

TO: ALL HOLDERS OF INBOARD MIDFLAP CARRIAGE ASSEMBLY OVERHAUL MANUAL,
57-53-40

REVISION NO. 10, DATED MAR 1/04

HIGHLIGHTS

DESCRIPTION OF CHANGE	TOPICS AFFECTED												
	D & O	D / A s s y	C l e a n i n g	I n s p / C h k	R e p a i r	A s s y	F / C	T e s t	T / S h o o t i n g	S / T o o l s	S t o r a g e	I P L	L / O v e r h a u l
Added hole repair data					X								
Added Numerical List												X	

Mar 1/04

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HIGHLIGHTS
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INBOARD MID FLAP CARRIAGE ASSEMBLY

57-53-40

BOEING P/N 65-68297-5 thru -8, -15 thru -18

AIRLINE P/N

THE FOLLOWING DIRECTIVES APPLY TO THIS SUBJECT:

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVES	DATE DIRECTIVE INCORPORATED INTO TEXT
		PRR 33754 PRR 32689	Sep 5/85 Sep 1/96

LIST OF EFFECTIVE PAGES

* Indicates pages revised, added or deleted in latest revision
F Indicates foldout pages - print one side only

PAGE	DATE	PAGE	DATE	PAGE	DATE
57-53-40					
T-1	Sep 1/96				
T-2	BLANK				
* LEP-1	Mar 1/04				
LEP-2	BLANK				
* T/C-1	Mar 1/04				
T/C-2	BLANK				
* 1	Mar 1/04				
* 2	Mar 1/04				
* 3	Mar 1/04				
* 4	Mar 1/04				
5	Sep 1/96				
6	Sep 1/96				
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8	Mar 1/02				
9	Mar 1/98				
10	Jun 1/97				
11	Jun 1/97				
* 12	Mar 1/04				
* 12A	Mar 1/04				
* 12B	Mar 1/04				
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14	Sep 1/96				
15	Sep 1/96				
16	Sep 1/96				
17	Sep 1/96				
18	Mar 1/02				
19	Sep 1/96				
20	Sep 1/96				
21	Sep 1/96				
22	Sep 1/96				
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24	Mar 1/97				
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*[1] Special instructions are not required. Use standard industry practices and the instructions in SOPM 20-30-03, 20-44-02 and 20-70-01.

INBOARD MIDFLAP CARRIAGE ASSEMBLY

1. DESCRIPTION AND OPERATION

- A. The inboard midflap carriage assembly has two machined carriage assemblies, four horizontal roller bearings, two side roller bearings, two cams, a torque tube and three machined ribs which attach the unit to the midflap structure.
- B. Roller bearings on the carriage assemblies hold and align the outboard end of the midflap on the wing mounted-flap tracks. Cams on the carriage assemblies control movement of the foreflap assembly. The carriage assemblies are on the torque tube which also holds the flipper flap assembly.
- C. Leading Particulars (Approximate)
 - Length -- 20 inches
 - Width -- 28 inches
 - Height -- 9 inches
 - Weight -- 42 pounds

2. INSPECTION/CHECK (Fig. 5)

- A. Do a visual check of all parts for any damage in accordance with standard industry practices. If cracks or damage are seen or if you think there are cracks or damage, do the magnetic particle check or penetrant checks.
- B. Penetrant check per SOPM 20-20-02 -- supports (78, 94), fail-safe tube assembly (109), fail-safe tube support (112, 123), sleeve (120), and ribs (124 thru 126).
- C. Magnetic particle check per SOPM 20-20-01 -- carriages (3, 9), cams (18, 19), beam (23), retainers (27, 39), nuts (29, 41, 61), washers (31, 32, 43, 44, 63), bushings (34, 46), bolts (36, 48, 66), bolt (56), bracket (59), plate (104), and torque tube (119).
- D. Refer to Fits and Clearance section for design dimensions and service wear limits.

3. REPAIR (Fig. 5)

- A. Remove small defects by standard industry practices. Refer to Fits and Clearances for design dimensions and wear limits.
- B. Carriage (3, 9)
 - (1) Diameter 1, 4
 - (a) Machine to the repair limit shown in Fig. 2A to remove defects as shown in SOPM 20-10-02 (including etch inspection).
 - (b) Magnetic particle examine per SOPM 20-20-01.
 - (c) Make a repair bushing (Fig. 2B) as necessary to adjust for the material removed in Step (a).

- (d) Install the bushing with wet BMS 5-95 sealant using the shrink-fit method of SOPM 20-50-03.
- (e) Bore the Repair Sleeve to the Design Dimension and restore the bore design chamfer as shown in Fig. 2A.

(2) Diameters 5, 7

- (a) Machine the Diameter 5 bore as required, within the thickness repair limits, to remove defects.
- (b) Machine the Diameter 7 fastener holes to an oversize increment as required to remove defects.
- (c) Make sure that the combination of minimum repair thickness and hole repair diameter are within the limits shown in the charts. If they are not, refer to Boeing for approval or serviceability decision.
- (d) Stress relieve per SOPM 20-10-02.
- (e) Magnetic particle examine per SOPM 20-20-01.
- (f) Shot peen as indicated.
- (g) Build up the Diameter 5 surfaces with sulfamate nickel plate (Ref SOPM 20-42-09) and machine to design dimensions and finish.
- (h) Refinish the carriage as indicated.
- (i) Machine the mating holes in the torque tube as necessary. Be sure to indentify these parts to tell you to use the applicable oversize fasteners during assembly.

C. Refinish

NOTE: Refer to 20-30-02 for stripping of protective finishes, and to 20-41-01 for explanation of F and SRF finish codes.

- (1) Carriages (3, 9) -- Fig. 2A.
- (2) Cams (18, 19 -- Cadmium-titanium plate (F-15.01). Apply primer BMS 10-11, Type 1 (F-20.02) and enamel BMS 10-60 (SRF-14.9813). Material: 4330M steel, 220-240 ksi.
- (3) Beam (23) -- Cadmium plate and apply primer, BMS 10-11, Type 1 (F-16.01) and enamel, BMS 10-11, Type 2 (F-21.02), but no primer or enamel in holes. Material: 4340 steel, 180-200 ksi.
- (4) Retainers (27, 39) -- Cadmium plate (F-15.02). Apply primer BMS 10-11, Type 1 (F-20.02), but not on inner and outer body diameters. Material: 4340 steel, 180-200 ksi.
- (5) Nuts (29, 41, 61) -- Cadmium plate (F-15.05) all over. Material: 4340 steel, 180-200 ksi.

- (6) Washers (32, 44) -- Cadmium plate (F-15.06) all over. Material: 4130 steel, 180-200 ksi.
- (7) Bushings (34, 46) -- Cadmium plate (F-15.02) all over. Material: 4340 steel, 160-180 ksi.
- (8) Bolts (36, 48, 66) -- Cadmium-titanium plate (F-15.01) all over. Material: 4340 steel, 180-200 ksi.
- (9) Bolt (56) -- Cadmium plate (F-15.02) all over. Material: 4340 steel, 125-145 ksi.
- (10) Bracket (59):
 - (a) 69-37860-1: Cadmium plate and apply primer BMS 10-11, Type 1 (F-16.01). Apply enamel BMS 10-11, Type 2 (F-21.02) but not in holes. Material: 4140 steel, 125-145 ksi.
 - (b) 65C16949-2: Passivate (F-17.09). Apply primer BMS 10-11, Type 1 (F-20.02), but not in holes. Material: 17-4PH CRES, not heat treated.
- (11) Plate (69 -- Passivate (F-17.09) and apply primer BMS 10-11, Type 1 (F-20.03) on inside of curved surface only. Material: 301 CRES.
- (12) Supports (78) -- Chromic acid anodize and apply primer BMS 10-11, Type 1 (F-18.13). Material: Al Alloy.
- (13) Washers (85, 86, 116, 117) -- Chemical treat and apply primer BMS 10-11, Type 1 (F-18.06). Material: Al Alloy.
- (14) Supports (94):
 - (a) 69-37208-9, -10: Chemical treat or chromic acid anodize and apply primer BMS 10-11, Type 1 (SRF-2.30), but no primer in holes. Material: Al alloy.
 - (b) 69-37208-15, -16: Chromic acid anodize and apply primer BMS 10-11, Type 1 (F-18.13), but no primer in holes. Material: Al alloy.
- (15) Supports (101) -- Chemical treat and apply primer BMS 10-11, Type 1 (F-18.06). Material: Al alloy.
- (16) Plate (104) -- Phosphate-fluoride treat (F-14.881) and apply primer BMS 10-11, Type 1 (F-20.02). Material: 6AL-4V titanium Alloy.
- (17) Fail-safe tube assembly (109) -- Chemical treat or chromic acid anodize and apply primer BMS 10-11, Type 1 (SRF-2.30) all over. Apply 0.9-1.1 inch bands of sealant, BMS 5-26, class B, 0.03-inch thick, on external area at inboard (smaller diameter) end of tube, and between 7.8 and 9.1 inches from that same end of the tube. Material: Al Alloy.
- (18) Supports (112, 123) -- Chemical treat or chromic acid anodize and apply primer BMS 10-11, Type 1 (F-18.05).
- (19) Torque tube (119) -- Fig. 1.

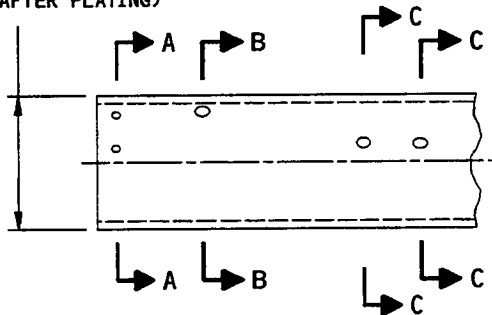
- (20) Sleeve (120) -- Cadmium plate to 0.0002-0.0004 inch thickness (F-15.02). Material: 304 CRES per QQ-S-763, class 304.
- (21) Ribs (124 thru 126) -- Apply mixed primer system finish (SRF-14.08) all over. Material: Al alloy.

D. Replacement

- (1) Replace unserviceable parts or those which cannot be repaired.
- (2) Replace all cotter pins at each overhaul.
- (3) Riveted parts -- Drill out rivets and install a replacement part with new rivets.
- (4) Threaded inserts -- Remove the old insert and install a replacement with wet primer BMS 10-11, Type 1. Install 1/4 to 1/2 turn below surface of part.
- (5) Rub strips (6, 12) -- Bond in position with Type 38 adhesive, special method 1 or 2, per SOPM 20-50-12. Install rivets (5, 11).
- (6) Bushing (95):
 - (a) Press out the old bushing.
 - (b) Install a replacement bushing per SOPM 20-50-03. Point stake at 4 locations between the old stake locations, equally spaced within ± 0.03 inch.
 - (c) Machine the bore of the installed bushing to 1.0005-0.0010 inch diameter.
- (7) Sleeve (120) (Fig. 2)
 - (a) Remove the old sleeve (a shrink fit on the tube).
 - (b) Heat the replacement sleeve to 375°F maximum.
 - (c) Apply primer BMS 10-11, Type 1 to the mating surfaces of the tube (119) and the sleeve (120).
 - (d) Install the sleeves (120) on tube (119) as shown in Fig. 2. If required, machine the sleeve diameter to dimension and finish as shown in Fig. 2.
 - (e) If a machined replacement sleeve (120) is not available, get a sleeve, part number 69-54988-1. Install it onto the tube (119) and machine it to the dimensions and finish as shown per steps 3.D.(7)(b) thru 3.D.(7)(d) and Fig. 2.

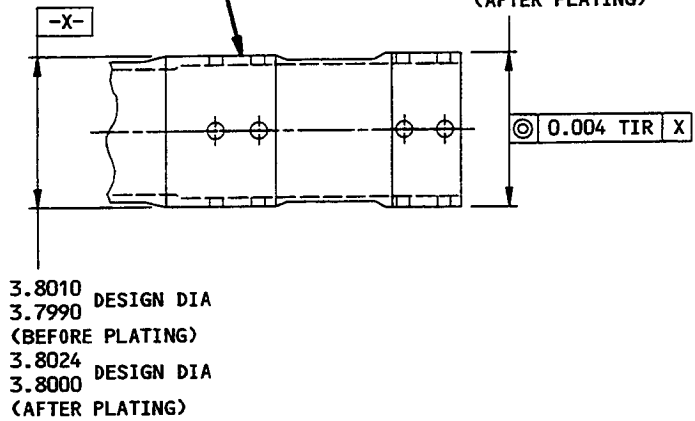
BOEING
COMMERCIAL JET
 OVERHAUL MANUAL

3.546 DESIGN DIA
 3.544 (BEFORE PLATING)
 3.5474 DESIGN DIA
 3.5450 (AFTER PLATING)

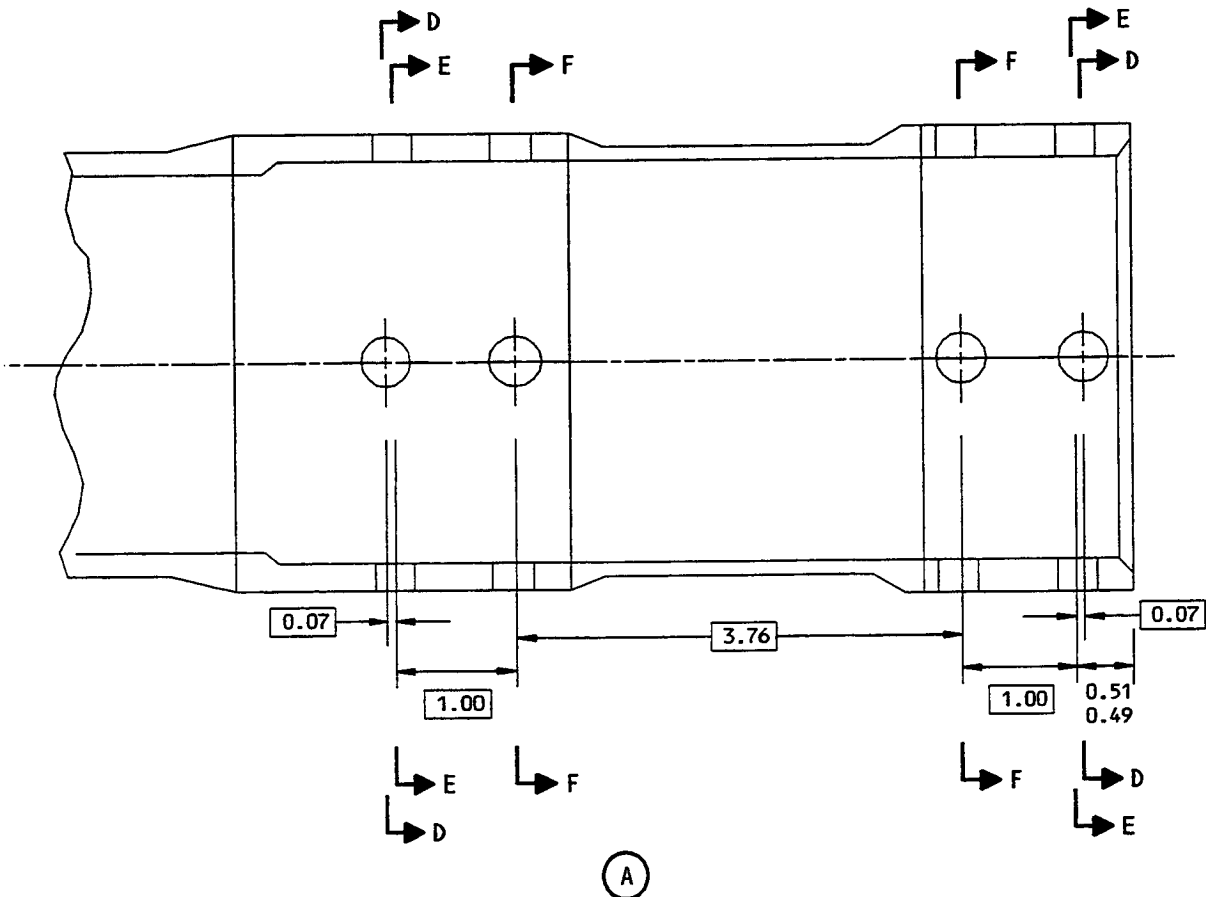


SEE (A)

3.8010 DESIGN DIA
 3.7990 (BEFORE PLATING)
 3.8024 DESIGN DIA
 3.8000 (AFTER PLATING)



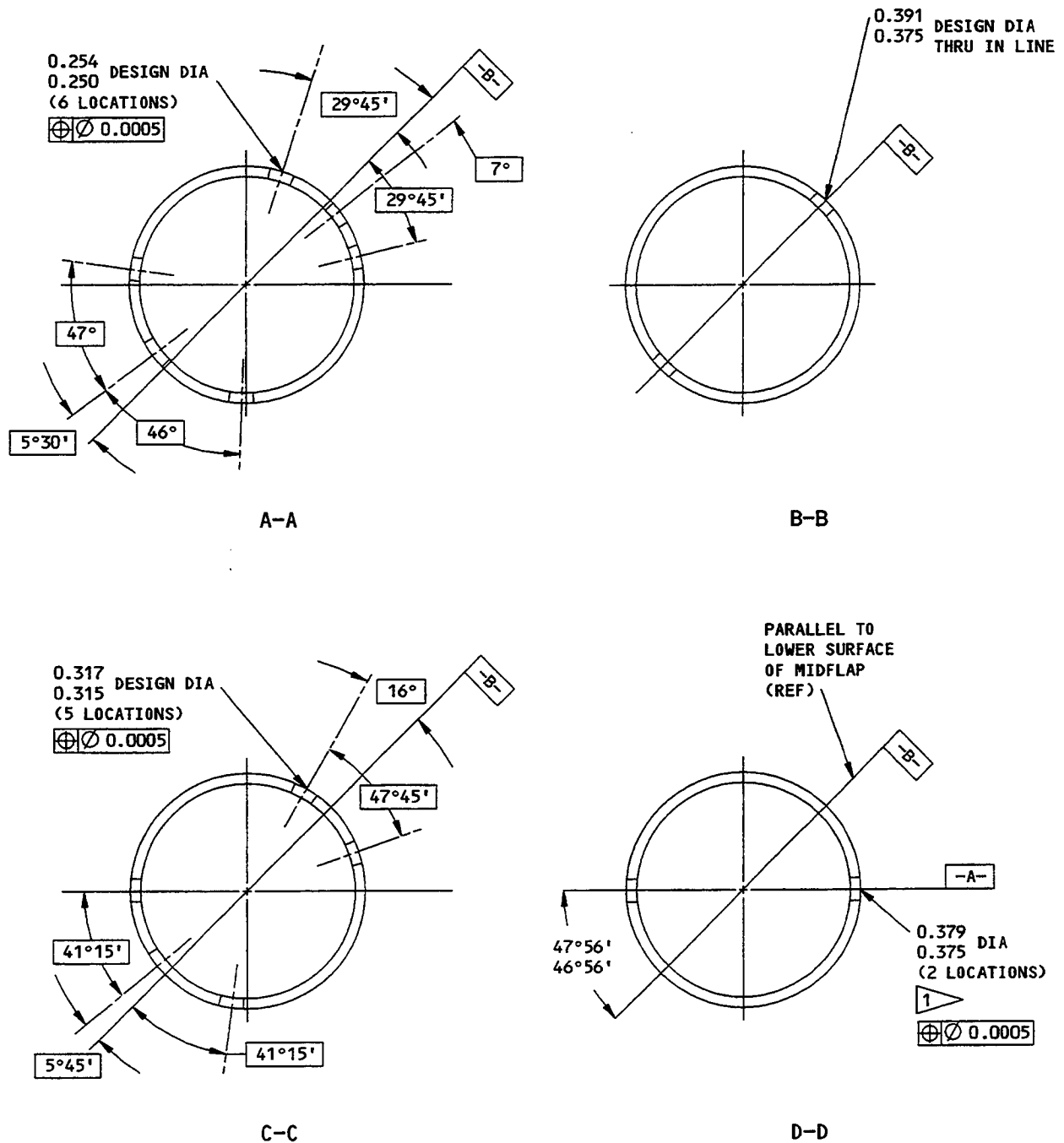
3.8010 DESIGN DIA
 3.7990 (BEFORE PLATING)
 3.8024 DESIGN DIA
 3.8000 (AFTER PLATING)



TORQUE TUBE (119)

Torque Tube Repair and Refinish
 Figure 1 (Sheet 1)

OVERHAUL MANUAL

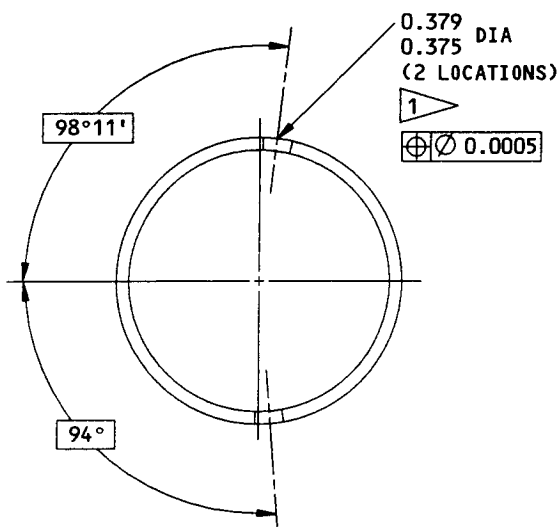


ALL DIMENSIONS ARE IN INCHES

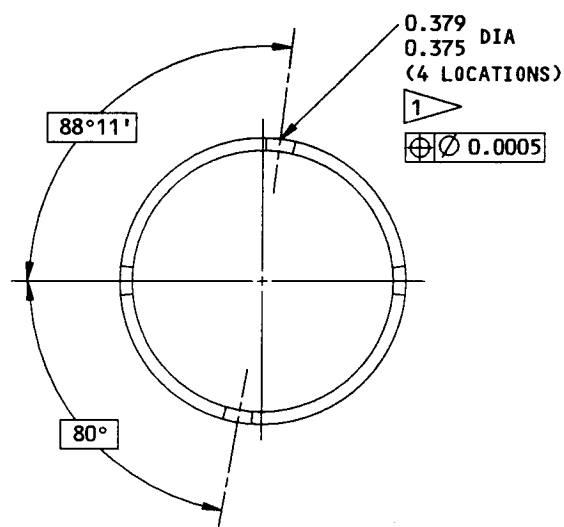
TORQUE TUBE (119)

Torque Tube Repair and Refinish
Figure 1 (Sheet 2)

OVERHAUL MANUAL



E-E



F-F

REFINISH

CADMIUM-TITANIUM PLATE (F-1.308, WHICH REPLACES F-1.181) ALL SURFACES. ON OUTSIDE SURFACES, APPLY PRIMER BMS 10-11, TYPE 1 (SRF-12.205). ON INSIDE SURFACES, APPLY PRIMER BMS 10-11, TYPE 1 (SRF-12.206).

1 IF NECESSARY, INCREASE THE DIAMETER OF THESE HOLES TO AGREE WITH THE INCREASED-DIAMETER MATING HOLES IN CARRIAGE (3,9) (FIG. 2A)

REPAIR

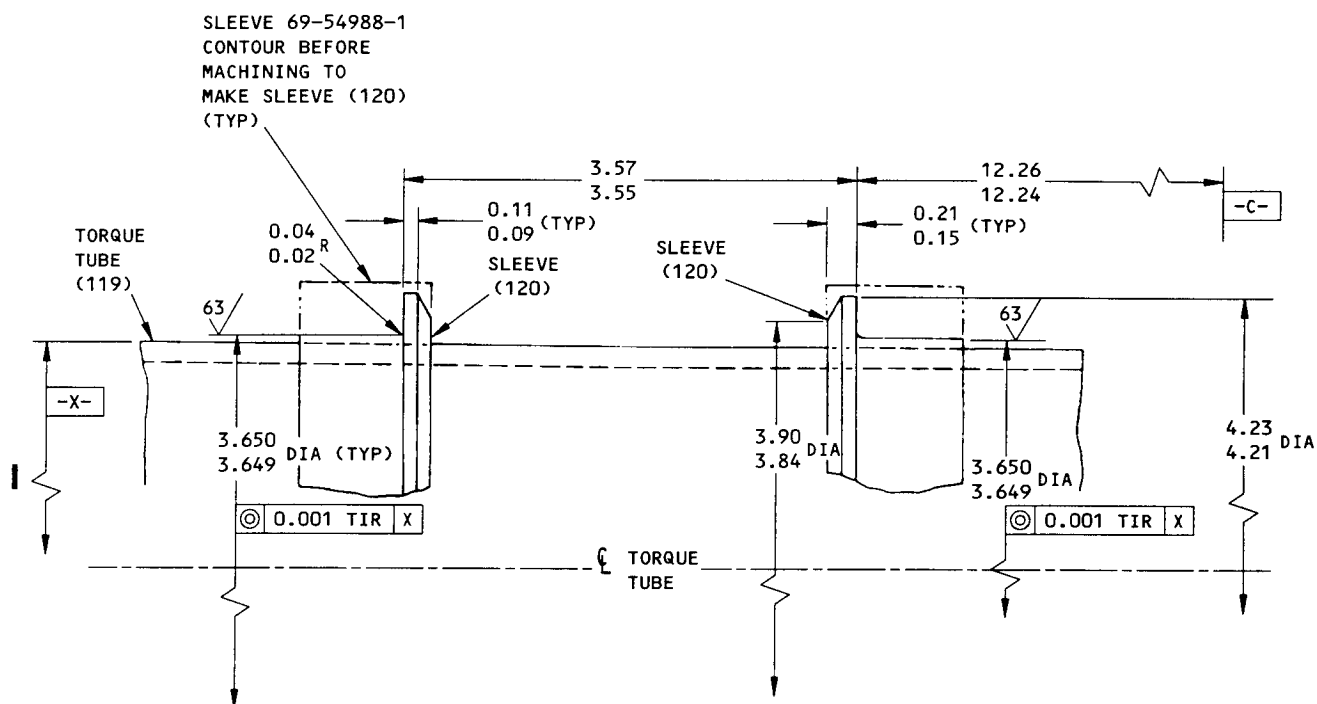
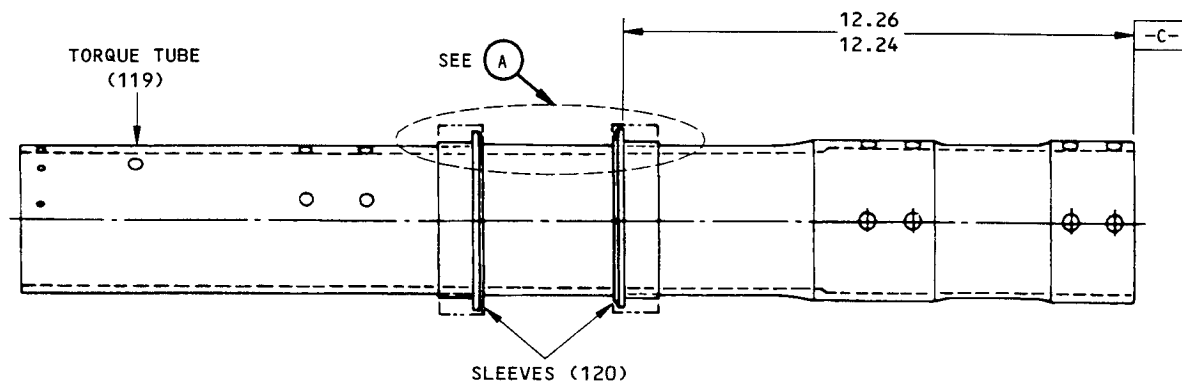
125/ ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

63/ ALL HOLES

MATERIAL: 4330M STEEL, 180-200 KSI
ALL DIMENSIONS ARE IN INCHES

TORQUE TUBE (119)

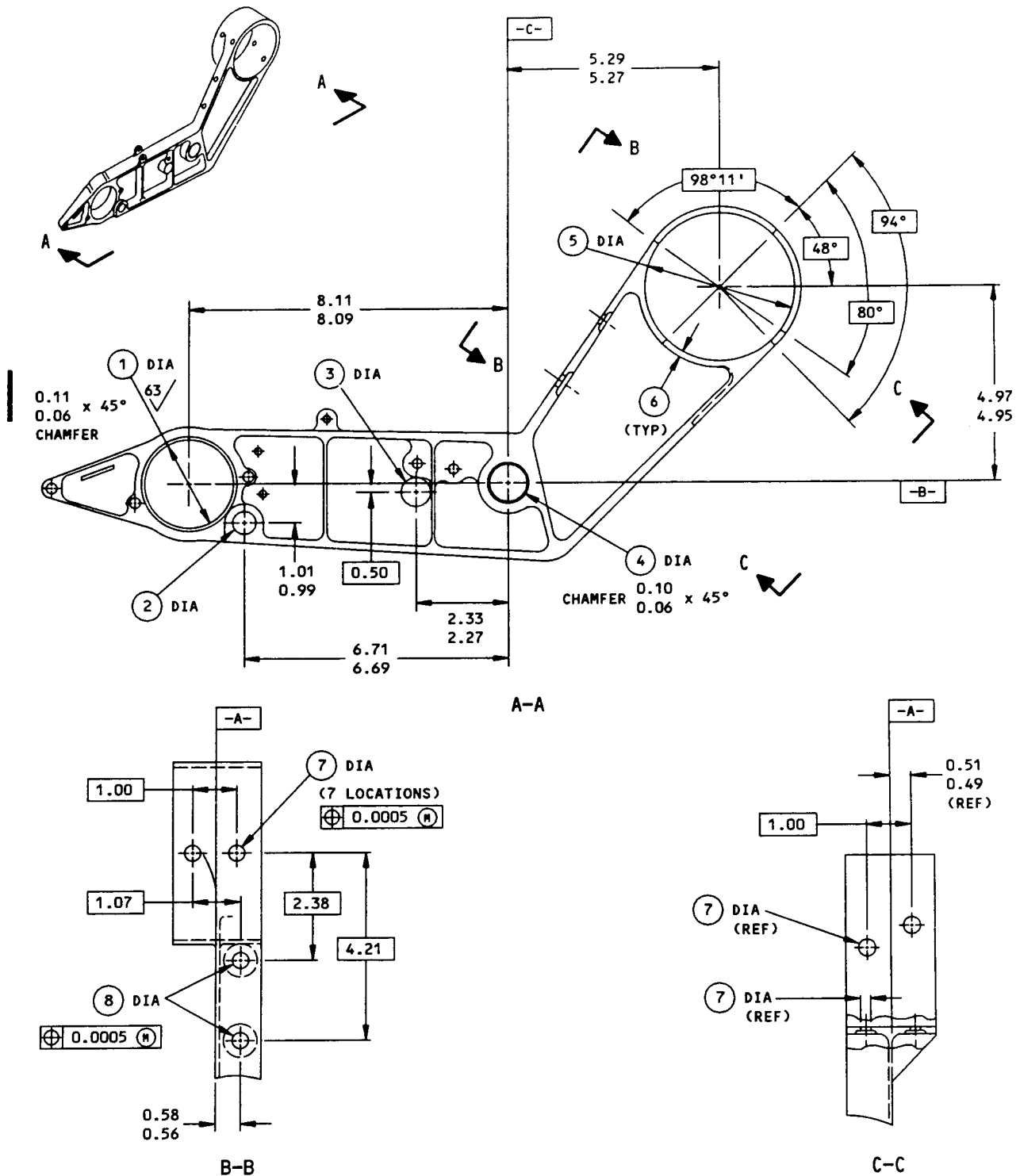
Torque Tube Repair and Refinish
Figure 1 (Sheet 3)



(A)

TORQUE TUBE ASSEMBLY (118)

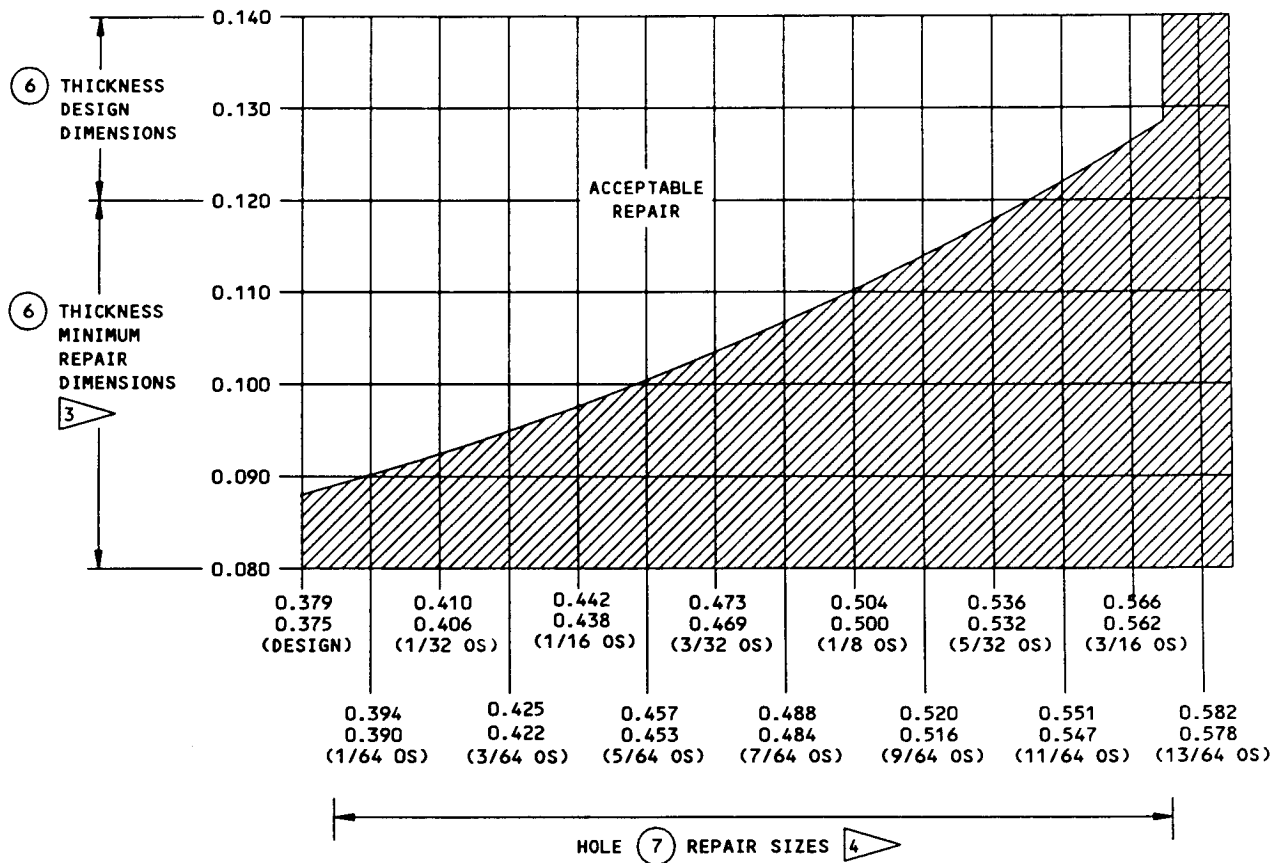
Torque Tube Parts Replacement
Figure 2



CARRIAGE (3, 9)

Carriage Repair and Refinish
 Figure 2A (Sheet 1)

OVERHAUL MANUAL



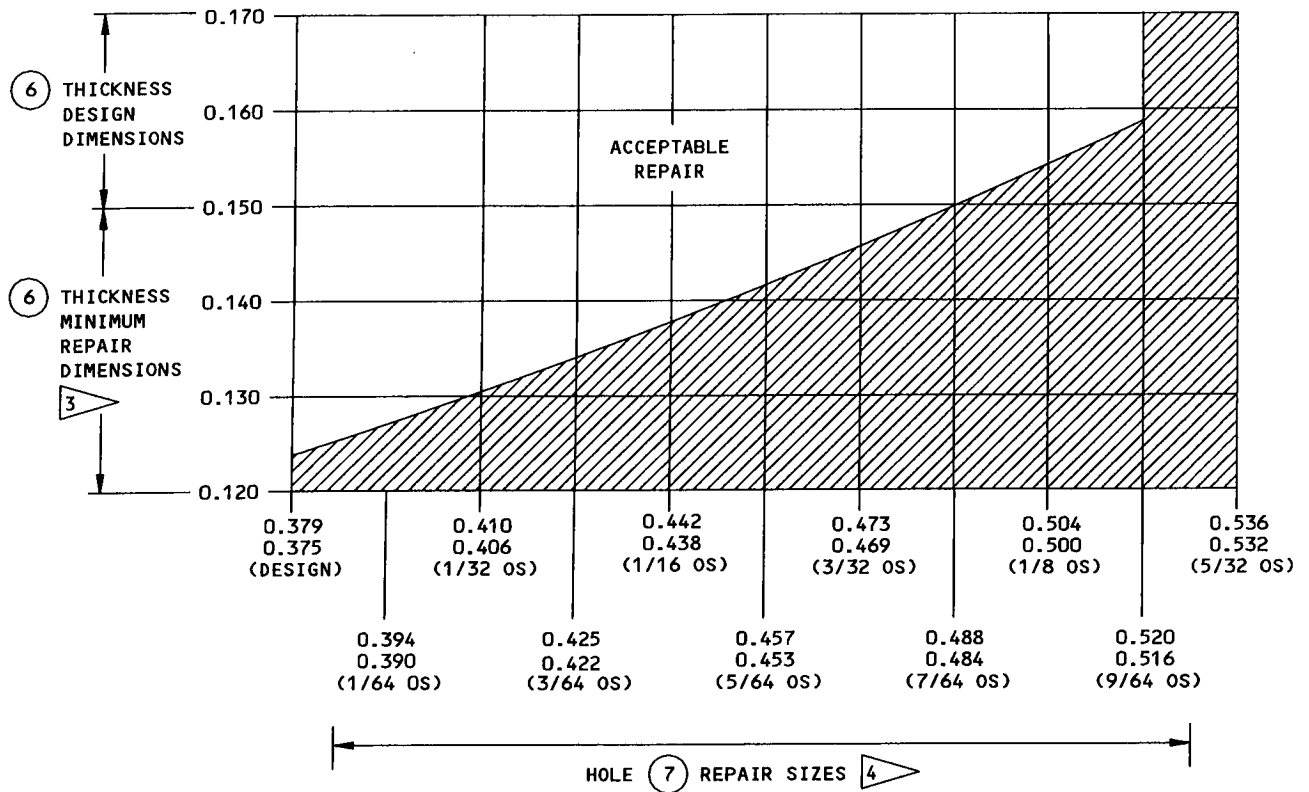
REPAIR NOT ACCEPTABLE

ALL DIMENSIONS ARE IN INCHES

CARRIAGE (3, 9)
65-47856-SERIES

Carriage Repair and Refinish
Figure 2A (Sheet 2)

OVERHAUL MANUAL



CARRIAGE (3, 9)
65-67138-SERIES

Carriage Repair and Refinish
Figure 2A (Sheet 3)

	①	②	③	④	⑤	⑥ 1	⑥ 2	⑦	⑧
DESIGN DIM	2.252 2.250	0.599 0.594	0.773 0.750	0.8775 0.8745	3.807 3.804	0.14 0.12	0.17 0.15	0.379 0.375	0.316 0.312
REPAIR LIMIT	2.315 1 5	---	---	0.9672 0.9375 1 5	SEE CHART	SEE CHART	SEE CHART	SEE CHART	---

REFINISH

CADMIUM-TITANIUM PLATE (F-1.308, WHICH REPLACES F-1.181) ALL OVER. APPLY PRIMER BMS 10-11, TYPE 1 (SRF-12.205) BUT NOT IN HOLES ① ④.

- 1 65-47856-SERIES
- 2 65-67138-SERIES
- 3 VALUES FOR SULFAMATE NICKEL PLATE BUILDUP AND MACHINE TO DESIGN DIMENSIONS AND FINISH
- 4 VALUES FOR INSTALLATION OF OVERSIZE FASTENERS IN 1/64 INCREMENTS
- 5 LIMIT FOR INSTALLATION OF REPAIR BUSHING (FIG. 2B)

REPAIR

REF 3 4 5

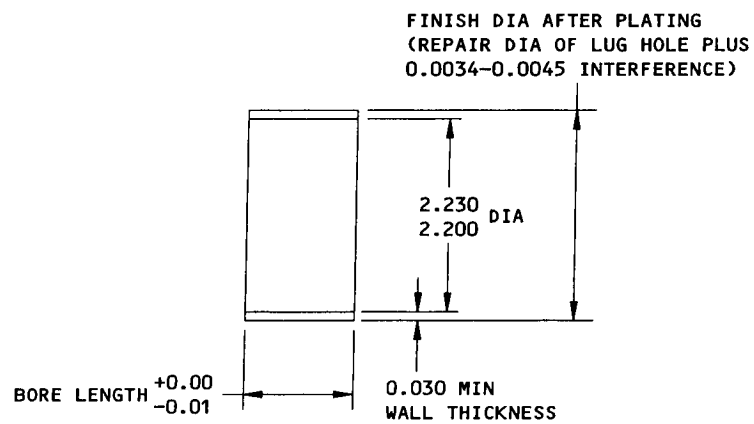
125/ ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

SHOT PEEN:
0.017-0.033 SHOT SIZE
0.012 A2 INTENSITY

MATERIAL: 4330M STEEL, 220-240 KSI
ALL DIMENSIONS ARE IN INCHES

CARRIAGE (3,9)

Carriage Repair and Refinish Figure 2A (Sheet 4)



125/ ALL MACHINED SURFACES

BREAK SHARP EDGES 0.01-0.02R

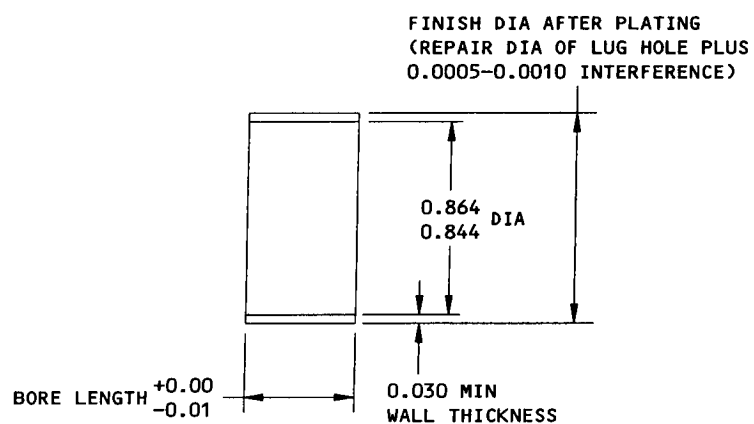
FINISH: CADMIUM PLATE (F-15.06)

MATERIAL: 15-5PH OR 17-4PH CRES
 (180-200 KSI)

ALL DIMENSIONS ARE IN INCHES

HOLE LOCATION ① FIG. 2A

Repair Bushing Details
 Figure 2B (Sheet 1)



125/ ALL MACHINED SURFACES

BREAK SHARP EDGES 0.01-0.02R

FINISH: CADMIUM PLATE (F-15.06)

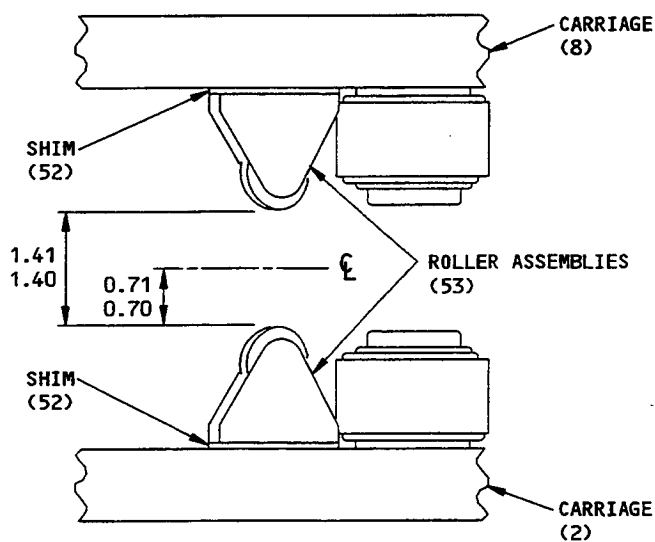
MATERIAL: 15-5PH OR 17-4PH CRES
(180-200 KSI)

ALL DIMENSIONS ARE IN INCHES

HOLE LOCATION (4) FIG. 2A
Repair Bushing Details
Figure 2B (Sheet 2)

4. ASSEMBLY (Fig. 5)

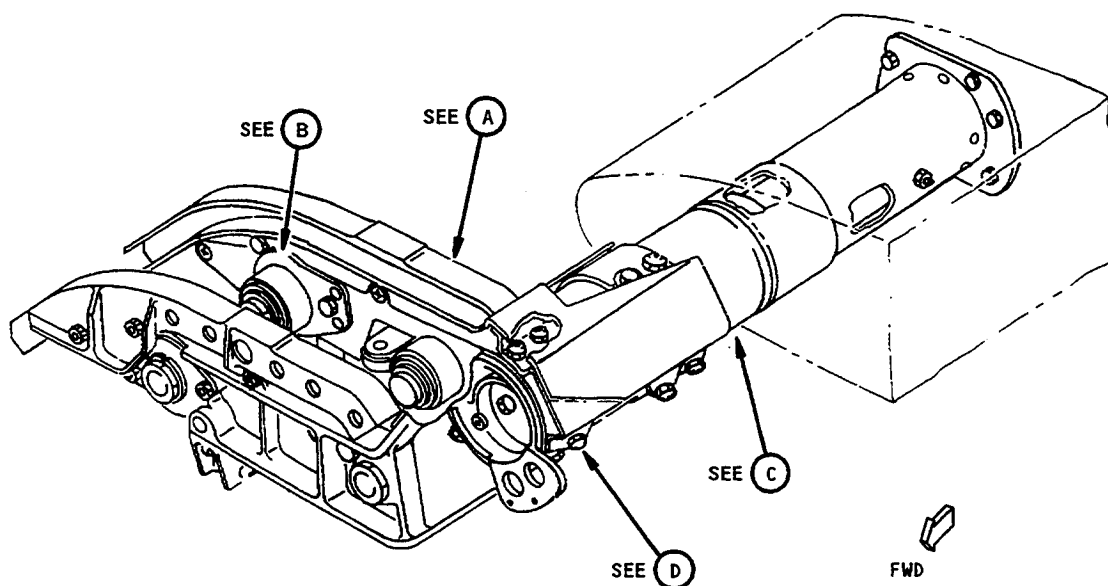
- A. Use standard industry practices and these steps.
- B. Install nut (106) finger-tight. Install cotter pin (105).
- C. When you install the fastener that holds the carriages to the torque tube, be sure to use the standard or oversize fasteners as indicated during repair. Install the fasteners with wet BMS 5-95 sealant.
- D. Coat bushings (34, 46) with grease MIL-G-23827, before installation.
- E. Install pins (33, 45) with wet primer, BMS 10-11, type 1.
- F. Do not tighten nuts (29, 41) to final torque (200-500 pound-inches) at this time. Install cotter pins (28, 40), but only bend them to hold them in position. These parts must be removed to let the eccentric bushing be adjusted when the carriage is installed on the airplane.
- G. Tighten nuts (61) to 200-500 pound-inches. Install cotter pin (60) so that it does not extend beyond the end of the bolt.
- H. Install roller assemblies (53) with shims (52), bolts (50) and washers (51) as shown in Fig. 3. If necessary, remove 0.002-inch laminations from the shims to adjust their thickness. Install the shims with wet or dry BMS 10-11, Type 1 primer. Tighten bolts (50) to 30-40 pound-inches. Install lockwire.
- I. Tighten bolts (24) to 30-40 pound-inches. Install lockwire.
- J. Tighten nuts (14) to 10-30 pound inches. Install cotter pin (13).



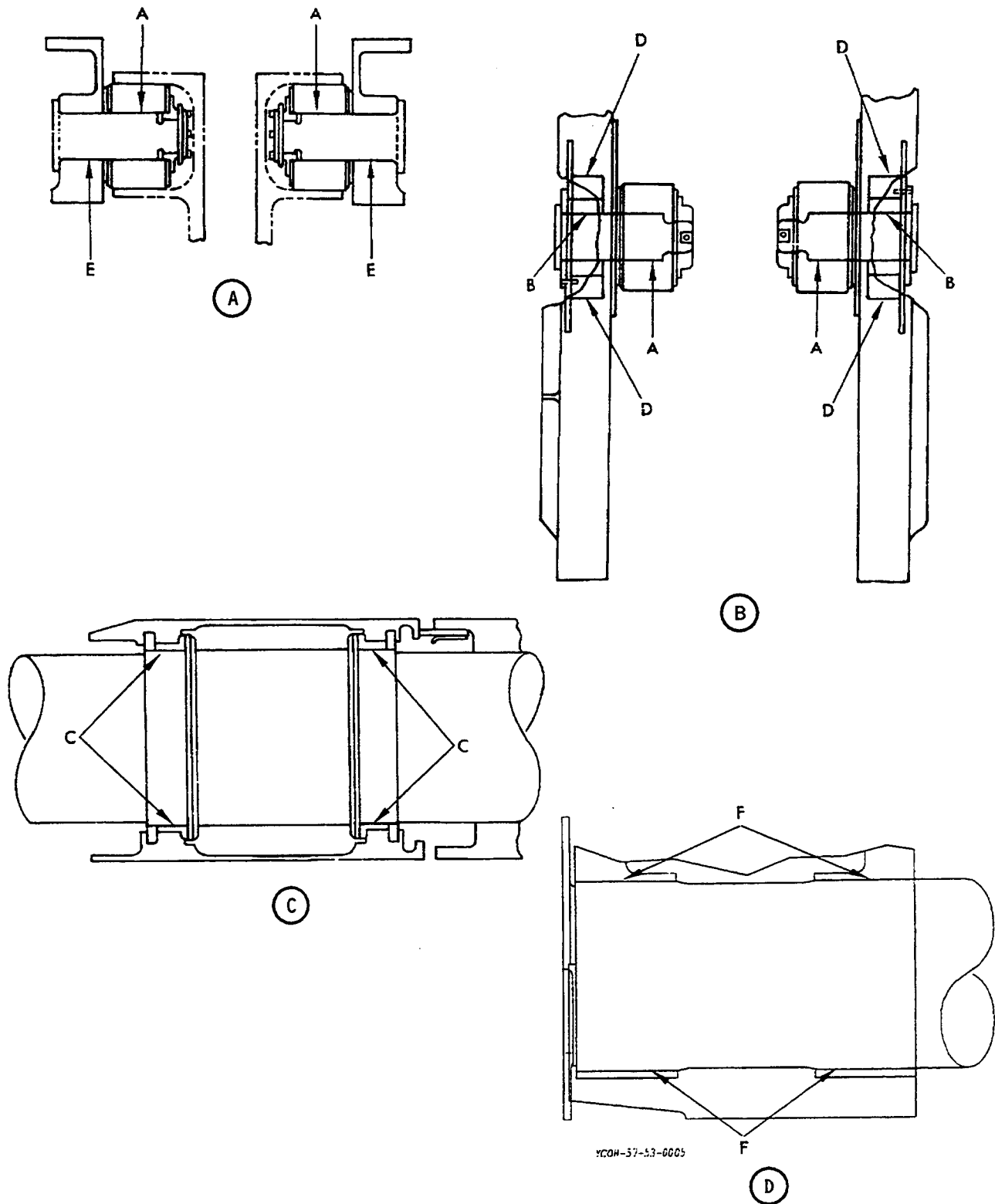
ALL DIMENSIONS ARE IN INCHES

Carriage Roller Adjustment
Figure 3

5. FITS AND CLEARANCES



Fits and Clearances
Figure 4 (Sheet 1)



Fits and Clearances
 Figure 4 (Sheet 2)

OVERHAUL MANUAL

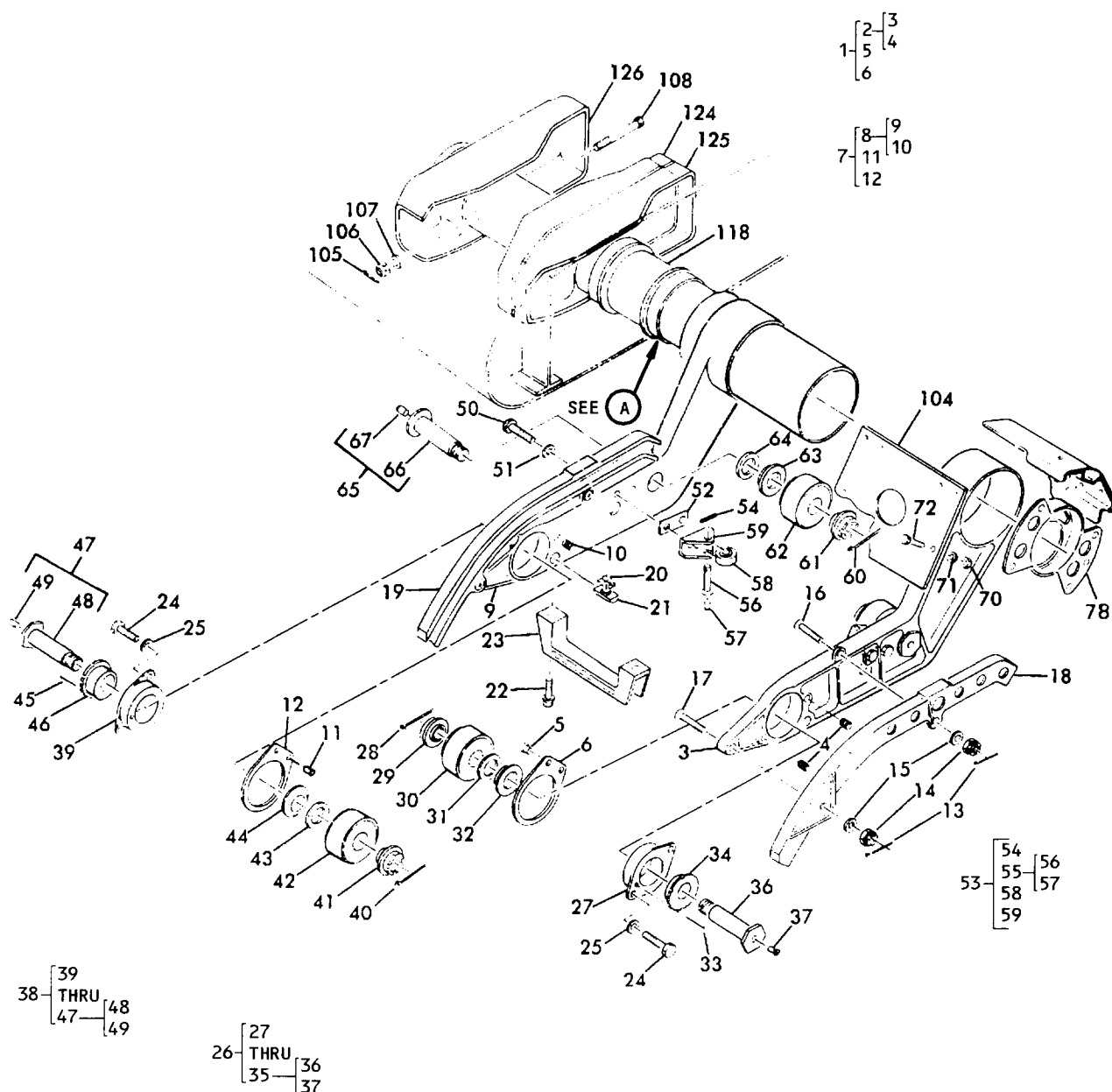
		Design Dimensions				Service Wear Limits		
Ref Letter Fig. 4	Mating Item No. Fig. 5	Dimensions (inches)		Assembly Clearance (inch)		Dimension Limits (inch)		Maximum Allowable Clearance (inch)
		Min	Max	Min	Max	Min	Max	
A	ID 30,42,62	0.8743	0.8750	0.0000	0.0010		0.8765	0.0020
	OD 35,47,65	0.8740	0.8745			0.8723		
B	ID 34,36	0.8745	0.8781	0.0000	0.0041		0.8825	0.0080
	OD 35,47	0.8740	0.8745			0.8665		
C	ID *[1]	3.653	3.655	0.003	0.006		3.658	0.011
	OD 120	3.649	3.650			3.647		
D	ID 3,9	2.2500	2.2520	0.0010	0.0040		2.2570	0.0080
	OD 27,39	2.2480	2.2490			2.2420		
E	ID 3,9	0.8745	0.8775	0.0000	0.0035		0.8805	0.0060
	OD 66	0.8740	0.8745			0.8685		
F	ID 3,9	3.804	3.807	0.003	0.008		3.809	0.0080
	OD 118	3.799	3.801			3.796		

*[1] Bushing 10-60516-271 (Installation part)

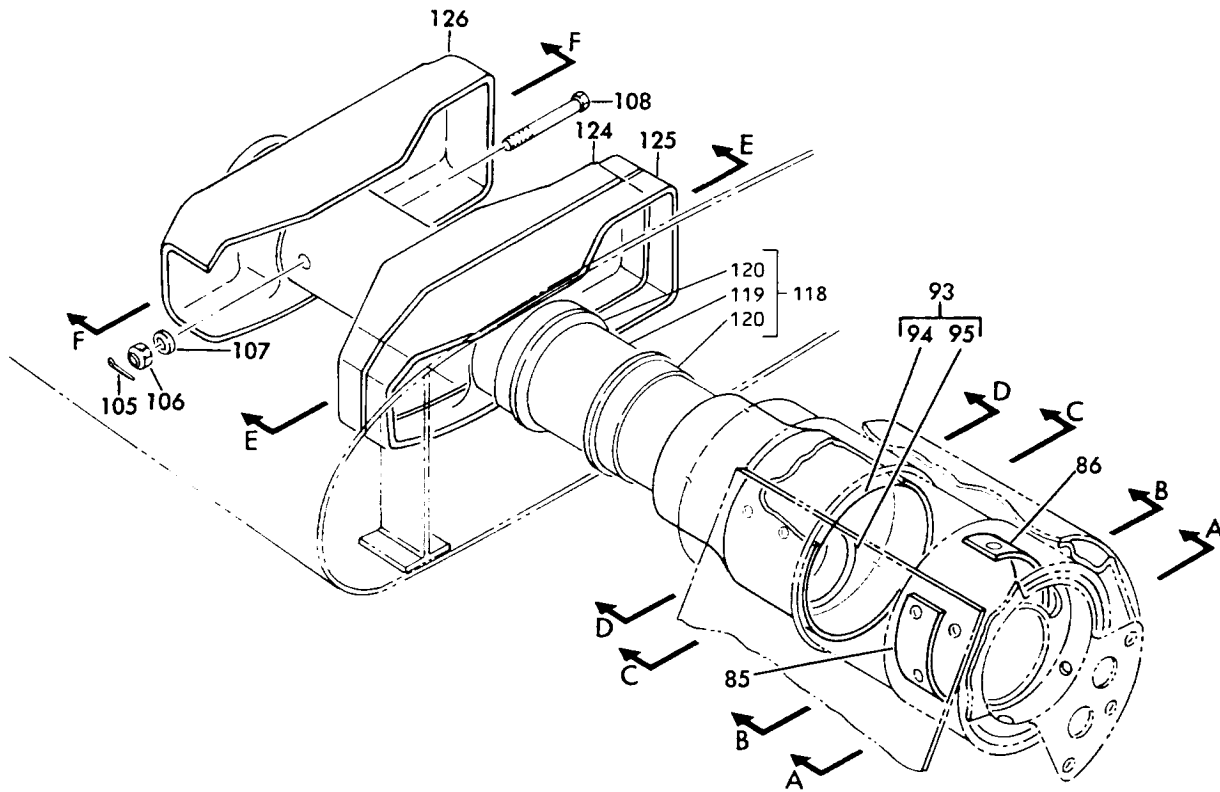
Fits and Clearances
Figure 4 (Sheet 3)

OVERHAUL MANUAL

6. ILLUSTRATED PARTS LIST



Inboard Midflap Carriage Assembly
Figure 5 (Sheet 1)

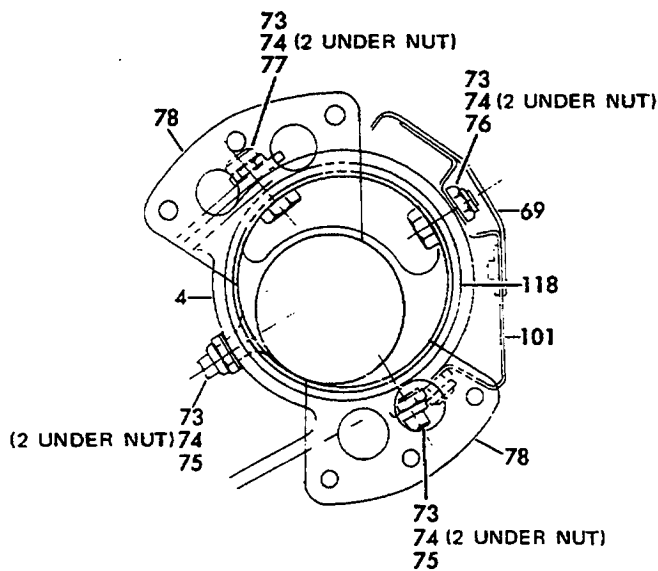


(A)

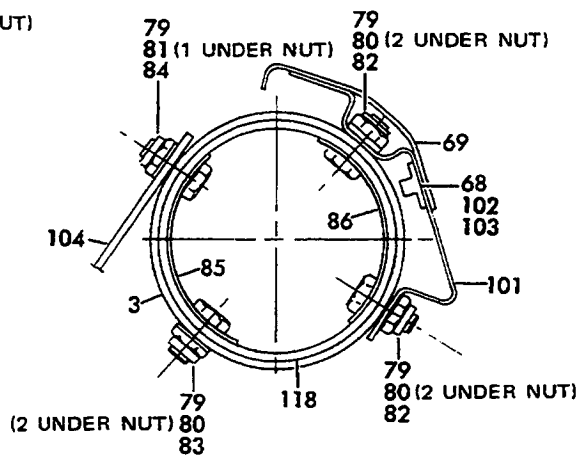
OUTBOARD CARRIAGE INSTALLATION

Inboard Midflap Carriage Assembly
Figure 5 (Sheet 2)

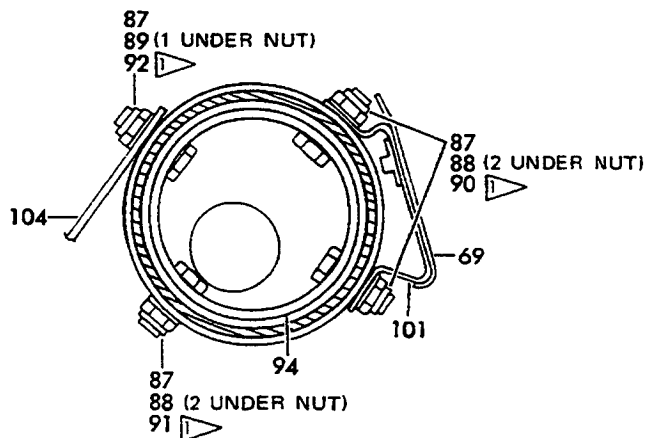
BOEING
COMMERCIAL JET
 OVERHAUL MANUAL



A-A



B-B

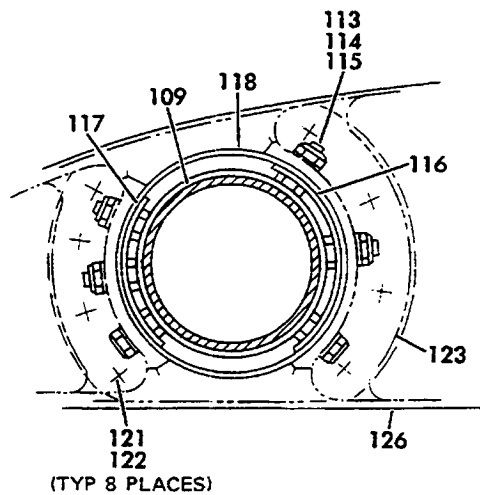
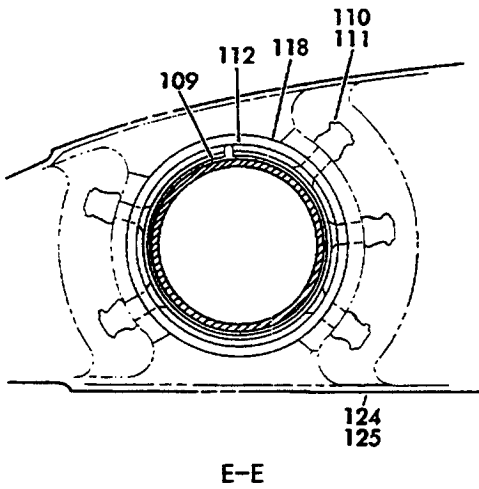
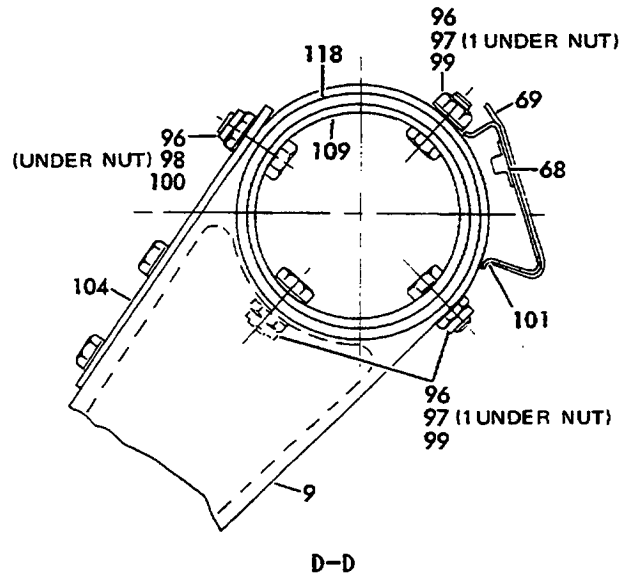


C-C

 OPTIONAL TO INSTALL BOLT WITH BOLT HEAD ON EXTERIOR OF TORQUE TUBE ASSY

Inboard Midflap Carriage Assembly
 Figure 5 (Sheet 3)

OVERHAUL MANUAL



Inboard Midflap Carriage Assembly
Figure 5 (Sheet 4)

OVERHAUL MANUAL

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
5-	65-68297-5		INBOARD MIDFLAP CARRIAGE ASSY (LH)	A	RF
	65-68297-6		INBOARD MIDFLAP CARRIAGE ASSY (RH)	B	RF
	65-68297-7		INBOARD MIDFLAP CARRIAGE ASSY (LH)	C	RF
	65-68297-8		INBOARD MIDFLAP CARRIAGE ASSY (RH)	D	RF
	65-68297-15		INBOARD MIDFLAP CARRIAGE ASSY (LH)	E	RF
	65-68297-16		INBOARD MIDFLAP CARRIAGE ASSY (RH)	F	RF
	65-68297-17		INBOARD MIDFLAP CARRIAGE ASSY (LH)	G	RF
	65-68297-18		INBOARD MIDFLAP CARRIAGE ASSY (RH)	H	RF
1	65-68297-9		. CARRIAGE ASSY	AE	1
1	65-68297-10		. CARRIAGE ASSY	BF	1
1	65-68297-11		. CARRIAGE ASSY (REPLS 65-68297-9)	ACG	1
1	65-68297-12		. CARRIAGE ASSY (REPLS 65-68297-10)	BDH	1
2	65-47856-13		. . CARRIAGE ASSY (USED ON 65-68297-9)		1
2	65-47856-14		. . CARRIAGE ASSY (USED ON 65-68297-10)		1
2	65-67138-1		. . CARRIAGE ASSY (USED ON 65-68297-11)		1
2	65-67138-2		. . CARRIAGE ASSY (USED ON 65-68297-12)		1
3	65-47856-15		. . . CARRIAGE (USED ON 65-47856-13)		1
3	65-47856-16		. . . CARRIAGE (USED ON 65-47856-14)		1
3	65-67138-3		. . . CARRIAGE (USED ON 65-67138-1)		1
3	65-67138-4		. . . CARRIAGE (USED ON 65-67138-2)		1
4	MS21209F4-15		. . . INSERT, HELICAL COIL		2
5	BACR15BA5B		. . RIVET		2
6	69-46447-1		. . STRIP, RUB		1
7	65-68297-9		. CARRIAGE ASSY	BF	1
7	65-68297-10		. CARRIAGE ASSY	AE	1
7	65-68297-11		. CARRIAGE ASSY (REPLS 65-68297-9)	BDH	1
7	65-68297-12		. CARRIAGE ASSY (REPLS 65-68297-10)	ACG	1
8	65-47856-14		. . CARRIAGE ASSY (USED ON 65-68297-10)		1
8	65-47856-13		. . CARRIAGE ASSY (USED ON 65-68297-9)		1
8	65-67138-2		. . CARRIAGE ASSY (USED ON 65-68297-12)		1
8	65-67138-1		. . CARRIAGE ASSY (USED ON 65-68297-11)		1
9	65-47856-15		. . . CARRIAGE (USED ON 65-47856-13)		1
9	65-47856-16		. . . CARRIAGE (USED ON 65-47856-14)		1
9	65-67138-3		. . . CARRIAGE (USED ON 65-67138-1)		1
9	65-67138-4		. . . CARRIAGE (USED ON 65-67138-2)		1
10	MS21209F4-15		. . . INSERT, HELICAL COIL		2

OVERHAUL MANUAL

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
5-					
11	BACR15BA5B		. . RIVET		2
12	69-46447-1		. . STRIP, RUB		1
13	MS24665-153		. PIN, COTTER		4
14	BACN10JD104		. NUT (REPLS AN320-4)		4
15	AN960-416		. WASHER		4
16	BACB30LU4D13		. BOLT (REPLS BACB30ABP4-13)		2
17	BACB30LU4D15		. BOLT (REPLS BACB30ABP4-15)		2
18	69-38848-5		. CAM	ACEG	1
18	69-38848-6		. CAM	BDFH	1
19	69-38848-6		. CAM	ACEG	1
19	69-38848-5		. CAM	BDFH	1
20	NAS5785A		. RETAINER		2
21	NAS5775A		. NUT, BARREL		2
22	BACB30CW5H6		. BOLT		2
23	69-39230-1		. BEAM, CROSS		1
24	BACB30NE4H2		. BOLT (REPLS NAS1304-2H)		4
25	AN960-416L		. WASHER		4
26	69-40659-1		. ROLLER ASSY	ACG	1
26	69-40659-3		. ROLLER ASSY (REPLS 69-40659-1)	ACE	1
26	69-40659-2		. ROLLER ASSY	BDH	1
26	69-40659-4		. ROLLER ASSY (REPLS 69-40659-2)	BDF	1
27	66-24505-5		. . RETAINER (USED ON 69-40659-1)		1
27	66-24505-7		. . RETAINER (USED ON 69-40659-3)		1
27	66-24505-6		. . RETAINER (USED ON 69-40659-2)		1
27	66-24505-8		. . RETAINER (USED ON 69-40659-4)		1
28	MS24665-289		. . PIN, COTTER		1
29	66-19144-2		. . NUT (SB 57-1060)		1
29	66-19144-1		. . NUT (LIMITED)		1
30	YR743-3		. . BEARING, V92563 (SB 57-1060) (LIMITED)		1
30	14AFC1832		. . BEARING, V92563 (PREF)		1
30	BACB10BN14		. . BEARING (REPLS BACB10B136) (LIMITED)		1
31	69-46493-1		. . WASHER, SHIM		1
32	69-46493-2		. . WASHER		1
33	MS16562-35		. . PIN, SPRING		1
34	69-37869-2		. . BUSHING, ECCENTRIC		1
35	66-23236-1		. . BOLT ASSY		1
36	66-23236-3		. . . BOLT		1
37	NAS516-1		. . . FITTING, LUBRICATION		1
38	69-40659-2		. ROLLER ASSY	ACG	1
38	69-40659-4		. ROLLER ASSY (REPLS 69-40659-2)	ACE	1
38	69-40659-1		. ROLLER ASSY	BDH	1
38	69-40659-3		. ROLLER ASSY (REPLS 69-40659-1)	BDF	1
39	66-24505-6		. . RETAINER (USED ON 69-40659-2)		1

OVERHAUL MANUAL

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
5-					
39	66-24505-8		. . RETAINER (USED ON 69-40659-4)		1
39	66-24505-5		. . RETAINER (USED ON 69-40659-1)		1
39	66-24505-7		. . RETAINER (USED ON 69-40659-3)		1
40	MS24665-289		. . PIN, COTTER		1
41	66-19144-2		. . NUT (SB 57-1060)		1
41	66-19144-1		. . NUT (LIMITED)		1
42	YR743-3		. . BEARING, V92563 (SB 57-1060) (LIMITED)		1
42	14AFC1832		. . BEARING, V92563 (PREF)		1
42	BACB10BN14		. . BEARING (REPLS BACB10B136) (LIMITED)		1
43	69-46493-1		. . WASHER, SHIM		1
44	69-46493-2		. . WASHER		1
45	MS16562-35		. . PIN, SPRING		1
46	69-37869-2		. . BUSHING, ECCENTRIC		1
47	66-23236-1		. . BOLT ASSY		1
48	66-23236-3		. . . BOLT		1
49	NAS516-1		. . . FITTING, LUBRICATION		1
50	BACB30NE4H6		. BOLT (REPLS NAS1304-6H)		4
51	BACW10BN4C		. WASHER (REPLS BACW10AK-C4)		4
52	BACS40R09W17		. SHIM		2
53	66-23233-1		. ROLLER ASSY	A-DGH	2
53	65C16949-1		. ROLLER ASSY (OPT)	AB	2
53	65C16949-1		. ROLLER ASSY	EF	2
54	MS16562-216		. . PIN, SPRING		1
55	66-23220-1		. . BOLT ASSY		1
56	66-23220-3		. . . BOLT		1
57	NAS516-1		. . . FITTING, LUBRICATION		1
58	BACB10BN06		. . BEARING (REPLS BACB10B132) (USED ON 66-23233-1)		1
58	BACB10ET06		. . BEARING (USED ON 65C16949-1)		1
59	69-37860-1		. . BRACKET(USED ON 66-23233-1)		1
59	65C16949-2		. . BRACKET (USED ON 65C16949-1)		1
60	MS24665-287		. PIN, COTTER		2
61	66-19144-2		. NUT (SB 57-1060)		2
61	66-19144-1		. NUT (LIMITED)		2
62	YR743-3		. BEARING, V92563 (SB 57-1060)		2
62	BACB10BN14		. BEARING (REPLS BACB10B136) (LIMITED)		2
63	69-46493-1		. WASHER		2
64	NAS1252-1416H		. WASHER		2
65	66-23236-1		. BOLT ASSY		2
66	66-23236-3		. . BOLT		2
67	NAS516-1		. . FITTING, LUBRICATION		2

OVERHAUL MANUAL

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
5-68	BACB30LU3-2		. BOLT		4
69	69-44969-12		. PLATE, BUMPER	ACEG	1
69	69-44969-11		. PLATE, BUMPER	BDFH	1
70	BACN10JC5		. NUT (REPLS NAS679A5)		4
71	AN960PD516		. WASHER		4
72	NAS1105-5		. BOLT		4
73	BACN10JC6		. NUT (REPLS NAS679A6)		4
74	AN960PD616L		. WASHER		8
75	BACB30LU6-8		. BOLT		2
76	NAS1106-7		. BOLT		1
77	NAS1106-8		. BOLT		1
78	69-37209-5		. SUPPORT, BEARING	AC	1
78	69-37209-6		. SUPPORT, BEARING	BD	1
78	69-37209-7		. SUPPORT, BEARING (OPT)	A	1
78	69-37209-7		. SUPPORT, BEARING	EG	1
78	69-37209-8		. SUPPORT, BEARING (OPT)	B	1
78	69-37209-8		. SUPPORT, BEARING	FH	1
79	BACN10JC6		. NUT (REPLS NAS679A6)		4
80	AN960PD616L		. WASHER		6
81	AN960PD616		. WASHER		1
82	NAS1106-6		. BOLT		2
83	NAS1106-5		. BOLT		1
84	NAS1106-7		. BOLT		1
85	69-40642-5		. WASHER, STRAP		1
86	69-40642-6		. WASHER, STRAP		1
87	BACN10JC6		. NUT (REPLS NAS679A6)		4
88	AN960PD616L		. WASHER		6
89	AN960PD616		. WASHER		1
90	NAS1106-10		. BOLT		2
91	NAS1106-9		. BOLT		1
92	NAS1106-11		. BOLT		1
93	69-37208-7		. SUPPORT ASSY, BEARING	AC	1
93	69-37208-8		. SUPPORT ASSY, BEARING	BD	1
93	69-37208-13		. SUPPORT ASSY, BEARING (OPT)	A	1
93	69-37208-13		. SUPPORT ASSY, BEARING	EG	1
93	69-37208-14		. SUPPORT ASSY, BEARING (OPT)	B	1
93	69-37208-14		. SUPPORT ASSY, BEARING	FH	1
94	69-37208-9		. . SUPPORT (USED ON 69-37208-7)		1
94	69-37208-10		. . SUPPORT (USED ON 69-37208-8)		1
94	69-37208-15		. . SUPPORT (USED ON 69-37208-13)		1
94	69-37208-16		. . SUPPORT (USED ON 69-37208-14)		1
95	66-23226-1		. . BUSHING		1
96	BACN10JC6		. NUT (REPLS NAS679A6)		4
97	AN960PD616L		. WASHER		3
98	AN960PD616		. WASHER		1
99	NAS1106-6		. BOLT		3
100	NAS1106-8		. BOLT		1
101	69-44969-6		. SUPPORT, BUMPER	ACEG	1

OVERHAUL MANUAL

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE							USE CODE	QTY PER ASSY
			1	2	3	4	5	6	7		
5-											
101	69-44969-5		.							BDFH	1
102	BACR15BA3D		.								8
103	BACN10JR3F		.								4
104	69-39233-4		.							ABEF	1
104	69-39233-3		.							CDGH	1
105	MS24665-134		.								1
106	BACN10JD5		.								1
107	AN960PD516		.								1
108	NAS1105-58D		.								1
109	69-54984-1		.							ACEG	1
109	69-54984-2		.							BDFH	1
110	BACC30M10		.								10
111	BACB30FN10-9		.								10
112	69-54987-1		.							ACEG	1
112	69-54987-2		.							BDFH	1
113	BACN10JC4		.								6
114	AN960PD416		.								6
115	NAS1104-6		.								6
116	69-40642-7		.								1
117	69-40642-8		.								1
118	65-68296-1		.							ACEG	1
118	65-68296-2		.							BDFH	1
119	65-68296-3		.	.						ACEG	1
119	65-68296-4		.	.						BDFH	1
120	65-68296-5		.	.							2
121	BACC30K8		.								8
122	BACB30GW8-7		.								8
123	69-54986-1		.							ACEG	1
123	69-54986-2		.							BDFH	1
124	65-71901-3		.							ACEG	1
124	65-71901-4		.							BDFH	1
125	65-71901-4		.							ACEG	1
125	65-71901-3		.							BDFH	1
126	65-68298-3		.							ACEG	1
126	65-68298-4		.							BDFH	1

*[1] WHEN INSTALLED IN THE MIDFLAP THIS PART BECOMES A PART OF THE PERMANENT STRUCTURE, AND POSSIBLY COULD NOT BE INCLUDED WITH THE FLAP CARRIAGE ASSEMBLY WHEN IT COMES IN FOR OVERHAUL.

VENDORS

V92563 MCGILL MANUFACTURING COMPANY, INC., BEARINGS DIVISION, 907
LAFAYETTE, VALPARAISO, INDIANA 46383-4210

Part No.	Fig. and Index No.	Qty. per Assy.
AN960-416	5-15	4
AN960-416L	25	4
AN960PD416	114	6
AN960PD516	107	1
AN960PD516	71	4
AN960PD616	81	1
AN960PD616	89	1
AN960PD616	98	1
AN960PD616L	74	8
AN960PD616L	80	6
AN960PD616L	88	6
AN960PD616L	97	3
BACB10BN06	58	1
BACB10BN14	30	1
BACB10BN14	42	1
BACB10BN14	62	2
BACB10ET06	58	1
BACB30CW5H6	22	2
BACB30FN10-9	111	10
BACB30GW8-7	122	8
BACB30LU3-2	68	4
BACB30LU4D13	16	2
BACB30LU4D15	17	2
BACB30LU6-8	75	2
BACB30NE4H2	24	4
BACB30NE4H6	50	4
BACC30K8	121	8
BACC30M10	110	10
BACN10JC4	113	6
BACN10JC5	70	4
BACN10JC6	73	4
BACN10JC6	79	4
BACN10JC6	87	4
BACN10JC6	96	4
BACN10JD104	14	4
BACN10JD5	106	1
BACN10JR3F	103	4
BACR15BA3D	102	8
BACR15BA5B	11	2
BACR15BA5B	5	2
BACS40R09W17	52	2
BACW10BN4C	51	4
MS16562-216	54	1
MS16562-35	33	1
MS16562-35	45	1
MS21209F4-15	10	2
MS21209F4-15	4	2

Part No.	Fig. and Index No.	Qty. per Assy.
MS24665-134	105	1
MS24665-153	13	4
MS24665-287	60	2
MS24665-289	28	1
MS24665-289	40	1
NAS1104-6	115	6
NAS1105-5	72	4
NAS1105-58D	108	1
NAS1106-10	90	2
NAS1106-11	92	1
NAS1106-5	83	1
NAS1106-6	82	2
NAS1106-6	99	3
NAS1106-7	76	1
NAS1106-7	84	1
NAS1106-8	100	1
NAS1106-8	77	1
NAS1106-9	91	1
NAS1252-1416H	64	2
NAS516-1	37	1
NAS516-1	49	1
NAS516-1	57	1
NAS516-1	67	2
NAS5775A	21	2
NAS5785A	20	2
YR743-3	30	1
YR743-3	42	1
YR743-3	62	2
14AFC1832	30	1
14AFC1832	42	1
65-47856-13	2	1
65-47856-13	8	1
65-47856-14	2	1
65-47856-14	8	1
65-47856-15	3	1
65-47856-15	9	1
65-47856-16	3	1
65-47856-16	9	1
65-67138-1	2	1
65-67138-1	8	1
65-67138-2	2	1
65-67138-2	8	1
65-67138-3	3	1
65-67138-3	9	1
65-67138-4	3	1
65-67138-4	9	1
65-68296-1	118	1

Part No.	Fig. and Index No.	Qty. per Assy.
65-68296-2	5-118	1
65-68296-3	119	1
65-68296-4	119	1
65-68296-5	120	2
65-68297-10	1	1
65-68297-10	7	1
65-68297-11	1	1
65-68297-11	7	1
65-68297-12	1	1
65-68297-12	7	1
65-68297-15		RF
65-68297-16		RF
65-68297-17		RF
65-68297-18		RF
65-68297-5		RF
65-68297-6		RF
65-68297-7		RF
65-68297-8		RF
65-68297-9	1	1
65-68297-9	7	1
65-68298-3	126	1
65-68298-4	126	1
65-71901-3	124	1
65-71901-3	125	1
65-71901-4	124	1
65-71901-4	125	1
65C16949-1	53	2
65C16949-1	53	2
65C16949-2	59	1
66-19144-1	29	1
66-19144-1	41	1
66-19144-1	61	2
66-19144-2	29	1
66-19144-2	41	1
66-19144-2	61	2
66-23220-1	55	1
66-23220-3	56	1
66-23226-1	95	1
66-23233-1	53	2
66-23236-1	35	1
66-23236-1	47	1
66-23236-1	65	2
66-23236-3	36	1
66-23236-3	48	1
66-23236-3	66	2
66-24505-5	27	1
66-24505-5	39	1

Part No.	Fig. and Index No.	Qty. per Assy.
66-24505-6	27	1
66-24505-6	39	1
66-24505-7	27	1
66-24505-7	39	1
66-24505-8	27	1
66-24505-8	39	1
69-37208-10	94	1
69-37208-13	93	1
69-37208-13	93	1
69-37208-14	93	1
69-37208-14	93	1
69-37208-15	94	1
69-37208-16	94	1
69-37208-7	93	1
69-37208-8	93	1
69-37208-9	94	1
69-37209-5	78	1
69-37209-6	78	1
69-37209-7	78	1
69-37209-7	78	1
69-37209-8	78	1
69-37209-8	78	1
69-37860-1	59	1
69-37869-2	34	1
69-37869-2	46	1
69-38848-5	18	1
69-38848-5	19	1
69-38848-6	18	1
69-38848-6	19	1
69-39230-1	23	1
69-39233-3	104	1
69-39233-4	104	1
69-40642-5	85	1
69-40642-6	86	1
69-40642-7	116	1
69-40642-8	117	1
69-40659-1	26	1
69-40659-1	38	1
69-40659-2	26	1
69-40659-2	38	1
69-40659-3	26	1
69-40659-3	38	1
69-40659-4	26	1
69-40659-4	38	1
69-44969-11	69	1
69-44969-12	69	1
69-44969-5	101	1

Part No.	Fig. and Index No.	Qty. per Assy.
69-44969-6	5-101	1
69-46447-1	12	1
69-46447-1	6	1
69-46493-1	31	1
69-46493-1	43	1
69-46493-1	63	2
69-46493-2	32	1
69-46493-2	44	1
69-54984-1	109	1
69-54984-2	109	1
69-54986-1	123	1
69-54986-2	123	1
69-54987-1	112	1
69-54987-2	112	1

Part No.	Fig. and Index No.	Qty. per Assy.