

OVERHAUL MANUAL

TO: ALL HOLDERS OF AIR MANIFOLD ASSEMBLY OVERHAUL MANUAL, 29-13-31

REVISION NO. 4, DATED MAR 5/93

HIGHLIGHTS

DESCRIPTION OF CHANGE	TOPICS AFFECTED												
	D & O	D / Assy	Cleaning	Inspect/Chk	Repair	Assy	F/C	Test	T/Shooting	S/Tools	Storage	IPL	L/Overhaul
Added top assembly 65-44699-9 per PRR 34334 with new cap 69B83900-2												X	
Revised Fig. 1 illustration	X												
Deleted MS 21916-6-4 reducer, and added a MS21902D6 union												X	

# AIR MANIFOLD ASSEMBLY

## 29-13-31

BOEING P/N 65-44699-2, -5, -9

AIRLINE P/N

---

THE FOLLOWING DIRECTIVES APPLY TO THIS SUBJECT:

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVES	DATE DIRECTIVE INCORPORATED INTO TEXT
29-1037 (737)		PRR 32910 PRR 34334	Jul 5/81 Mar 5/93

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
29-13-31					
* T-1	Mar 5/93				
T-2	BLANK				
* LEP-1	Mar 5/93				
LEP-2	BLANK				
T/C-1	Jul 5/81				
T/C-2	BLANK				
* 1	Mar 5/93				
* 2	Mar 5/93				
* 3	Mar 5/93				
* 4	Mar 5/93				
5	Jul 5/81				
* 6	Mar 5/93				
* 7	Mar 5/93				
8	BLANK				

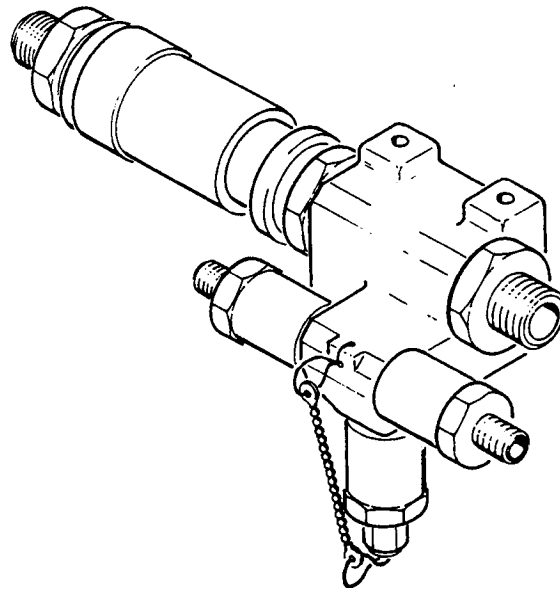
**BOEING**   
**COMMERCIAL JET**  
**OVERHAUL MANUAL**

TABLE OF CONTENTS

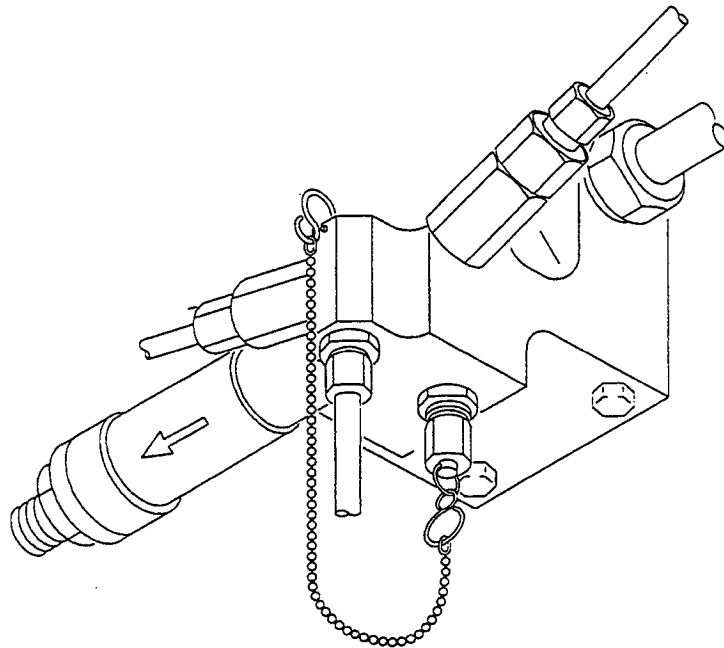
<u>Paragraph Title</u>	<u>Page</u>
Description and Operation . . . . .	2
Disassembly . . . . .	2
Cleaning. . . . .	2
Inspection/Check. . . . .	2
Repair. . . . .	3
Assembly. . . . .	3
Fits and Clearances . . . . .	4
Testing . . . . .	4
Trouble Shooting. . . . .	4
Storage Instructions. . . . .	4
Special Tools, Fixtures, and Equipment. . . . .	4
Illustrated Parts List. . . . .	5

OVERHAUL MANUAL

AIR MANIFOLD ASSEMBLY



65-44699-2



65-44699-5, -9

OVERHAUL MANUAL

1. DESCRIPTION AND OPERATION

A. Description

- (1) The manifold assembly is composed of three check valves, one air valve, a relief valve, hydraulic fittings, and in the 65-44699-5 configuration, a reducer, mounted on a machined manifold.

B. Operation

- (1) The manifold assembly simplifies the connection of valves and tubing used to conduct bleed air from the engines to the hydraulic reservoirs.

C. Leading Particulars (approximate)

Length -- 10 inches  
Width -- 4 inches  
Height -- 5 inches

2. DISASSEMBLY

- A. Remove chain ends (1), chain (2), cap (3), valves (4 and 4A), O-ring packings (5), valve (7), O-ring packing (12) on -5 assembly only, cap (6), unions (8 and 11), O-ring packings (9 and 12), relief valve (10), and O-ring packing (12) from manifold (13).

3. CLEANING

- A. Wash and rinse all parts in solvent, Specification P-D-680.
- B. Dry parts with clean lint-free cloth or clean, dry, low pressure compressed air.
- C. For further information refer to Subject 20-30-03.

4. INSPECTION/CHECK

A. Visual Check

- (1) Examine parts for damage such as scratches, pits, cracks and corrosion. Use a strong light and 10-power magnification.
- (2) Examine all plated or painted surfaces for blisters and flaking.

## OVERHAUL MANUAL

## B. Special Checks

- (1) Fluorescent dye penetrant check manifold (13), if visual examination discloses evidence of defect.
- (2) Examine valves (4, 4A, 7, and 10) in accordance with manufacturer's specifications.

5. REPAIR (Fig. 2)

## A. Deleted

## B. Refinish

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

- (1) Manifold (13) -- Chromic acid anodize (F-2.26) all over.  
Material: Al alloy.

- (2) Cap (6) -- Clear Coat, Type 41 per (20-44-01)

## C. Replacement

- (1) Replace all O-ring packings at each overhaul and any parts damaged or worn beyond allowable limits.

6. ASSEMBLY (Fig. 2)

- A. Apply hydraulic fluid, BMS 3-11, or Skydrol Assembly Lube MCS 352 (Monsanto Co. Inc., 80 North Lindberg Blvd., St. Louis Mo. 63166) to packings and threads of fittings prior to assembly and install per 20-50-06.
- B. Place packings (12) on unions (11) and install in ports 5 and 6 of manifold (13).
- C. Place packings (5) on valves (4) and install in ports 1 and 2 of manifold (13).
- D. Place packing (5) on valve (4) for the -2 configuration, and (4A) for the -5 configuration and install in port 3 of manifold (13).

NOTE: Ensure that flow arrows point toward manifold.

OVERHAUL MANUAL

- E. Place packings (9) on unions (8). Install unions (8) in valve (10) and install in port 4 of manifold (13).

NOTE: Ensure that valve (10) is installed with the "IN" port toward manifold (13).

- F. Place packing (9) on union (8) and install in port 7 of manifold (13).

- G. Install valve (7) in port 8 of manifold (13). For -5 configuration, use packing (12).

- H. Place packing (12) on union (11) and install in port 9 of manifold (13).

- I. Install caps (6 and 3) ends (1) and chain (2).

7. FITS AND CLEARANCES

- A. None

8. TESTING

- A. None

9. TROUBLE SHOOTING

- A. None

10. STORAGE INSTRUCTIONS

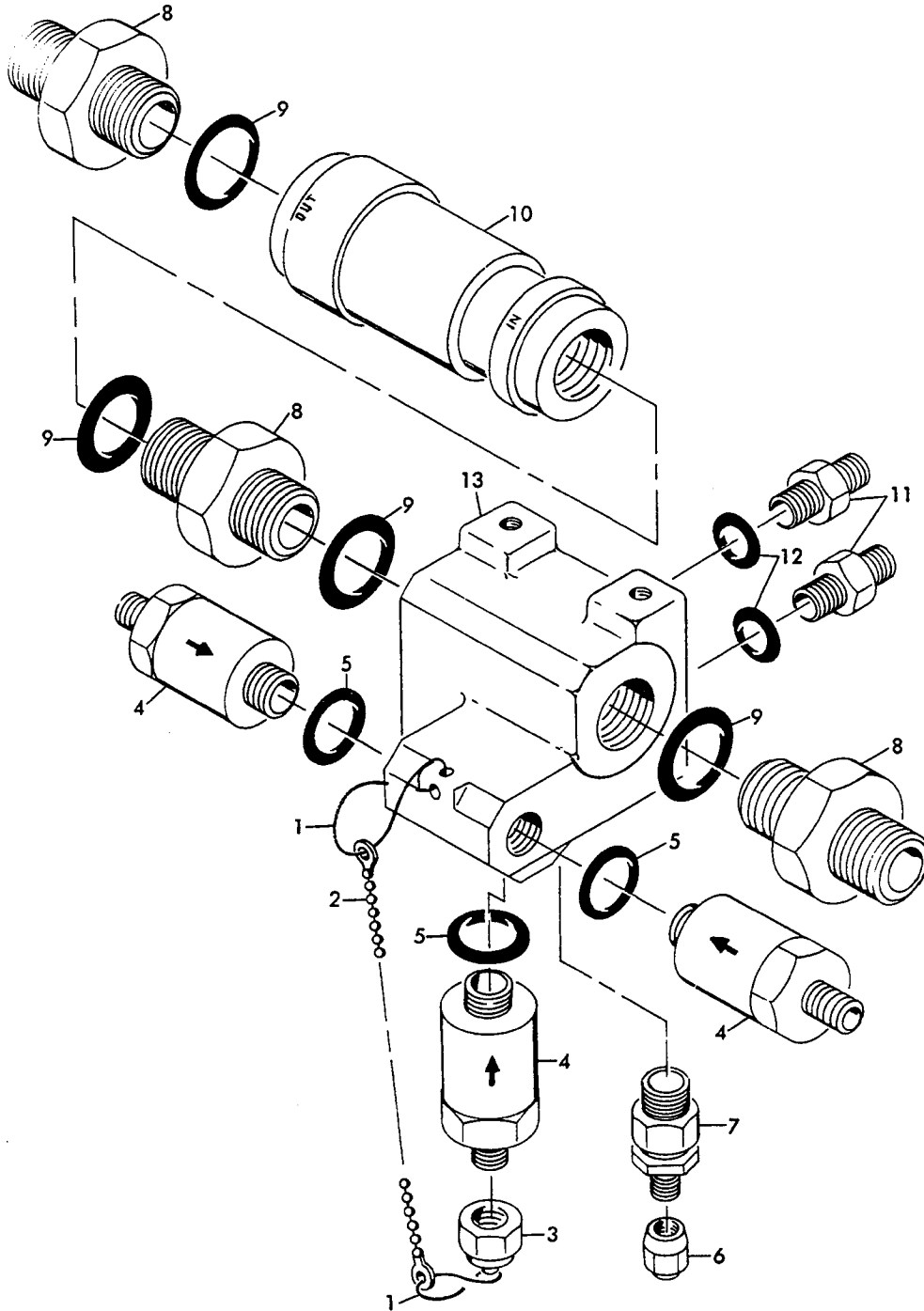
- A. Cap all fittings with BMS 3-11 hydraulic fluid resistant caps and wrap assembly in vapor barrier paper.
- B. Tag with part number and overhaul date and store.
- C. For further information refer to 20-44-02.

11. SPECIAL TOOLS, FIXTURES, AND EQUIPMENT

- A. None



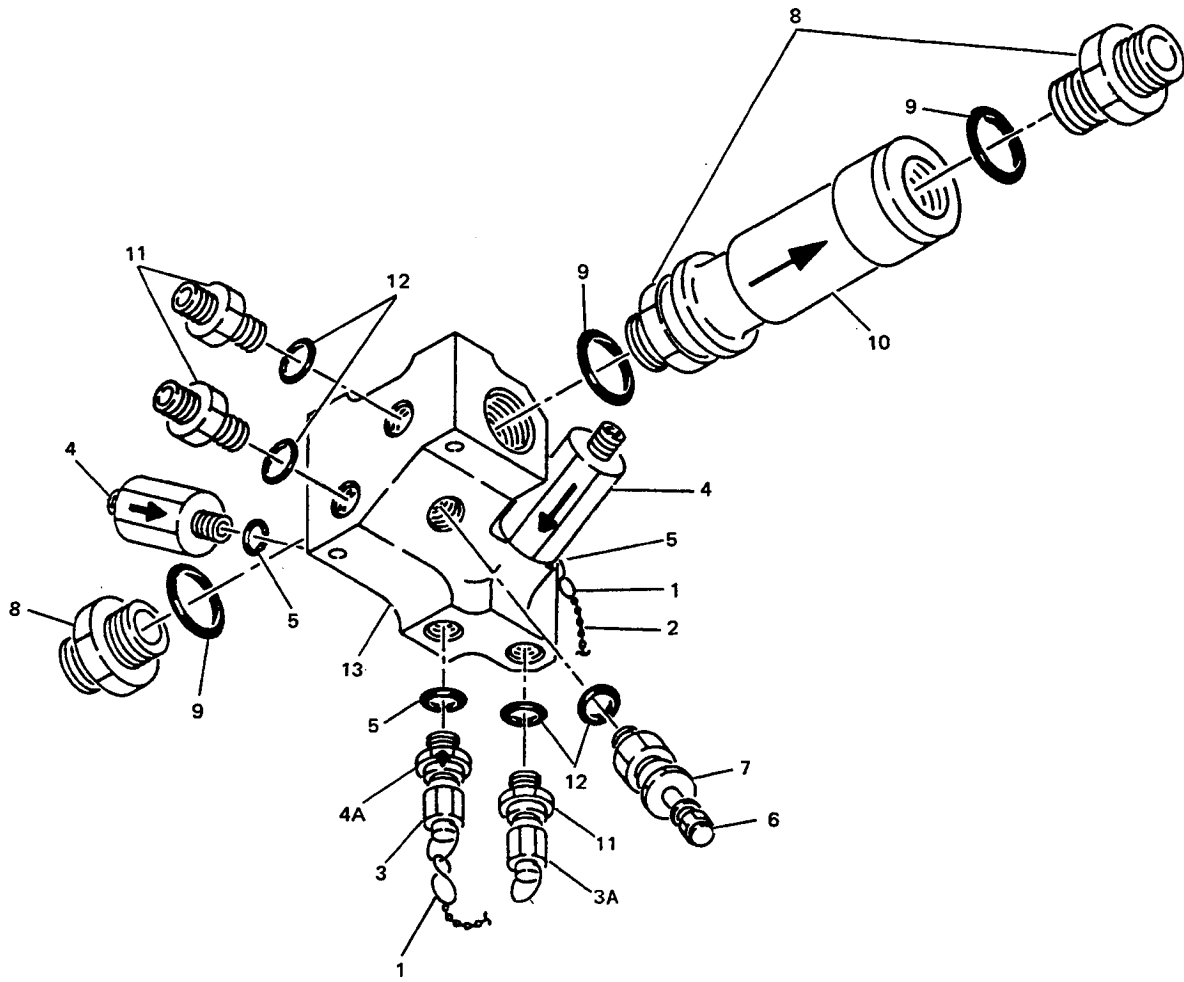
12. ILLUSTRATED PARTS LIST



65-44699-2

Air Manifold Assembly  
Figure 2 (Sheet 1)

OVERHAUL MANUAL



65-44699-5, -9

## OVERHAUL MANUAL

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	N O M E N C L A T U R E							USE CODE	QTY PER ASSY
			1	2	3	4	5	6	7		
2-	65-44699-2		AIR MANIFOLD ASSEMBLY							A	
	65-44699-5		AIR MANIFOLD ASSEMBLY (SB 29-1037)							B	
	65-44699-9		AIR MANIFOLD ASSEMBLY							C	
1	NAS1090-1		. END, CHAIN								2
2	NAS1201C6A 10A		. CHAIN								1
3	MS21914D4		. CAP							A	1
3	BACC14AD04		. CAP							BC	1
3A	69B83900-2		. CAP							C	1
4	BACV10W4HOR		. VALVE, SWING CHECK							A	3
4	BACV10W4HOR		. VALVE, SWING CHECK							BC	2
4A	BACV10BU1		. VALVE, CHECK							BC	1
5	NAS1612-4		. PACKING, O-RING								3
6	MS20813-1		. CAP								1
7	BACV10T1		. VALVE, AIR								1
8	MS21902D12		. UNION								3
9	NAS1612-12		. PACKING, O-RING								4
10	316565		. VALVE, RELIEF, V00502								1
11	MS21902D6		. UNION							A	2
11	MS21902D6		. UNION							BC	3
12	NAS1612-6		. PACKING, O-RING							A	2
12	NAS1612-6		. PACKING, O-RING							BC	4
12A	MS21916-6-4		DELETED								
13	69-35578-2		. MANIFOLD							A	1
13	65-44669-1		. MANIFOLD							BC	1

VENDOR

V00502 HYDRO-AIRE DIV. CRANE CO., 3000 WINONA AVENUE, P.O. BOX 7722,  
BURBANK, CALIFORNIA 91510