TO: ALL HOLDERS OF MAIN LANDING GEAR SIDE STRUT ASSEMBLY COMPONENT MAINTENANCE MANUAL 32-11-73

REVISION NO. 2 DATED MAR 01/02

HIGHLIGHTS

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

CHAPTER/SECTION AND PAGE NO.	DESCRIPTION OF CHANGE
REPAIR 6-1 605	Added clarifications and updated callouts.

BOEING

COMPONENT
MAINTENANCE MANUAL

MAIN LANDING GEAR SIDE STRUT ASSEMBLY

PART NUMBER 161T2100-1,-2

COMPONENT MAINTENANCE MANUAL
WITH
ILLUSTRATED PARTS LIST

K13072

REVISION RECORD

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

REVISION NUMBER	REVISION DATE	DATE FILED	BY	REVISION NUMBER	REVISION DATE	DATE FILED	BY

K13073

TEMPORARY REVISION AND SERVICE BULLETIN RECORD

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVE	DATE OF INCORPORATION INTO MANUAL

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2	BLANK	
REVISION RECORD		
1	JUL 01/99	01
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TR & SB RECORD		
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REPAIR 3-2		
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607	NOV 01/00	01.1
608	NOV 01/00	01.1
REPAIR 4-1		
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608	NOV 01/00	01.1
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REPAIR 5-2		
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609	NOV 01/00	01.1
610	NOV 01/00	01.1
REPAIR 6-1		
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REPAIR 7-1		
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801	NOV 01/00	01.1
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1001	JUL 01/99	01
1002	JUL 01/99	01
1003	NOV 01/00	01.1
1004	NOV 01/00	01.1
1005	JUL 01/99	01
1006	JUL 01/99	01
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* = REVISED, ADDED OR DELETED

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1009	NOV 01/00	01.1
1010	JUL 01/99	01

PAGE	DATE	CODE

* = REVISED, ADDED OR DELETED

TABLE OF CONTENTS

*[1] Not Applicable.

*[2] Special instructions not required. Use standard industry practices.

INTRODUCTION

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

This manual is divided into separate sections:

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

Refer to the Table of Contents for the page location of applicable sections.

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

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

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

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

Verification:

DESCRIPTION AND OPERATION

1. Description

   A. The main landing gear side strut assembly consists of an upper strut assembly, a lower strut assembly, an inboard lock link assembly, and an outboard lock link assembly.

2. Operation

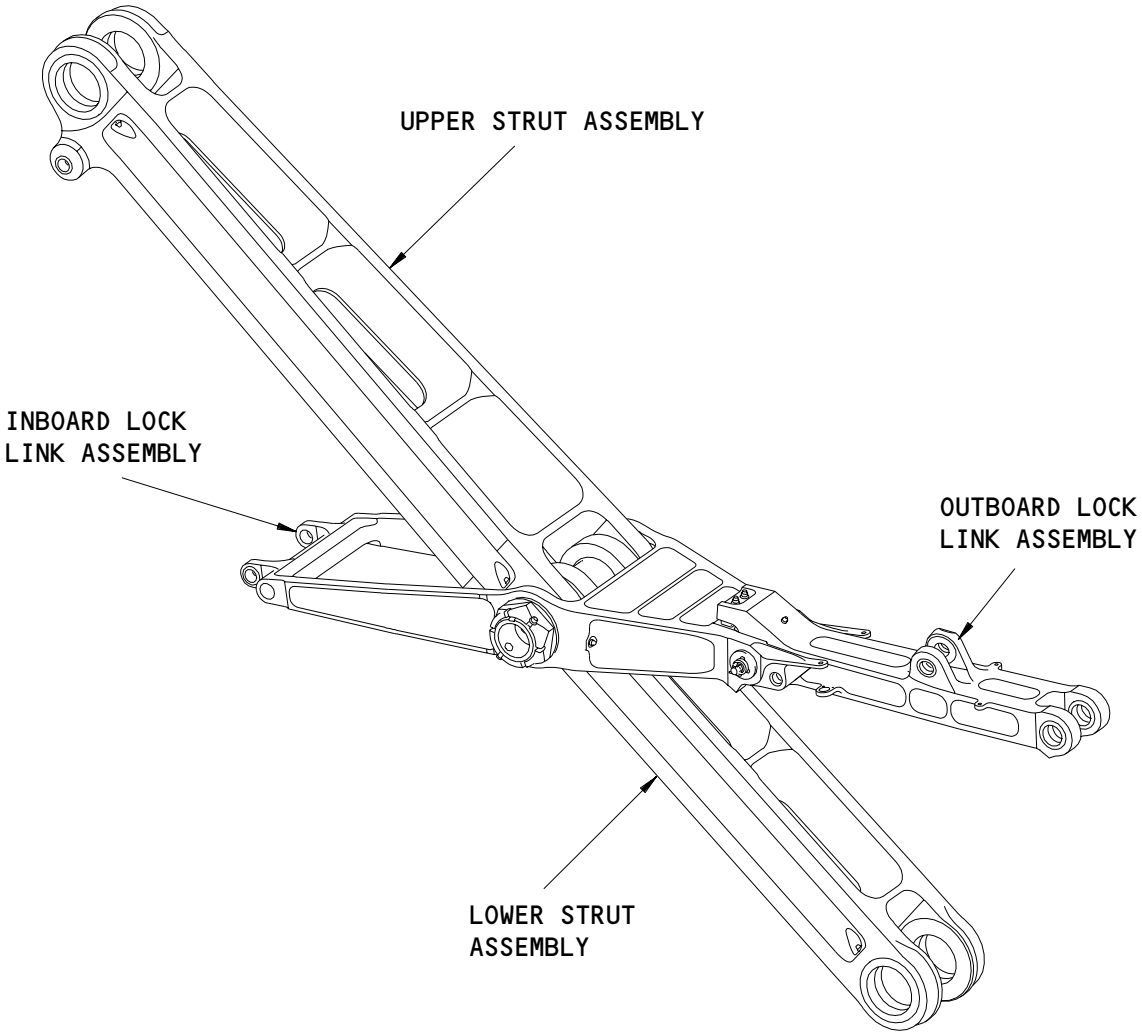
   A. The side strut assembly braces and supports the main landing gear. The lock link assemblies lock the side strut assembly in the extended position. During, the main landing gear extension, the side strut assembly extends and the lock link assemblies travel into over center position, bracing the side strut assemblies.

3. Leading Particulars (Approximate)

   A. Length -- 74.0 inches

   B. Width -- 25.3 inches

   C. Weight -- 184 pounds



Side Strut Assembly
Figure 1

K13117

TESTING AND FAULT ISOLATION

1. General

   A. This procedure contains the necessary data to test the main landing gear (MLG) side strut assembly after an overhaul or for fault isolation.

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

   C. Refer to IPL Fig. 1 for item numbers.

2. MLG Side Strut Assembly Test

   A. References

      (1) 32-11-73/301, Disassembly

      (2) 32-11-73/701, Assembly

   B. Procedures

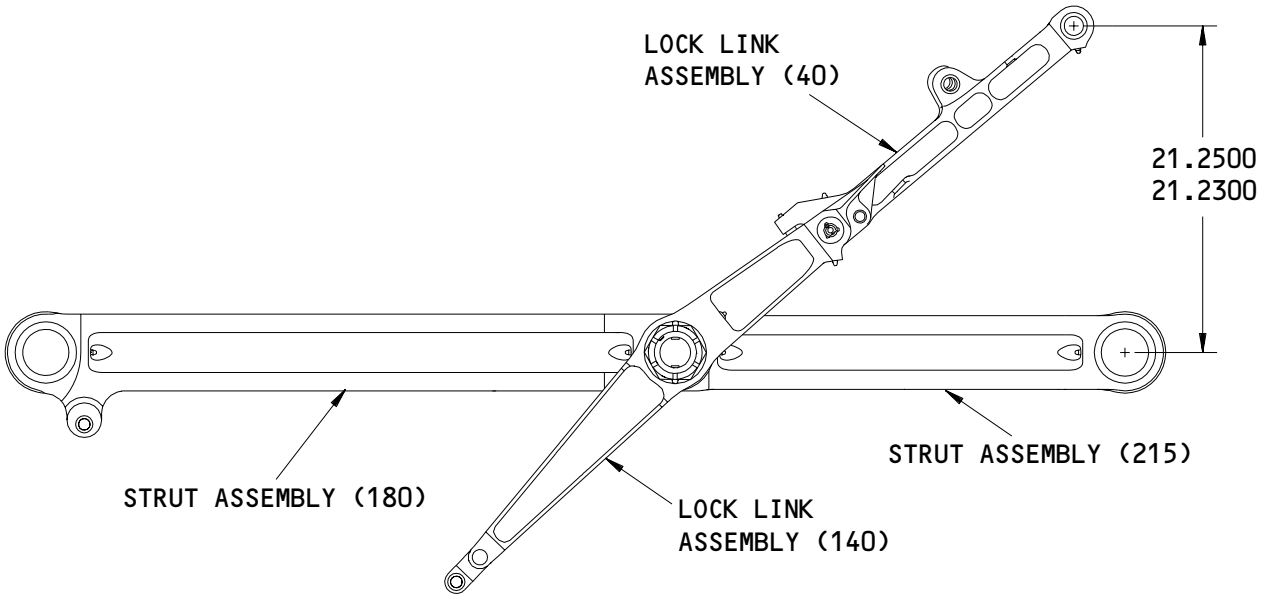
      (1) Do a side strut (1) functional test.

         (a) With the side strut assembly (1) in the gear down position, fold the side strut assembly (1) to the dimension shown in Fig. 101.

         (b) There must be no binding or interference of any part.

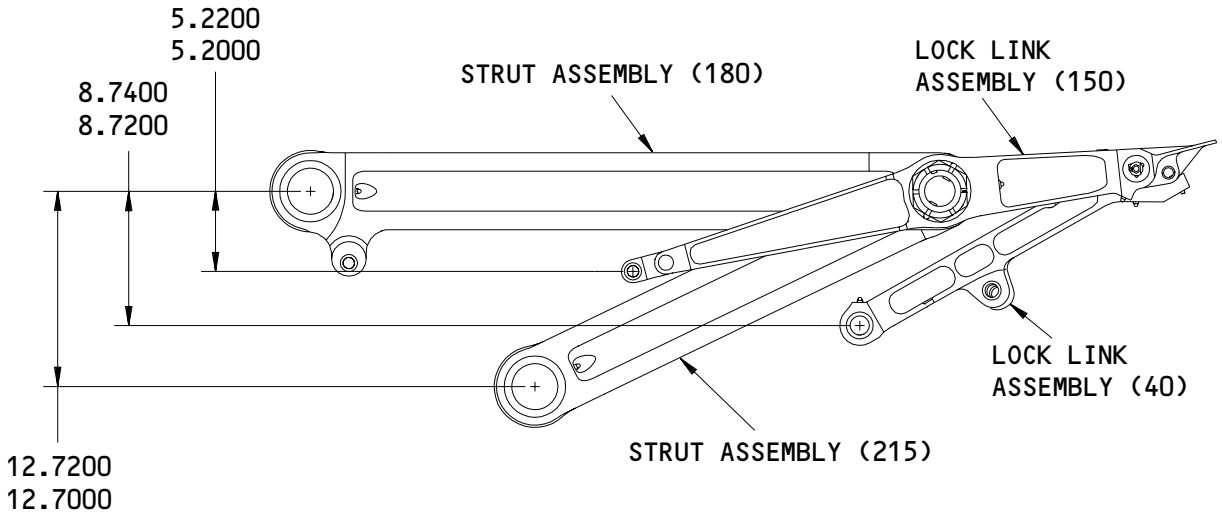
         (c) Unfold the side strut assembly (1) to the gear down position.

         (d) There must be no binding or interference of any part.



GEAR DOWN POSITION

161T2100-1 SHOWN
161T2100-2 OPPOSITE



GEAR UP POSITION

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

Side Strut Assembly
Figure 101

K13128

DISASSEMBLY

1. General

   A. This procedure has the data necessary to disassemble the main landing gear side strut assembly.

   B. Disassemble this component sufficiently to isolate the defects, do the necessary repairs, and put the component back to a serviceable condition.

   C. Refer to the Standard Overhaul Practices Manual (SOPM) for details of the SOPM subjects identified in the procedure.

   D. Refer to IPL Fig. 1 for item numbers.

2. Disassembly

   A. References

      (1) SOPM 20-50-01, Bolt and Nut Installation.

   B. Procedure

      (1) Use standard industry procedures and the steps shown below to disassemble this component.

      (2) Remove the cotter pin (10), the bolt (15), the washer (20), and the nut (25) from the lock link pin (35).

      (3) Remove the end caps (30) and the lock link pin (35), and the lock link assembly (40 or 45) from the lock link assembly (150).

      (4) If necessary, remove the bolts (90), the washers (100), the nuts (105), the shim (110), and the fitting (115) from the lock link assembly (40 or 45).

      (5) If necessary, remove the bolts (95), the washers (100), the nuts (105), and the fitting (115) from the lock link assembly (150).

      (6) Remove the pin (135), the washer (140), the nut (145), and the strut assemblies (180, 215) from the lock link assembly (150).

CLEANING

1. General

   A. This procedure has the data necessary to clean the main landing gear side strut assembly.

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

   C. Refer to IPL Fig. 1 for item numbers.

2. Cleaning

   A. References

      (1) SOPM 20-30-03, General Cleaning Procedures

   B. Procedure

      (1) Clean all parts by standard industry procedures and the instructions in SOPM 20-30-03.

CHECK

1. General

A. This procedure has the data necessary to find defects in the material of the specified parts.

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

C. Refer to the Standard Overhaul Practices Manual (SOPM) for details of the SOPM subjects identified in the procedure.

D. Refer to IPL Fig. 1 for item numbers.

2. Check

A. References

(1) SOPM 20-20-01, Magnetic Particle Inspection

(2) SOPM 20-20-02, Penetrant Methods of Inspection

B. Procedure

(1) Examine all parts by standard industry practices.

(2) Do a magnetic particle check (SOPM 20-20-01) of these parts:

(a) Bolt (15)

(b) Pins (35, 135)

(c) Washer (20, 140)

(d) Cap (30, 195)

(e) Nut (145)

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

(a) Link (80, 85, 177)

(b) Strut (245)

REPAIR - GENERAL

1. General

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

PART NUMBER	NAME	REPAIR
---	REFINISH OF OTHER PARTS	1-1
161T2101	STRUT ASSEMBLY	2-1, 2-2
161T2103	STRUT ASSEMBLY	3-1, 3-2
161T2111	LOCK LINK ASSEMBLY	4-1, 4-2
161T2112	LOCK LINK ASSEMBLY	5-1, 5-2
161T2129	PIN	6-1
161T2136	LINK PIN	7-1

2. Dimensioning Symbols

A. Standard True Position Dimensioning Symbols used in the applicable repair procedures are shown in SOPM 20-00-00.

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 subjects identified in the procedure.

   C. Refer to IPL Fig. 1 for item numbers.

2. Refinish of Other Parts

   A. General

      (1) Instructions for the repair of the parts listed in Table 601 are for repair of the initial finish.

   B. Consumable Materials

      NOTE: Equivalent material can be used.

      (1) C00033 Coating -- BMS 10-60, Type 2 enamel 707 (SOPM 20-60-02)

      (2) C00175 Coating -- BMS 10-79, Type 3 primer (SOPM 20-60-02)

      (3) C00259 Coating -- BMS 10-11, Type 1 primer (SOPM 20-60-02)

      (4) C00308 Compound -- MIL-C-11796, class 1 (SOPM 20-41-03)

   C. References

      (1) SOPM 20-30-03, General Cleaning Procedures

      (2) SOPM 20-41-03, Application of Corrosion Preventives to Interior of Closed End Tubes

      (3) SOPM 20-42-01, Low Hydrogen Embrittlement Cadmium Plating

      (4) SOPM 20-42-02, Low Hydrogen Embrittlement Cadmium-Titanium Alloy Plating

      (5) SOPM 20-44-01, Application of Special Purpose Coatings and Finishes

(6) SOPM 20-50-07, Lubrication

(7) SOPM 20-50-08, Application of Bonded Solid Film Lubricants

(8) SOPM 20-60-02, Finishing Materials

(9) SOPM 20-60-03, Lubricants

(10) SOPM 20-60-04, Miscellaneous Materials

IPL FIG. & ITEM	MATERIAL	FINISH
IPL Fig. 1		
Bolt (15)	15-5PH Cres 180-200 ksi	Passivate (F-17.25).
Washer (20)	15-5PH Cres 180-200 ksi	Passivate (F-17.25).
End Cap (30)	15-5PH Cres 180-200 ksi	Cadmium plate (F-15.06) to all surfaces. Apply BMS 3-8 dry film lubricant (F-19.10).
Plate (115A)	15-5PH Cres 180-200 ksi	Passivate (F-17.25) all surfaces. Apply BMS 1079, type 3 primer (F-19.47).
Washer (140)	4130 Steel 180-200 ksi	Cadmium plate (F-15.06) all surfaces. Wipe the plating with BMS 10-79, type 3 primer (F-19.451).
Nut (145)	4340 Steel 275-300 ksi	Cadmium plate, minimum 0.0005 inch thick (F-15.01) to outside surfaces. Cadmium-titanium plate (F-15.32) on threads. Apply BMS 10-79, type 3 primer (F-19.47). Apply BMS 10-60 enamel (F-14.9813, which replaces SRF-14.9813) to outside surfaces only.

Refinish Details
Table 601

STRUT ASSEMBLY - REPAIR 2-1

161T2101-1

1. General

A. This procedure has the data necessary to repair the side strut assembly (180).

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

C. Refer to IPL Fig. 1 for item numbers.

2. Bushing Replacement

A. Consumable Materials

NOTE: Equivalent material can be used.

(1) D00633 Grease -- BMS 3-33 (SOPM 20-60-03)

B. References

(1) SOPM 20-50-03, Bushing and Bearing Replacement

(2) SOPM 20-50-07, Lubrication

(3) SOPM 20-60-03, Lubricants

C. Procedure (Fig. 601)

(1) Remove the old bushings.

(2) If you find defects on strut surfaces, refer to REPAIR 2-2 for repair instructions.

(3) Install replacement bushings with BMS 3-33 grease by the shrink-fit method as shown in SOPM 20-50-03.

(4) If necessary, machine the bushing(s) (195A, 200, 205) to design dimensions and finish.

3. Lube Fitting Replacement

A. Consumable Materials

NOTE: Equivalent material can be used.

(1) D00633 Grease -- BMS 3-33 (SOPM 20-60-03)

B. References

(1) SOPM 20-50-01, Bolt and Nut Installation

(2) SOPM 20-50-07, Lubrication

(3) SOPM 20-60-03, Lubricants

C. Procedure

(1) Remove the old lube fittings (190) from the side strut (210).

(2) Install replacement lube fittings (190) onto the side strut (210) with BMS 3-33 grease. Tighten the lube fittings to 25-30 pound-inches.

(3) Make sure that the lube passage is not blocked. Apply BMS 3-33 grease to the lube fittings until grease appears in the inside diameter of the bushings (195, 200).

4. Threaded Insert Replacement

A. Consumable Materials

NOTE: Equivalent material can be used.

(1) D00633 Grease - BMS 3-33 (SOPM 20-60-03)

B. References

(1) SOPM 20-50-03, Bushing and Bearing Replacement

(2) SOPM 20-50-07, Lubrication

(3) SOPM 20-60-03, Lubricants

C. Procedure

(1) Remove the old threaded inserts (185) from the side strut (210) as shown in Fig. 601.

(2) Install replacement threaded inserts with BMS 3-33 grease by shrink-fit procedure as shown in SOPM 20-50-03.

(3) Make sure the threaded inserts are flush with the machined surface of side strut (210) surface to within plus or minus 0.02 inch.

5. Side Strut Assembly Refinish

A. Consumable Materials

NOTE: Equivalent material can be used.

(1) C00175 Coating - BMS 10-79, Type 3 primer (SOPM 20-60-02)

(2) C00033 Coating - BMS 10-60 enamel 702 (SOPM 20-60-02)

B. References

(1) SOPM 20-30-03, General Cleaning Procedure

(2) SOPM 20-44-04, Application of Urethane Compatible Primer

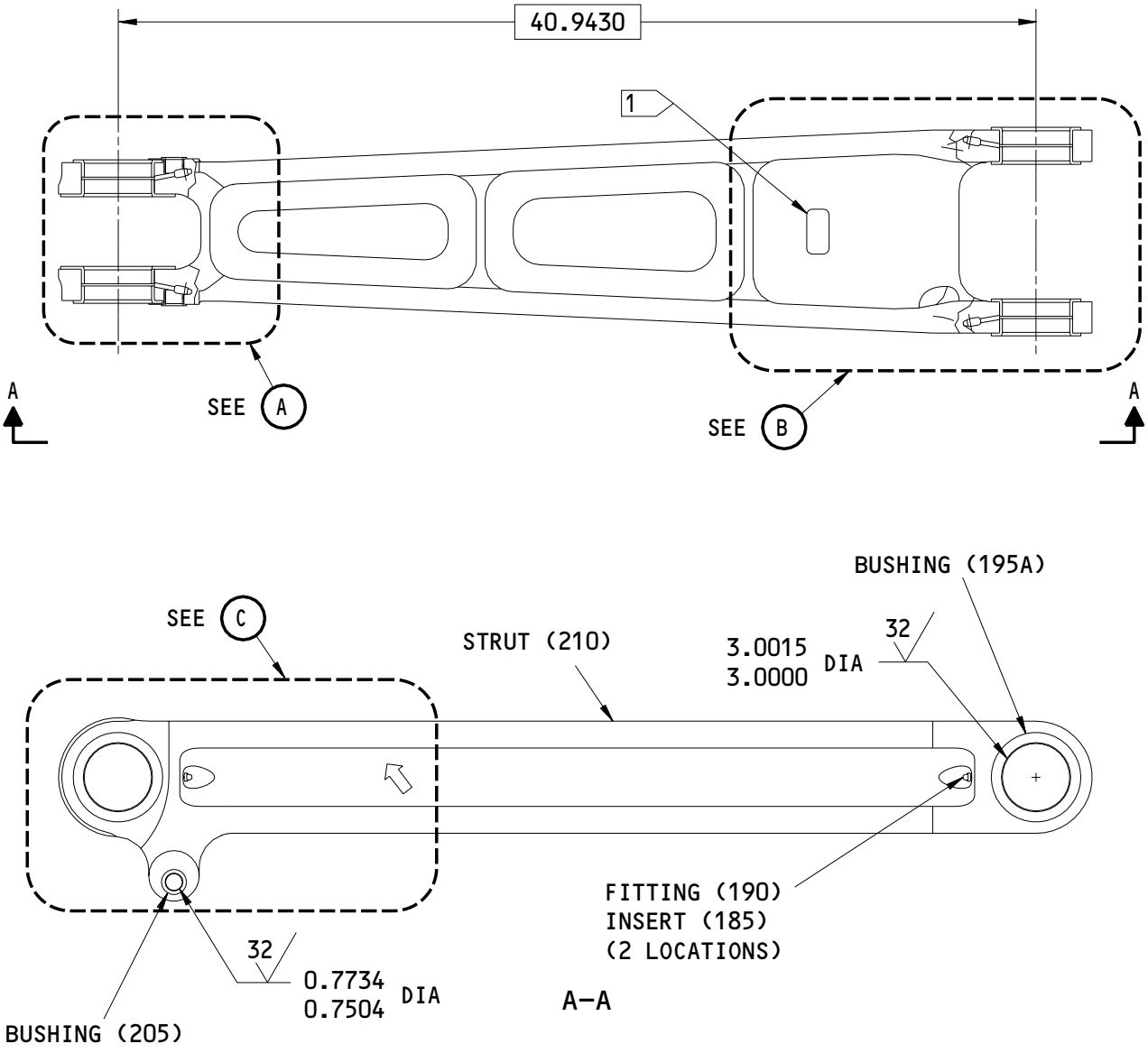
(3) SOPM 20-50-10, Application of Stencils, Insignia, Silk Screen, Part Numbering and Identification Markings

(4) SOPM 20-60-02, Finishing Materials

C. Procedure

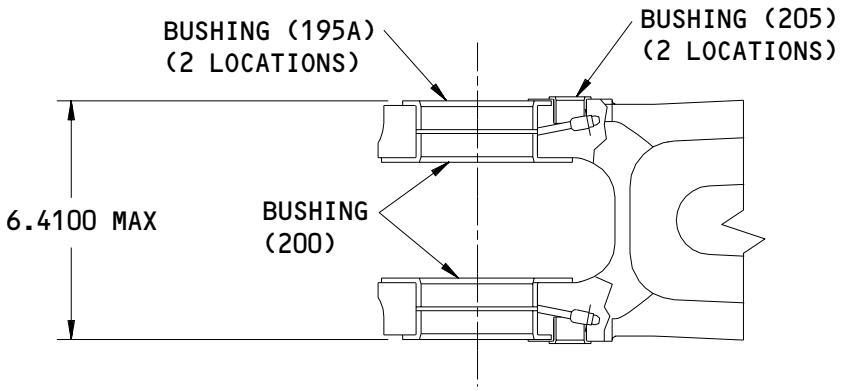
(1) Clean the surface area identified by flagnote 2 in Fig. 601.

(2) Apply BMS 10-79, type 3 primer (F-19.47) and BMS 10-60 gloss enamel (SRF-14.9815-702) to the word "UP" and the indicator arrow.



161T2101-1
Side Strut Assembly Repair
Figure 601 (Sheet 1)

K13699



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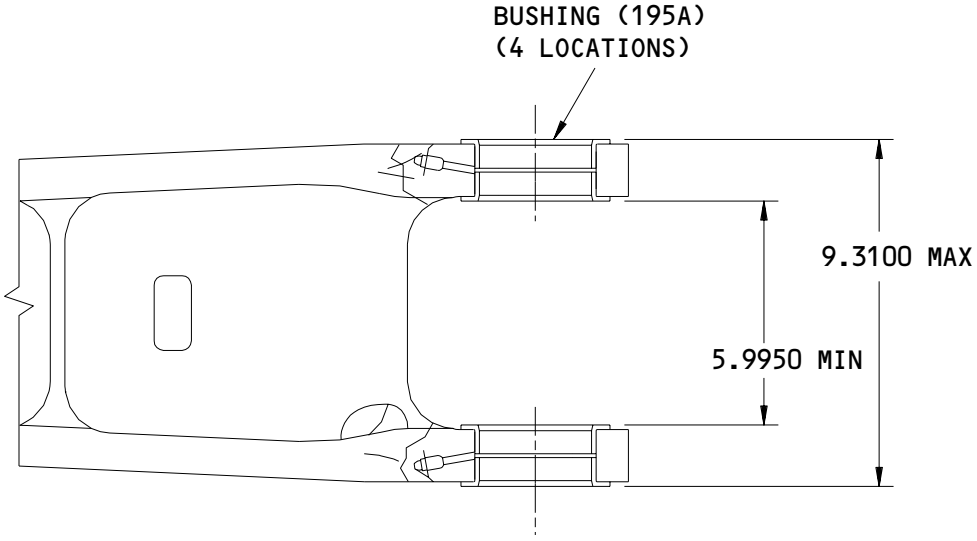
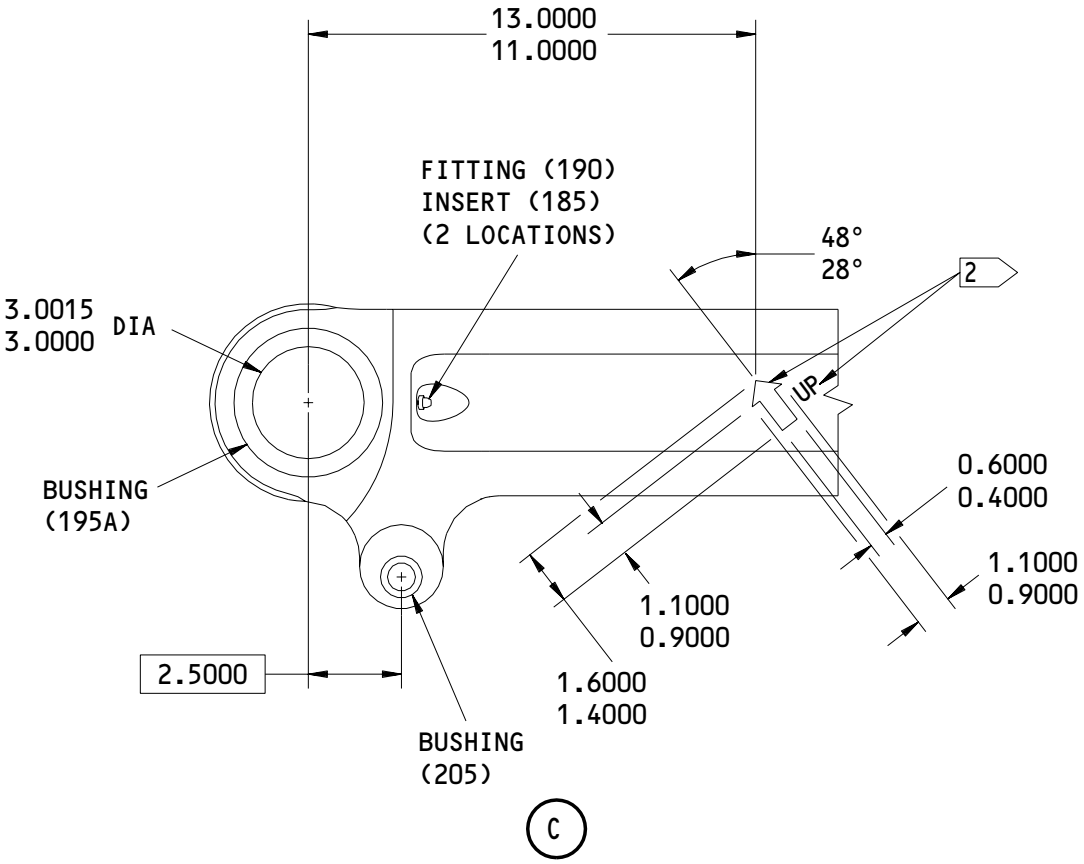


B

161T2101-1
Side Strut Assembly Repair
Figure 601 (Sheet 2)

K13729



1 PART NUMBER AND SERIAL NUMBER LOCATION

2 APPLY BMS 10-79, TYPE 3 PRIMER (F-19.47) AND BMS 10-60 GLOSS ENAMEL (SRF-14.9815-702) TO THE WORD "UP" AND INDICATOR ARROW

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

161T2101-1
Side Strut Assembly Repair
Figure 601 (Sheet 3)

K13732

STRUT - REPAIR 2-2

161T2101-2

1. General

A. This procedure has the data necessary to repair and refinish the strut (210).

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

C. Refer to IPL Fig. 1 for item numbers.

D. General repair details:

(1) Material: Titanium alloy

(2) Shot peen: All surfaces, but not in lubrication holes
Intensity 0.014A2
Hard shot Rc 55-65

2. Strut Repair

A. References

(1) SOPM 20-10-03, Shot Peening

(2) SOPM 20-10-07, Machining of Titanium

(3) SOPM 20-30-02, Stripping of Protective Finishes

(4) SOPM 20-30-03, General Cleaning Procedures

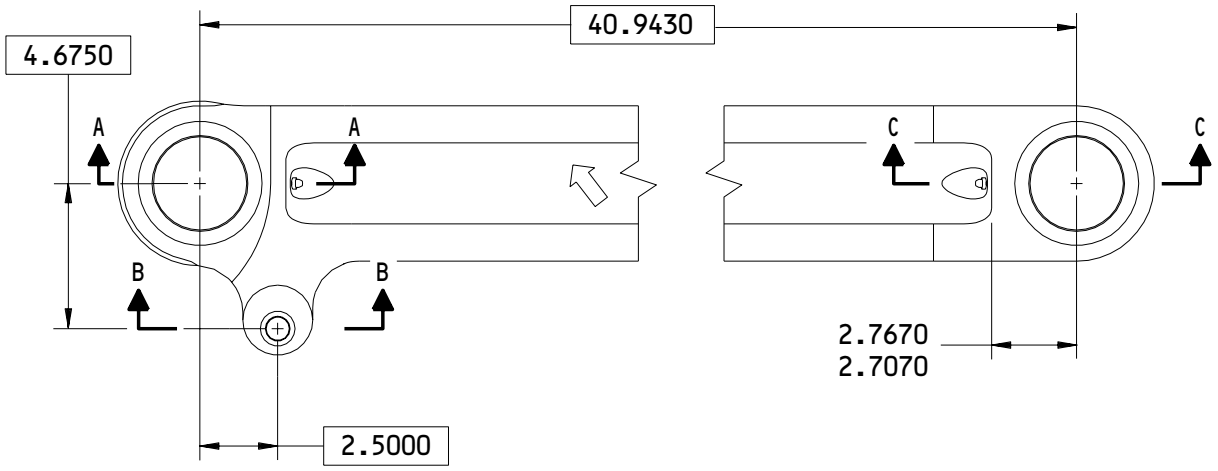
(5) SOPM 20-41-01, Decoding Table for Boeing Finish Codes

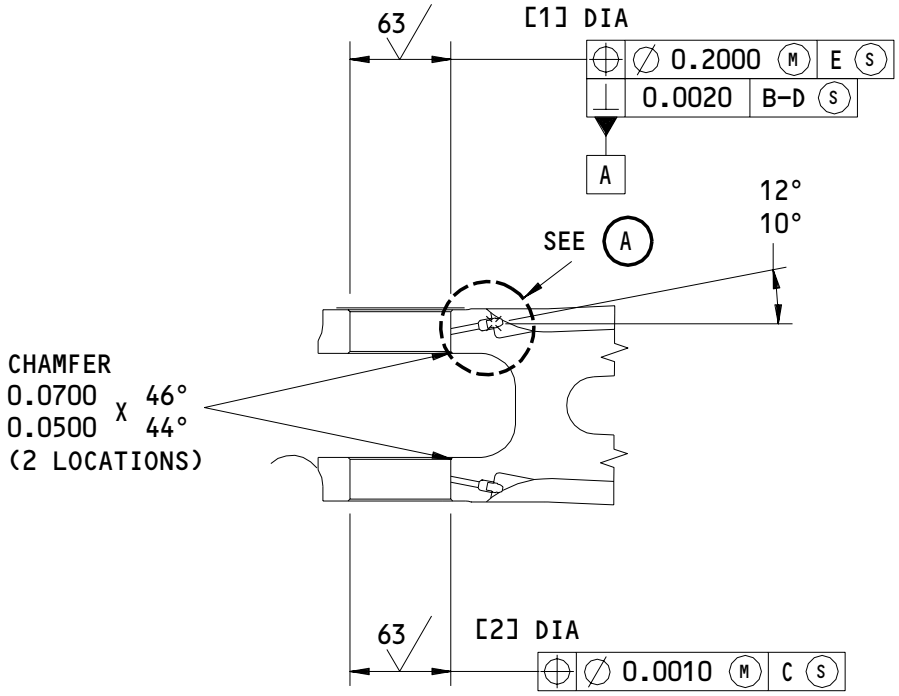
B. Procedure

(1) Machine as necessary, within the repair limits shown in Fig. 601 to remove the defects.

(2) Make oversize bushings (Fig. 602), as necessary to adjust for the amount of material removed.

(3) Install the bushings as shown in REPAIR 2-1.

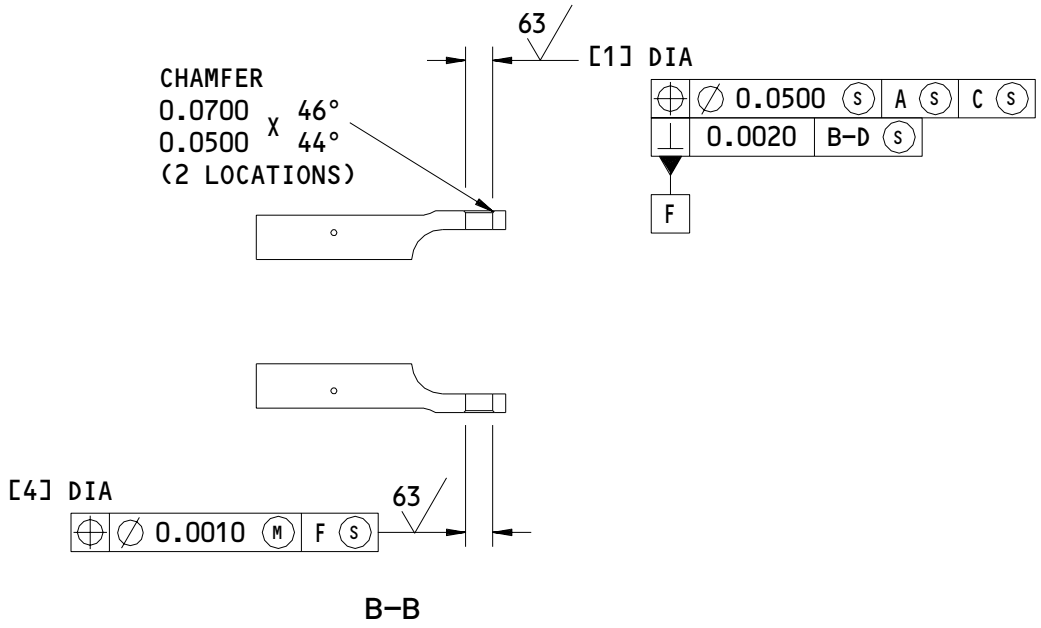




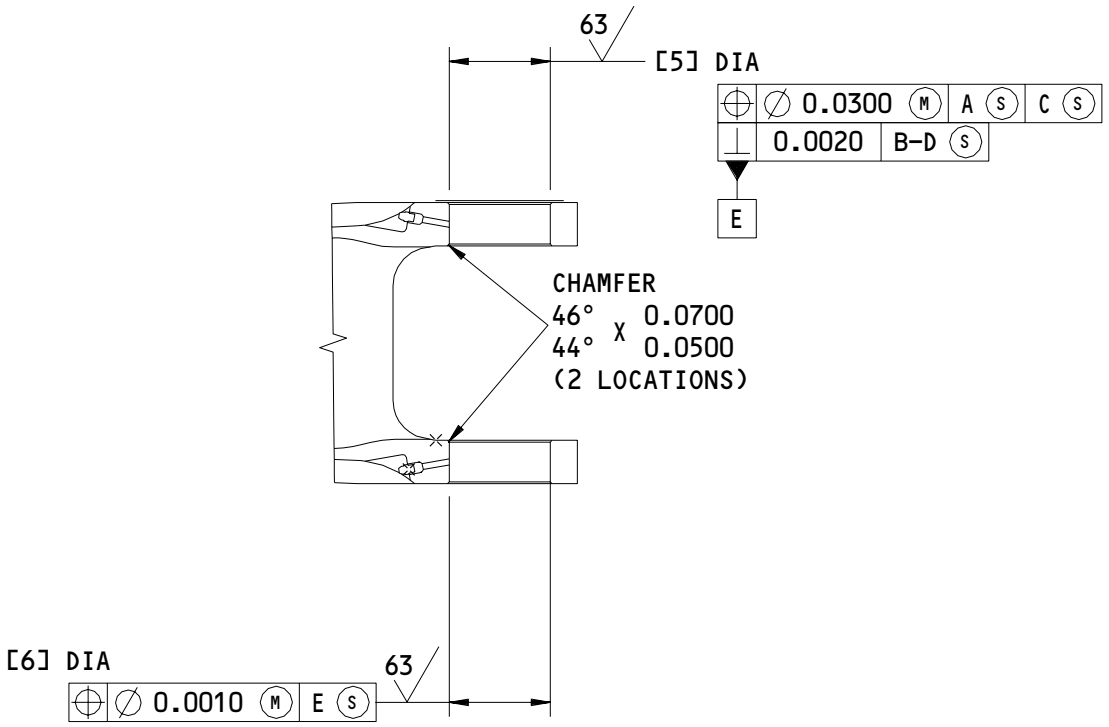
A-A

161T2101-2
Strut Repair
Figure 601 (Sheet 1)

K13747



B–B



C–C

161T2101-2
Strut Repair
Figure 601 (Sheet 2)

K13769

REFERENCE NUMBER	[1]	[2]	[3]	[4]	[5]	[6]
DESIGN DIMENSION	3.2515 3.2500	3.2515 3.2500	0.8768 0.8760	0.8768 0.8760	3.2515 3.2500	3.2515 3.2500
REPAIR LIMIT 1	3.3115	3.3115	0.9368	0.9368	3.3115	3.3115

1 LIMIT FOR OVERSIZE BUSHING INSTALLATION

2 DEPTH OF CLOSE TOLERANCE DIAMETER TO BE 0.35 MINIMUM

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

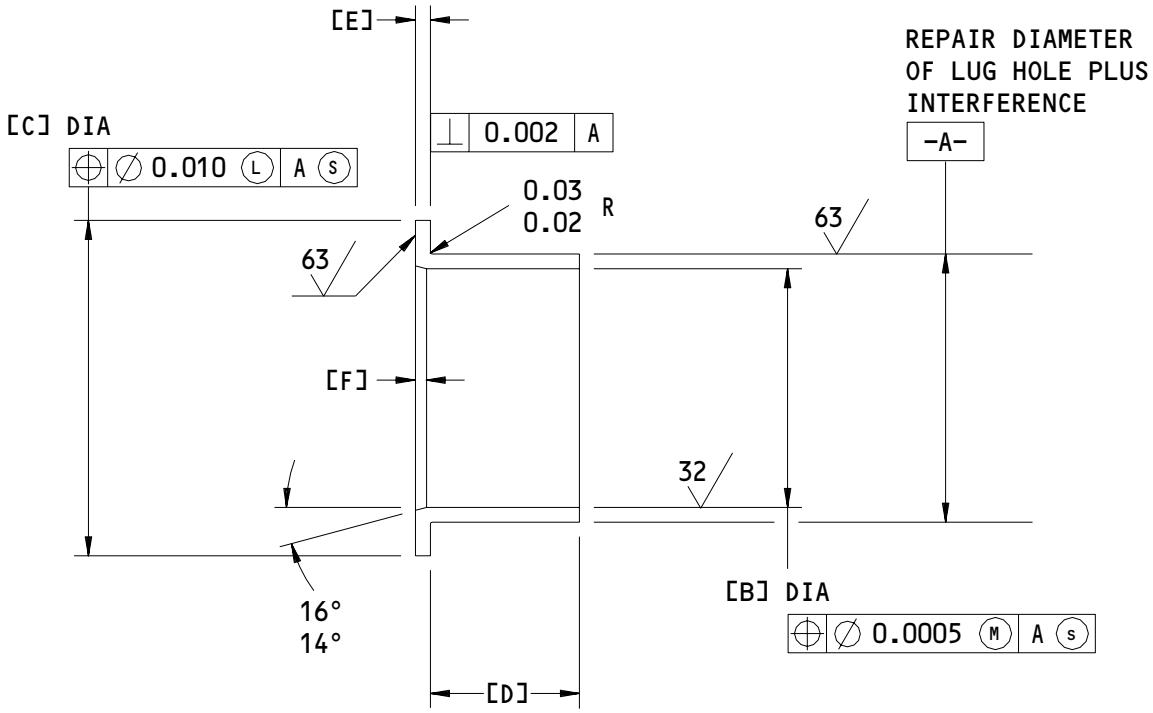
BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

161T2101-2
Strut Repair
Figure 601 (Sheet 3)

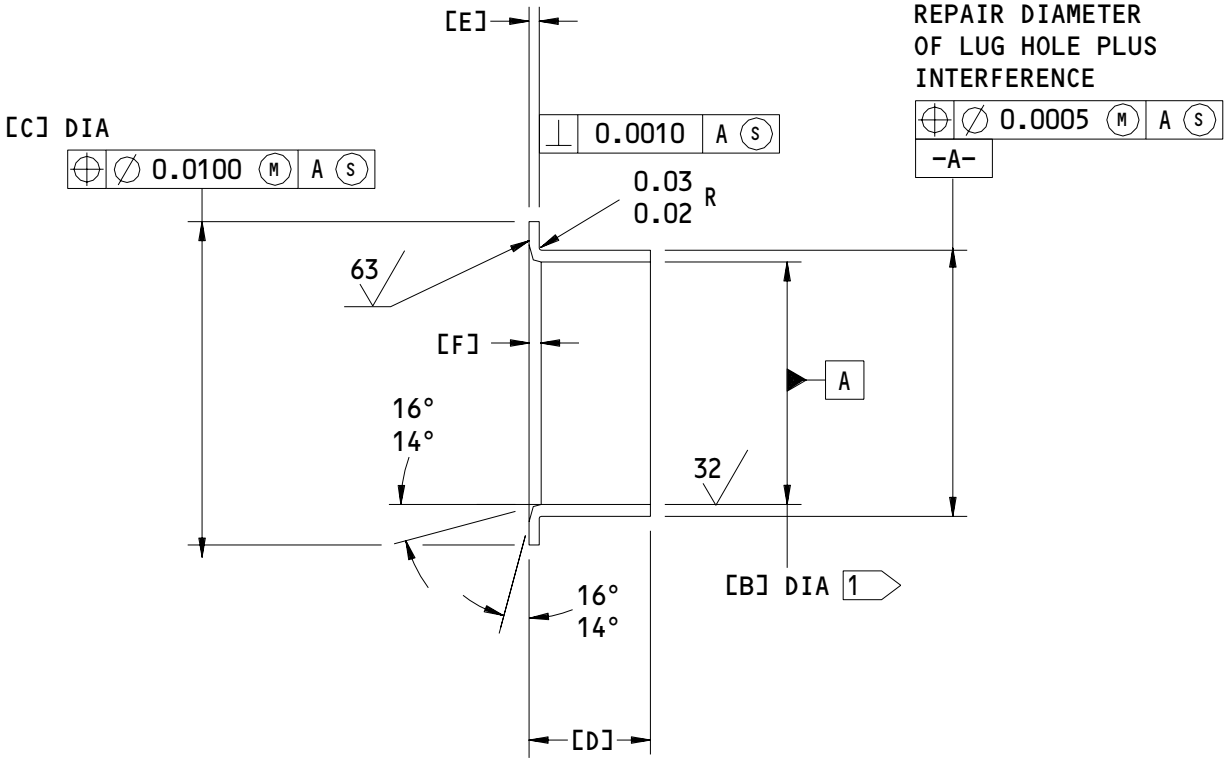
K13792



OVERSIZE REPLACEMENT FOR BUSHING (195A)

Oversize Bushing Details
Figure 602 (Sheet 1)

K14138



OVERSIZE REPLACEMENT FOR BUSHINGS (200,205)

Oversize Bushing Details
Figure 602 (Sheet 2)

K18967

HOLE LOCATION (FIG. 601)	REPLACES BUSHING (IPL FIG. 1)	[B]	[C]	[D]	[E]	[F]	INTER-FERENCE
[1],[2], [5],[6]	161W3027-1 (195A)	3.0036 3.0021	4.0000 3.9800	0.6600 0.6400	0.1250 0.1240	0.1600 0.1400	0.0056 0.0026
[1],[2]	161T2874-14 (200)	3.0036 3.0021	5.1300 5.1100	0.6600 0.6400	0.1260 0.1250	0.1600 0.1400	0.0056 0.0026
[3],[4]	161T2874-16 (205)	0.7516 0.7514	1.1300 1.1100	0.6700 0.6500	0.0640 0.0630	0.1000 0.0800	0.0023 0.0009

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

MATERIAL: AL-NI-BRZ AS IN AMS 4640

BREAK ALL SHARP EDGES 0.01-0.02 R

FINISH: NO FINISH

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

Oversize Bushing Details
Figure 602 (Sheet 3)

K14142

STRUT ASSEMBLY - REPAIR 3-1

161T2103-1

1. General

A. This procedure has the data necessary to repair the strut assembly (215).

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

C. Refer to IPL Fig. 1 for item numbers.

2. Bushing Replacement

A. Consumable Materials

NOTE: Equivalent material can be used.

(1) D00633 Grease - BMS 3-33 (SOPM 20-60-03)

B. References

(1) SOPM 20-50-03, Bushing and Bearing Replacement

(2) SOPM 20-50-07, Lubrication

(3) SOPM 20-60-03, Lubricants

C. Procedure

(1) Remove the bushings (230, 235, 240) from the strut (245) as shown.

(2) Install replacement bushings with BMS 3-33 grease by shrink-fit procedure as shown in SOPM 20-50-03.

(3) Machine the bushings (230, 235, 240) to design dimensions and finish.

3. Lube Fitting Replacement

A. Consumable Materials

NOTE: Equivalent material can be used.

(1) D00633 Grease - BMS 3-33 (SOPM 20-60-03)

B. References

(1) SOPM 20-50-01, Bolt and Nut Installation

(2) SOPM 20-50-07, Lubrication

(3) SOPM 20-60-03, Lubricants

C. Procedure

(1) Remove the old lube fittings (225) from the strut (245) as shown in Fig. 601.

(2) Install replacement lube fittings with BMS 3-33 grease. Tighten the lube fittings to 25-30 pound-inches.

(3) Make sure that the lube passage is not blocked. Apply BMS 3-33 grease to the lube fittings (225) until grease appears in the inside diameter of the bushing(s) (230, 235, 240).

4. Threaded Insert Replacement

A. Consumable Materials

NOTE: Equivalent material can be used.

(1) D00633 Grease - BMS 3-33 (SOPM 20-60-03)

B. References

(1) SOPM 20-50-03, Bushing and Bearing Replacement

(2) SOPM 20-50-07, Lubrication

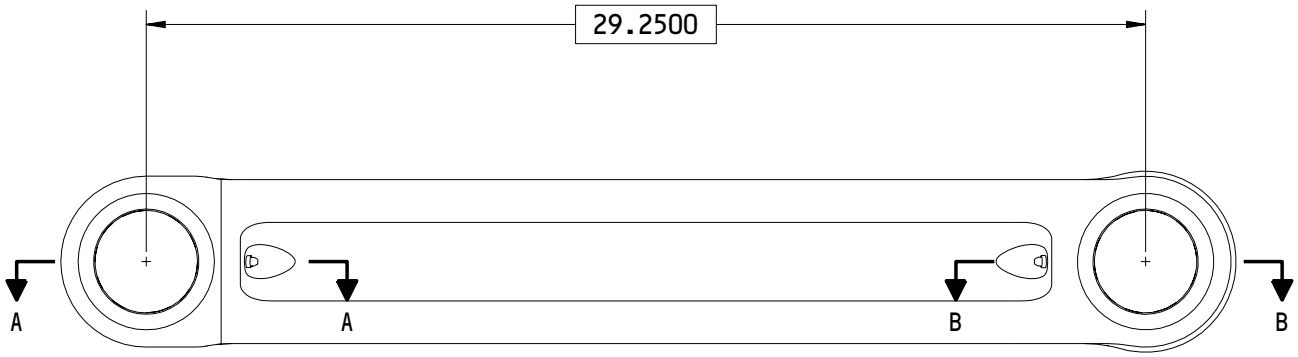
(3) SOPM 20-60-03, Lubricants

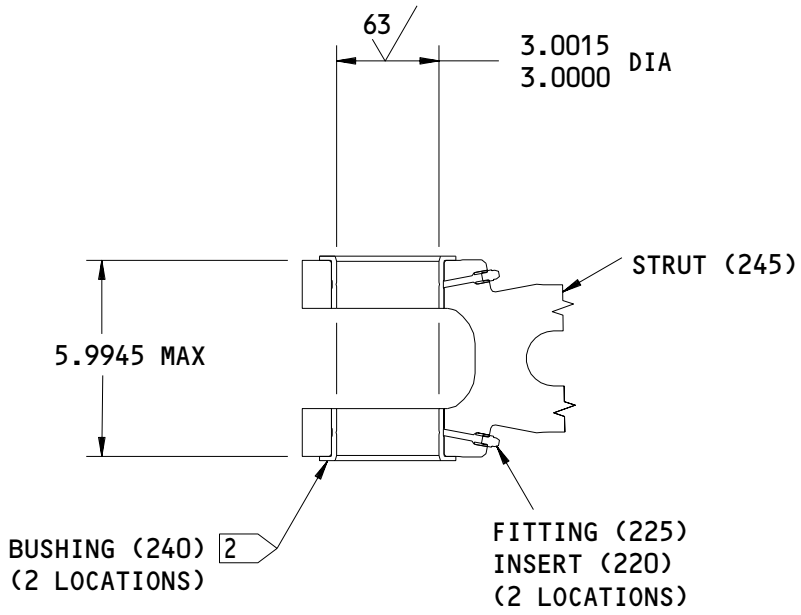
C. Procedure

(1) Remove the old threaded inserts (220) from the strut (245) as shown in Fig. 601.

(2) Install replacement threaded inserts with BMS 3-33 grease by shrink-fit procedure as shown in SOPM 20-50-03.

(3) Make sure the threaded inserts (220) are installed flush with the machined surface of the strut (245) surface to within plus or minus 0.02 inch.

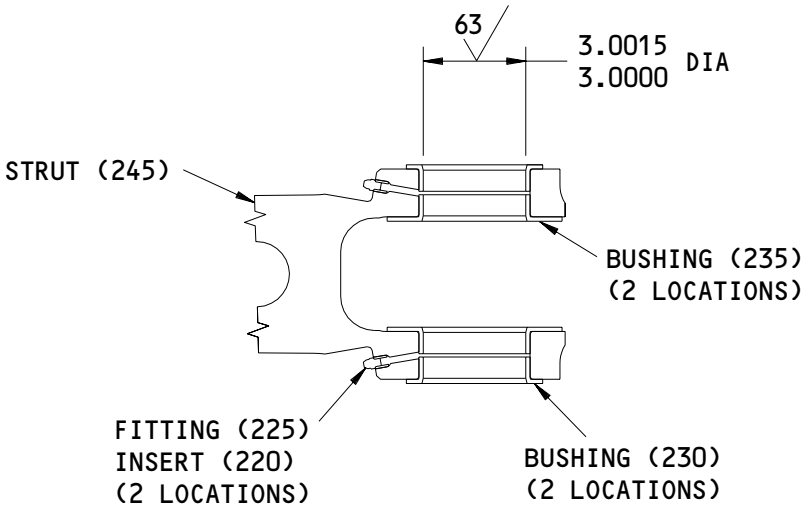




A–A

161T2103-1
Strut Assembly Repair
Figure 601 (Sheet 1)

K14168



ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

161T2103-1
Strut Assembly Repair
Figure 601 (Sheet 2)

STRUT - REPAIR 3-2

161T2103-2

1. General

A. This procedure has the data necessary to repair and refinish the strut assembly (245).

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

C. Refer to IPL Fig. 1 for item numbers.

D. General repair details:

(1) Material:	Titanium alloy
(2) Shot Peen:	All surfaces, but not in lubrication holes Intensity 0.014A2 Hard shot Rc 55-65

2. Strut Repair

A. References

(1) SOPM 20-10-03, Shot Peening

(2) SOPM 20-10-07, Machining of Titanium

(3) SOPM 20-30-02, Stripping of Protective Finishes

(4) SOPM 20-30-03, General Cleaning Procedures

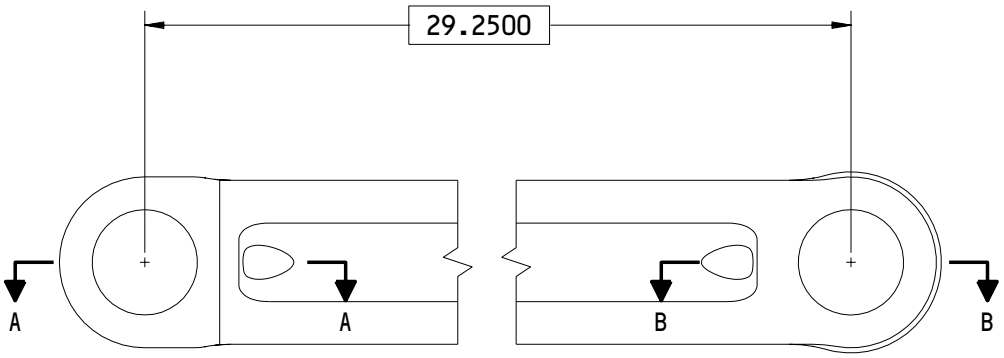
(5) SOPM 20-41-01, Decoding Table for Boeing Finish Codes

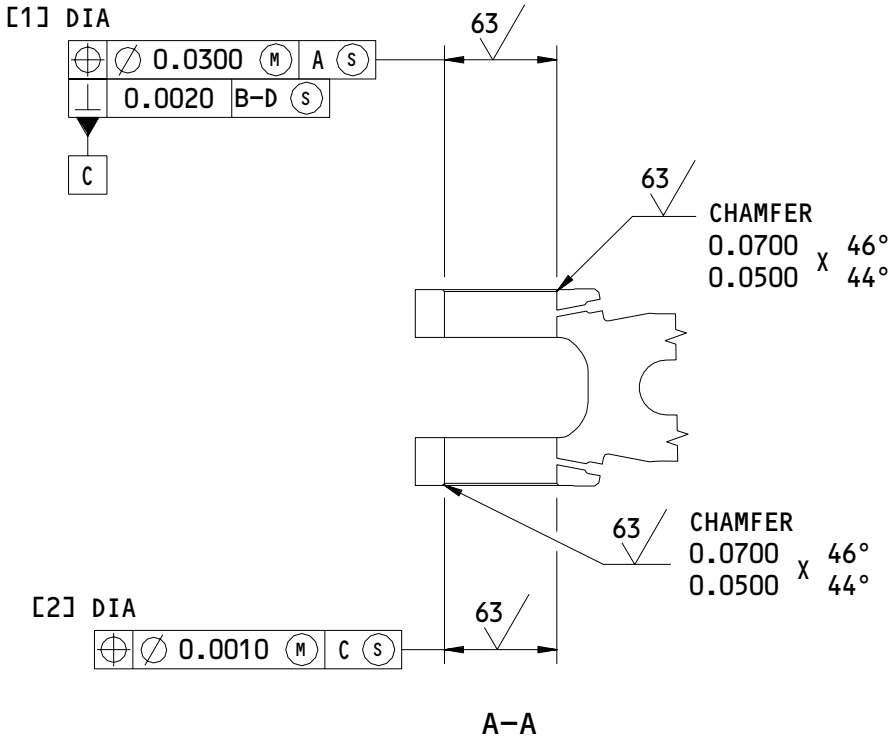
B. Procedure

(1) Machine as necessary within the repair limits shown in Fig. 601 to remove the defects.

(2) Make oversize bushings (Fig. 602), as necessary to adjust for the amount of material removed.

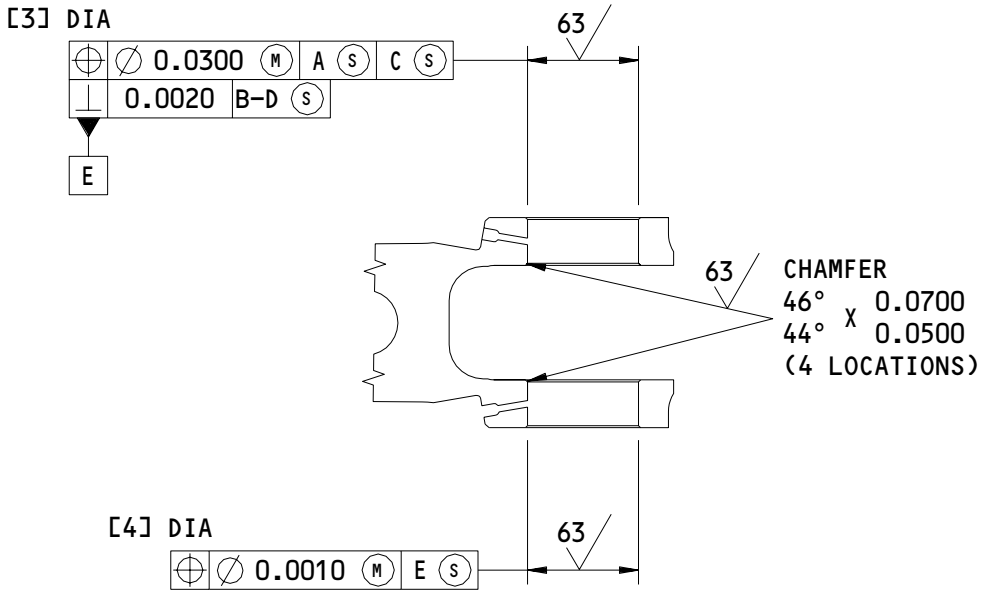
(3) Install the bushings as shown in REPAIR 3-1.





A–A

161T2103-2
Strut Repair
Figure 601 (Sheet 1)



B-B

REFERENCE NUMBER	[1]	[2]	[3]	[4]
DESIGN DIMENSION	3.2515 3.2500	3.2515 3.2500	3.2515 3.2500	3.2515 3.2500
REPAIR LIMIT 1	3.3115	3.3115	3.3115	3.3115

1 LIMIT FOR OVERSIZE BUSHING INSTALLATION

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

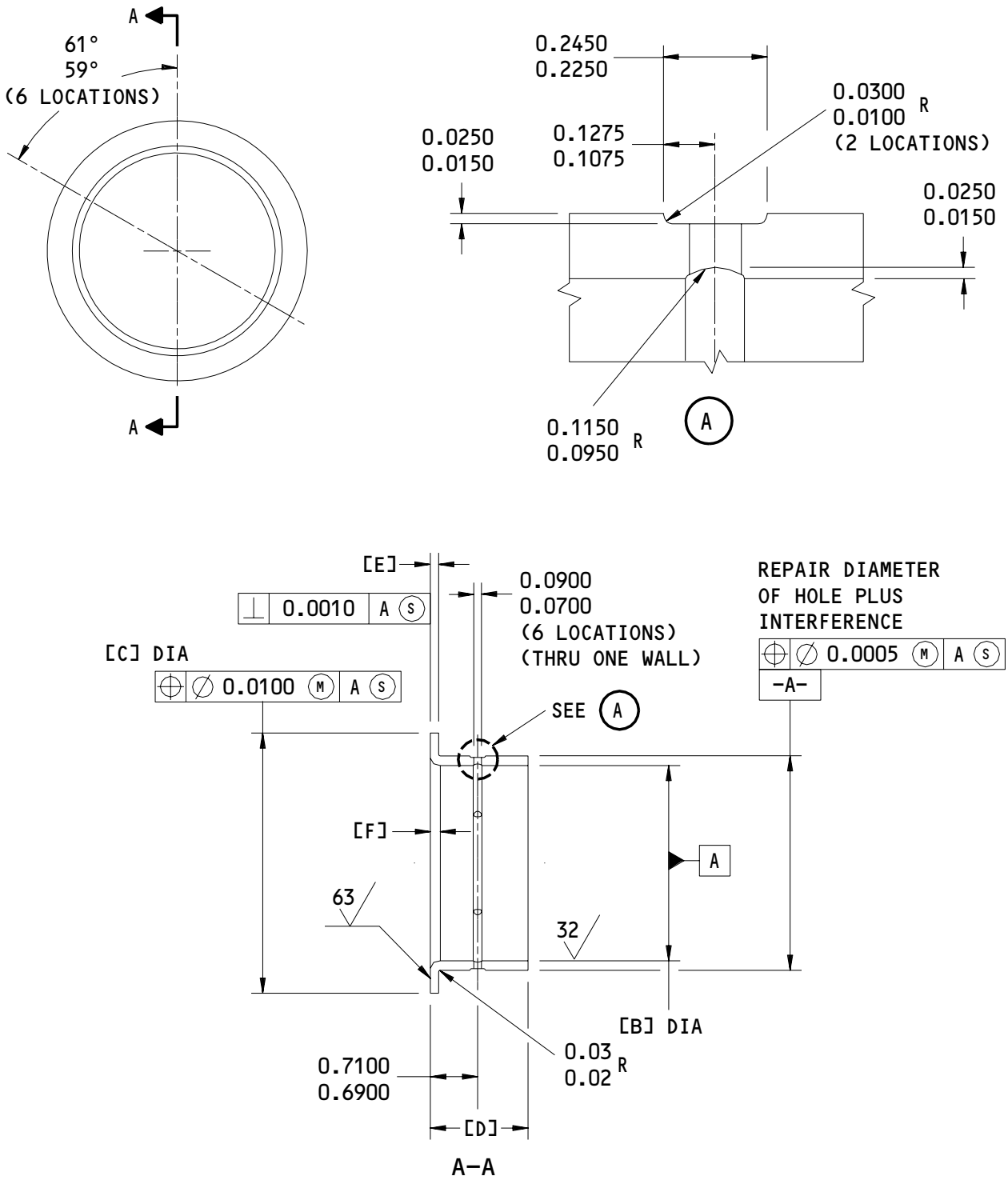
BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

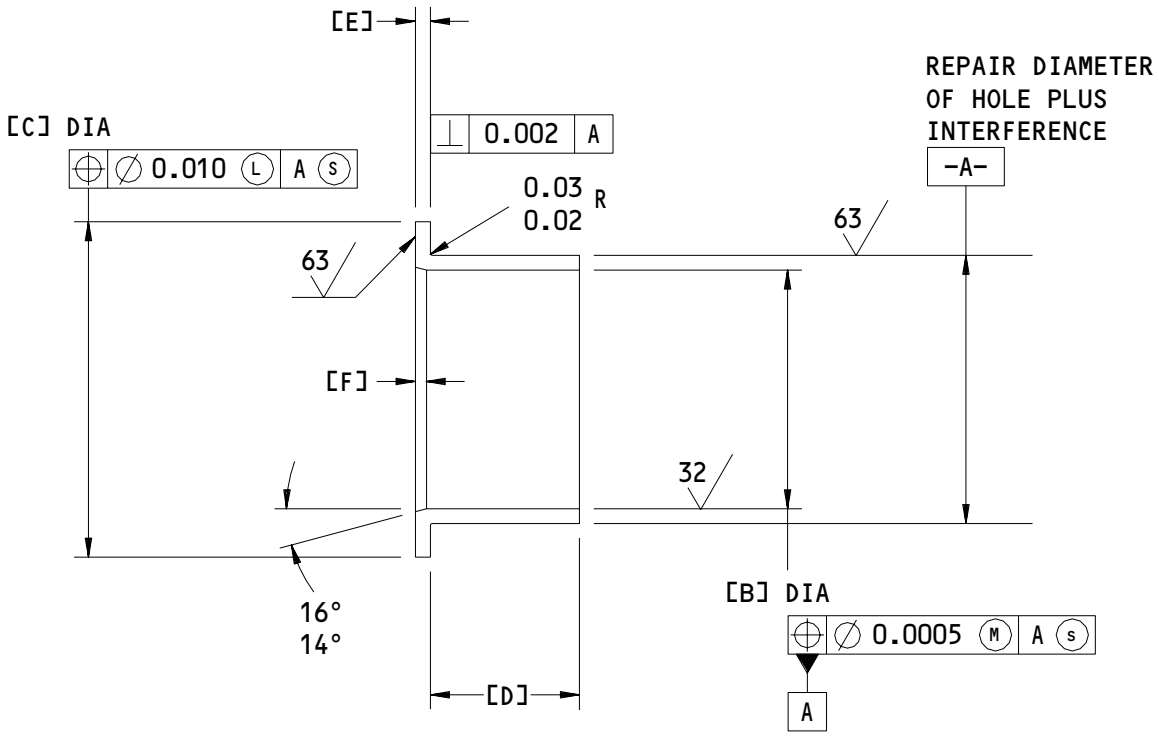
161T2103-2
Strut Repair
Figure 601 (Sheet 2)

K14258



OVERSIZE REPLACEMENT FOR BUSHING (240)

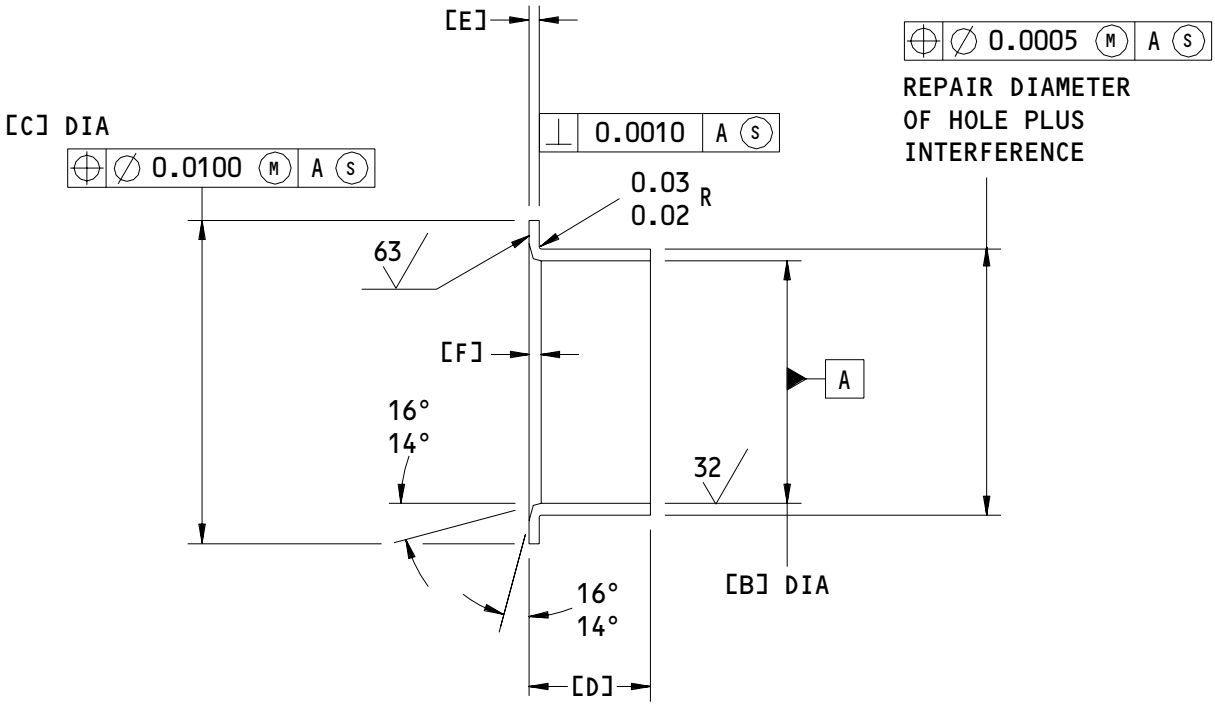
Oversize Bushing Details
Figure 602 (Sheet 1)



OVERSIZE REPLACEMENT FOR BUSHING (230)

Oversize Bushing Details
Figure 602 (Sheet 2)

K19033



C–C

OVERSIZE REPLACEMENT FOR BUSHING (235)

Oversize Bushing Details
Figure 602 (Sheet 3)

HOLE LOCATION (FIG. 601)	REPLACES BUSHING (IPL FIG. 1)	[B]	[C]	[D]	[E]	[F]	INTER-FERENCE
[1],[2]	161T2874-15 (240)	3.0037 3.0022	4.0000 3.9800	1.4100 1.3900	0.1260 0.1250	0.1600 0.1400	0.0057 0.0026
[3],[4]	161W3027-1 (230)	3.0036 3.0021	4.0000 3.9800	0.6600 0.6400	0.1250 0.1240	0.1600 0.1400	0.0056 0.0026
[3],[4]	161T2874-14 (235)	3.0036 3.0021	5.1300 5.1100	0.6600 0.6400	0.1260 0.1250	0.1600 0.1400	0.0056 0.0026

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

MATERIAL: AL-NI-BRZ AS IN AMS 4640

BREAK ALL SHARP EDGES 0.01-0.02 R

FINISH: NO FINISH

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

Oversize Bushing Details
Figure 602 (Sheet 4)

K19014

LOCK LINK ASSEMBLY - REPAIR 4-1

161T2111-1

1. General

   A. This procedure has the data necessary to repair and refinish the lock link assembly (150).

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

   C. Refer to IPL Fig. 1 for item numbers.

2. Bushing Replacement

   A. Consumable Materials

      NOTE: Equivalent material can be used.

      (1) A00274 Sealant - BMS 5-95 (SOPM 20-60-04)

      (2) C00913 Compound - BMS 3-27 (SOPM 20-60-04)

   B. References

      (1) SOPM 20-41-05, Application of Corrosion Inhibiting Compound

      (2) SOPM 20-50-03, Bushing and Bearing Replacement

      (3) SOPM 20-50-19, General Sealing

      (4) SOPM 20-60-04, Miscellaneous Materials

   C. Procedure

      (1) Remove the old bushings.

      (2) Install replacement bushings with BMS 3-27 corrosion inhibiting compound by shrink-fit procedure as shown in SOPM 20-50-03.

(3) Install replacement bushings (175) into the link (177) with BMS 3-27 corrosion inhibiting compound by shrink-fit and roller-swage procedures as shown in SOPM 20-50-03.

(4) If necessary, machine the bushing(s) (160, 165, 170, 175) to design dimensions and finish.

(5) Fillet seal the bushing(s) (160, 165, 170, 175) with BMS 5-95 sealant as shown in SOPM 20-50-19.

3. Lube Fitting Replacement

A. Consumable Materials

NOTE: Equivalent material can be used.

(1) D00633 Grease - BMS 3-33 (SOPM 20-60-03)

B. References

(1) SOPM 20-50-01, Bolt and Nut Installation

(2) SOPM 20-50-07, Lubrication

(3) SOPM 20-60-03, Lubricants

C. Procedure

(1) Remove the lube fittings (155) from the link (177) as shown in Fig. 601.

(2) Install lube fittings with BMS 3-33 grease. Tighten the fittings to 25-30 pound-inches.

(3) Make sure that the lube passage is not blocked. Apply BMS 3-33 grease to the lube fittings until grease appears in the inside diameter of the bushing(s) (165, 170).

4. Lock Link Assembly Refinish

A. Consumable Materials

NOTE: Equivalent material can be used.

(1) C00175 Coating - BMS 10-79, Type 3 primer (SOPM 20-60-02)

(2) C00033 Coating - BMS 10-60 enamel (SOPM 20-60-02)

(3) C00501 Coating - Type 41, Hydraulic Fluid Resistant (SOPM 20-60-02)

B. References

(1) SOPM 20-30-03, General Cleaning Procedures

(2) SOPM 20-44-01, Application of Special Purpose Coatings and Finishes

(3) SOPM 20-44-04, Application of Urethane Compatible Primer

(4) SOPM 20-50-10, Application of Stencils, Insignia, Silk Screen, Part Numbering and Identification Markings

(5) SOPM 20-60-02, Finishing Materials

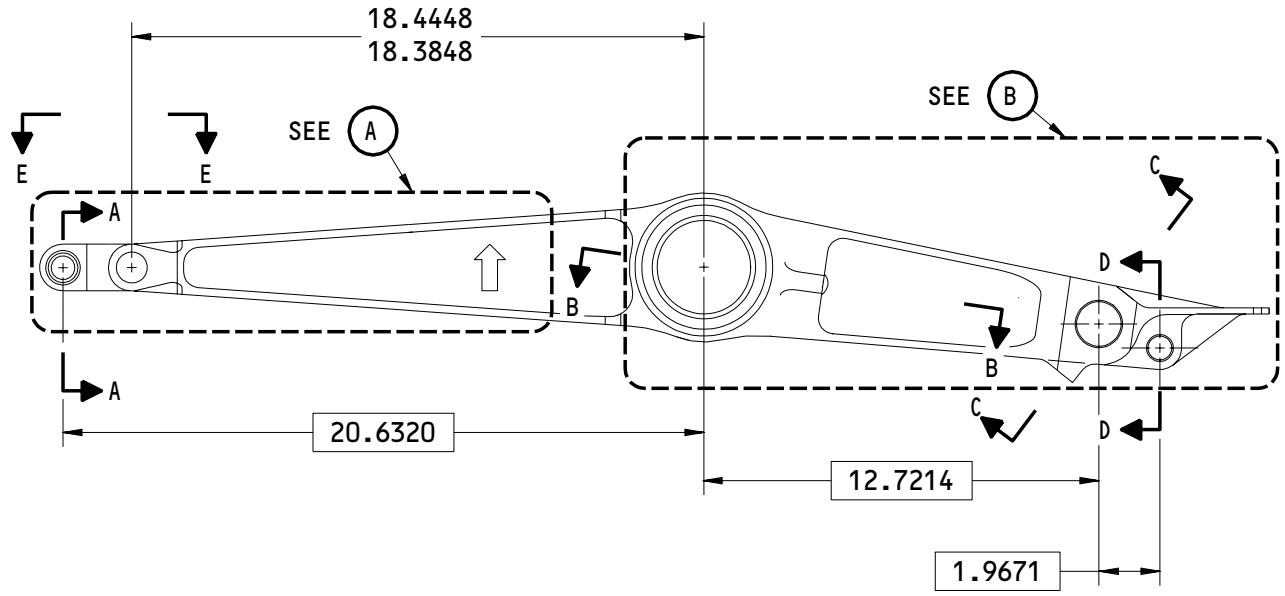
(6) SOPM 20-60-04, Miscellaneous Materials

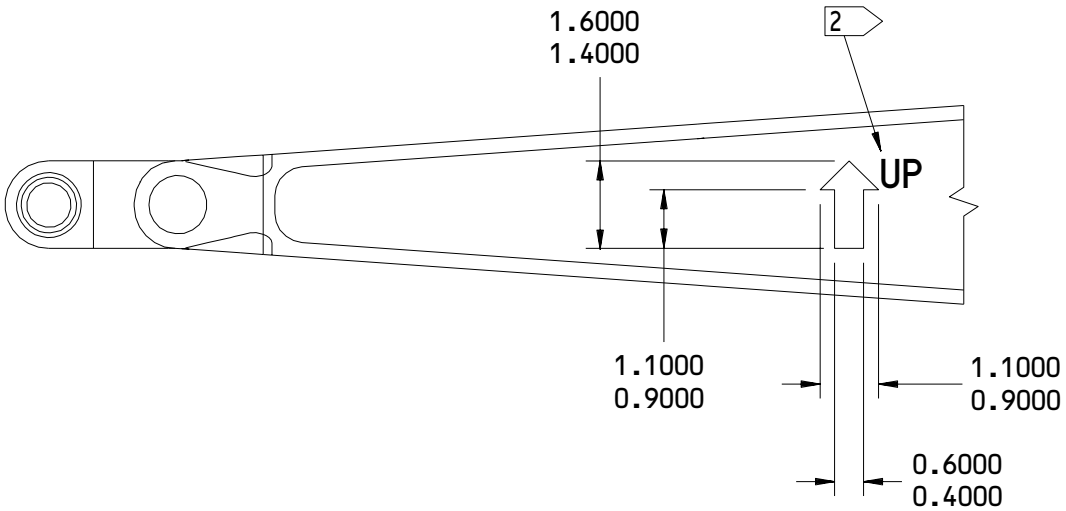
C. Procedure (Fig. 601)

(1) Apply BMS 10-60, type 2 enamel (F-20.56-707) with dry film thickness of 10.0-12.0 mils. Do not put enamel on the part number area.

(2) Apply enamel to the identification characters and clear protective finish as shown.

(3) Apply the word "UP" and the indicator arrow as shown.

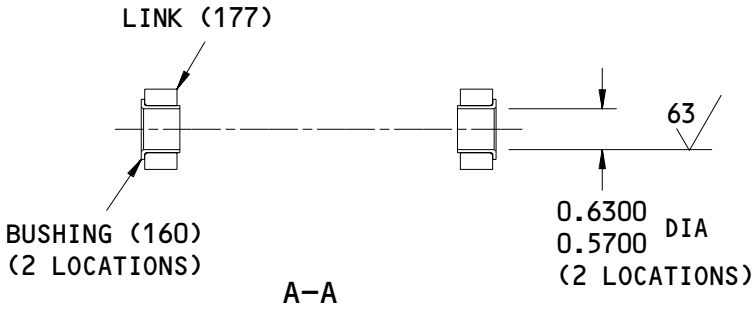




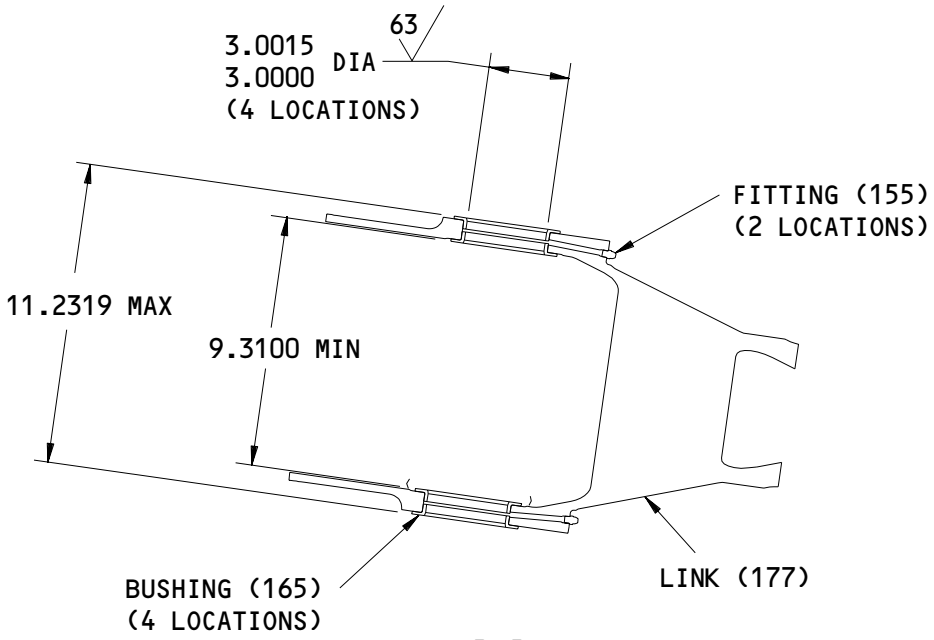
A

161T2111-1
Lock Link Assembly Repair
Figure 601 (Sheet 1)

K17747



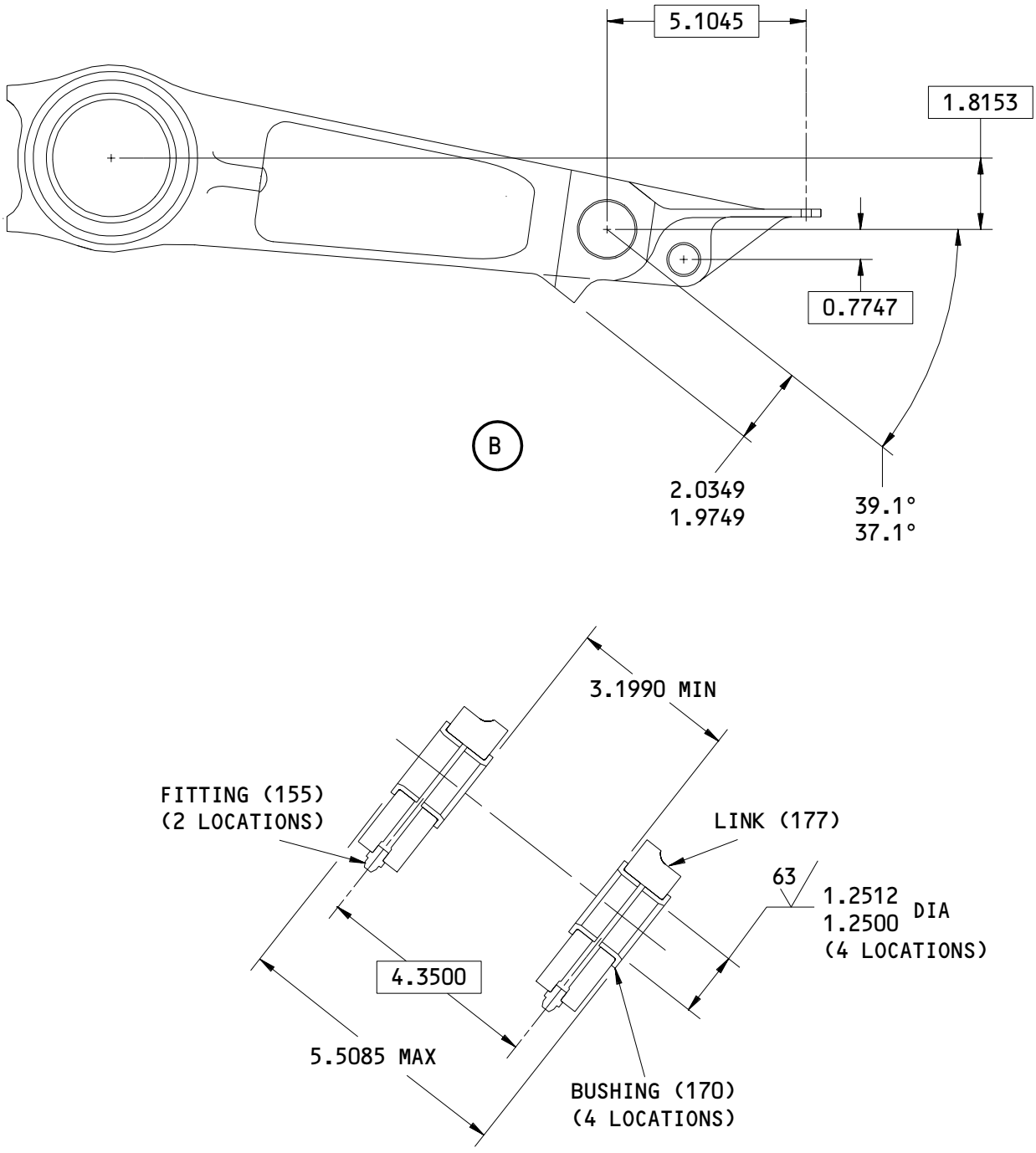
A–A



B–B

161T2111-1
Lock Link Assembly Repair
Figure 601 (Sheet 2)

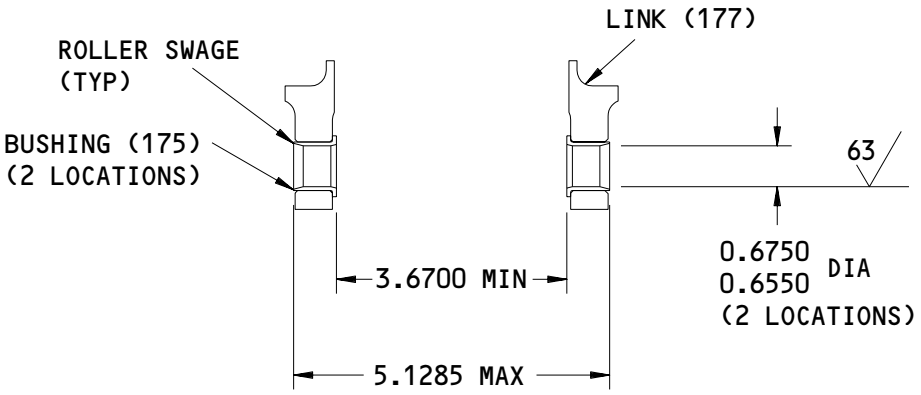
K17757



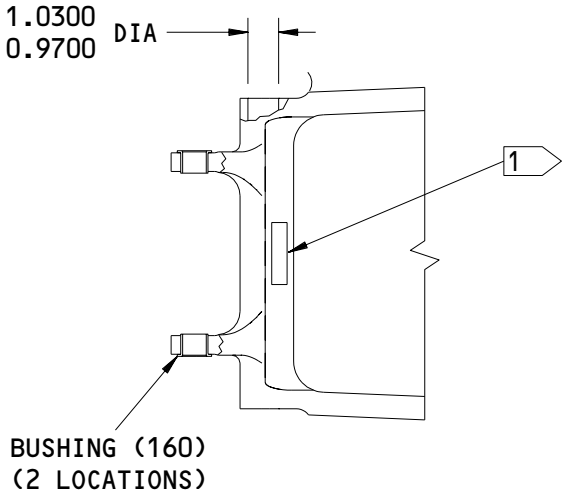
C–C

161T2111-1
Lock Link Assembly Repair
Figure 601 (Sheet 3)

K17782



D–D



E–E

1 PART NUMBER AND SERIAL NUMBER LOCATION. DO NOT PAINT (F-20.56-707) THEM. MASK AS NECESSARY. APPLY BMS 10-60 ENAMEL (F-19.39-707). WHEN ENAMEL DRIES APPLY BMS 10-60 ENAMEL (F-19.39-707) TO IDENTIFICATION CHARACTERS ONLY. APPLY TYPE 41 CLEAR COATING (F-21.34) EQUIVALENT TO THE ADJACENT THICKNESS OF ENAMEL.

2 APPLY THESE MARKINGS WITH BMS 10-60 GLOSS ENAMEL (F-14.9815-702, WHICH REPLACES SRF-14.9815-702)

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

161T2111-1
Lock Link Assembly Repair
Figure 601 (Sheet 4)

K17799

LINK - REPAIR 4-2

161T2111-2

1. General

A. This procedure has the data necessary to repair and refinish the link (177).

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

C. Refer to IPL Fig. 1 for item numbers.

D. General repair details:

(1) Material: Aluminum alloy

(2) Shot Peen: All surfaces, but not in lubrication holes
Intensity 0.007A2

2. Link Repair

A. Consumable Materials

NOTE: Equivalent material can be used.

(1) C00175 Coating - BMS 10-79, Type 3 primer (SOPM 20-60-02)

B. References

(1) SOPM 20-10-03, Shot Peening

(2) SOPM 20-30-02, Stripping of Protective Finishes

(3) SOPM 20-30-03, General Cleaning Procedures

(4) SOPM 20-41-01, Decoding Table for Boeing Finish Codes

(5) SOPM 20-43-01, Chromic Acid Anodizing

(6) SOPM 20-44-04, Application of Urethane Compatible Primer

(7) SOPM 20-60-02, Finishing Materials

C. Procedure

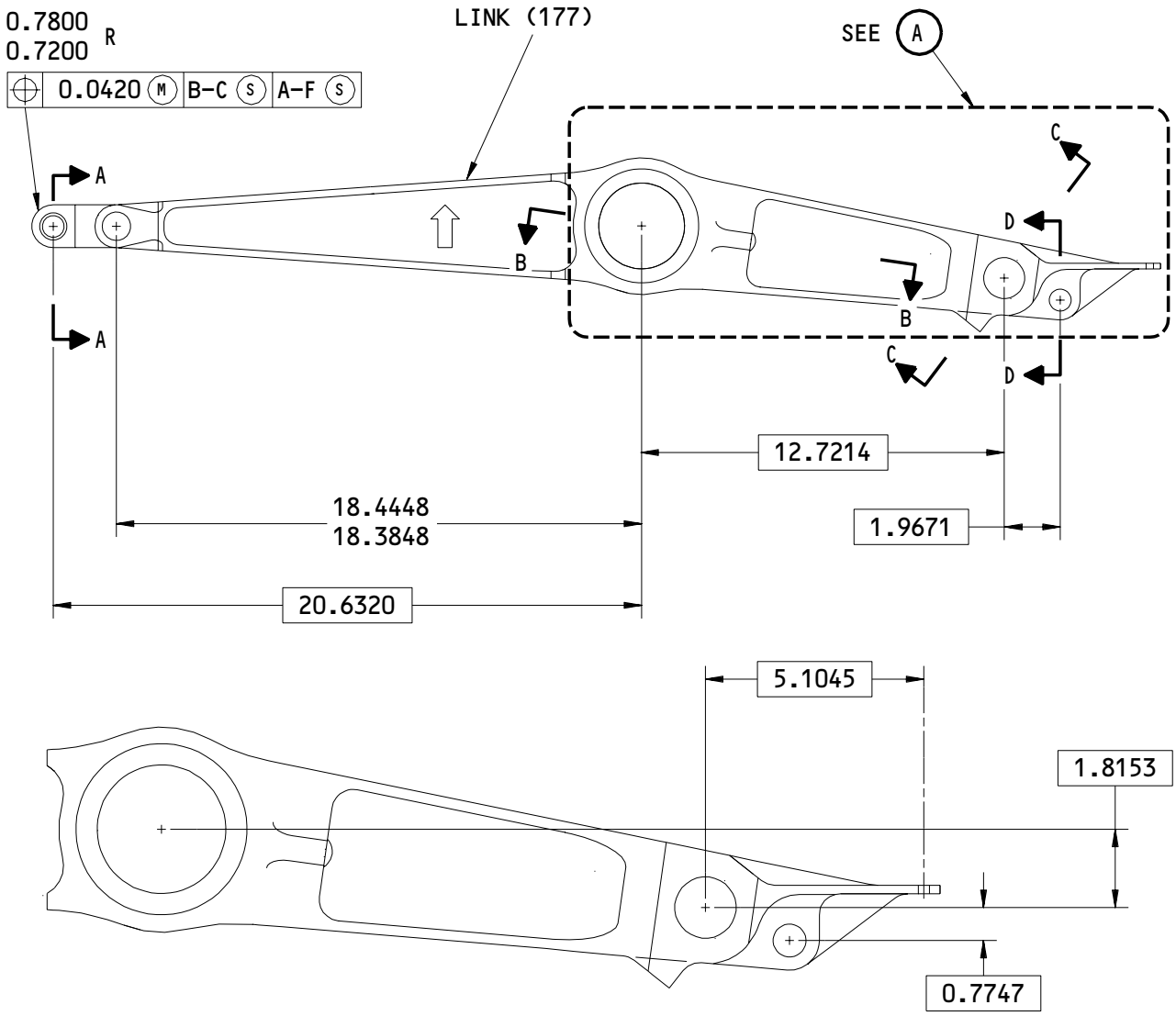
(1) Machine as necessary within the repair limits shown in Fig. 601 to remove the defects.

(2) Chromic acid - sulfuric acid anodize or chromic acid anodize (F-17.31).

(3) Apply BMS 10-60, type 3 primer (F-19.47) but not in lube fitting holes.

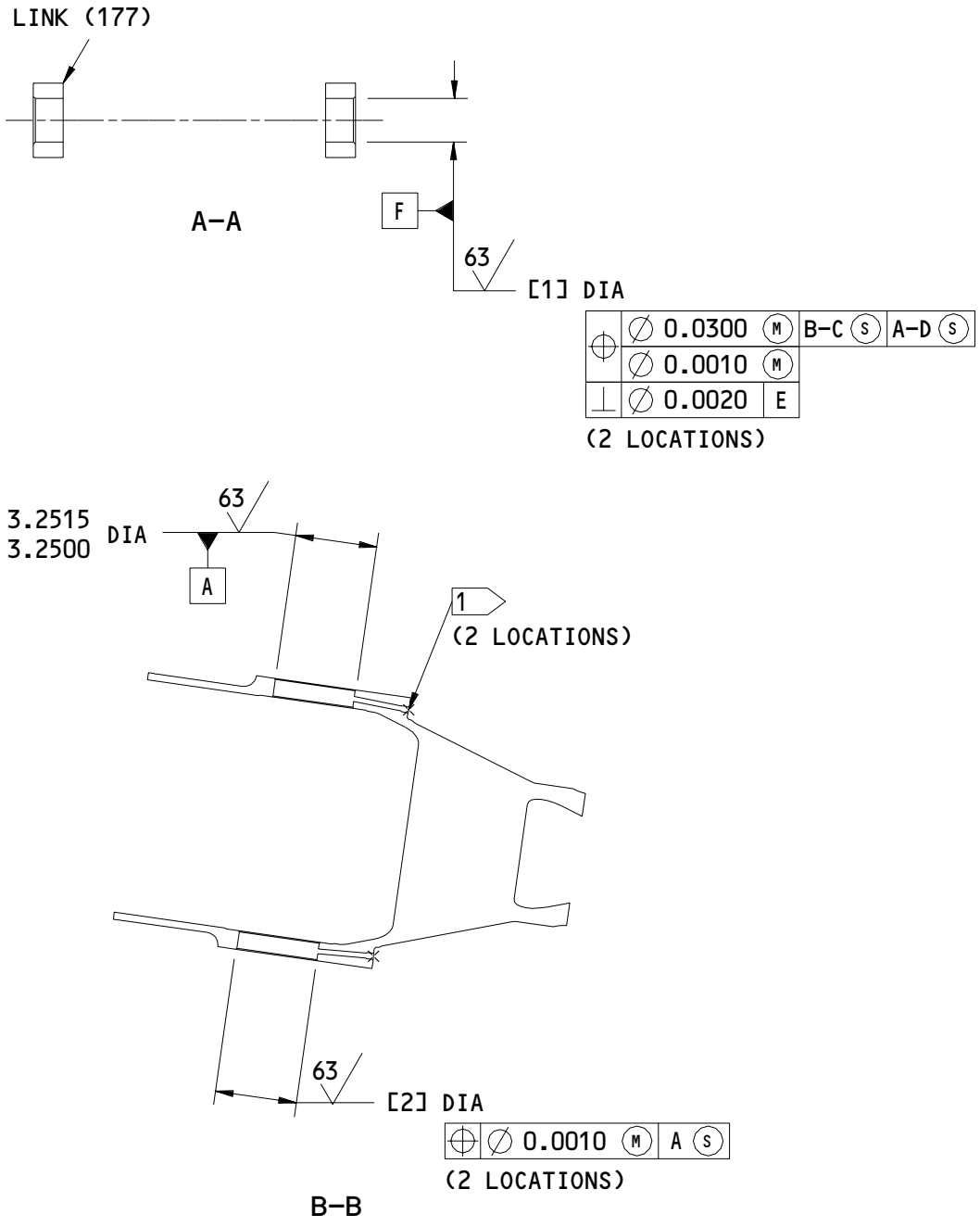
(4) Make oversize bushings (Fig. 602) as necessary to adjust for the amount of material removed.

(5) Install the bushings as shown in REPAIR 4-1.



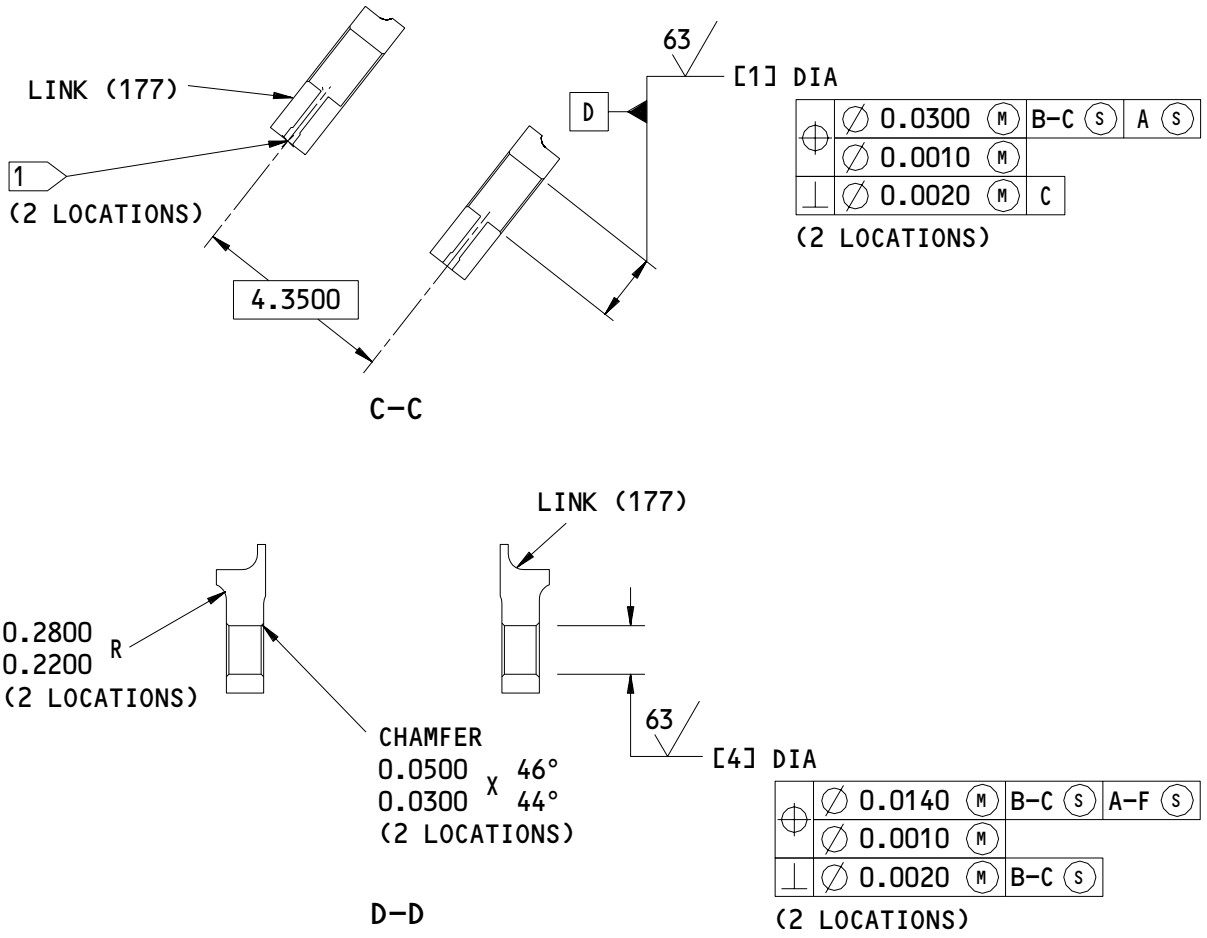
161T2111-2
Link Repair
Figure 601 (Sheet 1)

K19193



161T2111-2
Link Repair
Figure 601 (Sheet 2)

K19205



REFERENCE NUMBER	[1]	[2]	[3]	[4]
DESIGN DIMENSION	0.8768 0.8793	3.2516 3.2500	1.4394 1.4380	0.7818 0.7800
REPAIR LIMIT 2	0.9368	3.3116	1.4994	0.8418

1 DO NOT PUT PRIMER (F-19.47) IN THIS SURFACE

2 LIMIT FOR OVERSIZE BUSHING INSTALLATION

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

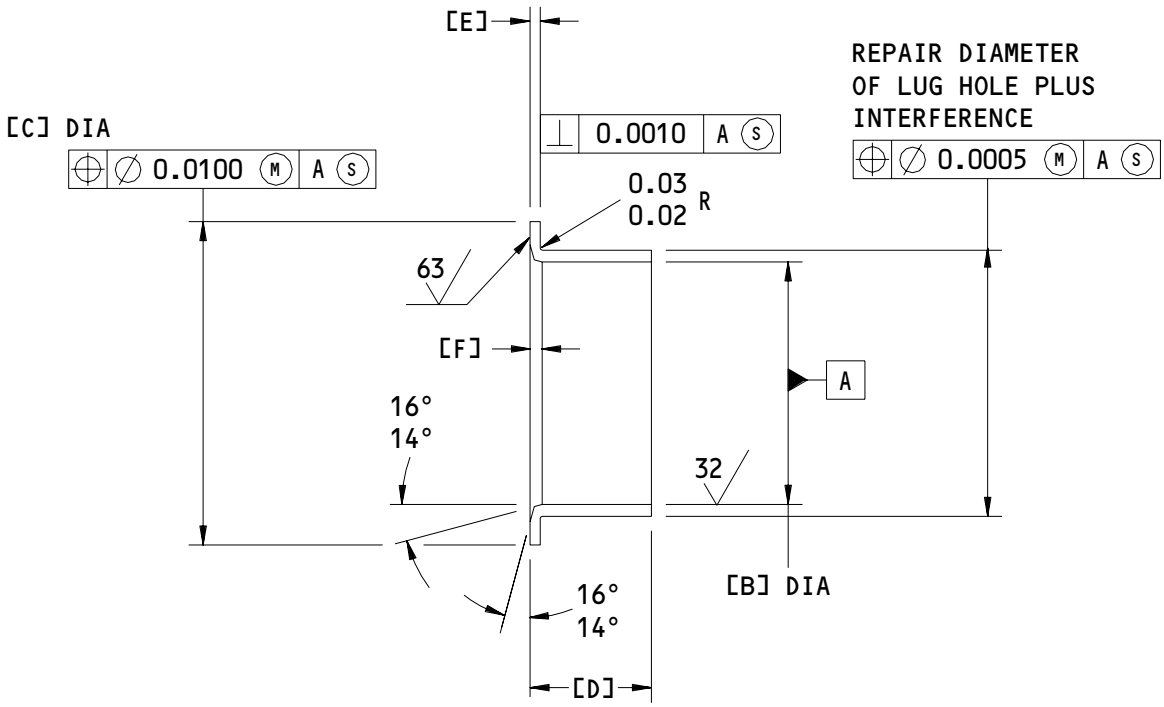
BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

161T2111-2
Link Repair
Figure 601 (Sheet 3)

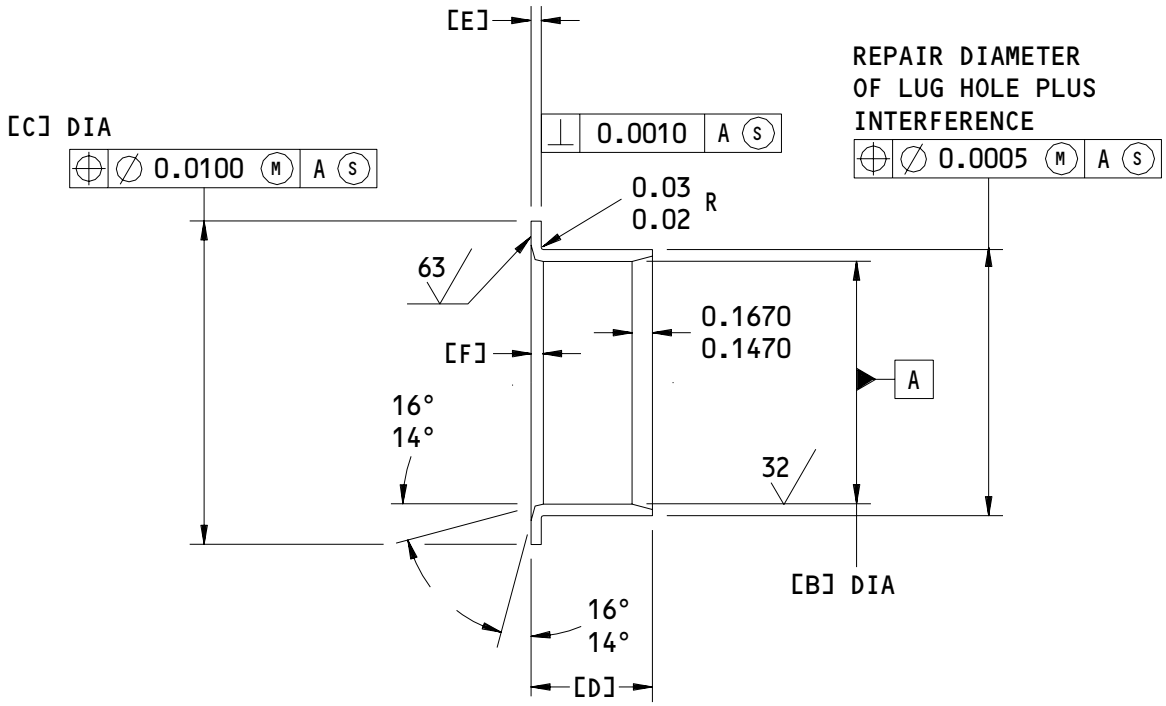
K19247



OVERSIZE REPLACEMENT FOR BUSHINGS (160,165,170)

Oversize Bushing Details
Figure 602 (Sheet 1)

K19164



OVERSIZE REPLACEMENT FOR BUSHING (175)

Oversize Bushing Details
Figure 602 (Sheet 2)

K19166

HOLE LOCATION (FIG. 601)	REPLACES BUSHING (IPL FIG. 1)	[B]	[C]	[D]	[E]	[F]	INTER-FERENCE
[1]	161T2874-24 (160)	0.7514 0.7506	1.1300 1.1100	0.6700 0.6500	0.0640 0.0630	0.1000 0.0800	0.0023 0.0009
[2]	161T2874-17 (165)	3.0034 3.0019	4.0100 3.9900	0.3350 0.3150	0.1260 0.1250	0.1600 0.1400	0.0057 0.0025
[3]	161T2874-18 (170)	1.2520 1.2509	1.7500 1.7300	0.4300 0.4100	0.0950 0.0940	0.1300 0.1100	0.0035 0.0011
[4]	161T2874-83 (175)	0.6565 0.6555	0.9900 0.9700	0.6310 0.6210	0.0640 0.0630	0.1000 0.0000	0.0021 0.0006

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

FINISH: CADMIUM PLATE (F-15.36)

MATERIAL: AL-NI-BRZ AS IN AMS 4640

BREAK ALL SHARP EDGES 0.01-0.02 R

DIMENSIONS ARE BEFORE PLATING

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

Oversize Bushing Details
Figure 602 (Sheet 3)

K19178

LOCK LINK ASSEMBLY - REPAIR 5-1

161T2112-5, -6

1. General

   A. This procedure has the data necessary to repair and refinish the lock link assembly (40, 45).

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

   C. Refer to IPL Fig. 1 for item numbers.

2. Bushing Replacement

   A. Consumable Materials

      NOTE: Equivalent material can be used.

      (1) A00247 Sealant - BMS 5-95 (SOPM 20-60-04)

      (2) C00913 Compound - BMS 3-27 (SOPM 20-60-04)

   B. References

      (1) SOPM 20-50-03, Bushing and Bearing Replacement

      (2) SOPM 20-41-05, Application of Corrosion Inhibiting Compound

      (3) SOPM 20-60-04, Miscellaneous Materials

   C. Procedures

      (1) Remove the bushing(s) (55, 60, 65, 70, 75) from the link (80 or 85) as shown in Fig. 601.

      (2) Install replacement bushing(s) (55, 65, 70, 75) into the link (80 or 85) with BMS 3-27 corrosion inhibiting compound by shrink-fit procedure as shown in SOPM 20-50-03.

(3) Install the bushing (60) into the link (80 or 85) with BMS 3-27 corrosion inhibiting compound by shrink-fit and roller-swage procedures as shown in SOPM 20-50-03.

(4) If necessary, machine the bushing(s) (55, 60, 65, 70, 75) to design dimensions and finish.

(5) Fillet seal the bushing(s) (55, 60, 65, 70, 75) with BMS 5-95 sealant as shown in SOPM 20-50-19.

3. Lube Fitting Replacement

A. Consumable Materials

NOTE: Equivalent material can be used.

(1) D00633 Grease - BMS 3-33 (SOPM 20-60-03)

B. References

(1) SOPM 20-50-01, Bolt and Nut Installation

(2) SOPM 20-50-07, Lubrication

(3) SOPM 20-60-03, Lubricants

C. Procedure

(1) Remove the old lube fittings (50) from the link (80 or 85).

(2) Install replacement lube fittings with BMS 3-33 grease. Tighten them to 25-30 pound-inches.

(3) Make sure that the lube passage is not blocked. Apply BMS 3-33 grease to the lube fitting(s) (50) until grease appears in the inside diameter of the bushings (55, 75).

4. Lock Link Assembly Refinish

A. Consumable Materials

NOTE: Equivalent material can be used.

(1) C00175 Coating - BMS 10-79, Type 3 primer (SOPM 20-60-02)

(2) C00033 Coating - BMS 10-60 enamel 707 (SOPM 20-60-02)

(3) C00033 Coating - BMS 10-60 enamel 701 (SOPM 20-60-02)

(4) C00501 Coating - Type 41, Hydraulic Fluid Resistant (SOPM 20-60-02)

B. References

(1) SOPM 20-30-03, General Cleaning Procedure

(2) SOPM 20-44-01, Application of Special Purpose Coatings and Finishes

(3) SOPM 20-44-04, Application of Urethane Compatible Primer

(4) SOPM 20-50-10, Application of Stencils, Insignia, Silk Screen, Part Numbering and Identification Markings

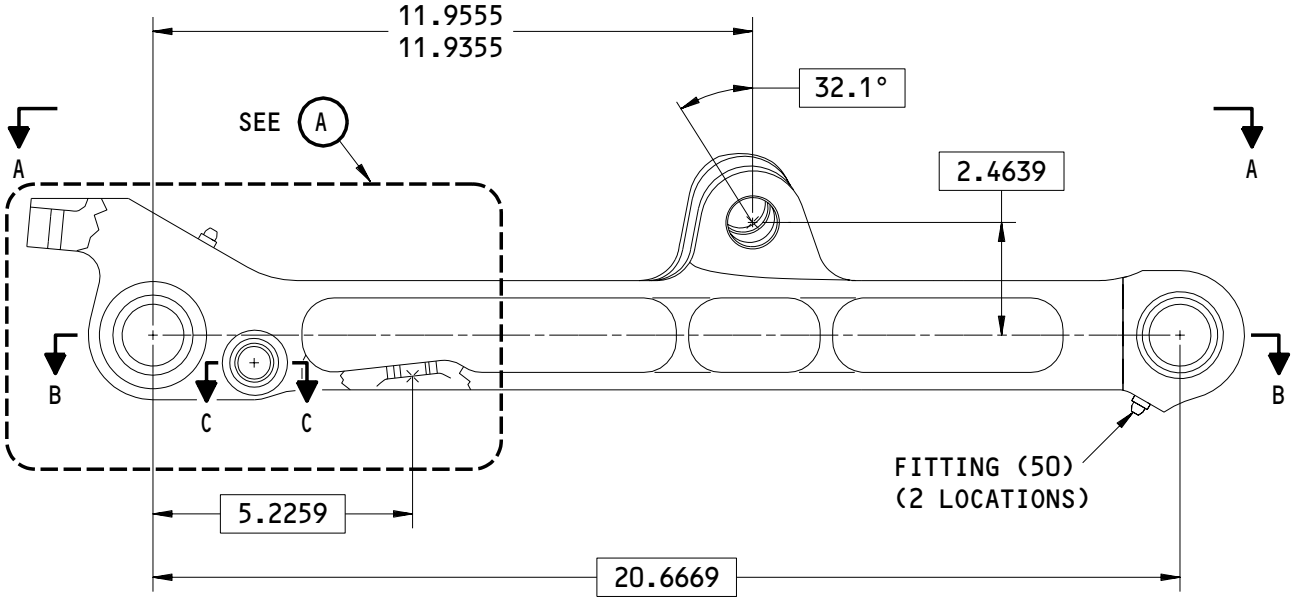
(5) SOPM 20-60-02, Finishing Materials

(6) SOPM 20-60-04, Miscellaneous Materials

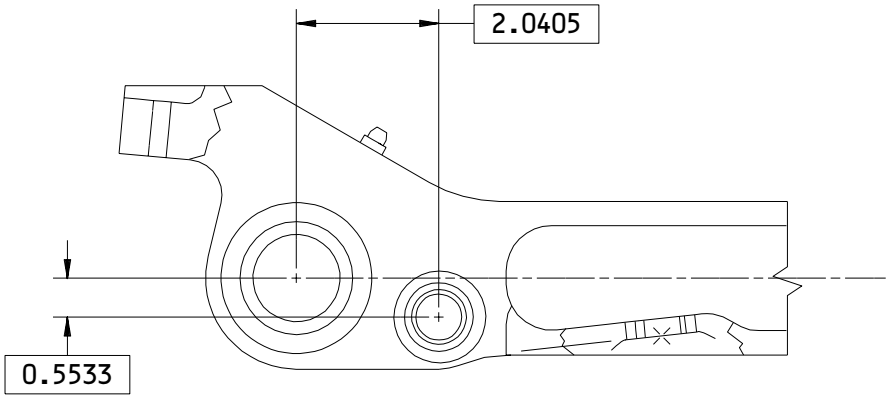
C. Procedure

(1) Apply BMS 10-60, type 2 enamel (F-20.56-707) with dry film thickness of 10.0-12.0 mils. Do not put enamel on surface identified by flagnote 5 in Fig. 601.

(2) Apply enamel and type 41 clear coating to the identification characters as shown.

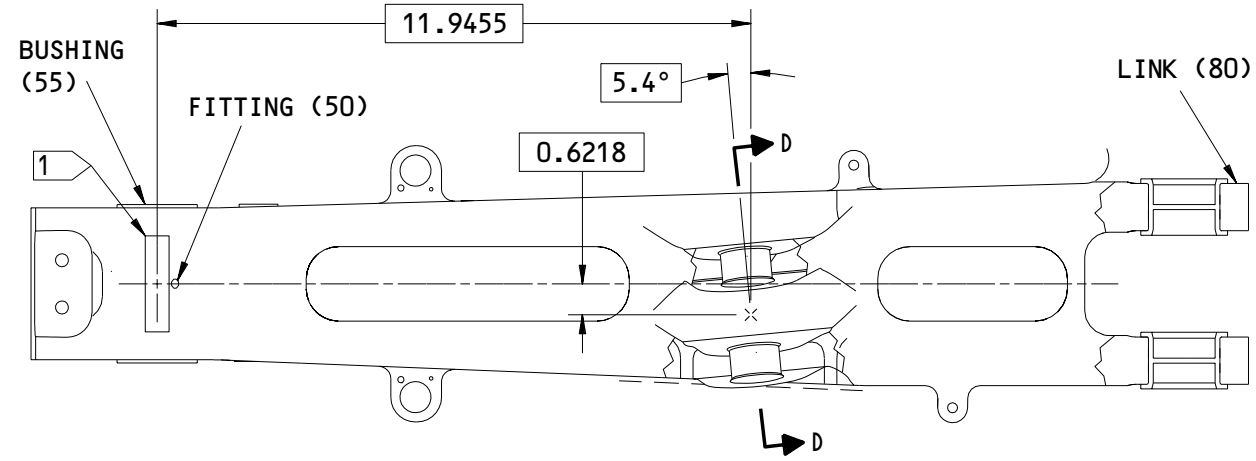


161T2112-1 SHOWN
161T2112-2 OPPOSITE

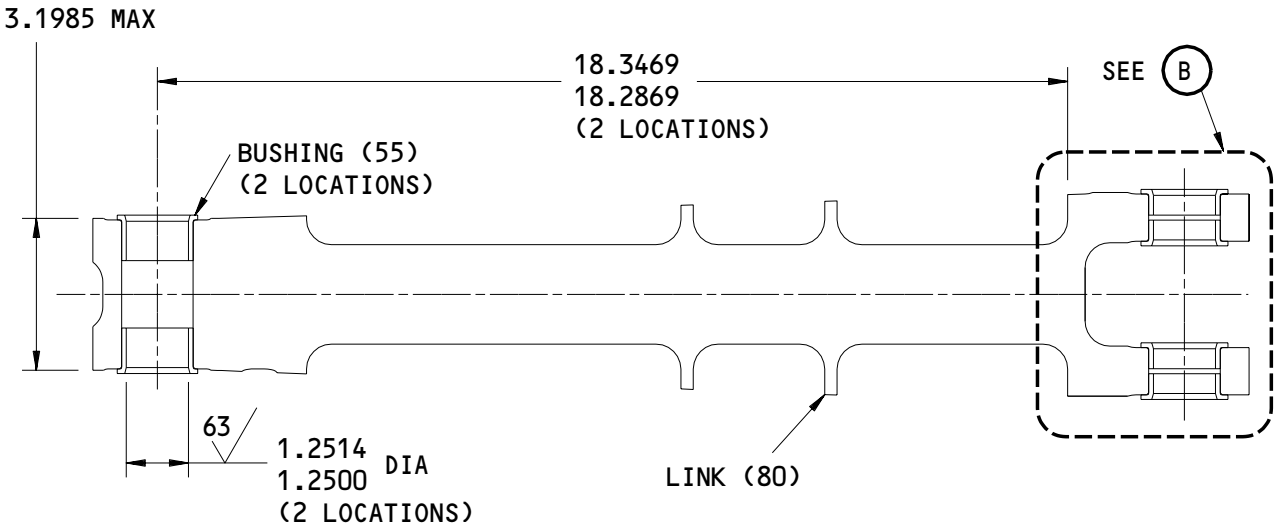


A

161T2112-5,-6
Lock Link Assembly Repair
Figure 601 (Sheet 1)



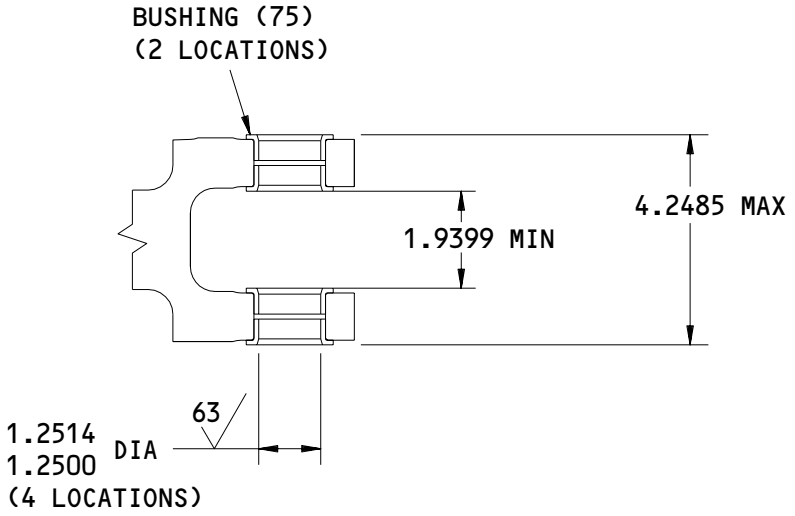
A–A



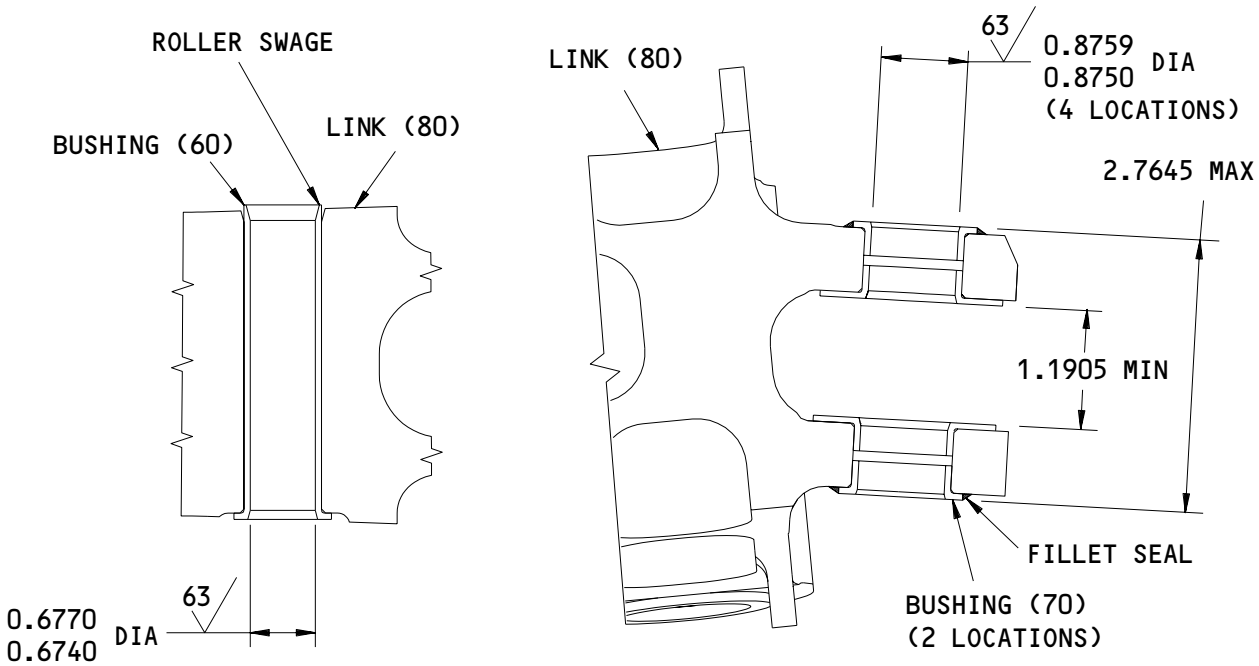
B–B

161T2112-5,-6
Lock Link Assembly Repair
Figure 601 (Sheet 2)

K17918



B



C–C

D–D

161T2112-5,-6
Lock Link Assembly Repair
Figure 601 (Sheet 3)

K17964

1 PART NUMBER AND SERIAL NUMBER LOCATION. DO NOT APPLY ENAMEL (F-20.56-707)HERE. MASK AS NECESSARY. APPLY BMS 10-60 ENAMEL (F-19.39-707). WHEN ENAMEL DRIES APPLY BMS 10-60 ENAMEL (F-19.39-701) TO IDENTIFICATION CHARACTERS ONLY. APPLY TYPE 41 (F-21.34) COATING EQUIVALENT TO THICKNESS OF THE ADJACENT ENAMEL

2 FILLET SEAL END OF FLANGE ONLY

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

161T2112-5,-6
Lock Link Assembly Repair
Figure 601 (Sheet 4)

K17977

LINK - REPAIR 5-2

161T2112-3, -4

1. General

A. This procedure had the data necessary to repair and refinish the link (80, 85).

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

C. Refer to IPL Fig. 1 for item numbers.

D. General repair details:

(1) Material: Aluminum alloy

(2) Shot Peen: All surfaces, but not in lubrication holes
Intensity 0.012A2
Coverage 2.0

2. Link Repair

A. Consumable Materials

NOTE: Equivalent material can be used.

(1) C00175 Coating - BMS 10-79, Type 3 primer (SOPM 20-60-02)

B. References

(1) SOPM 20-10-03, Shot Peening

(2) SOPM 20-30-02, Stripping of Protective Finishes

(3) SOPM 20-30-03, General Cleaning Procedures

(4) SOPM 20-41-01, Decoding Table for Boeing Finish Codes

(5) SOPM 20-43-01, Chromic Acid Anodizing

(6) SOPM 20-44-04, Application of Urethane Compatible Primer

(7) SOPM 20-60-02, Finishing Materials

C. Procedures

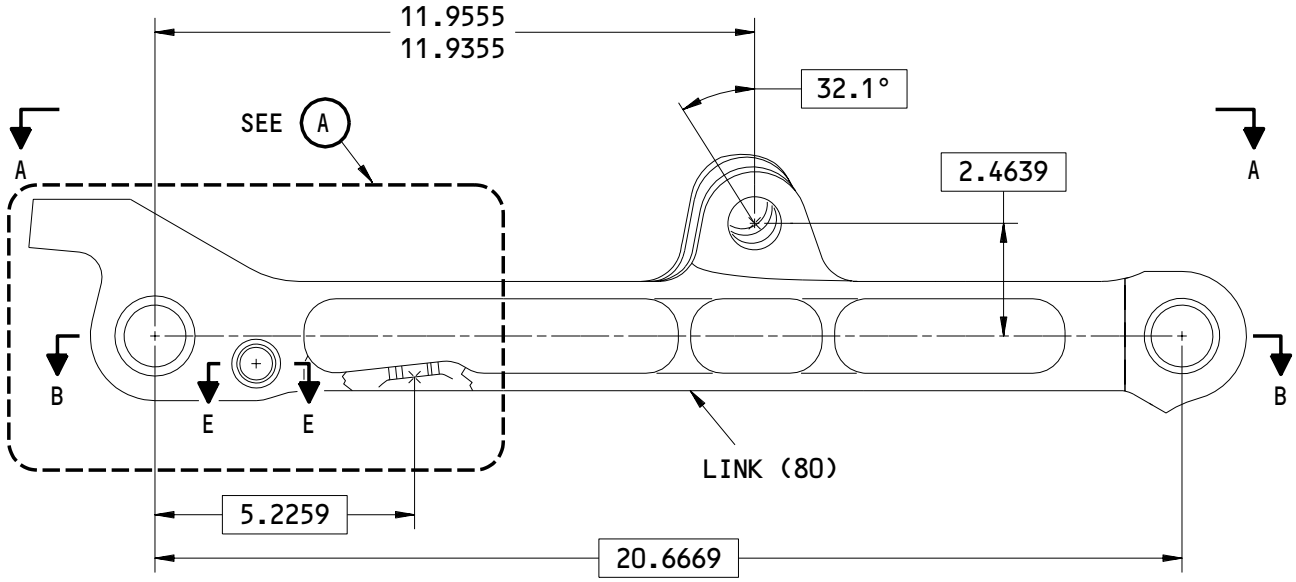
(1) Machine as necessary within the repair limits shown in Fig. 601 to remove the defects.

(2) Chromic acid - sulfuric acid anodize or chromic acid anodize (F-17.31).

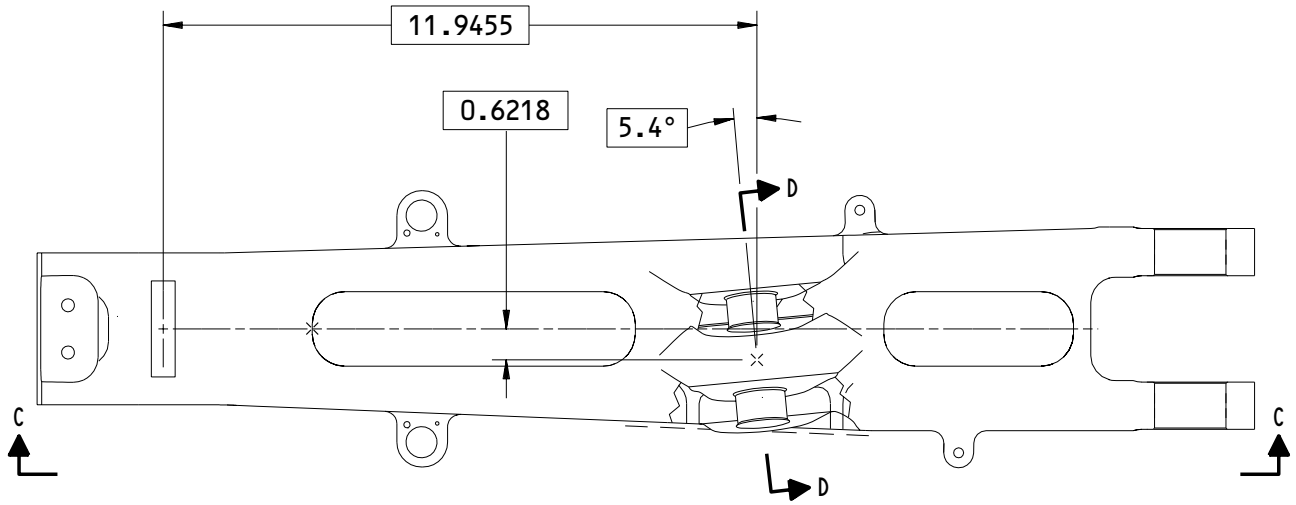
(3) Apply BMS 10-60, type 3 primer (F-19.47) but not in lube fitting holes.

(4) Make oversize bushings (Fig. 602) as necessary to adjust for the amount of material removed.

(5) Install the bushings as shown in REPAIR 5-1.

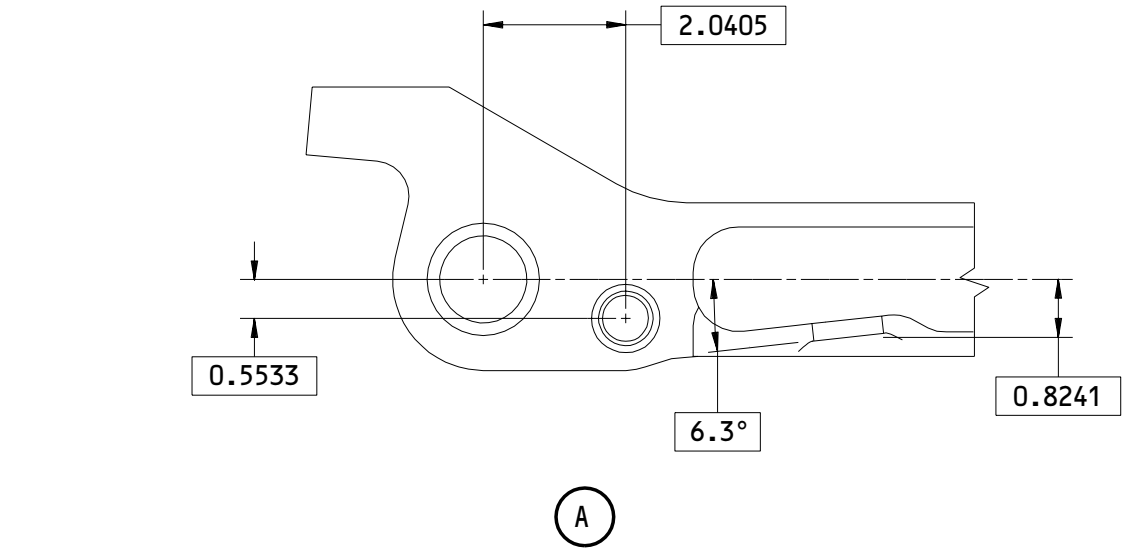


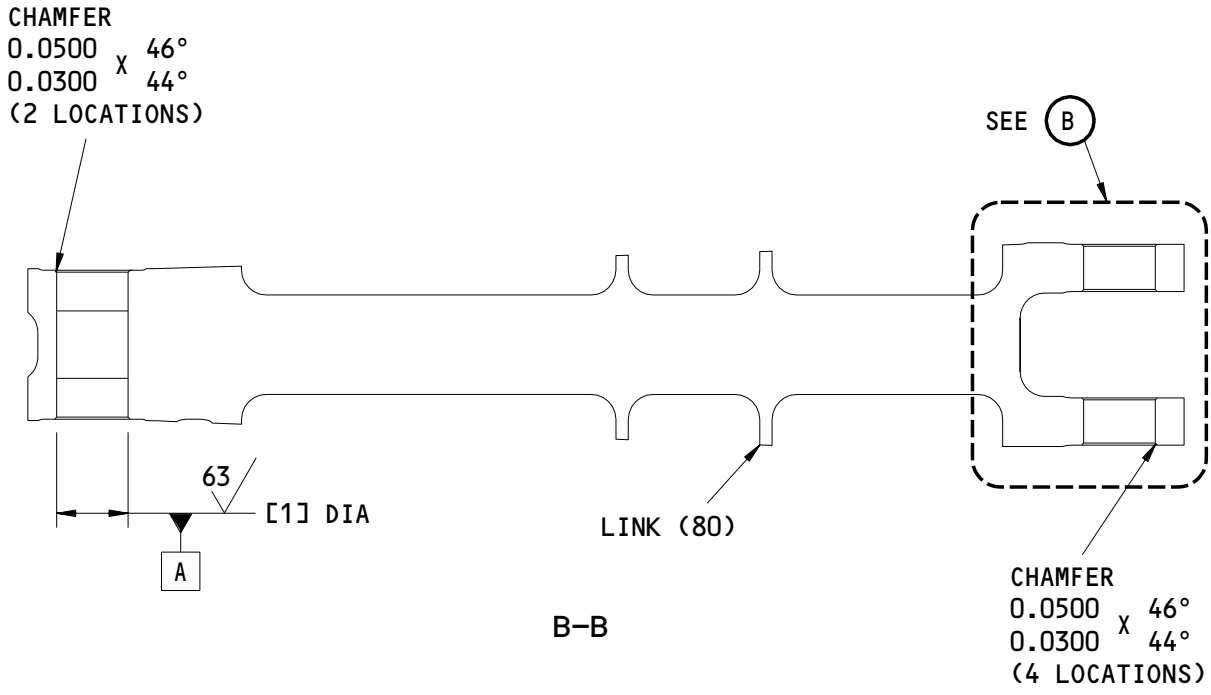
161T2112-3 SHOWN
161T2112-4 OPPOSITE



A-A

161T2112-3,-4
Link Repair
Figure 601 (Sheet 1)

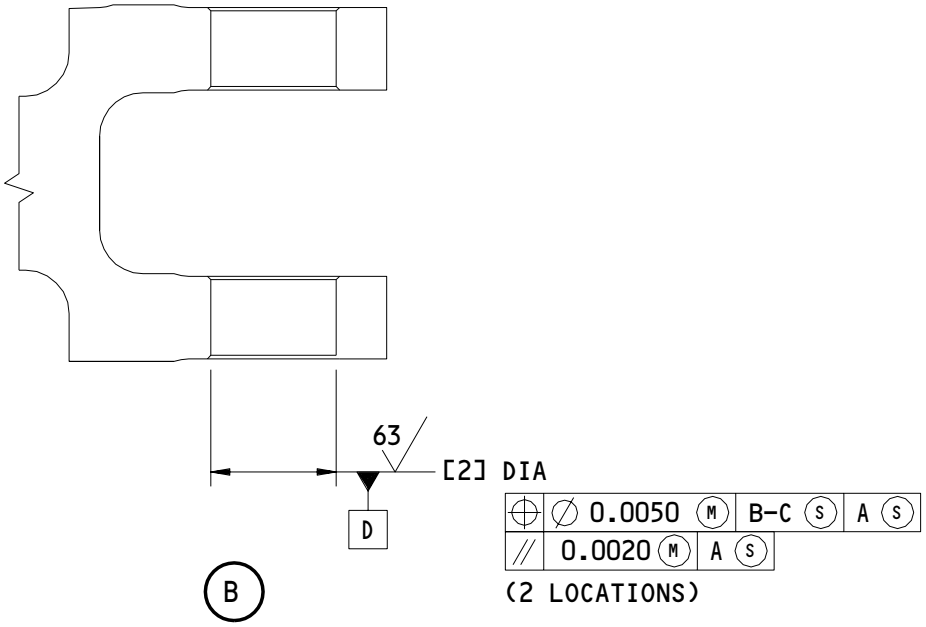


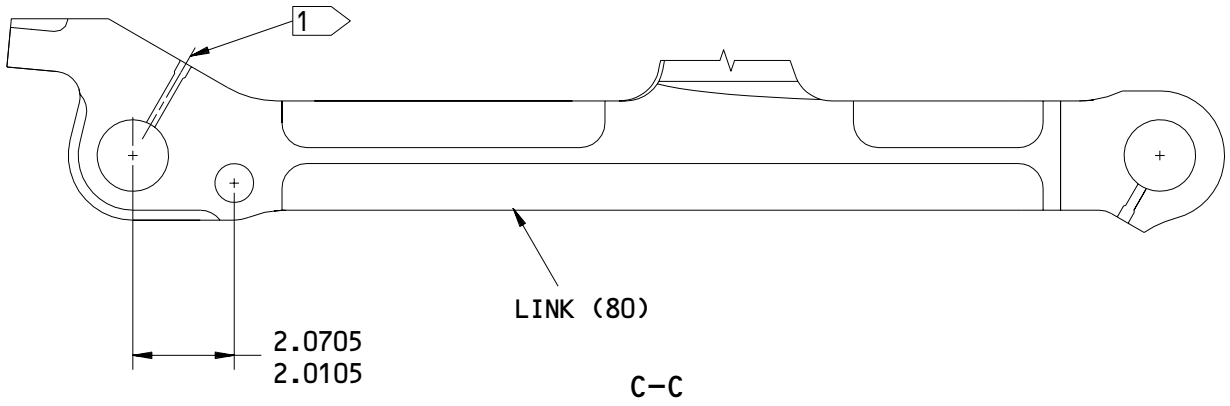


B–B

161T2112-3,-4
Link Repair
Figure 601 (Sheet 2)

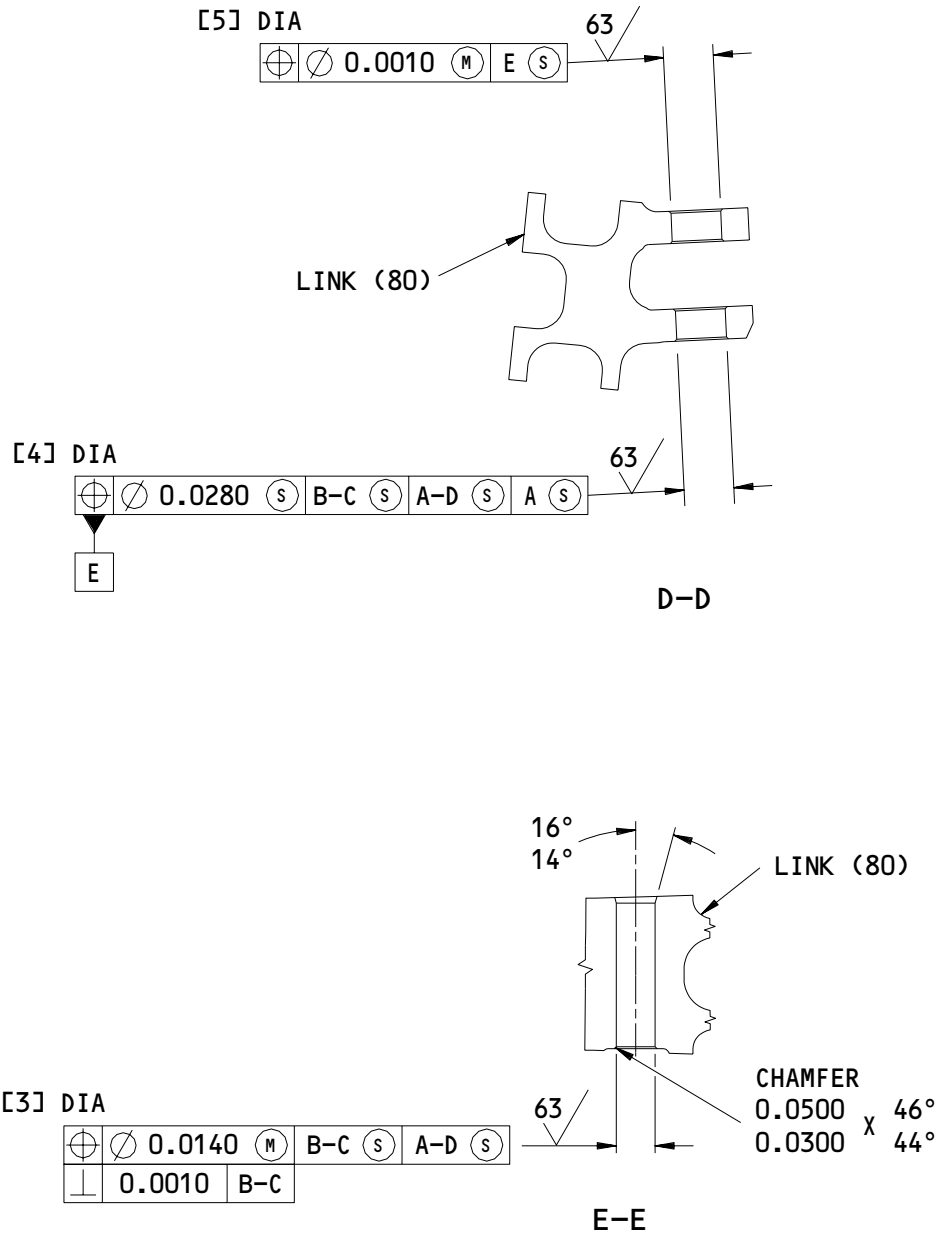
K18144





161T2112-3,-4
Link Repair
Figure 601 (Sheet 3)

K18318



161T2112-3,-4
Link Repair
Figure 601 (Sheet 4)

K18795

REFERENCE NUMBER	[1]	[2]	[3]	[4]	[5]
DESIGN DIMENSION	1.4394 1.4380	1.4394 1.4380	0.7810 0.7800	1.0019 1.0010	1.0019 1.0010
REPAIR LIMIT 2	1.4994	1.4994	0.8410	1.0619	1.0619

1 DO NOT PUT PRIMER (F-19.47) IN THIS SURFACE

2 LIMIT FOR OVERSIZE BUSHING INSTALLATION

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

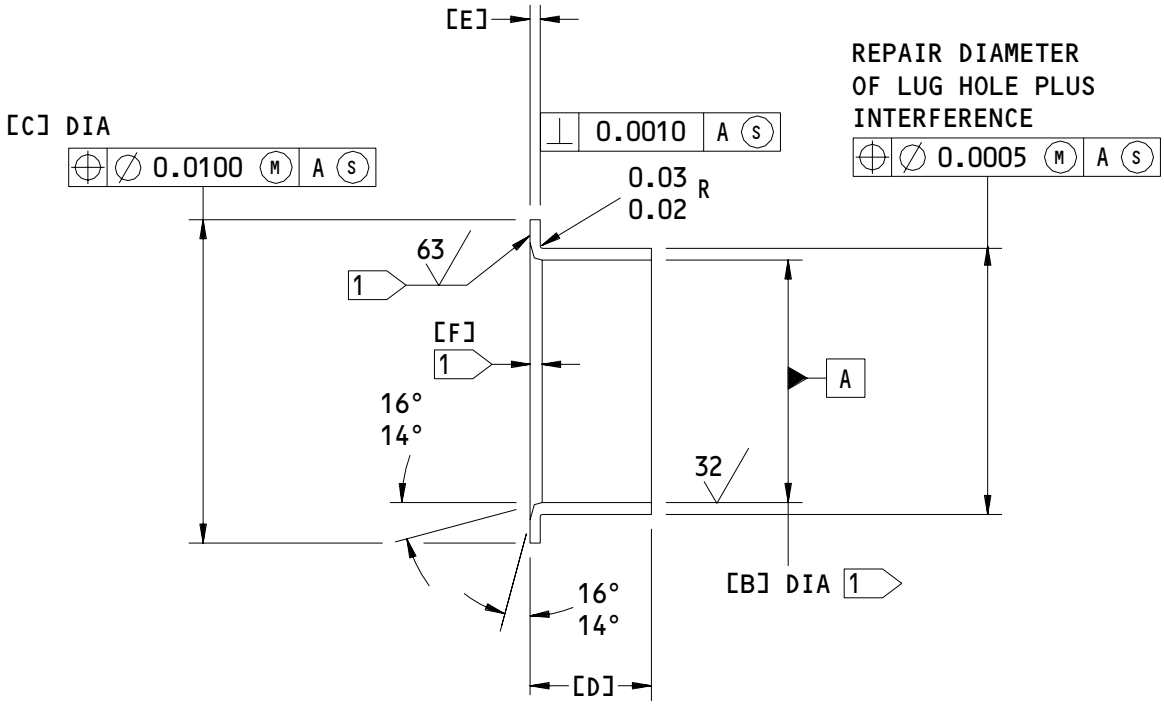
BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

161T2112-3,-4
Link Repair
Figure 601 (Sheet 5)

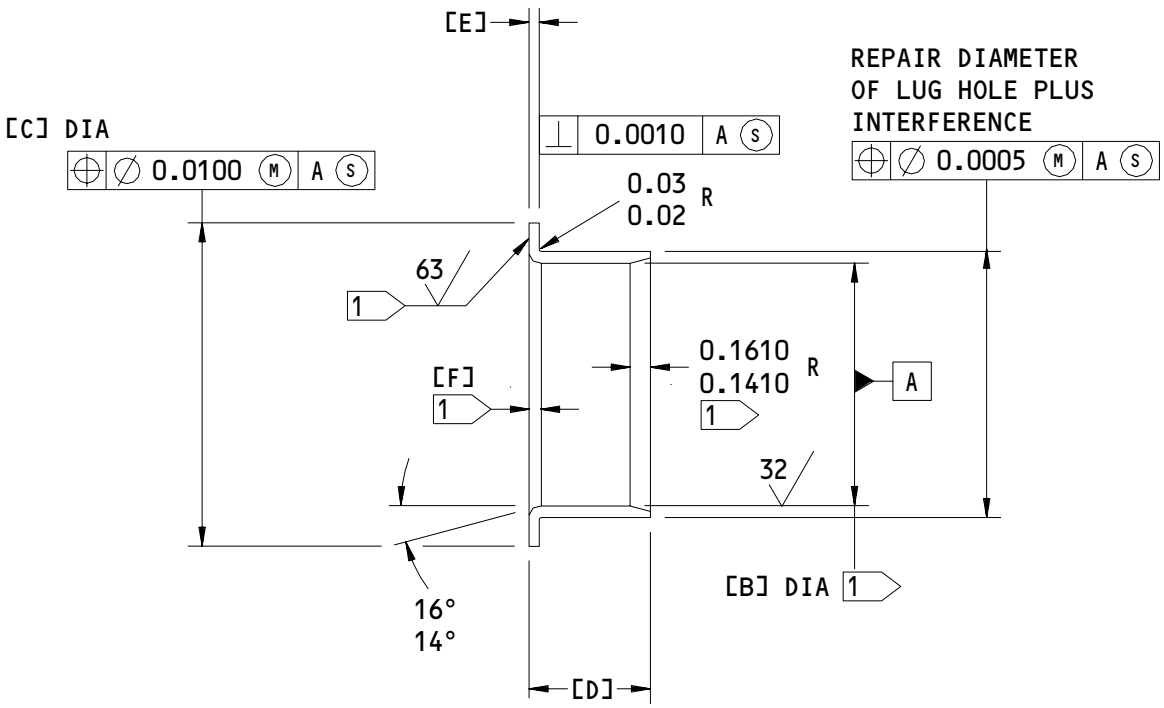
K18916



OVERSIZE REPLACEMENT FOR BUSHINGS (55,65,70,75)

Oversize Bushing Details
Figure 602 (Sheet 1)

K19137



B–B

OVERSIZE REPLACEMENT FOR BUSHING (60)

Oversize Bushing Details
Figure 602 (Sheet 2)

K19146

HOLE LOCATION (FIG. 601)	REPLACES BUSHING (IPL FIG. 1)	[B]	[C]	[D]	[E]	[F]	INTER-FERENCE
[1]	161T2874-82 (55)	1.2520 1.2508	1.6300 1.6100	0.8650 0.8450	0.0950 0.0940	0.1300 0.1100	0.0035 0.0011
[2]	161T2874-20 (75)	1.2520 1.2508	1.6300 1.6100	0.4350 0.4150	0.0950 0.0940	0.1300 0.1100	0.0035 0.0011
[3]	161T2874-21 (60)	0.6558 0.6550	0.9900 0.9700	3.1100 3.0900	0.0640 0.0630	0.1000 0.0800	0.0021 0.0006
[3]	161T2874-86 (60A)	0.6769 0.6756	0.9900 0.9700	3.1100 3.0900	0.0640 0.0630	0.1000 0.0800	0.0021 0.0006
[4],[5]	161T2874-22 (65)	0.8766 0.8757	1.8500 1.8300	0.2850 0.2650	0.0590 0.0580	0.1000 0.0800	0.0021 0.0006
[4],[5]	161T2874-23 (70)	0.8766 0.8757	1.2600 1.2400	0.2850 0.2650	0.0640 0.0630	0.1000 0.0800	0.0021 0.0010

1 NO PLATING

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

CADMIUM PLATE UNLESS SHOWN BY 1

MATERIAL: AL-NI-BR AS IN AMS 4640

BREAK ALL SHARP EDGES 0.01-0.02 R

DIMENSIONS APPLY BEFORE PLATING

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

Oversize Bushing Details
Figure 602 (Sheet 3)

K18923

PIN - REPAIR 6-1

161T2129-2

1. General

A. This procedure has the data necessary to repair and refinish the pin (135).

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

C. Refer to IPL Fig. 1 for item numbers.

D. General repair details:

(1) Material: 4340M Steel

(2) HT TR: 275-300 Ksi

(3) Shot peen: 0.016-0.033 shot size
0.014-0.016 A2 Intensity

2. Pin Repair

A. Consumable Materials

NOTE: Equivalent material can be used.

(1) C00033 Coating - BMS 10-60, Type 2 enamel (SOPM 20-60-02)

(2) C00175 Coating - BMS 10-79, Type 3 primer (SOPM 20-60-02)

(3) C00308 Compound - MIL-C-11796, Class 1 (SOPM 20-60-04)

B. References

(1) CMM 32-00-05, Repair of High Strength Steel Landing Gear Parts

(2) SOPM 20-10-01, Repair and Refinish of High Strength Steel Parts

(3) SOPM 20-10-02, Machining of Alloy Steel

(4) SOPM 20-10-03, Shot Peening

(5) SOPM 20-10-04, Grinding of Chrome Plated Parts

(6) SOPM 20-30-03, Stripping of Protective Finishes

(7) SOPM 20-41-01, Decoding Table for Boeing Finish Codes

(8) SOPM 20-41-03, Application of Corrosion Preventives to Interior of Closed End Tubes

(9) SOPM 20-42-03, Hard Chrome Plating

(10) SOPM 20-60-02, Finishing Materials

(11) SOPM 20-60-04, Miscellaneous Materials

C. Procedure (Fig. 601)

(1) Repair

(a) Machine as required, within the repair limits, to remove defects.

(b) Shot peen as indicated (but not threads).

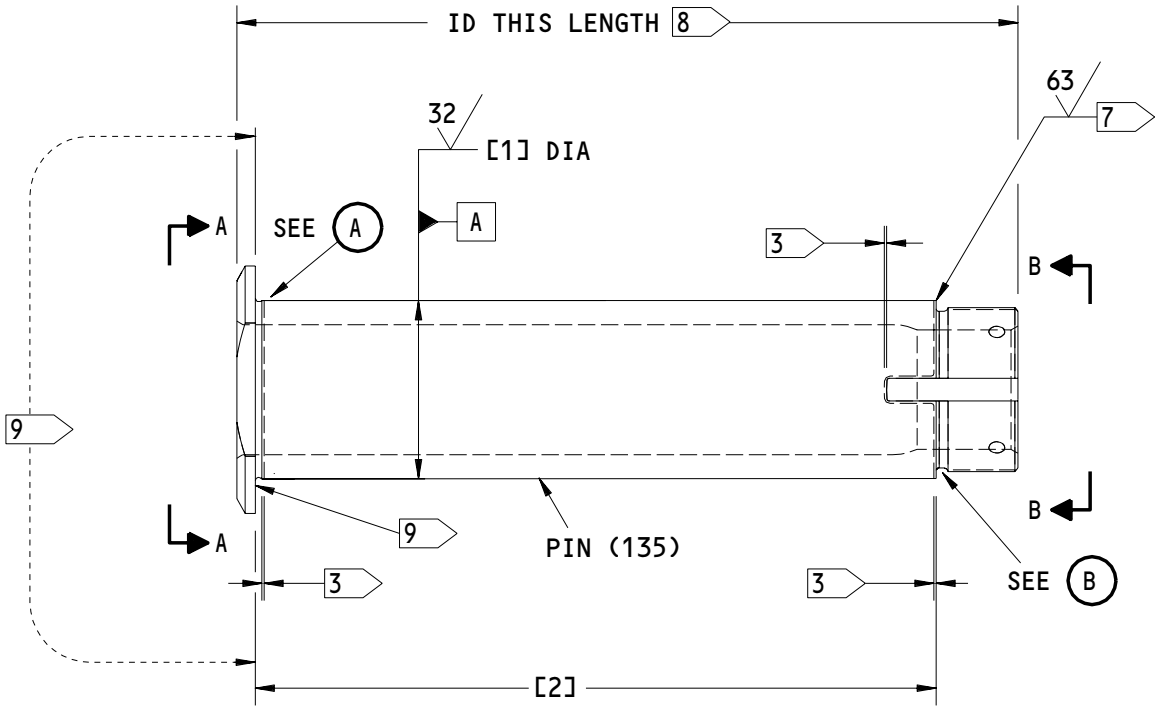
(c) Build up with chrome plate.

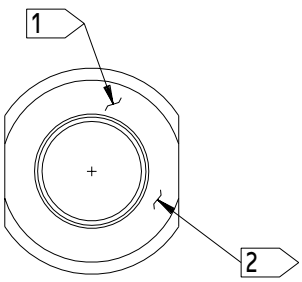
(d) Grind the chrome plate to design dimensions and finish.

(2) Refinish

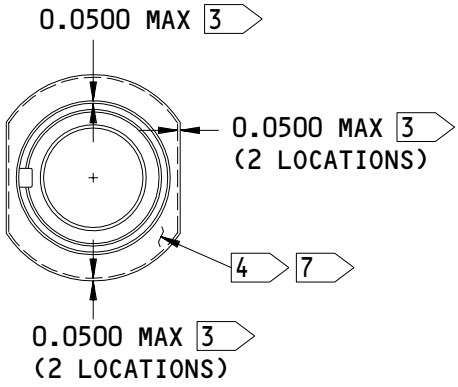
(a) Chrome plate the shank OD per flagnote 6, if it was not repaired.

(b) Chrome plate, cadmium-titanium plate and apply primer, enamel and a corrosion preventive compound to other surfaces as indicated.





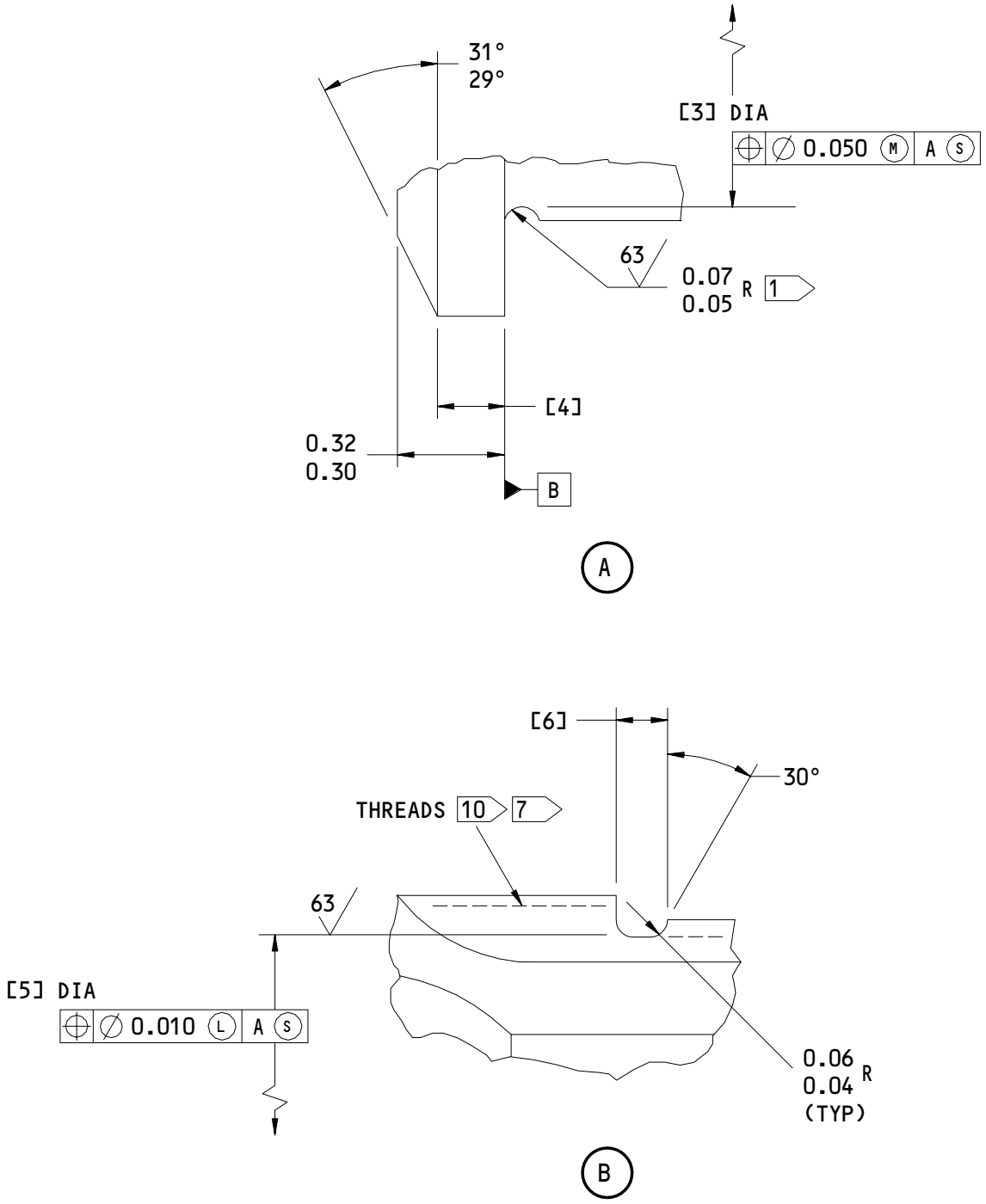
A–A



B–B

161T2129-2
Pin Repair
Figure 601 (Sheet 1)

K18093



161T2129-2
Pin Repair
Figure 601 (Sheet 2)

K18096

REFERENCE NUMBER	[1]	[2]	[3]	[4]	[5]	[6]
DESIGN DIMENSION	2.9990 2.9970	11.4200 11.4150	2.9450 2.9400	0.1800 0.1600	2.6300 2.6200	0.1770 0.1570
REPAIR LIMIT	2.9690 5	----	----	----	----	----

1 PART NUMBER AND SERIAL NUMBER LOCATION

2 RUBBER STAMP THE WORDS "THIS END AFT" AT THIS SURFACE WITH BLACK ENAMEL, OR STENCIL WITH BMS 10-60 ENAMEL (F-14.9815-701, WHICH REPLACES SRF-14.9815-701)

3 CHROME PLATE RUNOUT

4 CHROME PLATE (F-15.34) 0.0025-0.0035 INCH THICK. DO NOT GRIND

5 LIMIT FOR CHROME PLATE BUILDUP (SOPM 20-42-03) AND GRIND TO DESIGN DIMENSIONS AND FINISH.

6 CHROME PLATE (F-15.34), 0.003 MINIMUM THICKNESS.

7 WIPE THE CHROME PLATE WITH PRIMER (F-19.451)

8 CADMIUM-TITANIUM PLATE (F-15.01). APPLY BMS 10-79, TYPE 3 PRIMER (F-19.66) AND MIL-C-11796, CLASS 1 CORROSION PREVENTIVE COMPOUND (F-19.03)

9 CADMIUM-TITANIUM PLATE (F-15.01). APPLY BMS 10-79, TYPE 3 PRIMER (F-19.66) AND BMS 10-60 ENAMEL (F-19.39-707)

10 CADMIUM-TITANIUM PLATE (F-15.32)

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

161T2129-2
Pin Repair
Figure 601 (Sheet 3)

LINK PIN - REPAIR 7-1

161T2136-1

1. General

A. This procedure has the data necessary to repair and refinish the link pin (35).

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

C. Refer to IPL Fig. 1 for item numbers.

D. General repair details:

(1) Material: 4340M Steel

(2) HT TR: 275-300 Ksi

(3) Shot peen: 0.016-0.033 shot size
0.014-0.016 A2 Intensity

2. Link Pin Repair

A. Consumable Materials

NOTE: Equivalent material can be used.

(1) C00033 Coating - BMS 10-60, Type 2 enamel (SOPM 20-60-02)

(2) C00175 Coating - BMS 10-79, Type 3 primer (SOPM 20-60-02)

(3) C00308 Compound - MIL-C-11796, Class 1 (SOPM 20-60-04)

B. References

(1) CMM 32-00-05, Repair of High Strength Steel Landing Gear Parts

(2) SOPM 20-10-01, Repair of High Strength Steel Parts

(3) SOPM 20-10-02, Machining of Alloy Steel

(4) SOPM 20-10-03, Shot Peening

(5) SOPM 20-10-04, Grinding of Chrome Plated Parts

(6) SOPM 20-30-03, Stripping of Protective Finishes

(7) SOPM 20-41-01, Decoding Table for Boeing Finish Codes

(8) SOPM 20-41-03, Application of Corrosion Preventives to Interior of Closed End Tubes

(9) SOPM 20-42-03, Hard Chrome Plating

(10) SOPM 20-60-02, Finishing Materials

(11) SOPM 20-60-04, Miscellaneous Materials

C. Procedure (Fig. 601)

(1) Repair

(a) Machine as required, within repair limits to remove defects.

(b) Shot peen surfaces as indicated.

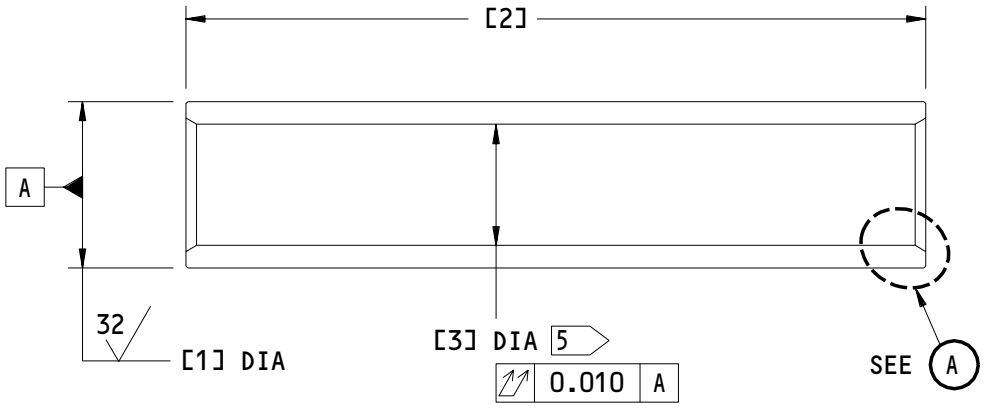
(c) Build up with chrome plate.

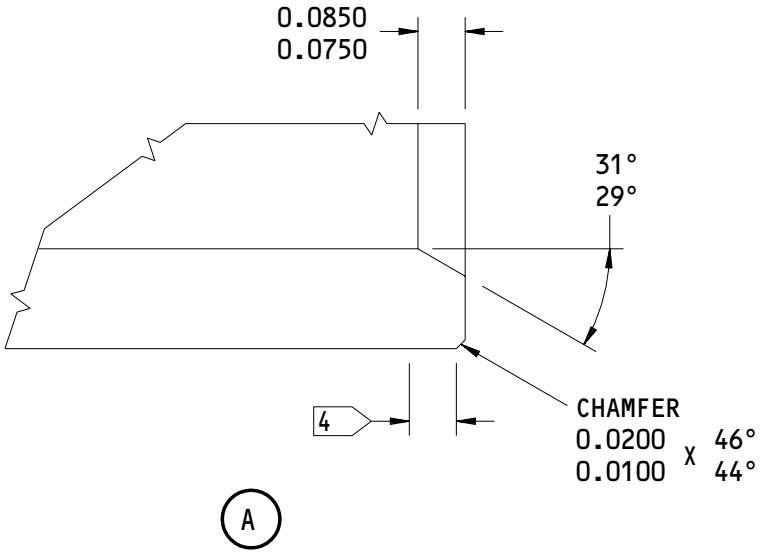
(d) Grind the chrome plate to design dimensions and finish.

(2) Refinish

(a) Chrome plate the shank OD per flagnote 5, if it was not repaired.

(b) Cadmium-titanium plate (F-15.01) and apply primer and corrosion preventive compound to other surfaces as indicated.





161T2136-1
Pin Repair
Figure 601 (Sheet 1)

K19121

REFERENCE NUMBER	[1]	[2]	[3]
DESIGN DIMENSION	1.2490 1.2390	5.5200 5.5100	0.905 0.900
REPAIR LIMIT	1.2190 2	----	----

1 PART NUMBER AND SERIAL NUMBER LOCATION

2 LIMIT FOR CHROME PLATE BUILDUP (SOPM 20-42-03) AND GRIND TO DESIGN DIMENSIONS AND FINISH

3 CHROME PLATE (F-15.34) 0.003 INCH THICK MAXIMUM AND WIPE WITH PRIMER (F-19.451)

4 CHROME PLATE RUNOUT

5 CADMIUM-TITANIUM PLATE (F-15.01) AND APPLY BMS 10-79, TYPE 3 PRIMER (F-19.66) AND MIL-C-11796, CLASS 1 CORROSION PREVENTIVE COMPOUND (F-19.03) IN THE INSIDE SURFACE OF THIS LENGTH

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

161T2136-1
Pin Repair
Figure 601 (Sheet 2)

K19129

ASSEMBLY

1. General

A. This procedure has the data necessary to assemble the main landing gear side strut assembly.

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

C. Refer to IPL Fig. 1 for item numbers.

2. Assembly

A. Consumable Materials

NOTE: Equivalent material can be used.

(1) AOO247 Sealant -- BMS 5-95 (SOPM 20-60-04)

(2) COO913 Compound - BMS 3-27 Corrosion Inhibiting (SOPM 20-60-04)

(3) DOO633 Grease - BMS 3-33 (SOPM 20-60-03)

B. References

(1) SOPM 20-41-05, Application of Corrosion Inhibiting Compounds

(2) SOPM 20-50-01, Bolt and Nut Installation

(3) SOPM 20-50-02, Installation of Safetying Devices

(4) SOPM 20-50-07, Lubricant

(5) SOPM 20-60-03, Lubricants

(6) SOPM 20-60-04, Miscellaneous Materials

C. Procedure (Fig. 701)

(1) Use standard industry procedures and the steps shown below to assemble this component.

(2) Install the fitting plate (115A) on the lock link assembly (150) as follows:

(a) Apply BMS 5-95 fay surface sealant onto the mating surfaces of the fitting plate (115A) and the lock link assembly (150).

(b) Install the fitting plate (115A) onto the lock link assembly (150) with the bolts (95), the wahers (100), and the nuts (105).

(3) Install the fitting plate (115A) and the shim (110A) on the lock link assembly (40 or 45) as follows:

(a) Adjust the thickness of the shim (110A) to get the dimension shown.

(b) Apply BMS 5-95 fay surface sealant on the mating surfaces of the fitting plate (115A), the shim (110A), and the lock link assembly (40 or 45).

(c) Install the shim (110A) and the fitting plate (115A) on the lock link assembly (40 or 45) with the bolts (90), the washers (100), and the nuts (105).

(4) Apply BMS 3-27 corrosion preventive compound (F-19.71) to the thread relief and undercut of the bolt (15) and the mating surfaces of the end caps (30).

(5) Apply BMS 3-33 grease to the chrome plated surfaces of the link pin (35).

(6) Install the lock link assembly (40) on the lock link assembly (150) with the link pin (35) and the end caps (30).

(7) Install the bolt (15), the washer (20), and the nut (25) onto the link pin (35) and the end caps (30).

(8) Tighten the nut (25) to 100-125 pound-inches. Back off to the nearest nut castellation and install the cotter pin (10) onto the bolt (15).

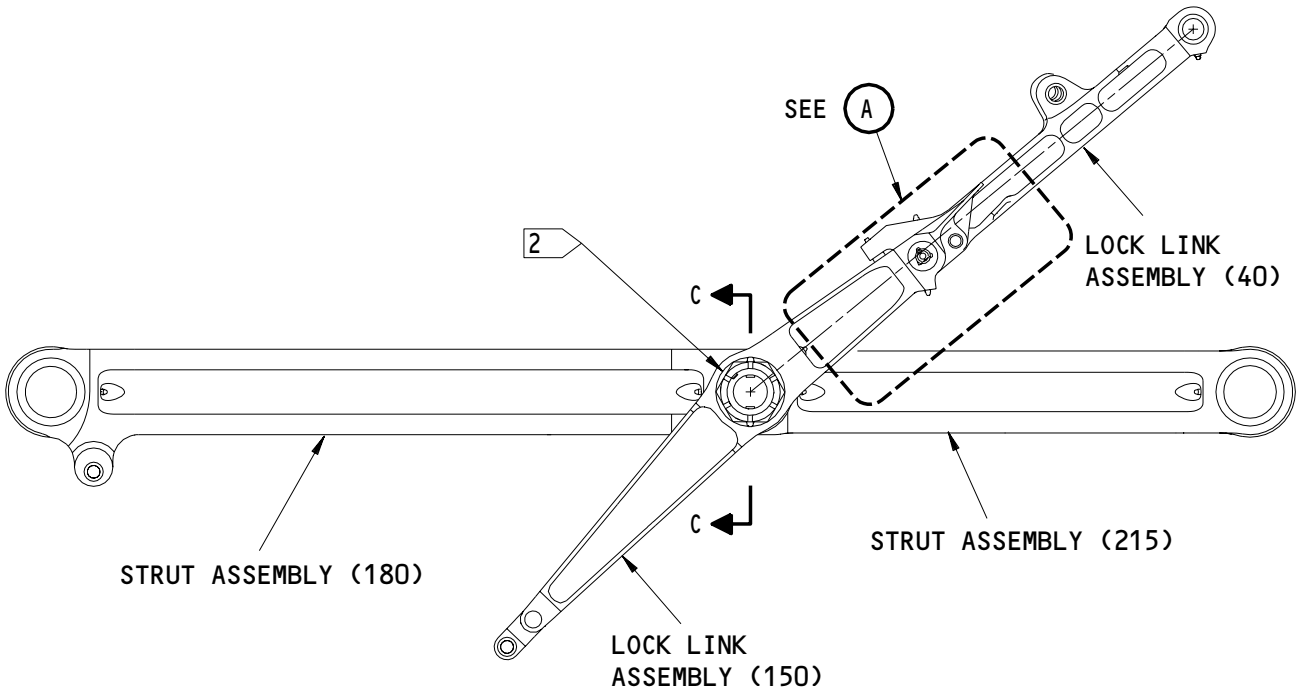
(9) Apply BMS 3-33 grease to the chrome plated surfaces of the pin (135).

(10) Apply BMS 3-27 corrosion preventive compound (F-19.71) to shanks, thread reliefs, threads, and mating surfaces of the bolt (120), the washers (125, 140), and nuts (130, 145). Wipe off unwanted compound.

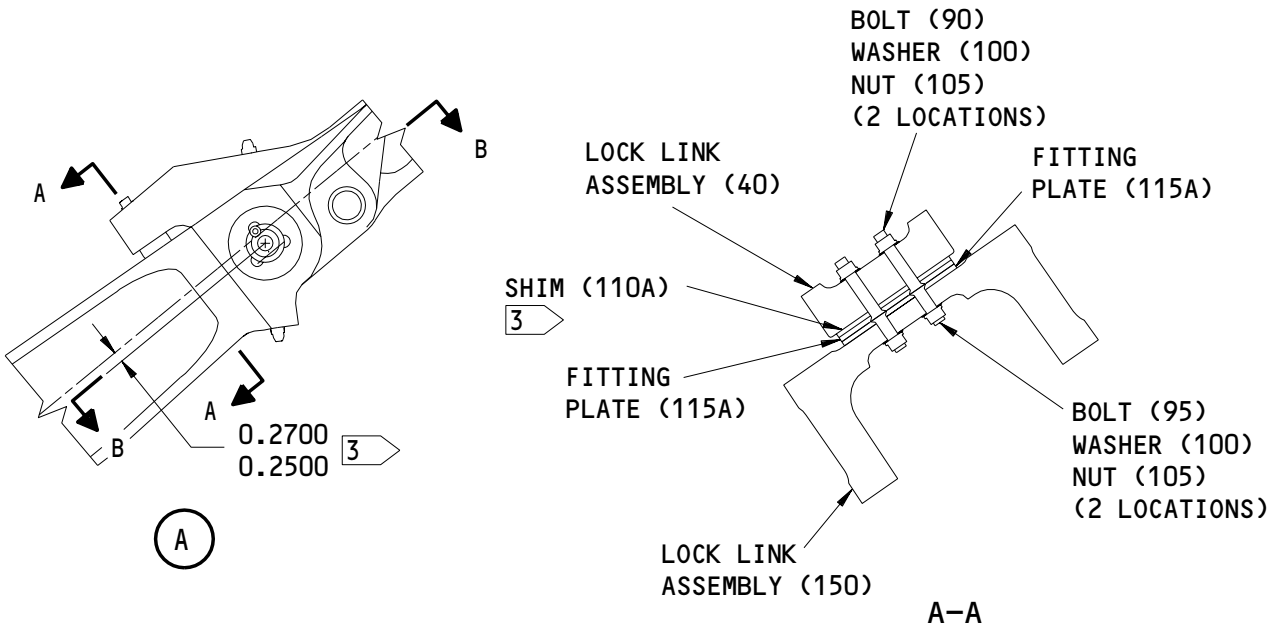
(11) Install the strut assemblies (180, 215) on the lock link assembly (150) with the pin (135), the washer (140), and the nut (145).

(12) Tighten the nut (135) to 50-58 pound-feet. Back off to the nearest castellation.

(13) Install the bolt (120), the washer (125), and the nut (130) on the pin (135).

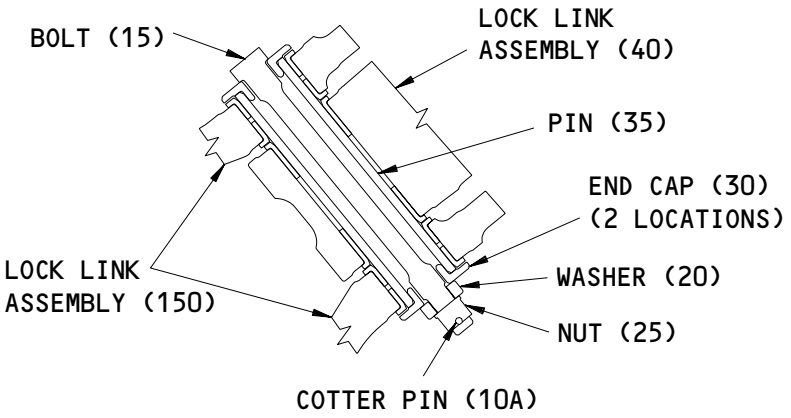


161T2100-1 SHOWN
161T2100-2 OPPOSITE 1

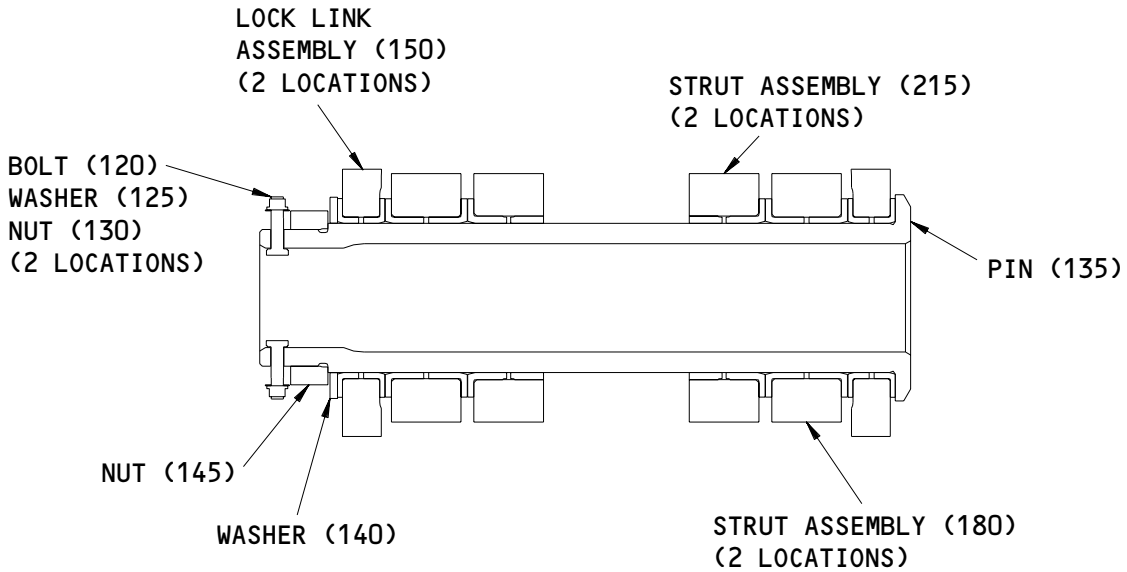


161T2100-1,-2
Side Strut Assembly
Figure 701 (Sheet 1)

K13137



B–B



C–C

1 > 161T2100–2 SAME AS –1, BUT PIN (135) AND BOLT (15) ARE INSTALLED FROM OPPOSITE DIRECTION AND USES LOCK–LINK ASSEMBLY (45)

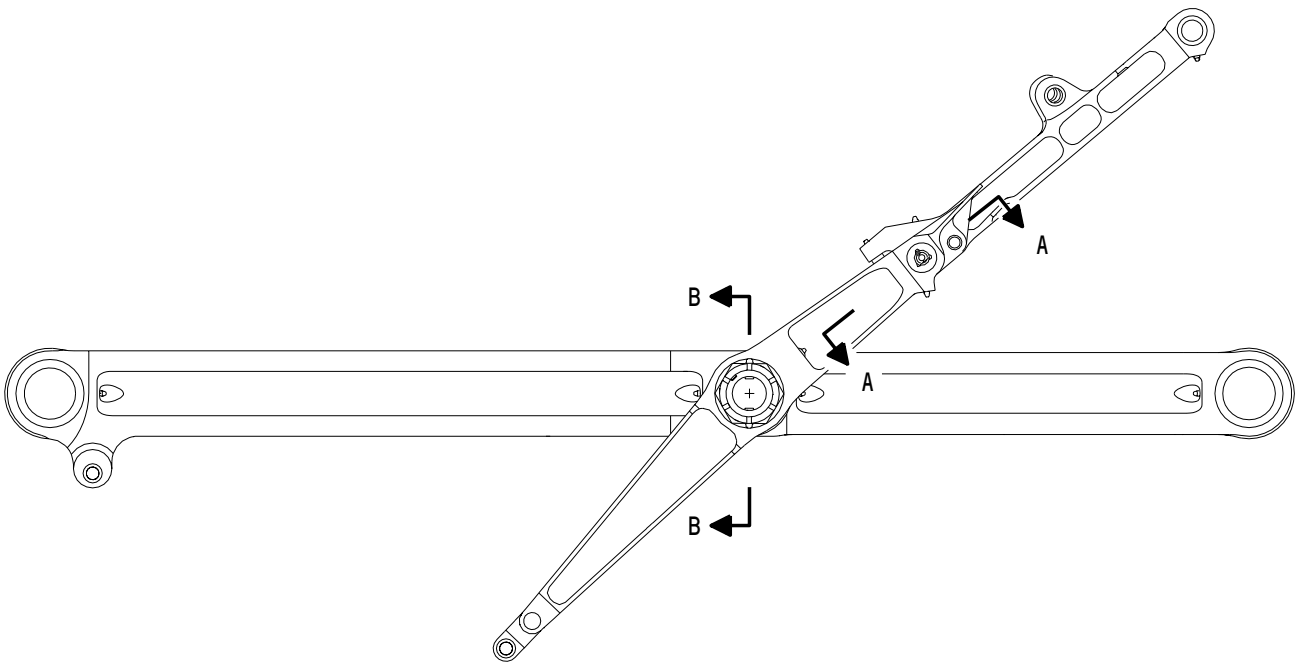
2 > MAKE SURE THAT PIN (135) IS INSTALLED IN THE CORRECT DIRECTION

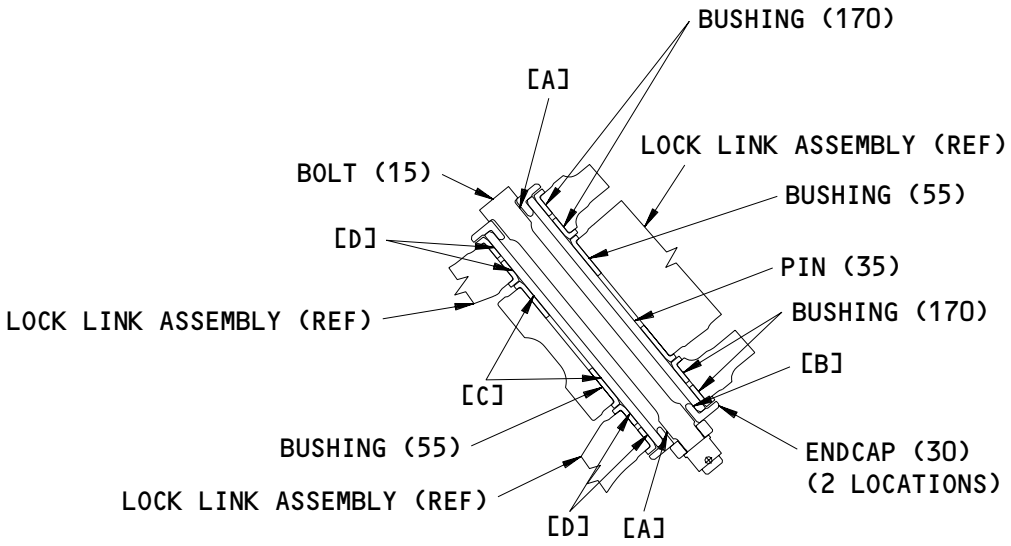
3 > ADJUST THICKNESS OF SHIM (110A) TO GET THIS DIMENSION

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

161T2100–1,–2
Side Strut Assembly
Figure 701 (Sheet 2)

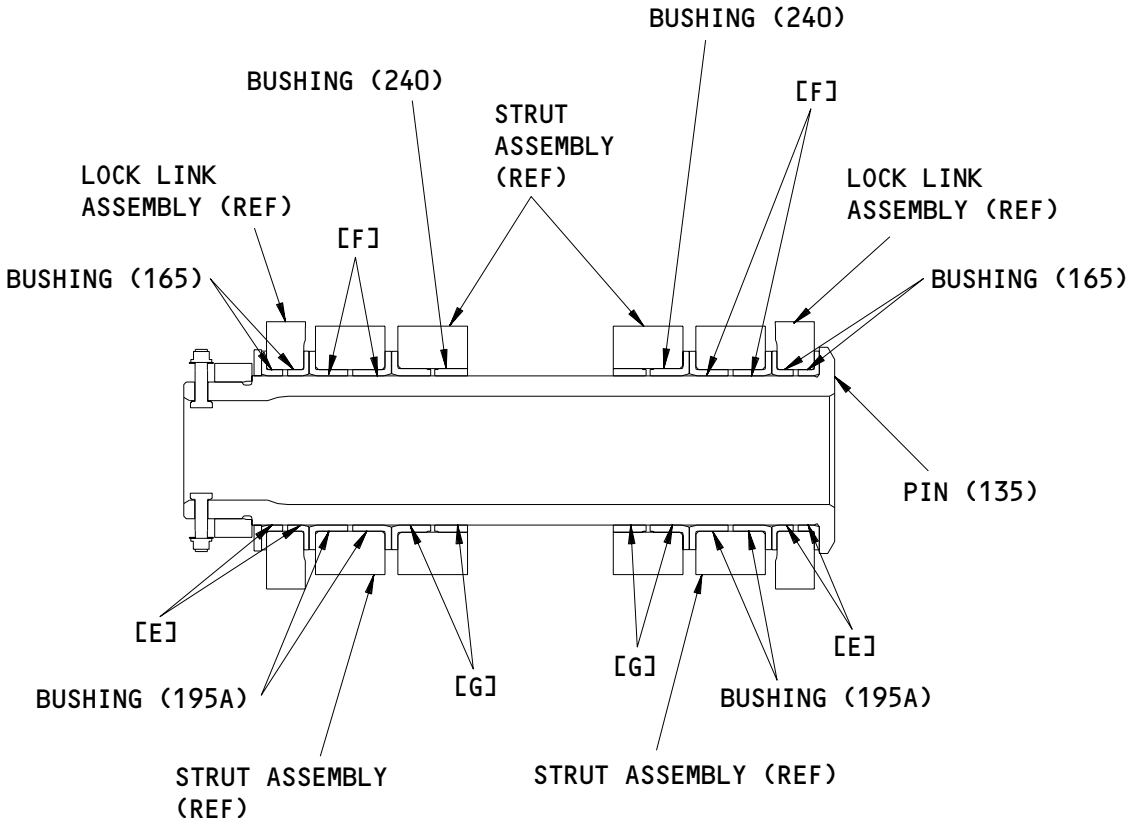




A–A

Fits and Clearances
Figure 801 (Sheet 1)

K13154



B–B

Fits and Clearances
Figure 801 (Sheet 2)

K13158

REF LETTER	REF IPL FIG. 1, MATING ITEM NO.	DESIGN DIMENSION*				SERVICE WEAR LIMIT*		
		DIMENSION		ASSEMBLY CLEARANCE		DIMENSION		MAXIMUM CLEARANCE
		MIN	MAX	MIN	MAX	MIN	MAX	
[A]	ID 30 OD 15	0.6150 0.5450	0.6250 0.5550	0.0600	0.0800	0.5434	0.6366	0.0816
[B]	ID 35 OD 30	0.9000 0.8890	0.9050 0.8990	0.0010	0.0160	0.8871	0.9169	0.0179
[C]	ID 55 OD 35	1.2500 1.2480	1.2514 1.2490	0.0010	0.0034	1.2458	1.2546	0.0056
[D]	ID 170 OD 35	1.2500 1.2480	1.2512 1.2490	0.0010	0.0032	1.2458	1.2544	0.0054
[E]	ID 165 OD 135	3.0000 2.9970	3.0015 2.9990	0.0010	0.0045	2.9935	3.0070	0.0080
[F]	ID 195A OD 135	3.0000 2.9970	3.0015 2.9990	0.0010	0.0045	2.9935	3.0070	0.0080
[G]	ID 240 OD 135	3.0000 2.9970	3.0015 2.9990	0.0010	0.0045	2.9935	3.0070	0.0080

* ALL DIMENSIONS ARE IN INCHES

Fits and Clearances
Figure 801 (Sheet 3)

K13170

ILLUSTRATED PARTS LIST

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

2. Indentures show parts relationships as follows:

    Assembly
      Detail Parts for Assembly
      Subassembly
      Attaching Parts for Subassembly
        Detail Parts for Subassembly

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

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

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

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

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

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

6. Parts Interchangeability

Optional (OPT)	The parts are optional to and interchangeable with other parts having the same item number.
Supersedes, Superseded By (SUPSDS, SUPSD BY)	The part supersedes and is not interchangeable with the original part.
Replaces, Replaced By (REPLS, REPLD BY)	The part replaces and is interchangeable with, or is an alternate to, the original part.

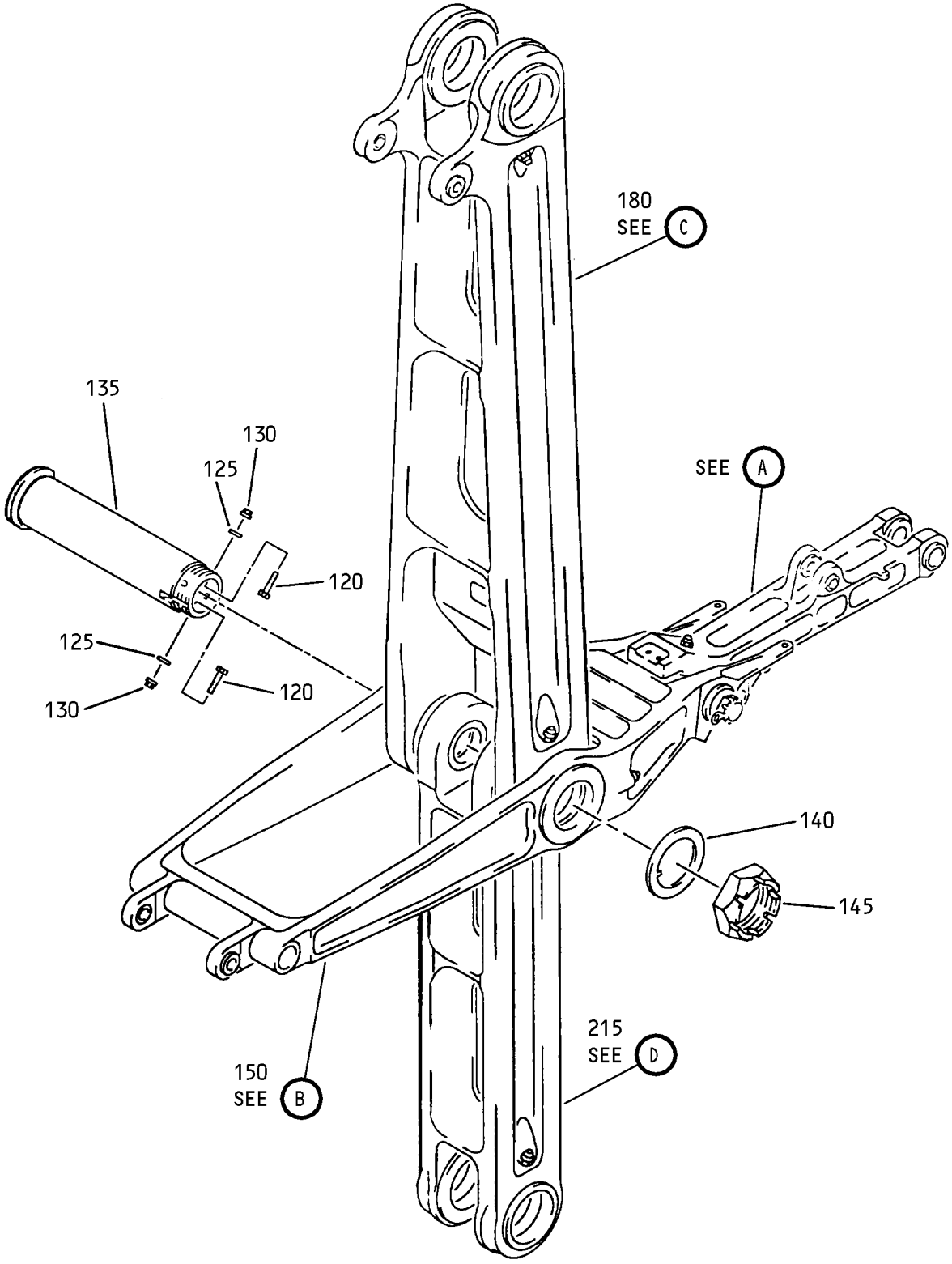
VENDORS

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

62554 SIMMONDS MECAERO FASTENERS INC
1734 SEQUOIA AVENUE
ORANGE, CALIFORNIA 92668

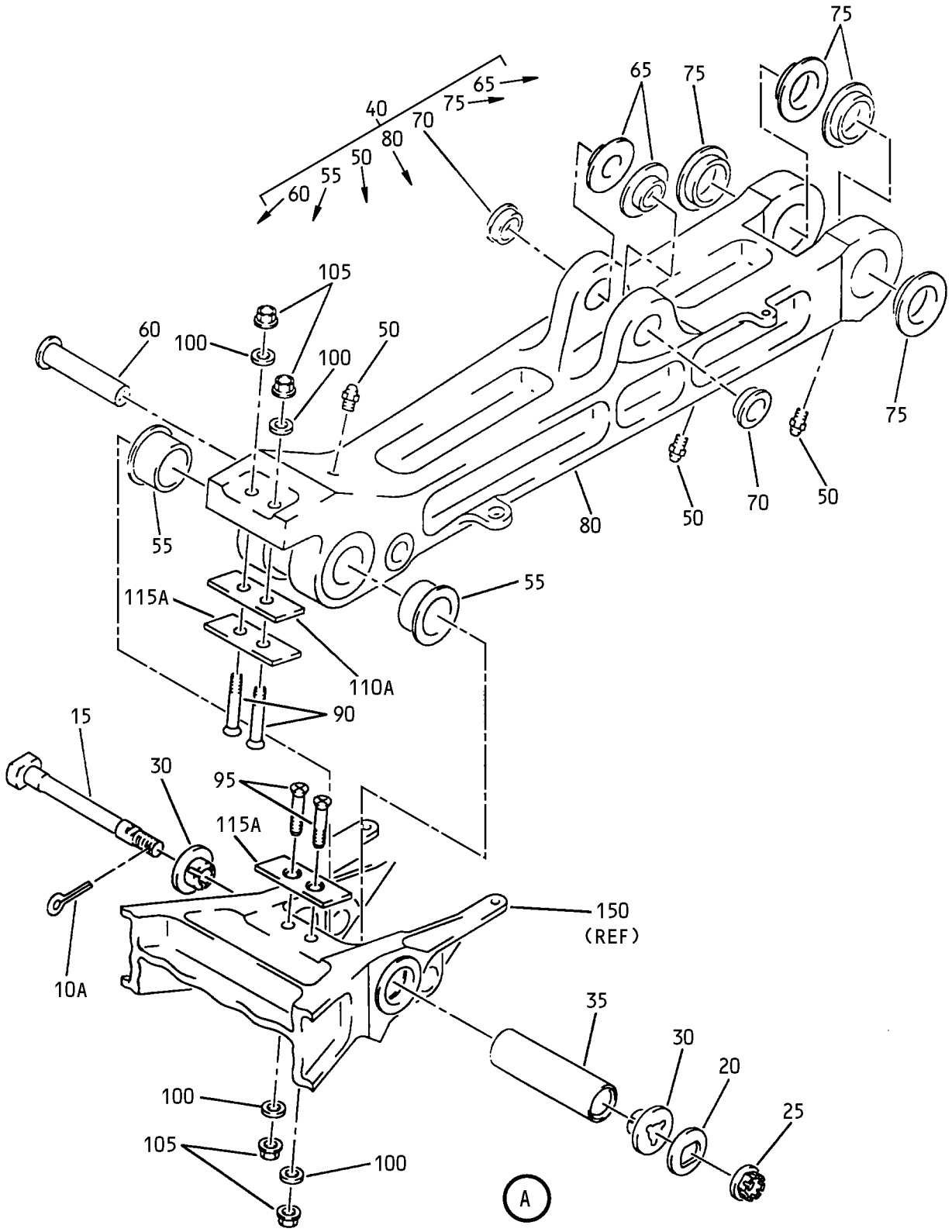
PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
BACN10YR4CD		1	105	4
		1	130	2
BACN11N7CS		1	25	1
BACP18BC04A06P		1	10A	1
BACW10BP4NDP		1	100	4
		1	125	2
H52732-4CD		1	105	4
		1	130	2
MS15001-1		1	50	3
		1	155	4
MS15004-1		1	190	4
		1	225	4
NAS6704-10		1	120	2
NAS8704-16		1	90	2
NAS8704-7		1	95	2
PLH54CD		1	105	4
		1	130	2
161A2128-2		1	20	1
161T2100-1		1	1A	RF
161T2100-2		1	5	RF
161T2101-1		1	180	1
161T2101-2		1	210	1
161T2103-1		1	215	1
161T2103-2		1	245	1
161T2111-1		1	150	1
161T2111-2		1	177	1
161T2112-1		1	40	1
161T2112-2		1	45	1
161T2112-3		1	80	1
161T2112-4		1	85	1
161T2112-5		1	40A	1
161T2112-6		1	45A	1
161T2129-2		1	135	1
161T2136-1		1	35	1
161T2874-14		1	200	2
		1	235	2
161T2874-15		1	240	2
161T2874-16		1	205	2
161T2874-17		1	165	4
161T2874-18		1	170	4
161T2874-20		1	75	4
161T2874-21		1	60	1
161T2874-22		1	65	2
161T2874-23		1	70	2

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
161T2874-24		1	160	2
161T2874-82		1	55	2
161T2874-83		1	175	2
161T2874-86		1	60A	1
161T6026-1		1	145	1
161T6116-2		1	15	1
161W0061-2		1	140	1
161W3027-1		1	195A	6
		1	230	2
161W3130-1		1	30	2
161W4021-1		1	115A	2
161W4022-1		1	110A	1
161W7010-1		1	185	4
		1	220	4



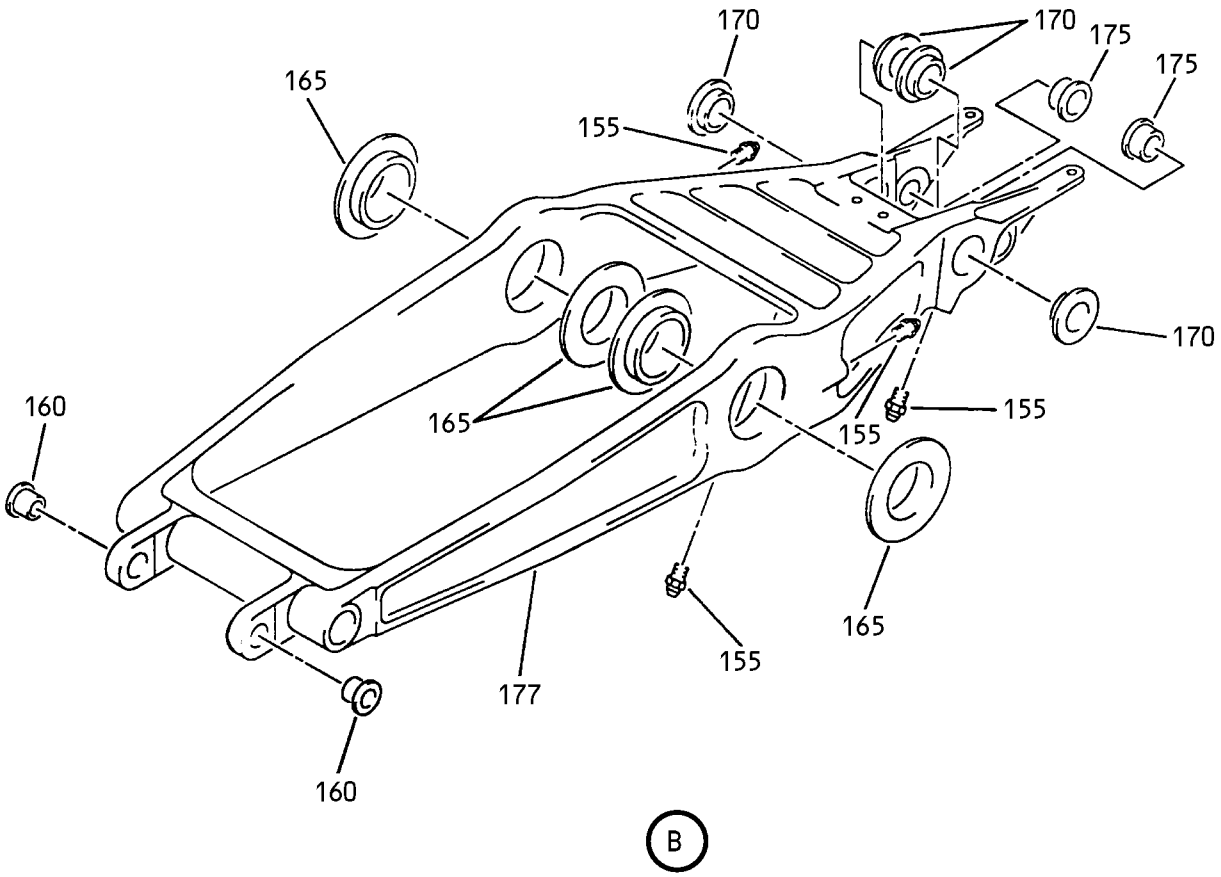
Side Strut Assembly
Figure 1 (Sheet 1)

K13210



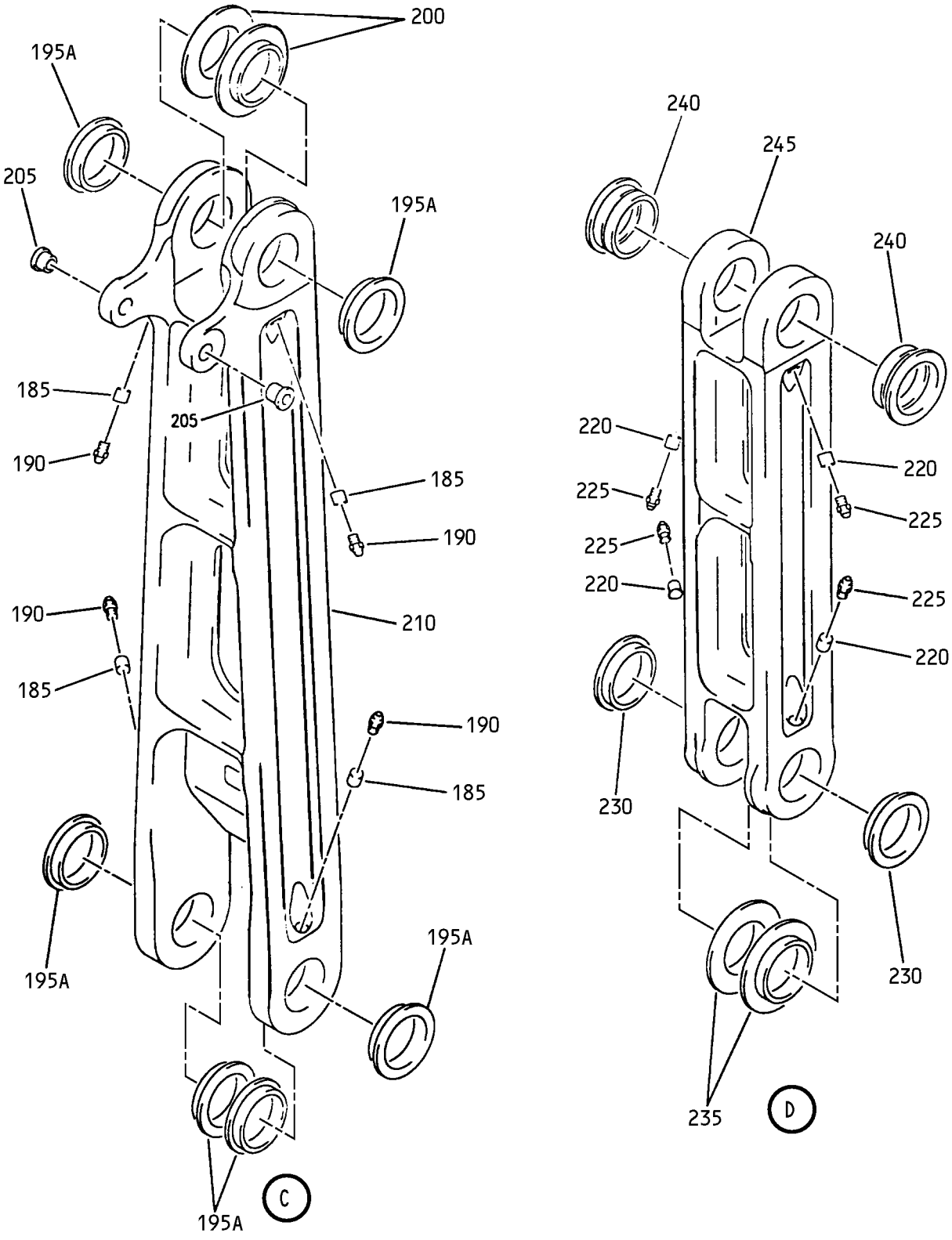
Side Strut Assembly
Figure 1 (Sheet 2)

K13215



Side Strut Assembly
Figure 1 (Sheet 3)

K13217



Side Strut Assembly
Figure 1 (Sheet 4)

K13223

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
-1A	161T2100-1		STRUT ASSY-SIDE	A	RF
-5	161T2100-2		STRUT ASSY-SIDE	B	RF
10	BACP18BC04A08P		DELETED		
10A	BACP18BC04A06P		.PIN-COTTER		1
15	161T6116-2		.BOLT-END CAP		1
20	161A2128-2		.WASHER		1
25	BACN11N7CS		.NUT		1
30	161W3130-1		.END CAP		2
35	161T2136-1		.PIN-LOCK LINK (LIFE-LIMITED PART)		1
40	161T2112-1		DELETED		
40A	161T2112-5		.LINK ASSY-LOCK	A	1
-45	161T2112-2		DELETED		
45A	161T2112-6		.LINK ASSY-LOCK	B	1
50	MS15001-1		..FITTING-LUBE		3
55	161T2874-82		..BUSHING		2
60	161T2874-21		..BUSHING (OPT)		1
60A	161T2874-86		..BUSHING		1
65	161T2874-22		..BUSHING		2
70	161T2874-23		..BUSHING		2
75	161T2874-20		..BUSHING		4
80	161T2112-3		..LINK- (LIFE-LIMITED PART)	A	1
-85	161T2112-4		..LINK- (LIFE-LIMITED PART)	B	1
90	NAS8704-16		.BOLT		2
95	NAS8704-7		.BOLT		2
100	BACW10BP4NDP		.WASHER		4
105	H52732-4CD		.NUT- (V15653) (SPEC BACN10YR4CD) (OPT PLH54CD (V62554))		4
110	161W4022-11		DELETED		
110A	161W4022-1		.SHIM		1
115	161W4021-11		DELETED		
115A	161W4021-1		.PLATE-FITTING		2
120	NAS6704-10		.BOLT		2

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
125	BACW10BP4NDP		.WASHER		2
130	H52732-4CD		.NUT-		2
			(V15653)		
			(SPEC BACN10YR4CD)		
			(OPT PLH54CD		
			(V62554))		
135	161T2129-2		.PIN-		1
			(LIFE-LIMITED PART)		
140	161W0061-2		.WASHER		1
145	161T6026-1		.NUT		1
150	161T2111-1		.LINK ASSY-LOCK		1
155	MS15001-1		..FITTING-LUBE		4
160	161T2874-24		..BUSHING		2
165	161T2874-17		..BUSHING		4
170	161T2874-18		..BUSHING		4
175	161T2874-83		..BUSHING		2
177	161T2111-2		..LINK-		1
			(LIFE-LIMITED PART)		
180	161T2101-1		.STRUT ASSY		1
185	161W7010-1		..INSERT-THREADED		4
190	MS15004-1		..FITTING-LUBE		4
195	161W3020-1		DELETED		
195A	161W3027-1		..BUSHING		6
200	161T2874-14		..BUSHING		2
205	161T2874-16		..BUSHING		2
210	161T2101-2		..STRUT-		1
			(LIFE-LIMITED PART)		
215	161T2103-1		.STRUT ASSY		1
220	161W7010-1		..INSERT-THREADED		4
225	MS15004-1		..FITTING-LUBE		4
230	161W3027-1		..BUSHING		2
235	161T2874-14		..BUSHING		2
240	161T2874-15		..BUSHING		2
245	161T2103-2		..STRUT-		1
			(LIFE-LIMITED PART)		

- Item Not Illustrated