

TO: ALL HOLDERS OF RUDDER CONTROL YAW DAMPER BIAS POGO ASSEMBLY COMPONENT MAINTENANCE MANUAL 27-21-55

REVISION NO. 3 DATED APR 10/84

HIGHLIGHTS

Pages which have been added or revised are outlined below together with the highlights of the revision. Remove and insert the affected pages as listed and enter Revision No. 3 dated Apr 10/84 on the Record of Revision Sheet. CHAPTER/SECTION

AND PAGE NO.
INTRODUCTION

<u>DESCRIPTION OF CHANGE</u> Added verification date.

1



RUDDER CONTROL YAW DAMPER BIAS POGO ASSEMBLY PART NUMBER 251T3745-1

COMPONENT MAINTENANCE MANUAL WITH ILLUSTRATED PARTS LIST

27-21-55

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

59013



REVISION RECORD

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

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

27-21-55
REVISION RECORD



TEMPORARY REVISION AND SERVICE BULLETIN RECORD

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



PAGE	DATE	CODE	PAGE	DATE	CODE
27-21-55				OCT 10/83 BLANK	01.1
TITLE PAGE	IIII 40/97	04	DEDATE CENE	DAL	
	JUL 10/83 BLANK	01		JUL 10/83 JUL 10/83	
REVISION REC					
	JUL 10/83 BLANK	01		JUL 10/83 BLANK	01
TR & SB RECO					
	JUL 10/83 BLANK	01		OCT 10/83 BLANK	01.1
LIST OF EFFE					
*1 THRU LA	APR 10/84 ST PAGE	01		OCT 10/83 BLANK	01.1
CONTENTS					
	JUL 10/83 BLANK	01		OCT 10/83 BLANK	01.1
INTRODUCTION					
	APR 10/84 BLANK	01.1		JUL 10/83 BLANK	01.1
DESCRIPTION					
	OCT 10/83 BLANK	01.1		OCT 10/83 OCT 10/83	
TESTING & TR	OUBLE SHOOTING	Ĝ		OCT 10/83	-
1	OCT 10/83 BLANK	01.1		OCT 10/83	01.1
DISASSEMBLY			FITS AND CL 801	EARANCES OCT 10/83	01.1
301 302	JUL 10/83 BLANK	01	802	BLANK	01.1
			ILLUSTRATED		
CLEANING 401 402	JUL 10/83 BLANK	01	1001 1002 1003	JUL 10/83 JUL 10/83 BLANK	01 01.1
402	DEVIAN		1003	JUL 10/83	01.1

^{* =} REVISED, ADDED OR DELETED

27-21-55

EFFECTIVE PAGES
CONTINUED Page 1
01 Apr 10/84



PAGE	DATE	CODE	PAGE	DATE	CODE
ILLUSTRATED 1005 1006	JUL 10/83	CONT. 01.1 01.1			

^{* =} REVISED, ADDED OR DELETED

27-21-55 **EFFECTIVE PAGES** LAST PAGE Page 2 Apr 10/84

01



TABLE OF CONTENTS

Paragraph Title	age
Description and Operation	1
Testing/Trouble Shooting	101
Disassembly	301
Cleaning	401
Check	501
Repair	601
Assembly	701
Fits and Clearances	801
Special Tools (Not Applicable)	
Illustrated Parts List	001



INTRODUCTION

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

This manual is divided into separate sections:

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

Refer to the Table of Contents for the page location of applicable sections. An asterisked flagnote *[] in place of the page number indicates that no special instructions are provided since the function can be performed using standard industry practices.

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

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

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

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

Verification:

Disassembly Mar/25/83 Assembly Mar/25/83



RUDDER CONTROL YAW DAMPER BIAS POGO ASSEMBLY

DESCRIPTION AND OPERATION

- 1. The rudder control yaw damper bias pogo assembly consists of a case, stop ring, tailstock assembly, piston, compression spring, rod end bearing, an adjuster nut, and two slides. The bias pogo assembly reduces backlash in the yaw damper linkage and sets as "ground" to allow pilot inputs to rudder in case of a failure of the yaw damper servo linkage. The pogo detent is offset and failure of the linkage would result in approximately 2° of left rudder offset.
- 2. <u>Leading Particulars</u> (Approximate)

Diameter -- 1.5 inches

Length -- 12 inches (relaxed condition)

15 inches (extended condition)

Weight -- 5.5 pounds



TESTING AND TROUBLE SHOOTING

1. <u>Test</u>

- A. Check that breakout force is 16.5-20.1 lbs. in either direction.
- B. Extend pogo assembly to 11.09-11.13 inches between centers of bearings (10, 45) and check that load is 24.3-29.7 lbs.
- C. Compress pogo assembly to 10.09-10.13 inches between centers of bearings (10, 45) and check that load is 24.3-29.7 lbs.
 - D. Apply 3-5 lbs reversing load and check that backlash does not exceed 0.003 inch.



DISASSEMBLY

<u>NOTE</u>: Disassemble this component only as necessary to complete fault isolation, determine the serviceability of parts, perform required repairs, and restore the unit to serviceable condition.

1. Parts Replacement

<u>NOTE</u>: The following parts are recommended for replacement. Unless otherwise specified, actual replacement of parts may be based on in-service experience.

- A. Rivets (5, 20)
- B. Lockbolts (35) and collars (40)
- 2. <u>Disassembly</u> (IPL, Fig. 1)
 - A. Remove rivet (5) and unscrew rod end bearing (10) from piston (60).
 - B. Remove adjuster nut (15) from rod end bearing (10).

<u>CAUTION</u>: USE EXTREME CARE WHEN REMOVING RIVETS (20). SPRING (70) IS HEAVILY LOADED.

- C. Remove rivets (20) and remove stop ring (25).
- D. Remove slides (65), spring (70) and piston (60).
- E. Remove fasteners (35, 40) and remove tailstock assembly (30).

NOTE: Do not remove bearing (45) or bushing (50) from tailstock assembly (30) unless necessary for repair or replacement.



CLEANING

- 1. Clean all parts except teflon-sealed bearing (45, IPL Fig. 1) using standard industry practices and information contained in 20-30-03.
- 2. Clean teflon-sealed bearing (45) per manufacturer's instruction.



CHECK

- Check all parts for obvious defects in accordance with standard industry practices. Refer to FITS AND CLEARANCES for design dimensions and wear limits.
- 2. Magnetic particle check per 20-20-01 -- Adjuster nut (15, IPL Fig. 1), stop ring (25), slides (65), piston (60), bushing (50), and spring (70).
- 3. Penetrant check per 20-20-02 -- Tail stock (55) and case (75).
- 4. Check spring (70).
 - A. Compress spring to 1.67 inches and check that load is 38.0-46.4 lbs.
 - B. Compress spring to 2.99 inches and check that load is 16.5-20.1 lbs.



REPAIR - GENERAL

1. Content

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

<u>P/N</u>	<u>NAME</u>	<u>REPAIR</u>
251T3727	RING, STOP	1–1
251T3746	TAILSTOCK	2–1
251T3747	PISTON	3–1
251T3730	SLIDE	4–1
	MISC PARTS REFINISH	5-1

2. Standard Practices

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

20-10-01 Repair and Refinish of High Strength Steel Parts

20-10-04 Grinding of Chrome Plated Parts

20-41-01 Decoding Table for Boeing Finish Codes

20-42-03 Hard Chrome Plating

20-42-05 Bright Cadmium Plating

20-43-01 Chromic Acid Anodizing

20-50-03 Bearing Installation and Retention

3. Materials

NOTE: Equivalent substitutes may be used.

- A. Primer -- BMS 10-11, type 1 (Ref 20-60-02)
- B. Sealant -- BMS 5-95 (Ref 20-60-04)
- C. Teflon -- KARON N. TFE liner material (Ref 20-60-04) MANUFACTURER: KAMATICS Corp., 1335 Blue Hills Ave., Bloomfield, CT 06002



4. <u>Dimensioning Symbols</u>

RUNOUT

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

_	STRAIGHTNESS	\oplus	THEORETICAL EXACT POSITION
	FLATNESS		OF A FEATURE (TRUE POSITION)
\perp	PERPENDICULARITY (OR SQUARENESS)	Ø	DIAMETER
//	PARALLELISM	BASIC (BSC)	A THEORETICALLY EXACT DIMENSION USED
\circ	ROUNDNESS	OR	TO DESCRIBE SIZE, SHAPE OR LOCATION OF A FEATURE FROM WHICH PERMISSIBLE
\bigcirc	CYLINDRICITY	DIM	VARIATIONS ARE ESTABLISHED BY TOLERANCES ON OTHER DIMENSIONS OR NOTES.
\cap	PROFILE OF A LINE	-A-	DATUM
\bigcirc	PROFILE OF A SURFACE		DATO!!
0	CONCENTRICITY	M	MAXIMUM MATERIAL CONDITION (MMC)
=	SYMMETRY	S	REGARDLESS OF FEATURE SIZE (RFS)
_	ANGULARITY	P	PROJECTED TOLERANCE ZONE

EXAMPLES

<pre>- 0.002</pre>	STRAIGHT WITHIN 0.002	⊚ c Ø 0.0005	CONCENTRIC TO C WITHIN 0.0005 DIAMETER (FULL INDICATOR MOVEMENT)
<u> </u>	PERPENDICULAR TO B WITHIN 0.002	<u></u> ■ A 0.010	SYMMETRICAL WITH A WITHIN 0.010
// A 0.002	PARALLEL TO A WITHIN 0.002	∠ A 0.005	ANGULAR TOLERANCE 0.005 WITH A
0.002	ROUND WITHIN 0.002	⊕ B Ø 0.002 (\$)	LOCATED AT TRUE POSITION
0.010	CYLINDRICAL SURFACE MUST LIE BETWEEN TWO CONCENTRIC CYLIN-	(F) 1/2 (C)	WITHIN 0.002 DIA IN RELATION TO DATUM B, REGARDLESS OF FEATURE SIZE
	DERS, ONE OF WHICH HAS A RADIUS 0.010 INCH GREATER THAN THE OTHER	<u>⊥</u> A Ø 0.010 M 0.510 P	AXIS IS TOTALLY WITHIN A CYLINDER OF 0.010-INCH
∩ A 0.006	EACH LINE ELEMENT OF THE SURFACE AT ANY CROSS SECTION MUST LIE BETWEEN TWO PROFILE BOUNDARIES 0.006 INCH APART IN RELATION TO DATUM PLANE A		DIAMETER, PERPENDICULAR TO, AND EXTENDING 0.510-INCH ABOVE, DATUM A, MAXIMUM MATERIAL CONDITION
	SURFACES MUST LIE WITHIN	2.000	EXACT DIMENSION IS 2.000
△ A 0.020	PARALLEL BOUNDARIES 0.02 INCH APART AND EQUALLY DISPOSED ABOUT TRUE PROFILE	OR 2.000 BSC	

True Position Dimensioning Symbols Figure 601

27-21-55
REPAIR-GENERAL

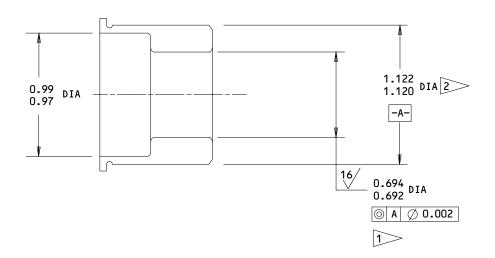


RING, STOP - REPAIR 1-1

251T3727-1

1. Plating Repair (Fig. 601)

<u>NOTE</u>: Repair consists of restoration of original finish. Refer to Refinish instructions, Fig. 601 and to REPAIR-GEN for list of applicable standard practices.



REFINISH

MATERIAL: 15-5PH CRES, 150-170 KSI

ALL DIMENSIONS ARE IN INCHES

PASSIVATE (F-17.09) ALL OVER.
CADMIUM PLATE AND APPLY
ONE COAT OF PRIMER,
BMS 10-11, TYPE 1 (F-16.01)
EXCEPT ON SURFACE NOTED

1 OMIT PLATING AND PRIMER.

2 OMIT PRIMER ON THIS SURFACE.

Stop Ring - Plating Repair Figure 601

7368

27-21-55
REPAIR 1-1

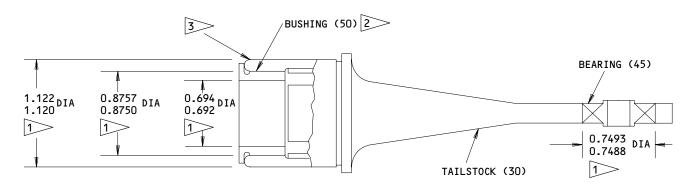


TAILSTOCK ASSEMBLY - REPAIR 2-1

251T3746-1

<u>NOTE</u>: Refer to REPAIR-GEN for list of applicable standard practices. For repair of surfaces which may only require stripping and restoration of original finish, refer to Refinish instructions, Fig. 601.

- 1. Bushing Replacement (Fig. 601, IPL Fig. 1)
 - A. Remove bushing (50).
 - B. Install new bushing per 20-50-03 except use sealant, BMS 5-95.
 - C. Fillet seal bushing flange with sealant BMS 5-95. Keep sealant below 1.120 inch diameter.
- 2. Bearing Replacement (Fig. 601)
 - A. Remove bearing (45).
 - B. Install new bearing and swage tailstock over bearing per 20-50-03.



MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

REFINISH

TAILSTOCK (30) -- CHROMIC ACID ANODIZE (F-17.04) AND APPLY TWO COATS OF PRIMER, BMS 10-11, TYPE 1 (F-20.03) EXCEPT AS NOTED

1 OMIT PRIMER

2 FAY FILLET SEAL WITH BMS 5-95 SEALANT

FILLET SEAL BUSHING FLANGE WITH BMS 5-95 SEALANT. KEEP SEALANT BELOW 1.120 INCH DIAMETER

Tailstock Assembly - Bushing/Bearing Replacement Figure 601

27-21-55

REPAIR 2-1 01.1 Page 601 0ct 10/83

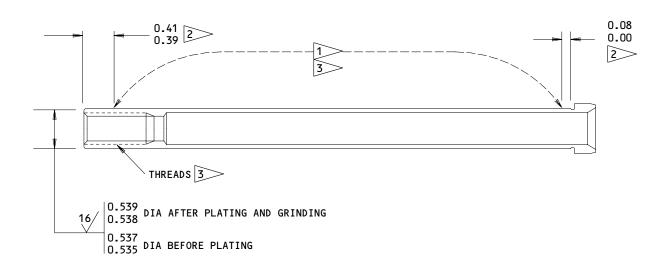


PISTON - REPAIR 3-1

251T3747-1

1. Plating Repair (Fig. 601)

<u>NOTE</u>: Repair consists of restoration of original finish. Refer to Refinish instructions, Fig. 601 and to REPAIR-GEN for list of applicable standard practices.



<u>REFINISH</u>

PASSIVATE (F-17.09) AND APPLY ONE COAT OF BMS 10-11, TYPE 1 PRIMER (F-20.02) EXCEPT AS NOTED

CHROMIUM PLATE (F-15.03)(0.0005 TO 0.002 INCH THICK AFTER GRIND)

2 CHROMIUM PLATE (F-15.03) RUN OUT.
PLATE SHALL NOT TERMINATE AT A
SQUARE EDGE BUT SMALL FADE OUT FROM
FULL TO ZERO THICKNESS IN THE
DISTANCE SHOWN

3 OMIT PRIMER FROM THIS SURFACE

MATERIAL: 15-5PH CRES, 150-170 KSI

ALL DIMENSIONS ARE IN INCHES

Piston-Plating Repair Figure 601

1000

27-21-55
REPAIR 3-1

01.1

Page 601 0ct 10/83

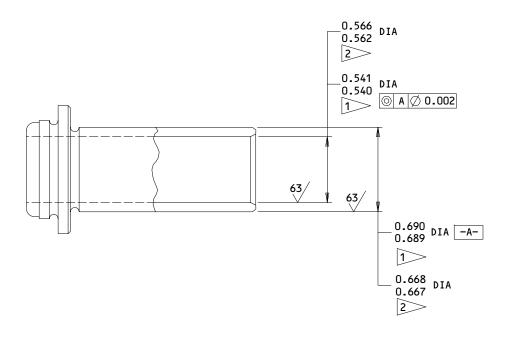


SLIDE - REPAIR 4-1

251T3730-1

1. Plating Repair (Fig. 601)

<u>NOTE</u>: Repair consists of restoration of original finish. Refer to Refinish instructions, Fig. 601 and to REPAIR-GEN for list of applicable standard practices.



REFINISH

PASSIVATE (F-17.09) PRIOR TO 1

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

ALL DIMENSIONS ARE IN INCHES

COAT SURFACE WITH KARON
H TFE LINER MATERIAL PER
MIL-B-81819 AND MANUFACTURER'S
INSTRUCTION. DIMENSIONS APPLY
AFTER COATING.

2 DIMENSION PRIOR TO COATING

Slide Plating Repair Figure 601

7370

27-21-55
REPAIR 4-1



MISC PARTS REFINISH - REPAIR 5-1

1. Repair of parts listed in Fig. 601 consists of restoration of the original finish.

IPL FIG. & ITEM	MATERIAL	FINISH
<u>Fig. 1</u>		
Nut (15)	15-5PH CRES 150-170 ksi	Cadmium plate (F-15.06) all over.
Case (75)	Al alloy	Chromic acid anodize (F-17.04) and apply two coats of primer, BMS 10-11 type 1 (F-20.03).

Refinish Details Figure 601

ASSEMBLY

1. Materials

NOTE: Equivalent substitutes may be used.

- A. Grease BMS 3-24 (Ref 20-60-03)
- B. Sealant -- BMS 5-95 (Ref 20-60-04)
- C. Primer -- BMS 10-11, type 1 (Ref 20-60-02)
- 2. <u>Assembly</u> (IPL Fig. 1, Fig. 701)

NOTE: If stop ring (25), tailstock assembly (30), or case (75) is being replaced, refer to paragraph 2.A, Assembly Preparation Procedures. Otherwise, proceed to paragraph 2.B.

- A. Assembly Preparation Procedures
 - (1) If case (75) is being replaced, install stop ring (25) into case (75) until its flange butts against end of case. Mark four centers of rivet holes as shown and remove stop ring.

NOTE: If a new stop ring (25) is also being installed, leave stop ring (25) on case (75).

- (2) Drill rivet holes and drain holes as shown. If new stop ring (25) has been drilled with case, remove stop ring at this time.
- (3) Insert tailstock assembly (30) into the other end of case (75) as shown until its flange butts against end of case (75). Mark three centers of lockbolt holes as shown and remove tailstock assembly (30).

NOTE: If a new tailstock assembly (30) is also being installed, leave tailstock assembly (30) on case (75).

- (4) Drill lockbolt holes as shown. If new tailstock assembly has been drilled with new case, remove tailstock assembly at this time.
- (5) If stop ring (25) is being replaced, insert stop ring (25) into case (75) until its flange butts against end of case (75). Drill rivet holes and drain holes using existing holes of case (75). Remove stop ring (25).

ASSEMBLY

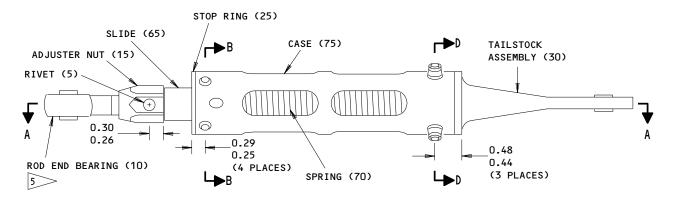


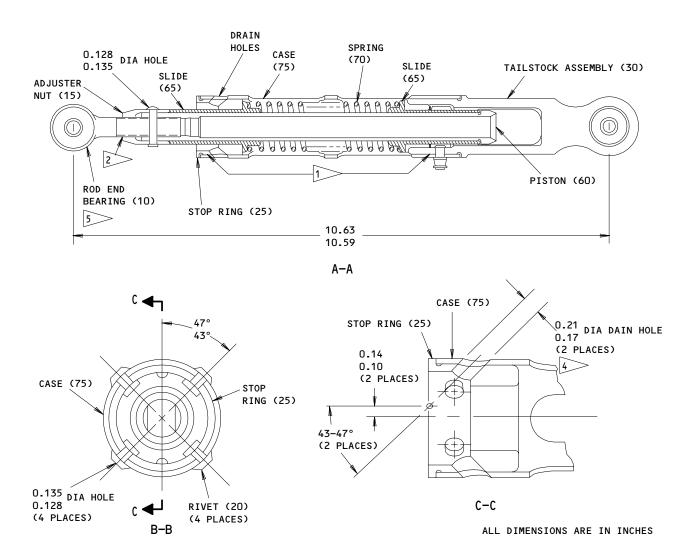
- (6) If tailstock assembly (30) is being replaced, insert tailstock assembly into the other end of case (75) until it butts against end of case (75). Drill lockbolt holes using existing holes of case (75). Remove tailstock assembly (30).
- B. Install stop ring (25) into case (75) with faying surface seal and rivets (20). Remove sealant from drain holes and apply finish (Fig. 701).
- C. Install piston (60), slides (65) and spring (70) in case (75). Compress slide (65) and spring (70) and extend piston (60) to allow clearance for installation of fastener (35, 40) thru case (75) and tailstock (30).

<u>CAUTION</u>: USE EXTREME CARE WHEN INSTALLING TAILSTOCK ASSEMBLY (30). SPRING (70) IS HEAVILY LOADED.

- D. Install tailstock assembly (30) with faying surface seal and lockbolts (35). Install lockbolts (35) with sealant. Allow piston (60), slide (65) and spring (70) to return to relaxed condition. Install collars (40).
- E. Install adjuster nut (15) and rod end (10) as shown. Ensure rod end (10) is lined up with tailstock (30). Adjust nut (15) and rod end (10) simultaneously to achieve overall length between centerlines of bearings (10, 45). Install rod end (10) with grease and after assembly clean with solvent and fay fillet seal with sealant (Fig. 701).
- F. Remove backlash by screwing adjuster nut (15) in and out of rod end bearing (10). Total backlash must be less than 0.003 in. with a reversing load of 3-7 lbs.
- G. If holes of adjuster nut (15), rod end (10) and piston (60) are not concentric after removing backlash, remove adjuster nut (15) and rod end (10). Turn piston (60) 90 degrees from old holes either way and repeat assembly steps 2.E. and 2.F. After removing backlash, drill rivet hole thru piston (60) and rod end (10) using existing hole in adjuster nut (15) as a guide.
- H. Install rivet (5).
- I. Test unit per TESTING
- 3. Prepare and store component in accordance with standard industry practices.





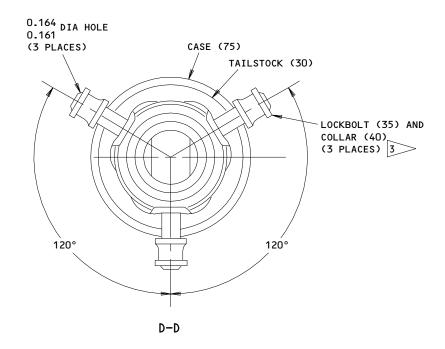


Bias Pogo Assembly Figure 701 (Sheet 1)

27-21-55
ASSEMBLY
Page 703
Oct 10/83

01.1





1 FAY SURFACE SEAL WITH BMS 5-95 SEALANT

2 INSTALL WITH BMS 3-24 GREASE. AFTER ASSEMBLY CLEAN WITH SOLVENT AND FAY FILLET SEAL WITH BMS 5-95 SEALANT

3 INSTALL FASTENER WITH BMS 5-95 SEALANT

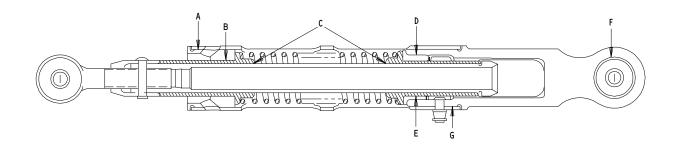
> REMOVE FAY SURFACE SEALANT FROM HOLES, THEN MANUALLY APPLY COLORED CHEMICAL COATING (F-17.10) PLUS APPLY TWO COATS OF BMS 10-11, TYPE I PRIMER (F-20.03)

5 INSTALL PER 20-50-03

Bias Pogo Assembly Figure 701 (Sheet 2)



FITS AND CLEARANCES



			Design Dimension			Service Wear Limit				
Ref Letter	Mating Item No.	Item No. Dimension			Assembly Clearance		Dimension			
Fig.801	IPL Fig.	Min	Max	Min Max		Min	Max	Clearance		
	ID 75	1.124	1.126	0.000	0.007					
A	OD 25	1.120	1.122	0.002	0.006					
	ID 25	0.692	0.694	0.000	0.005					
В	OD 65	0.689	0.690	0.002	.002 0.005					
С	ID 65	0.540	0.541	0.001	0.001	0.001	0.003			
	OD 60	0.538	0.539		0.003					
D	ID 50	0.8750	0.8757	0.0000	0.0020	0.0000				
J D	OD 55 0.8757 0.8770 *[1] 0.0000	0.0000								
E	ID 50	0.692	0.694	0.002 0.005	0.000	0.005				
	OD 65	0.689	0.690		0.005					
F	ID 55	0.7488	0.7493	-0.0012	-0.0002					
Г	OD 45	0.7495	0.7500	*E13	*E13					
G	ID 75	1.124	1.126	0.002	0.006					
u u	OD 55	1.120	1.122	0.002	0.000					

*[1] INTERFERENCE FIT

ALL DIMENSIONS ARE IN INCHES

Fits and Clearances Figure 801



ILLUSTRATED PARTS LIST

- 1. This section lists and illustrated replaceable or repairable component parts. The Illustrated Parts Catalog contains a complete explanation of the Boeing part numbering system.
- 2. Indentures show parts relationships as follows:

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

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

- 3. One use code letter (A, B, C, etc.) is assigned in the EFF CODE column for each variation of top assembly. All listed parts are used on all top assemblies except when limitations are shown by use code letter opposite individual part entries.
- 4. Letter suffixes (alpha-variants) are added to item numbers for optional parts, Service Bulletin modification parts, configuration differences (except left- and right-hand parts), product improvement parts, and parts added between two sequential item numbers. The alpha-variant is not shown on illustrations when appearance and location of all variants of the part is the same.
- 5. Service Bulletin modifications are shown by the notations PRE SB XXXX and POST SB XXXX.
 - A. When a new top assembly part number is assigned by Service Bulletin, the notations appear at the top assembly level only. The configuration differences at detail part level are then shown by use code letter.
 - B. When the top assembly part number is not changed by the Service Bulletin, the notations appear at the detail part level.

6. Parts Interchangeability

Optional (OPT) The parts are optional to and interchangeable with other parts having the same item number.

Supersedes, Superseded By (SUPSDS, SUPSD BY)

The part supersedes and is not interchangeable with the original part.

Replaces, Replaced By (REPLS, REPLD BY)

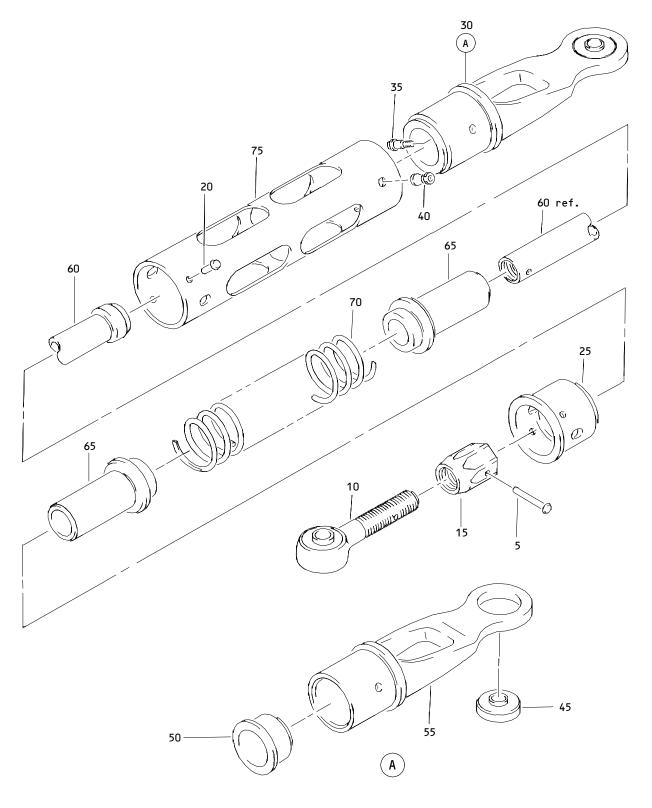
The part replaces and is interchangeable with, or is an alternate to, the original part.



<u>VENDORS</u>

09192	ALUMINUM COMPANY OF AMERICA VERNON WORKS 5151 ALCOA AVENUE VERNON, CALIFORNIA 90058
21335	TEXTRON INC FAFNIR BEARING DIVISION 37 BOOTH STREET NEW BRITAIN, CONNECTICUT 06050
38443	TRW INC BEARING DIV 402 CHANDLER STREET JAMESTOWN, NEW YORK 14701
42838	NATIONAL RIVET AND MANUFACTURING COMPANY 1-21 EAST JEFFERSON STREET WAUPUN, WISCONSIN 53963
43991	FAG BEARING INCORPORATED HAMILTON AVENUE STAMFORD, CONNECTICUT 06904
53551	ALLFAST INC. 15252 DON JULIAN ROAD PO BOX 3166 CITY OF INDUSTRY, CALIFORNIA 91744
55580	BRILES RIVET CORP 2125 SOUTH HATHAWAY STREET SANTA ANA, CALIFORNIA 92705
56878	SPS TECHNOLOGIES INC HIGHLAND AVENUE JENKINTOWN, PENNSYLVANIA 19046
73197	HI-SHEAR CORPORATION 2600 SKYPARK DRIVE TORRANCE, CALIFORNIA 90509
92215	VOI-SHAN DIV OF VSI CORP 8463 HIGUERA STREET CULVER CITY, CALIFORNIA 90230
97928	LITTON FASTENING SYSTEMS DIV OF LITTON SYSTEMS INC 3969 PARAMONT BOULEVARD LAKEWOOD, CALIFORNIA 90712





Rudder Control Yaw Damper Bias Pogo Assembly Figure 1

!

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01- -1	251T3745-1		POGO ASSY-RUD CONT YAW DAMPER BIAS		RF
5 10	MS20615-4M14 REP4M6-5FS428		.RIVET .BEARING-ROD END (V21335) (SPEC BACB10AD12)		1
15	251⊤3732−1		(OPT HHRE4M6-2 (V38443)) (OPT REP4M6-5E9171B (V21335)) NUT-ADJUSTER		1
20	BACR15BB4AD4		RIVET- (V09192) (SPEC BACR15BB4AD4) (OPT BACR15BB4AD4 (V42838)) (OPT BACR15BB4AD4 (V53551))		1 4
25	251т3727-1		(V555517) (OPT BACR15BB4AD4 (V55580)) RING-STOP		1
30	251T3746-1		.TAILSTOCK ASSY ATTACHING PARTS		1
35	HL18PB5-3		.LOCKBOLT- (V56878) (SPEC BACB30FM5-3) (OPT HL18PB5-3 (V73197)) (OPT HL18PB5-3 (V92215)) (OPT HL18PB5-3 (V97928)) (OPT 62550-5-3 (V56878))		3

ı	

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-40	HL70-5		.COLLAR- (V56878) (SPEC BACC30M5) (OPT HL70-5 (V73197)) (OPT HL70-5 (V92215)) (OPT 66014-5 (V56878))		3
45	KSP4A		*		1
50 55 60 65 70 75	251T3740-1 251T3746-2 251T3747-1 251T3730-1 251T3748-1 251T3749-1		BUSHINGTAILSTOCK .PISTON .SLIDE .SPRING-CPRSN .CASE		1 1 1 2 1