Polaris Aviation Solutions

B767
Aircraft Maintenance Manual (AMM) Supplement

Effectivity: 673BF

Issue: 03-31-2014
Revision 2

REVISION HISTORY

Date	ATA/Chapter	Revised Content
Revision 2		
03-31-2014	ATA 20 Standard Practices	20-10-38-4 - STANDARD PRACTICES ELECTRICAL COMPONENT BOX– REMOVAL/INSTALLATION (Revised)
	ATA 21 Air Conditioning	21-23-00-1 - CONDITIONED AIR DISTRIBUTION-DESCRIPTION AND OPERATION (Revised) 21-26-00-1 - VENTILATION SYSTEM - DESCRIPTION AND OPERATION (New)
	ATA 23 Communications	23-31-00-1 - PASSENGER ADDRESS SYSTEM - DESCRIPTION AND OPERATION (Revised) 23-31-01-4 - SPEAKERS- REMOVAL/INSTALLATION (New) 23-31-02-4 - SUB WOOFERS- REMOVAL/INSTALLATION (New) 23-34-10-1 - SWITCH PANELS - DESCRIPTION AND OPERATION (New) 23-34-10-2 - SWITCH PANELS – MAINTENANCE PRACTICES (New) 23-70-00-1 - SECURITY SYSTEM BATTERY BACKUP - DESCRIPTION AND OPERATION (New) 23-70-00-4 - SECURITY SYSTEM BATTERY BACKUP - REMOVAL – INSTALLATION (New)
	ATA 24 Electrical Power	24-60-00-4 - TRU – REMOVAL/INSTALLATION (New)

	ATA 25 Equipment/Furnishings	25-60-01-1 - EMERGENCY EQUIPMENT - DESCRIPTION AND OPERATION (New)
	ATA 26 Fire Detection	26-14-00-1 - SMOKE AND FIRE DETECTION - DESCRIPTION AND OPERATION (New)
		26-14-00-4 - SMOKE DETECTOR - REMOVAL/INSTALLATION (New)
		26-14-00-5 - SMOKE AND FIRE DETECTION ADJUSTMENT TESTS (New)
		26-14-01-4 - CENTRAL CONTROL UNIT - REMOVAL AND INSTALLATION (New)
		26-14-02-4 - CONTROL DISPLAY UNIT - REMOVAL AND INSTALLATION (New)
		26-14-03-4 - CONFIGURATION MODULE - REMOVAL AND INSTALLATION (New)
		26-14-04-4 - SMOKE DETECTOR BATTERY - REMOVAL AND INSTALLATION (New)
	ATA 33 Lights	33-23-00-1 - VIP INTERIOR LIGHTING - DESCRIPTION AND OPERATION (New)
		33-23-00-2 - VIP INTERIOR LIGHTING - MAINTENANCE PRACTICES (New)
		33-23-00-5 - VIP INTERIOR LIGHTING - ADJUSTMENT – TEST (New)
	ATA 34 Navigation	34-31-00-5 - MULTI-MODE RECEIVER - ADJUSTMENT/TEST (Revised)
		34-31-01-4 - MULTI-MODE RECEIVER – REMOVAL/INSTALLATION (Revised)
		34-31-05-4 - GPS ANTENNA – REMOVAL/INSTALLATION (New)

	ATA 35 Oxygen	35-21-01-1 - PASSENGER OXYGEN - DESCRIPTION AND OPERATION (New) 35-21-01-5 - PASSENGER OXYGEN - ADJUSTMENT/TEST (New)
	ATA 38 Water/Waste	38-10-00-1 - POTABLE WATER SYSTEM - DESCRIPTION AND OPERATION (New) 38-10-00-5 - POTABLE WATER SYSTEM - ADJUSTMENT/TEST (New) 38-10-01-4 - HEATER TAPE - REMOVAL AND INSTALLATION (New) 38-10-02-4 - IN-LINE HEATER - REMOVAL AND INSTALLATION (New) 38-31-00-1 - WASTE WATER SYSTEM - DESCRIPTION AND OPERATION (New) 38-32-00-1 - TOILET WASTE SYSTEM - DESCRIPTION AND OPERATION (New)
Revision 1		
08-30-2013	ATA 23 Communications	23-33-00-1 - CABIN ENTERTAINMENT-DESCRIPTION AND OPERATION (Revised) 23-33-01-4 - GUEST ROOM MONITOR-REMOVAL/INSTALLATION (New) 23-33-04-4 - CREW LOUNGE MONITOR-REMOVAL/INSTALLATION (New) 23-33-05-4 - STATEROOM MONITOR-REMOVAL/INSTALLATION (New) 23-33-06-4 - PRIVATE LOUNGE MONITOR-

		REMOVAL/INSTALLATION (New) 23-33-07-4 - LOUNGE MONITOR - REMOVAL/INSTALLATION (New) 23-33-08-4 - DINING ROOM MONITOR-REMOVAL/INSTALLATION (New) 23-33-09-4 - CONFERENCE ROOM MONITORS-REMOVAL/INSTALLATION (New)

Boeing 767
Aircraft Maintenance Manual Supplement

INTRODUCTION

NOTE: This manual is in the development process; therefore some ATA's may not be complete at this time.

1. Interior Modification

A. Passengers 35

B. Crew 5

C. Conditioned Air

(1) Modify the ECS distribution ducts to accommodate the interior arrangement.

(2) Modify the vent system to accommodate the shower, galleys and toilets.

D. Communications

(1) Modify the existing passenger address by adding speakers to accommodate the interior arrangement.

(2) Install an Airshow passenger information system.

(3) Install a CCC passenger entertainment system.

E. Electrical Power

(1) Install one 230 V 50 Hz 2000 A frequency converters for cabin power.

(2) Install four 115 V 60 Hz 2000 A frequency converters for cabin power.

(3) Install 400Hz outlets in the fwd and aft galleys.

(4) Install 60Hz outlets throughout the cabin.

(5) Install 50Hz outlets in the Stateroom Lav, Guest Lav and Aft Guest Lav.

F. Interior

(1) Install custom ceiling panels and sidewall panels throughout the cabin to accommodate the interior configuration.

(2) Install custom ceiling panels from approximately STA 366.00 to STA 1310.00.

(3) Install manually controlled window shade panels from approximately STA 366.00 to STA 1434.25.

(4) Install a Crew Lounge from approximately STA 366.00 to STA 426.00 with a three place divan and a single seat.

(5) Install a stateroom lavatory from approximately STA 426.00 to STA 502.00 with a toilet, vanity and shower.

(6) Install a stateroom from approximately STA 502.00 to STA 639.50 with one bed, storage cabinet, closet and two nightstands.

(7) Install a private lounge from approximately STA 639.50 to STA 783.50 with a five place divan with convertible bed, one single seat, one manual hi-lo table and one end cabinet.

(8) Install a guest room from approximately STA 783.50 to STA 950.38 with three two place bunk divans and three manual hi-lo tables.

(9) Install a guest lavatory from approximately STA 950.38 to STA 1027.50 with a toilet, vanity and shower.

(10) Install a lounge seating compartment from approximately STA 1027.50 to STA 1160.50 with one seven place wrap-around divan, one manual hi-lo table and storage cabinets.

(11) Install a dining area from approximately STA 1160.50 to STA 1310.00 with one fixed table, seven single seats and a buffet cabinet.

(12) Install a conference area from approximately STA 1310.00 to STA 1434.25 with two manual hi-lo tables and eight single seats.

(13) Install an aft Airstair per Aerocon Engineering STC ST00587LA.

(14) Install carpeting and vinyl floor covering throughout the cabin.

(15) Install an acoustic insulation package throughout the cabin.

G. Smoke Detection

(1) Install new smoke detection system, consisting of ten zones throughout the cabin to accommodate the interior configuration.

F. Lighting

(1) Install new lighting fixtures for area and effect lighting

(2) Install reading and table lights

(3) Install night lighting

(4) Add additional passenger information signs to accommodate the interior configuration

(5) Modify the existing emergency lighting system to accommodate the interior configuration.

(6) Modify the existing escape path lighting system to accommodate the interior configuration.

G. Oxygen

(1) Install oxygen generators to accommodate the interior configuration.

H. Water and Waste

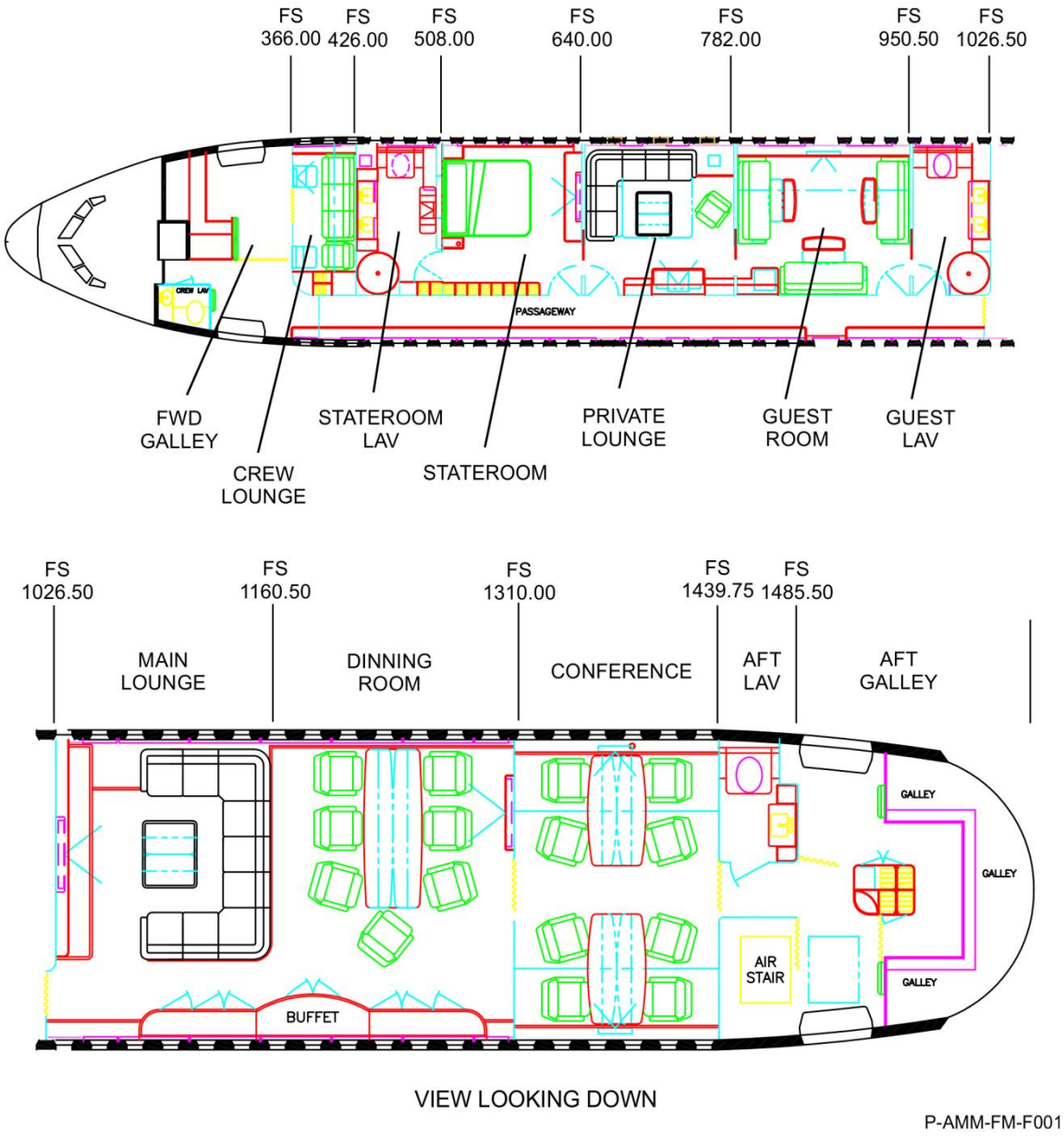
(1) Plumb the new galleys and lavatories to the existing water system.

(2) Plumb the new lavatories to the existing drain system.

(3) Plumb the new toilets to the existing vacuum waste system.

I. Fuselage

(1) Install additional seat track/pallet to accommodate the interior configuration.



Interior Floorplan
Figure 1

ATA

11

Placards and Markings

MULTI-MODE RECEIVER - PLACARDS AND MARKINGS

1. General

A. This section contains markings for the Multi-Mode Receivers.

2. Multi-Mode Receivers Placards and Markings – Maintenance Practices

A. GPS Antenna RF Cables

Placard Title	Location
M9002 GPS ANT RIGHT	Structure adjacent to GPS at Fuselage Station 600
D9004	Structure adjacent to GPS at Fuselage Station 600
M9001 GPS ANT LEFT	Structure adjacent to GPS at Fuselage Station 622
D9003	Structure adjacent to GPS at Fuselage Station 622

B. Right Hand MMR Wiring (E1-5) Shelf

Placard Title	Location
D9002	Adjacent to connector D9002
D9008 R.MMR	On MMR -R tray (replaced D377)
M9012 R. MMR	Underneath MMR -R tray (replaced M158)

C. Left Hand MMR Wiring (E1-3) Shelf

Placard Title	Location
D9001	Adjacent to connector D9001
D9007 L. MMR	On MMR-L tray (replaced D429)
M9012 L. MMR	Underneath MMR-L tray (replaced M156)

D. Center Hand MMR Wiring (E1-4) Shelf

Placard Title	Location
D9009 CTR MMR	On MMR-C tray (replaced D417)
M9013 CTR MMR	Underneath MMR-C tray (replaced M157)

E. Circuit Breaker Panel (P11)

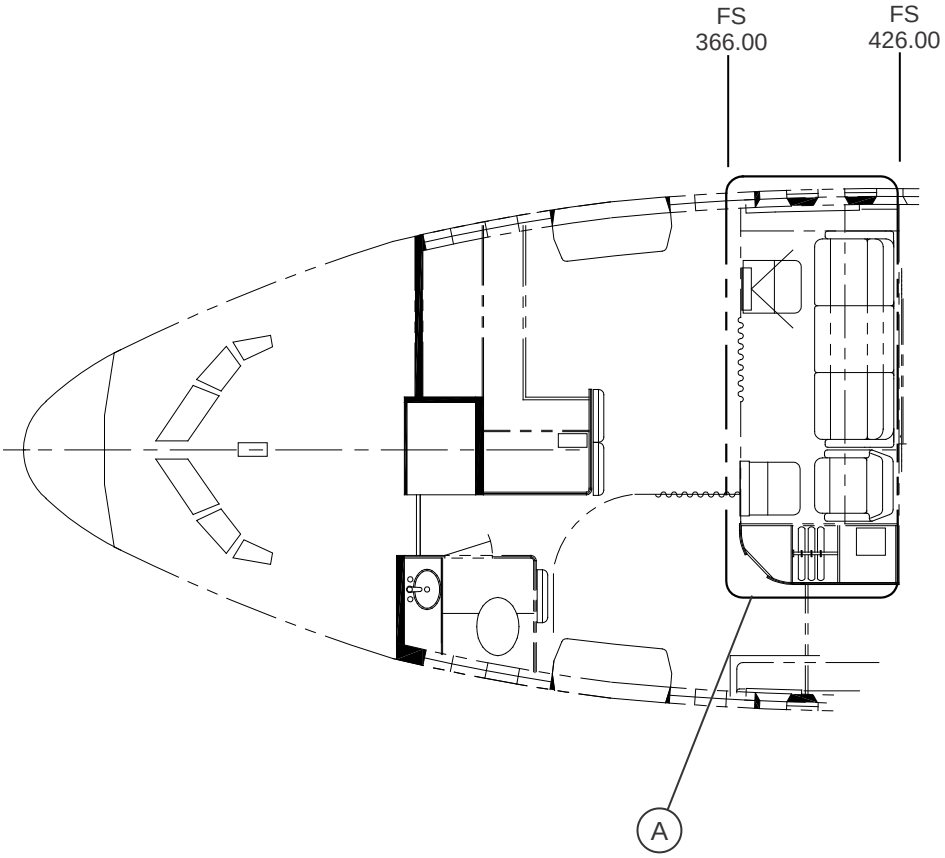
Placard Title	Location
MMR-L	P11-1, E10
MMR-C	P11-1, A2
MMR-R	P11-4, E33

---------- END OF TASK ----------

CREW LOUNGE PLACARDS AND MARKINGS

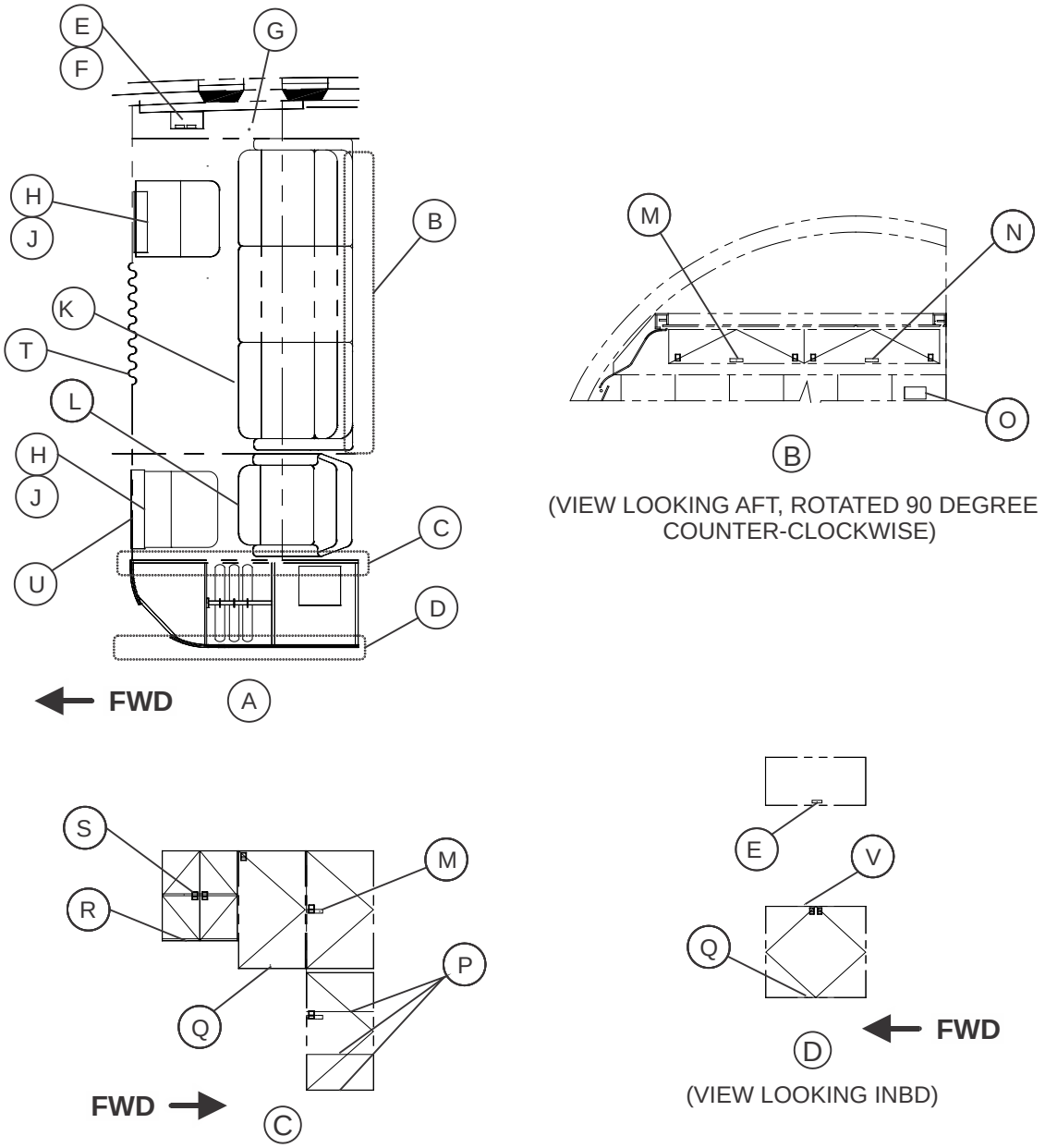
1. General

A. This section contains markings for the crew lounge placards.



P11-38-02-2-F001

Crew Lounge Placards
Figure 201 (Sheet 1 of 3)



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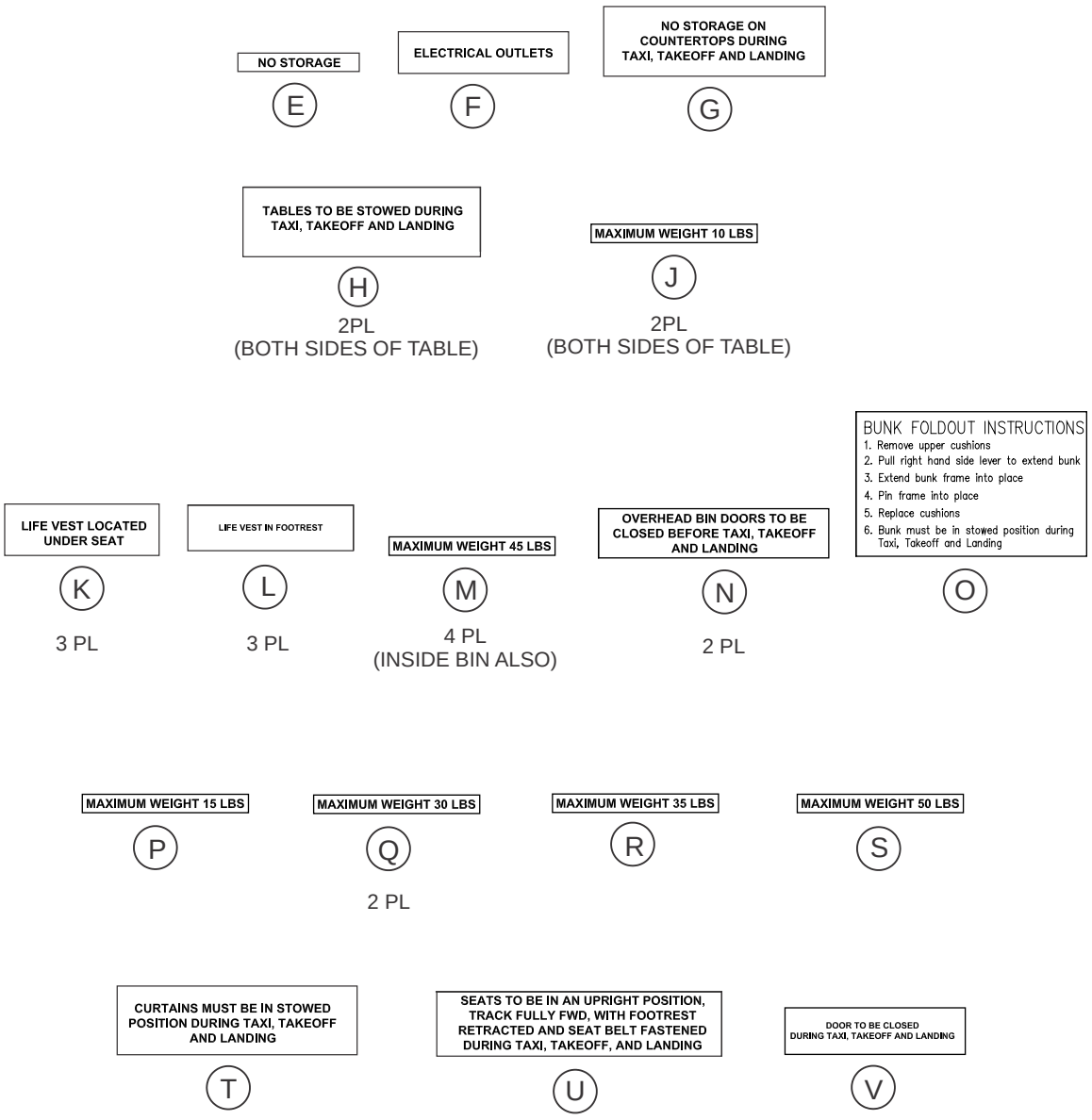
Crew Lounge Placards
Figure 201 (Sheet 2 of 3)



P11-38-02-2-F003

Crew Lounge Placards
Figure 201 (Sheet 3 of 3)

ATA

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Standard Practices

STANDARD PRACTICES ELECTRICAL COMPONENT BOX - REMOVAL/INSTALLATION

1. General

(Figure 401 and 402)

A. This procedure contains two tasks:

(1) Removal

(2) Installation

B. Electrical components used in the cabin management, in-flight entertainment and communications systems are often secured to cabinets, ceiling panels or pallets with screws. Screw count may be two, four or six screws depending on the size of the component.

2. Removal

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

CAUTION: DISABLE ELECTRICAL POWER BY PULLING THE 115VAC 60HZ BUS 1, 115VAC 60HZ BUS 2 AND 115VAC 60HZ BUS 3 OR THE APPLICABLE SYSTEM BREAKERS.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Obtain access to the component.

(3) Disconnect the wire harness from the component.

(4) Remove the screws securing the component mounting flange to the mounting surface.

---------- END OF TASK ----------

3. Installation

(Figure 401)

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

CAUTION: DISABLE ELECTRICAL POWER BY PULLING THE 115VAC 60HZ BUS 1, 115VAC 60HZ BUS 2 AND 115VAC 60HZ BUS 3 OR THE APPLICABLE SYSTEM BREAKERS. (SEE FIGURE 401 AND 402).

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Re-install screws securing the component mounting flange to the mounting surface.

(3) Reconnect wire harness.

---------- END OF TASK ----------

ELECTRICAL BONDING – MAINTENANCE PRACTICES

1. General

A. All interior components which house electrical equipment must be properly bonded to the aircraft structure on re-installation.

B. To ensure proper bonding of these units refer to Boeing Standard Wiring Practices Manual, Document No. D6-54446, Chapter 20, Section 20-20-00, Paragragh 7 (Test Procedures for Electrical Bonds).

C. The maximum allowable resistance between the structure and the airframe is 2.5 milliohm.

DUCTS AND TUBING – MAINTENANCE PRACTICES

1. General

A. ECS Hose Protection

(1) Apply 225FR-3 tape to ECS hoses wherever contact is likely with surrounding structure or equipment when reinstalling ceiling panels.

WIRE BUNDLE ROUTING – MAINTENANCE PRACTICES

1. General

A. All wire routing for this modification has been selected to comply with applicable FAR requirements. In order to ensure proper separation of wire bundles for continued safe operation note exact routing and clamping position whenever a wire bundle must be disturbed for maintenance. Taking photographs of the area being worked before disturbing any wire installations is recommended. Inspect all reinstalled wire bundles to ensure that the original design installation has been maintained.

PROTECTION OF INTERIOR ITEMS – MAINTENANCE PRACTICES

1. General

A. Protection of Interior Items

(1) Whenever maintenance activity is being performed in the passenger cabin protect the fabrics and finished surfaces from damage by covering them.

(a) Always install the maintenance runners over the carpeting to prevent soiling.

(b) Place drop cloths or slip covers over chairs.

(c) Tape cardboard or Styrofoam sheet or apply self adhesive monkeyskin to bulkheads and cabinets to prevent scratching.

ATA

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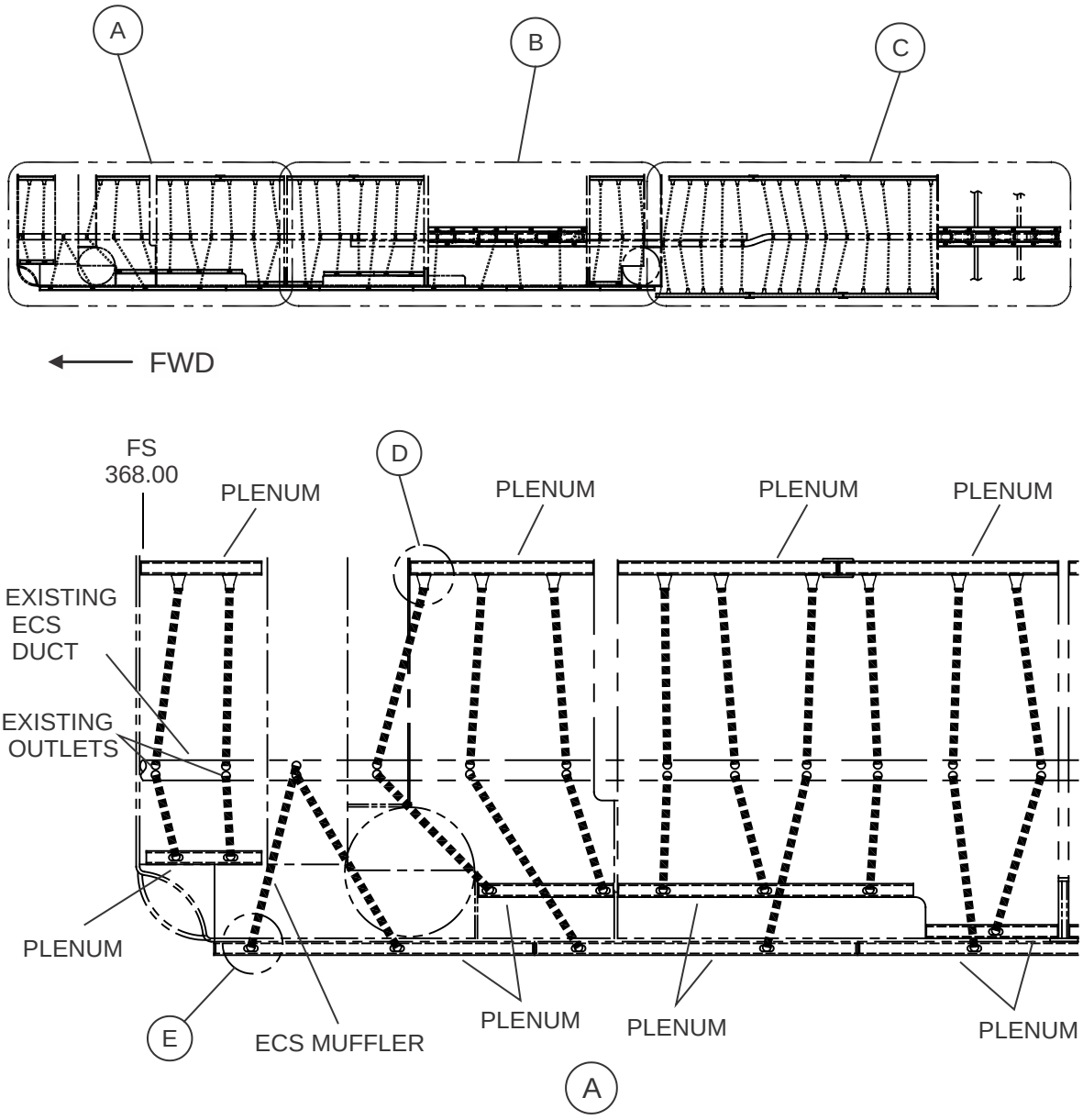
Air Conditioning

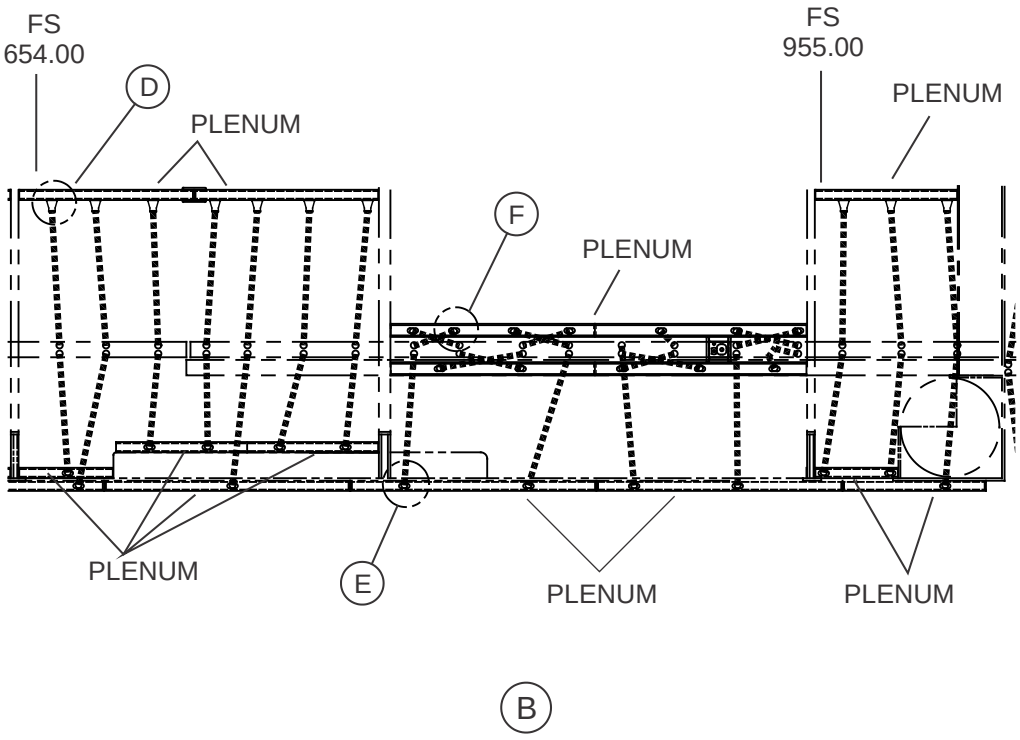
CONDITIONED AIR DISTRIBUTION - DESCRIPTION AND OPERATION

1. General

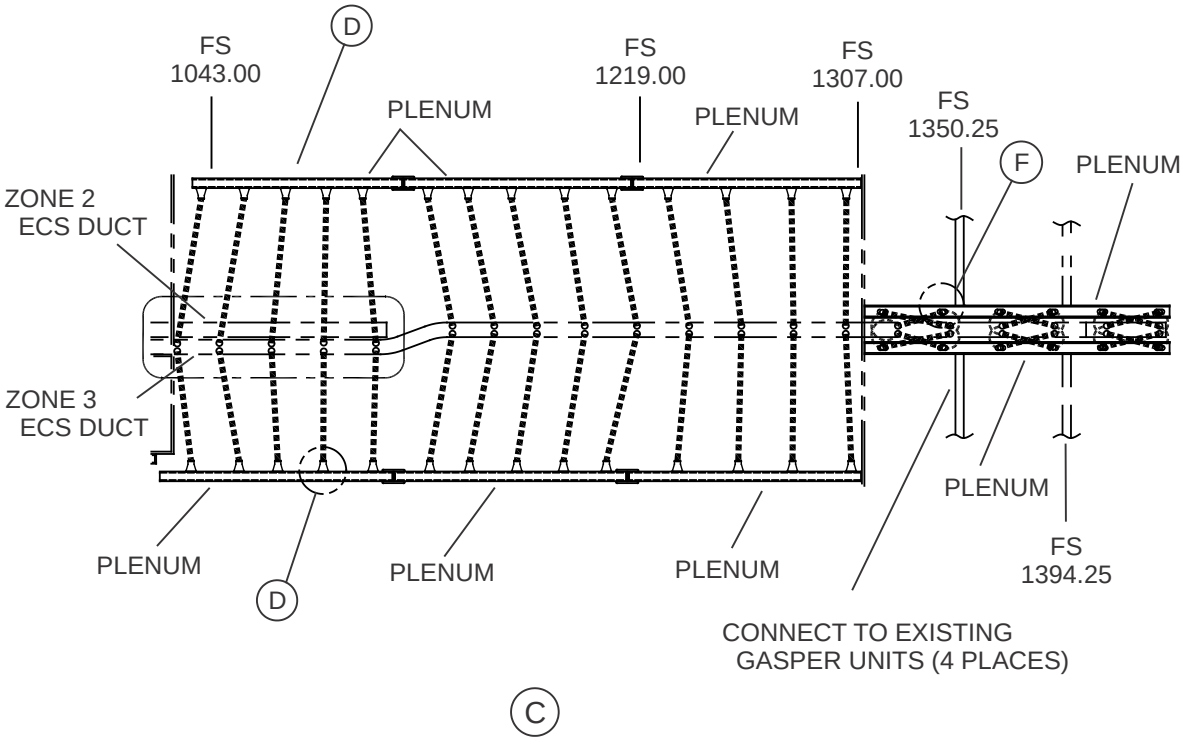
A. The conditioned air distribution system has been modified by relocating the distribution ducts and plenums locally to accommodate the installation of interior components. Existing air diffusers have been relocated where possible. Unused air takeoffs on the main distribution duct have been capped (Figure 1).



Conditioned Air Distribution
Figure 1 (Sheet 1 of 4)

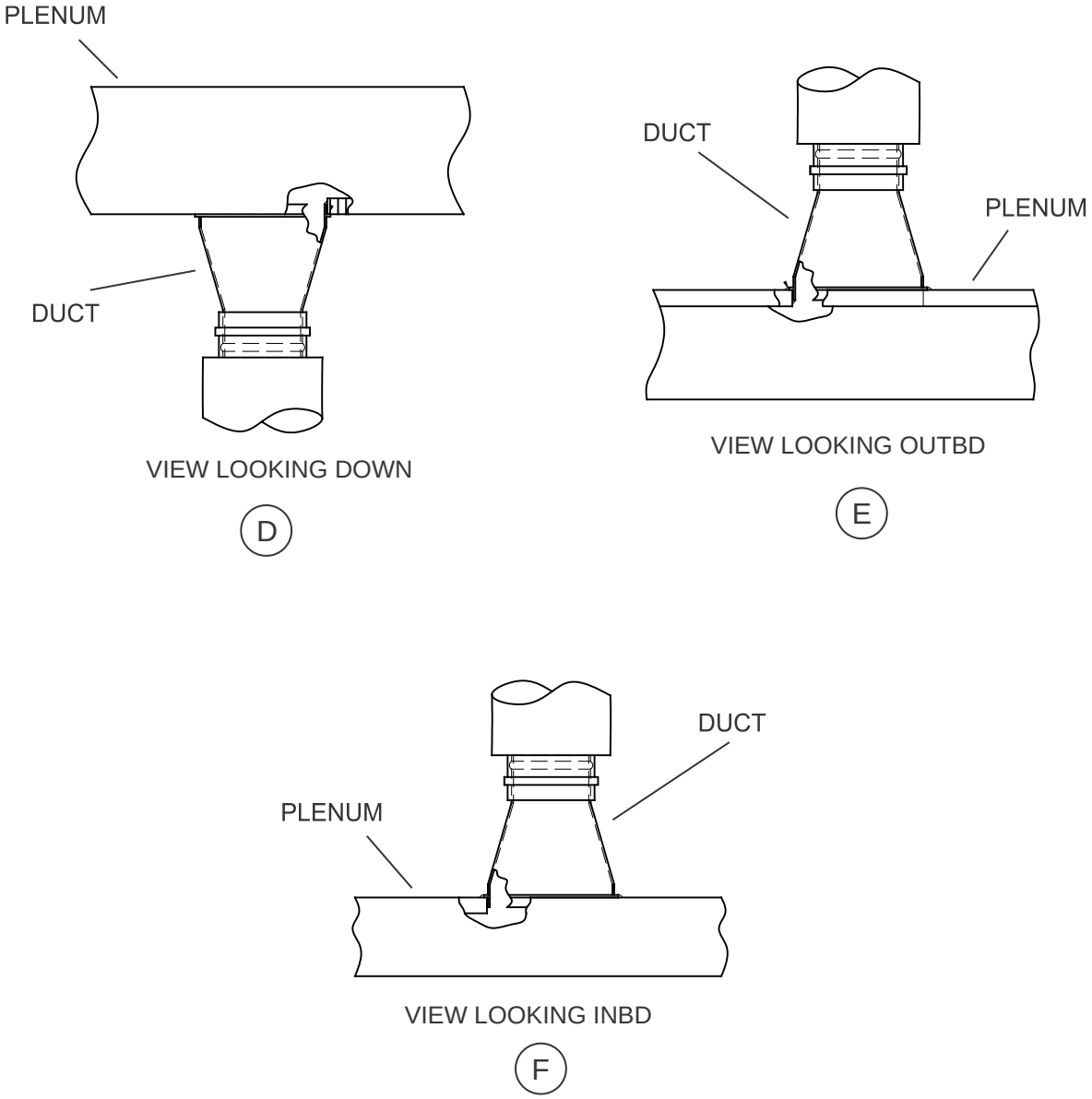


Conditioned Air Distribution
Figure 1 (Sheet 2 of 4)



VIEW LOOKING DOWN

Conditioned Air Distribution
Figure 1 (Sheet 3 of 4)

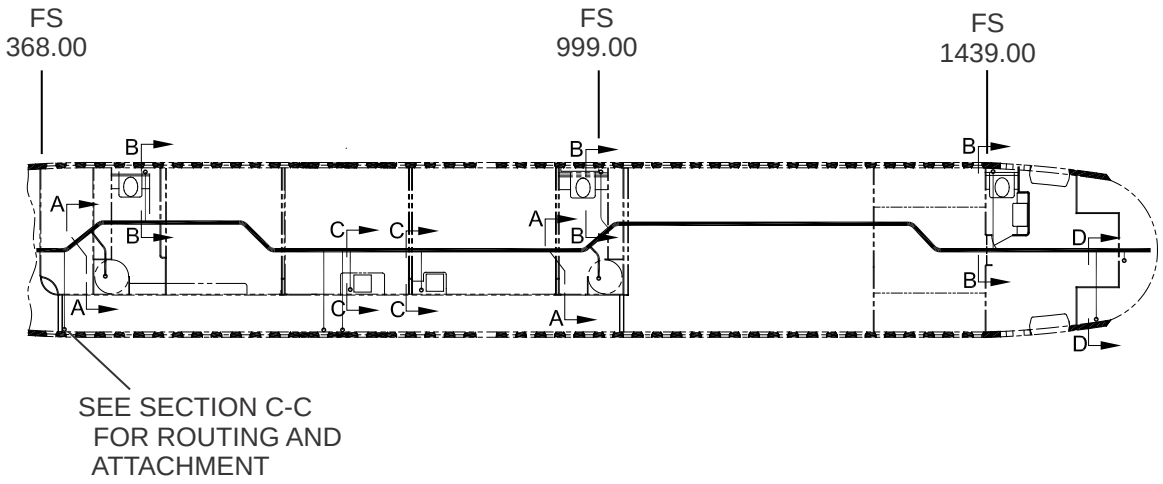


Conditioned Air Distribution
Figure 1 (Sheet 4 of 4)

VENTILATION SYSTEM - DESCRIPTION AND OPERATION

1. General

A. The vent lines have been connected to the existing overhead vent system for the showers and the toilet shrouds in the lavatories. (Figure 1).



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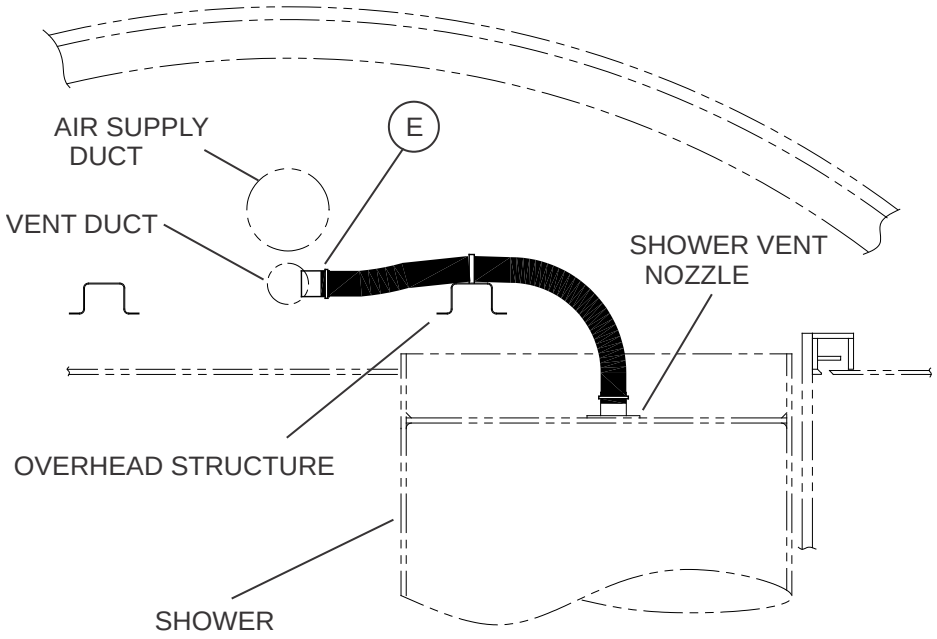
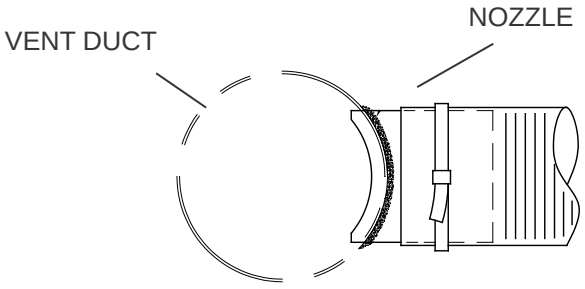
Ventilation System
Figure 1 (Sheet 1 of 5)



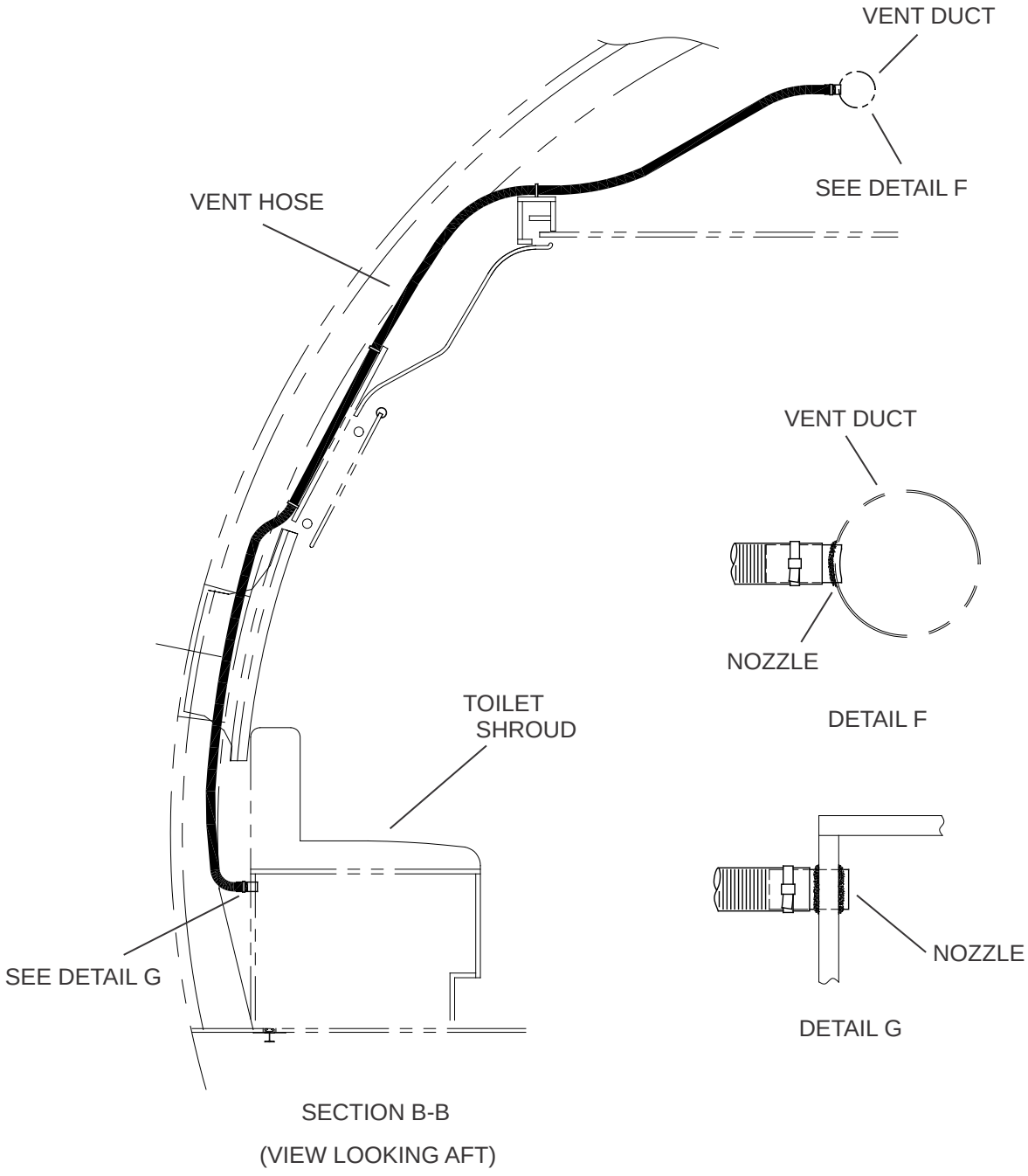
SECTION A-A

(VIEW LOOKING AFT)

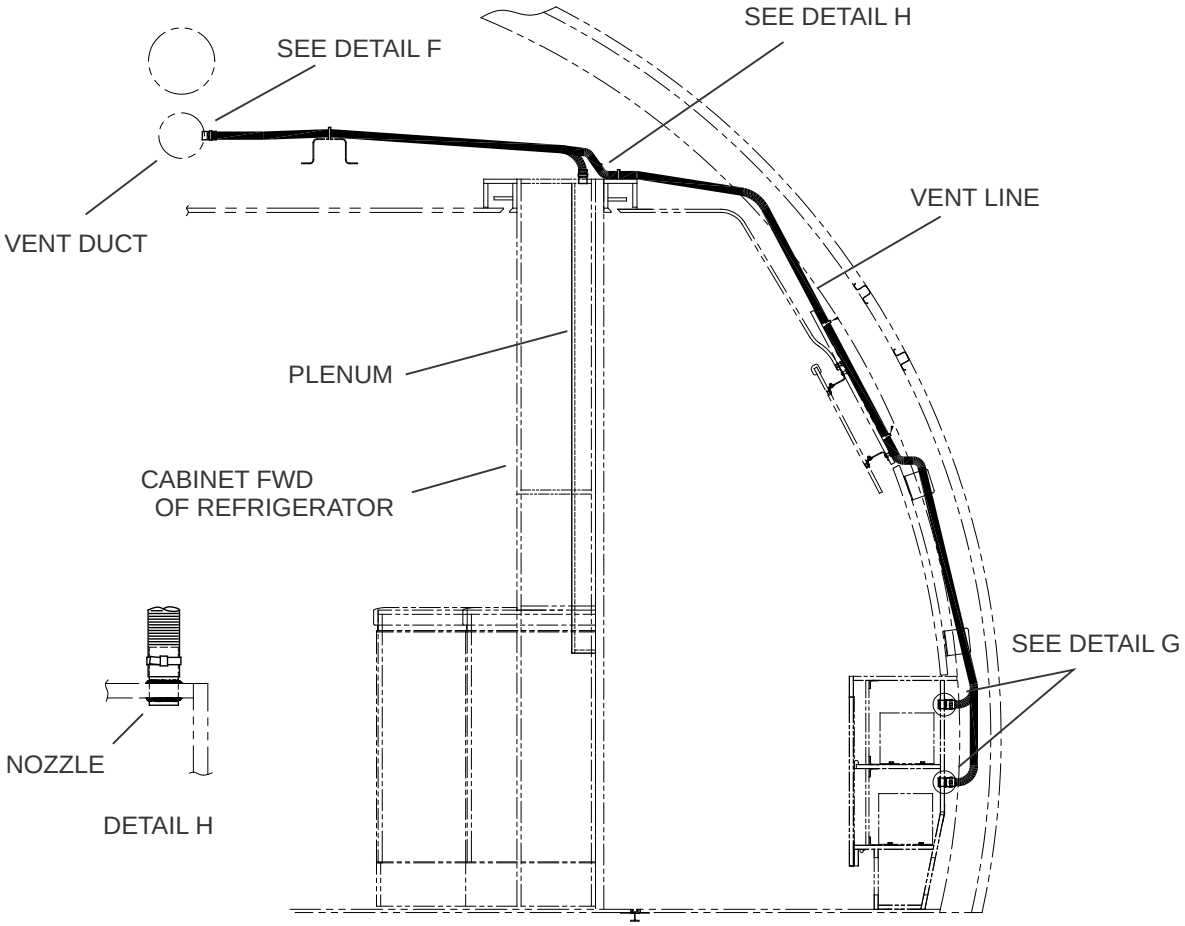


E

Ventilation System
Figure 1 (Sheet 2 of 5)



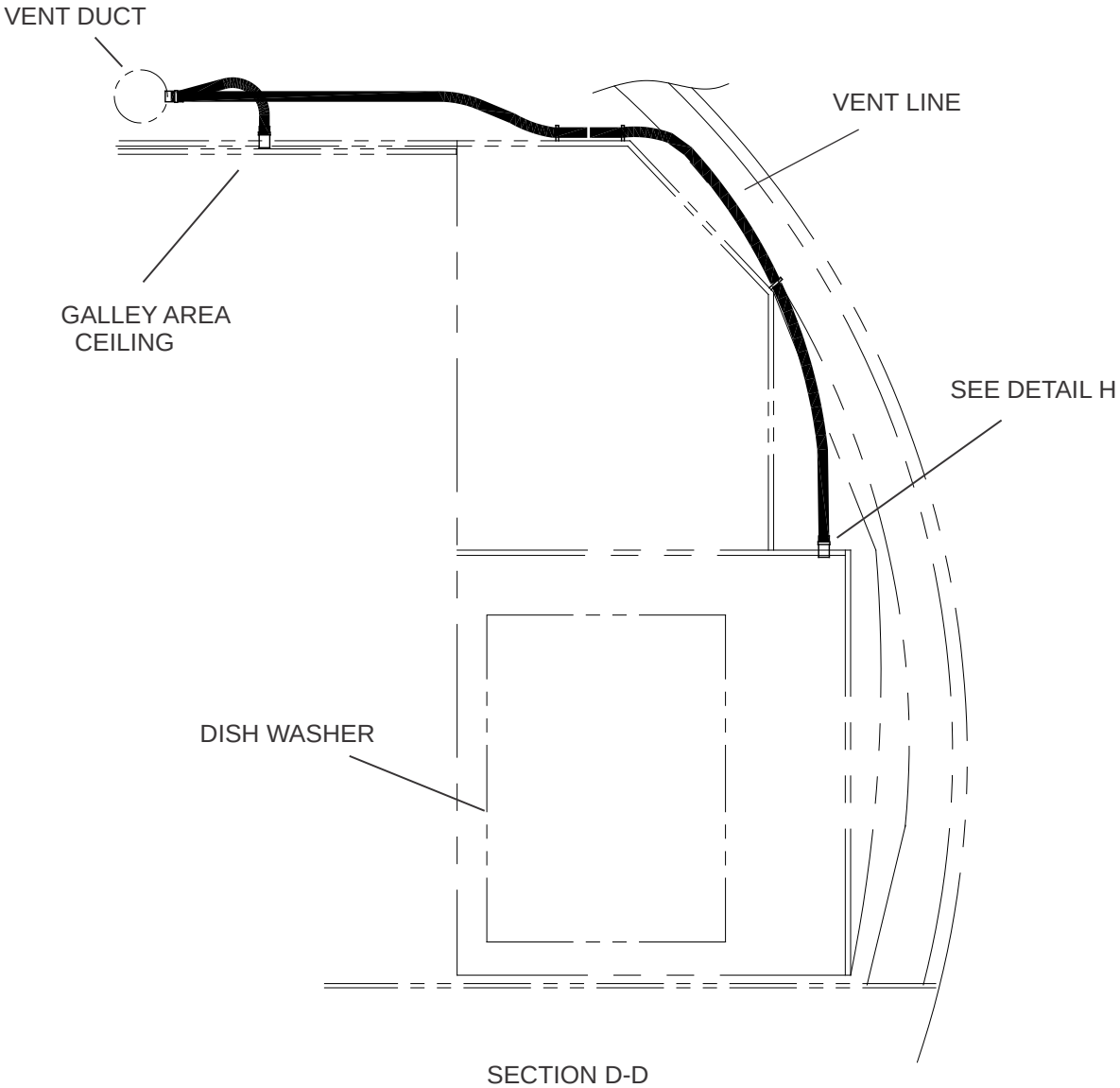
Ventilation System
Figure 1 (Sheet 3 of 5)



SECTION C-C

(VIEW LOOKING AFT)

Ventilation System
Figure 1 (Sheet 4 of 5)



SECTION D-D

(VIEW LOOKING AFT AT AFT LH GALLEY)

Ventilation System
Figure 1 (Sheet 5 of 5)

ATA

23

Communications

PASSENGER ADDRESS SYSTEM - DESCRIPTION AND OPERATION

1. General

A. The aircraft passenger address system has been retained. Speakers have been relocated to accommodate the interior configuration.

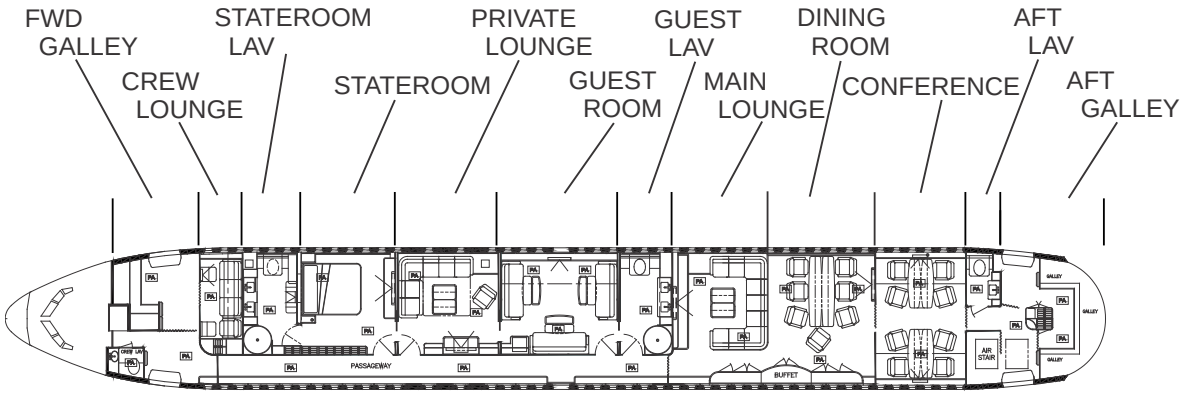
B. Refer to Boeing Maintenance Manual, Chapter 23, Section 23-31-00 for troubleshooting and operating information on this system.

2. Speakers

A. Mid range speakers are installed on the back sides of ceiling panels (Figure 1).

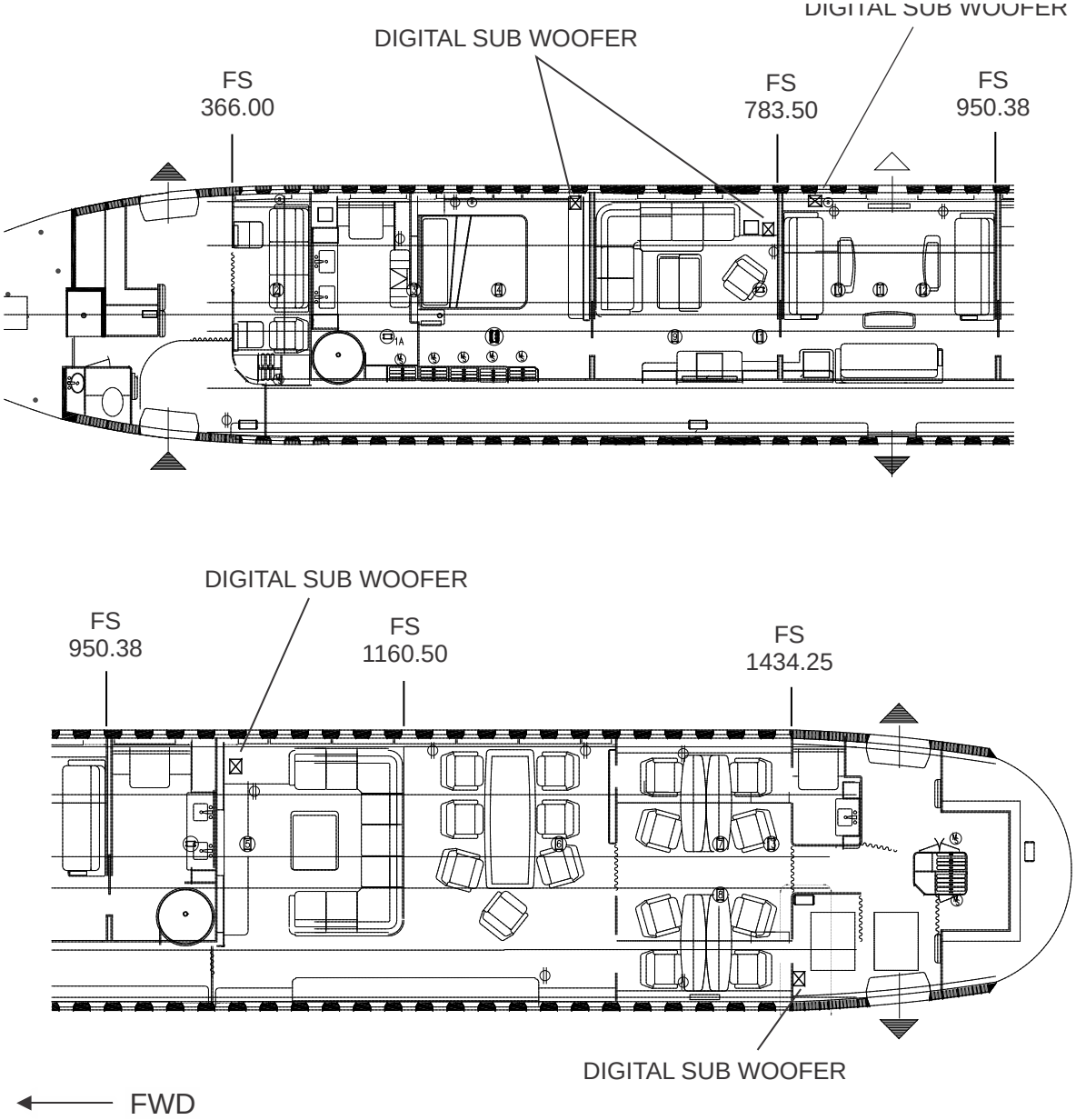
3. Sub Woofers

A. The sub woofers are mounted in enclosure boxes behind the sidewall cabinets in the State Room, Private Lounge, Guest Room, Lounge and Conference Room (Figure 2).



PA - PASSENGER ADDRESS SPEAKER LOCATION

PA Speaker Locations
Figure 1



Digital Sub Woofer Locations
Figure 2

SPEAKER - REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks:

(1) Removal

(2) Installation

2. Removal

(Figure 401)

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Disconnect the wire harness.

(3) Remove screws, washers, and speaker.

---------- END OF TASK ----------

3. Installation

(Figure 401)

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

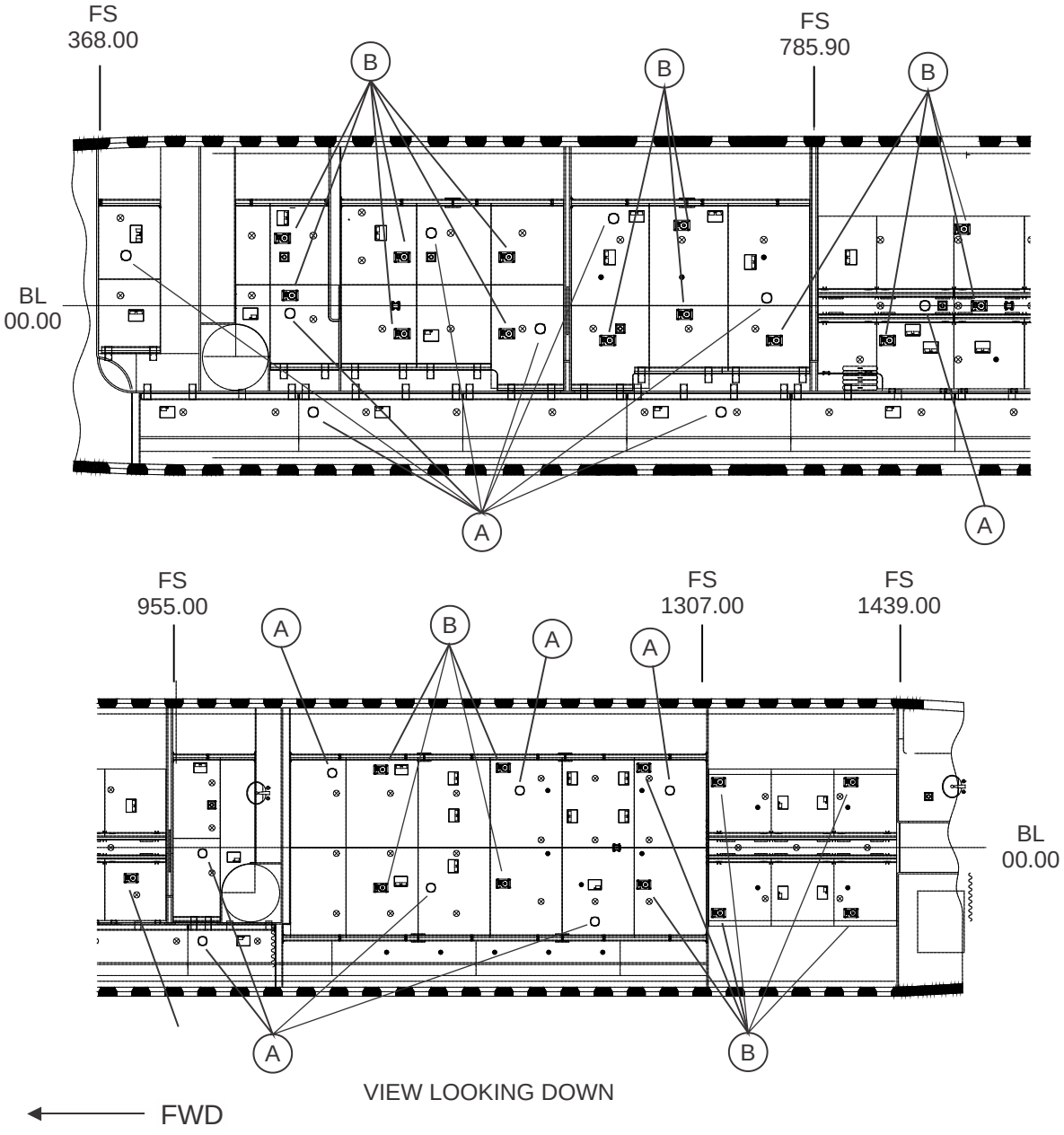
(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Position speaker.

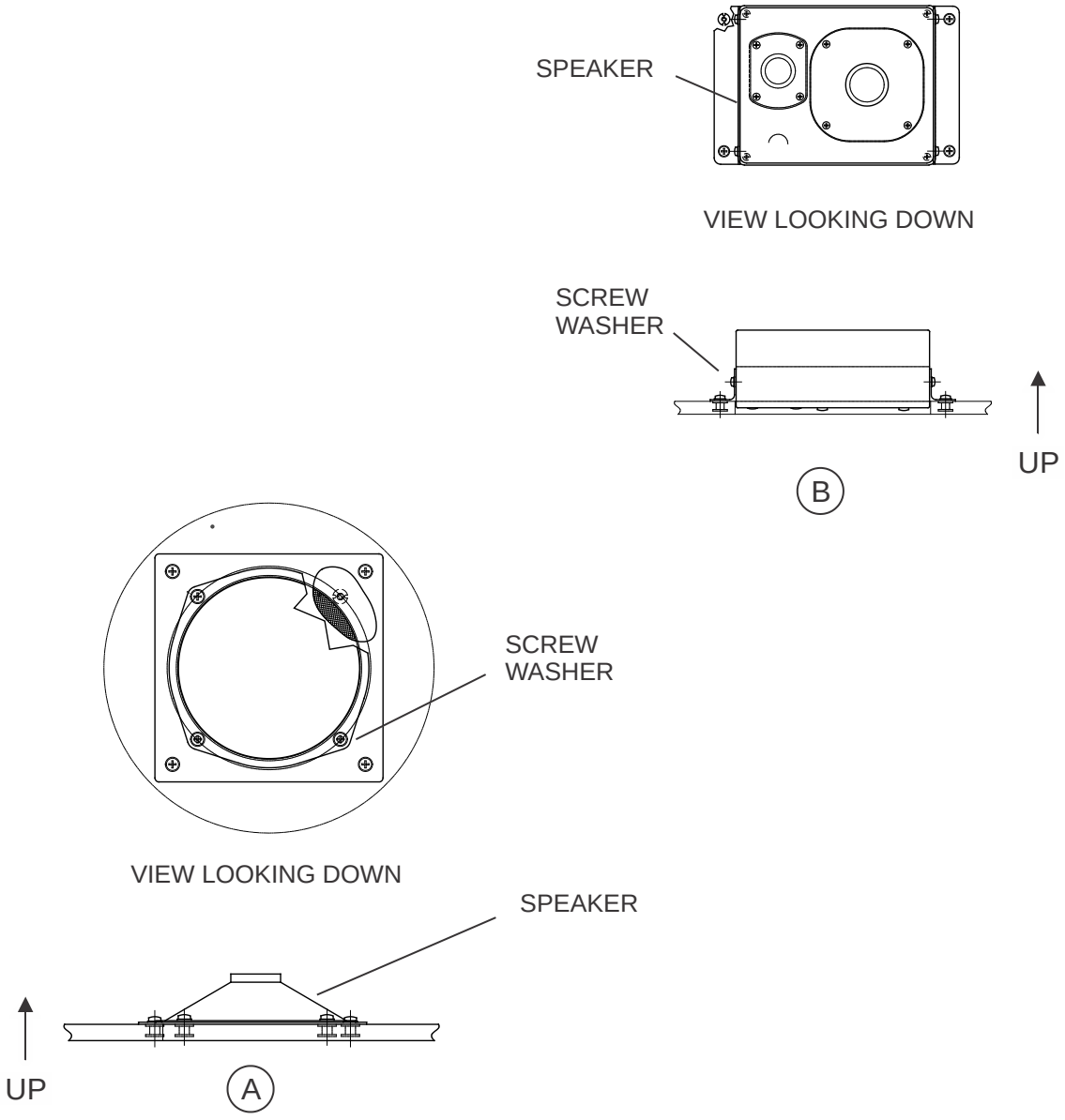
(3) Install washers and screws.

(4) Connect the wire harness.

---------- END OF TASK ----------



Speakers
Figure 401 (Sheet 1 of 2)



Speakers
Figure 401 (Sheet 2 of 2)

SUB WOOFER SPEAKER - REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks:

(1) Removal

(2) Installation

2. Removal

(Figure 401)

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Disconnect the wire harness.

(3) Remove bolt, washer, and speaker.

---------- END OF TASK ----------

3. Installation

(Figure 401)

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

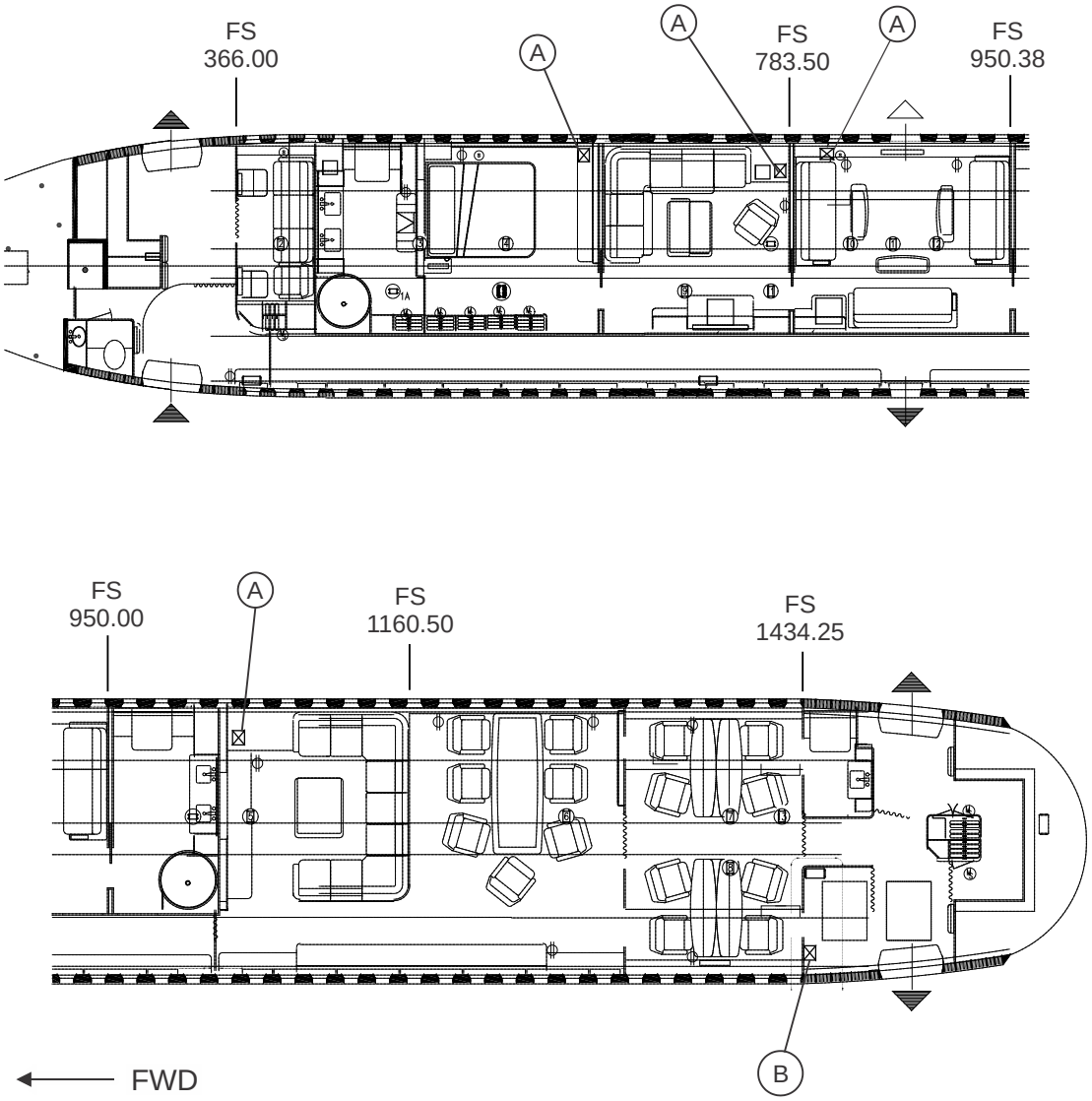
(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Position speaker.

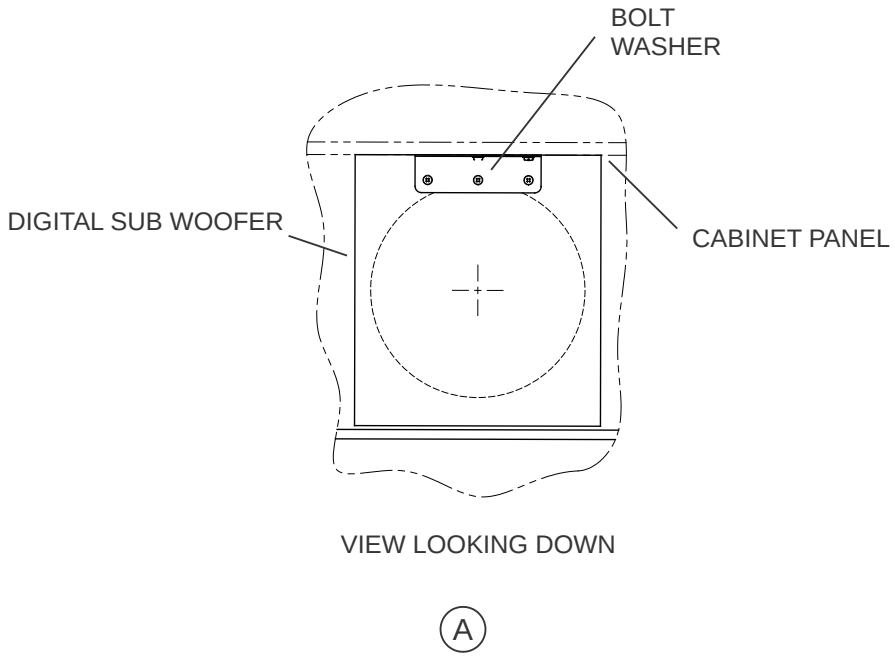
(3) Install washer and bolt.

(4) Connect the wire harness.

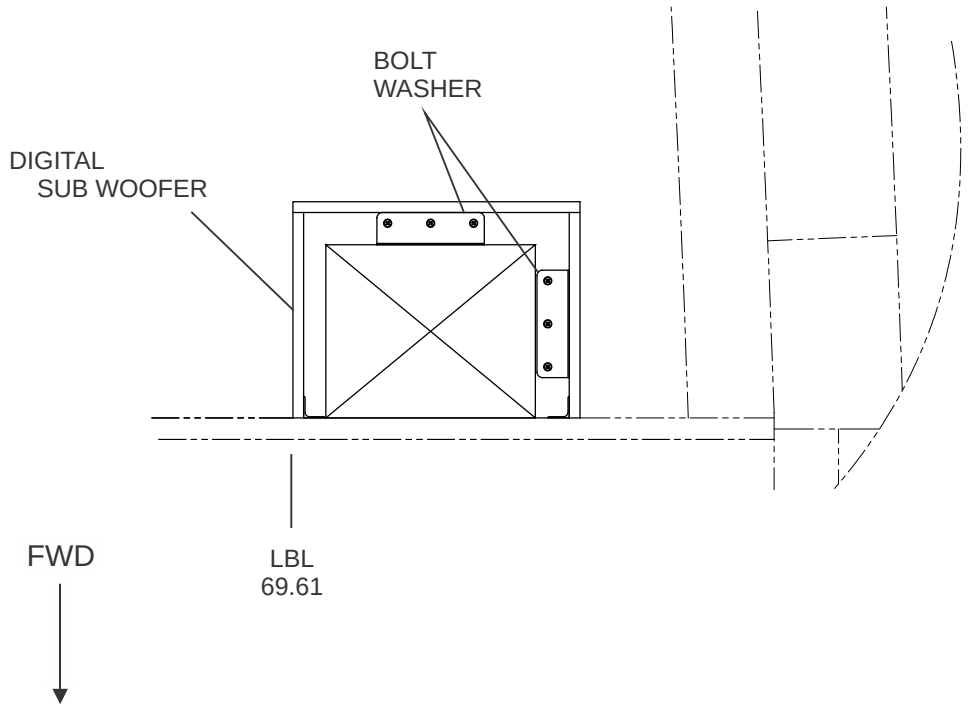
---------- END OF TASK ----------



Sub Woofer Speakers
Figure 401 (Sheet 1 of 3)



Sub Woofer Speakers
Figure 401 (Sheet 2 of 3)



VIEW LOOKING DOWN

B

Sub Woofer Speakers
Figure 401 (Sheet 3 of 3)

CABIN ENTERTAINMENT - DESCRIPTION AND OPERATION

1. General

A. A passenger entertainment system is installed in the aircraft providing multiple audio and video sources for each area.

B. The entertainment source equipment is installed in the VCC cabinet. System control and distribution components are located in the VCC cabinet and above ceiling panels throughout the cabin.

C. Selection of the source equipment located in the VCC cabinet is available throughout the aircraft. Selection of the source components located in the bedroom is limited to that room only.

2. Video System

A. Monitors (Figure 1) are mounted on bulkheads throughout the cabin. In the Guest Room and Conference Room, three monitors are located in the outboard side ledges, one in the Guest Room and two in the Conference Room. The monitors display the available video sources and the Airshow passenger information.

3. Audio System

A. Audio speakers are installed in the ceiling panels. Headset jacks are located in the face of the armrest in the seats and divans.

4. Airshow

A. An Airshow passenger information system provides flight information to the entertainment system.

(1) A control panel is located in the VCC cabinet just aft of the cockpit.

(2) The Airshow computer is located in the VCC cabinet. Airshow data is available on all video monitors in the cabin.

(3) Any of the audio sources may be selected while the Airshow displays have been selected for video.

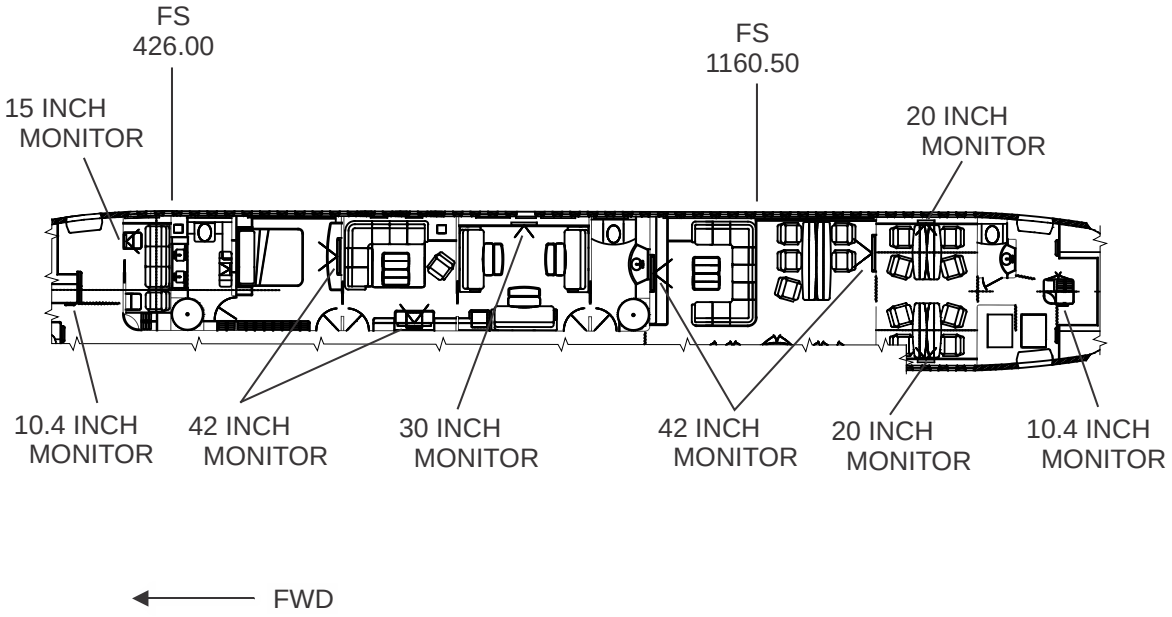
(4) Refer to the Airshow Operator's Manual for description and operation. Refer to the wiring diagram for system interface information.

B. Operations

(1) For normal operations the entertainment system components should be left on at all times when cabin power is supplied. The system will power up to the default settings after shutdown.

(2) Local operation of the audio selection is controlled through passenger control units at each seat location. These panels provide video and audio source selection with LED readout of the current channel.

(3) System operation is menu driven through the control unit in the VCC cabinet.



Video Monitors
Figure 1

GUEST ROOM MONITOR - REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks:

(1) Removal

(2) Installation

2. Removal

(Figure 401)

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Remove the monitor shroud by pulling straight out to release ball catches.

(3) Disconnect the wire harness.

(4) Remove the eight screws and washers securing the monitor to the cabinet.

---------- END OF TASK ----------

3. Installation

(Figure 401)

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

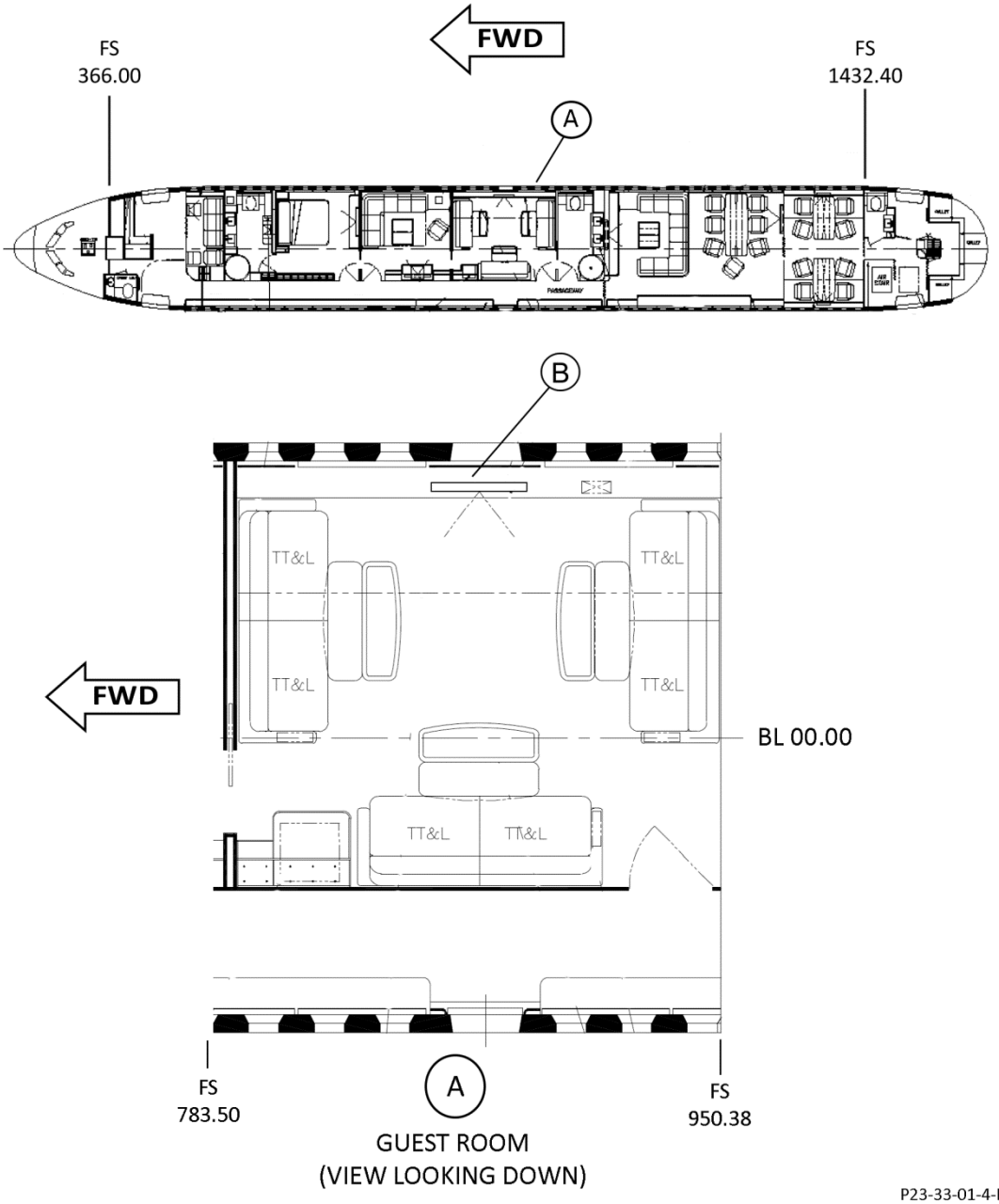
(2) Place monitor against inserts located on the cabinet and align holes.

(3) Install the eight screws and washers securing the monitor to the cabinet.

(4) Connect the wire harness.

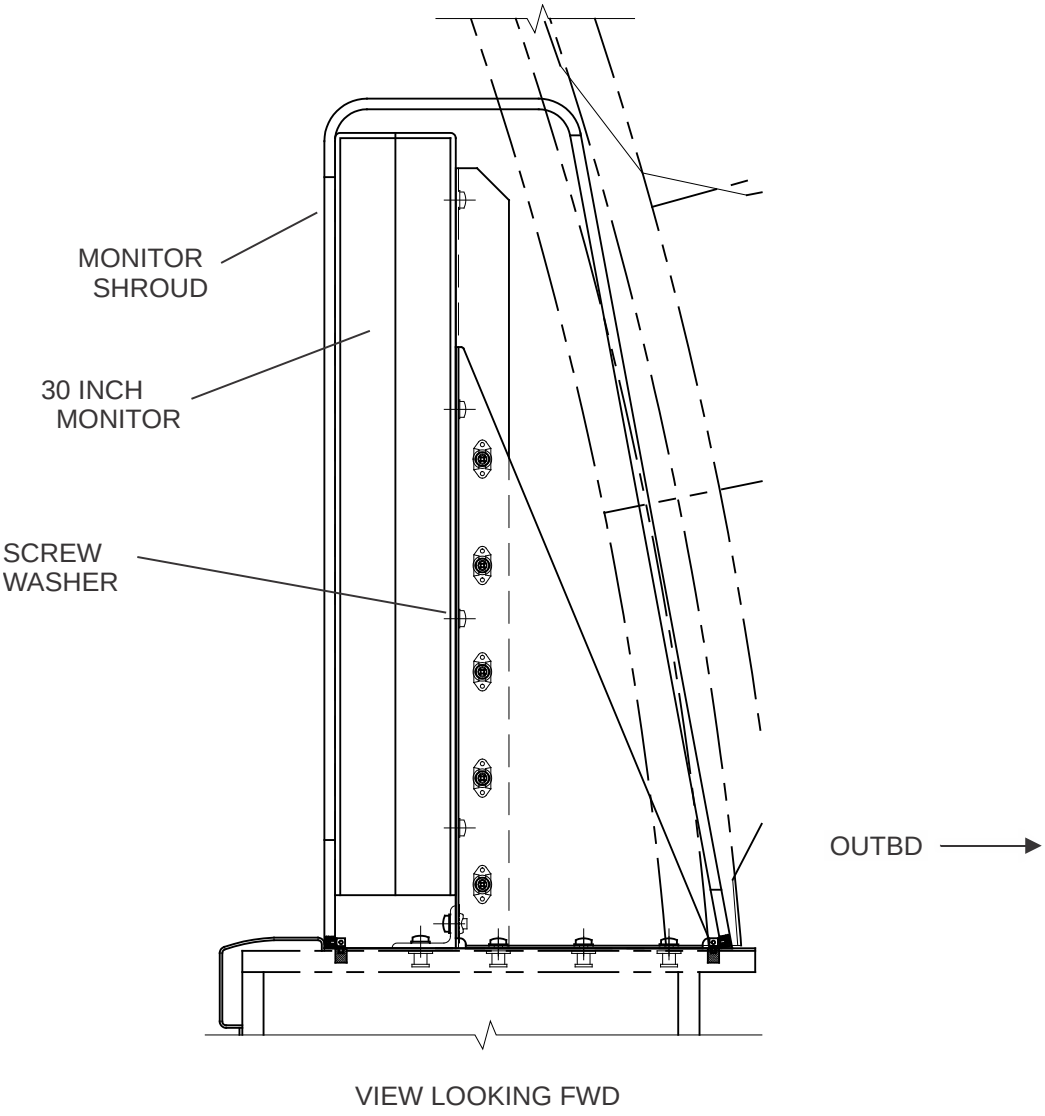
(5) Align monitor shroud and press toward cabinet engaging ball catches.

---------- END OF TASK ----------



P23-33-01-4-F401

Guest Room Monitor
Figure 401 (Sheet 1 of 2)



Guest Room Monitor
Figure 401 (Sheet 2 of 2)

VCC COMPONENTS - REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks:

(1) Removal

(2) Installation

2. Removal

(Figure 401)

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Open closeout panel.

(3) Remove hardware securing component.

(3) Disconnect the wire harness

---------- END OF TASK ----------

3. Installation

(Figure 401)

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

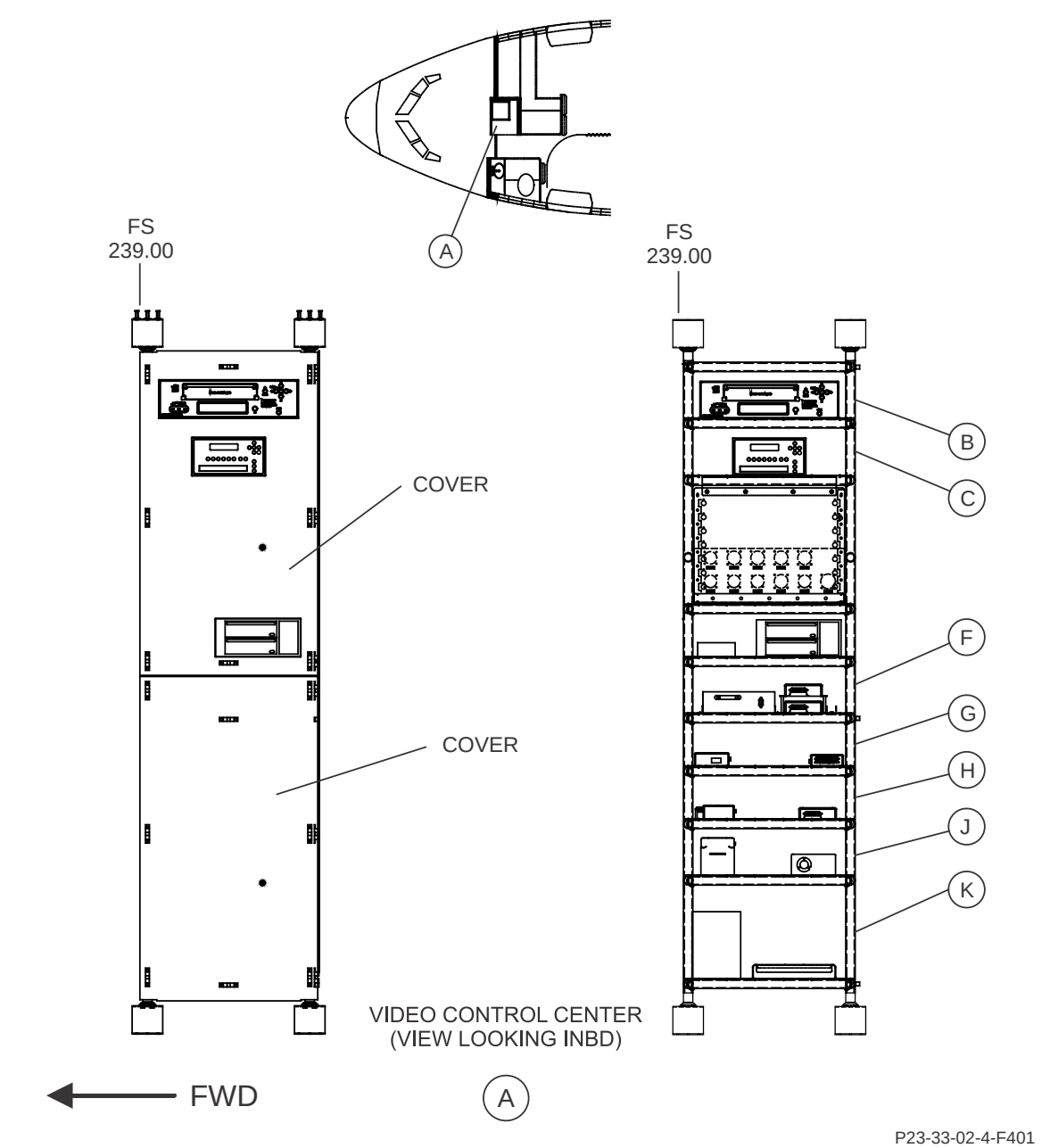
(2) Position component.

(3) Install hardware to secure component.

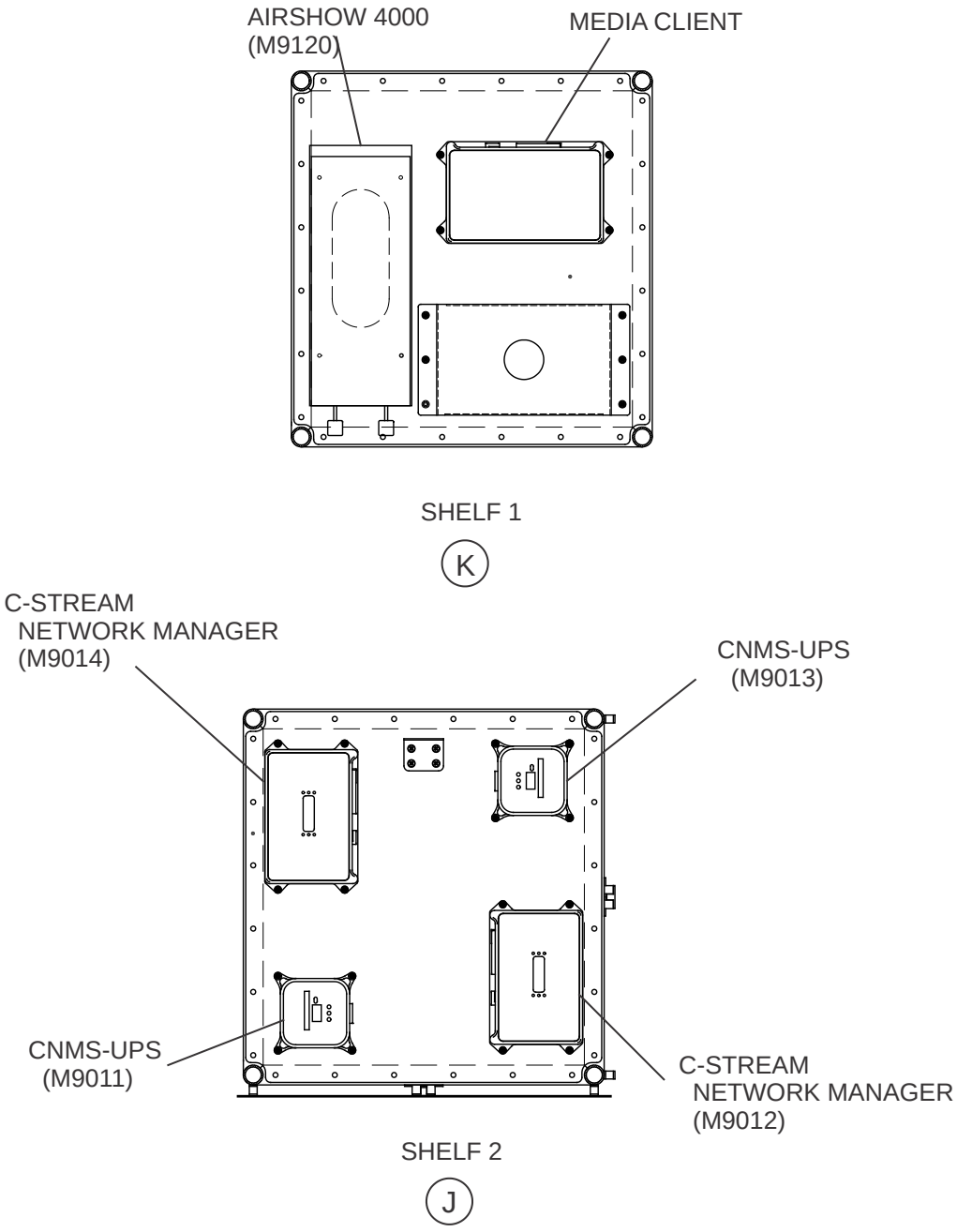
(4) Connect the wire harness.

(5) Close closeout panel.

---------- END OF TASK ----------

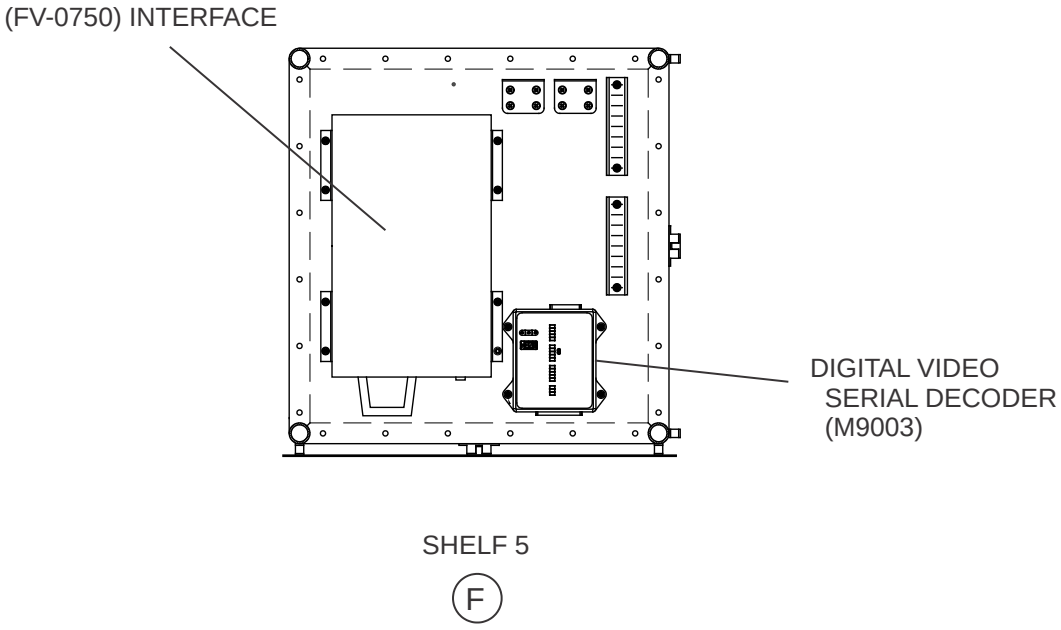


VCC Component Locations
Figure 401 (Sheet 1 of 5)



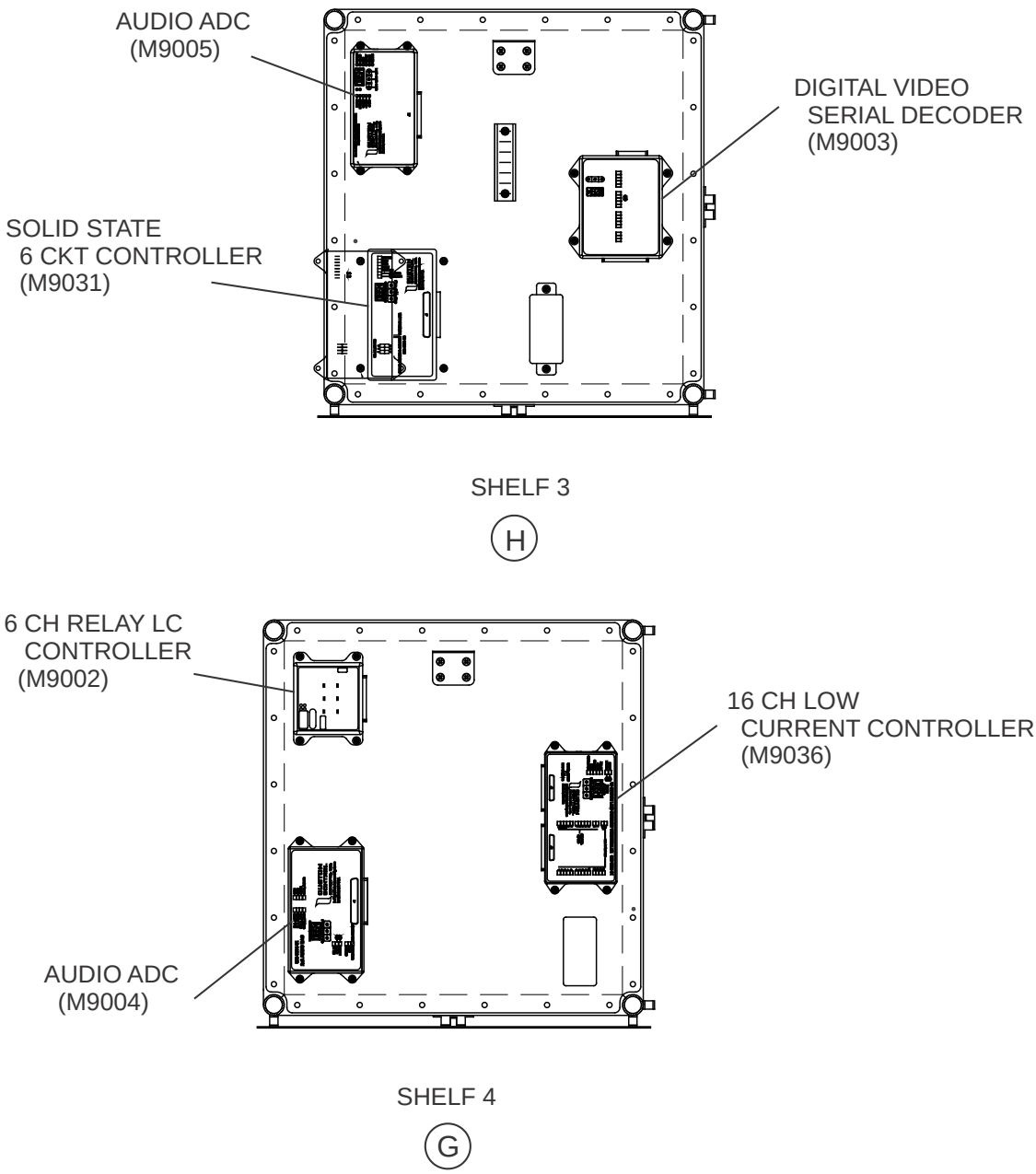
P23-33-02-4-F402

VCC Component Locations
Figure 401 (Sheet 2 of 5)



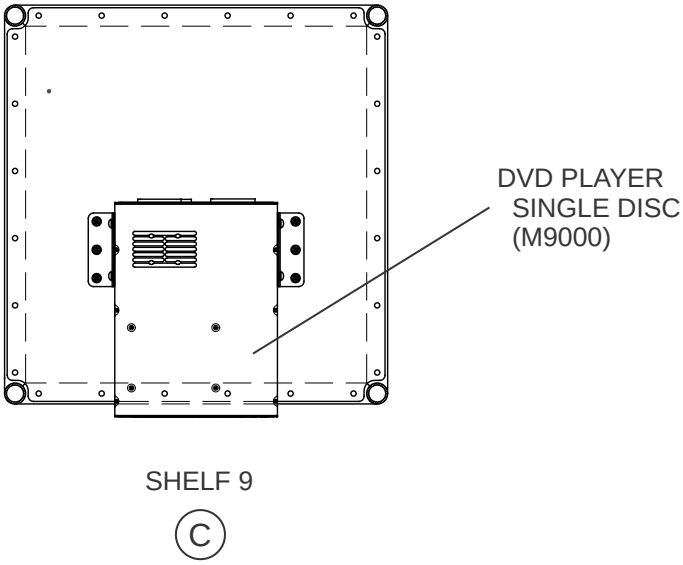
P23-33-02-4-F403

VCC Component Locations
Figure 401 (Sheet 3 of 5)



P23-33-02-4-F404

VCC Component Locations
Figure 401 (Sheet 4 of 5)



P23-33-02-4-F405

VCC Component Locations
Figure 401 (Sheet 5 of 5)

CABIN MANAGEMENT EQUIPMENT - REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks:

(1) Removal

(2) Installation

2. Removal

(Figure 401)

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Open closeout panel.

(3) Remove hardware securing component.

(3) Disconnect the wire harness

---------- END OF TASK ----------

3. Installation

(Figure 401)

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

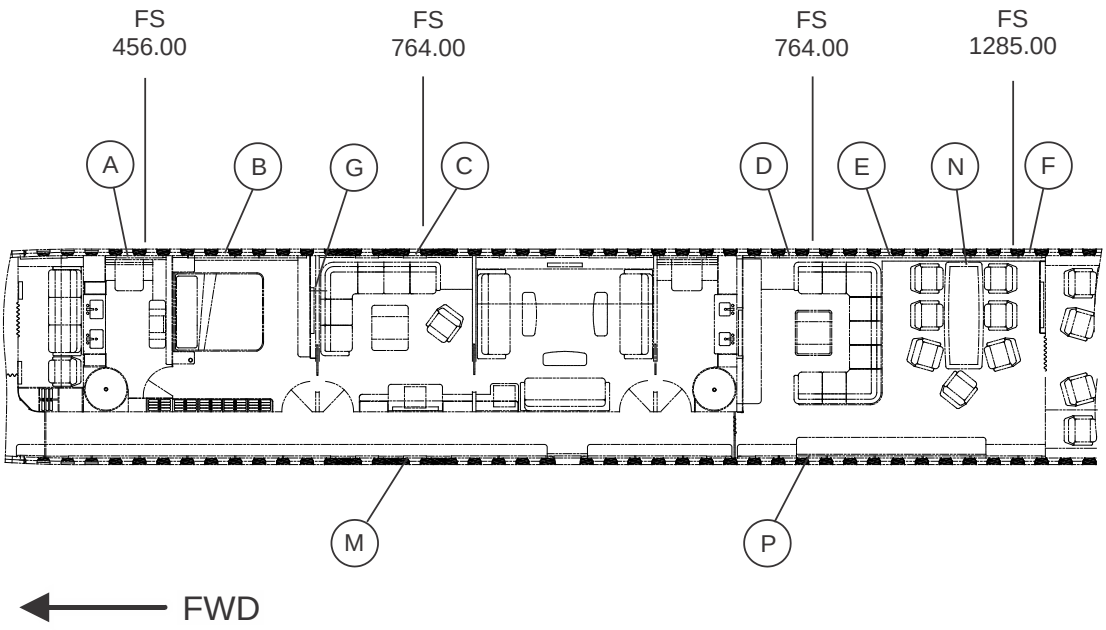
(2) Position component.

(3) Install hardware to secure component.

(4) Connect the wire harness.

(5) Close closeout panel.

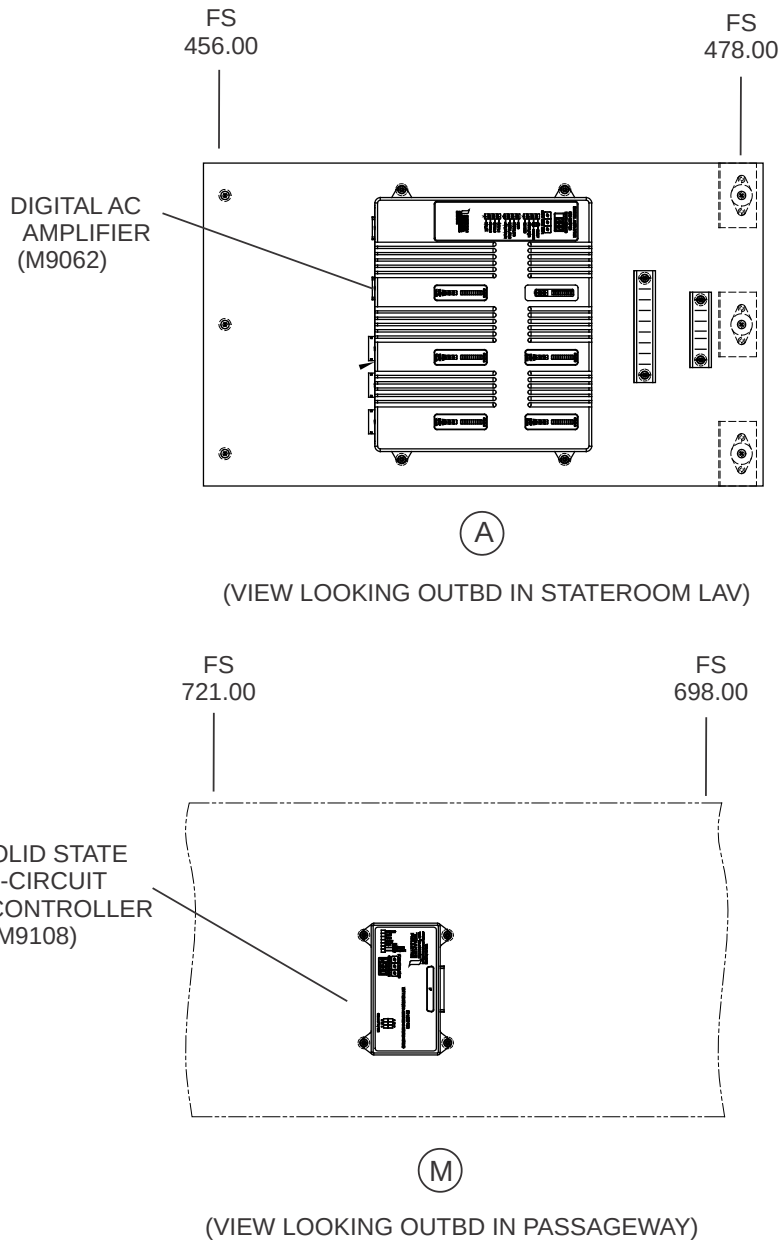
---------- END OF TASK ----------



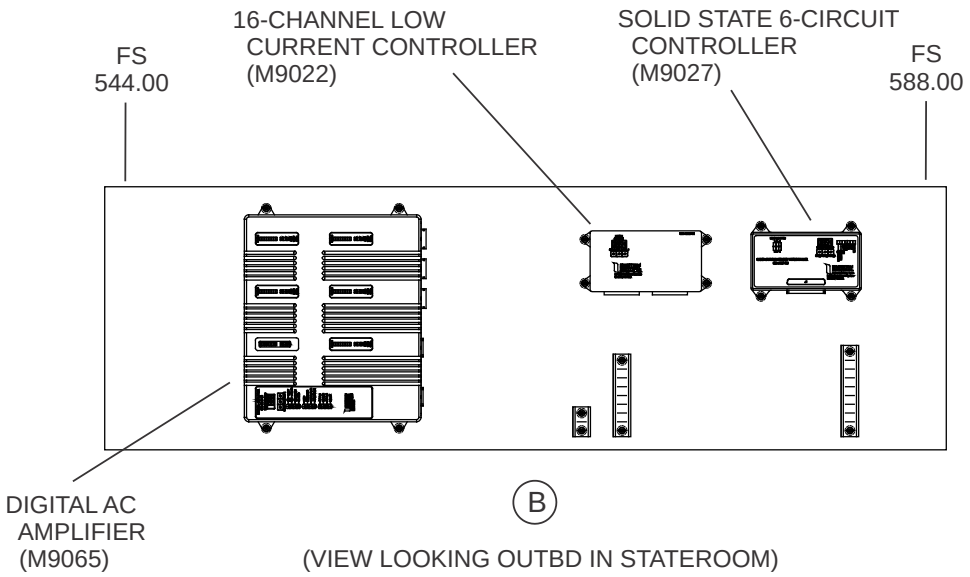
CABIN MANAGEMENT EQUIPMENT
(VIEW LOOKING DOWN)

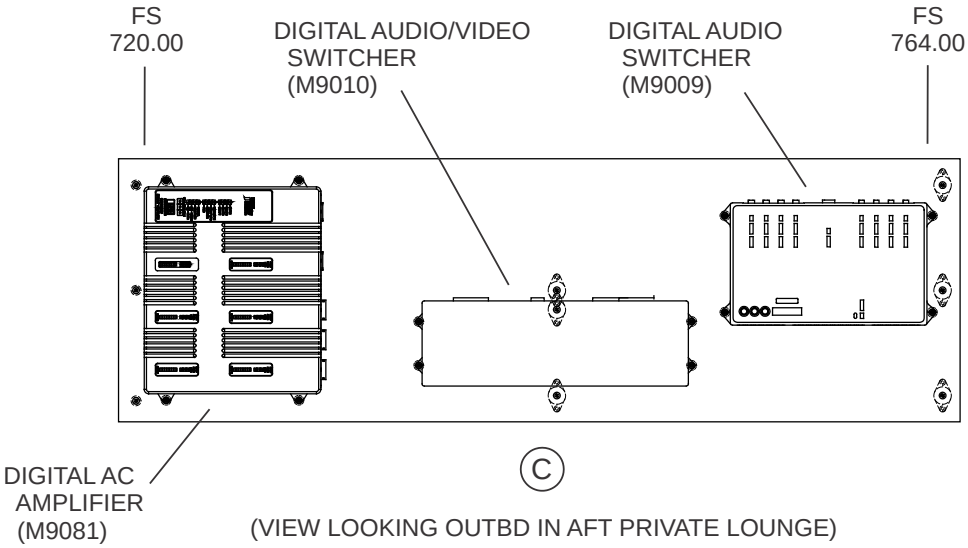
P23-33-03-4-F401

Cabin Management Equipment Locations
Figure 401 (Sheet 1 of 7)



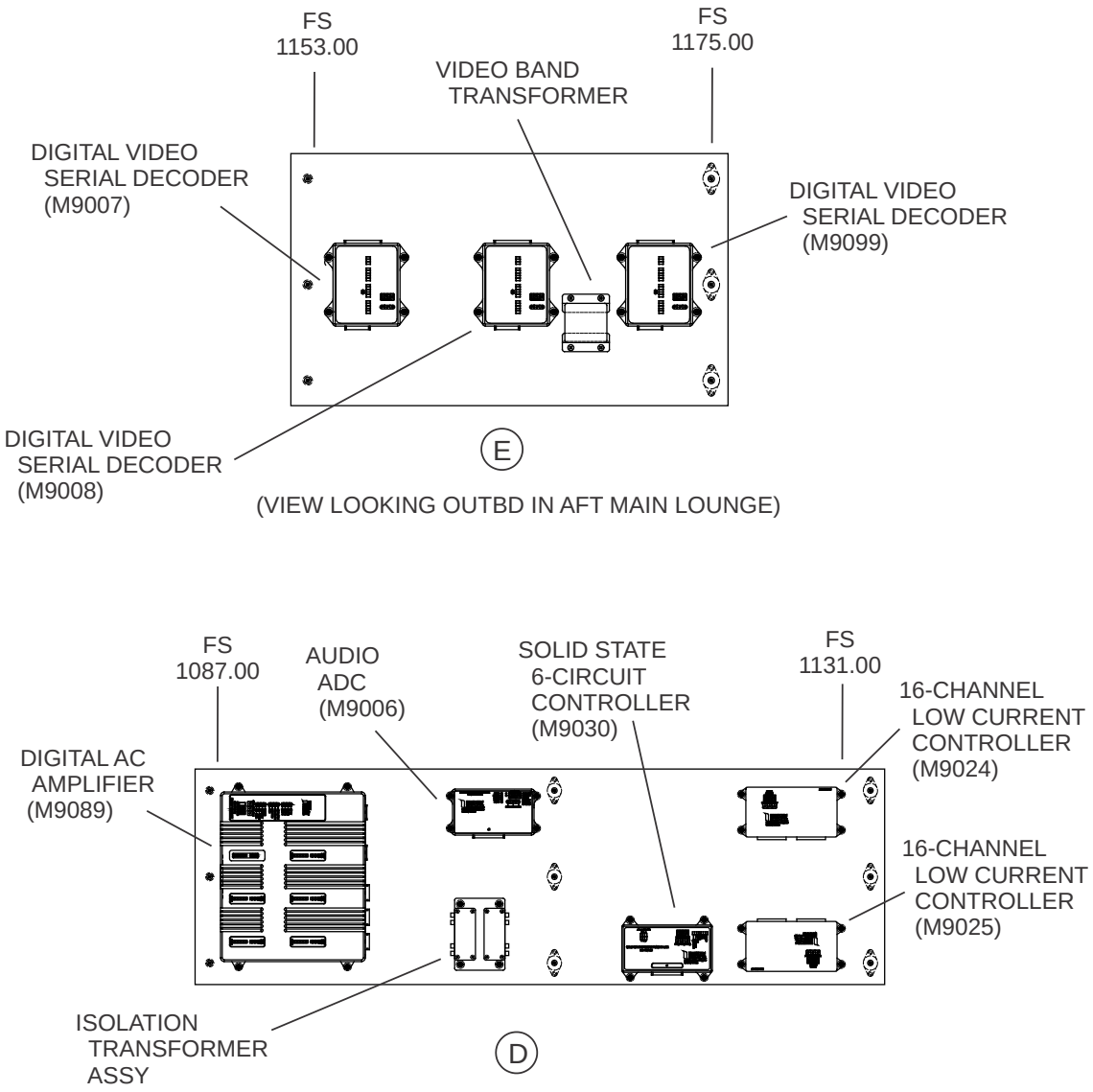
Cabin Management Equipment Locations
Figure 401 (Sheet 2 of 7)



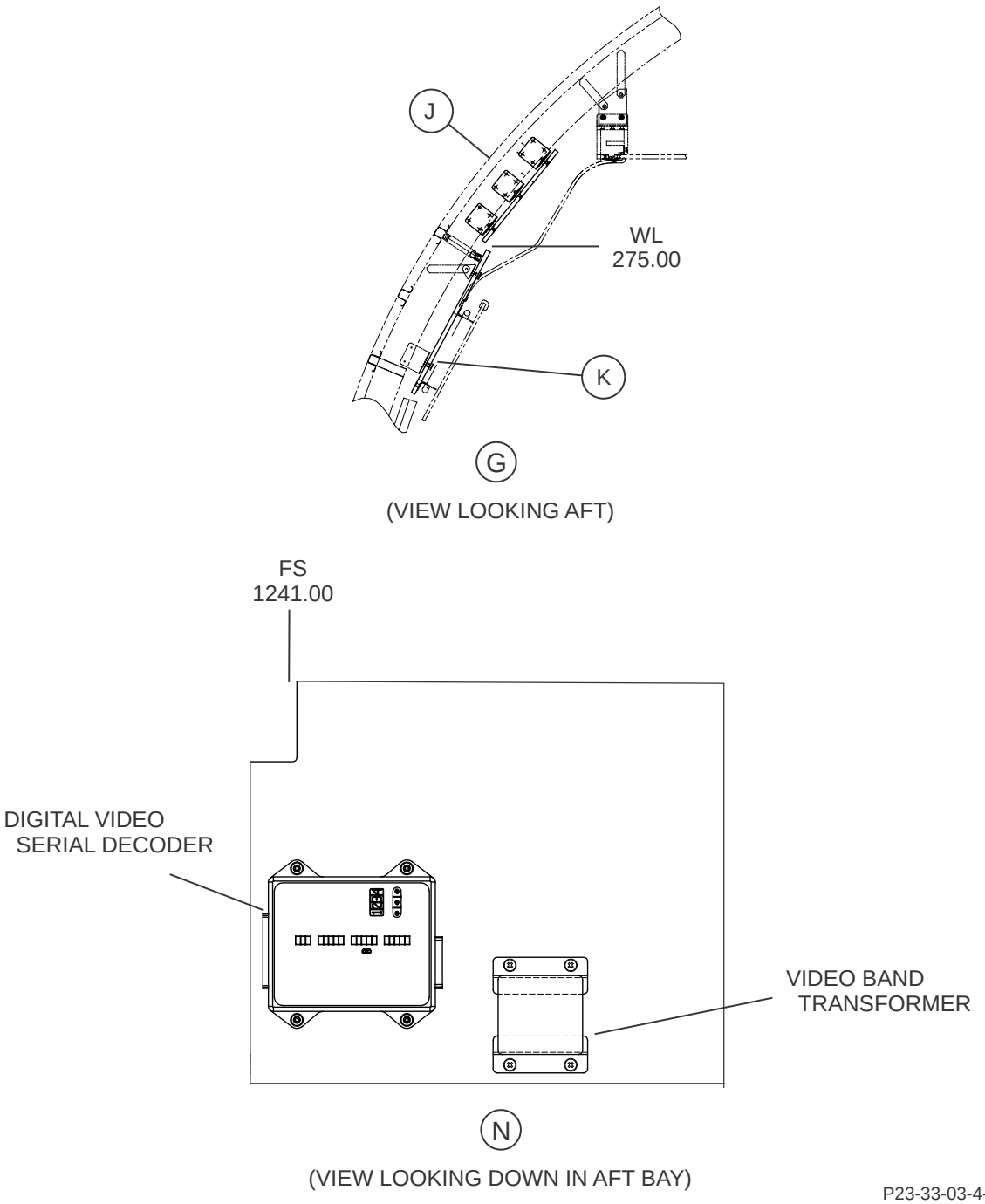


P23-33-03-4-F403

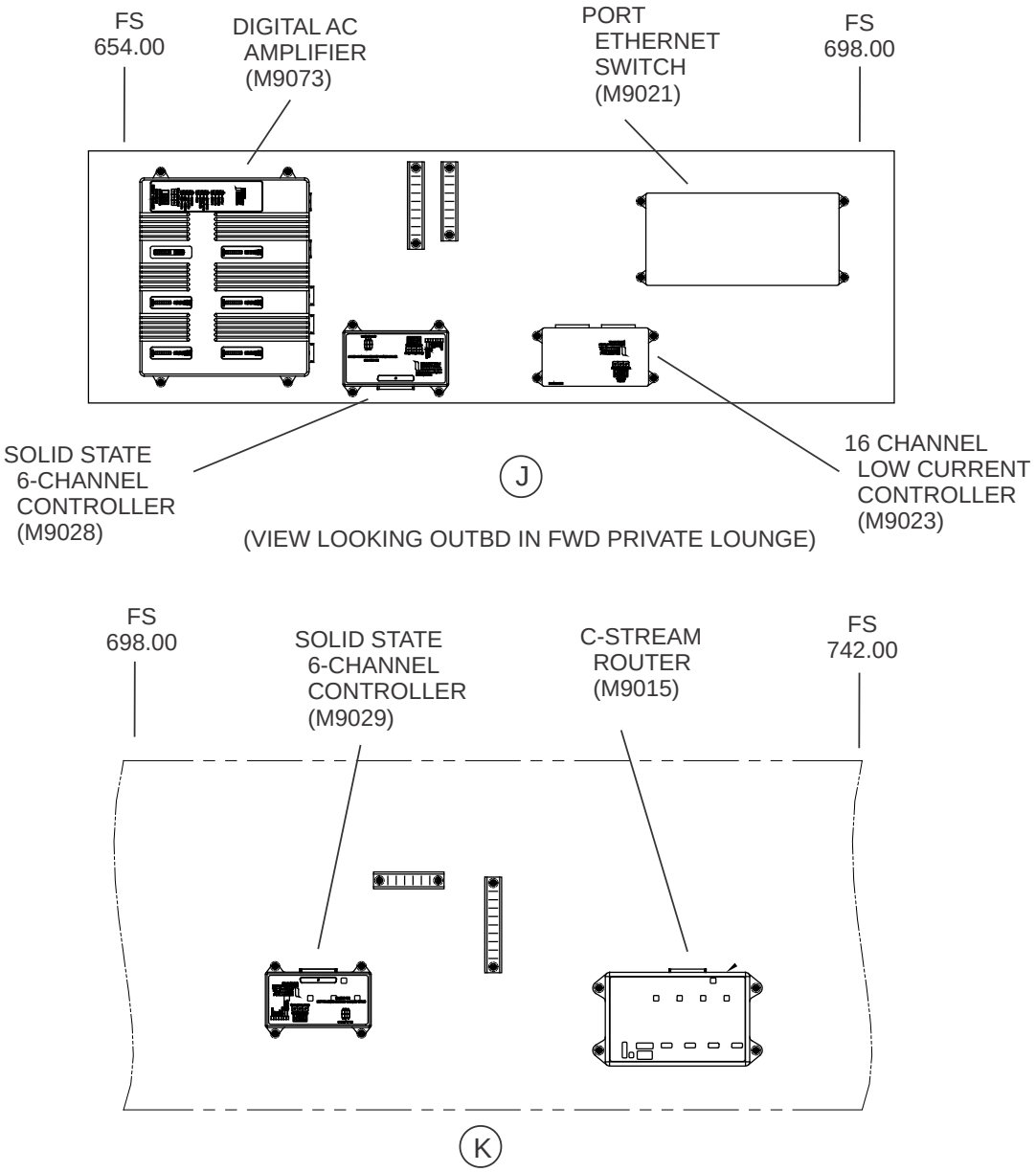
Cabin Management Equipment Locations
Figure 401 (Sheet 3 of 7)



Cabin Management Equipment Locations
Figure 401 (Sheet 4 of 7)

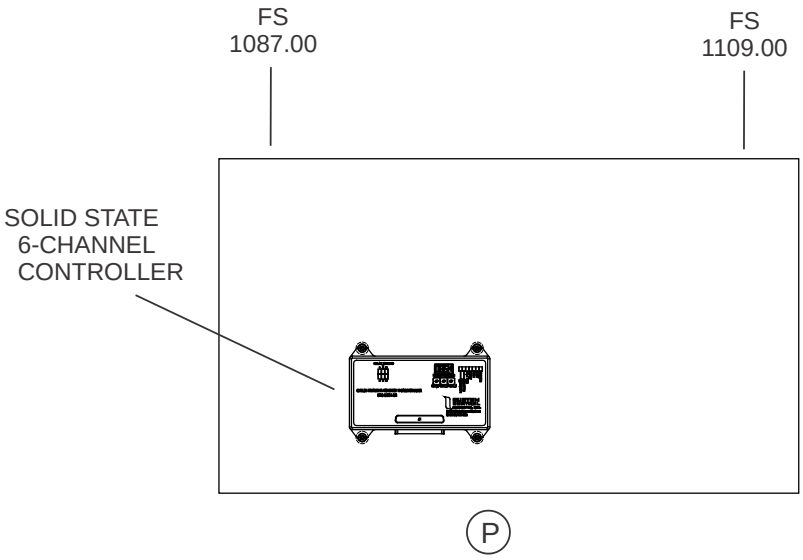


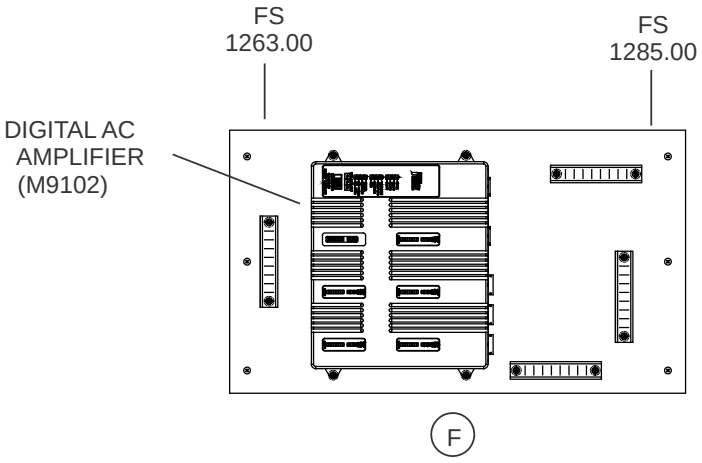
Cabin Management Equipment Locations
Figure 401 (Sheet 5 of 7)



P23-33-03-4-F406

Cabin Management Equipment Locations
Figure 401 (Sheet 6 of 7)





P23-33-03-4-F407

Cabin Management Equipment Locations
Figure 401 (Sheet 7 of 7)

CREW LOUNGE MONITOR- REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks:

(1) Removal

(2) Installation

2. Removal

(Figure 401)

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Remove the monitor shroud by pulling straight out to release ball catches.

(3) Disconnect the wire harness.

(4) Remove the four screws and washers securing the monitor to the mounting brackets.

---------- END OF TASK ----------

3. Installation

(Figure 401)

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

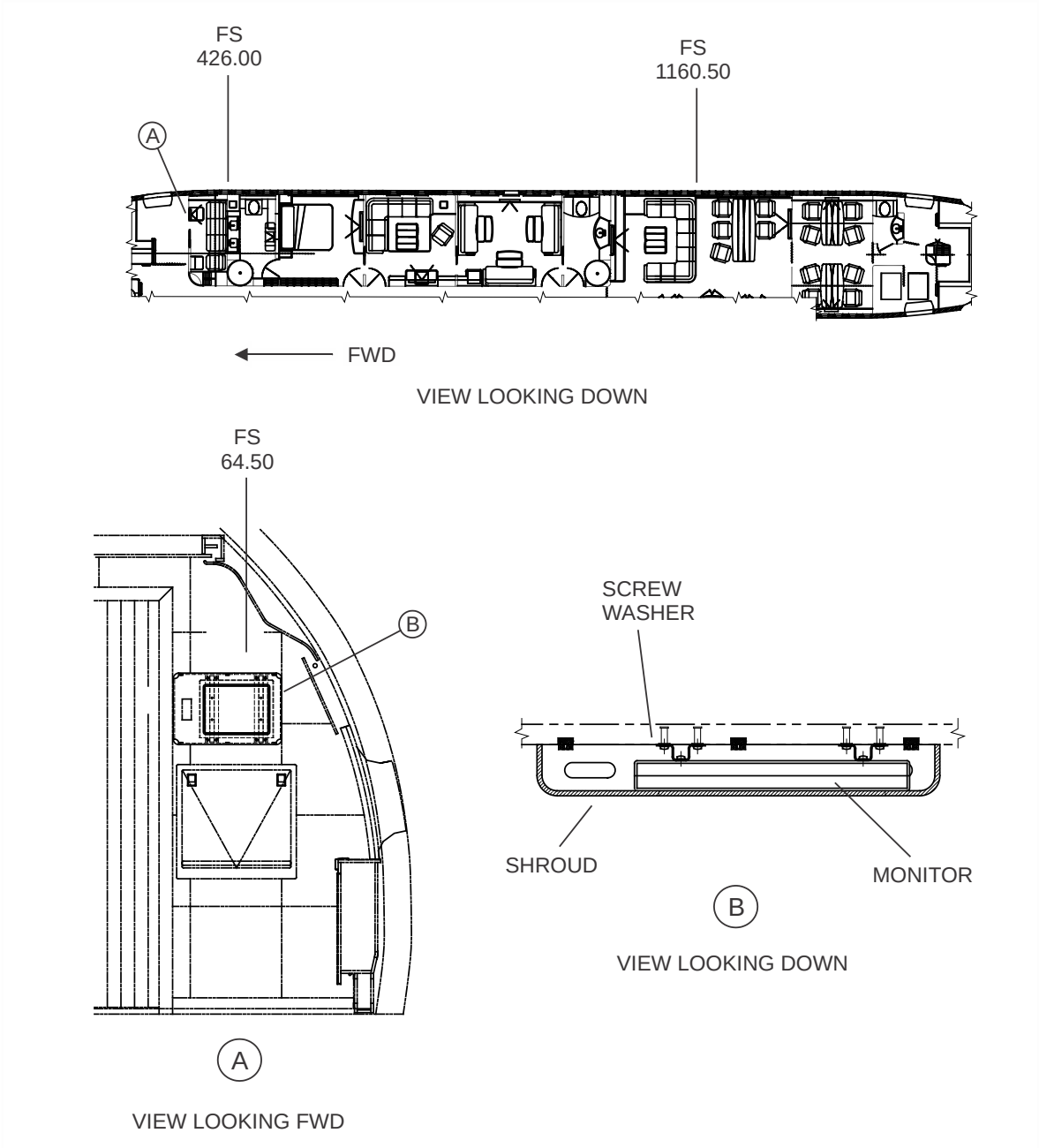
(2) Place monitor against inserts located on the mounting brackets and align holes.

(3) Install the four screws and washers securing the monitor to the mounting brackets.

(4) Connect the wire harness.

(5) Align monitor shroud and press toward mounting brackets engaging ball catches.

---------- END OF TASK ----------



Crew Lounge Monitor
Figure 401

STATEROOM MONITOR- REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks:

(1) Removal

(2) Installation

2. Removal

(Figure 401)

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Remove the monitor shroud by pulling straight out to release ball catches.

(3) Disconnect the wire harness.

(4) Remove the eight screws and washers securing the monitor to the bulkhead.

---------- END OF TASK ----------

3. Installation

(Figure 401)

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

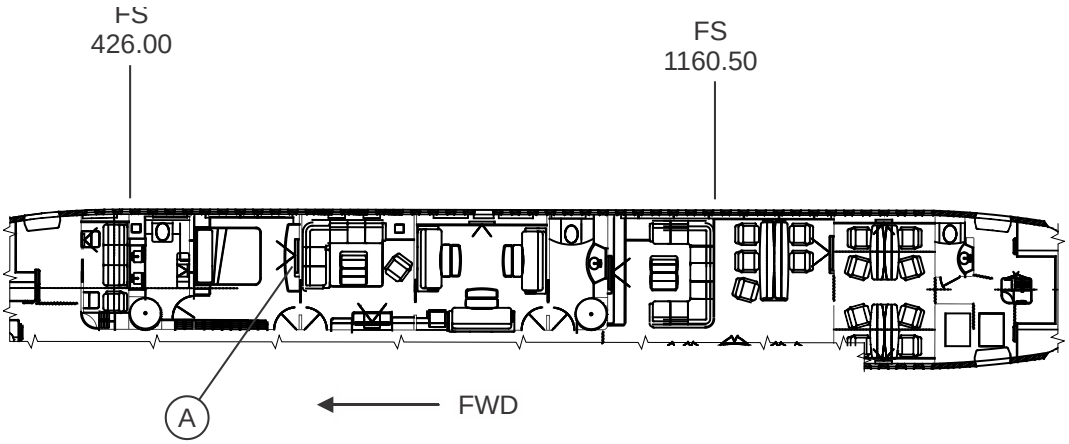
(2) Place monitor against inserts located on the bulkhead and align holes.

(3) Install the eight screws and washers securing the monitor to the bulkhead.

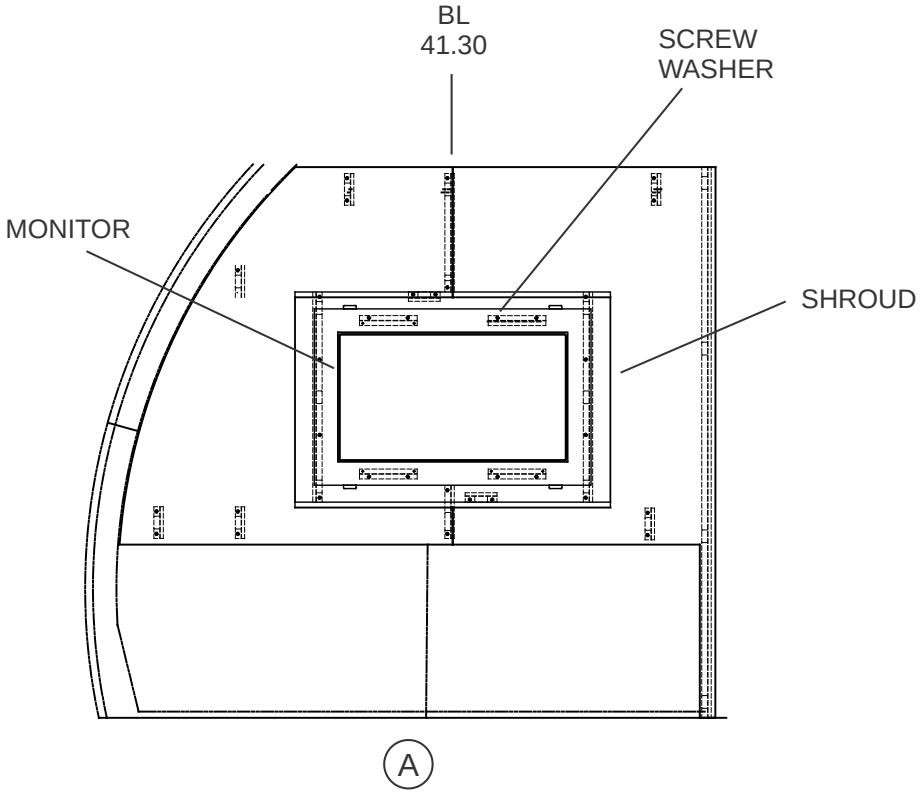
(4) Connect the wire harness.

(5) Align monitor shroud and press toward bulkhead engaging ball catches.

---------- END OF TASK ----------



VIEW LOOKING DOWN



VIEW LOOKING AFT

Stateroom Monitor
Figure 401

PRIVATE LOUNGE MONITOR - REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks:

(1) Removal

(2) Installation

2. Removal

(Figure 401)

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Remove the monitor shroud by pulling straight out to release ball catches.

(3) Disconnect the wire harness.

(4) Remove the eight screws and washers securing the monitor to the cabinet.

---------- END OF TASK ----------

3. Installation

(Figure 401)

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

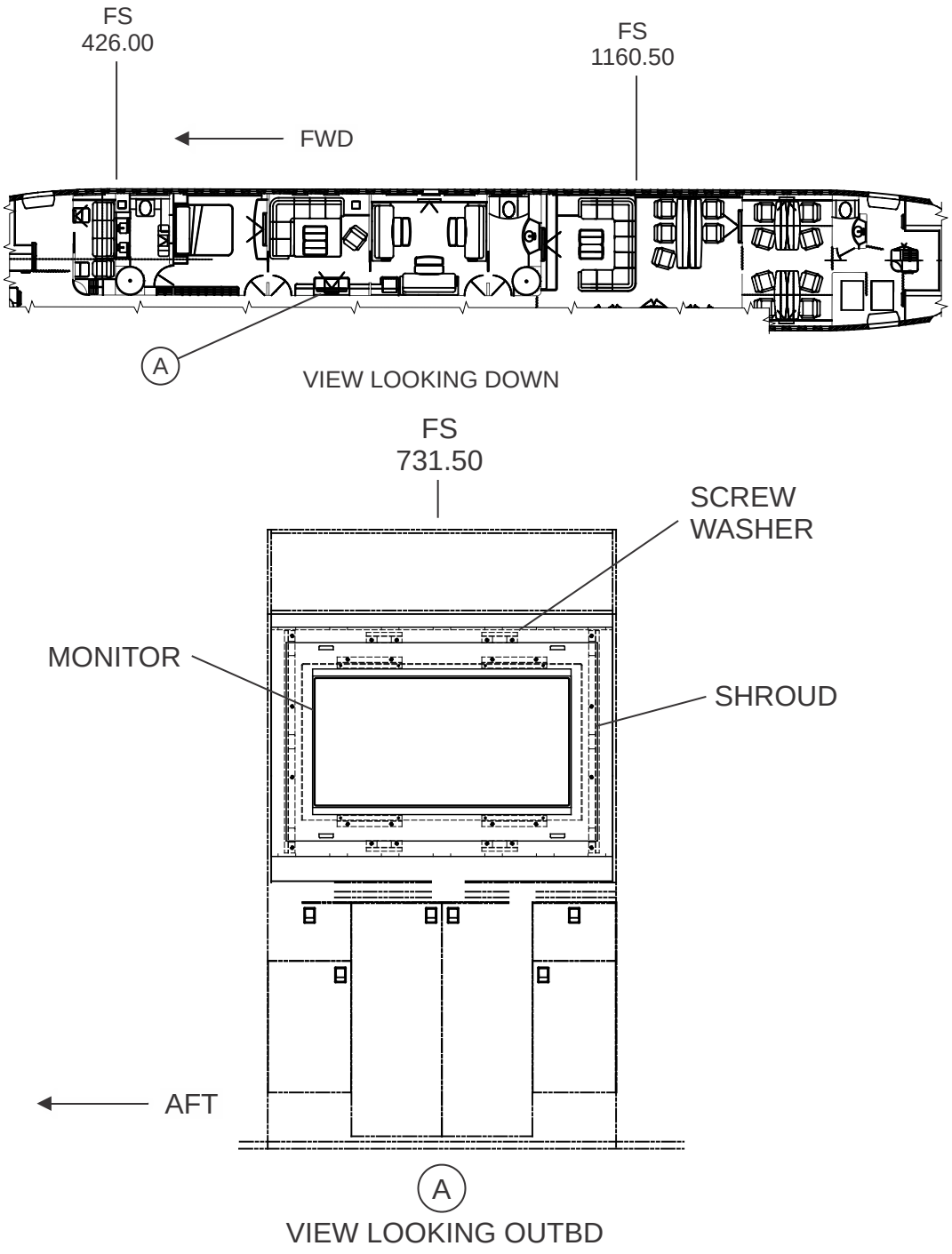
(2) Place monitor against inserts located on the cabinet and align holes.

(3) Install the eight screws and washers securing the monitor to the cabinet.

(4) Connect the wire harness.

(5) Align monitor shroud and press toward cabinet engaging ball catches.

---------- END OF TASK ----------



Private Lounge Monitor
Figure 401

LOUNGE MONITOR - REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks:

(1) Removal

(2) Installation

2. Removal

(Figure 401)

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Remove the monitor shroud by pulling straight out to release ball catches.

(3) Disconnect the wire harness.

(4) Remove the eight screws and washers securing the monitor to the bulkhead.

---------- END OF TASK ----------

3. Installation

(Figure 401)

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

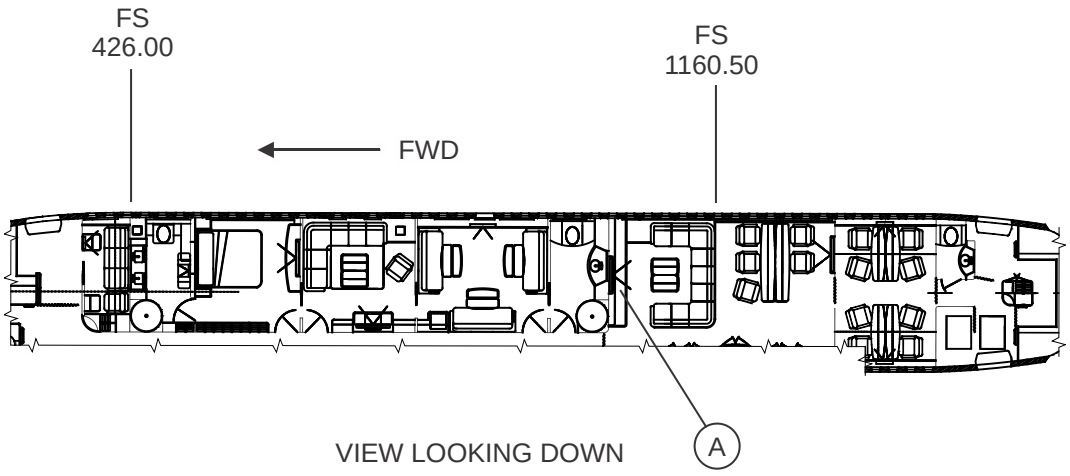
(2) Place monitor against inserts located on the bulkhead and align holes.

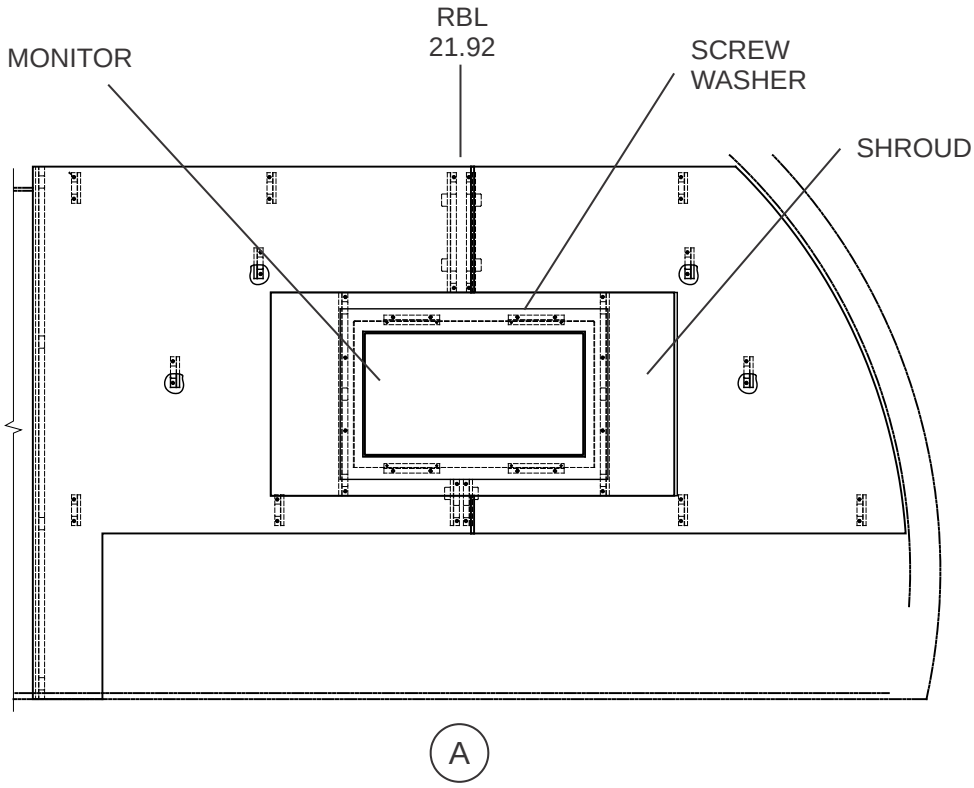
(3) Install the eight screws and washers securing the monitor to the bulkhead.

(4) Connect the wire harness.

(5) Align monitor shroud and press toward bulkhead engaging ball catches.

---------- END OF TASK ----------





Lounge Monitor
Figure 401

DINING ROOM MONITOR - REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks:

(1) Removal

(2) Installation

2. Removal

(Figure 401)

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Remove the monitor shroud by pulling straight out to release ball catches.

(3) Disconnect the wire harness.

(4) Remove the eight screws and washers securing the monitor to the bulkhead.

---------- END OF TASK ----------

3. Installation

(Figure 401)

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

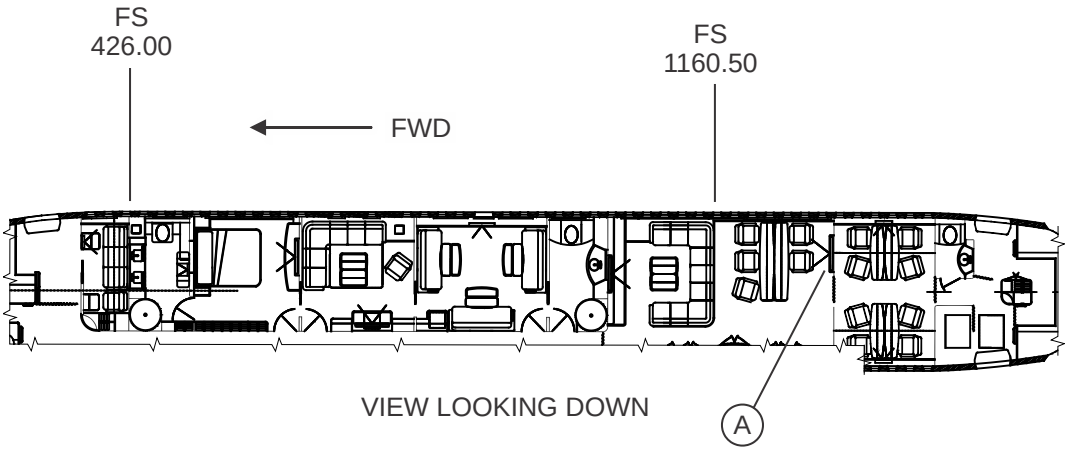
(2) Place monitor against inserts located on the bulkhead and align holes.

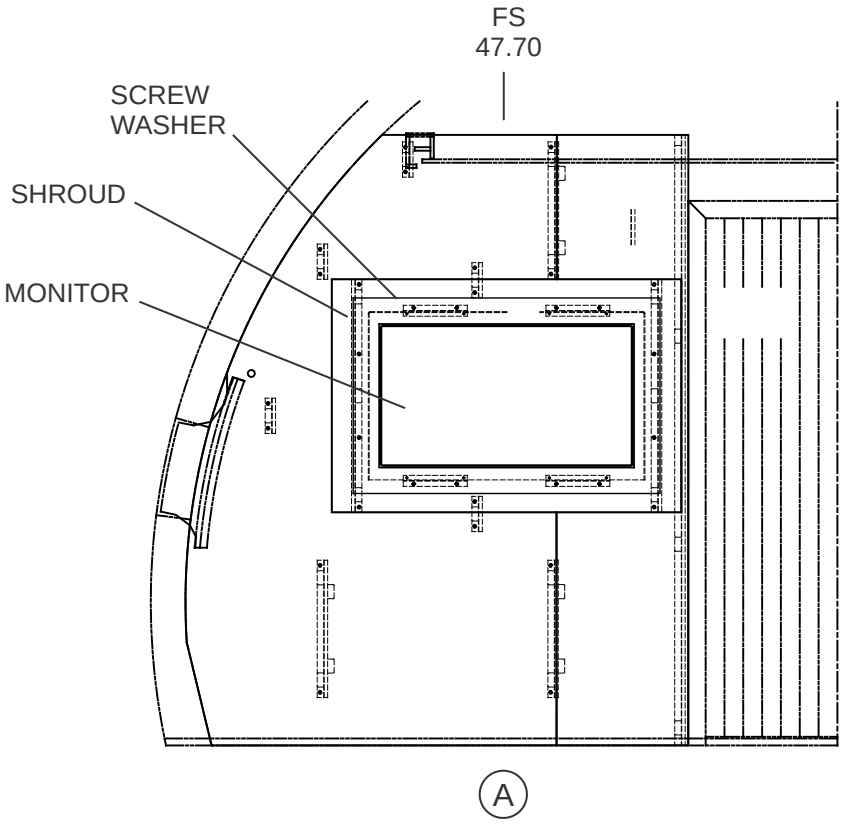
(3) Install the eight screws and washers securing the monitor to the bulkhead.

(4) Connect the wire harness.

(5) Align monitor shroud and press toward bulkhead engaging ball catches.

---------- END OF TASK ----------





Dining Room Monitor
Figure 401

CONFERENCE ROOM MONITORS - REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks:

(1) Removal

(2) Installation

2. Removal

(Figure 401)

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Remove the monitor shroud by pulling up and out to release Velcro from side ledge.

(3) Disconnect the wire harness.

(4) Remove the four screws from behind the monitor securing the monitor to the channel/gusset assembly.

---------- END OF TASK ----------

3. Installation

(Figure 401)

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

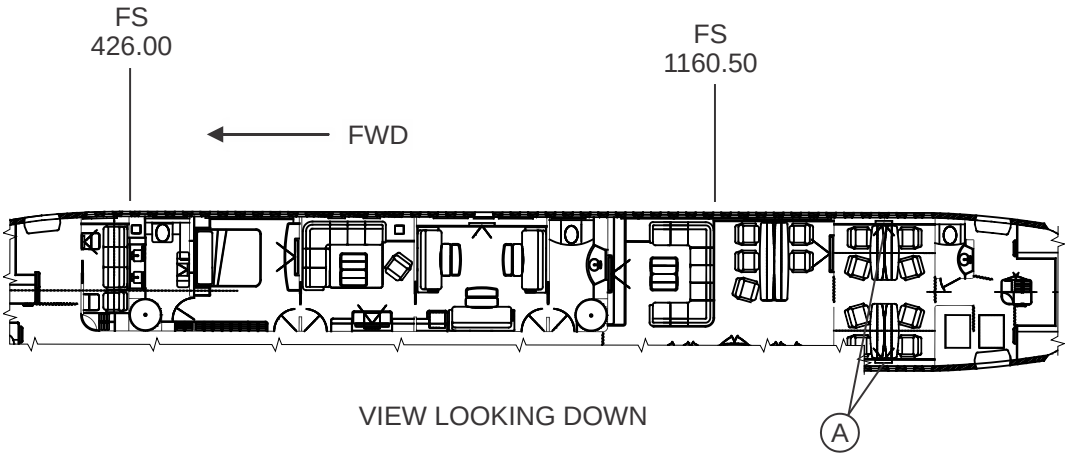
Zone	Area
200	Upper Half of Fuselage

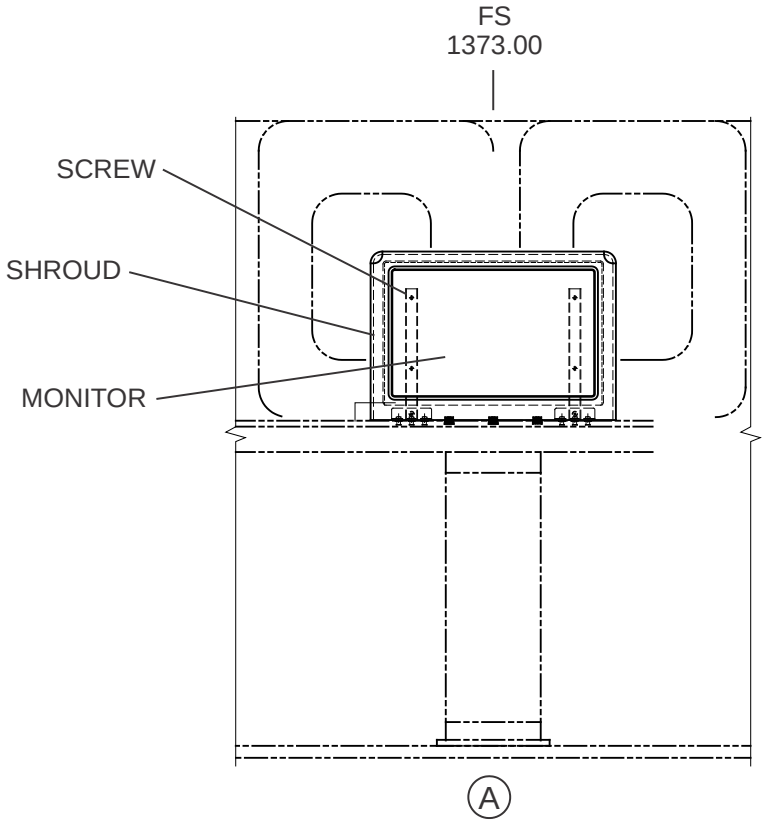
C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).
(2) Place monitor against channel/gusset assembly aligning the holes in the assembly to the monitor inserts.
(3) Install the four screws and washers securing the monitor to the channel/gusset assembly.
(4) Connect the wire harness.
(5) Align monitor shroud and press down firmly securing the Velcro.

---------- END OF TASK ----------



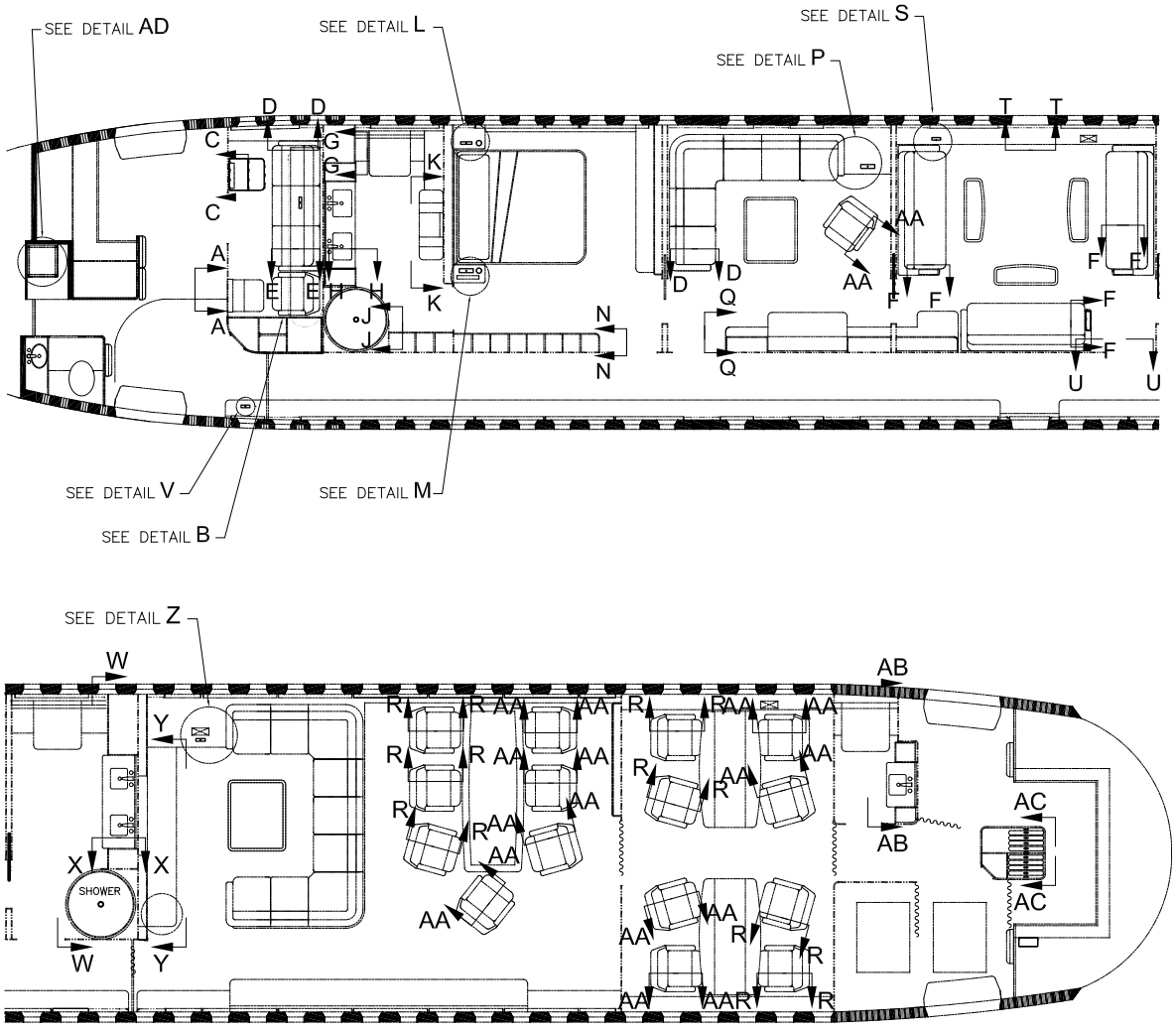


Conference Room Monitor
Figure 401

SWITCH PANELS - DESCRIPTION AND OPERATION

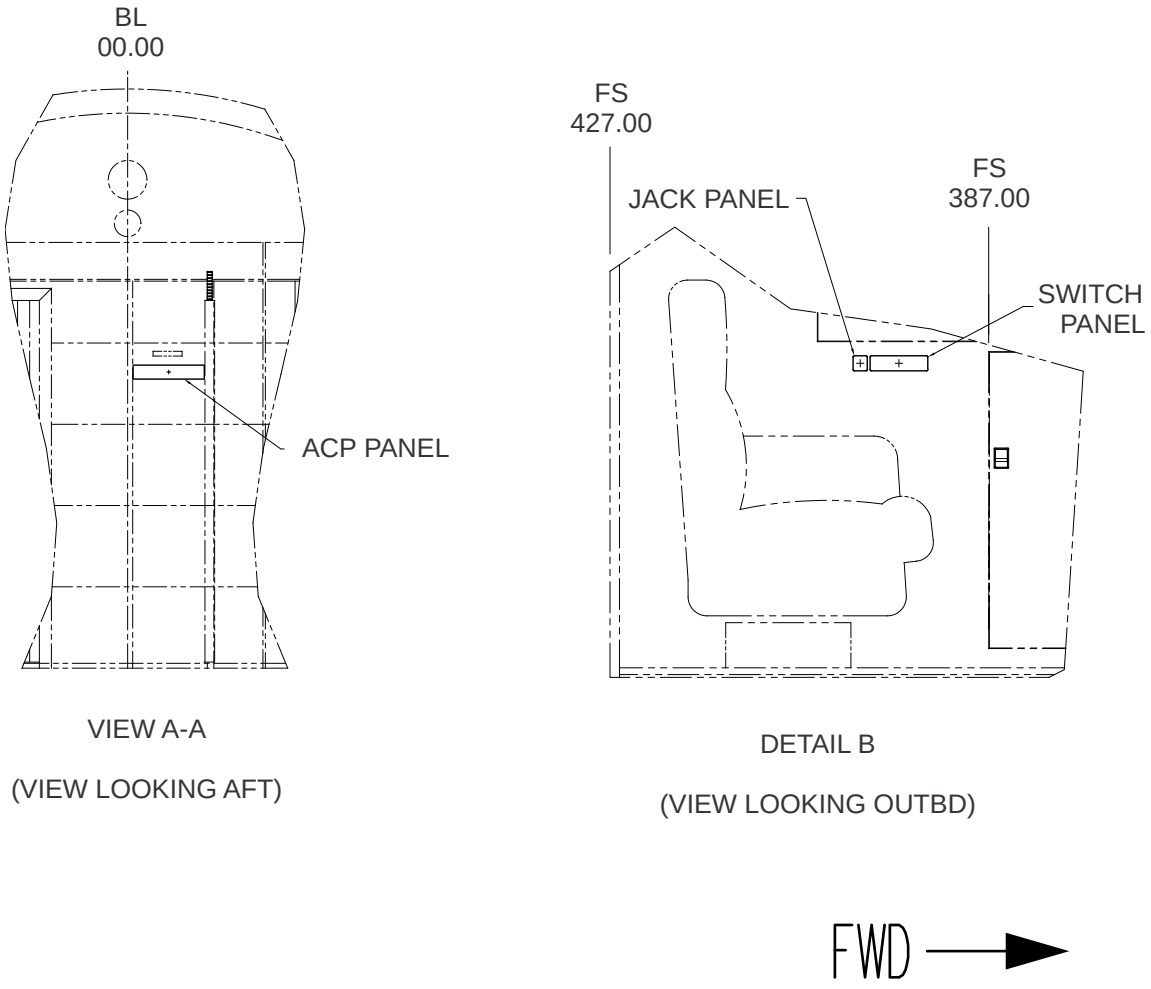
1. General

A. Switch Panels are located in various positions throughout the cabin (Figure 1).

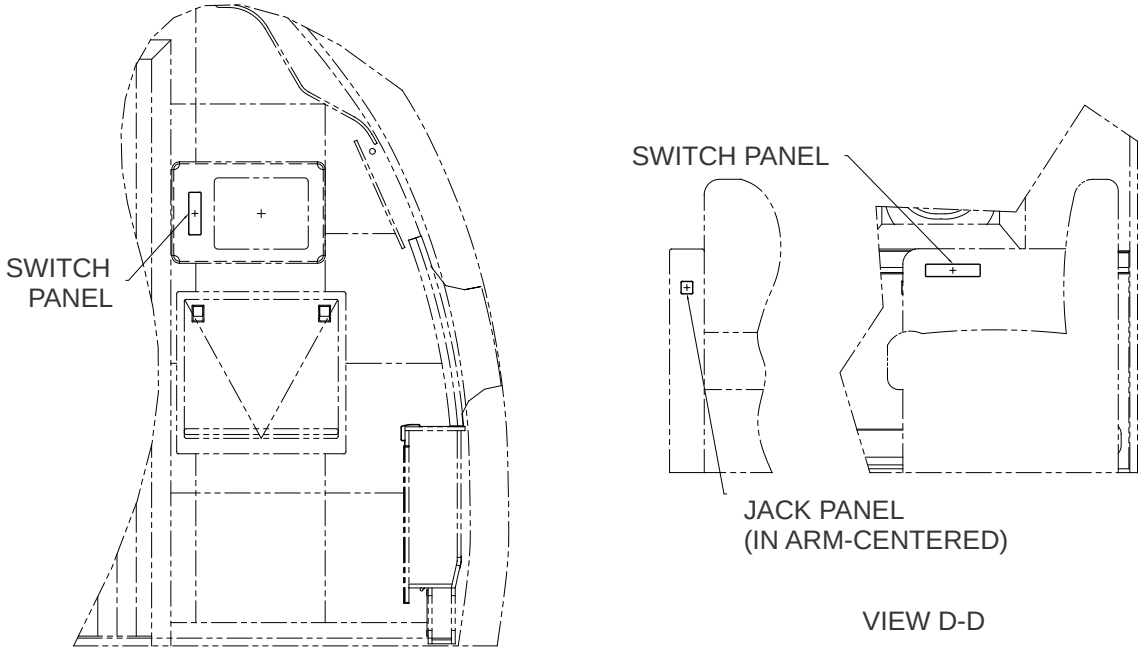


VIEW LOOKING DOWN

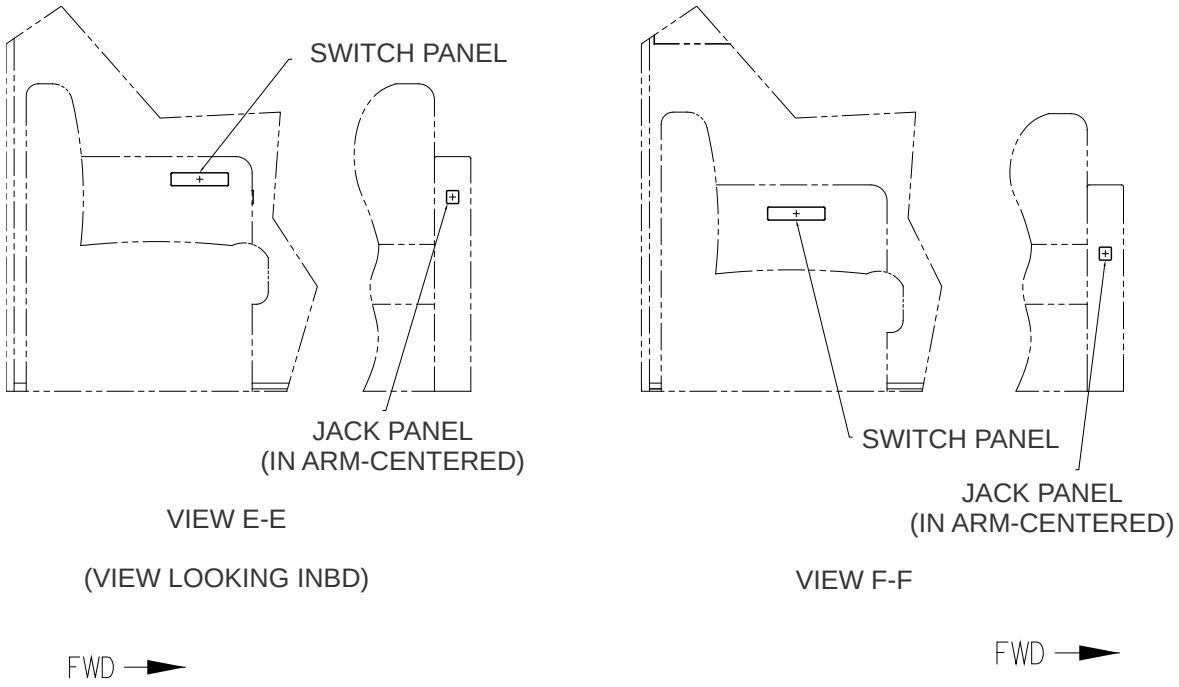
Switch Panels
Figure 1 (Sheet 1 of 15)



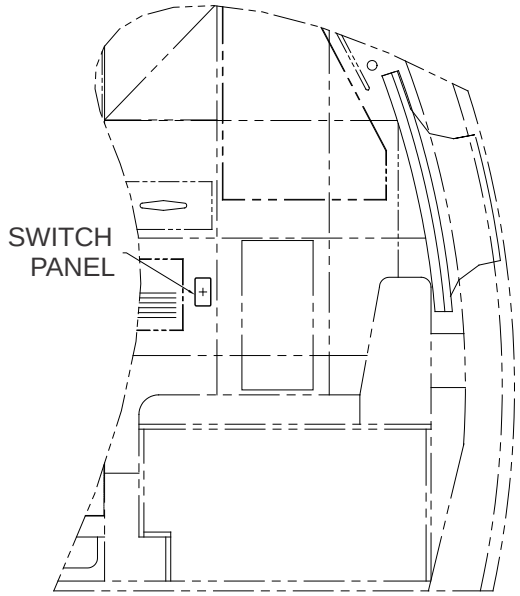
Switch Panels
Figure 1 (Sheet 2 of 15)



Switch Panels
Figure 1 (Sheet 3 of 15)

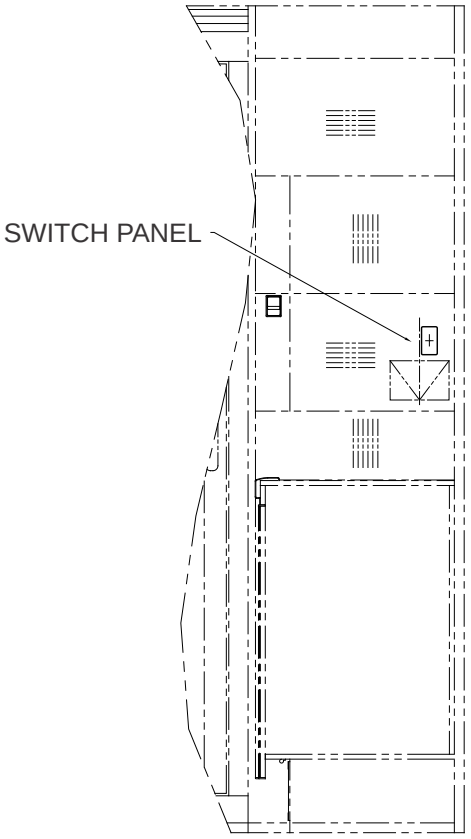


Switch Panels
Figure 1 (Sheet 4 of 15)



VIEW G-G

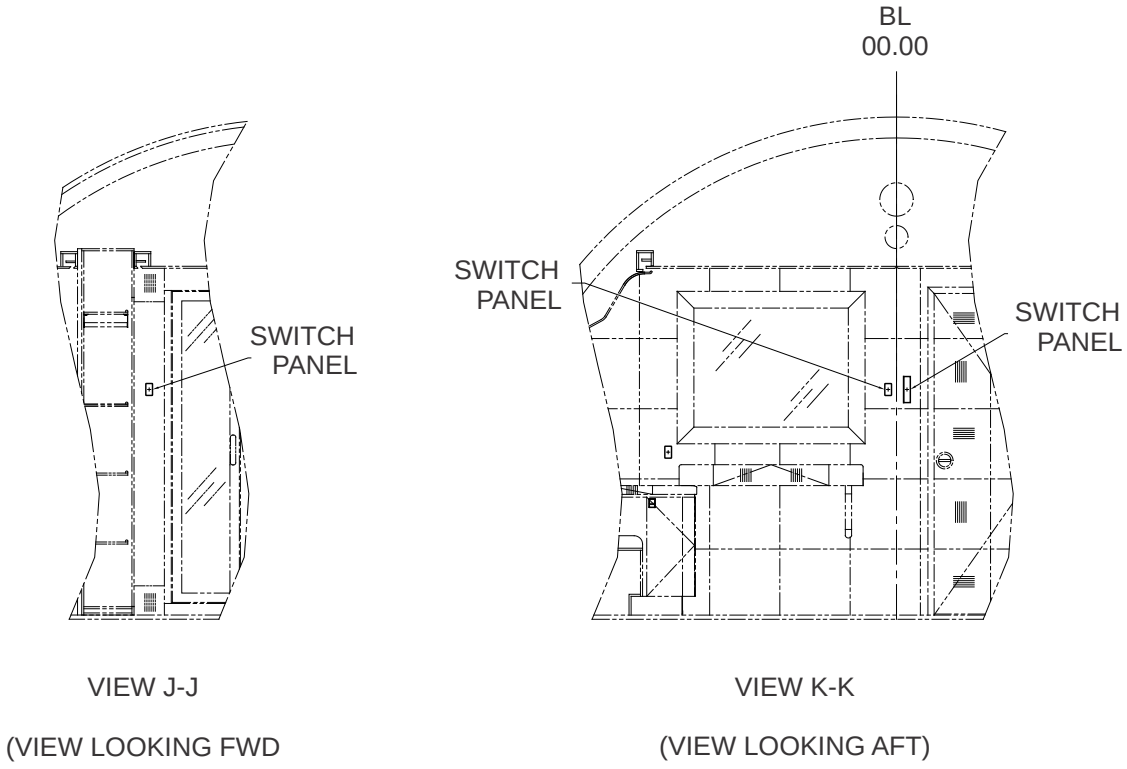
(VIEW LOOKING FWD)



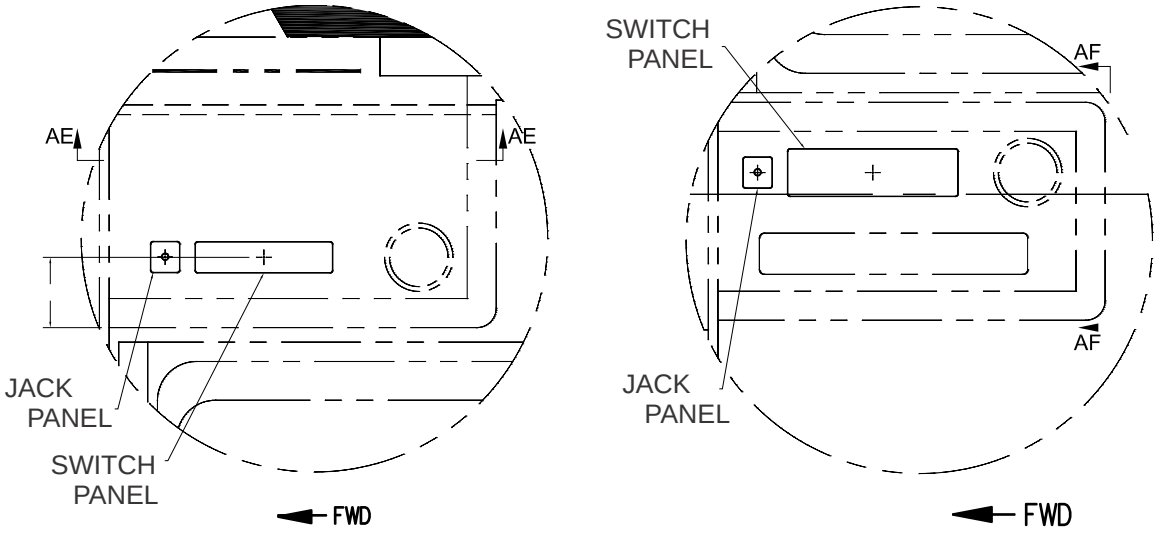
VIEW H-H

(VIEW LOOKING INBD

Switch Panels
Figure 1 (Sheet 5 of 15)



Switch Panels
Figure 1 (Sheet 6 of 15)



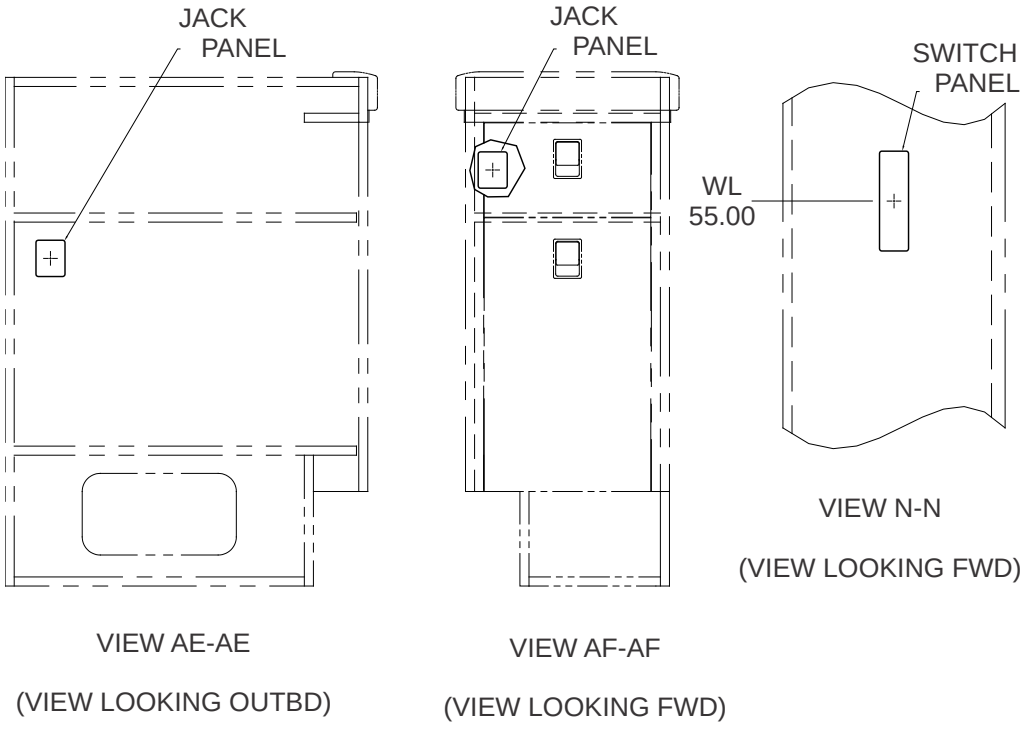
DETAIL L

(VIEW LOOKING DOWN)

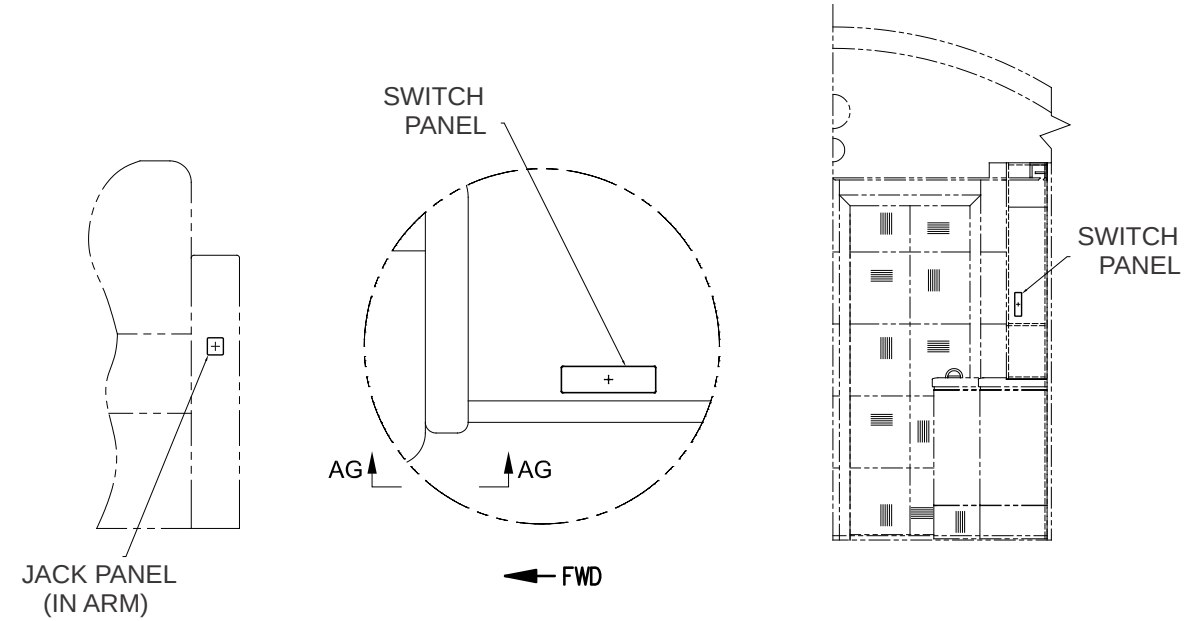
DETAIL M

(VIEW LOOKING DOWN)

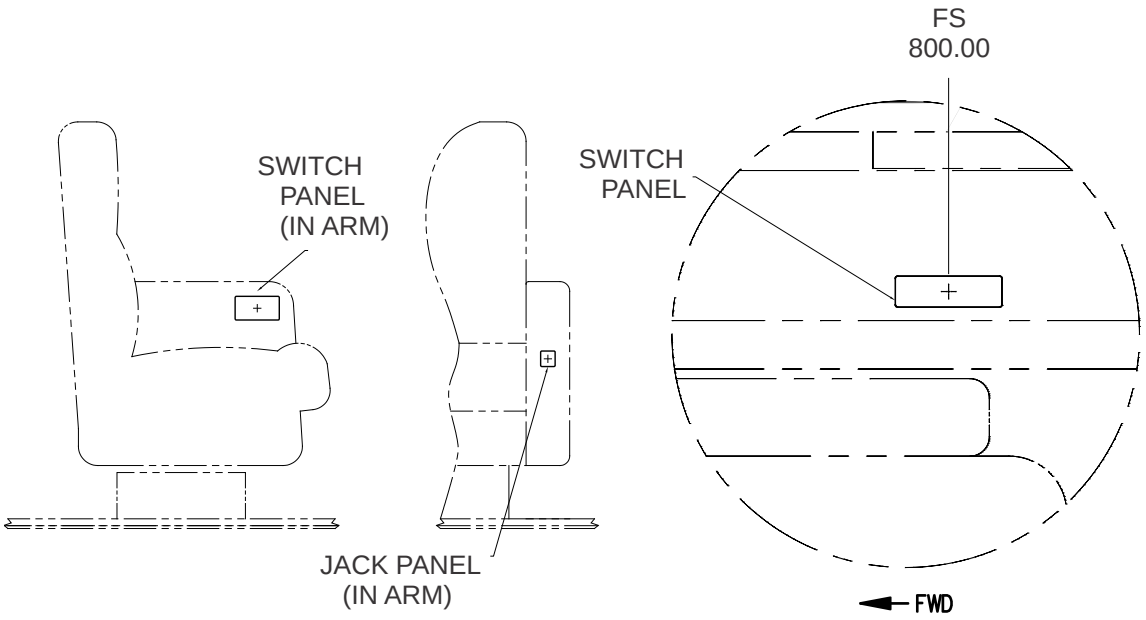
Switch Panels
Figure 1 (Sheet 7 of 15)



Switch Panels
Figure 1 (Sheet 8 of 15)



Switch Panels
Figure 1 (Sheet 9 of 15)



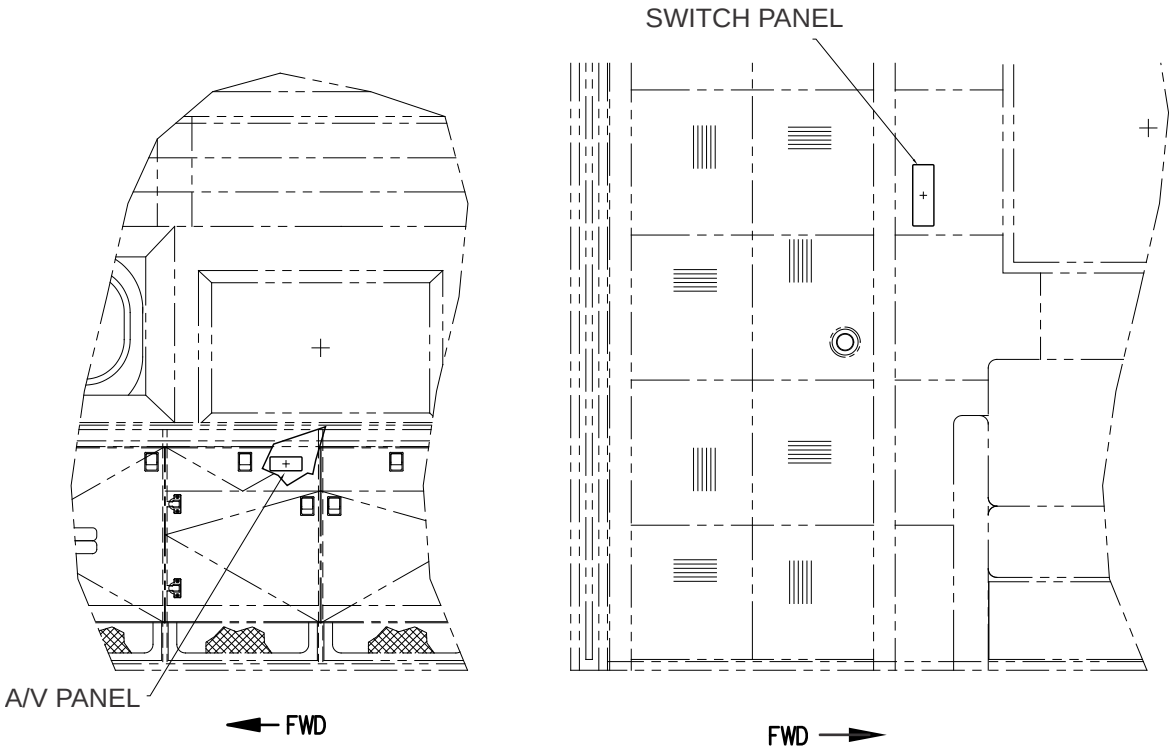
VIEW R-R (SHOWN)
(7 PLACES - L/H ARM)
(ORIENTATION AS SHOWN IN MAIN VIEW)

VIEW AA-AA (OPPOSITE)
(9 PLACES - R/H ARM)
(ORIENTATION AS SHOWN IN MAIN VIEW)

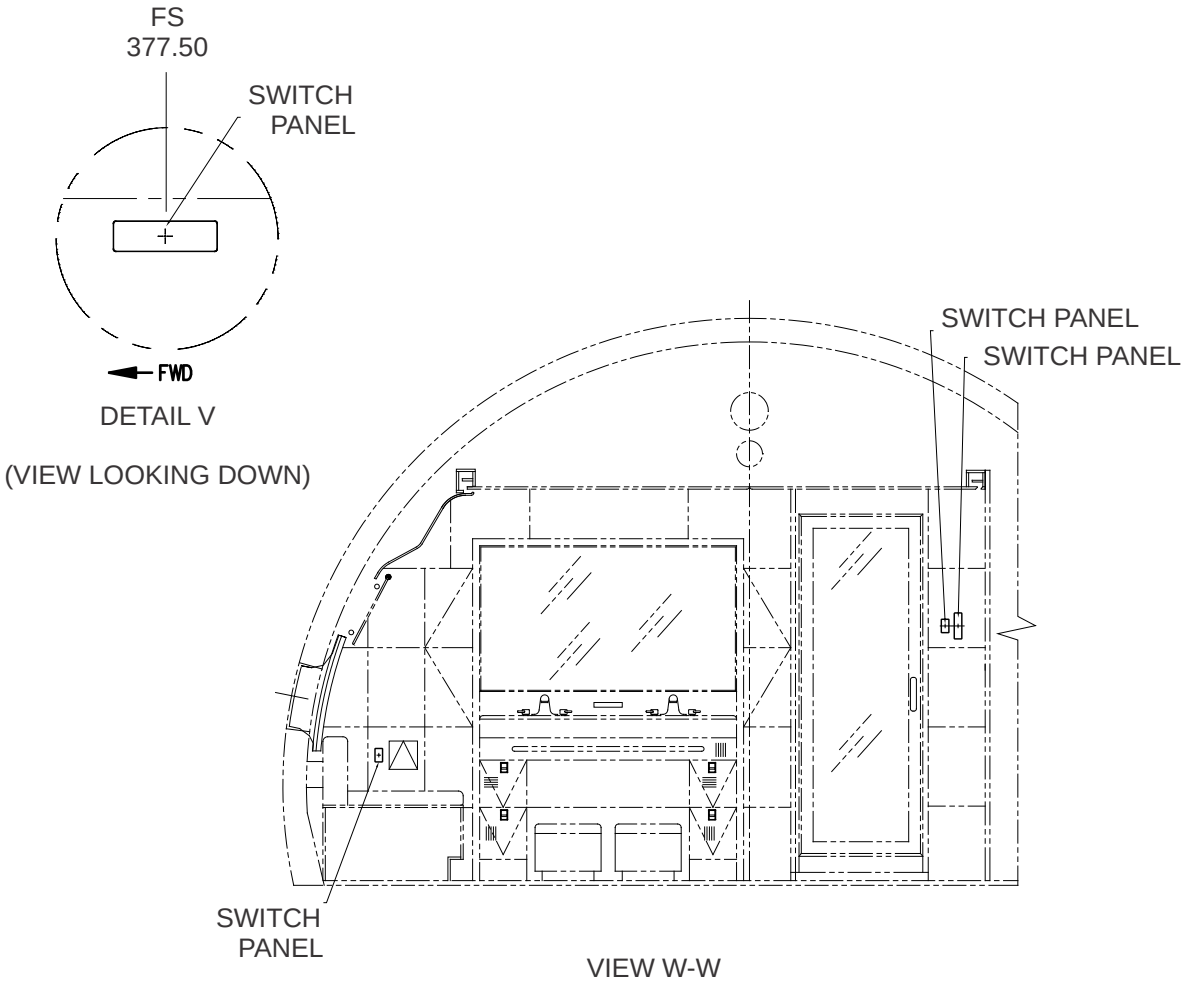
DETAIL S

(VIEW LOOKING DOWN)

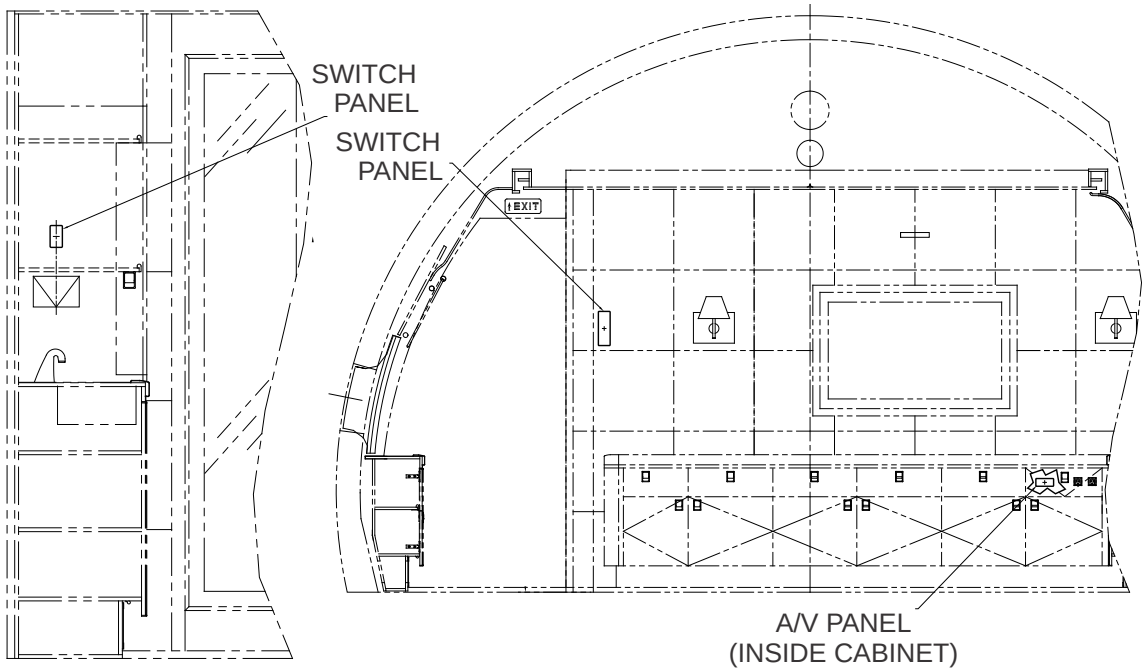
Switch Panels
Figure 1 (Sheet 10 of 15)



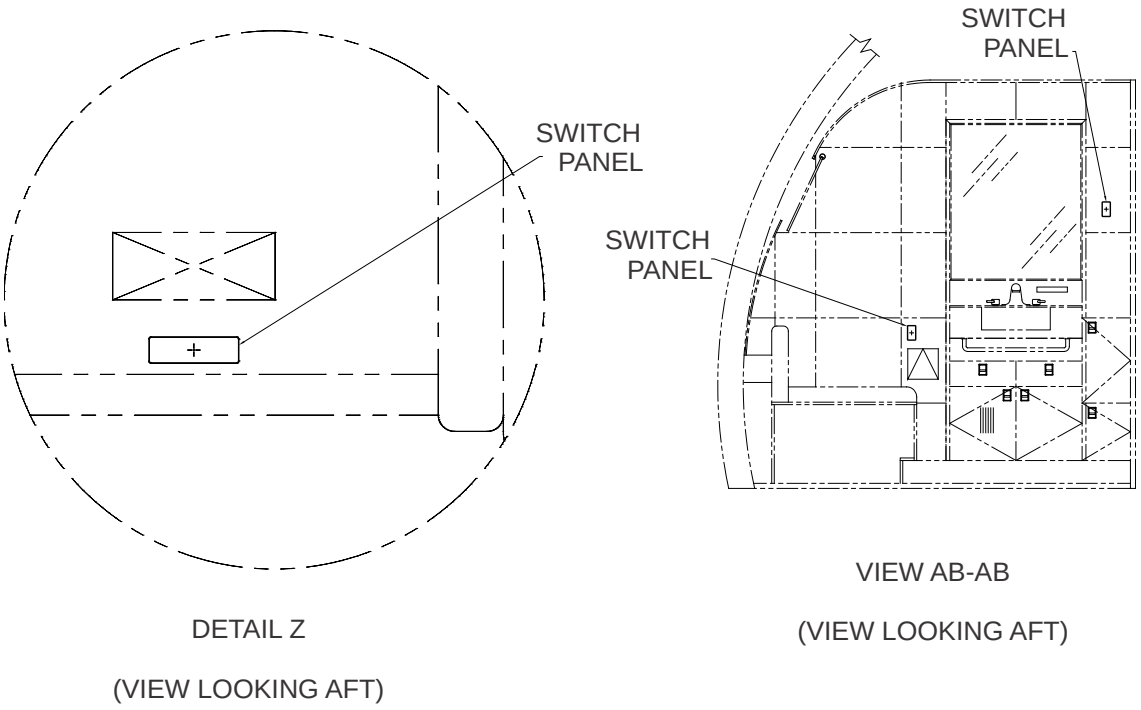
Switch Panels
Figure 1 (Sheet 11 of 15)



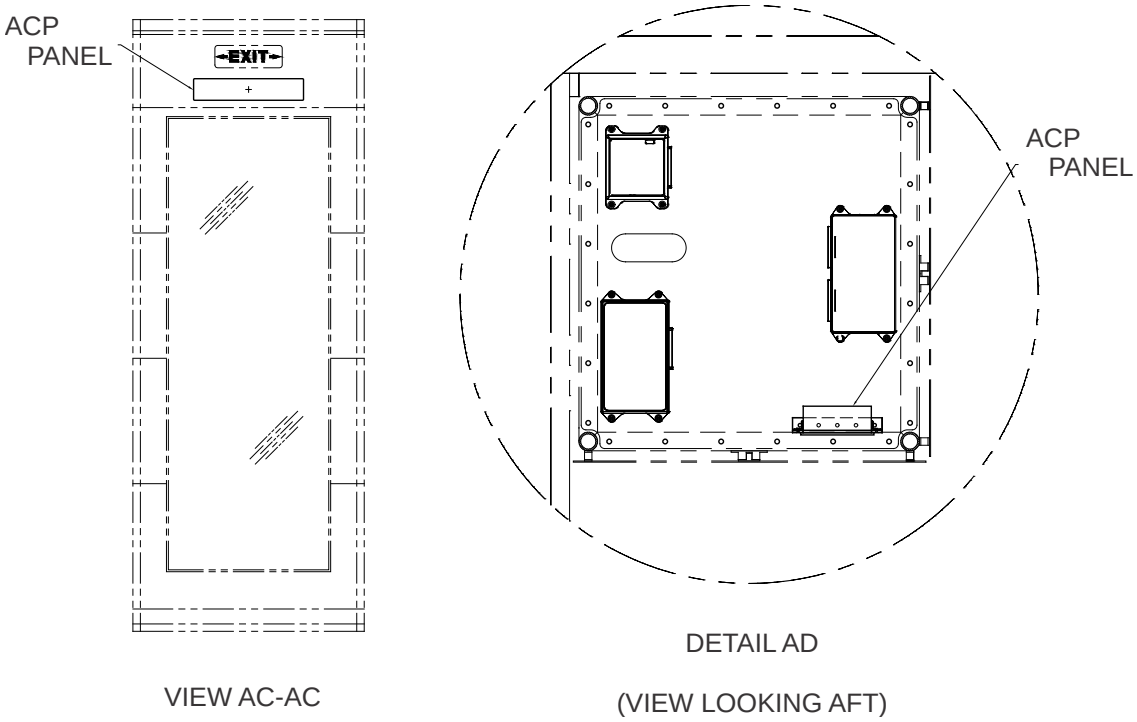
Switch Panels
Figure 1 (Sheet 12 of 15)



Switch Panels
Figure 1 (Sheet 13 of 15)



Switch Panels
Figure 1 (Sheet 14 of 15)



Switch Panels
Figure 1 (Sheet 15 of 15)

SWITCH PANELS – MAINTENANCE PRACTICES

1. General

A. This procedure contains the following removal/installation tasks:

(1) Switch Panels

2. Removal

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

Note: The switch panels are secured with spring clips.

(2) Carefully pull the panel out of the cabinet or seat and disconnect the wire harness.

---------- END OF TASK ----------

3. Installation

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

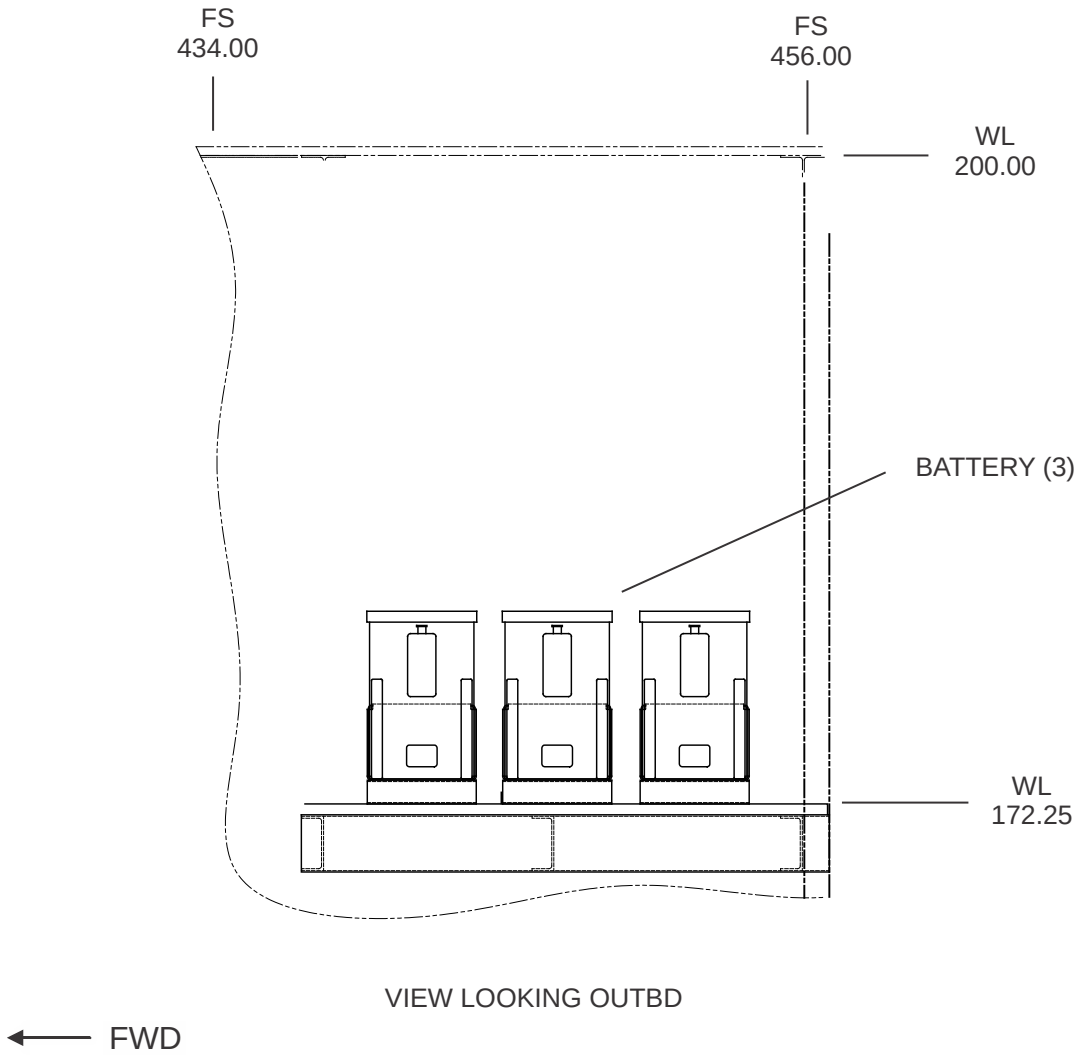
(2) Connect wire harness, align switch panels to opening and carefully press until spring clip latches.

---------- END OF TASK ----------

SECURITY SYSTEM BATTERY BACKUP - DESCRIPTION AND OPERATION

1. General

A. There are three (3) security system backup batteries installed in the equipment rack at water line 172.25 between fuselage station 434 and 456 (Figure 1).

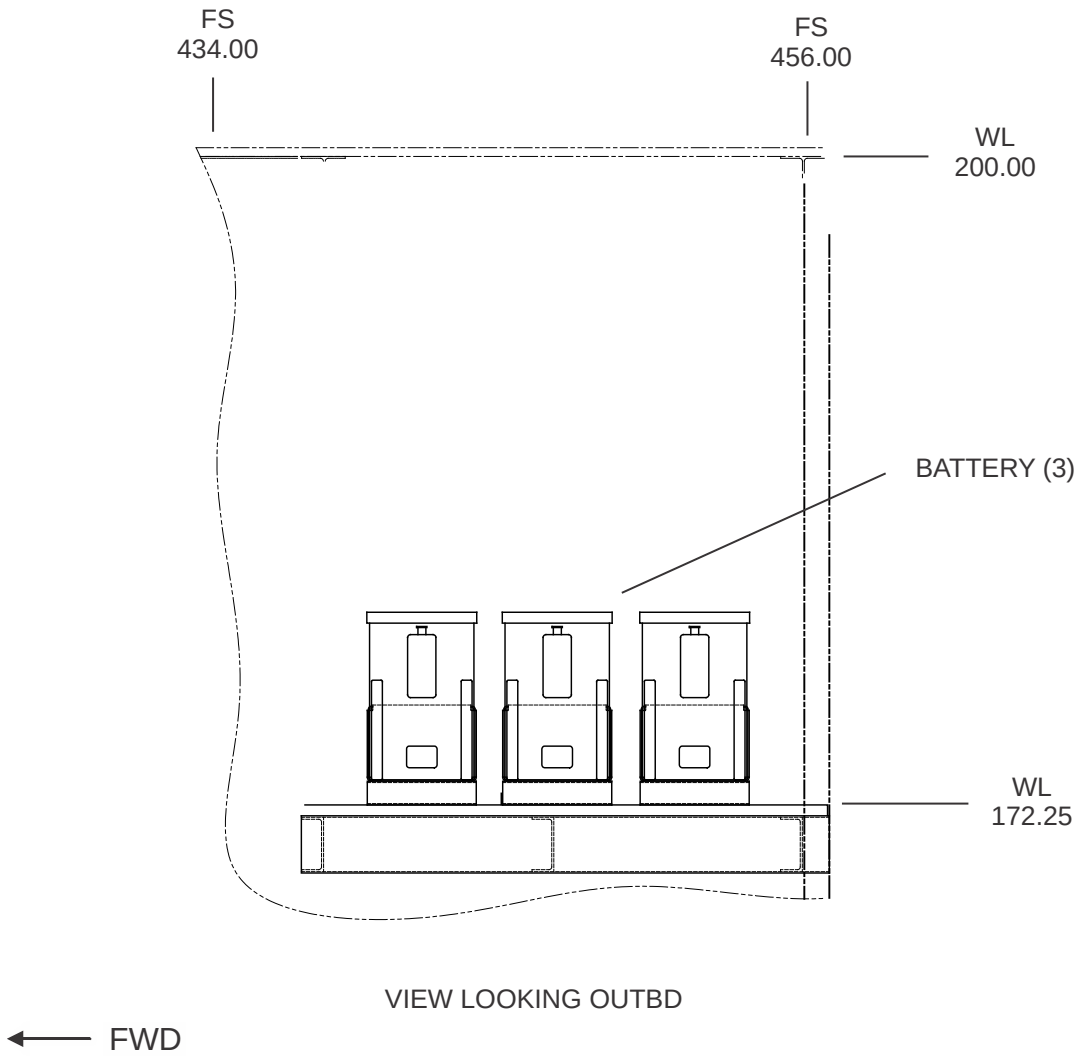


Security System Battery Backup
Figure 1

SECURITY SYSTEM BATTERY BACKUP - REMOVAL/INSTALLATION

1. General

A. Refer to AMM Supplement 20-10-38-4 - STANDARD PRACTICES ELECTRICAL COMPONENT BOX– REMOVAL/INSTALLATION for removal/installation.



Security System Battery Backup
Figure 401

CAMERAS - DESCRIPTION AND OPERATION

1. General

A. There are two cameras installed.

(1) Lower External Camera (Figure 1)

(a) The lower external camera is installed in a camera pod located on the aircraft belly centerline (BL 00) between Fuselage Station (FS) 1050 and 1070.

(2) Vertical Fin Camera (Figure 2)

(b) The vertical fin camera is installed in the vertical fin Front Spar Section (FSS) 373 on a support base behind a lens.

2. Components

A. Lower External Camera

(1) Camera

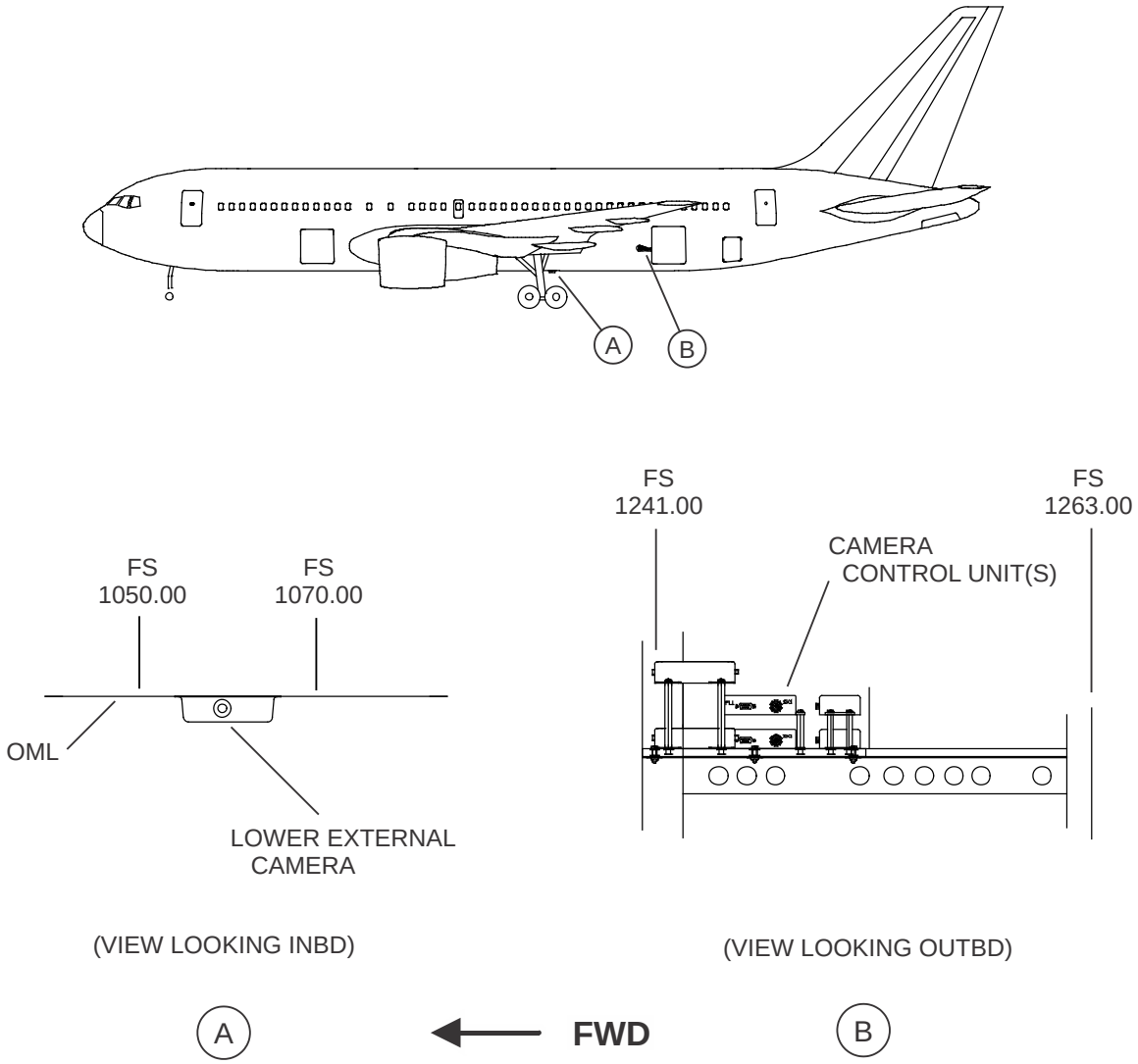
(2) Camera Control Unit

B. Vertical Fin Camera

(1) Camera

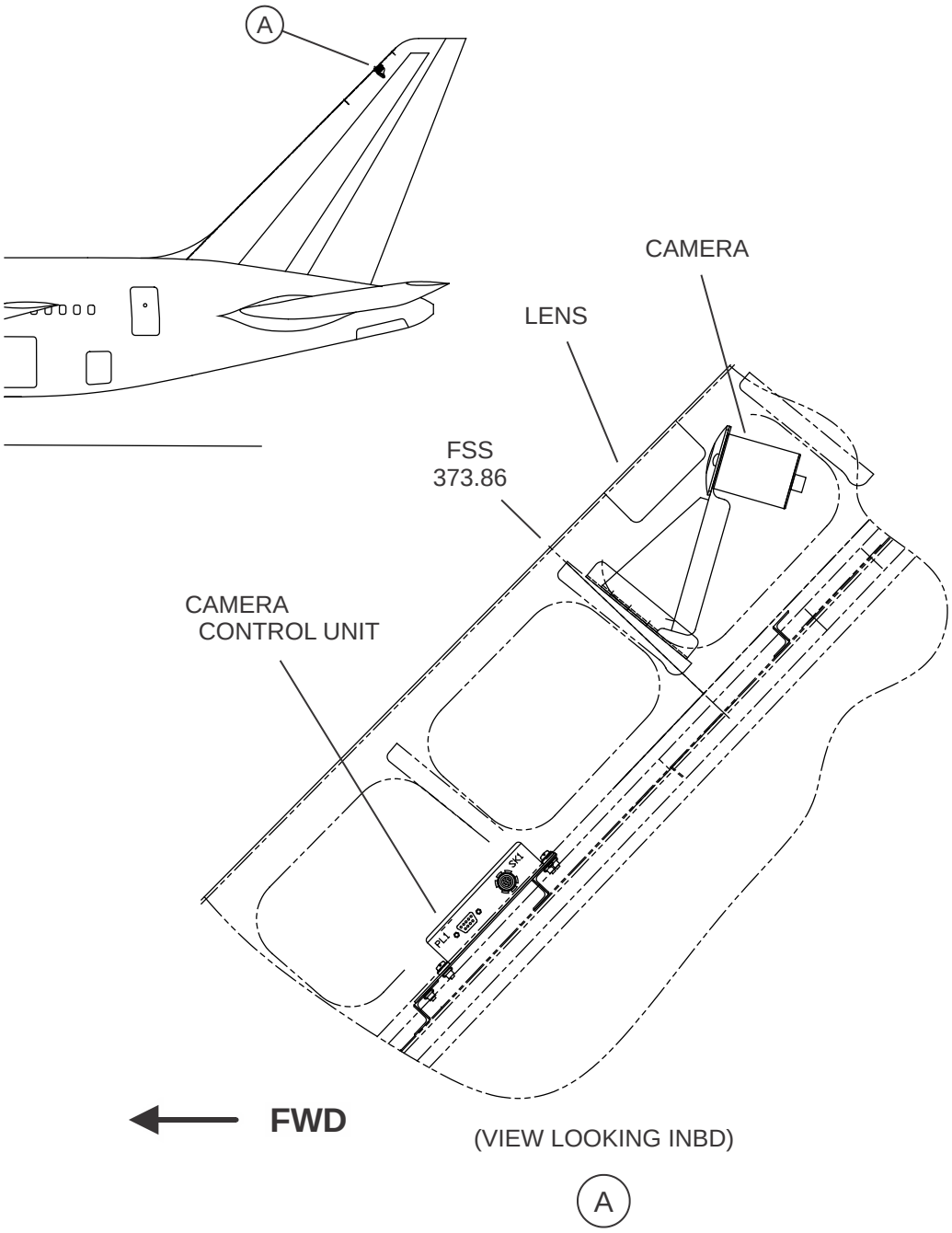
(2) Camera Control Unit

(3) Lens



P23-72-00-F001

Lower External Camera
Figure 1



P23-72-00-F002

Vertical Fin Camera
Figure 2

LOWER EXTERNAL CAMERA - REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks:

(1) Removal

(2) Installation

2. Removal

(Figure 401)

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
149	Aft Section of Keel Beam

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

Note: Access panel 149CL (AMM BOE 06-41-00-2), may need to be removed to facilitate maintenance.

(2) Remove screws and washers.

(3) Remove ground wire screw.

(4) Disconnect electrical connector

(5) Remove camera pod.

---------- END OF TASK ----------

3. Installation

(Figure 401)

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

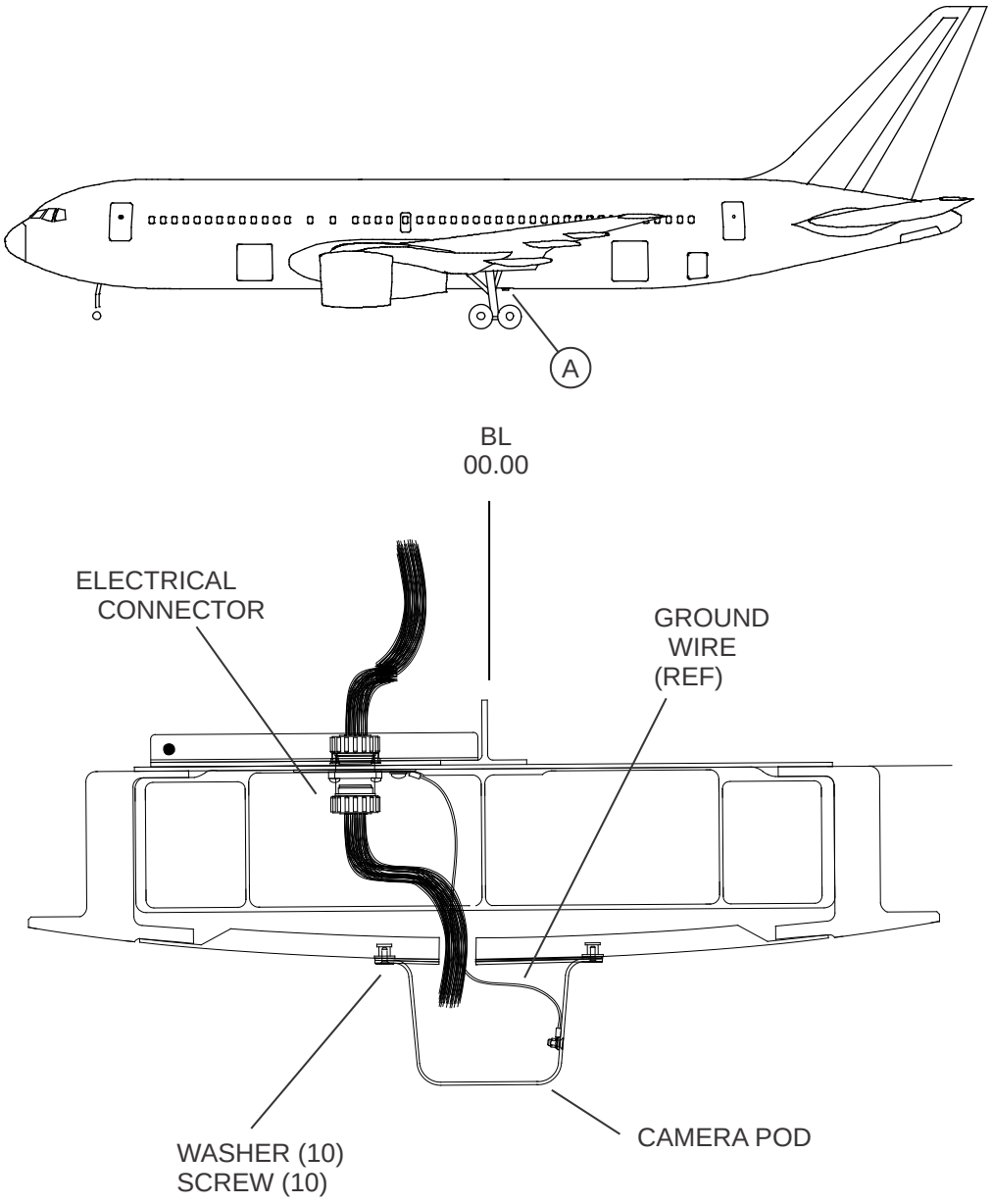
Zone	Area
149	Aft Section of Keel Beam

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).
(2) Connect electrical connector.
(3) Position ground wire and install screw.
(4) Position camera pod, install washers and screws.

---------- END OF TASK ----------



P23-72-01-4-F001

Lower External Camera
Figure 401

VERTICAL FIN CAMERA - REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks:

(1) Removal

(2) Installation

2. Removal

(Figure 401)

A. References

Reference	Title
06-42-00-2	Empennage (Major Zone 300) Access Doors And Panels - Maintenance Practices
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
320	Vertical Stabilizer and Rudder

C. Access

Panel	Area
321K	Fin Auxiliary Spar

D. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Open access panel 321K (AMM BOE 06-42-00-2).

(3) Disconnect electrical connector.

(4) Remove camera.

---------- END OF TASK ----------

3. Installation

(Figure 401)

A. References

Reference	Title
06-42-00-2	Empennage (Major Zone 300) Access Doors And Panels - Maintenance Practices
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
320	Vertical Stabilizer and Rudder

C. Access

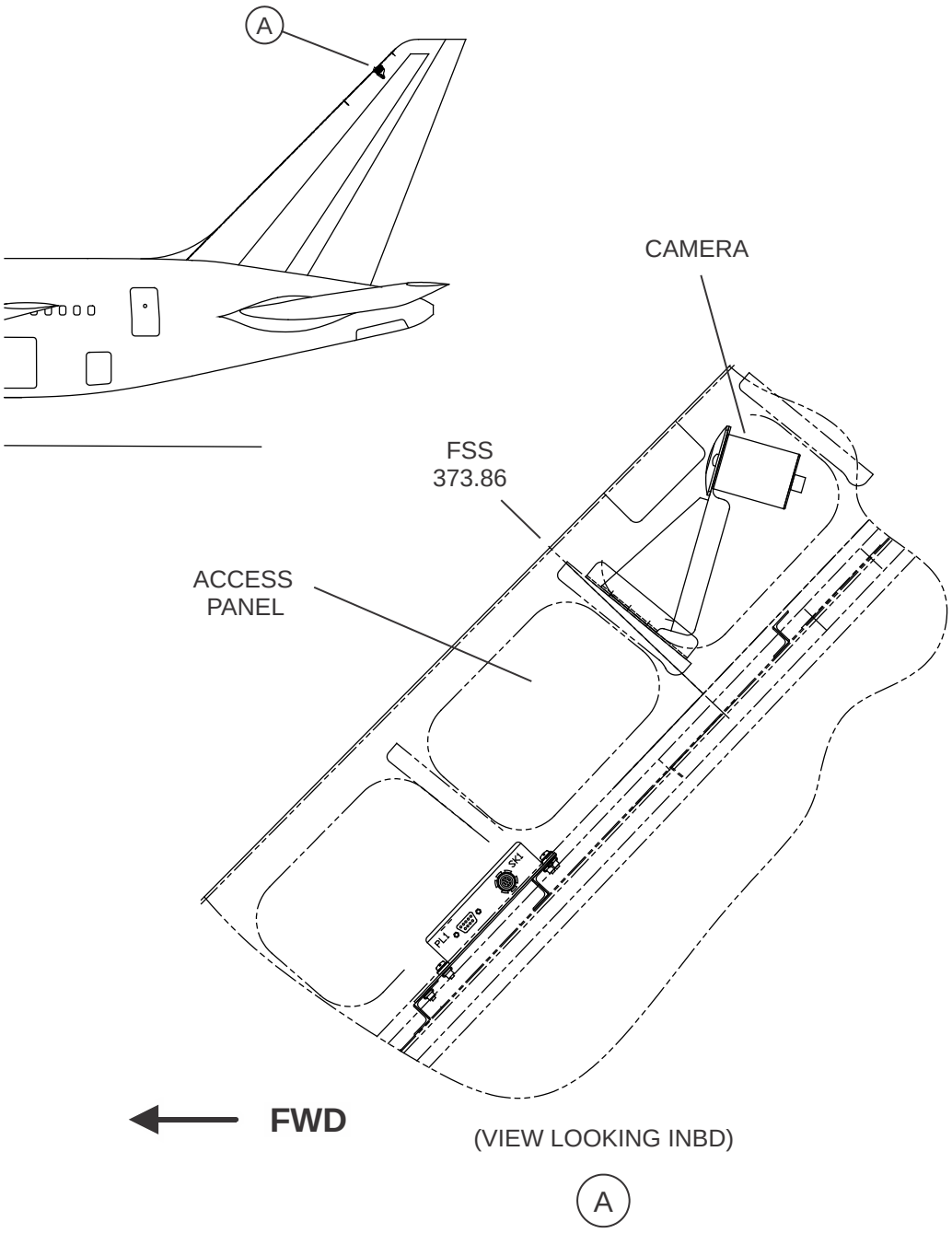
Panel	Area
321K	Fin Auxiliary Spar

D. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).
(2) Position and install camera.
(3) Connect electrical connector.
(4) Close access panel 321K (AMM BOE 06-42-00-2).

---------- END OF TASK ----------



P23-72-02-4-F002

Vertical Fin Camera
Figure 401

LOWER EXTERNAL CAMERA CONTROL UNIT - REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks:

(1) Removal

(2) Installation

2. Removal

(Figure 401)

A. References

Reference	Title
06-46-00-2	Entry And Cargo Compartment Doors (Major Zone 800) Access Doors And Panels - Maintenance Practices
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
820	Lower Half of Fuselage (Right)

C. Access

Panel	Area
822	Aft Cargo Compartment

D. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Open access panel 822 (AMM BOE 06-46-00-2).

(3) Disconnect electrical connectors.

(4) Remove screws and washers.

(5) Remove camera control unit.

---------- END OF TASK ----------

3. Installation

(Figure 401)

A. References

Reference	Title
06-46-00-2	Entry And Cargo Compartment Doors (Major Zone 800) Access Doors And Panels - Maintenance Practices
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
820	Lower Half of Fuselage (Right)

C. Access

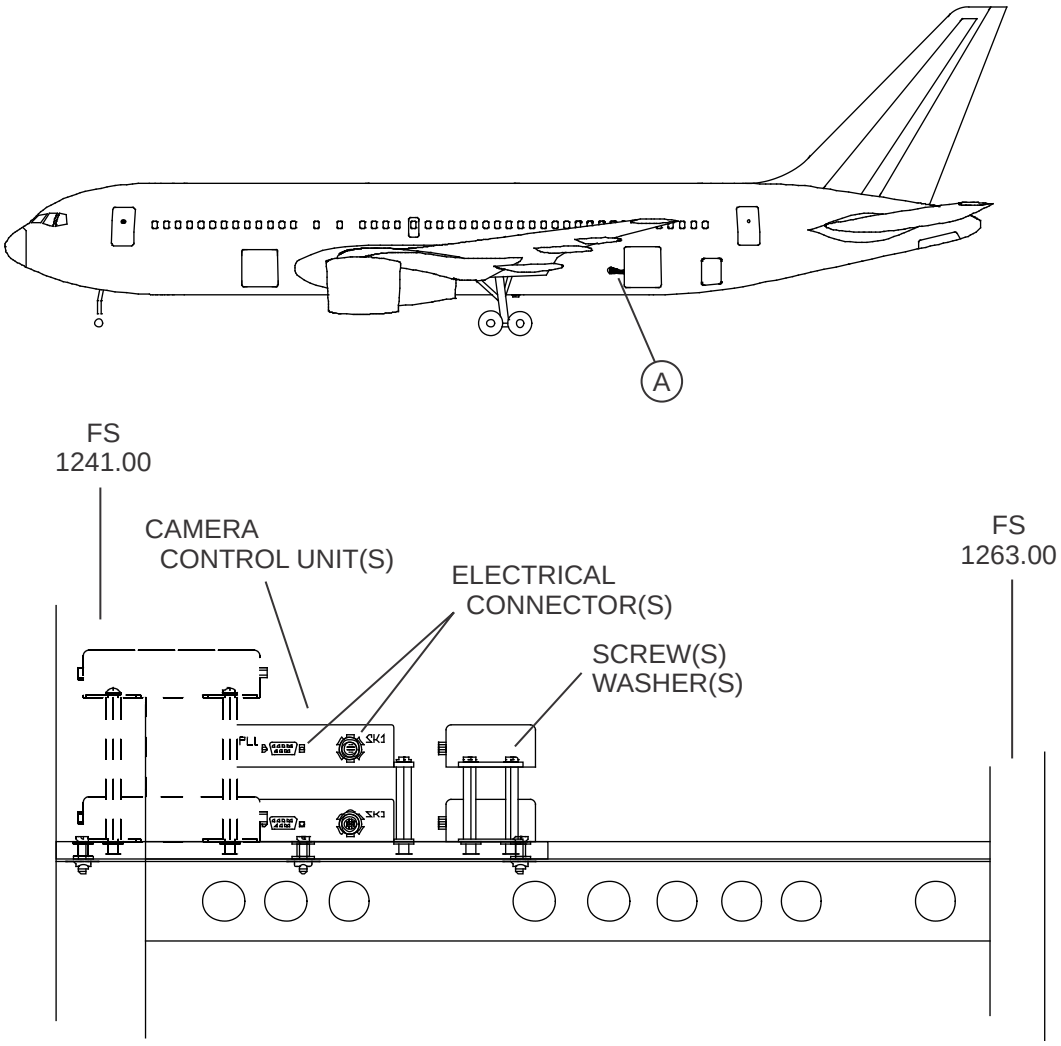
Panel	Area
822	Aft Cargo Compartment

D. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).
(2) Position camera control unit.
(3) Install washers and screws.
(4) Connect electrical connectors.
(5) Close access panel 822 (AMM BOE 06-46-00-2).

---------- END OF TASK ----------



P23-72-03-4-F001

Lower External Camera Control Unit
Figure 401

VERTICAL FIN CAMERA CONTROL UNIT - REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks:

(1) Removal

(2) Installation

2. Removal

(Figure 401)

A. References

Reference	Title
06-42-00-2	Empennage (Major Zone 300) Access Doors And Panels - Maintenance Practices
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
320	Vertical Stabilizer and Rudder

C. Access

Panel	Area
321K	Fin Auxiliary Spar

D. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Open access panel 321K (AMM BOE 06-42-00-2).

(3) Disconnect electrical connectors.

(4) Remove screws.

(5) Remove camera control unit.

---------- END OF TASK ----------

3. Installation

(Figure 401)

A. References

Reference	Title
06-42-00-2	Empennage (Major Zone 300) Access Doors And Panels - Maintenance Practices
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
320	Vertical Stabilizer and Rudder

C. Access

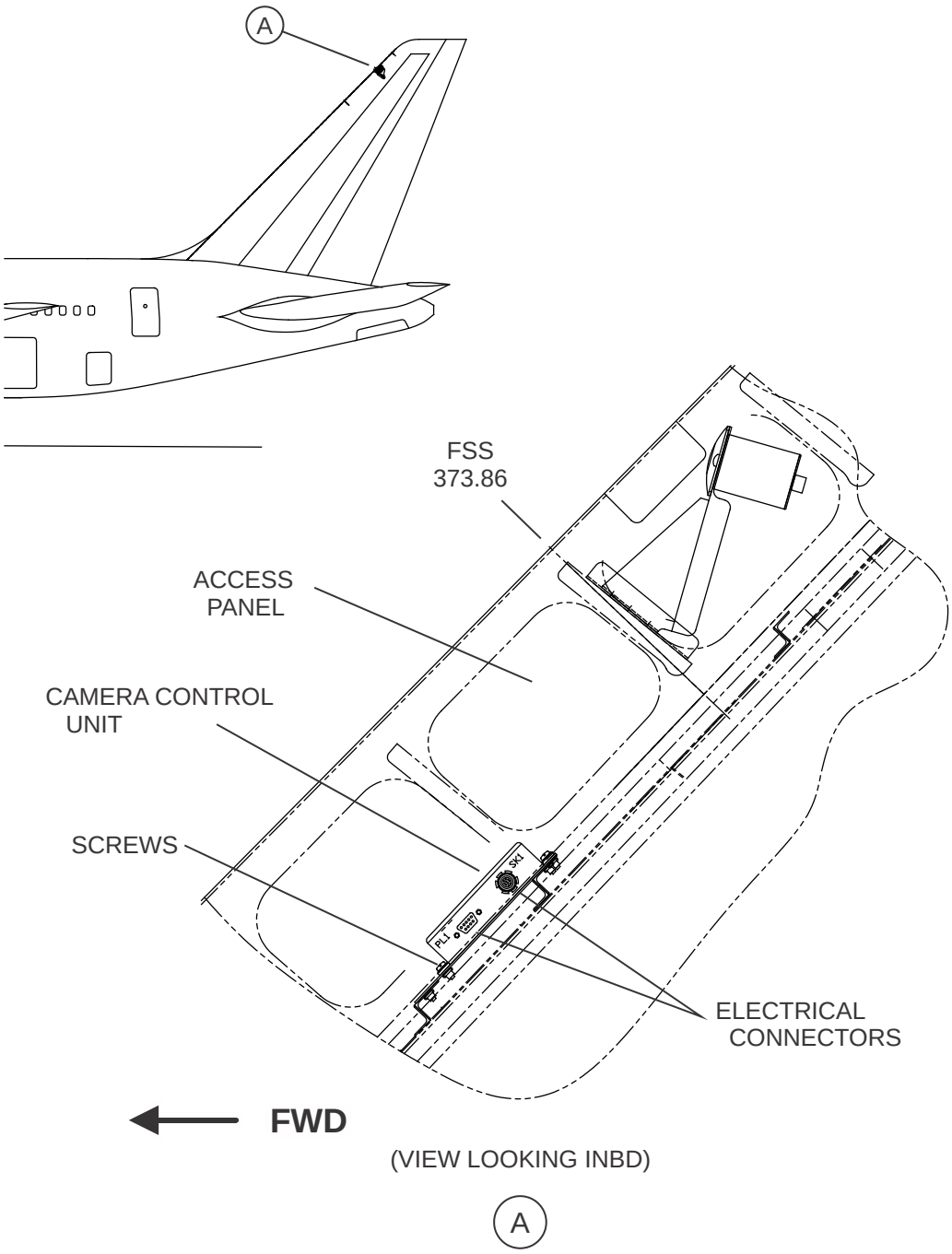
Panel	Area
321K	Fin Auxiliary Spar

D. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).
(2) Position camera control unit, install screws.
(3) Connect electrical connectors.
(4) Close access panel 321K (AMM BOE 06-42-00-2).

---------- END OF TASK ----------



P23-72-04-4-F002

Vertical Fin Camera Control Unit
Figure 401

ATA

24

Electrical Power

VIP INTERIOR ELECTRICAL POWER – DESCRIPTION AND OPERATION

1. General

A. One new bus and two existing buses were used to power the electrical components added during the interior modification. The new bus has been named AUX 28VDC 1 from a new TRU which derives its power from the Left Generator (C312 P6 Panel). The existing bus is the AUX 28VDC 2, which derives its power from the Right Generator (C903).

B. The existing RIGHT UTILITY BUS is fed from a 50A circuit breaker (28XN) and controlled via an existing contactor (M225) and Right Utility Bus switch on the cockpit overhead. This bus powers the cabin outlets, frequency converters and lavatory water heaters. A pressure switch (S9110) located near the frequency converter shuts off this power if the cabin depressurizes.

C. The AUX DC1 1 is fed from a new 20A circuit breaker and a new TRU. It is controlled via the existing Utility Bus L switch on the cockpit overhead. This bus powers the Cabin Management System and various other non-essential cabin loads.

2. Control

A. Boeing installs two control switches on the cockpit overhead panel for shedding purposes. These switches are labeled UTILITY BUS L and UTILITY BUS R. The UTILITY BUS R switch controls all the Galley buses. The UTILITY BUS L switch controls all the Galley buses as well as the new AUX 23 VDC 1.

B. UTILITY BUS is shed when:

(1) In flight: only one generator is operating

(2) On the ground: only one engine generator is operating. (This bus is energized if the APU GEN or EXT PWR is supplying power).

(3) The UTILITY BUS L switch on the cockpit overhead panel (35VU) is placed in the OFF position.

(4) The UTILITY BUS R switch on the cockpit overhead panel (35VU) is placed in the OFF position.

(5) When the engines are started with APU air while APU is supplying main AC bus power.

(6) Source overload occurs when any power source is loaded to 90 KVA for 4.5 minutes or 112.4 KVA for 4.5 seconds.

C. When the UTILITY BUS L switch is in the OFF position the OFF annunciator is illuminated and the Cabin systems supply is disabled, with the exception of the following:

(1) Cabin Smoke Detection System

(2) Passenger Signs, PA System

(3) Cabin Door Position

(4) Oxygen System

D. When the UTILITY BUS R switch is in the OFF position the OFF annunciator is illuminated. Systems on the cabin supply that will be shut off include:

(1) 50 Hz Converter

(2) 60 Hz Converter

(3) Other miscellaneous non-essential equipment

E. Systems on the Cabin TRU (Note this may be switched to Ground Service Power):

(1) Cabin Entertainment

(2) Converter control

(3) Lighting

F. Systems on the 50Hz Converter (Note this may be switched to Ground Service Power):

(1) Lavatory outlets

G. Systems on the 60Hz Converter (Note this may be switched to Ground Service Power):

(1) Cabin outlets

3. AC Power

A. Power Transformers

(1) Additional electrical power for cabin equipment is provided by one 2.0 KVA 230 volt 50 Hz frequency converter and four 2.0 KVA 115 volt 60 Hz frequency converters mounted on a shelf in the FWD and Mid Passageway Cabinet and in the overhead area above the AFT Lavatory. Power is supplied to the units from the 115VAC/400HZ 1XP AC BUS 1.

(2) The converters have a built in circuit breaker which will trip in the case of:

(a) Output overvoltage (100-115%)

(b) Output out of frequency (±20%)

(c) Output DC content

B. A barometric switch (S9110, S9111, S9112, and S9113 for 60Hz: S9104 for 50Hz) is installed on the equipment to shut down the frequency converter in the event of a cabin decompression. The switch activates an adjacent control relay (K9006, K9007, K9008, and K9009 for 60 Hz: K9001 for 50Hz) that disables the converter.

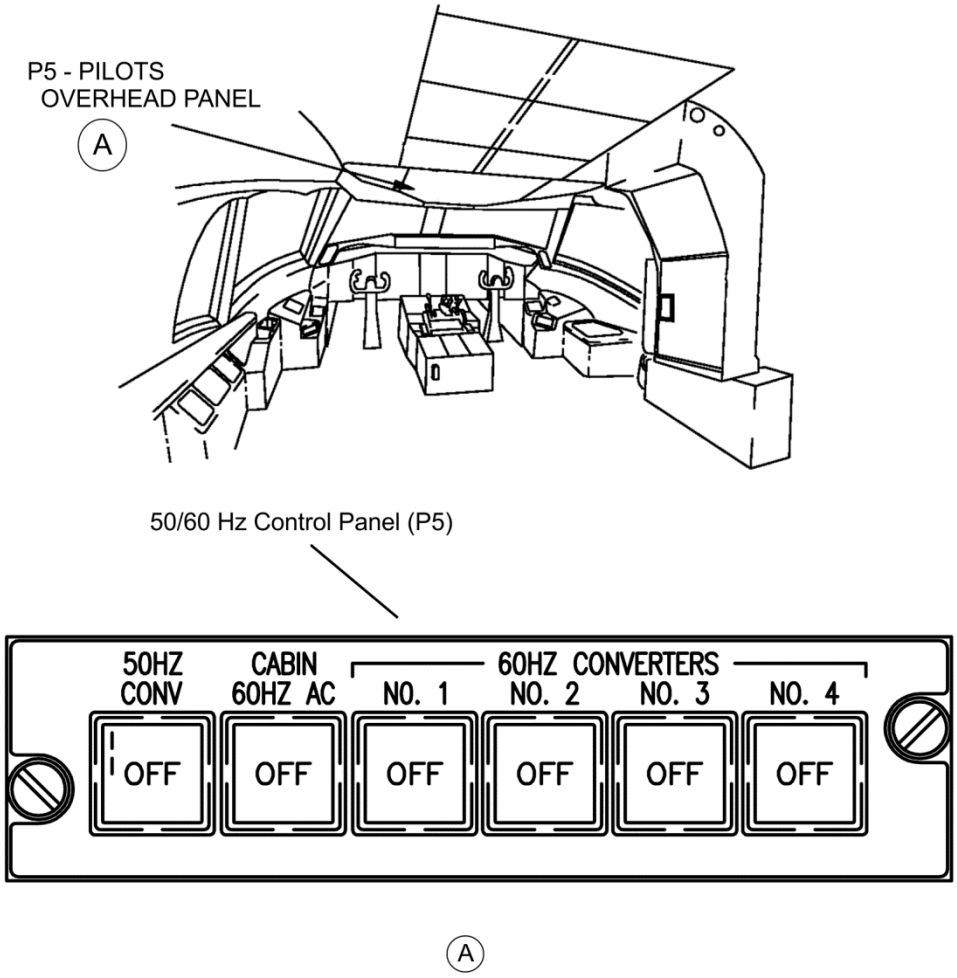
C. 50 Hz and 60 Hz power is controlled by a cabin power panel located on the P5 Overhead Panel located in the flight deck and a breaker located on the Video Control Center (VCC) Panel (Figure 1).

D. For 115V/60Hz and 230V/50Hz Outlet Locations see (Figure 2).

4. DC Power

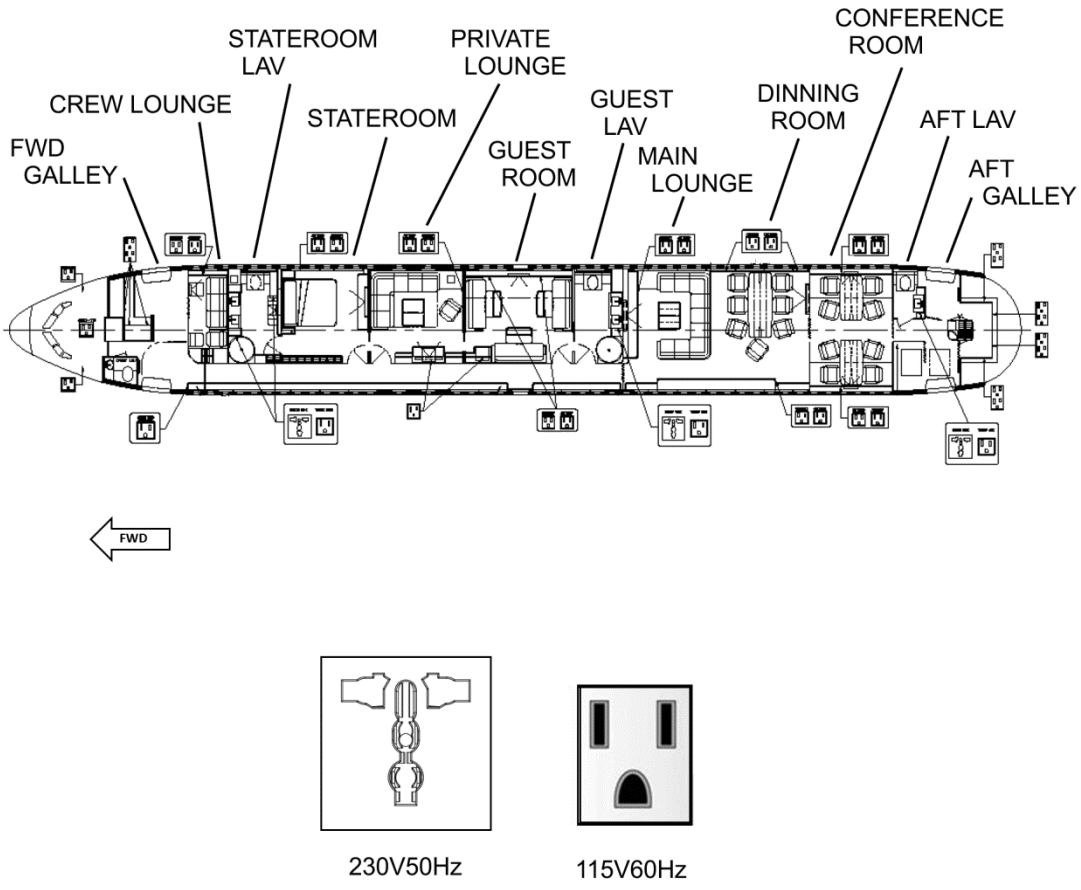
A. Supplemental DC power is provided to operate lighting, entertainment equipment and to control the frequency converters. One 200 amp transformer rectifier unit is utilized for this purpose.

B. The TRU is located in the forward galley. A circuit breaker for the DC power is installed on the Fwd Galley CB panel above the entry ceiling. The TRU is supplied with three-phase power from the 115VAC/400HZ L Generator AC BUS. Individual circuit breakers on the P9001 panel distribute DC power to the individual components.



P24-01-00-F001

50/60 Hz Control Panel
Figure 1



115V/60Hz and 230V/50Hz Outlet Locations

Figure 2

AFT GALLEY CB PANEL – REMOVAL/INSTALLATION

1. General

(Figure 401)

A. This procedure contains the following tasks:

(1) Removal

(2) Installation

B. The Aft Galley CB panel is located in the upper portion of the Aft Galley.

2. Removal

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) To remove this panel, remove the screws and washers securing the panel to the galley face and slowly pull the panel out.

(3) Disconnect the wire harnesses.

---------- END OF TASK ----------

3. Installation

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

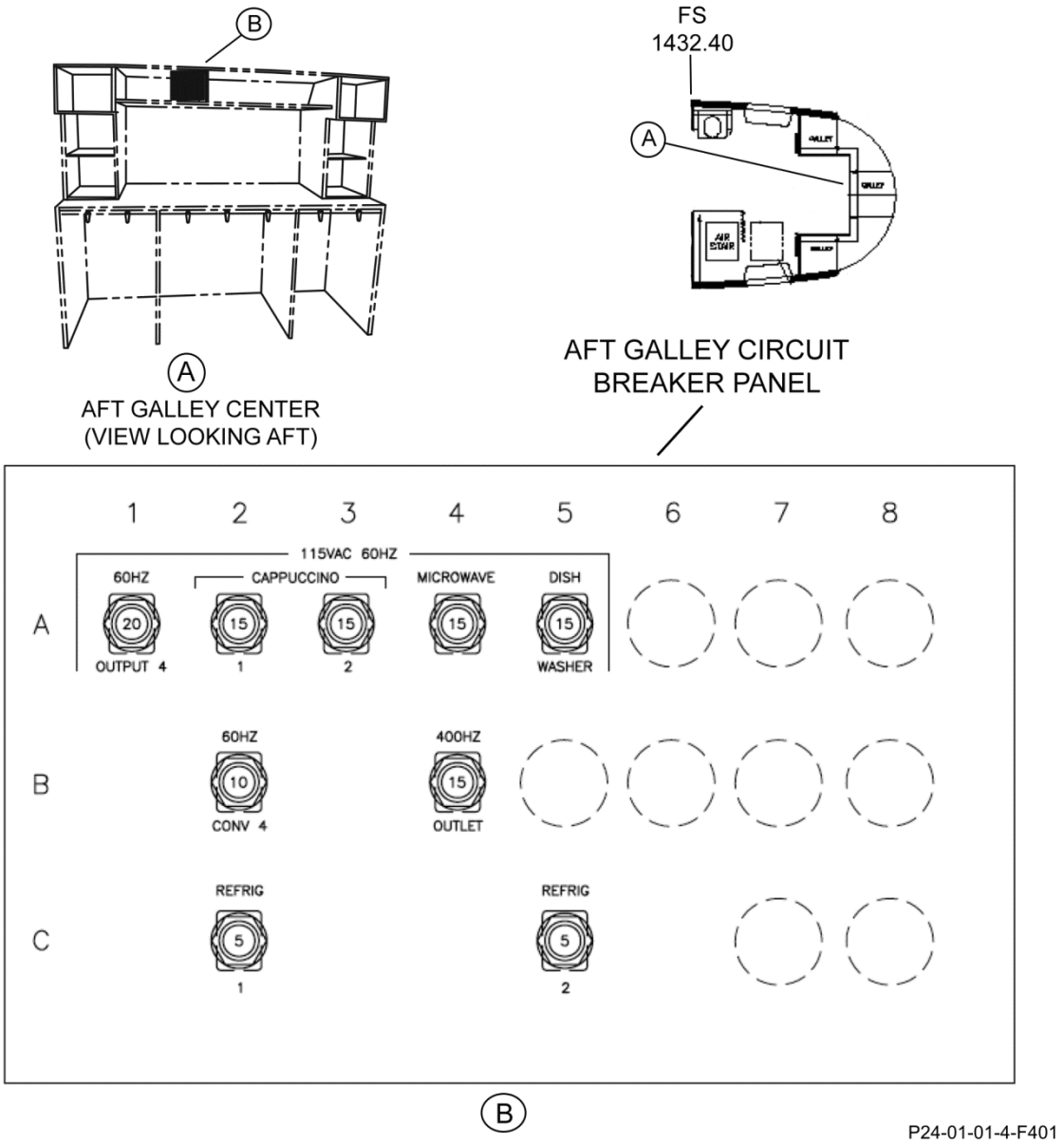
WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Reconnect the wire harnesses and align the inserts in the galley face.

(3) Re-install the screws and washers.

---------- END OF TASK ----------



P24-01-01-4-F401

Aft Galley CB Panel
Figure 401

CABIN ELECTRICAL OUTLETS – REMOVAL/INSTALLATION

1. General

(Figure 401)

A. This procedure contains the following tasks:

(1) Removal

(2) Installation

B. All outlets are mounted in sidewall and cabinet toe kick panels except as indicated.

2. Removal

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Remove two screws securing outlet mounting flange to the mounting surface.

---------- END OF TASK ----------

3. Installation

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

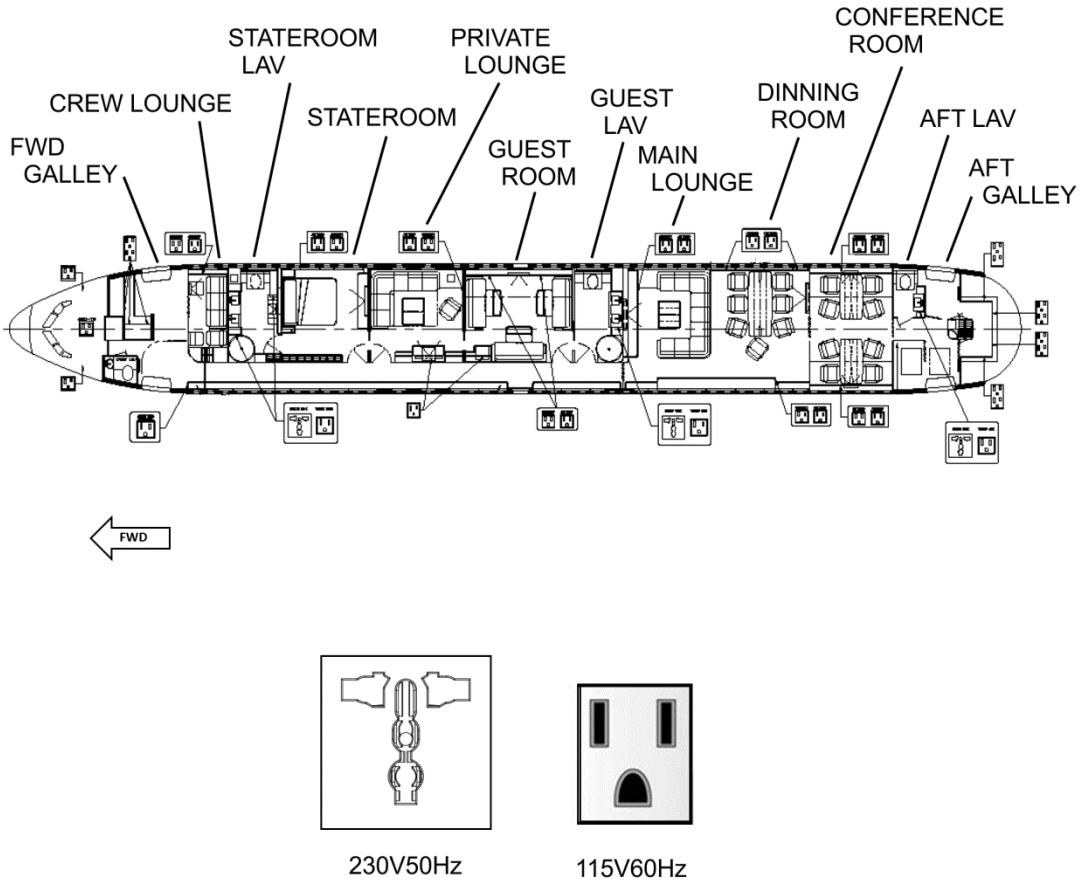
(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Position outlet.

(3) Install two screws securing outlet mounting flange to the mounting surface.

(4) Connect electrical connector.

---------- END OF TASK ----------



Cabin Electrical Outlets
Figure 401

FREQUENCY CONVERTER – REMOVAL/INSTALLATION

1. General

A. This procedure contains the following tasks:

(1) Removal

(2) Installation

B. The frequency converter is a standard tray mounted unit. It can be accessed behind the forward Passageway Cabinet at approximately STA 380.00 and STA 830, the forward side of the Guest Room Refrigerator Cabinet and behind the Air Stair Storage.

2. Removal

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Disconnect electrical connector.

(3) Remove four bolts and washers.

---------- END OF TASK ----------

3. Installation

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Tools/Equipment

Name	Description
Torque Wrench	

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

D. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Position frequency converter.

Note: Use a calibrated torque wrench; tighten bolts to 8-10 inch/lbs.

(3) Install four washers and bolts.

(4) Connect electrical connector.

---------- END OF TASK ----------

P9001 CB PANEL – REMOVAL/INSTALLATION

1. General

(Figure 401)

A. This procedure contains the following tasks:

(1) Removal

(2) Installation

B. The P9001 CB Panel (cabin power/maintenance) is located in the Video Control Center (VCC) cabinet.

2. Removal

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Slowly pull the panel out until the four ball catches release.

(3) Disconnect the wire harnesses.

---------- END OF TASK ----------

3. Installation

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

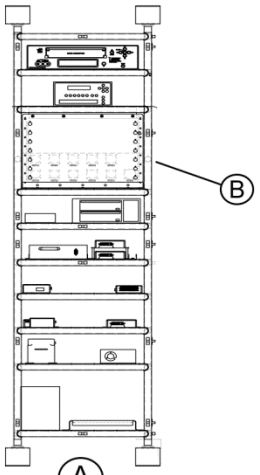
WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

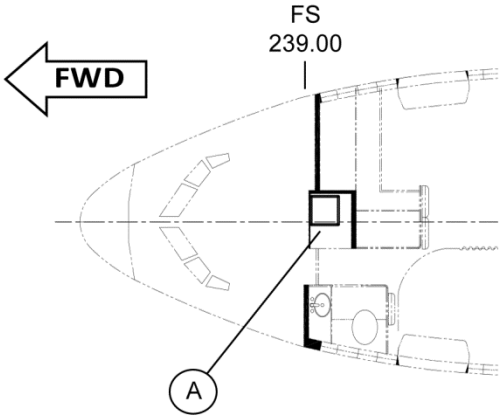
(2) Reconnect the wire harnesses and align the four ball catches.

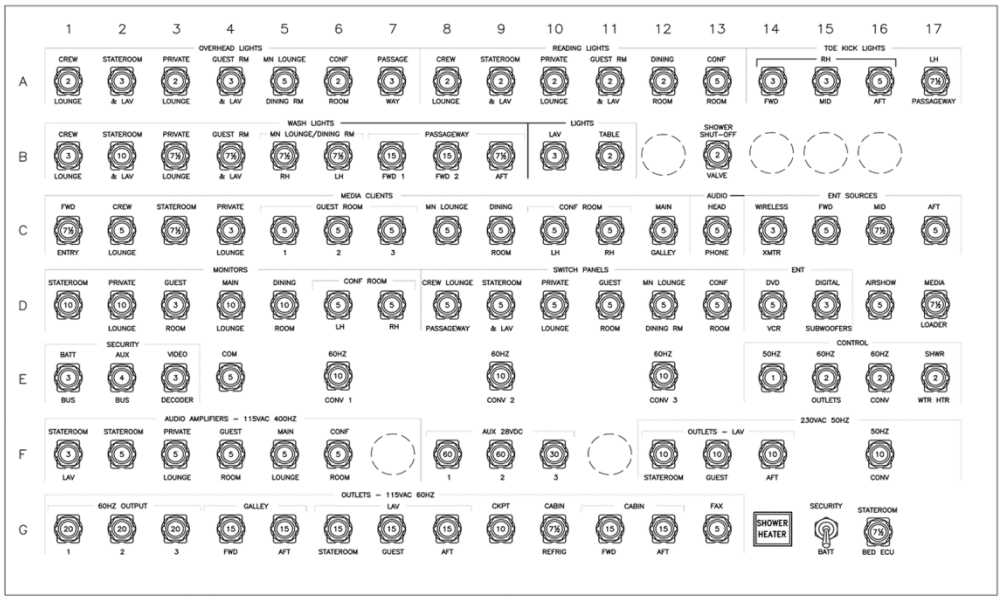
(3) Push inward until ball catches are secure.

---------- END OF TASK ----------



VIDEO CONTROL CENTER (VCC)
(VIEW LOOKING OUTBD)





B

P24-01-04-4-F401

P9001 Cabin Power CB Panel
Figure 401

AFT PRESSURE SWITCH (S9110) – REMOVAL/INSTALLATION

1. General

A. This procedure contains the following tasks:

(1) Removal

(2) Installation

B. The aft pressure switch (S9110) is mounted to the frequency converter shelf in the passageway cabinet STA 380 LH.

2. Removal

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Disconnect electrical connector.

(3) Remove screw.

---------- END OF TASK ----------

3. Installation

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Position pressure switch.

(3) Install screw.

(4) Connect electrical connector.

---------- END OF TASK ----------

CABIN ELECTRICAL POWER OUTLETS - ADJUSTMENT/TEST

1. General

A. This procedure contains the following tasks:

(1) Operational Test 230V/50Hz Outlets

(2) Operational Test 115V/60Hz Outlets

(3) Operational Test GFI Outlets

2. Operational Test 230V/50Hz Outlets

A. Tools/Equipment

Name	Description
Outlet Tester	Electrical Outlet Tester (Or Equivalent)

B. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

D. Procedure

(1) Supply electrical power (AMM BOE Task 24-22-00-862-001).

(2) Remove safety tags and close these circuit breakers:

P9001 CB Panel, Video Control Center (VCC), P9001

Row	Col	Number	Name
F	16	---	CONV
E	14	---	CONT
F	12	---	STATEROOM
F	13	---	GUEST
F	14	---	AFT

(3) Remove safety tags and close these circuit breakers:

Right Generator Power Panel, P32

Row	Col	Number	Name
---	---	C00903	RIGHT GEN

(4) Push the UTILITY L and R switches on the P5 panel to the ON position.

Note: A standard multi-meter set to read AC voltage may be substituted for the outlet tester.

(5) Plug an outlet tester into each of the outlets to verify proper operation (See Figure 501).

(6) Press the test button on the GFI controller in MID Passageway Cabinet.

(7) Verify that the reset button pops and power is removed from the outlet.

(8) Press the reset button and verify that power comes back on.

(9) With the tester plugged in to one of the outlets, place the UTILITY BUS R switch on the P5 panel in the OFF position.

(10) Verify that the power at the outlet goes off.

(11) Remove electrical power, if it is not necessary (AMM BOE Task 24-22-00-862-001).

---------- END OF TASK ----------

3. <u>Operational Test 115V/60Hz Outlets</u>

A. Tools/Equipment

Name	Description
Outlet Tester	GRT-500A Receptacle Tester (Or Equivalent)

B. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

D. Procedure

(1) Supply electrical power (AMM BOE Task 24-22-00-862-001).

(2) Remove safety tags and close these circuit breakers:

P9001 CB Panel, Video Control Center (VCC), P9001

Row	Col	Number	Name
E	6	---	CONV 1
E	9	---	CONV 2
E	12	---	CONV 3
E	16	---	CONV

(3) Remove safety tags and close these circuit breakers:

Aft Galley CB Panel

Row	Col	Number	Name
B	2	---	CONV 4

(4) Remove safety tags and close these circuit breakers:

Right Generator Power Panel, P32

Row	Col	Number	Name
---	---	C00903	RIGHT GEN

(5) Push the UTILITY BUS R switch on the P5 panel to the ON position.

Note: A standard multi-meter set to read AC voltage may be substituted for the outlet tester.

(6) Plug an outlet tester into each of the outlets to verify proper operation (See Figure 501).

(7) Press the test button on the GFI controller next to the converter being tested for CONV 1 or 3 and AFT Galley Overhead above the circuit breaker panel for CONV 2 or 4.

(8) Verify that the reset button pops and power is removed from the outlets.

(9) Press the reset button and verify that power comes back on.

(10) With the tester plugged in to one of the outlets, place the UTILITY BUS R switch on the P5 panel in the OFF position.

(11) Verify that the power at the outlet goes off.

(12) Remove electrical power, if it is not necessary (AMM BOE Task 24-22-00-862-001).

---------- END OF TASK ----------

4. Operational Test GFI Outlets

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

(1) Supply electrical power (AMM BOE Task 24-22-00-862-001).

(2) Remove safety tags and close these circuit breakers:

P9001 Panel, Video Control Center (VCC), P9001

Row	Col	Number	Name
E	6	---	CONV 1
E	9	---	CONV 2
E	12	---	CONV 3
E	16	---	CONV

(3) Remove safety tags and close these circuit breakers:

Aft Galley CB Panel

Row	Col	Number	Name
B	2	---	CONV 4

(4) Remove safety tags and close these circuit breakers:

Right Generator Power Panel, P32

Row	Col	Number	Name
---	---	C00903	RIGHT GEN

(5) Place the UTILITY BUS R switch on the P5 panel in the ON position.

(6) There are 4 ea GFI outlets located in the FWD Galley aft wall and 2 ea GFI outlets located in the AFT Galley Overhead.

(7) Observe the green LED on an outlet and press the “TEST” button.

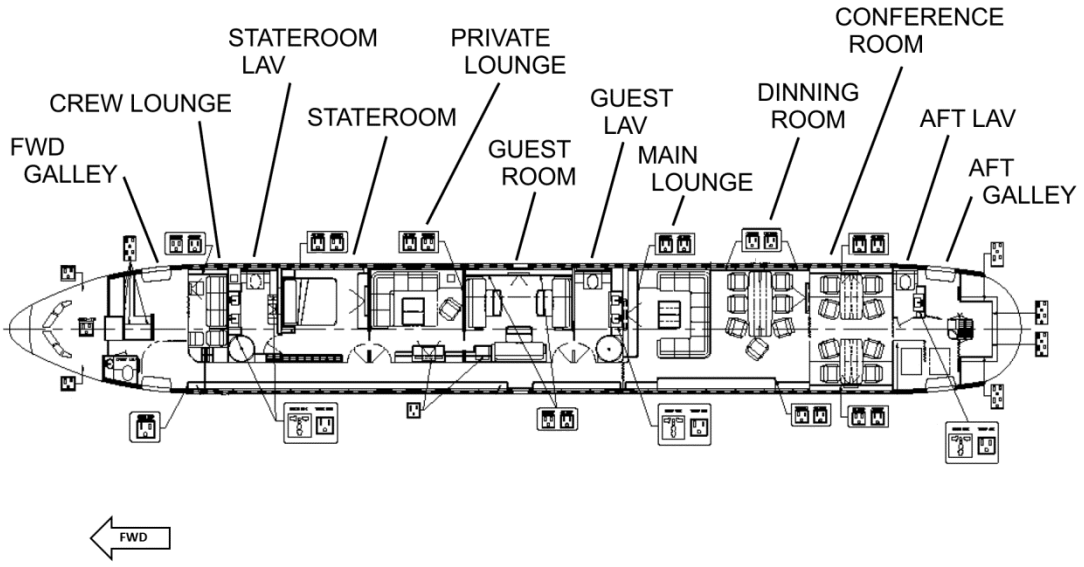
(8) Verify that the green LED goes off.

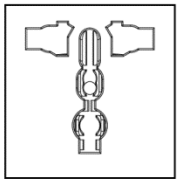
(9) Press the “Reset” the outlet and verify the LED illuminates.

(10) Repeat steps 7 through 9 for each GFI outlet.

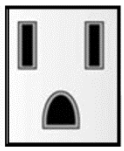
(11) Remove electrical power, if it is not necessary (AMM BOE Task 24-22-00-862-001).

---------- END OF TASK ----------





230V50Hz



115V60Hz

P24-01-06-5-F501

Cabin Electrical Power Outlets
Figure 501

SUPPLEMENTAL DC POWER SYSTEM – ADJUSTMENT/TEST

1. General

A. This procedure contains the following task:

(1) Operational Test

B. The equipment used in the DC power system can be tested by using the following procedure.

2. Operational Test

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

(1) Supply electrical power (AMM BOE Task 24-22-00-862-001).

(2) Remove safety tags and close these circuit breakers:

P9001 CB Panel, Video Control Center (VCC), P9001

Row	Col	Number	Name
F	8	C9111	AUX 28VDC 1
F	9	C9112	AUX 28VDC 2
F	10	C9113	AUX 28 VDC 3

(3) Remove safety tags and close these circuit breakers:

Left Generator Power Panel, P31

Row	Col	Number	Name
---	---	C00901	LEFT GEN

(4) Set the Left Generator circuit breaker on the P5 panel.

(5) Place the UTILITY BUS L switch on the P5 panel in the ON position.

(6) Operate reading lights and closet lights throughout the cabin.

(7) With the reading lights on, place the UTILITY BUS L switch in the OFF position.

(8) Verify that the reading lights go off.

---------- END OF TASK ----------

TRU – REMOVAL/INSTALLATION

1. General

(Figure 401)

A. This procedure contains the following tasks:

(1) Removal

(2) Installation

B. The TRU (M9224 AUX TRANSFORMER RECTIFIER UNIT) is located in the E-1 Main E/E Equipment Center.

2. Removal

A. References

Reference	Title
20-10-38-4	Standard Practices Electrical Comp Box (AMM SUPP)
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
119	Main Equipment Center

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Refer to (AMM SUPP 20-10-38-4).

---------- END OF TASK ----------

3. Installation

A. References

Reference	Title
20-10-38-4	Standard Practices Electrical Comp Box (AMM SUPP)
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
119	Main Equipment Center

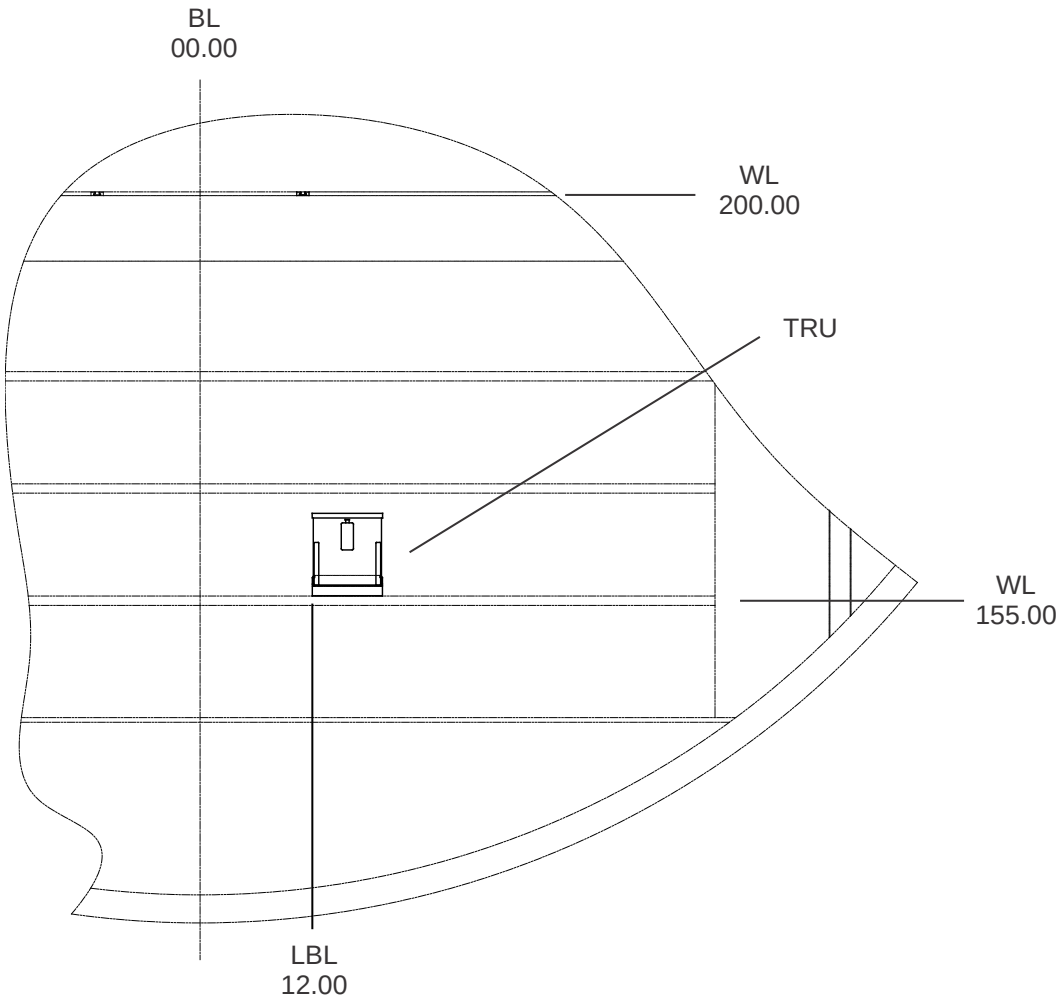
C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Refer to (AMM SUPP 20-10-38-4).

---------- END OF TASK ----------



(VIEW LOOKING AFT)

TRU
Figure 401

ATA

25

Equipment/Furnishings

EQUIPMENT/FURNISHINGS - CLEANING AND PAINTING

1. General

A. Cleaning

(1) Cleaning aircraft interiors presents unique challenges. Regulatory requirements for material flammability, smoke toxicity and material heat release of interior materials constitute continuing airworthiness considerations for the operation of the aircraft.

(2) The use of cleaning products which could affect the flammability properties of the materials used in the interior cannot be allowed. The following cleaning guidelines are intended to provide the best results within the limits of the regulations.

(3) Routine cleaning of the interior prevents buildup of dirt and contaminants and prolongs the appearance life of the materials and surfaces.

Note: Use only water-based cleaners such as the ones described below when cleaning the interior of the aircraft. Do not use alcohol or petroleum based cleaning products on any part of the interior. Stains that cannot be removed using the following instructions may be permanent.

(4) The materials used in the interior of this aircraft have been selected for their appearance, compliance with airworthiness requirements and durability. Cleaning of the hard surfaces (cabinets, countertops, doors, etc) can be accomplished using normal household cleaners.

(5) As a general purpose cleaner, Simple Green (Sunshine Makers Inc.) is recommended for these applications.

(a) For mirrors and clear coated wood surfaces where streaking may occur, Windex (Johnson Wax Inc.) or similar glass cleaner is recommended.

(b) When cleaning interior hard surfaces, dilute the cleaner according to the directions on the package.

(c) Use a soft cloth lightly dampened with the cleaning solution and wipe as required.

(d) Dry and buff afterwards with a soft cotton cloth.

(e) Galley and lavatory surfaces should be cleaned with a disinfecting cleaner.

(f) Water based ammonium chloride household cleaners such as Lysol (Reckitt Benckiser) may be used.

2. Spot Cleaning

A. Spills and stains should be cleaned immediately. If the carrier solvent (water, alcohol or oil) is allowed to evaporate, the residues in the spill may attach to the fabric fibers and any dyes may transfer into the fibers.

Note: A clean soft bristle brush can help work the cleaner into the fibers and also help in bringing out particles of dirt. Do not over brush the fabric to reduce the extra wear caused by brushing.

3. Upholstery

A. Fabrics used on the furnishings and trim panels can be spot cleaned using a ph neutral (7) soap diluted per the manufacturer's instructions.

B. Wipe stained or soiled areas with a cloth lightly dampened with the cleaning solution.

C. Then rub the area thoroughly with a cloth dampened with fresh water.

D. Pat dry with a clean cloth.

(1) Fabric Cleaner

(2) Silk Dry Fabric Prespray

(3) Wool Woolite

(4) Others Simple Green

E. Leather surfaces should be cleaned by wiping with a damp cloth and then drying immediately with a soft dry cloth. If more thorough cleaning is desired, use any commercial saddle soap (paste or liquid) per the manufacturer's instructions.

4. Carpet

A. Carpeting may be spot cleaned by following the directions above for the upholstery fabrics.

B. The carpet may be completely cleaned by removing it from the aircraft and using any standard water based carpet cleaning system.

C. Allow the carpet to dry thoroughly before reinstalling.

5. Specific Stains

Table 701. Stain Categories

Category	Examples
1	Water based stains, all beverages, fruits & vegetables, grass, chocolates, and candy.
2	Oil based stains meats, fried foods, cosmetics, lipstick, paint, hair oil, and ointments.
3	Solvent based stains nail polish shoe polish, and ink.
4	Dry stains rust or chalk.

Note: Spot cleaning silk fabrics often produces rings. Clean the entire panel of fabric when cleaning silk.

(1) For water and alcohol based stains use a cloth dampened in clean water first to remove as much of the stain as possible. If further cleaning is necessary, follow the oil based cleaning instructions.

(2) For oil based stains, use a cloth dampened with Simple Green diluted per the manufacturer's directions. Rub the cleaner deeply into the fabric then rub with a cloth dampened with clean water to remove the cleaner. Repeat if necessary and pat the fabric dry when done.

(3) Solvent based stains may tend to spread when cleaned with a rubbing motion. Prior to applying any cleanser, carefully scrape any build-up of the stain agent off

of the fabric. Next, dry pat the stain with a clean cloth until no more color will transfer. Cover the area around the stain to protect from spreading (masking tape works well). Carefully wipe the stain with Simple Green diluted per the manufacturer's instructions. Rub the cleaner deeply into the fabric then rub with a cloth dampened with clean water to remove the cleaner. Repeat if necessary and pat the fabric dry when done.

(4) Dry stains are the result of powdered dyes coming in contact with the fabric. Moistening dry stains speeds the transfer of the dyes into the fibers. Dry stains should be removed without the use of any cleaning by vacuuming or brushing.

6. <u>Window Shade Panels</u>

A. The inner lens has a scratch resistant finish. Because of this material's surface, avoid the use of abrasive cleaners and/or cleaning implements that may mar or gouge the coating.

B. Moisten soft, non-abrasive lint free cloth sparingly with a non-abrasive, ammonia free cleaner like Final Inspection from Meguires. Apply moistened cloth to the lens. This will minimize liquid accumulation on the lens surface. Excess liquid may otherwise enter the frame lens seal and cause water spotting to the mask. Dry thoroughly with a chamois or moist cellulose sponge to prevent water spots.

CAUTION:

1. DO NOT SPRAY OR APPLY CLEANER DIRECTLY TO LENS, TO AVOID CLEANER OVERSPRAY GETTING ON OTHER COMPONENTS OF THE SHADE, OR LIQUID SEEPING UNDER THE SEALS.
2. DO NOT CLEAN IN HOT SUN OR AT ELEVATED TEMPERATURES.
3. DO NOT USE ABRASIVE OR HIGHLY ALKALINE CLEANERS ON LENSES.
4. DO NOT USE CAUSTIC SOLUTIONS SUCH AS BENZENE, GASOLINE, ACETONE, M.E.K. OR CARBON TETRACHLORIDE ON LENS. ALTHOUGH SEVERAL COMMERCIALLY AVAILABLE CLEANING AGENTS ACCEPTED FOR CLEANING LEXAN LENSES, ANY CLEANER CONTAINING AMMONIA COULD BE HARMFUL TO CUSTOM-PLATED FRAMES, WHICH SOMETIMES HAVE A CLEAR COAT.

PASSENGER COMPARTMENT – DESCRIPTION AND OPERATION

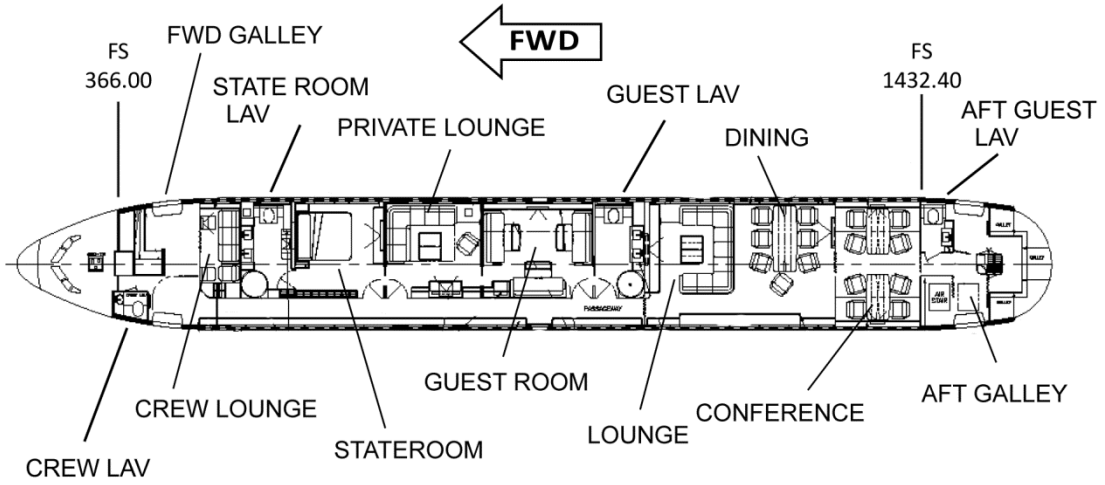
1. General

(Figure 1)

A. The passenger compartment contains equipment/furnishings for passenger and crew comfort.

B. The following lists the spaces provided within the passenger compartment:

(1) FWD Galley with Crew LAV
(2) Crew Lounge
(3) Stateroom LAV
(4) Stateroom
(5) Private Lounge
(6) Guest Room
(7) Guest LAV
(8) Lounge
(9) Dining
(10) Conference
(11) Aft Guest LAV
(12) Aft Galley
(13) Storage



VIEW LOOKING DOWN

P25-20-00-F001

Passenger Compartment
Figure 1

AFT GUEST LAVATORY INBOARD BULKHEAD - REMOVAL/INSTALLATION

1. General

A. This procedure contains the following task:

(1) Removal

(2) Installation

B. Aft Guest Lavatory Inboard Bulkhead is comprised of one panel and one door header.

Note: Wear cotton gloves whenever handling interior panels and furnishings to keep the surfaces clean.

2. Removal

(Figure 401)

A. Location Zones

Zone	Area
200	Upper Half of Fuselage

B. Procedure

(1) Remove vanity.

(2) Remove the ceiling panels adjacent to the bulkhead.

(3) Pull off the deco panels.

(4) Remove two bolts, washers and nuts from the two splice plates attaching the door header to the panel and the Conference Room aft bulkhead, leaving the splice plates attached to the door header.

(5) Slide the panel forward 0.5 inch and lift out of the seat track.

---------- END OF TASK ----------

3. Installation

(Figure 401)

A. Procedure

Note: Using a calibrated torque wrench, tighten bolts to 20-25 inch/lbs.

(1) Align the foot of the panel with the seat track, lower into the seat track and pushback 0.5 inch.

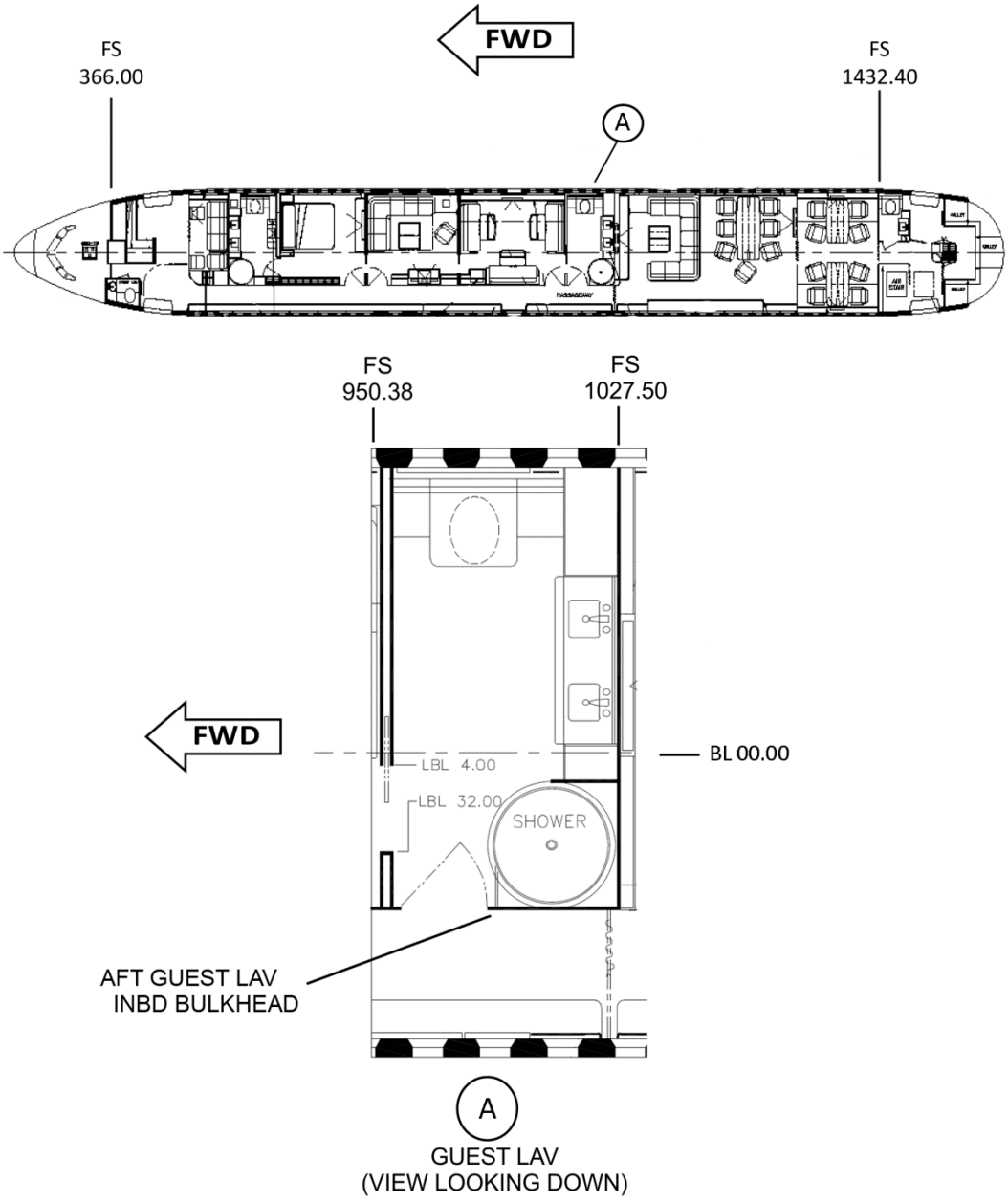
(2) Re-install the two bolts, washers and nuts by aligning the holes in the splice plates attached to the door header with the inserts in the panel.

(3) Re-install the deco panels.

(4) Re-install the adjacent ceiling panels.

(5) Re-install vanity.

---------- END OF TASK ----------



Aft Guest Lavatory Inboard Bulkhead
Figure 401

AFT GUEST LAVATORY AFT BULKHEAD - REMOVAL/INSTALLATION

1. General

A. This procedure contains the following task:
(1) Removal
(2) Installation

B. Aft Guest Lavatory Aft Bulkhead is comprised of three panels. The three panels will be listed as the inboard panel, center panel and the outboard panel.

Note: Wear cotton gloves whenever handling interior panels and furnishings to keep the surfaces clean.

2. Removal

(Figure 401)

A. Location Zones

Zone	Area
200	Upper Half of Fuselage

B. Procedure

(1) Remove vanity and toilet shroud.
(2) Remove the ceiling panels adjacent to the bulkhead.
(3) Remove the valance panels and sidewall panels adjacent to the bulkhead.
(4) Pull off the deco panels.
(5) Remove the five bolts, washers and nuts from the five splice plates on the inboard panel side leaving the splice plates attached to the center panel.
(6) Slide the center panel forward 0.5 inch and lift out of the seat track.
(7) Slide the inboard panel forward 0.5 inch and lift out of the seat track.
(8) Slide the outboard panel forward 0.5 inch and lift out of the seat track.

---------- END OF TASK ----------

3. Installation

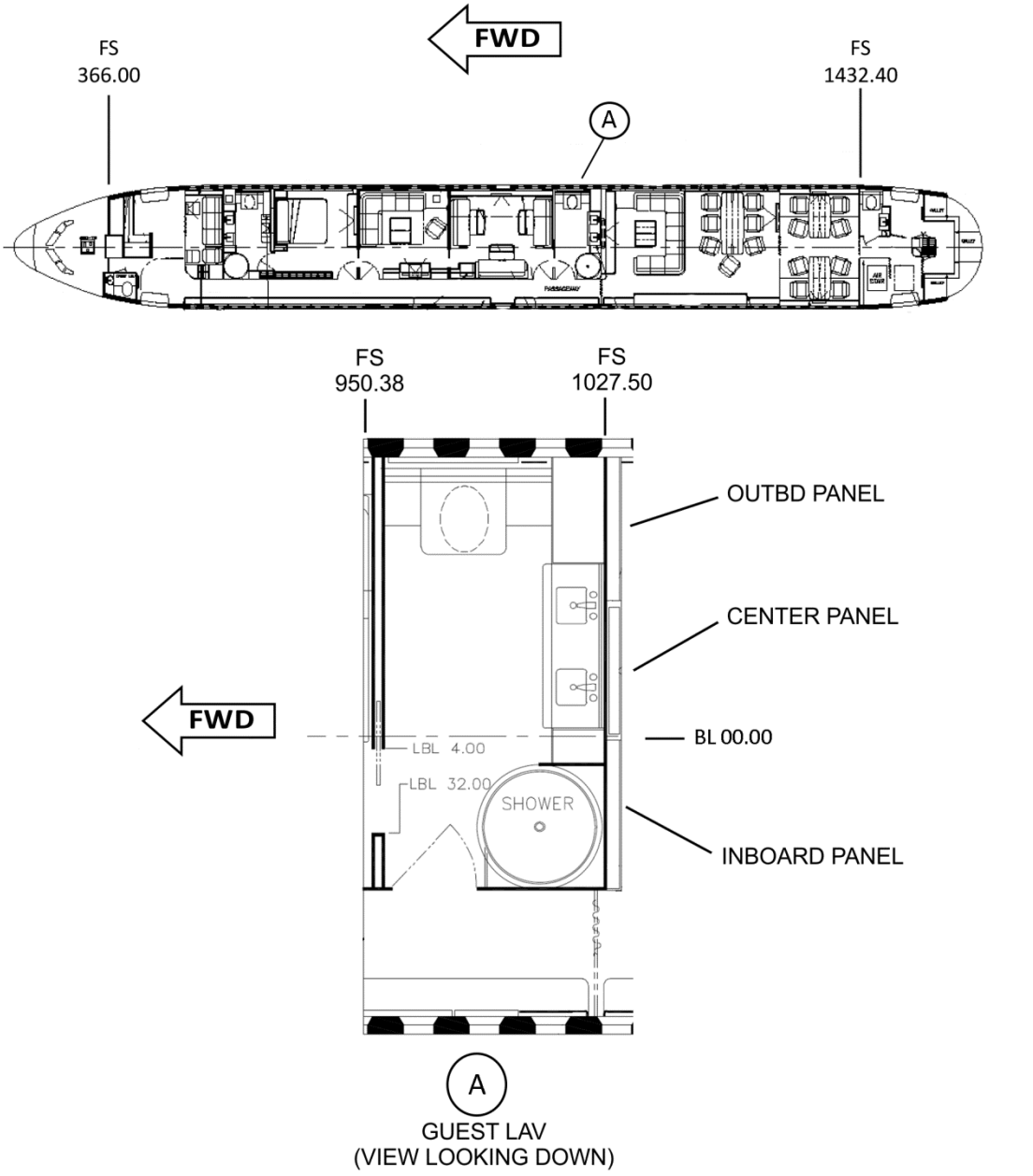
(Figure 401)

A. Procedure

Note: Using a calibrated torque wrench, tighten bolts to 20-25 inch/lbs.

(1) Align the feet of the outboard panel with the seat track, lower into the seat track and push back 0.5 inch.
(2) Align the feet of the inboard panel with the seat track, lower into the seat track and push back 0.5 inch.
(3) Align the feet of the center panel with the seat track, lower into the seat track and push back 0.5 inch.
(4) Re-install the five bolts, washers and nuts by aligning the holes in the splice plates attached to the center panel with the inserts in the inboard panel.
(5) Re-install the deco panels.
(6) Re-install the adjacent ceiling panels, valance panels and sidewall panels.
(7) Re-install vanity and toilet shroud.

---------- END OF TASK ----------



Aft Guest Lavatory Aft Bulkhead
Figure 401

AFT PASSAGEWAY BULKHEAD - REMOVAL/INSTALLATION

1. General

A. This procedure contains the following task:
(1) Removal
(2) Installation

B. Aft Passageway Bulkhead is comprised of nine panels and two door headers. For reference in this manual, the nine panels are numbered one to nine starting in the forward position and numbered consecutively going aft.

Note: Wear cotton gloves whenever handling interior panels and furnishings to keep the surfaces clean.

2. Removal

(Figure 401)

A. Location Zones

Zone	Area
200	Upper Half of Fuselage

B. Procedure

(1) Remove cabinetry adjacent to the bulkhead.
(2) Remove the ceiling panels adjacent to the bulkhead.
(3) Pull off the deco panels.
(4) Remove the screws from the bulkhead side of the door hinges and remove the doors.
(5) Remove the Fourteen screws and washers from the seven overhead channels and secure the channels out of the way.
(6) Remove the eight bolts, washers and nuts from the splice plates securing the door headers.

Note: If the removal of the Aft Passageway bulkhead is to be accomplished while the Fwd Passageway bulkhead remains, the four bolts, washers and nuts securing the first panel to the door header will need to be removed.

(7) Remove the five bolts, washers and nuts securing the first panel to the second panel.
(8) Slide panel forward 0.5 inch and lift out of seat track.
(9) Remove the five bolts, washers and nuts securing the second panel to the third panel.
(10) Slide panel forward 0.5 inch and lift out of seat track.
(11) Remove the five bolts, washers and nuts securing the third panel to the fourth panel.
(12) Remove the fourteen screws and washers attaching the third panel to the Private Lounge aft bulkhead.
(13) Slide panel forward 0.5 inch and lift out of seat track.
(14) Remove the five bolts, washers and nuts securing the fourth panel to the fifth panel.

(15) Slide panel forward 0.5 inch and lift out of seat track.
(16) Remove the five bolts, washers and nuts securing the fifth panel to sixth panel.
(17) Slide panel forward 0.5 inch and lift out of seat track.
(18) Slide the seventh panel forward 0.5 inch and lift out of seat track.
(19) Remove the fourteen screws and washers attaching the ninth panel to the Guest Lav aft bulkhead.
(20) Slide the eighth panel, leaving the ninth panel attached, forward 0.5 inch and lift out of seat track.

---------- END OF TASK ----------

3. Installation

(Figure 401)

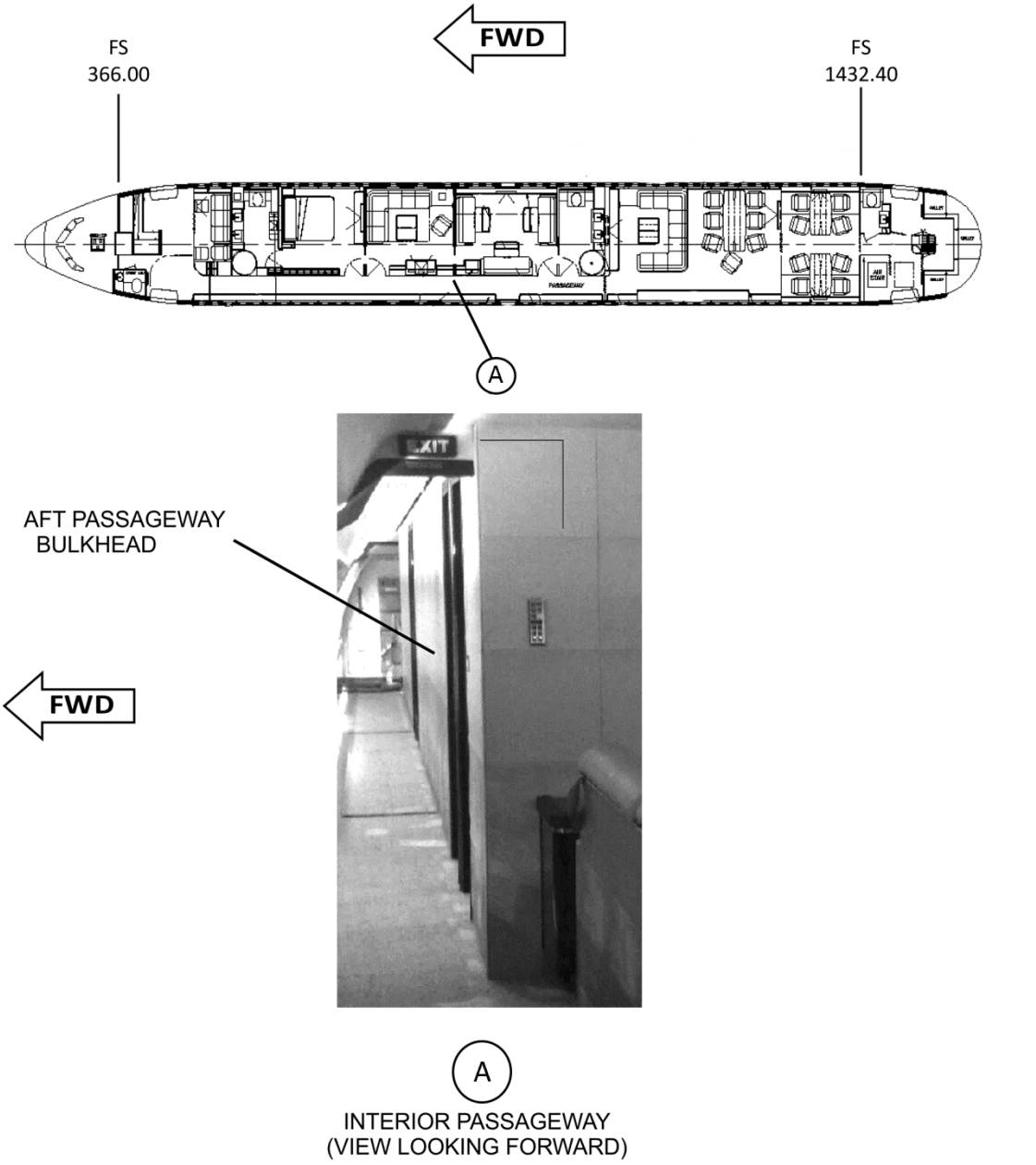
A. Procedure

Note: Using a calibrated torque wrench, tighten bolts to 20-25 inch/lbs.

(1) Align the feet of the eighth/ninth panel with the seat track and insert into the seat track.
(2) Slide the panel back 0.5 inch against the Guest Lav aft bulkhead.
(3) Re-install the fourteen screws and washers securing the eighth/ninth panel to the Guest Lav aft bulkhead.
(4) Align the feet of the seventh panel with the seat track and insert into the seat track.
(5) Slide the panel back 0.5 inch.
(6) Re-install the four bolts, washers and nuts to the splice plates securing the door header between the seventh and eighth panels.
(7) Align the feet of the sixth panel with the seat track and insert into the seat track.
(8) Slide the panel back 0.5 inch.
(9) Re-install the four bolts, washers and nuts to the splice plates securing the door header between the sixth and seventh panels.
(10) Align the feet of the fifth panel with the seat track and insert into the seat track.
(11) Slide the panel back 0.5 inch against the sixth panel.
(12) Re-install the five bolts, washers and nuts securing the fifth panel to the sixth panel.
(13) Align the feet of the fourth panel with the seat track and insert into the seat track.
(14) Slide the panel back 0.5 inch against the fifth panel.
(15) Re-install the five bolts, washers and nuts securing the fourth panel to the fifth panel.
(16) Align the feet of the third panel with the seat track and insert into the seat track.
(17) Slide the panel back 0.5 inch against the fourth panel.
(18) Re-install the five bolts, washers and nuts securing the third panel to the fourth panel.
(19) Align the feet of the second panel with the seat track and insert into the seat track.
(20) Slide the panel back 0.5 inch against the third panel.

(21) Re-install the five bolts, washers and nuts securing the second panel to the third panel.
(22) Align the feet of the first panel with the seat track and insert into the seat track.
(23) Slide the panel back 0.5 inch against the second panel.
(24) Re-install the five bolts, washers and nuts securing the first panel to the second panel.
(25) Re-install the two bolts, washers and nuts to the splice plates securing the fwd door header.
(26) Align the seven overhead channels and re-install the fourteen screws and washers securing the panels.
(27) Align the door and door hinge to the inserts and replace the screws.
(28) Re-install the deco panels.
(29) Re-install the adjacent ceiling panels.
(30) Re-install adjacent cabinetry.

---------- END OF TASK ----------



Aft Passageway Bulkhead
Figure 401

AFT ENTRY CLOSET - REMOVAL/INSTALLATION

1. General

A. This procedure contains the following task:

(1) Removal

(2) Installation

Note: Wear cotton gloves whenever handling interior panels and furnishings to keep the surfaces clean.

2. Removal

(Figure 401)

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Remove the ceiling panels adjacent to the closet.

(3) Remove the two doors by removing the hinge screws from the cabinet side panels.

(4) Disconnect the wire harnesses.

(5) Remove the false floor.

(6) Remove the adjacent floor panels.

(7) Remove the twelve bolts, washers, nuts and radius blocks securing the closet to the floor.

(8) Remove the eighteen bolts securing the closet to the floor.

---------- END OF TASK ----------

3. Installation

(Figure 401)

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Procedure

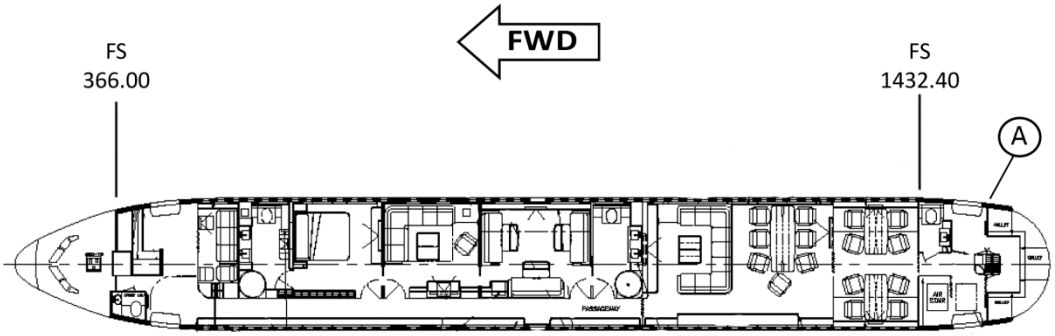
WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

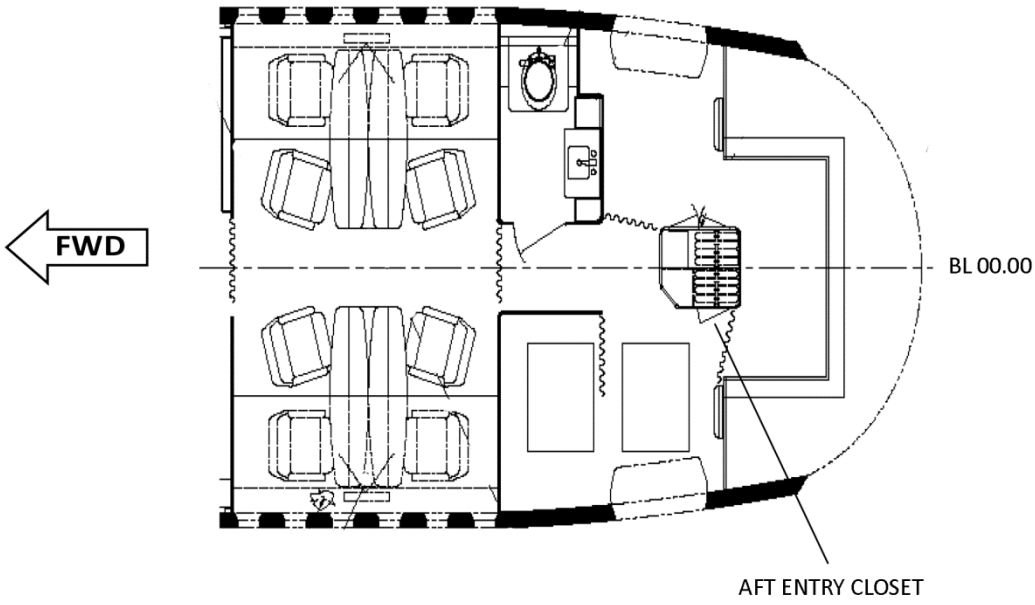
(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

Note: Using a calibrated torque wrench, tighten bolts to 50-70 inch/lbs.

(2) Align the holes with the inserts in the floor and re-install the eighteen bolts securing the closet to the floor.
(3) Re-install the twelve bolts, washers, nuts and radius blocks securing the closet to the floor.
(4) Re-install adjacent floor panels.
(5) Insert false floor.
(6) Reconnect wire harnesses.
(7) Re-install the two doors.
(8) Re-install the adjacent ceiling panels.

---------- END OF TASK ----------





P25-24-01-4-F401

Aft Entry Closet
Figure 401

LAVATORIES – DESCRIPTION AND OPERATION

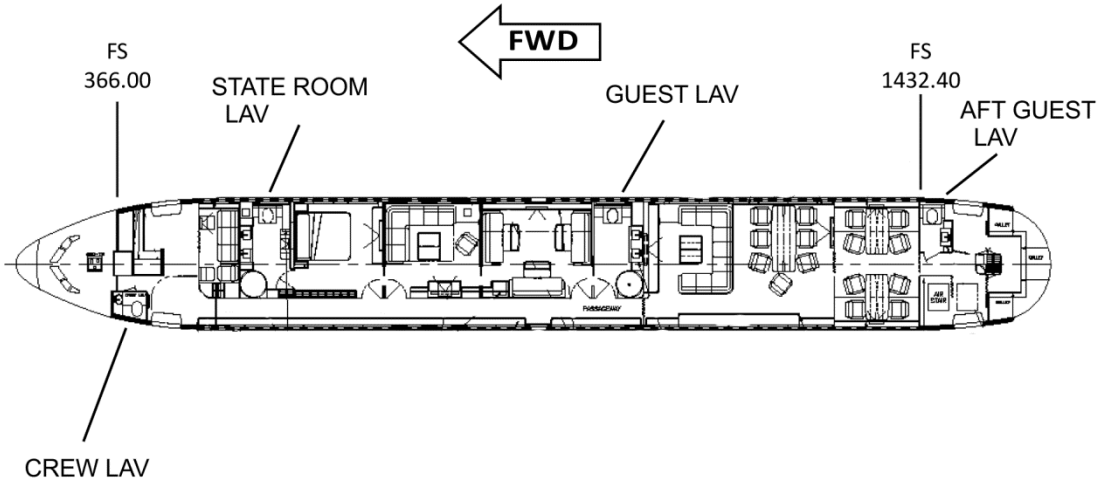
1. General

(Figure 1)

A. The existing crew lavatory and aft (Aft Guest Lav) lavatory modules have been retained.

(1) Refer to the Boeing AMM Chapter 25, Section 25-41-00 for maintenance information on these units.

(2) Custom lavatories are installed for the stateroom and the guest lavatories. These rooms are comprised of individual components enclosed by bulkhead structures.



VIEW LOOKING DOWN

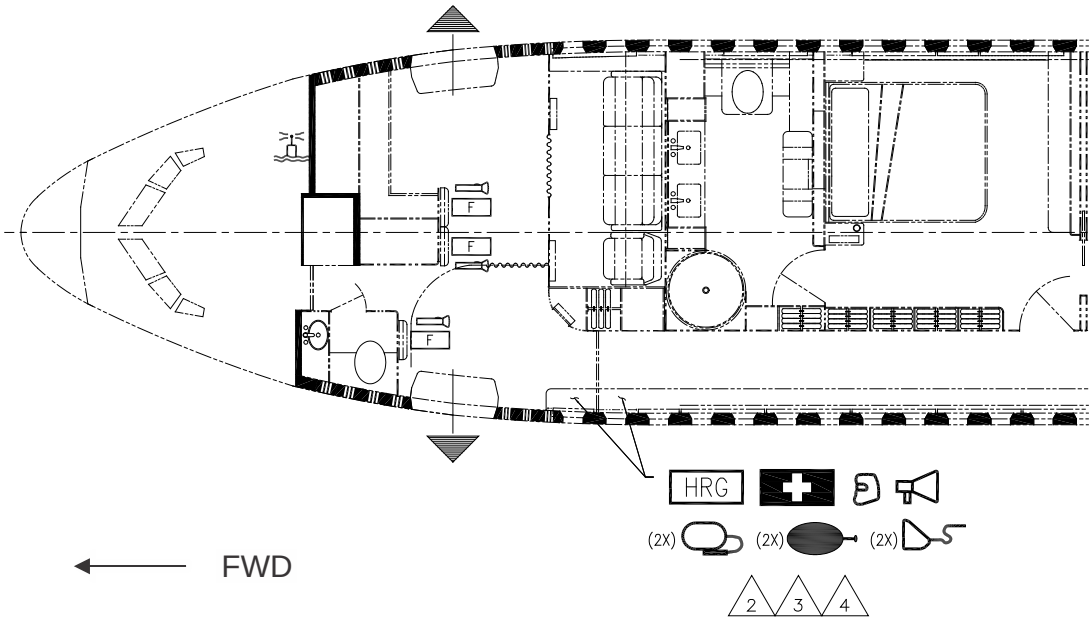
P25-40-00-F001

Lavatories
Figure 1

EMERGENCY EQUIPMENT – DESCRIPTION AND OPERATION

1. General

A. Emergency equipment locations are shown in Figure 1.



VIEW LOOKING DOWN

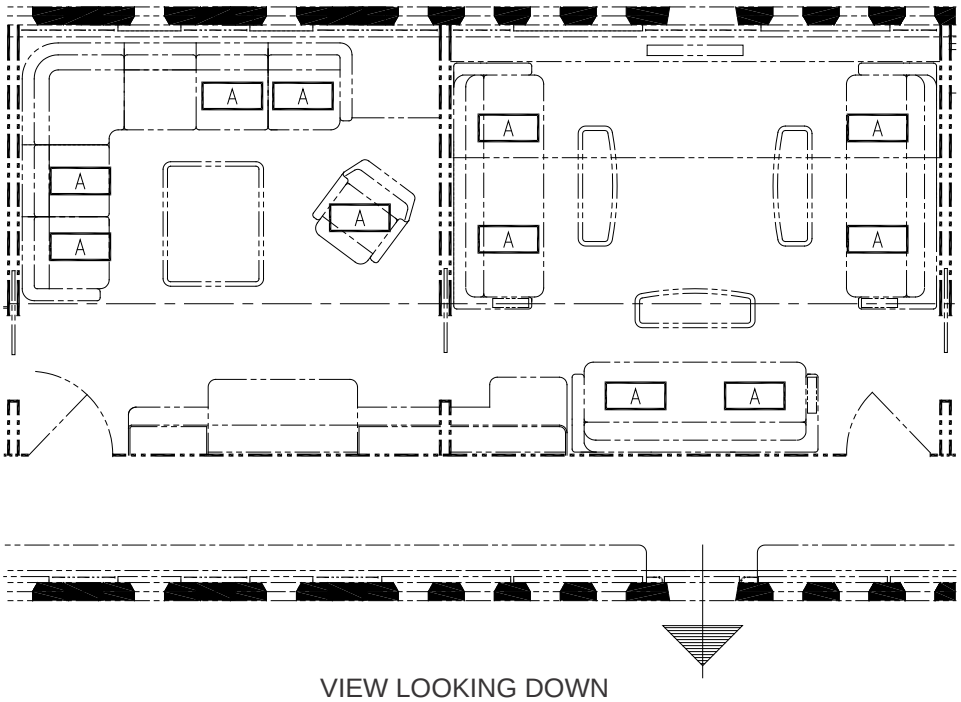
CODE	DESCRIPTION
	EMERGENCY RADIO BEACON
A	PAX LIFE JACKET (YELLOW)
F	CREW LIFE JACKET (ORANGE)
HRG	HEAT RESISTANT GLOVES
	FIRST AID KIT
	BCF FIRE EXTINGUISHER
	PORTABLE OXYGEN CYLINDER
	PAX OXYGEN MASK (DISPOSABLE)
	DME BREAKAWAY TORCH
	SMOKE HOOD
	MEGAPHONE

2 INSTALL ALL EMERGENCY EQUIPMENT WITH THE ORIGINAL BRACKETS AND HARDWARE.

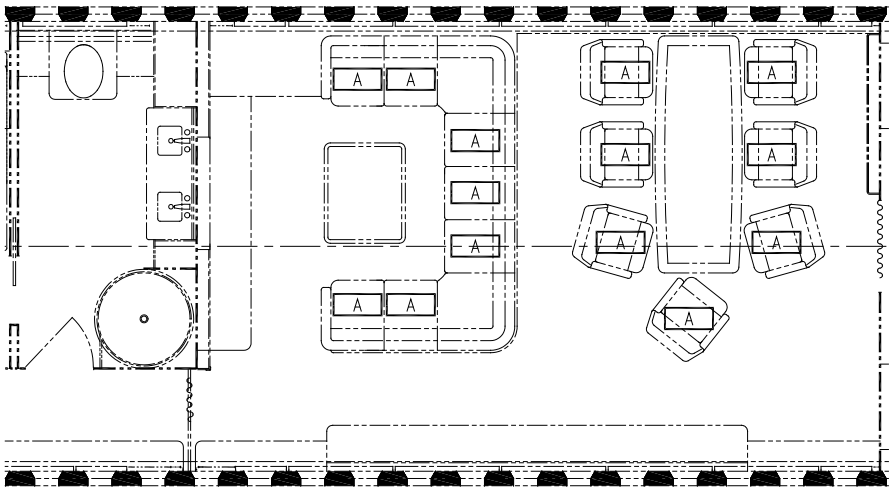
3 POSITION ALL EMERGENCY EQUIPMENT WITHIN THE CABINET/CLOSET IN A MANNER TO ALLOW FOR EASY ACCESS AND VISIBILITY.

4 ALL LIFE JACKETS SHOULD BE PLACED IN THE APPROPRIATE SPACE WITHIN THE SEATS, AS PROVIDED BY THE SEAT MANUFACTIRER.

Emergency Equipment
Figure 1 (Sheet 1 of 4)



Emergency Equipment
Figure 1 (Sheet 2 of 4)

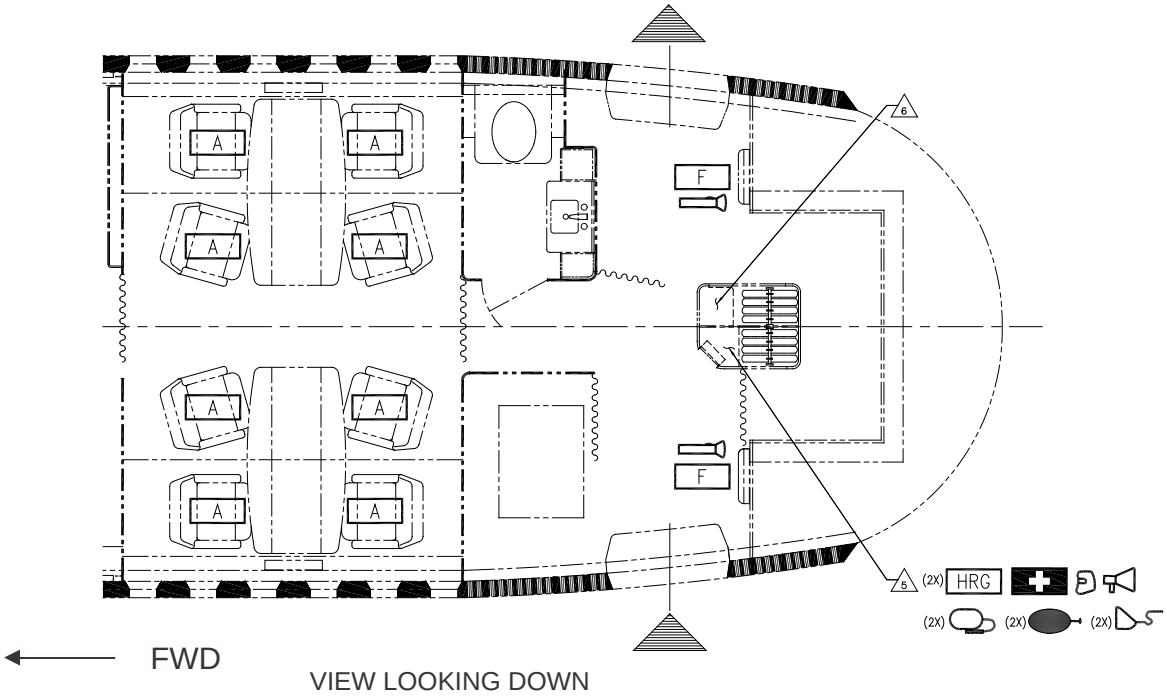


VIEW LOOKING DOWN

A PAX LIFE JACKET (YELLOW)

FWD

Emergency Equipment
Figure 1 (Sheet 3 of 4)



CODE	DESCRIPTION
	EMERGENCY RADIO BEACON
A	PAX LIFE JACKET (YELLOW)
F	CREW LIFE JACKET (ORANGE)
HRG	HEAT RESISTANT GLOVES
	FIRST AID KIT
	BCF FIRE EXTINGUISHER
	PORTABLE OXYGEN CYLINDER
	PAX OXYGEN MASK (DISPOSABLE)
	DME BREAKAWAY TORCH
	SMOKE HOOD
	MEGAPHONE

5 USE THE FWD SHELVES IN THE AFT ENTRY CLOSET. IF THERE ARE ITEMS THAT ARE TOO LONG TO FIT ON ONE OF THE LOWER SHELVES, THEN PLACE THEM ON THE TOP SHELF.

6 USE THE LOWER SHELVES IN THIS AREA AS AN ALTERNATIVE LOCATION FOR STOWAGE.

Emergency Equipment
Figure 1 (Sheet 4 of 4)

ATA

26

Fire Protection

Boeing 767

Aircraft Maintenance Manual Supplement

SMOKE AND FIRE DETECTION – DESCRIPTION AND OPERATION

1. General

Figure 1 thru 4

A. The cargo smoke detection system is based on wireless spread-spectrum technology. If smoke is detected or a temperature above 150 degrees, the Central Control Unit (CCU) will activate the FIRE light on the Central Display Unit (CDU), and a sonalert.

B. The Crew Lav, Stateroom Lav, Stateroom, Private Lounge, Guest Room, Guest Lav, Aft Lav areas utilize a negative pressure system to draw cabin air from overhead locations in the cabin into a detection device located above the ceiling panel.

C. The VCC closet, Private Lounge Refrigerator Cabinet and Guest Room Refrigerator Cabinet areas utilize a negative pressure system to draw cabin air in the cabin into a detection device located in open cabinets.

D. The cockpit annunciator panel mounted on the P5 overhead panel contains a sonalert and a switch to silence the fire alarm (See Wiring Diagram Manual).

E. The detector units, CDU, and CCU are powered by the 28V DC BUS 1.

F. Circuit breakers are on the P11-6 and P11-3 circuit breaker panels.

2. Components

A. Smoke Detector Unit (10) with ID Plugs

(1) The Smoke Detector Units monitor their respective compartments for the presence of smoke and heat. ID Plugs (one for each detector) are used to differentiate Compartment Smoke Detector Locations. Each SDU is powered by two 3.6V batteries. SDUs report Battery condition to the CCU every 30 seconds.

(2) The SDU transmits an RF signal that is received by the CCU. The CCU then interprets the data and sends a signal to the CDU, informing the Flight Crew of System status and any alarms.

B. Central Control Unit (CCU)/Configuration Module (CM)

(1) The CCU is the control center for the system and it monitors the SDUs and other system components. The CCU communicates with the CDU in the cockpit through an RS-422 communications bus and with the forward and aft compartment SDUs through a Spread Spectrum RF transmission link. The CCU contains all of the decision-making capability of the system. The CCU receives RF transmissions from the SDUs and, in the event of an emergency, makes the decision to illuminate the FIRE light on the CDU. The CCU functions on two

independent and redundant channels referred to as Channel [A] and Channel [B].

C. Control Display Unit

(1) The Control Display Unit is used as the control interface for the system to the flight crew. It provides the flight deck with Smoke Detection alarm reporting, System operational status, and Built-In- Test (BIT) capabilities. The CCU reports system status to the CDU using two redundant RS-422 serial links. The CDU displays this information in the form of indicator LEDs and a ten character alphanumeric display. Displayed information includes fire warnings, maintenance information and system status. The CDU contains all of the indicators and buttons necessary for the crew to view System status and perform System tests. Like the CCU, the CDU is arranged as a parallel two-channel design. All the lights in the cockpit pertaining to the smoke detection system are controlled by the CDU.

3. Smoke Detector Unit Zones

A. Refer to table below:

Zone Location	CDU Display
Video Control Center (VCC)	Zone 1
Crew LAV	Zone 2
Stateroom LAV	Zone 3
Stateroom	Zone 4
Private Lounge	Zone 5
Private Lounge Refrigerator	Zone 6
Guest Room Refrigerator	Zone 7
Guest Room	Zone 8
Guest LAV	Zone 9
Aft LAV	Zone 10

4. Operation

A. Functional Description

(1) Smoke is detected by photo electric smoke detectors located in the forward and aft Lower Cargo Compartments.

(a) When smoke is detected by an SDU, the SDU transmits a SMOKE data bit to the CCU.

(b) When the CCU receives SMOKE signals from two SDUs in the same bay simultaneously, or a SMOKE signal and a 150-degree overtemp from the same SDU, a Fire alarm occurs.

1) The FIRE light on the CDU illuminates.

2) The MX Display on the CDU displays FIRE if the smoke is detected.
3) The amber MX LED will NOT illuminate, provided there are no faults occurring when the smoke is detected.

(2) The maintenance function of the system shall display messages and function as described below:

(a) Each of the faults in Table 1 will cause the amber MX LED to illuminate.

(b) While the system is in normal operating mode, and the MX LED is illuminated, press and hold the MX TEST button for 2 seconds to display the first fault.

(c) Once the first fault is displayed, press the MX TEST button to cycle through each fault. After all faults have been displayed, the MX Display will go blank.

(d) After 15 minutes, if all faults have not been displayed and the MX TEST switch has not been pressed, the MX Display will go blank.

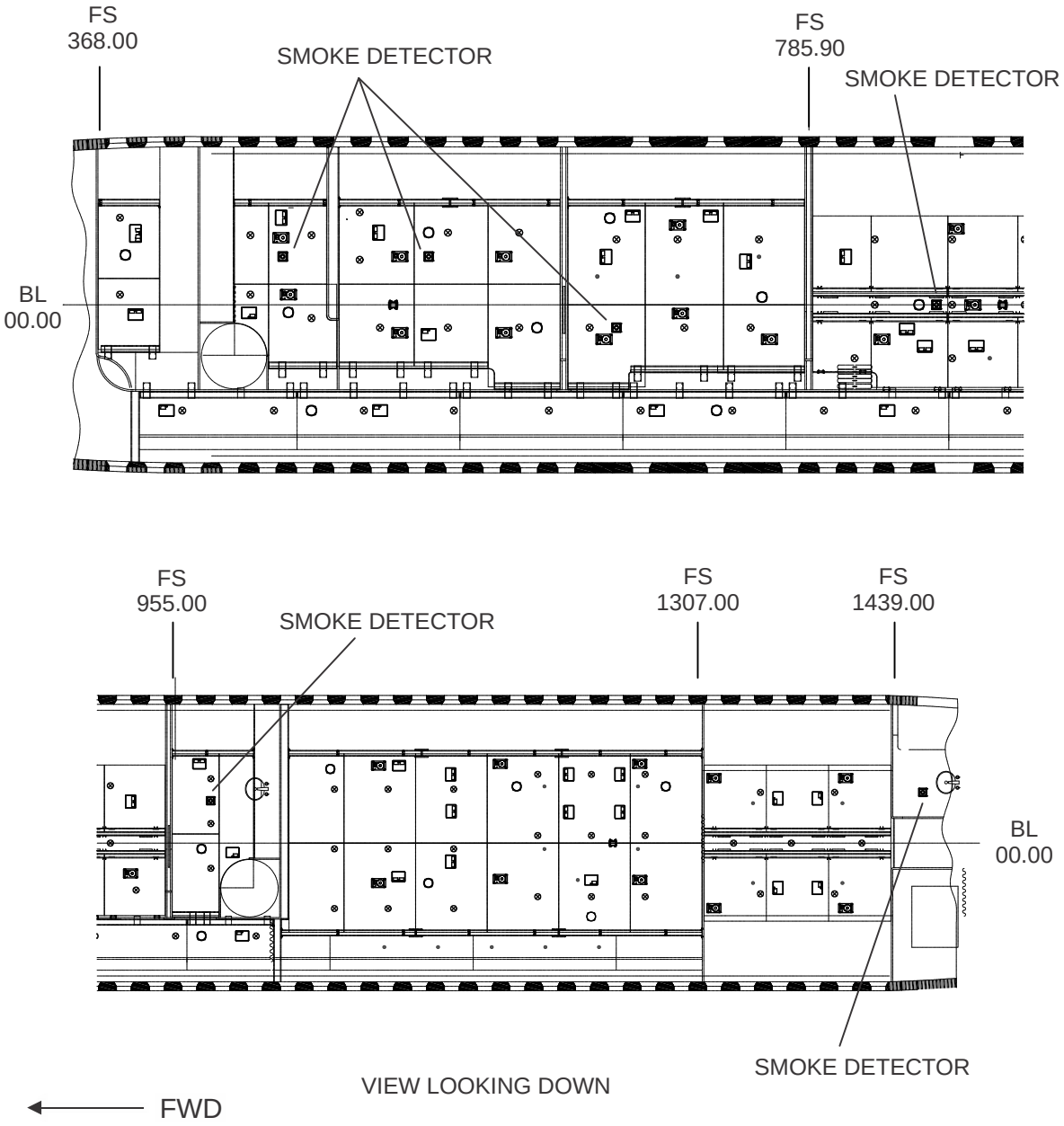
(e) Several of the faults in Table 1 below may appear with a [A] or [B] suffix. This denotes which channel on the CCU detected the fault. If both channels detected the fault, neither [A] nor [B] shall appear.

NOTE: The alphanumeric MX Display on the CDU receives data from Channel [B] only. If CCU Channel [B] is inoperative, no message will be displayed in the MX Display when a fault occurs.

Table 1. Maintenance Fault Displays

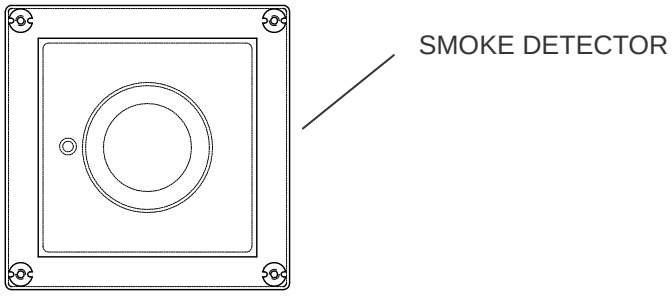
MX DISPLAY	MEANING	MAINTENANCE ACTION
SYSTEM OK	No failure, system operating normally.	
Blank Display, but MX LED illuminated CDU, CDU [A], CDU [B]	CCU Channel [B] has failed.	Replace CCU.
	Control Display Unit (CDU) failed.	Pull circuit breakers CCU CHA and CCU CHB, then close first CCU CHA, then CCU CHB. If fault persists, remove and replace CDU.
CCU CM, CCU CM [A], CCU CM [B]	CCU has an invalid Configuration Module.	Remove and replace Configuration Module. If error goes away, perform characterization

		procedure. If fault persists, remove and replace CCU.
CCU RX, CCU RX [A], CCU RX [B]	CCU has a failed Spread Spectrum Receiver	Remove and replace CCU.
CCU [A] [B]	Link between CCU sides A and B has failed.	Remove and replace CCU
CCU COM, CCU COM [A], CCU COM [B]	CCU COM has failed.	Remove and replace CCU
CCU TX1	CCU has a failed spread spectrum transmitter	Remove and replace CCU
CCU TX2	CCU has a failed spread spectrum transmitter	Remove and replace CCU



Overhead Smoke Detector Locations

Figure 1



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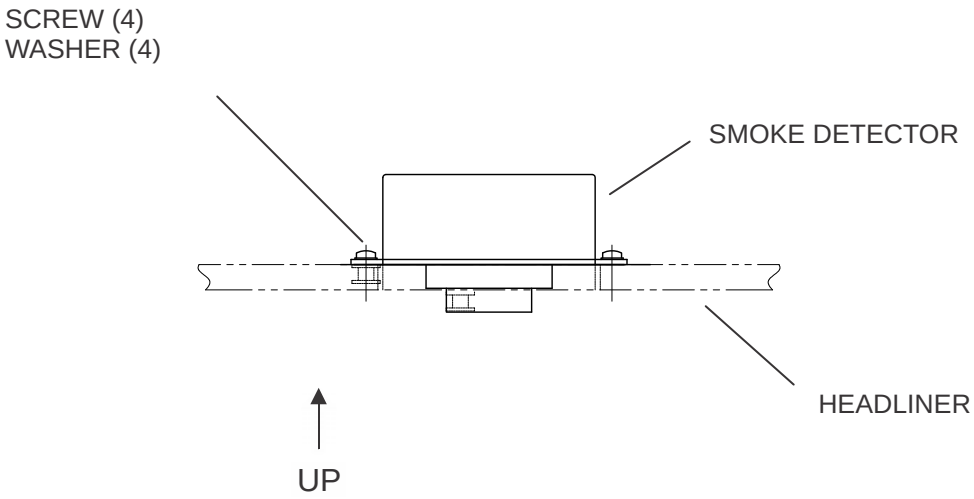
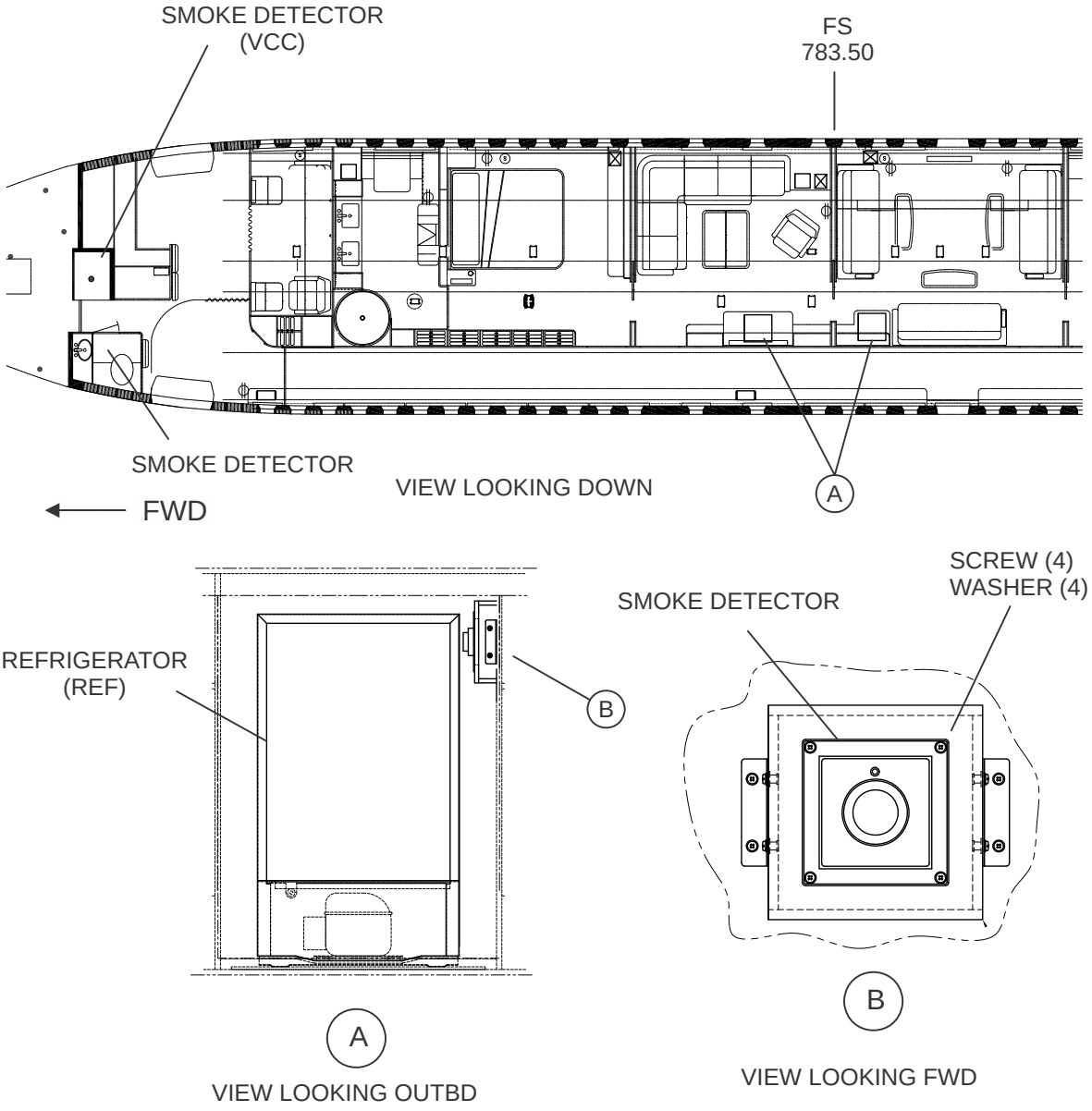


SMOKE DETECTOR
(TYP)

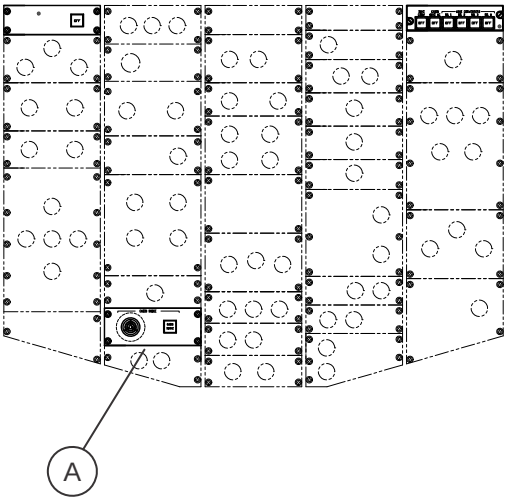
Overhead Smoke Detectors

Figure 2

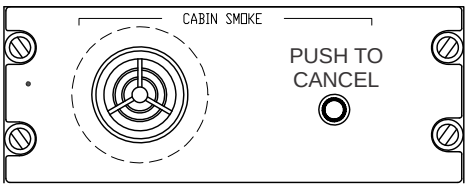


Crew LAV, VCC, and Refrigerator Smoke Detectors

Figure 3



P5 OVERHEAD PANEL



A

SWITCH (MOM) SONALERT

CONTROL DISPLAY UNIT
(CENTER PEDESTAL)

Smoke and Fire Detection Panels

Figure 4

SMOKE DETECTOR – REMOVAL/INSTALLATION

1. General

(Figure 401 and 402)

A. This procedure contains the following tasks:

(1) Smoke Detector Unit (SDU) Removal

(2) Smoke Detector Unit (SDU) Installation

2. Removal

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Remove mounting screws and washers then lower the Smoke Detector. Lower the Smoke Detector carefully because it will still be connected to the aircraft by an ID plug and lanyard.

(3) Grasp the barrel of the ID Plug located on the back of the Smoke Detector and gently pull the plug out of the Smoke Detector.

NOTE: Do not remove the ID plug from the aircraft unless it is to be replaced.

---------- END OF TASK ----------

3. Installation

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Install smoke detector unit batteries (See SMM 26-14-04).

(3) Position ID plug in socket on back of Smoke Detector by aligning keyways. Push ID plug into socket until a popping sound is heard. Popping sound indicates ID plug is fully seated. Gently pull on barrel of ID plug to verify it is properly seated.

CAUTION: WHEN INSTALLING THE SDUS, MAKE SURE THE ID PLUGLANYARD IS PROPERLY COILED INSIDE THE LANYARD GUARD.

(4) Check to make sure ID plug lanyard is properly coiled inside lanyard guard and insert Smoke Detector into position.

(5) Secure Smoke Detector in position using four washers and screws.

---------- END OF TASK ----------

D. New Smoke Detector Set-Up

(1) Apply electrical power (AMM BOE Task 24-22-00-862-001).

(2) On Control Display Unit (CDU) MX SETUP button, remove screw and cover, if installed.

(3) Press MX SETUP on Control Display Unit (CDU) for a minimum of five-seconds or until MX Display illuminates.

(a) MX Display will show the following message: ENTERING SETUP MODE.....RELEASE MX SETUP TO BEGIN ACQUIRING SENSORS.

(4) Release MX SETUP button. MX Display will show the following message: ACQUIRING SENSORS....PRESS MX SETUP WHEN ALL SENSORS FOUND.

NOTE: System is now waiting for new SDUs to report in. During replacement of the SDUs, this is accomplished by manually sending data from each replacement SDU.

(5) Press and release Setup Button on replacement Smoke Detector or Smoke Detectors. Setup button is a black momentary button located under grill on Smoke Detector.

(a) Person pressing Setup Button should record serial number of Smoke Detector, or Smoke Detector s, after pressing button. Serial number is located under grill of Smoke Detector.

(b) MX Display on Control Display Unit (CDU) will display serial number of each Smoke Detector when setup button is pressed.

(6) When all buttons on Smoke Detectors have been pressed, press MX SETUP BUTTON on the CDU again.

(a) The following message will be observed on MX Display: DONE WITH SENSOR CONFIGURATION. This message appears and then quickly disappears. The first sensor to be accepted is then displayed.

(b) Operator must now accept or reject each Smoke Detector as they are displayed.

(7) Release the MX SETUP Button on the CDU.

(8) Compare list of Smoke Detectors on MX Display against list recorded when Setup Buttons on Smoke Detectors were pressed. Press MX SETUP button to accept sensors and MX TEST button to reject sensors.

NOTE: Airport RF emissions or other aircraft operating in the vicinity may cause undocumented serial numbers to be received by the CCU and added to the list of serial numbers shown on the MX display during the above step. These numbers must be rejected by pressing the MX TEST BUTTON when solicited to accept or reject.

(9) When all sensors have been accepted or rejected the following message will appear on MX Display: DONE WITH SENSOR CONFIGURATION TO ACCEPT.....PRESS MX SETUP, TO REJECT.....PRESS MX TEST.

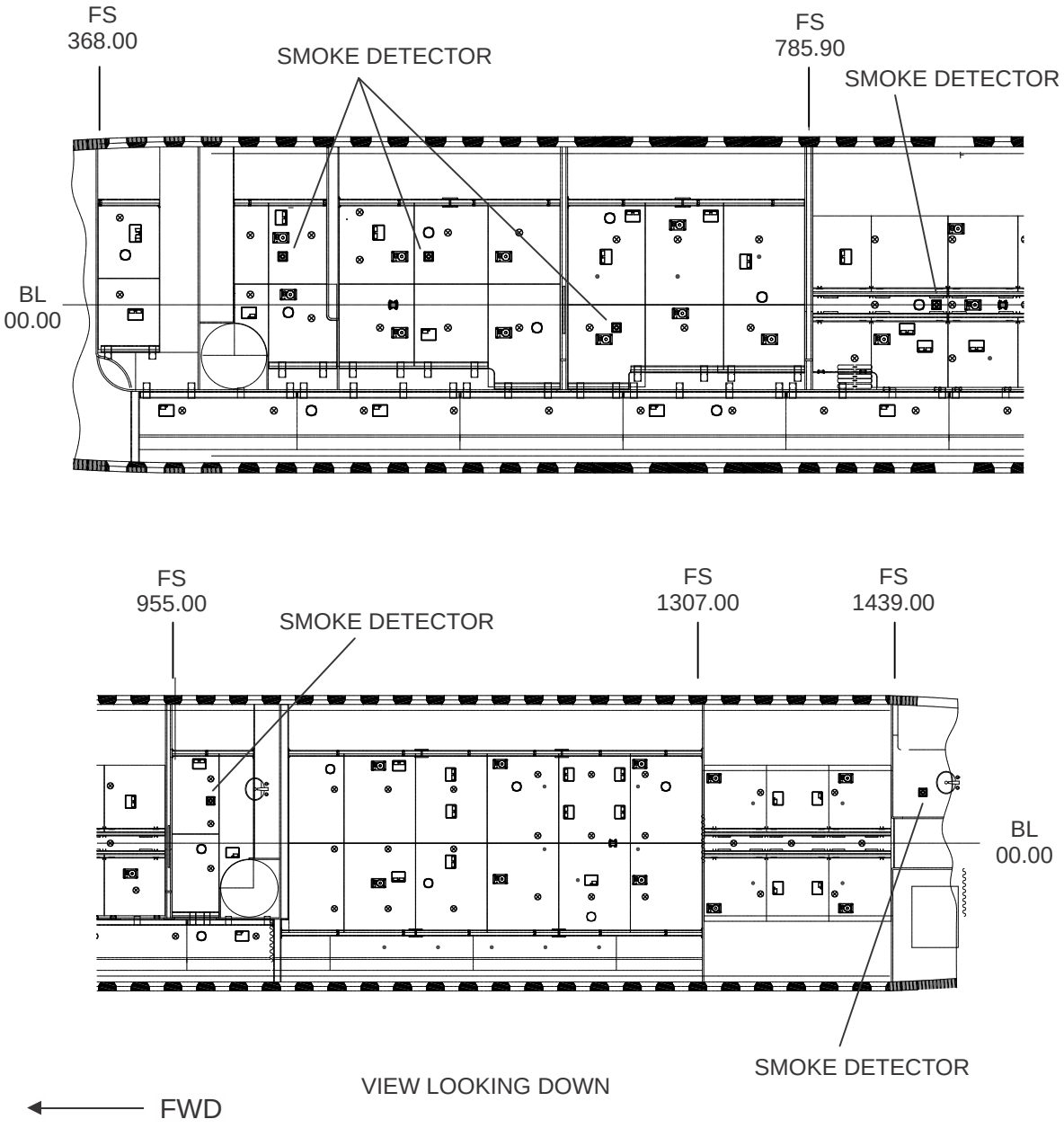
(10) Press and release the MX SETUP button. Ensure list of sensors is correct before continuing.

(a) MX DISPLAY will go blank, then after approximately 15 minutes the green SYS OK LED will come on if system is installed and configured properly.

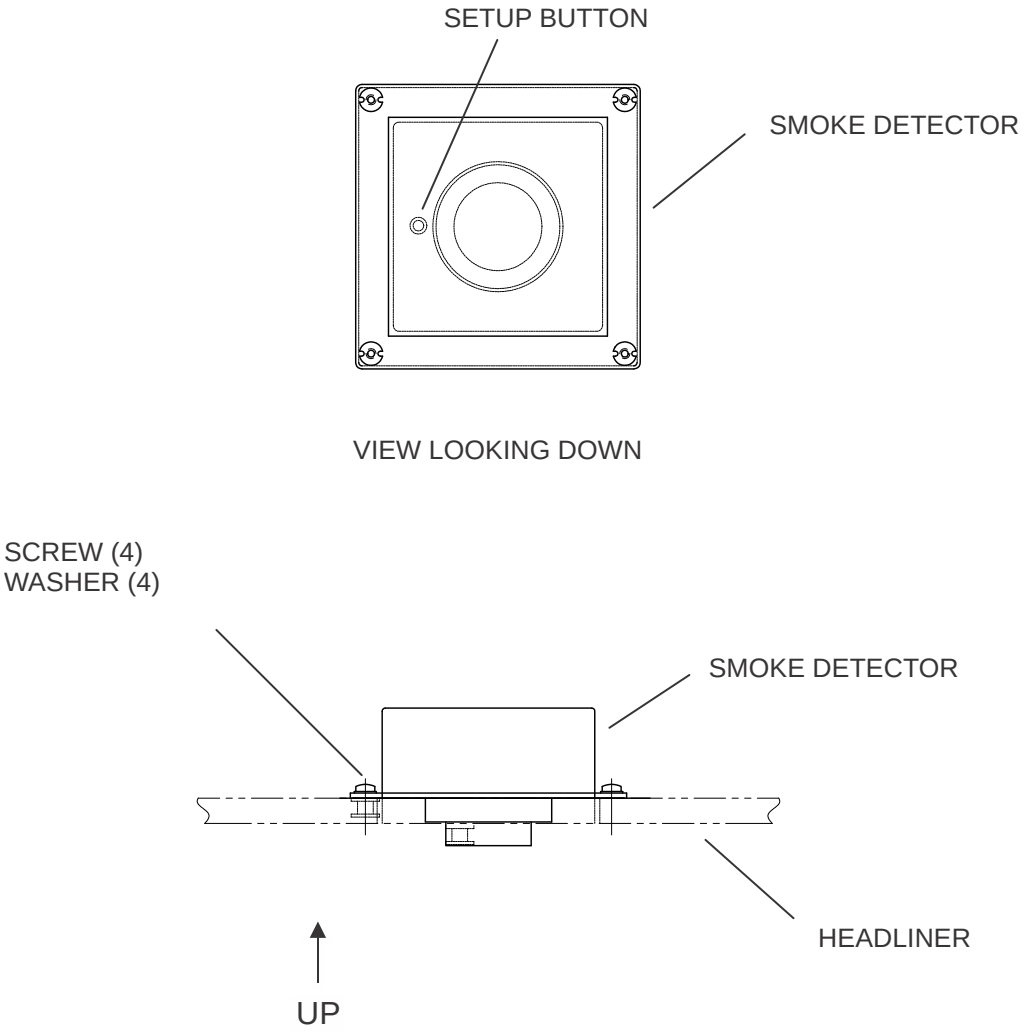
NOTE: Even if the SYS OK light comes on in less than 2-1/2 minutes, the MX light may also come on. Complete system check requires 15 minutes.

(11) On CDU MX SETUP button, position cover and install screw.

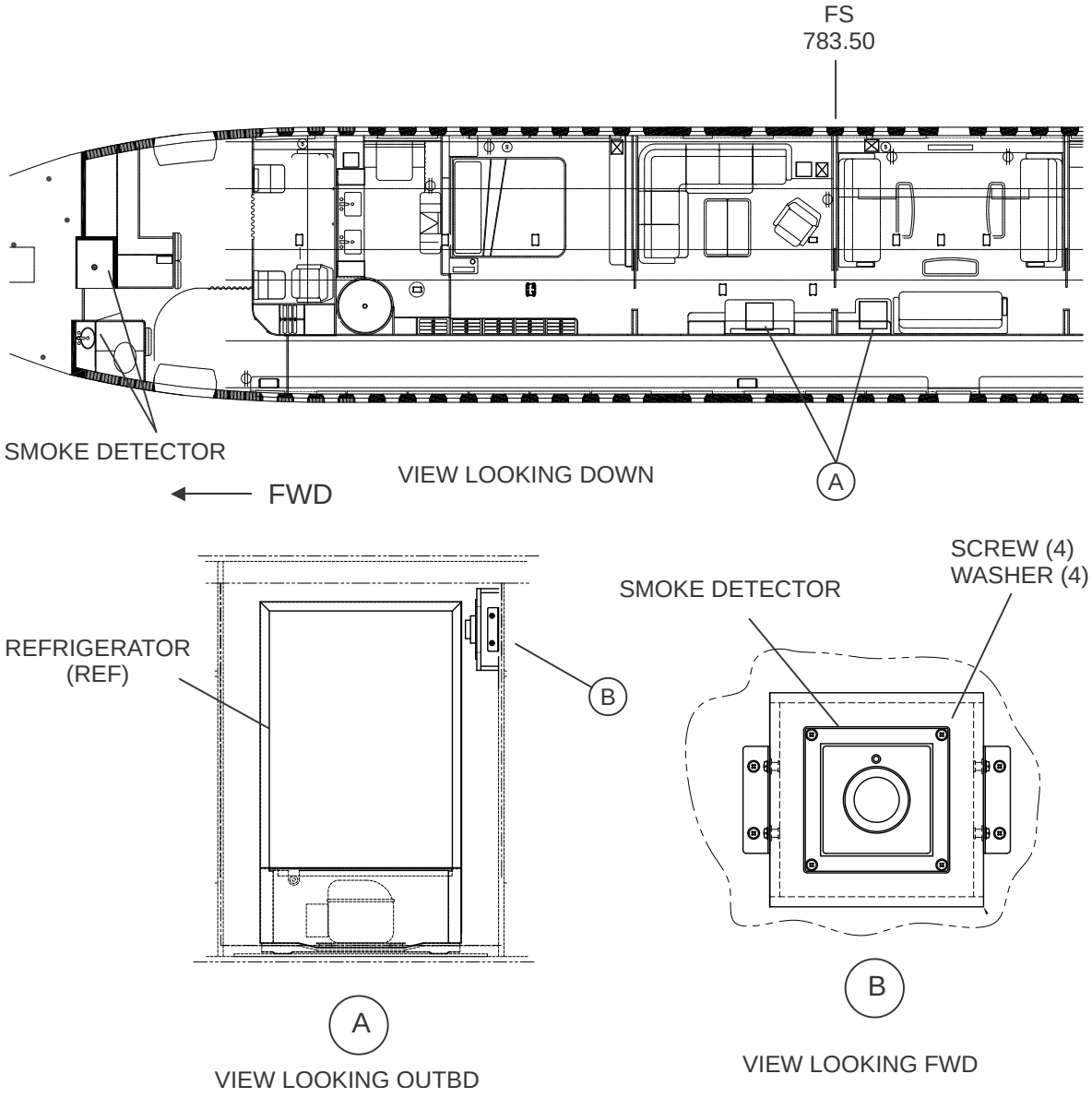
(12) Restore aircraft to its normal condition.



Overhead Smoke Detectors
Figure 401 (Sheet 1 of 2)



Overhead Smoke Detectors
Figure 401 (Sheet 2 of 2)



Crew LAV, VCC, and Refrigerator Smoke Detectors
Figure 402

SMOKE DETECTION SYSTEM -ADJUSTMENT/TEST

1. General

A. This procedure has these tasks:

(1) Operational Test

(2) Spread Spectrum Viewer Mode Test

(3) Cabin Smoke Detector Alarm Test

NOTE: When system components are removed and replaced, the system will require set up of the Smoke Detector Units (SDUs) and Central Control Unit (CCU) to program the transmitter/receiver ID codes.

2. Operational Test

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Preparation

(1) Supply Electrical Power per (AMM BOE Task 24-22-00-862-001).

(2) Open and tag circuit breakers CCU CHA and CCU.

D. Perform Operational Test.

(1) Channel A Power On Test. This test verifies the installed system powers up in the expected state on Channel A.

(a) Remove tag and close circuit breaker CCU CHA.

(b) After approximately 15 minutes, verify that the following occurs on the CDU:

1) Green SYS OK LED is ON.

2) Amber MX LED is ON.

3) Red FIRE LIGHT is OFF.

4) MX DISPLAY is blank.

(2) Channel A Lamp Test. This test verifies the CDU is correctly wired to the CCU and the fire warning lights. The LAMP TEST button will illuminate the MX lights, SYS OK light and the FIRE light on the CDU.

NOTE: The MX DISPLAY window is driven by Channel B only. When Channel B is not active the MX DISPLAY window will remain blank.

(a) Press and hold the LAMP TEST Button on the CDU. Verify the following occurs:

1) Green SYS OK LED illuminates.

2) Amber MX LED illuminates.

3) Red FIRE light illuminates.

4) The Maintenance Display on the CDU will be blank.

(b) Release the LAMP TEST Button.

(3) Open circuit breaker CCU CHA.

E. Perform Operational Test on Channel B.

(1) Channel B Power On Test. This test verifies that the installed system powers up in the expected state on Channel B.

(a) Remove tag and close circuit breaker CCU CHB.

(b) After approximately 15 minutes, verify the following occurs on the CDU: 1) Green SYS OK LED is ON. 2) Amber MX LED is ON.

1) Red FIRE light is OFF.

2) MX DISPLAY is blank.

(2) Channel B Lamp Test. This test verifies the CDU is correctly wired to the CCU and fire warning lights. The LAMP TEST Button will illuminate all lamps on the CDU including the Maintenance Display.

(a) Press and hold the LAMP TEST Button on the CDU. Verify the following occurs:

1) Green SYS OK LED illuminates.

2) Amber MX LED illuminates.

3) Red FIRE light illuminates.

4) The Maintenance Display on the CDU displays a checkerboard pattern (every other pixel illuminated).

(b) Release the LAMP TEST Button.

(3) Remove tags and close circuit breakers CCU CHA and CCU CHB.

3. <u>Spread Spectrum Viewer Mode Test</u>

A. The Spread Spectrum Viewer (SSV) Mode Test is used to view all SDUs configured and installed on a particular aircraft. It may also be used to troubleshoot the cabin smoke system. The SSV Mode is used to verify at what dB levels the SDU's are transmitting /being received at and to verify correct aircraft configurations and compare relative dB levels on suspected trouble components.

(1) Supply Aircraft Electrical Power per (AMM BOE Task 24-22-00-862-001).

(2) Enter the Spread Spectrum Viewer mode by simultaneously pressing both the MX TEST/MX DISPLAY and the MX SETUP buttons for at least 5 seconds.

(a) The lowest serial numbered SDU with the lowest part numbered ID Plug will automatically be displayed first.

(3) To view the next SDU status, press the MX TEST/MX DISPLAY button. Repeat for each SDU serial number installed.

(4) After all aircraft sensors are viewed; the MX DISPLAY screen will go blank.

(5) Other information about the Spread Spectrum Viewer mode:

(a) When in the Spread Spectrum Viewer mode the MX Display will continuously display (and update every 30 seconds if allowed to scroll) the signals received

from the selected SDU being read from the CCU Channel B receiver only. The data will be similar to that shown in Table 501.

(b) After 15 minutes in SSV viewing mode, (no additional activity), the display will go blank, and the spread spectrum viewer mode will have to be re-entered if required.

Table 501. - Spread Spectrum Viewer "Suffix" Examples

Sensor Status	MX DISPLAY Examples
Position 1 SDU – Normal Operation	POS1-xxxxx 69.3dB*
Crew Rest SDU – Normal Operation	CRxxxxx 69.3dB*
Position 1 SDU w/ SETUP bit set	POS1-xxxxx 70.3dB* SETUP
Crew Rest SDU w/ SETUP bit set	CRxxxxx 70.3dB* SETUP
Position 1 SDU w/ BATTERY bit set	POS1-xxxxx 70.3dB* BATT
Crew Rest SDU w/ BATTERY bit set	CRxxxxx 70.3dB* BATT
Position 1 SDU w/ LOW** or HIGH TEMPERATURE bit set	POS1-xxxxx 70.3dB* TEMP **
Crew Rest w/ LOW** or HIGH TEMPERATURE bit set	CRxxxxx 70.3dB* TEMP **

*The dB Levels shown are for reference only. Actual SDU dB levels will vary by SDU and aircraft.

(c) Other data BITs (suffix's) may be shown in the MX DISPLAY:

1) A "SMOKE" suffix indicates the displayed SDU is Alarming.

2) A "SETUP" suffix indicates the setup button on the SDU has been pushed and the SDU is sending a setup transmission.

3) A "BATT" suffix indicates the SDU has detected a low battery condition.

4) A "TEMP" suffix indicates the SDU internal temperature (not ambient compartment) BIT has detected either a high (150F or above) or a **low (32F or below) temperature. The cold TEMP suffix is commonly seen during or after flight and in cold winter months. It does not affect the SDU operation. A high "TEMP" may be seen in conjunction with an Alarm condition and indicates direct SDU surface temperature, not ambient.

3. <u>Cabin Smoke Detector Alarm Test</u>

A. This test is used to demonstrate that each SDU installed senses smoke and transmits an Alarm BIT to the CCU producing proper cockpit annunciation. This test will also check the Inhibit feature if used.

(1) Two persons are required for this test. One located in the cockpit and one at the test SDU location.

(2) System must be properly characterized (programmed) before beginning SDU test.

(3) Supply Aircraft Electrical Power per (AMM BOE Task 24-22-00-862-001).

(4) Locate first SDU to be tested and note “POSITION” (nomenclature)

(5) Spray a small amount of smoke in the selected SDUs sensor head.

(a) Use SDU Tester (Artificial Smoke Spray), Part # 25S or commercial equivalent.

(6) Verify the following occurs:

(a) “PASSENGER CABIN SMOKE” LED on the CDU illuminates

(b) MX DISPLAY reads:

1) EXAMPLE: POSITION 1 SMOKE or CREW REST SMOKE

(c) Cabin smoke sonalert rings.

(d) Verify pressing the “Press to cancel” button on the Cabin Smoke Panel on the P-5 Overhead Panel cancels the alert.

(7) Clear smoke from the SDU (sensor head) prior to proceeding to the next SDU Alarm test.

(a) Gently blowing air into each sensor head or fanning the SDU that has been exposed to smoke will hasten the clearing process.

(8) Repeat the SDU Smoke Test process for all SDU’s in each compartment on the aircraft.

(9) If any given SDU fails to report an Alarm:

(a) Verify through the SSV that the SDU is transmitting to the CCU.

(b) Ensure batteries are installed and the ID Plug is correctly installed.

(10) If any given SDU reports the wrong compartment smoke “prefix” when Alarming:

(a) Ensure the correct colored/part numbered ID Plug is installed on the SDU.

(11) If any given SDU fails to stop Alarming:

(a) Verify all smoke is cleared from both the SDU and Compartment.

(b) Check that the plastic sensor head cover on the SDU is securely seated and not allowing any light into the sensor chamber.

CENTRAL CONTROL UNIT – REMOVAL/INSTALLATION

1. General

(Figure 401)

A. This procedure contains the following tasks:

(1) Central Control Unit (CCU) Removal

(2) Central Control Unit (CCU) Installation

B. The Central Control Unit (CCU) is located in the cabin overhead.

2. Removal

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Open and tag circuit breakers CCU CHA and CCU CHB.

(3) Access the cabin overhead.

(4) Disconnect electrical connector from Central Control Unit.

NOTE: Configuration Module (CM) is not removed from aircraft mounting stud unless being replaced. The CM contains valuable system information and will be reinstalled on the new CCU.

(5) Remove 2 small screws from configuration module and retain for reinstallation on the new CCU.

(6) Unplug configuration module from the CCU. Install dust cap on CM connector and allow CM to hang from lanyard.

(7) Remove the 4 CCU mounting bolts and retain for reinstallation.

(8) Remove CCU from aircraft.

---------- END OF TASK ----------

3. Installation

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Position Central Control Unit on upper and lower mounting brackets.

(3) Install 2 screws attaching Central Control Unit to upper mounting bracket.

(4) Install 2 screws attaching Central Control Unit to lower mounting bracket.

(5) Install the Configuration Module into Central Control Unit with 2 screws retained earlier.

(6) Connect electrical connector to Central Control Unit.

(7) Remove tags and close circuit breakers CCU CHA and CCU CHB.

(8) Apply Electrical Power (AMM BOE Task 24-22-00-862-001).

(9) After system has powered up approximately 2 minutes.

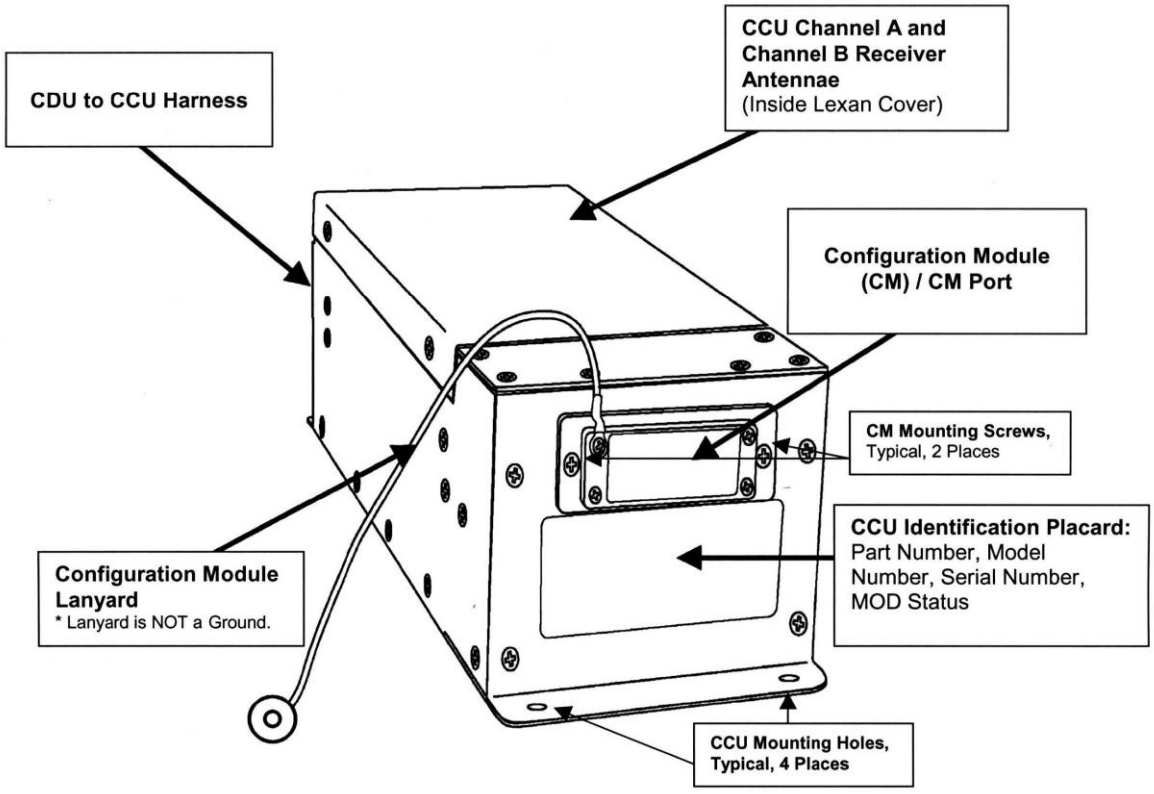
(a) Verify SYS OK LED is illuminated on CDU.

(b) Verify MX LED on CDU is extinguished.

(c) Press the MX TEST button on CDU and verify SYSTEM OK is displayed in CDU display window.

NOTE: When replacing only the CCU it is not necessary to perform a new system characterization or setup.

---------- END OF TASK ----------



Central Control Unit (CCU)
Figure 401

CONTROL DISPLAY UNIT – REMOVAL/INSTALLATION

1. General

A. This procedure contains the following tasks:

(1) Control Display Unit (CDU) Removal

(2) Control Display Unit (CDU) Installation

B. The Control Display Unit (CDU) is located on the center pedestal.

2. Removal

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
211/212	Crew Station

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Open and tag circuit breakers CCU CHA and CCU CHB.

(2) Unlatch 4 Dzus fasteners from Control Display Unit.

(3) Disconnect electrical connector from Control Display Unit and remove from aircraft.

---------- END OF TASK ----------

3. Installation

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
211/212	Crew Station

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Connect electrical connector to Control Display Unit.

(3) Position Control Display Unit on the aisle stand and latch 4 Dzus fasteners.

(4) Remove tags and close circuit breakers CCU CHA and CCU CHB.

(5) Apply Electrical Power (AMM BOE Task 24-22-00-862-001).

(6) Do a lamp test of Control Display Unit.

(a) Press LAMP TEST button on Control Display Unit.

(b) Observe the following conditions:

1) All lights on Control Display Unit (MX, Sys OK, and FIRE) come ON.

2) Maintenance display screen displays checker board pattern.

(c) Release lamp test button.

(7) After approximatley 2 minutes:

(a) Verify SYS OK LED is illuminated.

(b) Verify MX LED is extinguished.

(c) Press the MX TEST button and verify SYSTEM OK is displayed in the CDU display window.

---------- END OF TASK ----------

CONFIGURATION MODULE – REMOVAL/INSTALLATION

1. General

A. This procedure contains the following tasks:

(1) Configuration Module (CM) Removal

(2) Configuration Module (CM) Installation

(3) System Setup/Characterization

B. The Configuration Module (CM) is located on the Control Display Unit (CDU).

2. Removal

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

(Figure 401)

(1) Apply electrical power to the aircraft per (AMM BOE Task 24-22-00-862-001).

(2) Press MX TEST to determine CM Fault Message.

(a) Fault Message “CCU CM” indicates CM has failed communications with the CCU and should be replaced.

(b) If a CM has been permanently programmed with too many SDU’s or zones it MUST BE REPLACED. SDU’s/Quantities may be added to the system memory but NEVER removed.

(c) ANY TIME a CM is replaced; a full System Characterization must be performed.

(3) Open and tag the CCU CHA and CCU CHB circuit breakers on the circuit breaker panel.

(4) Gain access to the CCU (Configuration Module) / mounting panel.

(5) The CCU/CM is typically located mid-ship in the aircraft cabin overhead.

(6) Locate the Configuration Module on the CCU.

(a) CM is located on the end of the CCU, opposite the CCU to CDU harness connector.

(7) Remove the 2ea small mounting screws from the Configuration Module and retain for reinstallation.

(8) Remove the stainless steel CM Lanyard from the attachment screw/stud. Retain hardware for reinstallation.

NOTE: The CM Lanyard is not a ground and possesses no grounding characteristics. It is only used to secure the CM to the aircraft.

(9) Unplug the CM from the CCU and remove from the aircraft.

(a) Install dust cap on the CM connector port on the CCU.

---------- END OF TASK ----------

3. Installation

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

(1) Open and tag the CCU CHA and CCU CHB circuit breakers on the circuit breaker panel.

(2) Gain access to the CCU (Configuration Module) / mounting panel.

(3) The CCU/CM is typically located mid-ship in the aircraft cabin overhead.

(4) Locate the Configuration Module on the CCU.

(a) Check for proper module orientation to ensure connector pins are not damaged.

(b) CM is located on the end of the CCU, opposite the CCU to CDU harness connector.

(5) Install the 2ea small mounting screws from the Configuration Module.

(a) Install the fasteners hand tight. DO NOT over torque fasteners.

(6) Install the stainless steel CM Lanyard to the attachment screw/stud.

NOTE: The CM Lanyard is not a ground and possesses no grounding characteristics. It is only used to secure the CM to the aircraft.

(7) Close the CCU CHA and CCU CHB Circuit Breakers and remove the DO-NOT-CLOSE tags.

(8) After the system has powered up, almost immediately:

(a) The “SYS OK” LED should be extinguished

(b) The “MX LED should be illuminated.

(9) Press the MX TEST button on the CDU and verify:

(a) **“?0? CNT?”** is displayed in the MX Display window.

(b) This indicates the CCU/CM are awaiting system characterization.

(10) Perform a complete System Characterization, programming each SDU into the new CM memory.

---------- END OF TASK ----------

4. System Setup/Characterization

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. When initially installing the system in an aircraft or when replacing a smoke detector or configuration module, the system will requires the following characterization (setup) procedure to correctly program the transmitter/ receiver ID codes for all the SDU's into the Central Control Unit (CCU) / Configuration Module (CM) memory. The Table 401 – Characterization Data Sheet will assist in the Characterization of a new system or track the removal and replacement of faulted SDU's.

D. This procedure is used to perform the following tasks:

(1) Cabin Installed SDU – Initial System Characterization

(2) After replacement of a Configuration Module

(3) Cabin Installed SDU – Removing and Replacement of a Faulted SDU.

E. Prepare for the Initial SDU Installation and Characterization:

(1) A minimum of two people is recommended for this task. Two Way Radios are also recommended.

(2) Supply aircraft electrical power to the aircraft per (AMM BOE Task 24-22-00-862-001).

(3) Close CCU Circuit Breakers CHA and CHB located in the cockpit (typically the P18 Panel).

(4) Gain access all SDU's to be installed or replaced. You must have access to the black SETUP button inside the clear cover on the front of the SDU.

F. Perform the System Characterization (SETUP) Procedure per following steps:

(1) Verify all SDU's have been installed with 2 batteries, in the correct polarity and that the ID Plugs attached and are in the desired locations/compartments.

(2) On the Control Display Unit (CDU), press and hold the MX SETUP button for a minimum of 5 seconds until the display illuminates the following message:

"ENTERING SETUP MODE RELEASE MX SETUP TO BEGIN ACQUIRING SENSORS"

(3) Release the MX SETUP button

(4) The MX DISPLAY will automatically display the following message:

"ACQUIRING SENSORS..DEPRESS MX SETUP WHEN ALL SENSORS FOUND"

NOTE: The system is now waiting for all Smoke Detector Units (SDUs) to report in. During setup, "report in" is accomplished by manually commanding each SDU to send a data transmission to the CCU as shown in the following steps.

(5) Press and release the black SETUP button, just inside the SDU's cover, on all SDUs installed in all compartments. NOTE: The setup button on the SDU may be pushed as many times as necessary.

(a) The operator at the individual SDU should record the serial number of all SDU's in the aircraft after pressing the SDU SETUP button. Serial numbers are found inside the clear cover of the SDU near the sensor head, (See Table 401).

(b) Each time an SDU SETUP Button is pressed, the MX DISPLAY will display, one at a time, the SDU serial number and signal dB level of the SDU as received by the CCU. The operator in the cockpit should confirm and record the serial number and dB level as displayed on the CDU.

EXAMPLE: POS1-12345 58.7 dB or CR12468 49.5 dB

"POS 1-" = "Position 1" Compartment, "CR" = Crew Rest Compartment

(6) When all SETUP buttons on the SDUs have been depressed and serial numbers have been observed on the CDU, press and release the MX SETUP button.

(a) The following message will be briefly observed on the MX DISPLAY

DONE WITH SENSOR CONFIGURATION

(b) This brief message will be immediately followed by the first SDU serial number.

(7) The Central Control Unit (CCU) now has acquired a list of all SDUs that are to be programmed and the operator now must individually accept or reject each SDU by serial number.

(8) The following message showing the first detector that was acquired (the first SDU setup button pushed in Step 5) will now be observed on the MX DISPLAY:

< POS1-12345 58.7 dB or CR12468 49.5 dB > TO ACCEPT…PRESS MX SETUP TO REJECT…PRESS MX TEST/MX DISPLAY

(9) Following the directions shown on the MX DISPLAY the operator must now PRESS the MX SETUP button to accept the detector serial number or PRESS the MX TEST/DISPLAY button to reject the detector serial numbers for each SDU.

(10) Repeat this process for each SDU serial number displayed.

(a) After each time an SDU (serial number) is accepted or rejected, the next SDU serial number will be shown automatically until all SDU's detectors acquired in Steps 2 through 6 above have been viewed.

NOTE: Occasionally other airport RF emissions and radio traffic may be received by the CCU during the SETUP (Acquiring) procedure. These signals may cause errant "SDU serial numbers or zones", with a "setup BIT" set high, to be displayed. Recent updates to the CCU software should filter these errant signals as the CCU now only recognizes and displays signals from Type II transmitters (our SDU's). These errant serial numbers must be rejected by depressing the MX TEST/MX DISPLAY button if they are not on the list of SDU's to be accepted. The rule is, if you don't recognized the serial number or zone…reject it. The minimum dB level required for accepting an SDU is 5dB.

(11) When the last SDU serial number has been accepted or rejected the following message will automatically appear on the MX DISPLAY:

DONE WITH SENSOR CONFIGURATION TO ACCEPT...PRESS MX SETUP TO REJECT...PRESS MX TEST/MX DISPLAY

NOTE: Up to this point in the procedure, NO SDU's have been permanently programmed into the CM Memory. This is the final step in the characterization process.

(12) If the list of detectors is correct, Press and release the MX SETUP button. This will permanently write the aircraft configuration to the CM and close the EEPROM. (Skip to Step 15)

(a) If an error has been made or even suspected, DO NOT press the MX SETUP button and go to Steps 13.

(13) If an error in configuration was made, Press and release the MX TEST/MX DISPLAY button on the CDU.

(a) The MX DISPLAY will "blank".

(b) By pressing the MX TEST/MX DISPLAY button the operator will completely abort the SETUP Procedure (return to original system configuration, prior to beginning the characterization). No record of new detector serial numbers or quantities entered will be recorded.

(14) Repeat the Characterization / Setup Procedure, Steps 1-13, this section.

(15) If the MX SETUP button was depressed in step 12, the CDU will immediately go "blank", similar to cycling system power.

(a) The CCU/CM is now sorting the SDU's into the proper numerical order and ensuring all SDU's have been correctly programmed or for SDU replacements, that equal numbers of SDU's have been removed and replaced.

(b) The green SYS OK LED should illuminate within a few minutes and the MX LED will be extinguished if performed correctly if the system is non-inhibitable. If the system is inhibitable, the

(c) If an error has been made the MX LED will illuminate within a few seconds.

1) Press the MX TEST button to determine the configuration fault and repeat the Setup procedure if necessary.

NOTE: If a configuration module is over programmed (too many SDU serial numbers have been entered) the CM must be replaced and the characterization procedure has to be repeated for the new CM. The CM retains a memory of the minimum quantity of SDU's required in each compartment and must be maintained. The minimum quantity of SDU's in a compartment may be raised but never lowered. SDU's should always be replaced by removing and installing them in equal quantities.

Table 401. Smoke Detector Characterization Data Sheet

Component Name	Smoke Detector Prefix/Serial Number	Smoke Detector dB Level	Accepted (Press MX Setup Button)	Rejected (Press MX Test Button)
Smoke Detector 1				
Smoke Detector 2				
Smoke Detector 3				
Smoke Detector 4				
Smoke Detector 5				
Smoke Detector 6				
Smoke Detector 7				
Smoke Detector 8				
Smoke Detector 9				
Smoke Detector 10				

---------- END OF TASK ----------

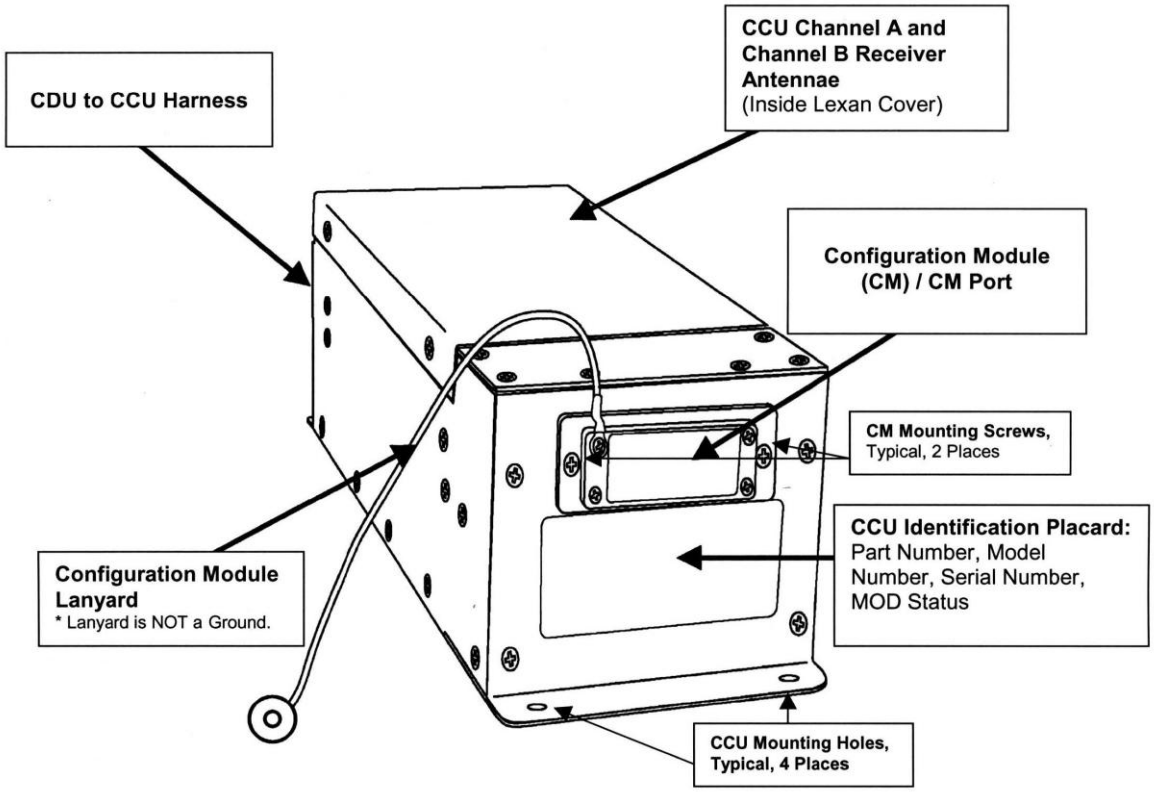


Figure 401. Central Control Unit (CDU)

SMOKE DETECTOR BATTERY – REMOVAL/INSTALLATION

1. General

A. This procedure contains the following tasks:

(1) Smoke Detector Battery Removal

(2) Smoke Detector Battery Installation

B. The batteries are located under the grill of the Smoke Detector Unit (SDU).

C. Each detector contains two (2) batteries. Always replace both batteries.

2. Removal

A. Location Zones

Zone	Area
200	Upper Half of Fuselage

B. Procedure

(1) Open and tag circuit breakers CCU CHA and CCU CHB.

CAUTION: TO PREVENT DAMAGE, USE CARE WHEN REMOVING THE BATTERY HOLDER CLIPS.

(2) Remove the 4 screws attaching the grill to the SDU.

(3) Insert a small flat blade screwdriver in one end of plastic battery cover.

(4) Gently pry on end of battery cover and remove cover.

(5) Remove batteries.

---------- END OF TASK ----------

3. Installation

A. Location Zones

Zone	Area
200	Upper Half of Fuselage

B. Procedure

CAUTION: TO PREVENT DAMAGE, DO NOT BEND BATTERY CONTACTS WHEN CLEANING THEM.

(1) If lubricant is present on the battery holders, wipe off excess lubricant with a clean cloth.

(2) Remove any film or contamination that may be present on the positive and negative battery holder contact points by using a small wire brush.

(3) Clean the contact areas using isopropyl alcohol and a clean cloth.

NOTE: Do not remove the mesh pads that are installed on both ends of battery, P/N 160-1173-02. The mesh pads are intended to prevent moisture/surface contamination from building up between the battery/battery holder terminals and impeding the electrical connection.

(4) Remove the plastic battery end caps and install batteries in holders by sliding the positive (plus) end of the battery into the holder first. Once seated, slide the negative end of the battery into the holder. Installing the battery in this manor will prevent the pad assemblies from becoming dislodged during installation.

NOTE: Make certain of correct Battery Polarity (polarity is stamped on PC board), and that the manufacture date is visible through the detector grill when installed.

(5) Position cover over each battery and push down over battery until fully seated.

(6) Position Smoke Detector Unit Grill and secure with four screws.

(7) Remove tags and close circuit breakers CCU CHA and CCU CHB.

(8) After 2-1/2 minutes verify that SYS OK LED is ON and MX LED is OFF.

NOTE: If necessary, take action to remove any MX faults.

(9) Press MX TEST and note that SYSTEM OK is displayed on Control Display Unit MX DISPLAY.

(10) Dispose of batteries per company procedures.

---------- END OF TASK ----------

ATA

33

Lights

VIP INTERIOR LIGHTING - DESCRIPTION AND OPERATION

1. General (Figure 1 – 6)

A. Lighting Controls

(1) Lighting controls for the passenger lighting systems are located in the cabin management switch panels and at the attendant control panels.

B. Wash Lighting

(1) Wash Lighting is secured by plastic clips.

(2) They are accessible without the removal of panels.

C. Dome Lighting

(1) Dome lights are secured to the back side of the ceiling panels with a retainer ring.

D. Lavatory Lighting

(1) Lighting in the lavatories is part of the cabin lighting systems described above.

E. Reading Lights

(1) Reading lights are secured to the back side of the ceiling panels with a retainer ring.

F. Lighted Signs

(1) Passenger information and exit signs have been added to the interior to accommodate the configuration of the aircraft.

(2) These signs are tied to the existing aircraft systems.

G. Passenger Ordinance Signs

(1) Various passenger ordinance signs are located throughout the cabin.

(2) Signs are face mounted with spring clips.

H. Lighted Exit Signs

(1) Two types of exit signs are used in the aircraft.

(2) The three Exit Identifiers by the Forward and Aft doors are attached to the ceiling panels.

I. Emergency Lighting

(1) Emergency lighting is provided by supplying the existing emergency battery power to the ceiling lights described above.

(2) Existing Boeing battery assemblies have been retained for this purpose. Some battery assemblies have been relocated to provide improved access for this interior configuration.

(3) The relocated battery assemblies are located behind valence panels or ceiling panels on trays mounted to stringers.

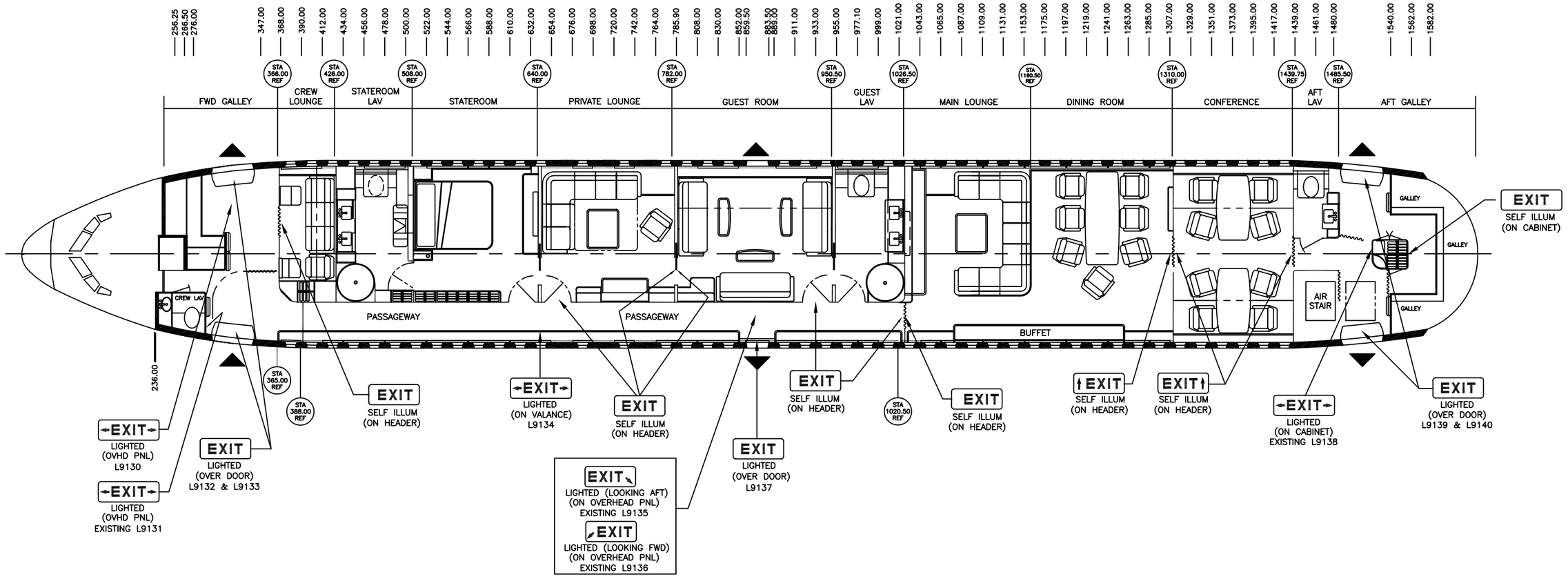
(4) An escape path lighting system has been installed using the existing dedicated power supplies and new dedicated light fixtures.

(5) The fixtures are attached to cabinet toe kick panels, chair bases and floorboards throughout the cabin.

(6) Lens elements for each light fixture are identified on the installation drawing.

J. Escape Path Light Fixtures

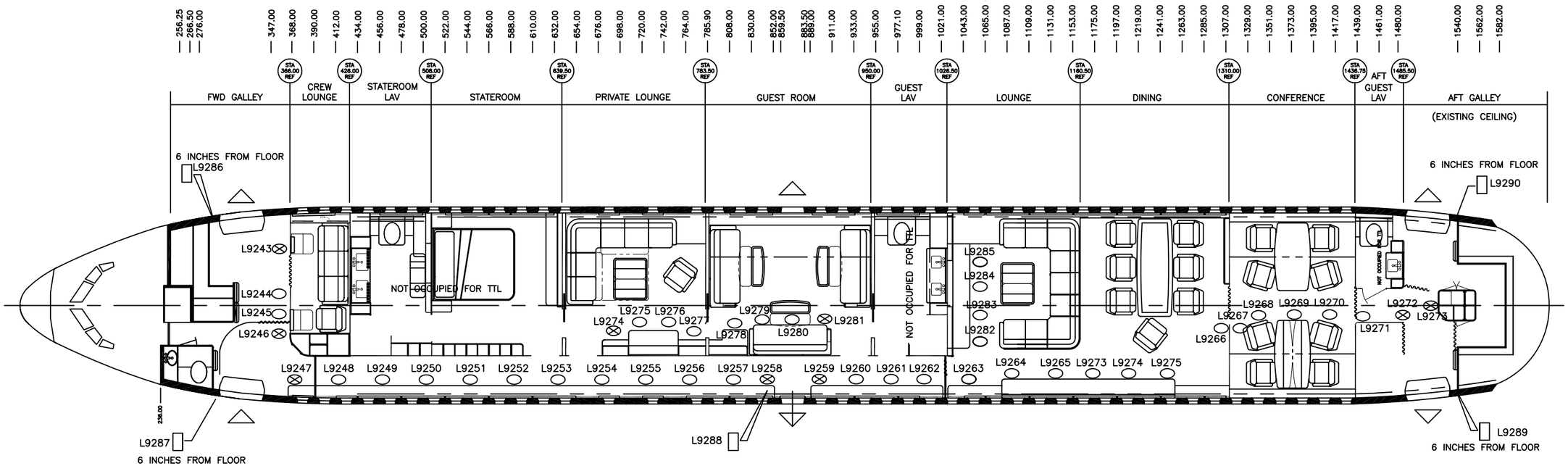
(1) The escape path light fixtures are secured to chairs, cabinets and bulkheads. Chairs and Cabinets



LIGHTED SIGNS

EXIT	BRUCE IND P/N: BR9279-332E (L9130 & L9134)
EXIT	BRUCE IND P/N: BR9279-272E (L9132, L9133, L9137, L9139 & L9140)
EXIT	BRUCE IND P/N: BR9279-270E (9135)
EXIT	BRUCE IND P/N: BR9279-271E (L9136)

EMERGENCY EXIT SIGN LAYOUT



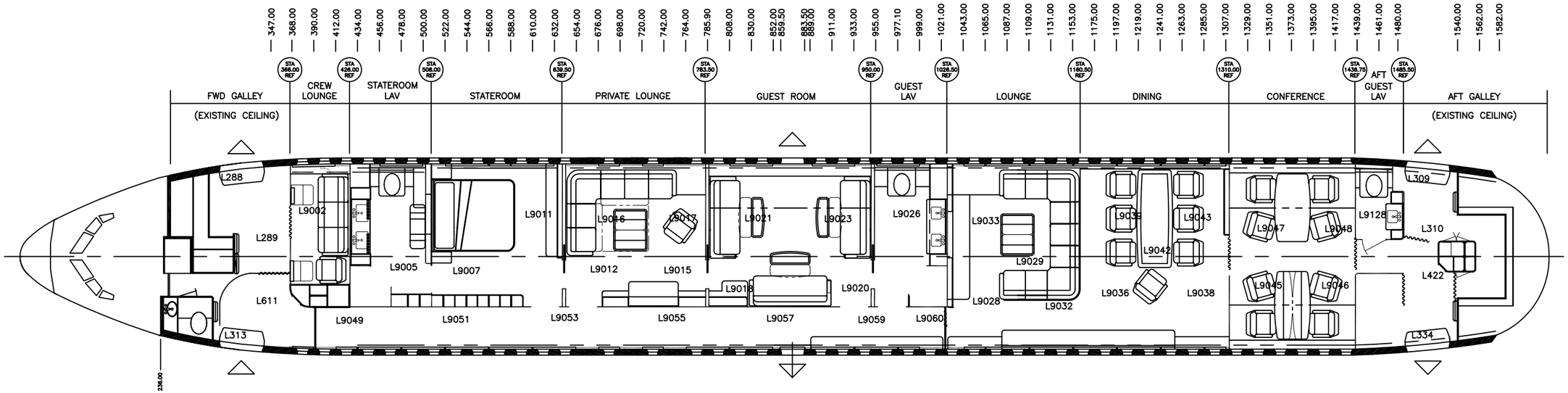
EMERGENCY E–PATH LIGHTS LAYOUT

EMERGENCY BATTERY PACK LOCATIONS				
BATTERY PACK	LOCATIONS			
REF DES	STATION	WL	LBL	RBL
M730	401	203		92
M731	423	203		92
M732	1010	203		92
M733	1406	203		92
M734	1428	203		92
M735	445	203	92	
M736	467	203	92	
M737	922	203	92	
M738	1340	203	92	
M739	1362	203	92	
M1208	284	204	53	
M1209	900	202		96
M1210	1540	204		54

EXIT LOCATOR SIGN

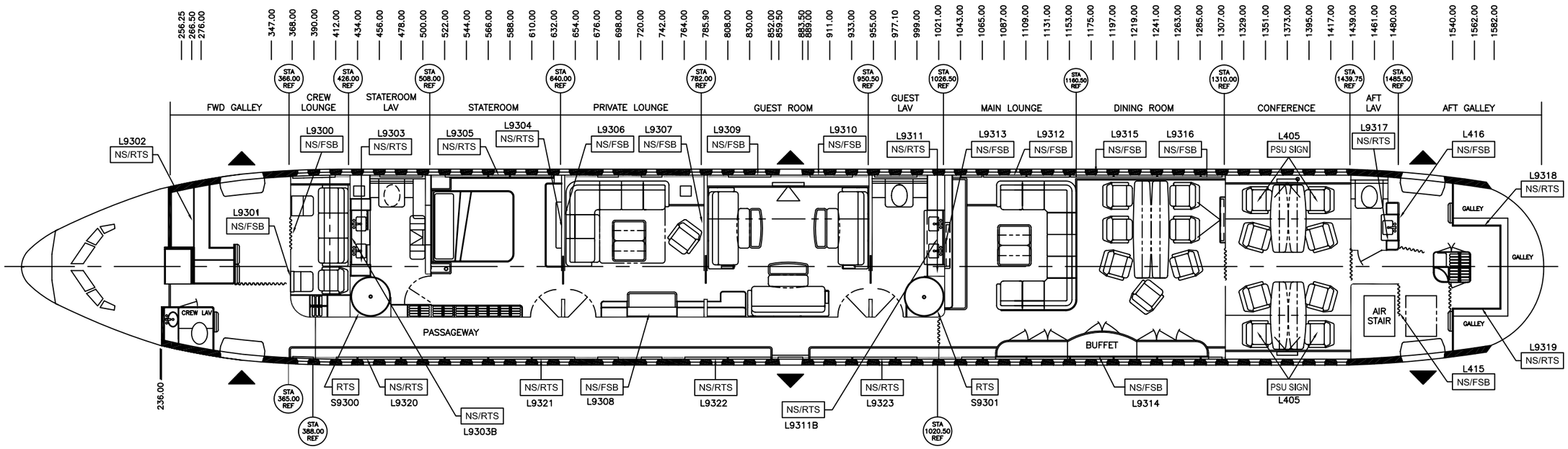
RED EPATH LIGHT

WHITE EPATH LIGHT



EMERGENCY OVERHEAD LIGHTS LAYOUT

EMERGENCY BATTERY PACK LOCATIONS				
BATTERY PACK	LOCATIONS			
REF DES	STATION	WL	LBL	RBL
M730	401	203		92
M731	423	203		92
M732	1010	203		92
M733	1406	203		92
M734	1428	203		92
M735	445	203	92	
M736	467	203	92	
M737	922	203	92	
M738	1340	203	92	
M739	1362	203	92	
M1208	284	204	53	
M1209	900	202		96
M1210	1540	204		54

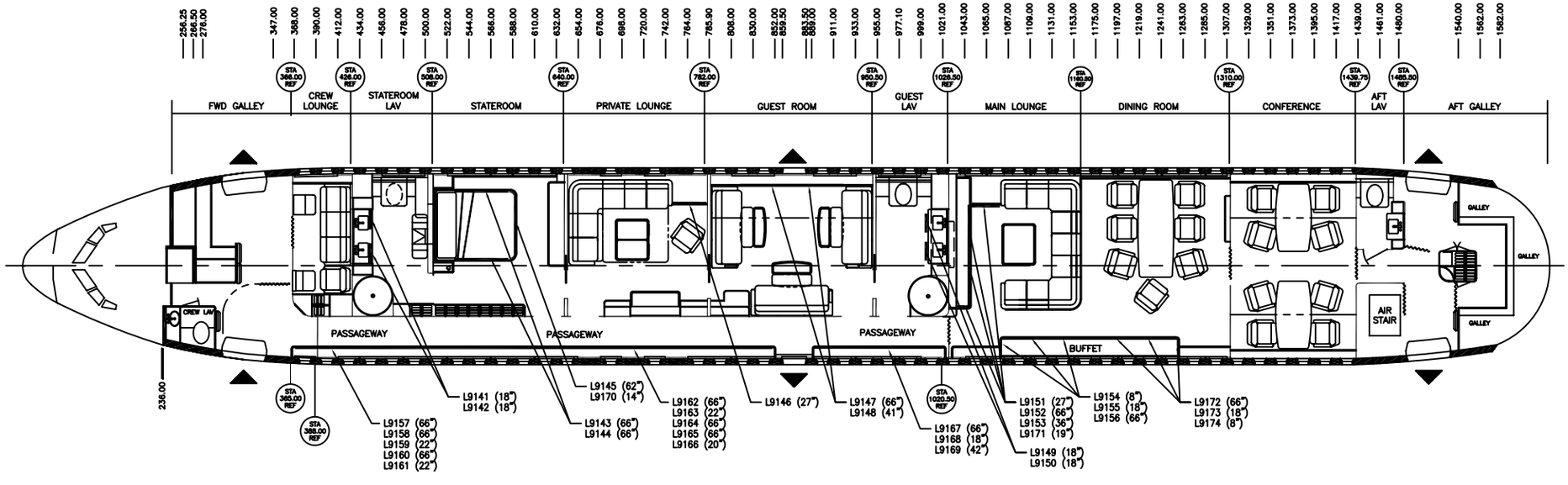


ORDINANCE SIGNS LAYOUT

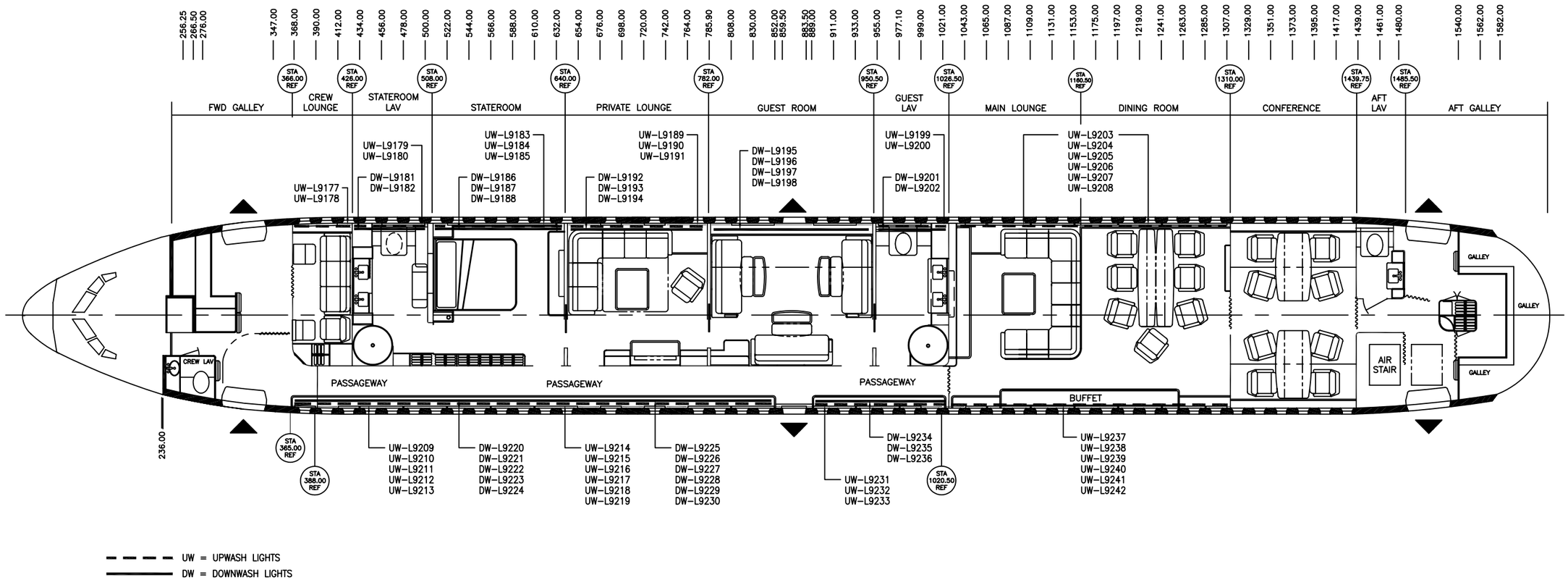
NS/FSB NO SMOKING/FASTEN SEAT BELT

NS/RTS NO SMOKING/RETURN TO SEAT

PSU SIGN PSU NO SMOKING/FASTEN SEAT BELT



TOE KICK LIGHTS LAYOUT



WASH (UP/DOWN) LIGHTS LAYOUT

VIP INTERIOR LIGHTNING – MAINTENANCE PRACTICES

1. General

A. This procedure contains the following removal/installation tasks:

(1) Wash Lighting

(2) Dome Lighting

(3) Reading/Table Lighting

(4) Passenger Ordinance Signs

(5) Lighted Exit Signs

(6) Escape Path Light Fixtures

(7) Bulkheads

2. Wash Lighting Removal

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Disconnect the wire leads and snap the bulbs out to remove.

---------- END OF TASK ----------

3. Wash Lighting Installation

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Reconnect the wire leads and press the bulbs until plastic clips grasp the bulbs.

---------- END OF TASK ----------

4. Dome Lighting Removal

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Lower ceiling panel and disconnect wire leads.

(3) Unscrew the retainer ring and detach the light.

---------- END OF TASK ----------

5. Dome Lighting Installation

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Place the light into the light hole in the ceiling panel and screw on the retainer ring.

(3) Reconnect the wire lead and re-install the ceiling panel.

---------- END OF TASK ----------

6. Reading/Table Lighting Removal

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Lower ceiling panel and disconnect wire leads.

(3) Unscrew the retainer ring and detach the light.

---------- END OF TASK ----------

7. Reading/Table Lighting Installation

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Place the light into the light hole in the ceiling panel and screw on the retainer ring.

(3) Reconnect the wire lead and re-install the ceiling panel.

---------- END OF TASK ----------

8. Passenger Ordinance Signs Removal

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

Note: Sign held in place by spring clip.

(2) Carefully pull the sign away from the panel to remove.

(3) Disconnect wire lead.

---------- END OF TASK ----------

9. Passenger Ordinance Signs Installation

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Reconnect wire lead and push into cutout until spring clips expand.

---------- END OF TASK ----------

10. Lighted Exit Signs Removal

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Lower the ceiling panel and disconnect the wire lead.

(3) Remove the four screws and washers securing the identifiers to the ceiling panel.

(4) Remove the two lenses and slide the identifier up and through the cutout.

---------- END OF TASK ----------

11. Lighted Exit Signs Installation

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Slide the identifier through the cutout and replace the four screws and washers.

(3) Re-install the ceiling panel and reinstall the two lenses.

---------- END OF TASK ----------

12. Escape Path Light Fixtures Removal

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Remove the two screws attaching the cap to the light fixture.

(3) Remove the two screws attaching the fixture in place.

---------- END OF TASK ----------

13. Escape Path Light Fixtures Installation

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Re-install the two screws attaching the fixture in place.

(3) Re-install the two screws securing the cap to the fixture.

---------- END OF TASK ----------

14. Bulkheads Removal

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

Note: Bulkhead attached using P51 double sided tape.

(2) Pull away from the panel on which it is mounted.

---------- END OF TASK ----------

15. Bulkheads Installation

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Material

Name	Description
P51 Tape	Double Sided Tape

D. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Replace P51 double sided tape and press into place.

---------- END OF TASK ----------

VIP INTERIOR LIGHTING – ADJUSTMENT/TEST

1. General

A. Follow procedures per Boeing AMM Chapter 33, Section 33-51-00.

B. Emergency lights will illuminate per the Boeing AMM.

C. Emergency lights located in cabin lavatories, 3 each, and 2 each located in the Stateroom headliner illuminate only during test and deployment of the Oxygen System.

D. Installation of the VIP Interior has deactivated the Right Over-Wing Escape Slide and the associated Exterior Emergency Escape Lighting.

ATA

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Navigation

MULTI-MODE RECEIVER - ADJUSTMENT/TEST

1. General

A. This procedure contains the following tasks:

(1) Functional Self Test

(2) ILS Functional Test

(3) MMR GNSS Sensor Interface

2. Functional Self Test

A. Tools/Equipment

Name	Description
Test Set	NAV-402AP Nav Test Set or Suitable Substitute

B. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

C. Location Zones

Zone	Area
119	Main Equipment Center
211	Control Cabin - Left
212	Control Cabin - Right

D. Procedure

(1) Supply electrical power (AMM BOE Task 24-22-00-862-001).

(2) Remove safety tags and close these circuit breakers:

Circuit Breaker Panel, P11

Row	Col	Number	Name
E	10	C00603	MMR-L
A	2	C00606	MMR-C
E	31	C00605	MMR-R

(3) Ensure the following systems are powered and operated:

(a) ACARS

(b) EGPWS

(4) On the Captain's and F/O's Display Control Panel (DCP)s, set the mode select switches to the APP position.

(5) On the Electronic Standby Instrument System (ESIS), press the Mode (M) switch until the ILS mode is displayed.

(6) On the ILS Control Panel, select a frequency other than Park (-----) or the local ILS station and set the ILS course heading to match the airplane heading as shown on the PFDs.

(7) Gain access to Main Avionics compartment and locate the MMR receivers, located on the E1-3, E1-4, and E1-5 shelves in the main equipment center. Verify the MMR (P/N: 066-50029-1201) and (S/W part number) are displayed on the LCD screen on the front panel.

(8) Depress TEST pushbutton on the front panel of each MMR receiver. Verify LCD screen displays "TEST IN PROGRESS" for about one second after the "TESTS" button is depressed and then displays "TEST COMPLETE, NO FAILURES" for about four seconds after the self test is in process.

(9) While the TEST COMPLETE screen is displayed on the MMR receivers, depress the MAINT buttons to display the MMR STATUS screens.

(10) Depress the MORE button as required to access the discrete pages and verify that TUNING PORT B is SELECTED, PORT B STATUS is NORM and the frequency display matches the selected ILS control panel frequency.

(11) Depress the RETURN pushbutton on each of the MMR front panels to return to the normal mode menu screen.

(12) In flight deck, verify the G/S (glideslope) and LOC (localizer) flags and deviation pointers are not in view on the Captain’s PFD, F/O’s PFD and ESIS.

(13) On the ILS Control Panel, momentarily depress the TEST pushbutton and verify the following:

(a) On the Captain's and F/O's PFDs, the G/S and LOC deviation scales go out of view, the G/S and LOC deviation pointers stay out of view and the G/S and LOC flags come into view for approximately 3 seconds.

(b) On the ESIS, the G/S and LOC deviation pointers stay out of view and the G/S and LOC flags come into view for approximately 3 seconds.

(c) On the Captain's and F/O’s PFDs, the G/S and LOC deviation scales come into view, the G/S and LOC deviation pointers stay out of view and the G/S and LOC flags go out of view for approximately 2 seconds.

(d) On the ESIS, the G/S and LOC deviation pointers stay out of view and the G/S and LOC flags go out for approximately 2 seconds.

(e) On the Captain's and F/Os PFDs and the ESIS, the G/S and LOC deviation pointers move to one dot up and left for approximately 3 seconds, move one dot down and right for approximately 3 seconds, and then go out of view.

(14) Open this circuit breaker and install safety tag:

Circuit Breaker Panel, P11

Row	Col	Number	Name
E	10	C00603	MMR-L

(15) Verify the following:

(a) The LOC and G/S flags are displayed on the Captain's PFD.

(b) The G/S and LOC deviation pointers and scales are removed from the Captain's EADI and PFD.

(16) Open this circuit breaker and install safety tag:

Circuit Breaker Panel, P11

Row	Col	Number	Name
E	31	C00605	MMR-R

(17) Verify the following:

(a) The LOC and G/S flags are displayed on the F/O's PFD.

(b) The G/S and LOC deviation pointers and scales are removed from the F/O's EADI and PFD.

(18) Open this circuit breaker and install safety tag:

Circuit Breaker Panel, P11

Row	Col	Number	Name
A	2	C00606	MMR-C

(19) Verify the LOC and G/S flags are displayed on the ESIS.

(20) Remove safety tags and close these circuit breakers:

Circuit Breaker Panel, P11

Row	Col	Number	Name
E	10	C00603	MMR-L
A	2	C00606	MMR-C
E	31	C00605	MMR-R

(21) Verify the G/S and LOC flags are not in view on the Captain's EHSI, F/O's PFD and ESIS.

(22) Remove electrical power, if it is not necessary (AMM BOE Task 24-22-00-862-001).

---------- END OF TASK ----------

3. ILS Functional Test

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Tools/Equipment

Name	Description
Test Set	NAV-402AP Nav Test Set or Suitable Substitute

C. Location Zones

Zone	Area
211	Control Cabin - Left
212	Control Cabin - Right

(1) Supply electrical power (AMM BOE Task 24-22-00-862-001).

(2) Place the ILS test set near the localizer and glide-slope antennas. Refer to test set manufacturer's operating instructions and set up to radiate a 0 DDM glide-slope and localizer signal using an approved local test frequency.

(3) On the ILS control panel, set the ILS frequency to the same frequency as the test set and set the CRS heading display to match the airplane heading as shown on the Captain's and F/O's EHSIs.

(4) Verify the following:

(a) The G/S and LOC deviation pointers come into view and are in the middle of their scales on the Captain's PFD, the F/O's PFD and the ESIS.

(b) The proper ILS frequency is displayed in the lower left corners of the PFDs.

(c) The airplane heading and the runway heading are the same on the PFDs.

(5) On the test set, adjust the controls to generate a localizer signal of +0.155 DDM and verify the LOC pointers on the Captain's PFD, F/O's PFD and ESIS move right 2 dots.

(6) On the test set, adjust the controls to generate a localizer signal of -0.155 DDM and verify the LOC pointers on the Captain's PFD, F/O's PFD and ESIS move left 2 dots.

(7) On the Captain's Audio Select Panel, individually select the L, C and R ILS audio position and verify the proper ILS identification tone is heard through the cockpit speakers.

(8) On the test set, reset the localizer control to 0 DDM and verify the LOC pointers on the Captain's PFD, F/O's PFD and ESIS are center.

(9) On the test set, adjust the controls to generate a glide-slope signal of +0.175 DDM and verify the G/S pointers on the Captain's PFD, F/O's PFD and ESIS move down 2 dots.

(10) On the test set, adjust the controls to generate a glide-slope signal of -0.175 DDM and verify the G/S pointers on the Captain's PFD, F/O's PFD and ESIS move up 2 dots.

(11) On the test set, reset the glide-slope control to 0 DDM and verify the G/S pointers on the Captain's PFD, F/O's PFD and ESIS are centered.

(12) Remove the test equipment and return all switches and systems to their normal operating positions.

(13) Remove electrical power, if it is not necessary (AMM BOE Task 24-22-00-862-001).

---------- END OF TASK ----------

4. MMR GNSS Sensor Interface

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
211	Control Cabin - Left
212	Control Cabin - Right

(1) Supply electrical power (AMM BOE Task 24-22-00-862-001).

Note: The GND PROX BITE or GND PROX SYS message will be annunciated on the EICAS system display and the terrain INOP light will be illuminated throughout this test.

(2) Initiate an EGPWS Self-Test by depressing the GND PROX Test switch on the P61 Panel. (This is the level 1 self-test).

Note: Self test level 2 follows self test level 1 such that self test level 1 must be performed to initiate self test level 2.

(3) Once the Self-Test Level 1 audio starts; press the cockpit GND PROX Test switch on the P61 Panel for less than 2 seconds. (This will initiate level 2 self-test).

(4) Verify no GPS failure voice message is enunciated through the Level 2 Self-Test.

(5) Open these circuit breakers and install safety tags:

Circuit Breaker Panel, P11

Row	Col	Number	Name
E	10	C00603	MMR-L
E	31	C00605	MMR-R

(6) Perform EGPWS Level 2 Self-Test. Verify the GPS fault messages are enunciated.

(7) Remove safety tags and close these circuit breakers:

Circuit Breaker Panel, P11

Row	Col	Number	Name
E	10	C00603	MMR-L
E	31	C00605	MMR-R

(8) From captain's MCDU, select the position initialization (POS INIT) page. Verify the displayed LAT/LONG matches the published airfield LAT/LONG.

(9) Return the aircraft to its original configuration.

(10) Remove electrical power, if it is not necessary (AMM BOE Task 24-22-00-862-001).

---------- END OF TASK ----------

MULTI-MODE RECEIVER – REMOVAL/INSTALLATION

1. General

A. This procedure contains the following tasks:

(1) Removal

(2) Installation

B. The three receivers are installed on the E1 rack in the main equipment center.

2. Removal

A. References

Reference	Title
20-10-01-004-005	Removal of the E/E Box (AMM BOE)

B. Location Zones

Zone	Area
119	Main Equipment Center
120	Forward Cargo Compartment [BS 355.0 to BS 785.9]

C. Procedure

(1) Open and tag these circuit breakers:

Circuit Breaker Panel, P11

Row	Col	Number	Name
E	10	C00603	MMR-L
A	2	C00606	MMR-C
E	31	C00605	MMR-R

CAUTION: DO NOT TOUCH THE UNIT BEFORE YOU DO THE PROCEDURE FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE UNIT.

(2) Remove multi-mode receiver (AMM BOE TASK 20-10-01-004-005).

---------- END OF TASK ----------

3. Installation

A. References

Reference	Title
20-10-01-404-013	Installation of the E/E Box (AMM BOE)
22-00-02 P/B 201 Config 1	Autoflight Bite - Maintenance Practices
24-22-00-862-001	Supply and Remove External Power (AMM BOE)
34-31-00-5	Multi-Mode Receiver - Adjustment/Test, Functional Self Test (AMM Supp)

B. Location Zones

Zone	Area
119	Main Equipment Center
120	Forward Cargo Compartment [BS 355.0 to BS 785.9]
211	Control Cabin – Left
212	Control Cabin - Right

C. Procedure

(1) Open and tag these circuit breakers:

Circuit Breaker Panel, P11

Row	Col	Number	Name
E	10	C00603	MMR-L
A	2	C00606	MMR-C
E	31	C00605	MMR-R

(2) Install multi-mode receiver (AMM BOE 20-10-01-404-013).

(3) Remove the safety tags and close these circuit breakers:

Circuit Breaker Panel, P11

Row	Col	Number	Name
E	10	C00603	MMR-L
A	2	C00606	MMR-C
E	31	C00605	MMR-R

---------- END OF TASK ----------

D. Installation Test

(1) Supply electrical power (AMM BOE Task 24-22-00-862-001).

(2) Set the frequency on the ILS control panel to a position other than PK.

(3) Do the Functional Self Test (AMM Supplemental 34-31-00-5).

(4) Do the Maintenance Control Display Panel Test - 30 Current Fault Report (AMM BOE 22-00-02/201 Config 1).

E. Put the Airplane Back to Its Usual Condition

(1) Remove electrical power if it is not necessary (AMM BOE Task 24-22-00-862-001).

---------- END OF TASK ----------

GPS ANTENNA – REMOVAL/INSTALLATION

1. General

(Figure 401)

A. This procedure contains the following tasks:

(1) Removal

(2) Installation

2. Removal

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
233	Area above cabin ceiling - section 43 (Left)
234	Area above cabin ceiling - section 43 (Right)

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Open and tag these circuit breakers:

Circuit Breaker Panel, P11

Row	Col	Number	Name
E	10	C00603	MMR-L
A	2	C00606	MMR-C
E	31	C00605	MMR-R

(3) Remove the antenna screws.

(4) Disconnect the antenna cable.

(5) Remove the GPS antenna.

---------- END OF TASK ----------

3. Installation

A. References

Reference	Title
24-22-00-862-001	Supply and Remove External Power (AMM BOE)

B. Consumable Materials

Name	Description	Note
BMS 3-23	Corrosion Preventive Compound	Or equivalent
B00083	Solvent	
RTV 162	Sealant	

C. References

Reference	Title
20-10-22/701	Metal Surfaces - Cleaning and Painting (AMM BOE)
20-50-01	BSWPM (BOE)

D. Location Zones

Zone	Area
233	Area above cabin ceiling - section 43 (Left)
234	Area above cabin ceiling - section 43 (Right)

E. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-862-001).

(2) Ensure there is no corrosion on the connections or the antenna cable.

(3) Ensure the mating surfaces of the antenna and the airplane do not have corrosion.

(4) Clean the mating surfaces with the solvent, B00083 (AMM BOE 20-10-22/701).

(5) Apply a layer of BMS 3-23 corrosion preventive compound or equivalent to the mating surfaces and the aircraft skin.

(6) Connect the cable to the antenna.

(7) Position the GPS antenna.

(8) Bond antenna to aircraft skin in accordance with Boeing Standard Wiring Practice Manual (BOE 20-50-01).

(9) Install fasteners and torque to maximum of 20 inch-pounds.

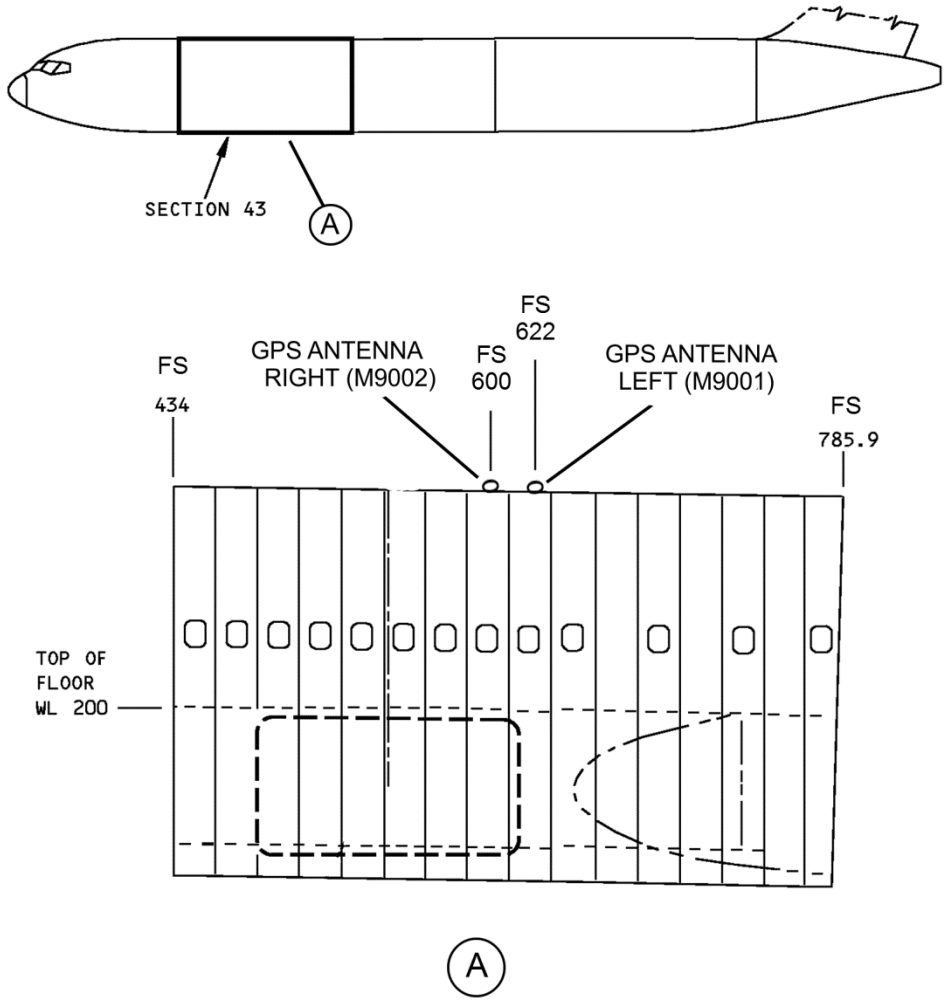
(10) Apply RTV 162 over the screw heads and around the periphery of the antenna.

(11) Remove safety tag and close these circuit breakers:

Circuit Breaker Panel, P11

Row	Col	Number	Name
E	10	C00603	MR-L
A	2	C00606	MMR-C
E	31	C00605	MMR-R

---------- END OF TASK ----------



P34-31-05-4-F401

GPS Antenna
Figure 401

ATA

35

Oxygen

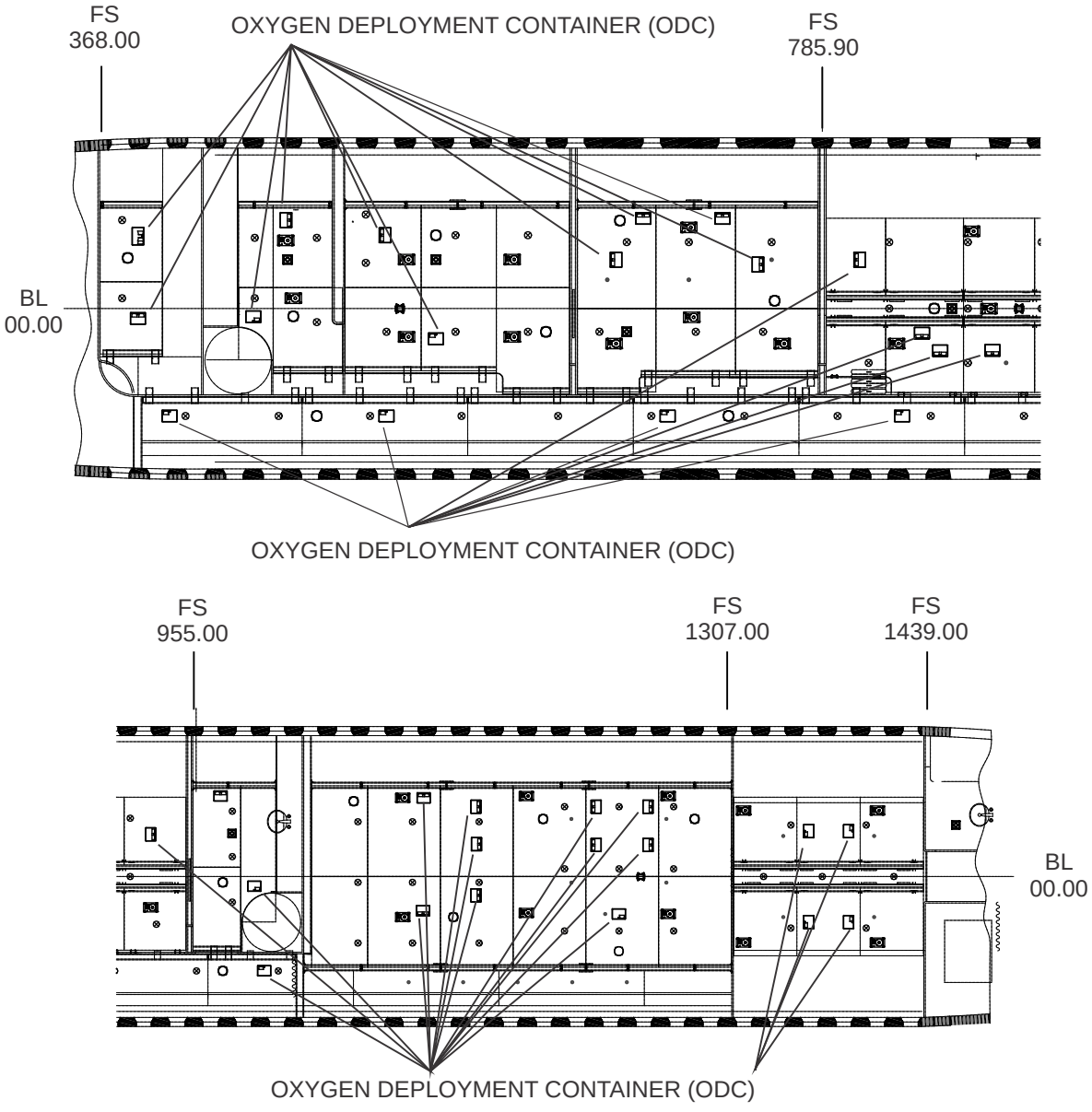
PASSENGER OXYGEN - DESCRIPTION AND OPERATION

1. General (Figure 1)

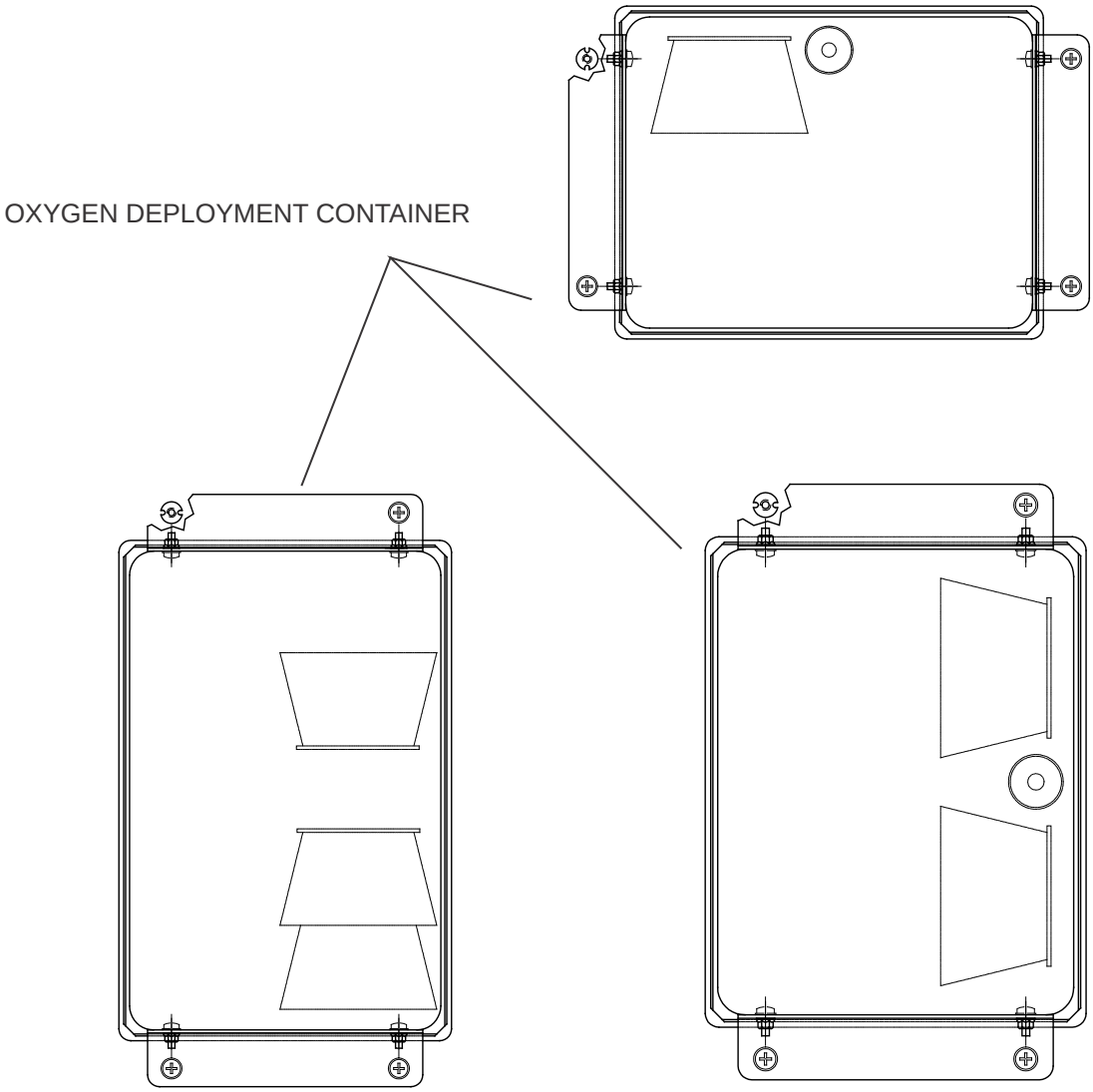
A. The existing passenger oxygen system has been retained.

B. Oxygen generators have been installed to accommodate the new interior configuration.

C. Refer to the Boeing AMM Chapter 35, Section 35-20-00 for maintenance information to the system.



Passenger Oxygen
Figure 1 (Sheet 1 of 2)



Passenger Oxygen
Figure 1 (Sheet 2 of 2)

PASSENGER OXYGEN - ADJUSTMENT/TEST

1. General

A. This procedure contains the following task:

(1) Operational Test

2. Operational Test

A. Procedure

(1) Place a tape loop over each oxygen box door to prevent the masks from falling out.

Note: On boxes equipped with a door stop, pull the stop down and rotate 90 degrees.

(2) Press the MASK MAN ON switch located on the crew O2 masks.

(3) Verify that all doors open.

(4) Verify 3 each Emergency lights illuminate in each of the cabin lavatories and 2 each in the Stateroom headliner.

(5) Close each door and remove the tape or reset the stop.

---------- END OF TASK ----------

ATA

38

Water/Waste

POTABLE WATER SYSTEM – DESCRIPTION AND OPERATION

1. General

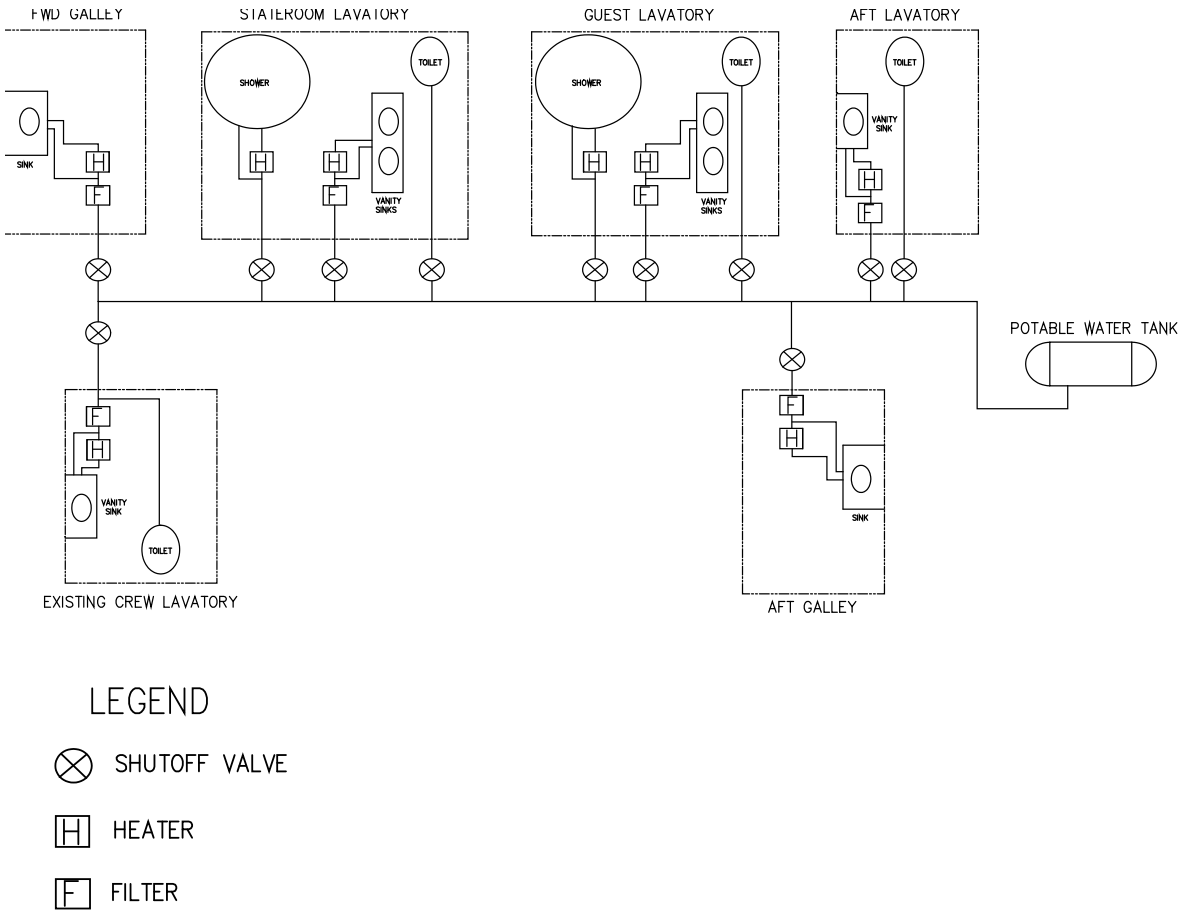
Figure 1 thru 5

A. The existing potable water system has been retained. Supply, vent and drain lines have been installed to accommodate the interior configuration. Refer to the Boeing AMM Chapter 38, Section 38-10-00 for maintenance procedures on the water system.

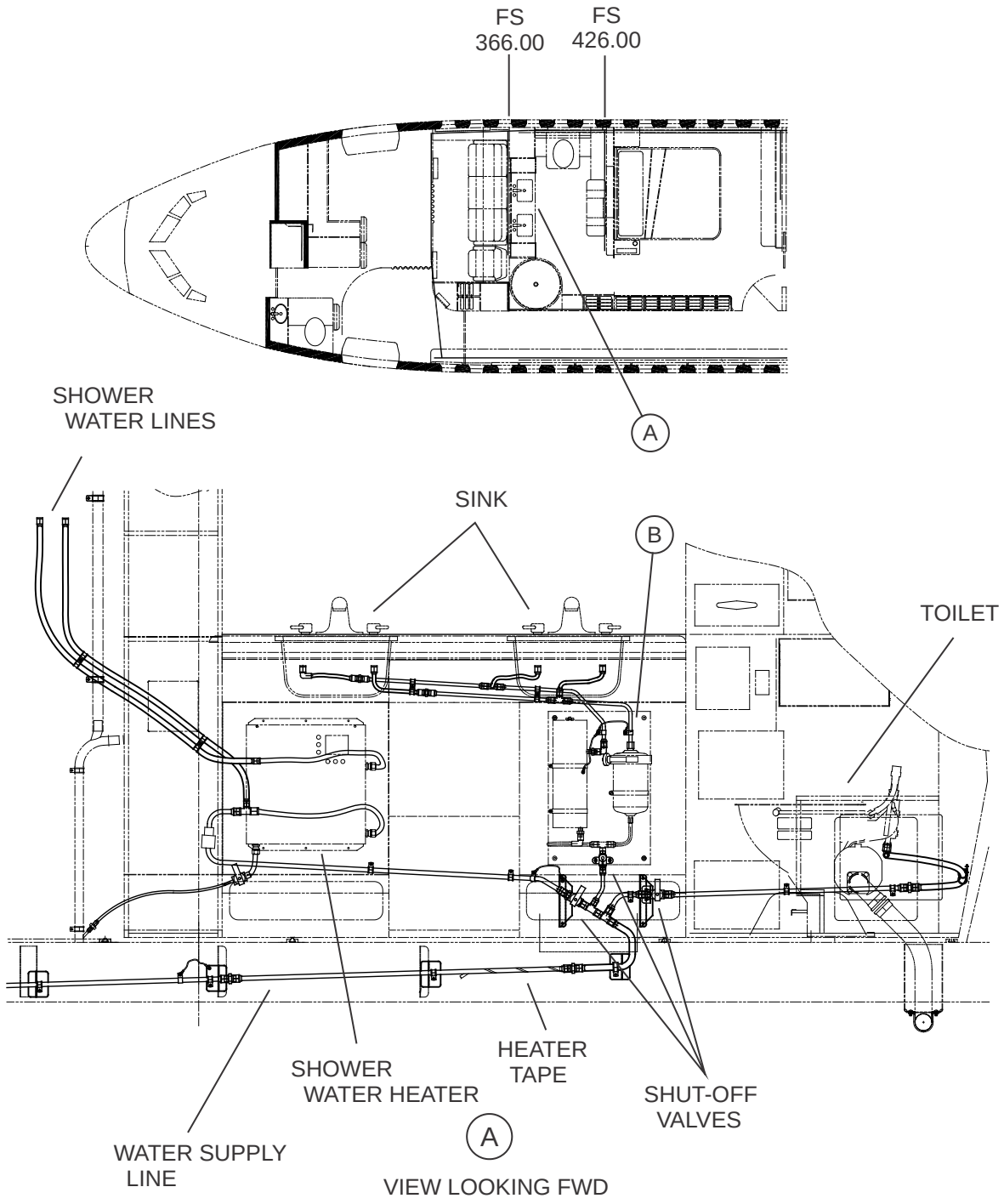
B. Existing in-line heaters and heated tape have been retained with the following exceptions:

(1) Additional heated tape added to the Stateroom Lav vanity and the Guest Lav vanity.

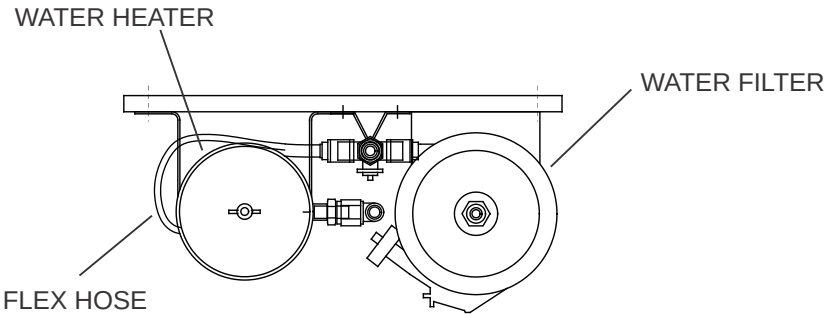
(2) Additional in-line heaters added to the Stateroom Lav shower and the Guest Lav shower.

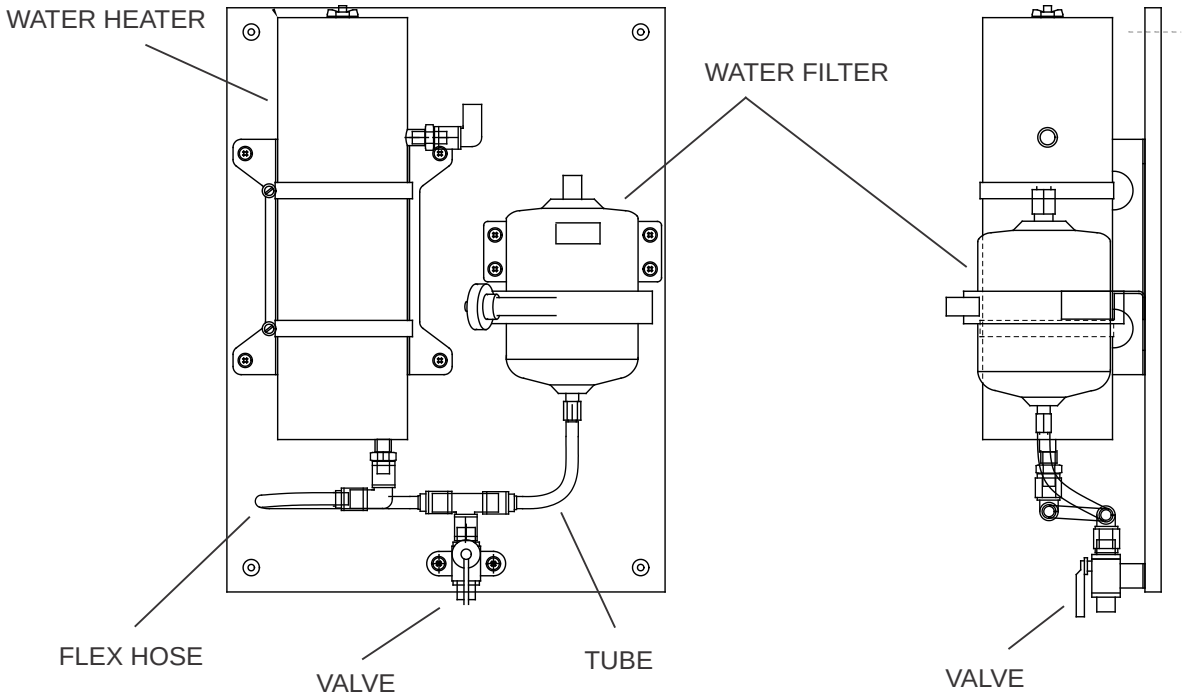


Potable Water Schematic
Figure 1



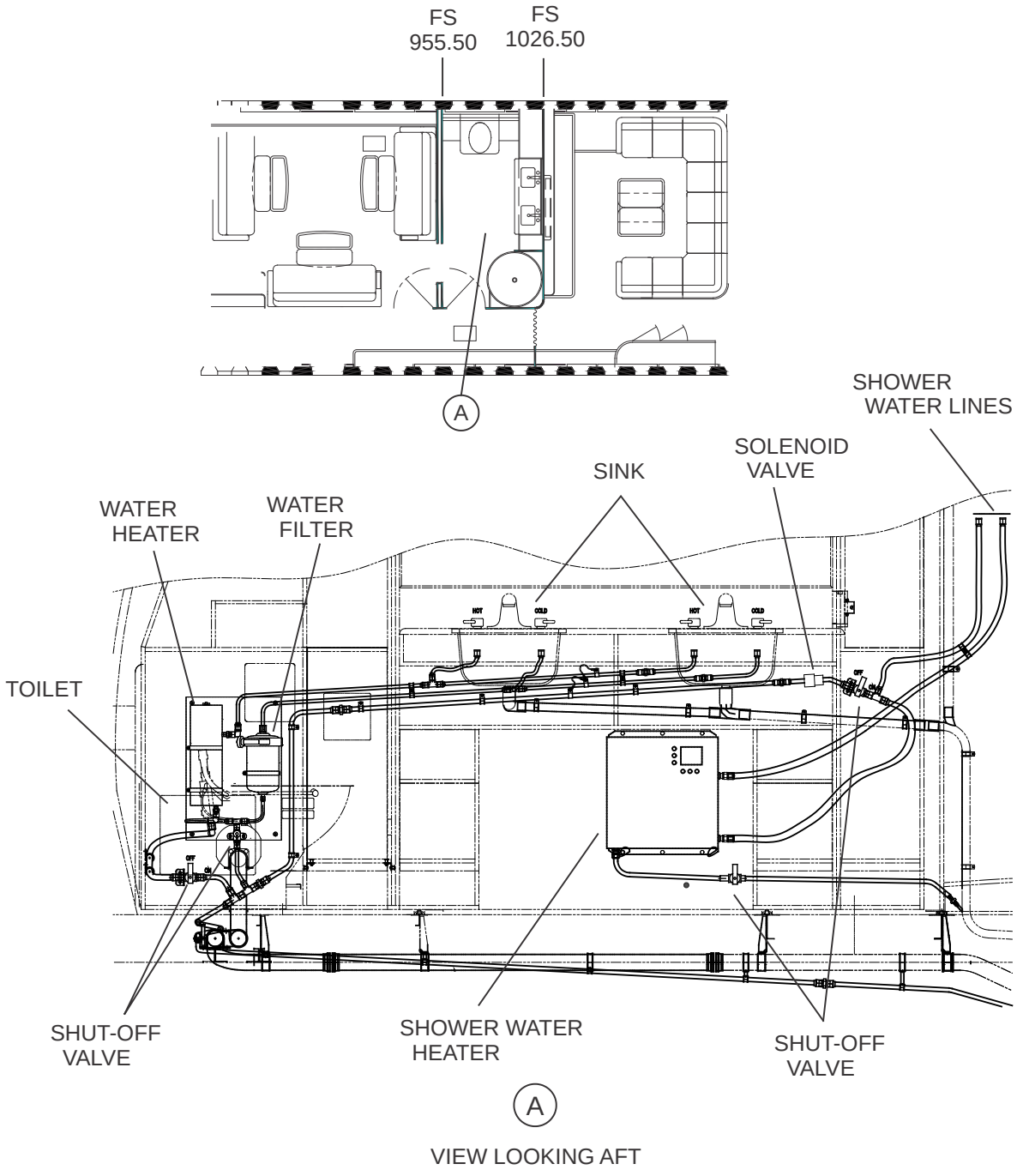
Stateroom Lavatory Potable Water
Figure 2 (Sheet 1 of 2)



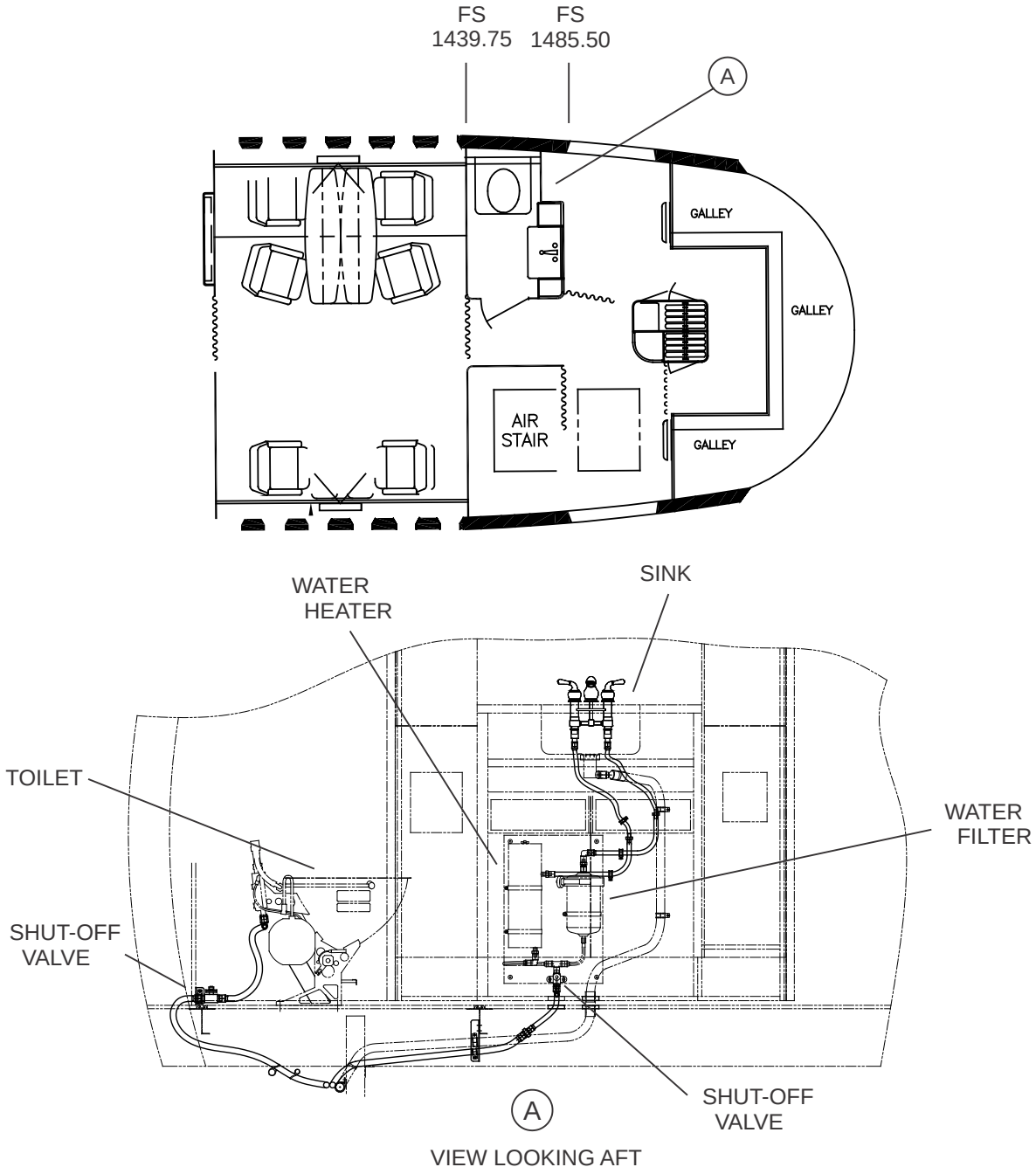


B

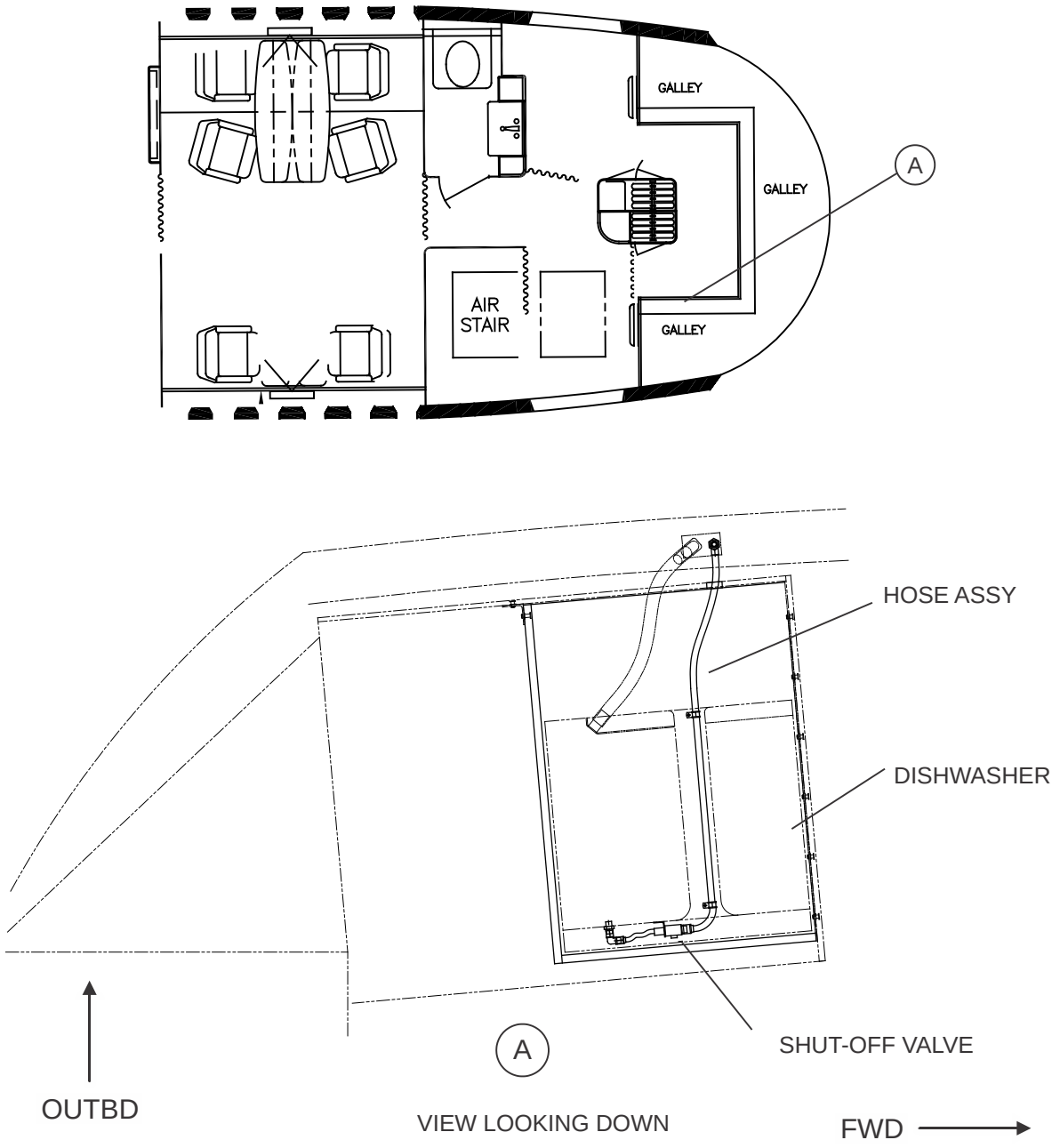
Stateroom Lavatory Potable Water
Figure 2 (Sheet 2 of 2)



Guest Lavatory Potable Water
Figure 3



Aft Guest Lavatory Potable Water
Figure 4



Dishwasher Potable Water
Figure 5

POTABLE WATER SYSTEM - ADJUSTMENT/TEST

1. General

A. This procedure contains the following task:

(1) Operational Test

2. Operational Test

A. References

Reference	Title
38-10-00-862-004-001	Pressurize/Depressurize Potable Water System (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

(1) Apply system pressure to the potable water system (AMM BOE 38-10-00-862-004-001).

(2) Open each water tap throughout the aircraft until all air has been purged and water runs evenly.

(3) Verify that all water heaters are on.

(4) Operate the following cabin points of use and record observations:

Location	Hot	Cold
Crew Lavatory sink hot and cold handle		
Crew Lavatory toilet	NA	
Fwd Galley water heater	NA	
Fwd Galley coffee pot	NA	
Stateroom Lavatory sink hot and cold handle		
Stateroom Lavatory toilet	NA	
Stateroom Lavatory Shower hot and cold handle		
Guest Lavatory sink hot and cold handle		
Guest Lavatory toilet	NA	
Guest Lavatory Shower hot and cold handle		
Aft Guest Lavatory sink hot and cold handle		
Aft Guest Lavatory toilet	NA	
Aft Galley water heater	NA	
Aft Galley coffee pot	NA	

(5) Close each tap.

---------- END OF TASK ----------

HEATER TAPE - REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks:

(1) Removal

(2) Installation

2. Removal

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Disconnect the wire harness.

(3) Starting at one end, un-wrap heater tape from water line.

---------- END OF TASK ----------

3. Installation

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Starting at one end, wrap heater tape around water line.

(3) Reconnect wire harness.

---------- END OF TASK ----------

IN-LINE HEATER- REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks:

(1) Removal

(2) Installation

2. Removal

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).

(2) Gain access to in-line heater, under sinks in vanities and inside shower closeout.

(3) Close potable water shutoff valve.

(4) Disconnect the water supply line on bottom of unit.

(5) Disconnect feeder line.

(6) Cap supply line.

(7) Disconnect the wire harness.

(8) Turn the locking screws counterclockwise loosening clamps securing heater to bulkhead or panel.

(9) Slide in-line heater out from clamps.

---------- END OF TASK ----------

3. Installation

A. References

Reference	Title
24-22-00-806-802	Supply and Remove External Power (AMM BOE)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

WARNING: TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ELECTRICAL POWER SHALL BE REMOVED.

(1) Remove electrical power (AMM BOE Task 24-22-00-806-802).
(2) Slide in-line heater into clamps.
(3) Turn the locking screws clockwise tightening clamps securing heater to bulkhead or panel.
(4) Uncap lines.
(5) Reconnect supply and feeder lines.
(6) Reconnect wire harness.
(7) Open potable water shut-off valve.
(8) Close access.

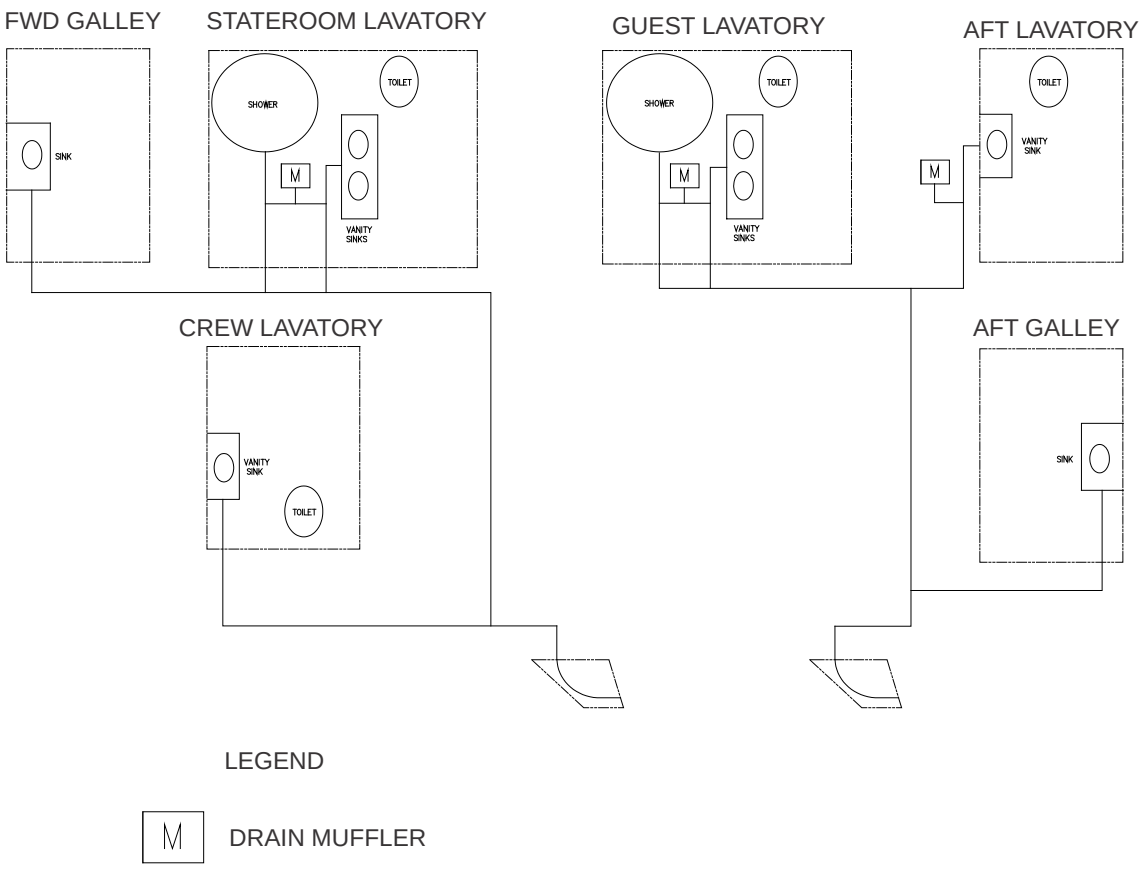
---------- END OF TASK ----------

WASTE WATER SYSTEM – DESCRIPTION AND OPERATION

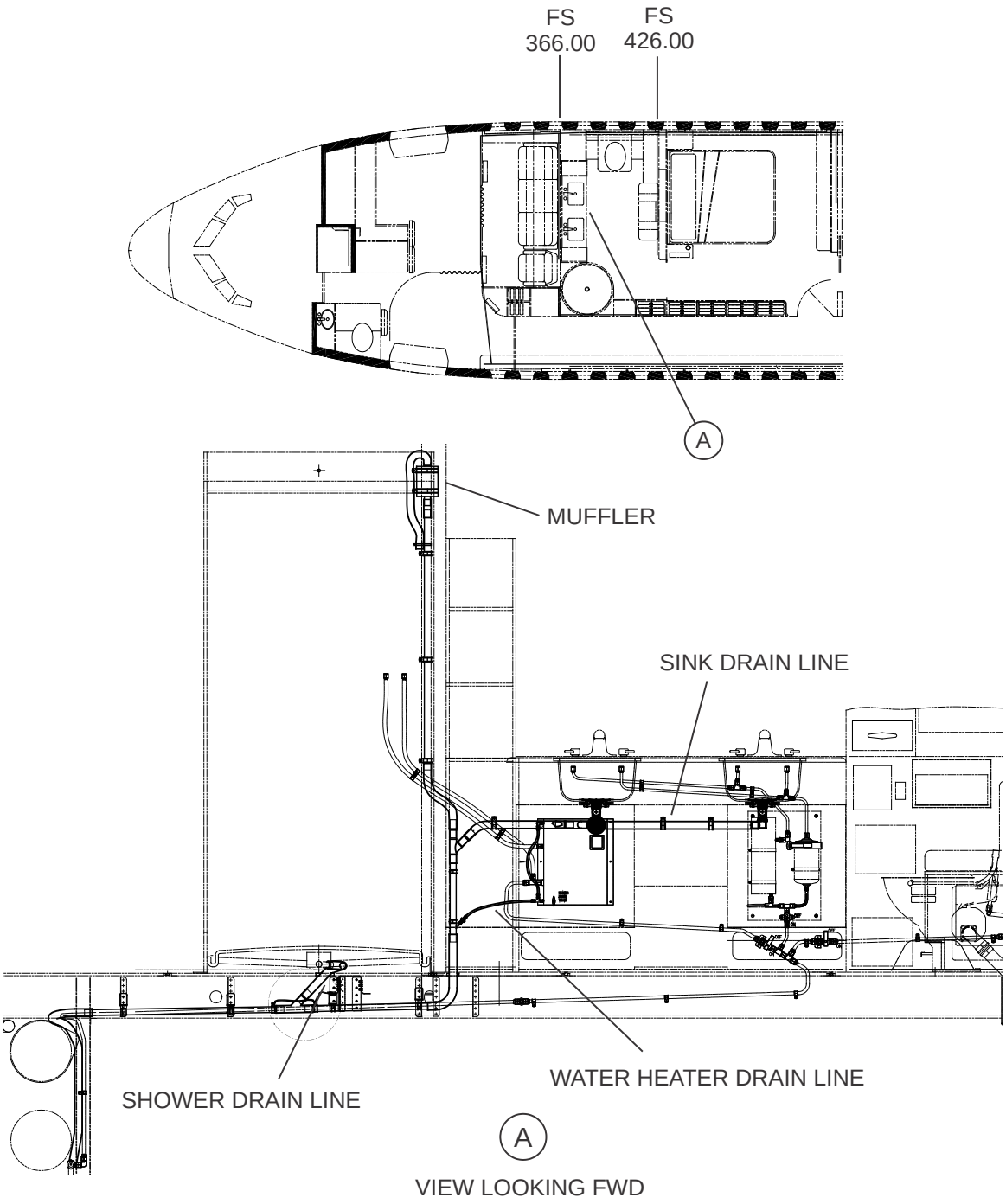
1. General

Figure 1 thru 5

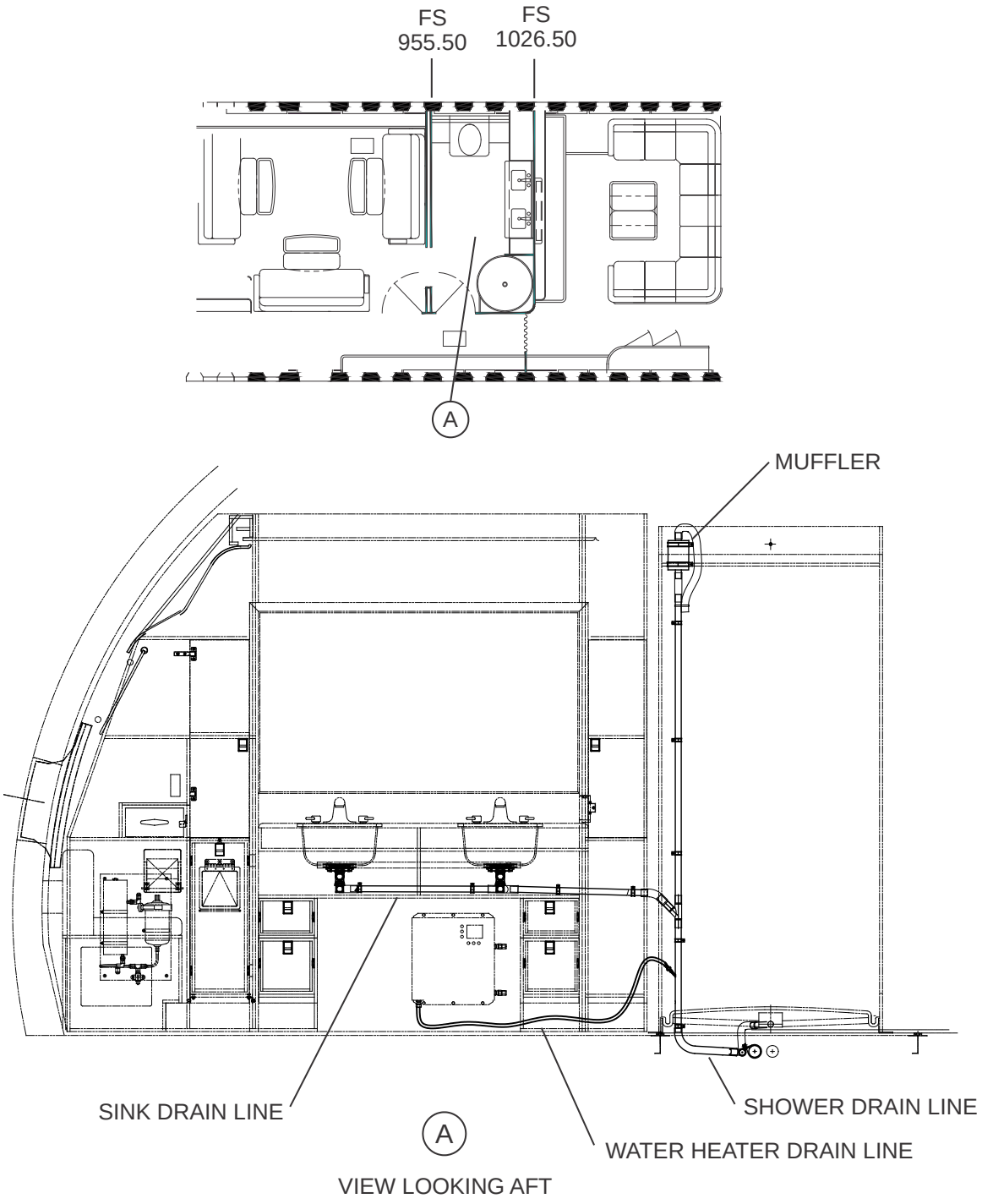
A. The waste water system has been retained. Lavatories and galleys are plumbed to the system. Refer to the AMM Chapter 38, Section 38-31-00 for maintenance information on the waste water system.



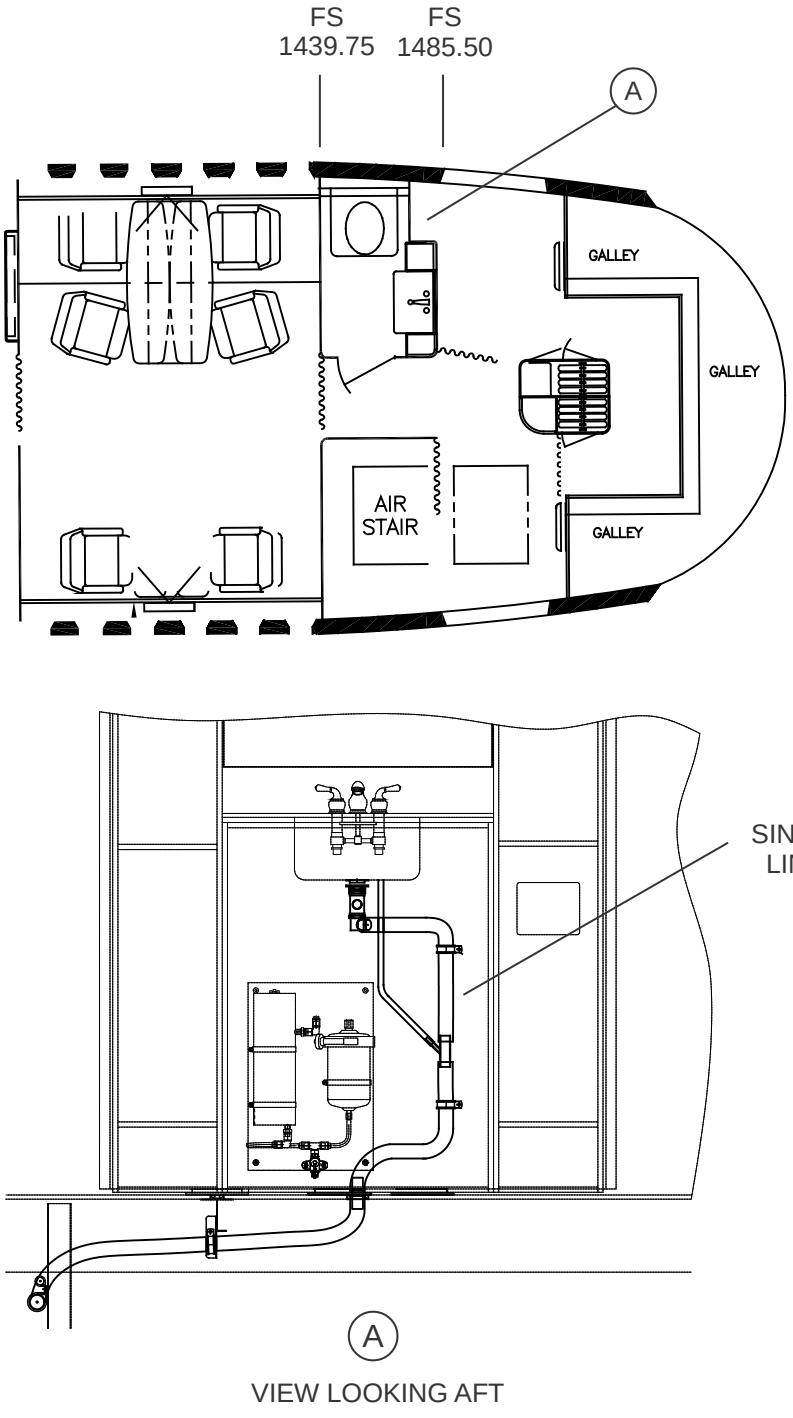
Waste Water Schematic
Figure 1



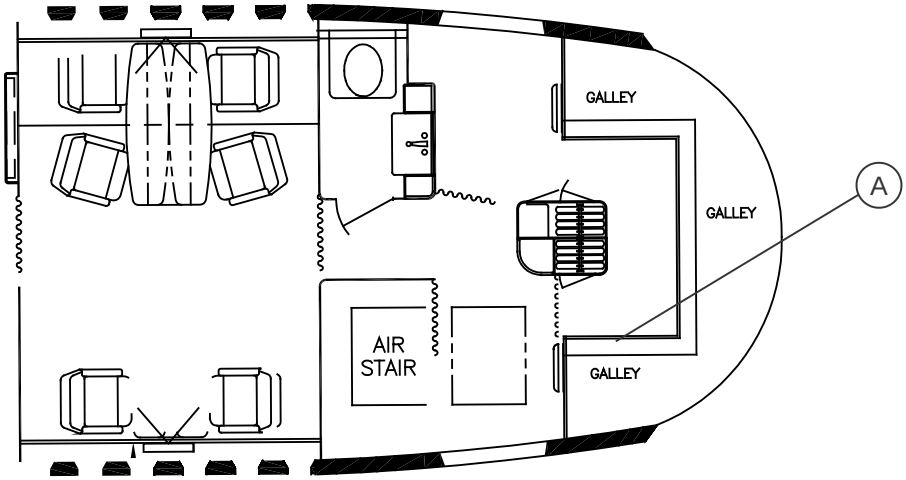
Stateroom Lavatory Waste Water
Figure 2

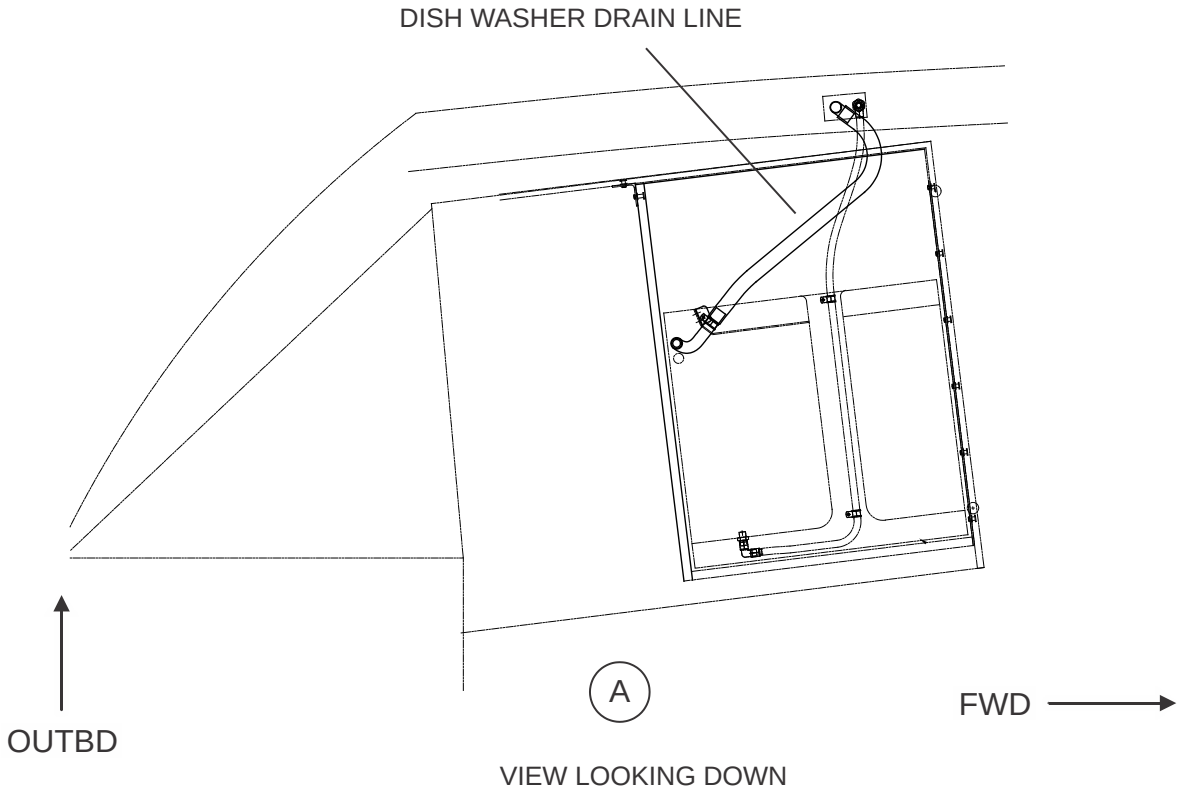


Guest Lavatory Waste Water
Figure 3



Aft Guest Lavatory Waste Water
Figure 4





Dishwasher Waste Water
Figure 5

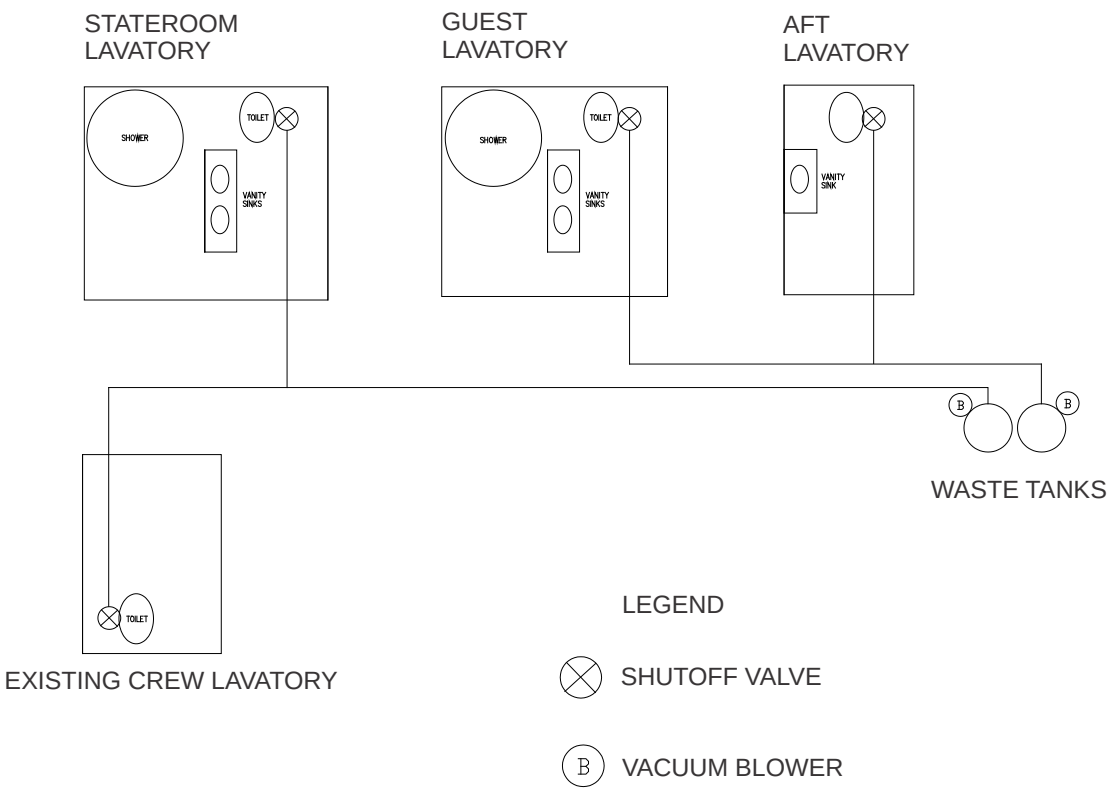
Boeing 767
Aircraft Maintenance Manual Supplement
TOILET WASTE SYSTEM – DESCRIPTION AND OPERATION

1. General

Figure 1

A. The existing toilet waste system has been retained. The toilets added for the Stateroom, Guest and Aft Guest lavatories are plumbed into the system. The toilet shutoff valve is accessible by removing the seat cover panel of the toilet shroud.

B. Refer to the Boeing AMM Chapter 38, Section 38-32-00 for Test Procedures.



Toilet Waste Schematic
Figure 1

ATA

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Doors

ENTRANCE STAIRS - DESCRIPTION AND OPERATION

1. General

A. The airstair is installed on the L4 Door and stows into a closet adjacent to the door (Figure 1).

B. The airstair is controlled electronically at the airstair Control Panel for normal operation or a hydraulic hand pump for emergency operation.

C. The airstair Assy Model No. 1423-6000 S/N 6701 & 6702 and subsequent is a four segment aluminum, hydraulically operated folding airborne stair specifically designed for B767 type aircraft.

2. Components

A. Stair Assembly

(1) Segments (4)

(2) Segment Latches (2)

(3) Handrails (8)

(4) Carriage Assembly

(5) Carriage Latch assembly

(6) Lights (Integral to Steps)

B. Hydraulic System (Integral to Stair Assembly) (Figure 2)

(1) Air Filler Valve

(2) Air Pressure Gage (25 PSI Precharge)

(3) Accumulator

(4) Check Valves (2)

(5) Pressure Relief Valve (1,900 PSI)

(6) Motor Pump

(7) Filter

(8) Selector Valve

(9) Hydraulic Actuator (2)

(10) Flow Control Valve

C. Control Panel

D. Indicator Light

3. Operation

A. Functional Description

(1) The airstair is powered by a 29 VDC motor driven hydraulic pump unit, which draws its power from the aircraft battery bus or APU battery bus depending on the configuration. The folding unit is mounted on a durable carriage assembly. The upper or transverse carriage moves the airstair assembly in the direction perpendicular to the aircraft centerline, i.e. in and out of the doorway.

The lower carriage moves the upper or transverse carriage and airstair assembly to the entrance door either longitudinally, i.e. forward to the doorway or transversely, (depending on particular installation). When the airstair assembly is retracted, the entire assembly, i.e. folding unit, upper and lower carriages are moved by hand to the stowed position. The control box for the operation of the airstair and the step lights are usually mounted adjacent to the entry door.

B. Hydraulic System (Figure 3)

(1) The hydraulic system uses MIL-H-5606 hydraulic fluid. The system is self contained requiring only electrical power from the aircraft battery or APU battery bus for its operation. The entire hydraulic system is mounted on the top airstair segment and is controlled electrically from a remote panel. Hydraulic pressure is supplied by a motor-pump unit mounted on the underside of the upper airstair segment. A hand pump can be used to deploy and retract the stair. The handpump connects to quick disconnect fittings on the fourth riser from the top of the airstair. Access to these disconnect fittings is gained by removing a sheet metal cover.

(2) The reservoir, which is of the non vented type, is mounted below the first step. A pressure relief valve is incorporated in the system to prevent damage to the pump and to regulate the pressure. It is mounted below the third step. The pressure relief valve is set at 1,900 PSI +/-25.

C. Latching Mechanism

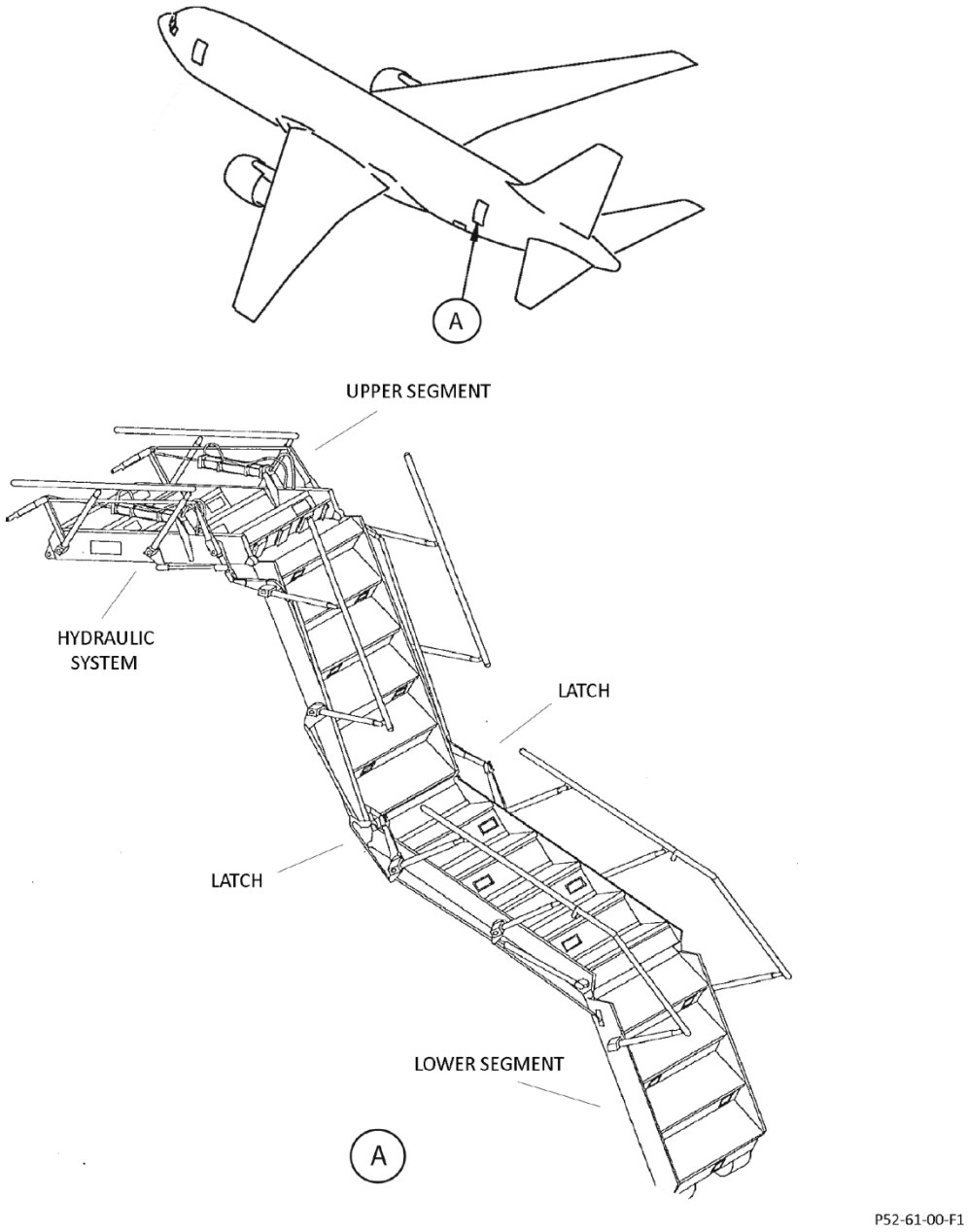
(1) During retraction, the segments #2 and #3 latch is actuated by a hook attached to the segment #2 tension rod.

(2) Just prior to the tension rod bottoming (the motion will start segment #2 drive lever); the hook engages the trigger at the top end of the latch lever arm. A minimal movement of the rod travel raises the latch out of the way. Further travel of the tension rod pulls the end of the hook away from the trigger and the return spring forces the latch closed.

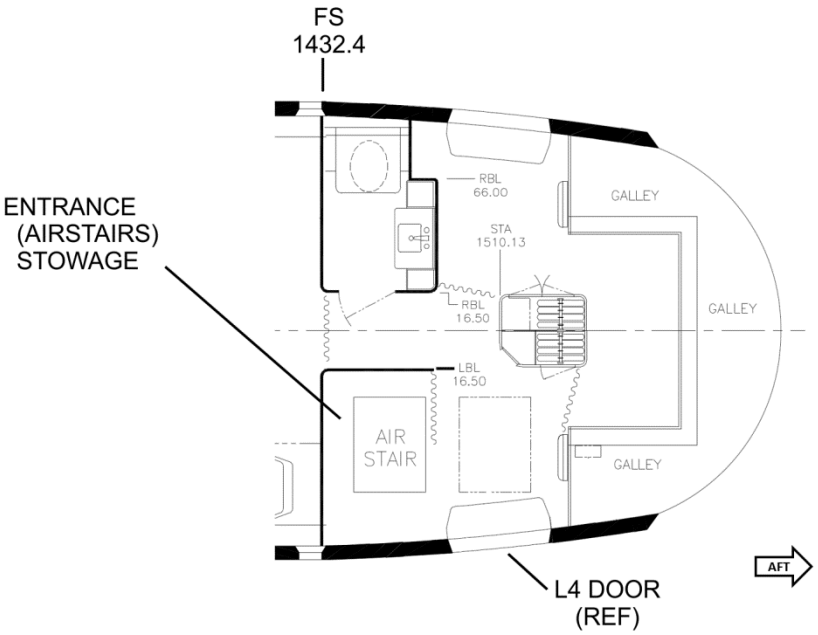
(3) Initial motion of the hook/trigger engagement opens the micro switch (light goes out) when the hook releases the trigger and the latch forces closed. The light stays out during retraction to stow and while stowed.

(4) On deployment, the light remains off until the segment #3 roller cams it out of the way (the light comes on) and then it forced closed and the light stays on.

(5) Once opened by the hook/trigger action, (and dropping back to closed); the tension rod must be driven far enough over travel to re-engage the trigger.



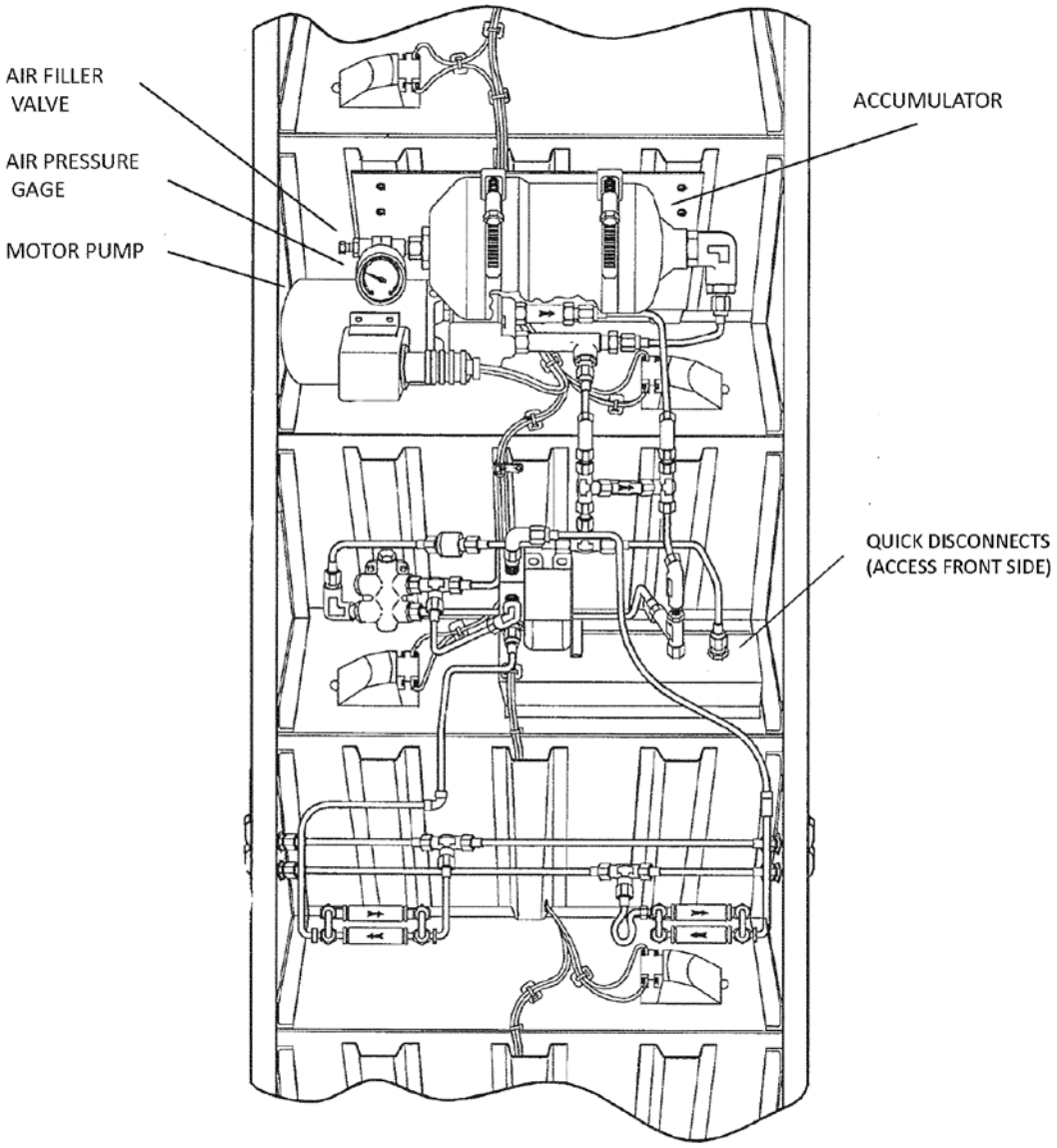
Airstair
Figure 1 (Sheet 1 of 2)



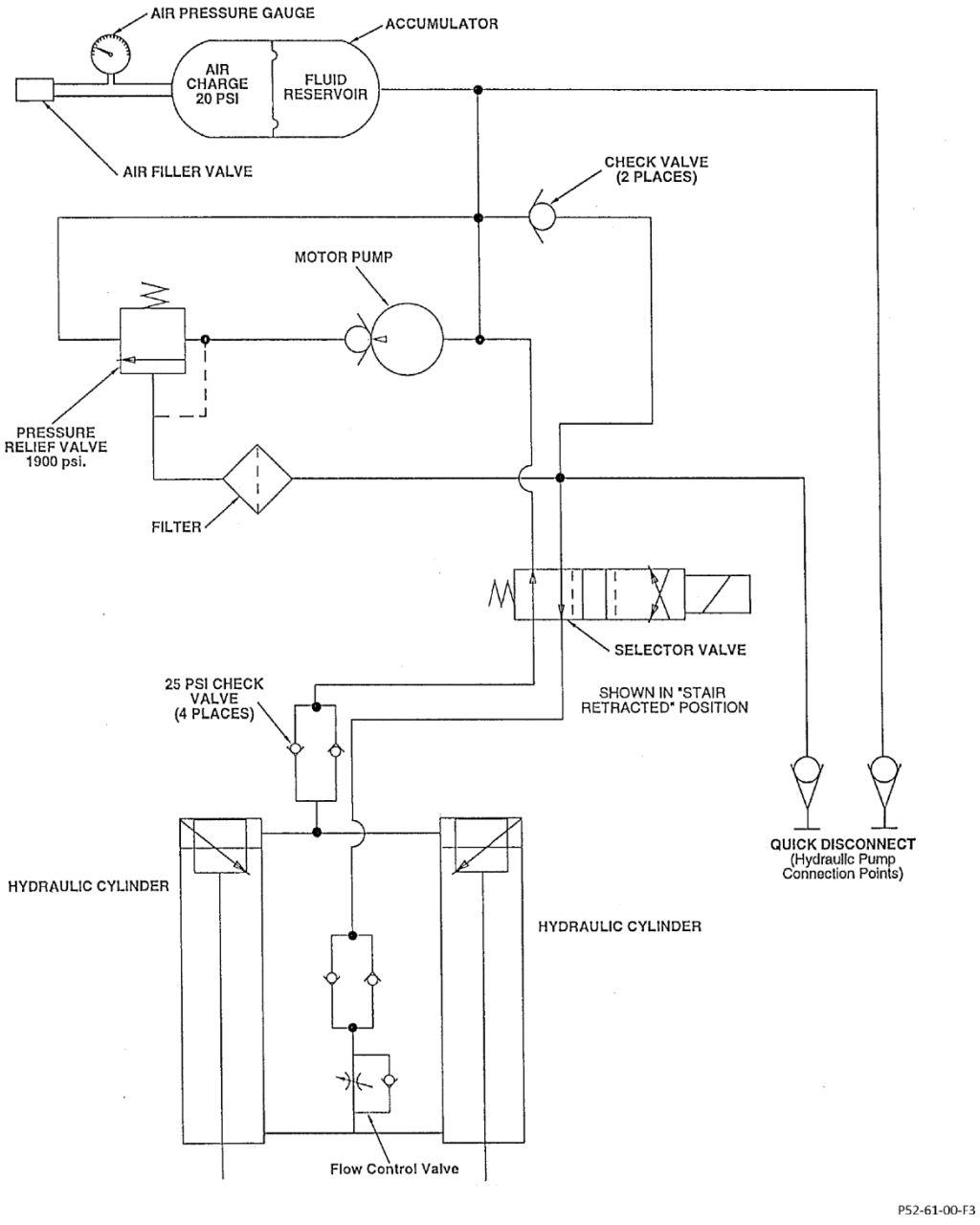
AFT GUEST LAV/AFT GALLEY AREA
(VIEW LOOKING DOWN)

P52-61-00-F4

Airstair
Figure 1 (Sheet 2 of 2)



Airstair Hydraulic System Components
Figure 2



Airstair Hydraulic Schematic
Figure 3

ENTRANCE STAIRS – MAINTENANCE PRACTICES

1. General

A. This procedure contains the following tasks:

(1) Removing Airstair Assembly from Closet

(2) Bleeding Hydraulic System

(3) Manual Airstair Operation with Hand Pump

(4) Draining Hydraulic System

(5) Setting Pressure Relief Valve

(6) Latch Adjustment

(7) Alignment, Adjustment and Tightening Procedures

(8) Operating Procedures

(9) Inspection

(10) Lubrication

(11) Pressure Adjustment

2. Removing Airstair Assembly from Closet

A. Location Zones

Zone	Area
833	Aft Passenger Cabin Door - Left

B. Procedure

NOTE: The airstair must be locked in the ready to deploy position before it can receive power for operation. One micro switch under the floor, forward of airstair lower carriage will be depressed by the floor lock and a "**READY**" light will illuminate on the control panel signifying that the airstair is locked in and it is safe to proceed to the deployment mode. An AFT floor lock is also installed but with no electrical switch. This is due to presence of floor structure.

NOTE: If the airstair has relaxed toward the "OPEN" or "DEPLOYED" mode, and the assembly cannot be moved without damaging aircraft structures or closet, these steps must be followed:

(1) Remove safety tags and close these circuit breakers (Figure 201):

Circuit Breaker Panel, Aft Equipment Center, E6 Equipment Rack

Row	Col	Number	Name
---	---	---	15A
---	---	---	75A or 80A

NOTE: Opening and closing of circuit breakers should be performed by qualified aircraft mechanics.

(2) Raise the RED SWITCH GUARD on the STOW OVERRIDE SWITCH and position the "STOW OVERRIDE SWITCH" to the OVERRIDE position.

NOTE: The red guarded STOW OVERRIDE SWITCH is located on an access panel cover adjacent to the hydraulic feed through fittings on the first segment upper forward frame.

(3) Depress "POWER ON" switch at the airstair control panel. Ensure that the "POWER ON" lighted switch actuator has illuminated.

CAUTION: ENSURE THAT ALL PERSONNEL ARE CLEAR OF THE AIRSTAIR DURING RETRACTION.

(4) Momentarily depress the "Retract" switch as required to move the airstair to the retract position.

CAUTION: DO NOT HOLD RETRACT SWITCH AFTER AIRSTAIR HAS FULLY RETRACTED, AS DAMGE TO AIRSTAIR COMPONENTS MAY OCCUR.

(5) Depress the "POWER ON" switch to the "NORMAL" position and close the "RED SWITCH GUARD".

(6) Return the "STOW OVERRIDE" procedure and the airstair has been returned to the normal configuration.

NOTE: This completes the "STOW OVERRIDE procedure and the airstair has been returned to the normal configuration.

(7) Remove airstair locking pins (P/N 1423-7013-7) through floor block.

(8) Move airstair toward deploy position.

---------- END OF TASK ----------

3. <u>Bleeding Hydraulic System</u>

A. Location Zones

Zone	Area
833	Aft Passenger Cabin Door - Left

B. Procedure

(1) Deploy airstair (Paragraph 9 Operating Procedures).

(2) Open these circuit breakers and install safety tags (Figure 201):

Circuit Breaker Panel, Aft Equipment Center, E6 Equipment Rack

Row	Col	Number	Name
---	---	---	15A
---	---	---	75A or 80A

NOTE: Opening and closing of circuit breakers should be performed by qualified aircraft mechanics.

NOTE: It is recommended that the hydraulic actuator piston rids be disconnected by removing cotter pin and washer from clevis pin and push pin “in” just enough to clear rod end from upper end of airstair and then supported in such a manner to allow free movement of hydraulic actuator piston shafts during bleeding operation. After completion of bleeding, reconnect hydraulic actuator piston rods to airstair by pushing clevis pin through hydraulic actuator rod end and bracketry. Install cotter pin and washer and perform operational check.

(3) Remove access plate to quick disconnects (upper segment, fourth riser) and remove dust caps (Figure 202).

(4) Connect service hoses per (Figure 203).

(5) Apply 25 PSI air pressure to airside of reservior/acculmuator (Figure 204).

(6) Disconnect the two hydraulic actuators at the rod end.

(7) Use handpump to actuate the hydraulic actuators to the full retract position.

(8) Depress and turn the override knob assembly located beside the airstair quick disconnect fittings to its manual down position (Figure 202).

(9) Use handump assembly to pump the hydraulic actuators to the fully extend edposition.

NOTE: A hydraulic hand pump assembly is provided by the manufacturer. It can be used to bleed the entire hydraulic system, deploy and retract the airstair without using electrical power. It is also used for emergency deployment and retraction of the airstair.

This unit will be part of the “Fly Away Kit” (optional). This pump should be stored as close to the airstair as possible, should it be needed in emergency situations.

NOTE: A Hydraulic Auxiliary Power Supply System (HAPS) (P/N AC29-1000) is optional through the manufacturer. It is electrically driven, 28 VDC, 5 GPM flow, 1,000 PSI and weighs approximately 40 pounds. It can do the bleeding and extend or retract operations if needed in any emergency, should the airstair pump fail. This unit is normally part of the Fly Away Kit.

(10) Reset the override knob assembly and repeat steps 7, 8, and 9, alternating selector for about 5 or 6 complete cycles.

(11) Reset the override knob assembly to the normal position and pump the cylinders until they can be engaged in their original position at the pivot links.

(12) Remove hoses from both disconnects.

(13) Connect hose per (Figure 205).

(14) To fill the reservoir with hydraulic pump assembly refer to (Figure 205).

(15) Pump until a definate resistence is noted.

NOTE: If during the filling of the reservoir, gage reaches maximum reading, relieve pressure accumulator air valve.

(16) Disconnect all service hoses, re-install dust caps securely and stow servicing equipment.

NOTE: Be sure that the selector knob assembly has been returned to its normal position. Re-install access plate.

(17) Release air pressure from airstair reservior until a stable PSI reading is established on the gage.

(18) Airstair should now be free of air and ready for normal operation.

(19) Remove safety tags and close these circuit breakers (Figure 201):

Circuit Breaker Panel, Aft Equipment Center, E6 Equipment Rack

Row	Col	Number	Name
---	---	---	15A
---	---	---	75A or 80A

NOTE: Opening and closing of circuit breakers should be performed by qualified aircraft mechanics.

(20) Perform operational check electrically (Paragraph 9 Operating Procedures).

NOTE: If any malfunction is noted, airstair can be stopped by merely releasing the deployment switch on the control panel and the airstair will come to an immediate stop. Fix the problem and then continue the mode of travel.

---------- END OF TASK ----------

4. <u>Manual Operation with Hand Pump</u>

A. Location Zones

Zone	Area
833	Aft Passenger Cabin Door - Left

B. Retract Procedure

(1) Take the hose from the pump that is marked “out” on the hand pump.

(2) Connect it to the “in position” on the airstair.

(3) Then take the hose marked in or return on pump and attach to “out position” on the airstair.

(4) The airstair is now ready to retract providing the hydraulic fluid level is sufficient.

(5) Pump the hand pump until the airstair is fully retracted.

C. Deploy Procedure

CAUTION: MAKE SURE OVERRIDE KEY OR T-HANDLE IS NOT IN ITS RECEPTACLE AT THIS TIME OF OPERATION.

(1) Take key or T-handle and insert it into manual override for extend position of airstair.

(2) Pump the hand pump just enough to get the stair out far enough so gravity will take over, airstair will then go down to the full extend position.

CAUTION: IF YOU WANT TO HAND PUMP OR USE THE ELECTRICAL SYSTEM PUMP TO BRING AIRSTAIR BACK UP, REMEMBER TO REMOVE THE KEY FROM MANUAL OVERRIDE.

NOTE: When you are deploying the airstair manually in case of emergency, while the key is in manual override position make sure that the system is bled after airstair is deployed.

---------- END OF TASK ----------

5. <u>Draining Hydraulic System</u>

A. Location Zones

Zone	Area
833	Aft Passenger Cabin Door - Left

B. Procedure

NOTE: If it is necessary to replace or repair any of the hydraulic system components, the following procedure is recommended for draining.

(1) Deploy airstair, leave selector valve in “EXTEND” position.

(2) Disconnect “DOWN” hydraulic line at “TEE” fitting under fourth step, drain into suitable container.

(3) Operate hand pump to purge fluid from pump and lines.

(4) To expedite draining of actuating cylinders, disconnect “DOWN” flex line at airstair beam bulkhead fitting and drain into suitable container.

(5) Push piston rods to “UP” position to purge cylinders.

---------- END OF TASK ----------

6. Setting Pressure Relief Valve

A. References

Reference	Title
20-11-00-422-003	Maintenance Practices - Standard Torque Values

B. Location Zones

Zone	Area
833	Aft Passenger Cabin Door - Left

C. Procedure

NOTE: Pressure setting of relief valve must be done in shop where adequate calibrated and certified test equipment is available.

(1) Remove valve from airstair and route to shop.

(2) Provide container to catch hydraulic fluid and cap off lines.

(3) Turn adjustment screw clockwise to increase pressure and counter clockwise to decrease (this is a shop function).

NOTE: Pressure setting is 1,900 PSI.

(4) Re-install valve and torque “B” nuts (TASK 20-11-00-422-003).

(5) Bleed system of all air (Paragraph 3 Bleeding Hydraulic System).

(6) Perform operational check of airstair with normal pump pressure approximately 3,000 PSI and leak check (Paragraph 9 Operating Procedures).

---------- END OF TASK ----------

7. Latch Adjustment

A. Location Zones

Zone	Area
833	Aft Passenger Cabin Door - Left

B. Procedure

NOTE: Between segment 2 and 3 (Figure 206).

(1) There is no field adjustment necessary. Remove and replace only.

(2) Ascertain that the trigger mechanism pivots freely.

CAUTION: OVER TIGHTENING WILL INTERFERE WITH PROPER LATCH OPERATION.

NOTE: At maximum ramp weight, with cabin floor closet to the ground, the airstair will latch a minimum of 8.0 inches between roller and ground.

---------- END OF TASK ----------

8. Alignment, Adjustment and Tightening Procedures

A. Location Zones

Zone	Area
833	Aft Passenger Cabin Door - Left

B. Stanchion Hubs Procedure

(1) Tighten hub nuts to take up all clearance, but do not preload.

(2) Hubs may have to be backed off ¼ turn.

C. Lower Drive Link Procedure

CAUTION: OVER TIGHTENING CAN INTERFERE WITH PROPER OPERATION OF LATCH RESULTING IN DAMAGE TO MECHANISM.

(1) Tighten beam shaft nut to take up all clearance.

(2) Loosen until drive link moves freely.

D. Beam Pivot Points Procedure

CAUTION: OVER TIGHTENING CAN INTERFERE WITH PROPER OPERATION OF LATCH RESULTING IN DAMAGE TO MECHANISM.

(1) To remove all clearance, add or remove washers because clevis pins with cotter keys are used between nut face of pivot fitting.

(2) Do not preload.

E. Handrails to Stanchion Assembly Procedure

CAUTION: OVER TIGHTENING CAN INTERFERE WITH PROPER OPERATION OF LATCH RESULTING IN DAMAGE TO MECHANISM.

(1) Tighten to remove all clearance, between nut and face of stanchion clevis fitting.

(2) Do not preload.

(3) To align handrail stanchions, loosen check nuts on either end of stanchion push rods and turn rod.

(4) Tighten check nuts after adjustment is made.

(5) In order for the handrails to fold without interference during airstair retraction and extension, the handrail stanchions must be set at the following angles (Table 201):

Table 201

STAIR SEGMENT	ANGLE
First or top stair	92 degrees, plus or minus ½ degree
Second Stair	93 degrees, plus or minus ½ degree
Third Stair	93 degrees, plus or minus ½ degree
Fourth Stair	93 degrees, plus or minus ½ degree
Fifth Stair	93 degrees, plus or minus ½ degree

F. Tension Rods Procedure

(1) To insure complete retraction of airstair assembly and for proper latch operation, the tension rods must be at the following lengths (Table 202):

Table 202

STAIR SEGMENT	LENGTH
Top segment tension rod	49.62 inches plus or minus 0.03 inches (1)
Second segment tension rod	46.35 inches bolt hole to beginning of slot (1)
Third Segment	49.25 inches end of slot to centerline of hole (1)
Fourth Segment	49.02 inches hole to beginning of slot (1)

Foot Note: (1) Final rod length must be determined on installation after rigging.

NOTE: It is recommended that after each adjustment is made, the airstair be retracted to assure that no interference or misalignment occurs. These checks should be made using the hydraulic hand pump, supplied as standby equipment.

---------- END OF TASK ----------

9. Operating Procedures

A. Location Zones

Zone	Area
833	Aft Passenger Cabin Door - Left

B. Deploy Procedure

(1) Close these circuit breakers (Figure 201):

Circuit Breaker Panel, Aft Equipment Center, E6 Equipment Rack

Row	Col	Number	Name
---	---	---	15A
---	---	---	75A or 80A

NOTE: Activation or deactivation of circuit breakers should be performed by qualified aircraft technician.

(2) Open aircraft door to its full open position.

(3) Check condition of electrical disconnect to assure that it is properly plugged in. If not, properly secure it.

(4) Open closet door.

(5) Before moving airstair to deploy position, check for clearance in the closet. If the airstair is slightly open or relaxed, turn toggle switch located on access plate AFT of airstair approximately 4 feet from floor level on #1 segment, then return toggle switch to “OFF” position.

NOTE: This switch must be in the "OFF" position during extension or retraction modes. Use it only when airstair has relaxed. Depress the "Retract" switch to close airstair completely. This will eliminate the possibility of the airstair jamming in the closet, and also for easy maneuverability.

(6) Release large FWD and AFT latch pins (P/N 1423-7013-7) of upper carriage which is mounted through the floor preventing airstair from moving.

(7) Move airstair to traverse position when the lower carriage comes into contact with the stop bolted on to airstair track.

(8) Move airstair in to deploy position.

(9) Engage FWD and AFT latch pins (P/N 1423-7013-7) of upper carriage through floor.

(10) Engage the forward latch pin (P/N 1423-7013-7) through floor by pushing down with foot. The FORWARD or AFT latch will activate a micro switch.

(11) Ready light will come "ON".

NOTE: Airstair is now ready to be deployed.

(12) Hold the "EXTEND" switch down until airstair has been fully deployed and is resting on ramp.

NOTE: Hydraulic system powers airstair through approximately 80% of movement. At this point, a cutoff switch interrupts power to hydraulic pump and airstair extends by gravity.

(13) Latch position indicator light illuminates signifying airstair is in the "LATCHED" position.

NOTE: The two latches are electrically wired in "series". In the event that airstair latch is not believed to be latched prior to touchdown, operator will release extend switch and retract airstair. If airstair latch is in "latched" position, the airstair will come to a stop because the hydraulic relief will allow bypassing of the fluid in the system. Operator may then proceed to deploy the airstair to the full position. This will signify a failed micro switch in the locking mechanism. Switches will then have to be checked for condition and proper adjustment. If the airstair retracts all the way up, the latching mechanism must be checked by properly qualified personnel. Fully retract airstair and stow in aircraft until the aircraft reaches home base where proper personnel and equipment such as high stands, forklifts and parts are available. Then manually extend the airstair using the hand pump assembly. Investigate cause of failure and correct.

NOTE: Airstair being a trigger type actuating mechanism must extend to the full extend mode to reset the unlatching trigger. No adjustment is necessary, remove and replace parts only (between segments 2 and 3). Operational check will have to be done to ascertain the airstair is functioning properly.

NOTE: The airstair may be stopped at any position immediately by releasing the "EXTEND" or "RETRACT" switches. Also if "READY" light goes out, push down on FORWARD latching pin and light will come on, proceed on extending or retracting modes.

(14) Release the "EXTEND" switch when airstair is completely deployed.

(15) Install 2 each stanchions underneath segment #3 at provided brackets. It is recommended not to load airstairs more than one person at a time without stanchions installed.

NOTE: It may be necessary to adjust length of stanchions due to aircraft sill height. Remove pip pin near bottom of stanchion and adjust accordingly.

(16) Open these circuit breakers and install safety tags (Figure 201):

Circuit Breaker Panel, Aft Equipment Center, E6 Equipment Rack

Row	Col	Number	Name
---	---	---	15A
---	---	---	75A or 80A

NOTE: Opening and closing of circuit breakers should be performed by qualified aircraft mechanics.

C. Raise Airstair Procedure

CAUTION: MAKE CERTAIN THAT PERSONNEL OR ANY OBJECTS ARE CLEAR OF RETRACTING PATH.

(1) Remove 2 each stanchions and store in closet.

(2) Remove safety tags and close these circuit breakers (Figure 201):

Circuit Breaker Panel, Aft Equipment Center, E6 Equipment Rack

Row	Col	Number	Name
---	---	---	15A
---	---	---	75A or 80A

NOTE: Opening and closing of circuit breakers should be performed by qualified aircraft mechanics.

(3) Hold down the "RETRACT" switch until airstair is completely retracted. Ready light "ON". Micro switch #1 and #2 segments will stop hydraulic pump and motor, just at full retract position.

(4) Release the "RETRACT" switch when airstair is fully retracted (when micro switch on airstairs opens).

(5) Open these circuit breakers and install safety tags (Figure 201):

Circuit Breaker Panel, Aft Equipment Center, E6 Equipment Rack

Row	Col	Number	Name
---	---	---	15A
---	---	---	75A or 80A

NOTE: Opening and closing of circuit breakers should be performed by qualified aircraft mechanics.

(6) Disconnect airstair and cable assembly from receptacle on the fuselage side wall.

(7) Depress arm to raise latch pins (P/N 1423-7013-7) through blocks on floor (FWD or AFT of lower carriage).

(8) Move airstair and both carriages to stowed position.

(9) Push latching pins (P/N 1423-7013-7) through block on floor to lock airstairs and carriages in place.

NOTE: This is a “MUST” prior to flight.

NOTE: Latch pins engagement must be verified prior to taxi and take off.

---------- END OF TASK ----------

10. <u>Inspection</u>

A. General

(1) It is recommended that the airstair be inspected every 100 cycles or (6) months whichever occurs first.

B. Location Zones

Zone	Area
833	Aft Passenger Cabin Door - Left

C. Consumable Materials

Name	Description	Note
409	Household Cleaner	Equivalent

D. Procedure

(1) Check the airstair structure condition, chafing and cracks.

(2) Check all wiring for condition, routing, security and chafing.

(3) Check all hydraulic plumbing for chafing, leaks, condition, routing and security.

(4) Check beam pivot points for condition and security.

(5) Check folding mechanism links for condition and security.

(6) Check latches for freedom of operation, condition, and security.

(7) Check operation of down latch switch.

(8) Check operation of pump cut-off switch.

(9) Check hydraulic flex hoses for chafing, condition, routing and security.

(10) Check handrail to stanchion pivot points for freedom of movement, security and chafing conditions.

(11) Check handrails for proper alignment.

(12) Check the tracks for condition. Track must be clean and free of debris or any oil and dirt.

(13) Check carriage for condition, freedom of operation and security. “U” channels on FWD and AFT of lower carriage must be clean. No oil is allowed on these “U” channels. Clean with 409 household cleaner or equivalent.

(14) Check all placards for presence and legibility.

(15) Clean both airstairs tracks (409 household cleaner or equivalent, a clean cloth may be used).

NOTE: No lubricant of any type should be allowed on tracks.

---------- END OF TASK ----------

11. Lubrication

A. Location Zones

Zone	Area
833	Aft Passenger Cabin Door - Left

C. Consumable Materials

Name	Description	Note
SAE 20	Oil	Or Lubriplate
Silicone Oil	Oil	
Lubriplate	Light Grease	
General Purpose Grease	Grease	Equivalent
Mineral Spirits	Cleaner	

B. Procedure

(1) All plane bearing pivot points (steel bolt through aluminum fittings) should be cleaned with mineral spirits solvent, blown dry, then lubricated with SAE 20 oil or Lubriplate, wipe off all excess. This must be performed every 3,000 cycles of airstair operation, down and up being one cycle or minimum of once every six months whichever occurs first, see (Figure 207).

NOTE: Handrail to stanchion points can be left dry if presence of lubricant would be considered undesirable. A light coat of silicone oil may be sprayed on; then wiped with a clean cloth. If dry, thrust bearing on either side of stanchion hubs should be cleaned with mineral spirits and packed with light grease (Lubriplate), general purpose grease or equivalent.

---------- END OF TASK ----------

12. Pressure Adjustment

A. Tools/Equipment

Name	Description
Wrench	1/4 hex socket
Wrench	5/64 hex allen
Wrench	5/16 hex socket
Wrench	3/32 allen

B. Location Zones

Zone	Area
833	Aft Passenger Cabin Door - Left

C. Procedure

NOTE: For (P/N MS28893-C4)

(1) Pressure adjustment is reached through the return port.

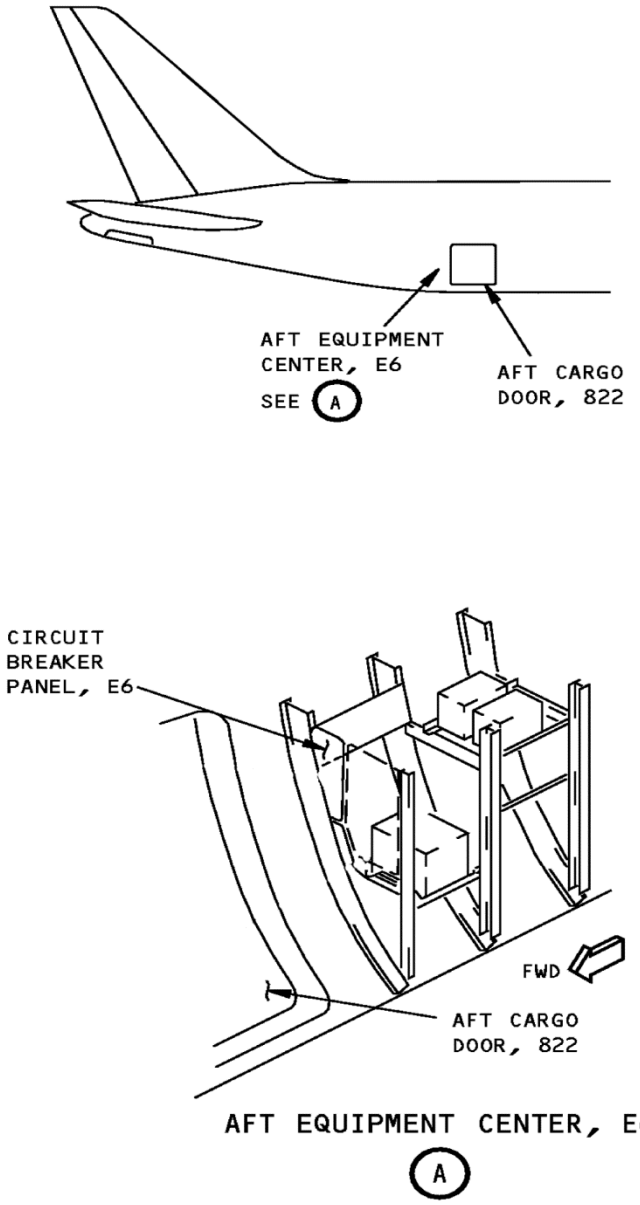
(2) Loosen locknut with 1/4 hex socket wrench.

(3) Adjust the pressure-adjusting screw with a 5/64 hex allen wrench, (clockwise to increase pressure).

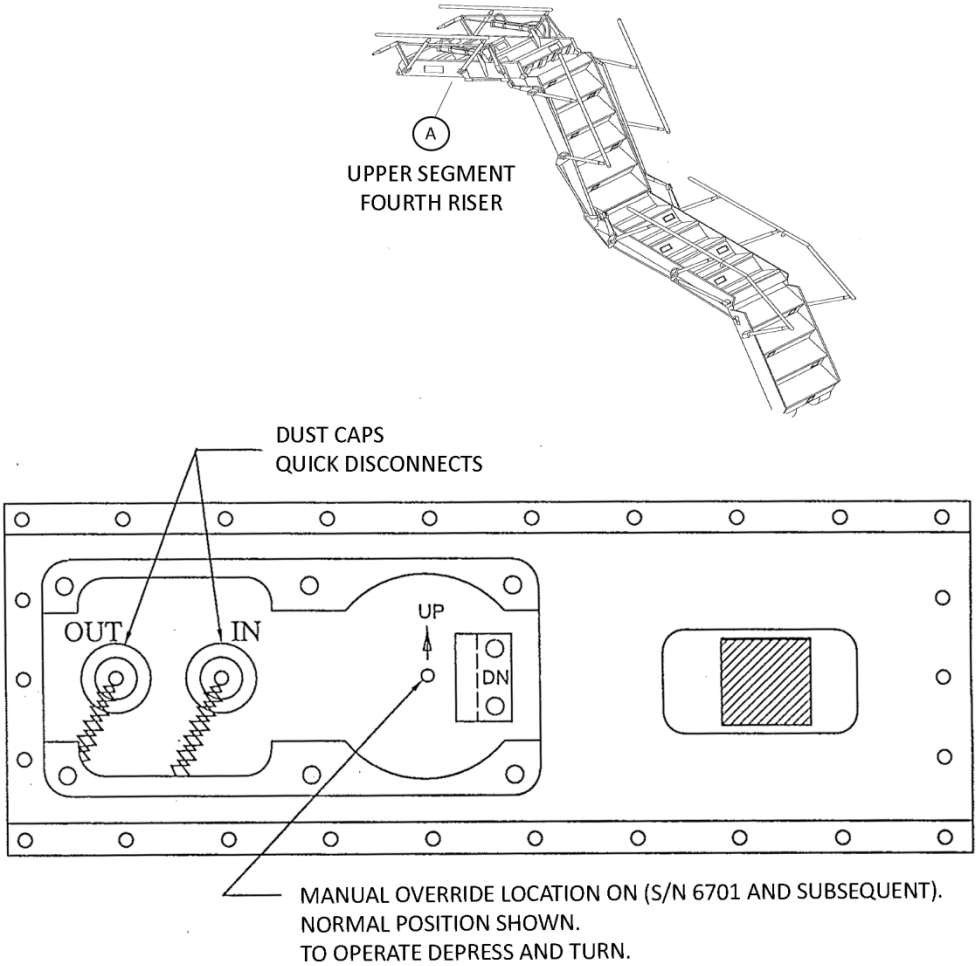
(4) When pressure is set to desired PSI, tighten locknut with a torque of 30 inch-pounds.

NOTE: For (P/N 1751 with any dash number). Follow instructions above; except use 5/16 hex socket wrench, 3/32 allen wrench and 35-inch-pounds torque.

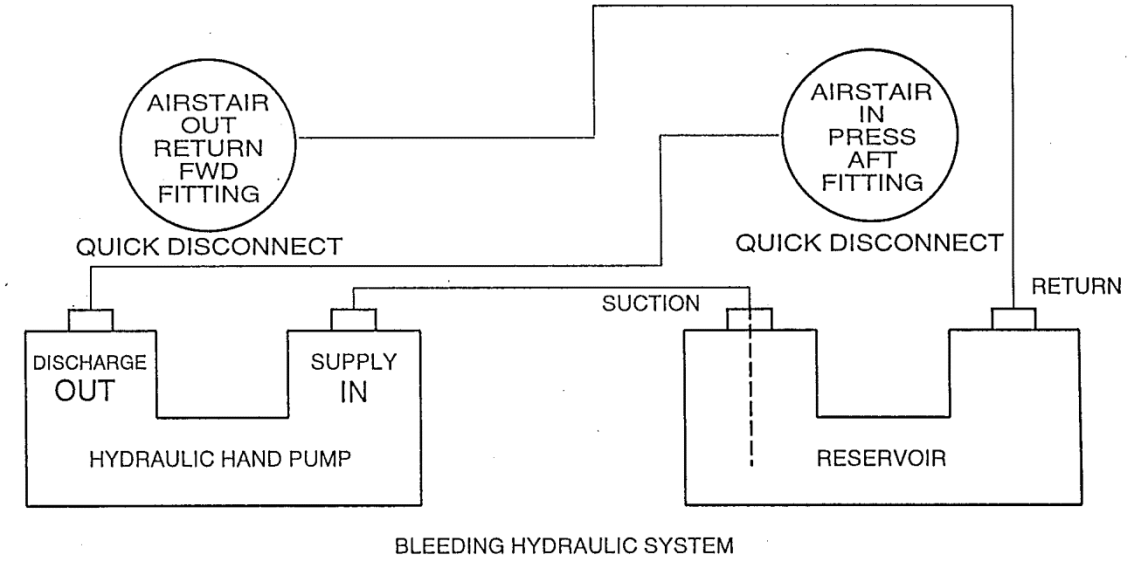
---------- END OF TASK ----------



Circuit Breaker Panel, Aft Equipment Center, E6 Equipment Rack
Figure 201

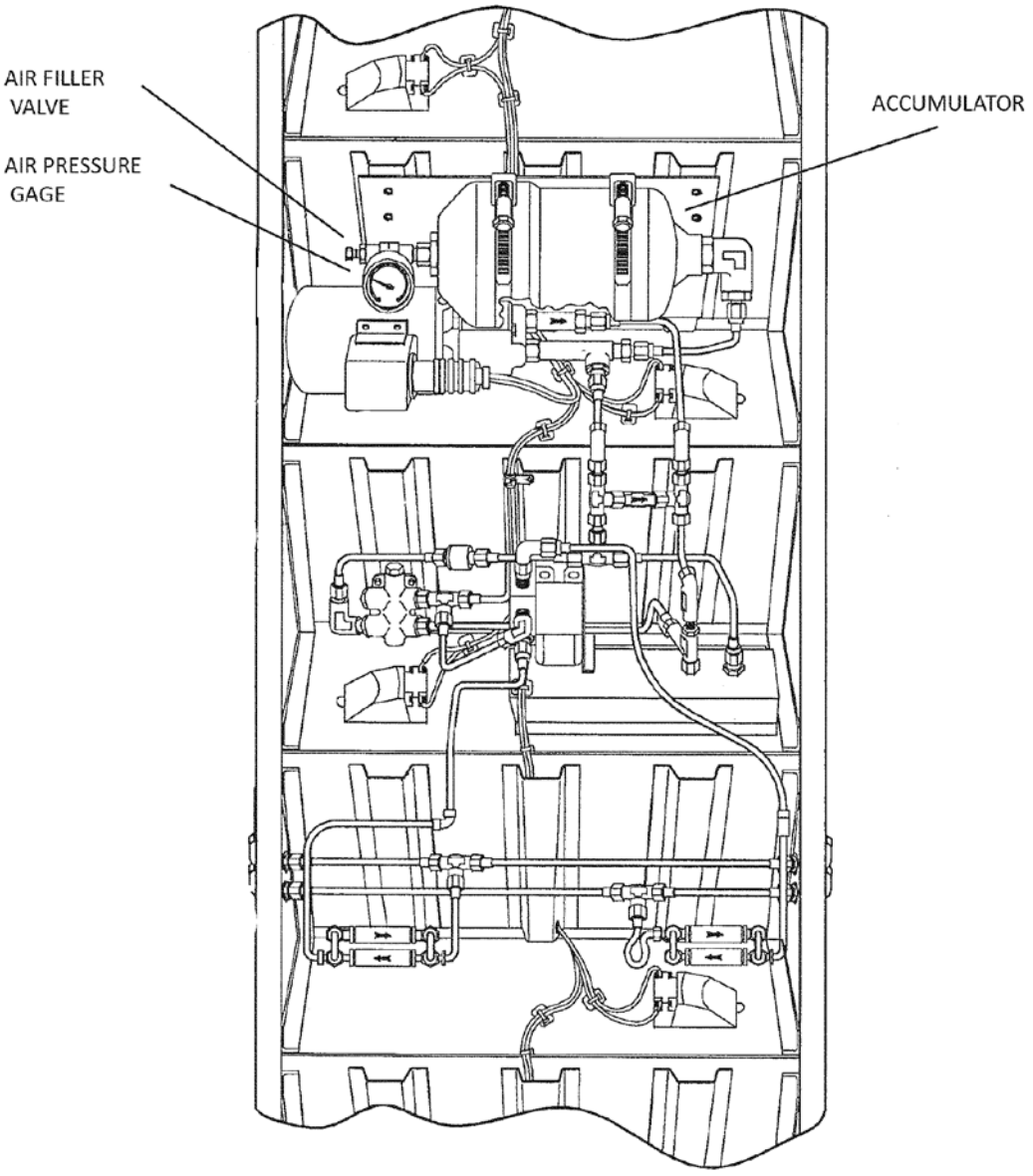


Airstair Hydraulic Quick Disconnect and Manual Override Access
Figure 202

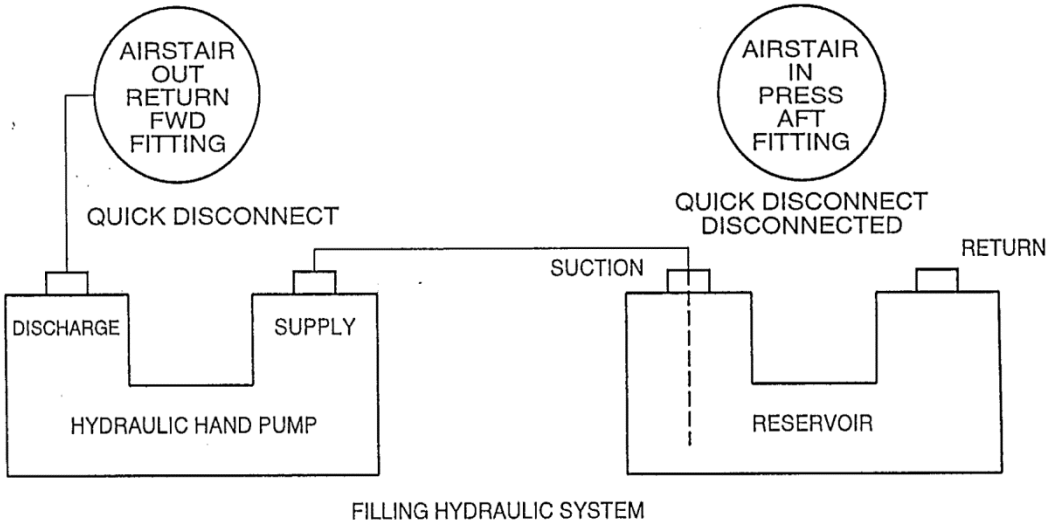


P52-61-00-2-F203

Airstair Hydraulic System Bleed Service Hose Connection
Figure 203

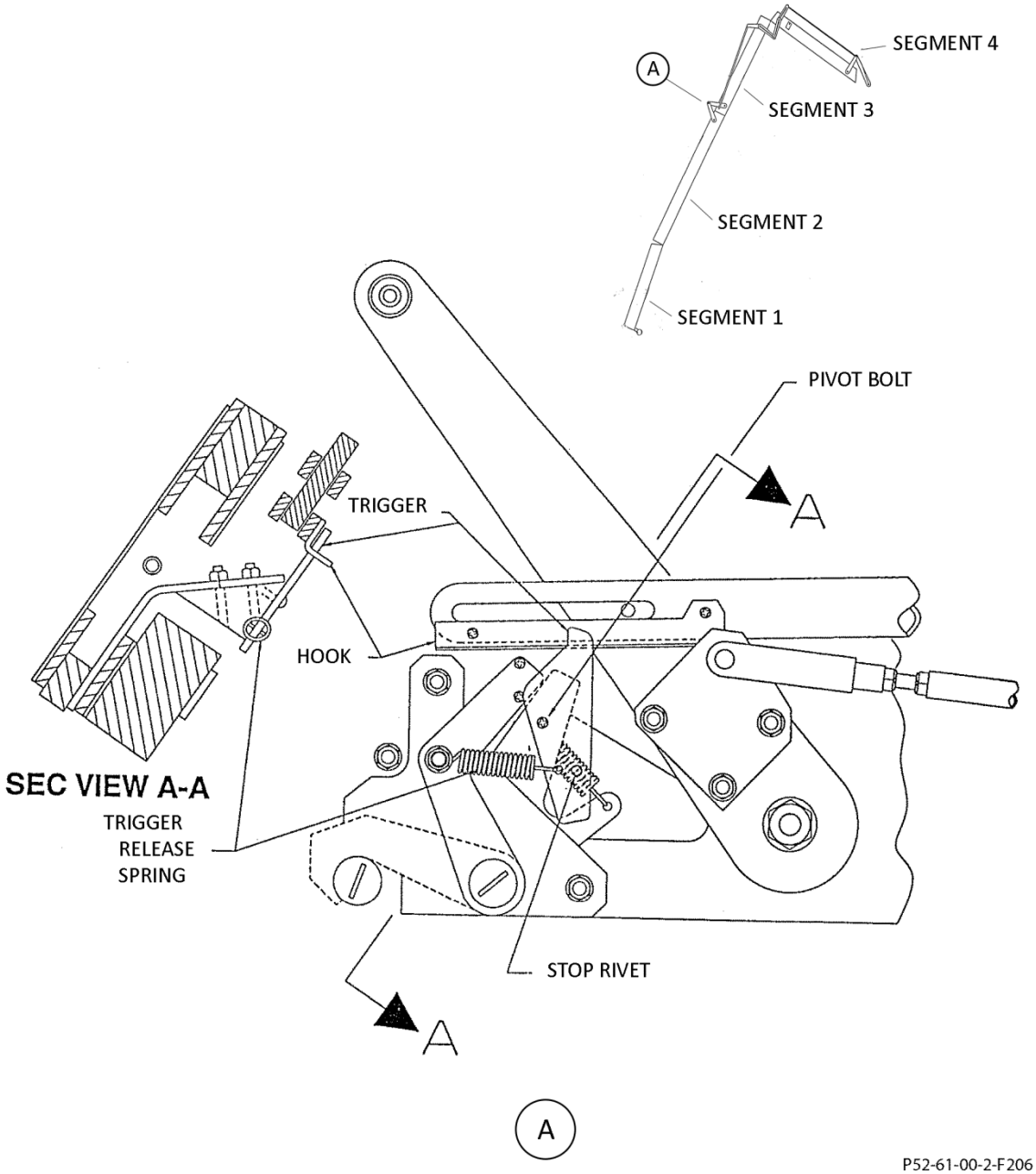


Airstair Hydraulic system
Figure 204

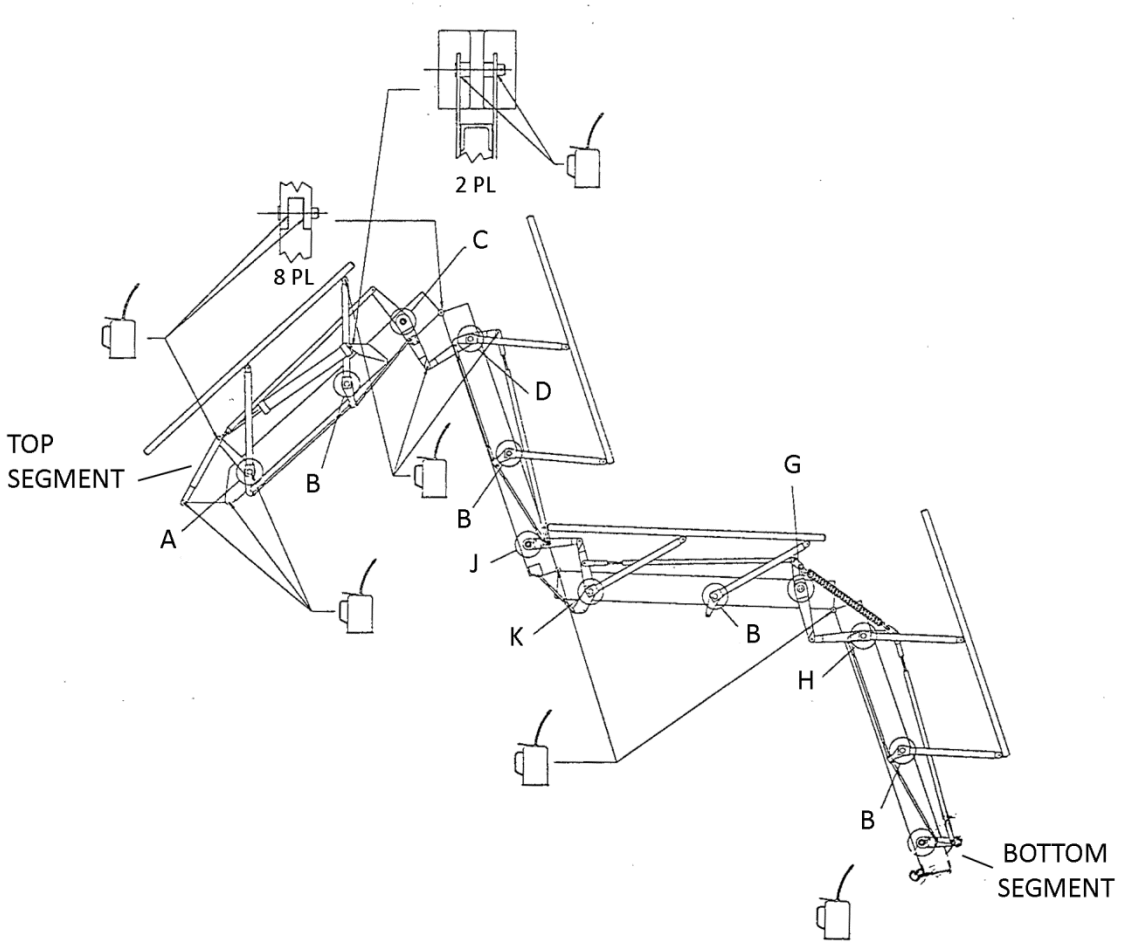


P52-61-00-2-F205

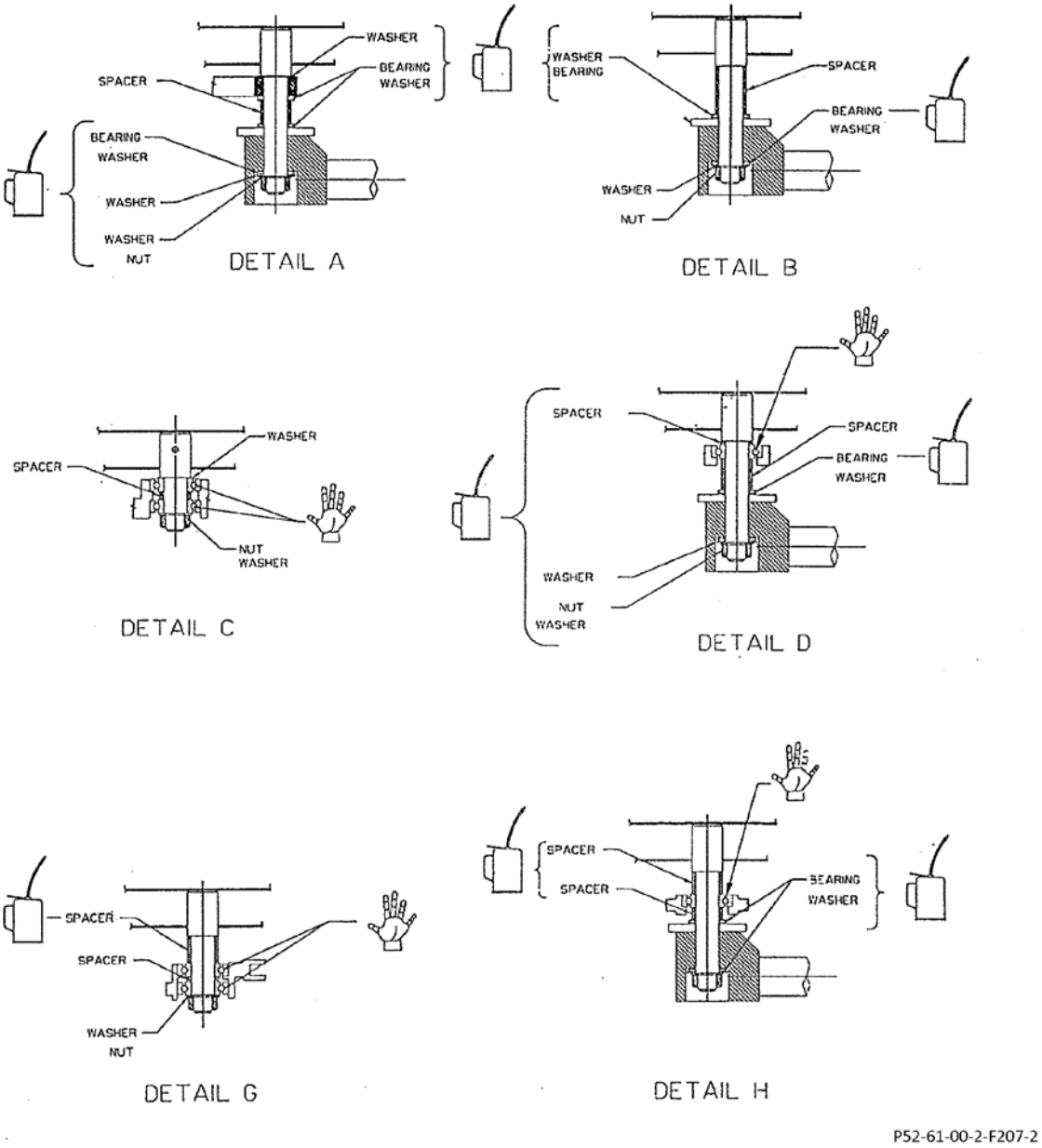
Airstair Hydraulic System Bleeding Hose Connection
Figure 205



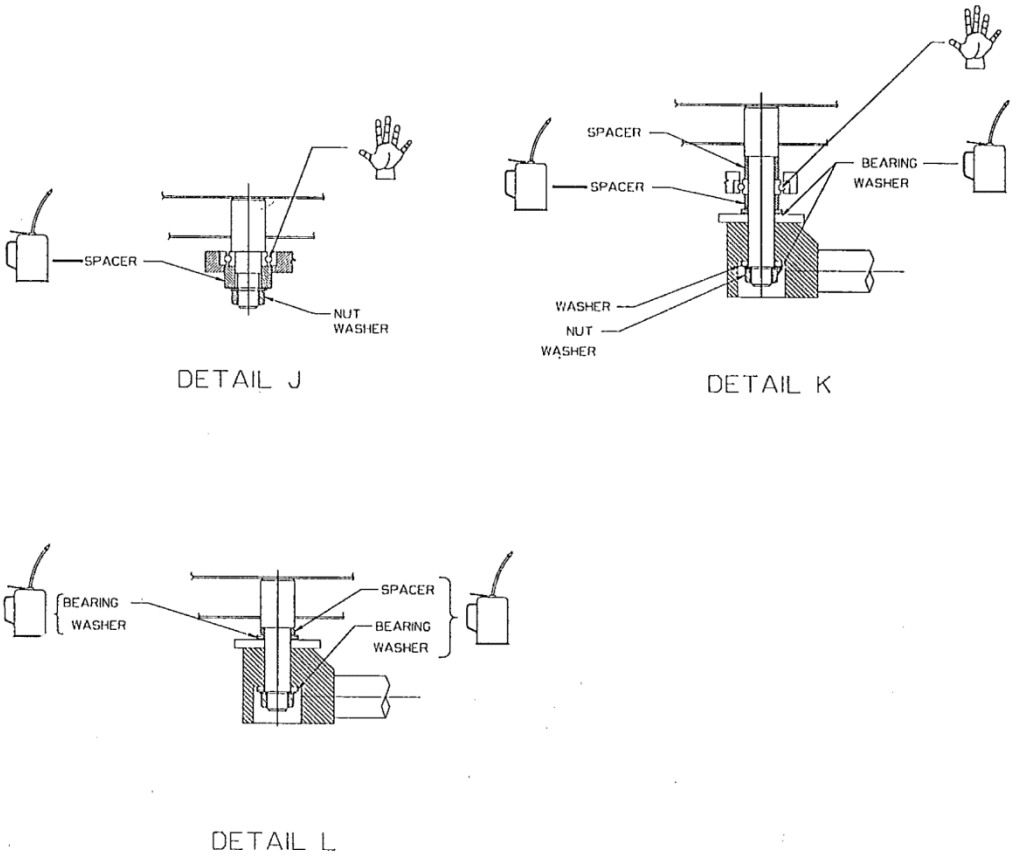
Airstair Latch
Figure 206



Airstair Lubrication
Figure 207 (Sheet 1 of 3)



Airstair Lubrication
Figure 207 (Sheet 2 of 3)



P52-61-00-2-F207-3

Airstair Lubrication
Figure 207 (Sheet 3 of 3)

ENTRANCE STAIRS – REMOVAL/INSTALLATION

1. General

A. This procedure contains the following tasks:

(1) Removal

(2) Installation

2. Removal

A. Tools/Equipment

Name	Description
Strap(s)	Cargo
Forklift	
Platform	

B. Location Zones

Zone	Area
833	Aft Passenger Cabin Door - Left

C. Procedure

(1) Remove safety tags and close these circuit breakers (Figure 401):

Circuit Breaker Panel, Aft Equipment Center, E6 Equipment Rack

Row	Col	Number	Name
---	---	---	5A
---	---	---	15A
---	---	---	75A or 80A

NOTE: Opening and closing of circuit breakers should be performed by qualified aircraft mechanics.

(2) Connect the connector from the airstair to the wall receptacle.

(3) Depress “Power On” switch at the central panel, button shall illuminate.

(4) Depress “Retract” switch at the control box, if airstair has relaxed and it would be damaging to the airstair closet walls if removed.

(5) If airstair s is relaxed in the closet, and the “Retract” switch has been depressed and no movement is noticed, an override guarded switch is located on the 1st segment aft beam assembly, operate this switch and depress the “Retract” switch again. Airstair will “Retract”. If not, consult the Wiring Diagram Manual.

(6) It is now safe to raise the two locks from the floor and install a cargo strap(s) to prevent airstair from relaxing to the open or deploy position.

NOTE: It is of the utmost importance that the airstair is strapped in the maximum “UP” position to make it easier for personnel to move airstair to the “Deployed” position. It is recommended that 2 personnel move the airstair and carriage assembly.

CAUTION: WHEN STRAPPING THE AIRSTAIR SO IT WILL NOT OPEN, CARE MUST BE TAKEN TO PREVENT BENDING OF RODS, HANDRAILS AND AIRSTAIR. TRY TO KEEP STRAP ON SEGMENTS ONLY.

(7) With the airstair and carriages in the "deploy" position, push down on the FWD floor lock so it will contact and activate the micro switch and lock the carriages and airstair in place.

(8) Disconnect the airstair electrical disconnect

(9) Open these circuit breakers and install safety tags (Figure 401):

Circuit Breaker Panel, Aft Equipment Center, E6 Equipment Rack

Row	Col	Number	Name
---	---	---	15A
---	---	---	75A or 80A

NOTE: Opening and closing of circuit breakers should be performed by qualified aircraft mechanics.

(10) Remove the forward angle stop from the lower carriage. Re-install the screws to help hold the lower carriage together.

NOTE: Angle stop must be re-installed after airstair is removed so it will not be lost.

(11) With the help of five (5) sturdy men, forklift and a large platform, ease the airstair and upper carriage off the lower carriage (Figure 402).

(12) All five (5) men must manhandle the airstairs as the first two (2) rollers come off the lower carriage side channels. The upper part of the airstair will tend to fall down and away from the aircraft.

(13) The five (5) men must hold and manipulate the airstair and upper carriage until the last two rollers have left the lower carriage side channels.

(14) Lower the airstair and upper carriage on a makeshift cradle (one that will prevent the airstair from being damaged).

CAUTION: DO NOT LAY AIRSTAIR AND UPPER CARRIAGE ON EITHER SIDE AS DAMAGE WILL RESULT.

(15) Airstair must be laid down flat on segment number one (1).

(16) Remove the four (4) lips and spacers by removing the countersink screws holding them onto both airstair tracks.

(17) Remove the lower carriage.

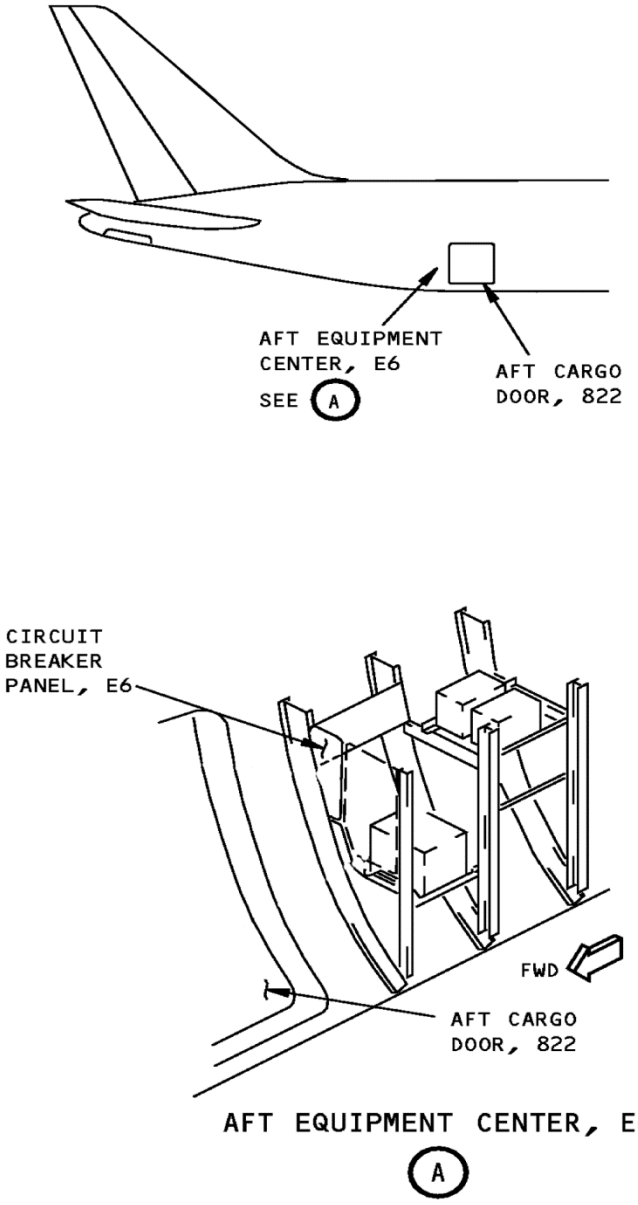
(18) Re-install the four (4) lips, spacers and countersink screws until they are snug.

(19) Airstair and carriage are now considered removed.

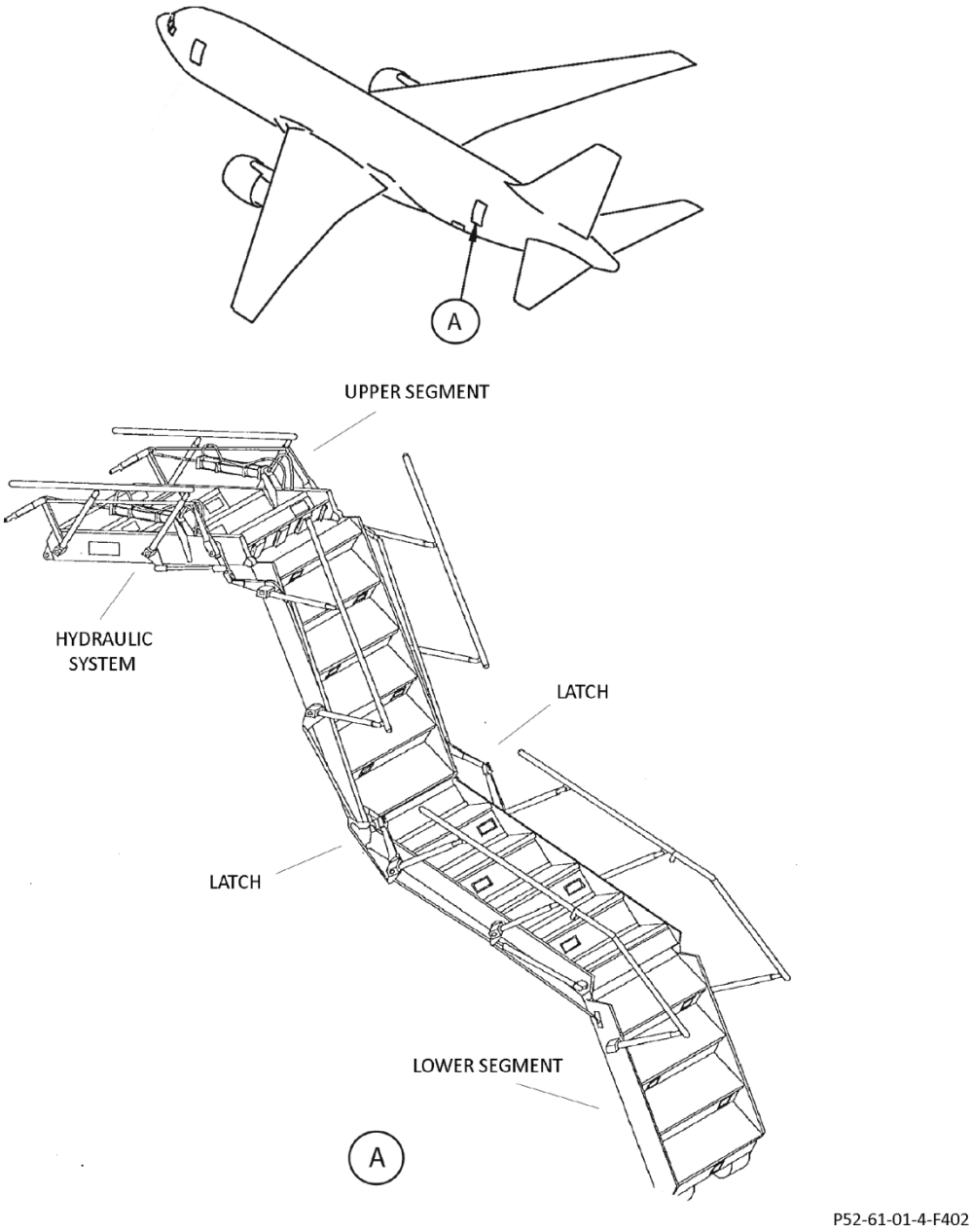
---------- END OF TASK ----------

3. Installation

NOTE: For airstair and carriages installation, reverse the order of removal.



Circuit Breaker Panel, Aft Equipment Center, E6 Equipment Rack
Figure 401



Airstair
Figure 402