BOEING

Commercial
Airplane
Group

747

Service Bulletin

Number:	**747-28-2295**
Date:	November 17, 2006
Revision 2:	January 19, 2009
ATA System:	2811

SUBJECT: CONVERSION AIRPLANE - Boeing Converted Freighter Modification of a 747-400 Passenger Airplane to a 747-400 Special Freighter (SF) Airplane - Horizontal Stabilizer Tank Deactivation

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Number:	**747-28-2295**
Original Issue:	November 17, 2006
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Revision Transmittal Sheet

SUBJECT: CONVERSION AIRPLANE - Boeing Converted Freighter Modification of a 747-400 Passenger Airplane to a 747-400 Special Freighter (SF) Airplane - Horizontal Stabilizer Tank Deactivation

This Revision includes all pages of the service bulletin.

COMPLIANCE INFORMATION RELATED TO THIS REVISION

No more work is necessary on airplanes changed as shown in the Revision 1 of this service bulletin.

Airplane RT837 was added to this service bulletin effectivity and will be included as Group 4 airplane.

REASON FOR REVISION

This Revision adds airplane RT837 (Group 4) to the service bulletin effectivity.

Vertical lines are put on the left edge of each page, except in Paragraph 1.A., Effectivity, to show the location of important changes.

Pages with no vertical lines have no important changes.

REVISION HISTORY

Original Issue:	**November 17, 2006**
Revision 1:	March 20, 2008
Revision 2:	January 19, 2009

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CONCURRENT REQUIREMENTS

Refer to Paragraph 1.B., Concurrent Requirements.

BACKGROUND

As part of the special freighter conversion, the horizontal stabilizer fuel tank is to be deactivated and the fuel transfer line removed. This service bulletin provides instructions and a kit of parts to do that.

ACTION (MC 0100MK4051, 0100MK4084)

On P7-2 overhead circuit breaker panel, remove the Horizontal Stabilizer REFUEL & XFR circuit breakers C10125 and C10126. Rework the circuit breaker wiring.

On the horizontal stabilizer refuel valve control unit, disconnect electrical connector, cap and stow wiring.

At the FWD and AFT fuel isolation valves for the horizontal stabilizer transfer system, disconnect the electrical connector from each valve actuator, coil and stow wiring. Position manual override lever for affected valves, located on valve actuator, to closed position and lockwire to secure in place.

On the P42 left wing refueling panel coil and stow wiring for indicator, switches and lights. Place "H.STAB TANK DEACTIVATED" placard above H.STAB indicator.

On P85 panel, remove HOR STAB XFER/JETT PUMP circuit breakers C03141 and C03142. Remove HOR STAB XFER/JETT PUMP placard below the circuit breakers. Rework circuit breaker wire and pump wiring. Cap and stow plugs S1884 and S1885 for H.STAB fuel pump low pressure switches.

On the horizontal stabilizer transfer / jettison pumps, remove two motor impeller assemblies located on the front spar of H. Stab tank. Install plugs and associated pins.

On the E8 equipment rack, in the Remote Electronic Unit (REU), M7861, remove REU cover plate and H.STAB Individual Fuel Quantity Channel (IFQC) card. Re-install REU cover plate. Placard REU "INOP" and rework the wiring.

On the Fuel System Card File, remove horizontal stabilizer transfer Single Point Sensor Control (SPSC) card and install cover assembly. Coil and stow SPSC card wiring. Insert jumper wire in Fuel System Card File.

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On P5 overhead panel, remove the Fuel Management Control Module (M00154) and rework the wiring.

On the Fuel Quantity Indicating System (FQIS), reprogram FQIS card file for Horizontal Stabilizer absent.

On the Wire Interface Unit (WIU), modify affected wire bundles at WIU.

On the fuel transfer line, remove and discard fuel transfer line from center wing tank to the horizontal stabilizer fuel tank, and install plugs.

On the E2 equipment rack, make changes to the left, center, and right Electronic Instrument Unit (EIU) configuration pins to disable the Horizontal Stab Tank display and associated messaging on the Integrated Display Unit (IDS).

EFFECTIVITY

Group	Operator	Airplanes
1	CAT	RT518
2	CAT	RT528
3	CAT	RT461
4	SIA	RT837

COMPLIANCE

No compliance time is given.

INDUSTRY SUPPORT INFORMATION

Boeing Industry Support information is provided in Master Change 0100MK4051 and 0100MK4084.

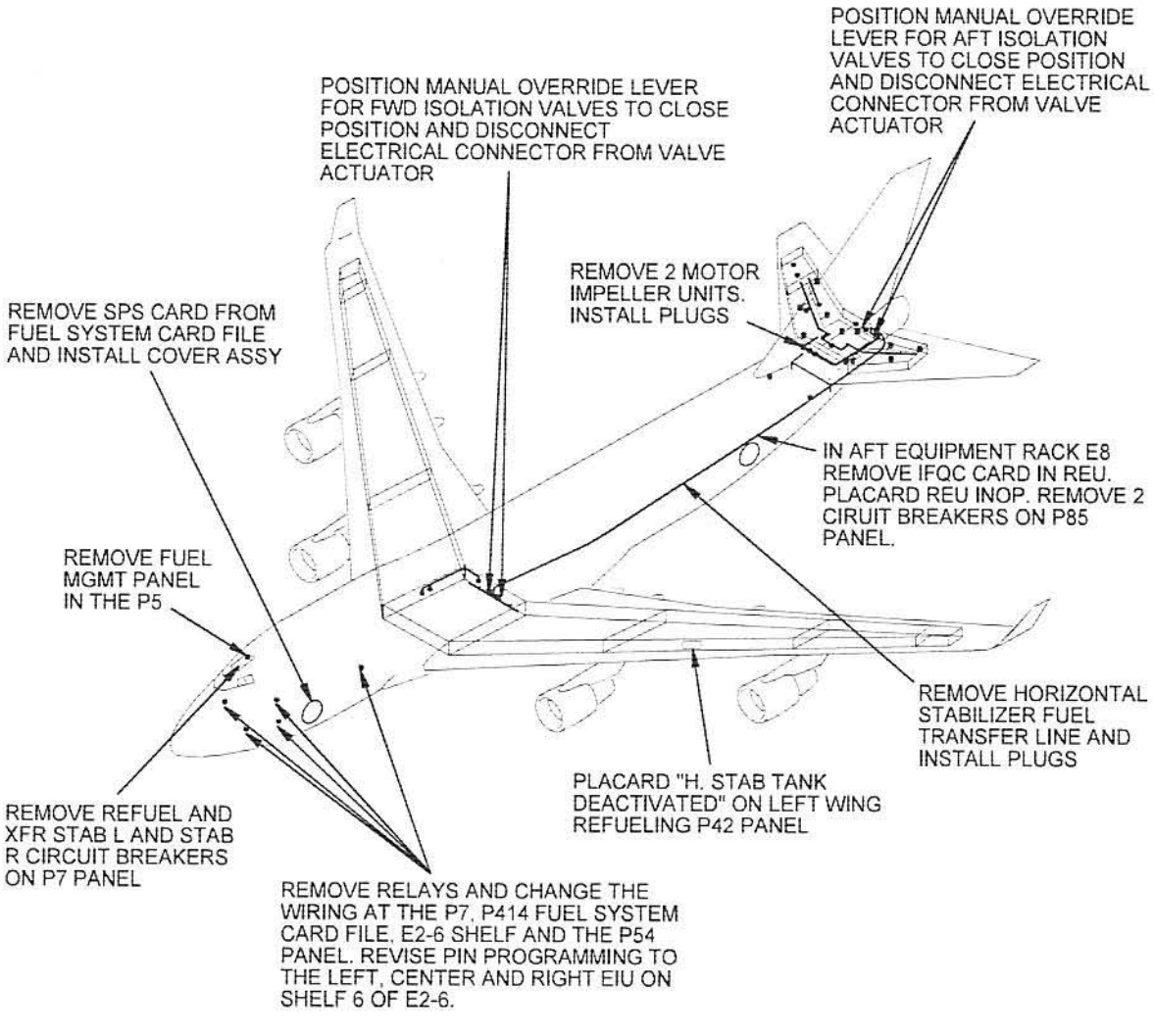
MANPOWER

Man Hours are not listed in this Service Bulletin. They are negotiated separately between Boeing and the contracted modification facility.

MATERIAL INFORMATION

Negotiated Kits.

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SUBJECT: CONVERSION AIRPLANE - Boeing Converted Freighter Modification of a 747-400 Passenger Airplane to a 747-400 Special Freighter (SF) Airplane - Horizontal Stabilizer Tank Deactivation

1. PLANNING INFORMATION

A. Effectivity

1. Airplanes

Refer to Service Bulletin Index Document D6-30300 Part 3 for Airplane Variable Number, Line Number, and Serial Number data.

This service bulletin is for the airplanes shown below. Refer to Master Change 0100MK4051 and 0100MK4084 for data about this change.

GROUP	CONFIGURATION	DESCRIPTION
1	-	747-400 airplane RT518 to be modified to a 747-400SF.
2	-	747-400 airplane RT528 to be modified to a 747-400SF.
3	-	747-400 airplane RT461 to be modified to a 747-400SF.
4	-	747-400 airplane RT837 to be modified to a 747-400SF.

Airplane models:

747-400

IDENTIFICATION BY CUSTOMER, CUSTOMER CODE, GROUP AND VARIABLE NUMBER

CATHAY PACIFIC AIRWAYS (CAT)
1 RT518
2 RT528
3 RT461

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SINGAPORE AIRLINES (SIA)
4 RT837

IDENTIFICATION BY VARIABLE NUMBER

Variable	Group
RT461	3
RT518	1
RT528	2
RT837	4

2. Spares Affected

None.

B. Concurrent Requirements

A Boeing Service Bulletin 747-28-2182, "FUEL - INDICATING - FUEL QUANTITY PROCESSOR AND REMOTE ELECTRONICS UNIT CHANGE" August 17, 1995, is required to be done prior to or at the same time with this service bulletin.

The service bulletin is to be accomplished concurrently with the 747-400 Boeing Converted Freighter Modification.

Group 1-4:

Company	Service Bulletin	Description
Boeing	747-00-2045	This service bulletin is the collector of all lower level service bulletins for Group 1 Boeing Converted Freighter.
Boeing	747-00-2046	This service bulletin is the collector of all lower level service bulletins for Group 2 Boeing Converted Freighter.
Boeing	747-00-2118	This service bulletin is the collector of all lower level service bulletins for Group 3 Boeing Converted Freighter.
Boeing	747-00-2144	This service bulletin is the collector of all lower level service bulletins for Group 4 Boeing Converted Freighter.

C. Reason

As part of the special freighter conversion, the horizontal stabilizer fuel tank is to be deactivated and the fuel transfer line removed. This service bulletin provides instructions and a kit of parts to do that.

Revision 2 is sent to add airplane RT837 (Group 4) to the service bulletin effectivity.

D. Description

On P7-2 overhead circuit breaker panel, remove the Horizontal Stabilizer REFUEL & XFR circuit breakers C10125 and C10126. Rework the circuit breaker wiring.

On the horizontal stabilizer refuel valve control unit, disconnect electrical connector, cap and stow wiring.

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At the FWD and AFT fuel isolation valves for the horizontal stabilizer transfer system, disconnect the electrical connector from each valve actuator, coil and stow wiring. Position manual override lever for affected valves, located on valve actuator, to closed position and lockwire to secure in place.

On the P42 left wing refueling panel coil and stow wiring for indicator, switches and lights. Place "H.STAB TANK DEACTIVATED" placard above H.STAB indicator.

On P85 panel, remove HOR STAB XFER/JETT PUMP circuit breakers C03141 and C03142. Remove HOR STAB XFER/JETT PUMP placard below the circuit breakers. Rework circuit breaker wire and pump wiring. Cap and stow plugs S1884 and S1885 for H.STAB fuel pump low pressure switches.

On the horizontal stabilizer transfer / jettison pumps, remove two motor impeller assemblies located on the front spar of H. Stab tank. Install plugs and associated pins.

On the E8 equipment rack, in the Remote Electronic Unit (REU), M7861, remove REU cover plate and H.STAB Individual Fuel Quantity Channel (IFQC) card. Re-install REU cover plate. Placard REU "INOP" and rework the wiring.

On the Fuel System Card File, remove horizontal stabilizer transfer Single Point Sensor Control (SPSC) card and install cover assembly. Coil and stow SPSC card wiring. Insert jumper wire in Fuel System Card File.

On P5 overhead panel, remove the Fuel Management Control Module (M00154) and rework the wiring.

On the Fuel Quantity Indicating System (FQIS), reprogram FQIS card file for Horizontal Stabilizer absent.

On the Wire Interface Unit (WIU), modify affected wire bundles at WIU.

On the fuel transfer line, remove and discard fuel transfer line from center wing tank to the horizontal stabilizer fuel tank, and install plugs.

On the E2 equipment rack, make changes to the left, center, and right Electronic Instrument Unit (EIU) configuration pins to disable the Horizontal Stab Tank display and associated messaging on the Integrated Display Unit (IDS).

Revision 2 - No more work is necessary on airplanes changed as shown in Revision 1 of this service bulletin.

E. Compliance

No compliance time is given.

F. Approval

This service bulletin was examined by the Federal Aviation Administration (FAA). The changes specified in this service bulletin comply with the applicable regulations and are FAA approved. This service bulletin and the FAA approval were based on the airplane in its original Boeing delivery configuration or as modified by other FAA approved Boeing changes.

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If an airplane has a non-Boeing modification or repair that affects a component or system also affected by this service bulletin, the operator is responsible for obtaining appropriate regulatory agency approval before incorporating this service bulletin.

G. Manpower

Man Hours are not listed in this Service Bulletin. They are negotiated separately between Boeing and the contracted modification facility.

H. Weight and Balance Changes

Boeing requires that, because of the magnitude and uniqueness of major modification programs, the total airplane weight and center of gravity will be determined by actual weighing after all modifications are complete and prior to delivery. The actual data will be recorded and placed in Chapter 2 of the Weight and Balance Manual.

I. Electrical Load Data

Group 1-3: Refer to Document Number D828B006-1001 for Electrical Load Data.

Group 4: Refer to Document Number D828B001-1007 for Electrical Load Data.

NOTE: The electrical loads of CAT Model 747-400B airplanes RT518, RT528, RT461and RT837 as specified in document D281U002-422 have been reviewed and the following loads were deleted.

1. Direct Current (DC) Loads

Airplanes	Nomenclature	Connected Load	Circuit Breaker	Bus
RT518, RT528, RT461, RT837	Refuel and Transfer Stabilizer - Left	1.40	10125	DC1P7
	Refuel and Transfer Stabilizer - Right	1.40	10126	DC2P7

2. Alternating Current (AC) Loads

Airplanes	Nomenclature	Connected Load	Circuit Breaker	Bus
RT518, RT528, RT461, RT837	Horizontal Stabilizer Boost Pump - Fwd	4.600KVA.76PF	3141	GSB-3
	Horizontal Stabilizer Boost Pump - Aft	4.600KVA.76PF	3142	AC2P85P183

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J. References

1. Existing Data:

   a. Engineering Change Memo MC 0100MK4051 and MC 0100MK4084.

   b. 747-400 Aircraft Maintenance Manual (AMM) 12-11-10, 20-11-06, 20-11-16, 24-22-00, 28-11-00, 28-17-01, 28-17-04, 28-17-06, 28-17-10, 28-21-12, 28-22-00, 28-26-00, 28-41-00, 28-41-17, 29-11-00, 32-00-30

   c. 747-400 Wiring Diagram Manual (WDM) 24-51-26, 24-51-64, 24-54-23, 28-21-11, 28-21-12, 28-21-13, 28-21-21, 28-21-23, 28-21-24, 28-21-25, 28-21-26, 28-21-27, 28-21-28, 28-21-29, 28-21-30, 28-21-31, 28-42-15, 28-43-12, 28-54-13, 31-61-12, 31-61-22, 31-61-32

   d. 747-400SF Structural Repair Manual (SRM) 51

   e. Standard Wiring Practices Manual (SWPM) 20-10-11, 20-10-12, 20-20-00

   f. Boeing Parts Standards Document, D-590.

   g. Electrical Load Data Document, D828B006-1001and D828B001-1007.

   h. Boeing Service Bulletins: Refer to section 1.B., Concurrent Requirements.

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2. Data supplied with this Service Bulletin:

NOTE:

1. The Module Parts List (MPL) drawings listed below will not be shipped with this service bulletin. Drawing access will be given to the modification site through My Boeing Fleet (MBF). This was negotiated by the operator and modification facility under Master Change 0100MK4051 and 0100MK4084.

2. Within the MPL is a list of the retrofit and/or production drawing picture sheets required to facilitate installation of the identified part, assembly or installation as given in this service bulletin

Group 1: RMC 800B0337-1 is a collector for all MPL's as shown on the table.

MPL	TITLE	DRAWING NUMBER	SHEET	REV
834B0401-1001	FUEL TANK DEACTIVATION - HORIZONTAL STABILIZER	834B0401	MPL	E
		148U0002	1	A
		148U0002	DL	-
		284U1255	1	C
		284U1255	DL	-
		284U4219	7	-
		344U1011	4	-
		344U1011	DL	-
		344U1014	1	B
		344U1014	DL	B
		344U1022	1	K
		344U1022	2	G
		344U1022	DL	A
		344U1023	2	A
		344U1023	DL	-

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Group 2: RMC 800B0346-1 is a collector for all MPL's as shown on the table

MPL	TITLE	DRAWING NUMBER	SHEET	REV
834B0401-1001	FUEL TANK DEACTIVATION - HORIZONTAL STABILIZER	834B0401	MPL	E
		148U0002	1	A
		148U0002	DL	-
		284U1255	1	C
		284U1255	DL	-
		284U4219	7	-
		344U1011	4	-
		344U1011	DL	-
		344U1014	1	B
		344U1014	DL	B
		344U1022	1	K
		344U1022	2	G
		344U1022	DL	A
		344U1023	2	A
		344U1023	DL	-

Group 3: RMC 800B0755-1

MPL	TITLE	DRAWING NUMBER	SHEET	REV
834B0401-1001	FUEL TANK DEACTIVATION - HORIZONTAL STABILIZER	834B0401	MPL	F
		148U0002	1	A
		148U0002	DL	-
		284U1255	1	C
		284U1255	DL	-
		284U4219	7	-
		344U1011	4	-
		344U1011	DL	-
		344U1014	1	B
		344U1014	DL	B
		344U1022	1	K
		344U1022	2	G
		344U1022	DL	A
		344U1023	2	A
		344U1023	DL	-

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Group 4: RMC 800B0755-3 is a collector for all MPL's as shown on the table

MPL	TITLE	DRAWING NUMBER	SHEET	REV
834B0401-1001	FUEL TANK DEACTIVATION - HORIZONTAL STABILIZER	834B0401	MPL	F
		148U0002	1	A
		148U0002	DL	-
		284U1255	1	C
		284U1255	DL	A
		284U4219	7	-
		344U1011	4	-
		344U1011	DL	-
		344U1014	1	B
		344U1014	DL	B
		344U1022	1	K
		344U1022	2	G
		344U1022	DL	A
		344U1023	2	A
		344U1023	DL	-
		828B4114	1	A

3. Installation Drawings Used in the Preparation of this Service Bulletin:

   None.

4. Process Data:

   Boeing Process specifications referred to on the drawings are not given in this service bulletin since these procedures are frequently used as standard shop practices.

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K. Publications Affected

Publication	Chapter-Section
747 FAA Approved Airplane Flight Manual	1
747-400 Flight Crew Operations Manual	6.20, L.10, 12.10, 12.20, 12.30, NNC.12, NP.21
747 Maintenance Manual	11-13, 28-10, 28-30, and 28-40 (Dual configuration already exists)
747 Wiring Diagram Manual	24-51, 24-54, 28-21, 28-22, 28-27, 28-41, 28-42, 28-43, 28-51, and 31-61
747 Fault Reporting Manual	28-10
747 Fault Isolation Manual	28 CMCS Index, 28 EICAS Index
747 Illustrated Parts Catalog	28-22, 28-26, and 28-41
Ramp Maintenance Manual	28-00

L. Interchangeability and Intermixability of Parts

Refer to Paragraph 2.C., Parts Necessary For Each Airplane, for interchangeability and intermixability information.

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2. MATERIAL INFORMATION

A. Material - Price and Availability

Boeing supplies the kits shown in Paragraph 2. C., Parts Necessary For Each Airplane. This was negotiated with the operator under Master Change 0100MK4051 and 0100MK4084.

B. Industry Support Information

Boeing Industry Support Information is provided in Master Change 0100MK4051 and 0100MK4084.

C. Parts Necessary For Each Airplane

1. Kits/Parts:

   To get the kits/parts shown below, refer to Paragraph 2.A., Material - Price and Availability.

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NOTE: One top kit and the items shown in Paragraph 2.C.2., Parts and Materials Supplied by the Operator, are necessary for each airplane.

Kit 834B0401				
New Part Number	QTY - 1001	Name	Existing Part Number	Notes
834B0401-1001	-	FUEL TANK DEACTIVATION - HORIZONTAL STABILIZER		(a)
285U0096-6	1	COVER ASSY		
65B02637-22	1	BLANKING PLATE		
65B02637-28	1	GASKET		
835B0004-1	1	PLUG - CONNECTOR FITTING, HST FUEL TRANSFER LINE		
835U0001-1	2	MACHINED PARTS DETAILS-PLUG		
835U0002-1	2	MACHINED PARTS DETAILS-PIN		
AS5168W32	2	PLUG, FLARED TUBE		(b)
BAC27EFS595	1	MARKER		
BAC27TFDE0013	1	VINYL DECAL- (INOP)		
MS21913W32	1	PLUG, FLARELESS		(b) (c)
(a) Kit has more parts than necessary. Discard extra parts or keep them for other use.				
(b) Optional to AS5168W32 in the forward fitting 344U0014 only.				
(c) MS21913W32 is a substitute for AS5168W32				

Group 1-2:

Kit 826B4260				
New Part Number	QTY -	Name	Existing Part Number	Notes
829B9006-14	1	Wire		

Group 3:

Kit 826B4970-10, 826B4980-12, 826B4990-10				
New Part Number	QTY -	Name	Existing Part Number	Notes
829B9006-36	1	Wire		

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Group 4:

Kit 826B4970-8, 826B4980-7				
New Part Number	QTY -	Name	Existing Part Number	Notes
829B9006-37	1	Wire		

Group 4:

Kit 826B4990-7				
New Part Number	QTY -	Name	Existing Part Number	Notes
829B9006-4	1	Wire		

Group 2-3: Additional Installs

PART NUMBER	NAME	QTY	REMOVAL INSTALL P/N REF	REMOVAL DRAWING REF	NOTES: INSTL REF
AS5168W32 (Opt MS21913W32)	Plug	1			834B0401-1001
MS29512-32	O-Ring	1			834B0401-1001
835B0004-1	Plug	1			834B0401-1001
MS29513-241	O-Ring	1			834B0401-1001
MS20995NC32	Lockwire	1			834B0401-1001
AS5168W32	Plug	1			834B0401-1001
MS29512-32	O-Ring	1			834B0401-1001
BACC14AD06D	Cap	1			834B0401-1001

Group 4: Additional Installs

PART NUMBER	NAME	QTY	REMOVAL INSTALL P/N REF	REMOVAL DRAWING REF	NOTES: INSTL REF
AS5168W32 (Opt MS21913W32)	Plug	1			834B0401-1001
MS29512-32	O-Ring	1			834B0401-1001
835B0004-1	Plug	1			834B0401-1001
MS29513-241	O-Ring	1			834B0401-1001
MS20995NC32	Lockwire	1			834B0401-1001
AS5168W32	Plug	1			834B0401-1001
MS29512-32	O-Ring	1			834B0401-1001
BACC14AD06D	Cap	1			834B0401-1001
MS29513-007	Packing	2			834B0401-1001

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Group 4: Additional Installs

PART NUMBER	NAME	QTY	REMOVAL INSTALL P/N REF	REMOVAL DRAWING REF	NOTES: INSTL REF
M25988-1-238	Packing	2			834B0401-1001
BACN10JC06C	Nut	2			834B0401-1001
NAS620C6	Washer	2			834B0401-1001

2. Parts and Materials Supplied by the Operator:

Part Number / Specification	QTY	Name	Notes
2645	4	Plug Button	(a)
(a) PALL AEROPOWER CORP 5775 RIO VISTA CLEARWATER FL 33760 USA 727-539-8448			

3. Parts Modified and Reidentified:

None

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4. Parts Removed and Not Replaced:

Group 1-3:

Existing Part Number	Name	QTY	Notes
60-72101-1 or 60-72102-4 (Boeing Part Number 60B92603-22 or 60B92603-26)	Motor-Impeller Assembly	2	Refer to 747-400 AMM 28-17-04 (a)
S344T002-8	Horizontal Stabilizer Transfer Single Point Sensor Control Card (SPSC) A3	1	Refer to 747-400 AMM 28-17-10 (a)
60B92018-207	Individual Fuel Quantity Channel (IFQC) Card Y5XA1	1	Refer to 747-400 AMM 28-41-17 (a)
R7391	Relay	1	Located on P54 panel
10-60536-25 (opt 10-60536-22)	Hose Assy	1	-
344U0000-6	Fitting	1	-
344U1022-10	Tube Assy	1	-
344U1022-11	Tube Assy	1	-
344U1022-12	Tube Assy	1	-
344U1022-13	Tube Assy	1	-
344U1022-14	Tube Assy	1	-
344U1022-2	Tube Assy	1	-
344U1022-22	Sleeve	1	-
344U1022-23	Shroud	1	-
344U1022-25	Tube Assy	1	-
344U1022-26	Tube Assy	1	-
344U1022-5	Tube Assy	3	-
344U1022-8	Tube Assy	1	-
344U1022-9	Tube Assy	1	-
6305B374S48-03	Nut Assy	2	-
6305B381S48-1	Shroud Connector	1	-
63211-48	Coupling Assy	1	-
69B92447-39	Spacer	1	(b)
69B92447-52	Spacer	1	(b)
69B92447-8	Spacer	1	(b)
AN735D48	Clamp, Loop	20	-
AS1712D48	Coupling	11	-
BACB30NM3HK7	Bolt	6	-
BACC10CC48	Clamp, U-style	3	-
BACC10CC48S	Clamp	1	(b)

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Group 1-3:

Existing Part Number	Name	QTY	Notes
BACC10EW48A	Clamp, U-style	60	-
BACC10EW48B	Clamp, U-style	60	-
BACJ40A20-3	Bonding Jumper	2	-
BACJ40A20-4	Bonding Jumper	4	-
BACJ40A20-5	Bonding Jumper	9	-
BACS40R008E048F	Shim, Laminated	1	-
MS24665-144	Pin	4	-
MS29513-234	O-ring	2	-
MS29513-241	O-ring	1	-
MS29513-338	O-ring	26	-
NAS1523AA3R	Washer	6	-
344U0000-2	Fitting	1	-
MS29513-241	O-ring	1	-
AP7102D32-1 (opt AFP720D3232 or AP7102D32 or MS21900D32)	Union	1	-
MS29512-32	O-ring	1	-
344U0018-8 (opt 344U0018-5)	Tube Assy	1	-
10-60536-23	Hose Assy	1	-
BACC18AD7	Circuit Breaker	2	-
BACC18AE25	Circuit Breaker	2	-
BAC27EEL23764	Marker	1	Refer to 747-400 AMM 20-11-06
233U3100-247	Fuel Management Panel Assy	1	

(a) Keep the part if there are other uses for it.
(b) Quantity used varies.

Group 4:

Existing Part Number	Name	QTY	Notes
60-72101-1 or 60-72102-4 (Boeing Part Number 60B92603-22 or 60B92603-26)	Motor-Impeller Assembly	2	Refer to 747-400 AMM 28-17-04 (a)
S344T002-8	Horizontal Stabilizer Transfer Single Point Sensor Control Card (SPSC) A3	1	Refer to 747-400 AMM 28-17-10 (a)
60B92018-207	Individual Fuel Quantity Channel (IFQC) Card Y5XA1	1	Refer to 747-400 AMM 28-41-17 (a)

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Group 4:

Existing Part Number	Name	QTY	Notes
R7391	Relay	1	Located on P54 panel
10-60536-25 (opt 10-60536-22)	Hose Assy	1	-
344U0000-6	Fitting	1	-
344U1022-10	Tube Assy	1	-
344U1022-11	Tube Assy	1	-
344U1022-12	Tube Assy	1	-
344U1022-13	Tube Assy	1	-
344U1022-14	Tube Assy	1	-
344U1022-2	Tube Assy	1	-
344U1022-22	Sleeve	2	-
344U1022-23	Shroud	1	-
344U1022-25	Tube Assy	1	-
344U1022-26	Tube Assy	1	-
344U1022-5	Tube Assy	3	-
344U1022-8	Tube Assy	1	-
344U1022-9	Tube Assy	1	-
6305B374S48-03	Nut Assy	2	-
6305B381S48-1	Shroud Connector	1	-
63211-48	Coupling Assy	1	-
69B92447-39	Spacer	1	(b)
69B92447-52	Spacer	1	(b)
69B92447-8	Spacer	1	(b)
AN735D48	Clamp, Loop	20	-
AS1712D48	Coupling	11	-
BACB30NM3HK7	Bolt	6	-
BACC10CC48	Clamp, U-style	3	-
BACC10CC48S	Clamp	1	(b)
BACC10EW48A	Clamp, U-style	61	-
BACC10EW48B	Clamp, U-style	61	-
BACJ40A20-3	Bonding Jumper	2	-
BACJ40A20-4	Bonding Jumper	4	-
BACJ40A20-5	Bonding Jumper	9	-
MS24665-144	Pin	4	-
M25988-1-234	O-ring	2	-
M25988-1-241	O-ring	2	-
M25988-1-338	O-ring	26	-
NAS1523AA3R	Washer	6	-

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Group 4:

Existing Part Number	Name	QTY	Notes
344U0000-2	Fitting	1	-
AP7102D32-1 (opt AFP720D3232 or AP7102D32 or MS21900D32)	Union	1	-
MS29512-32	O-ring	1	-
344U0018-12 (opt 344U0018-8)	Tube Assy	1	-
10-60536-23	Hose Assy	1	-
BACC18AD7	Circuit Breaker	2	-
BACC18AE25	Circuit Breaker	2	-
BAC27EEL23764	Marker	1	Refer to 747-400 AMM 20-11-06
233U3100-247	Fuel Management Panel Assy	1	
(a) Keep the part if there are other uses for it. (b) Quantity used varies.			

Group 2: Additional Removals

PART NUMBER	NAME	QTY	REMOVAL INSTALL P/N REF	REMOVAL DRAWING REF	NOTES
10-60536-25	Hose Assy	1	344U1022-100	344U1022	
344U0000-6	Fitting	1	344U1022-100	344U1022	
344U1022-10	Tube Assy	1	344U1022-100	344U1022	
344U1022-11	Tube Assy	1	344U1022-100	344U1022	
344U1022-12	Tube Assy	1	344U1022-100	344U1022	
344U1022-13	Tube Assy	1	344U1022-100	344U1022	
344U1022-14	Tube Assy	1	344U1022-100	344U1022	
344U1022-2	Tube Assy	1	344U1022-100	344U1022	
344U1022-22	Sleeve	1	344U1022-100	344U1022	
344U1022-23	Shroud	1	344U1022-100	344U1022	
344U1022-25	Tube Assy	1	344U1022-100	344U1022	
344U1022-26	Tube Assy	1	344U1022-100	344U1022	
344U1022-5	Tube Assy	3	344U1022-100	344U1022	
344U1022-8	Tube Assy	1	344U1022-100	344U1022	
344U1022-9	Tube Assy	1	344U1022-100	344U1022	
6305B374S48-03	Nut Assy	2	344U1022-100	344U1022	
6305B381S48-1	Shroud Connector	1	344U1022-100	344U1022	
63211-48	Coupling Assy	1	344U1022-100	344U1022	
69B92447-39	Spacer	1	344U1022-100	344U1022	
69B92447-52	Spacer	1	344U1022-100	344U1022	

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Group 2: Additional Removals

PART NUMBER	NAME	QTY	REMOVAL INSTALL P/N REF	REMOVAL DRAWING REF	NOTES
69B92447-8	Spacer	1	344U1022-100	344U1022	
AN735D48	Clamp, Loop	20	344U1022-100	344U1022	
AS1712D48	Coupling	11	344U1022-100	344U1022	
BACB30NM3HK7	Bolt	6	344U1022-100	344U1022	
BACC10CC48	Clamp, U-Style	3	344U1022-100	344U1022	
BACC10CC48S	Clamp	1	344U1022-100	344U1022	
BACC10EW48A	Clamp, U-Style	61	344U1022-100	344U1022	
BACC10EW48B	Clamp, U-Style	61	344U1022-100	344U1022	
BACJ40A20-3	Bonding Jumper	2	344U1022-100	344U1022	
BACJ40A20-4	Bonding Jumper	4	344U1022-100	344U1022	
BACJ40A20-5	Bonding Jumper	9	344U1022-100	344U1022	
BACS40R008E048F	Shim, Laminated	1	344U1022-100	344U1022	
MS24665-144	Pin	4	344U1022-100	344U1022	
M25988-1-234	O-Ring	2	344U1022-100	344U1022	
M25988-1-241	O-Ring	1	344U1022-100	344U1022	
M25988-1-338	O-Ring	26	344U1022-100	344U1022	
NAS1523AA3R	Washer	6	344U1022-100	344U1022	
344U0000-2	Fitting	1	344U1022-100	344U1022	
M25988-1-241	O-Ring	1	344U1022-100	344U1022	
AP7102D32	Union	1	344U1022-100	344U1022	
MS29512-32	O-Ring	1	344U1022-100	344U1022	
344U0018-12	Tube Assy	1	344U1022-100	344U1022	
10-60536-23	Hose Assy	1	344U1022-100	344U1022	

Group 3: Additional Removals

PART NUMBER	NAME	QTY	REMOVAL INSTALL P/N REF	REMOVAL DRAWING REF	NOTES
10-60536-25	Hose Assy	1	344U1022-24	344U1022	
344U0000-6	Fitting	1	344U1022-24	344U1022	
344U1022-10	Tube Assy	1	344U1022-24	344U1022	
344U1022-11	Tube Assy	1	344U1022-24	344U1022	
344U1022-12	Tube Assy	1	344U1022-24	344U1022	
344U1022-13	Tube Assy	1	344U1022-24	344U1022	
344U1022-14	Tube Assy	1	344U1022-24	344U1022	
344U1022-2	Tube Assy	1	344U1022-24	344U1022	
344U1022-22	Sleeve	1	344U1022-24	344U1022	

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Group 3: Additional Removals

PART NUMBER	NAME	QTY	REMOVAL INSTALL P/N REF	REMOVAL DRAWING REF	NOTES
344U1022-23	Shroud	1	344U1022-24	344U1022	
344U1022-25	Tube Assy	1	344U1022-24	344U1022	
344U1022-26	Tube Assy	1	344U1022-24	344U1022	
344U1022-5	Tube Assy	3	344U1022-24	344U1022	
344U1022-8	Tube Assy	1	344U1022-24	344U1022	
344U1022-9	Tube Assy	1	344U1022-24	344U1022	
6305B374S48-03	Nut Assy	2	344U1022-24	344U1022	
6305B381S48-1	Shroud Connector	1	344U1022-24	344U1022	
63211-48	Coupling Assy	1	344U1022-24	344U1022	
69B92447-39	Spacer	1	344U1022-24	344U1022	
69B92447-52	Spacer	1	344U1022-24	344U1022	
69B92447-8	Spacer	1	344U1022-24	344U1022	
AN735D48	Clamp, Loop	20	344U1022-24	344U1022	
AS1712D48	Coupling	11	344U1022-24	344U1022	
BACB30NM3HK7	Bolt	6	344U1022-24	344U1022	
BACC10CC48	Clamp, U-Style	3	344U1022-24	344U1022	
BACC10CC48S	Clamp	1	344U1022-24	344U1022	
BACC10EW48A	Clamp, U-Style	60	344U1022-24	344U1022	
BACC10EW48B	Clamp, U-Style	60	344U1022-24	344U1022	
BACJ40A20-3	Bonding Jumper	2	344U1022-24	344U1022	
BACJ40A20-4	Bonding Jumper	4	344U1022-24	344U1022	
BACJ40A20-5	Bonding Jumper	9	344U1022-24	344U1022	
BACS40R008E048F	Shim, Laminated	1	344U1022-24	344U1022	
MS24665-144	Pin	4	344U1022-24	344U1022	
M25988-1-234	O-Ring	2	344U1022-24	344U1022	
M25988-1-241	O-Ring	2	344U1022-24	344U1022	
M25988-1-338	O-Ring	26	344U1022-24	344U1022	
NAS1523AA3R	Washer	6	344U1022-24	344U1022	
344U0000-2	Fitting	1	344U1022-24	344U1022	
AP7102D32	Union	1	344U1022-24	344U1022	
MS29512-32	O-Ring	1	344U1022-24	344U1022	
344U0018-8	Tube Assy	1	344U1022-24	344U1022	
10-60536-23	Hose Assy	1	344U1022-24	344U1022	

D. Parts Necessary to Change Spares

None.

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E. Special Tooling - Price and Availability

The operator can supply the tools shown in Paragraph 2.F., Special Tooling Necessary to do this Service Bulletin. Tool price and supply data are not given.

F. Special Tooling Necessary to do this Service Bulletin

To get the tools shown below, refer to Paragraph 2.E., Special Tooling - Price and Availability. Maintenance and overhaul tools in the manuals shown in Paragraph 1.J., References, can also be necessary. Examine operator tool supply to make sure all necessary tools are available.

Tool Kit Number	Name
Shop Supply	ESDS Wrist Strap (1 required)
Shop Supply	Jumper Wire (4 required)

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3. ACCOMPLISHMENT INSTRUCTIONS

A. GENERAL INFORMATION

CAUTION: KEEP THE WORK AREA, WIRES AND ELECTRICAL BUNDLES CLEAN OF METAL PARTICLES OR CONTAMINATION WHEN YOU USE TOOLS. UNWANTED MATERIAL, METAL PARTICLES OR CONTAMINATION CAUGHT IN WIRE BUNDLES CAN CAUSE DAMAGE TO THE BUNDLES. DAMAGED WIRE BUNDLES CAN CAUSE SPARKS OR OTHER ELECTRICAL DAMAGE.

NOTE:

1. Manual titles are referred to by acronyms. Refer to Paragraph 1.J., References, for definition of the acronyms.

2. Obey all of the warnings and cautions given in the specified manual sections.

3. Unless shown differently, these dimensions and tolerances are used:
   - Linear dimensions are in inches
   - Tolerance on linear dimensions, other than rivet and bolt edge margins, is plus or minus 0.03 inch.
   - Tolerance on rivet and bolt edge margin is plus or minus 0.05 inch
   - Angular tolerance is plus or minus 2 degrees
   - Hole dimensions for standard solid rivets are given in 747-400SF Structural Repair Manual, Chapter 51(747-400SF SRM 51).
   - Torque limits to tighten nuts and bolts are given in 747-400SF Structural Repair Manual, Chapter 51 (747-400SF SRM 51).

4. For approved fastener and process material substitutions, refer to 747-400SF Structural Repair Manual, Chapter 51 (747-400SF SRM 51).

5. Refer to the Boeing Standard Wiring Practices Manuals 20-10-11 and 20-10-12 for the wire installation procedures (SWPM 20-10-11and SWPM 20-10-12).

6. If the length of fasteners specified in this service bulletin do not meet the installation standards, fasteners of the same specification, or an approved substitute, one grip length longer or shorter may be used.

7. Refer to the BSWPM 20-20-00 (SWPM 20-20-00) the necessary grounding procedures. This is the same as BAC5117 which is used on the drawings.

B. WORK INSTRUCTIONS

Horizontal Stabilizer Tank Preparation

1. Defuel Horizontal Stabilizer Tank (HST) per 747-400 AMM 28-26-00. In addition, defuel Main Tanks 2 and 3 sufficiently to allow the Fill/Jettison Manifold to drain.

2. Sump HST per 747-400 AMM 12-11-10.

3. Open the following circuit breakers and attach DO-NOT-CLOSE tag on the P7 Overhead Circuit Breaker Panel:

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a. 7H25 REFUEL & XFR STAB L.

b. 7H26 REFUEL & XFR STAB R.

4. Manually open one of the horizontal stabilizer isolation valves at the rear spar of the center wing tank. Refer to 747-400 AMM 28-17-01.

   NOTE: This will let fuel from the fuel transfer line drain into main tanks 2 and 3.

5. On the flight deck push FUEL synoptic EICAS display switch.

6. On the lower EICAS display, record the fuel quantity for all displayed tanks.

7. After the fuel has drained from the fuel transfer line, manually close the horizontal stabilizer isolation valve that was opened.

8. Close the circuit breakers opened in step 3 above.

9. Purge the fuel tanks as specified in 747-400 AMM 28-11-00. Prepare the horizontal stabilizer for entry.

10. Clean and corrosion protect HST as necessary to prepare for deactivation in accordance with 747-400 AMM 28-11-00.

11. Close HST (do not put fuel into the HST).

12. Put the stabilizer in the neutral trim position (3 units of trim) as follows:

    a. Supply electrical power. Refer to the 747-400 AMM 24-22-00.

    WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF ALL CONTROL SURFACES BEFORE YOU SUPPLY HYDRAULIC POWER. AILERONS, RUDDERS, ELEVATORS, FLAPS, SPOILERS, LANDING GEAR, AND THRUST REVERSERS CAN MOVE QUICKLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

    b. Supply hydraulic power. Refer to the 747-400 AMM 29-11-00.

    c. Use the STAB TRIM ALTN switches to set the horizontal stabilizer to the neutral rig position (3 units of trim).

    d. Set the STAB TRIM 2 and 3 switches on the control stand to CUTOUT.

    e. On the P7 panel, open the L STAB TRIM S/O VLV circuit breaker (position E7) and the R STAB TRIM S/O VLV circuit breaker (position E20) and attach DO-NOT-CLOSE tabs.

    f. Set all FLT CONTROL HYD POWER TAIL switches on the P461 pilots overhead maintenance panel to SHUTOFF.

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g. On the P180 panel, open these circuit breakers and attach DO-NOT-CLOSE tags:

(1)	ELEV/RUD VLV SYS 2, position E7
(2)	ELEV/RUD VLV SYS 4, position E22
(3)	ELEV/RUD VLV SYS 1, position H8
(4)	ELEV/RUD VLV SYS 3, position H23

13. Install the gear door locks. Refer to the 747-400 AMM 32-00-30.

14. Remove hydraulic power. Refer to the747-400 AMM 29-11-00.

15. Remove electrical power. Refer to the 747-400 AMM 24-22-00.

Horizontal Stabilizer Tank Deactivation Procedure

1. The following circuit breakers are to be opened and remain open throughout the duration of this HST deactivation procedure.

Location		Name	Circuit Breaker
Panel	Position		
P-6	D05	FUEL QTY 1	C10123
P-6	D06	FUEL QTY 2	C10124
P180	M08	FUELING VALVE 2	C00086
P180	M09	FUELING LTS-HOT or FUELING PWR-HOT BATH	C01143
P180	C25	FUELING LIGHTS PANEL (if installed)	C10746
P180	C26	FUELING LTS RECP (if installed)	C10747
P414	F17	FUELING VALVE	C00090
P414	F22	LIGHT FUELING or FUELING POWER	C01142
P415	M14	FUEL OVERFILL CONT	C00062
P6	F06	FUEL SYS MGMT CH 1	C10129
P6	F08	FUEL SYS MGMT CH 2	C10130
E2-6	F9	LEFT EIU	C10174
E2-6	F10	CENTER EIU	C10175
E2-6	F15	RIGHT EIU	C10176

2. Remove and install plugs for REFUEL & XFR STAB L circuit breaker C10125 and REFUEL & XFR STAB R circuit breaker C10126. Refer to Figure 1.

3. Modify wire bundle W0007 on P7 Overhead Circuit Breaker Panel.

   a. Group 1: Figure 13

   b. Group 2: Figure 14

   c. Group 3: Figure 18

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d. Group 4: Figure 20

4. Modify wire bundles W4092 and W4094 on Overhead Circuit Breaker Panel P7.

   a. Group 1: Figure 13

   b. Group 2: Figure 14

   c. Group 3: Figure 18

   d. Group 4: Figure 20

5. Change AFT Horizontal Stabilizer Fuel Isolation Valves as follows:

   a. Locate two isolation valves on rear spar of H. Stab tank, L aft valve (V435), R aft valve (V436). Refer to Figure 5.

   b. Disconnect electrical connector from valve actuator. Rework wire bundle W4607 and W4618.

      (1) Group 1: Figure 13

      (2) Group 2: Figure 14

      (3) Group 3: Figure 18

      (4) Group 4: Figure 20

   c. Position manual override lever for affected valves, located on valve actuator, to closed position and LOCKWIRE. Refer to Figure 2 for location.

6. Change FWD Horizontal Stabilizer Fuel Isolation Valves as follows:

   a. Locate two isolation valves on rear spar of center tank, L fwd valve (V439), R fwd valve (V440). Refer to Figure 3 for location.

   b. Disconnect electrical connector from valve actuator. Rework wire bundle W4611 and W4641.

      (1) Group 1: Figure 13

      (2) Group 2: Figure 14

      (3) Group 3: Figure 18

      (4) Group 4: Figure 20

   c. Position manual override lever for affected valves, located on valve actuator, to closed position and LOCKWIRE. Refer to Figure 3 for location.

7. Modify wire bundle W0144 on Pressure Fueling Control Panel P42.

   a. Group 1: Figure 13

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b. Group 2: Figure 14

c. Group 3: Figure 18

d. Group 4: Figure 20

Coil and stow wiring for indicator, switches, and lights.

8. Install the "H.STAB TANK DEACTIVATED" placard (marker) above H.STAB indicator, Part Number BAC27EFS595 as given in 747-400 AMM 20-11-06-404-012 ALUMINUM FOIL MARKER INSTALLATION. Refer to Figure 4.

9. Remove relay R7391 and rework wire bundle W0076 on Center Equipment Panel P54.

a. Group 1: Figure 13

b. Group 2: Figure 14

c. Group 3: Figure 18

d. Group 4: Figure 20

10. Modify wire bundle W4606 on the Horizontal Stabilizer Refuel Valve Control Unit. Refer to Figure 2 for component location.

a. Group 1: Figure 13

b. Group 2: Figure 14

c. Group 3: Figure 18

d. Group 4: Figure 20

11. Remove "HOR STAB XFER/JETT PUMP L" circuit breaker C03141 and "HOR STAB XFER/ JETT R" circuit breaker C03142. Remove HOR STAB XFER/JETT PUMP LEFT and RIGHT placard as shown in Figure 5.

12. Modify wire bundle W2018 on AFT MISC Circuit Breaker Panel P85.

a. Group 1: Figure 13

b. Group 2: Figure 14

c. Group 3: Figure 18

d. Group 4: Figure 20

13. Modify wire bundles W4601 and W4602 on Left AFT Equipment Center E8. Cap and stow pump wiring and plugs S1884 and S1885 as indicated

a. Group 1: Figure 13

b. Group 2: Figure 14

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c. Group 3: Figure 18

d. Group 4: Figure 20

14. Remove fuel transfer line and install plugs as shown in:

    a. Group 1: Figure 12

    b. Group 2: Figure 15

    c. Group 3: Figure 19

    d. Group 4: Figure 22

15. Change Horizontal Stabilizer Motor Impeller Assemblies as shown in Figure 6 and as follows:

    a. Remove two motor impeller assemblies located on the front spar of HST. Refer to 747-400 AMM 28-17-04.

    b. Install two plugs and two associated pins and do the following:

        (1) Install new packing MS29513-007, lubricated with petrolatum, into groove on pin, part number 835U0002-1.

        (2) Put end of pin with packing into housing on top of unit.

        (3) Install new packing M25988-1-238, lubricated with petrolatum into groove on plug, part number 835U0001-1.

        (4) Carefully push the plug into housing. Make sure that smallest hole is in line with pin on housing.

        (5) Put the bonding clip(s) with the bonding jumper(s) attached into position on the plug.

        CAUTION: ENSURE SOCKET HEAD MOUNTING SCREWS ARE P/N MS24674-9 OR EQUIVALENT ALTERNATIVE (THREAD LENGTH 15MM). QUANTITY (1) WASHER P/N NAS1149DN832J MUST BE USED AT EACH SCREW LOCATION.

        (6) Install socket head screws and washers at five locations to fasten the bonding clips and plug, part number 835U0001-1, to the pump housing.

        (7) Install nut, part number BACN10JC06C, and washer, part number NAS620C6 to the threaded end on pin to secure pin in housing.

16. Modify the Remote Electronic Unit (REU) at M7861 in Equipment Center E8 as shown in Figure 7 and as follows:

    a. Remove the "H.STAB INDIVIDUAL FUEL QUANTITY CHANNEL (IFQC) CARD", part number 60B92018-207 in accordance with 747-400 AMM 28-41-17.

    b. Install the cover plate on the REU, M7861 and tighten the four captive screws.

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c. Placard REU "INOP".

d. Modify wire bundle W3851 on AFT Left Equipment Center E8.

(1) Group 1: Figure 13

(2) Group 2: Figure 14

(3) Group 3: Figure 18

(4) Group 4: Figure 20

17. Modify wire bundle W3890 and "reprogram FQIS card file for Horizontal Stabilizer absent", as referenced in Figure 12.

a. Group 1: Figure 13

b. Group 2: Figure 14

c. Group 3: Figure 18

d. Group 4: Figure 20

NOTE: Reprogram FQIS card file for Horizontal Stabilizer absent

18. Change Fuel System Card File as follows:

a. Remove horizontal stabilizer Single Point Sensor Control Card (SPSC) A3, in accordance with 747-400 AMM 28-17-10 and Figure 8.

b. Install cover assembly, part number 285U0096-6, at SPSC installation location. Refer to Figure 8.

c. Modify wire bundle W4764 by inserting jumper wire in Fuel System Card File.

(1) Group 1: Figure 13

(2) Group 2: Figure 14

(3) Group 3: Figure 18

(4) Group 4: Figure 20

d. Modify wire bundle W4974 on shelf 6 of Main Right Equipment Center E2-6.

(1) Group 1: Figure 13

(2) Group 2: Figure 14

(3) Group 3: Figure 18

(4) Group 4: Figure 20

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19. Change P5 Fuel Management Control Panel as follows:

    a. Remove the Fuel Management Control module (M00154) from the P5.

        (1) Group 1: Figure 9

        (2) Group 2: Figure 10

        (3) Group 3: Figure 16

        (4) Group 4: Figure 23

    b. Modify wire bundles W4751 and W4753 on Pilots Overhead Panel P5.

        (1) Group 1: Figure 13

        (2) Group 2: Figure 14

        (3) Group 3: Figure 18

        (4) Group 4: Figure 20

20. Deactivate tail tank at WIU for the left, center, and right Electronic Instrument Units (EIU) E2-6 WIU modifications referred in Figure 11 and wire changes.

    a. Group 1:

        (1) Modify wire bundle W4970, W4980, W4990 on shelf 6 of the Main Right Equipment Center E2-6 for the left, center, and right EIUs as shown in Figure 13

    b. Group 2:

        (1) Modify wire bundle W4970, W4980, W4990 on shelf 6 of the Main Right Equipment Center E2-6 for the left, center, and right EIUs as shown in Figure 14.

21. Deactivate tail tank at WIU for the left, center, and right Electronic Instrument Units (EIU) E2-6 WIU modifications referred in Figure 17 and wire changes.

    Group 3:

    a. Modify wire bundle W4970, W4980, W4990 on shelf 6 of the Main Right Equipment Center E2-6 for the left, center, and right EIUs as shown in Figure 18.

22. Deactivate tail tank at WIU for the left, center, and right Electronic Instrument Units (EIU) E2-6 WIU modifications referred in Figure 21 and wire changes.

    Group 4:

    a. Modify wire bundle W4970, W4980, W4990 on shelf 6 of the Main Right Equipment Center E2-6 for the left, center, and right EIUs as shown in Figure 20.

23. Close all circuit breakers that were opened in step 1 above.

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WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF ALL CONTROL SURFACES BEFORE YOU SUPPLY HYDRAULIC POWER. ALERONS, RUDDERS, ELEVATORS, FLAPS, SPOILERS, LANDING GEAR, AND THRUST REVERSERS CAN MOVE QUICKLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE EQUIPMENT.

24. Supply electrical power to airplane. Refer to the 747-400 AMM 24-22-00.

Horizontal Stabilizer Tank Functional Check

1. Group 1-3: Do the following steps to check the IDS program pin configuration:

   NOTE: Only check the NON-X values shown in steps c, e, and g below. The "X" values in the program pin codes shown below are not pertinent to this change and may be any value.

   a. Display the configuration maintenance page on the CMC display unit.

   b. Put the Captain's and First Officer's source select switches in the L position.

   c. Make sure that the following is displayed:

   ```
   IDS PROGRAM PINS:
   1/XXXX X0XX/32
   33/XXXX XX/56 1/P
   ```

   d. Put the Captain's and First Officer's source select switches in the C position.

   e. Make sure that the following is displayed:

   ```
   IDS PROGRAM PINS:
   1/XXXX X0XX/32
   33/XXXX XX/56 1/P
   ```

   f. Put the Captain's and First Officer's source select switches in the R position.

   g. Make sure that the following is displayed:

   ```
   IDS PROGRAM PIN:
   1/XXXX X0XX/32
   33/XXXX XX/56 1/P
   ```

2. Do an electrical test of the P42 panel as follows. The airplane must be in the ground mode for this test:

   a. Open these circuit breakers on the P6 panel:

CB NO.	LOC	Nomenclature
C10123	D05	FUEL QTY 1
C10124	D06	FUEL QTY 2

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b. Open these circuit breakers on the P414 panel:

CB NO.	LOC	Nomenclature
C00090	F17	FUELING VALVE
C01142	F22	FUELING PWR
C10131	M33	HOR STAB SUMP DRAIN VLV

c. Open these circuit breakers on the P180-1 panel:

CB NO.	LOC	Nomenclature
C00086	M08	FUELING VALVE 2
C01143	M09	FUELING LTS - HOT

d. Open the P42 fueling panel door.

e. On the P42 panel, put the battery switch in the NORM position.

f. On the P414 panel, position F22, close the circuit breaker C01142, FUELING PWR.

g. On the P42 panel, push and hold the GAUGES TEST switch. See that all the fuel quantity indicator displays read 888.8. The horizontal stabilizer indicator will remain blank.

h. Release the GAUGES TEST switch.

i. Set the SELECT QTY value to 222.2.

j. Press the PRESELECT SET QTY switch to the TOTAL position and hold for more than 2 seconds.

k. Release the PRESELECT SET QTY switch.

l. See that the quantity 222.2 can be seen in the bottom display of the TOTAL FUEL indicator.

m. On the flight deck, push the FUEL synoptic EICAS display switch.

n. On the lower EICAS display, see that the fuel quantities are within +/- 200 lbs (+/- 100 kgs) of the quantities recorded in Step 6 of the Horizontal Stabilizer Tank Preparation Procedure.

NOTE: Horizontal Stabilizer tank fuel quantity will not be displayed.

o. On the P414 panel, position F22, open the circuit breaker C01142, FUELING PWR.

p. On the P42 panel, see that the refuel indicator displays go blank.

q. On the P42 panel, put the battery switch in the BATT position.

r. On the P180-1 panel, position M09, close the circuit breaker C01143, FUELING PWR-HOT BAT.

s. On the P42 panel, see that the refuel indicator quantities are within +/- 200 lbs (+/- 100 kgs) of the quantities recorded in Step 6 of the Horizontal Stabilizer Tank Preparation Procedure.

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NOTE: Horizontal Stabilizer tank fuel quantity will not be displayed.

t. On the P180-1 panel, position M09, open the circuit breaker C01143, FUELING PWR-HOT BAT.

u. On the P42 panel, see that the refuel indicator displays go blank.

v. On the P42 panel, put the battery switch in the NORM position.

3. Do an electrical test of the FQIS display, center tank fuel control card, and secondary valves and horizontal stabilizer sump drain valves as follows:

a. On the rear spar of the center tank, disconnect connector DV437 from the left secondary refuel valve.

b. On the P42 panel, put the CENTER tank valve position control switch in the OPEN position.

c. On the P414 panel, position F22, close the circuit breaker C01142, FUELING PWR.

d. On the rear spar of the center tank, make sure there is 23-30 VDC on DV437, between pins A and B.

e. On the P42 panel, push and hold the C. TANK SEC. VAL. switch to the CLOSED position. See that the L and R valve position lights come on.

f. On the rear spar of the center tank, make sure there is 0-3 VDC on DV437, between pins A and B.

g. On the rear spar of the center tank, disconnect the left secondary refuel valve pressure switch connector DS1877. On the P42 panel, see that the secondary refuel valve L valve position lights goes off.

h. On the P42 panel, release the C. TANK SEC. VAL. switch.

i. On the P42 panel, put the CENTER tank valve position control switch in the CLOSED position.

j. On the P42 panel, put the ALL VALVES switch in the OPEN position.

k. On the rear spar of the center tank, make sure there is 23-30 VDC on DV437, between pins A and B.

l. On the P42 panel, put the ALL VALVES switch in the CLOSED position.

m. On the rear spar of the center tank, make sure there is 0-3 VDC on DV437, between pins A and B.

n. On the P414 panel, position F22, open the circuit breaker C01142, FUELING PWR.

o. On the rear spar of the center tank, connect connectors DV437 and DS1877.

p. On the rear spar of the center tank, disconnect connector DV438 from the right secondary refuel valve.

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q. On the P42 panel, put the CENTER tank valve position control switch in the OPEN position.

r. On the P414 panel, position F22, close the circuit breaker C01142, FUELING PWR.

s. On the rear spar of the center tank, make sure there is 23-30 VDC on DV438, between pins A and B.

t. On the P42 panel, push and hold the C. TANK SEC. VAL. switch to the CLOSED position. See that the L and R valve position lights come on.

u. On the rear spar of the center tank, make sure there is 0-3 VDC on DV436, between pins A and B.

v. On the rear spar of the center tank, disconnect the right secondary refuel valve pressure switch connector DS1876. On the P42 panel, see that the secondary refuel valve R valve position lights goes off.

w. On the P42 panel, release the C. TANK SEC. VAL. switch.

x. On the P42 panel, put the CENTER tank valve position control switch in the CLOSED position.

y. On the P42 panel, put the ALL VALVES switch in the OPEN position.

z. On the rear spar of the center tank, make sure there is 23-30 VDC on DV438, between pins A and B.

aa. On the P42 panel, put the ALL VALVES switch in the CLOSED position.

ab. On the rear spar of the center tank, make sure there is 0-3 VDC on DV438, between pins A and B.

ac. On the P414 panel, position F22, open the circuit breaker C01142, FUELING PWR.

ad. On the rear spar of the center tank, connect connectors DV438 and DS1876.

ae. On the P414 panel, close the circuit breakers C090, FUELING VALVE, position F17 and C10131, H/S SUMP DRAIN VALVE, position M33.

af. On the P211 panel, push the L VALVE (L3666) and R VALVE (L3667) valve power lights. See that the lights come on when they are pushed.

ag. On the P211 panel, push the SUMP DRAIN MAINT switch to the open position. On the horizontal stabilizer, hear that each solenoid valve operates. On the P211 panel, see that the L VALVE and R VALVE valve power lights come on.

ah. On the P211 panel, push the SUMP DRAIN MAINT switch to CLOSED position.

ai. On the P211 panel, push the SUMP DRAIN CONT switch to the L OPEN position. On the horizontal stabilizer, hear that the left solenoid valve operates. On the P211 panel, see that L VALVE valve power light comes on. Put the switch back to the normal position.

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aj. On the P211 panel, push the SUMP DRAIN CONT switch to the R OPEN position. On the horizontal stabilizer, hear that the right solenoid valve operates. On the P211 panel, see that the R VALVE valve power light comes on. Put the switch back to the normal position.

4. Do an electrical test of the fuel system management cards as follows:

a. On the CMC MCDU, go to the INPUT MONITORING screen.

b. On the P6 panel, close the circuit breaker C10128, FUEL SYS MGMT CARD A, position F5, and open the circuit breaker C10127, FUEL SYS MGMT CARD B, position F7.

c. On the P414 panel, position F22, open the circuit breaker C01142, FUELING PWR.

d. On the P6 panel, close the circuit breaker C10129, FUEL SYS MGMT CH 1, position F6, and open the circuit breaker C10130, FUEL SYS MGMT CH 2, position F8.

e. In the fuel system card file (M7852), on the A2 card, see that the CH 1 green LED is on and the CH 2 green LED is not on.

f. On the CMC MCDU, put this data in for input monitoring: port "E69," label "270" and sdi "00."

g. In the fuel system card file (M7852), on the A2 card, push and hold the BIT switch to the CH 1 position. See that the CH 1 green LED goes off. On the CMC MCDU see that bit 27 goes from "1" to "0" (main tank number 2 single point sensor). This can take up to 1 minute to happen.

h. In the fuel system card file (M7853), on the A2 card, release the BIT switch.

i. On the P6 panel, open the circuit breaker C10128, FUEL SYS MGMT CARD A, position F5, open the circuit breaker C10130, FUEL SYS MGMT CH 2, position F8, open the circuit breaker C10129, FUEL SYS MGMT CH 1, position F6, and open the circuit breaker C10127, FUEL SYS MGMT CARD B, position F7.

j. On the P180 panel, close the circuit breaker C10136, FUEL SYS EICAS INTFC CONT, position H17.

k. On the CMC MCDU, put this data in for input monitoring: port "E 10", label "274" and sdi "00." See that this data can be seen. This can take up to 1 minute to happen.

(1) Group 1-3:

Position	29	28	27	26	25	24	23	22	21	20
Status	0	1	1	1	1	1	1	0	0	0
Position	19	18	17	16	15	14	13	12	11	
Status	0	1	1	1	1	1	0	0	1	

(2) Group 4:

Position	29	28	27	26	25	24	23	22	21	20

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Status	0	1	1	1	1	1	1	0	0	0
Position	19	18	17	16	15	14	13	12	11	
Status	0	0	1	1	1	1	0	0	1	

l. On the CMC MCDU, put this data in for input monitoring: "E 10", label "270" and sdi "00."

m. On the P5 panel, push the MAIN 1 AFT fuel pump switch to ON. See that bit 11 goes from "0" to "1." This can take up to 1 minute.

n. On the P5 panel, push the MAIN 1 FWD fuel pump switch to ON. See that bit 12 goes from "0" to "1." This can take up to 1 minute to happen.

o. On the P5 panel, push the MAIN 2 AFT fuel pump switch to ON. See that bit 13 goes from "0" to "1". This can take up to 1 minute to happen.

p. On the P5 panel, push the MAIN 2 FWD fuel pump switch to ON. See that bit 14 goes from "0" to "1." This can take up to 1 minute.

q. On the P5 panel, push the MAIN 3 AFT fuel pump switch to ON. See that bit 15 goes from "0" to "1." This can take up to 1 minute.

r. On the P5 panel, push the MAIN 3 FWD fuel pump switch to ON. See that bit 16 goes from "0" to "1." This can take up to 1 minute.

s. On the P5 panel, push the MAIN 4 AFT fuel pump switch to ON. See that bit 17 goes from "0" to "1." This can take up to 1 minute.

t. On the P5 panel, push the MAIN 4 FWD fuel pump switch to ON. See that bit 18 goes from "0" to "1." This can take up to 1 minute.

u. On the P5 panel, push the CTR L fuel pump switch to ON. See that bit 19 goes from "0" to "1." This can take up to 1 minute.

v. On the P5 panel, push the CTR R fuel pump switch to ON. See that bit 20 goes from "0" to "1." This can take up to 1 minute.

w. On the P5 panel, push the OVRD 2 MAIN AFT fuel pump switch to ON. See that bit 23 goes from "0" to "1." This can take up to 1 minute.

x. On the P5 panel, push the OVRD 2 MAIN FWD fuel pump switch to ON. See that bit 24 goes from "0" to "1." This can take up to 1 minute.

y. On the P5 panel, push the OVRD 3 MAIN AFT fuel pump switch to ON. See that bit 25 goes from "0" to "1." This can take up to 1 minute.

z. On the P5 panel, push the OVRD 3 MAIN FWD fuel pump switch to ON. See that bit 26 goes from "0" to "1." This can take up to 1 minute.

aa. On the P5 panel, push the number 1 tank FUEL X FEED switch to on (flow bar can be seen). See that bit 27 goes from "0" to "1." This can take up to 1 minute to happen.

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ab. On the P5 panel, push the number 2 tank FUEL X FEED switch to on (flow bar can be seen). See that bit 28 goes from "0" to "1." This can take up to 1 minute to happen.

ac. On the P5 panel, push the number 3 tank FUEL X FEED switch to on (flow bar can be seen). See that bit 29 goes from "0" to "1." This can take up to 1 minute to happen.

ad. On the CMC MCDU, put this data in for input monitoring: port "E 10", label "270" and sdi "10."

ae. On the P5 panel, push the number 4 tank FUEL X FEED switch to on (flow ban can be seen). See that bit 11 goes from "0" to "1." This can take up to 1 minute.

af. On the P5 panel, push all the switches on the M154 module to off.

ag. On the P6 panel, close the circuit breakers C10128, FUEL SYS MGMT CARD A, position F5, C10127, FUEL SYS MGMT CARD B, position F7, C10129, FUEL SYS MGMT CH 1, position F6, and C10130, FUEL SYS MGMT CH 2, position F8.

5. Do the Fuel Quantity Indication System Ground test as specified in the 747-400 AMM 28-41-00.

   NOTE: Horizontal Stabilizer is now deactivated and NOT to be fueled.

6. Do the Wing Surge Tank Float Switch Operational Test as specified in the 747-400 AMM 28-21-12.

7. Restore hydraulic power. Refer to the 747-400 AMM 29-11-00.

8. Remove the gear door locks. Refer to the 747-400 AMM 32-00-30.

9. Put the airplane back into serviceable condition.

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FIGURE 1: OVERHEAD CIRCUIT BREAKER PANEL P7-2 CHANGE

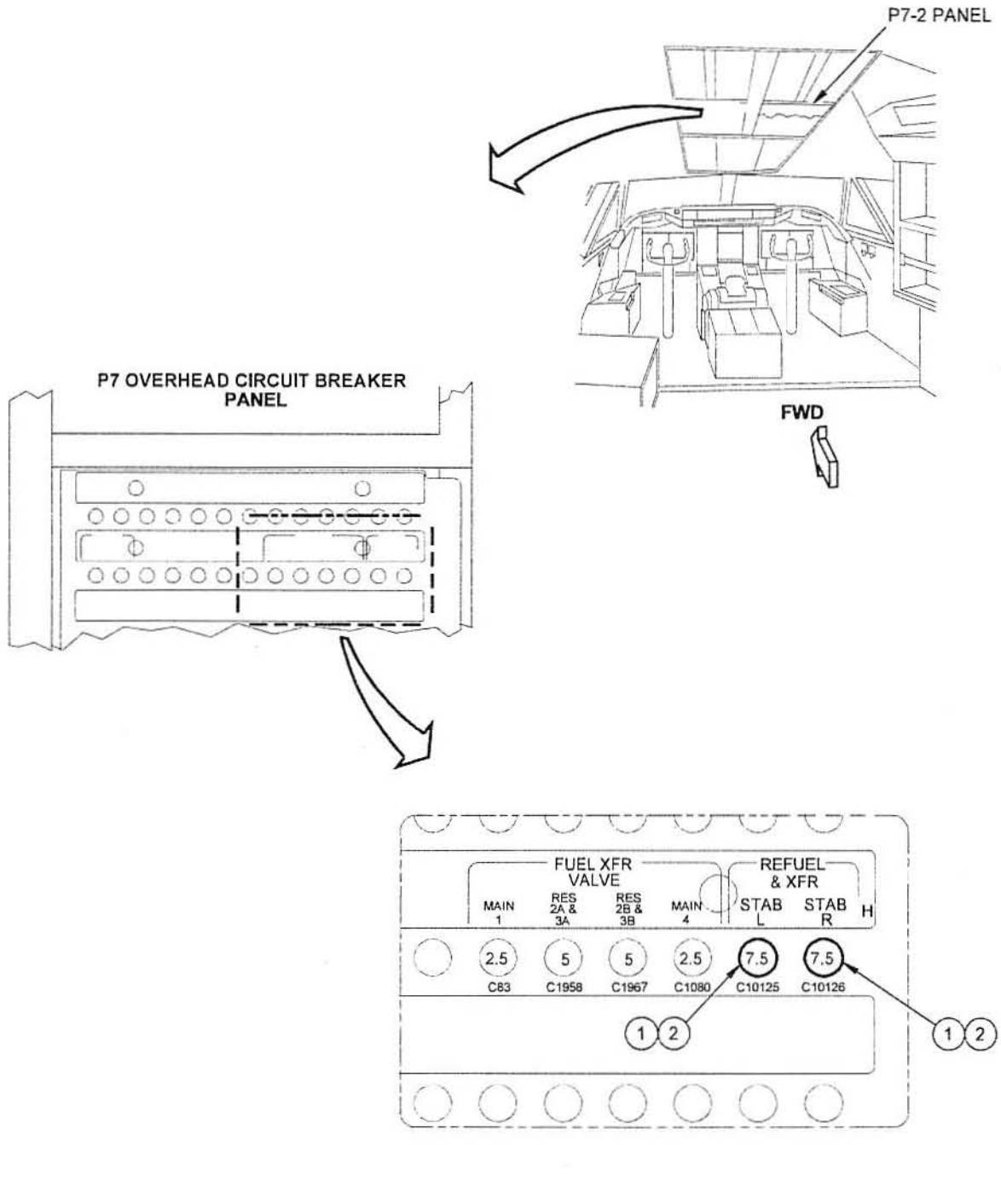


FIGURE 1: OVERHEAD CIRCUIT BREAKER PANEL P7-2 CHANGE
(SHEET 1 OF 2)

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The step numbers shown below agree with the numbers The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

STEP	TASK	NAME	PART NUMBER	QTY	NOTES
1	Remove	Circuit Breaker	BACC18AD7	2	-
2	Install	Plug Button	2645	2	-

FIGURE 1: OVERHEAD CIRCUIT BREAKER PANEL P7-2 CHANGE
(SHEET 2 OF 2)

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FIGURE 2: HORIZONTAL STABILIZER TANK AFT FUEL TRANSFER SYSTEM LOCATION

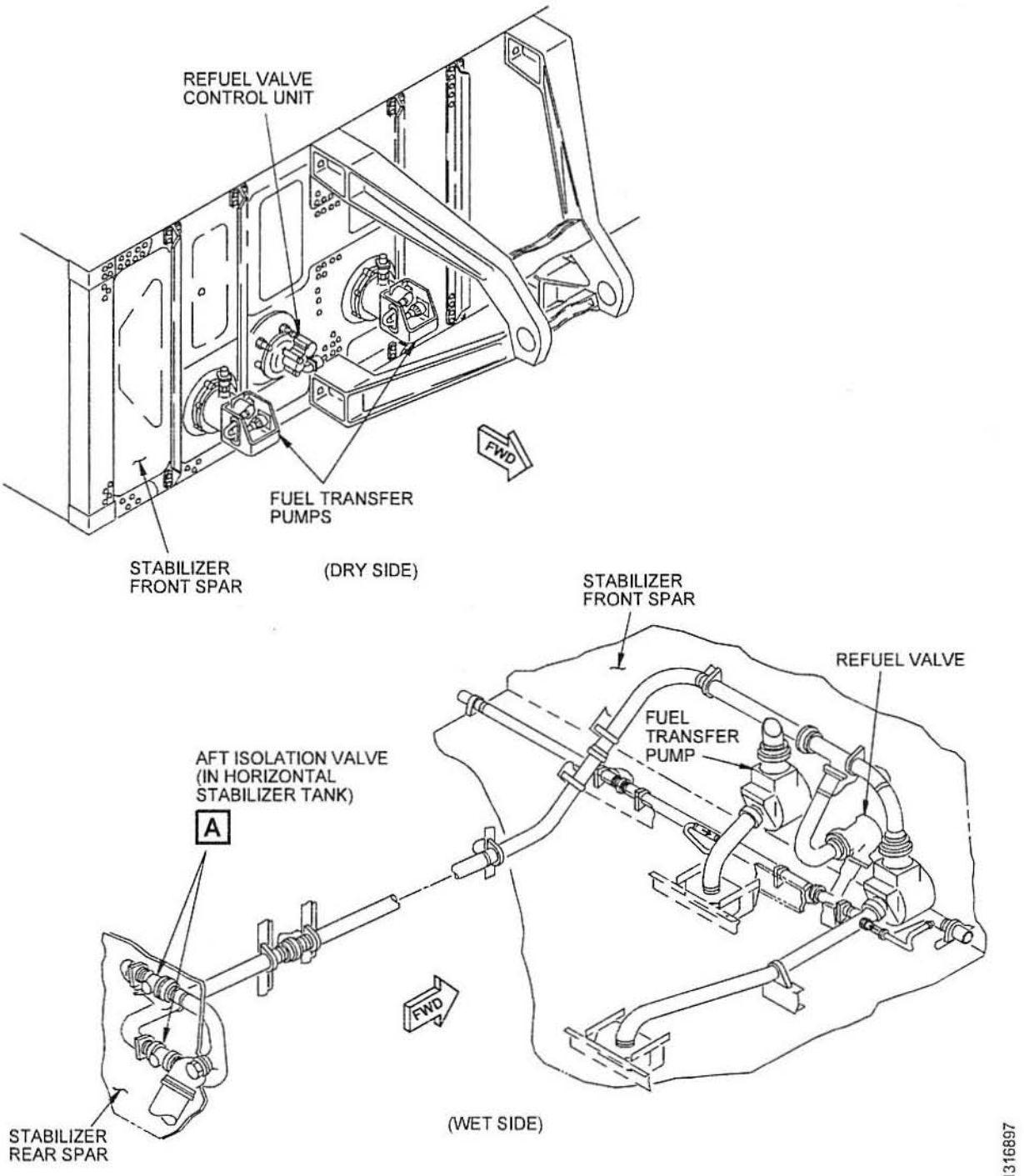


FIGURE 2: HORIZONTAL STABILIZER TANK AFT FUEL TRANSFER SYSTEM LOCATION
(SHEET 1 OF 2)

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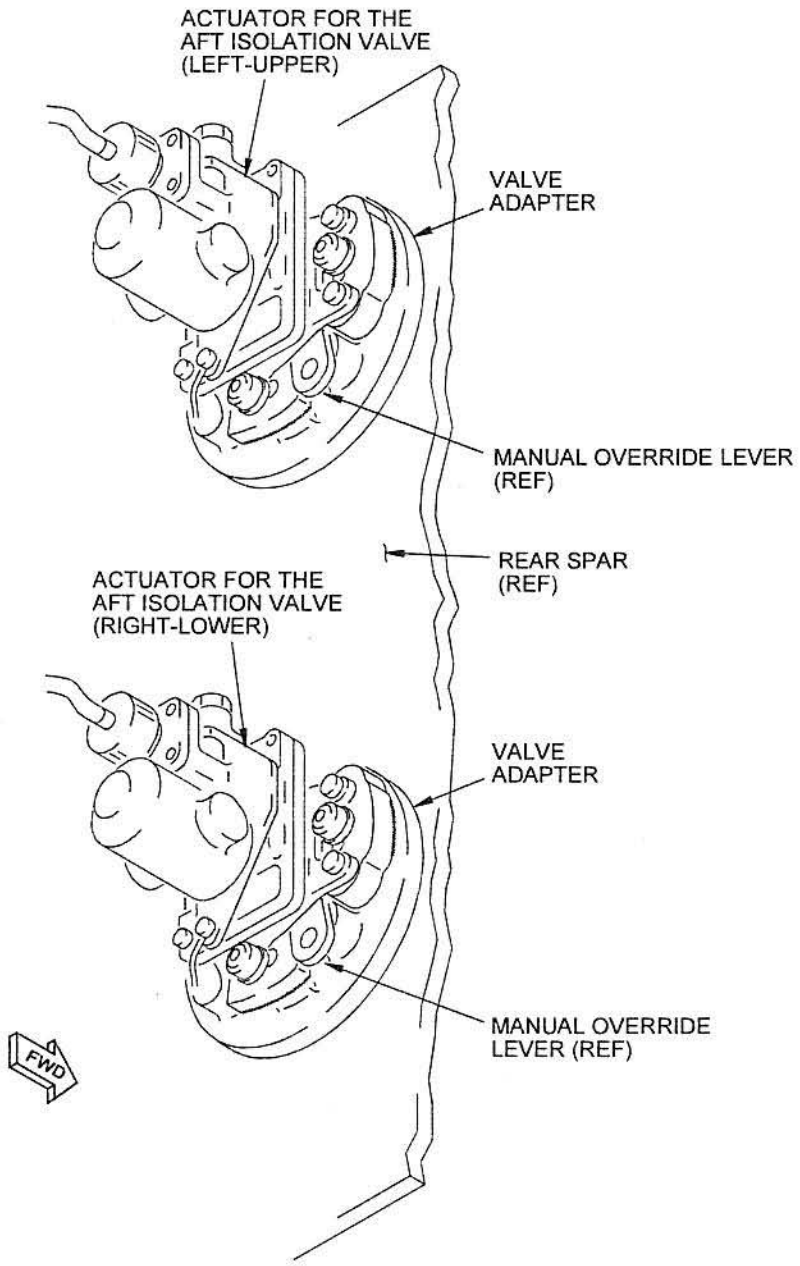


FIGURE 2: HORIZONTAL STABILIZER TANK AFT FUEL TRANSFER SYSTEM LOCATION (SHEET 2 OF 2)

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FIGURE 3: HORIZONTAL STABILIZER TANK FWD FUEL TRANSFER SYSTEM LOCATION

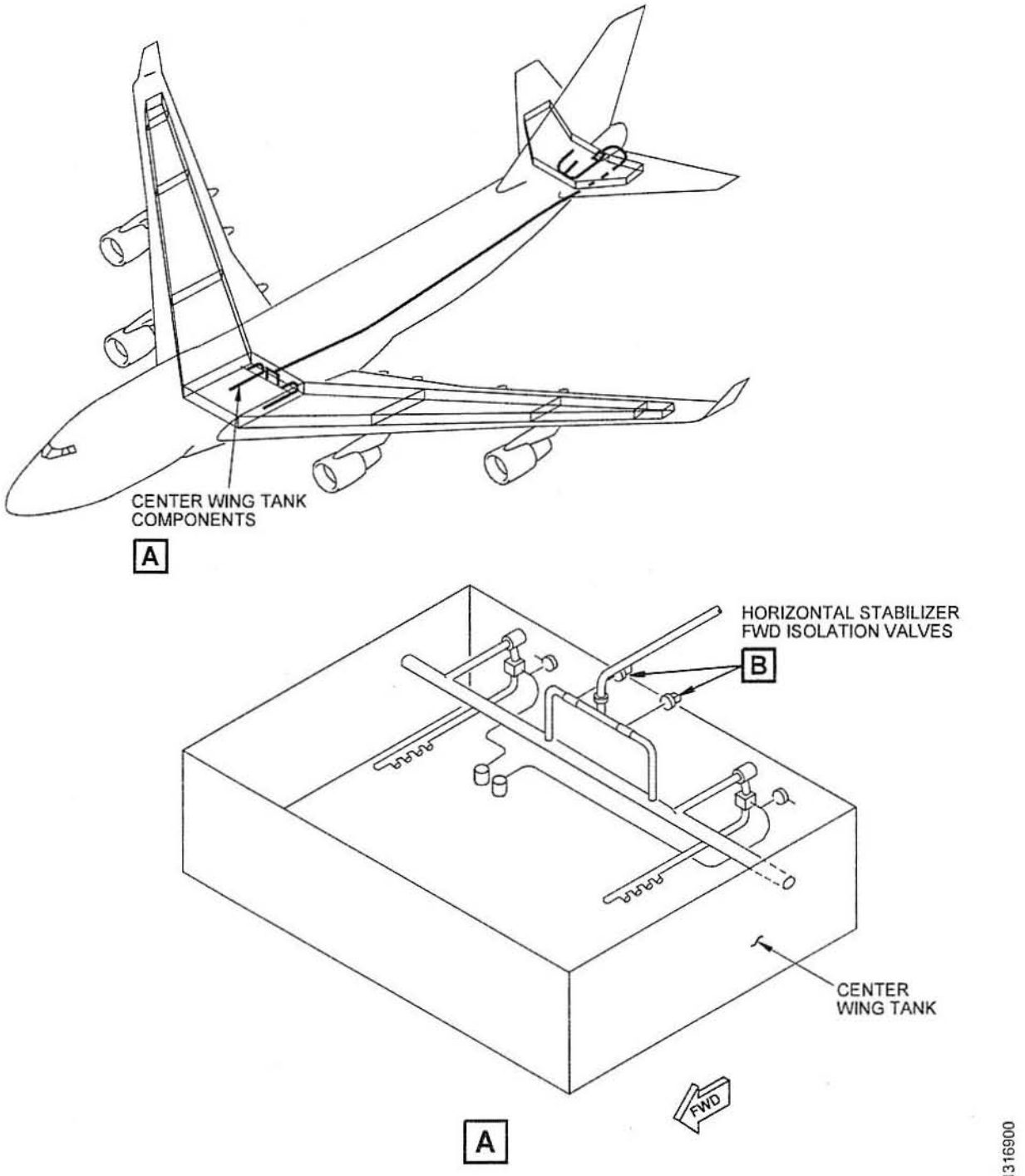
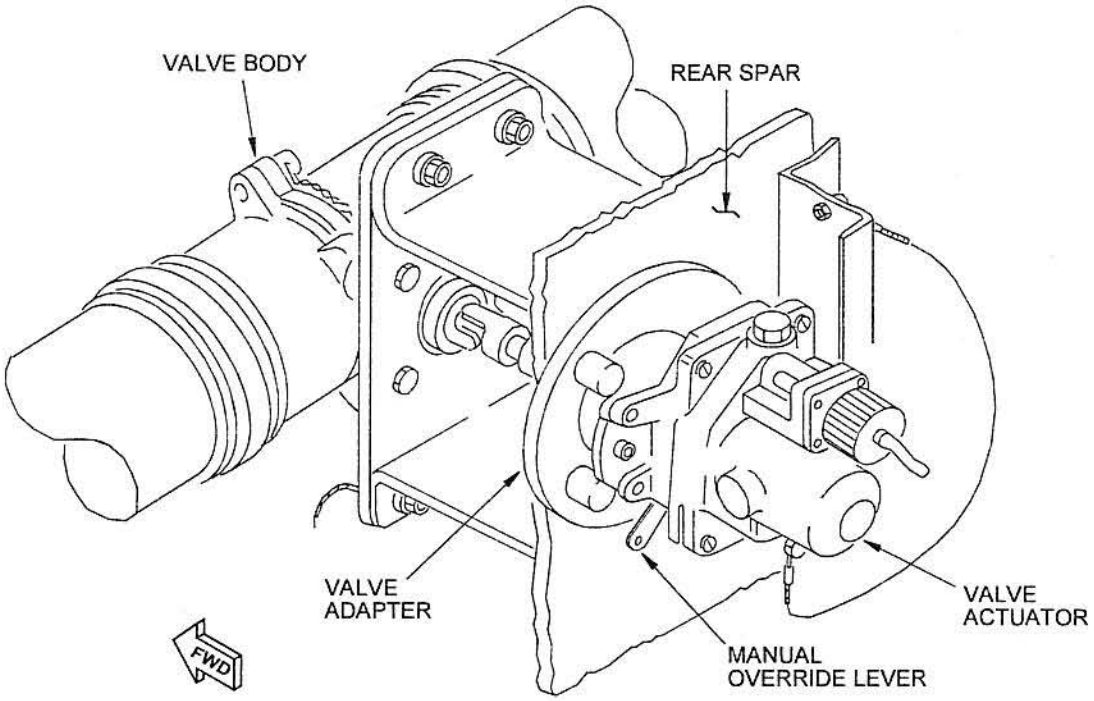


FIGURE 3: HORIZONTAL STABILIZER TANK FWD FUEL TRANSFER SYSTEM LOCATION
(SHEET 1 OF 2)

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HORIZONTAL STABILIZER ISOLATION VALVE

B

1316901

FIGURE 3: HORIZONTAL STABILIZER TANK FWD FUEL TRANSFER SYSTEM LOCATION
(SHEET 2 OF 2)

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FIGURE 4: LEFT WING REFUELING PANEL P42 MODIFICATION

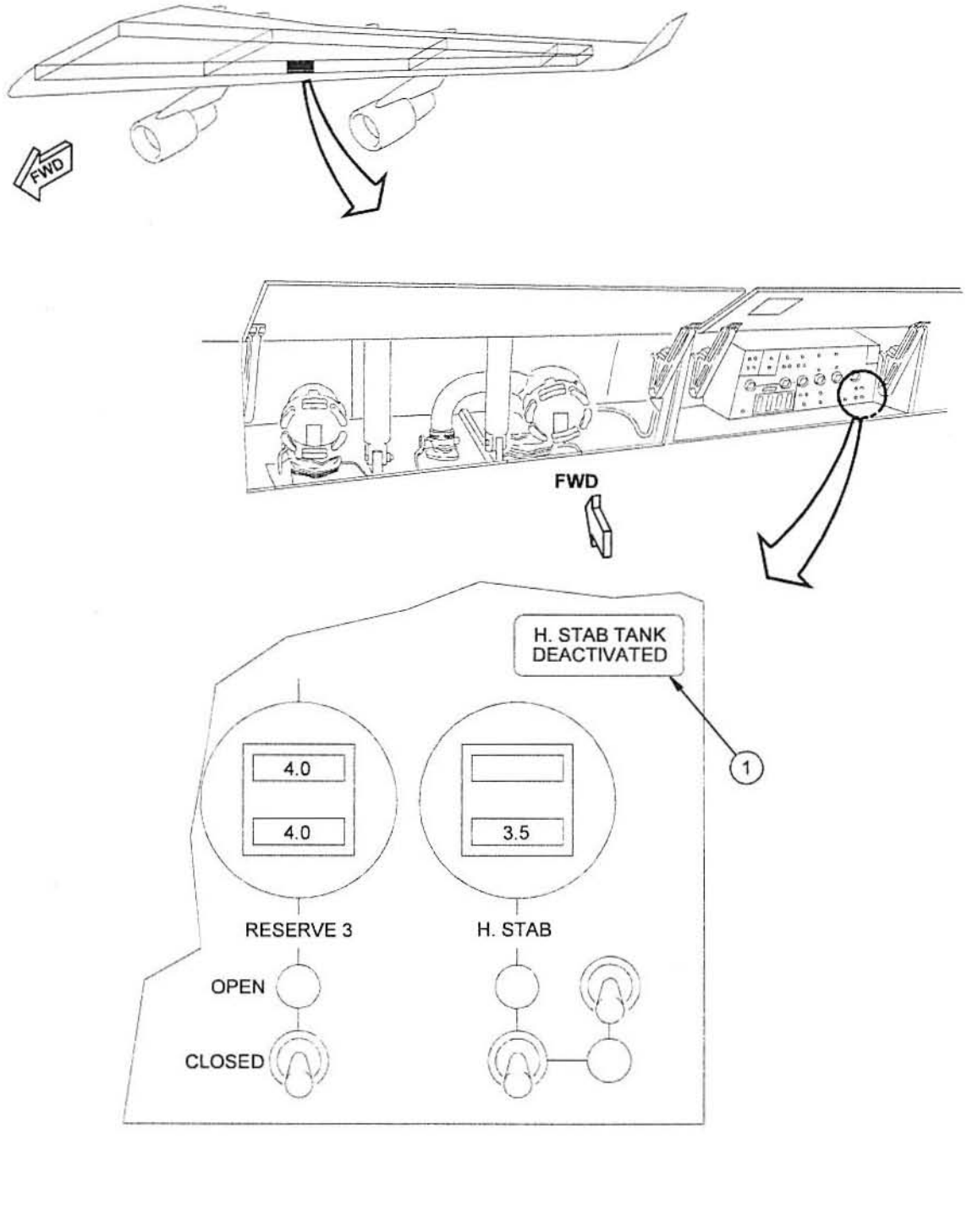


FIGURE 4: LEFT WING REFUELING PANEL P42 MODIFICATION
(SHEET 1 OF 2)

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The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

STEP	TASK	NAME	PART NUMBER	QTY	NOTES
1	Install	Marker	BAC27EFS595	1	Refer to 747-400 AMM 20-11-06.

FIGURE 4: LEFT WING REFUELING PANEL P42 MODIFICATION
(SHEET 2 OF 2)

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FIGURE 5: H.STAB FUEL PUMP LOW PRESSURE SWITCHES AND P85 PANEL CHANGE

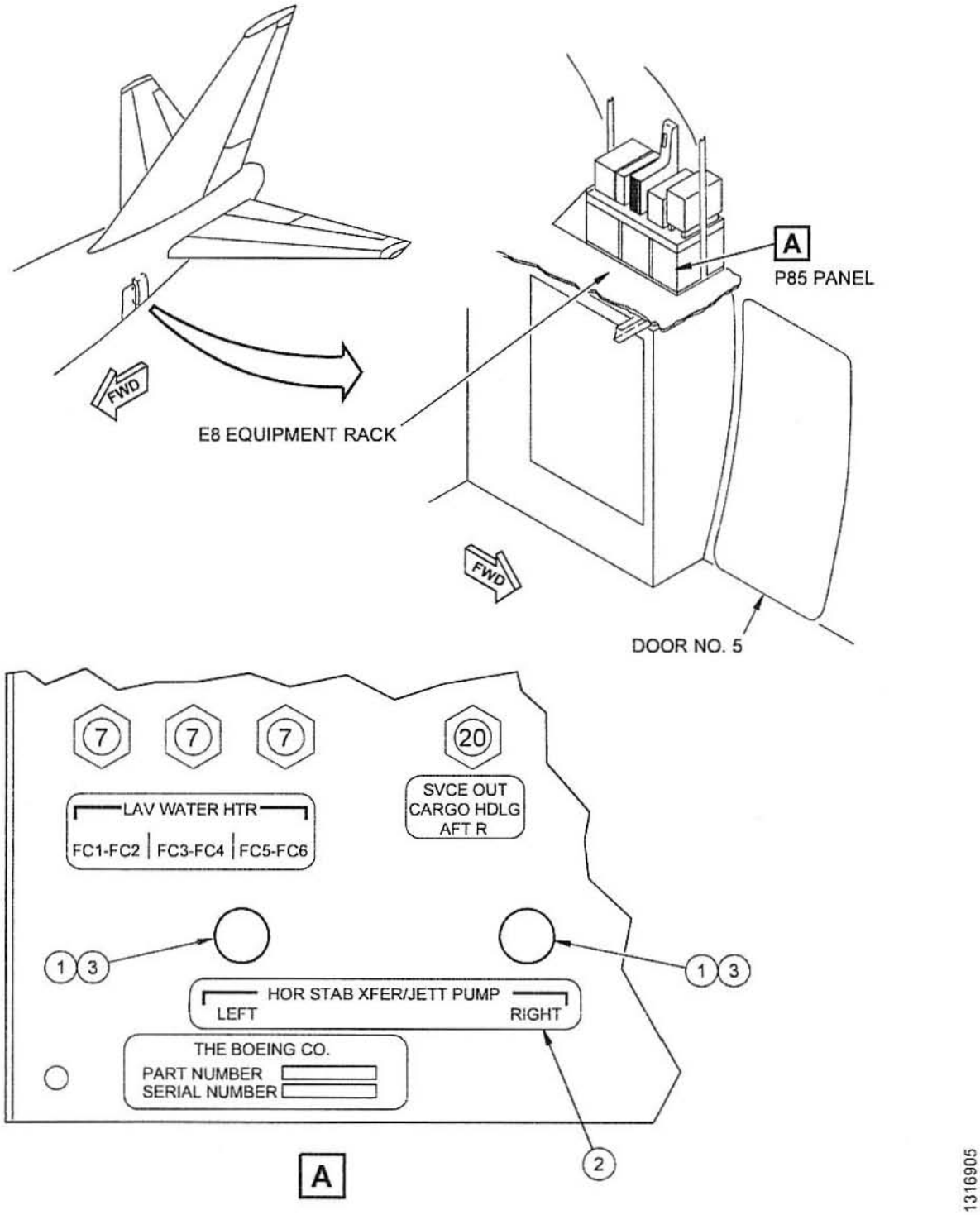


FIGURE 5: H.STAB FUEL PUMP LOW PRESSURE SWITCHES AND P85 PANEL CHANGE
(SHEET 1 OF 2)

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The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

STEP	TASK	NAME	PART NUMBER	QTY	NOTES
1	Remove	Circuit Breakers	BACC18AE25	2	-
2	Remove	Marker	BAC27EEL23764	1	Refer to 747-400 AMM 20-11-06.
3	Install	Plug Button	2645	2	

FIGURE 5: H.STAB FUEL PUMP LOW PRESSURE SWITCHES AND P85 PANEL CHANGE
(SHEET 2 OF 2)

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FIGURE 6: HORIZONTAL STABILIZER TRANSFER PUMP MOTOR IMPELLER ASSY CHANGE

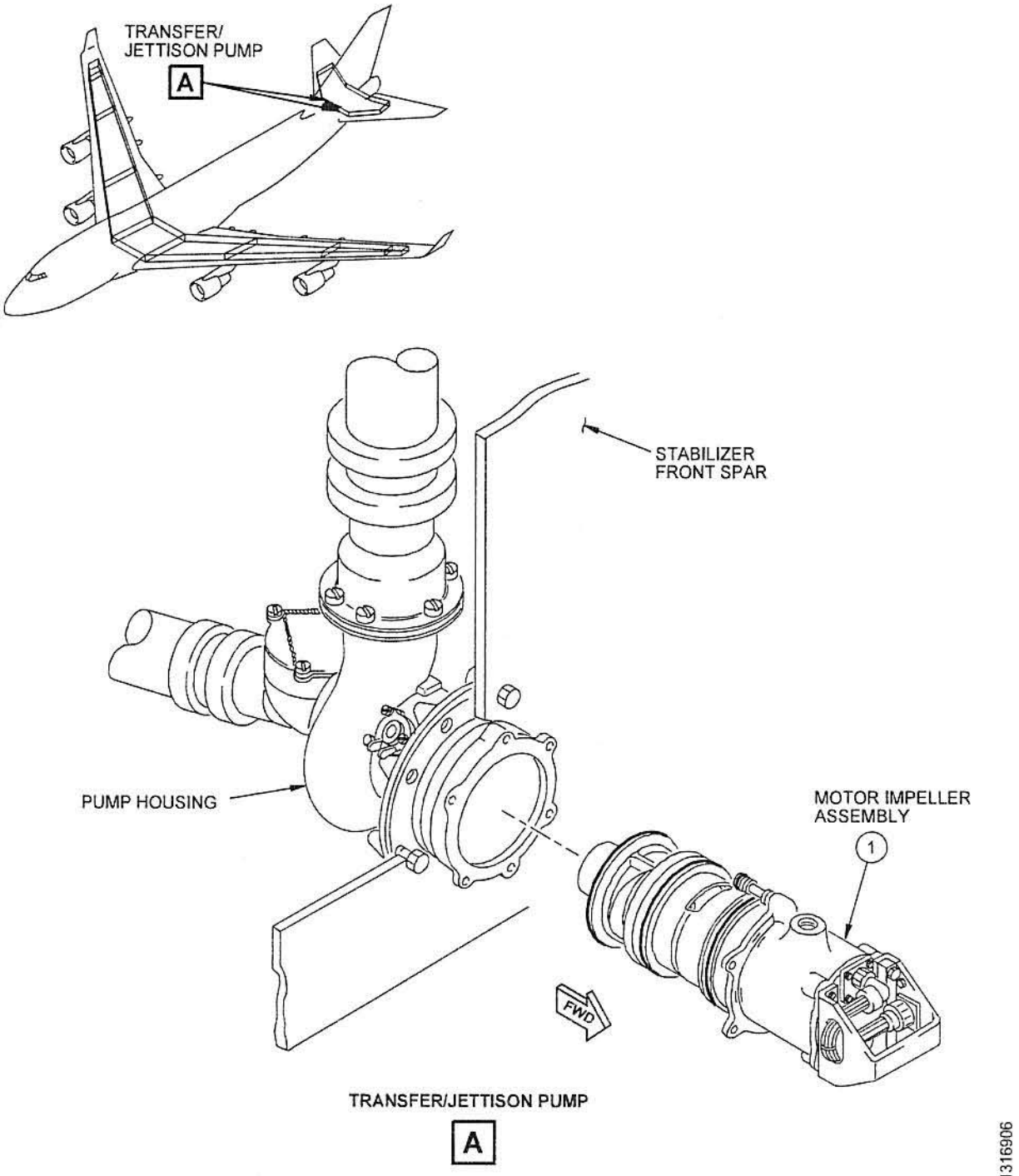
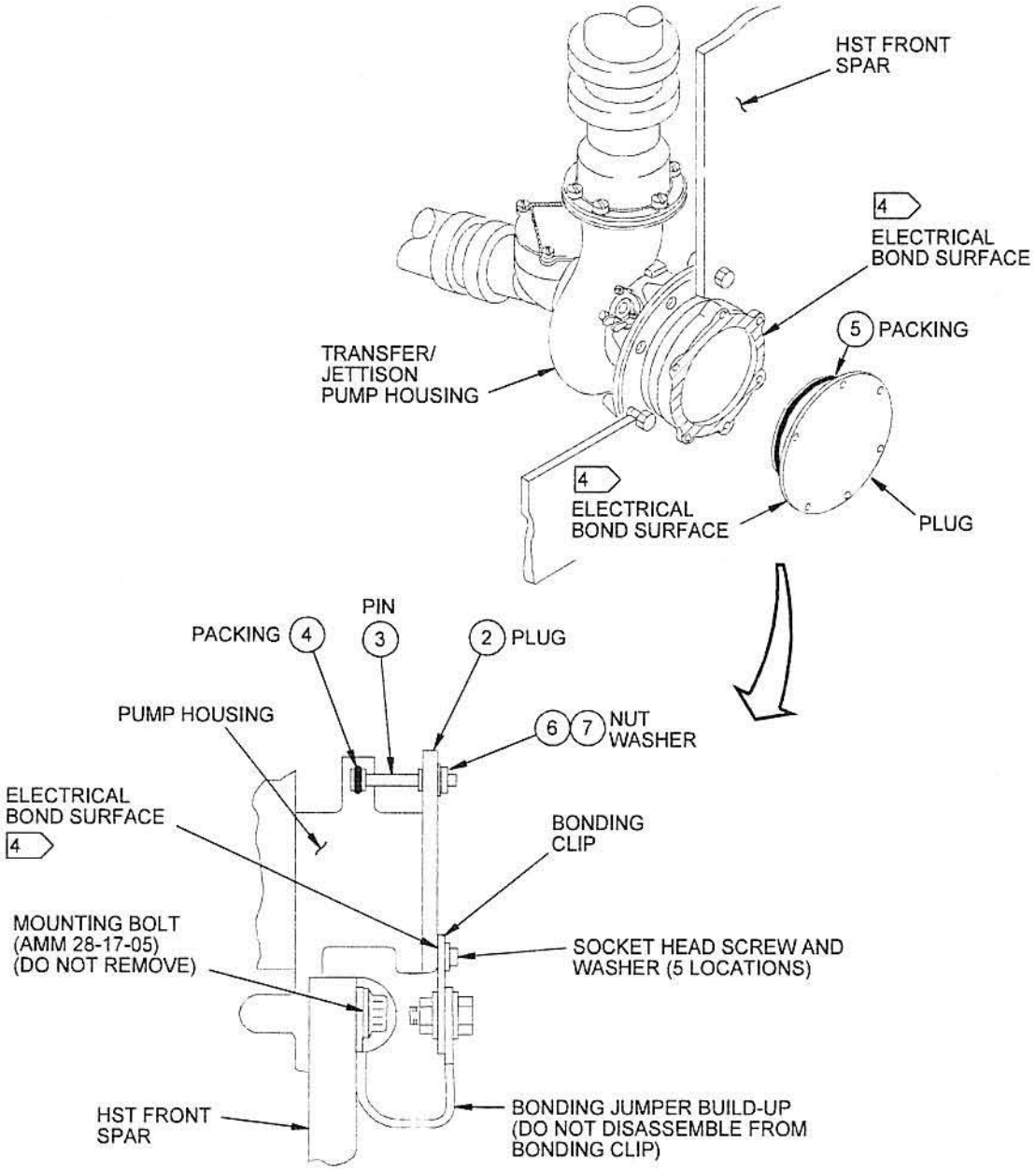


FIGURE 6: HORIZONTAL STABILIZER TRANSFER PUMP MOTOR IMPELLER ASSY CHANGE
(SHEET 1 OF 3)

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4 PREPARE THE FAYING SURFACE OF THE TRANSFER/JETTISON PUMP HOUSING AND THE MATING SURFACE OF THE PLUG FOR AN ELECTRICAL SURFACE BOND (SWPM 20-20-00).

1316907

FIGURE 6: HORIZONTAL STABILIZER TRANSFER PUMP MOTOR IMPELLER ASSY CHANGE (SHEET 2 OF 3)

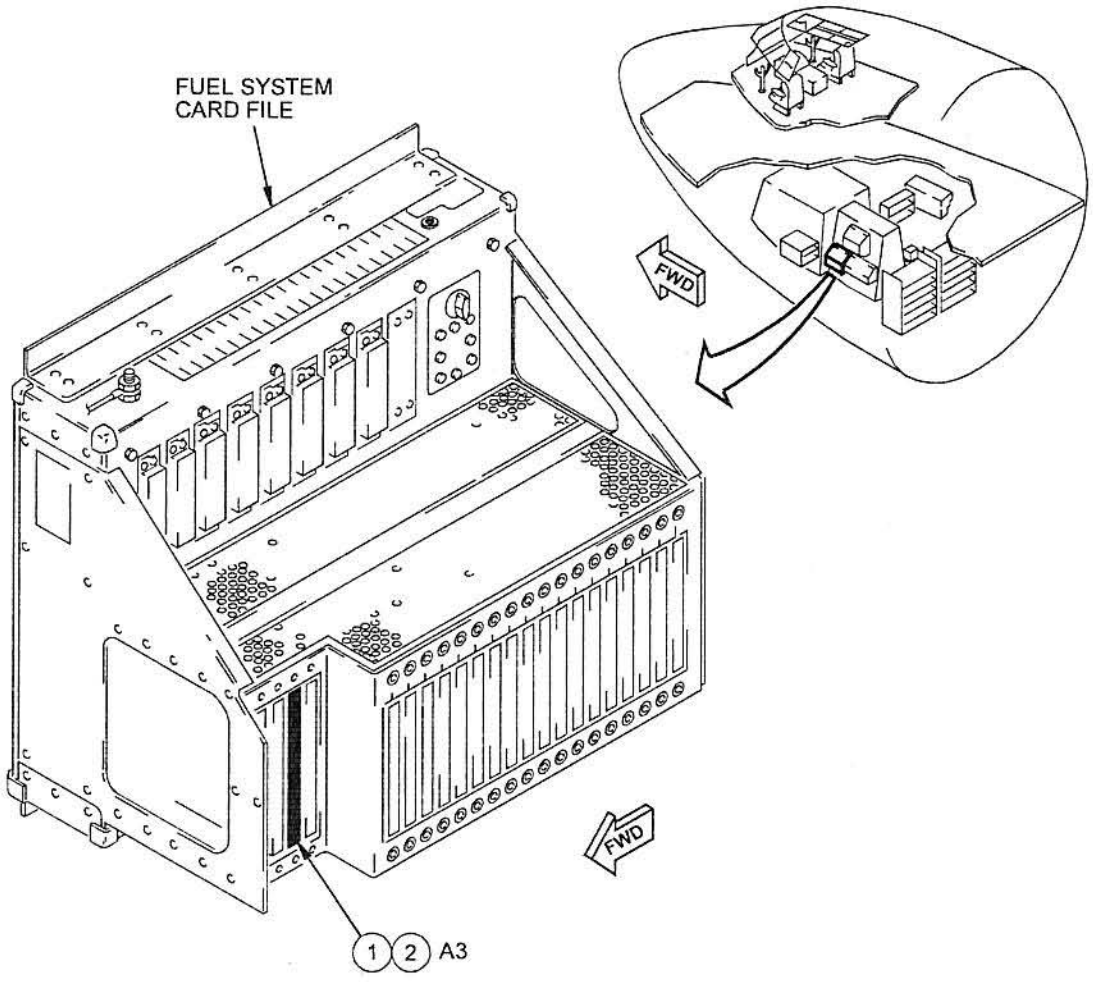
The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

STEP	TASK	NAME	PART NUMBER	QTY	NOTES
1	Remove	Motor Impeller Assembly	60-72101-1 or 60-72102-4 (Boeing Part Number 60B92603-22 or 60B92603-26)	2	Refer 747-400 AMM 28-17-04. Keep fasteners to install plug.
2	Install	Plug	835U0001-1	2	Use kept fasteners, if usable (10 locations).
3	Install	Pin	835U0002-1	2	
4	Install	Packing	MS29513-007	2	
5	Install	Packing	M25988-1-238	2	
6	Install	Nut	BACN10JC06C	2	Use with pin
7	Install	Washer	NAS620C6	2	Use with pin

FIGURE 6: HORIZONTAL STABILIZER TRANSFER PUMP MOTOR IMPELLER ASSY CHANGE
(SHEET 3 OF 3)

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FIGURE 7: FUEL SYSTEM CARD FILE CHANGE



The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

STEP	TASK	NAME	PART NUMBER	QTY	NOTES
1	Remove	Single Point Sensor Card (SPSC)	S344T002-8	1	Remove Per 747-400 AMM 28-17-10
2	Install	Cover Assembly	285U0096-6	1	-

FIGURE 7: FUEL SYSTEM CARD FILE CHANGE
(SHEET 1 OF 1)

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FIGURE 8: REMOTE ELECTRONIC UNIT CHANGES - E8 EQUIPMENT RACK

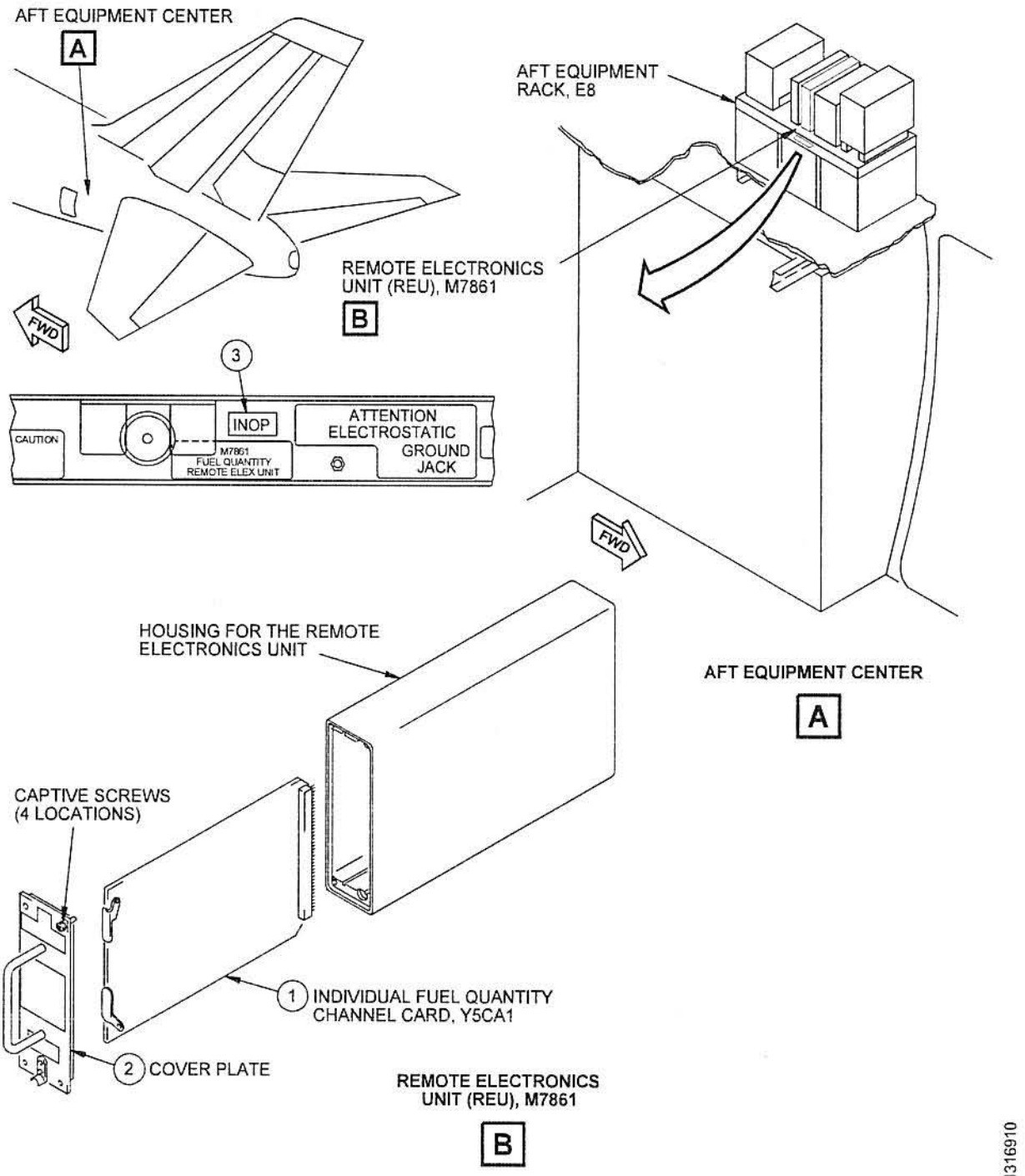


FIGURE 8: REMOTE ELECTRONIC UNIT CHANGES - E8 EQUIPMENT RACK
(SHEET 1 OF 2)

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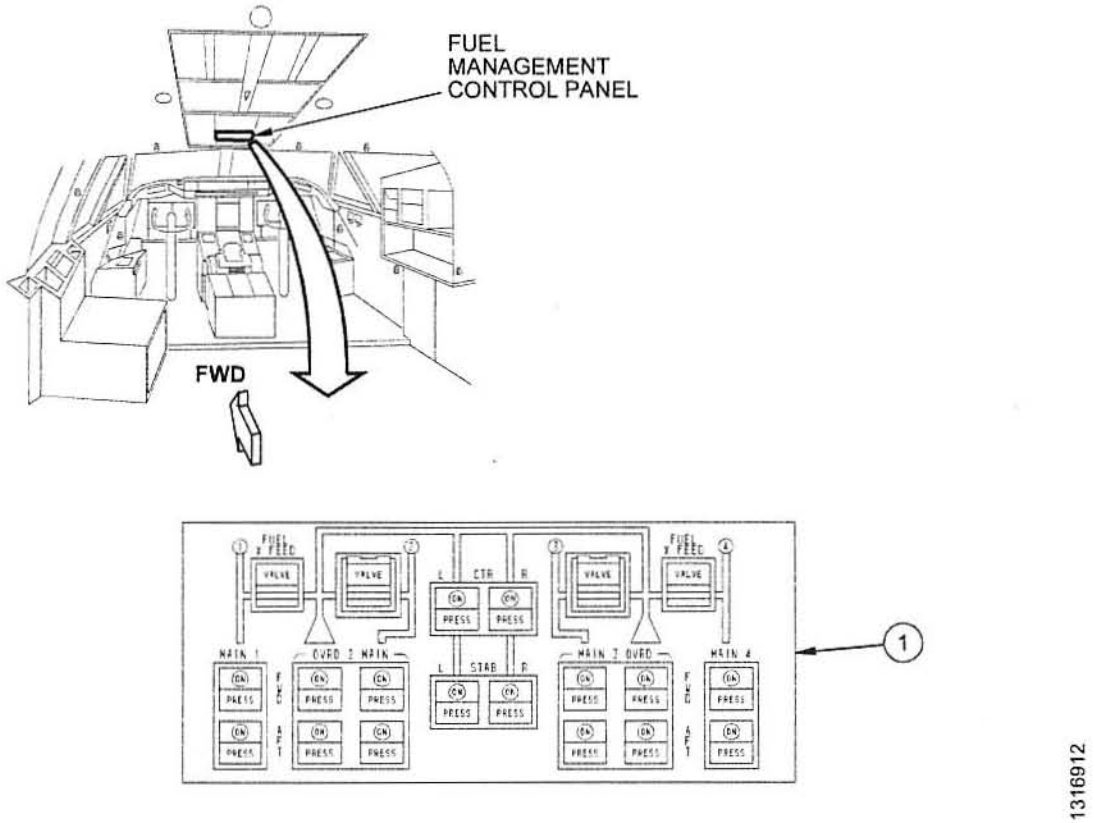
The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

STEP	TASK	NAME	PART NUMBER	QTY	NOTES
1	Remove	Individual Fuel Quantity Channel (IFQC) Card Y5XA1	60B92018-207	1	Refer to 747-400 AMM 28-41-17
2	Reinstall	Cover Plate	-		-
3	Install	INOP Decal	BAC27TFDE0013	1	Refer to 747-400 AMM 20-11-16

FIGURE 8: REMOTE ELECTRONIC UNIT CHANGES - E8 EQUIPMENT RACK
(SHEET 2 OF 2)

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FIGURE 9: FUEL MANAGEMENT CONTROL PANEL CHANGE



This Figure applies to Group 1:

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

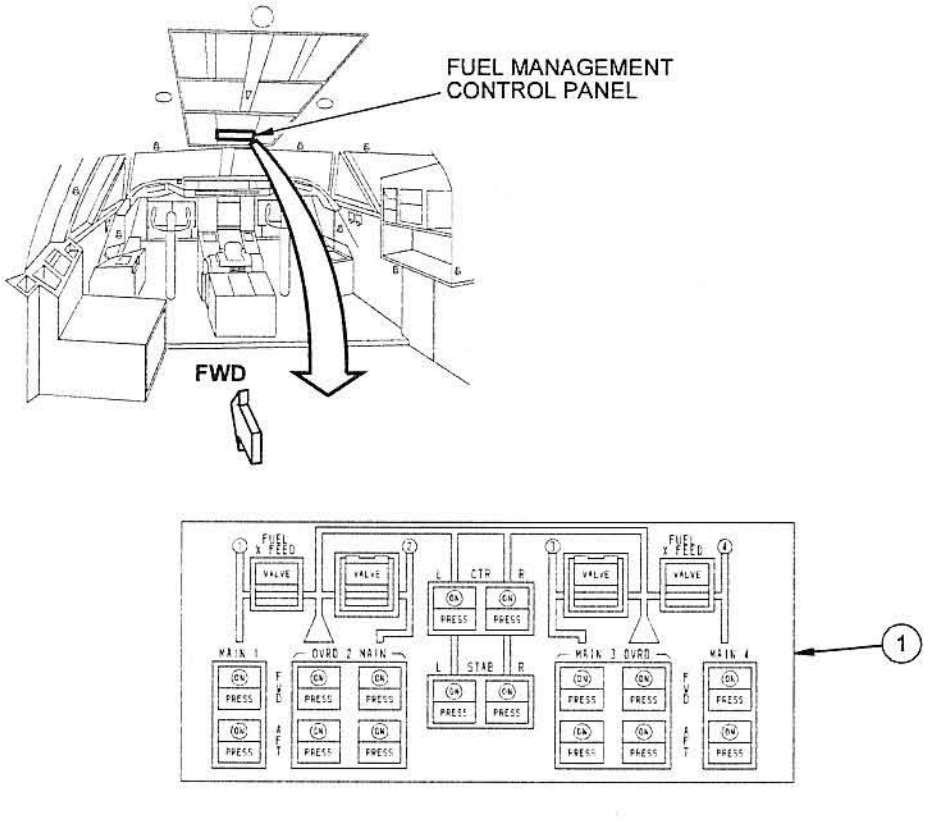
STEP	TASK	NAME	PART NUMBER	QTY	NOTES
1	Remove	Fuel Management Panel Assy (M001540)	233U3100-247	1	(a)

NOTE:	
(a)	Refer to the Electrical, Avionics, and Communication - Installation, 747-24 -2268, Service Bulletin.

FIGURE 9: FUEL MANAGEMENT CONTROL PANEL CHANGE
(SHEET 1 OF 1)

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FIGURE 10: FUEL MANAGEMENT CONTROL PANEL CHANGE



This Figure applies to Group 2:

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

STEP	TASK	NAME	PART NUMBER	QTY	NOTES
1	Remove	Fuel Management Panel Assy (M001540)	233U3100-247	1	(a)

NOTE:	
(a)	Refer to the Electrical, Avionics, and Communication - Installation, 747-24 -2296, Service Bulletin.

FIGURE 10: FUEL MANAGEMENT CONTROL PANEL CHANGE
(SHEET 1 OF 1)

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FIGURE 11: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE

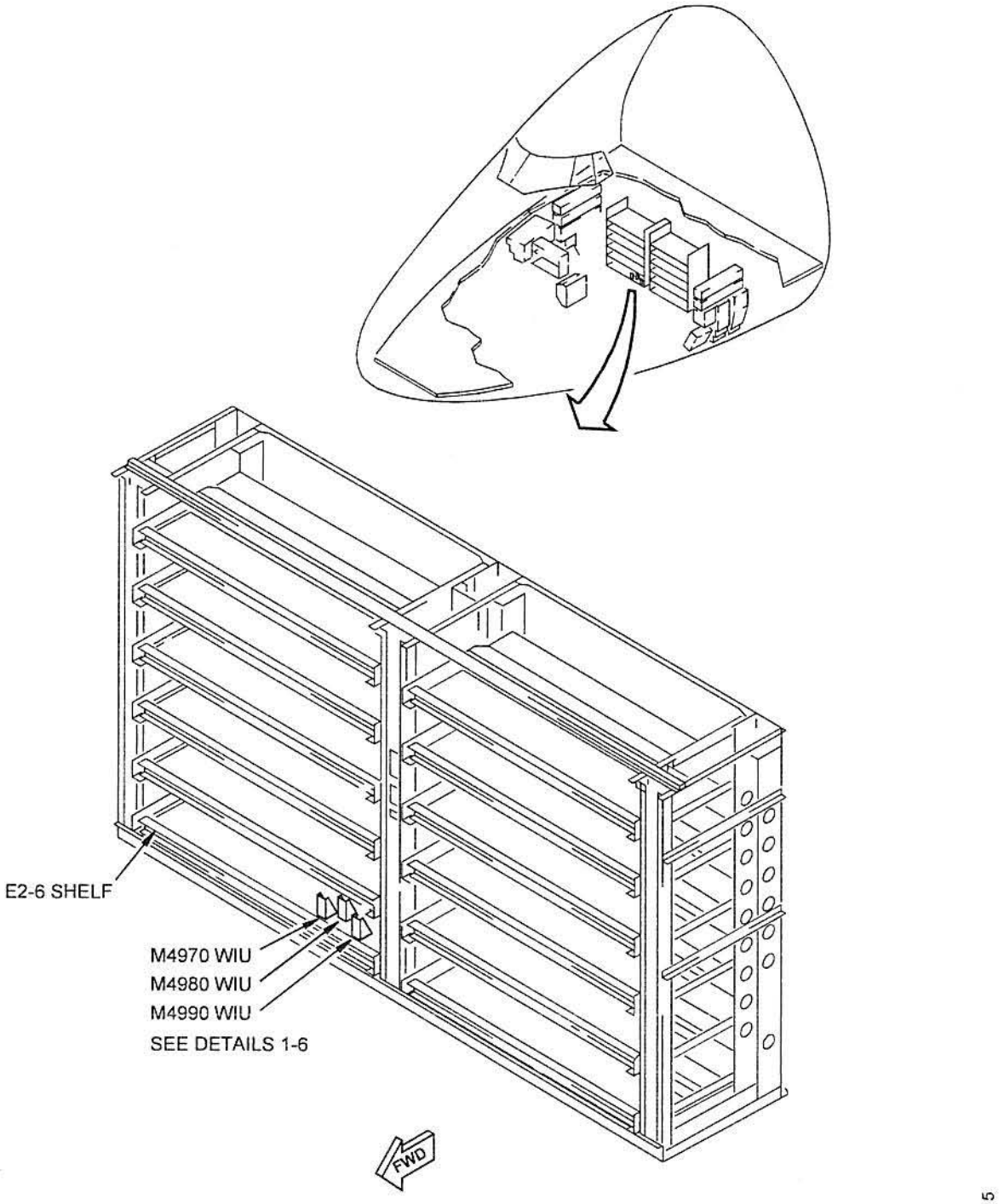


FIGURE 11: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE
(SHEET 1 OF 10)

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The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

ACTION (a)	WIRE NO. (b)	TYPE (c)	FROM		TO		LENGTH (d)	NOTES (e)	SL (f)
			EQUIP. NO.	PIN	EQUIP. NO.	PIN			
DELETE	QL0021-26	RD	DQ9711	B06	GDY1	21	0	-	-
DELETE	QC0021-26	RD	DQ9811	B06	GDY1	21	0	-	-
DELETE	QR0021-26	RD	DQ9911	B06	GDY1	21	0	-	-
ADD	QL0008-26	RD	DQ9711	A08	GDY1	7	4.4	-	-
ADD	QC0008-26	RD	DQ9811	A08	GDY1	8	4.3	-	-
ADD	QR0024-26	RD	DQ9911	A08	GDY1	8	4.4	-	-

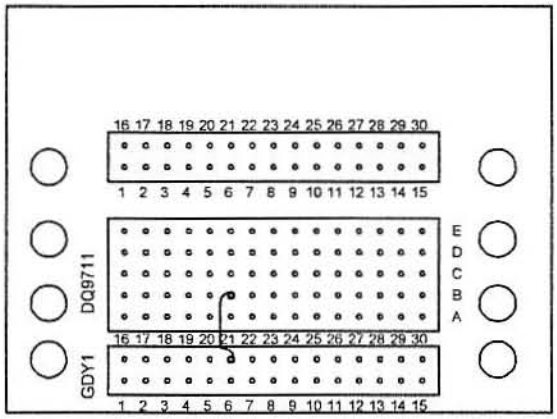
Change the wire wrap wires in the sequence shown in this table. Install the wire along the routing shown on the subsequent pages. Refer to Boeing Standard Wiring Practices Manual 20-72-18.

LEGEND FOR DETAILS 1-6		
(a)	DELETE	Delete this wire from the wire integration unit (WIU).
	ADD	Add this wire to the wire integration unit (WIU)
(b)	Wire number is shown for reference only; the number is not printed on wire wrap wires.	
(c)	RD	Cut from wire 829B9006-14. This wire is BMS 13-46, Type 3, Class 1, AWG 26
(d)	The length of wire is in inches. Use these lengths as aids only. Cut the wire to the correct length during the installation.	
(e)	None	
(f)	Sleeve Code: None	

FIGURE 11: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE
(SHEET 2 OF 10)

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NOTE: Reference: Wire Kit 826B4970



ACTION	WIRE NO.-GAGE	TYP					LENGTH (INCHES)	NOTES
			CONNECTOR	PIN	CONNECTOR	PIN		
DELETE	QL0021-26	RD	DQ9711	B06	GDY1	21		

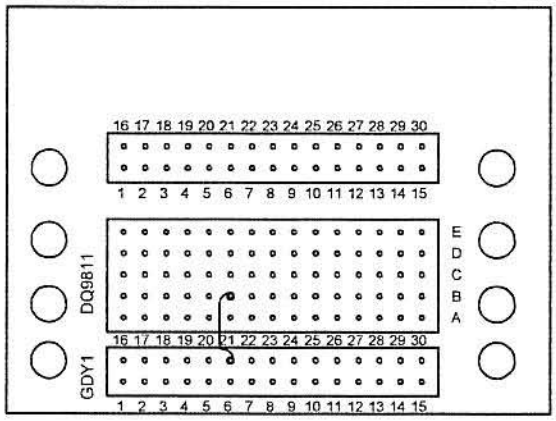
1316916

DETAIL 1

FIGURE 11: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE
(SHEET 3 OF 10)

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NOTE: Reference: Wire Kit 826B4980



ACTION	WIRE NO.-GAGE	TYP					LENGTH (INCHES)	NOTES
			CONNECTOR	PIN	CONNECTOR	PIN		
DELETE	QC0021-26	RD	DQ9811	B06	GDY1	21		

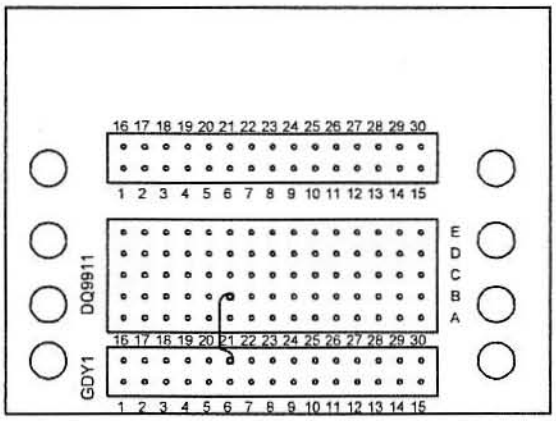
1316917

DETAIL 2

FIGURE 11: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE
(SHEET 4 OF 10)

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NOTE: Reference: Wire Kit 826B4990



ACTION	WIRE NO.-GAGE	TYP	CONNECTOR	PIN	CONNECTOR	PIN	LENGTH (INCHES)	NOTES
DELETE	QR0021-26	RD	DQ9911	B06	GDY1	21		

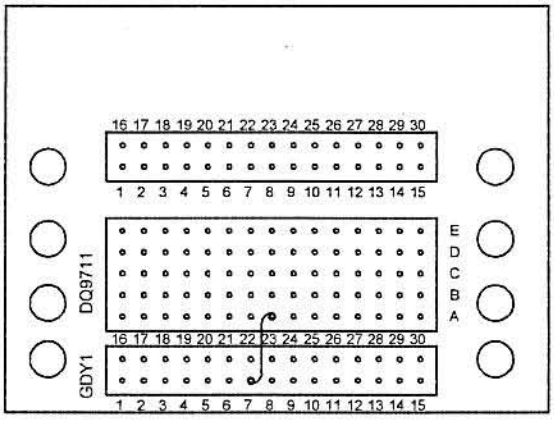
1316918

DETAIL 3

FIGURE 11: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE
(SHEET 5 OF 10)

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NOTE: Reference: Wire Kit 826B4970



ACTION	WIRE NO.-GAGE	TYP	CONNECTOR	PIN	CONNECTOR	PIN	LENGTH (INCHES)	NOTES
ADD	QL0008-26	RD	DQ9711	A08	GDY1	7	4.4	

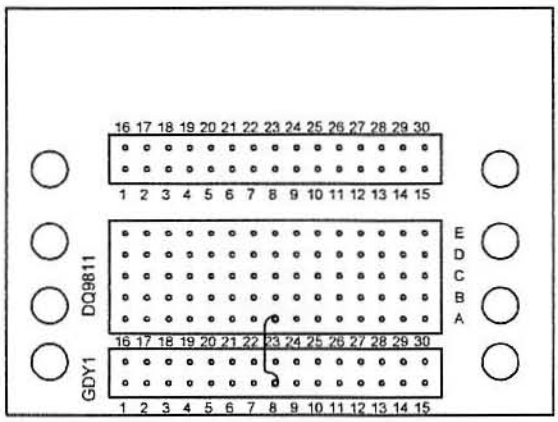
1316919

DETAIL 4

FIGURE 11: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE
(SHEET 6 OF 10)

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NOTE: Reference: Wire Kit 826B4980



ACTION	WIRE NO.-GAGE	TYP					LENGTH (INCHES)	NOTES
			CONNECTOR	PIN	CONNECTOR	PIN		
ADD	QC0008-26	RD	DQ9811	A08	GDY1	8	4.3	

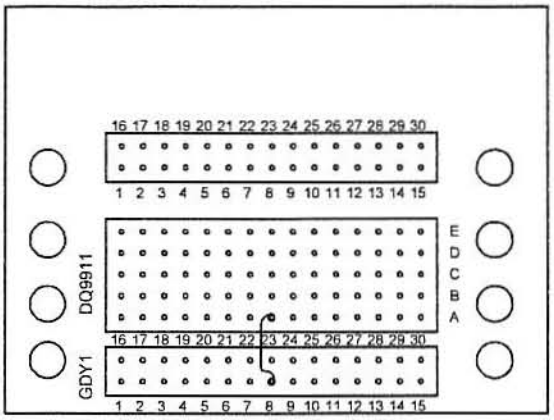
1316920

DETAIL 5

FIGURE 11: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE
(SHEET 7 OF 10)

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NOTE: Reference: Wire Kit 826B4990



ACTION	WIRE NO.-GAGE	TYP					LENGTH (INCHES)	NOTES
			CONNECTOR	PIN	CONNECTOR	PIN		
ADD	QR0024-26	RD	DQ9911	A08	GDY1	8	4.3	

1316922

DETAIL 6

FIGURE 11: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE
(SHEET 8 OF 10)

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NOTE: Reference: Wire Kit 826B4970, 826B4980, and 826B4990

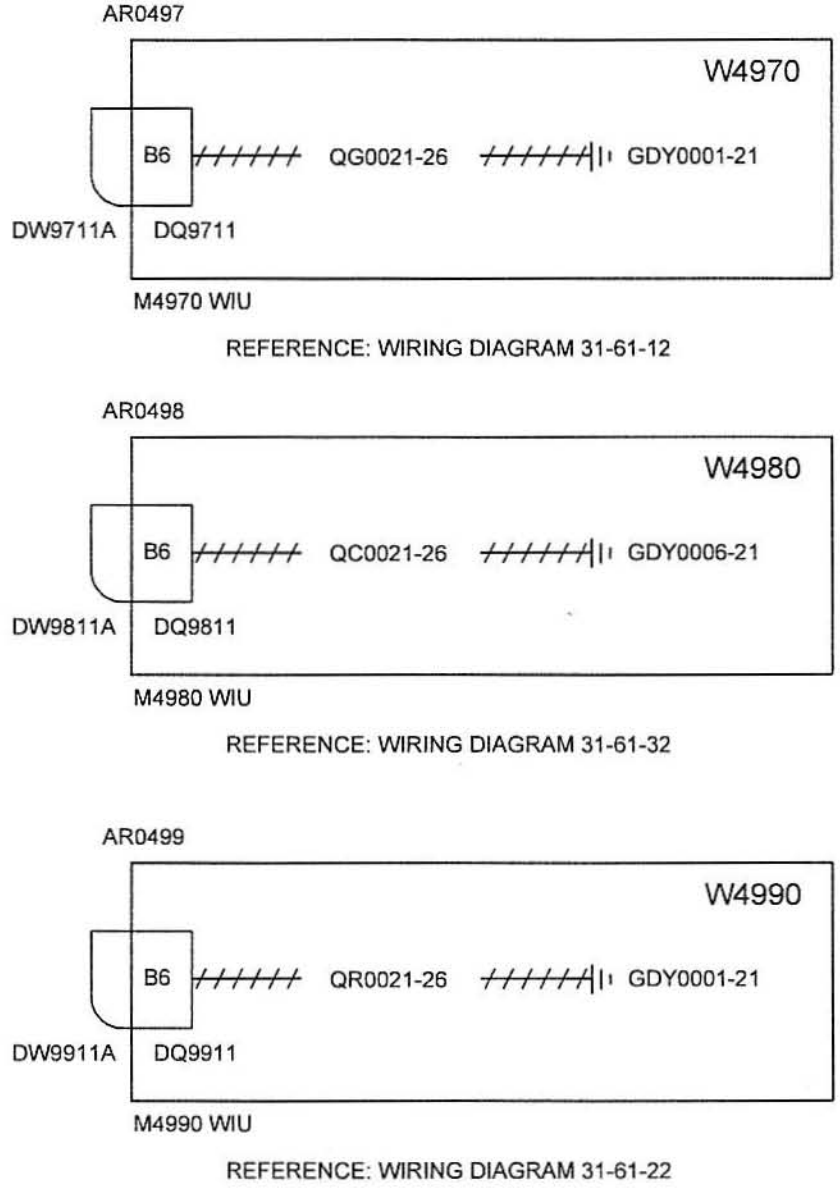


FIGURE 11: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE
(SHEET 9 OF 10)

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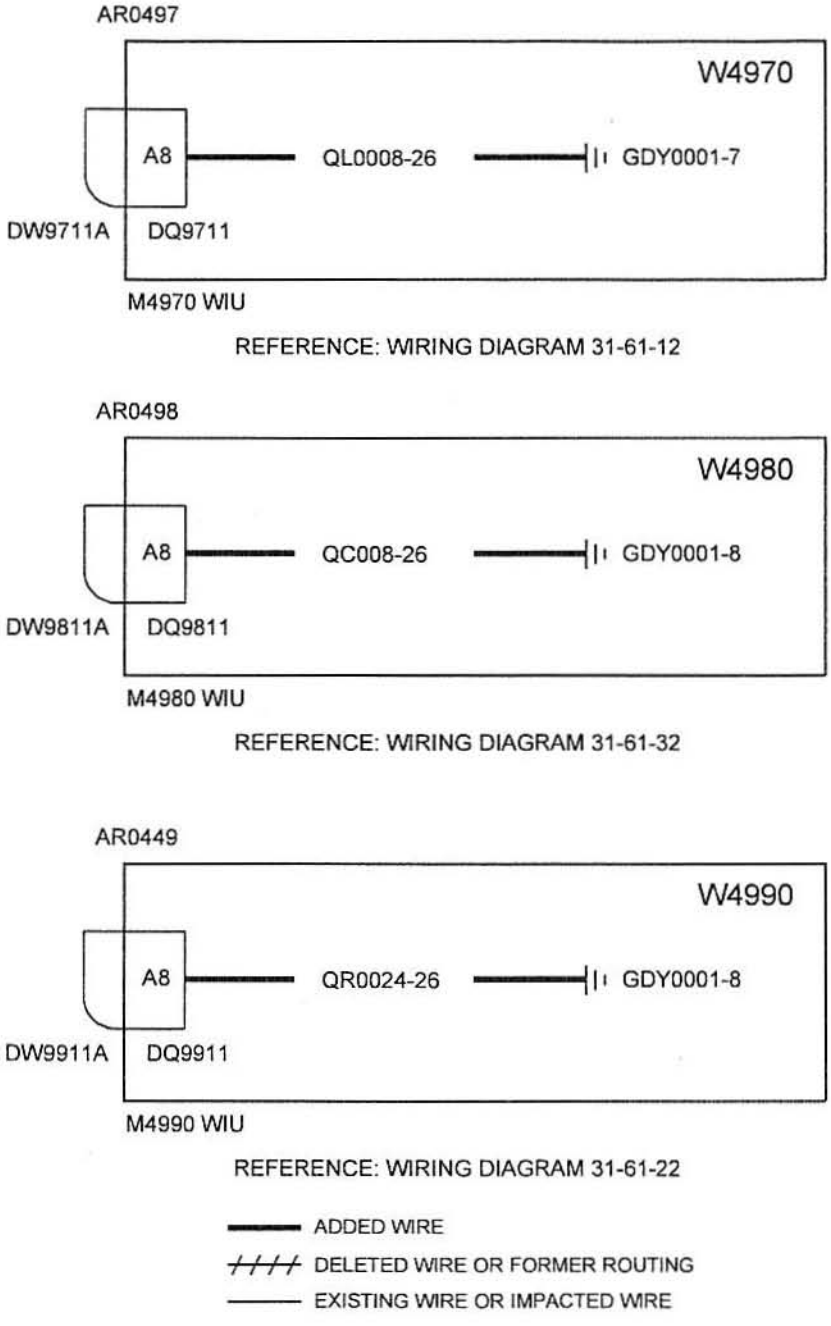


FIGURE 11: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE
(SHEET 10 OF 10)

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FIGURE 12: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE

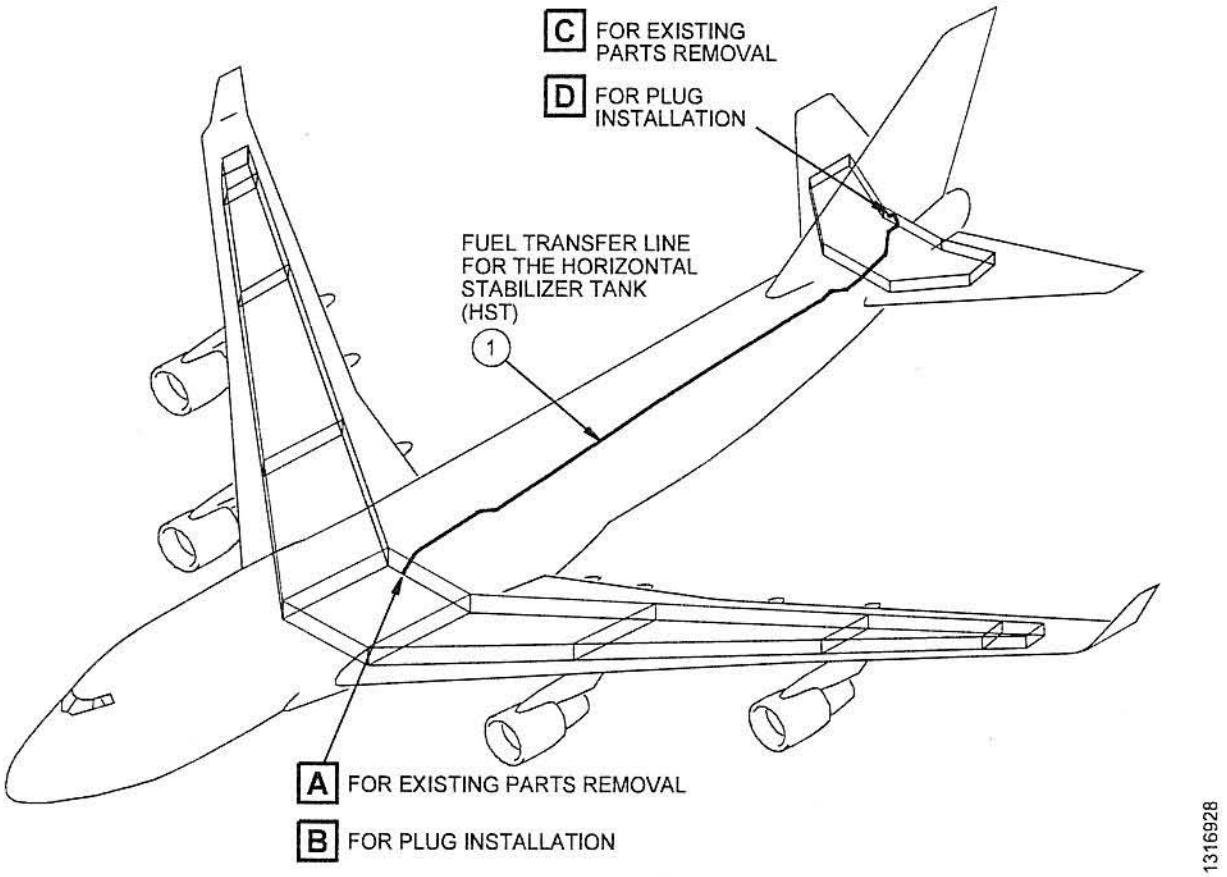


FIGURE 12: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 1 OF 8)

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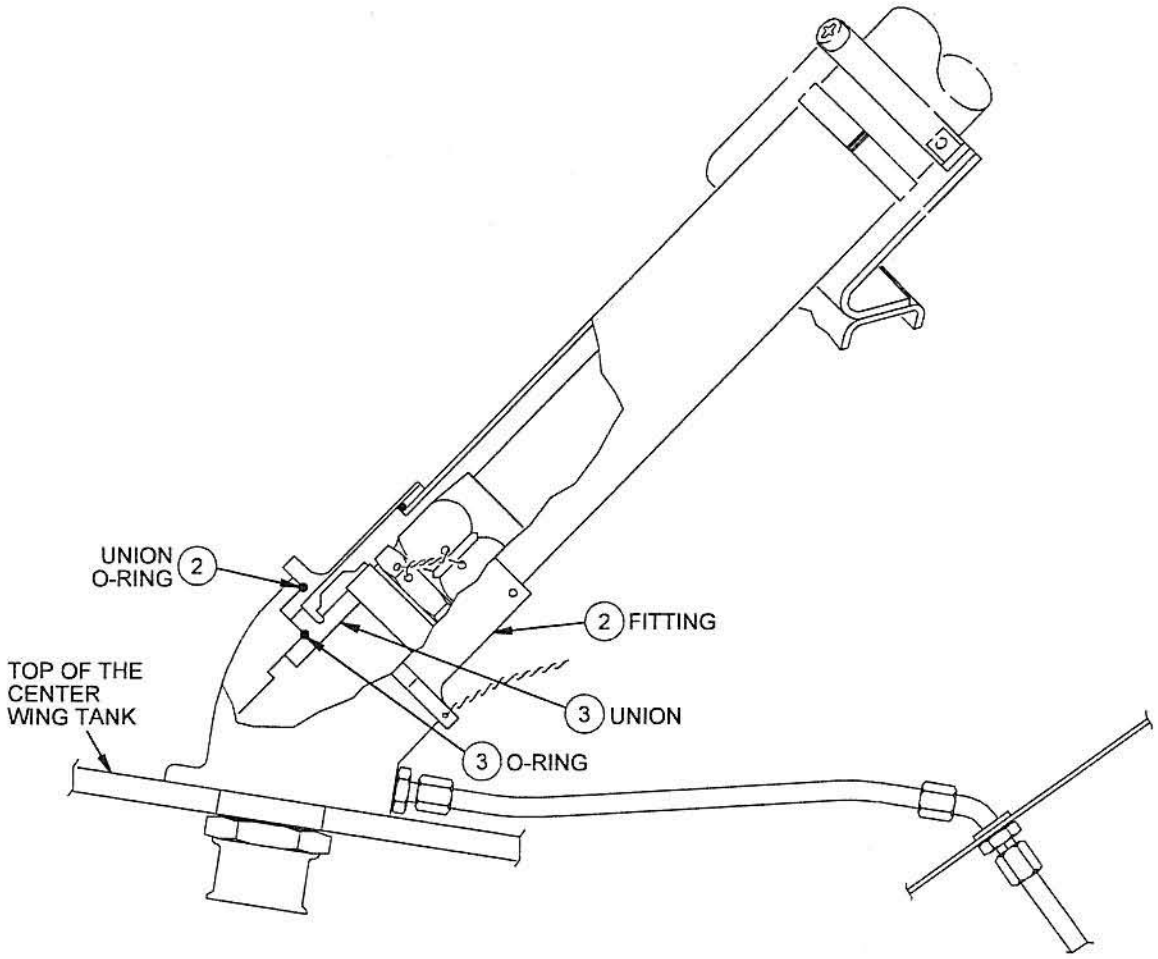


FIGURE 12: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 2 OF 8)

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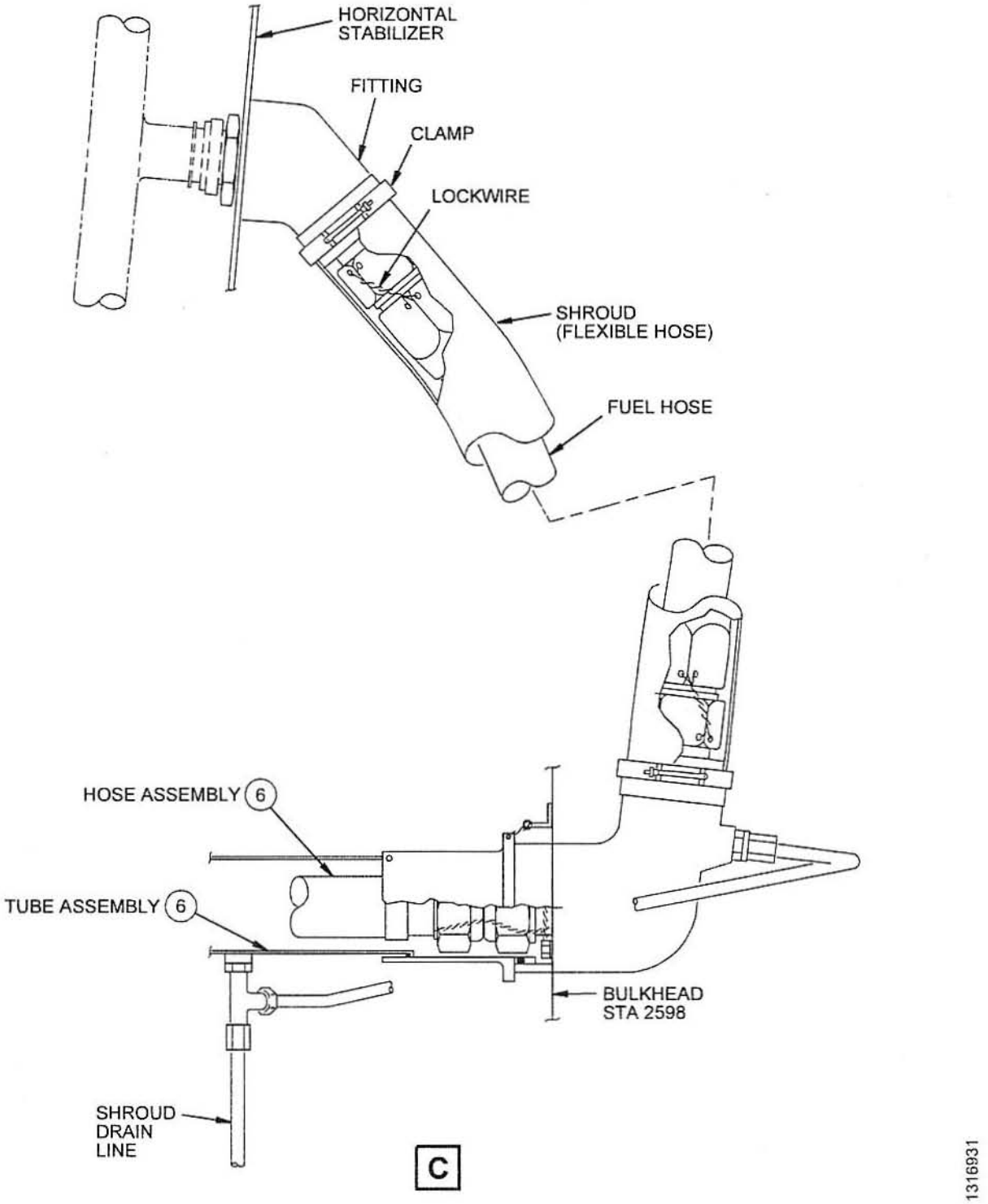


FIGURE 12: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 3 OF 8)

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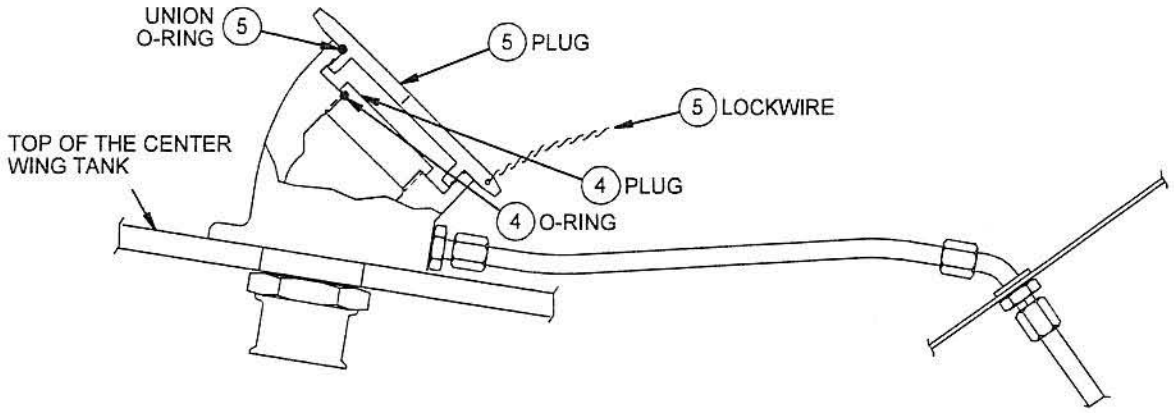
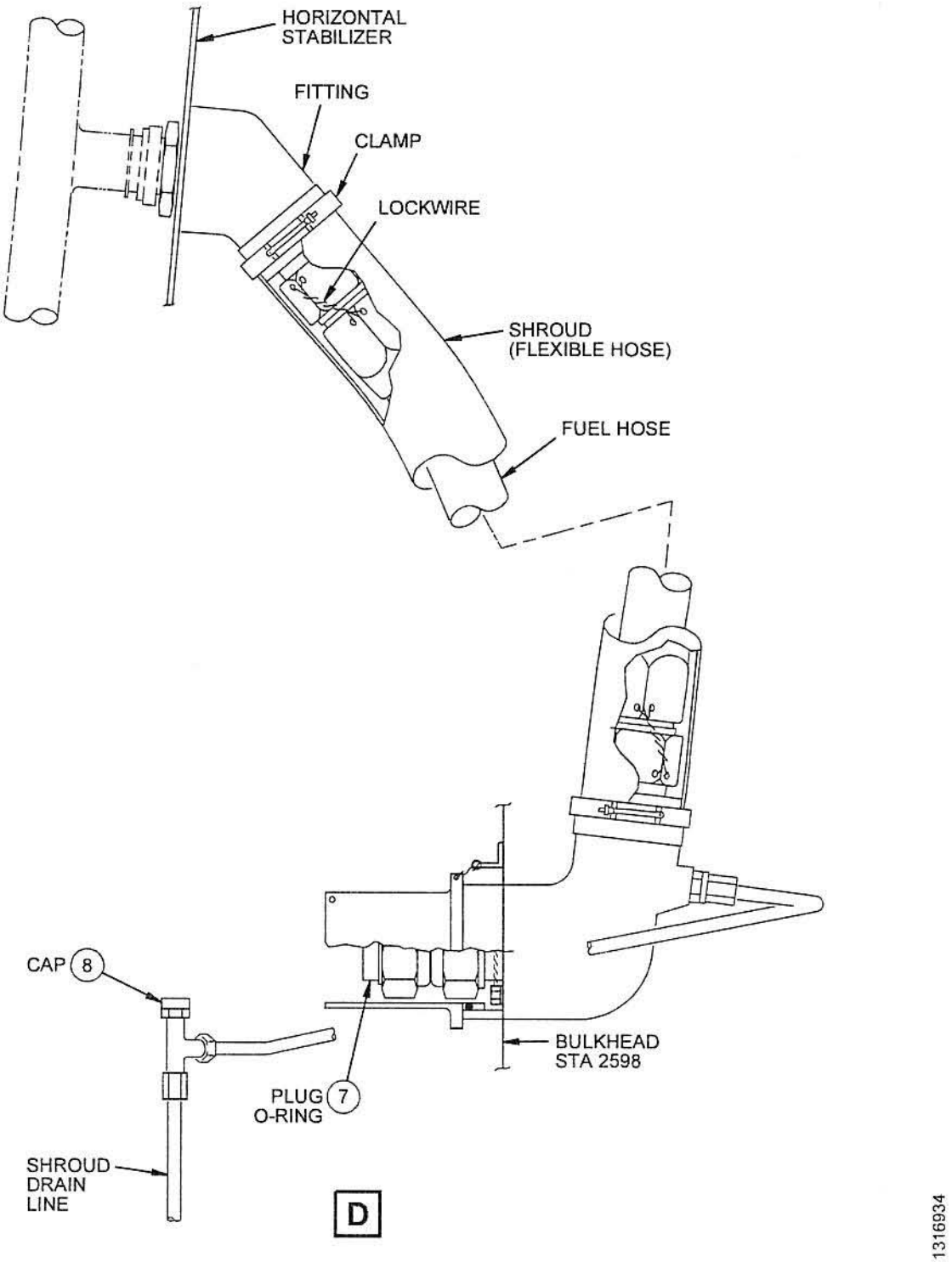


FIGURE 12: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 4 OF 8)

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This Figure applies to Group 1:

FIGURE 12: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE (SHEET 5 OF 8)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

STEP	TASK	NAME	IDENTIFICATION	QTY	REMOVAL INSTALL P/N REF	REMOVAL DRAWING REF	PIC SHT REF	INSTALL REF	MORE DATA
1	Remove	Hose Assy	10-60536-25 (opt 10-60536-22)	1	344U1022 -24	344U1022	1		(a)
	Remove	Fitting	344U0000-6	1	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-10	1	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-11	1	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-12	1	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-13	1	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-14	1	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-2	1	344U1022 -24	344U1022	1		(a)
	Remove	Sleeve	344U1022-22	1	344U1022 -24	344U1022	1		(a)
	Remove	Shroud	344U1022-23	1	344U1022 -24	344U1022	2D7		(a)
	Remove	Tube Assy	344U1022-25	1	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-26	1	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-5	3	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-8	1	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-9	1	344U1022 -24	344U1022	1		(a)
	Remove	Nut Assy	6305B374S48-03	2	344U1022 -24	344U1022	2C7		(a)
	Remove	Shroud Connector	6305B381S48-1	1	344U1022 -24	344U1022	1		(a)
	Remove	Coupling Assy	63211-48	1	344U1022 -24	344U1022	3A5		(a)
	Remove	Spacer	69B92447-39	1	344U1022 -24	344U1022			(a)(b)

FIGURE 12: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE (SHEET 6 OF 8)

STEP	TASK	NAME	IDENTIFICATION	QTY	REMOVAL INSTALL P/N REF	REMOVAL DRAWING REF	PIC SHT REF	INSTALL REF	MORE DATA
1	Remove	Spacer	69B92447-52	1	344U1022 -24	344U1022			(a)(b)
	Remove	Spacer	69B92447-8	1	344U1022 -24	344U1022	1		(a)(b)
	Remove	Clamp, Loop	AN735D48	20	344U1022 -24	344U1022	1		(a)
	Remove	Coupling	AS1712D48	11	344U1022 -24	344U1022	1		(a)
	Remove	Bolt	BACB30NM3HK7	6	344U1022 -24	344U1022	3		(a)
	Remove	Clamp, U-style	BACC10CC48	3	344U1022 -24	344U1022	1, 2, 3		(a)
	Remove	Clamp	BACC10CC48S	1	344U1022 -24	344U1022			(a)(b)
	Remove	Clamp, U-style	BACC10EW48A	60	344U1022 -24	344U1022	2		(a)
	Remove	Clamp, U-style	BACC10EW48B	60	344U1022 -24	344U1022	2		(a)
	Remove	Bonding Jumper	BACJ40A20-3	2	344U1022 -24	344U1022	2		(a)
	Remove	Bonding Jumper	BACJ40A20-4	4	344U1022 -24	344U1022	1, 2		(a)
	Remove	Bonding Jumper	BACJ40A20-5	9	344U1022 -24	344U1022	1, 2		(a)
	Remove	Shim, Laminated	BACS40R008E048 F	1	344U1022 -24	344U1022	1		(a)
	Remove	Pin	MS24665-144	4	344U1022 -24	344U1022	1, 2		(a)
	Remove	O-ring	MS29513-234	2	344U1022 -24	344U1022	1, 2		(a)
	Remove	O-ring	MS29513-241	1	344U1022 -24	344U1022	1, 2		(a)
	Remove	O-ring	MS29513-338	26	344U1022 -24	344U1022	1, 2, 3		(a)
	Remove	Washer	NAS1523AA3R	6	344U1022 -24	344U1022	3		(a)
2	Remove	Fitting	344U0000-2	1	344U1022 -24	344U1022	1		(a)
		O-ring	MS29513-241	1					

FIGURE 12: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 7 OF 8)

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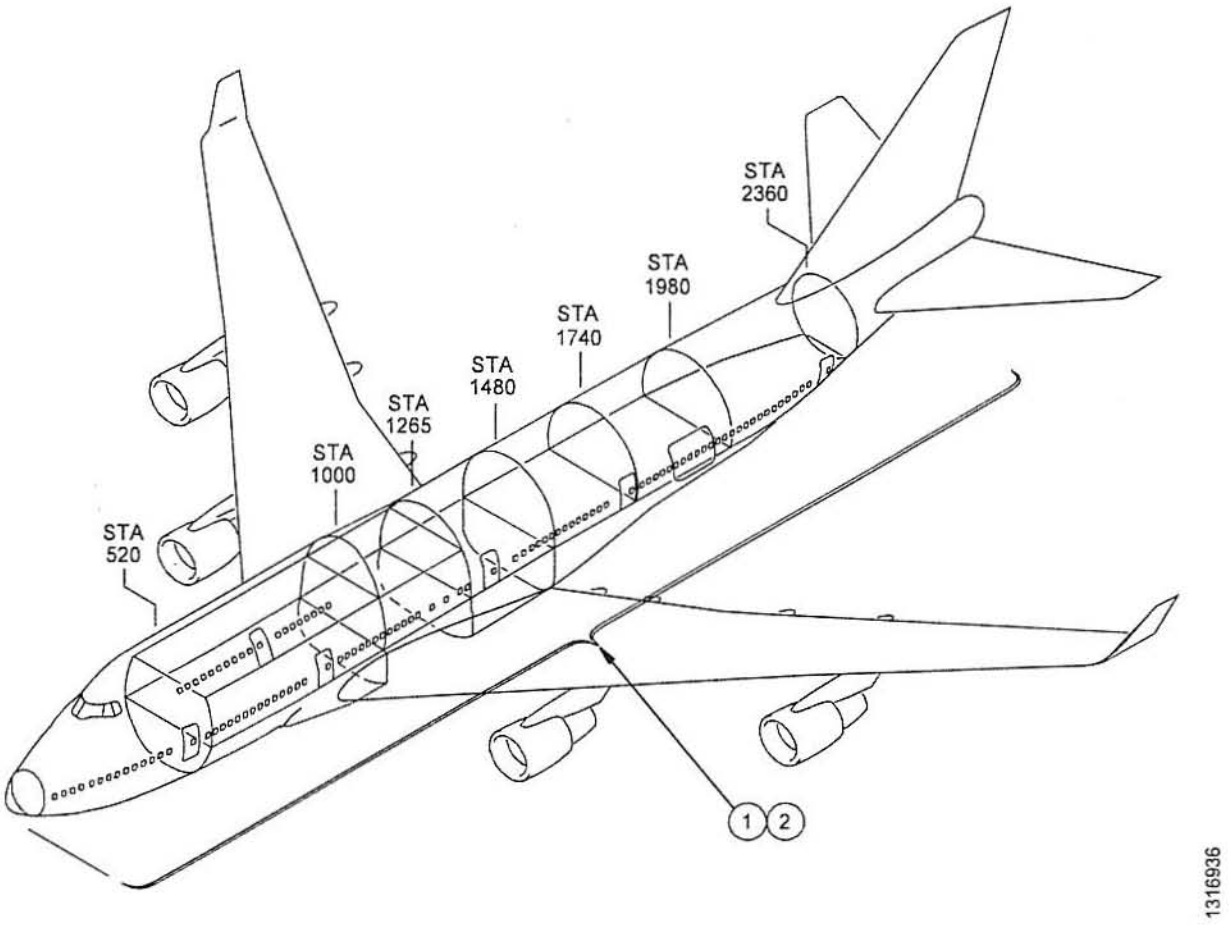
STEP	TASK	NAME	IDENTIFICATION	QTY	REMOVAL INSTALL P/N REF	REMOVAL DRAWING REF	PIC SHT REF	INSTALL REF	MORE DATA
3	Remove	Union	AP7102D32-1 (opt AFP720D3232 or AP7102D32 or MS21900D32)	1	344U1022 -24	344U1022	1		(a)
		O-ring	MS29512-32	1					
4	Install	Plug	AS5168W32 (Opt MS21913W32)	1				834B0401 -1001	(c)
		O-ring	MS29512-32	1					
5	Install	Plug	835B0004-1	1				834B0401 -1001	(c)
		O-ring	MS29513-241	1					
		Lockwire	MS20995NC32	1					
6	Remove	Tube Assy	344U0018-8 (opt 344U0018-5)	1	344U1022 -24	344U1022	1		(a)
		Hose Assy	10-60536-23	1					
7	Install	Plug	AS5168W32	1				834B0401 -1001	(d)
		O-ring	MS29512-32	1					
8	Install	Cap	BACC14AD06D	1				834B0401 -1001	(e)

NOTE	
(a)	Refer to 747-400 AMM 28-17-06 for additional information.
(b)	Quantity used varies.
(c)	on 344U0014-1 fitting.
(d)	on 13218 adapter.
(e)	on MS21912D6 tee.

FIGURE 12: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 8 OF 8)

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FIGURE 13: REWORK OF WIRE BUNDLES



This Figure applies to Group 1:

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

STEP	TASK	NAME	IDENTIFICATION	MORE DATA
1	Remove	Relay	R7391	Located on P54 panel
2	Rework	Wire Bundles	--	See Table 13.1 for all rework wire bundles. Refer to 747-400 Wiring Diagram Manual - Wire/ Equipment List for additional information. See Wire Bundle Instruction - Revise, 828B6102-1022.

FIGURE 13: REWORK OF WIRE BUNDLES
(SHEET 1 OF 3)

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WIRE BUNDLE	IDENTIFICATION	INSTALL REF	WIRE DIAGRAM
W0007	826B0007-7	828B6102-1022	747-400 WDM 28-21-26
W0076	826B0076-9	828B6102-1022	747-400 WDM 28-21-23
W0144	826B0144-4	828B6102-1022	747-400 WDM 28-21-24
W2018	826B2018-6	828B6102-1022	747-400 WDM 24-51-26 747-400 WDM 24-51-64
W3842	826B3842-15	828B6102-1022	747-400 WDM 28-21-26
W3844	826B3844-20	828B6102-1022	747-400 WDM 28-21-26
W3845	826B3845-16	828B6102-1022	747-400 WDM 28-21-11
W3846	826B3846-14	828B6102-1022	747-400 WDM 28-21-26
W3851	826B3851-13	828B6102-1022	747-400 WDM 28-21-12
W3890	826B3890-5	828B6102-1022	747-400 WDM 28-21-21
W3942	826B3942-23	828B6102-1022	747-400 WDM 28-21-29
W3944	826B3944-15	828B6102-1022	747-400 WDM 28-21-26
W4092	826B4092-3	828B6102-1022	747-400 WDM 28-54-13
W4094	826B4094-6	828B6102-1022	747-400 WDM 24-54-23
W4260	826B4260-18	828B6102-1022	747-400 WDM 28-42-15
W4261	826B4261-18	828B6102-1022	747-400 WDM 28-21-26
W4262	826B4262-17	828B6102-1022	747-400 WDM 28-21-29
W4263	826B4263-15	828B6102-1022	747-400 WDM 28-42-15
W4406	826B4406-2	828B6102-1022	747-400 WDM 28-21-23
W4415	826B4415-3	828B6102-1022	747-400 WDM 28-21-23
W4427	826B4427-11	828B6102-1022	747-400 WDM 28-21-29
W4435	826B4435-1	828B6102-1022	747-400 WDM 28-21-25
W4437	826B4437-13	828B6102-1022	747-400 WDM 28-21-12
W4441	826B4441-15	828B6102-1022	747-400 WDM 28-21-27
W4445	826B4445-1	828B6102-1022	747-400 WDM 28-21-13
W4478	826B4478-11	828B6102-1022	747-400 WDM 28-21-12
W4488	826B4488-12	828B6102-1022	747-400 WDM 28-21-13
W4562	826B4562-14	828B6102-1022	747-400 WDM 28-21-30
W4588	826B4588-9	828B6102-1022	747-400 WDM 28-21-13
W4606	826B4606-5	828B6102-1022	747-400 WDM 28-21-25
W4607	826B4607-4	828B6102-1022	747-400 WDM 28-21-31
W4611	826B4611-7	828B6102-1022	747-400 WDM 28-21-28
W4616	826B4616-1	828B6102-1022	747-400 WDM 28-21-12
W4618	826B4618-4	828B6102-1022	747-400 WDM 28-21-28
W4620	826B4620-1	828B6102-1022	747-400 WDM 28-21-12
W4641	826B4641-5	828B6102-1022	747-400 WDM 28-21-31
W4693	826B4693-11	828B6102-1022	747-400 WDM 28-21-12
W4750	826B4750-17	828B6102-1022	747-400 WDM 28-42-15

FIGURE 13: REWORK OF WIRE BUNDLES
(SHEET 2 OF 3)

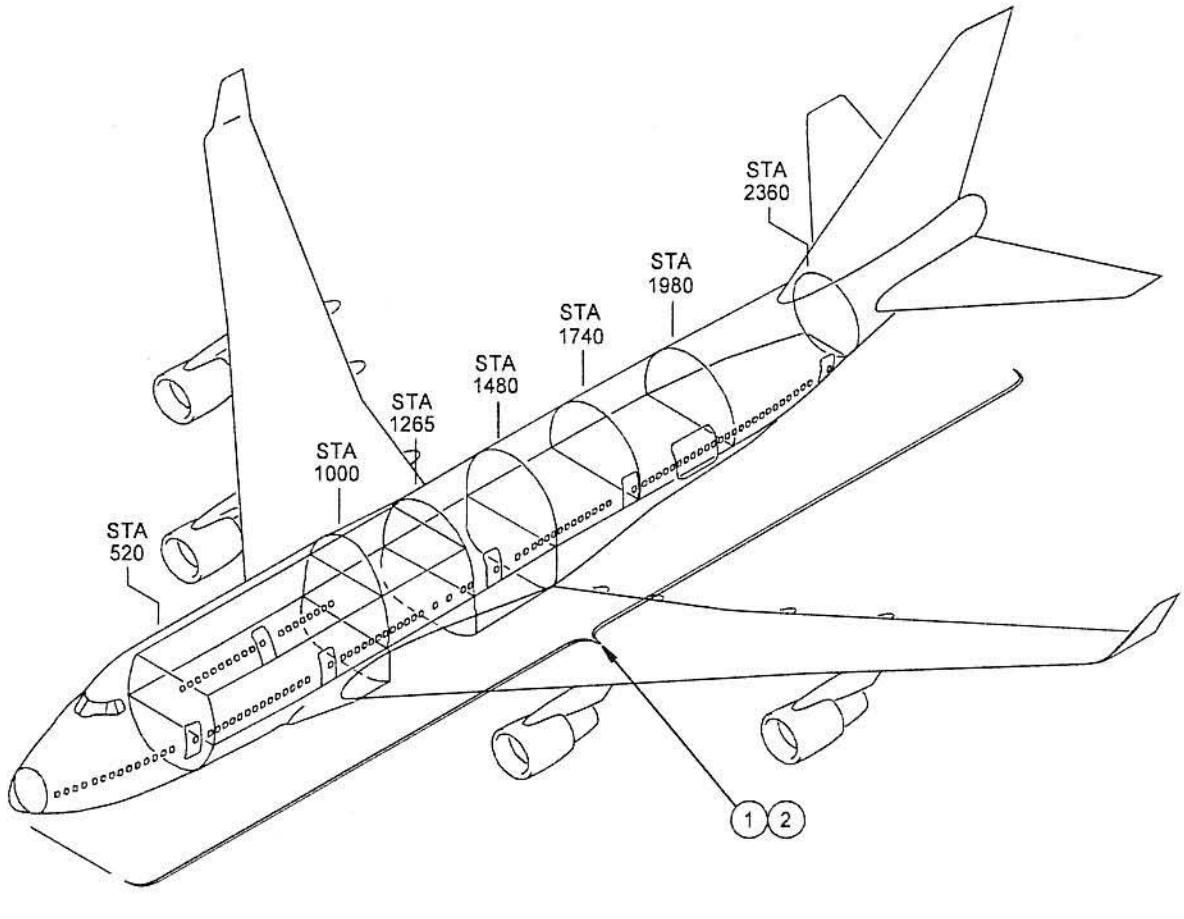
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WIRE BUNDLE	IDENTIFICATION	INSTALL REF	WIRE DIAGRAM
W4751	826B4751-18	828B6102-1022	747-400 WDM 28-21-26
W4753	826B4753-25	828B6102-1022	747-400 WDM 28-42-15
W4758	826B4758-14	828B6102-1022	747-400 WDM 28-21-26
W4760	826B4760-17	828B6102-1022	747-400 WDM 28-21-29
W4764	826B4764-14	828B6102-1022	747-400 WDM 28-43-12
W4768	826B4768-1	828B6102-1022	747-400 WDM 28-21-29
W4774	826B4774-1	828B6102-1022	747-400 WDM 28-21-29
W4970	826B4970-7	828B6102-1022	747-400 WDM 31-61-12
W4980	826B4980-6	828B6102-1022	747-400 WDM 31-61-32
W4990	826B4990-6	828B6102-1022	747-400 WDM 31-61-22
W4974	826B4974-1	828B6102-1022	747-400 WDM 28-21-29
W5172	826B5172-1	828B6102-1022	747-400 WDM 28-21-30

FIGURE 13: REWORK OF WIRE BUNDLES
(SHEET 3 OF 3)

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FIGURE 14: REWORK OF WIRE BUNDLES



This Figure applies to Group 2:

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

STEP	TASK	NAME	IDENTIFICATION	MORE DATA
1	Remove	Relay	R7391	Located on P54 panel
2	Rework	Wire Bundles	--	See Table 13.1 for all rework wire bundles. Refer to 747-400 Wiring Diagram Manual - Wire/ Equipment List for additional information. See Wire Bundle Instruction - Revise, 828B6102-1023.

FIGURE 14: REWORK OF WIRE BUNDLES
(SHEET 1 OF 3)

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WIRE BUNDLE	IDENTIFICATION	INSTALL REF	WIRE DIAGRAM
W0007	826B0007-7	828B6102-1023	747-400 WDM 28-21-26
W0076	826B0076-9	828B6102-1023	747-400 WDM 28-21-23
W0144	826B0144-4	828B6102-1023	747-400 WDM 28-21-24
W2018	826B2018-6	828B6102-1023	747-400 WDM 24-51-26 747-400 WDM 24-51-64
W3842	826B3842-16	828B6102-1023	747-400 WDM 28-21-26
W3844	826B3844-25	828B6102-1023	747-400 WDM 28-21-26
W3845	826B3845-16	828B6102-1023	747-400 WDM 28-21-11
W3846	826B3846-14	828B6102-1023	747-400 WDM 28-21-26
W3851	826B3851-14	828B6102-1023	747-400 WDM 28-21-12
W3890	826B3890-5	828B6102-1023	747-400 WDM 28-21-21
W3942	826B3942-22	828B6102-1023	747-400 WDM 28-21-29
W3944	826B3944-16	828B6102-1023	747-400 WDM 28-21-26
W4092	826B4092-3	828B6102-1023	747-400 WDM 28-54-13
W4094	826B4094-6	828B6102-1023	747-400 WDM 24-54-23
W4260	826B4260-18	828B6102-1023	747-400 WDM 28-42-15
W4261	826B4261-18	828B6102-1023	747-400 WDM 28-21-26
W4262	826B4262-17	828B6102-1023	747-400 WDM 28-21-29
W4263	826B4263-15	828B6102-1023	747-400 WDM 28-42-15
W4406	826B4406-2	828B6102-1023	747-400 WDM 28-21-23
W4415	826B4415-3	828B6102-1023	747-400 WDM 28-21-23
W4427	826B4427-11	828B6102-1023	747-400 WDM 28-21-29
W4435	826B4435-1	828B6102-1023	747-400 WDM 28-21-25
W4437	826B4437-14	828B6102-1023	747-400 WDM 28-21-12
W4441	826B4441-15	828B6102-1023	747-400 WDM 28-21-27
W4445	826B4445-4	828B6102-1023	747-400 WDM 28-21-13
W4478	826B4478-11	828B6102-1023	747-400 WDM 28-21-12
W4488	826B4488-12	828B6102-1023	747-400 WDM 28-21-13
W4562	826B4562-14	828B6102-1023	747-400 WDM 28-21-30
W4588	826B4588-11	828B6102-1023	747-400 WDM 28-21-13
W4606	826B4606-5	828B6102-1023	747-400 WDM 28-21-25
W4607	826B4607-4	828B6102-1023	747-400 WDM 28-21-31
W4611	826B4611-7	828B6102-1023	747-400 WDM 28-21-28
W4616	826B4616-1	828B6102-1023	747-400 WDM 28-21-12
W4618	826B4618-4	828B6102-1023	747-400 WDM 28-21-28
W4620	826B4620-1	828B6102-1023	747-400 WDM 28-21-12
W4641	826B4641-5	828B6102-1023	747-400 WDM 28-21-31
W4693	826B4693-11	828B6102-1023	747-400 WDM 28-21-12
W4750	826B4750-18	828B6102-1023	747-400 WDM 28-42-15

FIGURE 14: REWORK OF WIRE BUNDLES
(SHEET 2 OF 3)

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WIRE BUNDLE	IDENTIFICATION	INSTALL REF	WIRE DIAGRAM
W4751	826B4751-19	828B6102-1023	747-400 WDM 28-21-26
W4753	826B4753-26	828B6102-1023	747-400 WDM 28-42-15
W4758	826B4758-15	828B6102-1023	747-400 WDM 28-21-26
W4760	826B4760-17	828B6102-1023	747-400 WDM 28-21-29
W4764	826B4764-13	828B6102-1023	747-400 WDM 28-43-12
W4768	826B4768-1	828B6102-1023	747-400 WDM 28-21-29
W4774	826B4774-1	828B6102-1023	747-400 WDM 28-21-29
W4970	826B4970-7	828B6102-1023	747-400 WDM 31-61-12
W4980	826B4980-6	828B6102-1023	747-400 WDM 31-61-32
W4990	826B4990-6	828B6102-1023	747-400 WDM 31-61-22
W4974	826B4974-1	828B6102-1023	747-400 WDM 28-21-29
W5172	826B5172-1	828B6102-1023	747-400 WDM 28-21-30

FIGURE 14: REWORK OF WIRE BUNDLES
(SHEET 3 OF 3)

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FIGURE 15: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE

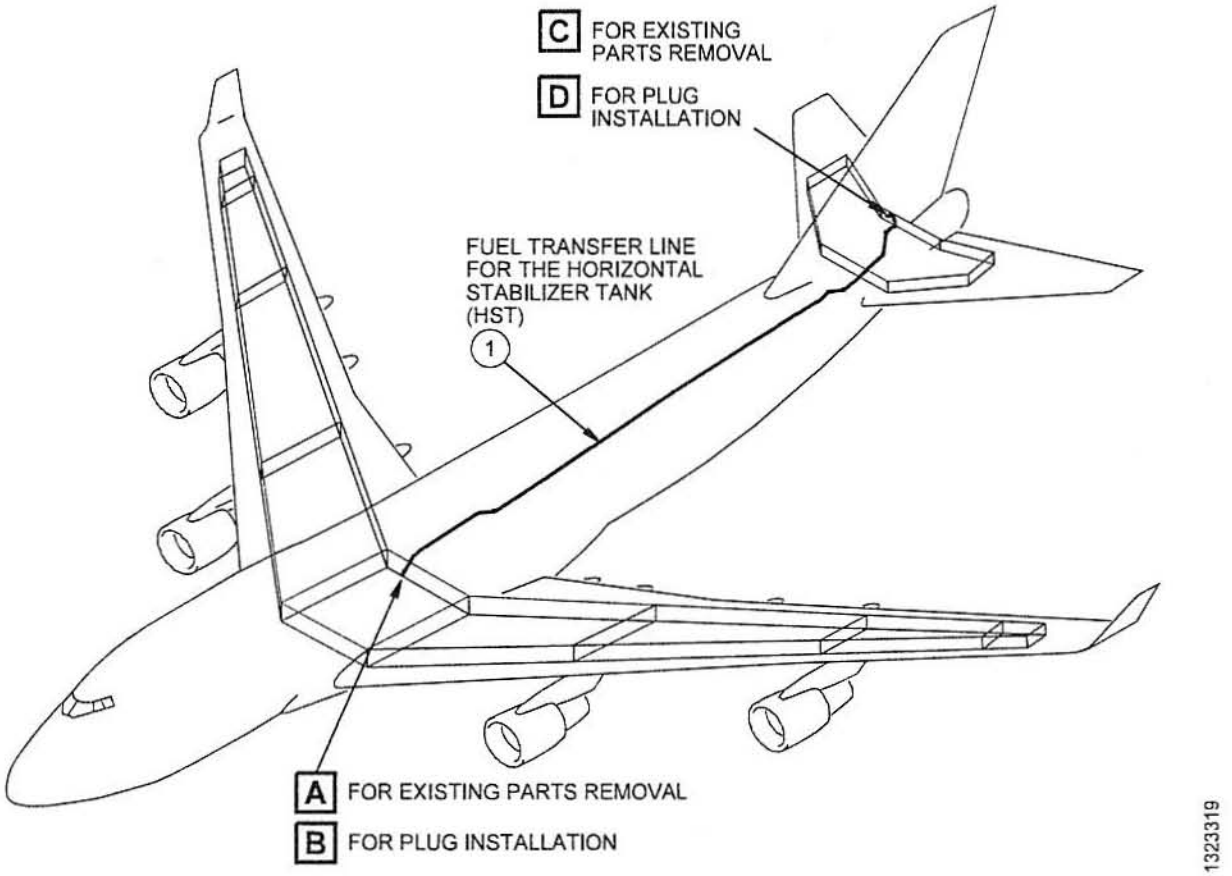


FIGURE 15: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 1 OF 7)

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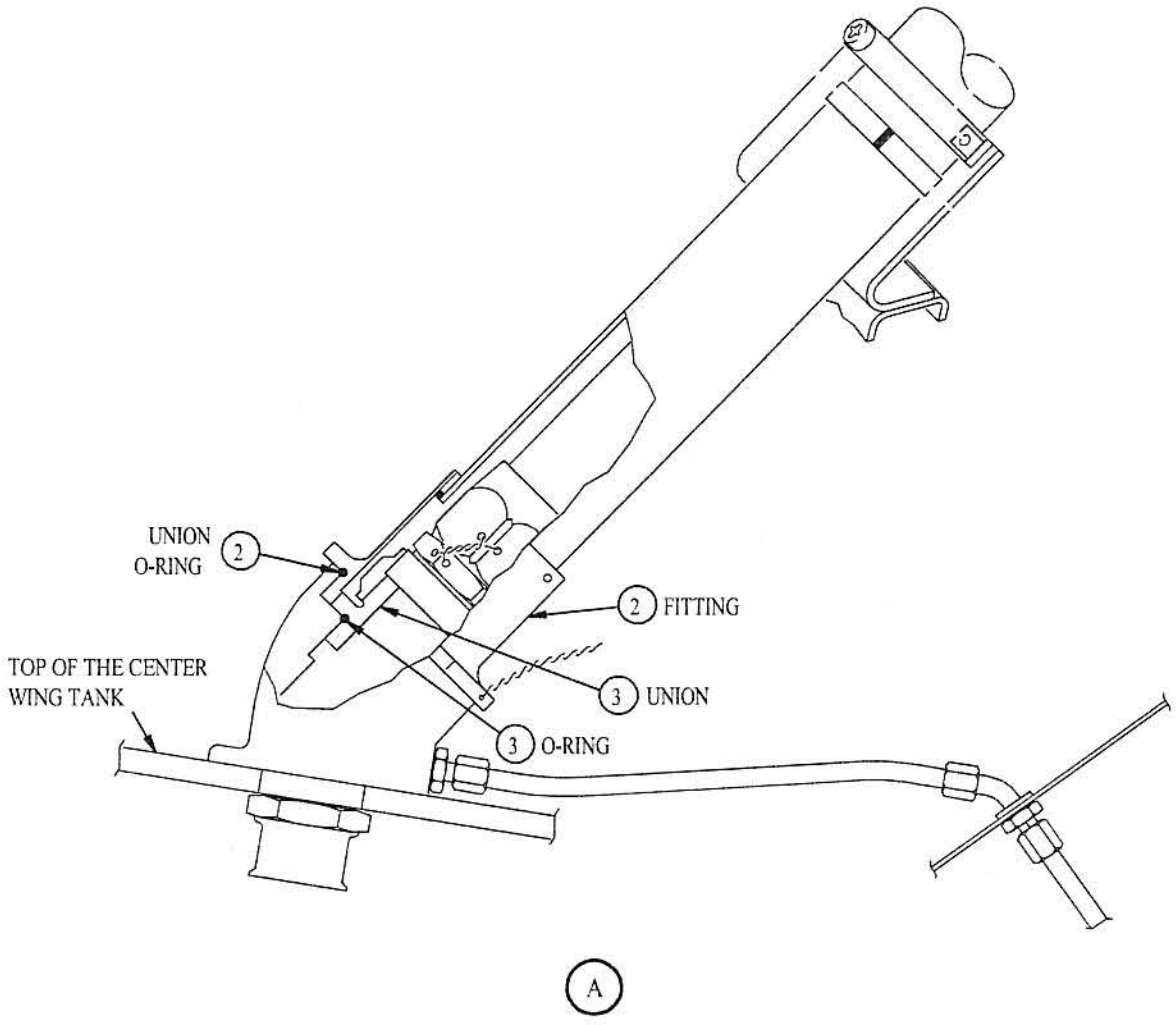


FIGURE 15: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 2 OF 7)

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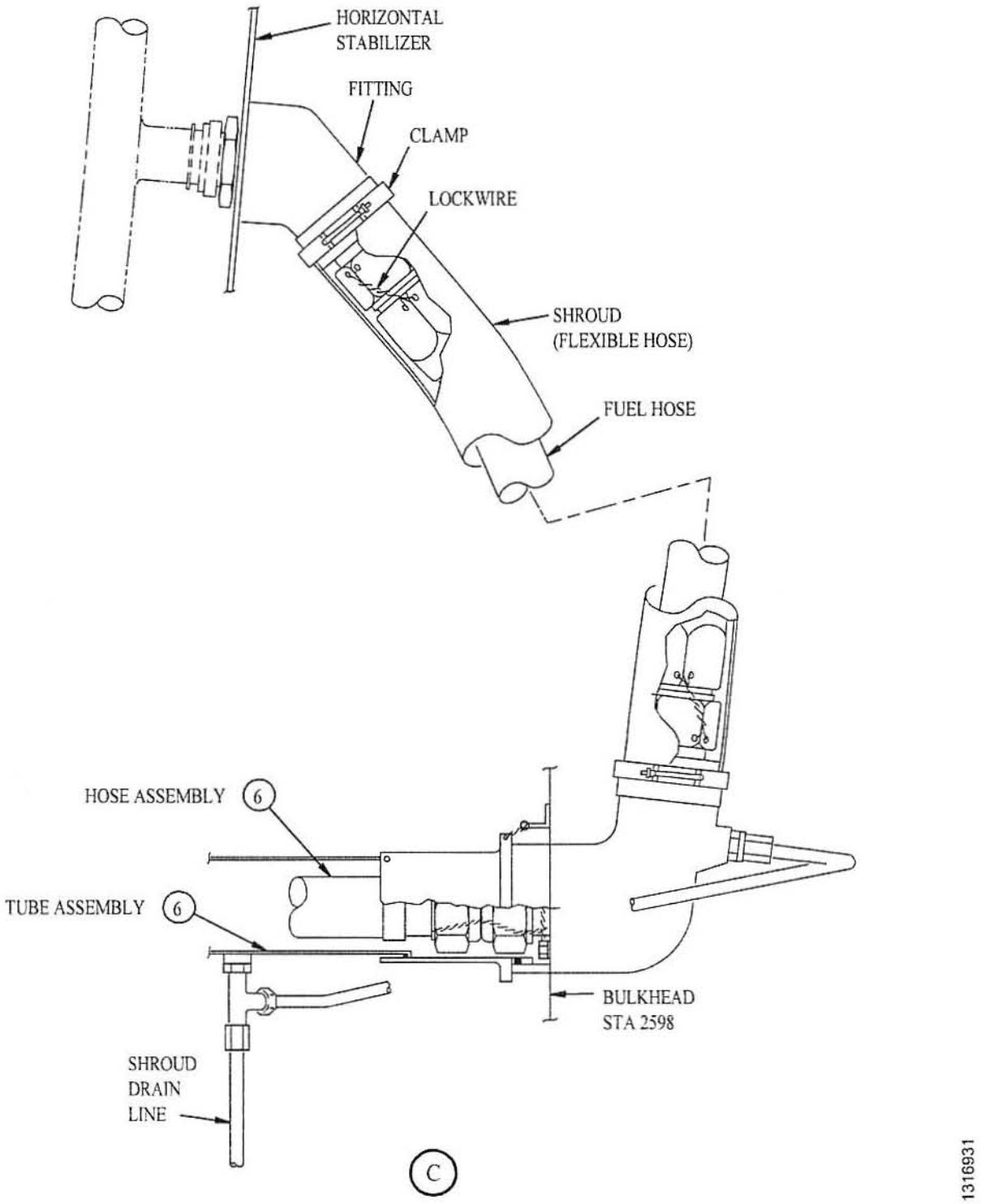


FIGURE 15: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 3 OF 7)

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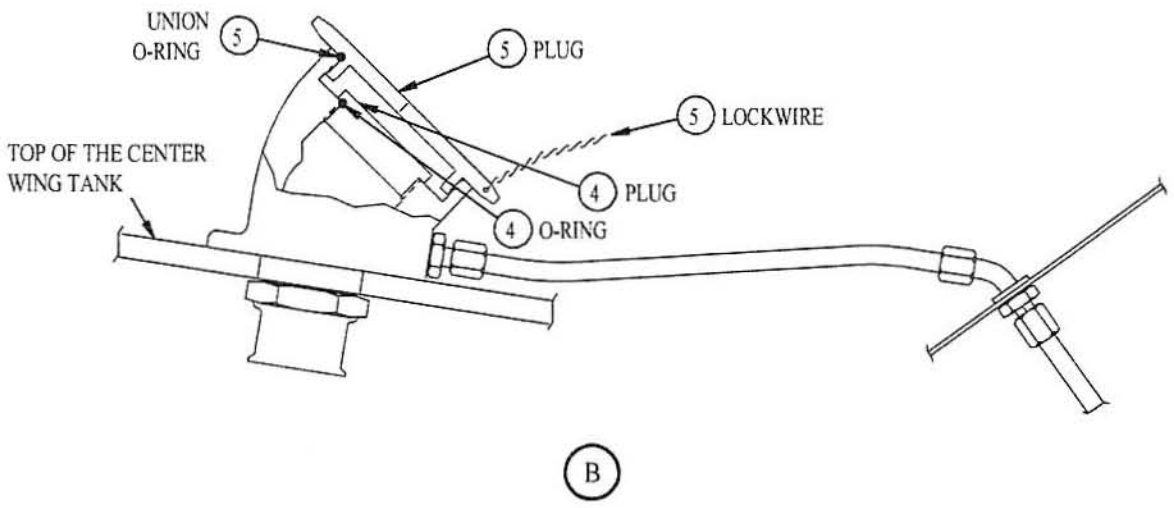
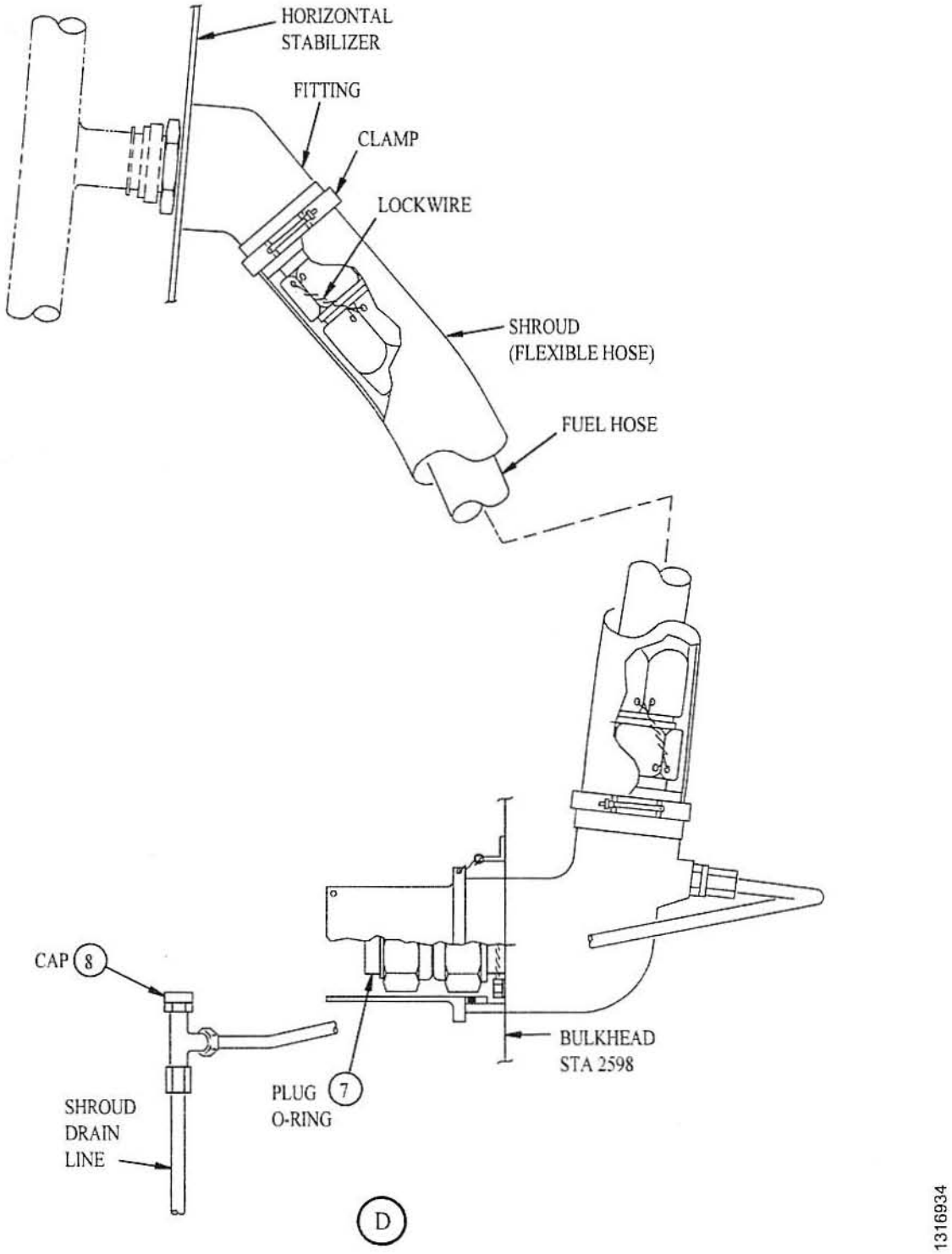


FIGURE 15: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 4 OF 7)

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This Figure applies to Group 2:

FIGURE 15: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 5 OF 7)

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The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

STEP	TASK	NAME	PART NUMBER	QTY	REMOVAL INSTALL P/N REF	REMOVAL DRAWING REF	MORE DATA
1	Remove	Hose Assy	10-60536-25	1	344U1022-100	344U1022	
	Remove	Fitting	344U0000-6	1	344U1022-100	344U1022	
	Remove	Tube Assy	344U1022-10	1	344U1022-100	344U1022	
	Remove	Tube Assy	344U1022-11	1	344U1022-100	344U1022	
	Remove	Tube Assy	344U1022-12	1	344U1022-100	344U1022	
	Remove	Tube Assy	344U1022-13	1	344U1022-100	344U1022	
	Remove	Tube Assy	344U1022-14	1	344U1022-100	344U1022	
	Remove	Tube Assy	344U1022-2	1	344U1022-100	344U1022	
	Remove	Sleeve	344U1022-22	1	344U1022-100	344U1022	
	Remove	Shroud	344U1022-23	1	344U1022-100	344U1022	
	Remove	Tube Assy	344U1022-25	1	344U1022-100	344U1022	
	Remove	Tube Assy	344U1022-26	1	344U1022-100	344U1022	
	Remove	Tube Assy	344U1022-5	3	344U1022-100	344U1022	
	Remove	Tube Assy	344U1022-8	1	344U1022-100	344U1022	
	Remove	Tube Assy	344U1022-9	1	344U1022-100	344U1022	
	Remove	Nut Assy	6305B374S48-03	2	344U1022-100	344U1022	
	Remove	Shroud Connector	6305B381S48-1	1	344U1022-100	344U1022	
	Remove	Coupling Assy	63211-48	1	344U1022-100	344U1022	
	Remove	Spacer	69B92447-39	1	344U1022-100	344U1022	
	Remove	Spacer	69B92447-52	1	344U1022-100	344U1022	
	Remove	Spacer	69B92447-8	1	344U1022-100	344U1022	
	Remove	Clamp, Loop	AN735D48	20	344U1022-100	344U1022	
	Remove	Coupling	AS1712D48	11	344U1022-100	344U1022	
	Remove	Bolt	BACB30NM3HK7	6	344U1022-100	344U1022	
	Remove	Clamp, U-Style	BACC10CC48	3	344U1022-100	344U1022	
	Remove	Clamp	BACC10CC48S	1	344U1022-100	344U1022	
	Remove	Clamp, U-Style	BACC10EW48A	61	344U1022-100	344U1022	
	Remove	Clamp, U-Style	BACC10EW48B	61	344U1022-100	344U1022	
	Remove	Bonding Jumper	BACJ40A20-3	2	344U1022-100	344U1022	
	Remove	Bonding Jumper	BACJ40A20-4	4	344U1022-100	344U1022	
	Remove	Bonding Jumper	BACJ40A20-5	9	344U1022-100	344U1022	
	Remove	Shim, Laminated	BACS40R008E048F	1	344U1022-100	344U1022	
	Remove	Pin	MS24665-144	4	344U1022-100	344U1022	

FIGURE 15: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE (SHEET 6 OF 7)

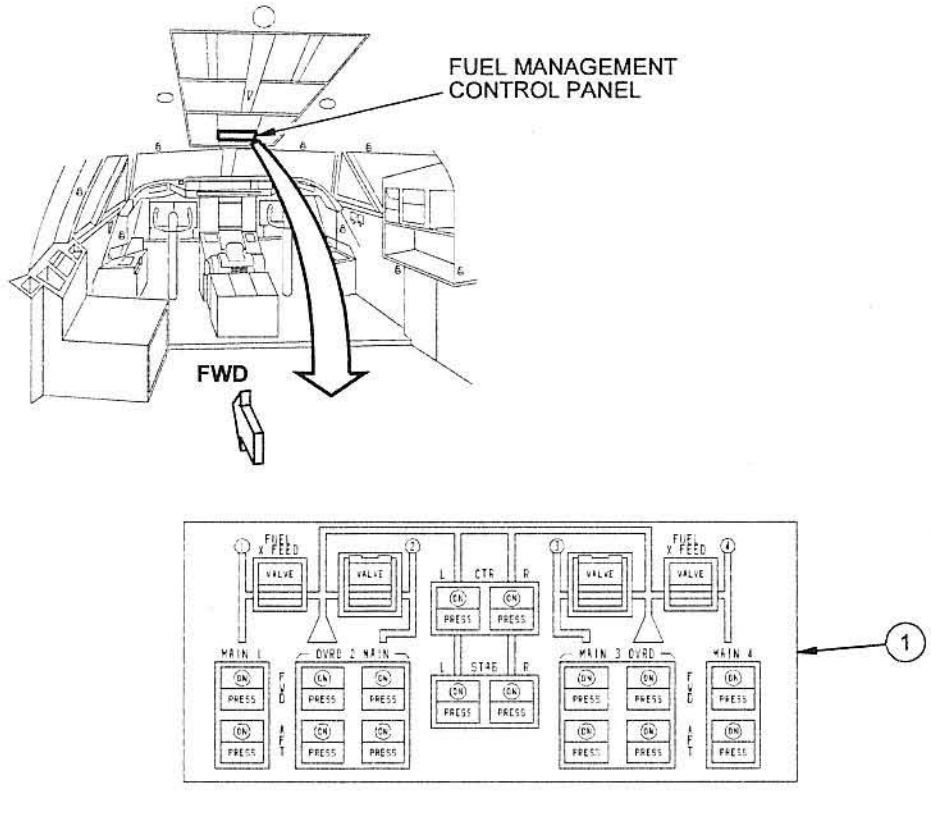
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STEP	TASK	NAME	PART NUMBER	QTY	REMOVAL INSTALL P/N REF	REMOVAL DRAWING REF	MORE DATA
1	Remove	O-Ring	M25988-1-234	2	344U1022-100	344U1022	
	Remove	O-Ring	M25988-1-241	1	344U1022-100	344U1022	
	Remove	O-Ring	M25988-1-338	26	344U1022-100	344U1022	
	Remove	Washer	NAS1523AA3R	6	344U1022-100	344U1022	
2	Remove	Fitting	344U0000-2	1	344U1022-100	344U1022	
	Remove	O-Ring	M25988-1-241	1	344U1022-100	344U1022	
3	Remove	Union	AP7102D32	1	344U1022-100	344U1022	
	Remove	O-Ring	MS29512-32	1	344U1022-100	344U1022	
4	Install	Plug	AS5168W32 (Opt MS21913W32)	1			834B0401-1001
	Install	O-Ring	MS29512-32	1			834B0401-1001
5	Install	Plug	835B0004-1	1			834B0401-1001
	Install	O-Ring	MS29513-241	1			834B0401-1001
	Install	Lockwire	MS20995NC32	1			834B0401-1001
6	Remove	Tube Assy	344U0018-12	1	344U1022-100	344U1022	
	Remove	Hose Assy	10-60536-23	1	344U1022-100	344U1022	
7	Install	Plug	AS5168W32	1			834B0401-1001
	Install	O-Ring	MS29512-32	1			834B0401-1001
8	Install	Cap	BACC14AD06D	1			834B0401-1001

FIGURE 15: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 7 OF 7)

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FIGURE 16: FUEL MANAGEMENT CONTROL PANEL CHANGE



This Figure applies to Group 3:

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

STEP	TASK	NAME	PART NUMBER	QTY	NOTES
1	Remove	Fuel Management Panel Assy (M001540)	233U3100-247	1	(a)

NOTE:	
(a)	Refer to the Electrical, Avionics, and Communication - Installation, 747-24-2305, Service Bulletin.

FIGURE 16: FUEL MANAGEMENT CONTROL PANEL CHANGE
(SHEET 1 OF 1)

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FIGURE 17: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE

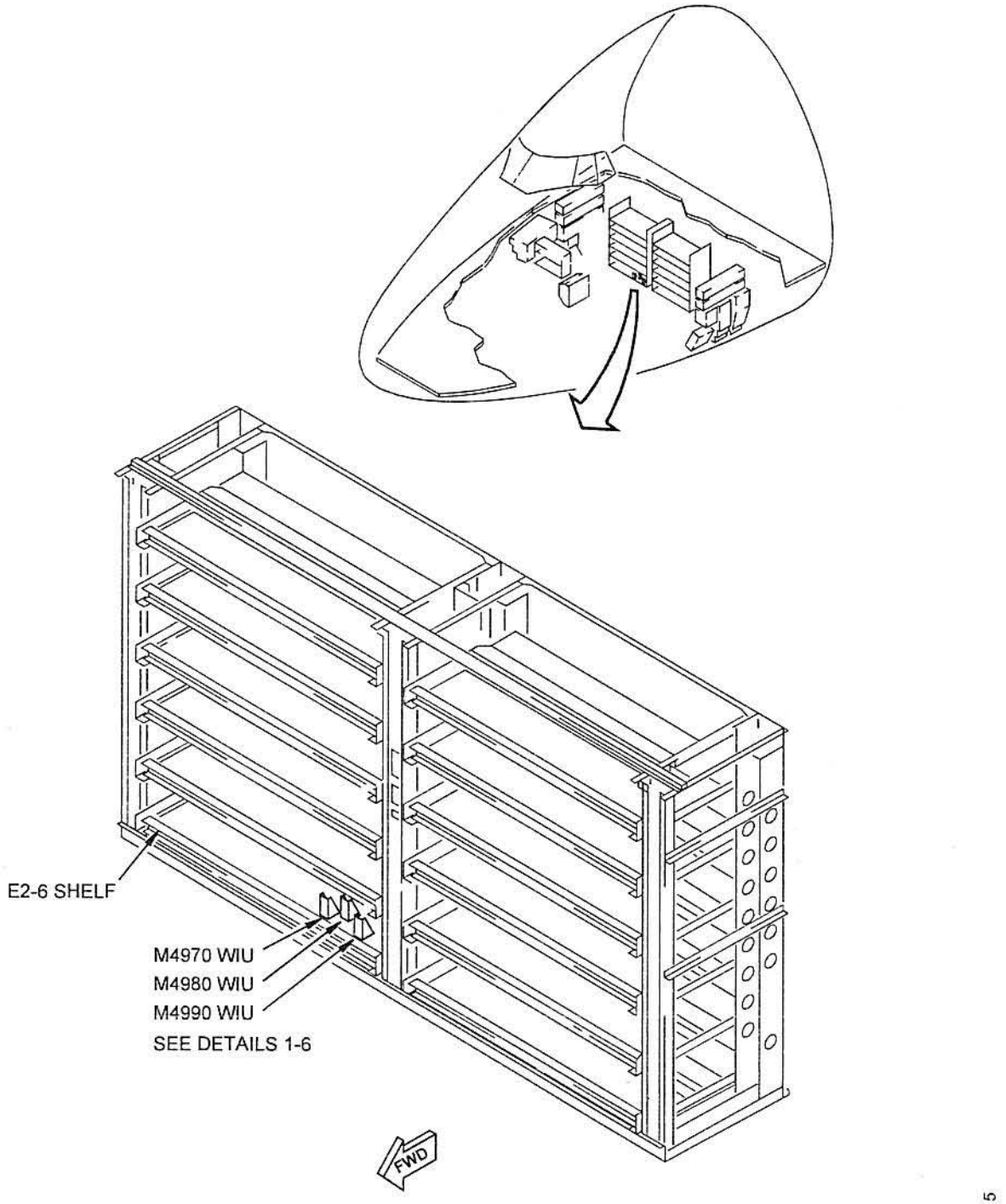


FIGURE 17: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE
(SHEET 1 OF 9)

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The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

ACTION (a)	WIRE NO. (b)	TYPE (c)	FROM		TO		LENGTH (d)	NOTES (e)	SL (f)
			EQUIP. NO.	PIN	EQUIP. NO.	PIN			
DELETE	QL0021-26	RD	DQ9711	B06	GDY1	21	0	-	-
DELETE	QR0021-26	RD	DQ9911	B06	GDY1	21	0	-	-
ADD	QL0008-26	RD	DQ9711	A08	GDY1	7	4.4	-	-
ADD	QC0008-26	RD	DQ9811	A08	GDY1	8	4.3	-	-
ADD	QR0024-26	RD	DQ9911	A08	GDY1	8	4.4	-	-

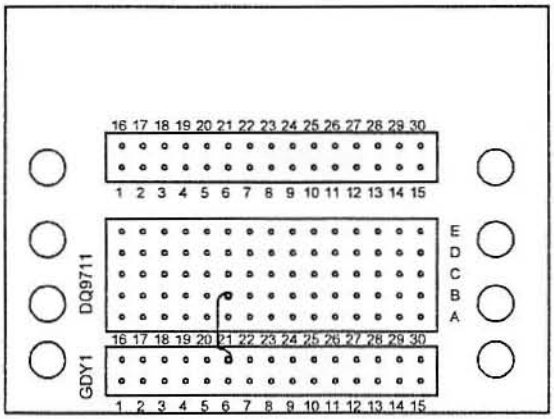
Change the wire wrap wires in the sequence shown in this table. Install the wire along the routing shown on the subsequent pages. Refer to Boeing Standard Wiring Practices Manual 20-72-18.

LEGEND FOR DETAILS 1-6		
(a)	DELETE	Delete this wire from the wire integration unit (WIU).
	ADD	Add this wire to the wire integration unit (WIU)
(b)	Wire number is shown for reference only; the number is not printed on wire wrap wires.	
(c)	RD	Cut from wire 829B9006-36. This wire is BMS 13-46, Type 3, Class 1, AWG 26
(d)	The length of wire is in inches. Use these lengths as aids only. Cut the wire to the correct length during the installation.	
(e)	None	
(f)	Sleeve Code: None	

FIGURE 17: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE
(SHEET 2 OF 9)

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NOTE: Reference: Wire Kit 826B4970



M4970 ROW A (1)

ACTION	WIRE NO.-GAGE	TYP	CONNECTOR	PIN	CONNECTOR	PIN	LENGTH (INCHES)	NOTES
DELETE	QL0021-26	RD	DQ9711	B06	GDY1	21		

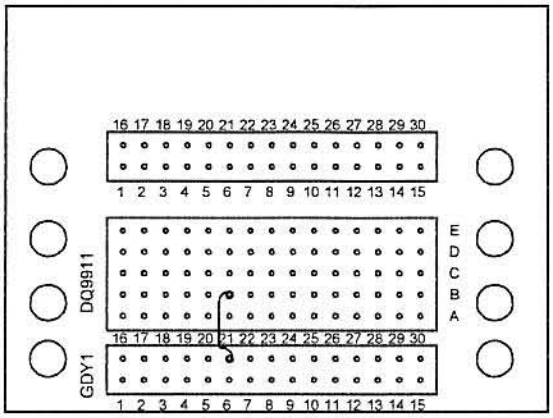
1539916

DETAIL 1

FIGURE 17: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE
(SHEET 3 OF 9)

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NOTE: Reference: Wire Kit 826B4990



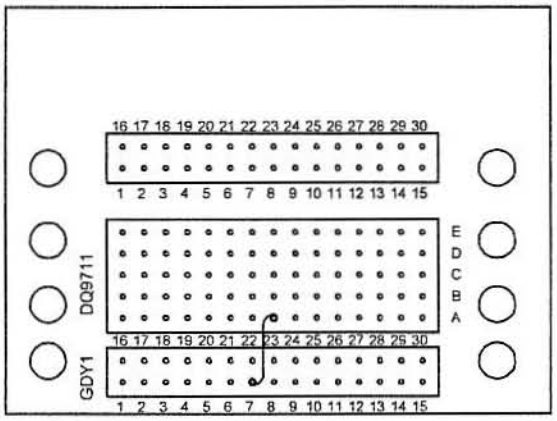
ACTION	WIRE NO.-GAGE	TYP	CONNECTOR	PIN	CONNECTOR	PIN	LENGTH (INCHES)	NOTES
DELETE	QR0021-26	RD	DQ9911	B06	GDY1	21		

1539918

FIGURE 17: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE
(SHEET 4 OF 9)

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NOTE: Reference: Wire Kit 826B4970



ACTION	WIRE NO.-GAGE	TYP	CONNECTOR	PIN	CONNECTOR	PIN	LENGTH (INCHES)	NOTES
ADD	QL0008-26	RD	DQ9711	A08	GDY1	7	4.4	

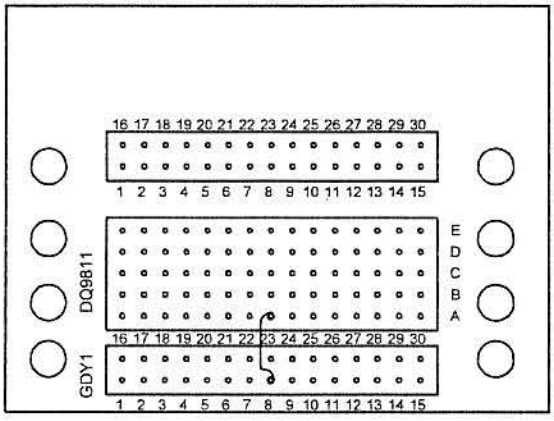
1539919

DETAIL 5

FIGURE 17: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE
(SHEET 5 OF 9)

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NOTE: Reference: Wire Kit 826B4980



ACTION	WIRE NO.-GAGE	TYP	CONNECTOR	PIN	CONNECTOR	PIN	LENGTH (INCHES)	NOTES
ADD	QC0008-26	RD	DQ9811	A08	GDY1	8	4.3	

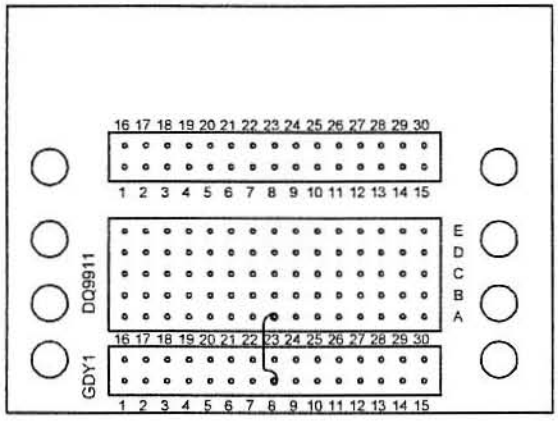
1539920

DETAIL 5

FIGURE 17: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE
(SHEET 6 OF 9)

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NOTE: Reference: Wire Kit 826B4990

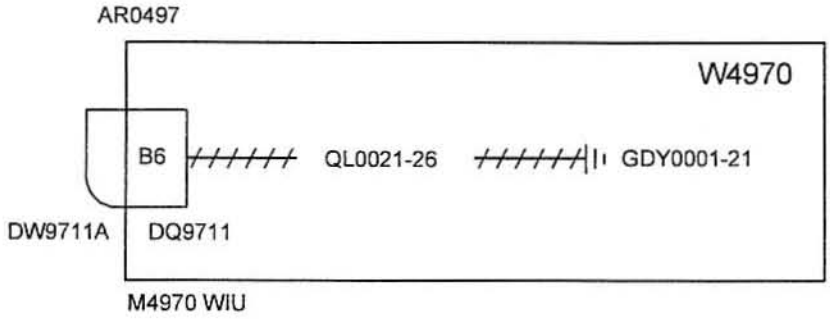


ACTION	WIRE NO.-GAGE	TYP	CONNECTOR	PIN	CONNECTOR	PIN	LENGTH (INCHES)	NOTES
ADD	QR0024-26	RD	DQ9911	A08	GDY1	8	4.3	

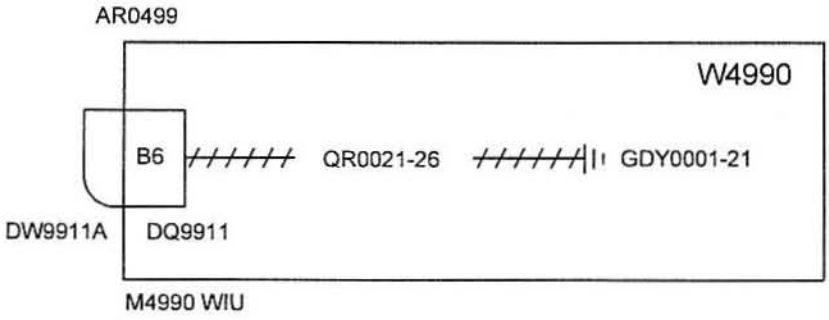
1539921

FIGURE 17: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE
(SHEET 7 OF 9)

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REFERENCE: WIRING DIAGRAM 31-61-12



REFERENCE: WIRING DIAGRAM 31-61-22

1539922

DETAIL 6

FIGURE 17: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE
(SHEET 8 OF 9)

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NOTE: Reference: Wire Kit 826B4970, 826B4980, and 826B4990

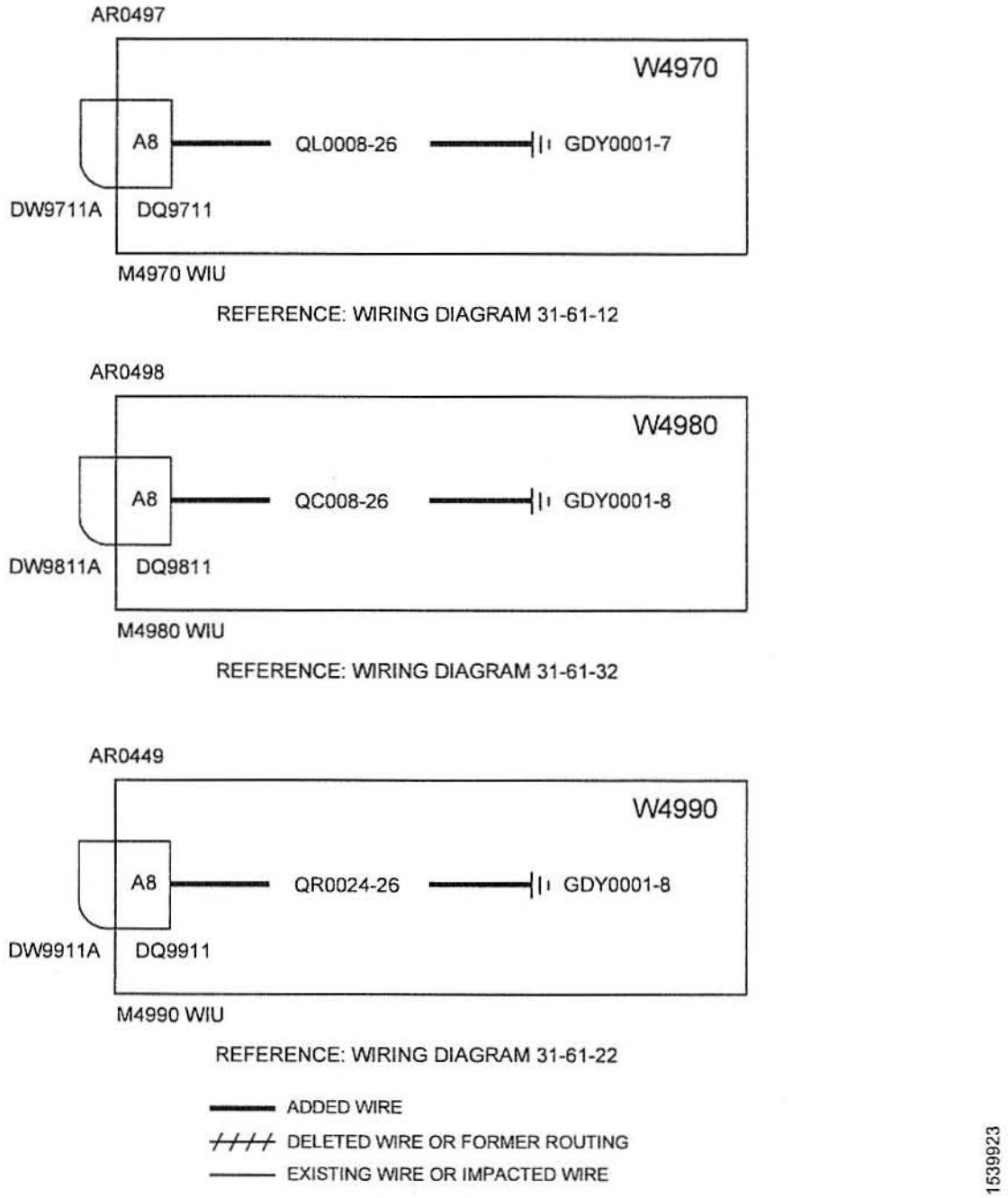
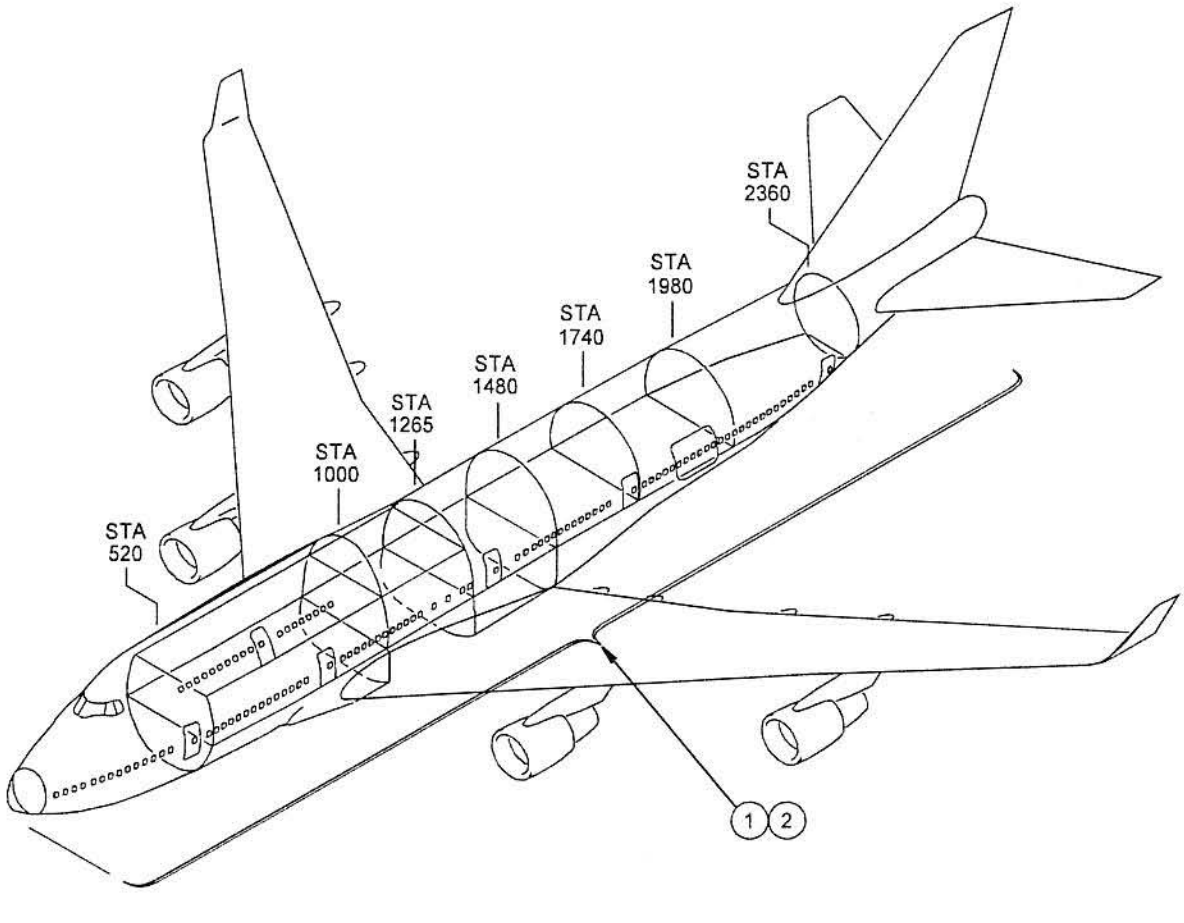


FIGURE 17: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIU WIRE CHANGE
(SHEET 9 OF 9)

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FIGURE 18: REWORK OF WIRE BUNDLES



This Figure applies to Group 3:

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

STEP	TASK	NAME	IDENTIFICATION	MORE DATA
1	Remove	Relay	R7391	Located on P54 panel
2	Rework	Wire Bundles	--	See Table 18.1 for all rework wire bundles. Refer to 747-400 Wiring Diagram Manual - Wire/ Equipment List for additional information. See Wire Bundle Instruction - Revise, 828B6115-1013.

FIGURE 18: REWORK OF WIRE BUNDLES
(SHEET 1 OF 3)

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WIRE BUNDLE	IDENTIFICATION	INSTALL REF	WIRE DIAGRAM
W0007	826B0007-7	828B6115-1013	747-400 WDM 28-21-26
W0076	826B0076-9	828B6115-1013	747-400 WDM 28-21-23
W0144	826B0144-4	828B6115-1013	747-400 WDM 28-21-24
W2018	826B2018-6	828B6115-1013	747-400 WDM 24-51-26 747-400 WDM 24-51-64
W3842	826B3842-15	828B6115-1013	747-400 WDM 28-21-26
W3844	826B3844-20	828B6115-1013	747-400 WDM 28-21-26
W3845	826B3845-16	828B6115-1013	747-400 WDM 28-21-11
W3846	826B3846-14	828B6115-1013	747-400 WDM 28-21-26
W3851	826B3851-13	828B6115-1013	747-400 WDM 28-21-12
W3890	826B3890-5	828B6115-1013	747-400 WDM 28-21-21
W3942	826B3942-23	828B6115-1013	747-400 WDM 28-21-29
W3944	826B3944-15	828B6115-1013	747-400 WDM 28-21-26
W4092	826B4092-3	828B6115-1013	747-400 WDM 28-54-13
W4094	826B4094-6	828B6115-1013	747-400 WDM 24-54-23
W4260	826B4260-18	828B6115-1013	747-400 WDM 28-42-15
W4261	826B4261-18	828B6115-1013	747-400 WDM 28-21-26
W4262	826B4262-17	828B6115-1013	747-400 WDM 28-21-29
W4263	826B4263-15	828B6115-1013	747-400 WDM 28-42-15
W4406	826B4406-2	828B6115-1013	747-400 WDM 28-21-23
W4415	826B4415-3	828B6115-1013	747-400 WDM 28-21-23
W4427	826B4427-11	828B6115-1013	747-400 WDM 28-21-29
W4435	826B4435-1	828B6115-1013	747-400 WDM 28-21-25
W4437	826B4437-13	828B6115-1013	747-400 WDM 28-21-12
W4441	826B4441-15	828B6115-1013	747-400 WDM 28-21-27
W4445	826B4445-1	828B6115-1013	747-400 WDM 28-21-13
W4478	826B4478-11	828B6115-1013	747-400 WDM 28-21-12
W4488	826B4488-12	828B6115-1013	747-400 WDM 28-21-13
W4562	826B4562-14	828B6115-1013	747-400 WDM 28-21-30
W4588	826B4588-9	828B6115-1013	747-400 WDM 28-21-13
W4606	826B4606-5	828B6115-1013	747-400 WDM 28-21-25
W4607	826B4607-4	828B6115-1013	747-400 WDM 28-21-31
W4611	826B4611-7	828B6115-1013	747-400 WDM 28-21-28
W4616	826B4616-1	828B6115-1013	747-400 WDM 28-21-12
W4618	826B4618-4	828B6115-1013	747-400 WDM 28-21-28
W4620	826B4620-1	828B6115-1013	747-400 WDM 28-21-12
W4641	826B4641-5	828B6115-1013	747-400 WDM 28-21-31
W4693	826B4693-11	828B6115-1013	747-400 WDM 28-21-12
W4750	826B4750-17	828B6115-1013	747-400 WDM 28-42-15

FIGURE 18: REWORK OF WIRE BUNDLES
(SHEET 2 OF 3)

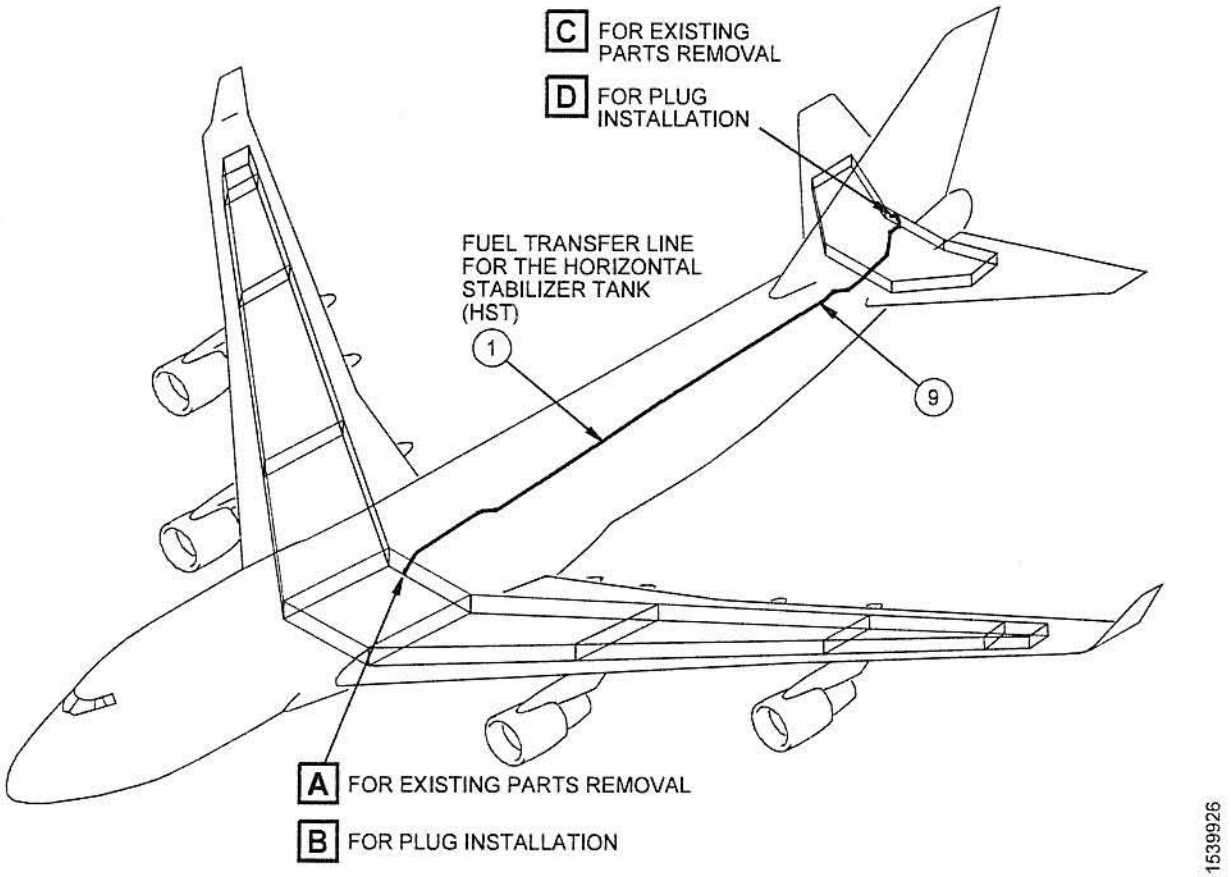
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WIRE BUNDLE	IDENTIFICATION	INSTALL REF	WIRE DIAGRAM
W4751	826B4751-18	828B6115-1013	747-400 WDM 28-21-26
W4753	826B4753-25	828B6115-1013	747-400 WDM 28-42-15
W4758	826B4758-14	828B6115-1013	747-400 WDM 28-21-26
W4760	826B4760-17	828B6115-1013	747-400 WDM 28-21-29
W4764	826B4764-14	828B6115-1013	747-400 WDM 28-43-12
W4768	826B4768-1	828B6115-1013	747-400 WDM 28-21-29
W4774	826B4774-1	828B6115-1013	747-400 WDM 28-21-29
W4970	826B4970-10	828B6115-1013	747-400 WDM 31-61-12
W4980	826B4980-12	828B6115-1013	747-400 WDM 31-61-32
W4990	826B4990-10	828B6115-1013	747-400 WDM 31-61-22
W4974	826B4974-1	828B6115-1013	747-400 WDM 28-21-29
W5172	826B5172-1	828B6115-1013	747-400 WDM 28-21-30

FIGURE 18: REWORK OF WIRE BUNDLES
(SHEET 3 OF 3)

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FIGURE 19: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE



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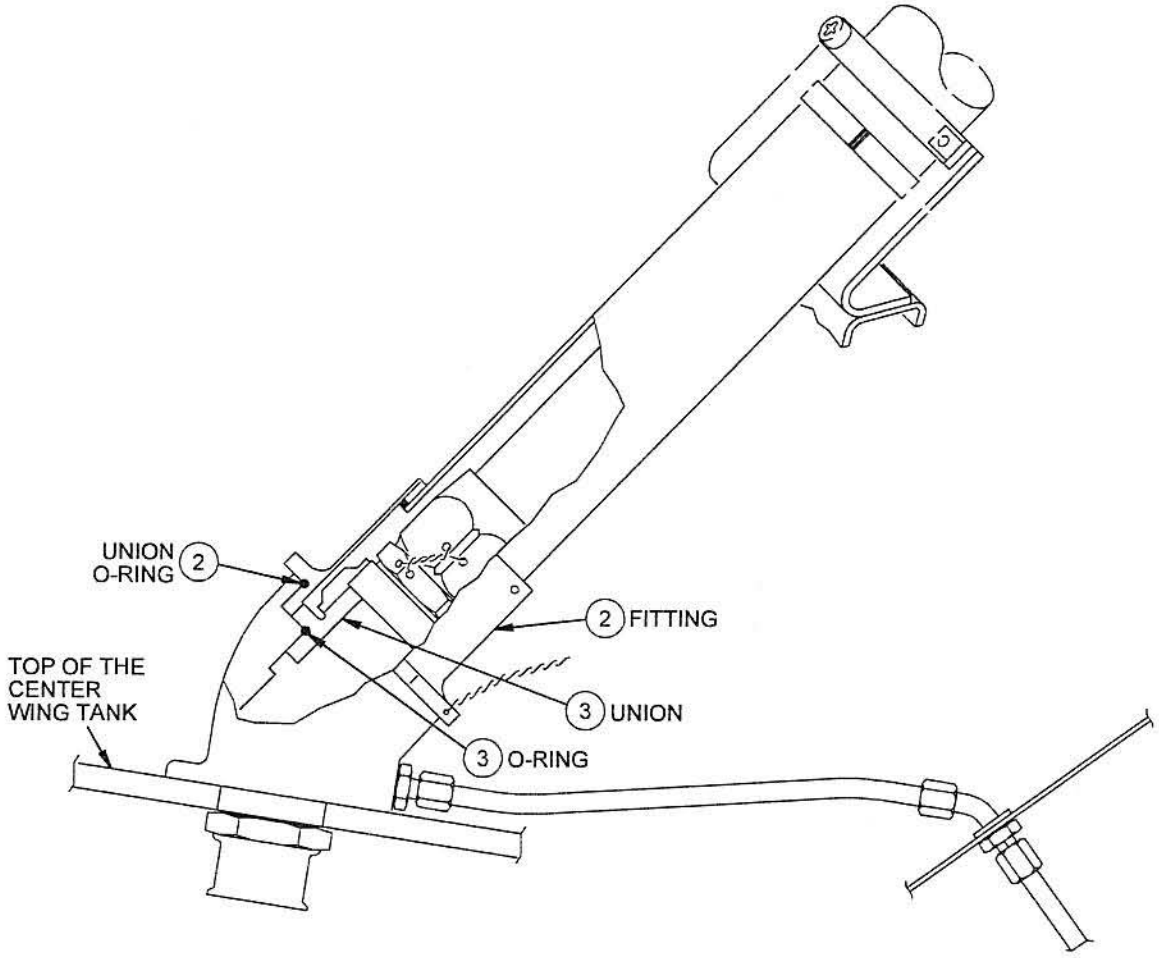


FIGURE 19: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 2 OF 8)

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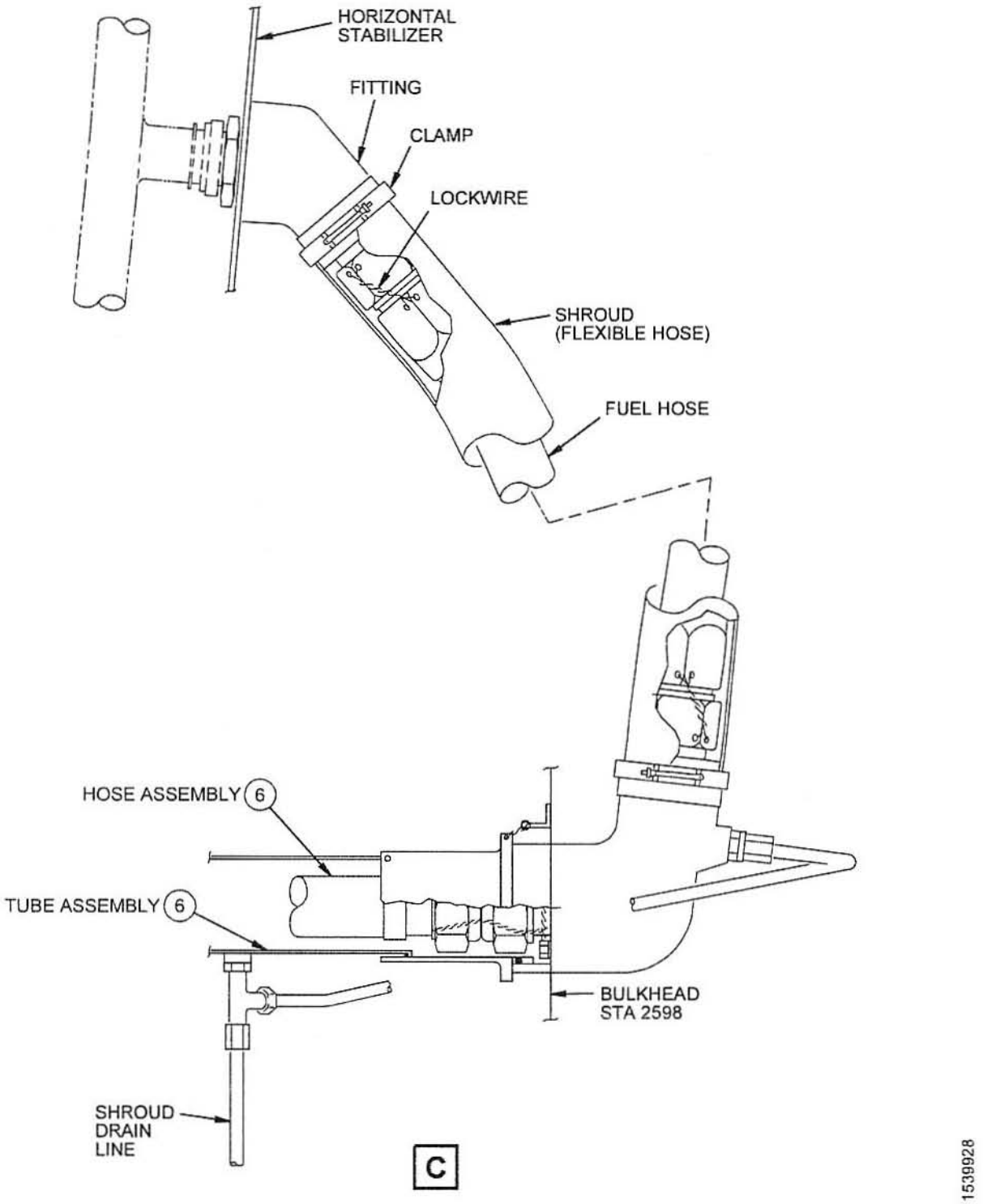


FIGURE 19: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 3 OF 8)

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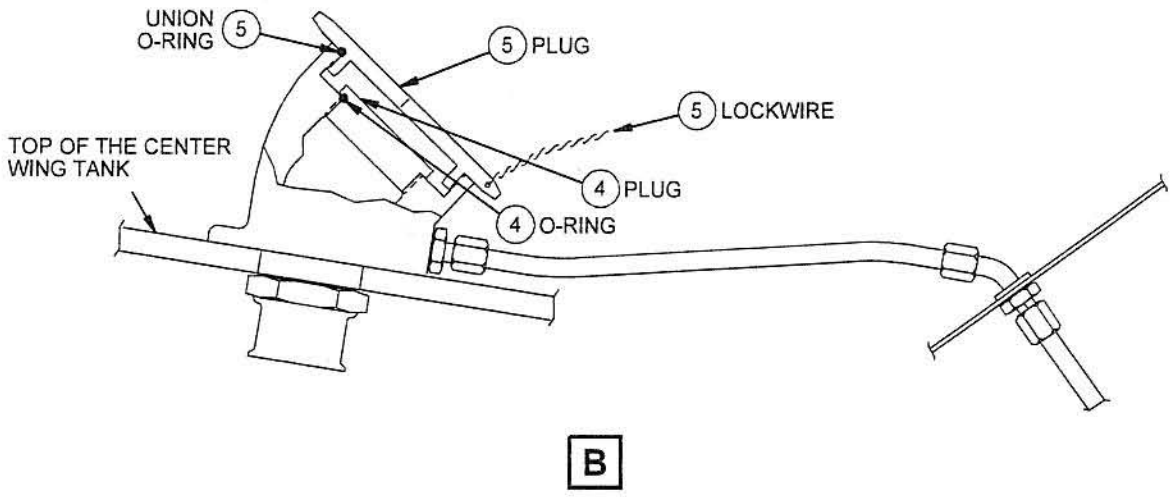
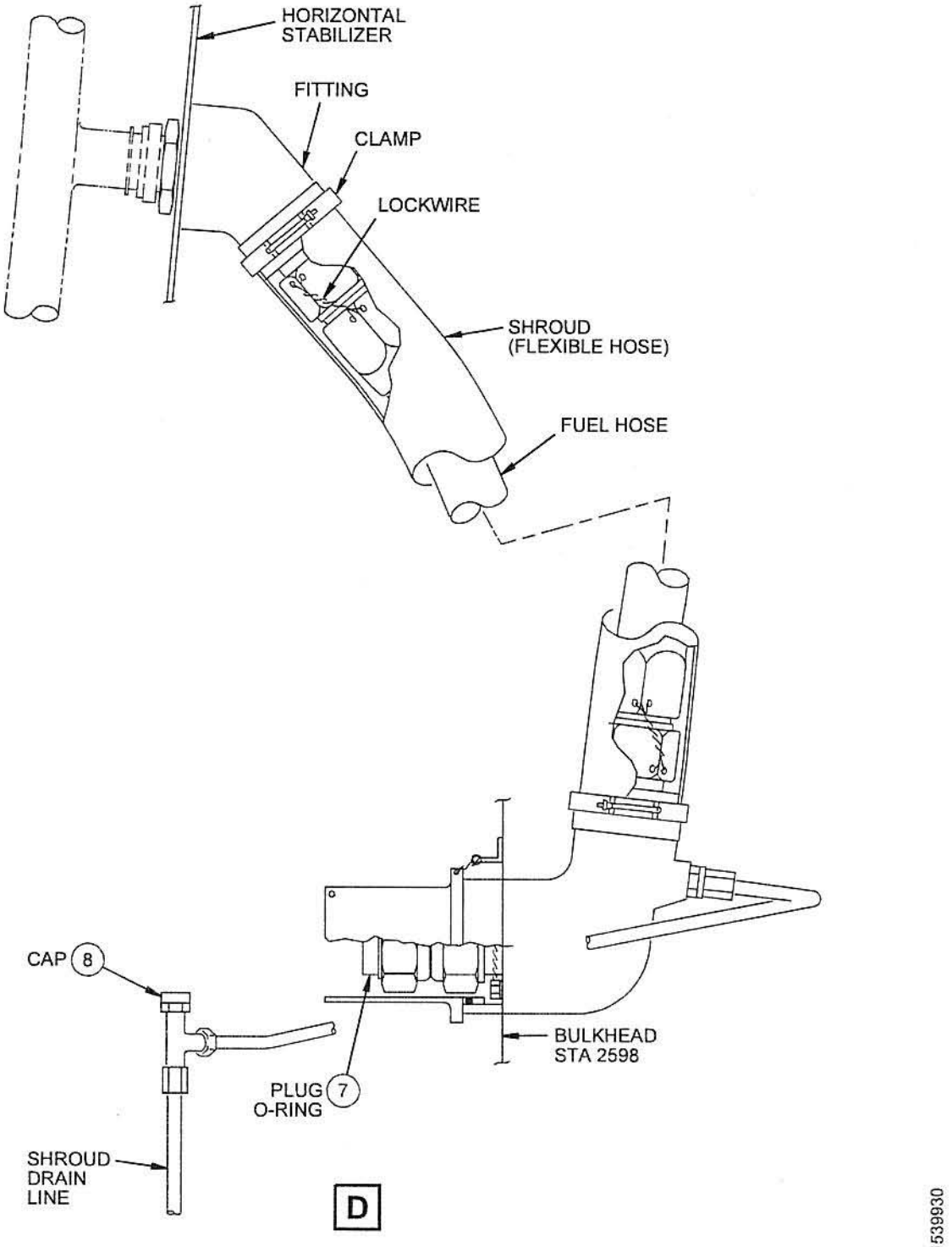


FIGURE 19: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 4 OF 8)



This Figure applies to Group 3:

FIGURE 19: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 5 OF 8)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

STEP	TASK	NAME	IDENTIFICATION	QTY	REMOVAL INSTALL P/N REF	REMOVAL DRAWING REF	PIC SHT REF	INSTALL REF	MORE DATA
1	Remove	Hose Assy	10-60536-25 (opt 10-60536-22)	1	344U1022 -24	344U1022	1		(a)
	Remove	Fitting	344U0000-6	1	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-10	1	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-11	1	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-12	1	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-13	1	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-14	1	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-2	1	344U1022 -24	344U1022	1		(a)
	Remove	Sleeve	344U1022-22	1	344U1022 -24	344U1022	1		(a)
	Remove	Shroud	344U1022-23	1	344U1022 -24	344U1022	2D7		(a)
	Remove	Tube Assy	344U1022-25	1	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-26	1	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-5	3	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-8	1	344U1022 -24	344U1022	1		(a)
	Remove	Tube Assy	344U1022-9	1	344U1022 -24	344U1022	1		(a)
	Remove	Nut Assy	6305B374S48-03	2	344U1022 -24	344U1022	2C7		(a)
	Remove	Shroud Connector	6305B381S48-1	1	344U1022 -24	344U1022	1		(a)
	Remove	Coupling Assy	63211-48	1	344U1022 -24	344U1022	3A5		(a)
	Remove	Spacer	69B92447-39	1	344U1022 -24	344U1022			(a)(b)

FIGURE 19: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE (SHEET 6 OF 8)

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STEP	TASK	NAME	IDENTIFICATION	QTY	REMOVAL INSTALL P/N REF	REMOVAL DRAWING REF	PIC SHT REF	INSTALL REF	MORE DATA
1	Remove	Spacer	69B92447-52	1	344U1022 -24	344U1022			(a)(b)
	Remove	Spacer	69B92447-8	1	344U1022 -24	344U1022	1		(a)(b)
	Remove	Clamp, Loop	AN735D48	20	344U1022 -24	344U1022	1		(a)
	Remove	Coupling	AS1712D48	11	344U1022 -24	344U1022	1		(a)
	Remove	Bolt	BACB30NM3HK7	6	344U1022 -24	344U1022	3		(a)
	Remove	Clamp, U-style	BACC10CC48	3	344U1022 -24	344U1022	1, 2, 3		(a)
	Remove	Clamp	BACC10CC48S	1	344U1022 -24	344U1022			(a)(b)
	Remove	Clamp, U-style	BACC10EW48A	60	344U1022 -24	344U1022	2		(a)
	Remove	Clamp, U-style	BACC10EW48B	60	344U1022 -24	344U1022	2		(a)
	Remove	Bonding Jumper	BACJ40A20-3	2	344U1022 -24	344U1022	2		(a)
	Remove	Bonding Jumper	BACJ40A20-4	4	344U1022 -24	344U1022	1, 2		(a)
	Remove	Bonding Jumper	BACJ40A20-5	9	344U1022 -24	344U1022	1, 2		(a)
	Remove	Shim, Laminated	BACS40R008E048F	1	344U1022 -24	344U1022	1		(a)
	Remove	Pin	MS24665-144	4	344U1022 -24	344U1022	1, 2		(a)
	Remove	O-ring	MS29513-234	2	344U1022 -24	344U1022	1, 2		(a)
	Remove	O-ring	MS29513-241	1	344U1022 -24	344U1022	1, 2		(a)
	Remove	O-ring	MS29513-338	26	344U1022 -24	344U1022	1, 2, 3		(a)
	Remove	Washer	NAS1523AA3R	6	344U1022 -24	344U1022	3		(a)
2	Remove	Fitting	344U0000-2	1	344U1022 -24	344U1022	1		(a)
		O-ring	MS29513-241	1					

FIGURE 19: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE

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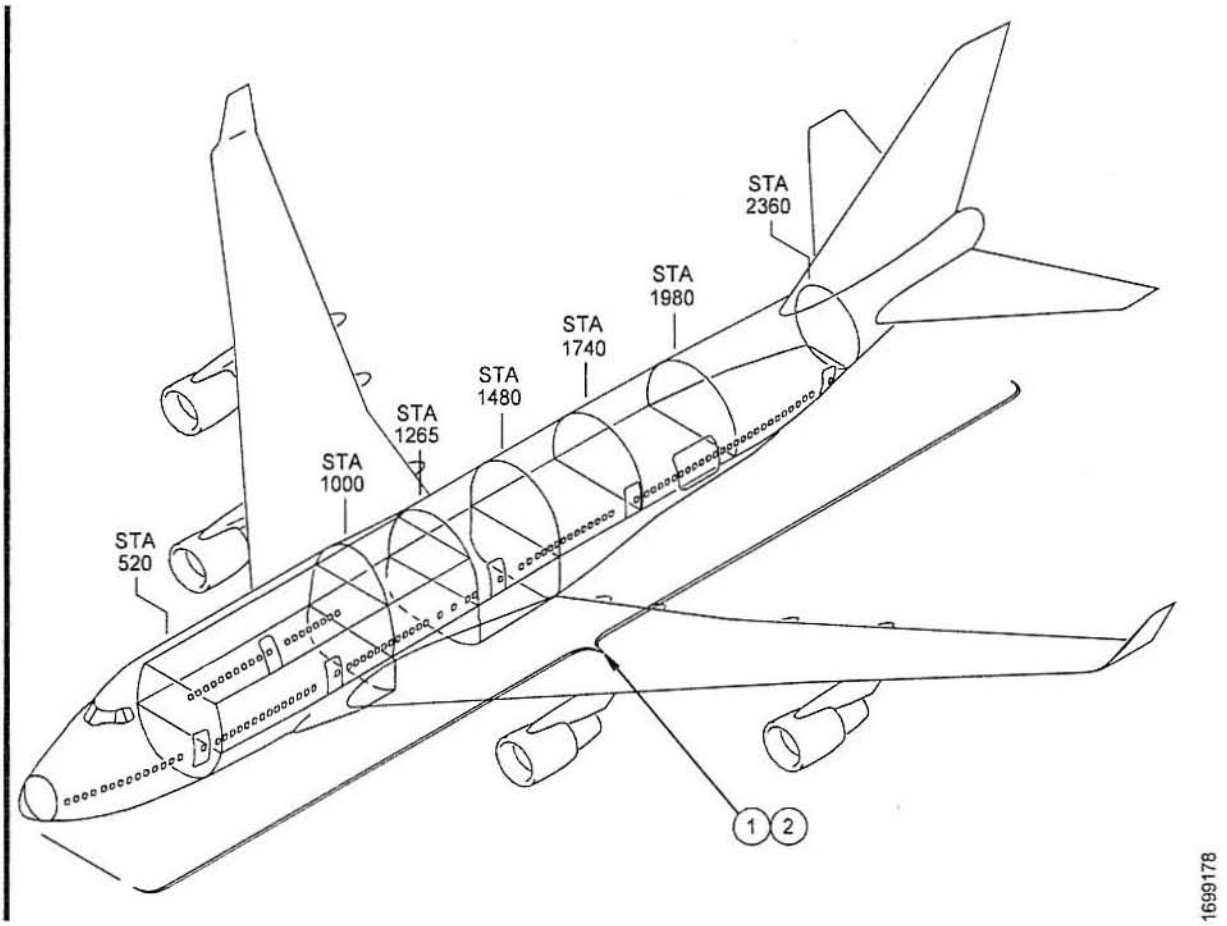
STEP	TASK	NAME	IDENTIFICATION	QTY	REMOVAL INSTALL P/N REF	REMOVAL DRAWING REF	PIC SHT REF	INSTALL REF	MORE DATA
3	Remove	Union	AP7102D32-1 (opt AFP720D3232 or AP7102D32 or MS21900D32)	1	344U1022 -24	344U1022	1		(a)
		O-ring	MS29512-32	1					
4	Install	Plug	AS5168W32 (Opt MS21913W32)	1				834B0401 -1001	(c)
		O-ring	MS29512-32	1					
5	Install	Plug	835B0004-1	1				834B0401 -1001	(c)
		O-ring	MS29513-241	1					
		Lockwire	MS20995NC32	1					
6	Remove	Tube Assy	344U0018-8 (opt 344U0018-5)	1	344U1022 -24	344U1022	1		(a)
		Hose Assy	10-60536-23	1					
7	Install	Plug	AS5168W32	1				834B0401 -1001	(d)
		O-ring	MS29512-32	1					
8	Install	Cap	BACC14AD06D	1				834B0401 -1001	(e)
9	Install	Blanking Plate	65B02637-22	1				834B0401 -1001	(f)
		Gasket	65B02637-28	1					

NOTE	
(a)	Refer to 747-400 AMM 28-17-06 for additional information.
(b)	Quantity used varies.
(c)	on 344U0014-1 fitting.
(d)	on 13218 adapter.
(e)	on MS21912D6 tee.
(f)	Install blanking plate and gasket at STA 2360, WL 195, LBL 8.73 as shown in drawing 148U0002, installation -8, sheet 1.

FIGURE 19: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 8 OF 8)

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FIGURE 20: REWORK OF WIRE BUNDLES



This Figure applies to Group 4:

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

STEP	TASK	NAME	IDENTIFICATION	MORE DATA
1	Remove	Relay	R7391	Located on P54 panel
2	Rework	Wire Bundles	--	See Table 20.1 for all rework wire bundles. Refer to 747-400 Wiring Diagram Manual - Wire/ Equipment List for additional information. See Wire Bundle Instruction - Revise, 828B6115-1018.

FIGURE 20: REWORK OF WIRE BUNDLES
(SHEET 1 OF 3)

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TABLE 20.1

WIRE BUNDLE	IDENTIFICATION	INSTALL REF	WIRE DIAGRAM
W0007	826B0007-7	828B6115-1018	747-400 WDM 28-21-26
W0076	826B0076-9	828B6115-1018	747-400 WDM 28-21-23
W0144	826B0144-4	828B6115-1018	747-400 WDM 28-21-24
W2018	826B2018-6	828B6115-1018	747-400 WDM 24-51-26 747-400 WDM 24-51-64
W3842	826B3842-15	828B6115-1018	747-400 WDM 28-21-26
W3844	826B3844-20	828B6115-1018	747-400 WDM 28-21-26
W3845	826B3845-16	828B6115-1018	747-400 WDM 28-21-11
W3846	826B3846-14	828B6115-1018	747-400 WDM 28-21-26
W3851	826B3851-13	828B6115-1018	747-400 WDM 28-21-12
W3890	826B3890-5	828B6115-1018	747-400 WDM 28-21-21
W3942	826B3942-23	828B6115-1018	747-400 WDM 28-21-29
W3944	826B3944-15	828B6115-1018	747-400 WDM 28-21-26
W4092	826B4092-3	828B6115-1018	747-400 WDM 28-54-13
W4094	826B4094-6	828B6115-1018	747-400 WDM 24-54-23
W4260	826B4260-18	828B6115-1018	747-400 WDM 28-42-15
W4261	826B4261-18	828B6115-1018	747-400 WDM 28-21-26
W4262	826B4262-17	828B6115-1018	747-400 WDM 28-21-29
W4263	826B4263-15	828B6115-1018	747-400 WDM 28-42-15
W4406	826B4406-2	828B6115-1018	747-400 WDM 28-21-23
W4415	826B4415-3	828B6115-1018	747-400 WDM 28-21-23
W4427	826B4427-11	828B6115-1018	747-400 WDM 28-21-29
W4435	826B4435-1	828B6115-1018	747-400 WDM 28-21-25
W4437	826B4437-13	828B6115-1018	747-400 WDM 28-21-12
W4441	826B4441-15	828B6115-1018	747-400 WDM 28-21-27
W4445	826B4445-1	828B6115-1018	747-400 WDM 28-21-13
W4478	826B4478-11	828B6115-1018	747-400 WDM 28-21-12
W4488	826B4488-12	828B6115-1018	747-400 WDM 28-21-13
W4562	826B4562-14	828B6115-1018	747-400 WDM 28-21-30
W4588	826B4588-9	828B6115-1018	747-400 WDM 28-21-13
W4606	826B4606-5	828B6115-1018	747-400 WDM 28-21-25
W4607	826B4607-4	828B6115-1018	747-400 WDM 28-21-31
W4611	826B4611-7	828B6115-1018	747-400 WDM 28-21-28
W4616	826B4616-1	828B6115-1018	747-400 WDM 28-21-12
W4618	826B4618-4	828B6115-1018	747-400 WDM 28-21-28
W4620	826B4620-1	828B6115-1018	747-400 WDM 28-21-12
W4641	826B4641-5	828B6115-1018	747-400 WDM 28-21-31
W4693	826B4693-11	828B6115-1018	747-400 WDM 28-21-12

FIGURE 20: REWORK OF WIRE BUNDLES
(SHEET 2 OF 3)

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TABLE 20.1

WIRE BUNDLE	IDENTIFICATION	INSTALL REF	WIRE DIAGRAM
W4750	826B4750-17	828B6115-1018	747-400 WDM 28-42-15
W4751	826B4751-18	828B6115-1018	747-400 WDM 28-21-26
W4753	826B4753-25	828B6115-1018	747-400 WDM 28-42-15
W4758	826B4758-14	828B6115-1018	747-400 WDM 28-21-26
W4760	826B4760-17	828B6115-1018	747-400 WDM 28-21-29
W4764	826B4764-14	828B6115-1018	747-400 WDM 28-43-12
W4768	826B4768-1	828B6115-1018	747-400 WDM 28-21-29
W4774	826B4774-1	828B6115-1018	747-400 WDM 28-21-29
W4970	826B4970-8	828B6115-1018	747-400 WDM 31-61-12
W4980	826B4980-7	828B6115-1018	747-400 WDM 31-61-32
W4990	826B4990-7	828B6115-1018	747-400 WDM 31-61-22
W4974	826B4974-1	828B6115-1018	747-400 WDM 28-21-29
W5172	826B5172-1	828B6115-1018	747-400 WDM 28-21-30

FIGURE 20: REWORK OF WIRE BUNDLES
(SHEET 3 OF 3)

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FIGURE 21: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIRE CHANGE (GROUP 4)

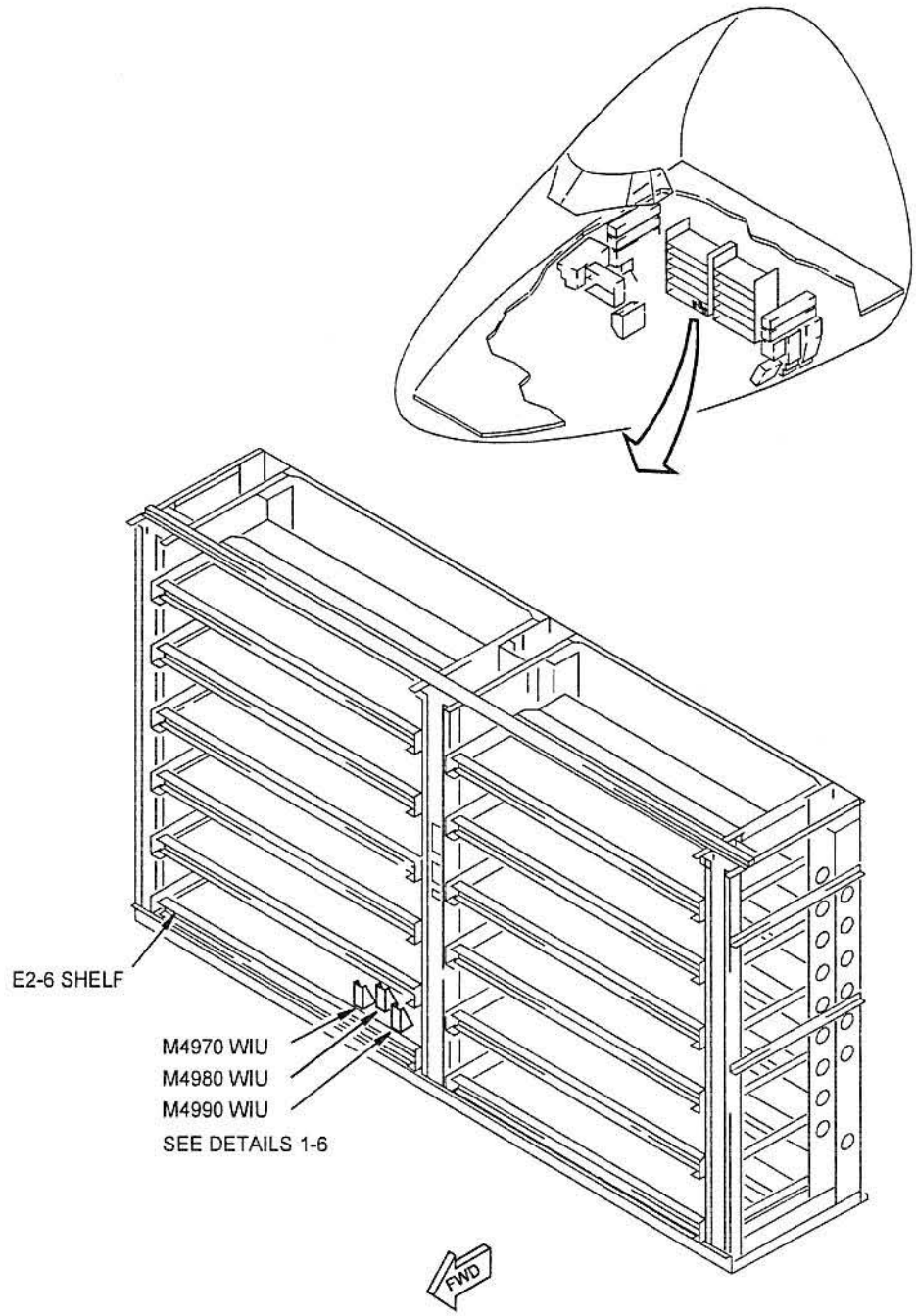


FIGURE 21: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIRE CHANGE (GROUP 4)
(SHEET 1 OF 10)

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The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

ACTION (a)	WIRE NO. (b)	TYPE (c)	FROM		TO		LENGTH (d)	NOTES (e)	SL (f)
			EQUIP. NO.	PIN	EQUIP. NO.	PIN			
DELETE	QL0021-26	RD	DQ9711	B06	GDY1	21	0	-	-
DELETE	QC0021-26	RD	DQ9811	B06	GDY1	21	0	-	-
DELETE	QR0021-26	RD	DQ9911	B06	GDY1	21	0	-	-
ADD	QL0008-26	RD	DQ9711	A08	GDY1	7	4.4	-	-
ADD	QC0053-26	RD	DQ9811	A08	GDY1	8	4.3	-	-
ADD	QR0024-26	RD	DQ9911	A08	GDY1	8	4.3	-	-

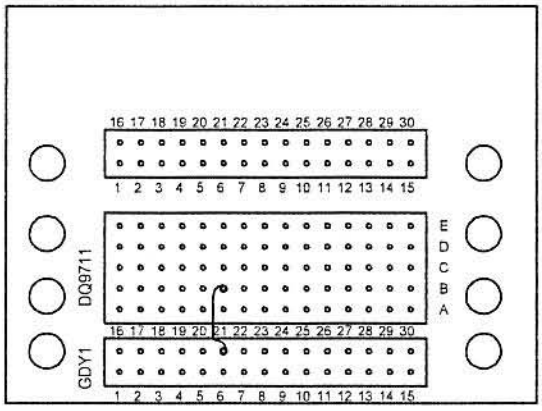
Change the wire wrap wires in the sequence shown in this table. Install the wire along the routing shown on the subsequent pages. Refer to Boeing Standard Wiring Practices Manual 20-72-18.

LEGEND FOR DETAILS 1-6		
(a)	DELETE	Delete this wire from the wire integration unit (WIU).
	ADD	Add this wire to the wire integration unit (WIU)
(b)	Wire number is shown for reference only; the number is not printed on wire wrap wires.	
(c)	RD	Cut from wires 829B9006-37 and 829B9006-4. These wires are BMS 13-46, Type 3, Class 1, AWG 26
(d)	The length of wire is in inches. Use these lengths as aids only. Cut the wire to the correct length during the installation.	
(e)	None	
(f)	Sleeve Code: None	

FIGURE 21: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIRE CHANGE (GROUP 4)
(SHEET 2 OF 10)

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NOTE: Reference: Wire Kit 826B4970



ACTION	WIRE NO.-GAGE	TYP					LENGTH (INCHES)	NOTES
			CONNECTOR	PIN	CONNECTOR	PIN		
DELETE	QL0021-26	RD	DQ9711	B06	GDY1	21		

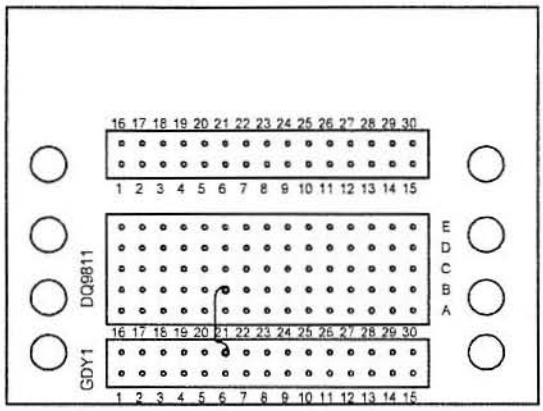
1699201

DETAIL 1

FIGURE 21: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIRE CHANGE (GROUP 4)
(SHEET 3 OF 10)

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NOTE: Reference: Wire Kit 826B4980



ACTION	WIRE NO.-GAGE	TYP	CONNECTOR	PIN	CONNECTOR	PIN	LENGTH (INCHES)	NOTES
DELETE	QC0021-26	RD	DQ9811	B06	GDY1	21		

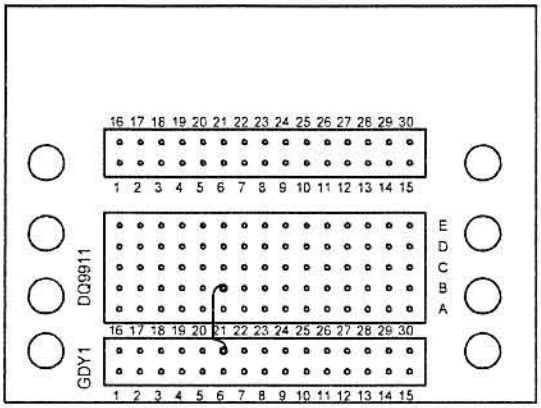
1699203

DETAIL 2

FIGURE 21: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIRE CHANGE (GROUP 4)
(SHEET 4 OF 10)

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NOTE: Reference: Wire Kit 826B4990



ACTION	WIRE NO.-GAGE	TYP					LENGTH (INCHES)	NOTES
			CONNECTOR	PIN	CONNECTOR	PIN		
DELETE	QR0021-26	RD	DQ9911	B06	GDY1	21		

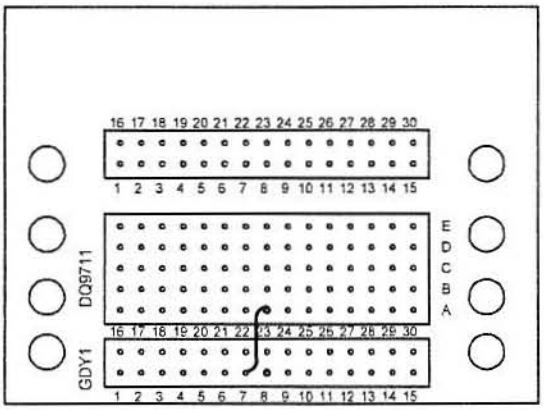
1699204

DETAIL 3

FIGURE 21: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIRE CHANGE (GROUP 4)
(SHEET 5 OF 10)

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NOTE: Reference: Wire Kit 826B4970



ACTION	WIRE NO.-GAGE	TYP					LENGTH (INCHES)	NOTES
			CONNECTOR	PIN	CONNECTOR	PIN		
ADD	QL0008-26	RD	DQ9711	A08	GDY1	7	4.4	

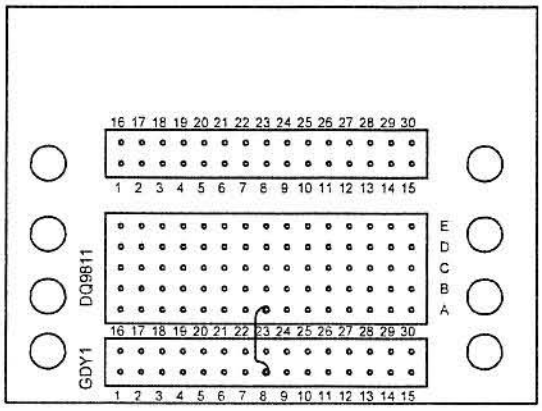
1699206

DETAIL 4

FIGURE 21: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIRE CHANGE (GROUP 4)
(SHEET 6 OF 10)

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NOTE: Reference: Wire Kit 826B4980



M4980 ROW A (1)

ACTION	WIRE NO.-GAGE	TYP					LENGTH (INCHES)	NOTES
			CONNECTOR	PIN	CONNECTOR	PIN		
ADD	QC0053-26	RD	DQ9811	A08	GDY1	8	4.3	

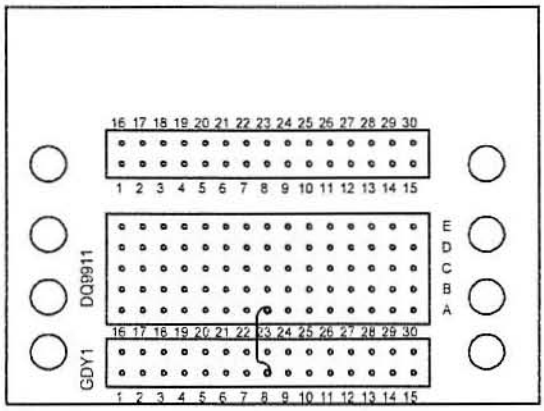
1699208

DETAIL 5

FIGURE 21: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIRE CHANGE (GROUP 4)
(SHEET 7 OF 10)

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NOTE: Reference: Wire Kit 826B4990



ACTION	WIRE NO.-GAGE	TYP	CONNECTOR	PIN	CONNECTOR	PIN	LENGTH (INCHES)	NOTES
ADD	QR0024-26	RD	DQ9911	A08	GDY1	8	4.3	

1699212

DETAIL 6

FIGURE 21: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIRE CHANGE (GROUP 4)
(SHEET 8 OF 10)

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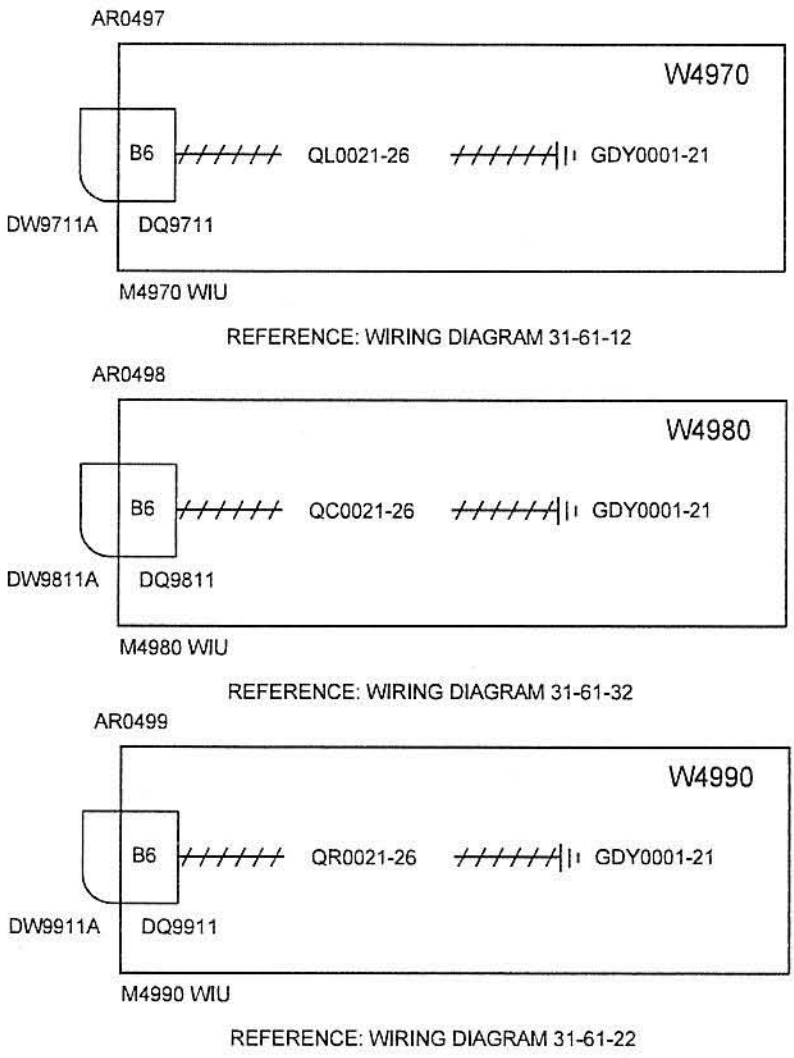


FIGURE 21: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIRE CHANGE (GROUP 4)
(SHEET 9 OF 10)

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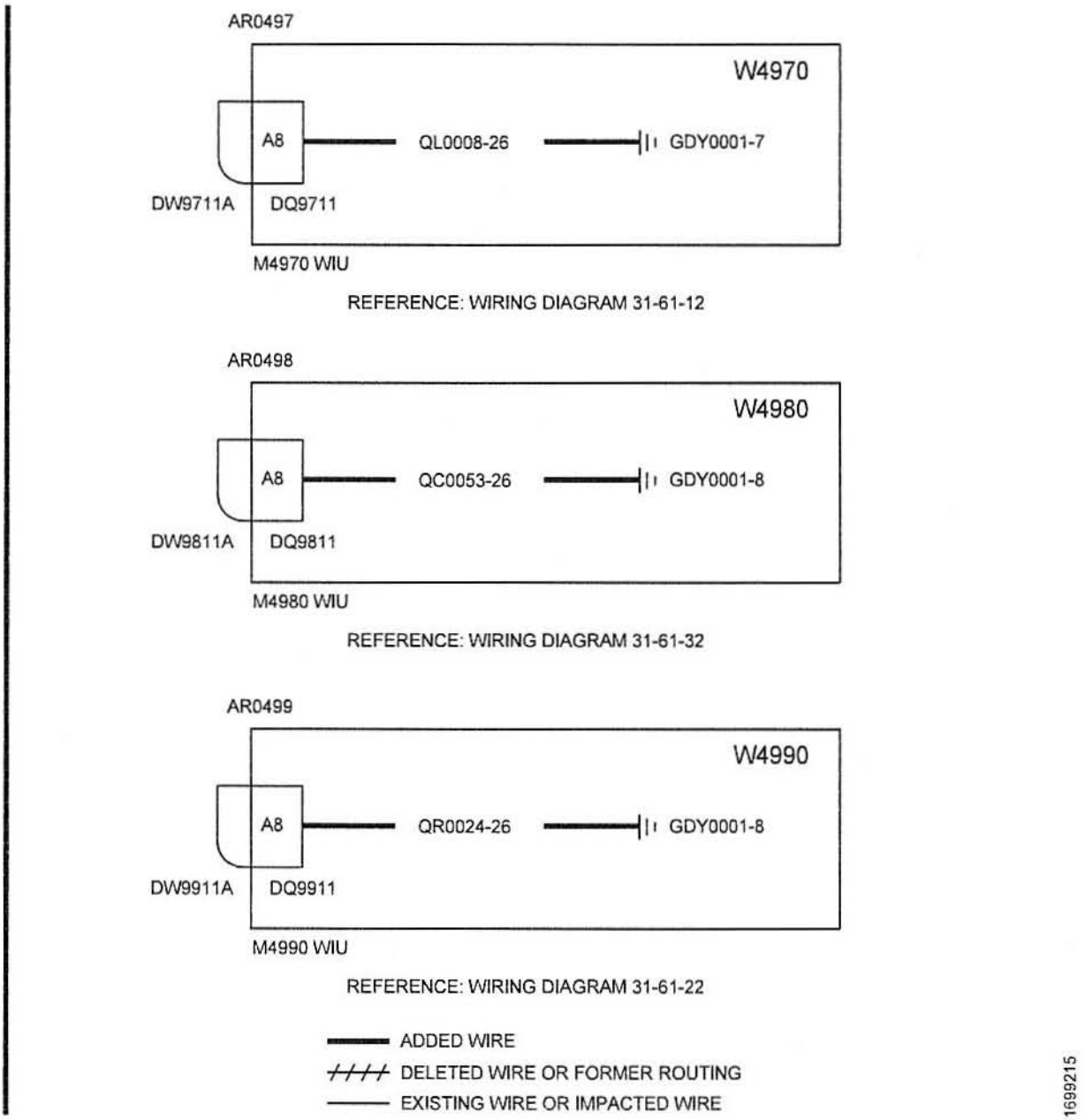


FIGURE 21: DEACTIVATION OF TAIL TANK AT LEFT, CENTER, AND RIGHT EIU - E2-6 WIRE CHANGE (GROUP 4)
(SHEET 10 OF 10)

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FIGURE 22: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE

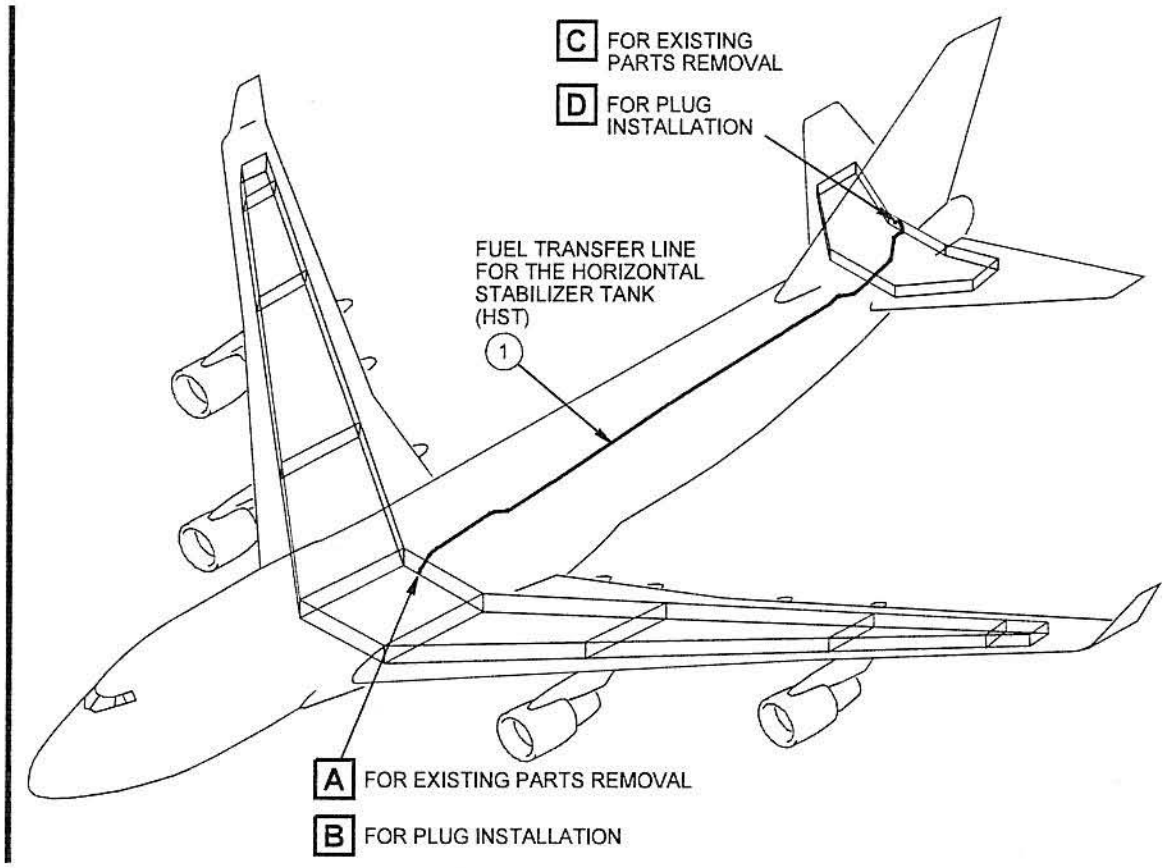


FIGURE 22: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 1 OF 8)

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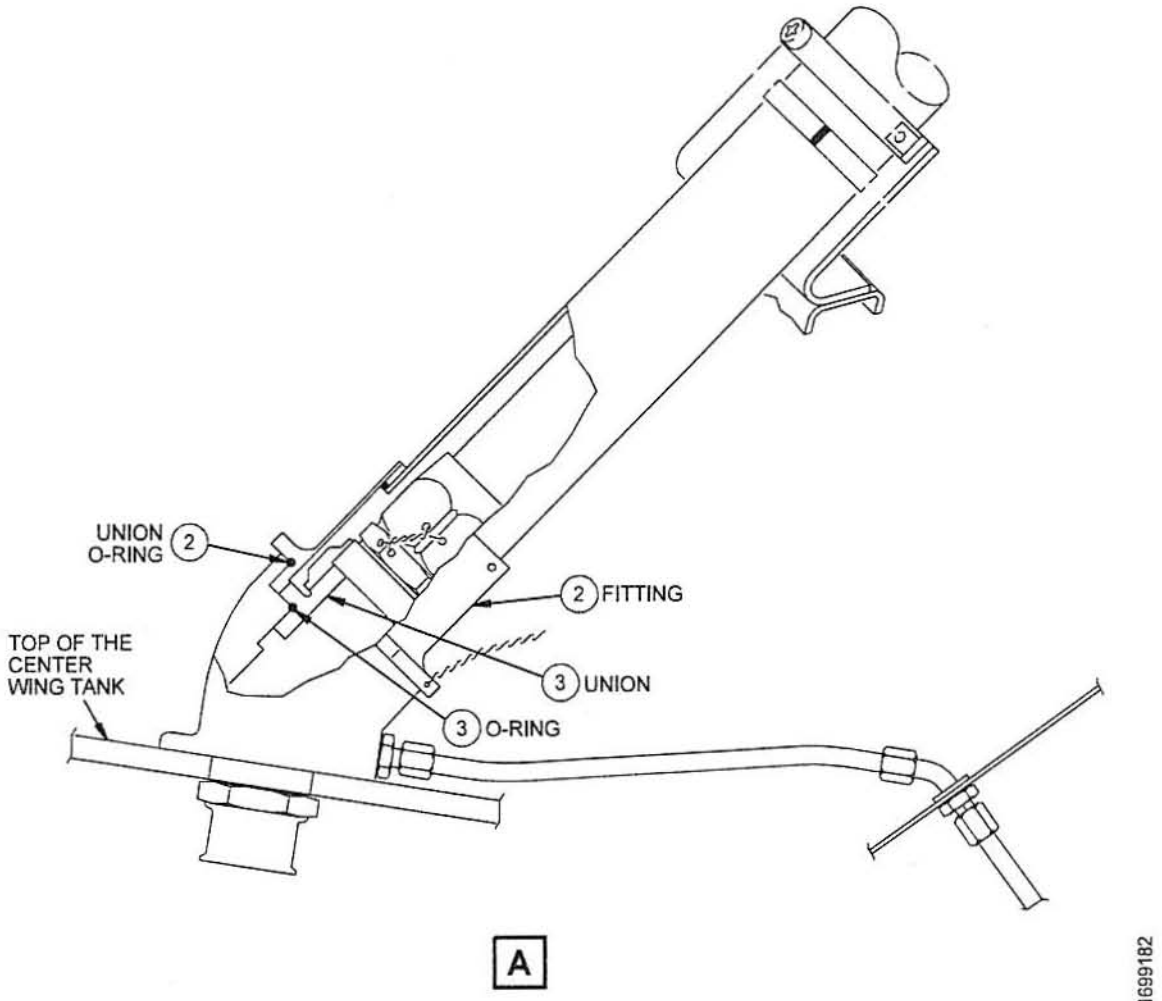


FIGURE 22: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 2 OF 8)

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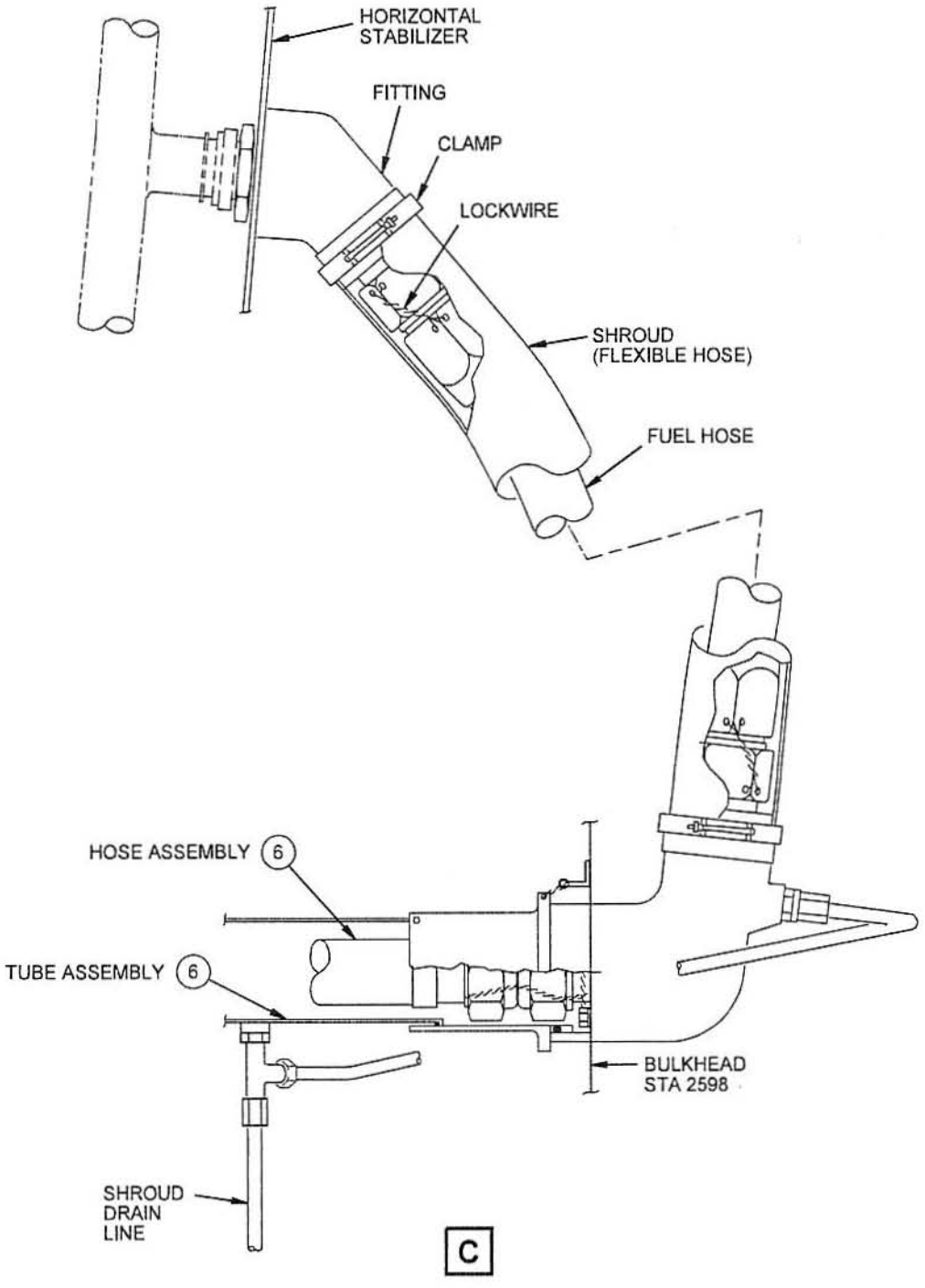


FIGURE 22: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE (SHEET 3 OF 8)

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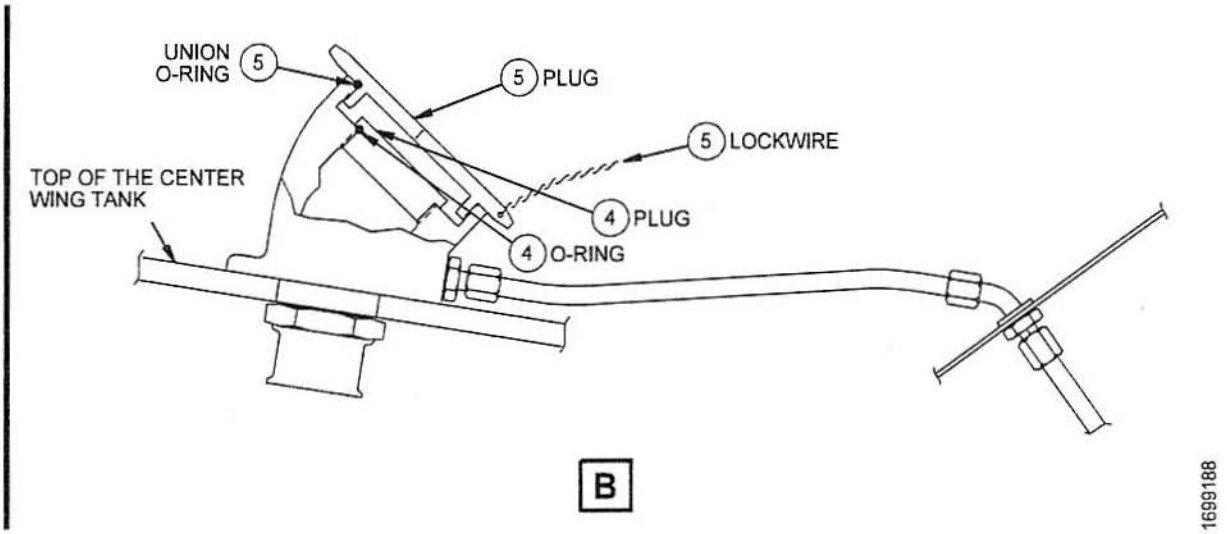
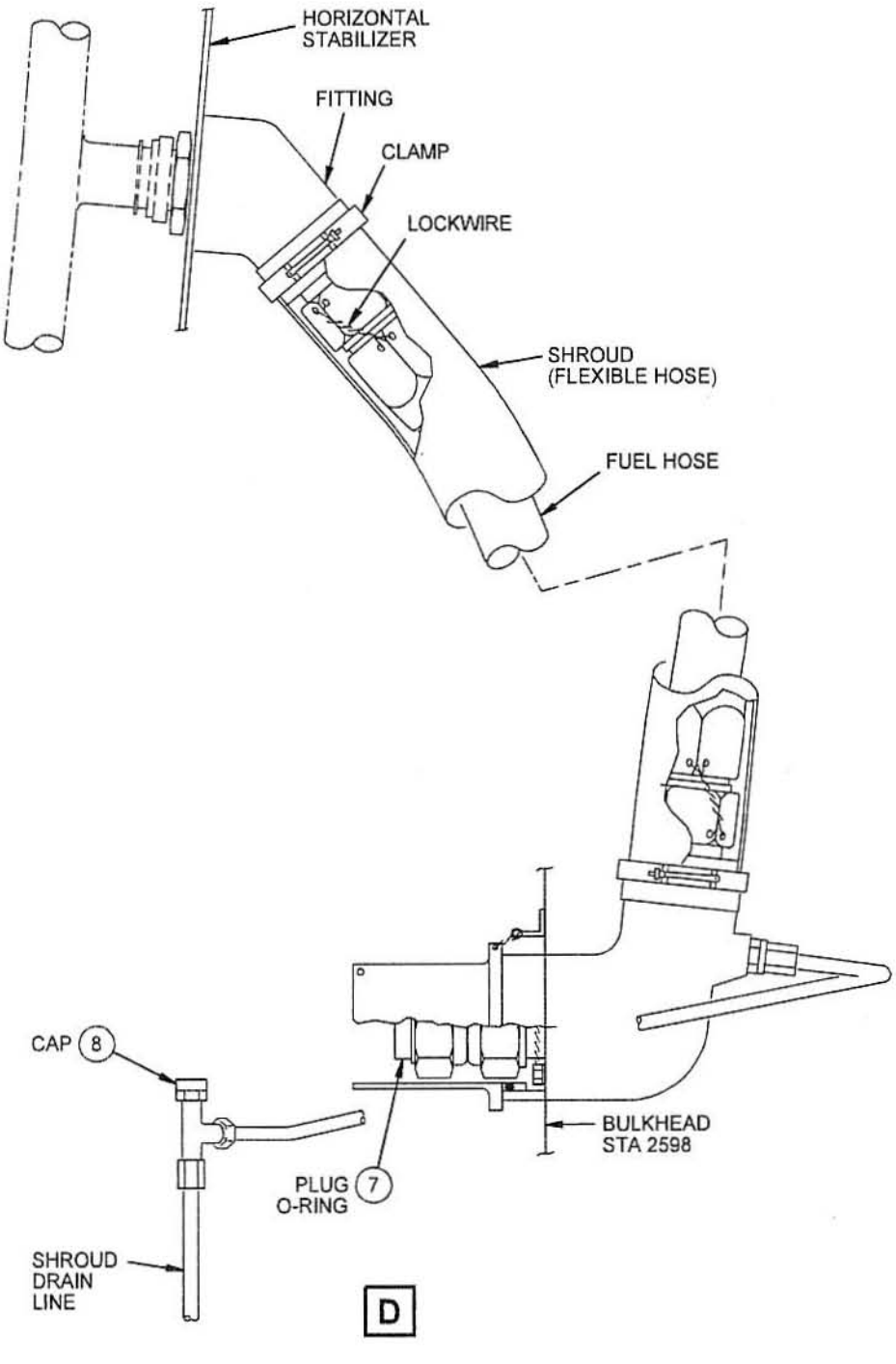


FIGURE 22: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 4 OF 8)

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This Figure applies to Group 4:

FIGURE 22: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 5 OF 8)

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The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

STEP	TASK	NAME	IDENTIFICATION	QTY	REMOVAL INSTALL P/N REF	REMOVAL DRAWING REF	PIC SHT REF	INSTALL REF	MORE DATA
1	Remove	Hose Assy	10-60536-25 (opt 10-60536-22)	1	344U1022 -100	344U1022	1		
	Remove	Fitting	344U0000-6	1	344U1022 -100	344U1022	1		
	Remove	Tube Assy	344U1022-10	1	344U1022 -100	344U1022	1		
	Remove	Tube Assy	344U1022-11	1	344U1022 -100	344U1022	1		
	Remove	Tube Assy	344U1022-12	1	344U1022 -100	344U1022	1		
	Remove	Tube Assy	344U1022-13	1	344U1022 -100	344U1022	1		
	Remove	Tube Assy	344U1022-14	1	344U1022 -100	344U1022	1		
	Remove	Tube Assy	344U1022-2	1	344U1022 -100	344U1022	1		
	Remove	Sleeve	344U1022-22	2	344U1022 -100	344U1022	1		
	Remove	Shroud	344U1022-23	1	344U1022 -100	344U1022	2		
	Remove	Tube Assy	344U1022-25	1	344U1022 -100	344U1022	1		
	Remove	Tube Assy	344U1022-26	1	344U1022 -100	344U1022	1		
	Remove	Tube Assy	344U1022-5	3	344U1022 -100	344U1022	1		
	Remove	Tube Assy	344U1022-8	1	344U1022 -100	344U1022	1		
	Remove	Tube Assy	344U1022-9	1	344U1022 -100	344U1022	1		
	Remove	Nut Assy	6305B374S48-03	2	344U1022 -100	344U1022	2		
	Remove	Shroud Connector	6305B381S48-1	1	344U1022 -100	344U1022	1		
	Remove	Coupling Assy	63211-48	1	344U1022 -100	344U1022	3		
	Remove	Spacer	69B92447-39	A/R	344U1022 -100	344U1022			

FIGURE 22: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 6 OF 8)

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STEP	TASK	NAME	IDENTIFICATION	QTY	REMOVAL INSTALL P/N REF	REMOVAL DRAWING REF	PIC SHT REF	INSTALL REF	MORE DATA
1	Remove	Spacer	69B92447-52	A/R	344U1022 -100	344U1022			
	Remove	Spacer	69B92447-8	A/R	344U1022 -100	344U1022			
	Remove	Clamp, Loop	AN735D48	20	344U1022 -100	344U1022	1,2, 3		
	Remove	Coupling	AS1712D48	11	344U1022 -100	344U1022	1, 2		
	Remove	Bolt	BACB30NM3HK7	6	344U1022 -100	344U1022	3		
	Remove	Clamp, U-style	BACC10CC48	3	344U1022 -100	344U1022	2, 3		
	Remove	Clamp	BACC10CC48S	A/R	344U1022 -100	344U1022	2, 3		(a)
	Remove	Clamp, U-style	BACC10EW48A	61	344U1022 -100	344U1022	1, 2, 3		
	Remove	Clamp, U-style	BACC10EW48B	61	344U1022 -100	344U1022	1, 2, 3		
	Remove	Bonding Jumper	BACJ40A20-3	2	344U1022 -100	344U1022	2, 3		
	Remove	Bonding Jumper	BACJ40A20-4	4	344U1022 -100	344U1022	1, 2		
	Remove	Bonding Jumper	BACJ40A20-5	9	344U1022 -100	344U1022	1, 2, 3		
	Remove	Pin	MS24665-144	4	344U1022 -100	344U1022	1, 2		
	Remove	O-ring	M25988-1-234	2	344U1022 -100	344U1022	1, 2		
	Remove	O-ring	M25988-1-241	1	344U1022 -100	344U1022	2		
	Remove	O-ring	M25988-1-338	26	344U1022 -100	344U1022	1, 2, 3		
	Remove	Washer	NAS1523AA3R	6	344U1022 -100	344U1022	3		
2	Remove	Fitting	344U0000-2	1	344U1022 -100	344U1022	1, 2		
		O-ring	M25988-1-241	1					
3	Remove	Union	AP7102D32-1	1	344U1022 -100	344U1022	1		(b)
		O-ring	MS29512-32	1					
4	Install	Plug	AS5168W32 (Opt MS21913W32)	1				834B0401 -1001	(c)
		O-ring	MS29512-32	1					

FIGURE 22: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 7 OF 8)

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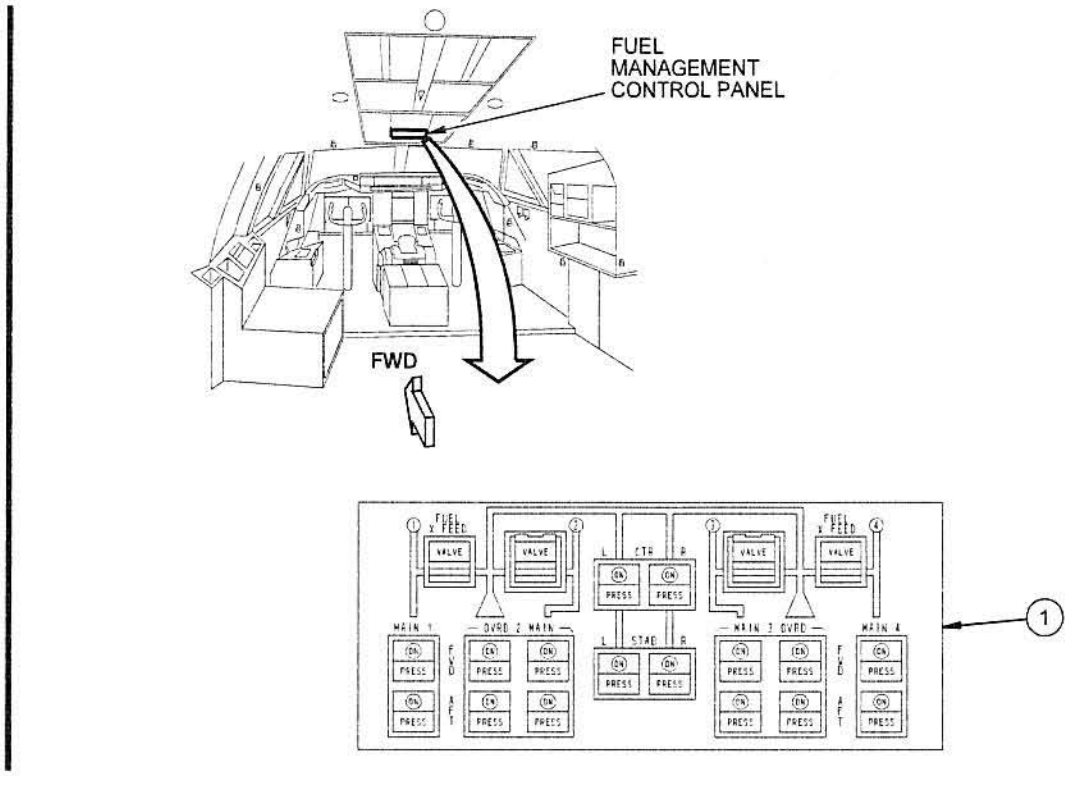
STEP	TASK	NAME	IDENTIFICATION	QTY	REMOVAL INSTALL P/N REF	REMOVAL DRAWING REF	PIC SHT REF	INSTALL REF	MORE DATA
5	Install	Plug	835B0004-1	1				834B0401 -1001	
		O-ring	MS29513-241	1					
		Lockwire	MS20995NC32	1					(d)
6	Remove	Tube Assy	344U0018-12(opt 344U0018-8)	1	344U1022 -100	344U1022	1		(e)
		Hose Assy	10-60536-23	1					
7	Install	Plug	AS5168W32	1				834B0401 -1001	
		O-ring	MS29512-32	1					
8	Install	Cap	BACC14AD06D	1				834B0401 -1001	

NOTE	
(a)	See GN3 on 344U1022 DL for description of part usage.
(b)	MS21900D32, AFP720D3232 and AP7102D32-1 optional to AP7102D32.
(c)	MS21913W32 optional to AS5168W32.
(d)	Quantity used varies.
(e)	344U0018-8 optional to 344U0018-12.

FIGURE 22: REMOVAL OF HORIZONTAL STABILIZER TANK TRANSFER LINE
(SHEET 8 OF 8)

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FIGURE 23: FUEL MANAGEMENT CONTROL PANEL CHANGE



This Figure applies to Group 4:

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one airplane. Each reference drawing listed is a Module Parts List (MPL). The MPL lists all the retrofit drawing and/or production drawings picture sheets to facilitate installation of the identified part, assembly or installation.

STEP	TASK	NAME	PART NUMBER	QTY	NOTES
1	Remove	Fuel Management Panel Assy (M001540)	233U3100-247	1	(a)

NOTE:	
(a)	Refer to the Electrical, Avionics, and Communication - Installation, 747-24 -2323, Service Bulletin.

FIGURE 23: FUEL MANAGEMENT CONTROL PANEL CHANGE
(SHEET 1 OF 1)

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