

 **BOEING**
COMPONENT
MAINTENANCE MANUAL

TO: ALL HOLDERS OF ALTERNATE THRUST REVERSER HYDRAULIC TEST PANEL ASSEMBLY M1218
COMPONENT MAINTENANCE MANUAL 29-11-56

REVISION NO. 1 DATED APR 01/89

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 to the Record of Revision Sheet.

CHAPTER/SECTION

AND PAGE NO.

DESCRIPTION OF CHANGE

INTRODUCTION

Added test verification date.

1

101-102

Edited without technical change.

29-11-56

HIGHLIGHTS

01.1

Page 1

Apr 01/89



ALTERNATE THRUST REVERSER HYDRAULIC
TEST PANEL ASSEMBLY M1218

PART NUMBER 233T4249-1

COMPONENT MAINTENANCE MANUAL
WITH
ILLUSTRATED PARTS LIST

29-11-56

TITLE PAGE

Page 1

Oct 01/87

01

210033



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

29-11-56

REVISION RECORD

01

Page 1

Oct 01/87

**BOEING**
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MAINTENANCE MANUALTEMPORARY REVISION AND SERVICE BULLETIN RECORD

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVE	DATE OF INCORPORATION INTO MANUAL
		PRR B11091	APR 10/86

29-11-56

TR & SB RECORD

01

Page 1

Oct 01/87


BOEING
 COMPONENT
 MAINTENANCE MANUAL

PAGE	DATE	CODE	PAGE	DATE	CODE
29-11-56			ILLUSTRATED PARTS LIST		
			1001	OCT 01/87	01
			1002	OCT 01/87	01
TITLE PAGE			1003	BLANK	
1	OCT 01/87	01	*1004	APR 01/89	01.1
2	BLANK		1005	OCT 01/87	01
REVISION RECORD			1006	OCT 01/87	01
1	OCT 01/87	01			
2	BLANK				
TR & SB RECORD					
1	OCT 01/87	01			
2	BLANK				
LIST OF EFFECTIVE PAGES					
*1	APR 01/89	01			
THRU LAST PAGE					
CONTENTS					
1	OCT 01/87	01			
2	BLANK				
INTRODUCTION					
*1	APR 01/89	01.1			
2	BLANK				
DESCRIPTION & OPERATION					
1	OCT 01/87	01			
2	BLANK				
TESTING & TROUBLE SHOOTING					
*101	APR 01/89	01.1			
*102	APR 01/89	01.1			
103	APR 01/88	01.101			
104	OCT 01/87	01			
REPAIR-GENERAL					
601	OCT 01/87	01			
602	BLANK				

* = REVISED, ADDED OR DELETED

29-11-56
 EFFECTIVE PAGES
 LAST PAGE Page 1
 01 Apr 01/89



TABLE OF CONTENTS

<u>Paragraph Title</u>	<u>Page</u>
Description and Operation	1
Testing and Trouble Shooting.	101
Disassembly*[1]	
Cleaning.*[1]	
Check*[1]	
Repair.*[2]	
Assembly.*[1]	
Fits and Clearances (not applicable)	
Special Tools*[2]	
Illustrated Parts List.	1001

*[1] Use applicable procedures in 20-11-05 and standard industry practices.
 *[2] Special instructions not required.



INTRODUCTION

The instructions in this manual provide the information necessary to perform maintenance functions including test, fault isolation, and replacement of defective components.

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.

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:

| Testing/TS Jul 29/87

29-11-56

INTRODUCTION

01.1

Page 1

Apr 01/89



ALTERNATE THRUST REVERSER HYDRAULIC TEST PANEL ASSEMBLY M1218

DESCRIPTION AND OPERATION

1. Description

- A. The alternate thrust reverser hydraulic test panel assembly consists of a baseplate assembly and a support bracket connected by three standoff spacers. A switch is mounted on the panel front and two time delay relays are on the panel back. A wire bundle assembly connects the interconnects the components with the interface connector on the support bracket.

29-11-56

DESCRIPTION & OPERATION

01

Page 1

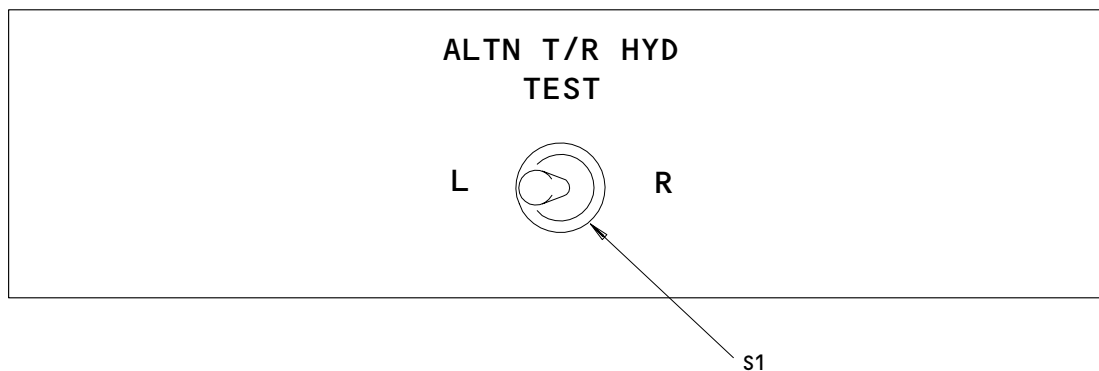
Oct 01/87

TESTING AND TROUBLE SHOOTING1. Test Equipment

- A. Multimeter -- Simpson 260 or equivalent
- B. Power Supply -- 28v dc
- C. Timer/counter -- HP5328A or equivalent
- D. Test connector -- Mates with J1, BACC45FT12-12S6 or equivalent (Boeing breakout box A33003-2 with cable A33003-167 may be used)
- E. Resistor -- 300 ohm, 5%, 5 watt

2. Functional Test

- A. Perform functional test per Fig. 102. Use Fig. 101 to identify switch positions.



233T4249
Component Identification
Figure 101

PROCEDURES	REQUIRED RESULTS	SUSPECT
<p>Connect test connector to J1.</p> <p>Measure the impedance between the pins listed. Make sure the polarity of the meter is as shown.</p> <p>Hold S1 to R position.</p> <p style="padding-left: 40px;">(+)J1-8 to (-)J1-6</p> <p style="padding-left: 40px;">(+)J1-6 to (-)J1-8</p> <p>Release S1 (+)J1-6 to (-)J1-8</p> <p>Hold S1 to L position.</p> <p style="padding-left: 40px;">(+)J1-10 to (-)J1-11</p> <p style="padding-left: 40px;">(+)J1-11 to (-)J1-10</p> <p>Release S1 (+)J1-11 to (-)J1-10</p> <p>Connect 300-ohm resistor between 28v power supply return and J1-6.</p> <p>Connect timer start trigger to J1-7 and stop trigger to J1-6. Set trigger level to +18v rising.</p> <p>Connect J1-7 to 28v dc source. Hold S1 to R position. Apply +28v dc to J1-7. Observe time delay.</p> <p>Remove all connections.</p> <p>Connect 300-ohm resistor between 28v power supply return and J1-11.</p> <p>Connect timer start trigger to J1-12 and stop trigger to J1-11. Set trigger level to +18v rising.</p>	<p>100K min</p> <p>100 ohms max</p> <p>100K min</p> <p>100K min</p> <p>100 ohms max</p> <p>100K min</p> <p>0.27 to 0.33 sec</p>	<p>CR2</p> <p>CR2</p> <p>S1</p> <p>CR1</p> <p>CR1</p> <p>S1</p> <p>K2</p>

Functional Test
 Figure 102 (Sheet 1)

29-11-56

TESTING & TROUBLE SHOOTING
 01.1 Page 102
 Apr 01/89

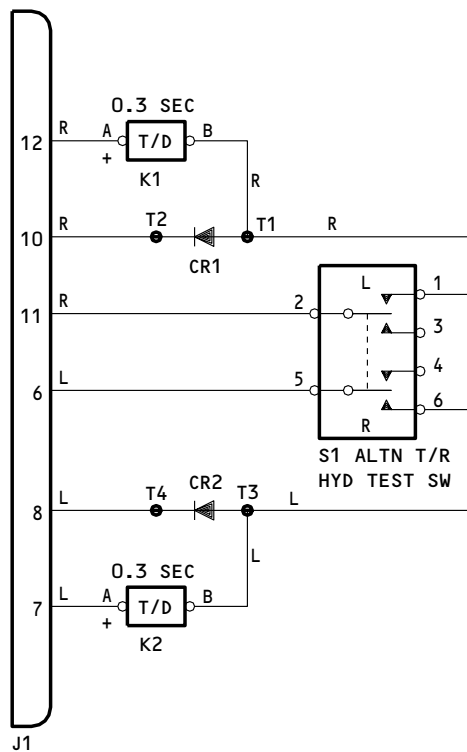

BOEING
 COMPONENT
 MAINTENANCE MANUAL

PROCEDURES	REQUIRED RESULTS	SUSPECT
Connect J1-12 to 28v dc. Hold S1 to L position. Observe time delay. Remove all connections. END OF TEST	0.27 to 0.33 sec	K1

Functional Test
 Figure 102 (Sheet 2)

29-11-56

TESTING & TROUBLE SHOOTING
 01.101 Page 103
 Apr 01/88



233T4249
 Schematic Diagram
 Figure 103

29-11-56

REPAIR1. Materials

A. Varglas non-fray, type H0 or HP sleeving (Varflex Corp., 512 West Court Street, Rome, New York 13440)

2. All repairs can be accomplished using standard industry practices and procedures listed in 20-11-05 except as follows:

A. When replacing wires, bundle the wires as follows:

(1) Separate wires by categories:

L (red)

R (green)

(2) Maintain 1/4 inch spacing between bundles.

(3) Use Varglas Non-Fray Type H0 or HP and 63-9273-2 separators as required to ensure 1/4 inch separation.

29-11-56

REPAIR-GENERAL

01

Page 601

Oct 01/87

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.

29-11-56

ILLUSTRATED PARTS LIST

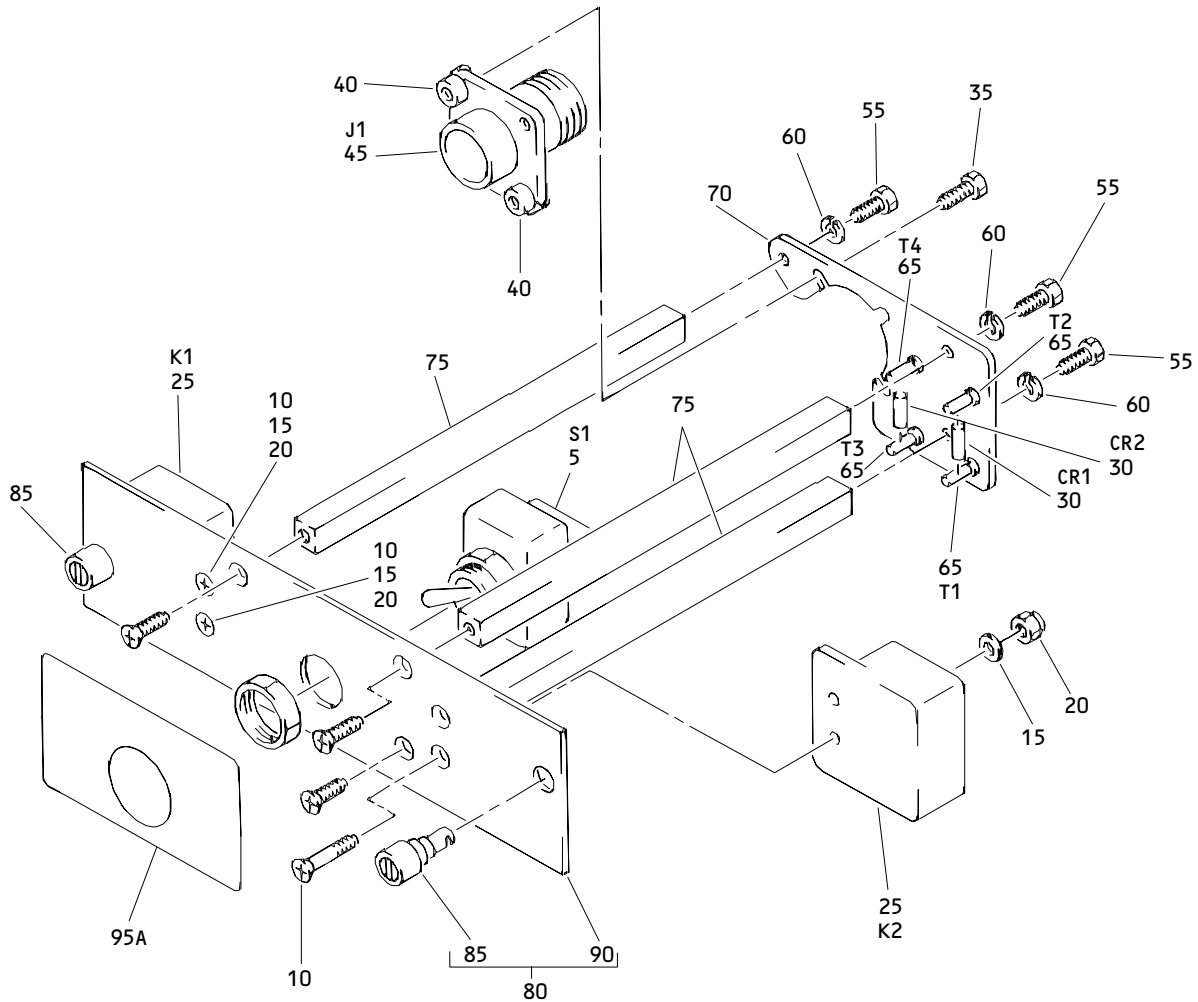
01 Page 1001

Oct 01/87

REFERENCE DESIGNATOR INDEX (SEE SCHEMATIC DIAGRAM)		
REFERENCE DESIGNATOR	PART NUMBER	FIG-ITEM
CR1	JANTX1N5618	1-30
CR2	JANTX1N5618	30
J1	ZZWAC1712-126	45
K1	10167-3000BT	25
K1	10167-3000BT	25
S1	MS24524-27	5
T1	4443B9	65
T2	4443B9	65
T3	4443B9	65
T4	4443B9	65

29-11-56

 ILLUSTRATED PARTS LIST
 01 Page 1002
 Oct 01/87



M1218 Alternate Thrust Reverser Hydraulic Test Panel Assembly
 Figure 1

29-11-56

ILLUSTRATED PARTS LIST
 01.1 Page 1004
 Apr 01/89


BOEING
 COMPONENT
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01- -1	233T4249-1		PANEL ASSY-M1218 ALTERNATE THRUST REVERSER HYDR TEST		RF
5	MS24524-27		.SWITCH- (S1)		1
10	NAS514P632-14		.SCREW		4
15	NAS620-6L		.WASHER		4
20	H10-06BAC		.NUT- (V15653) (SPEC BACN10JC06) (OPT RMLH9075-62W (V72962)) (OPT T6S632J (V71087)) (OPT VN303A62 (V92215)) (OPT 96-62 (V80539)) (OPT BRH10A62 (V52828)) (OPT NS202101-62 (V80539))		4
25	10167-3000BT		.RELAY-TIME DELAY (V08719) (K1, K2)		2
30	JANTX1N5618		.DIODE- (CR1, CR2)		2
35	NAS1801-04-5		.SCREW		2
40	K19798-04		.NUT- (V15653) (SPEC BACN10NW1) (OPT RMA4812-160-40 (V72962)) (OPT 293162 (V76530))		2

29-11-56

ILLUSTRATED PARTS LIST

01

Page 1005

Oct 01/87

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-45	ZZWAC1712-12P6		.CONNECTOR- (V49367) (SPEC BACC45FN12-12P6) (OPT C48-10R12-12P6-10 (V13556)) (OPT 48-10R12-12P300 (V02660)) (J1)		1
-50	233T4249-3		.WIRE BUNDLE ASSY		1
55	NAS1801-06-5		.SCREW		3
60	MS35338-41		.WASHER		3
65	4443B9		.TERMINAL (V88245) (T1-T4)		4
70	233T6200-102		.BRACKET-SPRT		1
75	69B46200-11		.STANDOFF		3
80	233T4249-2		.BASEPLATE ASSY		1
85	DBMB1400-6A1		.STUD ASSY- (V08524) (SPEC BACS21DD1B)		2
90	BACP10U0150N		..PANEL		1
95	BACT27FDE0194		DELETED		
95A	BACT27TFDE0194		.DECAL		1

29-11-56

 ILLUSTRATED PARTS LIST
 01 Page 1006
 Oct 01/87