COMPONENT MAINTENANCE MANUAL WITH ILLUSTRATED PARTS LIST

ELEVATOR TAB CONTROL VALVE ASSEMBLY

PART NUMBER 251A2420–1, –7

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COMPONENT MAINTENANCE MANUAL

Revision No. 9
Jul 01/2009

To: All holders of ELEVATOR TAB CONTROL VALVE ASSEMBLY 27-37-25.

Attached is the current revision to this COMPONENT MAINTENANCE MANUAL

The COMPONENT MAINTENANCE MANUAL is furnished either as a printed manual, on microfilm, or digital products, or any combination of the three. This revision replaces all previous microfilm cartridges or digital products. All microfilm and digital products are reissued with all obsolete data deleted and all updated pages added.

For printed manuals, changes are indicated on the List of Effective Pages (LEP). The pages which are revised will be identified on the LEP by an R (Revised), A (Added), O (Overflow, i.e. changes to the document structure and/or page layout), or D (Deleted). Each page in the LEP is identified by Chapter-Section-Subject number, page number and page date.

Pages replaced or made obsolete by this revision should be removed and destroyed.

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COMPONENT MAINTENANCE MANUAL

TEMPORARY REVISION AND SERVICE BULLETIN RECORD

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

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COMPONENT MAINTENANCE MANUAL

All revisions to this manual will be accompanied by transmittal sheet bearing the revision number. Enter the revision number in numerical order, together with the revision date, the date filed and the initials of the person filing.

Revision		Filed		Revision		Filed	
Number	Date	Date	Initials	Number	Date	Date	Initials

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Temporary Revision		Inserted		Removed	
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INTRODUCTION

1. General

A. The instructions in this manual supply the data necessary to do the maintenance functions together with the test, fault isolation, repair, and replacement of the defective parts.

B. This manual is divided into different parts:

(1) Title Page

(2) Transmittal Letter

(3) Highlights

(4) List of Effective Pages

(5) Table of Contents

(6) Temporary Revision & Service Bulletin Record

(7) Record of Revisions

(8) Record of Temporary Revisions

(9) Introduction

(10) Procedures & IPL Sections

C. Components that can be repaired have a different repair number for each specified repair. To find the repair number location of a component, look in the Repair-General procedure at the beginning of the REPAIR section. The Repair-General procedure also has an explanation of the True Position Dimension symbols used.

D. All dimensions, measures, quantities and weights included are in English units. When metric equivalents are given they will be in the parentheses that follow the English units.

E. The introduction to the Illustrated Parts List (IPL) shows how the IPL data is used.

F. Design changes, optional parts, configuration differences and Service Bulletin modifications may cause different part numbers. These part numbers are identified in the IPL with an alphabetical letter which is added to the end of the basic item number. This new item number is referred to as an alpha-variant. Throughout the manual, IPL basic item number references also apply to alpha-variants unless shown differently.

G. The tool reference numbers found in the individual procedures and in the Special Tools, Fixtures, and Equipment section are used to identify if a tool is a standard tool (STD-XXXX), a commercial tool (COM-XXXX), or a Special Tool (SPL-XXXX). This reference number is also used to distinguish between tools with similar names in the same procedure. These reference numbers are for use in the documentation only. They are not to be used for ordering tools.

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ELEVATOR TAB CONTROL VALVE ASSEMBLY - DESCRIPTION AND OPERATION

1. Description

A. The elevator tab control valve mainly consists of an aluminum alloy valve body and a solenoid valve.

2. Operation

A. The function of an elevator tab control valve assembly is to supply hydraulic pressure to the tab actuator. Two independent elevator tab control valve assemblies control the mode of the left and right elevator tab. When the control valve is energized it allows hydraulic fluid to flow which extends the tab lock actuator and positions the tab linkage to the anti-balance mode.

B. When the solenoid is de-energized, the control valve assembly allows hydraulic fluid to flow from the cylinder port to the return port and the tab lock actuator retracts to revert the elevator tab linkage to the balance mode.

C. If hydraulic pressure is lost when the solenoid valve is energized, the valve will permit flow from the cylinder port to the pressure port. This feature permits tab mechanism springs to retract the tab lock actuator and revert the tab linkage to the balance mode.

3. Leading Particulars (approximate)

A. Length – 5.5 inches

B. Width – 3.25 inches

C. Height – 2.00 inches

D. Weight – 2.5 pounds

E. Operating Medium – Hydraulic fluid, BMS 3-11

F. Operating Pressure – 2950 - 3050 psig

G. Proof Pressure – 4500 psig

H. Return Pressure – 0 - 75 psig

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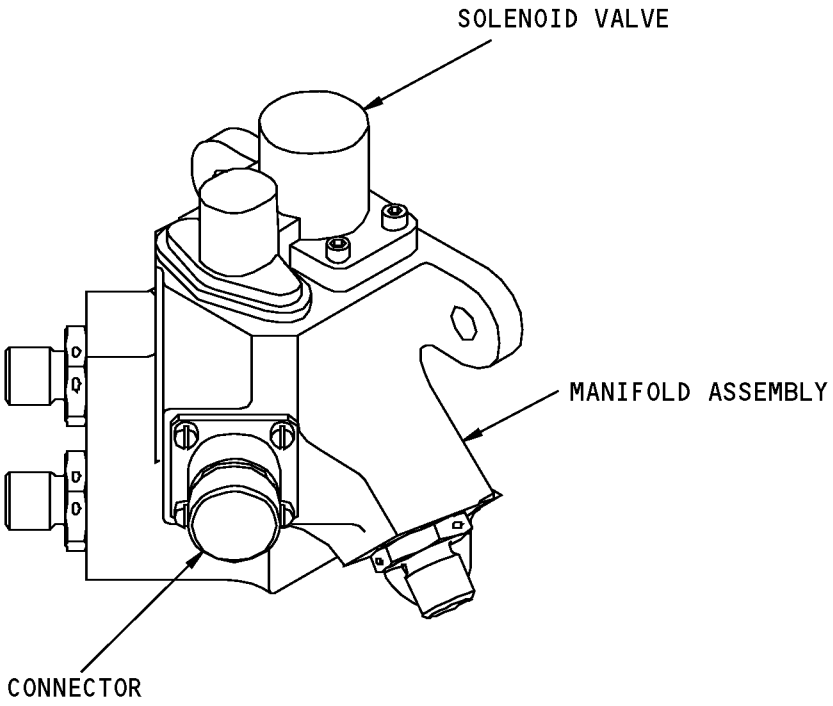

Elevator Tab Control Valve Assembly
Figure 1

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TESTING AND FAULT ISOLATION

1. General

A. This procedure contains the data necessary to perform all general tests on Elevator tab control valve assembly.

B. See IPL Figure 1 for item numbers.

C. Hydraulic Fluid – fluid, D00153 filtered to NAS1638 class 8 or better.

2. Control Valve Assembly Test

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange~able & intermixable with Type V)

B. Special Tools and Equipment

NOTE: Equivalent equipment can be used.

(1) Holding Fixture – Hydraulic test bench

(2) Hydraulic Test Bench Requirements

(a) The test equipment shall provide control and measurement during the test and shall be capable of fully performing the test specified herein.

(b) The hydraulic power supply shall be capable of delivering a minimum of 5 gallons per minute of fluid, D00153 at 3000 psig system pressure. It must be capable of supplying hydraulic fluid in a range of 0 to 4500 psig.

(3) Test Conditions

(a) Air Temperature – 50 - 90°F

(b) Fluid Temperature – 60 - 120°F

(c) Ambient pressure – 13 - 17 psig

(4) Test Preparation

(a) Install the test unit on Test fixture and connect all the hydraulic ports to the hydraulic system as shown in the test setup diagram TESTING AND FAULT ISOLATION, Figure 101.

(b) Bleed all entrained air from the test unit and system prior to testing.

3. Test Procedure

WARNING: DO NOT APPLY COMPRESSED AIR PRESSURE TO PORTS AT ANY TIME. DO NOT CYCLE SOLENOID VALVE AT PROOF PRESSURE (4500 PSI).

3. A. Electrical tests

(1) Insulation resistance

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(a) Apply 500 VDC test voltage between the solenoid connector (pins 1 and 2 tied together) and the solenoid shell. Measure the resistance.

1) The minimum resistance should be 40 mega ohms.

(2) Dielectrical strength

(a) Apply 750 volts RMS, 60 HZ between Pins 1 and 2 (pins 1 and 2 tied together) and the solenoid shell for one minute. Increase or decrease voltage at a rate of 250 to 500 volts.

1) There shall be no arching, spark over, breakdown or leakage cuurent exceeding 2.0 mA.

B. Proof Pressure

(1) Open valves V1, V2, and V5. Close all other valves.

(2) Eneregize the solenoid and apply a pressure 4500 psig (supply pressure "A") to the pressure and cylinder ports. Simultaneously apply 3000 psi (supply Pressure "B") to the return port and hold the pressure for a period of 2 minutes. Reduce supply pressure to zero.

(3) Close valve V2 and open valve V3. Keep valves V1 and V2 opened.

(a) There shall be no evidence of external leakage, failure or damage.

(4) De-energized the solenoid and apply a pressure of 4500 psig (supply pressure "A") to the pressure port. Simultaneously apply 3000 psig (supply pressure "B") to the cylinder and return ports and hold both pressures for a period of 2 minutes.

(5) Reduce supply pressures to zero.

C. Internal Leakage

(1) De-energize the solenoid. Open valves V1 and V4 and close all other valves. Apply a pressure 3000 psig to the pressure port.

(a) The leakage from the cylinder port shall not exceed 2.0 CC per minute after a 2-minute waiting period. Reduce supply pressure to zero.

(2) Energize the solenoid. Open valves V1 and V6 and keep all other valves closed. Apply a pressure of 3000 psig to the pressure port.

(a) The leakage at the return port shall not exceeds 2.0 CC per minute after a 2-minute waiting period. Reduce supply pressure to Zero.

D. Flow Test

(1) Energize the solenoid with 28 VDC. Open valves V1 and V4. Close all other valves and increase the supply pressure to 3000 psig.

(a) The flow from the pressure port to the cylinder port shall be 0.029-0.039 gpm.

(2) De-energize the solenoid. Open valves V2 and V6. Close all other valves and increase the supply pressure to 3000 psig.

(a) The flow from the cylinder port to the return port shall be 0.029-0.039 gpm. Reduce supply pressure to zero.

E. Reverse Test Flow

(1) Energize the solenoid valve to 28 VDC.

(2) Open valves V7 and V2. Close all other valves.

(3) Increase supply pressure to 3000 psig.

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(4) Meassure and record the flow from V7.

(5) Reduce supply pressure to zero.

(a) The flow exiting from the pressure port shall be within limit of 0.029-0.039 gpm.

Table 101: Trouble Shooting

TROUBLE	PROBABLE CAUSE	CORRECTION
If unit fails in electrical tests	Defective electrical plug, connector. wiring potting or solenoid.	Replace faulty components.
If unit shows leakage at proof pressure	Defective O-ring or backup rings.	Replace the defective O-rings or backup rings.
If unit shows permanent distortion at proof pressure	Defective manifold	Replace the manifold.
If unit fails the flow test (if flow is not with- in limit of 0.029 - 0.039 gpm)	Defective solenoid Valve. assembly or plugged restricter.	Disassemble solenoid valve assembly, replace O-rings and backup rings as applicable. Clean out or replace restrictor.
If reverse flow is not within limit of 0.029 - 0.039 gpm	Defective solenoid valve assembly or plugged restrictor.	Disassemble solenoid valve assembly, replace O-rings and backup rings as applicable. clean out or replace restrictor.
If unit does not respond when energized	Defective wires from connector (75) to plug (70) or defective solenoid valve or high connector plug resitance	Replace wires or solenoid valves as applicable. Clean connector or plug contacts.

4. Corrective Procedures

A. If control valve assembly fails the revese flow test, replace the unit. Return the defective unit to Boeing.

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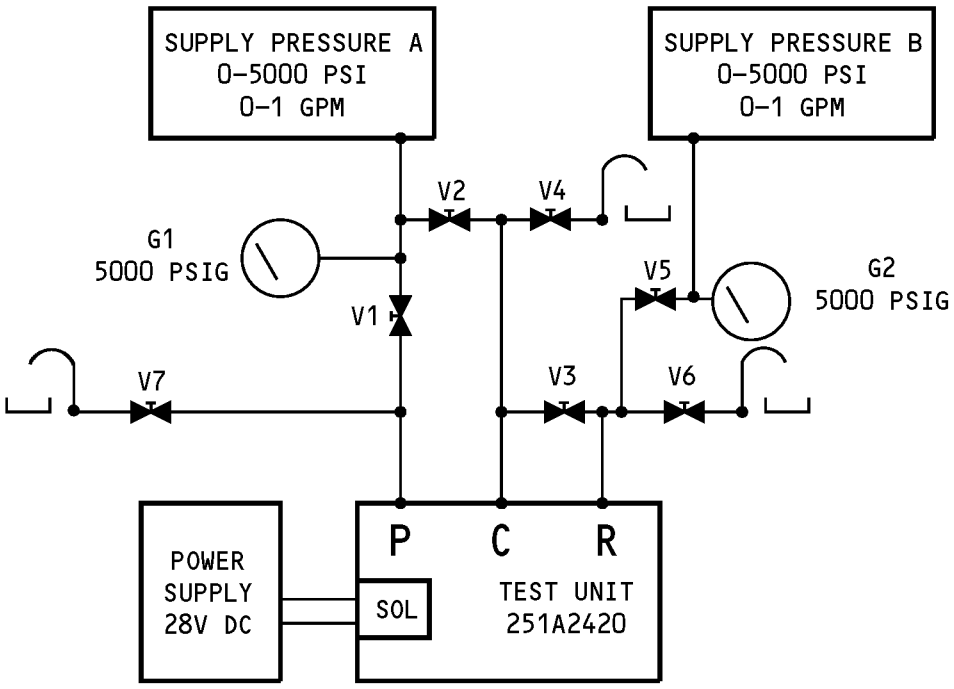

NOTE: GAUGES MUST HAVE OVER-PRESSURE PROTECTION.

Elevator Tab Control Valve Assembly Test Set-up Diagram
Figure 101

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DISASSEMBLY

1. General

A. This procedure contains the data necessary to disassemble the control valve assembly.

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to TESTING AND FAULT ISOLATION section to establish the condition of the component or most probable cause of its malfunction. This is to determine the extent of disassembly required without completely tearing down and rebuilding the component.

D. See IPL Figure 1 for item numbers.

2. Valve Disassembly (IPL Figure 1)

A. Part Replacement

NOTE: The following parts are recommended for replacement. Unless a procedure tells you to replace a part, replacement is optional.

(1) Packings (15, 25, 35, 40, 50, (IPL Figure 1)

(2) Backup rings (20, 30)

3. Disassembly

A. Procedure

(1) Drain the hydraulic fluid from the control valve assembly thru the ports.

(2) Remove lockwires, screws (5) and solenoid valve (10). Drain remaining hydraulic fluid from the unit.

(3) Remove Packings (15, 25, 35, 40, 50), backup rings (20, 30), unions (45).

(4) Remove lockwires, screws (60), disconnect connector (75), remove retainer (65), electrical plug (70) and remove Visco-jet (95) .

NOTE: Do not remove connector (75), electrical plug (70) and potting compound from the cavity unless it is required to repair manifold or replace wires from the cavity of manifold. Do not remove the visco jet unless the fluid flow checks can not be met or the manifold requires repair.

(5) Remove nameplate if required for replacement or repair.

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CHECK

1. General

A. This procedure contains the data necessary to find defects in the material specified parts.

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 1 for item numbers.

2. Check

A. References

Reference	Title
SOPM 20-20-01	MAGNETIC PARTICLE INSPECTION

B. Procedure

(1) Use standard industry procedures to do a visual check of all the parts for defects. Do the penetrant inspection if the visual check shows possible damage or if you suspect possible damage on the part listed below:

(2) Do a penetrant inspection check on manifold assembly (80) (SOPM 20-20-01).

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REPAIR

1. General

A. Instructions for repair, refinish, and replacement of the specified subassembly parts are included in each REPAIR when applicable.

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the standard practices shown in the repair.

C. Refer to IPL Figure 1 for item numbers.

Table 601:

PART NUMBER	NAME	REPAIR
251A2421-1	MANIFOLD	1-1

2. Standard Practices

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

(1) SOPM 20-30-02, Stripping of Protective Finishes

(2) SOPM 20-30-03, General Cleaning Procedures

(3) SOPM 20-41-01, Decoding Table for Boeing Finish Codes

(4) SOPM 20-43-01, Chromic Acid Anodizing

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REFINISH DETAILS

1. **General**

   A. This procedure has the data necessary to refinish the parts which are not given in the specified repairs.

   B. Refer to REPAIR-GENERAL, Paragraph 2. for the SOPM subjects identified in this procedure.

   C. Refer to IPL Figure 1 for item numbers.

2. **Refinish Details**

   A. Procedure

      (1) Instructions for the repair of the parts listed REPAIR 1-1, Table 601 are for repair of the initial finish.

Table 601: Refinish Details

IPL FIG. & ITEM	MATERIAL	FINISH
Fig. 1		
Manifold (100)	Al alloy	Chromic acid anodize (F-17.02) all over.

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ASSEMBLY

1. General

A. This procedure contains the data necessary to assemble the control valve assembly.

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM chapters idntified in this procedure.

C. Refer to IPL Figure 1 for item numbers.

2. Control Valve Assembly

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00209	Compound - Silicone Rubber - Dow Corning RTV3110	
A00551	Sealant - Fuel Tank	BAC5010, Type 44 (BMS5-44, BMS5-45)
D00054	Fluid - Hydraulic Assembly Lubricant - MCS 352B (Formerly Monsanto MCS 352B)	
D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchange˜able & intermixable with Type V)

B. References

Reference	Title
SOPM 20-12-01	SOLDERING ELECTRICAL CONNECTIONS
SOPM 20-44-02	TEMPORARY PROTECTIVE COATINGS
SOPM 20-50-02	INSTALLATION OF SAFETYING DEVICES
SOPM 20-50-04	INSTALLATION OF PERMANENT PINS AND PLUGS IN DRILL PASSAGES
SOPM 20-50-19	GENERAL SEALING
SOPM 20-60-02	FINISHING MATERIALS
SOPM 20-60-03	LUBRICANTS
SOPM 20-60-04	MISCELLANEOUS MATERIALS

C. Special Tools and Equipment

NOTE: Equivalent tools can be used.

(1) Holding Fixture – Hydraulic bench

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D. Procedure

NOTE: For temporary protective coating, refer to SOPM 20-44-02. For finishing materials, refer to SOPM 20-60-02. For lubricants, refer to SOPM 20-60-03. For miscellaneous materials, refer to SOPM 20-60-04.

(1) Install visco jet (95) per SOPM 20-50-04.

(2) Solder the wire-red (M22759/10-22-2) and wire-white (22759/10-22-9) to the electrical plug (70) and connector (75) thru the manifold cavity as shown in ASSEMBLY, Figure 701 (SOPM 20-12-01).

(3) Apply potting compound BMS 8-68 or Dow Corning 3110 RTV silicone rubber compound, A00209 into the cavity into all noted areas and electrical cavities per BAC5550 as shown in ASSEMBLY, Figure 701. Apply potting compound at the back of the electrical plug prior to installation.

(4) Apply sealant, A00551 to potting compound fill hole on manifold (SOPM 20-50-19). Potting compound fill hole is located near connector (75).

(5) Install plug-electrical (70), retainer (65), connector (75) and screws (60). Torque the screws (60) 2-4 inch-pounds during installation.

(6) Install packings (15, 25, 35, 40), backup rings (20, 30), solenoid valve (10). Lightly lubricate all seals and packings prior to installation with fluid, D00153 or MCS 352B fluid, D00054.

(7) Install solenoid valve (10), screws (5), packing (50), and unions (45) on manifold assembly (80). Torque the screws (5) to 17-20 inch-pounds during installation.

(8) Install all lockwires (SOPM 20-50-02).

(9) Install the nameplate with sealant, A00551, Type II, Class B-2 sealant. Fay surface seal all around the nameplate.

NOTE: Form the nameplate at installation to give a firm fit.

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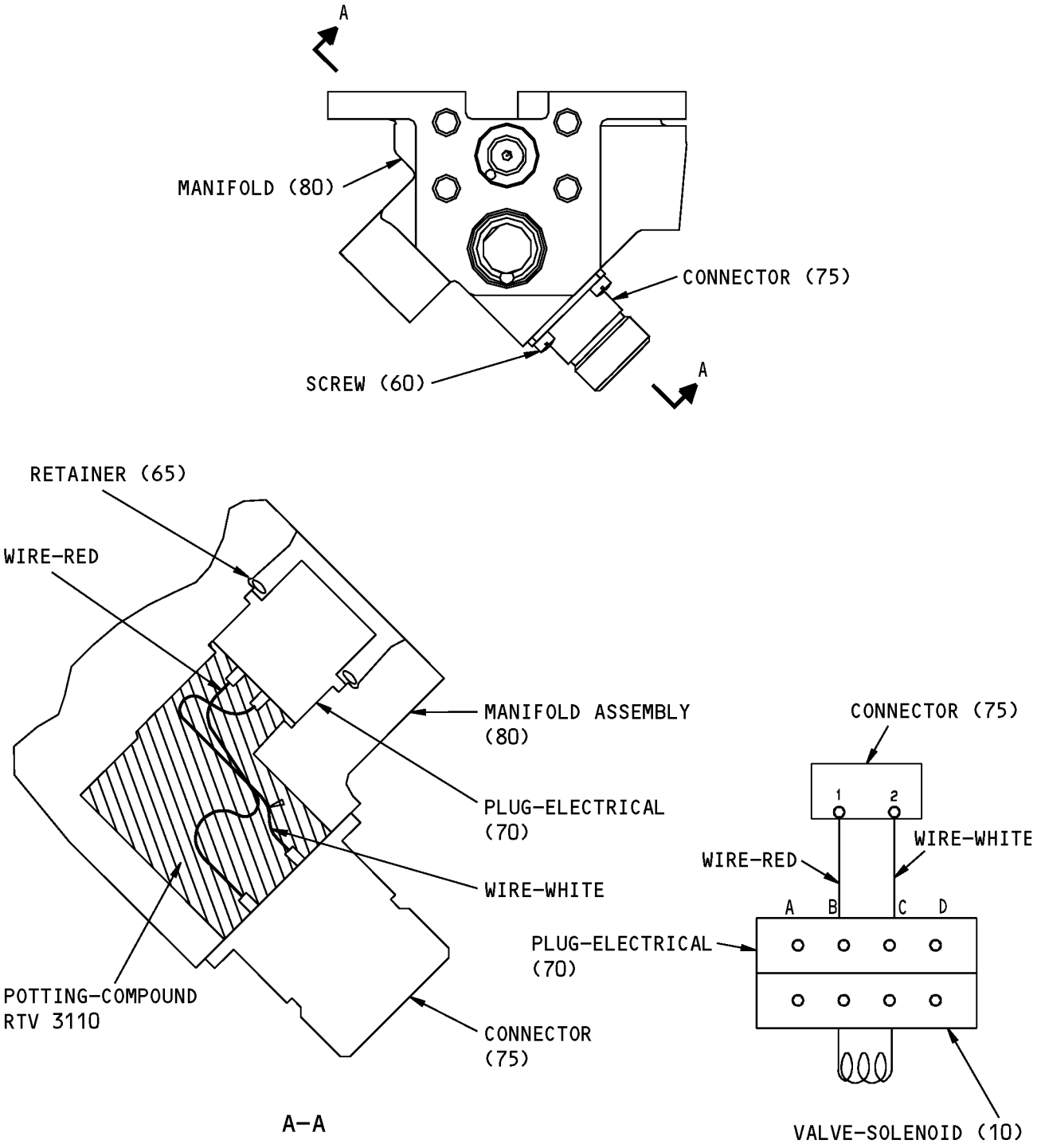

Control Valve Assembly
Figure 701

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FITS AND CLEARANCES

REF IPL		NAME	TORQUE*	
FIG. NO.	ITEM NO.		POUND-INCHES	POUND-FEET
1	5	Screw	17-20	
2	60	Screw	2-4	

* REFER TO SOPM 20-50-01 FOR TORQUE VALUES OF STANDARD FASTENERS

Torque Table
Figure 801

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ILLUSTRATED PARTS LIST

1. Introduction

A. The Illustrated Parts List (IPL) contains an illustration and a list of component parts you can repair or replace. The Illustrated Parts Catalog (IPC) shows how to use the Boeing part number system.

B. This shows how parts are related: The relation of each item to its next higher assembly (NHA) is shown in the NOMENCLATURE column. Use the indenture system that follows:

1 2 3 4 5 6 7

. Assembly

. Attaching parts for assembly

. . Detail parts for assembly

. . Subassembly

. . Attaching parts for subassembly

. . . Detail parts for subassembly

. . . Sub-subassembly

. . . Attaching parts for subassembly

. . . . . Details parts for sub-subassembly

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

C. Each top assembly is given one use code letter (A, B, C, etc.) in the USAGE CODE column. All subsequent component parts in the list can have one or more of the use code letters to show effectivity to top assemblies. A component part without a use code applies to all top assemblies.

D. An alphabetical letter is added after the item number for optional parts, parts changed by a Service Bulletin, configuration differences (except left-handed and right-handed parts), last engineering releases, and parts added between item numbers in a sequence. The alphabetical letter will not be shown on the illustration for equivalent parts of the same part number.

E. Color-coded parts are identified with a single digit alpha following the dash number or with ''SP'' suffix. If the ''SP'' suffix is used, it represents consolidation of all color codes applicable for a given usage which are not separately listed. Orders for color-coded parts should include the registry number of the airplane for which the parts are ordered.

F. If a part number is 15 characters long but will not fit in the part number column, the part number will be displayed with a ''~'' at the end of the line and will be continued on the next line. The ''~'' denotes that the part number continues on the next line.

G. Parts changed by a Service Bulletin are shown by PRE SB XXXX and POST SB XXXX added to the NOMENCLATURE column.

(1) When a new top assembly is added by a Service Bulletin, PRE SB XXXX and POST SB XXXX will be added at the top assembly level only. The configuration differences at the detail part level are shown by use code letters.

(2) When the top assembly part number is not changed by the Service Bulletin, PRE SB XXXX and POST SB XXXX will be added at the detail level.

H. Interchangeable Parts

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Optional (OPT)	The part is optional to and interchangeable with other parts that have the same item number.
Replaces, Replaced by and not interchangeable with (REPLACES, REPLACED BY AND NOT INTCHG/W)	The part replaces and is not interchangeable with the initial part.
Replaces, Replaced by (REPLACES, REPLACED BY)	The part replaces and is interchangeable with, or is an alternative to, the initial part.

VENDOR CODES

Code	Name
02107	FLOUROCARBON CO OHIO DIV DOVER, OHIO 44622 CANCELLED NO REPLACEMENT FORMERLY SPARTA MANUFACTURING CO
05574	VIKING ELECTRONICS INC. 5455 ENDEAVOUR CT MOORPARK, CALIFORNIA 93021 FORMERLY VIKING IND DATACON DIV; VIKING SPECIAL PROD V53156; FORMERLY VIKING CONN SUB OF CRITON CORP; ARIZONA INTEGRATED ELEC V0P9C6; FORMERLY IN CHATSWORTH, CA
07128	TETRAFLUOR INC 2051 EAST MAPLE AVENUE EL SEGUNDO, CALIFORNIA 90245-5009 FORMERLY ROYAL IND TETRAFLUOR DIV V0667B ENGLEWOOD CALIF
13556	LABINAL COMPONENTS AND SYS CINCH MILITARY AEROSPACE DIV 8821 SCIENCE CENTER DRIVE MINNEAPOLIS, MINNESOTA 55428-3619 FORMERLY TRW CINCH MFG CO, FORMERLY IN NEW HOPE, MINNESOTA FORMERLY CINCH CYLINDRICAL DIV OF LABINAL COMP & SYS
26303	GREENE TWEED IND INC ADVANTEC DIV 7101 PATTERSON DRIVE PO BOX 5037 GARDEN GROVE, CALIFORNIA 92645-5037 FORMERLY OHIO AIRCRAFT SUPPLIES INC IN INGLEWOOD, CALIFORNIA FORMERLY ADVANTEC DIV OF IFP INC, LOS ANGELES, CA V5P801

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Code	Name
26879	CORONADO MFG INC 11069 PENROSE AVENUE SUN VALLEY, CALIFORNIA 90352-2722 FORMERLY CORONADO PLASTICS INC IN BURBANK, CALIFORNIA
41118	RMS COMPANY 8600 EVERGREEN BLVD MINNEAPOLIS, MINNESOTA 55433-6036
75554	LEA MANUFACTURING COMPANY 237 EAST AURORA STREET PO BOX 71 WATERBURY, CONNECTICUT 06720-3291
92003	PARKER-HANNIFIN CORPORATION 14300 ALTON PKWY IRVINE, CALIFORNIA 92618 FORMERLY PARKER AIRCRAFT V02689;FORMERLY SCHULZ TOOL & MFG V82267; FORMERLY PARKER-BERTEA AEROSPACE GROUP
94878	RAYBESTOS-MANHATTAN INC PACIFIC COAST DIV FULLERTON, CALIFORNIA 92631 BUSINESS DISCONTINUED
97820	BUSAK AND SHAMBAN INC BEARING DIV 711 MITCHELL ROAD PO BOX 665 NEWBURY PARK, CALIFORNIA 91320-2214 FORMERLY IN CULVER CITY, CALIF; FORMERLY SHAMBAN W S & CO

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NUMERICAL INDEX

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
00100-0113		1	70	1
10-62018-9		1	10	1
2100-008		1	20A	2
2100-009		1	30A	2
251A2420-1		1	1A	RF
251A2420-5		1	55	1
251A2420-7		1	1B	RF
251A2421-1		1	80	1
251A2421-2		1	100	1
381711-1		1	105A	1
3820007-104		1	10	1
3820007-106		1	10A	1
59140		1	65	1
AN500AD4-4		1	60	4
BAC27DHY382		1	105	1
BACC63BV10F20PN		1	75	1
BACR12BM008		1	20A	2
BACR12BM009		1	30A	2
C11236-008B		1	20A	2
C11236-009B		1	30A	2
CN0967C10G20PN		1	75A	1
MS21209C0410P		1	90	4
MS21209C0815P		1	85	4
MS21902-4T		1	45	2
		1	47	1
MS21902D4		1	47A	1
MS21902J4		1	45A	2
MS27595-008		1	20	2
MS27595-009		1	30	2
NAS1352N08H8P		1	5	4
NAS1611-008		1	15	1
NAS1611-008A		1	15A	1
NAS1611-009		1	25	1
NAS1611-009A		1	25A	1

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PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
NAS1611-013		1	35	1
NAS1611-013A		1	35A	1
NAS1611-112		1	40	1
NAS1611-112A		1	40A	1
NAS1612-4		1	50	3
NAS1612-4A		1	50A	3
R071110F20PN		1	75B	1
RMR12BM008		1	20A	2
RMR12BM009		1	30A	2
S30294-008-1		1	20A	2
S30294-009-1		1	30A	2
STF800-008		1	20A	2
STF800-009		1	30A	2
TF450-008A		1	20A	2
TF450-009A		1	30A	2
VHCA1230330H		1	95	1

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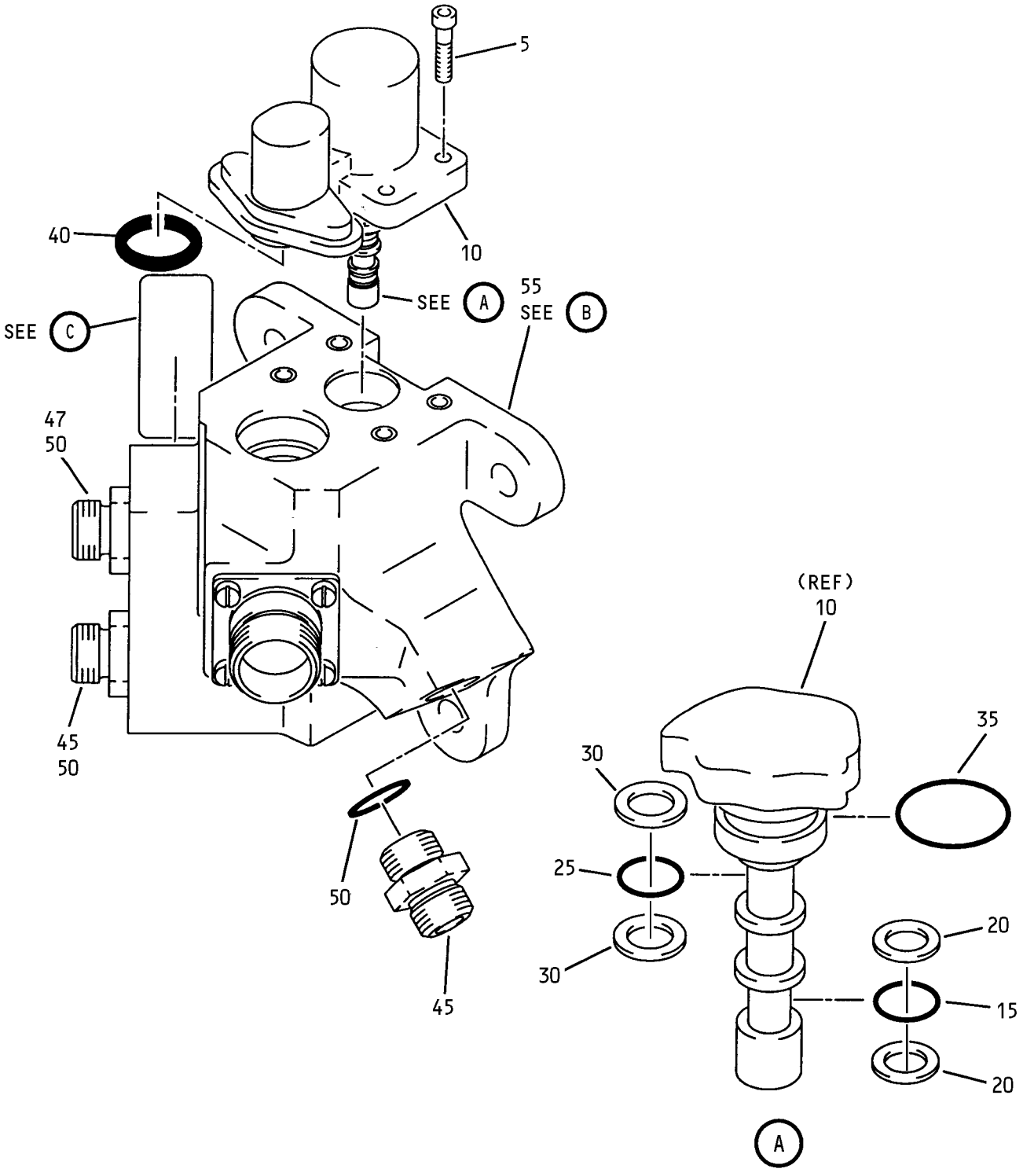

Elevator Tab Control Valve Assembly
IPL Figure 1 (Sheet 1 of 2)

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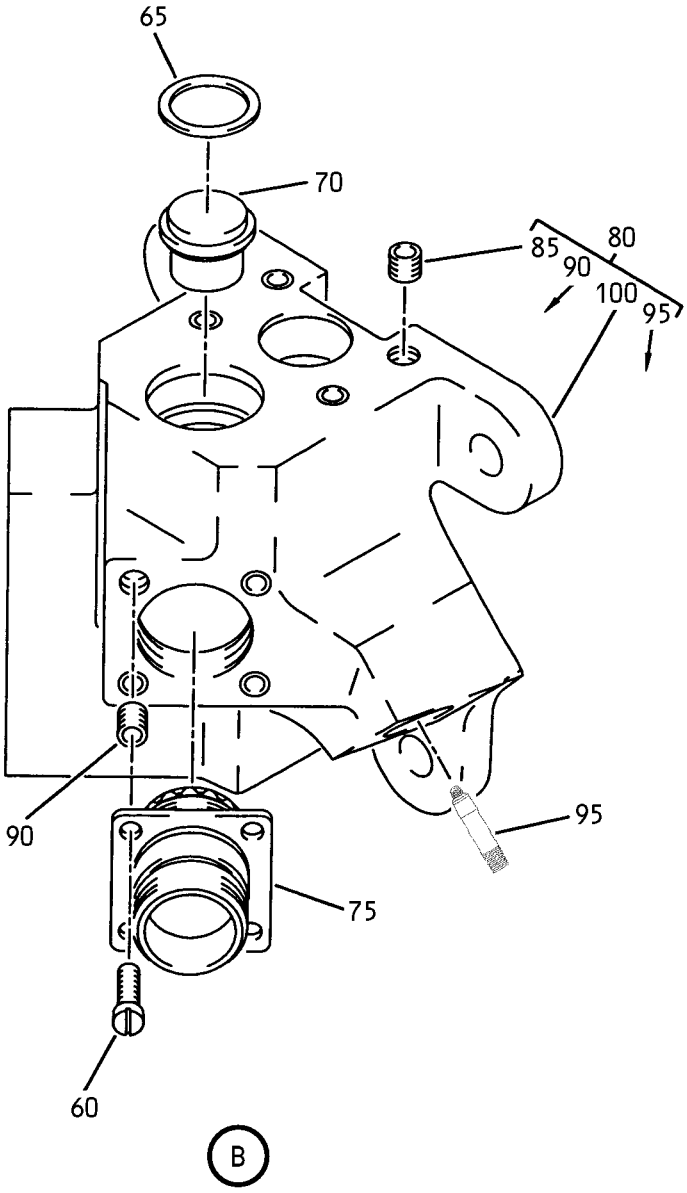

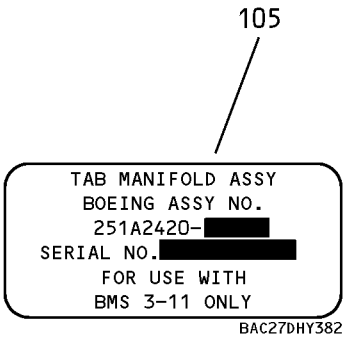

Elevator Tab Control Valve Assembly
IPL Figure 1 (Sheet 2 of 2)

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
–1A	251A2420-1		VALVE ASSY-CONTROL	A	RF
–1B	251A2420-7		VALVE ASSY-CONTROL	B	RF
5	NAS1352N08H8P		. SCREW		4
10	3820007-104		. VALVE-SOLENOID (V92003) (SPEC 10-62018-9)	A	1
–10A	3820007-106		. VALVE-SOLENOID (V92003)	B	1
15	NAS1611-008		. PACKING	A	1
15A	NAS1611-008A		. PACKING	B	1
20	MS27595-008		. BACKUP (OPT ITEM 20A)		2
–20A	C11236-008B		. RING (V26879) (SPEC BACR12BM008) (OPT RMR12BM008 (V94878)) (OPT STF800-008 (V02107)) (OPT S30294-008-1 (V97820)) (OPT TF450-008A (V07128)) (OPT 2100-008 (V26303)) (OPT ITEM 20)		2
25	NAS1611-009		. PACKING	A	1
25A	NAS1611-009A		. PACKING	B	1
30	MS27595-009		. BACKUP (OPT ITEM 30A)		2
–30A	C11236-009B		. RING (V26879) (SPEC BACR12BM009) (OPT RMR12BM009 (V94878)) (OPT STF800-009 (V02107)) (OPT S30294-009-1 (V97820)) (OPT TF450-009A (V07128)) (OPT 2100-009 (V26303)) (OPT ITEM 30)		2
35	NAS1611-013		. PACKING	A	1
–35A	NAS1611-013A		. PACKING	B	1
40	NAS1611-112		. PACKING	A	1
–40A	NAS1611-112A		. PACKING	B	1

–Item not Illustrated

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
45	MS21902-4T		. UNION	A	2
–45A	MS21902J4		. UNION	B	2
47	MS21902-4T		. UNION	A	1
–47A	MS21902D4		. UNION	B	1
50	NAS1612-4		. PACKING	A	3
–50A	NAS1612-4A		. PACKING	B	3
55	251A2420-5		. VALVE ASSY		1
60	AN500AD4-4		. . SCREW		4
65	59140		. . RETAINER (V92003)		1
70	00100-0113		. . PLUG-ELECTRICAL (V05574)		1
75	BACC63BV10F20PN		. . CONNECTOR (OPT ITEM 75A, 75B)		1
–75A	CN0967C10G20PN		. . CONNECTOR (V13556) (OPT ITEM 75, 75B)		1
–75B	R071110F20PN		. . CONNECTOR (V41118) (OPT ITEM 75, 75A)		1
80	251A2421-1		. . MANIFOLD ASSY		1
85	MS21209C0815P		. . . INSERT		4
90	MS21209C0410P		. . . INSERT		4
95	VHCA1230330H		. . . JET-VISCO (V75554)		1
100	251A2421-2		. . . MANIFOLD		1
105	BAC27DHY382		. MARKER-ALUMINUM FOIL (OPT ITEM 105A)		1
–105A	381711-1		. NAMEPLATE (V92003) (OPT ITEM 105)		1

–Item not Illustrated

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