test for the pressure fuse, then replace the check valve in the UP line for the steering system.

4) If the nose gear did not operate correctly when you replaced the pressure fuse, then do Fault Isolation Procedure - Internal Leakage Check.

(aq) If the pressures you wrote down do not agree with any of the above, then do the Fault Isolation Procedure - Internal Leakage Check.

F. Fault Isolation Procedure - Internal Leakage Check

WARNING: MAKE SURE YOU CONNECT A HOSE TO HYDRAULIC PORTS THAT ARE OPENED TO THE ATMOSPHERE FOR THIS CHECK AND THAT IT GOES TO A SUITABLE CONTAINER FOR EXCESS FLOW. HYDRAULIC FLUID THAT SPRAYS FREELY INTO THE AIR CAN CAUSE DAMAGE TO EQUIPMENT OR INJURY TO PERSONNEL.

NOTE: One procedure to use to find internal leakage without component removal is to disconnect the hydraulic line from the port on that component that will not have flow. If there is flow, the component is bad.

(1) Do this check for internal leakage:

(a) Make sure the control lever for the landing gear is in the DN position.

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.

(b) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(c) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(d) Disconnect the Gear Up line that connects the lock valve manifold and the nose gear lock actuator.

(e) Install a hose on the open ports and put the other end in a suitable container.

(f) Disconnect the Gear Up line on the supply side of the lock valve manifold.

(g) Install a cap in the Gear Up line that was disconnected.

(h) Install a hose on the open port of the lock valve manifold and put the other end in a suitable container.

(i) Disconnect the Gear Up line from the nose gear retract actuator and the transfer cylinder.

(j) Install a hose on the open ports and put the other end in a suitable container.

(k) Make sure the control lever for the landing gear is in the DN position.

WARNING: KEEP ALL PERSONNEL AWAY FROM DISCONNECTED HYDRAULIC LINES. PRESSURIZED HYDRAULIC FLUID CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

(l) For hydraulic system A, slowly increase the pressure to 3000 psi. Do this task: Hydraulic System A or B Pressurization with a Portable Hydraulic Cart, AMM TASK 29-11-00-860-802

Hold this pressure for 5 minutes, unless you see heavy leakage.

(m) Examine the flow from the components that you disconnected.

1) If the flow is more than 10 cc/min from any of the components except the transfer cylinder, then replace the component that has the leakage.

2) If the flow is more than 100 cc/min from the transfer cylinder, then replace the transfer cylinder.

(n) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(o) Remove the vent hose and connect the Gear Up line from the nose gear retract actuator and the transfer cylinder.

(p) Remove the vent hose and connect the Gear Up line on the supply side of the lock valve manifold.

(q) Remove the vent hoses and connect the Gear Up line that connects the lock valve manifold and the nose gear lock actuator.

(r) Do the Repair Confirmation to put the airplane back to the usual condition.

G. Repair Confirmation

(1) Make sure the control lever for the landing gear is in the OFF position.

(2) Install the downlock pin in the nose landing gear. To install the downlock pin, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

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.

(3) Make sure the downlock pins are installed in the main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(4) Move the control lever for the landing gear to the DN position.

(5) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(6) Do this task: Lower the Airplane Nose, AMM TASK 07-11-06-580-803.

———————— END OF TASK ————————

813. Landing Gear Control Lever Lock - Fault Isolation

A. Description

(1) This task is for this observed fault:

(a) The landing gear lever does not move to the UP position in flight. The lever is free to move to the UP position when the lock override is used.

(2) The control lever for the landing gear has a lever lock mechanism operated by a lever lock solenoid. The lever lock prevents accidental movement of the control lever to the UP position when the airplane is on the ground. When the airplane is in the air or on jacks with the weight off the landing gear and the GSBV (ground spoiler bypass valve) Interlock Valve is in the closed position, the solenoid gets electrical power and releases the lever lock.

(3) (SDS SUBJECT 32-31-00)

B. Possible Causes

(1) Circuit breakers

(2) Lever latch solenoid

(3) Wiring

(4) The GSBV Interlock Valve proximity switch/actuation cable.

(5) Proximity switch electronics unit (PSEU), M2061

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN

(1) This is the circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	16	C01356	LANDING GEAR AIR/GND SYS 1

(1) This is the circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	15	C01355	LANDING GEAR AIR/GND SYS 2

D. Related Data

(1) (SSM 31-53-11)

(2) (SSM 32-09-11)

(3) (SSM 32-30-00)

(4) (SSM 32-31-11)

(5) (SSM 32-64-11)

(6) (WDM 32-31-11)

(7) (WDM 32-64-11)

E. Initial Evaluation

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

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.

(2) Make sure the downlock pins are installed in the nose and main landing gear. To install the pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(3) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(4) Prepare to put the airplane in the air mode, do this task: Prepare to Put the Airplane in the Air Mode, AMM TASK 32-09-00-840-801.

(5) Put the airplane in the air mode, do this task: Put the Airplane in the Air Mode, AMM 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.

(6) Do the steps that follow to make sure that the GSBV Interlock Valve is in the closed position:

NOTE: The interlock valve must be in the closed position for the landing gear lever lock solenoid to be energized. The interlock valve proximity switch gives a 'closed' (near) signal when the shock strut is fully extended, or when the interlock valve actuating cable lower end at the right main landing gear strut upper torsion link is disconnected and the cable is manually actuated to the 'closed' position.

(a) If the airplane is on jacks and the shock strut is fully extended the valve is in the closed position.

(b) If the airplane is not on jacks, do the following steps to manually actuate the GSBV Interlock actuating cable

1) Remove the bolt, washers, and nut to disconnect the cable end from the strut upper torsion link. Do the steps in this task: (AMM TASK 27-62-00-820-803) needed to disconnect the interlock valve actuator cable slider.

2) Move the lower slider until you can easily install rig pin S/B-3 from the kit, F70207-109, through the yoke of the interlock valve.

(7) Move the control lever for the landing gear to the UP position.

(a) If you can not move the control lever to the UP position, then do the Fault Isolation Procedure below.

(b) If you can move the control lever to the UP position, then there was an intermittent fault. Do these steps to complete the task:

1) Move the control lever to the DN position

2) Remove the rig pin S/B-3 from the yoke of the interlock valve.

3) Install the bolt, washers, and nut to reconnect the actuator cable end to the strut upper torsion link. Do the steps in this task: (AMM TASK 27-62-00-820-803) needed to reconnect the interlock valve actuator cable slider.

4) Perform PSEU self test to clear any induced maintenance faults, do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

5) Put the airplane back to the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

F. Fault Isolation Procedure

(1) Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If the PSEU BITE shows a PSEU internal fault or AIR/GND FLT, then go to the fault isolation task for the applicable maintenance message to correct the fault.

1) Do the Repair Confirmation at the end of this task.

(b) If the PSEU BITE does not show a PSEU internal fault or AIR/GND FLT, then continue.

(2) Make sure, at the circuit breaker panel, P6-3, the 6b17 LANDING GEAR LATCH & PRESS WARN circuit breaker is in the closed position.

(3) Do this check for power at the landing gear lever latch solenoid:

(a) Disconnect connector D11138 for the lever latch solenoid.

NOTE: The connector D11138 is located on the PSEU in the forward electrical equipment bay.

(b) Do a check for 28 VDC at pin 19 of connector D11138 from the lever lock solenoid.

1) If there is not 28 VDC at pin 19 of connector D11138, then do this check of the wiring:

a) Remove the landing gear control lever module, M1952. To remove it, do this task: Landing Gear Control Lever Module Removal, AMM TASK 32-31-11-020-801.

CAUTION: MAKE SURE THAT THE POWER AT THE POWER PANEL IS TURNED OFF BEFORE PERFORMING THE CONTINUITY CHECK BELOW. DAMAGE TO EQUIPMENT COULD OCCUR.

b) Do a check for an open circuit between these pins of connector D11990 in the flight compartment and connector D11138 at the E11 rack:

D11138	D11990
pin 19 - - - - - - - - - - - - - - - - -	pin 8

c) If there is an open circuit, then do these steps:

d) Repair the wiring.

e) Re-install the landing gear control lever module, M1952. To install it, do this task: Landing Gear Control Lever Module Installation, AMM TASK 32-31-11-400-801.

f) Re-connect the connector D11138 to the PSEU.

g) Do the Repair Confirmation at the end of this task.

2) If there is continuity between pin 19 of connector D11138 and pin 8 of connector D11990, then continue.

3) Do a check of the lever lock solenoid functionality by grounding pin 19 of connector D11138. If the solenoid does not energize, then do these steps:

a) Replace the lever latch solenoid. These are the tasks:
- Landing Gear Control Lever Lock Solenoid Removal, AMM TASK 32-31-31-020-801
- Landing Gear Control Lever Lock Solenoid Installation, AMM TASK 32-31-31-400-801

b) Re-connect the connector D11138 to the PSEU.

c) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

(1) Do this check of the landing gear lever:

(a) Make sure the control lever for the landing gear is in the DN position.

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.

(b) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(c) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(d) Put the airplane in the air mode, do this task: Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801.

(e) Move the control lever for the landing gear to the UP position.

(f) If you can put the control lever to the UP position, then you corrected the fault.

1) Move the control lever for the landing gear to the DN position.

2) Put the airplane back to the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

——————— END OF TASK ———————

814. NOSE GEAR Red Light On (On Ground Only) - Fault Isolation

A. Description

WARNING: THIS CAN BE A VERY DANGEROUS CONDITION. IF THE NOSE LANDING GEAR IS NOT LOCKED IN THE DOWN POSITION IT CAN ACCIDENTALLY RETRACT. IF THE NOSE LANDING GEAR RETRACTS, INJURY OR DEATH TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) The landing gear position indicating and warning system uses lights in the flight compartment to show indications for these landing gear conditions:

(a) Landing gear down and locked

(b) Disagree

(c) Not down warning.

(2) The red NOSE GEAR light comes on for these conditions:

(a) Disagree: lever down, nose gear not down and locked

(b) Disagree: lever not down, nose gear down and locked

(c) Gear not down warning.

(3) (SDS SUBJECT 32-61-00)

B. Possible Causes

(1) Nose landing gear is not in the locked position

(2) Proximity sensor or wiring problem

(3) Proximity switch electronics unit (PSEU), M2061

C. Related Data

(1) (SSM 32-30-00)

(2) (SSM 32-64-11)

(3) (SSM 32-64-12)

(4) (WDM 32-64-11)

(5) (WDM 32-64-12)

D. Fault Isolation Procedure

WARNING: DO NOT LET YOURSELF OR ANOTHER PERSON BE UNDER THE AIRPLANE TO CHECK FOR THE DOWNLOCK PIN. IF THE NOSE LANDING GEAR RETRACTS, INJURY OR DEATH TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) If you are not sure if the downlock pin for the nose landing gear is installed, then do these steps:

WARNING: DO NOT MOVE THE AIRPLANE. THE NOSE LANDING GEAR CAN INADVERTENTLY RETRACT IF IT IS NOT IN THE LOOCKED POSITION AND THE DOWNLOCK PIN IS NOT INSTALLED. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) Stop all maintenance and loading activity that can cause the airplane to bounce, shake or move.

(b) Make sure the configuration of the hydraulic systems is not changed.

NOTE: If hydraulic power is supplied, leave it on and if it is not supplied, leave it off.

(c) Make sure the parking brake is set.

(d) Make sure that chocks are installed against the front and the back of at least one set of MAIN LANDING GEAR tires.

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.

(e) Make sure the downlock pins are installed in the main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

WARNING: DO NOT LET YOURSELF OR ANOTHER PERSON UNDER THE AIRPLANE WHEN YOU PUT A CHOCK IN FRONT OF THE NOSE LANDING GEAR TIRE. IF THE NOSE LANDING GEAR RETRACTS, THIS CAN CAUSE INJURY OR DEATH TO PERSONS AND DAMAGE TO EQUIPMENT.

(f) Use ropes or a long pole to put a chock in front of the nose landing gear tires, if chocks are not already installed.

WARNING: DO NOT LET YOURSELF OR ANOTHER PERSON BE UNDER THE AIRPLANE WHEN YOU INSTALL THE JACK PAD. IF THE NOSE LANDING GEAR RETRACTS IT CAN CAUSE INJURIES OR DEATH TO PERSONS AND DAMAGE TO EQUIPMENT.

(g) Do the task to install a jack to lift the nose of the airplane, but do not lift the nose gear tire off the ground. Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, AMM TASK 07-11-21-580-801.

(h) If hydraulic system A power is supplied, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(i) Do the operational test for the nose landing gear. Do this task: Operational Test for the Nose Landing Gear, AMM TASK 32-33-00-710-801.

1) If the operational test for the nose landing gear was not normal, then do the applicable fault isolation for nose gear extension and retraction.

2) If the operational test for the nose landing gear was normal, then you corrected the fault.

(j) Do these steps to put the airplane back to its usual condition:

1) Make sure the control lever for the landing gear is in the OFF position.

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.

2) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

4) Move the control lever for the landing gear to the DN position.

5) Make sure the red NOSE GEAR light does not come on, and the green NOSE GEAR light is on.

6) If the nose of the airplane is still lifted on jacks, then, do this task: Lower the Airplane Nose Off of the Jack, AMM TASK 07-11-21-580-802.

7) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(k) If the downlock pin is installed in the nose landing gear, then do this task: Landing Gear Position Indicating and Warning System - Test, AMM TASK 32-61-00-710-801.

(l) If the system test for landing gear position and indication was not normal, then do the applicable fault isolation.

(m) If the system test for landing gear position and indication was normal, then you corrected the fault. Do these steps to put the airplane back to its usual condition:

1) Make sure the control lever for the landing gear is in the OFF position.

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.

2) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

4) Move the control lever for the landing gear to the DN position.

5) Make sure the red NOSE GEAR light does not come on, and the green NOSE GEAR light is on.

6) If the nose of the airplane is still lifted on jacks, then do this task: Lower the Airplane Nose Off of the Jack, AMM TASK 07-11-21-580-802.

7) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

END OF TASK

815. Landing Gear Commanded Up, NOSE, LEFT, and RIGHT GEAR Green and Red Lights On - Fault Isolation

A. Description

(1) The landing gear control system controls the extension and retraction of the nose and main landing gear.

(a) The landing gear control system has these components:

1) Landing gear control lever assembly
2) Teleflex cable
3) Forward quadrant and system cables
4) Selector valve
5) Transfer valve

(b) You move the landing gear control lever to control landing gear extension and retraction. The control lever moves the selector valve through cables.

(c) The control lever operates a teleflex cable which moves the forward quadrant assembly. The forward quadrant assembly is below the flight compartment floor.

(d) The forward quadrant moves the landing gear selector valve through control cables and the selector valve quadrant.

(e) The landing gear selector valve supplies hydraulic pressure to extend and retract the nose and main landing gear. The selector valve is in the main wheel well on the upper bulkhead.

(f) The three positions of the landing gear selector valve are as follows:

1) UP - pressurized to retract
2) OFF - extension and retraction components are not pressurized
3) DN - pressurized to extend.

(g) (SDS SUBJECT 32-31-00)

(2) The manual extension system for the landing gear has a limit switch in the manual extension access door. When the access door is opened for manual extension the switch sends a signal to the bypass valve that is in the landing gear selector valve. This moves the bypass valve to connect all hydraulic components in the landing gear system to the hydraulic system return.

(a) (SDS SUBJECT 32-34-00)

(3) The landing gear position indicating and warning system uses lights in the flight compartment to show indications for the nose, left, and right gear conditions.

(a) Indications are shown for these nose, left, and right gear conditions:

1) Nose, Left, and right gear position (Up, Down, In-transit)
2) Landing gear control lever and nose, left, and right gear position disagree
3) Throttle position and gear position disagree.

(b) The red NOSE, LEFT, or RIGHT GEAR lights come on for these conditions:

1) Disagree: lever down, nose, left, or right main gear not down and locked
2) Disagree: lever not down, left or right main gear not up and locked
3) Disagree: left or right main gear not down, throttle retarded and altitude below 800 feet

(c) (SDS SUBJECT 32-61-00)

B. Possible Causes

(1) Manual extension limit switch, S1060, in the door open position

(2) Rigging of the landing gear control cables

(3) Landing gear selector valve.

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

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

D. Related Data

(1) (SSM 32-30-00)

(a) (SSM 32-35-11)

(b) (SSM 32-64-11, 12)

(c) (WDM 32-35-11)

(d) (WDM 32-64-11, 12)

E. Fault Isolation Procedure

(1) Do these steps to prepare for fault isolation:

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.

(a) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(b) Electrically ground the airplane. To do this, do this task: Static Grounding, AMM TASK 20-40-11-910-801.

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

(d) 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

(e) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-3

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

(f) Make sure the control lever for the landing gear is in the DN position.

(g) Make sure the manual extension access door is fully closed.

1) Open the manual extension access door and verify that the door recess and the area around the manual extension access door switch are free of debris.

2) If necessary clean the door recess and the area around the manual extension access door switch with a dry brush and alcohol.

NOTE: The location of the manual extension system access door [1] makes it likely to collect dirt and residue found in the cockpit.

(h) Remove the downlock pins from the nose and main landing gear. To remove the downlock pins, do this task: Landing Gear Downlock Pins Removal, AMM TASK 32-00-01-080-801.

(i) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(j) Move the two thrust levers to the full forward position.

WARNING: MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE NOSE AND MAIN LANDING GEAR. FAST MOVEMENT OF THE LANDING GEAR CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(k) Move the control lever for the landing gear to UP to retract the landing gear.

(l) If the landing gear retracted and the NOSE, LEFT GEAR, and RIGHT GEAR green and red lights are not on, then do these steps to complete this task:

1) Move the control lever for the landing gear to the DN position.

2) Install the downlock pins for the landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

3) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

4) Do this task: Lower the Airplane Off the Jacks, AMM TASK 07-11-01-580-816.

(m) If the landing gear did not retract and the NOSE, LEFT GEAR, and RIGHT GEAR green lights stayed on, and the NOSE, LEFT GEAR, and RIGHT GEAR red lights came on, then do the fault isolation procedure.

(2) Do these steps to do the fault isolation procedure:

(a) Put the control lever for the landing gear to the DN position.

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.

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

(c) Make sure the limit switch for the manual extension access door, S1060, is operable. Do these steps:

1) At the landing gear selector valve in the main wheel well, disconnect connector D46026P.

2) Do a check for 28 VDC at pin 8 of connector D46026P.

3) If there is 28 VDC at pin 8 of connector D46026P, then replace the limit switch for the manual extension access door, S1060.

a) Do this task: Removal of the Manual Extension System Access Door Switch, AMM TASK 32-34-11-820-801.

b) Do this task: Installation of the Manual Extension System Access Door Switch, AMM TASK 32-34-11-820-802.

c) Do the Repair Confirmation at the end of this task.

4) If there is not 28 VDC at pin 8 of connector D46026P, then connect the connector D46026P and continue.

(d) Make sure the limit switch for the manual extension access door is properly adjusted. To do this, do this task: Adjustment of the Manual Extension System Access Door Switch, AMM TASK 32-34-00-820-802.

(e) Do the landing gear control system adjustment. Do this task: Landing Gear Control System Adjustment, AMM TASK 32-31-00-820-801.

1) Do the Repair Confirmation at the end of this task.

2) If the Repair Confirmation is not satisfactory, then continue.

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

- Landing Gear Selector Valve Removal, AMM TASK 32-31-51-020-801
- Landing Gear Selector Valve Installation, AMM TASK 32-31-51-400-801

1) Do the Repair Confirmation at the end of this task.

F. Repair Confirmation

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 install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(a) Electrically ground the airplane. Do this task: Static Grounding, AMM TASK 20-40-11-910-801.

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

(c) 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

(d) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-3

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

(e) Make sure the control lever for the landing gear is in the DN position.

(f) Make sure the manual extension access door is fully closed.

(g) Remove the downlock pins from the nose and main landing gear. To remove the downlock pins, do this task: Landing Gear Downlock Pins Removal, AMM TASK 32-00-01-080-801.

(h) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(i) Move the two thrust levers to the full forward position.

WARNING: MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE NOSE AND MAIN LANDING GEAR. FAST MOVEMENT OF THE LANDING GEAR CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(j) Move the control lever for the landing gear to UP to retract the landing gear.

(k) Make sure the landing gear retracts and the NOSE, LEFT GEAR, and RIGHT GEAR green and red lights are not on, then do these steps to complete this task:

(l) Move the control lever for the landing gear to the DN position.

(m) Install the downlock pins for the landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(n) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(o) Do this task: Lower the Airplane Off the Jacks, AMM TASK 07-11-01-580-816.

———————— END OF TASK ————————

816. Landing Gear Commanded Down, NOSE, LEFT, and RIGHT GEAR Green and Red Lights On - Fault Isolation

A. Description

(1) The landing gear control system controls the extension and retraction of the nose and main landing gear.

(a) The landing gear control system has these components:

1) Landing gear control lever assembly

2) Teleflex cable

3) Forward quadrant and system cables

4) Selector valve

5) Transfer valve

(b) You move the landing gear control lever to control landing gear extension and retraction. The control lever moves the selector valve through cables.

1) The control lever operates a teleflex cable which moves the forward quadrant assembly. The forward quadrant assembly is below the flight compartment floor.

2) The control lever also operates four switches within the landing gear lever module assembly. Two switches are at the UP position and two switches are at the DOWN position. There are no switches at the OFF position.

a) At the UP position, switches S3 and S4 provide input to the Anti-Skid System.

b) At the DOWN position, switch S2 provides input to the Landing Gear Lever/Landing Gear Position Disagree indicating system.

c) At the DOWN position, switch S1 provides input to the Passenger Sign Control System.

(c) The forward quadrant moves the landing gear selector valve through control cables and the selector valve quadrant.

(d) The landing gear selector valve supplies hydraulic pressure to extend and retract the nose and main landing gear. The selector valve is in the main wheel well on the upper bulkhead.

(e) The three positions of the landing gear selector valve are as follows:

1) UP - pressurized to retract

2) OFF - extension and retraction components are not pressurized

3) DN - pressurized to extend.

(f) (SDS SUBJECT 32-31-00)

(2) The landing gear position indicating and warning system uses lights in the flight compartment to show indications for these nose, left, and right gear conditions:

(a) Nose, Left, and right gear position (Up, Down, In-transit)

(b) Landing gear control lever and nose, left, and right gear position disagree

(c) Throttle position and gear position disagree.

(d) The red NOSE, LEFT, or RIGHT GEAR lights comes on for these conditions:

1) Disagree: lever down, nose, left, or right main gear not down and locked

2) Disagree: lever not down, left or right main gear not up and locked

3) Disagree: left or right main gear not down, throttle retarded and altitude below 800 feet

(e) (SDS SUBJECT 32-61-00)

B. Possible Causes

(1) The landing gear lever is not fully engaged in the landing gear lever module detent assembly, causing lack of contact with the disagree switch (S2).

(a) A wiring problem.

(b) The Proximity Switch Electronics Unit (PSEU), M2061.

(c) The Landing Gear Control Lever Module, M1952.

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Related Data

(1) (SSM 32-30-00)

(2) (SSM 32-61-11)

(3) (WDM 32-64-11)

(4) (WDM 32-64-12)

E. Fault Isolation Procedure

(1) Do these steps to prepare for the fault isolation procedure:

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.

(a) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(b) Do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(c) Electrically ground the airplane, do this task: Static Grounding, AMM TASK 20-40-11-910-801.

(d) Do this task: Supply External Power, AMM TASK 24-22-00-860-813.

(e) Do this task: Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801.

NOTE: You must use proximity switch deactuators to put the airplane in the air mode or put the airplane on jacks. You cannot use the PSEU BITE for this test.

(f) Put an actuator on the Ground Spoiler Interlock Valve Close Sensor (S1050).

NOTE: The actuator is part of this test set: Set A27092-61. For information on the Ground Spoiler Interlock Valve Close Sensor, refer to this task: (AMM TASK 27-62-61-400-808)

(2) Do these steps to do the fault isolation procedure:

(a) Put the control lever for the landing gear in the DN position if not already in that position.

(b) Install the force gage equipment, SPL-6190 on the control lever for the landing gear.

(c) Pull the control lever for the landing gear out of the DN position detent with the force gage equipment, SPL-6190.

1) Make sure that the force necessary to pull the control lever out of the detent is not more than 12 pounds (53 newtons).

(d) Remove the force gage equipment, SPL-6190.

(e) Pull the control lever completely out and release into the DN detent.

1) Make sure that the control lever goes freely into the detent and to the bottom of the detent without a push, or binding, or stickiness.

(f) If the NOSE, RIGHT GEAR and LEFT GEAR green lights are on, and the NOSE, LEFT GEAR and RIGHT GEAR red lights are not on, then the system has operated correctly, and no further testing is required.

(g) If the NOSE, RIGHT GEAR and LEFT GEAR green lights are on, and the NOSE, LEFT GEAR and RIGHT GEAR red lights came on, and stayed on; or if there was binding or stickiness detected between the outer lever shaft and outer lever sleeve, then do the following steps:

1) Lubricate the landing gear control lever between the outer lever shaft and the outer lever sleeve using MIL-PRF-23827 spray or liquid.

2) Repeat steps (a) through (e) above.

3) If the landing gear NOSE, LEFT GEAR AND RIGHT GEAR red lights go out, then you have corrected the fault.

4) If the landing gear NOSE, LEFT GEAR AND RIGHT GEAR lights still remain on, then continue.

(h) Do the following steps to check for power at the landing gear control lever module, M1952.

1) Remove the landing gear lever control module. To remove it, do this task: Landing Gear Control Lever Module Removal, AMM TASK 32-31-11-020-801.

2) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

3) Do a check for 28 VDC,from the PSEU, at pin 2 of connector D11990 in the Flight Compartment.

NOTE: The connector D11990 is located at the control lever module, M1952, on the P2-3 panel (W0001).

4) If there is not 28 VDC at pin 2 of connector D11990, then do these steps:

a) Disconnect connector D10982 for the landing gear lever switch.

NOTE: The connector D10982 is located on the PSEU, M2061, on the E-11 rack in the forward electrical equipment bay.

b) Repair the wiring between these pins of connector D11990 in the flight compartment and connector D10982 at the E-11 rack:

D11990		D10982
pin 2	- - - - - - - - - - - - - - - - -	pin 1

5) Re-connect the connector D10982 to the PSEU, M2061.

6) Re-connect the connector D11990 at the control lever module, M1952.

7) Re-install the control lever module, M1952. To install it, do this task: Landing Gear Control Lever Module Installation, AMM TASK 32-31-11-400-801

(i) If there is 28VDC at pin 2 of connector D11990, then continue.

(j) Do this check of the switch and wiring on the control lever module, M1952:

1) Do a check for an open circuit between pin 1 and pin 2 of connector D11990 on the control lever module, M1952.

2) If there is not continuity between pin 1 and pin 2 of connector D11990 on the control lever module, then do these steps:

a) Replace the control lever module, M1952. To replace it, do this task: Landing Gear Control Lever Module Removal, AMM TASK 32-31-11-020-801 and, do this task: Landing Gear Control Lever Module Installation, AMM TASK 32-31-11-400-801.

b) Do the Repair Confirmation at the end of this task.

3) If there is continuity between pin 1 and pin 2 of connector D11990 on the control lever module, then do these steps:

a) Clean the connector D11990 and make sure the pins are not damaged.

b) Re-connect the connector D11990.

c) Re-install the control lever module. Do this task: Landing Gear Control Lever Module Installation, AMM TASK 32-31-11-400-801

d) Do the Repair Confirmation at the end of this task.

F. Repair Confirmation

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 install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(a) Make sure the control lever for the landing gear is in the DN position.

(b) IF the landing gear NOSE, LEFT GEAR, and RIGHT GEAR green lights are on, and the NOSE, LEFT GEAR, and RIGHT GEAR red lights are not on, then you have corrected the fault.

END OF TASK

801. Landing Gear Commanded Up, LEFT or RIGHT GEAR Green Light and LEFT or RIGHT GEAR Red Light On - Fault Isolation

A. Description

(1) This task is for this observed fault:

(a) Main Landing Gear: LEFT or RIGHT GEAR green light does not go off with landing gear lever at UP. LEFT or RIGHT GEAR red light stays on.

(2) The landing gear position indicating and warning system uses lights in the flight compartment to show indications for these left and right main gear conditions:

(a) Left and right main gear position (Up, Down, In-transit)

(b) Landing gear control lever and left and right main gear position disagree

(c) Throttle position and gear position disagree.

(3) The red LEFT or RIGHT GEAR light comes on for these conditions:

(a) Disagree: lever down, left or right main gear not down and locked

(b) Disagree: lever not down, left or right main gear not up and locked

(c) Disagree: left or right main gear not down, throttle retarded and altitude below 800 feet

(4) (SDS SUBJECT 32-61-00)

B. Possible Causes

(1) Position sensors damaged or not adjusted correctly

(2) Proximity switch electronics unit (PSEU), E11

(3) High friction in the lock mechanism

(4) Debris of foreign objects trapped in the lock mechanism

(5) High friction in the side strut (the affected main gear does not fully unlock)

(6) Hydraulic causes:

(a) Main gear downlock actuator (high internal leakage, plugged, or bent)

(b) Main gear transfer cylinder (high internal leakage)

(c) Hydraulic line blocked (from loose contamination in the system such as a piece of seal)

(d) Hydraulic fuse (stuck closed, closed prematurely, or an internal leak in the system)

(e) Hydraulic line crossed (after maintenance)

(f) Main gear retract actuator (high internal leakage or plugged)

(g) Main gear uplock actuator (high internal leakage, plugged, or bent)

(h) Frangible fitting broken

(i) Flow limiter plugged.

C. Related Data

(1) (SSM 32-30-00)

(2) (SSM 32-64-11, 12)

(3) (WDM 32-64-11, 12)

D. Initial Evaluation

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

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.

(2) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(3) Examine these components on the applicable main gear and in the main wheel well for damage or foreign objects:

(a) Wiring and sensors

(b) Sensor brackets

(c) Lock links

(d) Lock springs

(e) Lock actuator piston rods.

WARNING: REMOVE PERSONS AND EQUIPMENT FROM THE MAIN GEAR PATH. WHEN THE MAIN GEAR RETRACTS, THEY CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

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

(5) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(6) Remove the downlock pins for the main landing gear. To remove the downlock pins, do this task: Landing Gear Downlock Pins Removal, AMM TASK 32-00-01-080-801.

(7) Place the thrust levers in the fully forward position.

(8) Operate the override trigger and move the control lever for the landing gear to the UP position.

(a) If the red LEFT or RIGHT GEAR light and the green LEFT or RIGHT GEAR lights stay on, and you observe that the left, right gear is down and locked then do the Fault Isolation Procedure - Left or (Right) Gear Retraction.

(b) If the red LEFT or RIGHT GEAR light stays on, the green LEFT or RIGHT GEAR light is not on, and you observe that the left, right gear is in the up and locked position and stays there when the gear lever is put to OFF, then there is a sensor or PSEU problem. Do these steps to complete this task:

1) Move the control lever for the landing gear to the DN position.

2) Install the downlock pins for the main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

3) Do this task: Lower the Airplane Off the Jacks, AMM TASK 07-11-01-580-816.

(c) If the red LEFT or RIGHT GEAR light stays on, and the green LEFT or RIGHT GEAR light is not on, and you observe that the left, right gear stalls before it gets to the up and locked position, then there is high internal leakage in the retraction system. Do the Check for Internal Leakage.

E. Fault Isolation Procedure - Main Gear Retraction

(1) Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If a maintenance message shows for a PSEU internal failure or LEFT (RIGHT) RED LT FLT, then go to the FIM task.

(b) If a maintenance message does not show for a PSEU internal failure or LEFT (RIGHT) RED LT FLT, then continue.

(2) Do these steps to see the pressure changes in the Up and Down lines both upstream and downstream of the lock valve manifold:

NOTE: This procedure does a check of pressure changes in the Up and Down hydraulic lines for the main gear. Use a pressure gage clamp-on, COM-1804 or install an inline pressure gage.

Table 201

TUBE OD - MATERIAL	WALL THICKNESS	CPG1000 GAIN
0.25 inch - Titanium	0.0164 inch	2400
0.375 inch - Titanium	0.0195 inch	1220
0.50 inch - Titanium	0.0267 inch	1060

(a) Move the control lever for the landing gear to the DN position.

WARNING: MAKE SURE THE DOWNLOCK PINS FOR THE MAIN LANDING GEAR ARE INSTALLED. IF THE DOWNLOCK PINS ARE NOT INSTALLED THE MAIN GEAR CAN RETRACT AND CAUSE INJURY TO PERSONS.

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

(b) If the pressure gage clamp-on, COM-1804 is available, install it on the gear Up hydraulic tube near the downlock actuator for the affected main gear.

NOTE: Install the pressure transducer at least 2.5 inches away from bends or fittings. Use the instructions with the gage.

(c) If you will use an in-line pressure gage, do these steps:

1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

2) Install an in-line pressure gage in the gear Up hydraulic line near the downlock actuator for the affected main gear.

3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(d) Put the control lever for the landing gear to the OFF position.

(e) If you use the pressure gage, clamp-on, COM-1804, then set the gage to zero with the zero control knob on the control panel.

(f) Operate the override trigger and move the control lever for the landing gear to the UP position.

(g) Read the maximum pressure that is stable on the pressure gage and write it in Row 1 of Table 202.

(h) Put the control lever for the landing gear to the DN position.

(i) Read the maximum pressure that is stable on the pressure gage and write it in Row 2 of Table 202.

(j) If you used the pressure gage, clamp-on, COM-1804, remove the gage and install it on the gear Down hydraulic tube near the downlock actuator for the affected main gear.

NOTE: Install the pressure transducer at least 2.5 inches away from bends or fittings.

(k) If you used an in-line pressure gage, do these steps:

1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.
2) Remove the in-line pressure gage and install it in the gear Down hydraulic line near the downlock actuator for the affected main gear.
3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(l) Put the control lever for the landing gear to the OFF position.

(m) If you use the pressure gage, clamp-on, COM-1804, then set the gage to zero with the zero control knob on the control panel.

(n) Operate the override trigger and move the control lever for the landing gear to the UP position.

(o) Read the maximum pressure that is stable on the pressure gage and write it in Row 3 of Table 202.

(p) Put the control lever for the landing gear to the DN position.

(q) Read the maximum pressure that is stable on the pressure gage and write it in Row 4 of Table 202.

(r) If you used the pressure gage, clamp-on, COM-1804, remove the gage and install it on the gear Down hydraulic tube near the transfer cylinder for the affected main gear (between the transfer cylinder and the restrictor check valve in the Down line).

NOTE: Install the pressure transducer at least 2.5 inches away from bends or fittings. Install the transducer on the largest diameter tubing that is accessible.

(s) If you used an in-line pressure gage, do these steps:

1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.
2) Remove the in-line pressure gage and install it in the gear Down hydraulic tube near the transfer cylinder for the affected main gear (between the transfer cylinder and the restrictor check valve in the Down line).
3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(t) Put the control lever for the landing gear to the OFF position.

(u) If you use the pressure gage, clamp-on, COM-1804, then set the gage to zero with the zero control knob on the control panel.

(v) Operate the override trigger and move the control lever for the landing gear to the UP position.

(w) Read the maximum pressure that is stable on the pressure gage and write it in Row 5 of Table 202.

(x) Put the control lever for the landing gear to the DN position.

(y) Read the maximum pressure that is stable on the pressure gage and write it in Row 6 of Table 202.

(z) If you used the pressure gage, clamp-on, COM-1804, remove the gage and install it on the gear Up hydraulic tube upstream of the hydraulic fuse for the affected main gear.

NOTE: Install the pressure transducer at least 2.5 inches away from bends or fittings. Install the transducer on the largest diameter tubing that is accessible.

(aa) If you used an in-line pressure gage, do these steps:

1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.
2) Remove the in-line pressure gage and install it in the gear Up hydraulic tube upstream of the hydraulic fuse for the affected main gear.
3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(ab) Put the control lever for the landing gear to the OFF position.

(ac) If you use the pressure gage, clamp-on, COM-1804, then set the gage to zero with the zero control knob on the control panel.

(ad) Operate the override trigger and move the control lever for the landing gear to the UP position.

(ae) Read the maximum pressure that is stable on the pressure gage and write it in Row 7 of the applicable table.

(af) Put the control lever for the landing gear to the DN position.

(ag) Read the maximum pressure that is stable on the pressure gage and write it in Row 8 of the applicable table.

(ah) If you used the pressure gage, clamp-on, COM-1804, remove the gage.

(ai) If you used an in-line pressure gage, do these steps:

1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.
2) Remove the in-line pressure gage.
3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

Table 202 PRESSURE CHANGES IN UP AND DOWN LINES WHEN USING THE INLINE PRESSURE GAGE

Row	Down Pressure	Up Pressure
1. Downlock Actuator Up Line Lever UP	N/A	Correct = 3000
2. Downlock Actuator Up Line Lever DN	N/A	Correct = 0 - 70
3. Downlock Actuator Dn Line Lever UP	Correct = 0 - 70	N/A
4. Downlock Actuator Dn Line Lever DN	Correct = 3000	N/A
5. Transfer Cylinder Dn Line Lever UP	Correct = 0 - 70	N/A
6. Transfer Cylinder Dn Line Lever DN	Correct = 3000	N/A

(Continued)

Row	Down Pressure	Up Pressure
7. Upstream of Fuse in Up Line Lever UP	N/A	Correct = 3000
8. Upstream of Fuse in Up Line Lever DN	N/A	Correct = 0 - 70

Table 203 PRESSURE CHANGES IN UP AND DOWN LINES WHEN USING THE CLAMP -ON PRESSURE GAGE

Row	Down Pressure	Up Pressure
1. Downlock Actuator Up Line Lever UP	N/A	Correct = 3000
2. Downlock Actuator Up Line Lever DN	N/A	Correct = 0 - 300
3. Downlock Actuator Dn Line Lever UP	Correct = 0 - 300	N/A
4. Downlock Actuator Dn Line Lever DN	Correct = 3000	N/A
5. Transfer Cylinder Dn Line Lever UP	Correct = 0 - 300	N/A
6. Transfer Cylinder Dn Line Lever DN	Correct = 3000	N/A
7. Upstream of Fuse in Up Line Lever UP	N/A	Correct = 3000
8. Upstream of Fuse in Up Line Lever DN	N/A	Correct = 0 - 300

(3) If you used an in-line pressure gage, do these steps:

(4) If Row 1 pressure was 3000 +/-600 psi, and Row 3 pressure was less than 70 psi, and Row 5 pressure was less than 70 psi, then do these steps:

(a) Replace the lock mechanism for the affected main gear. These are the tasks:
- Main Landing Gear Downlock Strut Removal, AMM TASK 32-11-89-000-801
- Main Landing Gear Downlock Strut Installation, AMM TASK 32-11-89-420-801

(b) If the main gear operated correctly when you did the installation test for the lock mechanism, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

(c) If the main gear did not operate correctly when you did the installation test for the lock mechanism, then replace the downlock actuator, including the restrictor check valve unions, for the affected main landing gear These are the tasks:
- Main Gear Downlock Actuator Removal, AMM TASK 32-32-51-000-801
- Main Gear Downlock Actuator Installation, AMM TASK 32-32-51-400-801

1) Do the Repair Confirmation to put the airplane back to normal.

(5) If you used the pressure gage, clamp-on, COM-1804, do these steps:

(6) If Row 1 pressure was 3000 +/-600 psi, and Row 3 pressure was less than 300 psi, and Row 5 pressure was less than 300 psi, then do these steps:

(a) Replace the lock mechanism for the affected main gear. These are the tasks:
- Main Landing Gear Downlock Strut Removal, AMM TASK 32-11-89-000-801
- Main Landing Gear Downlock Strut Installation, AMM TASK 32-11-89-420-801

(b) If the main gear operated correctly when you did the installation test for the lock mechanism, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

(c) If the main gear did not operate correctly when you did the installation test for the lock mechanism, then replace the downlock actuator, including the restrictor check valve unions, for the affected main landing gear These are the tasks:
- Main Gear Downlock Actuator Removal, AMM TASK 32-32-51-000-801
- Main Gear Downlock Actuator Installation, AMM TASK 32-32-51-400-801

1) Do the Repair Confirmation to put the airplane back to normal.

(7) If Row 1 pressure was 3000 +/-600 psi and Row 3 pressure was greater than 500 psi, and Row 5 pressure was less than 500 psi, then do these steps:

(a) Replace the downlock actuator, including the restrictor check valve unions, for the affected main landing gear. To do this, these are the tasks:
- Main Gear Downlock Actuator Removal, AMM TASK 32-32-51-000-801
- Main Gear Downlock Actuator Installation, AMM TASK 32-32-51-400-801

1) Do the Repair Confirmation to put the airplane back to normal.

(8) If Row 1 pressure was less than 500 psi and Row 7 pressure was 3000 +/-500 psi, then do these steps:

(a) Replace the fuse in the UP line for the affected main gear. These are the tasks:
- Removal of the Retract Pressure Fuses for the Main Gear, AMM TASK 32-32-21-000-801
- Installation of the Retract Pressure Fuses for the Main Gear, AMM TASK 32-32-21-400-801

(b) Do the extension/retraction test for the main landing gear. Do this task: Main Landing Gear Test - Component Replacement, AMM TASK 32-32-00-710-802. If the main gear retracts and extends correctly after you replaced the fuse, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

(c) If the main gear did not operate correctly after you replaced the fuse, then continue. A hydraulic line or fitting can be blocked.

(d) Move the control lever for the landing gear to the DN position.

WARNING: MAKE SURE THE DOWNLOCK PINS FOR THE MAIN LANDING GEAR ARE INSTALLED. IF THE DOWNLOCK PINS ARE NOT INSTALLED THE MAIN GEAR CAN RETRACT AND CAUSE INJURY TO PERSONS.

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

(e) If the pressure gage clamp-on, COM-1804 is available, install it on the gear Up hydraulic line between the downlock actuator for the affected main gear and the selector valve.

NOTE: Install the pressure transducer at least 2.5 inches away from bends or fittings. Use the instructions with the gage.

(f) If you will use an in-line pressure gage, do these steps:

1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

2) Install the pressure gage in the gear Up hydraulic line between the downlock actuator for the affected main gear and the selector valve.

3) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(g) Put the control lever for the landing gear to the OFF position.

(h) If you use the pressure gage, clamp-on, COM-1804, then set the gage to zero with the zero control knob on the control panel.

(i) If the nose gear operated correctly when you did the installation test for the nose gear transfer cylinder, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

(j) Operate the override trigger and move the control lever for the landing gear to the UP position.

(k) Read the maximum pressure that is stable on the pressure gage. If the pressure is not 3000 +/-500 psi, then put the pressure gage further upstream (closer to the selector valve) and do the test again. The blocked line or fitting will be just downstream of the region where 3000 psi is indicated.

(l) Put the control lever for the landing gear to the DN position.

(m) If you used the pressure gage, clamp-on, COM-1804, remove the gage.

(n) If you used an in-line pressure gage, do these steps:

1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

2) Remove the in-line pressure gage.

(o) Replace the blocked line or fitting.

F. Fault Isolation Procedure - Internal Leakage Check

NOTE: This procedure uses the hydraulic fuse in the Up line to find a component with internal leakage that causes the fuse to set.

(1) Do this check for internal leakage:

(a) Make sure the control lever for the landing gear is in the DN position.

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.

(b) Make sure the downlock pins are installed in the nose and main landing gear. Do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(c) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(d) Replace the fuse in the UP line for the affected main gear. To do this, these are the tasks:

- Removal of the Retract Pressure Fuses for the Main Gear, AMM TASK 32-32-21-000-801
- Installation of the Retract Pressure Fuses for the Main Gear, AMM TASK 32-32-21-400-801

(e) Do the extension/retraction test for the main landing gear. Do this task: Main Landing Gear Test - Component Replacement, AMM TASK 32-32-00-710-802

If the main gear retracts and extends correctly after you replaced the fuse, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

(f) If the main gear did not operate correctly after you replaced the fuse, then continue.

(g) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(h) Disconnect the Gear Up line from the downlock actuator for the affected main gear. Install a cap in the line you disconnected.

(i) If the pressure gage clamp-on, COM-1804 is available, install it on the gear Up hydraulic tube just downstream of the hydraulic fuse for the affected main gear.

NOTE: Install the pressure transducer at least 2.5 inches away from bends or fittings. Use the instructions with the gage.

(j) If you will use an in-line pressure gage, do these steps:

1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

2) Install an in-line pressure gage in the gear Up hydraulic tube just downstream of the hydraulic fuse for the affected main gear.

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.

(k) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(l) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(m) Put the control lever for the landing gear to the OFF position.

(n) If you use the pressure gage, clamp-on, COM-1804, then set the gage to zero with the zero control knob on the control panel.

(o) Operate the override trigger and move the control lever for the landing gear to the UP position.

(p) The pressure on the gage should go to 3000 psi (+/- 500 psi). Look to see if the fuse sets (the pressure drops).

(q) If the fuse does not set (the pressure does not drop), then replace the downlock actuator for the affected main gear. To do this, these are the tasks:

- Main Gear Downlock Actuator Removal, AMM TASK 32-32-51-000-801
- Main Gear Downlock Actuator Installation, AMM TASK 32-32-51-400-801

(r) If the fuse sets (the pressure drops), then continue.

(s) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(t) Disconnect the Gear Up line from the retract actuator for the affected main gear. Install a cap in the line you disconnected.

(u) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(v) Put the control lever for the landing gear to the OFF position.

(w) If you use the pressure gage, clamp-on, COM-1804, then set the gage to zero with the zero control knob on the control panel.

(x) Operate the override trigger and move the control lever for the landing gear to the UP position.

(y) The pressure on the gage should go to 3000 psi (+/- 500 psi). Look to see if the fuse sets (the pressure drops).

(z) If the fuse does not set (the pressure does not drop), then replace the retract actuator for the affected main gear. To do this, these are the tasks:
- Removal of the Actuator Assembly for the Main Gear, AMM TASK 32-32-11-000-801
- Installation of the Actuator Assembly for the Main Gear, AMM TASK 32-32-11-400-801

(aa) If the fuse does set (the pressure drops), then replace the transfer cylinder for the affected main gear. To do this, these are the tasks:
- Main Gear Transfer Cylinder Removal, AMM TASK 32-32-71-000-801
- Main Gear Transfer Cylinder Installation, AMM TASK 32-32-71-400-801

(ab) Put the control lever for the landing gear to the DN position.

(ac) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(ad) Remove the cap and connect the Up line that you disconnected to the retract actuator.

(ae) Remove the cap and connect the Up line that you disconnected to the downlock actuator.

(af) If you used the pressure gage, clamp-on, COM-1804, remove the gage.

(ag) If you used an in-line pressure gage, do these steps:

1) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

2) Remove the in-line pressure gage.

(ah) Do the Repair Confirmation to put the airplane back to the usual condition.

G. Repair Confirmation

(1) Make sure the control lever for the landing gear is in the OFF position.

(2) Make sure the thrust levers are in the fully aft position.

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.

(3) Make sure the downlock pins are installed in the main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(4) Move the control lever for the landing gear to the DN position.

(5) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805

(6) Do this task: Lower the Airplane Off the Jacks, AMM TASK 07-11-01-580-816.

END OF TASK

802. LEFT GEAR, RIGHT GEAR Red Light On (In Air Only) - Fault Isolation

A. Description

(1) This task is for these observed faults:

(a) Main Landing Gear: LEFT GEAR green light does not come on with landing gear lever at DN. LEFT GEAR red light on, indications normal after alternate gear extension.

(b) Main Landing Gear: RIGHT GEAR green light does not come on with landing gear lever at DN. RIGHT GEAR red light on, indications normal after alternate gear extension.

(2) The landing gear position indicating and warning system uses lights in the flight compartment to show indications for these left and right main gear conditions:

(a) Left, right main gear down and locked

(b) Disagree

(c) Not down warning.

(3) The red LEFT, RIGHT GEAR light comes on for these conditions:

(a) Disagree: lever down, left, right gear not down and locked

(b) Disagree: lever not down, left, right gear not up and locked

(c) Gear not down warning.

(4) (SDS SUBJECT 32-61-00)

B. Possible Causes

(1) Main gear transfer cylinder

(2) Main gear uplock or downlock actuator

(3) Main gear actuator

(4) Proximity switch electronics unit (PSEU), E11

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Related Data

(1) (SSM 32-30-00)

(2) (SSM 32-61-11, 12)

(3) (WDM 32-64-11, 12)

E. Initial Evaluation

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

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.

(2) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

WARNING: REMOVE PERSONS AND EQUIPMENT FROM THE MAIN GEAR PATH. WHEN THE NOSE GEAR RETRACTS, THEY CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

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

(4) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(5) Remove the downlock pin for the main landing gear you will troubleshoot. To remove the downlock pin, do this task: Landing Gear Downlock Pins Removal, AMM TASK 32-00-01-080-801.

(6) Place the thrust levers in the fully forward position.

(7) Operate the override trigger and move the control lever for the landing gear to the UP position to retract the main gear.

(8) Move the control lever for the landing gear to the DN position.

(a) If the red LEFT, RIGHT GEAR light is on, then do the Fault Isolation Procedure - Main Gear Extension.

(b) If the red LEFT, RIGHT GEAR light goes out, and the green LEFT, RIGHT GEAR light is on, then there was an intermittent fault. Do these steps to complete this task:

1) Install the downlock pin for the main landing gear. To install the downlock pin, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

2) Do this task: Lower the Airplane Off the Jacks, AMM TASK 07-11-01-580-816.

F. Fault Isolation Procedure - Main Gear Extension

(1) If the left, right main gear did not unlock from the up and locked position and the LEFT, RIGHT GEAR red light stayed on, then do these steps:

(a) Replace the left, right main gear transfer cylinder. These are the tasks:
- Main Gear Transfer Cylinder Removal, AMM TASK 32-32-71-000-801
- Main Gear Transfer Cylinder Installation, AMM TASK 32-32-71-400-801

(b) If the left, right main gear operated correctly when you did the installation test for the main gear transfer cylinder, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

(c) If the left, right main gear did not operate correctly when you did the installation test for the main gear transfer cylinder, then do these steps:

1) Replace the left, right main gear uplock actuator. These are the tasks:
- Main Gear Uplock Actuator Removal, AMM TASK 32-32-41-000-801
- Main Gear Uplock Actuator Installation, AMM TASK 32-32-41-400-801

2) Do the Repair Confirmation at the end of this task.

(2) If the left, right main gear did not extend completely and the LEFT, RIGHT GEAR green light was not on, then do these steps:

(a) Replace the left, right main gear actuator. These are the tasks:
- Removal of the Actuator Assembly for the Main Gear, AMM TASK 32-32-11-000-801
- Installation of the Actuator Assembly for the Main Gear, AMM TASK 32-32-11-400-801

(b) If the left, right main gear operated correctly when you did the installation test for the main gear actuator, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

(c) If the left, right main gear extended but the downlock strut did not lock when you did the installation test for the main gear actuator, then replace the left, right main gear downlock actuator. These are the tasks:
- Main Gear Downlock Actuator Removal, AMM TASK 32-32-51-000-801
- Main Gear Downlock Actuator Installation, AMM TASK 32-32-51-400-801

(d) If the left, right main gear operated correctly when you did the installation test for the main gear downlock actuator, then you corrected the fault. Do the Repair Confirmation to put the airplane back to normal.

G. Repair Confirmation

(1) Make sure the control lever for the landing gear is in the OFF position.

(2) Make sure the thrust levers are in the fully aft position.

(3) Install the downlock pin in the main landing gear. To install the downlock pin, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

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.

(4) Make sure the downlock pins are installed in the main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(5) Move the control lever for the landing gear to the DN position.

(6) Do this task: Lower the Airplane Off the Jacks, AMM TASK 07-11-01-580-816.

——————— END OF TASK ———————

803. Both Main Landing Gear Slow to Retract or Extend - Fault Isolation

A. Description

(1) The extension and retraction sequence is the same for the left and right main landing gear. The main landing gear extension and retraction system has these hydraulic components:

(a) Main gear actuator

(b) Downlock actuator

(c) Uplock actuator

(d) Transfer cylinder

(2) The sequence for main gear retraction is as follows:

(a) The landing gear selector valve supplies up pressure when the control lever for the landing gear is moved to the UP position.

(b) Up pressure goes to the transfer cylinder and moves the piston in the transfer cylinder to the down side. This gives a time delay to let the downlock actuator unlock the downlock strut.

(c) Up pressure goes to the downlock actuator. The downlock actuator extends and unlocks the downlock strut.

(d) When the piston in the transfer cylinder gets to the end of the up side, up pressure goes to the up side of the main gear actuator. The main gear actuator moves to retract the gear.

(e) When the uplock roller on the main gear moves into the hook of the uplock mechanism, the uplock mechanism moves to the locked position.

(3) The sequence for main gear extension is as follows:

(a) The landing gear selector valve supplies down pressure when the control lever for the landing gear is moved to the DN position.

(b) Down pressure goes to the transfer cylinder and moves the piston in the transfer cylinder to the up side. This momentarily applies a retract force to the main gear to decrease the forces in the uplock mechanism so the uplock actuator can operate it.

(c) Down pressure goes to the uplock actuator. The uplock actuator retracts and unlocks the uplock mechanism.

(d) When the piston in the transfer cylinder gets to the end of the up side, down pressure goes to the down side of the main gear actuator. The main gear actuator moves to extend the gear.

(e) Down pressure goes to retract the downlock actuator. The downlock actuator moves the downlock strut to the locked position as the main landing gear extends.

(4) (SDS SUBJECT 32-32-00)

B. Possible Causes

(1) Rigging of the landing gear selector valve

(2) Landing gear selector valve

(3) A restriction in the hydraulic lines from the selector valve

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Related Data

(1) (SSM 32-30-00)

(2) (SSM 32-64-11, 12)

(3) (WDM 32-64-11, 12)

E. Initial Evaluation

(1) Do the operational test for the main landing gear. Do this task: Main Landing Gear Operational Test, AMM TASK 32-32-00-710-801.

(2) If both main landing gear extend and retract very slowly, then do the Fault Isolation Procedure below.

(3) If the retraction and extension times for the main landing gear are acceptable, then there was an intermittent fault. Do these steps to complete this task:

(a) Make sure the downlock pins are installed on the main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(b) Make sure the control lever for the landing gear is in the DN position.

(c) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(d) Do this task: Lower the Airplane Off the Jacks, AMM TASK 07-11-01-580-816.

F. Fault Isolation Procedure

(1) Make sure the landing gear control system is adjusted correctly. Do this task: Landing Gear Control System Adjustment, AMM TASK 32-31-00-820-801.

(a) If the landing gear control system is not adjusted correctly, then do these steps:

1) Do the adjustment of the landing gear control system, do this task: Landing Gear Control System Adjustment, AMM TASK 32-31-00-820-801.

2) Do the Repair Confirmation at the end of this task.

(b) If the landing gear control system is adjusted correctly, then continue.

(2) Make sure there are no restrictions in the hydraulic lines from the landing gear selector valve.

(a) If there is a restriction in the hydraulic lines from the selector valve to the components for main landing gear extension/retraction, then do these steps:

1) Flush or change the hydraulic lines.

2) Do the Repair Confirmation at the end of this task.

(b) If there is not a restriction in the hydraulic lines, then continue.

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

- Landing Gear Selector Valve Removal, AMM TASK 32-31-51-020-801
- Landing Gear Selector Valve Installation, AMM TASK 32-31-51-400-801

(a) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

(1) Do the operational test for the main landing gear. Do this task: Main Landing Gear Operational Test, AMM TASK 32-32-00-710-801.

——————— END OF TASK ———————

804. Right (Left) Main Landing Gear Slow to Retract or Extend - Fault Isolation

A. Description

(1) The extension and retraction sequence is the same for the left and right main landing gear. The main landing gear extension and retraction system has these hydraulic components:

(a) Main gear actuator

(b) Downlock actuator

(c) Uplock actuator

(d) Transfer cylinder

(e) Landing gear selector valve

(2) The sequence for main gear retraction is as follows:

(a) The landing gear selector valve supplies up pressure when the control lever for the landing gear is moved to the UP position.

(b) Up pressure goes to the transfer cylinder and moves the piston in the transfer cylinder to the down side. This gives a time delay to let the downlock actuator unlock the downlock strut.

(c) Up pressure goes to the downlock actuator. The downlock actuator extends and unlocks the downlock strut.

(d) When the piston in the transfer cylinder gets to the end of the up side, up pressure goes to the up side of the main gear actuator. The main gear actuator moves to retract the gear.

(e) When the uplock roller on the main gear moves into the hook of the uplock mechanism, the uplock mechanism moves to the locked position.

(3) The sequence for main gear extension is as follows:

(a) The landing gear selector valve supplies down pressure when the control lever for the landing gear is moved to the DN position.

(b) Down pressure goes to the transfer cylinder and moves the piston in the transfer cylinder to the up side. This momentarily applies a retract force to the main gear to decrease the forces in the uplock mechanism so the uplock actuator can operate it.

(c) Down pressure goes to the uplock actuator. The uplock actuator retracts and unlocks the uplock mechanism.

(d) When the piston in the transfer cylinder gets to the end of the up side, down pressure goes to the down side of the main gear actuator. The main gear actuator moves to extend the gear.

(e) Down pressure goes to retract the downlock actuator. The downlock actuator moves the downlock strut to the locked position as the main landing gear extends.

(4) (SDS SUBJECT 32-32-00)

B. Possible Causes

(1) Main gear trunnion bearings

(2) Hinges for the side strut assembly on the main gear

(3) A restriction in one of these components:

(a) Main gear transfer cylinder

(b) Main gear downlock actuator

(c) Main gear actuator

(4) A restriction in the hydraulic lines from and to the landing gear selector valve.

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Related Data

(1) (SSM 32-30-00)

(2) (SSM 32-64-11, 12)

(3) (WDM 32-64-11, 12)

E. Initial Evaluation

(1) Do the operational test for the main landing gear. Do this task: Main Landing Gear Operational Test, AMM TASK 32-32-00-710-801.

(2) If the right (left) main landing gear extends or retracts very slowly, then do the Fault Isolation Procedure below.

(3) If the extension/retraction times for the main landing gear are acceptable, then it was an intermittent fault. Do these steps to complete this task:

(a) Make sure the downlock pins are installed on the main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(b) Make sure the control lever for the landing gear is in the DN position.

(c) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(d) Do this task: Lower the Airplane Off the Jacks, AMM TASK 07-11-01-580-816.

F. Fault Isolation Procedure

(1) Inspect the trunnion bearings on the right (left) main landing gear.

(a) If the trunnion bearings are damaged, then do these steps:

1) Replace the damaged bearings These are the tasks:
- Main Landing Gear Forward Trunnion Bearing Assembly Removal, AMM TASK 32-11-83-000-801
- Main Landing Gear Forward Trunnion Bearing Assembly Installation, AMM TASK 32-11-83-400-801
- Landing Gear Support Beam Removal, AMM TASK 57-15-00-000-801
- Landing Gear Support Beam Installation, AMM TASK 57-15-00-400-801

2) Do the Repair Confirmation at the end of this task.

(b) If the trunnion bearings are not damaged, then continue.

(2) Inspect the pins and bushings at the hinge points for the side strut assembly on the right (left) main landing gear.

(a) If the pins or bushings are damaged, then do these steps:

1) Replace the side strut assembly for the main landing gear: These are the tasks:
- Main Landing Gear Side Strut Removal, AMM TASK 32-11-61-000-803
- Main Landing Gear Side Strut Installation, AMM TASK 32-11-61-400-803

2) Do the Repair Confirmation at the end of this task.

(b) If the pins or bushings at the hinge points for the side strut are not damaged, then continue.

(3) Make sure there are no restrictions in the transfer cylinder, the downlock actuator, the retract actuator, or the hydraulic lines from and to the landing gear selector valve, for the right (left) main landing gear.

(a) If there is a restriction in one of the above components then do these steps, as applicable:

1) Replace the main gear transfer cylinder. These are the tasks:
- Main Gear Transfer Cylinder Removal, AMM TASK 32-32-71-000-801
- Main Gear Transfer Cylinder Installation, AMM TASK 32-32-71-400-801

2) Replace the main gear downlock actuator. These are the tasks:
- Main Gear Downlock Actuator Removal, AMM TASK 32-32-51-000-801
- Main Gear Downlock Actuator Installation, AMM TASK 32-32-51-400-801

3) Replace the main gear actuator. These are the tasks:

- Removal of the Actuator Assembly for the Main Gear, AMM TASK 32-32-11-000-801
- Installation of the Actuator Assembly for the Main Gear, AMM TASK 32-32-11-400-801

4) Flush or replace the hydraulic lines from or to the landing gear selector valve.

5) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

(1) Do the operational test for the main landing gear. Do this task: Main Landing Gear Operational Test, AMM TASK 32-32-00-710-801.

(a) If the operational test for the main landing gear is satisfactory, then you corrected the fault.

——————— END OF TASK ———————

805. LEFT (RIGHT) GEAR Green Light Not On With Gear Lever DN, LEFT (RIGHT) GEAR Red Light On, Alternate Gear Extension Attempted - Fault Isolation

A. Description

(1) The landing gear position indicating and warning system uses lights in the flight compartment to show indications for these left and right main gear conditions:

(a) Left, right main landing gear down and locked

(b) Disagree

(c) Not down warning.

(2) The red LEFT, RIGHT GEAR light comes on for these conditions:

(a) Disagree: lever down, left, right main landing gear not down and locked

(b) Disagree: lever not down, left, right main landing gear not up and locked

(c) Gear not down warning.

(3) The manual extension system for the main landing gear permits you to lower the left and right main landing gear from the up and locked position when hydraulic system A pressure fails.

(4) The manual extension system for the main landing gear has these components:

(a) Manual extension control mechanism.

(b) Manual extension linkage

(c) System cable

(5) The manual extension system for the main landing gear operates independently of the normal extension and retraction system.

(6) The manual extension system for the landing gear has a limit switch in the manual extension access door. When the access door is opened for manual extension the switch sends a signal to the bypass valve that is in the landing gear selector valve. This moves the bypass valve to connect all hydraulic components in the landing gear system to the hydraulic system return.

(a) (SDS SUBJECT 32-34-00)

(7) To operate either the left or right system pull on the left or right main gear manual extension handle in the manual extension control mechanism. This pulls on the left or right MLG manual extension system cable which goes to that main gear manual extension linkage.

(8) The main gear manual extension linkage moves the uplock mechanism for that main landing gear to the unlocked position. The main landing gears extend by airloads and their own weight.

(9) (SDS SUBJECT 32-34-00)

(10) (SDS SUBJECT 32-61-00)

B. Possible Causes

(1) Main gear alternate extension system out of adjustment

(2) Damage to, or jammed, manual extension cable, pulley, drums, or manual extension linkage.

C. Related Data

(1) (SSM 32-30-00)

(2) (SSM 32-35-11)

(3) (SSM 32-64-11, 12)

(4) (WDM 32-35-11)

(5) (WDM 32-64-11, 12)

D. Fault Isolation Procedure

(1) Do the main gear manual extension system test for the main gear that is affected. Do this task: Main Gear Manual Extension System Test - Airplane on Jacks, AMM TASK 32-34-00-730-801.

(a) If the affected main gear did not freefall to the down and locked position, then do these steps:

1) Put the control lever for the landing gear in the OFF position.

2) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

3) Put the control lever to the DN position to hydraulically extend the main gear.

4) If the main gear did not extend to the down and locked position, then do these steps:

a) Visually examine the cables, pulleys, drums, and manual extension linkage to see if they are jammed or there is damage.

b) Remove the obstruction, if it is necessary.

c) If it is damaged, replace the manual extension control mechanism, these are the tasks:

- Main Gear Manual Extension Control Mechanism Removal, AMM TASK 32-34-11-000-801
- Main Gear Manual Extension Control Mechanism Installation, AMM TASK 32-34-11-400-801

d) If it is damaged, replace the manual extension mechanism for the main gear, these are the tasks:

- Removal of the Manual Extension Mechanism for the Main Gear, AMM TASK 32-34-21-000-801
- Installation of the Manual Extension Mechanism for the Main Gear, AMM TASK 32-34-21-400-801

e) If they are damaged, replace the main gear manual extension system cables, these are the tasks:

- Main Gear Manual Extension System Cables Removal, AMM TASK 32-34-31-000-801
- Main Gear Manual Extension System Cables Installation, AMM TASK 32-34-31-400-801

f) Do the adjustment of the main gear manual extension, do this task: Adjustment of the Manual Extension System for the Main Gear, AMM TASK 32-34-00-820-801 and the system test of the main gear manual extension, do this task: Adjustment of the Manual Extension System for the Main Gear, AMM TASK 32-34-00-820-801 to complete the task.

5) If the main gear did extend to the down and locked position, then continue.

6) Do the adjustment of the main gear manual extension, do this task: Adjustment of the Manual Extension System for the Main Gear, AMM TASK 32-34-00-820-801 and the system test of the main gear manual extension, do this task: Main Gear Manual Extension System Test - Airplane on Jacks, AMM TASK 32-34-00-730-801 to complete the task.

(b) If the affected main gear did freefall to the down and locked position, but the force required to release the main gear was too high, then continue.

(2) Do these steps to look for damaged or jammed components in the manual extension system for the main gear:

(a) Do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(b) Cycle the system several times, then do the main gear manual extension system test again. Do this task: Main Gear Manual Extension System Test - Airplane on Jacks, AMM TASK 32-34-00-730-801.

(c) If the force required to release the affected main gear was still too high, then do these steps to complete the task:

1) Visually examine the cables, pulleys, drums, and manual extension mechanism to see if they are jammed or there is damage.

2) Remove the obstruction, if it is necessary.

3) If it is damaged, replace the manual extension control mechanism, these are the tasks:
- Main Gear Manual Extension Control Mechanism Removal, AMM TASK 32-34-11-000-801
- Main Gear Manual Extension Control Mechanism Installation, AMM TASK 32-34-11-400-801

4) If it is damaged, replace the manual extension mechanism for the main gear, these are the tasks:
- Removal of the Manual Extension Mechanism for the Main Gear, AMM TASK 32-34-21-000-801
- Installation of the Manual Extension Mechanism for the Main Gear, AMM TASK 32-34-21-400-801

5) If they are damaged, replace the main gear manual extension system cables, these are the tasks:
- Main Gear Manual Extension System Cables Removal, AMM TASK 32-34-31-000-801
- Main Gear Manual Extension System Cables Installation, AMM TASK 32-34-31-400-801

6) Do the adjustment of the main gear manual extension, do this task: Adjustment of the Manual Extension System for the Main Gear, AMM TASK 32-34-00-820-801 and the system test of the main gear manual extension, do this task: Main Gear Manual Extension System Test - Airplane on Jacks, AMM TASK 32-34-00-730-801 to complete the task.

(3) If the system test for manual extension of the affected main gear was satisfactory, then there was an intermittent fault. Do these steps to complete the task:

(a) Make sure the downlock pins are installed on the main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(b) Make sure the control lever for the landing gear is in the DN position.

(c) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(d) Do this task: Lower the Airplane Off the Jacks, AMM TASK 07-11-01-580-816.

——————— END OF TASK ———————

801. Antiskid/Autobrake Control Unit (AACU) BITE Procedure

A. General

(1) The AACU will keep a record of faults in memory. These faults can be seen on the AACU message display by doing a Memory Recall.

(2) You do the Antiskid/Autobrake Control Unit (AACU) BITE tests at the front panel of the AACU. The AACU is on the E1-3 shelf in the electronic equipment bay. These are the functions in the AACU BITE that you will use in this task:

(a) Display Test

(b) Antiskid/Autobrake Control Test

(c) Memory Recall

(3) The AACU Display Test commands the display segments in the AACU display to come on. The ANTISKID INOP light in the flight compartment also comes on with the display test.

(4) The Antiskid/Autobrake Control Test does the internal tests and external interfaces test. The faults that are found during this test are active.

(5) If a maintenance message is displayed on the AACU and there is no fault procedure listed to correct it, it is assumed to be a failure of the AACU, do these steps:

(a) Replace the AACU, M162. These are the tasks:

- Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801
- Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801

1) Do this task: Antiskid/Autobrake Control Unit Functional Test, AMM TASK 32-42-00-720-801.

2) If the maintenance message does not show during the antiskid/autobrake functional test, then you corrected the fault.

B. BITE Procedure

(1) Do the fault MEMORY RECALL for the AACU:

(a) Set the PRESS/TEST-BIT switch to the BIT position.

(b) If there are no faults, then the display will show TEST END.

(c) If there are faults in the memory, then the display will show the first maintenance message. Do these steps:

1) Write the maintenance message.

2) Set the PRESS/TEST-BIT switch to the BIT position to look for more faults until the display show TEST END.

NOTE: The display shows TEST END when there are no fault in the memory. If you do not set the PRESS/TEST-BIT switch to the BIT position in 45 seconds, the test will end and the fault will be removed from the display.

(2) Do the display test for the AACU:

(a) Set the PRESS/TEST-BIT switch to the PRESS/TEST position.

(b) Make sure all display segments on the AACU display come on in a checkerboard pattern.

(c) Make sure the ANTI SKID INOP light in the flight compartment also comes on with the display test.

(d) If some of the display segments do not come on, then do these steps:

1) Replace the AACU, M162. These are the tasks:

- Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801

- Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801

2) Do the Antiskid/Autobrake Control Unit BITE again.

3) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(e) If the ANTISKID INOP amber light does not come on, then do these steps:

1) Push and release the ANTISKID INOP light, L2 (P2-2 panel) to use the press-to-test switch in the light. If press to test fails, replace the bulbs or troubleshoot wiring to master dim/test

2) Do a wiring check between pin 8 of the light connector D339 and the following pins: pin 5 of D11402 (relay R626, J24), pin 5 of D11406 (relay R628, J22), and pin 3 of D11404 (relay R627, J22). If there is not continuity to all three pins, repair the wiring.

a) Do the Antiskid/Autobrake Control Unit BITE again.

b) If the ANTISKID INOP amber light comes on, then you corrected the fault.

(3) Do the antiskid/autobrake control test for the AACU:

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

(b) Make sure the autobrake selector switch is in the OFF position.

(c) Make sure the two thrust levers are in the IDLE position.

(d) Make sure the wheel chocks are installed.

(e) Make sure the parking brake is released.

(f) Make sure the landing gear control lever is in the down position.

(g) Make sure the speed brake lever is in the DOWN position.

(h) Make sure the airplane is in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(i) Make sure the mode select switch for the air data inertial reference system (ADIRU) is in the NAV mode and wait for the alignment to complete.

1) Align the ADIRS. Do this task: Air Data Inertial Reference System - Alignment from the ISDU, AMM TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, AMM TASK 34-21-00-820-801.

(j) Set the rotary switch on the AACU to the NORM position.

(k) Push and release the RESET switch on the AACU.

(l) Set the autobrake selector switch as follows:

1) Set the autobrake switch to OFF position.

2) Set the autobrake switch to position 1.

NOTE: The AUTO BRAKE DISARM amber lights will stay on if the autobrake is disabled or the above arming conditions are not met.

(m) Push and hold the ENABLE/VERIFY switch on the AACU.

(n) While you hold the ENABLE/VERIFY switch, push and hold the VERIFY switch on the AACU.

NOTE: The ANTISKID INOP and AUTO BRAKE DISARM amber lights in the flight compartment should illuminate briefly during this test.

(o) Release the ENABLE/VERIFY switch and VERIFY switch at the same time.

(p) If the AUTOBRAKE DISARM amber light in the flight compartment does not come on during this test, then do these steps:

1) Push and release the AUTOBRAKE DISARM light, L1 (P2-2 panel) to use the press-to-test switch in the light. If press to test fails, replace the bulb or troubleshoot wiring to master dim/test.

2) With the Autobrake Selector switch armed in position 1, do a wiring continuity check between AACU connector D1040B, pin B7 (E1-3, M162), and AACU connector D1040A, pin D7. If there is not continuity to all these pins, repair the wiring or replace switch S4 in P2-2 panel.

   a) Do the Antiskid/Autobrake Control Unit BITE again.

   b) If the AUTOBRAKE DISARM amber light comes on, then you corrected the fault.

(q) If there are no faults, then the display will show TEST END. Do this step to complete the task:

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

(r) If the display shows BRK ####, then the test was initiated but not properly executed, you must repeat the test and make sure that you meet all of the initial conditions.

(s) If there are existing faults, then the display on the AACU will show the first maintenance message. Do these steps:

1) Write the maintenance message.

2) Push the VERIFY switch to look for more faults until the display shows TEST END.

NOTE: The display shows TEST END when the test is completed. If you do not push the VERIFY switch in 45 seconds, the test will end and the fault will be removed from the display.

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

4) Refer to the table at the beginning of this chapter to find the fault isolation task for the applicable maintenance message.

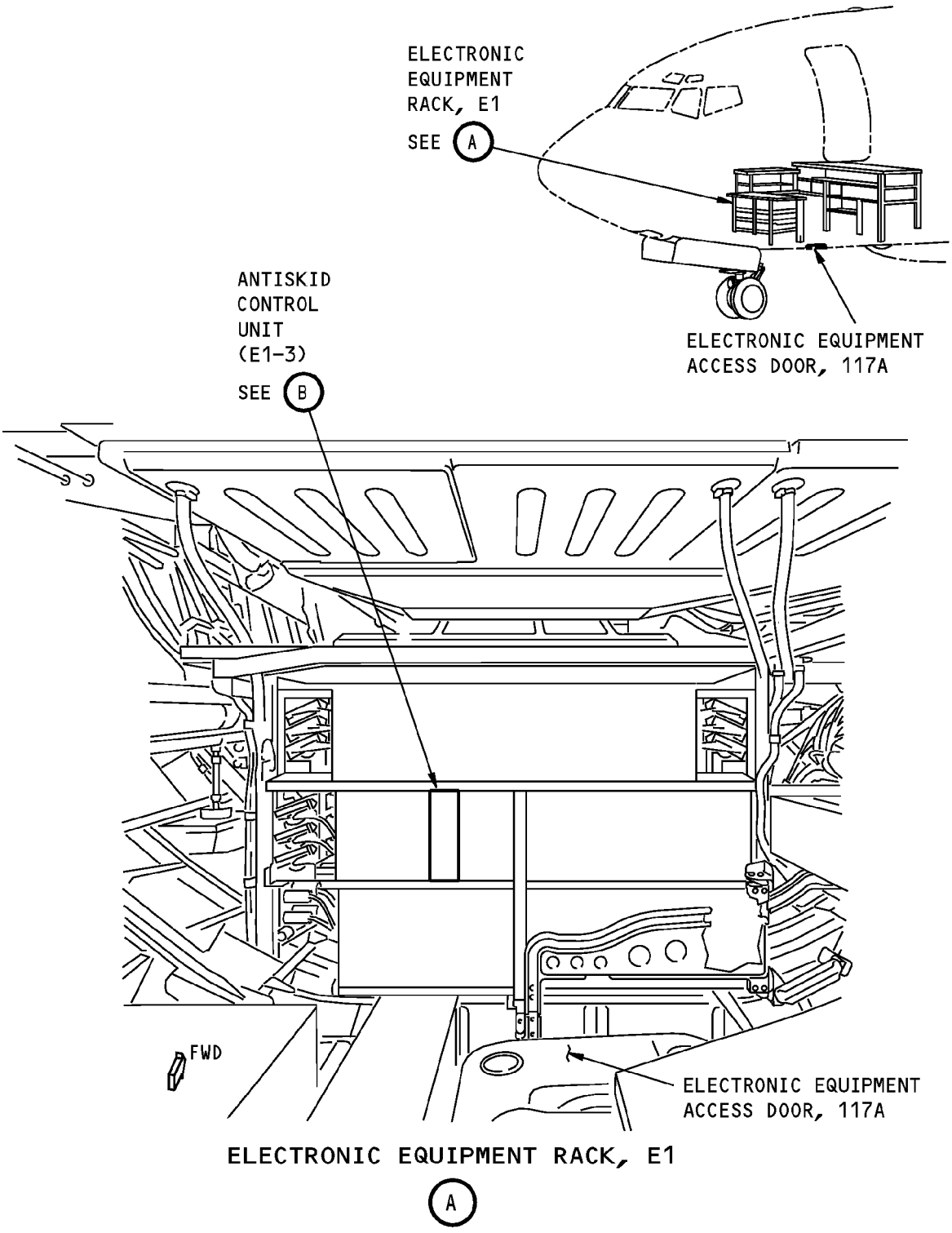
(t) If there are no existing faults, but there was an indication of a fault, then refer to the list of stored faults from step 1 above and the table at the end of this task to find the fault isolation task for the applicable maintenance message.

——————— END OF TASK ———————

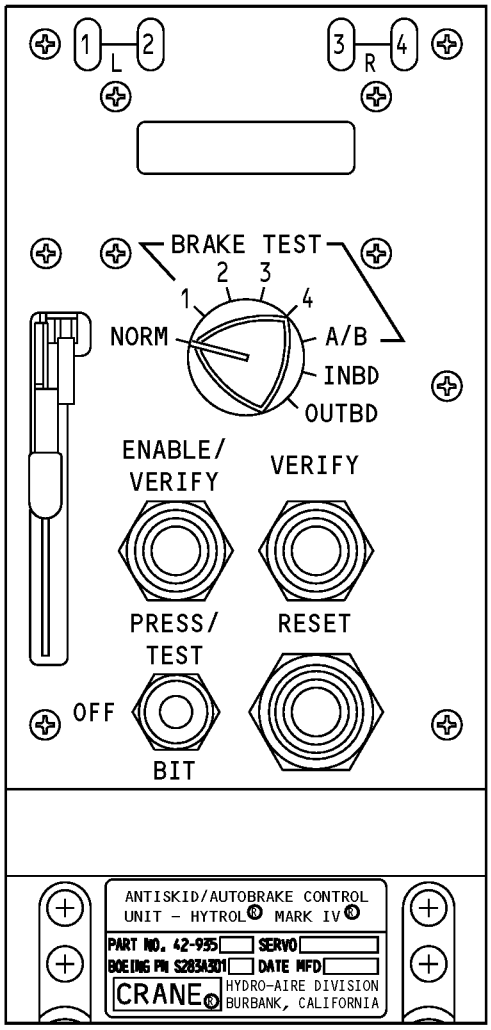
LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
ANTISKID	A/B CONT	32-42 TASK 807
ANTISKID	A/B SEL	32-42 TASK 821
ANTISKID	A/B SOL	32-42 TASK 808
ANTISKID	A/B SYS	32-42 TASK 803
ANTISKID	A/G 1	32-42 TASK 823
ANTISKID	A/G 2	32-42 TASK 823
ANTISKID	A/G SW	32-42 TASK 823
ANTISKID	ADIRU L	32-42 TASK 824

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
ANTISKID	ADIRU R	32-42 TASK 825
ANTISKID	BOX 1-4	32-42 TASK 803
ANTISKID	BOX 1	32-42 TASK 803
ANTISKID	BOX 2-3	32-42 TASK 803
ANTISKID	BOX 2	32-42 TASK 803
ANTISKID	BOX 3	32-42 TASK 803
ANTISKID	BOX 4	32-42 TASK 803
ANTISKID	BOX A/B	32-42 TASK 803
ANTISKID	BOX BITE	32-42 TASK 803
ANTISKID	CNTLP SW	32-42 TASK 810
ANTISKID	GEARSW1	32-42 TASK 812
ANTISKID	GEARSW2	32-42 TASK 812
ANTISKID	PARKBRK	32-42 TASK 811
ANTISKID	PRESL	32-42 TASK 822
ANTISKID	PRESR	32-42 TASK 822
ANTISKID	PWR 1-4	32-42 TASK 802
ANTISKID	PWR 2-3	32-42 TASK 802
ANTISKID	PWR A/B	32-42 TASK 826
ANTISKID	PWR BITE	32-42 TASK 826
ANTISKID	SOL P SW	32-42 TASK 809
ANTISKID	SP CO LI	32-42 TASK 803
ANTISKID	SP CO RO	32-42 TASK 803
ANTISKID	SP SW LI	32-42 TASK 806
ANTISKID	SP SW LO	32-42 TASK 806
ANTISKID	SP SW RI	32-42 TASK 806
ANTISKID	SP SW RO	32-42 TASK 806
ANTISKID	SPLRHDL	32-42 TASK 827

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
ANTISKID	THR L 1	32-42 TASK 813
ANTISKID	THR L 2	32-42 TASK 813
ANTISKID	THR R 1	32-42 TASK 813
ANTISKID	THR R 2	32-42 TASK 813
ANTISKID	THR SW	32-42 TASK 813
ANTISKID	VLV 1-2	32-42 TASK 805
ANTISKID	VLV 1	32-42 TASK 804
ANTISKID	VLV 2	32-42 TASK 804
ANTISKID	VLV 3-4	32-42 TASK 805
ANTISKID	VLV 3	32-42 TASK 804
ANTISKID	VLV 4	32-42 TASK 804
ANTISKID	XDCR 1	32-42 TASK 806
ANTISKID	XDCR 2	32-42 TASK 806
ANTISKID	XDCR 3	32-42 TASK 806
ANTISKID	XDCR 4	32-42 TASK 806



Antiskid/Autobrake Control Unit
Figure 201 (Sheet 1 of 2)/ 32-42-00-990-803



ANTISKID/AUTOBRAKE CONTROL UNIT

B

Antiskid/Autobrake Control Unit
Figure 201 (Sheet 2 of 2)/ 32-42-00-990-803

802. Antiskid Autobrake Control Unit Power for Antiskid 1-4, or 2-3 Problem - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) PWR 1-4

(b) PWR 2-3

(2) The antiskid/autobrake control unit (AACU) does not receive power.

B. Possible Causes

(1) Circuit breaker C195, or C196

(2) Antiskid/autobrake control unit (AACU), M162

(3) Wiring

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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. Related Data

(1) (SSM 32-41-11)

(2) (WDM 32-41-11)

E. Initial Evaluation

(1) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(a) If the maintenance message does not show during the antiskid/autobrake control test, then there was an intermittent fault.

(b) If the maintenance message shows during the antiskid/autobrake control test, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the power wiring:

(a) Remove the antiskid/autobrake control unit, M162 to get access to the electrical connectors. To remove it, do this task: Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801.

(b) In the table below, find the electrical connector and the pair of pins for the applicable circuit breaker:

Table 201

ANTISKID WHEELS 1,2,3, and 4 (WDM 32-41-11)

CIRCUIT BREAKER EQUIPMENT NUMBER	CIRCUIT BREAKER CONNECTOR	AACU CONNECTOR
HAP 001, 006, 007		
WHEEL 1&4	D46065P	D1040B

HAP 001, 006, 007 (Continued)

(Continued)

ANTISKID WHEELS 1,2,3, and 4 (WDM 32-41-11)

CIRCUIT BREAKER EQUIPMENT NUMBER	CIRCUIT BREAKER CONNECTOR		AACU CONNECTOR
C195	pin 9	————	pin C1
HAP ALL			
WHEEL 1&4	D40750P		D1040B
C195	pin 2	————	pin C1
WHEEL 2&3	D46069P		D1040A
C196	pin 8	————	pin C1

HAP 001, 006, 007

(c) Review (WDM 32-41-11) for the applicable connector congfiguration that may appply to circuit breaker C195, 6E16 Landing Gear Antiskid Outbd.

HAP ALL

(d) Do a check for 28V DC from pin C1 of the connector D1040B or D1040A to structure ground (WDM 32-41-11).

(e) If there is not 28V DC at pin C1 of D1040A or D1040B, then do these steps:

1) Open the P6-3 load control center panel.

2) Do a check for 28V DC at the load terminal of circuit breaker C195 or C196.

3) If there is not 28V DC at the load terminal, then do these steps:

a) Replace this circuit breaker, C195 or C196 (WDM 32-41-11):

<1> These are the 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

b) Re-install the antiskid/autobrake control unit, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

c) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

d) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

4) If there is 28V DC at the load terminal, then do these steps:

a) Repair the wiring between these pins of the connector D1040A or D1040B at the E1-3 shelf and the load terminal of circuit breaker C195 or C196 (WDM 32-41-11):

b) Re-install the antiskid/autobrake control unit, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

c) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

d) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(f) If there is 28V DC at pins C1 of the connector D1040A or D1040B, then continue.

(2) Install a new AACU M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

———————— END OF TASK ————————

803. Antiskid/Autobrake System Control Unit Internal Problem - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) BOX 1-4

(b) BOX 2-3

(c) BOX 1

(d) BOX 2

(e) BOX 3

(f) BOX 4

(g) BOX BITE

(h) BOX A/B

(i) SP CO LI

(j) SP CO RO

(k) A/B SYS

(2) These messages indicate an internal failure of the antiskid/autobrake control unit (AACU), M162, or the auto speedbrake module (ASM), M980, or the alternate antiskid valves. The possible causes of each message is as follows:

(a) BOX 1-4 indicates a failure of the outboard antiskid card (5V DC, memory, communication, or code execution failure).

1) BOX 1-4 can also indicate an out of tolerance condition for normal antiskid valve 1 or normal antiskid valve 4.

2) BOX 1-4 can also indicate an out of tolerance condition for the alternate antiskid valve which drives wheel pair 1 and 2.

(b) BOX 2-3 indicates a failure of the inboard antiskid card (5V DC, memory, communication, or code execution failure).

1) BOX 2-3 can also indicate an out of tolerance condition for normal antiskid valve 2 or normal antiskid valve 3.

2) BOX 2-3 can also indicate an out of tolerance condition for the alternate antiskid valve which drives wheel pair 3 and 4.

(c) BOX 1 indicates a wheel 1 transducer interface or valve driver failure.

(d) BOX 2 indicates a wheel 2 transducer interface or valve driver failure.

(e) BOX 3 indicates a wheel 3 transducer interface or valve driver failure.

(f) BOX 4 indicates a wheel 4 transducer interface or valve driver failure.

(g) BOX BITE indicates a BITE card failure (memory, comm, or code execution).

(h) BOX A/B indicates an autobrake card failure (5v DC power, memory, comm, or code execution) when landing or RTO autobrake is selected.

1) BOX A/B can also indicate a problem with a brake pedal pressure switch. Perform procedure in AMM 32-42-00/501 tests 2 and test 6.

(i) SP CO LI indicates the left inboard wheel speed switch control disagrees with output for more than 3 seconds.

(j) SP CO RO indicates the right outboard wheel speed switch control disagrees with output for more than 3 seconds.

(k) A/B SYS indicates that the AACU detected a fault during the system test, but is unable to isolate the fault.

B. Possible Causes

(1) Antiskid/autobrake control unit (AACU), M162

(2) Auto speedbrake module (ASM), M980

(3) Normal antiskid valves.

(4) Alternate antiskid valves.

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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. Related Data

(1) (SSM 32-41-11)

(2) (WDM 32-41-11)

E. Initial Evaluation

(1) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(a) If the maintenance message does not show during the antiskid/autobrake control test, then there was an intermittent fault.

(b) If the maintenance message shows during the antiskid/autobrake control test, then do the Fault Isolation Procedure below.

(2) Do this task when you get error messages ''i'' or ''j'' above: Auto Speed Brake/Antiskid Interface Test, 27-62 TASK 801

(3) Do this task when you get error message ''h'' above: Antiskid/Autobrake System - Adjustment/ Test, AMM PAGEBLOCK 32-42-00/501 test 2 and test 6.

F. Fault Isolation Procedure

(1) Replace the AACU, M162. These are the tasks:
- Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801,
- Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(c) If the maintenance message still shows, then continue.

(2) Do this task: Normal Antiskid Valve 1,2,3, or 4 Problem - Fault Isolation, 32-42 TASK 804.

(a) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(b) If the maintenance message still shows, then continue.

(3) Do this task: Alternate Antiskid Valve 1-2, or 3-4 Problem - Fault Isolation, 32-42 TASK 805.

(a) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

——————— END OF TASK ———————

804. Normal Antiskid Valve 1,2,3, or 4 Problem - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) VLV 1

(b) VLV 2

(c) VLV 3

(d) VLV 4

(2) The antiskid/autobrake control unit (AACU) does not receive a valid signal from a normal antiskid valve.

B. Possible Causes

(1) Antiskid valves V7 (wheel #2), V8 (wheel #3), V9 (wheel #1), V10 (wheel #4)

(2) Antiskid/autobrake control unit (AACU), M162

(3) Wiring

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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. Related Data

(1) (SSM 32-41-11)

(2) (WDM 32-41-11)

E. Initial Evaluation

(1) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(a) If the maintenance message does not show during the antiskid/autobrake control test, then there was an intermittent fault.

(b) If the maintenance message show during the antiskid/autobrake control test, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the normal antiskid valves:

(a) Disconnect the connector from the applicable normal antiskid valve.

Table 202

ANTISKID VALVE EQUIPMENT NUMBER		ANTISKID VALVE CONNECTOR NUMBER
LEFT OUTBOARD WHEEL		
V9	————	D926
LEFT INBOARD WHEEL		
V7	————	D924
RIGHT INBOARD WHEEL		
V8	————	D930
RIGHT OUTBOARD WHEEL		
V10	————	D932

(b) Measure the resistance between pin 1 and pin 2 of the connector at the applicable normal antiskid valve.

(c) If the resistance is not 180-240 ohms, then do these steps:

1) Replace the applicable normal antiskid valve. These are the tasks:
- Antiskid Valve Removal, AMM TASK 32-42-31-000-801
- Antiskid Valve Installation, AMM TASK 32-42-31-400-801

2) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

3) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(d) If the resistance is 180-240 ohms, then continue.

(2) Do this check of the wiring:

(a) Remove the antiskid/autobrake control unit, M162 to get access to the electrical connectors. To remove it, do this task: Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801.

(b) In the table below, find the electrical connector and the pair of pins for the applicable normal antiskid valve:

Table 203

ANTISKID VALVE EQUIPMENT NUMBER	ANTISKID VALVE CONNECTOR NUMBER		AACU CONNECTOR
WHEEL #1	D926		D1040A
V9	pin 1	————	pin B1
WHEEL #2	D924		D1040B
V7	pin 1	————	pin A1

(Continued)

WHEEL #3	D930		D1040B
V8	pin 1	————	pin A3
WHEEL #4	D932		D1040A
V10	pin 1	————	pin B3

(c) Do a wiring check between the pair of pins of the connector D1040A or D1040B at the E1-3 shelf and the connector at the normal antiskid valve.

(d) Make sure there is continuity between pin 2 of the connector at the applicable normal antiskid valve, and structure ground.

(e) Check for continuity between pin 1 of D932 to D926 and the back of the applicable connector.

(f) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the connector to the normal antiskid valve.

3) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

4) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

5) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(g) If you do not find a problem with the wiring, then continue:

1) Re-connect the connector to the normal antiskid valve.

(3) Install a new AACU M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

———————— END OF TASK ————————

805. Alternate Antiskid Valve 1-2, or 3-4 Problem - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) VLV 1-2

(b) VLV 3-4

(2) The antiskid/autobrake control unit (AACU) does not receive a valid signal from an alternate antiskid valve.

B. Possible Causes

(1) Antiskid valves, V124 or V125

(2) Antiskid/autobrake control unit (AACU), M162

(3) Wiring

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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. Related Data

(1) (SSM 32-41-11)

(2) (WDM 32-41-11)

E. Initial Evaluation

(1) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(a) If the maintenance message does not show during the antiskid/autobrake control test, then there was an intermittent fault.

(b) If the maintenance message show during the antiskid/autobrake control test, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the alternate antiskid valves:

(a) Disconnect the connector D2872 (right ALT) or D2874 (left ALT) from the applicable alternate antiskid valve.

(b) Measure the resistance between pin 1 and pin 2 of the connector at the applicable alternate antiskid valve.

(c) If the resistance is not 180-240 ohms, then do these steps:

1) Replace the applicable alternate antiskid valve. These are the tasks:
- Antiskid Valve Removal, AMM TASK 32-42-31-000-801
- Antiskid Valve Installation, AMM TASK 32-42-31-400-801

2) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

3) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(d) If the resistance is 180-240 ohms, then continue.

(2) Do this check of the wiring:

(a) Remove the antiskid/autobrake control unit, M162 to get access to the electrical connectors. To remove it, do this task: Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801.

(b) In the table below, find the electrical connector and the pair of pins for the applicable alternate antiskid valve:

Table 204

ANTISKID VALVE EQUIPMENT NUMBER	ANTISKID VALVE CONNECTOR NUMBER		AACU CONNECTOR
WHEEL #1&2	D2874		D1040A
V125	pin 1	———	pin A15

(Continued)

ANTISKID VALVE EQUIPMENT NUMBER	ANTISKID VALVE CONNECTOR NUMBER		AACU CONNECTOR
WHEEL #3&4	D2872		D1040B
V124	pin 1	———	pin B15

(c) Do a wiring check between the pair of pins of the connector D1040A or D1040B at the E1-3 shelf and the connector at the normal antiskid valve.

(d) Make sure there is continuity between pin 2 of the connector at the applicable alternate antiskid valve, and structure ground.

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the connector to the alternate antiskid valve.

3) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

4) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

5) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(f) If you do not find a problem with the wiring, then continue:

1) Re-connect the connector to the alternate antiskid valve.

(3) Install a new AACU M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

——————— END OF TASK ———————

806. Antiskid Transducer Problem - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) XDCR 1

(b) XDCR 2

(c) XDCR 3

(d) XDCR 4

(e) SP SW LI

(f) SP SW LO

(g) SP SW RI

(h) SP SW RO

(2) The antiskid/autobrake control unit (AACU) does not receive a valid signal from an antiskid transducer.

B. Possible Causes

(1) Antiskid transducer, T392, T393, T394, or T395

(2) Antiskid/autobrake control unit (AACU), M162

(3) Wiring

(4) Auto speedbrake module (ASM), M980

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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. Related Data

(1) (SSM 32-41-11)

(2) (WDM 32-41-11)

E. Initial Evaluation

(1) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(a) If the maintenance message does not show during the antiskid/autobrake control test, then there was an intermittent fault.

(b) If the maintenance message show during the antiskid/autobrake control test, then do the Fault Isolation Procedure below.

(2) Do this task if you get message ''e'', ''f'', ''g'', or ''h'' above: Auto Speed Brake/Antiskid Interface Test, 27-62 TASK 801.

F. Fault Isolation Procedure

(1) Do this check of antiskid transducer:

(a) Disconnect connector from the applicable antiskid transducer.

(b) Measure the resistance between pin 1 and pin 3 of the connector at the applicable antiskid transducer.

(c) If the resistance is not 130-800 ohms, do these steps:

1) Replace the applicable antiskid transducer. These are the tasks:
- Transducer Removal, AMM TASK 32-42-11-000-801
- Transducer Installation, AMM TASK 32-42-11-400-801

2) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

3) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(d) If the resistance is 130-800 ohms, then continue.

(2) Do this check of the wiring:

(a) Remove the antiskid/autobrake control unit, M162 to get access to the electrical connectors. To remove it, do this task: Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801.

(b) In the table below, find the electrical connector and the pair of pins for the applicable antiskid transducer:

Table 205

TRANSDUCER EQUIPMENT NUMBER	AACU CONNECTOR		TRANSDUCER CONNECTOR NUMBER
WHEEL #1	D1040B		D11120
T392	pin A6	————	pin 3
	pin A5	————	pin 1
WHEEL #2	D1040B		D11122
T394	pin A13	————	pin 3
	pin A12	————	pin 1
WHEEL #3	D1040A		D11124
T393	pin B13	————	pin 3
	pin B12	————	pin 1
WHEEL #4	D1040A		D11126
T395	pin B6	————	pin 3
	pin B5	————	pin 1

(c) Do a wiring check between the pairs of pins of connector D1040B or D1040A at the E1-3 shelf and the pins of the connector at the antiskid transducer.

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the connector to the antiskid transducer.

3) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

4) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

5) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(e) If you do not find a problem with the wiring, then continue:

1) Re-connect the connector to the antiskid transducer.

(3) Install a new AACU M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

———— END OF TASK ————

807. Autobrake Control Valve Module - Servo Valve Problem - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) A/B CNTL

(2) The possible cause of message A/B CNTL is the control pressure switch indicates low pressure, the solenoid pressure switch indicates high pressure, and the control valve is energized.

(3) The antiskid/autobrake control unit (AACU) does not receive a valid signal from the servo valve of the autobrake control valve module.

B. Possible Causes

(1) The servo valve of the autobrake control valve module.

(2) Antiskid/autobrake control unit (AACU), M162

(3) Wiring

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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. Related Data

(1) (SSM 32-42-11)

(2) (WDM 32-42-11)

E. Initial Evaluation

(1) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(a) If the maintenance message does not show during the antiskid/autobrake control test, then there was an intermittent fault.

(b) If the maintenance message shows during the antiskid/autobrake control test, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the autobrake control valve module:

NOTE: Steps (a) through (b) may be skipped if you do not wish to replace individual Line Replaceable Units.

(a) Disconnect the electrical connector D2574 from the servo valve.

(b) Measure the resistance between the pin 1 and pin 2 of the connector at the servo valve.

(c) If the resistance is not 400 - 600 ohms, then do these steps:

1) Replace the servo valve. These are the tasks:

- Autobrake Pressure Control Module Line Replaceable Units Removal, AMM TASK 32-42-81-000-802

- Autobrake Pressure Control Module Line Replaceable Units Installation, AMM TASK 32-42-81-000-803

2) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

3) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(d) If the resistance is 400 - 600 ohms, do these steps:

1) Inspect and clean the connector D2574.

2) Reconnect connector D2574.

3) Replace the servo valve pressure switch. These are the tasks:
- Autobrake Pressure Control Module Line Replaceable Units Removal, AMM TASK 32-42-81-000-802
- Autobrake Pressure Control Module Line Replaceable Units Installation, AMM TASK 32-42-81-000-803

NOTE: The servo valve pressure switch is associated with connector D2576.

4) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

5) If the maintenance message does not show during during the antiskid/autobrake control/ test, then you corrected the fault.

(e) If the maintenance message still shows, then do these steps:

1) Replace the autobrake control valve module. These are the tasks:
- Autobrake Pressure Control Module Line Replaceable Units Removal, AMM TASK 32-42-81-000-802
- Autobrake Pressure Control Module Line Replaceable Units Installation, AMM TASK 32-42-81-000-803

2) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

3) If the maintenance message does not show during during the antiskid/autobrake control/ test, then you corrected the fault.

(2) Do this check of the wiring:

(a) Remove the antiskid/autobrake control unit, M162 to get access to the electrical connectors. To remove it, do this task: Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801.

(b) In the table below, find the electrical connector and the pair of pins for the servo valve and pressure switch:

AACU CONNECTOR D1040A		**SERVO VALVE CONNECTOR D2574**
pin D9	- - - - - - - - - - - - - - - - - -	pin 2
pin C9	- - - - - - - - - - - - - - - - - -	pin1

AACU CONNECTOR D1040A		**PRESSURE SW CONNECTOR D2576**
pin C7	- - - - - - - - - - - - - - - - - -	pin 3

D1040B		D2576
pin A10	- - - - - - - - - - - - - - - - -	pin 2

(c) Do a wiring check between the pins of connector D1040A and D1040B at the E1-3 shelf and the pins of connector D2574 at the servo valve and connector D2576 at the pressure switch.

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the connector to the servo valve.

3) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

4) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

5) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(e) If you do not find a problem with the wiring, then continue:

1) Re-connect the connector to the servo valve and pressure switch.

(3) Install a new AACU M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

——————— END OF TASK ———————

808. Autobrake Control Valve Module - Solenoid Valve Problem - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) A/B SOL

(2) The possible cause of message A/B SOL is the solenoid pressure switch indicates high pressure when the solenoid valve is commanded closed or the solenoid pressure switch indicates low pressure when the solenoid valve is commanded open.

(3) The antiskid/autobrake control unit (AACU) does not receive a valid signal from the solenoid valve of the autobrake control valve module.

B. Possible Causes

(1) The solenoid valve of the autobrake control valve module.

(2) Antiskid/autobrake control unit (AACU), M162

(3) Wiring

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

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

Row	Col	Number	Name
A	18	C00583	LANDING GEAR AUTOBRAKE BITE CONT 1
E	16	C00196	LANDING GEAR ANTISKID INBD
E	18	C00195	LANDING GEAR ANTISKID OUTBD

D. Related Data

(1) (SSM 32-42-11)

(2) (WDM 32-42-11)

E. Initial Evaluation

(1) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(a) If a maintenance message does not show during the antiskid/autobrake control test, then there was an intermittent fault.

(b) If the maintenance message shows during the antiskid/autobrake control test, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the solenoid valve of the autobrake control valve module:

(a) Disconnect the solenoid valve from the autobrake control valve module, do this task: Autobrake Pressure Control Module Line Replaceable Units Removal, AMM TASK 32-42-81-000-802.

(b) Make sure there is continuity between the pin 1 and pin 2 of the connector D2570 at the solenoid valve.

(c) If you do not have continuity between pin 1 and pin 2 of D2570, then do these steps:

1) Replace the solenoid valve. These are the tasks:
- Autobrake Pressure Control Module Line Replaceable Units Removal, AMM TASK 32-42-81-000-802
- Autobrake Pressure Control Module Line Replaceable Units Installation, AMM TASK 32-42-81-000-803

2) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

3) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(d) If you do have continuity between pin 1 and pin 2, then continue.

(2) Do this check of the wiring:

(a) Remove the antiskid/autobrake control unit (AACU), M162. To remove it, do this task: Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801.

(b) In the table below, find the electrical connector and the pair of pins for the solenoid valve:

AACU CONNECTOR D1040A		**SOLENOID VALVE CONNECTOR D2570**
pin B8	- - - - - - - - - - - - - - - - - -	pin 2

(c) Do a wiring check between pin B8 of connector D1040A at the E1-3 shelf and pin 2 of the connector for the solenoid valve.

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Connect solenoid valve to the autobrake control valve module, do this task: Autobrake Pressure Control Module Line Replaceable Units Installation, AMM TASK 32-42-81-000-803.
3) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.
4) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.
5) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(e) If you do not find a problem with the wiring, then continue:

1) Connect solenoid valve to the autobrake control valve module, do this task: Autobrake Pressure Control Module Line Replaceable Units Installation, AMM TASK 32-42-81-000-803.

(3) Install a new AACU M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

———————— END OF TASK ————————

809. Autobrake Control Valve Module - Solenoid Pressure Switch Problem - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) SOL P SW

(2) The possible cause of message SOL P SW is the solenoid pressure switch indicates low pressure (< 1000 psi).

(3) The antiskid/autobrake control unit (AACU) does not receive a valid signal from the solenoid pressure switch of the autobrake control valve module.

B. Possible Causes

(1) The solenoid pressure switch on the autobrake control valve module.

(2) Antiskid/autobrake control unit (AACU), M162

(3) Wiring

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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. Related Data

(1) (SSM 32-42-11)

(2) (WDM 32-42-11)

E. Initial Evaluation

(1) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(a) If the maintenance message does not show during the antiskid/autobrake control test, then there was an intermittent fault.

(b) If the maintenance message shows during the antiskid/autobrake control test, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the solenoid pressure switch:

(a) Prepare to supply pressure through the autobrake control module:

1) Make sure the two thrust levers are in the IDLE position.

2) Make sure the landing gear control lever is in the DOWN position.

3) Make sure the spoilers are stowed.

4) Make sure the Right and Left ADIRSs are in the NAV mode.

a) Align the ADIRS. Do this task: Air Data Inertial Reference System - Alignment from the ISDU, AMM TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, AMM TASK 34-21-00-820-801.

5) Make sure the tires have chocks installed around them.

6) 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.

7) For the normal (system B) hydraulic system, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

8) Set the TEST SELECTOR switch on the antiskid control unit to A/B.

(b) Disconnect the connector D2572 from the solenoid pressure switch.

(c) Prepare to check the continuity between pin 1 and pin 2 of the solenoid pressure switch within 10 seconds of enabling the control module in the steps that follow.

(d) Do the steps that follow for autobrake selector position "MAX" to supply pressure through the autobrake control module.

1) Set the autobrake selector switch on the P2-2 panel to "MAX".

2) Push and hold the ENABLE/VERIFY button on the antiskid control unit.

3) While you hold the ENABLE/VERIFY button, push and hold the VERIFY button on the antiskid control unit.

4) Release the ENABLE/VERIFY button and the VERIFY button at the same time.

NOTE: The antiskid control unit display will show BRK A/B4 during the test. The AUTOBRAKE DISARM light on the P2-2 panel will come on at the end of this test.

(e) Make sure there is continuity between pin 1 and pin 2 of the solenoid pressure switch.

NOTE: The control module will supply 3000 psi to the brake for approximately 10 seconds.

(f) Set the autobrake selector switch on the P2-2 panel to "OFF".

(g) Set the autobrake selector switch on the antiskid control unit to NORM

(h) Do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(i) If there is not continuity between pin 1 and pin 2 of the solenoid pressure switch, then do these steps:

1) Replace the solenoid pressure switch. These are the tasks:
   - Autobrake Pressure Control Module Line Replaceable Units Removal, AMM TASK 32-42-81-000-802
   - Autobrake Pressure Control Module Line Replaceable Units Installation, AMM TASK 32-42-81-000-803
2) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.
3) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(j) If there is continuity between pin 1 and pin 2 of the solenoid pressure switch, then continue.

(2) Do this check of the wiring:

(a) Disconnect electrical connector D2572 from the solenoid pressure switch.

(b) Remove the antiskid/autobrake control unit, M162 to get access to the electrical connectors. To remove it, do this task: Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801.

(c) In the table below, find the electrical connector and the pin for the solenoid pressure switch:

AACU CONNECTOR D1040B		SERVO VALVE PRESSURE SWITCH CONNECTOR D2572
pin D4	- - - - - - - - - - - - - - - - - -	pin 1

(d) Do a wiring check between pin D4 of connector D1040B at the E1-3 shelf and pin 1 of the connector for the solenoid pressure switch.

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-connect the connector to the solenoid pressure switch.
3) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.
4) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.
5) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(f) If you do not find a problem with the wiring, then continue:

1) Re-connect the connector to the solenoid pressure switch.

(3) Install a new AACU M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

——————— END OF TASK ———————

810. Autobrake Control Valve Module - Servo Valve Pressure Switch Problem - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) CNTLP SW

(2) The possible cause of message CNTLP SW is the servo valve pressure switch indicates low pressure (< 1000 psi).

(3) The antiskid/autobrake control unit (AACU) does not receive a valid signal from the servo valve of the autobrake control valve module.

B. Possible Causes

(1) The servo valve of the autobrake control valve module.

(2) Antiskid/autobrake control unit (AACU), M162

(3) Wiring

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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. Related Data

(1) (SSM 32-42-11)

(2) (WDM 32-42-11)

E. Initial Evaluation

(1) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(a) If the maintenance message does not show during the antiskid/autobrake control test, then there was an intermittent fault.

(b) If the maintenance message shows during the antiskid/autobrake control test, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Replace the servo valve pressure switch. These are the tasks:

- Autobrake Pressure Control Module Line Replaceable Units Removal, AMM TASK 32-42-81-000-802

- Autobrake Pressure Control Module Line Replaceable Units Installation, AMM TASK 32-42-81-000-803

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(2) Do this check of the wiring:

(a) Disconnect electrical connector D2576 from the servo valve pressure switch.

(b) Remove the antiskid/autobrake control unit, M162 to get access to the electrical connectors. To remove it, do this task: Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801.

(c) In the table below, find the electrical connector and the pins for the servo valve pressure switch:

Table 206

AACU CONNECTOR	AACU CONNECOR PIN NUMBER	SERVO VALVE PRESSURE SWITCH CONNECTOR PIN NUMBER	SERVO VALVE PRESSURE SWITCH CONNECTOR
D1040A	pin C7	pin 3	D2576
D1040B	pin A10	pin 2	

(d) Do a wiring check between the pins of connector D1040B or D1040A at the E1-3 shelf and the pins of the connector for the servo valve pressure switch.

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the connector to the servo valve pressure switch.

3) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

4) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

5) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(f) If you do not find a problem with the wiring, then continue:

1) Re-connect the connector D2576 to the servo valve pressure switch.

(3) Install a new AACU M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

——————— END OF TASK ———————

811. Parking Brake Shutoff Valve Problem - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) PARKBRK

(2) The possible cause of message PARKBRK is the antiskid/autobrake control unit (AACU) does not receive a valid signal for more than two seconds.

B. Possible Causes

(1) Parking brake valve, V11

(2) Wiring problem

(3) Park brake close sense relay, R613

(4) Antiskid/autobrake control unit (AACU), M162

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

D. Related Data

(1) (SSM 32-44-11)

(2) (WDM 32-44-11)

E. Initial Evaluation

(1) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(a) If the maintenance message does not show during the antiskid/autobrake control test, then do the steps that follow:

1) Fully push the brake pedals and set the parking brake.

2) Do a check for the maintenance message PARKBRK on the AACU.

3) If the maintenance message does not show during the antiskid/autobrake control test, then there was an intermittent fault.

4) Release the parking brake.

(b) If the maintenance message shows during the antiskid/autobrake control test, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the ground wire for the parking brake valve:

(a) Disconnect connector D928 from the parking brake valve, V11.

(b) Do a continuity check from pin 9 of connector D928 to structure ground.

(c) If there is no continuity at pin 9 of connector D928, then do these steps:

1) Repair the wiring.

2) Re-connect the connector D928.

3) Do the Repair Confirmation at the end of this task.

(d) If there is continuity at pin 9 of connector D928, then continue.

(2) Do these checks of the parking brake valve, V11:

(a) Do a continuity check between pin 8 and pin 9 on the parking brake valve, V11.

(b) If there is no continuity between pin 8 and pin 9 on the parking brake valve, V11, then do these steps:

1) Replace the parking brake valve, V11. These are the tasks:
   - Parking Brake Shutoff Valve Removal, AMM TASK 32-44-21-000-801
   - Parking Brake Shutoff Valve Installation, AMM TASK 32-44-21-400-801
2) Do the Repair Confirmation at the end of this task.

(c) If there is continuity between pin 8 and pin 9 on the parking brake valve, V11, then continue.
1) Re-connect the connector D928.
2) Fully push the brake pedals and set the parking brake.

(d) Disconnect connector D928 from the parking brake valve, V11.

(e) Do a continuity check between pin 9 and pin 10 on the parking brake valve, V11.

(f) If there is no continuity between pin 9 and pin 10 on the parking brake valve, V11, then do these steps:
1) Replace the parking brake valve, V11. These are the tasks:
   - Parking Brake Shutoff Valve Removal, AMM TASK 32-44-21-000-801
   - Parking Brake Shutoff Valve Installation, AMM TASK 32-44-21-400-801
2) Do the Repair Confirmation at the end of this task.

(g) If there is continuity between pin 9 and pin 10 on the parking brake valve, V11, then continue.

(3) Do this wiring check:

(a) Disconnect connector D928 from the parking brake valve, V11 and connector D11154 from the park brake close sense relay, R613.

(b) Do a wiring check between these pins of connector D928 at the parking brake valve, V11 and the pins of connector D11154 at the park brake close sense relay, R613:

D928		D11154
pin 10	- - - - - - - - - - - - - - - - - - -	pin 4
pin 8	- - - - - - - - - - - - - - - - - - -	pin 3
pin 4	- - - - - - - - - - - - - - - - - - -	pin 12

(c) If you find a problem with the wiring, then do these steps:
1) Repair the wiring.
2) Re-connect connector D928 and connector D11154.
3) Do the Repair Confirmation at the end of this task.

(d) If you do not find a problem with the wiring, then continue.
1) Re-connect connector D928.

(e) Do a continuity check from pin 6 of connector D11154 to structure ground.

(f) If there is no continuity at pin 6 of connector D11154, then do these steps:
1) Repair the wiring.
2) Re-connect connector D11154.
3) Do the Repair Confirmation at the end of this task.

(g) If there is continuity at pin 6 of connector D11154, then continue.

(h) Remove the antiskid/autobrake control unit, M162 to get access to the electrical connectors. To remove it, do this task: Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801.

(i) Do the following wiring check:

Park Brake Close Sense Relay R613	**AACU M162**
D11154	**D1040A**
pin 5 - - - - - - - - - - - - - - - - - -	D15

(j) If you find a problem with the wiring, then do these steps:
1) Repair the wiring.
2) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.
3) Re-connect connector D11154.
4) Do the Repair Confirmation at the end of this task.

(k) If you do not find a problem with the wiring, then continue.
1) Re-connect connector D11154.

(l) Fully push the brake pedals and set the parking brake.

(m) Do a continuity check from pin D15 of connector D1040A to structure ground.

(n) If there is no continuity at pin D15 of connector D1040A, then do these steps:
1) Release the parking brake.
2) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.
3) Re-connect connector D1040A.
4) Replace the park brake close sense relay, R613.
5) Do the Repair Confirmation at the end of this task.

(o) If there is continuity at pin D15 of connector D1040A, then continue.
1) Release the parking brake.

(4) Replace the antiskid/autobrake control unit (AACU), M162. These are the tasks:
- Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801
- Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801

(a) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

(1) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.
(a) If the maintenance message does not show during the antiskid/autobrake control test, then do these steps:
1) Fully push the brake pedals and set the parking brake.
2) Check for the maintenanc message PARKBRK on the AACU.
3) If a maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.
4) Release the parking brake.

——————— END OF TASK ———————

812. Landing Gear Lever Switch Problem - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) GEARSW1

(b) GEARSW2

(2) The possible cause of messages GEARSW1 and GEARSW2 is the antiskid/autobrake control unit (AACU) finds the gear lever not down during system test.

B. Possible Causes

(1) Landing gear lever switch, S3

(2) Landing gear lever switch, S4

(3) Wiring problem

(4) Antiskid/autobrake control unit (AACU), M162

C. Related Data

(1) (SSM 32-41-11)

(2) (WDM 32-41-11)

D. Initial Evaluation

(1) Make sure the landing gear control lever is in the DOWN position.

(2) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(a) If the maintenance message does not show during the antiskid/autobrake control test, then there was an intermittent fault.

(b) If the maintenance message shows during the antiskid/autobrake control test, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

(1) Do this check of the landing gear lever switch module, M1952:

(a) Disconnect connector D11990 from the landing gear lever switch module, M1952.

(b) Make sure the landing gear control lever is in the DOWN position.

(c) For the landing gear lever switch, S3, do these steps:

1) Do a continuity check between pin 14 and pin 16 of the landing gear lever switch module.

2) Move the landing gear control lever to the UP position.

3) Do a check for an open circuit between pin 14 and pin 16 of the landing gear lever switch module.

(d) For the landing gear lever switch, S4, do these steps:

1) Do a continuity check between pin 11 and pin 13 of the landing gear lever switch module.

2) Move the landing gear control lever to the UP position.

3) Do a check for an open circuit between pin 11 and pin 13 of the landing gear lever switch module.

(e) If you find a problem with the landing gear lever switch module, then do these steps:

1) Replace the landing gear lever switch module, M1952. These are the tasks:

- Landing Gear Control Lever Module Removal, AMM TASK 32-31-11-020-801
- Landing Gear Control Lever Module Installation, AMM TASK 32-31-11-400-801

2) Re-connect connector D11990.

3) Make sure the landing gear control lever is in the DOWN position.

4) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

5) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(f) If you do not find a problem with the landing gear switch module, then continue.

(2) Do these checks of the wiring:

(a) Do a continuity check between pin 14 of connector D11990 at the center aisle panel, P2-3, and structure ground.

(b) Do a continuity check between pin 11 of connector D11990 at the center aisle panel, P2-3, and structure ground.

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector D11990.

3) Make sure the landing gear control lever is in the DOWN position.

4) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

5) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(d) If you do not find a problem with the wiring, then continue.

(e) Remove the antiskid/autobrake control unit, M162 to get access to the electrical connectors. To remove it, do this task: Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801.

(f) Do a continuity check between these pins of connector D1040A at the antiskid/autobrake control unit and connector D11990 at the landing gear lever switch module, M1952:

D11990	D1040A
pin 13	pin D1

D11990	D1040B
pin 16	pin D1

(g) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

3) Re-connect connector D11990.

4) Make sure the landing gear control lever is in the DOWN position.

5) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

6) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(h) If you do not find problem with the wiring, then continue.

1) Re-connect connector D11990.

(3) Replace the antiskid/autobrake control unit (AACU), M162. These are the tasks:

- Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801

- Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

——————— END OF TASK ———————

813. Thrust Lever Switch Problem - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) PWR A/B

NOTE: This message will appear when the autobrake system is deactivated. This is considered normal operation.

(b) THR L 1

(c) THR R 1

(d) THR L 2

(e) THR R 2

(f) THR SW

(2) The possible cause of the messages is the antiskid/autobrake control unit (AACU) finds the thrust lever not retarded during system test.

B. Possible Causes

(1) Right thrust lever switch, S2

(2) Right thrust lever switch, S3

(3) Left thrust lever switch, S2

(4) Left thrust lever switch, S3

(5) Wiring problem

(6) Antiskid/autobrake control unit (AACU), M162

C. Related Data

(1) (SSM 32-42-11)

(2) (WDM 32-42-11)

D. Initial Evaluation

(1) Make sure the thrust levers are in the IDLE position.

(2) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(a) If the maintenance message does not show during the antiskid/autobrake control test, then there was an intermittent fault.

(b) If a maintenance message shows during the antiskid/autobrake control test, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

(1) Do this check of the autothrottle switch packs, M1766 and M1767:

(a) Disconnect connector D11130 from the autothrottle switch pack, M1766.

(b) Disconnect connector D11134 from the autothrottle switch pack, M1767.

(c) Make sure the thrust levers are in the IDLE position.

(d) Do a continuity check between these pins of the autothrottle switch packs.

AUTOTHROTTLE SWITCH PACK #1

L ENG,		**M1766**
-		**-**
pin 2	- - - - - - - - - - - - - - - - - -	pin 3
pin 5	- - - - - - - - - - - - - - - - - -	pin 6

AUTOTHROTTLE SWITCH PACK #2

R ENG,		**M1767**
-		**-**
pin 2	- - - - - - - - - - - - - - - - - -	pin 3
pin 5	- - - - - - - - - - - - - - - - - -	pin 6

(e) Move the thrust levers to greater that 44 degrees advanced.

(f) Do a continuity check between these pins of the autothrottle switch packs.

AUTOTHROTTLE SWITCH PACK #1

L ENG,		**M1766**
-		**-**
pin 1	- - - - - - - - - - - - - - - - - -	pin 2
pin 4	- - - - - - - - - - - - - - - - - -	pin 5

AUTOTHROTTLE SWITCH PACK #2

R ENG,		**M1767**
-		**-**
pin 1	- - - - - - - - - - - - - - - - - -	pin 2
pin 4	- - - - - - - - - - - - - - - - - -	pin 5

(g) Move the thrust levers to the IDLE position.

(h) If you find a problem with a autothrottle switch pack, then do these steps:

1) Replace the thrust lever switch, S2 or S3, from the switch pack, M1767, or thrust lever switch, S2 or S3, from the switch pack, M1766.

2) Re-connect connector D11130 to the autothrottle switch pack, M1766.

3) Re-connect connector D11134 to the autothrottle switch pack, M1767.

4) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

5) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(i) If you do not find a problem with a autothrottle switch pack, then continue.

(2) Do this check of the wiring:

(a) Remove the antiskid/autobrake control unit, M162 to get access to the electrical connectors. To remove it, do this task: Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801.

(b) Do a continuity check between the pins of connector D1040A and D1040B at the AACU, and the pins of connector D11130 at switch pack, M1766 and connector D11134 at switch pack, M1767.

D11134		**D1040A**
pin 2	- - - - - - - - - - - - - - - - - -	pin A7
D11130		**D1040A**
pin 2	- - - - - - - - - - - - - - - - - -	pin A7
D11134		**D1040B**
pin 3	- - - - - - - - - - - - - - - - - -	pin D6
pin 5	- - - - - - - - - - - - - - - - - -	pin B9
pin 6	- - - - - - - - - - - - - - - - - -	pin A2
D11130		**D1040B**
pin 3	- - - - - - - - - - - - - - - - - -	pin A4
pin 5	- - - - - - - - - - - - - - - - - -	pin B9
pin 6	- - - - - - - - - - - - - - - - - -	pin A7

(c) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

(d) Re-connect connector D11130 to the autothrottle switch pack, M1766.

(e) Re-connect connector D11134 to the autothrottle switch pack, M1767.

(f) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

3) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

(g) If you do not find a problem with the wiring, then continue.

(3) Replace the antiskid/autobrake control unit (AACU), M162. These are the tasks:

- Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801
- Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show during the antiskid/autobrake control test, then you corrected the fault.

———————— END OF TASK ————————

814. Brake Pressure Indication Low/Zero - Fault Isolation

A. Description

(1) SDS 32-41-00

B. Possible Causes

(1) Nitrogen gas leak at a tube connection

(2) Brake accumulator pressure transducer, T185

(3) Brake accumulator

C. Related Data

(1) (SSM 32-40-00)

D. Fault Isolation Procedure

(1) Do a check for nitrogen gas leakage at these locations:

(a) The gas pressure tube connection to the brake accumulator.

(b) The gas pressure tube connections to the manifold assembly.

(c) The gas pressure tube connections to the brake accumulator pressure gage.

(d) The brake accumulator charging valve.

(e) If there is nitrogen gas leakage, then do these steps:

1) Repair the leak.

2) Do this task: Hydraulic Brake Accumulator Servicing, AMM TASK 12-15-11-420-801.

3) If the brake pressure indication does not show low/zero on subsequent flights, then you corrected the fault.

(f) If there is no nitrogen gas leakage, then continue.

(2) Replace the brake accumulator pressure transducer, T185. These are the tasks:

- Brake Accumulator Pressure Transmitter Removal, AMM TASK 32-41-53-000-801
- Brake Accumulator Pressure Transmitter Installation, AMM TASK 32-41-53-400-801

(a) Do this task: Hydraulic Brake Accumulator Servicing, AMM TASK 12-15-11-420-801.

(b) If the brake pressure indication does not show low/zero on subsequent flights, then you corrected the fault.

(c) If the brake pressure indication shows low/zero on subsequent flights, then continue.

(3) Replace the brake accumulator. These are the tasks:

- Hydraulic Brake Accumulator Removal, AMM TASK 32-41-51-000-801
- Hydraulic Brake Accumulator Installation, AMM TASK 32-41-51-420-801

(a) Do this task: Hydraulic Brake Accumulator Servicing, AMM TASK 12-15-11-420-801.

(b) If the brake pressure indication does not show low/zero on subsequent flights, then you corrected the fault.

——————— END OF TASK ———————

815. Brake Pressure Indication Problem - Fault Isolation

A. Description

(1) SDS 32-41-00

B. Possible Causes

(1) Brake accumulator pressure gage

(2) Brake accumulator pressure transducer, T185

C. Related Data

(1) (SSM 32-40-00)

D. Fault Isolation Procedure

(1) Replace the brake accumulator pressure gage.

(a) If the brake pressure indication operates correctly, then you corrected the fault.

(b) If the brake pressure indication does not operate correctly, then continue.

(2) Replace the brake accumulator pressure transducer, T185. These are the tasks:

- Brake Accumulator Pressure Transmitter Removal, AMM TASK 32-41-53-000-801
- Brake Accumulator Pressure Transmitter Installation, AMM TASK 32-41-53-400-801

(a) If the brake pressure indication operates correctly, then you corrected the fault.

END OF TASK

816. Brakes Grab, Drag, or Lock - Fault Isolation

A. Description

(1) SDS 32-41-00

B. Possible Causes

(1) Brake adjustment

(2) Brake metering valve

C. Related Data

(1) (SSM 32-40-00)

D. Fault Isolation Procedure

(1) Do this task: Hydraulic Brake System Adjustment, AMM TASK 32-41-00-820-801.

(a) If the brakes operate correctly on subsequent flights, then you corrected the fault.

1) Do this task: Landing Gear Tire Pressure Check and Tire Servicing, AMM TASK 12-15-51-780-801.

(b) If the brakes do not operate normally on subsequent flights, then continue.

(2) Replace the brake metering valve. These are the tasks:

- Brake Metering Valve Removal, AMM TASK 32-41-31-000-801
- Brake Metering Valve Installation, AMM TASK 32-41-31-400-801

(a) If the brakes operate correctly on subsequent flights, then you corrected the fault.

1) Do this task: Landing Gear Tire Pressure Check and Tire Servicing, AMM TASK 12-15-51-780-801.

END OF TASK

817. Brakes Pull to the Left or Right - Fault Isolation

A. Fault Isolation Procedure

(1) Do a check of the landing gear tires pressure:

(a) Do this task: Landing Gear Tire Pressure Check and Tire Servicing, AMM TASK 12-15-51-780-801.

(b) If the landing gear tires pressure are not satisfactory, then do these steps:

1) Do this task: Add Nitrogen or Air to the Tire, AMM TASK 12-15-51-610-802.

2) If the brakes operate correctly on subsequent flights, then you corrected the fault.

a) Do this task: Landing Gear Tire Pressure Check and Tire Servicing, AMM TASK 12-15-51-780-801.

(2) Inspect all transducer drive components on each wheel and hubcap if there is a pulling condition during braking.

END OF TASK

818. Parking Brake Lever Problem - Fault Isolation

A. Description

(1) SDS 32-44-00

B. Possible Causes

(1) Parking brake system adjustment

(2) Parking brake lever

(3) Parking brake latch mechanism

C. Related Data

(1) (SSM 32-44-11)

D. Fault Isolation Procedure

(1) Do this task: Parking Brake System Adjustment, AMM TASK 32-44-00-820-801.

(a) If the parking brake lever operates, then you corrected the fault.

(b) If the parking brake lever does not operate, then continue.

(2) Replace the parking brake lever. These are the tasks:
- Parking Brake Lever Removal, AMM TASK 32-44-11-000-801
- Parking Brake Lever Installation, AMM TASK 32-44-11-400-801

(a) If the parking brake lever operates, then you corrected the fault.

(b) If the parking brake lever does not operate, then continue.

(3) Replace the parking brake latch mechanism. These are the tasks:
- Parking Brake Latch Removal, AMM TASK 32-44-11-000-803
- Parking Brake Latch Installation, AMM TASK 32-44-11-400-803

(a) If the parking brake lever operates, then you corrected the fault.

——————— END OF TASK ———————

819. PARKING BRAKE Warning Light (Flight Compartment) Does Not Operate - Fault Isolation

A. Description

(1) The PARKING BRAKE light located on the control stand comes on whenever the parking brake lever is set and the parking brake valve is moved the the closed position.

B. Possible Causes

(1) PARKING BRAKE light, L382

(2) Wiring problem

(3) Parking brake switch, S100

(4) Parking brake valve, V11

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

Row	Col	Number	Name
E	12	C00314	INDICATOR MASTER DIM SECT 2

D. Related Data

(1) (SSM 32-44-11)

(2) (SSM 33-18-61)

(3) (WDM 32-44-11)

(4) (WDM 33-18-61)

E. Initial Evaluation

(1) Fully push the brake pedals and set the parking brake.

(2) If the PARKING BRAKE light comes on, then there was an intermittent fault.

(3) If the PARKING BRAKE light does not come on, then do the Fault Isolation Procedure below.

(4) Release the parking brake.

F. Fault Isolation Procedure

(1) Do this check of the PARKING BRAKE light, L382:

(a) At the captain's main instrument panel, P1, set the switch for the master dim and test lights to TEST.

(b) Set the switch for the master dim and test lights to its original position.

(c) If the PARKING BRAKE light does not come on, then do these steps:

1) Replace the PARKING BRAKE light, L382.

2) Fully push the brake pedals and set the parking brake.

3) If the PARKING BRAKE light comes on, then you corrected the fault.

4) Release the parking brake.

(d) If the PARKING BRAKE light comes on, then continue.

(2) Do this voltage check at the parking brake valve, V11:

(a) Disconnect the connector D928 from the parking brake valve, V11.

(b) Do a check for 28v DC from pin 3 of connector D928 to structure ground.

(c) Fully push the brake pedals and set the parking brake.

(d) Do a check for 28v DC from pin 2 of connector D928 to structure ground.

(e) Release the parking brake.

(f) If there is 28v DC at pin 3 of connector D928, but there is not 28v DC at pin 2 of connector D928 after you set the parking brake, then do these steps:

1) Do a wiring check between these pins on switch, S100, in the P8 stand and connector D928 at the parking brake valve V11:

S100		**D928**
1N0	- - - - - - - - - - - - - - - - - - -	pin 2

2) If you find a problem with the wiring, then do these steps:

a) Re-connect connector D928.

b) Repair the wiring.

c) Fully push the brake pedals and set the parking brake.

d) If the PARKING BRAKE light comes on, then you corrected the fault.

e) Release the parking brake.

3) If you do not find a problem with the wiring, then do these steps:

a) Re-connect connector D928.

b) Adjust the parking brake switch, S100, do this task: Parking Brake System Adjustment, AMM TASK 32-44-00-820-801.

c) Fully push the brake pedals and set the parking brake.

d) If the PARKING BRAKE light comes on, then you corrected the fault.

e) Release the parking brake.

f) If the PARKING BRAKE light does not come on, then continue.

g) Replace the parking brake switch, S100. These are the tasks:

- Parking Brake Latch Switch Removal, AMM TASK 32-44-11-000-804
- Parking Brake Latch Switch Installation, AMM TASK 32-44-11-400-804

h) Fully push the brake pedals and set the parking brake.

i) If the PARKING BRAKE light comes on, then you corrected the fault.

j) Release the parking brake.

(g) If there is not 28v DC at either pin of connector D928 that you checked, then do these steps:

1) Do a check for 28v DC from the load terminal of this circuit breaker, C1346, to structure ground:

1) This is the circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

a) If there is not 28v DC at the load terminal of the circuit breaker, C1346, then do these steps:

b) Replace the circuit breaker, C1346.

c) Fully push the brake pedals and set the parking brake.

d) If the PARKING BRAKE light comes on, then you corrected the fault.

e) Release the parking brake.

f) If there is 28v DC at the load terminal of the circuit breaker, C1346, then continue.

2) Do a check for 28v DC from connection 1C of the parking brake switch, S100, to structure ground.

3) If there is 28v DC at connection 1C of the parking brake switch, S100, then do these steps:

a) Replace the parking brake switch, S100. These are the tasks:

- Parking Brake Latch Switch Removal, AMM TASK 32-44-11-000-804
- Parking Brake Latch Switch Installation, AMM TASK 32-44-11-400-804

Fully push the brake pedals and set the parking brake.

b) If the PARKING BRAKE light comes on, then you corrected the fault.

c) Release the parking brake.

4) If there is not 28v DC at connection 1C of the parking brake switch, S100, then do these steps:
   a) Repair the wiring between pin 1C of the parking brake switch, S100 to the load terminal of circuit breaker C1346.
   b) Fully push the brake pedals and set the parking brake.
   c) If the PARKING BRAKE light comes on, then you corrected the fault.
   d) Release the parking brake.

(h) If there is 28v DC at pin 3 of connector D928, and there is also 28v DC at pin 2 of connector D928 after you set the parking brake, then continue.

(3) Do a ground check of the parking brake valve, V11:
   (a) Disconnect connector D928 from the parking brake valve, V11.
   (b) Do a continuity check from pin 1 of connector D928 to structure ground.
   (c) Do a continuity check from pin 9 of connector D928 to structure ground.
   (d) If there is no continuity at pin 1 or pin 9 of connector D928, then do these steps:
      1) Repair the wiring.
      2) Re-connect connector D928.
      3) Fully push the brake pedals and set the parking brake.
      4) If the PARKING BRAKE light comes on, then you corrected the fault.
         a) Release the parking brake.
   (e) If there is continuity at pin 1 and pin 9 of connector D928, then continue.

(4) Do this wiring check:
   (a) Do a wiring check between this pin on connector D928 at the parking brake valve and terminal block TB602 at the STA 261:

D928		TB602
pin 10	- - - - - - - - - - - - - - - - - - -	term YB41

   (b) If you find a problem with the wiring, then do these steps:
      1) Repair the wiring.
      2) Re-connect connector D928.
      3) Fully push the brake pedals and set the parking brake.
      4) If the PARKING BRAKE light comes on, then you corrected the fault.
         a) Release the parking brake.
   (c) If you do not find a problem with the wiring, then continue.
      1) Re-connect connector D928.

(5) Do this wiring check:
   (a) Disconnect connector D5148P from the P10 control stand.
   (b) Do a wiring check between this pin on connector D5148P at the P10 control stand and terminal block TB602 at the STA 261: (WDM 33-18-61)

D5148P		TB602
pin 2	- - - - - - - - - - - - - - - - - - -	term YB41

   (c) If you find a problem with the wiring, then do these steps:
      1) Repair the wiring.

2) Re-connect connector D5148P
3) Fully push the brake pedals and set the parking brake.
4) If the PARKING BRAKE light comes on, then you corrected the fault.
   a) Release the parking brake.

(d) If you do not find a problem with the wiring, then continue.

(6) Do a ground check of the connector D5148P at the P10 control stand:
   (a) Do a continuity check from pin 3 of connector D5148P to structure ground.
   (b) If there is no continuity at pin 3 of connector D5148P, then do these steps:
      1) Repair the wiring.
      2) Re-connect connector D5148P.
      3) Fully push the brake pedals and set the parking brake.
      4) If the PARKING BRAKE light comes on, then you corrected the fault.
         a) Release the parking brake.
   (c) If there is continuity at pin 3 of connector D5148P, then continue.

(7) Do a voltage check of the connector D5148P at the P10 control stand:
   (a) Do a check for 28v DC from pin 1 of connector D5148P to structure ground.
   (b) If there is not 28v DC at pin 1 of connector D5148P, then do these steps:
   (c) Do a check for 28v DC from the load terminal of this circuit breaker, C314, to structure ground:
      1) This is the circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
E	12	C00314	INDICATOR MASTER DIM SECT 2

      2) If there is not 28v DC at the load terminal of the circuit breaker, C314, then do these steps:
         a) Replace the circuit breaker, C314.
         b) Re-connect connector D5148P.
         c) Fully push the brake pedals and set the parking brake.
         d) If the PARKING BRAKE light comes on, then you corrected the fault.
         e) Release the parking brake.
      3) If there is 28v DC at the load terminal of the circuit breaker, C314, then do these steps:
         a) Repair the wiring between connector D5148P an the load terminal of the circuit breaker.
         b) Re-connect connector D5148P.
         c) Fully push the brake pedals and set the parking brake.
         d) If the PARKING BRAKE light comes on, then you corrected the fault.
         e) Release the parking brake.
   (d) If there is 28v DC at pin 1 of connector D5148, then continue.
      1) Re-connect connector D5148P.

(8) Replace the parking brake valve, V11. These are the tasks:

- Parking Brake Shutoff Valve Removal, AMM TASK 32-44-21-000-801
- Parking Brake Shutoff Valve Installation, AMM TASK 32-44-21-400-801

(a) Fully push the brake pedals and set the parking brake.

(b) If the PARKING BRAKE light comes on, then you corrected the fault.

(c) Release the parking brake.

END OF TASK

820. Tire Problem - Fault Isolation

A. Fault Isolation Procedure

(1) If the tire is burst or flat spotted, do this task: Tire Tread Loss or Tire Burst Conditional Inspection, AMM TASK 05-51-54-210-801.

(2) Do this task: Tires Inspection, AMM TASK 32-45-00-700-803.

END OF TASK

821. Autobrake Selector Switch Problem - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) A/B SEL

(2) The autobrake selector switch indicates more than one position selected.

B. Possible Causes

(1) Wiring

(2) Antiskid/autobrake control unit (AACU), M162

(3) Autobrake selector switch, S4

C. Related Data

(1) (SSM 32-42-11)

(2) (WDM 32-42-11)

D. Initial Evaluation

(1) For each position of the autobrake selector switch, except OFF, do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

NOTE: The BITE test can be performed with the selector switch in any position except OFF. If you do the test in each possible position, you can detect a fault in the switch itself.

(a) If the maintenance message does not show, then there was an intermittent fault.

(b) If the maintenance message shows, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

(1) If the maintenance message does not show in a selector position, but does show in other selector positions, then do these steps:

(a) Replace the autobrake selector switch, S4.

(b) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(c) If the maintenance message does not show, then you corrected the fault.

(d) If the maintenance message shows, then continue.

(2) Do this check of the wiring:

(a) Remove the antiskid/autobrake control unit, M162. To remove it, do this task: Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801.

(b) Disconnect connector D333 from the P2-2 panel.

(c) Do a wiring check between these pins of connector D1040B at E1-3 shelf and connector D333 at the autobrake selector switch, S4.

D1040B		D333
pin D7	- - - - - - - - - - - - - - - - - -	pin 32
pin D8	- - - - - - - - - - - - - - - - - -	pin 33
pin D12	- - - - - - - - - - - - - - - - - -	pin 36
pin D9	- - - - - - - - - - - - - - - - - -	pin 34
pin D10	- - - - - - - - - - - - - - - - - -	pin 35
pin C10	- - - - - - - - - - - - - - - - - -	pin 37

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector D333.

3) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

4) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

5) If the maintenance message does not show, then you corrected the fault.

(e) If you do not find a problem with the wiring, then continue.

1) Re-connect connector D333.

(3) Install a new AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show, then you corrected the fault.

(c) If the maintenance message shows, then continue.

———————— END OF TASK ————————

822. Brake Pressure Signal to the Antiskid/Autobrake Control Unit Problem - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) PRESL

(b) PRESR

(2) The antiskid/autobrake control unit (AACU) receives high brake pressure.

B. Possible Causes

(1) Brake pedal switch, S762 or S763

(2) Wiring

(3) Antiskid/autobrake control unit (AACU), M162

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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. Related Data

(1) (SSM 32-42-11)

(2) (WDM 32-42-11)

E. Initial Evaluation

(1) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(a) If the maintenance message does not show, then there was an intermittent fault.

(b) If the maintenance message shows, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Replace the applicable brake pedal switch.

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show, then you corrected the fault.

(c) If the maintenance message shows, then continue.

(2) Do this check of the wiring:

(a) Remove the antiskid/autobrake control unit, M162. To remove it, do this task: Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801.

(b) Find the connector and the pair of pins for the applicable brake pedal switch:

LEFT SWITCH EQUIPMENT NUMBER S762

SWITCH CONNECTOR D2564		AACU CONNECTOR D1040B
pin 2	- - - - - - - - - - - - - - - - - -	pin B8
pin 3	- - - - - - - - - - - - - - - - - -	pin A9

RIGHT SWITCH EQUIPMENT NUMBER S763

SWITCH CONNECTOR D2566		AACU CONNECTOR D1040A
pin 2	- - - - - - - - - - - - - - - - - -	pin A10
pin 3	- - - - - - - - - - - - - - - - - -	pin B10

(c) Disconnect the connector from the applicable brake pedal switch.

(d) Do a wiring check between the pins of the connector at the E1-3 shelf and the connector at the applicable brake pedal switch.

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the connector to the applicable brake pressure switch.

3) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

4) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

5) If the maintenance message does not show, then you corrected the fault.

(f) If you do not find a problem with the wiring, then continue.

1) Re-connect the connector to the applicable brake pressure switch.

(3) Install a new AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show, then you corrected the fault.

—————— END OF TASK ——————

823. Air/Ground System Signal to the Antiskid/Autobrake Control Unit Problem - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) A/G 1

(b) A/G 2

(c) A/G SW

(2) The antiskid/autobrake control unit (AACU) receives air mode signal from the air/ground system.

B. Possible Causes

(1) Wiring

(2) Antiskid/autobrake control unit (AACU), M162

(3) Proximity switch electronics unit (PSEU), M2061

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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. Related Data

(1) (SSM 32-42-11)

(2) (WDM 32-42-11)

E. Initial Evaluation

(1) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(a) If the maintenance messages A/G 1 and A/G 2 do not show, then there was an intermittent fault.

(b) If the maintenance message A/G 1 or A/G 2 shows, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the wiring:

(a) Remove the antiskid/autobrake control unit (AACU), M162. To remove it, do this task: Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801.

(b) Find the applicable air/ground system connector and pair of pins for the proximity switch electronics unit (PSEU), M2061:

AIR/GROUND SYSTEM 1

PSEU CONNECTOR D11142	AACU CONNECTOR D1040B
pin 48	pin C8
pin 49	pin A8

AIR/GROUND SYSTEM 2

PSEU CONNECOR D11140	AACU CONNECTOR D1040A
pin 48	pin C8
pin 49	pin A8

(c) Disconnect the applicable connector from the PSEU, M2061.

(d) Do a wiring check between the pins of the connector at the E1-3 shelf and the applicable connector at the PSEU, M2061.

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the applicable connector.

3) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

4) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

5) If the maintenance message does not show, then you corrected the fault.

(f) If you do not find a problem with the wiring, then continue.

1) Re-connect the applicable connector.

(2) Install a new AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show, then you corrected the fault.

(c) If the maintenance message shows, then continue.

(3) Replace the PSEU, M2061. These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show, then you corrected the fault.

END OF TASK

824. Left ADIRU Signal to the Antiskid/Autobrake Control Unit Problem - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) ADIRU L

(2) The antiskid/autobrake control unit (AACU) does not receive valid signal from the left air data inertial reference unit (ADIRU).

B. Possible Causes

(1) Wiring

(2) Air data inertial reference unit (ADIRU), M1749

(3) Antiskid/autobrake control unit, M162

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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. Related Data

(1) (SSM 32-41-11)

(2) (WDM 32-41-11)

E. Initial Evaluation

(1) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(a) If the maintenance message does not show, then there was an intermittent fault.

(b) If the maintenance message shows, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the wiring:

(a) Remove the antiskid/autobrake control unit, M162. To remove it, do this task: Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801.

(b) Remove the left air data inertial reference unit (ADIRU), M1749. To remove it, do this task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.

(c) Do a wiring check between these pins of connector D1040A at E1-3 shelf and connector D3687B at the E5-2 shelf:

D1040A		**D3687B**
pin D11	- - - - - - - - - - - - - - - - -	pin C10
pin D12	- - - - - - - - - - - - - - - - -	pin C11

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the left ADIRU, M1749. To install it, do this task: Air Data Inertial Reference Unit Installation, AMM TASK 34-21-01-400-801.

3) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

4) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

5) If the maintenance message does not show, then you corrected the fault.

(e) If you do not find a problem with the wiring, then continue.

1) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

(2) Install a new left ADIRU, M1749. To install it, do this task: Air Data Inertial Reference Unit Installation, AMM TASK 34-21-01-400-801.

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show, then you corrected the fault.

(c) If the maintenance message shows, then continue.

(3) Replace the AACU, M162. These are the tasks:

- Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801
- Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show, then you corrected the fault.

END OF TASK

825. Right ADIRU Signal to the Antiskid/Autobrake Control Unit Problem - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) ADIRU R

(2) The antiskid/autobrake control unit (AACU) does not receive valid signal from the right air data inertial reference unit (ADIRU).

B. Possible Causes

(1) Wiring

(2) Air data inertial reference unit (ADIRU), M1752

(3) Antiskid/autobrake control unit, M162

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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. Related Data

(1) (SSM 32-41-11)

(2) (WDM 32-41-11)

E. Initial Evaluation

(1) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(a) If the maintenance message does not show, then there was an intermittent fault.

(b) If the maintenance message shows, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the wiring:

(a) Remove the antiskid/autobrake control unit, M162. To remove it, do this task: Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801.

(b) Remove the right air data inertial reference unit (ADIRU), M1752. To remove it, do this task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.

(c) Do a wiring check between these pins of connector D1040B at E1-3 shelf and connector D3693B at the E5-2 shelf:

D1040B		D3693B
pin D13	- - - - - - - - - - - - - - - - -	pin C10
pin D14	- - - - - - - - - - - - - - - - -	pin C11

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the right ADIRU, M1752. To install it, do this task: Air Data Inertial Reference Unit Installation, AMM TASK 34-21-01-400-801.

3) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

4) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

5) If the maintenance message does not show, then you corrected the fault.

(e) If you do not find a problem with the wiring, then continue.

1) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

(2) Install a new right ADIRU, M1752. To install it, do this task: Air Data Inertial Reference Unit Installation, AMM TASK 34-21-01-400-801.

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show, then you corrected the fault.

(c) If the maintenance message shows, then continue.

(3) Replace the AACU, M162. These are the tasks:

- Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801
- Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show, then you corrected the fault.

———————— END OF TASK ————————

826. Power for Autobrake or AACU BITE Problem - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) PWR A/B

NOTE: This message will appear when the autobrake system is deactivated, this is considered normal operation.

(b) PWR BITE

(2) The antiskid/autobrake control unit (AACU) does not receive power for autobrake and BITE functions.

B. Possible Causes

(1) Antiskid/autobrake control unit (AACU), M162

NOTE: This message will appear when the autobrake system is deactivated, this is considered normal operation.

(2) Circuit breakers C583 and C1345

(3) Right thrust lever switch, S2

(4) Right thrust lever switch, S3

(5) Left thrust lever switch, S2

(6) Left thrust lever switch, S3

(7) Wiring

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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. Related Data

(1) (SSM 32-42-11)

(2) (WDM 32-42-11)

E. Initial Evaluation

(1) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(a) If the maintenance message does not show, then there was an intermittent fault.

(b) If the maintenance message shows, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the power wiring:

(a) Remove the antiskid/autobrake control unit (AACU), M162. To remove it, do this task: Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801.

(b) 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

(c) Do a check for 28V DC from pin A11 and C9 of the connector D1040B at E1-3 shelf to structure ground (WDM 32-42-11).

(d) 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) If there is not 28V DC at pin A11 and C9, then do these steps:

1) Open the P6-3 load control center panel.

2) 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

3) Do a check for 28V DC from the load terminals of circuit breakers C583 and C1345 to structure ground.

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

5) If there is not 28V DC at the load terminals, then do these steps:

a) Replace one or both of the following circuit breakers (WDM 32-42-11):

<1> These are the 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) Re-install the antiskid/autobrake control unit, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

c) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

d) If the maintenance message does not show, then you corrected the fault.

6) If there is 28V DC at the load terminals, then do these steps:

a) Repair the wiring between pin A11 of connector D1040B at the E1-3 shelf and the load terminal C583 at the panel P6.

b) Repair the wiring between pin C9 of connector D1040B at the E1-3 shelf and the load terminal C1345 at the panel P6.

c) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

d) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

e) If the maintenance message does not show, then you corrected the fault.

(f) If there is 28V DC at the pin A11 or C9 of connector D1040B, then continue.

(2) Check the thrust lever switches. Do this task: Thrust Lever Switch Problem - Fault Isolation, 32-42 TASK 813.

(3) Install a new AACU M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show, then you corrected the fault.

———————— END OF TASK ————————

827. Speed Brake Lever Signal to the Antiskid/Autobrake Control Unit Problem - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) SPLRHDL

(2) The antiskid/autobrake control unit (AACU) receives signal that the speed brake lever is not stowed.

B. Possible Causes

(1) Wiring

(2) Speed brake arming switch, S276

(3) Antiskid/autobrake control unit (AACU), M162

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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. Related Data

(1) (SSM 32-42-11)

(2) (WDM 32-42-11)

E. Initial Evaluation

(1) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(a) If the maintenance message does not show, then there was an intermittent fault.

(b) If the maintenance message shows, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the wiring:

(a) Remove the antiskid/autobrake control unit (AACU), M162. To remove it, do this task: Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801.

(b) Disconnect connector D10199 from the speed brake arming switch, S276.

(c) Do a wiring check between these pins of connector D1040A and D1040B at E1-3 shelf and connector D10199 at the speed brake arming switch, S276:

D1040A		**D10199**
pin B7	- - - - - - - - - - - - - - - - - -	pin 8
D1040B		**D10199**
pin C11	- - - - - - - - - - - - - - - - - -	pin 8

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector D10199.

3) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

4) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

5) If the maintenance message does not show, then you corrected the fault.

(e) If you do not find a problem with the wiring, then continue.

1) Re-connect connector D10199.

2) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

(2) Do the check of the spped brake arming switch:

(a) Using the Ohmmeter, monitor between D1040A pin B7 and D1040B pin C11.

(b) If the impedance is not greater than 20 Mohms when the speedbrake handle is in the stowed position, or not less than 10 ohms when the speedbrake handle is in OFF position, then replace the speedbrake arming switch, S276. These are the tasks:

- Speed Brake Armed Switch and Speed Brake Handle Position Switch Removal, AMM TASK 27-62-34-000-801
- Speed Brake Armed Switch and Speed Brake Handle Position Switch Installation, AMM TASK 27-62-34-400-801

1) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(c) If the maintenance message does not show, then you corrected the fault.

(d) If the maintenance message shows, then continue.

(3) Replace the AACU, M162. These are the tasks:

- Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801
- Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the maintenance message does not show, then you corrected the fault.

——————— END OF TASK ———————

828. AUTOBRAKE DISARM Light is ON - Fault Isolation

A. Description

(1) The AUTOBRAKE DISARM light comes on when these conditions occur:

(a) When the autobrake selector switch is in the OFF position:

1) When the solenoid pressure switch on the autobrake valve module indicates autobrake valve module pressure is greater than 1000 psi.

(b) When the autobrake selector switch is in position 1,2,3, or MAX:

1) During autobrake arming, the autobrake disarm light will come on momentarily when an autobrake position is selected.

2) During autobrake arming, if any of these conditions exist, the autobrake disarm light will remain on:

a) Both air/ground signals do not indicate air -AND- all four thrust lever switches are not retarded -AND- more than 3 seconds elapsed since both air ground signals indicated air.

b) Both the left and right brake metered pressure switches do not indicate low pressure.

c) An autobrake system fault is detected.

d) An antiskid fault that illuminates the ANTISKID INOP light is detected.

e) ADIRU input not valid.

3) During autobrake disarming, if any of these conditions exist, the autobrake disarm light will remain on:

a) Any of the previous "arming" conditions exist.

b) The speedbrakes are stowed after they have been deployed when either air/ground signal indicates ground.

c) Any of the four thrust lever switches indicate advanced.

(c) When the autobrake selector switch is in the RTO position:

1) During RTO autobrake arming, the autobrake disarm light will come on momentarily when the RTO position is selected.

2) During RTO autobrake arming, if any of these conditions exist, the autobrake disarm light will remain on:

a) Less than 2 seconds elapsed since the previous selection of RTO.

NOTE: More than 2 seconds is needed to complete the initialization check.

b) All four thrust lever switches are not retarded.

c) The antiskid/autobrake contol unit indicates the average wheel speed is greater the 60 knots.

d) Both air/ground signals do not indicate ground.

e) An autobrake system fault is detected.

f) An antiskid fault that illuminates the ANTISKID INOP light is detected.

3) During RTO autobrake disarming, if any of these conditions exist, the autobrake disarm light will remain on:

a) If the autobrake selector switch is not moved to OFF after lift off, then either air/ground signal indicates ground on the subsequent landing.

4) At the initiation of RTO above 88 knots, if any of these conditions exist, the autobrake disarm light will remain on:

a) Either left or right brake metered pressure switches indicate high pressure.

b) The speedbrakes are stowed after they have been deployed when either air/ground signal indicates ground.

c) Any of the four thrust lever switches indicate advanced.

d) An autobrake system fault is detected.

e) An antiskid fault that illuminates the ANTISKID INOP light is detected.

(2) If the autobrake disarm light is on when the autobrake selector switch is not in the OFF position, you can turn the light off by moving the selector switch to the OFF position.

B. Possible Causes

(1) Wiring problem

(2) AUTOBRAKE DISARM light, L1

(3) Solenoid pressure switch on the autobrake pressure control module, V122.

(4) Autobrake disarm relay, R1.

(5) Antiskid/autobrake control unit (AACU), M162

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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
F	11	C00317	INDICATOR MASTER DIM SECT 5

D. Related Data

(1) (SSM 32-42-11)

(2) (WDM 32-42-11)

E. Initial Evaluation

(1) Do this check of the AUTOBRAKE DISARM light:

(a) Make sure the autobrake selector switch is in the OFF position.

1) If the AUTOBRAKE DISARM light turns off when the autobrake selector switch is moved to the OFF position, then the fault was intermittent or the antiskid/autobrake system detected a system fault.

a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

b) If a maintenance message does not show, then there was an intermittent fault.

c) If a maintenance message shows, then go to the fault isolation task for that maintenance message.

2) If the AUTOBRAKE DISARM light stays on when the autobrake selector switch is moved to the OFF position, then do the Fault Isolation Procedure below.

(2) Check the autobrake non-volatile memory for any faults.

(a) If PWR A/B maintenance message shows, then do this task: Thrust Lever Switch Problem - Fault Isolation, 32-42 TASK 813.

F. Fault Isolation Procedure

(1) Do this check of the solenoid pressure switch on the autobrake pressure control module, V122:

(a) Disconnect the electrical connector D2572 from the solenoid pressure switch.

(b) If the AUTOBRAKE DISARM light goes off, then do these steps:

1) Replace the solenoid pressure switch on the autobrake pressure control module, V122. These are the tasks:

- Autobrake Pressure Control Module Line Replaceable Units Removal, AMM TASK 32-42-81-000-802
- Autobrake Pressure Control Module Line Replaceable Units Installation, AMM TASK 32-42-81-000-803

2) Re-connect the connector D2572 to the solenoid pressure switch.

3) If the AUTOBRAKE DISARM light remains off, then you corrected the fault.

(c) If the AUTOBRAKE DISARM light stays on, then continue.

(2) Do these checks of the wiring:

(a) Remove the center instrument panel, P2-2.

(b) Disconnect connector D331 from the center instrument panel, P2-2.

(c) Make sure you do not have continuity from pin 29 and pin 24 of connector D331 on the P2-2 panel.

(d) If there is continuity between pin 29 and pin 24 of connector D331, then do these steps:

1) Replace the autobrake disarm relay, R1.

2) Re-connect connector D331.

3) Install the center instrument panel, P2-2.

4) If the AUTOBRAKE DISARM light goes off, then you corrected the fault.

(e) Make sure pins 29 and 31 on connector D331 go to ground.

(f) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector D331.

3) Install the center instrument panel, P2-2.

4) If the AUTOBRAKE DISARM light goes off, then you corrected the fault.

(g) If you do not find a problem with the wiring, then continue.

(h) Remove the antiskid/autobrake control unit (AACU), M162. To remove it, do this task: Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801.

(i) Do a wiring check between these pins of connector D1040A on the AACU and connector D331 on the P2-2 panel.

D1040A		D331
pin D7	- - - - - - - - - - - - - - - - - -	pin 24

(j) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-connect connector D331 to the center instrument panel, P2-2.
3) Install the center instrument panel, P2-2.
4) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.
5) If the AUTOBRAKE DISARM light goes off, then you corrected the fault.

(k) If you do not find a problem with the wiring, then do these steps and continue.
1) Re-connect connector D331 to the center instrument panel, P2-2.
2) Re-install the AACU, M162. To install it, do this task: Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801.

(3) Do this check of the wiring between the AUTOBRAKE DISARM light and terminal block TB1303:
(a) Remove the center instrument panel, P2-2.
(b) Disconnect connector D339 from the center instrument panel, P2-2.
(c) Do a wiring check between these pins on connector D339 at the P2-2 panel and terminal block TB1303 at STA E001-3 on the E1-3 shelf:

D339		TB1303
pin 9	- - - - - - - - - - - - - - - - - -	term YB3

(d) If you find a problem with the wiring, then do these steps:
1) Repair the wiring.
2) Re-connect connector D339.
3) If the AUTOBRAKE DISARM light goes off, then you corrected the fault.
4) Install the center instrument panel, P2-2.

(e) If you do not find a problem with the wiring, then continue.
(f) Re-connect connector D339 to the center instrument panel, P2-2.
(g) Install the center instrument panel, P2-2.
(h) Disconnect the electrical connector D2572 from the solenoid pressure switch on the autobrake pressure control module, V122.
(i) Do a wiring check between these pins on connector D2572 at the solenoid pressure switch and terminal block TB1303 at STA E001-3 on the E1-3 shelf:

D2572		TB1303
pin 1	- - - - - - - - - - - - - - - - - -	term YB3

(j) If you find a problem with the wiring, then do these steps:
1) Repair the wiring.
2) Re-connect the connector D2572 to the solenoid pressure switch.
3) If the AUTOBRAKE DISARM light goes off, then you corrected the fault.

(k) If you do not find a problem with the wiring, then continue.
1) Re-connect the connector D2572 to the solenoid pressure switch.

(4) Do this check of the AUTOBRAKE DISARM light, L1:
(a) Push and release the AUTOBRAKE DISARM light to use the press-to-test switch in the light.
(b) If the AUTOBRAKE DISARM light goes off, then do these steps:

1) Replace the AUTOBRAKE DISARM light assembly, L1, do this task: Indicator Light - Light Assembly Replacement, AMM TASK 33-18-00-960-802.
2) Push and release the AUTOBRAKE DISARM light to use the press-to-test switch in the light.
3) If the AUTOBRAKE DISARM light comes on and then goes off, then you corrected the fault.

(c) If the AUTOBRAKE DISARM light remains on, then continue.

(5) Replace the antiskid/autobrake control unit, M162. These are the tasks:
- Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801
- Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the AUTOBRAKE DISARM light goes off, then you corrected the fault.

———————— END OF TASK ————————

829. ANTISKID INOP Light is ON - Fault Isolation

A. Description

(1) The ANTISKID INOP light comes on when these conditions occur:

(a) When the antiskid/autobrake control unit is not powered or not installed.

(b) Detection of an antiskid system fault by the antiskid/autobrake control unit.

(c) When the alternate brake hydraulic system is pressurized (as determined by the pressure switch on the alternate brake selector valve) and any antiskid system fault is detected (except a normal valve or parking brake disagree fault).

B. Possible Causes

(1) Wiring problem

(2) ANTISKID INOP light, L2

(3) Outboard antiskid sense relay, R626

(4) Inboard antiskid sense relay, R628

(5) Alternate antiskid sense relay, R627

(6) Pressure switch on the alternate brake selector valve, S811.

(7) Antiskid/autobrake control unit (AACU), M162

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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. Related Data

(1) (SSM 32-41-11)

(2) (WDM 32-41-11)

E. Initial Evaluation

(1) Do this check of the ANTISKID INOP light:

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If a maintenance message shows, then go to the fault isolation task for that maintenance message.

(c) If a maintenance message does not show, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the pressure switch on the alternate brake selector valve, S811.

(a) Disconnect the electrical connector D2870 from the pressure switch.

(b) If the ANTISKID INOP light goes off, then do the steps that follow:

1) Replace the pressure switch on the alternate brake seletor valve, S811. These are the tasks:
- Alternate Brake Selector Valve Removal, AMM TASK 32-41-93-000-801
- Alternate Brake Selector Valve Installation, AMM TASK 32-41-93-420-801

2) Reconnect the connector D2870 to the pressure switch.

3) If the ANTISKID INOP light remains off, then you corrected the fault.

(c) If the AUTOBRAKE DISARM light remains on, then continue.

(2) Do this check of the wiring between the ANTISKID INOP light and the antiskid sense relays:

(a) Remove the center instrument panel, P2-2.

(b) Disconnect connector D339 from the center instrument panel, P2-2.

(c) Disconnect connector D11402 from the outboard antiskid sense relay, R626, in the J24 junction box at STA 259.

(d) Do a wiring check between this pin on connector D339 at the P2-2 panel and the pin on connector D11402 for the outboard sense relay, R626:

D339		D11402
pin 8	- - - - - - - - - - - - - - - - - - -	pin 5

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector D339 to the P2-2 panel.

3) Re-connect connector D11402 to the relay.

4) If the ANTISKID INOP light goes off, then you corrected the fault.

5) Install the center instrument panel, P2-2.

(f) If you do not find a problem with the wiring, then continue.

(g) Re-connect connector D11402 to the relay.

(h) Disconnect connector D11406 from the inboard antiskid sense relay, R628, in the J22 junction box at STA 259.

(i) Do a wiring check between this pin on connector D339 at the P2-2 panel and the pin on connector D11406 for the inboard sense relay, R628:

D339		D11406
pin 8	- - - - - - - - - - - - - - - - - - -	pin 5

(j) If you find a problem with the wiring, then do these steps:
1) Repair the wiring.
2) Re-connect connector D339 to the P2-2 panel.
3) Re-connect connector D11406 to the relay.
4) If the ANTISKID INOP light goes off, then you corrected the fault.
5) Install the center instrument panel, P2-2.

(k) If you do not find a problem with the wiring, then continue.

(l) Re-connect connector D11406 to the relay.

(m) Disconnect connector D11404 from the alternate antiskid sense relay, R627, in the J22 junction box at STA 259.

(n) Do a wiring check between this pin on connector D339 at the P2-2 panel and the pin on connector D11404 for the alternate sense relay, R627:

D339		D11402
pin 8	- - - - - - - - - - - - - - - - - -	pin 3

(o) If you find a problem with the wiring, then do these steps:
1) Repair the wiring.
2) Re-connect connector D339 to the P2-2 panel.
3) Re-connect connector D11404 to the relay.
4) If the ANTISKID INOP light goes off, then you corrected the fault.
5) Install the center instrument panel, P2-2.

(p) If you do not find a problem with the wiring, then continue.

(q) Re-connect connector D11404 to the relay.

(r) Re-connect connector D339 to the center instrument panel, P2-2.

(s) Install the center instrument panel, P2-2.

(3) Do this check of the ANTISKID INOP light, L2:
(a) Push and release the ANTISKID INOP light to use the press-to-test switch in the light.
(b) If the ANTISKID INOP light goes off, then do the steps that follow:
1) Replace the ANTISKID INOP light assembly, L2, do this task: Indicator Light - Light Assembly Replacement, AMM TASK 33-18-00-960-802.
2) Push and release the ANTISKID INOP light to use the press-to-test switch in the light.
3) If the ANTISKID INOP light comes on and then goes off, then you corrected the fault.
(c) If the ANTISKID INOP light remains on, then continue.

(4) Replace the Antiskid/Autobrake control unit, M162. These are the tasks:
- Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801
- Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.
(b) If the ANTISKID INOP light goes off, then you corrected the fault.

——————— END OF TASK ———————

830. PARKING BRAKE Warning Light (External Power Receptacle Panel) Does Not Operate - Fault Isolation

A. Description

(1) The PARKING BRAKE light, on the external power receptacle panel, comes on whenever the parking brake lever is set.

B. Possible Causes

(1) PARKING BRAKE light, L1002

(2) Parking brake switch, S100

(3) Parking brake valve, V11

(4) Wiring problem

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

D. Related Data

(1) (SSM 32-44-11)

(2) (WDM 32-44-11)

E. Initial Evaluation

(1) Fully push the brake pedals and set the parking brake.

(2) If the PARKING BRAKE light comes on, then there was an intermittent fault.

(3) If the PARKING BRAKE light does not come on, then do the Fault Isolation Procedure below.

(4) Release the parking brake.

F. Fault Isolation Procedure

(1) Replace the PARKING BRAKE light, L1002.

(a) Fully push the brake pedals and set the parking brake.

(b) If the PARKING BRAKE light comes on, then you corrected the fault.

(c) Release the parking brake.

(d) If the PARKING BRAKE light does not come on, then continue.

(2) Do this voltage check at the parking brake valve, V11:

(a) Disconnect the connector D928 from the parking brake valve, V11.

(b) Do a check for 28v DC from pin 3 of connector D928 to structure ground.

(c) Fully push the brake pedals and set the parking brake.

(d) Do a check for 28v DC from pin 2 of connector D928 to structure ground.

(e) Release the parking brake.

(f) If there is 28v DC at pin 3 of connector D928, but there is not 28v DC at pin 2 of connector D928 after you set the parking brake, then do these steps:

1) Do a wiring check between these pins on switch, S100, in the P8 stand and connector D928 at the parking brake valve V11:

S100		D928
1N0	- - - - - - - - - - - - - - - - - -	pin 2

2) If you find a problem with the wiring, then do these steps:
   a) Re-connect connector D928.
   b) Repair the wiring.
   c) Fully push the brake pedals and set the parking brake.
   d) If the PARKING BRAKE light comes on, then you corrected the fault.
   e) Release the parking brake.
3) If you do not find a problem with the wiring, then do these steps:
   a) Re-connect connector D928.
   b) Adjust the parking brake switch, S100, do this task: Parking Brake System Adjustment, AMM TASK 32-44-00-820-801.
   c) Fully push the brake pedals and set the parking brake.
   d) If the PARKING BRAKE light comes on, then you corrected the fault.
   e) Release the parking brake.
   f) If the PARKING BRAKE light does not come on, then continue.
   g) Replace the parking brake switch, S100. These are the tasks:
      - Parking Brake Latch Switch Removal, AMM TASK 32-44-11-000-804
      - Parking Brake Latch Switch Installation, AMM TASK 32-44-11-400-804
   h) Fully push the brake pedals and set the parking brake.
   i) If the PARKING BRAKE light comes on, then you corrected the fault.
   j) Release the parking brake.

(g) If there is not 28v DC at either pin of connector D928 that you checked, then do these steps:
1) Do a check for 28v DC from the load terminal of this circuit breaker, C1346, to structure ground:
   a) This is the circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	16	C01346	LANDING GEAR PARKING BRAKE

   b) If there is not 28v DC at the load terminal of the circuit breaker, C1346, then do these steps:
   c) Replace the circuit breaker, C1346.
   d) Fully push the brake pedals and set the parking brake.
   e) If the PARKING BRAKE light comes on, then you corrected the fault.
   f) Release the parking brake.
   g) If there is 28v DC at the load terminal of the circuit breaker, C1346, then continue.
2) Do a check for 28v DC from connection 1C of the parking brake switch, S100, to structure ground.
3) If there is 28v DC at connection 1C of the parking brake switch, S100, then do these steps:

a) Replace the parking brake switch, S100. These are the tasks:
- Parking Brake Latch Switch Removal, AMM TASK 32-44-11-000-804
- Parking Brake Latch Switch Installation, AMM TASK 32-44-11-400-804

b) Fully push the brake pedals and set the parking brake.

c) If the PARKING BRAKE light comes on, then you corrected the fault.

d) Release the parking brake.

4) If there is not 28v DC at connection 1C of the parking brake switch, S100, then do these steps:

a) Repair the wiring between pin 1C of the parking brake switch, S100 to the load terminal of circuit breaker C1346.

b) Fully push the brake pedals and set the parking brake.

c) If the PARKING BRAKE light comes on, then you corrected the fault.

d) Release the parking brake.

(h) If there is 28v DC at pin 3 of connector D928, and there is also 28v DC at pin 2 of connector D928 after you set the parking brake, then continue.

(3) Do a ground check of the parking brake valve, V11:

(a) Disconnect connector D928 from the parking brake valve, V11.

(b) Do a continuity check from pin 1 of connector D928 to structure ground.

(c) Do a continuity check from pin 9 of connector D928 to structure ground.

(d) If there is no continuity at pin 1 or pin 9 of connector D928, then do these steps:

1) Repair the wiring.

2) Re-connect connector D928.

3) Fully push the brake pedals and set the parking brake.

4) If the PARKING BRAKE light comes on, then you corrected the fault.

a) Release the parking brake.

(e) If there is continuity at pin 1 and pin 9 of connector D928, then continue.

(4) Replace the parking brake valve, V11. These are the tasks:
- Parking Brake Shutoff Valve Removal, AMM TASK 32-44-21-000-801
- Parking Brake Shutoff Valve Installation, AMM TASK 32-44-21-400-801

(a) Fully push the brake pedals and set the parking brake.

(b) If the PARKING BRAKE light comes on, then you corrected the fault.

(c) Release the parking brake.

——————— END OF TASK ———————

831. ANTISKID INOP Light is OFF - Fault Isolation

A. Description

(1) The ANTISKID INOP light comes on when these conditions occur:

(a) When the antiskid/autobrake control unit is not powered or not installed.

(b) Detection of an antiskid system fault by the antiskid/autobrake control unit.

(c) When the alternate brake hydraulic system is pressurized (as determined by the pressure switch on the alternate brake selector valve) and any antiskid system fault is detected (except a normal valve or parking brake disagree fault).

B. Possible Causes

(1) Wiring problem

(2) ANTISKID INOP light, L2

(3) Outboard antiskid sense relay, R626

(4) Inboard antiskid sense relay, R628

(5) Alternate antiskid sense relay, R627

(6) Pressure switch on the alternate brake selector valve, S811.

(7) Antiskid/autobrake control unit (AACU), M162

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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. Related Data

(1) (SSM 32-41-11)

(2) (WDM 32-41-11)

E. Initial Evaluation

(1) Do this check of the ANTISKID INOP light:

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If a maintenance message shows, then go to the fault isolation task for that maintenance message.

(c) If a maintenance message does not show, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the ANTISKID INOP light, L2:

(a) Push and release the ANTISKID INOP light to use the press-to-test switch in the light.

(b) If the ANTISKID INOP light goes off, then do the steps that follow:

1) Replace the ANTISKID INOP light assembly, L2, do this task: Indicator Light - Light Assembly Replacement, AMM TASK 33-18-00-960-802.

2) Push and release the ANTISKID INOP light to use the press-to-test switch in the light.

3) If the ANTISKID INOP light comes on and then goes off, then you corrected the fault.

(c) If the ANTISKID INOP light remains on, then continue.

(2) Do this check of the pressure switch on the alternate brake selector valve, S811.

(a) Disconnect the electrical connector D2870 from the pressure switch.

(b) If the ANTISKID INOP light goes off, then do the steps that follow:

1) Replace the pressure switch on the alternate brake seletor valve, S811. These are the tasks:
   - Alternate Brake Selector Valve Removal, AMM TASK 32-41-93-000-801
   - Alternate Brake Selector Valve Installation, AMM TASK 32-41-93-420-801
2) Reconnect the connector D2870 to the pressure switch.
3) If the ANTISKID INOP light remains off, then you corrected the fault.

(c) If the AUTOBRAKE DISARM light remains on, then continue.

(3) Do this check of the wiring between the ANTISKID INOP light and the antiskid sense relays:

(a) Remove the center instrument panel, P2-2.

(b) Disconnect connector D339 from the center instrument panel, P2-2.

(c) Disconnect connector D11402 from the outboard antiskid sense relay, R626, in the J24 junction box at STA 259.

(d) Do a wiring check between this pin on connector D339 at the P2-2 panel and the pin on connector D11402 for the outboard sense relay, R626:

D339		D11402
pin 8	- - - - - - - - - - - - - - - - - -	pin 5

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-connect connector D339 to the P2-2 panel.
3) Re-connect connector D11402 to the relay.
4) If the ANTISKID INOP light goes off, then you corrected the fault.
5) Install the center instrument panel, P2-2.

(f) If you do not find a problem with the wiring, then continue.

(g) Re-connect connector D11402 to the relay.

(h) Disconnect connector D11406 from the inboard antiskid sense relay, R628, in the J22 junction box at STA 259.

(i) Do a wiring check between this pin on connector D339 at the P2-2 panel and the pin on connector D11406 for the inboard sense relay, R628:

D339		D11406
pin 8	- - - - - - - - - - - - - - - - - -	pin 5

(j) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-connect connector D339 to the P2-2 panel.
3) Re-connect connector D11406 to the relay.
4) If the ANTISKID INOP light goes off, then you corrected the fault.
5) Install the center instrument panel, P2-2.

(k) If you do not find a problem with the wiring, then continue.

(l) Re-connect connector D11406 to the relay.

(m) Disconnect connector D11404 from the alternate antiskid sense relay, R627, in the J22 junction box at STA 259.

(n) Do a wiring check between this pin on connector D339 at the P2-2 panel and the pin on connector D11404 for the alternate sense relay, R627:

D339		D11402
pin 8	- - - - - - - - - - - - - - - - - -	pin 3

(o) If you find a problem with the wiring, then do these steps:
1) Repair the wiring.
2) Re-connect connector D339 to the P2-2 panel.
3) Re-connect connector D11404 to the relay.
4) If the ANTISKID INOP light goes off, then you corrected the fault.
5) Install the center instrument panel, P2-2.

(p) If you do not find a problem with the wiring, then continue.

(q) Re-connect connector D11404 to the relay.

(r) Re-connect connector D339 to the center instrument panel, P2-2.

(s) Install the center instrument panel, P2-2.

(4) Replace the Antiskid/Autobrake control unit, M162. These are the tasks:
- Antiskid/Autobrake Control Unit Removal, AMM TASK 32-42-21-000-801
- Antiskid/Autobrake Control Unit Installation, AMM TASK 32-42-21-400-801

(a) Do this task: Antiskid/Autobrake Control Unit (AACU) BITE Procedure, 32-42 TASK 801.

(b) If the ANTISKID INOP light goes off, then you corrected the fault.

END OF TASK

801. Parking Brake Drops Faster Than Permitted with the Parking Brake Set - Fault Isolation

A. Initial Evaluation

(1) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.

(a) If the parking brake accumulator pressure drops faster than permitted, then do the Fault Isolation Procedure below.

B. Fault Isolation Procedure

(1) Did you wait for a minimum of 10 minutes after you turned on the pumps to start the parking brake hold check.

(a) If you waited less than 10 minutes, then allow 10 minutes for the accumulator temperature to stabilize.

(b) If you waited for more than 10 minutes, then continue.

(2) Do this task: Check of the Brake Accumulator Precharge Pressure, AMM TASK 12-15-11-610-801.

(a) If the brake accumulator precharge pressure is low, then, do this task: Hydraulic Brake Accumulator Servicing, AMM TASK 12-15-11-420-801.

(b) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.

1) If the accumulator pressure drops within the limit, then you corrected the fault.

2) If the accumulator pressure drops faster than permitted, then continue.

(3) Do the check of the gap between the parking brake pawl and the bushing:

(a) Do the check of the gap between the pawl lip and the bushing when the pedals against the stop position.

1) If the gap between the pawl lip and the bushing is more than 0.1 inches (2.5 mm), then adjust the pawls of the parking brake, do this task: Parking Brake System Adjustment, AMM TASK 32-44-00-820-801

(b) Do the check of the gap between the aft edge of the pawls and the bushing when the bellcrank turned slightly.

1) If the gap between the aft edge of the pawls and bushing is more than 0.2 inches (5 mm), then adjust the pawl stop, do this task: Parking Brake System Adjustment, AMM TASK 32-44-00-820-801.

(c) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.

1) If the accumulator pressure drops within the limit, then you corrected the fault.

2) If the accumulator pressure drops faster than permitted, then continue.

(4) Do the check of the freeplay for the rig pins and cable tension.

(a) If the freeplay is not satisfactory, then, do this task: Hydraulic Brake System Adjustment, AMM TASK 32-41-00-820-801.

(b) If the freeplay is satisfactory, then continue.

(5) Make sure that the parking brake shutoff valve is at the "closed" position (position 2) with the parking brake is set:

(a) Make sure the parking brake light in the flight compartment is on.

1) If the parking brake shutoff valve is not closed, then replace the parking brake shutoff valve, these are the tasks:

- Parking Brake Shutoff Valve Removal, AMM TASK 32-44-21-000-801

- Parking Brake Shutoff Valve Installation, AMM TASK 32-44-21-400-801

(b) If the parking brake light in the flight compartment is off, then do a check on the parking brake switch actuator, do this task: Parking Brake System Adjustment, AMM TASK 32-44-00-820-801

1) If you do not find a problem with the adjustment of the parking brake switch actuator, then these are the tasks:
   - Parking Brake Latch Switch Removal, AMM TASK 32-44-11-000-804
   - Parking Brake Latch Switch Installation, AMM TASK 32-44-11-400-804

(c) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.

1) If the brake accumulator pressure drops within the limit, then you corrected the fault.

2) If the brake accumulator pressure drops faster than permitted, then continue.

(6) Replace the check valves (Figure 201):

(a) For the B hydraulic system, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(b) Disconnect hydraulic lines from the valves.

(c) Install the caps on the hydraulic lines.

(d) Remove the check valves.

(e) Remove the caps from the hydraulic lines.

(f) Put the valve in position to align it with the hydraulic lines.

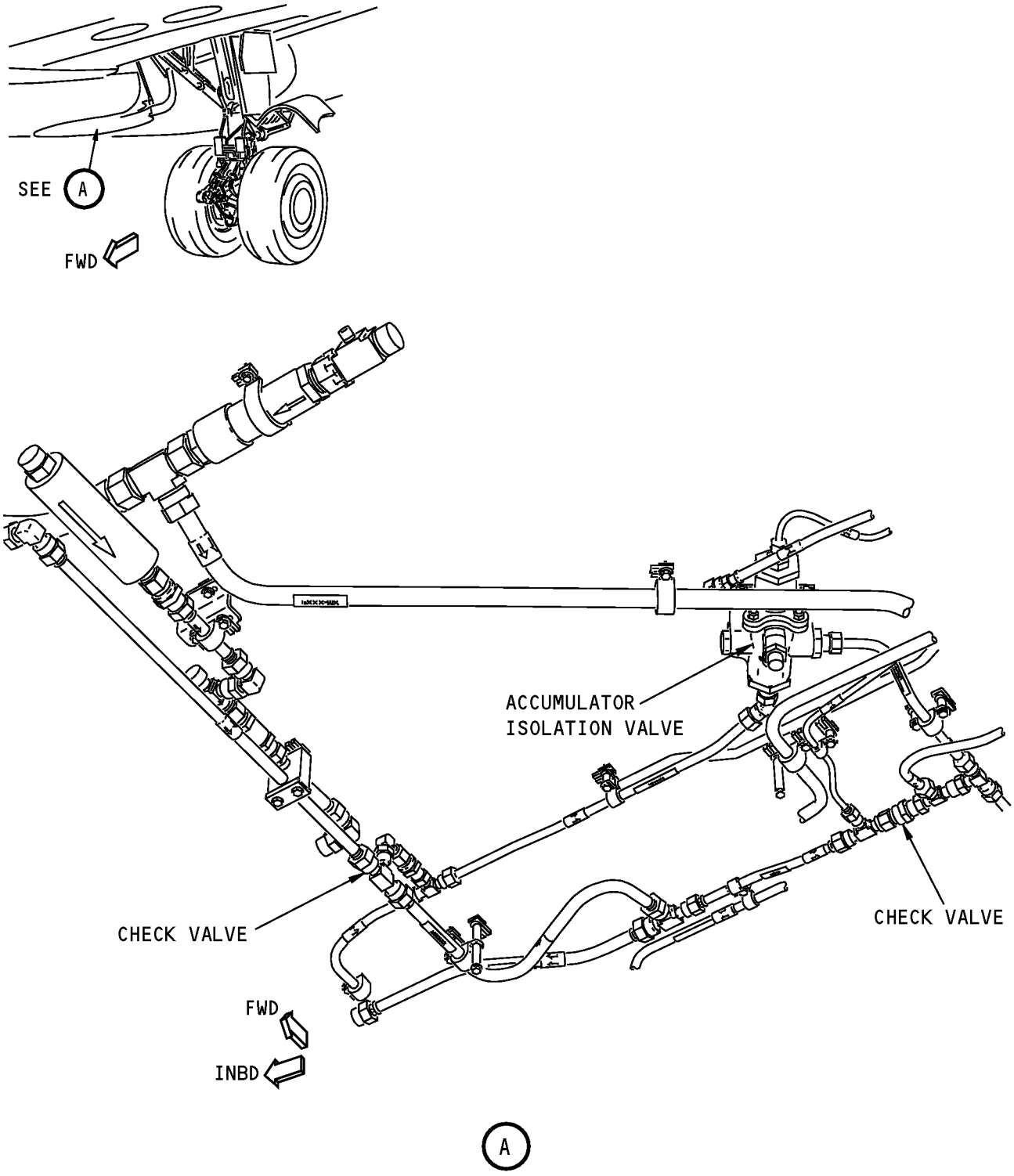
(g) Connect the hydraulic lines to the valve.

(h) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.

1) If the brake accumulator pressure drops within the limit, then you corrected the fault.

2) If the brake accumulator pressure drops faster than permitted, then continue.

END OF TASK



Check Valve Locations
Figure 201 / 32-44-00-990-801

(7) Do the check for internal leakage of the check valve:
   (a) Put a plug in the outlet (return) port of the parking brake shutoff valve.
   (b) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.
      1) If the accumulator pressure drops within the limit, then replace the parking brake shutoff valve, these are the tasks:
         - Parking Brake Shutoff Valve Removal, AMM TASK 32-44-21-000-801
         - Parking Brake Shutoff Valve Installation, AMM TASK 32-44-21-400-801
      2) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.
         a) If the brake accumulator pressure drops within the limit, then you corrected the fault.
         b) If the brake accumulator pressure drops faster than permitted, then continue.
   (c) Remove the plug from the port of parking brake shut-off valve and connect the return line before releasing the brake.

(8) Do the check for internal leakage of the parking brake shutoff valve:
   (a) Put a plug in the outlet (return) port of the parking brake shutoff valve.
   (b) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.
      1) If the accumulator pressure drops within the limit, then replace the parking brake shutoff valve, these are the tasks:
         - Parking Brake Shutoff Valve Removal, AMM TASK 32-44-21-000-801
         - Parking Brake Shutoff Valve Installation, AMM TASK 32-44-21-400-801
      2) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.
         a) If the brake accumulator pressure drops within the limit, then you corrected the fault.
         b) If the brake accumulator pressure drops faster than permitted, then continue.
   (c) Remove the plug from the port of parking brake shut-off valve and connect the return line before releasing the brake.

(9) Do the check for internal leakage of either one of the brake metering valves:
   (a) Put a plug on the B system return lines.
   (b) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.
      1) If the brake accumulator pressure drops within the limit, then replace the brake metering valve, these are the tasks:
         - Brake Metering Valve Removal, AMM TASK 32-41-31-000-801
         - Brake Metering Valve Installation, AMM TASK 32-41-31-400-801
      2) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.
         a) If the brake accumulator pressure drops within the limit, then you corrected the fault.
         b) If the brake accumulator pressure drops faster than permitted, then continue.
   (c) Remove the plug from the A and B system pressure lines before releasing the brake.

(10) Do the check for internal leakage of the autobrake shuttle valve:
   (a) Put a plug on the hydraulic line to the autobrake control module.
   (b) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.

1) If the brake accumulator pressure drops within the limit, then replace the autobrake shuttle valve. These are the tasks:
   - Autobrake Shuttle Valve Removal, AMM TASK 32-42-71-000-801
   - Autobrake Shuttle Valve Installation, AMM TASK 32-42-71-400-801
2) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.
   a) If the brake accumulator pressure drops within the limit, then you corrected the fault.
   b) If the brake accumulator pressure drops faster than permitted, then continue.

(c) Remove the plug before releasing the brake.

(11) Do the check for internal leakage of any of the four brake shuttle valves:

(a) Put a plug on the hydraulic line of the brake shuttle valve to the alternate antiskid control valve.

(b) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.

1) If the brake accumulator pressure drops within the limit, then replace the brake shuttle valve. These are the tasks:
   - Brake Shuttle Valve Removal, AMM TASK 32-41-95-000-801
   - Brake Shuttle Valve Installation, AMM TASK 32-41-95-400-801
2) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.
   a) If the brake accumulator pressure drops within the limit, then you corrected the fault.
   b) If the brake accumulator pressure drops faster than permitted, then continue.

(c) Remove the plug from the hydraulic line before releasing the brake.

802. Parking Brake Drops Faster Than Permitted with the Parking Brake Released- Fault Isolation

A. Initial Evaluation

(1) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.

(a) If the parking brake accumulator pressure drops faster than permitted, then do the Fault Isolation Procedure below.

B. Fault Isolation Procedure

(1) Did you wait for a minimum of 10 minutes after you turned on the pumps to start the parking brake hold check.

(a) If you waited less than 10 minutes, then allow 10 minutes for the accumulator temperature to stabilize.

(b) If you waited for more than 10 minutes, then continue.

(2) Do this task: Check of the Brake Accumulator Precharge Pressure, AMM TASK 12-15-11-610-801.

(a) If the brake accumulator precharge pressure is low, then, do this task: Hydraulic Brake Accumulator Servicing, AMM TASK 12-15-11-420-801.

(b) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.

1) If the accumulator pressure drops within the limit, then you corrected the fault.

2) If the accumulator pressure drops faster than permitted, then continue.

(3) Do the check for leakage in the accumulator pressure relief valve:

(a) Release the parking brake.

(b) For the B hydraulic system, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(c) Wait at least 10 minutes for the accumulator temperature to stabilize.

(d) For the B hydraulic system, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805

(e) Wait an additional 10 minutes.

(f) During the final 10 minutes, did the B hydraulic system pressure quantity increase and the accumulator pressure decrease.

1) If no, then continue.

2) If yes, then replace the accumulator pressure relief valve, these are the tasks:
- Brake Accumulator Pressure Relief Valve Removal, AMM TASK 32-41-71-000-801
- Brake Accumulator Pressure Relief Valve Installation, AMM TASK 32-41-71-420-801

a) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.

b) If the brake accumulator pressure drops within the limit, then you corrected the fault.

c) If the brake accumulator pressure drops faster than permitted, then continue.

(4) Do the check for internal leakage of either one of the brake metering valves:

(a) Put a plug on the A and B system pressure inputs.

(b) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.

1) If the brake accumulator pressure drops within the limit, then replace the brake metering valve, these are the tasks:
- Brake Metering Valve Removal, AMM TASK 32-41-31-000-801
- Brake Metering Valve Installation, AMM TASK 32-41-31-400-801

2) Do this task: Parking Brake Hold Check, AMM TASK 32-44-00-790-801.

a) If the brake accumulator pressure drops within the limit, then you corrected the fault.

b) If the brake accumulator pressure drops faster than permitted, then continue.

(c) Remove the plug before releasing the brake.

——————— END OF TASK ———————

801. Nose Wheel Makes a Loud Noise in the Wheel Well - Fault Isolation

A. Description

(1) There are two nose wheel spin brakes in the nose gear wheel well. The nose wheel spin brakes use friction with the nose tires to stop nose wheel rotation after the nose gear is retracted.

(2) The wheel spin brake assemblies attach to spring supports in the upper forward nose wheel well.

(3) When you move the rudder pedals full travel on the ground, the nose wheels turn a maximum of 7 degrees in the left or right direction. Steering inputs from the rudder pedals go to the metering valve through a cable loop.

(4) The rudder pedal steering mechanism does these functions:

(a) Combines the steering inputs from the rudder pedals and the steering wheel

(b) Prevents rudder pedal inputs when the airplane is in the air

(c) Provides centering forces.

(5) A rudder pedal steering rotary actuator is attached to the rudder pedal steering mechanism with a cable loop. When the airplane is in the air the rotary actuator moves a cam in the mechanism. This will not let the rudder pedal inputs move the control cables for the nose wheel steering.

(6) (SDS SUBJECT 32-45-00)

(7) (SDS SUBJECT 32-51-00)

B. Possible Causes

(1) Damaged or worn nose tires

(2) Damaged or worn nose wheel spin brakes

(3) Rudder pedal steering rotary actuator, M1177, and/or cable loop

(4) The air/ground system

(5) Incorrect nose gear shock strut servicing.

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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

D. Related Data

(1) (SSM 32-51-11)

(2) (WDM 32-51-11)

E. Fault Isolation Procedure

(1) Do these steps to prepare for the fault isolation:

(a) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(b) Make sure the control lever for the landing gear is in the OFF position.

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.

(c) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(2) Examine the nose tires for wear or damage. Do these tasks:AMM PAGEBLOCK 32-45-00/601

(3) Examine the nose wheel spin brake assemblies in the nose gear wheel well. To do this, do this task: Nose Wheel Spin Brake Lining Inspection, AMM TASK 32-45-31-700-801

Look for wear on the spin brake pads or damaged spring supports.

(a) If the spin brake pad is worn or the spring supports are damaged, then do these steps:

1) Replace the nose wheel spin brakes. These are the tasks:
- Nose Wheel Spin Brake Lining - Removal, AMM TASK 32-45-31-000-801
- Nose Wheel Spin Brake Lining - Installation, AMM TASK 32-45-31-400-801

2) If the fault does not occur on the subsequent flight, then you corrected the fault.

(b) If the spin brake pad is not worn or the spring supports are not damaged, then continue.

(4) Examine the nose gear wheel well, nose gear doors, and and the nose gear for obvious signs of damage or contact by nose tires.

(a) If there is damage in the wheel well or on the nose gear, then repair the damage and service the nose gear shock strut. To service the nose gear shock strut, do this task: Nose Landing Gear Shock Strut Servicing, AMM TASK 12-15-41-610-802.

(b) If the fault does not occur on the subsequent flight, then you corrected the fault.

(c) If there is no damage in the wheel well or on the nose gear, then continue.

(5) Do this check of the rudder pedal steering rotary actuator, M1177, and/or cable loop:

NOTE: The rotary actuator is below the flight deck floor. You get access to the actuator through the access panel on the left side bulkhead of the nose gear wheel well.

(a) Put the airplane in the air mode. Do this task: Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801.

(b) Do a check to see if the rotary actuator moved to the air position.

NOTE: The rotary actuator is in the air position when the index marks on the actuator pulley and the housing are aligned.

(c) If the rotary actuator did not move to the air position, then do these steps:

1) Replace the steering rotary actuator. These are the tasks:
- Rudder Pedal Steering Rotary Actuator Removal, AMM TASK 32-51-81-000-801
- Rudder Pedal Steering Rotary Actuator Installation, AMM TASK 32-51-81-400-801

2) Put the airplane back to the ground mode. Do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

3) If the fault does not occur again on the subsequent flight, then you corrected the fault.

(d) If the rotary actuator did move to the air position, then continue.

1) Put the airplane back to the ground mode. Do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(6) Do this task: Nose Landing Gear Shock Strut Servicing, AMM TASK 12-15-41-610-802.

——————— END OF TASK ———————

802. Nose Wheel Shock Strut Bottoms During Taxi - Fault Isolation

A. Description

(1) (SDS SUBJECT 32-51-00)

B. Possible Causes

(1) Incorrect nose gear shock strut servicing

(2) Nose gear shock strut seals

C. Fault Isolation Procedure

(1) Do this step to prepare for fault isolation:

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.

(a) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(2) Do this check of the shock strut for the nose landing gear for the correct servicing:

(a) Examine the nose gear shock strut for the correct servicing. Do this task: Nose Landing Gear Shock Strut Fluid Check, AMM TASK 12-15-41-610-801.

(b) If it is necessary, service the nose gear shock strut. To service the strut, do this task: Nose Landing Gear Shock Strut Servicing, AMM TASK 12-15-41-610-802.

1) If the fault does not occur on the subsequent taxi, then you corrected the fault.

(c) If the nose gear shock is correctly serviced, then continue.

(3) Do this check to see if there is leakage of the shock strut seals:

(a) Examine the shock strut to see if there is leakage at the seals. Do this task: Nose Landing Gear Shock Strut Seal Leakage Check, AMM TASK 32-21-11-200-801.

(b) If it is necessary, replace the seals on the nose gear. Do this task: Replace the Active Seals and Spare Seals, AMM TASK 32-21-11-960-802.

1) If the fault does not occur on the subsequent taxi, then you corrected the fault.

——————— END OF TASK ———————

803. Nose Wheel Vibrates at Gear Retraction - Fault Isolation

A. Description

(1) (SDS SUBJECT 32-51-00)

B. Possible Causes

(1) Incorrect inflation or servicing of the nose wheel tires

(2) Flat spots, worn areas, out-of-balance, or damage on the nose tires

(3) Damaged nose wheels

(4) Loose axle nuts on left and/or right nose wheels

(5) Nose wheel bearings loose or damaged

(6) Nose gear steering cylinder attachment loose

(7) Nose wheel snubber pads worn, damaged or need adjusting

(8) Incorrect nose gear shock strut servicing

(9) Excessive freeplay on the nose gear torsion links

(10) Excessive freeplay in the nose gear steering collar and/or steering actuator trunnion bushings

(11) Nose wheel steering cable loop out of adjustment

C. Related Data

(1) (SSM 32-51-11)

(2) (WDM 32-51-11)

D. Fault Isolation Procedure

(1) Do these steps to prepare for fault isolation:

(a) Make sure that the control lever for the landing gear is in the DN position.

(b) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

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.

WARNING: MAKE SURE THE TOWING LEVER LOCK PIN IS INSTALLED ON THE NOSE LANDING GEAR. WITHOUT THE TOWING LEVER LOCK PIN INSTALLED, INADVERTENT MOVEMENT OF THE NOSE LANDING GEAR COULD RESULT IN INJURIES TO PERSONS.

(c) Make sure that the nose and main landing gear have downlock pins installed. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(2) Make sure that the nose wheel tires are inflated to the correct pressure. Do this task: Landing Gear Tire Pressure Check and Tire Servicing, AMM TASK 12-15-51-780-801.

(a) If the pressure for the nose wheel tires is not correct, then do these steps:

1) Do the servicing of the nose wheel tires. To service the tires, do this task: Add Nitrogen or Air to the Tire, AMM TASK 12-15-51-610-802.

(b) If the pressure for the nose wheel tires is correct, then continue.

(3) Examine the nose wheel tires for flat spots, worn areas, or damage:

(a) If there are flat spots, worn areas, or damage on the tires, then do these steps:

1) Replace the applicable nose wheel tires that are damaged. These are the tasks:

- Nose Landing Gear Wheel and Tire Assembly Removal, AMM TASK 32-45-21-000-801
- Nose Landing Gear Wheel and Tire Assembly Installation, AMM TASK 32-45-21-400-801

(b) If the nose wheel tires are not worn or damaged, then continue.

(4) Examine the nose wheels for structural damage, do this task: Wheels Fast Check (Wheel Installed on the Airplane), AMM TASK 32-45-00-700-801.

(a) If there is structural damage to the nose wheels, then do this step:

1) Replace the nose wheel tires that are damaged. These are the tasks:

- Nose Landing Gear Wheel and Tire Assembly Removal, AMM TASK 32-45-21-000-801
- Nose Landing Gear Wheel and Tire Assembly Installation, AMM TASK 32-45-21-400-801

(b) If the nose wheels do not have structural damage, then continue.

(5) If the nose wheel tires passed the previous inspections, then do the following:

(a) Examine the previous five flight legs for NLG vibration discrepancies.

(b) If no previous discrepancies exist, then you corrected the fault.

(c) If previous discrepancies exist and the NLG tires have not been replaced for this problem, replace the two NLG tires. These are the tasks:

- Nose Landing Gear Wheel and Tire Assembly Removal, AMM TASK 32-45-21-000-801
- Nose Landing Gear Wheel and Tire Assembly Installation, AMM TASK 32-45-21-400-801

(d) If previous discrepancies exist and NLG tires have already been replaced for this problem, then continue.

(6) Do this check of the axle nut on the two nose wheels:

(a) Make sure the torque for the axle nut on the two nose wheels is correct, do this task: Nose Landing Gear Wheel and Tire Assembly Installation, AMM TASK 32-45-21-400-801.

(b) If the torque on the axle nut for the two nose wheels is not correct, then do this step:

1) Tighten the axle nuts to the correct torque, do this task: Nose Landing Gear Wheel and Tire Assembly Installation, AMM TASK 32-45-21-400-801.

(c) If the torque on the axle nuts is correct, then continue.

(7) Do this check of the wheel bearings on the two nose wheels:

(a) Examine the wheel bearings on the two nose wheels for damage, do this task: Nose Landing Gear Wheel and Tire Assembly Removal, AMM TASK 32-45-21-000-801.

(b) If it is necessary, replace the wheel bearings. Do this task: Nose Landing Gear Wheel and Tire Assembly Installation, AMM TASK 32-45-21-400-801.

(c) If the wheel bearings do not need to be replaced, then continue.

(8) Do a check of the nose wheel snubber pads for wear and damage, do these tasks: AMM PAGEBLOCK 32-45-31/201.

(9) Do this check of the shock strut for the nose landing gear for the correct servicing:

(a) Examine the nose gear shock strut for the correct servicing. To do this, do this task: Nose Landing Gear Shock Strut Fluid Check, AMM TASK 12-15-41-610-801.

(b) If it is necessary, service the nose gear shock strut. To do this, do this task: Nose Landing Gear Shock Strut Servicing, AMM TASK 12-15-41-610-802.

(c) If the nose gear shock is correctly serviced, then continue.

(10) Do a check for torsional freeplay of the torsion links on the nose gear. To do this, do this task: Nose Landing Gear Inspection, AMM TASK 32-21-00-200-801.

(a) If there is too much torsional freeplay, then do these steps to replace the parts that are out of limits:

1) Replace the upper torsion link. These are the tasks:
   - Nose Landing Gear Upper Torsion Link Removal, AMM TASK 32-21-31-000-801
   - Nose Landing Gear Upper Torsion Link Installation, AMM TASK 32-21-31-400-801
2) Replace the lower torsion link. These are the tasks:
   - Nose Landing Gear Lower Torsion Link Removal, AMM TASK 32-21-31-000-802
   - Nose Landing Gear Lower Torsion Link Installation, AMM TASK 32-21-31-400-802
3) Replace the steering collar. These are the tasks:
   - Steering Collar Removal, AMM TASK 32-51-61-000-801
   - Steering Collar Installation, AMM TASK 32-51-61-400-801
4) Replace the nose gear steering cylinder and attachments, as necessary. These are the tasks:
   - Nose Gear Steering Actuator Removal, AMM TASK 32-51-51-000-801
   - Ground Spoiler Control Valve Removal, AMM TASK 27-62-41-000-801

(b) If the torsional freeplay is correct, then continue.

(11) Do a check for excessive freeplay in the Nose Gear Steering Actuator and the Nose Gear Steering Collar. These are the tasks:
- Nose Gear Steering Actuator Trunnion and Trunnion Bushing Dimensional Inspection, AMM TASK 32-51-51-200-802
- Steering Collar Inspection, AMM TASK 32-51-61-220-801

(a) If there is freeplay or wear greater than the allowable limits, then do these steps to replace the parts that are out of limits:

1) Replace the upper and lower nose gear steering actuator trunnion bushings. These are the tasks:
   - Nose Gear Steering Actuator Removal, AMM TASK 32-51-51-000-801
   - Nose Gear Steering Actuator Installation, AMM TASK 32-51-51-400-801
2) Replace the steering collar. These are the tasks: .
   - Steering Collar Removal, AMM TASK 32-51-61-000-801
   - Steering Collar Installation, AMM TASK 32-51-61-400-801

(b) If there is not excessive freeplay in the Nose Gear Steering Actuator and the Nose Gear Steering Collar, then continue.

(12) Replace the steering actuator. These are the tasks:
- Nose Gear Steering Actuator Removal, AMM TASK 32-51-51-000-801
- Nose Gear Steering Actuator Installation, AMM TASK 32-51-51-400-801

(13) If the fault does not occur on the subsequent flight, then you corrected the fault.

———————— END OF TASK ————————

804. Nose Wheel Vibrates at Taxi, Takeoff, or Landing - Fault Isolation

A. Description

(1) (SDS SUBJECT 32-51-00)

B. Possible Causes

(1) Incorrect inflation or servicing of the nose wheel tires

(2) Flat spots, worn areas, out-of-balance or damage on the nose wheel tires

(3) Damaged nose wheels

(4) Loose axle nuts on nose wheels

(5) Loose or damaged nose wheel bearings

(6) Nose gear steering cylinder attachment loose

(7) Incorrect nose gear shock strut servicing

(8) Excessive freeplay on the nose gear torsion links

(9) Excessive freeplay in the nose gear steering collar and/or steering actuator trunnion bushings.

(10) Worn trunnion pins or bushings.

C. Related Data

(1) (SSM 32-51-11)

(2) (WDM 32-51-11)

D. Fault Isolation Procedure

(1) Do these steps to prepare for fault isolation:

(a) Make sure the control lever for the landing gear is in the OFF position.

(b) For hydraulic system A, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

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.

(c) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(2) Make sure the nose wheel tires are inflated to the correct pressure, do this task: Landing Gear Tire Pressure Check and Tire Servicing, AMM TASK 12-15-51-780-801

(a) If the pressure for the nose wheel tires is not correct, then do these steps:

1) Do the servicing of the nose wheel tires. To service the tires, do this task: Add Nitrogen or Air to the Tire, AMM TASK 12-15-51-610-802.

2) Do the Repair Confirmation at the end of this task.

(b) If the pressure for the nose wheel tires is correct, then continue.

(3) Examine the nose wheel tires for flat spots, worn areas, or damage:

(a) If there are flat spots, worn areas, or damage on the tires, then do these steps:

1) Replace the nose wheel tires that are damaged. These are the tasks:

- Nose Landing Gear Wheel and Tire Assembly Removal, AMM TASK 32-45-21-000-801
- Nose Landing Gear Wheel and Tire Assembly Installation, AMM TASK 32-45-21-400-801

2) Do the Repair Confirmation at the end of this task.

(b) If the nose wheel tires are not worn or damaged, then continue.

(4) Examine the nose wheels for structural damage, such as cracks:

(a) If there is structural damage to the nose wheels, then do these steps:

1) Replace the nose wheel tires that are damaged. These are the tasks:
- Nose Landing Gear Wheel and Tire Assembly Removal, AMM TASK 32-45-21-000-801
- Nose Landing Gear Wheel and Tire Assembly Installation, AMM TASK 32-45-21-400-801

2) Do the Repair Confirmation at the end of this task.

(b) If the nose wheels do not have structural damage, then continue.

(5) If the nose wheel tires passed the previous inspections, then do the following:

(a) Examine the previous five flight legs for NLG vibration discrepancies.

(b) If no previous discrepancies exist, then you corrected the fault.

(c) If previous discrepancies exist and the NLG tires have not been replaced for this problem, replace the two NLG tires. These are the tasks:
- Nose Landing Gear Wheel and Tire Assembly Removal, AMM TASK 32-45-21-000-801
- Nose Landing Gear Wheel and Tire Assembly Installation, AMM TASK 32-45-21-400-801

(d) If previous discrepancies exist and NLG tires have already been replaced for this problem, then continue.

(6) Do this check of the axle nut on the two nose wheels:

(a) Make sure the torque for the axle nut on the two nose wheels is correct, do this task: Nose Landing Gear Wheel and Tire Assembly Installation, AMM TASK 32-45-21-400-801.

(b) If the torque on the axle nut for the two nose wheels is not correct, then do this step:

1) Tighten the axle nuts to the correct torque, do this task: Nose Landing Gear Wheel and Tire Assembly Installation, AMM TASK 32-45-21-400-801.

(c) If the torque on the axle nuts is correct, then continue.

(7) Do this check of the wheel bearings on the two nose wheels:

(a) Examine the wheel bearings on the two nose wheels for damage, do this task: Nose Landing Gear Wheel and Tire Assembly Removal, AMM TASK 32-45-21-000-801.

(b) If it is necessary, replace the wheel bearings. Do this task: Nose Landing Gear Wheel and Tire Assembly Installation, AMM TASK 32-45-21-400-801.

(c) If the wheel bearings do not need to be replaced, then continue.

(8) Do this check of the shock strut for the nose landing gear for the correct servicing:

(a) Examine the nose gear shock strut for the correct servicing. Do this task: Nose Landing Gear Shock Strut Fluid Check, AMM TASK 12-15-41-610-801.

(b) If it is necessary, service the nose gear shock strut. Do this task: Nose Landing Gear Shock Strut Servicing, AMM TASK 12-15-41-610-802.

1) Do the Repair Confirmation at the end of this task.

(c) If the nose gear shock is correctly serviced, then continue.

(9) Examine the torsion links for wear, do this task: Nose Landing Gear Torsion Links Inspection, AMM TASK 32-21-31-200-801.

NOTE: Replace worn parts as needed.

(10) Do a check for torsional freeplay, do this task: Nose Landing Gear Torsional Freeplay Inspection, AMM TASK 32-21-00-700-801.

(a) If there is too much torsional freeplay, then do these tasks:

1) Nose Gear Steering Actuator Trunnion and Trunnion Bushing Dimensional Inspection, AMM TASK 32-51-51-200-802

2) Steering Collar Inspection, AMM TASK 32-51-61-220-801

3) Do the Repair Confirmation at the end of this task.

(11) Do a check for torsional freeplay, do this task: Nose Landing Gear Torsional Freeplay Inspection, AMM TASK 32-21-00-700-801.

(a) If there is freeplay or wear greater that the allowable limits, then do these tasks:

1) Replace the Nose Landing Gear, do this task: NOSE LANDING GEAR - REMOVAL/INSTALLATION, AMM 32-21-00/401.

2) Do the Repair Confirmation at the end of this task.

(12) Do a check for excessive freeplay in the Nose Gear Steering Actuator and the Nose Gear Steering Collar. These are the tasks:

- Nose Gear Steering Actuator Trunnion and Trunnion Bushing Dimensional Inspection, AMM TASK 32-51-51-200-802
- Steering Collar Inspection, AMM TASK 32-51-61-220-801

(a) If there is freeplay or wear greater than the allowable limits, then do these steps to replace the parts that are out of limits:

1) Replace the upper and lower nose gear steering actuator trunnion bushings. These are the tasks:

- Nose Gear Steering Actuator Removal, AMM TASK 32-51-51-000-801
- Nose Gear Steering Actuator Installation, AMM TASK 32-51-51-400-801

2) Replace the steering collar. These are the tasks: .

- Steering Collar Removal, AMM TASK 32-51-61-000-801
- Steering Collar Installation, AMM TASK 32-51-61-400-801

(b) If there is not excessive freeplay in the Nose Gear Steering Actuator and the Nose Gear Steering Collar, then continue.

(13) Replace the steering actuator. These are the tasks:

- Nose Gear Steering Actuator Removal, AMM TASK 32-51-51-000-801
- Nose Gear Steering Actuator Installation, AMM TASK 32-51-51-400-801

E. Repair Confirmation

(1) Put the control lever for the landing gear to the DN position.

(2) If the fault does not occur again on the subsequent flight, then you corrected the fault.

END OF TASK

805. Rudder Pedal Steering Does Not Operate - Fault Isolation

A. Description

(1) This task is for this observed fault:

(a) The rudder pedal steering does not operate. The tiller steering operates correctly.

(2) Steering inputs are from the steering tiller or the rudder pedals. When you move the steering tiller full travel the nose wheels turn a maximum of 78 degrees in the left or right direction. When you move the rudder pedals on the ground, the nose wheels turn a maximum of 7 degrees in the left or right direction. Steering inputs from the rudder pedals go to the metering valve through a cable loop.

(3) The rudder pedal steering mechanism does these functions:

(a) Combines the steering inputs from the rudder pedals and the steering wheel

(b) Prevents rudder pedal inputs when the airplane is in the air

(c) Provides centering forces.

(4) A rudder pedal steering rotary actuator is attached to the rudder pedal steering mechanism with a cable loop. When the airplane is in the air the rotary actuator moves a cam in the mechanism. This will not let the rudder pedal inputs move the control cables for the nose wheel steering.

(5) (SDS SUBJECT 32-51-00)

B. Possible Causes

(1) NWSA, NWSB, NWSA/B cable loop adjustment (cable tension is too high)

(2) NGPP (Nose Gear Piston Position) cable loop adjustment (cable tension is too high or too low)

(3) Rudder pedal steering rotary actuator, M1177

(4) The air/ground system

(5) Rudder pedal steering interconnect mechanism

(6) Excessive friction in cable control system

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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

D. Related Data

(1) (SSM 32-50-00)

(2) (WDM 32-51-11)

E. Fault Isolation Procedure

(1) Do these steps to prepare for fault isolation:

(a) Make sure the control lever for the landing gear is in the DN position.

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.

(b) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(c) Lift the nose of the airplane with jacks. Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, AMM TASK 07-11-21-580-801.

(d) Install greased plates under the nose wheels.

(e) Lower the nose of the airplane and remove the jacks. Do this task: Lower the Airplane Nose Off of the Jack, AMM TASK 07-11-21-580-802.

(f) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(2) Examine the cable loop for NWSA, NWSB, NWSA/B for correct rigging and tension. Do this task: AMM PAGEBLOCK 32-51-00/501

(3) Do this check of the cable loop for the NGPP (Nose Gear Piston Position) rudder pedal steering:

NOTE: Open the forward access panel on the left wall of the nose wheel well to get access to the NWSA and NWSB cable loop and the rotary actuator.

(a) Move the towing lever to the TOW position and install the towing lever lockpin.

(b) Make sure the nose wheels are in the center position.

(c) Use a spring scale to measure the load that is necessary to move the NGPP (Nose Gear Piston Position) cables 0.50 +/- 0.05 inch at the turnbuckles.

(d) If the force that you measure is not 16 - 22 pounds, then do these steps:

NOTE: It is not necessary to allow for temperature because the NGPP cables are very short.

1) Do the adjustment of the interconnect mechanism, do this task: Rudder Pedal Interconnect Mechanism Adjustment, AMM TASK 32-51-00-820-801

2) Do the Repair Confirmation at the end of this task.

(e) If the force that you measure is 16 - 22 pounds, then continue.

(4) Do this check of the rudder pedal steering rotary actuator, M1177:

NOTE: The rotary actuator is below the flight deck floor. You get access to the actuator through the access panel on the left side bulkhead of the nose gear wheel well.

(a) Put the airplane in the air mode. Do this task: Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801.

(b) Do a check to see if the rotary actuator moved to the air position.

NOTE: The rotary actuator is in the air position when the index marks on the actuator pulley and the housing are aligned.

(c) If the rotary actuator did not move to the air position, then do these steps:

1) Replace the steering rotary actuator, M1177. These are the tasks:
- Rudder Pedal Steering Rotary Actuator Removal, AMM TASK 32-51-81-000-801
- Rudder Pedal Steering Rotary Actuator Installation, AMM TASK 32-51-81-400-801

2) Put the airplane back to the air mode. Do this task: Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801.

3) If the rotary actuator did not move to the air position, then replace the air/ground relay, R596.

4) If the rotary actuator did move to the air position, then continue.

5) Put the airplane back to the ground mode. Do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

6) Do the Repair Confirmation at the end of this task.

(d) If the rotary actuator did move to the air position, then continue.

1) Put the airplane back to the ground mode. Do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(5) Replace the rudder pedal steering mechanism. These are the tasks:
- Rudder Pedal Steering Mechanism Removal, AMM TASK 32-51-21-000-801
- Rudder Pedal Steering Mechanism Installation, AMM TASK 32-51-21-400-801

(a) Do the Repair Confirmation at the end of this task.

(6) Do this check for excessive friction in cable control system:

(a) Check for excessive friction in the pulleys and bearings.

(b) Check for pulleys contacting brackets, steering valve cover, local structure, attach hardware.

(c) Check for proper routing of cables

(d) Check summing mechanism for binding and looseness or contact with local structure or corrosion.

(e) Check tiller for over tightened handle attach nut.

(f) Check cable alignment.

(g) Check for frayed cables.

(h) Check for cable dragging on cable guards and local structure.

(i) Check the tiller steering cables for high tension, do this task: Nose Wheel Steering System Adjustment Check, AMM TASK 32-51-00-820-805.

1) If necessary, adjust to the low end of tolerance, do this task: Nose Wheel Steering System Adjustment, AMM TASK 32-51-00-820-802.

(j) Do the Repair Confirmation at the end of this task.

F. Repair Confirmation

(1) Do this check of the rudder pedal steering:

(a) Steer the nose wheels to the left and right with the rudder pedals.

(b) Make sure the nose wheels turn to the left and right.

(c) If the nose wheels turn to the left and right, then you corrected the fault.

(2) Lift the nose of the airplane with jacks. Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, AMM TASK 07-11-21-580-801.

(3) Remove the greased plates from under the nose wheels.

(4) Lower the nose of the airplane and remove the jacks. Do this task: Lower the Airplane Nose Off of the Jack, AMM TASK 07-11-21-580-802.

——————— END OF TASK ———————

806. Tiller Steering Does Not Operate - Fault Isolation

A. Description

(1) Steering inputs are from the steering tiller or the rudder pedals. When you move the steering tiller full travel the nose wheels turn a maximum of 78 degrees in the left or right direction. Steering inputs from the tiller and rudder pedals go to the metering valve through a cable loop.

(2) The nose wheel steering (NWS) system uses the hydraulic pressure for landing gear extension to turn the nose wheels.

(3) The steering inputs go through the control cables NWSA (Nose Wheel Steering Control Cable A) and NWSB (Nose Wheel Steering Control Cable B) to the steering metering valve on the nose gear. The cables move the summing mechanism to provide in input to the metering valve. This input sends hydraulic pressure through the swivel valves to the steering actuators.

(4) The two steering actuators get hydraulic pressure on the extend side, the retract side, or both sides. This moves the nose wheels, through the torsion links, up to 78 degrees to the left or right.

(5) When the nose wheels get to the commanded position, the summing mechanism moves the metering valve back to neutral. This stops hydraulic pressure to the steering actuators and stops movement of the nose wheels.

(6) (SDS SUBJECT 32-51-00)

B. Possible Causes

(1) NWS cable loop damage or adjustment

(2) Steering metering valve

(3) Summing mechanism

(4) Steering actuators

(5) Excessive Friction in cable control system

(6) Steering collar and Steering plates

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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

D. Related Data

(1) (SSM 32-50-00)

(2) (WDM 32-51-11)

E. Fault Isolation Procedure

(1) Do these steps to prepare for fault isolation:

(a) Make sure the control lever for the landing gear is in the DN position.

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.

(b) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(c) Lift the nose of the airplane with jacks. Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, AMM TASK 07-11-21-580-801.

(d) Install greased plates under the nose wheels.

(e) Lower the nose of the airplane and remove the jacks. Do this task: Lower the Airplane Nose Off of the Jack, AMM TASK 07-11-21-580-802.

(f) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(2) Do this check of the cable loop for the NWS (Nose Wheel Steering):

NOTE: Open the forward access panel on the left wall of the nose wheel well to get access to the NWS cable loop.

(a) Move the towing lever to the TOW position and install the towing lever lockpin.

(b) Examine the cable loop between the tiller quadrant and the steering metering valve to see if it is broken or disconnected.

(c) If the NWS cable loop is broken or disconnected, then do these steps:

1) Connect or replace the cable and do the adjustment, do this task: Nose Wheel Steering System Adjustment, AMM TASK 32-51-00-820-802.

2) Do the Repair Confirmation at the end of this task.

(d) If the NWS cable loop is not broken or disconnected, then continue.

(3) Do this check of the cable loop for the NWS nose wheel steering:

(a) Look for a blockage in the NWS cable loop between the tiller and the steering metering valve.

(b) If there is a blockage in the NWS cable loop, then do these steps:

1) Remove the blockage from the cable loop and do the adjustment. Do this task: Nose Wheel Steering System Adjustment, AMM TASK 32-51-00-820-802.

2) Do the Repair Confirmation at the end of this task.

(c) If there is not a blockage in the NWS cable loop, then continue.

(4) Do this check to make sure the summing mechanism can move freely:

(a) Move the towing lever to the TOW position and install the towing lever lockpin.

(b) Remove the summing mechanism cover and disconnect the link assembly for the summing mechanism from the steering metering valve. Do this task: Steering Metering Valve Removal, AMM TASK 32-51-11-000-801.

(c) Use the tiller to move the summing mechanism to the left and right.

(d) If the summing mechanism moves freely with light tension in the centering spring, then do these steps:

1) Replace the steering metering valve, these are the tasks:
- Steering Metering Valve Removal, AMM TASK 32-51-11-000-801
- Steering Metering Valve Installation, AMM TASK 32-51-11-400-801

2) Do the Repair Confirmation at the end of this task.

(e) If the summing mechanism does not move freely when you use the tiller, then do these steps:

1) Repair or replace the pulleys in the NWS cable loop and do the adjustment for the NWS cables, do this task: Nose Wheel Steering System Adjustment, AMM TASK 32-51-00-820-802

2) Do the Repair Confirmation at the end of this task.

(5) Check the tiller handle nut for proper torque (Nose Landing Gear Tiller Assembly Installation, AMM TASK 32-51-41-400-801).

(a) Do the Repair Confirmation at the end of this task.

(6) Do this check for hydraulic leaks at the steering metering valve or the steering actuators:

(a) Remove the towing lever lockpin and let the towing lever move to the OFF position.

(b) Examine the steering metering valve and steering actuators to see if there are hydraulic leaks.

(c) If there are hydraulic leaks on the steering metering valve, then do these steps:

1) Repair the leaks or replace the steering metering valve. To replace the valve, these are the tasks:
- Steering Metering Valve Removal, AMM TASK 32-51-11-000-801
- Steering Metering Valve Installation, AMM TASK 32-51-11-400-801

2) Do the Repair Confirmation at the end of this task.

(d) If there are hydraulic leaks on the steering actuators, then do these steps:

1) Repair the leaks or replace the nose gear steering actuator(s). To replace the actuator(s), these are the tasks:
- Nose Gear Steering Actuator Removal, AMM TASK 32-51-51-000-801
- Nose Gear Steering Actuator Installation, AMM TASK 32-51-51-400-801

2) Do the Repair Confirmation at the end of this task.

(e) If there are no hydraulic leaks on the steering metering valve or the steering actuators, then continue.

(7) Check steering actuator for seized or gauled or sticky trunnion bearings

(8) Examine the steering valve for sticky tow lever. Do this task:AMM PAGEBLOCK 32-51-11/201

(9) Replace steering metering valve. Do this task:AMM PAGEBLOCK 32-51-11/401

(10) Replace the steering actuators. Do this task:AMM PAGEBLOCK 32-51-51/401

(11) Check steering collar for binding, jams, loose or missing attach hardware, broken bearings,metal transfer between bearings and collar main bore and proper assembly

(12) Check for binding in steering sleeve and steering plate

F. Repair Confirmation

(1) Use the steering tiller to do this check of the nose wheel steering:

(a) Remove the towing lever lockpin and let the towing lever move to the OFF position.

(b) Steer the nose wheels to the full travel to the left and right with the tiller.

(c) If the nose wheels turn 78 degrees to the left and right, then you corrected the fault.

(2) Lift the nose of the airplane with jacks, do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, AMM TASK 07-11-21-580-801.

(3) Remove the greased plates from under the nose wheels.

(4) Lower the nose of the airplane and remove the jacks. Do this task: Lower the Airplane Nose Off of the Jack, AMM TASK 07-11-21-580-802.

END OF TASK

807. Tiller Steering Response is Sluggish - Fault Isolation

A. Description

(1) This task is for this observed fault:

(a) The tiller steering operates, but it is sluggish.

(2) Steering inputs are from the steering tiller or the rudder pedals. When you move the steering tiller full travel the nose wheels turn a maximum of 78 degrees in the left or right direction. Steering inputs from the tiller and rudder pedals go to the metering valve through a cable loop.

(3) The nose wheel steering system uses the hydraulic pressure for landing gear extension to turn the nose wheels.

(4) The steering inputs go through the control cables NWSA and NWSB to the steering metering valve on the nose gear. The cables move the summing mechanism to provide in input to the metering valve. This input sends hydraulic pressure through the swivel valves to the steering actuators.

(5) The two steering actuators get hydraulic pressure on the extend side, the retract side, or both sides. This moves the nose wheels, through the torsion links, up to 78 degrees to the left or right.

(6) When the nose wheels get to the commanded position, the summing mechanism moves the metering valve back to neutral. This stops hydraulic pressure to the steering actuators and stops movement of the nose wheels.

(7) (SDS SUBJECT 32-51-00)

B. Possible Causes

(1) Leakage inside the steering metering valve or the steering actuators or sticky tow lever.

(2) Low hydraulic pressure.

(3) Stuck nose landing gear steering system check valves.

(4) Ice or Foreign Object Debris (FOD) on the steering cables or summing mechanism.

(5) Sticking or binding steering collar.

(6) Excessive friction in the cable control system.

(7) A restriction in the hydraulic lines from the selector valve.

(8) Seized or gauled steering actuator trunnions.

(9) Nose Landing Gear Down or Up fuse.

(10) Binding Steering Tiller.

(11) Rigging of the landing gear selector valve

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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

D. Related Data

(1) (SSM 32-50-00)

(2) (WDM 32-51-11)

E. Fault Isolation Procedure

(1) Do these steps to prepare for fault isolation:

(a) Make sure the control lever for the landing gear is in the DN position.

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.

(b) Make sure the downlock pins are installed in the nose and main landing gear. To install the downlock pins, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(c) Lift the nose of the airplane with jacks. Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, AMM TASK 07-11-21-580-801.

(d) Install greased plates under the nose wheels.

(e) Lower the nose of the airplane and remove the jacks. Do this task: Lower the Airplane Nose Off of the Jack, AMM TASK 07-11-21-580-802.

(f) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(2) Make sure there is normal pressure for hydraulic system A.

(a) If the hydraulic pressure for system A is low, then do these steps:

1) Do this task: System A Hydraulic Pressure Below 2850 psi Problem - Fault Isolation, 29-10 TASK 810.

2) Do the Repair Confirmation at the end of this task.

(b) If the hydraulic pressure for system A is normal, then continue.

(3) Examine the tow lever to make sure it is not sticking. Do this task:AMM PAGEBLOCK 32-51-11/201

(4) Do this check for hydraulic leaks at the steering metering valve or the steering actuators:

(a) Remove the towing lever lockpin and let the towing lever move to the OFF position.

(b) Examine the steering metering valve and steering actuators to see if there are hydraulic leaks.

(c) If there are hydraulic leaks on the steering metering valve, then do these steps:

1) Repair the leaks or replace the steering metering valve. To replace the valve, these are the tasks:
- Steering Metering Valve Removal, AMM TASK 32-51-11-000-801
- Steering Metering Valve Installation, AMM TASK 32-51-11-400-801

2) Do the Repair Confirmation at the end of this task.

(d) If there are hydraulic leaks on the steering actuators, then do these steps:

1) Repair the leaks or replace the nose gear steering actuator(s). To replace the actuator(s), these are the tasks:
- Nose Gear Steering Actuator Removal, AMM TASK 32-51-51-000-801
- Nose Gear Steering Actuator Installation, AMM TASK 32-51-51-400-801

2) Do the Repair Confirmation at the end of this task.

(e) If there are no hydraulic leaks on the steering metering valve or the steering actuators, then continue.

(5) Examine the steering collar to make sure it is free to move.

(a) If the steering collar is not free to move, then do these steps:

1) Replace the steering collar. These are the tasks:
- Steering Collar Removal, AMM TASK 32-51-61-000-801
- Steering Collar Installation, AMM TASK 32-51-61-400-801

2) Do the Repair Confirmation at the end of this task.

(b) If the steering collar is free to move, then continue.

(6) Make sure there are no restrictions in the hydraulic lines from the landing gear selector valve.

(a) If there is a restriction in the hydraulic lines from the selector valve to the metering valve, then do these steps:

1) Flush or change the hydraulic lines.

2) Do the Repair Confirmation at the end of this task.

(7) Do this check for excessive friction in cable control system:

(a) Check for excessive friction in the pulleys and bearings.

(b) Check for pulleys contacting brackets, steering valve cover, local structure, attach hardware.

(c) Check for proper routing of cables

(d) Check summing mechanism for binding and looseness or contact with local structure or corrosion.

(e) Check tiller for over tightened handle attach nut.

(f) Check cable alignment.

(g) Check for frayed cables.

(h) Check for cable dragging on cable guards and local structure.

(i) Check the tiller steering cables for high tension, do this task: Nose Wheel Steering System Adjustment Check, AMM TASK 32-51-00-820-805.

1) If necessary, adjust to the low end of tolerance, do this task: Nose Wheel Steering System Adjustment, AMM TASK 32-51-00-820-802.

(8) Check the tiller handle nut for proper torque (Nose Landing Gear Tiller Assembly Installation, AMM TASK 32-51-41-400-801).

(a) Do the Repair Confirmation at the end of this task.

F. Repair Confirmation

(1) Use the steering tiller to do this check of the nose wheel steering:

(a) Remove the towing lever lockpin and let the towing lever move to the OFF position.

(b) Steer the nose wheels to the full travel to the left and right with the tiller.

(c) If the nose wheels turn 78 degrees to the left and right, then you corrected the fault.

(2) Lift the nose of the airplane with jacks. Do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, AMM TASK 07-11-21-580-801.

(3) Remove the greased plates from under the nose wheels.

(4) Lower the nose of the airplane and remove the jacks, do this task: Lower the Airplane Nose Off of the Jack, AMM TASK 07-11-21-580-802.

——————— END OF TASK ———————

808. Tiller Steering Steers Left or Right Direction Only - Fault Isolation

A. Description

(1) This task is for this observed fault:

(a) The tiller steering steers in the right or left direction only.

(2) Steering inputs are from the steering tiller or the rudder pedals. When you move the steering tiller full travel the nose wheels turn a maximum of 78 degrees in the left or right direction. Steering inputs from the tiller and rudder pedals go to the metering valve through a cable loop.

(3) The nose wheel steering system uses the hydraulic pressure for landing gear extension to turn the nose wheels.

(4) The steering inputs go through the control cables NWSA and NWSB to the steering metering valve on the nose gear. The cables move the summing mechanism to provide in input to the metering valve. This input sends hydraulic pressure through the swivel valves to the steering actuators.

(5) The two steering actuators get hydraulic pressure on the extend side, the retract side, or both sides. This moves the nose wheels, through the torsion links, up to 78 degrees to the left or right.

(6) When the nose wheels get to the commanded position, the summing mechanism moves the metering valve back to neutral. This stops hydraulic pressure to the steering actuators and stops movement of the nose wheels.

(7) SDS 32-51-00, p001

B. Possible Causes

(1) Summing mechanism

(2) Steering metering valve

(3) Cable tension too high

(4) Excessive friction in the control system

(5) Sticking or binding in Steering Collar

(6) Jammed Steering Actuator attach hardware

(7) Seized or galled steering actuator trunnion

(8) Steering Actuator internal leakage

(9) Tiller binding

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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

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

D. Related Data

(1) (WDM 32-51-11)

(2) (SSM 32-50-00)

E. Fault Isolation Procedure

(1) Do these steps to prepare for fault isolation:

(a) Make sure the control lever for the landing gear is in the DN position.

(b) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

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.

(c) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(d) Lift the nose of the airplane with jacks, do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, AMM TASK 07-11-21-580-801.

(e) Install greased plates under the nose wheels.

(f) Lower the nose of the airplane and remove the jacks, do this task: Lower the Airplane Nose Off of the Jack, AMM TASK 07-11-21-580-802.

(2) Use the steering tiller to do this check of the nose wheel steering:

(a) Steer the nose wheels to the full travel to the left and right with the tiller.

(b) If the nose wheel steers in the right or left direction only, then continue.

(c) If the nose wheel steers to the full travel to both the left and right, then there was an intermittent fault.

1) Do the Repair Confirmation at the end of this task.

(3) Do this check to make sure the summing mechanism is free to move in both directions:

(a) Remove the screws and washers that hold the summing mechanism cover to the summing mechanism bracket.

(b) Remove the summing mechanism cover.

(c) Examine the summing mechanism and make sure it is free to move in both directions.

(d) If the summing mechanism not free to move in both directions, then do these steps:

1) Repair or replace the summing mechanism. To replace the summing mechanism, these are the tasks:
- Summing Mechanism Removal, AMM TASK 32-51-52-020-801
- Summing Mechanism Installation, AMM TASK 32-51-52-420-801

2) Do the Repair Confirmation at the end of this task.

(e) If the summing mechanism is free to move in both directions, then continue.

(4) Replace the steering metering valve, these are the tasks:
- Steering Metering Valve Removal, AMM TASK 32-51-11-000-801
- Steering Metering Valve Installation, AMM TASK 32-51-11-400-801

(a) Do the Repair Confirmation at the end of this task.

(5) Do this check for excessive friction in cable control system:

(a) Check for excessive friction in the pulleys and bearings.

(b) Check for pulleys contacting brackets, steering valve cover, local structure, attach hardware.

(c) Check for proper routing of cables

(d) Check summing mechanism for binding and looseness or contact with local structure or corrosion.

(e) Check tiller for over tightened handle attach nut.

(f) Check cable alignment.

(g) Check for frayed cables.

(h) Check for cable dragging on cable guards and local structure.

(i) Check the tiller steering cables for high tension, do this task: Nose Wheel Steering System Adjustment Check, AMM TASK 32-51-00-820-805.

1) If necessary, adjust to the low end of tolerance, do this task: Nose Wheel Steering System Adjustment, AMM TASK 32-51-00-820-802.

(j) Do the Repair Confirmation at the end of this task.

F. Repair Confirmation

(1) Use the steering tiller to do this check of the nose wheel steering:

(a) Remove the towing lever lockpin and let the towing lever move to the OFF position.

(b) Steer the nose wheels to the full travel to the left and right with the tiller.

(c) If the nose wheels turn 78 degrees to the left and right, then you corrected the fault.

(2) Lift the nose of the airplane with jacks, do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, AMM TASK 07-11-21-580-801.

(3) Remove the greased plates from under the nose wheels.

(4) Lower the nose of the airplane and remove the jacks. Do this task: Lower the Airplane Nose Off of the Jack, AMM TASK 07-11-21-580-802.

——————— END OF TASK ———————

810. Airplane Steering Steers Left or Right Direction During Taxi, Takeoff, or Landing - Fault Isolation

A. Description

(1) This task is for this observed fault:

(a) The Airplane steers to the left or right direction during taxi, takeoff, or landing.

(2) Steering inputs are from the steering tiller or the rudder pedals. When you move the steering tiller full travel the nose wheels turn a maximum of 78 degrees in the left or right direction. Steering inputs from the tiller and rudder pedals go to the metering valve through a cable loop.

(3) The nose wheel steering system uses the hydraulic pressure for landing gear extension to turn the nose wheels.

(4) The steering inputs go through the control cables NWSA and NWSB to the steering metering valve on the nose gear. The cables move the summing mechanism to provide in input to the metering valve. This input sends hydraulic pressure through the swivel valves to the steering actuators.

(5) The two steering actuators get hydraulic pressure on the extend side, the retract side, or both sides. This moves the nose wheels, through the torsion links, up to 78 degrees to the left or right.

(6) When the nose wheels get to the commanded position, the summing mechanism moves the metering valve back to neutral. This stops hydraulic pressure to the steering actuators and stops movement of the nose wheels.

(7) SDS 32-51-00, p001

B. Possible Causes

(1) Summing mechanism

(2) Steering metering valve

(3) Cable tension too high

(4) Excessive friction in the control system

(5) Sticking or binding in Steering Collar

(6) Jammed Steering Actuator attach hardware

(7) Seized or galled steering actuator trunnion

(8) Steering Actuator internal leakage

(9) System Rigging Out-of-Adjustment

(10) Rotary Actuator faulty

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

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

D. Related Data

(1) (WDM 32-51-11)

(2) (SSM 32-50-00)

E. Fault Isolation Procedure

(1) Do these steps to prepare for fault isolation:

(a) Make sure the control lever for the landing gear is in the DN position.

(b) For hydraulic system A, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

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.

(c) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(d) Lift the nose of the airplane with jacks, do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, AMM TASK 07-11-21-580-801.

(e) Install greased plates under the nose wheels.

(f) Lower the nose of the airplane and remove the jacks, do this task: Lower the Airplane Nose Off of the Jack, AMM TASK 07-11-21-580-802.

(2) Use the steering tiller to do this check of the nose wheel steering:

(a) Steer the nose wheels to the full travel to the left and right with the tiller.

(b) If the nose wheel steers in the right or left direction only, then continue.

(c) If nose wheel does not return to center, then continue.

(d) If the nose wheel steers to the full travel to both the left and right, then there was an intermittent fault.

1) Do the Repair Confirmation at the end of this task.

(3) Do this check to make sure the summing mechanism is free to move in both directions:

(a) Remove the screws and washers that hold the summing mechanism cover to the summing mechanism bracket.

(b) Remove the summing mechanism cover.

(c) Examine the summing mechanism and make sure it is free to move in both directions.

(d) If the summing mechanism not free to move in both directions, then do these steps:

1) Repair or replace the summing mechanism. To replace the summing mechanism, these are the tasks:
- Summing Mechanism Removal, AMM TASK 32-51-52-020-801
- Summing Mechanism Installation, AMM TASK 32-51-52-420-801

2) Do the Repair Confirmation at the end of this task.

(e) If the summing mechanism is free to move in both directions, then continue.

(4) Replace the steering metering valve, these are the tasks:
- Steering Metering Valve Removal, AMM TASK 32-51-11-000-801
- Steering Metering Valve Installation, AMM TASK 32-51-11-400-801

(a) Do the Repair Confirmation at the end of this task.

(5) Do this check for excessive friction in cable control system:

(a) Check for excessive friction in the pulleys and bearings.

(b) Check for pulleys contacting brackets, steering valve cover, local structure, attach hardware.

(c) Check for proper routing of cables

(d) Check summing mechanism for binding and looseness or contact with local structure or corrosion.

(e) Check tiller for over tightened handle attach nut.

(f) Check cable alignment.

(g) Check for frayed cables.

(h) Check for cable dragging on cable guards and local structure.

(i) Check the tiller steering cables for high tension, do this task: Nose Wheel Steering System Adjustment Check, AMM TASK 32-51-00-820-805.

1) If necessary, adjust to the low end of tolerance, do this task: Nose Wheel Steering System Adjustment, AMM TASK 32-51-00-820-802.

(j) Do the Repair Confirmation at the end of this task.

(6) Check steering actuator for seized or gauled or sticky trunnion bearings

(7) Examine the steering valve for sticky tow lever. Do this task:AMM PAGEBLOCK 32-51-11/201

(8) Replace steering metering valve. Do this task:AMM PAGEBLOCK 32-51-11/401

(9) Replace the steering actuators. Do this task:AMM PAGEBLOCK 32-51-51/401

(10) Check steering collar for binding, jams, loose or missing attach hardware, broken bearings,metal transfer between bearings and collar main bore and proper assembly

(11) Check for binding in steering sleeve and steering plate

(12) Do this check for hydraulic leaks at the steering metering valve or the steering actuators:

(a) Remove the towing lever lockpin and let the towing lever move to the OFF position.

(b) Examine the steering metering valve and steering actuators to see if there are hydraulic leaks.

(c) If there are hydraulic leaks on the steering metering valve, then do these steps:

1) Repair the leaks or replace the steering metering valve. To replace the valve, these are the tasks:
- Steering Metering Valve Removal, AMM TASK 32-51-11-000-801
- Steering Metering Valve Installation, AMM TASK 32-51-11-400-801

2) Do the Repair Confirmation at the end of this task.

(d) If there are hydraulic leaks on the steering actuators, then do these steps:

1) Repair the leaks or replace the nose gear steering actuator(s). To replace the actuator(s), these are the tasks:
- Nose Gear Steering Actuator Removal, AMM TASK 32-51-51-000-801
- Nose Gear Steering Actuator Installation, AMM TASK 32-51-51-400-801

2) Do the Repair Confirmation at the end of this task.

(e) If there are no hydraulic leaks on the steering metering valve or the steering actuators, then continue.

(13) Do this check of the rudder pedal steering rotary actuator, M1177, and/or cable loop:

NOTE: The rotary actuator is below the flight deck floor. You get access to the actuator through the access panel on the left side bulkhead of the nose gear wheel well.

(a) Put the airplane in the air mode. Do this task: Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801.

(b) Do a check to see if the rotary actuator moved to the air position.

NOTE: The rotary actuator is in the air position when the index marks on the actuator pulley and the housing are aligned.

(c) If the rotary actuator did not move to the air position, then do these steps:

1) Replace the steering rotary actuator. These are the tasks:
   - Rudder Pedal Steering Rotary Actuator Removal, AMM TASK 32-51-81-000-801
   - Rudder Pedal Steering Rotary Actuator Installation, AMM TASK 32-51-81-400-801
2) Put the airplane back to the ground mode. Do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.
3) If the fault does not occur again on the subsequent flight, then you corrected the fault.

(d) If the rotary actuator did move to the air position, then continue.

1) Put the airplane back to the ground mode. Do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

F. Repair Confirmation

(1) Use the steering tiller to do this check of the nose wheel steering:

(a) Remove the towing lever lockpin and let the towing lever move to the OFF position.

(b) Steer the nose wheels to the full travel to the left and right with the tiller.

(c) If the nose wheels turn 78 degrees to the left and right, then you corrected the fault.

(2) Lift the nose of the airplane with jacks, do this task: Lift the Airplane Nose with the Nose Jack at Jack Point D, AMM TASK 07-11-21-580-801.

(3) Remove the greased plates from under the nose wheels.

(4) Lower the nose of the airplane and remove the jacks. Do this task: Lower the Airplane Nose Off of the Jack, AMM TASK 07-11-21-580-802.

——————— END OF TASK ———————

801. Main Landing Gear Down-And-Locked Sensor Fault - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 32-61001 LEFT DWN LKD A

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) 32-61101 LEFT DWN LKD A

HAP ALL

(c) 32-61005 RIGHT DWN LKD A

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(d) 32-61105 RIGHT DWN LKD A

HAP ALL

(e) 32-61007 LEFT DWN LKD B

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(f) 32-61107 LEFT DWN LKD B

HAP ALL

(g) 32-61011 RIGHT DWN LKD B

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(h) 32-61111 RIGHT DWN LKD B

HAP ALL

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(2) These maintenance messages show that a main landing gear down lock sensor disagrees with the other main landing gear locked sensors.

(a) Maintenance message number 32-61001 will be set if the left down and locked A sensor disagrees with the other main gear down and locked or up and locked sensors.

(b) Maintenance message number 32-61005 will be set if the right down and locked A sensor disagrees with the other main gear down and locked or up and locked sensors.

(c) Maintenance message number 32-61007 will be set if the left down and locked B sensor disagrees with the other main gear down and locked or up and locked sensors.

(d) Maintenance message number 32-61011 will be set if the right down and locked B sensor disagrees with the other down and locked or up and locked sensors.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(3) These maintenance messages show that a main landing gear down lock sensor disagrees with the other main landing gear locked sensors.

(a) Maintenance message number 32-61001 will be set if the left down and locked A sensor indicates down with the other main gear sensors indicating that both main gear are up and locked and left down and locked B sensor indicates up.

(b) Maintenance message 32-61101 will be set if the left down and locked A sensor indicates up with the other main gear sensors indicating that both main gear are down and locked.

(c) Maintenance message number 32-61005 will be set if the right down and locked A sensor indicates down with the other main gear sensors indicating that both main gear are up and locked and right down and locked B sensor indicates up.

(d) Maintenance message 32-61105 will be set if the right down and locked A sensor indicates up with the other main gear sensors indicating that both main gear are down and locked.

(e) Maintenance message number 32-61007 will be set if the left down and locked B sensor indicates down with the other main gear sensors indicating that both main gear are up and locked and left down and locked A sensor indicates up.

(f) Maintenance message 32-61107 will be set if the left down and locked B sensor indicates up with the other main gear sensors indicating that both main gear are down and locked.

(g) Maintenance message number 32-61011 will be set if the right down and locked B sensor indicates down with the other main gear sensors indicating that both main gear are up and locked and right down and locked A sensor indicates up.

(h) Maintenance message 32-61111 will be set if the right down and locked B sensor indicates up with the other main gear sensors indicating that both main gear are down and locked.

HAP ALL

B. Possible Causes

(1) Left main landing gear down and locked sensor, S0071 or S0302

(2) Right main landing gear down and locked sensor, S0073 or S0301

(3) Wiring problem

(4) Proximity switch electronics unit (PSEU), M02061

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Related Data

(1) Component Location (Figure 302)

(2) (SSM 32-64-11)

(3) (SSM 32-64-12)

(4) (WDM 32-64-11)

(5) (WDM 32-64-12)

E. Initial Evaluation

(1) Look for any obvious damage to the applicable sensor, target, and adjacent structure.

(a) If you find any damage, then do the Fault Isolation Procedure below.

(b) If there is no obvious damage, then continue.

(2) Do these steps to show the status of the applicable landing gear position sensor:

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

(b) Push the down switch until OTHER FUNCTNS? shows.

(c) Push the YES switch to select OTHER FUNCTNS?.

(d) Push the down switch until I/O MONITOR? shows.

(e) Push the YES switch to select I/O MONITOR.

(f) Push the down switch until SENSORS? shows.

(g) Push the YES switch to select SENSORS.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(h) Push the down arrow switch until the sensor number shows.

1) For maintenance message number 32-61001, show sensor S0071

2) For maintenance message number 32-61005, show sensor S0073

3) For maintenance message number 32-61007, show sensor S0302

4) For maintenance message number 32-61011, show sensor S0301

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(i) Push the down arrow switch until the sensor number shows.

1) For maintenance message number 32-61001 and 32-61101, show sensor S0071

2) For maintenance message number 32-61005 and 32-61105, show sensor S0073

3) For maintenance message number 32-61007 and 32-61107, show sensor S0302

4) For maintenance message number 32-61011 and 32-61111, show sensor S0301

HAP ALL

(j) Push the YES switch to show the sensor status.

(k) If the sensor status is TGT NEAR, then do this test of the other sensor states:

1) Put a deactuator on the face of the sensor face.

NOTE: The deactuator is part of this tool set: proximity sensor test set, SPL-1690.

2) If the display shows TGT FAR, then there was an intermittent fault.

NOTE: The following tests can be performed to find possible causes of intermittent faults.

a) Measure the clearance between the sensor and target to determine if the sensor clearance is incorrect. Do this task: Main Landing Gear Down-and-Locked Sensor Clearance Measurement, AMM TASK 32-61-31-220-801.

b) Do a check of the bonding resistance between the sensor ground and the airplane structure (Standard Wiring Practices Manual).

c) Make sure that the resistance is less than 0.001 ohm.

3) If the display shows TGT NEAR, then do the Fault Isolation Procedure below.

(l) If the sensor status is TGT FAR or FAILSAFE, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) If you found any obvious damage to the applicable sensor, target, and adjacent structure, then do these steps:

(a) Repair the damage.

(b) Do the Repair Confirmation at the end of this task.

(c) If the Repair Confirmation is not satisfactory, then continue.

(2) If the sensor status is TGT NEAR, with a deactuator installed, then do these steps:

(a) Perform a resistance check of the sensor and wires, these are the steps:

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

1) For maintenance message number 32-61001 or 32-61005, disconnect connector D10982 from the PSEU.

2) For maintenance message number 32-61007 or 32-61011, disconnect connector D10984 from the PSEU.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

3) For maintenance message number 32-61001, 32-61101, 32-61005 or 32-61105, disconnect connector D10982 from the PSEU.

4) For maintenance message number 32-61007, 32-61107, 32-61011, or 32-61111, disconnect connector D10984 from the PSEU.

HAP ALL

5) Verify that the resistance values for the sensor connections listed in the table below are within these limits:

a) Between the blue and yellow leads: 350 ± 35 Ohm.

b) Between the red and yellow leads: 30 ± 6 Ohm.

6) Re-connect connector D10982 or D10984 to the PSEU.

7) If the resistance values are out of tolerance then cut the wires at the sensor splices and recheck the resistance of the sensors.

8) These are the connections on the sensor and the PSEU to check the resistances at:

Table 201

SENSOR	SENSOR LEAD		PSEU CONNECTOR
S0071	YELLOW	———	GROUND
			D10982
	BLUE	———	pin 55
			D10982
	RED	———	pin 33
S0073	YELLOW	———	GROUND
			D10982
	BLUE	———	pin 12
			D10982
	RED	———	pin 11

(Continued)

HAP 001-013, 015-020 POST SB 737-32-1317	S0301	YELLOW *[1]	————
GROUND			
HAP 021-026, 028-054, 101-999; HAP 001-013, 015-020 PRE SB 737-32-1317			
S0301	YELLOW	————	GROUND
HAP ALL			
	BLUE	————	D10984 pin 12
	RED	————	D10984 pin 11
HAP 001-013, 015-020 POST SB 737-32-1317			
S0302	YELLOW *[2]	———	GROUND
HAP 021-026, 028-054, 101-999; HAP 001-013, 015-020 PRE SB 737-32-1317			
S0302	YELLOW	———	GROUND
HAP ALL			
	BLUE	————	D10984 pin 55
	RED	————	D10984 pin 33

*[1] The ground path for sensor S0301 includes an additional jumper wire between ground stud GD2064AC and connector D46018.

*[2] The ground path for sensor S0302 includes an additional jumper wire between ground stud GD2054AC and connector D46008.

(b) If the resistances values for the sensors are out of tolerance, then do a check of the bonding resistance between the sensor ground and the airplane structure (Standard Wiring Practices Manual).

1) Make sure that the resistance is less than 0.001 ohm.

2) If the resistance is greater than 0.001 ohm, then inspect and repair the ground between the sensor connection and structure ground.

3) If you do not find a problem with the sensor ground, then continue.

(c) If the resistance values are out of tolerance and there are no problems with the sensor ground then replace the sensor. These are the tasks:

- Main Landing Gear Down-and-Locked Sensor Removal, AMM TASK 32-61-31-020-801
- Main Landing Gear Down-and-Locked Sensor Installation, AMM TASK 32-61-31-400-801

1) Do the Repair Confirmation at the end of this task.

(d) If the resistance values for the sensor are in tolerance and there are no problems with the sensor ground then you have determined that the wiring is faulty. Do the wiring check below.

(3) If the sensor status is TGT FAR without a deactuator installed, then do these steps:

(a) Measure the clearance between the sensor and target. To measure the clearance, do this task: Main Landing Gear Down-and-Locked Sensor Clearance Measurement, AMM TASK 32-61-31-220-801.

(b) If the sensor clearance is not correct, then do these steps:

1) Adjust the sensor clearance. To adjust the clearance, do this task: Main Landing Gear Down-and-Locked Sensor Clearance Adjustment, AMM TASK 32-61-31-400-802.

2) Do the Repair Confirmation at the end of this task.

(c) If the sensor clearance is correct, then do these steps:

1) Replace the sensor. These are the tasks:

- Main Landing Gear Down-and-Locked Sensor Removal, AMM TASK 32-61-31-020-801
- Main Landing Gear Down-and-Locked Sensor Installation, AMM TASK 32-61-31-400-801

2) Do the Repair Confirmation at the end of this task.

(4) If the sensor status is FAILSAFE, then do these steps:

(a) Disconnect the sensor leads from the airplane wiring.

(b) Temporarily install the leads from a replacement sensor to the airplane wiring.

(c) Make sure the sensor is away from all metal objects.

(d) Do the steps to show the sensor status again.

(e) If the sensor status is TGT FAR, then the installed sensor has a fault. Do these steps:

1) Replace the sensor. These are the tasks:

- Main Landing Gear Down-and-Locked Sensor Removal, AMM TASK 32-61-31-020-801
- Main Landing Gear Down-and-Locked Sensor Installation, AMM TASK 32-61-31-400-801

2) Do the Repair Confirmation at the end of this task.

(f) If the sensor status is FAILSAFE, then do these steps and continue:

1) Remove the replacement sensor leads from the junction box connector.

2) Re-install the leads from the installed sensor.

(5) Do this check of the wiring:

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(a) For maintenance message number 32-61001 or 32-61005, disconnect connector D10982 from the PSEU.

(b) For maintenance message number 32-61007 or 32-61011, disconnect connector D10984 from the PSEU.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(c) For maintenance message number 32-61001, 32-61101, 32-61005 or 32-61105, disconnect connector D10982 from the PSEU.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5 (Continued)

(d) For maintenance message number 32-61007, 32-61107, 32-61011, or 32-61111, disconnect connector D10984 from the PSEU.

HAP ALL

(e) Do a wiring check between these connections on the sensor and the PSEU:

Table 202

SENSOR	SENSOR LEAD		PSEU CONNECTOR
S0071	YELLOW	———	GROUND
			D10982
	BLUE	———	pin 55
			D10982
	RED	———	pin 33
S0073	YELLOW	———	GROUND
			D10982
	BLUE	———	pin 12
			D10982
	RED	———	pin 11
HAP 001-013, 015-020 POST SB 737-32-1317			
S0301	YELLOW *[1]	———	GROUND
HAP 021-026, 028-054, 101-999; HAP 001-013, 015-020 PRE SB 737-32-1317			
S0301	YELLOW	———	GROUND
HAP ALL			
			D10984
	BLUE	———	pin 12
			D10984
	RED	———	pin 11
HAP 001-013, 015-020 POST SB 737-32-1317			
S0302	YELLOW *[2]	———	GROUND
HAP 021-026, 028-054, 101-999; HAP 001-013, 015-020 PRE SB 737-32-1317			
S0302	YELLOW	———	GROUND
HAP ALL			
			D10984
	BLUE	———	pin 55
			D10984

(Continued)

RED ———— pin 33

*[1] The ground path for sensor S0301 includes an additional jumper wire between ground stud GD2064AC and connector D46018.

*[2] The ground path for sensor S0302 includes an additional jumper wire between ground stud GD2054AC and connector D46008.

(f) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector D10982 or D10984 to the PSEU.

3) Do the Repair Confirmation at the end of this task.

(g) If you do not find a problem with the wiring, then do a check of the bonding resistance between the sensor ground and the airplane structure (Standard Wiring Practices Manual).

1) Make sure that the resistance is less than 0.001 ohm.

2) If the resistance is greater than 0.001 ohm, then inspect and repair the ground between the sensor connection and structure ground.

3) If you do not find a problem with the sensor ground, then continue.

(6) Do these steps to replace the PSEU:

(a) Replace the PSEU, M2061. These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

(b) Do the post installation test in the PSEU installation procedure.

(c) If the test operates correctly, then you corrected the fault.

G. Repair Confirmation

(1) Do this test of the applicable sensor:

(a) Put a deactuator on the face of the sensor.

(b) Remove the deactuator from the face of the sensor.

(c) Do the EXISTING FAULTS test on the PSEU BITE display. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(d) If you do not find the maintenance message, then you corrected the fault.

———————— END OF TASK ————————

802. Main Landing Gear Uplock Sensor Fault - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 32-61002 LEFT UP LKD A

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) 32-61102 LEFT UP LKD A

HAP ALL

(c) 32-61006 RIGHT UP LKD A

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(d) 32-61106 RIGHT UP LKD A

HAP ALL

(e) 32-61008 LEFT UP LKD B

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(f) 32-61108 LEFT UP LKD B

HAP ALL

(g) 32-61012 RIGHT UP LKD B

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(h) 32-61112 RIGHT UP LKD B

HAP ALL

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(2) These maintenance messages show that a main landing gear up and locked sensor disagrees with the other main landing gear locked sensors.

(a) Maintenance message 32-61002 will be set if the left up and locked A sensor disagrees with the other main gear down and locked or up and locked sensors.

(b) Maintenance message 32-61006 will be set if the right up and locked A sensor disagrees with the other main gear down and locked or up and locked sensors.

(c) Maintenance message 32-61008 will be set if the left up and locked B sensor disagrees with the other main gear down and locked or up and locked sensors.

(d) Maintenance message 32-61012 will be set if the right up and locked B sensor disagrees with the other down and locked or up and locked sensors.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(3) These maintenance messages show that a main landing gear up and locked sensor disagrees with the other main landing gear locked sensors.

(a) Maintenance message 32-61002 will be set if the left up and locked A sensor indicates up with the other main gear sensors indicating that both main gear are down and locked.

(b) Maintenance message 32-61102 will be set if the left up and locked A sensor indicates down with the other main gear sensors indicating that both main gear are up and locked.

(c) Maintenance message 32-61006 will be set if the right up and locked A sensor indicates up with the other main gear sensors indicating that both main gear are down and locked.

(d) Maintenance message 32-61106 will be set if the left up and locked A sensor indicates down with the other main gear sensors indicating that both main gear are up and locked.

(e) Maintenance message 32-61008 will be set if the left up and locked B sensor indicates up with the other main gear sensors indicating that both main gear are down and locked.

(f) Maintenance message 32-61108 will be set if the left up and locked A sensor indicates down with the other main gear sensors indicating that both main gear are up and locked.

(g) Maintenance message 32-61012 will be set if the right up and locked B sensor indicates up with the other main gear sensors indicating that both main gear are down and locked.

(h) Maintenance message 32-61112 will be set if the left up and locked A sensor indicates down with the other main gear sensors indicating that both main gear are up and locked.

HAP ALL

B. Possible Causes

(1) Left main landing gear up and locked sensor, S0072 or S1016

(2) Right main landing gear up and locked sensor, S0074 or S1017

(3) Wiring problem

(4) Proximity switch electronics unit (PSEU), M02061

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Related Data

(1) Component Location (Figure 303)

(2) (SSM 32-64-11)

(3) (SSM 32-64-12)

(4) (WDM 32-64-11)

(5) (WDM 32-64-12)

E. Initial Evaluation

(1) Look for any obvious damage to the applicable sensor, target, and adjacent structure.

(a) If you find any damage, then do the Fault Isolation Procedure below.

(b) If there is no obvious damage, then continue.

(2) Do these steps to show the status of the applicable landing gear position sensor:

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

(b) Push the down switch until OTHER FUNCTNS? shows.

(c) Push the YES switch to select OTHER FUNCTNS?.

(d) Push the down switch until I/O MONITOR? shows.

(e) Push the YES switch to select I/O MONITOR.

(f) Push the down switch until SENSORS? shows.

(g) Push the YES switch to select SENSORS.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(h) Push the down arrow switch until the sensor number shows.

1) For maintenance message number 32-61002, show sensor S0072

2) For maintenance message number 32-61006, show sensor S0074

3) For maintenance message number 32-61008, show sensor S1016

4) For maintenance message number 32-61012, show sensor S1017

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(i) Push the down arrow switch until the sensor number shows.

1) For maintenance message number 32-61002 or 3261102, show sensor S0072

2) For maintenance message number 32-61006 or 32-61106, show sensor S0074

3) For maintenance message number 32-61008 or 32-61108, show sensor S1016

4) For maintenance message number 32-61012 or 32-61112, show sensor S1017

HAP ALL

(j) Push the YES switch to show the sensor status.

(k) If the sensor status is TGT NEAR, then do this test of the other sensor states:

1) Put a deactuator on the face of the sensor face.

NOTE: The deactuator is part of this tool set: proximity sensor test set, SPL-1690.

2) If the display shows TGT FAR, then there was an intermittent fault.

NOTE: You may measure the clearance between the sensor and target. To determine if the sensor clearance is incorrect, do this task: (AMM TASK 32-61-21-400-802).

3) If the display shows TGT NEAR, then do the Fault Isolation Procedure below.

(l) If the sensor status is TGT FAR or FAILSAFE, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) If you found any obvious damage to the applicable sensor, target, and adjacent structure, then do these steps:

(a) Repair the damage.

(b) Do the Repair Confirmation at the end of this task.

(c) If the Repair Confirmation is not satisfactory, then continue.

(2) If the sensor status is TGT NEAR, with a deactuator installed, then do these steps:

(a) Perform a resistance check of the sensor and wires, these are the steps:

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

1) For maintenance message number 32-61002 or 32-61006, disconnect connector D10982 from the PSEU.

2) For maintenance message number 32-61008 or 32-61012, disconnect connector D10984 from the PSEU.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

3) For maintenance message number 32-61002, 32-61102, 32-61006 or 32-61106, disconnect connector D10982 from the PSEU.

4) For maintenance message number 32-61008, 32-61108, 32-61012 or 32-61112, disconnect connector D10984 from the PSEU.

HAP ALL

5) Verify that the resistance values for the sensor connections listed in the table below are within these limits:
   a) Between the blue and yellow leads: 350 ± 35 Ohm.
   b) Between the red and yellow leads: 30 ± 6 Ohm.
6) Re-connect connector D10982 or D10984 to the PSEU.
7) If the resistance values are out of tolerance then cut the wires at the sensor splices and recheck the resistance of the sensors.
8) These are the connections on the sensor and the PSEU to check the resistances at:

Table 203

SENSOR	SENSOR LEAD		PSEU CONNECTOR
S0072	YELLOW	———	GROUND D10982
	BLUE	———	pin 57 D10982
	RED	———	pin 58
S0074	YELLOW	———	GROUND D10982
	BLUE	———	pin 46 D10982
	RED		pin 45
S1016	YELLOW	———	GROUND D10984
	BLUE	———	pin 15 D10984
	RED	———	pin 5
S1017	YELLOW	———	GROUND D10984
	BLUE	———	pin 46 D10984
	RED	———	pin 45

(b) If the resistances values for the sensors are out of tolerance, then do a check of the bonding resistance between the sensor ground and the airplane structure (Standard Wiring Practices Manual).

1) Make sure that the resistance is less than 0.001 ohm.

2) If the resistance is greater than 0.001 ohm, then inspect and repair the ground between the sensor connection and structure ground.

3) If you do not find a problem with the sensor ground, then continue.

(c) If the resistance values are out of tolerance and there are no problems with the sensor ground then replace the sensor. These are the tasks:

- Main Landing Gear Down-and-Locked Sensor Removal, AMM TASK 32-61-31-020-801
- Main Landing Gear Down-and-Locked Sensor Installation, AMM TASK 32-61-31-400-801

1) Do the Repair Confirmation at the end of this task.

(d) If the resistance values for the sensor are in tolerance and there are no problems with the sensor ground then you have determined that the wiring is faulty. Do the wiring check below.

(3) If the sensor status is TGT FAR without a deactuator installed, then do these steps:

(a) Measure the clearance between the sensor and target. To measure the clearance, do this task: Main Landing Gear Uplock Sensor Clearance Measurement (Airplane on Jacks), AMM TASK 32-61-21-400-802.

(b) If the sensor clearance is not correct, then do these steps:

1) Adjust the sensor clearance. To adjust the clearance, do this task: Main Landing Gear Uplock Sensor Clearance Adjustment, AMM TASK 32-61-21-820-801.

2) Do the Repair Confirmation at the end of this task.

(c) If the sensor clearance is correct, then do these steps:

1) Replace the sensor. These are the tasks:

- Main Landing Gear Uplock Sensor Removal, AMM TASK 32-61-21-020-801
- Main Landing Gear Uplock Sensor Installation, AMM TASK 32-61-21-400-801

2) Do the Repair Confirmation at the end of this task.

(4) If the sensor status is FAILSAFE, then do these steps:

(a) Disconnect the sensor leads from the airplane wiring.

(b) Temporarily install the leads from a replacement sensor to the airplane wiring.

(c) Make sure the sensor is away from all metal objects.

(d) Do the steps to show the sensor status again.

(e) If the sensor status is TGT FAR, then the installed sensor has a fault. Do these steps:

1) Replace the sensor. These are the tasks:

- Main Landing Gear Uplock Sensor Removal, AMM TASK 32-61-21-020-801
- Main Landing Gear Uplock Sensor Installation, AMM TASK 32-61-21-400-801

2) Do the Repair Confirmation at the end of this task.

(f) If the sensor status is FAILSAFE, then do these steps and continue:

1) Remove the replacement sensor leads from the airplane wiring.

2) Re-install the leads from the installed sensor.

(5) Do this check of the wiring:

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(a) For maintenance message number 32-61002 or 32-61006, disconnect connector D10982 from the PSEU.

(b) For maintenance message number 32-61008 or 32-61012, disconnect connector D10984 from the PSEU.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(c) For maintenance message number 32-61002, 32-61102, 32-61006 or 32-61106, disconnect connector D10982 from the PSEU.

(d) For maintenance message number 32-61008, 32-61108, 32-61012 or 32-61112, disconnect connector D10984 from the PSEU.

HAP ALL

(e) Do a wiring check between these connections on the sensor and the PSEU:

Table 204

SENSOR	SENSOR LEAD		PSEU CONNECTOR
S0072	YELLOW	———	GROUND
			D10982
	BLUE	———	pin 57
			D10982
	RED	———	pin 58
S0074	YELLOW	———	GROUND
			D10982
	BLUE	———	pin 46
			D10982
	RED		pin 45
S1016	YELLOW	———	GROUND
			D10984
	BLUE	———	pin 15
			D10984
	RED	———	pin 5
S1017	YELLOW	———	GROUND
			D10984
	BLUE	———	pin 46
			D10984
	RED	———	pin 45

(f) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector D10982 or D10984 to the PSEU.

3) Do the Repair Confirmation at the end of this task.

(g) If you do not find a problem with the wiring, then continue.

(6) Do these steps to replace the PSEU:

(a) Replace the PSEU, M2061. These are the tasks:
- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

(b) Do the post installation test in the PSEU installation procedure.

(c) If the test operates correctly, then you corrected the fault.

G. Repair Confirmation

(1) Do this test of the applicable sensor:

(a) Put a deactuator on the face of the sensor.

(b) Remove the deactuator from the face of the sensor.

(c) Do the EXISTING FAULTS test on the PSEU BITE display. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(d) If you do not find the maintenance message, then you corrected the fault.

——————— END OF TASK ———————

803. Nose Landing Gear Down Sensor Fault - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 32-61004 NOSE DN A FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) 32-61104 NOSE DN A FAULT

HAP ALL

(c) 32-61009 NOSE DN B FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(d) 32-61109 NOSE DN B FAULT

HAP ALL

(e) 32-61013 NOSE DN DISAGREE

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(2) These maintenance messages show that a nose landing gear down position sensor disagrees with the main landing gear locked sensors.

(a) Maintenance message 32-61004 will be set if the nose down A position sensor disagrees with the main gear down and locked or up and locked sensors.

(b) Maintenance message 32-61009 will be set if the nose down B position sensor disagrees with the main gear down and locked or up and locked sensors.

(c) Maintenance message 32-61013 will be set if the nose down A position sensor disagrees with the nose down B sensor.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(3) These maintenance messages show that a nose landing gear down position sensor disagrees with the main landing gear locked sensors.

(a) Maintenance message 32-61004 will be set if the nose down A position sensor indicates down with the other main gear sensors indicating that both main gear are up and locked and nose down B sensor indicates up.

(b) Maintenance message 32-61104 will be set if the nose down A position sensor indicates up with the other main gear sensors indicating that both main gear are down and locked and lever down, lever up and nose down B sensor indicates down.

(c) Maintenance message 32-61009 will be set if the nose down B position sensor indicates down with the other main gear sensors indicating that both main gear are up and locked and nose down A sensor indicates up.

(d) Maintenance message 32-61109 will be set if the nose down A position sensor indicates up with the other main gear sensors indicating that both main gear are down and locked and lever down, lever up and nose down A sensor indicates down.

(e) Maintenance message 32-61013 will be set if the nose down A position sensor disagrees with the nose down B sensor.

HAP ALL

B. Possible Causes

(1) Nose landing gear down position sensor, S0845 or S0853

(2) Wiring problem

(3) Proximity switch electronics unit (PSEU), M02061

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Related Data

(1) Component Location (Figure 304)

(2) (SSM 32-64-11)

(3) (SSM 32-64-12)

(4) (WDM 32-64-11)

(5) (WDM 32-64-12)

E. Initial Evaluation

(1) Look for any obvious damage to the applicable sensor, target, and adjacent structure.

(a) If you find any damage, then do the Fault Isolation Procedure below.

(b) If there is no obvious damage, then continue.

(2) Show the status of the applicable landing gear position sensor.

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

(b) Push the down switch until OTHER FUNCTNS? shows.

(c) Push the YES switch to select OTHER FUNCTNS?.

(d) Push the down switch until I/O MONITOR? shows.

(e) Push the YES switch to select I/O MONITOR.

(f) Push the down switch until SENSORS? shows.

(g) Push the YES switch to select SENSORS.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(h) Push the down switch until the sensor number shows.

1) For maintenance message number 32-61004 or 32-61013, show sensor S0845

2) For maintenance message number 32-61009 or 32-61013, show sensor S0853

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(i) Push the down switch until the sensor number shows.

1) For maintenance message number 32-61004, 32-61104 or 32-61013, show sensor S0845

2) For maintenance message number 32-61009, 32-61109 or 32-61013, show sensor S0853

HAP ALL

(j) Push the YES switch to show the sensor status.

(k) If the sensor status is TGT NEAR, then do this test of the other sensor states:

1) Put a deactuator on the face of the sensor face.

NOTE: The deactuator is part of this tool set: proximity sensor test set, SPL-1690.

2) If the display shows TGT FAR, then there was an intermittent fault.

NOTE: You may measure the clearance between the sensor and target. This can help you determine if the sensor clearance is incorrect. To do this, you can do this task: (AMM TASK 32-61-51-220-801).

3) If the display shows TGT NEAR, then do the Fault Isolation Procedure below.

(l) If the sensor status is TGT FAR or FAILSAFE, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) If you found any obvious damage to the applicable sensor, target, and adjacent structure, then do these steps:

(a) Repair the damage.

(b) Do the Repair Confirmation at the end of this task.

(c) If the Repair Confirmation is not satisfactory, then continue.

(2) If the sensor status is TGT NEAR, with a deactuator installed, then do these steps:

(a) Perform a resistance check of the sensor and wires, these are the steps:

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

1) For maintenance message number 32-61004 or 32-61013, disconnect connector D10982 from the PSEU.

2) For maintenance message number 32-61009 or 32-61013, disconnect connector D10984 from the PSEU.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

3) For maintenance message number 32-61004, 32-61104 or 32-61013, disconnect connector D10982 from the PSEU.

4) For maintenance message number 32-61009, 32-61109 or 32-61013, disconnect connector D10984 from the PSEU.

HAP ALL

5) Verify that the resistance values for the sensor connections listed in the table below are within these limits:

a) Between the blue and yellow leads: 350 ± 35 Ohm.

b) Between the red and yellow leads: 30 ± 6 Ohm.

6) Re-connect connector D10982 or D10984 to the PSEU.

7) If the resistance values are out of tolerance then cut the wires at the sensor splices and recheck the resistance of the sensors.

8) These are the connections on the sensor and the PSEU to check the resistances at:

Table 205

SENSOR	SENSOR LEAD		PSEU CONNECTOR
S0845	YELLOW	———	GROUND D10982
	BLUE	———	pin 19 D10982
	RED	———	pin 20
S0853	YELLOW	———	GROUND D10984
	BLUE	———	pin 19 D10984
	RED	———	pin 20

(b) If the resistances values for the sensors are out of tolerance, then do a check of the bonding resistance between the sensor ground and the airplane structure (Standard Wiring Practices Manual).

1) Make sure that the resistance is less than 0.001 ohm.

2) If the resistance is greater than 0.001 ohm, then inspect and repair the ground between the sensor connection and structure ground.

3) If you do not find a problem with the sensor ground, then continue.

(c) If the resistance values are out of tolerance and there are no problems with the sensor ground then replace the sensor. These are the tasks:

- Nose Landing Gear Down Position Sensor Removal, AMM TASK 32-61-51-020-801

- Nose Landing Gear Down Position Sensor Installation, AMM TASK 32-61-51-400-802

1) Do the Repair Confirmation at the end of this task.

(d) If the resistance values for the sensor are in tolerance and there are no problems with the sensor ground then you have determined that the wiring is faulty. Do the wiring check below.

(3) If the sensor status is TGT FAR without a deactuator installed on the sensor, then do these steps:

(a) Measure the clearance between the sensor and target. To measure the clearance, do this task: Nose Landing Gear Down Position Sensor Clearance Measurement, AMM TASK 32-61-51-220-801.

(b) If the sensor clearance is not correct, then do these steps:

1) Adjust the sensor clearance. To adjust the clearance, do this task: Nose Landing Gear Down Position Sensor Clearance Adjustment, AMM TASK 32-61-51-400-801.

2) Do the Repair Confirmation at the end of this task.

(c) If the sensor clearance is correct, then do these steps:

1) Replace the sensor. These are the tasks:
- Nose Landing Gear Down Position Sensor Removal, AMM TASK 32-61-51-020-801
- Nose Landing Gear Down Position Sensor Installation, AMM TASK 32-61-51-400-802

2) Do the Repair Confirmation at the end of this task.

(4) If the sensor status is FAILSAFE, then do these steps:

(a) Disconnect the sensor leads from the airplane wiring.

(b) Temporarily install the leads from a replacement sensor to the airplane wiring.

(c) Make sure the sensor is away from all metal objects.

(d) Do the steps to show the sensor status again.

(e) If the sensor status is TGT FAR, then the installed sensor has a fault. Do these steps:

1) Replace the sensor. These are the tasks:
- Nose Landing Gear Down Position Sensor Removal, AMM TASK 32-61-51-020-801
- Nose Landing Gear Down Position Sensor Installation, AMM TASK 32-61-51-400-802

2) Do the Repair Confirmation at the end of this task.

(f) If the sensor status is FAILSAFE, then do these steps and continue:

1) Remove the replacement sensor leads from the junction box connector.

2) Re-install the leads from the current air/ground sensor.

(5) Do this check of the wiring:

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(a) For maintenance message number 32-61004 or 32-61013, disconnect connector D10982 from the PSEU.

(b) For maintenance message number 32-61009 or 32-61013, disconnect connector D10984 from the PSEU.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(c) For maintenance message number 32-61004, 32-61104 or 32-61013, disconnect connector D10982 from the PSEU.

(d) For maintenance message number 32-61009, 32-61109 or 32-61013, disconnect connector D10984 from the PSEU.

HAP ALL

(e) Do a wiring check between these connections on the sensor and the PSEU:

Table 206

SENSOR	SENSOR LEAD		PSEU CONNECTOR
S0845	YELLOW	———	GROUND D10982
	BLUE	———	pin 19 D10982
	RED	———	pin 20
S0853	YELLOW	———	GROUND D10984
	BLUE	———	pin 19 D10984
	RED	———	pin 20

(f) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector D10982 or D10984 to the PSEU.

3) Do the Repair Confirmation at the end of this task.

(g) If you do not find a problem with the wiring, then continue.

(6) Do these steps to replace the PSEU:

(a) Replace the PSEU, M2061. These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

(b) Do the post installation test in the PSEU installation procedure.

(c) If the test operates correctly, then you corrected the fault.

G. Repair Confirmation

(1) Do this test of the applicable sensor:

(a) Put a deactuator on the face of the sensor.

(b) Remove the deactuator from the face of the sensor.

(c) Do the EXISTING FAULTS test on the PSEU BITE display. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(d) If you do not find the maintenance message, then you corrected the fault.

—————— END OF TASK ——————

804. Nose Landing Gear Lock Sensor Fault - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 32-61003 NOSE LKD A FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) 32-61103 NOSE LKD A FAULT

HAP ALL

(c) 32-61010 NOSE LKD B FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(d) 32-61110 NOSE LKD B FAULT

HAP ALL

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(2) These maintenance messages show that a nose landing gear lock sensor disagrees with the main landing gear locked sensors.

(a) Maintenance message number 32-61003 will be set if the nose gear lock A sensor disagrees with the main gear down and locked or up and locked sensors.

(b) Maintenance message number 32-61010 will be set if the nose gear lock B sensor disagrees with the main gear down and locked or up and locked sensors.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(3) These maintenance messages show that a nose landing gear lock sensor disagrees with the main landing gear locked sensors.

(a) Maintenance message number 32-61003 will be set if the nose gear lock A sensor indicates locked while both main gear are neither down and locked nor up and locked and lever down and lever up indicates down.

(b) Maintenance message number 32-61103 will be set if the nose gear lock A sensor indicates not locked while both main gear are down and locked and lever down, lever up and nose locked B sensor indicates down and locked.

(c) Maintenance message number 32-61010 will be set if the nose gear lock B sensor indicates locked while both main gear are neither down and locked nor up and locked and lever down and lever up indicates down.

(d) Maintenance message number 32-61110 will be set if the nose gear lock B sensor indicates not locked while both main gear are down and locked and lever down, lever up and nose locked A sensor indicates down and locked.

HAP ALL

B. Possible Causes

(1) Nose landing gear lock sensor, S0846 or S0854

(2) Wiring problem

(3) Proximity switch electronics unit (PSEU), M02061

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Related Data

(1) Component Location (Figure 305)

(2) (SSM 32-64-11)

(3) (SSM 32-64-12)

(4) (WDM 32-64-11)

(5) (WDM 32-64-12)

E. Initial Evaluation

(1) Look for any obvious damage to the applicable sensor, target, and adjacent structure.

(a) If you find any damage, then do the Fault Isolation Procedure below.

(b) If there is no obvious damage, then continue.

(2) Show the status of the applicable landing gear position sensor.

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

(b) Push the down switch until OTHER FUNCTNS? shows.

(c) Push the YES switch to select OTHER FUNCTNS?.

(d) Push the down switch until I/O MONITOR? shows.

(e) Push the YES switch to select I/O MONITOR.

(f) Push the down switch until SENSORS? shows.

(g) Push the YES switch to select SENSORS.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(h) Push the down switch until the sensor number shows.

1) For maintenance message number 32-61003, show sensor S0846

2) For maintenance message number 32-61010, show sensor S0854

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(i) Push the down switch until the sensor number shows.

1) For maintenance message number 32-61003 and 32-61103, show sensor S0846

2) For maintenance message number 32-61010 and 32-61110, show sensor S0854

HAP ALL

(j) Push the YES switch to show the sensor status.

(k) If the sensor status is TGT NEAR, then do this test of the other sensor states:

1) Put a deactuator on the face of the sensor face.

NOTE: The deactuator is part of this tool set: proximity sensor test set, SPL-1690.

2) If the display shows TGT FAR, then there was an intermittent fault.

NOTE: You may measure the clearance between the sensor and target. This can help you determine if the sensor clearance is incorrect. To do this, you can do this task: (AMM TASK 32-61-41-220-801).

3) If the display shows TGT NEAR, then do the Fault Isolation Procedure below.

(l) If the sensor status is TGT FAR or FAILSAFE, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) If you found any obvious damage to the applicable sensor, target, and adjacent structure, then do these steps:

(a) Repair the damage.

(b) Do the Repair Confirmation at the end of this task.

(c) If the Repair Confirmation is not satisfactory, then continue.

(2) If the sensor status is TGT NEAR, with a deactuator installed, then do these steps:

(a) Perform a resistance check of the sensor and wires, these are the steps:

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

1) For maintenance message number 32-61003, disconnect connector D10982 from the PSEU.

2) For maintenance message number 32-61010, disconnect connector D10984 from the PSEU.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

3) For maintenance message number 32-61003 and 32-61103, disconnect connector D10982 from the PSEU.

4) For maintenance message number 32-61010 and 32-61110, disconnect connector D10984 from the PSEU.

HAP ALL

5) Verify that the resistance values for the sensor connections listed in the table below are within these limits:

a) Between the blue and yellow leads: 350 ± 35 Ohm.

b) Between the red and yellow leads: 30 ± 6 Ohm.

6) Re-connect connector D10982 or D10984 to the PSEU.

7) If the resistance values are out of tolerance then cut the wires at the sensor splices and recheck the resistance of the sensors.

8) These are the connections on the sensor and the PSEU to check the resistances at:

Table 207

SENSOR	SENSOR LEAD		PSEU CONNECTOR
S0846	YELLOW	———	GROUND
			D10982
	BLUE	———	pin 2

(Continued)

SENSOR	SENSOR LEAD		PSEU CONNECTOR
			D10982
	RED	———	pin 9
S0854	YELLOW	———	GROUND
			D10984
	BLUE	———	pin 2
			D10984
	RED	———	pin 9

(b) If the resistances values for the sensors are out of tolerance, then do a check of the bonding resistance between the sensor ground and the airplane structure (SWPM 20-20-00).

1) Make sure that the resistance is less than 0.001 ohm.

2) If the resistance is greater than 0.001 ohm, then inspect and repair the ground between the sensor connection and structure ground.

3) If you do not find a problem with the sensor ground, then continue.

(c) If the resistance values are out of tolerance and there are no problems with the sensor ground then replace the sensor. These are the tasks:

- Nose Landing Gear Lock Sensor Removal, AMM TASK 32-61-41-020-801
- Nose Landing Gear Lock Sensor Installation, AMM TASK 32-61-41-400-801

1) Do the Repair Confirmation at the end of this task.

(d) If the resistance values for the sensor are in tolerance and there are no problems with the sensor ground then you have determined that the wiring is faulty. Do the wiring check below.

(3) If the sensor status is TGT FAR without a deactuator installed on the sensor, then do these steps:

(a) Measure the clearance between the sensor and target. To measure the clearance, do this task: Nose Landing Gear Lock Sensor Clearance Measurement, AMM TASK 32-61-41-220-801.

(b) If the sensor clearance is not correct, then do these steps:

1) Adjust the sensor clearance. To adjust the clearance, do this task: Nose Landing Gear Lock Sensor Clearance Adjustment, AMM TASK 32-61-41-400-802.

2) Do the Repair Confirmation at the end of this task.

(c) If the sensor clearance is correct, then do these steps:

1) Replace the sensor. These are the tasks:

- Nose Landing Gear Lock Sensor Removal, AMM TASK 32-61-41-020-801
- Nose Landing Gear Lock Sensor Installation, AMM TASK 32-61-41-400-801

2) Do the Repair Confirmation at the end of this task.

(4) If the sensor status is TGT FAR without a deactuator installed, then do these steps:

(a) Measure the clearance between the sensor and target. To measure the clearance, do this task: Nose Landing Gear Lock Sensor Clearance Measurement, AMM TASK 32-61-41-220-801.

(b) If the sensor clearance is not correct, then do these steps:

1) Adjust the sensor clearance. To adjust the clearance, do this task: Nose Landing Gear Lock Sensor Clearance Adjustment, AMM TASK 32-61-41-400-802.
2) Do the Repair Confirmation at the end of this task.

(c) If the sensor clearance is correct, then do these steps:

1) Replace the sensor. These are the tasks:
   - Nose Landing Gear Lock Sensor Removal, AMM TASK 32-61-41-020-801
   - Nose Landing Gear Lock Sensor Installation, AMM TASK 32-61-41-400-801
2) Do the Repair Confirmation at the end of this task.

(5) If the sensor status is FAILSAFE, then do these steps:

(a) Disconnect the sensor leads from the airplane wiring.

(b) Temporarily install the leads from a replacement sensor to the airplane wiring.

(c) Make sure the sensor is away from all metal objects.

(d) Do the steps to show the sensor status again.

(e) If the sensor status is TGT FAR, then the installed sensor has a fault. Do these steps:

1) Replace the sensor. These are the tasks:
   - Nose Landing Gear Lock Sensor Removal, AMM TASK 32-61-41-020-801
   - Nose Landing Gear Lock Sensor Installation, AMM TASK 32-61-41-400-801
2) Do the Repair Confirmation at the end of this task.

(f) If the sensor status is FAILSAFE, then do these steps and continue:

1) Remove the replacement sensor leads from the junction box connector.
2) Re-install the leads from the current air/ground sensor.

(6) Do this check of the wiring:

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(a) For maintenance message number 32-61003, disconnect connector D10982 from the PSEU.

(b) For maintenance message number 32-61010, disconnect connector D10984 from the PSEU.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(c) For maintenance message number 32-61003 and 32-61103, disconnect connector D10982 from the PSEU.

(d) For maintenance message number 32-61010 and 32-61110, disconnect connector D10984 from the PSEU.

HAP ALL

(e) Do a wiring check between these connections on the sensor and the PSEU:

Table 208

SENSOR	SENSOR LEAD		PSEU CONNECTOR
S0846	YELLOW	———	GROUND
			D10982
	BLUE	———	pin 2
			D10982
	RED	———	pin 9

(Continued)

SENSOR	SENSOR LEAD		PSEU CONNECTOR
S0854	YELLOW	———	GROUND
			D10984
	BLUE	———	pin 2
			D10984
	RED	———	pin 9

(f) If you find a problem with the wiring, then do these steps:
1) Repair the wiring.
2) Re-connect connector D10982 or D10984 to the PSEU.
3) Do the Repair Confirmation at the end of this task.

(g) If you do not find a problem with the wiring, then continue.

(7) Do these steps to replace the PSEU:
(a) Replace the PSEU, M2061. These are the tasks:
- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

(b) Do the post installation test in the PSEU installation procedure.
(c) If the test operates correctly, then you corrected the fault.

G. Repair Confirmation

(1) Do this test of the applicable sensor:
(a) Put a deactuator on the face of the sensor.
(b) Remove the deactuator from the face of the sensor.
(c) Do the EXISTING FAULTS test on the PSEU BITE display. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.
(d) If you do not find the maintenance message, then you corrected the fault.

——————— END OF TASK ———————

805. Altitude Less Than 200 (Left) Fault - Fault Isolation

A. Description

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(1) This task is for this maintenance message:
(a) 32-62005 ALT L LT 200 FLT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(2) This task is for these maintenance messages:
(a) 32-62005 ALT L LT 200 FLT
(b) 32-62105 ALT L LT 200 FLT
(c) 32-62205 ALT L LT 200 FLT

HAP ALL

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(3) This maintenance message shows one of these conditions:

(a) The left signal on the flight control computer shows the airplane altitude is greater than 200 feet with airplane on the ground.

(b) The left signal on the flight control computer shows the airplane altitude is less than 200 feet with airplane in the air for an extended period.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(4) These maintenance messages show when one of these conditions occur:

(a) Maintenance message 32-62005 will be set if the left signal on the flight control computer shows the airplane altitude is greater than 200 feet with airplane on the ground.

(b) Maintenance message 32-62105 will be set if the left signal on the flight control computer shows the airplane altitude is less than 200 feet with airplane in the air for more than two minutes.

(c) Maintenance message 32-62205 will be set during the LRU replacement test if the left signal on the flight control computer shows the airplane altitude is greater than 200 feet and the right signal on the flight control computer shows the airplane altitude is less than 200 feet.

HAP ALL

B. Possible Causes

(1) Wiring problem

(2) Flight control computer (FCC) A, M1875

(3) Radio Altimeter Transmitter/Receiver, M1735 (1) or M1736 (2)

(4) Proximity switch electronics unit (PSEU), M02061

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN

D. Related Data

(1) (SSM 32-61-21)

(2) (WDM 32-64-21)

E. Initial Evaluation

(1) Do a test to determine if there are FCC faults. Do this task: Digital Flight Control System (DFCS) BITE Procedure, 22-11 TASK 801.

(a) If this fault exists: FCC-A (J1A-G03), then the do the Fault Isolation Procedure below.

(b) If there is a radio altimeter output problem or other FCC problem, then do the fault isolation referenced in the BITE procedure.

(c) If there are no FCC faults, then continue.

(2) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If you do not find the maintenance message, then there was an intermittent fault.

(b) If you find the maintenance message, then do the fault isolation procedure below.

F. Fault Isolation Procedure

(1) Do this test of the PSEU and wiring:

(a) Remove the flight control computer A. To remove the computer, do this task: Flight Control Computer Removal, AMM TASK 22-11-33-000-801.

(b) Examine the connectors and sockets for damage and unwanted material.

(c) Show the input status for connector D10982 pin 43 on the PSEU BITE display.

NOTE: If you need instructions on how to show the input status, see this task: (32-09 TASK 821).

(d) If the status of pin 43 is GND, then do this test of the PSEU:

1) Remove the connector D10982 from the PSEU.

2) Examine the connector and socket for damage and unwanted material.

3) Show the input status for connector D10982 pin 43 again.

4) If the status of the pin is GND, then do these steps:

a) Replace the PSEU. These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

b) Do the Repair Confirmation Below.

5) If the status of the pin is NO GND, then do these steps:

a) Repair the wiring between the PSEU and FCC.

b) Do the Repair Confirmation Below.

(e) If the status of pin 43 is NO GND, then continue.

(f) Ground pin G3 on the FCC connector D10135A with a jumper wire.

(g) If the status of pin 43 is NO GND, then do this test of the PSEU:

1) Remove the connector D10982 from the PSEU.

2) Examine the connector and socket for damage and unwanted material.

3) Ground pin 43 on the PSEU connector D10982 with a jumper wire.

4) Show the input status for connector D10982 pin 43 again.

5) If the status of the pin is NO GND, then do these steps:

a) Replace the PSEU, M2061. These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

b) Do the Repair Confirmation Below.

6) If the status of the pin is GND, then do these steps:

a) Repair the wiring between the PSEU and FCC.

b) Do the Repair Confirmation Below.

(h) If the status of pin 43 is GND, then continue.

(2) Do this test of the FCC:

(a) Do an exchange test of the FCC. To do this, do this task: FCC Exchange Check, 22-11 TASK 820.

(b) Do the Initial Evaluation again.

(c) If the fault is now active for FCC-B, then do these steps:

1) Install a new flight control computer. To install the computer, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.

2) Do the Repair Confirmation below.

(d) If the fault is still active for FCC-A, then do these steps:

1) Examine the FCC connector D10135A pin G3 and socket for damage or a pushed back pin.

2) Repair any damage that you find

(e) If the fault is no longer active, then you had an intermittent fault.

G. Repair Confirmation

(1) Do this test to see if the fault is still active:

(a) If it is necessary, re-connect the connector on the PSEU.

(b) If it is necessary, re-install the FCC. To install the FCC, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.

(c) Simulate an altitude greater than 200 feet. Do this task: Radio Altitude Simulation Test, AMM TASK 34-33-00-700-801.

(d) Return the airplane altitude to it's usual condition.

(e) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

1) If you do not find the maintenance message, then you corrected the fault.

2) If you find the maintenance message, then continue the fault isolation procedure.

——————— END OF TASK ———————

806. Altitude Less Than 200 (Right) Fault - Fault Isolation

A. Description

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(1) This task is for this maintenance message:

(a) 32-62006 ALT R LT 200 FLT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(2) This task is for these maintenance messages:

(a) 32-62006 ALT R LT 200 FLT

(b) 32-62106 ALT R LT 200 FLT

(c) 32-62206 ALT R LT 200 FLT

HAP ALL

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(3) This maintenance message shows one of these conditions:

(a) The right signal on the flight control computer shows the airplane altitude is greater than 200 feet with airplane on the ground.

(b) The right signal on the flight control computer shows the airplane altitude is less than 200 feet with airplane in the air for an extended period.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(4) These maintenance messages show when one of these conditions occur:

(a) Maintenance message 32-62006 will be set if the right signal on the flight control computer shows the airplane altitude is greater than 200 feet with airplane on the ground.

(b) Maintenance message 32-62106 will be set if the right signal on the flight control computer shows the airplane altitude is less than 200 feet with airplane in the air for more than two minutes.

(c) Maintenance message 32-62206 will be set during the LRU replacement test if the right signal on the flight control computer shows the airplane altitude is greater than 200 feet and the left signal on the flight control computer shows the airplane altitude is less than 200 feet.

HAP ALL

B. Possible Causes

(1) Wiring problem

(2) Flight control computer (FCC) B, M1876

(3) Radio Altimeter Transmitter/Receiver, M1735 (1) or M1736 (2)

(4) Proximity switch electronics unit (PSEU), M02061

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN

D. Related Data

(1) (SSM 32-61-21)

(2) (WDM 32-64-21)

E. Initial Evaluation

(1) Do a test to determine if there are FCC faults. Do this task: Digital Flight Control System (DFCS) BITE Procedure, 22-11 TASK 801.

(a) If this fault exists: FCC-B (J1A-G03), then do the Fault Isolation Procedure below.

(b) If there is a radio altimeter output problem or other FCC problem, then do the fault isolation referenced in the BITE procedure.

(c) If there are no FCC faults, then continue.

(2) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If you do not find the maintenance message, then there was an intermittent fault.

(b) If you find the maintenance message, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this test of the PSEU and wiring:

(a) Remove the flight control computer (FCC) B. To remove the computer, do this task: Flight Control Computer Removal, AMM TASK 22-11-33-000-801.

(b) Examine the connectors and sockets for damage and unwanted material.

(c) Show the input status for connector D10984 pin 43 on the PSEU BITE display.

NOTE: If you need instructions on how to show the input status, see this task: (32-09 TASK 821).

(d) If the status of pin 43 is GND, then do this test of the PSEU:

1) Remove the connector D10984 from the PSEU.

2) Examine the connector and socket for damage and unwanted material.

3) Show the input status for connector D10984 pin 43 again.

4) If the status of the pin is GND, then do these steps:

a) Replace the PSEU, M2061. These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

b) Do the Repair Confirmation Below.

5) If the status of the pin is NO GND, then do these steps:

a) Repair the wiring between the PSEU and FCC.

b) Do the Repair Confirmation Below.

(e) If the status of pin 43 is NO GND, then continue.

(f) Ground pin G3 on the FCC connector D10137A with a jumper wire.

(g) If the status of pin 43 is NO GND, then do this test of the PSEU:

1) Remove the connector D10984 from the PSEU.

2) Examine the connector and socket for damage and unwanted material.

3) Ground pin 43 on the PSEU connector D10984 with a jumper wire.

4) Show the input status for connector D10984 pin 43 again.

5) If the status of the pin is NO GND, then do these steps:

a) Replace the PSEU, M2061. These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

b) Do the Repair Confirmation Below.

6) If the status of the pin is GND, then do these steps:

a) Repair the wiring between the PSEU and FCC.

b) Do the Repair Confirmation Below.

(h) If the status of pin 43 is GND, then continue.

(2) Do this test of the FCC:

(a) Do an exchange test of the FCC. Do this task: FCC Exchange Check, 22-11 TASK 820.

(b) Do the Initial Evaluation again.

(c) If the fault is now active for FCC-A, then do these steps:

1) Install a new flight control computer. To install the computer, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.

2) Do the Repair Confirmation below.

(d) If the fault is still active for FCC-B, then do these steps:

1) Examine the FCC connector D10137A pin G3 and socket for damage or a pushed back pin.

2) Repair any damage that you find

(e) If the fault is no longer active, then you had an intermittent fault.

G. Repair Confirmation

(1) Do this test to see if the fault is still active:

(a) If it is necessary, re-connect the connector on the PSEU.

(b) If it is necessary, re-install the FCC. To install the FCC, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.

(c) Simulate an altitude greater than 200 feet. Do this task: Radio Altitude Simulation Test, AMM TASK 34-33-00-700-801.

(d) Return the airplane altitude to its usual condition.

(e) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

1) If you do not find the maintenance message, then you corrected the fault.

2) If you find the maintenance message, then continue the fault isolation procedure.

——————— END OF TASK ———————

809. Landing Gear Lever Position Fault - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 32-62007 LEVER DN FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) 32-62107 LEVER DN FAULT

HAP ALL

(c) 32-62008 LEVER UP FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(d) 32-62108 LEVER UP FAULT

HAP ALL

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(2) These maintenance messages show a fault with the landing gear lever position sensors.

(a) Maintenance message number 32-62007 will be set if the lever down sensor does not agree with the position of the main landing gear. This fault will latch in the PSEU if the lever down sensor shows that the lever is down and gear is up and locked.

(b) Maintenance message number 32-62008 will be set if the lever up sensor does not agree with the position of the main landing gear. This fault will latch in the PSEU if the lever up sensor does not show that the lever is up and gear is up and locked.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(3) These maintenance messages show a fault with the landing gear lever position sensors.

(a) Maintenance message number 32-62007 will be set if the lever down sensor indicate that the lever is neither down nor up and the main landing gear is down and locked.

(b) Maintenance message number 32-62107 will be set and latch in the PSEU if the lever down sensor shows that the lever is down and gear is up and locked.

(c) Maintenance message number 32-62008 will be set if the lever up sensor indicates that the lever is neither down nor up and the main landing gear is down and locked.

(d) Maintenance message number 32-62108 will be set and latch in the PSEU if the lever up sensor shows that the lever is up and the gear is down and locked.

HAP ALL

B. Possible Causes

(1) Landing gear control lever, M1952

(2) Wiring problem

(3) Proximity Switch Electronics Unit (PSEU), M02061

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI

D. Related Data

(1) (SSM 32-30-00)

(2) SSM 32-61-12

(3) (WDM 32-64-11)

E. Initial Evaluation

(1) Do this test with the landing gear control lever switch in the down position:

(a) Put the landing gear control lever in the DOWN position.

(b) Show the input status for these landing gear control lever switch inputs on the PSEU BITE display:

NOTE: If you need instructions on how to show the input status, see this task: (32-09 TASK 821).

1) D10982 pin 1
2) D10982 pin 6

(c) If the status of pin 1 is NO GND, then do the Fault Isolation Procedure below.

(d) If the status of pin 6 is GND, then do the Fault Isolation Procedure below.

(e) If the status of pin 1 is GND and the status of pin 6 is NO GND, then continue.

(2) Do this test with the landing gear control lever switch in the UP position:

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.

(a) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(b) Put the landing gear control lever in the UP position.

(c) Show the input status for these landing gear control lever switch inputs on the PSEU display:

1) D10982 pin 1
2) D10982 pin 6

(d) If the status of pin 1 is GND, then do the Fault Isolation Procedure below.

(e) If the status of pin 6 is NO GND, then do the Fault Isolation Procedure below.

(f) If the status of pin 1 is NO GND and the status of pin 6 is GND, then there was an intermittent fault.

F. Fault Isolation Procedure

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) Make sure the downlock pins are installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, AMM TASK 32-00-01-480-801.

(2) If the initial evaluation failed with the lever in the DOWN position, then do this test:

(a) Disconnect connector D11990 from the landing gear control lever module.

(b) Examine the connector and socket for damage and unwanted material.

(c) Move the Landing Gear Control Lever to the DOWN position.

(d) Use a multimeter, STD-1231 to measure for continuity between pins 1 and 2 on the landing gear control lever module.

1) If continuity is not found, then do these steps.

a) Replace the landing gear control lever. These are the tasks:

- Landing Gear Control Lever Module Removal, AMM TASK 32-31-11-020-801
- Landing Gear Control Lever Module Installation, AMM TASK 32-31-11-400-801

b) Do the Repair Confirmation at the end of this task.

<1> If the repair confirmation is not satisfactory, then continue.

2) If there is continuity, then continue.

(3) If the initial evaluation failed with the lever in the UP position, then do this test:

(a) Remove the connector D11990 from the landing gear control lever module.

(b) Examine the connector and socket for damage and unwanted material.

(c) Move the Landing Gear Control Lever to the UP or OFF position.

(d) Use a multimeter, STD-1231 to measure for continuity between pins 1 and 3 on the landing gear control lever module.

1) If continuity is not found, then do these steps.

a) Replace the landing gear control lever. These are the tasks:

- Landing Gear Control Lever Module Removal, AMM TASK 32-31-11-020-801
- Landing Gear Control Lever Module Installation, AMM TASK 32-31-11-400-801

b) Do the Repair Confirmation at the end of this task.

<1> If the repair confirmation is not satisfactory, then continue.

2) If there is continuity, then continue.

(4) Do this check of the wiring:

(a) Use a multimeter, STD-1231 to measure for continuity between pin 1 on the connector D11990 and structure ground.

(b) If the continuity is not found, then do these steps:

1) Repair the wiring between the connector and structure ground.

2) Re-connect connector D11990 to the landing gear control lever module.

3) Do the Repair Confirmation at the end of this task.

(c) If there is continuity, then continue.

(5) Do this test of the PSEU:

(a) Disconnect connector D10982 from the PSEU.

(b) Examine the connector and socket for damage and unwanted material.

(c) Show the input status for these landing gear control lever switch inputs on the PSEU display:

1) D10982 pin 1

2) D10982 pin 6

(d) If the status of either pin is GND, then do these steps:

1) Replace the PSEU, M2061. These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

2) Do the post installation test in the PSEU installation procedure.

3) If the test operates correctly, then you corrected the fault.

(e) If the status of both pins is NO GND, then continue.

(f) Ground pins 1 and 6 on the PSEU with jumpers connected to structure ground.

(g) Show the input status for these landing gear control lever switch inputs on the PSEU display:

1) D10982 pin 1

2) D10982 pin 6

(h) If the status of either pin is NO GND, then do these steps:

1) Replace the PSEU, M2061. These are the tasks:
   - Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
   - Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801
2) Do the post installation test in the PSEU installation procedure.
3) If the test operates correctly, then you corrected the fault.

(i) If the status of both pins is GND, then continue.

(6) Repair the wiring between the PSEU and landing gear control lever module.
   (a) Re-connect the connectors on the PSEU and landing gear control lever module.
   (b) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

(1) Do this test of the PSEU:
   (a) Put the landing gear control lever in the UP position.
   (b) Put the landing gear control lever in the DOWN position.
   (c) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.
      1) If you do not find the maintenance message, then you corrected the fault.

———————— END OF TASK ————————

810. Landing Gear Position Light Fault (System 1) - Fault Isolation

A. Description

(1) This task is for these maintenance messages:
   (a) 32-66001 L GRN LT 1 FAULT
   (b) 32-66002 NOSE GRN LT 1 FLT
   (c) 32-66003 R GRN LT 1 FLT
   (d) 32-66004 L RED LT 1 FLT
   (e) 32-66005 NOSE RED LT 1 FLT
   (f) 32-66006 R RED LT 1 FLT

(2) These maintenance messages show a fault with the landing gear indicator lights on the landing gear module. Each light has a corresponding fault message.

B. Possible Causes

(1) Landing gear module, P2-3

(2) Wiring problem

(3) Proximity switch electronics unit (PSEU), M02061

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
E	12	C00314	INDICATOR MASTER DIM SECT 2
F	11	C00317	INDICATOR MASTER DIM SECT 5

D. Related Data

(1) (SSM 32-64-11)

(2) (SSM 33-18-24)

(3) (WDM 32-64-11)

(4) (WDM 33-18-24)

E. Initial Evaluation

(1) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If you do not find the maintenance message, then there was an intermittent fault.

(b) If you find the maintenance message, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the switch light:

(a) For maintenance message 32-66001, push the left gear green light on the landing gear module.

(b) For maintenance message 32-66002, push the nose gear green light on the landing gear module.

(c) For maintenance message 32-66003, push the right gear green light on the landing gear module.

(d) For maintenance message 32-66004, push the left gear red light on the landing gear module.

(e) For maintenance message 32-66005, push the nose gear red light on the landing gear module.

(f) For maintenance message 32-66006, push the right gear red light on the landing gear module.

(2) If the light does not come on, then do these steps:

(a) Replace the indicator light.

(b) Push the indicator again.

(c) If the light comes on, then you corrected the fault.

(d) If the light does not come on, then do these steps:

1) Remove the connector D11732 from the landing gear module. Do the applicable steps in (AMM TASK 32-31-11-020-801) to remove the connector.

2) For maintenance messages 32-66001, 32-66002, and 32-66003, measure the voltage between pin 21 on the connector and ground.

3) For maintenance messages 32-66004, 32-66005, and 32-66006, measure the voltage between pin 26 on the connector and ground.

4) If you measure 16 or 28 VDC at the pin then do these steps:

a) Replace the landing gear module. These are the tasks:

- Landing Gear Control Lever Module Removal, AMM TASK 32-31-11-020-801
- Landing Gear Control Lever Module Installation, AMM TASK 32-31-11-400-801

b) Push the master dim and test switch.

c) If the light comes on, then you corrected the fault.

5) If you do not measure 16 or 28 VDC at the pin, then do a wiring check between these pins on connector D11732 and the applicable circuit breaker:

Table 209

MAINTENANCE MESSAGE	CIRCUIT BREAKER		P2-3 CONNECTOR
32-66001	C317		
32-66002	P6-3 F11		D11732
32-66003	term 1	–	pin 21
32-66004	C314		
32-66005	P6-3 E12		D11732
32-66006	term 1	–	pin 26

6) If you find a problem with the wiring, then do these steps:
   a) Repair the wiring.
   b) Re-connect the connector on the landing gear module.
   c) Push the master dim and test switch.
   d) If the light comes on, then you corrected the fault.

(3) If the light comes on, then do these steps:
   (a) Remove the connector D10982 from the PSEU.
   (b) Measure the voltage between structure ground and the applicable pin:

Table 210

MAINTENANCE MESSAGE	PSEU D10982
32-66001	pin 34
32-66002	pin 36
32-66003	pin 26
32-66004	pin 59
32-66005	pin 8
32-66006	pin 25

   (c) If you measure 16 or 28 VDC at the pin, then do these steps:
      1) Replace the PSEU, M2061. These are the tasks:
         - Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
         - Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801
      2) Do the post installation test in the PSEU installation procedure.
      3) If the test operates correctly, then you corrected the fault.
   (d) If you do not measure 16 or 28 VDC at the pin, then continue.

(4) Do this wiring test between the PSEU and landing gear module:

(a) Remove the connector D11732 from the landing gear module. Do the applicable steps in (AMM TASK 32-31-11-020-801) to remove the connector.

(b) Do a check of the wiring between these pins:

Table 211

MAINTENANCE MESSAGE	PSEU CONNECTOR D10982		P2-3 CONNECTOR D11732
32-66001	pin 34	–	pin 23
32-66002	pin 36	–	pin 9
32-66003	pin 26	–	pin 22
32-66004	pin 59	–	pin 19
32-66005	pin 8	–	pin 30
32-66006	pin 25	–	pin 31

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-connect the connector on the landing gear module.
3) Re-connect the connector on the PSEU.
4) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.
5) If you do not find the maintenance message, then you corrected the fault.

——————— END OF TASK ———————

811. Landing Gear Position Green Light Fault (System 2) - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 32-66011 L GRN LT 2 FAULT

(b) 32-66012 NOSE GRN LT 2 FLT

(c) 32-66013 R GRN LT 2 FLT

(2) These maintenance messages show a fault with the landing gear position lights on the P5 overhead panel. Each light has a corresponding maintenance message.

B. Possible Causes

(1) Landing gear module, P2-3

(2) Wiring problem

(3) Proximity switch electronics unit (PSEU), M02061

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
F	13	C01179	INDICATOR MASTER DIM SECT 7

D. Related Data

(1) (SSM 32-64-12)

(2) (SSM 33-18-42)

(3) (WDM 32-64-12)

(4) (WDM 33-18-42)

E. Initial Evaluation

(1) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If you do not find the maintenance message, then there was an intermittent fault.

(b) If you find the maintenance message, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the switch light:

(a) For maintenance message 32-66011, push the left gear green light on the P5 overhead panel.

(b) For maintenance message 32-66012, push the nose gear green light on the P5 overhead panel.

(c) For maintenance message 32-66013, push the right gear green light on the P5 overhead panel.

(2) If the light does not come on, then do these steps:

(a) Replace the indicator light.

(b) Push the indicator again.

(c) If the light comes on, then you corrected the fault.

(d) If the light does not come on, then do these steps:

1) Measure the voltage between pin 1 on the light switch socket.

2) If you measure 16 or 28 VDC at the pin, then do these steps:

a) Replace the switch light.

b) Push the switch light.

c) If the light comes on, then you corrected the fault.

3) If you do not measure 16 or 28 VDC at the pin, then do a wiring check between these pins:

Table 212

MAINTENANCE MESSAGE	CIRCUIT BREAKER		SWITCH LIGHT
	C1179		
	P6-3 F13		L482
32-66011	term 1	–	pin 1
	C1179		
	P6-3 F13		L1001
32-66012	term 1	–	pin 1

(Continued)

MAINTENANCE MESSAGE	CIRCUIT BREAKER		SWITCH LIGHT
	C1179		
	P6-3 F13		L481
32-66013	term 1	–	pin 1

4) If you find a problem with the wiring, then do these steps:
   a) Repair the wiring.
   b) Push the switch light.
   c) If the light comes on, then you corrected the fault.

(3) If the light comes on, then do these steps:
   (a) Remove the connector D10984 from the PSEU.
   (b) Measure the voltage between structure ground and the applicable pin:

Table 213

MAINTENANCE MESSAGE	PSEU D10984
32-66011	pin 32
32-66012	pin 7
32-66013	pin 26

   (c) If you measure 16 or 28 VDC at the pin, then do these steps:
      1) Replace the PSEU, M2061. These are the tasks:
         - Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
         - Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801
      2) Do the post installation test in the PSEU installation procedure.
      3) If the test operates correctly, then you corrected the fault.
   (d) If you do not measure 16 or 28 VDC at the pin, then continue.

(4) Do this wiring test between the PSEU and switch light:
   (a) Do a check of the wiring between these pins:

Table 214

MAINTENANCE MESSAGE	PSEU CONNECTOR D10982		SWITCH LIGHT
			L482
32-66011	pin 32	–	pin 2
			L1001
32-66012	pin 7	–	pin 2
			L481
32-66013	pin 26	–	pin 2

(b) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the connector on the PSEU.

3) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

4) If you do not find the maintenance message, then you corrected the fault.

——————— END OF TASK ———————

812. Landing Gear Position Red Light Fault (System 2) - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 32-66014 L RED LT 2 FLT

(b) 32-66015 NOSE RED LT 2 FLT

(c) 32-66016 R RED LT 2 FLT

(2) These maintenance messages show a fault with the landing gear position fault lights on the P5 overhead panel. Each light has a corresponding maintenance message.

B. Possible Causes

(1) Landing gear module, P2-3

(2) Wiring problem

(3) Proximity switch electronics unit (PSEU), M02061

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
F	11	C00317	INDICATOR MASTER DIM SECT 5

D. Related Data

(1) (SSM 32-64-12)

(2) (SSM 33-18-42)

(3) (WDM 32-64-12)

(4) (WDM 33-18-42)

E. Initial Evaluation

(1) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If you do not find the maintenance message, then there was an intermittent fault.

(b) If you find the maintenance message, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this test of the light switch:

(a) For maintenance message 32-66014, push the left gear red light on the landing gear module.

(b) For maintenance message 32-66015, push the nose gear red light on the landing gear module.

(c) For maintenance message 32-66016, push the right gear red light on the landing gear module.

(2) If the light does not come on, then do these steps:

(a) Replace the indicator light.

(b) Push the indicator again.

(c) If the light comes on, then you corrected the fault.

(d) If the light does not come on, then do these steps:

1) Remove the connector D11732 from the landing gear module. Do the applicable steps in (AMM TASK 32-31-11-020-801) to remove the connector.

2) Measure the voltage between pin 26 on the connector and ground.

3) If you measure 16 or 28 VDC at the pin, then do these steps:

a) Replace the landing gear module. These are the tasks:

- Landing Gear Control Lever Module Removal, AMM TASK 32-31-11-020-801
- Landing Gear Control Lever Module Installation, AMM TASK 32-31-11-400-801

b) Push the master dim and test switch.

c) If the light comes on, then you corrected the fault.

4) If you do not measure 16 or 28 VDC at the pin, then do a wiring check between these pins:

Table 215

MAINTENANCE MESSAGE	CIRCUIT BREAKER		P2-3 CONNECTOR
32-66014	C314		
32-66015	P6-3 E12		D11732
32-66016	term 1	–	pin 26

5) If you find a problem with the wiring, then do these steps:

a) Repair the wiring.

b) Re-connect the connector on the landing gear module.

c) Push the master dim and test switch.

d) If the light comes on, then you corrected the fault.

(3) If the light comes on, then do these steps:

(a) Remove the connector D10984 from the PSEU.

(b) Measure the voltage between structure ground and the applicable pin:

Table 216

MAINTENANCE MESSAGE	PSEU D10984
32-66014	pin 16
32-66015	pin 8
32-66016	pin 25

(c) If you measure 16 or 28 VDC at the pin, then do these steps:

1) Replace the PSEU, M2061. These are the tasks:
   - Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
   - Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801
2) Do the post installation test in the PSEU installation procedure.
3) If the test operates correctly, then you corrected the fault.

(d) If you do not measure 16 or 28 VDC at the pin, then continue.

(4) Do this wiring test between the PSEU and landing gear module:

(a) Remove the connector D11732 from the landing gear module. Do the applicable steps in AMM TASK 32-31-11-020-801 to remove the connector.

(b) Do a check of the wiring between these pins:

Table 217

MAINTENANCE MESSAGE	PSEU CONNECTOR D10984		P2-3 CONNECTOR D11732
32-66014	pin 16	–	pin 4
32-66015	pin 8	–	pin 13
32-66016	pin 25	–	pin 25

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-connect the connector on the landing gear module.
3) Re-connect the connector on the PSEU.
4) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.
5) If you do not find the maintenance message, then you corrected the fault.

———————— END OF TASK ————————

813. Nose Steering Relay Fault - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) 32-06016 NGS RLY FLT

(2) This maintenance message shows a fault with an air/ground relay output.

B. Possible Causes

(1) Wiring problem

(2) System 2 air/ground relay, R596

(3) Proximity switch electronics unit (PSEU), M02061

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	15	C01355	LANDING GEAR AIR/GND SYS 2

D. Related Data

(1) (SSM 32-31-12)

(2) (WDM 32-31-12)

E. Initial Evaluation

(1) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If you do not find the maintenance message, then there was an intermittent fault.

(b) If you find the maintenance message, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do these steps to replace the system 2 air/ground relay:

(a) Replace the relay.

(b) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(c) If you do not find the maintenance message, then you corrected the fault.

(d) If you find the maintenance message, then continue.

(2) Do this check for power to the relay:

(a) Remove the relay R596 from the J20 panel.

(b) Examine the connectors and sockets for damage and unwanted material.

(c) Measure the voltage between pin X1 on the relay socket and structure ground.

(d) If you do not measure 28 VDC at the pin, then do these steps:

1) Do a wiring check between these pins of the circuit breaker C314 and connector D11026 for the relay R596:

C314 P6-3 E12		**D11026**
term 1	- - - - - - - - - - - - - - - - -	pin X1

2) If you find a problem with the wiring, then do these steps:

a) Repair the wiring.

b) Re-install the relay.

c) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

d) If you do not find the maintenance message, then you corrected the fault.

(e) If you measure 28 VDC at the pin, then continue.

(3) Do this wiring check between the relay and PSEU:

(a) Remove the connector D11140 from the PSEU.

(b) Do a check for continuity between these pins of the connector D11026 for the relay R596 and connector D11140 for the PSEU:

D11026		D11140
pin X2	- - - - - - - - - - - - - - - - - -	pin 24

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the connector on the PSEU.

3) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

4) If you do not find the maintenance message, then you corrected the fault.

(d) If you do not find a problem with the wiring, then continue.

(4) Do these steps to replace the PSEU:

(a) Replace the PSEU, M2061. These are the tasks:
- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

(b) Do the post installation test in the PSEU installation procedure.

(c) If the test operates correctly, then you corrected the fault.

———————— END OF TASK ————————

815. Flap Landing Warning Switch Fault - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 32-62009 LDG FLAP A FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) 32-62109 LDG FLAP A FAULT

HAP ALL

(c) 32-62010 LDG FLAP B FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(d) 32-62110 LDG FLAP B FAULT

HAP ALL

(e) 32-62014 LDG FLAP DISAGREE

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(2) These maintenance messages show a disagreement between the flap landing warning switch and air/ground mode. One of these conditions exist:

(a) The flap landing warning switch indicates that a flap is not in a landing configuration when the airplane is landing.

(b) The flap landing warning switch indicates that a flap is in a landing configuration when the airplane is in the air and not landing.

(c) These inputs to the PSEU: LANDING FLAPS A and LANDING FLAPS B do not agree.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(3) These maintenance messages show a disagreement between the flap landing warning switch and air/ground mode. One of these conditions exist:

(a) For maintenance message 32-62009 the flap landing warning switch indicates that landing flaps A is not in a landing configuration when the airplane is landing.

(b) For maintenance message 32-62109 the flap landing warning switch indicates that landing flaps A is in a landing configuration when the airplane is in the air for more than two minutes and is not landing.

(c) For maintenance message 32-62010 the flap landing warning switch indicates that landing flaps B is not in a landing configuration when the airplane is landing.

(d) For maintenance message 32-62110 the flap landing warning switch indicates that landing flaps B is in a landing configuration when the airplane is in the air for more than two minutes and is not landing.

(e) For maintenance message 32-62014 these inputs to the PSEU: LANDING FLAPS A and LANDING FLAPS B do not agree.

HAP ALL

B. Possible Causes

(1) Flap landing warning switch, S138

(2) Wiring problem

(3) Proximity switch electronics unit (PSEU), M02061

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

(1) (SSM 32-61-21)

(2) (WDM 32-64-21)

E. Initial Evaluation

(1) Do this test of the flap position switch in the UP position:

(a) Put the flaps in the FLAP UP position. Do this task: Leading Edge Flaps and Slats Retraction, AMM TASK 27-81-00-860-804.

(b) Show the input status for these flap position inputs on the PSEU display:

NOTE: If you need instructions on how to show the input status, review task: (32-09 TASK 821).

1) D10984 pin 48
2) D10984 pin 49

(c) If the status of either pin is GND, then do the Fault Isolation Procedure - Flaps Up below.

(d) If the status of both pins is NO GND, then continue.

(2) Do this test of the flap position switch in the DOWN position:

(a) Put the flaps in the fully down FLAP DOWN position. To do this, do this task: Leading Edge Flaps and Slats Extension, AMM TASK 27-81-00-860-803.

(b) Show the input status for these flap position inputs on the PSEU display:

1) D10984 pin 48
2) D10984 pin 49

(c) If the status of either pin is NO GND, then do the Fault Isolation Procedure - Flaps Down below.

(d) If the status of both pins is GND, then you had an intermittent fault.

NOTE: The switch S138 is adjusted to actuate (provide ground) at between 10 and 15 units Flaps Down.

1) Return the flaps to their usual condition.

F. Fault Isolation Procedure - Flaps Up (Switch S138 is in Open Position)

(1) Do this test of the flap landing warning switch:

(a) Disconnect the D46040P connector.

(b) Examine the connector and pins for damage.

(c) Show the input status for these flap position inputs on the PSEU display:

NOTE: If you need instructions on how to show the input status, review task: (Proximity Switch Electronics Unit (PSEU) Input Monitoring Procedure, 32-09 TASK 821).

1) D10984 pin 48
2) D10984 pin 49

(d) If status of both pins are NO GND, replace S138 Flap Landing Gear Switch.

(e) If PSEU returns GND for either input, then continue.

(2) Do this test of the PSEU:

(a) Disconnect connector D10984 from the PSEU.

(b) Examine the connector and pins for damage.

(c) Show the input status for the flap position inputs on the PSEU display:

1) D10984 pin 48
2) D10984 pin 49

(d) If the status of either pin is GND, then do these steps:

1) Replace the PSEU, M2061. These are the tasks:
- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

2) Re-connect the connector to the flap landing warning switch.
3) Do the post installation test in the PSEU installation procedure.
4) If the test operates correctly, then you corrected the fault.

G. Fault Isolation Procedure - Flaps Down (Switch S138 is in Closed Position)

(1) Do this test of the flap landing warning switch:

(a) Disconnect the D46040P connector from the switch.

(b) Examine the connector and pins for damage.

(c) Attach D46040P connector pins 8 and 10 to structure ground.

(d) Show the input status for these flap position inputs on the PSEU display:

NOTE: If you need instructions on how to show the input status, see this task: (Proximity Switch Electronics Unit (PSEU) Input Monitoring Procedure, 32-09 TASK 821).

1) D10984 pin 48

2) D10984 pin 49

(e) If the PSEU returns GND, then do these steps:

1) Replace the flap landing warning switch. These are the tasks:
- Flap Landing Warning Switch Removal, AMM TASK 31-51-01-000-801
- Flap Landing Warning Switch Installation, AMM TASK 31-51-01-400-801

2) Do the Repair Confirmation at the end of this task.

(f) If the PSEU returns NO GND for either input, then continue.

(2) Do this test of the PSEU:

(a) Disconnect connector D10984 from the PSEU.

(b) Examine the connector and pins for damage.

(c) Ground D10984 pins 48 and 49 on the PSEU with jumpers attached to structure ground.

(d) Show the input status for the flap position inputs on the PSEU display:

1) D10984 pin 48

2) D10984 pin 49

(e) If the status of either pin is NO GND, then do these steps:

1) Replace the PSEU, M2061. These are the tasks:
- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

2) Re-connect the connector to the flap landing warning switch.

3) Do the post installation test in the PSEU installation procedure.

4) If the test operates correctly, then you corrected the fault.

(f) If the status of both pins is NO GND, then do these steps:

1) Repair the wiring between the PSEU and flap landing warning switch.

2) Re-connect connector D10984 to the PSEU.

3) Re-connect the connector to the flap landing warning switch.

4) Do the Repair Confirmation at the end of this task.

H. Repair Confirmation

(1) Do this test of the flap position switch:

(a) Put the flaps in the fully down FLAP DOWN position. Do this task: Leading Edge Flaps and Slats Extension, AMM TASK 27-81-00-860-803.

(b) Put the flaps in the FLAP UP position. Do this task: Leading Edge Flaps and Slats Retraction, AMM TASK 27-81-00-860-804.

(c) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

1) If you do not find the maintenance message, then you corrected the fault.

——————— END OF TASK ———————

816. Landing Warning Fault - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 32-66018 LDG WARN FAULT

(2) This maintenance message shows a problem with the aural warning module.

B. Possible Causes

(1) Aural warning module, M315

(2) Wiring problem

(3) Proximity switch electronics unit (PSEU), M02061

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

(1) (SSM 32-61-21)

(2) (WDM 32-64-21)

E. Initial Evaluation

(1) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If you do not find the maintenance message, then there was an intermittent fault.

(b) If you find the maintenance message, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check for power to the aural warning module:

(a) Remove the connector D940 from the aural warning module.

(b) Measure the voltage at pin 5 of the connector.

(c) If you do not measure 28 VDC at the pin, then do these steps:

1) Do a check for continuity between these pins of the circuit breaker C451 and connector D940 of the aural warning module:

C451 P6 D18		**D940**
term 1	- - - - - - - - - - - - - - - - -	pin 5

2) If you find a problem with the wiring, then do these steps:

a) Repair the wiring.

b) Re-connect the connector on the aural warning module.

c) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

d) If you do not find the maintenance message, then you corrected the fault.

(d) If you measure 28 VDC at the pin, then continue.

(2) Replace the aural warning module, M315.

(a) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(b) If you do not find the maintenance message, then you corrected the fault.

(c) If you find the maintenance message, then continue.

(3) Do this wiring check for the aural warning module:

(a) Remove the connector D940 from the aural warning module.

(b) Remove the connector D10984 from the PSEU.

(c) Do a check for continuity between these pins of connector D940 and D10984:

D940		D10984
pin 2	- - - - - - - - - - - - - - - - - - -	pin 53

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the connector on the PSEU.

3) Re-connect the connector on the aural warning module.

4) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

5) If you do not find the maintenance message, then you corrected the fault.

(e) If you do not find a problem with the wiring, then continue.

(4) Do these steps to replace the PSEU:

(a) Replace the PSEU, M2061. These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

(b) Do the post installation test in the PSEU installation procedure.

(c) If the test operates correctly, then you corrected the fault.

———————— END OF TASK ————————

818. PSEU Dispatch Fault - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 32-66007 DISPATCH 1 FAULT

(b) 32-66010 NO DISP 1 FAULT

(c) 32-66017 DISPATCH 2 FAULT

(d) 32-66020 NO DISP 2 FAULT

(2) These maintenance messages show a problem with the flight recorder and mach airspeed warning module.

(a) For maintenance message 32-66007, the PSEU does not sense the expected load on the DISPATCH FAULT A output.

(b) For maintenance message 32-66010, the PSEU does not sense the expected load on the NO DISPATCH FAULT A output.

(c) For maintenance message 32-66017, the PSEU does not sense the expected load on the DISPATCH FAULT B output.

(d) For maintenance message 32-66020, the PSEU does not sense the expected load on the NO DISPATCH FAULT B output.

B. Possible Causes

(1) Flight recorder and mach airspeed warning module, P5-19

(2) Wiring problem

(3) Resistor, TB502YR744

(4) Auxiliary dim and test module, M1456

(5) Proximity switch electronics unit (PSEU), M02061

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
E	14	C00316	INDICATOR MASTER DIM SECT 4
F	14	C01180	INDICATOR MASTER DIM SECT 8

D. Related Data

(1) (SSM 32-61-21)

(2) (SSM 31-52-75)

(3) (SSM 33-18-42)

(4) (WDM 32-64-21)

(5) (WDM 31-52-75)

(6) (WDM 33-18-42)

E. Initial Evaluation

(1) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If you do not find the maintenance message, then there was an intermittent fault.

(b) If you find the maintenance message, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Replace the flight recorder and mach airspeed warning module (P5-19).

(a) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(b) If you do not find the maintenance message, then you corrected the fault.

(c) If you find the maintenance message, then continue.

(2) Do this wiring check between the P5-19 module and the PSEU:

(a) Remove the connector D483 from the P5-19 module.

(b) For maintenance message 32-66007, remove the connector D11138 from the PSEU.

(c) For maintenance message 32-66010, remove the connector D10982 from the PSEU.

(d) For maintenance message 32-66017, remove the connector D10988 from the PSEU.

(e) For maintenance message 32-66020, remove the connector D11140 from the PSEU.

(f) Examine the connector and socket for damage and unwanted material.

(g) Do a check for continuity between these pins:

Table 218

FAULT	P5-19 MODULE D483		PSEU
			D11138
32-66007	pin 39	–	pin 23
			D10982
32-66010	pin 35	–	pin 14
			D10988
32-66017	pin 39	–	pin 8
			D11140
32-66020	pin 35	–	pin 19

(h) For maintenance messages 32-66010 and 32-66020, do a check for continuity between these pins on the PSEU and PSEU fault light:

Table 219

FAULT	PSEU FAULT LIGHT		PSEU
			D10982
32-66010	pin 2	–	pin 14
			D11140
32-66020	pin 2	–	pin 19

(i) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the connectors on the PSEU.

3) Re-connect the connector on the P5-19 module.

4) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

5) If you do not find the maintenance message, then you corrected the fault.

(j) If you do not find a problem with the wiring, then continue.

(k) Reconnect the connectors on the PSEU.

(l) Reconnect the connector on the P5-19 module.

(3) For maintenance messages 32-66007 or 32-66017 do this check of the resistor TB502YR744 and associated wiring:

(a) Measure the resistance between the two terminals on the resistor module.

(b) If the resistance is not between 40 and 60 K-ohms, then do these steps:

1) Replace the resistor.

2) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

3) If you do not find the maintenance message, then you corrected the fault.

(c) If the resistance is between 40 and 60 K-ohms, then continue.

(d) Remove the connector D483 from the P5-19 module.

(e) Do a check for continuity between these pins:

Table 220

RESISTOR MODULE		P5 MODULE
		P5-19 D483
pin A29	–	pin 39
		L1331
pin B29	–	pin 1

(f) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the connector on the P5-19 module.

3) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

4) If you do not find the maintenance message, then you corrected the fault.

(g) If you do not find a problem with the wiring, then continue.

(h) Re-connect the connector on the P5-19 module.

(4) Replace the auxiliary dim and test module, M1456.

(a) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(b) If you do not find the maintenance message, then you corrected the fault.

(c) If you find the maintenance message, then continue.

(5) Do these steps to replace the PSEU:

(a) Replace the PSEU, M2061. These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

(b) Do the post installation test in the PSEU installation procedure.

(c) If the test operates correctly, then you corrected the fault.

END OF TASK

822. Landing Warning Inhibit Fault - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) 32-62011 LDG WARN INHB FLT

(2) This maintenance message shows a problem with the horn reset switch.

B. Possible Causes

(1) Horn reset switch, S77

(2) Wiring problem

(3) Proximity switch electronics unit (PSEU), M02061

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

(1) (SSM 32-61-21)

(2) (WDM 32-64-21)

E. Initial Evaluation

(1) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If you do not find the maintenance message, then there was an intermittent fault.

NOTE: This fault can be caused if the horn reset switch is pushed for greater than 5 seconds. The fault will reset 5 seconds after the switch is released but the PSEU light will remain lit until the PSEU light is reset.

(b) If you find the maintenance message, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do these steps to replace the horn reset switch:

(a) Replace the horn reset switch, S77.

(b) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(c) If you do not find the maintenance message, then you corrected the fault.

(d) If you find the maintenance message, then continue.

(2) Do this wiring check for the horn reset switch:

(a) Remove the horn reset switch.

(b) Remove the connector D10984 from the PSEU.

(c) Do a check for continuity between these pins:

HORN RESET SWITCH		PSEU D10984
pin 3	- - - - - - - - - - - - - - - - - -	pin 52
pin 4	- - - - - - - - - - - - - - - - - -	ground

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the connector on the PSEU.

3) Re-install the horn reset switch.

4) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

5) If you do not find the maintenance message, then you corrected the fault.

(e) If you do not find a problem with the wiring, then continue.

(f) Re-install the horn reset switch.

(3) Do these steps to replace the PSEU:

(a) Replace the PSEU, M2061. These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

(b) Do the post installation test in the PSEU installation procedure.

(c) If the test operates correctly, then you corrected the fault.

———————— END OF TASK ————————

823. Altitude Less Than 800 Feet Fault - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 27-62003 ALT L LT 800 FLT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) 27-62103 ALT L LT 800 FLT

(c) 27-62203 ALT L LT 800 FLT

HAP ALL

(d) 27-62004 ALT R LT 800 FLT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(e) 27-62104 ALT R LT 800 FLT

(f) 27-62204 ALT R LT 800 FLT

HAP ALL

(g) 27-65001 ALT L LT 800

(h) 27-65002 ALT R LT 800

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(2) These maintenance messages show a disagreement between the altitude and air/ground mode.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(3) These maintenance messages show a disagreement between the altitude and air/ground mode.

(a) Maintenance message 27-62003 will be set when the left signal on the flight control computer shows the airplane altitude is greater than 800 feet and the airplane is landing.

(b) Maintenance message 27-62103 will be set when the airplane has landed and the left signal on the flight control computer did not indicate altitude is greater than 800 ft while the airplane was in the air and it has been at least 2 minutes between takeoff and landing.

(c) Maintenance message 27-62203 will be set LRU replacement when the left signal on the flight control computer shows the airplane altitude is greater than 800 feet and the right signal on the flight control computer shows the airplane altitude is less than 800 feet.

(d) Maintenance message 27-62004 will be set when the right signal on the flight control computer shows the airplane altitude is greater than 800 feet and the airplane is landing.

(e) Maintenance message 27-62104 will be set when the airplane has landed and the right signal on the flight control computer did not indicate altitude is greater than 800 ft while the airplane was in the air and it has been at least 2 minutes between takeoff and landing.

(f) Maintenance message 27-62204 will be set LRU replacement when the right signal on the flight control computer shows the airplane altitude is greater than 800 feet and the left signal on the flight control computer shows the airplane altitude is less than 800 feet.

(g) Maintenance message 27-65001 will set when the left signal from the flight control computer to the PSEU has either failed open or closed during the current flight leg or during speedbrake test.

(h) Maintenance message 27-65002 will set when the right signal from the flight control computer to the PSEU has either failed open or closed during the current flight leg or during speedbrake test.

HAP ALL

B. Possible Causes

(1) Wiring problem

(2) FCC, M1875 (A) or M1876 (B)

(3) Radio Altimeter Transmitter/Receiver, M1735 (1) or M1736 (2)

(4) Proximity switch electronics unit (PSEU), M02061

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	2	C01400	PSEU ALTN

D. Related Data

(1) (SSM 27-62-21)

(2) (WDM 27-62-21)

E. Initial Evaluation

(1) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If you do not find the maintenance message, then there was an intermittent fault.

(b) If you find the maintenance message, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this test of the FCC:

(a) Do the EXISTING FAULTS test on the FCC BITE. Do this task: Digital Flight Control System (DFCS) BITE Procedure, 22-11 TASK 801.

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

NOTE: For maintenance message 27-62003 or 27-65001, do the test on the FCC A. For maintenance message 27-62004 or 27-65002, do the test on the FCC B.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

NOTE: For maintenance message 27-62003, 27-62103, 27-62203 or 27-65001, do the test on the FCC A. For maintenance message 27-62004, 27-62104, 27-62204 or 27-65002, do the test on the FCC B.

HAP ALL

(b) If you find maintenance messages, then do these steps:

1) Do the FIM procedures referenced by the messages.

2) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

3) If you do not find the maintenance message, then you corrected the fault.

(c) If you do not find maintenance messages, then continue.

(2) Do this wiring check between the PSEU and FCC:

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(a) For maintenance message 27-62003 or 27-65001, remove the FCC A.

(b) For maintenance message 27-62004 or 27-65002, remove the FCC B.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(c) For maintenance message 27-62003, 27-62103, 27-62203 or 27-65001, remove the FCC A.

(d) For maintenance message 27-62004, 27-62104, 27-62204 or 27-65002, remove the FCC B.

HAP ALL

(e) To remove the FCC, do this task: Flight Control Computer Removal, AMM TASK 22-11-33-000-801.

(f) Remove the connector D10986 from the PSEU.

(g) Examine the connectors and sockets for damage and unwanted material.

(h) If you removed the FCC A, do a check for continuity between these pins:

FCC A		**PSEU**
D10135A		**D10986**
pin C1	- - - - - - - - - - - - - - - - - -	pin 4

(i) If you removed the FCC B, do a check for continuity between these pins:

FCC B		PSEU
D10137A		D10986
pin C1	- - - - - - - - - - - - - - - - - -	pin 12

(j) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-connect the connector on the PSEU.
3) Re-install the FCC. To install the FCC, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.
4) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.
5) If you do not find the maintenance message, then you corrected the fault.

(k) If you did not find a problem with the wiring, then continue.

(l) Re-install the FCC. To install the FCC, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.

(3) Do these steps to replace the PSEU:

(a) Replace the PSEU, M2061. These are the tasks:
- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

(b) Do the post installation test in the PSEU installation procedure.

(c) If the test operates correctly, then you corrected the fault.

END OF TASK

824. Ground Spoiler Pressure Fault - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) 31-52008 GS PRESS A FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(b) 31-52108 GS PRESS A FAULT

(c) 31-52208 GS PRESS A FAULT

HAP ALL

(d) 31-52009 GS PRESS B FAULT

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(e) 31-52109 GS PRESS B FAULT

(f) 31-52209 GS PRESS B FAULT

HAP ALL

(g) 31-53001 GS PRESS A GT 750

(h) 31-53002 GS PRESS B GT 750

(i) 31-55001 GS PRESS A

(j) 31-55002 GS PRESS B

HAP 001-013, 015-026, 028-036 PRE SBC 285A1600-32-04; AIRPLANES WITHOUT PSEU -5

(2) These maintenance messages show a problem with the ground spoiler pressurization.

(a) Maintenance messages 31-52008 and 31-52009 show that either the ground spoiler is pressurized in the air, or not pressurized when commanded during landing.

(b) Maintenance messages 31-53001 and 31-53002 are not faults. These are the cause of the last takeoff warning.

(c) Maintenance messages 31-55001 and 31-55002 show the input from the pressure switch did not change state since the last takeoff.

HAP 037-054, 101-999; HAP 001-013, 015-026, 028-036 POST SBC 285A1600-32-04; AIRPLANES WITH PSEU -5

(3) These maintenance messages show a problem with the ground spoiler pressurization.

(a) Maintenance messages 31-52008 and 31-52009 show that the ground spoiler is pressurized in the air., or not pressurized when commanded during landing.

(b) Maintenance messages 31-52108 and 31-52109 show that the ground spoiler is not pressurized when commanded during landing.

(c) Maintenance messages 31-52208 and 31-52209 show that ground spoiler pressure A and B dissagree during LRU replacement test.

(d) Maintenance messages 31-53001 and 31-53002 are not faults. These are the cause of the last takeoff warning.

(e) Maintenance messages 31-55001 and 31-55002 show the input from the pressure switch did not change state since the last takeoff.

HAP ALL

B. Possible Causes

(1) Fractured Ground Spoiler Interlock Valve Cable

(2) Ground spoiler up pressure switch, S1049

(3) Wiring problem

(4) Proximity switch electronics unit (PSEU), M02061

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Related Data

(1) BITE Diagram (Figure 301)

(2) (SSM 27-62-21)

(3) (SSM 31-53-11)

(4) (WDM 27-62-21)

(5) (WDM 31-53-11)

E. Initial Evaluation

(1) Do this test of the ground spoiler up pressure switch:

(a) Do this test with the ground spoilers in the down position:

1) Show the input status for these pressure switch outputs on the PSEU display:

NOTE: If you need instructions on how to show the input status, see this task: (32-09 TASK 821).

a) D10986 pin 14

b) D10986 pin 29

2) Make sure that the status of pin 14 is NO GND.

3) Make sure that the status of pin 29 is GND.

4) If the status of the pins are not correct, then do the Fault Isolation Procedure below.

5) If the status of the pins are correct, then continue.

(b) Do this test with the ground spoilers in the up position:

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.

1) Do this task: Speed Brake Hydraulic Systems A and B Pressurization, AMM TASK 27-62-00-800-801.

2) Make sure the airplane is on its landing gear or compress the right main gear strut a minimum of 5 inches.

NOTE: This will open the ground spoiler interlock valve.

3) Slowly move the speed brake lever to the UP position.

4) Make sure the ground spoilers extend.

5) Show the input status for these pressure switch outputs on the PSEU display:

a) D10986 pin 14

b) D10986 pin 29

6) Make sure pin 14 is GND.

7) Make sure pin 29 is NO GND.

8) Do this task: Remove Pressure from the Speed Brake Hydraulic Systems A and B, AMM TASK 27-62-00-800-802.

9) If the status of the pins are correct, then there was an intermittent fault.

10) If the status of the pins are not correct, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) If you find a problem with the Ground Spoiler Interock Valve Cable, then do these steps:

(a) Replace the Ground Spoiler Interock Valve Cable, these are the tasks:

- AMM TASK 27-62-51-000-801
- AMM TASK 27-62-51-400-801

(b) Do the Repair Confirmation at the end of this task.

(2) Do this test of the pressure switch:
   (a) Disconnect the connector from the pressure switch.
   (b) Examine the connector and socket for damage and unwanted material.
   (c) Do this test of pin 1 on the connector:
      1) Show the input status for connector D10986 pin 14 on the PSEU display.
      2) Make sure that the input status is NO GND.
      3) Ground pin 1 with a jumper wire.
      4) Make sure that the input status is GND.
      5) If the test does not operate correctly, then do the test of the PSEU below.
      6) If the test operates correctly, then continue.
   (d) Do this test of pin 3 on the connector:
      1) Show the input status for connector D10986 pin 29 on the PSEU display.
      2) Make sure that the input status is NO GND.
      3) Ground pin 3 with a jumper wire.
      4) Make sure that the input status is GND.
      5) If the test operates correctly, then do these steps:
         a) Replace the switch, S1049.
         b) Do the Repair Confirmation at the end of this task.
      6) If the test does not operate correctly, then continue.

(3) Do this test of the PSEU:
   (a) Remove the connector D10986 from the PSEU.
   (b) Examine the connector and socket for damage and unwanted material.
   (c) Do this test of pin 14 on the connector:
      1) Show the input status for connector D10986 pin 14 on the PSEU display.
      2) Make sure that the input status is NO GND.
      3) Ground pin 14 with a jumper wire.
      4) Make sure that the input status is GND.
      5) If the test does not operate correctly, then do these steps:
         a) Replace the PSEU, M2061. These are the tasks:
            - Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
            - Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801
         b) Re-connect the connector to the pressure switch.
         c) Do the Repair Confirmation steps below.
      6) If the test operates correctly, then continue.
   (d) Do this test of pin 29 on the connector:
      1) Show the input status for connector D10986 pin 29 on the PSEU display.
      2) Make sure that the input status is NO GND.
      3) Ground pin 29 with a jumper wire.

4) Make sure that the input status is GND.

5) If the test does not operate correctly, then do these steps:

a) Replace the PSEU, M2061. These are the tasks:

- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

b) Re-connect the connector to the pressure switch.

c) Do the Repair Confirmation steps below.

6) If the test operates correctly, then continue.

(4) Do this check of the wiring between the PSEU and pressure switch:

(a) Do a check of the wiring between these pins:

PRESSURE SWITCH S1049 D11730		PSEU D10986
pin 1	- - - - - - - - - - - - - - - - - -	pin 14
pin 2	- - - - - - - - - - - - - - - - - -	ground
pin 3	- - - - - - - - - - - - - - - - - -	pin 29

(b) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the connector on the PSEU.

3) Re-connect the connector on the pressure switch.

4) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

(1) Do this test of the ground spoiler up pressure switch:

(a) If it is necessary, re-connect the connectors on the PSEU and ground spoiler up pressure switch.

(b) Operate the ground spoilers:

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.

1) Do this task: Speed Brake Hydraulic Systems A and B Pressurization, AMM TASK 27-62-00-800-801.

2) Make sure the airplane is on its landing gear or compress the right main gear strut a minimum of 5 inches.

NOTE: This will open the ground spoiler interlock valve.

3) Slowly move the speed brake lever to the UP position.

4) Make sure the ground spoilers extend.

5) Slowly move the speed brake lever to the DOWN position.

6) Make sure the ground spoilers come down.

7) Do this task: Remove Pressure from the Speed Brake Hydraulic Systems A and B, AMM TASK 27-62-00-800-802.

(c) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

1) If you do not find the maintenance message, then you corrected the fault.

——————— END OF TASK ———————

825. Ground Spoiler Interlock Valve Close Sensor Fault - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) 31-51001 GSBV CL FAULT

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

(b) 31-51101 GSBV CL FAULT

HAP ALL

(2) This maintenance message shows a problem with ground spoiler interlock valve close sensor.

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

(3) Maintenance message 31-51001 is set when the ground spoiler interlock valve close sensor indicates that the valve is not closed and the airplane is in the air.

(4) Maintenance message 31-51101 is set when the ground spoiler interlock valve close sensor indicates that the valve is closed and the airplane is on the ground.

HAP ALL

B. Possible Causes

(1) Fractured Ground Spoiler Interlock Valve Cable

(2) Ground spoiler interlock valve close sensor, S1050

(3) Wiring problem

(4) Proximity switch electronics unit (PSEU), M02061

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

D. Related Data

(1) (SSM 31-53-11)

(2) (WDM 31-53-11)

E. Initial Evaluation

(1) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If you do not find the maintenance message, then there was an intermittent fault.

(b) If you find the maintenance message, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) If you find a problem with the Ground Spoiler Interlock Valve Cable, then do these steps:

(a) Replace the Ground Spoiler Interlock Valve Cable, these are the tasks:
- AMM TASK 27-62-51-000-801
- AMM TASK 27-62-51-400-801

(b) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(c) If you do not find the maintenance message, then you corrected the fault.

(d) If you find the maintenance message, then continue.

(2) Do these steps to replace the ground spoiler interlock valve close sensor:

(a) Replace the sensor, S1050.

(b) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(c) If you do not find the maintenance message, then you corrected the fault.

(d) If you find the maintenance message, then continue.

(3) Do this wiring check between the PSEU and the interlock valve close sensor:

(a) Remove the connector from the pressure switch.

(b) Remove the connector D11142 from the PSEU.

(c) Examine the connectors and sockets for damage and unwanted material.

(d) Do a check for continuity between these pins:

VALVE CLOSED SENSOR S1050		PSEU D11142
pin 1	- - - - - - - - - - - - - - - - - - -	pin 20
pin 2	- - - - - - - - - - - - - - - - - - -	pin 8
pin 4	- - - - - - - - - - - - - - - - - - -	ground

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the connector on the PSEU.

3) Re-connect the connector on the valve close sensor.

4) Do the EXISTING FAULTS test on the PSEU BITE. Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

5) If you do not find the maintenance message, then you corrected the fault.

(f) If you did not find a problem with the wiring, then continue.

(g) Re-connect the connector on the valve close sensor.

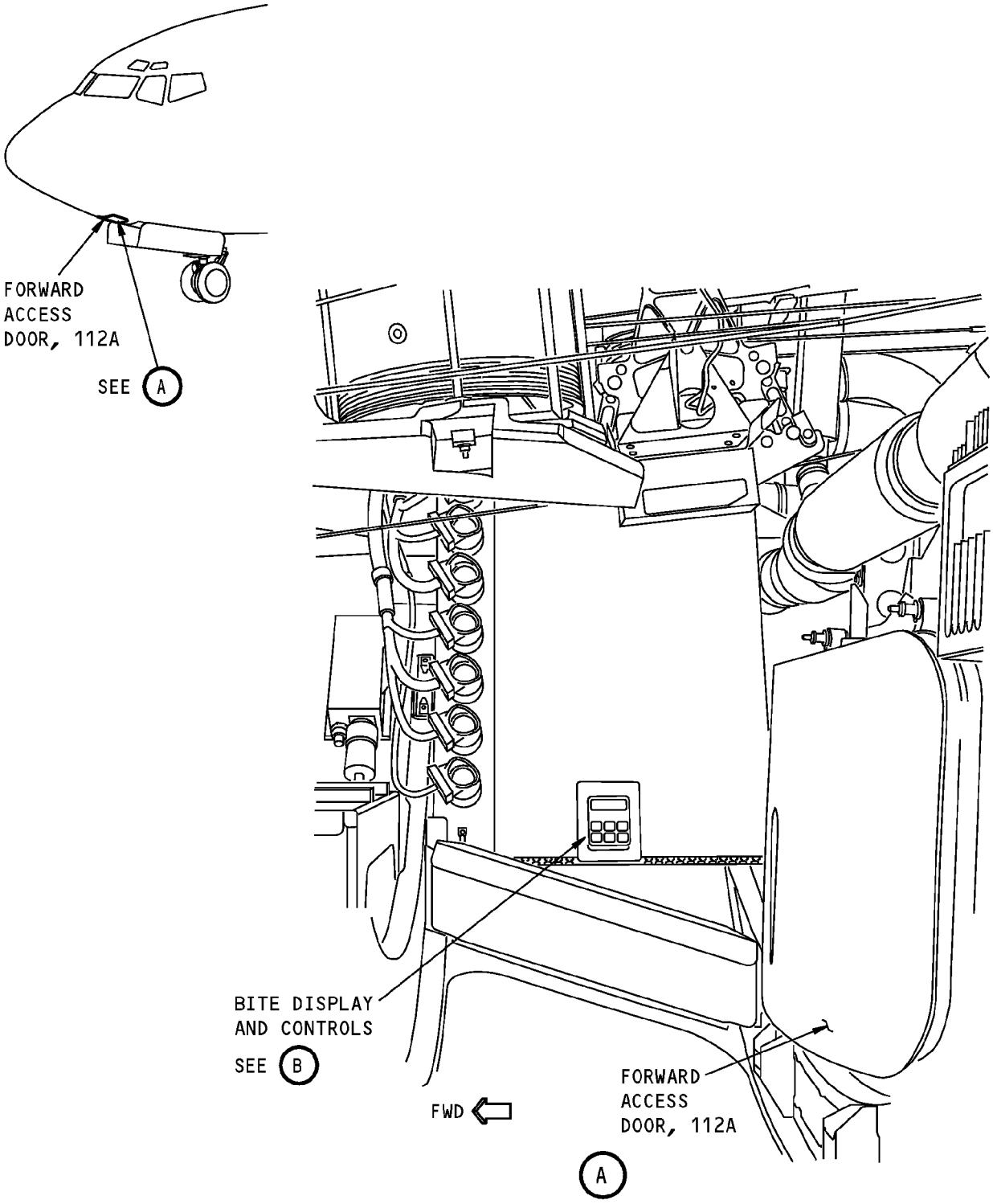
(4) Do these steps to replace the PSEU:

(a) Replace the PSEU, M2061. These are the tasks:
- Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
- Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801

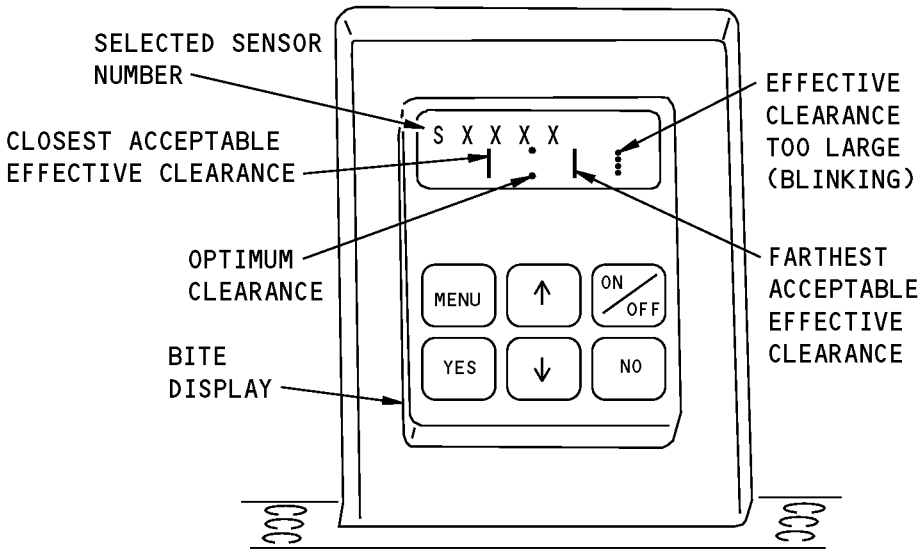
(b) Do the post installation test in the PSEU installation procedure.

(c) If the test operates correctly, then you corrected the fault.

——————— END OF TASK ———————



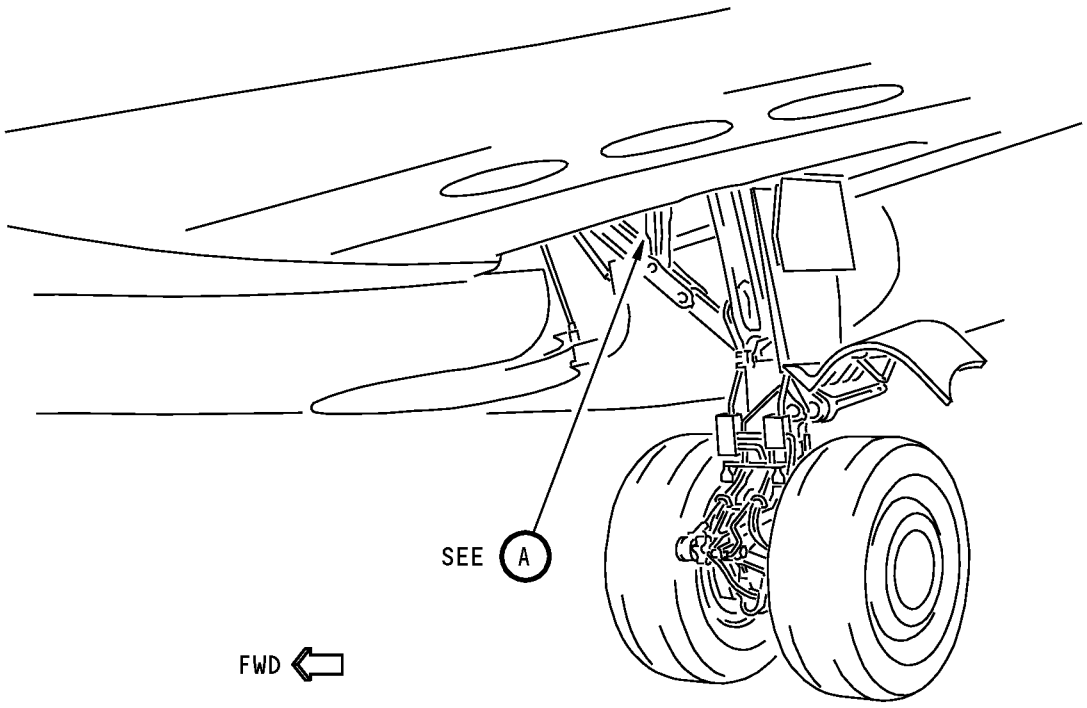
Proximity Switch Electronics Unit (PSEU) Component Location
Figure 301 (Sheet 1 of 2)/ 32-61-00-990-801



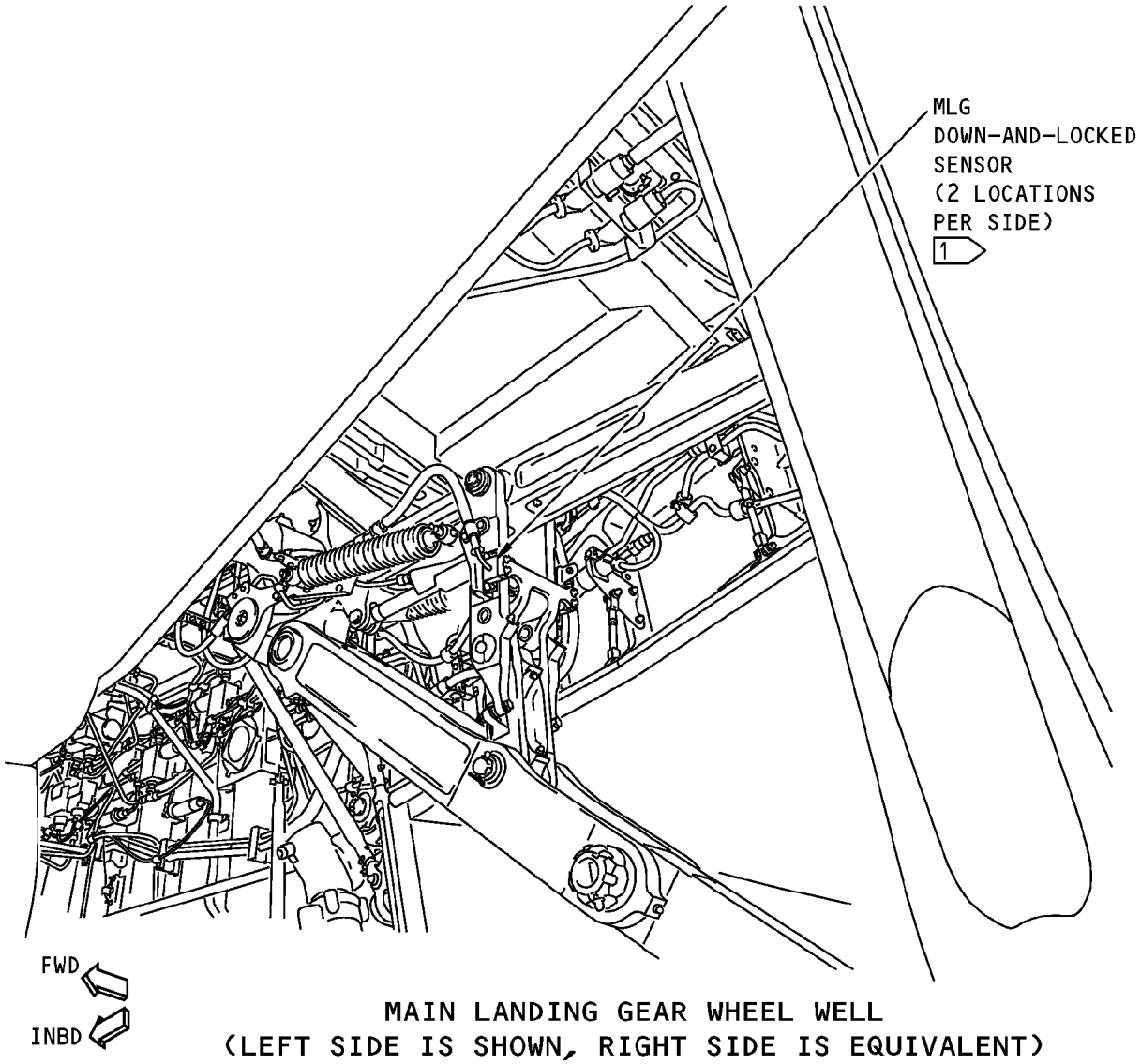
BITE DISPLAY

B

Proximity Switch Electronics Unit (PSEU) Component Location
Figure 301 (Sheet 2 of 2)/ 32-61-00-990-801



Main Landing Gear Down-and-Locked Sensor Component Location
Figure 302 (Sheet 1 of 2)/ 32-61-00-990-802



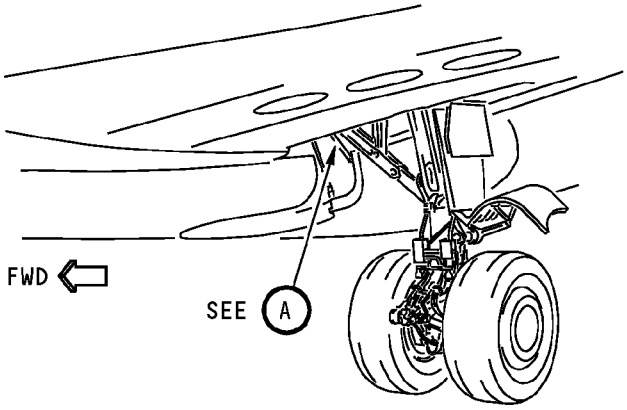
MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE IS SHOWN, RIGHT SIDE IS EQUIVALENT)

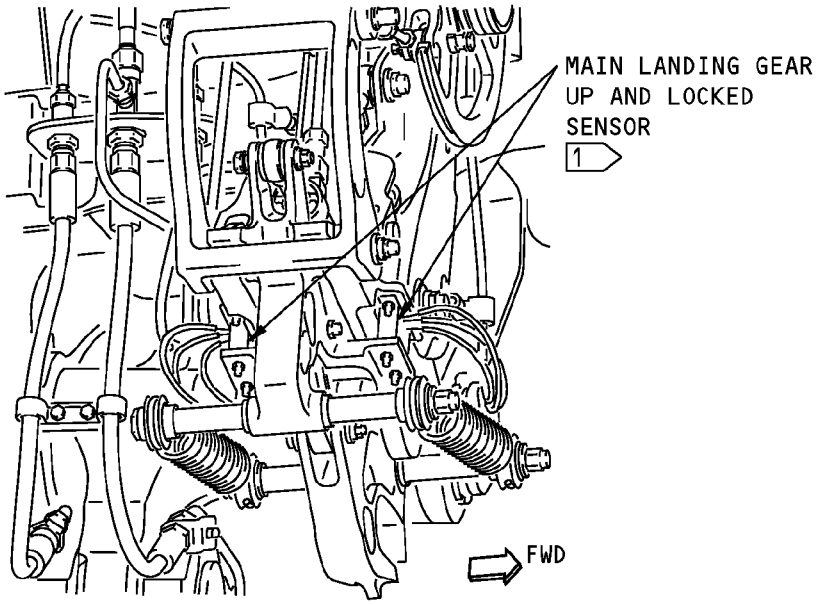
A

1

SYSTEM NO.	SENSOR NO.	MLG	LOCATION
1	S0071	L	FWD
1	S0073	R	FWD
2	S0301	R	AFT
2	S0302	L	AFT

Main Landing Gear Down-and-Locked Sensor Component Location
Figure 302 (Sheet 2 of 2)/ 32-61-00-990-802



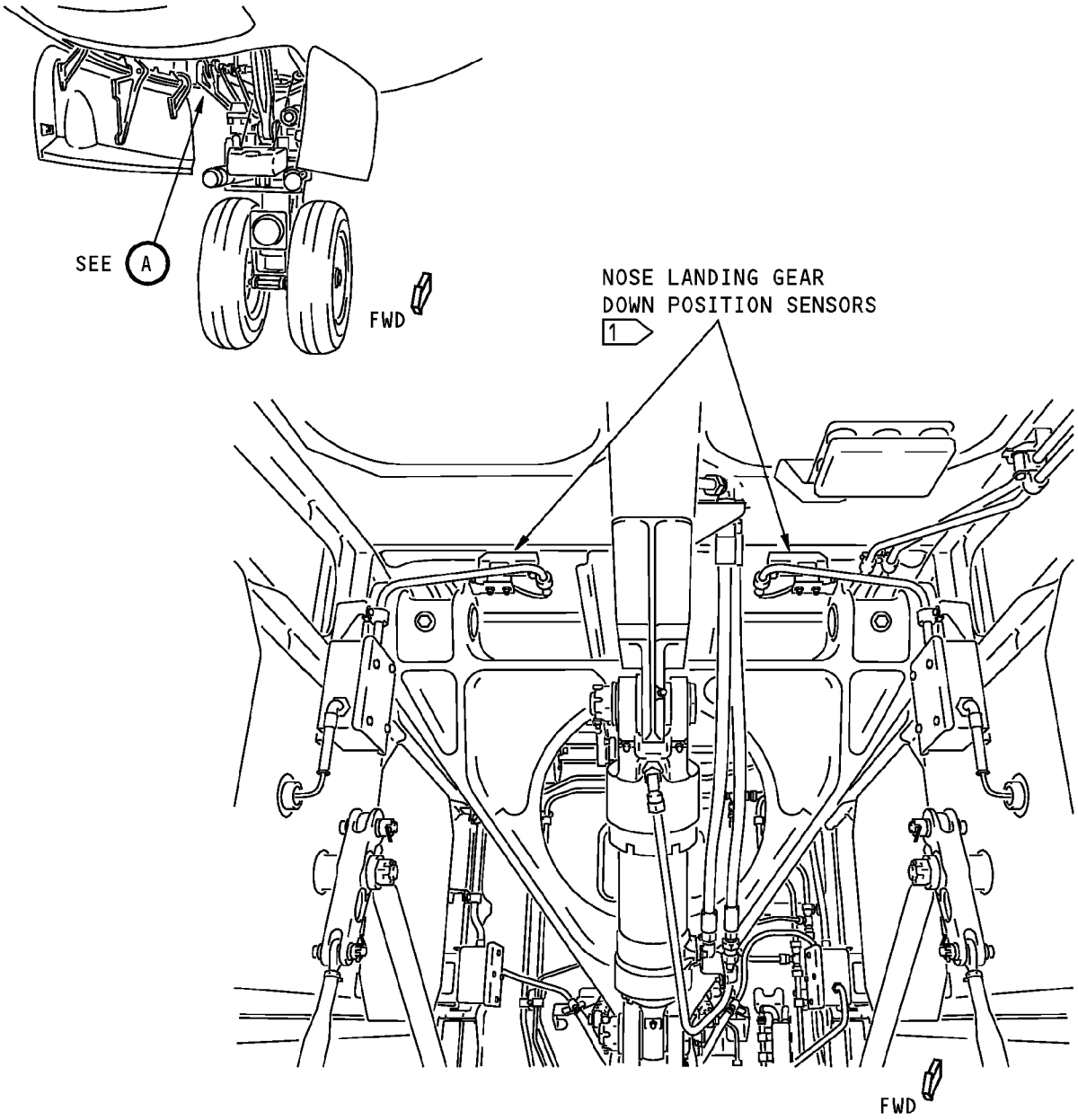


LEFT MAIN LANDING GEAR UPLOCK
(RIGHT MAIN LANDING GEAR UPLOCK IS EQUIVALENT)
A

1

SYSTEM NO.	SENSOR NO.	MLG	LOCATION
1	S72	L	FWD
2	S1016	L	AFT
1	S74	R	FWD
2	S1017	R	AFT

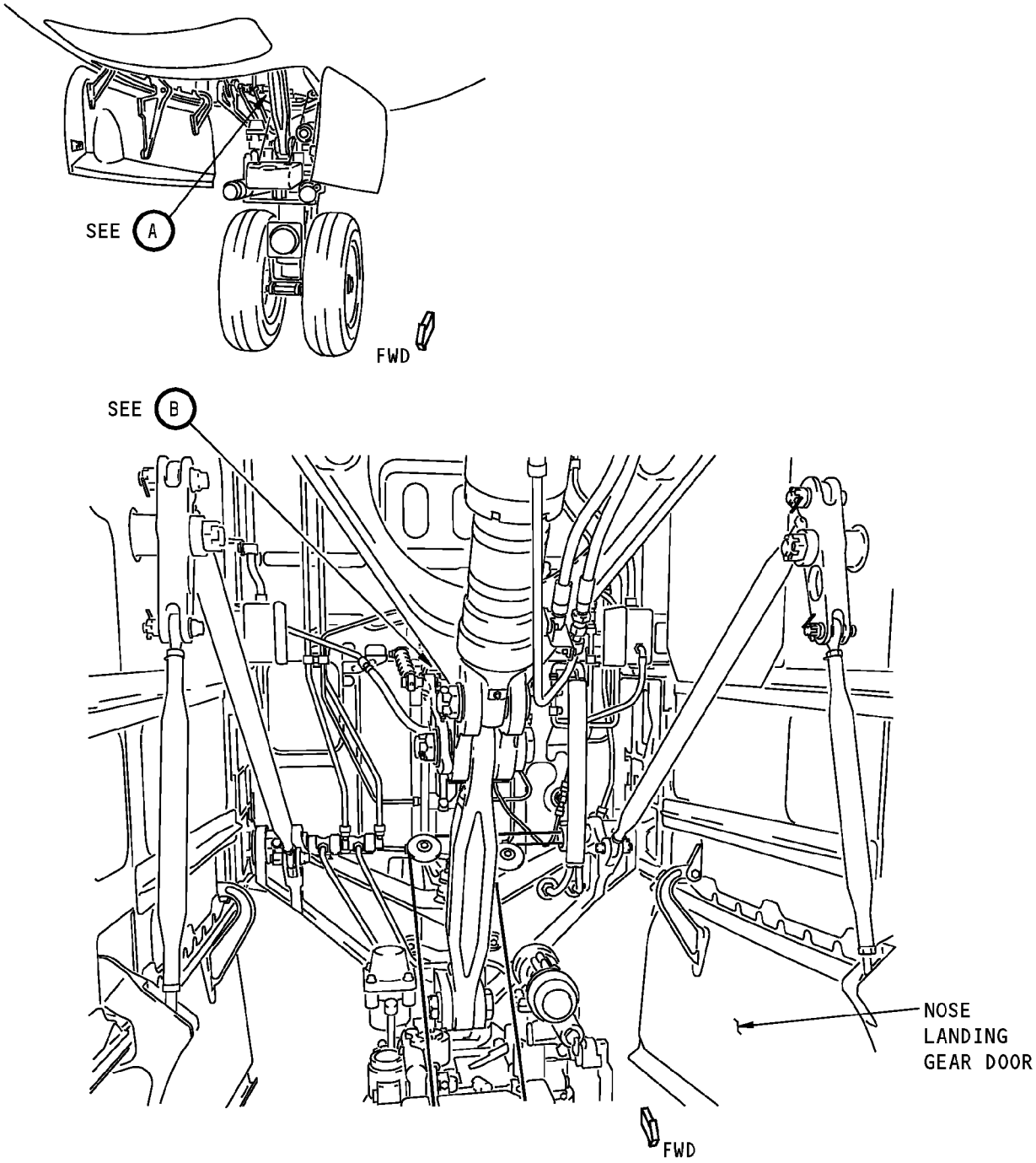
Main Landing Gear Up-and-Locked Sensor Component Location
Figure 303 / 32-61-00-990-803



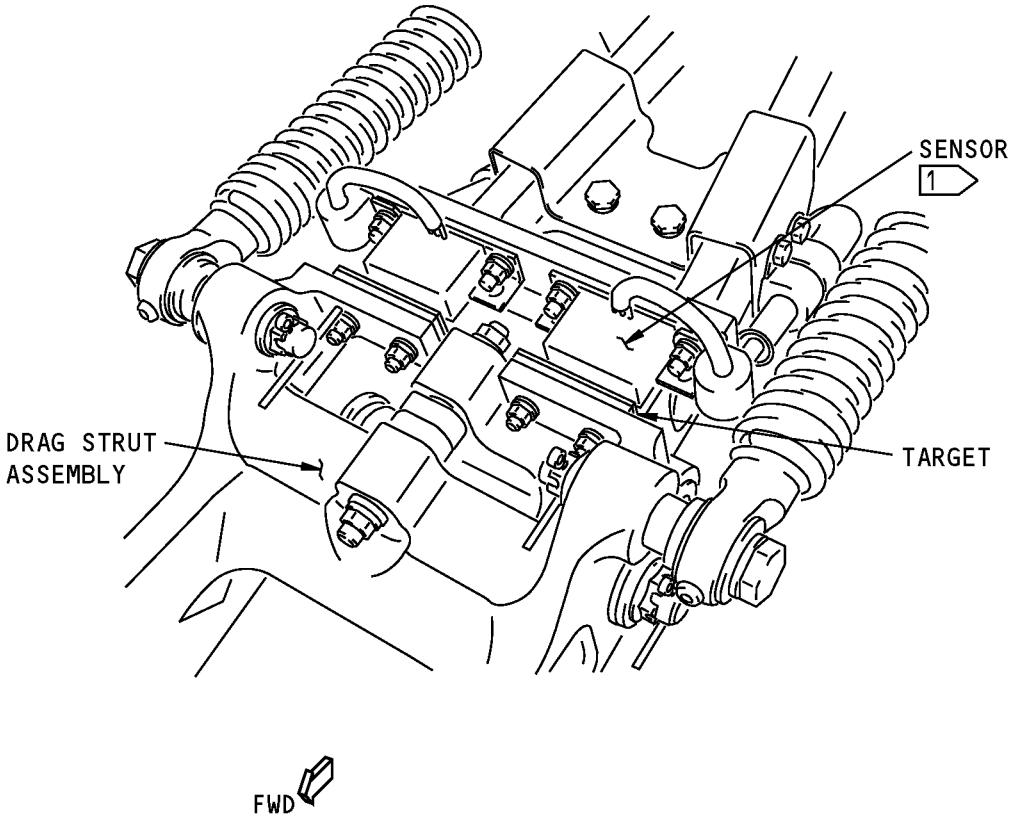
1

SYSTEM NO.	SENSOR NO.	LOCATION
1	S845	L
2	S853	R

Nose Landing Gear Down Position Sensor Component Location
Figure 304 / 32-61-00-990-804



Nose Landing Gear Lock Sensor Component Location
Figure 305 (Sheet 1 of 2)/ 32-61-00-990-805



1

SYSTEM NO.	SENSOR NO.	LOCATION
1	S846	L
2	S854	R

Nose Landing Gear Lock Sensor Component Location
Figure 305 (Sheet 2 of 2)/ 32-61-00-990-805