COMPONENT MAINTENANCE MANUAL WITH ILLUSTRATED PARTS LIST

BRAKE METERING VALVE CONTROL INSTALLATION COMPONENTS

PART NUMBER 65C25416–10, –13, –14, –9, 65C25442–10, –7, 65C25479–13, –14, –7, –8, 65C25576–1, –2, –3, –4, 69-74714–1, –2

PUBLISHED BY BOEING COMMERCIAL AIRPLANES GROUP, SEATTLE, WASHINGTON, USA
A DIVISION OF THE BOEING COMPANY
PAGE DATE: Jul 01/2009

BOEING®

COMPONENT MAINTENANCE MANUAL

Revision No. 7
Jul 01/2009

To: All holders of BRAKE METERING VALVE CONTROL INSTALLATION COMPONENTS 32-41-20.

Attached is the current revision to this COMPONENT MAINTENANCE MANUAL

The COMPONENT MAINTENANCE MANUAL is furnished either as a printed manual, on microfilm, or digital products, or any combination of the three. This revision replaces all previous microfilm cartridges or digital products. All microfilm and digital products are reissued with all obsolete data deleted and all updated pages added.

For printed manuals, changes are indicated on the List of Effective Pages (LEP). The pages which are revised will be identified on the LEP by an R (Revised), A (Added), O (Overflow, i.e. changes to the document structure and/or page layout), or D (Deleted). Each page in the LEP is identified by Chapter-Section-Subject number, page number and page date.

Pages replaced or made obsolete by this revision should be removed and destroyed.

ATTENTION

IF YOU RECEIVE PRINTED REVISIONS, PLEASE VERIFY THAT YOU HAVE RECEIVED AND FILED THE PREVIOUS REVISION. BOEING MUST BE NOTIFIED WITHIN 30 DAYS IF YOU HAVE NOT RECEIVED THE PREVIOUS REVISION. REQUESTS FOR REVISIONS OTHER THAN THE PREVIOUS REVISION WILL REQUIRE A COMPLETE MANUAL REPRINT SUBJECT TO REPRINT CHARGES SHOWN IN THE DATA AND SERVICES CATALOG.

Location of Change	Description of Change
	NO HIGHLIGHTS

BOEING®

COMPONENT MAINTENANCE MANUAL

A = Added, R = Revised, D = Deleted, O = Overflow

Subject/Page	Date	Subject/Page	Date	Subject/Page	Date
32-41-20 ILLUSTRATED PARTS LIST (cont)					
1011	Mar 01/2006				
1012	Mar 01/2006				
1013	Mar 01/2006				
1014	Mar 01/2006				
1015	Mar 01/2006				
1016	Mar 01/2006				
1017	Mar 01/2006				
1018	Mar 01/2006				
1019	Mar 01/2006				
1020	Mar 01/2006				
1021	Mar 01/2006				
1022	Mar 01/2006				
1023	Mar 01/2006				
1024	Mar 01/2006				

A = Added, R = Revised, D = Deleted, O = Overflow

TABLE OF CONTENTS

TEMPORARY REVISION AND SERVICE BULLETIN RECORD

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVE	DATE OF INCORPORATION INTO MANUAL
		PRR 33382	SEP 01/97
		PRR 33718	SEP 01/97
		PRR 35310	SEP 01/97
		PRR 38029	SEP 01/97

All revisions to this manual will be accompanied by transmittal sheet bearing the revision number. Enter the revision number in numerical order, together with the revision date, the date filed and the initials of the person filing.

Revision		Filed	
Number	Date	Date	Initials

Revision		Filed	
Number	Date	Date	Initials

Revision		Filed	
Number	Date	Date	Initials

Revision		Filed	
Number	Date	Date	Initials

BOEING®

COMPONENT MAINTENANCE MANUAL

All temporary revisions to this manual will be accompanied by a cover sheet bearing the temporary revision number. Enter the temporary revision number in numerical order, together with the temporary revision date, the date the temporary revision is inserted and the initials of the person filing.
When the temporary revision is incorporated or cancelled, and the pages are removed, enter the date the pages are removed and the initials of the person who removed the temporary revision.

Temporary Revision		Inserted		Removed	
Number	Date	Date	Initials	Date	Initials

Temporary Revision		Inserted		Removed	
Date	Initials	Number	Date	Date	Initials

Temporary Revision		Inserted		Removed	
Number	Date	Date	Initials	Date	Initials

Temporary Revision		Inserted		Removed	
Date	Initials	Number	Date	Date	Initials

INTRODUCTION

1. General

A. The instructions in this manual supply the data necessary to do the maintenance functions together with the test, fault isolation, repair, and replacement of the defective parts.

B. This manual is divided into different parts:

(1) Title Page

(2) Transmittal Letter

(3) Highlights

(4) List of Effective Pages

(5) Table of Contents

(6) Temporary Revision & Service Bulletin Record

(7) Record of Revisions

(8) Record of Temporary Revisions

(9) Introduction

(10) Procedures & IPL Sections

C. Components that can be repaired have a different repair number for each specified repair. To find the repair number location of a component, look in the Repair-General procedure at the beginning of the REPAIR section. The Repair-General procedure also has an explanation of the True Position Dimension symbols used.

D. All dimensions, measures, quantities and weights included are in English units. When metric equivalents are given they will be in the parentheses that follow the English units.

E. The introduction to the Illustrated Parts List (IPL) shows how the IPL data is used.

F. Design changes, optional parts, configuration differences and Service Bulletin modifications may cause different part numbers. These part numbers are identified in the IPL with an alphabetical letter which is added to the end of the basic item number. This new item number is referred to as an alpha-variant. Throughout the manual, IPL basic item number references also apply to alpha-variants unless shown differently.

G. The tool reference numbers found in the individual procedures and in the Special Tools, Fixtures, and Equipment section are used to identify if a tool is a standard tool (STD-XXXX), a commercial tool (COM-XXXX), or a Special Tool (SPL-XXXX). This reference number is also used to distinguish between tools with similar names in the same procedure. These reference numbers are for use in the documentation only. They are not to be used for ordering tools.

(NOT APPLICABLE)

(NOT APPLICABLE)

(NOT APPLICABLE)

(NOT APPLICABLE)

REPAIR

1. **Content**

   A. Instructions for repair, refinish, and replacement of the specified subassembly parts are included in each REPAIR when applicable:

PART NUMBER	NAME	REPAIR
————	MISCELLANEOUS PARTS REFINISH	1-1
65C25416	SUPPORT ASSEMBLY	2-1
65C25442	LEVER ASSEMBLY	3-1
65C25479	SPRING PLATE ASSEMBLY	4-1
65C25576-1, -2	QUADRANT AND SHAFT ASSEMBLY	5-1
65C25576-3, -4	QUADRANT AND SHAFT ASSEMBLY	6-1
65-49954	QUADRANT	7-1
69-74409	INNER SHAFT	8-1
69-74411	OUTER SHAFT	9-1
69-74714	LEVER ASSEMBLY	10-1

2. **Dimensioning Symbols**

   A. Standard True Position Dimensioning Symbols used in applicable repair procedures are shown in REPAIR-GENERAL, Figure 601.

—	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)
Ø	DIAMETER
S Ø	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 THIS FEATURE PERMISSIBLE VARIATIONS ARE ESTABLISHED BY TOLERANCES ON OTHER DIMENSIONS OR NOTES.
[-A-]	DATUM
(M)	MAXIMUM MATERIAL CONDITION (MMC)
(L)	LEAST MATERIAL CONDITION (LMC)
(S)	REGARDLESS OF FEATURE SIZE (RFS)
(P)	PROJECTED TOLERANCE ZONE
FIM	FULL INDICATOR MOVEMENT

EXAMPLES

— | 0.002	STRAIGHT WITHIN 0.002
⊥ | 0.002 | B	PERPENDICULAR TO DATUM B WITHIN 0.002
// | 0.002 | A	PARALLEL TO DATUM A WITHIN 0.002
○ | 0.002	ROUND WITHIN 0.002
⌭ | 0.010	CYLINDRICAL SURFACE MUST LIE BETWEEN TWO CONCENTRIC CYLINDERS, ONE OF WHICH HAS A RADIUS 0.010 INCH GREATER THAN THE OTHER
⌒ | 0.006 | A	EACH LINE ELEMENT OF THE SURFACE AT ANY CROSS SECTION MUST LIE BETWEEN TWO PROFILE BOUNDARIES 0.006 INCH APART RELATIVE TO DATUM A
⌓ | 0.020 | A	SURFACES MUST LIE WITHIN PARALLEL BOUNDARIES 0.020 INCH APART AND EQUALLY DISPOSED ABOUT TRUE PROFILE
◎ | Ø 0.0005 | C	CONCENTRIC TO DATUM C WITHIN 0.0005 DIAMETER
⌯ | 0.010 | A	SYMMETRICAL WITH DATUM A WITHIN 0.010
∠ | 0.005 | A	ANGULAR TOLERANCE 0.005 WITH DATUM A
⌖ | Ø 0.002 (S) | B	LOCATED AT TRUE POSITION WITHIN 0.002 DIA RELATIVE TO DATUM B, REGARDLESS OF FEATURE SIZE
⊥ | Ø 0.010 (M) | A 0.510 (P)	AXIS IS TOTALLY WITHIN A CYLINDER OF 0.010 INCH DIAMETER, PERPENDICULAR TO DATUM A, AND EXTENDING 0.510 INCH ABOVE DATUM A, MAXIMUM MATERIAL CONDITION
[2.000] OR 2.000 BSC	THEORETICALLY EXACT DIMENSION IS 2.000

True Position Dimensioning Symbols
Figure 601

MISCELLANEOUS PARTS REFINISH - REPAIR 1-1

1. **General**

   A. This procedure has the data necessary to refinish the parts which are not given in the other repairs.

   B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

   C. Refer to the identified IPL Figure for the item numbers.

2. **Check**

   A. Do a strength check of the springs as follows:

Table 601: Spring Check

IPL FIG. & ITEM NO.	APPROXIMATE FREE LENGTH (INCHES) (REF) *[1]	TEST LENGTH (INCHES) *[1]	LOAD LIMITS (POUNDS)
Fig. 1			
800	4.17	5.00	19-23
		5.49	27-33
805	4.585	5.920	17.50-21.50
		6.302	22.58-27.58

*[1] Measured between hook inside faces.

3. **Refinish of Other Parts**

   NOTE: For stripping of protective finishes, refer to SOPM 20-30-02. For the decoding table for Boeing finish codes, refer to SOPM 20-41-01. For finishing materials, refer to SOPM 20-60-02.

   A. Instructions for the repair of the parts in REPAIR 1-1, Table 602 are for replacement of the original finish.

Table 602: Refinish Details

IPL FIG. & ITEM	MATERIAL	FINISH
Fig. 1		
Spring (800)	Music wire per QQ-W-470	Cadmium plate (F-15.02), 0.0002-0.0003 inch thick.
Spring (805)	17-7PH CRES, CH 900	Passivate (F-17.09).
Spacers (810)	321 CRES	Passivate (F-17.09).
Spacers (815,820, 825)	Al alloy	Chemical treat and apply primer, C00259(F-18.07).
Angles (830)	Al alloy	Chromic acid anodize and apply primer, C00259 and enamel coating, C00260 (F-21.18), but no enamel in holes or on spotfaces.
Fig. 2		
Retainer (45)	Al alloy	Chromic acid anodize and apply primer, C00259 (F-18.13).
Plug (70)	Phenolic resin	No finish.

Table 602: Refinish Details (Continued)

IPL FIG. & ITEM	MATERIAL	FINISH
Pin (80)	15-5PH CRES, 180-200 ksi	Passivate (F-17.09)
Fig. 3		
Retainer (40)	Al alloy	Chromic acid anodize and apply primer, C00259 (F-18.13).
Spacer (55)	Al alloy	Chemical treat and apply primer, C00259 (F-18.07).
Spacer (110)	321 CRES	Passivate (F-17.09).
Fig. 5		
Retainer (50)	Al alloy	Chromic acid anodize and apply primer, C00259 (F-18.13).
Plates (55,60)	Al alloy	Chromic acid anodize and apply primer, C00259 (F-18.13). Then apply enamel coating, C00260 (F-21.03).
Bracket (70)	Al alloy	Chemical treat and apply primer, C00259 (F-18.06). Then apply enamel coating, C00260 (F-21.03).
Fig. 6		
Bushing (40)	15-5PH CRES, 180-200 ksi	Passivate (F-17.09).
Fig. 7		
Retainer (35)	Al-Ni-Bronze per AMS 4640 or QQ-C-465 alloy number 630	No finish.

SUPPORT ASSEMBLY - REPAIR 2-1

65C25416–9, –10, –13, –14

1. General

A. This procedure has the data to replace the inserts (IPL Figure 4, 20) in the support assembly (IPL Figure 4; 10), .

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 4 for the item numbers.

2. Inserts

A. Remove the bad inserts (20).

B. Install replacement inserts with wet primer, C00259. Turn the inserts in until the outer end is 0.215-0.240 inch below the surface. Remove the tangs.

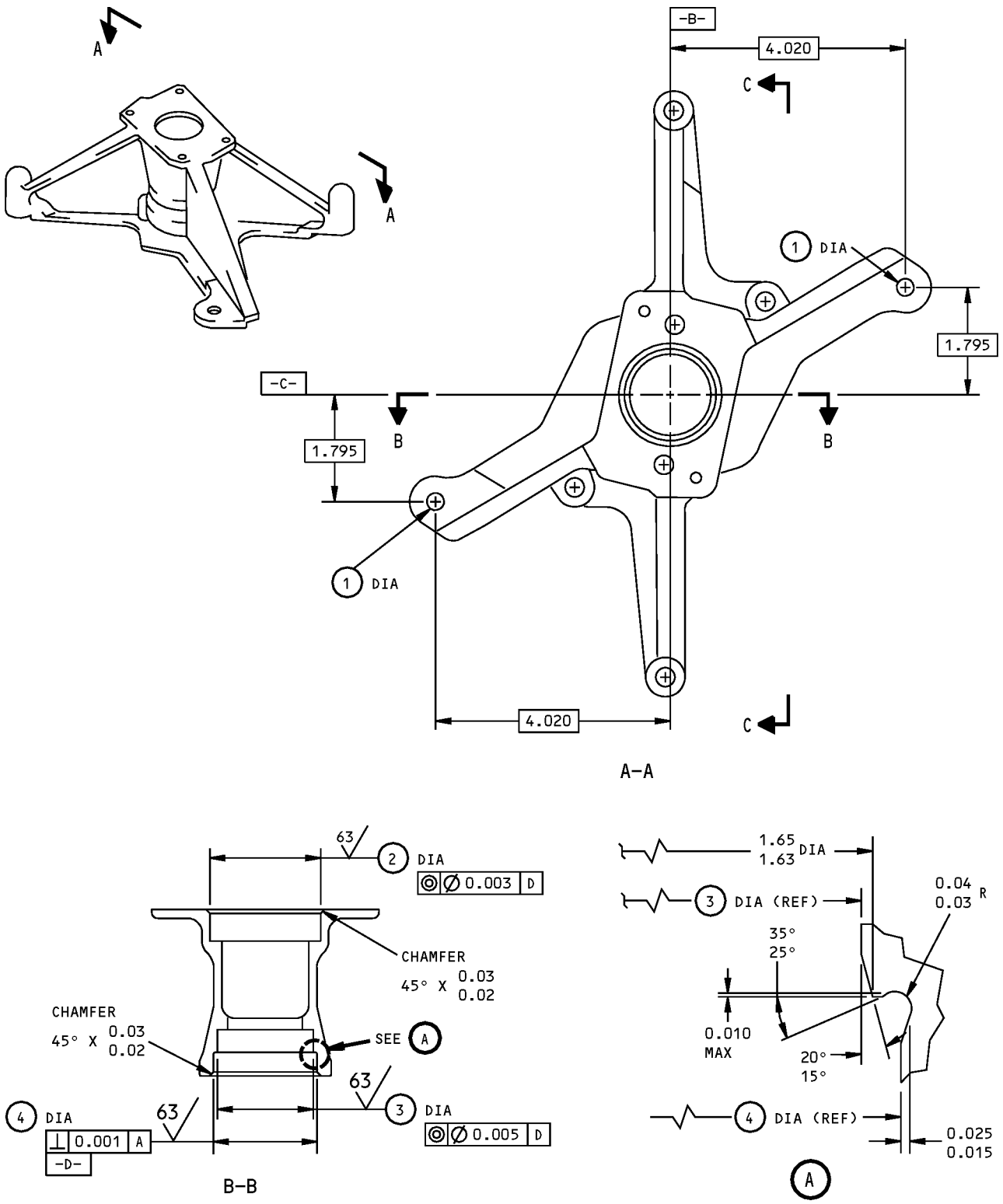
3. Coating Repair (REPAIR 2-1, Figure 601)

A. Repair is only replacement of the original finish. Refer to Refinish instructions for details.

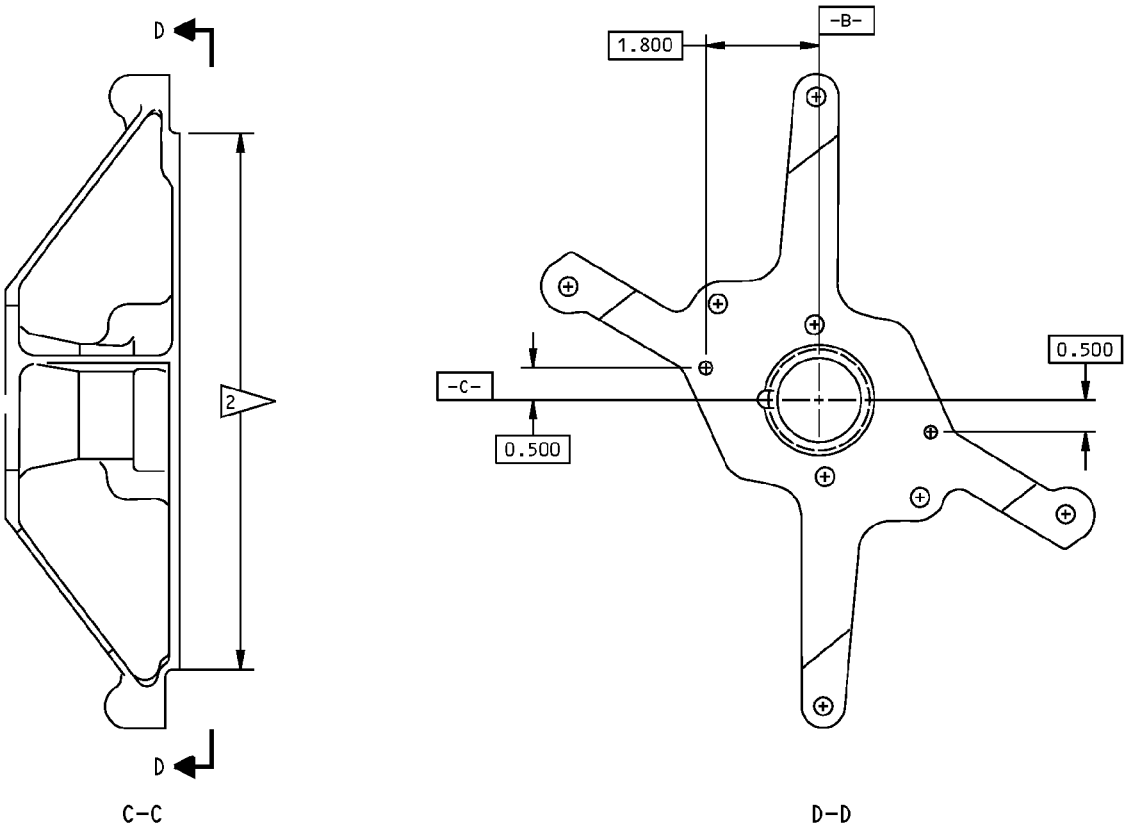
(1) Anodize (F-17.05).

(2) Apply primer, C00259 as shown in REPAIR 2-1, Figure 601.

(3) Apply enamel coating, C00260 as shown in REPAIR 2-1, Figure 601.



65C25416-11,-12,-15,-16 Support Repair and Refinish
Figure 601 (Sheet 1 of 2)



	1	2	3	4	5
DESIGN DIM	0.291 0.279	1.751 1.750	1.626 1.624	1.751 1.750	0.222 0.218
REPAIR LIMIT	---	---	---	---	---

REFINISH

ANODIZE (F-17.05). APPLY PRIMER BMS 10-11, TYPE 1 (F-20.02) BUT NOT IN HOLES OR AS SHOWN BY 1. APPLY ENAMEL AS SHOWN BY 2.

1 NO PRIMER

2 APPLY BMS 10-11, TYPE 2 ENAMEL TO THIS SURFACE, BUT NOT IN THE HOLES

REPAIR

(SAME AS REFINISH)

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

65C25416-11,-12,-15,-16 Support Repair and Refinish
Figure 601 (Sheet 2 of 2)

LEVER ASSEMBLY, AFT TRUNNION OUTER - REPAIR 3-1

65C25442–7, –10

1. General

A. This procedure has the data to repair the lever assembly (45, 45A).

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 6 for item numbers.

2. Parts Replacement (REPAIR 3-1, Figure 601)

NOTE: For finishing materials, refer to SOPM 20-60-02.

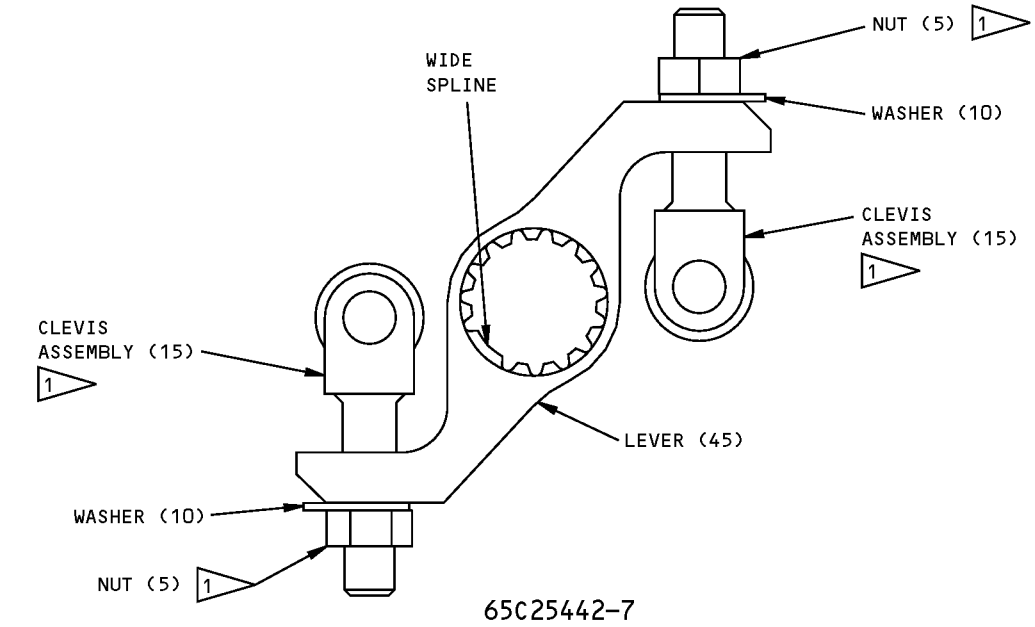
A. Disassemble by standard industry practices.

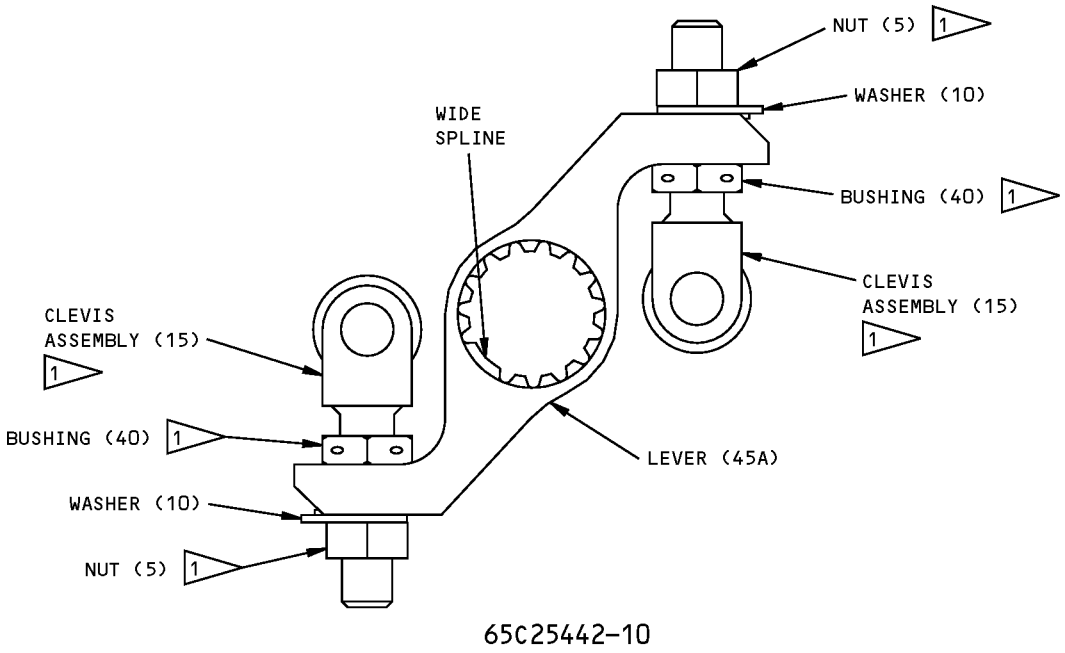
B. Replace parts as necessary.

C. Refer to REPAIR 3-2 for repair of the clevis assembly (15).

D. Refer to REPAIR 3-4 for repair of the lever (45).

E. Assemble the unit by standard industry practices. Be sure to install clevis (15), bushing (40) if applicable, and nut (5) with corrosion preventive compound, B50080 on the mating threads, as shown in REPAIR 3-1, Figure 601.





1 INSTALL WITH MIL-C-16173, GRADE 2 CORROSION PREVENTIVE COMPOUND ON THE MATING THREADS.

ITEM NUMBERS REFER TO IPL FIG. 6

65C25442-7,-10 Lever Assembly Parts Replacement
Figure 601

CLEVIS ASSEMBLY - REPAIR 3-2

69-74408–2

1. General

A. This procedure has the data to repair the clevis assembly (15).

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 6 for item numbers.

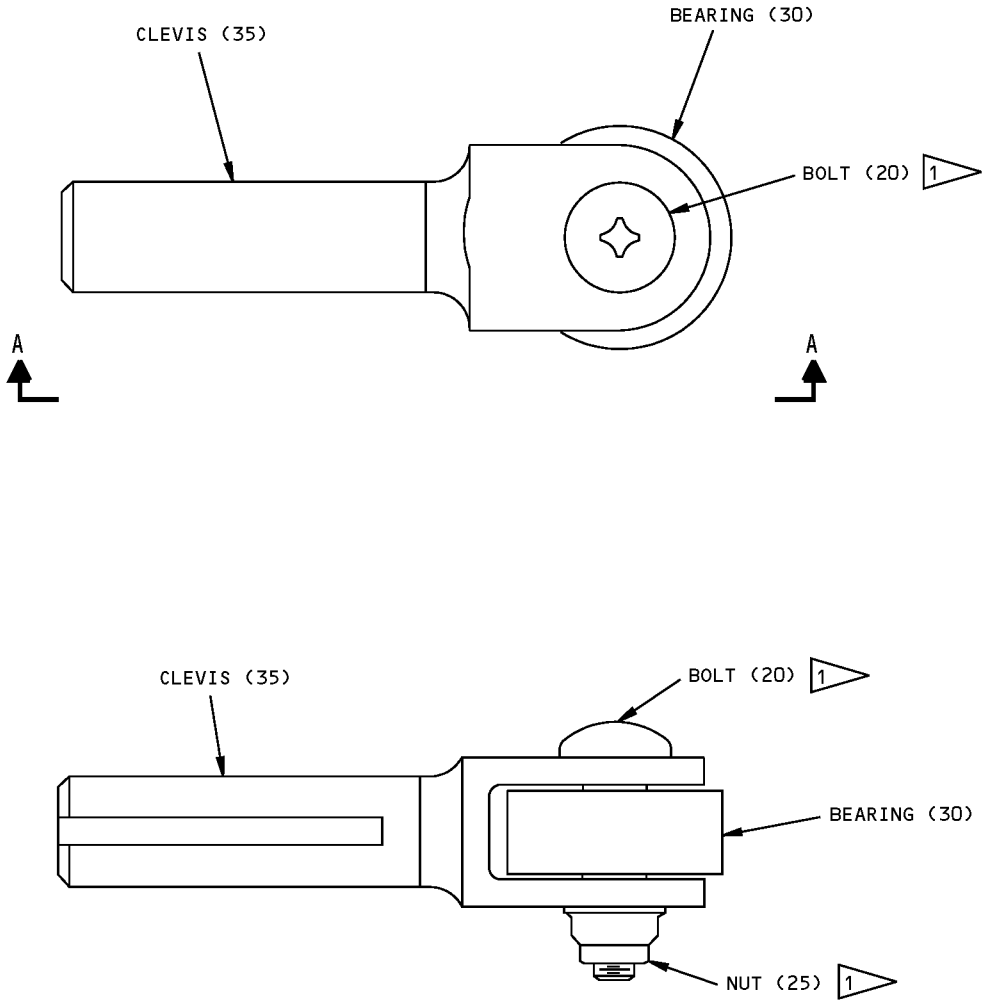
2. Parts Replacement REPAIR 3-2, Figure 601

A. Disassemble by standard industry practices.

B. Replace parts as necessary.

C. Refer to REPAIR 3-3 for repair of clevis (35).

D. Assemble parts by standard industry practices. Be sure to install bolt (20) and nut (25) with corrosion preventive compound, B50080 on the mating threads, as shown in REPAIR 3-2, Figure 601.



1 INSTALL WITH MIL-C-16173, GRADE 2 CORROSION PREVENTIVE COMPOUND ON THE MATING THREADS

ITEM NUMBERS REFER TO IPL FIG. 6

69-74408-2 Clevis Assembly Parts Replacement
Figure 601

CLEVIS - REPAIR 3-3

69-74407–1

1. General

A. This procedure has the data to repair the clevis (35).

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 6 for item numbers.

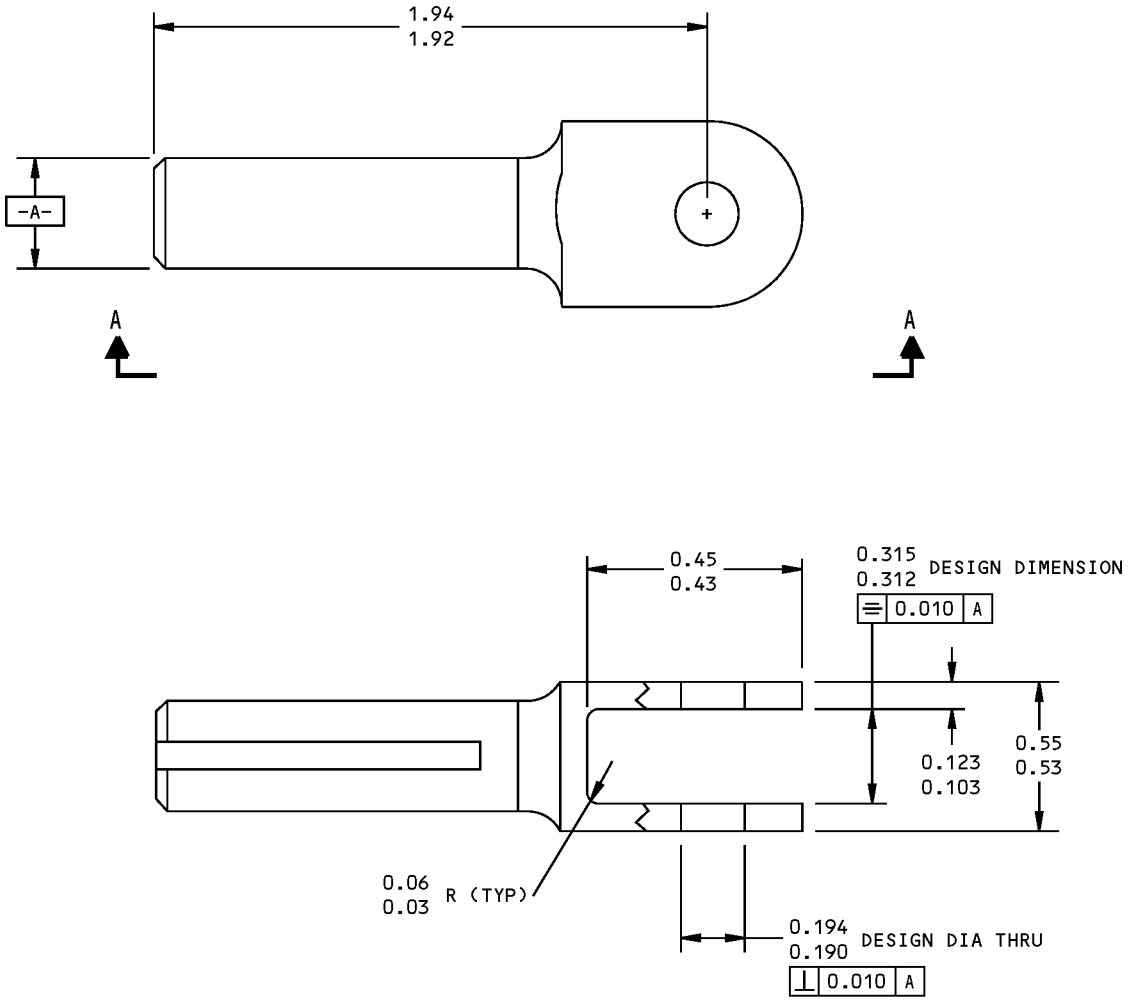
D. Material: 15-5PH CRES, 180-200 KSI

2. Coating Repair (REPAIR 3-3, Figure 601)

NOTE: For the decoding table for the Boeing finish codes, refer to SOPM 20-41-01.

A. Repair is only replacement of the original finish.

(1) Passivate (F-17.09) the clevis (35).



A-A

REFINISH

PASSIVATE (F-17.09)

REPAIR

(SAME AS REFINISH)

125 ALL MACHINED SURFACES

MATERIAL: 15-5PH CRES, 180-200 KSI

ALL DIMENSIONS ARE IN INCHES

69-74407-1 Clevis Repair and Refinish
Figure 601

LEVER - REPAIR 3-4

69-74439–1, –2

1. General

A. This procedure has the data to repair the lever (45, 45A).

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 6 for item numbers.

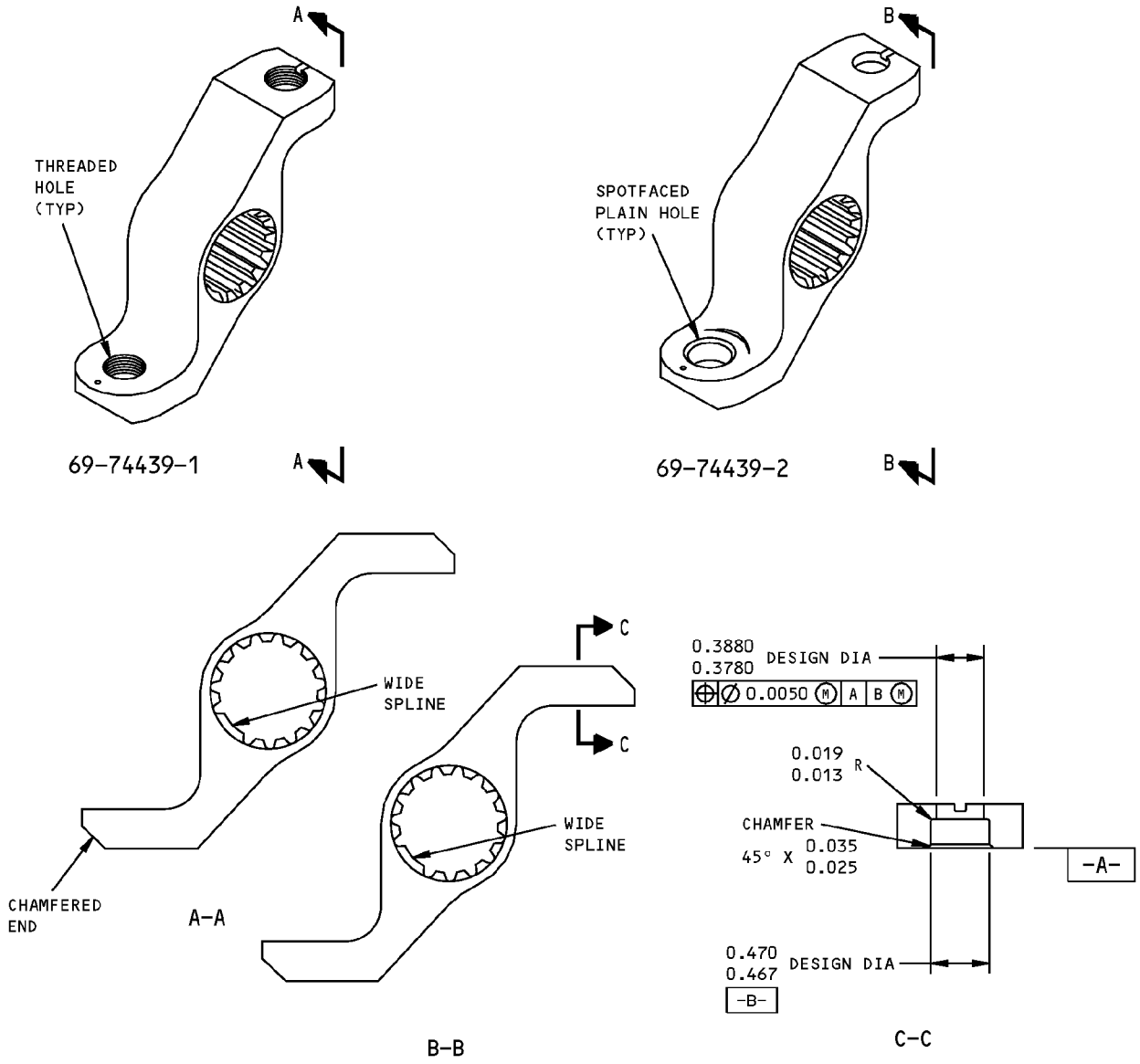
D. Material: 15-5PH CRES, 180-200 KSI

2. Coating Repair (REPAIR 3-4, Figure 601)

NOTE: For the decoding table for the Boeing finish codes, refer to SOPM 20-41-01.

A. Repair is only replacement of the original finish. Refer to Refinish instructions for details.

(1) Passivate (F-17.09) the lever (45).



REFINISH

PASSIVATE (F-17.09)

REPAIR

(SAME AS REFINISH)

125 ALL MACHINED SURFACES UNLESS SHOWN

MATERIAL: 15-5PH CRES, 180-200 KSI

ALL DIMENSIONS ARE IN INCHES

69-74439-1,-2 Lever Refinish
Figure 601

SPRING PLATE ASSEMBLY - REPAIR 4-1

65C25479–7, –8, –13, –14

1. General

A. This procedure has the data to repair the spring plate assembly (1, 5).

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 5 for item numbers.

2. Parts Replacement (REPAIR 4-1, Figure 601)

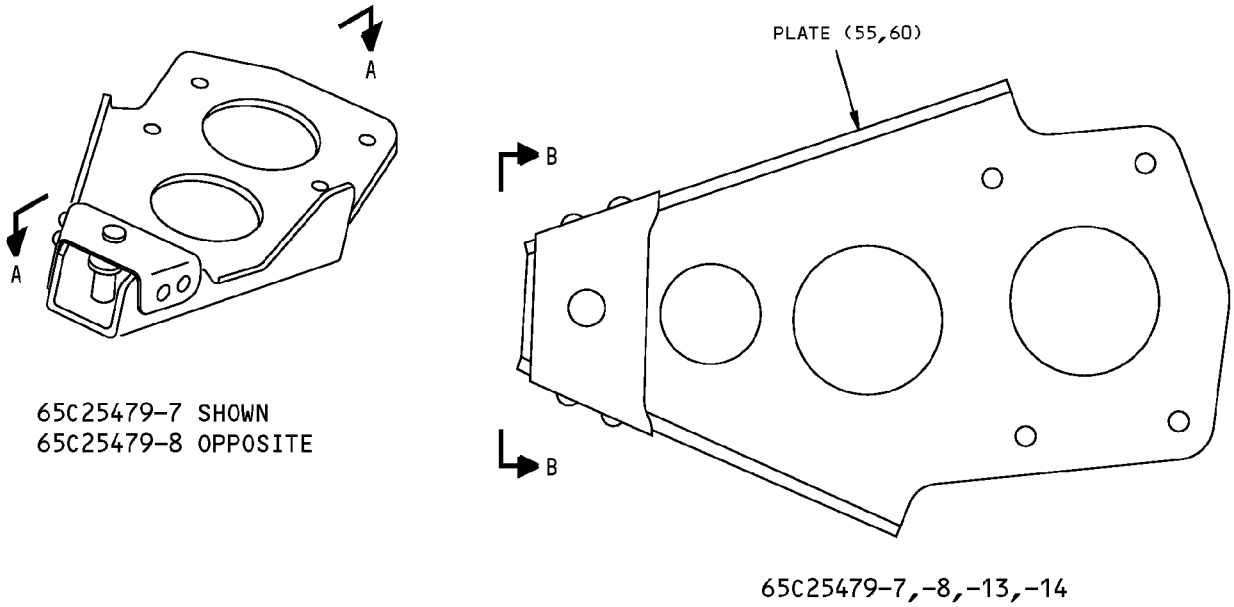
NOTE: For finishing materials, refer to SOPM 20-60-02.

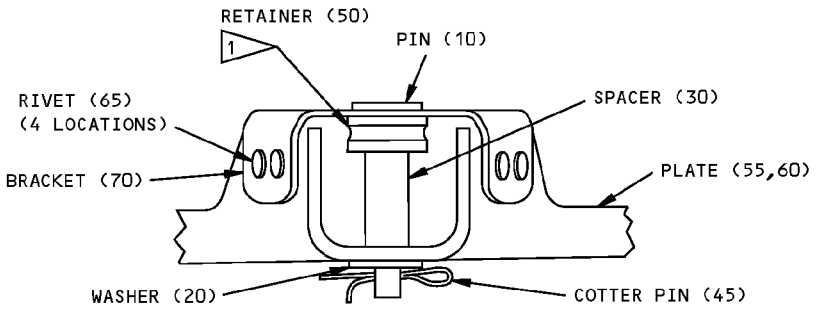
A. Disassemble by standard industry practices.

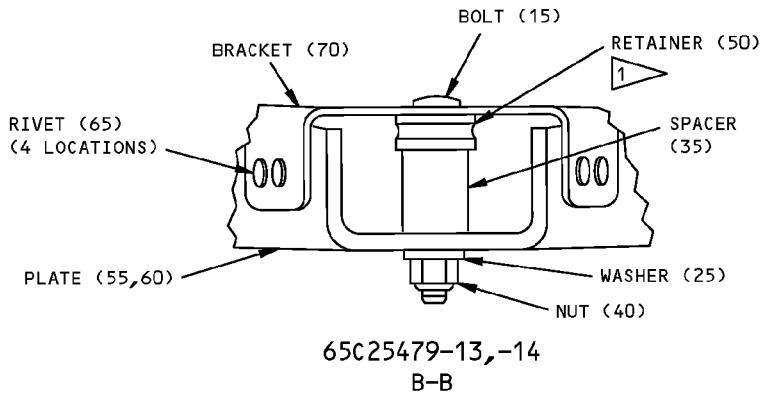
B. Replace parts as necessary.

C. Refer to REPAIR 1-1 for refinish of retainer (50), plates (55, 60) and bracket (70).

D. Assemble parts by standard industry practices. Be sure to apply corrosion preventive compound, B50080 to the bore of the retainer (50) before you install it.







1 APPLY MIL-C-11796, CLASS 1 CORROSION PREVENTIVE COMPOUND TO THE BORE OF THIS PART BEFORE INSTALLATION

ITEM NUMBERS REFER TO IPL FIG. 5

65C25479-7,-8,-13,-14 Spring Plate Assembly Parts Replacement
Figure 601

QUADRANT AND SHAFT ASSEMBLY - REPAIR 5-1

65C25576–1, –2

1. General

A. The 65C25576-1, -2 quadrant and shaft assembly could come in for overhaul as a unit with the 65C25416-series support IPL Figure 4 because the bearings in the support could be an interference fit with the shaft for some combinations of shaft OD and bearing ID sizes. If this is the case, use the instructions of REPAIR 5-1, Paragraph 2. to remove the quadrant and shaft assembly from the other components. Then refer to REPAIR 5-1, Paragraph 3. for the overhaul of the quadrant and shaft assembly itself. After overhaul is complete, you can install the quadrant and shaft assembly back into the support to have a unit that can be installed in the airplane. If the bearings are not an interference fit on the shaft, or if the quadrant and shaft assembly did not come installed on the support, start with the instructions of REPAIR 5-1, Paragraph 3..

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 1 for item numbers, unless shown differently.

2. Disassembly of Quadrant and Shaft Assembly From Installation Components (REPAIR 5-1, Figure 601)

A. Remove spring (800) from between the quadrant and spring plate (25).

B. Remove nuts (IPL Figure 2;65), washers (IPL Figure 2;60) and bolts (IPL Figure 2;55). Remove plug (IPL Figure 2;70) from the end of the shaft (IPL Figure 2;90).

C. Remove the quadrant from the shaft.

D. Remove spacer (815) from the top end of the shaft.

E. Remove the nuts, washers, and bolts that hold spring plate assembly (25) to support assembly (15). Remove the plate.

F. Try to remove the shaft from the support assembly. The bearings in the upper and lower locations could be an interference fit with the outer shaft for some combinations of shaft OD and bearing ID sizes. If necessary, push the shaft out with a press.

G. Remove the bearings, the seal, and spacer (810) from support assembly (15).

H. Refer to REPAIR 5-1, Paragraph 3., as necessary, for more instructions to disassemble the parts of the quadrant and shaft assembly. Refer to REPAIR 2-1for repair of the support assembly. Refer to REPAIR 4-1for repair of the spring plate assembly.

3. Disassembly of Quadrant and Shaft Assembly (REPAIR 5-1, Figure 602)

NOTE: Refer to IPL Figure 2 for item numbers.

NOTE: Bearings could be on the shaft when the unit comes in for overhaul. These bearings could be an interference fit on the shaft for some combinations of shaft OD and bearing ID sizes.

A. Remove nuts (65), washers (60) and bolts (55). Remove plug (70). Pull the quadrants (75) as a unit from the shaft. The plug and the quadrants were installed on the shaft with wet primer.

B. Quadrants

(1) Remove nuts (25), washers (20) and bolts (10).

(2) Remove cotter pins (20) and pins (15).

(3) Remove cotter pin (50), washer (40), pin (35) and spring retainers (45).

(4) Pull the two quadrants (75) apart.

(5) Refer to REPAIR 7-1 for repair of the quadrants. Refer to REPAIR 1-1 for refinish of retainer (45).

C. Shafts

(1) Push out pins (80). These pins were installed with retaining compound.

(2) Push or pull inner shaft (90) from outer shaft (85). Remove bearings (100) from the outer shaft (85), if necessary.

(3) Refer to REPAIR 8-1 and REPAIR 9-1 for repair of the inner shafts (90) and outer shafts (85), respectively. Refer to REPAIR 1-1 for refinish of pins (80).

4. Assembly of Quadrant and Shaft Assembly (REPAIR 5-1, Figure 602)

NOTE: Refer to IPL Figure 2 for item numbers.

NOTE: If the bearings in the support are not a clearance fit with the outer shaft, do only the procedures for REPAIR 5-1, Paragraph 4.A.and REPAIR 5-1, Paragraph 4.B.below. Then do the procedure of REPAIR 5-1, Paragraph 5. as an alternative to the procedure for REPAIR 5-1, Paragraph 4.C..

NOTE: For finishing materials, refer to SOPM 20-60-02. For lubricants, refer to SOPM 20-60-03.

A. Shafts

(1) Install inner shaft (90) in outer shaft (85). Adjust the shafts as necessary to align the holes. If a replacement shaft is used, be sure to drill holes in it with the old shaft or the mating shaft as a guide.

(2) Install pins (80) with Type 3 retaining compound, G00106 per SOPM 20-50-12. Be sure to push the pins in lower than the surfaces of the splines.

B. Quadrants

(1) Put the two quadrants together. Adjust their positions as necessary to align the holes and to be aligned within the limit shown. If a quadrant is replaced, be sure to drill holes in it as shown with the other quadrant and the pilot holes as a guide.

(2) Install spring retainer (45) with pin (35) and washer (40), with grease, D00015 on mating surfaces. Install cotter pin (50).

(3) Install pins (15) with grease, D00015. Install cotter pins (20).

(4) Install bolts (10), washers (20), and nuts (25) with grease, D00015 on mating surfaces.

NOTE: If the bearings are not a clearance fit with the shaft, do the procedure of REPAIR 5-1, Paragraph 5. as an alternative to this step, REPAIR 5-1, Paragraph 4.C..

C. Apply primer, C00259 to the mating splines of the shaft and the quadrant unit. Then install the quadrant unit on the shaft. Install plug (70) in the end of the shaft with wet primer, C00259. Be sure to align the holes in the plug with the mating holes in the shaft and the quadrant. Then install bolts (55), washers (60), and nuts (65) with grease, D00015 on the mating surfaces.

5. Assembly of Quadrant and Shaft Assembly into Installation Components (REPAIR 5-1, Figure 601)

NOTE: Refer to IPL Figure 1 for item numbers, unless shown differently.

NOTE: For finishing materials, refer to SOPM 20-60-02. For lubricants, refer to SOPM 20-60-03.

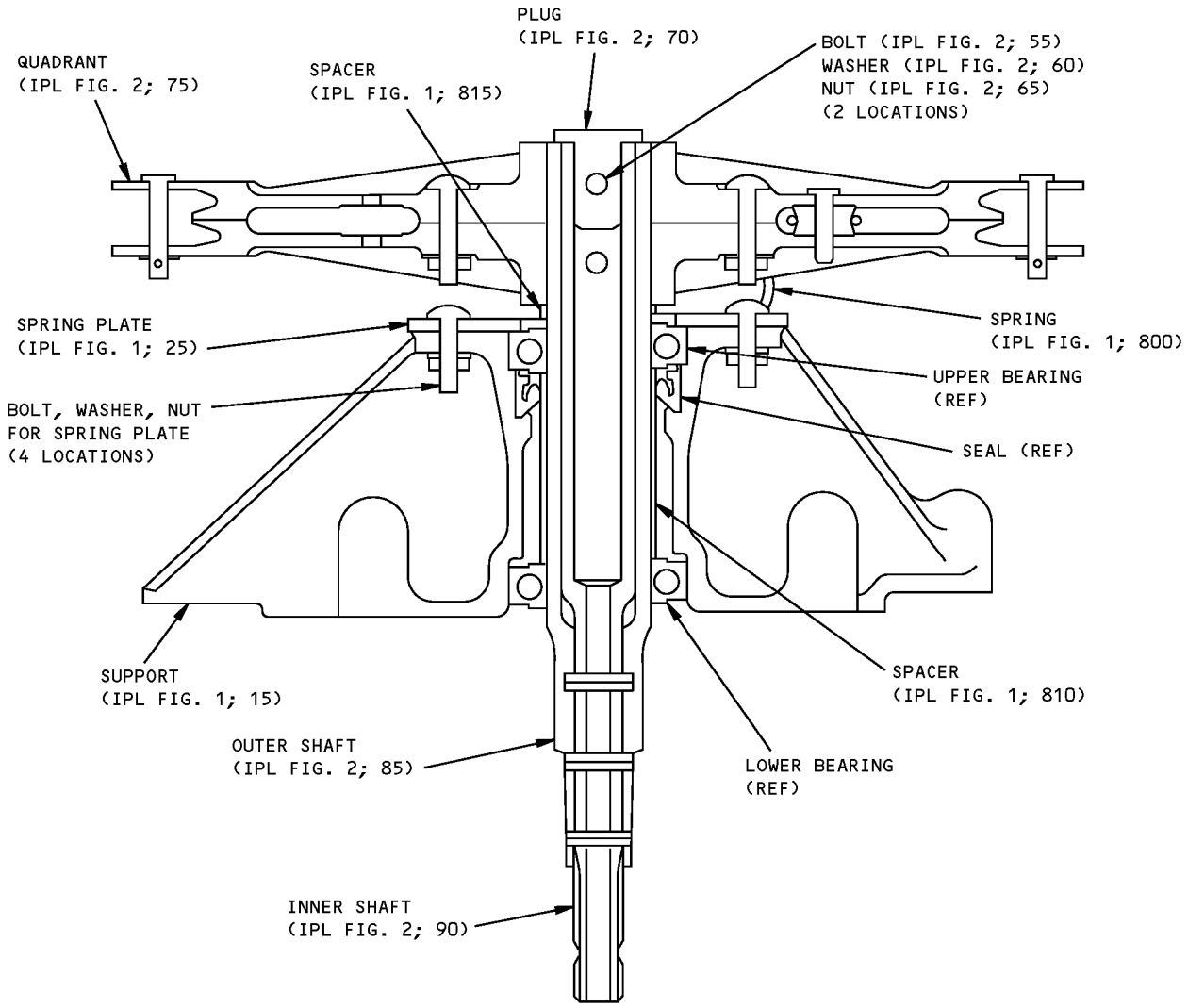
A. Install the outer shaft (with installed inner shaft) in support assembly (15) with the bearings at the upper and lower locations, with spacer (810) and the seal in between, and with grease, D00013 on the mating surfaces of the bearings, spacer, and shaft. If the bearings are an interference fit with the shaft, press them on the shaft in the locations shown, with the shaft, spacer, and seal installed in the support.

B. Install spacer (815) on the top end of the shaft.

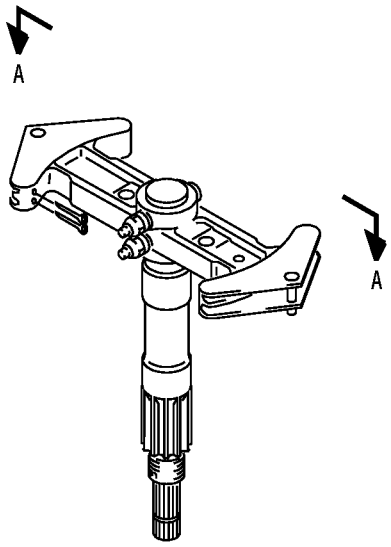
C. Install spring plate assembly (25) on support assembly (15) with the bolts, washers, and nuts (4 locations) (IPL Figure 2).

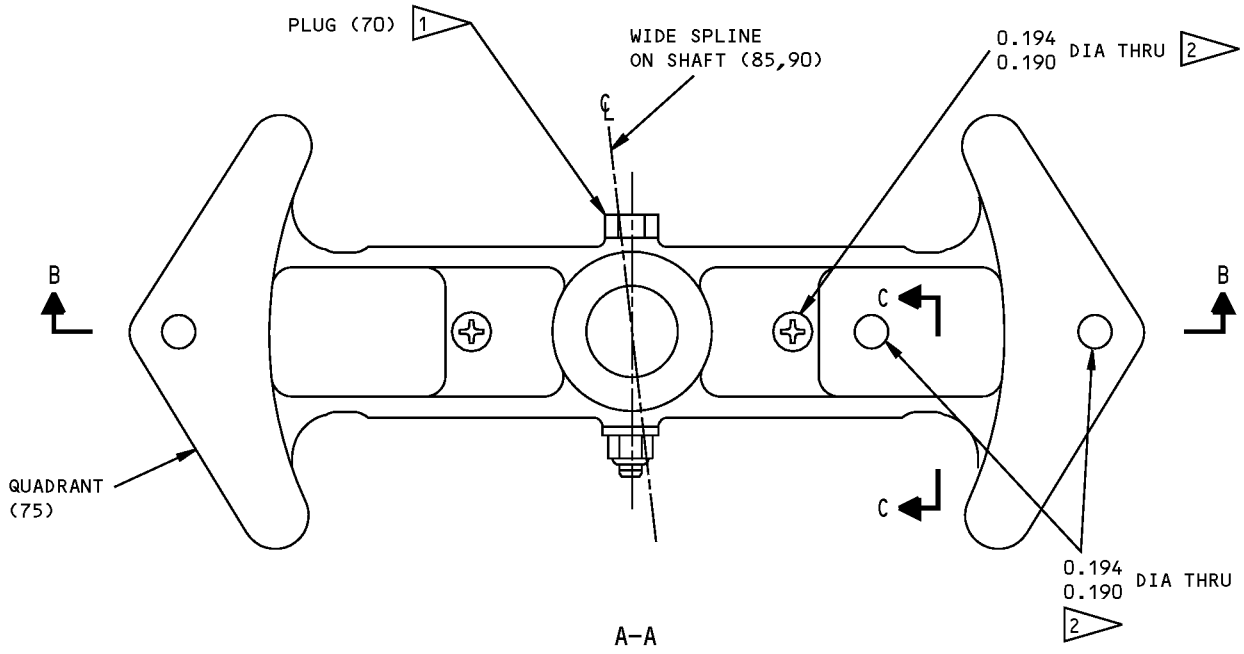
D. Apply primer, C00259 to the mating splines of the shaft and the quadrant unit. Then install the quadrant unit on the shaft.

E. Install plug (70) in the end of the shaft with wet primer, C00259. Be sure to align the holes in the plug with the mating holes in the shaft and the quadrant. Then install bolts (55), washers (60), and nuts (65) with grease, D00013 on the mating surfaces (IPL Figure 2).

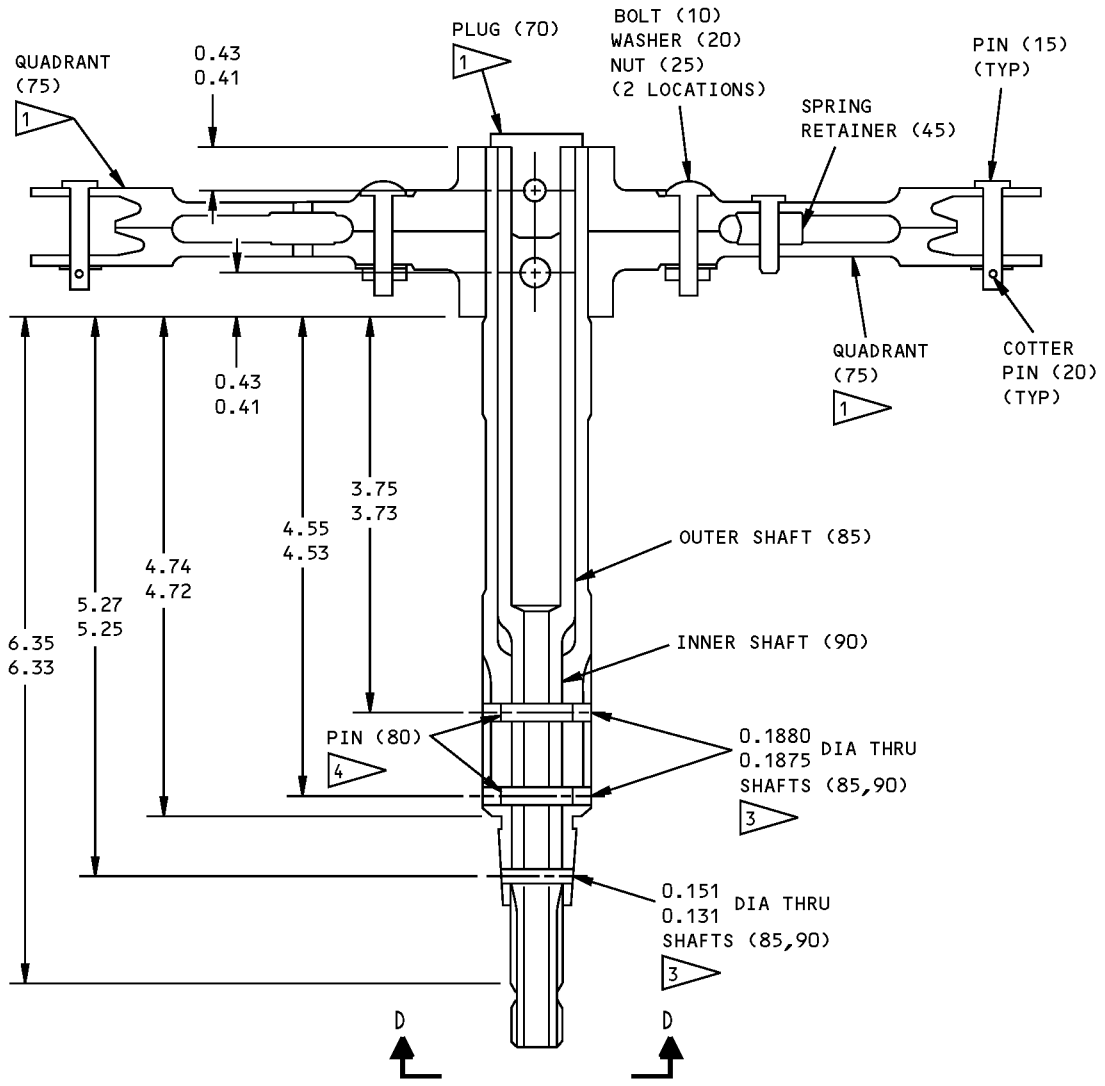


65C25576-1,-2 Quadrant and Shaft Assembly with Installation Parts
Figure 601

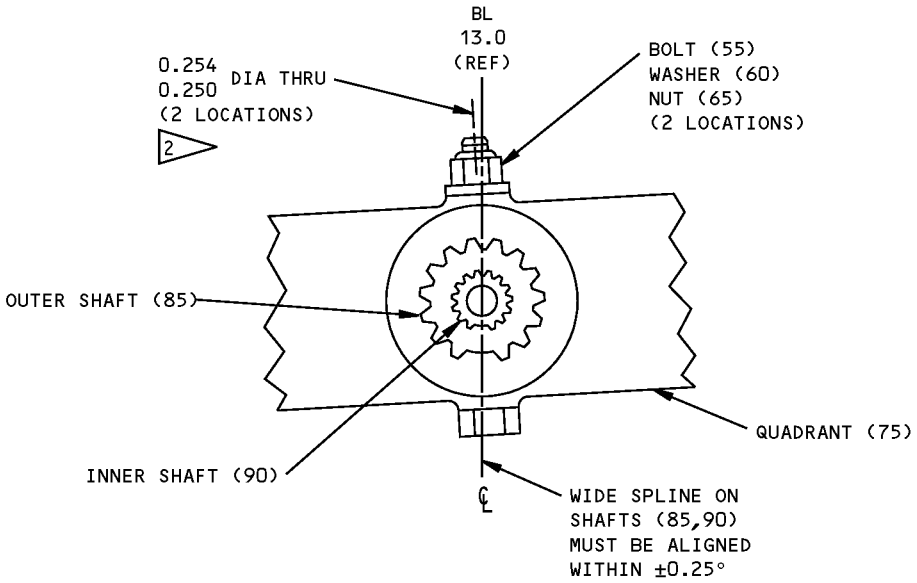




65C25576-1,-2 Quadrant and Shaft Assembly Parts Replacement
Figure 602 (Sheet 1 of 3)



65C25576-1,-2 Quadrant and Shaft Assembly Parts Replacement
Figure 602 (Sheet 2 of 3)



D–D

1 INSTALL OR ASSEMBLE WITH WET PRIMER BMS 10-11, TYPE 1 (F-20.06) ON MATING SURFACES.

2 THIS HOLE MUST BE MADE IN REPLACEMENT PARTS. THE QUADRANTS COME WITH ONLY A SMALLER PILOT HOLE AT THIS LOCATION.

3 THESE HOLES MUST BE MADE IN REPLACEMENT PARTS. THE ANGULAR POSITION IS OPTIONAL.

4 INSTALL AND BOND WITH MIL-R-46082, TYPE 3 RETAINING COMPOUND PER SOPM 20-50-12.

5 INSTALL WITH BMS 3-27 CORROSION PREVENTIVE COMPOUND PER SOPM 20-50-19, CORROSION PROTECTION SEALING METHOD 2.

ITEM NUMBERS REFER TO IPL FIG. 2

ALL DIMENSIONS ARE IN INCHES

65C25576-1,-2 Quadrant and Shaft Assembly Parts Replacement
Figure 602 (Sheet 3 of 3)

QUADRANT AND SHAFT ASSEMBLY - REPAIR 6-1

65C25576–3, –4

1. General

A. This procedure has the data to repair the quadrant and shaft assembly (5A, 10A).

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 3 for item numbers.

2. Disassembly (REPAIR 6-1, Figure 601)

A. Remove spring (45) from quadrant (50) and spring plate (75).

B. Remove bolt (10), washers (15), nuts (20).

C. Remove quadrant (50) from shaft (115). If necessary, remove collar (35), bolt (25), washers (30) and spring retainer (40) from the quadrant. Refer to REPAIR 7-1 for repair of the quadrant.

D. Remove spacer (55) from the end of the shaft.

E. Remove bolts (60), washers (65), nuts (70), and plate (75).

F. Try to remove shaft (115) from support (85). Bearings (100) could be an interference fit on the shaft for some combinations of shaft OD and bearing ID sizes. If necessary, push the shaft out with a press.

G. Remove bearings (100), spacer (110) and seal (105) from support (85).

H. Refer to REPAIR 2-1 for repair of the support. Refer to REPAIR 4-1 for repair of the spring plate. Refer to REPAIR 9-1 for repair of the shaft.

3. Assembly (REPAIR 6-1, Figure 601)

NOTE: For finishing materials, refer to SOPM 20-60-02. For lubricants, refer to SOPM 20-60-03.

A. Install shaft (115) in support (85) with bearings (100), spacer (110) and seal (105) with grease, D00015 or grease, D00013 on mating surfaces. If the bearings are an interference fit with the shaft, press them on the shaft to get the dimension shown.

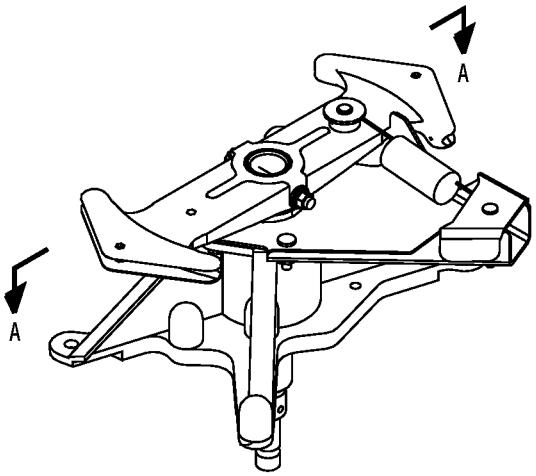
B. Install spacer (55) on shaft (115).

C. Install spring plate (75) with bolts (60), washers (65) and nuts (70), with corrosion preventive compound, C00913. Tighten the nuts as shown.

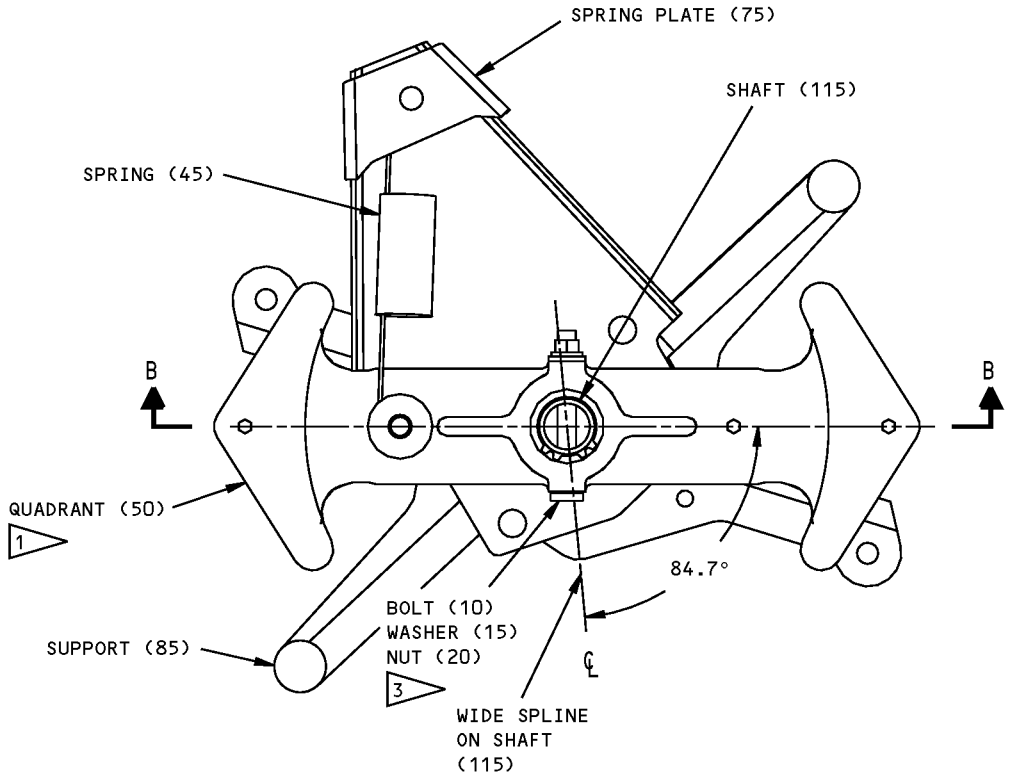
D. Install spring retainer (40) on quadrant (50) with bolt (25), washer (30), and collar (35).

E. Apply primer, C00259 to the mating splines of the shaft and the quadrant. Then install the quadrant on the shaft. Apply primer, C00259 to the hole surfaces of the shaft and quadrant. Then install bolt (10), washer (15) and nut (20). Tighten the nut as shown.

F. Connect spring (45) between the quadrant and the spring plate as shown.

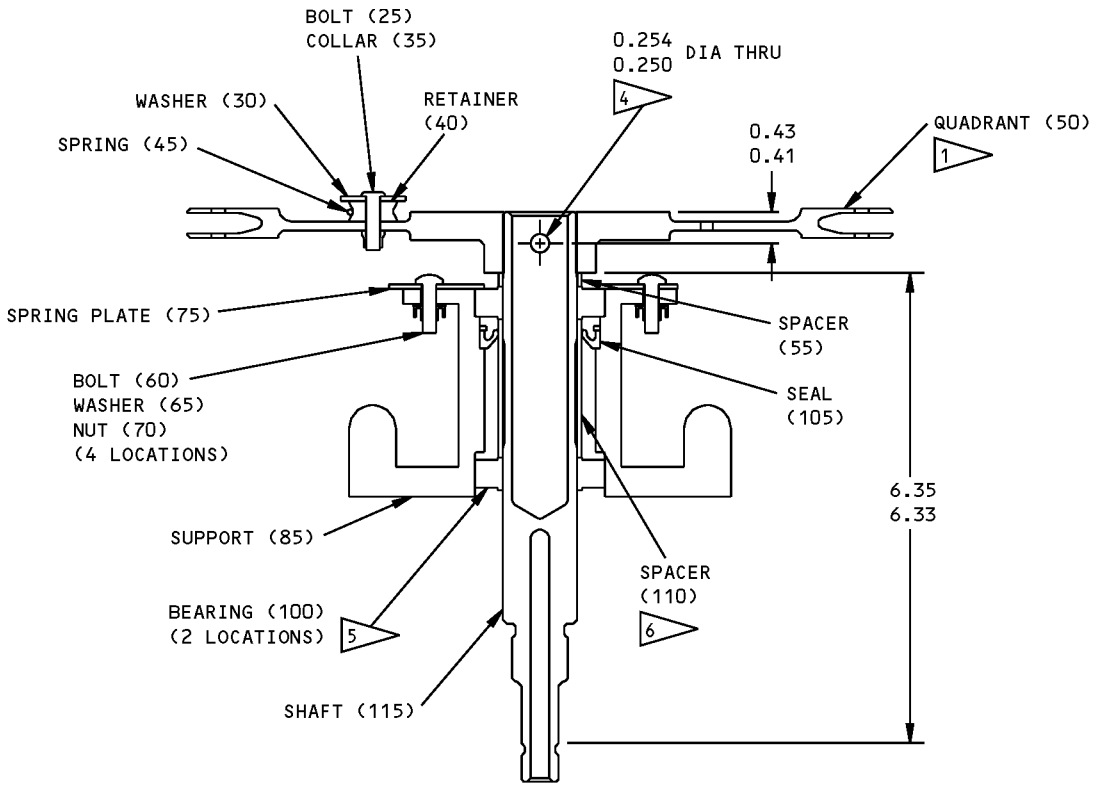


65C25576-3 SHOWN
65C25576-4 OPPOSITE



A-A

65C25576-3,-4 Quadrant and Shaft Assembly Parts Replacement
Figure 601 (Sheet 1 of 2)



B–B

1. INSTALL THE QUADRANT ON THE SHAFT WITH WET BMS 10-11, TYPE 1 PRIMER (F-20.06).
2. INSTALL THE FASTENERS WITH BMS 3-27 CORROSION PREVENTIVE COMPOUND PER SOPM 20-50-19, CORROSION PROTECTION SEALING METHOD 2.
3. APPLY BMS 10-11, TYPE 1 PRIMER TO THE HOLE SURFACES AND IMMEDIATELY INSTALL BOLT, WASHER AND NUT. TIGHTEN THE NUT TO 20 POUND-INCHES ABOVE DRIVE TORQUE.
4. THIS HOLE MUST BE MADE IN REPLACEMENT PARTS. CHEMICAL TREAT THE NEW HOLE PER SOPM 20-43-03.
5. INSTALL THESE PARTS WITH GREASE BMS 3-24 OR MIL-G-23827.
6. LUBRICATE THE SPACER OUTSIDE DIAMETER WITH MIL-G-23827 GREASE BEFORE INSTALLATION.

ITEM NUMBERS REFER TO IPL FIG. 3

ALL DIMENSIONS ARE IN INCHES

65C25576-3,-4 Quadrant and Shaft Assembly Parts Replacement
Figure 601 (Sheet 2 of 2)

QUADRANT - REPAIR 7-1

65-49954–5, –7

1. General

A. This procedure has the data to repair the quadrant (IPL Figure 2;75) and (IPL Figure 3;50).

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 2 and IPL Figure 3 for item numbers.

D. Materil: ALUM ALLOY

2. Coating Repair (REPAIR 7-1, Figure 601 and REPAIR 7-1, Figure 602)

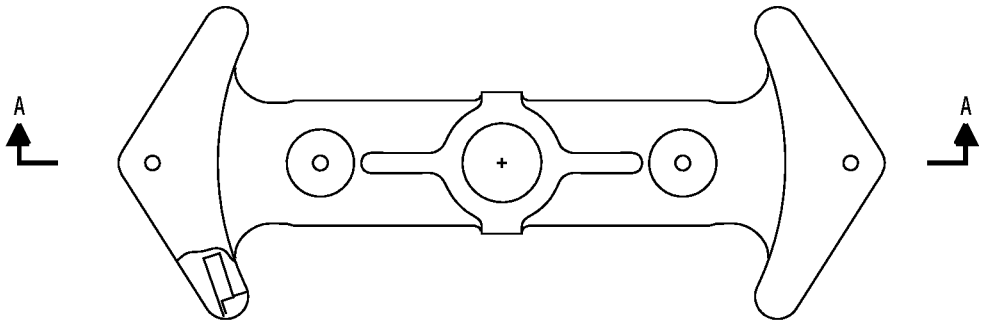
NOTE: For stripping of protective finishes, refer to SOPM 20-30-02. For the decoding table for Boeing finish codes, refer to SOPM 20-41-01. For finishing materials, refer to SOPM 20-60-02.

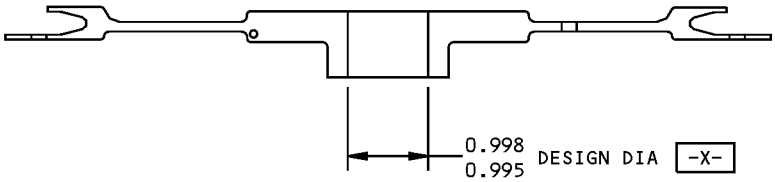
A. Repair is only replacement of the original finish of quadrant (IPL Figure 2;75).

(1) Anodize and apply primer, C00259 (F-18.04) as shown in REPAIR 7-1, Figure 601.

B. Repair is only replacement of the original finish of quadrant (IPL Figure 3;50).

(1) Boric acid-sulfuric acid anodize (F-17.31) and apply primer, C00259 (F-20.03) as shown in REPAIR 7-1, Figure 602.





A–A

REFINISH

ANODIZE AND APPLY PRIMER BMS 10-11, TYPE 1 (F-18.04), BUT NO PRIMER ON DIA -X-

REPAIR

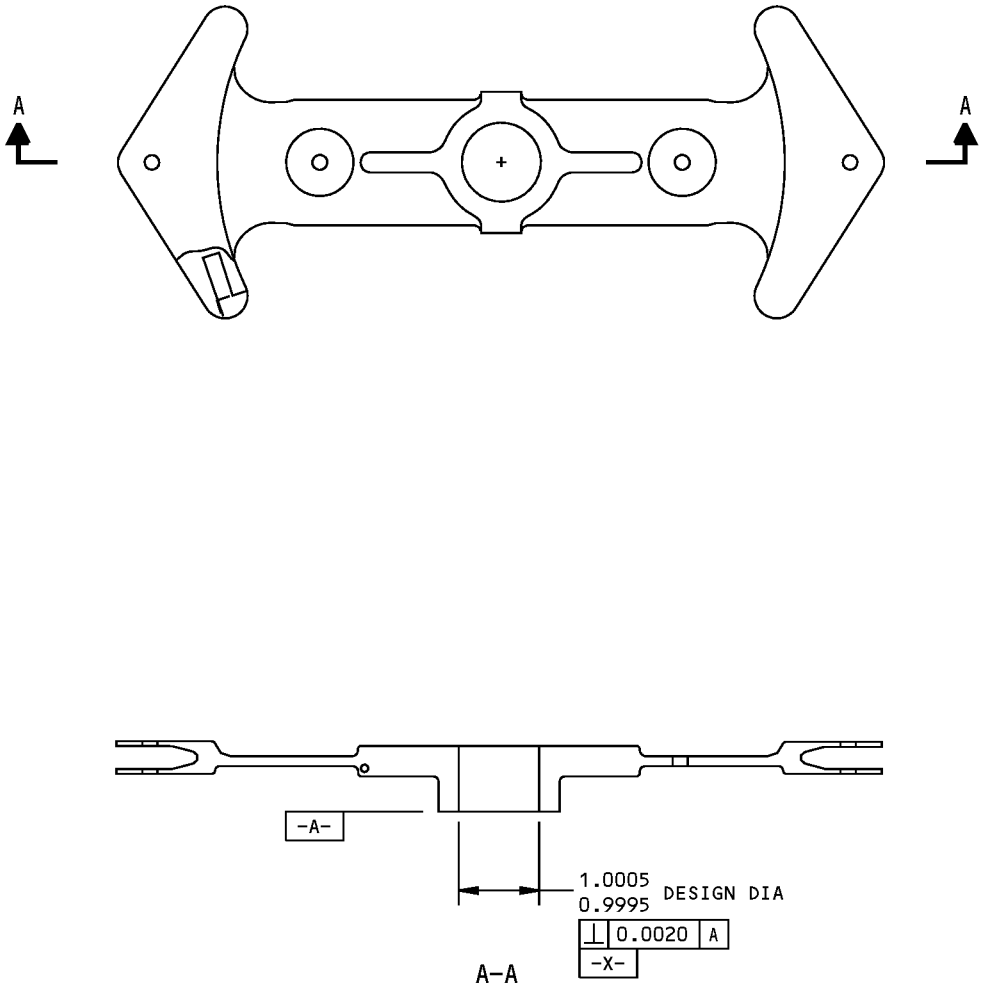
(SAME AS REFINISH)

125 ALL MACHINED SURFACES

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

65-49954-5 Quadrant Refinish
Figure 601



REFINISH

BORIC ACID-SULFURIC ACID ANODIZE (F-17.31). APPLY PRIMER BMS 10-11, TYPE 1 (F-20.03), BUT NOT IN DIA -X-

REPAIR

(SAME AS REFINISH)

125 ALL MACHINED SURFACES

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

65-49954-7 Quadrant Refinish
Figure 602

INNER SHAFT - REPAIR 8-1

69-74409–1

1. General

A. This procedure has the data to repair the inner shaft (IPL Figure 2;90).

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 2 for item numbers.

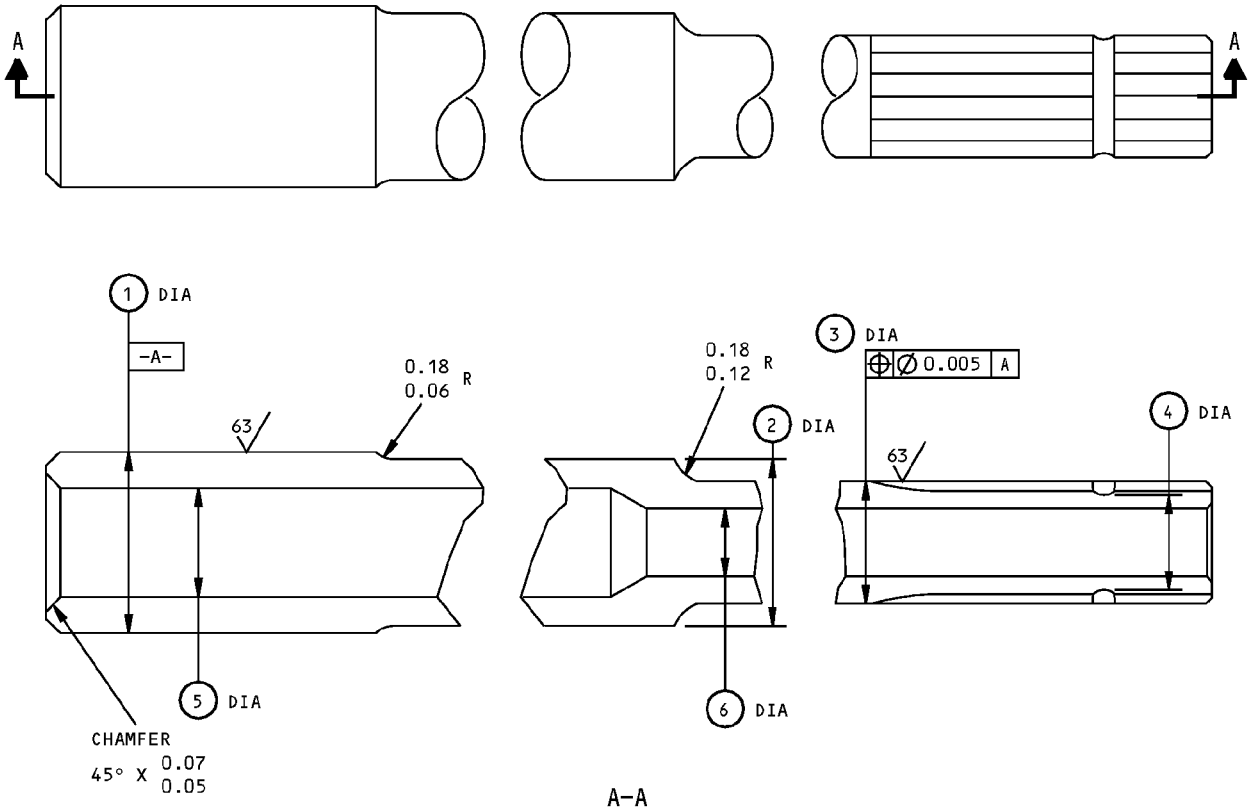
D. Material: 15-5PH CRES, 180-200 KSI

2. Coating Repair (REPAIR 8-1, Figure 601)

NOTE: For stripping of protective finishes, refer to SOPM 20-30-02. For the decoding table for Boeing finish codes, refer to SOPM 20-41-01.

A. Repair is only replacement of the original finish of inner shaft (IPL Figure 2;90).

(1) Passivate (F-17.09).



	1	2	3	4	5	6
DESIGN DIM	0.747 0.745	0.710 0.690	0.500 0.490	0.41 0.40	0.470 0.467	0.260 0.240
REPAIR LIMIT	---	---	---	---	---	---

REFINISH

PASSIVATE (F-17.09)

REPAIR

(SAME AS REFINISH)

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

MATERIAL: 15-5PH CRES, 180-200 KSI

ALL DIMENSIONS ARE IN INCHES

69-74409-1 Inner Shaft Repair and Refinsh
Figure 601

OUTER SHAFT - REPAIR 9-1

69-74411–1, –2

1. General

A. This procedure has the data to repair the outer shaft (IPL Figure 2;85) and (IPL Figure 3;115).

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 2 and IPL Figure 3 for item numbers.

D. Material: 15-5PH CRES, 180-200 KSI

2. Coating Repair (REPAIR 9-1, Figure 601 and REPAIR 9-1, Figure 602)

NOTE: For stripping of protective finishes, refer to SOPM 20-30-02. For the decoding table for Boeing finish codes, refer to SOPM 20-41-01. For finishing materials, refer to SOPM 20-60-02.

A. Repair is only replacement of the original finish of outer shaft (IPL Figure 2;85).

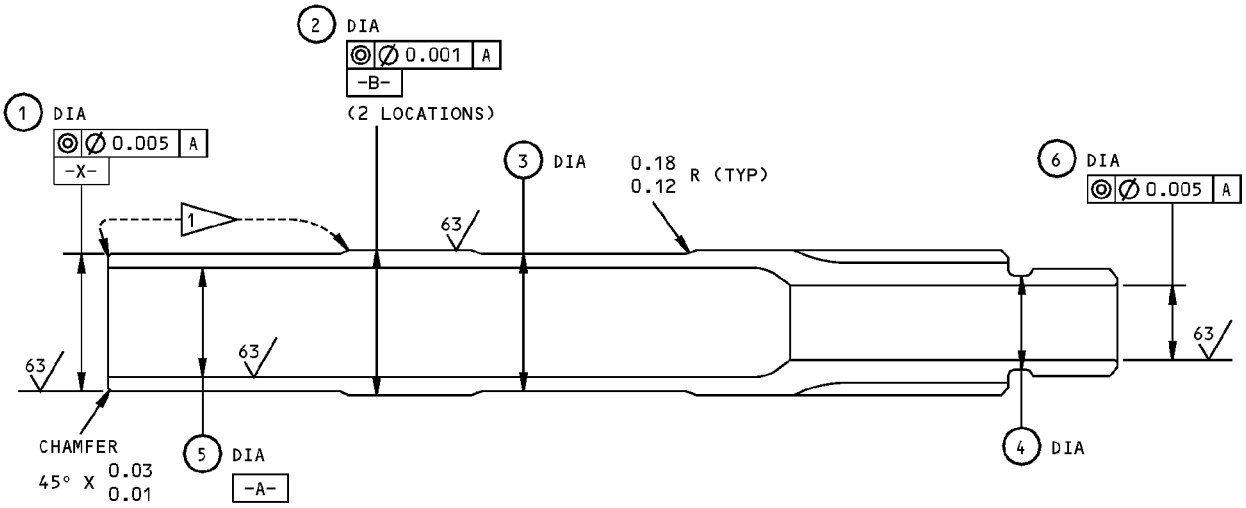
(1) Passivate (F-17.09) all over.

(2) Cadmium plate and apply primer, C00259 (F-16.01) as shown in REPAIR 9-1, Figure 601.

B. Repair is only replacement of the original finish of outer shaft (IPL Figure 3;115).

(1) Passivate (F-17.25) all over.

(2) Cadmium plate (F-16.06) as shown in REPAIR 9-1, Figure 602.



	1	2	3	4	5	6
DESIGN DIM	0.995 0.992	0.9995 0.9990	0.97 0.95	0.659 0.652	0.750 0.748	0.510 0.505
LIMIT	---	---	---	---	---	---

REFINISH

PASSIVATE (F-17.09) ALL OVER.
CADMIUM PLATE AND APPLY PRIMER TO AREA
SHOWN BY 1

1 CADMIUM PLATE AND APPLY PRIMER BMS 10-11, TYPE 1 (F-16.01) TO THIS AREA

REPAIR

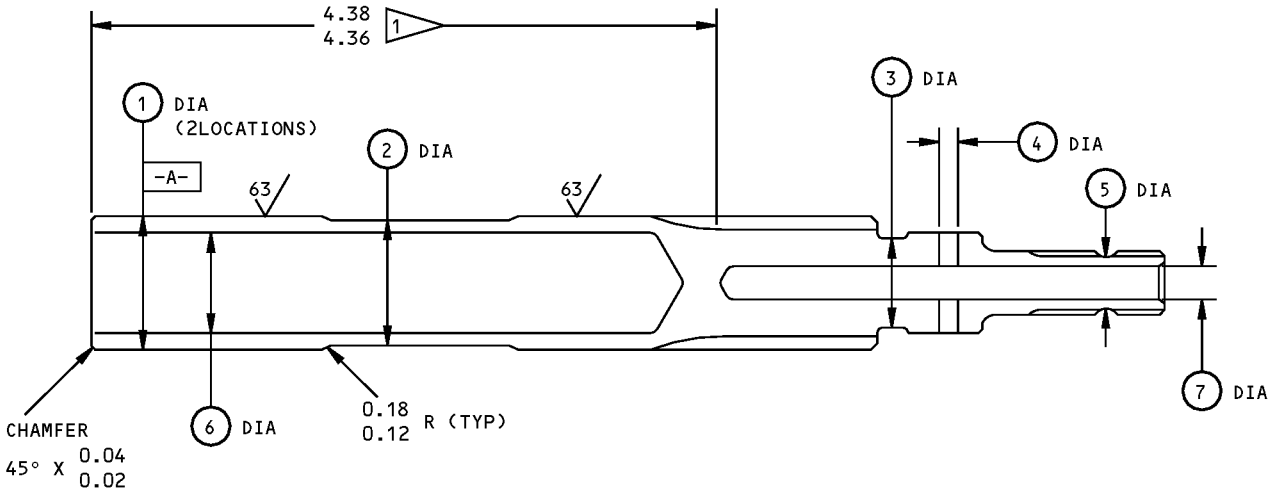
(SAME AS REFINISH)

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

MATERIAL: 15-5PH CRES, 180-200 KSI

ALL DIMENSIONS ARE IN INCHES

69-74411-1 Outer Shaft Repair and Refinish
Figure 601



	1	2	3	4	5	6	7
DESIGN DIM	0.9995 0.9990 2	0.097 0.095	0.659 0.652	0.151 0.131	0.500 0.490	0.76 0.74	0.26 0.24
REPAIR LIMIT	---	---	---	---	---	---	---

REFINISH

PASSIVATE (F-17.25). CADMIUM PLATE OUTER DIAMETER AREAS AS SHOWN BY 1

1 CADMIUM PLATE (F-16.06) THIS AREA OF OUTER DIAMETER, 0.0002-0.0003 THICK WITH PLATING RUNOUT IN SPLINE RUNOUT.

2 DIMENSION AFTER PLATING.

REPAIR

(SAME AS REFINISH)

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

MATERIAL: 15-5PH CRES, 180-200 KSI

ALL DIMENSIONS ARE IN INCHES

69-74411-2 Outer Shaft Repair and Refinish
Figure 602

LEVER ASSEMBLY - REPAIR 10-1

69-74714–1, –2

1. General

A. This procedure has the data to repair the lever assembly (IPL Figure 7; 1,5).

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 7 for item numbers.

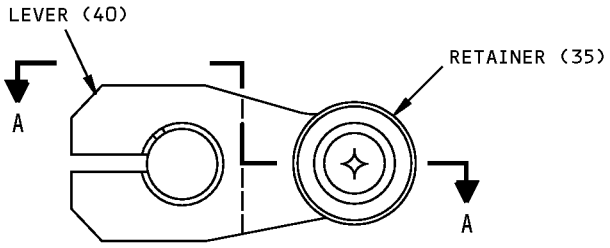
2. Parts Replacement (REPAIR 10-1, Figure 601)

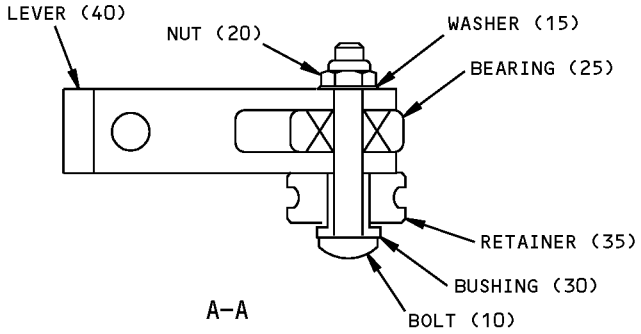
A. Disassemble by standard industry practices.

B. Refer to REPAIR 10-2 for repair of lever (40).

C. Refer to REPAIR 1-1for refinish of bushing (30) and retainer (35).

D. Assemble parts by standard industry practices.





69-74714-1 SHOWN
69-74714-2 OPPOSITE

ITEM NUMBERS REFER TO IPL FIG. 7

69-74714-1,-2 Lever Assembly Parts Replacement
Figure 601

LEVER - REPAIR 10-2

69-74712–1

1. General

A. This procedure has the data to repair the lever (IPL Figure 7;40).

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 7 for item numbers.

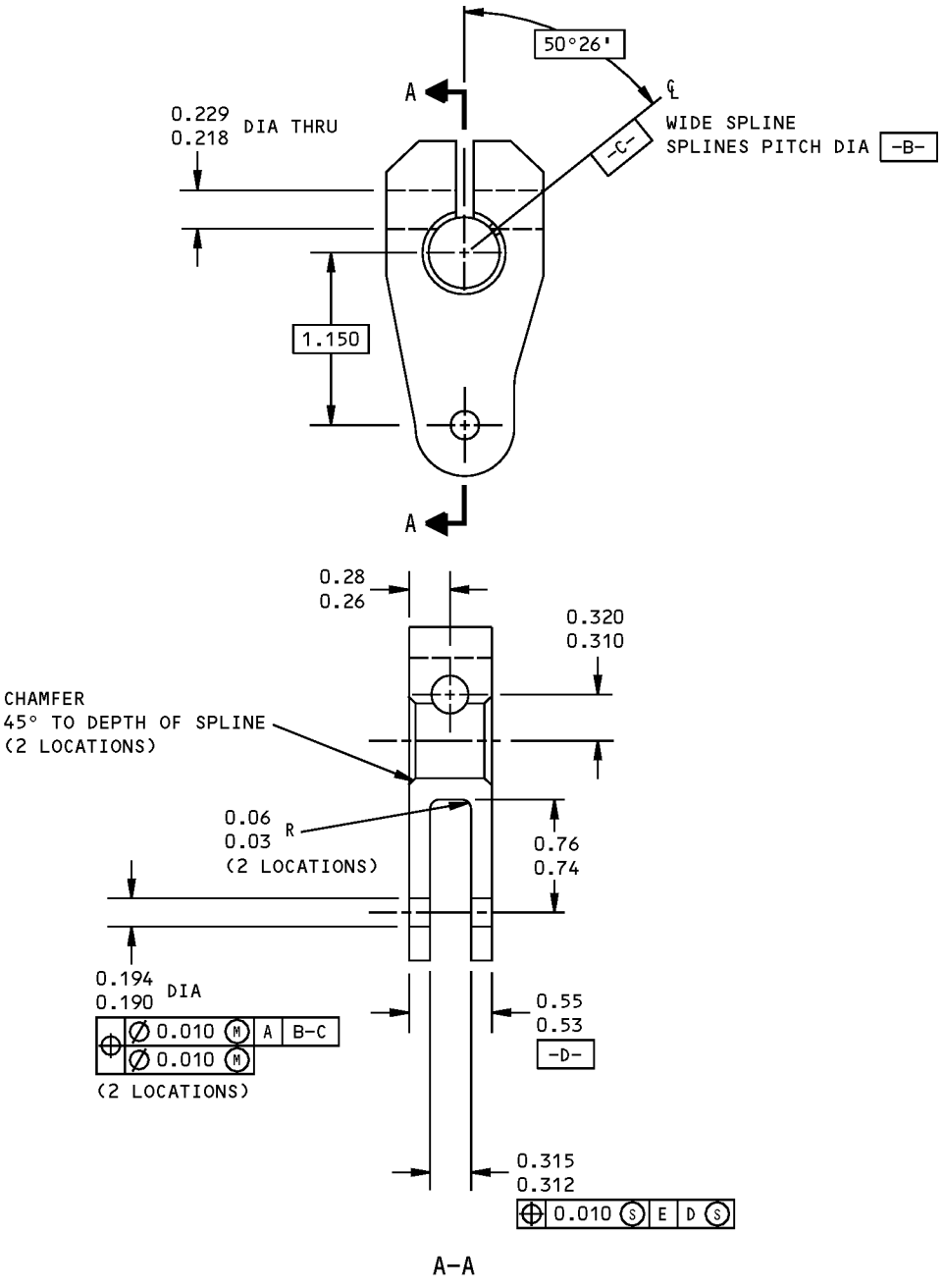
D. Material: 15-5PH CRES, 150-170 KSI

2. Coating Repair (REPAIR 10-2, Figure 601)

NOTE: For stripping of protective finishes, refer to SOPM 20-30-02. For the decoding table for Boeing finish codes, refer to SOPM 20-41-01.

A. Repair is only replacement of the original finish of lever (IPL Figure 7;40).

(1) Passivate (F-17.09) all over.



REFINISH

PASSIVATE (F-17.09)

REPAIR

(SAME AS REFINISH)

125 ALL MACHINED SURFACES

MATERIAL: 15-5PH CRES, 150-170 KSI

ALL DIMENSIONS ARE IN INCHES

69-74712-1

Lever Repair and Refinish
Figure 601

(NOT APPLICABLE)

BOEING®

COMPONENT MAINTENANCE MANUAL

FITS AND CLEARANCES

(NOT APPLICABLE)

BOEING®

COMPONENT MAINTENANCE MANUAL

SPECIAL TOOLS, FIXTURES, AND EQUIPMENT

(NOT APPLICABLE)

ILLUSTRATED PARTS LIST

1. Introduction

A. The Illustrated Parts List (IPL) contains an illustration and a list of component parts you can repair or replace. The Illustrated Parts Catalog (IPC) shows how to use the Boeing part number system.

B. This shows how parts are related: The relation of each item to its next higher assembly (NHA) is shown in the NOMENCLATURE column. Use the indenture system that follows:

1 2 3 4 5 6 7

. Assembly

. Attaching parts for assembly

. . Detail parts for assembly

. . Subassembly

. . Attaching parts for subassembly

. . . Detail parts for subassembly

. . . Sub-subassembly

. . . Attaching parts for subassembly

. . . . . Details parts for sub-subassembly

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

C. Each top assembly is given one use code letter (A, B, C, etc.) in the USAGE CODE column. All subsequent component parts in the list can have one or more of the use code letters to show effectivity to top assemblies. A component part without a use code applies to all top assemblies.

D. An alphabetical letter is added after the item number for optional parts, parts changed by a Service Bulletin, configuration differences (except left-handed and right-handed parts), last engineering releases, and parts added between item numbers in a sequence. The alphabetical letter will not be shown on the illustration for equivalent parts of the same part number.

E. Color-coded parts are identified with a single digit alpha following the dash number or with ''SP'' suffix. If the ''SP'' suffix is used, it represents consolidation of all color codes applicable for a given usage which are not separately listed. Orders for color-coded parts should include the registry number of the airplane for which the parts are ordered.

F. If a part number is 15 characters long but will not fit in the part number column, the part number will be displayed with a ''~'' at the end of the line and will be continued on the next line. The ''~'' denotes that the part number continues on the next line.

G. Parts changed by a Service Bulletin are shown by PRE SB XXXX and POST SB XXXX added to the NOMENCLATURE column.

(1) When a new top assembly is added by a Service Bulletin, PRE SB XXXX and POST SB XXXX will be added at the top assembly level only. The configuration differences at the detail part level are shown by use code letters.

(2) When the top assembly part number is not changed by the Service Bulletin, PRE SB XXXX and POST SB XXXX will be added at the detail level.

H. Interchangeable Parts

Optional (OPT)	The part is optional to and interchangeable with other parts that have the same item number.
Replaces, Replaced by and not interchangeable with (REPLACES, REPLACED BY AND NOT INTCHG/W)	The part replaces and is not interchangeable with the initial part.
Replaces, Replaced by (REPLACES, REPLACED BY)	The part replaces and is interchangeable with, or is an alternative to, the initial part.

VENDOR CODES

Code	Name
73680	GARLOCK INC MECHANICAL PACKING DIV SUB OF COLT IND 1666 DIVISION STREET PALMYRA, NEW YORK 14522-9343

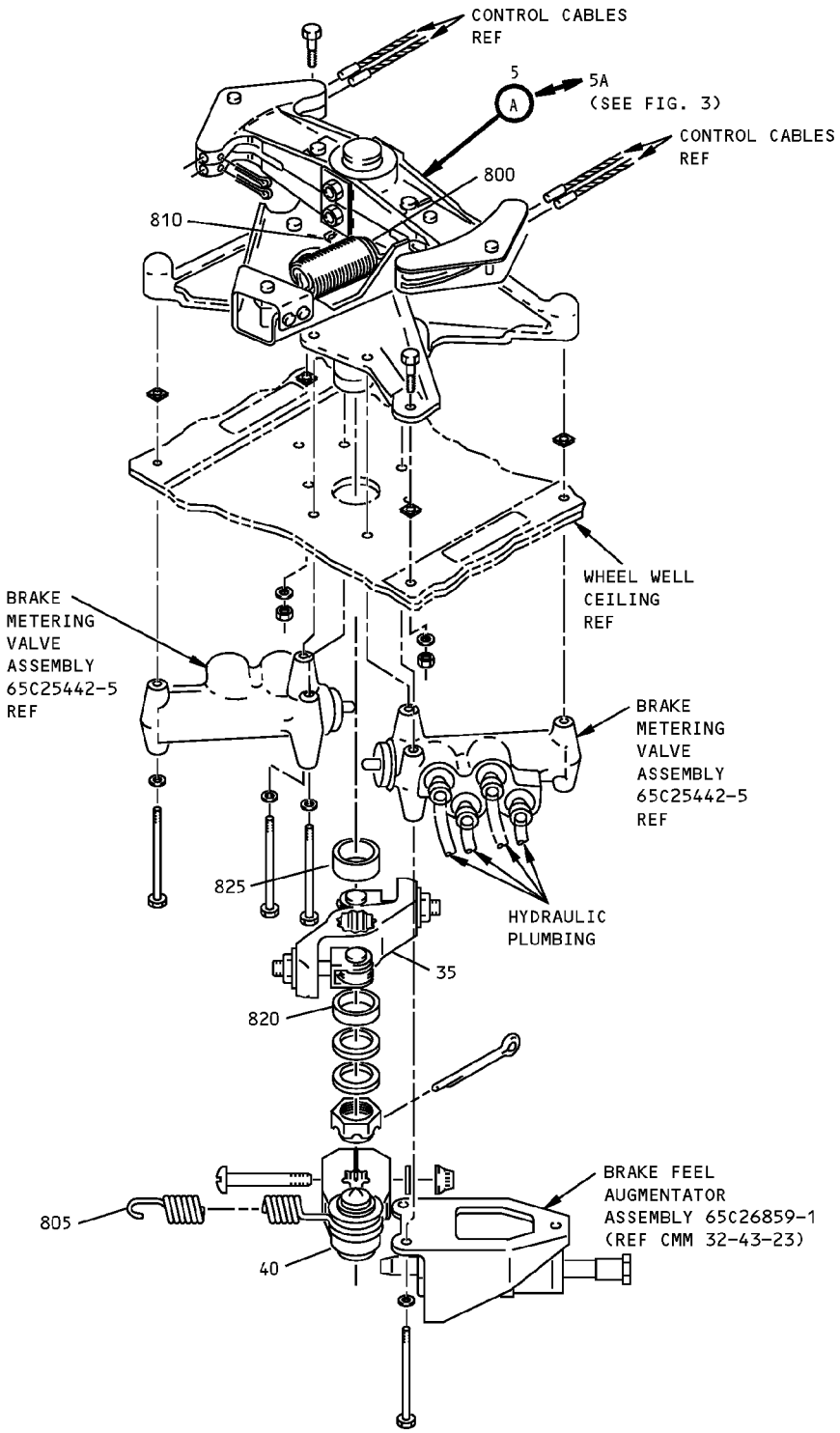
NUMERICAL INDEX

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
		1		1
21923-0351		3	105	1
21959-0351		3	105A	1
65-49954-5		2	75	2
65-49954-7		3	50	1
65C20899-1		1	830	1
65C20899-3		1	830A	1
65C20899-4		1	830B	1
65C20899-5		1	830C	1
65C25416-10		1	20	RF
		4	5	RF
65C25416-11		4	10	1
65C25416-12		4	15	1
65C25416-13		1	15A	RF
		3	85	1
		4	1A	RF
65C25416-14		1	20A	RF
		3	90	1
		4	5A	RF
65C25416-15		4	10A	1
65C25416-16		4	15A	1
65C25416-9		1	15	RF
		4	1	RF
65C25442-10		1	35A	RF
		6	1A	RF
65C25442-7		1	35	RF
		6	1	RF
65C25479-10		5	60	1
65C25479-11		5	70	1
65C25479-13		1	25A	RF
		3	75	1
		5	1A	RF
65C25479-14		1	30A	RF
		3	80	1

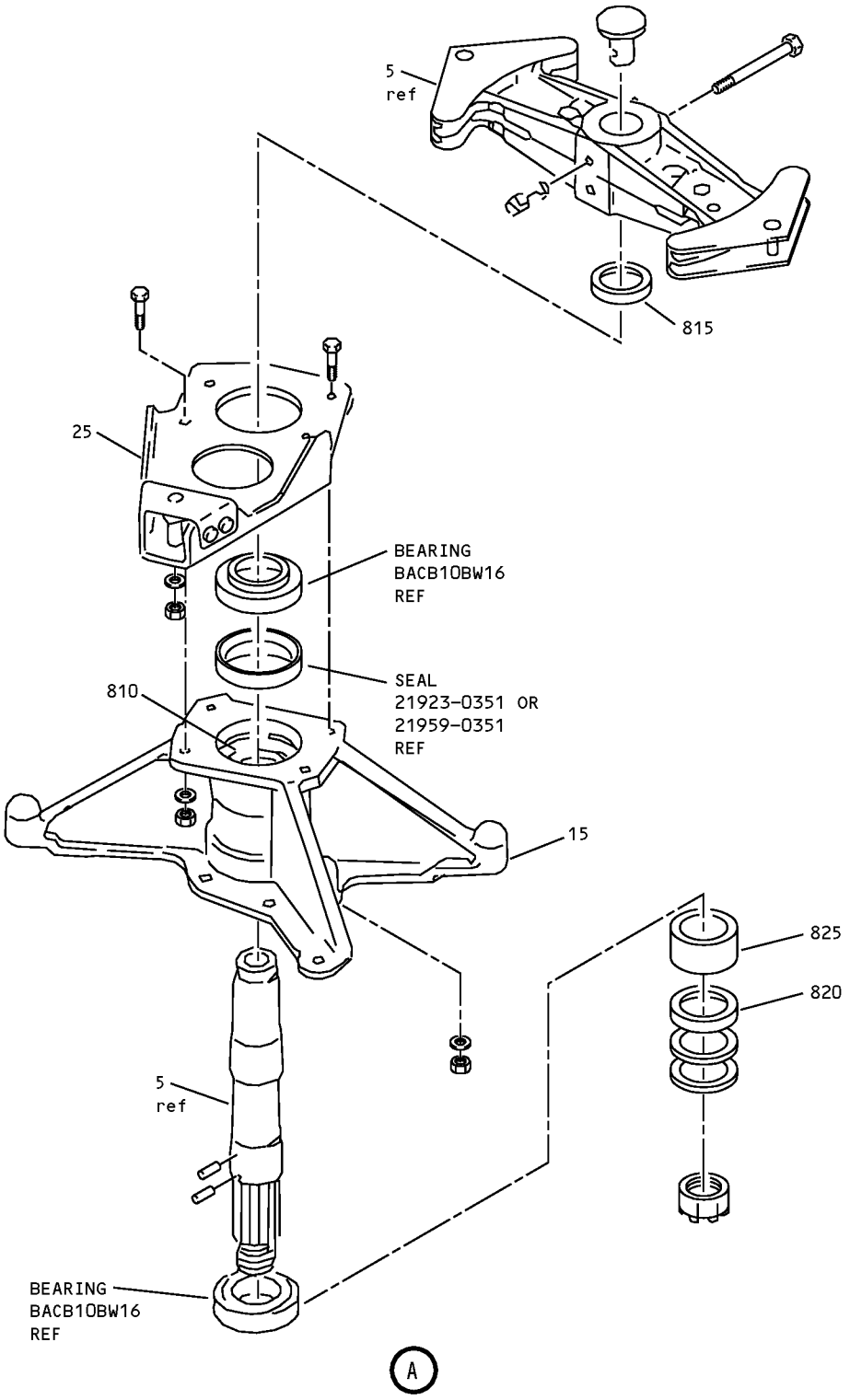
PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
		5	5A	RF
65C25479-7		1	25	RF
		5	1	RF
65C25479-8		1	30	RF
		5	5	RF
65C25479-9		5	55	1
65C25576-1		1	5	RF
		2	1	RF
65C25576-2		1	10	RF
		2	5	RF
65C25576-3		1	5A	RF
		3	1	RF
65C25576-4		1	10A	RF
		3	5	RF
66-24188-3		1	815	1
		3	55	1
66-24188-4		1	820	1
66-24188-6		1	825	1
69-73422-1		2	45	1
		3	40	1
		5	50	1
69-73423-1		1	800	1
		3	45	1
69-73499-1		2	70	1
69-74407-1		6	35	1
69-74408-2		6	15	2
69-74409-1		2	90	1
69-74410-1		2	80	2
69-74411-1		2	85	1
69-74411-2		3	115	1
69-74412-1		1	810	1
		3	110	1
69-74439-1		6	45	1
69-74439-2		6	45A	1
69-74712-1		7	40	1

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
69-74713-1		7	35	1
69-74714-1		1	40	RF
		7	1	RF
69-74714-2		1	45	RF
		7	5	RF
69-75945-1		1	805	1
69-78716-1		6	40	2
AN960C10L		7	15	1
AN960JD10		5	25	1
AN960PD10		2	20	4
AN960PD10L		2	40	1
		5	20	1
AN960PD416		2	60	2
AN970-3		3	30	1
BACB10BW16		3	100	2
BACB10ET03		6	30	1
BACB28X3N035		7	30	1
BACB30LK3-16		7	10	1
BACB30LT4D28		3	10	1
BACB30NT3K5		3	60	4
BACB30VT6K19		5	15	1
BACB30VT6K7		3	25	1
BACC30BL6		3	35	1
BACN10JC3		2	25	2
BACN10JC3CD		3	70	4
BACN10JC4		2	65	2
BACN10YR4CD		3	20	1
BACR15BB5D		5	65	4
BACS18K10-54W		5	35	1
MS20392-2C19		2	35	1
MS20392-2C27		2	15	2
MS20392-2C41		5	10	1
MS21042L3		5	40	1
		7	20	1
MS21209F4-20P		4	20	4

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
MS21438-103G		7	25	1
MS24665-132		2	30	2
		2	50	1
MS24665-134		5	45	1
NAS1149D0332J		3	15	1
		3	65	4
NAS1805-3		6	25	1
NAS43DD3-41		5	30	1
NAS509-6		6	5	2
NAS513-6		6	10	2
NAS623-3-10		2	10	2
NAS623-3-8		6	20	1
NAS6604-28		2	55	2



Brake Metering Valve Control Installation Components
IPL Figure 1 (Sheet 1 of 2)



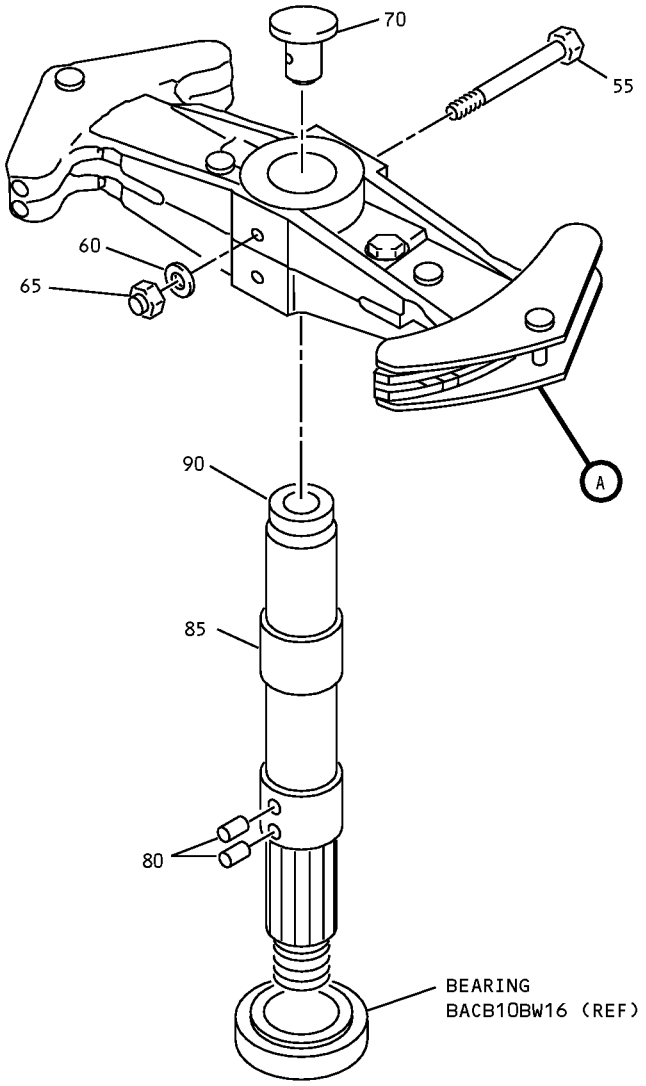
Brake Metering Valve Control Installation Components
IPL Figure 1 (Sheet 2 of 2)

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–			BRAKE METERING VALVE CONTROL INSTALLATION COMPONENTS		
5	65C25576-1		QUADRANT AND SHAFT ASSY (LH) (FOR DETAILS SEE FIG. 2)		RF
5A	65C25576-3		QUADRANT AND SHAFT ASSY (LH) (FOR DETAILS SEE FIG. 3)		RF
–10	65C25576-2		QUADRANT AND SHAFT ASSY (RH) (FOR DETAILS SEE FIG. 2)		RF
–10A	65C25576-4		QUADRANT AND SHAFT ASSY (RH) (FOR DETAILS SEE FIG. 3)		RF
–15	65C25416-9		SUPPORT ASSY (FOR DETAILS SEE FIG. 4)		RF
–15A	65C25416-13		SUPPORT ASSY (FOR DETAILS SEE FIG. 4)		RF
–20	65C25416-10		SUPPORT ASSY (FOR DETAILS SEE FIG. 4)		RF
–20A	65C25416-14		SUPPORT ASSY (FOR DETAILS SEE FIG. 4)		RF
–25	65C25479-7		PLATE ASSY-SPRING (FOR DETAILS SEE FIG. 5)		RF
–25A	65C25479-13		PLATE ASSY-SPRING (FOR DETAILS SEE FIG. 5)		RF
–30	65C25479-8		PLATE ASSY-SPRING (FOR DETAILS SEE FIG. 5)		RF
–30A	65C25479-14		PLATE ASSY-SPRING (FOR DETAILS SEE FIG. 5)		RF
35	65C25442-7		LEVER ASSY (FOR DETAILS SEE FIG. 6)		RF
–35A	65C25442-10		LEVER ASSY (FOR DETAILS SEE FIG. 6)		RF
40	69-74714-1		LEVER ASSY (FOR DETAILS SEE FIG. 7)		RF
–45	69-74714-2		LEVER ASSY (FOR DETAILS SEE FIG. 7)		RF

–Item not Illustrated

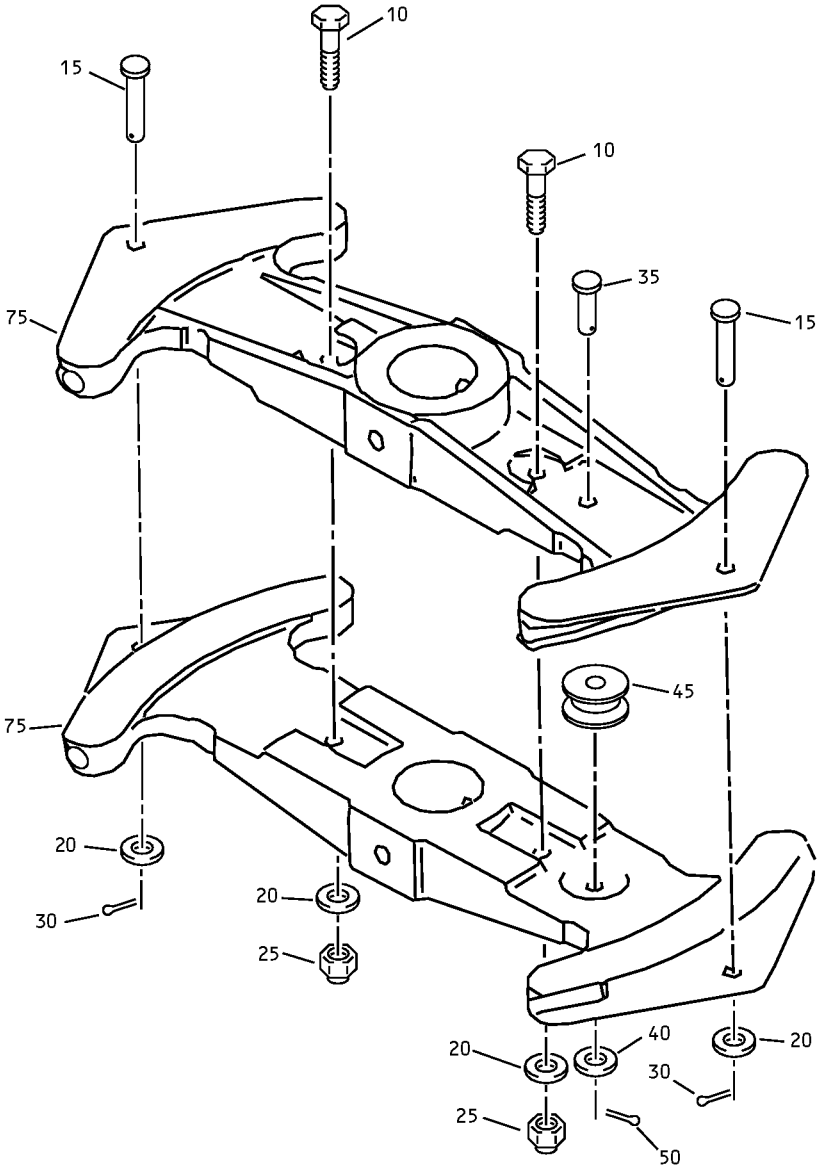
FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
800	69-73423-1		SPRING		1
805	69-75945-1		SPRING		1
810	69-74412-1		SPACER		1
815	66-24188-3		SPACER		1
820	66-24188-4		SPACER		1
825	66-24188-6		SPACER		1
830	65C20899-1		ANGLE, SUPPORT		1
830A	65C20899-3		ANGLE, SUPPORT		1
830B	65C20899-4		ANGLE, SUPPORT		1
830C	65C20899-5		ANGLE, SUPPORT		1

–Item not Illustrated



65C25576-1 SHOWN
65C25576-2 OPPOSITE

Quadrant and Shaft Assembly
IPL Figure 2 (Sheet 1 of 2)



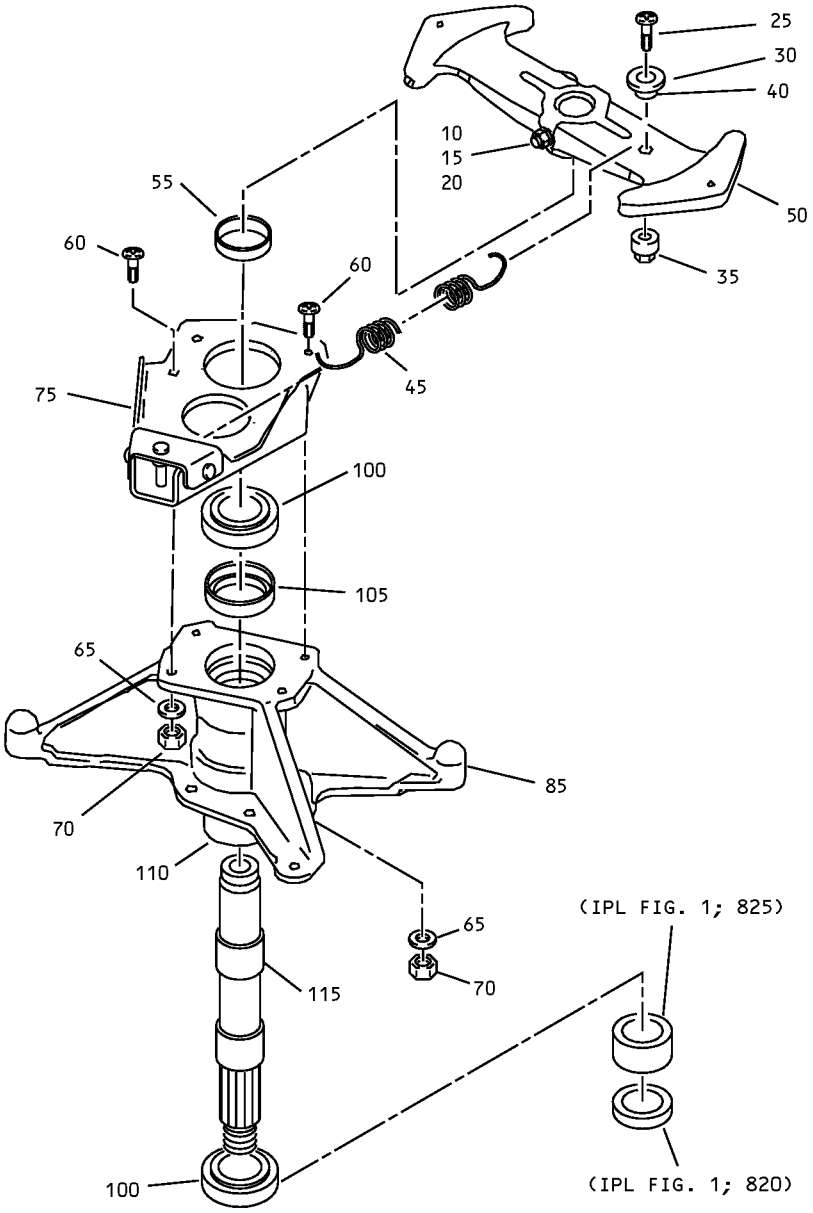
65C25576-1 SHOWN
65C25576-2 OPPOSITE

A

Quadrant and Shaft Assembly
IPL Figure 2 (Sheet 2 of 2)

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
2–					
–1	65C25576-1		QUADRANT AND SHAFT ASSY (LH)	A	RF
–5	65C25576-2		QUADRANT AND SHAFT ASSY (RH)	B	RF
10	NAS623-3-10		. SCREW		2
15	MS20392-2C27		. PIN		2
20	AN960PD10		. WASHER		4
25	BACN10JC3		. NUT		2
30	MS24665-132		. PIN-COTTER		2
35	MS20392-2C19		. PIN		1
40	AN960PD10L		. WASHER		1
45	69-73422-1		. RETAINER-SPRING		1
50	MS24665-132		. PIN-COTTER		1
55	NAS6604-28		. BOLT		2
60	AN960PD416		. WASHER		2
65	BACN10JC4		. NUT		2
70	69-73499-1		. PLUG		1
75	65-49954-5		. QUADRANT		2
80	69-74410-1		. PIN		2
85	69-74411-1		. SHAFT-OUTER		1
90	69-74409-1		. SHAFT-INNER		1

–Item not Illustrated

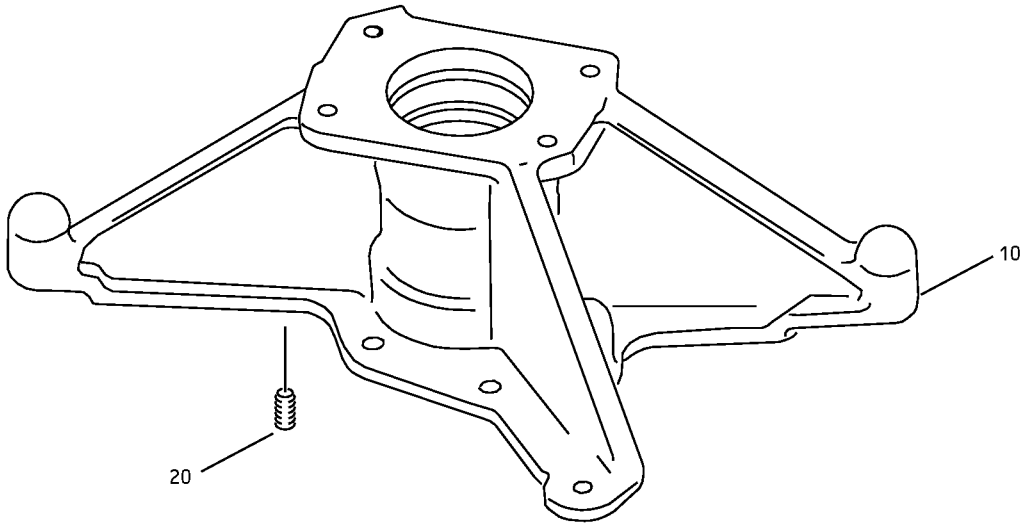


65C25576-3 SHOWN
65C25576-4 OPPOSITE

Quadrant and Shaft Assembly
IPL Figure 3

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
3–					
–1	65C25576-3		QUADRANT AND SHAFT ASSY	A	RF
–5	65C25576-4		QUADRANT AND SHAFT ASSY	B	RF
10	BACB30LT4D28		. BOLT		1
15	NAS1149D0332J		. WASHER		1
20	BACN10YR4CD		. NUT		1
25	BACB30VT6K7		. BOLT		1
30	AN970-3		. WASHER		1
35	BACC30BL6		. COLLAR		1
40	69-73422-1		. RETAINER-SPRING		1
45	69-73423-1		. SPRING		1
50	65-49954-7		. QUADRANT		1
55	66-24188-3		. SPACER		1
60	BACB30NT3K5		. BOLT		4
65	NAS1149D0332J		. WASHER		4
70	BACN10JC3CD		. NUT		4
75	65C25479-13		. PLATE ASSY-SPRING (FOR DETAILS SEE FIG. 5)	A	1
–80	65C25479-14		. PLATE ASSY-SPRING (FOR DETAILS SEE FIG. 5)	B	1
85	65C25416-13		. SUPPORT ASSY (FOR DETAILS SEE FIG. 4)	A	1
–90	65C25416-14		. SUPPORT ASSY (FOR DETAILS SEE FIG. 4)	B	1
100	BACB10BW16		. BEARING		2
105	21923-0351		. SEAL (V73680)		1
–105A	21959-0351		. SEAL (V73680) (OPT ITEM 105)		1
110	69-74412-1		. SPACER		1
115	69-74411-2		. SHAFT		1

–Item not Illustrated

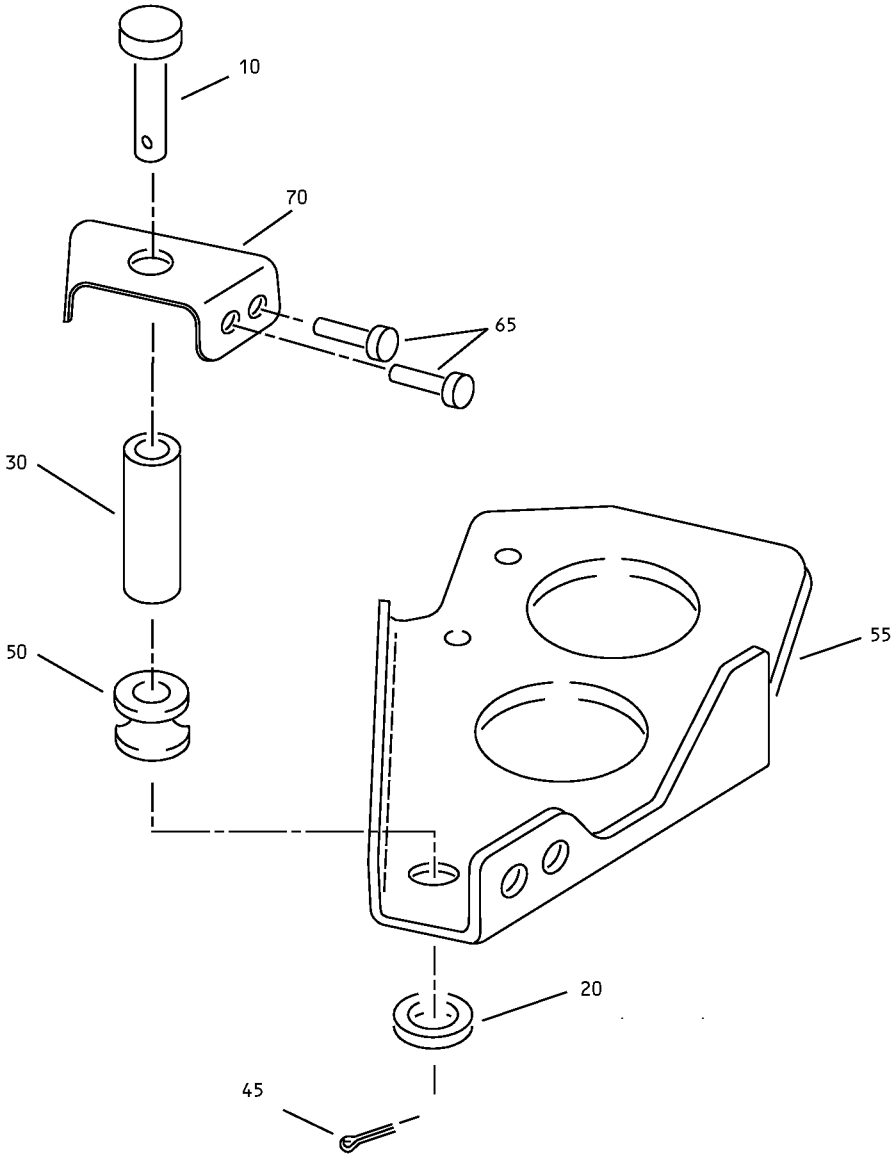


65C25416-9,-13 SHOWN
65C25416-10,-14 OPPOSITE

Support Assembly
IPL Figure 4

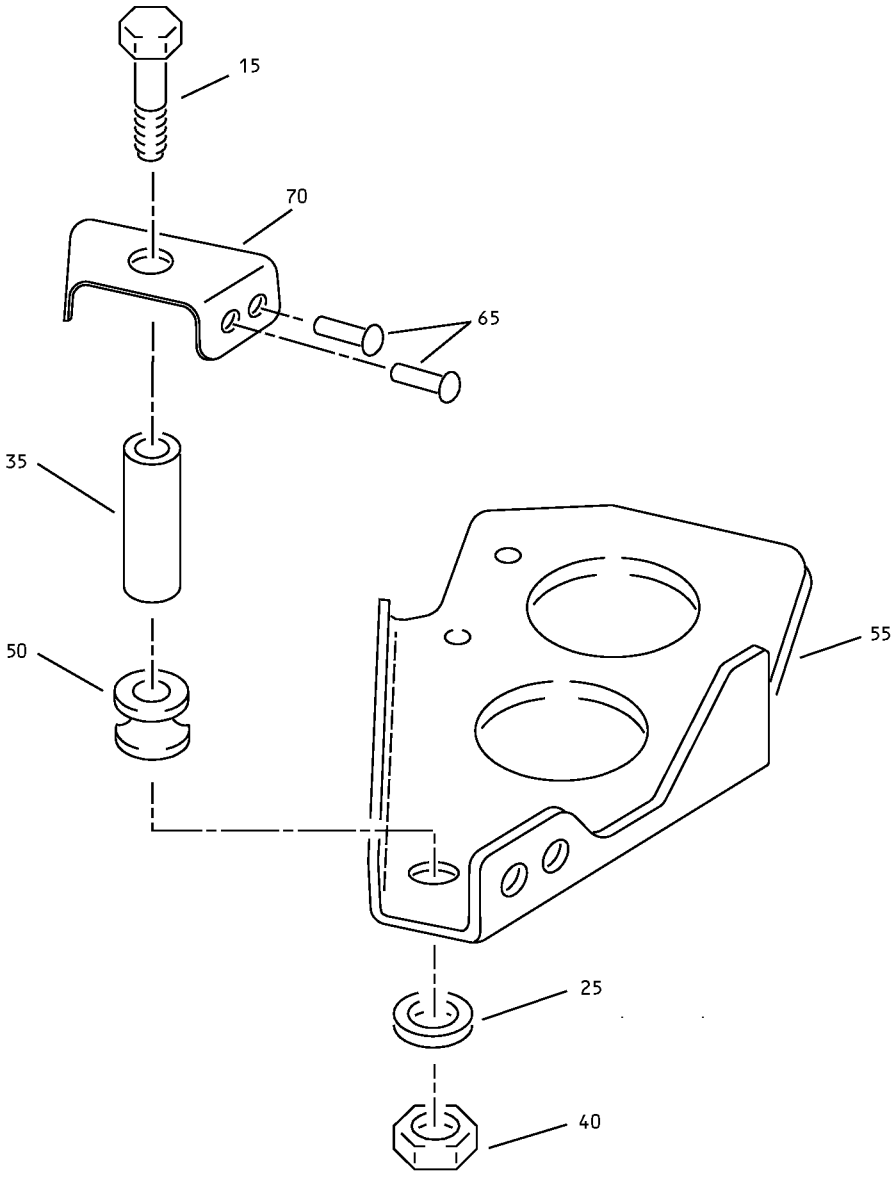
FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
4–					
–1	65C25416-9		SUPPORT ASSY	A	RF
–1A	65C25416-13		SUPPORT ASSY	C	RF
–5	65C25416-10		SUPPORT ASSY	B	RF
–5A	65C25416-14		SUPPORT ASSY	D	RF
10	65C25416-11		. SUPPORT	A	1
–10A	65C25416-15		. SUPPORT	C	1
15	65C25416-12		. SUPPORT	B	1
–15A	65C25416-16		. SUPPORT	D	1
20	MS21209F4-20P		. INSERT-HELICAL COIL		4

–Item not Illustrated



65C25479-7 SHOWN
65C25479-8 OPPOSITE

Spring Plate Assembly
IPL Figure 5 (Sheet 1 of 2)

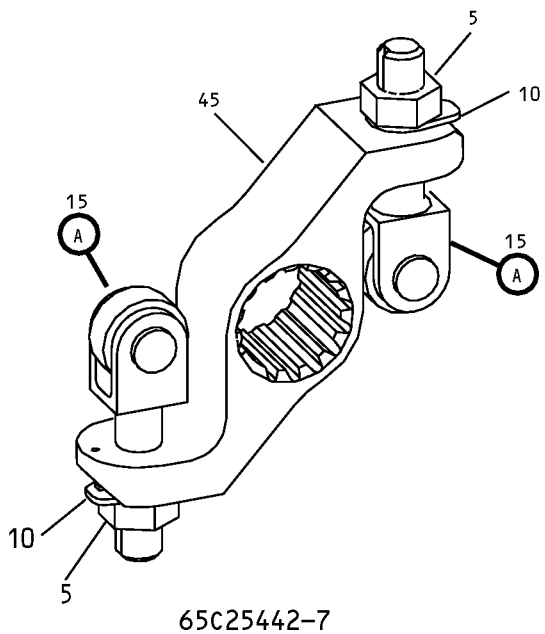


65C25479-13 SHOWN
65C25479-14 OPPOSITE

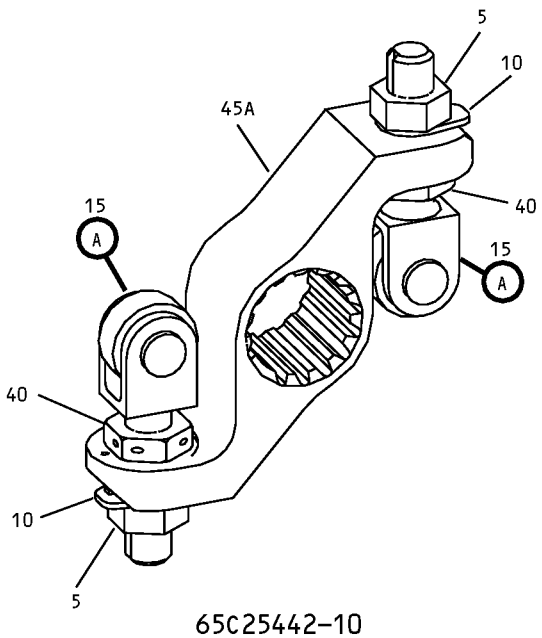
Spring Plate Assembly
IPL Figure 5 (Sheet 2 of 2)

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
5–					
–1	65C25479-7		PLATE ASSY-SPRING	A	RF
–1A	65C25479-13		PLATE ASSY-SPRING	C	RF
–5	65C25479-8		PLATE ASSY-SPRING	B	RF
–5A	65C25479-14		PLATE ASSY-SPRING	D	RF
10	MS20392-2C41		. PIN	A, B	1
15	BACB30VT6K19		. BOLT	C, D	1
20	AN960PD10L		. WASHER	A, B	1
25	AN960JD10		. WASHER	C, D	1
30	NAS43DD3-41		. SPACER	A, B	1
35	BACS18K10-54W		. SPACER	C, D	1
40	MS21042L3		. NUT	C, D	1
45	MS24665-134		. PIN-COTTER	A, B	1
50	69-73422-1		. RETAINER		1
55	65C25479-9		. PLATE	A, C	1
60	65C25479-10		. PLATE	B, D	1
65	BACR15BB5D		. RIVET		4
70	65C25479-11		. BRACKET		1

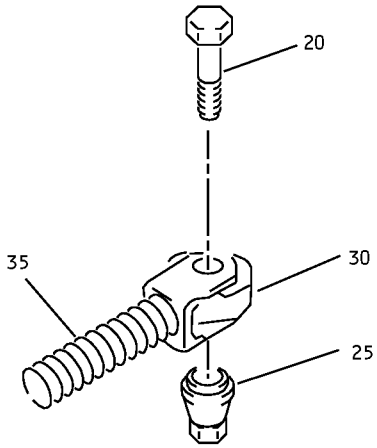
–Item not Illustrated



65C25442-7



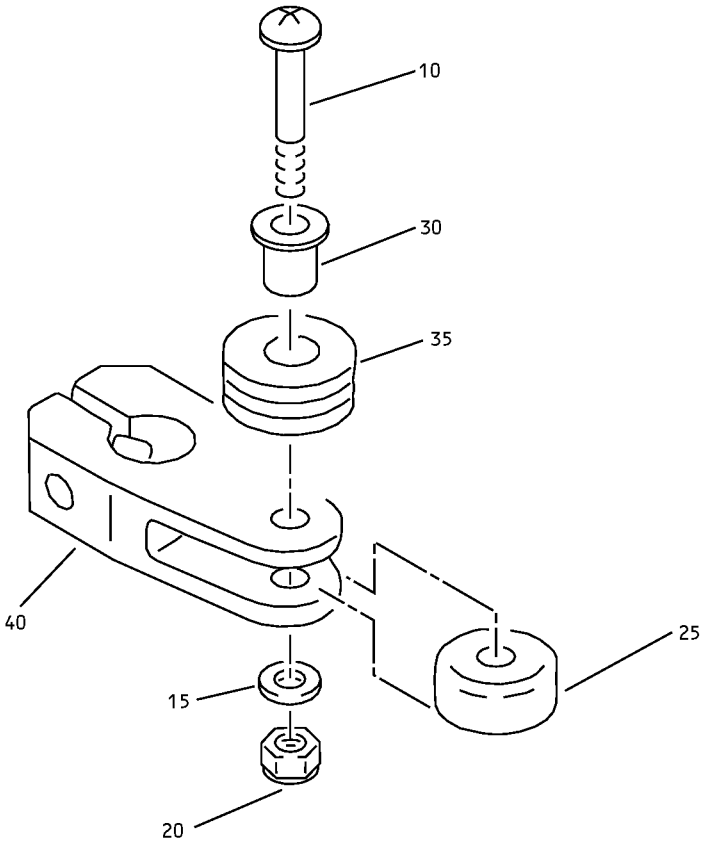
65C25442-10



Lever Assembly
IPL Figure 6

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
6–					
–1	65C25442-7		LEVER ASSY	A	RF
–1A	65C25442-10		LEVER ASSY	B	RF
5	NAS509-6		. NUT		2
10	NAS513-6		. WASHER		2
15	69-74408-2		. CLEVIS ASSY		2
20	NAS623-3-8		. . BOLT		1
25	NAS1805-3		. . NUT		1
30	BACB10ET03		. . BEARING		1
35	69-74407-1		. . CLEVIS		1
40	69-78716-1		. BUSHING	B	2
45	69-74439-1		. LEVER	A	1
–45A	69-74439-2		. LEVER	B	1

–Item not Illustrated



69-74714-1 SHOWN
69-74714-2 OPPOSITE

Brake Force Augmenter Lever Assembly
IPL Figure 7

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
7–					
–1	69-74714-1		LEVER ASSY-BRAKE FORCE AUGMENTER	A	RF
–5	69-74714-2		LEVER ASSY-BRAKE FORCE AUGMENTER (OPPOSITE TO ITEM 1)	B	RF
10	BACB30LK3-16		. BOLT		1
15	AN960C10L		. WASHER		1
20	MS21042L3		. NUT		1
25	MS21438-103G		. BEARING		1
30	BACB28X3N035		. BUSHING		1
35	69-74713-1		. RETAINER		1
40	69-74712-1		. LEVER		1

–Item not Illustrated