COMPONENT MAINTENANCE MANUAL WITH ILLUSTRATED PARTS LIST

FAIRING FLAP SUPPORT INSTALLATION COMPONENTS

PART NUMBER 113A9104–1, –2, 113A9105–1, –5, 113A9106–1, –4, 113A9204–1, –2, 113A9205–1, –5, 113A9206–1, –4, 113A9207–1, –4, 113A9304–1, 113A9305–1, –5,

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

PART NUMBER (Cont.)

113A9306
113A9306–1, –4,
113A9307–1, –4

BOEING®

COMPONENT MAINTENANCE MANUAL

Revision No. 11
Jul 01/2009

To: All holders of FAIRING FLAP SUPPORT INSTALLATION COMPONENTS 57-26-47.

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

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

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		Revision		Filed	
Number	Date	Date	Initials	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.

FLAP SUPPORT FAIRING INSTALLATION COMPONENTS - DESCRIPTION AND OPERATION

1. **Description**

   A. This component maintenance manual is for repair of the flap support fairing installation components.

2. **Leading Particulars (approximate)**

   A. Weight – Each component is less than 10 pounds.

(NOT APPLICABLE)

(NOT APPLICABLE)

(NOT APPLICABLE)

CHECK

1. General

A. This section has the necessary data to do a complete check of the flap support fairing components.

B. Refer to FITS AND CLEARANCES for the design and service wear limit dimensions.

C. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM chapters Identified in this procedure.

D. Refer to the IPL Figure 1 thru IPL Figure 11 for the item numbers.

2. Procedure

A. References

Reference	Title
SOPM 20-20-01	MAGNETIC PARTICLE INSPECTION
SOPM 20-20-02	PENETRANT METHODS OF INSPECTION

B. Flap Support Fairing Components Check

(1) Do a visual check:

(a) Use standard industry procedures to examine all of the parts for defects.

(2) Do the penetrant check or magnetic particle check if cracks or damage are seen or if you think there are cracks or damage:

(a) Do a penetrant check (SOPM 20-20-02) of these parts:

1) Beam (IPL Figure 1; 90, 95) (IPL Figure 4; 50, 50A) (IPL Figure 8; 30)

2) Link (IPL Figure 2, IPL Figure 5, IPL Figure 9; 45,45A)

3) Fitting (IPL Figure 4; 23)

(b) Do a magnetic particle check (SOPM 20-20-01, Class B) of these parts:

1) Rod (IPL Figure 3, IPL Figure 6, IPL Figure 7, IPL Figure 10, IPL Figure 11; 30)

REPAIR

1. General

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

Table 601:

PART NUMBER	NAME	REPAIR
	REFINISH OF OTHER PARTS	1-1
113A9104	BEAM ASSEMBLY	2-1, 2-2
113A9105	LINK ASSEMBLY	3-1, 3-2
113A9106	ROD ASSEMBLY	4-1, 4-2
113A9204	BEAM ASSEMBLY	5-1 THRU 5-5
113A9205	LINK ASSEMBLY	6-1, 6-2
113A9206	ROD ASSEMBLY	7-1, 7-2
113A9207	ROD ASSEMBLY	8-1, 8-2
113A9304	BEAM ASSEMBLY	9-1, 9-2
113A9305	LINK ASSEMBLY	10-1, 10-2
113A9306	ROD ASSEMBLY	11-1, 11-2
113A9307	ROD ASSEMBLY	12-1, 12-2

—	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 THIS FEATURE 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

— | 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
◎ | ∅ 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
⌖ | ∅ 0.002 Ⓢ | B	LOCATED AT TRUE POSITION WITHIN 0.002 DIA RELATIVE TO DATUM B, REGARDLESS OF FEATURE SIZE
⊥ | ∅ 0.010 Ⓜ | A 0.510 Ⓟ	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

REFINISH OF OTHER PARTS - REPAIR 1-1

1. General

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

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

C. Refer to the IPL Figure 5 and 9 for the item numbers.

2. Procedure

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

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I
C50058	Cadmium Plate	QQ-P-416, Type II, Class 2

B. References

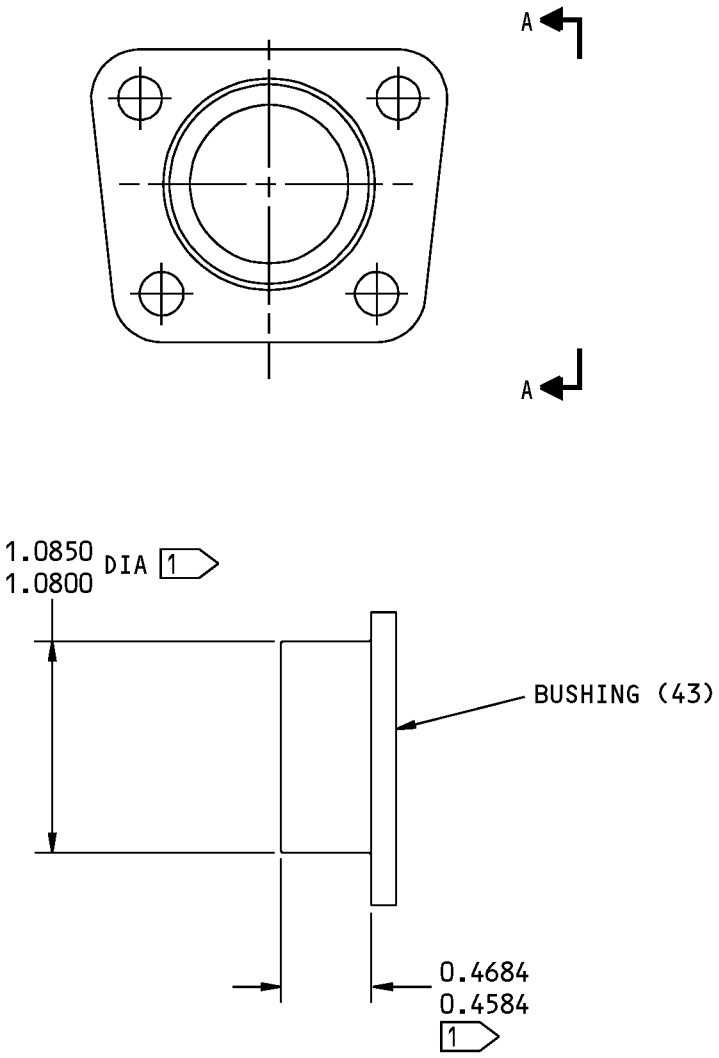
Reference	Title
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES

C. Refinish of Other Parts

(1) Instructions for the repair of the parts listed in REPAIR 1-1, Table 601 are for repair of the original finish.

Table 601: Refinish Details

IPL FIG & ITEM	MATERIAL	FINISH
Retainer (IPL Figure 5; 35) (IPL Figure 9; 35)	17-7PH CRES	Passivate all over (F-17.09). Apply one layer of primer, C00259 (F-20.02).
Bushing (IPL Figure 5; 43) (IPL Figure 9; 43)	15-5PH CRES	Apply cadmium plating, C50058 (F-15.36) to the bushing as shown in REPAIR 1-1, Figure 601. Apply cadmium plating, C50058 (F-15.06) to the bushing.



1 APPLY CADMIUM PLATE (F-15.36)

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

ITEM NUMBERS REFER TO IPL FIG. 5 & 9

ALL DIMENSIONS ARE IN INCHES

113A9120-1 Bushing Refinish
Figure 601

BEAM ASSEMBLY - REPAIR 2-1

113A9104–1, -2

1. General

A. This repair gives the data necessary to repair the beam assembly (IPL Figure 1; 1A, 1B).

B. Refer to the Standard Overhaul and Practices Manual (SOPM) for the standard practices shown in the repair.

C. Refer to REPAIR-GENERAL, Figure 601 for the standard true position dimensioning symbols shown in the repair.

D. Refer to IPL Figure 1 for the item numbers.

2. Procedure

NOTE: For miscellaneous materials, refer to SOPM 20-60-04.

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95

B. References

Reference	Title
SOPM 20-50-03	BEARING AND BUSHING REPLACEMENT
SOPM 20-60-04	MISCELLANEOUS MATERIALS

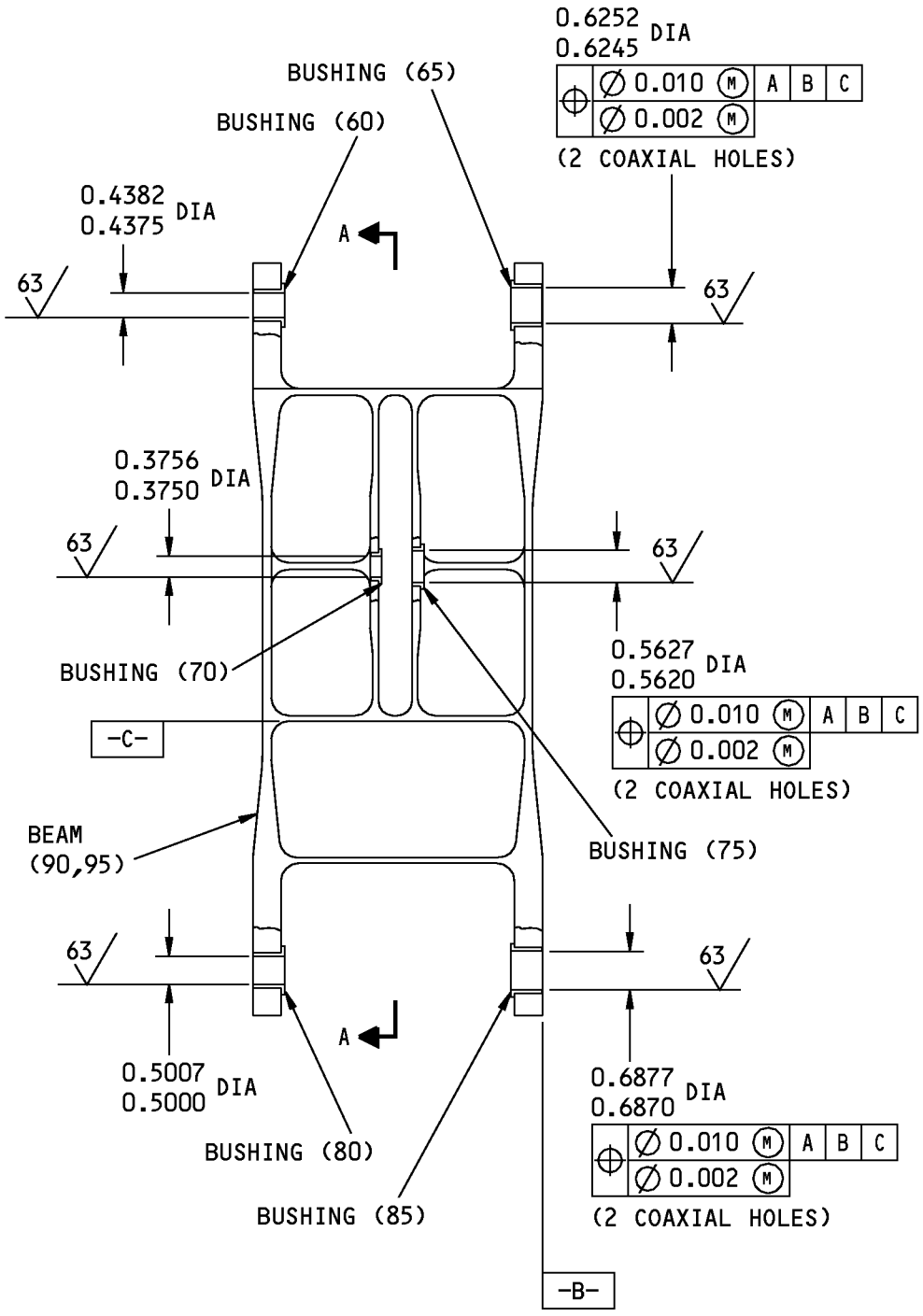
C. Bushing Replacement

(1) Remove the bushing (60, 65, 70, 75, 80, 85) from the beam (90, 95) as specified in the (SOPM 20-50-03).

(2) Install the new bushing (60, 65, 70, 75, 80, 85) in the beam (90, 95) by the shrink fit method with sealant, A00247 as specified in the (SOPM 20-50-03).

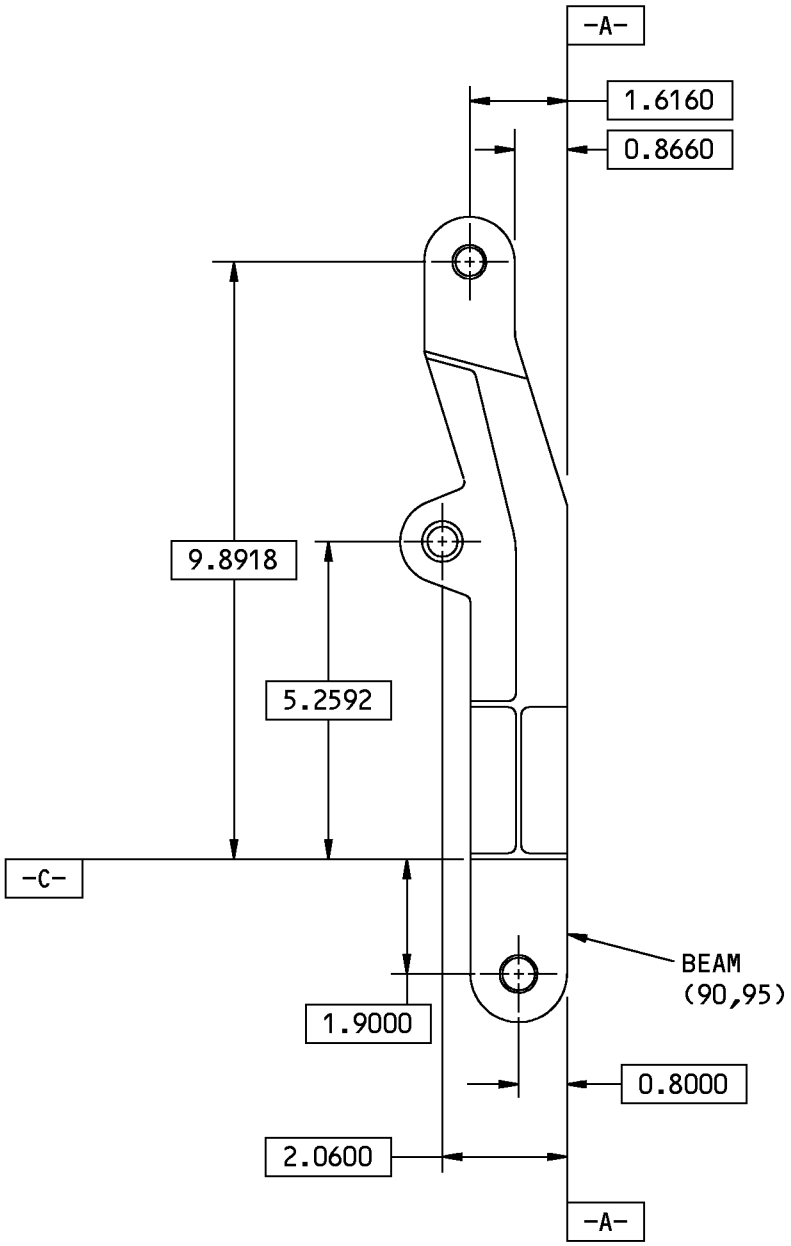
(3) Machine the bushing (60, 65, 70, 75, 80, 85) to the diameter specified in REPAIR 2-1, Figure 601.

(4) Break the sharp edges.



113A9104-1 SHOWN
113A9104-2 OPPOSITE

113A9104-1 Beam Assembly Bushing Replacement
Figure 601 (Sheet 1 of 2)



A-A

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

113A9104-1 Beam Assembly Bushing Replacement
Figure 601 (Sheet 2 of 2)

BEAM - REPAIR 2-2

113A9104–3, -4

1. General

A. This repair gives the data necessary to refinish the beam (IPL Figure 1; 90, 95).

B. Refer to the Standard Overhaul and Practices Manual (SOPM) for the standard practices shown in the repair.

C. Refer to REPAIR-GENERAL, Figure 601 for the standard true position dimensioning symbols shown in the repair.

D. Refer to the IPL Figure 1 for the item numbers.

2. Procedure

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

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
C00175	Primer - Urethane Compatible, Corrosion Resistant (Less Than 1% Aromatic Amines)	BMS10-79, Type III
C00700	Coating - Exterior Protective Enamel, Gray Gloss Enamel	BMS10-60, Type I, BAC 707

B. References

Reference	Title
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES

C. Beam Refinish

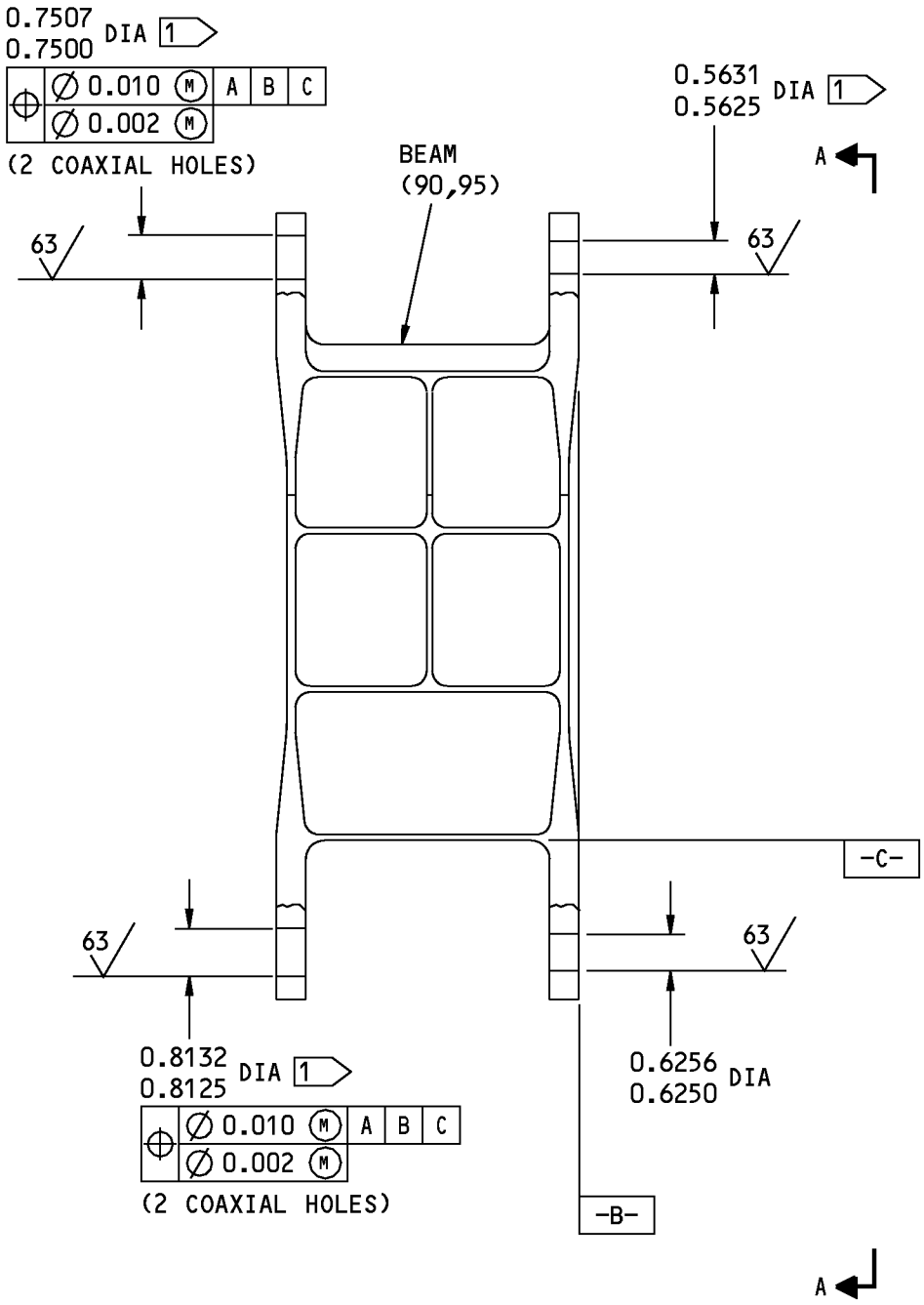
(1) Apply a boric acid anodize (F-17.31) to the beam (90, 95).

(2) Apply one layer of primer, C00175 (F-19.47) to the beam (90, 95).

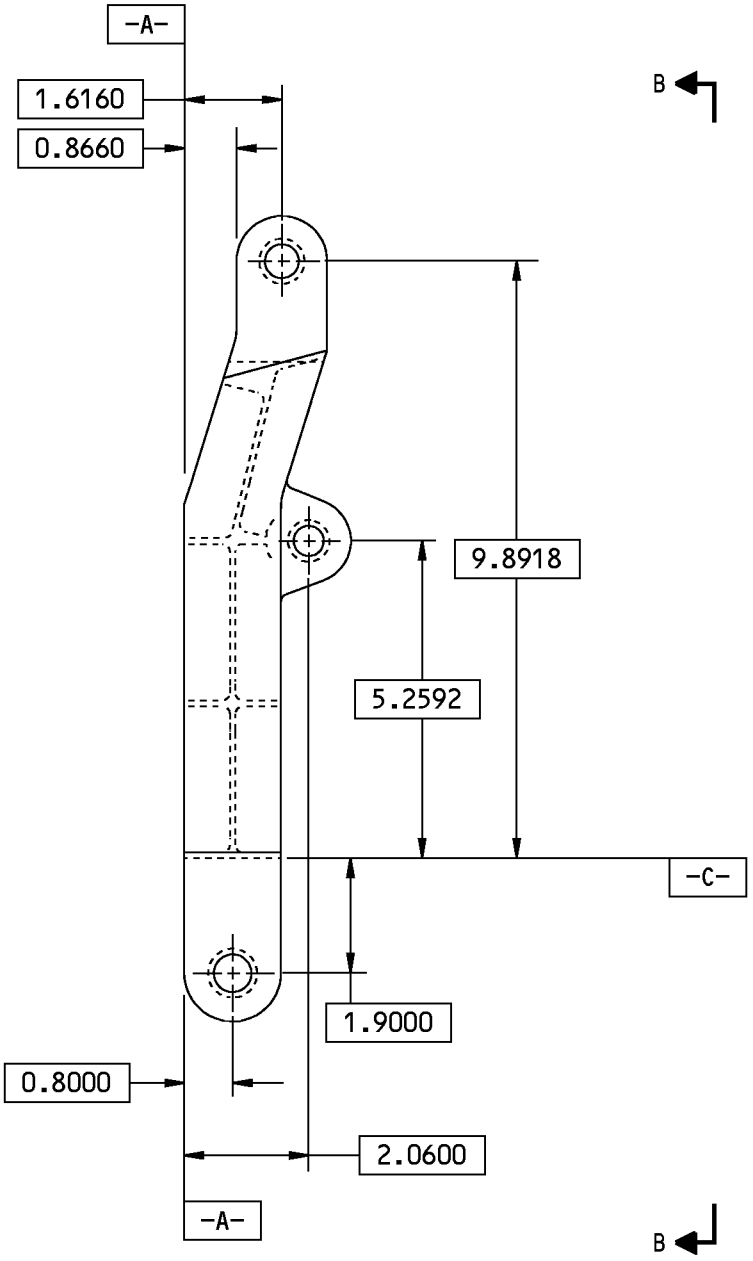
(a) Do not apply primer in the bushing holes, see REPAIR 2-2, Figure 601.

(3) Apply coating, C00700 (SRF-14.9813) to the beam (90, 95).

(a) Do not apply primer in the bushing holes, see REPAIR 2-2, Figure 601.

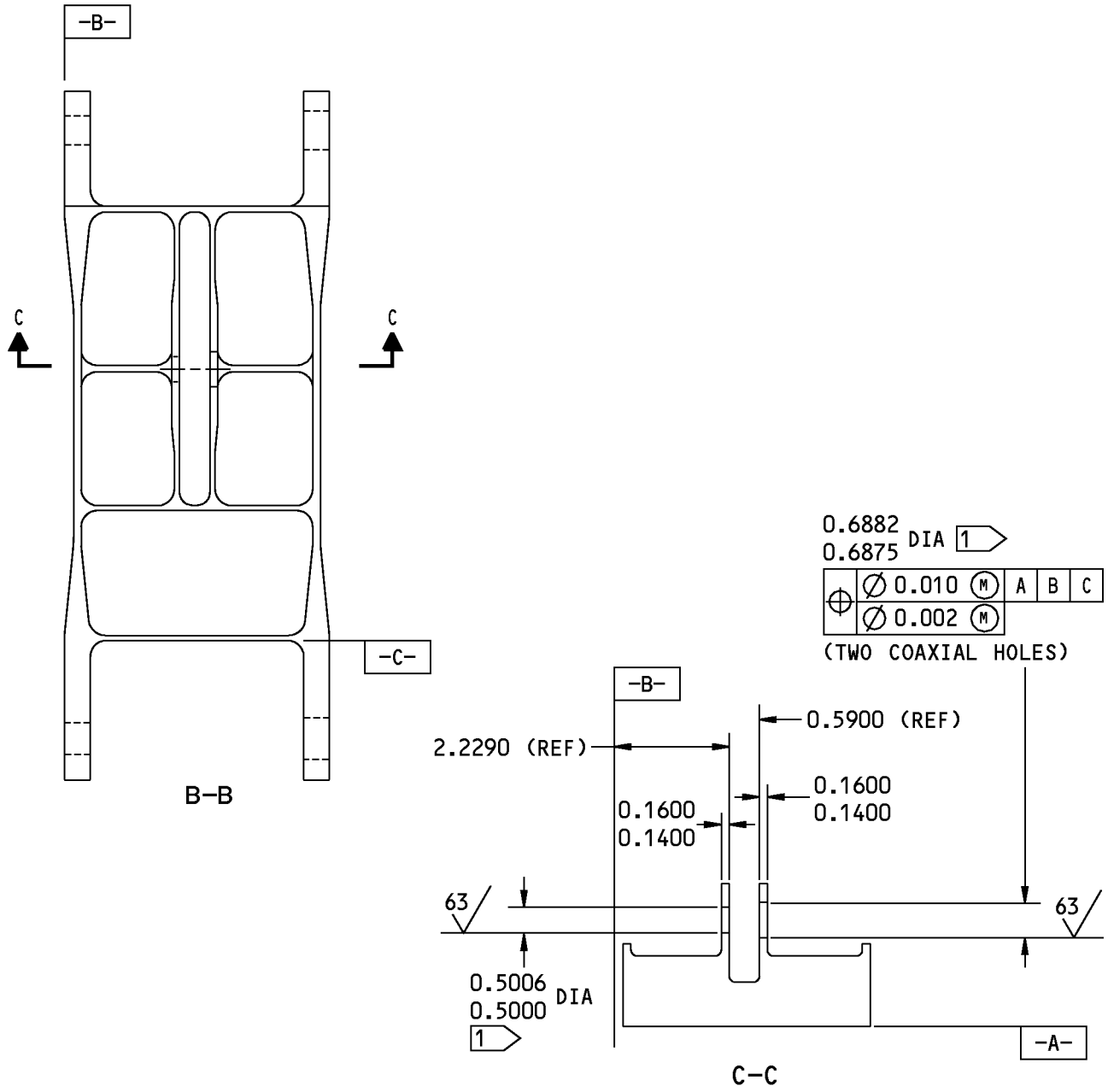


113A9104-3 Beam Repair and Refinish
Figure 601 (Sheet 1 of 3)



A–A

113A9104-3 Beam Repair and Refinish
Figure 601 (Sheet 2 of 3)



1 DO NOT APPLY PRIMER AND ENAMEL IN THE HOLE

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

113A9104-3 Beam Repair and Refinish
Figure 601 (Sheet 3 of 3)

LINK ASSEMBLY - REPAIR 3-1

113A9105–1, –5

1. General

A. This repair gives the data necessary to repair the link assembly (IPL Figure 2; 1A, 1B).

B. Refer to the Standard Overhaul and Practices Manual (SOPM) for the standard Practices shown in the repair.

C. Refer to REPAIR-GENERAL, Figure 601 for the standard true position dimensioning symbols shown in the repair.

D. Refer to IPL Figure 2 for the item numbers.

2. Bearing Replacement (113A9105-1)

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I

B. References

Reference	Title
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES
SOPM 20-50-02	INSTALLATION OF SAFETYING DEVICES
SOPM 20-50-03	BEARING AND BUSHING REPLACEMENT
SOPM 20-50-19	GENERAL SEALING
SOPM 20-60-04	MISCELLANEOUS MATERIALS

C. This procedure is for the Link Assembly (IPL Figure 2 ; 1A)

NOTE: For decoding table for Boeing finish codes, refer to SOPM 20-41-01. For miscellaneous materials, refer to SOPM 20-60-04.

(1) Remove the bolt (20), the washer (25), the shim (30), and the retainer (35) from the link (45).

(2) Remove the worn bearing (40) from the link (45).

(3) Install a new bearing (40) in the link (45) with sealant, A00247 as specified in the (SOPM 20-50-03).

(4) Apply a corrosion fay surface seal to the retainer (35) between the link (45), as shown in REPAIR 3-1, Figure 601, with sealant, A00247 as specified in the (SOPM 20-50-19).

(5) Assemble the bolt (20), the washers (25) and the retainer (35) on the link (45).

(a) If the gap between the retainer (35) and the link (45) is not more than 0.004 inch than do not install the shim (30), see REPAIR 3-1, Figure 601.

(b) If the gap between the retainer (35) and the link (45) is more than 0.004 inch, then peel the shim (30) until the gap is between 0.001- 0.004 inch.

1) Peel the shim (30) in increments of 0.003 inch.
2) Apply one layer of primer, C00259 (F-20.02) to all sides of the shim (30).
3) Apply a corrosion fay surface seal on both sides of the shim (30) withsealant, A00247 as specified in the (SOPM 20-50-19), see REPAIR 3-1, Figure 601.
4) Install the shim (30).

(6) Remove the bolts (20) and apply sealant, A00247 as specified in the (SOPM 20-50-19, method 2).

(7) Re-install the bolts (20).

(8) Torque the bolts (20) to 31-38 pound-inches.

(9) Install lockwire between the bolts (20) as specified in REPAIR 3-1, Figure 601 and as specified in the (SOPM 20-50-02, double-twist method).

3. Bearing Replacement (113A9105-5)

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I

B. References

Reference	Title
SOPM 20-50-02	INSTALLATION OF SAFETYING DEVICES
SOPM 20-50-03	BEARING AND BUSHING REPLACEMENT
SOPM 20-50-19	GENERAL SEALING
SOPM 20-50-20	HOW TO MAKE AND INSTALL RESIN BOND LAMINATED SHIMS AND SOLID FILLERS

C. This procedure is for the Link Assembly (IPL Figure 2 ; 1B).

(1) Remove the bolt (20), the washer (25), the shim (30), and the retainer (35) from the link (45A).

(2) Remove the worn bearing (40) from the link (45A).

(3) If necessary, remove the bushing (43) as specified in the (SOPM 20-50-03).

(4) If necessary, install a new bushing (43) in the link (45A) by the shrink-fit method with sealant, A00247 as specified in the (SOPM 20-50-03).

(a) Machine the bushing (43) inside diameter to the dimension specified in REPAIR 3-1, Figure 601.

(b) Break sharp edges.

(5) Install a new bearing (40) in the bushing (43) with sealant, A00247 as specified in the (SOPM 20-50-03) .

(6) Assemble the bolt (20), the washers (25) and the retainer (35) on the link (45A).

(a) If the gap between the retainer (35) and the link (45) is not more than 0.004 inch than do not install the shim (30), see REPAIR 3-1, Figure 601 .

(b) If the gap between the retainer (35) and the link (45A) is more than 0.004 inch, then peel the shim (30) until the gap is between 0.001- 0.004 inch as specified in the (SOPM 20-50-20) .

1) Peel the shim (30) in increments of 0.003 inch.

2) Apply one layer of primer, C00259 (F-20.02) to all sides of the shim (30).

3) Install the shim (30).

(7) Remove the bolts (20) and apply sealant, A00247 as specified in the (SOPM 20-50-19 , method 2).

(8) Re-install the bolts (20).

(9) Torque the bolts (20) to 31-38 pound-inches.

(10) Install lockwire between the bolts (20) as specified in REPAIR 3-1, Figure 601 and as specified in the (SOPM 20-50-02 , double-twist method).

4. Bushing Replacement

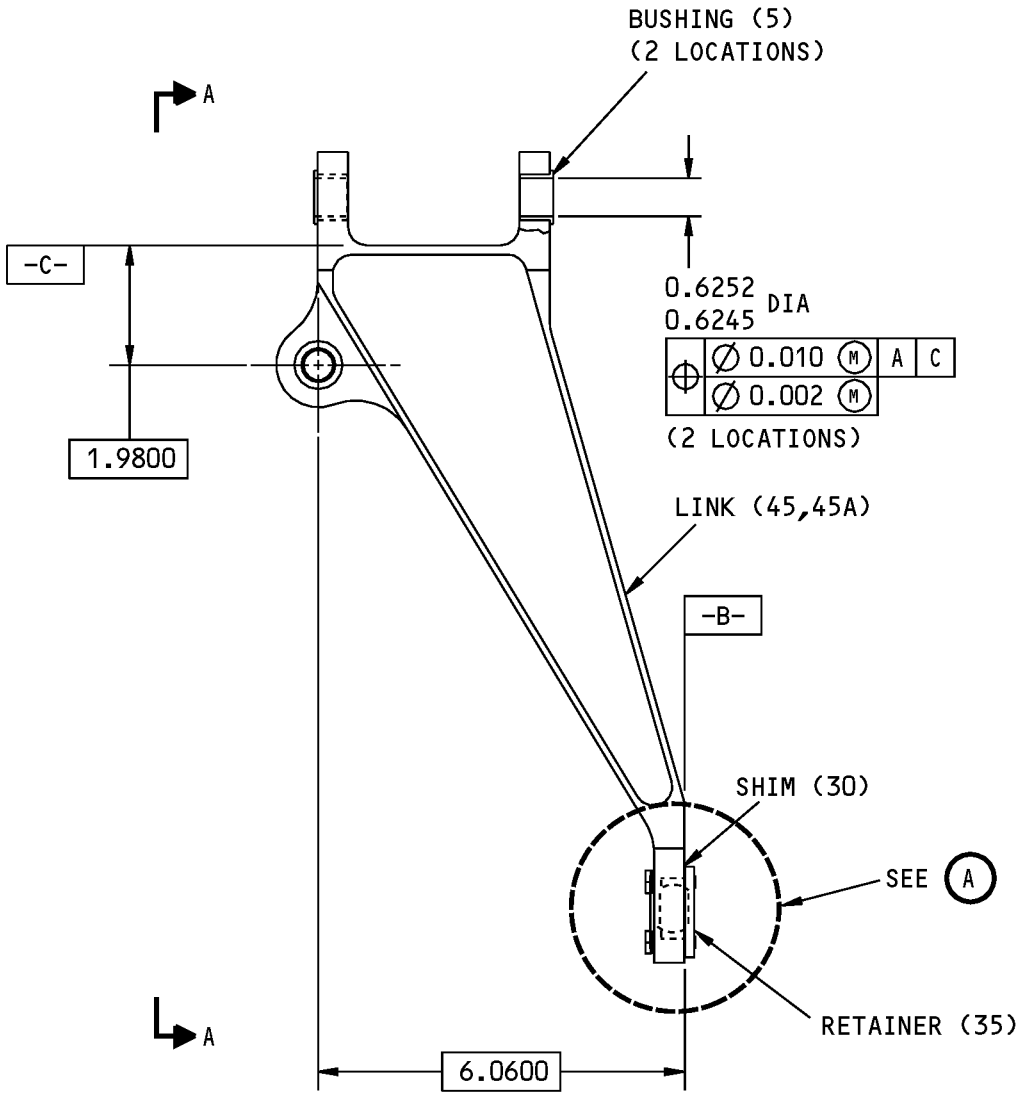
A. Procedure

(1) Remove the bushing (5, 10, 15) from the link (45, 45A) as specified in the (SOPM 20-50-03).

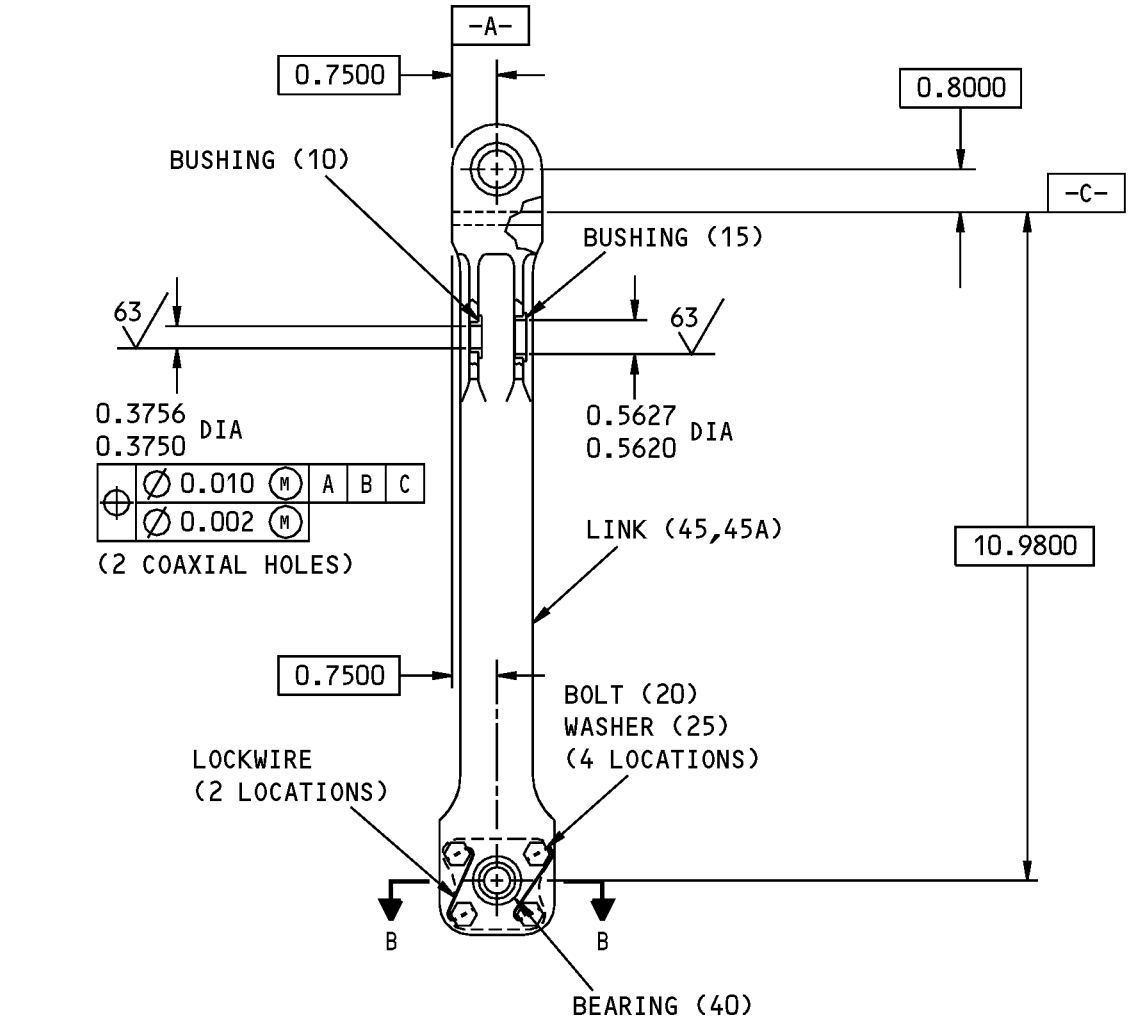
(2) Install the new bushing (5, 10, 15) in the link (45, 45A) by the shrink fit method as specified in the (SOPM 20-50-03).

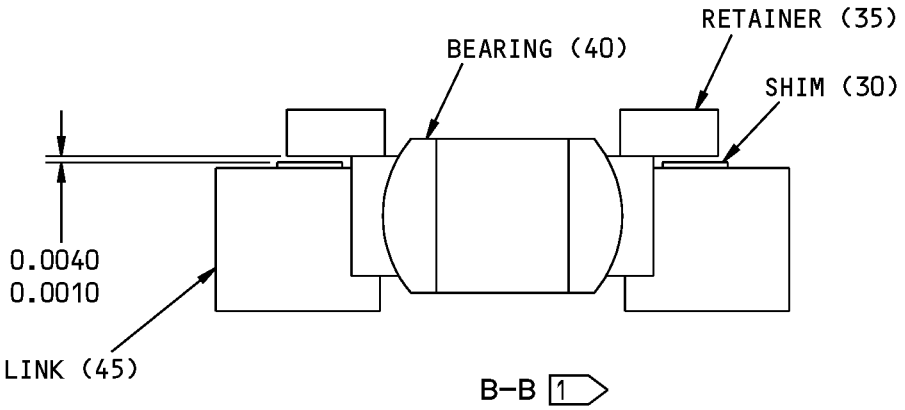
(3) Machine the bushing (5, 10, 15) to the diameter specified in REPAIR 3-1, Figure 601.

(4) Break the sharp edges.

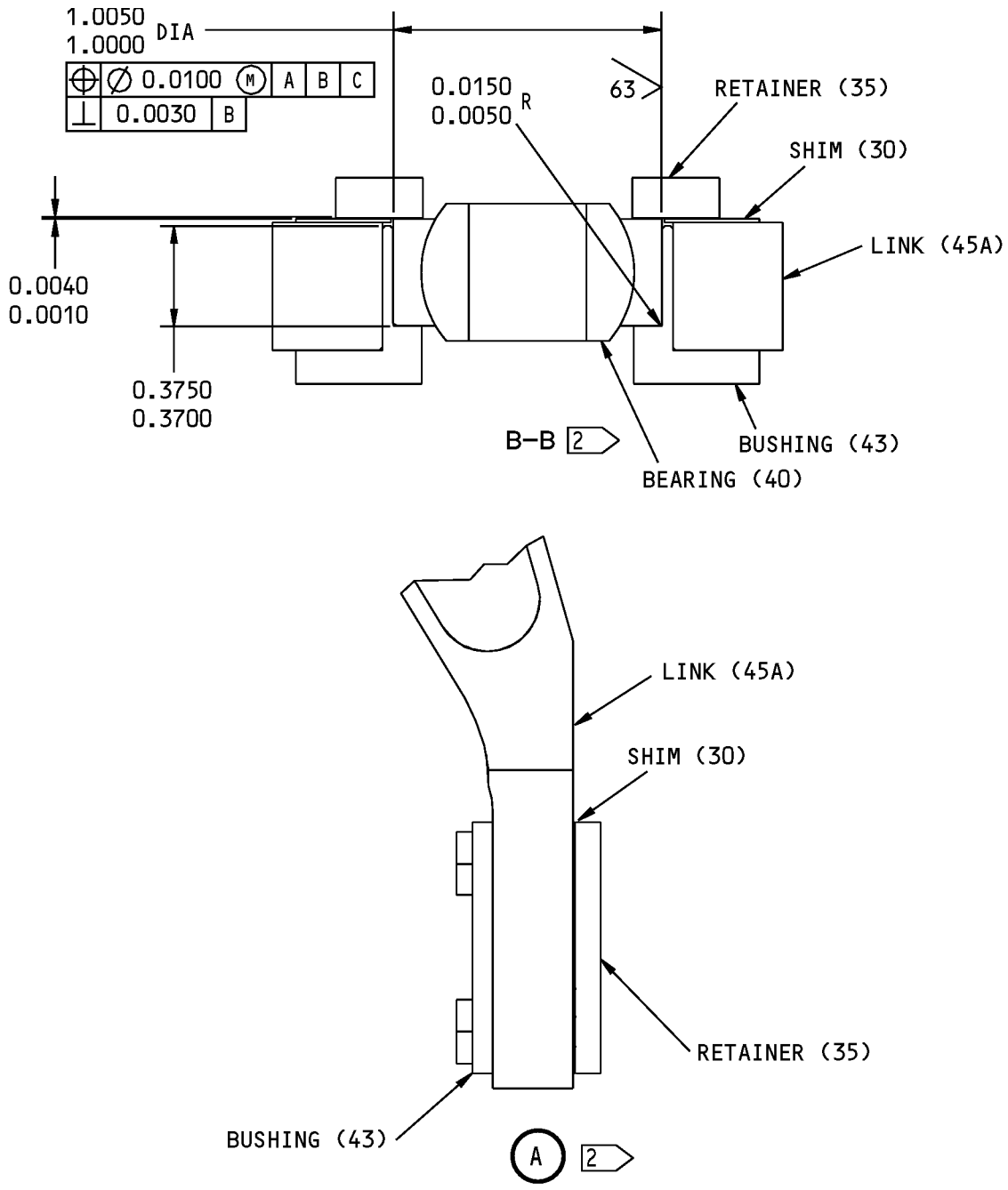


113A9105-1,-5 Adjust Link Assembly Bushing and Bearing Replacement
Figure 601 (Sheet 1 of 3)





113A9105-1,-5 Adjust Link Assembly Bushing and Bearing Replacement
Figure 601 (Sheet 2 of 3)



1 113A9105-1 ASSEMBLY

2 113A9105-5 ASSEMBLY

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

ITEM NUMBERS REFER TO IPL FIG. 2

ALL DIMENSIONS ARE IN INCHES

113A9105-1,-5 Adjust Link Assembly Bushing and Bearing Replacement
Figure 601 (Sheet 3 of 3)

LINK - REPAIR 3-2

113A9105–3, –7

1. General

A. This repair gives the data necessary to refinish the link (IPL Figure 2; 45, 45A).

B. Refer to the Standard Overhaul and Practices Manual (SOPM) for the standard practices shown in the repair.

C. Refer to REPAIR-GENERAL, Figure 601 for the standard true position dimensioning symbols shown in the repair.

D. Refer to IPL Figure 2 for the item numbers.

2. Procedure

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

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
C00175	Primer - Urethane Compatible, Corrosion Resistant (Less Than 1% Aromatic Amines)	BMS10-79, Type III
C00700	Coating - Exterior Protective Enamel, Gray Gloss Enamel	BMS10-60, Type I, BAC 707

B. References

Reference	Title
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES

C. Link Refinish

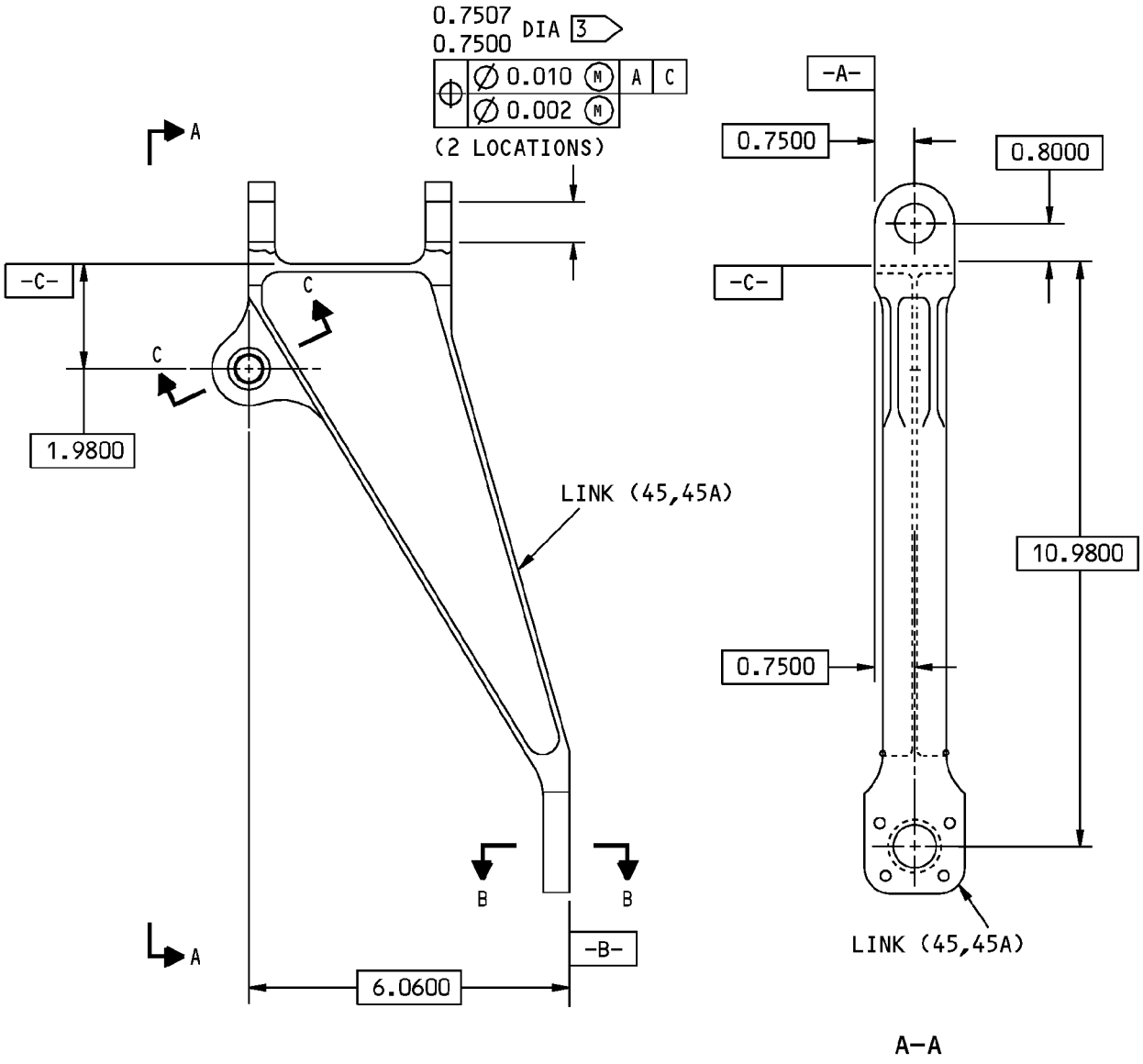
(1) Apply a boric acid anodize (F-17.31) to the link (45, 45A).

(2) Apply one layer of primer, C00175 (F-19.47) to the link (45, 45A).

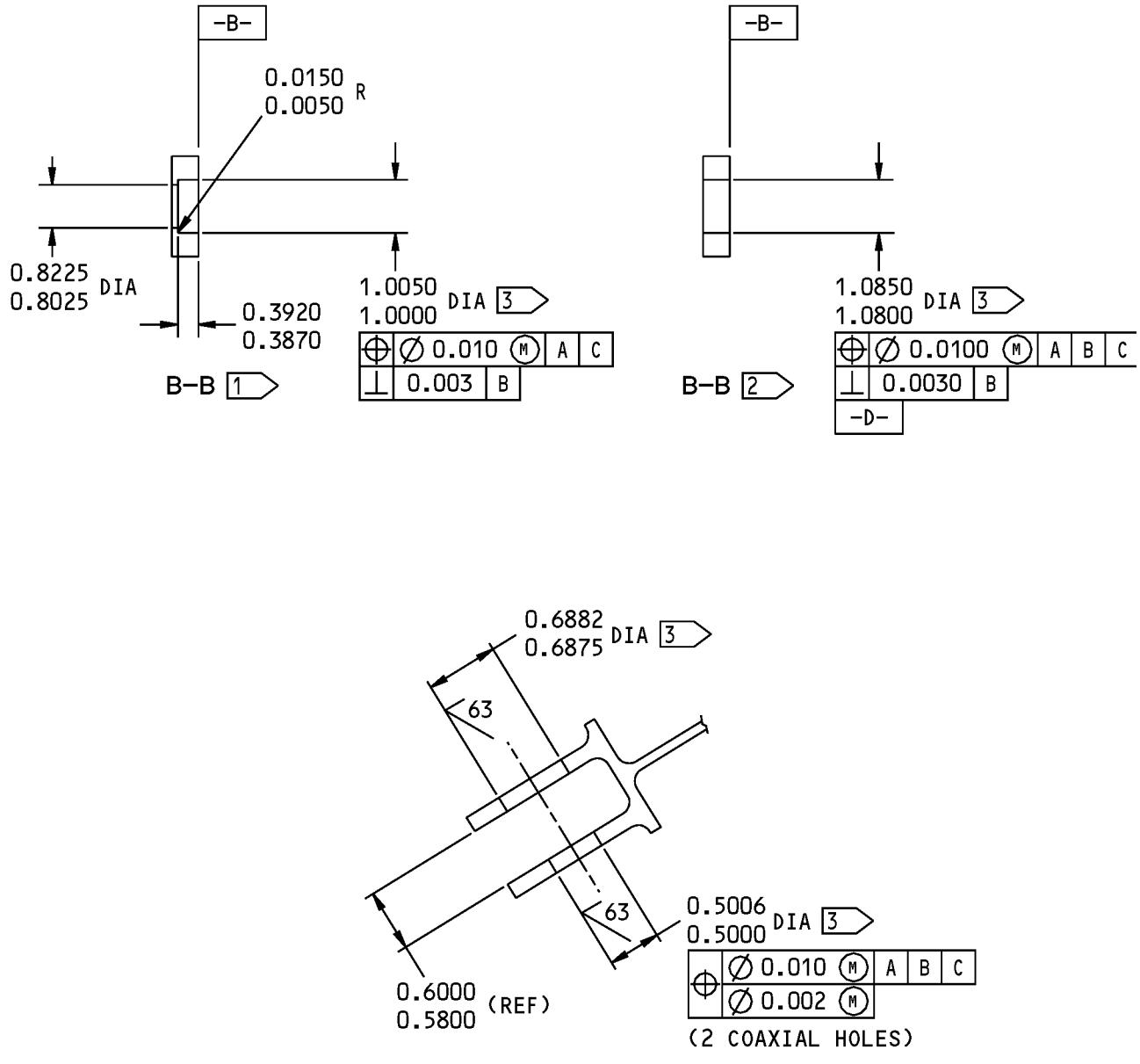
(a) Do not apply primer in the bushing holes, see REPAIR 3-2, Figure 601 .

(3) Apply coating, C00700l (SRF-14.9813) to the link (45, 45A).

(a) Do not apply primer in the bushing holes, see REPAIR 3-2, Figure 601 .



113A9105-3,-7 Link Repair and Refinish
Figure 601 (Sheet 1 of 2)



1 > 113A9105-3

2 > 113A9105-7

3 > DO NOT APPLY PRIMER OR ENAMEL IN THE HOLE

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

ITEM NUMBERS REFER TO IPL FIG. 2

ALL DIMENSIONS ARE IN INCHES

113A9105-3,-7 Link Repair and Refinish
Figure 601 (Sheet 2 of 2)

ROD ASSEMBLY - REPAIR 4-1

113A9106–1, -4

1. General

A. This repair gives the data necessary to repair the rod assembly (IPL Figure 3; 1A, 1B).

B. Refer to IPL Figure 3 for the item numbers.

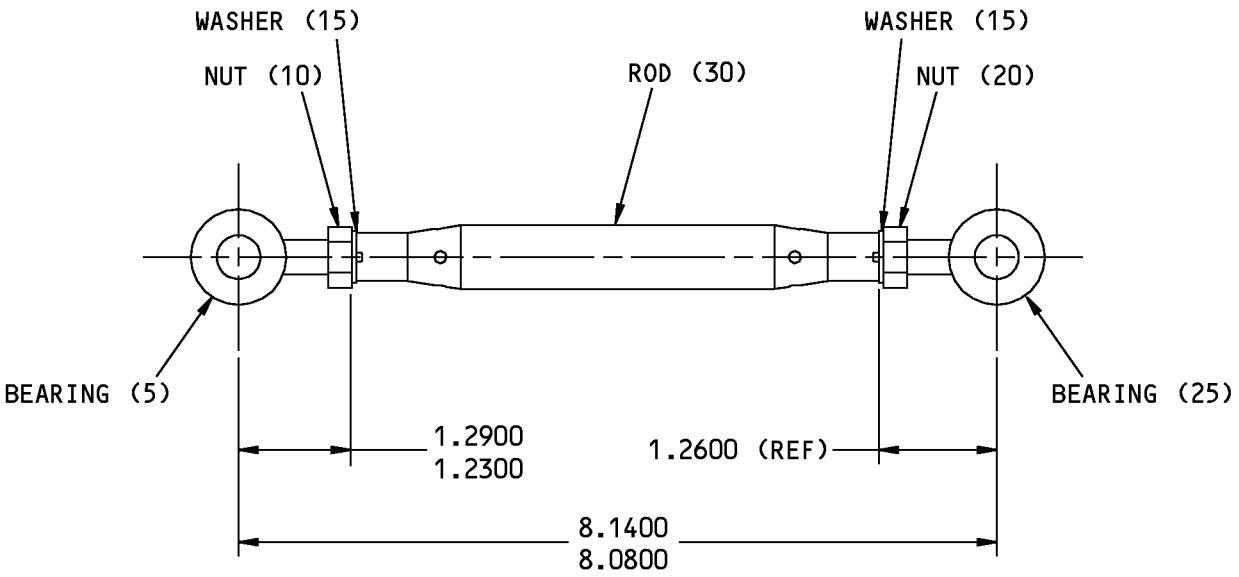
2. Procedure

A. Rod End Bearing Replacement

(1) Loosen the nut (10, 10A, 20, 20A) and remove the worn rod end bearing (5, 25) from the rod (30).

(2) Install the washer (15, 15A), the nut (10, 10A, 20, 20A) and the new rod end bearing (5, 25) on the rod (30) to the dimensions and orientation as shown in REPAIR 4-1, Figure 601 .

(3) Tighten the nut (10, 10A, 20, 20A) by hand.



125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

ITEM NUMBERS REFER TO IPL FIG. 3

ALL DIMENSIONS ARE IN INCHES

113A9106-1 Drive Rod Assembly Rod End Bearing Replacement
Figure 601

ROD - REPAIR 4-2

113A9106–3

1. General

A. This repair gives the data necessary to refinish the rod (IPL Figure 3; 30).

B. Refer to the IPL Figure 3 for the item numbers.

2. Procedure

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

A. References

Reference	Title
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES

B. Rod Refinish

(1) Passivate (F-17.25) the rod (30) all over.

BEAM ASSEMBLY - REPAIR 5-1

113A9204–1, –2

1. General

A. This repair gives the data necessary to repair the beam assembly (IPL Figure 4; 1A, 1B).

B. Refer to the Standard Overhaul and Practices Manual (SOPM) for the standard Practices shown in the repair.

C. Refer to REPAIR-GENERAL, Figure 601 for the standard true position dimensioning symbols shown in the repair.

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

2. Procedure

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

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95

B. References

Reference	Title
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES
SOPM 20-50-19	GENERAL SEALING
SOPM 20-50-20	HOW TO MAKE AND INSTALL RESIN BOND LAMINATED SHIMS AND SOLID FILLERS

C. Fitting Replacement

(1) Remove the bolt (5), the collar (10), the shim (15), and the beam assembly (25, 25A) from the fitting assembly (20).

(2) Locate the fitting assembly (20) in the beam assembly (25, 25A) as specified in REPAIR 5-1, Figure 601.

(a) Install shim (15) if any gap is more than 0.008 inch as specified in the (SOPM 20-50-20, type 1).

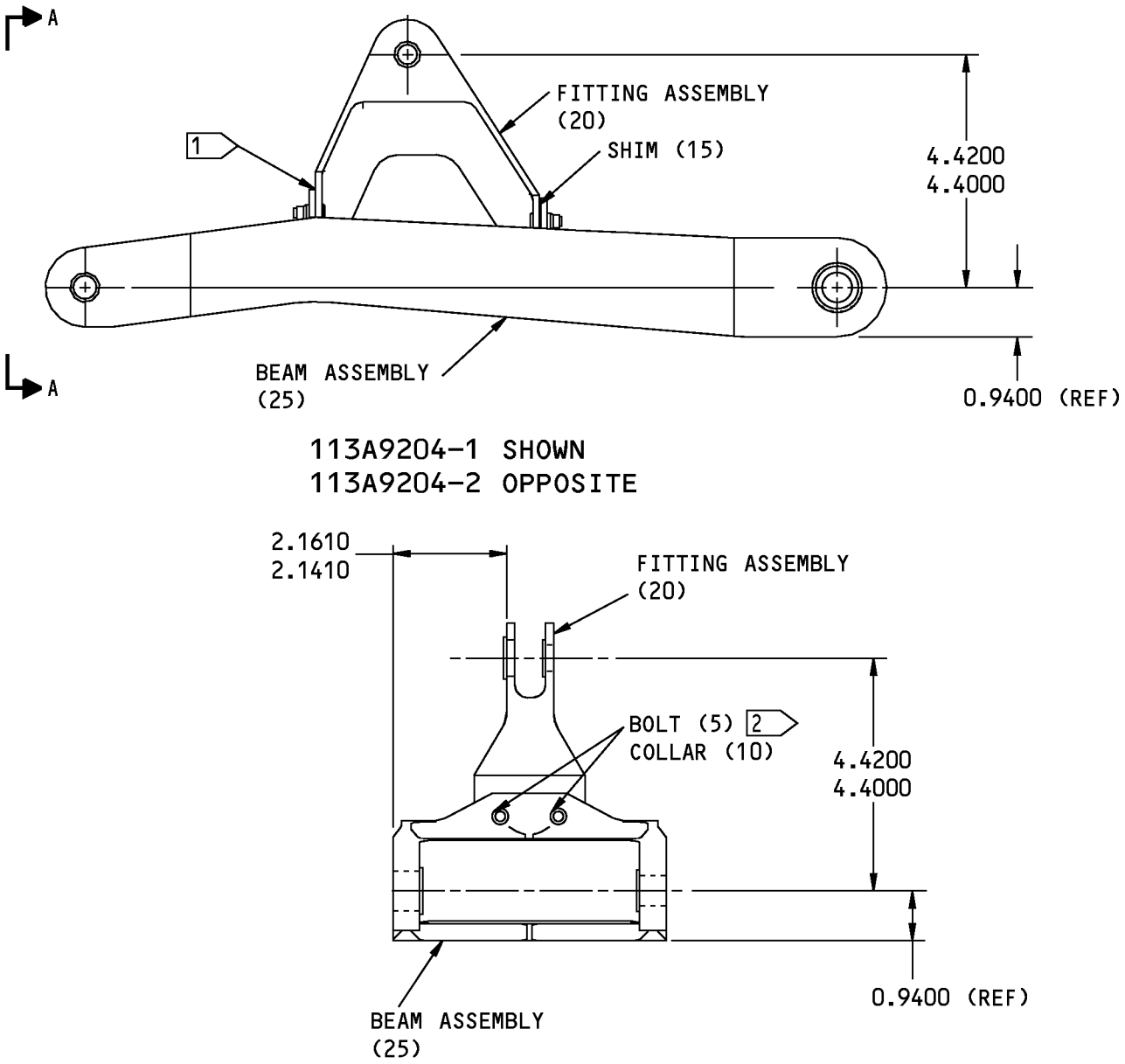
(b) The maximum gap with the shim (15) is 0.002 inch.

(c) Apply a fay surface seal to both sides of the shim (15) with sealant, A00247 as specified in the (SOPM 20-50-19) .

(3) Apply a fay surface seal between the fitting assembly (20) and the beam assembly (25, 25A) with sealant, A00247 as specified in the (SOPM 20-50-19) .

(4) Apply sealant, A00247 to the bolts (5) (F-19.48).

(5) Install the bolt (5) and collar (10).



1 APPLY FAY SURFACE SEAL BETWEEN THE FITTING AND THE BEAM WITH BMS 5-95 SEALANT

2 APPLY BMS 5-95 SEALANT (F-19.47) TO THE BOLT

ITEM NUMBERS REFER TO IPL FIG. 4

ALL DIMENSIONS ARE IN INCHES

113A9204-1,-2 Attach Beam Assembly Fitting Assembly Replacement
Figure 601

BEAM ASSEMBLY - REPAIR 5-2

113A9216–1, –2

1. General

A. This repair gives the data that is necessary to repair the beam assembly (IPL Figure 4; 25, 25A).

B. Refer to the Standard Overhaul and Practices Manual (SOPM) for the standard practices shown in the repair.

C. Refer to REPAIR-GENERAL, Figure 601 for the standard true position dimensioning symbols shown in the repair.

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

2. Bushing Replacement

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95

B. References

Reference	Title
SOPM 20-50-03	BEARING AND BUSHING REPLACEMENT
SOPM 20-60-04	MISCELLANEOUS MATERIALS

C. Procedure

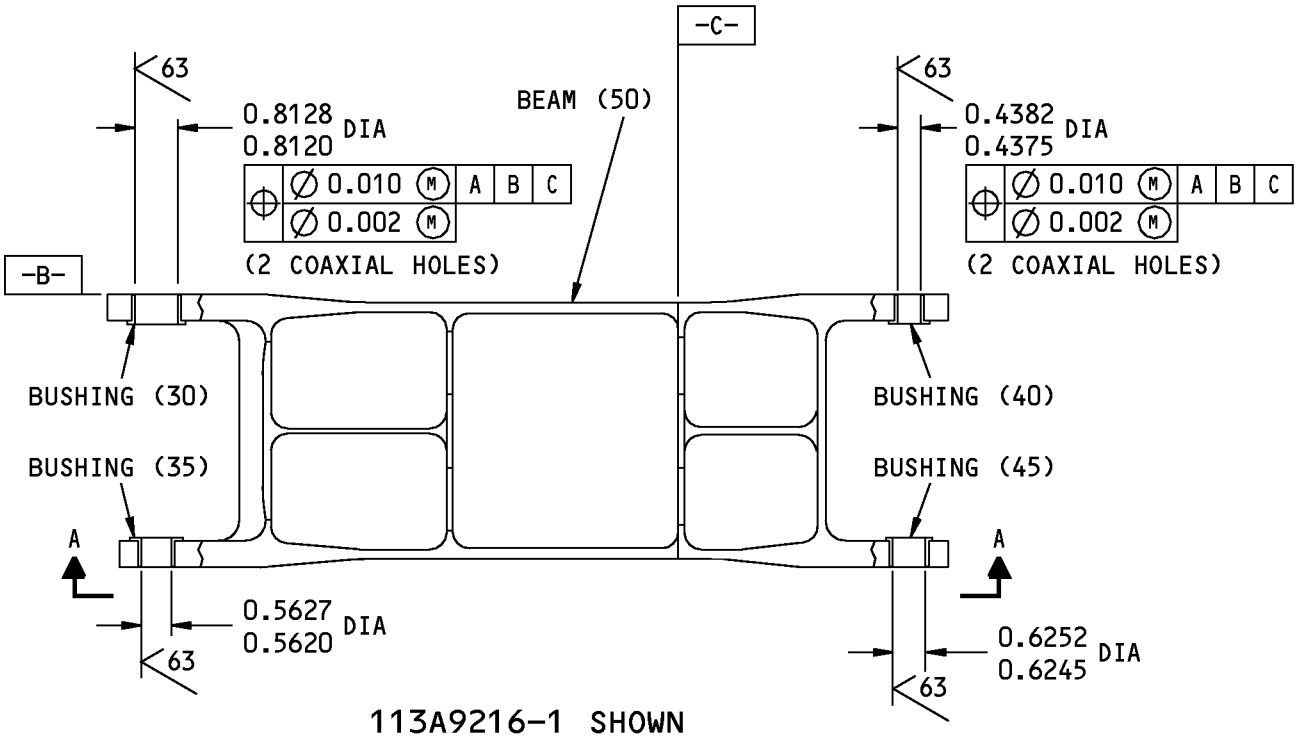
NOTE: For Bearing and Bushing replacement, refer to (SOPM 20-50-03). For Miscellaneous Materials, refer to (SOPM 20-60-04).

(1) Remove the bushing (30, 35, 40, 45) from the beam (50, 50A) as specified in the (SOPM 20-50-03).

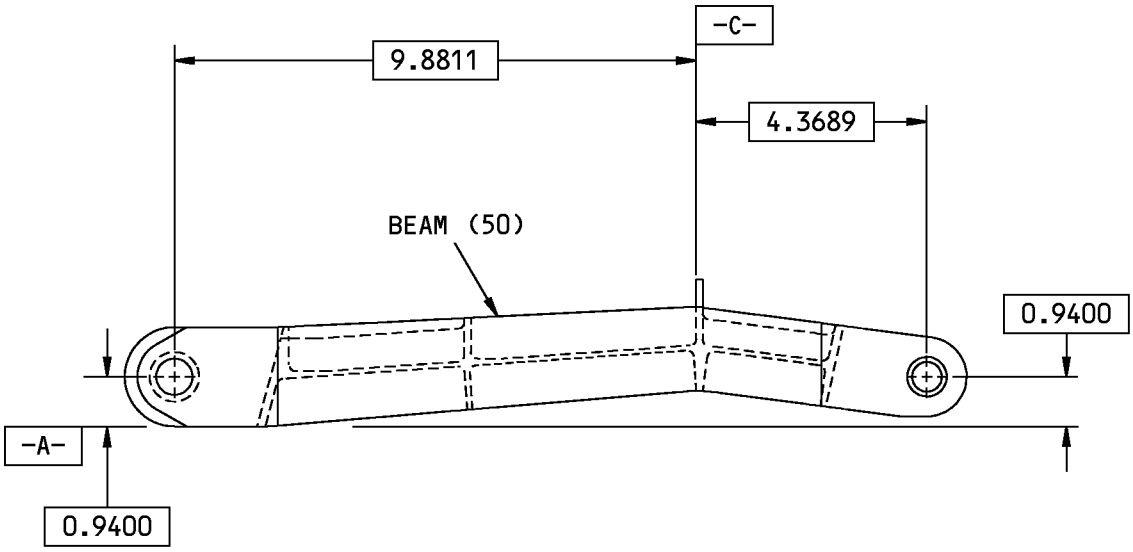
(2) Install the new bushing (30, 35, 40, 45) in the beam (50, 50A) by the shrink-fit method with sealant, A00247 as specified in the (SOPM 20-50-03).

(3) Machine the bushing (30, 35, 40, 45) to the diameter specified in REPAIR 5-2, Figure 601.

(4) Break the sharp edges.



113A9216-1 SHOWN
113A9216-2 OPPOSITE



A-A

ITEM NUMBERS REFER TO IPL FIG. 4

ALL DIMENSIONS ARE IN INCHES

113A9216-1,-2 Attach Beam Assembly Bushing Replacement
Figure 601

BEAM - REPAIR 5-3

113A9216–3, –4

1. General

A. This repair gives the data that is necessary to refinish the beam (IPL Figure 4; 50, 50A).

B. Refer to the Standard Overhaul and Practices Manual (SOPM) for the standard practices shown in the repair.

C. Refer to the REPAIR-GENERAL (57-26-47/601) for the standard true position dimensioning symbols shown in the repair.

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

2. Procedure

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

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
C00175	Primer - Urethane Compatible, Corrosion Resistant (Less Than 1% Aromatic Amines)	BMS10-79, Type III
C00700	Coating - Exterior Protective Enamel, Gray Gloss Enamel	BMS10-60, Type I, BAC 707

B. References

Reference	Title
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES

C. Beam Refinish

(1) Apply a boric acid anodize (F-17.31) to the beam (50, 50A).

(2) Apply one layer of primer, C00175 (F-19.47) to the beam (50, 50A).

(a) Do not apply primer in the bushing holes, see REPAIR 5-2, Figure 601.

(3) Apply coating, C00700 (SRF-14.9813) to the beam (50, 50A).

(a) Do not apply primer in the bushing holes, see REPAIR 5-2, Figure 601.

FITTING ASSEMBLY - REPAIR 5-4

113A9217–1

1. General

A. This repair gives the data that is necessary to repair the fitting assembly (IPL Figure 4; 20).

B. Refer to the Standard Overhaul and Practices Manual (SOPM) for the standard practices shown in the repair.

C. Refer to the REPAIR-GENERAL (57-26-47/601) for the standard true position dimensioning symbols shown in the repair.

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

2. Procedure

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95

B. References

Reference	Title
SOPM 20-50-03	BEARING AND BUSHING REPLACEMENT

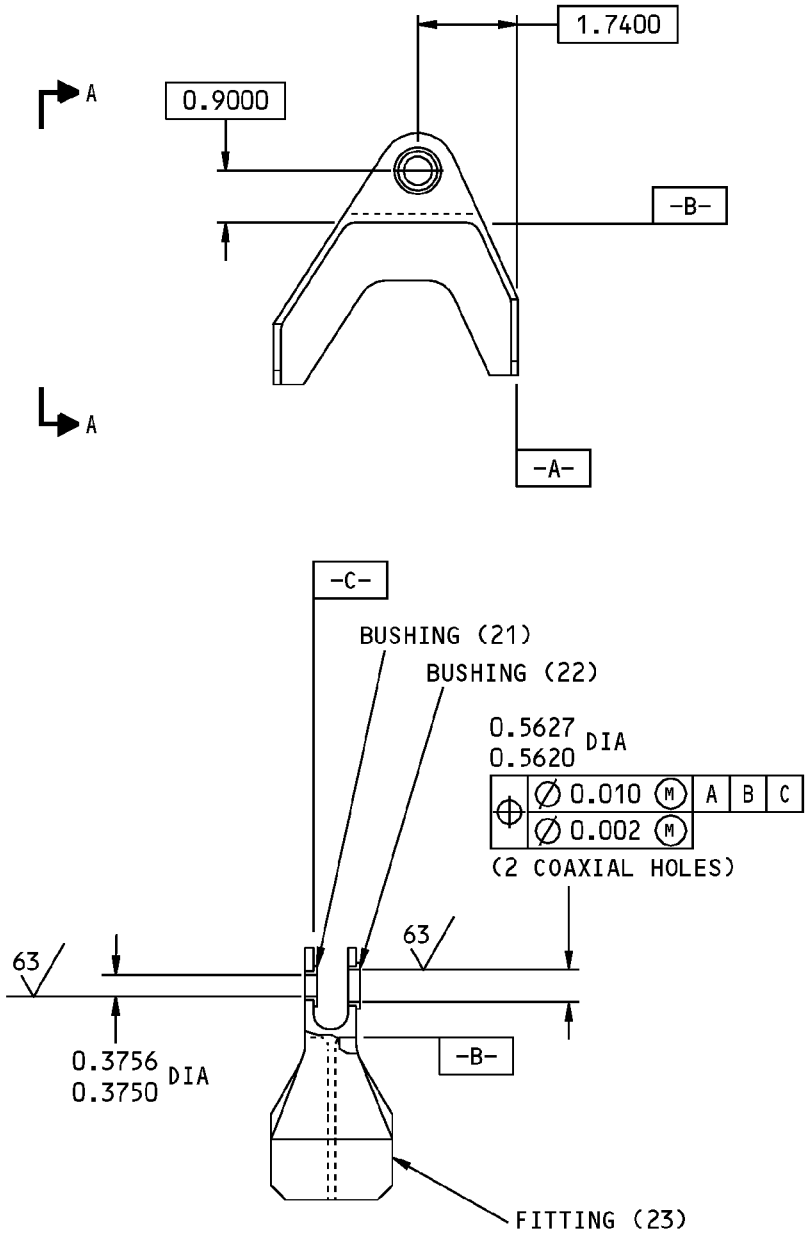
C. Bushing Replacement

(1) Remove the bushing (21, 22) from the fitting (23) as specified in the (SOPM 20-50-03).

(2) Install the new bushing (21, 22) in the fitting (23) by the shrink-fit method with sealant, A00247 as specified in the (SOPM 20-50-03).

(3) Machine the bushing (21, 22) to the diameter specified in REPAIR 5-4, Figure 601.

(4) Break the sharp edges.



A-A

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

ITEM NUMBERS REFER TO IPL FIG. 4

ALL DIMENSIONS ARE IN INCHES

113A9217-1 Fitting Assembly Bushing Replacement
Figure 601

FITTING - REPAIR 5-5

113A9217–3

1. General

A. This repair gives the data that is necessary to refinish the fitting (IPL Figure 4; 23).

B. Refer to the Standard Overhaul and Practices Manual (SOPM) for the standard practices shown in the repair.

C. Refer to the REPAIR-GENERAL (57-26-47/601) for the standard true position dimensioning symbols shown in the repair.

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

2. Procedure

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

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
C00175	Primer - Urethane Compatible, Corrosion Resistant (Less Than 1% Aromatic Amines)	BMS10-79, Type III
C00700	Coating - Exterior Protective Enamel, Gray Gloss Enamel	BMS10-60, Type I, BAC 707

B. References

Reference	Title
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES

C. Beam Refinish

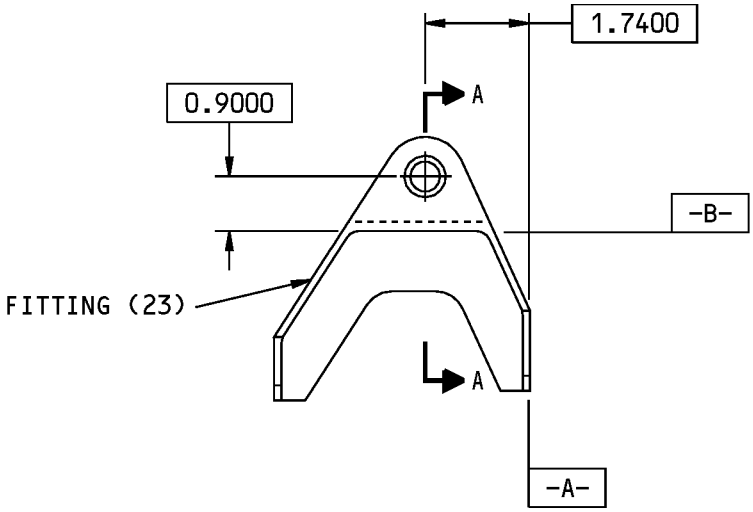
(1) Apply a boric acid anodize (F-17.31) to the fitting (23).

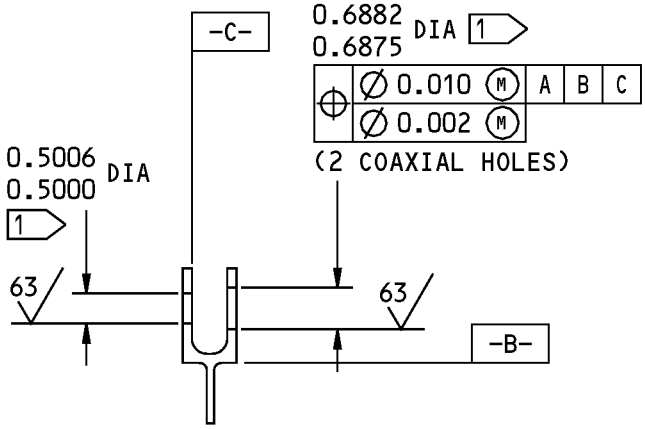
(2) Apply one layer of primer, C00175 (F-19.47) to the fitting (23).

(a) Do not apply primer in the bushing holes, see REPAIR 5-5, Figure 601.

(3) Apply coating, C00700 (SRF-14.9813) to the fitting (23).

(a) Do not apply primer in the bushing holes, see REPAIR 5-5, Figure 601.





A-A

1 DO NOT APPLY PRIMER OR ENAMEL IN THE HOLE

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

ITEM NUMBERS REFER TO IPL FIG. 4

ALL DIMENSIONS ARE IN INCHES

113A9217-3 Fitting Repair and Refinish
Figure 601

LINK ASSEMBLY - REPAIR 6-1

113A9205–1, –5

1. General

A. This repair gives the data necessary to repair the link assembly (IPL Figure 5; 1A, 1B).

B. Refer to the Standard Overhaul and Practices Manual (SOPM) for the standard Practices shown in the repair.

C. Refer to REPAIR-GENERAL, Figure 601 for the standard true position dimensioning symbols shown in the repair.

D. Refer to the IPL Figure 5 for the item numbers.

2. Bearing Replacement (113A9205-1)

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I

B. References

Reference	Title
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES
SOPM 20-50-02	INSTALLATION OF SAFETYING DEVICES
SOPM 20-50-03	BEARING AND BUSHING REPLACEMENT
SOPM 20-50-19	GENERAL SEALING
SOPM 20-60-04	MISCELLANEOUS MATERIALS

C. This procedure is for the Link Assembly (IPL Figure 5 ; 1A).

NOTE: For decoding table for Boeing finish codes, refer to SOPM 20-41-01. For installation of safety devices, refer to SOPM 20-50-02. For miscellaneous materials, refer to SOPM 20-60-04.

(1) Remove the bolt (20), the washer (25), the shim (30), and the retainer (35) from the link (45) as specified in the (SOPM 20-50-03).

(2) Remove the worn bearing (40) from the link (45).

(3) Install a new bearing (40) in the link (45) with sealant, A00247 as specified in the (SOPM 20-50-03).

(4) Apply a corrosion fay surface seal to the retainer (35) between the link (45), as shown in REPAIR 6-1, Figure 601, with sealant, A00247 as specified in the (SOPM 20-50-19).

(5) Assemble the bolt (20), the washers (25) and the retainer (35) on the link (45).

(a) If the gap between the retainer (35) and the link (45) is not more than 0.004 inch than do not install the shim (30), see REPAIR 6-1, Figure 601.

(b) If the gap between the retainer (35) and the link (45) is more than 0.004 inch, then peel the shim (30) until the gap is between 0.001-0.004 inch.

1) Peel the shim (30) in increments of 0.003 inch.

2) Apply one layer of primer, C00259 (F-20.02) to all sides of the shim (30).

3) Apply a corrosion fay surface seal on both sides of the shim (30) with sealant, A00247 as specified in the (SOPM 20-50-19), see REPAIR 6-1, Figure 601

4) Install the shim (30).

(6) Remove the bolts (20) and apply sealant, A00247 as specified in the (SOPM 20-50-19, method 2).

(7) Re-install the bolts (20).

(8) Torque the bolts (20) to 31-38 pound-inches.

(9) Install lockwire between the bolts (20) as specified in torque table REPAIR 6-1, Figure 601 and as specified in the (SOPM 20-50-02, double-twist method).

3. Bearing Replacement (113A9205-5)

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I

B. References

Reference	Title
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES
SOPM 20-50-02	INSTALLATION OF SAFETYING DEVICES
SOPM 20-50-03	BEARING AND BUSHING REPLACEMENT
SOPM 20-50-19	GENERAL SEALING
SOPM 20-50-20	HOW TO MAKE AND INSTALL RESIN BOND LAMINATED SHIMS AND SOLID FILLERS
SOPM 20-60-04	MISCELLANEOUS MATERIALS

C. This procedure is for the Link Assembly (IPL Figure 5 ; 1B).

NOTE: For the decoding table for Boeing finish codes, refer to SOPM 20-41-01. For miscellaneous materials, refer to SOPM 20-60-04.

(1) Remove the bolt (20A), the washer (25), the shim (30), and the retainer (35) from the link (45A).

(2) Remove the worn bearing (40) from the link (45A).

(3) If necessary, remove the bushing (43) as specified in the (SOPM 20-50-03) .

(4) If necessary, install a new bushing (43) in the link (45A) by the shrink-fit method with sealant, A00247 as specified in the (SOPM 20-50-03).

(a) Machine the bushing (43) inside diameter to the dimension specified in REPAIR 6-1, Figure 601.

(b) Break sharp edges.

(5) Install a new bearing (40) in the bushing (43) with sealant, A00247 as specified in the (SOPM 20-50-03).

(6) Assemble the bolt (20A), the washers (25) and the retainer (35) on the link (45A).

(a) If the gap between the retainer (35) and the link (45A) is not more than 0.004 inch than do not install the shim (30), see REPAIR 6-1, Figure 601.

(b) If the gap between the retainer (35) and the link (45A) is more than 0.004 inch then peel the shim (30) until the gap is between 0.001-0.004 inch as specified in the (SOPM 20-50-20).

1) Peel the shim (30) in increments of 0.003 inch.

2) Apply one layer of primer, C00259 (F-20.02) to all sides of the shim (30).

3) Install the shim (30).

(7) Remove the bolts (20A) and apply sealant, A00247 as specified in the (SOPM 20-50-19, method 2).

(8) Re-install the bolts (20A).

(9) Torque the bolts (20A) to 31-38 pound-inches.

(10) Install lockwire between the bolts (20A) as specified in REPAIR 6-1, Figure 601 and torque table as specified in the (SOPM 20-50-02 , double-twist method).

4. Bushing Replacement

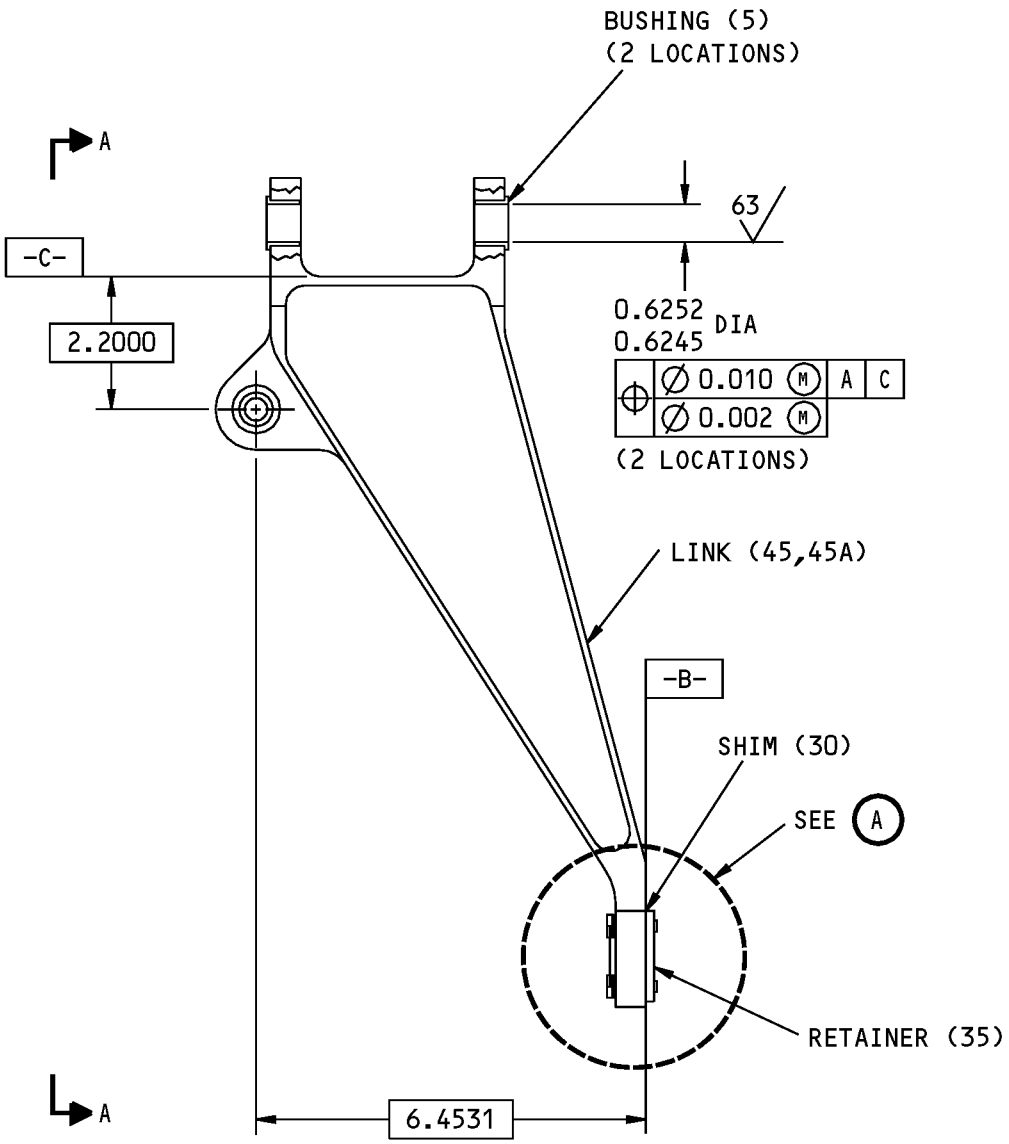
A. Procedure

(1) Remove the bushing (5, 10, 15) from the link (45, 45A) as specified in the (SOPM 20-50-03).

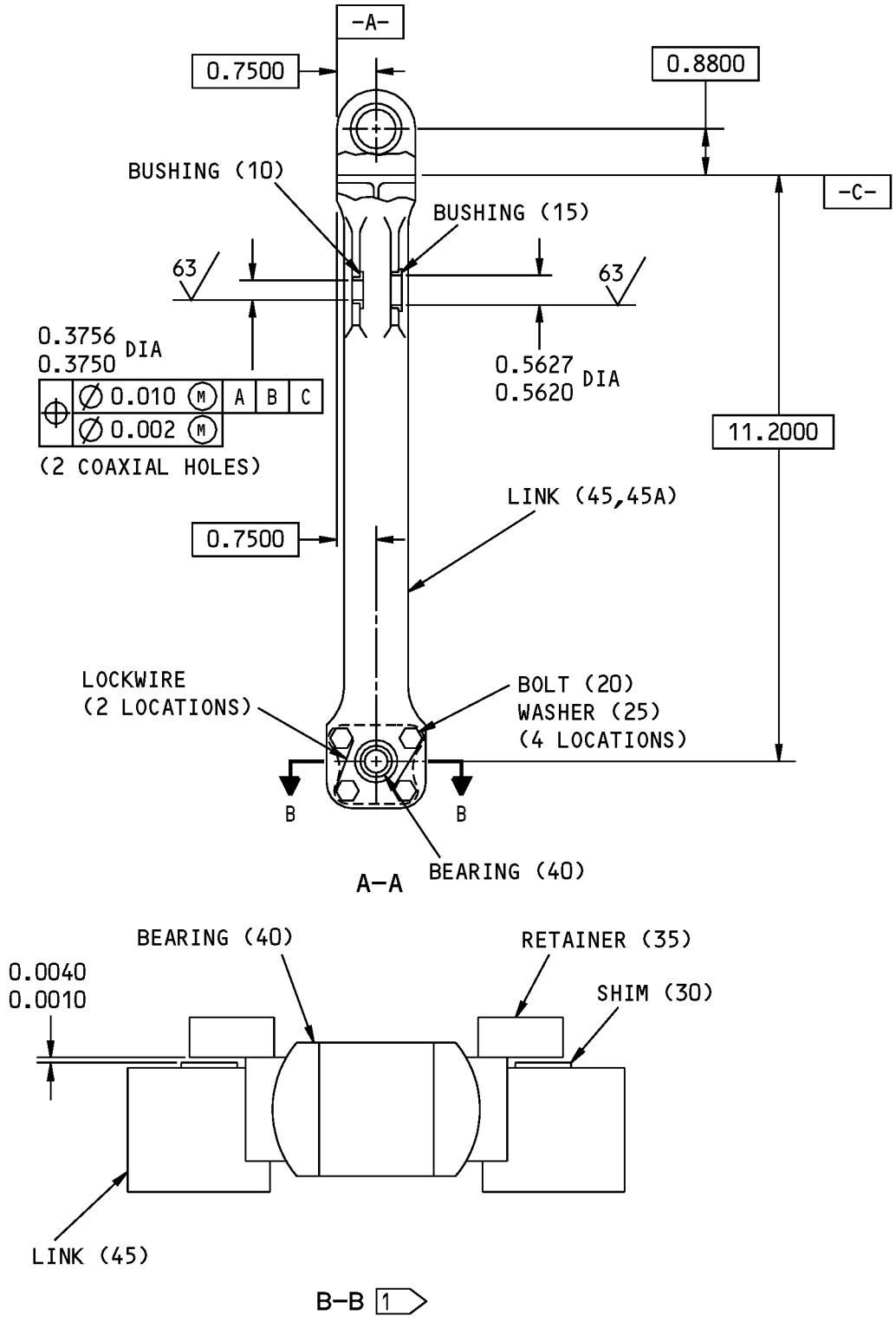
(2) Install the new bushing (5, 10, 15) in the link (45, 45A) by the shrink-fit method as specified in the (SOPM 20-50-03).

(3) Machine the bushing (5, 10, 15) to the diameter specified in REPAIR 6-1, Figure 601.

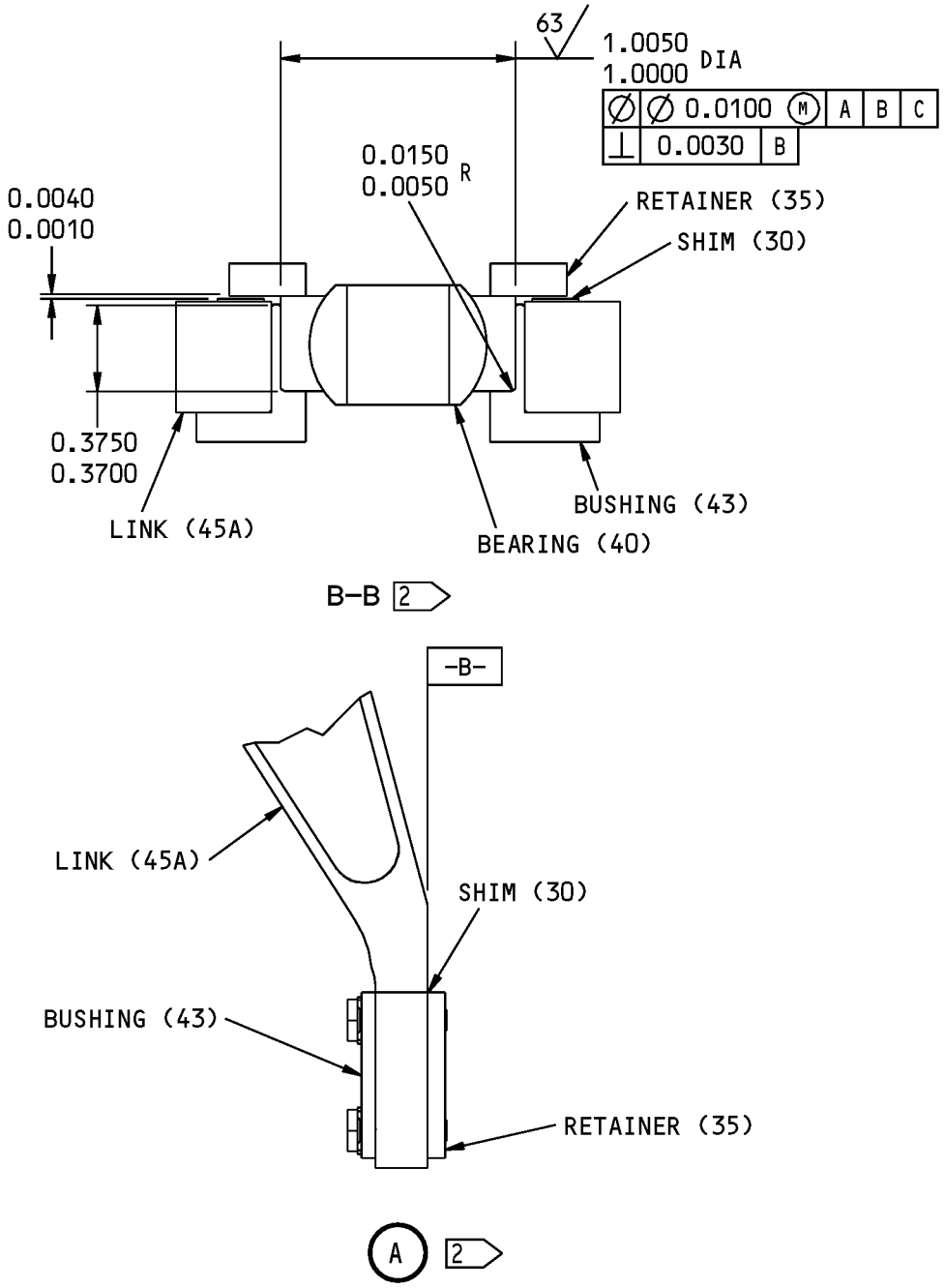
(4) Break the sharp edges.



113A9205-1,-5 Adjust Link Assembly Bushing and Bearing Replacement
Figure 601 (Sheet 1 of 3)



113A9205-1,-5 Adjust Link Assembly Bushing and Bearing Replacement
Figure 601 (Sheet 2 of 3)



1 FOR 113A9205-1

2 FOR 113A9205-5

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

ITEM NUMBERS REFER TO IPL FIG. 5

ALL DIMENSIONS ARE IN INCHES

113A9205-1,-5 Adjust Link Assembly Bushing and Bearing Replacement
Figure 601 (Sheet 3 of 3)

LINK - REPAIR 6-2

113A9205–3, –7

1. General

A. This repair gives the data necessary to refinish the link (IPL Figure 5; 45, 45A).

B. Refer to the Standard Overhaul and Practices Manual (SOPM) for the standard practices shown in the repair.

C. Refer to the REPAIR-GENERAL (57-26-47/601) for the standard true position dimensioning symbols shown in the repair.

D. Refer to the IPL Figure 5 for the item numbers.

2. Procedure

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

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
C00175	Primer - Urethane Compatible, Corrosion Resistant (Less Than 1% Aromatic Amines)	BMS10-79, Type III
C00700	Coating - Exterior Protective Enamel, Gray Gloss Enamel	BMS10-60, Type I, BAC 707

B. References

Reference	Title
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES

C. Link Refinish

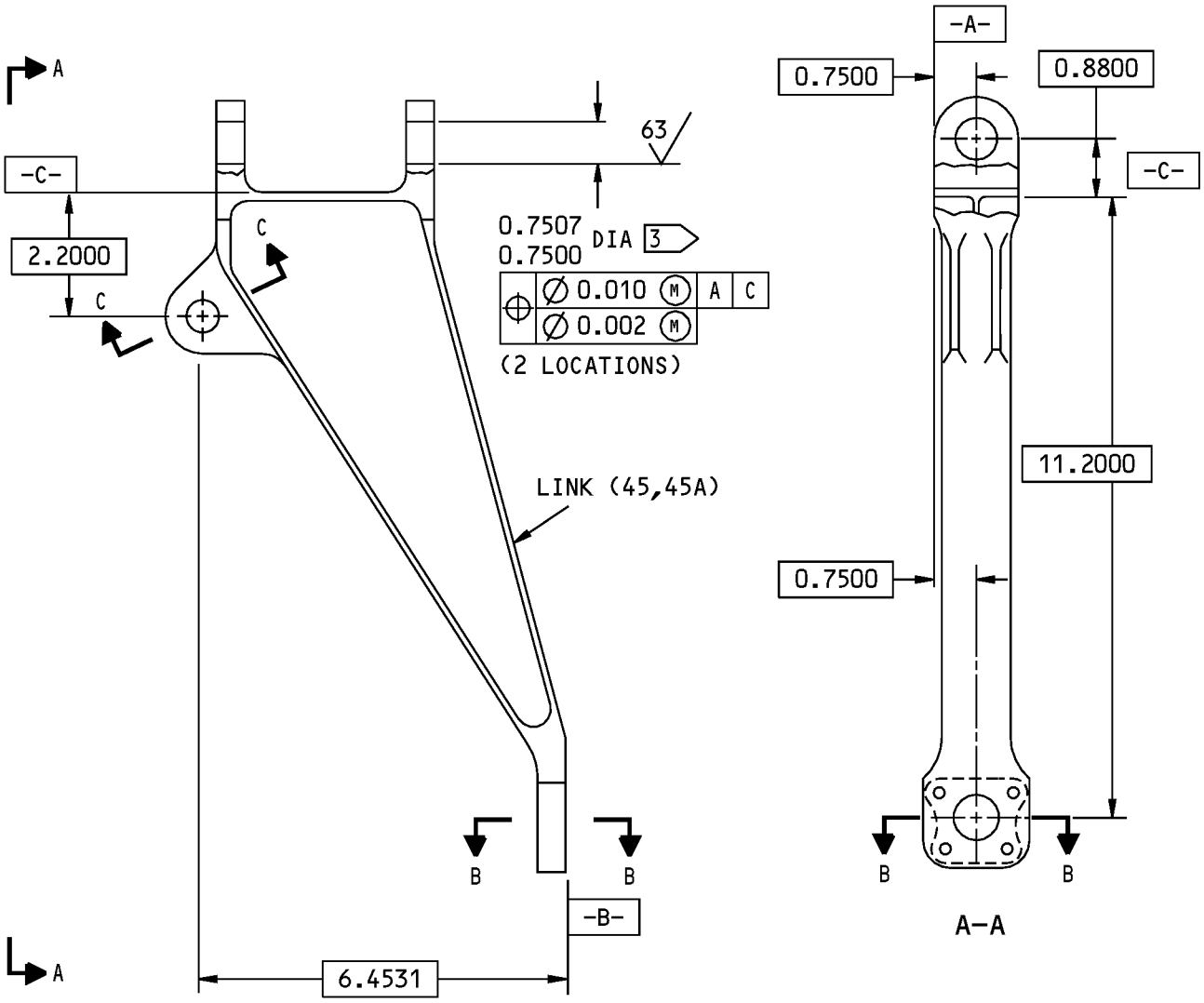
(1) Apply a boric acid anodize (F-17.31) to the link (45, 45A).

(2) Apply one layer of primer, C00175 (F-19.47) to the link (45, 45A).

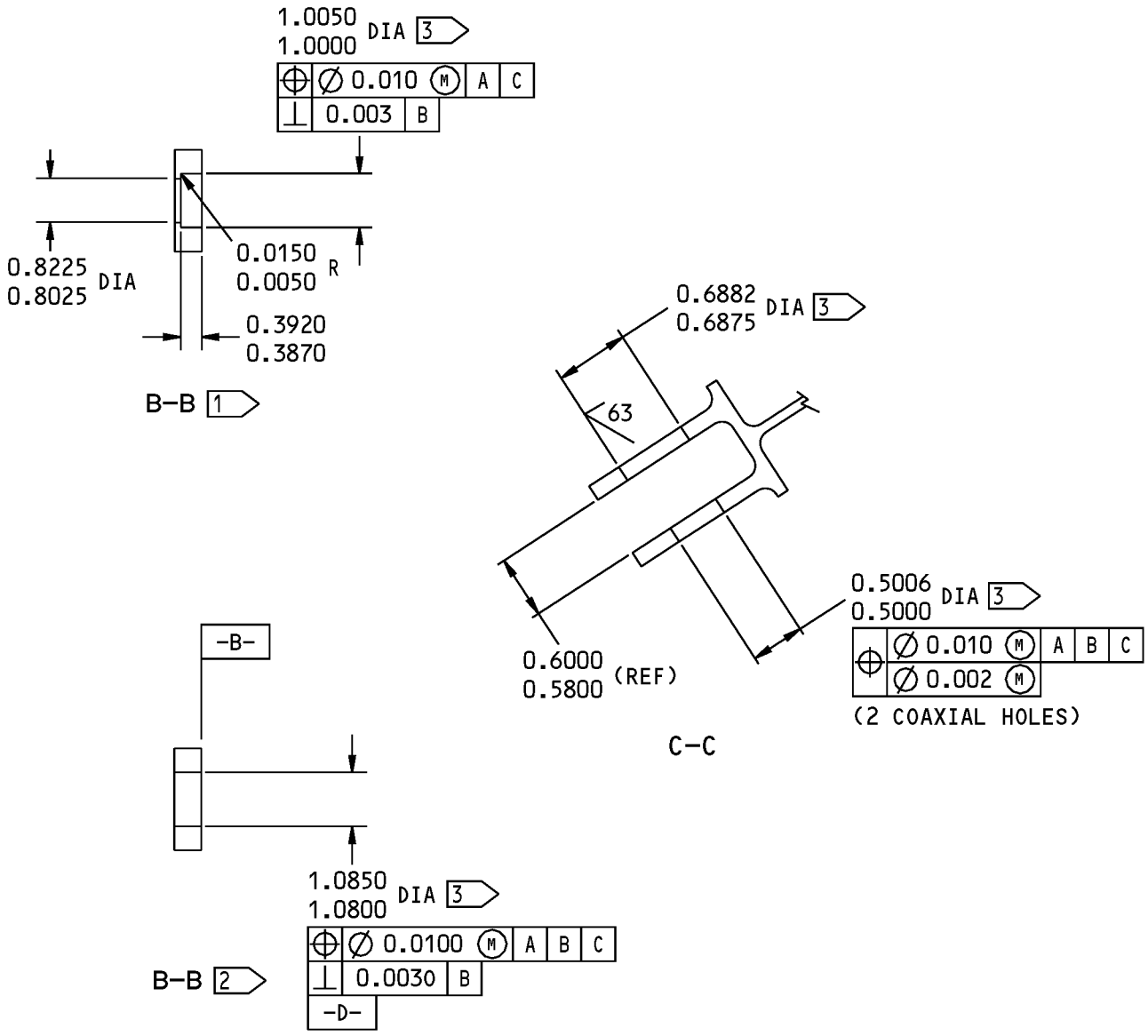
(a) Do not apply primer, C00175 in the bushing holes, see REPAIR 6-2, Figure 601.

(3) Apply coating, C00700 (SRF-14.9813) to the link (45, 45A).

(a) Do not apply primer, C00175 in the bushing holes, see REPAIR 6-2, Figure 601.



113A9205-3,-7 Link Repair and Refinish
Figure 601 (Sheet 1 of 2)



1 113A9205-3

2 113A9205-7

3 DO NOT APPLY PRIMER OR ENAMEL IN THE HOLE

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

ITEM NUMBERS REFER TO IPL FIG. 5

ALL DIMENSIONS ARE IN INCHES

113A9205-3,-7 Link Repair and Refinish
Figure 601 (Sheet 2 of 2)

ROD ASSEMBLY - REPAIR 7-1

113A9206–1, -4

1. General

A. This repair gives the data necessary to repair the rod assembly (IPL Figure 6; 1A, 1B).

B. Refer to IPL Figure 6 for the item numbers.

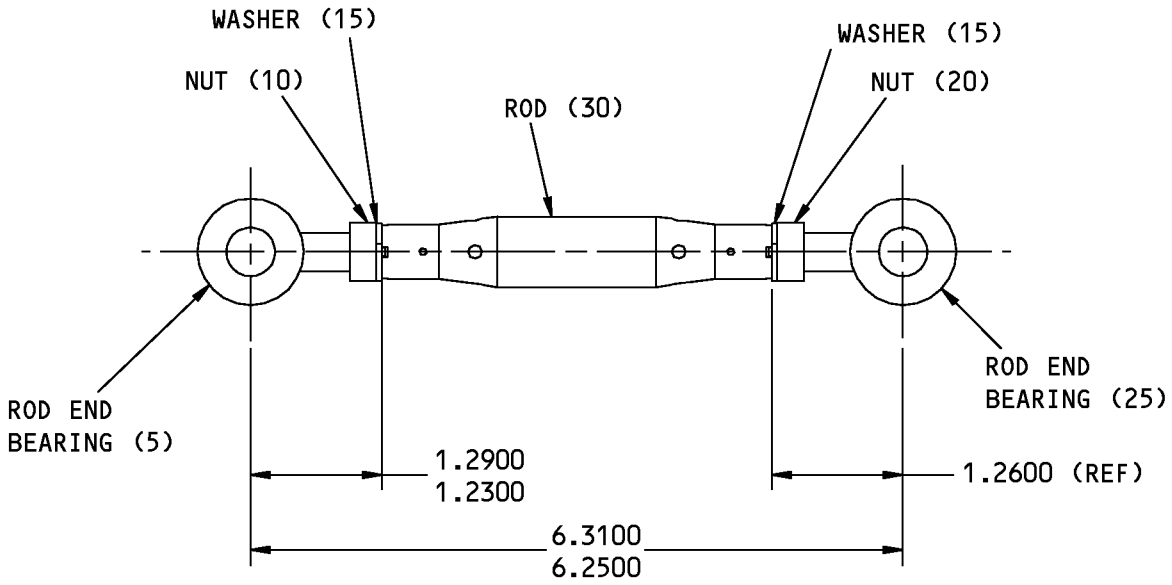
2. Procedure

A. Rod End Bearing Replacement

(1) Loosen the nut (10, 10A, 20, 20A) and remove the worn rod end bearing (5, 25) from the rod (30).

(2) Install the washer (15, 15A), the nut (10, 10A, 20, 20A) and the new rod end bearing (5, 25) on the rod (30) to the dimensions and orientation as shown in REPAIR 7-1, Figure 601.

(3) Tighten the nut (10, 10A, 20, 20A) by hand.



ITEM NUMBERS REFER TO IPL FIG. 6

ALL DIMENSIONS ARE IN INCHES

113A9206-1 Drive Rod Assembly Rod End Bearing Replacement
Figure 601

ROD ASSEMBLY - REPAIR 8-1

113A9207–1, -4

1. General

A. This repair gives the data necessary to repair the rod assembly (IPL Figure 7; 1A, 1B).

B. Refer to IPL Figure 7 for the item numbers.

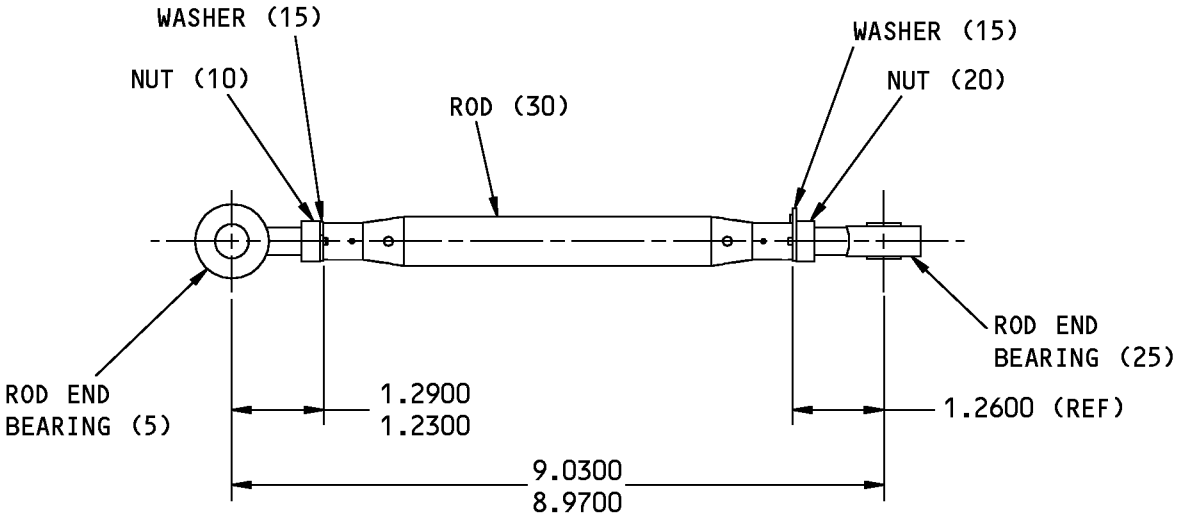
2. Procedure

A. Rod End Bearing Replacement

(1) Loosen the nut (10, 10A, 20, 20A) and remove the worn rod end bearing (5, 25) from the rod (30).

(2) Install the washer (15, 15A), the nut (10, 10A, 20, 20A) and the new rod end bearing (5, 25) on the rod (30) to the dimensions and orientation as shown in REPAIR 8-1, Figure 601.

(3) Tighten the nut (10, 10A, 20, 20A) by hand.



ITEM NUMBERS REFER TO IPL FIG. 7

ALL DIMENSIONS ARE IN INCHES

113A9207-1 Adjust Rod Assembly Rod End Bearing Replacement
Figure 601

BEAM ASSEMBLY - REPAIR 9-1

113A9304–1

1. General

A. This repair gives the data that is necessary to repair the beam assembly (IPL Figure 8; 1A).

B. Refer to the Standard Overhaul and Practices Manual (SOPM) for the standard practices shown in the repair.

C. Refer to the REPAIR-GENERAL (57-26-47/601) for the standard true position dimensioning symbols shown in the repair.

D. Refer to the IPL Figure 8 for the item numbers.

2. Procedure

NOTE: For miscellaneous materials, refer to SOPM 20-60-04.

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95

B. References

Reference	Title
SOPM 20-50-03	BEARING AND BUSHING REPLACEMENT
SOPM 20-60-04	MISCELLANEOUS MATERIALS

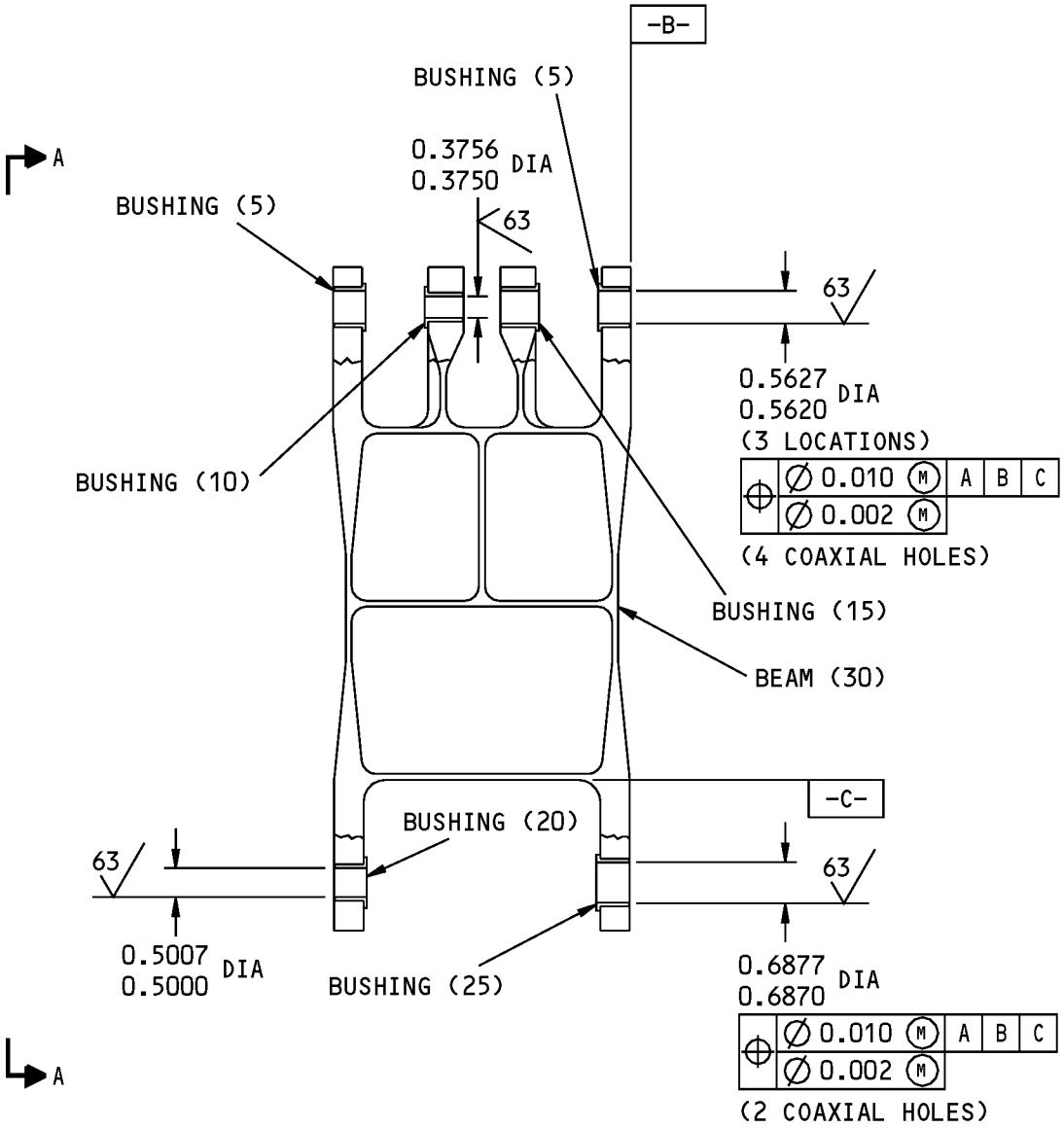
C. Bushing Replacement

(1) Remove the bushing (5, 10, 15, 20, 25) from the beam (30) as specified in the (SOPM 20-50-03).

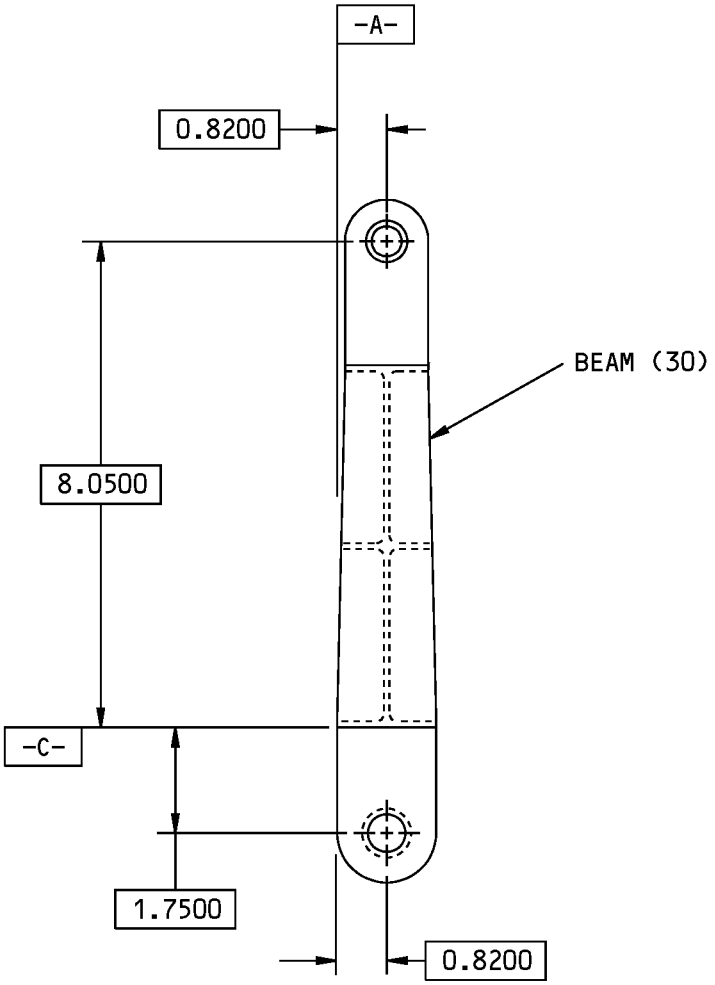
(2) Install the new bushing (5, 10, 15, 20, 25) in the beam (30) by the shrink-fit method with sealant, A00247 as specified in the (SOPM 20-50-03).

(3) Machine the bushing (5, 10, 15, 20, 25) to the diameter specified in REPAIR 9-1, Figure 601 .

(4) Break the sharp edges.



113A9304-1 Attach Beam Assembly Bushing Replacement
Figure 601 (Sheet 1 of 2)



A–A

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

ITEM NUMBERS REFER TO IPL FIG. 8

ALL DIMENSIONS ARE IN INCHES

113A9304-1 Attach Beam Assembly Bushing Replacement
Figure 601 (Sheet 2 of 2)

BEAM - REPAIR 9-2

113A9304–3

1. General

A. This repair gives the data that is necessary to repair the beam (IPL Figure 8; 30).

B. Refer to the Standard Overhaul and Practices Manual (SOPM) for the standard practices shown in the repair.

C. Refer to the REPAIR-GENERAL (57-26-47/601) for the standard true position dimensioning symbols shown in the repair.

D. Refer to the IPL Figure 8 for the item numbers.

2. Procedure

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

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
C00175	Primer - Urethane Compatible, Corrosion Resistant (Less Than 1% Aromatic Amines)	BMS10-79, Type III
C00700	Coating - Exterior Protective Enamel, Gray Gloss Enamel	BMS10-60, Type I, BAC 707

B. References

Reference	Title
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES

C. Beam Refinish

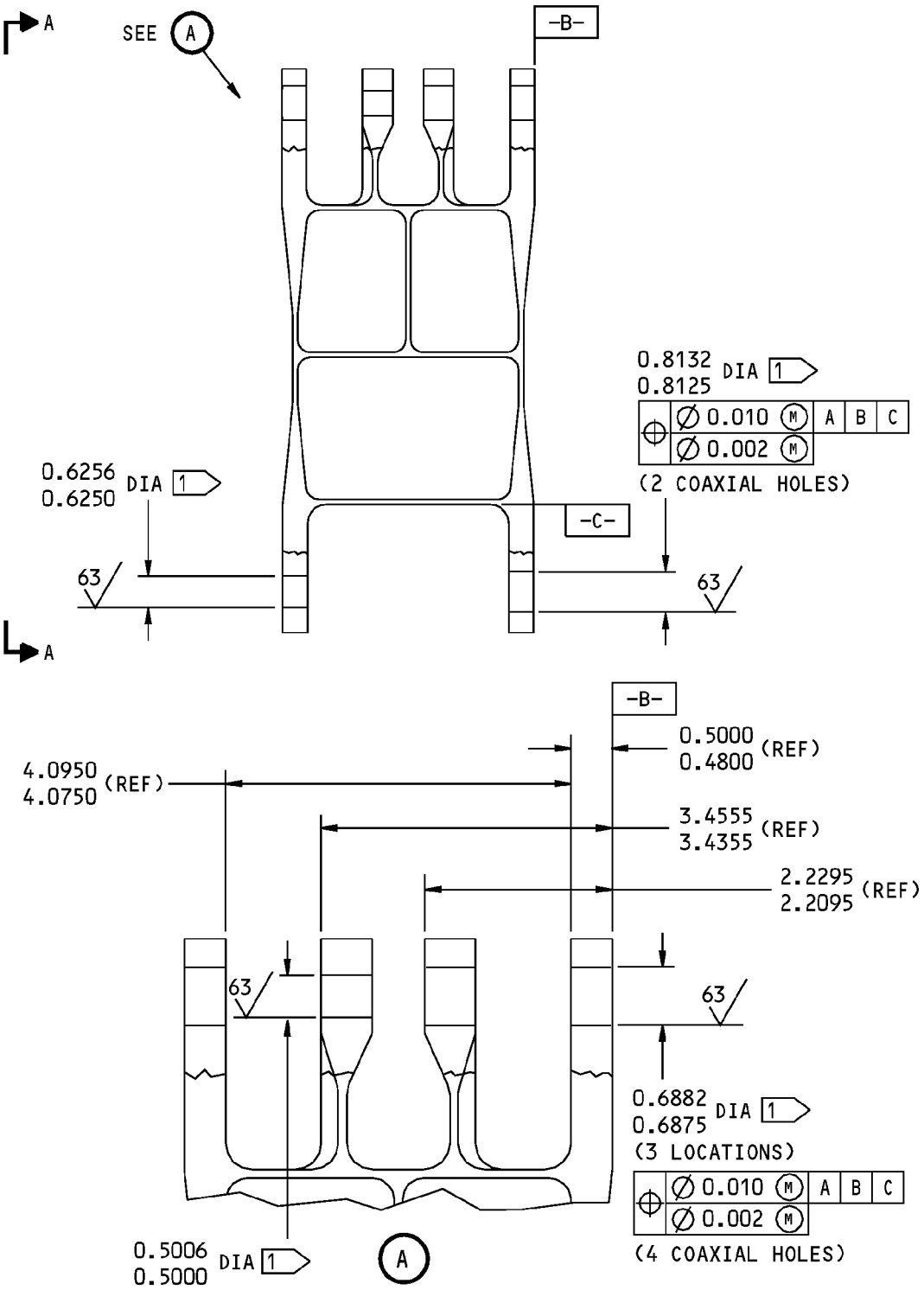
(1) Apply a boric acid anodize (F-17.31) to the beam (30).

(2) Apply one layer of primer, C00175 (F-19.47) to the beam (30).

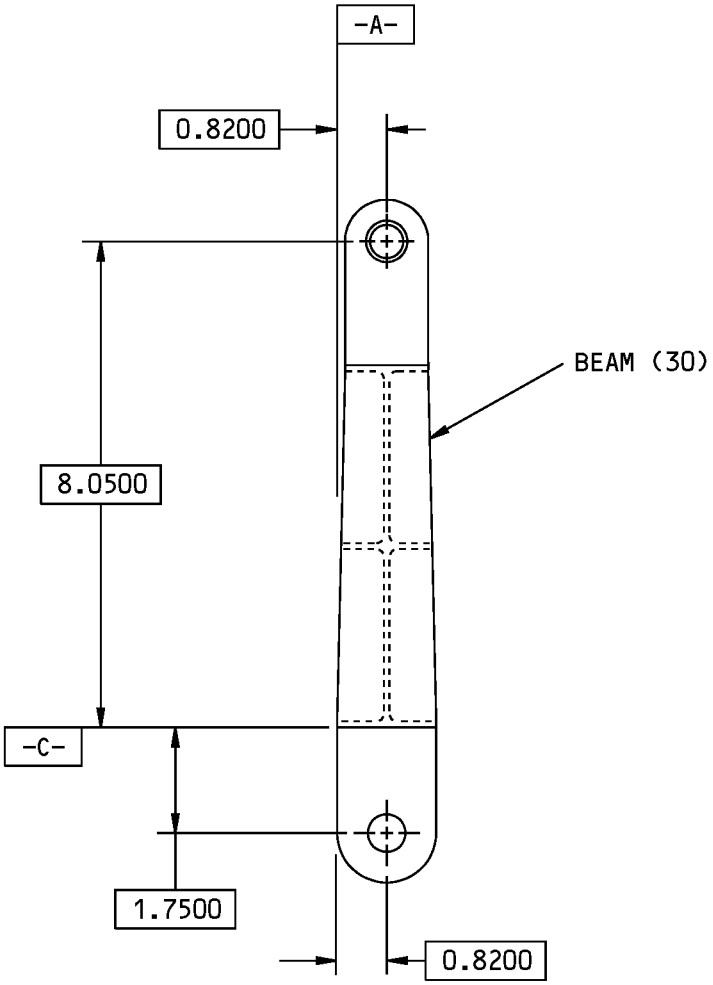
(a) Do not apply primer, C00175 in the bushing holes, see REPAIR 9-2, Figure 601.

(3) Apply coating, C00700 (SRF-14.9813) to the beam (30).

(a) Do not apply primer, C00175 in the bushing holes, see REPAIR 9-2, Figure 601.



113A9304-3 Beam Repair and Refinish
Figure 601 (Sheet 1 of 2)



A-A

1 DO NOT APPLY PRIMER OR ENAMEL IN THE HOLE

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

ITEM NUMBERS REFER TO IPL FIG. 8

ALL DIMENSIONS ARE IN INCHES

113A9304-3 Beam Repair and Refinish
Figure 601 (Sheet 2 of 2)

LINK ASSEMBLY - REPAIR 10-1

113A9305–1, –5

1. General

A. This repair gives the data that is necessary to repair the link assembly (IPL Figure 9; 1A, 1B).

B. Refer to the Standard Overhaul and Practices Manual (SOPM) for the standard Practices shown in the repair.

C. Refer to REPAIR-GENERAL, Figure 601 for the standard true position dimensioning symbols shown in the repair.

D. Refer to the IPL Figure 9 for the item numbers.

2. Bearing Replacement (113A9305-1)

NOTE: For decoding table for Boeing finish codes, refer to SOPM 20-41-01. For miscellaneous materials, refer to SOPM 20-60-04.

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I

B. References

Reference	Title
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES
SOPM 20-50-02	INSTALLATION OF SAFETYING DEVICES
SOPM 20-50-03	BEARING AND BUSHING REPLACEMENT
SOPM 20-50-19	GENERAL SEALING
SOPM 20-60-04	MISCELLANEOUS MATERIALS

C. This procedure is for the Link Assembly (IPL Figure 9 ; 1A).

(1) Remove the bolt (20), the washer (25), the shim (30), and the retainer (35) from the link (45) as specified in the (SOPM 20-50-03).

(2) Remove the worn bearing (40) from the link (45).

(3) Install a new bearing (40) in the link (45) with sealant, A00247 as specified in the (SOPM 20-50-03).

(4) Apply a corrosion fay surface seal to the retainer (35) between the link (45), as shown in REPAIR 10-1, Figure 601, with sealant, A00247 as specified in the (SOPM 20-50-19).

(5) Assemble the bolt (20), the washers (25) and the retainer (35) on the link (45).

(a) If the gap between the retainer (35) and the link (45) is not more than 0.004 inch than do not install the shim (30), see REPAIR 10-1, Figure 601.

(b) If the gap between the retainer (35) and the link (45) is more than 0.004 inch, then peel the shim (30) until the gap is between 0.001-0.004 inch.

1) Peel the shim (30) in increments of 0.003 inch.

2) Apply one layer of primer, C00259 (F-20.02) to all sides of the shim (30).

3) Apply a corrosion fay surface seal on both sides of the shim (30) with sealant, A00247 as specified in the (SOPM 20-50-19) , see REPAIR 10-1, Figure 601

4) Install the shim (30).

(6) Remove the bolts (20) and apply sealant, A00247 as specified in the (SOPM 20-50-19 , method 2).

(7) Re-install the bolts (20).

(8) Torque the bolts (20) to 31-38 pound-inches.

(9) Install lockwire between the bolts (20) as specified in torque table REPAIR 10-1, Figure 601 and as specified in the (SOPM 20-50-02 , double-twist method).

3. Bearing Replacement (113A9305-5)

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I

B. References

Reference	Title
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES
SOPM 20-50-02	INSTALLATION OF SAFETYING DEVICES
SOPM 20-50-03	BEARING AND BUSHING REPLACEMENT
SOPM 20-50-19	GENERAL SEALING
SOPM 20-50-20	HOW TO MAKE AND INSTALL RESIN BOND LAMINATED SHIMS AND SOLID FILLERS
SOPM 20-60-04	MISCELLANEOUS MATERIALS

C. This procedure is for the Link Assembly (IPL Figure 9; 1B).

NOTE: For decoding table for Boeing finish codes, refer to SOPM 20-41-01. For installation of safetying device, refer to SOPM 20-50-02. For miscellaneous materials, refer to SOPM 20-60-04.

(1) Remove the bolt (20A), the washer (25), the shim (30), and the retainer (35) from the link (45A).

(2) Remove the worn bearing (40) from the link (45A).

(3) If necessary, remove the bushing (43) as specified in the (SOPM 20-50-03).

(4) If necessary, install a new bushing (43) in the link (45A) by the shrink-fit method with sealant, A00247 as specified in the (SOPM 20-50-03).

(a) Machine the bushing (43) inside diameter to the dimension specified in REPAIR 10-1, Figure 601.

(b) Break sharp edges.

(5) Install a new bearing (40) in the bushing (43) with sealant, A00247 as specified in the (SOPM 20-50-03).

(6) Assemble the bolt (20A), the washers (25) and the retainer (35) on the link (45A).

(a) If the gap between the retainer (35) and the link (45) is not more than 0.004 inch than do not install the shim (30), see REPAIR 10-1, Figure 601 .

(b) If the gap between the retainer (35) and the link (45A) is more than 0.004 inch then peel the shim (30) until the gap is between 0.001-0.004 inch as specified in the (SOPM 20-50-20).

1) Peel the shim (30) in increments of 0.003 inch.

2) Apply one layer of primer, C00259 (F-20.02) to all sides of the shim (30).

3) Install the shim (30).

(7) Remove the bolts (20A) and apply sealant, A00247sealant, A00247 as specified in the (SOPM 20-50-19, method 2).

(8) Re-install the bolts (20A).

(9) Torque the bolts (20A) to 31-38 pound-inches.

(10) Install lockwire between the bolts (20A) as specified in REPAIR 10-1, Figure 601 and as specified in the (SOPM 20-50-02, double-twist method).

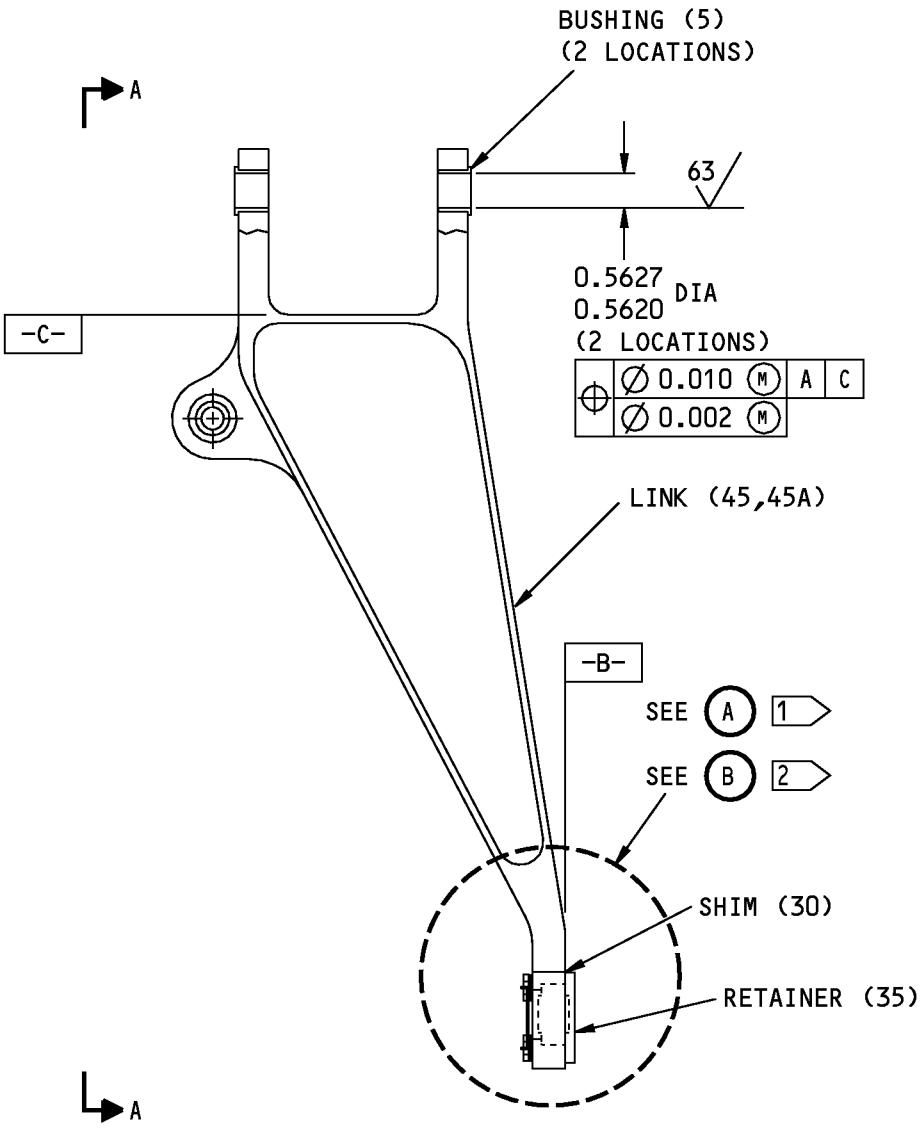
4. Bushing Replacement

A. Remove the bushing (5, 10, 15) from the link (45, 45A) as specified in the (SOPM 20-50-03).

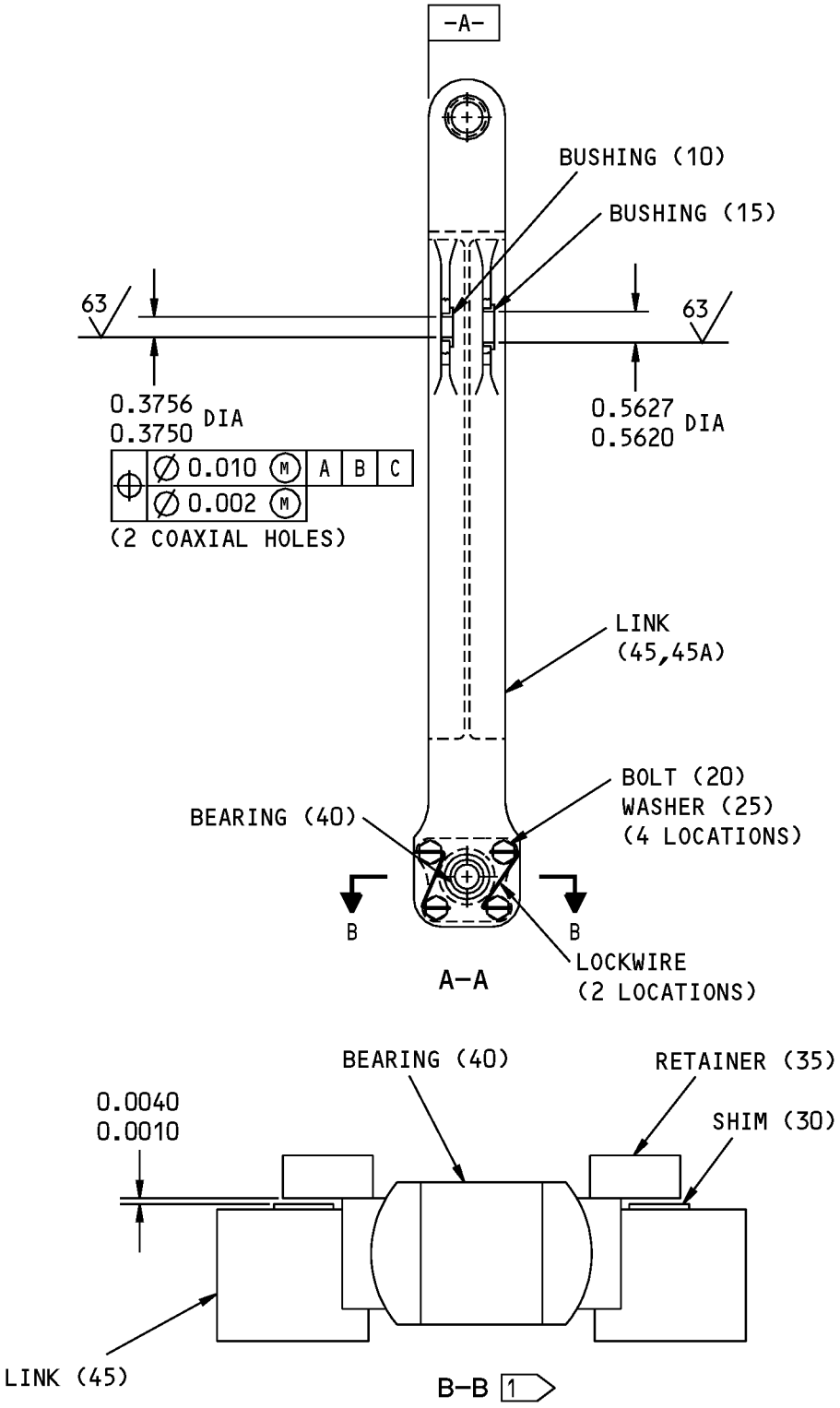
B. Install the new bushing (5, 10, 15) in the link (45, 45A) by the shrink-fit method as specified in the (SOPM 20-50-03).

C. Machine the bushing (5, 10, 15) to the diameter specified in REPAIR 10-1, Figure 601.

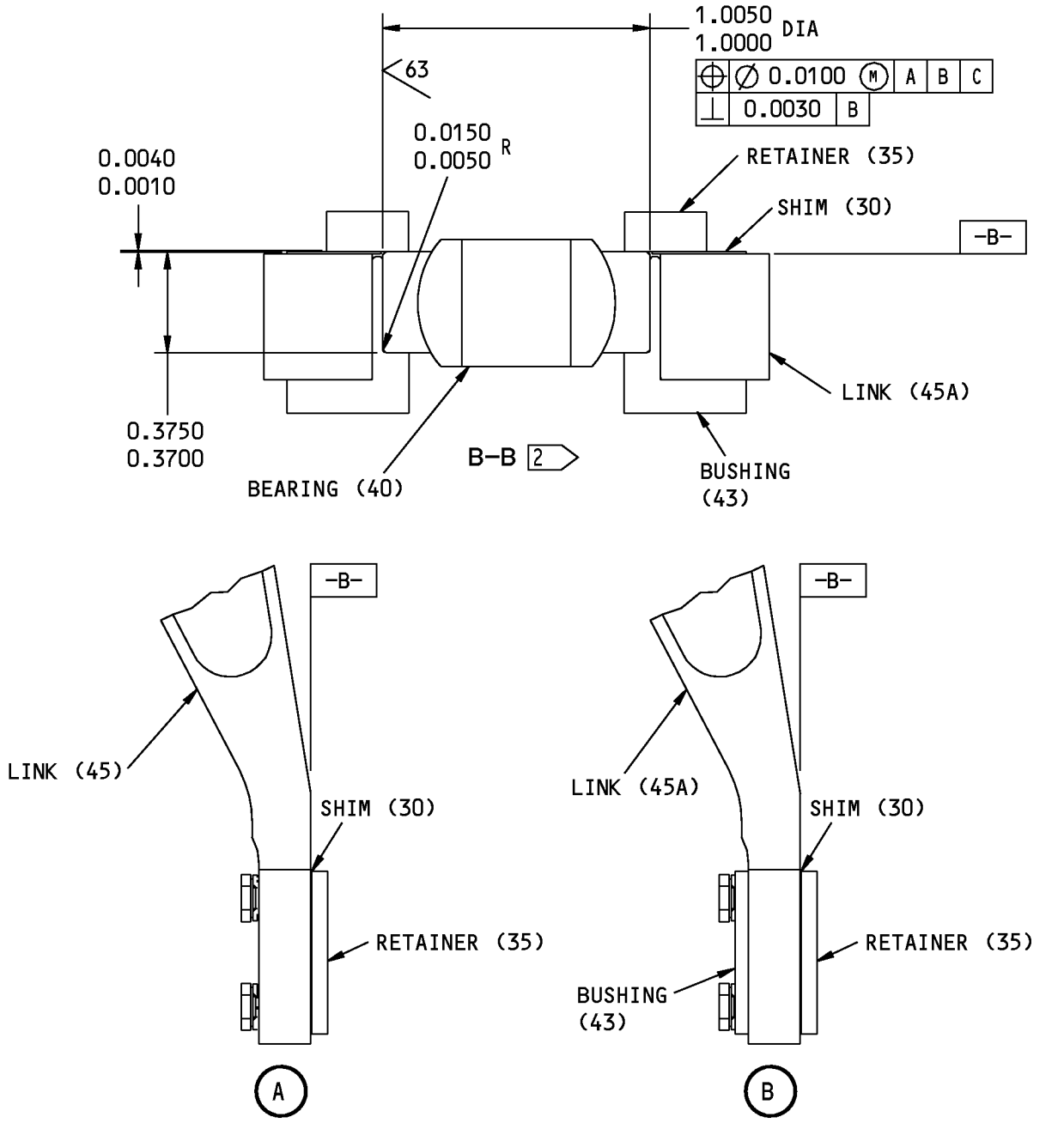
D. Break the sharp edges.



113A9305-1,-5 Adjust Link Assembly Bushing and Bearing Replacement
Figure 601 (Sheet 1 of 3)



113A9305-1,-5 Adjust Link Assembly Bushing and Bearing Replacement
Figure 601 (Sheet 2 of 3)



125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

1 113A9305-1

2 113A9305-5

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

113A9305-1,-5 Adjust Link Assembly Bushing and Bearing Replacement
Figure 601 (Sheet 3 of 3)

LINK - REPAIR 10-2

113A9305–3, –7

1. General

A. This repair gives the data necessary to refinish the link (IPL Figure 9; 45, 45A).

B. Refer to the Standard Overhaul and Practices Manual (SOPM) for the standard practices shown in the repair.

C. Refer to REPAIR-GENERAL, Figure 601 for the standard true position dimensioning symbols shown in the repair.

D. Refer to IPL Figure 9 for the item numbers.

2. Procedure

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

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
C00175	Primer - Urethane Compatible, Corrosion Resistant (Less Than 1% Aromatic Amines)	BMS10-79, Type III
C00700	Coating - Exterior Protective Enamel, Gray Gloss Enamel	BMS10-60, Type I, BAC 707

B. References

Reference	Title
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES

C. Link Refinish

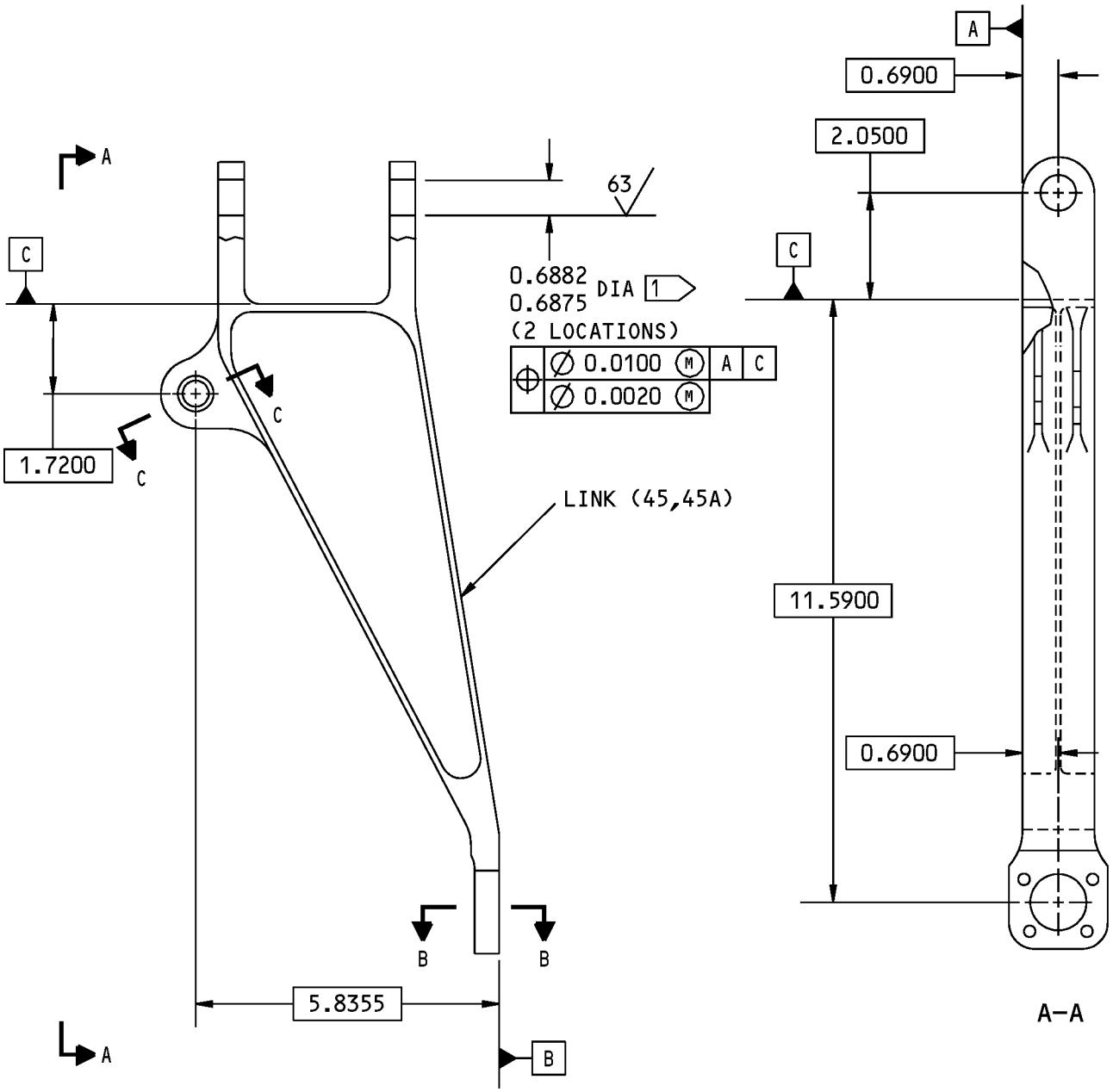
(1) Apply a boric acid anodize (F-17.31) to the link (45, 45A).

(2) Apply one layer of primer, C00175 (F-19.47) to the link (45, 45A).

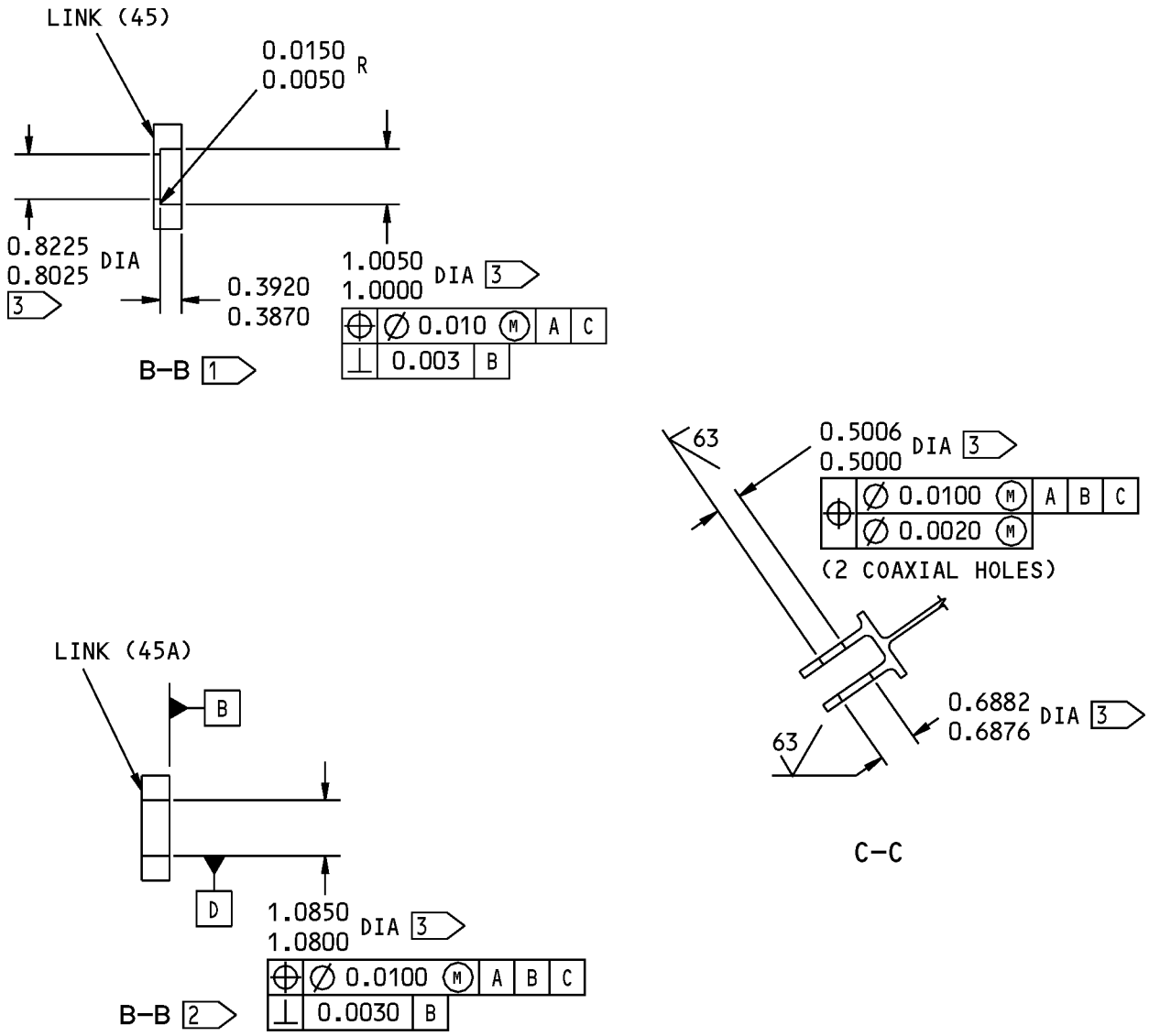
(a) Do not apply primer in the bushing holes, see REPAIR 10-2, Figure 601 .

(3) Apply coating, C00700 (SRF-14.9813) to the link (45, 45A).

(a) Do not apply primer in the bushing holes, see REPAIR 10-2, Figure 601.



113A9305-3,-7 Link Repair and Refinish
Figure 601 (Sheet 1 of 2)



1 113A9105-3

2 113A9105-7

3 DO NOT APPLY PRIMER OR ENAMEL IN THE HOLE

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

ITEM NUMBERS REFER TO IPL FIG. 2

ALL DIMENSIONS ARE IN INCHES

113A9305-3,-7 Link Repair and Refinish
Figure 601 (Sheet 2 of 2)

ROD ASSEMBLY - REPAIR 11-1

113A9306–1, -4

1. General

A. This repair gives the data necessary to repair the rod assembly (IPL Figure 10; 1A, 1B).

B. Refer to IPL Figure 10 for the item numbers.

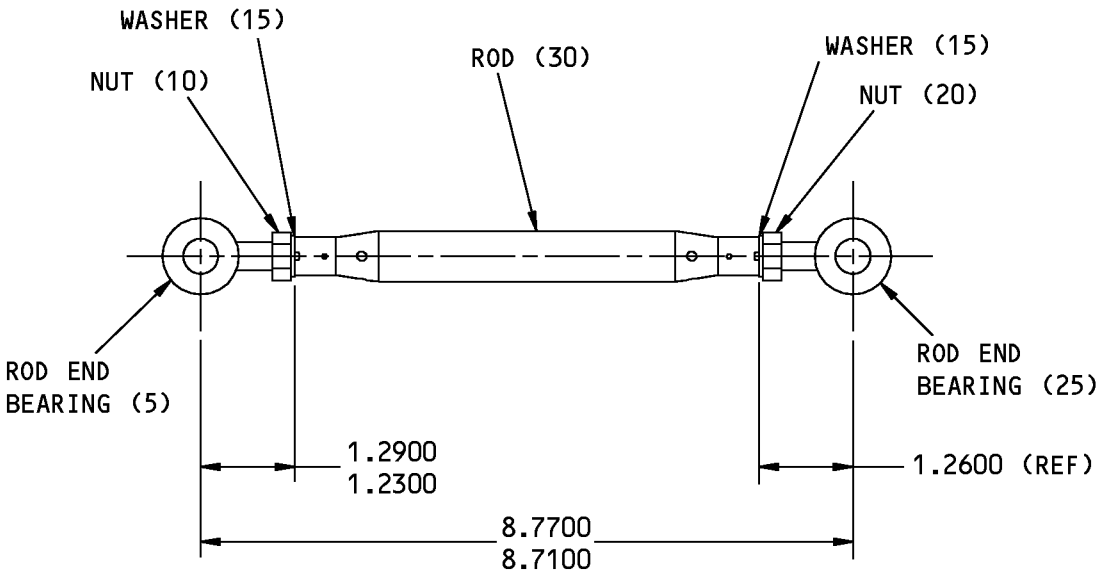
2. Procedure

A. Rod End Bearing Replacement

(1) Loosen the nut (10, 10A, 20, 20A) and remove the worn rod end bearing (5, 25) from the rod (30).

(2) Install the washer (15, 15A), the nut (10, 10A, 20, 20A) and the new rod end bearing (5, 25) on the rod (30) to the dimensions and orientation as shown in REPAIR 11-1, Figure 601.

(3) Tighten the nut (10, 10A, 20, 20A) by hand.



ITEM NUMBERS REFER TO IPL FIG. 10

ALL DIMENSIONS ARE IN INCHES

113A9306-1 Drive Rod Assembly Rod End Bearing Replacement
Figure 601

ROD - REPAIR 11-2

113A9306–3

1. General

A. This repair gives the data necessary to refinish the rod (IPL Figure 10; 30).

B. Refer to IPL Figure 10 for the item numbers.

2. Procedure

NOTE: For decoding table For Boeing finish codes, refer toSOPM 20-41-01.

A. References

Reference	Title
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES

B. Rod Refinish

(1) Passivate (F-17.25) the rod (30) all over.

ROD ASSEMBLY - REPAIR 12-1

113A9307–1, -4

1. General

A. This repair gives the data necessary to repair the rod assembly (IPL Figure 11; 1A, 1B).

B. Refer to IPL Figure 11 for the item numbers.

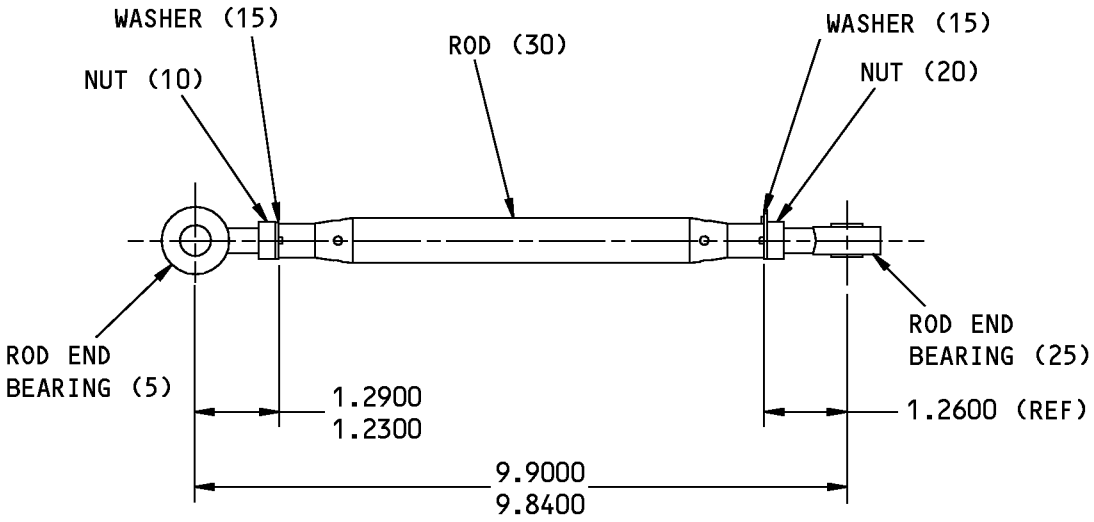
2. Rod End Bearing Replacement

A. Procedure

(1) Loosen the nut (10, 10A, 20, 20A) and remove the worn rod end bearing (5, 25) from the rod (30).

(2) Install the washer (15, 15A), the nut (10, 10A, 20, 20A) and the new rod end bearing (5, 25) on the rod (30) to the dimensions and orientation as shown in REPAIR 12-1, Figure 601.

(3) Tighten the nut (10, 10A, 20, 20A) by hand.



ITEM NUMBERS REFER TO IPL FIG. 11

ALL DIMENSIONS ARE IN INCHES

113A9307-1 Adjust Rod Assembly Rod End Bearing Replacement
Figure 601

ROD - REPAIR 12-2

113A9307–3

1. General

A. This repair gives the data necessary to refinish the rod (IPL Figure 11; 30).

B. Refer to IPL Figure 11 for the item numbers.

2. Procedure

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

A. References

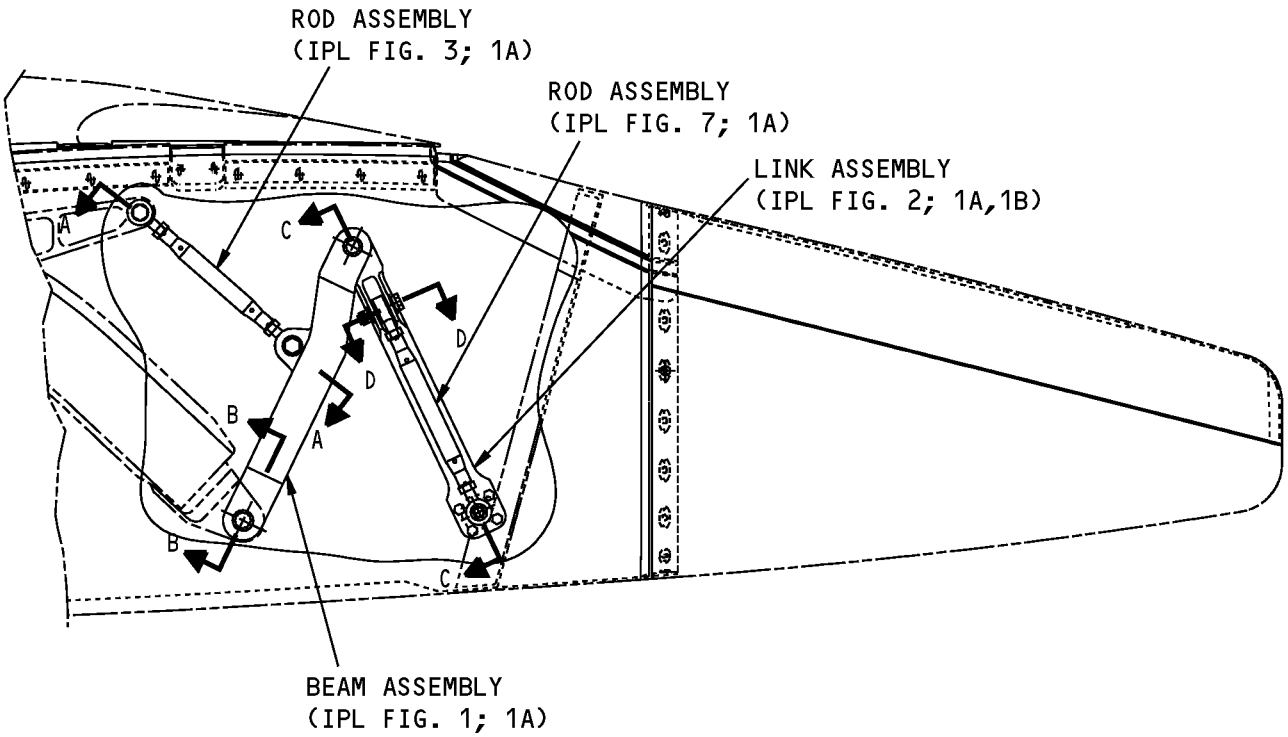
Reference	Title
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES

B. Rod Refinish

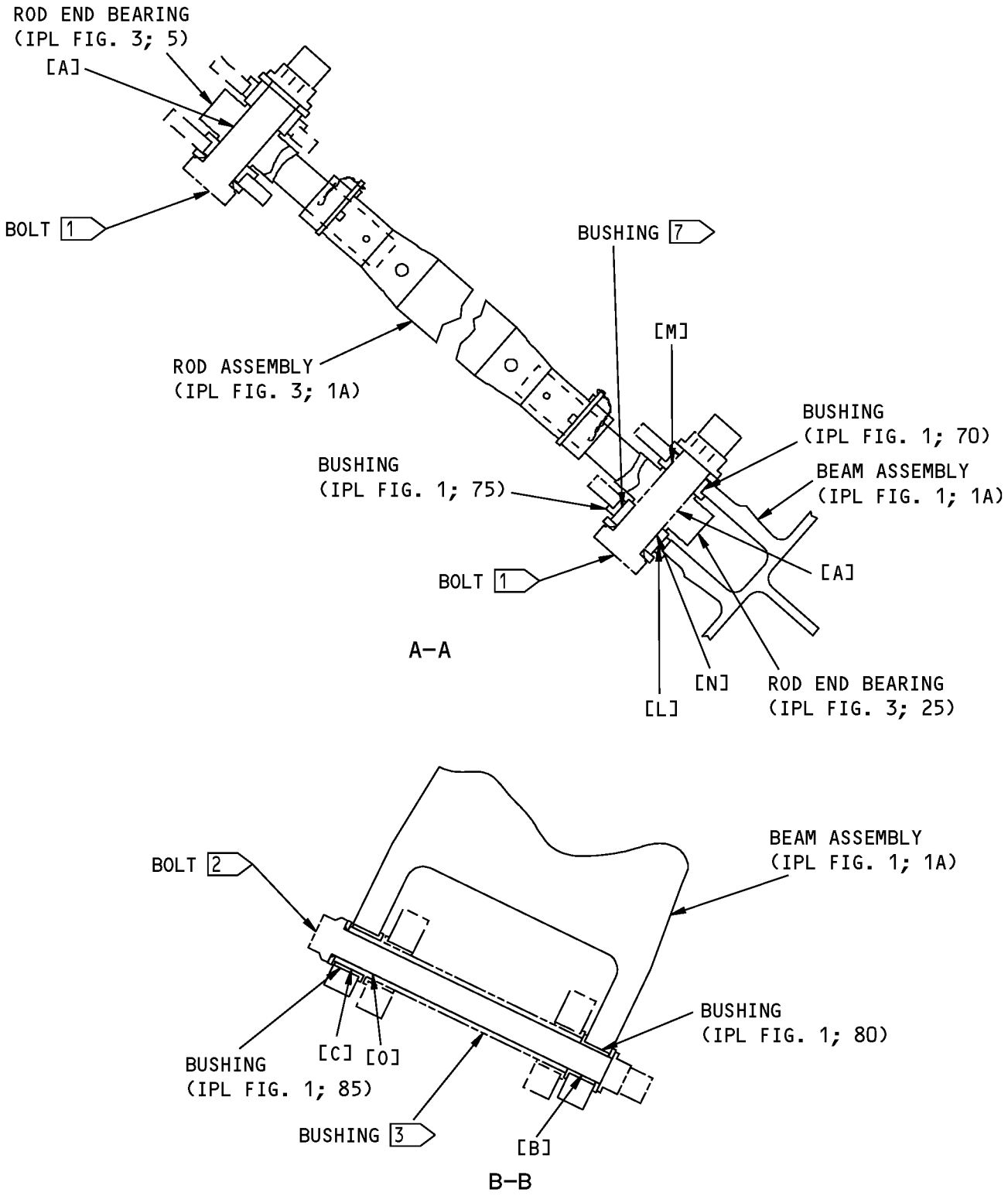
(1) Passivate (F-17.25) the rod (30) all over.

(NOT APPLICABLE)

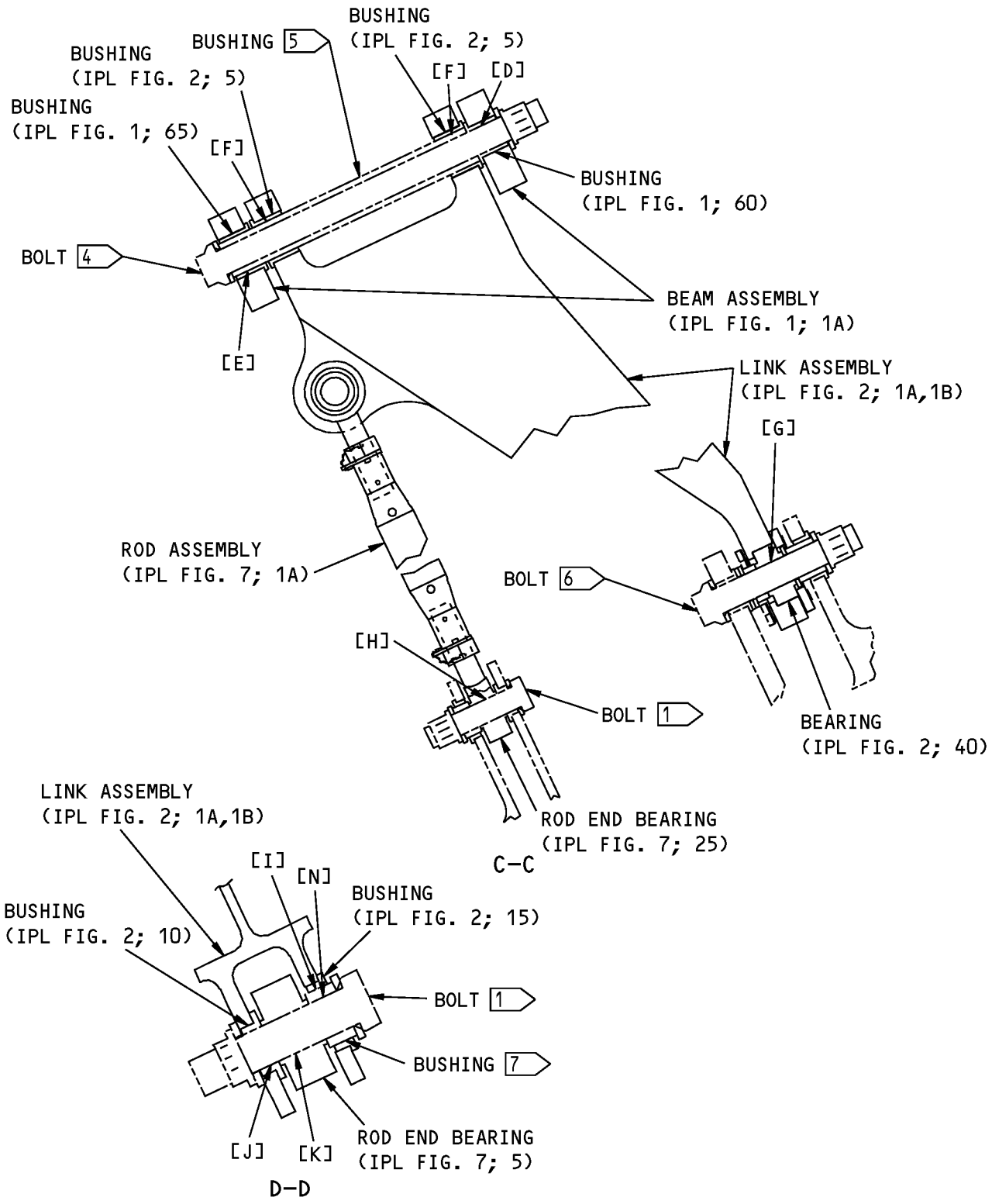
FITS AND CLEARANCES



Fits and Clearances
Figure 801 (Sheet 1 of 5)



Fits and Clearances
Figure 801 (Sheet 2 of 5)



Fits and Clearances
Figure 801 (Sheet 3 of 5)

REF LETTER	REF IPL		DESIGN DIMENSION*				SERVICE WEAR LIMIT*		
	FIG. NO.	MATING ITEM NO.	DIMENSION		ASSEMBLY CLEARANCE		DIMENSION		MAXIMUM CLEARANCE
			MIN	MAX	MIN	MAX	MIN	MAX	
[A]	3	ID 5,25	0.3745	0.3750	0.0000	0.0015		0.3760	0.0040
		OD 1	0.3735	0.3745			0.3720		
[B]	1	ID 80	0.5000	0.5007	0.0005	0.0022		0.5022	0.0050
		OD 2	0.4985	0.4995			0.4970		
[C]	1	ID 85	0.6870	0.6877	0.0005	0.0017		0.6887	0.0040
		OD 3	0.6860	0.6865			0.6845		
[D]	1	ID 60	0.4375	0.4382	0.0005	0.0022		0.4397	0.0050
		OD 4	0.4360	0.4370			0.4345		
[E]	1	ID 65	0.6245	0.6252	0.0005	0.0022		0.6262	0.0040
		OD 5	0.6235	0.6240			0.6220		
[F]	2	ID 5	0.6245	0.6252	0.0005	0.0022		0.6262	0.0040
		OD 5	0.6235	0.6240			0.6220		
[G]	2	ID 40	0.4375	0.4380	0.0005	0.0020		0.4395	0.0050
		OD 6	0.4360	0.4370			0.4345		
[H]	7	ID 25	0.3745	0.3750	0.0000	0.0015		0.3760	0.0040
		OD 1	0.3735	0.3745			0.3720		

N50173 S00041004321_V3

Fits and Clearances
Figure 801 (Sheet 4 of 5)

REF LETTER	REF IPL		DESIGN DIMENSION*				SERVICE WEAR LIMIT*		
	FIG. NO.	MATING ITEM NO.	DIMENSION		ASSEMBLY CLEARANCE		DIMENSION		MAXIMUM CLEARANCE
			MIN	MAX	MIN	MAX	MIN	MAX	
[I]	2	ID 15 OD 7	0.5620 0.5610	0.5627 0.5615	0.0005	0.0017	0.5595	0.5637	0.0040
[J]	2	ID 10 OD 1	0.3750 0.3735	0.3756 0.3745	0.0005	0.0021	0.3720	0.3771	0.0050
[K]	7	ID 5 OD 1	0.3745 0.3735	0.3750 0.3745	0.0000	0.0015	0.3720	0.3760	0.0040
[L]	1	ID 75 OD 7	0.5620 0.5610	0.5627 0.5615	0.0005	0.0017	0.5595	0.5637	0.0040
[M]	1	ID 70 OD 1	0.3750 0.3735	0.3756 0.3745	0.0005	0.0021	0.3720	0.3771	0.0050
[N]		ID 7 OD 1	0.3750 0.3735	0.3755 0.3745	0.0005	0.0020	0.3720	0.3770	0.0050
[O]		ID 3 OD 2	0.5000 0.4985	0.5005 0.4995	0.0005	0.0020	0.4970	0.5020	0.0050

* ALL DIMENSIONS ARE IN INCHES

1 > BOLT, BACB30NM6DK17, USED ON INSTALLATION 113A9100

2 > BOLT, BACB30US8K85D, USED ON INSTALLATION 113A9100

3 > BUSHING, BACB28AK08-461, USED ON INSTALLATION 113A9100

4 > BOLT, BACB30MR7DK85, USED ON INSTALLATION 113A9100

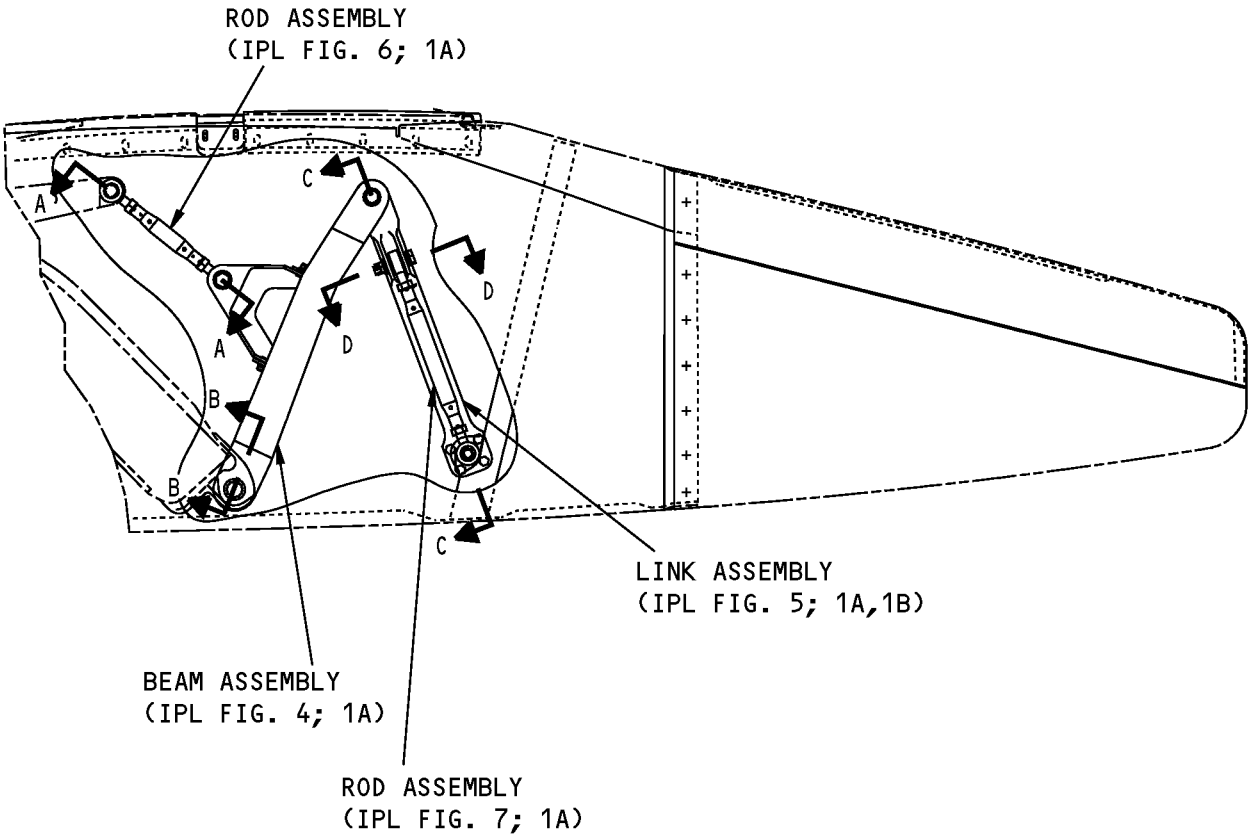
5 > BUSHING, BACB28AK07-461, USED ON INSTALLATION 113A9100

6 > BOLT, BACB30LE7DK30, USED ON INSTALLATION 113A9100

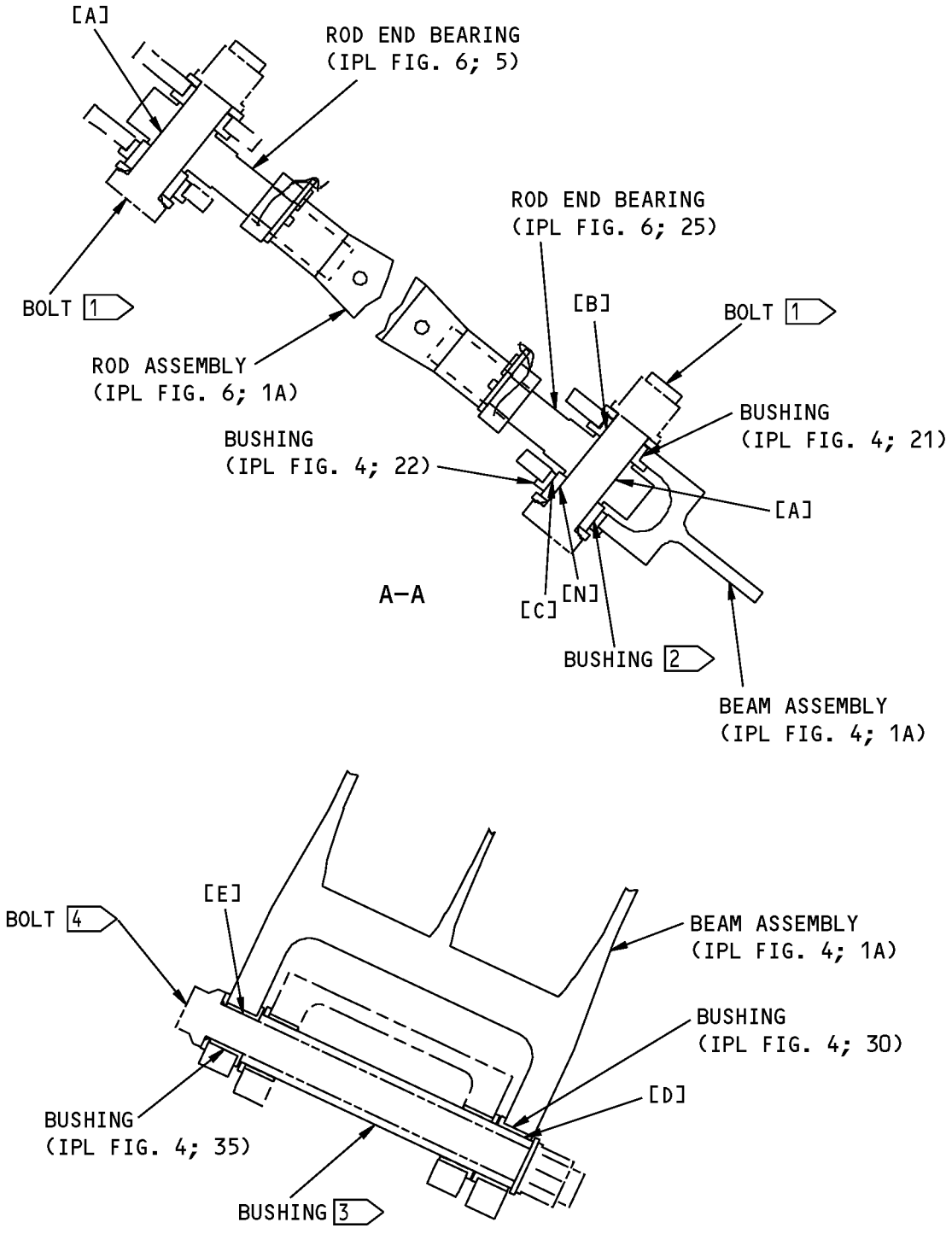
7 > BUSHING, BACB28AK06-029, USED ON INSTALLATION 113A9100

N50189 S00041004322_V3

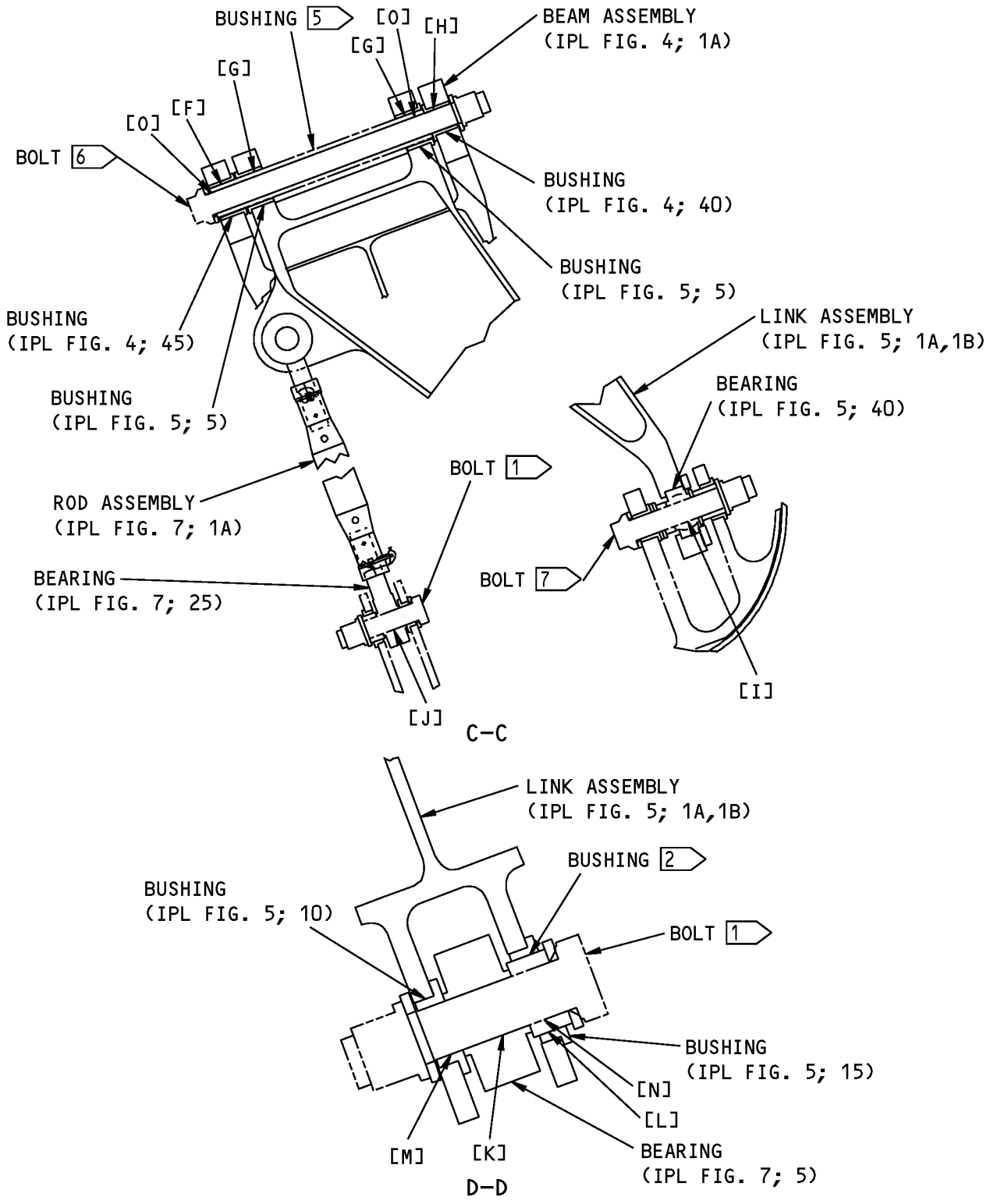
Fits and Clearances
Figure 801 (Sheet 5 of 5)



Fits and Clearances
Figure 802 (Sheet 1 of 5)



Fits and Clearances
Figure 802 (Sheet 2 of 5)



Fits and Clearances
Figure 802 (Sheet 3 of 5)

REF LETTER	REF IPL		DESIGN DIMENSION*				SERVICE WEAR LIMIT*		
	FIG. NO.	MATING ITEM NO.	DIMENSION		ASSEMBLY CLEARANCE		DIMENSION		MAXIMUM CLEARANCE
			MIN	MAX	MIN	MAX	MIN	MAX	
[A]	6	ID 5,25	0.3745	0.3750	0.0000	0.0015		0.3760	0.0040
		OD 1	0.3735	0.3745			0.3720		
[B]	4	ID 21	0.3750	0.3756	0.0005	0.0021		0.3771	0.0050
		OD 1	0.3735	0.3745			0.3720		
[C]	4	ID 22	0.5620	0.5627	0.0005	0.0017		0.5637	0.0040
		OD 2	0.5610	0.5615			0.5595		
[D]	4	ID 30	0.8120	0.8128	0.0005	0.0018		0.8138	0.0040
		OD 3	0.8110	0.8115			0.8095		
[E]	4	ID 35	0.5620	0.5627	0.0005	0.0022		0.5637	0.0050
		OD 4	0.5605	0.5615			0.5590		
[F]	4	ID 45	0.6245	0.6252	0.0005	0.0017		0.6262	0.0040
		OD 5	0.6235	0.6240			0.6220		
[G]	5	ID 5	0.6245	0.6252	0.0005	0.0017		0.6262	0.0040
		OD 5	0.6235	0.6240			0.6220		
[H]	4	ID 40	0.4375	0.4382	0.0005	0.0022		0.4397	0.0050
		OD 6	0.4360	0.4370			0.4345		

N49480 S00041004326_V2

Fits and Clearances
Figure 802 (Sheet 4 of 5)

REF LETTER	REF IPL		DESIGN DIMENSION*				SERVICE WEAR LIMIT*		
	FIG. NO.	MATING ITEM NO.	DIMENSION		ASSEMBLY CLEARANCE		DIMENSION		MAXIMUM CLEARANCE
			MIN	MAX	MIN	MAX	MIN	MAX	
[I]	5	ID 40 OD 7	0.4375 0.4360	0.4380 0.4370	0.0005	0.0020	0.4345	0.4395	0.0050
[J]	7	ID 25 OD 1	0.3745 0.3735	0.3750 0.3745	0.0000	0.0015	0.3720	0.3760	0.0040
[K]	7	ID 5 OD 1	0.3745 0.3735	0.3750 0.3745	0.0000	0.0015	0.3720	0.3760	0.0040
[L]	5	ID 15 OD 2	0.5620 0.5610	0.5627 0.5615	0.0005	0.0017	0.5595	0.5637	0.0040
[M]	5	ID 10 OD 1	0.3750 0.3735	0.3756 0.3745	0.0005	0.0021	0.3720	0.3771	0.0050
[N]		ID 2 OD 1	0.3750 0.3735	0.3755 0.3745	0.0005	0.0020	0.3720	0.3770	0.0050
[O]		ID 5 OD 6	0.4375 0.4360	0.4380 0.4370	0.0005	0.0020	0.4345	0.4395	0.0050

* ALL DIMENSIONS ARE IN INCHES

1 > BOLT, BACB30NM6DK17, USED ON INSTALLATION 113A9200

2 > BUSHING, BACB28AK06-029, USED ON INSTALLATION 113A9200

3 > BUSHING, BACB28AK09-465, USED ON INSTALLATION 113A9200

4 > BOLT, BACB30US9K85D, USED ON INSTALLATION 113A9200

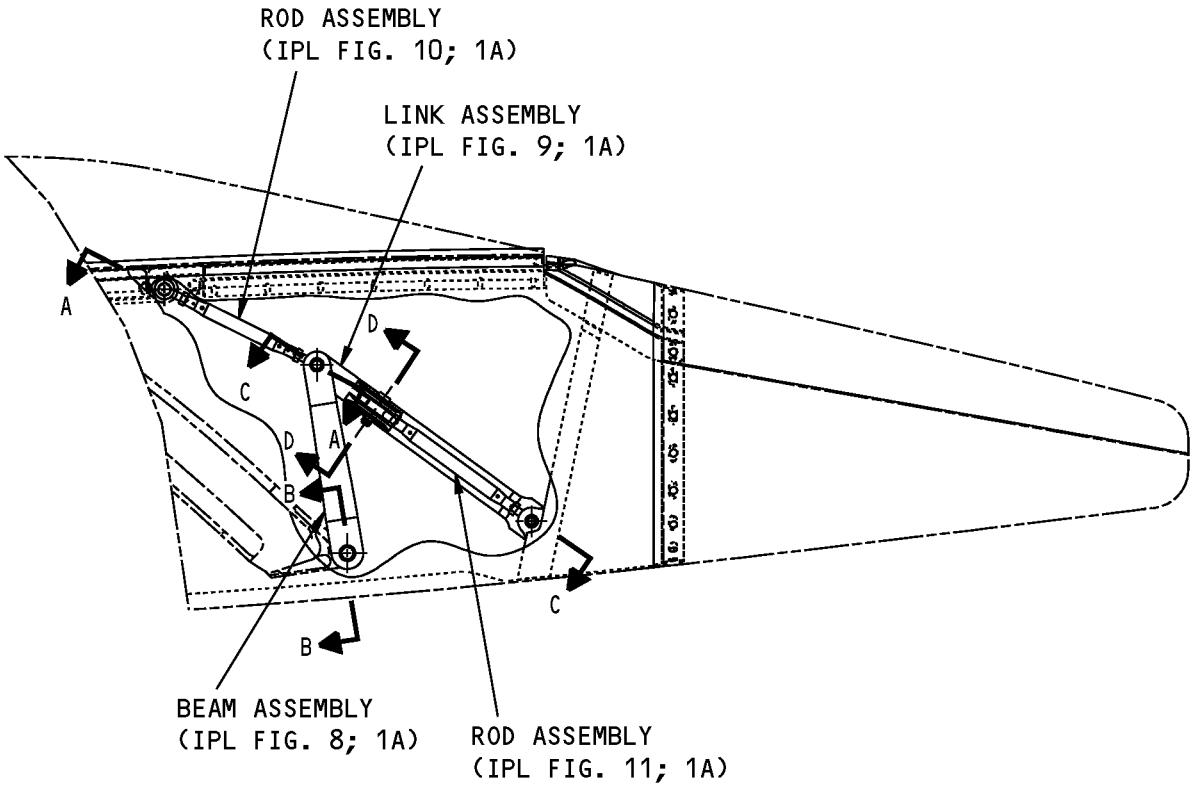
5 > BUSHING, BACB28AK07-465, USED ON INSTALLATION 113A9200

6 > BOLT, BACB30MR7DK85, USED ON INSTALLATION 113A9200

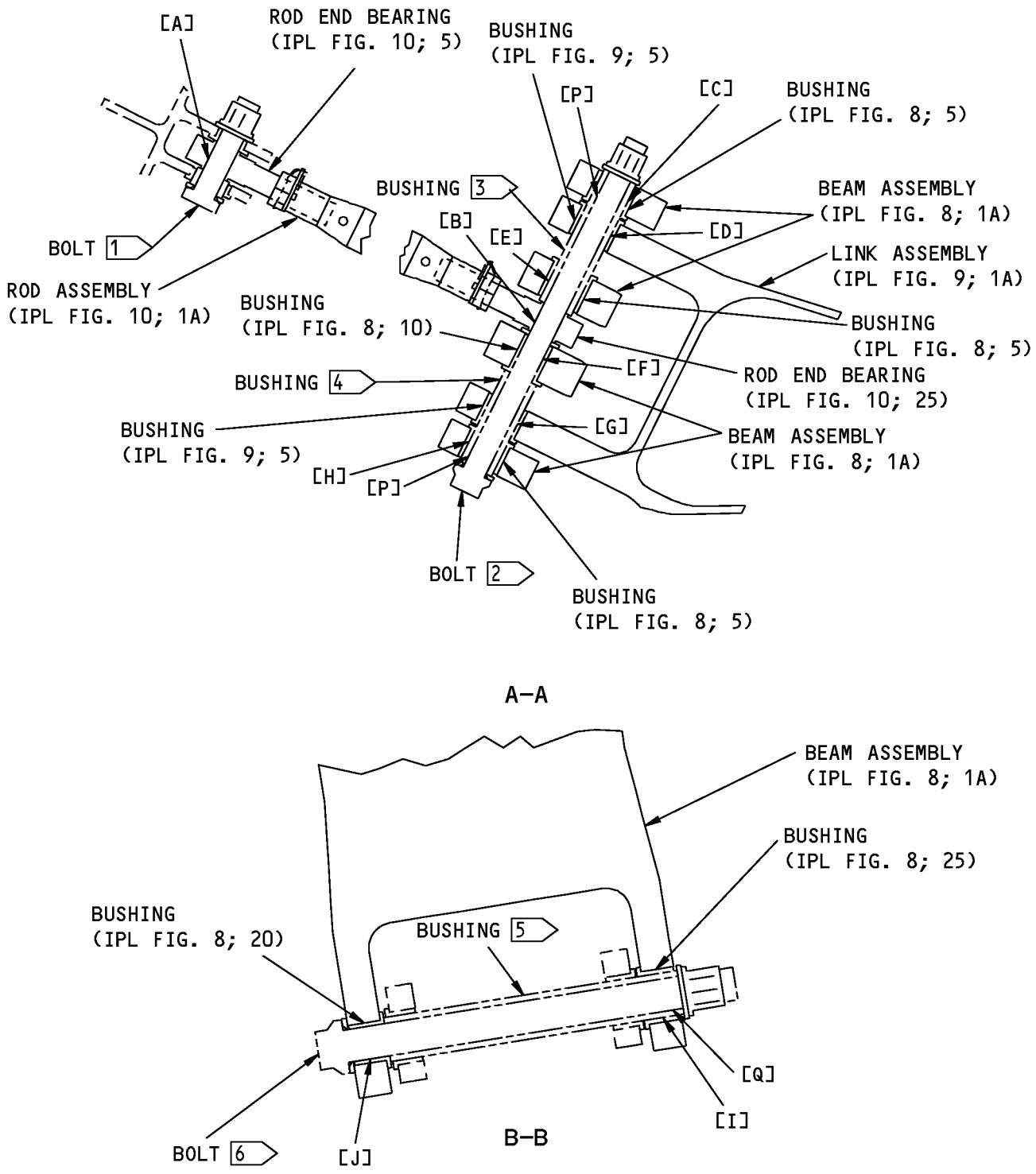
7 > BOLT, BACB30LE7DK30, USED ON INSTALLATION 113A9200

N49503 S00041004327_V2

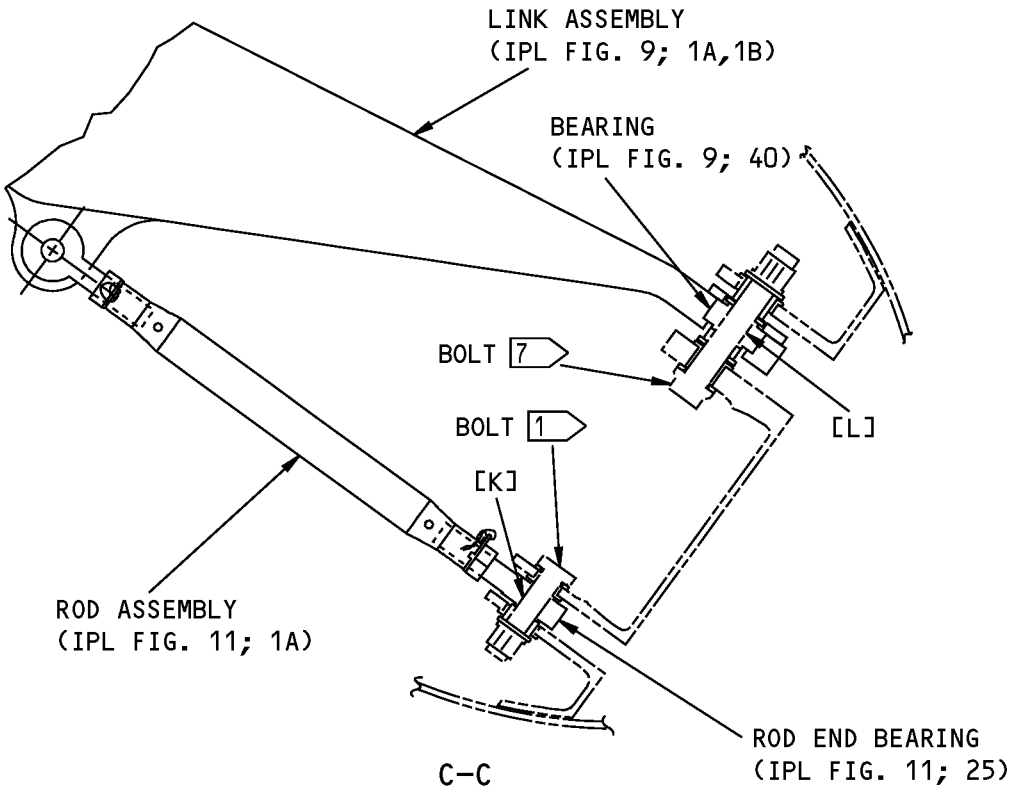
Fits and Clearances
Figure 802 (Sheet 5 of 5)



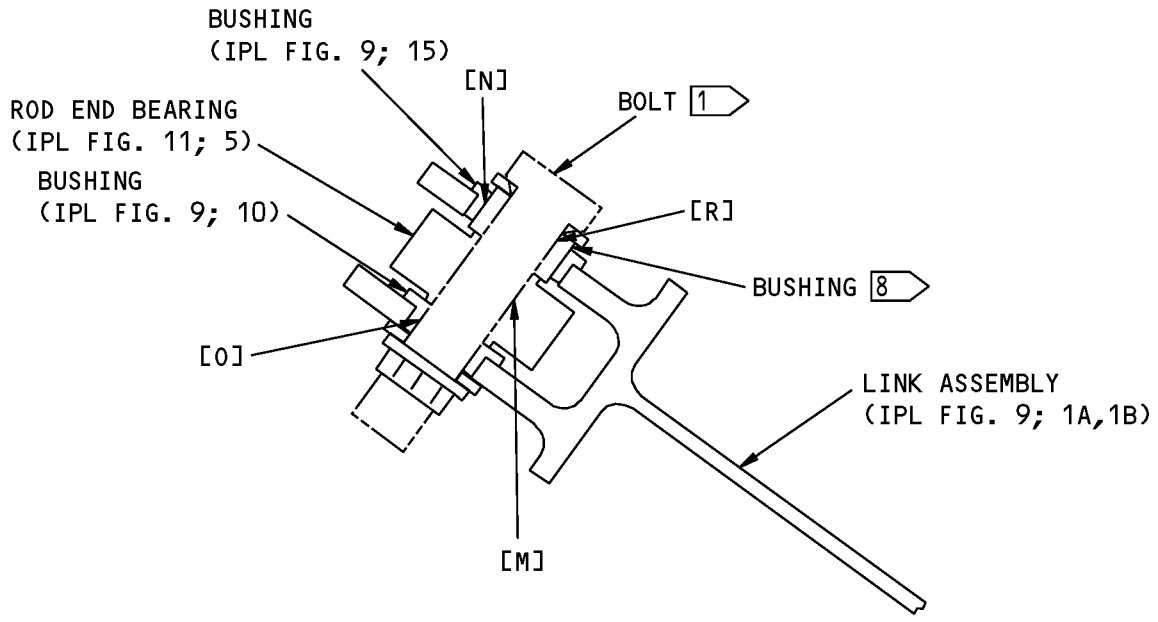
Fits and Clearances
Figure 803 (Sheet 1 of 5)



Fits and Clearances
Figure 803 (Sheet 2 of 5)



C–C



D–D

Fits and Clearances
Figure 803 (Sheet 3 of 5)

REF LETTER	REF IPL		DESIGN DIMENSION*				SERVICE WEAR LIMIT*		
	FIG. NO.	MATING ITEM NO.	DIMENSION		ASSEMBLY CLEARANCE		DIMENSION		MAXIMUM CLEARANCE
			MIN	MAX	MIN	MAX	MIN	MAX	
[A]	10	ID 5 OD 1	0.3745 0.3735	0.3750 0.3745	0.0000	0.0015	0.3720	0.3760	0.0040
[B]	10	ID 25 OD 2	0.3745 0.3735	0.3750 0.3745	0.0000	0.0015	0.3720	0.3760	0.0040
[C]	8	ID 5 OD 3	0.5620 0.5610	0.5627 0.5615	0.0005	0.0017	0.5595	0.5637	0.0050
[D]	9	ID 5 OD 3	0.5620 0.5610	0.5627 0.5615	0.0005	0.0017	0.5595	0.5637	0.0050
[E]	8	ID 15 OD 3	0.5620 0.5610	0.5627 0.5615	0.0005	0.0017	0.5595	0.5637	0.0050
[F]	8	ID 10 OD 2	0.3750 0.3735	0.3756 0.3745	0.0005	0.0021	0.3720	0.3771	0.0050
[G]	9	ID 5 OD 4	0.5620 0.5610	0.5627 0.5615	0.0005	0.0017	0.5595	0.5637	0.0050
[H]	8	ID 5 OD 4	0.5620 0.5610	0.5627 0.5615	0.0005	0.0017	0.5595	0.5637	0.0050
[I]	8	ID 25 OD 5	0.6870 0.6860	0.6877 0.6865	0.0005	0.0017	0.6845	0.6887	0.0040
[J]	8	ID 20 OD 6	0.5000 0.4985	0.5007 0.4995	0.0005	0.0022	0.4970	0.5022	0.0050
[K]	11	ID 25 OD 1	0.3745 0.3735	0.3750 0.3745	0.0000	0.0015	0.3720	0.3760	0.0040

N48977 S00041004331_V2

Fits and Clearances
Figure 803 (Sheet 4 of 5)

REF LETTER	REF IPL		DESIGN DIMENSION*				SERVICE WEAR LIMIT*		
	FIG. NO.	MATING ITEM NO.	DIMENSION		ASSEMBLY CLEARANCE		DIMENSION		MAXIMUM CLEARANCE
			MIN	MAX	MIN	MAX	MIN	MAX	
[L]	9	ID 40 OD 7	0.4375 0.4360	0.4380 0.4370	0.0005	0.0020	0.4345	0.4395	0.0050
[M]	11	ID 5 OD 1	0.3745 0.3735	0.3750 0.3745	0.0000	0.0015	0.3720	0.3760	0.0040
[N]	9	ID 15 OD 8	0.5620 0.5610	0.5627 0.5615	0.0005	0.0017	0.5595	0.5637	0.0050
[O]	9	ID 10 OD 1	0.3650 0.3735	0.3756 0.3745	0.0005	0.0021	0.3720	0.3771	0.0050
[P]		ID 4 OD 2	0.3750 0.3735	0.3755 0.3745	0.0005	0.0020	0.3720	0.3770	0.0050
[Q]		ID 5 OD 6	0.5000 0.4985	0.5005 0.4995	0.0005	0.0020	0.4970	0.5020	0.0050
[R]		ID 8 OD 1	0.3750 0.3735	0.3755 0.3745	0.0005	0.0020	0.3720	0.3770	0.0050

* ALL DIMENSIONS ARE IN INCHES

1 > BOLT, BACB30NM6DK17, USED ON INSTALLATION 113A9300

2 > BOLT, BACB30MR6DK84, USED ON INSTALLATION 113A9300

3 > BUSHING, BACB28AK06-232, USED ON INSTALLATION 113A9300

4 > BUSHING, BACB28AK06-161, USED ON INSTALLATION 113A9300

5 > BUSHING, BACB28AK08-452, USED ON INSTALLATION 113A9300

6 > BOLT, BACB30LE8DK83, USED ON INSTALLATION 113A9300

7 > BOLT, BACB30LE7DK30, USED ON INSTALLATION 113A9300

8 > BUSHING, BACB28AK06-029, USED ON INSTALLATION 113A9300

N49055 S00041004332_V2

Fits and Clearances
Figure 803 (Sheet 5 of 5)

REF IPL		NAME	TORQUE*	
FIG. NO.	ITEM NO.		POUND-INCHES	POUND-FEET
2	20	Bolt	31-38	
5	20	Bolt	31-38	
9	20	Bolt	31-38	

* REFER TO SOPM 20-50-01 FOR TORQUE VALUES OF STANDARD FASTENERS.

Torque Table
Figure 804

(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
06725	AIR INDUSTRIES CORPORATION 12570 KNOTT STREET GARDEN GROVE, CALIFORNIA 92641-3932 FORMERLY AIR INDUSTRIES OF CALIF IN GARDENA, CALIF.
0PTK6	SPS TECHNOLOGIES INC AEROSPACE PRODUCTS DIV 5195 W 4700 SALT LAKE CITY, UTAH 94118 SEE V56878 SPS TECHNOLOGIES INC
50632	KAMATICS CORP SUB OF KAMAN CORP 1335 BLUE HILLS ROAD BLOOMFIELD, CONNECTICUT 06002-1304
56878	SPS TECHNOLOGIES INC AEROSPACE AND INDUSTRIAL PRODUCTS DIV 301 HIGHLAND AVE JENKINTOWN, PENNSYLVANIA 19046 FORMERLY STANDARD PRESSED STEEL FORMERLY IN SALT LAKE, UTAH
5M902	ALCOA GLOBAL FASTENERS INC, DIV OF VOI-SHAN PRODUCTS 3000 W LOMITA BLVD TORRANCE, CALIFORNIA 90505-5103 FORMERLY FAIRCHILD INC INC FAIRCHILD AEROSPACE FASTENERS DIV
73197	HI-SHEAR TECHNOLOGY CORP 2600 SKYPARK DRIVE TORRANCE, CALIFORNIA 90509

Code	Name
92215	FAIRCHILD IND INC FAIRCHILD AEROSPACE FASTENER DIV 3010 W LOMITA BLVD TORRANCE, CALIFORNIA 90505-5102 FORMERLY VOI-SHAN IN CULVER CITY, CALIF

NUMERICAL INDEX

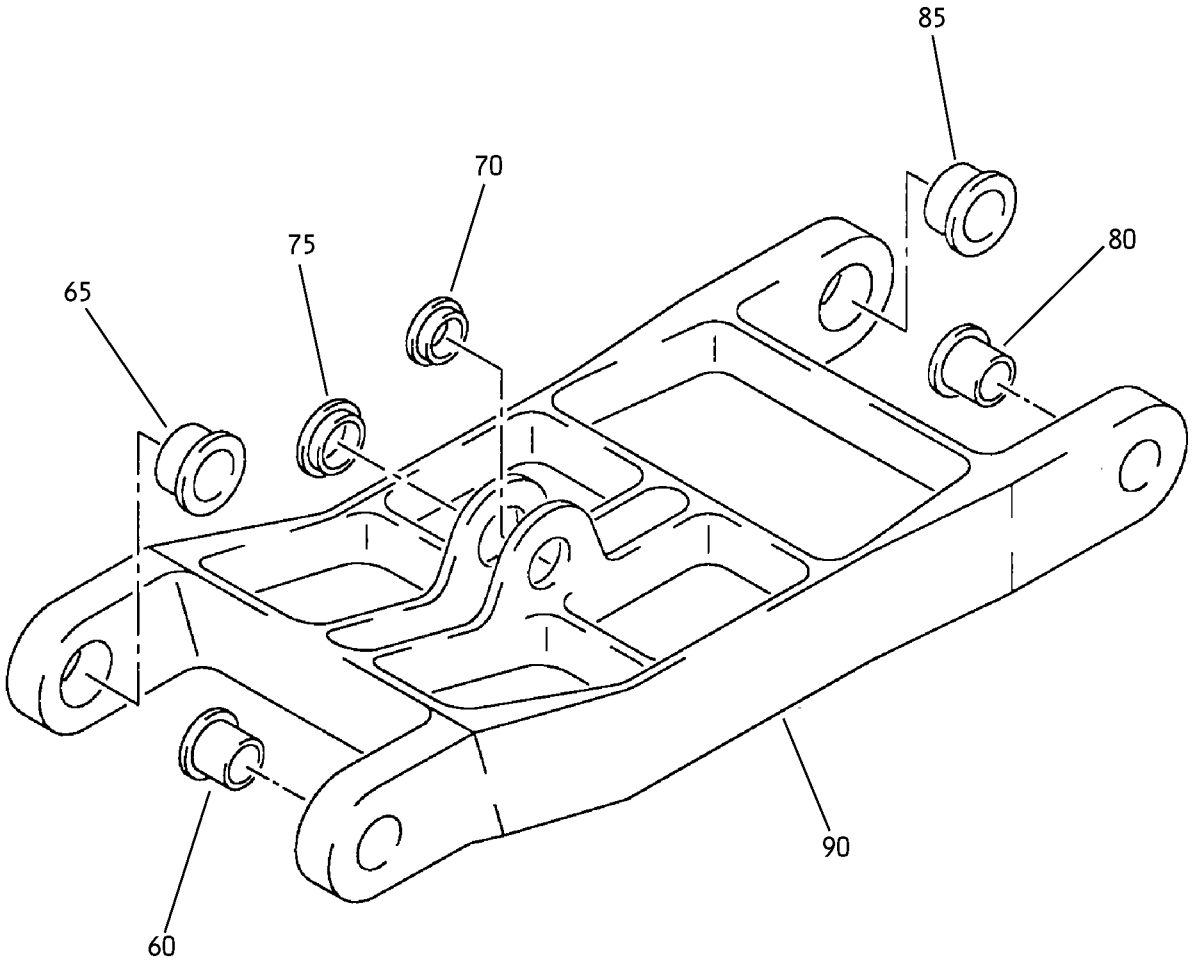
PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
		1		6
		1		6
113A9104-1		1	1A	RF
113A9104-2		1	1B	RF
113A9104-3		1	90	1
113A9104-4		1	95	1
113A9105-1		1	5	RF
		2	1A	RF
113A9105-3		2	45	1
113A9105-5		1	5A	RF
		2	1B	RF
113A9105-7		2	45A	1
113A9106-1		1	10	RF
		3	1A	RF
113A9106-3		3	30	1
113A9106-4		1	10A	RF
		3	1B	RF
113A9120-1		2	43	1
		5	43	1
		9	43	1
113A9204-1		1	15	RF
		4	1A	RF
113A9204-2		1	15A	RF
		4	1B	RF
113A9205-1		1	20	RF
		5	1A	RF
113A9205-3		5	45	1
113A9205-5		1	20A	RF
		5	1B	RF
113A9205-7		5	45A	1
113A9206-1		1	25	RF
		6	1A	RF
113A9206-3		6	30	1
113A9206-4		1	25A	RF

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
		6	1B	RF
113A9207-1		1	30	RF
		7	1A	RF
113A9207-3		7	30	1
113A9207-4		1	30A	RF
		7	1B	RF
113A9216-1		4	25	1
113A9216-2		4	25A	1
113A9216-3		4	50	1
113A9216-4		4	50A	1
113A9217-1		4	20	1
113A9217-3		4	23	1
113A9304-1		1	35	RF
		8	1A	RF
113A9304-3		8	30	1
113A9305-1		1	40	RF
		9	1A	RF
113A9305-3		9	45	1
113A9305-5		1	40A	RF
		9	1B	RF
113A9305-7		9	45A	1
113A9306-1		1	45	RF
		10	1A	RF
113A9306-3		10	30	1
113A9306-4		1	45A	RF
		10	1B	RF
113A9307-1		1	50	RF
		11	1A	RF
113A9307-3		11	30	1
113A9307-4		1	50A	RF
		11	1B	RF
69B14136-2		2	35	1
		5	35	1
		9	35	1
69B14136-3		2	30	1

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
		5	30	1
		9	30	1
BACB28AP06P014		1	70	1
		2	10	1
		4	21	1
		5	10	1
		9	10	1
BACB28AP06P059		8	10	1
BACB28AP07P049		1	60	1
		4	40	1
BACB28AP08P049		1	80	1
		8	20	1
BACB28AP09P049		4	35	1
BACB28AT09B014C		1	75	1
		2	15	1
		4	22	1
		5	15	1
		9	15	1
BACB28AT09B048C		8	5	2
BACB28AT09B059C		8	15	1
BACB28AT10B049C		1	65	1
		4	45	1
BACB28AT11B049C		1	85	1
		8	25	1
BACB28AT13B049C		4	30	1
BACB28AZ09A049C		9	5	2
BACB28AZ10A049C		2	5	2
		5	5	2
BACB30NM3HK6		2	20	4
		5	20	4
		9	20	4
BACB30NM3HK7		2	20A	4
		5	20A	4
		9	20A	4
BACB30VT6K4		4	5	4

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
BACC30BL6		4	10	4
BACN11U6CM1		3	20A	1
		6	20A	1
		7	20A	1
		10	20A	1
		11	20A	1
BACN11U6CM1L		3	10A	1
		6	10A	1
		7	10A	1
		10	10A	1
		11	10A	1
BACS40R010C021P		4	15	1
BACW10DS3S		2	25	4
		5	25	4
		9	25	4
HST10AG6-4		4	5	4
		4	5	4
		4	5	4
		4	5	4
HST79-6		4	10	4
HST79CY6		4	10	4
		4	10	4
		4	10	4
KSC2786007BZ		5	40	1
KSC278607BZ		2	40	1
		5	40A	1
		9	40	1
KSR167306BK		3	25	1
		6	25	1
		7	25	1
		10	25	1
		11	25	1
KSR167306BLK		3	5	1
		6	5	1
		7	5	1

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
		10	5	1
		11	5	1
MS14227-6		3	15A	2
		6	15A	2
		7	15A	2
		10	15A	2
		11	15A	2
NAS509-6C		3	20	1
		6	20	1
		7	20	1
		10	20	1
		11	20	1
NAS509L6C		3	10	1
		6	10	1
		7	10	1
		10	10	1
		11	10	1
NAS513-6		3	15	2
		6	15	2
		7	15	2
		10	15	2
		11	15	2

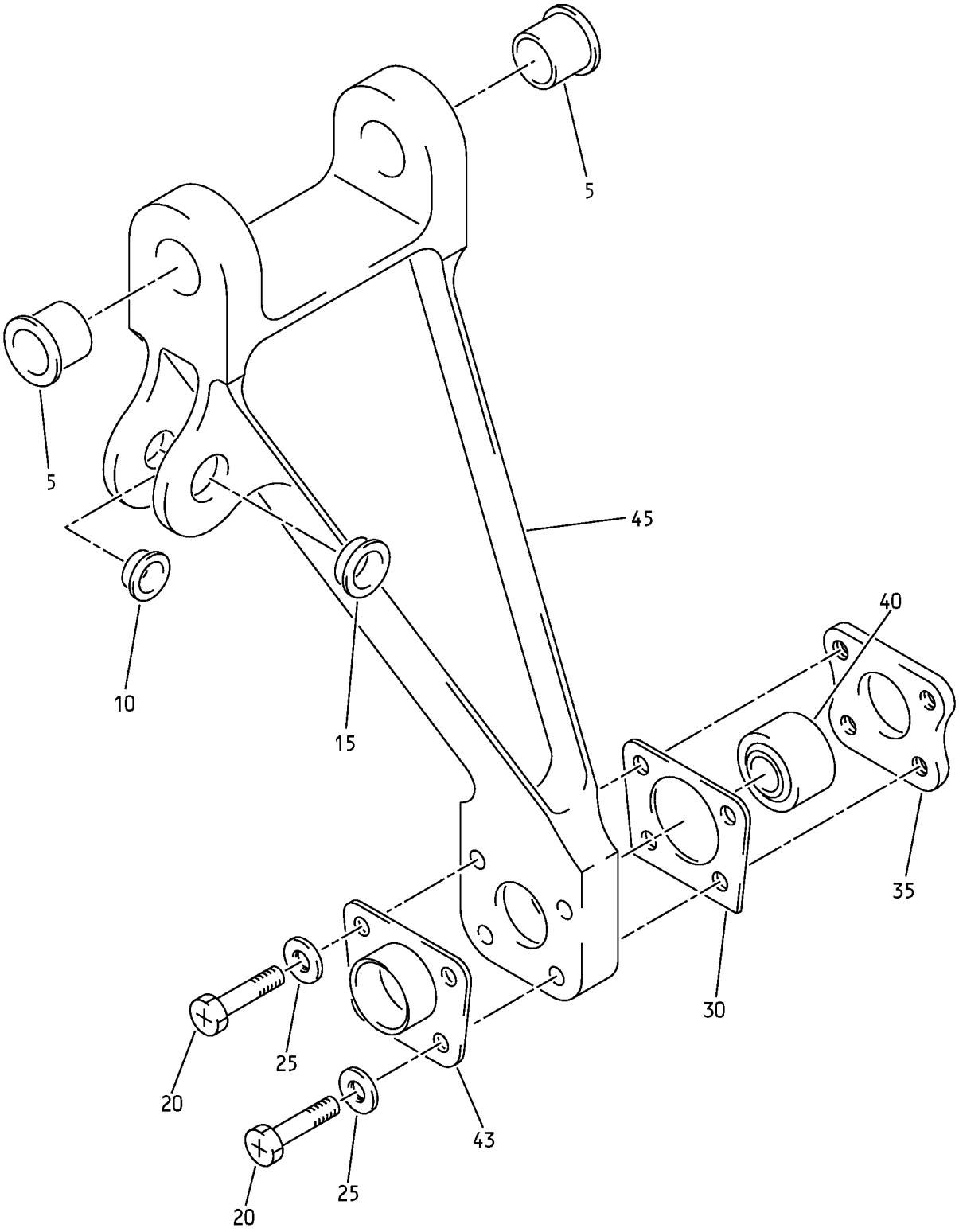


Attach Beam Assembly
IPL Figure 1

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
			INSTALLATION COMPONENTS		
			FAIRING FLAP SUPPORT		
–1A	113A9104-1		BEAM ASSY-ATTACH	A	RF
–1B	113A9104-2		BEAM ASSY-ATTACH	W	RF
–5	113A9105-1		LINK ASSY-ADJUST (FOR DETAILS SEE FIG. 2)	B	RF
–5A	113A9105-5		LINK ASSY-ADJUST (FOR DETAILS SEE FIG. 2)	M	RF
–10	113A9106-1		ROD ASSY-DRIVE (FOR DETAILS SEE FIG. 3)	C	RF
–10A	113A9106-4		ROD ASSY-DRIVE (FOR DETAILS SEE FIG. 3)	R	RF
–15	113A9204-1		BEAM ASSY-ATTACH (FOR DETAILS SEE FIG. 4)	D	RF
–15A	113A9204-2		BEAM ASSY-ATTACH (FOR DETAILS SEE FIG. 4)	Q	RF
–20	113A9205-1		LINK ASSY-ADJUST (FOR DETAILS SEE FIG. 5)	E	RF
–20A	113A9205-5		LINK ASSY-ADJUST (FOR DETAILS SEE FIG. 5)	N	RF
–25	113A9206-1		ROD ASSY-DRIVE (FOR DETAILS SEE FIG. 6)	F	RF
–25A	113A9206-4		ROD ASSY-DRIVE (FOR DETAILS SEE FIG. 6)	S	RF
–30	113A9207-1		ROD ASSY-ADJUST (FOR DETAILS SEE FIG. 7)	G	RF
–30A	113A9207-4		ROD ASSY-ADJUST (FOR DETAILS SEE FIG. 7)	T	RF
–35	113A9304-1		BEAM ASSY-ATTACH (FOR DETAILS SEE FIG. 8)	H	RF
–40	113A9305-1		LINK ASSY-ADJUST (FOR DETAILS SEE FIG. 9)	J	RF
–40A	113A9305-5		LINK ASSY-ADJUST (FOR DETAILS SEE FIG. 9)	P	RF
–45	113A9306-1		ROD ASSY-DRIVE (FOR DETAILS SEE FIG. 10)	K	RF

–Item not Illustrated

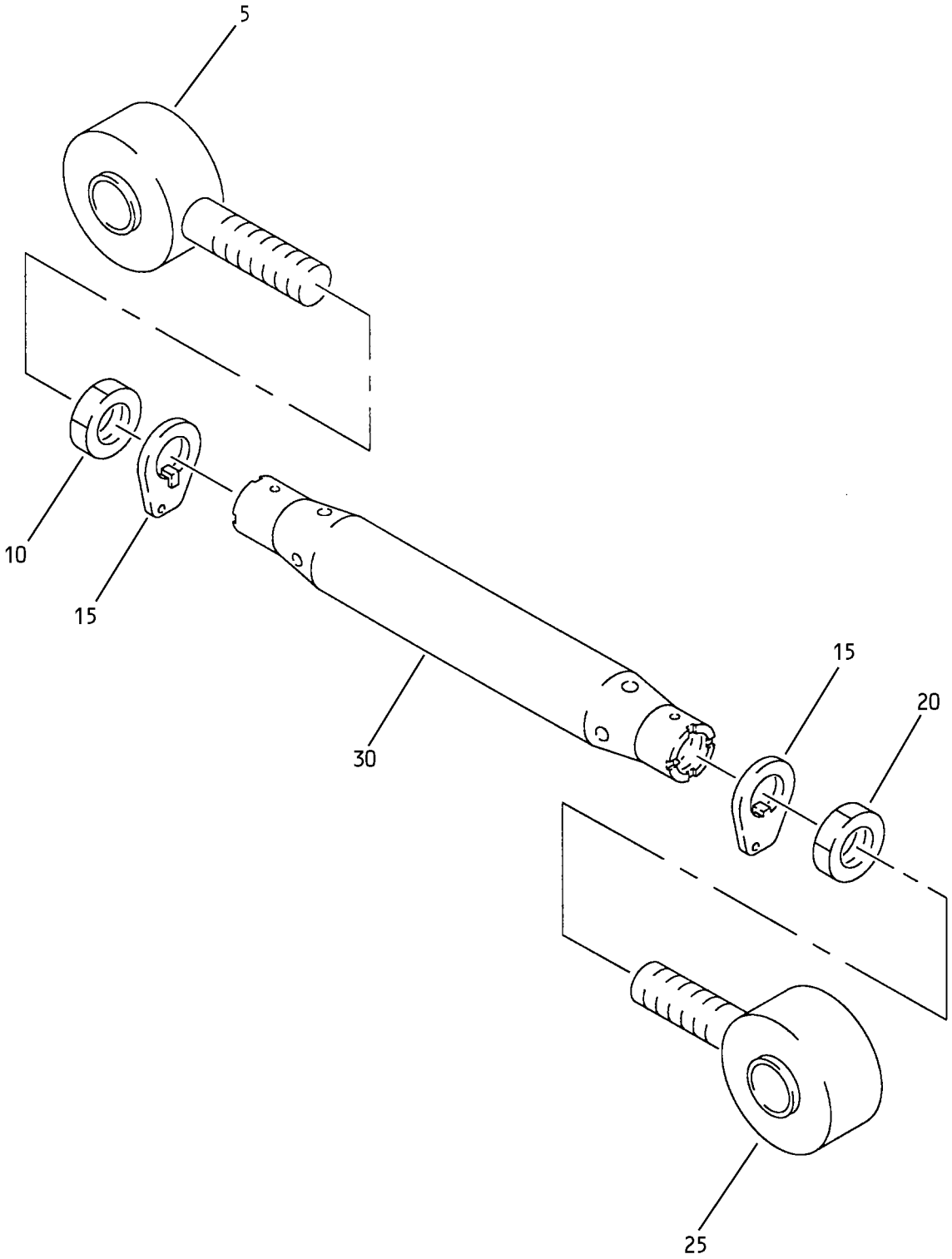
FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
–45A	113A9306-4		ROD ASSY-DRIVE (FOR DETAILS SEE FIG. 10)	U	RF
–50	113A9307-1		ROD ASSY-ADJUST (FOR DETAILS SEE FIG. 11)	L	RF
–50A	113A9307-4		ROD ASSY-ADJUST (FOR DETAILS SEE FIG. 11)	V	RF
60	BACB28AP07P049		. BUSHING	A, W	1
65	BACB28AT10B049C		. BUSHING	A, W	1
70	BACB28AP06P014		. BUSHING	A, W	1
75	BACB28AT09B014C		. BUSHING	A, W	1
80	BACB28AP08P049		. BUSHING	A, W	1
85	BACB28AT11B049C		. BUSHING	A, W	1
90	113A9104-3		. BEAM	A	1
–95	113A9104-4		. BEAM	W	1



Adjust Link Assembly
IPL Figure 2

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
2–					
–1A	113A9105-1		LINK ASSY-ADJUST	B	RF
–1B	113A9105-5		LINK ASSY-ADJUST	M	RF
5	BACB28AZ10A049C		. BUSHING	B, M	2
10	BACB28AP06P014		. BUSHING	B, M	1
15	BACB28AT09B014C		. BUSHING	B, M	1
20	BACB30NM3HK6		. BOLT	B	4
–20A	BACB30NM3HK7		. BOLT	M	4
25	BACW10DS3S		. WASHER	B, M	4
30	69B14136-3		. SHIM	B, M	1
35	69B14136-2		. RETAINER	B, M	1
40	KSC278607BZ		. BEARING (V50632)	B, M	1
43	113A9120-1		. BUSHING	M	1
45	113A9105-3		. LINK	B	1
–45A	113A9105-7		. LINK	M	1

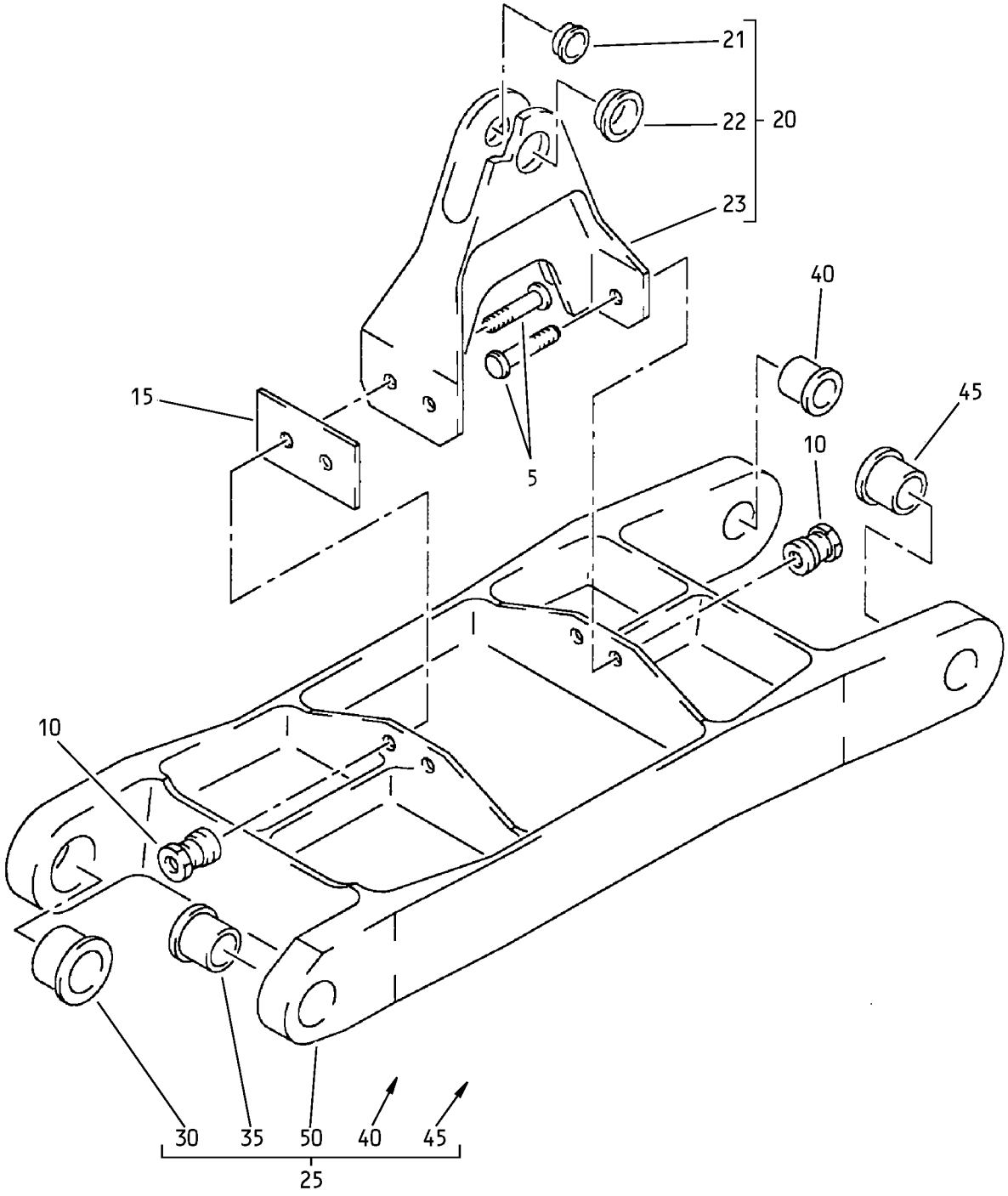
–Item not Illustrated



Drive Rod 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–					
–1A	113A9106-1		ROD ASSY-DRIVE	C	RF
–1B	113A9106-4		ROD ASSY-DRIVE	R	RF
5	KSR167306BLK		. BEARING-ROD END (V50632)	C, R	1
10	NAS509L6C		. NUT	C	1
–10A	BACN11U6CM1L		. NUT-JAM	R	1
15	NAS513-6		. WASHER	C	2
–15A	MS14227-6		. LOCK-LOCK-ROD END	R	2
20	NAS509-6C		. NUT	C	1
–20A	BACN11U6CM1		. NUT-JAM	R	1
25	KSR167306BK		. BEARING-ROD END (V50632)	C, R	1
30	113A9106-3		. ROD-SWAGED	C, R	1

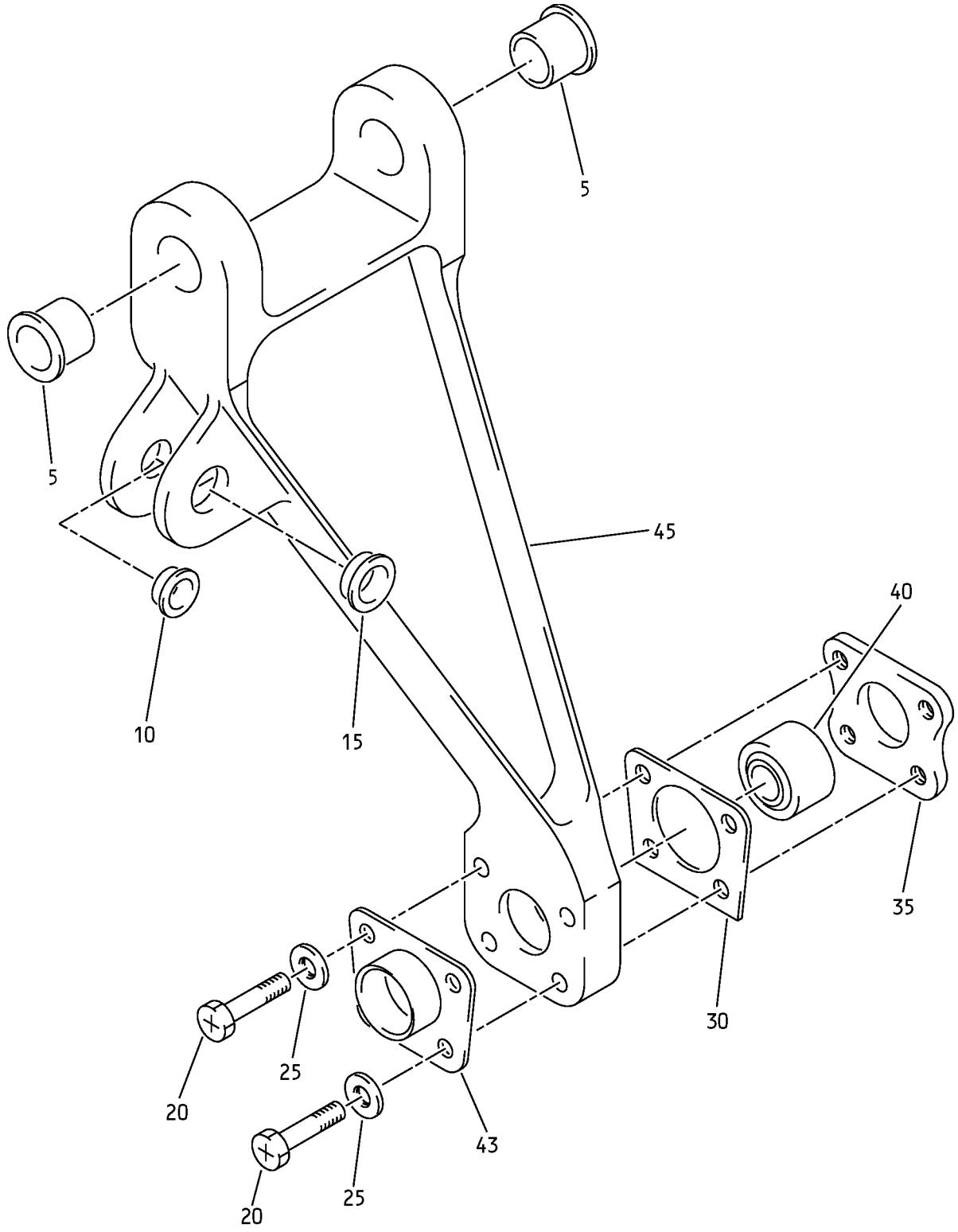
–Item not Illustrated



Attach Beam 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–					
–1A	113A9204-1		BEAM ASSY-ATTACH	D	RF
–1B	113A9204-2		BEAM ASSY-ATTACH	Q	RF
5	HST10AG6-4		. BOLT (V06725) (SPEC BACB30VT6K4) (OPT HST10AG6-4 (V73197)) (OPT HST10AG6-4 (V56878)) (OPT HST10AG6-4 (V0PTK6))	D, Q	4
10	HST79CY6		. COLLAR (V73197) (SPEC BACC30BL6) (OPT HST79-6 (V92215)) (OPT HST79CY6 (V56878)) (OPT HST79CY6 (V5M902))	D, Q	4
15	BACS40R010C021P		. SHIM	D, Q	1
20	113A9217-1		. FITTING ASSY	D, Q	1
21	BACB28AP06P014		. . BUSHING	D, Q	1
22	BACB28AT09B014C		. . BUSHING	D, Q	1
23	113A9217-3		. . FITTING	D, Q	1
25	113A9216-1		. BEAM ASSY	D	1
–25A	113A9216-2		. BEAM ASSY	Q	1
30	BACB28AT13B049C		. . BUSHING	D, Q	1
35	BACB28AP09P049		. . BUSHING	D, Q	1
40	BACB28AP07P049		. . BUSHING	D, Q	1
45	BACB28AT10B049C		. . BUSHING	D, Q	1
50	113A9216-3		. . BEAM	D	1
–50A	113A9216-4		. . BEAM	Q	1

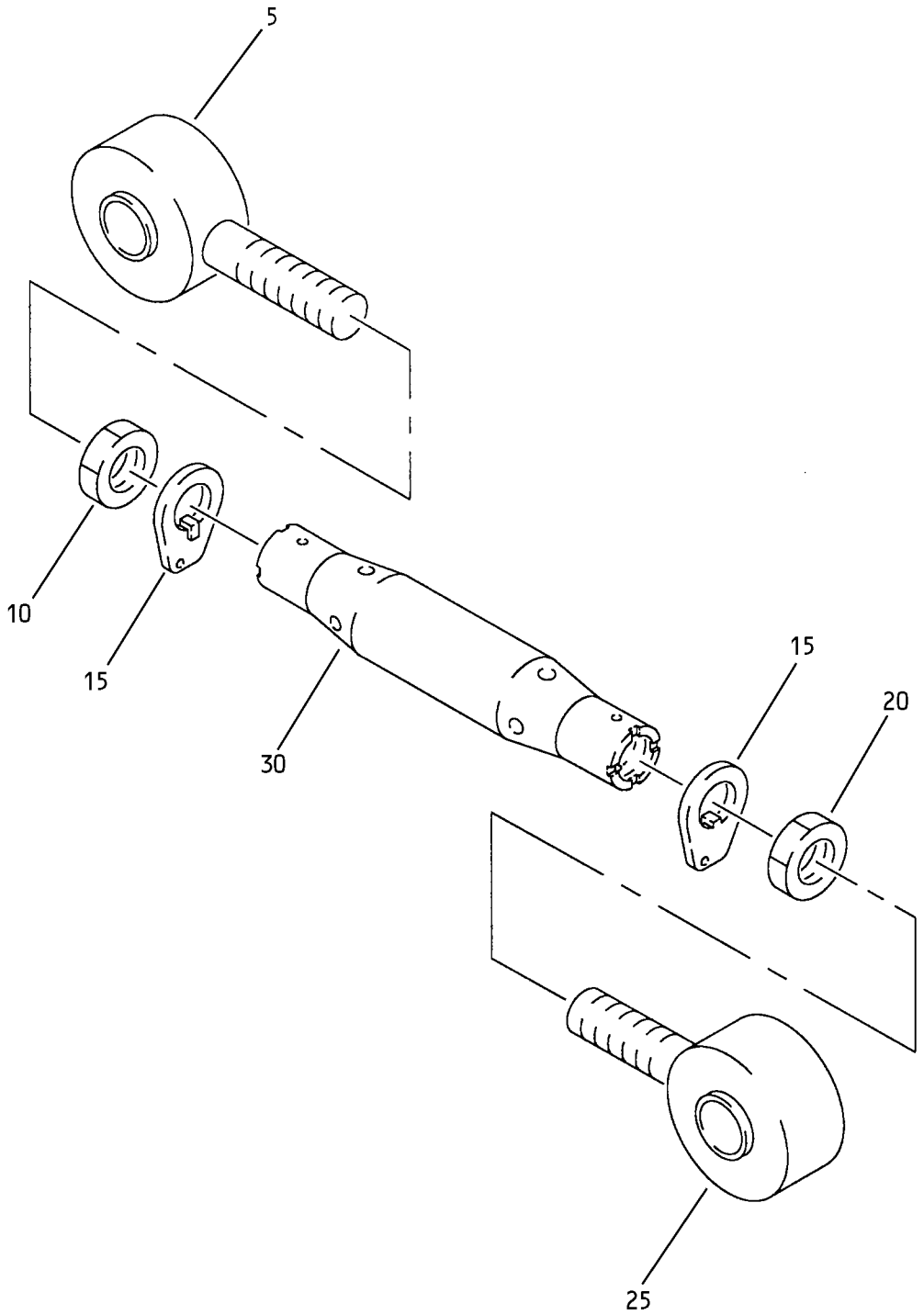
–Item not Illustrated



Adjust Link Assembly
IPL Figure 5

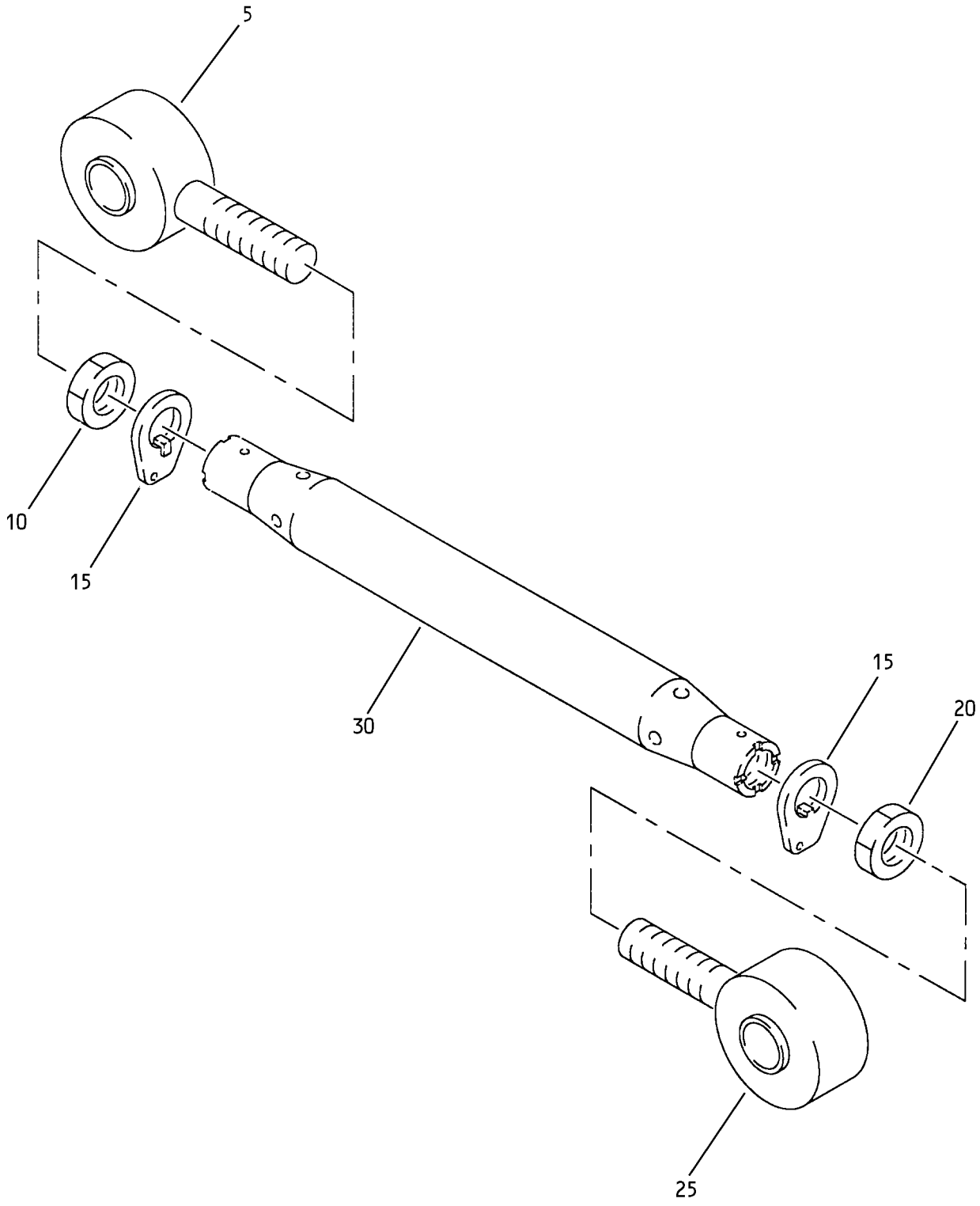
FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
5–					
–1A	113A9205-1		LINK ASSY-ADJUST	E	RF
–1B	113A9205-5		LINK ASSY-ADJUST	N	RF
5	BACB28AZ10A049C		. BUSHING	E, N	2
10	BACB28AP06P014		. BUSHING	E, N	1
15	BACB28AT09B014C		. BUSHING	E, N	1
20	BACB30NM3HK6		. BOLT	E	4
–20A	BACB30NM3HK7		. BOLT	N	4
25	BACW10DS3S		. WASHER	E, N	4
30	69B14136-3		. SHIM-LAMINATED	E, N	1
35	69B14136-2		. RETAINER	E, N	1
40	KSC2786007BZ		. DELETED (V50632)		
40A	KSC278607BZ		. BEARING (V50632)	E, N	1
43	113A9120-1		. BUSHING	N	1
45	113A9205-3		. LINK	E	1
–45A	113A9205-7		. LINK	N	1

–Item not Illustrated



Drive Rod Assembly
IPL Figure 6

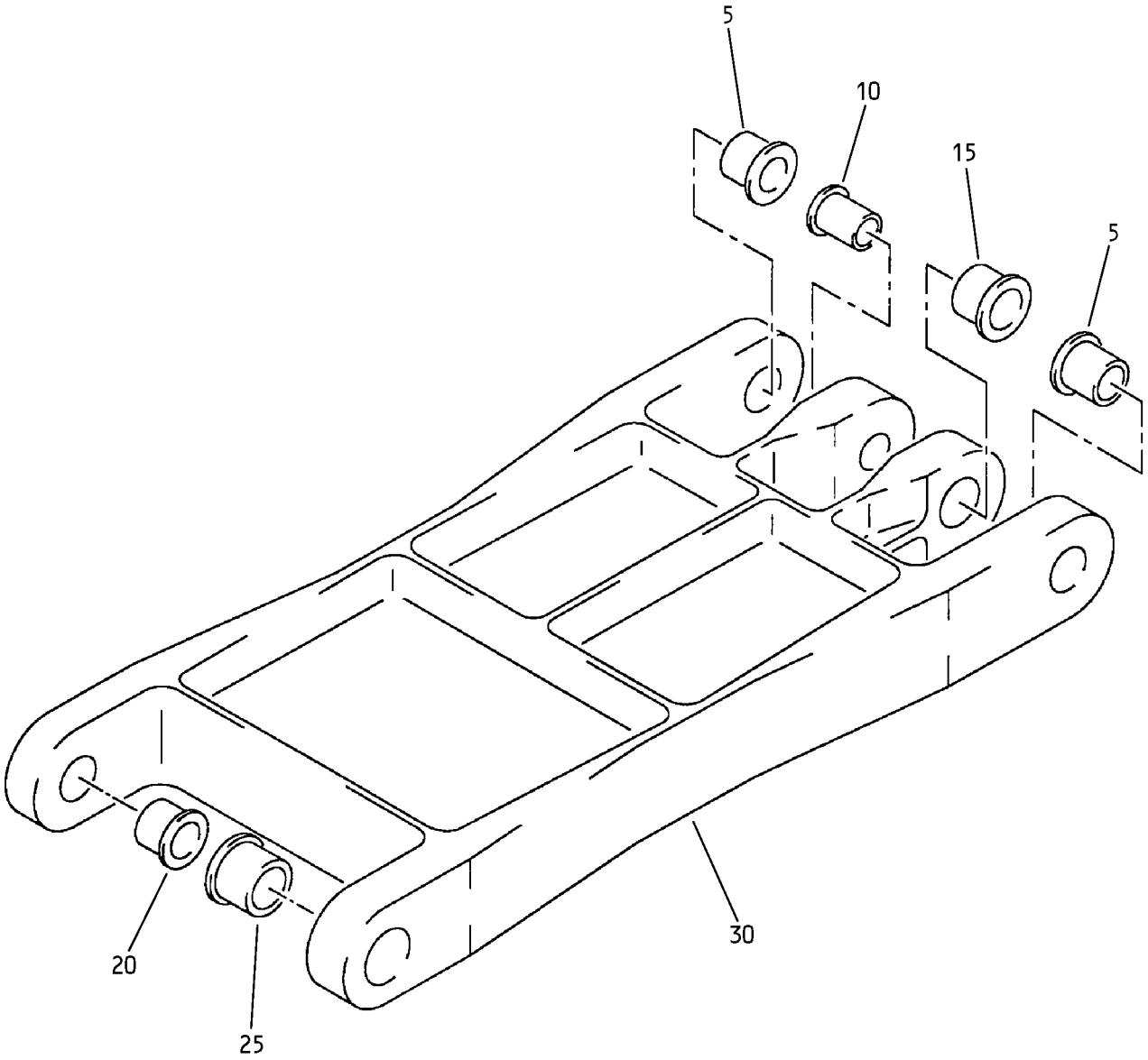
FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
6–					
–1A	113A9206-1		ROD ASSY-DRIVE	F	RF
–1B	113A9206-4		ROD ASSY-DRIVE	S	RF
5	KSR167306BLK		. BEARING-ROD END (V50632)	F, S	1
10	NAS509L6C		. NUT	F	1
–10A	BACN11U6CM1L		. NUT-JAM	S	1
15	NAS513-6		. WASHER	F	2
–15A	MS14227-6		. LOCK-LOCK-ROD END	S	2
20	NAS509-6C		. NUT	F	1
–20A	BACN11U6CM1		. NUT-JAM	S	1
25	KSR167306BK		. BEARING-ROD END (V50632)	F, S	1
30	113A9206-3		. ROD-SWAGED	F, S	1



Adjust Rod 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–					
–1A	113A9207-1		ROD ASSY-ADJUST	G	RF
–1B	113A9207-4		ROD ASSY-ADJUST	T	RF
5	KSR167306BLK		. BEARING-ROD END (V50632)	G, T	1
10	NAS509L6C		. NUT	G	1
–10A	BACN11U6CM1L		. NUT-JAM	T	1
15	NAS513-6		. WASHER	G	2
–15A	MS14227-6		. LOCK-LOCK-ROD END	T	2
20	NAS509-6C		. NUT	G	1
–20A	BACN11U6CM1		. NUT-JAM	T	1
25	KSR167306BK		. BEARING-ROD END (V50632)	G, T	1
30	113A9207-3		. ROD-SWAGED	G, T	1

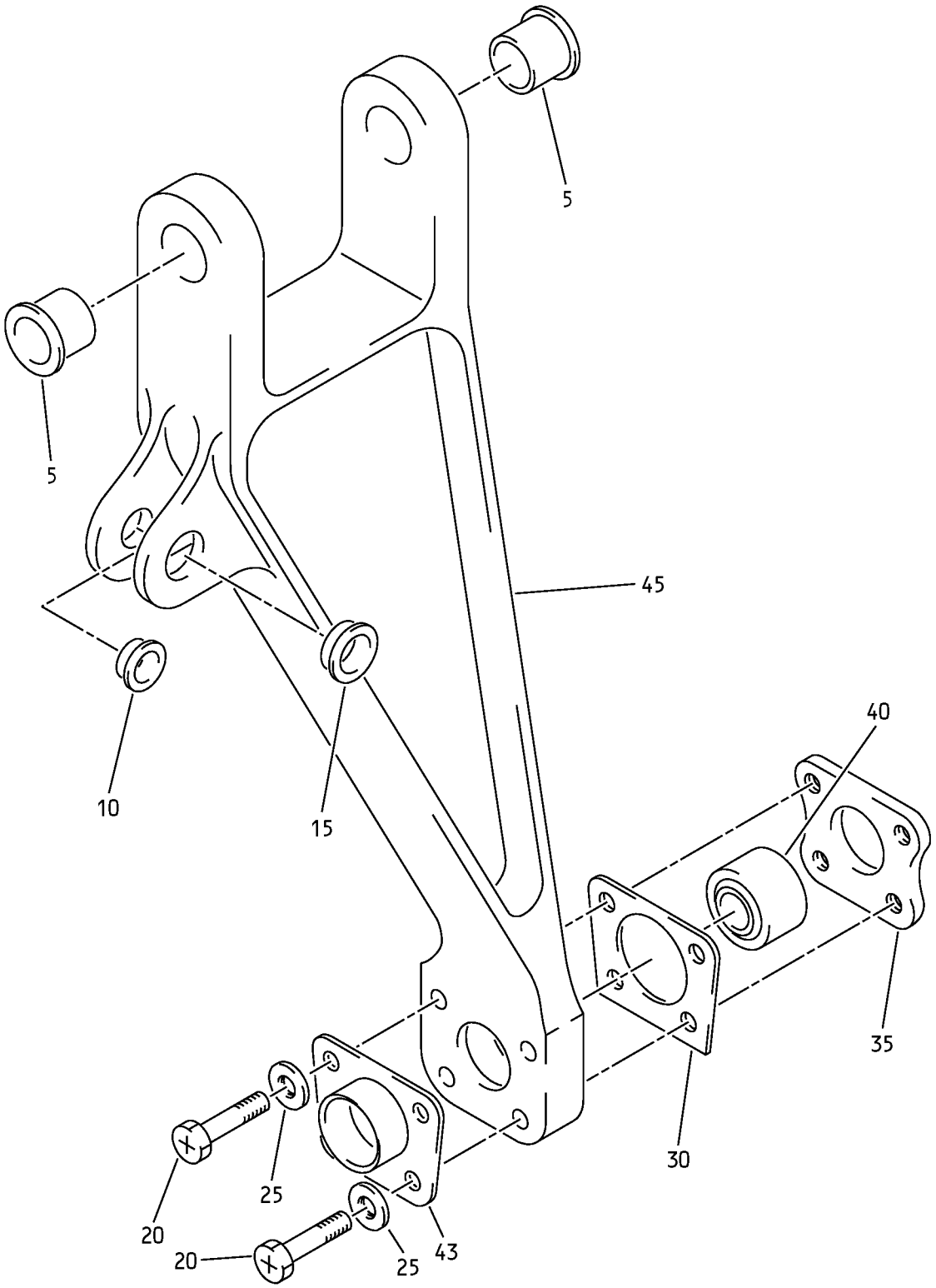
–Item not Illustrated



Attach Beam Assembly
IPL Figure 8

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
8–					
–1A	113A9304-1		BEAM ASSY-ATTACH	H	RF
5	BACB28AT09B048C		. BUSHING	H	2
10	BACB28AP06P059		. BUSHING	H	1
15	BACB28AT09B059C		. BUSHING	H	1
20	BACB28AP08P049		. BUSHING	H	1
25	BACB28AT11B049C		. BUSHING	H	1
30	113A9304-3		. BEAM	H	1

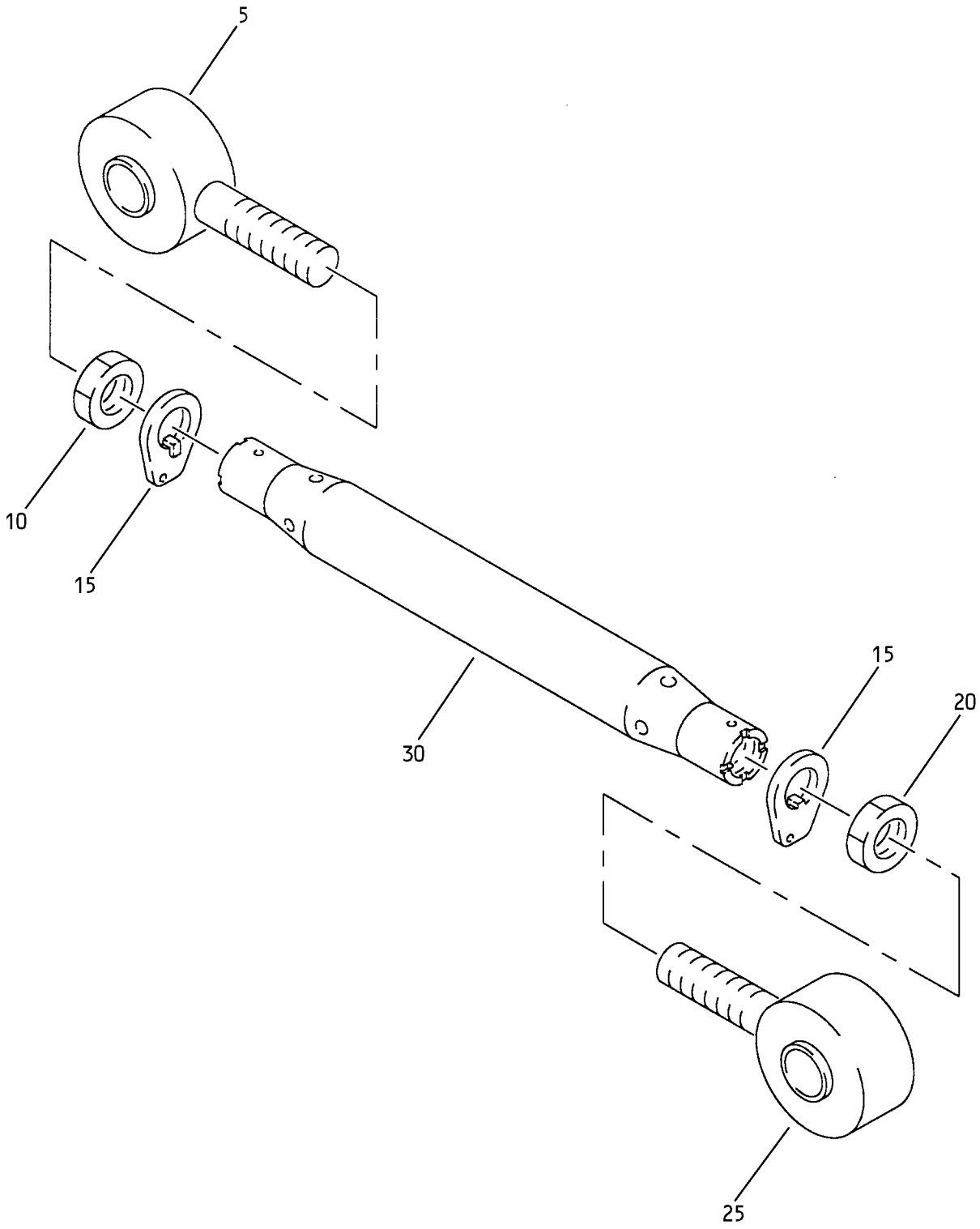
–Item not Illustrated



Adjust Link Assembly
IPL Figure 9

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
9–					
–1A	113A9305-1		LINK ASSY-ADJUST	J	RF
–1B	113A9305-5		LINK ASSY-ADJUST	P	RF
5	BACB28AZ09A049C		. BUSHING	J, P	2
10	BACB28AP06P014		. BUSHING	J, P	1
15	BACB28AT09B014C		. BUSHING	J, P	1
20	BACB30NM3HK6		. BOLT	J	4
–20A	BACB30NM3HK7		. BOLT	P	4
25	BACW10DS3S		. WASHER	J, P	4
30	69B14136-3		. SHIM-LAMINATED	J, P	1
35	69B14136-2		. RETAINER	J, P	1
40	KSC278607BZ		. BEARING (V50632)	J, P	1
43	113A9120-1		. BUSHING	P	1
45	113A9305-3		. LINK	J	1
–45A	113A9305-7		. LINK	P	1

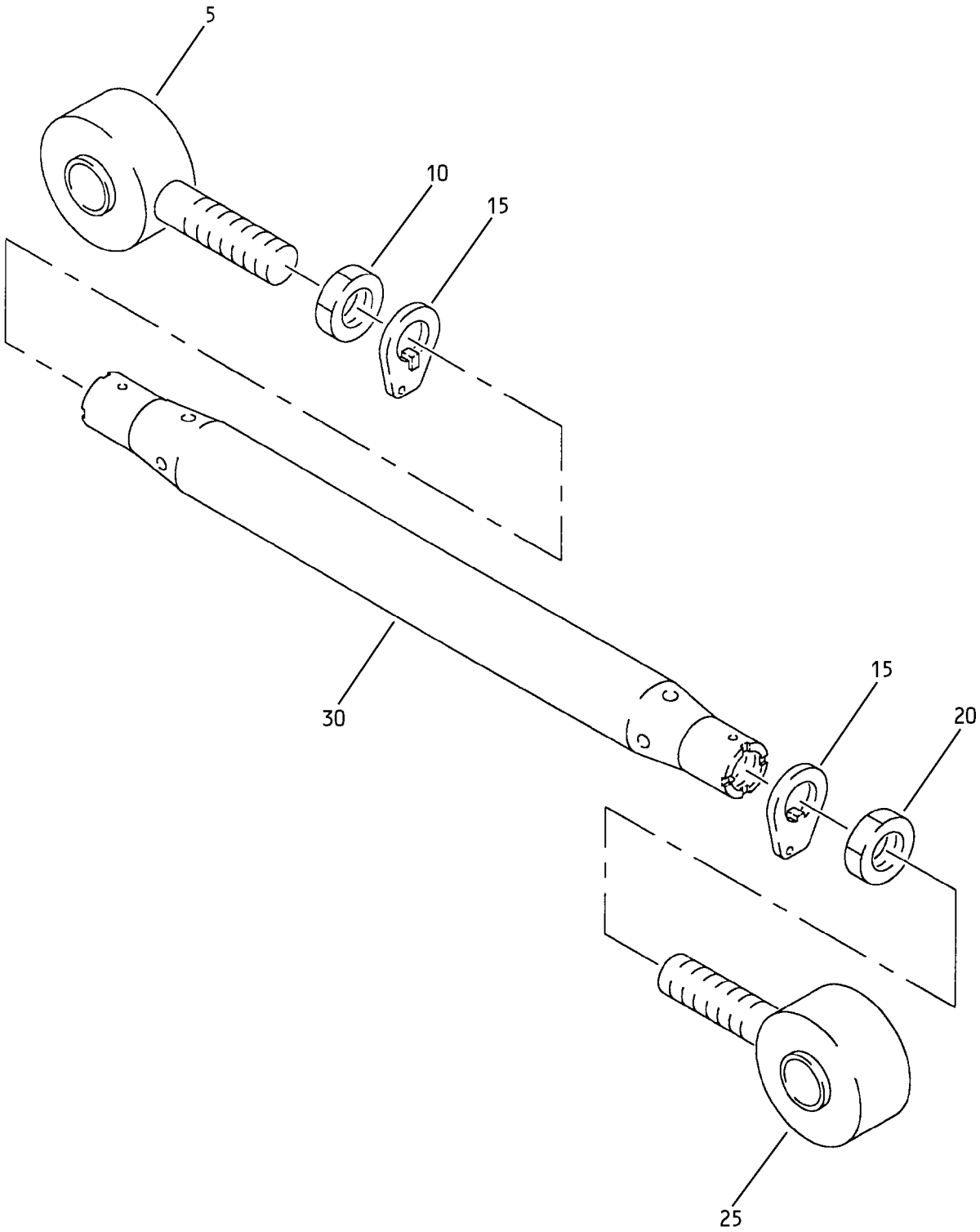
–Item not Illustrated



Drive Rod Assembly
IPL Figure 10

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
10–					
–1A	113A9306-1		ROD ASSY-DRIVE	K	RF
–1B	113A9306-4		ROD ASSY-DRIVE	U	RF
5	KSR167306BLK		. BEARING-ROD END (V50632)	K, U	1
10	NAS509L6C		. NUT	K	1
–10A	BACN11U6CM1L		. NUT-JAM	U	1
15	NAS513-6		. WASHER	K	2
–15A	MS14227-6		. LOCK-LOCK-ROD END	U	2
20	NAS509-6C		. NUT-ROD END	K	1
–20A	BACN11U6CM1		. NUT-JAM	U	1
25	KSR167306BK		. BEARING-ROD END (V50632)	K, U	1
30	113A9306-3		. ROD-SWAGE	K, U	1

–Item not Illustrated



Adjust Rod Assembly
IPL Figure 11

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
11–					
–1A	113A9307-1		ROD ASSY-ADJUST	L	RF
–1B	113A9307-4		ROD ASSY-ADJUST	V	RF
5	KSR167306BLK		. BEARING-ROD END (V50632)	L, V	1
10	NAS509L6C		. NUT	L	1
–10A	BACN11U6CM1L		. NUT-JAM	V	1
15	NAS513-6		. WASHER	L	2
–15A	MS14227-6		. LOCK-LOCK-ROD END	V	2
20	NAS509-6C		. NUT	L	1
–20A	BACN11U6CM1		. NUT-JAM	V	1
25	KSR167306BK		. BEARING-ROD END (V50632)	L, V	1
30	113A9307-3		. ROD-SWAGE	L, V	1

–Item not Illustrated