TO: ALL HOLDERS OF MAIN LANDING GEAR SIDE BRACE DOWNLOCK ACTUATOR ASSEMBLY
COMPONENT MAINTENANCE MANUAL 32-32-29

REVISION NO. 2 DATED MAR 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
CONTENTS 1 101-102 301-302 701,703-704 901	Added tool callouts.
CONTENTS 1 101,106-107 301 501 701-706	Added clarifications and updated callouts.

BOEING

COMPONENT
MAINTENANCE MANUAL

MAIN LANDING GEAR
SIDE BRACE DOWN LOCK ACTUATOR ASSEMBLY

PART NUMBER 273T6251-1

COMPONENT MAINTENANCE MANUAL
WITH
ILLUSTRATED PARTS LIST

K09882

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

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TEMPORARY REVISION AND SERVICE BULLETIN RECORD

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

PAGE	DATE	CODE
32-32-29		
TITLE PAGE		
1	JUL 01/99	01
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TR & SB RECORD		
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*301	MAR 01/01	01.1
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REPAIR-GENERAL		
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603	JUL 01/00	01.101
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602	JUL 01/00	01.1
603	JUL 01/00	01.1
604	BLANK	
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*701	MAR 01/01	01.1
*702	MAR 01/01	01.1
*703	MAR 01/01	01.1
*704	MAR 01/01	01.1
*705	MAR 01/01	01.1
*706	MAR 01/01	01.1
707	JUL 01/00	01.1
708	BLANK	
FITS AND CLEARANCES		
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802	JUL 01/99	01
803	JUL 01/99	01
804	JUL 01/99	01
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SPECIAL TOOLS		
*901	MAR 01/01	01.1
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1001	JUL 01/99	01
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1004	BLANK	
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*[1] 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 SIDE BRACE DOWNLOCK ACTUATOR ASSEMBLY

DESCRIPTION AND OPERATION

1. Description

   A. The downlock actuator assembly for the side brace has a CRES barrel, a one piece CRES piston/piston rod and a CRES rod end.

2. Operation

   A. The downlock actuator assembly extends with hydraulic pressure to lock the side brace in the over center position. The side brace is held in the over center position with springs and the actuator. The actuator retracts with hydraulic pressure to unlock the side brace from the over center position.

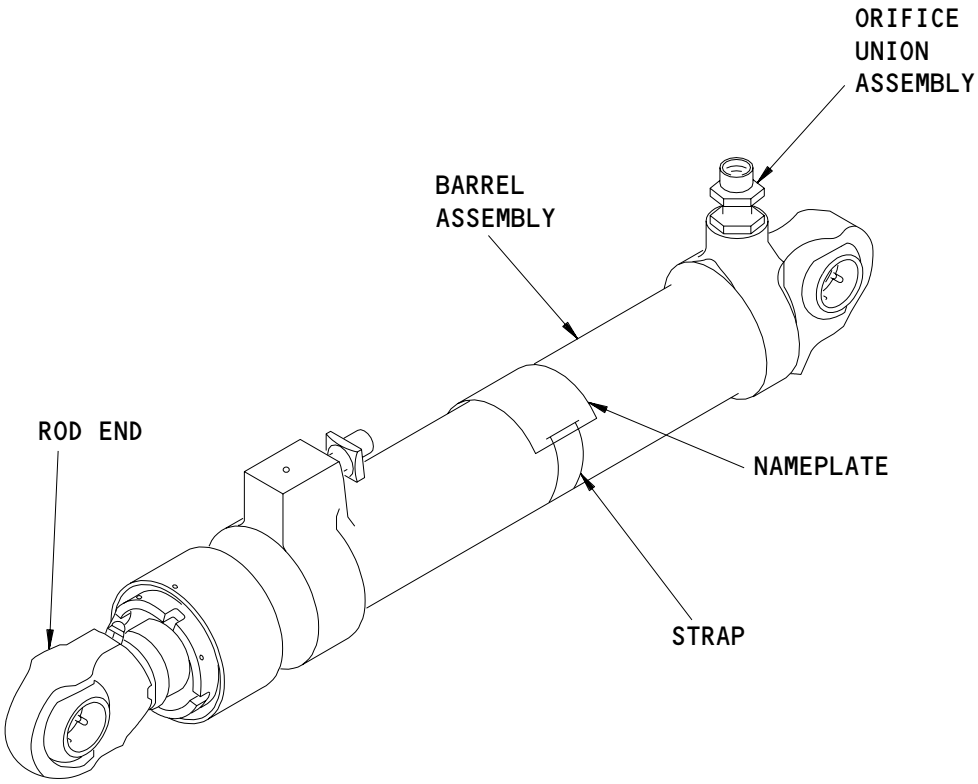
3. Leading Particulars (Approximate)

   A. Length -- 28 inches (extended)
   18 inches (retracted)

   B. Width -- 2 inches

   C. Height -- 4 inches

   D. Weight -- 11 pounds



Main Landing Gear - Side Brace Down Lock Actuator Assembly
Figure 1

K14016

TESTING AND FAULT ISOLATION

1. General

   A. This procedure contains the data necessary to do a test of the actuator after an overhaul or for fault isolation. There are three parts:

      (1) Actuator Assembly Test

         (a) External Leakage

         (b) Internal Leakage

         (c) Seal Friction

         (d) Extend rate

         (e) Retract rate

         (f) Proof Pressure

      (2) Fault Isolation

      (3) Fault Correction

   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. Actuator Assembly Test

   A. Special Tools and Equipment

      NOTE: Equivalent equipment can be used.

      (1) Holding Fixture -- A32121-1

B. Standard Tools and Equipment

NOTE: Equivalent equipment can be used.

(1) A hydraulic test stand with these requirements:

(a) Can operate with BMS 3-11, Type 4 hydraulic fluid.

(b) Can operate in a range of 0-4700 psi.

(c) The fluid must be continuously filtered by a filter no larger than 15 micron absolute.

(d) The fluid temperature to be 60-120° F.

(e) Sufficient valves to change the direction of the hydraulic fluid flow.

C. Consumable Material

(1) D00153 Fluid, Hydraulic - BMS 3-11, Type 4 (SOPM 20-60-03)

D. References

(1) 32-32-29/301, Disassembly

(2) 32-32-29/701, Assembly

(3) SOPM 20-60-03, Lubricants

E. Prepare for Test

(1) Install the actuator in the holding fixture.

(2) Attach the hydraulic test stand lines to the ports.

(3) Fill the actuator with hydraulic fluid.

NOTE: The actuator will be continuously full of BMS 3-11, Type 4 hydraulic fluid for each test.

(4) Remove all of the air from the actuator.

F. Procedure

WARNING: DO NOT APPLY AIR PRESSURE TO THE PORTS. THIS CAN CAUSE DAMAGE TO THE UNIT OR INJURY TO YOU.

(1) Do an external leakage test:

(a) Clean around the dynamic rod seal to permit leak detection.

(b) Operate the actuator for 25 full cycles at a rate of 5 cycles per minute (CPM):

1) Apply the minimum hydraulic pressure to the extend port that is necessary to move the piston.

2) Increase the pressure to 3000-3200 psi when the actuator stops at the end of the piston travel.

3) Remove the pressure from the retract port.

4) Do steps 1-3 for 25 full cycles.

(c) After 25 cycles, do a visual check for leakage around the dynamic rod seal:

1) Recommended leakage is zero.

2) The leakage limit for the rod seal is 1 drop.

3) The leakage limit for static seals is zero.

(2) Do an internal leakage test:

(a) Fully retract the actuator.

(b) Remove the hydraulic line from the retract port.

(c) Apply 3000-3200 psi to the retract port for a minimum of one minute.

(d) Do a visual check for leakage from the open extend port:

1) Recommended leakage is zero.

2) The leakage limit is 5 cc per minute.

(e) Remove the pressure from the retract port.

(f) Attach the hydraulic line to the extend port.

(g) Fully extend the actuator.

(h) Remove the hydraulic line from the extend port.

(i) Apply 3000-3200 psi to the extend port for a minimum of one minute.

(j) Do a visual check for leakage from the open retract port:

1) Recommended leakage is zero.

2) The leakage limit is 5 cc per minute.

(k) Remove the pressure from the extend port.

(l) Attach the hydraulic line to the retract port.

(3) Do a seal friction test:

(a) Fully retract the actuator.

(b) Apply no pressure to the retract port.

(c) With no load applied to the actuator, slowly increase the pressure to 100 psi maximum at the extend port:

1) The actuator must extend fully with a smooth, continuous movement.

(d) Decrease the pressure applied to the extend port.

(e) Fully extend the actuator.

(f) Apply no pressure to the extend port.

(g) With no load applied to the actuator, slowly increase a pressure to 100 psi maximum at retract port:

1) The actuator must retract fully with a smooth, continuous movement.

(h) Remove the pressure applied to the retract port.

(4) Do an extend rate test:

(a) Fully retract the actuator.

(b) Apply 450-510 psig to the extend port and 40-60 psig to the retract port

1) Keep a record of the time that is necessary to get the full travel from the fully retracted to the fully extended position.

a) The total extension time must be 8.3-10.8 seconds.

(c) Remove the pressure from the extend port.

(5) Do a retract rate test:

(a) Fully extend the actuator.

(b) Apply 450-510 psig to the retract port and 40-60 psig to the extend port.

1) Keep a record of the time that is necessary to get to full travel from the fully extended to the fully retracted position.

a) The total retraction time must be 3.2-5.8 seconds.

(c) Remove the pressure from the retract port.

(6) Do a proof pressure test:

(a) Fully retract the actuator.

(b) Apply no pressure to the extend port.

(c) Apply 4500-4700 psi pressure to the retract port for a minimum of 30 seconds.

(d) Make sure there is no sign of external leakage or permanent damage to the actuator.

(e) Remove the pressure from the retract port.

(f) Fully extend the actuator.

(g) Apply no pressure to the retract port.

(h) Apply 4500-4700 psi pressure to the extend port for a minimum of 30 seconds.

(i) Make sure there is no sign of external leakage or permanent damage to the actuator.

(j) Remove the pressure from the extend port.

(7) Remove the actuator from the holding fixture.

(8) Fill the unit with hydraulic fluid and install the shipping caps.

3. Fault Isolation

TROUBLE	PROBABLE CAUSE	CORRECTIONS
External leakage	Defective seals (40, 45, 50, 55)	Disassemble and replace parts (paragraph 4.A)
Internal leakage	Defective seals (70)	
Movement of the rod assembly	Defective piston rod (65), piston rod bushing (50), barrel assembly (100) or rod seal gland	Disassemble and replace parts (paragraph 4.A)
Leakage around unions	seals (80, 90)	
	Dirt or unwanted matter in the cylinder	Disassemble and clean parts

Fault Isolation Chart
Table 101

4. Fault Correction

A. Procedure

(1) Drain all the hydraulic fluid from the unit.

(2) Replacement of scraper (30), seal (40), O-rings (45, 55):

(a) Remove the rod gland nut (5) from barrel assembly (100).

(b) Remove the rod end (15) from piston rod (65). Remove rod end and cup lockwasher (10) from piston rod (65).

(c) Remove the scraper (30), rod seal gland (35), foot seal (40), O-ring (45), bushing (50), backup rings (60) and packing (55).

(d) Replace parts as necessary.

(e) Install bushing (50), packing (45), foot seal (40), rod seal gland (35) the scraper (30) and the nut (5) on piston rod (65). Push these parts back into barrel assembly (100).

(f) Install nut (50) in barrel assembly (100). Install cup lockwasher (10) and rod end (15) on piston rod (65) per ASSEMBLY. Do the test again to see if the problem was corrected.

(g) Install nut (5) in barrel assembly (100) and install the lockwire. Do the test again to see if the problem was corrected.

(3) Replacement of piston seal (70):

(a) Do steps 4.A.(2), (2), (a).

(b) Replace defective seal (70).

(c) Install piston rod (65) in barrel assembly (100).

(d) Do steps 4.A (2), (g).

B. Replacement of piston rod (65) on the barrel assembly (100):

(1) Drain the hydraulic fluid from the actuator.

(2) Disassemble the actuator (32-32-29/301).

(3) Replace the defective parts.

(4) Assemble the actuator (32-32-29/701).

(5) Do the test again (par. 2).

DISASSEMBLY

1. General

   A. This procedure contains the data necessary to disassemble the actuator assembly.

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

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

2. Actuator Disassembly

   A. Special Tools and Equipment

      NOTE: Equivalent equipment can be used.

      (1) Holding Fixture -- A32121-1

      (2) Torque Adapters -- A32120-4, -8

      (3) Rod End Removal/Installation Fixture -- A32121-series

      (4) Spanner Wrench -- A32120-14

   B. Part Replacement

      NOTE: These parts are recommended for replacement. Replacement of other parts can be by in-service experience.

      (1) Scraper (30)

      (2) Packings and O-rings (45, 55, 80, 90)

      (3) Backup rings (60)

      (4) Foot seal (40)

(5) Lockwasher (10)

(6) Strap (120)

C. Procedure

(1) Install the actuator assembly in the holding fixture.

(2) Remove the piston rod (65) and the attached items from the barrel assembly (115):

(a) Remove the lockwire from the gland nut (5) and the barrel assembly (115).

(b) Carefully remove the gland nut (5) with the spanner wrench Remove the piston rod (65) from the barrel assembly (100).

(3) Install the piston rod (65) in the rod end removal/installation fixture.

(4) Bend the flanges of the lockwasher (10) to release the rod end (15).

(5) Remove the rod end (15) from the piston rod (65) with the torque adapters.

(6) Remove the gland nut (5), the scraper (30), the rod seal gland (35), the foot seal (40), the packing (45), and the bushing (50) from the piston rod (65).

(7) Remove the strap (120) and the marker (125) from the barrel assembly (100).

(8) Remove the union assemblies (75, 85) from the barrel assembly (100).

CHECK

1. General

A. This procedure contains the data necessary to find defects in the parts.

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

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

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

2. Check

A. References

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

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

B. Procedure

(1) Use standard industry procedures to do a visual check of all the parts for defects.

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

(a) Rod End (15)

(b) Barrel (115)

(c) Piston Rod (65)

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

(a) Gland nut (5)

(b) Split spherical bearing (20)

(c) Rod seal gland (35)

(d) Piston rod bushing (50)

(e) Split spherical bearing (95)

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
---	MISCELLANEOUS PARTS REFINISH	1-1
273T6252	BARREL ASSEMBLY	2-1, 2-2
273T6253	PISTON ROD	3-1
273T6254	ROD END	4-1
273T6255	PISTON ROD BUSHING	5-1
BAC27TLG18	NAMEPLATE	6-1

2. Dimensioning Symbols

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

—	STRAIGHTNESS
▱	FLATNESS
⊥	PERPENDICULARITY (OR SQUARENESS)
//	PARALLELISM
○	ROUNDNESS
⌭	CYLINDRICITY
⌒	PROFILE OF A LINE
⌓	PROFILE OF A SURFACE
◎	CONCENTRICITY
⌯	SYMMETRY
∠	ANGULARITY
↗	RUNOUT
↗↗	TOTAL RUNOUT
⌴	COUNTERBORE OR SPOTFACE
⌵	COUNTERSINK
⌖	THEORETICAL EXACT POSITION OF A FEATURE (TRUE POSITION)
∅	DIAMETER
S ∅	SPHERICAL DIAMETER
R	RADIUS
SR	SPHERICAL RADIUS
()	REFERENCE
BASIC (BSC) OR [DIM]	A THEORETICALLY EXACT DIMENSION USED TO DESCRIBE SIZE, SHAPE OR LOCATION OF A FEATURE. FROM THIS FEATURE PERMISSIBLE VARIATIONS ARE ESTABLISHED BY TOLERANCES ON OTHER DIMENSIONS OR NOTES.
[-A-]	DATUM
Ⓜ	MAXIMUM MATERIAL CONDITION (MMC)
Ⓛ	LEAST MATERIAL CONDITION (LMC)
Ⓢ	REGARDLESS OF FEATURE SIZE (RFS)
Ⓟ	PROJECTED TOLERANCE ZONE
FIM	FULL INDICATOR MOVEMENT

EXAMPLES

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

True Position Dimensioning Symbols
Figure 601

KD09887

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 Table 601 are for the repair of the initial finish.

   B. Consumable Materials

      NOTE: Equivalent material can be used.

      (1) D00566 Lubricant -- BMS 3-8, Type 8 (SOPM 20-60-02)

   C. 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 20-50-08, Application of Bonded Solid Film Lubricants

   D. Procedure

IPL FIG. & ITEM	MATERIAL	FINISH
IPL Fig. 1		
Cup Lockwasher (10)	304 CRES	Passivate (F-17.25) all over
Gland Nut (5)	Ti-6AL-4V alloy	Apply phosphate-flouride coating (F-14.881) all over. Apply BMS 3-8, Type 8 solid film lubricant (F-19.10) to the threads
Strap (120)	304 CRES	Passivate (F-17.09) all over
Bearings (20,95)	AL-Ni-Bronze	No finish (F-25.01)
Rod seal gland (35)	AL-Ni-Bronze	No finish (F-25.01)
Piston rod bushing (50)	AL-Ni-Bronze	No finish (F-25.01)

Refinish Details
Table 601

BARREL ASSEMBLY - REPAIR 2-1

273T6252-1

1. General

   A. This repair gives the data that is necessary to replace the plug (105) and the pin (110) on the barrel assembly (100).

   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. Plug Replacement

   A. Consumable Materials

      NOTE: Equivalent material can be used.

      (1) C00501 Clear Coat -- Type 41 (SOPM 20-60-02)

      (2) A00589 Sealant -- BMS 5-26 (SOPM 20-60-02)

   B. References

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

      (2) SOPM 20-50-04, Installation of Permanent Pins and Plugs in Drill Passages

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

   C. Procedure

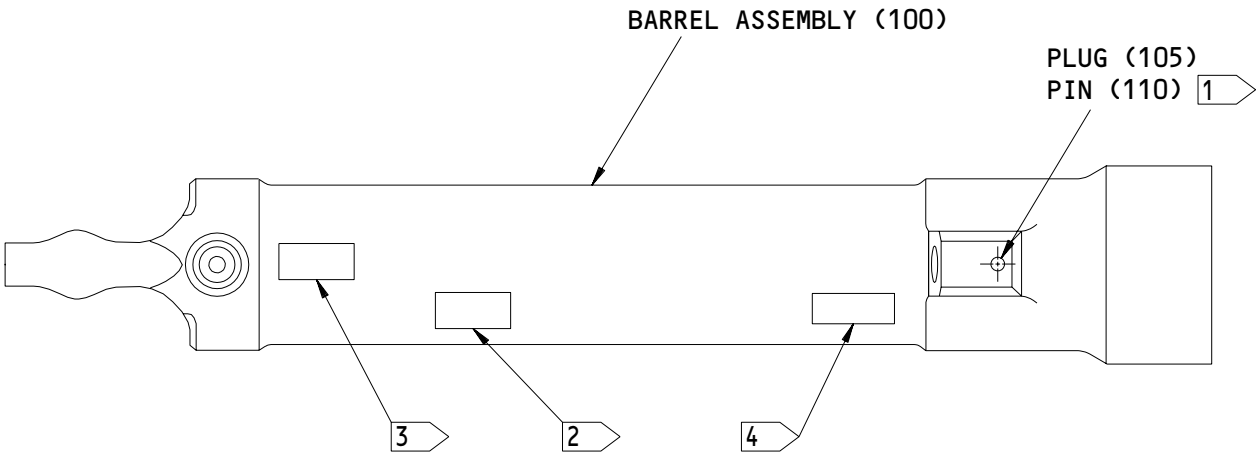
      (1) Remove the plug (105) and the pin (110).

      (2) Install the plug and the pin as shown in SOPM 20-50-04.

      (3) Fill the hole on top of the plug with BMS 5-26 sealant.

         (a) Let the sealant fully dry.

      (4) Apply a layer of clear top coat Type 41 on the sealant.



1 INSTALL THE PLUG (105) AND THE PIN (110) AS SHOWN IN SOPM 20-50-04. THEN FILL THE HOLE WITH BMS 5-26 SEALANT. THEN APPLY TOP COAT OF BAC5710 TYPE 41 SEALANT TO THE SURFACE OF THE SEALANT

2 PART MARK THE AREA SHOWN

3 IDENTIFY THE PORT IN THE AREA SHOWN TO "EXTEND (LOCK)"

4 IDENTIFY THE PORT IN THE AREA SHOWN TO "RETRACT (UNLOCK)"

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

273T6252-1
Barrel Assembly Repair
Figure 601

KD9897

BARREL - REPAIR 2-2

273T6252-2

1. General

A. This repair gives the data that is necessary to repair and refinish the barrel (115).

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

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

D. General repair details:

(1) Shot Peen: 0.005-0.010 A intensity, Coverage 2
200-240 Shot size

(2) Material: 15-5PH CRES, AMS 5659,
180-200 KSI

2. Barrel Repair

A. References

(1) 20-10-03, Shot Peening

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

(3) 20-41-01, Decoding of Boeing Finish Codes

B. Procedure

(1) Machine the worn or damaged area of the barrel (115) as necessary, to remove defects, cracks, and/or corrosion up to the limits shown in Fig. 601.

(2) Break all sharp edges before you shot peen.

(3) Do a magnetic particle check as shown in SOPM 20-20-01, Class B before you shot peen.

(4) Shot peen the machine surface as shown in SOPM 20-10-03 , intensity 0.007A, coverage 2.0.

(5) Chrome plate (F-15.34) the area to 0.0030-0.0150 inches after grinding.

(6) If it is necessary, to meet chrome plate thickness requirements, nickel plate (F-15.33) the area before you chrome plate.

(a) You must keep 0.00030-0.0050 inches of chrome plate on top of the nickel plate, after grinding the chrome plate.

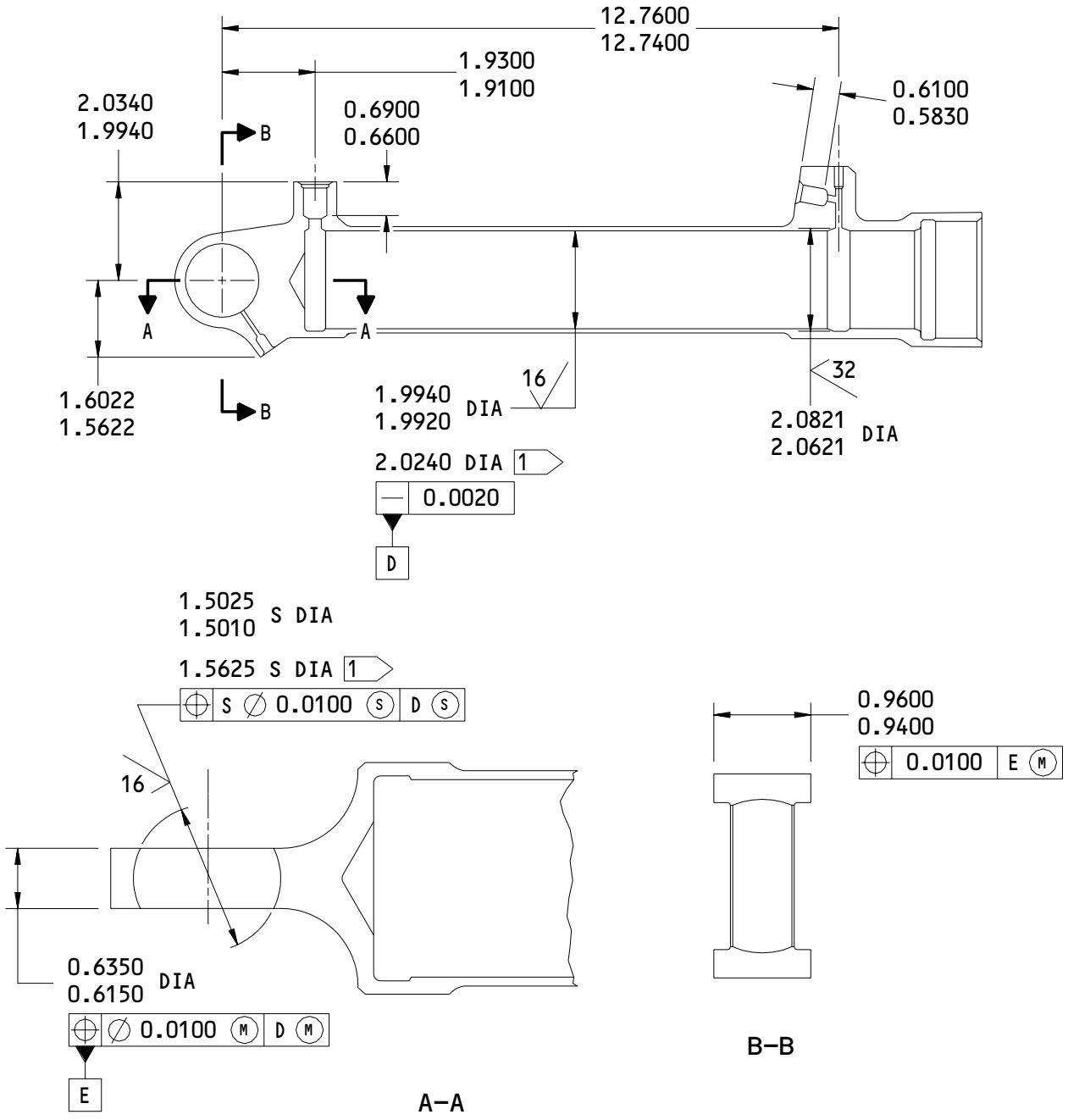
(7) Finish grind the barrel (115) as shown in SOPM 20-10-04 to the design limits as shown in Fig. 601.

(8) Do a magnetic particle check as shown in SOPM 20-20-01 Class B before you shot peen.

(9) Put a finish on the barrel (115):

(a) Glass bead or aluminum oxide blast as shown in the SOPM 20-30-03.

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



1 REPAIR LIMIT

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

ALL DIMENSIONS ARE IN INCHES

273T6252-2
Barrel Repair
Figure 601

K13255

PISTON ROD - REPAIR 3-1

273T6253-1

1. General

A. This repair gives the data that is necessary to repair and refinish the piston rod (65).

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)	Shot Peen:	170-460 shot size 0.005-0.010 intensity, coverage 2.0
(2)	Material:	15-5PH CRES, AMS 5659, 180-200 KSI

2. Piston Rod Repair

A. References

(1) 20-10-02, Machining of Alloy Steel

(2) 20-10-03, Shot Peening

(3) 20-10-04, Grinding of Chrome Plated Parts

(4) 20-20-01, Magnetic Particle Inspection

(5) 20-42-03, Hard Chrome Plating

B. Procedure

(1) For repair of the piston rod (65), do the subsequent steps:

(a) Grind the worn or damaged surface of the piston rod (65) as necessary, to remove defects, cracks, and/or corrosion up to the limits shown in Fig. 601.

(b) Break all sharp edges.

(c) Do a magnetic particle inspection to the piston rod (65) as shown in the SOPM 20-20-01.

(d) Shot peen the machined surface as shown in the SOPM 20-10-03 and Fig. 601, intensity 0.007A, coverage 2.0.

1) Obey the flagnotes 5, 6 and 8 in Fig. 601.

(e) Apply chrome plate to the machined surface to 0.0030-0.0150 inches as shown in the SOPM 20-42-03 and Fig. 601.

1) Obey the flagnotes 4 and 7 in Fig. 601.

(f) If it is necessary, to meet chrome plate thickness requirements, nickel plate (F-15.33) the area before you chrome plate.

1) You must keep 0.0030-0.0050 inches of chrome plate on top of the nickel plate, after grinding the chrome plate.

(g) Finish grind as shown in the SOPM 20-10-04 to the design dimensions limits.

(h) Do a magnetic particle inspection to the piston rod (65) as shown in the SOPM 20-20-01.

3. Piston Rod Refinish

A. References

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

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

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

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

B. Procedure

(1) Put a finish on the piston rod (65):

(a) Chrome plate (F-15.34) and grind as shown in Fig. 601.

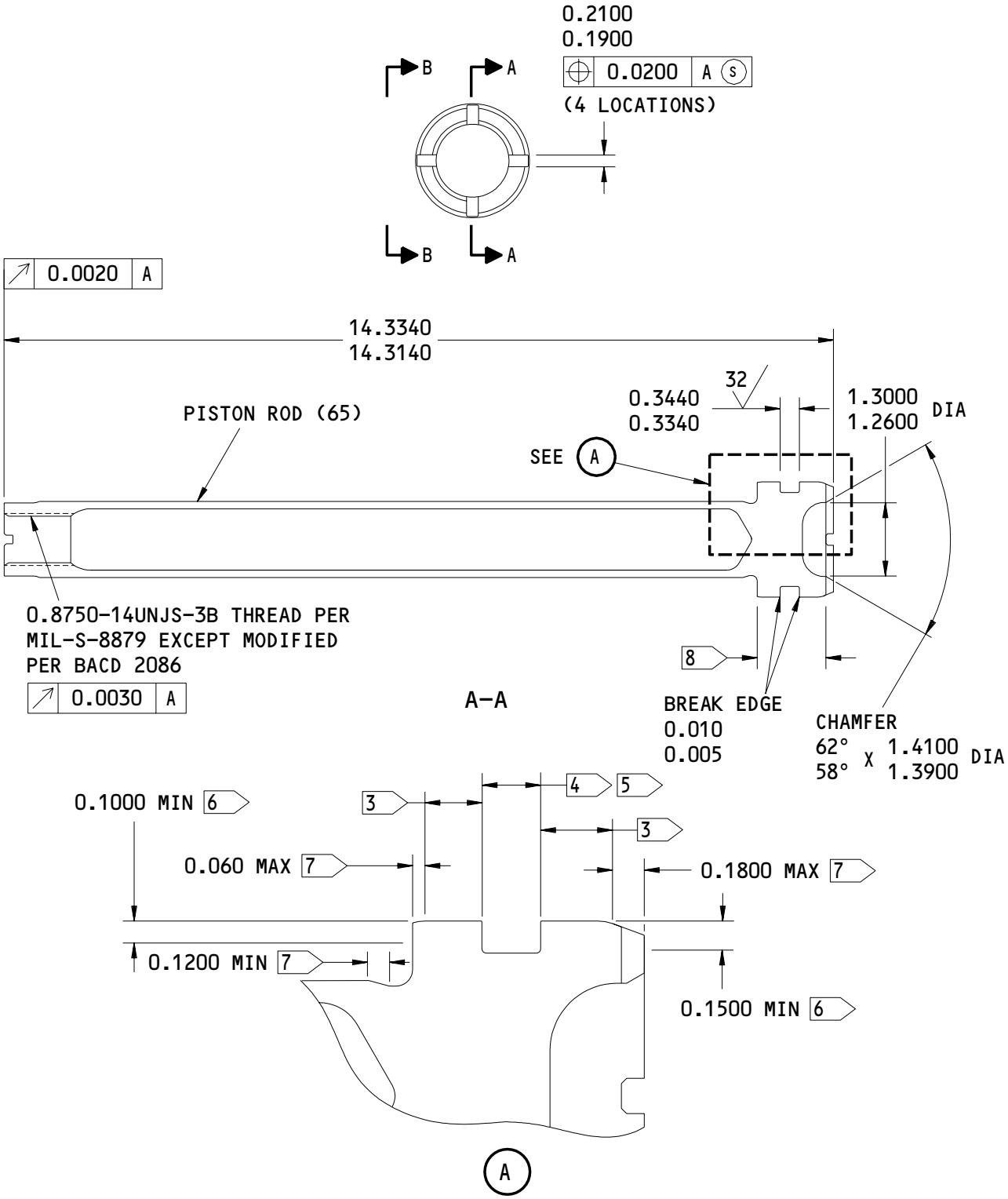
1) Final chrome plate thickness to be 0.003-0.005 inches.

2) Obey the flagnotes 3, 4 and 7 in Fig. 601.

(b) Glass blast or aluminum oxide blast all over as shown in the SOPM 20-30-03.

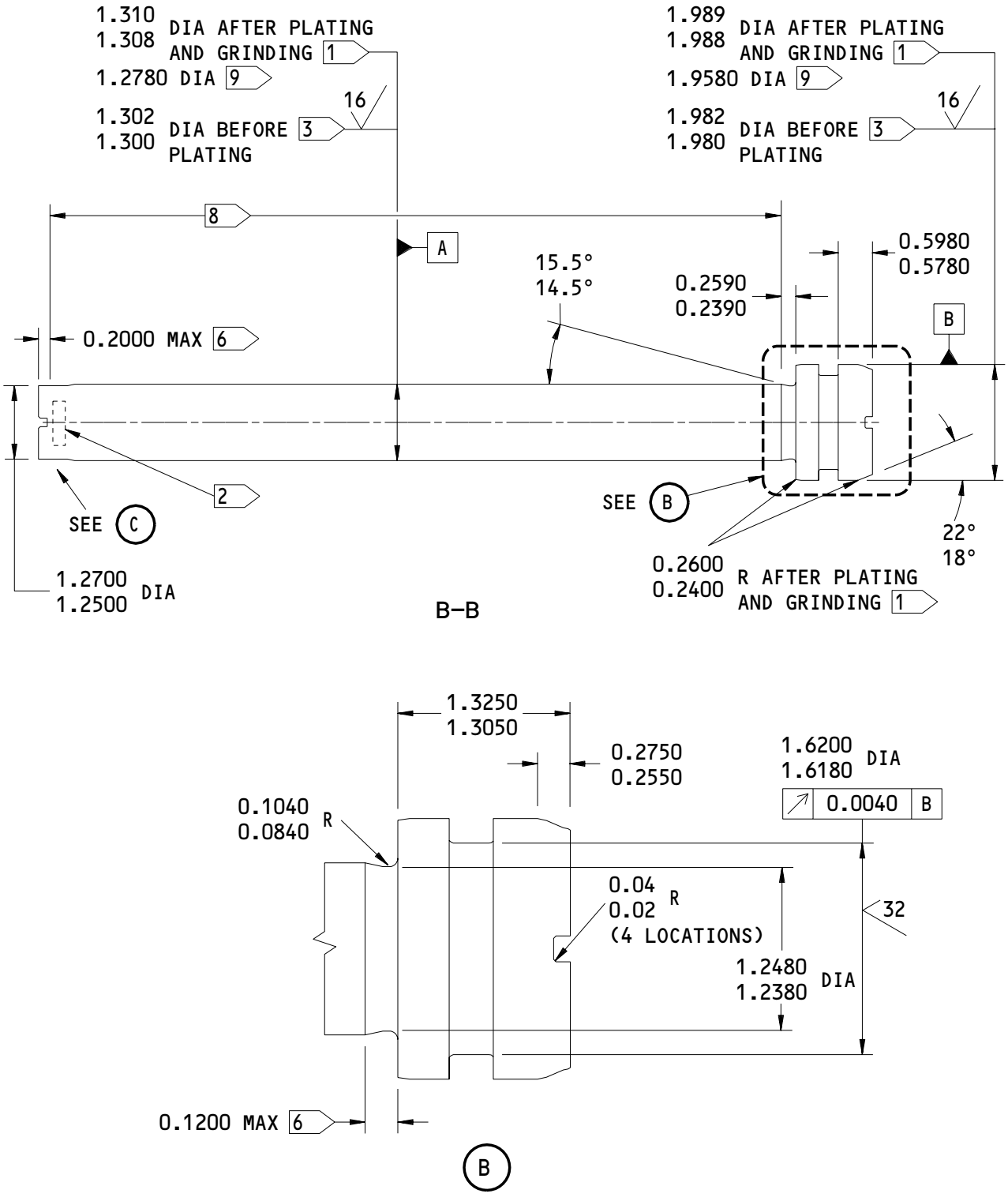
(c) Passivate (F-17.25) all over.

(2) Obey the flagnote 2 in Fig. 601.



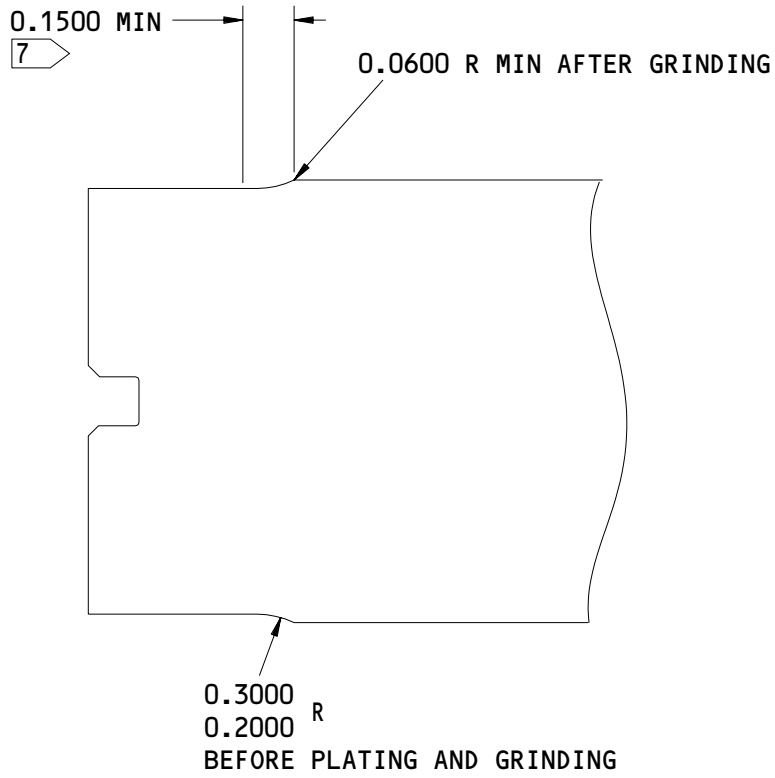
273T6253-1
Piston Rod Repair
Figure 601 (Sheet 1)

K10797



273T6253-1
Piston Rod Repair
Figure 601 (Sheet 2)

K11027



1 SURFACE FINISH CAN BE 8 TO 16 MICROINCHES

2 PART MARK THE AREA SHOWN AS SHOWN IN SOPM 20-50-10

3 AFTER SHOT PEENING, APPLY CHROME PLATE (F-15.34) TO THE SURFACES SHOWN. CHROME PLATING THICKNESS AFTER ALL FINISHING OPERATION TO BE 0.003-0.005 INCHES

4 NO CHROME PLATE ON THIS AREA

5 NO SHOT PEEN IN THE SEAL GROOVE

6 SHOT PEEN RUNOUT AREA

7 CHROME PLATE RUNOUT ON THIS AREA

8 SHOT PEEN THIS AREA

9 REPAIR LIMIT

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

273T6253-1
Piston Rod Repair
Figure 601 (Sheet 3)

K11065

ROD END - REPAIR 4-1

273T6254-1

1. General

A. This repair gives the data that is necessary to repair and refinish the rod end (15).

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)	Shot Peen:	0.005-0.010 intensity, Coverage 2.0 170-460 Shot size
(2)	Material:	15-5PH CRES, AMS 5659, 180-200 KSI

2. Rod End Repair

A. References

(1) 20-10-02, Machining of Alloy Steel

(2) 20-10-03, Shot Peening

(3) 20-10-04, Grinding of Chrome Plated Parts

(4) 20-20-01, Magnetic Particle Inspection

(5) 20-42-03, Hard Chrome Plating

B. Procedure

(1) For repair of the rod end (15).

(a) Grind the worn or damaged surface of the rod end (15) as necessary, to remove defects, cracks, and/or corrosion up to the limits shown in Fig. 601.

(b) Break all the sharp edges.

(c) Shot peen the machined area as shown in the SOPM 20-10-03, intensity 0.007A, coverage 2.0.

1) Obey the flagnote 2 in Fig. 601.

(d) Apply chrome plate to the machined surface to 0.0030-0.0150 inches as shown in the SOPM 20-42-03 and Fig. 601.

(e) If it is necessary, to meet chrome plate thickness requirements, nickel plate (F-15.33) the area before you chrome plate.

1) You must keep 0.0030-0.0050 inches of chrome plate on top of the nickel plate, after grinding the chrome plate.

(f) Finish grind as shown in the SOPM 20-10-04 to the design dimensions limits.

(g) Do a magnetic particle inspection to the rod end (15) as shown in the SOPM 20-20-01.

3. Rod End Refinish

A. References

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

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

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

B. Procedure (Fig. 601)

(1) Put a finish on the rod end (15):

(a) Glass blast or aluminum oxide blast as shown in the SOPM 20-30-03.

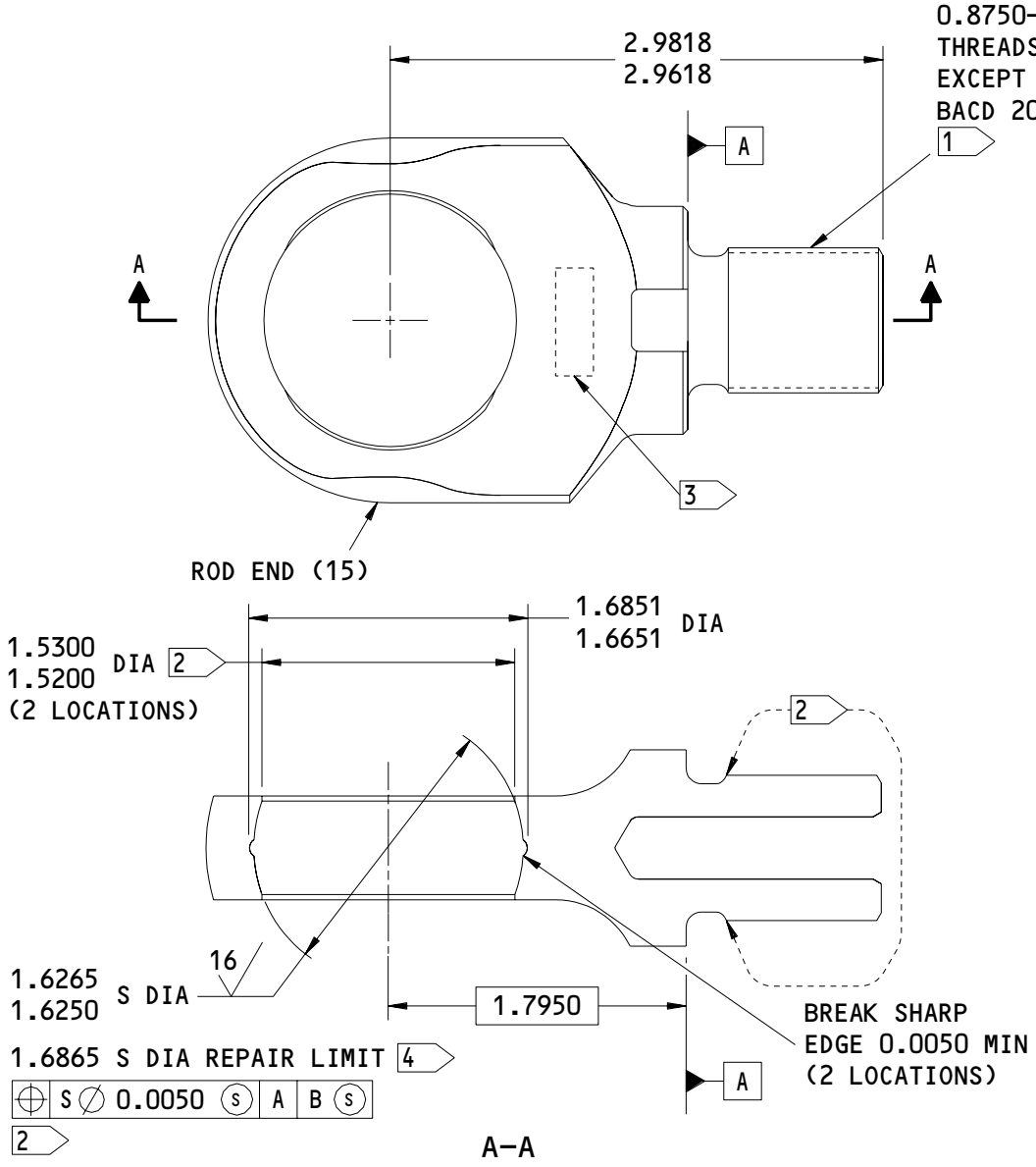
(b) Passivate (F-17.25) all over.

(c) Apply BMS 3-8 solid film lubricant (F-19.10) to the threads.

1) Make sure the threads are fully covered.

2) Obey the flagnote 1 in Fig. 601.

(2) Obey the flagnote 3 in Fig. 601.



A-A

1 APPLY BMS 3-8 SOLID FILM LUBRICANT (F-19.10). APPLY TO THE THREADS ALL OVER

2 NO SHOT PEEN IS PERMITTED IN THIS AREA. THE SHOT PEEN RUNOUT TO NON-SHOT PEENED AREA MUST BE 0.06 INCH MAXIMUM

3 PART MARK IN THIS AREA AS SHOWN IN SOPM 20-50-10

4 REPAIR LIMIT

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

273T6254-1
Rod End Repair
Figure 601

K11145

PISTON ROD BUSHING - REPAIR 5-1

293W2510-1

1. General

A. This repair gives the data that is necessary to repair and refinish the piston rod bushing (15).

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

C. Refer to the REPAIR - GENERAL (32-32-29/601, REPAIR - GENERAL) for the standard true position dimensioning symbols shown in the repair.

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

E. General repair details:

(1) Material: AL-Ni-BRONZE, AMS 4640

2. Piston Rod Bushing Repair

A. References

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

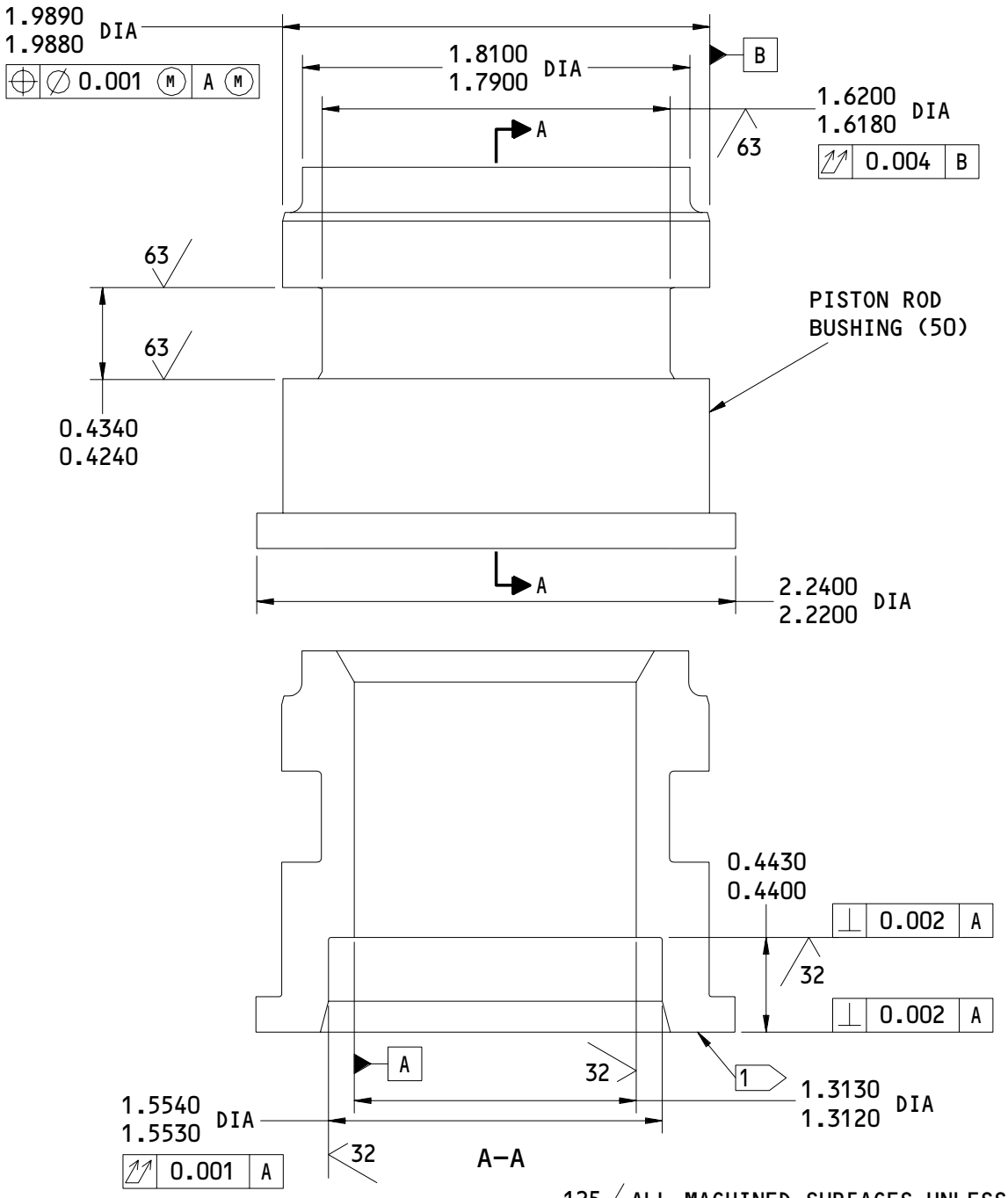
(2) SOPM 20-30-03, General Cleaning Procedures

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

B. Procedure (Fig. 601)

(1) Apply no finish (F-25.01) on the bushing (15).

(2) Obey the flagnote 1 in Fig. 601.



125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 1

1 PART MARK THE AREA SHOWN

ALL DIMENSIONS ARE IN INCHES

273T6255-1
Piston Rod Bushing Repair
Figure 601

K11239

NAMEPLATE INSTALLATION - REPAIR 6-1

BAC27TLG18

1. General

   A. This repair has instructions for the replacement of the nameplate (125) and the strap (120).

   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. Nameplate Replacement (Fig. 601)

   A. General

      (1) Use the strap only one time.

   B. Consumable Materials

      (1) A00323 Adhesive -- Type 54 (SOPM 20-60-04)

      (2) A00779 Sealant -- BMS 5-26 (SOPM 20-60-04)

      (3) B00571 Coating -- Type 41 (SOPM 20-44-01)

   C. References

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

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

   D. Procedure

      (1) Prepare the nameplate:

         NOTE: Make sure the serial number and the part number are steel stamped on the nameplate.

         (a) Make the nameplate in a shape smaller than the barrel radius.

         (b) Make a small bend in the nameplate corners to the mounting surface.

      (2) Attach the nameplate to the barrel:

         (a) Install the strap through End 1 of the nameplate.

         (b) Bend the strap 0.25-0.30 around the End 1 of the nameplate.

(c) Bond the strap and the nameplate to the barrel assembly with Type 54 adhesive.

1) Apply a layer of Type 54 adhesive to the bottom of the strap and the nameplate.

2) Hold the nameplate on the barrel.

3) Install the strap through End 2 of the nameplate.

4) Pull the strap tight.

NOTE: Make sure the strap and the nameplate are tight against the barrel.

5) Bend the strap down around the End 2 of the nameplate.

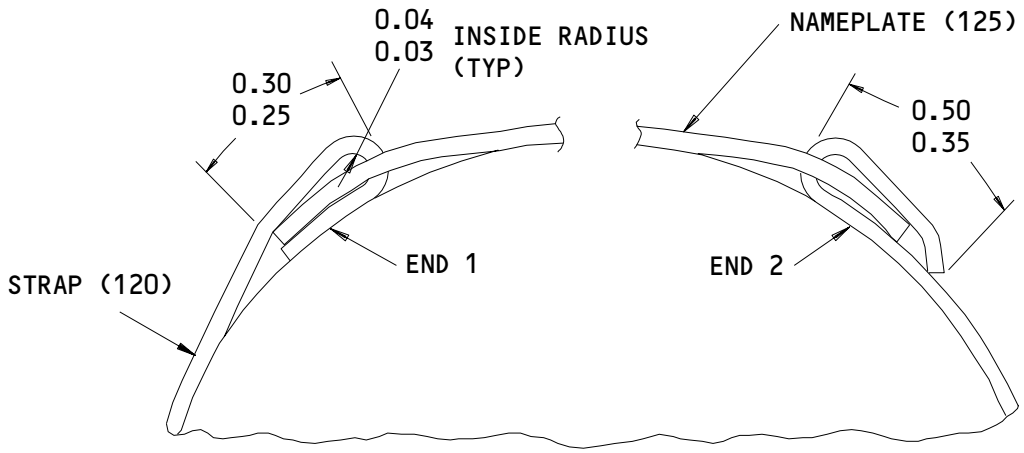
NOTE: Keep the strap tight.

6) Fill all of the areas between the strap and the barrel with the adhesive.

(d) Cut the strap 0.35-0.50 from the nameplate slot.

(e) Bend the strap end down with a soft nosed hammer.

(3) Seal the edges of the nameplate and strap with BMS 5-26 adhesive. Topcoat sealant with Type 41 coating as shown in SOPM 20-44-01.



ALL DIMENSIONS ARE IN INCHES

ITEM NUMBERS REFER TO IPL FIG. 1

Nameplate Installation
Figure 601

K11300

ASSEMBLY

1. General

A. This procedure contains the data necessary to assemble the actuator 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. Actuator Assembly

A. Special Tools and Equipment

NOTE: Equivalent equipment can be used.

(1) Holding Fixture -- A32121-1

(2) Torque Adapters -- A32120-4, -8

(3) Rod End Removal/Installation Fixture -- A32121-series

(4) Spanner Wrench -- A32120-14

B. Consumable Materials

NOTE: Equivalent material can be used.

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

(2) D00183 Fluid, Hydraulic - BMS 3-11 (SOPM 20-60-03)

(3) G01912 Lockwire - MS20995NC32 (SOPM 20-60-04)

(4) D00571 Grease - Batco 8401 (SOPM 20-60-03)

(5) C00501 Protective Finish - Type 41 (SOPM 20-60-02)

(6) Sealant - BMS 5-26 (SOPM 20-60-04)

(7) AO0323 Adhesive -- Type 54 (SOPM 20-50-12)

C. References

(1) 32-32-29/101, Testing and Fault Isolation

(2) 32-32-29/601, REPAIR 6-1, Nameplate Installation

(3) SOPM 20-44-02, Temporary Protective Coating

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

(5) SOPM 20-50-12, Application of Adhesives

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

(7) SOPM 20-60-03, Lubricants

D. Procedure (Fig. 701)

(1) Install the seal (70) on the piston rod (65):

(a) Lubricate the seal (70) with hydraulic fluid.

(b) Install the seal on the piston rod.

(2) Install the backup rings (60) and the packing (55) on the bushing (50).

(a) Lubricate the backup rings (60) and the packing (55) with hydraulic fluid or MCS352 assembly lubricant.

(b) Install the backup rings and the packing on the bushing.

(3) Install the bushing (50) on the piston rod (65).

(4) Install the packing (45) and the foot seal (40) on the piston rod (65):

(a) Lubricate the packing (45) and the foot seal (40) with hydraulic fluid.

(b) Install the packing and the foot seal on the piston rod.

(5) Install the rod seal gland (35) on the piston rod (65).

(6) Install the scraper (30) on the piston rod (65):

(a) Lubricate the scraper (30) with hydraulic fluid.

(b) Install the scraper on the piston rod.

(7) Install the gland nut (5) on the piston rod (65).

(8) Install the piston rod (65) in the rod end removal/installation fixture.

(9) Install the rod end (15) on the piston rod (65):

(a) Lubricate the threads of the rod end (15) with Batco 8401 grease.

(b) Install the lockwasher (10) on the rod end (15).

(c) Install the rod end (15) on the piston rod (65) hand tight.

(d) Align the keys on the lockwasher with the slots on the piston rod.

(e) Tighten the rod end with the torque adapter to 920-070 pound-inches more than the torque necessary to turn the rod end in the piston rod.

(f) With a punch or equivalent tool, bend the flange of the lockwasher into the slots in the rod end.

(10) Remove the piston rod (65) and attached parts from the rod end removal/installation fixture.

(11) Install the piston rod and the attached parts into the barrel assembly (100).

(a) Install the barrel assembly (100) in the actuator assembly holding fixture.

(b) Lubricate the threads of the gland nut (5) with the Batco 8401 grease. Do not apply the grease on the surfaces that will get sealant.

(c) Carefully move the piston rod and the attached parts into the barrel assembly.

(d) Make sure the flange of bushing (50), the foot seal (40), the packing (45), the rod seal gland (35), and the scraper (30) are fully engaged in the barrel assembly.

(e) Turn the gland nut (5) into the barrel assembly (100).

(f) Tighten the gland nut to 500-550 pound-inches with the spanner wrench.

(g) Remove the barrel assembly from the actuator assembly holding fixture.

(12) Install the bearing (95) in the barrel assembly (100):

CAUTION: KEEP BEARING (95) HALVES TOGETHER. DO NOT MIX THE BEARING HALVES. BEARING HALVES ARE A MATCHED SET.

(a) Apply a layer of BMS 3-33 grease to the O.D. of the bearing (95).

(b) Apply a layer of BMS 3-33 grease to the bearing hole I.D. in the barrel assembly (100).

CAUTION: INSTALL THE BEARING (95) WITH THE INDEX MARKS ALIGNED.

(c) Align the index marks of the bearing (95), then install the bearing in the barrel assembly (100).

(13) Install the bearing (20) in the rod end (15).

CAUTION: KEEP BEARING (20) HALVES TOGETHER. DO NOT MIX THE BEARING HALVES. BEARING HALVES ARE A MATCHED SET.

(a) Apply a layer of BMS 3-33 grease to the O.D. of the bearing (20).

(b) Apply a layer of BMS 3-33 grease to the bearing hole I.D. in the rod end (15).

CAUTION: INSTALL THE BEARING (20) WITH THE INDEX MARKS ALIGNED.

(c) Align the index marks of the bearing (20), then install the bearing in the rod end (15).

(14) Install the lubrication fittings (25) in the rod end (15) and the barrel assembly (100). Tighten the lubrication fittings to 15-20 pound-inches.

(15) Install the union assemblies (75, 85) in the barrel assembly (100):

(a) Lubricate the packings (80, 90) with hydraulic fluid.

(b) Install the packings on the union assemblies.

(c) Install the union assemblies (75, 85) in the hydraulic ports of the barrel assembly (100):

(16) Install the nameplate and the strap (32-32-29/601, REPAIR 6-1) on the barrel assembly (100).

(17) Test the unit as shown in TESTING AND FAULT ISOLATION (32-32-29/101).

(18) After assembly, apply BMS 3-33 grease to the spherical surfaces of bearings (20, 95) through the lubrication fittings (25).

(19) Lockwire the gland nut (5) to the barrel assembly (100) by the double-twist method.

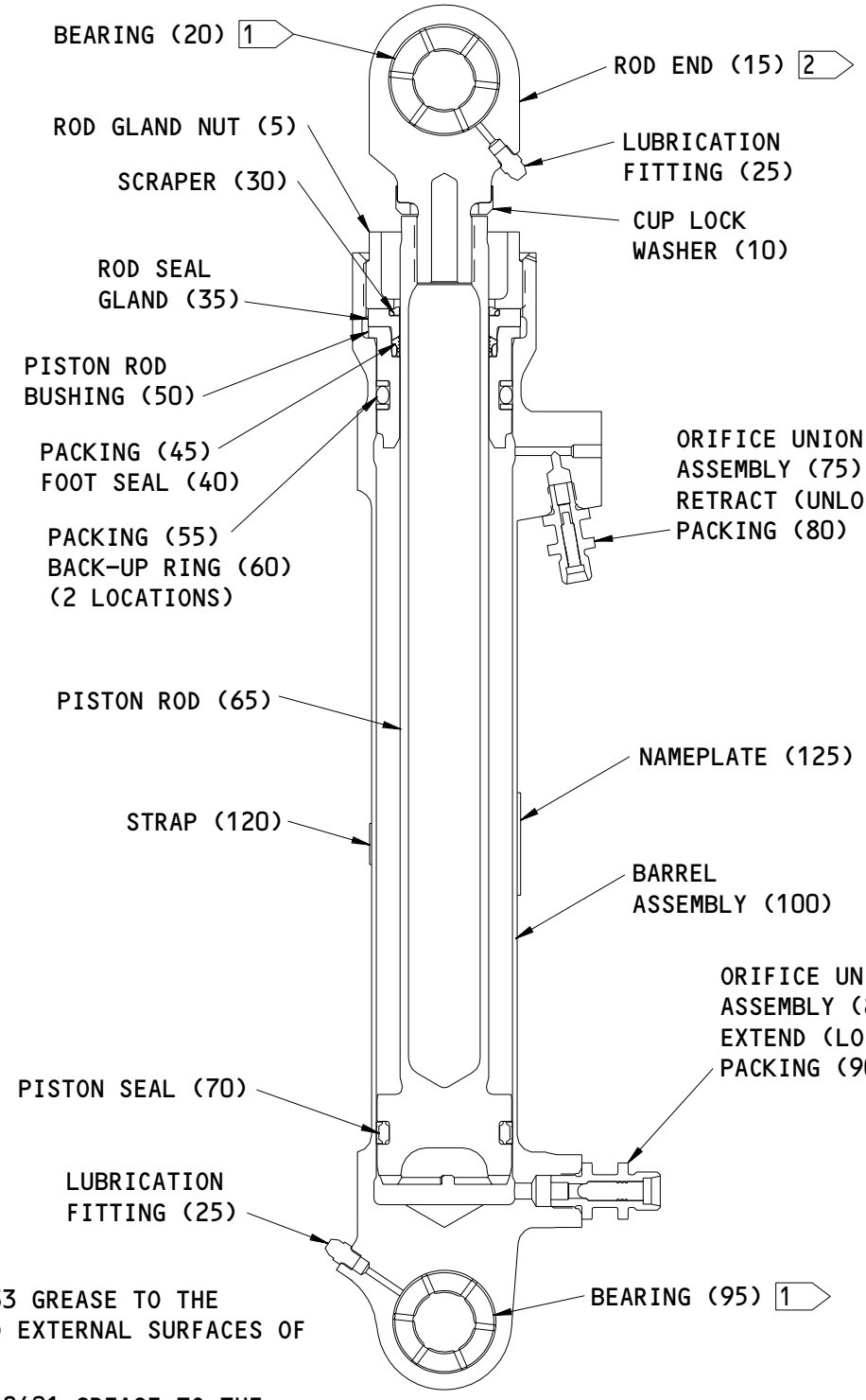
3. Storage

A. Procedure

(1) Partially fill the unit with hydraulic fluid.

(2) Seal ports with BMS 3-11 resistant plugs or caps.

(3) Give the unit protection and put it away by standard industry practices and the instructions in SOPM 20-44-02.



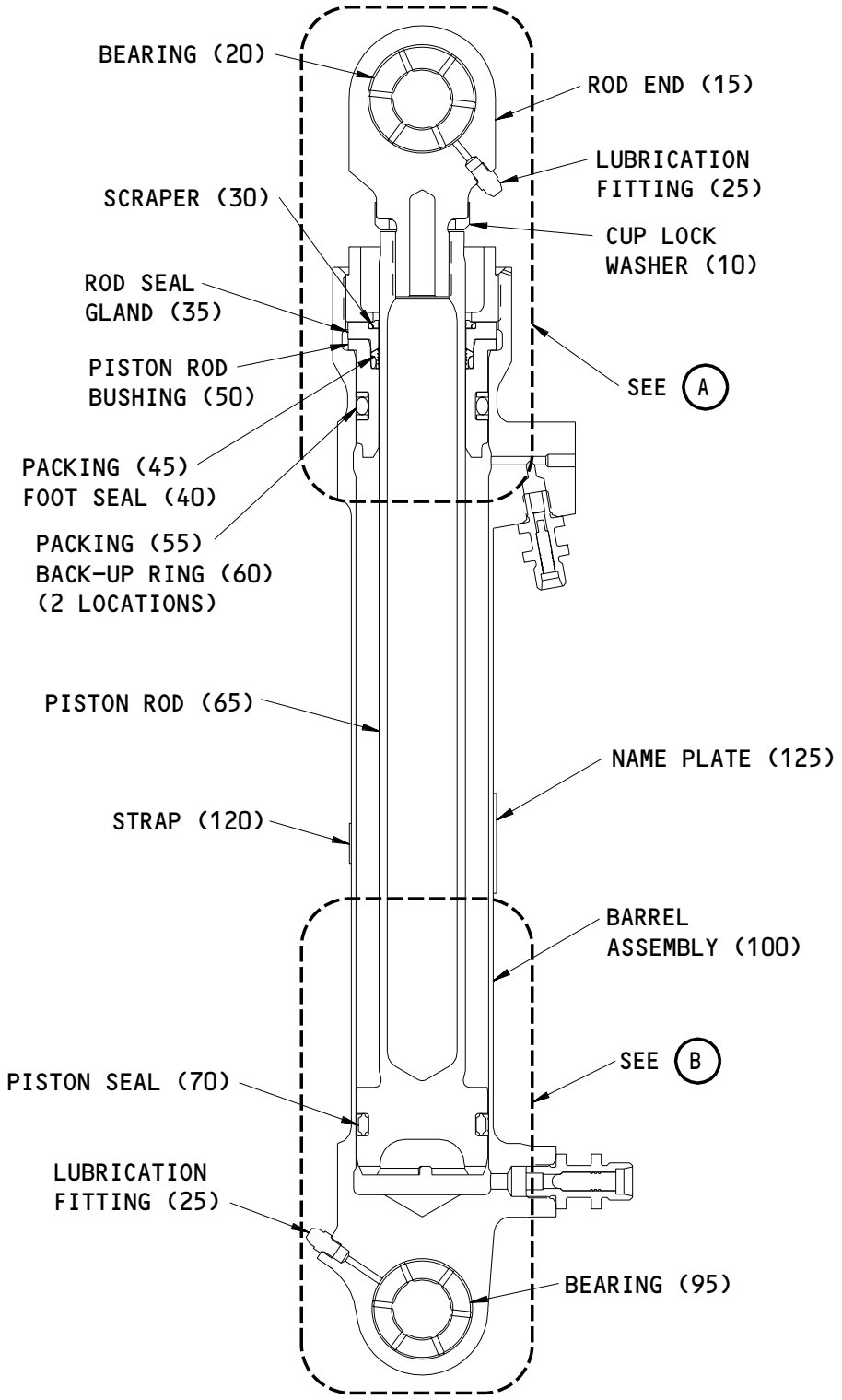
1 APPLY BMS3-33 GREASE TO THE INTERNAL AND EXTERNAL SURFACES OF THE BEARING

2 APPLY BATCO 8401 GREASE TO THE EXTERNAL THREADS BEFORE ASSEMBLY

ITEM NUMBERS REFER TO IPL FIG. 1

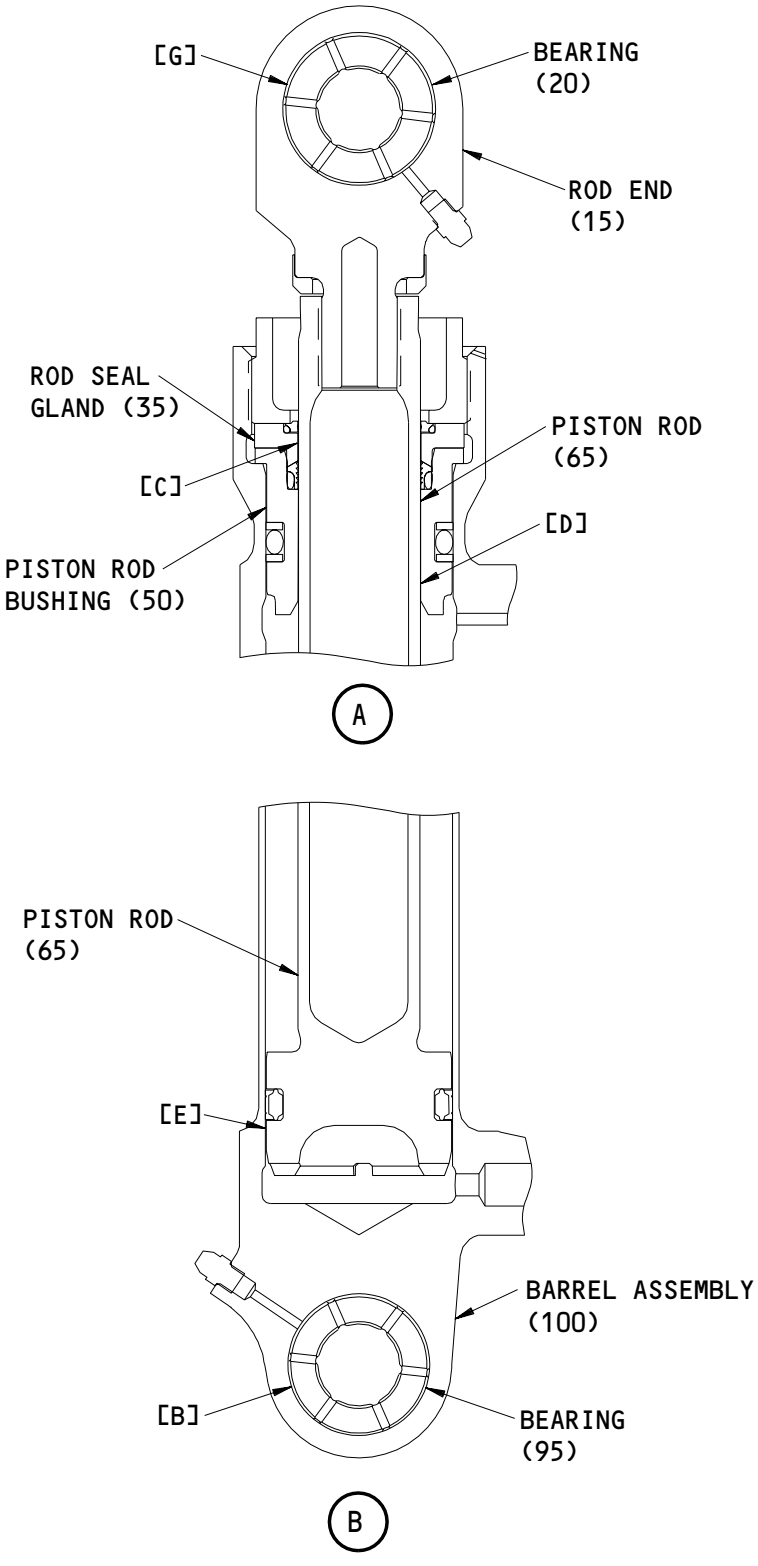
Assembly Details
Figure 701

FITS AND CLEARANCES



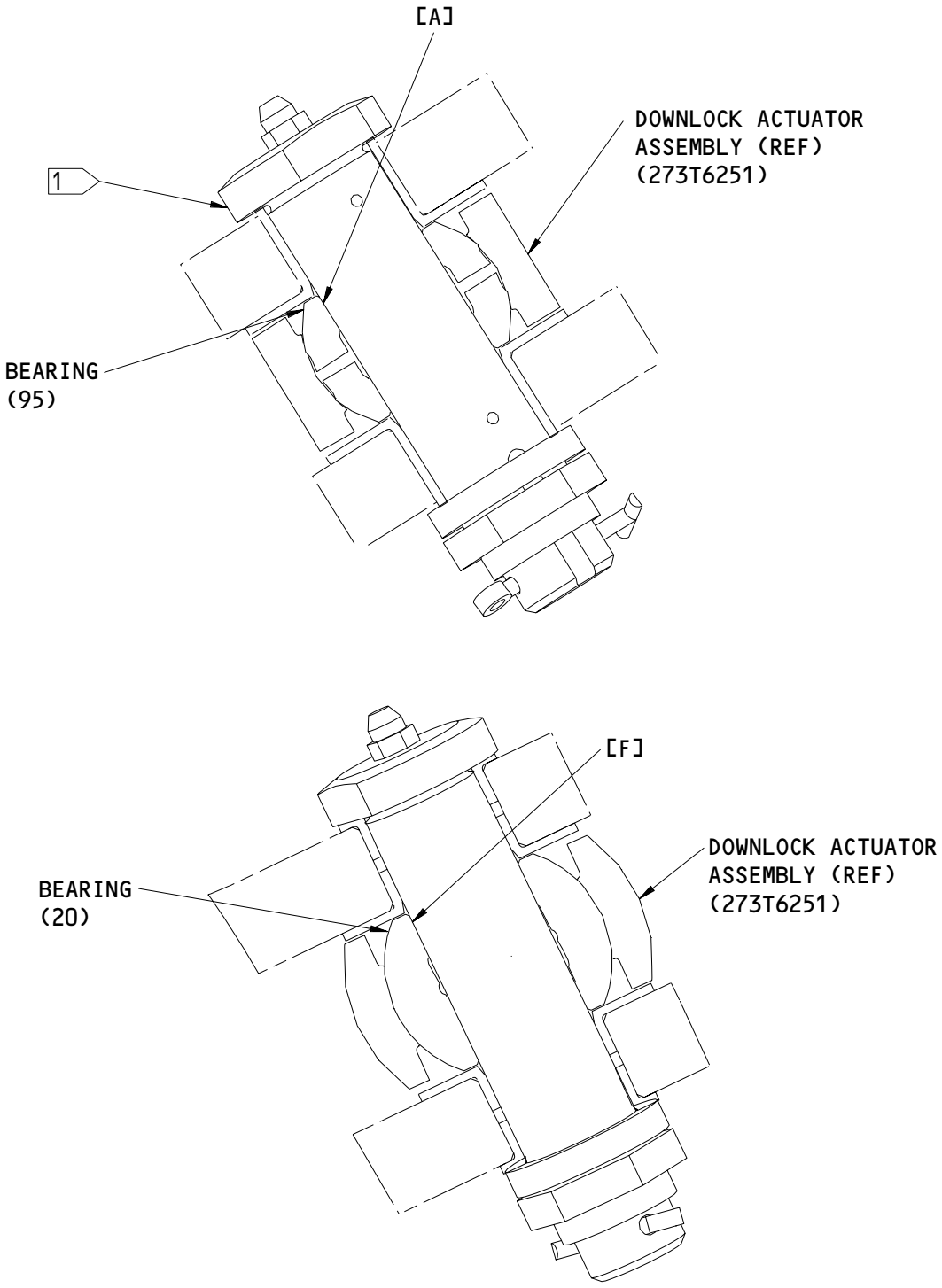
Fits and Clearances
Figure 801 (Sheet 1)

K19204



Fits and Clearances
Figure 801 (Sheet 2)

K19225



Fits and Clearances
Figure 801 (Sheet 3)

K19245

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 95	0.8750	0.8760	0.0010	0.0030		0.8789	0.0049
	OD 1	0.8730	0.8740			0.8711		
[B]	ID 100	1.5010	1.5025	0.0020	0.0040		1.5035	0.0065
	OD 95	1.4985	1.4990			1.4970		
[C]	ID 35	1.3120	1.3130	0.0020	0.0050		1.3143	0.0073
	OD 65	1.3080	1.3100			1.3070		
[D]	ID 50	1.3120	1.3130	0.0020	0.0050		1.3143	0.0073
	OD 65	1.3080	1.3100			1.3070		
[E]	ID 100	1.9920	1.9940	0.0030	0.0060		1.9960	0.0090
	OD 65	1.9880	1.9890			1.9870		
[F]	ID 20	0.8750	0.8760	0.0010	0.0030		0.8789	0.0049
	OD 2	0.8730	0.8740			0.8711		
[G]	ID 15	1.6250	1.6265	0.0010	0.0030		1.6275	0.0055
	OD 20	1.6235	1.6240			1.6220		

* ALL DIMENSIONS ARE IN INCHES

1 INSTALLATION PIN 161T6171-4

2 INSTALLATION PIN 161T6171-3

Fits and Clearances
Figure 801 (Sheet 4)

K19255

REF IPL		NAME	TORQUE*	
FIG. NO.	ITEM NO.		POUND-INCHES	POUND-FEET
1	5	Gland Nut	500 - 550	
1	15	Rod End	920 - 970	
1	25	Lubrication Fitting	15 - 20	

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

Torque Table
Figure 802

K19270

SPECIAL TOOLS, FIXTURES, AND EQUIPMENT

1. General

A. This is a list of the special tools, fixtures, and equipment used in this manual. Equivalent substitutes can be used.

(1) A32121-1 -- Holding Fixture Equipment

(2) A32120-4, -8 -- Torque Adapters

(3) A32120-14 -- Spanner Wrench

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

02107 FLOUROCARBON CO OHIO DIV
DOVER, OHIO 44622
CANCELLED NO REPLACEMENT

07128 TETRAFLUOR INC
2051 EAST MAPLE AVENUE
EL SEGUNDO, CALIFORNIA 90245-5009

26303 GREENE TWEED IND INC ADVANTEC DIV
7101 PATTERSON DRIVE PO BOX 5037
GARDEN GROVE, CALIFORNIA 92645-5037

26879 CORONADO MFG INC
11069 PENROSE AVENUE
SUN VALLEY, CALIFORNIA 90352-2722

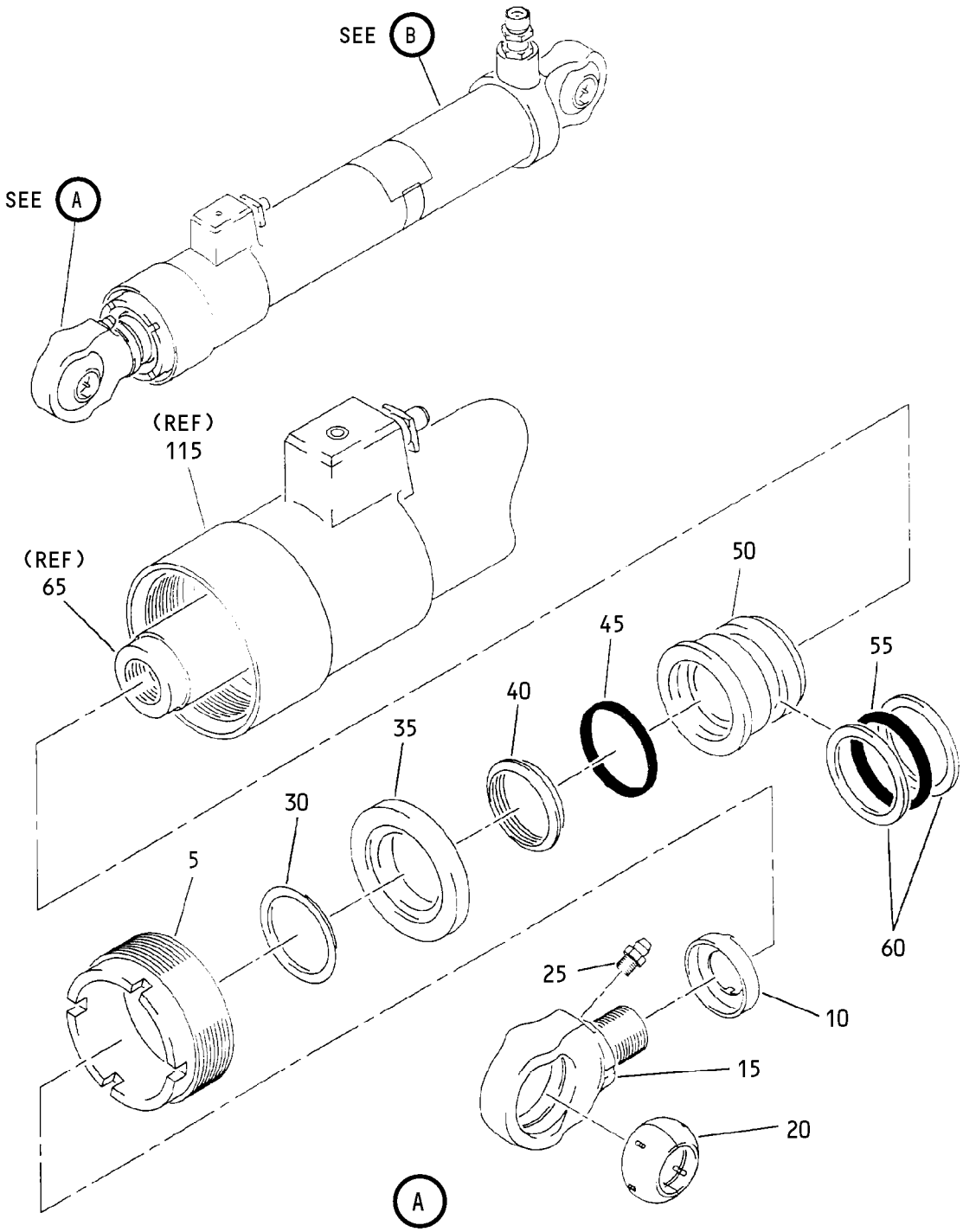
92555 LEE COMPANY
2 PETTIPAUG ROAD PO BOX 424
WESTBROOK, CONNECTICUT 06498-1543

94878 RAYBESTOS-MANHATTAN INC PACIFIC COAST DIV
FULLERTON, CALIFORNIA 92631
BUSINESS DISCONTINUED

97820 BUSAK AND SHAMBAN INC BEARING DIV
711 MITCHELL ROAD PO BOX 665
NEWBURY PARK, CALIFORNIA 91320-2214

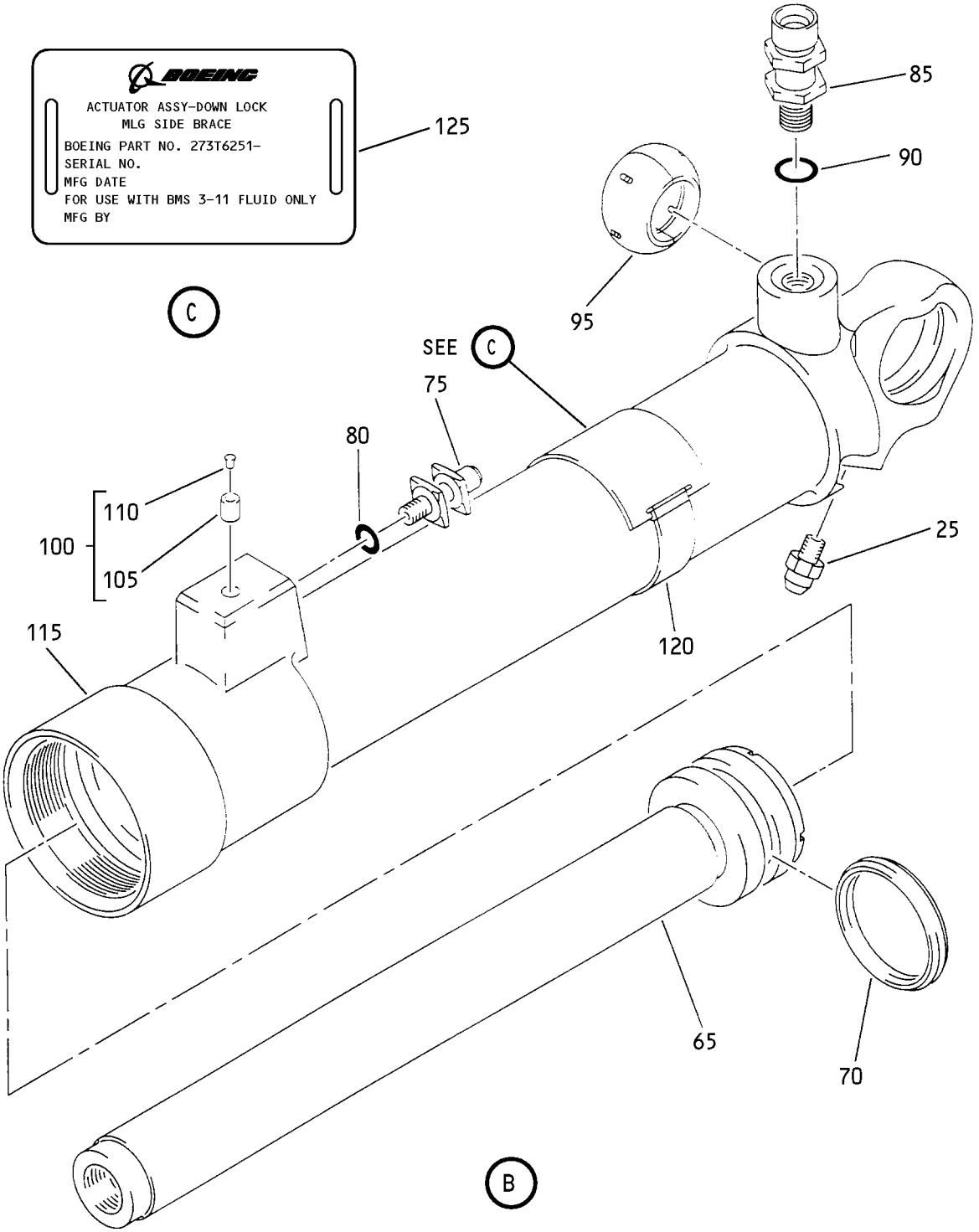
99240 CRISSAIR, INCORPORATED
38905 10TH STREET EAST
PALMDALE, CALIFORNIA 93550-3415

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
BACP20AX15		1	105	1
BACP20AX15P		1	110	1
BACR12BM326		1	60	2
BAC27TLG18		1	125	1
C11236-326B		1	60	2
MS15004-1		1	25	2
NAS1611-219		1	45	1
NAS1611-326		1	55	1
NAS1612-3		1	80	1
NAS1612-5		1	90	1
PLGA1876020		1	110	1
PLGA1877020		1	105	1
RMR12BM326		1	60	2
STF800-326		1	60	2
S30294-326-1		1	60	2
S33121-219H99		1	40	1
S33865-14H99N		1	30	1
S34721-326H99N		1	70	1
TF450-326A		1	60	2
2100-326		1	60	2
273T0050-4		1	120	1
273T6251-1		1	1A	RF
273T6252-1		1	100	1
273T6252-2		1	115	1
273T6253-1		1	65	1
273T6254-1		1	15	1
273T6255-1		1	50	1
293W2513-4		1	5	1
293W2515-4		1	10	1
293W2516-4		1	35	1
293W2521-16		1	95	1
293W2521-17		1	20	1
6F4080		1	85	1
6F4100		1	75	1



Main Landing Gear Side Brace – Down Lock Actuator Assembly
Figure 1 (Sheet 1)

K11299



Main Landing Gear Side Brace – Down Lock Actuator Assembly
Figure 1 (Sheet 2)

K11617

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
-1A	273T6251-1		ACTUATOR ASSY-DOWN LOCK SIDE BRACE MLG		RF
5	293W2513-4		.NUT-ROD GLAND		1
10	293W2515-4		.WASHER-LOCK CUP		1
15	273T6254-1		.ROD END		1
20	293W2521-17		.BEARING-SPLIT SPHERICAL		1
25	MS15004-1		.FITTING-LUBE		2
30	S33865-14H99N		.SCRAPPER- (V97820)		1
35	293W2516-4		.GLAND-ROD SEAL		1
40	S33121-219H99		.SEAL-FOOT (V97820)		1
45	NAS1611-219		.PACKING		1
50	273T6255-1		.BUSHING-PISTON ROD		1
55	NAS1611-326		.PACKING		1
60	C11236-326B		.RING-BACK UP (V26879) (SPEC BACR12BM326) (OPT RMR12BM326 (V94878)) (OPT STF800-326 (V02107)) (OPT S30294-326-1 (V97820)) (OPT TF450-326A (V07128)) (OPT 2100-326 (V26303))		2
65	273T6253-1		.ROD-PISTON		1
70	S34721-326H99N		.SEAL-PISTON (V97820)		1
75	6F4100		.UNION ASSY-ORIFICE (V99240)		1
80	NAS1612-3		.PACKING		1
85	6F4080		.UNION ASSY-ORIFICE (V99240)		1
90	NAS1612-5		.PACKING		1
95	293W2521-16		.BEARING-SPLIT SPHERICAL		1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
100	273T6252-1		.BARREL ASSY		1
105	PLGA1877020		..PLUG- (V92555) (SPEC BACP20AX15)		1
110	PLGA1876020		..PIN- (V92555) (SPEC BACP20AX15P)		1
115	273T6252-2		.BARREL		1
120	273T0050-4		.STRAP		1
125	BAC27TLG18		.MARKER-STAINLESS STEEL		1

- Item Not Illustrated