TO: ALL HOLDERS OF OUTBOARD LEADING EDGE SLAT DRIVE POWER DRIVE UNIT ASSEMBLY COMPONENT MAINTENANCE MANUAL 27-81-82

REVISION NO. 7 DATED NOV 01/00

HIGHLIGHTS

All data formerly in manual 27-81-81 is included in this manual 27-81-82.

CHAPTER/SECTION AND PAGE NO.	DESCRIPTION OF CHANGE
TITLE PAGE 1 701-703 1002-1003,1005-1010, 1013-1022	Added top assembly 256T2710-12 with new control valve module 732-18560-08.
101-103,106 901	Updated test equipment part numbers.
102 902	Replaced Dytronics voltmeter which is no longer available.
103-105 501	Edited without technical change.
109 301-302 REPAIR 2-1 601 703-708 1012	Updated item numbers.
302 1012	Added the fasteners that attach the jumper assembly.

CHAPTER/SECTION AND PAGE NO.	DESCRIPTION OF CHANGE
REPAIR-GEN 601	Added Standard Practices.
1002-1003,1005-1010, 1013-1022	Added improved electric motors per specification S256T011-2 as an option on all top assemblies.

BOEING

COMPONENT
MAINTENANCE MANUAL

OUTBOARD LEADING EDGE SLAT DRIVE POWER DRIVE UNIT ASSEMBLY

PART NUMBERS 256T2710-5 THRU -12

COMPONENT MAINTENANCE MANUAL
WITH
ILLUSTRATED PARTS LIST

2384

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

TEMPORARY REVISION AND SERVICE BULLETIN RECORD

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		PRR B10298	OCT 10/81
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		PRR VDCT0263	OCT 10/83
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*1002	NOV 01/00	01.1
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*1005	NOV 01/00	01.1
*1006	NOV 01/00	01.1
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*1010	NOV 01/00	01.1
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*1021	NOV 01/00	01.1
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TABLE OF CONTENTS

*[1] Special instructions not required. Use standard industry practices.

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.

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.

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	MAR 3/83
Disassembly	MAR 3/83
Assembly	MAR 3/83

OUTBOARD LEADING EDGE SLAT DRIVE POWER DRIVE UNIT ASSEMBLY

DESCRIPTION AND OPERATION

1. Description

   A. The outboard leading edge slat drive power drive unit assembly consists of a power control unit, a control valve module, a gearbox, a hydraulic motor and an electric motor. All components are bolted together to form the complete power drive unit.

2. Operation

   A. The power drive unit uses a hydraulic motor (normal system) and an electric motor (alternate system) to operate the slat drive system.

   B. Movement of the cockpit flap control lever actuates the pilot input arm of the control unit which positions a valve in the control valve module. The control valve module provides two-directional control during normal operation and hydraulic fluid bypass through a motor operated valve when the alternate drive system is engaged. Operation of the hydraulic motor rotates the gear train in the gearbox which turns the output shaft. The gearbox also drives a follow-up cam in the control unit which closes a control valve in the control module when selected flap position is reached.

   C. Manual arming of the alternate electrical slat drive system from the cockpit actuates a bypass valve in the control module, preventing hydraulic motor operation. The electric motor then performs the same function as the hydraulic motor to drive the slat drive system.

3. Leading Particulars (Approximate)

   Length -- 16 inches
   Width -- 21 inches
   Height -- 27 inches
   Weight -- 70 lbs
   Operating Medium -- Hydraulic Fluid, BMS 3-11 (Control valve module and hydraulic motor)
   -- 115 volt AC (Electric motor)
   Operating Pressure -- 3000 psi
   Output Shaft Speed -- 915 rpm

TESTING AND TROUBLE SHOOTING

1. Test Equipment

NOTE: Equivalent substitutes may be used.

A. Mechanical Equipment

NOTE: The following equipment are components of test equipment A27079-89 (replaces A27079-78) and A27079-96.

(1) Fixture assembly A27079-90 (replaces A27079-79) which incorporates a dynamic torque transducer, tachometer, and water-cooled brake.

(2) Support assembly A27079-5 used in conjunction with fixture assembly A27079-90 to support the PDU.

(3) Lever support assembly A27079-6 and gage assembly A27079-85 used for actuating the pilot input arm (PIA).

(4) Spline -- A27079-10

(5) Coupling -- A27079-18

(6) Machine key -- MS20066-257 (2 required)

B. Hydraulic Equipment

(1) Hydraulic test bench capable of delivering 15 gal./min (gpm) at 3000 psi, plus hoses and fittings required for hookup to the test unit.

(2) Flowmeter capable of measuring a flow rate of 16.0 gpm with accuracy of ±1 gpm.

C. Electrical Equipment

(1) AC power supply, 115V, 3 phase, 400 ±5 Hz, capable of maintaining a minimum terminal voltage of 104V.

(2) DC power supply, 28V (22.0-29.5V allowable range), 12A.

(3) Test box A27081-3 (part of A27081-1 readout equipment) used to display torque readings and to provide hookup for the digital counter.

(4) Cable assemblies A27081-8, -10 (part of A27081-1 readout equipment) used to connect the dynamic torque transducer and tachometer to test box A27081-3.

(5) Test box A27081-4 (part of A27081-2 control equipment) used to activate control valve and alternate motor.

(6) Digital counter used in conjunction with test box A27081-3 to provide readouts of rpm and number of revolutions -- Fluke 1900A.

(7) Phase sensitive voltmeter (±2% of full scale) -- North Atlantic Industries Model 2250.

(8) AC power supply, 28V ±100mV, 400 ± Hz.

D. Materials

(1) Hydraulic fluid, BMS 3-11, filtered continuously through a 5 micron nominal/15 micron absolute filter.

(2) Assembly lube, MCS352 Skydrol.

(3) Lockwire, MS20995C32.

2. Preparation for Test

A. Mount PDU on support assembly A27079-5 and test fixture A27079-90 at the three mounting lugs on the PDU (Ref Fig. 101).

B. Check that test unit has been rigged in the "Slats Retracted" position (see ASSEMBLY).

NOTE: "Test Zero" position corresponds to "Slats Retracted" position of the pilot input arm (PIA).

C. Remove protective caps from control module pressure and return ports. Lightly lubricate backup rings and packings with MCS352 Skydrol assembly lube or BMS 3-11 hydraulic fluid before attaching hoses and fittings required for hookup to test bench. Ensure that PDU hydraulic control module (100, IPL Fig. 1) and hydraulic drive motor (230) are filled with BMS 3-11 hydraulic fluid prior to testing.

D. Connect hydraulic power to control module and hydraulic motor.

E. Attach gage assembly A27079-85 to the PDU.

F. Electrical hookup for control and readout instruments (Ref Fig. 103).

(1) Attach connectors from test box A27081-4 to the hydraulic drive motor (230) and control valve module (100) receptacles.

(2) Attach cable assemblies A27081-8, -10 to the torque transducer on fixture assembly A27079-90 and to the test box A27081-3.

(3) Connect digital counter Fluke 1900A to the DIGITAL COUNTER output jacks on test box A27081-3. Set DIGITAL COUNTER/PLOTTER switch to DIGITAL COUNTER.

(4) Connect 115v ac 50-400 Hz to input jacks of test box A27081-3 and set POWER switch to ON.

(5) On test box A27081-4, set POWER switches to OFF, set ALTERNATE MOTOR DRIVE switch to OFF and CONTROL VALVE MODULE switch NORMAL. Close the 10A circuit breaker.

(6) Connect 115v ac, 3-phase, 400Hz and 28v dc to the corresponding input jacks of the test box A27081-4.

G. Use of test box A27081-3 and digital counter Fluke 1900A.

(1) Dynamic torque value is continuously displayed on the digital readout of the test box A27081-3.

(2) To obtain number of revolutions during test, set MODE switch on digital counter Fluke 1900A to TOTALIZER and divide the display value by 60. Reset the counter after each run or cumulative value will be displayed.

(3) To obtain rpm during test, set MODE switch on the digital counter Fluke 1900A to FREQUENCY. The display will show rpm (no conversion is required).

3. Test

A. Check control valve null and RVDT adjustment.

NOTE: Refer to CMM 27-81-55 for disassembly and assembly details of the control unit assembly (130A).

(1) With output shaft free to rotate, set hydraulic test stand at 2900-3100 psi to provide 14.25-15.75 gpm. With CONTROL VALVE MODULE switch on test box A27081-4 set at NORMAL, set 28VDC POWER switch to ON.

(2) Check that the PIA is in the "Slats Retracted - Test Zero Position" as shown in Fig. 101. Remove the plug (170) on the cover of the control unit assembly (130A), and insert a 0.250 inch dia input cam rig pin.

(3) Remove plug (170) on housing of the control unit assembly (130A) and insert a 0.250 inch dia follow-up cam rig pin. Adjust length of rod assembly (95) as required until rig pin can be fully inserted. Check that both rig pins can be easily removed and inserted without binding.

(4) Remove the cover from the control unit assembly (130A).

(5) Check RVDT (S256T002-1, -3, -6) adjustment.

(a) Loosen clamps and remove RVDT(s).

(b) Align black "null" mark on RVDT body with "null" mark on RVDT shaft.

(c) Re-install RVDT(s) and tighten clamps lightly.

(d) Rotate RVDT(s) approximately 35° CCW.

(e) Connect voltmeter per Fig. 107 and slowly rotate each RVDT until a reading of -8.75V ±60 millivolts is obtained.

(f) Tighten clamp and recheck value per step (8).

(6) Check RVDT (S256T002-11) adjustment.

(a) Make sure the RVDT shaft locking pin is captured in the leaf spring notch.

(b) Align the RVDT attachment bolts with the support plate holes, then insert the RVDT spline shaft.

NOTE: The RVDT shaft is locked until the second attachment bolt is tightened.

(c) Thread and tighten only the RVDT bolt that is indicated by an arrow and the label "TIGHTEN FIRST".

(d) Thread and tighten the second RVDT attachment bolt.

(e) Connect the voltmeter as shown in Fig. 107 and make sure the voltmeter reads -10.0 V ±60 millivolts.

(7) Lockwire (MS20995C32) RVDT attachments per 20-50-02.

(8) Install the cover on the control unit assembly (130A).

(9) Remove rig pins and re-insert plugs (170).

B. Check normal hydraulic operation (Fig. 102, 104, 105).

NOTE: Allow output shaft to stop revolving at each detent position before proceeding to the next detent position.

(1) Move handle of gage assembly A27079-85 to the following successive detent positions: 1, 5, 15, 20 and 0. Measure and record corresponding angular displacement of PIA and check for compliance with Fig. 102. Measure and record output shaft direction and number of revolutions and check for compliance with Table I (Fig. 105).

(2) Move handle of gage assembly A27079-85 to the following successive detent positions: 25, 30 and 0. Measure and record corresponding angular displacement of PIA and check for compliance with Fig. 102. Measure and record output shaft direction and number of revolutions and check for compliance with Table I (Fig. 105). At the 30 detent also check that RVDT (S256T002-1, -3, -6) voltage is +10.32 V ±220 millivolts or that RVDT (S256T002-11) voltage is +9.07 V ±220 millivolts.

C. Check manual override.

(1) Switch off 28 VDC electrical power. With the handle of gage assembly A27079-85 in the zero detent position, move the manual override handle to Position 1 as shown in Fig. 101.

(2) Move handle of the gage assembly A27079-85 from the zero to the number 30 detent position. Check that the output shaft does not move. Return the handle back to the zero detent position. Move the manual override handle back to Position 2.

D. Check torque output.

(1) Apply hydraulic pressure, 2900-3100 psi, to the hydraulic control valve module (100A, IPL Fig. 1).

(2) Move handle of gage assembly A27079-85 to detent positions in accordance with Table II (Fig. 106). Gradually apply and maintain normal operating torques at each position. Output shaft will stop turning after completing specified number of revolutions for each detent position.

(3) Remove hydraulic pressure.

E. Check backdriving torque.

(1) Move manual override handle to Position 1.

(2) Disconnect output shaft from the dynamic torque sensor in fixture assembly A27079-90.

(3) Manually turn output shaft in extend direction at least 5 full revolutions and check that torque required does not exceed 50 lb-inches.

(4) Move override handle to Position 2 and pressurize unit for 1 minute.

(5) Depressurize unit.

F. Check alternate electric motor operation.

(1) Set both POWER switches on test box A27079-4 to ON (supply 28 VDC to control valve module NORMAL circuit and 115 VAC, 400 Hz, 3 phase to ARM RELAY).

(2) Move handle of gage assembly A27079-85 to the zero detent position and identify the corresponding output shaft "Flaps Retracted" position. Move NORMAL/BYPASS switch on test box A27081-4 to BYPASS position.

(3) Move EXTEND/RETRACT switch on test box A27081-4 to EXTEND position. Check that output shaft rotates in the "Extend" direction. Check that output shaft speed is 117-137 rpm. Allow shaft to rotate to 15-30 seconds. Move EXTEND/RETRACT switch to OFF position. Note total number of revolutions after output shaft has stopped rotating.

CAUTION: DO NOT ALLOW OUTPUT SHAFT ROTATION DURING RETRACTION EXCEEDS THE NUMBER OF REVOLUTIONS NOTED IN STEP (3) OR GEARBOX/CONTROL UNIT COUPLING MAY SHEAR.

(4) Move switch to RETRACT position. Check that output shaft rotates in the "Retract" direction. Check that output shaft speed is 117-137 rpm. Allow shaft to rotate for 5-10 seconds. Move EXTEND/RETRACT switch to OFF position.

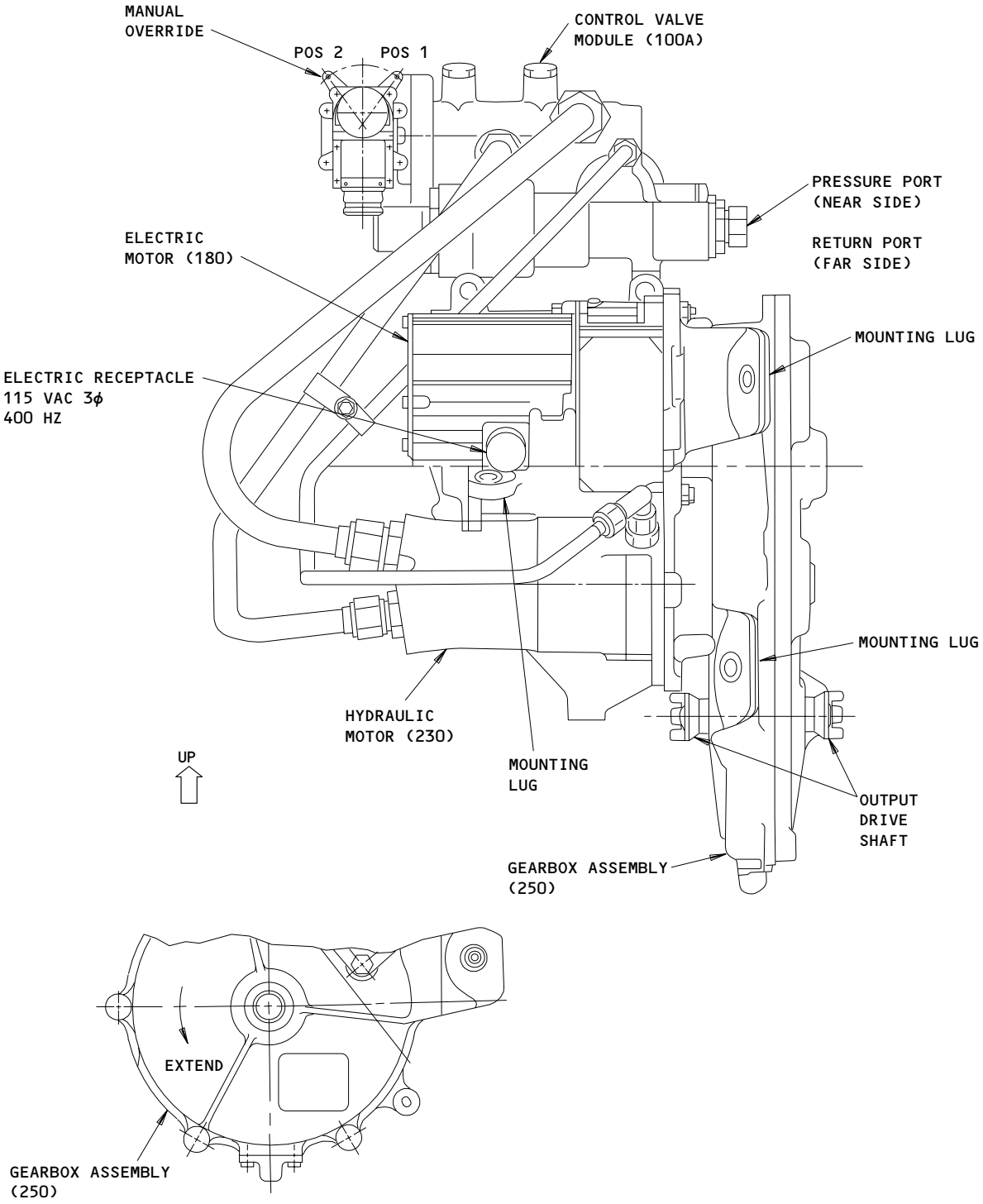
(5) Move NORMAL/BYPASS switch to NORMAL position.

(6) Apply hydraulic pressure per par. A.(1) and allow unit to travel to full up position.

(7) Move handle of gage assembly A27079-85 to the following successive detent positions: 1, 5, 15, 20 and 0. Allow output shaft to stop revolving at each detent position before proceeding to the next detent position.

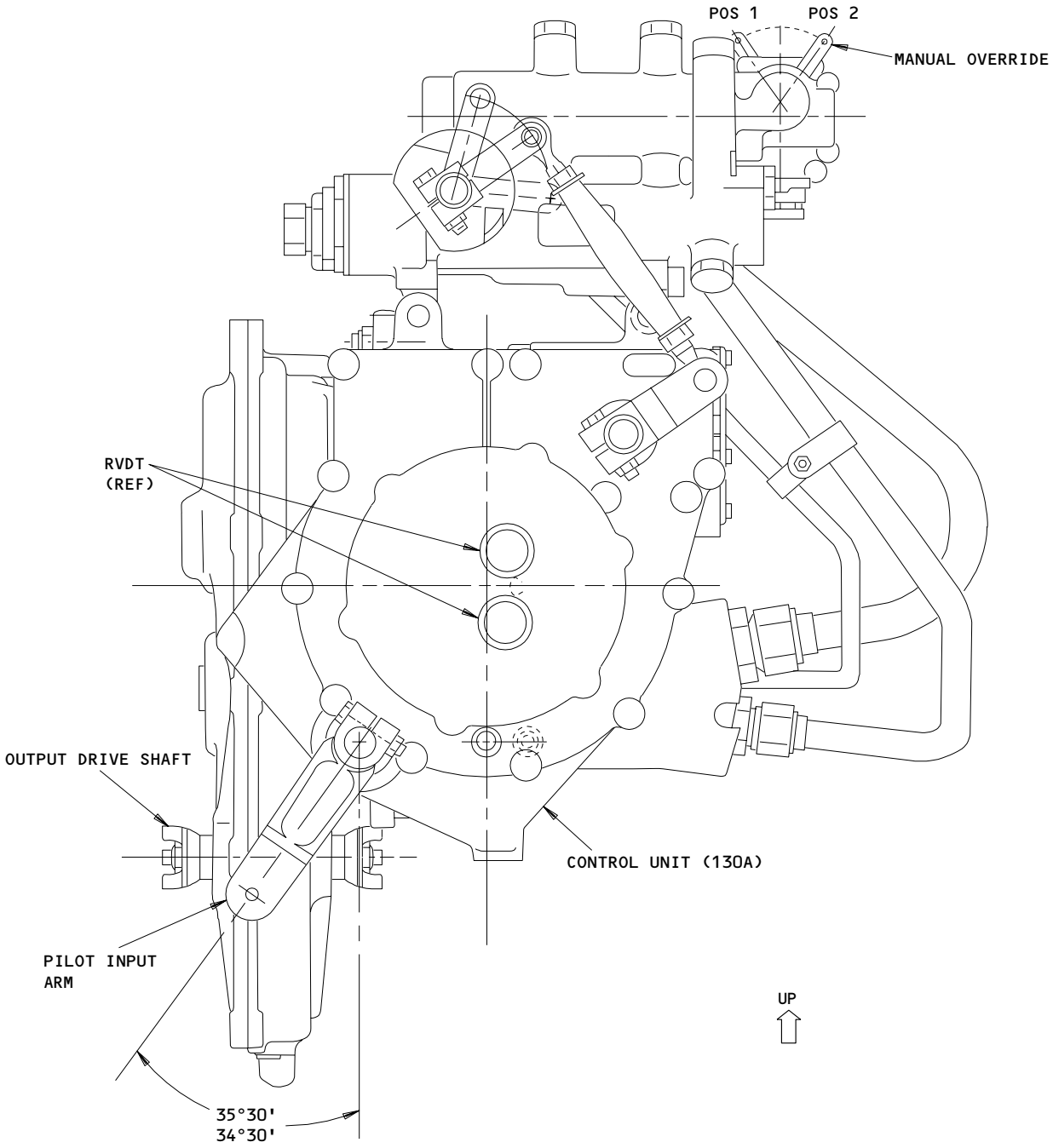
(8) Remove hydraulic pressure.

G. Cap all exposed hydraulic ports with hydraulic resistant plugs after completing functional test.

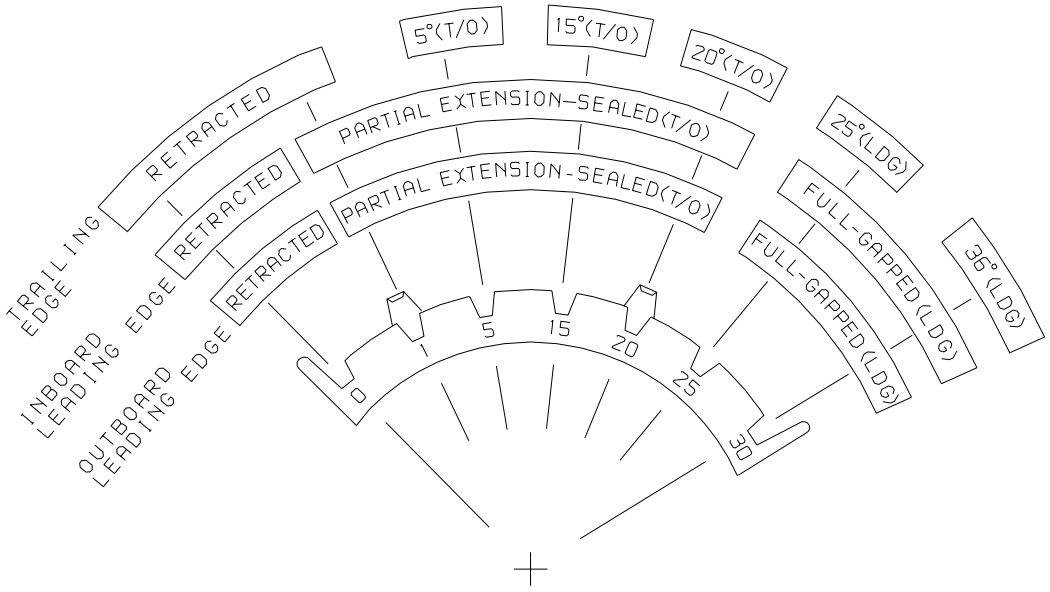


Power Drive Unit Assembly
Figure 101 (Sheet 1)

30449

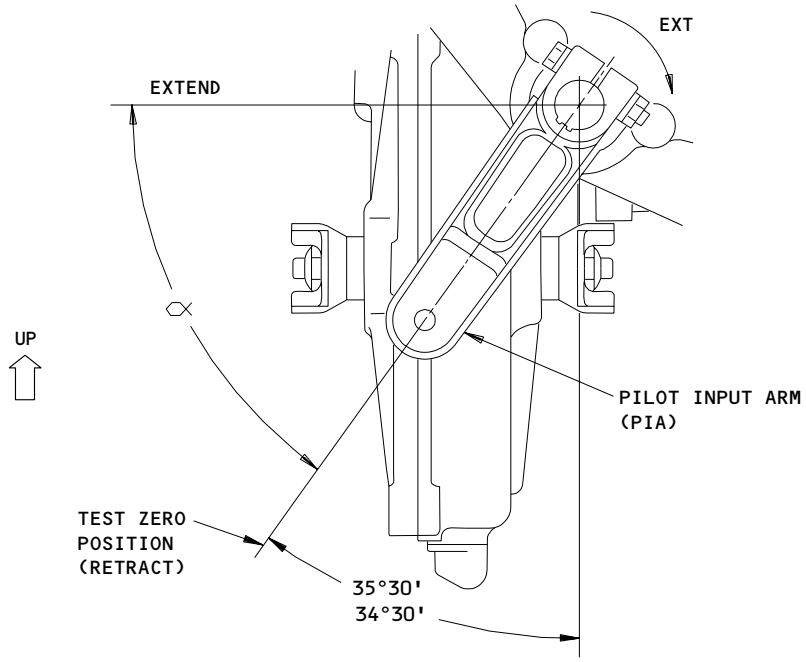


Power Drive Unit Assembly
Figure 101 (Sheet 2)



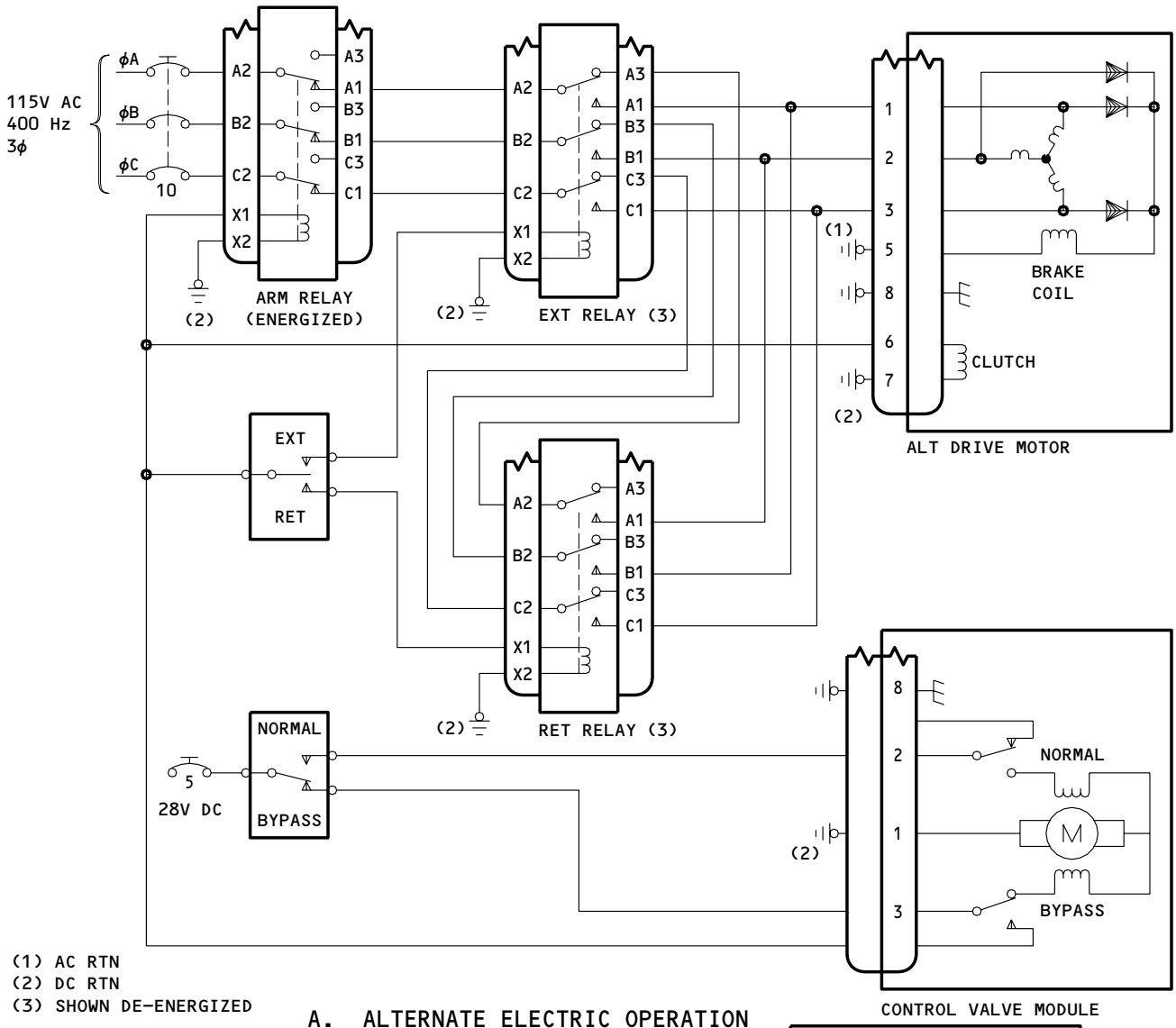
FLAP HANDLE DEVICE
(PILOT INPUT ARM ACTUATION DEVICE)

DETENT NO.	0	1	5	15	20	25	30
∠X (DEG)	0	7–13	17–23	27–33	37–43	47–53	57–63

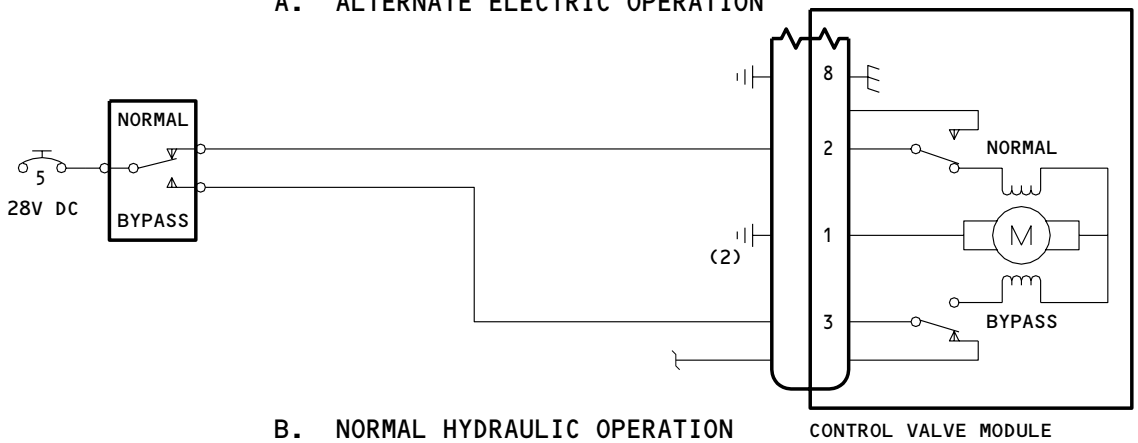


Pilot Input Arm Actuation
Figure 102

30451



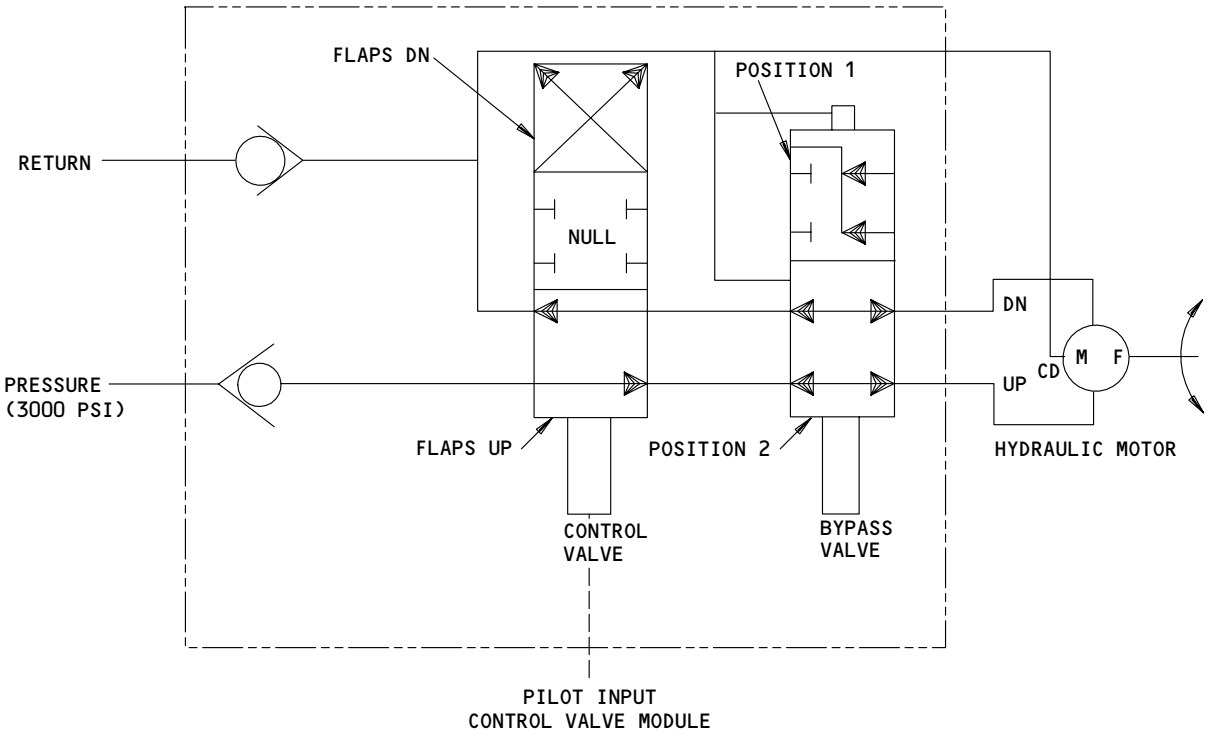
A. ALTERNATE ELECTRIC OPERATION



B. NORMAL HYDRAULIC OPERATION

Functional Test Electrical Schematic Diagram
Figure 103

30452



Hydraulic Functional Schematic Diagram
Figure 104

Detent Position [1]	Output Shaft Revolutions (±0.5)	Direction of Rotation [2]	
		Extend	Retract
0	0	-	-
1	87.8	X	
5	0	-	
15	0	-	
20	0	-	
0	87.8		X
0	0	-	-
25	116.7	X	
30	0	-	
0	116.7		X

Table I

[1] SEE FIG. 102
[2] SEE FIG. 101

Normal Hydraulic Operation
Figure 105

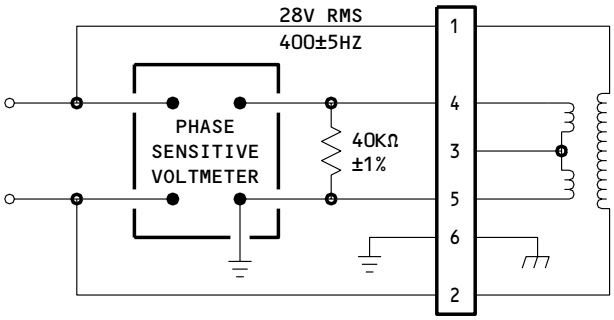
30454

Detent Position	Normal Operating Torque (lb-in.)	Number of Revolutions of Output Shaft (Direction)
0	0	0
15	330-390	87.3-88.3 (Ext)
0	0	87.3-88.3 (Ret)
20	790-850	87.3-88.3 (Ext)
0	0	87.3-88.3 (Ret)
30	330-390	116.2-117.2 (Ext)
0	0	116.2-117.2 (Ret)

Table II

Torque Output
Figure 106

F53975



Electrical Schematic for RVDT Adjustment
Figure 107

30456

DISASSEMBLY

NOTE: See Testing and Trouble Shooting 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.

1. Part 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. Packings

2. Disassembly (IPL Fig. 1)

   CAUTION: USE EXTREME CARE WHEN REMOVING TUBE ASSEMBLIES (30, 35, 40). DO NOT FORCE OR BEND TUBE ASSEMBLY DURING REMOVAL.

   A. Remove the tube assemblies (30, 35, 40).

      (1) Remove tube assembly (30) by loosening coupling nuts and remove unions (45) and packings (50).

      (2) Remove clamps (5, 10) and fasteners (15, 20A, 25).

      (3) Remove tube assembly (35) and remove unions (55) and packings (60).

      (4) Remove tube assembly (40) and remove elbow (65), unions (70), and packing (75).

   B. Remove the plug (215) and packing (220) from the hydraulic motor (230).

   C. Remove the bolts (235B, 236), washers (240A), and nuts (245), then remove the hydraulic motor (230). Remove the packing (225A).

      NOTE: Refer to the manufacturer's instructions for disassembly and repair of the hydraulic motor (230).

D. Remove the bolts (185B, 195B, 197), washers (200A, 205C, 206), and nuts (210), then remove the electric motor (180).

NOTE: Refer to the manufacturer's instructions for disassembly and repair of the electric motor (180).

E. Remove bolts (80), washers (85A) and nuts (90) and remove rod assembly (95).

NOTE: Refer to 27-00-11 for repair of rod assembly (95).

F. Remove parts (105 thru 125) and remove the control valve module (100A).

NOTE: Refer to the manufacturer's instructions for disassembly and repair of the control valve module (100A).

G. Remove lockwire and remove the bolts (135C, 136, 145), washers (137A, 138, 140A, 150, 155), and nuts (142B). Separate the control unit assembly (130A) from the gearbox assembly (250) and remove the support (165) and jumper assembly (160). Remove parts (172A thru 174A) and remove the jumper assembly (163) from the support (165), if installed.

NOTE: Refer to 27-81-71 for disassembly and repair of the gearbox assembly (250).

H. Remove the plugs (170) and quill shaft (175) from the control unit assembly (130A).

NOTE: Refer to 27-81-55 for disassembly and repair of the control unit assembly (130A).

CHECK

1. Do a check of all parts for obvious defects in accordance with standard industry procedures.

2. Do a penetrant check per 20-20-02 -- Shaft (175).

3. Refer to the manufacturer's instructions to do a check of the control valve module (100A), hydraulic motor (230), and electric motor (180).

4. Refer to 27-81-55 to do a check of the control unit assembly (130A).

5. Refer to 27-00-11 to do a check of the rod assembly (95).

6. Refer to 27-81-71 to do a check of the gearbox assembly (250).

REPAIR - GENERAL

1. Content

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

P/N	NAME	REPAIR
---	MISC. PARTS REFINISH	1-1
BAC27TCTO172	NAMEPLATE	2-1
BAC27TCTO286	MARKER	2-1
BAC27TCTO304	MARKER	2-1

2. Standard Practices

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

   20-30-02 Stripping of Protective Finishes
   20-41-01 Decoding Table for Boeing Finish Codes
   20-43-01 Chromic Acid Anodizing
   20-43-03 Chemical Conversion Coatings for Aluminum
   20-50-12 Application of Adhesives
   20-60-02 Finishing Materials

3. Material

   NOTE: Equivalent substitutes may be used.

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

   B. Adhesive -- Type 70 (Ref 20-50-12)

REFINISH - REPAIR 1-1

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

IPL FIG. & ITEM	MATERIAL	FINISH
Fig. 1		
Support (165)	Al alloy	Chemical treat and apply 1 coat of BMS 10-11, type 1 primer (F-18.06). Optional: Chemical treat or chromic acid anodize and apply 1 coat of BMS 10-11, type 1 primer (F-18.05).
Quill shaft (175)	Al alloy	Chromic acid anodize (F-17.02).

Refinish Details
Figure 601

NAMEPLATE AND MARKER - REPAIR 2-1

BAC27TCTO172
BAC27TCTO286
BAC27TCTO304

1. Nameplate Replacement

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

A. Bond the nameplate (255) to the cover on the control unit assembly (130A); the marker (260) to the control valve assembly (100A); and the marker (265) to the electric motor (180) per 20-50-12, type 70.

ASSEMBLY

1. Materials

NOTE: Equivalent substitutes may be used.

A. Grease -- MIL-G-23827 (Ref 20-60-03)

B. Grease -- BMS 3-24 (Ref 20-60-03)

C. Grease -- BMS 3-33 (Ref 20-60-03)

D. Sealant -- BMS 5-26 (Ref 20-60-04)

E. Lockwire -- MS20995C32

2. Equipment

NOTE: Equivalent substitutes may be used.

A. Rigging Pins -- 0.250 inch diameter (2 required)

B. Rigging Pin -- 0.187 inch diameter

3. Assembly (IPL Fig. 1)

A. Assemble the control valve module (100A) to the control unit assembly (130A).

(1) Rotate the pilot input arm (Ref 27-81-55) of the control unit assembly (130A) to the position shown in Fig. 701, and install 0.250-inch rigging pin in the input cam rig pin hole. Adjust the position of the pilot input arm as required until the pin can be fully inserted.

NOTE: This position fixes the pilot input arm in the slats retracted position.

CAUTION: DO NOT ROTATE VALVE INPUT ARM MANUALLY. ADJUST POSITION OF VALVE INPUT ARM BY ROTATING FOLLOW-UP CAM SHAFT ONLY.

(2) Rotate the follow-up cam shaft (Ref 27-81-55) on the control unit assembly (130A) using the quill shaft (175) or equivalent tool, until the valve input arm is at the position shown in Fig. 701. install a 0.250-inch rigging pin in the follow-up cam rig pin hole. Adjust the follow-up cam as required until the rigging pin can be fully inserted.

NOTE: This position fixes the follow-up cam in the slats retracted position.

(3) Apply a thin film of grease, BMS 3-24 (or BMS 3-33 on 256T2710-12 assembly), to the shank and threads of the bolts (105) and to the bushings (120).

(4) Put the control valve module (100A) on the control unit assembly (130A) and install parts (105 thru 125), with washers (110A) under the bolt heads and washers (115) under the nuts. Clean and bond the area shown in Fig. 701 per 20-11-03. Make sure that the resistance across the bond area is 0.001 ohm maximum.

(5) Apply a thin film of grease, BMS 3-24 (or BMS 3-33 on 256T2710-12 assembly), to the shank and threads of the bolt (80), the faces of the washer (85A), and the threads of the nut (90).

(6) Put the rod assembly (95) (nominal length 6.56 inches) on the valve input arm of the control unit assembly (130A) and install the fasteners lubricated in step (5).

(7) Rotate arm on control valve module (100A) until hole for rigging pin on arm lines up with hole in body and install 0.187-inch rigging pin thru.

(8) Apply a thin film of grease, BMS 3-24 (or BMS 3-33 on 256T2710-12 assembly), to the shank and threads of the bolt (80), the faces of the washer (85A), and the threads of the nut (90).

(9) Put the other end of the rod assembly (95) on the arm of the control valve module (100A). Loosen the locking devices and adjust the length of the rod end at both ends of the rod assembly (95) as required to achieve the proper length. Install the fasteners lubricated in step (8). After adjustment, apply a thin film of grease, BMS 3-24 (or BMS 3-33 on 256T2710-12 assembly), to the exposed threads of the rod assembly.

(10) Make sure that all rigging pins can be removed and reinserted without binding.

(11) Remove all rigging pins and install the plugs (170).

(12) Apply a layer of grease, MIL-G-23827 (or BMS 3-33 on 256T2710-12 assembly), to the spline of the quill shaft (175) and slide the shaft into the follow-up cam shaft of the control unit assembly (130A).

(13) Lockwire the nuts on the rod assembly (95) with MS20995NC32 using the double twist method per 20-50-02.

B. Assemble the gearbox assembly (250) to the control unit assembly (130A).

CAUTION: DO NOT USE FORCE TO ASSEMBLE THE GEARBOX ASSEMBLY AND CONTROL UNIT ASSEMBLY. TURN THE GEARBOX OUTPUT SHAFT IF NECESSARY TO ALIGN THE QUILL SHAFT SPLINES FOR ASSEMBLY.

(1) Assemble the gearbox assembly (250) to the control unit assembly (130A) with the quill shaft (175) mated to the spline in the gearbox.

(2) Install the jumper assembly (160), support (165), and fasteners (135C thru 155) per Fig. 701 and 20-11-03.

(3) Fasten the jumper assembly (163) to the support (165) with the screw (172A), nut (173A), and washers (174) per 20-11-03.

(4) Fillet seal the contact area between the control unit assembly (130A) and the gearbox assembly (250) with BMS 5-26 sealant.

C. Install the electric motor (180).

(1) Apply a layer of grease MIL-G-23827 to the spline of the electric motor (180) and install the motor on the gearbox assembly (250).

(2) Apply a thin film of grease, BMS 3-24 (or BMS 3-33 on 256T2710-12 assembly), to the shank and thread of the bolts (185B, 195B, 197), washers (200A, 205C, 206), and nuts (210) (except the nut that mates with the bolt (195B) used with the jumper assembly (212)).

(3) Attach the electric motor (180) to the gearbox assembly (250) with parts lubricated in step (2) and attach the jumper assembly (212) to the motor with the bolt (195B), washers (200A, 205C, 206), and nut (210).

NOTE: Bond the jumper assembly (212) per 20-11-03.

(4) Deleted

D. Install the hydraulic motor (230).

(1) Install the plug (215) and packings (220, 225A) on the hydraulic motor (230).

(2) Apply a layer of grease, MIL-G-23827 (or BMS 3-33 on 256T2710-12 assembly), to the spline of the hydraulic motor (230) and install the motor on the gearbox assembly (250).

(3) Apply a thin film of grease, BMS 3-24 (or BMS 3-33 on 256T2710-12 assembly), to the shank and threads of the bolts (235B, 236), the faces of the washers (240A), and the threads of the nuts (245).

(4) Attach the hydraulic motor (230) to the gearbox assembly (250) with the parts lubricated in step (3).

(5) Deleted

E. Install tube assemblies (30, 35, 40).

CAUTION: USE EXTREME CARE WHEN INSTALLING TUBE ASSEMBLIES (30, 35, 40). DO NOT FORCE OR BEND TUBE ASSEMBLIES.

(1) Install the unions (70) and packings (75) on the control valve module (100A) and on the hydraulic motor (230).

(2) Attach the elbow (65) to the union (70) on the hydraulic motor (230) and tighten the swivel nut on the elbow finger-tight.

(3) Install the tube assembly (40) on the control valve module (100A) and attach the other end to the elbow (65). Point the elbow so that there is no preload in the tube assembly (40) and tighten the swivel nut on the elbow.

(4) Install the unions (55) and packings (60), then install the tube assembly (35).

(5) Install the unions (45) and packings (50) then install the tube assembly (30).

(6) Install the clamps (5, 10) on the tube assemblies (35, 40) withthe fasteners (15, 20A, 25).

F. Make sure that the force required to move the pilot input arm on the control unit assembly (130A), to any detent position on extension or retraction, does not exceed 10 lbs. measured perpendicular to the input arm.

G. Do a test of the unit per TESTING/TROUBLE SHOOTING.

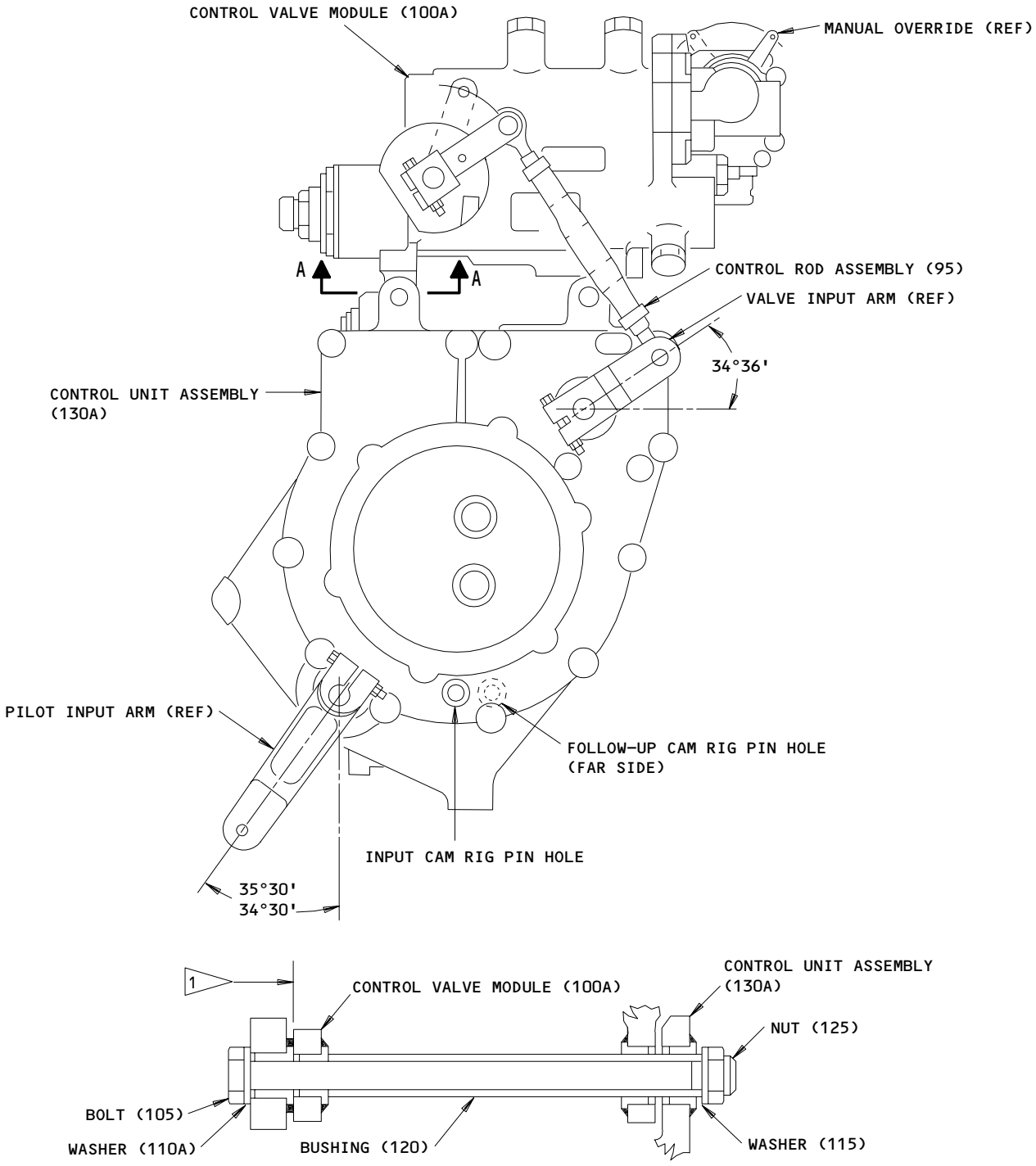
H. Attach lockwire, MS20995C32, between the plug (215) and the bolt (235B). Use the double twist method (Ref 20-50-02).

I. Attach lockwire between bolt (136) and bolt (145). Use double twist method (Ref 20-50-02).

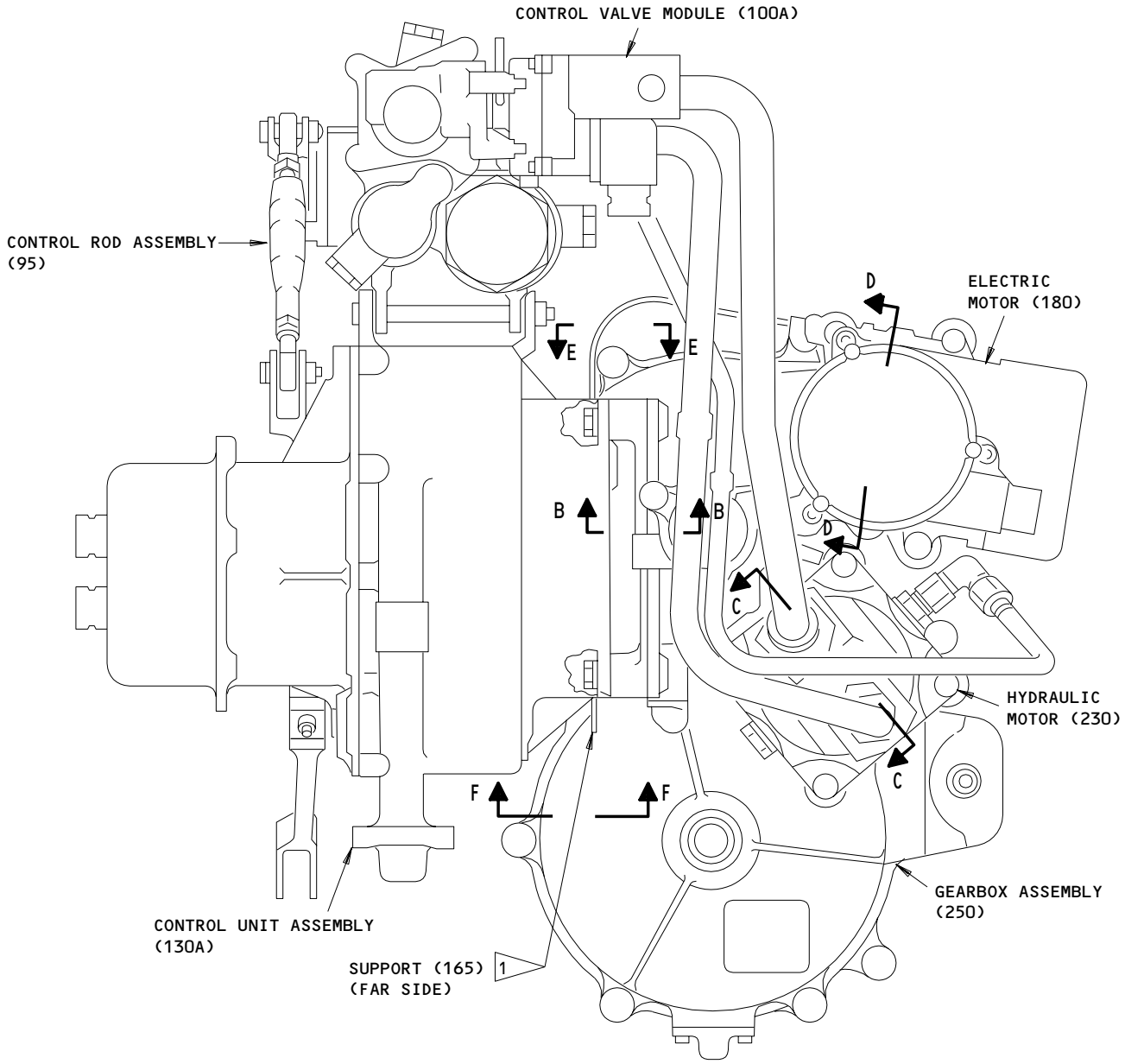
4. Storage

A. Plug or cap exposed hydraulic ports with hydraulic fluid resistance caps or plug.

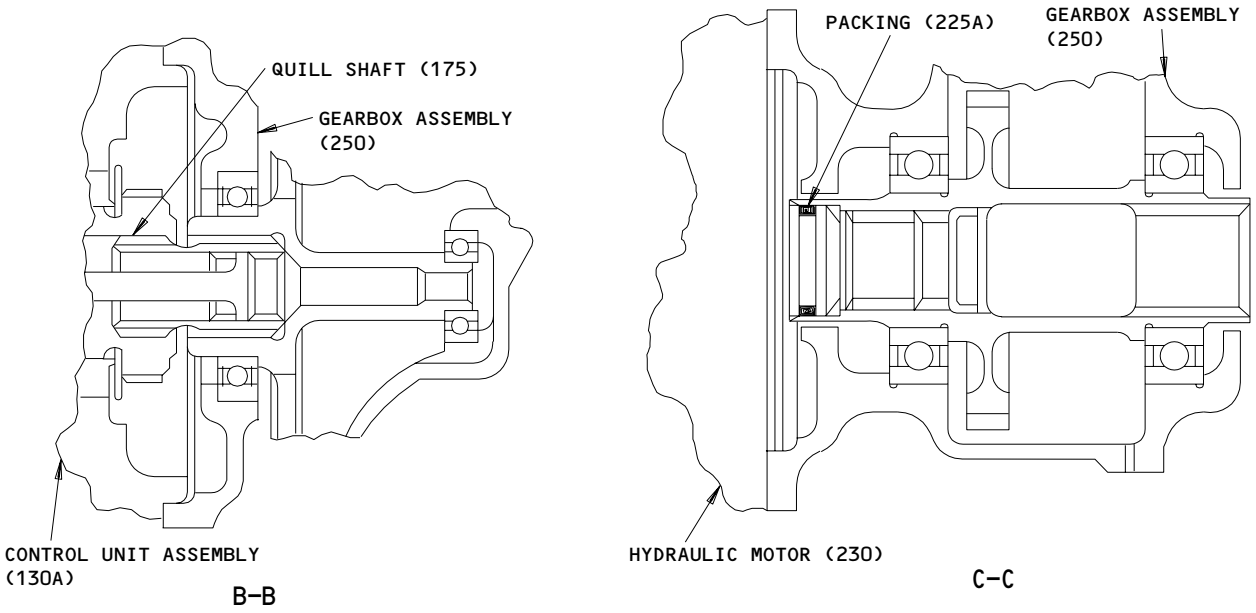
B. Use standard industry procedures to store this component.

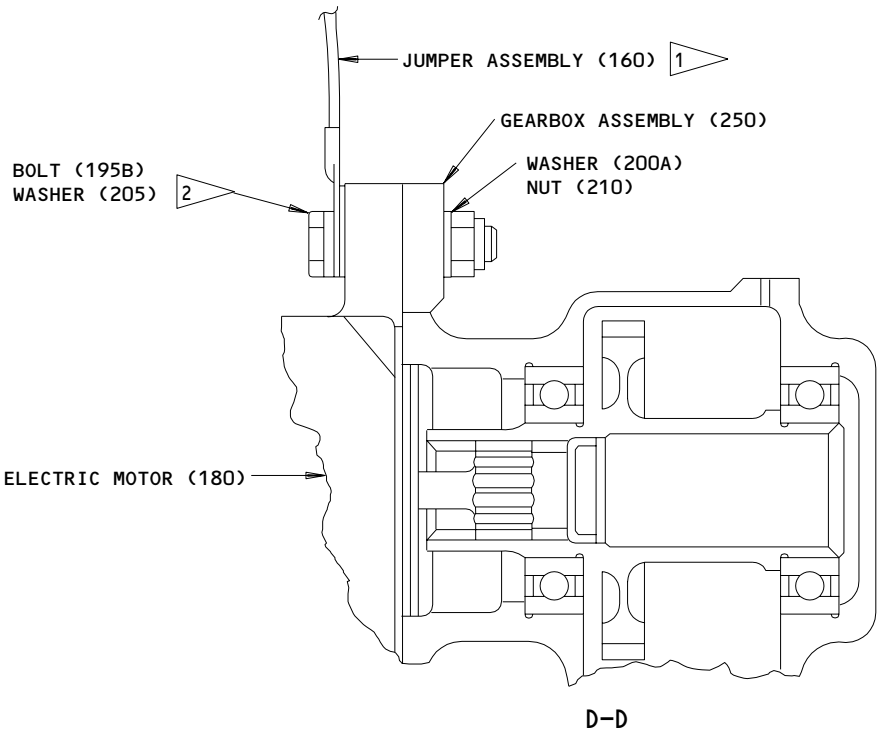


Assembly Details
Figure 701 (Sheet 1)

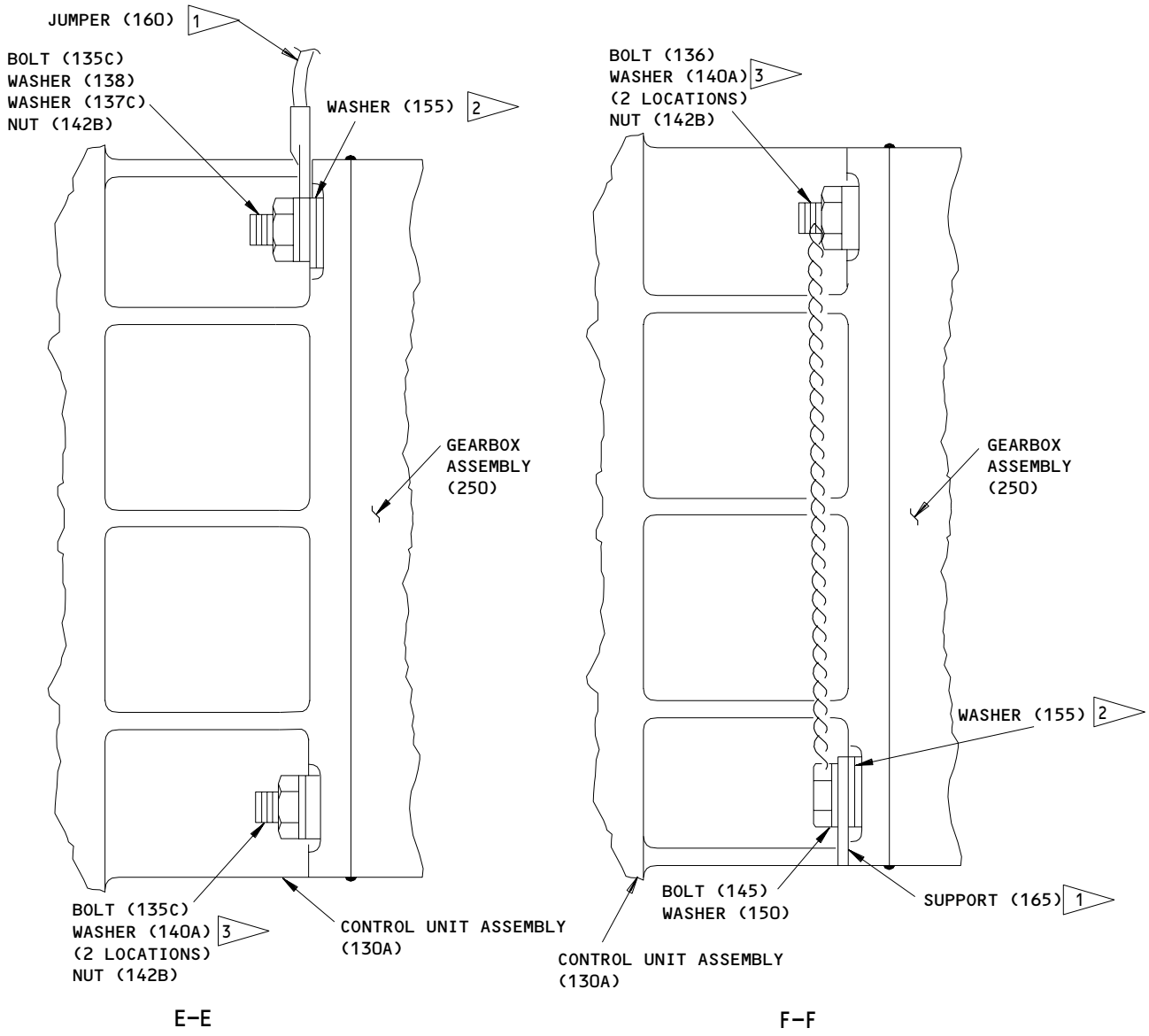


Assembly Details
Figure 701 (Sheet 2)





Assembly Details
Figure 701 (Sheet 3)



1 CLEAN AND BOND PER 20-11-03. TOTAL RESISTANCE ACROSS BOND SHALL BE 0.001 OHM MAX.

2 ADD OR DELETE WASHERS AS REQUIRED (AT SPOT FACE SURFACE), SO THAT WASHER HEIGHT IS FLUSH OR PROTRUDES LESS THAN ONE WASHER THICKNESS ABOVE CAST SURFACE.

3 ADD WASHERS AS REQUIRED TO ENSURE ADEQUATE WRENCH ENGAGEMENT WITH BOLT HEAD.

Assembly Details
Figure 701 (Sheet 4)

SPECIAL TOOLS, FIXTURES, AND EQUIPMENT

NOTE: Equivalent substitutes may be used.

1. Mechanical Equipment

NOTE: The following listed equipment are parts of Test Equipment A27079-89 (replaces A27079-78) and A27079-96.

A. Fixture assembly A27079-90 (replaces A27079-79), which incorporates dynamic torque transducer, tachometer, and water cooled brake.

B. Support assembly A27079-5 used to support the PDU.

C. Lever support assembly A27079-6 and gauge assembly A27079-85 used for actuating the Pilot Input Arm (PIA).

D. Spline -- A27079-10

E. Coupling -- A27079-18

F. Machine key -- MS20066-257 (2 required)

G. Rigging Pins -- 0.250-inch diameter (2 required) and 0.187-inch diameter

2. Hydraulic Equipment

A. Hydraulic test bench capable of supplying 15 gallon/minute at 3000 psi, plus hoses and fittings required for hookup.

B. Flowmeter capable of measuring a flow rate of 16.0 gpm with accuracy of ±1 gpm.

3. Electrical Equipment

A. AC power supply, 115v, 3 phase, 400 ±5 Hz, minimum terminal voltage 104v.

B. DC power supply, 28v (22.0-29.5v allowable range), 12A.

C. Test box A27081-3 (part of A27081-1 readout equipment) used for display torque readings and provides hookup for the digital counter.

D. Cable assemblies A27081-8, -10 (part of A27081-1 readout equipment) used in connecting the dynamic torque transducer and tachometer to test box A27081-3.

E. Test box A27081-4 (part of A27081-2 control equipment) used to activate control valve and alternate motor.

F. Digital counter used in conjunction with test box A27081-3 to provide readouts of rpm and number of revolutions -- Fluke 1900A *[1].

G. Phase sensitive voltmeter (± 2% of full scale) -- North Atlantic Instruments Model 2250 *[2].

H. AC power supply, 28v ±100 mV, 400 ±5 Hz.

*[1] John Fluke Mfg Co. Inc.
P.O. Box C9090, M/S 263C
Everett, Washington 98206.

*[2] North Atlantic Instruments, Inc.
Bohemia, New York
Phone 631-567-1100
Fax 631-567-1823

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 are 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

S4096 SHIMADZU SEISAKUSHO
KYOTO,JAPAN
FORMERLY VZ2239

01673 AIRDROME PARTS CO
3251 AIRPORT WAY PO BOX 1867
LONG BEACH, CALIFORNIA 90801

08199 SIERRACIN-HARRISON
3020 EMPIRE AVENUE
BURBANK, CALIFORNIA 91504-3109
FORMERLY TECHNICAL IND INC OR HARRISON MFG CO DIV AXIAL CORP

11328 AEROQUIP CORP LINAIR DIV
651 WEST KNOX STREET
GARDENA, CALIFORNIA 90248-4409
FORMERLY LINAIR ENG A TELEDYNE CO. AND TELEDYNE LINAIR
ENG TELEDYNE IND, FORMERLY V70195 AND V17687

11815 CHERRY AEROSPACE FASTENERS DIV OF TEXTRON
1224 EAST WARNER AVENUE PO BOX 2157
SANTA ANA, CALIFORNIA 92707-0157
FORMERLY IN LOS ANGELES, CALIF , FORMERLY CHERRY FASTENERS
TOWNSEND DIV OF TEXTRON INC V71087

14798 DEUTSCH CO METAL COMPONENTS DIV
14800 SOUTH FIGUEROA STREET
GARDENA, CALIFORNIA 90248-1719
FORMERLY WEATHERHEAD V79470 FOR AEROSPACE PRODUCTS

15653 KAYNAR TECHNOLOGY KAYNAR DIV
800 SOUTH STATE COLLEGE BLVD PO BOX 3001
FULLERTON, CALIFORNIA 92831-3001
FORMERLY MICRODOT AEROSP LTD VK6405

VENDORS

18076 UMPCO, INCORPORATED
7100 LAMPSON AVENUE PO BOX 5158
GARDEN GROVE, CALIFORNIA 92645
FORMERLY IN CITY OF INDUSTRY, CALIFORNIA

30974 AEROFIT PRODUCTS INC
8531 WHITAKER STREET
BUENA PARK, CALIFORNIA 90621-3129

34270 GARRETT HYDRAULIC DIV OF GARRETT CORP
2150 NORTHWEST 62ND STREET
FT LAUDERDALE, FLORIDA 33309
FORMERLY AERO HYDRAULICS INC SUB OF GARRETT CORP

52828 REPUBLIC FASTENER MFG CORP
1300 RANCHO CONEJO BLVD
NEWBURY PARK, CALIFORNIA 91320-1405
FORMERLY IN SYLMAR, CALIFORNIA

57771 STIMPSON EDWIN B. COMPANY INC
900 SYLVAN AVENUE
BAYPORT, NEW YORK 11705-1012
FORMERLY IN BROOKLYN, NEW YORK

62554 SIMMONDS MECAERO FASTENERS INC
1734 SEQUOIA AVENUE
ORANGE, CALIFORNIA 92668

72962 HARVARD INDUSTRIES INC
3 WERNER WAY SUITE 210
LEBANON, NEW JERSEY 08833
FORMERLY AMERACE CORP ESNA DIV
FORMERLY ELASTIC STOP NUT IN UNION, NJ

VENDORS

80539 SPS TECHNOLOGIES INC AEROSPACE PRODUCTS DIV
2701 SOUTH HARBOR BOULEVARD PO BOX 1259
SANTA ANA, CALIFORNIA 92702-1259
FORMERLY NUTT-SHEL DIV OF SPC WESTERN CO V80539
AND STANDARD PRESSED STEEL WESTERN DIV V17279

83930 IMO DELAVAL INC ADEL FASTENERS DIV
1444 WASHINGTON AVENUE PO BOX 7727
HUNTINGTON, WEST VIRGINIA 25778
FORMERLY ADEL PRODUCTS DIV OF DELAVAL TURBINE CALIF. INC,
EXACTO IND SAN FERNANDO, CALIF.V72285, DELAVAL ADEL FSTN
DIV AND TRANSAMERICA DELAVAL INC ADEL FASTENERS DIV

84971 TA MFG CO SUB OF ESTERLINE
28065 W FRANKLIN PKY
VALENCIA, CALIFORNIA 91355
FORMERLY IN LA, CALIF; SUB OF CRITON CORP, GLENDALE, CALIF

92215 FAIRCHILD IND INC FAIRCHILD AEROSPACE FASTENER DIV
3010 W LOMITA BLVD
TORRANCE, CALIFORNIA 90505-5102
FORMERLY VOI-SHAN IN CULVER CITY, CALIF

98889 TELEFLEX CONTROL SYSTEMS
1950 WILLIAMS DRIVE
OXNARD, CALIFORNIA 93030
FORMERLY TALLEY CORP, NEWBURY PARK DIV

REFERENCE DESIGNATOR INDEX (SEE SCHEMATIC DIAGRAM)		
REFERENCE DESIGNATOR	PART NUMBER	FIG-ITEM
M69	4134T100-3	1-180J

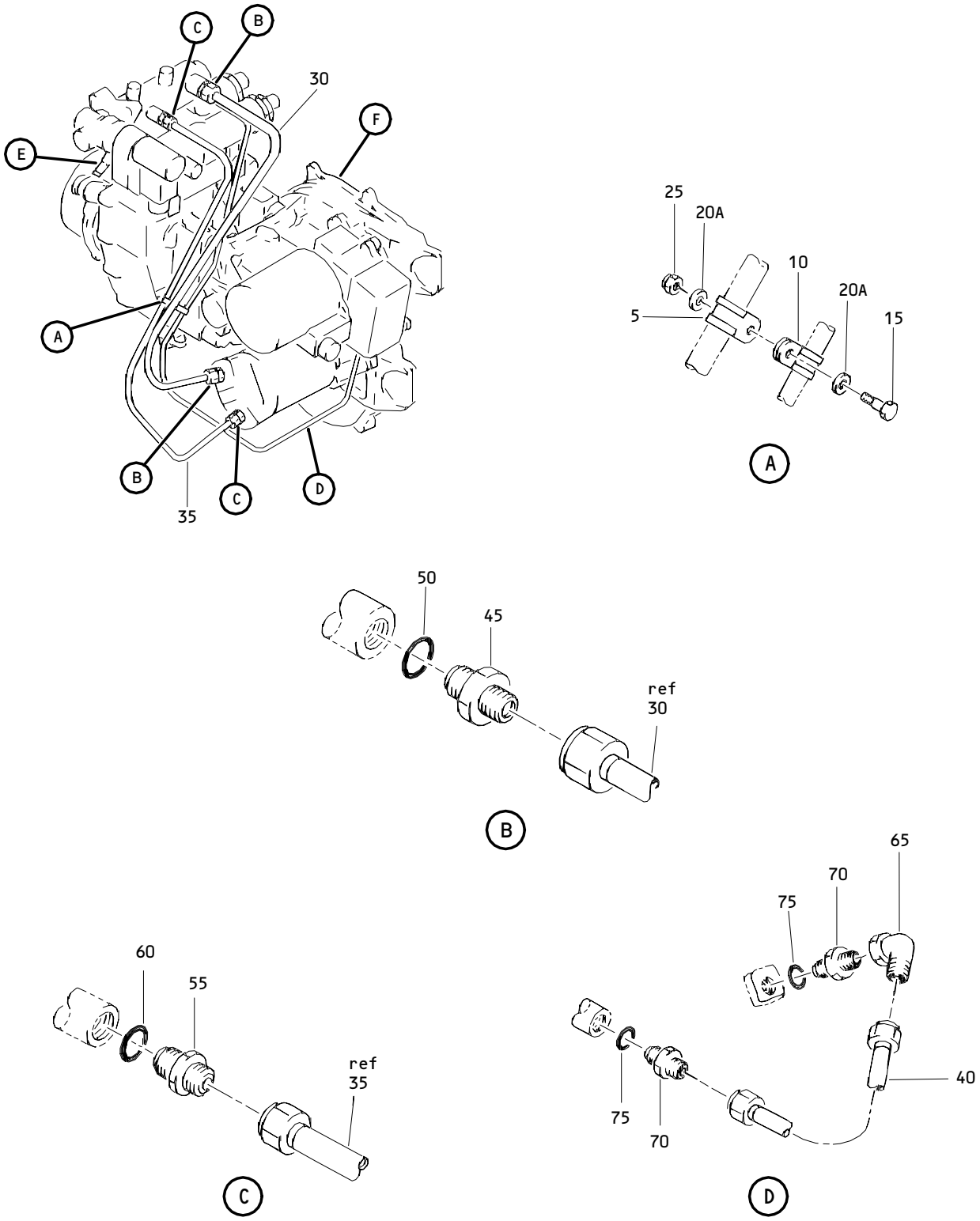
PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
AFP175V06P		1	42	2
AN814-4D		1	215A	1
AN814-4DL		1	215	1
AN960-416L		1	115	2
AN960D10L		1	174A	3
AN960D416		1	155	4
AN960D416L		1	137C	1
		1	150	1
AN960D516		1	206	2
AN960JD10L		1	20A	2
AN960JD416		1	140A	4
AN960JD416L		1	85A	4
		1	110A	2
AN960JD516		1	200A	3
		1	240A	8
AP2097-06HP		1	42	2
AS1581T10		1	37A	2
AS1581T12		1	32A	2
BACB28AK04-335		1	120	2
BACB30MR5K14		1	197	1
BACB30MR5K15		1	195B	2
BACB30MR5K16		1	195C	2
BACB30MR5K8		1	185B	1
BACB30NR4K64		1	105	2
BACC10EP10		1	5	1
BACC10EP6		1	10	1
BACC10HS10		1	5A	1
BACC10HS6		1	10A	1
BACE21AW0606L		1	65	1
BACE21AW0606W		1	65A	1
BACJ40A20-12		1	163	1
BACJ40A22-9		1	212	1
BACJ40A31-9		1	160	1
BACN10JC3		1	173A	1
BACN10JC3CD		1	25	1

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
BACN10JC4CD		1	90	2
		1	125	2
		1	142D	3
BACN10JC5CD		1	210	3
		1	245	4
BACN10YA10N		1	39	2
BACN10YA12N		1	34	2
BACN10YA6N		1	44	2
BACN10YR3CD		1	25A	1
		1	173B	1
BACN10YR4CD		1	90A	2
		1	125A	2
		1	142C	3
BACN10YR5CD		1	210A	3
		1	245A	4
BACP20B65		1	170	2
BACS13BX06HP		1	42	2
BACU24K10		1	55	2
BACU24K12		1	45	2
BAC27TCT0172		1	255	1
		1	270	1
BAC27TCT0286		1	260	1
BAC27TCT0304		1	265	1
BRH10A3		1	173A	1
DBOS13BX06HP		1	42	2
D2587PB		1	170	2
H10-3BAC		1	173A	1
H52732-3CD		1	25A	1
		1	173B	1
H52732-4CD		1	90A	2
		1	125A	2
		1	142C	3

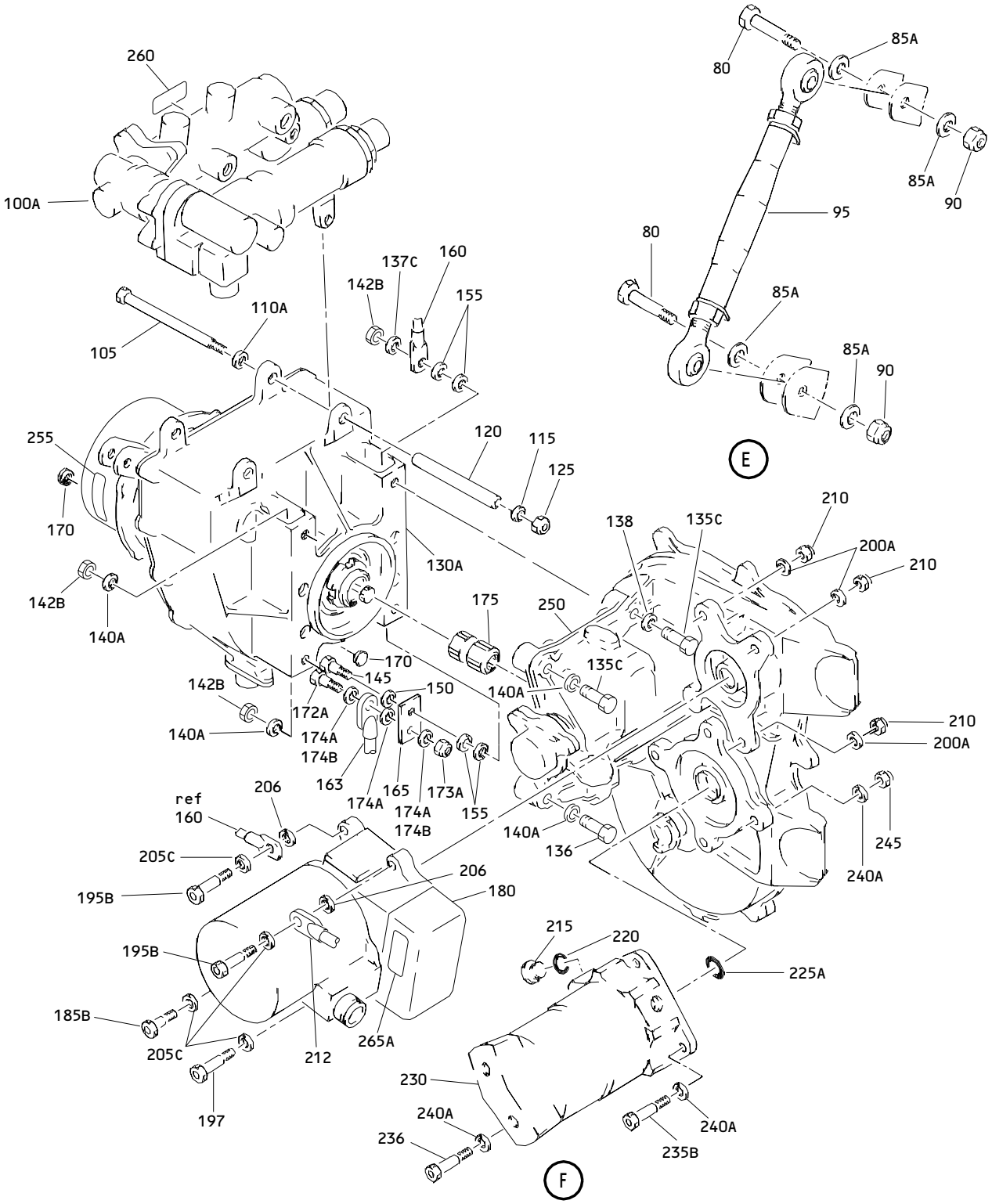
PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
H52732-5CD		1	210A	3
		1	245A	4
MS20002C5		1	205C	4
MS21042L4		1	142B	3
MS21902D6		1	70	2
NAS1149D0316H		1	174B	2
NAS1149D0332J		1	20B	2
NAS1149D0416H		1	137D	1
		1	150A	1
NAS1149D0416J		1	85B	4
		1	110B	2
NAS1149D0463		1	137B	1
NAS1149D0463H		1	155A	2
NAS1149D0463J		1	138	1
		1	140B	4
NAS1149D0516H		1	206A	2
NAS1149D0563J		1	200C	3
		1	240B	8
NAS1149F0416P		1	115A	2
NAS1611-019		1	225A	1
NAS1612-10		1	60	2
NAS1612-12		1	50	2
NAS1612-4		1	220	1
NAS1612-6		1	75	2
NAS1801-3-8		1	172A	1
NAS6604-26		1	135C	2
NAS6604D26		1	136	1
NAS6703-5		1	15	1
NAS6704-13		1	80	2
NAS6704-64		1	105A	2
NAS6704H19		1	145	1
NAS6705-13		1	235B	3
NAS6705H13		1	236	1
NS202101-02		1	173A	1
PLH53CD		1	25A	1
		1	173B	1
PLH54CD		1	90A	2
		1	125A	2
		1	142C	3
PLH55CD		1	210A	3
		1	245A	4
RMLH9075-3W		1	173A	1
S256T003-1		1	230	1
S256T004-12		1	180C	1
S256T004-2		1	180	1
S256T004-9		1	180A	1

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
S256T005-12		1	100F	1
S256T005-5		1	100A	1
S256T005-9		1	100E	1
S256T011-2		1	180H	1
S500-10		1	5A	1
T6S1032J		1	173A	1
VN303A02		1	173A	1
025029-10		1	5A	1
1824T100-1		1	180	1
1824T100-3		1	180A	1
2-02903-06HP		1	42	2
2474T100-1		1	180C	1
251T0100-306		1	95	1
256T2710-10		1	1G	RF
256T2710-101		1	40	1
256T2710-102		1	35	1
256T2710-103		1	30	1
256T2710-11		1	1H	RF
256T2710-12		1	1J	RF
256T2710-5		1	1B	RF
256T2710-6		1	1C	RF
256T2710-7		1	1D	RF
256T2710-8		1	1E	RF
256T2710-9		1	1F	RF
256T2711-1		1	250	1
256T2760-4		1	130A	1
256T2760-5		1	130B	1
256T2760-6		1	130C	1
256T3104-1		1	175	1
35235VN06		1	42	2
4100362-1		1	230	1
4134T100-1		1	180H	1
4134T100-3		1	180H	1
490-10RPB		1	5A	1
69B82604-15		1	165	1

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
732-18560-02		1	100B	1
732-18560-03		1	100A	1
732-18560-07		1	100E	1
732-18560-08		1	100F	1
96-02		1	173A	1



Outboard Leading Edge Slat Drive Power Drive Unit Assembly
Figure 1 (Sheet 1)



Outboard Leading Edge Slat Drive Power Drive Unit Assembly
Figure 1 (Sheet 2)

T58035

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
-1B	256T2710-5		UNIT ASSY-LE SLAT DRIVE OUTBD PWR DRIVE	A	RF
-1C	256T2710-6		UNIT ASSY-LE SLAT DRIVE OUTBD PWR DRIVE	B	RF
-1D	256T2710-7		UNIT ASSY-LE SLAT DRIVE OUTBD PWR DRIVE	C	RF
-1E	256T2710-8		UNIT ASSY-LE SLAT DRIVE OUTBD PWR DRIVE	D	RF
-1F	256T2710-9		UNIT ASSY-LE SLAT DRIVE OUTBD PWR DRIVE	E	RF
-1G	256T2710-10		UNIT ASSY-LE SLAT DRIVE OUTBD PWR DRIVE	F	RF
-1H	256T2710-11		UNIT ASSY-LE SLAT DRIVE OUTBD PWR DRIVE	G	RF
-1J	256T2710-12		UNIT ASSY-LE SLAT DRIVE OUTBD PWR DRIVE	H	RF
5	BACC10EP10		.CLAMP	A-G	1
-5A	025029-10		.CLAMP- (V84971) (SPEC BACC10HS10) (OPT 490-10RPB (V83930)) (OPT S500-10 (V18076))	H	1
10	BACC10EP6		.CLAMP	A-G	1
-10A	BACC10HS6		.CLAMP ATTACHING PARTS	H	1
15	NAS6703-5		.BOLT -------*-------		1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
20	AN960PD10L		DELETED		
20A	AN960JD10L		.WASHER	A-F	2
-20B	NAS1149D0332J		.WASHER	G	2
			ATTACHING PARTS		
25	BACN10JC3CD		.NUT	A-F,H	1
-25A	H52732-3CD		.NUT-	G	1
			(V15653)		
			(SPEC BACN10YR3CD)		
			(OPT PLH53CD		
			(V62554))		
			-------*-------		
30	256T2710-103		.TUBE ASSY		1
-32	AS1581-12T		DELETED		
-32A	AS1581T12		..SLEEVE		2
-34	BACN10YA12N		..NUT		2
35	256T2710-102		.TUBE ASSY-		1
-37	AS1581-10T		DELETED		
-37A	AS1581T10		..SLEEVE		2
-39	BACN10YA10N		..NUT		2
40	256T2710-101		.TUBE ASSY-		1
-42	DBOS13BX06HP		..SLEEVE-		2
			(V14798)		
			(SPEC BACS13BX06HP)		
			(OPT 2-02903-06HP		
			(V11328))		
			(OPT 35235VN06		
			(V08199))		
			(OPT AP2097-06HP		
			(V01673))		
			(OPT AFP175V06P		
			(V30974))		
			(OPT AFP175V06P		
			(V30974))		
-44	BACN10YA6N		..NUT		2
45	BACU24K12		.UNION		2
50	NAS1612-12		.PACKING		2
55	BACU24K10		.UNION		2
60	NAS1612-10		.PACKING		2

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
65	BACE21AW0606L		.ELBOW	A-F	1
-65A	BACE21AW0606W		.ELBOW	G	1
70	MS21902D6		.UNION		2
75	NAS1612-6		.PACKING		2
80	NAS6704-13		.BOLT		2
85	AN960PD416L		DELETED		
85A	AN960JD416L		.WASHER	A-F	4
-85B	NAS1149D0416J		.WASHER	G	4
90	BACN10JC4CD		.NUT	A-F,H	2
-90A	H52732-4CD		.NUT- (V15653) (SPEC BACN10YR4CD) (OPT PLH54CD (V62554))	G	2
95	251T0100-306		.ROD ASSY-CONT (REF CMM 27-00-11)		1
100A	732-18560-03		.MODULE-CONT VALVE (VS4096) (SPEC S256T005-5) (OPT 732-18560-02 (VS4096))	A-D,F	1
-100B	732-18560-02		.MODULE-CONT VALVE (VS4096) (SPEC S256T005-5) (OPT 732-18560-03 (VS4096))	A-D,F	1
-100C	S256T005-9		DELETED		
-100D	732-18560-05		DELETED		
-100E	732-18560-07		.MODULE-CONT VALVE (M1081) (VS4096) (SPEC S256T005-9)	E,G	1
-100F	732-18560-08		.MODULE-CONT VALVE (M1081) (VS4096) (SPEC S256T005-12)	H	1
			ATTACHING PARTS		
105	BACB30NR4K64		.BOLT- (OPT ITEM 105A)		2
-105A	NAS6704-64		.BOLT- (OPT ITEM 105)		2
			-------*-------		

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
110	AN960PD416L		DELETED		
			ATTACHING PARTS		
110A	AN960JD416L		.WASHER	A-F	2
-110B	NAS1149D0416J		.WASHER	G,H	2
115	AN960-416L		.WASHER	A-F	2
-115A	NAS1149F0416P		.WASHER	G,H	2
116	NAS1149D0416J		DELETED		
117	NAS1149F0416P		DELETED		
120	BACB28AK04-335		.BUSHING		2
125	BACN10JC4CD		.NUT	A-F,H	2
125A	H52732-4CD		.NUT-	G	2
			(V15653)		
			(SPEC BACN10YR4CD)		
			(OPT PLH54CD		
			(V62554))		
			-------*-------		
130A	256T2760-4		.UNIT ASSY-CONT	A-C	1
			(PRE SB 27-0108R3)		
			(REF CMM 27-81-55)		
-130B	256T2760-5		.UNIT ASSY-CONT	D	1
			(REF CMM 27-81-55)		
-130C	256T2760-6		.UNIT ASSY-CONT	E-G	1
			(REF CMM 27-81-55)		
-130D	256T2760-6		.UNIT ASSY-CONT	A-C	1
			(POST SB 27-0108R3)		
			(REF CMM 27-81-55)		
			ATTACHING PARTS		
135C	NAS6604-26		.BOLT		2
136	NAS6604D26		.BOLT		1
			-------*-------		
137	AN960PD416L		DELETED		
137A	AN960JD416		DELETED		
137B	NAS1149D0463		DELETED		

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
137C	AN960D416L		.WASHER	A-F	1
-137D	NAS1149D0416H		.WASHER	G,H	1
138	NAS1149D0463J		.WASHER	G,H	1
140	AN960PD416		DELETED		
140A	AN960JD416		.WASHER	A-F	4
-140B	NAS1149D0463J		.WASHER	G	4
142A	H10-4BAC		DELETED		
142B	MS21042L4		.NUT	A-F	3
-142C	H52732-4CD		.NUT- (V15653) (SPEC BACN10YR4CD) (OPT PLH54CD (V62554))	G	3
142D	BACN10JC4CD		.NUT	H	3
			ATTACHING PARTS		
145	NAS6704H19		.BOLT		1
150	AN960D416L		.WASHER	A-F	1
-150A	NAS1149D0416H		.WASHER	G	1
155	AN960D416		.WASHER	A-F	4
-155A	NAS1149D0463H		.WASHER	G,H	2
			-------*-------		
160	BACJ40A31-9		.JUMPER ASSY		1
-160A	BACJ40A20-12		DELETED		
-160B	BACJ40A22-9		DELETED		
163	BACJ40A20-12		.JUMPER ASSY	E,G,H	1
165	69B82604-15		.SUPPORT		1
170	D2587PB		.PLUG BUTTON- (V57771) (SPEC BACP20B65)		2

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
172	NAS1096-2-4		DELETED		
172A	NAS1801-3-8		.SCREW-	E,G,H	1
			(USED ON ITEM 163)		
173	BACN10JC4		DELETED		
173A	H10-3BAC		.NUT-	E	1
			(V15653)		
			(SPEC BACN10JC3)		
			(OPT NS202101-02		
			(V80539))		
			(OPT RMLH9075-3W		
			(V72962))		
			(OPT VN303A02		
			(V92215))		
			(OPT 96-02		
			(V80539))		
			(OPT BRH10A3		
			(V52828))		
			(OPT T6S1032J		
			(V11815))		
			(USED ON ITEM 163)		
-173B	H52732-3CD		.NUT-	G,H	1
			(V15653)		
			(SPEC BACN10YR3CD)		
			(OPT PLH53CD		
			(V62554))		
			(USED ON ITEM 163)		
174	AN960D416L		DELETED		
174A	AN960D10L		.WASHER-	E	3
			(USED ON ITEM 163)		
174B	NAS1149D0316H		.WASHER	G,H	2
175	256T3104-1		.SHAFT-QUILL		1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
180	1824T100-1		.MOTOR-ELEC *[1] (V98889) (SPEC S256T004-2) (OPT ITEMS 180A, 180C)	A	1
-180A	1824T100-3		.MOTOR-ELEC *[1] (V98889) (SPEC S256T004-9) (OPT ITEMS 180, 180C)	A	1
-180B	1824T100-3		.MOTOR-ELEC *[1] (V98889) (SPEC S256T004-9) (OPT ITEM 180D)	B	1
-180C	2474T100-1		.MOTOR-ELEC *[1] (V98889) (SPEC S256T004-12) (OPT ITEMS 180, 180B)	A	1
-180D	2474T100-1		.MOTOR-ELEC *[1] (V98889) (SPEC S256T004-12) (OPT ITEM 180B)	B	1
-180E	2474T100-1		.MOTOR-ELEC *[1] (V98889) (SPEC S256T004-12)	C-F	1
-180F	S256T011-2		DELETED		
-180G	4134T100-1		DELETED		
-180H	4134T100-3		.MOTOR-ELEC (M469) (V98889) (SPEC S256T011-2) (OPT 4134T100-1 (V98889))	G,H	1
-180J	4134T100-3		.MOTOR-ELEC *[1] (V98889) (M69) (SPEC S256T011-2) (OPT 4134T100-1 (V98889))	A-F	1
			ATTACHING PARTS		
185A	BACB30MR5K6		DELETED		
185B	BACB30MR5K8		.BOLT		1
195A	BACB30MR5K13		DELETED		
195B	BACB30MR5K15		.BOLT-*[1]	A-F	2
-195C	BACB30MR5K16		.BOLT	G,H	2

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
-195D	BACB30MR5K16		.BOLT-*[1]	A-F	2
			-------*-------		
197	BACB30MR5K14		.BOLT		1
200	AN960PD516		DELETED		
200A	AN960JD516		.WASHER-*[1]	A-F	3
-200B	NAS1149D0516H		DELETED		
			ATTACHING PARTS		
-200C	NAS1149D0563J		.WASHER	G,H	3
-200D	NAS1149D0563J		.WASHER-*[1]	A-F	3
			-------*-------		
202	MS20002C5		DELETED		
			ATTACHING PARTS		
205	AN960D516		DELETED		
-205A	NAS1149D0563J		DELETED		
205B	NAS1149D0563J		DELETED		
205C	MS20002C5		.WASHER		4
			-------*-------		
206	AN960D516		.WASHER-*[1]	A-F	2
-206A	NAS1149D0516H		.WASHER	G,H	2
-206B	NAS1149D0516H		.WASHER-*[1]	A-F	2
			ATTACHING PARTS		
210	BACN10JC5CD		.NUT-*[1]	A-F	3
-210A	H52732-5CD		.NUT-	G,H	3
			(V15653)		
			(SPEC BACN10YR5CD)		
			(OPT PLH55CD		
			(V62554))		
-210B	H52732-5CD		.NUT-*[1]	A-F	3
			(V15653)		
			(SPEC BACN10YR5CD)		
			(OPT PLH55CD		
			(V62554))		
			-------*-------		

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
212	BACJ40A22-9		.JUMPER ASSY	E,G	1
215	AN814-4DL		.PLUG AND BLEEDER- (OPT ITEM 215A)	A-F	1
-215A	AN814-4D		.PLUG AND BLEEDER- (OPT ITEM 215)	A-F	1
-215B	AN814-4DL		.PLUG AND BLEEDER	G	1
220	NAS1612-4		.PACKING		1
225A	NAS1611-019		.PACKING		1
230	4100362-1		.MOTOR-HYDR (V34270) (SPEC S256T003-1) ATTACHING PARTS		1
235B	NAS6705-13		.BOLT		3
236	NAS6705H13		.BOLT -------*-------		1
240	AN960PD516		DELETED		
240A	AN960JD516		.WASHER	A-F	8
-240B	NAS1149D0563J		.WASHER ATTACHING PARTS	G,H	8
245	BACN10JC5CD		.NUT	A-F	4
-245A	H52732-5CD		.NUT- (V15653) (SPEC BACN10YR5CD) (OPT PLH55CD (V62554)) -------*-------	G	4
250	256T2711-1		.GEARBOX ASSY- (REF CMM 27-81-72)		1
255	BAC27TCT0172		.NAMEPLATE		1
255A	NAS1801-3-8		DELETED		

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
260	BAC27TCT0286		.MARKER-ALUMINUM FOIL-M1081 MODULE-CONTROL VALVE, OUTBD SLAT		1
260A	NAS1149D0316H		DELETED		
265	BAC27TCT0304		.MARKER-ALUMINUM FOIL-M469 MOTOR-SLAT DRIVE OUTBD ALT		1
265A	H52732-3CD		DELETED		
270	BAC27TCT0172		DELETED		
275	BAC27TCT0286		DELETED		
280	BAC27TCT0304		DELETED		

- Item Not Illustrated

*[1] ITEM 180J USED WITH ITEMS 195D, 200D, 206B, 210B OPT TO ITEM 180, 180A, 180B, 180C, 180D, OR 180E, USED WITH ITEMS 195B, 200A, 206, 210