COMPONENT MAINTENANCE MANUAL WITH ILLUSTRATED PARTS LIST

NOSE GEAR ASSEMBLY

PART NUMBER 65-73762–21, –25, –26, –27, –28

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COMPONENT MAINTENANCE MANUAL

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To: All holders of NOSE GEAR ASSEMBLY 32-21-48.

Attached is the current revision to this COMPONENT MAINTENANCE MANUAL

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

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Location of Change	Description of Change
32-21-48	
FRONTMATTER	Changed the data in the TEMPORARY REVISION AND SERVICE BULLETIN RECORD list.
	Added parts with a different thermal spray coating per PRR 35458-R.
REPAIR-GENERAL	Added clarifications and updated callouts.
REPAIR 1-1	Added clarifications and updated callouts.
	Changed reference from ''IPL Figure 2'' to ''IPL Figure 1''
REPAIR 1-2	Added parts with a different thermal spray coating per PRR 35458-R.
	Changed reference from ''IPL Figure 2'' to ''IPL Figure 1''
	Changed reference from ''REPAIR 1-2'' to ''REPAIR 1-2, Figure 602''
	Changed the data in the References list.
REPAIR 2-2	Added parts with a different thermal spray coating per PRR 35458-R.
	Changed reference from ''IPL Figure 2'' to ''IPL Figure 1''
REPAIR 4-1	Added torsion link pin 69-72698-6 with tungsten carbide thermal spray coating on the outside diameter.
	Changed reference from ''IPL Figure 2'' to ''IPL Figure 1''
REPAIR 9-1	Added clarifications and updated callouts.
	Changed reference from ''IPL Figure 2'' to ''IPL Figure 1''
	Changed reference from ''REPAIR-GENERAL'' to ''REPAIR 9-1, Table 601''
REPAIR 10-1	Added parts with a different thermal spray coating per PRR 35458-R.
	Added clarifications and updated callouts.
	Changed reference from ''IPL Figure 2'' to ''IPL Figure 1''
REPAIR 11-1	Added parts with a different thermal spray coating per PRR 35458-R.
	Added clarifications and updated callouts.
	Changed reference from ''IPL Figure 2'' to ''IPL Figure 1''
REPAIR 12-1	Added parts with a different thermal spray coating per PRR 35458-R.
	Changed reference from ''IPL Figure 2'' to ''IPL Figure 1''
ILLUSTRATED PARTS LIST	Changed the data in the NUMERICAL INDEX list.
	Added clarifications and updated callouts.
	Added parts with a different thermal spray coating per PRR 35458-R.
	Added torsion link pin 69-72698-6 with tungsten carbide thermal spray coating on the outside diameter.

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TEMPORARY REVISION AND SERVICE BULLETIN RECORD

BOEING SERVICE BULLETIN	BOEING TEMPOR˜ ARY REVISION	OTHER DIRECTIVE	DATE OF INCORPORATION INTO MANUAL
		PRR 33194	DEC 05/83
		PRR 33300	DEC 05/83
		PRR 33347	DEC 05/83
		PRR 33411	DEC 05/83
		PRR 33586	SEP 05/84
		PRR 33626	DEC 05/84
		PRR 33905	MAR 05/86
		PRR 34477	JUN 05/88
32-1209		PRR 33890-39	SEP 05/89
32-1211		PRR 34474	SEP 05/89
		PRR 34509	MAR 05/89
		PRR 34656	JUN 05/91
		PRR 34939	MAR 05/93
32-1211,Rev. 2			JUN 01/94
32-1129,Rev. 3			MAR 01/95
		PRR 35005-132	DEC 01/97
		PRR 35005-153	DEC 01/97
		MC 3250MP3011	SEP 01/96
		737-SL-32-056B	NOV 01/00
		737-SL-32-083	MAR 01/01
		737-SL-32-065A	NOV 01/03
I		PRR 35458-R	JUL 01/09

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

Revision		Filed		Revision		Filed	
Number	Date	Date	Initials	Number	Date	Date	Initials

Revision		Filed		Revision		Filed	
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Temporary Revision		Inserted		Removed	
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Temporary Revision		Inserted		Removed	
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Temporary Revision		Inserted		Removed	
Date	Initials	Number	Date	Date	Initials

INTRODUCTION

1. General

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

B. This manual is divided into different parts:

(1) Title Page

(2) Transmittal Letter

(3) Highlights

(4) List of Effective Pages

(5) Table of Contents

(6) Temporary Revision & Service Bulletin Record

(7) Record of Revisions

(8) Record of Temporary Revisions

(9) Introduction

(10) Procedures & IPL Sections

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

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

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

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

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

NOSE GEAR ASSEMBLY - DESCRIPTION AND OPERATION

1. Description

A. The nose gear assembly includes the shock strut, torsion links, steering collar, steering cylinders, and steering metering valve.

2. Operation

A. The shock strut absorbs shocks and impacts during take-off, landing, and taxiing operations. The torsion links keep radial alignment of the shock strut inner and outer cylinders during compression and extension. The metering valve sends hydraulic fluid to the steering cylinders, which push their pistons to turn the steering collar to turn the nose gear.

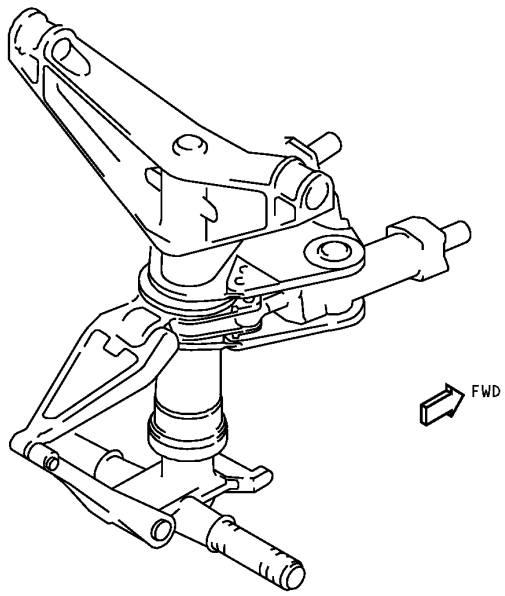
3. Leading Particulars (Approximate)

A. Length – Centerline of axle to mounting trunnion holes

(1) Compressed – 35.5 inches

(2) Extended – 47.5 inches

B. Weight – 190 pounds



Nose Gear Assembly
Figure 1

(NOT APPLICABLE)

DISASSEMBLY

1. General

A. This procedure has the data necessary to disassemble the nose gear assembly.

B. Disassemble this component only as necessary to complete fault isolation, find the serviceability of parts, do necessary repairs, and put the unit back into serviceable condition.

C. Refer to IPL Figure 1 for item numbers, except where noted.

2. Disassembly Procedures

A. References

Reference	Title
CMM 32-21-58	NOSE GEAR SHOCK STRUT ASSEMBLY
CMM 32-50-12	NOSE WHEEL STEERING METERING VALVE COVER ASSEMBLY
OHM 32-50-11	Overhaul Manual

B. Part Replacement

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

(1) Cotter pins (5, 35 or 37, 170)

WARNING: BE SURE TO RELEASE ALL AIR PRESSURE FROM THE NOSE GEAR ASSEMBLY BEFORE YOU START DISASSEMBLY. INJURY TO PERSONNEL OR DAMAGE TO PARTS CAN OCCUR.

(2) O-rings (165, IPL Figure 2)

C. Disassembly (IPL Figure 1)

(1) Install the nose gear unit in the stand in a vertical position with the air valve at the top.

(2) Remove the air valve cap and slowly loosen the swivel nut. After the pressure is released, tighten the air valve nut.

(3) Remove torsion links (70).

(a) Remove cotter pin (5), nut (20), washer (17), bushing (25), bearing (30) and apex bolt (10).

(b) Remove cotter pins (35), nuts (40), washers (45, 50), end caps (55) and retaining pins (60), or cotter pins (37), nuts (42), washers (47, 48), end caps (55) and bolts (62).

(c) Remove pins (65) and link assemblies (70) from shock strut (205) and steering collar (120).

(4) Remove metering valve (160, IPL Figure 2) and cylinders (175, IPL Figure 2).

(a) Remove nut (105), washer (100), bolt (95) and bushings (110, 115) at each steering cylinder rod end.

(b) Bend up the tabs of washers (5, IPL Figure 2) and loosen lower nuts (10, IPL Figure 2).

CAUTION: THE SHOCK STRUT COULD HAVE SPACERS AND WASHERS BETWEEN THE UPPER AND LOWER STEERING PLATES.

(c) If applicable, remove the spacers and related fasteners from the two locations between the upper and lower steering plates. Make a note of the type and quantity of washers at each location, to help during assembly. The washers were used to adjust the gap between the spacers and the plates during the assembly of the shock strut assembly (Ref CMM 32-21-58).

CAUTION: STEERING PLATES ARE A MATCHED SET WITH SHOCK STRUT OUTER CYLINDER. DO NOT INTERCHANGE WITH PARTS FROM OTHER SETS.

(d) Remove nuts, washers, bolts (eight locations) (items 50, 55, 65, IPL Figure 1, CMM 32-21-58) that hold the upper and lower steering plates to the shock strut outer cylinder. Remove the plates.

(e) Remove screws (15, IPL Figure 2), washers (20, IPL Figure 2), bolts (25, IPL Figure 2) and cover assembly (30, IPL Figure 2). Refer to CMM 32-50-12 for overhaul of the cover assembly.

(f) Remove nuts (85, IPL Figure 2), washers (20, IPL Figure 2), bolts (95, 100, IPL Figure 2) and bracket (105 or 125, IPL Figure 2).

CAUTION: BE SURE TO COMPLETELY DISENGAGE THE VALVE CYLINDER THREADED RING FROM THE STEERING CYLINDER TRUNNION, OR DAMAGE TO PARTS COULD OCCUR.

(g) Remove the sealant from metering valve (160, IPL Figure 2) ring and steering cylinder trunnions. Completely unscrew the valve cylinder threaded ring from the steering cylinder trunnion.

(h) Remove nuts (145, IPL Figure 2), washers (150, IPL Figure 2) and bolts (155, IPL Figure 2). Remove metering valve (160, IPL Figure 2).

(i) Remove O-rings (165, IPL Figure 2) and unions (170, IPL Figure 2).

(j) Bend the tabs of washers (5, IPL Figure 2) out of the slots in the nuts. Remove nuts (10, IPL Figure 2) and washers from steering cylinders.

(k) Remove the plates from steering cylinders (175, IPL Figure 2) and remove bearings (180, IPL Figure 2) from the plates. Refer to OHM 32-50-11 for overhaul of the steering cylinders.

(l) Remove nuts (185, IPL Figure 2), washers (190, IPL Figure 2), bolts (195, IPL Figure 2) and support (130, IPL Figure 2) from upper plate.

(m) Remove cotter pins (170), nuts (190, 195), washers (185), bolts (175, 180) and brackets (200).

(5) Remove steering collar (120).

(a) Remove bushings (110) and separate each half of collar assembly (120) from shock strut. Keep the collar assembly together as a matched set.

NOTE: Do not remove shim (150) from aft collar half (140) unless necessary for repair or replacement. If removed, make a note of the number of laminations of shim (150) to help during assembly.

CAUTION: BEARING HALVES (160, 165) ARE A MATCHED SET AND MUST BE KEPT TOGETHER TO BE SURE OF FREE OPERATION AFTER ASSEMBLY.

(b) Remove bearing assemblies (155) from shock strut. Keep bearing halves (160, 165) as a matched set.

(6) Temporarily install the steering plates back on the shock strut outer cylinder with the eight bolts, washers, nuts (items 50, 55, 65, IPL Figure 1, CMM 32-21-58). If applicable, temporarily install spacer with washers as noted in DISASSEMBLY, Paragraph 2.C.(3), bolts and nuts. Or, as an alternative, put the steering plates and related fasteners together in a container and keep with this shock strut as a set. Refer to CMM 32-21-58 for overhaul of the shock strut.

CLEANING

1. General

A. This procedure tells how to clean parts of the nose gear assembly.

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

C. Refer to IPL Figure 2 for item numbers.

2. Cleaning

A. References

Reference	Title
SOPM 20-30-01	CLEANING AND RELUBRICATING BEARINGS
SOPM 20-30-03	GENERAL CLEANING PROCEDURES

B. Procedure

(1) Clean all parts but the metering valve (160, IPL Figure 2) by standard industry practices and the instructions in SOPM 20-30-01 and SOPM 20-30-03. Clean the metering valve by the vendor's overhaul instructions.

CHECK

1. General

A. This procedure tells how to examine the parts of the nose gear assembly.

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

C. Refer to IPL Figure 1 and IPL Figure 2 for item numbers.

2. Check

A. References

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

B. Check procedures

(1) Examine all parts for defects by standard industry practices. Refer to FITS AND CLEARANCES for design dimensions and wear limits.

(2) Examine all pin and bolt shanks for wear. Carefully examine the area around lubrication and pin retention holes for hairline cracks.

(3) Magnetic particle examine (SOPM 20-20-01) these parts (IPL Figure 1):

(a) Pin (65)

(b) Bolt (95)

(c) Nut (105)

(d) Bushing (110, 115)

(e) Collar (140, 145)

(f) CRES bearing assemblies (155B, 155C)

(4) Penetrant examine (SOPM 20-20-02) these parts (IPL Figure 1):

(a) Bolt (10)

(b) Pin (60)

(c) Link (90)

(d) Bushings (110A,115A)

(e) Bearing assemblies (155, 155A)

REPAIR

1. Content

A. Repair, refinish and replacement procedures are included in separate repair sections as follows:

Table 601:

P/N	NAME	REPAIR
65-46203	COLLAR, STEERING	1-1, 1-2
65-46288	LINK, TORSION	2-1, 2-2
69-61383	BOLT	3-1
69-72698	PIN	4-1
69-73008	PIN, RETAINING	5-1
69-61785	BEARING	6-1
BACB30LM10CD52	BOLT, APEX	7-1
BAC27DHY0301	MARKER	8-1
BAC27DLG0066	MARKER	8-1
BAC27DLG0108	MARKER	8-1
BAC27DLG0116	MARKER	8-1
BAC27DLG0120	MARKER	8-1
BAC27DLG0145	MARKER	8-1
69-73685	TEE	8-1
- -	MISCELLANEOUS PARTS REFINISH	9-1
65C37814	BEARING	10-1
65C37817	BOLT	11-1
65C37822	BOLT, APEX	12-1
65C37823	PIN	13-1

2. Standard Practices

A. Refer to these standard practices, as applicable, for details of procedures in individual repairs.

- SOPM 20-00-00 Introduction
- SOPM 20-10-01 Repair and Refinish of High-Strength Steel Parts
- SOPM 20-10-02 Machining of Alloy Steel
- SOPM 20-10-03 Shot Peening
- SOPM 20-10-04 Grinding of Chrome Plated Parts
- SOPM 20-10-05 Application and Finishing of Thermal Spray Coatings
- SOPM 20-10-09 Machining of Copper Beryllium Alloy
- SOPM 20-30-02 Stripping of Protective Finshes
- SOPM 20-30-03 General Cleaning Procedures
- SOPM 20-41-01 Decoding Table for Boeing Finish Codes

- SOPM 20-41-02 Application of Chemical and Solvent Resistant Finishes
- SOPM 20-42-03 Hard Chrome Plating
- SOPM 20-42-05 Bright Cadmium Plating
- SOPM 20-42-09 Electrodeposited Nickel Plating
- SOPM 20-43-01 Chromic Acid Anodizing
- SOPM 20-50-02 Installation of Safetying Devices
- SOPM 20-50-03 Bearing and Bushing Replacement
- SOPM 20-50-05 Application of Aluminum Foil and other Markers
- SOPM 20-50-12 Application of Adhesives
- SOPM 20-60-02 Finishing Materials
- SOPM 20-60-04 Miscellaneous Materials
- 32-00-03 Landing Gear Parts - Lubrication Fitting Replacement
- 32-00-05 Repair of High-Strength Steel Landing Gear Parts

3. Dimensioning Symbols

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

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STEERING COLLAR ASSEMBLY - REPAIR 1-1

65-46203–24, –26, –29, –31

1. General

A. Use this procedure to replace the parts of the steering collar assembly.

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

C. Refer to REPAIR-GENERAL for a list of applicable standard practices.

D. Refer to IPL Figure 1 for item numbers.

2. Parts Replacement

NOTE: For repair of surfaces which is only replacement of the original finish, refer to Refinish instructions, REPAIR 1-2.

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27

B. References

Reference	Title
32-00-03	Landing Gear Parts - Lubrication Fitting Replacement
SOPM 20-30-03	GENERAL CLEANING PROCEDURES
SOPM 20-42-10	LOW HYDROGEN EMBRITTLEMENT STYLUS CADMIUM PLATING
SOPM 20-50-03	BEARING AND BUSHING REPLACEMENT

C. Bushing Replacement (REPAIR 1-1, Figure 601)

(1) Remove bushings (110, 115, 125).

(2) If you find defects on lug faces or holes, refer to REPAIR 1-2 for repair instructions.

(3) Standard bushings (125, 125B, 125C, 125D)

NOTE: For bushings (125A and 125E), which have a layer of thermal spray coating on the outer flange face that must not be machined, refer to REPAIR 1-1, Paragraph 2.C.(4) below.

(a) Install replacement bushings (125, 125B, 125C or 125D) by the shrink-fit procedure (SOPM 20-50-03).

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

(4) Bushings (125A and 125E) (with thermal spray coating on flange face).

(a) Because these bushings have a hard layer of thermal spray coating on the outer flange face, you must adjust the bushing flange thickness before bushing installation to get the correct installed dimension across the flanges.

(b) Measure the lug width of the steering collar after repair and refinish to calculate the necessary thickness of the bushing flanges. Be sure to include and adjust for the thickness of the cadmium plating to be applied to the inside faces of the bushing flanges.

(c) Machine the inside surfaces of the bushing flanges to get the necessary thickness, with a fillet radius of 0.02-0.03 inch and a maximum undercut of 0.010 inch. Remove material from each bushing to make the flange thicknesses equal within 0.005 inch. Do not machine the thermal spray layer on the outside flange faces.

(d) Brush cadmium plate (SOPM 20-42-10) the inside surfaces of the flanges.

(e) Install the bushings by the shrink-fit procedure (SOPM 20-50-03), with compound, C00913.

(f) Make a check of the dimension between the flange faces of the installed bushings to be sure it is within design dimensions shown.

(g) Machine the bores of the bushings to design dimensions and finish.

(h) Seal the flanges of the bushings with sealant, A00247.

(5) Install bushings (110, 115). Use compound, C00913 when you install the 65C37818-series bushings.

NOTE: Bushings (110, 115) are not part of steering collar assembly (120). They are included in this repair to make their replacement procedure easier to find.

(6) Make sure the lubrication passages are clear.

D. Shim Replacement (REPAIR 1-1, Figure 603)

(1) Put collar halves (140, 145) together and align the holes in the mating lugs. Measure the distance between the adjacent collar faces as shown.

(2) Get a replacement shim (150) and adjust its size for an approximate fit. It goes on the aft collar half with the chamfer facing the center of the ID.

(3) Clean the mating surfaces of the shim and the aft collar half (SOPM 20-30-03).

(4) Install the shim on the aft collar half with the chamfer to the center of the ID and bond it in position with sealant, A00247.

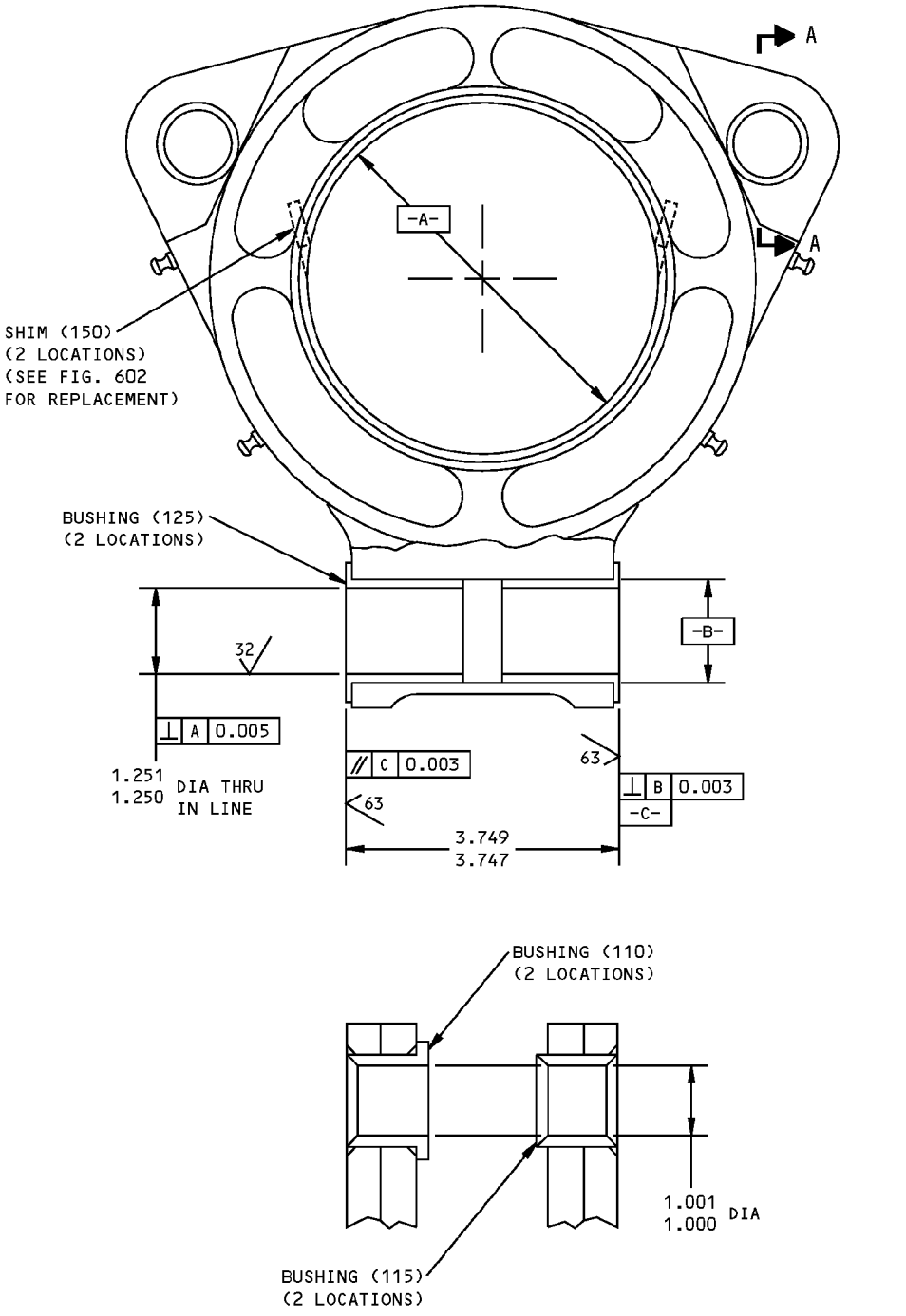
(5) Remove laminations as necessary to get an assembled gap of 0.01-0.03 inch between the shim and the forward collar half, as shown.

(6) Make sure that the shim and the sealant surfaces are not above the surfaces of the ID of the collar assembly.

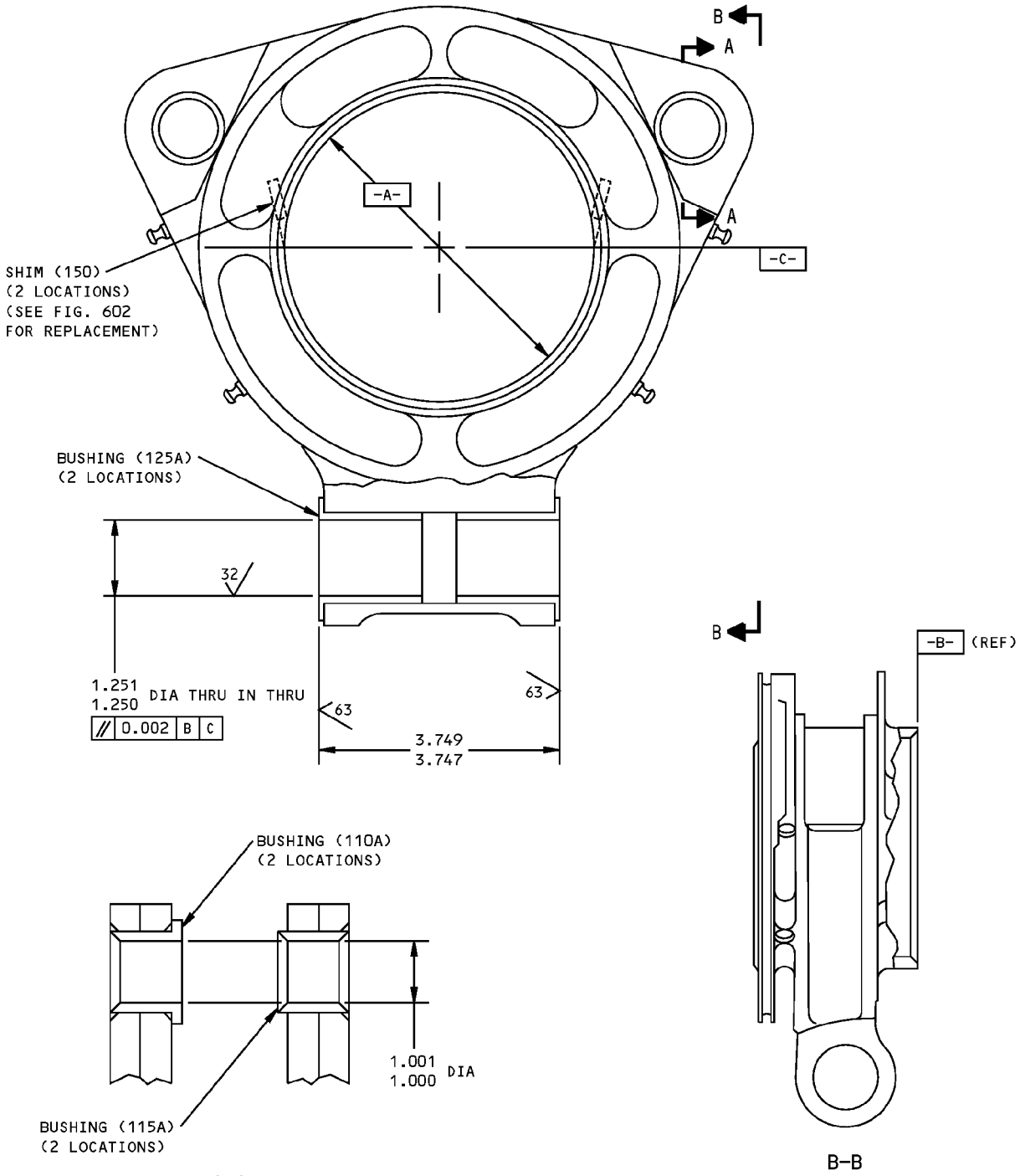
(7) Apply two layers of primer, C00259 after you remove the lamination(s).

E. Lube Fitting Replacement

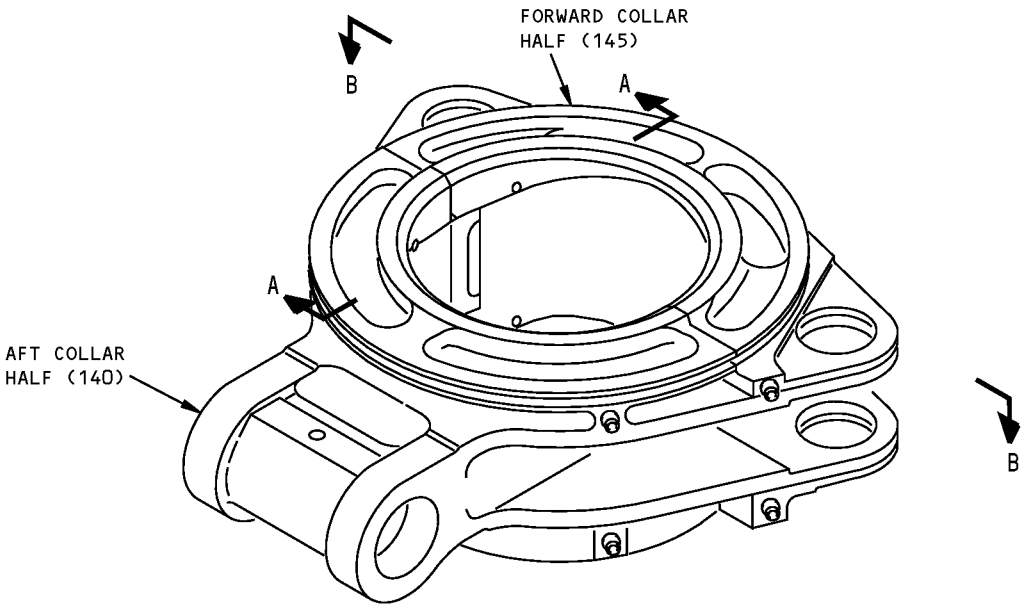
(1) Replace lube fittings (130) as specified in 32-00-03.

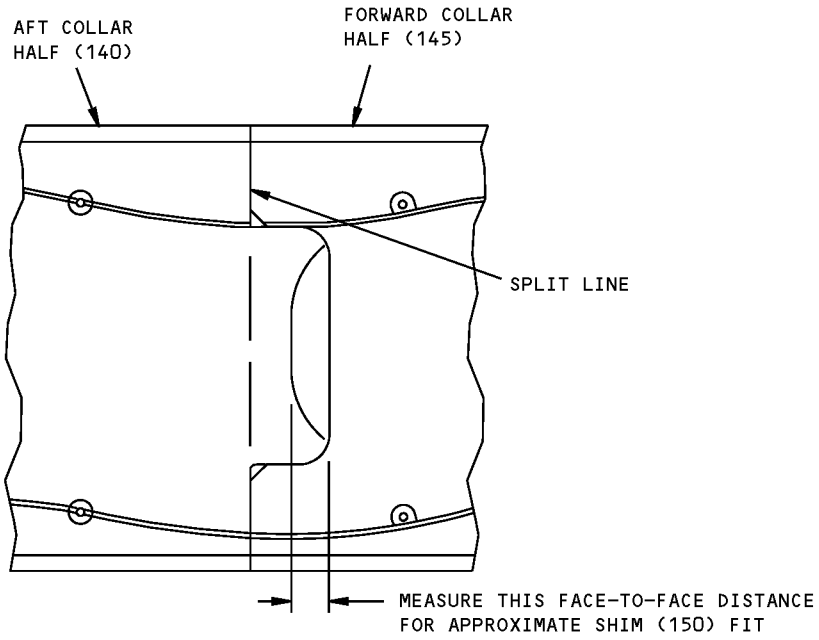


65-46203-24,-26 Bushing Replacement
Figure 601



65-46203-29,-31 Bushing Replacement
Figure 602

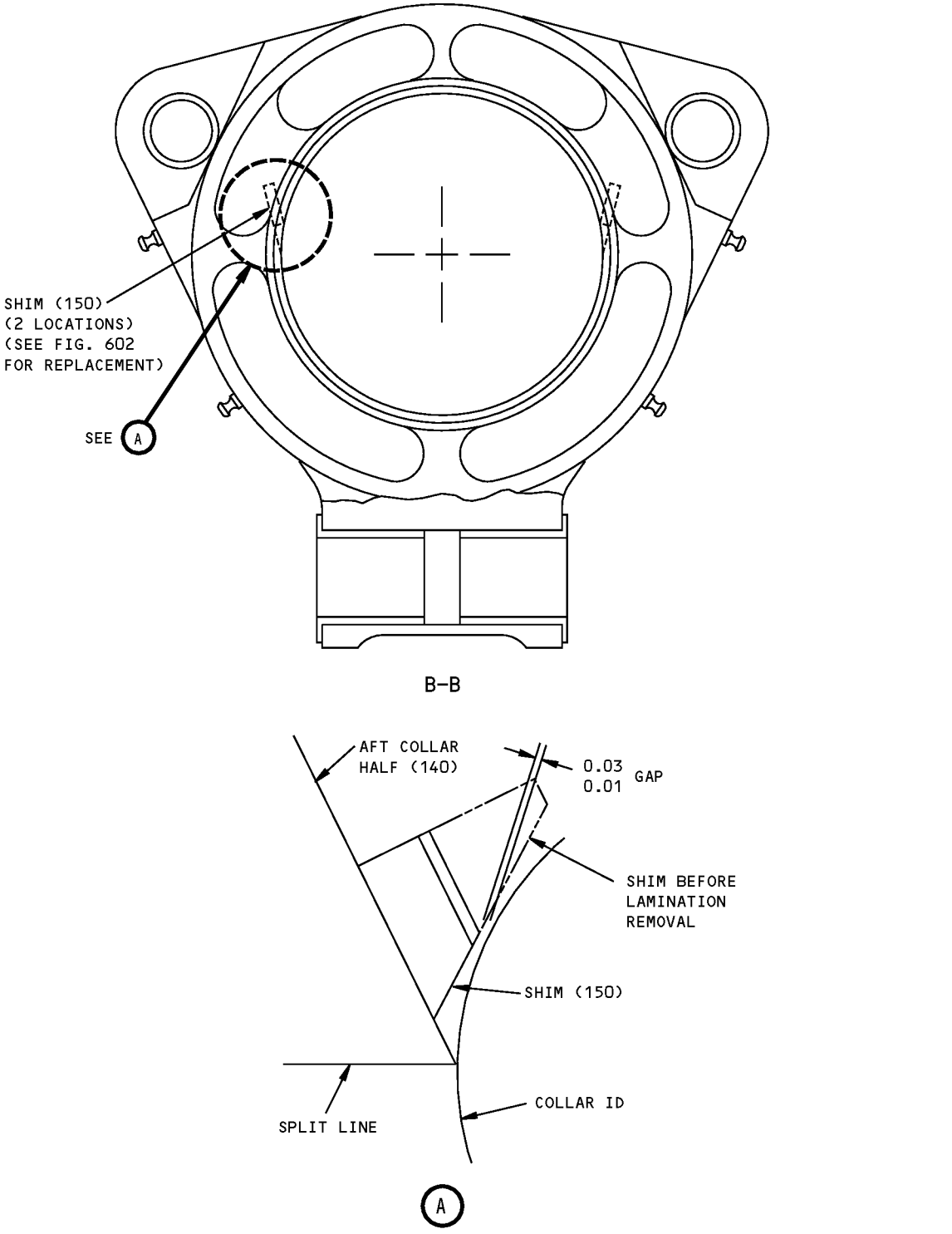




A-A
SHIM REMOVED FOR CLARITY

ITEM NUMBERS REFER TO IPL FIG. 1

65-46203-24,-26,-29,-31 Shim Replacement
Figure 603 (Sheet 1 of 2)



65-46203-24,-26,-29,-31 Shim Replacement
Figure 603 (Sheet 2 of 2)

COLLAR ASSEMBLY - REPAIR 1-2

65-46203–25, –27, –28, –30

1. General

A. Use this procedure to repair collar assembly (135).

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

C. Refer to REPAIR-GENERAL for a list of applicable standard practices.

D. Refer to IPL Figure 1 for item numbers.

2. Repair

NOTE: For repair of surfaces which is only replacement of the original finish, refer to Refinish instructions in REPAIR 1-2, Figure 601 or REPAIR 1-2, Figure 602.

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I

B. References

Reference	Title
SOPM 20-10-04	GRINDING OF CHROME PLATED PARTS
SOPM 20-42-03	HARD CHROME PLATING
SOPM 20-42-09	ELECTRODEPOSITED NICKEL PLATING

C. Central Bore (REPAIR 1-2, Figure 601 or REPAIR 1-2, Figure 602)

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

(2) Shot peen as indicated.

(3) Build up with chrome plate or thermal spray. Grind to design dimension and finish. Or chrome plate as shown and make a special mating bearing as shown in REPAIR 6-1.

D. Lug Faces and Holes (REPAIR 1-2, Figure 601 or REPAIR 1-2, Figure 602)

NOTE: The repair limits are applicable only if the lug radii were not machined to become outside of design dimensions.

(1) Method 1 – Installation of oversize bushings or repair sleeves (for material removal more than 0.015 inch)

(a) Machine lug faces and holes as necessary, within repair limits, to remove defects.

(b) Shot peen, cadmium-titanium plate and apply primer, C00259.

(c) Make oversize bushings or repair sleeves (REPAIR 1-2, Figure 603 and on) to adjust for the material removed.

(d) Install the bushings or sleeves as specified in REPAIR 1-1.

(2) Method 2 – Chrome plate buildup on faces only (for aft collar (140) only)

(a) Machine lug faces and holes as necessary, within repair limits, to remove defects.

(b) Shot peen, chrome plate and grind to design dimensions and finish. Chrome plate thickness must not be more than 0.015 inch after grinding. If material removal is more than 0.015 inch, nickel plate (SOPM 20-42-09) and then chrome plate (SOPM 20-42-03) and grind(SOPM 20-10-04) to design dimensions. Total plate thickness must not be more than 0.040 inch after grinding.

(c) Install standard bushings (see IPL Figure 1) as specified in REPAIR 1-1.

(3) Method 3 – Nickel plate buildup on faces only (for forward collar (145) only)

(a) Machine lug faces and holes as necessary, within repair limits, to remove defects.

(b) Shot peen, nickel plate and machine to design dimensions and finish. Nickel plate thickness must not be more than 0.040 inch after machining.

(c) Install standard bushings (see IPL Figure 1) as specified in REPAIR 1-1.

(4) Method 4 – Thermal spray buildup, only for the mating faces of the two collar halves (optional)

NOTE: If one faying surface of the steering collar half is built up with tungsten carbide, the other matched faying surface must be built up with tungsten carbide.

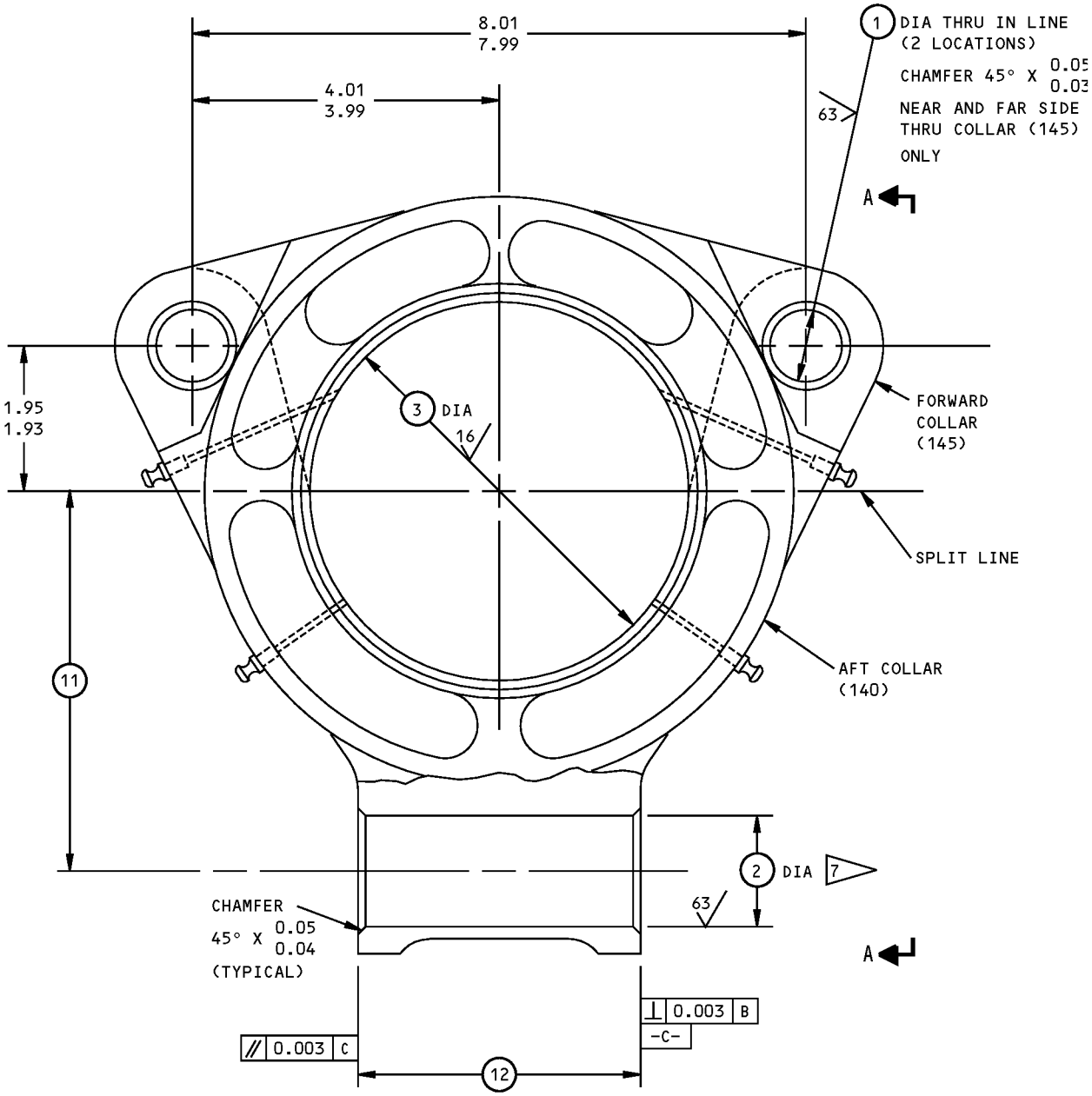
(a) Machine lug faces and holes as necessary, within repair limits, to remove defects.

(b) Shot peen as indicated.

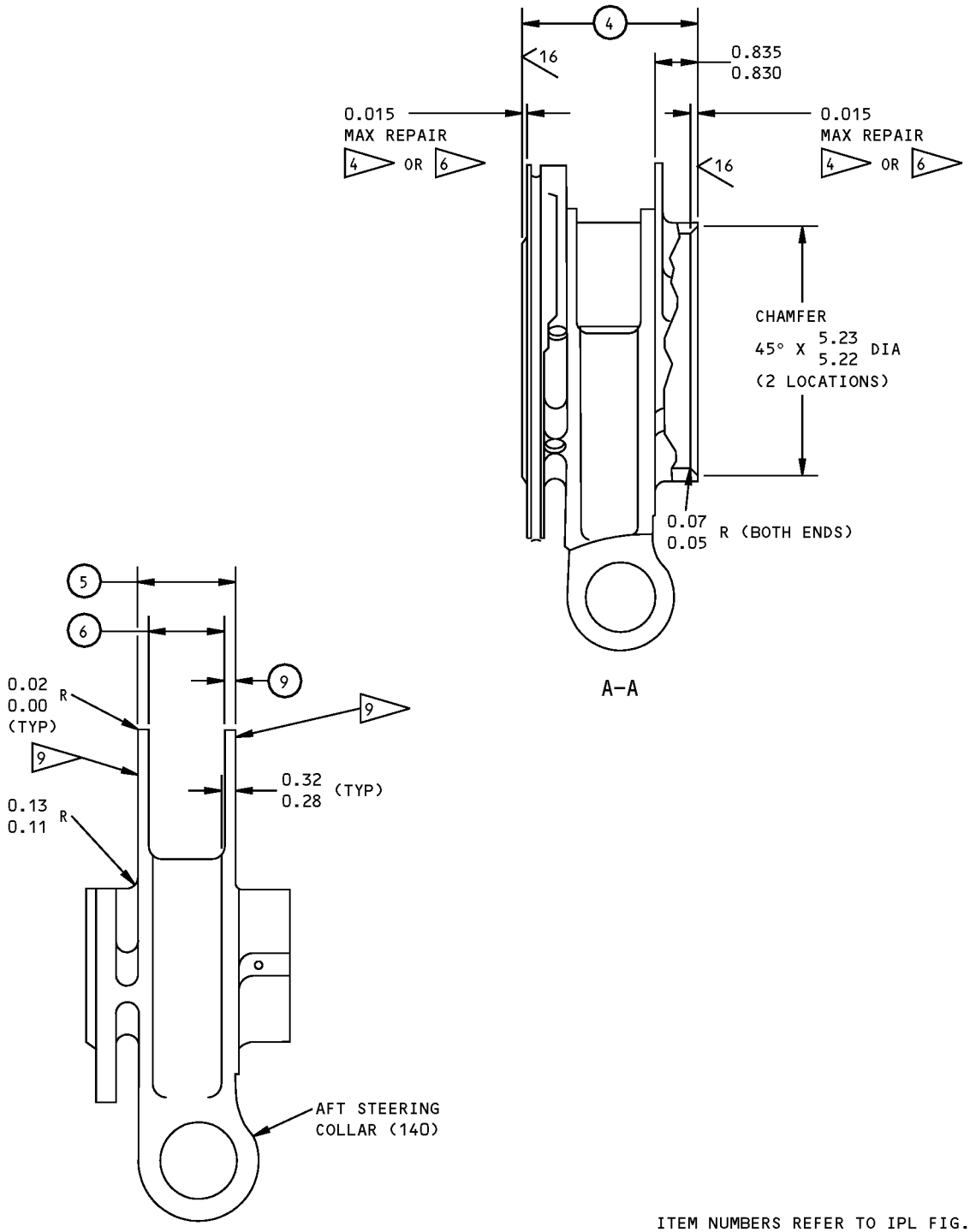
(c) Build up with thermal spray coating as indicated. Thickness must not be more than 0.015 inch.

(d) Install standard bushings (see IPL Figure 1) as specified in REPAIR 1-1.

(e) We recommend that you repair the mating surfaces of the steering collar bearing with the same coating. Refer to REPAIR 6-1 for details.



Steering Collar Repair and Refinish
Figure 601 (Sheet 1 of 7)

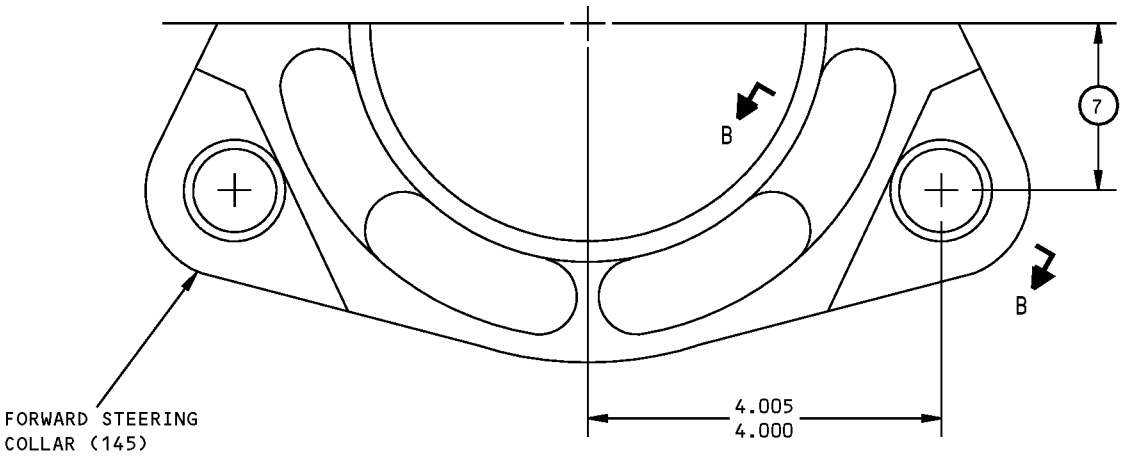


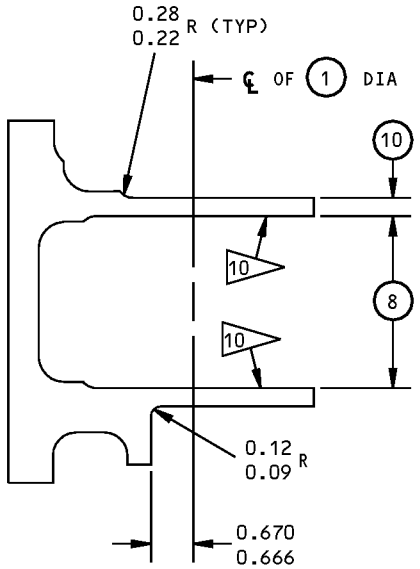
ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

65-46203-25,-27

Steering Collar Repair and Refinish
Figure 601 (Sheet 2 of 7)





B-B

65-46203-25,-27

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

Steering Collar Repair and Refinish
Figure 601 (Sheet 3 of 7)

REFERENCE NUMBER	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DESIGN DIMENSION	1.201 1.200	1.4380 1.4370	4.999 4.997	3.400 3.398	1.753 1.745 1.750 1.743 11 12	1.330 1.325	1.945 1.940	1.756 1.764 1.754 1.762 11 12
REPAIR LIMIT	SEE CHART	1.6000 1	5.019 6 5.029 2 5.060 15	3.350 14	1.720 2 5	1.360 2 5	1.909 3	1.786 5 6 8

REFERENCE NUMBER	(9)	(10)	(11)	(12)
DESIGN DIMENSION	0.218 0.214	0.21 0.19	5.01 4.99	3.625 3.615
REPAIR LIMIT	SEE CHART	SEE CHART	4.984 3	3.565 1

REFINISH

CHROME PLATE (F-15.04) DIA (3). CADMIUM-TITANIUM PLATE (F-15.01) ALL OTHER SURFACES (THROW-IN PERMITTED IN BORES). APPLY BMS 10-11, TYPE 1 PRIMER (F-20.02) BUT NOT ON CHROME PLATE. AFTER INSTALLATION OF LUBE FITTINGS AND BUSHINGS, APPLY BMS 10-11, TYPE 2 ENAMEL (F-21.02) BUT NOT ON DIA (1) AND (3), BUSHINGS, LUBE FITTINGS, MATING SURFACES AT SPLIT LINE AND AS NOTED

REPAIR

REF 1 THRU 6 8 14 15 16

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK EDGES 0.04 R UNLESS SHOWN DIFFERENTLY

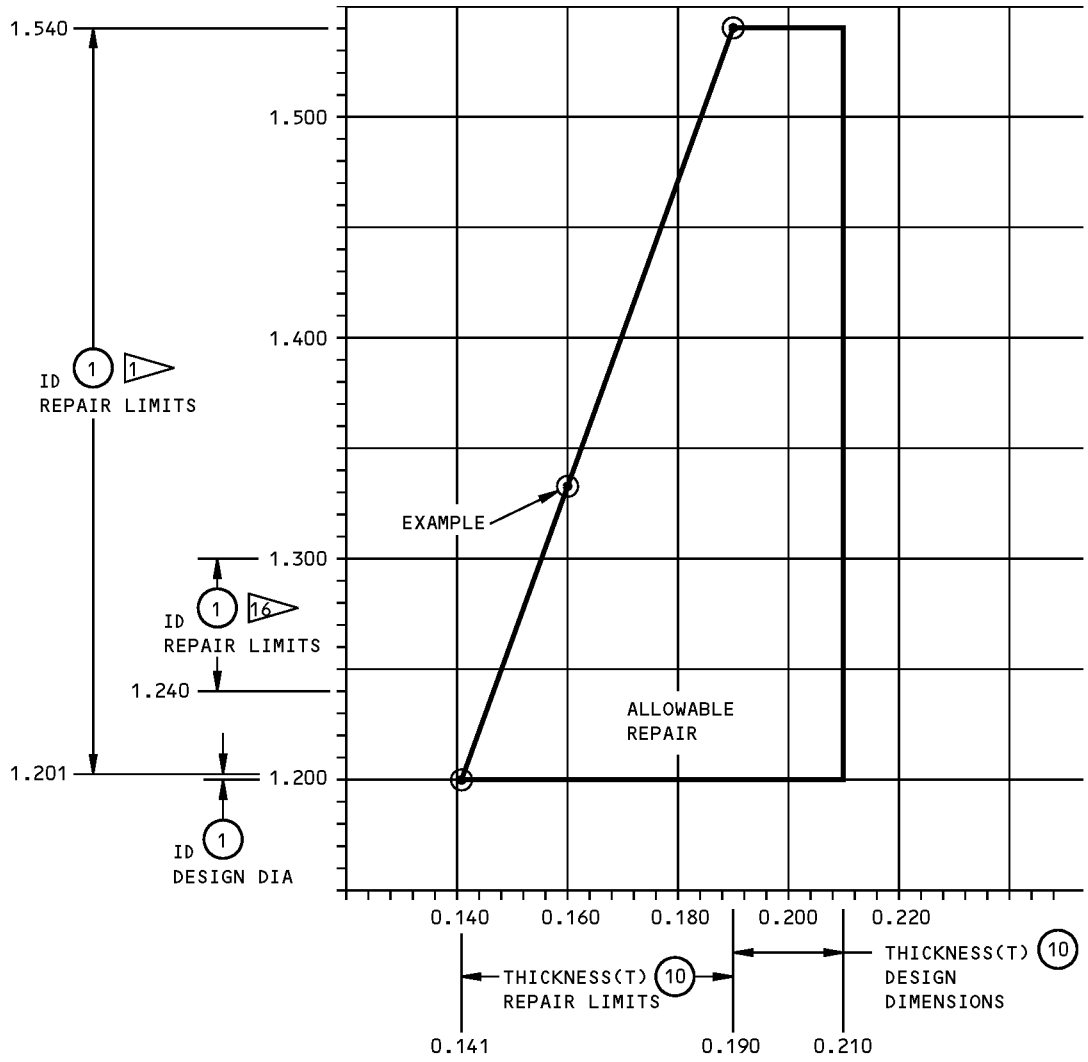
SHOT PEEN: 0.016-0.033 SHOT SIZE
0.009-0.015 A2 INTENSITY

MATERIAL: 4340M STEEL (270-300 KSI)

ALL DIMENSIONS ARE IN INCHES

65-46203-25,-27

Steering Collar Repair and Refinish
Figure 601 (Sheet 4 of 7)



REPAIR CRITERIA

THE COMBINATION OF ID AND THICKNESS REPAIR LIMITS MUST BE WITHIN THE INDICATED AREA OF THE CHART. AN ACCEPTABLE ID OR THICKNESS CAN BE CALCULATED AS FOLLOWS:

$T \geq 0.1445(ID) - 0.0325$ IF $(1.201 < ID \leq 1.540)$
$T = 0.141$ MINIMUM IF $(1.200 \leq ID \leq 1.201)$

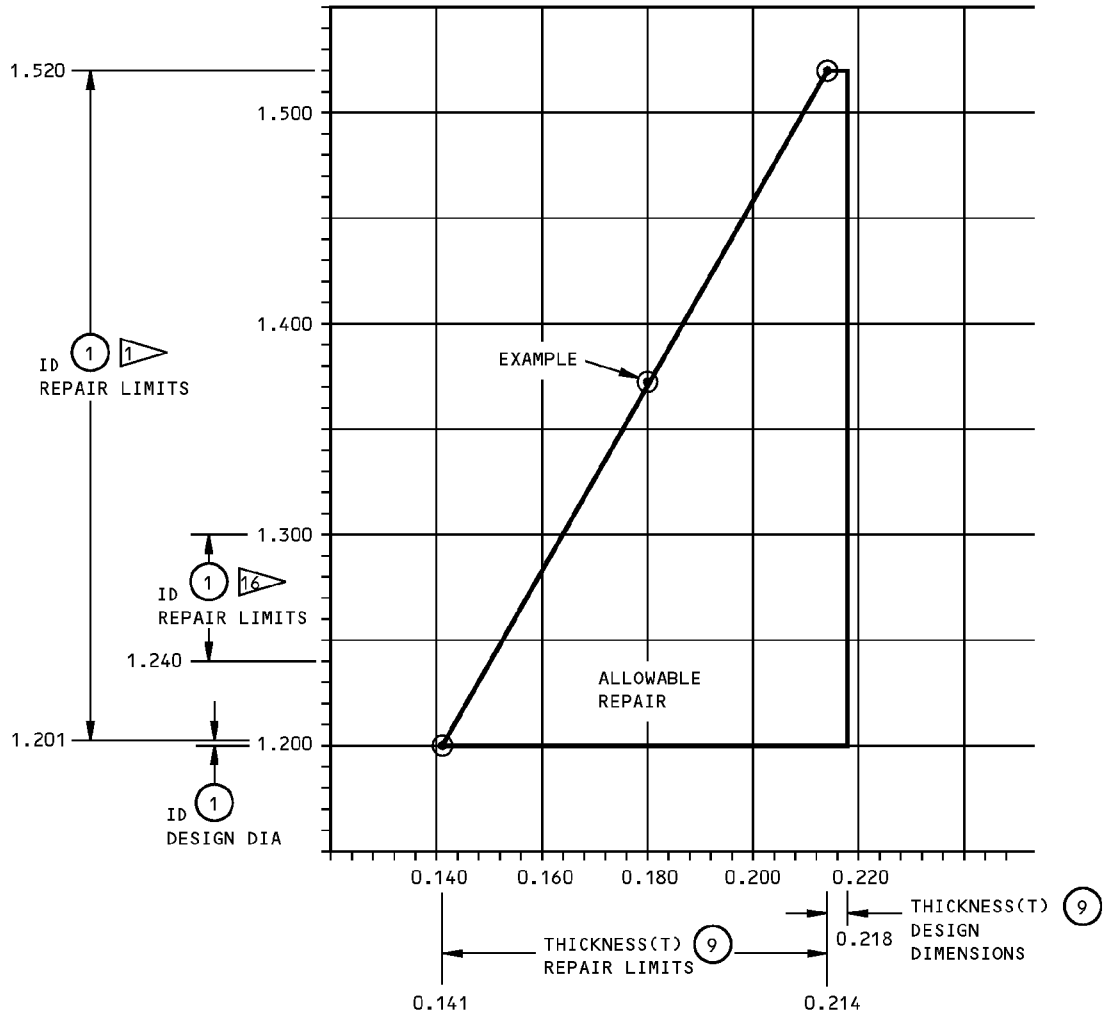
$ID \leq 6.9204(T) + 0.2249$ IF $(0.141 \leq T < 0.190)$
$ID = 1.540$ MAXIMUM IF $(0.190 \leq T \leq 0.210)$

EXAMPLE: IF ID IS MACHINED OUT TO 1.332,
$T \geq 0.1445(1.332) - 0.0325$
$T \geq 0.160$

THIS MEANS THE THICKNESS MUST BE 0.160 OR GREATER. IF THE THICKNESS IS ANTICIPATED FIRST, THE ID CAN SIMILARLY BE FOUND.

FORWARD STEERING COLLAR (IPL FIG. 1; 145)
65-46252-5,-7

Steering Collar Repair and Refinish
Figure 601 (Sheet 5 of 7)



REPAIR CRITERIA

THE COMBINATION OF ID AND THICKNESS REPAIR LIMITS MUST BE WITHIN THE INDICATED AREA OF THE CHART. AN ACCEPTABLE ID OR THICKNESS CAN BE CALCULATED AS FOLLOWS:

$T \geq 0.2288(ID) - 0.1338$ IF $(1.201 < ID \leq 1.520)$
$T = 0.141$ MINIMUM IF $(1.200 \leq ID \leq 1.201)$

$ID \leq 4.3706(T) + 0.5848$ IF $(0.141 \leq T < 0.214)$
$ID = 1.520$ MAXIMUM IF $(0.214 \leq T \leq 0.218)$

EXAMPLE: IF ID IS MACHINED OUT TO 1.3715,
$T \geq 0.2288(1.3715) - 0.1338$
$T \geq 0.180$

THIS MEANS THE THICKNESS MUST BE 0.180 OR GREATER. IF THE THICKNESS IS ANTICIPATED FIRST, THE ID CAN SIMILARLY BE FOUND.

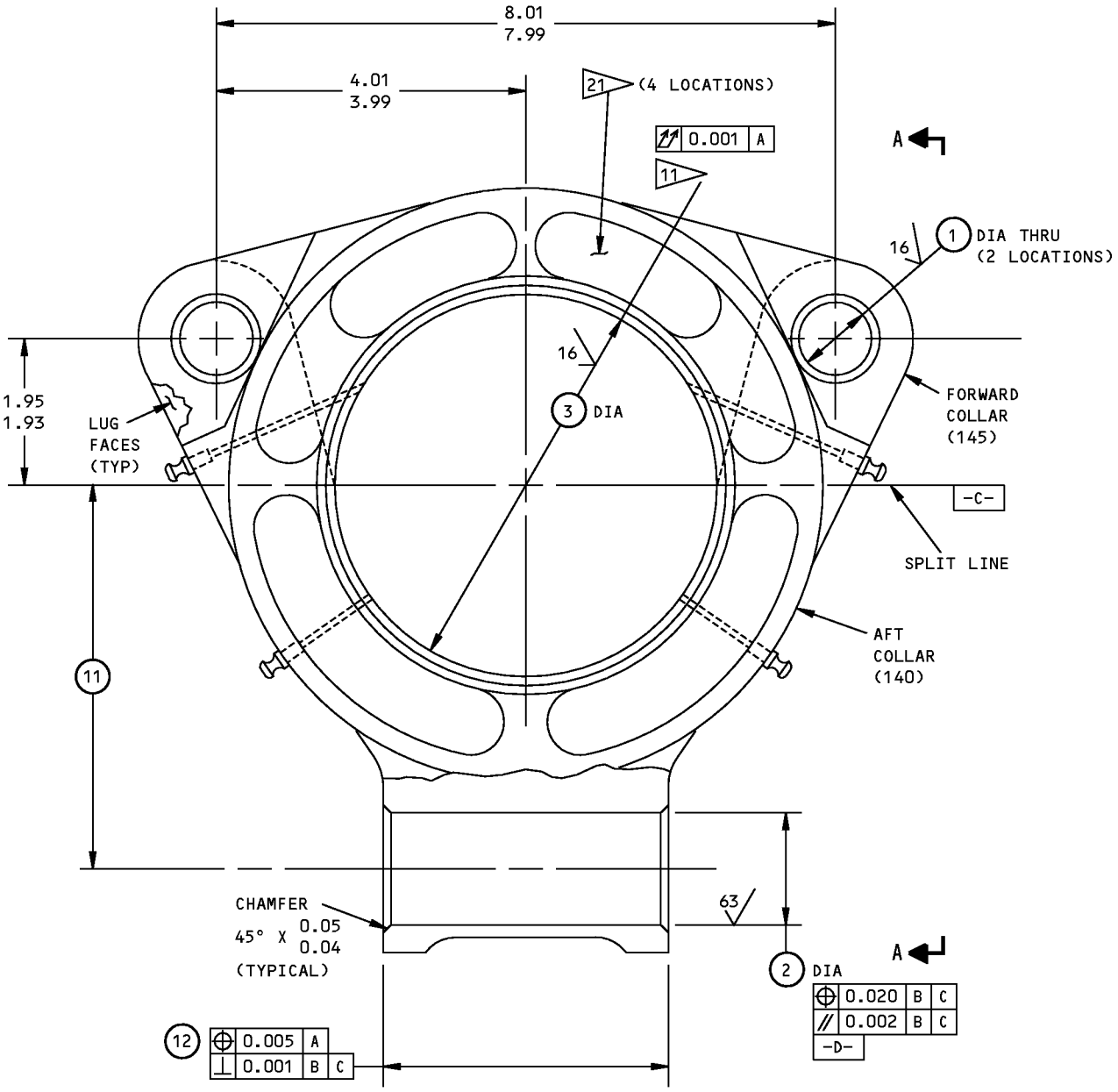
AFT STEERING COLLAR (IPL FIG. 1; 140)
65-46250-8,-9

Steering Collar Repair and Refinish
Figure 601 (Sheet 6 of 7)

1. LIMIT FOR INSTALLATION OF OVERSIZE BUSHINGS
2. LIMIT FOR BUILDUP WITH CHROME PLATE, WITH 0.06 PLATING RUNOUT AT EDGES. GRIND TO DESIGN DIMENSIONS AND FINISH
3. LIMIT FOR REMOVAL OF DEFECTS AT SPLIT LINE. CADMIUM PLATE AFTER MACHINING. RESTORATION TO DESIGN DIMENSIONS NOT REQUIRED
4. LIMIT FOR BUILDUP WITH CHROME OR NICKEL PLATE AND INSTALLATION OF STANDARD BUSHINGS AS SHOWN IN PARTS LIST
5. MAXIMUM MATERIAL REMOVAL FROM EITHER FACE IS ONE-HALF THE DIFFERENCE BETWEEN THE DESIGN DIM AND REPAIR LIMIT
6. LIMIT FOR BMS 10-67 TYPE 1 OR 17, CLASS 2, 3, OR 4 THERMAL SPRAY BUILDUP (REF SOPM 20-10-05) AND GRIND TO DESIGN DIMENSIONS AND 8 MICROINCH FINISH. A 4 MICROINCH FINISH IS PREFERRED (737-SL-32-065-A). PUT A 0.06 RUNOUT AT EDGES
7. APPLY PRIMER, BMS 10-11, TYPE 1 (F-20.02). THEN APPLY MIL-C-16173 GRADE 1 CORROSION PREVENTIVE COMPOUND (F-14.13) TO ID BETWEEN BUSHINGS
8. LIMIT FOR BUILDUP WITH NICKEL PLATE (REF 20-42-09), AND MACHINE TO DESIGN DIMENSIONS AND FINISH, WITH 0.06 PLATING RUNOUT AT EDGES
9. CHROME PLATE (F-15.34) (MINIMUM PLATING THICKNESS 0.003 AFTER GRINDING) AND WIPE WITH PRIMER (F-19.45) ONLY ON THE OUTSIDE SURFACES OF LUGS (4 LOCATIONS)(65-46203-27 ONLY)
10. NICKEL PLATE (F-15.33) (MINIMUM PLATING THICKNESS 0.003 AFTER MACHINING) ONLY ON THE INSIDE SURFACES OF LUGS (4 LOCATIONS)(65-46203-27 ONLY)
11. 65-46203-25 AFTER PLATING, 65-46203-27 AFTER PLATING
12. 65-46203-27 BEFORE PLATING AS SHOWN IN 9 OR 10
13. MAXIMUM MATERIAL REMOVAL FROM EITHER FACE IS 0.040
14. LIMIT FOR 0.003-0.005 CHROME PLATE (SOPM 20-42-03) AND INSTALLATION OF BEARING WITH THICKER FLANGES (SEE REPAIR 6-1, FIG. 601). WIPE CHROME WITH PRIMER (F-19.45)
15. LIMIT FOR 0.003-0.005 CHROME PLATE (SOPM 20-42-03) AND INSTALLATION OF BEARING WITH LARGER OUTSIDE DIAMETER (SEE REPAIR 6-1, FIG. 601). WIPE CHROME WITH PRIMER (F-19.45)
16. LIMIT FOR INSTALLATION OF REPAIR SLEEVES, AND STANDARD BUSHINGS AS SHOWN IN PARTS LIST

65-46203-25,-27

Steering Collar Repair and Refinish
Figure 601 (Sheet 7 of 7)



ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

65-46203-28,-30

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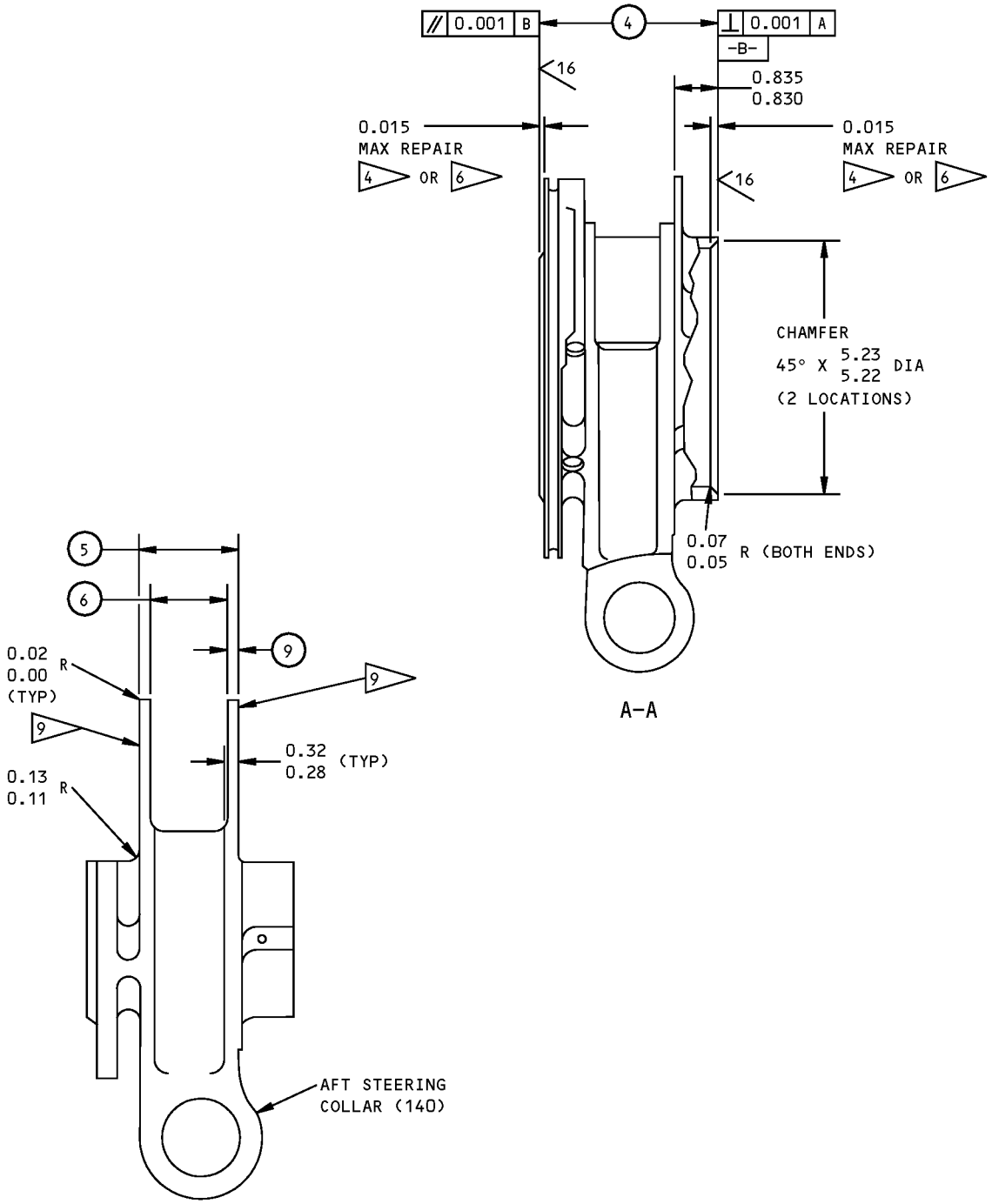
Steering Collar Repair and Refinish
Figure 602 (Sheet 1 of 7)

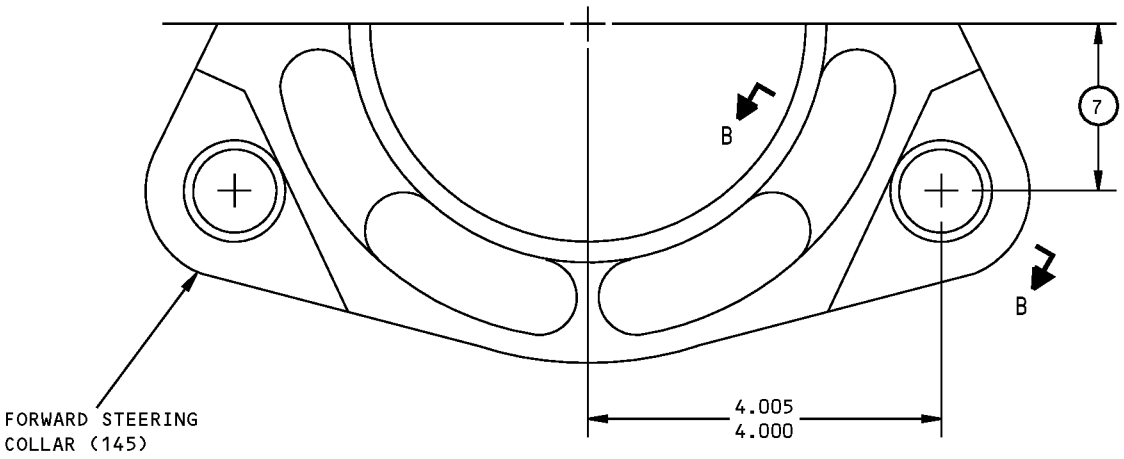


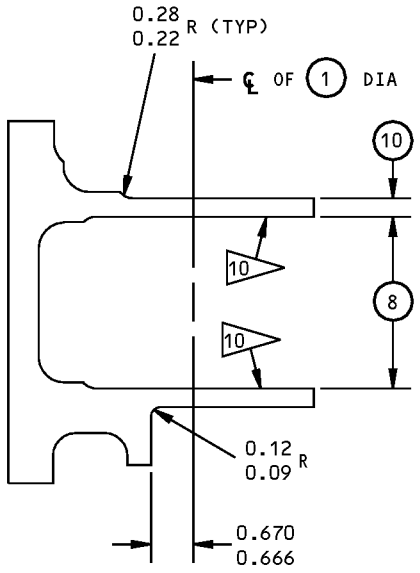
ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

65-46203-28,-30

Steering Collar Repair and Refinish
Figure 602 (Sheet 2 of 7)





B-B

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

65-46203-28,-30

Steering Collar Repair and Refinish
Figure 602 (Sheet 3 of 7)

REFERENCE NUMBER	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DESIGN DIMENSION	1.201 1.200 16	1.4380 1.4370	4.999 4.997 16	3.400 3.398 16	1.745 1.753 1.743 1.751 12 16	1.330 1.325	1.945 1.940	1.764 1.756 1.762 1.754 12 16
REPAIR LIMIT	SEE CHART	1.6000 1	5.019 6 5.029 2 5.060 15	3.350 14	1.720 2 5	1.360 2 5	1.930 3	1.786 5 6 8

TABLE A

REFERENCE NUMBER	(9)	(10)	(11)	(12)
DESIGN DIMENSION	0.218 0.214	0.21 0.19	5.01 4.99	3.625 3.615
REPAIR LIMIT	SEE CHART	SEE CHART	4.984 3	3.565 1

TABLE A

FEATURE	65-46203-28	65-46203-30	NOTES
DIA (1)	18	18	
DIA (3)	17	F-15.34	0.060 MAX CHROME PLATE RUNOUT AT EDGES
SPLIT LINE-C	17	17 20	
LUG FACES	17	17	21

TABLE B

REFINISH

REFINISH DIAS (1), (3), SPLIT LINE -C- AND LUG FACES AS SHOWN IN TABLE B.

CADMIUM-TITANIUM PLATE (F-15.01) ALL OTHER SURFACES (THROW-IN PERMITTED IN BORES). APPLY BMS 10-11, TYPE 1, PRIMER (F-20.02) BUT NOT ON CHROME PLATE OR TUNGSTEN CARBIDE COATING. AFTER INSTALLATION OF LUBE FITTINGS AND BUSHINGS, APPLY BMS 10-11, TYPE 2, ENAMEL (F-21.02) BUT NOT ON DIAMETERS (1) AND (3), BUSHINGS, LUBE FITTINGS, MATING SURFACES AT SPLIT LINE AND AS NOTED

REPAIR

REF 1 THRU 6 8 14 15 19

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK EDGES 0.04 R UNLESS SHOWN DIFFERENTLY

SHOT PEEN: 0.016-0.033 SHOT SIZE
0.009-0.015 A2 INTENSITY

MATERIAL: 4340M STEEL (270-300 KSI)

ALL DIMENSIONS ARE IN INCHES

65-46203-28,-30

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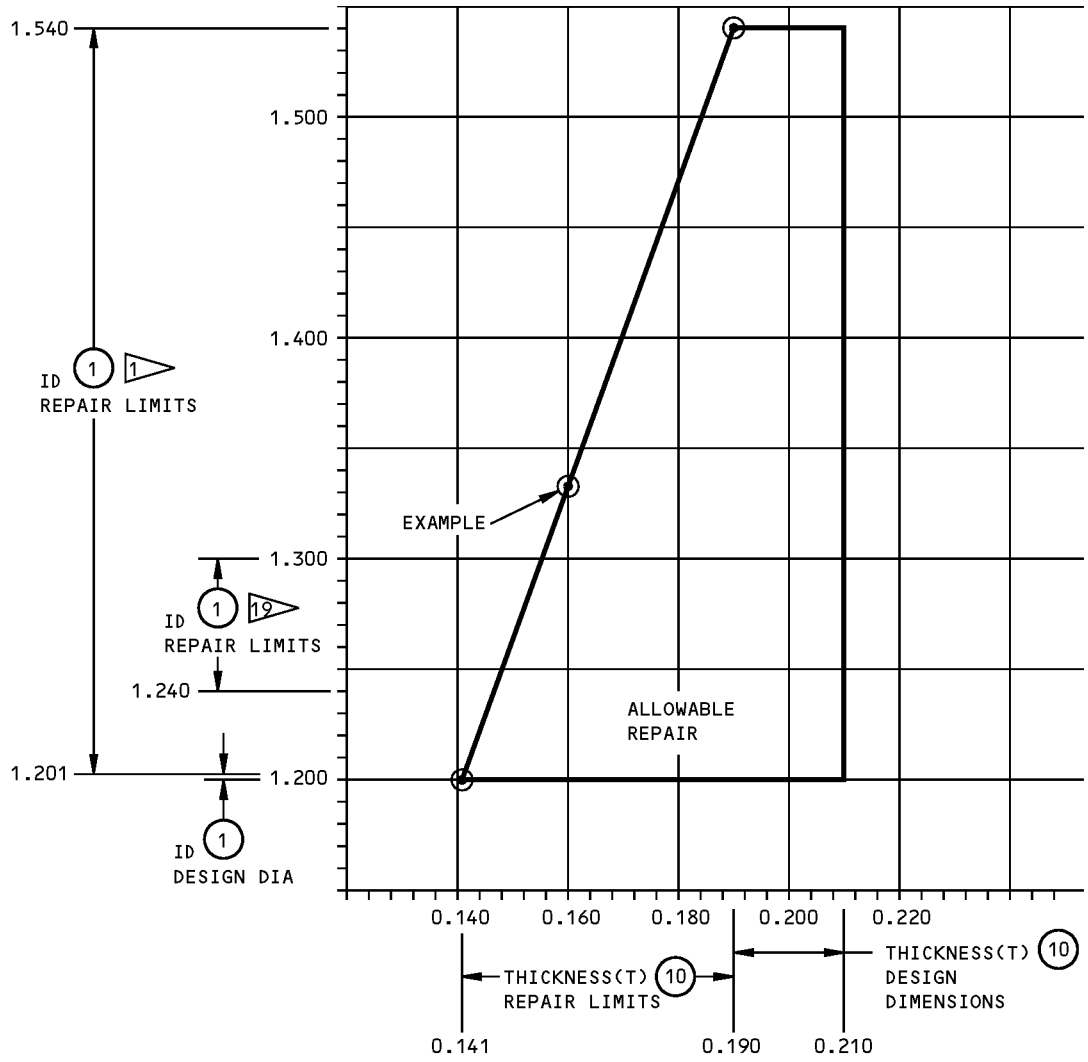
Steering Collar Repair and Refinish
Figure 602 (Sheet 4 of 7)



REPAIR CRITERIA

THE COMBINATION OF ID AND THICKNESS REPAIR LIMITS MUST BE WITHIN THE INDICATED AREA OF THE CHART. AN ACCEPTABLE ID OR THICKNESS CAN BE CALCULATED AS FOLLOWS:

$T \geq 0.1445(ID) - 0.0325$ IF $(1.201 < ID \leq 1.540)$
$T = 0.141$ MINIMUM IF $(1.200 \leq ID \leq 1.201)$

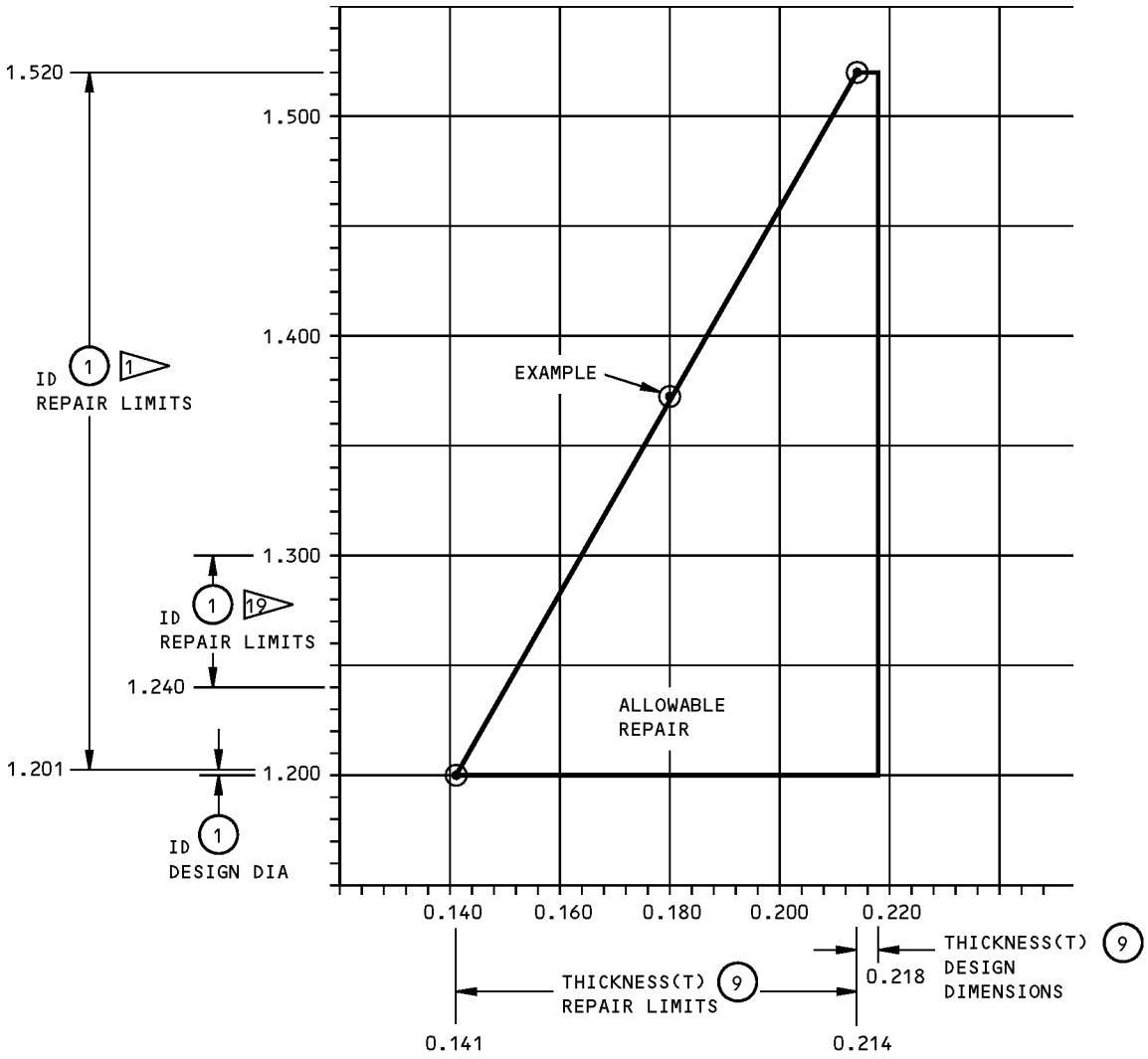
$ID \leq 6.9204(T) + 0.2249$ IF $(0.141 \leq T < 0.190)$
$ID = 1.540$ MAXIMUM IF $(0.190 \leq T \leq 0.210)$

EXAMPLE: IF ID IS MACHINED OUT TO 1.332,
$T \geq 0.1445(1.332) - 0.0325$
$T \geq 0.160$

THIS MEANS THE THICKNESS MUST BE 0.160 OR GREATER. IF THE THICKNESS IS ANTICIPATED FIRST, THE ID CAN SIMILARLY BE FOUND.

FORWARD STEERING COLLAR (IPL FIG.1; 145)
65-46252-8

Steering Collar Repair and Refinish
Figure 602 (Sheet 5 of 7)



REPAIR CRITERIA

THE COMBINATION OF ID AND THICKNESS REPAIR LIMITS MUST BE WITHIN THE INDICATED AREA OF THE CHART. AN ACCEPTABLE ID OR THICKNESS CAN BE CALCULATED AS FOLLOWS:

$T \geq 0.2288(ID) - 0.1338$	IF $(1.201 < ID \leq 1.520)$
$T = 0.141$ MINIMUM	IF $(1.200 \leq ID \leq 1.201)$
$ID \leq 4.3706(T) + 0.5848$	IF $(0.141 \leq T < 0.214)$
$ID = 1.520$ MAXIMUM	IF $(0.214 \leq T \leq 0.218)$

EXAMPLE: IF ID IS MACHINED OUT TO 1.3715,
$T \geq 0.2288(1.3715) - 0.1338$
$T \geq 0.180$

THIS MEANS THE THICKNESS MUST BE 0.180 OR GREATER. IF THE THICKNESS IS ANTICIPATED FIRST, THE ID CAN SIMILARLY BE FOUND.

AFT STEERING COLLAR (IPL FIG. 1; 140)
65-46250-10

Steering Collar Repair and Refinish
Figure 602 (Sheet 6 of 7)

1. LIMIT FOR INSTALLATION OF OVERSIZE BUSHINGS.
2. LIMIT FOR BUILDUP WITH CHROME PLATE, WITH 0.06 PLATING RUNOUT AT EDGES. GRIND TO DESIGN DIMENSIONS AND FINISH.
3. LIMIT FOR REMOVAL OF DEFECTS AT SPLIT LINE. FINISH PER 17 AFTER MACHINING. RESTORATION TO DESIGN DIMENSIONS NOT REQUIRED.
4. LIMIT FOR BUILDUP WITH CHROME OR NICKEL PLATE AND INSTALLATION OF STANDARD BUSHINGS AS SHOWN IN PARTS LIST.
5. MAXIMUM MATERIAL REMOVAL FROM EITHER FACE IS ONE-HALF THE DIFFERENCE BETWEEN THE DESIGN DIM AND REPAIR LIMIT.
6. LIMIT FOR BMS 10-67 TYPE 1 OR 17, CLASS 2, 3, OR 4 THERMAL SPRAY BUILDUP (SOPM 20-10-05) AND GRIND TO DESIGN DIMENSIONS AND 8 MICROINCH FINISH. A 4 MICROINCH FINISH IS PREFERRED (737-SL-32-065-A). PUT A 0.06 RUNOUT AT EDGES
7. APPLY PRIMER, BMS 10-11, TYPE 1 (F-20.02). THEN APPLY MIL-C-16173 GRADE 1 CORROSION PREVENTIVE COMPOUND (F-14.13) TO ID BETWEEN BUSHINGS.
8. LIMIT FOR BUILDUP WITH NICKEL PLATE (SOPM 20-42-09), AND MACHINE TO DESIGN DIMENSIONS AND FINISH, WITH 0.06 PLATING RUNOUT AT EDGES.
9. CHROME PLATE (F-15.34) (MINIMUM PLATING THICKNESS 0.003 AFTER GRINDING) AND WIPE WITH PRIMER (F-19.45) ONLY ON THE OUTSIDE SURFACES OF LUGS ONLY (4 LOCATIONS)(65-46203-27 ONLY).
10. NICKEL PLATE (F-15.33) (MINIMUM PLATING THICKNESS 0.003 AFTER MACHINING) ONLY ON THE INSIDE SURFACES OF LUGS (4 LOCATIONS).
11. DATUM A IS THIS DIAMETER BEFORE COATING.
12. BEFORE PLATING AS SHOWN IN 9 OR 10.
13. MAXIMUM MATERIAL REMOVAL FROM EITHER FACE IS 0.040.
14. LIMIT FOR 0.003-0.005 CHROME PLATE (SOPM 20-42-03) AND INSTALLATION OF BEARING WITH THICKER FLANGES (SEE REPAIR 6-1, FIG. 601). WIPE CHROME PLATE WITH PRIMER (F-19.45)
15. LIMIT FOR 0.003-0.005 CHROME PLATE (SOPM 20-42-03) AND INSTALLATION OF BEARING WITH LARGER OUTSIDE DIAMETER (SEE REPAIR 6-1, FIG. 601). WIPE CHROME PLATE WITH PRIMER (F-19.45).
16. DIMENSION AFTER COATING OR PLATING, AS APPLICABLE.
17. APPLY BMS 10-67 TYPE 1 TUNGSTEN CARBIDE COATING LW-1N40A (F-15.390), AND THEN UCAR 100 SEALANT WITHIN 1 HOUR. NO CADMIUM-TITANIUM PLATING OR PRIMER.
18. APPLY BMS 10-67 TYPE 1 TUNGSTEN CARBIDE COATING SDG-2040GA (F-15.360), AND THEN UCAR 100 SEALANT WITHIN 1 HOUR. NO CADMIUM-TITANIUM PLATING OR PRIMER.
19. LIMIT FOR INSTALLATION OF REPAIR SLEEVES, AND STANDARD BUSHINGS AS SHOWN IN PARTS LIST.
20. OPTIONAL: APPLY BMS 10-67 TYPE 1 TUNGSTEN CARBIDE COATING (F-15.380) AND PRIMER (F-19.45)
21. LIGHT TUNGSTEN CARBIDE COATING OVERSPRAY IS PERMITTED ON THE SURFACE, BUT THIS MUST BE GRIT BLASTED TO PREPARE FOR THE SUBSEQUENT CADMIUM-TITANIUM PLATING.

65-46203-28,-30

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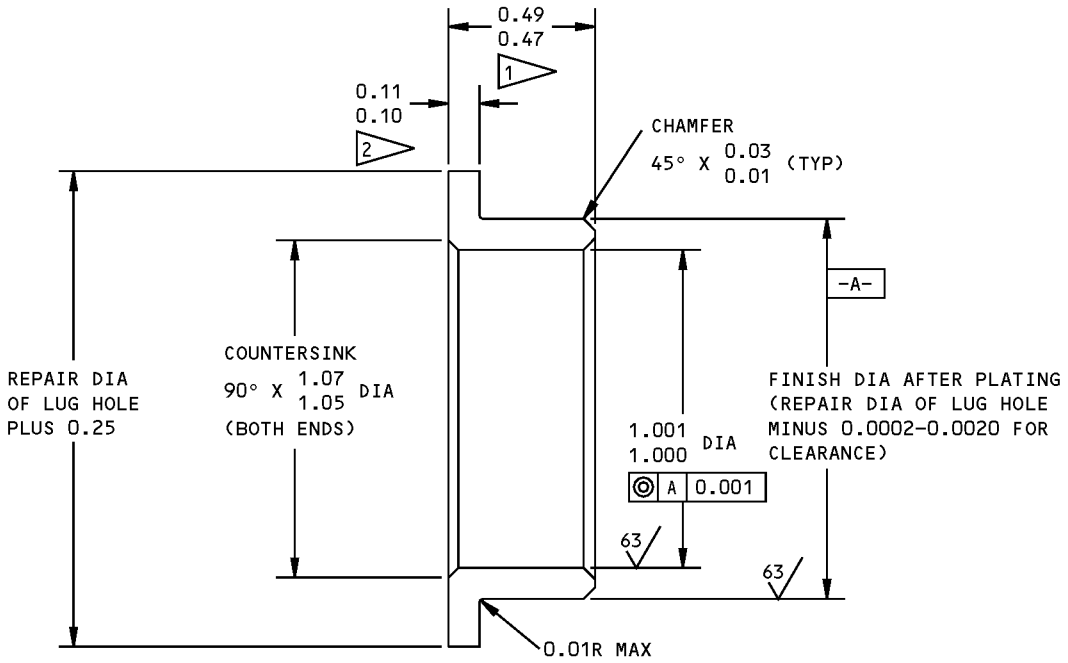
Steering Collar Repair and Refinish
Figure 602 (Sheet 7 of 7)



1 MINUS AMOUNT REMOVED FROM LUG FACE

2 PLUS AMOUNT REMOVED FROM LUG FACE

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.02 R MAX

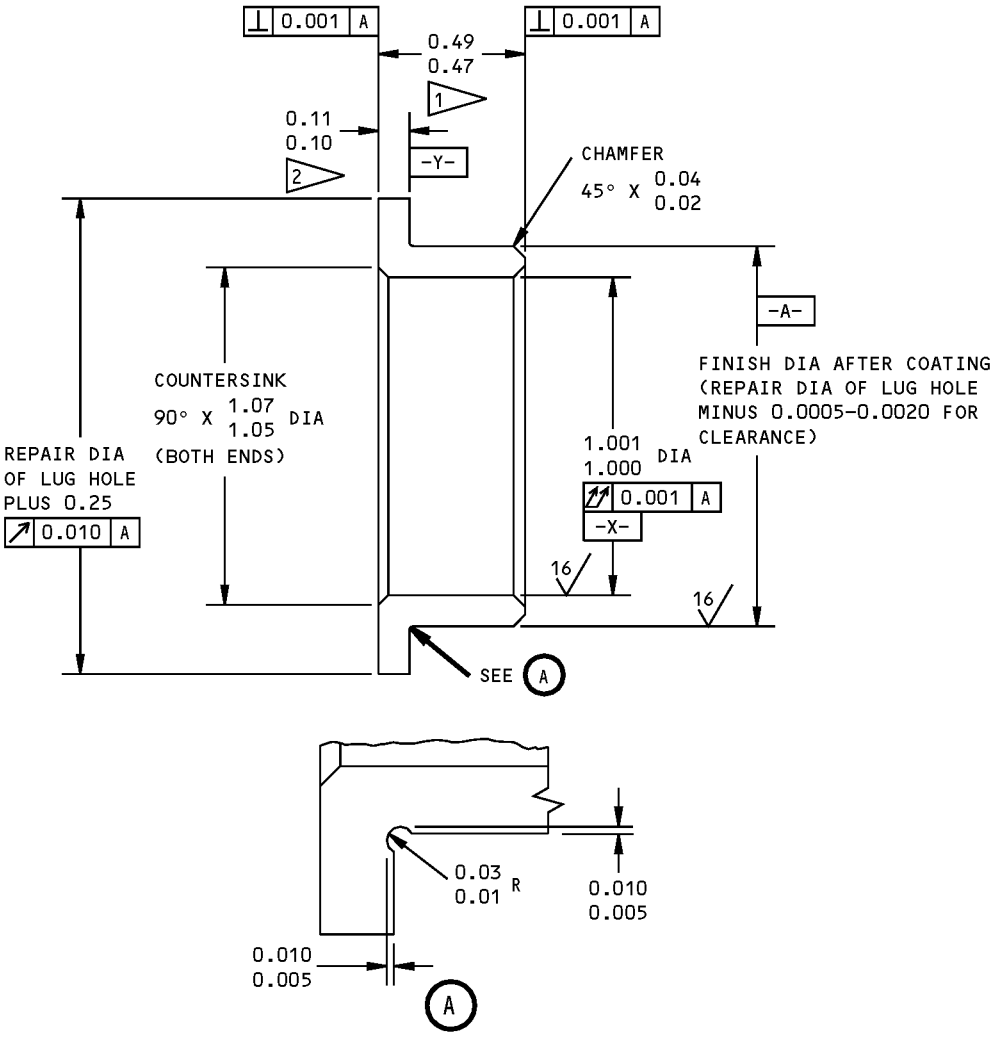
FINISH: CADMIUM PLATE (F-15.02) DIA -A-.
PASSIVATE (F-17.25, WHICH REPLACES
F-17.09) OTHER SURFACES

MATERIAL: 17-4PH CRES (180-200 KSI) OR
AL-NI-BRONZE (AMS 4640)

ALL DIMENSIONS ARE IN INCHES

HOLE LOCATION (1) FIG. 601 - REPLACES BUSHING (IPL FIG. 1; 110) 69-61381-1

Oversize Bushing Details
Figure 603



1 MINUS AMOUNT REMOVED FROM LUG FACE

2 PLUS AMOUNT REMOVED FROM LUG FACE

63 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.02 R MAX

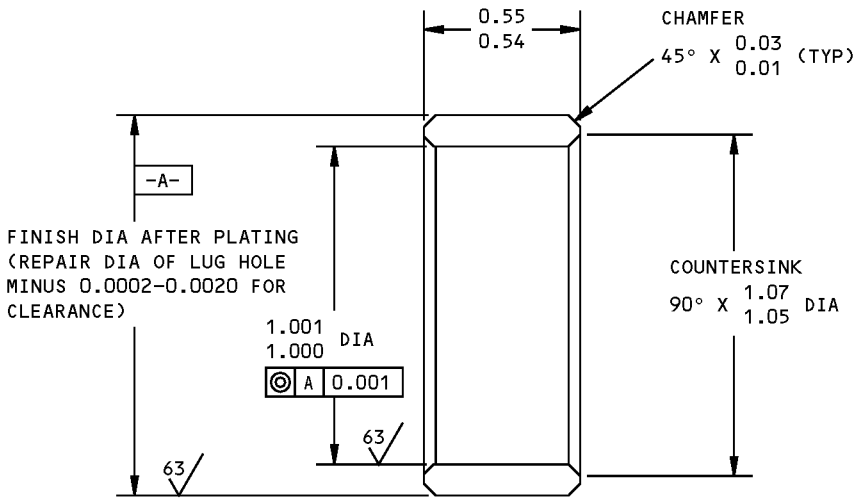
FINISH: ON DIA -A-, -X-, AND SURFACE -Y-, APPLY BMS 10-67 TYPE 1 OR 17 CLASS 2, 3, OR 4 THERMAL SPRAY (SOPM 20-10-05), 0.010 MAX THICK. PUT A 0.080 MAX RUNOUT AT EDGES. GRIND TO DESIGN DIMENSIONS AND 4 MICROINCH FINISH OR SMOOTHER. COATING CAN RUNOUT ON CHAMFERS. PASSIVATE (F-17.25, WHICH REPLACES F-17.09) OTHER SURFACES

MATERIAL: 17-4PH OR 15-5PH CRES (180-200 KSI) OR AL-NI-BRONZE (AMS 4640)

ALL DIMENSIONS ARE IN INCHES

HOLE LOCATION (1) FIG. 601A - REPLACES BUSHING (IPL FIG. 1; 110A) 65C37818-1

Oversize Bushing Details
Figure 604



125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.02 R MAX

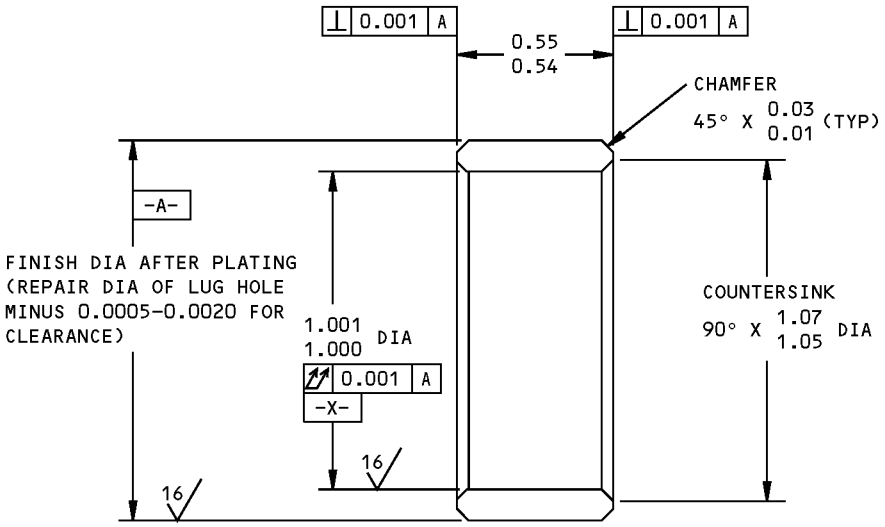
FINISH: CADMIUM PLATE (F-15.02) DIA -A-.
PASSIVATE (F-17.25, WHICH REPLACES
F-17.09) OTHER SURFACES

MATERIAL: 17-4PH CRES (180-200 KSI) OR
AL-NI-BRONZE (AMS 4640)

ALL DIMENSIONS ARE IN INCHES

HOLE LOCATION (1) FIG. 601 - REPLACES BUSHING (IPL FIG. 1; 115) 69-61382-1

Oversize Bushing Details
Figure 605



125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.02 R MAX

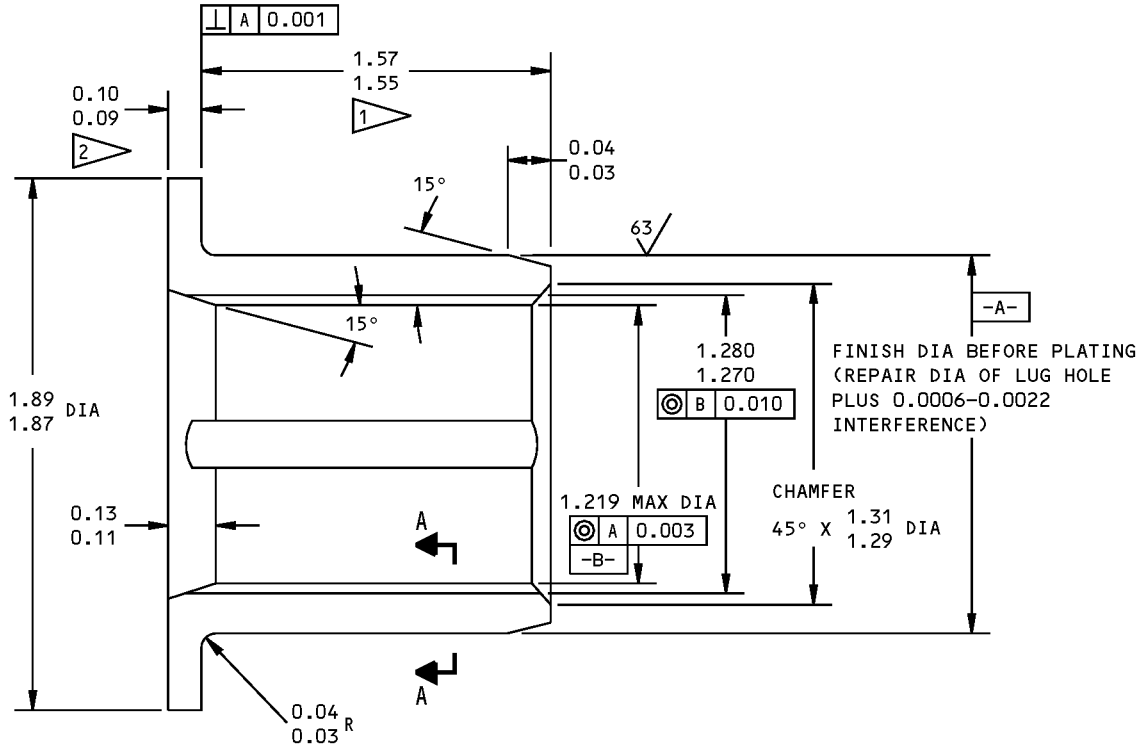
FINISH: ON DIAS -A-, -X-, APPLY BMS 10-67 TYPE 1 OR 17 CLASS 2, 3, OR 4 THERMAL SPRAY (SOPM 20-10-05), 0.010 MAX THICK. PUT A 0.080 MAX RUNOUT AT EDGES. GRIND TO DESIGN DIMENSIONS AND 4 MICROINCH FINISH OR SMOOTHER. COATING CAN RUNOUT ON CHAMFERS. PASSIVATE (F-17.25, WHICH REPLACES F-17.09) OTHER SURFACES

MATERIAL: 17-4PH CRES (180-200 KSI) OR AL-NI-BRONZE (AMS 4640)

ALL DIMENSIONS ARE IN INCHES

HOLE LOCATION (1) FIG. 601A - REPLACES BUSHING (IPL FIG. 1; 115A) 65C37818-2

Oversize Bushing Details
Figure 606



MINUS AMOUNT REMOVED FROM LUG FACE

PLUS AMOUNT REMOVED FROM LUG FACE

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.01-0.02 R

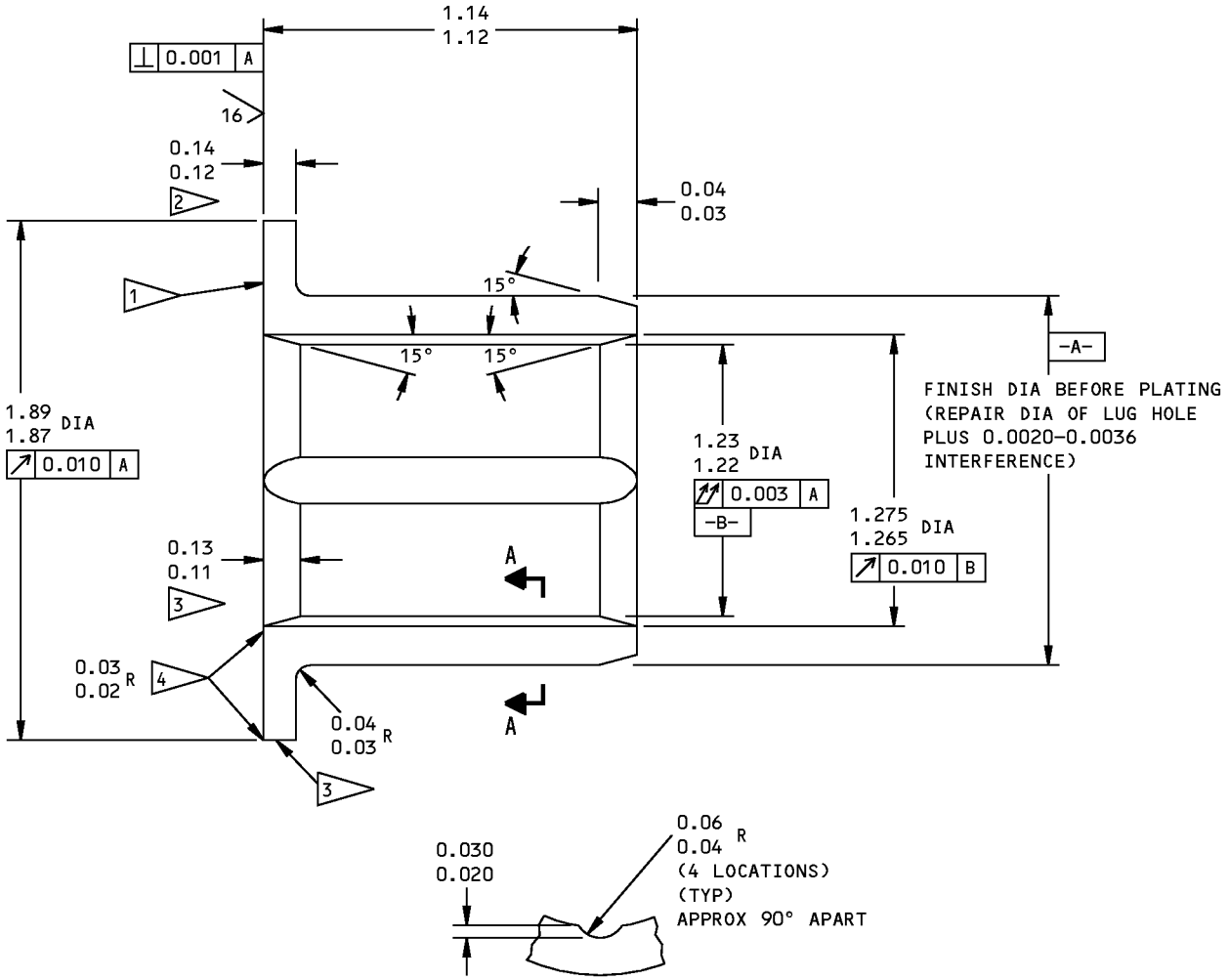
FINISH: CADMIUM PLATE (F-15.06)(OPTIONAL ON INTERNAL SURFACES)

MATERIAL: 17-4PH CRES (180-200 KSI)

ALL DIMENSIONS ARE IN INCHES

HOLE LOCATION (2) FIG. 601 - REPLACES BUSHING (IPL FIG. 1; 125) 65-46150-95

Oversize Bushing Details
Figure 607



A-A

1. APPLY BMS 10-67 TYPE 1 COATING (F-15.390) WITH LW-1N40A TO 0.003 MINIMUM THICKNESS
2. PLUS AMOUNT REMOVED FROM LUG FACE
3. COATING OVERSPRAY PERMITTED ON THIS SURFACE
4. COATING RUNOUT AREA. THE COATING MUST GRADUALLY GO TO ZERO THICKNESS OVER A LENGTH OF 0.005 MINIMUM

63 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.01-0.02R

MATERIAL: CU-BE PER AMS 4535 OR 4533

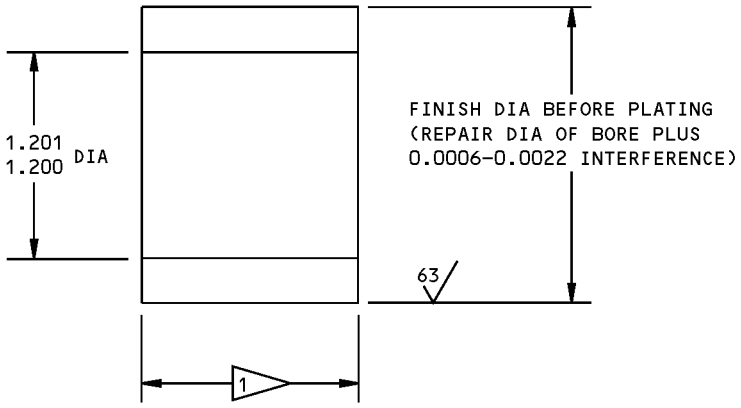
FINISH: CADMIUM PLATE (F-15.06) DIA-A-. (OPTIONAL ON OTHER SURFACES UNLESS SHOWN DIFFERENTLY)

DIMENSIONS APPLY BEFORE COATING UNLESS SHOWN DIFFERENTLY

ALL DIMENSIONS ARE IN INCHES

HOLE LOCATION (1) FIG. 601A - REPLACES BUSHING (125A, IPL FIG. 1) 65C37819-1

Oversize Bushing Details
Figure 608



FINISH:

CADMIUM PLATE (F-15.06) (OPTIONAL ON ID)

125 MACHINE FINISH

BREAK ALL SHARP EDGES

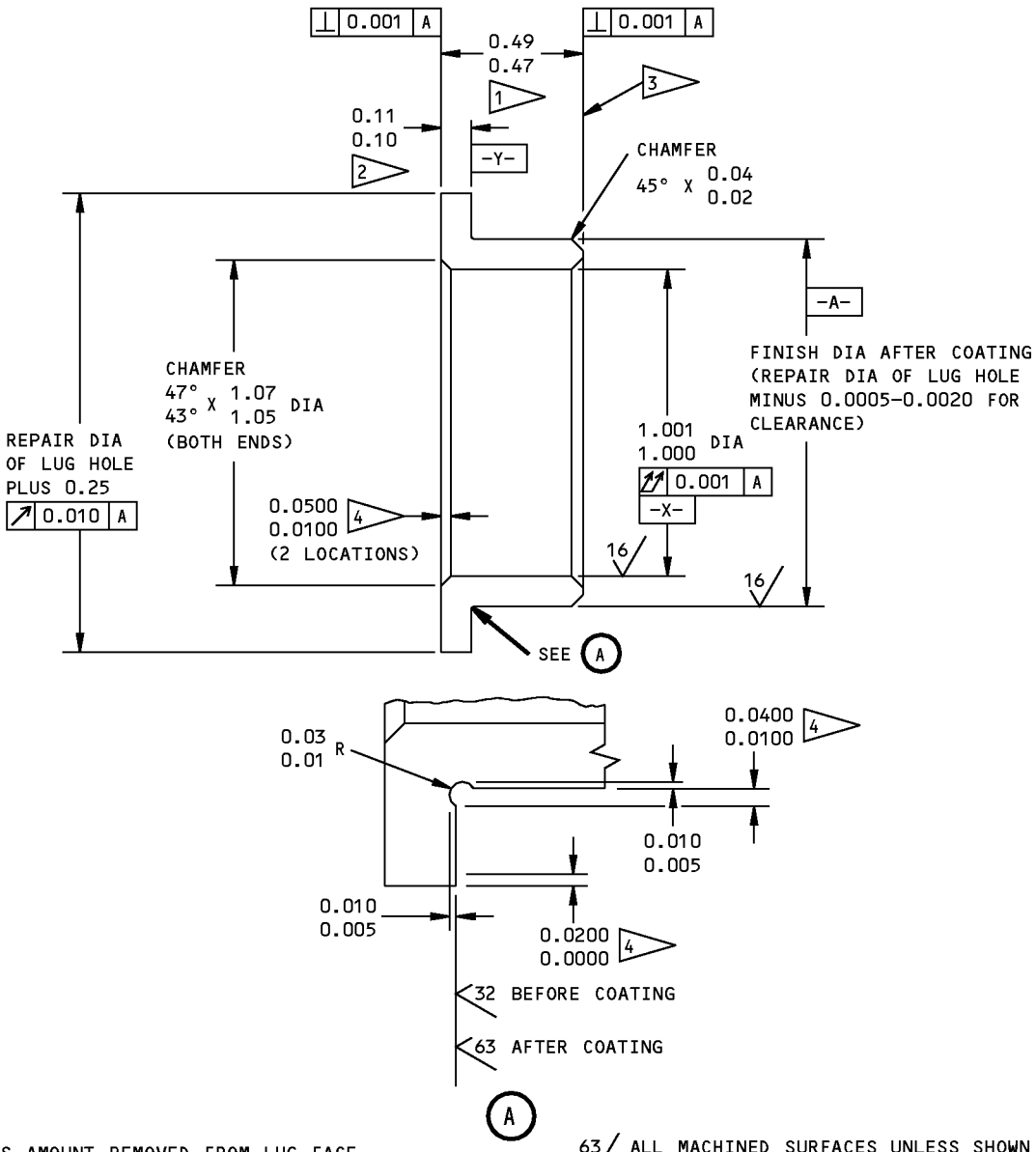
MATERIAL: AL-NI-BRZ PER AMS 4640 OR 4880

ALL DIMENSIONS ARE IN INCHES

1 LUG THICKNESS +0.000/-0.005

HOLE LOCATION (1) FIG. 601

Repair Sleeve Details
Figure 609



1 MINUS AMOUNT REMOVED FROM LUG FACE

2 PLUS AMOUNT REMOVED FROM LUG FACE

3 0.002 MAX THICK COATING OVERSPRAY PERMITTED ON THIS SURFACE

4 COATING RUNOUT AREA. THE COATING MUST NOT END IN A SQUARE EDGE. THE COATING MUST TAPER FROM FULL THICKNESS TO ZERO OVER 0.005 MINIMUM LENGTH

63 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.02 R MAX

FINISH: ON DIA -A-, -X-, AND SURFACE -Y-, APPLY BMS 10-67 TYPE 17 CLASS 2 THERMAL SPRAY (F-15.384), 0.003 THICK AFTER GRINDING. PASSIVATE (F-17.25) OTHER SURFACES

MATERIAL: 17-4PH OR 15-5PH CRES (180-200 KSI)

ALL DIMENSIONS ARE IN INCHES

HOLE LOCATION (1) FIG. 602 - REPLACES BUSHING (IPL FIG. 1; 110C) 65C37818-3

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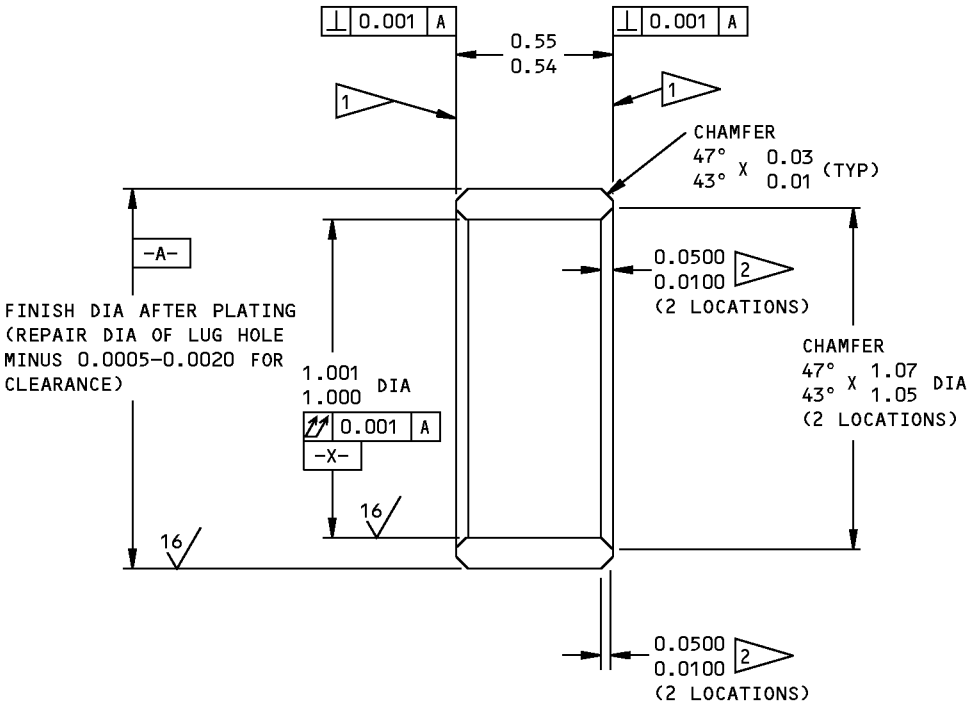
Oversize Bushing Details
Figure 610



1 0.002 MAX THICK COATING OVERSPRAY PERMITTED ON THIS SURFACE

2 COATING RUNOUT AREA. THE COATING MUST NOT END IN A SQUARE EDGE. THE COATING MUST TAPER FROM FULL THICKNESS TO ZERO OVER 0.005 MINIMUM LENGTH

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.02 R MAX

FINISH: ON DIA -A-, -X-, APPLY BMS 10-67 TYPE 17 CLASS 2 THERMAL SPRAY (F-15.384), 0.003 THICK AFTER GRINDING. PASSIVATE (F-17.25) OTHER SURFACES

MATERIAL: 17-4PH CRES (180-200 KSI)

ALL DIMENSIONS ARE IN INCHES

HOLE LOCATION (1) FIG. 602 - REPLACES BUSHING (IPL FIG. 1; 115C) 65C37818-4

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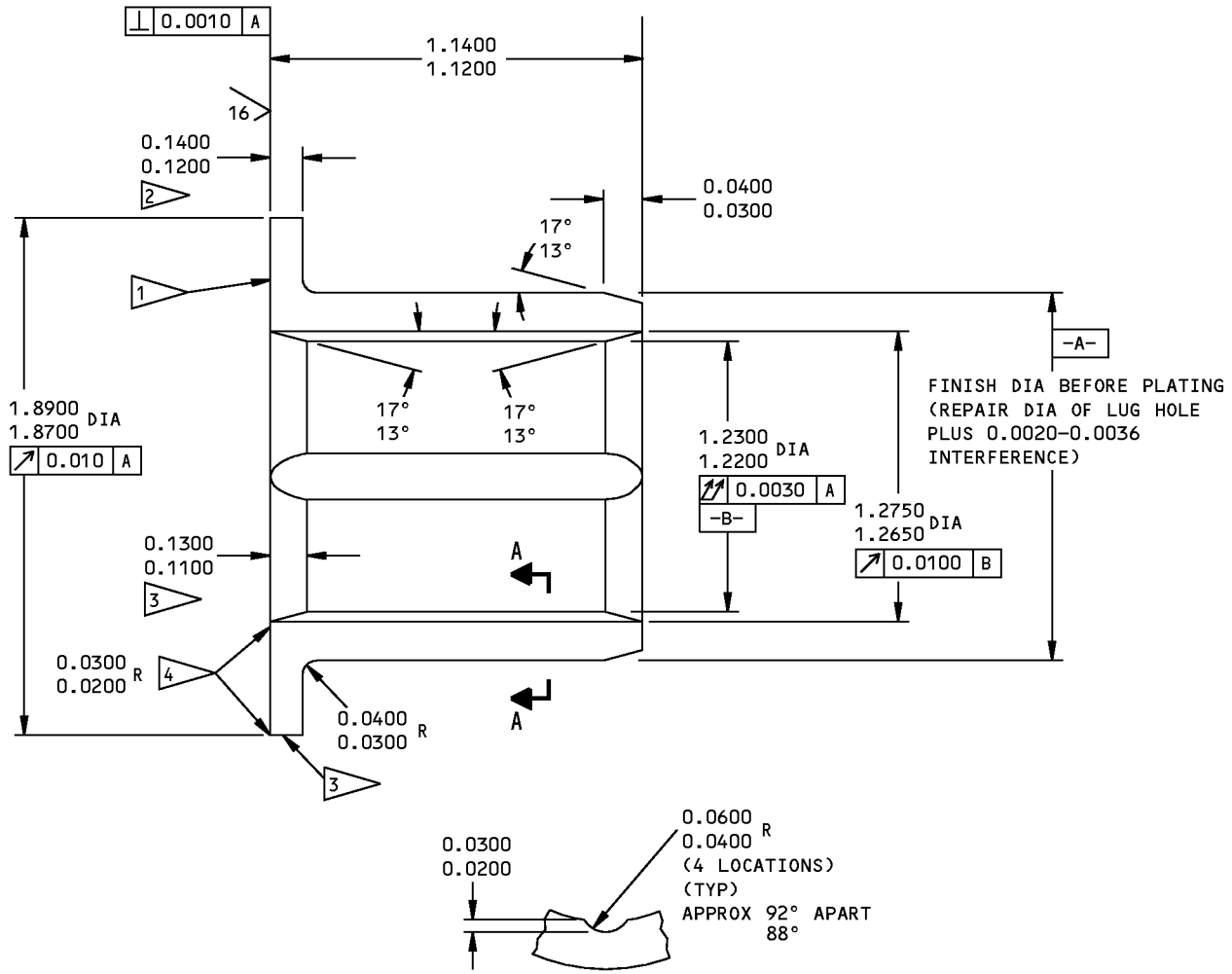
Oversize Bushing Details
Figure 611



A-A

1. APPLY BMS 10-67, TYPE 17 THERMAL SPRAY COATING (F-15.384); TO 0.003 MINIMUM THICKNESS
2. PLUS AMOUNT REMOVED FROM LUG FACE
3. COATING OVERSPRAY PERMITTED ON THIS SURFACE
4. COATING RUNOUT AREA. THE COATING MUST GRADUALLY GO TO ZERO THICKNESS OVER A LENGTH OF 0.005 MINIMUM

63 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.01-0.02R

MATERIAL: AL-NI-BRONZE (AMS 4640)

FINISH: CADMIUM PLATE (F-15.06) DIA-A-. (OPTIONAL ON OTHER SURFACES UNLESS SHOWN DIFFERENTLY)

DIMENSIONS APPLY BEFORE COATING UNLESS SHOWN DIFFERENTLY

ALL DIMENSIONS ARE IN INCHES

HOLE LOCATION (1) FIG. 602 - REPLACES BUSHING (125E, IPL FIG. 1) 65C37819-3

1848664 S0000328464_V1

Oversize Bushing Details
Figure 612

TORSION LINK ASSEMBLY - REPAIR 2-1

65-46288–9, –11, –13, –15

1. General

A. This procedure tells how to repair the torsion link assembly.

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

C. Refer to IPL Figure 2 for item numbers.

2. Repair Procedures

NOTE: Refer to REPAIR-GENERAL for a list of applicable standard practices. Refer to IPL Figure 1 for item numbers. For repair of surfaces which is only replacement of the original finish, refer to Refinish instructions, REPAIR 2-2.

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27

B. References

Reference	Title
32-00-03	Landing Gear Parts - Lubrication Fitting Replacement
SOPM 20-42-10	LOW HYDROGEN EMBRITTLEMENT STYLUS CADMIUM PLATING
SOPM 20-50-03	BEARING AND BUSHING REPLACEMENT

C. Bushing Replacement (REPAIR 2-1, Figure 601)

(1) Remove bushings (75, 80, 80A).

(2) If you find defects on lug faces or hole surfaces, refer to REPAIR 2-2 for repair instructions.

(3) Standard bushings (75, 80, 80A)

NOTE: For bushings (75A, 80B), which have a layer of tungsten carbide on the flange face, refer to par. D. below.

(a) Install replacement bushings by the shrink-fit method of SOPM 20-50-03.

(b) Make a check of the dimensions and machine them as necessary.

(4) Bushings (75A, 80B) (with tungsten carbide on flange face).

(a) Because these bushings have a hard layer of tungsten carbide on the outer flange face, you must adjust the bushing flange thickness before bushing installation to get the correct installed dimension across the flanges.

(b) Measure the lug width of the torsion link after repair and refinish to calculate the necessary thickness of the bushing flanges. Be sure to include and adjust for the thickness of the cadmium plating to be applied to the inside faces of the bushing flanges.

(c) Machine the inside surface of the bushing flanges to get the necessary thickness, with a fillet radius of 0.02-0.03 inch and a maximum undercut of 0.010 inch. Remove material from each bushing to make the flange thicknesses equal within 0.005 inch. Do not machine the tungsten carbide layer on the outside flange faces.

(d) Brush cadmium plate (SOPM 20-42-10) the inside surfaces of the flanges.

(e) Install the bushings by the shrink-fit method per SOPM 20-50-03, with compound, C00913.

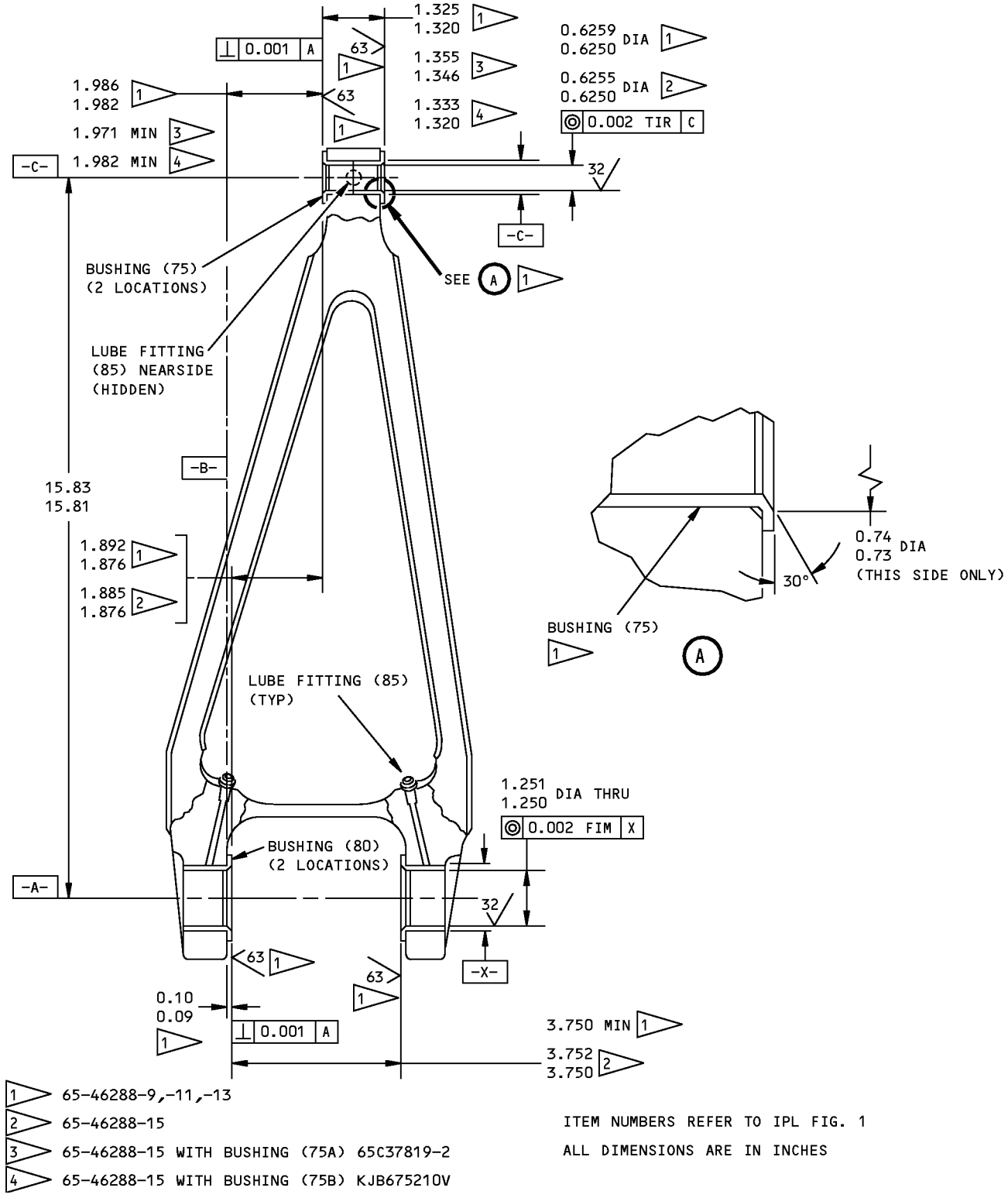
(f) Make a check of the dimension between the flange faces of the installed bushings to be sure it is within design dimensions shown.

(g) Machine the bores of the bushings to design dimensions and finish.

(h) Seal the flanges of the bushings with sealant, A00247.

D. Lube Fitting Replacement

(1) Replace lube fittings (85) per 32-00-03.



65-46288-9,-11,-13,-15 Bushing Replacement
Figure 601

TORSION LINK - REPAIR 2-2

65-46288–10, –12, –14

1. General

A. Use this procedure to repair torsion link (90).

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

C. Refer to REPAIR-GENERAL for a list of applicable standard practices.

D. Refer to IPL Figure 1 for item numbers.

2. Repair

NOTE: For repair of surfaces which is only replacement of the original finish, refer to Refinish instructions, REPAIR 2-2, Figure 601.

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I

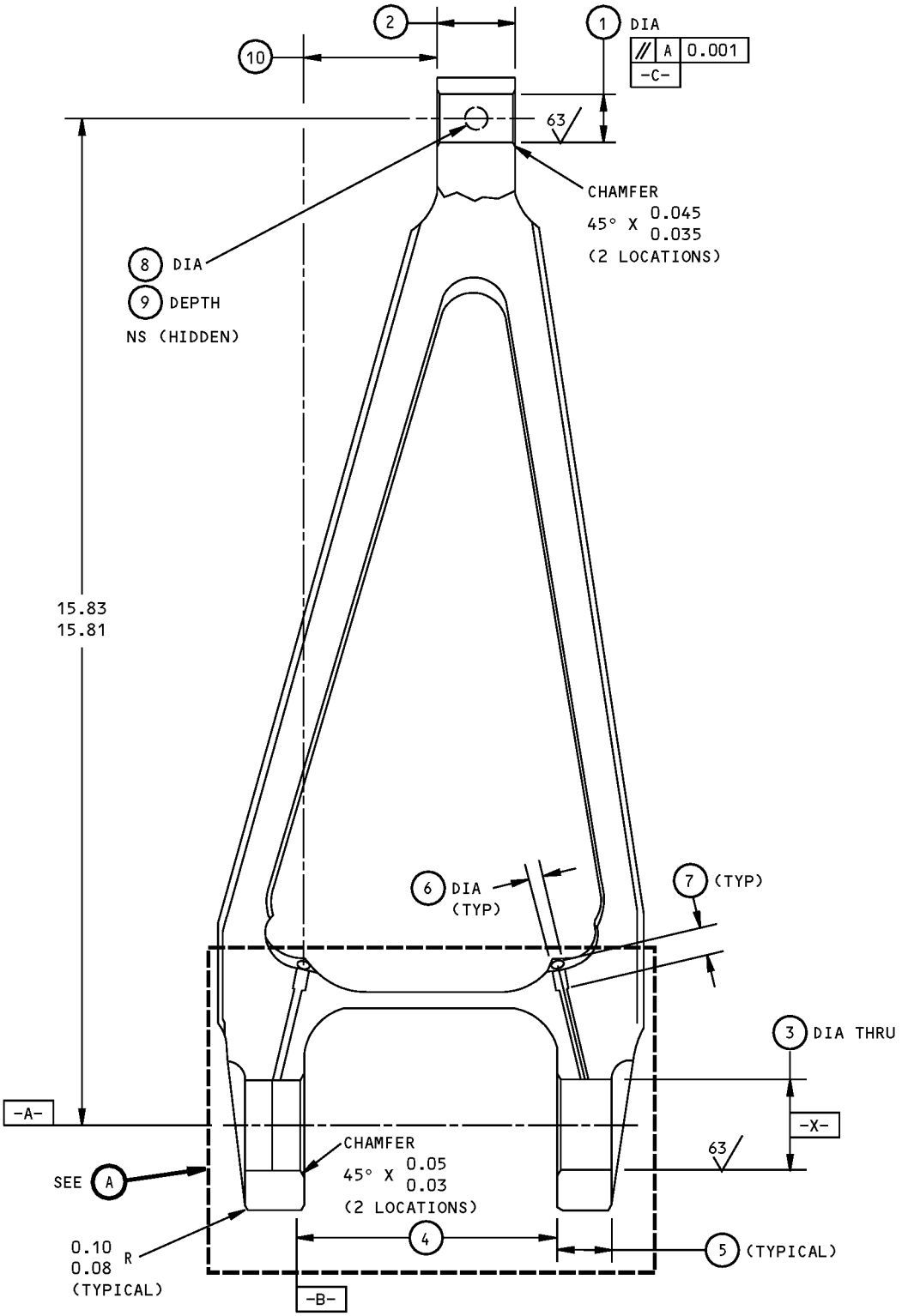
B. Lug Faces and Holes (REPAIR 2-2, Figure 601)

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

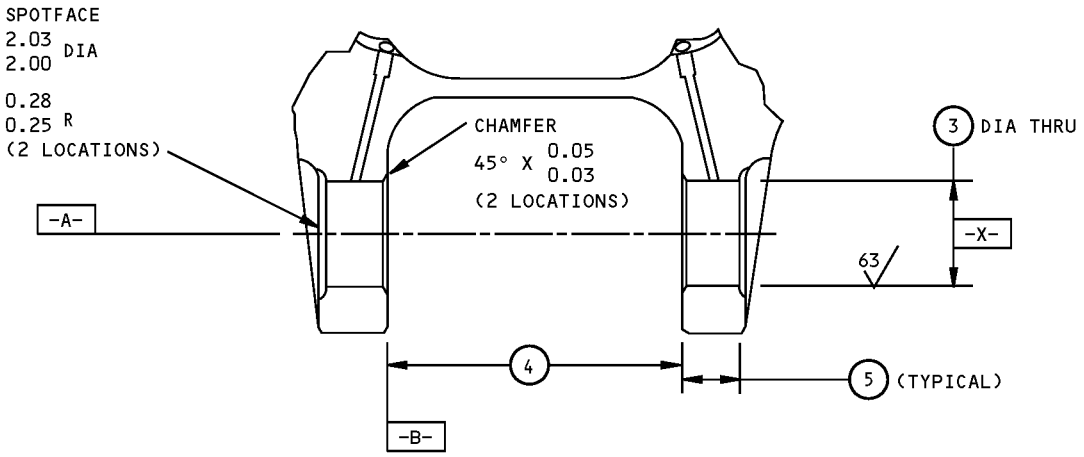
(2) Chemical treat the machined surfaces. Apply one layer of primer, C00259.

(3) Make oversize bushings (REPAIR 2-2, Figure 602 and on, or as indicated) to adjust for the material removed.

(4) Install the bushings as specified in REPAIR 2-1.

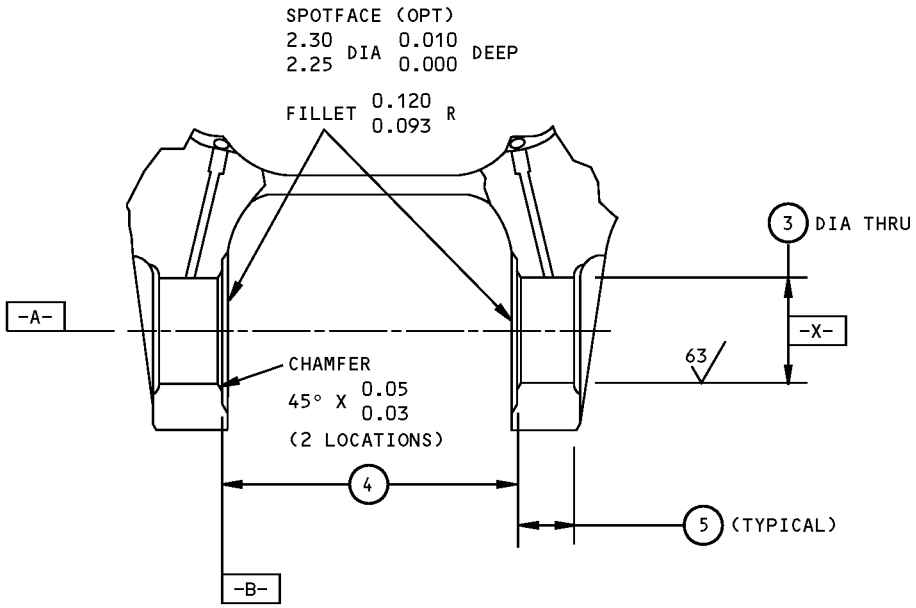


65-46288-10,-12,-14 Torsion Link Repair and Refinish
Figure 601 (Sheet 1 of 4)



SPOTFACE DETAILS

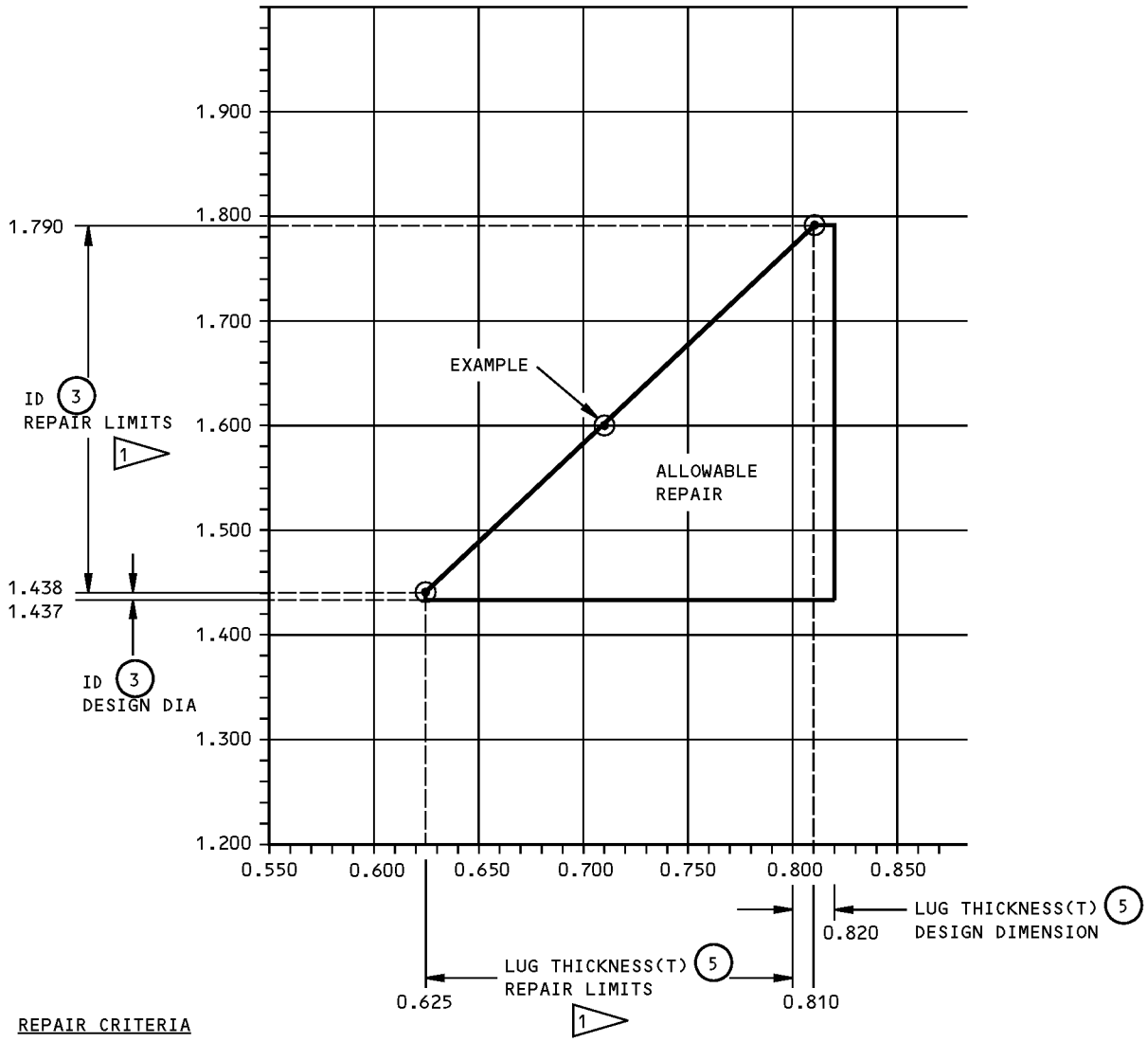
A



CONFIG WITH OPTIONAL SPOTFACES ON INSIDE LUG FACES

A

65-46288-10,-12,-14 Torsion Link Repair and Refinish
Figure 601 (Sheet 2 of 4)



REPAIR CRITERIA

THE COMBINATION OF ID AND THICKNESS REPAIR LIMITS MUST BE WITHIN THE INDICATED AREA OF THE CHART. AN ACCEPTABLE ID OR THICKNESS CAN BE CALCULATED AS FOLLOWS:

$T \geq 0.5256(ID) - 0.1308$	IF $(1.438 < ID \leq 1.790)$
$T = 0.625$ MINIMUM	IF $(1.437 \leq ID \leq 1.438)$
$ID \leq 1.902(T) + 0.2489$	IF $(0.625 \leq T < 0.810)$
$ID = 1.790$ MAXIMUM	IF $(0.810 \leq T \leq 0.820)$

EXAMPLE: IF ID IS MACHINED OUT TO 1.600,
$T = 0.5256(1.600) - 0.1308$
$T = 0.7102$

THIS MEANS THE THICKNESS MUST BE 0.7102 OR GREATER. OR IF YOU KNOW WHAT THE THICKNESS WILL BE FIRST, YOU CAN FIND THE ID LIMIT.

65-46288-10,-12,-14 Torsion Link Repair and Refinish
Figure 601 (Sheet 3 of 4)

REFERENCE NUMBER	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
DESIGN DIMENSION	0.7505 0.7500	1.205 1.200	1.438 1.437	3.943 3.938	0.82 0.80	0.186 0.185	0.40 0.30	0.186 0.185	0.40 0.30	2.052 2.046
REPAIR LIMIT ▷1	0.9500 ▷5	1.050 ▷2	SEE CHART	SEE CHART ▷2	SEE CHART	0.324 ▷3	---	0.250 ▷3	---	2.140 ▷4

TABLE 1

REFINISH

CHROMIC ACID ANODIZE AND APPLY BMS 10-11 TYPE 1 PRIMER (F-18.13), BUT NO PRIMER IN BORES FOR LUBE FITTINGS. AFTER BUSHING AND LUBE FITTING INSTALLATION, APPLY BMS 10-11 TYPE 2 ENAMEL, COLOR 707 GRAY GLOSS (F-21.02), BUT NO ENAMEL ON BUSHINGS AND LUBE FITTINGS.

▷1 LIMIT FOR INSTALLATION OF OVERSIZE BUSHINGS

▷2 LUG FACE MACHINING REQUIREMENTS:

1. MATERIAL REMOVED FROM ANY FACE MUST NOT BE MORE THAN HALF THE DIFFERENCE BETWEEN THE DESIGN DIMENSION AND REPAIR LIMIT
2. FLAT SURFACE MUST BE MINIMUM OF 0.02 LARGER THAN FLANGE DIAMETER OF BUSHING TO BE INSTALLED
3. BLEND MISMATCH STEPS TO 0.18-0.26 RADIUS OR IF WITHIN 0.10 OF LUG FILLET RADIUS, USE SAME RADIUS AS LUG FILLET. BREAK SHARP EDGES 0.03-0.07 R.

▷3 LIMIT FOR INSTALLATION OF REPAIR BUSHING (CMM 32-00-03)

▷4 RESTORATION TO DESIGN DIMENSIONS NOT REQUIRED

▷5 IF MORE MATERIAL THAN THIS MUST BE REMOVED, THE PART MUST BE SCRAPPED

REPAIR

REF ▷1 THRU ▷5

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

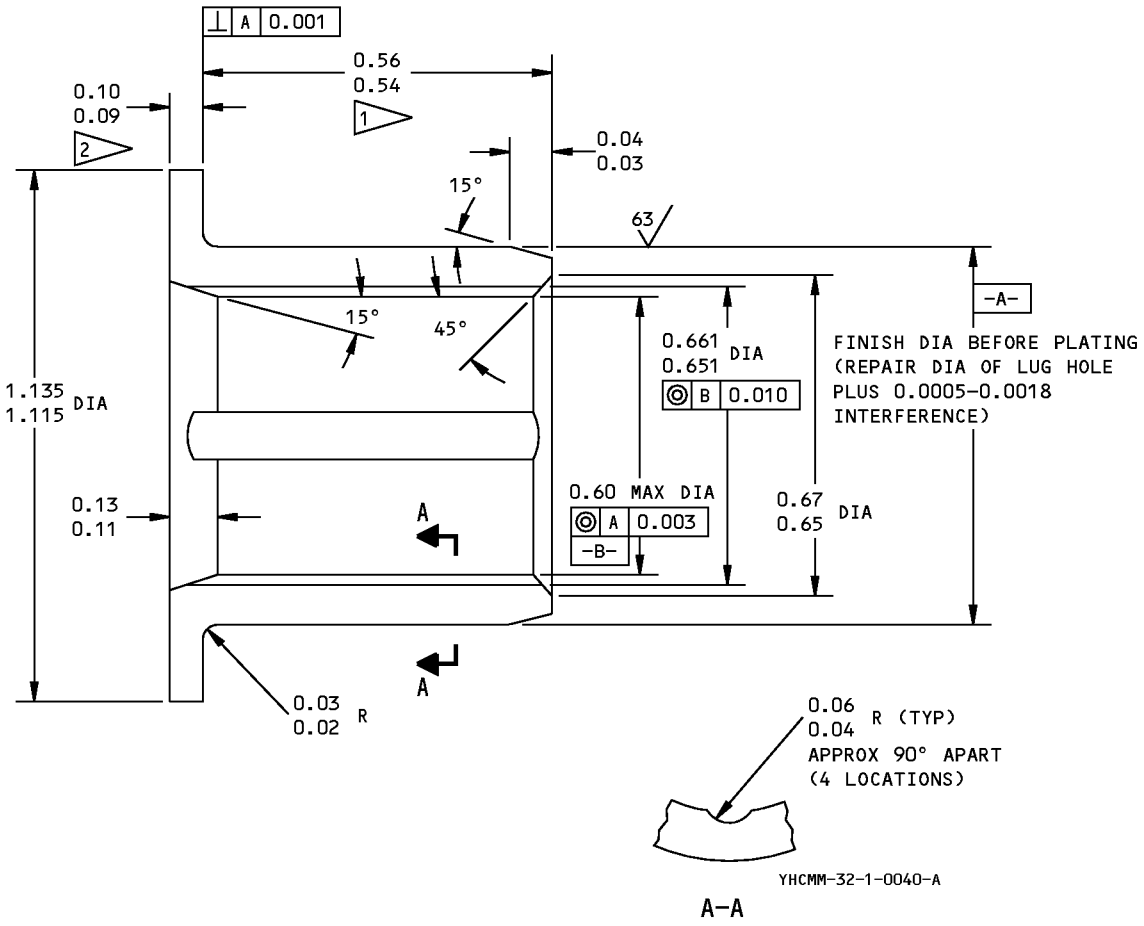
BREAK SHARP EDGES 0.06 R UNLESS SHOWN DIFFERENTLY

SHOT PEEN: 0.023-0.055 SHOT SIZE
0.012 A2 INTENSITY

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

65-46288-10,-12,-14 Torsion Link Repair and Refinish
Figure 601 (Sheet 4 of 4)



1 MINUS AMOUNT REMOVED FROM LUG FACE

2 PLUS AMOUNT REMOVED FROM LUG FACE

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.01-0.02 R

MATERIAL: COPPER BERYLLIUM ASTM-B-196 OR
AMS 4533 OR 4535 CONDITION "AT" OR
AMS 4534 OR 4651 CONDITION HT

CADMIUM PLATE (F-4.201)(OPTIONAL ON
INTERIOR SURFACES)

ALL DIMENSIONS ARE IN INCHES

HOLE LOCATION (1) FIG. 601 - REPLACES BUSHING (IPL FIG. 1; 75) 65-46150-74

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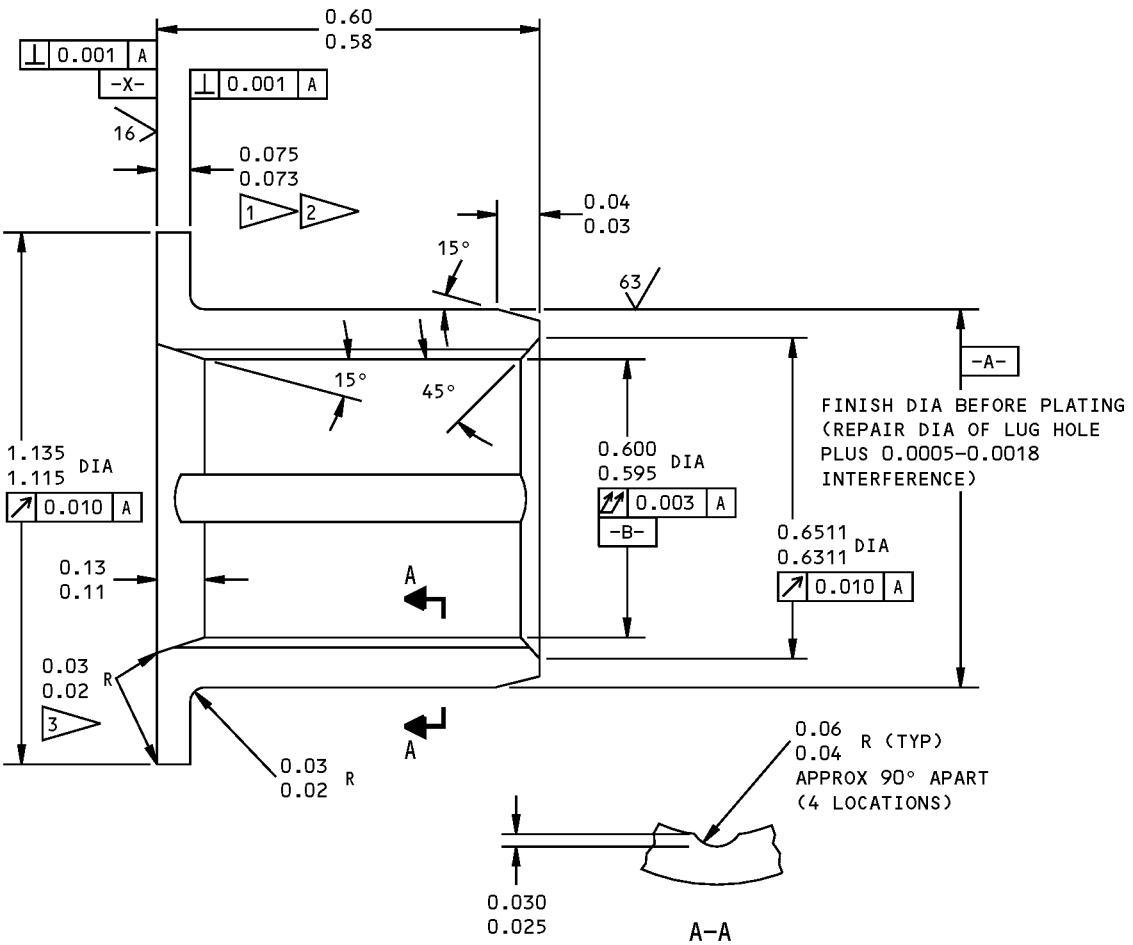
Oversize Bushing Details
Figure 602



1 DIMENSION AFTER COATING

2 PLUS AMOUNT REMOVED FROM LUG FACE

3 0.005 COATING RUNOUT ON THESE RADII

63 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.01-0.02 R

MATERIAL: COPPER BERYLLIUM PER AMS 4535, OR 4533

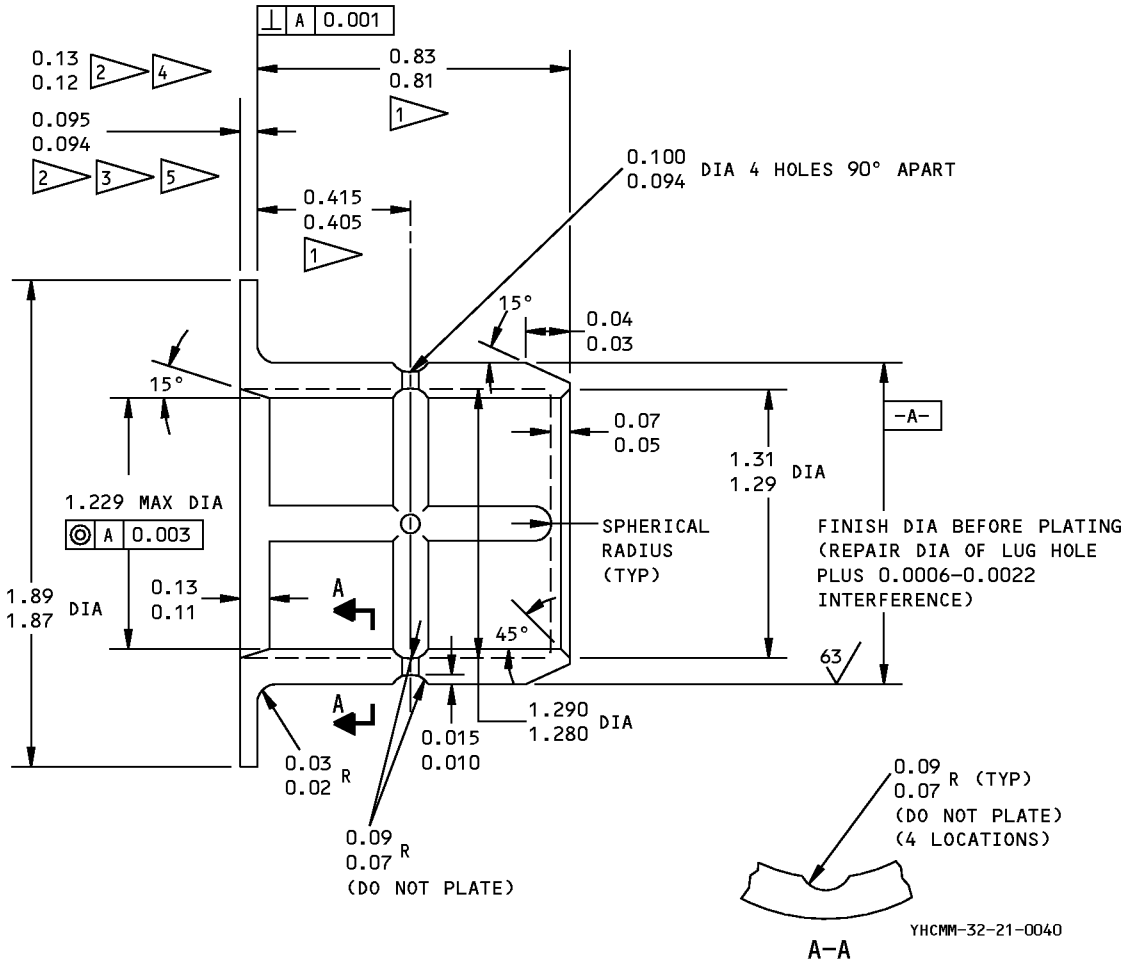
ON SURFACE -X- APPLY TUNGSTEN CARBIDE COATING (F-15.390) LW-1N40A TO SURFACE -X-, 0.003 MINIMUM THICKNESS. OVERSPRAY IS PERMITTED ON FLANGE OUTSIDE DIAMETER AND ADJACENT BORE CHAMFER. APPLY UCAR 100 SEALANT WITHIN ONE HOUR.
OPTIONAL: APPLY BMS 10-67 TYPE 1 THERMAL COATING (F-15.380) (15% MINIMUM COBALT) AND WIPE WITH PRIMER (F-19.45). CADMIUM PLATE (F-15.06) OTHER SURFACES. (OPTIONAL ON INTERIOR SURFACES)

DIMENSION APPLY BEFORE PLAING OR COATING UNLESS SHOWN BY 1

ALL DIMENSIONS ARE IN INCHES

HOLE LOCATION (1) FIG. 601 - REPLACES BUSHING (IPL FIG. 1; 75A) 65C37819-2

Oversize Bushing Details
Figure 603



1 MINUS AMOUNT REMOVED FROM LUG FACE

2 PLUS AMOUNT REMOVED FROM LUG FACE

3 CHROME PLATE (F-15.04) FACE OF FLANGE
0.0003-0.0005 THICK.
DIMENSION APPLIES AFTER PLATING

4 65-46150-75

5 65-46150-128

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.01-0.02 R

MATERIAL: COPPER BERYLLIUM ASTM-B-196 OR
AMS 4533 OR 4535 CONDITION "AT" OR
AMS 4534 OR 4651 CONDITION HT

CADMIUM PLATE (F-4.201)
(OPTIONAL ON INTERIOR SURFACES) PLATING 0.0003
MAX THICKNESS IN HOLES AND GROOVES

ALL DIMENSIONS ARE IN INCHES

HOLE LOCATION (3) FIG. 601 - REPLACES BUSHING (IPL FIG. 1; 80) 65-46150-75
AND BUSHING (IPL FIG. 1; 80A) 65-46150-128

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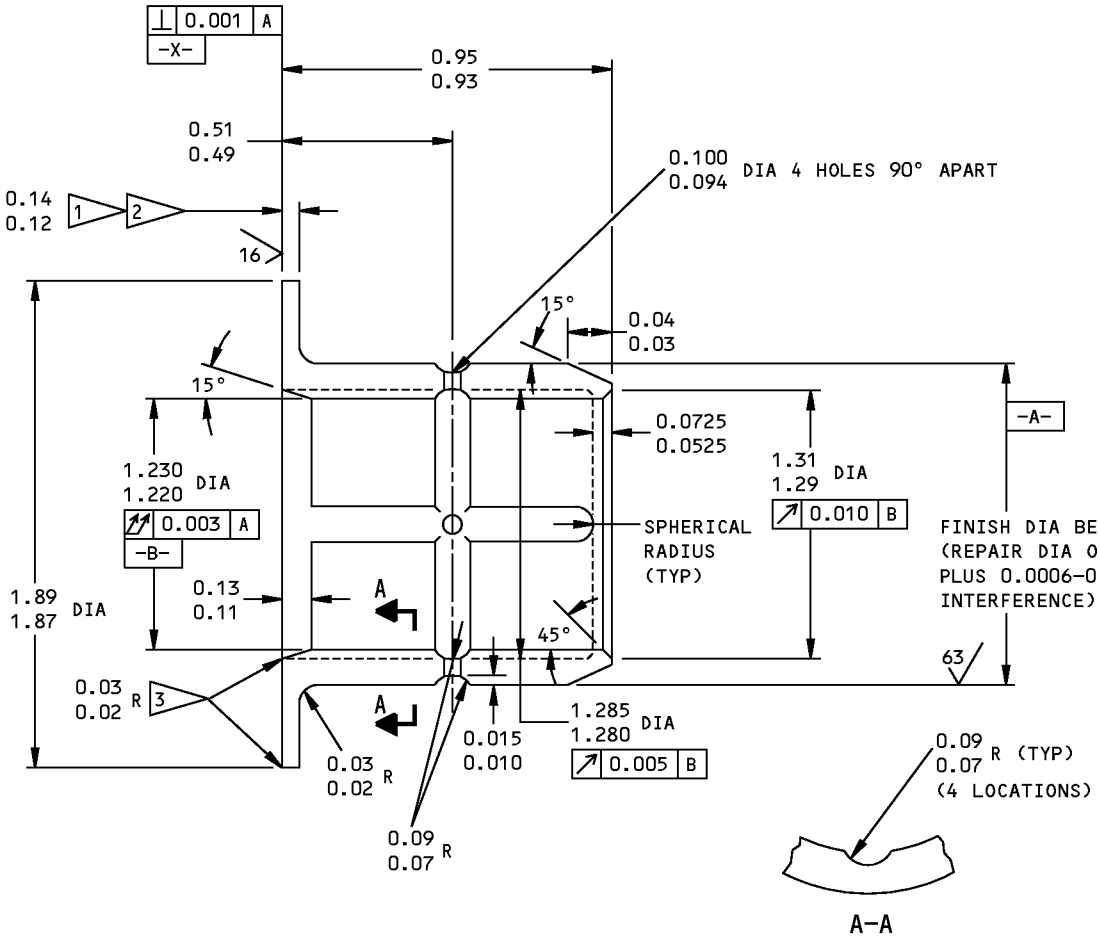
Oversize Bushing Details
Figure 604



1 DIMENSION AFTER COATING

2 PLUS AMOUNT REMOVED FROM LUG FACE

3 0.005 COATING RUNOUT ON THESE RADII

63 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.01-0.02 R

MATERIAL: COPPER BERYLLIUM PER AMS 4535 OR 4533

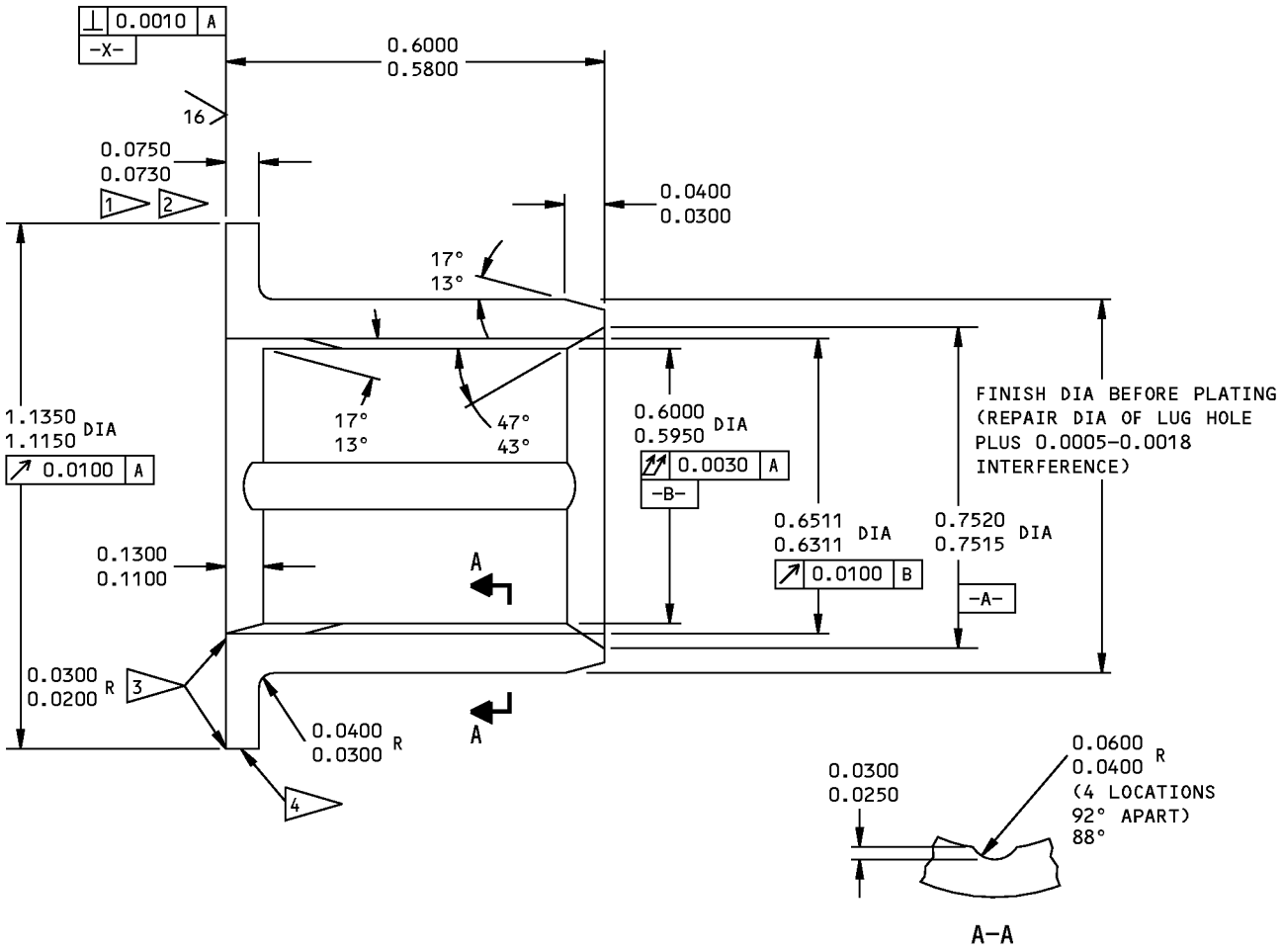
ON SURFACE -X-, APPLY TUNGSTEN CARBIDE COATING (F-15.390) LW-1N40A, 0.003 MINIMUM THICKNESS. OVERSPRAY IS PERMITTED ON FLANGE OUTSIDE DIAMETER AND ADJACENT BORE CHAMFER. APPLY UCAR 100 SEALANT WITHIN ONE HOUR. OPTIONAL: APPLY BMS 10-67 TYPE 1 THERMAL COATING (F-15.380) (15% MINIMUM COBALT) AND WIPE WITH PRIMER (F-19.45). CADMIUM PLATE (F-15.06) OTHER SURFACES

DIMENSIONS APPLY BEFORE PLATING OR COATING UNLESS SHOWN BY 1

ALL DIMENSIONS ARE IN INCHES

HOLE LOCATION (3) FIG. 601 - REPLACES BUSHING (IPL FIG. 1; 80B) 65C37821-1

Oversize Bushing Details
Figure 605



1 DIMENSION AFTER COATING

2 PLUS AMOUNT REMOVED FROM LUG FACE

3 COATING RUNOUT AREA. THE COATING MUST NOT END IN A SQUARE EDGE. THE COATING MUST TAPER FROM FULL THICKNESS TO ZERO OVER 0.005 MINIMUM LENGTH

4 COATING OVERSPRAY PERMITTED ON THIS SURFACE

63 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.01-0.02 R

MATERIAL: COPPER BERYLLIUM (AMS 4535 OR 4533)

ON SURFACE -X-, APPLY BMS 10-67, TYPE 17 TUNGSTEN CARBIDE-COBALT-CHROME COATING (F-15.384), 0.003 MINIMUM THICKNESS AFTER GRINDING. CADMIUM PLATE (F-15.06) OTHER SURFACES. (OPTIONAL ON INTERIOR SURFACES)

DIMENSIONS APPLY BEFORE PLATING OR COATING UNLESS SHOWN BY 1

ALL DIMENSIONS ARE IN INCHES

HOLE LOCATION (1) FIG. 601 - REPLACES BUSHING (IPL FIG. 1; 75C) 65C37819-4

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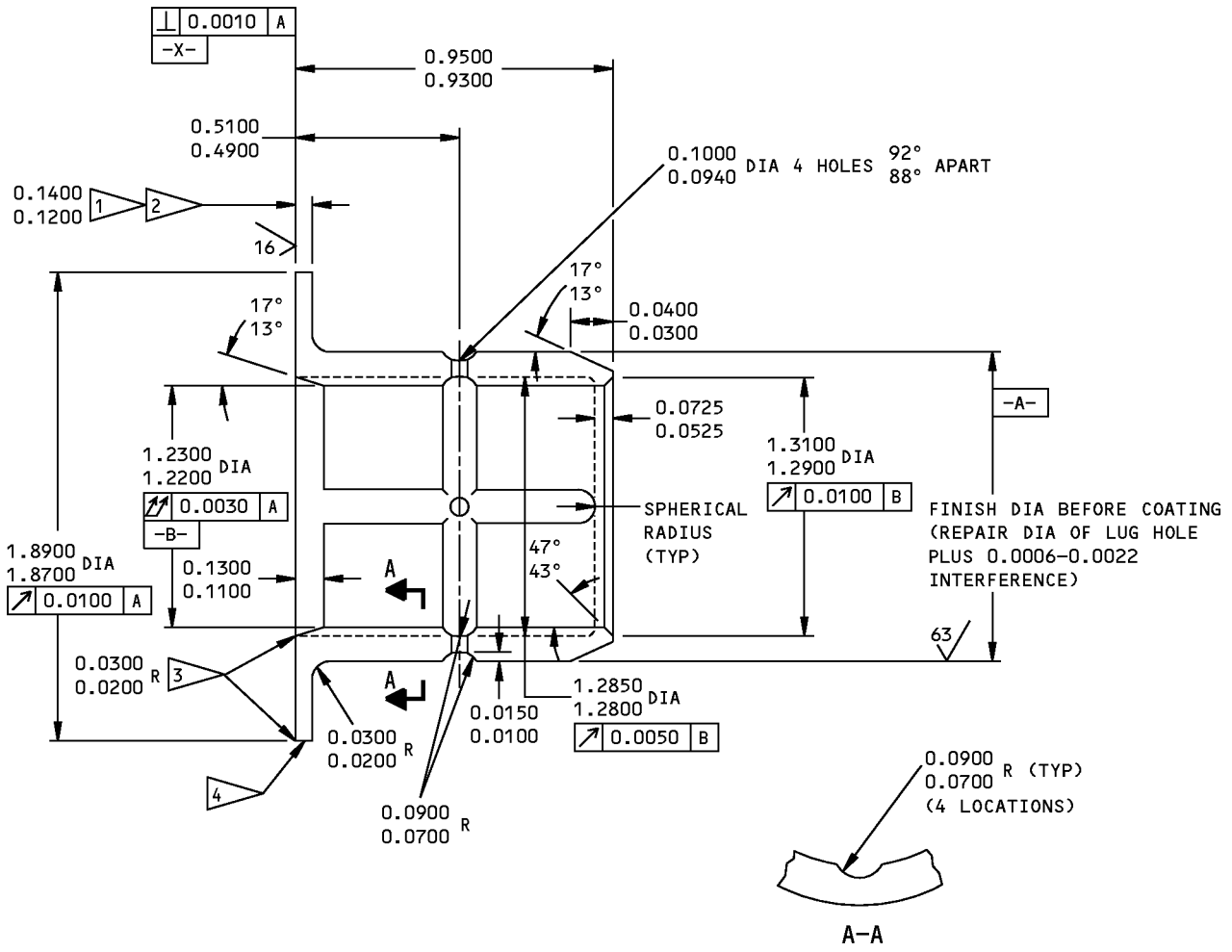
Oversize Bushing Details
Figure 606



1. DIMENSION AFTER COATING
2. PLUS AMOUNT REMOVED FROM LUG FACE
3. COATING RUNOUT AREA. THE COATING MUST NOT END IN A SQUARE EDGE. THE COATING MUST TAPER FROM FULL THICKNESS TO ZERO OVER 0.005 MINUMUM LENTGH.
4. COATING OVERSPRAY PERMITTED ON THIS SURFACE

63 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.01-0.02 R

MATERIAL: COPPER BERYLLIUM (AMS 4535 OR 4533)

ON SURFACE -X-, APPLY BMS 10-67, TYPE 17 TUNGSTEN CARBIDE-COBALT-CHROME COATING (F-15.384) COATING, 0.003 MINIMUM THICKNESS AFTER GRINDING. CADMIUM PLATE (F-15.06) OTHER SURFACES.

DIMENSIONS APPLY BEFORE PLATING OR COATING UNLESS SHOWN BY 1

ALL DIMENSIONS ARE IN INCHES

HOLE LOCATION (3) FIG. 601 - REPLACES BUSHING (IPL FIG. 1; 80E) 65C37821-2

1848932 S0000328494_V1

Oversize Bushing Details
Figure 607

STEERING COLLAR BOLT - REPAIR 3-1

69-61383–2, –3, –4

1. General

A. This procedure tells how to repair the steering collar bolt.

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

C. Refer to IPL Figure 2 for item numbers.

2. Repair Procedures

NOTE: Refer to REPAIR-GENERAL for a list of applicable standard practices. Refer to IPL Figure 1 for item numbers. For repair of surfaces which is only replacement of the original finish, refer to Refinish instructions, REPAIR 3-1, Figure 601.

A. Shank (REPAIR 3-1, Figure 601)

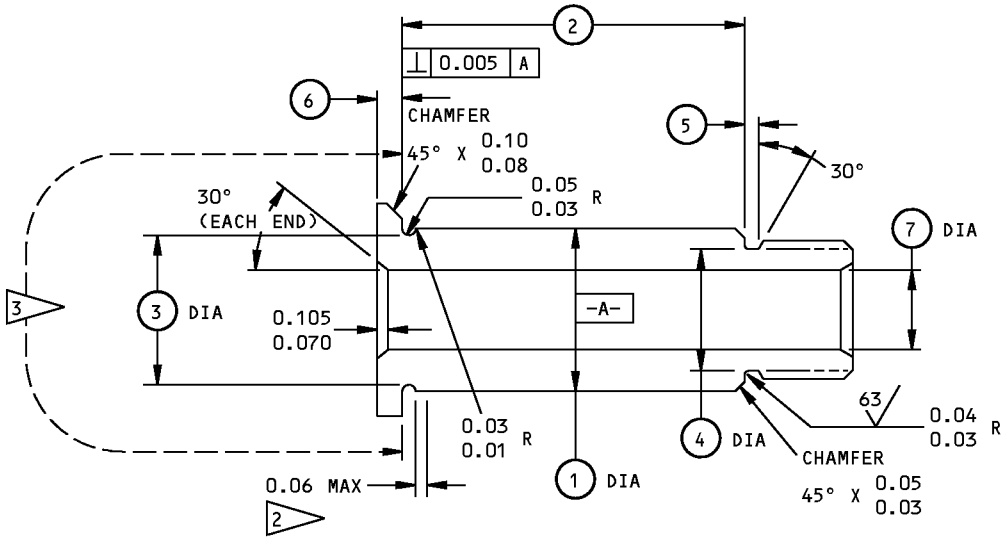
(1) Machine as required, within repair limits, to remove defects.

(2) Shot peen, chrome plate and grind to design dimensions and finish.

B. Relief Grooves; head face (REPAIR 3-1, Figure 601)

(1) Machine as required, within repair limits.

(2) Refinish as indicated.



	1	2	3	4	5	6	7
DESIGN DIM	0.9998 0.9991	2.16 2.14	0.980 0.970	0.774 0.764	0.153 0.133	0.16 0.14	0.510 0.490
REPAIR LIMIT	0.9710 ▷1	-----	0.932 ▷4	0.738 ▷4	0.163 ▷4	0.13 ▷4	-----

REFINISH

FOR 69-61383-2 -- CHROME PLATE (F-15.03) DIAMETER -A- CADMIUM PLATE (F-1.32) ALL OTHER SURFACES. APPLY BMS 10-11, TYPE 1 PRIMER (F-20.03) PLUS MIL-C-16173 GRADE 1 CORROSION PREVENTIVE COMPOUND (F-14.13) ON INTERIOR SURFACES.

FOR 69-61383-3,-4 -- CHROME PLATE (F-15.34) DIAMETER -A- AND WIPE WITH PRIMER (F-19.45). CADMIUM PLATE (F-15.06) ALL OTHER SURFACES AND APPLY BMS 10-11, TYPE 1 PRIMER (F-20.03) BUT NOT ON THREADS. WIPE THREADS WITH PRIMER (F-19.45). APPLY MIL-C-11796, CLASS 1 CORROSION PREVENTIVE COMPOUND (F-19.03) ON FULL LENGTH OF ID.

▷1 LIMIT FOR CHROME PLATE BUILDUP AND GRIND TO DESIGN DIMENSIONS AND FINISH, WITH PLATING RUNOUT AT EDGES AS SHOWN BY ▷2

▷2 CHROME PLATE RUNOUT

▷3 APPLY BMS 10-11, TYPE 2 WHITE GLOSS ENAMEL (F-21.03), (69-61383-3,-4)

▷4 RESTORATION TO DESIGN DIMENSIONS NOT REQUIRED.

REPAIR

REF ▷1 ▷2 ▷4

125√ ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.01-0.02 R

MATERIAL: 4340 STEEL (180-200 KSI)

SHOT PEEN: 0.016-0.033 SHOT SIZE
0.012A2 INTENSITY

ALL DIMENSIONS ARE IN INCHES

108610 S0004998375_V3

69-61383-2,-3,-4 Bolt Repair and Refinish
Figure 601

TORSION LINK PIN - REPAIR 4-1

69-72698–1, –4, –5, –6

1. General

A. Use this procedure to repair torsion link pin (65).

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

C. Refer to IPL Figure 1 for item numbers.

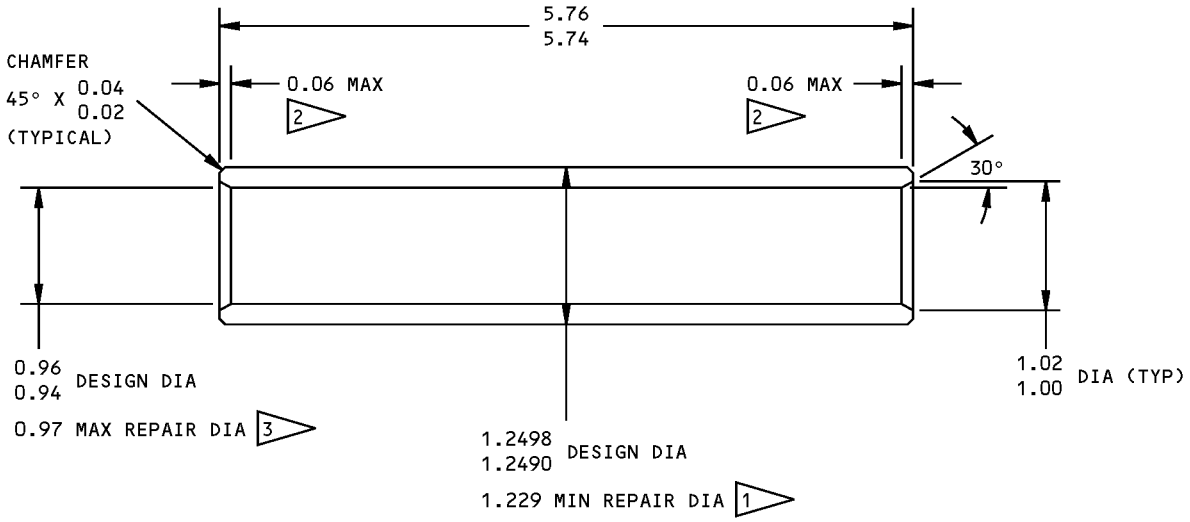
2. Repair

NOTE: Refer to REPAIR-GENERAL for a list of applicable standard practices. Refer to IPL Figure 1 for item numbers. For repair of surfaces which is only replacement of the original finish, refer to Refinish instructions, REPAIR 4-1, Figure 601.

A. Shank Repair (REPAIR 4-1, Figure 601)

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

(2) Shot peen, chrome plate and grind to design dimensions and finish.



REFINISH

69-72698-1: CHROME PLATE (F-15.04) OD. WIPE THE CHROME PLATE WITH PRIMER (F-19.45)

69-72698-4 AND ON: CHROME PLATE (F-15.34) OD. WIPE THE CHROME PLATE WITH PRIMER (F-19.45).

CADMIUM-TITANIUM PLATE (F-15.01) AND APPLY BMS 10-11, TYPE 1, PRIMER (F-20.03) ALL OTHER SURFACES. COAT INTERIOR SURFACE WITH MIL-C-11796 CLASS 1 CORROSION PREVENTIVE COMPOUND (F-19.03)

1 LIMIT FOR CHROME PLATE BUILDUP AND GRIND TO DESIGN DIMENSIONS AND FINISH

2 CHROME PLATE RUNOUT

3 RESTORATION TO DESIGN DIMENSION NOT REQUIRED

REPAIR

REF 1 3

125 ALL MACHINED SURFACES

BREAK SHARP EDGES 0.02 R MAX

SHOT PEEN: 0.017-0.046 SHOT SIZE
0.010-0.016A2 INTENSITY

MATERIAL: 4340M STEEL (275-300 KSI)

ALL DIMENSIONS ARE IN INCHES

69-72698-1,-4,-5, -6 Pin Repair and Refinish
Figure 601

TORSION LINK RETAINING PIN - REPAIR 5-1

69-73008–2

1. General

A. This procedure tells how to repair the torsion link retaining pin.

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

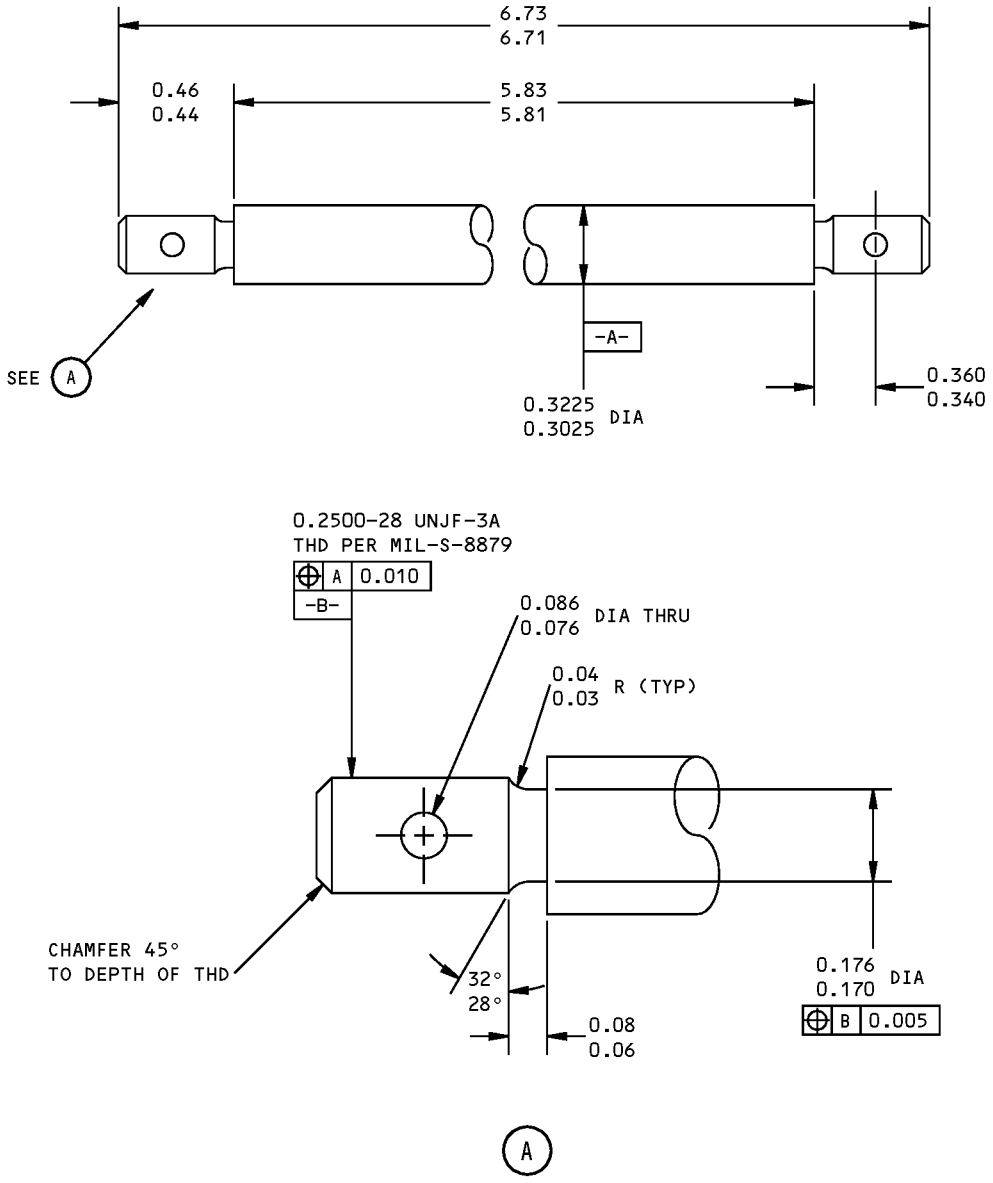
C. Refer to IPL Figure 2 for item numbers.

2. Repair Procedures

A. Coating Repair (REPAIR 5-1, Figure 601)

NOTE: Refer to REPAIR-GENERAL for a list of applicable standard practices.

(1) Repair is only replacement of the original finish. Refer to Refinish instructions for detials.



REFINISH

CADMIUM PLATE (F-15.06)

REPAIR

63 ALL SURFACES

MATERIAL: A286 CRES

ALL DIMENSIONS ARE IN INCHES

69-73008-2 Refinish Details
Figure 601

STEERING COLLAR BEARING ASSEMBLY - REPAIR 6-1

69-61785–8

1. General

A. This procedure tells how to repair the steering collar bearing assembly.

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

C. Refer to IPL Figure 2 for item numbers.

2. Repair procedures

NOTE: Refer to REPAIR-GENERAL for a list of applicable standard practices. Refer to IPL Figure 1 for item numbers. For repair of surfaces which is only replacement of the original finish, refer to Refinish instructions, REPAIR 6-1, Figure 601.

A. Bearing Repair (REPAIR 6-1, Figure 601)

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

(2) Build up machined surfaces with thermal spray coating as indicated.

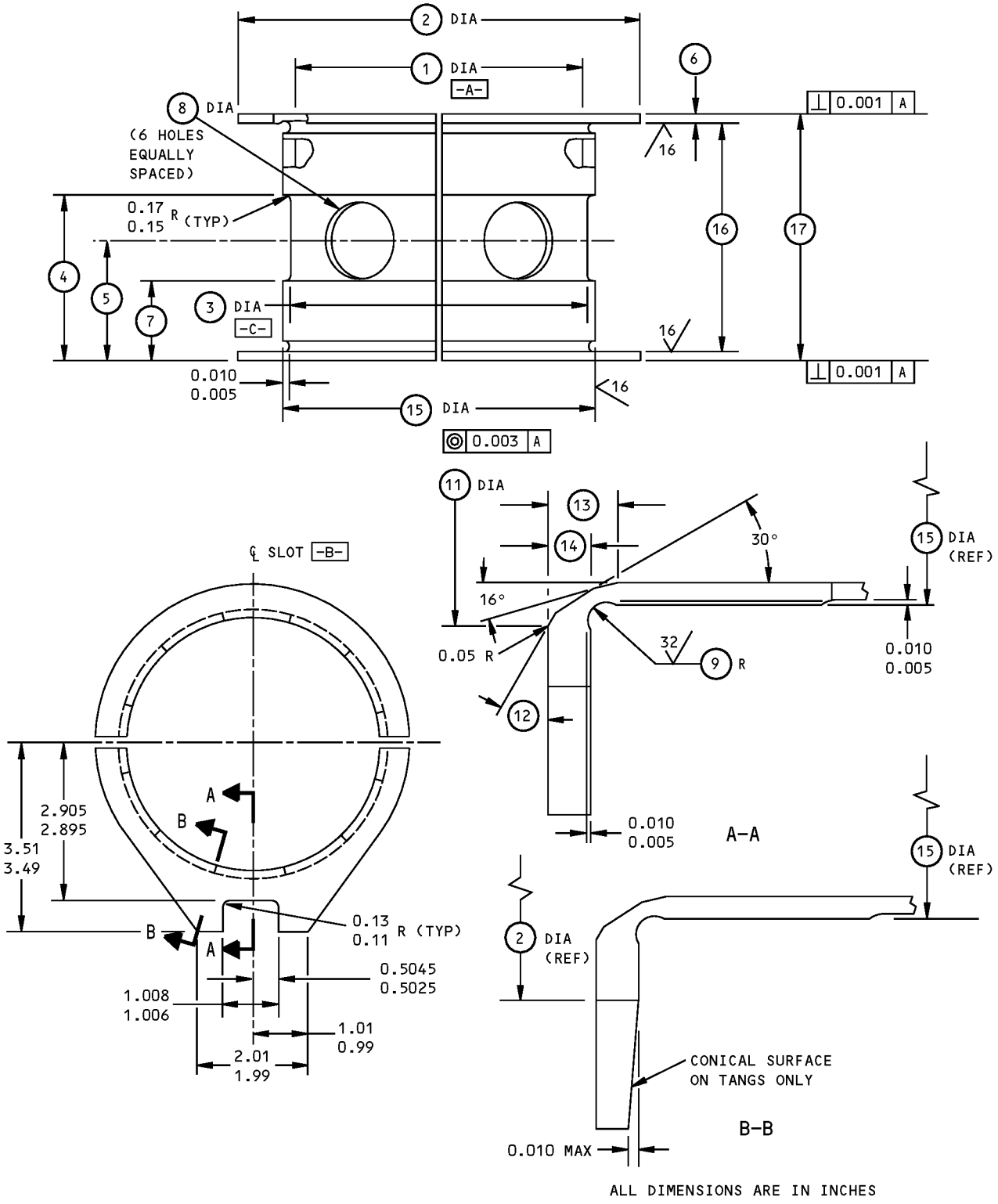
(3) Machine to design dimensions and finish.

(4) If you repaired the mating surfaces of the steering collar with thermal spray coating (Ref REPAIR 1-2), we recommend you also repair the bearing with the same coating, as shown. Be sure to identify the bearing and collar as a matched set.

B. Special Repair Bearing (REPAIR 6-1, Figure 601)

(1) If you machined the mating OD of the shock strut outer cylinder, or the steering collar ID or lug faces, make a special repair bearing as shown. You can also get the special repair bearing, with the dimensions specially changed for your repair, directly from Yeager Manufacturing Company (V31786).

(2) As applicable, be sure to identify the steering collar assembly, the repair bearing, and the shock strut outer cylinder as a matched set. To identify this bearing as a special repair part, we recommend you give it the equivalent part number with an M suffix, such as 69-61785-8M.



69-61785-8 Bearing Repair and Refinish
Figure 601 (Sheet 1 of 2)

REFERENCE NUMBER	(1) 3	(2)	(3)	(4)	(5)	(6) 9	(7)	(8)	(9)
DESIGN DIMENSION	4.7950 4.7940	5.91 5.89	4.94 4.92	2.61 2.59	1.98 1.92	0.26 0.24	1.31 1.29	1.155 1.095	0.09 0.07
REPAIR LIMIT	--	--	--	--	--	--	--	--	--

REFERENCE NUMBER	(11)	(12)	(13)	(14)	(15) 5	(16) 6	(17) 4
DESIGN DIMENSION	5.15 5.13	30 1/2° 29 1/2°	0.29 0.27	0.23 0.21	4.9950 4.9943	3.403 3.401	3.899 3.895
REPAIR LIMIT	--	--	--	--	4.9650 2 8	3.433 2 8	3.875 1 2

REFINISH

NO FINISH

1 DO NOT REMOVE MORE THAN 0.010 MATERIAL FROM EITHER FLANGE FACE

2 LIMIT FOR THERMAL FLAME SPRAY BUILDUP AL-NI-BRONZE, BMS 10-67, TYPE 2 (SOPM 20-10-05) AND MACHINE TO DESIGN DIMENSIONS AND 4 MICROINCH FINISH

3 DECREASE THIS DIAMETER AS NECESSARY TO GET MINUS 0.001 TO PLUS 0.001 CLEARANCE WITH UNDERSIZED OD ON THE SHOCK STRUT OUTER CYLINDER (CMM 32-21-58, REPAIR 1-4, FIG. 601)

4 INCREASE THIS DIMENSION AS NECESSARY TO GET 0.001-0.007 CLEARANCE WITH DECREASED MATING LUG THICKNESSES ON THE SHOCK STRUT OUTER CYLINDER (CMM 32-21-58, REPAIR 1-4, FIG. 601) 7

5 INCREASE THIS DIAMETER AS NECESSARY TO GET 0.0020-0.0047 CLEARANCE WITH OVER-SIZED ID ON THE STEERING COLLAR (REF REPAIR 1-2, FIG. 601) 7

REPAIR

REF 1 THRU 8

MARK BEARING HALVES AS MATCHED SET

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

MATERIAL: COPPER BERYLLIUM PER QQ-C-530

DIMENSIONS APPLY AFTER COATING

ALL DIMENSIONS ARE IN INCHES

6 DECREASE THIS DIMENSION AS NECESSARY TO GET 0.001-0.005 CLEARANCE WITH DECREASED FLANGE THICKNESSES ON THE STEERING COLLAR (REF REPAIR 1-2, FIG. 601) 7

7 BECAUSE THIS IS A REPAIR PART WITH CHANGED DIMENSIONS, ADD AN M SUFFIX TO THE PART NUMBER

8 LIMIT FOR THERMAL SPRAY BUILDUP TUNGSTEN CARBIDE, BMS 10-67, TYPE 1 OR CLASS 17, CLASS 2, 3, OR 4 (REF SOPM 20-10-05) AND GRIND TO DESIGN DIMENSIONS AND 4 MICROINCH FINISH. PUT A 0.05-0.08 RUNOUT AT EDGES AND RADII

9 PLUS ADJUSTMENTS MADE TO (16) (17), IF APPLICABLE

69-61785-8 Bearing Repair and Refinish
Figure 601 (Sheet 2 of 2)

APEX BOLT - REPAIR 7-1

BACB30LM10CD52

1. General

A. This procedure tells how to repair the apex bolt.

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

C. Refer to IPL Figure 2 for item numbers.

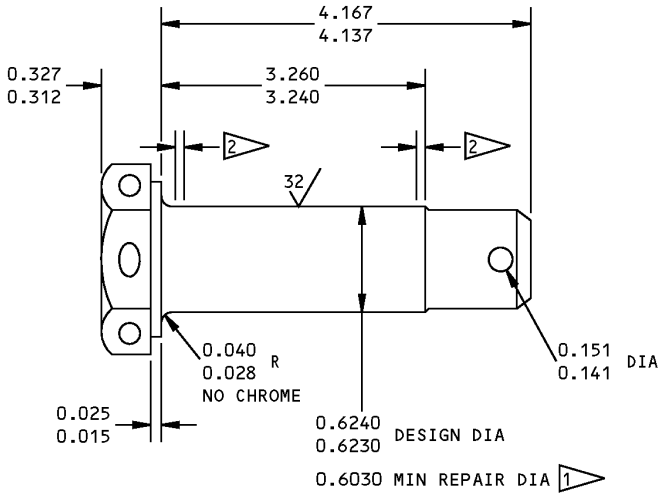
2. Repair procedures

A. Shank Repair (REPAIR 7-1, Figure 601)

NOTE: Refer to REPAIR-GENERAL for a list of applicable standard practices.

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

(2) Shot peen, chrome plate and grind to design dimensions and finish.



REFINISH

CHROME PLATE PER QQ-C-320, CLASS 2 (0.0020 MIN THICKNESS) ON SHANK ONLY. PASSIVATE OTHER SURFACES PER QQ-P-35 CLASS 160TC4

1 LIMIT FOR CHROME PLATE BUILDUP AND GRIND TO DESIGN DIMENSIONS AND FINISH

2 CHROME PLATE RUNOUT 0.06 MAX

REPAIR

REF 1

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

SHOT PEEN: 0.017-0.039 SHOT SIZE
0.016A2 INTENSITY

MATERIAL: A286 CRES (AMS 5737), 160-190 KSI

ALL DIMENSIONS ARE IN INCHES

BACB30LM10CD52 Apex Bolt Repair and Refinish
Figure 601

MARKER/TEE - REPAIR 8-1

BAC27DHY0301, BAC27DLG0066, BAC27DLG0108, BAC27DLG0116, BAC27DLG0120, BAC27DLG0145, BAC27TCT0010, 69-73685–1

1. General

A. This procedure tells how to repair the marker/tee.

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

C. Refer to IPL Figure 2 for item numbers.

2. Repair Procedures

NOTE: Refer to REPAIR-GENERAL for a list of applicable standard practices. Refer to IPL Figure 2 for item numbers.

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00028	Adhesive - Modified Epoxy For Rigid PVC, Foam Cored Sandwiches	BAC5010, Type 70 (BMS5-92, Type 1)

B. References

Reference	Title
SOPM 20-50-05	APPLICATION OF ALUMINUM FOIL AND OTHER MARKERS
SOPM 20-50-12	APPLICATION OF ADHESIVES

C. Marker Replacement (REPAIR 8-1, Figure 601)

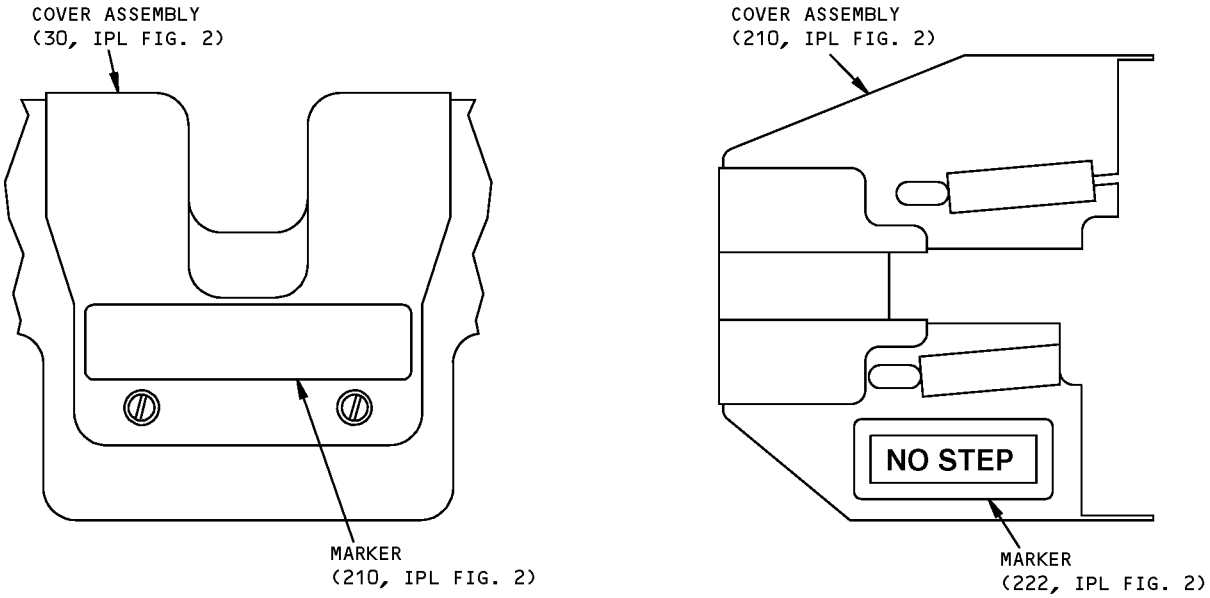
(1) Remove the defective markers (210, 215, 220, 222).

(2) Apply and edge seal the replacement markers per SOPM 20-50-05.

D. Tee Replacement (REPAIR 8-1, Figure 601)

(1) Remove the old tee (225).

(2) Install a replacement tee as shown and bond it in position with adhesive, A00028 per SOPM 20-50-12.

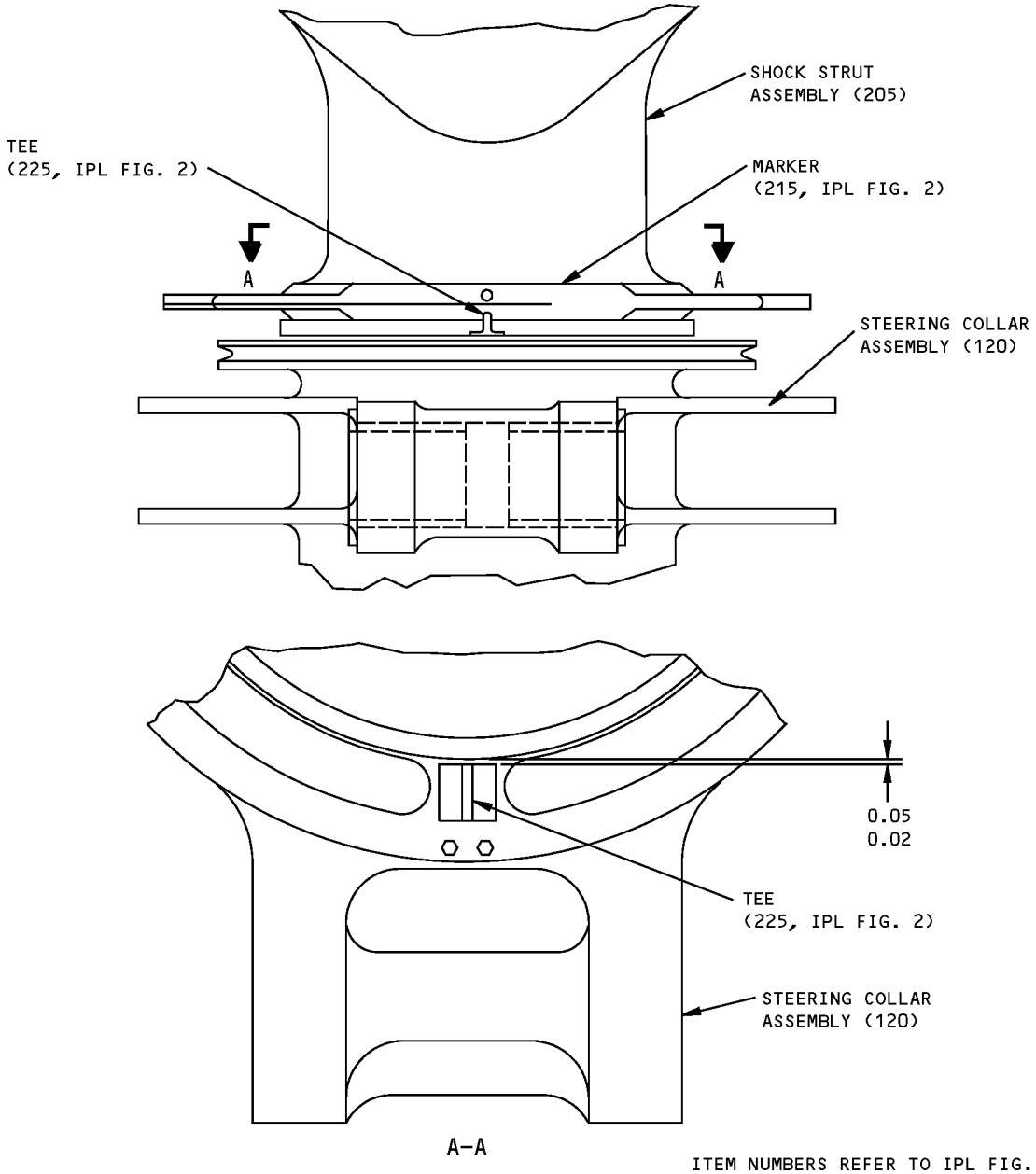


ITEM NUMBERS REFER TO IPL FIG. 1
UNLESS SHOWN DIFFERENTLY

ALL DIMENSIONS ARE IN INCHES

BAC27DHY0301
BAC27DLG0066
BAC27DLG0108
BAC27DLG0116
BAC27DLG0120
BAC27DLG0145
BAC27TCT0010

69-73685-1 Marker/Tee Replacement
Figure 601 (Sheet 1 of 2)



BAC27DHY0301
BAC27DLG0066
BAC27DLG0108
BAC27DLG0116
BAC27DLG0120
BAC27DLG0145
BAC27TCT0010

69-73685-1 Marker/Tee Replacement
Figure 601 (Sheet 2 of 2)

MISCELLANEOUS PARTS REFINISH - REPAIR 9-1

1. General

A. Use this procedure to refinish the parts that are not in the other repairs.

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

C. Refer to REPAIR-GENERAL for a list of applicable standard practices.

D. Refer to IPL Figure 1 and IPL Figure 2 for item numbers.

2. Refinish

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I
C00260	Coating - Chemical And Solvent Resistant Finish, Epoxy Resin Enamel	BMS10-11, Type II
C00700	Coating - Exterior Protective Enamel, Gray Gloss Enamel	BMS10-60, Type I, BAC 707

B. Procedure

(1) Repair of the parts in REPAIR 9-1, Table 601 is only replacement of the original finish.

Table 601: Refinish details

IPL FIG. & ITEM	MATERIAL	FINISH
Fig. 1		
Washer (17)	17-7PH CRES 150-170 ksi (optional: 301 or 302 CRES)	Thin dense chrome plate (F-15.43), 0.0003-0.0005 inch thick; optional on ID and OD.
Cap (55)	Al-Ni-Bronze	Cadmium plate (F-15.06).
Shim (150)	Al alloy	Apply primer, C00259 (F-20.03).
Bracket (200)	17-4PH CRES	Cadmium plate (F-1.1926)
Supports (235, 270)	Al alloy	Chromic acid anodize and apply primer, C00259 (F-18.13). Apply enamel coating, C00700 (F-14.9813, which replaces SRF-14.9813).
Target (250)	HYMU 80 steel or Moly Permalloy No. 1	No finish (F-25.01).
Target (250A)	HYMU 80 steel or Moly Permalloy No. 1	Cadmium plate and apply primer, C00259 (F-16.01). Apply enamel coating, C00700 (F-14.9813, which replaces SRF-14.9813).
Fig. 2		

Table 601: Refinish details (Continued)

IPL FIG. & ITEM	MATERIAL	FINISH
Brackets (125B, 125C), support (140)	AISI 630 CRES	Cadmium plate (F-15.06), then apply primer, C00259 (F-20.02) and enamel coating, C00700 (F-14.9813, which replaces SRF-14.9813).
Bracket (110, 115), plate (40, 50), support (120)	Al alloy	Chemical treat or chromic acid anodize and apply primer, C00259 (SRF-2.30).
Tee (225)	Al alloy	Chromic acid anodize and apply primer, C00259 (F-20.02) and gray enamel coating, C00260 (F-21.02) all over. Apply black enamel coating, C00260 (F-21.27-701, which replaces SRF-14.904-701) to the side faces from the top edge down to 0.10-0.15 inch, but not on the top flat surface.

STEERING COLLAR BEARING ASSEMBLY - REPAIR 10-1

65C37814–1, –5

1. General

A. Use this procedure to repair steering collar bearing assembly (155B, 155D).

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

C. Refer to REPAIR-GENERAL for a list of applicable standard practices.

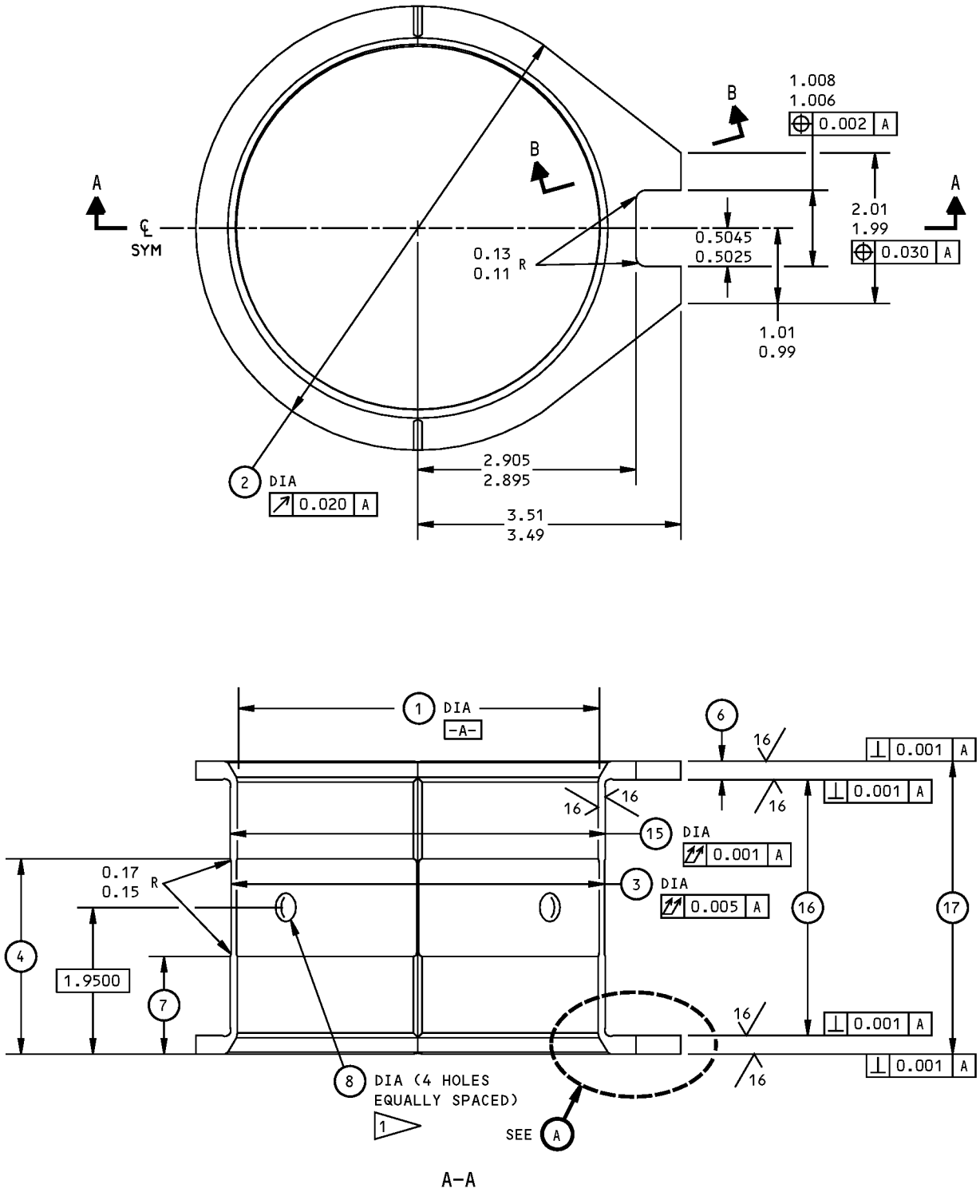
D. Refer to IPL Figure 1 for item numbers.

2. Repair

A. Coating Repair (REPAIR 10-1, Figure 601)

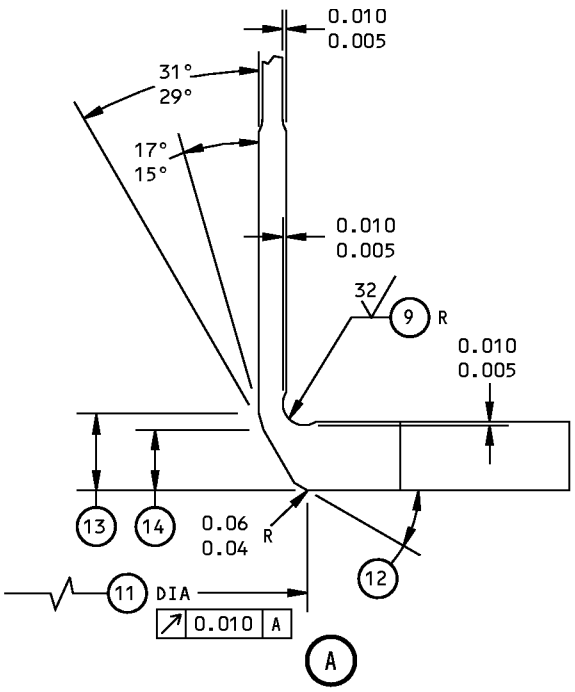
(1) Repair is only replacement of the original finish. Refer to Refinish instructions in REPAIR 10-1, Figure 601 for details.

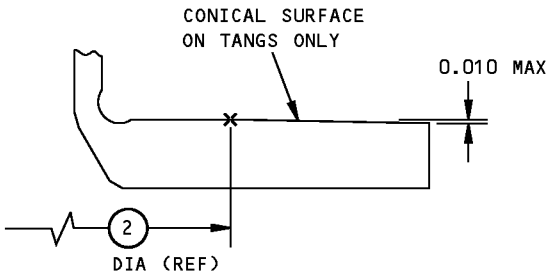
(2) If you think there are defects on important surfaces, see REPAIR 10-1, Figure 601 for dimension details.



A-A

65C37814-1, -5 Bearing Repair and Refinish
Figure 601 (Sheet 1 of 3)





OPTIONAL CONFIG (TYPICAL)
B-B

REFERENCE NUMBER	1	2	3	4	5	6	7	8 1	9
DESIGN DIMENSION	4.7950 4.7940	5.91 5.89	4.975 4.965	2.61 2.59	--	0.26 0.24	1.31 1.29	0.376 0.375	0.09 0.07
REPAIR LIMIT	--	--	--	--	--	--	--	--	--

REFERENCE NUMBER	11	12	13	14	15	16	17
DESIGN DIMENSION	5.15 5.13	30 1/2° 29 1/2°	0.29 0.27	0.23 0.21	4.9950 4.9940	3.403 3.401	3.899 3.897
REPAIR LIMIT	--	--	--	--	--	--	--

REFINISH

APPLY TUNGSTEN CARBIDE COATING (F-15.390) LW-1N40A, 0.003 MINIMUM THICKNESS, TO OUTSIDE DIAMETER AND INNER FLANGE FACES. APPLY COBALT ALLOY COATING (F-15.361) PRAXAIR TRIBALLOY SDG-2400 0.003 MINIMUM THICKNESS TO INSIDE DIAMETER AND OUTSIDE FLANGE FACES. PASSIVATE (F-17.25) OTHER SURFACES.

1 THESE TOOLING HOLES ARE OPTIONAL. SOME BEARINGS WILL NOT HAVE THEM

REPAIR

(SAME AS REFINISH)

MARK BEARING HALVES AS MATCHED SET

63 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

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

DIMENSIONS APPLY AFTER COATING

ALL DIMENSIONS ARE IN INCHES

65C37814-1, -5 Bearing Repair and Refinish
Figure 601 (Sheet 2 of 3)

REFINISH

ON OUTSIDE DIAMETER AND INNER FLANGE FACES:
ON 65C37814-1, APPLY BMS 10-67, TYPE 1 TUNGSTEN CARBIDE COBALT COATING (F-15.390) LW-1N40A, 0.003 MIN THICKNESS

ON 65C37814-5, APPLY BMS 10-67, TYPE 17 TUNGSTEN CARBIDE COBALT COATING (F-15.384), 0.003 MIN THICKNESS, OR BMS 10-67, TYPE 1 TUNGSTEN CARBIDE COBALT COATING (F-15.380) WITH A MINIMUM OF 15% COBALT, 0.003 MIN THICKNESS

ON INSIDE DIAMETER AND OUTSIDE FLANGE FACES:
ON 65C37814-1, APPLY BMS 10-67, TYPE 15 COBALT COATING (F-15.361) PRAXAIR TRIBALLOY SDG-2400, 0.003 MIN THICKNESS

ON 65C37814-5, APPLY BMS 10-67, TYPE 15 TUNGSTEN CARBIDE COBALT COATING (F-15.381), 0.003 MIN THICKNESS

NO COATING IN RELIEFS OR THEIR RADII

PASSUVATE (F-17.25) OTHER SURFACES

1 THESE TOOLING HOLES ARE OPTIONAL. SOME BEARINGS WILL NOT HAVE THEM

REPAIR

(SAME AS REFINISH)

MARK BEARING HALVES AS MATCHED SET

63 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

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

DIMENSIONS APPLY AFTER COATING

ALL DIMENSIONS ARE IN INCHES

1849118 S0000328485_V1

65C37814-1, -5 Bearing Repair and Refinish
Figure 601 (Sheet 3 of 3)

BOLT - REPAIR 11-1

65C37817–1, –2

1. General

A. Use this procedure to repair bolts (95C, 95D).

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

C. Refer to REPAIR-GENERAL for a list of applicable standard practices.

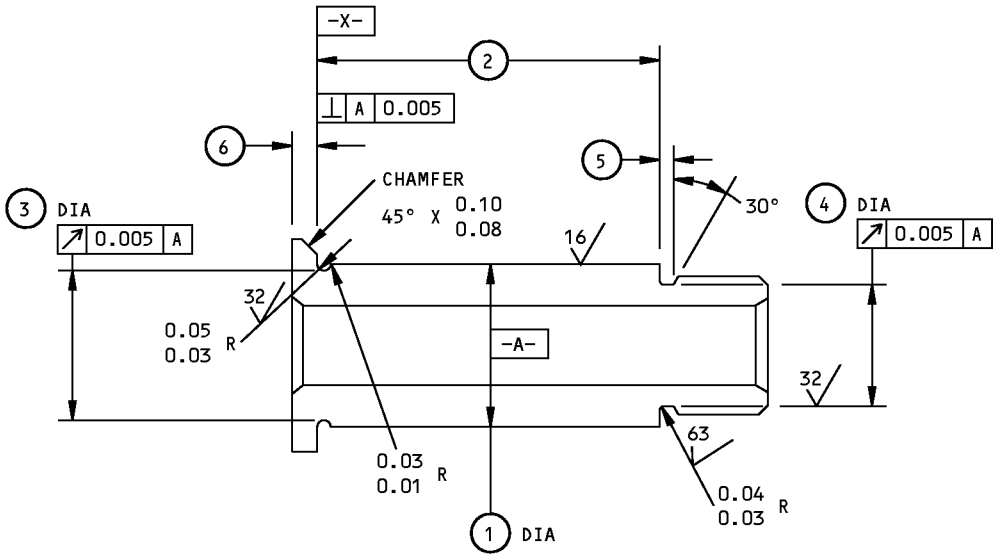
D. Refer to IPL Figure 1 for item numbers.

2. Repair

A. Coating Repair (REPAIR 11-1, Figure 601)

(1) Repair is only replacement of the original finish. Refer to Refinish instructions in REPAIR 11-1, Figure 601 for details.

(2) If you think there are defects on important surfaces, see REPAIR 11-1, Figure 601 for dimension details.



	1	2	3	4	5	6
DESIGN DIM	0.9996 0.9991	2.16 2.14	0.98 0.97	0.888 0.878	0.150 0.130	0.16 0.14
REPAIR LIMIT	--	--	--	--	--	--

REFINISH

APPLY BMS 10-67 TYPE 1 TUNGSTEN-CARBIDE-COBALT COATING (F-15.390) LW-1N40A, 0.003 MINIMUM THICKNESS, TO FLANGE SURFACE -X- AND SHANK DIA -A-. PUT A 0.005-0.040 RUNOUT AT EDGES AND RELIEFS. NO COATING IN RELIEFS OR THEIR RADII. PASSIVATE (F-17.25) OTHER SURFACES.

REPAIR

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.02 R MAX UNLESS SHOWN DIFFERENTLY

SHOT PEEN: 0.016-0.033 SHOT SIZE
0.014-0.019 A2 INTENSITY

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

ALL DIMENSIONS ARE IN INCHES

65C37817-1, -2 Bolt Repair and Refinish
Figure 601

APEX BOLT - REPAIR 12-1

65C37822–1, –2

1. General

A. Use this procedure to repair apex bolt (10A, 10B).

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

C. Refer to REPAIR-GENERAL for a list of applicable standard practices.

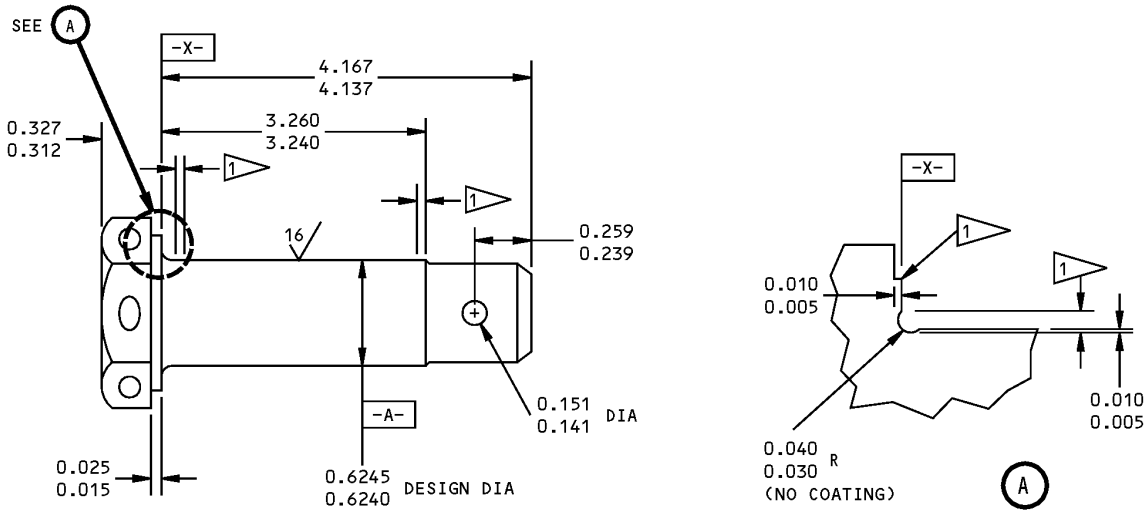
D. Refer to IPL Figure 1 for item numbers.

2. Repair

A. Coating Repair (REPAIR 12-1, Figure 601)

(1) Repair is only replacement of the original finish. Refer to Refinish instructions in REPAIR 12-1, Figure 601 for details.

(2) If you think there are defects on important surfaces, see REPAIR 12-1, Figure 601 for dimension details.



REFINISH

ON DIA -A- AND SURFACE -X-, APPLY TUNGSTEN CARBIDE COATING (F-15.390) LW-1N40A, 0.003 MINIMUM THICKNESS AFTER GRINDING. WITHIN ONE HOUR, APPLY UCAR 100 SEALANT. PASSIVATE (F-17.25) OTHER SURFACES.

1 COATING RUNOUT AREA 0.05-0.08

REPAIR

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

SHOT PEEN: 0.017-0.039 SHOT SIZE
0.014-0.019 A2 INTENSITY

MATERIAL: A286 CRES

ALL DIMENSIONS ARE IN INCHES

65C37822-1, -2 Apex Bolt Repair and Refinish
Figure 601

PIN - REPAIR 13-1

65C37823–1, –2, –3

1. General

A. This procedure tells how to repair the pin.

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

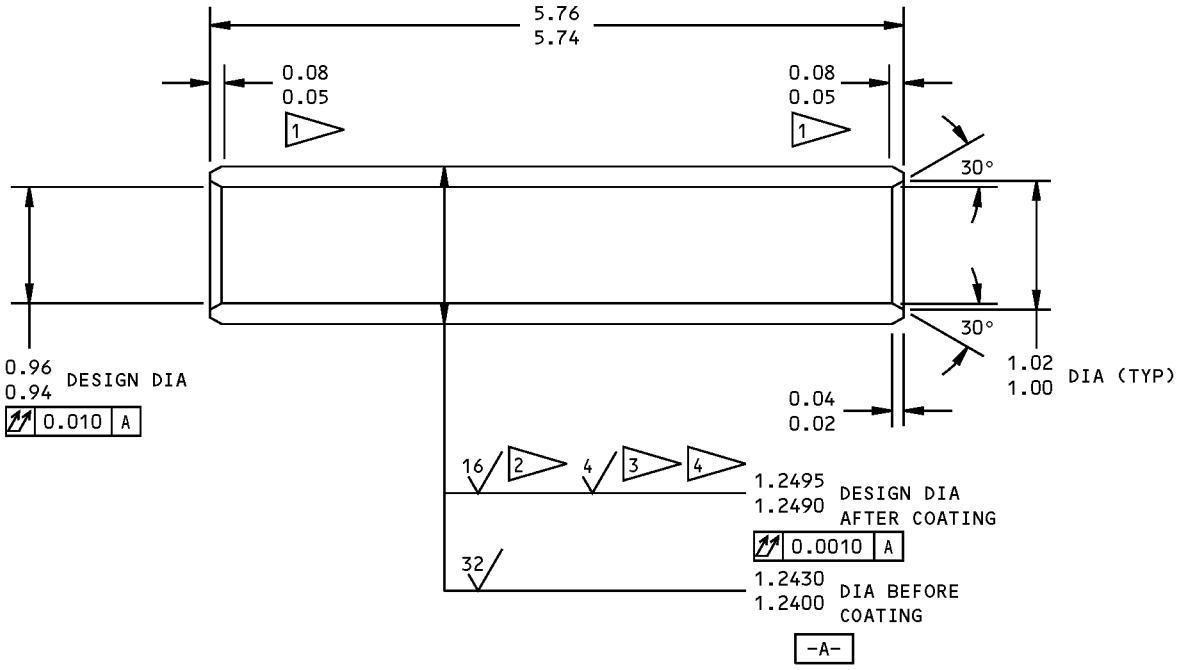
C. Refer to IPL Figure 2 for item numbers.

2. Repair Procedures

A. Coating Repair (REPAIR 13-1, Figure 601)

NOTE: Refer to REPAIR-GENERAL for a list of applicable standard practices.

(1) Repair is only replacement of the original finish. Refer to Refinish instructions for details.



REFINISH

65C27823-1,-3:
ON DIA -A-, APPLY TUNGSTEN CARBIDE COATING (F-15.390) LW-1N40A, 0.003 MINIMUM THICKNESS AFTER GRINDING. APPLY UCAR 100 SEALANT WITHIN ONE HOUR. OPTIONAL:
APPLY BMS 10-67, TYPE 1 COATING (F-15.380) 15% MINIMUM COBALT. WIPE THE COATING WITH PRIMER (F-19.45).

65C27823-2:
ON DIA -A-, APPLY BMS 10-67, TYPE 17 TUNGSTEN CARBIDE COBALT.CHROME COATING (F-15.3841).

ALL DASH NUMBERS:
ON OTHER SURFACES, CADMIUM-TITANIUM PLATE (F-15.01) AND APPLY BMS 10-11, TYPE 1, PRIMER (F-20.03). ON THE INTERIOR SURFACE, APPLY MIL-C-11796 CLASS 1 CORROSION PREVENTIVE COMPOUND (F-19.03)

1 > COATING RUNOUT
2 > 65C37823-1
3 > 65C37823-2
4 > 65C37823-3

REPAIR

(SAME AS REFINISH)

125 ALL MACHINED SURFACES

BREAK SHARP EDGES 0.02 R MAXIMUM

SHOT PEEN: 0.017-0.046 SHOT SIZE
0.010-0.016A2 INTENSITY

MATERIAL: 4340M STEEL (275-300 KSI)

ALL DIMENSIONS ARE IN INCHES

65C37823-1,-2,-3 Pin Repair and Refinish
Figure 601

ASSEMBLY

1. General

A. This procedure tells how to assemble the nose gear assembly.

B. Refer to IPL Figure 1 for item numbers.

2. Assembly

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00551	Sealant - Fuel Tank	BAC5010, Type 44 (BMS5-44, BMS5-45)
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00014	Grease - Molybdenum Disulfide, Low & High Temperature	MIL-G-21164 (NATO G-353)
D00070	Fluid - Hydraulic, Petroleum Base	MIL-PRF-5606 (Replaces MIL-H-5606)
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)

B. References

Reference	Title
CMM 32-21-38	NOSE GEAR BUILDUP
CMM 32-21-58	NOSE GEAR SHOCK STRUT ASSEMBLY

C. Lubrication

(1) Lubricate joints with grease, D00014 through all grease fittings after assembly.

(2) Apply a thin layer of fluid, D00070 to the exposed sliding surface of the shock strut inner cylinder.

D. Assembly Procedures

NOTE: IPL Figure 1 unless shown differently.

(1) Put the shock strut assembly (205) in the stand, in an upright position, with the valve at the top.

(2) Extend the shock strut assembly (205). Turn the shock strut assembly to its center position. It will come down into the detent on the centering cam. Refer to REPAIR 8-1 for installation of tee (225, IPL Figure 2) and marker (215, IPL Figure 2).

(3) If installed, remove the upper and lower steering plates from the outer cylinder. To do this, remove the eight bolts, washers, and nuts (65, 55, 50, IPL Figure 1, CMM 32-21-58) and related fasteners, brackets and supports. Make a note of the number of washers for reference during assembly.

(4) Install bearings (180, IPL Figure 2) in upper and lower steering plates.

(5) Drain some fluid from the steering cylinders (175, IPL Figure 2) to make it easier to extend or retract them during assembly.

(6) Assemble the steering cylinders (175, IPL Figure 2) and the steering plates.

(a) Install lower steering plates in the steering cylinders (175, IPL Figure 2) with the trunnions through the bearings. Apply a thin layer of grease, D00014 to the threads of nuts (10, IPL Figure 2). Install washers (5, IPL Figure 2) with inner tab in grooves. Install nuts (10, IPL Figure 2) and tighten until the nut face nearest to the trunnion end is flush with the end of the trunnion, then tighten the nuts 2 more turns.

(b) Install upper steering plates in the steering cylinders (175, IPL Figure 2) as in the above step (1), but tighten until the nut face nearest to the trunnion end is flush with the end of the trunnion, then tighten the nuts four more turns.

(c) Install the spacers, washers, and bolts between the steering plates that were removed in above ASSEMBLY, Paragraph 2.D.(3). Use the same number of washers between the spacer and the lower steering plate that you found, or as necessary to get a maximum gap of 0.015 inch before you tighten the nut.

(d) Tighten nuts (10, IPL Figure 2) at the upper steering plate 2-1/4 more turns.

WARNING: BMS 3-27 CORROSION PREVENTIVE COMPOUND CONTAINS ASBESTOS, TOLUENE, XYLENE, STRONTIUM CHROMATE AND BARIUM CHROMATE. SPEAK TO THE APPLICABLE SAFETY-STANDARDS PERSONS FOR APPROVED HANDLING 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.

(e) Apply compound, C00913 to the mating surfaces of the steering plates and the outer cylinder, the steering plates and the bearing retainer brackets (200), and to the body of bolts (175, 180) and the bolts common to the outer cylinder. Be sure to apply the compound under the bolt heads and on the ends.

(f) Install bearing retainer bracket (200), bolt (180) (head up), washer (185), and nut (190). Tighten nut (190) finger-tight.

(7) Slide the upper and lower steering plates, with the assembled components, onto the outer cylinder.

(8) If you have them, install the conduit support bracket (185, IPL Figure 2, CMM 32-21-38) and the nose-gear-compressed sensor support bracket (270, IPL Figure 2) at the right hand bolt location at the upper and lower steering plates, respectively. Install eight bolts, washers, and nuts (items 65, 55, 50, IPL Figure 1, CMM 32-21-58) into outer cylinder (205) and steering plates. Tighten all eight nuts (50, IPL Figure 1, CMM 32-21-58) to 40 pound-feet.

WARNING: BMS 3-27 CORROSION PREVENTIVE COMPOUND CONTAINS ASBESTOS, TOLUENE, XYLENE, STRONTIUM CHROMATE AND BARIUM CHROMATE. SPEAK TO THE APPLICABLE SAFETY-STANDARDS PERSONS FOR APPROVED HANDLING 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.

(9) Install steering collar assembly (120) and bearing assembly (155).

(a) Apply a thin coat of compound, C00913 to mating surfaces of bearing assembly (155). Also apply this compound in the undercuts in outer cylinder adjacent to bearing flanges (ASSEMBLY, Figure 701).

(b) Apply compound, C00913 to the interfaces of mating halves of steering collar halves (140, 145) (ASSEMBLY, Figure 701).

(c) Make sure that shim (150) is bonded to ID of aft collar (140).

CAUTION: BEARING ASSEMBLY (155) IS A MATCHED SET OF HALVES (160, 165). INSTALLATION OF PARTS NOT MATCHED COULD PREVENT FREE MOTION OF THE STEERING COLLAR.

(d) Install the forward bearing half (165) and move the bearing retainer (200) to fit in the bearing assembly (165) cutout. Install the aft bearing half (160).

(e) Temporarily install steering collars (140, 145) over bearing assembly (155) and look for 0.01-0.03 inch gap between collar halves. Install lower bushing (110) and temporarily install bolts (95), washers (100), and nuts (105), into steering collars (140, 145).

(f) Temporarily install upper torsion link (70) with pin (65) on steering collar (120).

(g) With upper torsion link positioned horizontally, apply a load of 5 pounds to apex link to turn the steering color on the outer cylinder. Make sure the collar can turn 90 degrees in each direction.

NOTE: If a load greater than 5 pounds is necessary to turn the steering collar, examine the installation of bearing halves (160, 165) and make sure the surfaces have correct lubrication.

(10) Connect steering cylinders (175, IPL Figure 2) and install metering valve (160, IPL Figure 2).

(a) Remove nut (105), washer (100), and bolt (95) from one side of collar (120) and install the cylinder rod end into the clevis. Adjust nuts (10, IPL Figure 2) finger-tight to center the rod end into the clevis with a clearance of 0.001-0.003 inch between the lower side of the rod end bearing and the lower steering collar bushings (110).

WARNING: BMS 3-27 CORROSION PREVENTIVE COMPOUND CONTAINS ASBESTOS, TOLUENE, XYLENE, STRONTIUM CHROMATE AND BARIUM CHROMATE. SPEAK TO THE APPLICABLE SAFETY-STANDARDS PERSONS FOR APPROVED HANDLING PRECAUTIONS.

(WARNING PRECEDES)

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.

(b) Apply compound, C00913 to all mating surfaces of forward and aft collar halves (140, 145), the faces and bushing outside diameter (110, 115), between bearing (160, 165) and outer cylinder (205), to rod attach bolt (95) (2 locations) inside flange face, undercut, shank, thread relief and threads. Fill any internal voids in the areas as shown in ASSEMBLY, Figure 701. Install upper bushing (110) in the upper lug of the collar, then install bolt (95) through collar and cylinder (175, IPL Figure 2) rod end and install washer (100) and nut (105). Tighten nut (105) to 600-700 pound-inches.

(c) Tighten nut (10, IPL Figure 2) to align the nearest slot with the tab of washer (5, IPL Figure 2). Bend the tab down into the slot.

(d) Do steps ASSEMBLY, Paragraph 2.D.(10)(a), ASSEMBLY, Paragraph 2.D.(10)(b), ASSEMBLY, Paragraph 2.D.(10)(c) again for the opposite side of the collar.

(e) If you have it, install bracket assembly (105, IPL Figure 2) temporarily with only one right hand bolt (95, IPL Figure 2), washer (20, IPL Figure 2), and nut (85, IPL Figure 2). Do not tighten nut (85, IPL Figure 2) at this time. It will be tightened in step (12) below.

(f) Install support (130, IPL Figure 2) on upper steering plate with bolts (195, IPL Figure 2), washers (190, IPL Figure 2), and nuts (185, IPL Figure 2). Attach the support (130, IPL Figure 2) to the lower steering plate using bolts (205, IPL Figure 2) and washers (200, IPL Figure 2).

(g) Lubricate the O-rings and backup rings of the metering valve with fluid, D00153.

(h) Loosen the swivel jamnuts and bolts on the metering valve (4 locations each side), align the metering valve parts with the steering cylinder parts, and install the valve on the upper plate and the cylinders (ASSEMBLY, Figure 702). Install bolts (10, IPL Figure 2), washers (150, IPL Figure 2), and nuts (145, IPL Figure 2). Do not tighten nuts (195, IPL Figure 2).

(i) Turn the retaining nut (on the metering valve) into the trunnion of the steering cylinder. Tighten this nut to 50-100 pound-inches. Lockwire the retainer nut (ASSEMBLY, Figure 702).

(j) Tighten the swivel bolts (four locations each side) to 30-40 pound-inches. Tighten the jamnuts on the swivel bolts finger-tight and install lockwire.

(k) Tighten nuts (145, IPL Figure 2) that you installed in ASSEMBLY, Paragraph 2.D.(10)(h) above.

NOTE: When you are done, there will be a gap between the metering valve body and the face of the swivel housing. This is not a defective condition.

(l) If you installed bracket (105, IPL Figure 2) (ASSEMBLY, Paragraph 2.D.(10)(e) above), install the remaining bolts (95, 100, IPL Figure 2), washers (20, IPL Figure 2), and nuts (170, IPL Figure 2) into bracket assembly (105, IPL Figure 2). Tighten nuts (85, IPL Figure 2).

(m) If the 65C31101-series and 65C31102-series brackets are used (ASSEMBLY, Figure 704:

1) Apply sealant, A00551 to the faying surfaces of the brackets (125, IPL Figure 2) and steering plate.

2) Install the brackets (125, IPL Figure 2) with bolts (95, IPL Figure 2), washers (90, IPL Figure 2), and nuts (85, IPL Figure 2).

(n) Apply sealant in the gap between the steering collar halves and around the interface seam as shown in ASSEMBLY, Figure 703.

(o) Install cover assembly (30, IPL Figure 2) with washers (20, IPL Figure 2) and screws (15, IPL Figure 2).

(11) Install torsion links (70).

(a) Install target (250, IPL Figure 2) and target support (235, IPL Figure 2) on upper torsion link (70) as shown in ASSEMBLY, Figure 705. Put the target support (235, IPL Figure 2) on the underside of the torsion link. Drill 0.164-0.167-inch holes through the link with the holes in the support as a guide if there are no holes for this support in the torsion link. Install the bolts (240, IPL Figure 2) and collars (245, IPL Figure 2) or the rivets (247, IPL Figure 2).

(b) Lubricate the inside diameter of torsion links (70), steering collar (120) and strut assembly (205) with grease, D00014.

(c) Align upper torsion link (70) on steering collar (120) and install pin (65).

(d) Align lower torsion link (70) on strut assembly (205) and install pin (65).

(e) Install end caps (55) on each end of pin (65).

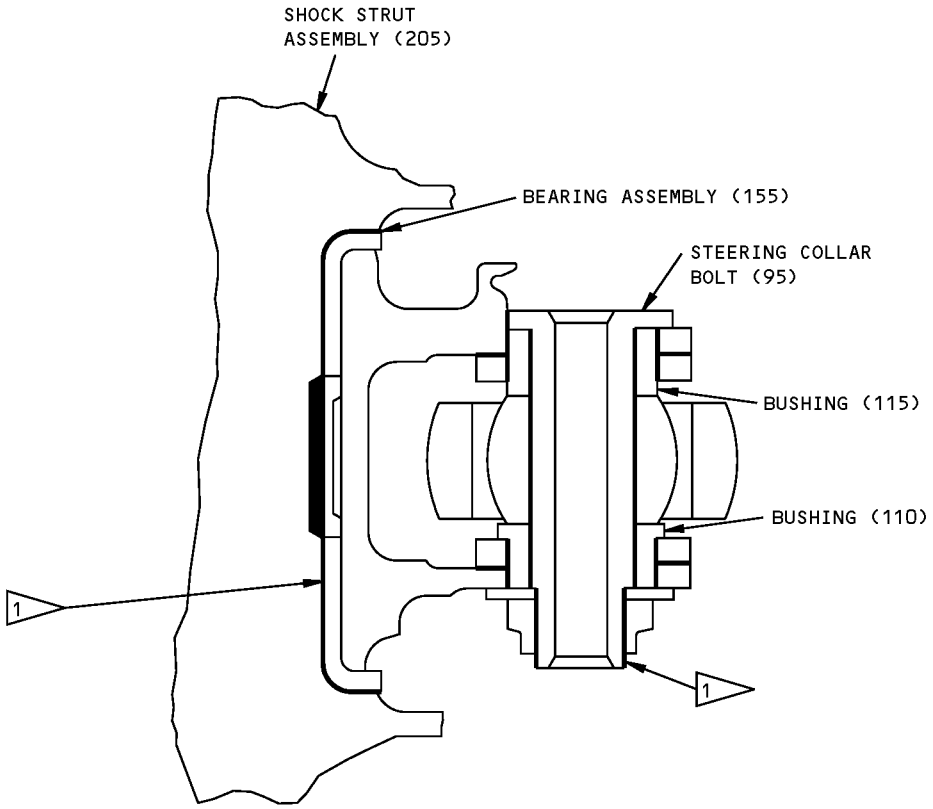
(f) Install retaining pin (60) with washers (45, 50) and nuts (40). Tighten nuts (40) to 30-80 lb-in. and install cotter pins (35). Or install bolts (62) with washers (47, 48), and nuts (42). Tighten nuts (42) to 90-125 pound-inches, back off the nuts a minimum to install cotter pins, and install cotter pins (37).

(12) Install apex bolt (10).

(a) Lubricate washer (17), face of bushing (25), threads of nut (20) and bolt (10), and pack bearing (30) with grease, D00014.

(b) Install bolt (10) through torsion links with washer (17) between links. Put the head of the bolt nearest to the lower torsion link.

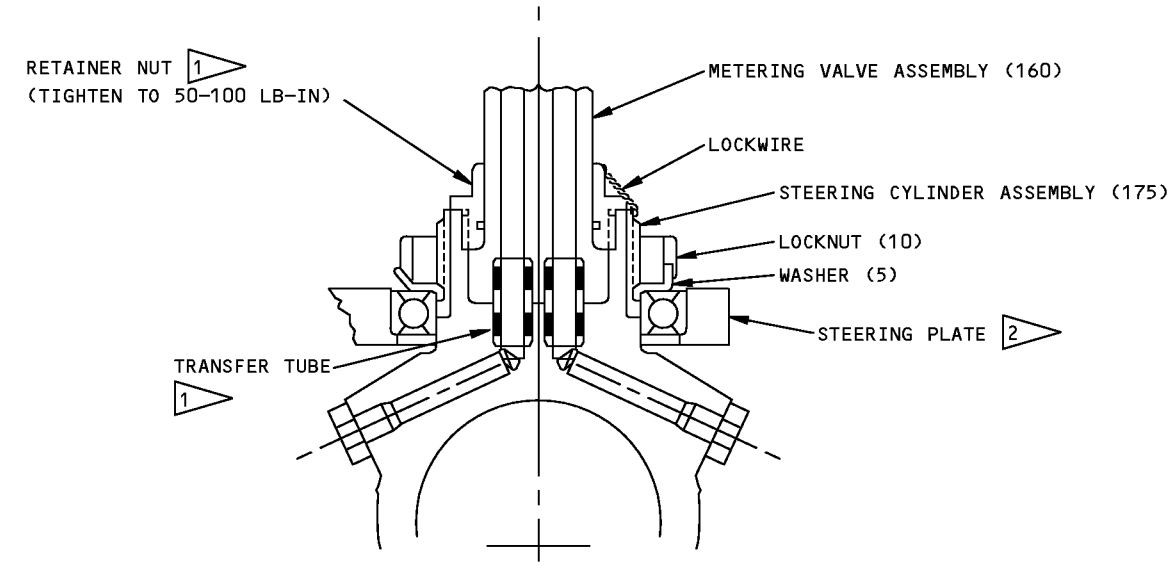
(c) Install bearing (30) on bushing (25) with the bearing seal nearest the nut. Install nut (20) and tighten to 225-250 lb-in. Then back off the nut and tighten it finger-tight. Install cotter pin (5).

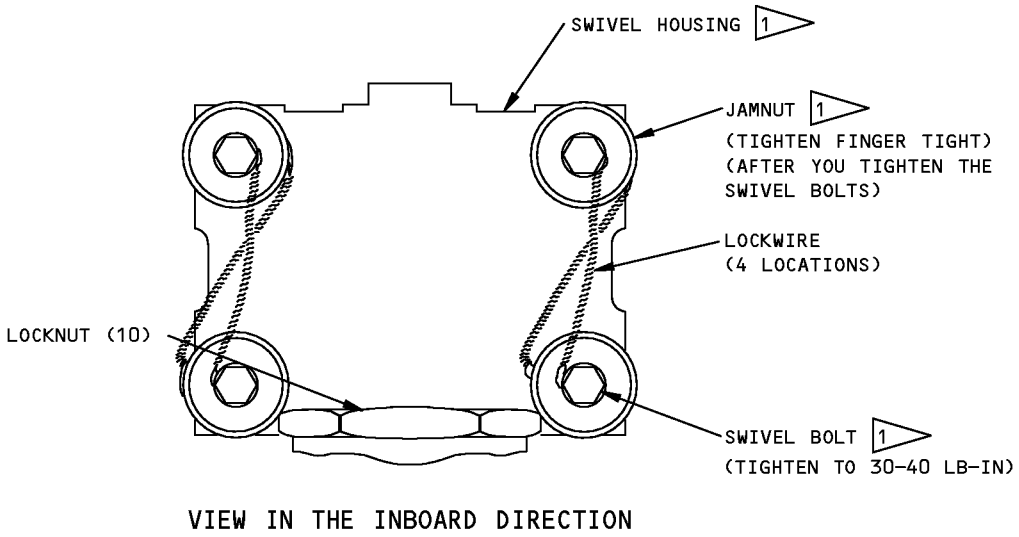


1 APPLY BMS 3-27 CORROSION PREVENTIVE COMPOUND AS INDICATED BY THESE DARK LINES.

ITEM NUMBERS REFER TO IPL FIG. 1

Corrosion Preventive Compound Application
Figure 701





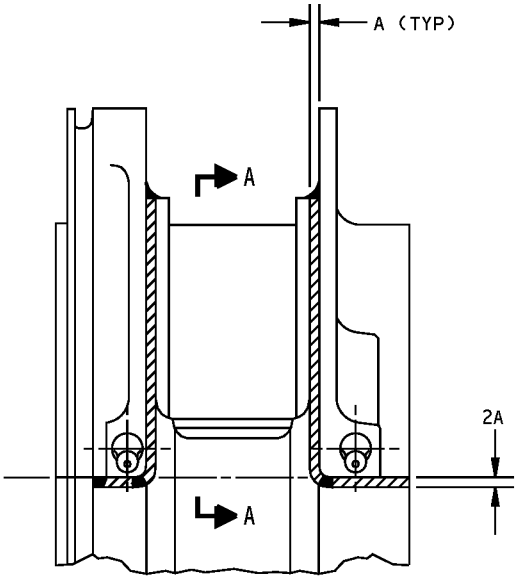
VIEW IN THE INBOARD DIRECTION

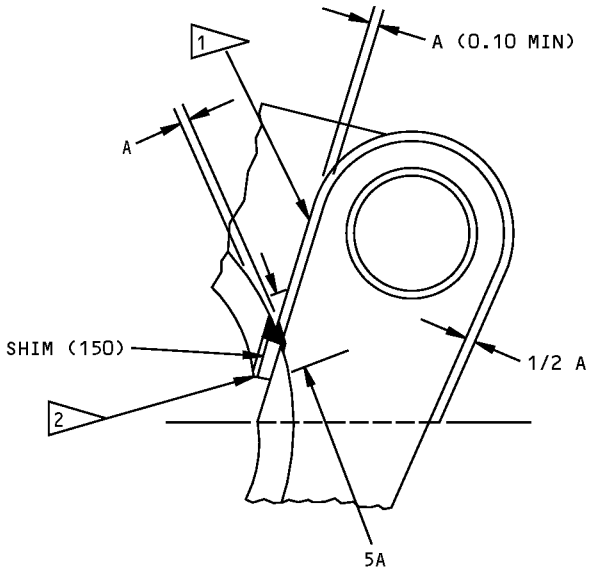
ITEM NUMBERS REFER TO IPL FIG. 2

1 PART OF METERING VALVE ASSEMBLY (160)

2 PART OF SHOCK STRUT ASSEMBLY (CMM 32-21-58)

Metering Valve and Steering Cylinder Installation Details
Figure 702





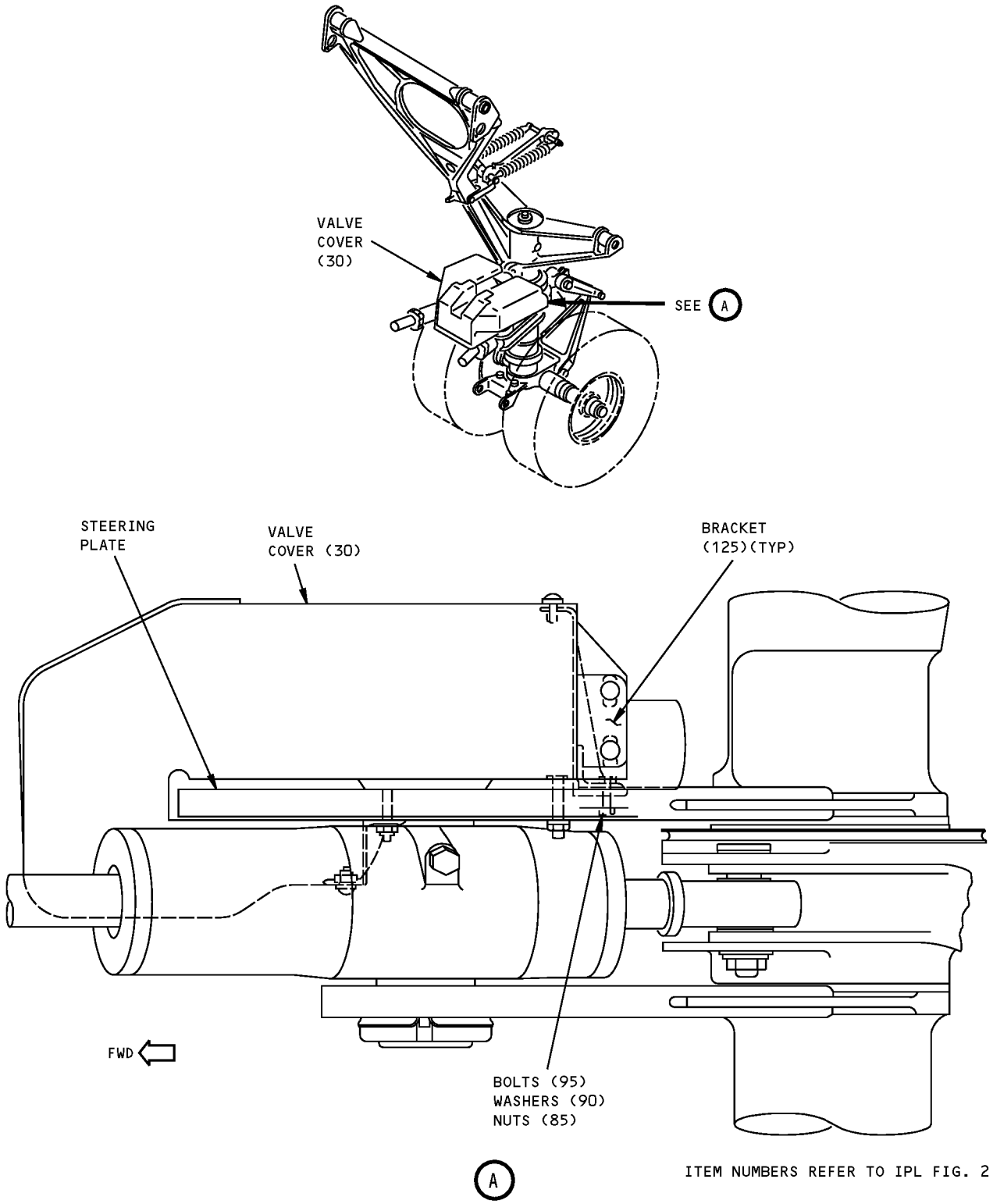
A-A

1 FILL GAP IN THIS AREA WITH BMS 5-95 SEALANT TO HEIGHT OF FORWARD COLLAR HALF LAND

2 SEALANT SHOULD NOT PENETRATE TO ID OF COLLAR ASSEMBLY

ITEM NUMBERS REFER TO IPL FIG. 1

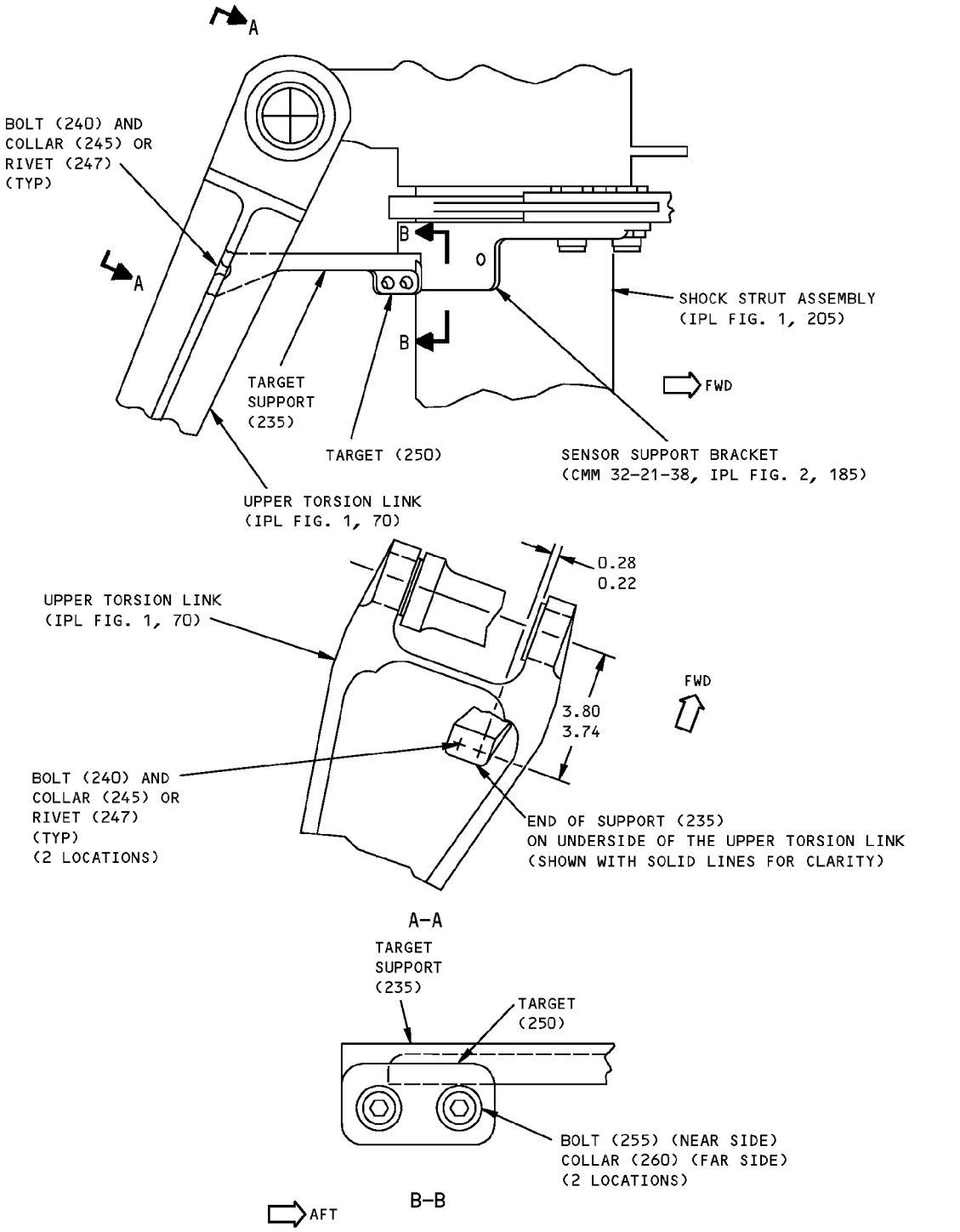
Steering Collar Shim and Sealant Installation
Figure 703



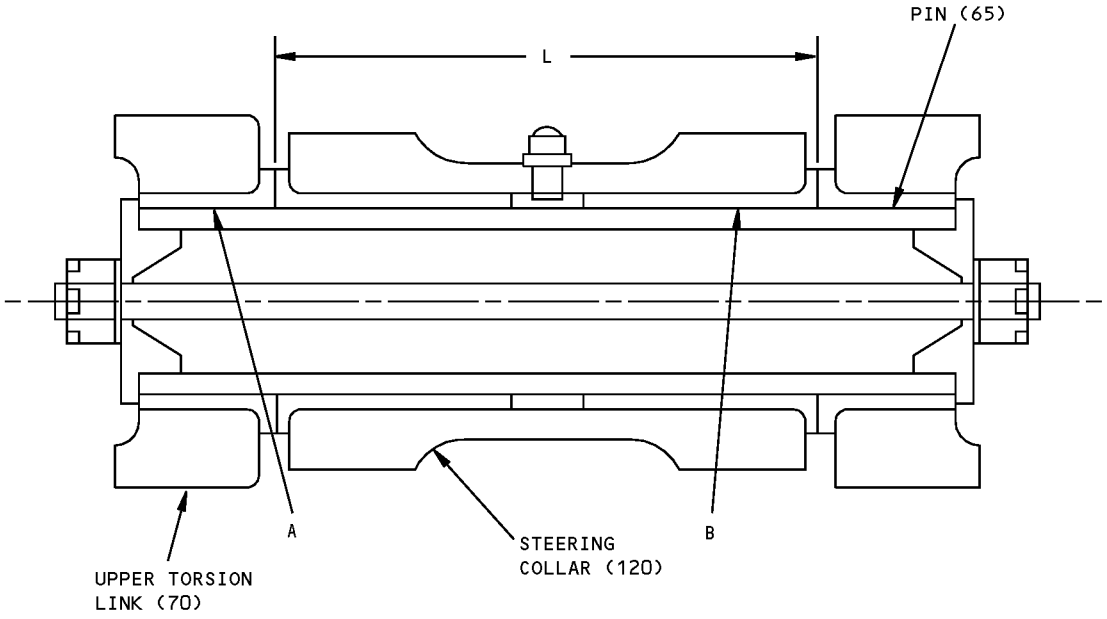
Valve Cover Installation
Figure 704

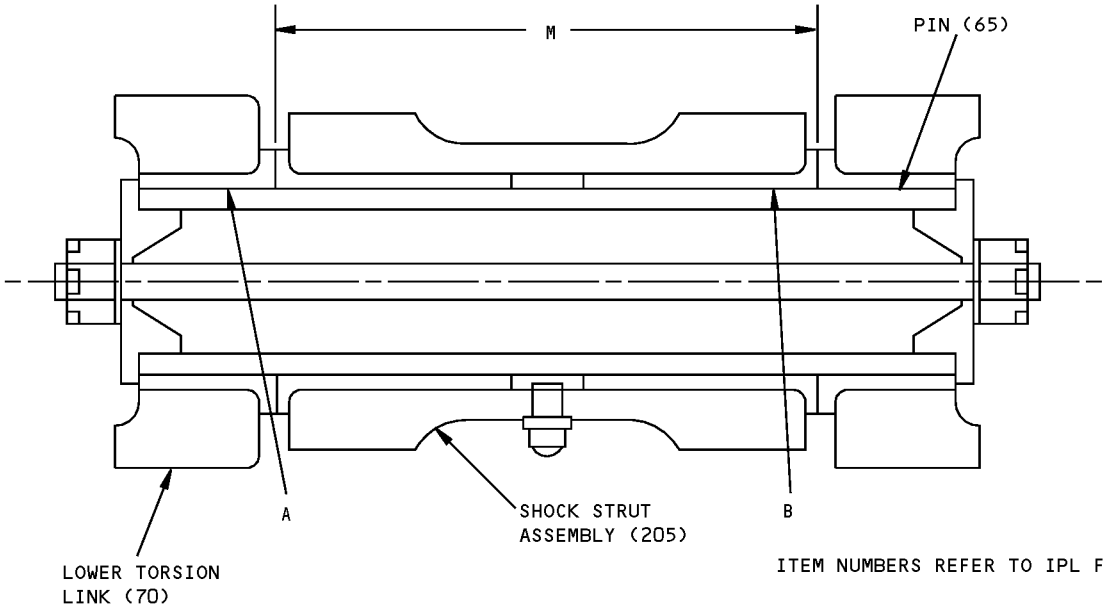
3. **Storage**

A. Give this component protection and put it away by standard industry practices and the instructions in SOPM 20-44-02 and SOPM 20-70-01..

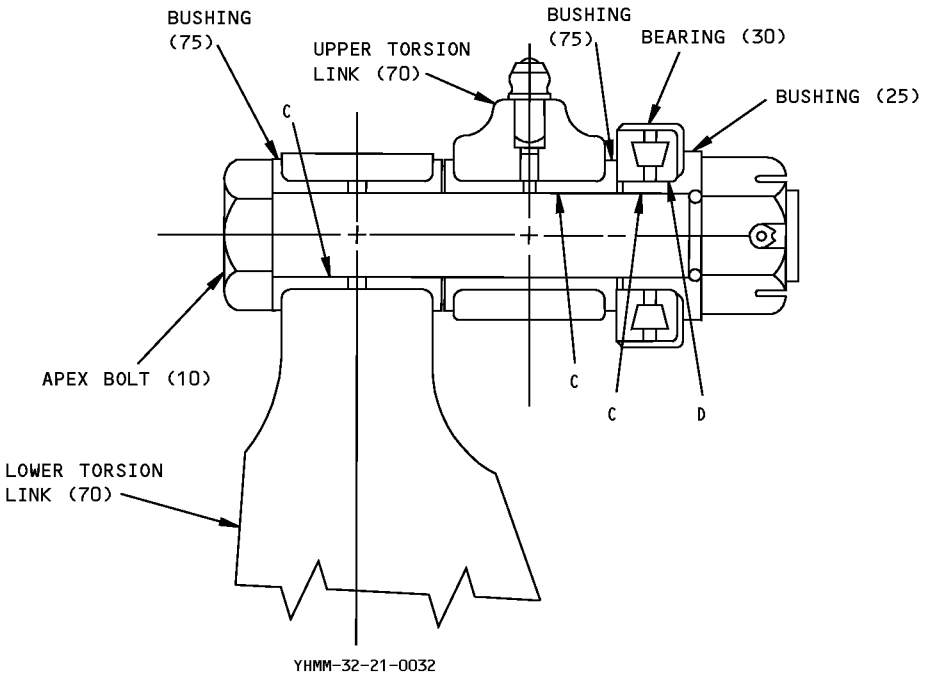


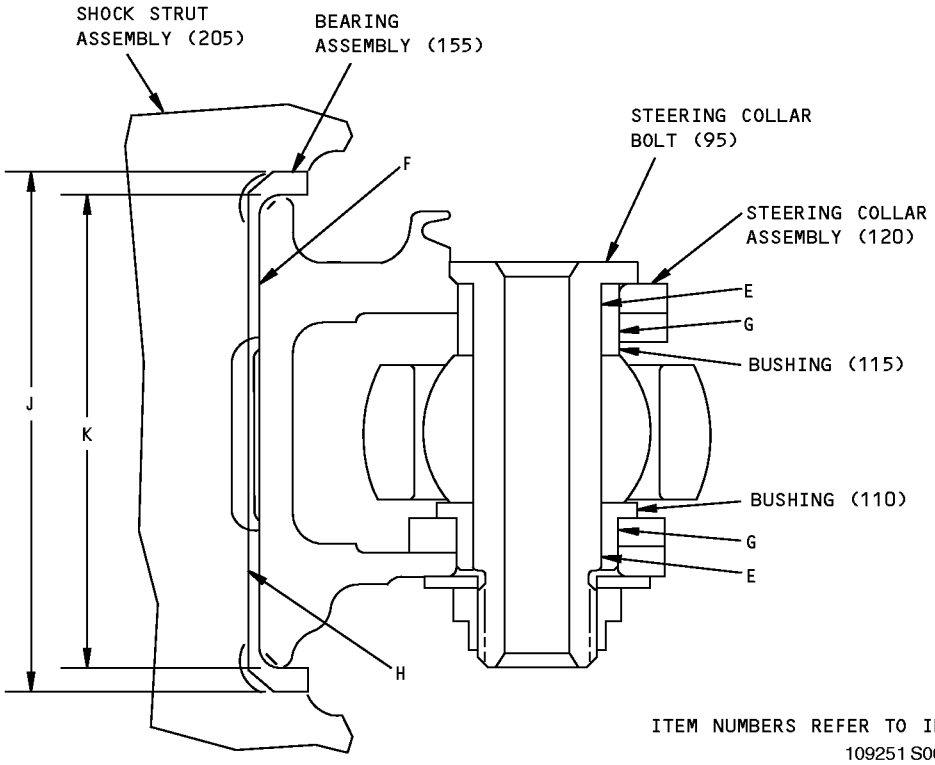
Upper Torsion Link Target Support Assembly
Figure 705





Fits and Clearances
Figure 801 (Sheet 1 of 4)





Fits and Clearances
Figure 801 (Sheet 2 of 4)

Ref Letter Fig.801	Mating Item No. IPL Fig.1	Design Dimension				Service Wear Limit		
		Dimension		Assembly Clearance		Dimension		Maximum Clearance
		Min	Max	Min	Max	Min	Max	
A	ID 80 OD 65	1.2500 1.2490	1.2510 1.2498	0.0002	0.0020	1.2450	1.2600	0.0100
B	ID 120,205 OD 65	1.2500 1.2490	1.2510 1.2498	0.0002	0.0020	1.2450	1.2600	0.0100
C	ID 25,75 OD 10	0.6250 0.6230	0.6259 0.6240	0.0010	0.0029	0.6190	0.6340	0.0100
D	ID 30 OD 25	0.758 0.756	0.764 0.757	0.001	0.008	0.754	0.766	0.010
E	ID 110,115 OD 95	1.0000 0.9991	1.0010 0.9998	0.0002	0.0019	0.9950	1.0080	0.0100
F	ID 120,120A OD 155,155A	4.9970 4.9943	4.9990 4.9950	0.0020	0.0047	4.9910	5.0030	0.0100
F	ID 120B OD 155B	4.9970 4.9940	4.9990 4.9950	0.0020	0.0050	4.9910	5.0030	0.0100
G	ID 125 OD 110,115	1.2000 1.1990	1.2010 1.1998	0.0002	0.0020	1.1980	1.2010	0.0030
H	ID 155 OD 205	4.7940 4.7940	4.7950 4.7950	−0.0010 1	0.0010	4.7940	4.7970	0.0030
J	205 2 155, 3 155A	3.900 3.895	3.902 3.899	0.001	0.007	3.887	3.906	0.015
J	205 2 155B, 3 155C	3.900 3.897	3.902 3.899	0.001	0.005	3.887	3.906	0.015
K	155 4 120 3	3.401 3.398	3.403 3.400	0.001	0.005	3.394	3.413	0.015

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Fits and Clearances
Figure 801 (Sheet 3 of 4)

Ref Letter Fig.801	Mating Item No. IPL Fig.1	Design Dimension				Service Wear Limit		
		Dimension		Assembly Clearance		Dimension		Maximum Clearance
		Min	Max	Min	Max	Min	Max	
L	80 (4)	3.750	3.752	0.001	0.005		3.758	0.009
	120 (3)	3.747	3.749			3.743		
M	80 (4)	3.750	3.752	0.001	0.005		3.758	0.009
	205 (3)	3.747	3.749			3.743		

(1) NEGATIVE VALUES DENOTE INTERFERENCE FIT

(2) DIMENSION BETWEEN SIDES OF BEARING GROOVE IN OUTER CYLINDER

(3) OUTSIDE DIMENSION ACROSS FLANGES

(4) INSIDE DIMENSION BETWEEN FACES

ALL DIMENSIONS ARE IN INCHES

Fits and Clearances
Figure 801 (Sheet 4 of 4)

REF IPL		NAME	TORQUE*	
FIG. NO.	ITEM NO.		POUND-INCHES	POUND-FEET
1	20	TORSION LINK APEX NUT	225-250	
1	40	NUT	30-80	
1	42	NUT	90-125	
1	105	NUT	600-700	
2	160	METERING VALVE RETAINER NUT	50-100	
2	160	METERING VALVE SWIVEL BOLT	30-40	

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

Torque Table
Figure 802

(NOT APPLICABLE)

ILLUSTRATED PARTS LIST

1. Introduction

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

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

1 2 3 4 5 6 7

. Assembly

. Attaching parts for assembly

. . Detail parts for assembly

. . Subassembly

. . Attaching parts for subassembly

. . . Detail parts for subassembly

. . . Sub-subassembly

. . . Attaching parts for subassembly

. . . . . Details parts for sub-subassembly

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

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

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

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

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

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

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

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

H. Interchangeable Parts

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

VENDOR CODES

Code	Name
08748	CRANE ELDEC CORP 16700 13TH AVE WEST LYNNWOOD, WASHINGTON 98036 FORMERLY VB0043; FORMERLY ELECTRO DEVELOPMENT CORP; FORMERLY ELDEC CORP.
10630	ANILLO INDUSTRIES, INCORPORATED 2090 NORTH GLASSELL ORANGE, CALIFORNIA 92667 FORMERLY WESTERN WASHER DIV OF SENG CO V87487
50632	KAMATICS CORP SUB OF KAMAN CORP 1335 BLUE HILLS ROAD BLOOMFIELD, CONNECTICUT 06002-1304
56878	SPS TECHNOLOGIES INC AEROSPACE AND INDUSTRIAL PRODUCTS DIV 301 HIGHLAND AVE JENKINTOWN, PENNSYLVANIA 19046 FORMERLY STANDARD PRESSED STEEL FORMERLY IN SALT LAKE, UTAH
78062	SARGENT CONTROLS A DOVER DIVERSIFIED CO 5675 WEST BURLINGAME ROAD TUCSON, ARIZONA 85743 FORMERLY SARGENT IND IN HUNTINGTON PARK, CALIFORNIA
95879	ALEMITE DIVISION OF STEWART WARNER CORP 1826 DIVERSEY PARKWAY CHICAGO, ILLINOIS 60614-1540

NUMERICAL INDEX

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
1-899-15		2	275	1
1-899-29		2	275B	1
		2	275C	1
1-899-83		2	275A	1
10-60590-4		2	160	1
10-61226-15		2	275	1
10-61226-26		2	275A	1
10-61226-29		2	275B	1
		2	275C	1
10-62185-1		2	180A	4
10-62185-2		2	180B	4
10-62185-3		2	180C	4
1645B		1	85A	3
1728B		1	85	3
		1	85B	3
		1	130	9
284N1641-7		2	295	1
4129RA9		2	160	1
48FT1414		1	105	2
65-35792-1		2	180	4
65-44502-1		1	220	1
		2	1	RF
65-44502-8		1	220A	1
		2	1A	RF
65-44502-9		1	220B	1
		2	1B	RF
65-44710-4		2	175	2
65-44710-7		2	175A	2
65-44710-8		2	175B	2
65-44710-9		2	175C	2
65-44713-52		2	30	1
65-44713-63		2	30A	1
65-46150-128		1	80A	2
		1	80C	2

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
65-46150-74		1	75	2
65-46150-75		1	80	2
65-46150-95		1	125	2
		1	125B	2
65-46200-60		1	205	1
65-46200-61		1	205A	1
65-46200-62		1	205B	1
65-46200-68		1	205C	1
65-46200-69		1	205D	1
65-46200-74		1	205E	1
65-46200-76		1	205F	1
65-46200-77		1	205G	1
65-46200-78		1	205H	1
65-46200-80		1	205J	1
65-46200-81		1	205K	1
65-46200-82		1	205L	1
65-46200-83		1	205M	1
65-46203-19		1	150	2
65-46203-24		1	120	1
65-46203-25		1	135	1
65-46203-26		1	120A	1
65-46203-27		1	135A	1
65-46203-28		1	135B	1
65-46203-29		1	120B	1
65-46203-30		1	135C	1
		1	135D	1
65-46203-31		1	120C	1
65-46203-33		1	120D	1
65-46203-34		1	135E	1
65-46203-35		1	120E	1
65-46250-10		1	140B	1
65-46250-8		1	140	1
65-46250-9		1	140A	1
65-46252-5		1	145	1
65-46252-7		1	145A	1

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
65-46252-8		1	145B	1
65-46288-10		1	90	1
65-46288-11		1	70A	2
65-46288-12		1	90A	1
65-46288-13		1	70B	2
65-46288-14		1	90B	1
65-46288-15		1	70C	2
65-46288-9		1	70	2
65-73762-21		1	1	RF
65-73762-25		1	1A	RF
65-73762-26		1	1B	RF
65-73762-27		1	1C	RF
65-73762-28		1	1D	RF
65C28018-2		2	250	1
65C28018-3		1	407	RF
		2	230	RF
65C28018-4		1	407A	RF
		2	230A	RF
65C28018-5		1	407B	RF
		2	230B	RF
65C28018-6		2	250A	1
65C28018-7		1	407C	RF
		2	230C	RF
65C28018-8		1	407D	RF
		2	230D	RF
65C31101-1		2	125	1
65C31101-2		2	127	1
65C31101-4		2	125B	1
65C31101-6		2	127B	1
65C31102-1		2	125A	1
65C31102-2		2	127A	1
65C31102-6		2	127C	1
65C31102-7		2	125C	1
65C31102-8		2	127D	1
65C31102-9		2	125D	1

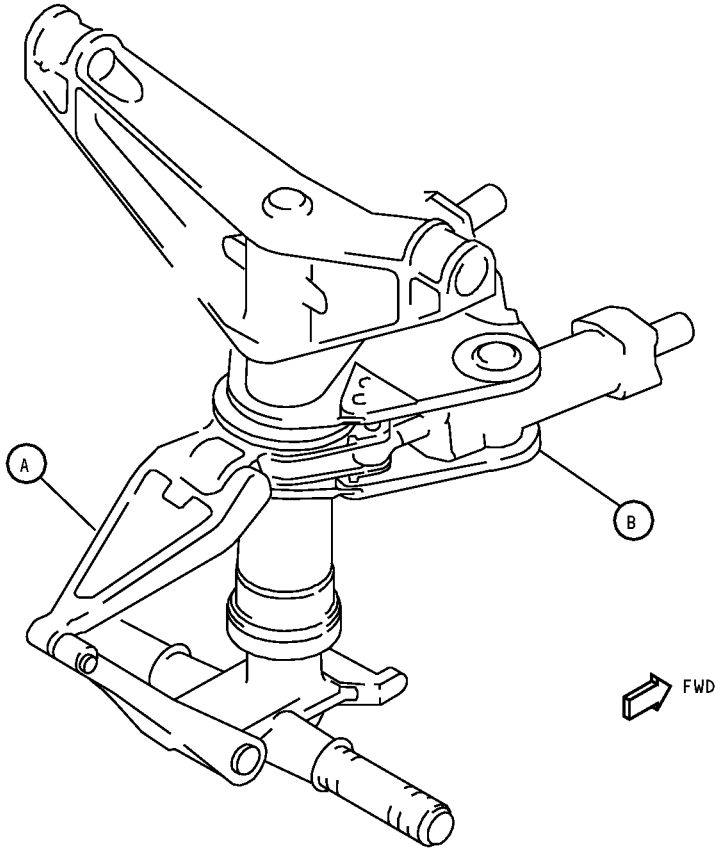
PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
65C31103-1		2	135	1
65C31103-2		2	140	1
65C37814-1		1	155B	1
65C37814-2		1	165A	1
65C37814-3		1	160A	1
65C37814-5		1	155D	1
65C37814-6		1	165B	1
65C37814-7		1	160B	1
65C37817-1		1	95C	2
65C37817-2		1	95D	2
65C37818-1		1	110A	2
65C37818-2		1	115A	2
65C37818-3		1	110C	2
65C37818-4		1	115C	2
65C37819-1		1	125A	2
65C37819-2		1	75A	2
65C37819-3		1	125E	2
65C37819-4		1	75C	2
65C37821-1		1	80B	2
65C37821-2		1	80E	2
65C37822-1		1	10A	1
65C37822-2		1	10B	1
65C37823-1		1	65C	2
65C37823-2		1	65E	2
65C37823-3		1	65F	2
66-22702-2		2	110	1
66-22702-5		2	115	1
66-24145-3		1	17	1
69-35573-3		2	120	2
69-35575-4		2	105	1
69-61381-1		1	110	2
69-61382-1		1	115	2
69-61383-2		1	95	2
69-61383-3		1	95A	2
69-61383-4		1	95B	2

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
69-61785-11		1	160	1
69-61785-12		1	165	1
69-61785-8		1	155	1
		1	155A	1
69-62214-1		1	200	2
69-62228-1		1	100	2
69-62228-2		1	100B	2
69-63392-1		1	25	1
69-72698-1		1	65	2
69-72698-4		1	65A	2
69-72698-5		1	65B	2
		1	65D	2
69-72698-6		1	65G	2
69-73008-2		1	60	2
69-73012-1		1	55	4
69-73133-1		2	130	1
69-73685-1		2	225	1
69-73753-3		2	270	1
69-73753-6		2	270A	1
69-73792-3		2	235	1
69-76481-1		1	100A	2
AN960-416L		1	185	4
AN960C10L		2	285	2
AN960C416L		1	45	4
AN960C516		1	47	2
		1	47A	2
		1	48A	2
AN960C616L		1	47B	2
AN960JD10		2	90	8
AN960PD10		2	20	12
		2	190	4
		2	200	4
AN960PD416		2	150	6
BAC27DHY0301		2	210	1
BAC27DLG0108		2	215	1

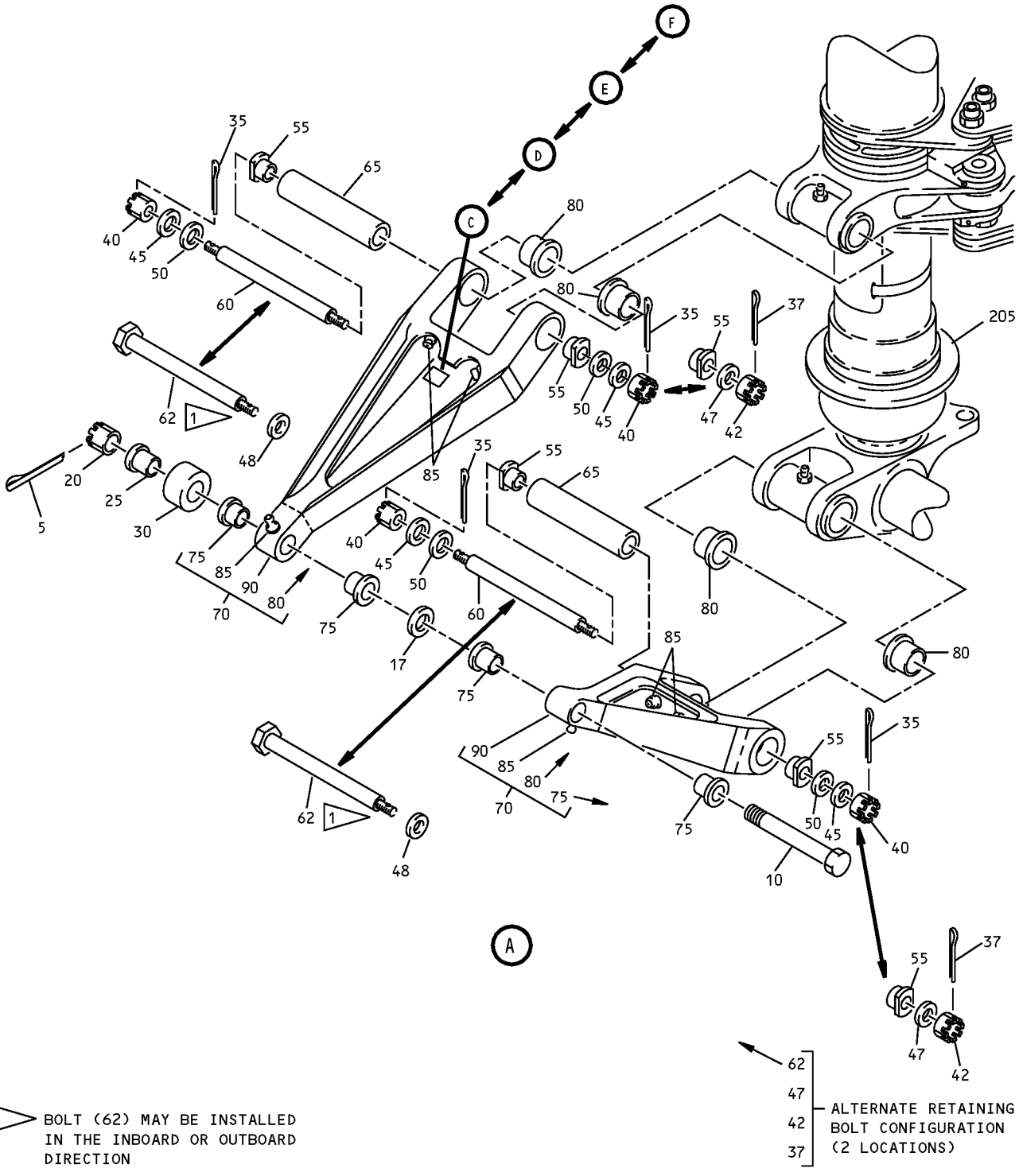
PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
BAC27DLG0110		2	220	2
BAC27DLG0116		1	210A	1
BAC27DLG0120		1	210B	1
BAC27DLG0145		2	215A	1
BAC27DLG0155		1	210C	1
		1	210D	1
BAC27DLG66		1	210	1
BAC27TCT0010		2	222	1
BACB10C43KP		1	30	1
BACB30FM5A6U		2	240	2
BACB30FM5AK6		2	240A	2
BACB30FN5A3U		2	255	2
BACB30LM10CD52		1	10	1
BACB30NE3-10		2	95	2
BACB30NE3-14		2	100	1
BACB30NE3-4		2	25	4
		2	205	4
BACB30NF4-5		2	97	1
BACB30NF4D10		1	175	3
		1	180A	1
BACB30NF4D8		1	180	1
BACC30M5		2	245	2
		2	260	2
BACN10JC3		2	85	3
		2	185	4
BACN10JC4		2	145	3
BACN10JD104		1	40	4
		1	195	1
BACN10JD10AU		1	20	1
BACN10JD4		1	190	3
		1	195A	1
BACN10KB3F		2	129	4
		2	129A	2
BACN10KE3D		2	128	2
BACR15BA5D		2	247	2

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
BACR15DR3		2	129J	8
BACR15DR3AC		2	129K	8
BACW10BP6CD		1	48	2
BACW10P14CC		2	92	1
BACW10P186C		1	50	4
		1	50	4
KJB674520V		1	125C	2
		1	125D	2
KJB674620V		1	80D	2
KJB675210V		1	75B	2
KJB675316V		1	110B	2
KJB675416V		1	115B	2
KJB919377V		1	155C	1
MS14144L5		1	42	2
		1	42A	2
MS14144L6		1	42B	2
MS14145-16		1	105A	2
MS19068-112		2	10	4
MS19070-112		2	5	4
MS21042-3		2	280	1
MS21042L3		2	85B	4
MS21902-6		2	170	2
MS24665-134		1	170	4
MS24665-136		1	35	4
MS24665-153		1	37	2
		1	37A	2
MS24665-302		1	37B	2
MS24665-308		1	107	2
MS24665-359		1	5	1
NAS1149G1632P		1	100C	2
NAS1304-17		2	155	3
NAS1612-6		2	165	2
NAS1801-3-9		2	290	2
NAS517-3-13		2	195	4
NAS603-9P		2	15	8

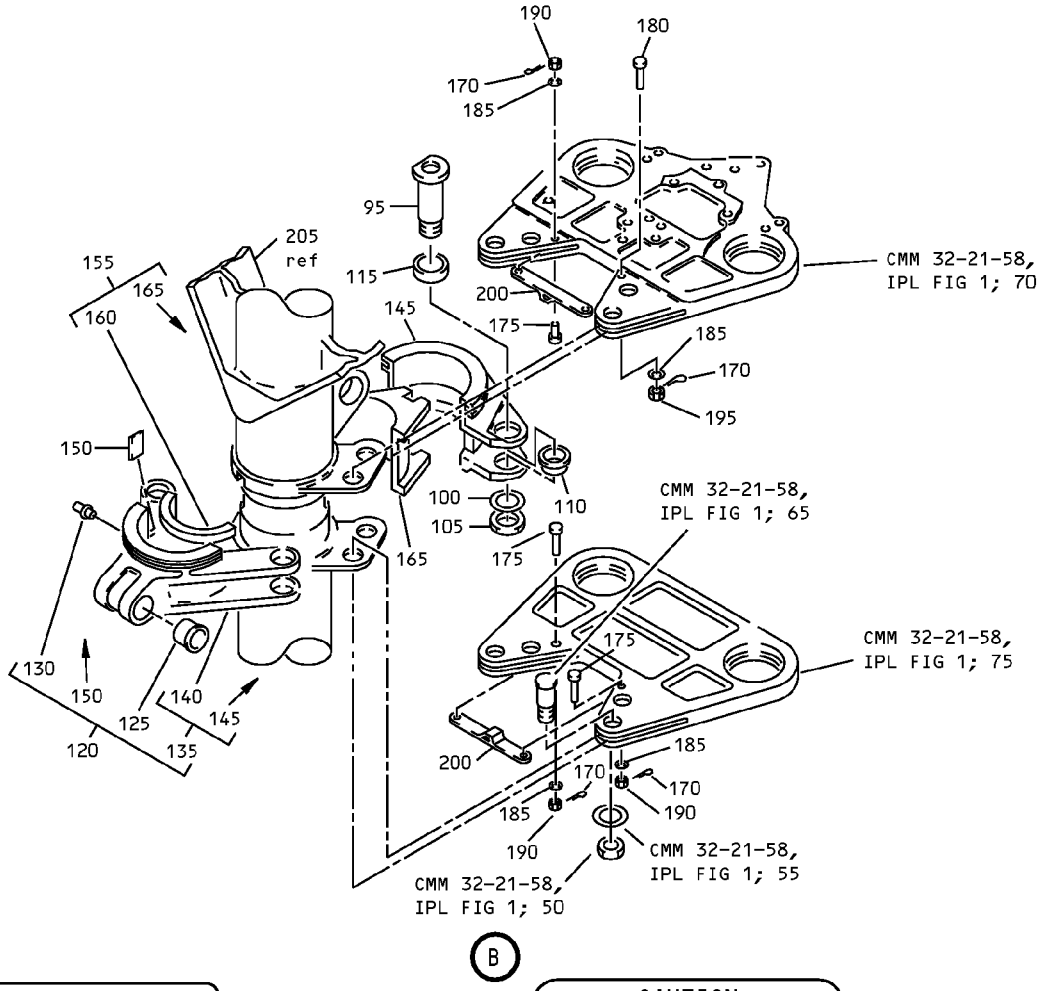
PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
NAS6603-7		2	95A	4
NAS6705D98		1	62	2
		1	62A	2
NAS6706D98		1	62B	2
NAS679A3W		2	85A	3
		2	185A	4
NAS679A4W		2	145A	3

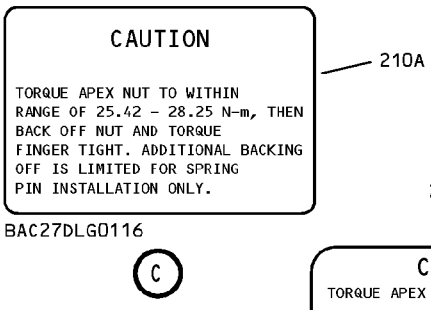


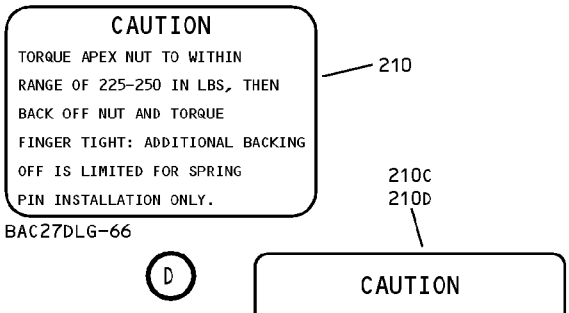
Nose Gear Assembly
IPL Figure 1 (Sheet 1 of 3)

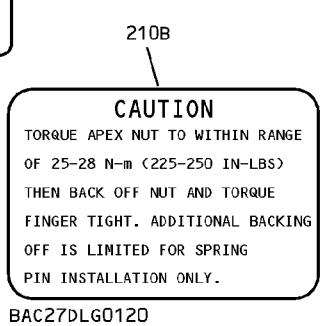


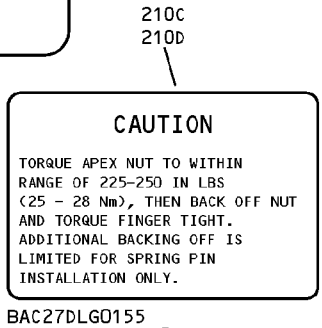
Nose Gear Assembly
IPL Figure 1 (Sheet 2 of 3)











Nose Gear Assembly
IPL Figure 1 (Sheet 3 of 3)

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
–1	65-73762-21		GEAR ASSY-NOSE LANDING	A	RF
–1A	65-73762-25		GEAR ASSY-NOSE LANDING	B	RF
–1B	65-73762-26		GEAR ASSY-NOSE LANDING	C	RF
–1C	65-73762-27		GEAR ASSY-NOSE LANDING	D	RF
–1D	65-73762-28		GEAR ASSY-NOSE LANDING	E	RF
5	MS24665-359		. PIN-COTTER		1
10	BACB30LM10CD52		. BOLT	A	1
–10A	65C37822-1		. BOLT (REPLACED BY ITEM 10B)	B-E	1
–10B	65C37822-2		. BOLT (REPLACES ITEM 10A)	B-E	1
15	66-24145-2		DELETED		
17	66-24145-3		. WASHER	A	1
20	BACN10JD10AU		. NUT		1
25	69-63392-1		. BUSHING		1
30	BACB10C43KP		. BEARING		1
35	MS24665-136		. PIN-COTTER (PRE SB 737-32-1129)	A	4
37	MS24665-153		. PIN-COTTER (POST SB 737-32-1129)	A	2
–37A	MS24665-153		. PIN-COTTER	B-E	2
37B	MS24665-302		. PIN-COTTER (USED WITH ITEM 62B)		2
40	BACN10JD104		. NUT (PRE SB 737-32-1129)	A	4
42	MS14144L5		. NUT (POST SB 737-32-1129)	A	2
–42A	MS14144L5		. NUT	B-E	2
42B	MS14144L6		. NUT (USED WITH ITEM 62B)		2
45	AN960C416L		. WASHER (PRE SB 737-32-1129)	A	4
47	AN960C516		. WASHER (POST SB 737-32-1129)	A	2

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
–47A	AN960C516		. WASHER	B-E	2
47B	AN960C616L		. WASHER (USED WITH ITEM 62B)		2
48	BACW10BP6CD		. WASHER (UNDER HEAD) (USED WITH ITEM 62B)		2
–48A	AN960C516		. WASHER (UNDER HEAD) (USED WITH ITEM 62A) (POST SB 737-32-1129)		2
50	BACW10P186C		. WASHER (V10630) (SPEC BACW10P186C)	A	4
55	69-73012-1		. CAP-END	A	4
60	69-73008-2		. PIN-RETAINING (PRE SB 737-32-1129)	A	2
62	NAS6705D98		. BOLT (OPT ITEM 62B) (POST SB 737-32-1129)	A	2
–62A	NAS6705D98		. BOLT	B-E	2
62B	NAS6706D98		. BOLT (OPT TO ITEMS 62, 62A)		2
65	69-72698-1		. PIN (LIMITED USAGE)	A	2
–65A	69-72698-4		. PIN (LIMITED USAGE) (OPT ITEM 65B)	A	2
–65B	69-72698-5		. PIN (LIMITED USAGE) (OPT ITEM 65A)	A	2
–65C	65C37823-1		. PIN (REPLD BY ITEMS 65E, 65F) (PRE 737-SL-32-083)	B-E	2
–65D	69-72698-5		. PIN (POST SL 737-SL-32-083)	B-E	2
–65E	65C37823-2		. PIN (REPLS ITEMS 65C, 65D)	B-E	2

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
–65F	65C37823-3		. PIN (REPLS ITEM 65C) (REPLD BY ITEM 65E)	B-E	2
–65G	69-72698-6		. PIN (REPLS ITEM 65D)	B-E	2
70	65-46288-9		. LINK ASSY-TORSION (LIMITED USAGE) (OPT ITEM 70A)	A	2
–70A	65-46288-11		. LINK ASSY-TORSION (LIMITED USAGE) (OPT ITEM 70)	A	2
–70B	65-46288-13		. LINK ASSY-TORSION (LIMITED USAGE)	A	2
–70C	65-46288-15		. LINK ASSY-TORSION	B-E	2
75	65-46150-74		. . BUSHING (USED ON ITEMS 70-70B)		2
–75A	65C37819-2		. . BUSHING (USED ON ITEM 70C) (REPLACED BY ITEM 75C)		2
–75B	KJB675210V		. . BUSHING (V50632) (USED ON ITEM 70C) (REPLACES ITEM 75A)		2
–75C	65C37819-4		. . BUSHING (USED ON ITEM 70C) (REPLACES ITEM 75A)		2
80	65-46150-75		. . BUSHING (OPT ITEM 80A) (USED ON ITEMS 70-70B)		2
–80A	65-46150-128		. . BUSHING (OPT ITEM 80) (USED ON ITEMS 70-70B)		2
–80B	65C37821-1		. . BUSHING (USED ON ITEM 70C) (POST SL 737-SL-32-083) (REPLACED BY ITEM 80E)		2
–80C	65-46150-128		. . BUSHING (USED ON ITEM 70C) (POST SL 737-SL-32-083)		2

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
–80D	KJB674620V		. . BUSHING (V50632) (USED ON ITEM 70C) (REPLACES ITEM 80B)		2
–80E	65C37821-2		. . BUSHING (USED ON ITEM 70C) (REPLACES ITEM 80B)		2
85	1728B		. . FITTING (V95879) (OPT ITEM 85A) (USED ON ITEMS 70, 70A)		3
–85A	1645B		. . FITTING (V95879) (OPT ITEM 85) (USED ON ITEMS 70, 70A)		3
–85B	1728B		. . FITTING (V95879) (USED ON ITEMS 70B, 70C)		3
90	65-46288-10		. . LINK-TORSION (USED ON ITEM 70)		1
–90A	65-46288-12		. . LINK-TORSION (USED ON ITEM 70A)		1
–90B	65-46288-14		. . LINK-TORSION (USED ON ITEMS 70B, 70C)		1
95	69-61383-2		. BOLT (LIMITED USAGE)	A	2
–95A	69-61383-3		. BOLT (LIMITED USAGE) (OPT ITEM 95B)	A	2
–95B	69-61383-4		. BOLT (LIMITED USAGE) (OPT ITEM 95A)	A	2
–95C	65C37817-1		. BOLT (REPLACED BY ITEM 95D)	B-E	2
–95D	65C37817-2		. BOLT (REPLACES ITEM 95C)	B-E	2
100	69-62228-1		. WASHER (LIMITED USAGE)	A	2
–100A	69-76481-1		. WASHER (LIMITED USAGE)	A	2

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
–100B	69-62228-2		. WASHER (LIMITED USAGE)	A	2
–100C	NAS1149G1632P		. WASHER	B-E	2
105	48FT1414		. NUT (V56878)	A	2
–105A	MS14145-16		. NUT	B-E	2
–107	MS24665-308		. PIN-COTTER	B-E	2
110	69-61381-1		. BUSHING	A	2
–110A	65C37818-1		. BUSHING (REPLACED BY ITEM 110C)	B-E	2
–110B	KJB675316V		. BUSHING (V50632) (REPLACES ITEM 110A)	B-E	2
–110C	65C37818-3		. BUSHING (REPLACES ITEM 110A) (PREFERRED)	B-E	2
115	69-61382-1		. BUSHING	A	2
–115A	65C37818-2		. BUSHING (REPLACED BY ITEM 115C)	B-E	2
–115B	KJB675416V		. BUSHING (V50632) (REPLACES ITEM 115A)	B-E	2
–115C	65C37818-4		. BUSHING (REPLACES ITEM 115A) (PREFERRED)	B-E	2
120	65-46203-24		. COLLAR ASSY (LIMITED USAGE)	A	1
–120A	65-46203-26		. COLLAR ASSY (LIMITED USAGE)	A	1
–120B	65-46203-29		. COLLAR ASSY (REPLACED BY ITEM 120D)	B, D	1
–120C	65-46203-31		. COLLAR ASSY (REPLACED BY ITEM 120E)	C, E	1
–120D	65-46203-33		. COLLAR ASSY (REPLACES ITEM 120B)	B, D	1
–120E	65-46203-35		. COLLAR ASSY (REPLACES ITEM 120C)	C, E	1

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
125	65-46150-95		. . BUSHING (USED ON ITEMS 120, 120A)		2
–125A	65C37819-1		. . BUSHING (USED ON ITEM 120B, 120C) (PRE SL 737-SL-32-083) (REPLACED BY ITEM 125C)		2
–125B	65-46150-95		. . BUSHING (USED ON ITEMS 120B, 120C) (POST SL 737-SL-32-083)		2
–125C	KJB674520V		. . BUSHING (V50632) (USED ON ITEMS 120B, 120C) (REPLACES ITEM 125A)		2
–125D	KJB674520V		. . BUSHING (V50632) (USED ON ITEMS 120D, 120E) (OPT)		2
–125E	65C37819-3		. . BUSHING (USED ON ITEM 120D, 120E) (PREFERRED)		2
130	1728B		. . FITTING (V95879)		9
135	65-46203-25		. . COLLAR ASSY-MACHINE (USED ON ITEM 120)		1
–135A	65-46203-27		. . COLLAR ASSY-MACHINE (USED ON ITEM 120A)		1
–135B	65-46203-28		. . COLLAR ASSY-MACHINE (USED ON ITEM 120B)		1
–135C	65-46203-30		. . COLLAR ASSY-MACHINE (USED ON ITEM 120C)		1
–135D	65-46203-30		. . COLLAR ASSY-MACHINE (USED ON ITEM 120D)		1
–135E	65-46203-34		. . COLLAR ASSY-MACHINE (USED ON ITEM 120E)		1
140	65-46250-8		. . . COLLAR-AFT (USED ON ITEM 135)		1
–140A	65-46250-9		. . . COLLAR-AFT (USED ON ITEM 135A)		1

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
–140B	65-46250-10		. . . COLLAR-AFT (USED ON ITEMS 135B THRU 135E)		1
145	65-46252-5		. . . COLLAR-FWD (USED ON ITEM 135)		1
–145A	65-46252-7		. . . COLLAR-FWD (USED ON ITEM 135A)		1
–145B	65-46252-8		. . . COLLAR-FWD (USED ON ITEMS 135B THRU 135E)		1
150	65-46203-19		. . SHIM		2
155	69-61785-8		. BEARING ASSY	A, C, E	1
–155A	69-61785-8		. BEARING ASSY (OPT) (POST SL 737-SL-32-083)	B, D	1
–155B	65C37814-1		. BEARING ASSY (REPLACED BY ITEM 155D)	B, D	1
–155C	KJB919377V		. BEARING ASSY (V50632) (REPLACES ITEM 155B)	B, D	1
–155D	65C37814-5		. BEARING ASSY (REPLACES ITEM 155B) (PREFERRED)	B, D	1
160	69-61785-11		. . BEARING HALF (USED ON ITEMS 155, 155A)		1
–160A	65C37814-3		. . BEARING HALF (USED ON ITEM 155B)		1
–160B	65C37814-7		. . BEARING HALF (USED ON ITEM 155D)		1
165	69-61785-12		. . BEARING HALF (USED ON ITEMS 155, 155A)		1
–165A	65C37814-2		. . BEARING HALF (USED ON ITEM 155B)		1
–165B	65C37814-6		. . BEARING HALF (USED ON ITEM 155D)		1
170	MS24665-134		. PIN		4
175	BACB30NF4D10		. BOLT (LIMITED USAGE)		3

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
180	BACB30NF4D8		. BOLT (LIMITED USAGE)		1
–180A	BACB30NF4D10		. BOLT (LIMITED USAGE)		1
185	AN960-416L		. WASHER		4
190	BACN10JD4		. NUT (LIMITED USAGE)		3
195	BACN10JD104		. NUT (LIMITED USAGE)		1
–195A	BACN10JD4		. NUT (LIMITED USAGE)		1
200	69-62214-1		. BRACKET		2
205	65-46200-60		. STRUT ASSY-SHOCK (LIMITED USAGE) (REFER TO CMM 32-21-58)	A	1
–205A	65-46200-61		. STRUT ASSY-SHOCK (LIMITED USAGE) (REF CMM 32-21-58)	A	1
–205B	65-46200-62		. STRUT ASSY-SHOCK (LIMITED USAGE) (REF CMM 32-21-58)	A	1
–205C	65-46200-68		. STRUT ASSY-SHOCK (LIMITED USAGE) (OPT ITEM 205F) (REF CMM 32-21-58)	A	1
–205D	65-46200-69		. STRUT ASSY-SHOCK (LIMITED USAGE) (REF CMM 32-21-58)	A	1
–205E	65-46200-74		. STRUT ASSY-SHOCK (LIMITED USAGE) (REF CMM 32-21-58)	A	1
–205F	65-46200-76		. STRUT ASSY-SHOCK (LIMITED USAGE) (OPT ITEM 205C) (REF CMM 32-21-58)	A	1
–205G	65-46200-77		. STRUT ASSY-SHOCK (LIMITED USAGE) (REF CMM 32-21-58)	A	1

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
–205H	65-46200-78		. STRUT ASSY-SHOCK (LIMITED USAGE) (REF CMM 32-21-58)	A	1
–205J	65-46200-80		. STRUT ASSY-SHOCK (LIMITED USAGE) (REF CMM 32-21-58)	A	1
–205K	65-46200-81		. STRUT ASSY-SHOCK (LIMITED USAGE) (REF CMM 32-21-58)	A	1
–205L	65-46200-82		. STRUT ASSY-SHOCK (REF CMM 32-21-58)	B, C	1
–205M	65-46200-83		. STRUT ASSY-SHOCK (REF CMM 32-21-58)	D, E	1
–210	BAC27DLG66		. MARKER (LIMITED USAGE)	A	1
210A	BAC27DLG0116		. MARKER (LIMITED USAGE)	A	1
210B	BAC27DLG0120		. MARKER (LIMITED USAGE)	A	1
210C	BAC27DLG0155		. MARKER (LIMITED USAGE)	A	1
–210D	BAC27DLG0155		. MARKER	B-E	1
			INSTALLATION PARTS		
220	65-44502-1		CYLINDER INSTL-NOSE WHEEL VALVE, COVER AND STEERING (FOR DETAILS SEE FIG. 2)		1
–220A	65-44502-8		CYLINDER INSTL-NOSE WHEEL VALVE, COVER AND STEERING (FOR DETAILS SEE FIG. 2)		1
–220B	65-44502-9		CYLINDER INSTL-NOSE WHEEL VALVE, COVER AND STEERING (FOR DETAILS SEE FIG. 2)		1
225	MS19070-112		DELETED		
230	MS19068-112		DELETED		
235	NAS603-9P		DELETED		
240	AN960PD10		DELETED		
245	BAC1330NE3-4		DELETED		
250	65-44713-44		DELETED		

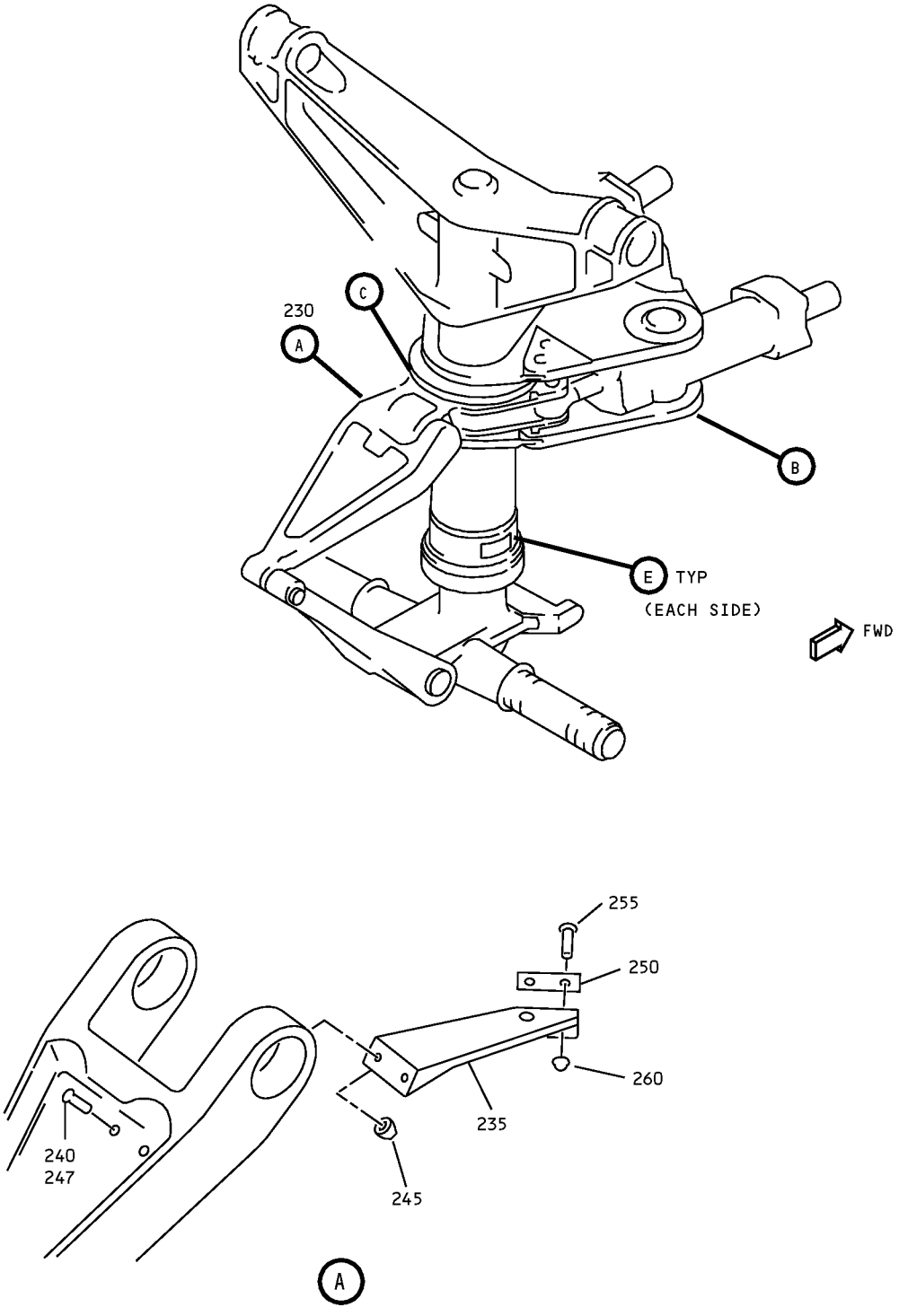
–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
250A	65-44713-52		DELETED		
255	65-44713-45		DELETED		
255A	65-44713-53		DELETED		
260	65-44713-10		DELETED		
260A	65-44713-55		DELETED		
265	65-44713-46		DELETED		
265A	65-44713-55		DELETED		
270	65-44713-9		DELETED		
275	BACR11X3C		DELETED		
280	65-44713-47		DELETED		
285	65-44713-48		DELETED		
290	BACG20X3C		DELETED		
295	BACR12X1		DELETED		
300	BACS21X8C		DELETED		
305	BACN10JC3		DELETED		
305A	NAS679A3W		DELETED		
305B	MS21042L3		DELETED		
307	AN960JD10		DELETED		
310	BACB30NE3-10		DELETED		
310A	NAS6603-7		DELETED		
315	BACB30NE3-14		DELETED		
320	69-33575-2		DELETED		
320A	69-35575-4		DELETED		
325	66-22702-2		DELETED		
330	66-22702-5		DELETED		
335	69-35573-3		DELETED		
336	65C31101-1		DELETED		
336A	65C31102-1		DELETED		
336B	65C31101-2		DELETED		
336C	65C31102-2		DELETED		
336D	BACN10KE3D		DELETED		

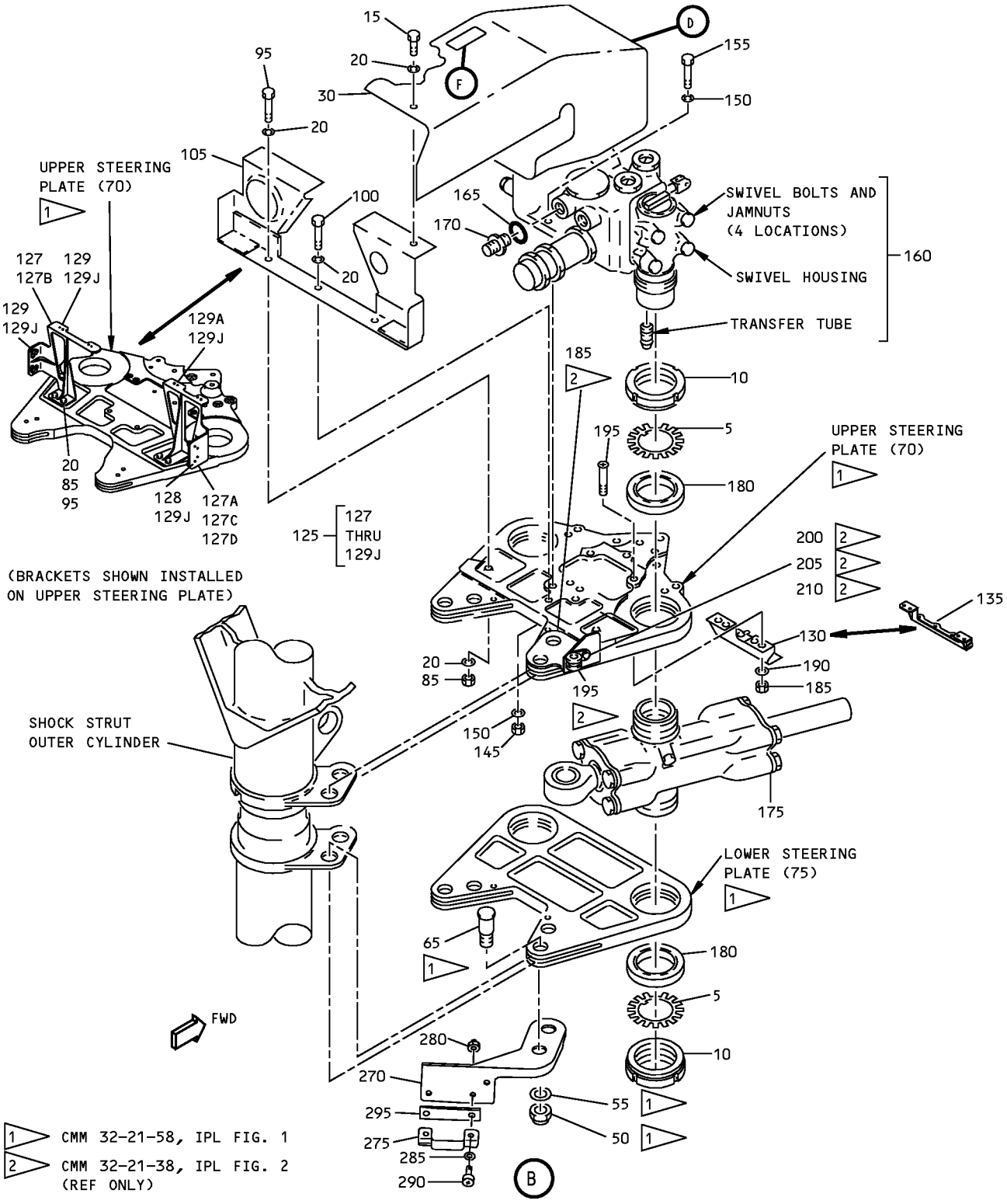
FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
337	69-73133-1		DELETED		
338	65C31103-1		DELETED		
339	65C31103-2		DELETED		
340	BACN10JC4		DELETED		
340A	NAS679A4W		DELETED		
345	AN960PD416		DELETED		
350	NAS1304-17		DELETED		
355	4129RA9		DELETED		
360	NAS1612-6		DELETED		
365	MS21902-6		DELETED		
370	65-44710-4		DELETED		
375	65-35792-1		DELETED		
375A	10-62185-1		DELETED		
380	BACN10JC3		DELETED		
380A	NAS679A3W		DELETED		
385	AN960PD10		DELETED		
390	NAS517-3-13		DELETED		
391	AN960PD10		DELETED		
392	BACB30NE3-4		DELETED		
395	BAC27DHY0301		DELETED		
400	BAC27DLG0105		DELETED		
400A	BAC27DLG0108		DELETED		
400B	BAC27DLG0120		DELETED		
401	BAC27DLG0120		DELETED		
405	69-73685-1		DELETED		
407	65C28018-3		SENSOR INSTL-NLG COMPRESSED (FOR DETAILS SEE FIG. 2)		RF
–407A	65C28018-4		SENSOR INSTL-NLG COMPRESSED (FOR DETAILS SEE FIG. 2)		RF
–407B	65C28018-5		SENSOR INSTL-NLG COMPRESSED (FOR DETAILS SEE FIG. 2)		RF
–407C	65C28018-7		SENSOR INSTL-NLG COMPRESSED (FOR DETAILS SEE FIG. 2)		RF

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
–407D	65C28018-8		SENSOR INSTL-NLG COMPRESSED (FOR DETAILS SEE FIG. 2)		RF
410	69-73792-1		DELETED		
410A	69-73792-3		DELETED		
415	BACR15BB5		DELETED		
415A	BACR15BA5D		DELETED		
415B	BACB30FM5A6U		DELETED		
417	BACC30M5		DELETED		
420	65C28018-2		DELETED		
425	BACR15AZ5		DELETED		
425A	BACB30FN5A		DELETED		
430	NAS528		DELETED		
430A	BACC30M5		DELETED		
435	10-61226-15		DELETED		
440	69-73753-3		DELETED		
445	10-61226-15		DELETED		
450	MS21042-3		DELETED		
455	AN960C10L		DELETED		
460	BACB30FM5A6U		DELETED		
460A	NAS1801-3-9		DELETED		
465	284N1641-7		DELETED		
470	NAS1801-3-8		DELETED		
475	AN960PD10		DELETED		
480	BACN10-JC3		DELETED		
485	BACC10GU103		DELETED		
490	69-72965-11		DELETED		

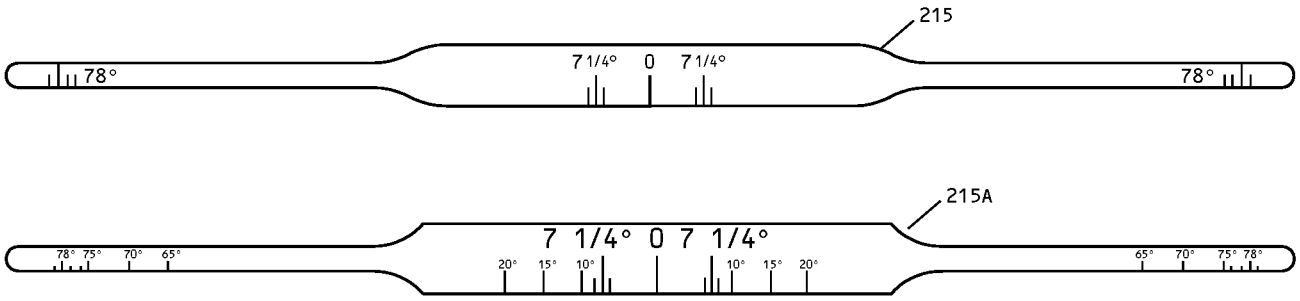
–Item not Illustrated



Nose Gear Installation Parts
IPL Figure 2 (Sheet 1 of 3)



Nose Gear Installation Parts
IPL Figure 2 (Sheet 2 of 3)



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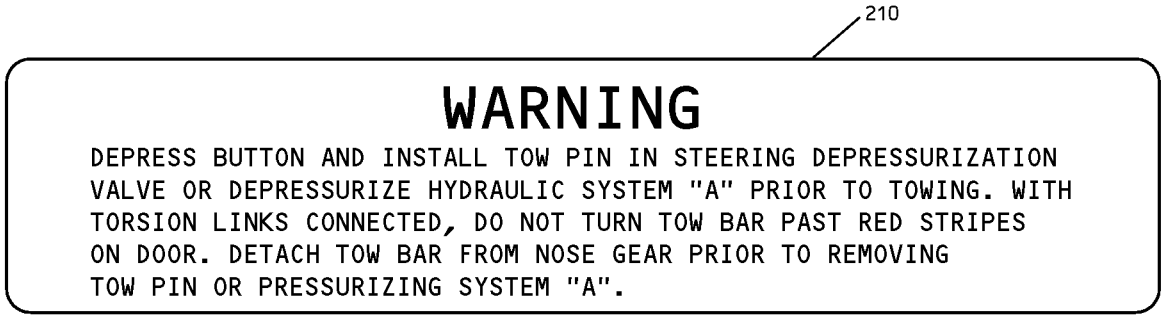

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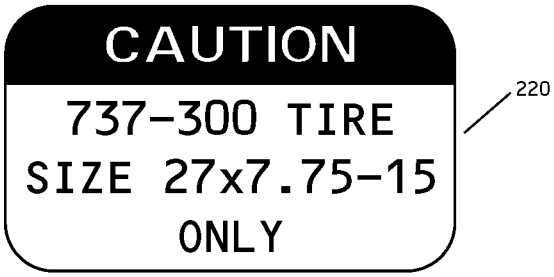

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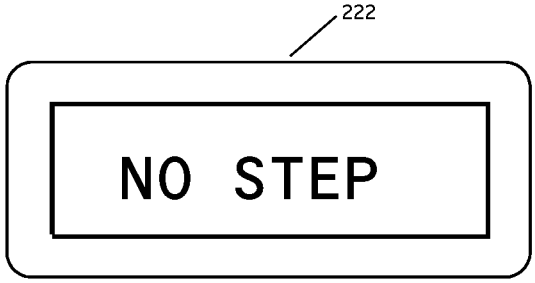

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Nose Gear Installation Parts
IPL Figure 2 (Sheet 3 of 3)

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
2–					
–1	65-44502-1		CYLINDER INSTL-NOSE WHEEL VALVE, COVER AND STEERING ARE USED WITH BUT ARE NOT PART OF THE 65-73762 NOSE GEAR ASSEMBLIES)	A	RF
			INSTALLATION PARTS		
–1A	65-44502-8		CYLINDER INSTL-NOSE WHEEL VALVE, COVER AND STEERING ARE USED WITH BUT ARE NOT PART OF THE 65-73762 NOSE GEAR ASSEMBLIES)	B	RF
–1B	65-44502-9		CYLINDER INSTL-NOSE WHEEL VALVE, COVER AND STEERING ARE USED WITH BUT ARE NOT PART OF THE 65-73762 NOSE GEAR ASSEMBLIES)	C	RF
5	MS19070-112		. WASHER	A, B, C	4
10	MS19068-112		. NUT-LOCK	A, B, C	4
15	NAS603-9P		. SCREW	A, B, C	8
20	AN960PD10		. WASHER	A, B, C	12
25	BACB30NE3-4		. BOLT	A, B, C	4
30	65-44713-52		. COVER ASSY (LIMITED USAGE) (REFER TO CMM 32-50-12)	A, B, C	1
–30A	65-44713-63		. COVER ASSY (LIMITED USAGE) (REFER TO CMM 32-50-12)	A, B, C	1
–35	65-44713-53		DELETED		
–35A	65-44713-64		DELETED		
–40	65-44713-55		DELETED		
–45	65-44713-54		DELETED		
–45A	65-44713-65		DELETED		
–50	65-44713-9		DELETED		
–55	BACR11X3C		DELETED		
–57	BACN10JN3		DELETED		
–58	BACN10KB3		DELETED		
–59	NAS603-8P		DELETED		
–60	65-44713-47		DELETED		

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
2–					
–65	65-44713-48		DELETED		
–70	BACG20X3C		DELETED		
–75	BACR12X1		DELETED		
–80	BACS21X8C		DELETED		
85	BACN10JC3		. NUT (REPLACED BY ITEM 85B) (REPLACES ITEM 85A)	A, B, C	3
–85A	NAS679A3W		. NUT (REPLACED BY ITEM 85)	A, B, C	3
–85B	MS21042L3		. NUT (REPLACES ITEMS 85, 85A)	A, B, C	4
–90	AN960JD10		. WASHER	A, B, C	8
–92	BACW10P14CC		. WASHER		1
95	BACB30NE3-10		. BOLT (REPLACED BY ITEM 95A)	A, B, C	2
–95A	NAS6603-7		. BOLT (REPLACES ITEM 95)	A, B, C	4
–97	BACB30NF4-5		. BOLT		1
100	BACB30NE3-14		. BOLT (LIMITED USAGE)	A, B, C	1
–105	69-35575-4		. BRACKET ASSY (REPLACED BY ITEMS 125, 125A) (PRE SB 737-32-1211)	A, B, C	1
–110	66-22702-2		. . BRACKET		1
–115	66-22702-5		. . BRACKET		1
–120	69-35573-3		. . . SUPPORT		2
–125	65C31101-1		. BRACKET ASSY (LIMITED USAGE) (REPLACES ITEM 105) (REPLACED BY ITEM 125B) (PRE SB 737-32-1211)	A, B, C	1
–125A	65C31102-1		. BRACKET ASSY (LIMITED USAGE) (REPLACES ITEM 105) (REPLACED BY ITEM 125C) (PRE SB 737-32-1211)	A, B, C	1

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
2–					
–125B	65C31101-4		. BRACKET ASSY (LIMITED USAGE) (REPLACES ITEM 125) (POST SB 737-32-1211)	A, B, C	1
–125C	65C31102-7		. BRACKET ASSY (LIMITED USAGE) (REPLACES ITEM 125A) (POST SB 737-32-1211)	A, B, C	1
–125D	65C31102-9		. BRACKET ASSY (REPLACES 65C31102-7)	A, B, C	1
127	65C31101-2		. . BRACKET (USED ON ITEM 125)		1
127A	65C31102-2		. . BRACKET (USED ON ITEM 125A)		1
127B	65C31101-6		. . BRACKET (USED ON ITEM 125B)		1
127C	65C31102-6		. . BRACKET (USED ON ITEM 125C)		1
127D	65C31102-8		. . BRACKET (USED ON ITEM 125D)		1
128	BACN10KE3D		. . NUTPLATE (USED ON ITEMS 125A,125C, 125D)		2
129	BACN10KB3F		. . NUTPLATE (USED ON ITEM 125, 125B)		4
129A	BACN10KB3F		. . NUTPLATE (USED ON ITEMS 125A, 125C, 125D)		2
129J	BACR15DR3		. . RIVET (USED ON ITEMS 125-125C)		8
–129K	BACR15DR3AC		. . RIVET (USED ON ITEM 125D)		8
130	69-73133-1		. SUPPORT ASSY (LIMITED USAGE) (REPLACED BY ITEM 135) (PRE SB 737-32-1211)	A, B, C	1
–135	65C31103-1		. SUPPORT ASSY (LIMITED USAGE) (REPLACES ITEM 130) (POST SB 737-32-1211)	A, B, C	1
–140	65C31103-2		. . SUPPORT		1

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
2–					
145	BACN10JC4		. NUT (REPLACES ITEM 145A)	A, B, C	3
–145A	NAS679A4W		. NUT (REPLACED BY ITEM 145)	A, B, C	3
150	AN960PD416		. WASHER	A, B, C	6
155	NAS1304-17		. BOLT	A, B, C	3
160	4129RA9		. VALVE-STEERING METERING (V78062) (LIMITED USAGE) (SPEC 10-60590-4)	A, B, C	1
165	NAS1612-6		. O-RING	A, B, C	2
170	MS21902-6		. UNION		2
175	65-44710-4		. CYLINDER ASSY (REFER TO OHM 32-50-11)	A	2
–175A	65-44710-7		. CYLINDER ASSY (REFER TO OHM 32-50-11)	B	2
–175B	65-44710-8		. CYLINDER ASSY (REFER TO OHM 32-50-11) (LIMITED USAGE)	C	2
–175C	65-44710-9		. CYLINDER ASSY (REFER TO OHM 32-50-11) (LIMITED USAGE)	C	2
180	65-35792-1		. BEARING (PRE SB 737-32-1209) (REPLACED BY ITEM 180A) (LIMITED USAGE)	A, B, C	4
180A	10-62185-1		. BEARING (OPT ITEM 180B) (POST SB 737-32-1209) (REPLACES ITEM 180) (LIMITED USAGE)	A, B, C	4
–180B	10-62185-2		. BEARING (LIMITED USAGE) (OPT ITEM 180A)	A, B, C	4
–180C	10-62185-3		. BEARING (PREFERED)	A, B, C	4
185	BACN10JC3		. NUT (REPLACES ITEM 185A)	A, B, C	4

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
2–					
–185A	NAS679A3W		. NUT (REPLACED BY ITEM 185)	A, B, C	4
190	AN960PD10		. WASHER	A, B, C	4
195	NAS517-3-13		. BOLT	A, B, C	4
–200	AN960PD10		. WASHER	A, B, C	4
–205	BACB30NE3-4		. BOLT	A, B, C	4
210	BAC27DHY0301		. MARKER	A, B, C	1
215	BAC27DLG0108		. MARKER	A, B, C	1
215A	BAC27DLG0145		. MARKER	A, B, C	1
220	BAC27DLG0110		. MARKER	A, B, C	2
222	BAC27TCT0010		. MARKER	A, B, C	1
–225	69-73685-1		. TEE	A, B, C	1
–230	65C28018-3		SENSOR INSTL-NLG COMPRESSED ARE USED WITH BUT ARE NOT PART OF THE 65-73762 NOSE GEAR ASSEMBLIES)	D	RF
–230A	65C28018-4		SENSOR INSTL-NLG COMPRESSED ARE USED WITH BUT ARE NOT PART OF THE 65-73762 NOSE GEAR ASSEMBLIES)	E	RF
–230B	65C28018-5		SENSOR INSTL-NLG COMPRESSED ARE USED WITH BUT ARE NOT PART OF THE 65-73762 NOSE GEAR ASSEMBLIES)	F	RF
–230C	65C28018-7		SENSOR INSTL-NLG COMPRESSED ARE USED WITH BUT ARE NOT PART OF THE 65-73762 NOSE GEAR ASSEMBLIES)	G	RF
–230D	65C28018-8		SENSOR INSTL-NLG COMPRESSED ARE USED WITH BUT ARE NOT PART OF THE 65-73762 NOSE GEAR ASSEMBLIES)	H	RF
235	69-73792-3		. SUPPORT-TARGET	D-H	1
			ATTACHING PARTS		
240	BACB30FM5A6U		. BOLT (REPLACED BY ITEM 240A)	D	2
–240A	BACB30FM5AK6		. BOLT (REPLACES BY ITEM 240)	D	2
245	BACC30M5		. COLLAR	D	2
247	BACR15BA5D		. RIVET	E-H	2
			- - - - - - - * - - - - - - -		

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
2–					
–250	65C28018-2		TARGET	D	1
–250A	65C28018-6		. TARGET	E-H	1
			ATTACHING PARTS		
255	BACB30FN5A3U		. BOLT	D-H	2
260	BACC30M5		. COLLAR	D-H	2
265	10-61226-15		DELETED		
			- - - - - - - * - - - - - - -		
270	69-73753-3		. SUPPORT-SENSOR	D	1
–270A	69-73753-6		. SUPPORT-SENSOR	E-H	1
–275	1-899-15		. SENSOR (V08748) (SPEC 10-61226-15)	D, F, G	1
–275A	1-899-83		. SENSOR (V08748) (SPEC 10-61226-26)	E	1
–275B	1-899-29		. SENSOR (V08748) (SPEC 10-61226-29) (PREFERED)	D-G	1
–275C	1-899-29		. SENSOR (V08748) (SPEC 10-61226-29)	H	1
			ATTACHING PARTS		
–280	MS21042-3		. NUT	D-H	1
–285	AN960C10L		. WASHER	D-H	2
–290	NAS1801-3-9		. BOLT	D-H	2
–295	284N1641-7		. SHIM	D-H	1
			- - - - - - - * - - - - - - -		
300	NAS1801-3-8		DELETED		
305	AN960PD10		DELETED		
310	BACN10-JC3		DELETED		
315	BACC10GU103		DELETED		
320	69-72965-11		DELETED		

–Item not Illustrated