TO: ALL HOLDERS OF MAIN LANDING GEAR SHOCK STRUT ASSEMBLY COMPONENT MAINTENANCE MANUAL 32-11-33

REVISION NO. 1 DATED NOV 01/01

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
TITLE PAGE 1 REPAIR 2-1 601,604-615 REPAIR 2-2 639-644 REPAIR 3-1 601,604-609 REPAIR 3-2 618-623 1002-1006,1019-1023	Added shock struts 161T7100-7, 8 with uncoated bushings in the inner and outer cylinders.
TITLE PAGE 1 REPAIR 2-1 601 1002-1006,1019-1023	Added shock struts 161T7100-11, -12 with better hydraulic and electrical brackets.
TITLE PAGE 1 CONTENTS 1 DESCRIPTION & OPERATION 1-2	Added clarifications and updated callouts.

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COMPONENT
MAINTENANCE MANUAL

MAIN LANDING GEAR SHOCK STRUT ASSEMBLY

PART NUMBERS 161T7100-3, -4, -7, -8, -11, -12

COMPONENT MAINTENANCE MANUAL
WITH
ILLUSTRATED PARTS LIST

K94854

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

TEMPORARY REVISION AND SERVICE BULLETIN RECORD

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

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*[1] Not Applicable.

*[2] Special instructions are not necessary. Use standard industry practices and the instructions in SOPM 20-30-03.

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:

MAIN LANDING GEAR SHOCK STRUT ASSEMBLY

DESCRIPTION AND OPERATION

1. Description

   A. The shock strut assembly has a steel inner cylinder and a steel outer cylinder. The outer cylinder has an upper bulkhead, an orifice plate and a support tube. The upper and lower bearings give sliding surfaces and keep the inner cylinder parallel with the outer cylinder. The lower bearing contains working and spare packings. The inner cylinder contains a metering pin which moves up and down thru the orifice plate.

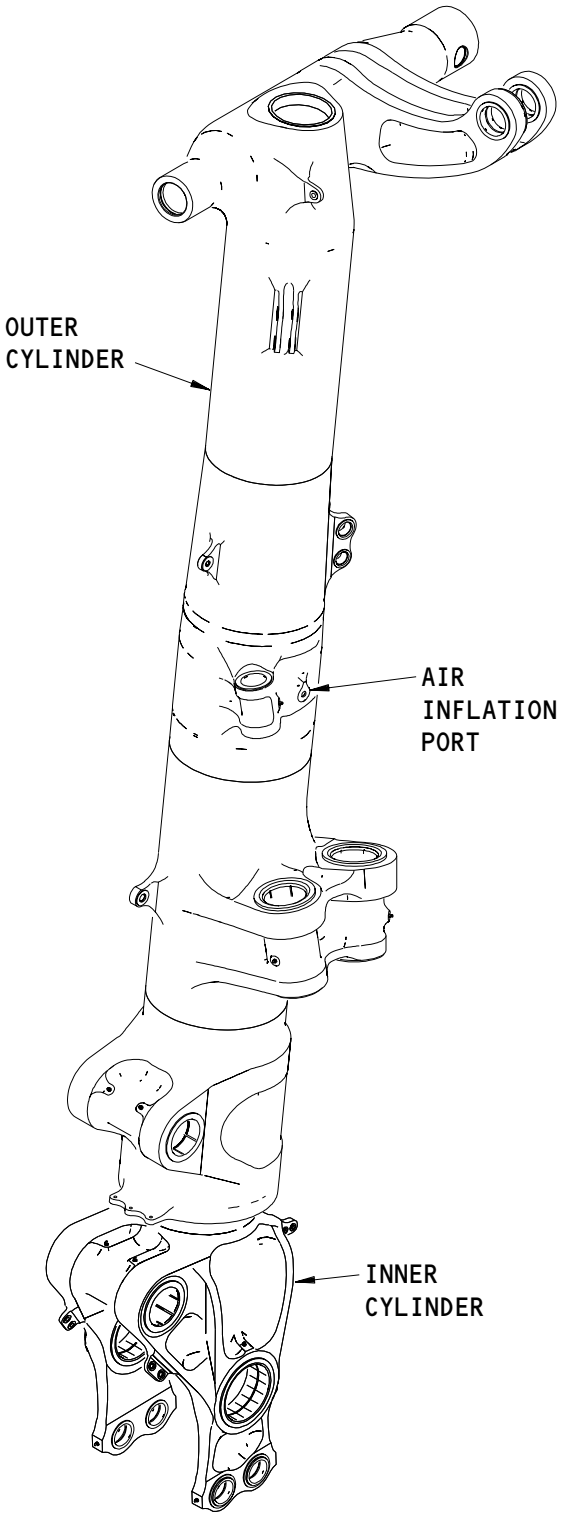
2. Operation

   A. The shock strut assembly holds up the airplane on the ground, and absorbs landing and taxiing shocks and dampens vibration.

3. Leading Particulars (Approximate)

   A. Length -- 129.0 inches (Extended)
      111.0 inches (Compressed)

   B. Weight -- 1999 pounds



Main Landing Gear Shock Strut Assembly
Figure 1

L13179

TESTING AND FAULT ISOLATION

1. General

   A. This procedure has the data necessary to do a test of the shock strut assembly after an overhaul or for fault isolation.

2. Shock Strut Assembly Testing

   A. Special Tools and Equipment

      NOTE: Equivalent equipment can be used.

      (1) Assembly Fixture -- B32050-50

      (2) Overhead Installation/Removal Equipment - A32115

   B. Consumable Material

      NOTE: Equivalent materials can be used.

      (1) D00467 Hydraulic Fluid -- BMS 3-32, Type 1 or 2 (SOPM 20-60-03)

   C. References

      (1) SOPM 20-60-03, Lubricants

   D. Prepare for Test

      (1) Install the shock strut assembly vertically in the fixture.

      (2) Make sure that the shock strut assembly is fully compressed.

      (3) Fill the shock strut assembly with BMS 3-32 hydraulic fluid until the fluid flows out of the air inflation post. Use a minimum of 2100 cubic inches hydraulic fluid.

   E. Procedure

WARNING: DO NOT PRESSURIZE THE SHOCK STRUT ASSEMBLY FOR THE TEST UNLESS THE INNER CYLINDER IS FULLY EXTENDED.

(1) Do the pressure test:

(a) Make sure that the inner cylinder is fully extended.

(b) Pressurize the shock strut with nitrogen to 295-305 psig.

(c) Let the inner cylinder become stable for 30 minutes.

(d) Hold the pressure is held at 295-305 psig for one more hour minimum.

(e) There must be no sign of external leakage.

(f) Make sure that the leakage of hydraulic fluid on the inner cylinder is less than one drop.

DISASSEMBLY

1. General

   A. This procedure contains the data necessary to disassemble the main landing gear shock 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 IPL Fig. 1 for item numbers.

2. Main Landing Gear Shock Strut Disassembly

   A. Special Tools and Equipment

      NOTE: Equivalent equipment can be used.

      (1) Overhead Installation/Removal Equipment - A32115

      (2) Shock Strut Equipment -- A32106

      (3) Gland Nut Wrench -- A32004-4 or -5

      (4) Lower Bearing Seal Replacement Equipment -- A32207

      (5) Assembly Fixture -- B32050-50

   B. Procedure

      WARNING: MAKE SURE THAT YOU REMOVE ALL THE AIR FROM THE BUILDUP ASSEMBLY (REF CMM 32-11-36) BEFORE YOU DISASSEMBLE THE OUTER CYLINDER (305, 310).

      (1) Lift the shock strut and put it in the assembly fixture.

      (2) Remove the cap assembly (295) and the air valve (290) from the outer cylinder (305, 310).

      (3) Remove check valve (300). Drain the hydraulic fluid from the outer cylinder (305, 310).

(4) Disassemble the inner cylinder assembly (95):

(a) Remove the lock tab (25) from the gland nut (30).

(b) Remove the nuts (20), the bolts (10) and the washers (15) from the gland nut (30).

CAUTION: GIVE PROTECTION TO THE FINISH ON INNER CYLINDER (165) AND THE NUT (30) WITH RAGS OR EQUIVALENT. WHEN YOU REMOVE THE GLAND NUT (30) FROM THE INNER CYLINDER (165), THE GLAND NUT (30) WILL MOVE DOWN THE INNER CYLINDER SHAFT AND WILL REST AGAINST THE INNER CYLINDER (165).

(5) Use the A32104 gland nut wrench adapter to remove the gland nut (30).

(6) Fully loosen the gland nut (30) and move it down the inner cylinder (165).

(7) Install the A32107 gland nut thread protector.

CAUTION: DO NOT LET THE RETAINER PINS (70) FALL OUT WHEN YOU REMOVE THE INNER CYLINDER (165) FROM THE OUTER CYLINDER (305, 310). MAKE SURE THAT THE RETAINER PINS (70) WILL STAY ATTACHED TO THE LOWER BEARING CARRIER (40).

(8) Carefully pull the inner cylinder (965) from the outer cylinder (305, 310) until you see the upper bearing carrier assembly (180).

CAUTION: THE UPPER BEARING CARRIER ASSEMBLY (180) IS A MATCHED SET OF HALVES (185, 190). KEEP THE HALVES (185, 190) TOGETHER.

(9) Keep the bearing carrier halves (185, 190) together as a set. Halves are not available separately.

(10) Lift outer cylinder (305, 310) from the inner cylinder (165).

(11) Put the outer cylinder (305, 310) in a fixture.

(12) Disassemble the upper bearing carrier assembly (180):

(a) Remove the piston ring (175) and the upper bearings (195).

(b) Remove the bearing carrier halves (185, 190).

(c) Remove the recoil valve ring (170).

(d) Remove the spacer tube (90) from the inner cylinder (165).

(13) Disassemble the lower bearing carrier (40):

(a) Remove the retainer pins (70) and the lower bearing seal retainer (55).

(b) Remove spare rings (45) and seal (50) from the lower bearing carrier (40).

(14) Remove ring assembly (60) and packing (65).

(15) Remove bearings (80).

(16) Remove the back-up spare rings (85). Remove the scraper (35) from the inner cylinder (165).

(17) Remove the metering pin (225) from the inner cylinder (165):

(a) Install the A32106 spanner on the inner cylinder (165).

(b) Remove the retainer nut assembly (210).

(c) Pull the metering pin (225) out of the inner cylinder (165).

(d) Remove the retainer ring (205).

(e) Remove the seal assembly (200) from the metering pin (225).

(18) Disassemble the outer cylinder assembly (305, 310).

(a) Remove the orifice support tube (285) from the outer cylinder (450, 455).

(b) Install the A32106 spanner into the upper part of the outer cylinder (450, 455) and remove the gland nut (275).

(c) Pull out the orifice support tube (285) and remove the retainer ring (260).

(d) Put the A32106 extension rod tool thru the top of the outer cylinder (450, 455) and push out the orifice support tube (285).

(e) Remove the seal assembly (280) from the orifice support tube (285).

CAUTION: BE CAREFUL, WHEN YOU REMOVE THE RETAINER NUT (255) AND THE ORIFICE SUPPORT TUBE (285), NOT TO CAUSE DAMAGE TO THE INNER WALL OF THE OUTER CYLINDER (450, 455).

(19) Use A32106 shock strut equipment to hold the orifice support tube (285) in the outer cylinder (450, 455).

(20) Remove the nut (245), the washer (240) and the bolt (235).

(21) Remove the retainer nut (255), the orifice plate (250) and the piston ring (230).

CHECK

1. General

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

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

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 for defects by standard industry practices. Refer to Fits and Clearances for design dimensions and wear limits.

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

         (a) Lock tab (25)

         (b) Gland nut (30)

         (c) Inner cylinder (165)

         (d) Retainer ring (205)

         (e) Orifice plate (250)

         (f) Retainer ring (260)

         (g) Outer cylinder (450, 455)

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

         (a) Pin (70)

         (b) Spacer tube (90)

(c) Valve (170)

(d) Piston ring (175)

(e) Metering pin (225)

(f) Piston ring (230)

(g) Orifice plate retainer nut (255)

(h) Orifice support tube (285)

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
161T7110	OUTER CYLINDER ASSEMBLY	2-1, 2-2
161T7120	INNER CYLINDER ASSEMBLY	3-1, 3-2
161T7150	GLAND NUT	4-1
161T7151	UPPER HALF - LOWER BEARING CARRIER	5-1
161T7156	LOWER HALF - LOWER BEARING CARRIER	6-1
161T7157	UPPER BEARING CARRIER	7-1

2. Dimensioning Symbols

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

REFINISH OF OTHER PARTS - REPAIR 1-1

1. General

   A. This repair gives the data that is necessary to refinish parts not given in the specified repairs.

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

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

2. Refinish of Other Parts

   A. General

      (1) Instructions for the repair of the parts shown in Fig. 601 are for repair of the initial finish.

   B. References

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

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

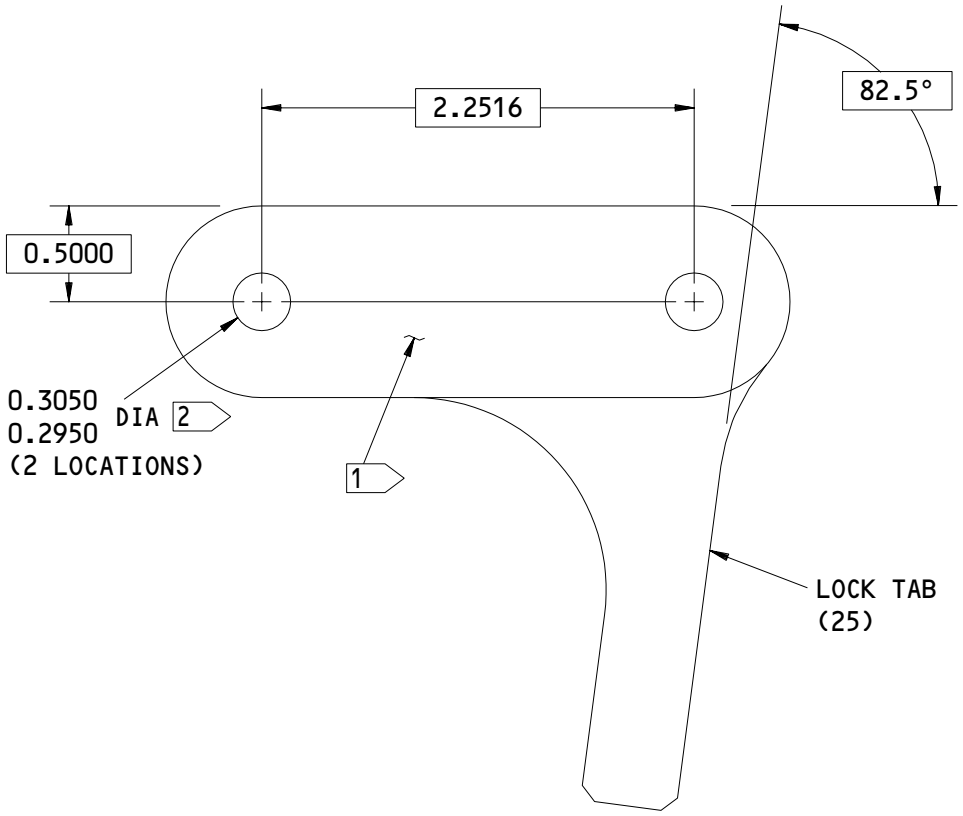
      (3) SOPM 20-41-01, Decoding Table for Boeing Finish Codes

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

   C. Procedure

IPL FIG. & ITEM	MATERIAL	FINISH
IPL Fig. 1		
Lock Tab (25)	4330M steel 180-200 ksi	Cadmium plate (F-15.06) and apply BMS 10-79 type 3 primer and apply BMS 10-60 enamel (F-19.39-707) as shown in Fig. 601.
Pin (70)	15-5PH CRES 180-200 ksi	Passivate (F-17.25, which replaces F-17.09).
Spacer Tube (90)	Al alloy	Boric acid - sulfuric acid anodize (F-17.35).
Recoil Valve (170)	Al alloy	Boric acid - sulfuric acid anodize (F-17.35).
Retainer Ring (205)	4330M steel 180-200 ksi	No finish (F-25.01).
Gland Nut (220)	Al alloy	Boric acid - sulfuric acid anodize (F-17.35).
Piston Ring (230)	Al-Ni-Bronze	No finish (F-25.01).
Orifice Plate (250)	4330M steel 180-200 ksi	No finish (F-25.01).
Retainer Nut (255)	Al alloy	Boric acid - sulfuric acid anodize (F-17.35).
Retainer Ring (260)	4330M steel 180-200 ksi	No finish (F-25.01).
Orifice Support Tube (285)	Al alloy	Boric acid - sulfuric acid anodize (F-17.35).

Refinish Details
Table 601



1 THE PART NUMBER IS FOUND HERE

2 CADMIUM PLATE (F-15.06). APPLY BMS 10-79, TYPE 3 PRIMER (F-19.47) TO THE SURFACE SHOWN

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

161T7171-1
Lock Tab Refinish
Figure 601

K94850

OUTER CYLINDER ASSEMBLY - REPAIR 2-1

161T7110-1, -2, -5, -6

1. General

   A. This repair gives the data that is necessary to replace the bushings and the lubricatioin fiting of the outer cylinder assembly.

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

   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 Corrosion Preventive Compound -- BMS 3-27 (SOPM 20-60-02)

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

   B. References

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

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

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

      (4) SOPM 20-60-03, Lubricants

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

   C. Procedure (Fig. 601)

WARNING: BMS 3-27 COMPOUND CONTAINS ASBESTOS, TOLUENE, XYLENE, STRONTIUM CHROMATE AND BARIUM CHROMATE. REFER TO APPLICABLE SAFETY STANDARDS FOR APPROVED PRECAUTIONS.

CAUTION: BMS 3-27 COMPOUND IS ONLY USED IN STATIC JOINTS WHERE GREASE CANNOT BE APPLIED. BMS 3-27 COMPOUND IN DYNAMIC JOINTS WILL NOT LET THEM MOVE FREELY.

(1) Replace the bushings (315 thru 390, 405 thru 430).

(a) Remove the old bushings.

(b) If you find defects on the cylinider surfaces refer to Repair 2-2 for repair instructions.

(c) Install replacement bushings with BMS 3-27 corrosion preventive compound by the shrink fit procedure (SOPM 20-50-03).

(d) If necessary, machine the bushings to design dimension and finish.

(e) Fillet seal bushings (315 thru 390, 405 thru 430) with BMS 5-95 sealant (SOPM 20-50-19).

(2) Replace the lubrication fitting (440):

(a) Remove the old lube fittings.

(b) Install a replacement lub fitting with BMS 3-33 grease.

(c) Tighten the lube fitting to 25-30 pound-inches.

3. Refinish

A. Consumable Materials

NOTE: Equivalent material can be used.

(1) A00032 Enamel -- BMS 10-60, Type 2, Color 707 Gray (SOPM 20-60-02)

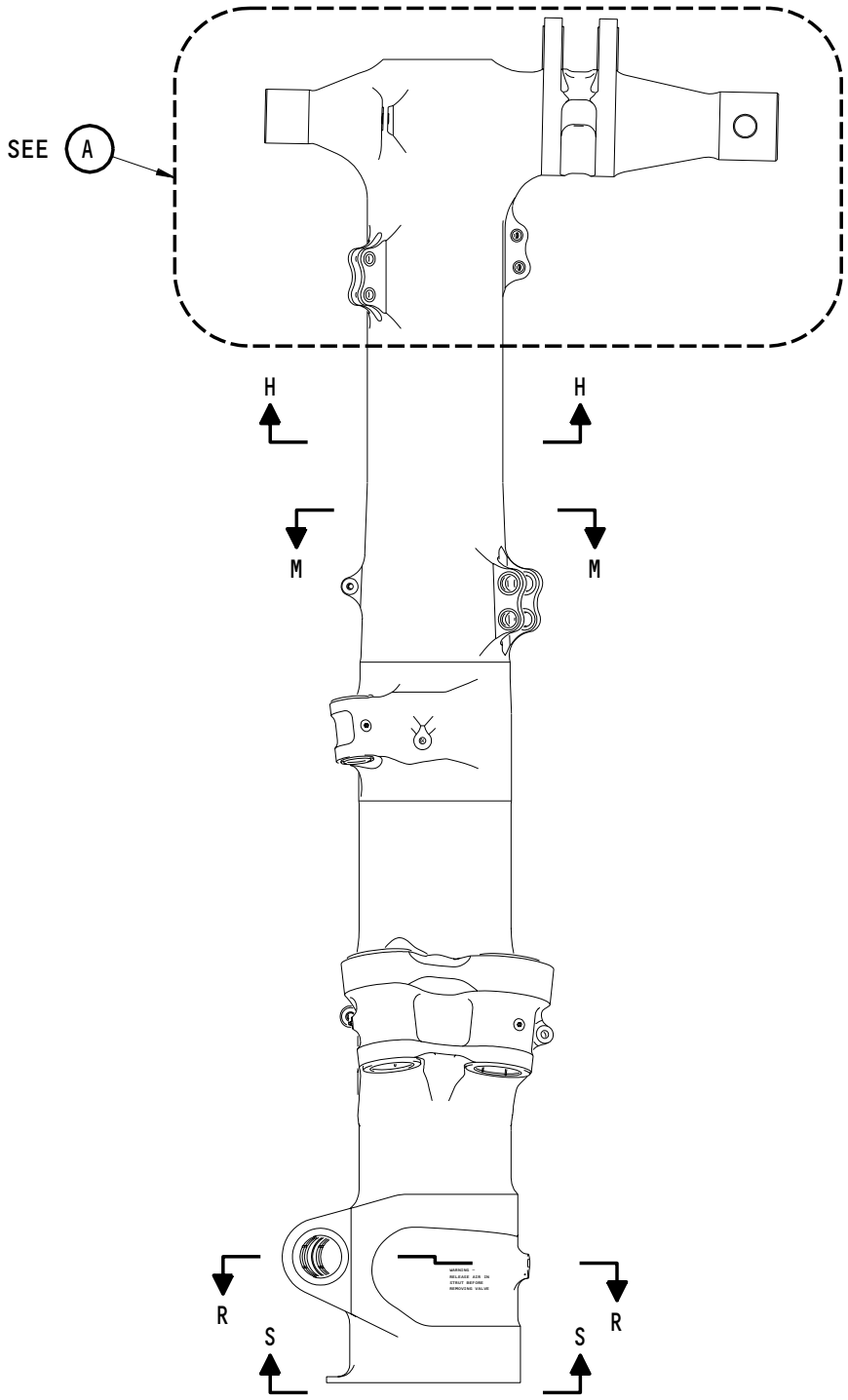
B. References

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

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

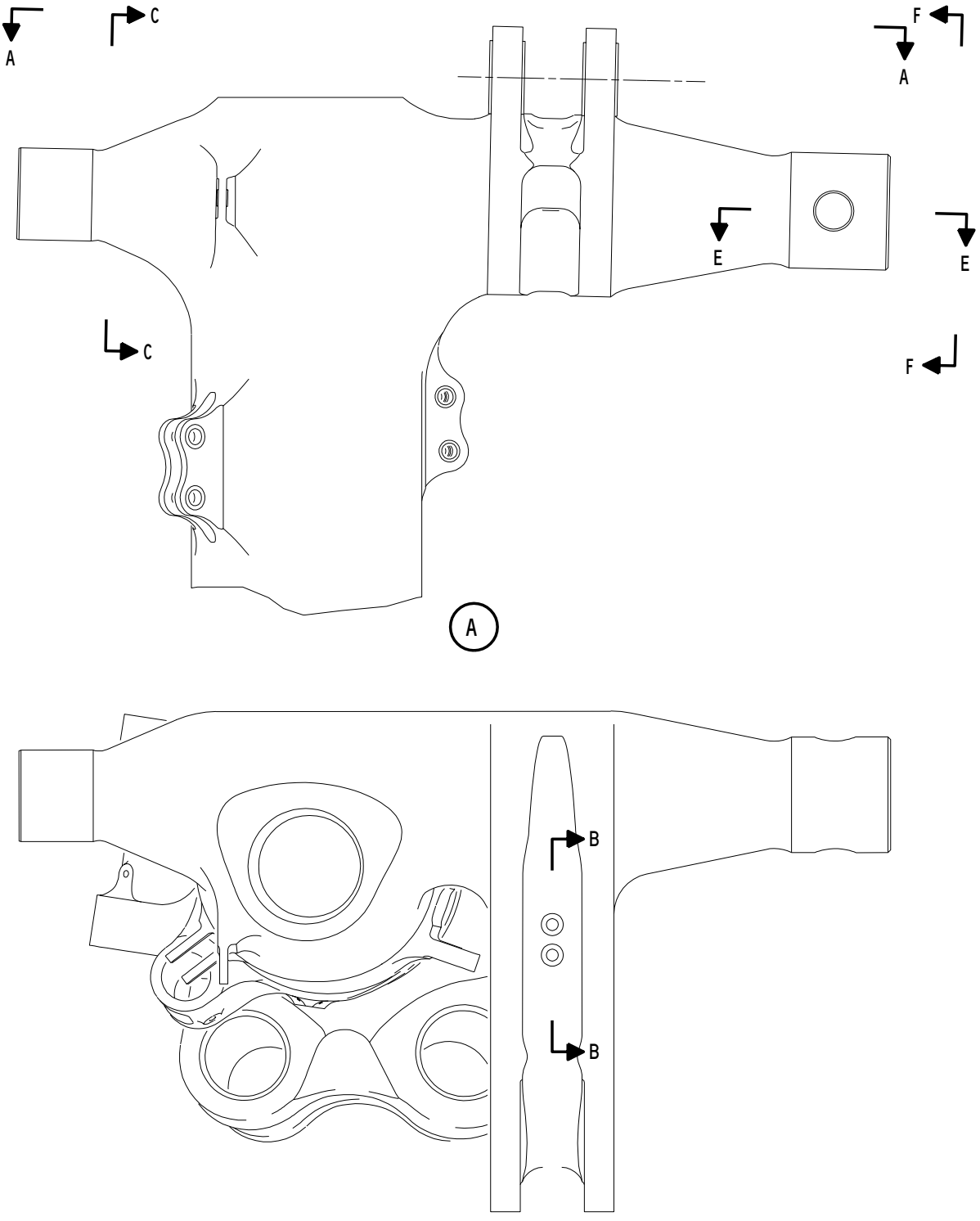
C. Procedure

(1) Apply BMS 10-60 color 707 gray gloss enamel (F-20.56-707) to the surfaces of outer cylinder assembly (305, 310) but not on the bushings or the lubrication fittings.



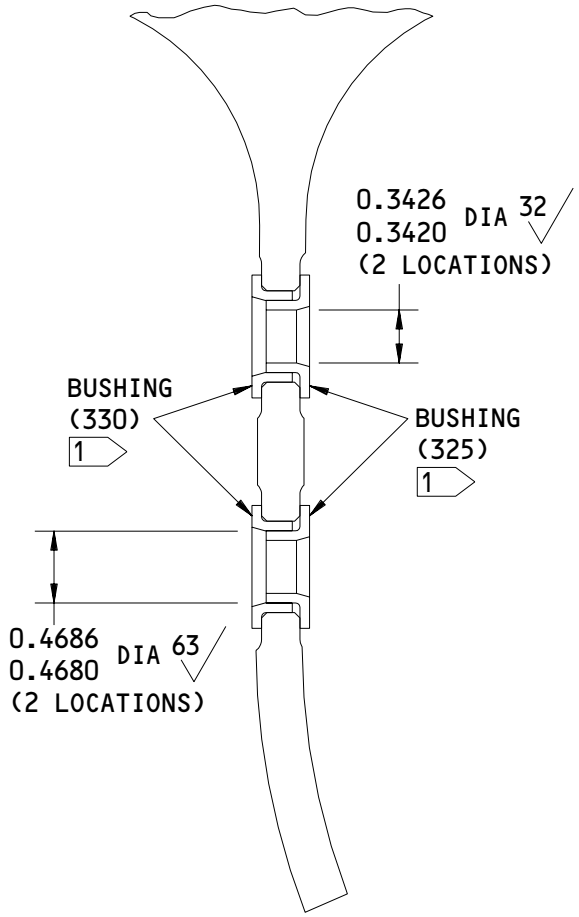
161T7110-1,-5 SHOWN
161T7110-2,-6 OPPOSITE

161T7110-1,-2,-5,-6
Outer Cylinder Assembly Bushing Replacement
Figure 601 (Sheet 1)

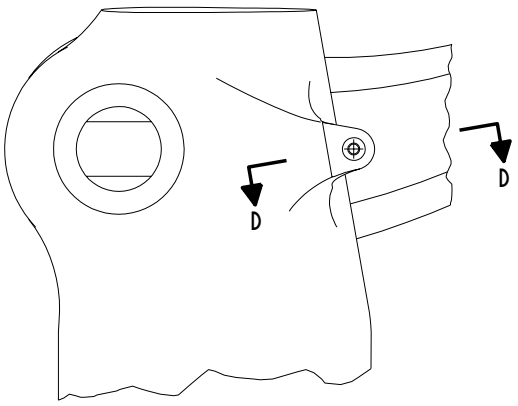


A–A

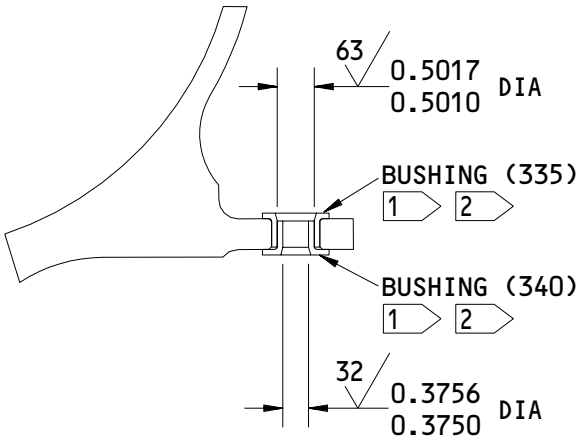
161T7110-1,-2,-5,-6
Outer Cylinder Assembly Bushing Replacement
Figure 601 (Sheet 2)



B–B

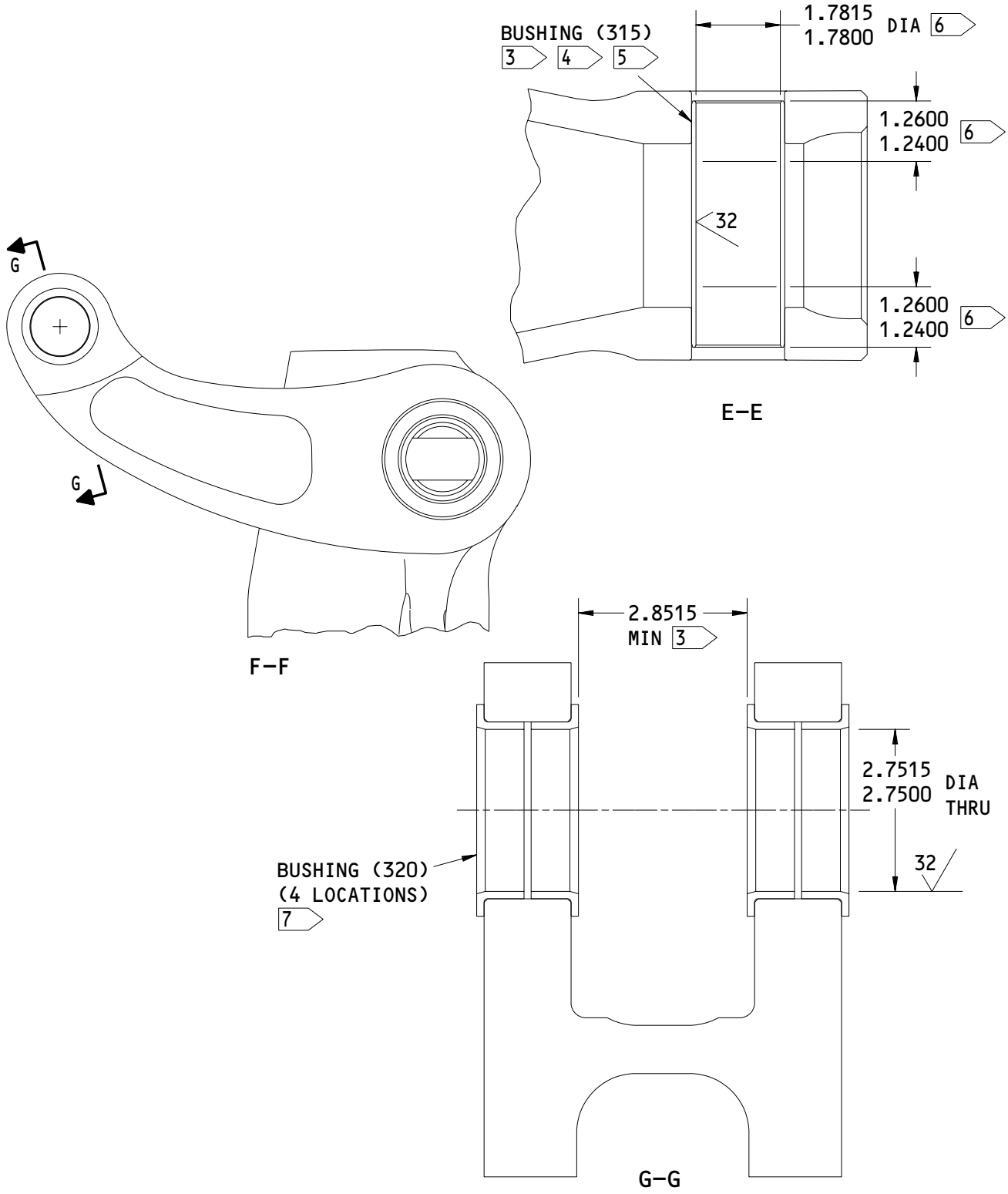


C–C



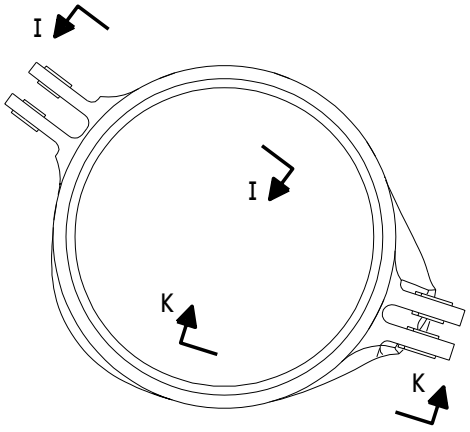
D–D

161T7110-1,-2,-5,-6
Outer Cylinder Assembly Bushing Replacement
Figure 601 (Sheet 3)

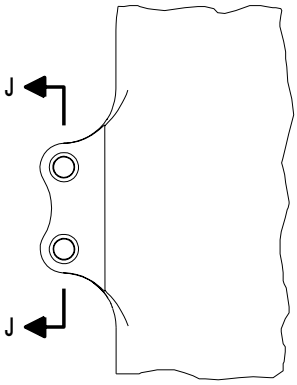


161T7110-1,-2,-5,-6
Outer Cylinder Assembly Bushing Replacement
Figure 601 (Sheet 4)

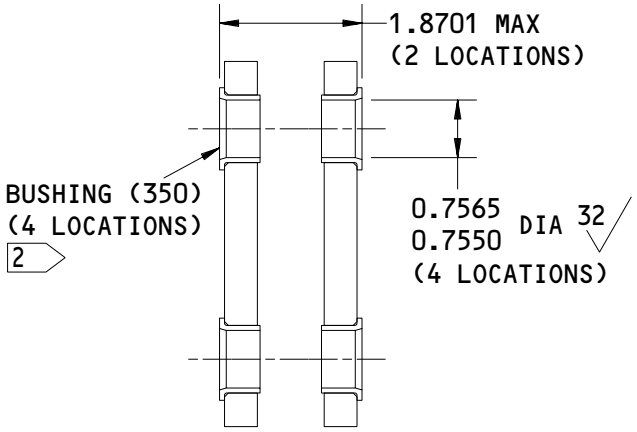
K98009



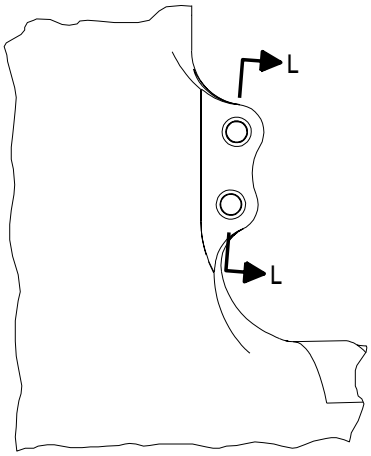
H–H



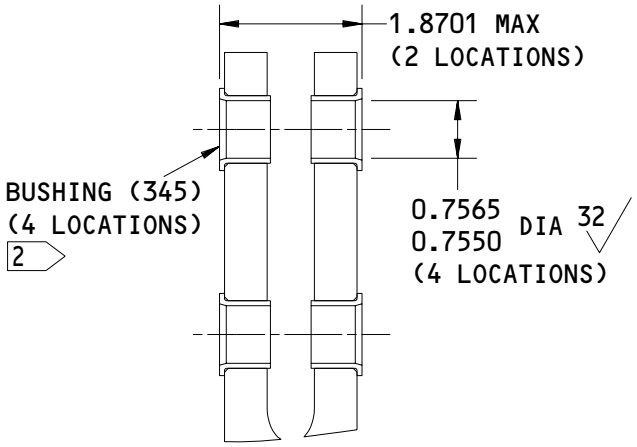
I–I



J–J

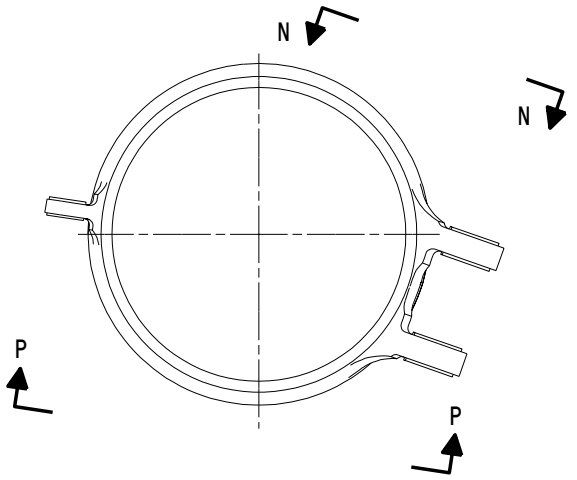


K–K



L–L

161T7110-1,-2,-5,-6
Outer Cylinder Assembly Bushing Replacement
Figure 601 (Sheet 5)



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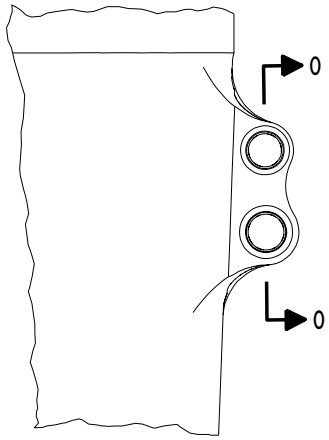
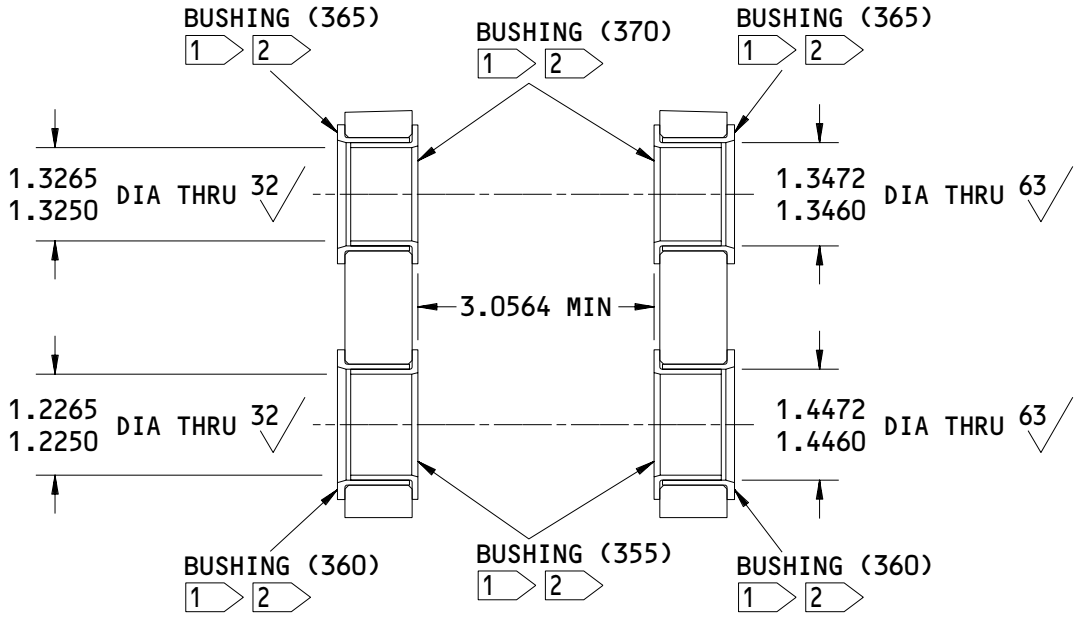


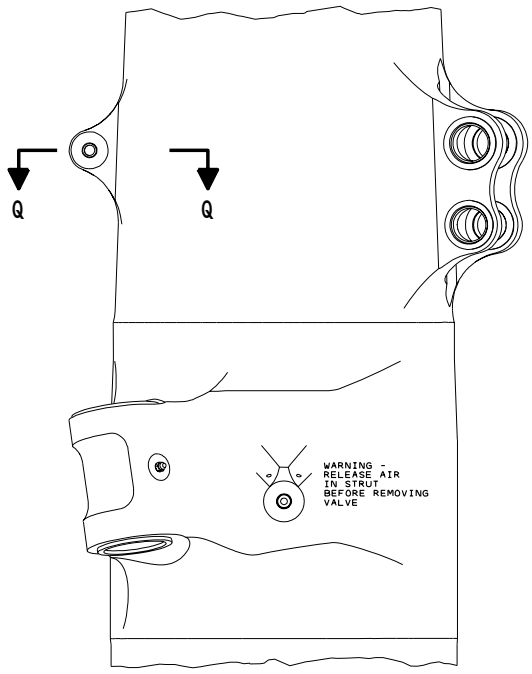
N–N



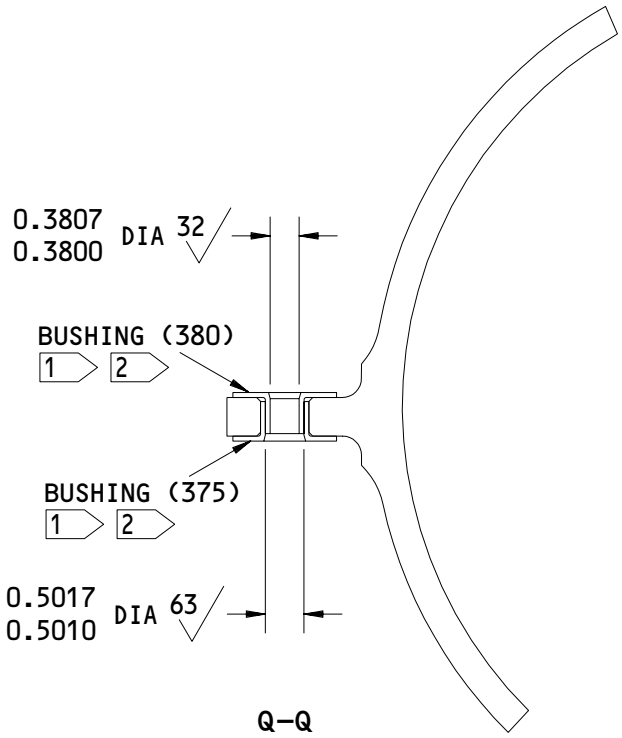
O–O

161T7110-1,-2,-5,-6
Outer Cylinder Assembly Bushing Replacement
Figure 601 (Sheet 6)

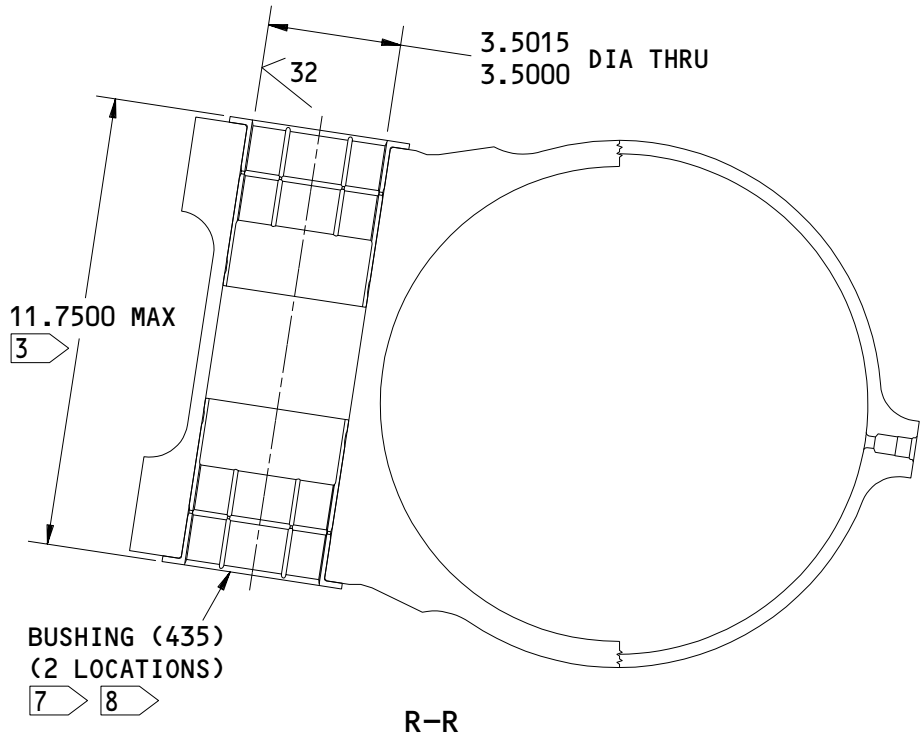
K98011



P–P

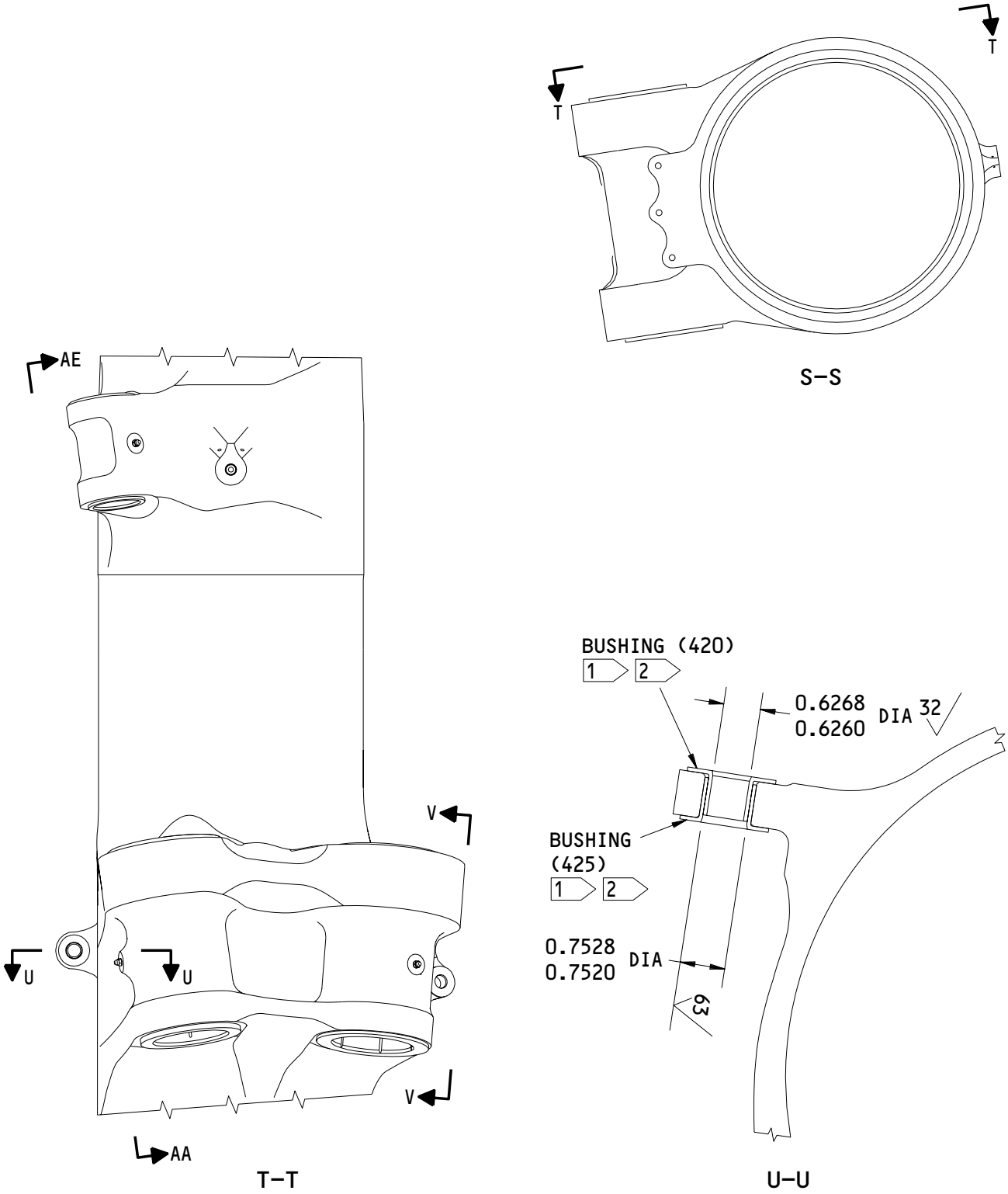


Q–Q

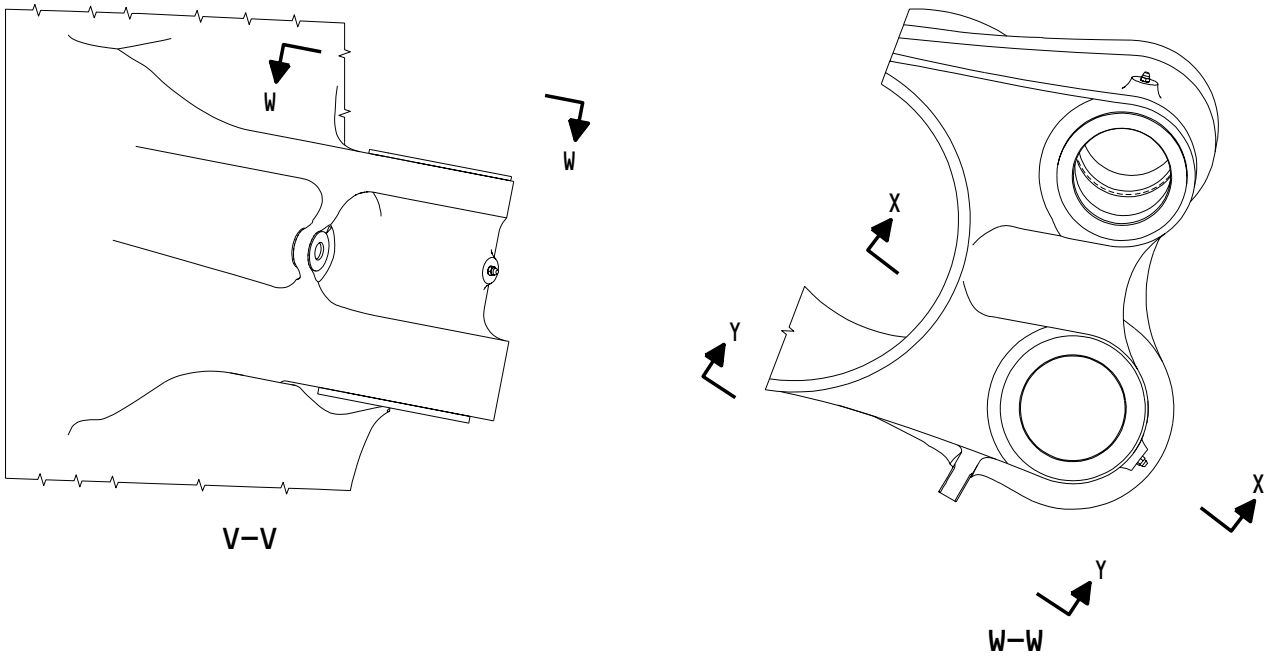


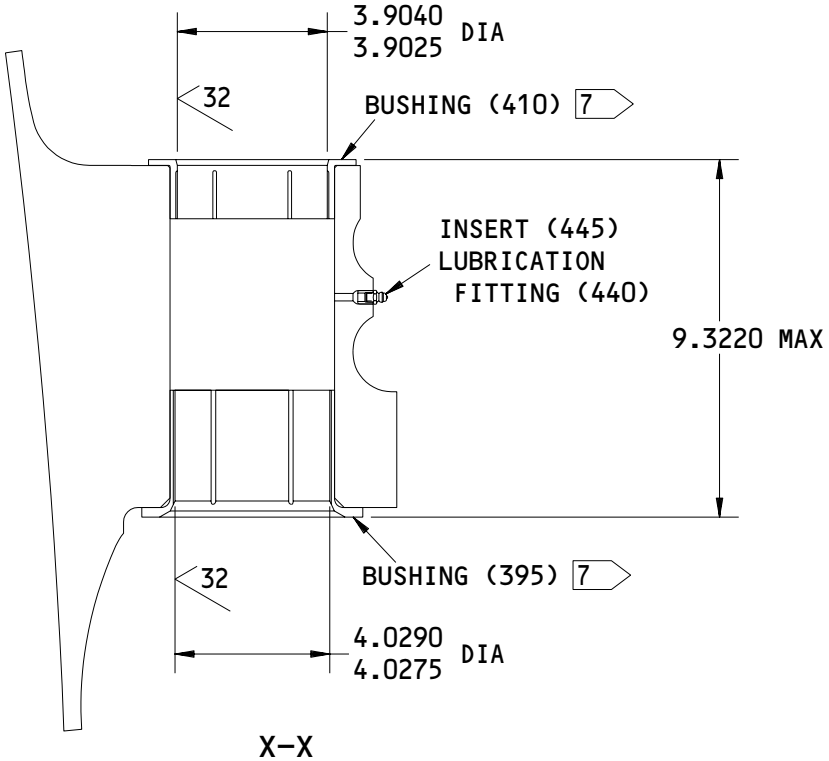
R–R

161T7110-1,-2,-5,-6
Outer Cylinder Assembly Bushing Replacement
Figure 601 (Sheet 7)

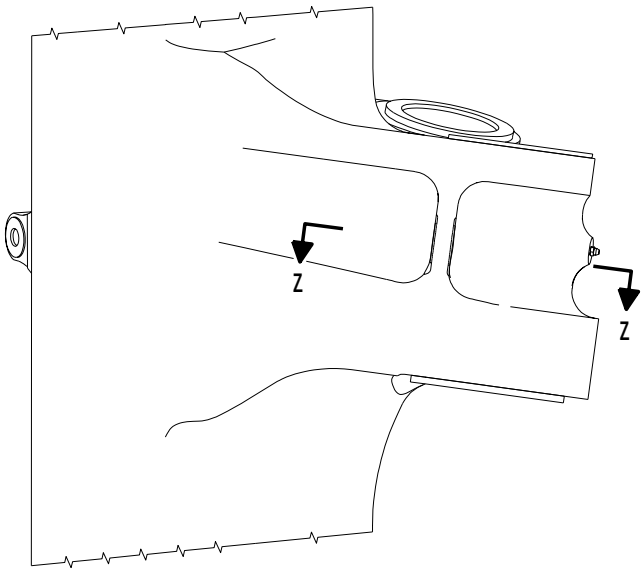


161T7110-1,-2,-5,-6
Outer Cylinder Assembly Bushing Replacement
Figure 601 (Sheet 8)

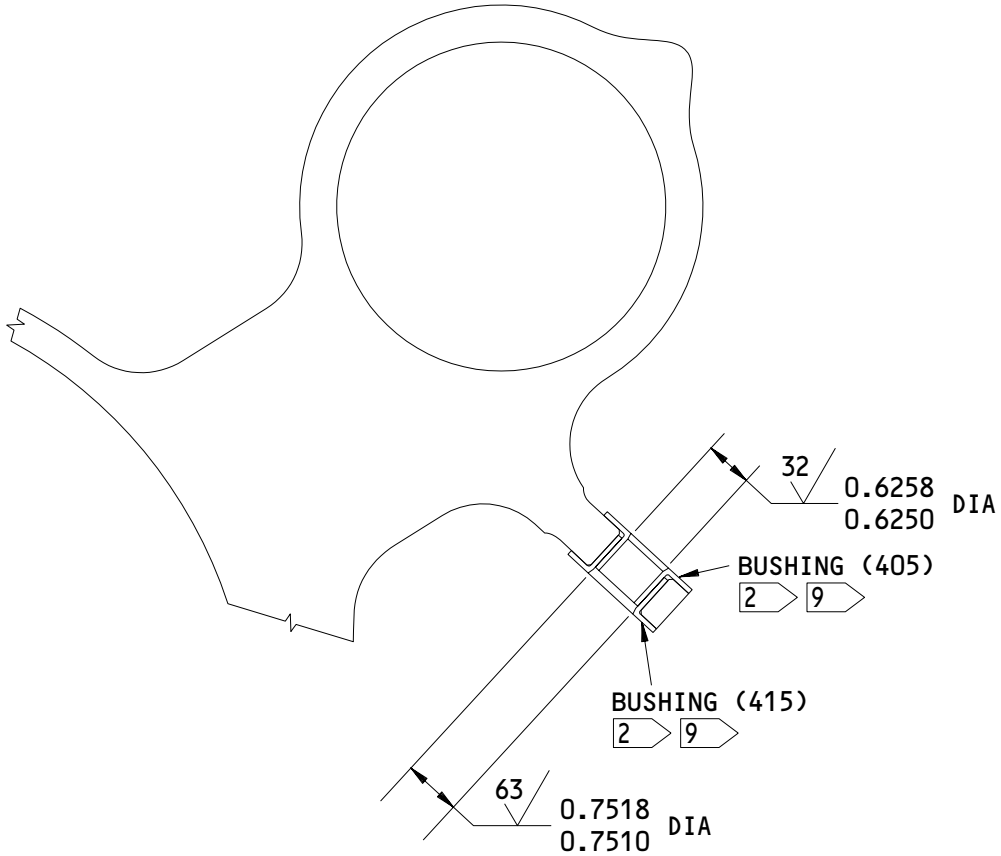




161T7110-1,-2,-5,-6
Outer Cylinder Assembly Bushing Replacement
Figure 601 (Sheet 9)



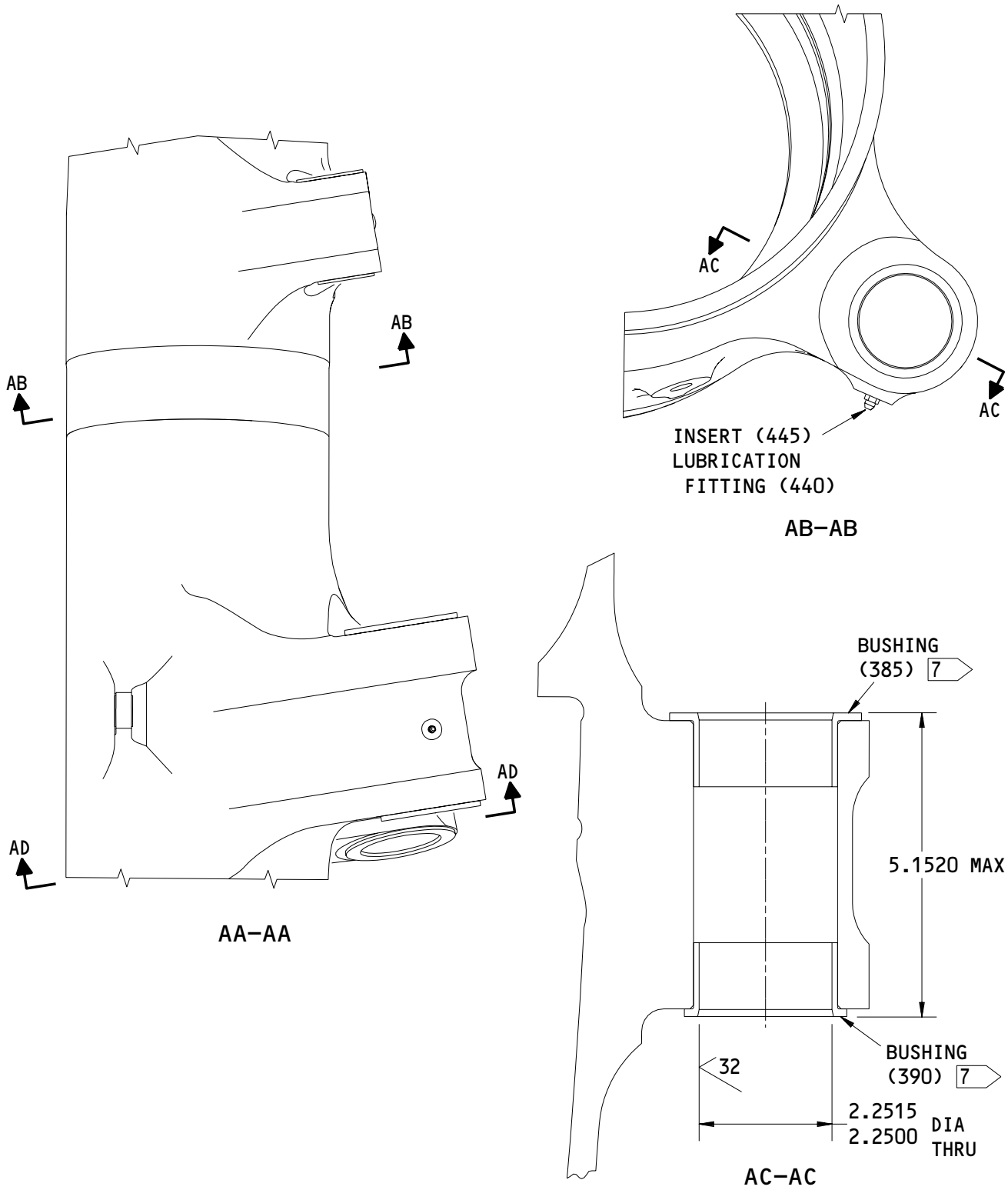
Y–Y



Z–Z

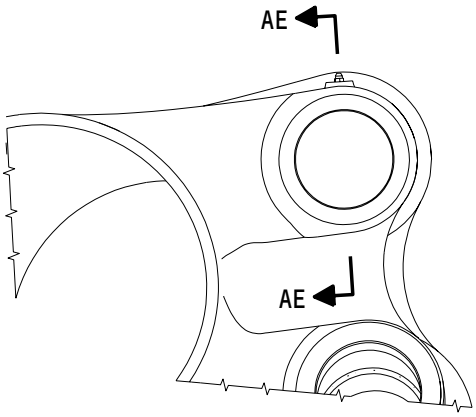
161T7110-1,-2,-5,-6
Outer Cylinder Assembly Bushing Replacement
Figure 601 (Sheet 10)

K98015

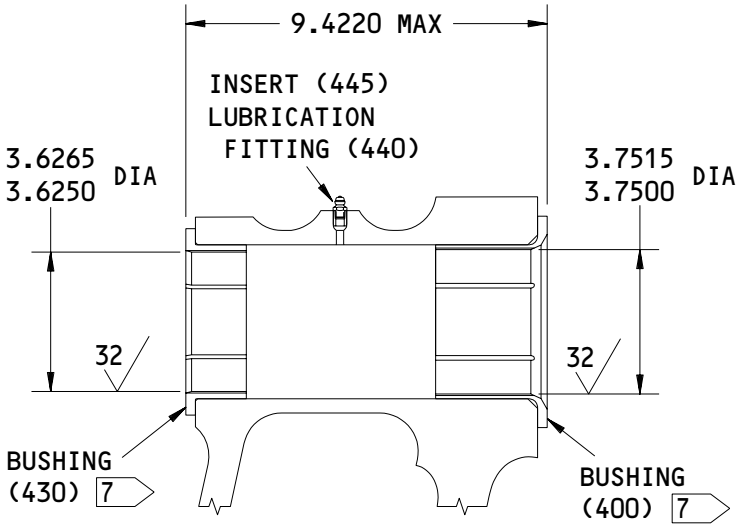


161T7110-1,-2,-5,-6
Outer Cylinder Assembly Bushing Replacement
Figure 601 (Sheet 11)

K98016



AD–AD



AE–AE

1 THE INSTALLATION DIRECTION OF THE NESTED BUSHINGS IS OPTIONAL

2 USE THE SHRINK FIT PROCEDURE TO INSTALL THE BUSHINGS WITH BMS 3-27 COMPOUND (SOPM 20-50-03). MAKE SURE THE CHAMFER/RADIUS VOLUME IS FILLED WITH BMS 3-27 COMPOUND. FILLET SEAL THE BUSHINGS WITH BMS 5-95 SEALANT (SOPM 20-50-19)

3 DO NOT APPLY ENAMEL TO THE SURFACE SHOWN

4 USE THE SHRINK FIT PROCEDURE WITH BMS 3-27 TO INSTALL THE BUSHING (SOPM 20-50-03)

5 INSTALL BUSHING TO A DEPTH OF 0.0200-0.0400

6 CLOSE TOLERANCE, REAM TO DEPTH AS SHOWN

7 USE THE SHRINK FIT PROCEDURE WITH BMS 3-27 COMPOUND TO INSTALL THE BUSHINGS (SOPM 20-50-03). MAKE SURE THE CHAMFER/RADIUS VOLUME AND THE AREA BETWEEN THE BUSHING FLANGE AND THE CHROME PLATED SURFACE IS FILLED WITH BMS 3-27 COMPOUND. MAKE SURE THE DISTANCE BETWEEN THE BUSHING FLANGE AND THE CHROME PLATED SURFACE IS 0.0010 MAXIMUM

8 AFTER THE BUSHING INSTALLATION, MAKE SURE THE LUBRICATION HOLE IS NOT BLOCKED. APPLY GREASE TO THE FITTING UNTIL THE GREASE COMES OUT AT THE INSIDE DIAMETER OF THE BUSHING

9 INSTALL NESTED BUSHINGS IN THE DIRECTION SHOWN

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

161T7110-1,-2,-5,-6
Outer Cylinder Assembly Bushing Replacement
Figure 601 (Sheet 12)

K98017

OUTER CYLINDER - REPAIR 2-2

161T7110-3, -4

1. General

A. This repair gives the data that is necessary to repair and refinish the outer cylinder (450, 455).

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

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

D. General repair details:

(1)	Material:	4340M steel 275-300 ksi
(2)	Shot peen:	Intensity 0.014-0.018A2 Coverage 2.0 Shot Size 0.016-0.033 Hard Shot (RC=55-65)

2. Lug Faces and Holes

A. References

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

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

(3) SOPM 20-20-01, Magnetic Particle Examination

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

B. Procedure (Fig. 601)

(1) Machine as necessary, within repair limits, to remove defects.

(2) Magnetic particle examine (SOPM 20-20-01).

(3) Shot peen as indicated (SOPM 20-10-03).

(4) Refinish as indicated.

(5) Make oversize bushings (Fig. 602 and on) as necessary to adjust for the material removed.

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

3. Outer Cylinder Refinish

A. References

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

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

(3) SOPM 20-41-01, Decoding Table For Boeing Finish Codes

(4) SOPM 20-41-02, Application of Chemical and Solvent Resistant Finishes

B. Procedure (Fig. 601)

(1) Chrome plate as indicated.

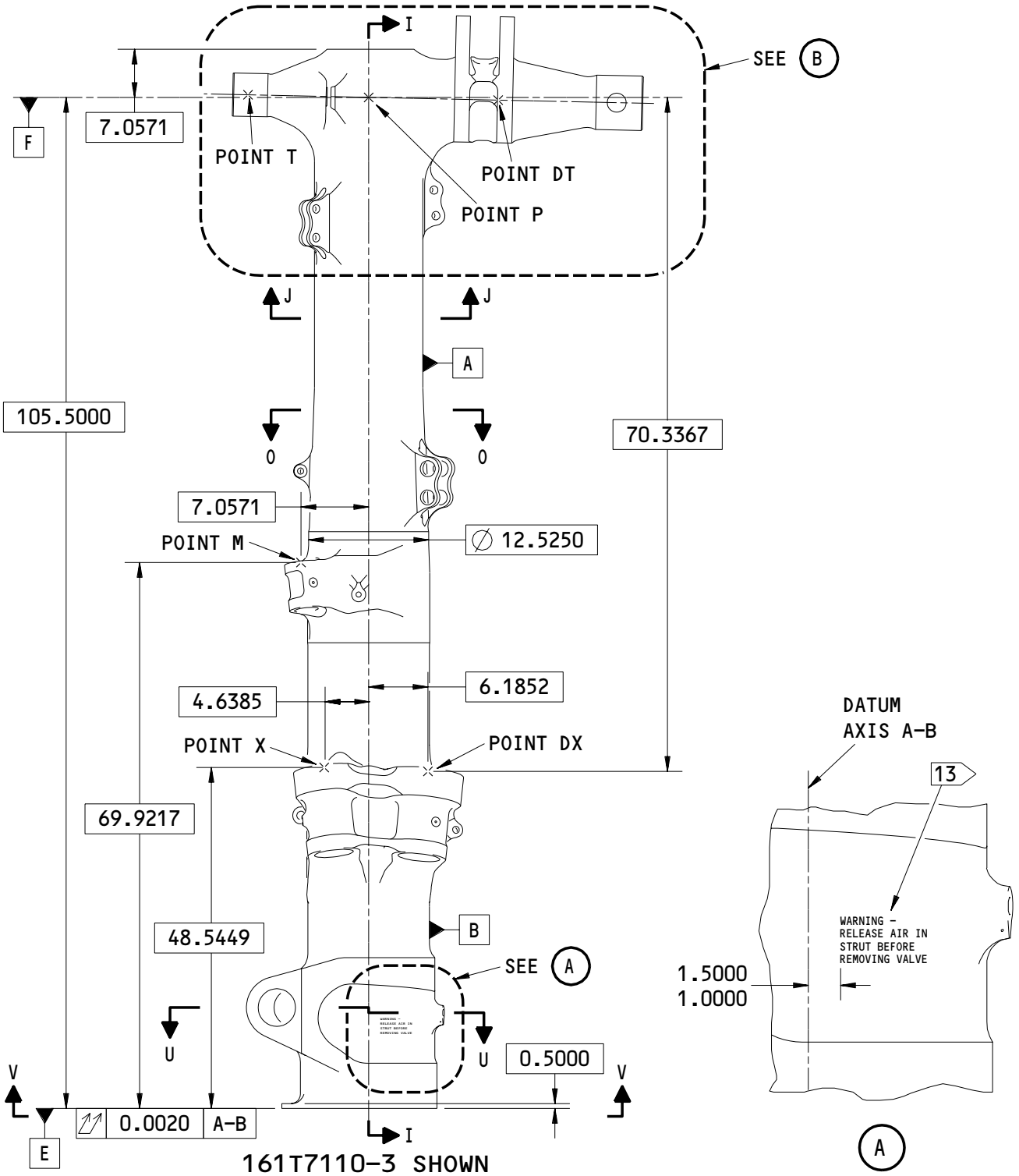
(2) Nickel plate as indicated.

(3) Cadmium-titanium plate as indicated.

(4) Apply primer and corrosion preventive compound as indicated.

(5) Apply enamel topcoat as indicated in REPAIR 2-1.

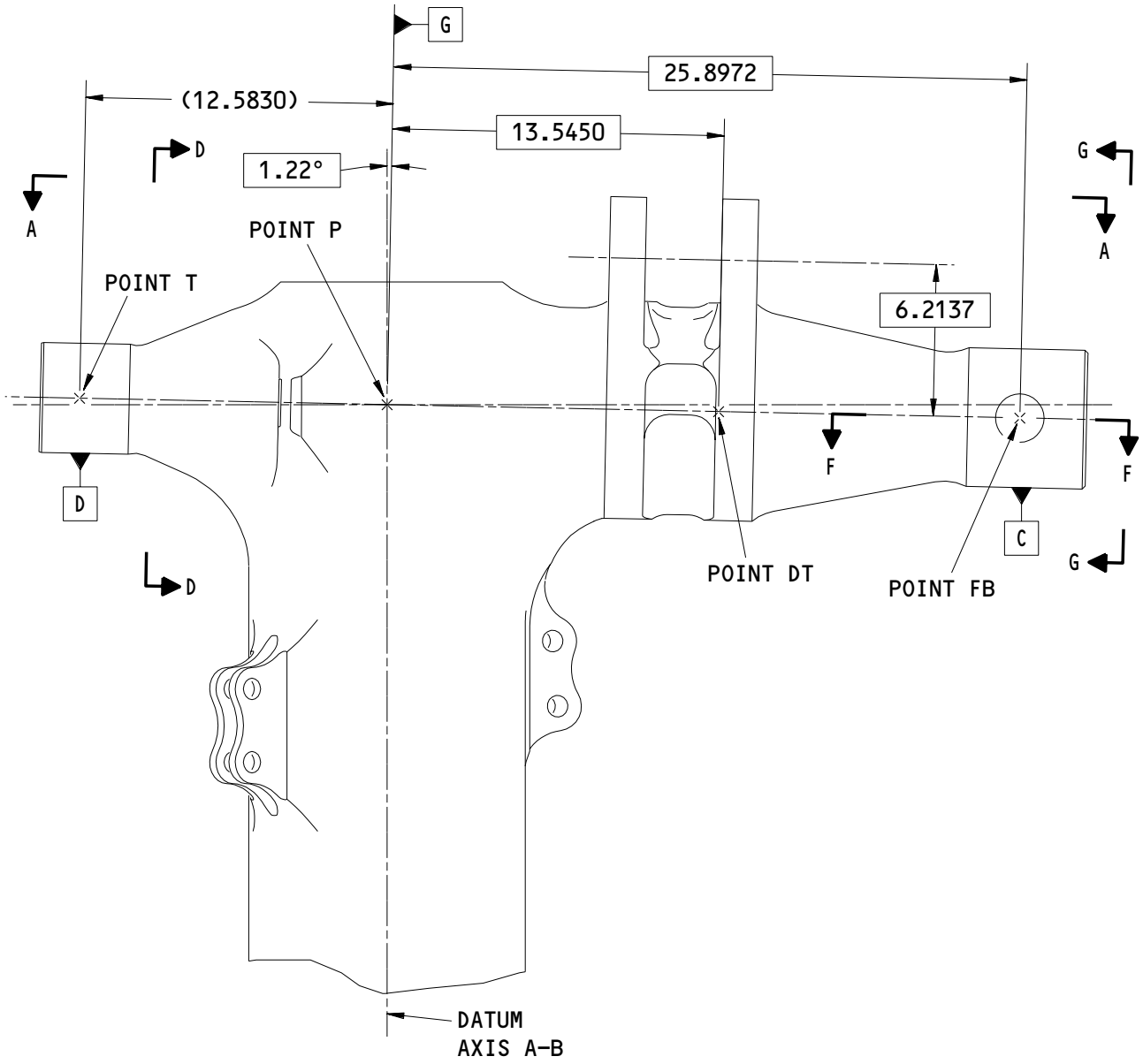
(6) Apply markings as shown.



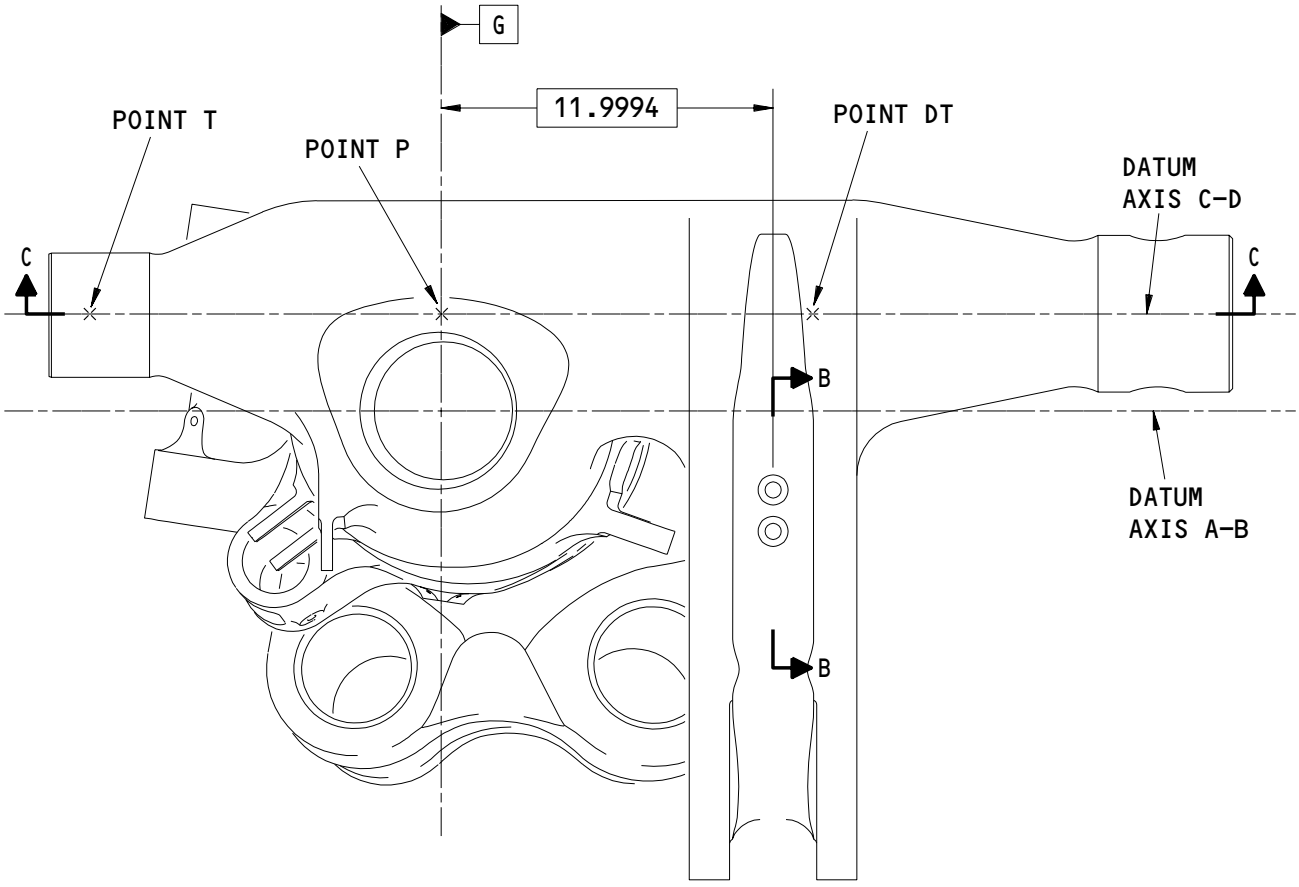
161T7110-3 SHOWN
161T7110-4 OPPOSITE

161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 1)

K96748

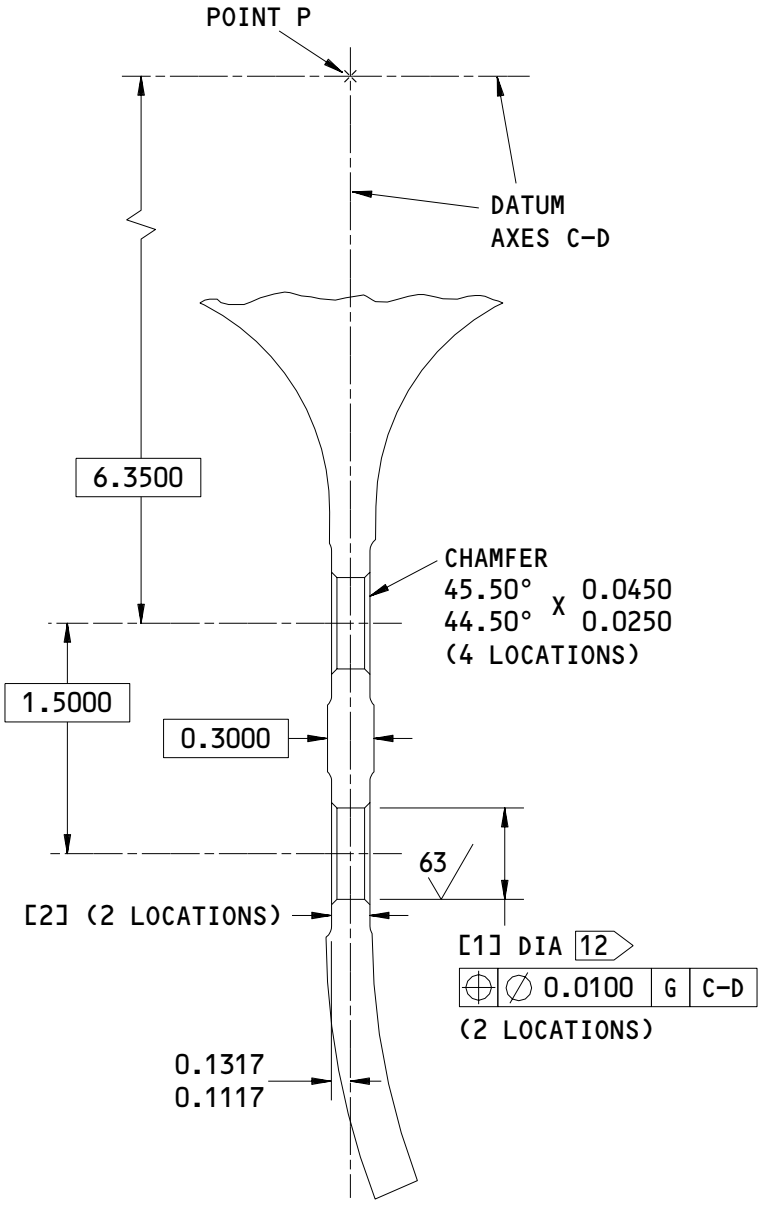


161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 2)



A-A

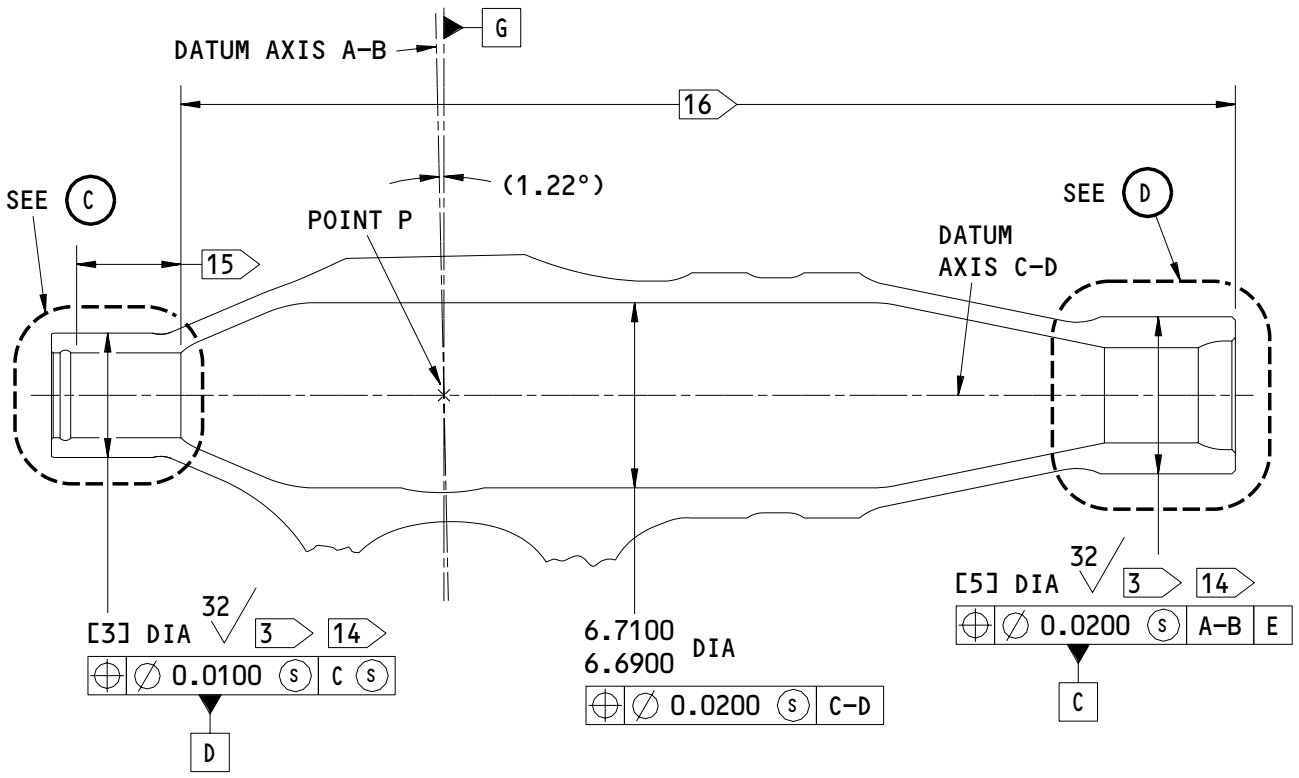
161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 3)



B–B

161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 4)

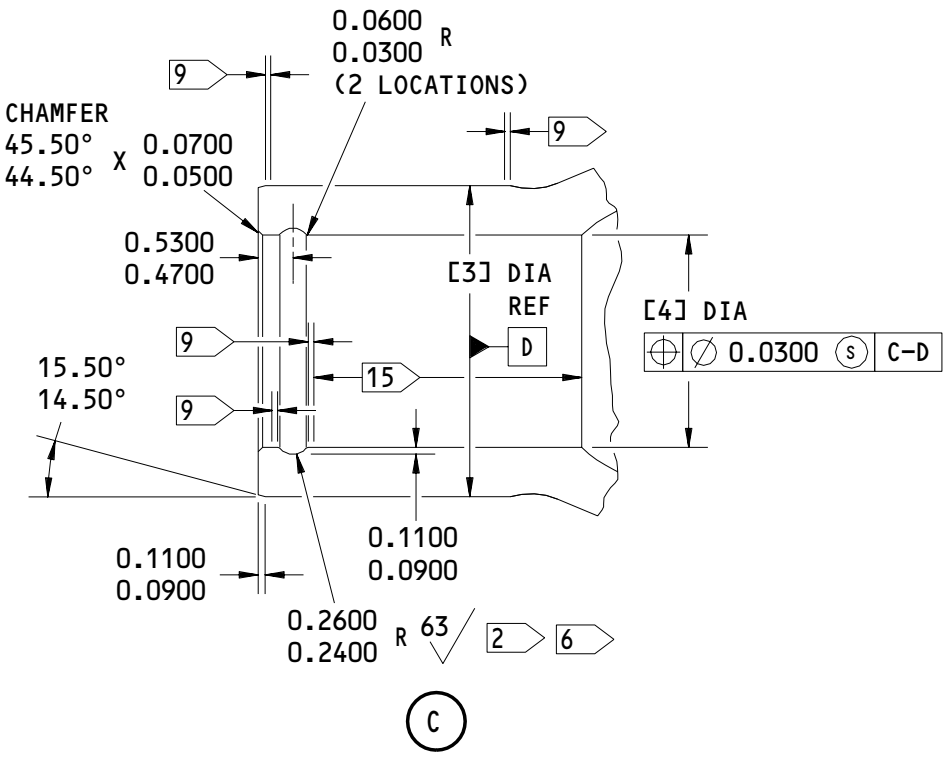
K96756

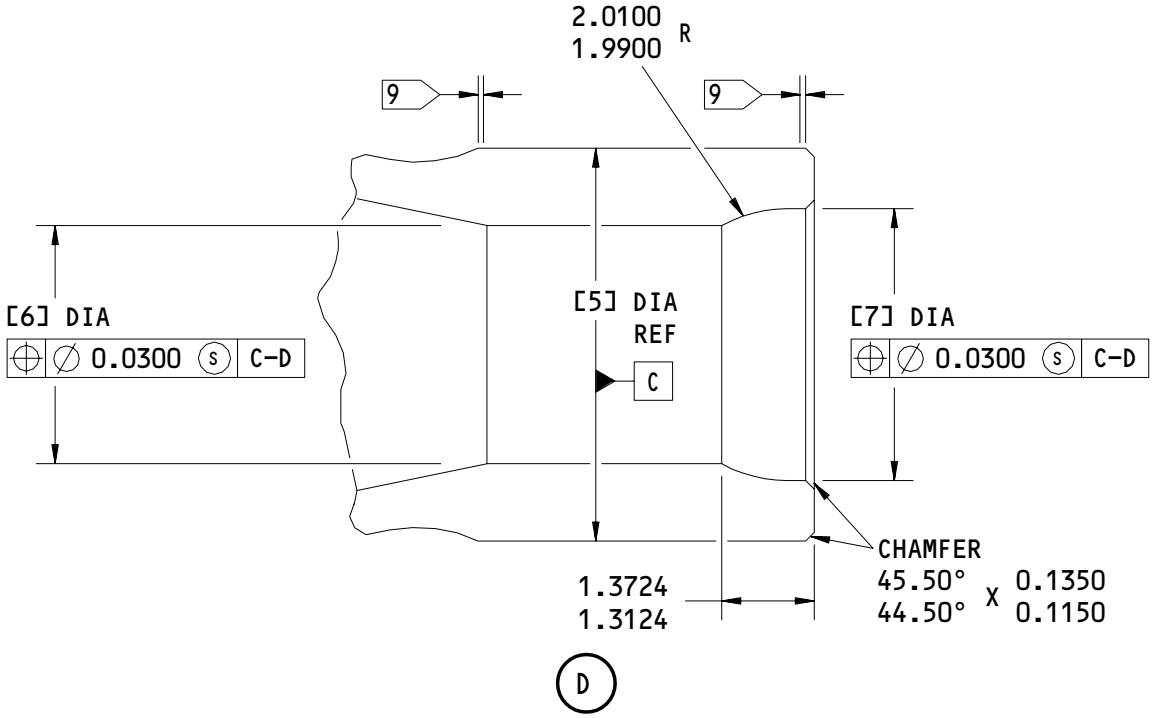


C–C

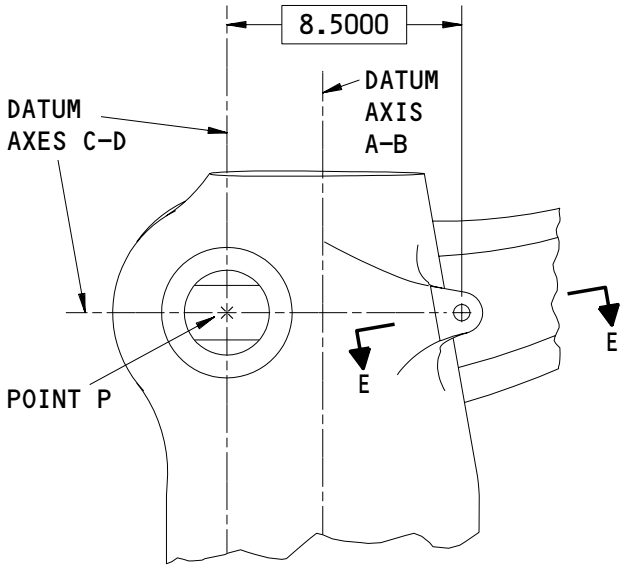
161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 5)

K96757

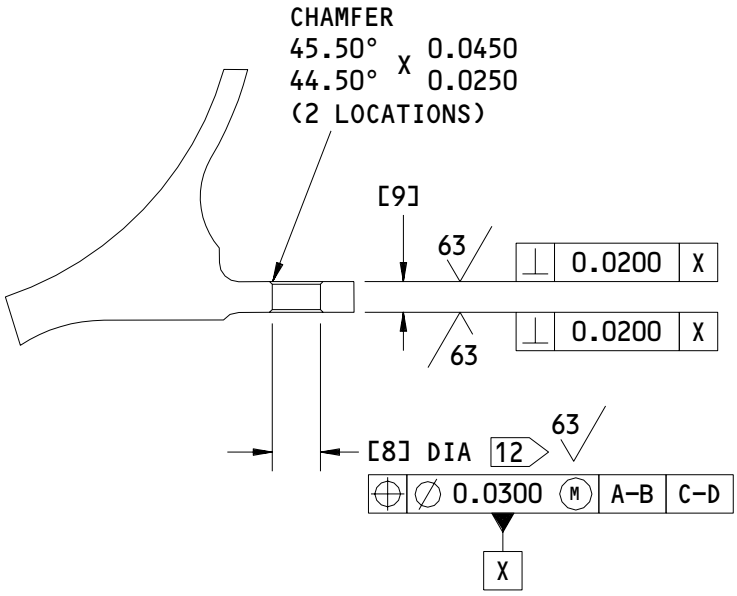




161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 6)

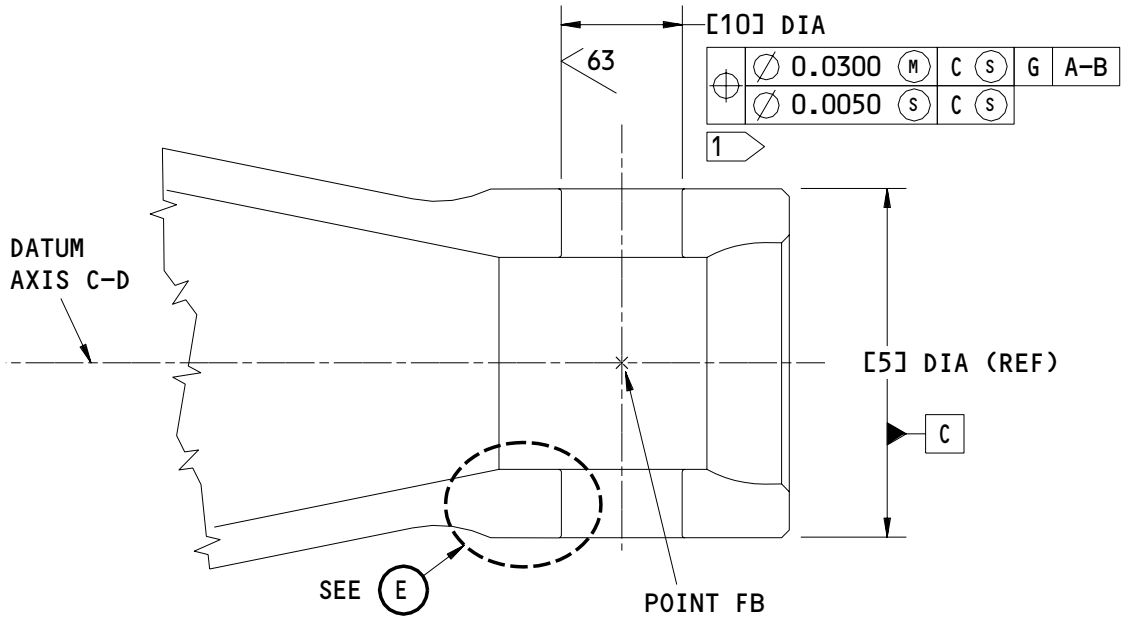


D-D

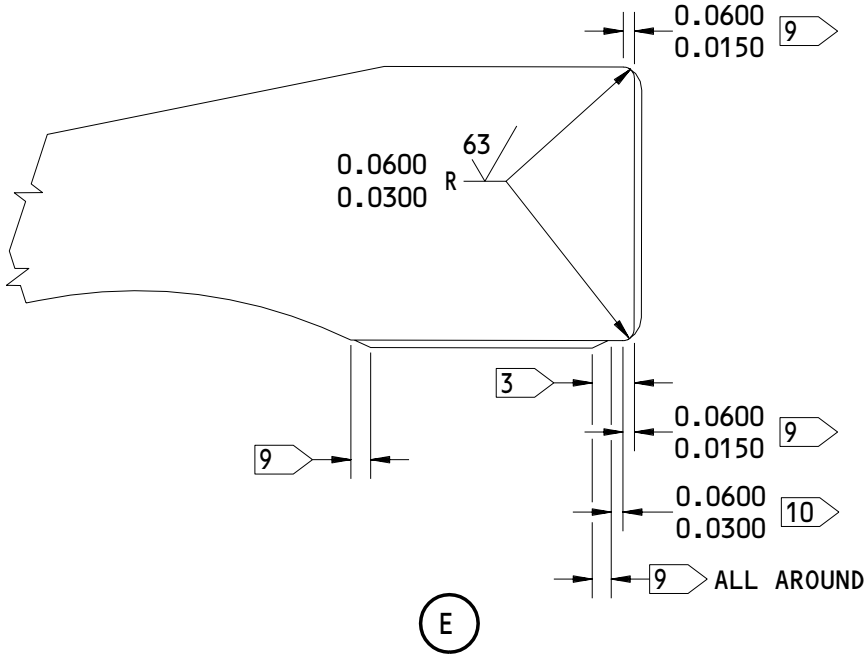


E-E

161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 7)

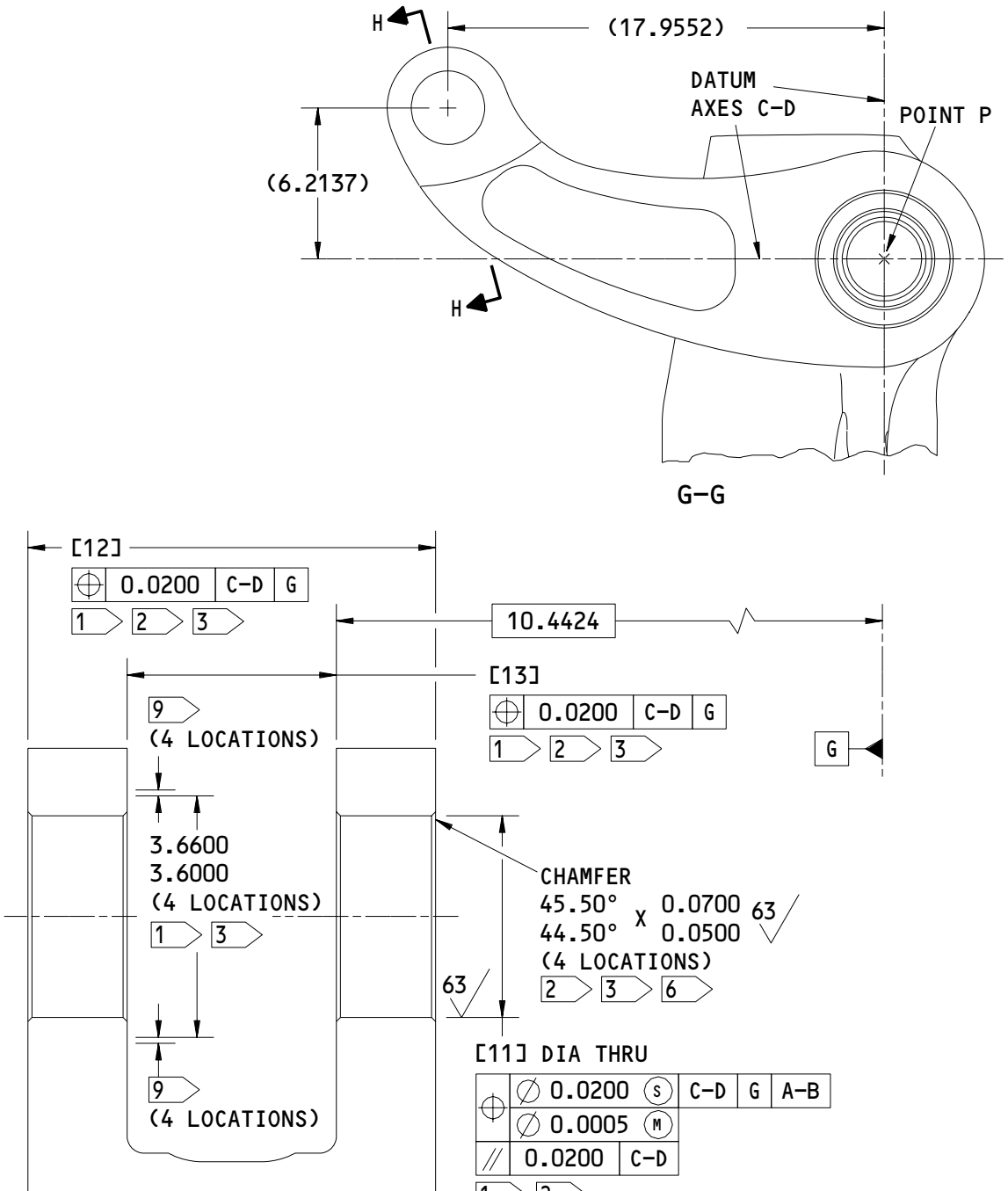


F–F



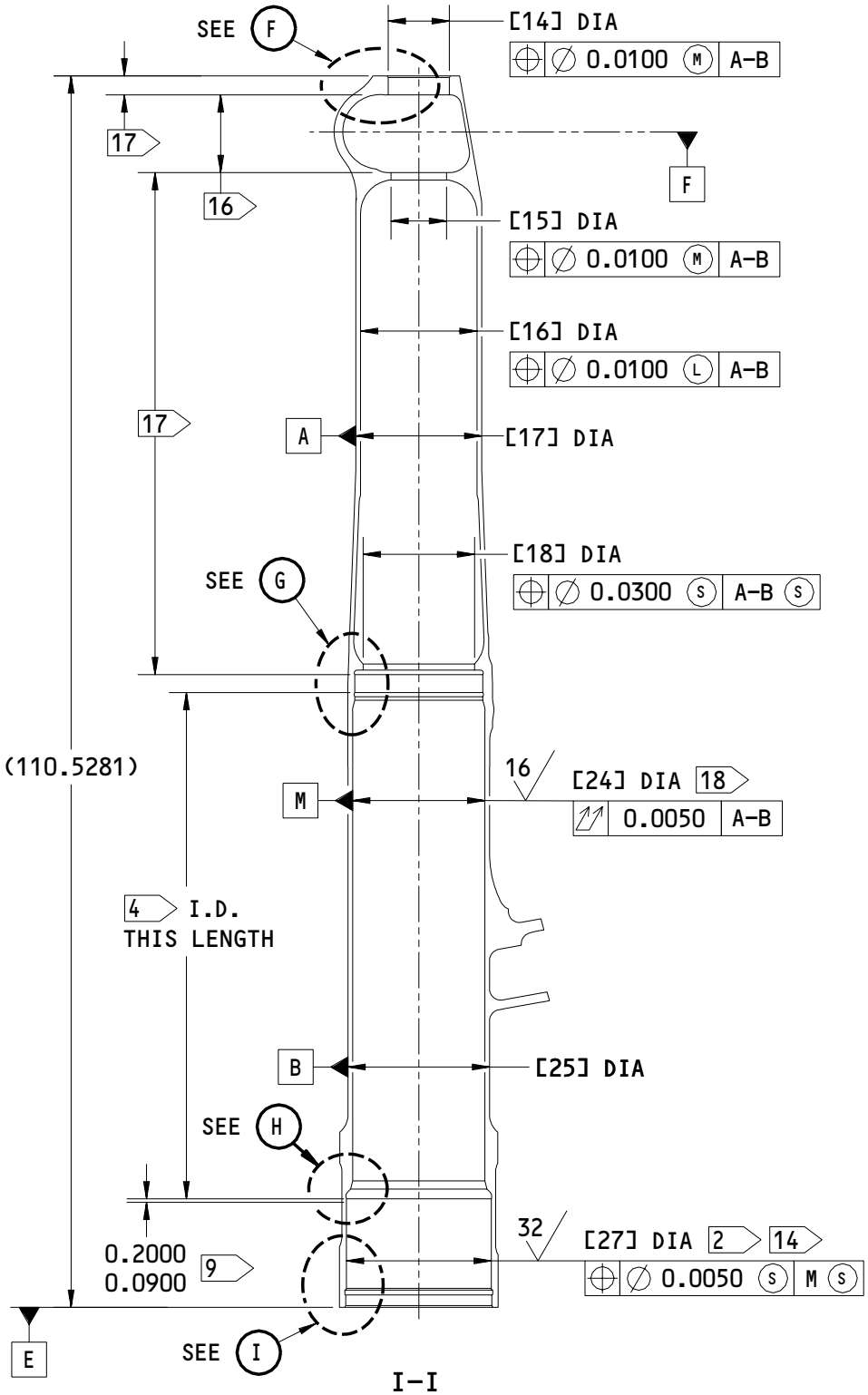
161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 8)

K96762



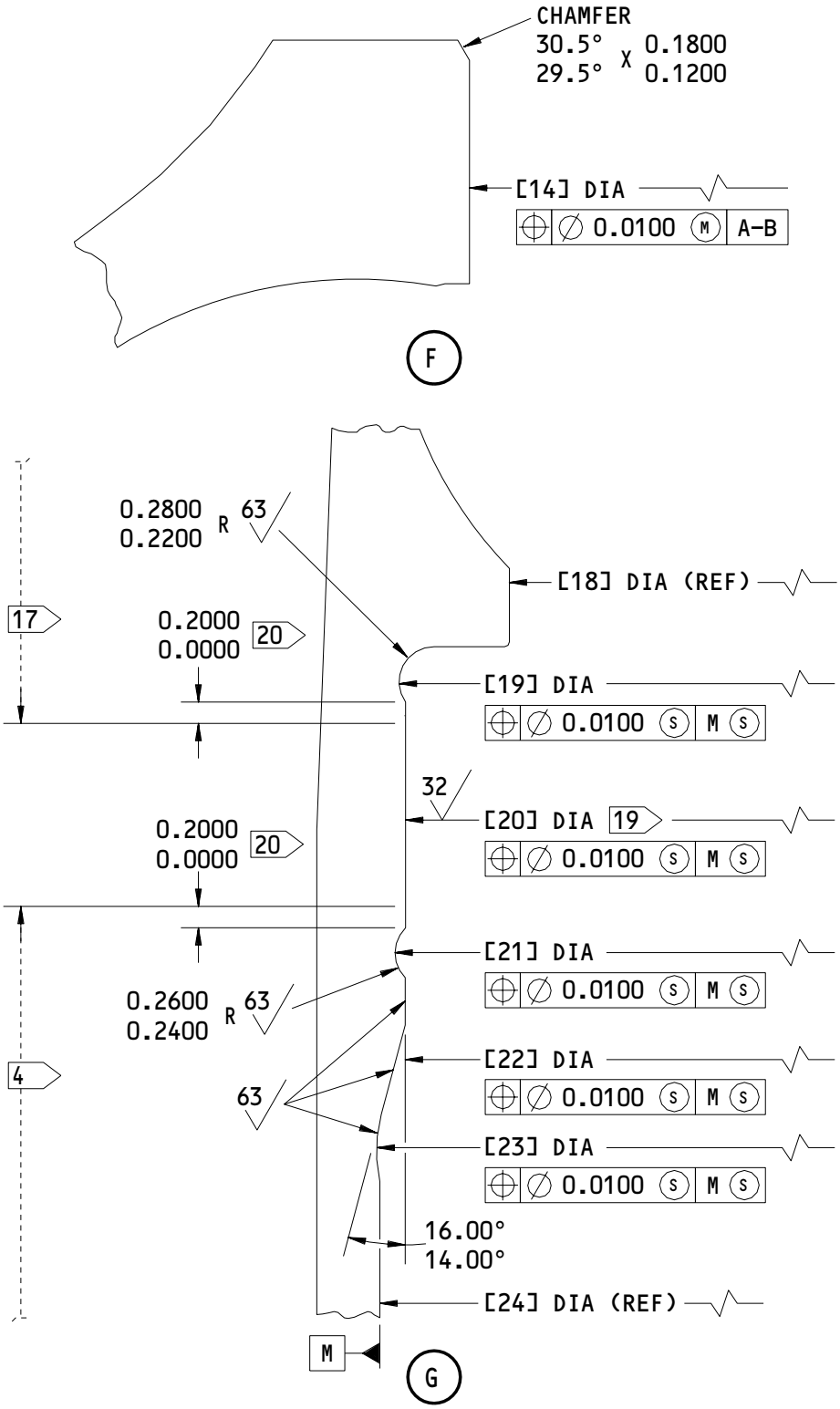
161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 9)

K96763



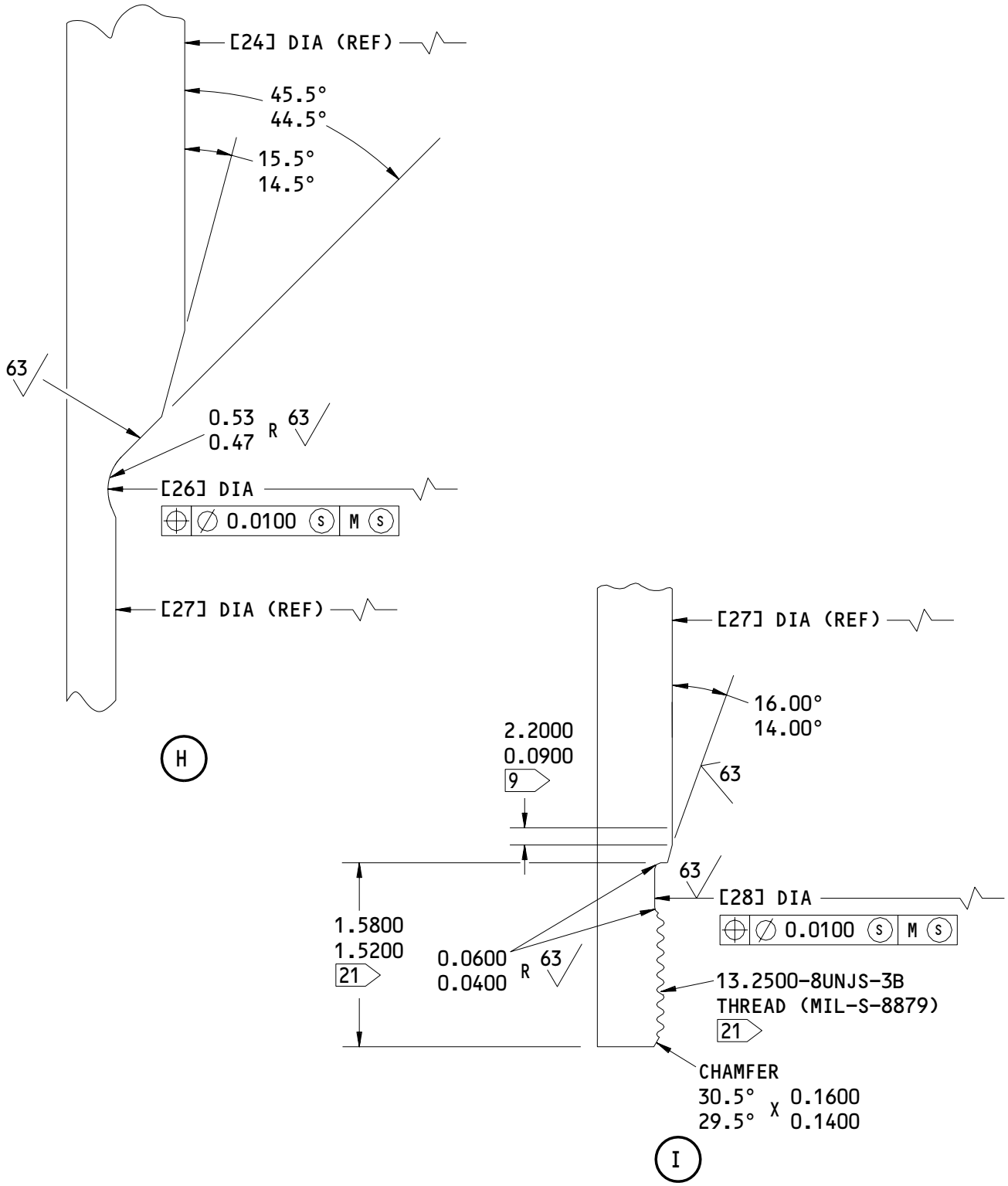
161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 10)

K96764

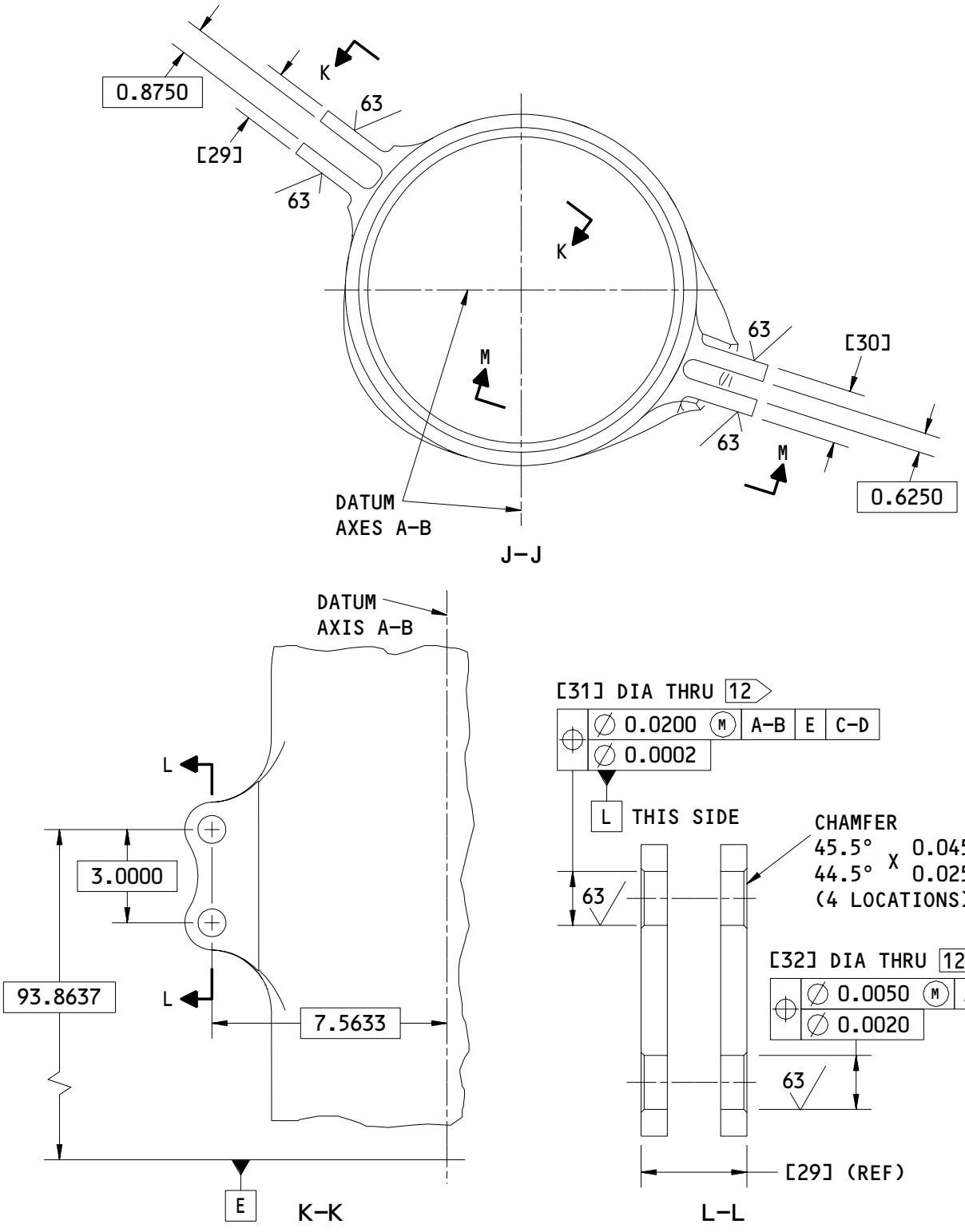


161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 11)

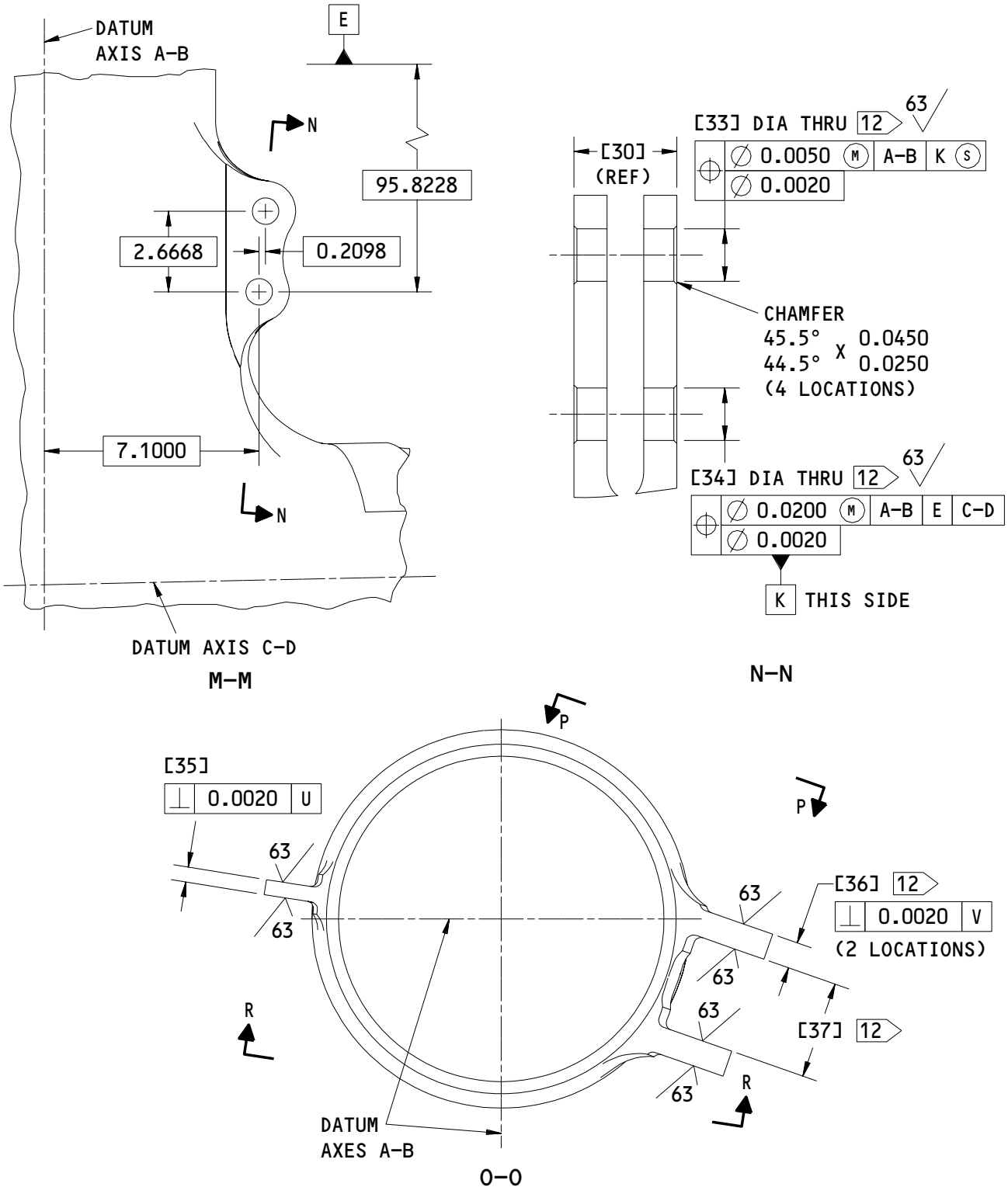
K96765



161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 12)

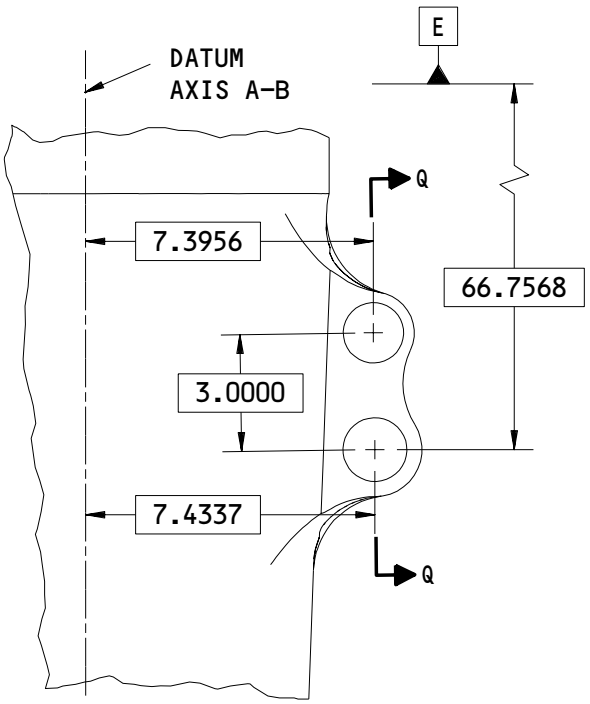


161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 13)

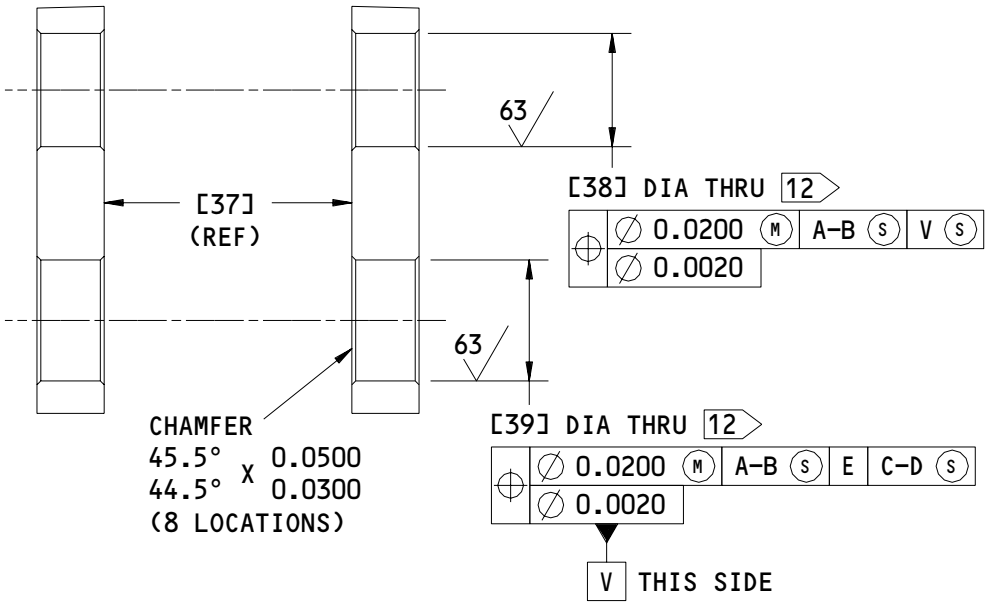


161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 14)

K96801



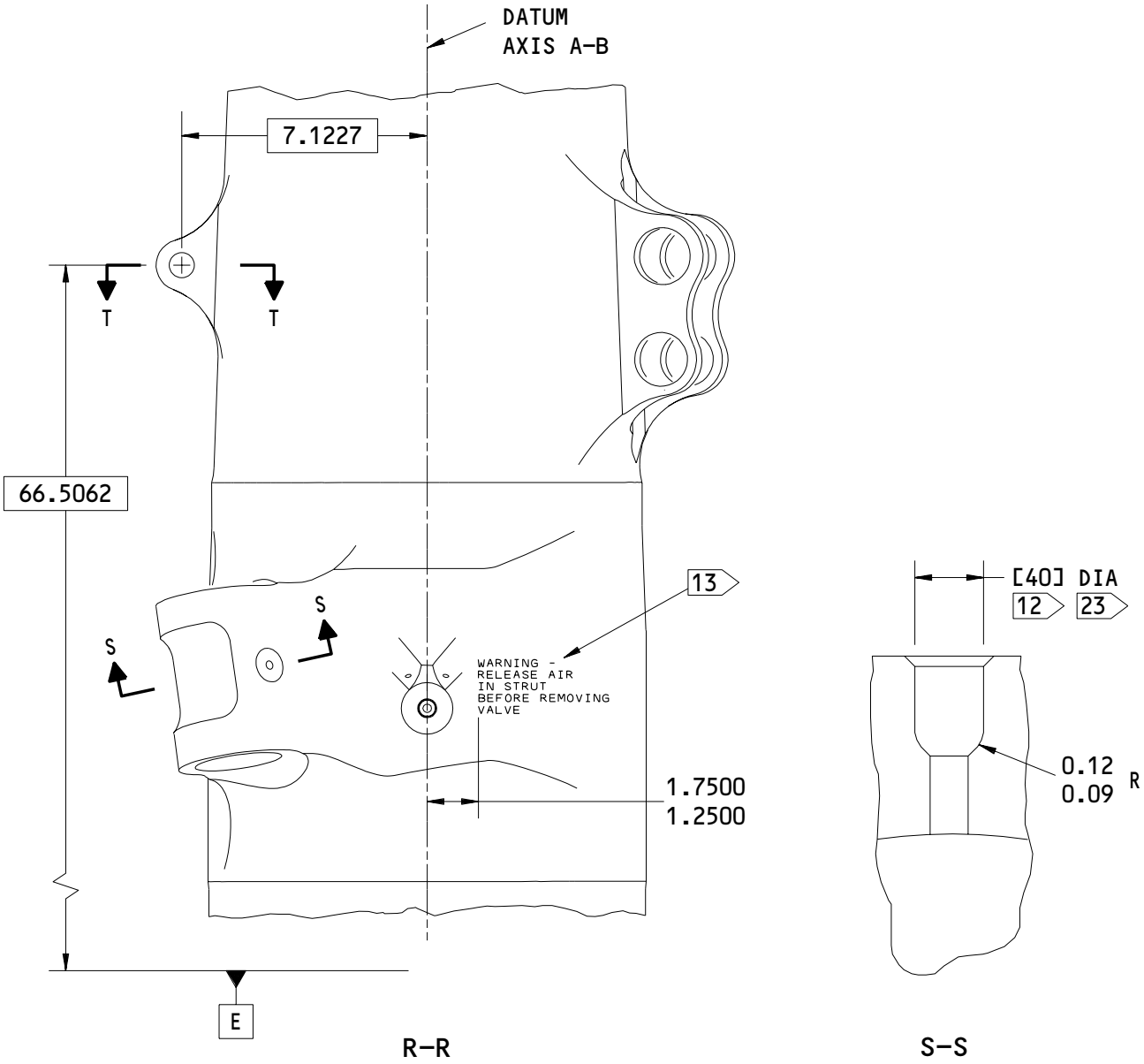
P–P



Q–Q

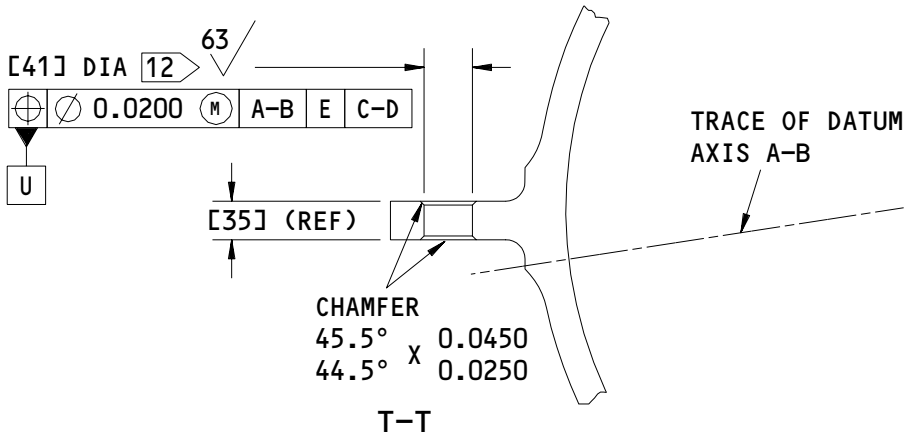
161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 15)

K96803

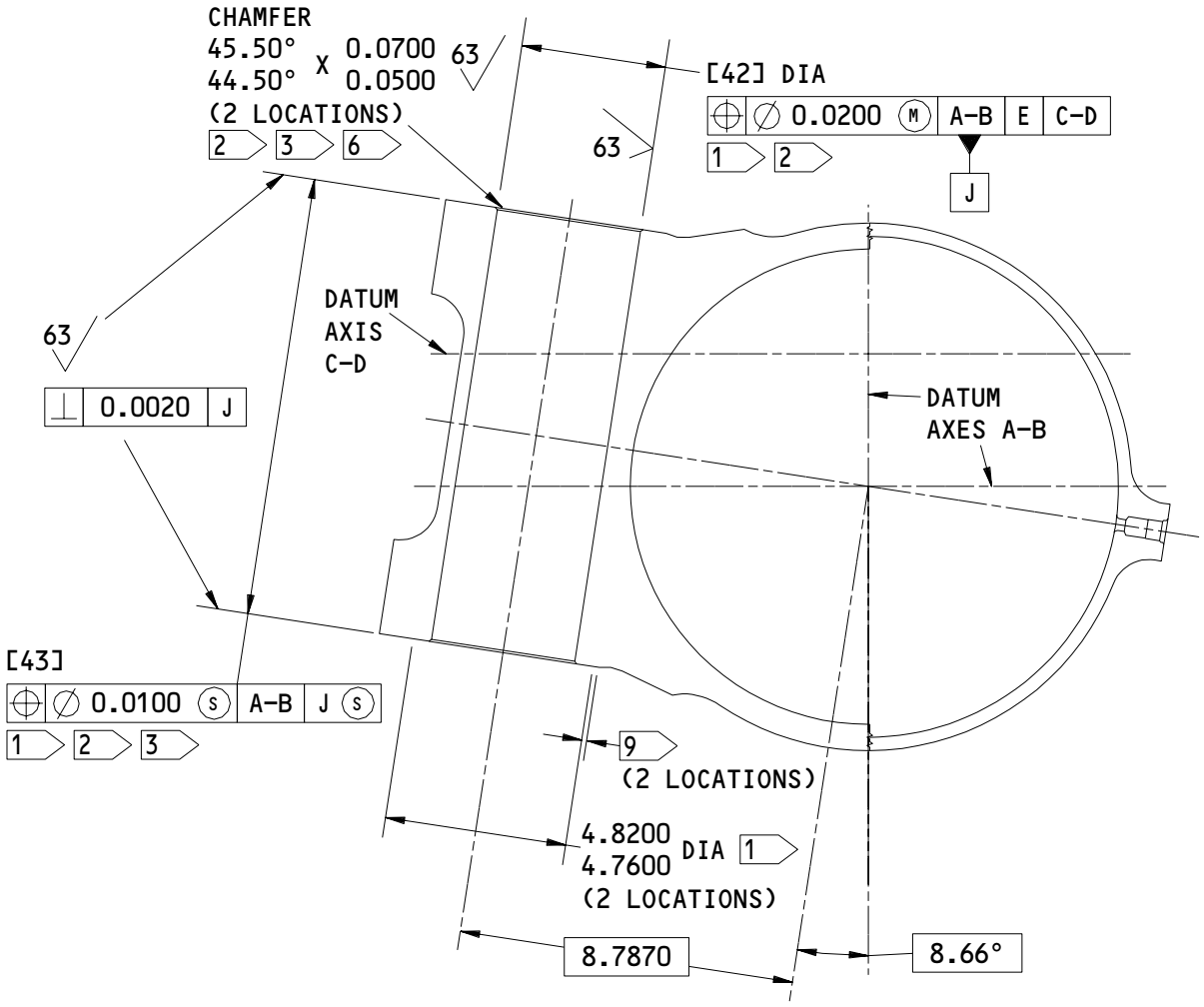


161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 16)

K96804

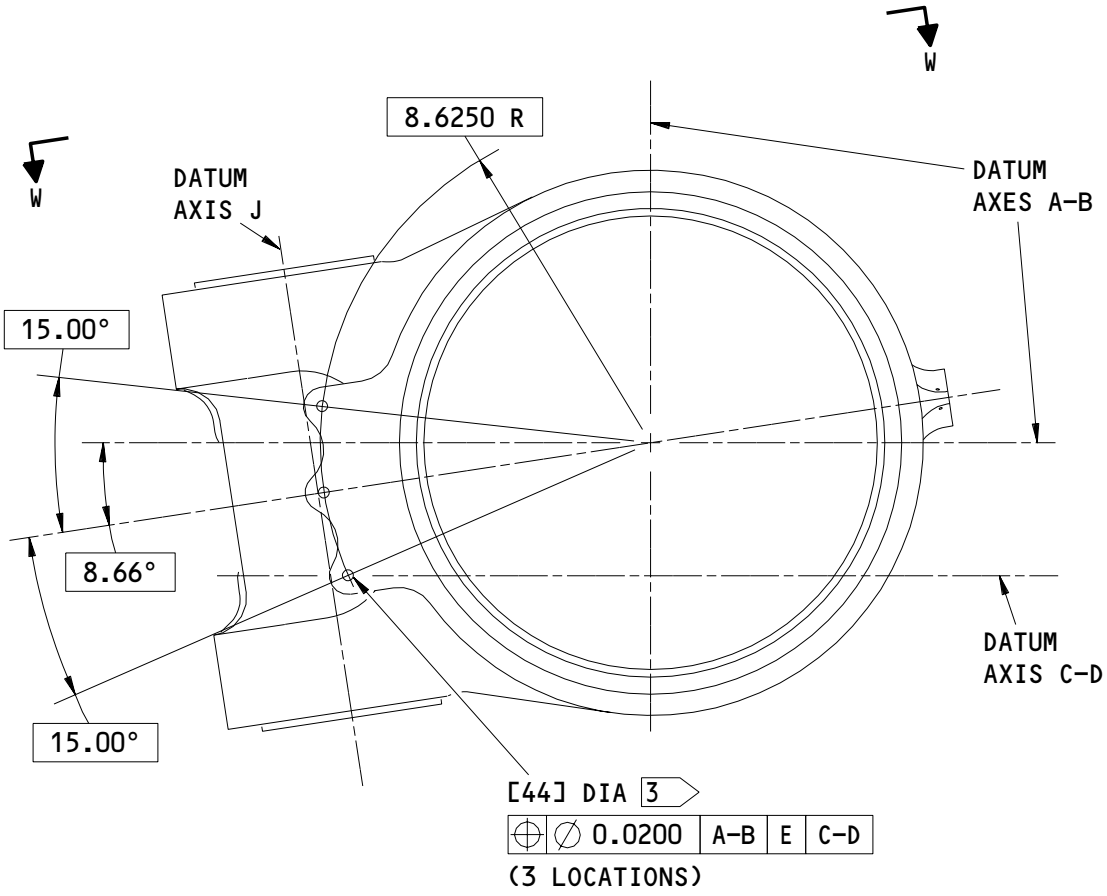


T–T



U–U

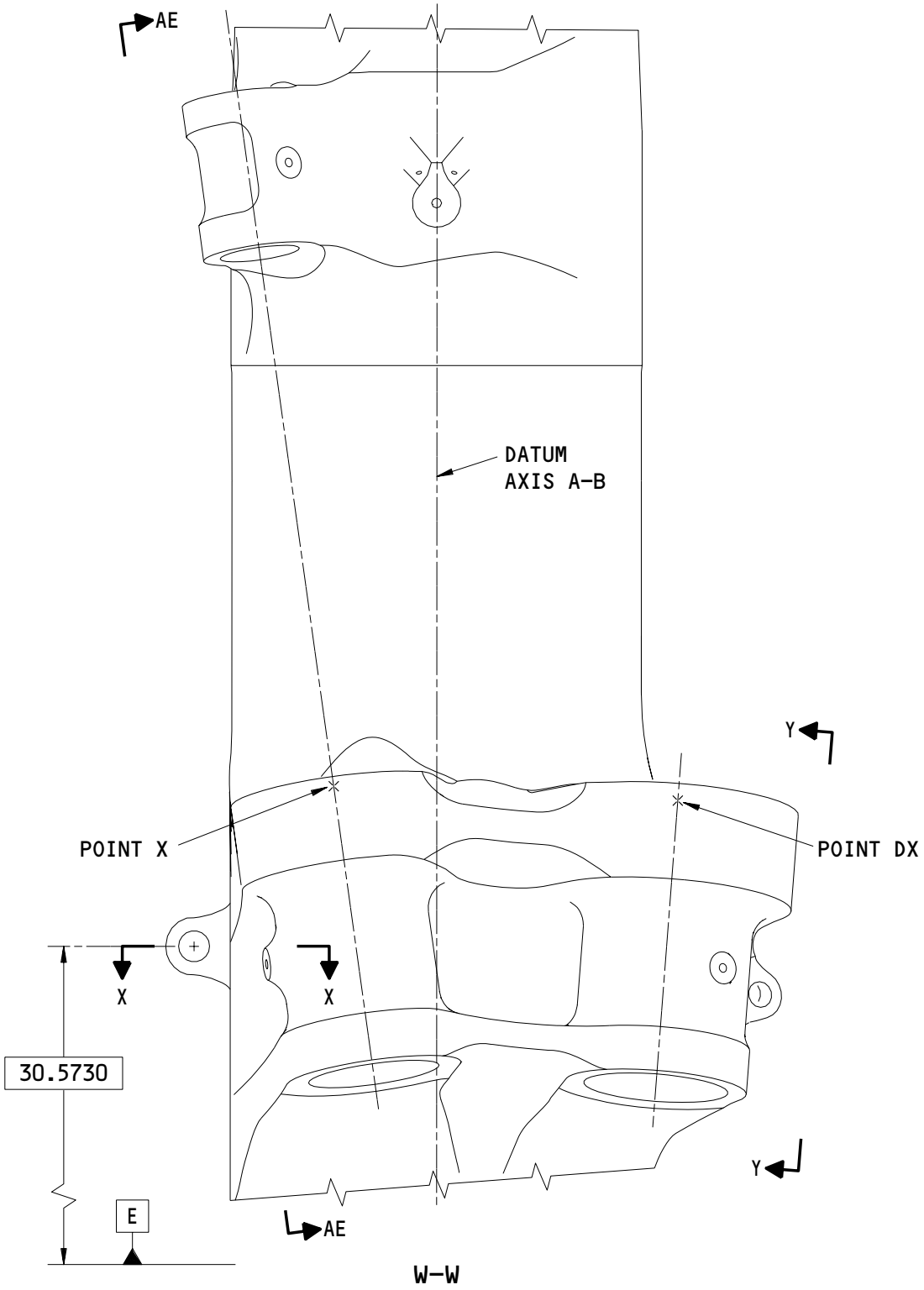
161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 17)



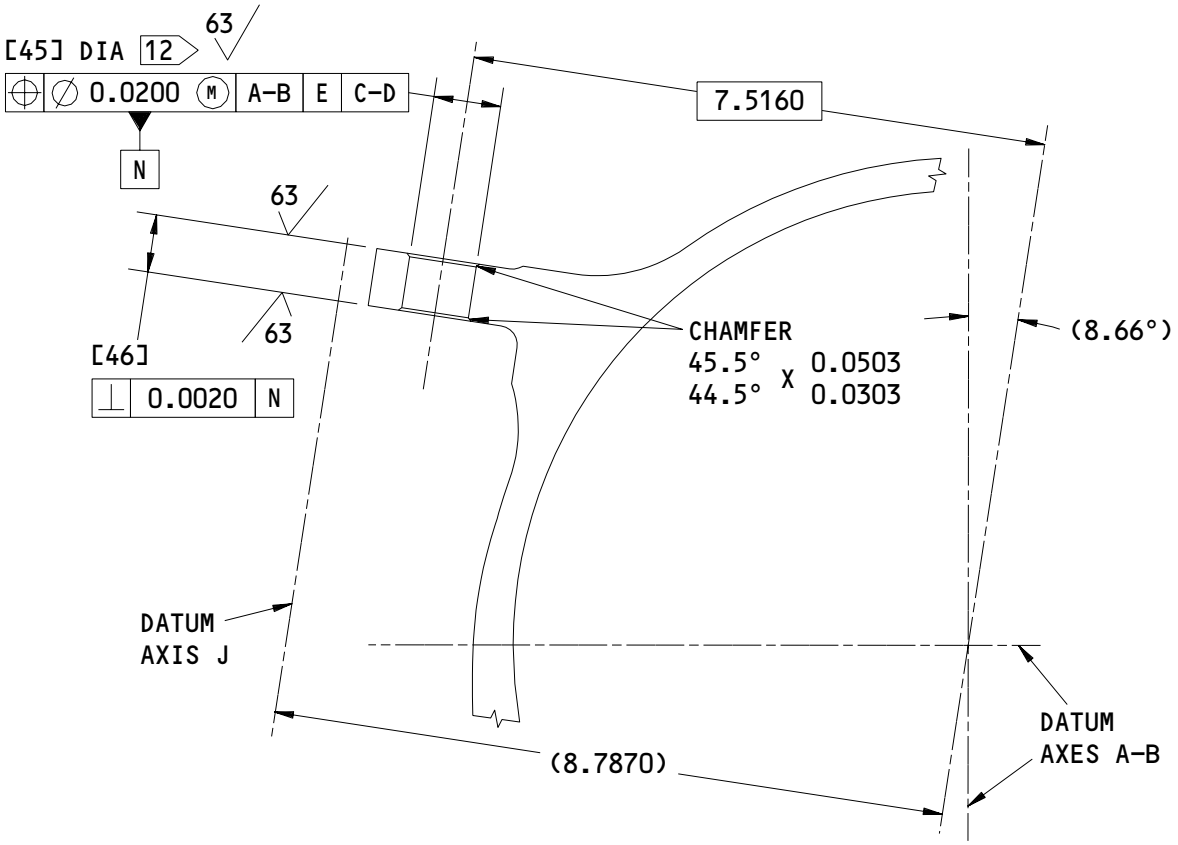
V-V

161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 18)

K96808



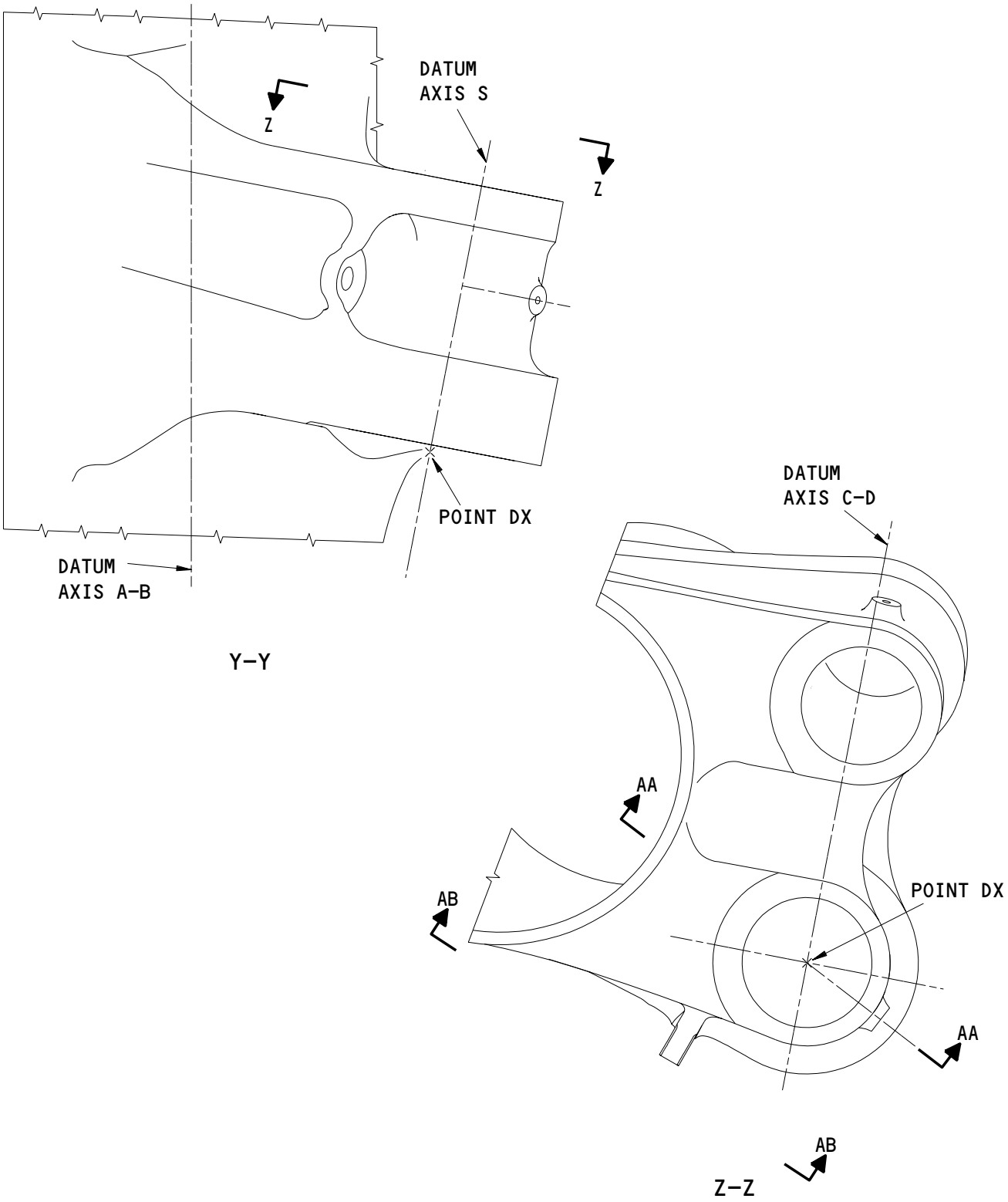
161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 19)



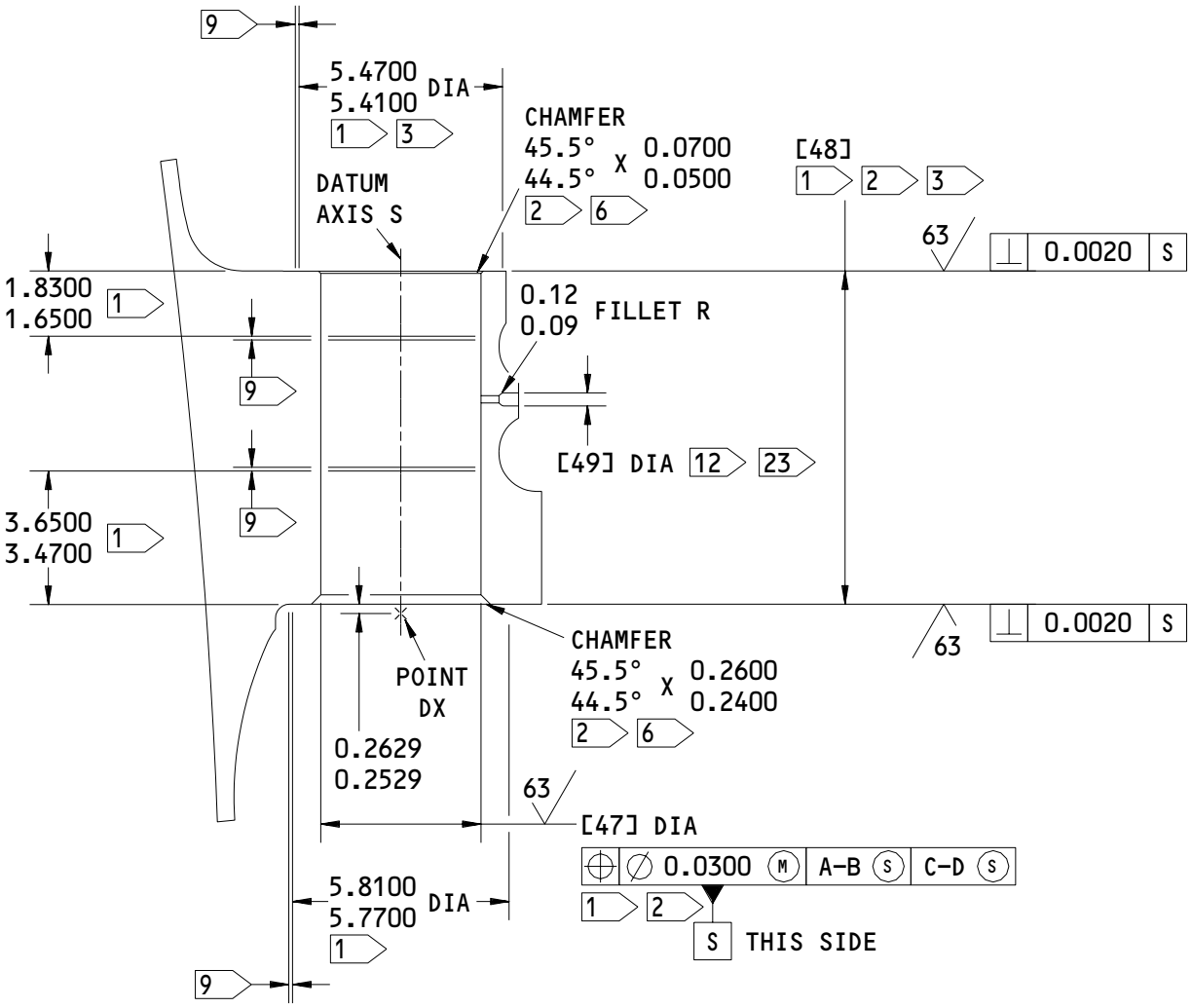
X-X

161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 20)

K96870



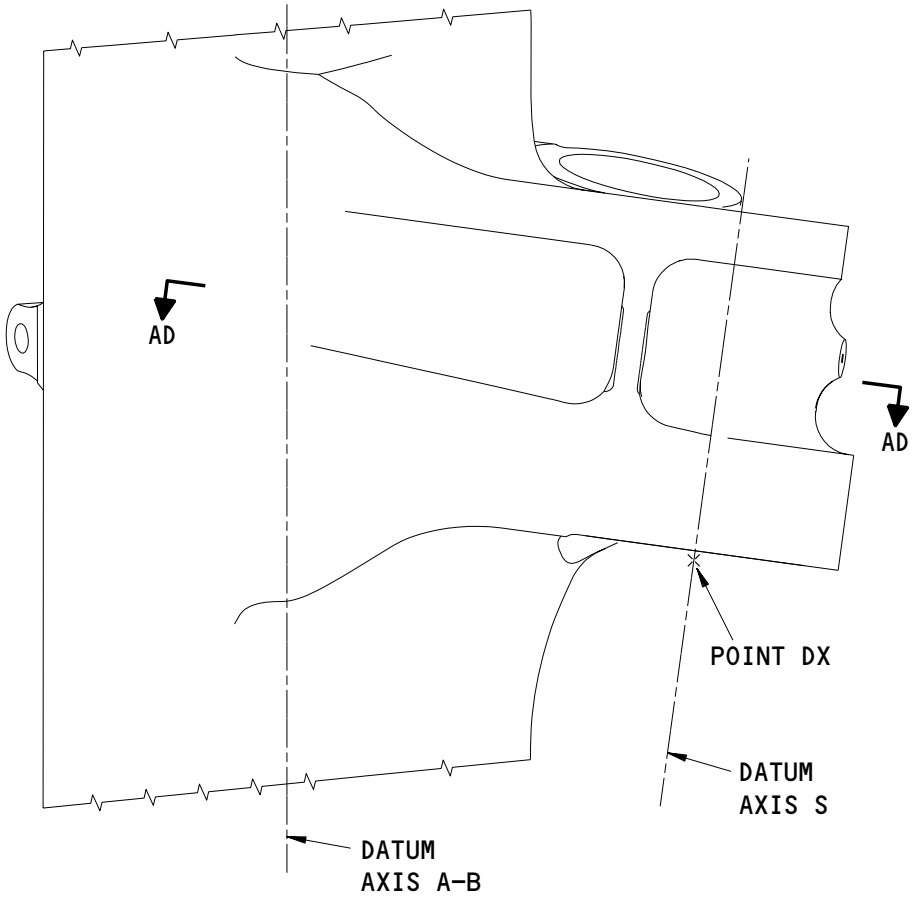
161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 21)



AA–AA

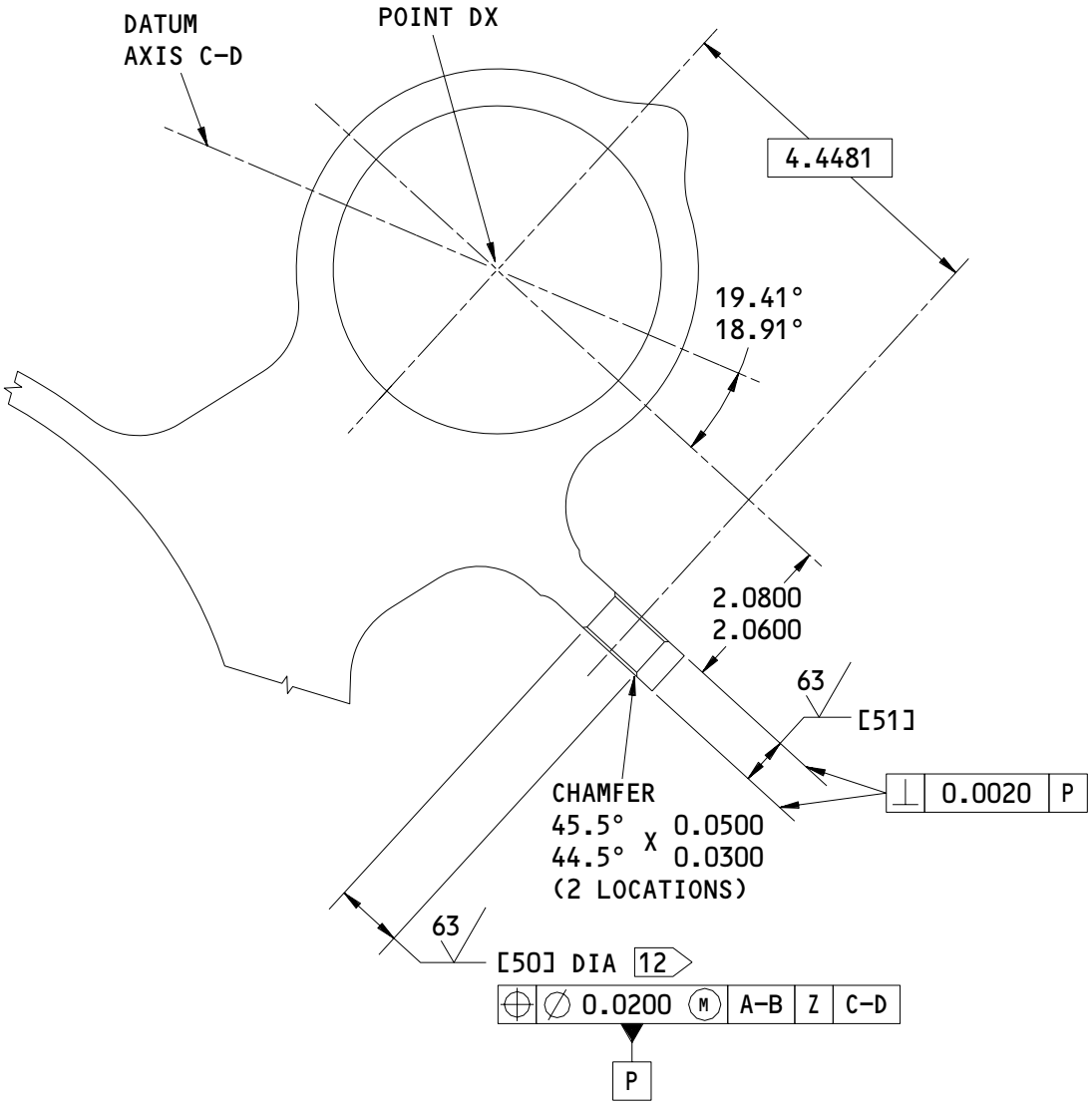
161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 22)

K96878



AB-AB

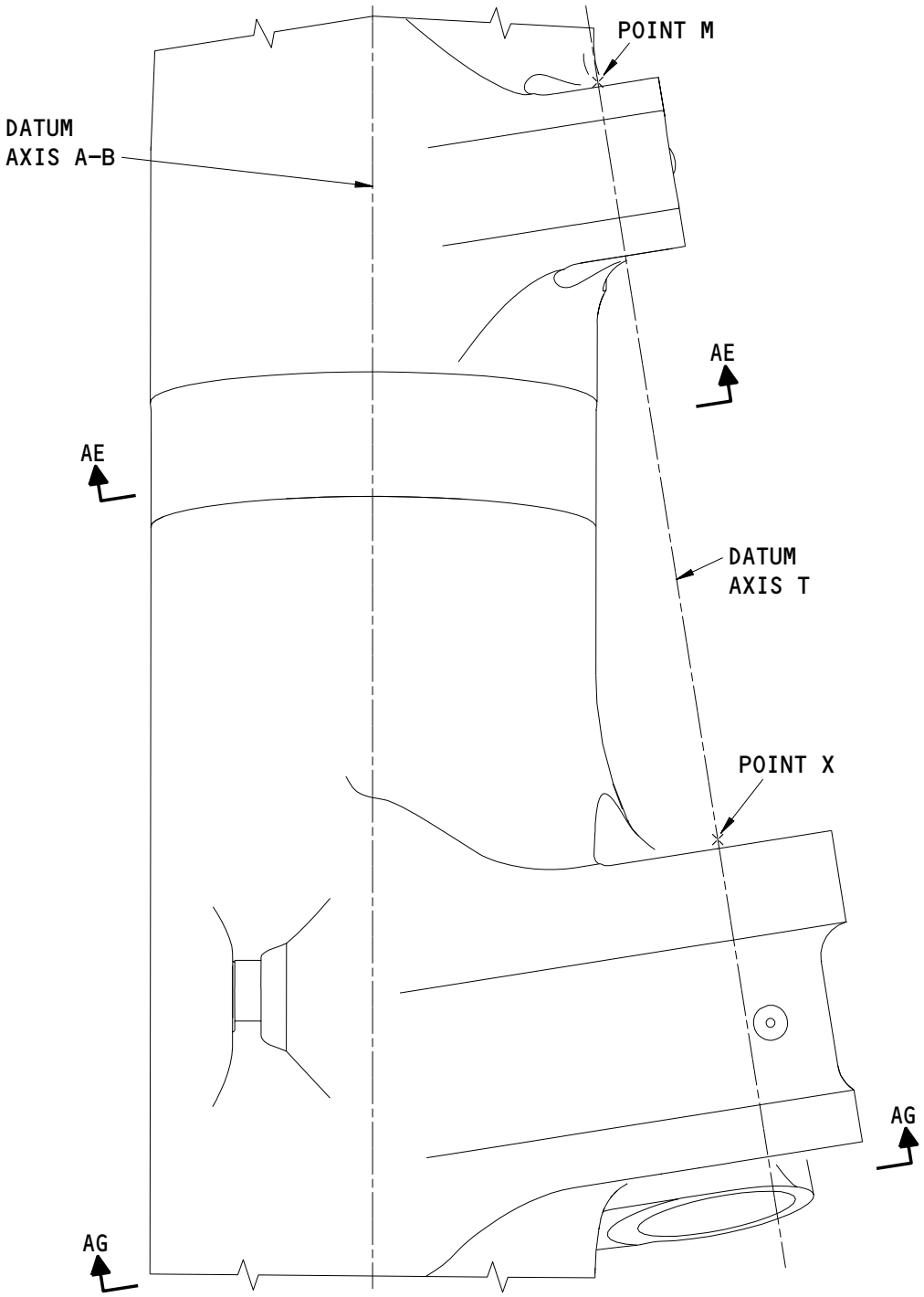
161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 23)



AC–AC

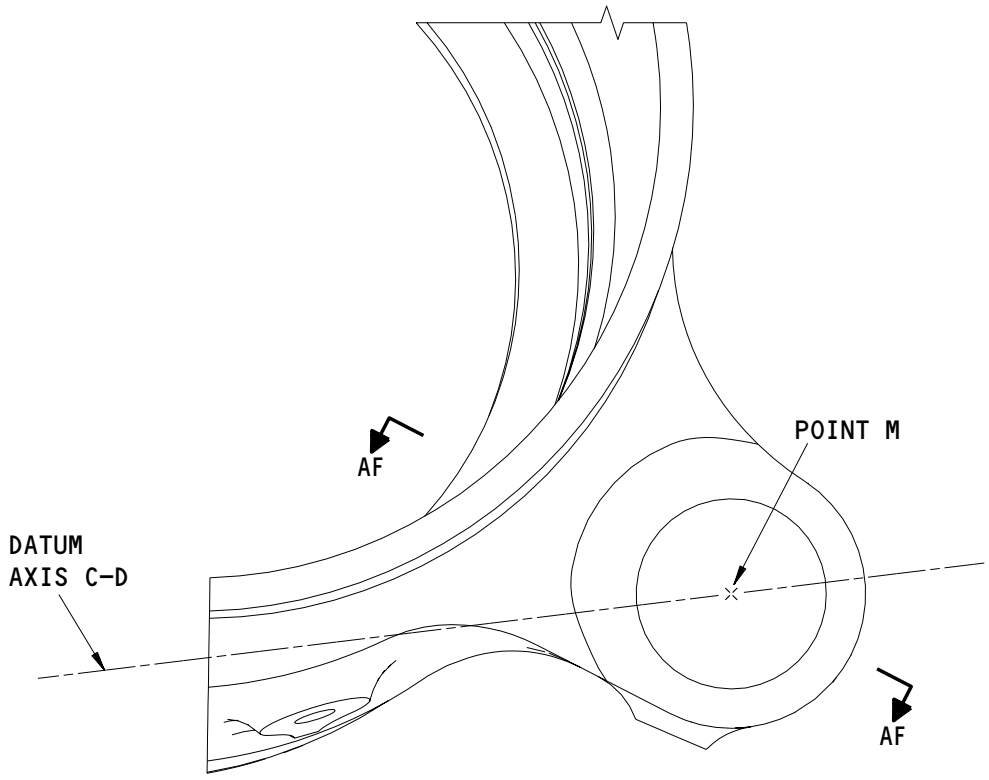
161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 24)

K96881



AD-AD

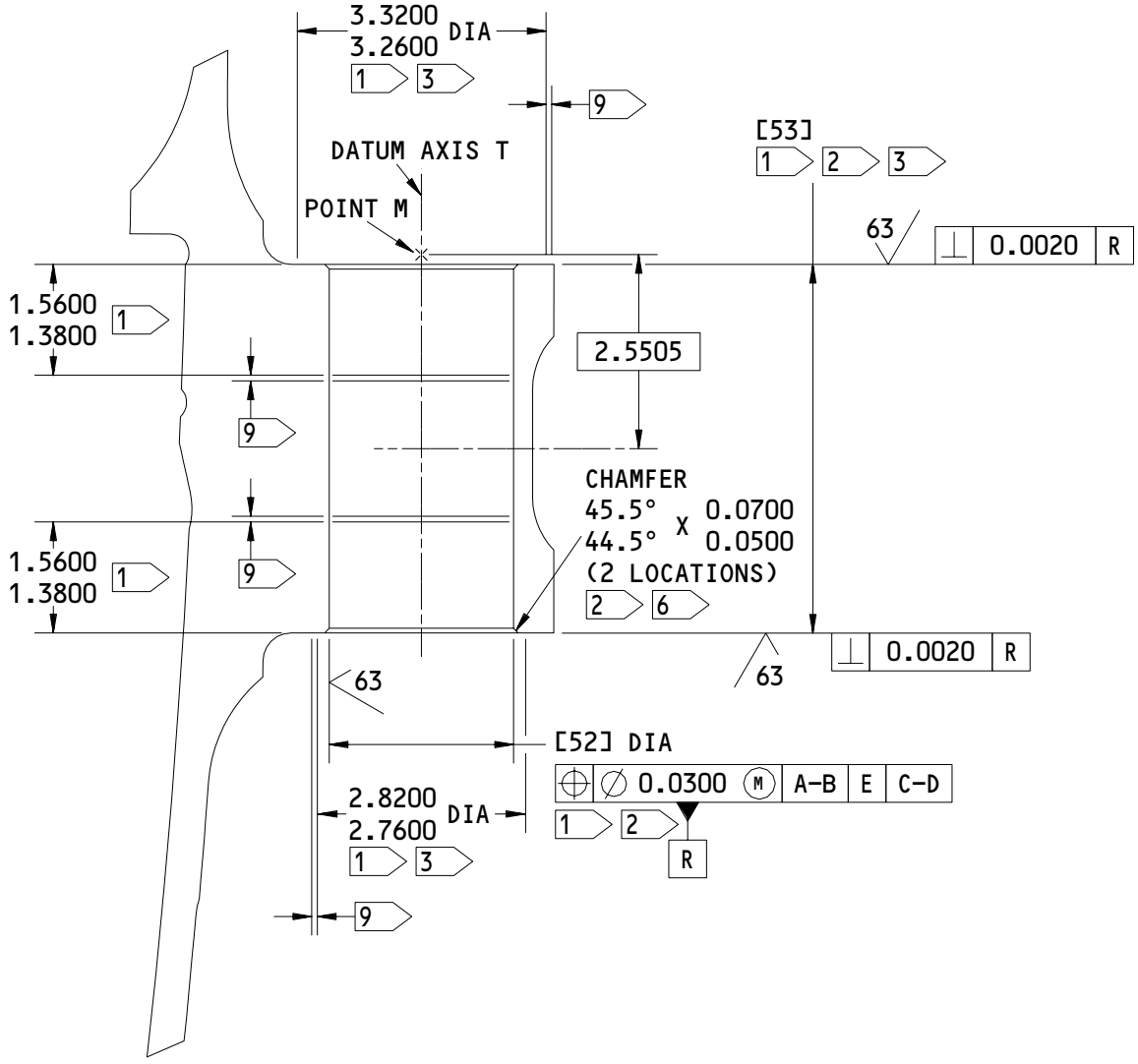
161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 25)



AE-AE

161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 26)

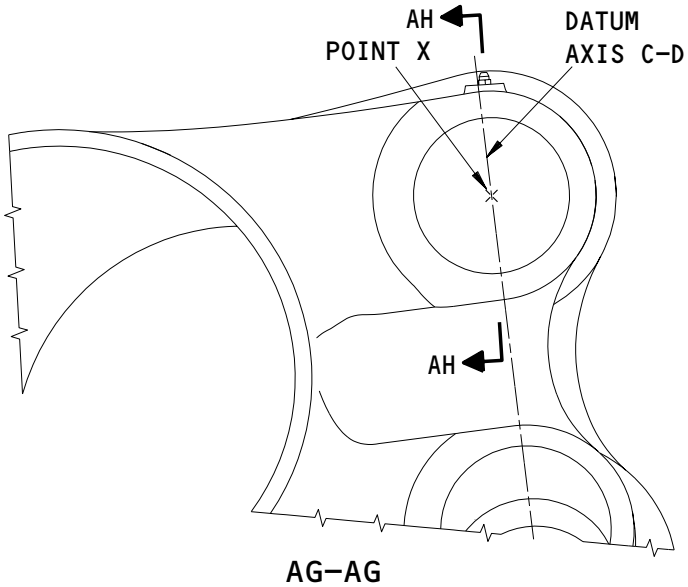
K96887



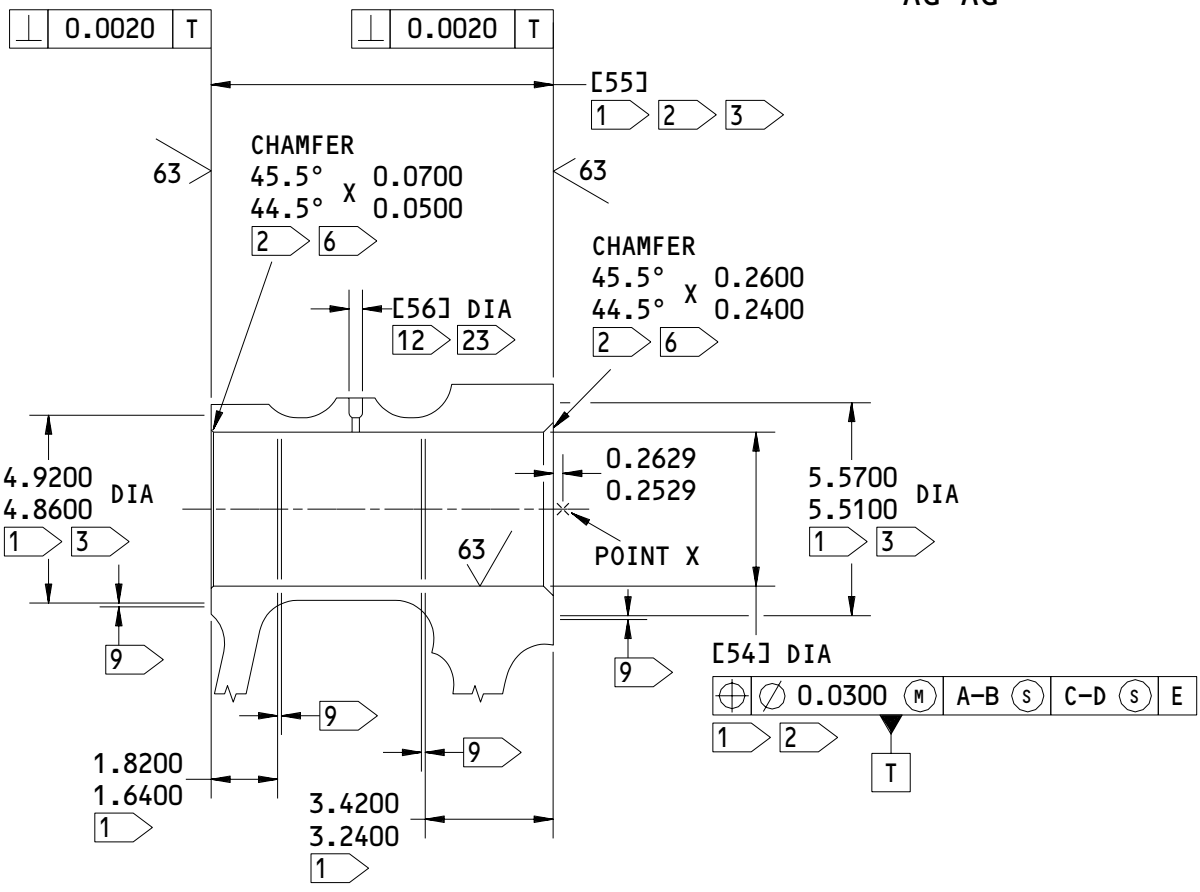
AF–AF

161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 27)

K96889



AG–AG



AH–AH

161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 28)

K96890

REFERENCE NUMBER	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
DESIGN DIMENSION	0.5947 0.5900	0.2600 0.2400	4.5095 4.5075 8	3.0800 3.0600	5.6875 5.6835 8	3.4600 3.4400	3.9340 3.9140	0.6277 0.6270
REPAIR LIMIT	0.6547 11	0.1800 11	---	---	---	---	---	0.6877 11

REFERENCE NUMBER	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]
DESIGN DIMENSION	0.405 0.395	1.9695 1.9680 8	3.0015 3.0000 8	6.0710 6.0490 8	3.1135 3.1065 8	5.5100 5.4900	5.0100 4.9900	10.4600 10.4400
REPAIR LIMIT	0.335 11	2.0295 7 11	3.0670 7 11	5.9860 7 11	3.1765 7 11	---	---	---

REFERENCE NUMBER	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]
DESIGN DIMENSION	11.3200 11.3000	10.0100 9.9900	11.5960 11.5560	11.4780 11.4740 8	11.6440 11.6240	11.4900 11.4840	11.9080 11.9880	11.8500 11.8450
REPAIR LIMIT	---	---	---	---	---	---	---	---

REFERENCE NUMBER	[25]	[26]	[27]	[28]	[29]	[30]	[31]	[32]
DESIGN DIMENSION	12.7100 12.6900	13.1100 13.0900	12.9780 12.9740 8	13.2850 13.2750	1.7325 1.7275	1.7325 1.7275	0.8768 0.8760	0.8768 0.8760
REPAIR LIMIT	---	---	---	---	1.6675 11	1.6675 11	0.9368 11	0.9368 11

REFERENCE NUMBER	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]
DESIGN DIMENSION	0.8768 0.8760	0.8768 0.8760	0.5050 0.4950	0.8800 0.8700	3.2310 3.2210	1.4732 1.4720	1.5732 1.5720	0.3448 0.3443
REPAIR LIMIT	0.9368 11	0.9368 11	0.4350 11	0.8100 11	3.1610 11	1.5332 11	1.6332 11	0.4048 24

161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 29)

M24824

REFERENCE NUMBER	[41]	[42]	[43]	[44]	[45]	[46]	[47]	[48]
DESIGN DIMENSION	0.6227 0.6270	3.7915 3.7900 8	11.4850 11.4780 8	0.2900 0.2700	0.8788 0.8760	0.7550 0.7450	4.2790 4.2775 8	8.9120 8.9050 8
REPAIR LIMIT	0.6877 11	4.0570 7 11	11.4150 7 11	---	0.9388 11	0.6850 11	4.3445 7 11	8.8420 7 11

REFERENCE NUMBER	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]
DESIGN DIMENSION	0.3448 0.3443	0.8778 0.8770	0.6300 0.6200	2.4395 2.4380 8	4.8870 4.8770 8	4.0015 4.0000 8	8.9120 8.9050 8	0.3448 0.3443
REPAIR LIMIT	0.4048 24	0.9378 11	0.5600 11	3.0450 7 11	4.8170 7 11	4.8170 7 11	8.8420 7 11	0.4048 24

1 CHROME PLATE (F-15.34), 0.0015 MINIMUM THICK. WIPE THE PLATING WITH PRIMER (F-19.451). DO NOT GRIND

2 SURFACE FINISH BEFORE AND AFTER PLATING

3 DO NOT APPLY ENAMEL

4 NO FINISH (F-25.01)

5 WIPE THE PLATING ON THE THREADS AND THREAD RELIEF WITH PRIMER (F-19.451)

6 CHROME PLATE (F-15.34), 0.0015-0.0025 THICK. WIPE THE PLATING WITH PRIMER (F-19.451). DO NOT GRIND BEFORE PLATING

7 BEFORE PLATING

8 AFTER PLATING

9 CHROME PLATE RUNOUT AREA

10 NO CHROME PLATE

11 LIMIT FOR INSTALLATION OF OVERSIZE BUSHINGS

12 CADMIUM-TITANIUM PLATE (F-15.32). APPLY BMS 10-79, TYPE 3 PRIMER (F-19.47) TO THE SURFACE SHOWN

13 STENCIL IN 0.50-HIGH LETTERS WITH BMS 10-60 ENAMEL (F-14.9815-101, WHICH REPLACES SRF-14.9815-101)

14 CHROME PLATE (F-15.34), 0.003 MINIMUM THICK. WIPE THE PLATING WITH PRIMER (F-19.451)

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

161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 30)

K96893

16 CADMIUM-TITANIUM PLATE (F-15.01). APPLY BMS 10-79, TYPE 3 PRIMER (F-19.47). APPLY TYPE 56 SEALANT AS A PRIMER (F-19.55), 0.006-0.010 THICK. AFTER THE SEALANT IS TACK-FREE, APPLY BMS 10-79, TYPE 3 PRIMER (F-19.47) AND MIL-C-11796 CLASS 1 CORROSION PREVENTIVE COMPOUND (F-19.03)

17 CADMIUM-TITANIUM PLATE (F-15.01). APPLY BMS 10-79, TYPE 3 PRIMER (F-19.66). APPLY MIL-C-11796 CLASS I CORROSION PREVENTIVE COMPOUND (F-19.03) TO THE INNER DIAMETER AND THE LENGTH SHOWN.

OPTIONAL:
APPLY MIL-C-11796 CLASS I CORROSION PREVENTIVE COMPOUND (F-19.03) IN THE 161T7100-XX COMPONENT ASSEMBLY AFTER YOU INSTALL THE 161T7164- SERIES ORIFICE SUPPORT TUBE (CMM 32-11-36). BE SURE TO APPLY MIL-C-11796 CLASS 1 CORROSION PREVENTIVE COMPOUND (F-19.03) AT THE OUTER CYLINDER ASSEMBLY (305, 310) LEVEL FOR SPARE PARTS

18 SURFACE FINISH AFTER SHOT PEEN

19 NICKEL PLATE (F-15.33), 0.0015 MINIMUM THICK

20 NICKEL PLATE RUNOUT AREA

21 CADMIUM-TITANIUM PLATE (F-15.32). WIPE THE PLATING WITH PRIMER (F-19.451)

22 APPLY MIL-C-11796 CLASS 1 CORROSION PREVENTIVE COMPOUND (F-19.03)

23 DEPTH OF CLOSE TOLERANCE DIAMETER IS 0.3500-0.3600. MAKE A SMOOTH TRANSITION

24 RESTORATION TO DESIGN DIMENSIONS NOT REQUIRED

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

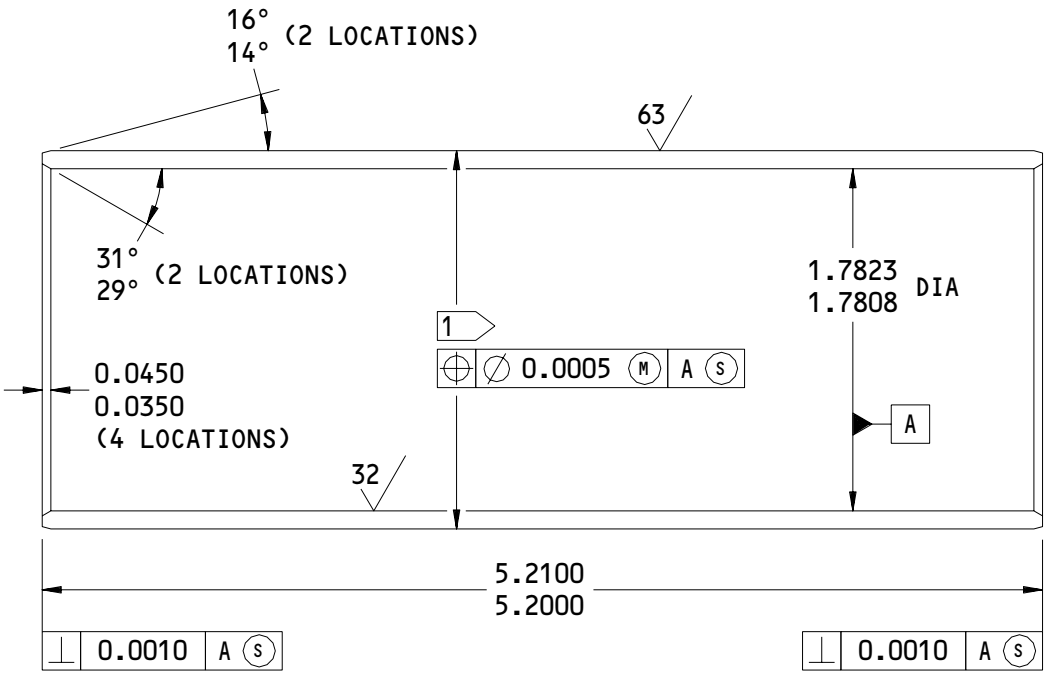
BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 31)

K96895



HOLE LOCATION [10] FIG. 601
REPLACES BUSHING (315) 161T2874-65

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

MATERIAL: CU-BE (AMS 4535 OR AMS 4535)

FINISH: NO FINISH

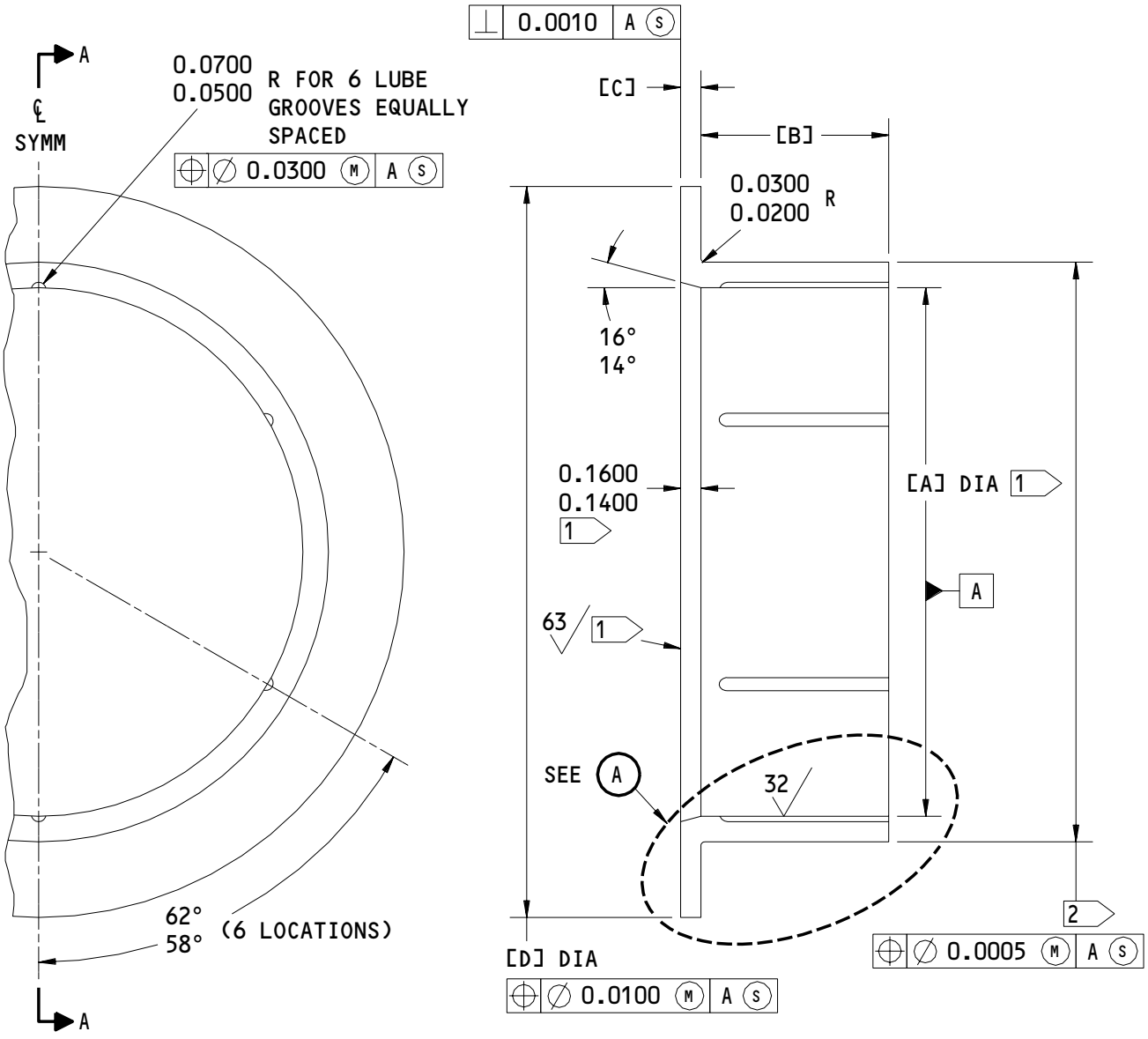
ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

1 THE OUTSIDE DIAMETER OF THE BUSHING IS EQUAL TO THE INSIDE DIAMETER OF THE LUG HOLE PLUS THE INTERFERENCE OF 0.0009-0.0038

Oversize Bushing Details
Figure 602

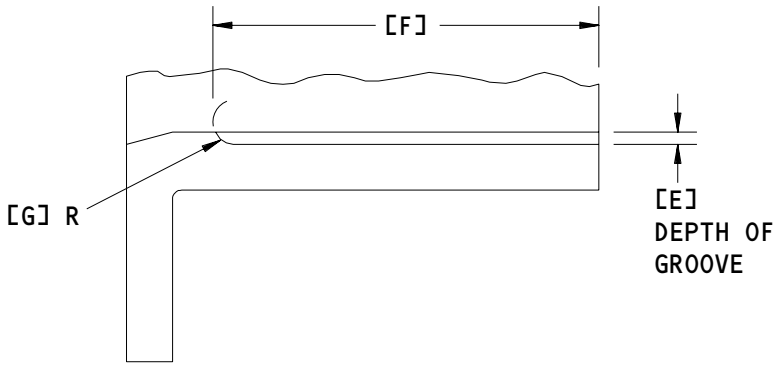
L04151



A–A

Oversize Bushing Details
Figure 603 (Sheet 1)

L04152



(6 LOCATIONS)

A

HOLE LOCATION (FIG. 601)	REPLACES BUSHING ITEM NO.	[A]	[B] 5	[C] 4	[D]	[E]	[F]	[G]	INTER-FERENCE
[11]	320 161T2874-66	2.7526 2.7511	0.6640 0.6630	0.1260 0.1250	3.6000 3.5800	0.0300 0.0200	0.5400 0.5200	0.0700 0.0500	0.0042 0.0012
[47]	410 161T2874-45	3.9053 3.9038	1.3880 1.3860	0.1510 0.1500	5.4100 5.3900	0.0400 0.0300	3	3	0.0046 0.0016
[54]	430 161T2874-46	3.6278 3.6263	1.3260 1.3240	0.2510 0.2500	4.8600 4.8400	0.0400 0.0300	1.2600 1.2400	0.0700 0.0500	0.0045 0.0015

1 NO FINISH (F-25.01) ON THESE SURFACES

2 THE OUTSIDE DIAMETER OF THE BUSHING IS EQUAL TO THE INSIDE DIAMETER OF THE LUG HOLE PLUS THE INTERFERENCE

3 NOT APPLICABLE, GROOVE EXTENDS THE FULL LENGTH OF THE INSIDE DIAMETER

4 PLUS AMOUNT REMOVED FROM LUG FACE

5 MINUS AMOUNT REMOVED FROM LUG FACE

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

MATERIAL: AL-NI-BRONZE (AMS 4640 OR AMS 4880)

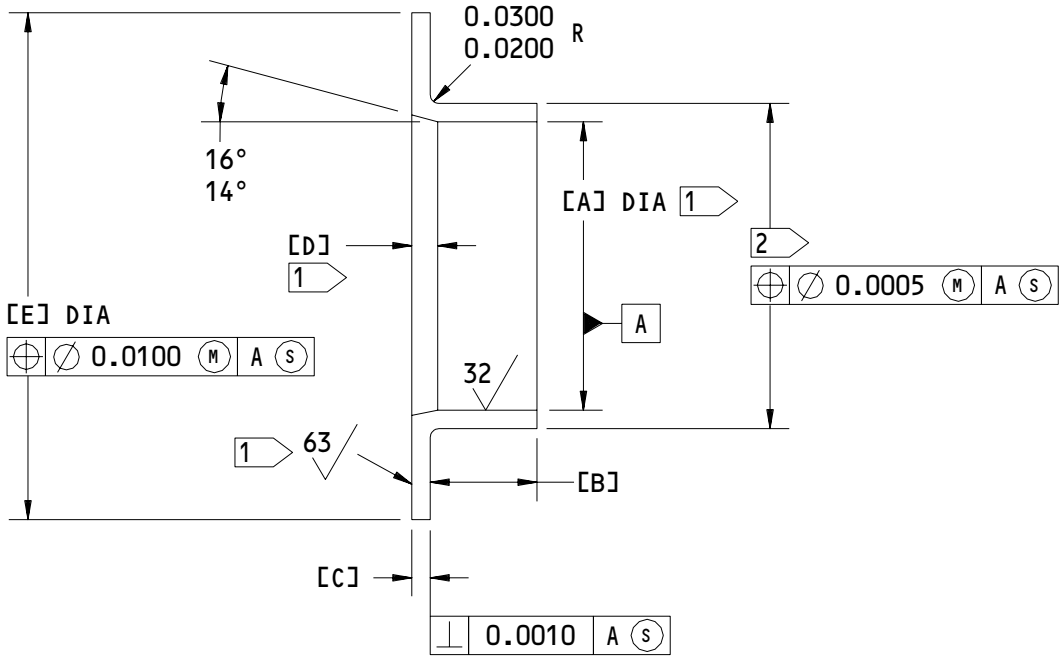
FINISH: NO FINISH

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

Oversize Bushing Details
Figure 603 (Sheet 2)

L04155



HOLE LOCATION (FIG. 601)	REPLACES BUSHING ITEM NO.	[A]	[B] 4	[C] 3	[D]	[E]	INTER-FERENCE	FINISH
[1]	325 5 161T2874-55	0.3429 0.3423	0.2300 0.2100	0.0640 0.0630	0.1000 0.0800	0.8100 0.7900	0.0020 0.0006	F-15.36 1
[1]	330 161T2874-56	0.4690 0.4684	0.2100 0.1900	0.0640 0.0630	0.1000 0.0800	0.8100 0.7900	0.0101 0.0033	F-15.36 1
[8]	335 161T2874-54	0.5021 0.5014	0.3700 0.3500	0.0610 0.0600	0.1000 0.0800	0.8370 0.8170	0.0017 0.0010	F-15.36 1
[8]	340 5 161T2874-53	0.3759 0.3753	0.3800 0.3600	0.0610 0.0600	0.1000 0.0800	0.8370 0.8170	0.0021 0.0005	F-15.36 1
[33] [34]	345 161T2874-64	0.7513 0.7505	0.6250 0.6050	0.0640 0.0630	0.1000 0.0800	1.0860 1.0660	0.0021 0.0006	F-15.36 1

Oversize Bushing Details
Figure 604 (Sheet 1)

L04148

HOLE LOCATION (FIG. 601)	REPLACES BUSHING ITEM NO.	[A]	[B] 4	[C] 3	[D]	[E]	INTER-FERENCE	FINISH
[31],[32]	350 161T2874-63	0.7513 0.7505	0.4975 0.4775	0.0640 0.0630	0.1000 0.0800	1.2100 1.1900	0.0021 0.0006	F-15.36 1
[39]	355 5 161T2874-62	1.3218 1.3206	0.8100 0.7900	0.0743 0.0733	0.0800 0.0600	1.9600 1.9400	0.0033 0.0002	F-15.36 1
[39]	360 161T2874-61	1.4479 1.4467	0.8500 0.8300	0.0950 0.0940	0.1300 0.1100	1.9600 1.9400	0.0032 0.0008	F-15.36 1
[38]	365 161T2874-59	1.3478 1.3466	0.8500 0.8300	0.0950 0.0940	0.1300 0.1100	1.8100 1.7900	0.0031 0.0007	F-15.36 1
[38]	370 5 161T2874-60	1.2217 1.2206	0.8100 0.7900	0.0743 0.0733	0.0800 0.0600	1.8100 1.7900	0.0033 0.0006	F-15.36 1
[41]	375 161T2874-52	0.5021 0.5014	0.4600 0.4400	0.0610 0.0600	0.1000 0.0800	1.3700 1.3500	0.0017 0.0004	F-15.36 1
[41]	380 5 161T2874-51	0.3759 0.3753	0.4800 0.4600	0.0610 0.0600	0.1000 0.0800	1.3700 1.3500	0.0021 0.0005	F-15.36 1
[52]	385 161T2874-57	2.2524 2.2509	1.1300 1.1100	0.1310 0.1300	0.1300 0.1100	3.2600 3.2400	0.0040 0.0010	NO FINISH
[52]	390 161T2874-58	2.2524 2.2509	1.1300 1.1100	0.1310 0.1300	0.1300 0.1100	2.7600 2.7400	0.0040 0.0010	NO FINISH
[50]	415 161T2874-48	0.7523 0.7514	0.5700 0.5500	0.0640 0.0630	0.1000 0.0800	1.5100 1.4900	0.0021 0.0006	F-15.36 1
[45]	420 5 161T2874-49	0.6272 0.6264	0.7000 0.6800	0.0610 0.0600	0.1000 0.0800	1.5100 1.4900	0.0024 0.0005	F-15.36 1
[45]	425 161T2874-50	0.7533 0.7525	0.7000 0.6800	0.0610 0.0600	0.1000 0.0800	1.5100 1.4900	0.0021 0.0006	F-15.36 1

1 NO FINISH (F-25.01) ON THESE SURFACES

2 THE OUTSIDE DIAMETER OF THE BUSHING (BEFORE PLATING, IF APPLICABLE) IS EQUAL TO THE INSIDE DIAMETER OF THE LUG HOLE PLUS THE INTERFERENCE

3 PLUS AMOUNT REMOVED FROM LUG FACE

4 MINUS AMOUNT REMOVED FROM LUG FACE

5 OVERSIZE BUSHING NOT NECESSARY UNLESS MATERIAL IS REMOVED FROM MATING LUG FACE

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

MATERIAL: AL-NI-BRONZE (AMS 4640 OR AMS 4880)

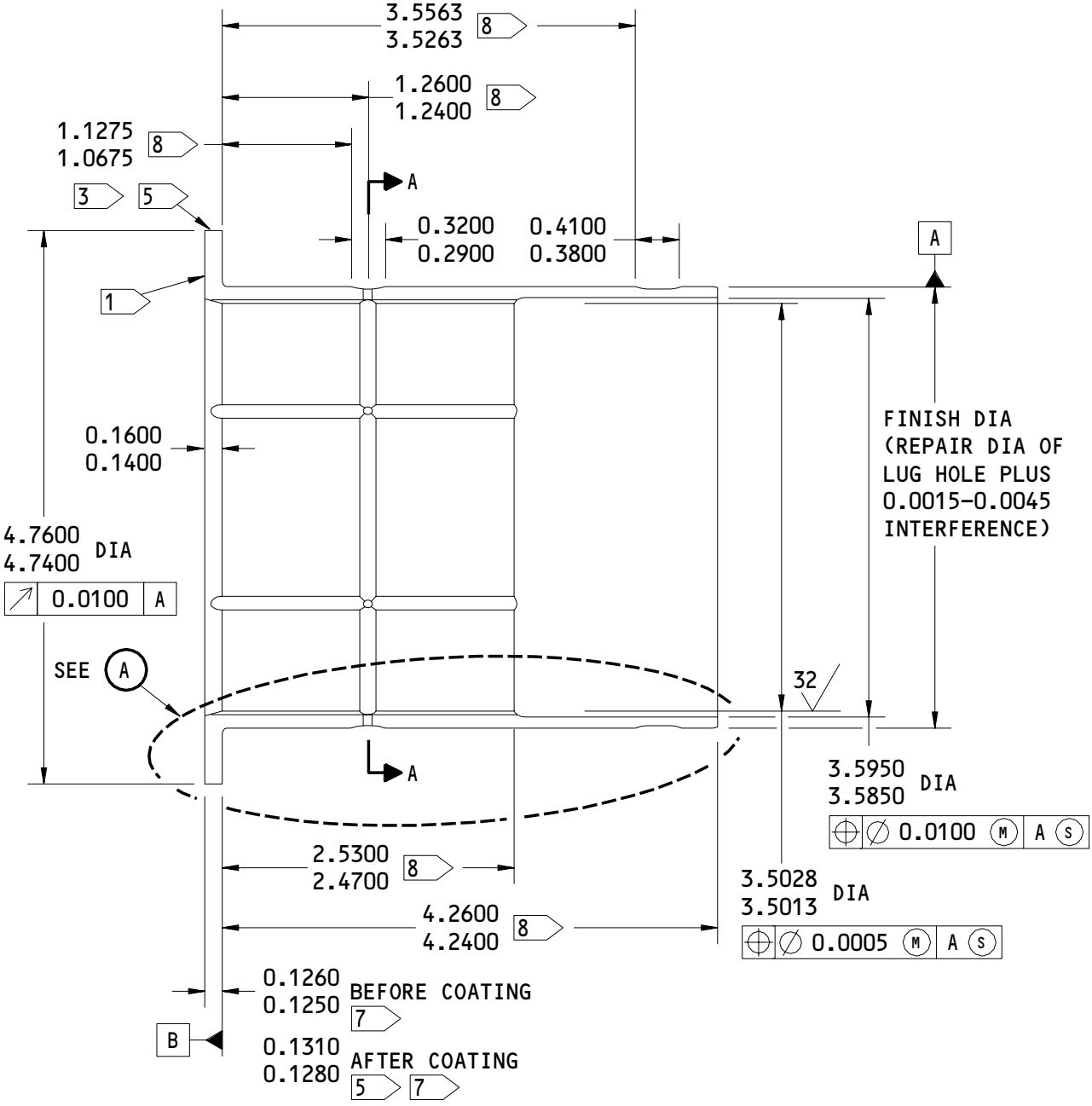
FINISH: AS NOTED

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

Oversize Bushing Details
Figure 604 (Sheet 2)

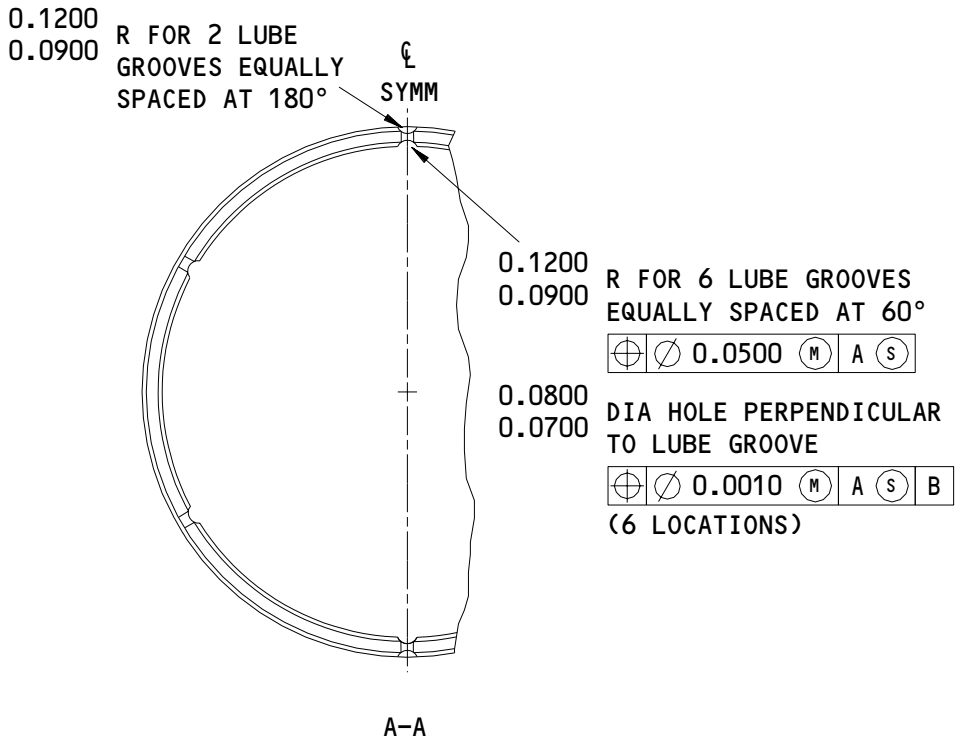
L04149



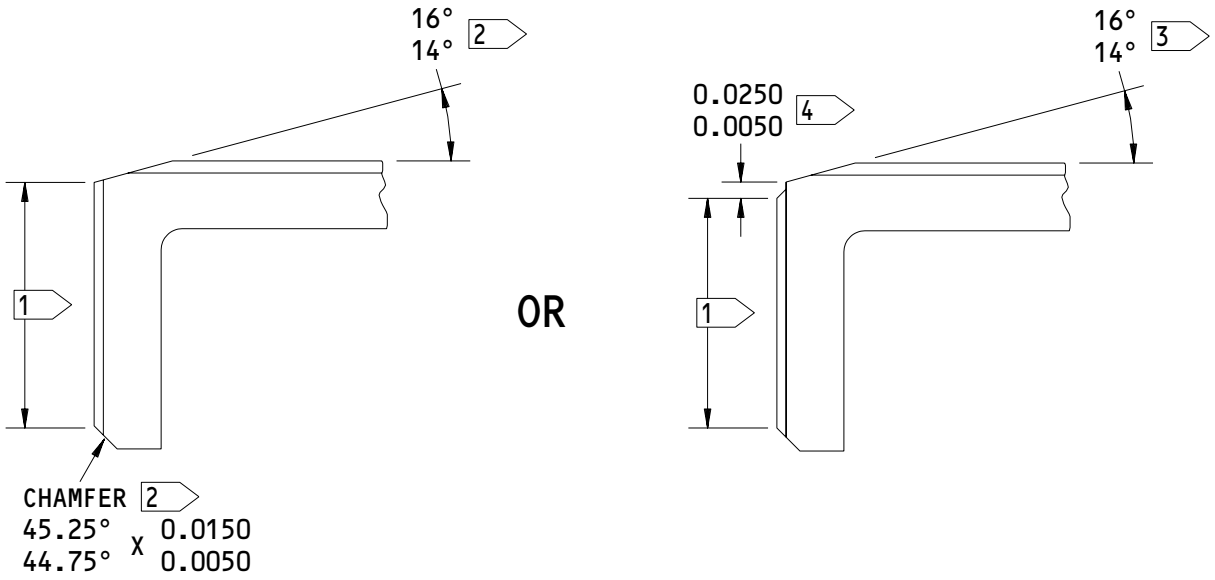
HOLE LOCATION [42] FIG. 601
REPLACES BUSHING (435,435A) 161T2875-7,-10

Oversize Bushing Details
Figure 605 (Sheet 1)

M26123



Oversize Bushing Details
Figure 605 (Sheet 2)



161T2875-7
ALTERNATIVE COATING RUNOUT DETAILS

B

1 APPLY BMS 10-67 TYPE 1 THERMAL SPRAY (15% MINIMUM COBALT BY WEIGHT), 0.003 MINIMUM THICK

2 MAKE THIS CHAMFER AFTER COATING

3 NO COATING OVERSPRAY

4 COATING RUNOUT AREA

5 161T2875-7

6 161T2875-10

7 PLUS AMOUNT REMOVED FROM LUG FACE

8 MINUS AMOUNT REMOVED FROM LUG FACE

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

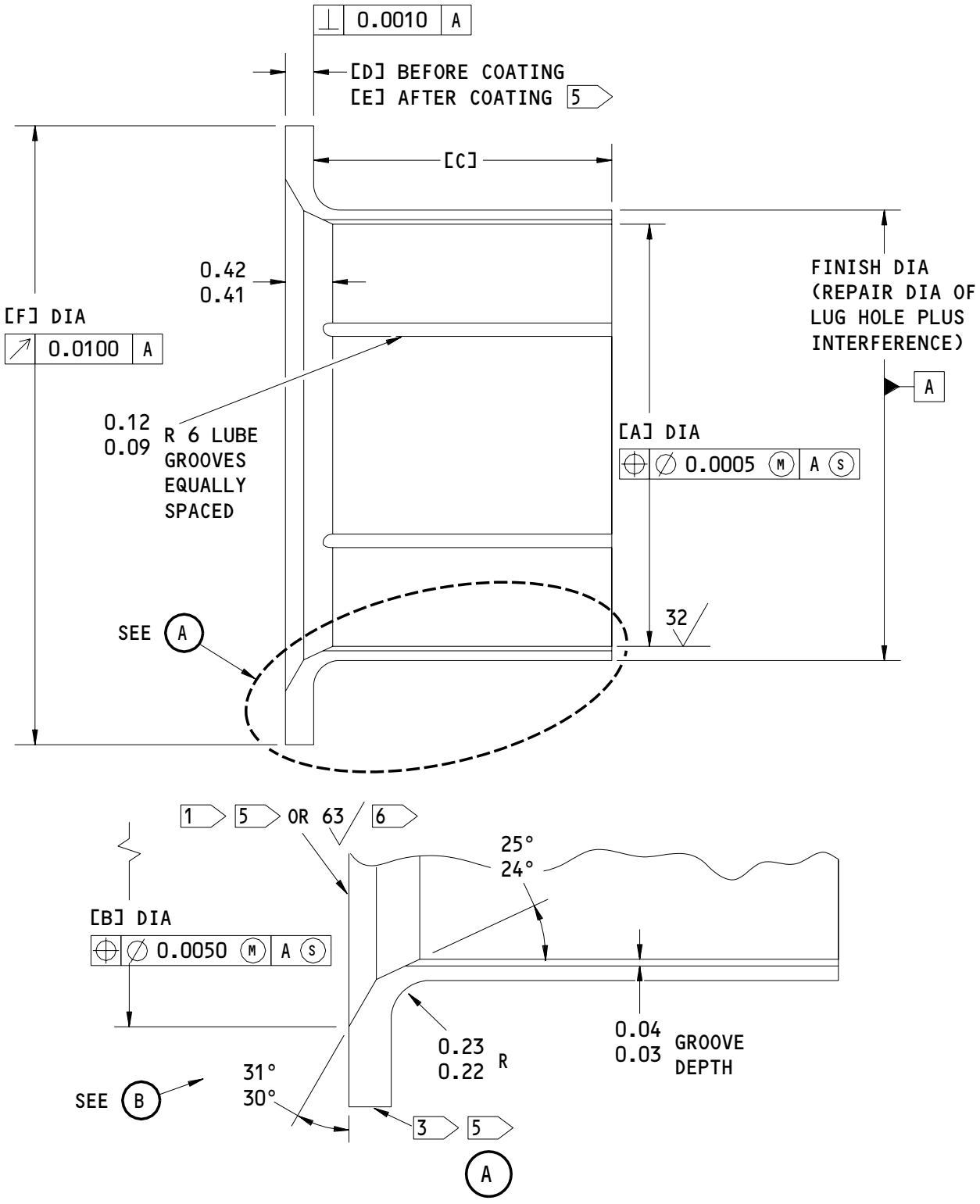
MATERIAL: AL-NI-BRONZE (AMS 4640 OR 4880))

FINISH: NO FINISH UNLESS SHOWN BY 1

ITEM NUMBERS REFER TO IPL FIG. 1

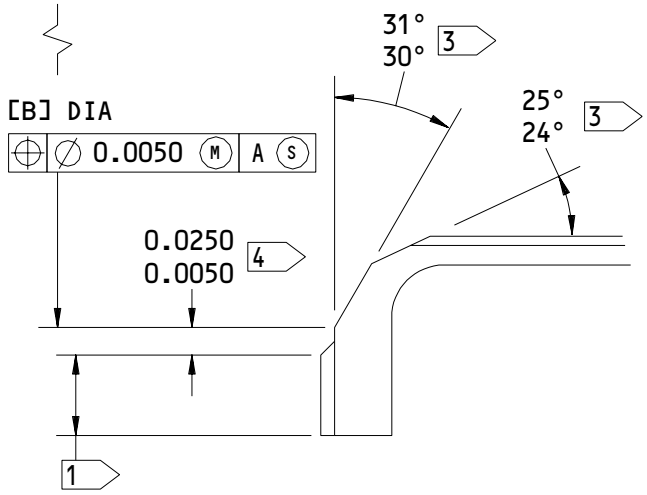
ALL DIMENSIONS ARE IN INCHES

Oversize Bushing Details
Figure 605 (Sheet 3)

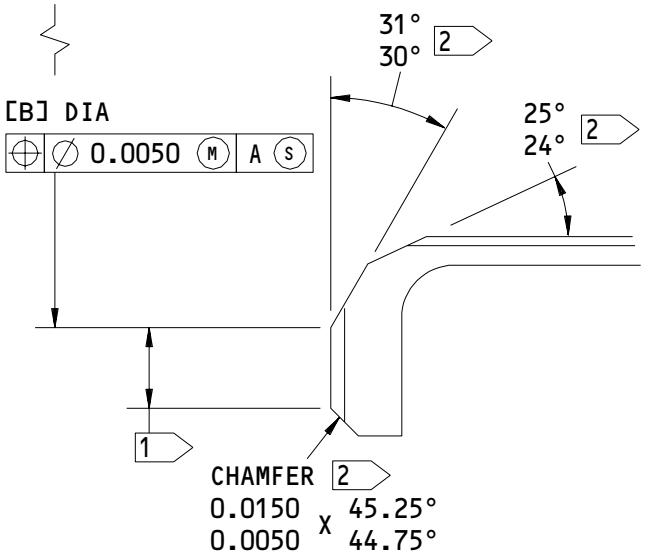


Oversize Bushing Details
Figure 606 (Sheet 1)

M26518



OR



ALTERNATIVE COATING RUNOUT DETAILS

(B)

Oversize Bushing Details
Figure 606 (Sheet 2)

HOLE LOCATION (FIG. 601)	REPLACES BUSHING ITEM NO.	[A]	[B]	[C] 8	[D] 7	[E] 7	[F]	INTER-FERENCE
[47]	395 161T2875-8	4.0305 4.0290	4.8430 4.8230	3.0600 3.0400	0.2510 0.2500	0.2560 0.2530	5.7600 5.7400	0.0046 0.0016
[47]	395A 161T2875-11	4.0305 4.0290	4.8430 4.8230	3.0600 3.0400	0.2560 0.2530	---	5.7600 5.7400	0.0046 0.0016
[54]	400 161T2875-9	3.7529 3.7514	4.5800 4.5600	2.6600 2.6400	0.2510 0.2500	0.2560 0.2530	5.5100 5.4900	0.0045 0.0015
[54]	400A 161T2875-12	3.7529 3.7514	4.5800 4.5600	2.6600 2.6400	0.2560 0.2530	---	5.5100 5.4900	0.0045 0.0015

1 APPLY BMS 10-67 TYPE 1 THERMAL SPRAY (15% MINIMUM COBALT BY WEIGHT), 0.003 MINIMUM THICK

2 MAKE THESE CHAMFERS AFTER COATING

3 NO COATING OVERSPRAY

4 COATING RUNOUT AREA

5 161T2875-8,-9

6 161T2875-11,-12

7 PLUS AMOUNT REMOVED FROM LUG FACE

8 MINUS AMOUNT REMOVED FROM LUG FACE

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

MATERIAL: AL-NI-BRONZE (AMS 4640 OR 4880))

FINISH: NO FINISH UNLESS SHOWN BY 1

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

Oversize Bushing Details
Figure 606 (Sheet 3)

M25981

INNER CYLINDER ASSEMBLY - REPAIR 3-1

161T7120-1, -3

1. General

A. This repair gives the data that is necessary to replace the bushings and the lubrication fittings of the inner cylinder assembly (95).

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

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 Corrosion Preventive Compound -- BMS 3-27 (SOPM 20-60-02)

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

B. References

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

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

(3) SOPM 20-60-03, Lubricants

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

C. Procedure (Fig. 601)

(1) Replace the bushings (100 thru 150):

WARNING: BMS 3-27 COMPOUND CONTAINS ASBESTOS, TOLUENE, XYLENE, STRONTIUM CHROMATE AND BARIUM CHROMATE. REFER TO APPLICABLE SAFETY STANDARDS FOR APPROVED PRECAUTIONS.

CAUTION: BMS 3-27 COMPOUND IS ONLY USED IN STATIC JOINTS WHERE GREASE CANNOT BE APPLIED. BMS 3-27 COMPOUND IN DYNAMI JOINTS WILL NOT LET THEM MOVE FREELY.

(a) Remove the old bushings.

(b) If you find defects on the cylinder surfaces, refer to REPAIR 3-2 for repair instructions.

(c) Install replacement bushings with BMS 3-27 corrosion preventive compound by the shrink-fit procedure (SOPM 20-50-03).

(d) If necessary, machine the bushings to design dimensions and finish.

(2) Replace the lubrication fittings:

(a) Remove the old lube fittings.

(b) Install replacement lube fittings with BMS 3-33 grease.

(c) Tighten the lube fittings to 25-30 pound-inches.

3. Inner Cylinder Assembly Refinish

A. Consumable Materials

NOTE: Equivalent material can be used.

(1) C0032 Enamel -- BMS 10-60, Type 1 (SOPM 20-60-04)

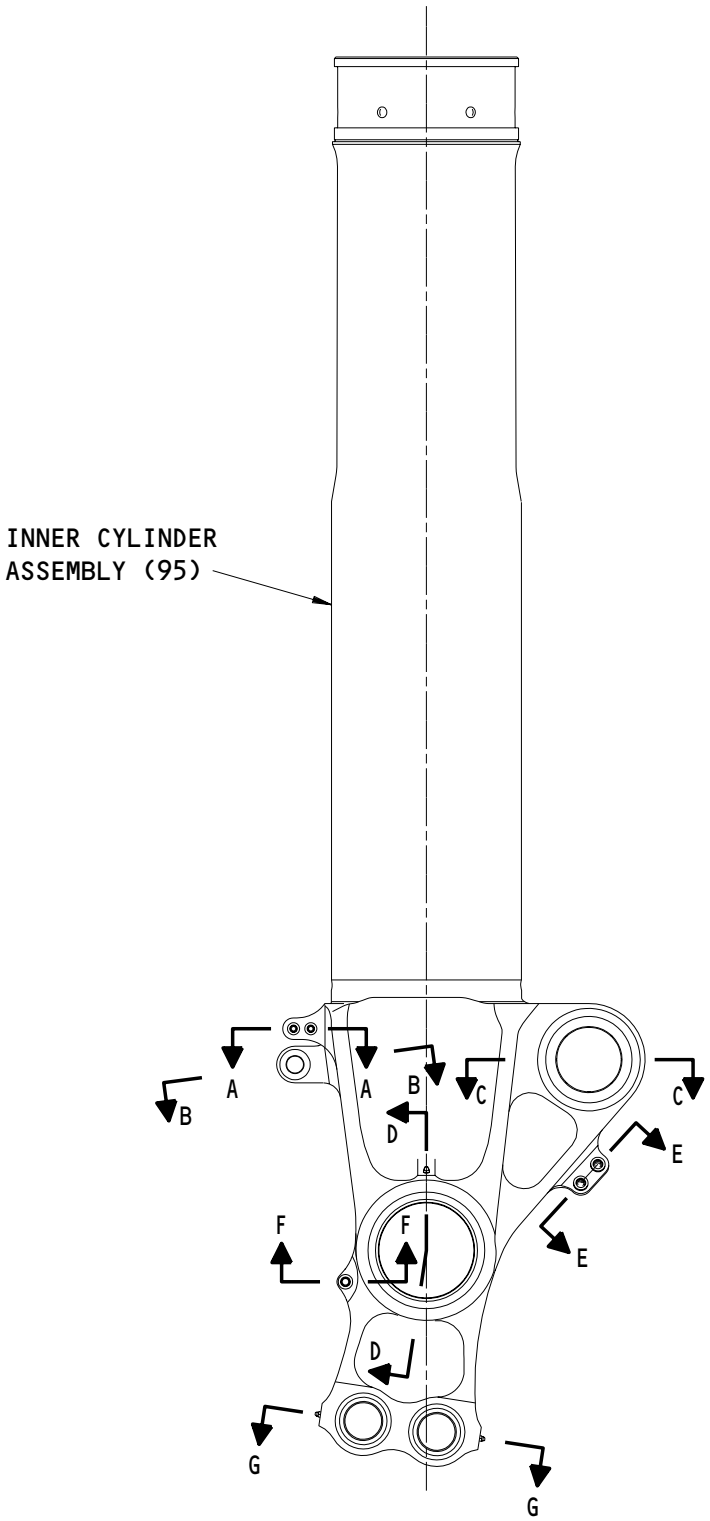
B. References

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

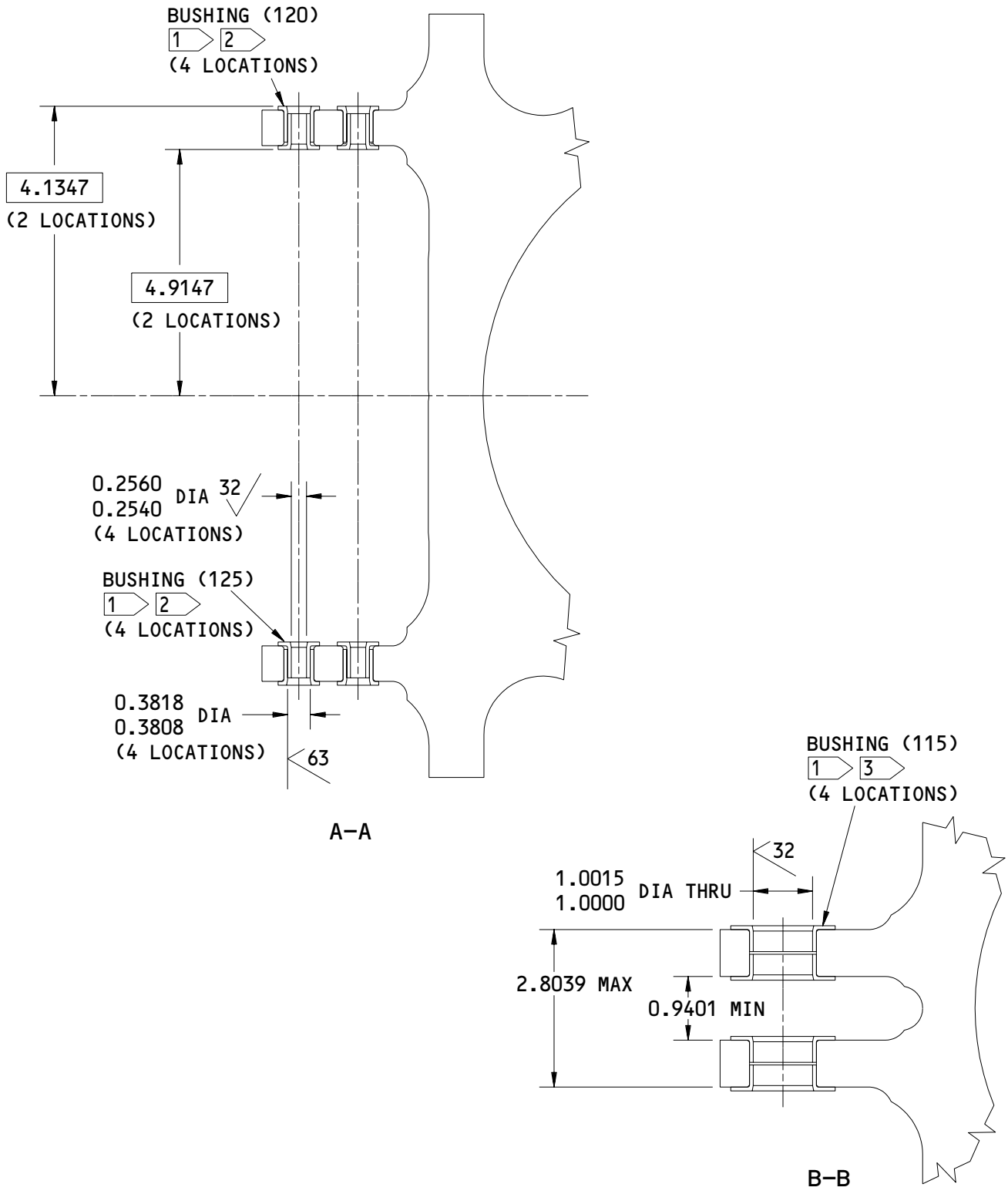
(2) SOPM 20-60-02, Finishing Materials

C. Procedure

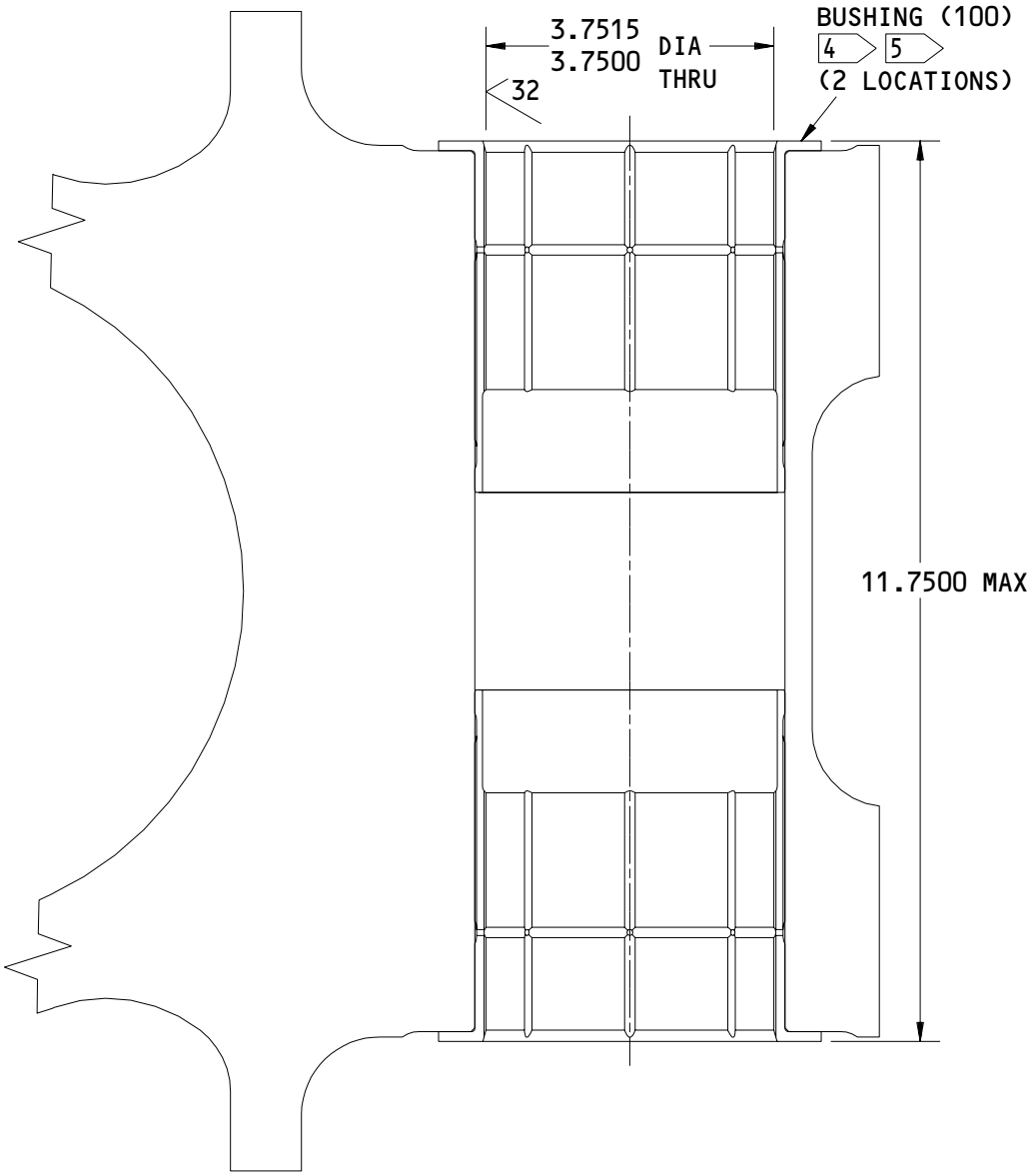
(1) Apply BMS 10-60 color 707 gray gloss enamel (F-20.56-707) to all the outer surfaces of the inner cylinder assembly (95) but do not apply enamel on the bushings or the lubrication fittings.



161T7120-1,-3
Inner Cylinder Assembly Bushing Replacement
Figure 601 (Sheet 1)

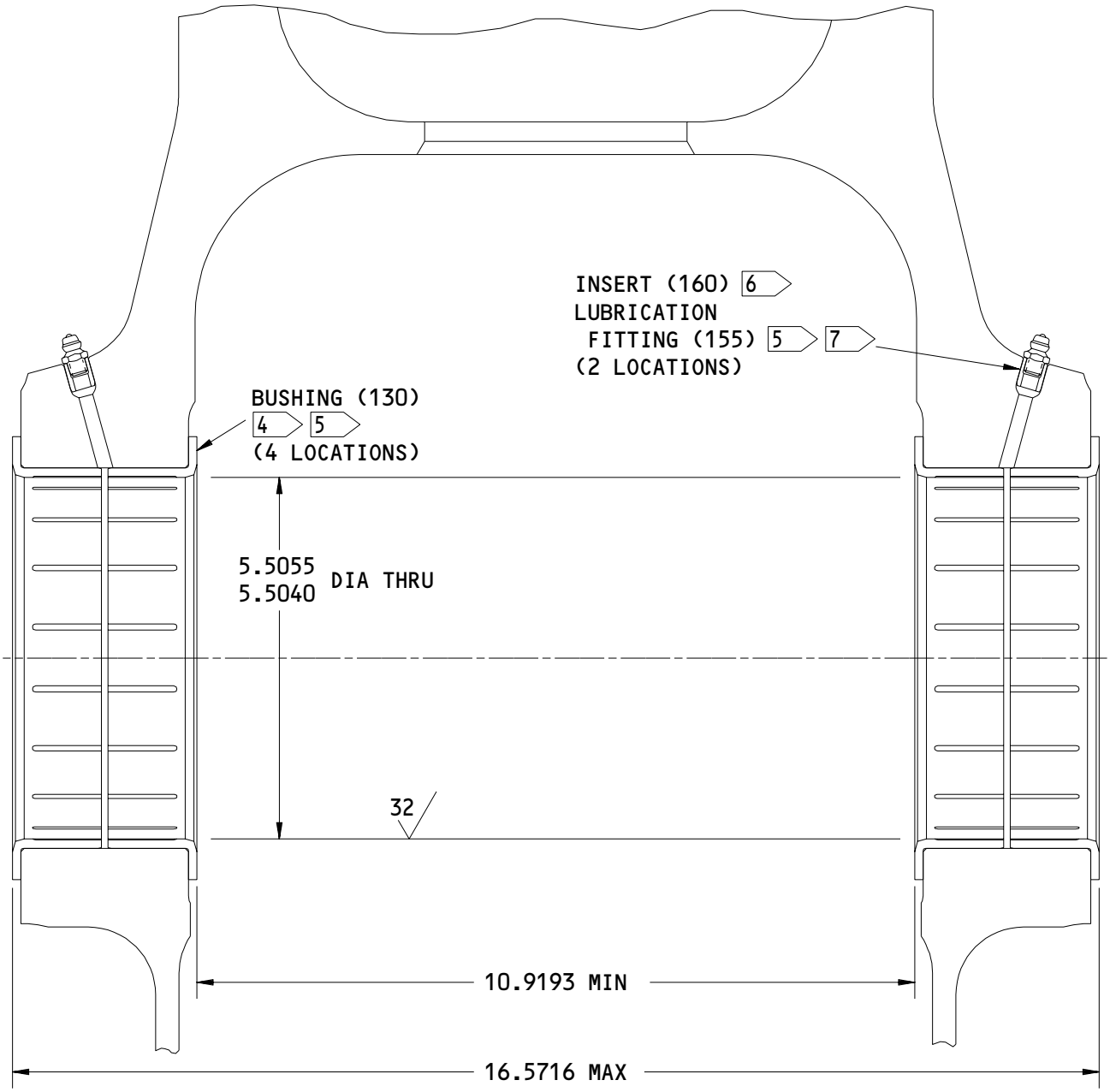


161T7120-1,-3
Inner Cylinder Assembly Bushing Replacement
Figure 601 (Sheet 2)



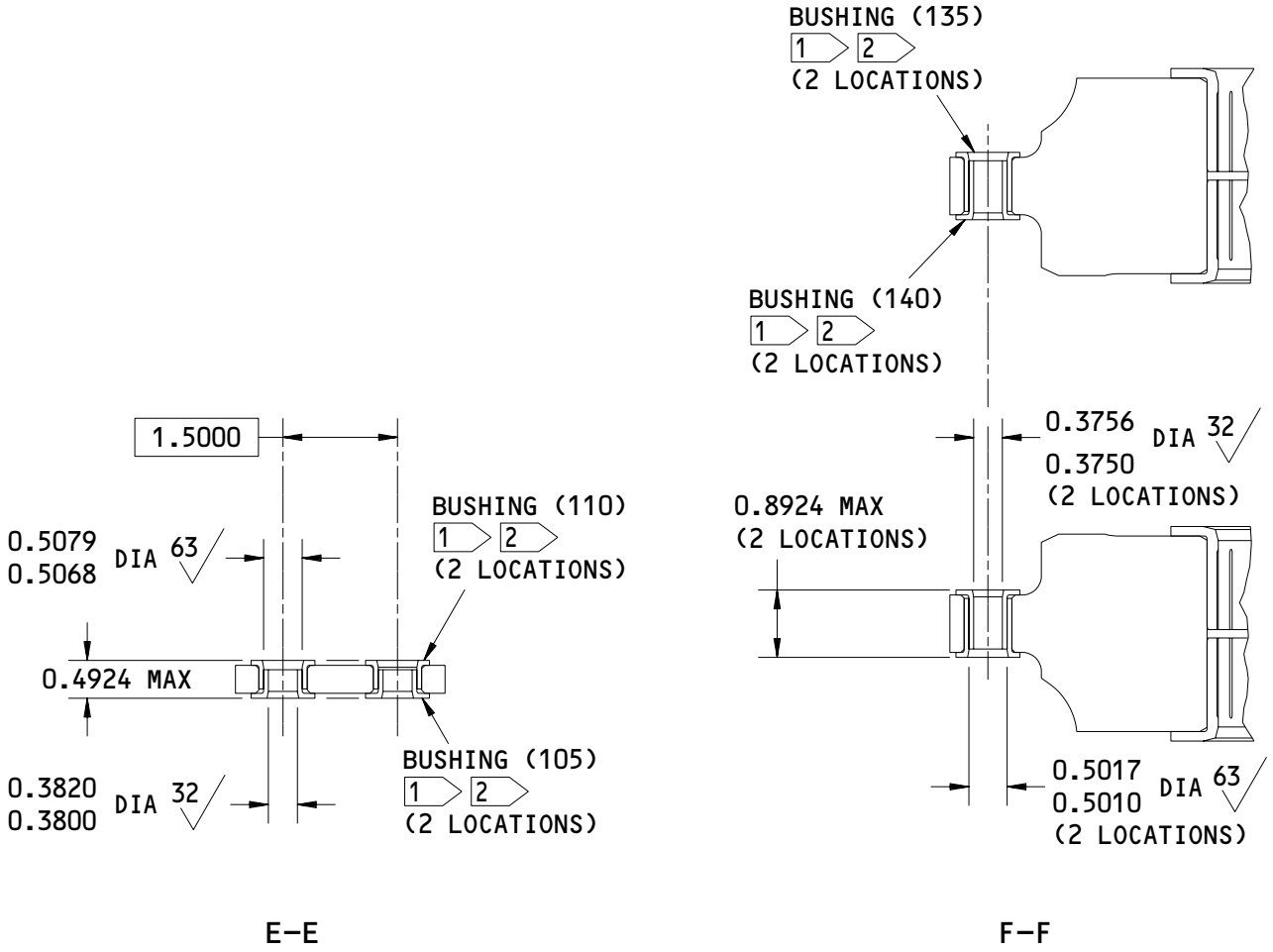
C–C

161T7120-1,-3
Inner Cylinder Assembly Bushing Replacement
Figure 601 (Sheet 3)



D–D

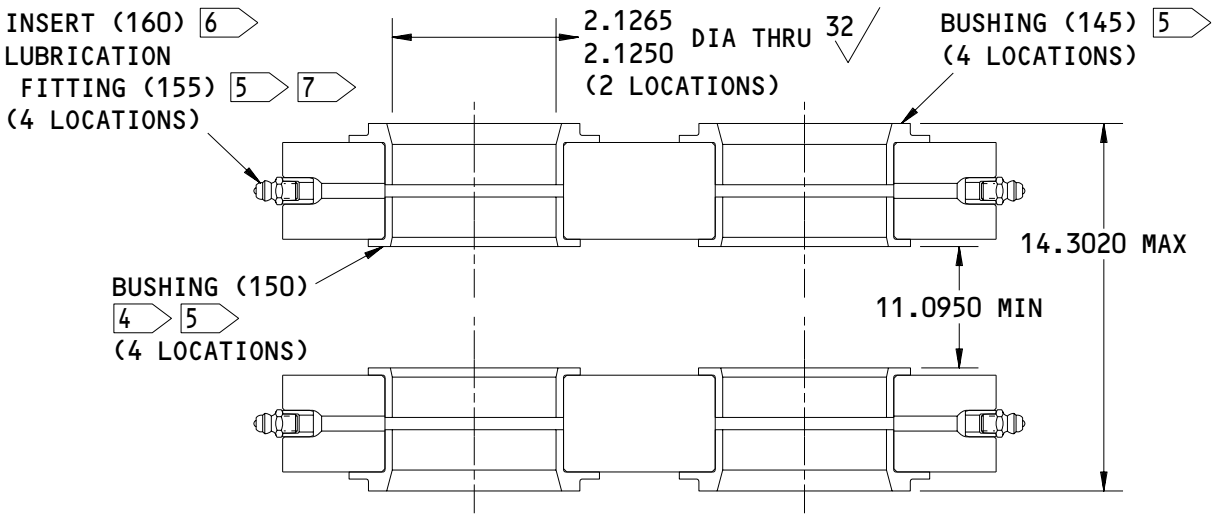
161T7120-1,-3
Inner Cylinder Assembly Bushing Replacement
Figure 601 (Sheet 4)



E–E F–F

161T7120-1,-3
Inner Cylinder Assembly Bushing Replacement
Figure 601 (Sheet 5)

L02515



G–G

1 USE THE SHRINK FIT PROCEDURE TO INSTALL THE BUSHING WITH BMS 3-27 COMPOUND (SOPM 20-50-03). MAKE SURE THE CHAMFER OR RADIUS VOLUME IS FILLED WITH BMS 3-27 COMPOUND. FILLET SEAL THE BUSHING WITH BMS 5-95 SEALANT (SOPM 20-50-19)

2 THE INSTALLATION DIRECTION OF THE NESTED BUSHINGS IS OPTIONAL

3 FILLET SEAL THE FLANGE END OF THE BUSHING ONLY

4 USE THE SHRINK FIT PROCEDURE TO INSTALL THE BUSHING WITH BMS 3-27 COMPOUND SOPM 20-50-03). MAKE SURE THE CHAMFER OR RADIUS VOLUME IS FILLED WITH BMS 3-27. MAKE SURE THE DISTANCE BETWEEN THE BUSHING FLANGE AND THE CHROME PLATED SURFACE IS 0.0010 MAXIMUM AND IS FILLED WITH BMS 3-27 COMPOUND.

5 AFTER THE BUSHING INSTALLATION, MAKE SURE THE LUBRICATION HOLE IS NOT BLOCKED. APPLY BMS 3-33 GREASE TO THE FITTING UNTIL THE GREASE COMES OUT AT THE INSIDE DIAMETER OF THE BUSHING

6 USE THE SHRINK FIT PROCEDURE TO INSTALL THE THREADED INSERT WITH BMS 5-95 SEALANT AS SHOWN IN (SOPM 20-50-03). INSTALL THE INSERT FLUSH TO THE SURFACE WITHIN ±0.0200

7 INSTALL THE LUBRICATION FITTING WITH BMS 3-33 GREASE AND TIGHTEN TO 25-30 POUND-INCHES

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

161T7120-1,-3
Inner Cylinder Assembly Bushing Replacement
Figure 601 (Sheet 6)

INNER CYLINDER - REPAIR 3-2

161T7120-2

1. General

A. This repair gives the data that is necessary to repair and refinish the inner cylinder (165).

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

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

D. General repair details:

(1)	Material:	4340M steel 275-300 ksi
(2)	Shot peen:	Intensity 0.014-0.018A2 Coverage 2.0 Shot Size 0.016-0.033 Hard Shot (RC=55-65)

2. Lug Faces and Holes

A. References

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

(2) SOPM 20-20-02, Magnetic Particle Inspection

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

B. Procedure (Fig. 601)

(1) Machine as necessary, within repair limits, to remove defects.

(2) Magnetic particle examine (SOPM 20-20-01).

(3) Shot peen as indicated (SOPM 20-10-03).

(4) Refinish as indicated.

(5) Make oversize bushings (Fig. 602 and on) as necesary to adjust for the material removed.

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

3. Inner Cylinder Refinish

A. Consumable Materials

NOTE: Equivalent materials can be used.

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

(2) C00032 Enamel -- BMS 10-60, Type 1 (SOPM 20-60-02)

B. References

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

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

(3) SOPM 20-41-01, Decoding Table For Boeing Finish Codes

C. Procedure (Fig. 601)

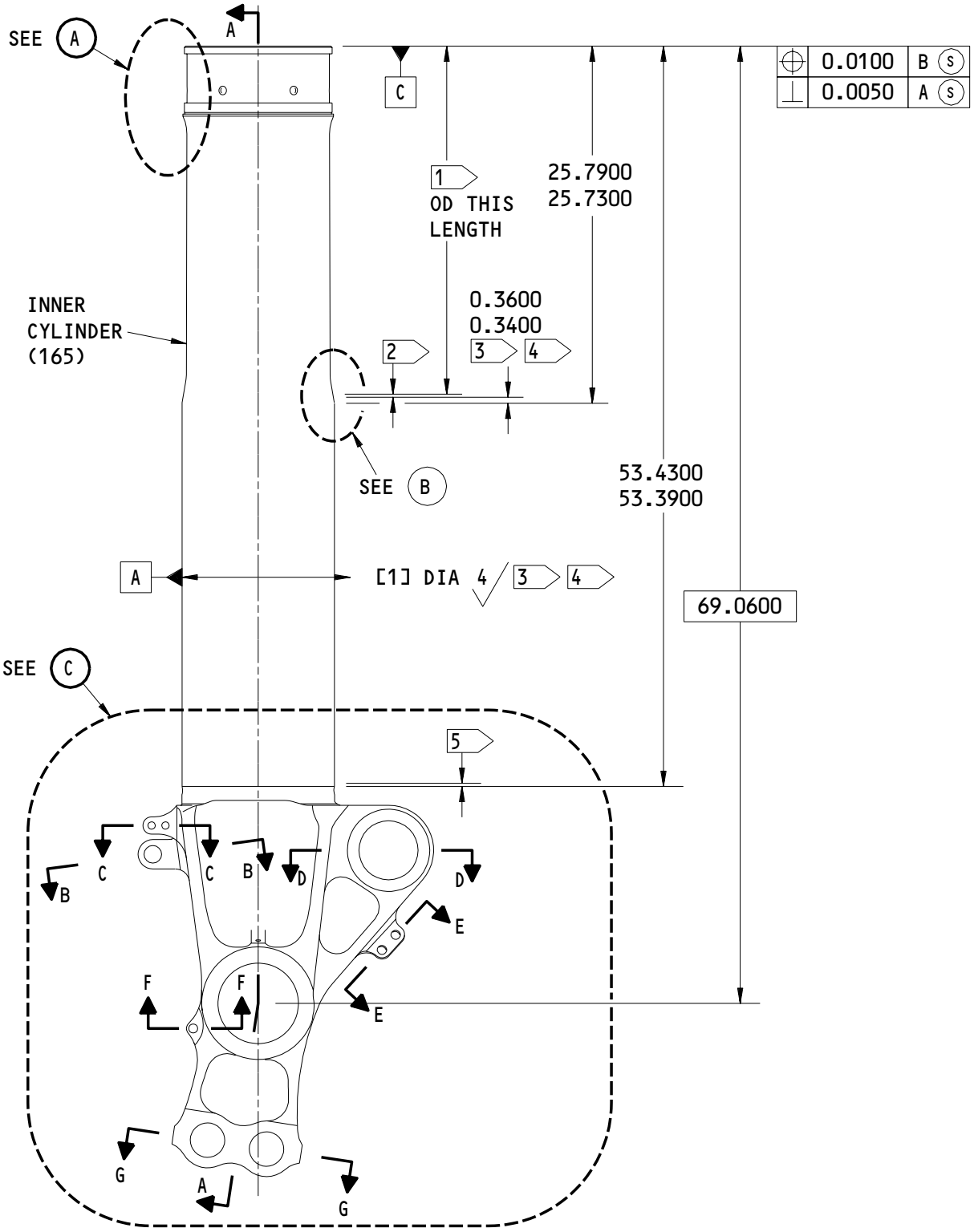
(1) Apply thermal spray coating as indicated.

(2) Chrome plate as indicated.

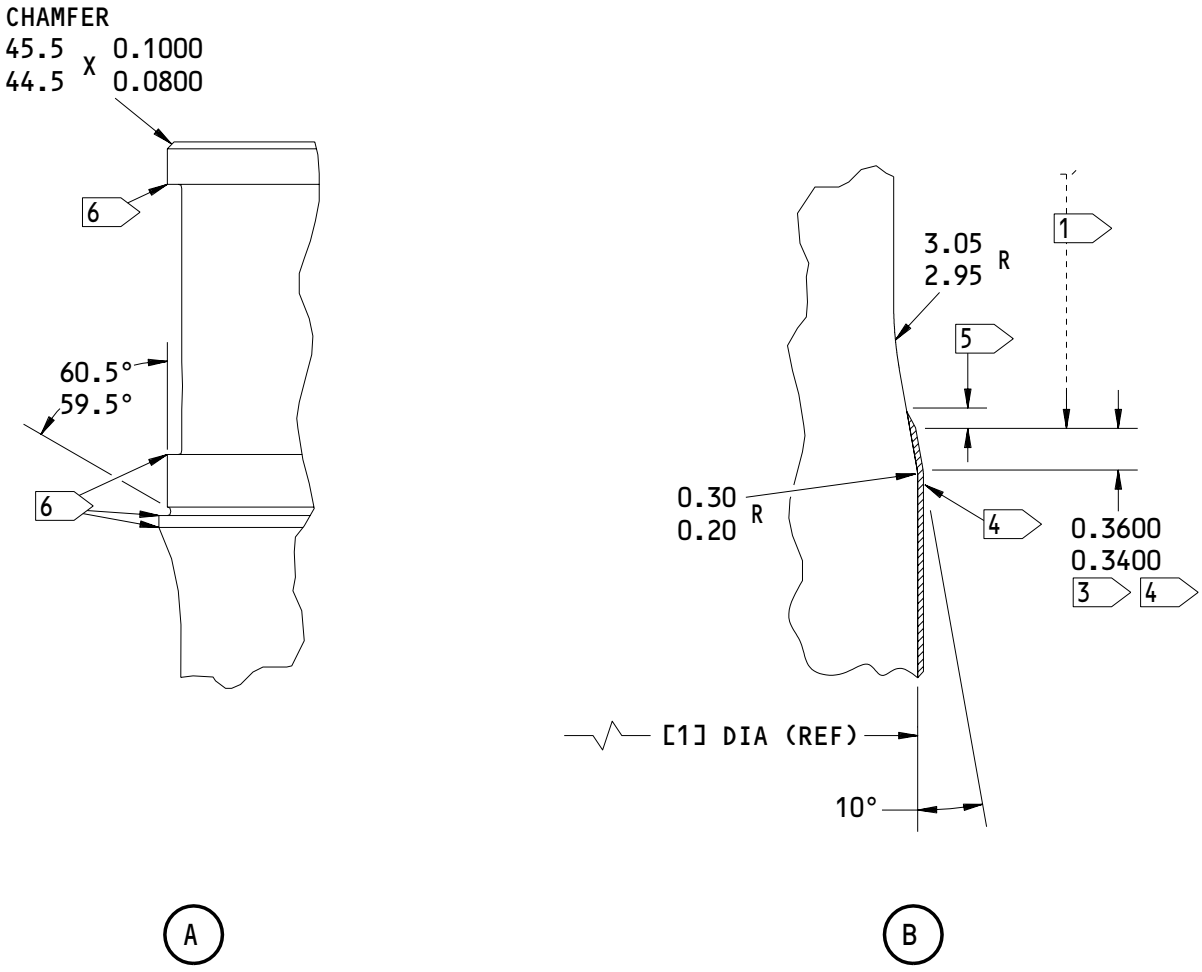
(3) Cadmium-titanium plate as indicated.

(4) Apply primer and corrosion preventive compound as indicated.

(5) Apply enamel topcoat as indicated in REPAIR 3-1.

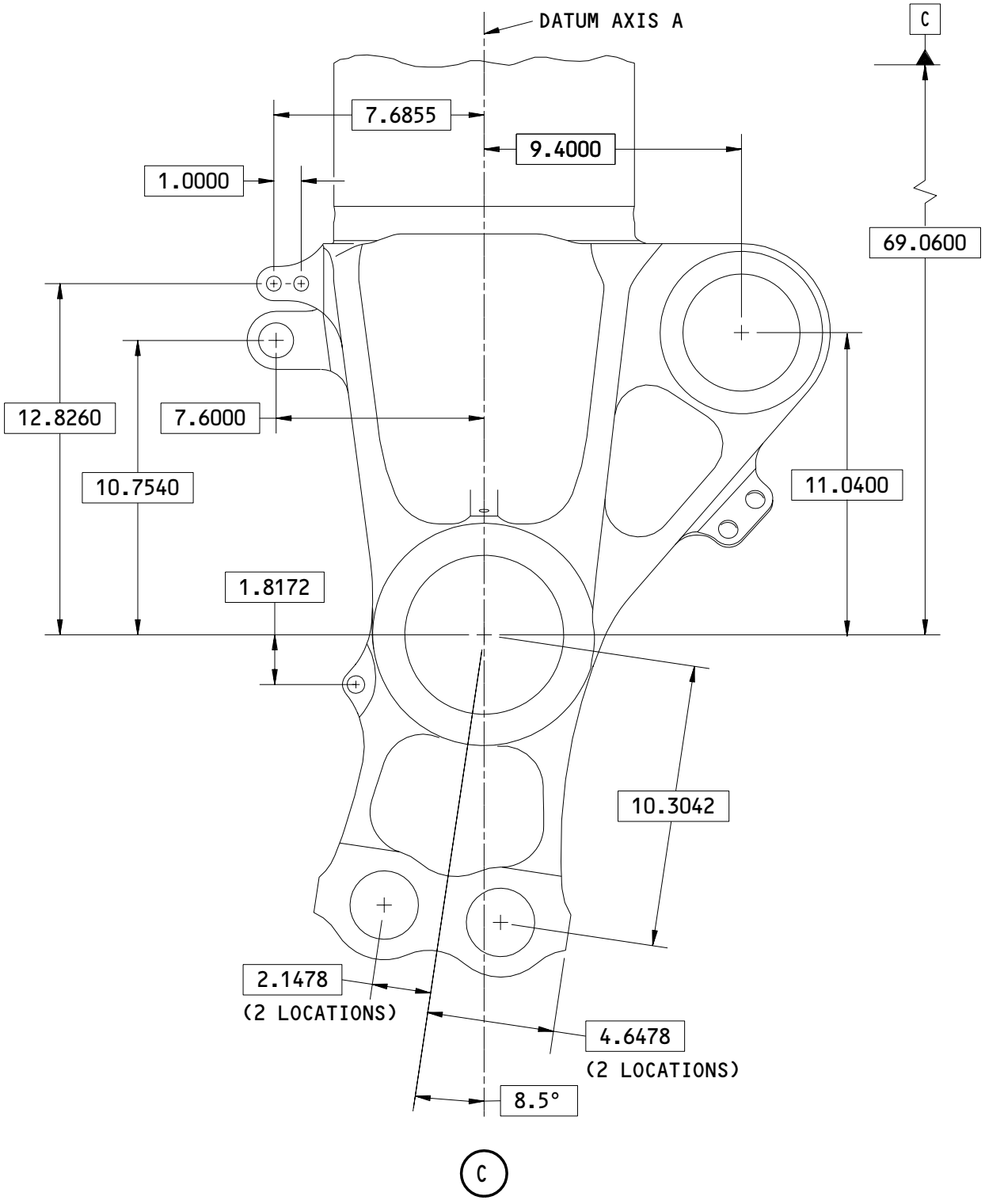


161T7120-2
Inner Cylinder Repair
Figure 601 (Sheet 1)



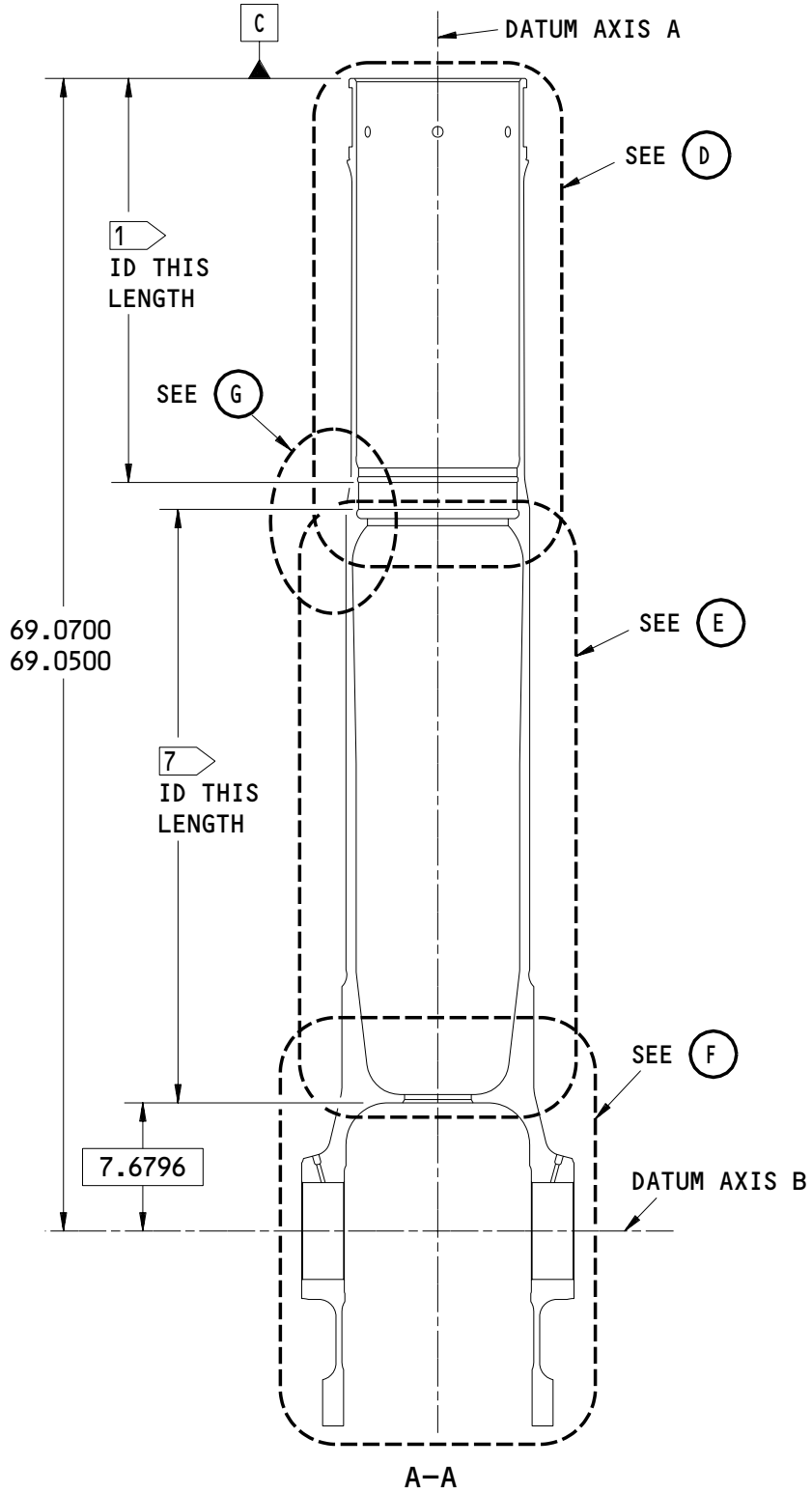
161T7120-2
Inner Cylinder Repair
Figure 601 (Sheet 2)

L02529

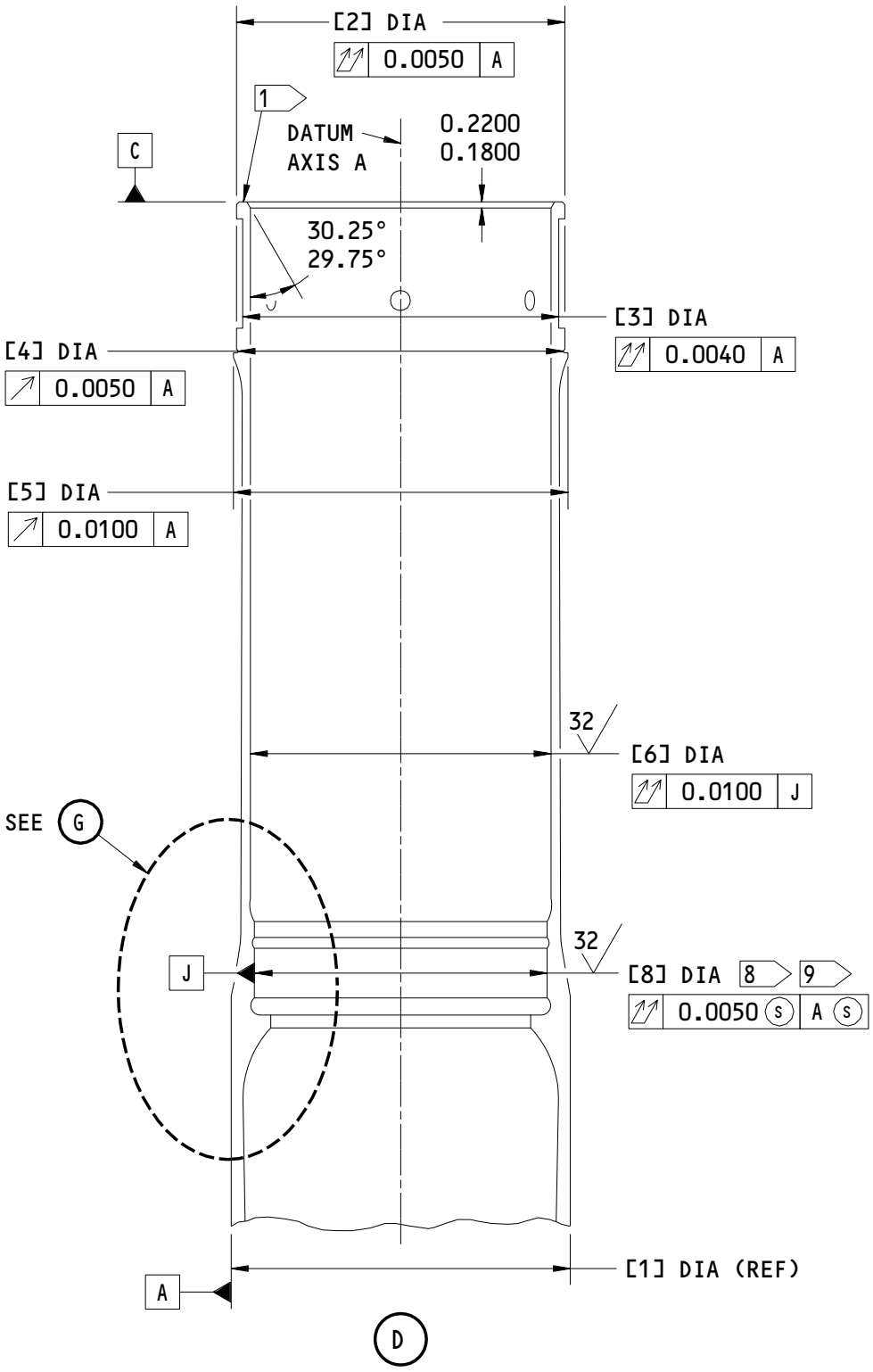


161T7120-2
Inner Cylinder Repair
Figure 601 (Sheet 3)

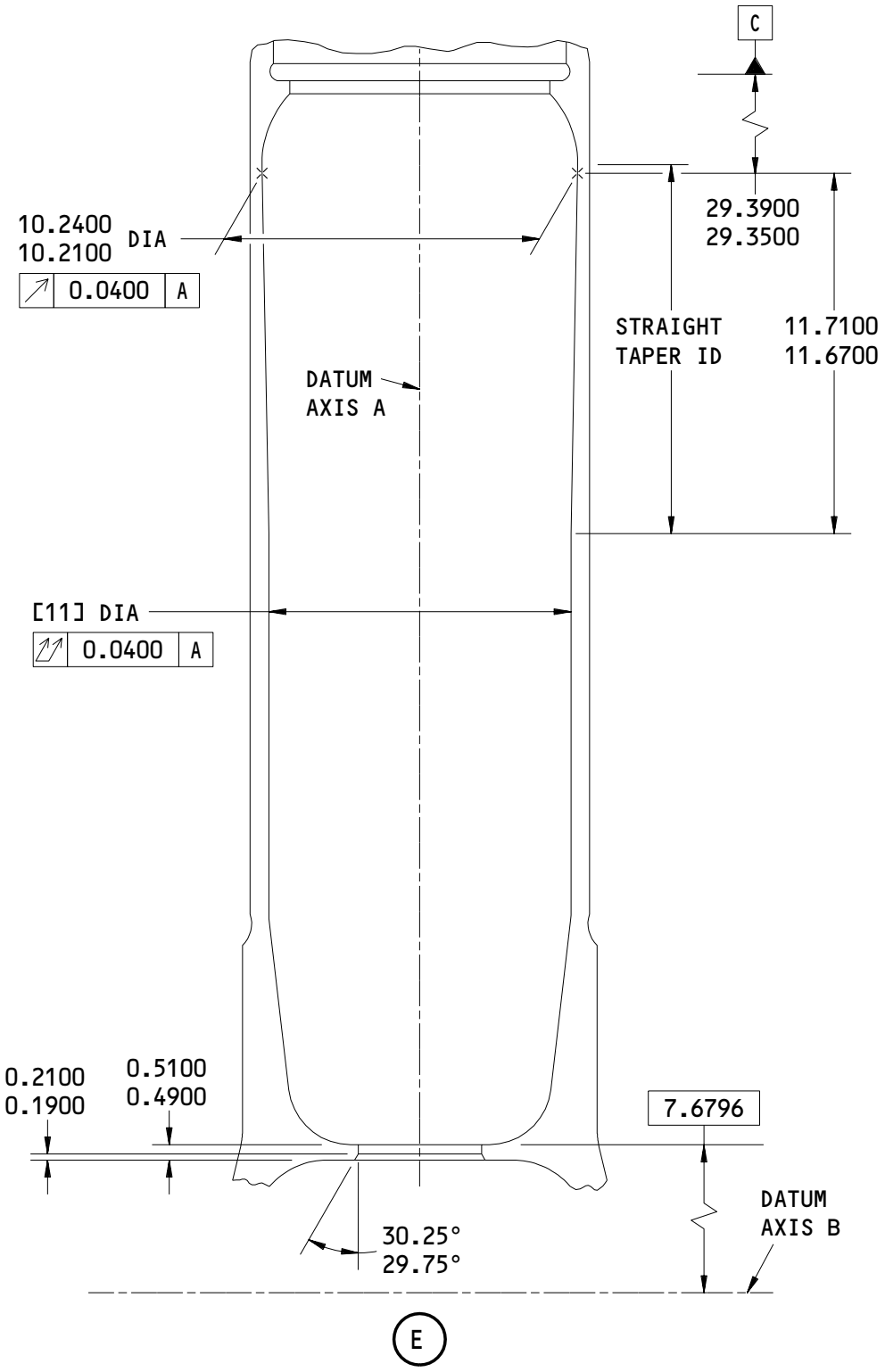
L02531



161T7120-2
Inner Cylinder Repair
Figure 601 (Sheet 4)

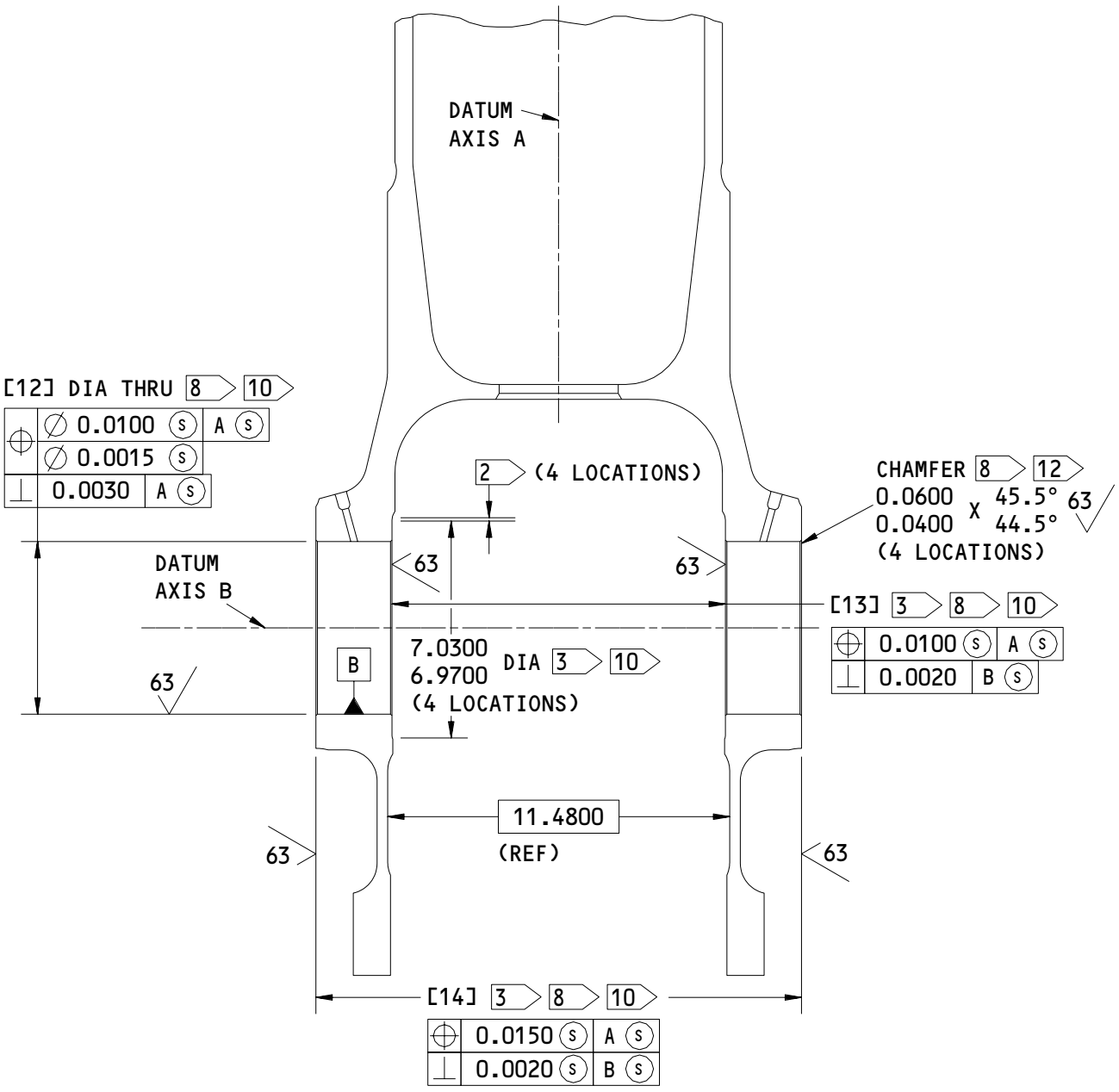


161T7120-2
Inner Cylinder Repair
Figure 601 (Sheet 5)



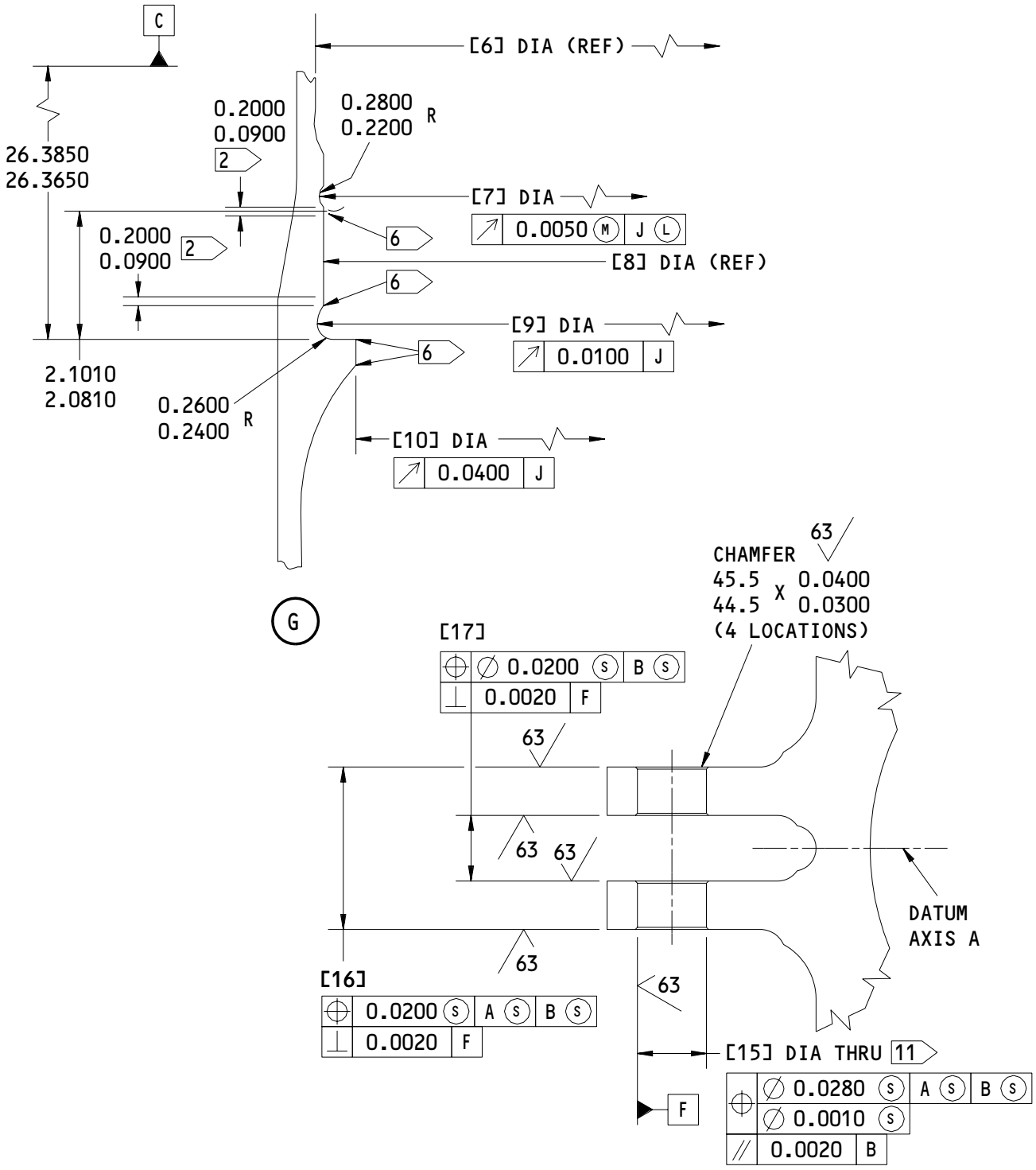
161T7120-2
Inner Cylinder Repair
Figure 601 (Sheet 6)

L02534

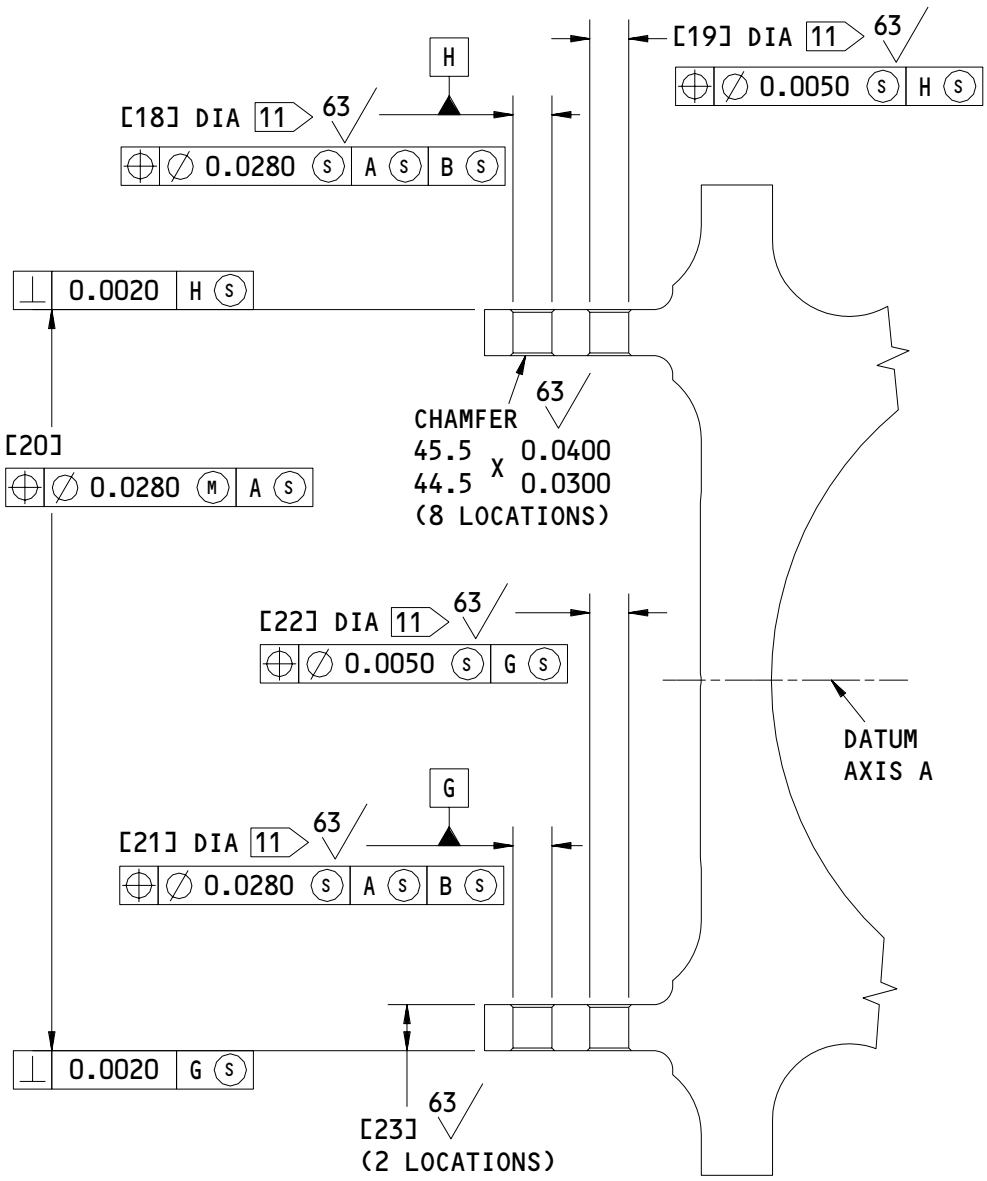


161T7120-2
Inner Cylinder Repair
Figure 601 (Sheet 7)

L02537



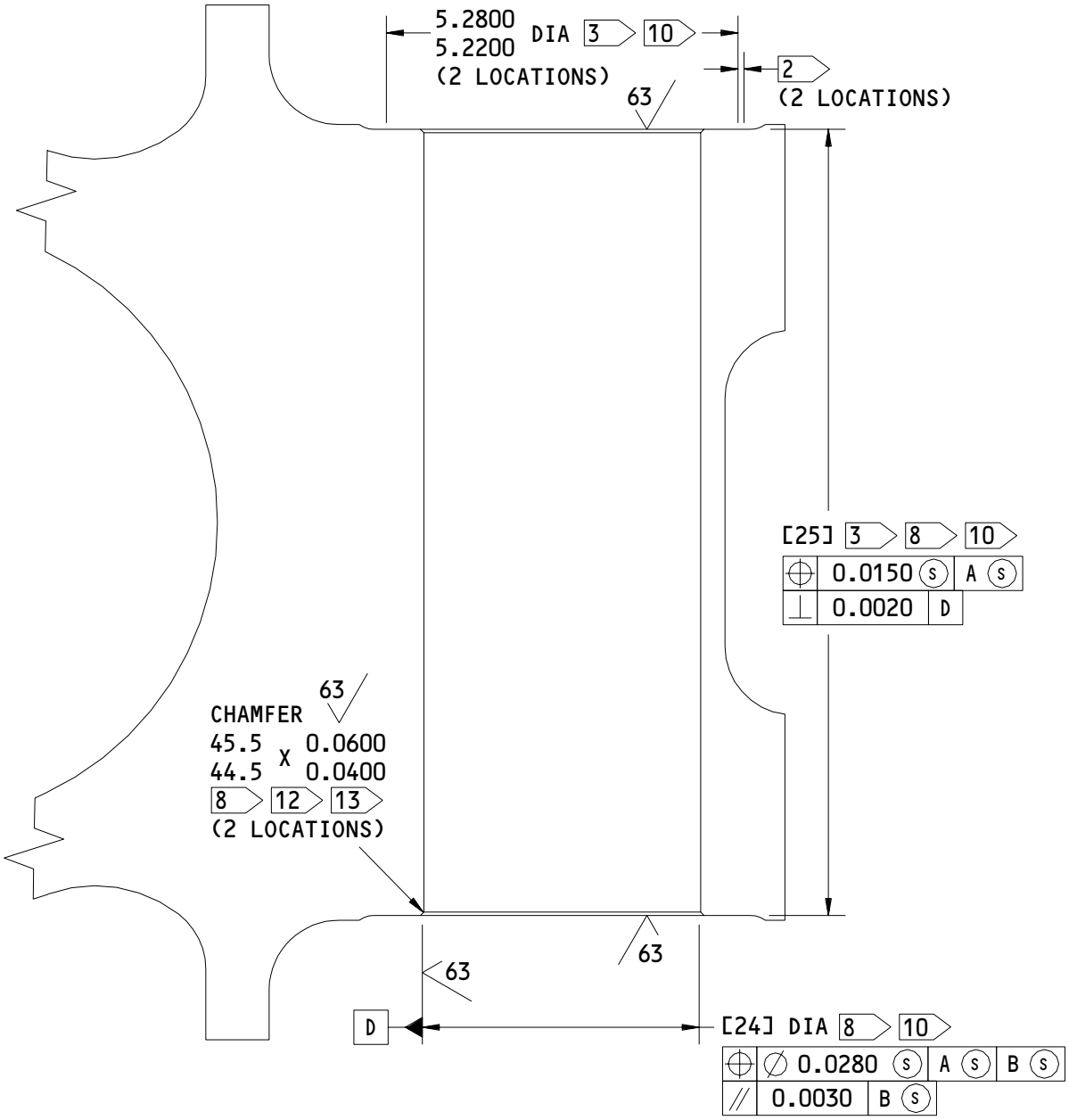
161T7120-2
Inner Cylinder Repair
Figure 601 (Sheet 8)



C–C

161T7120-2
Inner Cylinder Repair
Figure 601 (Sheet 9)

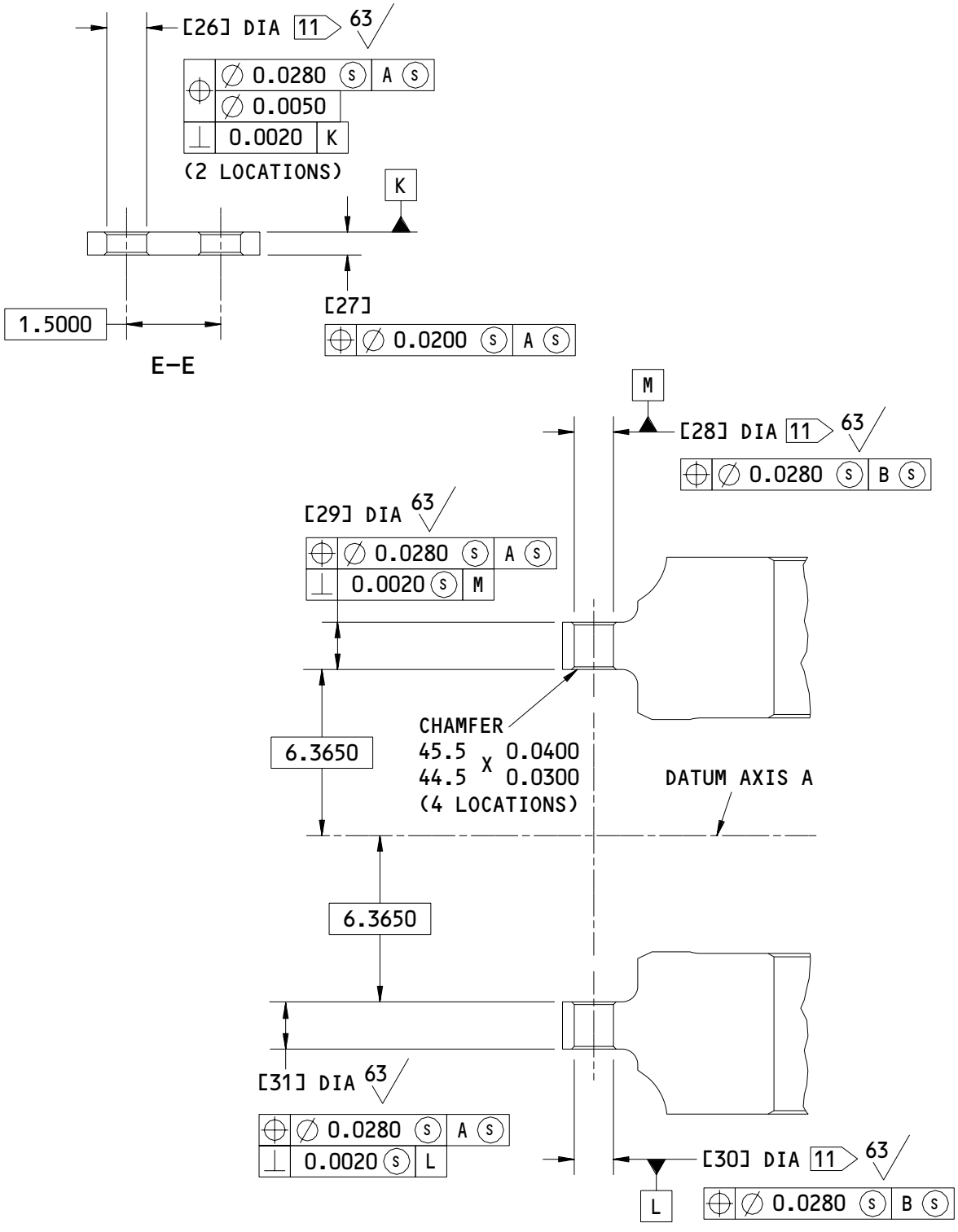
L02541



D–D

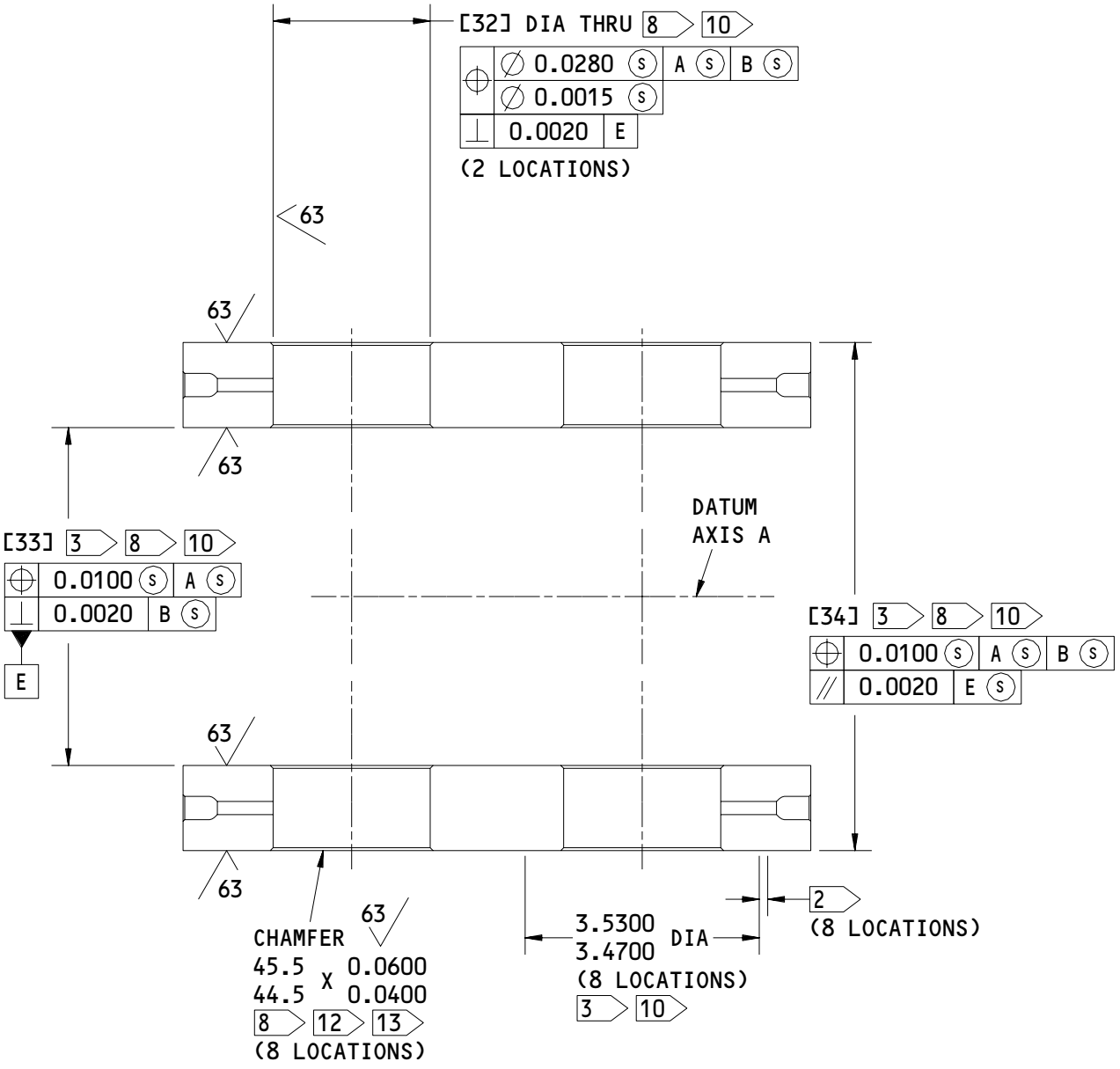
161T7120–2
Inner Cylinder Repair
Figure 601 (Sheet 10)

L02543



161T7120-2
Inner Cylinder Repair
Figure 601 (Sheet 11)

L02545



G–G

161T7120–2
Inner Cylinder Repair
Figure 601 (Sheet 12)

L02546

REFERENCE NUMBER	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
DESIGN DIMENSION	10.9970 10.9940 16	10.6490 10.6440	10.2510 10.2470	10.5500 10.5300	10.8600 10.8400 8	9.7500 9.7450	9.6950 9.6750	9.4780 9.4740
REPAIR LIMIT	---	---	---	---	---	---	---	---

REFERENCE NUMBER	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]
DESIGN DIMENSION	9.6400 9.6200	8.4410 8.4110	9.8150 9.7850	5.7955 5.7940 14	11.1837 11.1767 14	16.3142 16.3022 14	1.1270 1.1260	2.6665 2.6615
REPAIR LIMIT	---	---	---	5.8610 13 15	11.2167 13 15	16.2692 13 15	1.1870 15	2.6315 15

REFERENCE NUMBER	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]
DESIGN DIMENSION	1.0825 1.0775	0.5076 0.5070	0.5076 0.5070	9.6550 9.6450	0.5076 0.5070	0.5076 0.5070	0.6050 0.5950	4.0415 4.0400 14
REPAIR LIMIT	1.1125 15	0.5676 15	0.5676 15	9.6150 15	0.5676 15	0.5676 15	0.5350 15	4.1070 13 15

REFERENCE NUMBER	[25]	[26]	[27]	[28]	[29]	[30]	[31]	[32]
DESIGN DIMENSION	11.4850 11.4780 14	0.6337 0.6330	0.3550 0.3450	0.6277 0.6270	0.7550 0.7450	0.6277 0.6270	0.7550 0.7450	2.3145 2.3130 14
REPAIR LIMIT	11.4150 13 15	0.6937 15	0.3150 15	0.6877 15	0.6850 15	0.6877 15	0.6850 15	2.3800 13 15

REFERENCE NUMBER	[33]	[34]
DESIGN DIMENSION	11.3020 11.2900 14	13.8100 13.7980 14
REPAIR LIMIT	11.3650 13 15	13.7350 13 15

161T7110-3,-4
Outer Cylinder Repair
Figure 601 (Sheet 13)

L02547

1. NO FINISH (F-25.01)
2. CHROME PLATE RUNOUT AREA
3. DO NOT APPLY ENAMEL TO THIS SURFACE
4. APPLY BMS 10-67, TYPE 17 THERMAL SPRAY COATING (F-15.384), 0.0030 MINIMUM THICK
5. THERMAL SPRAY COATING RUNOUT AND CADMIUM PLATE OVERLAP (IF APPLICABLE) IN THIS AREA
6. BREAK THE CORNERS EQUIVALENT TO 0.0200-0.0300 R
7. CADMIUM-TITANIUM PLATE (F-15.01). APPLY BMS 10-79, TYPE 3 PRIMER (F-19.66). APPLY MIL-C-11796 CLASS 1 CORROSION PREVENTIVE COMPOUND (F-19.03) TO THE SURFACE SHOWN
8. SURFACE FINISH IS THE SAME BEFORE AND AFTER PLATING
9. CHROME PLATE (F-15.34), 0.0030 MINIMUM THICK. WIPE THE PLATING WITH PRIMER (F-19.451)
10. CHROME PLATE (F-15.34), 0.0015 MINIMUM THICK. WIPE THE PLATING WITH PRIMER (F-19.451). DO NOT GRIND
11. CADMIUM-TITANIUM PLATE (F-15.32). APPLY BMS 10-79, TYPE 3 PRIMER (F-19.47)
12. CHROME PLATE (F-15.34), 0.0015-0.0025 THICK. WIPE THE PLATING WITH PRIMER (F-19.451). DO NOT GRIND
13. BEFORE PLATING
14. AFTER PLATING
15. LIMIT FOR INSTALLATION OF OVERSIZE BUSHINGS
16. AFTER COATING

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

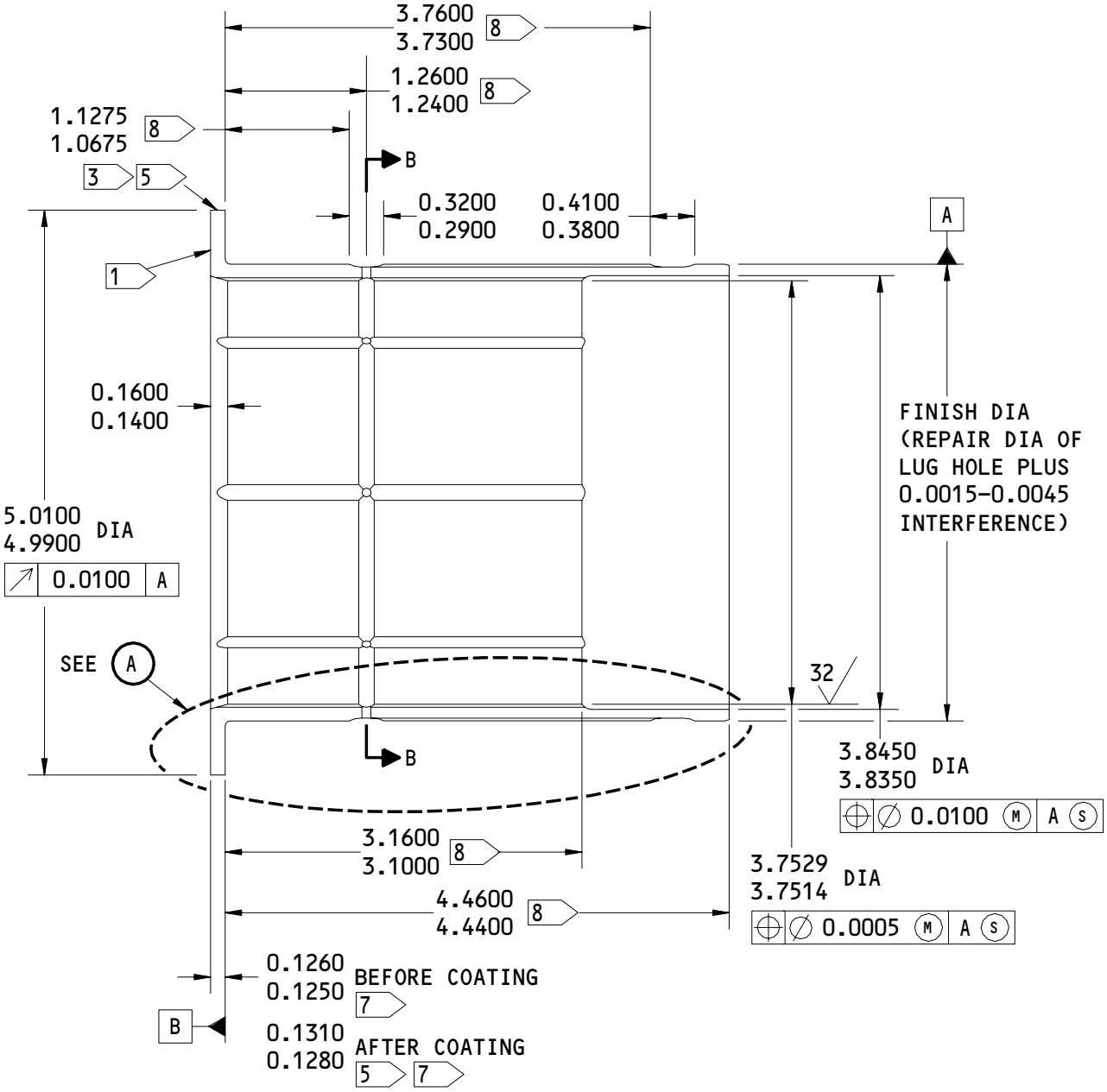
BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

161T7120-2
Inner Cylinder Repair
Figure 601 (Sheet 14)

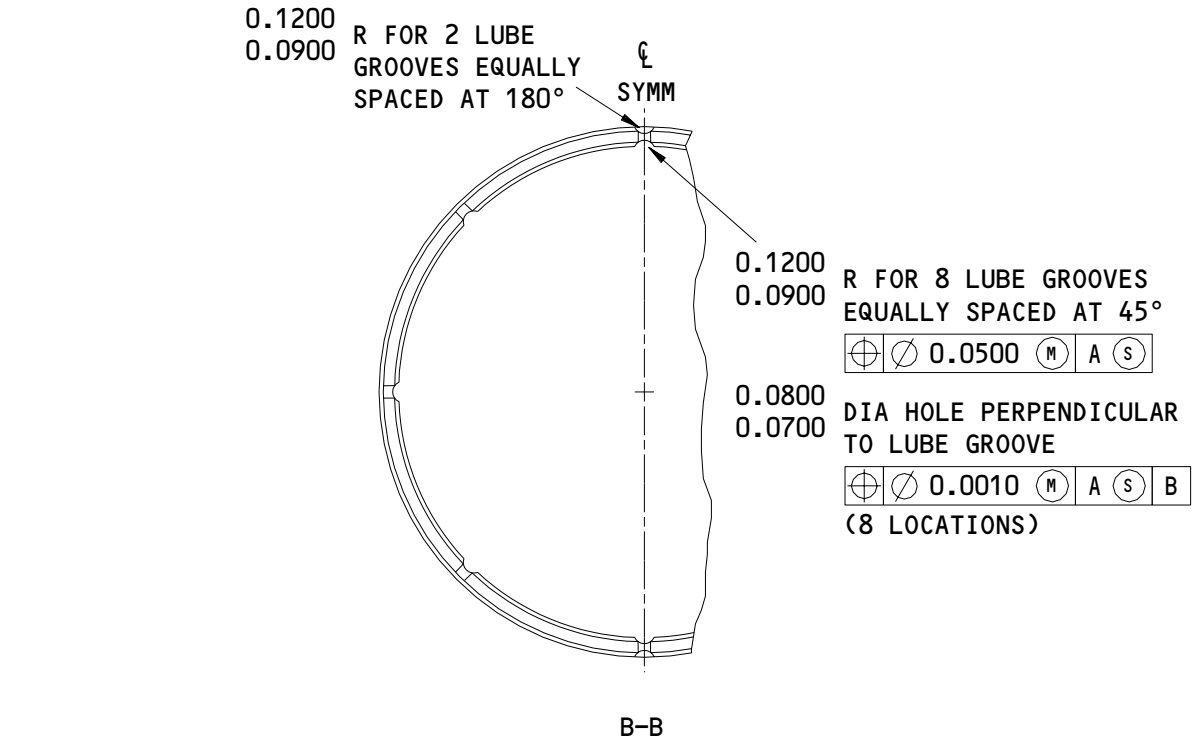
L02549



HOLE LOCATION [24] FIG. 601
REPLACES BUSHING (100,100A) 161T2875-6,-14

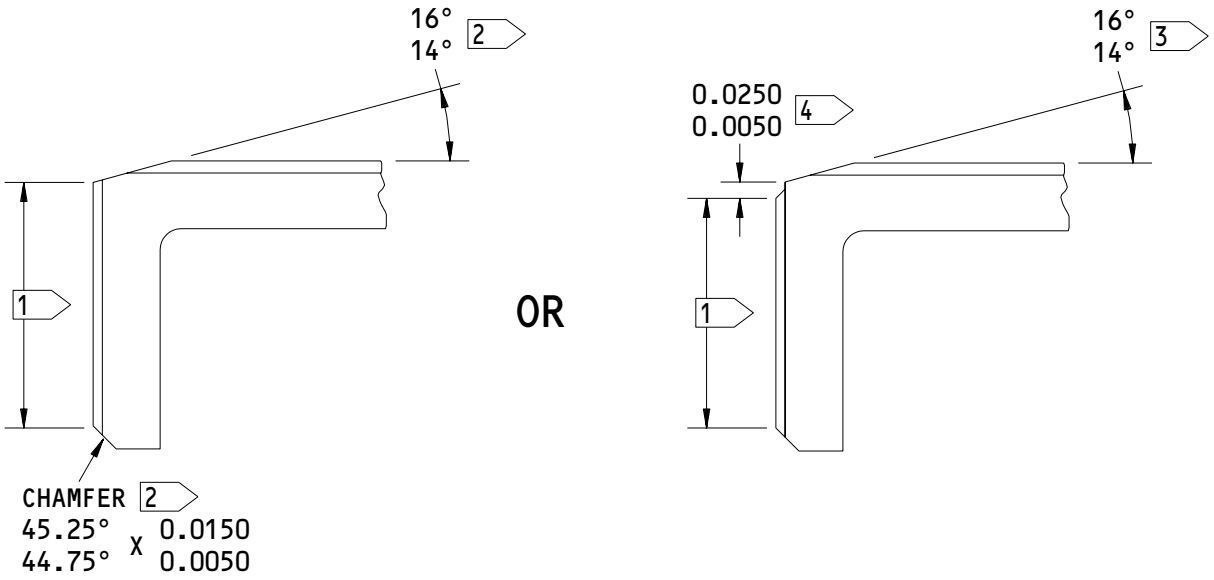
Oversize Bushing Details
Figure 602 (Sheet 1)

K97222



Oversize Bushing Details
Figure 602 (Sheet 2)

K97223



161T2875-6
ALTERNATIVE COATING RUNOUT DETAILS

(B)

1 > APPLY BMS 10-67 TYPE 1 THERMAL SPRAY (15% MINIMUM COBALT BY WEIGHT), 0.003 MINIMUM THICK

2 > MAKE THIS CHAMFER AFTER COATING

3 > NO COATING OVERSPRAY

4 > COATING RUNOUT AREA

5 > 161T2875-6

6 > 161T2875-14

7 > PLUS AMOUNT REMOVED FROM LUG FACE

8 > MINUS AMOUNT REMOVED FROM LUG FACE

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

MATERIAL: AL-NI-BRONZE (AMS 4640 OR 4880))

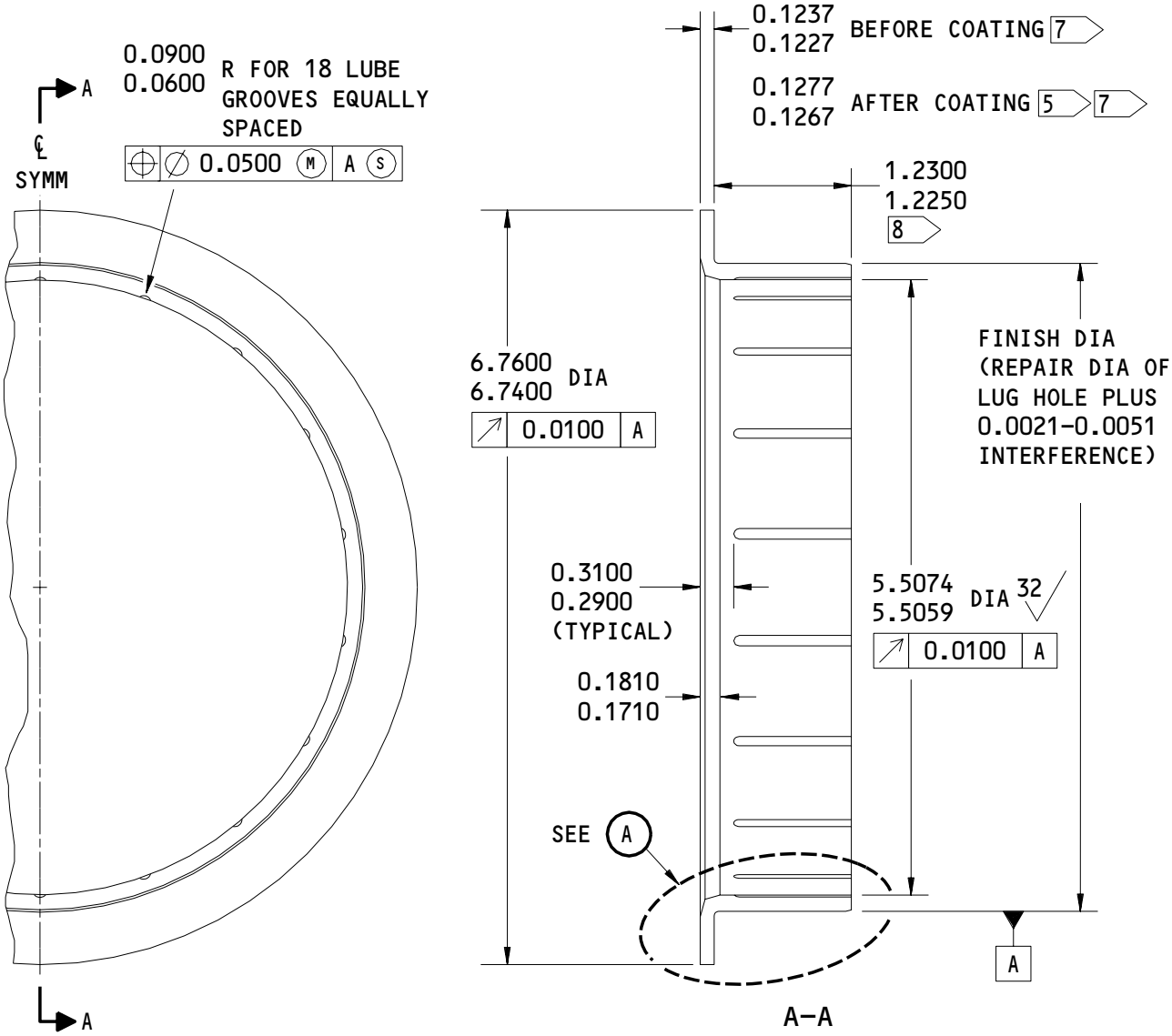
FINISH: NO FINISH UNLESS SHOWN BY 1

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

Oversize Bushing Details
Figure 602 (Sheet 3)

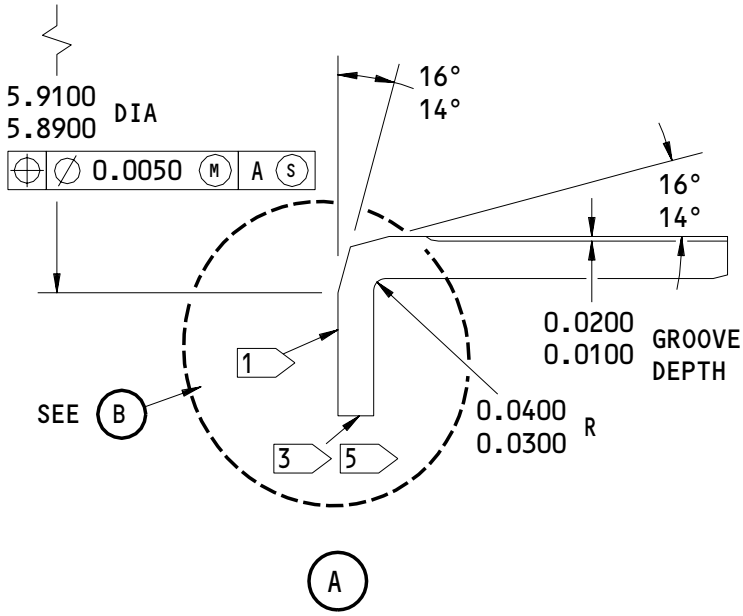
K97224



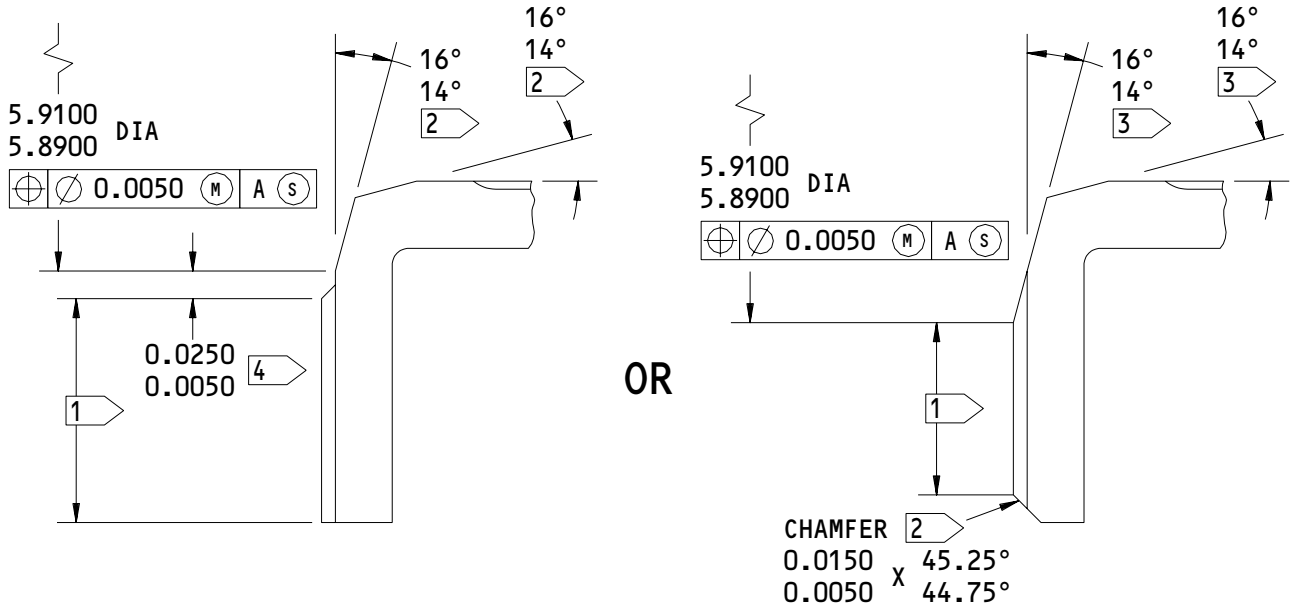
HOLE LOCATION [12] FIG. 601
REPLACES BUSHING (130,130A) 161T2875-5,-13

Oversize Bushing Details
Figure 603 (Sheet 1)

K97220



A



ALTERNATIVE COATING RUNOUT DETAILS

B

Oversize Bushing Details
Figure 603 (Sheet 2)

K97221

1 > APPLY BMS 10-67 TYPE 1 THERMAL SPRAY (15% MINIMUM COBALT BY WEIGHT), 0.003 MINIMUM THICK

2 > MAKE THIS CHAMFER AFTER COATING

3 > NO COATING OVERSPRAY

4 > COATING RUNOUT AREA

5 > 161T2875-5

6 > 161T2875-13

7 > PLUS AMOUNT REMOVED FROM LUG FACE

8 > MINUS AMOUNT REMOVED FROM LUG FACE

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

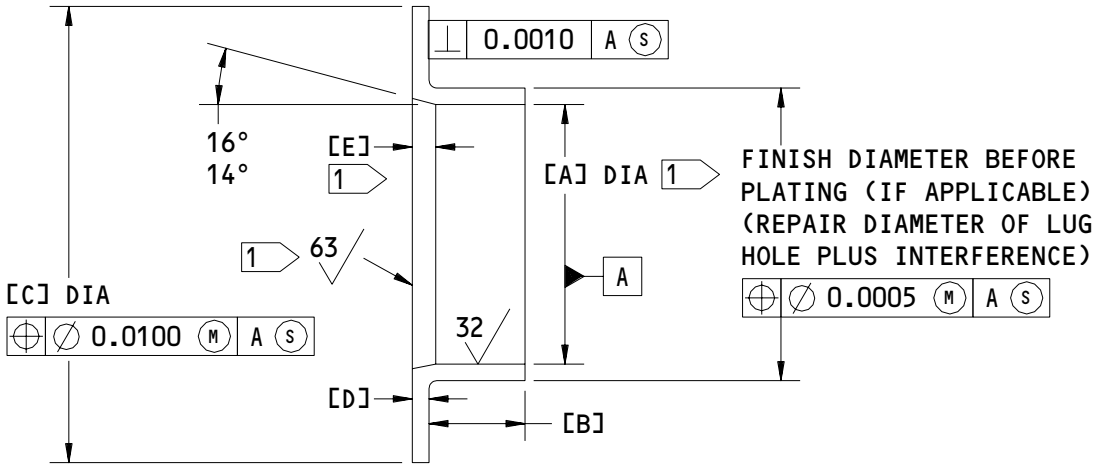
MATERIAL: AL-NI-BRONZE (AMS 4640 OR 4880))

FINISH: NO FINISH UNLESS SHOWN BY 1 >

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

Oversize Bushing Details
Figure 603 (Sheet 3)



HOLE LOCATION (FIG. 601)	REPLACES BUSHING ITEM NO.	[A]	[B] 4	[C] 3	[D]	[E]	INTER-FERENCE	FINISH
[26]	105 2 161T2874-40	0.3819 0.3813	0.32 0.30	0.85 0.83	0.0640 0.0630	0.10 0.08	0.0017 0.0001	F-15.36 1
[26]	110 161T2874-39	0.5080 0.5073	0.32 0.30	0.85 0.83	0.0640 0.0630	0.10 0.08	0.0017 0.0004	F-15.36 1
[15]	115 161T2874-36	1.0015 1.0005	0.38 0.36	1.77 1.75	0.0640 0.0630	0.10 0.08	0.0025 0.0006	F-15.36 1
[18] [19] [21] [22]	120 161T2874-37	0.3819 0.3813	0.55 0.53	0.72 0.70	0.0640 0.0630	0.10 0.08	0.0015 0.0004	F-15.36 1
[18] [19] [21] [22]	125 2 161T2874-38	0.2558 0.2553	0.55 0.53	0.72 0.70	0.0640 0.0630	0.10 0.08	0.0015 0.0001	F-15.36 1
[28] [30]	135 161T2874-41	0.5020 0.5013	0.72 0.70	0.85 0.83	0.0640 0.0630	0.10 0.08	0.0017 0.0004	F-15.36 1
[28] [30]	140 2 161T2874-42	0.3759 0.3753	0.72 0.70	0.72 0.70	0.0640 0.0630	0.10 0.08	0.0020 0.0000	F-15.36 1
[32]	150 161T2874-35	2.1274 2.1259	0.56 0.54	2.76 2.74	0.0950 0.0940	0.13 0.11	0.0040 0.0010	NO FINISH

1 NO FINISH (F-25.01)

2 OVERSIZE BUSHING NOT NECESSARY UNLESS MATERIAL IS REMOVED FROM MATING LUG FACE

3 PLUS AMOUNT REMOVED FROM LUG FACE

4 MINUS AMOUNT REMOVED FROM LUG FACE

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

MATERIAL: AL-NI-BRONZE (AMS 4640)

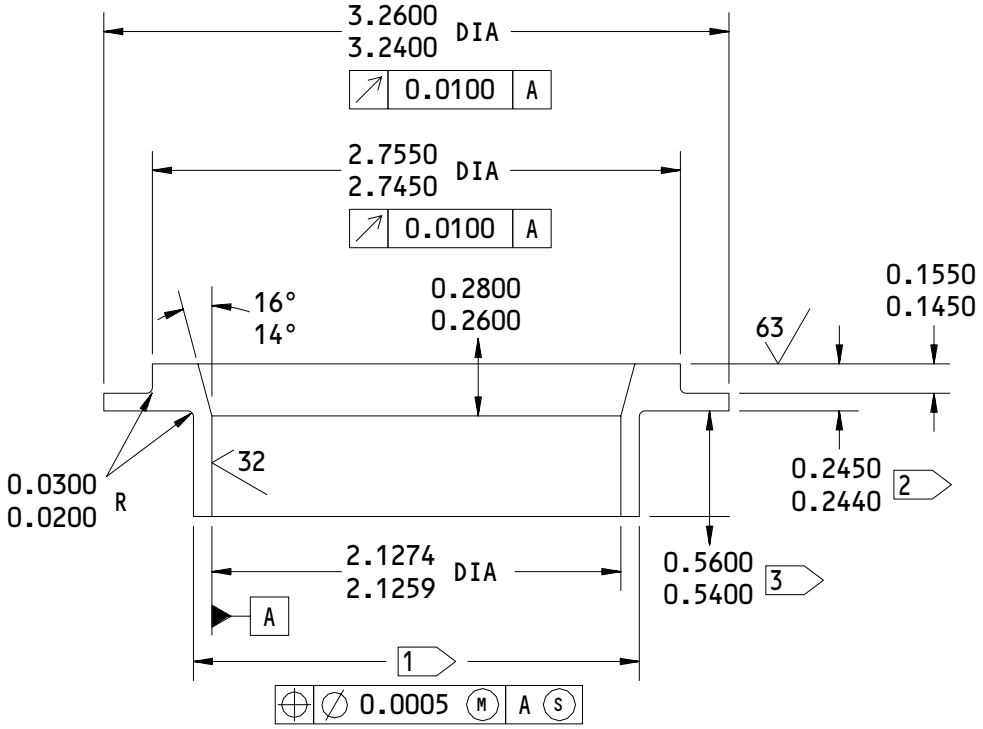
FINISH: AS NOTED

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

Oversize Bushing Details
Figure 604

K94930



HOLE LOCATION [32] FIG. 601
REPLACES BUSHING (145) 161T2881-1

1 THE OUTSIDE DIAMETER OF THE BUSHING IS EQUAL TO THE INSIDE DIAMETER OF THE BUSHING HOLE PLUS THE INTERFERENCE OF 0.0010-0.0040

2 PLUS AMOUNT REMOVED FROM LUG FACE

3 MINUS AMOUNT REMOVED FROM LUG FACE

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK ALL SHARP EDGES 0.01-0.02R

MATERIAL: AL-NI-BRONZE (AMS 4640 OR AMS 4880)

FINISH: NO FINISH

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

Oversize Bushing Details
Figure 605

L02567

GLAND NUT - REPAIR 4-1

161T7150-1

1. General

A. This repair gives the data that is necessary to repair and refinish the gland nut (30).

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

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

D. General repair details:

(1) Material: 4330M Steel
180-200 ksi

2. Gland Nut Refinish

A. Consumable Materials

(1) C00032 Enamel -- BMS 10-60, Type 1 (SOPM 20-60-02)

(2) C00259 Primer -- BMS 10-11, Type 1 (SOPM 20-60-02)

(3) G00034 Cheese Cloth -- BMS 15-5, Class A (SOPM 20-60-04)

(4) C00175 Primer -- BMS 10-79, Type 3 (SOPM 20-60-02)

B. References

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

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

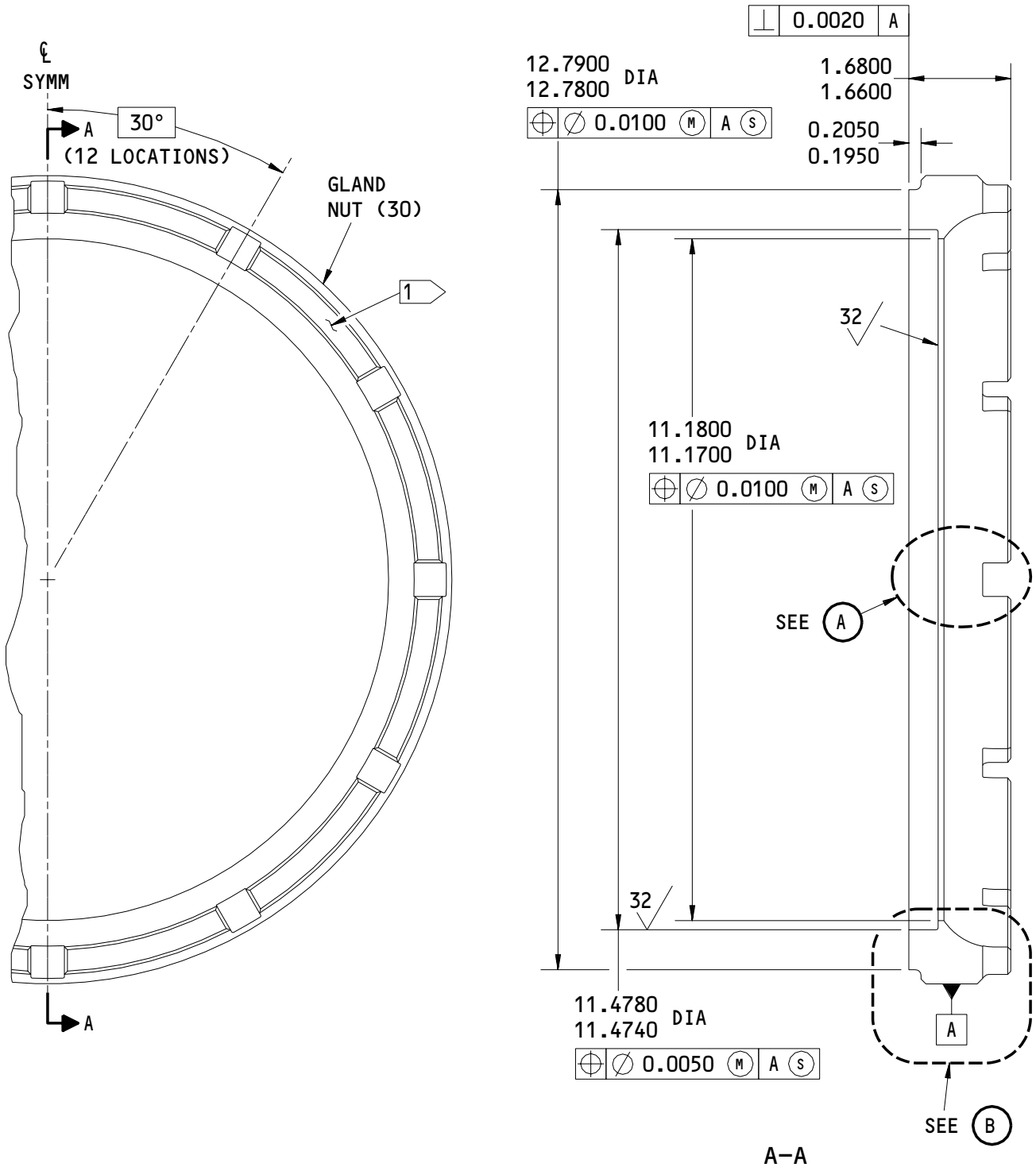
(3) SOPM 20-41-01, Decoding Table for Boeing Finish Codes

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

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

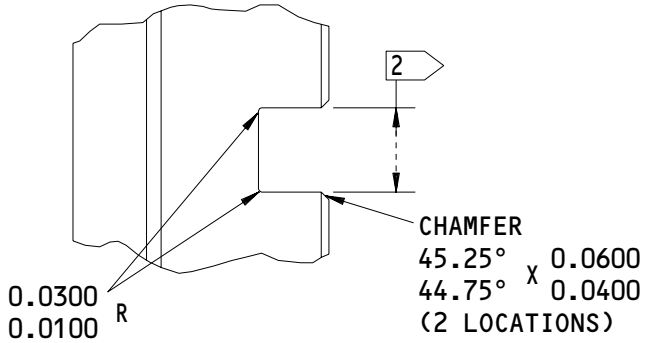
C. Procedure (Fig. 601)

(1) Cadmium plate and apply primer as indicated.

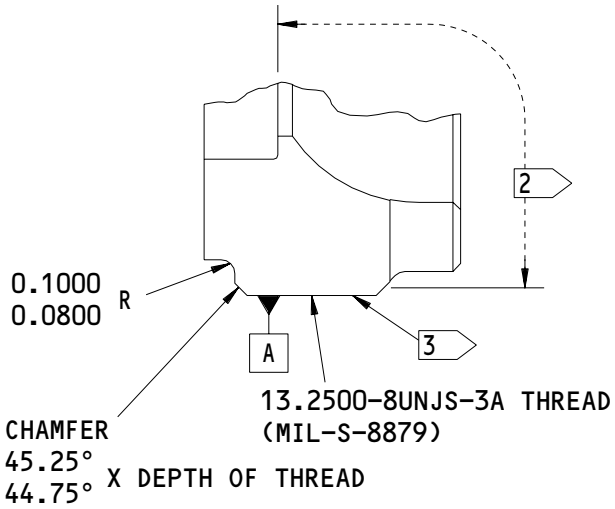


161T7150-1
Gland Nut Repair
Figure 601 (Sheet 1)

K95921



A



B

1 THE PART NUMBER AND SERIAL NUMBER ARE FOUND HERE

2 CADMIUM PLATE (F-15.36). APPLY BMS 10-79, TYPE 3 PRIMER (F-19.66). APPLY BMS 10-60 ENAMEL (F-19.39-707) TO THE SURFACE SHOWN

3 CADMIUM PLATE (F-15.36). WIPE THE PLATING WITH PRIMER (F-19.451)

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

161T7150-1
Gland Nut Repair
Figure 601 (Sheet 2)

UPPER HALF LOWER BEARING CARRIER - REPAIR 5-1

161T7151-1

1. General

A. This section has the necessary data to refinish the bearing carrier half (75).

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

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

D. General repair details:

(1) Material: Ti-6Al-4V

2. Bearing Refinish

A. References

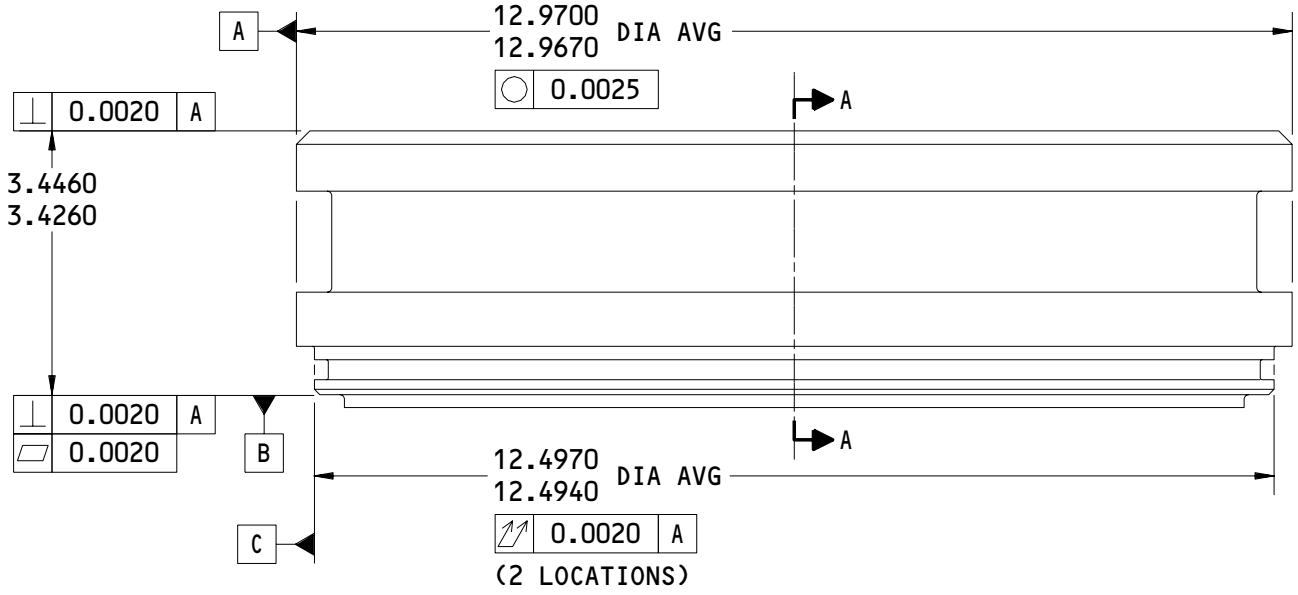
(1) SOPM 20-30-02, Stripping of Protective Finishes

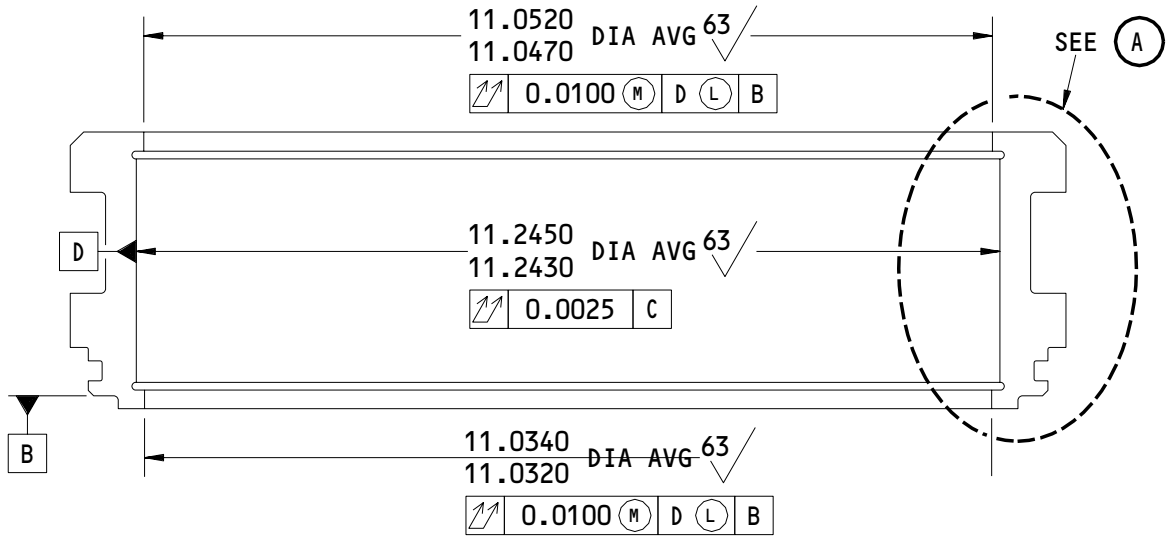
(2) SOPM 20-30-03, General Cleaning Procedures

B. Procedure (Fig. 601)

(1) If there are defects in the carrier material, replace the part.

(2) If the defects are only in the finish, send the part to Tiodize Company (V34568) to apply Tiodize Type 2 coating per AMS 2488. This is a vendor proprietary coating to be applied only by this vendor.

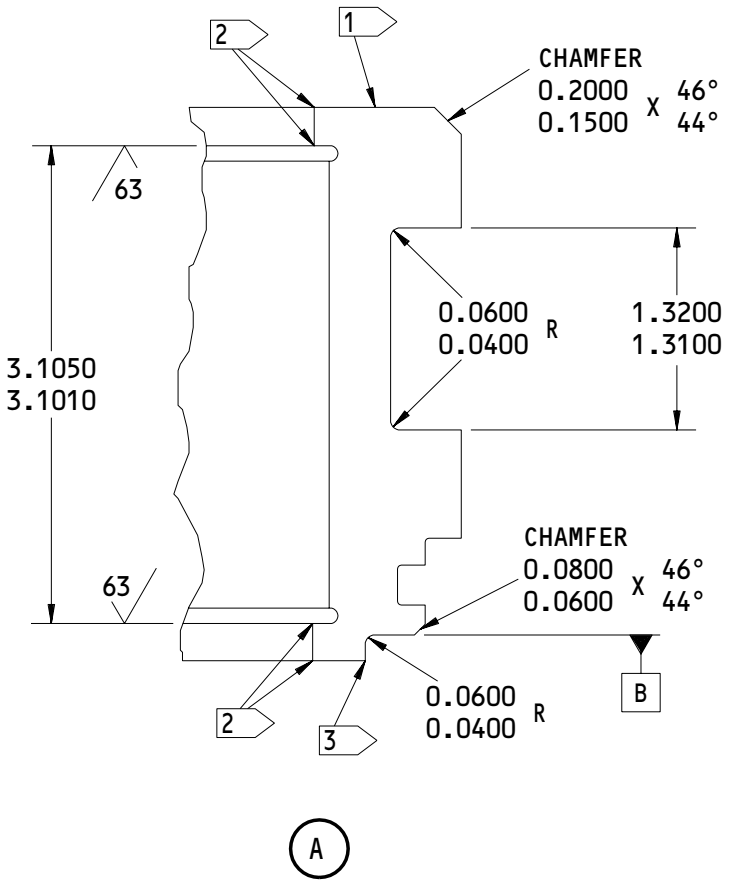




A–A

161T7151-1
Upper Half – Lower Bearing Carrier Repair
Figure 601 (Sheet 1)

K97998



1 THE PART NUMBER IS FOUND HERE

2 BREAK THE EDGE EQUIVALENT TO 0.005–0.010 R

3 BREAK THE EDGE EQUIVALENT TO 0.005 MAXIMUM

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

161T7151-1
Upper Half – Lower Bearing Carrier Repair
Figure 601 (Sheet 2)

LOWER HALF LOWER BEARING CARRIER - REPAIR 6-1

161T7156-1

1. General

A. This repair gives the data that is necessary to repair and refinish the bearing carrier half (40).

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

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

D. General repair details:

(1) Material: Ti-6Al-4V

2. Bearing Refinish

A. References

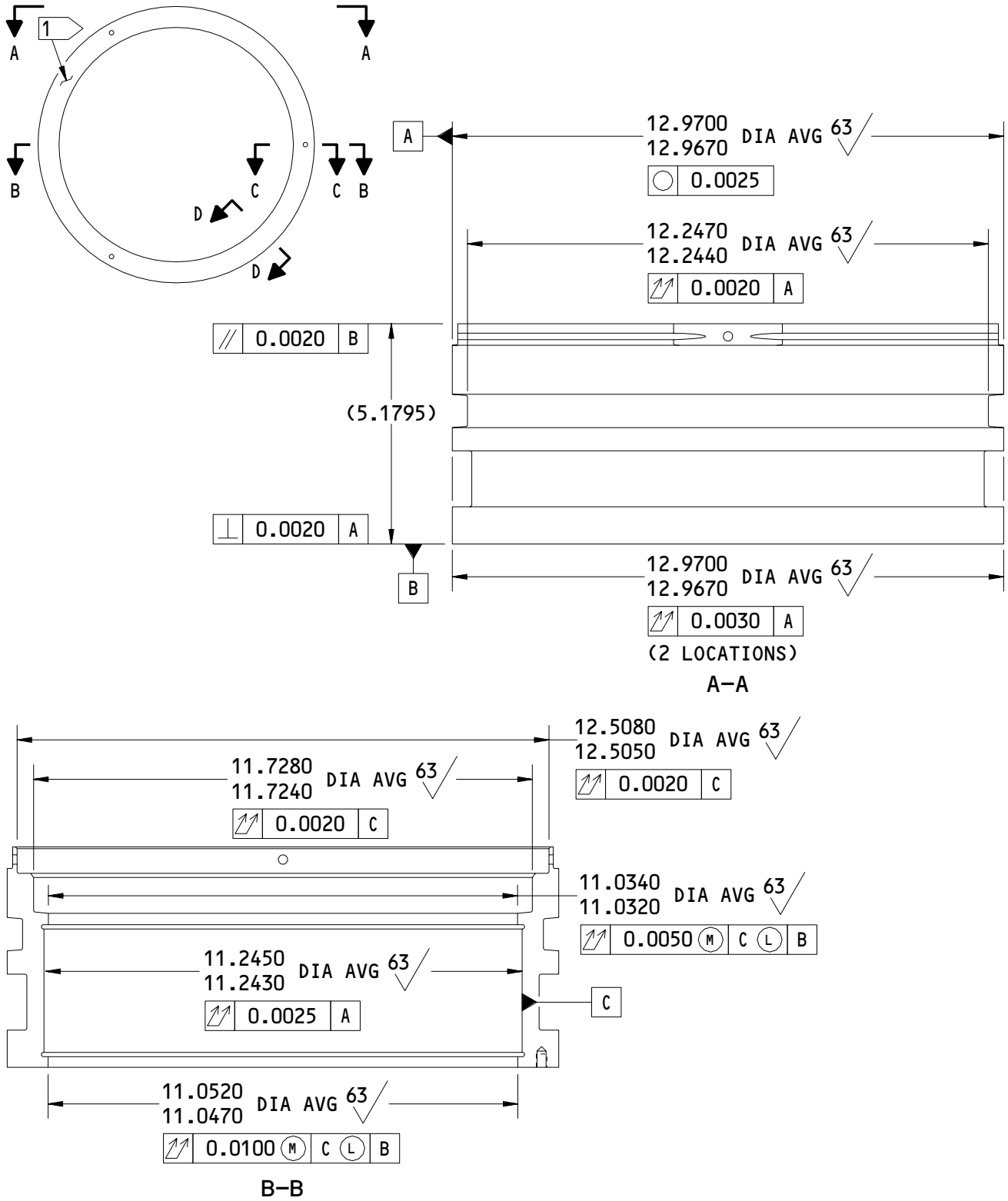
(1) SOPM 20-30-02, Stripping of Protective Finishes

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

B. Procedure (Fig. 601)

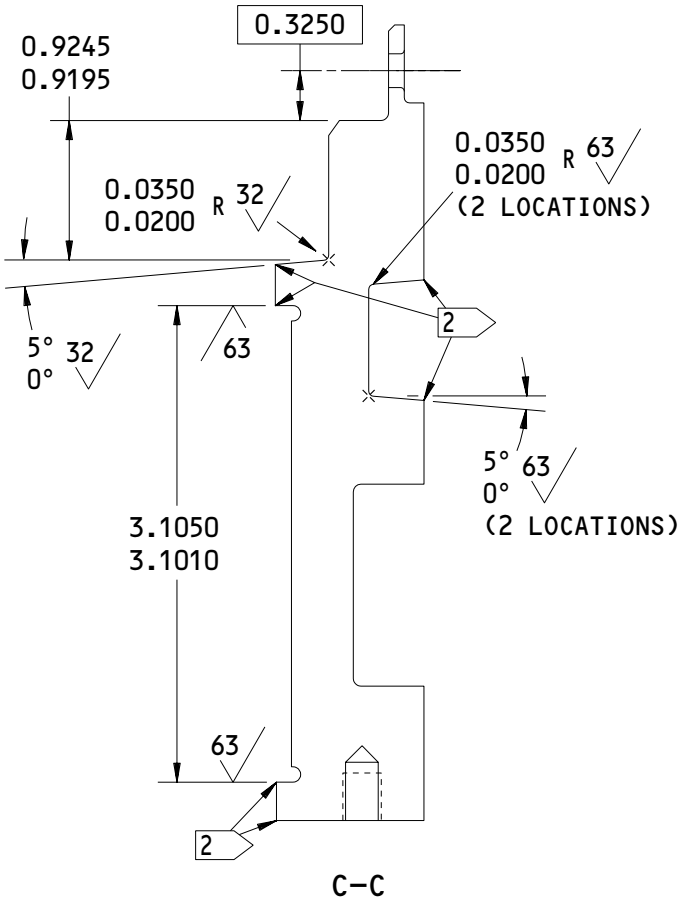
(1) If there are defects in the carrier material, replace the part.

(2) If the defects are only in the finish, send the part to Tiodize Company (V34568) to apply Tiodize Type 2 coating per AMS 2488. This is a vendor proprietary coating, to be applied only by this vendor.

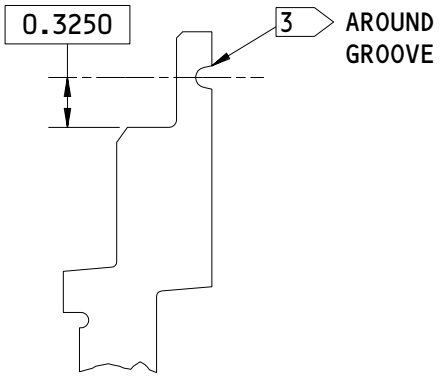


161T7156-1
Lower Half – Lower Bearing Carrier Repair
Figure 601 (Sheet 1)

K96116



C–C



D–D

1 > THE PART NUMBER IS FOUND HERE

2 > BREAK THE EDGE EQUIVALENT TO 0.005–0.010 R

3 > BREAK THE EDGE EQUIVALENT TO 0.005 R MAXIMUM

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

161T7156-1
Lower Half – Lower Bearing Carrier Repair
Figure 601 (Sheet 2)

K96117

UPPER BEARING CARRIER ASSEMBLY - REPAIR 7-1

161T7157-1

1. General

   A. This section has the necessary data to refinish the upper bearing carrier assembly (180).

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

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

   D. General repair details:

      (1) Material: Ti-6Al-4V

2. Bearing Refinish

   A. References

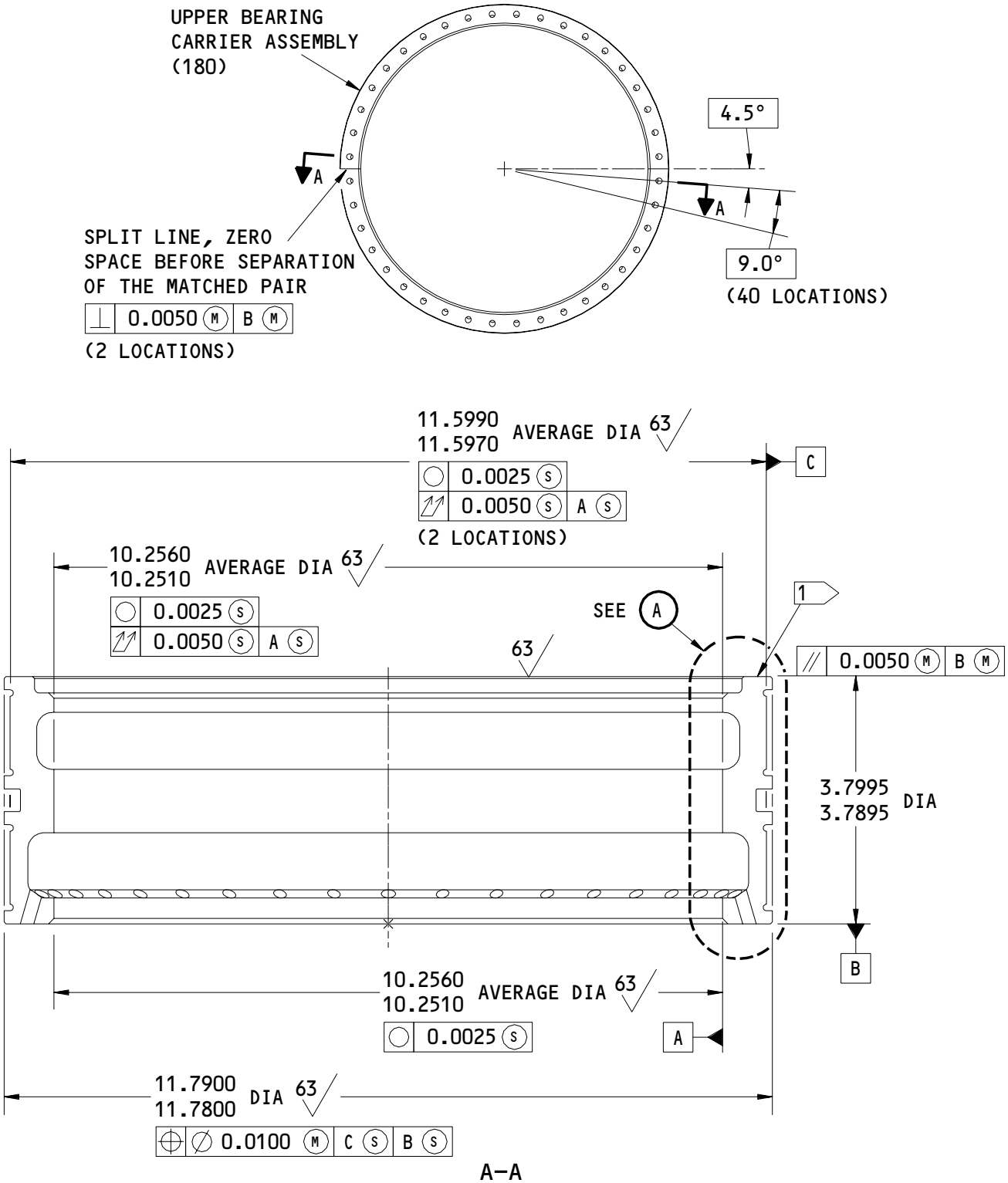
      (1) SOPM 20-30-03, General Cleaning Procedures

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

   B. Procedure (Fig. 601)

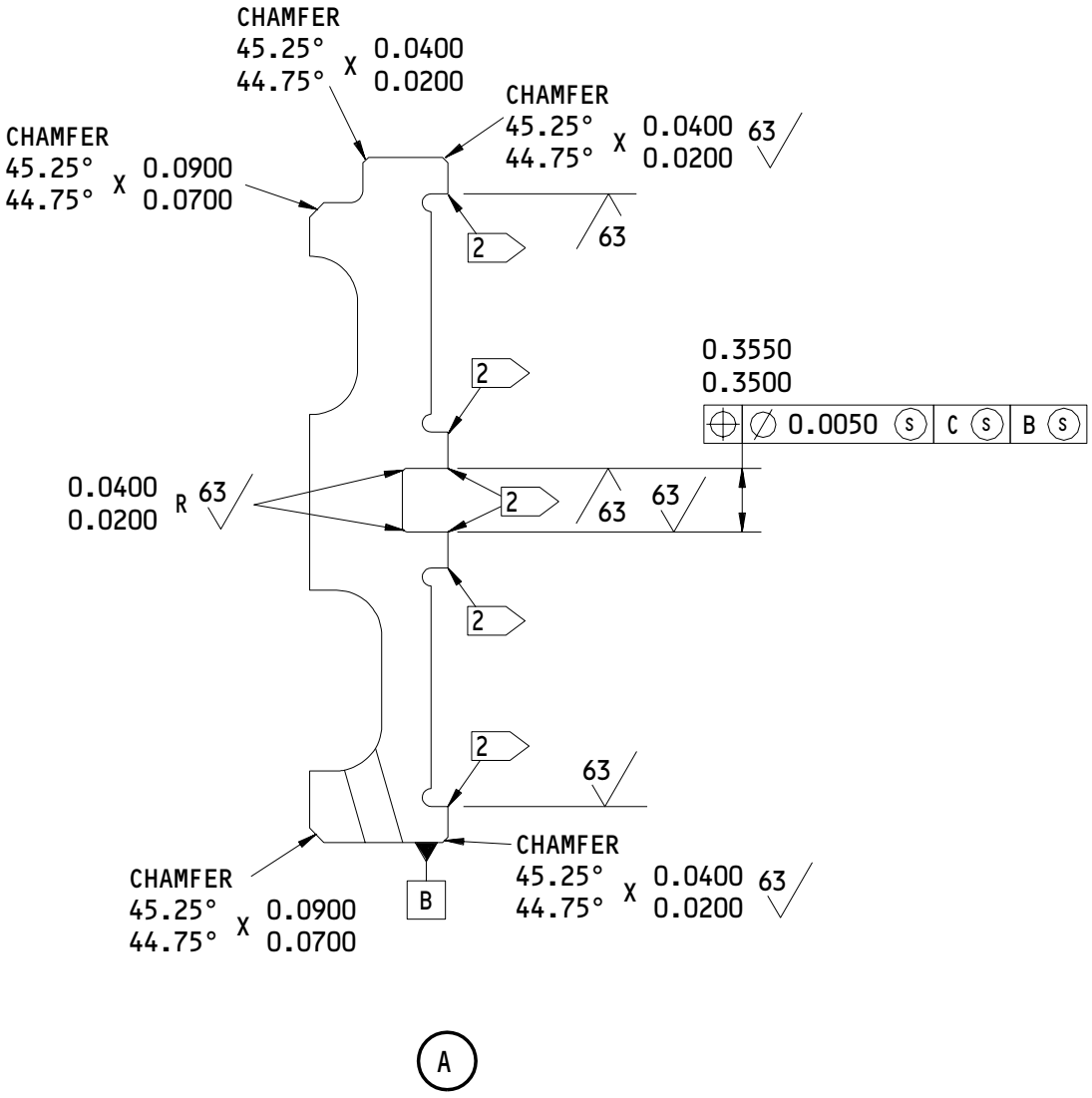
      (1) If you find defects in the carrier halves, replace the carrier as an assembly. The halves are a matched set, and are not available individually.

      (2) Apply no finish (F-25.01) to the upper bearing carrier assembly (180).



A–A

161T7157-1
Upper Bearing Carrier Assembly
Figure 601 (Sheet 1)



1 THE PART NUMBER AND THE SERIAL NUMBER CAN BE FOUND HERE ON EACH OF THE TWO HALVES OF THE UPPER BEARING CARRIER

2 BREAK SHARP EDGES EQUIVALENT TO 0.005–0.010 R

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

161T7157-1
Upper Bearing Carrier Assembly
Figure 601 (Sheet 2)

L07281

ASSEMBLY

1. General

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

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

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

2. Component Assembly

   A. Special Tools and Equipment

      NOTE: Equivalent equipment can be used.

      (1) Overhead Installation/Removal Equipment -- A32115

      (2) Shock Strut Equipment -- A32106

      (3) Gland Nut Wrench -- A32104-4 or -5

      (4) Lower Bearing Seal Replacement Equipment -- A32107

      (5) Assembly Fixture -- B32050-50

      (6) Extension Rod Tool -- TBD

   B. Consumable Materials

      NOTE: Equivalent material can be used.

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

      (2) D00467 Hydraulic Fluid -- BMS 3-32, Type 2 (SOPM 20-60-03)

      (3) D00589 Assembly Lubricant -- AFS-682 (SOPM 20-60-03)

      (4) G01505 Lockwire -- MS20995C32 (SOPM 20-60-04)

      (5) C00913 Corrosion Inhibiting Compound -- BMS 3-27 (SOPM 20-60-02)

      (6) A00226 Tamper Proof Putty -- BMS 8-45 (SOPM 20-60-02)

(7) C00032 Enamel -- BMS 10-60 (SOPM 20-60-02)

C. References

(1) SOPM 20-44-01, Application of Speical Purpose Coatings and Finishes

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

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

(4) SOPM 20-50-05, Application of Aluminum Foil and Other Markers

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

(6) SOPM 20-60-03, Lubricants

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

D. Lubrication

(1) Lubricate packings with hydraulic fluid or assembly lubricant (but not the spare seals). Also, lubricate the mating metal surfaces with hydraulic fluid or assembly lubricant during assembly.

(2) Keep the spare seals (45, 50) as dry as possible. Do not wet them with hydraulic fluid before or during installation. If necessary, you can use small amounts of assembly lube to help install these seals.

(3) Lubricate bolt shanks and threads, washer faces, and chrome-plated surfaces of pins and mating surfaces with BMS 3-33 grease.

E. Procedure

(1) Put the outer cylinder (450, 455) in a holding fixture or on a bench with vee blocks.

(2) Install the orifice support tube (285) in the outer cylinder (450, 455):

(a) Install the orifice plate (250) on the orifice tube support (285).

1) Put orifice plate (250) in retainer nut (255) and then install the nut on the orifice support tube (285).

2) Tighten the nut until there is no gap between the orifice plate and the orifice support tube. Then, if necessary, back off the nut to align holes for bolt (235).

3) Install bolt (235), washer (240) and nut (245).

(b) Install piston ring (230) on orifice tube support (285).

(c) Install nut (265) on orifice support tube (285).

(d) Install retainer ring (260) on orifice support tube (285):

1) Compress retainer ring (260) and tighten nut (265). Make sure that the retainer ring (260) is compressed between nut (265) and orifice support tube (285).

2) Loosen nut (265) to let retainer ring (260) expand into the groove of orifice support tube (285).

3) Tighten nut (2675) to 150-185 pound-feet.

(3) Push orifice support tube (285) and the attaching parts in the outer cylinder (450, 455) until it is approximately 1/8 inch from gainst the mating lip inside the outer cylinder. Apply MIL-C-11796 class 1 corrosion inhibiting compound to the upper surface and chamfer of the tube. (Overspray is permitted.) Then push the tube against the mating lip of the outer cylinder.

CAUTION: MAKE SURE THE RETAINER NUT (210) CAN GO BY RETAINER RING (205) AND THAT RETAINER RING (205) IS IN THE GROOVE OF THE INNER CYLINDER.

(4) Install nut (210) on orifice support tube (285). Tighten the nut to 150-185 pound-feet.

(5) Install parts inside inner cylinder assembly (95):

(a) Install the metering pin (225) in the inner cylinder (165):

1) Put metering pin (225) in the shock strut tool and install T-seal assembly (200) on the metering pin.

2) Push the metering pin (225) in the inner cylinder (165) until it is against the mating lip inside the inner cylinder.

3) Install nut (210) and the retainer ring (205) in the metering pin (225):

a) Apply hydraulic fluid to the threads of the nut.

b) Compress retainer ring (205) and tighten the nut. Make sure that retainer ring (205) is compressed between nut (220) and metering pin (225).

c) Loosen nut (220) to let retainer ring (205) expand into the groove of metering pin (225).

d) Tighten nut (220) to 150-185 pound-feet.

(6) Install the outer cylinder assembly (305, 310) on the inner cylinder assembly (95):

(a) Hang the outer cylinder (450, 455) in a sling.

(b) Put the inner cylinder (165) vertically in the holding fixture.

(c) Carefully lower the outer cylinder (450, 455) on the inner cylinder (165). Make sure the end of metering pin (225) goes through the hole in orifice plate (250).

(7) Install T-seal (50) and T-seal (55) on the lower bearing carrier lower half (40), as shown.

(8) Install the pins (70) on the lower bearing carrier lower half (40).

(9) Install lower bearings (80), ring assembly (60), packing (65), spare ring (45) and lower bearing (80), as shown.

(10) Install the spacer tube (90) on the inner cylinder (165).

(11) Install the spare backup rings (85).

(12) Install the upper bearing carrier assembly (180) on the inner cylinder assembly (95).

(a) Install the bearing carrier halves (185, 190) on the inner cylinder (165).

(b) Install the upper bearings (195) and the piston ring (175).

(13) Install the recoil valve (170) on the inner cylinder (165). Make sure the recoil valve moves freely.

WARNING: BMS 3-27 CORROSION INHIBITING COMPOUND CONTAINS SOLVENTS, CHROMATES AND A SMALL AMOUNT OF BOUND ASBESTOS. REFER TO APPLICABLE SAFETY STANDARDS FOR PRECAUTIONS.

CAUTION: BMS 3-27 COMPOUND IS USED ONLY IN STATIC JOINTS WHERE GREASE CANNOT BE APPLIED. BMS 3-27 COMPOUND IN DYNAMIC JOINTS WILL NOT LET THEM MOVE FREELY.

(14) Install gland nut (30) on outer cylinder (305, 310).

CAUTION: THE SCRAPER (35) MUST BE INSTALLED AWAY FROM THE LOWER BEARING (80).

(a) Install scraper (35) in the groove of gland nut (30), as shown.

(b) Apply a thin layer of BMS 3-27 corrosion preventive compound to the threads of the gland nut and the threads and thread relief of the outer cylinder.

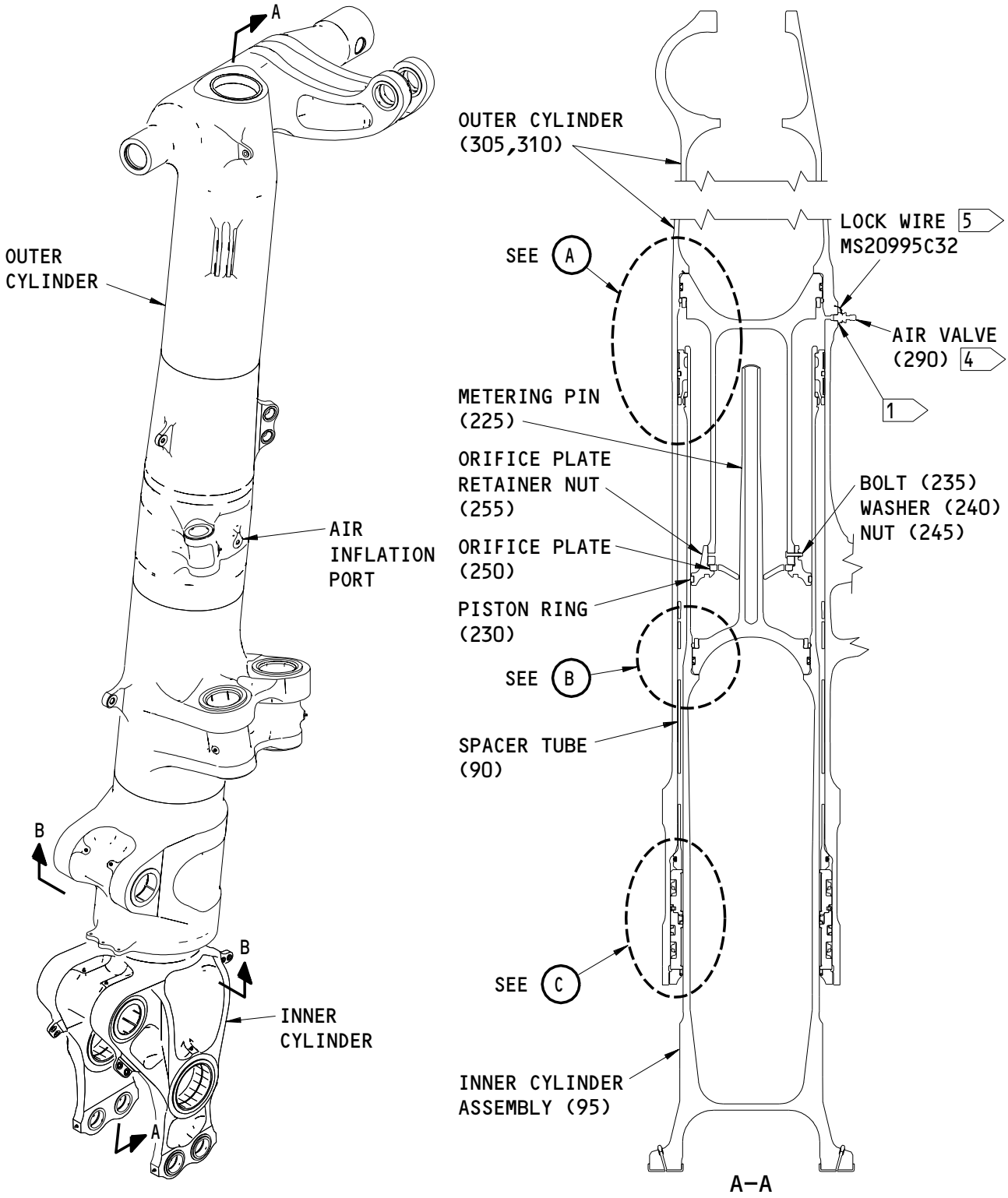
(c) Tighten gland nut (30) to 175-200 pound-feet. If necessary, loosen the gland nut to let you install lock tab (25).

(d) Apply a thin layer of BMS 3-33 grease to bolt (10) shanks and threads and washer faces (15).

(e) Install lock tab (25) on gland nut (30) and outer cylinder assembly (305, 310) with bolts (10), washers (15) and nuts (20).

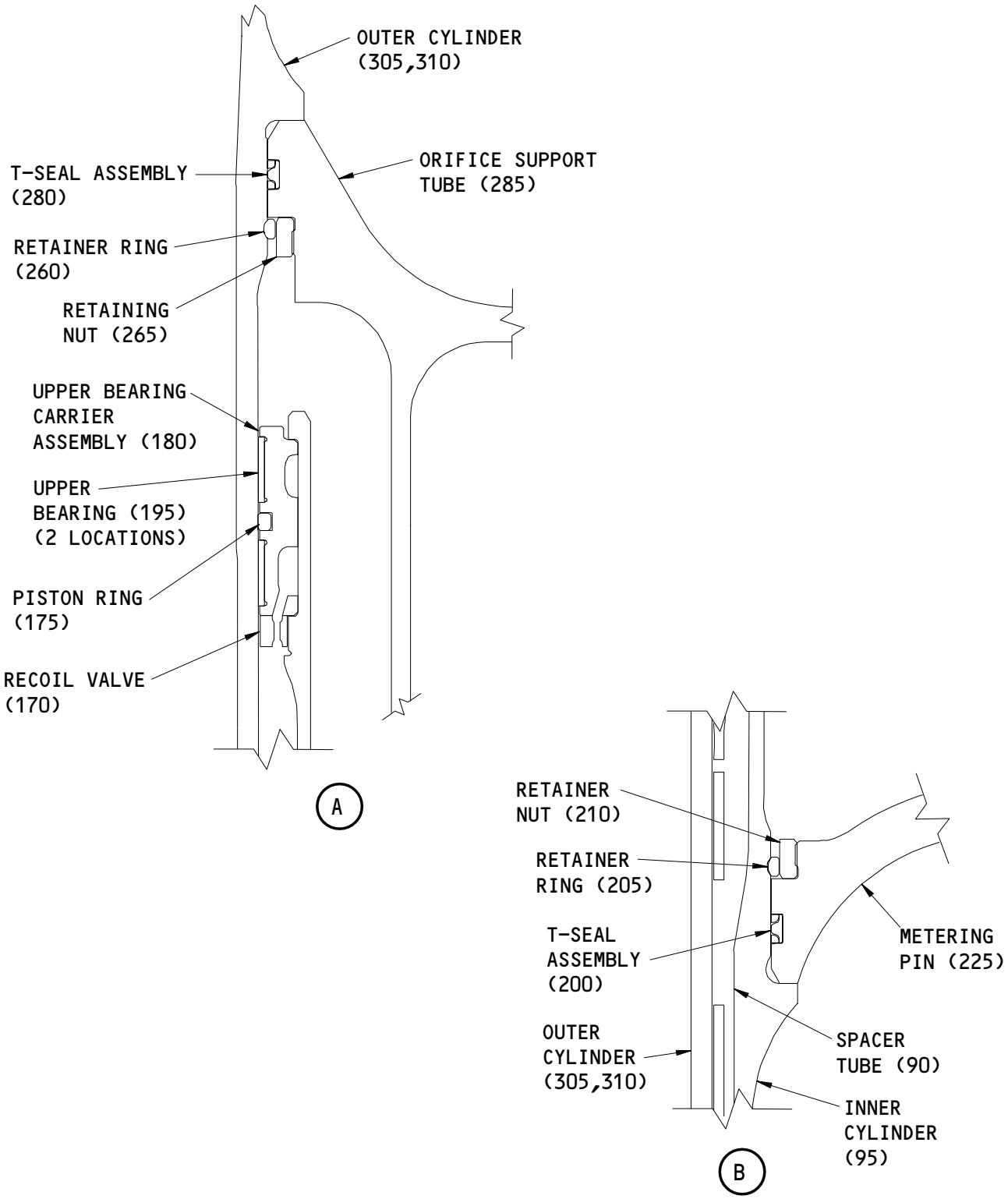
(f) Apply BMS 8-45 tamperproof putty to nuts (20) after assembly to make any external adjustment break the seal.

(15) Do the test of the shock strut. Refer to the TESTING and FAULT ISOLATION (32-11-33/101).



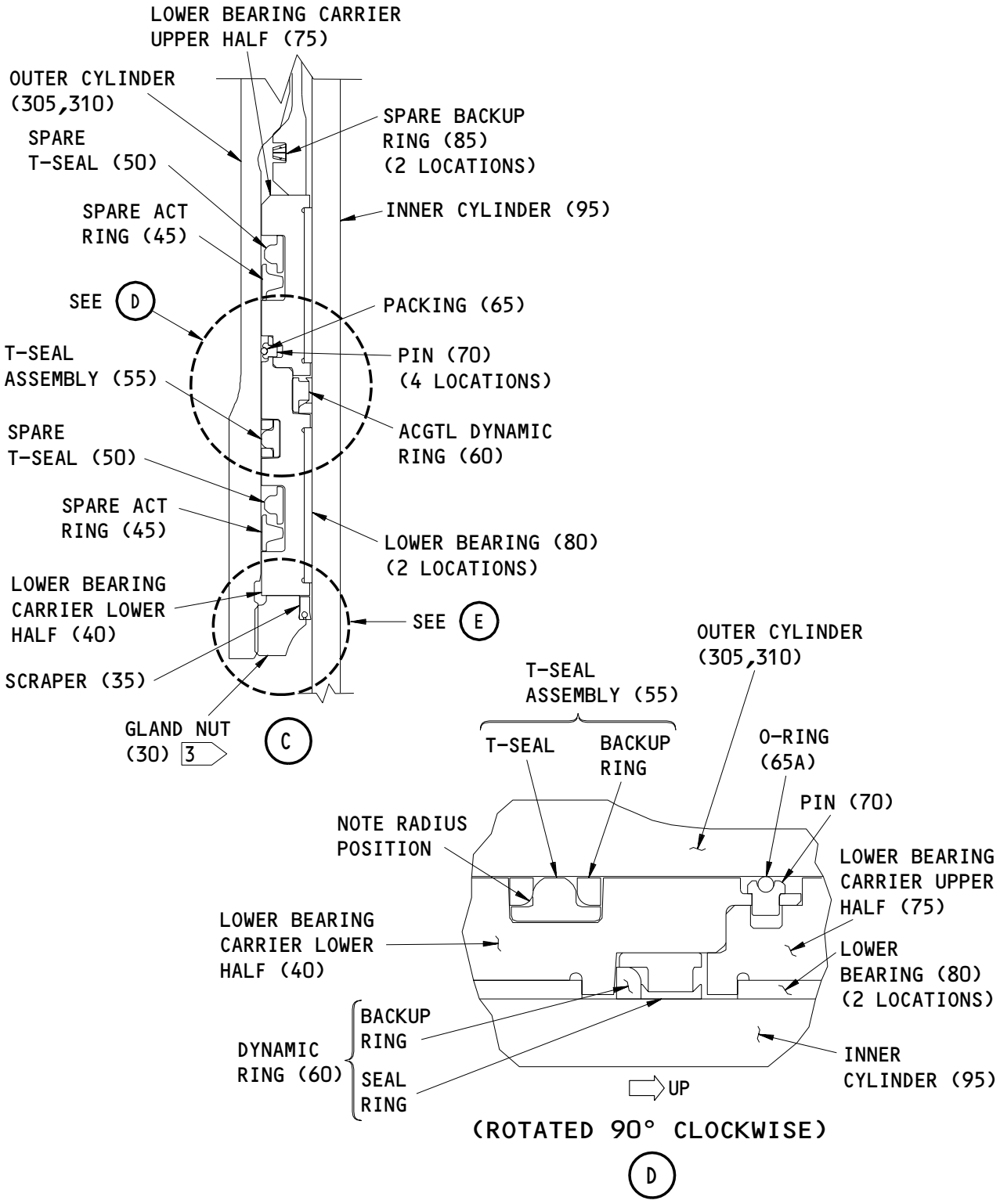
Assembly Details
Figure 701 (Sheet 1)

K96458



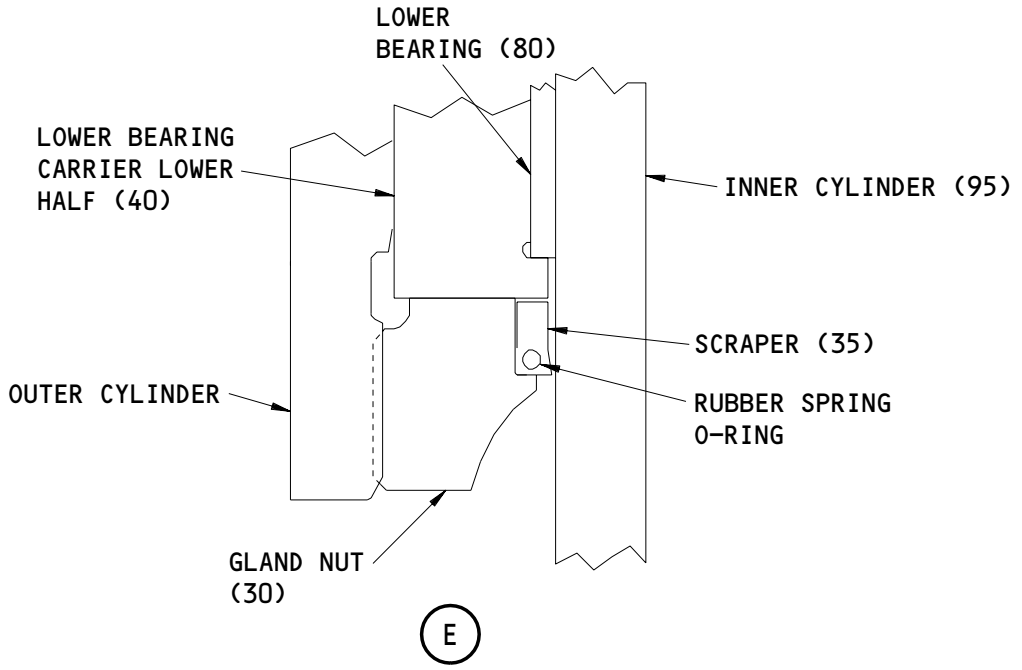
Assembly Details
Figure 701 (Sheet 2)

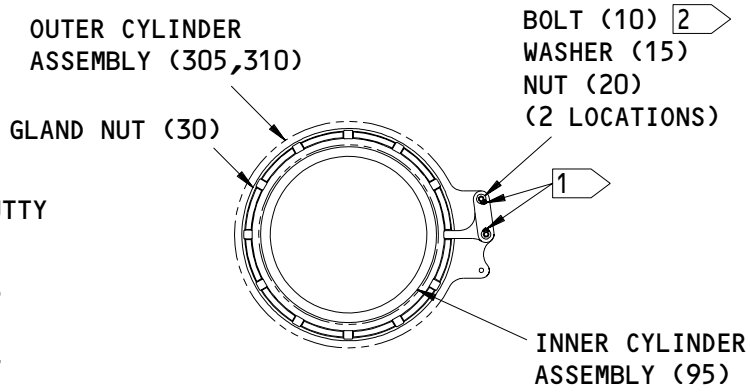
K96894



Assembly Details
Figure 701 (Sheet 3)

M26287





B-B

1 APPLY BMS 8-45 TAMPER PROOF PUTTY AFTER ASSEMBLY

2 APPLY A THIN LAYER OF BMS 3-33 GREASE BEFORE ASSEMBLY

3 APPLY A THIN LAYER OF BMS 3-27 CORROSION PREVENTIVE COMPOUND TO THREADS AND MATING SURFACES BEFORE ASSEMBLY

4 LUBRICATE THE THREADS WITH HYDRAULIC FLUID. TIGHTEN THE BODY OF THE AIR VALVE (290) TO 11-13 POUND-FEET. TIGHTEN THE SWIVEL NUT OF THE AIR VALVE (290) TO 5-7 POUND-FEET

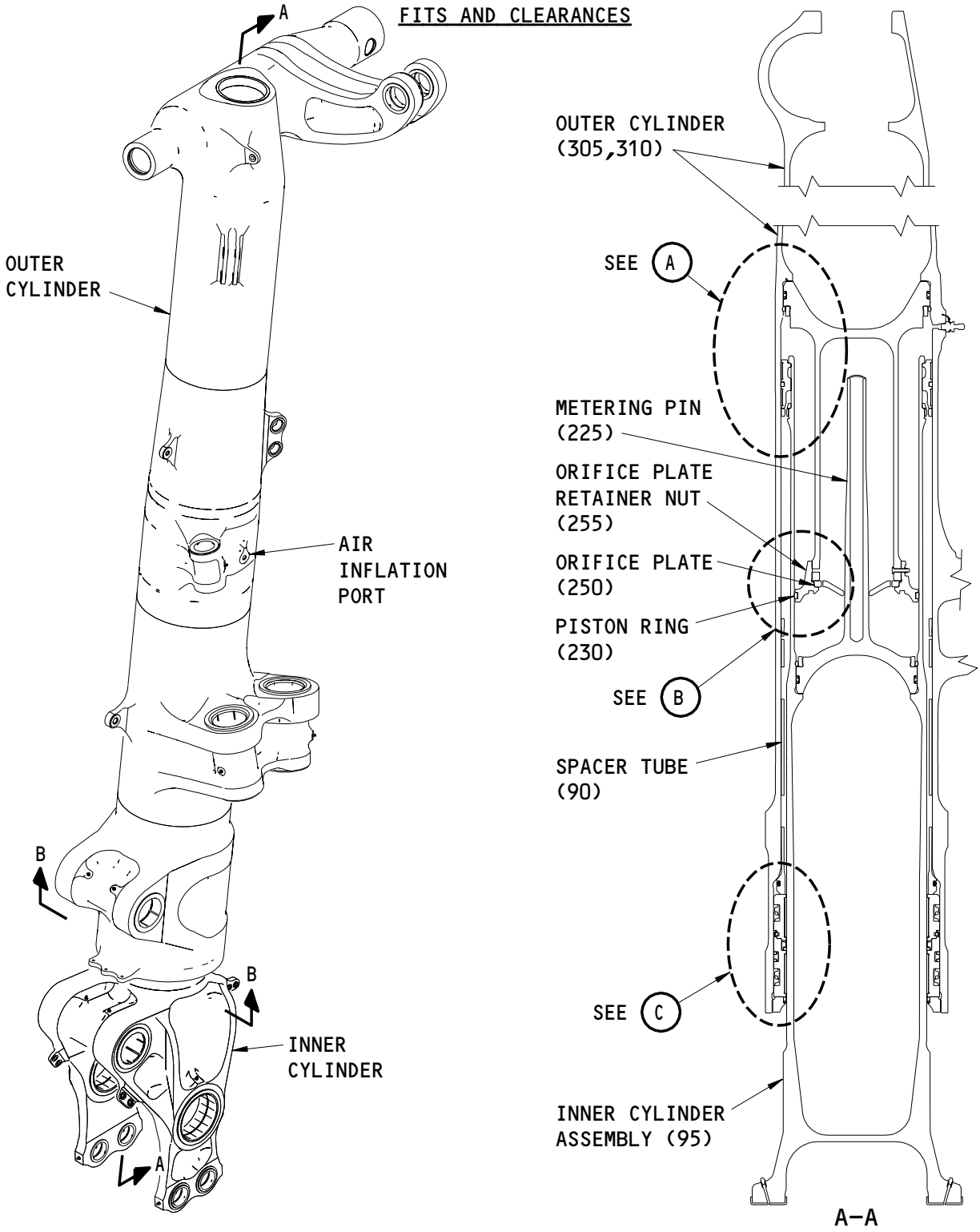
5 INSTALL THE LOCK WIRE BY THE DOUBLE-TWIST PROCEDURE (SOPM 20-50-02)

ITEM NUMBERS REFER TO IPL FIG. 1

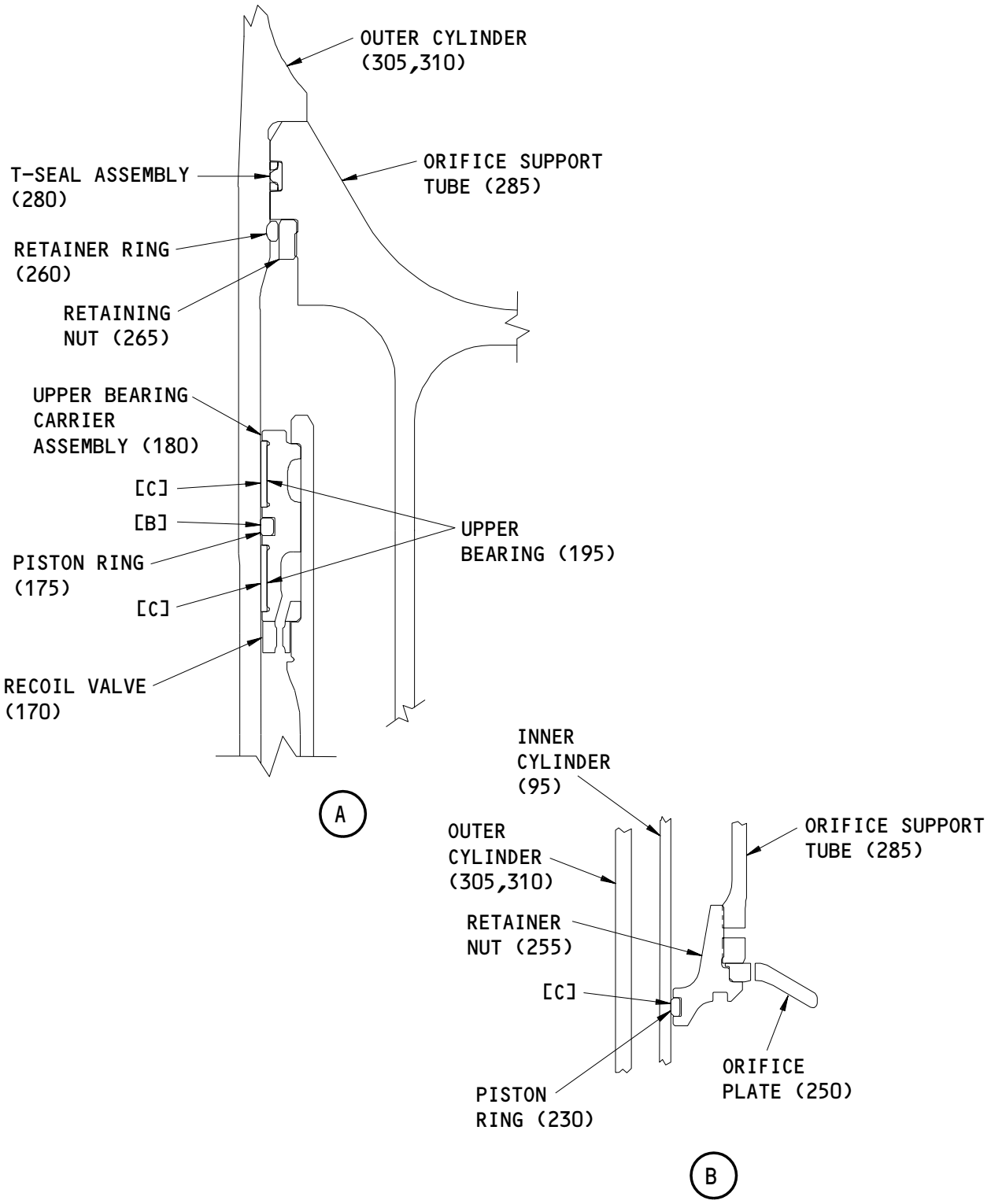
ALL DIMENSIONS ARE IN INCHES

Assembly Details
Figure 701 (Sheet 4)

K99162

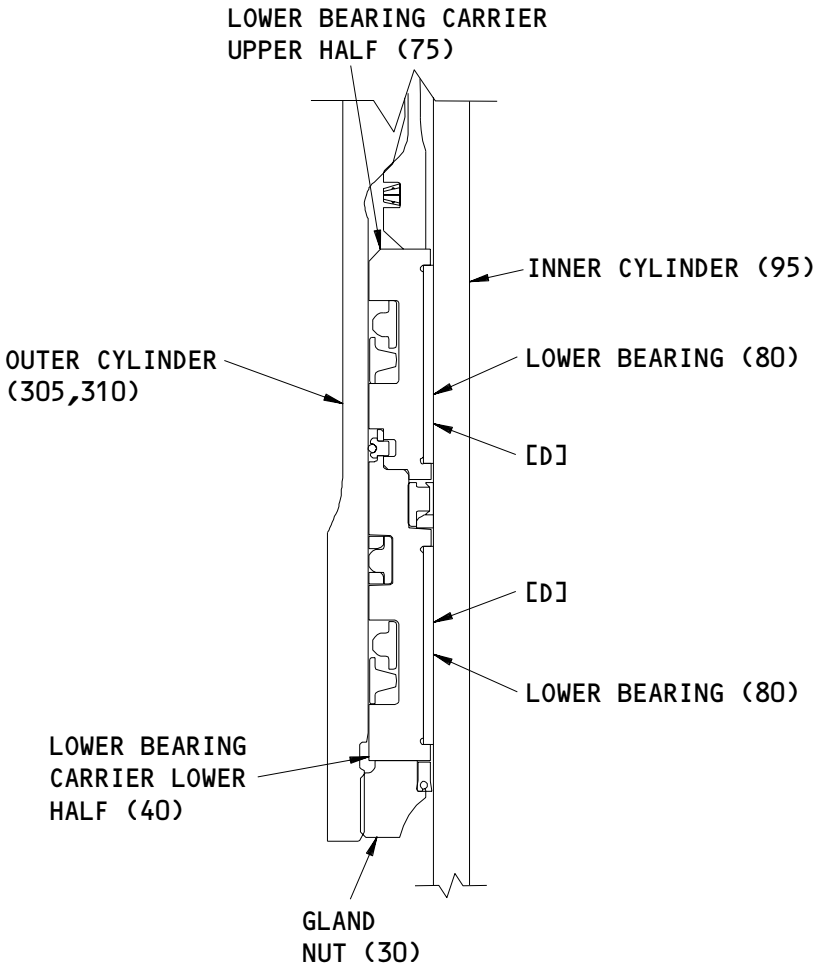


Fits and Clearances
Figure 801 (Sheet 1)



Fits and Clearances
Figure 801 (Sheet 2)

L00549



ITEM NUMBERS REFER TO IPL FIG. 1

Fits and Clearances
Figure 801 (Sheet 3)

M26321

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	305,310	11.8450	11.8500	---	---			---
	1	195	0.1190	0.1210			0.1160		
[B]	ID	305,310	11.8450	11.8500	0.0000				
	OD	175	11.8450	11.9100					
[C]	ID	95	9.7450	9.7500	0.0000				
	OD	230	9.7450	9.8100					
[D]	1	80	0.1190	0.1210	---	---	0.1160		
	OD	95	10.9840	10.9970					

* ALL DIMENSIONS ARE IN INCHES

1 WALL THICKNESS

Fits and Clearances
Figure 801 (Sheet 4)

L00529

REF IPL		NAME	TORQUE*	
FIG. NO.	ITEM NO.		POUND-INCHES	POUND-FEET
1	30	Gland Nut		175-200
1	210	Nut		150-185
1	265	Nut		150-185
1	290	Air Valve Body		11-13
1	290	Air Valve Nut		5-7

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

Torque Table
Figure 802

L00546

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

09257 BUSAK AND SHAMBAN INC SEALS DIV
2531 BREMER DR PO BOX 176
FORT WAYNE, INDIANA 46801
FORMERLY SHAMBAN, W S AND CO

11328 AEROQUIP SEE EATON AEROQUIP V00624

14397 FABER ENTERPRISES, INCORPORATED
6606 VARIEL AVE
CANOGA PARK, CALIFORNIA 91303-2808

14798 DEUTSCH CO METAL COMPONENTS DIV
14800 SOUTH FIGUEROA STREET
GARDENA, CALIFORNIA 90248-1719
FORMERLY WEATHERHEAD V79470 FOR AEROSPACE PRODUCTS

15653 FAIRCHILD FASTENERS KAYNAR PRODUCTS DIV
800 S STATE COLLEGE BLVD
FULLERTON, CALIFORNIA 92831-3001
FORMERLY VK6405 MICRODOT AEROSP LTD; FORMERLY KAYNAR TECH
KAYNAR DIV

30974 AEROFIT PRODUCTS INC
8531 WHITAKER STREET
BUENA PARK, CALIFORNIA 90621-3129

34568 TIODIZE COMPANY INC.
15701 INDUSTRY LANE
HUNTINGTON BEACH, CALIFORNIA 92649

5F573 GREENE TWEED AND CO INC
2075 DETWILER RD P.O. BOX 305
KULPSVILLE, PENNSYLVANIA 19443-0305

50948 PARKER-HANNIFIN CORP HUNTSVILLE AIRCRAFT FACILITY
9400 SOUTH MEMORIAL PARKWAY
HUNTSVILLE, ALABAMA 35802
FORMERLY PARKER-HANNIFIN CORP TUBE FITTINGS DIV

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

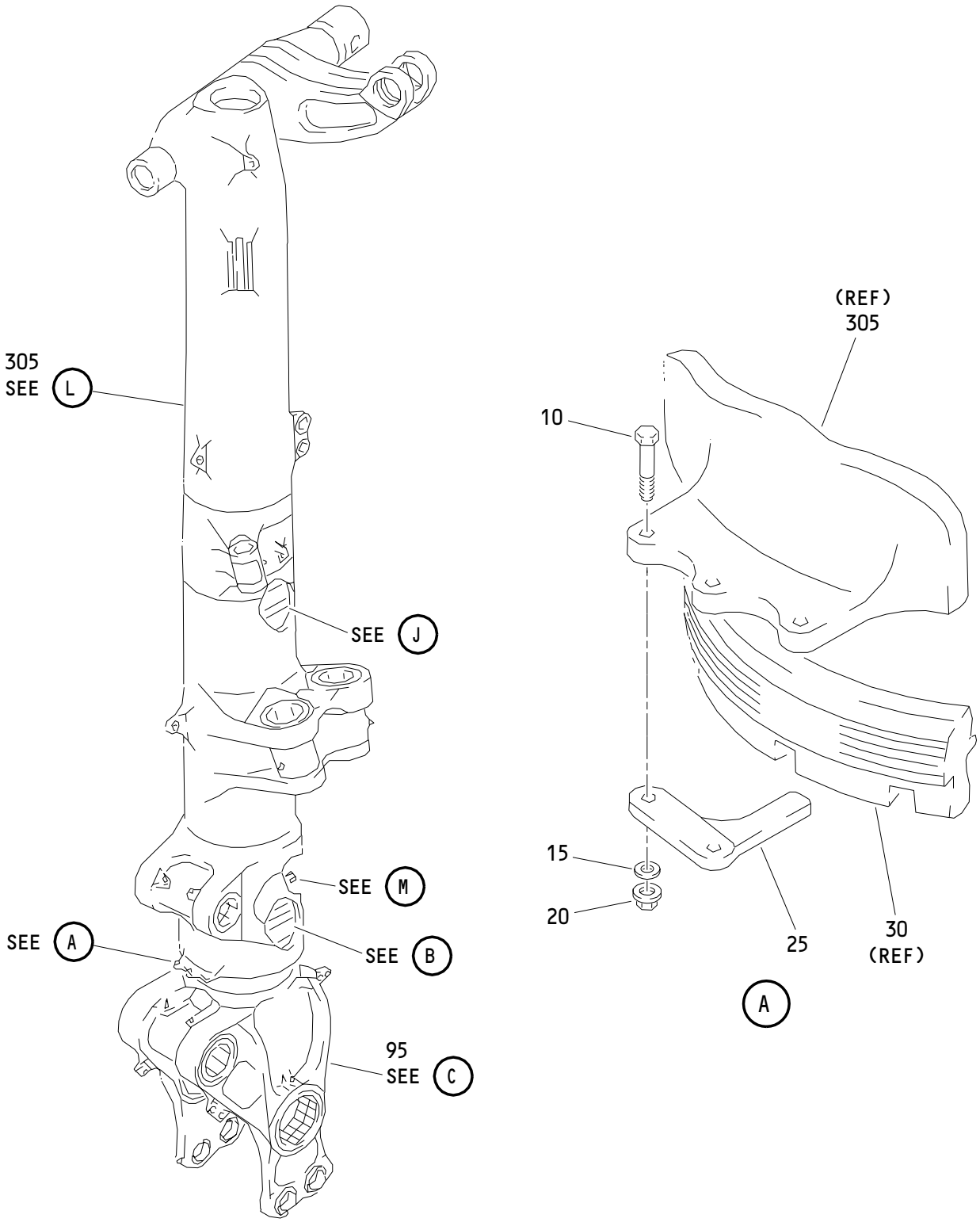
99240 CRISSAIR, INCORPORATED
38905 10TH STREET EAST
PALMDALE, CALIFORNIA 93550-3415
FORMERLY IN EL SEGUNDO, CALIFORNIA

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
AFP241-04JL		1	295	1
BACC14AD04JL		1	295	1
BACN10YR4CD		1	20	2
		1	245	1
BACW10BP4NDP		1	15	2
		1	240	1
BCREF142959		1	45A	2
BCREF15984		1	60	1
BCREF15985		1	85	2
DB0C14AD4JL		1	295	1
FER22661-04JL		1	295	1
H52732-4CD		1	20	2
		1	245	1
MS15004-1		1	155	8
		1	440	5
MS28775-178		1	65A	1
MS28778-6		1	67	1
MS28889-2		1	290	1
NAS6704-13		1	10	2
		1	235	1
PBZF0A0009		1	55	1
PBZF0A0010		1	280	1
PB22CM447AT29ND		1	200	1
PLH54CD		1	20	2
		1	245	1
S34706-3022		1	50	2
1C4048		1	300	1
161T1044-1		1	70	4
161T2874-35		1	150	4
161T2874-36		1	115	4
161T2874-37		1	120	4

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
161T2874-38		1	125	4
161T2874-39		1	110	4
161T2874-40		1	105	4
161T2874-41		1	135	2
161T2874-42		1	140	2
161T2874-45		1	410	1
161T2874-46		1	430	1
161T2874-47		1	405	1
161T2874-48		1	415	1
161T2874-49		1	420	1
161T2874-50		1	425	1
161T2874-51		1	380	1
161T2874-52		1	375	1
161T2874-53		1	340	1
161T2874-54		1	335	1
161T2874-55		1	325	2
161T2874-56		1	330	2
161T2874-57		1	385	1
161T2874-58		1	390	1
161T2874-59		1	365	2
161T2874-60		1	370	2
161T2874-61		1	360	2
161T2874-62		1	355	2
161T2874-63		1	350	4
161T2874-64		1	345	4
161T2874-65		1	315	1
161T2874-66		1	320	4
161T2875-10		1	435A	2
161T2875-11		1	395A	1
161T2875-12		1	400A	1
161T2875-13		1	130A	4
161T2875-14		1	100A	2
161T2875-5		1	130	4
161T2875-6		1	100	2
161T2875-7		1	435	2

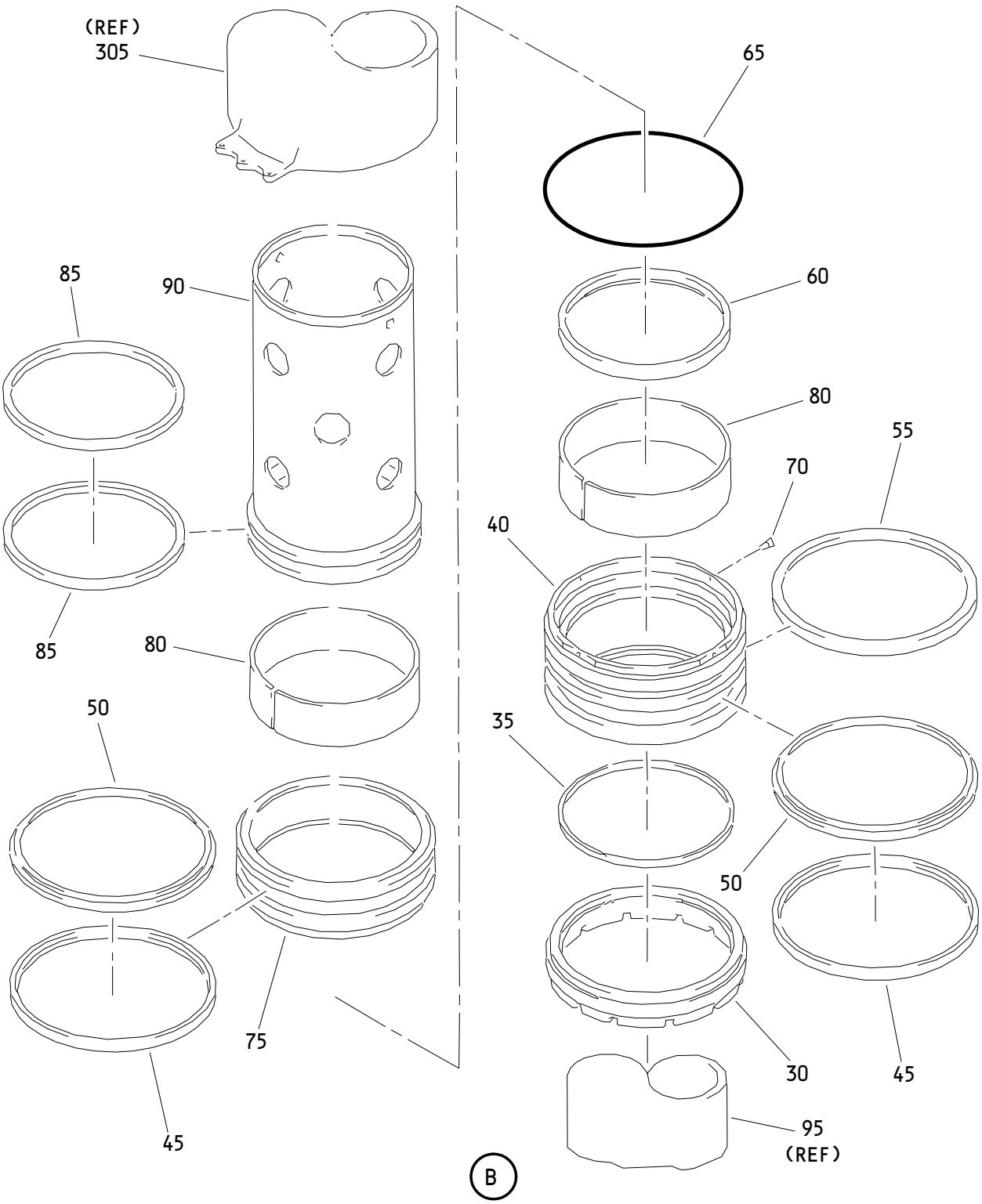
PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
161T2875-8		1	395	1
161T2875-9		1	400	1
161T2881-1		1	145	4
161T7010-1		1	445	5
161T7100-11		1	1C	RF
161T7100-12		1	5B	RF
161T7100-3		1	1A	RF
161T7100-4		1	5	RF
161T7100-7		1	1B	RF
161T7100-8		1	5A	RF
161T7110-1		1	305	1
161T7110-2		1	310	1
161T7110-3		1	450	1
161T7110-4		1	455	1
161T7110-5		1	305A	1
161T7110-6		1	310A	1
161T7120-1		1	95	1
161T7120-2		1	165	1
161T7120-3		1	95A	1
161T7150-1		1	30	1
161T7151-1		1	75	1
161T7152-1		1	80	2
161T7153-1		1	90	1
161T7154-1		1	170	1
161T7155-1		1	195	2
161T7156-1		1	40	1
161T7157-1		1	180	1
161T7157-2		1	190	1
161T7157-3		1	185	1
161T7158-1		1	205	1
161T7159-1		1	210	1
161T7159-2		1	220	1
161T7160-1		1	225	1
161T7162-1		1	260	1
161T7163-1		1	265	1
161T7163-2		1	275	1
161T7164-1		1	285	1
161T7166-1		1	230	1
161T7167-1		1	175	1
161T7168-1		1	250	1

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
161T7169-1		1	255	1
161T7171-1		1	25	1
161W7010-1		1	160	8
162T1518-1		1	215	1
		1	270	1
2-02813-04JL		1	295	1
265-71101-160-6		1	60	1
295-71101-000-5		1	85	2
295-71101-965		1	45	2
295-71101-965-0		1	45A	2
353-45103-330G		1	35	1
353-45104-330G		1	35A	1
4690009-04JL		1	295	1
7447MT160N		1	200A	1
7451MTE160N		1	280A	1
7716MT160N		1	55A	1

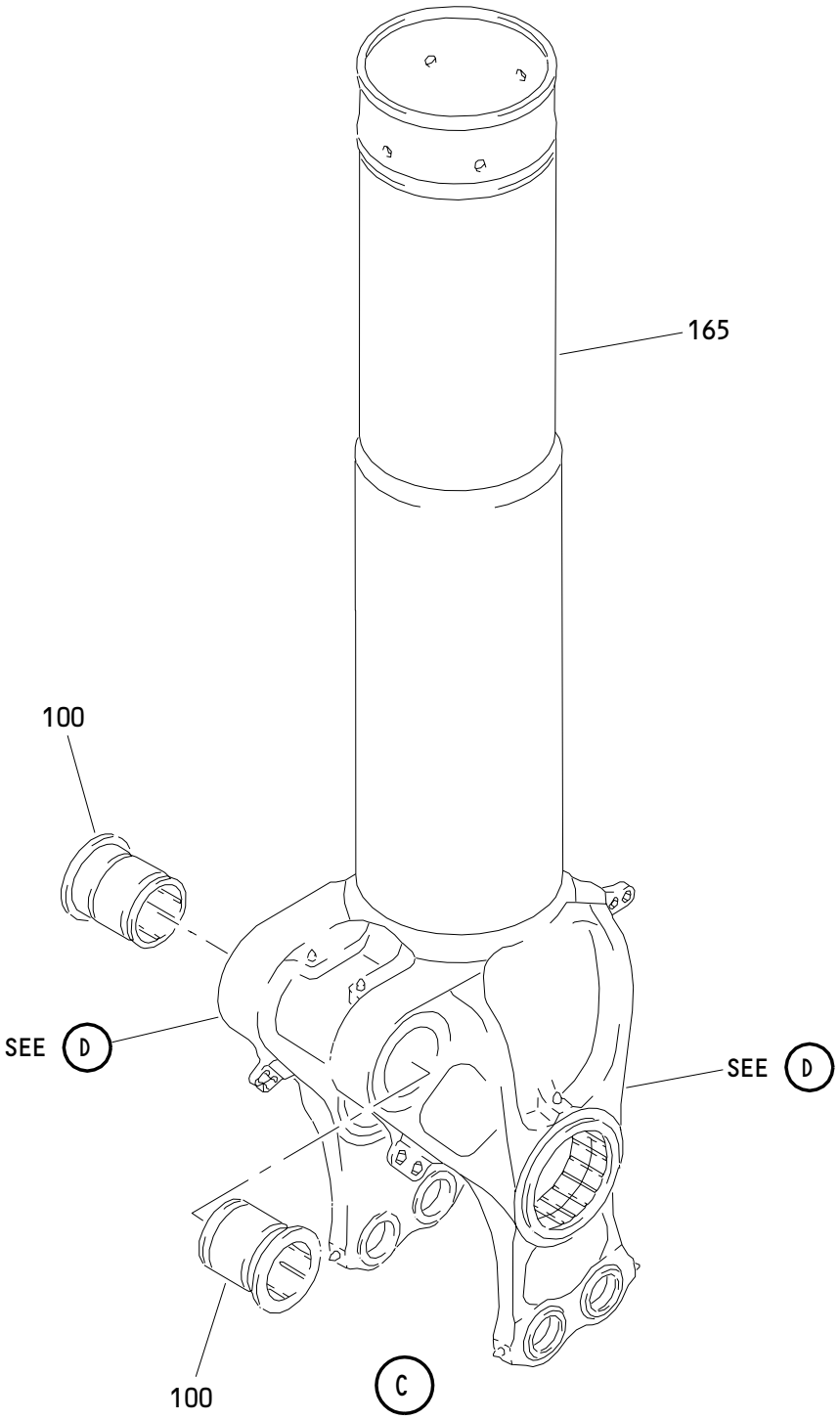


Main Landing Gear Shock Strut Assembly
Figure 1 (Sheet 1)

K38926

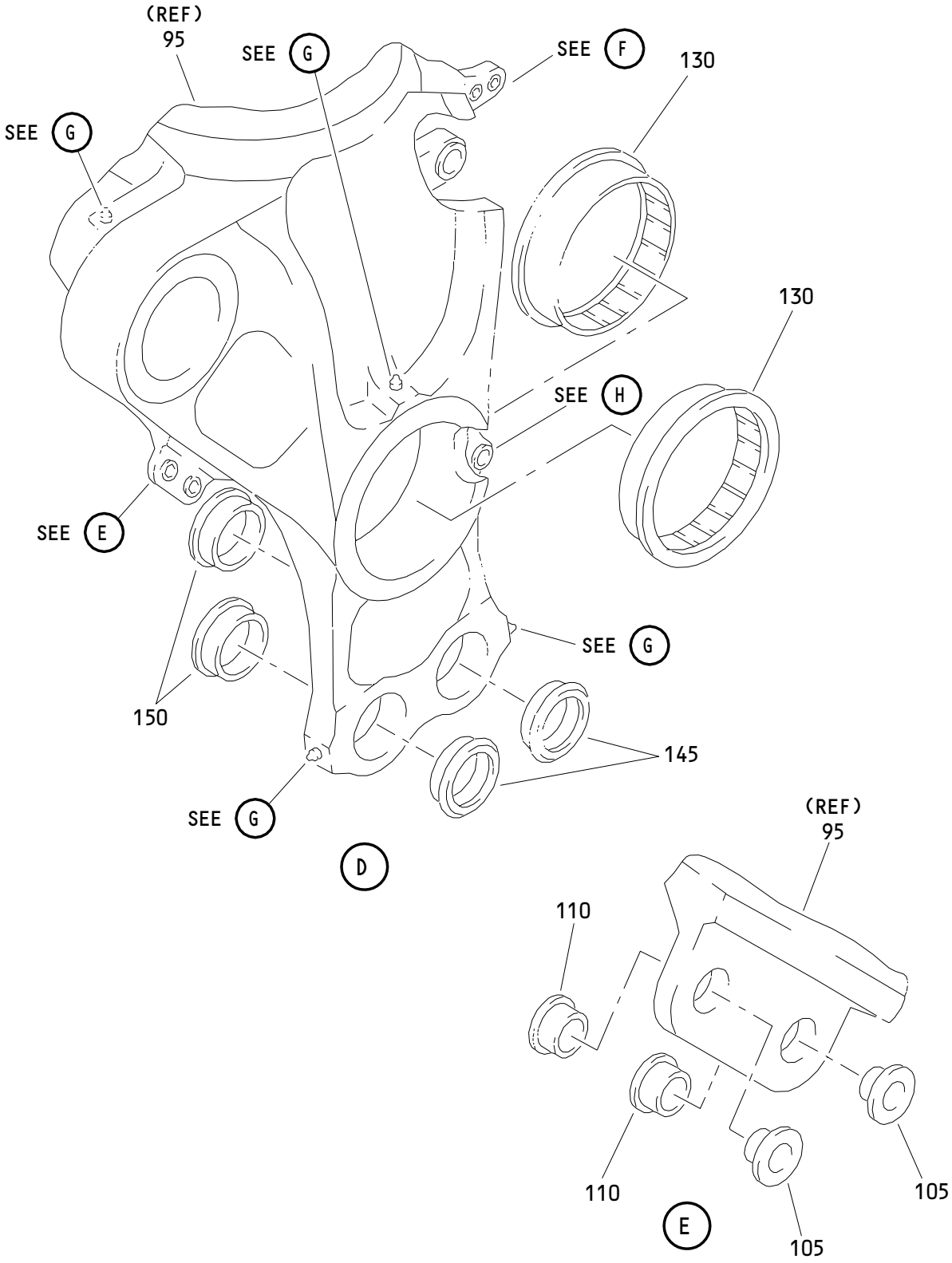


Main Landing Gear Shock Strut Assembly
Figure 1 (Sheet 2)



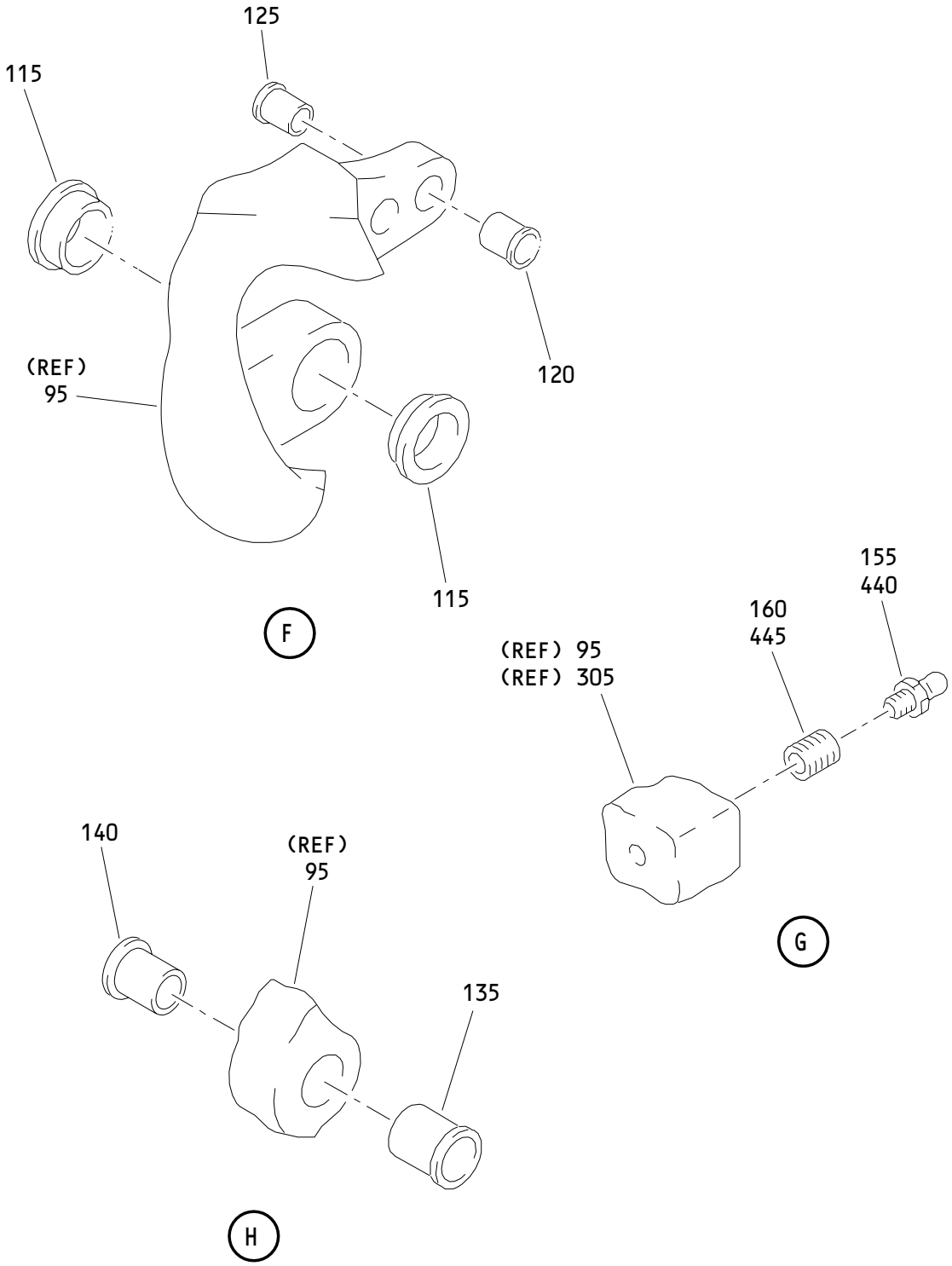
Main Landing Gear Shock Strut Assembly
Figure 1 (Sheet 3)

K38950



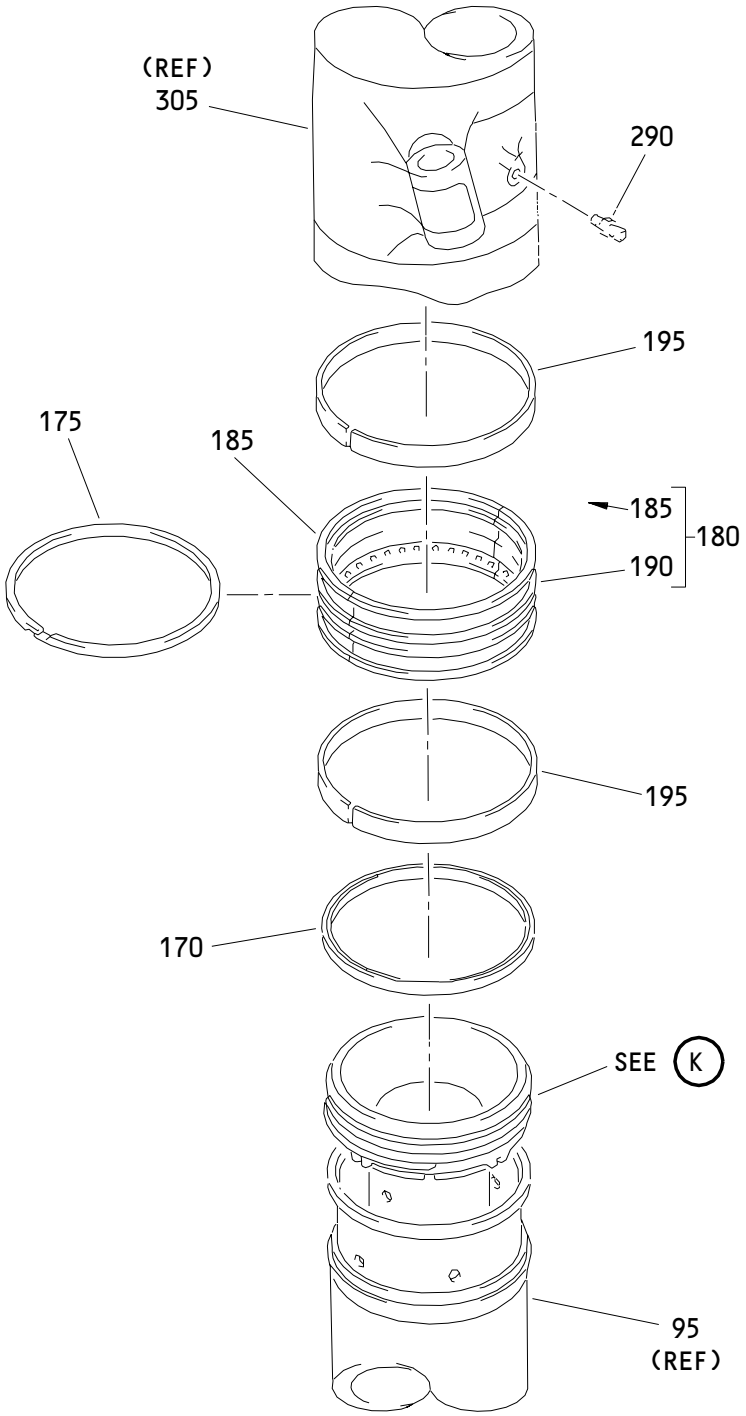
Main Landing Gear Shock Strut Assembly
Figure 1 (Sheet 4)

K38956



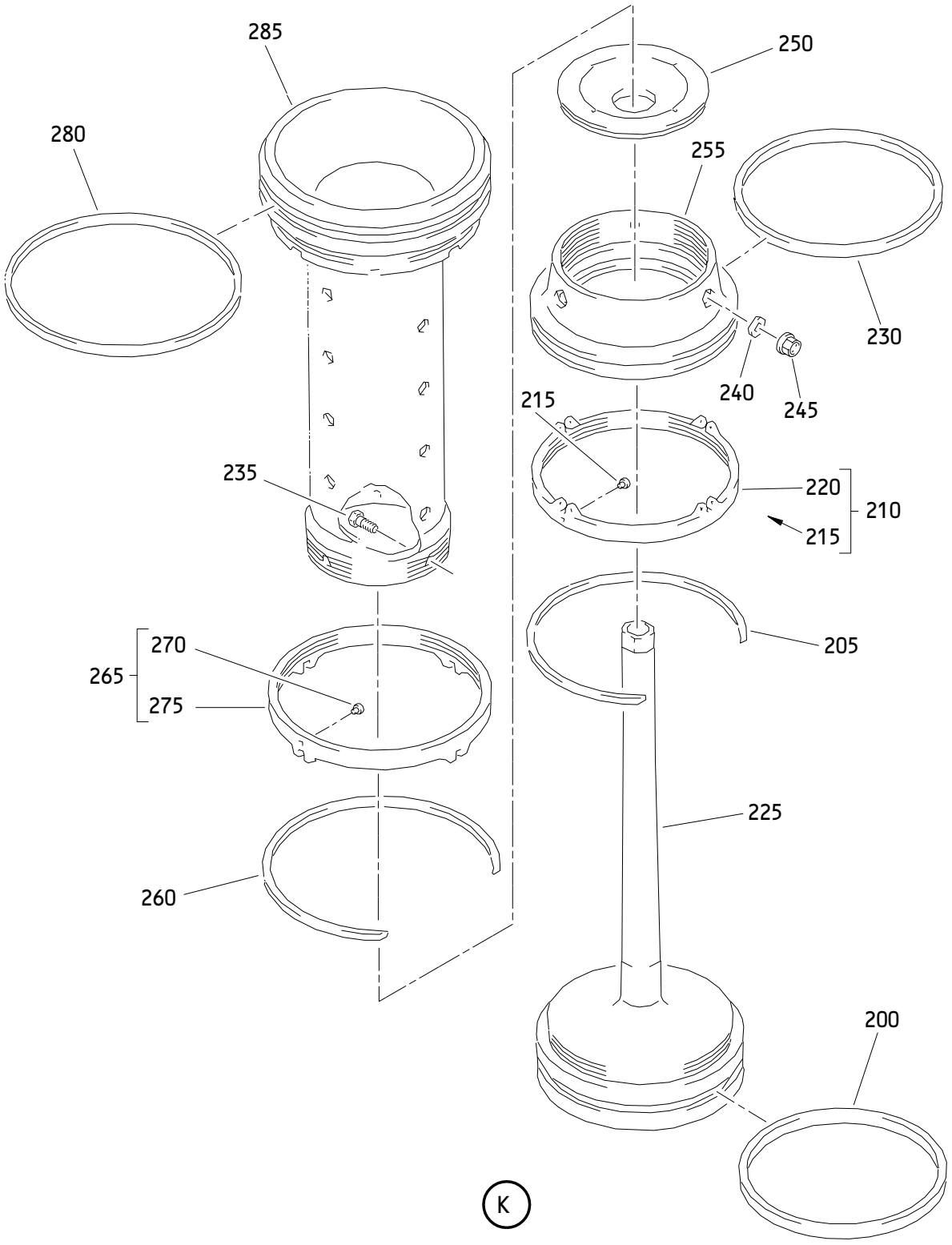
Main Landing Gear Shock Strut Assembly
Figure 1 (Sheet 5)

K38982

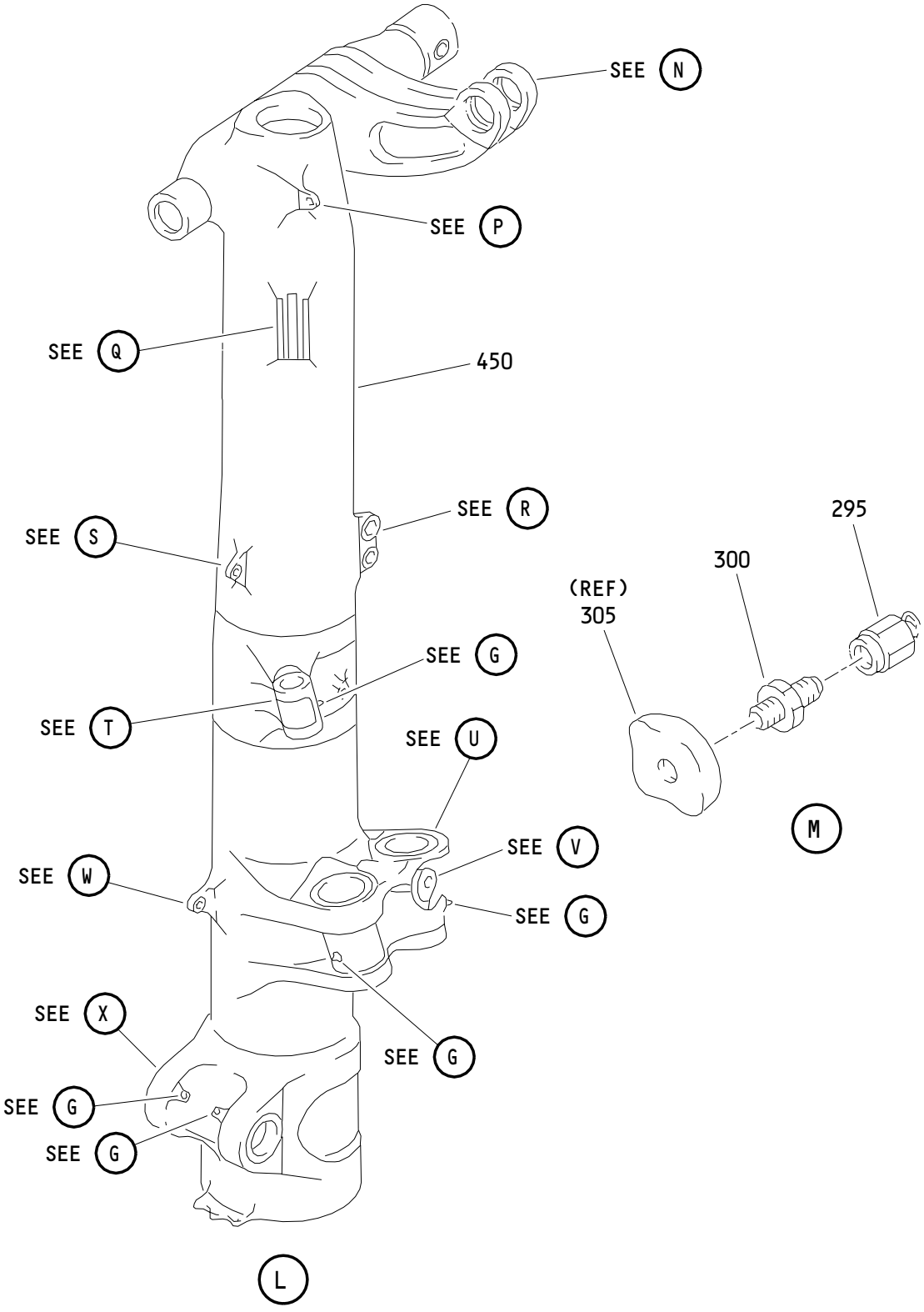


Main Landing Gear Shock Strut Assembly
Figure 1 (Sheet 6)

K38994

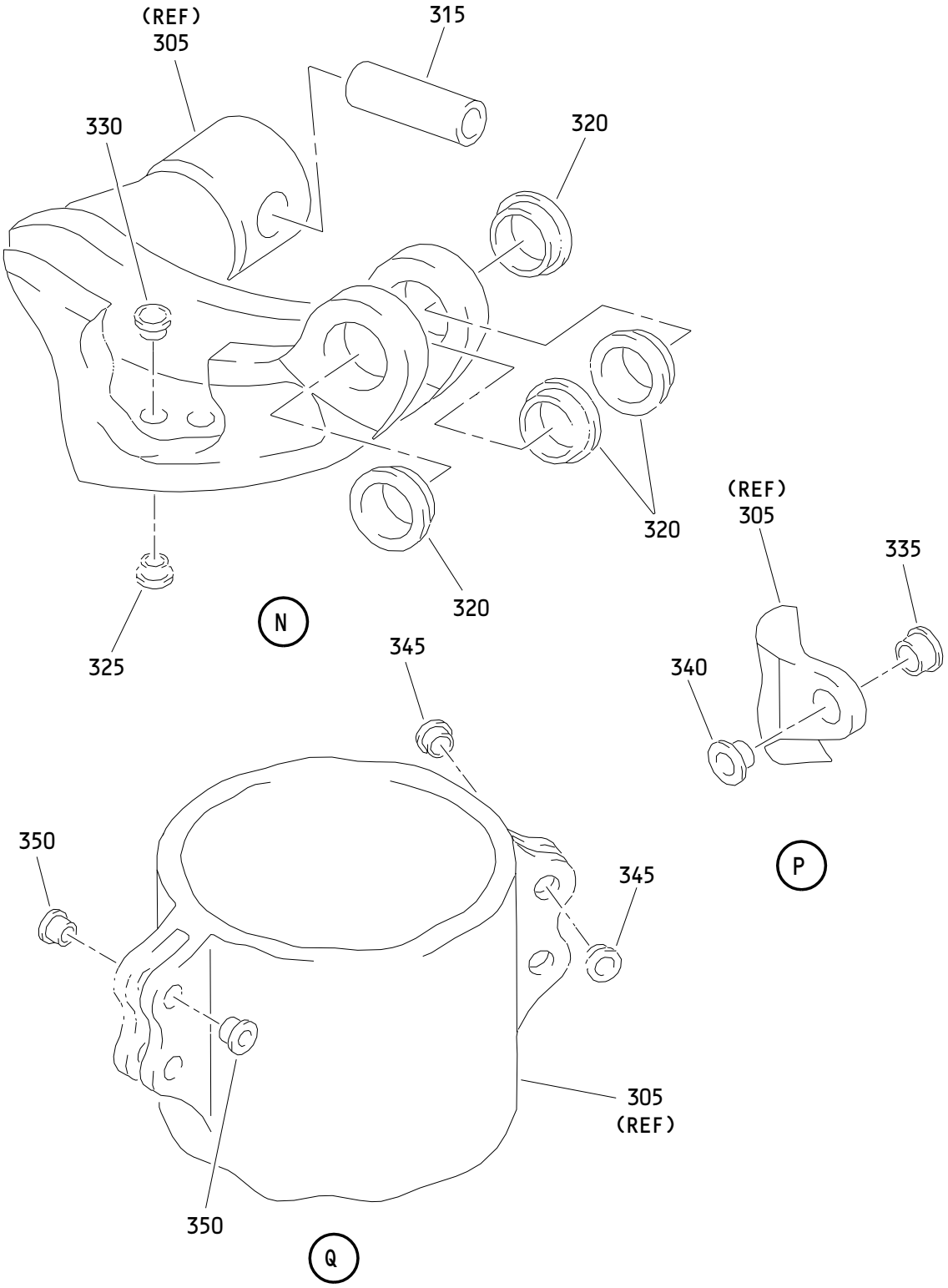


Main Landing Gear Shock Strut Assembly
Figure 1 (Sheet 7)



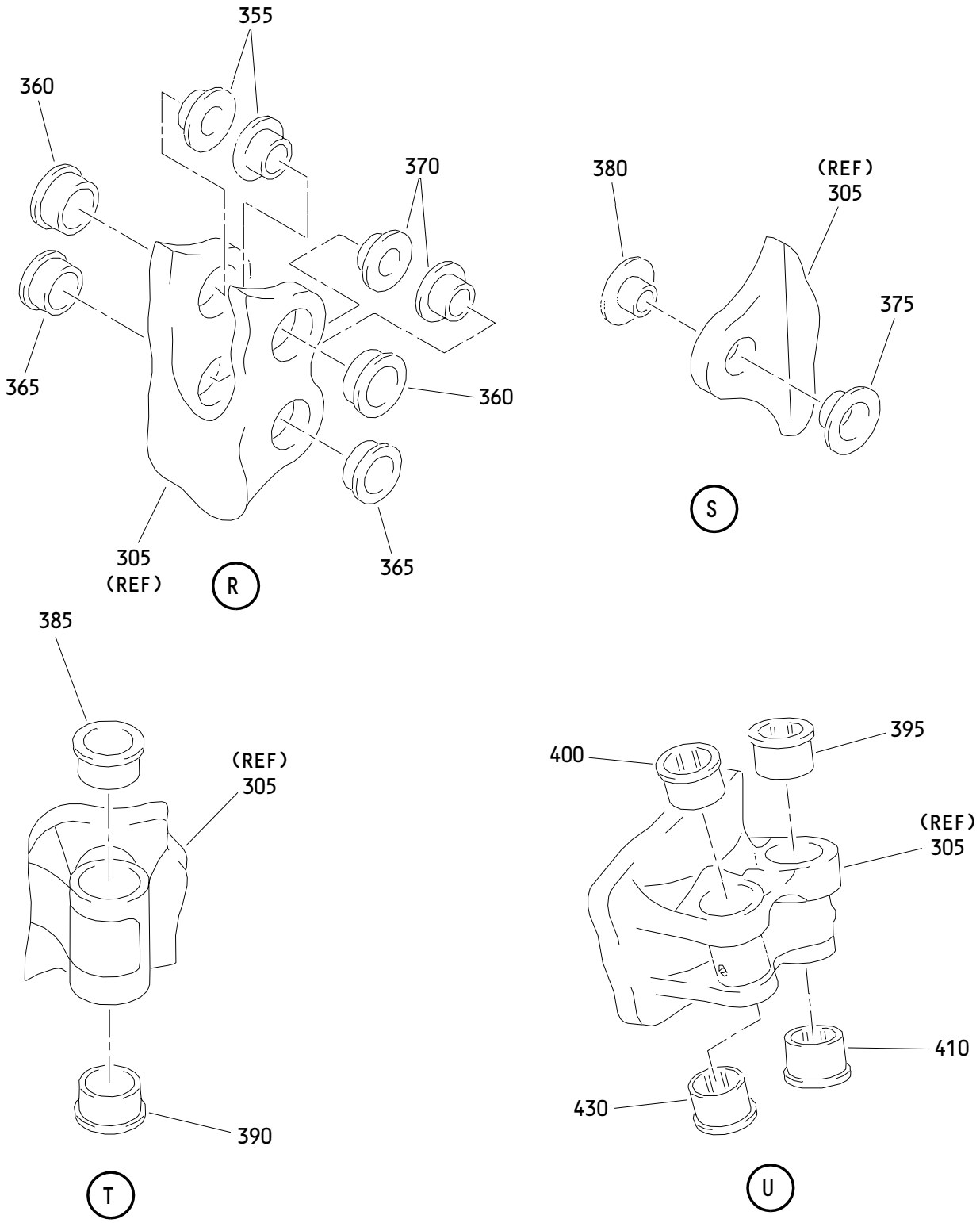
Main Landing Gear Shock Strut Assembly
Figure 1 (Sheet 8)

K39033

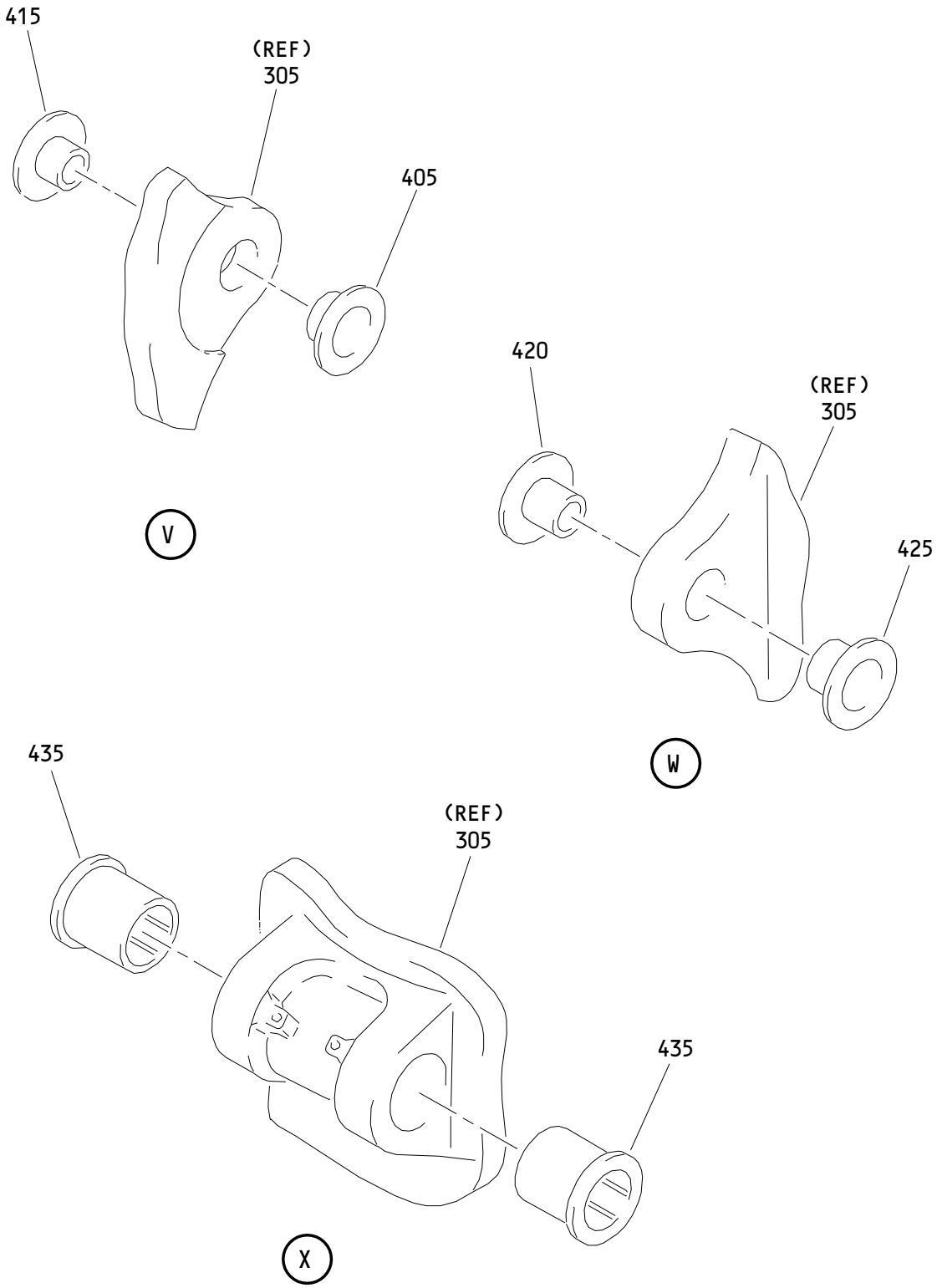


Main Landing Gear Shock Strut Assembly
Figure 1 (Sheet 9)

K39108



Main Landing Gear Shock Strut Assembly
Figure 1 (Sheet 10)



Main Landing Gear Shock Strut Assembly
Figure 1 (Sheet 11)

K39320

	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
	-1A	161T7100-3		STRUT ASSY-SHOCK	A	RF
R	-1B	161T7100-7		STRUT ASSY-SHOCK	C	RF
R	-1C	161T7100-11		STRUT ASSY-SHOCK	E	RF
	-5	161T7100-4		STRUT ASSY-SHOCK	B	RF
R	-5A	161T7100-8		STRUT ASSY-SHOCK	D	RF
R	-5B	161T7100-12		STRUT ASSY-SHOCK	F	RF
	10	NAS6704-13		.BOLT		2
	15	BACW10BP4NDP		.WASHER		2
	20	H52732-4CD		.NUT- (V15653) (SPEC BACN10YR4CD) (OPT PLH54CD (V62554))		2
	25	161T7171-1		.TAB-LOCK		1
	30	161T7150-1		.NUT-GLAND		1
	35	353-45103-330G		.SCRAPER (V5F573) (OPT ITEM 35A)		1
	-35A	353-45104-330G		.SCRAPER- (V5F573) (OPT ITEM 35)		1
	40	161T7156-1		.CARRIER-LWR HALF BEARING		1
	45	295-71101-965		.RING-ACT SPARE (V5F573)	A-D	2
R	45A	BCREF142959		.RING-ACT SPARE (V5F573) (295-71101-965-0000)	E,F	2
	50	S34706-3022		.T SEAL-ELASTOMER (V09257)		2
	55	PBZF0A0009		.T SEAL ASSY- (V09257) (OPT ITEM 55A)		1
	-55A	7716MT160N		.T SEAL ASSY- (V5F573) (OPT ITEM 55)		1

	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
	60	BCREF15984		.RING-ACGTL DYNAMIC (V5F573) (265-71101-160-6060)		1
	65	MS28775-128		DELETED		
R	65A	MS28775-178		.O-RING		1
R	67	MS28778-6		.PACKING-PREFORMED		1
	70	161T1044-1		.PIN		4
	75	161T7151-1		.CARRIER-UPR HALF BEARING		1
	80	161T7152-1		.BEARING-LWR		2
	85	BCREF15985		.RING-BACKUP SPARE (V5F573) (295-71101-000-5511)		2
	90	161T7153-1		.TUBE-SPACER		1
	95	161T7120-1		.CYLINDER ASSY-INNER	A,B	1
R	-95A	161T7120-3		.CYLINDER ASSY-INNER	C-F	1
	100	161T2875-6		..BUSHING	A,B	2
R	-100A	161T2875-14		..BUSHING	C-F	2
	105	161T2874-40		..BUSHING		4
	110	161T2874-39		..BUSHING		4
	115	161T2874-36		..BUSHING		4
	120	161T2874-37		..BUSHING		4
	125	161T2874-38		..BUSHING		4
	130	161T2875-5		..BUSHING	A,B	4
R	-130A	161T2875-13		..BUSHING	C-F	4
	135	161T2874-41		..BUSHING		2
	140	161T2874-42		..BUSHING		2
	145	161T2881-1		..BUSHING		4
	150	161T2874-35		..BUSHING		4
	155	MS15004-1		..FITTING-LUBE		8
	160	161W7010-1		..INSERT-THREADED		8
	165	161T7120-2		..CYLINDER-INNER		1
	170	161T7154-1		.VALVE		1
	175	161T7167-1		.RING-PISTON		1
	180	161T7157-1		.CARRIER ASSY-UPR BRG		1
	185	161T7157-3		..CARRIER-HALF		1
	190	161T7157-2		..CARRIER-HALF		1
	195	161T7155-1		.BEARING-UPR		2
	200	PB22CM447AT29ND		.T SEAL ASSY-METERING PIN (V09257) (OPT ITEM 200A)		1
	-200A	7447MT160N		.T SEAL ASSY-METERING PIN (V5F573) (OPT ITEM 200)		1
	205	161T7158-1		.RING-RETAINER METERING PIN		1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
210	161T7159-1		.NUT ASSY-RETAINER		1
215	162T1518-1		..PLUG-LOCKING		1
220	161T7159-2		..NUT-GLAND		1
225	161T7160-1		.PIN-METERING		1
230	161T7166-1		.RING-PISTON		1
235	NAS6704-13		.BOLT		1
240	BACW10BP4NDP		.WASHER		1
245	H52732-4CD		.NUT- (V15653) (SPEC BACN10YR4CD) (OPT PLH54CD (V62554))		1
250	161T7168-1		.PLATE-ORIFICE		1
255	161T7169-1		.NUT-RETAINER ORIFICE PLATE		1
260	161T7162-1		.RING-RETAINER ORIFICE SPRT TUBE		1
265	161T7163-1		.NUT ASSY-RETAINER ORIFICE SPRT		1
270	162T1518-1		..PLUG-LOCKING		1
275	161T7163-2		..NUT-GLAND		1
280	PBZF0A0010		.T SEAL ASSY-ORIFICE SPRT TUBE (V09257) (OPT ITEM 280A)		1
-280A	7451MTE160N		.T SEAL ASSY-ORIFICE SPRT TUBE (V5F573) (OPT ITEM 280)		1
285	161T7164-1		.TUBE-ORIFICE SPRT		1

	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
	290	MS28889-2		.VALVE-AIR		1
	295	AFP241-04JL		.CAP ASSY- (V30974) (SPEC BACC14AD04JL) (OPT DB0C14AD4JL (V14798)) (OPT FER22661-04JL (V14397)) (OPT 2-02813-04JL (V11328)) (OPT 4690009-04JL (V50948))		1
	300	1C4048		.VALVE-CHECK (V99240)		1
	305	161T7110-1		.CYLINDER ASSY-OUTER	A	1
R	-305A	161T7110-5		.CYLINDER ASSY-OUTER	C,E	1
	-310	161T7110-2		.CYLINDER ASSY-OUTER	B	1
R	-310A	161T7110-6		.CYLINDER ASSY-OUTER	D,F	1
	315	161T2874-65		..BUSHING		1
	320	161T2874-66		..BUSHING		4
	325	161T2874-55		..BUSHING		2
	330	161T2874-56		..BUSHING		2
	335	161T2874-54		..BUSHING		1
	340	161T2874-53		..BUSHING		1
R	345	161T2874-64		..BUSHING		4
	350	161T2874-63		..BUSHING		4
	355	161T2874-62		..BUSHING		2
	360	161T2874-61		..BUSHING		2
	365	161T2874-59		..BUSHING		2
	370	161T2874-60		..BUSHING		2
	375	161T2874-52		..BUSHING		1
	380	161T2874-51		..BUSHING		1
	385	161T2874-57		..BUSHING		1

	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
	390	161T2874-58		..BUSHING		1
	395	161T2875-8		..BUSHING	A,B	1
R	-395A	161T2875-11		..BUSHING	C-F	1
	400	161T2875-9		..BUSHING	A,B	1
R	-400A	161T2875-12		..BUSHING	C-F	1
	405	161T2874-47		..BUSHING		1
	410	161T2874-45		..BUSHING		1
	415	161T2874-48		..BUSHING		1
	420	161T2874-49		..BUSHING		1
	425	161T2874-50		..BUSHING		1
	430	161T2874-46		..BUSHING		1
	435	161T2875-7		..BUSHING	A,B	2
R	-435A	161T2875-10		..BUSHING	C-F	2
	440	MS15004-1		..FITTING-LUBE		5
	445	161T7010-1		..INSERT-THREADED		5
	450	161T7110-3		..CYLINDER-OUTER	A,C,E	1
	-455	161T7110-4		..CYLINDER-OUTER	B,D,F	1

- Item Not Illustrated