TO: ALL HOLDERS OF AC MOTOR PUMP PRESSURE AND CASE DRAIN FILTER ASSEMBLY
COMPONENT MAINTENANCE MANUAL 29-11-41

REVISION NO. 15 DATED JUL 01/04

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 on the Record of Revision Sheet.

CHAPTER/SECTION AND PAGE NO.	DESCRIPTION OF CHANGE
1004,1016	Revised item number (150) quantity from 2 to 1.

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AC MOTOR PUMP PRESSURE AND CASE DRAIN FILTER MODULE ASSEMBLY

PART NUMBER 271T0042-1 THRU -4

COMPONENT MAINTENANCE MANUAL
WITH
ILLUSTRATED PARTS LIST

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BOEING
COMPONENT
MAINTENANCE MANUAL

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

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TEMPORARY REVISION AND SERVICE BULLETIN RECORD

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVE	DATE OF INCORPORATION INTO MANUAL
		PRR N52207	JUL 10/82
		PRR N52225	JUL 10/82
		PRR VDC-N0002	JUL 10/82
		PRR VDC-T0004	JUL 10/82
		PRR B11022	OCT 10/83

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1	JUL 10/83	01
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*[1] Special instructions not required. Use standard industry practices.

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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.

The beginning of the REPAIR section includes a list of the separate repairs and a list of applicable standard Boeing 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
Disassembly
Assembly

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AC MOTOR PUMP PRESSURE AND CASE DRAIN FILTER MODULE ASSEMBLY

DESCRIPTION AND OPERATION

1. The module assembly consists of two filter elements, two check valves, two shutoff valves, two differential pressure indicators and a pressure switch all assembled to the housing assembly.

2. Operation

   A. Hydraulic fluid enters the module thru the P IN port from AC motor pump and thru the CD IN port from the pump case drain and passes thru the filters. The filtered fluid then exits thru the P OUT and CD OUT ports.

   B. The shutoff valves are in the open position whenever the filters are installed. When the filters are removed, the shutoff valves closed preventing hydraulic fluid loss.

   C. The check valves prevent back flow thru the filters.

   D. The differential pressure indicators activate when there is an excessive differential pressure across the filters and produce visual warning. The warning indicates dirty or clogged filters. The warning indicator can be manually reset after tripping.

   E. On 271T0042-1 thru -3 assemblies, the pressure switch activates a warning light indicating low pump pressure.

3. Leading Particulars (approximate)

   A. Height -- 8 inches

   B. Width -- 6 inches

   C. Length -- 9 inches

   D. Weight (Dry) -- 10 lbs

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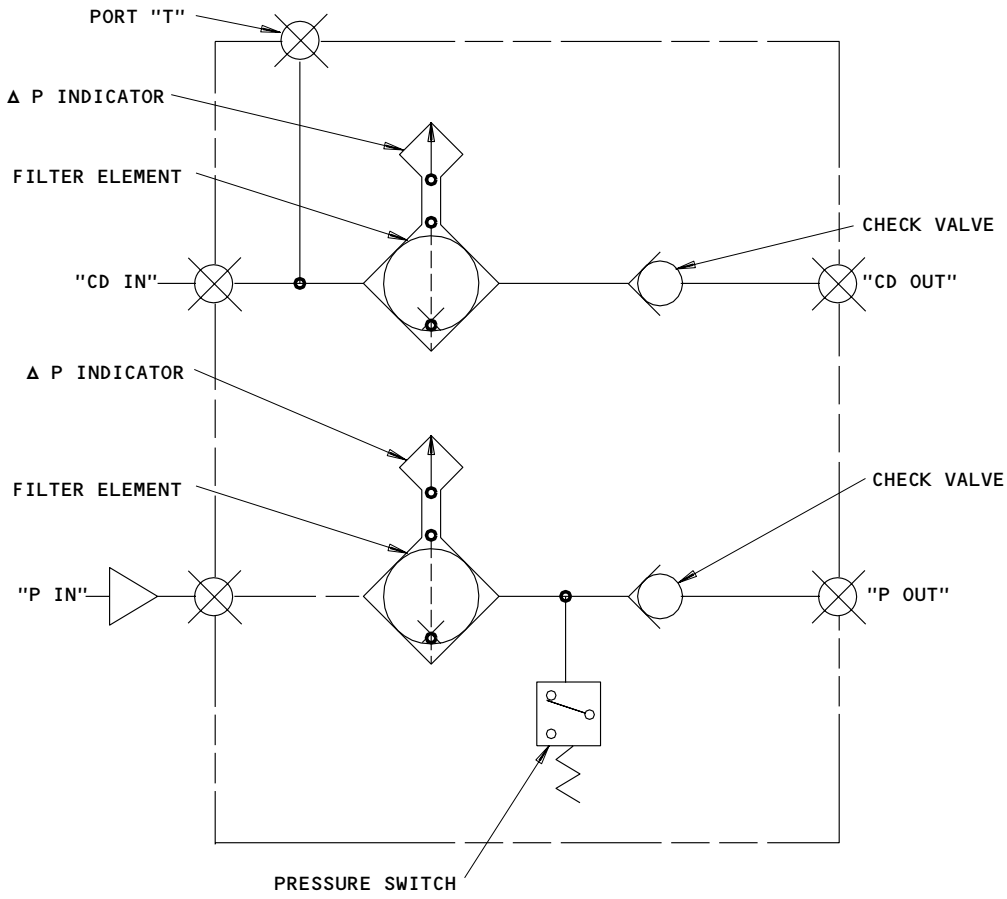
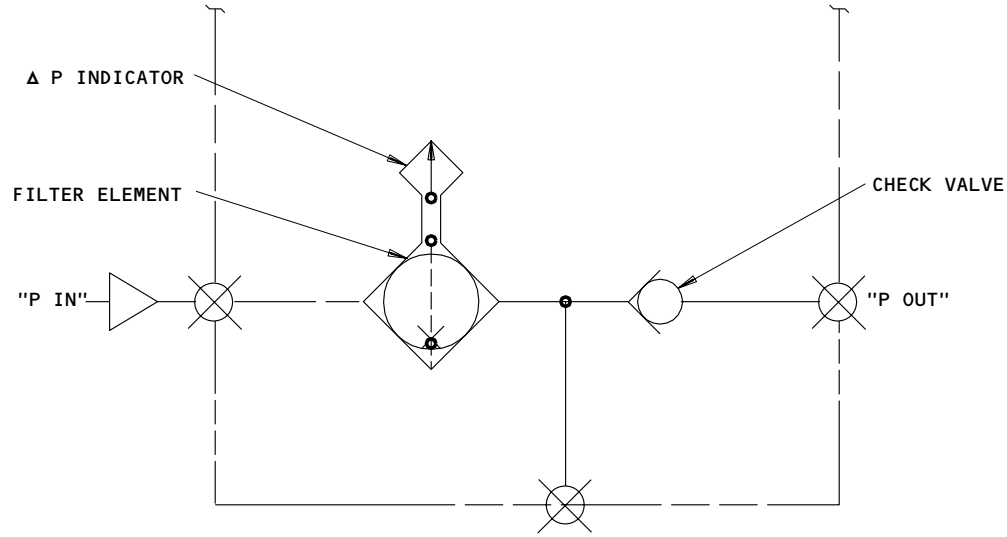


271T0042-1,-2,-3 ASSYS



271T0042-4 ASSY

Hydraulic Schematic
Figure 1

44583
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TESTING AND TROUBLE SHOOTING

1. Equipment and Materials

NOTE: Equivalent substitutes may be used.

A. Hydraulic test stand capable of delivering at least 9 gpm of hydraulic fluid, BMS 3-11 at a variable pressure up to 2000 psi.

B. Dummy filter assemblies -- A29003-9 *[1]

C. Dummy filter case assemblies -- A29003-38, -39 *[1]

D. Electric power supply providing 18.0-29.5v dc (28v dc nominal)

E. Pressure switch test equipment -- A29006-19

F. Plug -- AN814-6DL (used for 271T0042-4 only)

G. Packing -- NAS1612-6 (used for 271T0042-4 only)
*[1] Parts of tool set A29003-49

H. Voltmeter (customer furnished)

2. Test

A. Pressure switch test (271T0042-1 thru -3 assemblies only)

(1) Connect the pressure switch (75, IPL Fig. 1) to the 28v dc (nominal) power source and test equipment A29006-19 or to an indicator light wired as shown.

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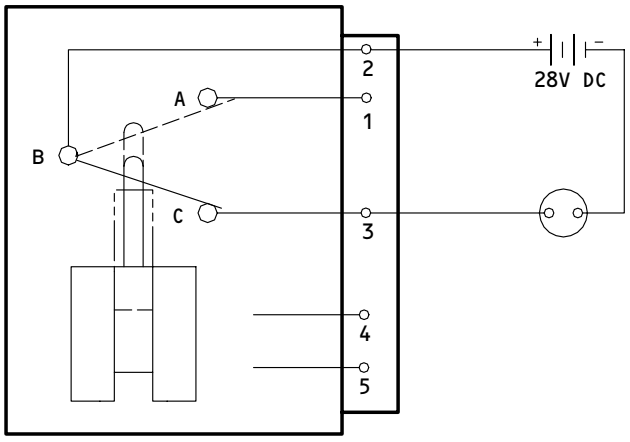

Hydraulic Pressure Switch Wiring Diagram
Figure 101

44584

(2) Plug port P OUT and gradually apply hydraulic pressure to port P IN. The indicator light shall go off at a pressure between 1300 and 1700 psi during increasing pressure.

(3) Slowly reduce hydraulic pressure. The indicator light shall go on again between 1350 and 1200 psi.

B. Flow and pressure drop test

(1) Conduct test at a temperature of 68°F (20°C) to 110°F (43.3°C).

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(2) Plug pressure switch port with an AN814-6DL plug and a NAS1612-6 packing (271T0042-4 assembly only).

(3) With a steady flow of 9 gpm thru the filter element from port P IN to port P OUT, check that pressure drop across the assembly does not exceed 25 psi with a clean filter.

(4) With a steady flow of 2.5 gpm thru the filter from port CD IN to port CD OUT, check that pressure drop across the assembly does not exceed 15 psi with a clean filter.

C. Differential pressure indicators (55, 60) test

(1) Conduct test at a temperature of 80°F (26.7°C) to 110°F (43.3°C).

(2) Remove cases (85, 125) and filters (95, 140) and install dummy filters A29003-9 and dummy cases A29003-38, -39 to simulate completely clogged filters. Plug ports P OUT and CD OUT.

(3) Gradually apply hydraulic pressure to port P IN until the warning button on the indicator is fully extended. Check that the pressure is 100-120 psi. Reduce the pressure to zero. Press to reset the indicator.

(4) Gradually apply hydraulic pressure to port CD IN until the warning button on the indicator is fully extended. Check that the pressure is 48-62 psi. Reduce the pressure to zero. Press to reset the indicator.

D. Shutoff valves leakage test

(1) Remove dummy filters A29003-9 and dummy cases A29003-38, -39.

(2) Apply hydraulic pressure of 5 psi to ports P IN and CD IN. Check that leakage from each valve does not exceed 10 drops per minute.

E. Proof pressure test

(1) Install filters (95, 140) and cases (85, 125) per ASSEMBLY par. 3.D., 3.E., 3.I. and 3.J.

(2) Connect hydraulic test stand to P IN and P OUT ports.

(3) Plug pressure switch port with AN814-6DL plug and a NAS1612-6 packing (271T0042-4 assembly only).

(4) Fill the assembly with hydraulic fluid. Make sure that air is removed from inside the assembly.

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(5) Apply hydraulic pressure to P IN and P OUT ports at the same time. Slowly increase the pressure to 4500/4750 PSIG and hold for 2 minutes. There shall be no evidence of external leakage.

(6) Decrease pressure to 0 psig.

(7) Apply 5-6 psig hydraulic pressure to P IN and P OUT ports at the same time and hold for 2 minutes. There shall be no evidence of external leakage.

WARNING: HYDRAULIC PRESSURE MUST BE REDUCED TO ZERO PRIOR TO LOOSENING OUTPUT PLUGS OR DAMAGE TO EQUIPMENT AND INJURY TO PERSONNEL MAY RESULT.

(8) Decrease hydraulic pressure to 0 psig.

(9) Disconnect the module assembly from the test stand.

(10) Connect hydraulic test stand to ports CD IN and CD OUT. Make sure that port T is plugged.

(11) Fill the assembly with fluid. Make sure that air is removed from inside the assembly.

(12) Apply hydraulic pressure to CD IN and CD OUT ports at the same time. Slowly increase the pressure to 900/945 psig and hold for 2 minutes. There shall be no evidence of external leakage.

(13) Decrease hydraulic pressure to 0 psig.

(14) Apply 5-6 psig hydraulic pressure and hold for 2 minutes. There shall be no evidence of external leakage.

WARNING: HYDRAULIC PRESSURE MUST BE REDUCED TO ZERO PRIOR TO LOOSENING OUTPUT PLUGS OR DAMAGE TO EQUIPMENT AND INJURY TO PERSONNEL MAY RESULT.

(15) Decrease hydraulic pressure to 0 psig.

(16) Disconnect the module assembly from the test stand.

F. Post test procedures

(1) Lockwire parts per ASSEMBLY par. 3.P.

(2) Remove the AN814-6DL plug and NAS1612-6 packing from the pressure switch port.

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(3) Prepare for storage using standard industry practices.

TROUBLE	POSSIBLE CAUSE	CORRECTION
Step 2.A.	Defective switch (75)	Replace switch per step 3.A.
Step 2.B.	Clogged passage	Disassemble per DISASSEMBLY and clean parts. NOTE: Filters (95, 140) are not cleanable. Replace filters if pressure drop is excessive.
Step 2.C.	Defective indicators (55,60)	Replace indicators per step 3.B.
Step 2.D.	Defective sleeves (105,160)	Disassemble and replace parts per step 3.C.

NOTE: Trouble shooting is keyed to the step of the test procedures.

Trouble Shooting Chart
Figure 102

3. Corrective Procedures

A. Switch (75) replacement

(1) Remove switch (75) and packing (80A).

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(2) Lubricate new packing (80A) with hydraulic fluid and install on replacement switch (75).

(3) Install switch (75) on housing assembly (180) and tighten to 160-175 lb-in.

(4) Retest unit per par. 2.

B. Indicators (55, 60) replacement

(1) Remove defective indicators (55, 60) and packings (65A, 70).

(2) Lubricate new packings (65A, 70) with hydraulic fluid and install on replacement indicators (55, 60).

(3) Install indicators (55, 60) on housing assembly (180) and tighten to 160-175 lb-in.

(4) Retest unit per par. 2.

C. Sleeves (105, 160) and springs (110, 165) replacement

(1) Remove parts per DISASSEMBLY step 3.E. thru 3.K. as applicable.

(2) Install replacement parts per ASSEMBLY step 3.A. thru 3.I. as appliable.

(3) Retest unit per par. 2.

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DISASSEMBLY

NOTE: Refer to TESTING/TROUBLE SHOOTING to establish condition or probable cause of any malfunction and to determine extent of disassembly and repair.

1. Equipment

   NOTE: Equivalent substitutes may be used.

   A. Sleeve retainer wrench assemblies -- A29003-4, A29003-33 *[1]

   B. Fitting wrench assembly -- A29003-6 *[1]

      *[1] Parts of tool set A29003-49

2. Parts Replacement

   NOTE: The following parts are recommended for replacement. Unless otherwise specified, actual replacement of parts may be based on in-service experience.

   A. Lockwire

   B. All packings and retainers.

   C. Filters (95, 140)

3. Disassembly (IPL Fig. 1)

   A. Remove check valves (20) from housing assembly (180). Remove packings (25, 35) and retainers (30, 40).

   B. Remove plug (45) from housing assembly (180). Remove packing (50).

   C. Remove differential pressure indicators (55, 60) from housing assembly (180). Remove packings (65A, 70).

   D. On 271T0042-1 thru -3 assemblies, remove pressure switch (75) from housing assembly (180). Remove packing (80A).

   E. Remove case (85) from housing assembly (180). Remove filter (95) with small clockwise and counterclockwise twists when pulling straight out of housing assembly (180). Remove packing (90) from case (85).

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WARNING: SPRING (110) IS PRELOADED WHEN INSTALLED. SLEEVE (105) SHOULD BE RETAINED WHILE REMOVING FITTING (100) TO PREVENT INJURY TO PERSONNEL.

F. Screw in wrench assembly A29003-4 to secure sleeve (105) in place. Using wrench assembly A29003-6, remove fitting (100) from housing assembly (180). Remove packing (115A).

G. Slowly unscrew wrench assembly A29003-4 from housing assembly (180) and remove sleeve (105) and spring (110). Remove packing (120) from housing (180).

H. Remove case (125) from housing assembly (180). Remove packing (130) and retainers (135) from case (125).

I. Remove filter (140) with small clockwise and counterclockwise twists while pulling straight out of housing assembly (180). Remove packings (145) and retainer (150).

WARNING: SPRING (165) IS PRELOADED WHEN INSTALLED. SLEEVE (160) SHOULD BE RETAINED WHILE REMOVING FITTING (155) TO PREVENT INJURY TO PERSONNEL.

J. Screw in wrench assembly A29003-33 to secure sleeve (160) in place. Using wrench assembly A29003-6, remove fitting (155) from housing assembly (180). Remove packing (170A).

K. Slowly unscrew wrench assembly A29003-33 out of housing assembly (180) and remove sleeve (160) and spring (165). Remove packing (175) from housing (180).

NOTE: Do not remove identification plate (15) or disassemble housing assembly (180) unless necessary for repair or replacement.

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CHECK

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

2. Penetrant check the following parts (Ref IPL Fig. 1) per 20-20-02.

   A. Cases (85, 125)

   B. Housing assembly (180)

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REPAIR - GENERAL

1. Content

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

P/N	NAME	REPAIR
7585538	PLATE, IDENTIFICATION	1-1
7586200	PLATE, IDENTIFICATION	1-1
7586228	PLATE, IDENTIFICATOIN	1-1
7587682	PLATE, IDENTIFICATOIN	1-1
- - -	MISC PARTS REFINISH	2-1

2. Standard Practices

A. Refer to the following standard pratices as applicable for details of procedures in individual repair.

20-43-01 Chromic Acid Anodizing
20-50-12 Application of Adhesive

3. Material

NOTE: Equivalent substitutes may be used.

A. Adhesive -- Type 75 (Ref 20-50-12)

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IDENTIFICATION PLATE - REPAIR 1-1

7585538
7586200
7586228
7587682

1. Identification Plate (15, IPL Fig. 1) Replacement

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

A. Remove existing identification plate.

B. Steel stamp dash number, serial number and all pertinent data on replacement identification plate.

C. Bond replacement identification plate to housing assembly per 20-50-12, type 75.

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MISCELLANEOUS PARTS REFINISH - REPAIR 2-1

1. Repair of parts listed in Fig. 601 consists of restoration of the original finish.

IPL FIG. & ITEM	MATERIAL	FINISH
Fig. 1		
Cases (85, 125)	Al alloy	Anodize per MIL-A-8625, type 1, class 1 (clear) all over.
Housing assembly (180)	Al alloy	Anodize per MIL-A-8625, type 1, class 1 (clear) except apply alodize per MIL-C-5541, class 3 on mounting surfaces and on mounting surfaces for indicators (55, 60).

Refinish Details
Figure 601

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ASSEMBLY

1. Equipment and Materials

   NOTE: Equivalent substitutes may be used.

   A. Hydraulic fluid -- BMS 3-11 (Ref 20-60-03)

   B. Fitting wrench assembly -- A29003-6 *[1]

   C. Sleeve retainer wrench assembly -- A29003-4, A29003-33 *[1]

      *[1] Parts of tool set A29003-49

2. Lubrication

   A. Lubricate threads and packings with hydraulic fluid before assembly.

3. Assembly (IPL Fig. 1)

   A. Install packings (175) on housing assembly (180).

   B. Assemble sleeve (160) and spring (165) on wrench assembly A29003-33 and screw wrench into housing assembly (180). Make sure the wrench is installed sufficiently to prevent wear of fittings (155) and sealing surfaces.

   C. Install packing (170A) on fitting (155) and screw fitting into housing assembly (180) using wrench assembly A29003-6. Tighten fitting (155) to 200-225 lb-in. Unscrew and remove wrench assembly A29003-33.

   D. Install packing (120) on housing assembly (180).

   E. Assemble spring (110) and sleeve (105) on wrench assembly A29003-4 and screw wrench into housing assembly (180). Make sure the wrench is installed sufficiently to prevent wear of fitting (100) and sealing surfaces.

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F. Install packing (115A) on fitting (100) and screw fitting into housing assembly (180) using wrench assembly A29003-6. Tighten fitting (100) to 200-225 lb-in. Unscrew and remove wrench assembly A29003-4.

G. Install packing (145) and retainer (150) in filter (140) and install filter on fitting (155).

H. Install packing (130) and retainers (135) on case (125).

(1) Warm the retainers (135).

(2) Carefully stretch retainers (135) and position them over the groove on case (125).

(3) Install a spacer between both retainers.

(4) Lubricate the retainers and install a sizing tool using a small rubber mallet.

(5) Cool the retainers and remove the sizing tool.

(6) Remove the spacer from between the retainers.

(7) Remove lubricant as required.

(8) Install packing (130) and lubricate with hydraulic fluid.

I. Install case (125) on housing assembly (180) and tighten case to 270-300 pound-inches.

J. Install filter (95) on fitting (100).

K. Install packing (90) on case (85) and screw case into housing assembly (180). Tighten case to 270-300 pound-inches.

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L. On 271T0042-1, -2, -3 assemblies, install packing (80A) on pressure switch (75). Install pressure switch on housing assembly (180) and tighten to 160-175 pound-inches. On 271T0042-4 assembly, install plug (77) in place of pressure switch.

NOTE: Use a thin-walled socket wrench to install indicator (55, 60).

M. Install packings (65A, 70) on indicator (55). Install indicator on case drain side of housing assembly (180) and tighten to 160-175 pound-inches.

N. Install packings (65A, 70) on indicator (60). Install indicator on pressure side of housing assembly (180) and tighten to 160-175 pound-inches.

O. Install packing (50) on plug (45). Install plug on housing assembly and tighten to 75-100 pound-inches.

P. Install packings (25, 35) and retainers (30, 40) on check valves (20).

(1) Warm the retainers (30, 40).

(2) Carefully stretch retainers and position them over the groove on check valves (20).

(3) Install a spacer between both sets of retainers.

(4) Lubricate the retainers and install a sizing tool using a small rubber mallet.

(5) Cool the retainers and remove the sizing tool.

(6) Remove the spacers from between the retainers.

(7) Remove lubricant as required.

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(8) Install packings (25, 35) and lubricate with hydraulic fluid.

Q. Install check valves (20) on housing assembly (180) and tighten to 100-125 lb-in.

R. Test unit per TESTING/TROUBLE SHOOTING.

S. Lockwire check valves (20), plug (45), indicators (55, 60), switch (75) and cases (85, 125) to housing assembly (180) using double twist method per 20-50-02.

4. Storage

A. Cap ports with plugs (5, 10).

B. Use standard industry practices to store this component.

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FITS AND CLEARANCES

FOR TORQUE VALUES OF STANDARD FASTENERS, REFER TO 20-50-01			
Item No. IPL Fig. 1	Name	TORQUE	
		Pound-Inches	Pound Feet
20	Check Valve	100 - 125	
45	Plug	75 - 100	
55,60	Indicators	160 - 175	
75	Switch	160 - 175	
85,125	Cases	270 - 300	
100,155	Fittings	200 - 225	

Torque Table
Figure 801

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SPECIAL TOOLS, FIXTURES AND EQUIPMENT

NOTE: Equivalent substitutes may be used.

1. Dummy filter assemblies -- A29003-9 *[1]

2. Dummy filter case assemblies -- A29003-38, -39 *[1]

3. Fitting wrench assembly -- A29003-6 *[1]

4. Sleeve retainer wrench assemblies -- A29003-4, A29003-33 *[1]

5. Pressure switch test equipment -- A29006-19

*[1] Parts of tool set A29003-49

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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.

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VENDORS

02107 FLOUROCARBON CO OHIO DIV
DOVER, OHIO 44622
CANCELLED NO REPLACEMENT
FORMERLY SPARTA MANUFACTURING CO

02750 EATON AEROSPACE ENGINEERED SENSORS
15 DURANT AVENUE
BETHEL, CONNECTICUT 06801-1901
FORMERLY CONSOLIDATED CONTROLS; FORMERLY EATON CORP
PRESSURE SENSORS DIV

05228 PTI TECHNOLOGIES INC
501 DEL NORTE BLVD
OXNARD, CALIFORNIA 93030-7983
FORMERLY PUROLATOR TECH; PTI TECH; TEXTRON FILTRATION SYS;
FORMERLY IN NEWBURY PARK, CA

07128 TETRAFLUOR INC
2051 EAST MAPLE AVENUE
EL SEGUNDO, CALIFORNIA 90245-5009
FORMERLY ROYAL IND TETRAFLUOR DIV V0667B ENGLEWOOD CALIF

18350 PALL AEROPOWER CORP
5775 RIO VISTA DR
CLEARWATER, FLORIDA 33760-3114
FORMERLY V01414; FORMERLY AIRCRAFT POROUS MEDIA INC
FORMERLY IN PINELLAS PARK, FL; FORMERLY V60047; FORMERLY
MECTRON IND V10989

23540 NIAGARA PLASTICS
7090 EDINBORO ROAD
ERIE, PENNSYLVANIA 16509-4447

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

26879 CORONADO MFG INC
11069 PENROSE AVENUE
SUN VALLEY, CALIFORNIA 90352-2722
FORMERLY CORONADO PLASTICS INC IN BURBANK, CALIFORNIA

34662 ROBROY INDUSTRIES INC ROBROY PLASTICS DIV
SOUTH PENNSYLVANIA AVENUE PO BOX 218
MORRISVILLE, PENNSYLVANIA 19067
FORMERLY ROBROY PLASTICS DIV ROBROY IND AND V0633B

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VENDORS

81904 G T I CORP CLOVER INDUSTRIES DIV
TONAWANDA, NEW YORK 14150
FACILITIY DISCONTINUED

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

99240 CRISSAIR, INCORPORATED
38905 10TH STREET EAST
PALMDALE, CALIFORNIA 93550-3415
FORMERLY IN EL SEGUNDO, CALIFORNIA

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PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
AC7681E1Y2		1	140A	1
AC9008E1		1	95	1
AC9008E11		1	95	1
AN814-12DL		1	45	1
BACP20BH6		1	77	1
BACR12BM116		1	25C	4
		1	40B	4
		1	40D	4
		1	40E	4
BACR12BM213		1	30D	4
BACR12BM228		1	135D	2
C11236-116B		1	25C	
		1	25D	
C11236-213B		1	30D	4
C11236-228B		1	135D	2
FP108		1	77	1
MS27595-116		1	25A	
		1	25B	
		1	40A	4
		1	40C	4
MS27595-213		1	30	4
MS27595-228		1	135B	2
MS28774-116		1	40	4
MS28774-213		1	30A	4
MS28774-228		1	135	2
MS28782-19		1	150	1
NAS1611-014		1	70	2
NAS1611-116		1	35	2
NAS1611-213		1	25	2
NAS1611-214		1	145	1
NAS1611-226		1	90	1
		1	120	1
NAS1611-228		1	130	1
		1	175	1
NAS1612-12		1	50	1
NAS1612-6		1	80A	1
NAS1612-8		1	65A	2
RMR12BM116		1	25C	4
RMR12BM213		1	30D	4
RMR12BM228		1	135D	2
STF800-116		1	25C	4
STF800-213		1	30D	4
STF800-228		1	135D	2
S270T242-1		1	20	2
S271T005-1		1	60	1
S271T005-2		1	55	1
S271T005-3		1	60A	1

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PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
S271T005-4		1	60C	1
S271T005-5		1	55D	1
S271T452-1		1	75B	1
S271T452-8		1	75A	1
S30294-116-1		1	25C	4
S30294-213-1		1	30D	4
S30294-228-1		1	135D	2
TC125UK00Z		1	60	1
TC125UK00ZY1		1	60A	1
TC125UK06Y		1	55	1
TF450-116A		1	25C	4
TF450-213A		1	30D	4
TF450-228A		1	135D	2
TF9		1	77	1
1C1244		1	20A	2
10-60592-5		1	140	1
10-60592-6		1	140A	1
2100-116		1	25C	4
2100-213		1	30D	4
2100-228		1	135D	2
211C223-209		1	75A	1
211C223-296		1	75C	1
211C223-301		1	75B	1
211C223-519		1	75E	1
211C223-534		1	75D	1
271T0042-1		1	1	RF
271T0042-2		1	1A	RF
271T0042-3		1	1B	RF
271T0042-4		1	1C	RF
271T0044-1		1	85	1
271T0045-1		1	125	1
		1	185	
271T0045-3		1	125C	1
		1	125D	
		1	185C	
271T0046-1		1	180	1

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PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
271T0047-1		1	85A	1
271T0048-1		1	125A	1
		1	185A	
271T0050-1		1	180A	1
271T0051-1		1	125B	1
		1	185B	
2790521-102		1	20	2
60B00211-3		1	95	1
7506161		1	105	1
7506162		1	110	1
7513128		1	140	1
7553276		1	95	1
7553414		1	100	1
		1	155	1
7554814		1	165	1
7578741		1	10	2
7578742		1	5	2
7582484		1	115A	1
		1	170A	1
7585481		1	160	1
7585538		1	15	1
7586200		1	15B	1
7586228		1	15A	1
7586630		1	55D	1
7586631		1	60C	1
7587682		1	15C	1
7589401		1	110B	1
809		1	77	1

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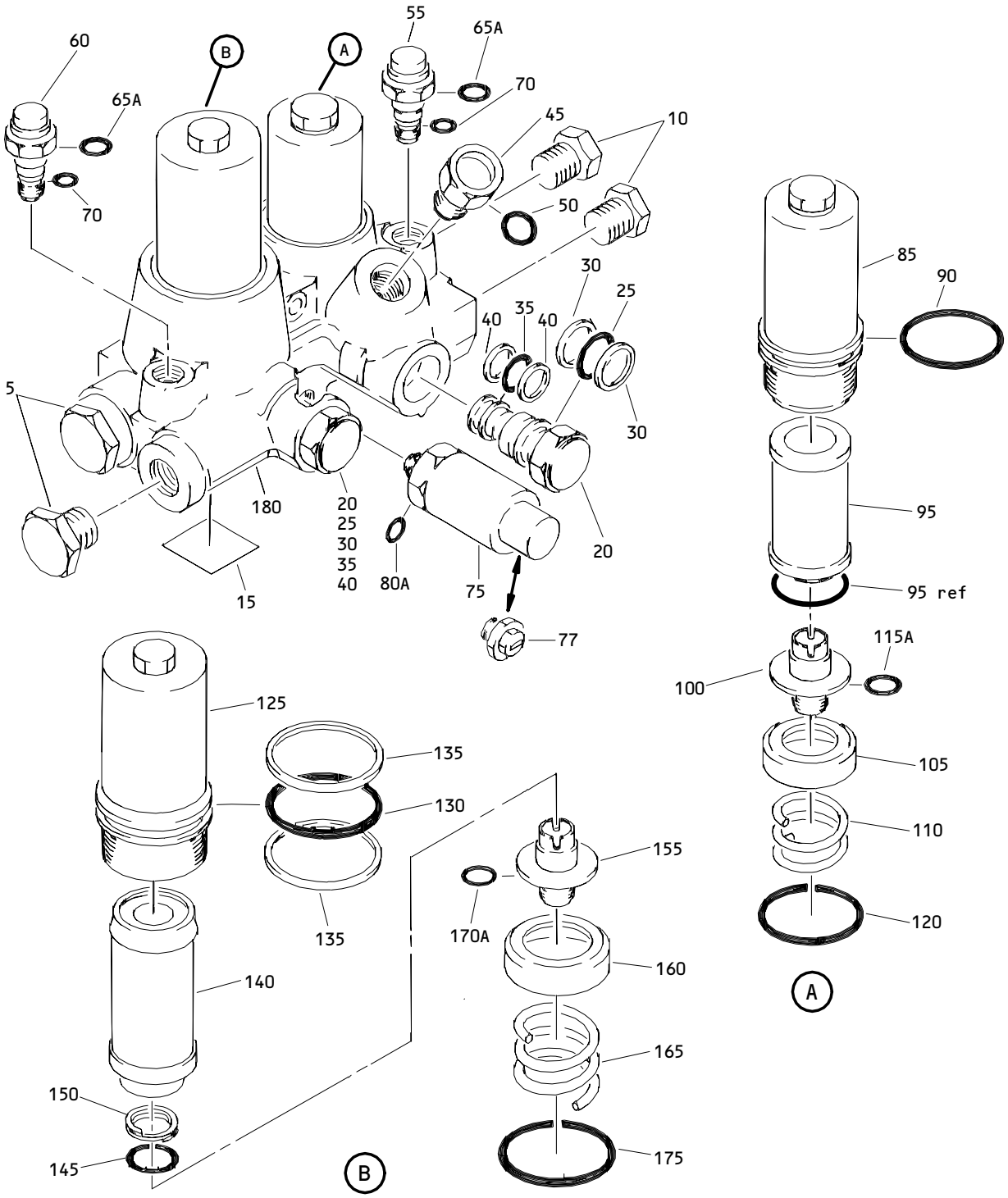

AC Motor Pump Pressure and Case Drain Filter Module Assembly
Figure 1

T63857

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	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
	-1	271T0042-1		MODULE ASSY-AC MOTOR PUMP PRESSURE AND CASE DRAIN FILTER	A	RF
	-1A	271T0042-2		MODULE ASSY-AC MOTOR PUMP PRESSURE AND CASE DRAIN FILTER	B	RF
	-1B	271T0042-3		MODULE ASSY-AC MOTOR PUMP PRESSURE AND CASE DRAIN FILTER	C	RF
R	-1C	271T0042-4		MODULE ASSY-AC MOTOR PUMP PRESSURE AND CASE DRAIN FILTER	D	RF
R	5	7578742		.PLUG AND GASKET ASSY-*(1) (V05228)		2
	10	7578741		.PLUG AND GASKET ASSY-*(1) (V05228)		2
	15	7585538		.PLATE-IDENT (V05228)	A	1
	-15A	7586228		.PLATE-IDENT (V05228)	C	1
	-15B	7586200		.PLATE-IDENT (V05228)	B	1
R	-15C	7587682		.PLATE-IDENT (V05228)	D	1
	20	2790521-102		.VALVE-CARTRIDGE CHK (V92003) (SPEC S270T242-1) (OPT 1C1244 (V99240))		2
R	-20A	1C1244		.VALVE-CARTRIDGE CHK (V99240) (SPEC S270T242-1) (OPT 2790521-102 (V92003))		2

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	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
	25	NAS1611-213		.PACKING		2
	-25A	MS27595-116		DELETED		
R	-25B	MS27595-116		DELETED		
R	-25C	C11236-116B		DELETED		
R	-25D	C11236-116B		DELETED		
	30	MS27595-213		.RETAINER (OPT ITEMS 30A,30B)	A	4
	-30A	MS28774-213		.RETAINER (OPT ITEMS 30,30B)	A	4
R	-30B	MS27595-213		.RETAINER (OPT ITEMS 30,30A)	A	4
R	-30C	MS27595-213		.RETAINER (OPT ITEM 30D)	BC	4
R	-30D	C11236-213B		.RING (V26879) (SPEC BACR12BM213) (OPT RMR12BM213 (V94878)) (OPT STF800-213 (V02107)) (OPT S30294-213-1 (V97820)) (OPT TF450-213A (V07128)) (OPT 2100-213 (V26303)) (OPT ITEM 30C)	BC	4
R	-30E	C11236-213B		.RING (V26879) (SPEC BACR12BM213) (OPT RMR12BM213 (V94878)) (OPT STF800-213 (V02107)) (OPT S30294-213-1 (V97820)) (OPT TF450-213A (V07128)) (OPT 2100-213 (V26303))	D	4

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	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
	35	NAS1611-116		.PACKING		2
	40	MS28774-116		.RETAINER	A	4
				(OPT ITEMS 40A,40B)		
	-40A	MS27595-116		.RETAINER	A	4
				(OPT ITEMS 40,40B)		
	-40B	BACR12BM116		.RETAINER	A	4
				(OPT ITEMS 40,40A)		
	-40C	MS27595-116		.RETAINER	B,C	4
				(OPT ITEM 40D)		
	-40D	BACR12BM116		.RETAINER	B,C	4
				(OPT ITEM 40C)		
	-40E	BACR12BM116		.RETAINER	D	4
	45	AN814-12DL		.PLUG-BLEEDER		1
	50	NAS1612-12		.PACKING	A,C,D	1
R	-50A	NAS1612-12A		.PACKING	B	1
	55	TC125UK06Y		.INDICATOR-DIFF PRESSURE	B-D	1
				HYDR		
				(V18350)		
				(SPEC S271T005-2)		
				(OPT ITEM 55D)		
	-55A	211C223-209		DELETED		
	-55B	S271T005-5		DELETED		
R	-55C	TC125UK06Y		.INDICATOR-DIFF PRESSURE	A	1
				HYDR		
				(V18350)		
				(SPEC S271T005-2)		
R	-55D	7586630		.INDICATOR-DIFF PRESSURE	B-D	1
				HYDR		
				(V05228)		
				(SPEC S271T005-5)		
				(OPT ITEM 55)		

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	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
	60	TC125UK00Z		.INDICATOR-DIFF PRESSURE HYDR (V18350) (SPEC S271T005-1)	A	1
	-60A	TC125UK00ZY1		.INDICATOR-DIFF PRESSURE HYDR (V18350) (SPEC S271T005-3) (OPT ITEM 60C)	B-D	1
	-60B	S271T005-4		DELETED		
R	-60C	7586631		.INDICATOR-DIFF PRESSURE HYDR (V05228) (SPEC S271T005-4) (OPT ITEM 60A)	B-D	1
	65	NAS1612-08		DELETED		
R	65A	NAS1612-8		.PACKING		2
	-65B	271T0046-3		DELETED		
	70	NAS1611-014		.PACKING		2
	75	211C223-175		DELETED		
R	75A	211C223-209		.SWITCH-PRESSURE HYDR (V02750) (SPEC S271T452-8) (OPT 211C223-296 (V02750)) (OPT 211C223-519 (V02750))	C	1
R	-75B	211C223-301		.SWITCH-PRESSURE HYDR (V02750) (SPEC S271T452-1) (OPT 211C223-534 (V02750))	A,B	1

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	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
R	-75C	211C223-296		.SWITCH-PRESSURE HYDR (V02750) (SPEC S271T452-8) (OPT 211C223-209 (V02750)) (OPT 211C223-519 (V02750))	C	1
R	-75D	211C223-534		.SWITCH-PRESSURE HYDR (V02750) (SPEC S271T452-1) (OPT 211C223-301 (V02750))	A,B	1
R	-75E	211C223-519		.SWITCH-PRESSURE HYDR (V02750) (SPEC S271T452-8) (OPT 211C223-209 (V02750)) (OPT 211C223-296 (V02750))	C	1
R	77	FP108		.PLUG-*(1) (V34662) (SPEC BACP20BH6) (OPT TF9 (V23540)) (OPT 809 (V81904))	D	1
	80	NAS1612-06		DELETED		
R	80A	NAS1612-6		.PACKING		1
R	85	271T0044-1		.CASE- (OPT ITEM 85A)		1
R	-85A	271T0047-1		.CASE- (OPT ITEM 85)		1

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	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
	90	NAS1611-226		.PACKING		1
R	95	7553276		.FILTER ELEMENT ASSY- (V05228) (SPEC 60B00211-3) (OPT AC9008E11 (V18350)) (OPT AC9008E1 (V18350))		1
	100	7553414		.FITTING- (V05228)		1
	105	7506161		.SLEEVE- (V05228)		1
R	110	7506162		.SPRING- (V05228)	A,B	1
R	-110A	7506162		.SPRING- (V05228) (OPT ITEM 110B)	C,D	1
R	-110B	7589401		.SPRING- (V05228) (OPT ITEM 110A)	C,D	1
	115	NAS1612-11		DELETED		
R	115A	7582484		.PACKING- (V05228)		1
	120	NAS1611-226		.PACKING		1
	125	271T0045-1		.CASE- (OPT ITEM 125A)	A	1
	-125A	271T0048-1		.CASE (OPT ITEM 125)	A	1
	-125B	271T0051-1		.CASE (OPT ITEM 125C)	B-D	1
R	-125C	271T0045-3		.CASE (OPT ITEM 125B)	B-D	1
R	-125D	271T0045-3		DELETED		

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	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
	130	NAS1611-228		.PACKING		1
	135	MS28774-228		.RETAINER	A	2
	-135A	MS28795-228		DELETED		
R	-135B	MS27595-228		.RETAINER	D	2
R	-135C	MS27595-228		.RETAINER (OPT ITEM 135D)	B,C	2
R	-135D	C11236-228B		.RETAINER (V26879) (SPEC BACR12BM228) (OPT RMR12BM228 (V94878)) (OPT STF800-228 (V02107)) (OPT S30294-228-1 (V97820)) (OPT TF450-228A (V07128)) (OPT 2100-228 (V26303)) (OPT ITEM 135C)	B,C	2
R	-135E	C11236-228B		.RETAINER (V26879) (SPEC BACR12BM228) (OPT RMR12BM228 (V94878)) (OPT STF800-228 (V02107)) (OPT S30294-228-1 (V97820)) (OPT TF450-228A (V07128)) (OPT 2100-228 (V26303))	D	2

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	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
	140	7513128		.FILTER- (V05228) (SPEC 10-60592-5) (OPT ITEM 140A)	B-D	1
	-140A	AC7681E1Y2		.FILTER- (V18350) (SPEC 10-60592-6) (OPT ITEM 140)	B-D	1
R	-140B	7513128		.FILTER- (V05228) (SPEC 10-60592-5)	A	1
	145	NAS1611-214		.PACKING		1
R	150	MS28782-19		.RING		1
	155	7553414		.FITTING- (V05228)		1
	160	7585481		.SLEEVE- (V05228)		1
R	165	7554814		.SPRING- (V05228)		1
	-165A	MS28795-228		DELETED		
	170	NAS1612-11		DELETED		
R	170A	7582484		.PACKING-		1
R	175	NAS1611-228		.PACKING		1
	-175A	AC7681E1Y2		DELETED		
	180	271T0046-1		.HOUSING ASSY	A	1
	-180A	271T0050-1		.HOUSING ASSY- (OPT ITEM 180B)	B-D	1
	-180B	271T0046-3		.HOUSING ASSY (OPT ITEM 180A)	B-D	1
	185	271T0045-1		DELETED		

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	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
	-185A	271T0048-1		DELETED		
	-185B	271T0051-1		DELETED		
R	-185C	271T0045-3		DELETED		

- Item Not Illustrated

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