

 **BOEING**
COMPONENT
MAINTENANCE MANUAL

TO: ALL HOLDERS OF RUDDER ACTUATOR CENTER BELLCRANK ASSEMBLY
COMPONENT MAINTENANCE MANUAL 27-21-49

REVISION NO. 3 DATED SEP 01/96

HIGHLIGHTS

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

CHAPTER/SECTION
AND PAGE NO.

DESCRIPTION OF CHANGE

301	Added assembly check diagram and edited without
REPAIR 2-1	technical change.
602	
701,703	
1004,1008,1010	

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HIGHLIGHTS

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RUDDER ACTUATOR CENTER BELLCRANK ASSEMBLY

PART NUMBER 252T3116-1,-5,-6

COMPONENT MAINTENANCE MANUAL
WITH
ILLUSTRATED PARTS LIST

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REVISION RECORD

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

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

TEMPORARY REVISION AND SERVICE BULLETIN RECORD

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVE	DATE OF INCORPORATION INTO MANUAL
		PRR B10435	JUL 10/85

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TR & SB RECORD

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 COMPONENT
 MAINTENANCE MANUAL

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REVISION RECORD			REPAIR 3-1		
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2	BLANK		602	BLANK	
TR & SB RECORD			REPAIR 4-1		
1	JUL 10/85	01	601	DEC 01/95	01.1
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LIST OF EFFECTIVE PAGES			ASSEMBLY		
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2	BLANK		1003	DEC 01/95	01.1
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2	BLANK		1006	DEC 01/95	01.1
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302	JUL 10/85	01	1009	DEC 01/95	01.1
CHECK			*1010	SEP 01/96	01.1
501	DEC 01/95	01.1	*1011	SEP 01/96	01.101
502	BLANK		*1012	SEP 01/96	01.101
REPAIR-GENERAL			*1013	SEP 01/96	01.101
601	JUL 10/85	01	*1014	BLANK	
602	JUL 10/85	01			

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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 | 4. List of Effective Pages |
| 2. Record of Revisions | 5. Table of Contents |
| 3. Temporary Revision &
Service Bulletin Record | 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 in parentheses following the English units.

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

Verification:

Disassembly:

Assembly:

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INTRODUCTION

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RUDDER ACTUATOR CENTER BELLCRANK ASSEMBLY

DESCRIPTION AND OPERATION

1. The rudder actuator center bellcrank assembly consists of a matched set of override assembly and torque tube assembly. The override assembly consists of two cams mounted on a hub assembly and two spring loaded crank arm assemblies. The hub assembly and crank arm assemblies pivot around the output crank.
2. The bellcrank assembly transfers rudder input from the yaw damper summing lever to the center rudder PCA. The override assembly allows rudder control in case of jam in the actuator or linkage.
3. Leading Particulars (Approximate)

Length -- 8 inches
Width -- 7 inches
Height -- 7 inches

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DESCRIPTION & OPERATION

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DISASSEMBLY

NOTE: 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 (IPL Fig. 1)

NOTE: The following parts are recommended for replacement. Unless otherwise noted, actual replacement of parts may be based on in-service experience.

A. Nuts (25A, 45A, 95A)

B. Bolts (70, 75, 140, 150) and collars (80, 145, 155).

2. Disassembly (IPL Fig. 1)

CAUTION: OVERRIDE ASSEMBLY (30) AND TORQUE TUBE ASSEMBLY (205A) CONSTITUTE A MATCHED SET. DO NOT REPLACE INDIVIDUAL ASSEMBLY OR PERFORMANCE WILL BE ADVERSELY AFFECTED.

A. Remove bolt (5A), screws (10A) washers (15A, 20A), nut (25A) and separate override assembly (30) from torque tube assembly (205A). Tag override assembly and torque tube assembly indicating matched parts.

B. Disassemble override assembly (30).

CAUTION: CAMS (105, 110), HUB ASSEMBLY (115A), CAM FOLLOWER ARM ASSEMBLIES (175, 180) AND OUTPUT CRANK (200) CONSTITUTE A MATCHED SET AFTER ASSEMBLY. DO NOT REPLACE INDIVIDUAL PART OR PERFORMANCE WILL BE ADVERSELY AFFECTED.

(1) Bend tab of washer (40) back and slowly back off nut (45A) to release spring (55, 60, 65) force.

(2) Remove nut (45A), washer (40), bolt (55), guides (50) and springs (55, 60, 65).

(3) Remove bolt (85), washer (90A), nut (95A), bushing (100) and separate hub assembly (115A) from output crank (200).

(4) Remove bolts (150), collars (155), bushings (160) and separate follower arm assemblies (175, 180) from output crank (200).

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- (5) Remove bolts (140), collars (145), bearings (160) and bushings (170) from follower arm assemblies (175, 180).

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CHECK

1. Check all parts for obvious defects in accordance with standard industry practices.
2. Magnetic particle check the following parts (Ref IPL Fig. 1) per 20-20-01.
 - A. Guide (50)
 - B. Springs (55, 60, 65)
 - C. Cams (105, 110)
 - D. Arms (190, 195)
3. Penetrant check the following parts (Ref IPL Fig. 1) per 20-20-02.
 - A. Hub (130B)
 - B. Crank (200)
4. Check springs.
 - A. Visually examine for nicks, scratches, notches or other damage.
 - B. Check springs as shown in Fig. 501.

ITEM NUMBER (IPL FIG. 1)	TEST LENGTH (INCHES)	ALLOWABLE LOAD LIMIT (POUND)
55,55A	1.702-1.722	103-125
	1.428-1.448	145-177
55B	1.702-1.722	130-158
	1.428-1.448	183-223
60,60A	1.702-1.722	51.14-63.14
	1.428-1.448	72.65-88.65
60B	1.702-1.722	50-62
	1.428-1.448	71-87
65,65A	1.702-1.722	25.77-31.37
	1.428-1.448	36.33-44.33

Spring Check
Figure 501

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CHECK
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REPAIR GENERAL1. 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>
252T3116-2	TUBE, TORQUE	1-1
252T3164	HUB, SUPPORT	2-1
252T3166	ARM, FOLLOWER	3-1
--	MISC PARTS REFINISH	4-1

2. Standard Practices

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

20-30-02 Stripping of Protective Finishes
 20-30-03 General Cleaning Procedures
 20-41-01 Decoding Table for Boeing Finish Codes
 20-41-02 Application of Chemical and Solvent Resistant Finishes
 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)

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4. Dimensioning Symbols

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

—	STRAIGHTNESS	\oplus	THEORETICAL EXACT POSITION OF A FEATURE (TRUE POSITION)
\square	FLATNESS	\varnothing	DIAMETER
\perp	PERPENDICULARITY (OR SQUARENESS)	BASIC (BSC) OR	A THEORETICALLY EXACT DIMENSION USED TO DESCRIBE SIZE, SHAPE OR LOCATION OF A FEATURE FROM WHICH PERMISSIBLE VARIATIONS ARE ESTABLISHED BY TOLERANCES ON OTHER DIMENSIONS OR NOTES.
//	PARALLELISM	DIM	
\bigcirc	ROUNDNESS	-A-	DATUM
\bigcirc	CYLINDRICITY	\textcircled{M}	MAXIMUM MATERIAL CONDITION (MMC)
\frown	PROFILE OF A LINE	\textcircled{S}	REGARDLESS OF FEATURE SIZE (RFS)
\triangle	PROFILE OF A SURFACE	\textcircled{P}	PROJECTED TOLERANCE ZONE
\odot	CONCENTRICITY		
\equiv	SYMMETRY		
\sphericalangle	ANGULARITY		
\nearrow	RUNOUT		

EXAMPLES

$\text{—} \quad 0.002$	STRAIGHT WITHIN 0.002	$\textcircled{\odot} \text{ C } \varnothing \quad 0.0005$	CONCENTRIC TO C WITHIN 0.0005 DIAMETER (FULL INDICATOR MOVEMENT)
$\perp \text{ B } \quad 0.002$	PERPENDICULAR TO B WITHIN 0.002	$\equiv \text{ A } \quad 0.010$	SYMMETRICAL WITH A WITHIN 0.010
$\parallel \text{ A } \quad 0.002$	PARALLEL TO A WITHIN 0.002	$\sphericalangle \text{ A } \quad 0.005$	ANGULAR TOLERANCE 0.005 WITH A
$\bigcirc \quad 0.002$	ROUND WITHIN 0.002	$\oplus \text{ B } \varnothing \quad 0.002 \textcircled{S}$	LOCATED AT TRUE POSITION WITHIN 0.002 DIA IN RELATION TO DATUM B, REGARDLESS OF FEATURE SIZE
$\bigcirc \quad 0.010$	CYLINDRICAL SURFACE MUST LIE BETWEEN TWO CONCENTRIC CYLINDERS, ONE OF WHICH HAS A RADIUS 0.010 INCH GREATER THAN THE OTHER	$\perp \text{ A } \varnothing \quad 0.010 \textcircled{M}$ $0.510 \textcircled{P}$	AXIS IS TOTALLY WITHIN A CYLINDER OF 0.010-INCH DIAMETER, PERPENDICULAR TO, AND EXTENDING 0.510-INCH ABOVE, DATUM A, MAXIMUM MATERIAL CONDITION
$\frown \text{ A } \quad 0.006$	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	2.000	EXACT DIMENSION IS 2.000
$\triangle \text{ A } \quad 0.020$	SURFACES MUST LIE WITHIN PARALLEL BOUNDARIES 0.02 INCH APART AND EQUALLY DISPOSED ABOUT TRUE PROFILE	OR 2.000 BSC	

True Position Dimensioning Symbols
Figure 601

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REPAIR-GENERAL

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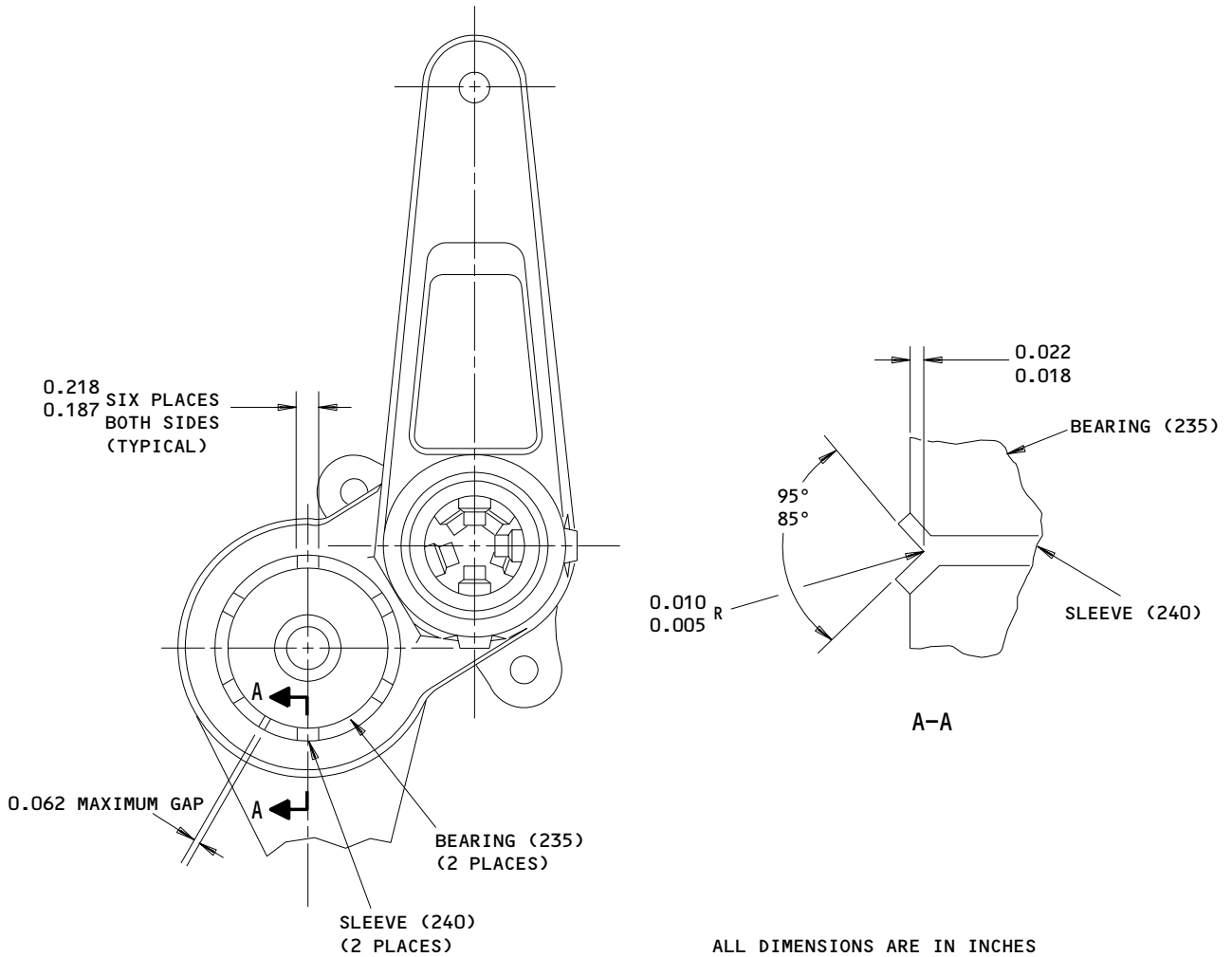
TORQUE TUBE ASSEMBLY - REPAIR 1-1

252T3116-4

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

1. Bearing Replacement (Fig. 601)

- A. Remove bearing (235) and sleeve (240).
- B. Install replacement bearing and sleeve with wet sealant and line stake per 20-50-03. Stake sleeve at 6 places equally spaced on both sides.



Bearing Replacement
 Figure 601

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SUPPORT HUB ASSEMBLY – REPAIR 2-1

252T3164-5

NOTE: 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 instruction, Fig. 601.

1. Bushing Replacement (Fig. 601)

- A. Remove bushing.
- B. Install replacement bushing using shrink fit method per 20-50-03 except use wet sealant.
- C. Machine bushing I.D. to dimension and finish shown.
- D. Fillet seal bushing flange with wet sealant.

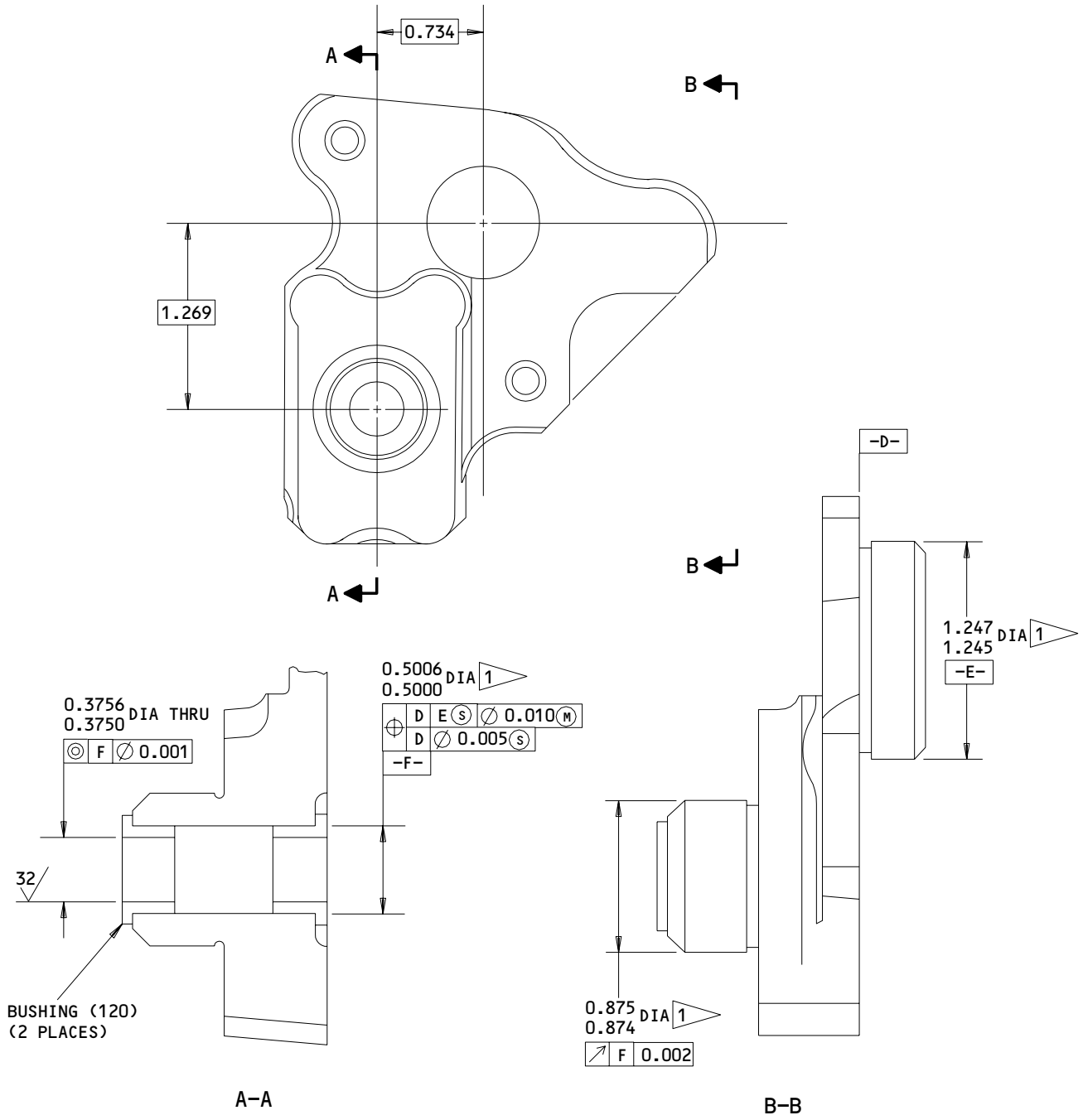
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REFINISH
 HUB (130B)--CHROMIC ACID ANODIZE (F-17.04) AND APPLY 2 COATS OF PRIMER (F-20.03) ALL OVER EXCEPT AS NOTED
 1 OMIT PRIMER THIS SURFACE

125 ALL MACHINED SURFACES EXCEPT AS NOTED
 MATERIAL: AL ALLOY
 ALL DIMENSIONS ARE IN INCHES

Bushing Replacement and Hub Refinish
 Figure 601



FOLLOWER ARM ASSEMBLY - REPAIR 3-1

252T3166-1,-2

NOTE: 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 instruction.

1. Bushing Replacement

- A. Remove bushing.
- B. Install replacement bushing using shrink fit method per 20-50-03 except use wet sealant.
- C. Fillet seal bushing flange with sealant.

2. Refinish

- A. Arm (190, 195) -- Cadmium plate and apply 1 coat of primer (F-16.01) all over except no plating or primer in 0.1900-0.1905, 0.3138-0.3143 and 0.5000-0.5006 diameter holes. Plating throw-in allowed in holes.
Material: Al alloy.

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REPAIR 3-1

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MISCELLANEOUS PARTS REFINISH – REPAIR 4-1

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

IPL FIG. & ITEM	MATERIAL	FINISH
<u>Fig. 1</u>		
Guide (50)	15-5PH CRES, 150-170 ksi	Cadmium plate and apply 1 coat of primer (F-16.01) all over except omit primer in 0.2500-0.2505 diameter hole.
Springs (55,60,65)	17-7PH CRES wire	Passivate (F-17.09) all over.
Springs (55A,60A, 60B,65A)	Titanium alloy	Apply F-21.14 to outside diameter of all coils. Color black. Top coat thickness .004-.008 inch. Apply F-21.14 to each ground end surface of spring. Finish color black. Top coat thickness .004-.008 inch.
Cams (105,110)	15-5PH CRES, 180-200 ksi	Cadmium plate and apply 1 coat of primer (F-16.01) except no plating or primer on cam profile and no primer in 0.876-0.877 diameter hole.
Output crank (200)	Al alloy	Chromic acid anodize (F-17.04) all over and apply 2 coats of primer (F-20.03) except omit primer in 0.2500-0.2505 and 0.3750-0.3756 diameter holes.

Refinish Details
Figure 601

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REPAIR 4-1

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ASSEMBLY1. Materials

NOTE: Equivalent substitutes may be used.

A. Sealant -- BMS 5-95 (Ref 20-60-04)

B. Grease -- BMS 3-24 (Ref 20-60-02)

2. Assembly (IPL Fig. 1)

A. Assemble override assembly (30).

CAUTION: CAMS (105, 100), ARM ASSEMBLIES (175, 180), HUB ASSEMBLY (115A) AND OUTPUT CRANK (200) CONSTITUTE A MATCHED SET. DO NOT REPLACE INDIVIDUAL PART.

- (1) Check that cams (105, 110), hub assembly (115A), arm assemblies (175, 180) and output crank (200) are parts of a matched set.
- (2) Install bolts (140), bearings (160), bushings (170) and collars (145) on arm assemblies (175, 180). Install bushings (170) with grease.
- (3) Position arm assemblies (175, 180) on output crank (200) and secure with bolts (150), bushings (165) and collars (155).
- (4) Assemble cams (105, 110) and hub assembly (115A) with wet sealant on faying surfaces. Secure cams with bolts (70, 75) and collars (80). Install fasteners with wet sealant.
- (5) Position hub assembly (115A) with attached cam (105, 110) on output crank (200) and secure bolt (85), washer (90A), nut (95A) and bushing (100). Install bushing with grease.

CAUTION: INSTALL SPRINGS WITH PROPER TOOLS. NEVER USE PLIERS, VICE GRIPS OR OTHER TOOLS THAT MAY CAUSE DAMAGE.

- (6) Install springs (55, 60, 65) guides (50) and secure with bolt (35), washer (40), nut (45A). Tighten nut (45A) to obtain 3.90-4.50 inches dim between guides.

CAUTION: TORQUE TUBE ASSEMBLY (205) AND OVERRIDE ASSEMBLY (30) CONSTITUTE A MATCHED SET AFTER ASSEMBLY. DO NOT REPLACE INDIVIDUAL PART.

B. Secure override assembly (30) to torque tube assembly (205A) with bolt (5A), screws (10A), washers (15A, 20A) and nut (25A). Install bolt (5A) with wet sealant.

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C. Assembly adjustment (Fig. 701)

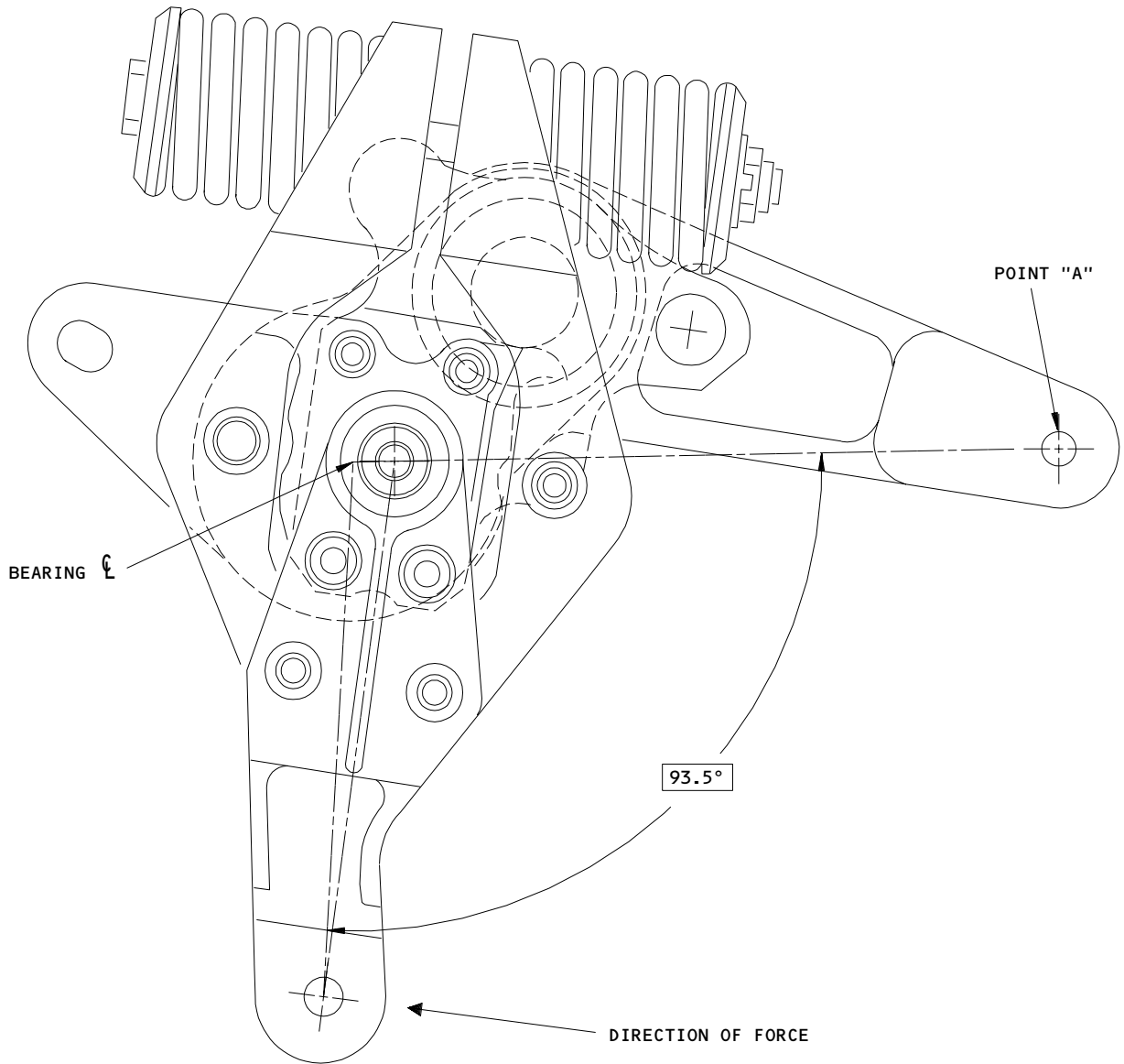
- (1) Support assembly at bearings (235) centerline and at point A indicated.
- (2) Adjust spring length to obtain a breakout force of 129.5–139.5 pounds applied to output crank (200) in the direction indicated.
- (3) After the adjustment is completed, bend up tab of washer (40) to the nearest flat of nut (45A).

3. Store this component using standard industry practices.

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Assembly Check Diagram
Figure 701

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ILLUSTRATED PARTS LIST

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

2. Indentures show parts relationships as follows:

Assembly

Detail Parts for Assembly

Subassembly

Attaching Parts for Subassembly

Detail Parts for Subassembly

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

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

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

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

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

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

6. Parts Interchangeability

Optional
(OPT)

The parts are optional to and interchangeable with other parts having the same item number.

Supersedes, Superseded By
(SUPSDS, SUPSD BY)

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

Replaces, Replaced By
(REPLS, REPLD BY)

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

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VENDORS

08524 DEUTSCH FASTENER CORP SEE CODE V97928

11815 CHERRY AEROSPACE FASTENERS DIV OF TEXTRON
1224 EAST WARNER AVENUE PO BOX 2157
SANTA ANA, CALIFORNIA 92707-0157

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

17446 HUCK MFG CO GOV CONTRACTS LOS ANGELES DIV SUB OF FED-MOGUL
900 WATSON CENTER ROAD
CARSON, CALIFORNIA 90745

21335 TORRINGTON CO FAFNIR BEARING DIV
59 FIELD STREET
TORRINGTON, CONNECTICUT 06790-4942

38443 MRC BEARINGS
402 CHANDLER STREET
JAMESTOWN, NEW YORK 14701-3802

52828 REPUBLIC FASTENER MFG CORP
1300 RANCHO CONEJO BLVD
NEWBURY PARK, CALIFORNIA 91320-1405

56878 SPS TECHNOLOGIES INC AEROSPACE AND INDUSTRIAL PRODUCTS DIV
HIGHLAND AVENUE
JENKINTOWN, PENNSYLVANIA 19046

60380 TORRINGTON CO BEARINGS DIV SUBSIDIARY OF INGERSOLL-RAND CORP
59 FIELD STREET PO BOX 1008
TORRINGTON, CONNECTICUT 06790-4942

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

71087 BOOTS ACFT NUT DIV TOWNSEND CO SEE TEXTRON INC CHERRY
FASTENER TOWNSEND DIV V11815

72962 ELASTIC STOP NUT A DIV OF HARTFORD INDUSTRIES INC
2330 VAUXHALL ROAD
UNION, NEW JERSEY 07083-5038

73197 HI-SHEAR TECHNOLOGY CORP
2600 SKYPARK DRIVE
TORRANCE, CALIFORNIA 90509

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**BOEING**
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80539 SPS TECHNOLOGIES INC AEROSPACE PRODUCTS DIV
2701 SOUTH HARBOR BOULEVARD PO BOX 1259
SANTA ANA, CALIFORNIA 92702-1259

83086 NEW HAMPSHIRE BALL BEARINGS, INCORPORATED
ROUTE 202
PETERBOROUGH, NEW HAMPSHIRE 03458

92215 FAIRCHILD IND INC FAIRCHILD AEROSP FASTNR DIV DESIGN & ENGRG
3000 WEST LOMITA BLVD
TORRANCE, CALIFORNIA 90505-5102

92563 MCGILL MFG CO INC BEARINGS DIV
909 LAFAYETTE STREET
VALPARAISO, INDIANA 46383-4210

97928 DEUTSCH FASTENER CORP
3969 PARAMONT BOULEVARD
LAKEWOOD, CALIFORNIA 90712-4193

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PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
ATF3		1	160	2
BACB10CA6		1	235	2
BACB10ET03		1	160	2
BACB28AK04-144		1	100	1
		1	165	2
BACB28W6B025		1	120	2
		1	185A	4
BACB30FN6-14		1	140	2
BACB30GY6-14		1	70	1
BACB30GY6-15		1	75	3
BACB30LU4-25		1	85	1
BACB30NN4K25		1	85A	1
BACB30NN4K7		1	5A	1
BACB30NT3K3		1	10A	2
BACB30TZ8K26		1	150	2
BACC30BE8		1	155	2
BACC30K6		1	80	4
BACC30M6		1	145	2
BACN10JC4		1	95	1
BACN10JC4CM		1	45A	1
BACN10YR4CD		1	25A	1
BACN10YR4CD		1	95A	1
BRH10A4		1	95	1
DSP6		1	235	2
DSP6FS428		1	235	2
DSP65D610		1	235	2
HHDSP6		1	235	2
HL19BB6-14		1	140	2
HL19PB6-14		1	140	2
HL79-6		1	145	2
H01-4BAC		1	45A	1
H52732-4CD		1	25A	1
MS21141-0606P		1	210B	20
MS21209F1-10P		1	125	2
MS27111-1		1	40	1
NAS1149D0363J		1	20A	2
NAS1149D0463J		1	15A	1
NAS1149F0432P		1	90A	1
NAS77-3-28		1	170	2
NS202101-048		1	95	1
NS202101SE048		1	45A	1

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PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
PLH54CD		1	25A	1
RMLH9075-4W		1	95	1
SAL100YT6-14		1	70	1
SAL100YT6-15		1	75	3
T6C428JM		1	45A	1
T6S428J		1	95	1
VN303A048		1	95	1
VN303D048		1	45A	1
109LH9075-4W		1	45A	1
2DCC6		1	80	4
2SC3C08		1	155	2
252T3116-1		1	1	RF
252T3116-3		1	245	1
252T3116-4		1	205A	1
252T3116-5		1	1A	RF
252T3116-6		1	1B	RF
252T3118-1		1	30	1
252T3118-2		1	135	1
252T3118-3		1	30A	1
252T3118-4		1	30B	1
252T3140-1		1	105	1
252T3140-2		1	110	1
252T3141-1		1	55	2
252T3141-2		1	55A	2
252T3141-3		1	55B	2
252T3142-1		1	60	2
252T3142-2		1	60A	2
252T3142-3		1	60B	2
252T3143-1		1	65	2
252T3143-2		1	65A	2
252T3144-1		1	50	2
252T3144-2		1	50A	2
252T3145-1		1	35	1
252T3152-7		1	250	1
252T3152-8		1	255	1

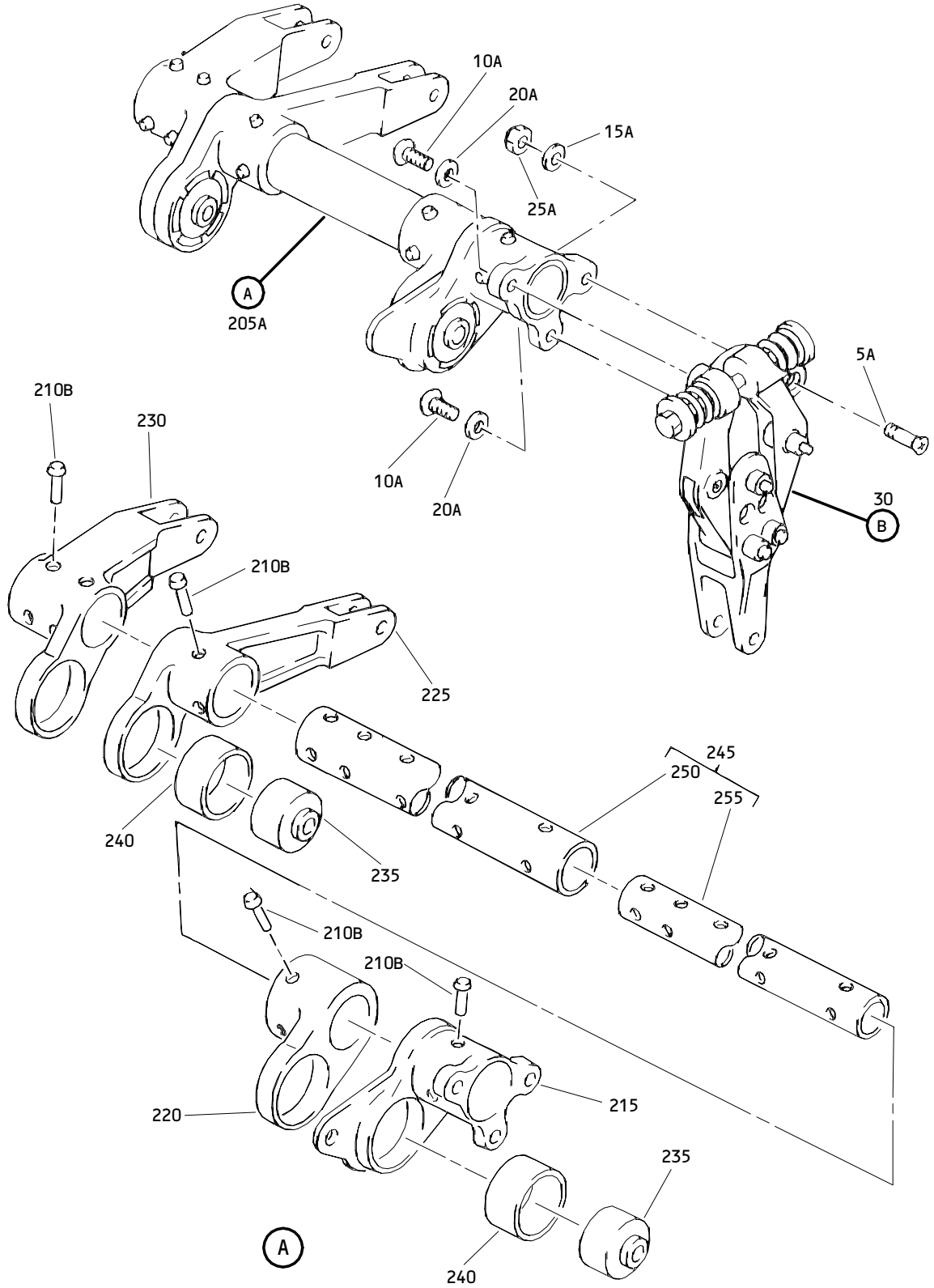
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PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
252T3161-2		1	240	2
252T3162-1		1	215	1
252T3164-5		1	115A	1
252T3164-6		1	130B	1
252T3164-7		1	130C	1
252T3165-1		1	200	1
252T3165-3		1	200A	1
252T3166-1		1	175	1
252T3166-2		1	180	1
252T3166-3		1	190	1
252T3166-4		1	195	1
252T3166-7		1	190A	1
252T3166-8		1	195A	1
252T3176-5		1	230	1
252T3179-1		1	220	1
252T3180-5		1	225	1
252T3180-6		1	225A	1
3AFC512		1	160	2
62547-6-14		1	140	2
66014-6		1	145	2
96-048		1	95	1
97E48		1	45A	1

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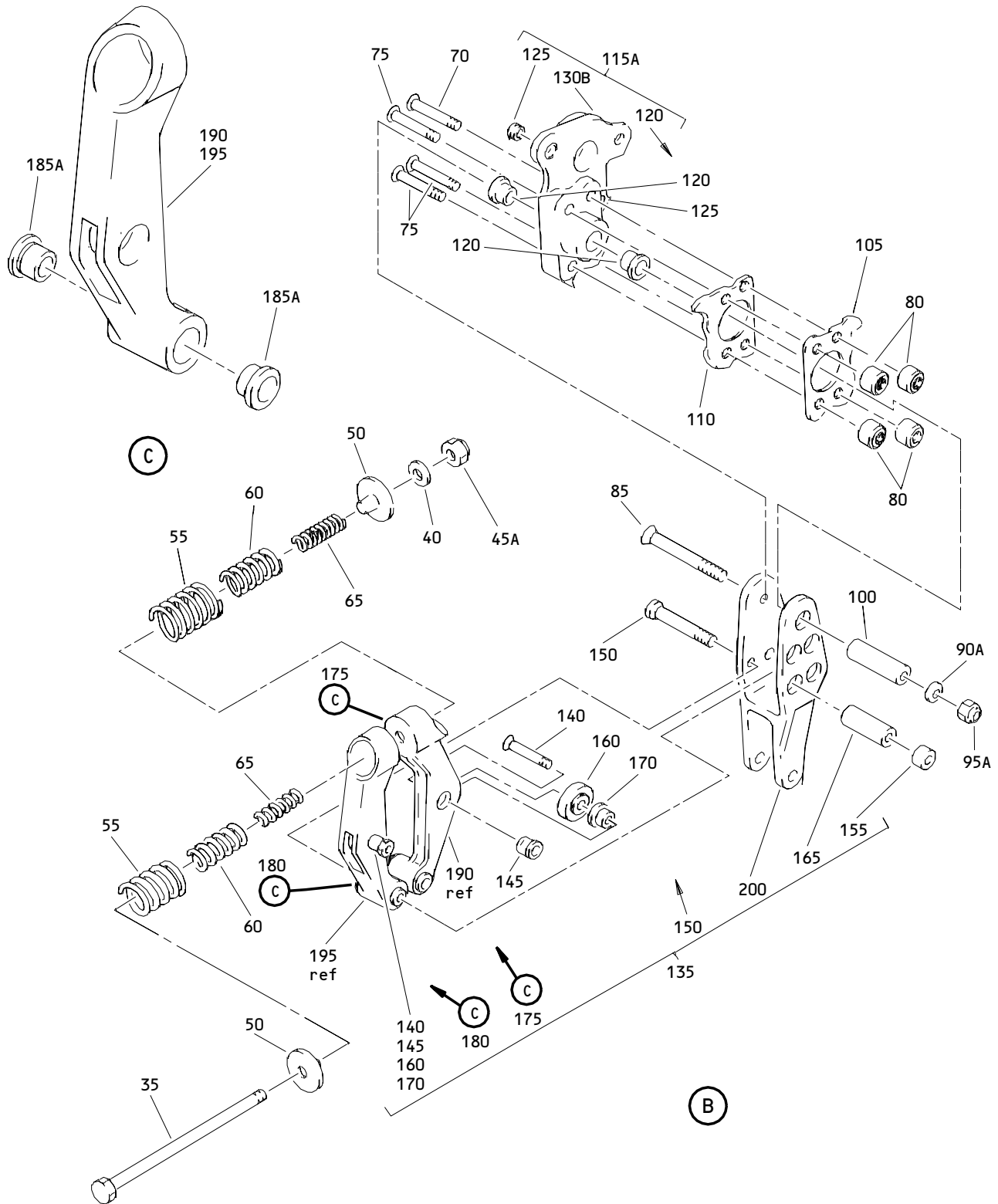
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Rudder Actuator Center Bellcrank Assembly
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Rudder Actuator Center Bellcrank Assembly
Figure 1 (Sheet 2)

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01- -1	252T3116-1		BELLCRANK ASSY-RUD ACTUATOR CTR	A	RF
-1A	252T3116-5		BELLCRANK ASSY-RUD ACTUATOR CTR	B	RF
-1B	252T3116-6		BELLCRANK ASSY-RUD ACTUATOR CTR	C	RF
5	BACB30LU4-7		DELETED		
5A	BACB30NN4K7		.BOLT		1
10	NAS623-3-3		DELETED		
10A	BACB30NT3K3		.BOLT		2
15	AN960PD416		DELETED		
15A	NAS1149D0463J		.WASHER		1
20	AN960PD10		DELETED		
20A	NAS1149D0363J		.WASHER		2
25	H10-4BAC		DELETED		
25A	H52732-4CD		.NUT- (V15653) (SPEC BACN10YR4CD) (OPT PLH54CD (V62554))		1
30	252T3118-1		.OVERRIDE ASSY-DUAL CAM (MATCHED SET)	A	1
-30A	252T3118-3		.OVERRIDE ASSY-DUAL CAM (MATCHED SET)	B	1
-30B	252T3118-4		.OVERRIDE ASSY-DUAL CAM (MATCHED SET)	C	1
35	252T3145-1		..BOLT		1
40	MS27111-1		..WASHER		1
45	H10-4BAC		DELETED		
45A	H01-4BAC		..NUT- (V15653) (SPEC BACN10JC4CM) (OPT NS202101SE048 (V80539)) (OPT T6C428JM (V11815)) (OPT VN303D048 (V92215)) (OPT 109LH9075-4W (V72962)) (OPT 97E48 (V80539))	A	1

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
50	252T3144-1		..GUIDE	A,B	2
-50A	252T3144-2		..GUIDE	C	2
55	252T3141-1		..SPRING-OUTER	A	2
-55A	252T3141-2		..SPRING-OUTER	B	2
-55B	252T3141-3		..SPRING-OUTER	C	2
60	252T3142-1		..SPRING-MIDDLE	A	2
-60A	252T3142-2		..SPRING-MIDDLE	B	2
-60B	252T3142-3		..SPRING-MIDDLE	C	2
65	252T3143-1		..SPRING-INNER	A	2
-65A	252T3143-2		..SPRING-INNER	B	2
70	SAL100YT6-14		..BOLT- (V11815) (SPEC BACB30GY6-14) (OPT SAL100YT6-14 (V17446))		1
75	SAL100YT6-15		..BOLT- (V11815) (SPEC BACB30GY6-15) (OPT SAL100YT6-15 (V17446))		3
80	2DCC6		..COLLAR- (V11815) (SPEC BACC30K6) (OPT 2DCC6 (V17446))		4
85	BACB30LU4-25		..BOLT	A,B	1
-85A	BACB30NN4K25		..BOLT	C	1
90	AN960-416L		DELETED		
90A	NAS1149F0432P		..WASHER	A,B,C	1
95	BACN10JC4		DELETED		
95A	BACN10YR4CD		..NUT-	A,B,C	1

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
100	BACB28AK04-144		..BUSHING		1
105	252T3140-1		..CAM-(MATCHED SET)		1
110	252T3140-2		..CAM-(MATCHED SET)		1
115	252T3164-1		DELETED		
115A	252T3164-5		..HUB ASSY-SPRT (MATCHED SET)		1
120	BACB28W6B025		...BUSHING		2
125	MS21209F1-10P		...INSERT		2
130	252T3164-2		DELETED		
-130A	252T3164-4		DELETED		
130B	252T3164-6		...HUB- (OPT ITEM 130C)		1
-130C	252T3164-7		...HUB- (OPT ITEM 130B)		1
135	252T3118-2		..ARM ASSY-CRANK		1
140	HL19PB6-14		...BOLT- (V56878) (SPEC BACB30FN6-14) (OPT HL19PB6-14 (V73197)) (OPT HL19PB6-14 (V92215)) (OPT HL19PB6-14 (V97928)) (OPT 62547-6-14 (V56878)) (OPT HL19BB6-14 (V80539)) (OPT HL19PB6-14 (V08524))		2

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-145	HL79-6		...COLLAR- (V56878) (SPEC BACC30M6) (OPT HL79-6 (V73197)) (OPT HL79-6 (V92215)) (OPT 66014-6 (V56878))		2
150	BACB30TZ8K26		...BOLT		2
155	2SC3C08		...COLLAR- (V17446) (SPEC BACC30BE8) (OPT 2SC3C08 (V92215))		2
160	ATF3		...BEARING- (V60380) (SPEC BACB10ET03) (OPT 3AFC512 (V92563))		2
165	BACB28AK04-144		...BUSHING		2
170	NAS77-3-28		...BUSHING		2
175	252T3166-1		...ARM ASSY-FOLLOWER (MATCHED SET)		1
180	252T3166-2		...ARM ASSY-FOLLOWER (MATCHED SET)		1
185	BACB28X6M025		DELETED		
185A	BACB28W6B025	BUSHING		2
190	252T3166-3	ARM- (OPT ITEM 190A) (USED ON ITEM 175)		1
-190A	252T3166-7	ARM- (OPT ITEM 190) (USED ON ITEM 175)		1
195	252T3166-4	ARM- (OPT ITEM 195A) (USED ON ITEM 180)		1
-195A	252T3166-8	ARM- (OPT ITEM 195) (USED ON ITEM 180)		1

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01- 200	252T3165-1		...CRANK-OUTPUT (MATCHED SET) (OPT ITEM 200A)		1
-200A	252T3165-3		...CRANK-OUTPUT (MATCHED SET) (OPT ITEM 200)		1
205	252T3116-2		DELETED		
205A	252T3116-4		.TUBE ASSY-TORQUE (MATCHED SET)		1
210	MS90354-0603		DELETED		
-210A	MS90354S0603		DELETED		
210B	MS21141-0606P		..FASTENER-BLIND		20
215	252T3162-1		..BOSS		1
220	252T3179-1		..LEVER		1
225	252T3180-5		..LEVER- (OPT ITEM 225A)		1
-225A	252T3180-6		..LEVER- (OPT ITEM 225)		1
230	252T3176-5		..LEVER		1
235	DSP6		..BEARING- (V38443) (SPEC BACB10CA6) (OPT DSP6FS428 (V21335)) (OPT HHDSP6 (V38443)) (OPT DSP65D610 (V83086))		2
240	252T3161-2		..SLEEVE		2
245	252T3116-3		..TUBE ASSY (MATCHED SET)		1
250	252T3152-7		...TUBE		1
255	252T3152-8		...TUBE		1

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