TO: ALL HOLDERS OF ALTERNATE BRAKE SELECTOR VALVE ASSY COMPONENT MAINTENANCE MANUAL, 32-41-10

REVISION NO. 9 DATED JUL 01/05

HIGHLIGHTS

All data formerly in 747/767 CMM 32-41-11 (not 747 OHM 32-41-11) is now included in this CMM 32-41-10. 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
DESCRIPTION & OPERATION 1	Added clarifications and updated callouts.
1003,1009	Deleted packing (75A), which is not applicable.

BRAKE ACCUMULATOR ISOLATION VALVE ASSEMBLY
ALTERNATE BRAKE SELECTOR VALVE ASSEMBLY

PART NUMBERS 274T4620-3,-5,-7,-8,-10,-12
274T0005-3,-5,-7,-8
274T4621-2,-3,-4
274U0003-2,-4

COMPONENT MAINTENANCE MANUAL
WITH
ILLUSTRATED PARTS LIST

T21950

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

T21945

TEMPORARY REVISION AND SERVICE BULLETIN RECORD

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVE	DATE OF INCORPORATION INTO MANUAL
32-0004	32-1	PRR B10890	JUL 10/83
32-0152		PRR B12580-7	JUN 01/97
		PRR B13100-4	JUN 01/97
		PRR 86100-4	JUN 01/97
		PRR B13106-8	JUL 01/99

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1	JUL 01/99	01.1
2	BLANK	
REVISION RECORD		
1	OCT 01/89	01.1
2	BLANK	
TR & SB RECORD		
1	JUL 01/99	01.1
2	BLANK	
LIST OF EFFECTIVE PAGES		
*1	JUL 01/05	01
THRU LAST PAGE		
CONTENTS		
1	OCT 01/89	01.1
2	BLANK	
INTRODUCTION		
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*1	JUL 01/05	01.1
2	BLANK	
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601	JUN 01/97	01.1
602	BLANK	
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601	JUL 01/03	01.1
602	BLANK	
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601	JUL 01/03	01.1
602	BLANK	
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701	JUL 01/03	01.1
702	JUN 01/97	01.1
703	JUN 01/97	01.1
704	JUN 01/97	01.1

* = REVISED, ADDED OR DELETED

PAGE	DATE	CODE
FITS AND CLEARANCES		
801	JUN 01/97	01.1
802	BLANK	
ILLUSTRATED PARTS LIST		
1001	OCT 01/89	01.1
1002	NOV 01/03	01.1
*1003	JUL 01/05	01.1
1004	NOV 01/03	01.101
1005	NOV 01/03	01.101
1006	NOV 01/03	01.101
1007	NOV 01/03	01.101
1008	NOV 01/03	01.101
*1009	JUL 01/05	01.1
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PAGE	DATE	CODE

* = REVISED, ADDED OR DELETED

TABLE OF CONTENTS

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
2. Record of Revisions
3. Temporary Revision & Service Bulletin Record
4. List of Effective Pages
5. Table of Contents
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.

Throughout the manual IPL item number references include alpha-variants, unless otherwise stated.

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.

Verification:

Testing/TS
Disassembly
Assembly

ALTERNATE BRAKE SELECTOR AND ACCUMULATOR ISOLATION VALVE ASSEMBLY

DESCRIPTION AND OPERATION

1. The alternate brake selector valve assembly and accumulator isolation valve assembly each have a valve unit with a piston, a matched slide and sleeve in an aluminum housing and a cap.

2. Usually, hydraulic pressure is applied to both PRESS A and PRESS B ports and the BRAKE port is connected to the RETURN port. When hydraulic pressure in the PRESS B port decreases to 1200 psi, the pressure differential between PRESS A and PRESS B ports moves the piston and the slide to connect the ALT port to the BRAKE port for alternate system operation. The 274T4620-series valves have a pressure operated switch that sends a signal to an indicator in the cockpit to tell the pilot that the alternate system is on.

3. Leading Particulars (Approximate)

   Length -- 6.0 inches
   Height -- 3.0 inches
   Width -- 4.0 inches
   Weight -- 4 pounds
   Operating Medium -- BMS 3-11 Hydraulic Fluid
   Proof Pressure -- 4500 psi

TESTING/TROUBLE SHOOTING

NOTE: This test procedure is for only the 274T4621-2, -3, -4 valves (3). For the 274N1051-3 valve, refer to CMM 32-41-12.

1. Test Equipment

NOTE: Equivalent substitutes can be used.

A. Hydraulic test stand -- To supply hydraulic fluid, BMS 3-11 at variable controlled pressures of 0 - 4500 psi. Fluid must be filtered to 15 microns and kept at 70°-130°F.

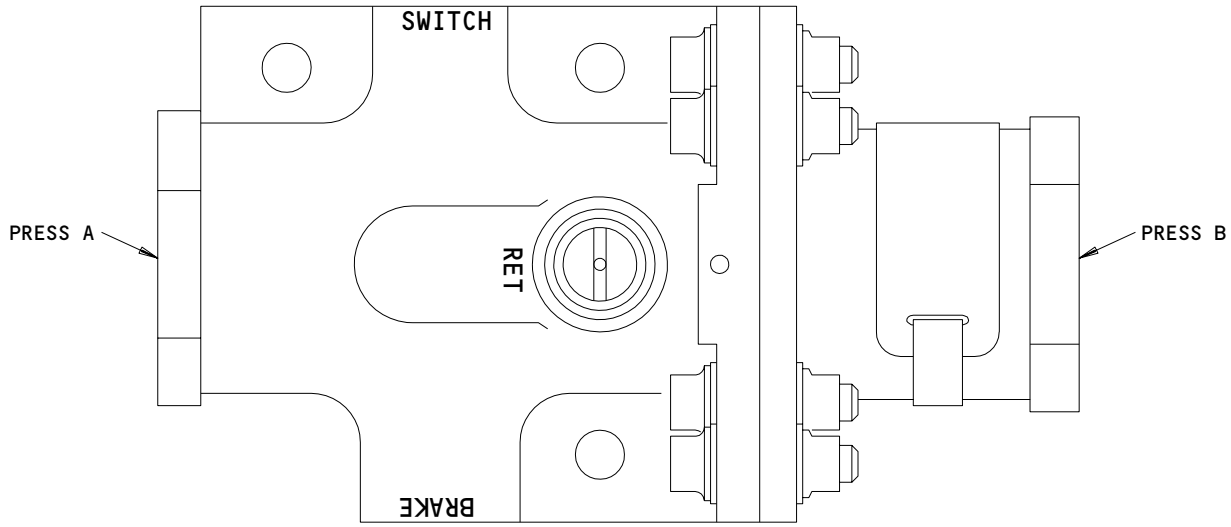
B. Fittings -- To fit MS33649-6, MS33649-8

C. Plug -- BACP20BH

2. Preparation for Test

A. Install the unit in the test stand.

B. Install the fittings in the ports and connect the hydraulic lines.



274T4621-2,-3,-4

Valve Port Diagram
Figure 101

C. Before the test, to wear in the seals, operate the valve the indicated number of cycles in step (1) by the procedure of step (2):

(1) Operate 274T4621-2 valves (3A) a minimum of 50 cycles. Operate 274T4621-3, -4 valves (3B thru 3E) a minimum of 100 cycles.

(2) To operate the valve, put a plug in the SWITCH port. Keep the BRAKE port open. Apply 2900-3100 psi to PRESS A port, and apply to PRESS B alternating pressures of 2900-3100 psi, then 0-1200 psi. Look for flow from the BRAKE port.

3. Test

WARNING: DO NOT APPLY COMPRESSED AIR TO PORTS AT ANY TIME.

CAUTION: DO NOT CYCLE UNIT AT PROOF PRESSURE (4500 PSI).

NOTE: See Fig. 102 for possible causes and corrections.

A. Proof pressure test.

(1) Seal the RETURN and SWITCH ports with plugs. Apply 4500 psi pressure to PRESS A, PRESS B and BRAKE port for 2 minutes. Make sure there is no external leakage or permanent set.

(2) Do step (1) again with 5 psi hydraulic pressure. Make sure there is no external leakage.

B. Vent Leakage Test

(1) Operate the valve a minimum of 25 cycles by the procedure of par. 2.C.(2).

(2) Total leakage from vent openings must not be more than 2 drops in 25 cycles.

C. Shuttle Pressure Test

(1) Seal the SWITCH port and RETURN port with plugs. Keep the BRAKE port open.

(2) Apply 2900-3100 psi pressure to each of the PRESS A and PRESS B ports. Slowly decrease the pressure at the PRESS B port until the valve opens, as shown by a large rate of fluid flow from BRAKE port. Measure and make a note of the pressure at the PRESS B port. Make sure this pressure is 1300-1500 psi.

(3) On the 274T4621-3, -4 valves (3B thru 3E), if pressure at PRESS A port decreases when the valve is open, partially block the flow from BRAKE port until the pressure at the PRESS A port is 2900-3100 psi. Slowly increase the pressure at the PRESS B port until flow from BRAKE port is less than 5 cc/min. Measure the pressure at the PRESS B port. This is valve closure pressure. This must be 1300-1550 psi, and not be more than 100 psi above the pressure you measure in step (2) above.

D. Lapped Seal Leakage Test

(1) Seal the SWITCH port with a plug. Keep the BRAKE and RETURN ports open.

(2) Apply 2900-3100 psi pressure to each of the PRESS A and B ports. Make sure the total leakage from the BRAKE and RETURN ports, added together, is:

(a) not more than 1 cc/min on the 274T4621-2 valve (3A), or

(b) between 2 and 3 cc/min on the 274T4621-3, -4 valves (3B thru 3E).

(3) Decrease the pressure at the PRESS B port to less than 1300 psi. Make sure the valve is open, as shown by a large rate of fluid flow from the BRAKE port.

(4) If the pressure at the PRESS A port decreases when the valve is open, partially block the flow from the BRAKE port until the pressure at PRESS A port is 2900-3100 psi.

(5) The leakage from RETURN port must be:

(a) not more than 2 drops per min on 274T4621-2 valve (3A), or

(b) between 0.1 and 3.0 cc/min on 274T4621-3, -4 valves (3B thru 3E).

TROUBLE	PROBABLE CAUSE	CORRECTION
Pressures or leakages out of limits	Defective slide (95), packing (96,115) or binding piston (70)	Disassemble and replace defective parts per par. 4.A., 4.B., 4.C.
	Seals not fully worn in	Operate the valve per par. 2.C.

Trouble Shooting Chart
Figure 102

4. Corrective Procedures (IPL Fig. 1)

A. Drain the hydraulic fluid from the unit.

B. Replacement of piston (70).

(1) Remove plug (60) with packing (75). Replace the piston if it is defective.

(2) Install a new packing (75) and plug (60) on cap (30) and tighten the plug to 665-735 lb-in.

(3) Do a test of the unit again per par. 3.

C. Replacement of slide (95) and packings (115, 96).

CAUTION: THE SLIDE ASSEMBLY IS A MATCHED SET OF A SLIDE AND A SLEEVE. DO NOT REPLACE THE SLIDE OR SLEEVE SEPARATELY.

(1) Remove plug (90) and packing (110) from body (55). Remove slide assembly (95) with packings (115, 125) and backup rings (120, 130) from body (55). Replace defective parts.

(2) Install new packing (110) and plug (90) on body (55). Tighten the plug to 665-735 lb-in.

(3) Do a test of the unit again per par. 3.

D. Lockwire the unit per ASSEMBLY.

DISASSEMBLY

NOTE: Refer to TESTING/TROUBLE SHOOTING to find out the condition, the possible cause of any malfunction, and to see how much disassembly and repair is necessary.

1. Parts Replacement (IPL Fig. 1)

NOTE: These parts are recommended for replacement. Replacement of other parts can be by in-service experience.

A. Packings (75, 80, 96, 110, 115, 145, 147, 155, 157, 165)

B. Back-up rings (85, 97, 120)

2. Disassembly (IPL Fig. 1)

CAUTION: SLIDE ASSEMBLY (95) IS A PRECISION PART. BE CAREFUL WITH IT.

A. Units with 274T4621-2, -3, -4 valves (3)

(1) Remove parts (140 thru 165). Remove lockwire and remove parts (15 thru 25) and separate cap (30) from body (55).

(2) Remove plug (60), piston (70), packing (80) and backup rings (85) from cap (30).

(3) Remove packing (75) from plug (60).

CAUTION: SLEEVE (100A) AND SLIDE (105) ARE A MATCHED SET AND MUST BE KEPT TOGETHER. DO NOT MIX WITH PARTS FROM OTHER SETS.

(4) Remove plug (90) from body (55). Remove slide assembly (95) from body. Carefully remove slide (105) from sleeve (100). Remove packings (110) from plug (90) and packings (96, 115) and backup rings (97, 120) from sleeve (100). Remove orifice (135) from body (55).

B. Units with 274N1051-3 valve (3)

(1) Remove parts (140 thru 165).

(2) Refer to CMM 32-41-12 for overhaul instructions.

CLEANING

1. Clean all parts but the pressure switch (160, IPL Fig. 1) by standard industry practices and the instructions in SOPM 20-30-03.

2. Clean pressure switch (160) by the vendor's instructions.

CHECK

NOTE: Refer to IPL Fig. 1 for item numbers.

1. Examine all parts for defects by standard industry practices.

2. Magnetic particle check (SOPM 20-20-01) -- Plug (60), piston (70), sleeve (100A, 100B) and slide (105, 105A).

3. Penetrant check (SOPM 20-20-02) -- Cap (30), body (55) and plugs (60, 90).

REPAIR - GENERAL

1. Content

   A. Repair, refinish and replacement procedures are included in separate repair sections as follows:

P/N	NAME	REPAIR
274T4625	BODY	1-1
274T4627	CAP	2-1
274T4628	PISTON	3-1
274T4629	PLUG	4-1
- - -	MISCELLANEOUS PARTS REFINISH	5-1
BAC27THY21	NAMEPLATE	6-1

2. Standard Practices

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

20-00-00 Introduction
20-10-04 Grinding of Chrome Plated Parts
20-30-02 Stripping of Protective Finishes
20-30-03 General Cleaning Procedures
20-41-01 Decoding Table for Boeing Finish Codes
20-42-03 Hard Chrome Plating
20-42-05 Bright Cadmium Plating
20-43-01 Chromic Acid Anodizing
20-50-02 Application of Adhesives
20-50-06 Installation of O-rings and Teflon Seals
20-60-01 Cleaning Materials
20-60-02 Finishing Materials
20-60-04 Miscellaneous Materials

3. Materials

NOTE: Equivalent substitutes can be used.

A. Primer -- BMS 10-11, Type 1 (SOPM 20-60-02)

B. Protective Finish -- Type 41 (SOPM 20-60-02)

C. Enamel -- BMS 10-60 (SOPM 20-60-02)

D. Solvent -- Aliphatic naphtha TT-N-95, Type 1 (Replaces BMS 3-2, Type 1) (SOPM 20-60-01)

E. Adhesive -- BMS 5-55 (SOPM 20-60-04)

4. Dimensioning Symbols

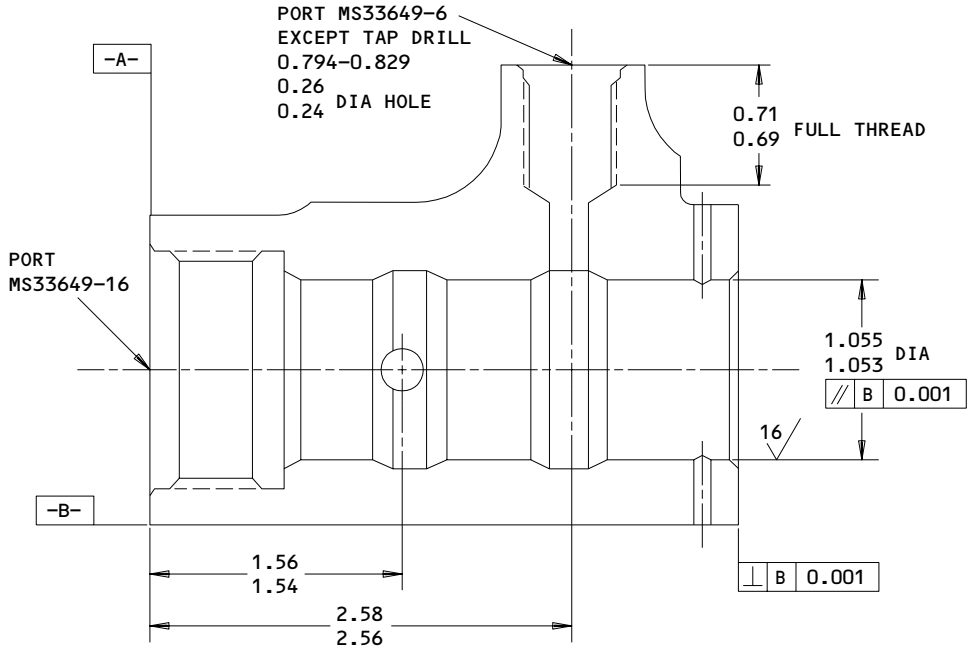
A. Standard True Position Dimensioning Symbols used in applicable repair procedures are shown in SOPM 20-00-00.

BODY - REPAIR 1-1

274T4625-2

1. Coating Repair

A. Repair is only replacement of the original finish. Refer to Refinish instructions, Fig. 601 and to REPAIR-GENERAL for a list of applicable standard practices.



REFINISH

BODY (55) - CHROMIC ACID ANODIZE (F-17.04)
ALL OVER

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

Body Refinish Details
Figure 601

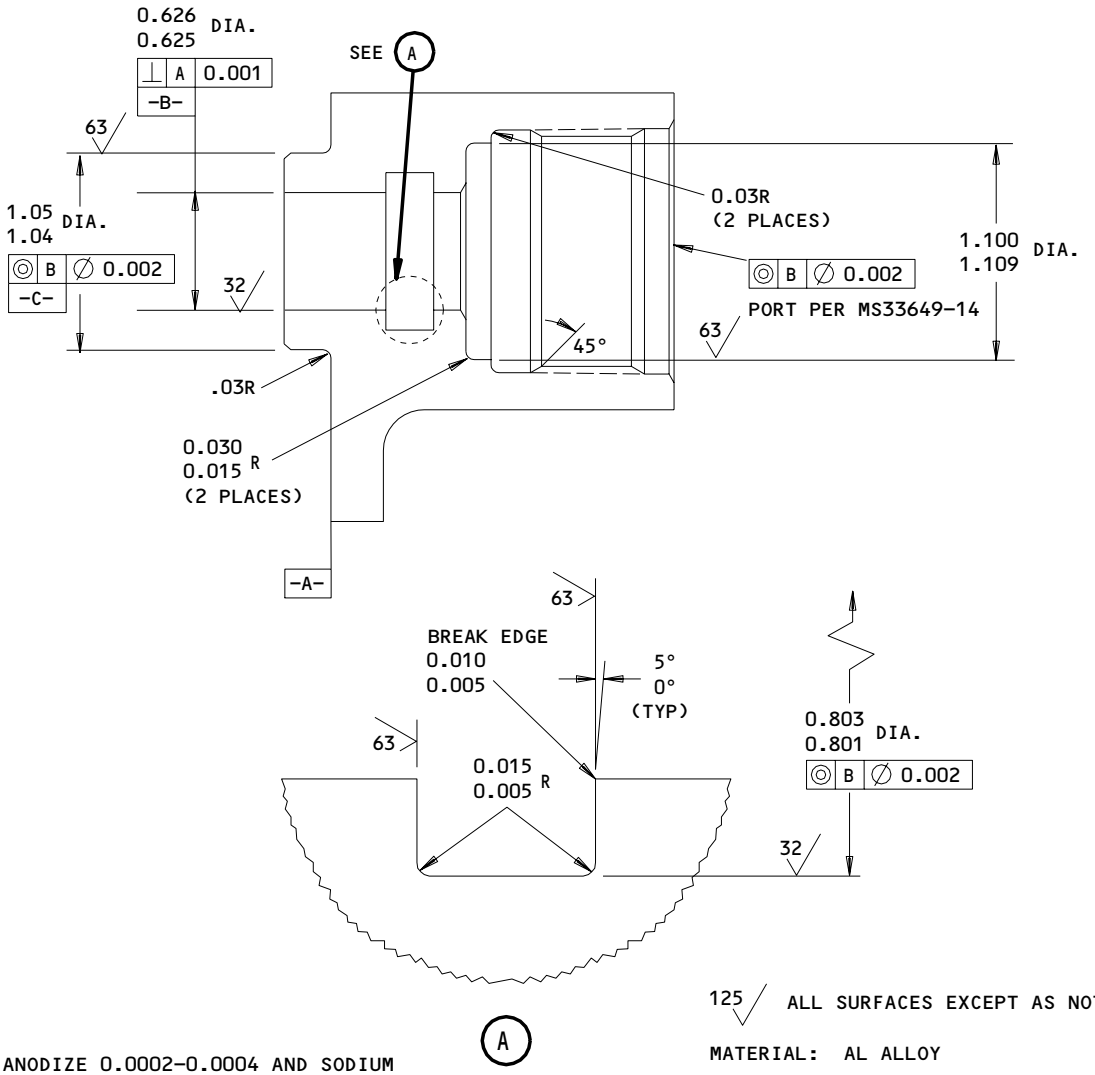
24588

CAP - REPAIR 2-1

274T4627-1

1. Coating Repair

A. Repair is only replacement of the original finish. Refer to Refinish instructions, Fig. 601 and to REPAIR-GENERAL for a list of applicable standard practices.



125 ALL SURFACES EXCEPT AS NOTED

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

REFINISH

FLASH HARD ANODIZE 0.0002-0.0004 AND SODIUM DICHROMATE SEAL PER MIL-A-8625

Cap Repair
Figure 601

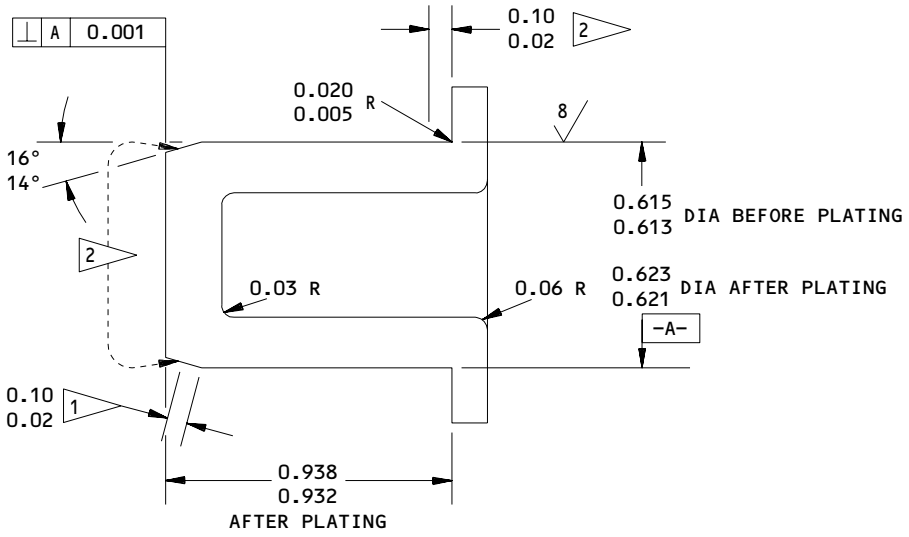
T58547

PISTON REPAIR 3-1

274T4628-1

1. Plating Repair

A. Repair is only replacement of the original finish. Refer to Refinish instructions, Fig. 601 and to REPAIR-GENERAL for a list of applicable standard practices.



REFINISH

CHROME PLATE (F-15.04) DIA-A, WITH RUNOUT AS SHOWN BY 1.
CADMIUM PLATE AREA SHOWN BY 2.

1 CHROME PLATE RUNOUT

2 CADMIUM PLATE (F-15.02)

125 ALL SURFACES UNLESS SHOWN DIFFERENTLY

MATERIAL: 4340 STEEL, 180-200 KSI

ALL DIMENSIONS ARE IN INCHES

Piston Repair
Figure 601

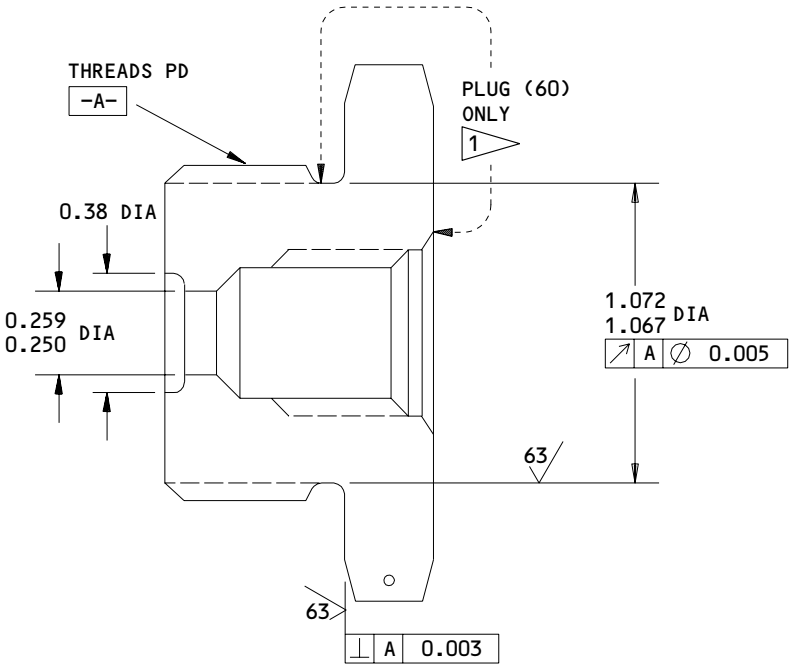
T21946

PLUG - REPAIR 4-1

274T4629-1, -4

1. Coating or Plating Repair

   A. Repair is only replacement of the original finish. refer to Refinish instructions, Fig. 601 and to REPAIR-GENERAL for a list of applicable standard practices.



REFINISH

PLUG (60) -- CADMIUM PLATE AREA SHOWN BY 1

PLUG (60A) -- CHROMIC ACID ANODIZE (F-17.04)

1 CADMIUM PLATE (F-15.02) THIS AREA

REPAIR
(SAME AS REFINISH)

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

MATERIAL:

PLUG (60) -- 4340 STEEL, 125-145 KSI

PLUG (60A) -- AL ALLOY

ALL DIMENSIONS ARE IN INCHES

274T4629-1,-4

Plug Repair and Refinish
Figure 601

T21949

MISCELLANEOUS PARTS REFINISH - REPAIR 5-1

1. Repair of these parts is only replacment of the original finish. Refer to REPAIR-GENERAL for a list of applicable standard practices.

IPL FIG. & ITEM	MATERIAL	FINISH
Fig. 1		
Valve assy (3) (274T4621-2,-3,-4 only)		Apply BMS 10-11, type 1 primer (F-20.02) and BMS 10-60 enamel (F-14.9813, which replaces SRF-14.9813) on unions (140), reducers (150) or switch (160).
Body (55), plug (90)	Al alloy	Chromic acid anodize (F-17.04).
Sleeve (100A), Slide (105)	440C CRES	Passivate (F-17.25, which replaces F-17.09).
Orifice (135)	15-5PH CRES, 180-200 ksi	Passivate (F-17.25, which replaces F-17.09).

Refinish Details
Figure 601

NAMEPLATE - REPAIR 6-1

BAC27THY21

1. Nameplate Replacement

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

A. Steel stamp the serial number on the replacement nameplate (5).

B. Clean the painted surface of cap (30) with solvent.

C. Apply a layer of adhesive to nameplate (5) and to the mating surface of cap (30).

D. Install nameplate (5) and strap (10) on cap (30). Remove unwanted adhesive with solvent.

E. Apply a layer of clear protective finish (F-21.34) to the surface and fillet area of nameplate (5) and strap (10).

ASSEMBLY

1. Materials

NOTE: Equivalent substitutes can be used.

A. Hydraulic Fluid -- BMS 3-11 (SOPM 20-60-03)

B. Assembly Lube -- MCS352 (SOPM 20-60-03)

C. Lockwire -- MS20995C32 (SOPM 20-60-04)

2. Lubrication

A. Apply a thin layer of hydraulic fluid or assembly lube to packings before installation.

3. Assembly (IPL Fig. 1, Fig. 701)

A. Valves 274T4621-2, -3, -4

(1) Install orifice (135) on body (55).

CAUTION: SLEEVE (100A) AND SLIDE (105) ARE A MATCHED SET (95) AND MUST BE KEPT TOGETHER.

CAUTION: BEFORE YOU INSTALL THE SLIDE AND SLEEVE UNIT, MAKE SURE THAT PACKING (96), RINGS (97) ARE INSTALLED. BE CAREFUL NOT TO DAMAGE THE SEALS.

(2) Install packings (115, 96) and backup rings (120, 97) on sleeve (100) and install slide (105) on the sleeve. Put slide assembly (95) into body (55).

(3) Install packing (110) on plug (90). Install the plug on body (55). Tighten the plug to 665-735 lb-in.

(4) Install packing (80) and backup rings (85) on cap (30) and packing (75) on plug (60). Install piston (70) on cap (30). Install plug (60) on cap and tighten to 665-735 lb-in.

(5) Assemble cap (30) with attached parts to body (55) with fasteners (15 thru 25). Install parts (140 thru 165).

(6) Do the test (Ref TESTING/TROUBLE SHOOTING).

(7) After the test, lockwire per Fig. 702.

B. Valve 274N1051-3

(1) Refer to CMM 32-41-12 for details.

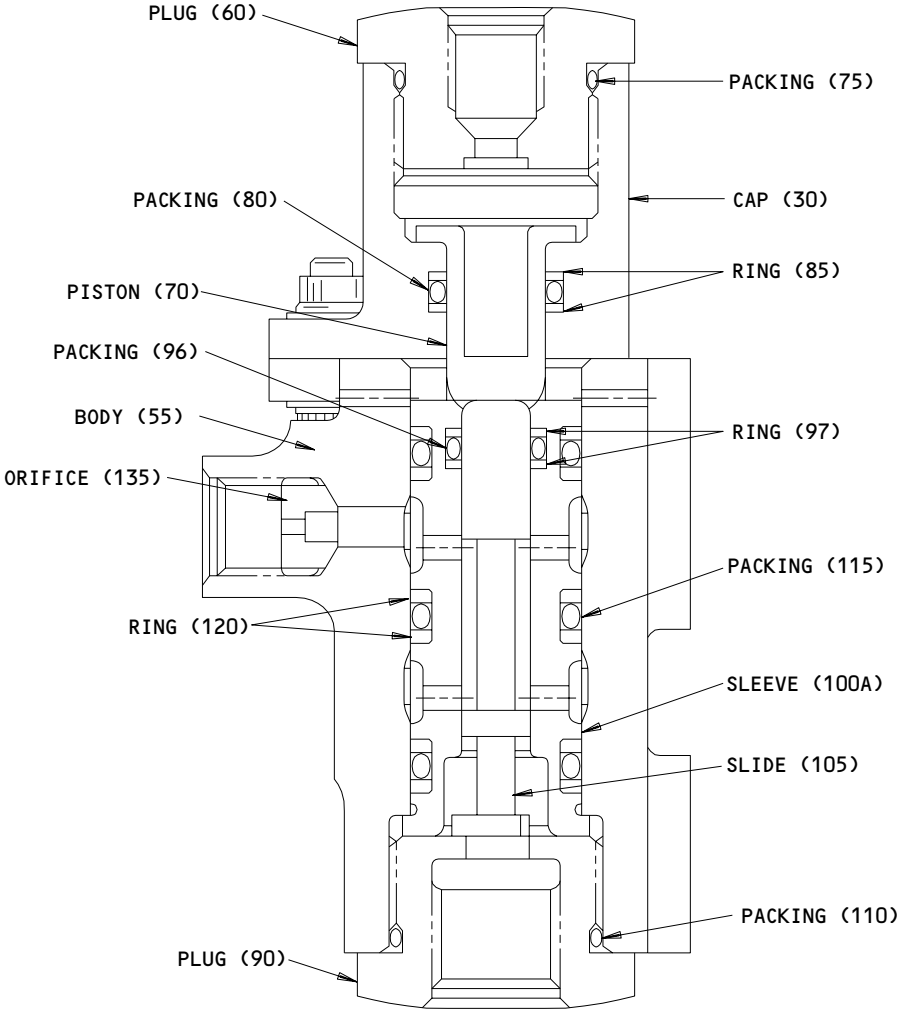
(2) Install parts (140 thru 165).

4. Storage Instructions

A. Partially fill the unit with hydraulic fluid.

B. Put clean BAC20BH plugs in the ports.

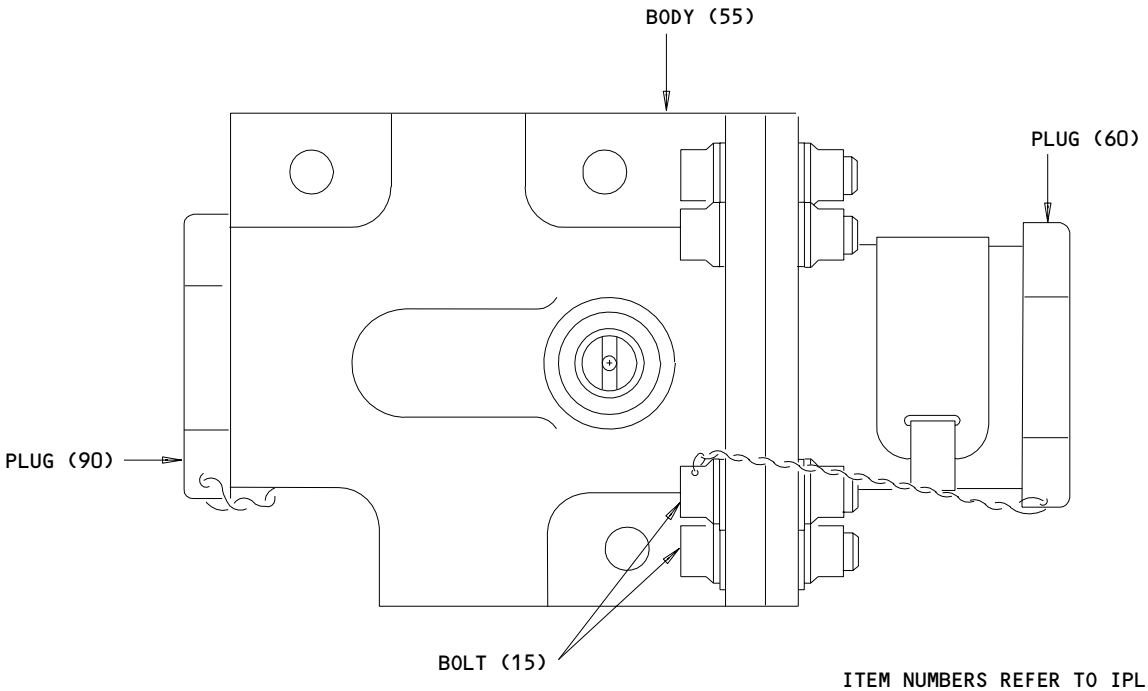
C. Put the unit away by standard industry practices and the instructions in SOPM 20-44-02.



ITEM NUMBERS REFER TO IPL FIGURE 1

274T4621-2,-3,-4
Seal Installation
Figure 701

92431

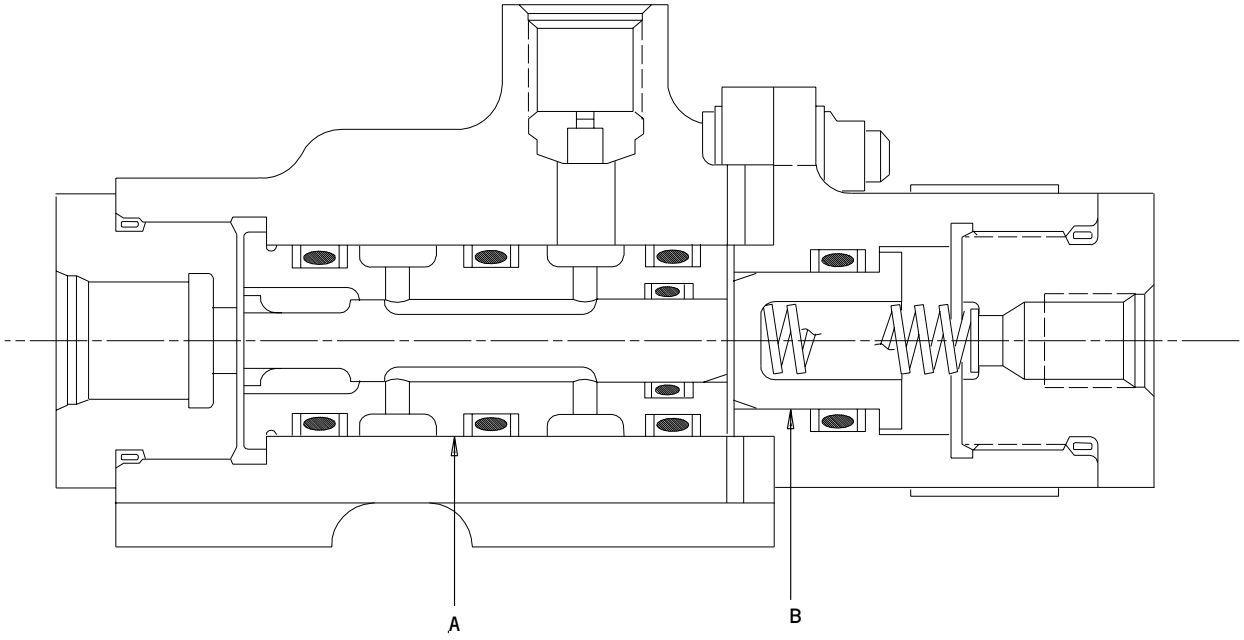


ITEM NUMBERS REFER TO IPL FIG 1

274T4621-2,-3,-4
Lockwire Diagram
Figure 702

T21953

FITS AND CLEARANCES



274T4621-2,-3,-4

Ref Letter Fig.801	Mating Item No. IPL Fig.1	Design Dimension				Service Wear Limit		
		Dimension		Assembly Clearance		Dimension		Maximum Clearance
		Min	Max	Min	Max	Min	Max	
A	ID 55 OD 100	1.053 1.050	1.055 1.051	0.002	0.005			
B	ID 30 OD 70	0.625 0.621	0.626 0.623	0.002	0.005			

ALL DIMENSIONS ARE IN INCHES

Fits and Clearances
Figure 801

T21954

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.

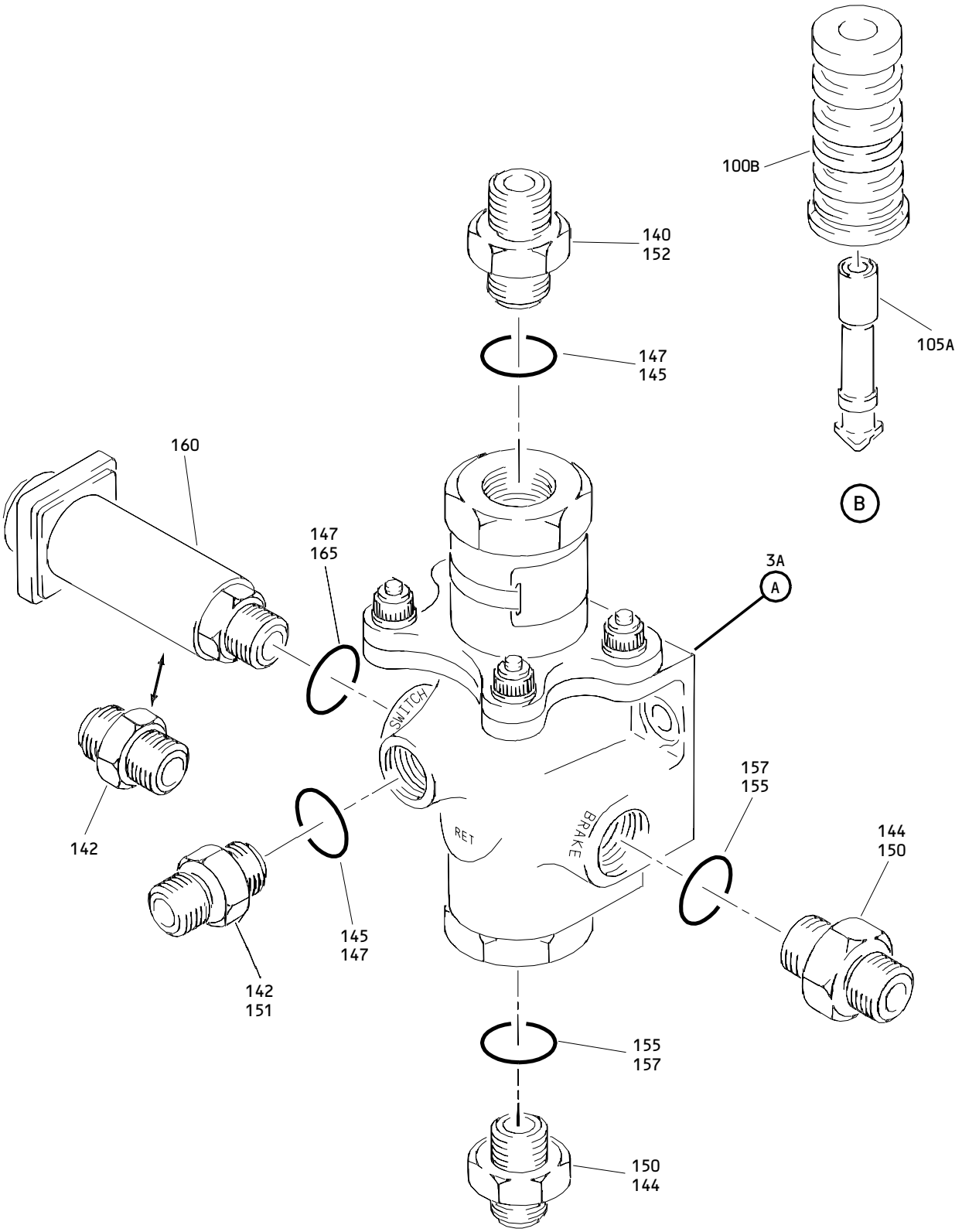
VENDORS

02750 EATON CORP ENGINEERED SENSORS DIV
15 DURANT AVENUE
BETHEL, CONNECTICUT 06801-1901

99240 CRISSAIR, INCORPORATED
38905 - TENTH STREET EAST
PALMDALE, CALIFORNIA 93550-4000

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
AN960D416L		1	20	8
BACB30LE4HB		1	15B	4
BACB30MR4HK8		1	15A	4
BACB30MT4HT8		1	15	
BACN10GW4		1	25	4
BACR12BM111		1	97A	2
BACR17E6-4		1	152	1
BACR17E8-6		1	150	2
		1	151	1
		1	151C	1
BACU24K6		1	140	1
		1	142	2
BACU24K8		1	144	2
BACW10BN4AC		1	20A	8
BAC27THY21		1	5	1
BMN10GW4		1	25	4
H93-4		1	25	4
MS21902-6T		1	152A	1
MS28774-111		1	97	
		1	130	
MS28774-114		1	85	2
MS28774-211		1	120	6
NAS1611-111		1	96	1
		1	125	
NAS1611-114		1	80	1
NAS1611-121		1	75	1
NAS1611-211		1	115	3
NAS1612-14		1	75A	
NAS1612-16		1	110	1
NAS1612-6		1	145	2
		1	147	3
		1	165	1
NAS1612-6A		1	147A	3
		1	165A	1
NAS1612-8		1	155	2
		1	157	2
NAS1612-8A		1	155A	2
		1	157A	2
NAS1804-4		1	25A	4
RMLH18-4		1	25	4
SL7020S428		1	25	4
S271T452-1		1	160	1
VN497A048		1	25	4
211C223-175		1	160	1
211C223-301		1	160	1
211C223-534		1	160	1
274N1051-3		1	3G	1

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
274T0001-1		1	135	1
274T0005-2		1	1B	
274T0005-3		1	1D	RF
274T0005-5		1	1G	RF
274T0005-7		1	1H	RF
274T0005-8		1	1K	RF
274T4620-10		1	1L	RF
274T4620-12		1	1N	RF
274T4620-2		1	1A	
274T4620-3		1	1C	RF
274T4620-5		1	1E	RF
274T4620-7		1	1F	RF
274T4620-8		1	1J	RF
274T4621-1		1	1	
		1	3	
274T4621-2		1	3A	1
274T4621-3		1	3B	1
		1	3C	1
274T4621-4		1	3D	1
		1	3E	1
		1	3F	1
274T4622-1		1	95	
274T4622-2		1	99	
274T4622-3		1	95A	1
274T4622-4		1	99A	1
274T4622-5		1	95B	1
274T4622-6		1	99B	1
274T4622-7		1	95C	1
274T4622-8		1	99C	1
274T4623-1		1	105	1
274T4623-2		1	105A	1
274T4624-1		1	100	
274T4624-2		1	100A	1
274T4624-3		1	100B	1
274T4625-2		1	55	1
274T4626-1		1	90	1
274T4627-1		1	30	1
274T4628-1		1	70	1
274T4629-1		1	60	1
274T4629-4		1	60A	1
274U0003-2		1	1I	RF
274U0003-4		1	1M	RF
6F3748		1	151A	1
		1	151B	1
66796-428		1	25	4
69B80300-18		1	10	1



Brake Alternate Selector Valve or Brake Accumulator Isolation Valve Assembly
Figure 1 (Sheet 1)

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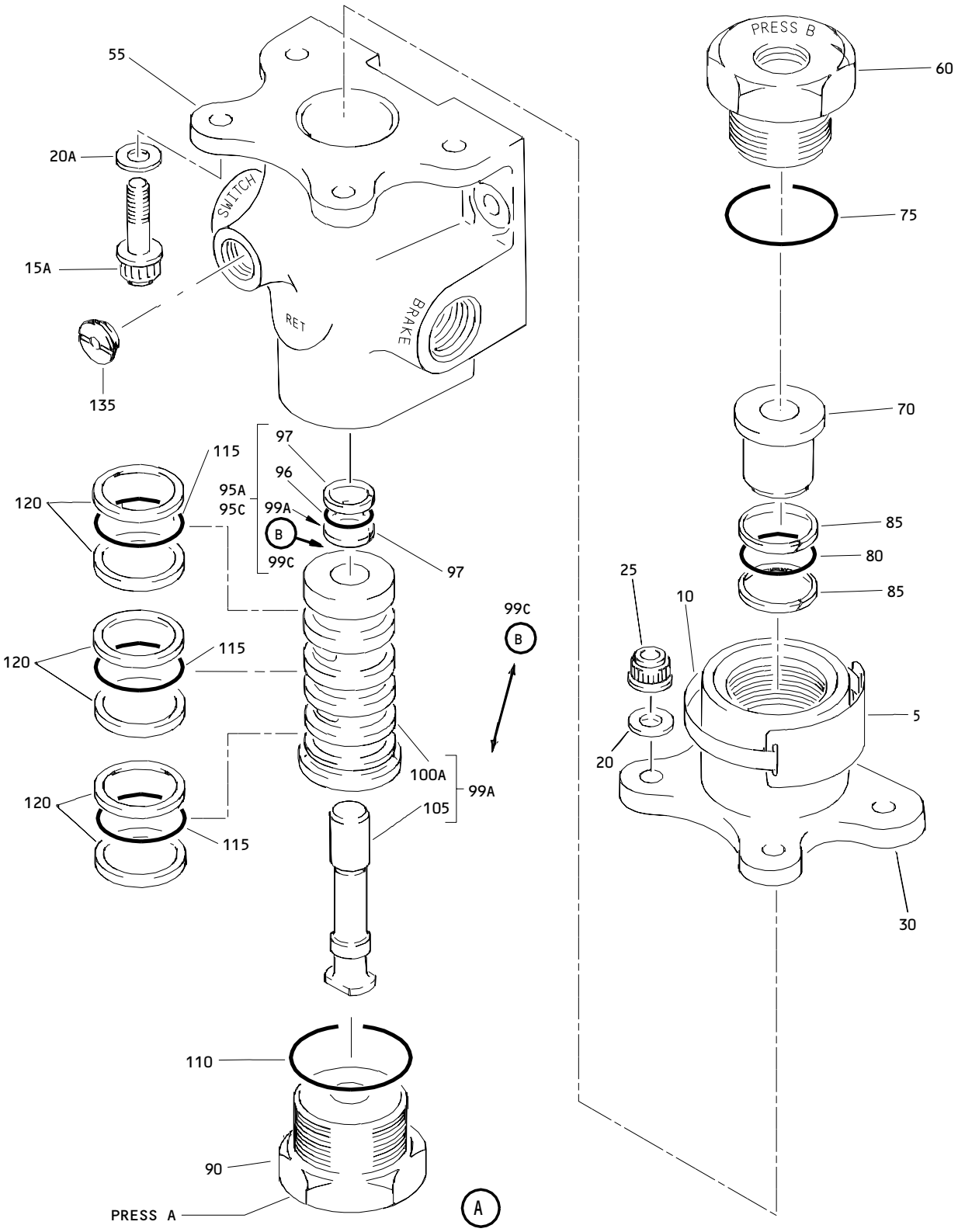

Brake Alternate Selector Valve or Brake Accumulator Isolation Valve Assembly
Figure 1 (Sheet 2)

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
-1	274T4621-1		DELETED		
-1A	274T4620-2		DELETED		
-1B	274T0005-2		DELETED		
-1C	274T4620-3		VALVE ASSY-BRAKE ALTERNATE SELECTOR (PRE SB 32-0004)	A	RF
-1D	274T0005-3		VALVE ASSY-BRAKE ALTERNATE SELECTOR (PRE SB 32-0004)	B	RF
-1E	274T4620-5		VALVE ASSY-BRAKE ALTERNATE SELECTOR	C	RF
-1F	274T4620-7		VALVE ASSY-BRAKE ALTERNATE SELECTOR (POST SB 32-0004)	D	RF
-1G	274T0005-5		VALVE ASSY-BRAKE ACCUMULATOR ISOLATION	E	RF
-1H	274T0005-7		VALVE ASSY-BRAKE ACCUMULATOR ISOLATION (POST SB 32-0004)	F	RF
-1I	274U0003-2		VALVE ASSY-BRAKE ACCUMULATOR ISOLATION	G	RF
-1J	274T4620-8		VALVE ASSY-BRAKE ALTERNATE SELECTOR	H	RF
-1K	274T0005-8		VALVE ASSY-BRAKE ACCUMULATOR ISOLATION	I	RF
-1L	274T4620-10		VALVE ASSY-BRAKE ALTERNATE SELECTOR	J	RF
-1M	274U0003-4		VALVE ASSY-BRAKE ACCUMULATOR ISOLATION	K	RF
-1N	274T4620-12		VALVE ASSY-BRAKE ALTERNATE SELECTOR	L	RF
3	274T4621-1		DELETED		
3A	274T4621-2		.VALVE ASSY- (OPT ITEM 3D)	AB	1
-3B	274T4621-3		.VALVE ASSY- (OPT ITEM 3D)	AB	1
-3C	274T4621-3		.VALVE ASSY- (OPT ITEM 3D)	CE	1
-3D	274T4621-4		.VALVE ASSY- (OPT ITEM 3A,3B,3C)	CE	1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
-3E	274T4621-4		.VALVE ASSY- (OPT ITEM 3C)	DF	1
-3F	274T4621-4		.VALVE ASSY	G	1
-3G	274N1051-3		.VALVE ASSY (REF CMM 32-41-12)	H-L	1
5	BAC27THY21		..NAMEPLATE (USED ON ITEMS 3A-3F)		1
10	69B80300-18		..STRAP (USED ON ITEMS 3A-3F)		1
15	BACB30MT4HT8		DELETED		
15A	BACB30MR4HK8		..BOLT (USED ON ITEMS 3A-3F)		4
-15B	BACB30LE4HB		..BOLT (OPT) (USED ON ITEMS 3A-3F)		4
20	AN960D416L		..WASHER (USED UNDER NUTS) (USED ON ITEMS 3A-3F)		4
20A	BACW10BN4AC		..WASHER (USED UNDER BOLTHEADS) (USED ON ITEMS 3A-3F)		4
25	BACN10GW4		..NUT-SELF LOCKING (OPT) (USED ON ITEMS 3A-3F)		4
-25A	NAS1804-4		..NUT- (USED ON ITEMS 3A-3F)		4
30	274T4627-1		..CAP (USED ON ITEMS 3A-3F)		1
55	274T4625-2		..BODY (USED ON ITEMS 3A-3F)		1
60	274T4629-1		..PLUG- (OPT ITEM 60A) (USED ON ITEMS 3A-3F)		1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
-60A	274T4629-4		..PLUG- (OPT ITEM 60) (USED ON ITEMS 3A-3F)		1
70	274T4628-1		..PISTON (USED ON ITEMS 3A-3F)		1
75	NAS1611-121		..PACKING (USED ON ITEMS 3A-3F)		1
75A	NAS1612-14		DELETED		
80	NAS1611-114		..PACKING (USED ON ITEMS 3A-3F)		1
85	MS28774-114		..RING-BACKUP (USED ON ITEMS 3A-3F)		2
90	274T4626-1		..PLUG (USED ON ITEMS 3A-3F)		1
95	274T4622-1		DELETED		
95A	274T4622-3		..SLIDE ASSY- (USED ON ITEM 3A)		1
-95B	274T4622-5		..SLIDE ASSY- (USED ON ITEMS 3B,3C)		1
95C	274T4622-7		..SLIDE ASSY- (USED ON ITEMS 3D,3E,3F)		1
96	NAS1611-111		...PACKING		1
97	MS28774-111		DELETED		
97A	BACR12BM111		...RING-BACKUP		2
99	274T4622-2		DELETED		
99A	274T4622-4		...SLIDE AND SLEEVE ASSY (USED ON ITEM 95A)		1
-99B	274T4622-6		...SLIDE AND SLEEVE ASSY (USED ON ITEM 95B)		1
99C	274T4622-8		...SLIDE AND SLEEVE ASSY (USED ON ITEM 95C)		1
100	274T4624-1		DELETED		1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
100A	274T4624-2		....SLEEVE- (USED ON ITEMS 99A,99B)		1
100B	274T4624-3		....SLEEVE- (USED ON ITEM 99C)		1
105	274T4623-1		....SLIDE (USED ON ITEM 99A,99B)		1
105A	274T4623-2		....SLIDE (USED ON ITEM 99C)		1
110	NAS1612-16		..PACKING (USED ON ITEMS 3A-3F)		1
115	NAS1611-211		..PACKING (USED ON ITEMS 3A-3F)		3
120	MS28774-211		..RING-BACKUP (USED ON ITEMS 3A-3F)		6
125	NAS1611-111		DELETED		
130	MS28774-111		DELETED		
135	274T0001-1		..ORIFICE (USED ON ITEMS 3A-3F)		1
140	BACU24K6		.UNION	ACDH	1
142	BACU24K6		.UNION	BEFGIK	2
144	BACU24K8		.UNION	BEFGIK	2
145	NAS1612-6		.PACKING	ACDGH	2
147	NAS1612-6		.PACKING	BEF	3
-147A	NAS1612-6A		.PACKING	I-L	3
150	BACR17E8-6		.REDUCER	ACDHL	2
-151	BACR17E8-6		.REDUCER- (PRE SB 32-0152)	ACDH	1
-151A	6F3748		.FITTING-RESTRICTOR- (V99240) (POST SB 32-0152)	ACDH	1
-151B	6F3748		.FITTING-RESTRICTOR- (V99240)	J	1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
-151C	BACR17E8-6		.REDUCER	L	1
152	BACR17E6-4		.REDUCER	BEFIK	1
152A	MS21902-6T		.REDUCER	JL	1
155	NAS1612-8		.PACKING	ACDHJ	2
-155A	NAS1612-8A		.PACKING	JL	2
157	NAS1612-8		.PACKING	BEFG	2
-157A	NAS1612-8A		.PACKING	JL	2
160	211C223-175		.SWITCH-PRESSURE	ACDH	1
			(V02750)	JL	
			(SPEC S271T452-1)		
			(OPT 211C223-301 (V02750))		
			(OPT 211C223-534 (V02750))		
165	NAS1612-6		.PACKING	ACDH	1
-165A	NAS1612-6A		.PACKING	JL	1