



OVERHAUL MANUAL

TO: ALL HOLDERS OF RUDDER CONTROL JACKSHAFT ASSEMBLY OVERHAUL MANUAL, 27-24-02

REVISION NO. 3, DATED MAR 1/96

HIGHLIGHTS

DESCRIPTION OF CHANGE	TOPICS AFFECTED												
	D & O	D / A s s y	C l e a n i n g	I n s p / C h k	R e p a i r	A s s y	F / C	T e s t	T / S h o o t i n g	S / T o o l s	S t o r a g e	I P L	L / O v e r h a u l
Added BACR15FT8AD Rivet optional to BACR15BB8B Rivet												X	

# RUDDER CONTROL JACKSHAFT ASSEMBLY

## 27-24-02

BOEING P/N 5-97613-3009 thru -3014, -3017 thru -3020

AIRLINE P/N

THE FOLLOWING DIRECTIVES APPLY TO THIS SUBJECT:

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVES	DATE DIRECTIVE INCORPORATED INTO TEXT
		PRR 23815-2 PRR 32456	May 10/77 May 10/77

OVERHAUL MANUAL

LIST OF EFFECTIVE PAGES

\* Indicates pages revised, added or deleted in latest revision  
 F Indicates foldout pages - print one side only

PAGE	DATE	PAGE	DATE	PAGE	DATE
27-24-02					
T-1	Dec 5/86				
T-2	BLANK				
* LEP-1	Mar 1/96				
LEP-2	BLANK				
T/C-1	May 10/77				
T/C-2	BLANK				
1	May 10/77				
2	May 10/77				
3	May 10/77				
4	May 10/77				
5	BLANK				
6	May 10/77				
* 7	Mar 1/96				
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**BOEING**   
**COMMERCIAL JET**  
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\*[1] Special instructions not required, use standard industry practices.

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1. DESCRIPTION AND OPERATION

A. The jackshaft assembly consists of a shaft assembly, screw assembly, quadrant, yoke and a universal joint. Movement of pushrods from the rudder pedals to the yoke rotates the shaft assembly and quadrant which transmits motion through cables for rudder control. Rotation of the screw assembly positions the yoke for rudder pedal adjustment.

## B. Leading Particulars (Approximate)

Weight -- 8.6 pounds  
 Length -- 19.1 inches  
 Width -- 12.56 inches  
 Height -- 9.2 inches

2. DISASSEMBLY (Fig. 3)

A. Remove cotter pin (1), nut (2), and retainer ring (3).

B. Unscrew shaft (10) from nut (11) in yoke (12) and remove bearing (4) and screw assembly (5) from shaft assembly (14).

C. Remove nut (11) from yoke (12) and remove yoke from shaft assembly.

NOTE: Do not remove parts (6 thru 9), sleeves (15), or separate quadrant (13) from shaft assembly (14) unless necessary for repair or replacement.

3. DELETED4. INSPECTION/CHECK

A. Check all parts for obvious defects in accordance with standard industry practices.

B. Penetrant examine yoke (12), shaft (16), and quadrant per 20-20-02.

C. Magnetic particle examine screw (10) per 20-20-01.

D. Check that sliding surfaces of nut (11), yoke (12), and shaft (16) are undamaged and that dry lubricant finish is uniform and not worn through.

5. REPAIR

## A. Refinish

NOTE: Repair consists of restoration of original finish. Refer to 20-30-02 for stripping of protective finishes and to 20-41-01 for explanation of F and SRF finish codes.

(1) Screw (10), nut (11), yoke (12), shaft assy (14) -- See Fig. 1.

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5-97613

B. Replacement

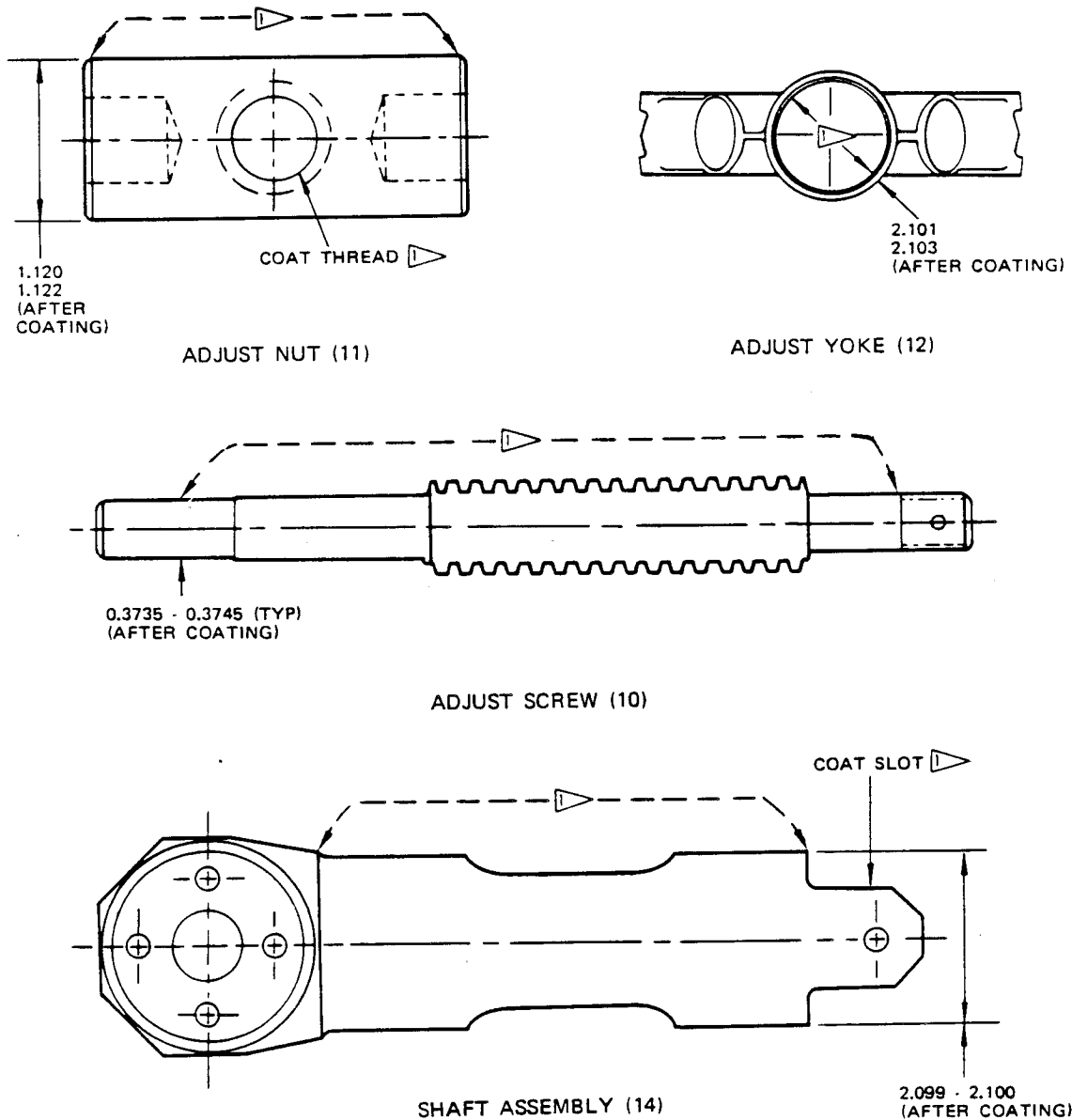
- (1) Quadrant (13), shaft (16) -- Assemble replacement parts and rivet in place as shown in Fig. 2.
- (2) Universal joint (7), screw (10), bearing (9) -- Remove rivet (6A) and parts from screw (10). Apply light coating of grease to parts, install on screw, and secure with rivet (6A).


6. ASSEMBLY (Fig. 3)

- A. Slide yoke (12) over shaft assembly (14).
- B. Pack universal joint (7) one-third full of grease, MIL-G-23827. Apply thin coating of oil, MIL-L-7870 to threaded portions of screw (10) and nut (11).
- C. Install nut (11) in yoke (12). Insert screw assembly (5) through hole in shaft (14) and rotate through nut (11).
- D. Press bearing (4) over end of screw (10). Install retainer ring (3).
- E. Install nut (2), tighten to 160-390 lb-in. and install cotter pin (1).
- F. Check that yoke (12) moves smoothly through entire range of travel when screw assembly (5) is rotated at universal joint (7).

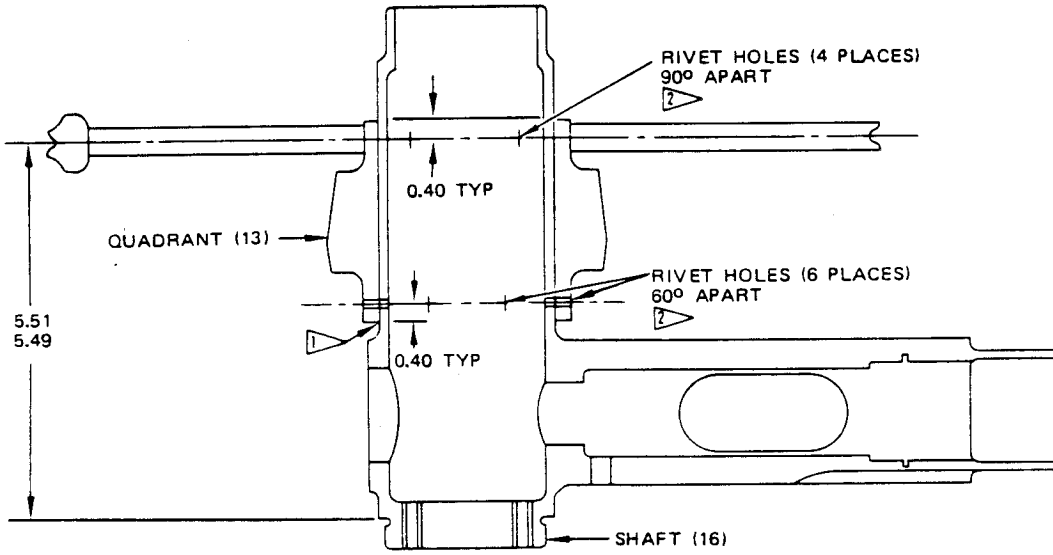
7. THRU 11. DELETED

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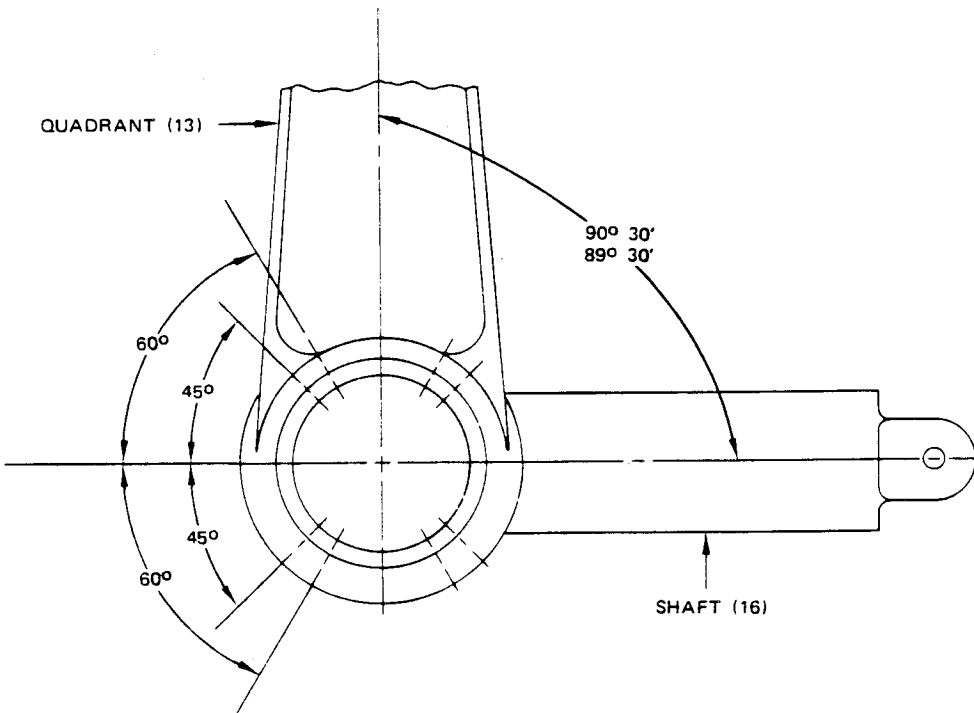


 DRI FILM LUBRICANT  
BMS 3-8, CLASS A

Refinish Diagram  
Figure 1



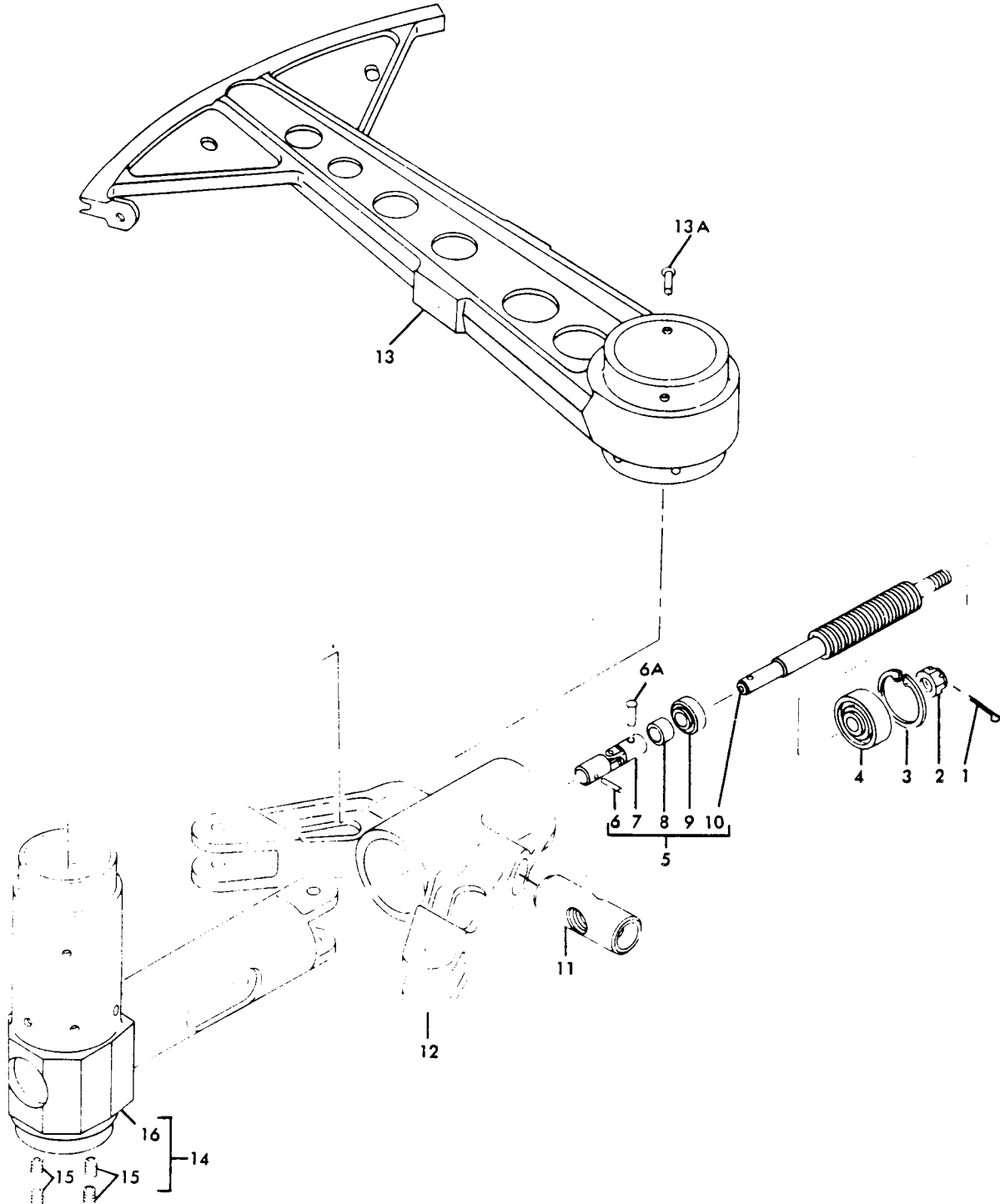
- 1 ▽ APPLY PRIMER, BMS 10-11, TYPE 1 TO MATING SURFACES
- 2 ▽ INSTALL BACR15BB-8B RIVET WITH PRIMER, BMS 10-11, TYPE 1



Quadrant/Shaft Replacement  
 Figure 2



12. ILLUSTRATED PARTS LIST



Rudder Control Jackshaft Assembly  
Figure 3

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FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE							USE CODE	QTY PER ASSY
			1	2	3	4	5	6	7		
3-	5-97613-3009		JACKSHAFT ASSY, RUDDER CONTROL (LH)							A	RF
	5-97613-3010		JACKSHAFT ASSY, RUDDER CONTROL (RH)							B	RF
	5-97613-3011		JACKSHAFT ASSY, RUDDER CONTROL (LH)							C	RF
	5-97613-3012		JACKSHAFT ASSY, RUDDER CONTROL (RH)							D	RF
	5-97613-3013		JACKSHAFT ASSY, RUDDER CONTROL (LH)							E	RF
	5-97613-3014		JACKSHAFT ASSY, RUDDER CONTROL (RH)							F	RF
	5-97613-3017		JACKSHAFT ASSY, RUDDER CONTROL (LH)							G	RF
	5-97613-3018		JACKSHAFT ASSY, RUDDER CONTROL (RH)							H	RF
	5-97613-3019		JACKSHAFT ASSY, RUDDER CONTROL (LH)							I	RF
	5-97613-3020		JACKSHAFT ASSY, RUDDER CONTROL (RH)							J	RF
1	MS24665-283		. PIN, COTTER								1
1	AN380-3-3		DELETED								
2	BACN10JD6		. NUT								1
2	AN310-6		DELETED								
3	MS16625-143		. RING, RETAINER								1
4	BACB10A691		DELETED								
4	BACB10BY6		. BEARING								1
5	5-97613-3		. SCREW ASSY							A-D	1
5	5-97613-3015		. SCREW ASSY							E-H	1
5	5-97613-3021		. SCREW ASSY							IJ	1
6	BACP18L6P0562		. . PIN, SPRING								1
6A	NAS508M4		DELETED								
6A	MS20615-4M		. . RIVET								1
7	MS20270B8		. . JOINT, UNIVERSAL								1
8	NAS42HT12-21		. . SPACER							E-J	1
8	NAS42-12-21		. . SPACER							A-D	1
9	BACB10A543		DELETED								
9	BACB10BX6		. . BEARING								1
10	6-58994-2		. . SCREW, ADJUSTMENT (PREF)							A-J	1
10	6-58994		. . SCREW, ADJUSTMENT (OPT)							A-D	1
10	6-58994-1		. . SCREW, ADJUSTMENT (OPT)							E-H	1
11	6-58995		. NUT								1
12	65-7208		. YOKE								1
13	65C10041-1		. QUADRANT							ACEGI	1
13	65C10041-2		. QUADRANT							BDFHJ	1
13	65-24103-1		. QUADRANT (OPT)							ACE	1
13	65-24103-2		. QUADRANT (OPT)							BDF	1
13	65-24103-7		. QUADRANT (OPT)							ACE	1
13	65-24103-8		. QUADRANT (OPT)							BDF	1
13A	MS20470B8		DELETED								
13A	BACR15BB8B		. RIVET								10
13A	BACR15FT8AD		. RIVET (OPT)							G-J	10
14	5-63067-2		. SHAFT ASSY								1
15	BACS13P3CN4		. . SLEEVE								4
16	50-6393-2		. . SHAFT								1