

 **BOEING**  
COMPONENT  
MAINTENANCE MANUAL

TO: ALL HOLDERS OF AILERON CONTROL FEEL MECHANISM ASSEMBLY COMPONENT MAINTENANCE  
MANUAL 27-11-23

REVISION NO. 11 DATED MAR 01/05

HIGHLIGHTS

Pages which have been added or revised are outlined below together with the highlights of the revision. Remove and insert the affected pages as listed and enter Revision No. and date on the Record of Revision Sheet.

CHAPTER/SECTION  
AND PAGE NO.

1038

DESCRIPTION OF CHANGE

Changed effectivity codes for item 592 in IPL.

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HIGHLIGHTS

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# AILERON CONTROL FEEL MECHANISM ASSEMBLY

PART NUMBERS 251T1205-13,-16,-18,-20,-22,  
-25,-27,-29

COMPONENT MAINTENANCE MANUAL  
WITH  
ILLUSTRATED PARTS LIST

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TITLE PAGE

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REVISION RECORD

- Retain this record in front of manual. On receipt of revision, insert revised pages in the manual, and enter revision number, date inserted and initial.

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TEMPORARY REVISION AND SERVICE BULLETIN RECORD

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVE	DATE OF INCORPORATION INTO MANUAL
		PRR B10063-4 PRR B10517-1 PRR B10500-20 PRR B10550 PRR B10450-1 PRR B11857	APR 10/82 JAN 10/83 JAN 10/83 JUL 10/83 JUL 10/83 JUL 01/89

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TR & SB RECORD

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602	JUL 10/86	01.1	1012	NOV 01/99	01.1
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## INTRODUCTION

The instructions in this manual provide the information necessary to perform maintenance functions ranging from simple checks and replacement to complete shop-type repair.

This manual is divided into separate sections:

- |  |                              |
|--|------------------------------|
| 1. Title Page                                      | 4. List of Effective Pages   |
| 2. Record of Revisions                             | 5. Table of Contents         |
| 3. Temporary Revision &<br>Service Bulletin Record | 6. Introduction              |
|  | 7. Procedures & IPL Sections |

Refer to the Table of Contents for the page location of applicable sections. An asterisked flagnote \*[ ] in place of the page number indicates that no special instructions are provided since the function can be performed using standard industry practices.

The beginning of the REPAIR section includes a list of the separate repairs, a list of applicable standard Boeing practices, and an explanation of the True Position Dimensioning symbols used.

An explanation of the use of the Illustrated Parts List is provided in the Introduction of that section.

All weights and measurements used in the manual are in English units, unless otherwise stated. When metric equivalents are given they will be in parentheses following the English units.

Design changes, optional parts, configuration differences and Service Bulletin modifications create alternate part numbers. These are identified in the Illustrated Parts List (IPL) by adding an alphabetical character to the basic item number. The resulting item number is called an alpha-variant. Throughout the manual, IPL basic item number references also apply to alpha-variants unless otherwise indicated.

Verification:

Disassembly	MAR 3/83
Assembly	MAR 3/83

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INTRODUCTION

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AILERON CONTROL FEEL MECHANISM ASSEMBLY

DESCRIPTION AND OPERATION

1. Description

A. The aileron control feel mechanism assembly consists of an electrically-powered trim actuator mounted on a feel assembly. The feel assembly consists of an actuator lever assembly, connecting control rod, trim and output lever assemblies, a quadrant assembly, and a cam follower assembly, all mounted in a housing assembly.

2. Operation

A. Rotation of the cockpit control wheel provides input to the feel mechanism quadrant assembly via control cables. The cam rotates with the quadrant, forcing the cam follower out of the neutral detent position. Two centering springs attached to the cam follower provide the load felt at the control wheel. When the wheel is released, the springs act to return the cam to neutral, thereby centering the unit.

B. The actuator controls lateral trim by rotating the trim lever and quadrant assemblies as a unit. The cam follower remains in the detent to maintain system neutral position.

3. Leading Particulars

A. Length -- 24 inches

B. Width -- 10 inches

C. Height -- 20 inches

D. Weight -- 20 pounds

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DISASSEMBLY

NOTE: Disassemble this component only as necessary to complete fault isolation, determine the serviceability of parts, perform required repairs, and restore the unit in serviceable condition.

1. Disassembly (IPL Fig. 1)

A. On assemblies 256T1205-16 thru -29 only, remove parts (21 thru 24H).

B. Remove parts (5 thru 20, 35) and remove actuator (25A).

NOTE: Refer to manufacturer's instructions for disassembly and repair of actuator.

C. Remove parts (45 thru 60A, 80) and remove actuator lever assembly (40A).

NOTE: Do not remove bearings (65, 70) from actuator lever assembly unless necessary for repair or replacement.

D. Remove parts (110, 115, 130) and remove cover assembly (105).

E. Remove parts (90 thru 100A) and remove rod assembly (85A).

NOTE: Refer to 27-00-11 for repair of rod assembly.

F. Remove nut (610B) and washer (615B) to release tension on springs (595, 600). Remove clevis (620) from trim lever (680) and remove washers (617, 618A). Remove parts (580A thru 590A) to remove springs. Separate springs and spring retainers (605).

G. Remove nut (175A) and washer (180A) from shaft of quadrant assembly (435A).

H. On assemblies 256T1205-16 thru -29 only, remove parts (26 thru 29).

CAUTION: INDIVIDUAL PARTS WHICH MAKE UP HOUSING ASSEMBLY (200B) COMPRISE A MATCHED SET. IF ANY PART IS UNUSABLE, HOUSING MUST BE REPLACED AS A UNIT, EXCEPT AS INDICATED IN REPAIR 4-1.

I. Remove parts (223 thru 225A and 248 thru 250A) and remove support brackets (410, 415) and associated parts.

J. Remove parts (196 thru 199).

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- K. Remove parts (135, 140) and remove bearing cap assembly (185) and shim (182), if installed.

NOTE: Do not remove bearing (190) from bearing cap unless necessary for repair or replacement.

Do not separate support brackets (410, 415) and shim (412) unless necessary for repair or replacement.

- L. Remove parts (420A thru 430A) to loosen cam (665) on shaft assembly (455), then remove quadrant assembly (435A) from housing.

NOTE: Do not disassemble quadrant assembly unless necessary for repair or replacement.

- M. Remove bearing (575) and cam (665) from inside lever assembly (670).

- N. Remove parts (296 thru 298A) and remove support bracket (300). Remove bearing (570).

- O. Remove trim lever assembly (670) from housing and remove bearing (570).

NOTE: Do not disassemble housing assembly any further unless necessary for repair.

- P. Remove parts (625A thru 645) and remove cam follower assembly (650) from trim lever and bearing (647A) from cam follower.

NOTE: Do not remove bearing (655) from cam follower assembly or bearing (675) from trim lever assembly (670) unless necessary for repair or replacement. Do not remove bolt (690), collar (695), lever (700) or bearing (710) from trim lever assembly (685) unless necessary for repair or replacement.

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CLEANING

1. Clean all parts using standard industry practices and information contained in 20-30-03, except as noted in Par. 2.
2. Clean teflon-sealed or -lined bearings (65, 70, 190, 520, 570, 575, 647A, 655, 675, 710, IPL Fig. 1) according to manufacturer's instructions.

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CHECK

1. Check all parts for obvious defects in accordance with standard industry practices.
2. Refer to FITS AND CLEARANCES for design dimensions and wear limits.
3. Magnetic particle check the following parts (Ref IPL Fig. 1) per 20-20-01.
  - A. Bushing (35, 80, 645)
  - B. Cam (665)
  - C. Clevis (620)
  - D. Shaft (480, 485)
  - E. Spring (595, 600)
4. Penetrant check the following parts (Ref IPL Fig. 1) per 20-20-02.
  - A. Bracket (215, 235, 240A, 260, 265A, 268, 300, 305, 385, 410, 415)
  - B. Cap (195)
  - C. Follower (660)
  - D. Lever (75A, 540, 545, 680, 700, 715)
  - E. Quadrant (450A, 565)
  - F. Retainer (605)
  - G. Support assemblies (270, 275)
5. Check splines for uneven wear.

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CHECK

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**CAUTION:** DO NOT EXTEND SPRINGS (595 OR 600) BEYOND THEIR RESPECTIVE LIMITS SHOWN BELOW OR PERMANENT SET MAY RESULT.

Item No. IPL Fig. 1	Maximum Extension (inches)	Item No. IPL Fig. 1	Maximum Extension (inches)
595	8.0	600	8.0
595A	6.91	600A	7.37
595B	6.31	600B	6.78
595C	6.33		

6. Check springs (595, 600, IPL Fig. 1) for load limits per Fig. 501.

Item No. IPL Fig. 1	Test Length (Inches)	Allowable Load Limit (Pounds)
595	5.115	9.5 - 10.5
	6.705	59.0 - 72.4
595A	5.120	10.70 - 11.70
	6.390	59.00 - 72.4
595B	4.780	13.15 - 14.55
	5.680	60.10 - 66.50
595C	4.829	13.15 - 14.55
	5.695	58.33 - 64.53
600	5.555	9.5 - 10.5
	7.145	59.0 - 72.4
600A	5.550	10.70 - 11.70
	6.830	59.00 - 72.40
600B	5.220	13.15 - 14.55
	6.100	59.20 - 65.40

Tension Spring Check  
Figure 501

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CHECK  
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REPAIR – GENERAL1. Content

- A. Repair, refinish and replacement procedures are included in separate repair sections as follows:

<u>P/N</u>	<u>NAME</u>	<u>REPAIR</u>
251T1203	SHAFT	1-1
251T1204	QUADRANT	2-1
251T1206	LEVER	3-1
251T1207	HOUSING	4-1
251T1212	QUADRANT	5-1
251T1218	BRACKET, SUPPORT	6-1
251T1299	BRACKET, SUPPORT	6-1
251T1224	SHAFT, INNER	7-1
251T1225	SHAFT, OUTER	8-1
251T1227	FOLLOWER, CAM	9-1
251T1228	LEVER, TRIM	10-1
251T1297	LEVER, TRIM	10-1
251T1300	LEVER, TRIM	10-1
251T1230	CAP, BEARING	11-1
251T1260	LEVER, ACTUATOR	12-1
251T1262	QUADRANT	13-1
--	MISC PARTS REFINISH	14-1
251T1254	CLEVIS	15-1
251T1258	BRACKET, PIVOT	16-1
251T1261	BRACKET, ACTUATOR	16-1

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## 2. Standard Practices

- A. Refer to the following standard practices as applicable, for details of procedures in individual repairs.

20-30-02 Stripping of Protective Finishes  
20-30-03 General Cleaning Procedures  
20-41-01 Decoding Table for Boeing Finish Codes  
20-41-02 Application of Chemical and Solvent Resistant Finishes  
20-42-03 Hard Chrome Plating  
20-42-05 Bright Cadmium Plating  
20-43-01 Chromic Acid Anodizing  
20-50-03 Bearing Installation and Retention  
20-50-08 Application of Dry Lubricant

## 3. Materials

NOTE: Equivalent substitutes may be used.

- A. Grease -- BMS 3-24 (Ref 20-60-03)  
B. Sealant -- BMS 5-95 (Ref 20-60-04)  
C. Primer -- BMS 10-11, type 1 (Ref 20-60-02)  
D. Enamel -- BMS 10-11, type 2, color BAC707 gray gloss (Ref 20-60-02)  
E. Dry Film Lubricant -- MIL-L-8937 (Ref 20-60-03)

## 4. Dimensioning Symbols

- A. Standard True Position Dimensioning Symbols used in applicable repair procedures are shown in Fig. 601.

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## COMPONENT MAINTENANCE MANUAL

- STRAIGHTNESS
- ▭ FLATNESS
- ⊥ PERPENDICULARITY (OR SQUARENESS)
- // PARALLELISM
- ROUNDNESS
- ⊘ CYLINDRICITY
- ⌒ PROFILE OF A LINE
- ⌒ PROFILE OF A SURFACE
- ◎ CONCENTRICITY
- ≡ SYMMETRY
- ∠ ANGULARITY
- ↗ RUNOUT
- ↗ TOTAL RUNOUT
- ⊏ COUNTERBORE OR SPOTFACE
- ∇ COUNTERSINK

- ⊕ THEORETICAL EXACT POSITION OF A FEATURE (TRUE POSITION)
- ∅ DIAMETER
- S ∅ SPHERICAL DIAMETER
- R RADIUS
- SR SPHERICAL RADIUS
- ( ) REFERENCE
- BASIC (BSC) OR DIM A THEORETICALLY EXACT DIMENSION USED TO DESCRIBE SIZE, SHAPE OR LOCATION OF A FEATURE FROM WHICH PERMISSIBLE VARIATIONS ARE ESTABLISHED BY TOLERANCES ON OTHER DIMENSIONS OR NOTES.
- A- DATUM
- Ⓜ MAXIMUM MATERIAL CONDITION (MMC)
- Ⓛ LEAST MATERIAL CONDITION (LMC)
- Ⓢ REGARDLESS OF FEATURE SIZE (RFS)
- Ⓟ PROJECTED TOLERANCE ZONE
- FIM FULL INDICATOR MOVEMENT

### EXAMPLES

<p><span style="border: 1px solid black; padding: 2px;">— 0.002</span> STRAIGHT WITHIN 0.002</p> <p><span style="border: 1px solid black; padding: 2px;">⊥ 0.002 B</span> PERPENDICULAR TO B WITHIN 0.002</p> <p><span style="border: 1px solid black; padding: 2px;">// 0.002 A</span> PARALLEL TO A WITHIN 0.002</p> <p><span style="border: 1px solid black; padding: 2px;">○ 0.002</span> ROUND WITHIN 0.002</p> <p><span style="border: 1px solid black; padding: 2px;">⊘ 0.010</span> CYLINDRICAL SURFACE MUST LIE BETWEEN TWO CONCENTRIC CYLINDERS, ONE OF WHICH HAS A RADIUS 0.010 INCH GREATER THAN THE OTHER</p> <p><span style="border: 1px solid black; padding: 2px;">⌒ 0.006 A</span> EACH LINE ELEMENT OF THE SURFACE AT ANY CROSS SECTION MUST LIE BETWEEN TWO PROFILE BOUNDARIES 0.006 INCH APART RELATIVE TO DATUM PLANE A</p> <p><span style="border: 1px solid black; padding: 2px;">⌒ 0.020 A</span> SURFACES MUST LIE WITHIN PARALLEL BOUNDARIES 0.02 INCH APART AND EQUALLY DISPOSED ABOUT TRUE PROFILE</p>	<p><span style="border: 1px solid black; padding: 2px;">◎ ∅ 0.0005 C</span> CONCENTRIC TO C WITHIN 0.0005 DIAMETER</p> <p><span style="border: 1px solid black; padding: 2px;">≡ 0.010 A</span> SYMMETRICAL WITH A WITHIN 0.010</p> <p><span style="border: 1px solid black; padding: 2px;">∠ 0.005 A</span> ANGULAR TOLERANCE 0.005 WITH A</p> <p><span style="border: 1px solid black; padding: 2px;">⊕ ∅ 0.002 Ⓢ B</span> LOCATED AT TRUE POSITION WITHIN 0.002 DIA RELATIVE TO DATUM B, REGARDLESS OF FEATURE SIZE</p> <p><span style="border: 1px solid black; padding: 2px;">⊥ ∅ 0.010 Ⓜ A</span> <span style="border: 1px solid black; padding: 2px;">0.510 Ⓟ</span> AXIS IS TOTALLY WITHIN A CYLINDER OF 0.010-INCH DIAMETER, PERPENDICULAR TO, AND EXTENDING 0.510-INCH ABOVE, DATUM A, MAXIMUM MATERIAL CONDITION</p> <p><span style="border: 1px solid black; padding: 2px;">2.000</span> THEORETICALLY EXACT DIMENSION IS 2.000</p> <p style="text-align: center;">OR</p> <p style="text-align: center;">2.000 BSC</p> <p><span style="border: 1px solid black; padding: 2px;">0.020 A</span> <span style="border: 1px solid black; padding: 2px;">A 0.020</span> NOTE: DATUM MAY APPEAR AT EITHER SIDE OF TOLERANCE FRAME</p>
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True Position Dimensioning Symbols  
Figure 601

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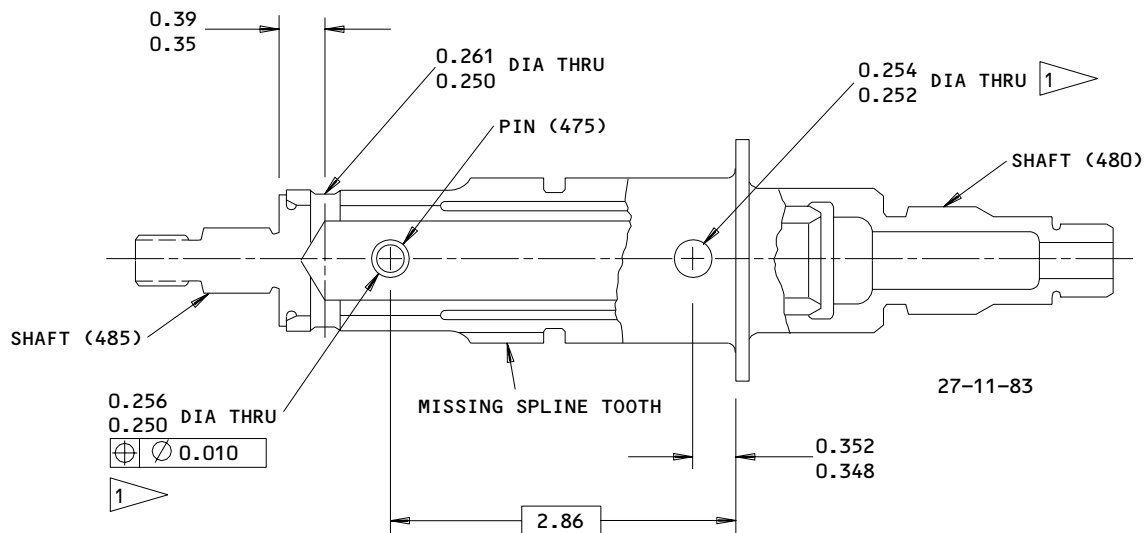
SHAFT ASSEMBLY – REPAIR 1-1

251T1203-2

**NOTE:** Refer to REPAIR – GENERAL for list of applicable standard practices. For repair of surfaces which may only require stripping and restoration of original finish, refer to Refinish instructions in Repairs 7-1 and 8-1.

1. Parts Replacement (Fig. 601)

- A. Remove spring pin (475, IPL Fig. 1) from shaft assembly (455) and separate inner and outer shafts (485, 480).
- B. Drill holes in replacement shaft as required.
  - (1) If inner shaft is being replaced, use existing holes in outer shaft as a pattern.
  - (2) If outer shaft is being replaced, drill holes as shown in the figure, using measurements taken off inner shaft, as required.
- C. Apply BMS 5-95 sealant on faying surfaces and assemble shafts. Install new spring pin to secure assembly.



1 HOLES LOCATED AT 90° TO MISSING SPLINE TOOTH

Shaft Assembly – Parts Replacement  
 Figure 601

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QUADRANT ASSEMBLY – REPAIR 2-1

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NOTE: Refer to REPAIR – GENERAL for list of applicable standard practices.

1. Parts Replacement (IPL Fig. 1)

## A. Disassemble quadrant assembly (435A).

- (1) Remove parts (440, 445), then remove quadrant (450A) from shaft assembly (455).
- (2) Remove parts (490 thru 510), then remove lever assembly (515) from shaft.
- (3) Remove parts (460 thru 470A), then remove quadrant assembly (550) from shaft.

## B. Re-assemble with repaired or replacement parts (Fig. 601).

- (1) Apply BMS 3-24 grease to splines and mating surfaces of quadrant (450A), shaft assembly (455), lever assembly (515), and quadrant assembly (550) prior to assembly.
- (2) Install quadrant assembly (550) on shaft assembly (455) and secure with parts (460 thru 470A).
- (3) Install lever assembly (515) on shaft. Check that parts are aligned per Fig. 601, then install parts (490 thru 500A). Tighten nut (500A) to clamp spline.
- (4) If new quadrant assembly (550) has been installed in step (2), drill bolt holes in quadrant, using holes in lever assembly as a pattern.
- (5) Install parts (505, 510) with sealant, BMS 5-95 (F-19.48).
- (6) Position quadrant (450A) on shaft as shown.
- (7) If new lever assembly has been installed in step 1.B.(3), hold quadrant (450A) in position and drill bolt holes in lever, using holes in quadrant as a pattern.
- (8) Install parts (440, 445) with sealant, BMS 5-95 (F-19.48) to secure assembly.

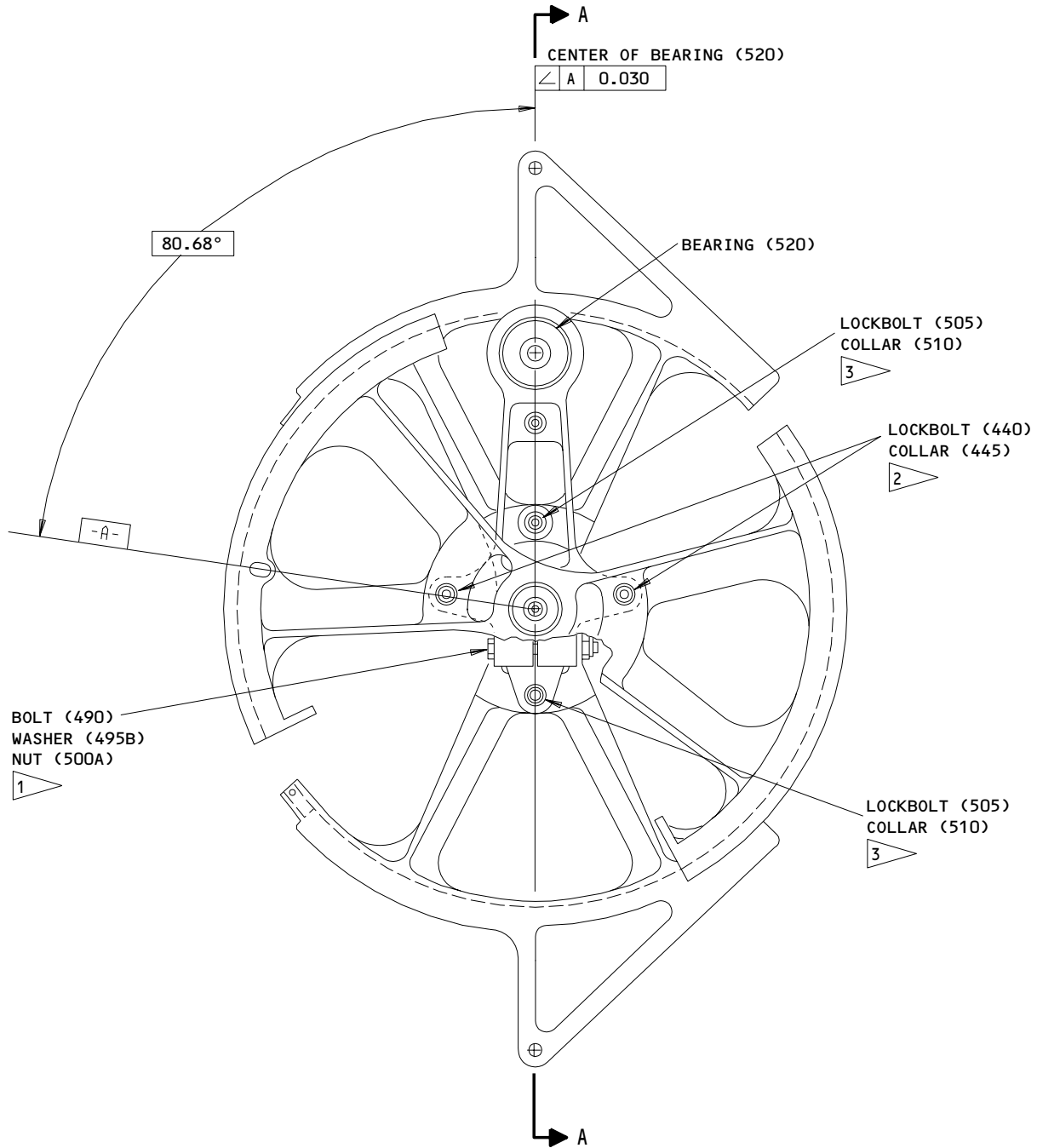
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Quadrant Assembly - Parts Replacement  
 Figure 601 (Sheet 1)

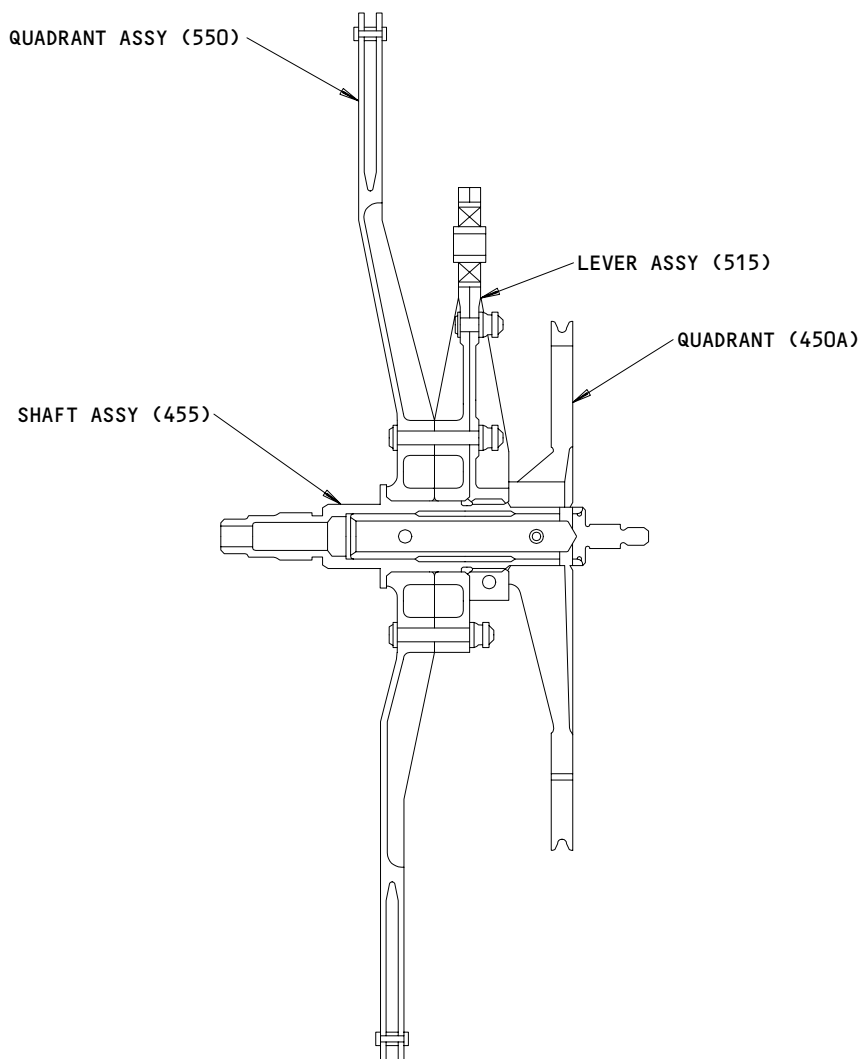
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REPAIR 2-1

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01.1



A-A

- 1 TIGHTEN BOLT PRIOR TO MACHINING HOLES
- 2 DRILL 0.250-0.254 HOLES IN REPLACEMENT LEVER ASSY (515). USE HOLES IN QUADRANT (450A) AS A PATTERN
- 3 DRILL 0.250-0.254 HOLES IN REPLACEMENT QUADRANT ASSY (550). USE HOLES IN LEVER ASSY (515) AS A PATTERN

251T1204-4

Quadrant Assembly - Parts Replacement  
 Figure 601 (Sheet 2)

27-11-23

REPAIR 2-1

01

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LEVER ASSEMBLY – REPAIR 3-1

251T1206-1

NOTE: Refer to REPAIR – GENERAL for list of applicable standard practices. For repair of surfaces which may only require stripping and restoration of original finish, refer to Refinish instruction, Fig. 601.

1. Bearing Replacement (Fig. 601)

- A. Remove bearing (520, IPL Fig. 1) and sleeve (525) from lever assembly (515).
- B. Restore colored chemical coating (F-17.10) on bore.
- C. Install new bearing and sleeve with wet BMS 5-95 sealant. Check that gap in sleeve is oriented as shown. Roller swage sleeve over housing and bearing.
- D. Fill sleeve gap with sealant.

2. Lever Replacement

NOTE: Levers (540, 545) are bonded and lockbolted together and are not intended to be separated. Replace levers as a unit.

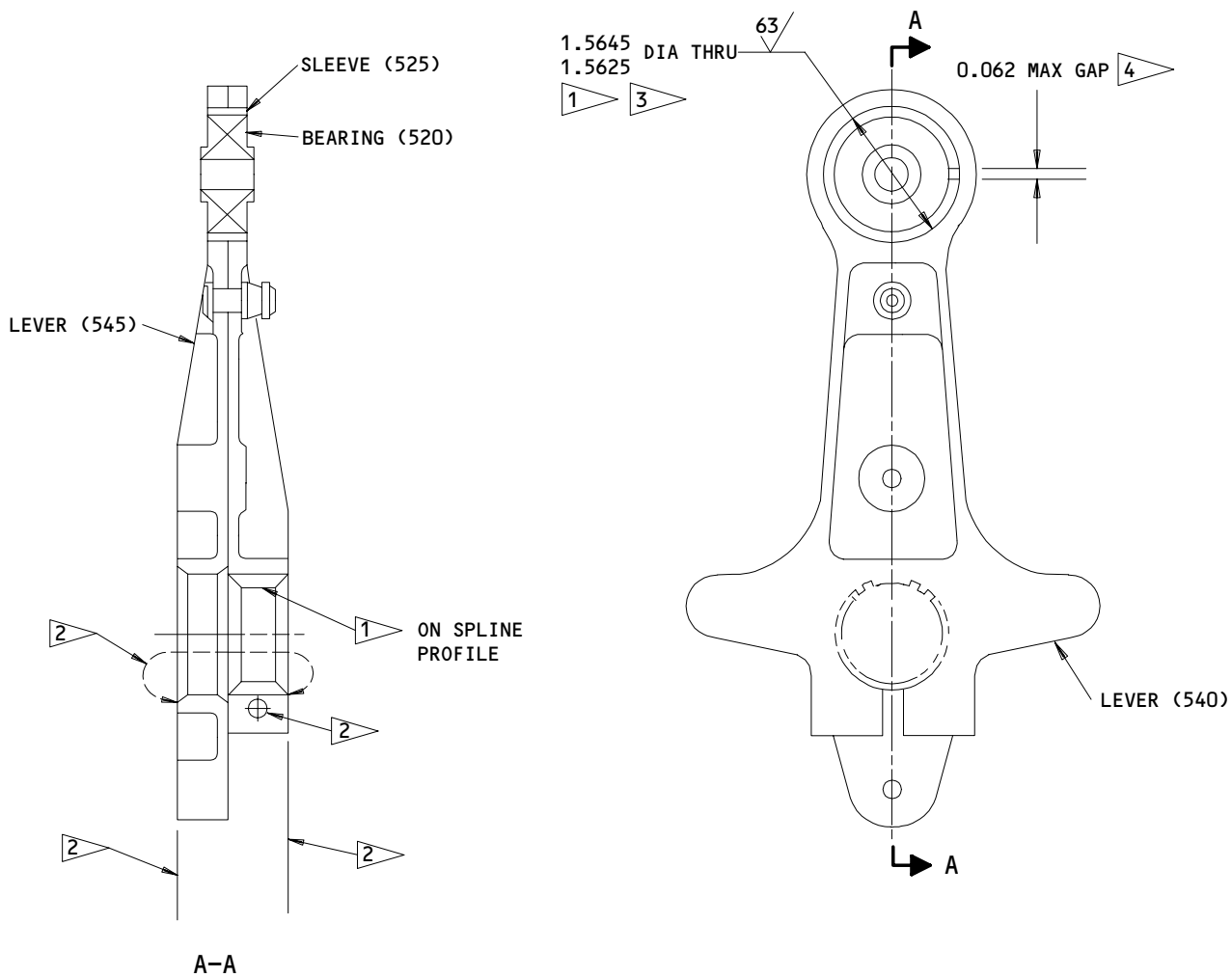
**27-11-23**

REPAIR 3-1

01

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**REFINISH**

LEVERS (540,545) -- CHROMIC ACID ANODIZE AND APPLY ONE COAT PRIMER, BMS 10-11, TYPE 1 (F-18.13) EXCEPT AS NOTED. APPLY ONE COAT GRAY GLOSS ENAMEL, BMS 10-11, TYPE 2 (F-21.02) EXCEPT IN BOLT HOLES AND AS NOTED

MATERIAL: AL ALLOY  
 ALL DIMENSIONS ARE IN INCHES

- 1 NO PRIMER OR ENAMEL THIS SURFACE
- 2 NO ENAMEL THIS SURFACE
- 3 APPLY COLORED CHEMICAL COATING (F-17.10) AFTER MACHINING
- 4 FILL GAP WITH BMS 5-95 SEALANT

251T1206-1  
 Lever Assembly Repair  
 Figure 601



HOUSING ASSEMBLY – REPAIR 4-1

251T1207-6, -8, -9, -10, -11

NOTE: Refer to REPAIR – GENERAL for list of applicable standard practices.

1. Debris Guard Bracket Replacement (IPL Fig. 1)

- A. Remove lockbolts (266, 267), collars (267G), bracket (268), and shim (269).
- B. Determine required shim thickness to reduce gap between bracket (268) and support bracket (265A) to 0.003 in. maximum (Fig. 601). Use mounting holes in bracket as a pattern and drill 0.190-0.194 in. dia holes in shim.
- C. Install replacement bracket and shim, using sealant, BMS 5-95 on shim. Secure with lockbolts and collars.

2. Bushing Replacement (IPL Fig. 1)

- A. Remove bushing (392).
- B. Install replacement bushing per 20-50-03.

3. Plating Repair

NOTE: Deleted.

- A. Remove damaged part and fasteners as applicable.

NOTE: Limit disassembly of this unit to the minimum required to remove damaged part.

- B. Refer to Repairs 6-1, 14-1, and 16-1 for Refinish instructions for individual parts.
- C. Apply colored chemical coating (F-17.10) to bolt and rig pin holes, as required.
- D. Assemble support brackets (410, 415) and shim (412) with sealant, BMS 5-95. Install fasteners within sealant cure time.
- E. Apply grease, BMS 3-24, to shank and threads of lockbolts before installation.

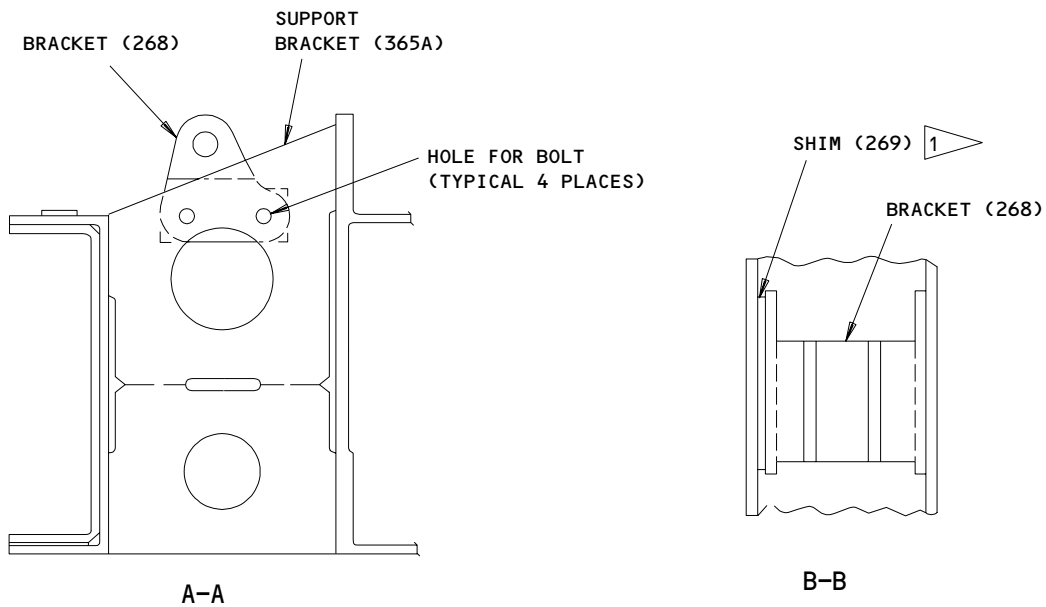
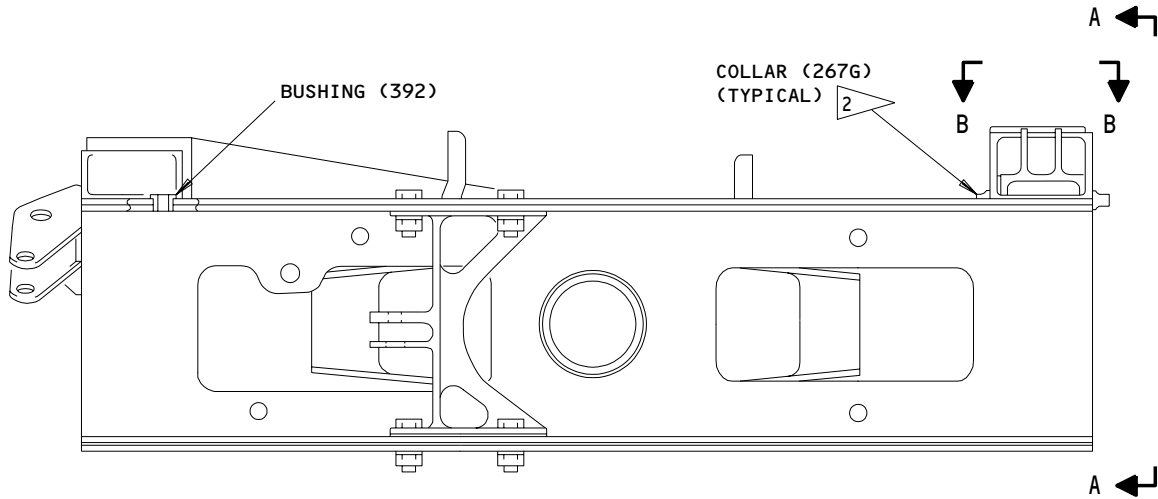
**27-11-23**

REPAIR 4-1

01.1

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1 DELAMINATE SHIM AS REQUIRED TO  
 REDUCE GAP TO 0.003 IN. MAX

2 INSTALL FASTENERS WITH COLLARS (267G)  
 ON OUTSIDE OF SUPPORT BRACKET (365A)

251T1207-6,-8,-9,-10,-11  
 Housing Assembly - Parts Replacement  
 Figure 601

**27-11-23**

REPAIR 4-1

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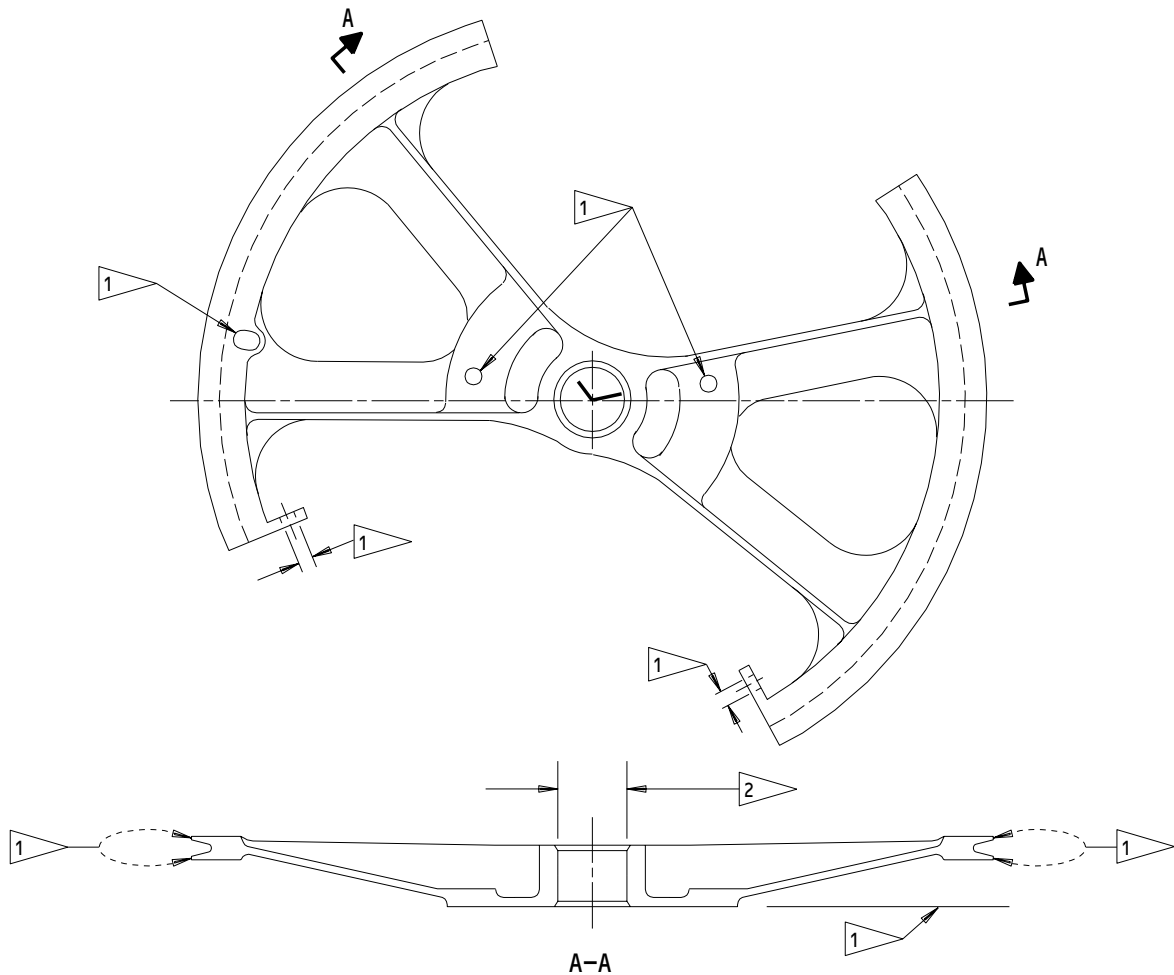
01.1

QUADRANT – REPAIR 5-1

251T1212-2

1. Plating Repair

**NOTE:** Repair consists of stripping and restoration of original finish. Refer to Refinish instruction in Fig. 601 and to REPAIR – GENERAL for list of applicable standard practices.



REFINISH

CHROMIC ACID ANODIZE PLUS ONE COAT PRIMER,  
 BMS 10-11, TYPE 1 (F-18.13) EXCEPT AS NOTED.  
 APPLY ONE COAT ENAMEL, BMS 10-11, TYPE 2, COLOR  
 BAC 707 GRAY GLOSS (F-21.02) EXCEPT AS NOTED.

MATERIAL: AL ALLOY

- 1 NO ENAMEL THIS SURFACE.
- 2 NO PRIMER OR ENAMEL THIS SURFACE.

Quadrant Refinish  
 Figure 601

**27-11-23**

REPAIR 5-1

01.1

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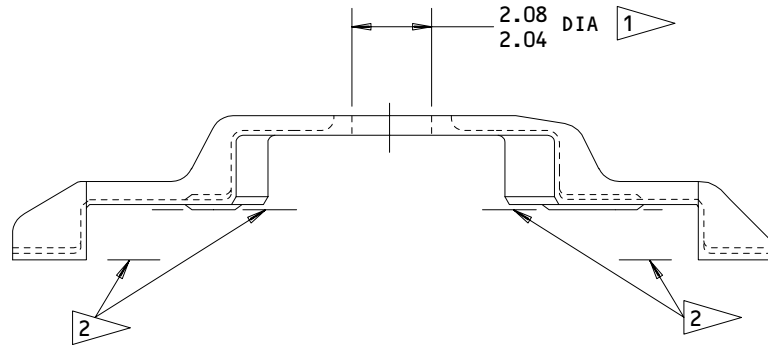
Jul 10/83

SUPPORT BRACKET - REPAIR 6-1

251T1218-2  
 251T1299-1

1. Plating Repair

**NOTE:** Repair consists of stripping and restoration of original finish. Refer to Refinish instruction in Fig. 601 and to REPAIR - GENERAL for list of applicable standard practices.



REFINISH

CHROMIC ACID ANODIZE PLUS ONE COAT PRIMER, BMS 10-11, TYPE 1 (F-18.13), EXCEPT AS NOTED. APPLY ONE COAT ENAMEL, BMS 10-11, TYPE 2, COLOR BAC 707 GRAY GLOSS (F-21.02), EXCEPT AS NOTED

MATERIAL: AL ALLOY

DIMENSIONS ARE IN INCHES

- 1 NO PRIMER OR ENAMEL THIS SURFACE
- 2 NO ENAMEL THIS SURFACE

Support Bracket Refinish  
 Figure 601

**27-11-23**

REPAIR 6-1

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01.1

INNER SHAFT - REPAIR 7-1

251T1224-1

**NOTE:** Refer to REPAIR - GENERAL for list of applicable standard practices. For repair of surfaces which may only require restoration of original finish, refer to Refinish instructions, Fig. 601.

1. Bearing Seat Repair (Fig. 601)

- A. Machine bearing seat as required, within repair limit shown, to remove defects.
- B. Build up repaired area with chrome plate, and grind to design dimensions and finish shown. Chrome plate must not exceed 0.015 inch after grinding.

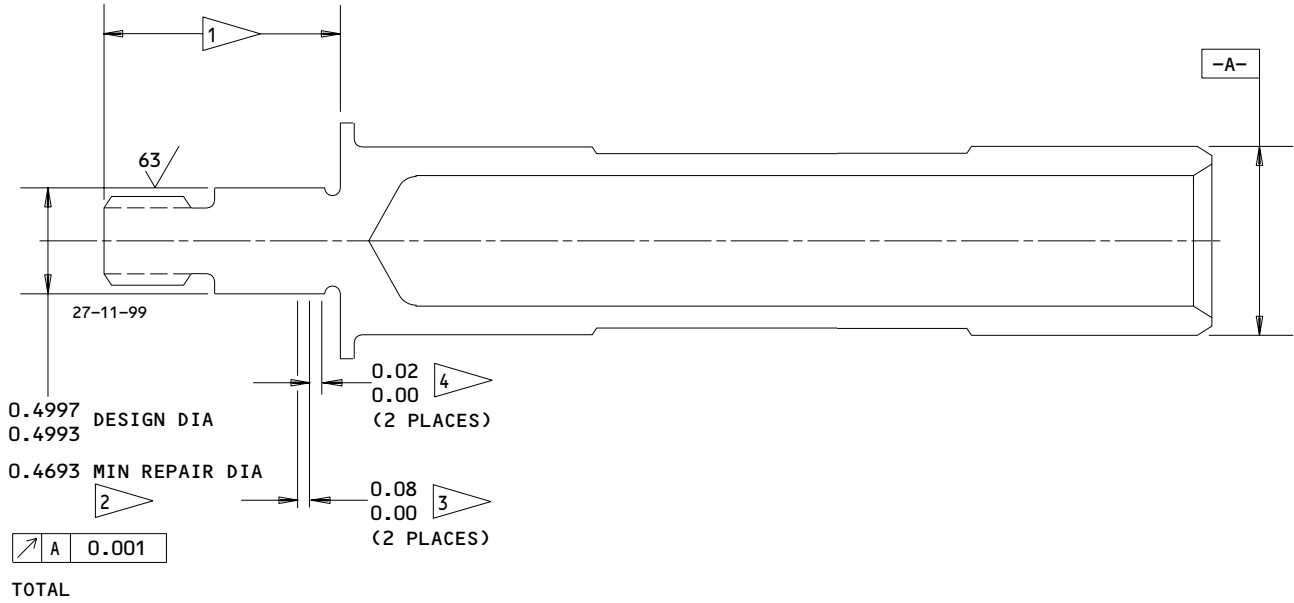
**27-11-23**

REPAIR 7-1

01.1

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**REFINISH**

PASSIVATE (F-17.09) ALL OVER, AND CADMIUM PLATE (F-15.06) AS NOTED

- 1 CADMIUM PLATE THIS AREA ONLY
- 2 BUILD UP WITH CHROME PLATE (F-15.03) AND GRIND TO DESIGN DIMENSIONS AND FINISH SHOWN. OBSERVE RUNOUT AT EDGES AND RELIEF GROOVE AS INDICATED
- 3 CHROME PLATE RUNOUT
- 4 END OF CHROME PLATING

**REPAIR**

REF 2 3 4

125/ ALL MACHINED SURFACES EXCEPT AS NOTED

BREAK SHARP EDGES 0.008 R

MATERIAL: 15-5PH CRES  
 150-170 KSI

ALL DIMENSIONS ARE IN INCHES

251T1224-1  
 Inner Shaft Repair  
 Figure 601

29235

27-11-23

REPAIR 7-1

01.1

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OUTER SHAFT - REPAIR 8-1

251T1225-2

**NOTE:** Refer to REPAIR - GENERAL for list of applicable standard practices. For repair of surfaces which may only require restoration of original finish, refer to Refinish instructions, Fig. 601.

1. Bearing Seat Repair (Fig. 601)

- A. Machine bearing seat as required, within repair limit shown, to remove defects.
- B. Build up repaired area with chrome plate, and grind to design dimensions and finish shown. Chrome plate must not exceed 0.015 inch after grinding.

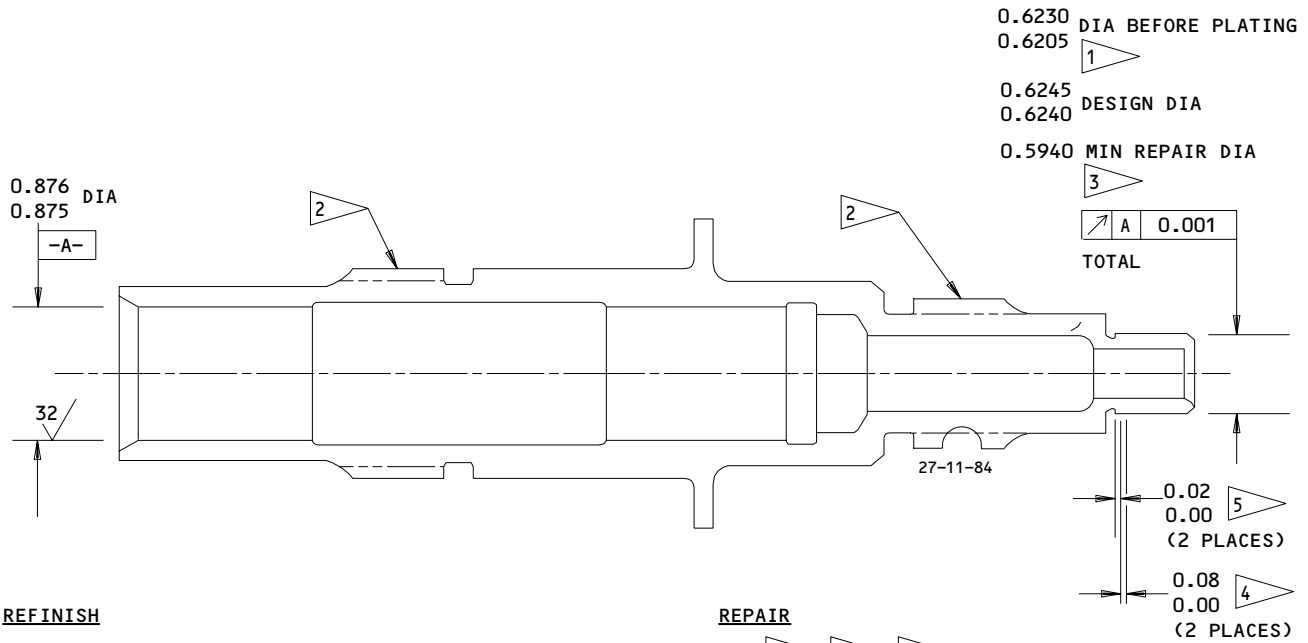
**27-11-23**

REPAIR 8-1

01.1

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**REFINISH**

CADMIUM PLATE (F-15.06) EXTERIOR ONLY, EXCEPT AS NOTED BY 1

- 1 CHROMIUM PLATE (F-15.03). PLATING THICKNESS 0.0005-0.002 AFTER GRINDING
- 2 APPLY MIL-L-8937 DRY FILM LUBRICANT TO SPLINES
- 3 BUILD UP WITH CHROME PLATE (F-15.03) AND GRIND TO DESIGN DIMENSIONS AND FINISH SHOWN. OBSERVE RUNOUT AT EDGES AND RELIEF GROOVE AS INDICATED
- 4 CHROME PLATE RUNOUT
- 5 END OF CHROME PLATING

**REPAIR**

REF 3 4 5

125/ ALL MACHINED SURFACES EXCEPT AS NOTED

BREAK SHARP EDGES 0.008 R

MATERIAL: 15-5PH CRES  
 150-170 KSI

ALL DIMENSIONS ARE IN INCHES

251T1225-2  
 Outer Shaft Refinish  
 Figure 601

29236

**27-11-23**

REPAIR 8-1

01.1

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CAM FOLLOWER ASSEMBLY – REPAIR 9-1

251T1227-3, -5, -7, -9, -10

NOTE: Refer to REPAIR – GENERAL for list of applicable standard practices. For repair of surfaces which may only require stripping and restoration of original finish, refer to Refinish instruction, Fig. 601.

1. Bearing Replacement (IPL Fig. 1)

- A. Remove bearing (655) from cam follower assembly (650).
- B. Install new bearing with wet sealant, BMS 5-95.
- C. Roller swage housing over bearing per 20-50-03.

2. Bolt Hole Repair (Fig. 601)

- A. Machine bolthole as required to remove defects, within repair limits shown.
- B. Make repair bushing per Fig. 602.
- C. Install repair bushing with wet sealant BMS 5-95 per 20-50-03.

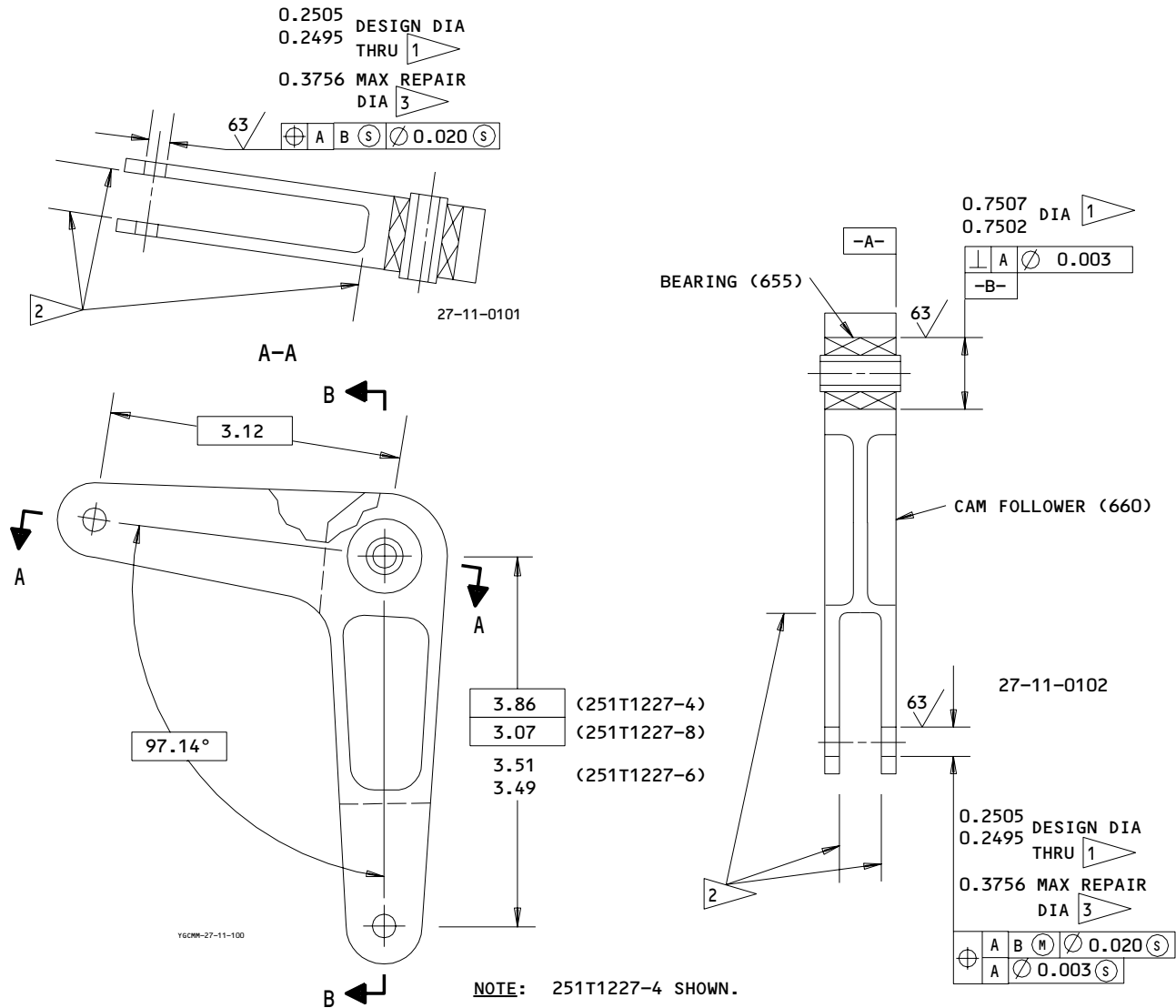
**27-11-23**

REPAIR 9-1

01.1

Page 601

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**REFINISH**

CAM FOLLOWER (660) -- CHROMIC ACID ANODIZE PLUS ONE COAT PRIMER, BMS 10-11, TYPE 1 (F-18.13), EXCEPT AS NOTED. APPLY ONE COAT ENAMEL, BMS 10-11, TYPE 2, COLOR BAC 707 GRAY GLOSS (F-21.02), EXCEPT AS NOTED

- 1 NO PRIMER OR ENAMEL THIS SURFACE
- 2 NO ENAMEL THIS SURFACE
- 3 REPAIR LIMIT FOR INSTALLATION OF REPAIR BUSHING

**REPAIR**

- REF 3
- 125/ ALL MACHINED SURFACES EXCEPT AS NOTED
- BREAK SHARP EDGES 0.008 R
- MATERIAL: AL ALLOY
- ALL DIMENSIONS ARE IN INCHES

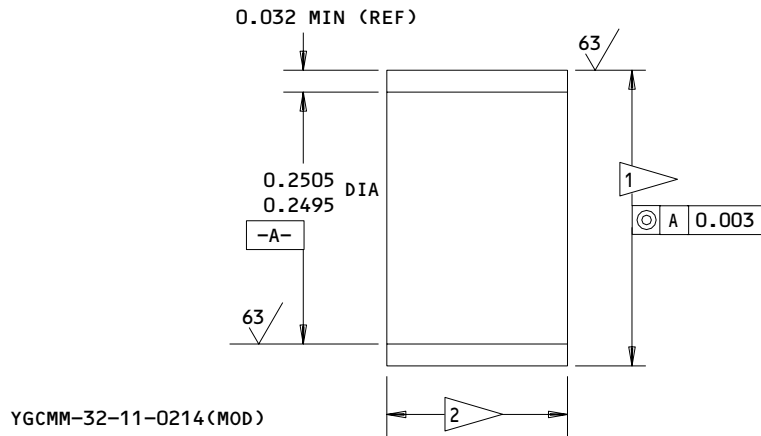
251T1227-3,-5,-7,-9,-10  
 Cam Follower Assembly Repair  
 Figure 601

**27-11-23**

REPAIR 9-1  
 Page 602  
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01.1

**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL



1 DIAMETER AFTER PLATING EQUAL TO REPAIR  
 DIA OF HOLE PLUS 0.0003-0.0015  
 INTERFERENCE

2 BUSHING LENGTH TO MATCH LUG THICKNESS

MATERIAL: AL-NI-BRONZE PER AMS 4640

FINISH: CADMIUM PLATE 0.0003-0.0005 THICK  
 PER 20-42-05

BREAK SHARP EDGES 0.008R

ALL DIMENSIONS ARE IN INCHES

251T1227-3,-5,-7,-9,-10  
 Repair Bushing Details  
 Figure 602

221442

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REPAIR 9-1

01.1

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TRIM LEVER ASSEMBLY – REPAIR 10-1

251T1228-5  
251T1297-1, -9  
251T1308-1, -2

**NOTE:** Refer to REPAIR – GENERAL for list of applicable standard practices. For repair of surfaces which may only require stripping and restoration of original finish, refer to Refinish instruction, Fig. 601.

1. Bearing Replacement (IPL Fig. 1)

- A. Remove bearing (675 or 710) from trim lever assembly (670 or 685).
- B. Install new bearing with BMS 3-24 grease.
- C. Roller swage bearing over housing per 20-50-03.

2. Bearing Seat Repair (Fig. 601)

- A. Machine bearing seat as required to remove defects, within repair limit shown.
- B. Make repair bushing per Fig. 602
- C. Install repair bushing with wet sealant BMS 5-95 per 20-50-03. Ensure that bushing is installed with chamfer facing inside of trim lever assembly (670 or 685).

3. Bolt Hole Repair (Fig. 601)

- A. Machine bolt hole as required to remove defects, within repair limits shown.
- B. Make repair bushing per Fig. 602.
- C. Install repair bushing with wet sealant BMS 5-95 per 20-50-03.

4. Bushing Hole Repair (Fig. 601)

- A. Machine hole for bushing (645, IPL Fig. 1) to repair diameter shown, to remove defects.
- B. Make oversize bushing per Fig. 602.
- C. Attach oversize bushing to trim lever with tag stating, "Bushing hole has been machined oversize. Use attached repair bushing in place of bushing 251T3741-12."

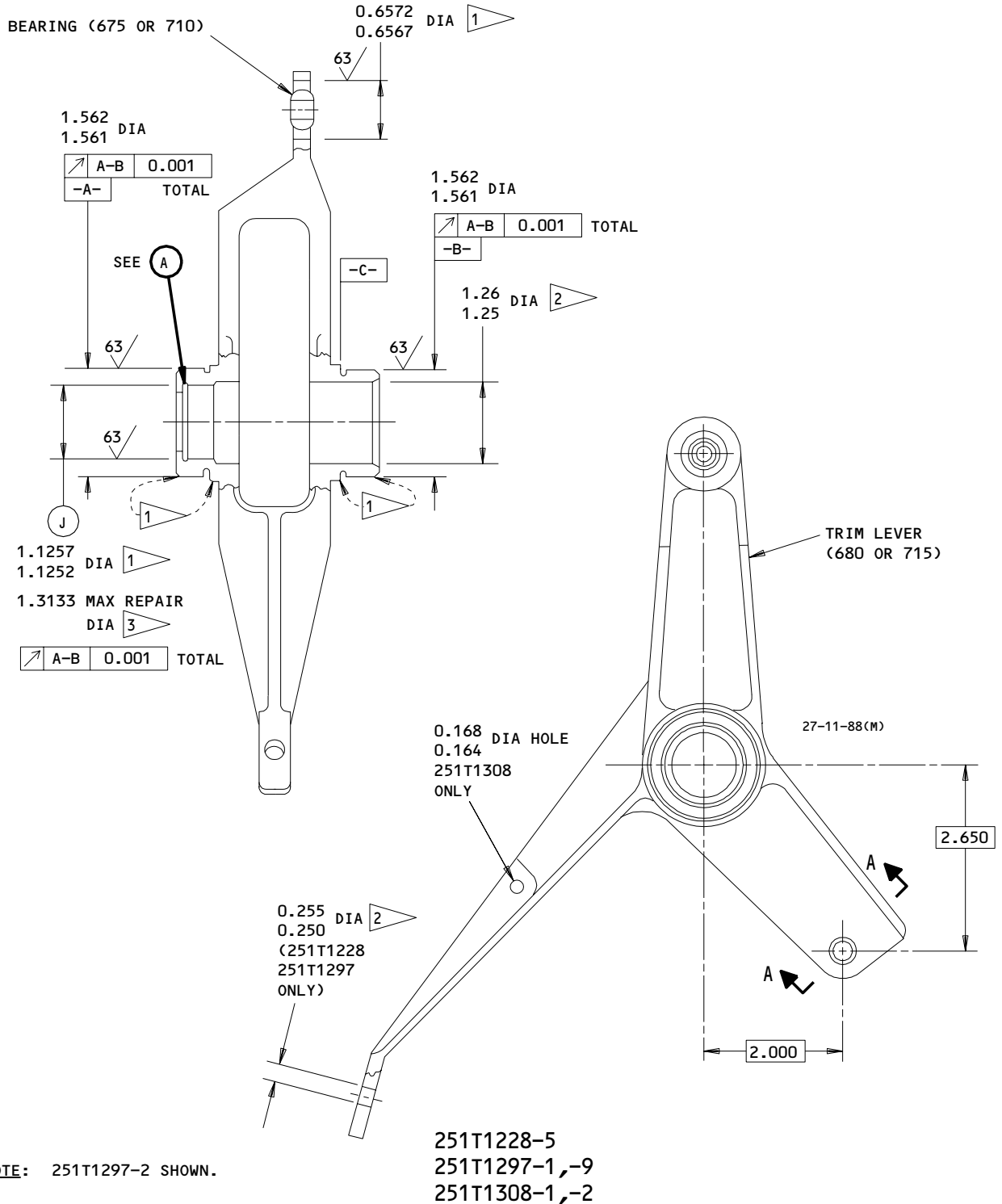
**27-11-23**

REPAIR 10-1

01.1

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Trim Lever Assembly Repair  
 Figure 601 (Sheet 1)

**27-11-23**

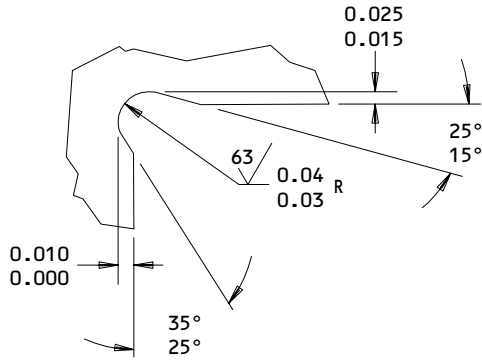
REPAIR 10-1

01.1

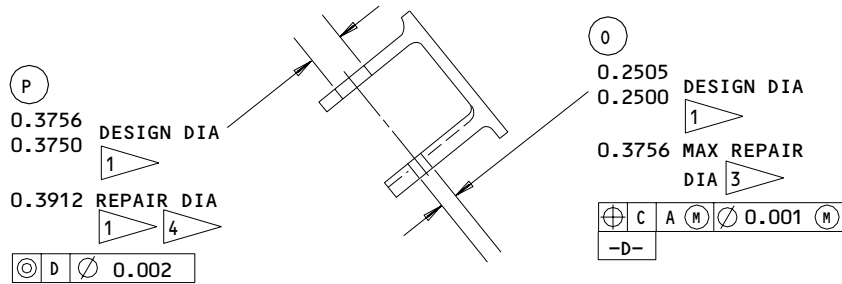
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**BOEING**  
**COMPONENT**  
**MAINTENANCE MANUAL**



(A)



YGMM-27-11-0116

A-A

**REFINISH**

TRIM LEVER (680) -- CHROMIC ACID ANODIZE PLUS ONE COAT PRIMER, BMS 10-11, TYPE 1 (F-18.13), EXCEPT AS NOTED. APPLY ONE COAT ENAMEL, BMS 10-11, TYPE 2, BAC707 GRAY GLOSS (F-21.02), EXCEPT AS NOTED

- 1 NO PRIMER OR ENAMEL THIS SURFACE
- 2 NO ENAMEL THIS SURFACE
- 3 REPAIR LIMIT FOR INSTALLATION OF REPAIR BUSHING
- 4 DIMENSION FOR INSTALLATION OF OVERSIZE BUSHING (645)

**REPAIR**

REF 3 4  
 125 ALL MACHINED SURFACES EXCEPT AS NOTED  
 BREAK SHARP EDGES 0.008 R  
 MATERIAL: AL ALLOY  
 ALL DIMENSIONS ARE IN INCHES

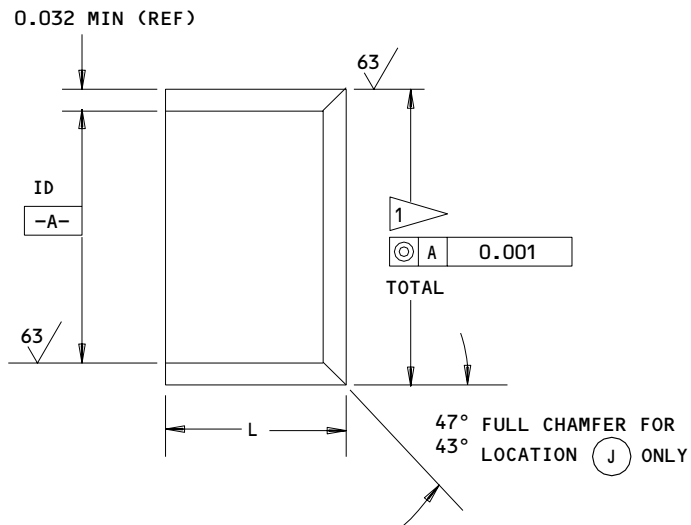
251T1228-5  
 251T1297-1,-9  
 251T1308-1,-2

Trim Lever Assembly Repair  
 Figure 601 (Sheet 2)

**27-11-23**

REPAIR 10-1  
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01.1



BUSHING INSTALLED AT	LENGTH L	ID	CLEARANCE (INTERFERENCE)
(J)	0.58 0.54	1.1257 1.1252	(0.0023) (0.0005)
(O)	2	0.2505 0.2500	(0.0015) (0.0003)
(P)	0.32 0.31	0.2505 0.2500	0.0016 0.0005

1 DIAMETER AFTER PLATING EQUAL TO HOLE REPAIR DIA MINUS CLEARANCE OR PLUS INTERFERENCE

2 BUSHING LENGTH TO MATCH LUG THICKNESS

FINISH: CADMIUM PLATE 0.0003-0.0015 THICK PER 20-42-05

BREAK SHARP EDGES 0.008 R

MATERIAL: AL-NI-BRONZE PER AMS 4640

ALL DIMENSIONS ARE IN INCHES

251T1228-5; 251T1297-1,-9; 251T1308-1,-2  
 Repair Bushing Details  
 Figure 602

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REPAIR 10-1

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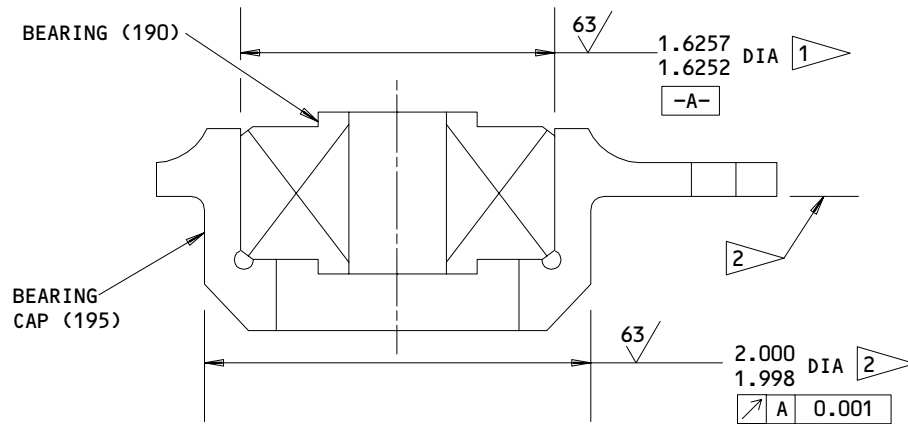
BEARING CAP ASSEMBLY - REPAIR 11-1

251T1230-1

**NOTE:** Refer to REPAIR - GENERAL for list of applicable standard practices. For repair of surfaces which may only require stripping and restoration of original finish, refer to Refinish instruction, Fig. 601.

1. Bearing Replacement (IPL Fig. 1)

- A. Remove bearing (190) from cap assembly (185).
- B. Install replacement bearing with BMS 3-24 grease.
- C. Roller swage housing over bearing per 20-50-03.



REFINISH

BEARING CAP (195) -- CHROMIC ACID ANODIZE PLUS ONE COAT PRIMER, BMS 10-11, TYPE 1 (F-18.13), EXCEPT AS NOTED. APPLY ONE COAT ENAMEL, BMS 10-11, TYPE 2, COLOR BAC 707 GRAY GLOSS (F-21.02), EXCEPT AS NOTED.

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

- 1 NO PRIMER OR ENAMEL THIS SURFACE.
- 2 NO ENAMEL THIS SURFACE.

Bearing Cap Assembly Repair  
 Figure 601

29248

**27-11-23**

REPAIR 11-1

01.1

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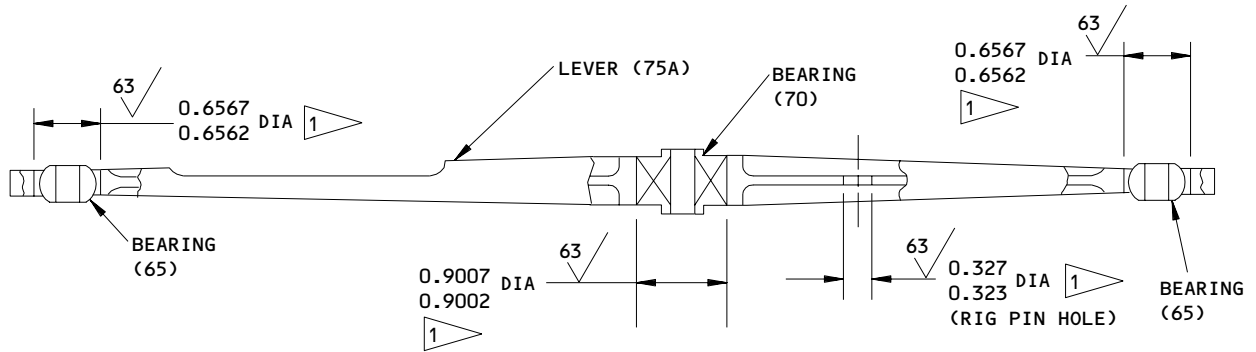
ACTUATOR LEVER ASSEMBLY – REPAIR 12-1

251T1260-5

**NOTE:** Refer to REPAIR – GENERAL for list of applicable standard practices. For repair of surfaces which may only require stripping and restoration of original finish, refer to Refinish instruction, Fig. 601.

1. Bearing Replacement (IPL Fig. 1)

- A. Remove bearing (65, 70) from lever assembly (40A).
- B. Install new bearing with wet sealant, BMS 5-95.
- C. Roller swage housing over bearing on both sides per 20-50-03.



REFINISH

LEVER (75A)--CHROMIC ACID ANODIZE AND APPLY ONE COAT PRIMER, BMS 10-11, TYPE 1 (F-18.13) EXCEPT AS NOTED. APPLY ONE COAT GRAY GLOSS ENAMEL, BMS 10-11, TYPE 2 (F-21.02) EXCEPT AS NOTED

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

1 NO PRIMER OR ENAMEL THIS SURFACE

Actuator Lever Repair  
 Figure 601

29250

**27-11-23**

REPAIR 12-1

01.1

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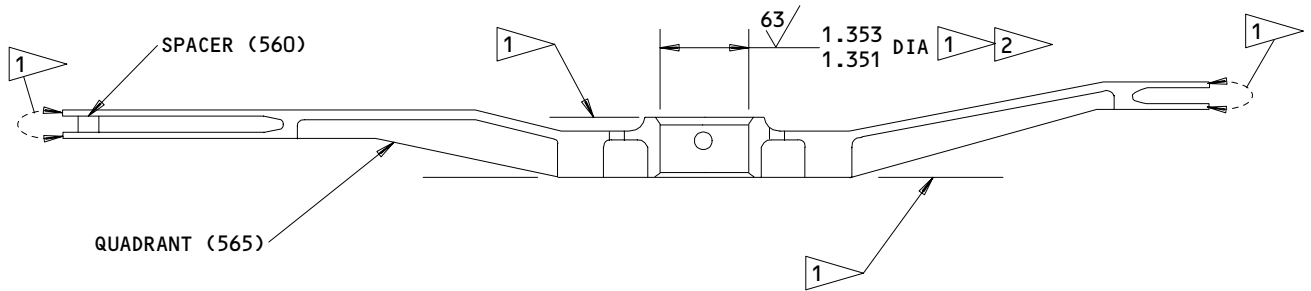
Nov 01/02

QUADRANT ASSEMBLY - REPAIR 13-1

251T1262-1

1. Plating Repair

**NOTE:** Repair consists of restoration of original finish. Refer to Refinish instructions, Fig. 601 and to REPAIR - GENERAL for list of applicable standard practices.



REFINISH

QUADRANT (565) -- CHROMIC ACID ANODIZE PLUS ONE COAT PRIMER, BMS 10-11, TYPE 1 (F-18.13). APPLY ONE COAT ENAMEL, BMS 10-11, TYPE 2, COLOR BAC 707 GRAY GLOSS (F-21.02), EXCEPT AS NOTED

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

1 NO ENAMEL THIS SURFACE

2 1.350 MIN DIA AFTER PRIMER

Quadrant Refinish  
 Figure 601

27-11-23

REPAIR 13-1

01.1

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MISCELLANEOUS PARTS REFINISH – REPAIR 14-1

1. Repair of parts listed in Fig. 601 consists of restoration of the original finish.

IPL FIG. & ITEM	MATERIAL	FINISH
<u>Fig. 1</u>		
Bushing (35,80,645)	4340 Steel 125-145 ksi	Cadmium plate (F-15.06).
Cover (125)	Kevlar	Prepare surface and apply Dexter 28-C-1 static conditioner plus Dexter 8-W-5 surfacer (SRF-14.672). Apply one coat primer, BMS 10-11, type 1 (F-20.02) plus one coat gray gloss enamel, BMS 10-11, type 2, color BAC 707 (F-21.02).
Pivot bracket (215)	Al alloy	Chromic acid anodize and apply one coat primer, BMS 10-11, type 1 (F-18.13). Apply one coat gray gloss enamel, BMS 10-11, type 2, color BAC 707 (F-21.02). Omit primer and enamel on holes.
Support bracket assy (220A,245A)	Al alloy	Chemical treat machined surfaces and apply one coat primer, BMS 10-11, type 1 (F-18.01).
Support bracket (235,240A,260,265A, 410,415), Support assy (270,275), Bracket (268), Actuator bracket (385)	Al alloy	Chromic acid anodize and apply one coat primer, BMS 10-11, type 1 (F-18.13). Apply one coat gray gloss enamel, BMS 10-11, type 2, color BAC 707 (F-21.02). On bracket (268), omit enamel on 0.375-0.379 in. dia holes.

Refinish Details  
 Figure 601 (Sheet 1)

**27-11-23**

REPAIR 14-1

01.1

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IPL FIG. & ITEM	MATERIAL	FINISH
Support (287,288)	Al alloy	Chemical treat and apply one coat primer, BMS 10-11, type 1 (F-18.06). Apply one coat gray gloss enamel, BMS 10-11, type 2, color BAC 707 (F-21.02).
Support bracket (300)	Al alloy	Chromic acid anodize and apply one coat primer, BMS 10-11, type 1 (F-18.13). Apply one coat gray gloss enamel, BMS 10-11, type 2, color BAC 707 (F-21.02). Omit enamel on 1.76-1.80 dia hole.
Spring (595,600)	17-7PH CRES	Passivate (F-17.09).
Retainer (605)	Al-Ni-Br	Cadmium plate and apply one coat primer, BMS 10-11, type 1 (F-16.01) except for inside diameter.
Clevis (620)		See Repair 15-1.
Cam (665)	15-5PH CRES 180-200 ksi	Passivate (F-17.09).

Refinish Details  
Figure 601 (Sheet 2)

**27-11-23**

REPAIR 14-1

01.1

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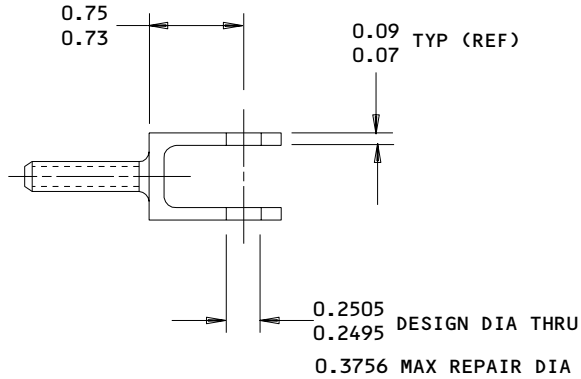
CLEVIS - REPAIR 15-1

251T1254-1

**NOTE:** Refer to REPAIR - GENERAL for list of applicable standard practices. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, Fig. 601.

1. Bolt Hole Repair (Fig. 601)

- A. Machine bolt hole as required to remove defects, within repair limits shown.
- B. Make repair bushing per Fig. 602.
- C. Install repair bushing with wet sealant BMS 5-95 per 20-50-03.



REFINISH

CADMIUM PLATE (F-15.06) EXCEPT NO PLATING IN HOLES



REPAIR LIMIT FOR INSTALLATION OF REPAIR BUSHING

REPAIR

REF 1

125/ ALL MACHINED SURFACES EXCEPT AS NOTED

BREAK SHARP EDGES 0.008 R

MATERIAL: 15-5PH CRES  
150-170 KSI

ALL DIMENSIONS ARE IN INCHES

251T1254-1  
 Clevis Repair  
 Figure 601

221332

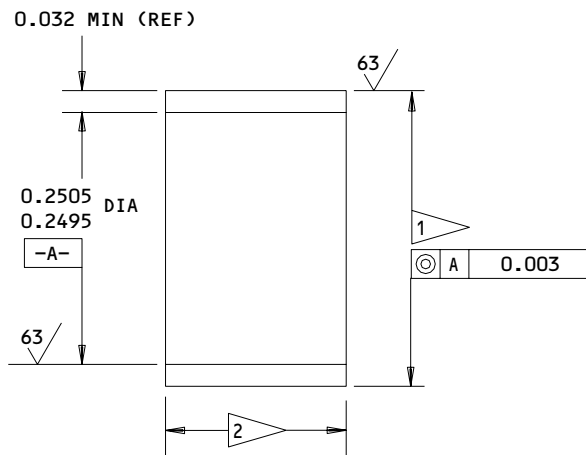
27-11-23

REPAIR 15-1

01.1

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- 1 DIAMETER AFTER PLATING EQUAL TO REPAIR DIA OF HOLE PLUS 0.0003-0.0015 INTERFERENCE
- 2 BUSHING LENGTH TO MATCH LUG THICKNESS

FINISH: CADMIUM PLATE 0.0003-0.0005 THICK PER 20-42-05  
 BREAK SHARP EDGES 0.008 R  
 MATERIAL: AL-NI-BRONZE PER AMS 4640  
 ALL DIMENSIONS ARE IN INCHES

Repair Bushing Details  
 Figure 602

221331

BRACKET - REPAIR 16-1251T1258-1  
251T1261-2

NOTE: Refer to REPAIR - GENERAL for list of applicable standard practices. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, Fig. 601.

**1. Bolt Hole Repair** (IPL Fig. 1, Fig. 601)

- A. Machine bolt hole in bracket (215, 385) as required to remove defects, within repair limits shown.
- B. Make repair bushing per Fig. 602.
- C. Install repair bushing with wet sealant, BMS 5-95, per 20-50-03.

**2. Bushing Hole Repair** (IPL Fig. 1, Fig. 601)

- A. Machine hole for bushing (50A, 35) in bracket (215, 385), to repair diameter shown, to remove defects.
- B. Make oversize bushing per Fig. 602.
- C. Attach oversize bushing to bracket with tag stating "Bushing hole has been machined oversize. Use attached repair bushing in place of bushing 251T3741-12."

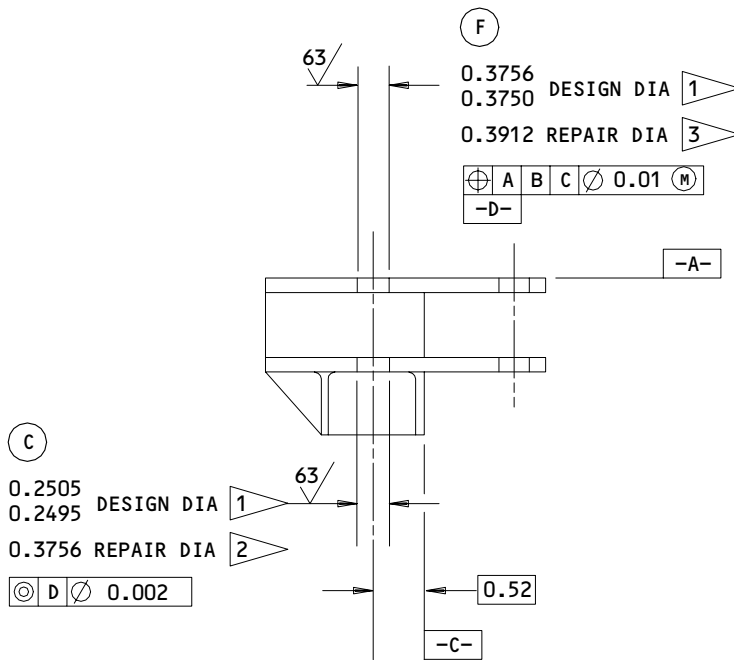
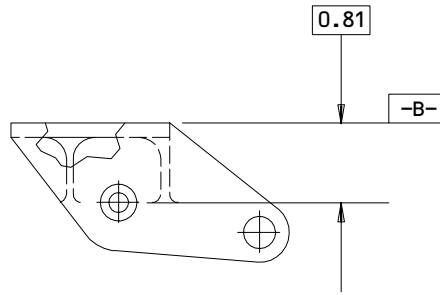
**27-11-23**

REPAIR 16-1

01.1

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PIVOT BRACKET (215)

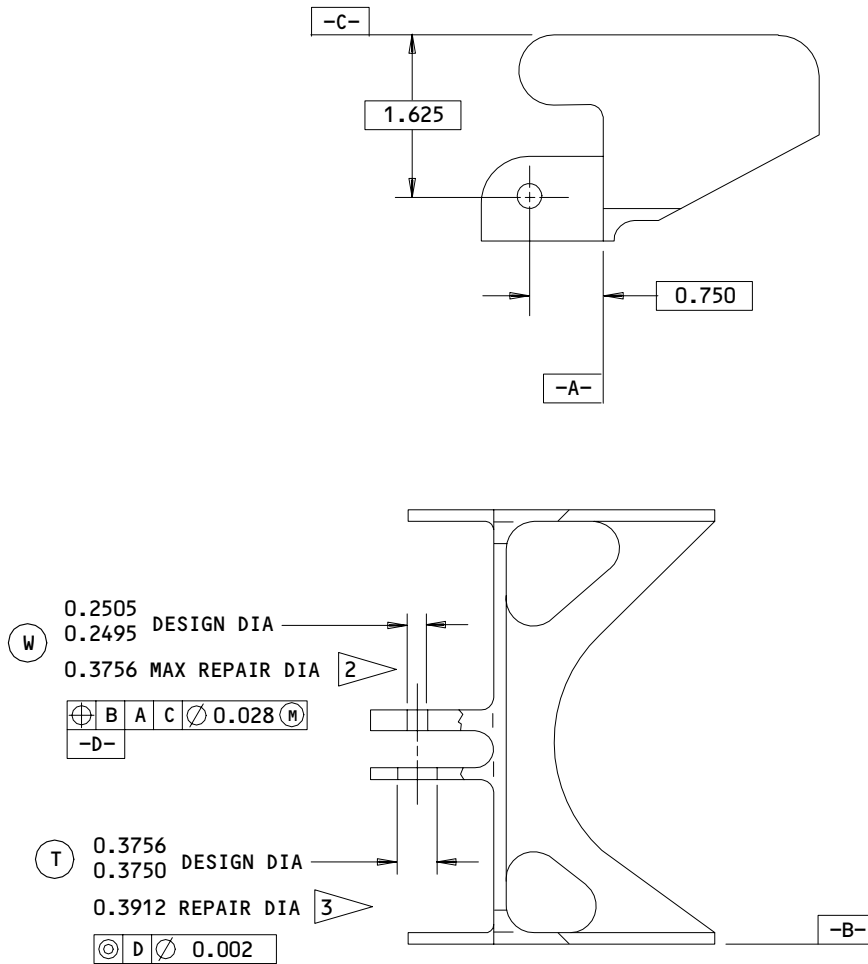
251T1258-1  
 251T1261-2  
 Bracket Repair  
 Figure 601 (Sheet 1)

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REPAIR 16-1  
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ACTUATOR BRACKET (385)

**REFINISH**

CHROMIC ACID ANODIZE AND APPLY ONE COAT PRIMER, BMS 10-11, TYPE 1 (F-18.13) EXCEPT AS NOTED. APPLY ONE COAT GRAY GLOSS ENAMEL, BMS 10-11, TYPE 2 (F-21.02) EXCEPT AS NOTED

- 1 NO PRIMER OR ENAMEL THIS SURFACE
- 2 REPAIR LIMIT FOR INSTALLATION OF REPAIR BUSHING
- 3 DIMENSION FOR INSTALLATION OF OVERSIZE BUSHING (35,80)

**REPAIR**

REF 2 3

125/ ALL MACHINED SURFACES EXCEPT AS NOTED

BREAK SHARP EDGES 0.008 R

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

251T1258-1  
 251T1261-2  
 Bracket Repair  
 Figure 601 (Sheet 2)

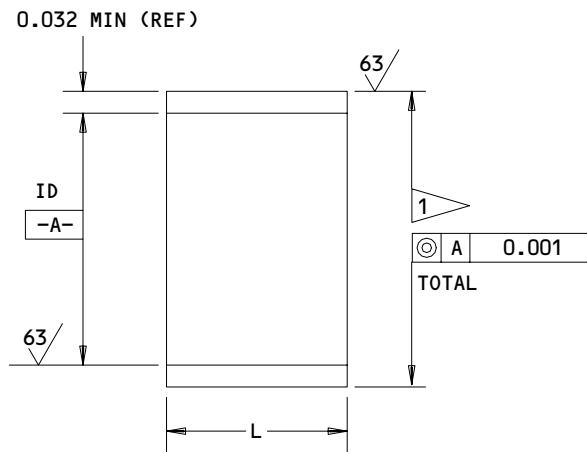
**27-11-23**

REPAIR 16-1

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BUSHING INSTALLED AT	LENGTH L	ID	CLEARANCE (INTERFERENCE)
(C) (W)	2	0.2505 0.2495	(0.0015) (0.0003)
(F) (T)	0.32 0.31	0.2505 0.2500	0.0016 0.0005

1 DIAMETER AFTER PLATING EQUAL TO HOLE  
 REPAIR DIA MINUS CLEARANCE OR PLUS  
 INTERFERENCE

2 BUSHING LENGTH TO MATCH LUG THICKNESS

FINISH: CADMIUM PLATE 0.0003-0.0015 THICK PER  
 20-42-05

BREAK SHARP EDGES 0.008 R

MATERIAL: AL-NI-BRONZE PER AMS 4640

ALL DIMENSIONS ARE IN INCHES

251T1258-1  
 251T1261-2  
 Repair Bushing Details  
 Figure 602

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REPAIR 16-1

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ASSEMBLY1. Materials

NOTE: Equivalent substitutes may be used.

- A. Grease -- BMS 3-24 (Ref 20-60-03)
- B. Primer -- BMS 10-11, type 1 (Ref 20-60-02)
- C. Sealant -- BMS 5-95 (Ref 20-60-04)

2. Equipment

NOTE: Equivalent substitutes may be used.

- A. Milliohmmeter, general purpose -- Cutler-Hammer-Shellcross Mfg. Co., Model 665

3. Lubrication (IPL Fig. 1)

- A. Apply grease to shank and threads of bolts (5, 45, 50A) passing through actuator lever assembly (40A).
- B. Apply grease to all surfaces of fasteners and bushings which connect linkages, as follows:

- (1) Bolts (15, 90, 580A, 625A, 635A)
- (2) Washers (95A, 585A, 630A)
- (3) Nuts (20, 100A, 590A, 640A)
- (4) Bushings (35, 645)

4. Assembly (IPL Fig. 1)

CAUTION: INDIVIDUAL PARTS WHICH MAKE UP HOUSING ASSEMBLY (200B) COMPRISE A MATCHED SET. IF ANY PART IS UNUSABLE, HOUSING MUST BE REPLACED AS A UNIT, EXCEPT AS INDICATED IN REPAIR 4-1.

- A. Before starting assembly, remove support brackets (410, 415) with associated parts, and support bracket (300) from rest of housing assembly (200B).

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- B. On assemblies 251T1205-16 thru -29 only, prepare surfaces for electrical bonding per 20-11-03, cleaning method 1, as shown in Fig. 701.
- C. Install bearings (570) in support brackets (300, 305), and bearing (575) in trim lever assembly (670 or 685) with grease per 20-50-03. Apply grease to hub of trim lever then install trim lever assembly in support bracket (305). Install support bracket (300) with parts (296 thru 298A) to secure assembly.
- D. Apply grease to mating splines of cam (665) and shaft of quadrant assembly (435A). Position cam in trim lever and install quadrant assembly. Secure cam to shaft with parts (420A thru 430A).

NOTE: Cam spline has missing space to match missing tooth on shaft spline.

- E. Install parts (196 thru 199) on support brackets (410, 415).
- F. Attach support brackets (410, 415) to rest of housing assembly with parts (223 thru 225A and 248 thru 250A). On assemblies 251T1205-16 thru -29 only, install parts (26 thru 29) per 20-11-03.
- G. Install bearing cap assembly (185) on support brackets with parts (135, 140). Install washer (180A) and nut (175A) on shaft of quadrant assembly.
- H. Measure gap "A" (Fig. 701). If gap is less than 0.06 in., install shim (182) per following instructions.

NOTE: If gap is greater than 0.06 inch, shim (182) is not required.

- (1) Delaminate shim, as required, to obtain a gap of 0.057-0.063 inch.
  - (2) Remove bearing cap assembly.
  - (3) Apply wet primer to shim (F-20.05), install shim, and reinstall bearing cap assembly.
  - (4) Recheck gap "A" for correct measurement.
- I. Install bearing (647A) on cam follower assembly (650) with parts (625A, 630A, 640A).
  - J. Attach cam follower to trim lever assembly with parts (635A thru 645).

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ASSEMBLY  
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- K. Assemble springs (595, 600) on retainers (605). Attach one retainer to clevis (620) with parts (580A thru 590A) and attach other retainer to cam follower with parts (580A thru 590A) and bushing (592; 251T1205-18, -20, -22, -27, -29 only).
- L. Install clevis in trim lever. Secure temporarily with washer (615B) and nut (610B).
- NOTE: Nut will be tightened after final adjustment of spring tension.
- M. Attach fixed end of rod assembly (85A) to trim lever with parts (90 thru 100A).
- N. Install cover assembly (105) over rod assembly and secure to housing assembly with parts (110, 115, 130).
- O. Install actuator lever assembly (40A) with parts (50A thru 60A, 80). Install 1/4 inch diameter rig pin through housing assembly and quadrant (450A). Install 5/16 inch diameter rig pin through pivot bracket (215) and actuator lever. Adjust length of rod assembly as required to attach free end to actuator lever with parts (45, 55A, 60A).
- P. Adjust nut (610B) to take out play in springs. Do not stretch springs beyond free length. Remove rig pins.
- Q. Install actuator on housing assembly with parts (15, 20).
- R. If actuator (25A) has been replaced, rotate clevis rod end 33.5 degrees relative to actuator body as shown in Fig. 701. Attach clevis rod end to actuator lever with parts (5, 10, 20).
- NOTE: Apply wrench to flats on actuator shaft to rotate rod end.
- S. Install bonding jumper (24G) with parts (21 thru 24A) per 20-11-03 as shown in Fig. 701.
- T. Adjust spring tension per instructions below (Fig. 701).
- (1) Apply 18.00-29.50v dc to actuator and operate actuator until rig pin can be installed without binding through pivot bracket (215) and actuator lever (75A) (rig pin hole (A)).
  - (2) Check that rig pin can be installed through housing assembly and quadrant (450A) (rig pin hole (B)). The assembly is now in the trim neutral position. Remove rig pins.
  - (3) Deleted.

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- (4) Adjust nut (610B) until breakout torque measured at shaft of quadrant assembly (435A) is 25.5–31.5 lb-in. for a clockwise rotation and 22.0–28.0 lb-in. for a counterclockwise rotation. Breakout occurs when a 0.002-inch to 0.004-inch shim can be installed between the cam (665) and the roller (647A) on the unloaded side.
  - (5) Measure gap between clevis (620) and trim lever (680). Remove nut (610B) and washer (615B) to release clevis. Install washer (617) with countersink facing clevis and additional washers (618A) as required to fill measured gap. Re-attach clevis to trim lever with nut (610B) and washer (615B) and re-check breakout torque.
  - (6) Rotate quadrant in clockwise and counterclockwise directions from trim neutral position to the 38-degree limits shown in Fig. 701. Check that motion remains smooth with no binding or interference.
  - (7) Extend actuator fully. Rotate quadrant in clockwise and counterclockwise directions from trim neutral position to the 38-degree limits shown in Fig. 701. Check that motion remains smooth with no binding or interference.
  - (8) Retract actuator fully. Rotate quadrant in clockwise and counterclockwise directions from trim neutral position to the 38-degree limits shown in Fig. 701. Check that motion remains smooth with no binding or interference.
  - (9) Remove electrical power connection.
- U. Check that resistance between actuator and housing is less than 0.0015 ohm.
- V. Fillet seal grounding stud (26) and jumper fasteners (21, 22) with sealant, BMS 5-95 per SOPM 20-50-19.

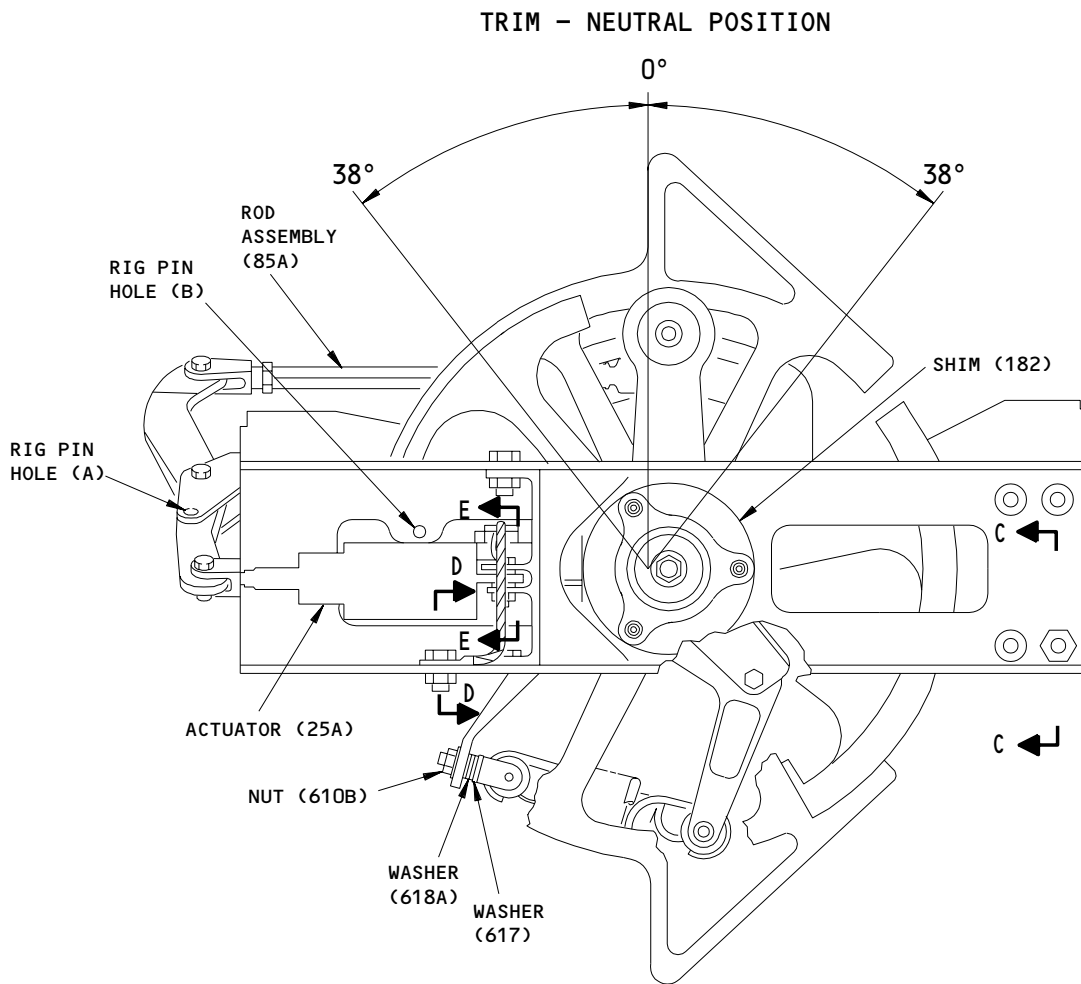
#### 4. Storage

- A. Use standard industry practices and information contained in 20-44-02 to store this component.

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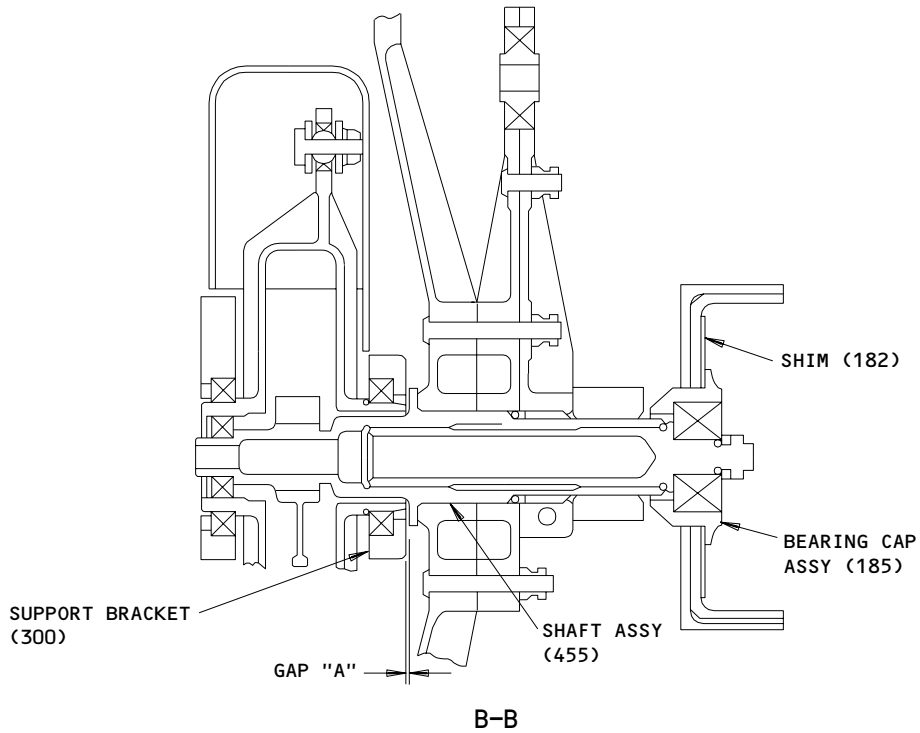
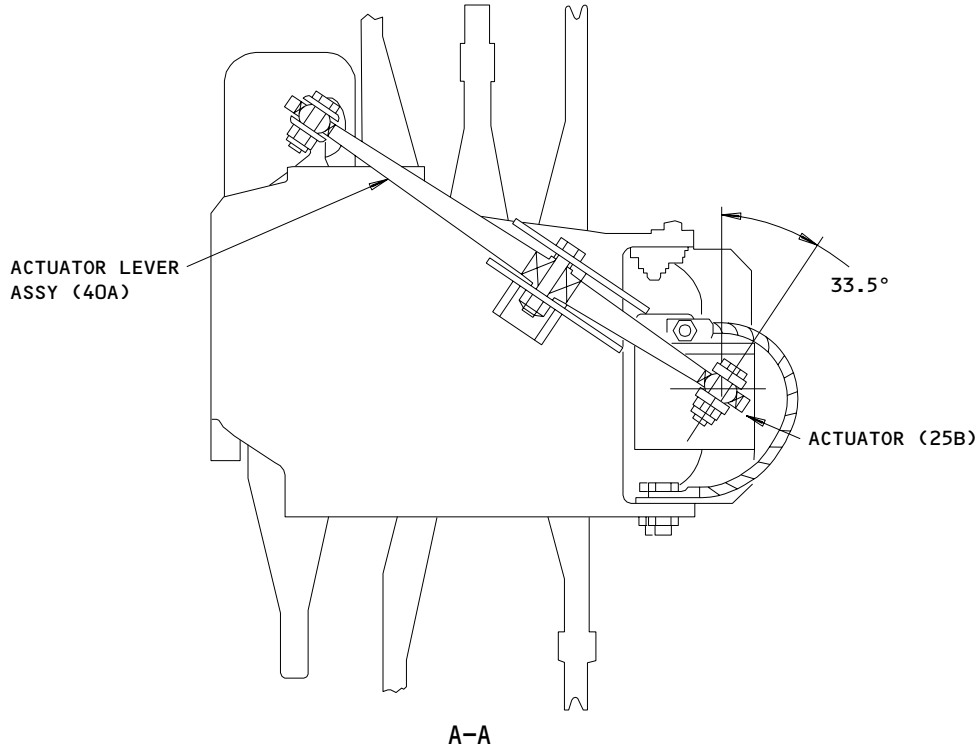
Assembly Details  
Figure 701 (Sheet 1)

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**COMPONENT  
MAINTENANCE MANUAL**



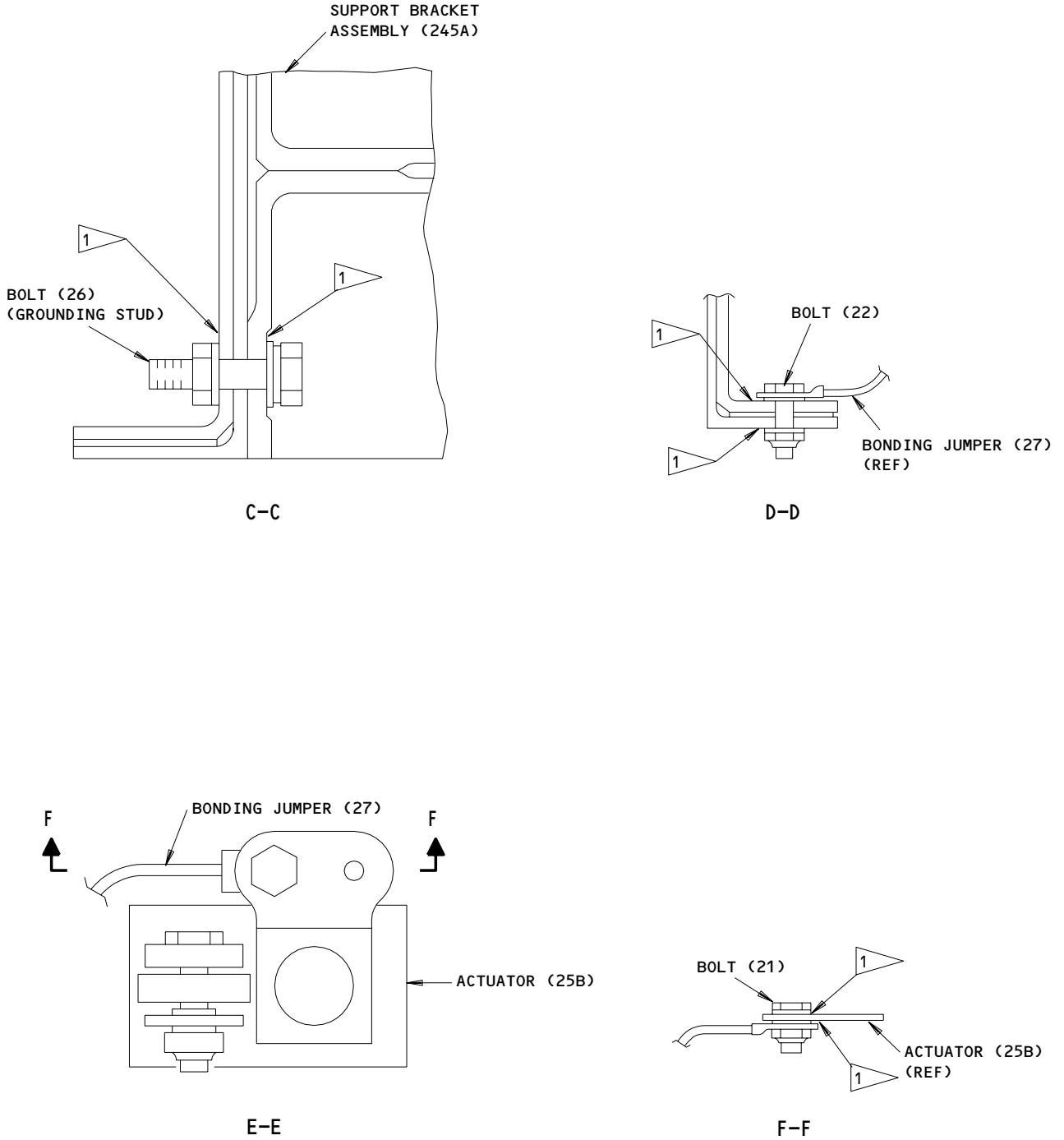
**Assembly Details  
Figure 701 (Sheet 2)**

**27-11-23**

ASSEMBLY  
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**1** PREPARE SURFACE FOR ELECTRICAL BONDING PER 20-11-03 CLEANING METHOD 1

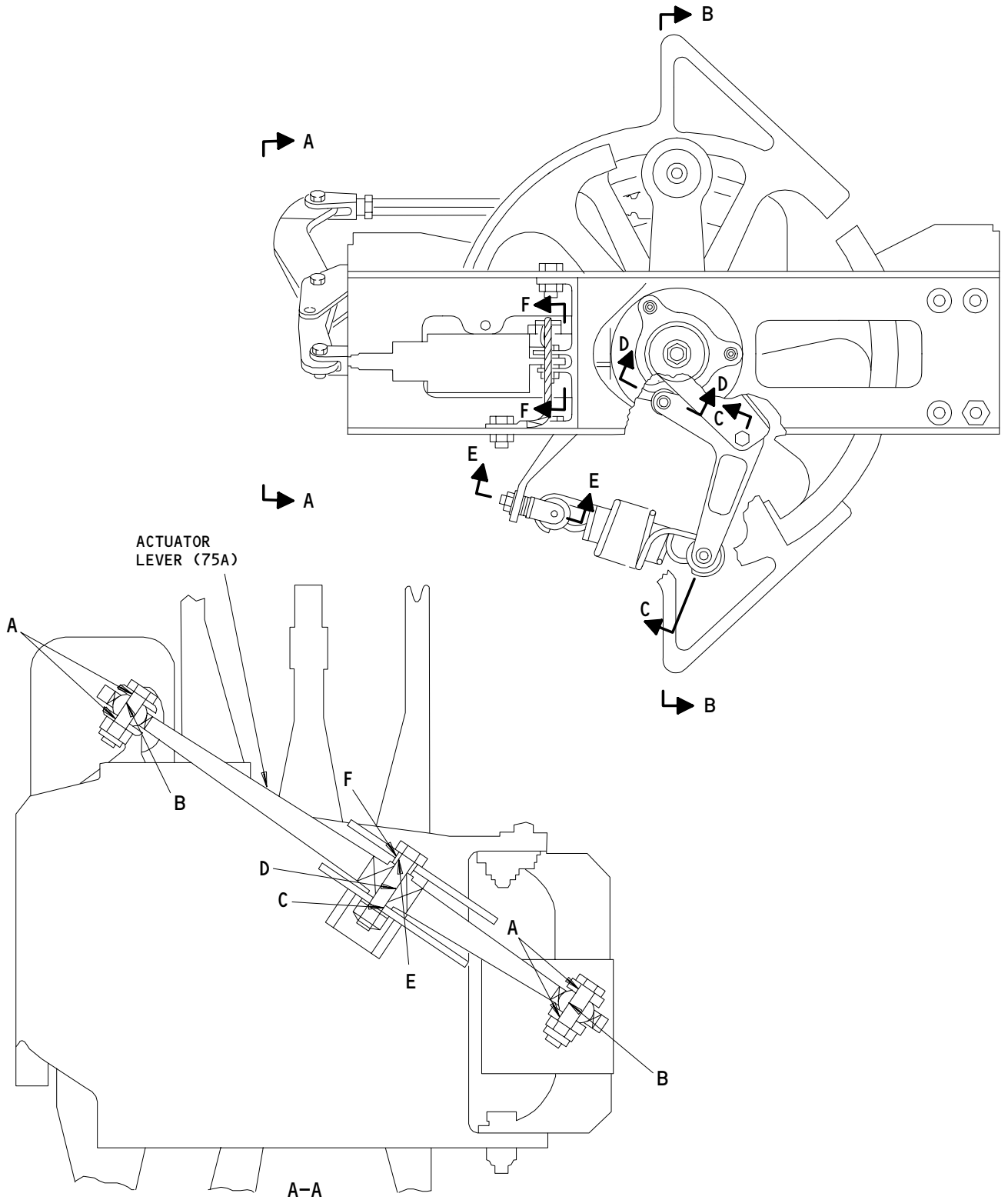
Assembly Details  
 Figure 701 (Sheet 3)

**27-11-23**

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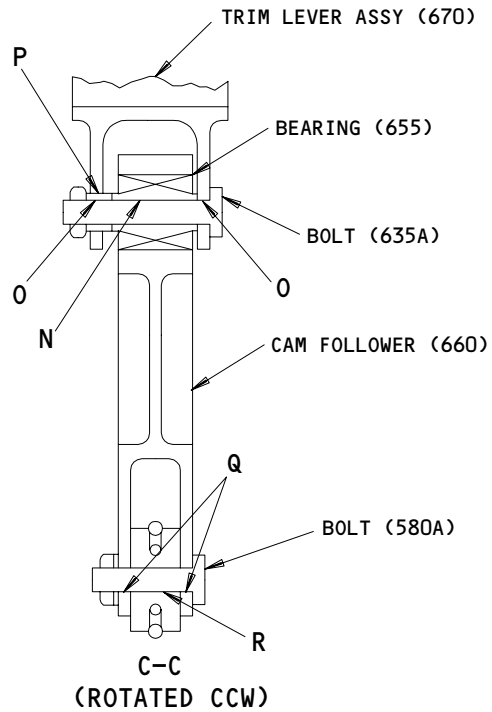
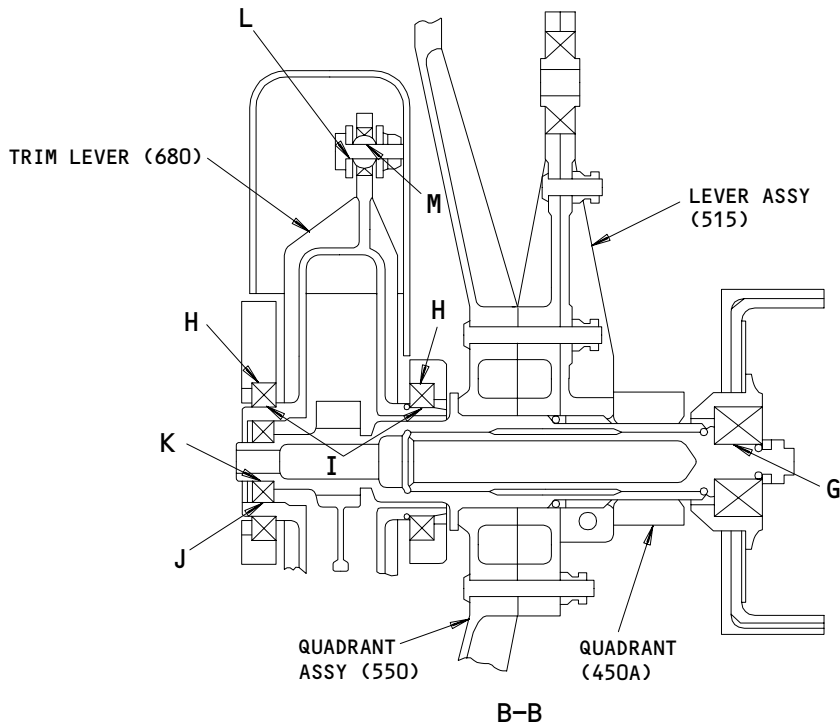
**BOEING**  
COMPONENT  
MAINTENANCE MANUAL  
FITS AND CLEARANCES



Fits and Clearances  
Figure 801 (Sheet 1)

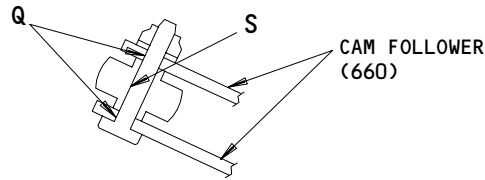
**27-11-23**

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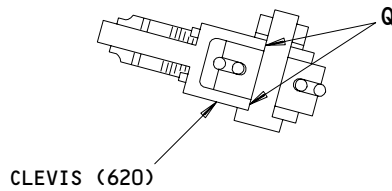


Fits and Clearances  
 Figure 801 (Sheet 2)

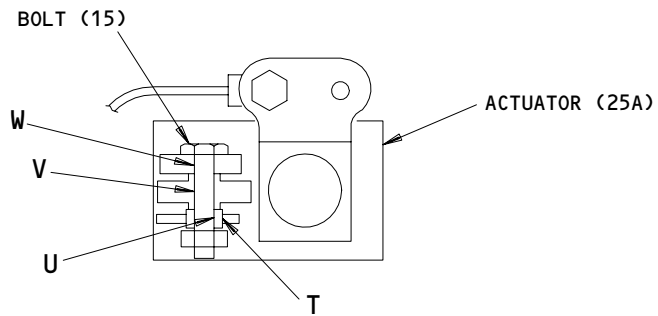
**27-11-23**



D-D



E-E



F-F

Fits and Clearances  
Figure 801 (Sheet 3)

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Ref Letter Fig.801	Mating Item No. IPL Fig.1	Design Dimension				Service Wear Limit		
		Dimension		Assembly Clearance *[1]		Min	Max	Maximum Clearance
		Min	Max	Min	Max			
A	ID 25A,85A	0.2495	0.2505	0.0000	0.0020	0.2470	0.2530	0.0035
	OD 5,45	0.2485	0.2495					
B	ID 65	0.2495	0.2500	0.0000	0.0015	0.2470	0.2525	0.0030
	OD 5,45	0.2485	0.2495					
C	ID 215	0.2495	0.2505	0.0000	0.0020	0.2475	0.2530	0.0035
	OD 50A	0.2485	0.2495					
D	ID 70	0.2495	0.2500	0.0000	0.0015	0.2470	0.2525	0.0030
	OD 50A	0.2485	0.2495					
E	ID 80	0.2500	0.2505	0.0005	0.0020	0.2475	0.2525	0.0030
	OD 50A	0.2485	0.2495					
F	ID 215	0.3750	0.3756	0.0005	0.0016	0.3726	0.3775	0.0030
	OD 80	0.3740	0.3745					
G	ID 190	0.4995	0.5000	-0.0002	0.0007	0.4973	0.5024	0.0027
	OD 485	0.4993	0.4997					
H	ID 300,305	2.3127	2.3132	0.0002	0.0017	2.3102	2.3155	0.0030
	OD 570	2.3115	2.3125					
I	ID 570	1.5620	1.5630	0.000	0.002	1.560	1.565	0.003
	OD 680	1.561	1.562					
J	ID 680	1.1252	1.1257	0.0002	0.0012	1.1232	1.1275	0.0025
	OD 575	1.1245	1.1250					
K	ID 575	0.6245	0.6250	0.0000	0.0010	0.6225	0.6270	0.0025
	OD 480	0.6240	0.6245					
L	ID 85A	0.2495	0.2505	0.0000	0.0020	0.2470	0.2530	0.0035
	OD 90	0.2485	0.2495					

ALL DIMENSIONS ARE IN INCHES

\*[1] NEGATIVE VALUES DENOTE INTERFERENCE FIT

Fits and Clearances  
 Figure 801 (Sheet 4)

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**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

Ref Letter Fig.801	Mating Item No. IPL Fig.1	Design Dimension				Service Wear Limit		
		Dimension		Assembly Clearance		Dimension		Maximum Clearance
		Min	Max	Min	Max	Min	Max	
M	ID 675	0.2495	0.2500	0.0000	0.0015	0.2470	0.2530	0.0035
	OD 90	0.2485	0.2495					
N	ID 655	0.2495	0.2500	0.0000	0.0015	0.2465	0.2530	0.0035
	OD 635A	0.2485	0.2495					
O	ID 645,680	0.2500	0.2505	0.0005	0.0020	0.2465	0.2535	0.0040
	OD 635A	0.2485	0.2495					
P	ID 680	0.3750	0.3756	0.0005	0.0016	0.3720	0.3781	0.0036
	OD 645	0.3740	0.3745					
Q	ID 620,660	0.2495	0.2505	0.0000	0.0020	0.2465	0.2535	0.0040
	OD 580A, 625A	0.2485	0.2495					
R	ID 605	0.2495	0.2545	0.0000	0.0060	0.2465	0.2575	0.0080
	OD 580A	0.2485	0.2495					
S	ID 647A	0.2495	0.2500	0.0000	0.0015	0.2465	0.2530	0.0035
	OD 625A	0.2485	0.2495					
T	ID 385	0.3750	0.3756	0.0005	0.0016	0.3720	0.3781	0.0036
	OD 35	0.3740	0.3745					
U	ID 35	0.2500	0.2505	0.0005	0.0020	0.2470	0.2530	0.0035
	OD 15	0.2485	0.2495					
V	ID 25A	0.2495	0.2500	0.0000	0.0015	0.2465	0.2530	0.0035
	OD 15	0.2485	0.2495					
W	ID 385	0.2495	0.2505	0.0000	0.0020	0.2470	0.2530	0.0035
	OD 15	0.2485	0.2495					

ALL DIMENSIONS ARE IN INCHES

Fits and Clearances  
 Figure 801 (Sheet 5)

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FITS AND CLEARANCES  
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SPECIAL TOOLS, FIXTURES, AND EQUIPMENT

NOTE: Equivalent substitutes may be used.

1. Milliohmeter, general purpose -- Cutler-Hammer-Shellcross Manufacturing Co., Model 665

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SPECIAL TOOLS

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ILLUSTRATED PARTS LIST

1. This section lists and illustrates replaceable or repairable component parts. The Illustrated Parts Catalog contains a complete explanation of the Boeing part numbering system.

2. Indentures show parts relationships as follows:

Assembly

Detail Parts for Assembly

Subassembly

Attaching Parts for Subassembly

Detail Parts for Subassembly

Detail Installation Parts (Included only if installation parts may be returned to shop as part of assembly)

3. One use code letter (A, B, C, etc.) is assigned in the EFF CODE column for each variation of top assembly. All listed parts are used on all top assemblies except when limitations are shown by use code letter opposite individual part entries.

4. Letter suffixes (alpha-variants) are added to item numbers for optional parts, Service Bulletin modification parts, configuration differences (except left- and right-hand parts), product improvement parts, and parts added between two sequential item numbers. The alpha-variant is not shown on illustrations when appearance and location of all variants of the part are the same.

5. Service Bulletin modifications are shown by the notations PRE SB XXXX and POST SB XXXX.

A. When a new top assembly part number is assigned by Service Bulletin, the notations appear at the top assembly level only. The configuration differences at detail part level are then shown by use code letter.

B. When the top assembly part number is not changed by the Service Bulletin, the notations appear at the detail part level.

6. Parts Interchangeability

Optional  
(OPT)

The parts are optional to and interchangeable with other parts having the same item number.

Supersedes, Superseded By  
(SUPSDS, SUPSD BY)

The part supersedes and is not interchangeable with the original part.

Replaces, Replaced By  
(REPLS, REPLD BY)

The part replaces and is interchangeable with, or is an alternate to, the original part.

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ILLUSTRATED PARTS LIST

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VENDORS

S0352 NIPPON MINIATURE BEARING CO LTD  
TOKYO, JAPAN

S4096 SHIMADZU SEISAKUSHO  
KYOTO, JAPAN

OPTK6 SPS TECHNOLOGIES INC AEROSPACE PRODUCTS DIV  
5195 W 4700 SPO BOX 18459  
KEARNS, UTAH 84118

06725 AIR INDUSTRIES CORPORATION  
12570 KNOTT STREET  
GARDEN GROVE, CALIFORNIA 92641-3932

08524 DEUTSCH FASTENER CORP SEE CODE V97928

11815 CHERRY AEROSPACE FASTENERS DIV OF TEXTRON  
1224 EAST WARNER AVENUE PO BOX 2157  
SANTA ANA, CALIFORNIA 92707-0157

15653 KAYNAR TECHNOLOGY KAYNAR DIV  
800 SOUTH STATE COLLEGE BLVD PO BOX 3001  
FULLERTON, CALIFORNIA 92634-3001

15860 NEW HAMPSHIRE BALL BEARINGS, INCORPORATED ASTRO DIVISION  
155 LEXINGTON AVENUE  
LACONIA, NEW HAMPSHIRE 03246-2937

17446 HUCK MFG CO GOV CONTRACTS LOS ANGELES DIV SUB OF FED-MOGUL  
900 WATSON CENTER ROAD  
CARSON, CALIFORNIA 90745

21335 TORRINGTON CO FAFNIR BEARING DIV  
59 FIELD STREET  
TORRINGTON, CONNECTICUT 06790-4942

30163 VALENTEC DAYRON INC  
333 MAGUIRE BLVD PO BOX 140394  
ORLANDO, FLORIDA 32814-0394

38443 MRC BEARINGS  
402 CHANDLER STREET  
JAMESTOWN, NEW YORK 14701-3802

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VENDORS

40920 MPB MINIATURE PRECISION BEARING DIV  
PRECISION PARK PO BOX 547  
KEENE, NEW HAMPSHIRE 03431

43991 FAG BEARING INCORPORATED  
118 HAMILTON AVENUE  
STAMFORD, CONNECTICUT 06904

50294 NEW HAMPSHIRE BALL BEARINGS INC  
9730 INDEPENDENCE AVENUE PO BOX 2515  
CHATSWORTH, CALIFORNIA 91311-4323

50632 KAMATICS CORP SUB OF KAMAN CORP  
1335 BLUE HILLS ROAD  
BLOOMFIELD, CONNECTICUT 06002-1304

52828 REPUBLIC FASTENER MFG CORP  
1300 RANCHO CONEJO BLVD  
NEWBURY PARK, CALIFORNIA 91320-1405

56878 SPS TECHNOLOGIES INC AEROSPACE AND INDUSTRIAL PRODUCTS DIV  
HIGHLAND AVENUE  
JENKINTOWN, PENNSYLVANIA 19046

60516 WEST COAST AEROSPACE INC  
812 MIRAFLORES STREET  
SAN PEDRO, CALIFORNIA 90731-1439

72962 HARVARD INDUSTRIES INC  
3 WERNER WAY SUITE 210  
LEBANON, NEW JERSEY 08833

73134 IMO INDUSTRIES INC HEIM BEARINGS DIV  
60 ROUND HILL ROAD PO BOX 430  
FAIRFIELD, CONNECTICUT 06430

73197 HI-SHEAR TECHNOLOGY CORP  
2600 SKYPARK DRIVE  
TORRANCE, CALIFORNIA 90509

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VENDORS

77896 REXNORD INC BEARING OPERATION  
2400 CURTIS STREET  
DOWNERS GROVE, ILLINOIS 60515-4005

80539 SPS TECHNOLOGIES INC AEROSPACE PRODUCTS DIV  
2701 SOUTH HARBOR BOULEVARD PO BOX 1259  
SANTA ANA, CALIFORNIA 92702-1259

83086 NEW HAMPSHIRE BALL BEARINGS, INCORPORATED  
ROUTE 202  
PETERBOROUGH, NEW HAMPSHIRE 03458

92215 FAIRCHILD IND INC FAIRCHILD AEROSPACE FASTENER DIV  
3010 W LOMITA BLVD  
TORRANCE, CALIFORNIA 90505-5102

97613 SARGENT CONTROLS & AEROSPACE/KAHR BEARING DIV  
5675 W BURLINGAME RD  
TUCSON, ARIZONA 85743

97928 DEUTSCH FASTENER CORP  
3969 PARAMONT BOULEVARD  
LAKEWOOD, CALIFORNIA 90712-4193

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**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
ACMGDW4KA3908		1	655A	1
		1	655B	1
ACMKP25BP26LY19		1	570A	2
ADB4VNC		1	675	1
		1	710	1
AN960D10L		1	23	4
AN960D416L		1	28	2
AN960JD416		1	55A	2
		1	95A	1
		1	197A	2
		1	425A	1
		1	585A	2
		1	630A	1
AN960JD416L		1	615B	1
		1	618A	5
AN960JD616		1	180A	1
AN960PD416		1	10	1
BACB10BW25		1	570	2
BACB10CG4A		1	655	1
BACB10CK10		1	575	1
BACB10CK6		1	520	1
BACB10CK8		1	190	1
BACB10CK8JD		1	190A	1
BACB10FC04C		1	675	1
		1	710	1
BACB10FG4		1	70	1
BACB10FR25		1	570A	2
BACB10FY4A		1	655A	1
BACB28AK04-050		1	592	2
BACB28X4C024		1	392	1
BACB30FM8-7		1	223	4
		1	248	3
		1	248G	1
BACB30FN8-10		1	296	2
BACB30GP5-10		1	690	1
BACB30LR3-4		1	110	2
BACB30MY6K3		1	280	4
BACB30MY6K4		1	266	2
BACB30MY6K5		1	267	2
		1	407	1
BACB30MY8K10		1	440	2
BACB30MY8K22		1	507	1
BACB30MY8K25		1	505	1

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PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
BACB30MY8K4		1	400	6
BACB30MY8K6		1	530	1
BACB30MY8K7		1	135	3
		1	227	2
		1	252	2
BACB30NF4-12		1	5	1
		1	580A	2
		1	625A	1
BACB30NF4-14		1	15	1
BACB30NF4-17		1	50A	1
BACB30NF4-22		1	635A	1
BACB30NF4-32		1	635B	1
BACB30NF4-9		1	45	1
		1	90	1
BACB30NR4K18		1	196	2
BACB30NR4K22		1	420A	1
BACB30NR4K29		1	460	1
		1	490	1
BACB30NR4K6		1	355	1
BACB30NR4K7		1	350	3
BACB30NW6K4		1	205	3
BACB30NW8K7		1	221	2
		1	246	2
BACC30M6		1	210	3
		1	267G	4
		1	285	4
		1	408	1
BACC30M8		1	140	3
		1	222	2
		1	230	2
		1	247	2
		1	255	2
		1	405A	6
		1	445	2
		1	510	2
		1	535	1
BACG20L3		1	120	2
BACJ40A20-5		1	24G	1
BACJ40A20-6		1	24H	1
BACN10JC4		1	20	2
BACN10JN3		1	295	4
BACR15BA3AD		1	290	8
BACR15BB5AD		1	555	2
BACS18K25-55W		1	199	2
BACS40R008F032F		1	390	1
BACS40R8E19F		1	269	1

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PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
BACW10BP5CD		1	617	1
BRFM20A3		1	295	4
B30NW6K4		1	205	3
B30NW8K7		1	221	2
		1	246	2
DPP4WFS428		1	70	1
DW4K1		1	655	1
GDW4KFS428		1	655	1
GDW4KSD610		1	655	1
GDW4KTT		1	655	1
HL10VAZ6-3		1	280	4
HL10VAZ6-4		1	266	2
HL10VAZ6-5		1	267	2
		1	407	1
HL10VAZ8-10		1	440	2
HL10VAZ8-22		1	507	1
HL10VAZ8-25		1	505	1
HL10VAZ8-4		1	400	6
HL10VAZ8-6		1	530	1
HL10VAZ8-7		1	135	3
		1	227	2
		1	252	2
HL11VAZ6-4		1	205	3
HL11VAZ8-7		1	221	2
		1	246	2
HL11V6-4		1	205	3
HL18PB8-7		1	223	4
		1	248	3
		1	248G	1
HL19PB8-10		1	296	2
HL79-6		1	210	3
		1	267G	4
		1	285	4
		1	408	1
HL79-8		1	140	3
		1	222	2
		1	230	2
		1	247	2
		1	255	2
		1	405A	6
		1	445	2
		1	510	2
		1	535	1

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PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
HT04VSBC		1	675	1
		1	710	1
KNDB4-66		1	675	1
		1	710	1
KP25B		1	570	2
KP4R16FS428		1	647A	1
KR4CNGBZC		1	675	1
		1	710	1
LLDW4K1		1	655	1
LLKP25B		1	570	2
L8006K4		1	266	2
L803-6-4		1	205	3
L803-6K4		1	205	3
L803-8K7		1	221	2
		1	246	2
MF1000-3BAC		1	295	4
MS14104-4		1	65	2
MS16562-252		1	475	1
MS21042L3		1	24A	2
MS21042L4		1	60A	2
		1	100A	1
		1	198A	2
		1	225A	4
		1	250A	3
		1	251A	1
		1	298A	2
		1	365A	4
		1	430A	1
		1	470A	1
		1	500A	1
		1	590A	2
		1	610B	1
		1	640A	2
MS21042L6		1	175A	1
MS35338-44		1	27	1
MS35650-3255T		1	29	1
NAS1080D5		1	695	1
NAS1149D0463J		1	224B	4
		1	249B	3
		1	249J	1
NAS1149D0463J		1	297B	2
		1	360B	4
		1	465B	1
		1	495B	1
NAS42DD5-18		1	560	2

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PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
NAS563-17		1	21	1
NAS563-21		1	22	1
NAS564-35		1	26	1
NAS623-3-8		1	115	2
NAS75-3-014		1	130	2
NRRS04B10GC		1	675	1
		1	710	1
NS103218-02		1	295	4
PACMKP25BA3908		1	570A	2
RMF9201M3		1	295	4
SA10-18B4		1	575	1
SA6-23A4		1	520	1
SA8-26A4		1	190	1
SSMGDW4KSD705		1	655A	1
SSMKP25BSD703		1	570A	2
VN252A02		1	295	4
WC22-8-7		1	223	4
		1	248	3
		1	248G	1
WC258-10		1	296	2
2LPYE5-10		1	690	1
251T0100-230		1	85A	1
251T1203-2		1	455	1
251T1204-4		1	435A	1
251T1205-13		1	1B	RF
251T1205-14		1	30B	1
251T1205-15		1	30C	1
251T1205-16		1	1D	RF
251T1205-18		1	1E	RF
251T1205-19		1	30D	1
251T1205-20		1	1F	RF
251T1205-21		1	30E	1
251T1205-22		1	1G	RF
251T1205-23		1	30F	1
251T1205-24		1	30G	1
251T1205-25		1	1H	RF
251T1205-26		1	30H	1
251T1205-27		1	1J	RF
251T1205-28		1	30J	1
251T1205-29		1	1L	RF
251T1206-1		1	515	1
251T1207-10		1	200F	1
251T1207-11		1	200G	1
251T1207-6		1	200B	1
251T1207-8		1	200D	1

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PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
251T1207-9		1	200E	1
251T1208-2		1	245A	1
251T1209-2		1	220A	1
251T1211-1		1	595	1
251T1212-2		1	450A	1
251T1214-1		1	235	1
		1	260	1
251T1215-2		1	265A	1
251T1216-2		1	410	1
251T1217-2		1	415	1
251T1218-2		1	305	1
251T1219-1		1	300	1
251T1222-1		1	540	1
251T1223-1		1	545	1
251T1224-1		1	485	1
251T1225-2		1	480	1
251T1227-10		1	650D	1
251T1227-3		1	650	1
251T1227-4		1	660	1
251T1227-5		1	650A	1
251T1227-6		1	660A	1
251T1227-7		1	650B	1
251T1227-8		1	660B	1
251T1227-9		1	650C	1
251T1228-5		1	670	1
251T1228-6		1	680	1
251T1230-1		1	185	1
251T1230-2		1	195	1
251T1231-1		1	600	1
251T1242-2		1	240A	1
251T1246-1		1	605	2
251T1252-1		1	605A	2
251T1253-1		1	700	1
251T1253-2		1	700A	1
251T1254-1		1	620	1
251T1258-1		1	215	1
251T1260-5		1	40A	1
251T1260-6		1	75A	1
251T1261-2		1	385	1
251T1262-1		1	550	1
251T1262-2		1	565	1
251T1263-1		1	105	1
251T1263-2		1	125	1
251T1263-3		1	105A	1
251T1263-4		1	125A	1

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PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
251T1264-1		1	270	1
251T1264-2		1	275	1
251T1270-1		1	412	1
251T1271-1		1	182	1
251T1272-1		1	665	1
251T1272-2		1	665A	1
251T1290-1		1	268	1
251T1297-1		1	670A	1
251T1297-10		1	680B	1
251T1297-2		1	680A	1
251T1297-5		1	705	1
251T1297-6		1	715	1
251T1297-7		1	705A	1
251T1297-8		1	715A	1
251T1297-9		1	670B	1
251T1299-1		1	305A	1
251T1308-1		1	685	1
251T1308-2		1	685A	1
251T1381-1		1	595A	1
251T1381-2		1	600A	1
251T1381-3		1	595B	1
251T1381-4		1	600B	1
251T1383-1		1	595C	1
251T1801-1		1	270A	1
251T1801-2		1	275A	1
251T1801-3		1	287	1
251T1801-4		1	288	1
251T3741-12		1	35	1
		1	80	1
		1	645	1
5500300-11		1	25E	1
62547-8-10		1	296	2
62550-8-7		1	223	4
		1	248	3
		1	248G	1

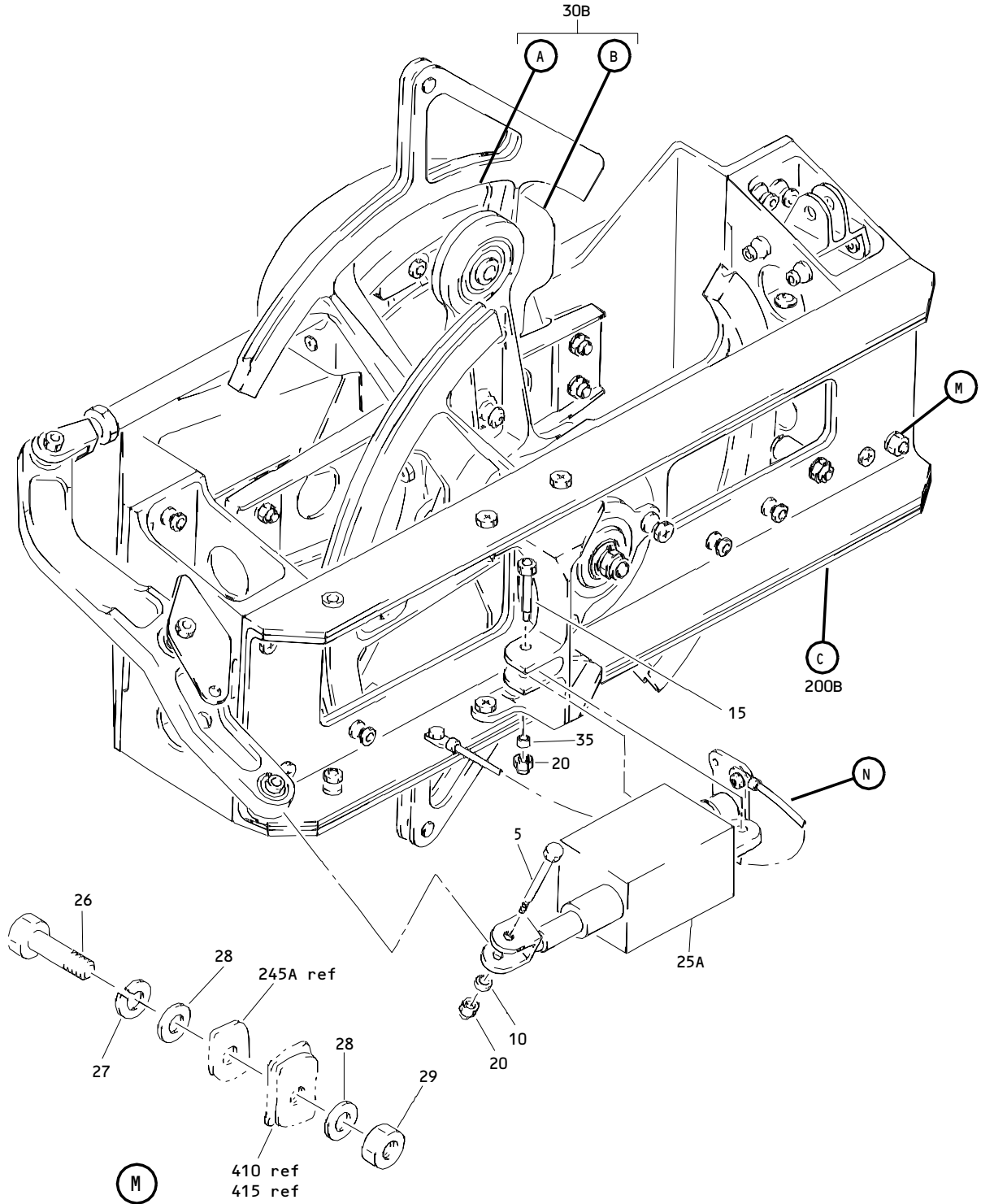
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PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
66014-6		1	210	3
		1	267G	4
		1	285	4
		1	408	1
66014-8		1	140	3
		1	222	2
		1	230	2
		1	247	2
		1	255	2
		1	405A	6
		1	445	2
		1	510	2
		1	535	1
		1	525	1
69-38919-18		1	25A	1
732-16810-01		1	25B	1
732-16810-03		1		

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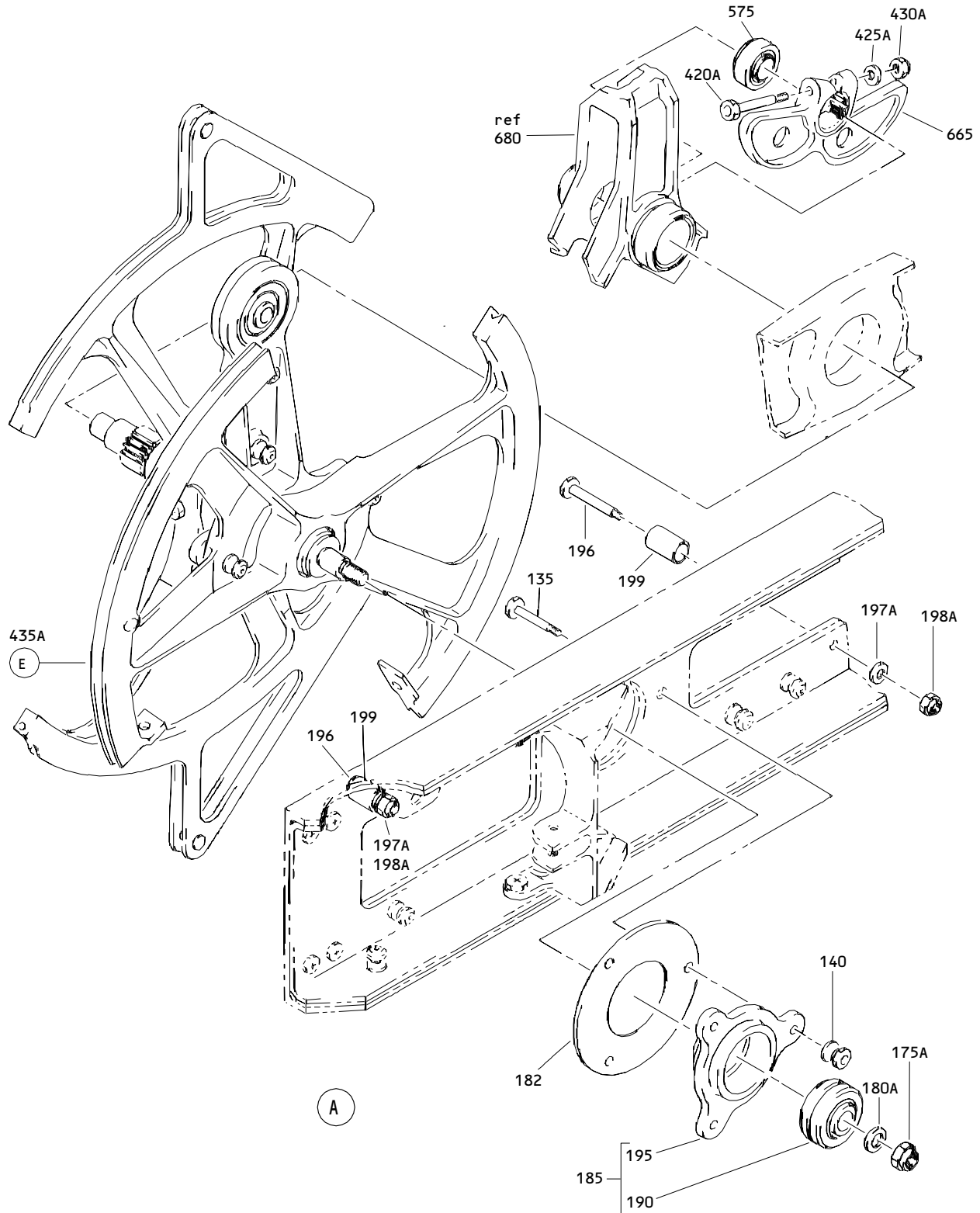
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Aileron Control Feel Mechanism Assembly  
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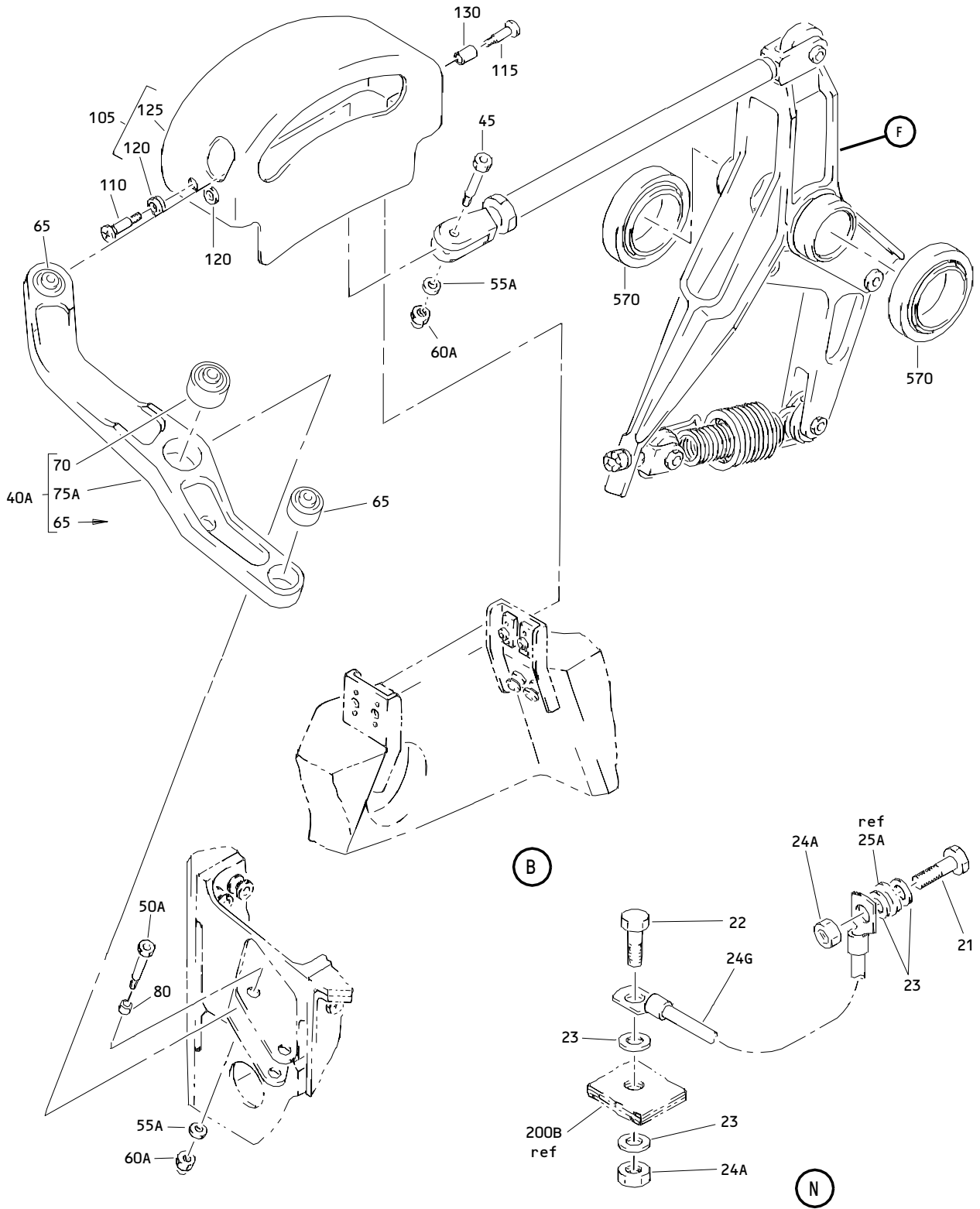
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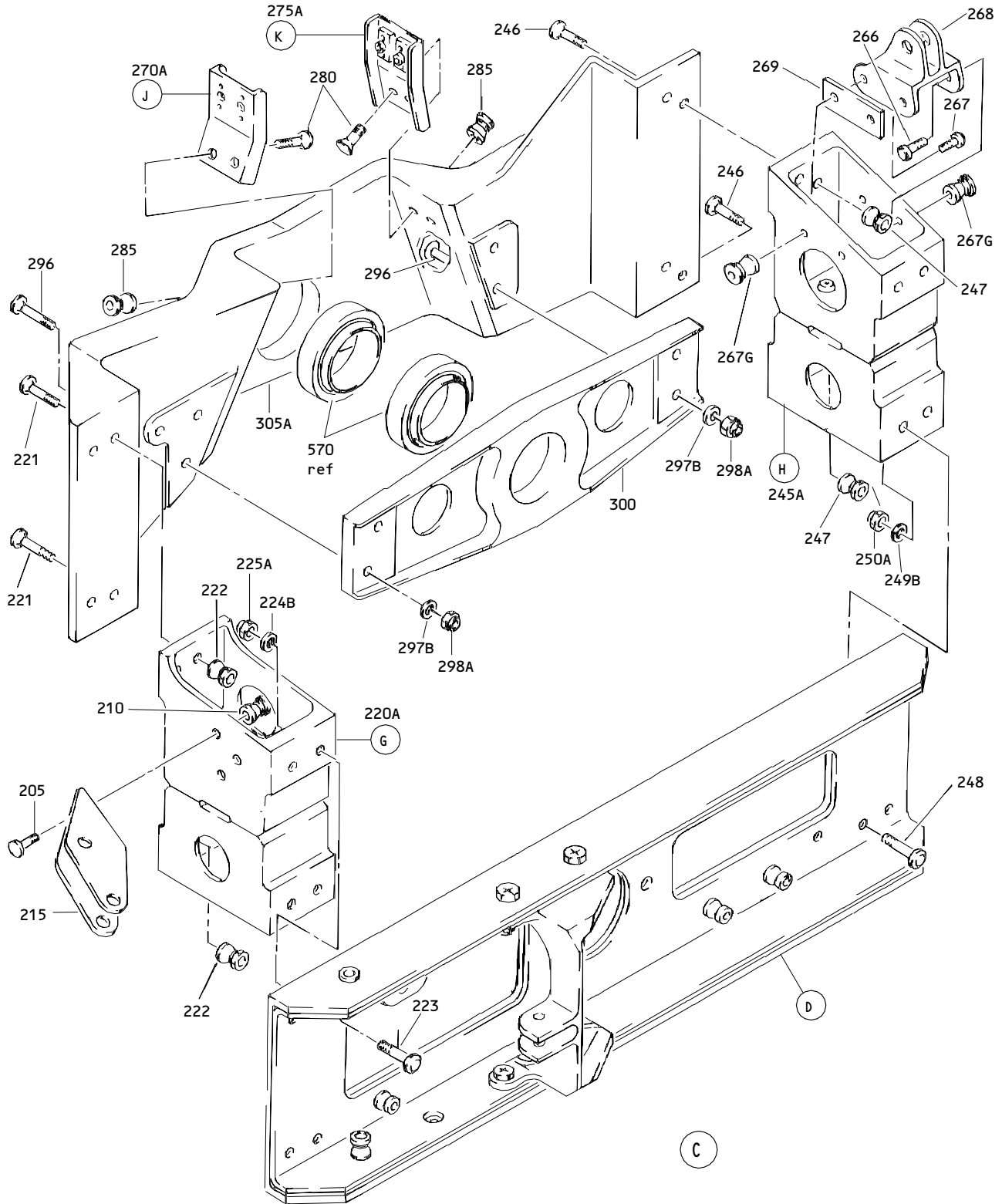
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Aileron Control Feel Mechanism Assembly  
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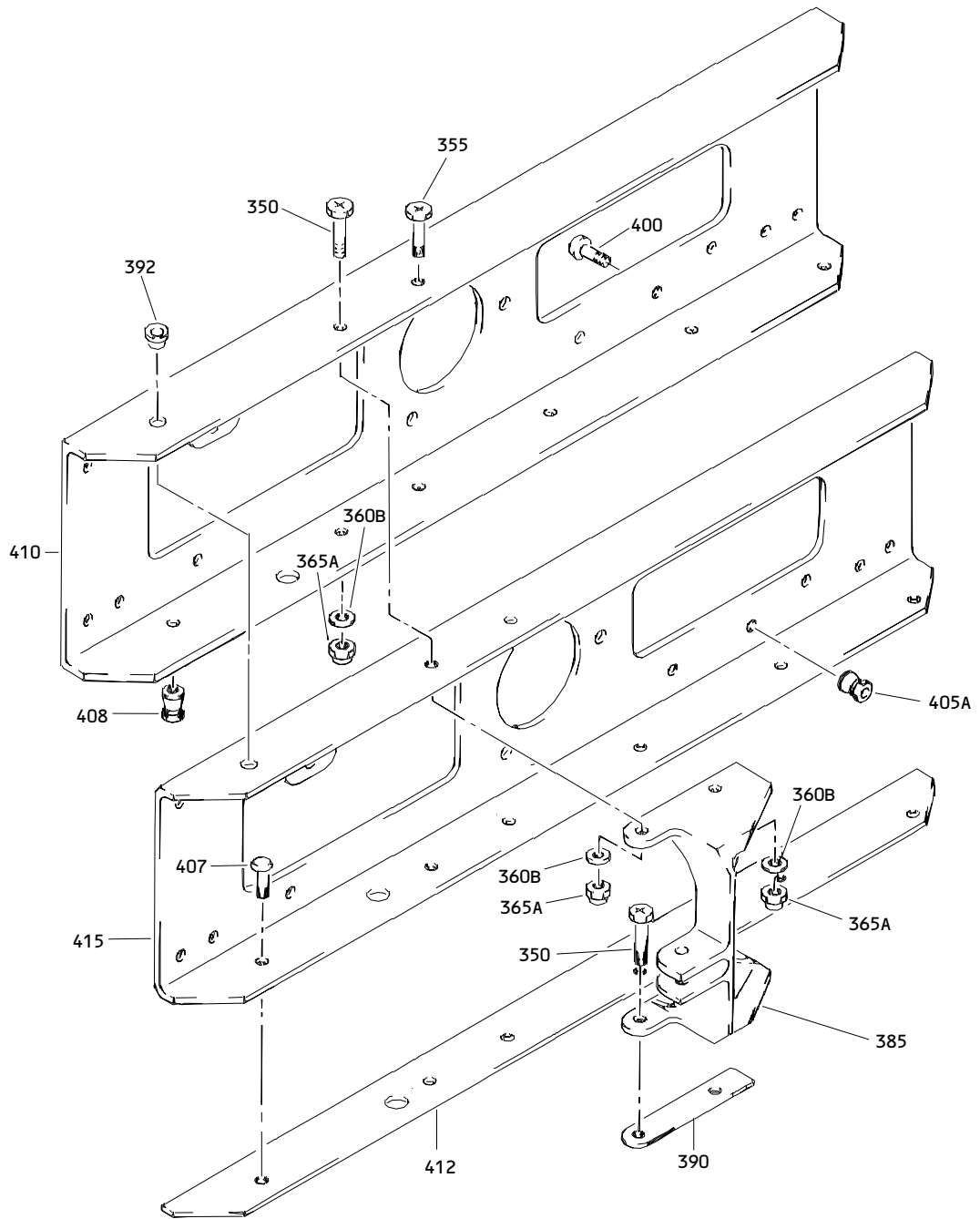
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**Aileron Control Feel Mechanism Assembly  
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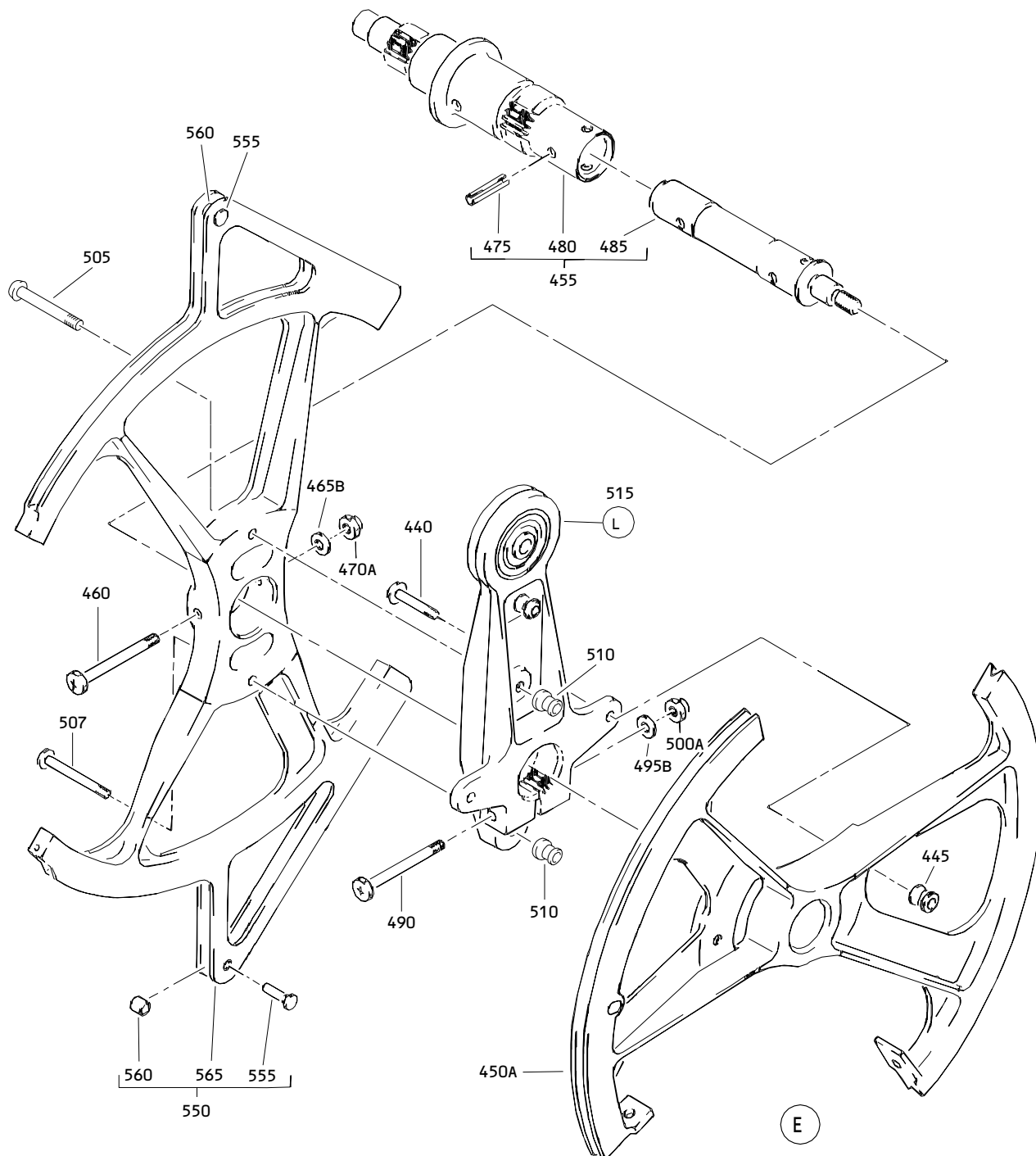
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Aileron Control Feel Mechanism Assembly  
Figure 1 (Sheet 5)

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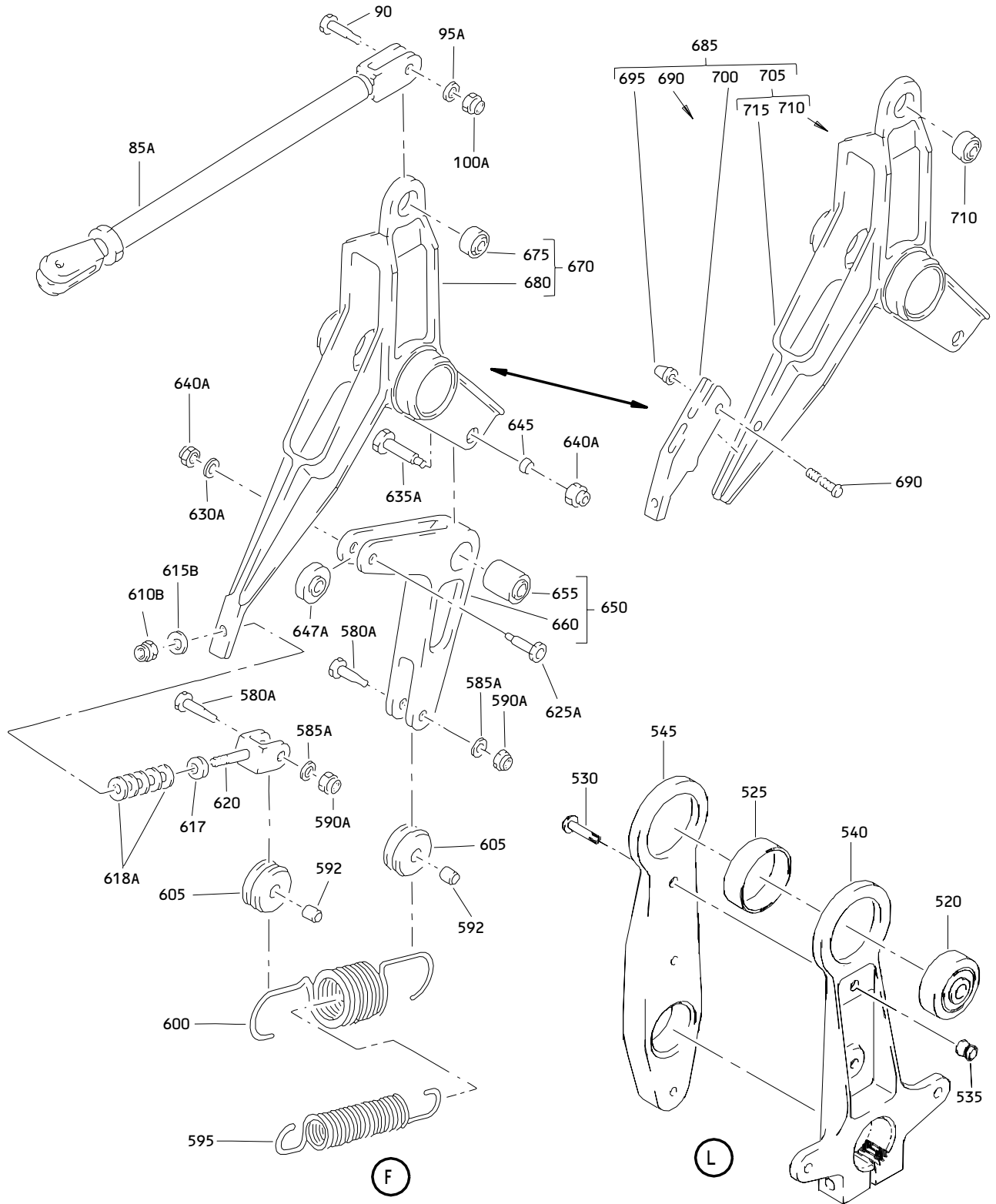




Aileron Control Feel Mechanism Assembly  
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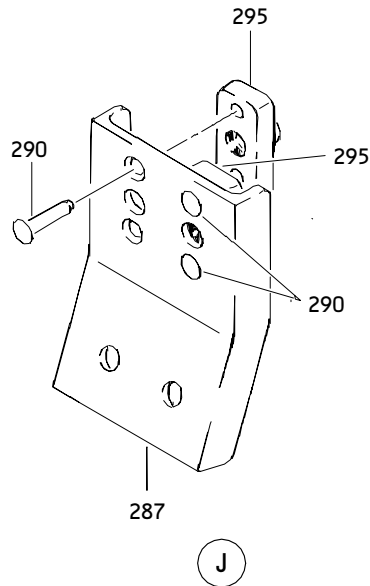
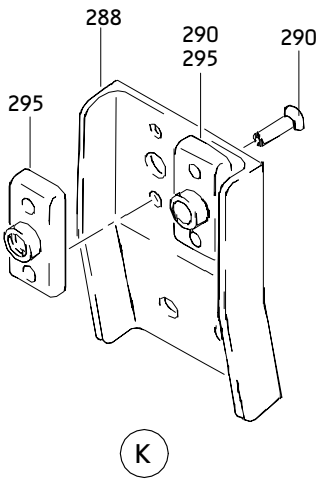
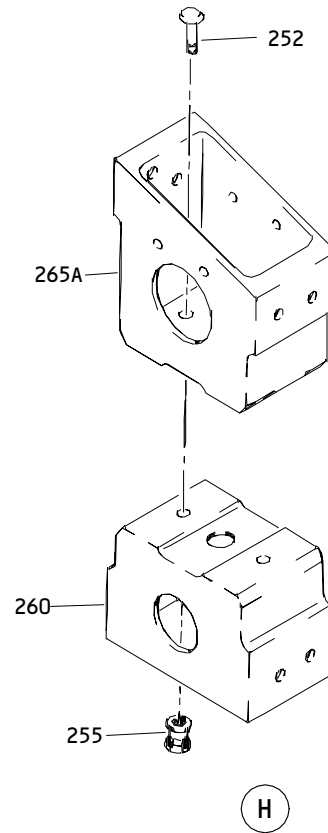
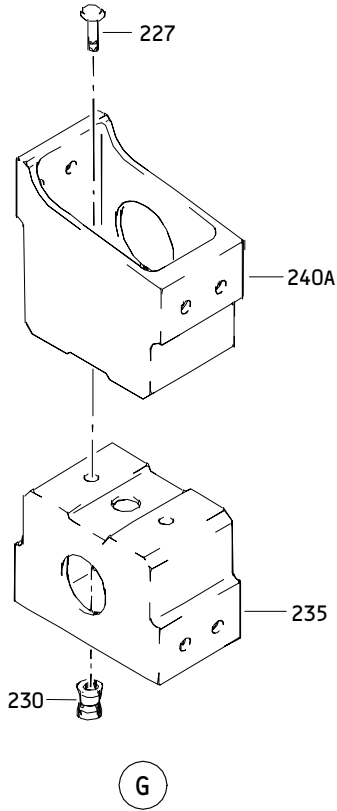
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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
-1	251T1205-9		DELETED		
-1A	251T1205-11		DELETED		
R -1B	251T1205-13		MECHANISM ASSY-AIL. CONT FEEL	A	RF
-1C	251T1205-15		DELETED		
R -1D	251T1205-16		MECHANISM ASSY-AIL. CONT FEEL	B	RF
-1E	251T1205-18		MECHANISM ASSY-AIL. CONT FEEL	C	RF
-1F	251T1205-20		MECHANISM ASSY-AIL. CONT FEEL	D	RF
-1G	251T1205-22		MECHANISM ASSY-AIL. CONT FEEL	E	RF
-1H	251T1205-25		MECHANISM ASSY-AIL. CONT FEEL	F	RF
-1J	251T1205-27		MECHANISM ASSY-AIL. CONT FEEL	G	RF
-1K	251T1205-27		DELETED		
R -1L	251T1205-29		MECHANISM ASSY-AIL. CONT FEEL	H	RF
R 5	BACB30NF4-12		.BOLT		1
R 10	AN960PD416		.WASHER		1
R 15	BACB30NF4-14		.BOLT		1
R 20	BACN10JC4		.NUT		2
R 21	NAS563-17		.BOLT	B-H	1
R 22	NAS563-21		.BOLT	B-H	1
R 23	AN960D10L		.WASHER		4
24	H10-3BAC		DELETED		
R 24A	MS21042L3		.NUT	B-H	2
R 24G	BACJ40A20-5		.JUMPER ASSY	B-F	1

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-					
R -24H	BACJ40A20-6		. JUMPER	G,H	1
25	132-16810-01		DELETED		
R 25A	732-16810-01		.ACTUATOR- (VS4096) (SPEC 60B80030-3) (OPT ITEM 25B)	A	1
R -25B	732-16810-03		.ACTUATOR- (VS4096) (SPEC 60B80030-4) (OPT ITEM 25A)	A	1
R -25C	732-16810-03		.ACTUATOR- (VS4096) (SPEC 60B80030-4)	B-F	1
R -25D	732-16810-03		.ACTUATOR- (VS4096) (SPEC 60B80030-4) (OPT ITEM 025E)	G,H	1
R -25E	5500300-11		.ACTUATOR- (VS4096) (OPT ITEM 025D)	G,H	1
R 26	NAS564-35		.BOLT	B-H	1
R 27	MS35338-44		.WASHER	B-H	1
R 28	AN960D416L		.WASHER	B-H	2
R 29	MS35650-3255T		.NUT	B-H	1
30	251T1205-10		DELETED		
30A	251T1205-12		DELETED		
R 30B	251T1205-14		.FEEL ASSY	A	1
R -30C	251T1205-15		.FEEL ASSY	B	1
-30D	251T1205-19		.FEEL ASSY	C	1
-30E	251T1205-21		.FEEL ASSY	D	1
-30F	251T1205-23		.FEEL ASSY	E	1
-30G	251T1205-24		.FEEL ASSY	F	1
-30H	251T1205-26		.FEEL ASSY	G	1
R -30J	251T1205-28		.FEEL ASSY	H	1
R 35	251T3741-12		..BUSHING		1
40	251T1260-3		DELETED		
R 40A	251T1260-5		..LEVER ASSY ATTACHING PARTS		1
R 45	BACB30NF4-9		..BOLT		1
50	BACB30NR4K17		DELETED		
R 50A	BACB30NF4-17		..BOLT		1
55	AN960PD416		DELETED		
R 55A	AN960JD416		..WASHER		2
60	H10-4BAC		DELETED		

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-60A	MS21042L4		..NUT -----*-----		2
R 65	MS14104-4		...BEARING		2
R 70	DPP4WFS428		...BEARING- (V21335) (SPEC BACB10FG4)		1
R 75	251T1260-4		DELETED		
R 75A	251T1260-6		...LEVER		1
R 80	251T3741-12		..BUSHING		1
R 85	251T0100-222		DELETED		
R 85A	251T0100-230		..ROD ASSY (REF CMM 27-00-11) ATTACHING PARTS		1
R 90	BACB30NF4-9		..BOLT		1
R 95	AN960PD416		DELETED		
R 95A	AN960JD416		..WASHER		1
R 100	H10-4BAC		DELETED		
R 100A	MS21042L4		..NUT -----*-----		1
R 105	251T1263-1		..COVER ASSY (OPT ITEM 105A)		1
R -105A	251T1263-3		..COVER ASSY- (OPT ITEM 105) ATTACHING PARTS		1
R 110	BACB30LR3-4		..BOLT		2
R 115	NAS623-3-8		..SCREW -----*-----		2
R 120	BACG20L3		...GROMMET		2
R 125	251T1263-2		...COVER- (USED ON ITEM 105)		1

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-125A	251T1263-4		...COVER- (USED ON ITEM 105A)		1
R 130	NAS75-3-014		..BUSHING		2
R 135	HL10VAZ8-7		..BOLT- (V60516) (SPEC BACB30MY8K7) (OPT HL10VAZ8-7 (VOPTK6))		3
R 140	HL79-8		..COLLAR- (V56878) (SPEC BACC30M8) (OPT HL79-8 (V73197)) (OPT HL79-8 (V92215)) (OPT 66014-8 (V56878))		3
175	H10-6BAC		DELETED		
175A	MS21042L6		..NUT		1
180	AN960PD616		DELETED		
180A	AN960JD616		..WASHER		1
R 182	251T1271-1		..SHIM		1
R 185	251T1230-1		..CAP ASSY		1
R 190	SA8-26A4		...BEARING- (V77896) (SPEC BACB10CK8) (OPT ITEM 190A)		1
R -190A	BACB10CK8JD		...BEARING- (OPT ITEM 190)		1

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
R 195	251T1230-2		...CAP-BRG		1
R 196	BACB30NR4K18		..BOLT		2
197	AN960PD416		DELETED		
197A	AN960JD416		..WASHER		2
198	H10-4BAC		DELETED		
198A	MS21042L4		..NUT		2
R 199	BACS18K25-55W		..SPACER		2
200	251T1207-4		DELETED		
200A	251T1207-5		DELETED		
R 200B	251T1207-6		..HOUSING ASSY	A	1
-200C	251T1207-7		DELETED		
R -200D	251T1207-8		..HOUSING ASSY- (OPT ITEM 200E)	B-G	1
R -200E	251T1207-9		..HOUSING ASSY- (OPT ITEM 200D)	B-G	1
R -200F	251T1207-10		..HOUSING ASSY- (OPT ITEM 200G)	H	1
R -200G	251T1207-11		..HOUSING ASSY- (OPT ITEM 200F)	H	1
R 205	HL11VAZ6-4		...BOLT- (V56878) (SPEC BACB30NW6K4) (OPT HL11V6-4 (V92215)) (OPT HL11V6-4 (V97928)) (OPT L803-6-4 (V06725)) (OPT B30NW6K4 (V97928)) (OPT HL11VAZ6-4 (V73197)) (OPT HL11VAZ6-4 (V92215)) (OPT HL11VAZ6-4 (V97928)) (OPT L803-6K4 (V06725)) (OPT HL11V6-4 (V80539)) (OPT HL11VAZ6-4 (VOPTK6)) (OPT HL11VAZ6-4 (V60516))		3

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-210	HL79-6		...COLLAR- (V56878) (SPEC BACC30M6) (OPT HL79-6 (V73197)) (OPT HL79-6 (V92215)) (OPT 66014-6 (V56878))		3
R 215	251T1258-1		...BRACKET-PIVOT		1
R 220	251T1209-1		DELETED		
R 220A	251T1209-2		...BRACKET ASSY-SPRT ATTACHING PARTS		1
R 221	HL11VAZ8-7		...BOLT- (V56878) (SPEC BACB30NW8K7) (OPT B30NW8K7 (V97928)) (OPT HL11VAZ8-7 (V73197)) (OPT HL11VAZ8-7 (V92215)) (OPT HL11VAZ8-7 (V97928)) (OPT L803-8K7 (V06725)) (OPT HL11VAZ8-7 (V0PTK6)) (OPT HL11VAZ8-7 (V60516))		2
R 222	HL79-8		...COLLAR- (V56878) (SPEC BACC30M8) (OPT HL79-8 (V73197)) (OPT HL79-8 (V92215)) (OPT 66014-8 (V56878))		2

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-223	HL18PB8-7		...BOLT- (V56878) (SPEC BACB30FM8-7) (OPT HL18PB8-7 (V73197)) (OPT HL18PB8-7 (V92215)) (OPT HL18PB8-7 (V97928)) (OPT HL18PB8-7 (V80539)) (OPT WC22-8-7 (V60516)) (OPT 62550-8-7 (V56878)) (OPT HL18PB8-7 (V60516)) (OPT HL18PB8-7 (V08524))		4
R 224	AN960PD416		DELETED		
R 224A	AN960JD416		DELETED		
R 224B	NAS1149D0463J		...WASHER		4
R 225	H10-4BAC		DELETED		
R 225A	MS21042L4		...NUT -----*-----		4
R 227	HL10VAZ8-7		....BOLT- (V60516) (SPEC BACB30MY8K7) (OPT HL10VAZ8-7 (VOPTK6))		2
R 230	HL79-8		....COLLAR- (V56878) (SPEC BACC30M8) (OPT HL79-8 (V73197)) (OPT HL79-8 (V92215)) (OPT 66014-8 (V56878))		2
R 235	251T1214-1		....BRACKET		1
R 240	251T1242-1		DELETED		
R 240A	251T1242-2		....BRACKET		1
R 245	251T1208-1		DELETED		
R 245A	251T1208-2		...BRACKET ASSY-SPRT		1

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-246	HL11VAZ8-7		ATTACHING PARTS ...BOLT- (V56878) (SPEC BACB30NW8K7) (OPT B30NW8K7 (V97928)) (OPT HL11VAZ8-7 (V73197)) (OPT HL11VAZ8-7 (V92215)) (OPT HL11VAZ8-7 (V97928)) (OPT L803-8K7 (V06725)) (OPT HL11VAZ8-7 (V0PTK6)) (OPT HL11VAZ8-7 (V60516))		2
R 247	HL79-8		...COLLAR- (V56878) (SPEC BACC30M8) (OPT HL79-8 (V73197)) (OPT HL79-8 (V92215)) (OPT 66014-8 (V56878))		2

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-248	HL18PB8-7		...BOLT- (V56878) (SPEC BACB30FM8-7) (OPT HL18PB8-7 (V73197)) (OPT HL18PB8-7 (V92215)) (OPT HL18PB8-7 (V97928)) (OPT HL18PB8-7 (V80539)) (OPT WC22-8-7 (V60516)) (OPT 62550-8-7 (V56878)) (OPT HL18PB8-7 (V60516)) (OPT HL18PB8-7 (V08524))		3
R 248G	HL18PB8-7		...BOLT- (V56878) (SPEC BACB30FM8-7) (OPT HL18PB8-7 (V73197)) (OPT HL18PB8-7 (V92215)) (OPT HL18PB8-7 (V97928)) (OPT HL18PB8-7 (V80539)) (OPT WC22-8-7 (V60516)) (OPT 62550-8-7 (V56878)) (OPT HL18PB8-7 (V60516)) (OPT HL18PB8-7 (V08524))	A	1
R 249	AN960PD416		DELETED		
R 249A	AN960JD416		DELETED		
R 249B	NAS1149D0463J		...WASHER		3
R 249G	AN960PD416		DELETED		
R 249H	AN960JD416		DELETED		
R 249J	NAS1149D0463J		...WASHER	A	1
R 250	H10-4BAC		DELETED		

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
R 250A	MS21042L4		...NUT		3
R 251	H10-4BAC		DELETED		
R 251A	MS21042L4		...NUT	A	1
			-----*-----		
R 252	HL10VAZ8-7		....BOLT- (V60516) (SPEC BACB30MY8K7) (OPT HL10VAZ8-7 (VOPTK6))		2
R 255	HL79-8		....COLLAR- (V56878) (SPEC BACC30M8) (OPT HL79-8 (V73197)) (OPT HL79-8 (V92215)) (OPT 66014-8 (V56878))		2
R 260	251T1214-1		....BRACKET		1
R 265	251T1215-1		DELETED		
R 265A	251T1215-2		....BRACKET		1
R 266	HL10VAZ6-4		...BOLT- (V60516) (SPEC BACB30MY6K4) (OPT HL10VAZ6-4 (VOPTK6)) (OPT HL10VAZ6-4 (V92215)) (OPT HL10VAZ6-4 (V97928)) (OPT L8006K4 (V06725)) (OPT HL10VAZ6-4 (V08524))		2
R 267	HL10VAZ6-5		...BOLT- (V60516) (SPEC BACB30MY6K5) (OPT HL10VAZ6-5 (VOPTK6))		2

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-267G	HL79-6		...COLLAR- (V56878) (SPEC BACC30M6) (OPT HL79-6 (V73197)) (OPT HL79-6 (V92215)) (OPT 66014-6 (V56878))		4
R 268	251T1290-1		...BRACKET		1
R 269	BACS40R8E19F		...SHIM		1
R 270	251T1264-1		...SUPPORT ASSY (USED ON ITEM 200E)		1
R -270A	251T1801-1		...SUPPORT ASSY (USED ON ITEM 200D)	B-H	1
R 275	251T1264-2		...SUPPORT ASSY- (USED ON ITEM 200E)		1
R -275A	251T1801-2		...SUPPORT ASSY- (USED ON ITEM 200D)	B-H	1
R 280	HL10VAZ6-3		ATTACHING PARTS ...BOLT- (V60516) (SPEC BACB30MY6K3) (OPT HL10VAZ6-3 (VOPTK6))		4
R 285	HL79-6		...COLLAR- (V56878) (SPEC BACC30M6) (OPT HL79-6 (V73197)) (OPT HL79-6 (V92215)) (OPT 66014-6 (V56878)) -----*		4

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-287	251T1801-3		....SUPPORT- (USED ON ITEM 270A)	B-H	1
R 288	251T1801-4		....SUPPORT- (USED ON ITEM 275A)	B-H	1
R 290	BACR15BA3AD		....RIVET- (SIZE DETERMINE ON INST)		4
R 295	BRFM20A3		....NUTPLATE- (V52828) (SPEC BACN10JN3) (OPT MF1000-3BAC (V15653)) (OPT NS103218-02 (V80539)) (OPT RMF9201M3 (V72962)) (OPT VN252A02 (V92215)) (OPT MF1000-3BAC (V15653)) (OPT MF53049-3 (V15653))		2
R 296	HL19PB8-10		...BOLT- (V56878) (SPEC BACB30FN8-10) (OPT HL19PB8-10 (V73197)) (OPT HL19PB8-10 (V92215)) (OPT HL19PB8-10 (V97928)) (OPT 62547-8-10 (V56878)) (OPT HL19PB8-10 (V80539)) (OPT WC258-10 (V60516)) (OPT HL19PB8-10 (V60516)) (OPT HL19PB8-10 (V08524))		2

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
	297	AN960PD416	DELETED		
	297A	AN960JD416	DELETED		
R	297B	NAS1149D0463J	...WASHER		2
	298	H10-4BAC	DELETED		
	298A	MS21042L4	...NUT		2
R	300	251T1219-1	...BRACKET		1
R	305	251T1218-2	...BRACKET-		1
			(USED ON ITEM 200E)		
R	-305A	251T1299-1	...BRACKET-	B-D	1
			(USED ON ITEM 200D)		
	310	BACR15FT5KE8	DELETED		
	315	251T1267-1	DELETED		
	320	BACR15FT5KE5	DELETED		
	325	251T1266-1	DELETED		
	330	NAS623-3-5	DELETED		
	332	NAS623-3-7	DELETED		
	335	NAS623-3-9	DELETED		
	340	AN960PD10	DELETED		
	345	BRH10-3	DELETED		
R	350	BACB30NR4K7	...BOLT		3
R	355	BACB30NR4K6	...BOLT		1
	360	AN960PD416	DELETED		
	360A	AN960JD416	DELETED		
R	360B	NAS1149D0463J	...WASHER		4
	365	H10-4BAC	DELETED		
	365A	MS21042L4	...NUT		4
	375	251T1269-1	DELETED		
	380	251T1265-1	DELETED		
R	385	251T1261-2	...BRACKET-ACTR		1
R	390	BACS40R008F032F	...SHIM		1
R	392	BACB28X4C024	...BUSHING		1

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-395	251T1268-1		DELETED		
R 400	HL10VAZ8-4		...BOLT- (V60516) (SPEC BACB30MY8K4) (OPT HL10VAZ8-4 (VOPTK6))		6
R 405	BACB30M8		DELETED		
R 405A	HL79-8		...COLLAR- (V56878) (SPEC BACC30M8) (OPT HL79-8 (V73197)) (OPT HL79-8 (V92215)) (OPT 66014-8 (V56878))		6
R 407	HL10VAZ6-5		...BOLT- (V60516) (SPEC BACB30MY6K5) (OPT HL10VAZ6-5 (VOPTK6))		1
R 408	HL79-6		...COLLAR- (V56878) (SPEC BACC30M6) (OPT HL79-6 (V73197)) (OPT HL79-6 (V92215)) (OPT 66014-6 (V56878))		1
R 410	251T1216-2		...BRACKET-SPRT		1
R 412	251T1270-1		...SHIM		1
R 415	251T1217-2		...BRACKET-SPRT		1
R 420	BACB30NR4K19		DELETED		
R 420A	BACB30NR4K22		..BOLT		1
R 425	AN960PD416		DELETED		
R 425A	AN960JD416		..WASHER		1
R 430	H10-4BAC		DELETED		
R 430A	MS21042L4		..NUT		1
R 435	251T1204-3		DELETED		

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
R 435A	251T1204-4		..QUADRANT ASSY		1
R 440	HL10VAZ8-10		...BOLT- (V60516) (SPEC BACB30MY8K10) (OPT HL10VAZ8-10 (VOPTK6))		2
R 445	HL79-8		...COLLAR- (V56878) (SPEC BACC30M8) (OPT HL79-8 (V73197)) (OPT HL79-8 (V92215)) (OPT 66014-8 (V56878))		2
R 450	251T1212-1		DELETED		
R 450A	251T1212-2		...QUADRANT		1
R 455	251T1203-2		...SHAFT ASSY ATTACHING PARTS		1
R 460	BACB30NR4K29		...BOLT		1
R 465	AN960PD416		DELETED		
R 465A	AN960JD416		DELETED		
R 465B	NAS1149D0463J		...WASHER		1
R 470	H10-4BAC		DELETED		
R 470A	MS21042L4		...NUT -----*-----		1
R 475	MS16562-252		....PIN-SPR		1
R 480	251T1225-2		....SHAFT		1
R 485	251T1224-1		....SHAFT		1
R 490	BACB30NR4K29		...BOLT		1
R 495	AN960PD416		DELETED		

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
R 495A	AN960JD416		DELETED		
R 495B	NAS1149D0463J		...WASHER		1
500	H10-4BAC		DELETED		
R 500A	MS21042L4		...NUT		1
R 505	HL10VAZ8-25		...BOLT- (V60516) (SPEC BACB30MY8K25) (OPT HL10VAZ8-25 (VOPTK6))		1
R 507	HL10VAZ8-22		...BOLT- (V60516) (SPEC BACB30MY8K22) (OPT HL10VAZ8-22 (VOPTK6))		1
R 510	HL79-8		...COLLAR- (V56878) (SPEC BACC30M8) (OPT HL79-8 (V73197)) (OPT HL79-8 (V92215)) (OPT 66014-8 (V56878))		2
R 515	251T1206-1		...LEVER ASSY		1
R 520	SA6-23A4		....BEARING- (V77896) (SPEC BACB10CK6)		1
R 525	69-38919-18		....SLEEVE- (MFD FROM SH AL QQ-A-327 OR 6061-0 PER WW-T-789 OPT 6061-T6 ROD QQ-A-225/8 F2.10 .062 IN .624 IN 4.92 IN)		1

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-530	HL10VAZ8-6		....BOLT- (V60516) (SPEC BACB30MY8K6) (OPT HL10VAZ8-6 (VOPTK6))		1
R 535	HL79-8		....COLLAR- (V56878) (SPEC BACC30M8) (OPT HL79-8 (V73197)) (OPT HL79-8 (V92215)) (OPT 66014-8 (V56878))		1
R 540	251T1222-1		....LEVER		1
R 545	251T1223-1		....LEVER		1
R 550	251T1262-1		...QUADRANT ASSY		1
R 555	BACR15BB5AD		....RIVET- (SIZE DETERMINE ON INST)		2
R 560	NAS42DD5-18		....SPACER		2
R 565	251T1262-2		....QUADRANT		1
R 570	KP25B		..BEARING- (V38443) (SPEC BACB10BW25) (OPT KP25B2TS (V43991)) (OPT LLKP25B (V38443)) (OPT KP25BG27 (V30163)) (OPT KP25BFS428 (V21335)) (OPT KP25BLY196 (V40920)) (OPT KP25BSD610 (V83086)) (OPT ITEM 570A)	A-E	2

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01- -570A	PACMKP25BA3908		..BEARING- (V21335) (SPEC BACB10FR25) (OPT ACMKP25BP510LY198 (V40920)) (OPT ACMKP25BP26LY198 (V40920)) (OPT ACMKP25P26LY198 (V40920)) (OPT SSMKP25BSD703 (V83086)) (OPT ITEM 570)	A-E	2
-570B	PACMKP25BA3908		..BEARING- (V21335) (SPEC BACB10FR25) (OPT ACMKP25BP510LY198 (V40920)) (OPT ACMKP25BP26LY198 (V40920)) (OPT ACMKP25P26LY198 (V40920)) (OPT SSMKP25BSD703 (V83086))	F,G,H	2
R 575	SA10-18B4		..BEARING- (V77896) (SPEC BACB10CK10)		1
580	BACB30NR4K12		DELETED		
R 580A	BACB30NF4-12		..BOLT		2
585	AN960PD416		DELETED		
585A	AN960JD416		..WASHER		2
590	H10-4BAC		DELETED		
590A	MS21042L4		..NUT		2
592	BACB28AK04-050		..BUSHING	C,D, E,G,H	2
R 595	251T1211-1		..SPRING	A,B,F	1
-595A	251T1381-1		..SPRING	C	1
-595B	251T1381-3		..SPRING	D	1
-595C	251T1383-1		..SPRING	E,G,H	1
R 600	251T1231-1		..SPRING	A,B,F	1
-600A	251T1381-2		..SPRING	C	1
-600B	251T1381-4		..SPRING	D,E,G ,H	1
R 605	251T1246-1		..RETAINER-SPR	A,B,F	2
-605A	251T1252-1		..RETAINER-SPR	C-E,G ,H	2

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
610	AN316-4		DELETED		
610A	H10-4BAC		DELETED		
610B	MS21042L4		..NUT		1
615	AN960PD416		DELETED		
615A	AN960KD416L		DELETED		
615B	AN960JD416L		..WASHER		1
R 617	BACW10BP5CD		..WASHER		1
618	AN960KD416L		DELETED		
618A	AN960JD416L		..WASHER		AR
R 620	251T1254-1		..CLEVIS		1
625	BACB30NR4K12		DELETED		
R 625A	BACB30NF4-12		..BOLT		1
630	AN960PD416		DELETED		
630A	AN960JD416		..WASHER		1
635	BACB30NR4K27		DELETED		
R 635A	BACB30NF4-22		..BOLT	A-C,F	1
R -635B	BACB30NF4-32		..BOLT	D,E,G	1
640	H10-4BAC		DELETED		
640A	MS21042L4		..NUT		2
R 645	251T3741-12		..BUSHING		1
647	KPR16FS428		DELETED		
R 647A	KP4R16FS428		..BEARING- (V21335)		1
R 650	251T1227-3		..CAM FOLLOWER ASSY	A,B	1
-650A	251T1227-5		..CAM FOLLOWER ASSY	C	1
-650B	251T1227-7		..CAM FOLLOWER ASSY	D,E	1
-650C	251T1227-9		..CAM FOLLOWER ASSY	F	1
-650D	251T1227-10		..CAM FOLLOWER ASSY	G,H	1

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-655	GDW4KFS428		...BEARING- (V21335) (SPEC BACB10CG4A) (OPT GDW4KTT (V43991)) (OPT LLDW4K1 (V38443)) (OPT DW4K1 (V38443)) (OPT GDW4KSD610 (V83086)) (OPT ITEM 655B)	A-E	1
-655A	ACMGDW4KA3908		...BEARING- (V21335) (SPEC BACB10FY4A) (OPT SSMGDW4KSD705 (V83086))	F,G,H	1
-655B	ACMGDW4KA3908		...BEARING- (V21335) (SPEC BACB10FY4A) (OPT SSMGDW4KSD705 (V83086)) (OPT ITEM 655)	A-E	1
R 660	251T1227-4		...CAM FOLLOWER	A,B,F	1
R -660A	251T1227-6		...CAM FOLLOWER	C	1
R -660B	251T1227-8		...CAM FOLLOWER	D,G,H	1
R 665	251T1272-1		..CAM- (OPT ITEM 665A)		1
R -665A	251T1272-2		...CAM- (OPT ITEM 665)		1

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-670	251T1228-5		..LEVER ASSY-TRIM (OPT ITEM 670A)	A,B,F	1
R -670A	251T1297-1		..LEVER ASSY-TRIM (OPT ITEM 670)	A,B,F	1
-670B	251T1297-9		..LEVER ASSY-TRIM (OPT ITEM 685A)	D,E,G ,H	1
R 675	HT04VSBC		...BEARING- (V50294) (SPEC BACB10FC04C) (OPT NRRS04B10GC (V73134)) (OPT HT04VSBC (VS0352)) (OPT ADB4VNC (V15860)) (OPT KNDB4-66 (V97613)) (OPT KR4CNGBZC (V50632))	A,B, D-H	1
R 680	251T1228-6		...LEVER- (USED ON ITEM 670)	A,B,F	1
R -680A	251T1297-2		...LEVER- (USED ON ITEM 670A)	A,B,F	1
-680B	251T1297-10		...LEVER	D,E,G ,H	1
685	251T1308-1		..LEVER ASSY-TRIM	C	1
-685A	251T1308-2		..LEVER ASSY-TRIM (OPT ITEM 670B)	D,E,G ,H	1
690	2LPYE5-10		...BOLT- (V11815) (SPEC BACB30GP5-10) (OPT 2LPYE5-10 (V17446))	C,D,E ,G,H	1
695	NAS1080D5		...COLLAR	C,D,E ,G,H	1
700	251T1253-1		...LEVER	C	1
-700A	251T1253-2		...LEVER	D,E,G ,H	1
705	251T1297-5		...LEVER ASSY	C	1
-705A	251T1297-7		...LEVER ASSY	D,E,G ,H	1

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-710	HT04VSBC		....BEARING- (V50294) (SPEC BACB10FC04C) (OPT NRRS04B10GC (V73134)) (OPT HT04VSBC (VS0352)) (OPT ADB4VNC (V15860)) (OPT KNDB4-66 (V97613)) (OPT KR4CNGBZC (V50632))	C,D	1
715	251T1297-6		....LEVER	C	1
-715A	251T1297-8		....LEVER	D	1

- Item Not Illustrated

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