CHAPTER
44

CABIN SYSTEMS

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A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

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CHAPTER 44
CABIN SYSTEMS

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1. **General**

    A. The landscape camera functions as part of the ARINC 628 system. The landscape camera provides forward and downward viewing from the aircraft when operated by the flight crew.

    B. This procedure has these tasks:

        (1) Landscape Camera Removal.

        (2) Landscape Camera Installation.

ARO 001-015

    TASK 44-21-01-000-802

2. **Landscape Camera Upper Module - Removal**
   Figure 401

    A. **General**

        (1) The upper camera module is also known as the video processor unit (VPU).

    B. **Tools/Equipment**

    NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1544	Ladder - Access, Forward Electrical Equipment Bay Door (Access Door 112AL)
	Part #: J12001-20 Supplier: 81205

    C. **Location Zones**

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well

    D. **Removal Procedure**

    SUBTASK 44-21-01-860-001

        (1) Open this circuit breaker and install safety tag:

        Right Power Management Panel, P210

Row	Col	Number	Name
E	5	C23403	VIDEO PGMS & CTRL

    SUBTASK 44-21-01-940-001

        (2) Use the forward electrical equipment bay door (access door 112AL) access ladder, SPL-1544 to get access to the landscape camera - upper module.

    SUBTASK 44-21-01-020-001

        (3) To remove the upper module do these steps:

> ⚠️ **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.

        (a) Disconnect the electrical connector [11] on the upper module.

        (b) Put protective covers on the electrical connectors.

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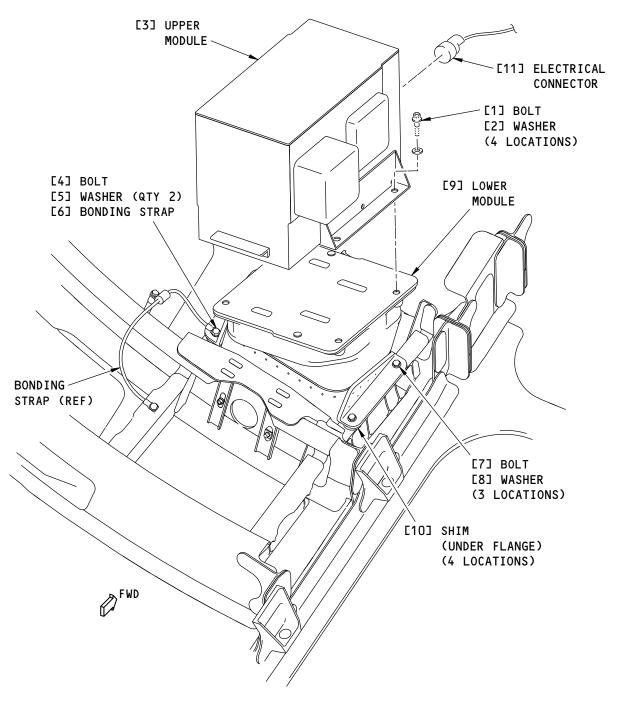
ARO 001-015 (Continued)

(c)   Remove the four bolts [1] and washers [2] that hold the upper module [3] to the lower camera module [9].

(d)   Remove the upper module [3].

(e)   If a replacement upper module is not being installed at this time, put protective covers on the Upper-to-Lower Camera Module electrical connectors.

———— **END OF TASK** ————

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[3] UPPER
MODULE

[11] ELECTRICAL
CONNECTOR

[1] BOLT
[2] WASHER
(4 LOCATIONS)

[4] BOLT
[5] WASHER (QTY 2)
[6] BONDING STRAP

[9] LOWER
MODULE

BONDING
STRAP (REF)

[7] BOLT
[8] WASHER
(3 LOCATIONS)

[10] SHIM
(UNDER FLANGE)
(4 LOCATIONS)

FWD

J34647 S0000171138_V1

Landscape Camera Installation
Figure 401/44-21-01-990-802

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TASK 44-21-01-400-802

3. **Landscape Camera Upper Module - Installation**
   Figure 401

   A. **General**

   (1)   The upper camera module is also known as the video processor unit (VPU).

   B. **References**

Reference	Title
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)

   C. **Tools/Equipment**

   NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1544	Ladder - Access, Forward Electrical Equipment Bay Door (Access Door 112AL) Part #: J12001-20 Supplier: 81205

   D. **Location Zones**

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well

   E. **Installation Procedure**

   SUBTASK 44-21-01-860-002

   (1)   Make sure that this circuit breaker is open and has safety tag:

   Right Power Management Panel, P210

Row	Col	Number	Name
E	5	C23403	VIDEO PGMS & CTRL

   SUBTASK 44-21-01-940-002

   (2)   Use the forward electrical equipment bay door (access door 112AL) access ladder, SPL-1544 to get access to the landscape camera - upper module.

   SUBTASK 44-21-01-420-001

   (3)   To install the upper module:

⚠️ **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.

   (a)   ESDS Handling for Metal Encased Unit Installation, TASK 20-41-01-400-803

      If required, remove the protective covers on the Upper-to-Lower Camera Module electrical connectors.

   (b)   Carefully position the upper module [3] on the lower module.

   (c)   Install and tighten the four bolts [1] and washers [2] that hold the upper module [3] to the lower module [9].

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    (d)   Connect the electrical connector [11] to the upper module.

    SUBTASK 44-21-01-860-003

(4)   Remove the safety tag and close this circuit breaker:

Right Power Management Panel, P210

Row	Col	Number	Name
E	5	C23403	VIDEO PGMS & CTRL

——— **END OF TASK** ———

TASK 44-21-01-000-803

4.   <u>Landscape Camera Lower Module - Removal</u>
Figure 401

  A. **Tools/Equipment**

    <u>NOTE</u>: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1544	Ladder - Access, Forward Electrical Equipment Bay Door (Access Door 112AL)
	Part #: J12001-20 Supplier: 81205

  B. **Location Zones**

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well

  C. **Removal Procedure**

    SUBTASK 44-21-01-860-004

(1)   Open this circuit breaker and install safety tag:

Right Power Management Panel, P210

Row	Col	Number	Name
E	5	C23403	VIDEO PGMS & CTRL

    SUBTASK 44-21-01-940-003

(2)   Use the forward electrical equipment bay door (access door 112AL) access ladder, SPL-1544 to get access to the landscape camera installation.

    SUBTASK 44-21-01-010-003

(3)   Do this task to remove the upper module [3]:

Landscape Camera Upper Module - Removal, TASK 44-21-01-000-802.

    SUBTASK 44-21-01-020-002

(4)   Remove the Lower Camera Module:

    (a)   Carefully remove any sealant from the bonding strap [6] and AFT outboard mounting bolt [4].

    (b)   Remove the AFT outboard mounting bolt [4], 2 washers [5], and bonding strap [6]. Keep the hardware for the installation.

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  (c) Remove the mounting bolt [7] and washer [8] from the FWD outboard, FWD inboard, and AFT inboard positions. Keep the hardware for the installation.

  (d) Carefully lift the lower module [9] from the mounting brackets.

  (e) Under the lower module there are shims [10].

    1) If the shims are loose, identify them with their correct mounting position and then remove them.

    2) Keep the shims for the installation.

———— **END OF TASK** ————

TASK 44-21-01-400-803

5. <u>Landscape Camera Lower Module - Installation</u>
  Figure 401

 A. **References**

Reference	Title
SWPM 20-20-00	Standard Wiring Practices Manual

 B. **Tools/Equipment**

  <u>NOTE</u>: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meters - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550).
	Part #: 620LK Supplier: 1CRL2
	Part #: M1 Supplier: 3AD17
	Part #: T477W Supplier: 01014
	Opt Part #: M1B Supplier: 3AD17
SPL-1544	Ladder - Access, Forward Electrical Equipment Bay Door (Access Door 112AL)
	Part #: J12001-20 Supplier: 81205

 C. **Consumable Materials**

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
B01008	Solvent - Final Cleaning Of Metal Prior To Non-Structural Bonding - Series 88	
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5 Class A

 D. **Location Zones**

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well

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ARO 001-015 (Continued)

E. Installation Procedure

SUBTASK 44-21-01-860-005

(1)   Make sure that this circuit breaker is open:

Right Power Management Panel, P210

Row	Col	Number	Name
E	5	C23403	VIDEO PGMS & CTRL

SUBTASK 44-21-01-940-004

(2)   Use the forward electrical equipment bay door (access door 112AL) access ladder, SPL-1544 to get access to the landscape camera installation.

SUBTASK 44-21-01-110-001

(3)   Prepare the bonding surfaces:

(a)   Examine the bonding strap and carefully remove any sealant from the old installation.

NOTE: Care must be taken to avoid scratching the bonding strap finish.

(b)   Clean the bonding surfaces with Series 88 solvent, B01008 and cotton wiper, G00034.

SUBTASK 44-21-01-420-002

(4)   Install the lower module [9]:

(a)   If necessary, place the mount shims [10] in their correct positions.

(b)   Put the lower camera module [9] into its mounting position.

(c)   Install the mounting bolts [7] and washers [8] in the FWD outboard, FWD inboard, and AFT inboard positions.

NOTE: Do not tighten the mounting bolts at this time.

(d)   Install the AFT outboard mounting bolt [4], 2 washers [5], and bonding strap [6].

1)   Make sure the bonding strap is between the 2 washers.

(e)   Tighten the mounting bolts.

1)   Make sure the lower module is flush with the outer skin panel +/- .05 inches.

(f)   Remove the protective covers from the lower-to-upper module electrical connectors.

SUBTASK 44-21-01-760-001

(5)   Measure the resistance between the bonding strap terminal and the airplane structure with an intrinsically safe approved bonding meter, COM-1550 (SWPM 20-20-00).

(a)   Make sure the resistance is .001 ohm or less.

SUBTASK 44-21-01-390-001

(6)   Seal the bonding strap [6] and bolt [4] with sealant, A00247.

SUBTASK 44-21-01-410-001

(7)   Install the landscape camera - upper module [3]:

Do this task: Landscape Camera Upper Module - Installation, TASK 44-21-01-400-802.

——— **END OF TASK** ———

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TASK 44-21-01-000-804

6. <u>High Definition Landscape Camera System Removal</u>

    A.   **General**

        (1)   This task includes the steps to remove the High Definition Landscape Camera System.

    B.   **Tools/Equipment**

       <u>NOTE</u>: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1544	Ladder - Access, Forward Electrical Equipment Bay Door (Access Door 112AL)
	Part #: J12001-20 Supplier: 81205

    C.   **Location Zones**

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well

    D.   **Removal Procedure**

      SUBTASK 44-21-01-860-006

        (1)   Open this circuit breaker and install safety tag:

           Right Power Management Panel, P210

Row	Col	Number	Name
E	5	C23403	VIDEO PGMS & CTRL

      SUBTASK 44-21-01-940-005

        (2)   Use the forward electrical equipment bay door (access door 112AL) access ladder, SPL-1544 to get access to the HD landscape camera system.

      SUBTASK 44-21-01-000-002

        (3)   To remove the HD landscape camera system do these steps:

⚠️ **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.

          (a)   Disconnect the electrical connector [11].

          (b)   Put protective covers on the electrical connectors.

          (c)   Carefully remove any sealant from the bonding strap [6] and AFT outboard mounting bolt [4].

          (d)   Remove the AFT outboard mounting bolt [4], two washers [5], and bonding strap [6]. Keep the hardware for the installation.

          (e)   Remove the mounting bolt [7] and washer [8] from the FWD outboard, FWD inboard, and AFT inboard positions. Keep the hardware for the installation.

          (f)   Carefully lift the HD landscape camera system from the mounting brackets.

          (g)   Under the HD landscape camera system there are shims [10].
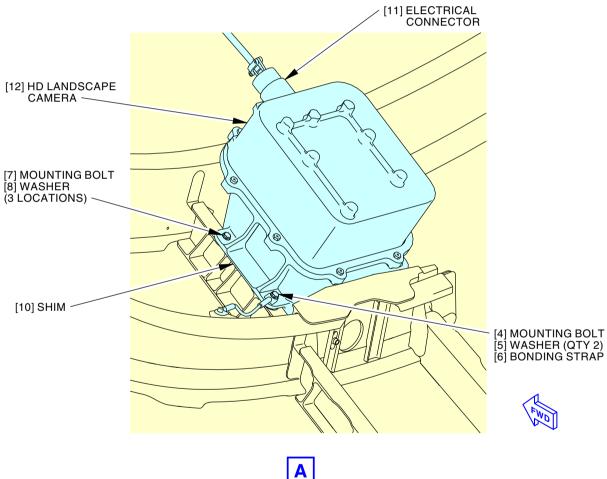
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      1)   If the shims are loose, identify them with their correct mounting position and then remove them.

      2)   Keep the shims for the installation.

————— **END OF TASK** —————

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A

FORWARD ACCESS
DOOR, 112AL

[11] ELECTRICAL
CONNECTOR

[12] HD LANDSCAPE
CAMERA

[7] MOUNTING BOLT
[8] WASHER
(3 LOCATIONS)

[10] SHIM

[4] MOUNTING BOLT
[5] WASHER (QTY 2)
[6] BONDING STRAP

FWD

A

2523375 S0000593373_V1

HD Landscape Camera System Installation
Figure 402/44-21-01-990-803

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TASK 44-21-01-400-804

7. <u>High Definition Landscape Camera System Installation</u>

A. **General**

(1) This task includes the steps to install the High Definition Landscape Camera System.

B. **References**

Reference	Title
SWPM 20-20-00	Standard Wiring Practices Manual

C. **Tools/Equipment**

<u>NOTE</u>: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meters - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550).
	Part #: 620LK Supplier: 1CRL2
	Part #: M1 Supplier: 3AD17
	Part #: T477W Supplier: 01014
	Opt Part #: M1B Supplier: 3AD17
SPL-1544	Ladder - Access, Forward Electrical Equipment Bay Door (Access Door 112AL)
	Part #: J12001-20 Supplier: 81205

D. **Consumable Materials**

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
B01008	Solvent - Final Cleaning Of Metal Prior To Non-Structural Bonding - Series 88	
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5 Class A

E. **Location Zones**

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well

F. **Installation Procedure**

SUBTASK 44-21-01-860-007

(1) Make sure that this circuit breaker is open and has safety tag:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C23403	VIDEO PGMS & CTRL

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SUBTASK 44-21-01-940-006

(2) Use the forward electrical equipment bay door (access door 112AL) access ladder, SPL-1544 to get access to the HD landscape camera system.

SUBTASK 44-21-01-110-002

(3) Prepare the bonding surfaces:

    (a) Examine the bonding strap and carefully remove any sealant from the old installation.

       NOTE: Care must be taken to avoid scratching the bonding strap finish.

    (b) Clean the bonding surfaces with Series 88 solvent, B01008 and cotton wiper, G00034.

SUBTASK 44-21-01-420-003

(4) Install the HD landscape camera [12]:

    (a) If necessary, place the mount shims [10] in their correct positions.

    (b) Put the HD landscape camera [12] into its mounting position.

    (c) Install the mounting bolts [7] and washers [8] in the FWD outboard, FWD inboard, and AFT inboard positions.

       NOTE: Do not tighten the mounting bolts at this time.

    (d) Install the AFT outboard mounting bolt [4], two washers [5], and bonding strap [6].

       1) Make sure the bonding strap is between the 2 washers.

    (e) Tighten the mounting bolts.

       1) Make sure the HD landscape camera is flush with the outer skin panel +/- .05 inches.

    (f) Remove the protective cover from the electrical connectors.

SUBTASK 44-21-01-760-002

(5) Measure the resistance between the bonding strap terminal and the airplane structure with an intrinsically safe approved bonding meter, COM-1550 (SWPM 20-20-00).

    (a) Make sure the resistance is .001 Ω or less.

SUBTASK 44-21-01-390-002

(6) Seal the bonding strap [6] and mounting bolt [4] with sealant, A00247.

——— **END OF TASK** ———

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PASSENGER ENTERTAINMENT SYSTEM (PES) VIDEO - MAINTENANCE PRACTICES

1.   <u>General</u>

   A.   This procedure has these tasks:

   (1)   Power On the Video Entertainment System.

   (2)   Power Off the Video Entertainment System.

   (3)   Portable Data Loader (PDL) Set Up Procedure.

   (4)   Phase 1 Software Download Procedure.

   (5)   Phase 2 Software Download Procedure.

   (6)   Content Loading Procedure.

   (7)   Content Crossload Procedure.

   (8)   Configuration Check Procedure.

   (9)   Touchscreen Calibration Procedure.

   (10) Sequence IP Addresses Procedure

   (11) Reset Seats Procedure

   (12) Digital Server Unit (DSU) Deactivation and Reactivation Procedure

   (13) Corrupt Software Module Replacement Procedure

   B.   Software Download Description

   (1)   Every effort has been made to permit software functionality for the TopSeries system to be modified using aircraft loadable software. This permits the system to be upgraded or enhanced without changing the hardware configuration of the aircraft. Depending on the specific configuration of the aircraft, software for the system can be provided on a variety of storage media including the following:

   (a)   CD ROM.

   (b)   USB Connection.

   (2)   Software is often provided on multiple media, each of which must be loaded into the system.

   (3)   Software download of the system is divided into the following two phases:

   (a)   Phase 1 Download

      1)   Installs the proper configuration of software into the download server.

   (b)   Phase 2 Download

      1)   Distributes the software to the required LRUs.

   (4)   Phase 1 Download Description

   (a)   Phase 1 download process consists of loading selected software components from the distribution media to the system download server.

   (b)   The Phase 1 download process is used to declare the desired software configuration for the aircraft. All subsequent maintenance actions (Download and Configuration Check) use the configuration list created by the Phase 1 download process as the aircraft configuration baseline. From each media, maintenance personnel can select either specific software component (by part number) or groups of software components called packages to be loaded onto the download server. The download server maintains a "desired configuration" database based on the most recent software loaded in this manner.

    (c)   Maintenance personnel are provided with a Phase 1 inventory screen which identifies the software components (by software part number and LRU type) which are in the systems "desired configuration" list. This list should be verified against the configuration documentation maintained by the airline. Extra components should be deleted.

  (5)   Phase 2 Download Description

    (a)   The Phase 2 download process uses the "desired configuration" list created by the Phase 1 download to install the proper software into each system LRU. The Phase 2 download must be performed on each LRU type independently. To perform a Phase 2 download, the maintenance person selects an LRU type to be downloaded and initiates the process. Progress is presented and the user is informed when the process is complete. The system provides for a download on one LRU or for all LRUs of a specified type.

    (b)   When a download is initiated by maintenance personnel, all aircraft loadable software present in the "desired configuration" list for the selected LRU/LRU type is to be loaded. If an LRU contains a software component which is not on the list, it will be removed from the LRU. If an LRU is missing a software component or has a different component from the list, it will be loaded by the LRU from the download server.

    (c)   Software download is only required when the software (including database) is changed or when an LRU is replaced. The system will not download a software component if it is already present in the LRU.

    (d)   System operation has a certain level of hierarchy with respect to maintenance processes including download. Because of this, components should be configured in the following order:

        1)   Head End Components.

        2)   Area Components.

        3)   Seat Components.

    (e)   It is also important that the proper database be loaded into the ADBs before an IP sequencing operation is performed.

    (f)   For i5000 system, the order should be as follows:

        1)   AVC-D

        2)   DSU-D3s

        3)   ADB-Gs

        4)   QSEBs

        5)   SVDUs

        6)   TPCUs

        7)   iCMT

    (g)   After a Phase 2 download is performed, the configuration information available to Configuration Check is automatically updated to reflect changes which have occurred in the system.

  C.   Software is loaded to the TopSeries LRU's in a two-phase process, in which the code is first uploaded from the CD-ROM on the PDL to the AVC-D hard disk drive and then downloaded to individual LRU types or individual LRU's.

  D.   When downloading software, it is important to carefully verify that the correct files to be downloaded were successfully uploaded and that all of the necessary files are selected. An error here could result in missing or an incompatible file on an LRU type that may prevent further downloads to correct the problem.

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TASK 44-28-00-860-801

2. **Power On the Video Entertainment System**

   A. **General**

     (1)   This procedure tells you how to turn on the power for the video entertainment system.

   B. **Location Zones**

Zone	Area
117	Main Equipment Center, Left
118	Main Equipment Center, Right
200	Upper Half of Fuselage

   C. **Power On Procedure**

     SUBTASK 44-28-00-860-001

     (1)   Make sure that these circuit breakers are closed:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3
D	21	C23355	VOD
G	17	C21659	IFE CLG SMK DET
G	19	C21656	IFE CLG FAN CTRL
G	23	C23641	ENTMT CTRL L
G	26	C21607	L LAV/GLY FAN CTRL

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
B	19	C24451	FLT DK SW PWR DISTR 1
D	14	C24452	FLT DK SW PWR DISTR 2
E	5	C23403	VIDEO PGMS & CTRL
E	8	C23471	VIDEO PGMS & CTRL B
G	2	C21608	R LAV/GLY FAN CTRL
G	12	C23658	IFE MASTER CTL
H	8	C23616	ENTMT CTRL R
L	23	C24688	IFE SEATS FLT DECK SW

These circuit breakers are inoperative and should remain open:

Left Power Management Panel, P110

Row	Col	Number	Name
C	21	C23409	VIDEO DISTR (INOP)
D	27	C23401	MULTP AUDIO ENTMT CTRL (INOP)
E	23	C23408	VIDEO DISTR 2 (INOP)
F	28	C23407	VIDEO DISTR 1 (INOP)
J	10	C23476	VIDEO DISTR (INOP)

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Right Power Management Panel, P210

Row	Col	Number	Name
C	1	C23413	VIDEO DISTR 4 (INOP)
C	7	C23462	VIDEO DISTR 1A (INOP)
C	13	C23405	CABIN PRINTER (INOP)
F	1	C23421	VIDEO DISTR 5 (INOP)
F	2	C23422	VIDEO DISTR 6 (INOP)

SUBTASK 44-28-00-860-002

(2)   Make sure the IFE/PASS SEATS switch on the pilot's overhead panel P5 is set to ON.

SUBTASK 44-28-00-860-003

⚠️ **CAUTION**	DO NOT MOVE THE MASTER POWER SWITCH QUICKLY OFF TO ON. YOU MUST WAIT A MINIMUM OF ONE MINUTE FOR THE HARD DISK DRIVES TO STOP SPINNING BEFORE YOU APPLY POWER TO THE SYSTEM. IF YOU DO NOT, IT WILL CAUSE DAMAGE TO THE HARD DISK DRIVES.

⚠️ **CAUTION**	MAKE SURE THAT THE AIR COOLING SYSTEM IS ON BEFORE THE IFE SYSTEM IS ON. IF THE IFE SYSTEM BECOMES TOO HOT, DAMAGE CAN OCCUR.

NOTE: Do not use the system outside of the recommended normal operation temperatures. Otherwise, the system may not operate optimally.

(3)   Do these steps at the Video Control Center (VCC) to power on the entertainment system:

(a)   Set the MASTER POWER Switch to ON.

(b)   Make sure these switches (if installed) are set to ON:

   1)   PC POWER

   2)   HEAD END POWER

(c)   Make sure the IFE LOSS OF COOLING light is not on.

(d)   Wait 15 minutes for the entertainment system to complete the power on sequence.

(e)   Make sure that the Welcome screen shows on the Interactive Cabin Management Terminal (iCMT).

   NOTE: The AVC ping dots will always have one dot remaining red.

(f)   To log in to the iCMT ENTERTAINMENT screens, do the steps that follow at the iCMT:

   1)   At the iCMT MAIN MENU screen, select the Entertainment button.

      a)   Make sure that the ENTERTAINMENT PASSWORD screen is shown.

   2)   At the ENTERTAINMENT PASSWORD screen, use the keypad to enter the applicable entertainment passcode.

   3)   Once the passcode has been entered, select the OK button.

      a)   Make sure the FLIGHT INFORMATION screen shows.

(g)   If it is necessary to log in to the iCMT MAINTENANCE screen, do the steps that follow:

   1)   From the iCMT MAIN MENU screen, select the Maintenance button.

      a)   Make sure that the MAINTENANCE PASSWORD screen shows.

   2)   From the MAINTENANCE PASSWORD screen, use the keypad to enter the applicable maintenance passcode.

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    3)   Once the passcode has been entered, select the OK button.

        a)   Make sure the MAINTENANCE screen shows.

———— **END OF TASK** ————

TASK 44-28-00-860-802

3.   <u>Power Off the Video Entertainment System</u>

  A.   **General**

    (1)   This procedure tells you how to turn off the video entertainment system.

  B.   **Location Zones**

Zone	Area
200	Upper Half of Fuselage

  C.   **Power Off Procedure**

SUBTASK 44-28-00-860-004

⚠️ **CAUTION**	DO NOT MOVE THE MASTER POWER SWITCH QUICKLY OFF TO ON. YOU MUST WAIT A MINIMUM OF ONE MINUTE FOR THE HARD DISK DRIVES TO STOP SPINNING BEFORE YOU APPLY POWER TO THE SYSTEM. IF YOU DO NOT, IT WILL CAUSE DAMAGE TO THE HARD DISK DRIVES.

    (1)   AIRPLANES WITH CLOSE FLIGHT BUTTON ON THE iCMT MAIN MENU SCREEN;

        To log out of the passenger entertainment system, do the steps that follow:

        (a)   At the iCMT MAIN MENU screen, select the Close Flight button.

            1)   Make sure that the confirmation pop-up is shown.

        (b)   Select the Confirm button at the pop-up window.

    (2)   AIRPLANES WITH SYSTEM SHUTDOWN BUTTON ON THE iCMT MAIN MENU SCREEN;

        To log out of the passenger entertainment system, do the steps that follow:

        (a)   At the iCMT MAIN MENU screen, select the System Shutdown button.

            1)   Make sure that the System Shutdown confirmation pop-up is shown.

        (b)   Select the OK button at the pop-up window.

            1)   Make sure that the SYSTEM SHUTDOWN PASSWORD screen is shown.

        (c)   At the SYSTEM SHUTDOWN PASSWORD screen, use the keypad to enter the applicable passcode.

            1)   Make sure that the System Shutdown Progress bar is shown.

            2)   When the System Shutdown Progress bar reaches 100%, Make sure that the message "It is now safe to power down the IFE system by pressing the IFE Master Reset button. To turn back on, press IFE Master Reset button again" is shown.

    (3)   AIRPLANES WITH CLOSE FLIGHT BUTTON ON THE iCMT MAIN MENU SCREEN;

        To power off the entertainment system, do this step:

        (a)   At the iCMT MAIN MENU screen, select the Close Flight button.

            1)   Make sure that the confirmation pop-up is shown.

        (b)   Select the Confirm button at the pop-up window.

        (c)   At the Video Control Center (VCC), set the MASTER POWER switch to the OFF position.

        (d)   Make sure these switches (if installed) are set to OFF:

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      1)   PC POWER

      2)   HEAD END POWER

(4)   AIRPLANES WITH SYSTEM SHUTDOWN BUTTON ON THE iCMT MAIN MENU SCREEN;

    To power off the entertainment system, do this step:

    (a)   At the iCMT MAIN MENU screen, select the System Shutdown button.

        1)   Make sure that the System Shutdown confirmation pop-up is shown.

    (b)   Select the OK button at the pop-up window.

        1)   Make sure that the SYSTEM SHUTDOWN PASSWORD screen is shown.

    (c)   At the SYSTEM SHUTDOWN PASSWORD screen, use the keypad to enter the applicable passcode.

        1)   Make sure that the System Shutdown Progress bar is shown.

        2)   When the System Shutdown Progress bar reaches 100%, Make sure that the message "It is now safe to power down the IFE system by pressing the IFE Master Reset button. To turn back on, press IFE Master Reset button again" is shown.

    (d)   At the Video Control Center (VCC), set the MASTER POWER switch to the OFF position.

    (e)   Make sure these switches (if installed) are set to OFF:

        1)   PC POWER

        2)   HEAD END POWER

——————— **END OF TASK** ———————

    TASK 44-28-00-860-803

4.   **Portable Data Load (PDL) Set Up Procedure**

    A.   **General**

    (1)   This procedure tells you how to connect and activate, and to disconnect and deactivate, the Portable Data Loader (PDL).

    B.   **PDL Set Up Procedure**

    SUBTASK 44-28-00-860-022

    (1)   Make sure that the Passenger Entertainment System is initialized (Power On the Video Entertainment System, TASK 44-28-00-860-801).

    SUBTASK 44-28-00-470-017

    (2)   To connect the PDL, do the steps that follow:

    (a)   Connect the RJ45 Ethernet cable to the PDL.

    (b)   Connect the RJ45 Ethernet cable to the first Ethernet port on the VCC/PWS.

    (c)   If applicable, connect the PDL external power source.

    (3)   To activate the PDL, do the steps that follow:

    (a)   Make sure that the PDL power is off.

    (b)   Insert the removable hard disk drive with the current software and content media disk into the PDL side slot.

    (c)   To power on the PDL, do these steps:

        1)   Open the PDL cover to show the keyboard.

        2)   Push the ON button.

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   a)   Make sure that the PDL boot-up process shows.

3)   The boot-up process is complete when the PDL DESKTOP LOG ON screen shows and the message: TO BEGIN, CLICK YOUR USER NAME shows.

   NOTE: The boot-up process takes approximately one minute.

4)   From the PDL DESKTOP LOG ON screen, click on the iSeries icon.

5)   From the LOG ON screen, type in iSeries for the password.

6)   Click the OK button.

   a)   Make sure that the PDL DESKTOP screen shows.

SUBTASK 44-28-00-470-018

(4)   To deactivate and disconnect the PDL, do the steps that follow:

(a)   From the PDL DESKTOP screen, click the Start button.

   1)   Make sure that the START MENU shows.

(b)   From the START MENU, select Shut Down and select Ok.

   1)   Make sure that the PDL stops all software applications and powers off.

(c)   Disconnect the PDL RJ45 Ethernet cable from the VCC/PWS port.

(d)   Disconnect the RJ45 Ethernet cable from the PDL.

(e)   Close the PDL lid and secure the fasteners.

C.   PDL-G (Portable Data Loader - Gigabit) Setup Procedure

SUBTASK 44-28-00-860-023

(1)   Make sure that the Passenger Entertainment System is initialized (Power On the Video Entertainment System, TASK 44-28-00-860-801).

SUBTASK 44-28-00-470-019

(2)   To activate the PDL-G (Portable Data Loader - Gigabit), do the steps that follow:

(a)   To power on the PDL-G, open the cover and press and hold the OK button for approximately 0.25 seconds.

(b)   Once the initialization process is complete, the PDL-G SYSTEM READY message shows.

   NOTE: During the initialization process, the LCD shows the POWER ON message first, and then the PDL-G INITIALIZING message. After approximately one minute, the LCD shows the SYSTEM STARTING message, and then the SYSTEM READY message. The initialization process takes approximately 1 to 3 minutes.

(c)   Connect a Category 6 Ethernet cable to the PDL-G Load 1 port.

   NOTE: The PDL-G contains two identical data loaders that can be used at the same time. To use data loader 2, use the Load 2 port.

(d)   Connect the Category 6 Ethernet cable to the first Ethernet port on the VCC/PWS.

   NOTE: VCC/PWS Ethernet port 1 provides 1-Gb Ethernet access. VCC/PWS Ethernet port 2 and port 3 provide 100-Mb Ethernet access. Using port 2 or port 3 slows down the loading process.

SUBTASK 44-28-00-470-020

(3)   To deactivate and disconnect the PDL-G, do the steps that follow:

(a)   To power off the PDL-G, push and hold the OK button for 0.25 seconds.

   1)   Make sure that the CONFIRM SYSTEM SHUTDOWN message shows.

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      (b)   Push the OK button to confirm system shutdown.

          1)   Make sure that the SYSTEM SHUTDOWN IN PROGRESS message shows, and then the power turns off automatically.

      (c)   Disconnect the Category 6 Ethernet cable from the VCC/PWS and PDL-G.

      (d)   Close the cover.

————— END OF TASK —————

TASK 44-28-00-470-801

5.   **Phase 1 Software Download Procedure**

   A.   **General**

     (1)   The Phase 1 procedure uploads software from the CD-ROM on the PDL to the AVC-D hard disk drive. The software can be uploaded either by software package or by file.

     (2)   Old software components left on the Phase 1 directory may be incompatible and cause SEB corruption.

     (3)   To prevent leaving old software on the Phase 1 list, it is recommended that the old Phase 1 list be deleted.

   B.   **Procedure**

⚠️ **CAUTION**	DO NOT MOVE THE MASTER POWER SWITCH QUICKLY OFF TO ON. YOU MUST WAIT A MINIMUM OF ONE MINUTE FOR THE HARD DISK DRIVES TO STOP SPINNING BEFORE YOU APPLY POWER TO THE SYSTEM. IF YOU DO NOT, IT WILL CAUSE DAMAGE TO THE HARD DISK DRIVES.

⚠️ **CAUTION**	MAKE SURE THAT THE AIR COOLING SYSTEM IS ON BEFORE THE IFE SYSTEM IS ON. IF THE IFE SYSTEM BECOMES TOO HOT, DAMAGE CAN OCCUR.

NOTE: Do not use the system outside of the recommended normal operation temperatures. Otherwise, the system may not operate optimally.

SUBTASK 44-28-00-860-005

     (1)   Make sure the power is on for the Passenger Entertainment System. (Power On the Video Entertainment System, TASK 44-28-00-860-801)

SUBTASK 44-28-00-470-003

     (2)   Do this task: Portable Data Load (PDL) Set Up Procedure, TASK 44-28-00-860-803.

SUBTASK 44-28-00-470-021

     (3)   To do a Phase 1 Software Download, do the steps that follow:

       (a)   Make sure that the PDL is connected and working.

       (b)   From the MAINTENANCE screen, select the Download button.

          1)   Make sure that the DOWNLOAD screen shows.

       (c)   From the DOWNLOAD screen, select the Update Software button.

          1)   Make sure that the CURRENT SOFTWARE CONFIGURATION screen shows with a list of all currently loaded IFES software components and their respective part numbers.

       (d)   From the CURRENT SOFTWARE CONFIGURATION screen, select the Delete button.

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    1)   Make sure that the SOFTWARE REMOVAL screen shows.

(e)   From the SOFTWARE REMOVAL screen, select all files listed by checking each box.

    NOTE: The checkbox at the upper left corner of the list can also be used to select all checkboxes.

(f)   Select the Delete button.

    1)   Make sure that the Software Removal list goes blank.

(g)   Select the Done button.

    1)   Make sure that the CURRENT SOFTWARE CONFIGURATION screen shows.

(h)   From the CURRENT SOFTWARE CONFIGURATION screen, select the Update button.

    1)   Make sure that the SOURCE SELECTION screen shows.

(i)   From the SOURCE SELECTION screen, select either the PDL, CD, ZIP, or Floppy Disk radio button.

(j)   From the SOURCE SELECTION screen, select either the By File button or the By Package button.

    1)   Make sure that the SOFTWARE LOAD BY FILE screen or the SOFTWARE LOAD BY PACKAGE screen shows.

(k)   Scroll down the SOFTWARE LOAD BY FILE screen or the SOFTWARE LOAD BY PACKAGE screen and check each box that is shown next to each listed file.

    NOTE: The checkbox at the upper left corner of the list can also be used to select all checkboxes.

(l)   Select the Update button.

    1)   Make sure that the progress bar shows.

    NOTE: This can take approximately 7 to 10 minutes depending on the size of the files being updated.

(m)   When the progress bar reaches 100%, select the OK button.

    1)   Make sure that the SOFTWARE LOAD BY FILE screen or the SOFTWARE LOAD BY PACKAGE screen shows.

(n)   From the SOFTWARE LOAD BY FILE screen or the SOFTWARE LOAD BY PACKAGE screen, select the Done button.

    1)   Make sure that the CURRENT SOFTWARE CONFIGURATION screen shows.

(o)   On the CURRENT SOFTWARE CONFIGURATION screen, make sure that the list of software matches all components required for the system software build.

(p)   Remove the Software CD from the PDL, if applicable.

SUBTASK 44-28-00-860-024

(4)   Do this task to deactivate and disconnect the PDL: Portable Data Load (PDL) Set Up Procedure, TASK 44-28-00-860-803.

───── **END OF TASK** ─────

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TASK 44-28-00-470-802

6. **Phase 2 Software Download Procedure**

    A. **General**

        (1)   The Phase 2 procedure is a software download from the AVC-D hard disk drive to selected LRU processors.

            (a)   The procedures for downloading to the AVC-D, DSU-D3s, ADB-Gs, QSEBs, iCMTs, SVDUs, and TPCU are presented as separate procedures.

        (2)   The proper database must be loaded into the ADBs before IP addresses are sequenced.

        (3)   This is the order of software download: AVC-D; DSU-D3s; ADB-Gs; QSEBs; iCMTs; SVDUs; TPCU.

        (4)   After a Phase 2 download is complete, the Configuration Check is automatically updated to reflect changes that have occurred in the system.

    B. **Procedure**

⚠️ **CAUTION**	MAKE SURE THAT THE AIR COOLING SYSTEM IS ON BEFORE THE IFE SYSTEM IS ON. IF THE IFE SYSTEM BECOMES TOO HOT, DAMAGE CAN OCCUR.

NOTE: While you do this procedure, make sure that aircraft power is not interrupted. Put "WORK-IN-PROGRESS" placard by the forward-most aircraft door and inside the flight deck so as to alert maintenance personnel. Loss of power can interrupt the procedure and cause damage to the system.

NOTE: Do the software download procedures as written. If you do not obey the procedures, failure of the LRUs can occure.

NOTE: Do not use the system outside of the recommended normal operation temperatures. Otherwise, the system may not operate optimally.

SUBTASK 44-28-00-860-008

        (1)   Make sure that the power is on for the Passenger Entertainment System(Power On the Video Entertainment System, TASK 44-28-00-860-801).

SUBTASK 44-28-00-860-010

        (2)   Do this task. Portable Data Load (PDL) Set Up Procedure, TASK 44-28-00-860-803.

            (a)   Make sure that the PDL is connected and activated.

    C. **Phase 2 Software Download to the AVC-D**

SUBTASK 44-28-00-470-006

        (1)   To do the Phase 2 Software Download to the AVC-D, do the steps that follow:

            NOTE: If the AVC-D is replaced, the system needs to be power-cycled and IP Sequenced again (Power On the Video Entertainment System, TASK 44-28-00-860-801 and Power Off the Video Entertainment System, TASK 44-28-00-860-802).

            (a)   From the Maintenance Screen at the PDL or iCMT, select the Download button.

                1)   Make sure that the Download Screen shows.

            (b)   From the Download Screen, select the Download LRU button.

                1)   Make sure that the LRU LOAD Screen shows.

            (c)   From the LRU LOAD screen, select the AVC-D radio button, and then select the All Selected LRUs button.

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    1)   Make sure that the DOWNLOAD screen shows with a progress bar.

        NOTE: The download may take approximately 15 to 20 minutes depending on the size of the files being downloaded.

  (d)   When the progress bar shows 100 percent, select the OK button.

    1)   Make sure that the SYSTEM CONFIG - DETAIL screen shows.

        NOTE: If the download does not complete and/or times out, repeat the download process as many times as necessary until the download completes.

  (e)   From the SYSTEM CONFIG - DETAIL screen, make sure that the files are downloaded to the AVC-D.

D.   Phase 2 Software download to the DSU-D3

    SUBTASK 44-28-00-470-007

  (1)   To do the Phase 2 Software Download to the DSU-D3, do the steps that follow:

    (a)   From the MAINTENANCE screen at the PDL or iCMT, select the Download button.

      1)   Make sure that the DOWNLOAD screen shows.

    (b)   From the DOWNLOAD screen, select the Download LRU button.

      1)   Make sure that the LRU LOAD screen shows.

    (c)   From the LRU LOAD screen, select the DSU-D3 radio button, and then select the All Selected LRUs button.

      1)   Make sure that the DOWNLOAD screen shows with a progress bar.

    (d)   When the progress bar shows 100 percent, select the OK button.

      1)   Make sure that the SYSTEM CONFIG - DETAIL screen shows.

         NOTE: If the download does not complete and/or times out, repeat the download process as many times as necessary until the download completes.

    (e)   From the SYSTEM CONFIG - DETAIL screen, make sure that the files are downloaded to the DSU-D3.

E.   Phase 2 Software Download to ADB-G

    SUBTASK 44-28-00-470-008

  (1)   To do the Phase 2 Software Download to the ADB-G, do the steps that follow:

    (a)   From the MAINTENANCE screen at the PDL or iCMT, select the Download button.

      1)   Make sure that the DOWNLOAD screen shows.

    (b)   From the DOWNLOAD screen, select the Download LRU button.

      1)   Make sure that the LRU LOAD screen shows.

    (c)   From the LRU LOAD screen, select the ADB-G radio button, and then select the All Selected LRUs button.

      1)   Make sure that the DOWNLOAD screen shows with a progress bar.

    (d)   When the progress bar shows 100 percent, select the OK button.

      1)   Make sure that the SYSTEM CONFIG - DETAIL screen shows.

         NOTE: If the download does not complete and/or times out, repeat the download process as many times as necessary until the download completes.

    (e)   From the SYSTEM CONFIG - DETAIL screen, make sure that the files are downloaded to the ADB-G.

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     (f)   Do this task: Sequence IP Addresses Procedure, TASK 44-28-00-820-802.

F.   **Phase 2 Software Download to QSEB.**

    SUBTASK 44-28-00-470-010

    (1)   To do the Phase 2 Software Download to the QSEB, do the steps that follow:

        (a)   From the MAINTENANCE screen at the PDL or iCMT, select the Download button.

            1)   Make sure that the DOWNLOAD screen shows.

        (b)   From the Download Screen, select the Download LRU button.

            1)   Make sure that the LRU LOAD Screen shows.

        (c)   From the LRU LOAD screen, select the QSEB radio button, and then select the All Selected LRUs button.

            1)   Make sure that the DOWNLOAD screen shows with a progress bar.

                NOTE: The download may take approximately 15 to 20 minutes depending on the size of the files being downloaded.

        (d)   When the progress bar shows 100 percent, select the OK button.

            1)   Make sure that the SYSTEM CONFIG - DETAIL screen shows.

                NOTE: If the download does not complete and/or times out, repeat the download process as many times as necessary until the download completes.

        (e)   From the SYSTEM CONFIG - DETAIL screen, make sure that the files are downloaded to the QSEB.

        (f)   Do this task: Sequence IP Addresses Procedure, TASK 44-28-00-820-802.

G.   **Phase 2 Software Download to SVDU**

    SUBTASK 44-28-00-470-022

    (1)   To do the Phase 2 Software Download to the SVDU, do the steps that follow:

        (a)   From the MAINTENANCE screen at the PDL or iCMT, select the Download button.

            1)   Make sure that the DOWNLOAD screen shows.

        (b)   From the DOWNLOAD screen, select the Download LRU button.

            1)   Make sure that the LRU LOAD screen shows.

        (c)   From the LRU LOAD screen, select the SVDU radio button, and then select the All Selected LRUs button.

            1)   Make sure that the DOWNLOAD screen shows with a progress bar.

                NOTE: This can take approximately 24 to 40 minutes depending on the size of the files being downloaded.

        (d)   When the progress bar shows 100 percent, select the OK button.

            1)   Make sure that the SYSTEM CONFIG - DETAIL screen shows.

                NOTE: If the download does not complete and/or times out, repeat the download process as many times as necessary until the download completes.

        (e)   From the SYSTEM CONFIG - DETAIL screen, make sure that the files are downloaded to the SVDU.

        (f)   Do this task: Sequence IP Addresses Procedure, TASK 44-28-00-820-802.

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H.   **Phase 2 Software Download to iCMT**

SUBTASK 44-28-00-470-013

(1)   To do the Phase 2 Software Download to the iCMT, do the steps that follow:.

 (a)   From the MAINTENANCE screen at the PDL, select the Download button.

   1)   Make sure that the DOWNLOAD screen shows.

 (b)   From the DOWNLOAD screen, select the Download LRU button.

   1)   Make sure that the LRU LOAD screen shows.

 (c)   From the LRU LOAD screen, select the iCMT radio button, and then select the All Selected LRUs button.

   1)   Make sure that the DOWNLOAD screen shows with a progress bar.

     NOTE: This can take 15 minutes depending on the size of the files being downloaded.

 (d)   When the progress bar shows 100 percent, select the OK button.

   1)   Make sure that the SYSTEM CONFIG - DETAIL screen shows.

     NOTE: If the download does not complete and/or times out, repeat the download process as many times as necessary until the download completes.

 (e)   From the SYSTEM CONFIG - DETAIL screen, make sure that the files are downloaded to the iCMT.

 (f)   Do this task: Sequence IP Addresses Procedure, TASK 44-28-00-820-802.

I.   **Phase 2 Software Download to TPCU**

SUBTASK 44-28-00-470-012

(1)   To do the Phase 2 Software Download to the TPCUs, do the steps that follow:

 (a)   From the MAINTENANCE screen at the PDL or iCMT, select the Download button.

   1)   Make sure that the DOWNLOAD screen shows.

 (b)   From the DOWNLOAD screen, select the Download LRU button.

   1)   Make sure that the LRU LOAD screen shows.

 (c)   From the LRU LOAD screen, select the TPCU radio button, and then select the All Selected LRUs button.

   1)   Make sure that the DOWNLOAD screen shows with a progress bar.

     NOTE: This can take 10 to 15 minutes depending on the size of the files being downloaded.

 (d)   When the progress bar shows 100 percent, select the OK button.

   1)   Make sure that the SYSTEM CONFIG - DETAIL screen shows.

     NOTE: If the download does not complete and/or times out, repeat the download process as many times as necessary until the download completes.

 (e)   From the SYSTEM CONFIG - DETAIL screen, make sure that the files are downloaded to the TPCU.

 (f)   Do this task: Sequence IP Addresses Procedure, TASK 44-28-00-820-802.

————— **END OF TASK** —————

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TASK 44-28-00-470-803

7. __Content Loading Procedure__

   A. General

     (1) This procedure tells you how to load the Current Content Inventory List (CIL) and Dynamic CIL (DCIL) with the Portable Data Loader (PDL) or Portable Data Loader - Gigabit (PDL-G)

     (2) This procedure also tells you how to do Benchload Control.

   B. Content Loading Setup

SUBTASK 44-28-00-860-011

     (1) Make sure the power is on for the Passenger Entertainment System. (Power On the Video Entertainment System, TASK 44-28-00-860-801)

     (2) Do the task: Portable Data Load (PDL) Set Up Procedure, TASK 44-28-00-860-803.

   C. Load Current Content Inventory List (CIL) Procedure

NOTE: Do not use the system outside of the recommended normal operating temperature. Otherwise, the system may not operate optimally.

SUBTASK 44-28-00-470-016

     (1) From the MAINTENANCE screen, select Download button.

       (a) Make sure that the DOWNLOAD screen is shown.

     (2) At the DOWNLOAD screen, select Update Content button.

       (a) Make sure that the MANAGE CONTENT STATUS screen is shown.

     (3) At the MANAGE CONTENT STATUS screen, select the Update Content button.

       (a) Make sure that the MANAGE CONTENT – UPDATE CONTENT screen is shown.

     (4) At the MANAGE CONTENT – UPDATE CONTENT screen, select the Load CIL Inventory button.

       (a) Make sure that the MANAGE CONTENT – UPDATE CONTENT – LOAD CIL screen is shown.

       (b) Make sure that the PDL or PDL-G is detected.

         NOTE: It can take a few seconds for a data loader to be detected. If a data loader is not listed, click the Refresh button.

     (5) At the MANAGE CONTENT – UPDATE CONTENT – LOAD CIL screen, select the PDL or PDL-G from the Content Loader Detected list.

       (a) Make sure that a list of CILs found on the selected content loader is shown.

     (6) Scroll the list until the desired CIL is displayed and select the checkbox at the right of the CIL.

       (a) Make sure a red check mark appears in a desired spot.

     (7) Select Load Static Content button.

       (a) Make sure the CIL SELECTION CONFIRMATION dialog box appears, and the selected CIL is shown.

     (8) At the CIL SELECTION CONFIRMATION dialog box, select the Confirm button.

     NOTE: It can take a few seconds for the Confirm button to be shown.

       (a) Make sure that the MANAGE CONTENT - UPDATE CONTENT - CHANGE ACTIVE SELECTION screen is shown.

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(9)   At the MANAGE CONTENT - UPDATE CONTENT - CHANGE ACTIVE SELECTION screen, select the desired month.

NOTE: If nothing is displayed in the selection box, select the Refresh button.

(a)   Make sure the red check mark appears in the selected checkbox.

(10)   Select the Change Active Selection button.

(a)   Make sure the CONFIRM CHANGE ACTIVE SELECTION dialog box appears and the selected the month is shown.

(11)   At the CONFIRM CHANGE ACTIVE SELECTION dialog box, select the Confirm button.

NOTE: It can take a few seconds for the Confirm button to be shown.

(a)   Make sure the MANAGE CONTENT - STATUS - CIL LOADING DETAIL screen is shown.

(12)   At the MANAGE CONTENT - STATUS - CIL LOADING DETAIL screen, make sure status screen is updated.

NOTE: Select the Legend button to obtain color code information.

(a)   Make sure Content Download Status displays In progress on the progress bar.

(b)   Make sure the Content Crossload Status displays on the progress bar.

(13)   Make sure content is 100% loaded.

NOTE: This can take up to two hours.

NOTE: If only partial content is available, the line should indicate, No further content available.

(14)   At the Manage Content-Status-CIL Loading Detail screen, select Maintenance Menu button.

(a)   Make sure that the MAINTENANCE screen is shown.

D.   Resume from a stopped content load, do the steps that follow:

NOTE: These steps are necessary if the content load procedure was interrupted and could not be completed in a single attempt.

SUBTASK 44-28-00-470-026

(1)   From the MAINTENANCE screen, select Download button.

(a)   Make sure that the DOWNLOAD screen is shown.

(2)   At the DOWNLOAD screen, select Update Content button.

(a)   Make sure that the MANAGE CONTENT STATUS screen is shown.

(3)   At the MANAGE CONTENT STATUS screen, select Eng Control button.

(a)   Make sure that the MANAGE CONTENT – ENG CONTROL screen is shown.

(4)   Make sure that the Current State is set to Automatic. If not, select the Automatically Enable/Disable button.

(a)   Make sure that the content load restarts automatically.

E.   Load Dynamic Current Content Inventory List (DCIL) Procedure

NOTE: Do not use the system outside of the recommended normal operating temperature. Otherwise, the system may not operate optimally.

SUBTASK 44-28-00-470-023

(1)   To Load the Dynamic Current Content Inventory List (DCIL), do the steps that follow:

(a)   From the MAINTENANCE screen, select the Download button.

1)   Make sure that the DOWNLOAD screen is shown.

(b)   From the DOWNLOAD screen, select the Update Content button.

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    1)   Make sure that the MANAGE CONTENT STATUS screen is shown.

(c)   From the MANAGE CONTENT STATUS screen, select the Update Content button.

    1)   Make sure that the MANAGE CONTENT – UPDATE CONTENT screen is shown.

(d)   From the MANAGE CONTENT – UPDATE CONTENT screen, select the Load DCIL Inventory button.

    1)   Make sure that the MANAGE CONTENT – UPDATE CONTENT – LOAD DCIL screen is shown.

    2)   Make sure that the PDL or PDL-G is detected.

        NOTE: It can take a few seconds for a data loader to be detected. If a data loader is not listed, select the Refresh button.

(e)   At the MANAGE CONTENT – UPDATE CONTENT – LOAD DCIL screen, select the PDL or PDL-G from the Content Loader Detected list.

    1)   Make sure that a list of DCILs found on the selected content loader is shown.

(f)   Scroll the list until the desired DCIL is displayed and select the checkbox at the right of the CIL.

    1)   Make sure the red check mark appears in the selected checkbox.

(g)   Select the Load Dynamic Content button.

    1)   Make sure that the DCIL LOAD CONFIRMATION dialog box is shown.

(h)   At the DCIL LOAD CONFIRMATION dialog box, select the Confirm button.

    1)   Make sure that the MANAGE CONTENT – STATUS –DCIL LOADING DETAIL screen shows.

(i)   From the MANAGE CONTENT – STATUS –DCIL LOADING DETAIL screen, select the Update button.

    1)   Make sure that the content download and crossload statuses show.

(j)   Make sure content is 100% loaded.

F.   Benchload Control Procedure

SUBTASK 44-28-00-470-024

(1)   To do the Benchload Control, do the steps that follow:

(a)   From the MAINTENANCE screen, select the Download button.

    1)   Make sure that the DOWNLOAD screen shows.

(b)   From the DOWNLOAD screen, select the Update Content button.

    1)   Make sure that the MANAGE CONTENT – STATUS screen shows.

(c)   From the MANAGE CONTENT – STATUS screen, select the Update Content button.

    1)   Make sure that the MANAGE CONTENT – UPDATE CONTENT screen shows.

(d)   From the MANAGE CONTENT – UPDATE CONTENT screen, select the Benchload Control button.

    1)   Make sure that the MANAGE CONTENT – UPDATE CONTENT – BENCHLOAD CONTROL screen shows.

        NOTE: The message "Collecting available LRU status – You will be forwarded in XX seconds" shows. When the countdown completes, the Benchload Configuration Menu shows.

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    (e)   From the MANAGE CONTENT – UPDATE CONTENT – BENCHLOAD CONTROL screen, select the correct states that need to be updated.

    (f)   Select the Update button.

<u>NOTE</u>: The message "Setting available LRU status – You will be forwarded in XX seconds" shows. When the countdown completes, the updated Benchload Configuration Menu shows.

———— **END OF TASK** ————

TASK 44-28-00-470-804

8. <u>Content Crossload Procedure</u>

   A. **General**

    (1)   This task shows how to crossload content across the Inflight Entertainment System (IFES) Digital Server Units (DSUs) and Audio/Video Controller - Digital (AVC-D) due to either the DSU or the AVC-D has been replaced.

   B. **Content Crossload Setup**

    SUBTASK 44-28-00-860-021

    (1)   Do this task: Power On the Video Entertainment System, TASK 44-28-00-860-801.

       (a)   Make sure that the Maintenance screen shows on the iCMT.

   C. **Content Crossload Procedure**

    SUBTASK 44-28-00-470-025

    (1)   To do a Content Crossload, do the steps that follow:

    <u>NOTE</u>: Content crossload may take a few hours depending on content size.

       (a)   From the MAINTENANCE screen, select the Download button.

          1)   Make sure that the DOWNLOAD screen shows

       (b)   From the DOWNLOAD screen, select the Update Content button.

          1)   Make sure that the MANAGE CONTENT - STATUS screen shows.

       (c)   From the MANAGE CONTENT - STATUS screen, server status icons show this legend:

         • Green - Complete

         • Blue - In Progress/Activity

         • Yellow - Pending/No Activity

         • Red - Down/Offline

       (d)   To view or change the current state of the crossload, select the Eng Control button.

          1)   Make sure that the ENG CONTROL screen shows. The current states are:

            • Automatically Enable/Disable

            • Enable Load/Crossload Unconditionally

            • Disable Load/Crossload Unconditionally

            • Engineering Control

       (e)   Make sure that all servers are green. Content Crossload is complete.

       (f)   Select CIL Detail to see the status of Content Download and content crossload as a percentage for Active and Inactive Content.

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    (g)   Select the Maintenance Menu button to return to the MAINTENANCE screen.

——————— **END OF TASK** ———————

TASK 44-28-00-750-801

9.   <u>Configuration Check Procedure</u>

    A.   **General**

        (1)   This procedure tells you how to do the Configuration Check.

    B.   **Configuration Check Setup**

       SUBTASK 44-28-00-860-012

        (1)   Do this task: Power On the Video Entertainment System, TASK 44-28-00-860-801.

            (a)   Make sure that the Maintenance screen shows on the iCMT.

    C.   **Configuration Check**

       SUBTASK 44-28-00-860-013

        (1)   To do a Configuration Check, do the steps that follow:

           <u>NOTE</u>: While you do this procedure, make sure that aircraft power is not interrupted. Put "WORK-IN-PROGRESS" placard by the forward-most aircraft door and inside the flight deck so as to alert maintenance personnel. Loss of power can interrupt the procedure and cause damage to the system.

            (a)   From the iCMT MAINTENANCE screen, select the Config Check button.

               1)   Make sure that the CONFIGURATION CHECK screen is shown.

            (b)   From the CONFIGURATION CHECK screen, select a radio button for each of these categories: Action, View Type, and Target Group.

            (c)   Select the GO button.

               1)   Make sure that the CONFIGURATION DATA screen is shown.

            (d)   Wait until all of the selected devices report and the results show on the screen that follows.

               <u>NOTE</u>: The screen that follows depends on the selections made on the CONFIGURATION DATA screen.

            (e)   Use the up/down arrows to scroll the screen and to select either the Top Level button, the Summary button, the Engineering button, or the Detail button to view various results.

            (f)   Select the CC Menu button to return to the CONFIGURATION CHECK screen.

            (g)   From the CONFIGURATION CHECK screen, select the Cancel button.

               1)   Make sure that the iCMT MAINTENANCE screen is shown.

——————— **END OF TASK** ———————

TASK 44-28-00-820-806

10.   <u>Touchscreen Calibration Procedure</u>

    A.   **General**

        (1)   This task shows how to calibrate a single Smart Video Display Unit (SVDU) or Interactive Cabin Management Terminal (iCMT) touchscreen.

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B. **Touchscreen Calibration Setup**

SUBTASK 44-28-00-860-017

(1) Do this task: Power On the Video Entertainment System, TASK 44-28-00-860-801.

    (a) Make sure that the Maintenance screen shows on the iCMT.

SUBTASK 44-28-00-860-018

(2) Initialize the PDL: Portable Data Load (PDL) Set Up Procedure, TASK 44-28-00-860-803.

C. **SVDU Calibration Procedure with PDL**

SUBTASK 44-28-00-820-001

(1) To calibrate a SVDU, do the steps that follow:

    <u>NOTE</u>: On the PDL, select the Enter key after typing each command.

    (a) At the PDL, open a command prompt window and type "telnet 172.17.0.217".

        1) Make sure that the login prompt shows.

    (b) At the login prompt, type "root".

    (c) At the password prompt, type "root00".

    (d) To telnet into the SVDU that needs calibration, type "telnet SVDUXXX". Where "XXX" is the seat number of the SVDU location.

        <u>NOTE</u>: For example, XXX could be SVDU34H.

    (e) At the login prompt, type "root".

    (f) At the password prompt, type "root00".

    (g) Stop all applications and launch the calibration procedure by typing the command "/etc/init.d/thales stop".

    (h) Type "cd/thales/atp./atp_svdu3_touch_screen.sh c"

    (i) Go to the SVDU at the seat and touch the small X located in the top left corner of the touchscreen.

        1) Make sure that the X moves in a clockwise direction after it is touched.

        <u>NOTE</u>: To get the best results, touch the screen with a stylus.

    (j) Do the previous step until all points are touched.

    (k) At the PDL, type "Reboot".

        1) Make sure that the new alignment shows that the SDVU touchscreen operates correctly.

    (l) Deactivate and disconnect the PDL. Portable Data Load (PDL) Set Up Procedure, TASK 44-28-00-860-803

D. **SVDU Calibration Procedure with iCMT**

SUBTASK 44-28-00-820-005

(1) To do the touchscreen calibration with the iCMT, if applicable, then do the steps that follow:

    (a) From the MAINTENANCE screen, select the Static Test button.

        1) Make sure that the STATIC TESTS screen shows.

    (b) From the STATIC TESTS screen, select 02tscal.tm from the list.

    (c) Select the Start button.

        1) Make sure that the Test in Progress indicator shows.

    (d) Go to the SVDU(s) that require calibration and touch the small X shown on the screen.

    (e)   Do the previous step again until all points have been touched.

        NOTE: Confirm calibration on the SVDU with your finger or a stylus and make sure that the cursor remains aligned.

    (f)   From the STATIC TESTS screen, select the Stop button.

        1)   Make sure that the MAINTENANCE screen shows on the SVDU(s).

    (g)   From the STATIC TESTS screen, select the Back button.

        1)   Make sure that the MAINTENANCE screen shows on the iCMT.

    (h)   From the MAINTENANCE screen, select the Customer Login button.

        1)   Make sure that the iCMT MAIN MENU screen shows.

  E.   **iCMT Calibration Procedure**

      SUBTASK 44-28-00-820-002

    (1)   To calibrate the iCMT touchscreen, do the steps that follow:

        NOTE: On the PDL, select the Enter key after typing each command.

    (a)   At the PDL, open a command prompt window and type "telnet 172.17.0.217".

        1)   Make sure that the login prompt shows.

    (b)   At the login prompt, type "root"

    (c)   At the password prompt, type "root00".

    (d)   To telnet into the iCMT, type "telnet icmt1".

        NOTE: Type "telnet icmt1" for the iCMT that is located in the VCC, or "telnet icmt2" for the iCMT that is located remotely from the VCC.

    (e)   At the login prompt, type "root".

    (f)   At the password prompt, type "root00".

    (g)   Stop all applications and launch the calibration procedure by typing the command "/etc/init.d/thales stop".

    (h)   Type "cd/thales/atp./atp_svdu3_touch_screen.sh c"

    (i)   Go to the iCMT and touch the small X located in the top left corner of the touchscreen.

        1)   Make sure that the X moves in a clockwise direction after it is touched.

            NOTE: To get the best results, touch the screen with a stylus.

    (j)   Do the previous step until all points are touched.

    (k)   At the PDL, type "Reboot".

        1)   Make sure that the new alignment shows that the iCMT touchscreen operates correctly.

    (l)   Deactivate and disconnect the PDL. Portable Data Load (PDL) Set Up Procedure, TASK 44-28-00-860-803

—————— **END OF TASK** ——————

      TASK 44-28-00-820-802

11.   **Sequence IP Addresses Procedure**

  A.   **General**

    (1)   This task shows how to IP sequence a component's address.

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B.   **Sequence IP Addresses Procedure**

SUBTASK 44-28-00-820-003

(1)   To sequence an IP address, do the steps that follow:

NOTE: IP sequencing is automated after a complete system power cycle.

(a)   From the MAINTENANCE screen, select the IP Sequencing button.

1)   Make sure that the TOPOLOGY STATUS BY LRU or the IP SEQUENCING SUMMARY screen is shown.

(b)   AIRPLANES WITH TOPOLOGY STATUS BY LRU SCREEN;

Do the steps that follow:

1)   From the TOPOLOGY STATUS BY LRU screen, select the Refresh button.

a)   Make sure that the LRU status shows.

2)   Select either the Match All Columns, Explore Topology, or Go to Columns Status button.

a)   Make sure that the selected screen shows.

3)   Select the Done button to return to the MAINTENANCE screen.

(c)   AIRPLANES WITH IP SEQUENCING SUMMARY SCREEN;

Do the steps that follow:

1)   Make sure that all columns are shown green in color. This indicates that there are no LRU's with network failures, link errors, or duplicate errors.

2)   If all columns are green IP sequencing is complete.

3)   If any columns are red, the associated LRU name can be used as a button to show a list of LRUs of that type that are unavailable on the system.

4)   If any faults are found on the LRU, details are displayed in the COLUMN STATUS, COLUMN DETAILS, LINK ERRORS, LRU DETAILS, and DUPLICATE ERROR screens.

5)   Select the Maintenance Menu button to return to the MAINTENANCE screen.

——————— **END OF TASK** ———————

TASK 44-28-00-840-804

12.   **Reset Seats Procedure**

A.   **General**

(1)   This task shows you how to reset individual passenger seat video screens, Passenger Control Units (PCUs), and Seat Electronic Boxes (SEBs)..

B.   **Reset Seats setup**

SUBTASK 44-28-00-860-019

(1)   Do this task: Power On the Video Entertainment System, TASK 44-28-00-860-801.

(a)   Make sure that the ENTERTAINMENTscreen shows on the iCMT.

C.   **Reset Seats Procedure**

SUBTASK 44-28-00-840-001

(1)   To reset a seat, do the steps that follow:

NOTE: Multiple seats can be selected and reset simultaneously. However, only one unit type can be selected per reset request

(a)   From the SYSTEM or FLIGHT INFORMATION screen, select the Seat Control button.

　　1)   Make sure that the SEAT CONTROL screen shows.

(b)   From the SEAT CONTROL screen, select a seat row and column from the Seat Selection area.

(c)   From the Control Function drop-down menu, select a function of either Reset PCU/SVDU or Seat Box.

(d)   Select the Apply button.

(e)   At the confirmation pop-up window, select the OK button.

(f)   Wait 6 to 10 minutes for the seat display to reset.

──────── END OF TASK ────────

TASK 44-28-00-840-805

13. **Digital Server Unit (DSU) Deactivation and Reactivation**

　A. General

　(1)   This task shows how to ensure full content availability at all seats after a Digital Server Unit (DSU) replacement. Do this procedure when a DSU has been replaced and the aircraft is required for a revenue flight and the content crossload has not completed.

　B. DSU Deactivation Setup

　SUBTASK 44-28-00-860-020

　(1)   Do this task: Power On the Video Entertainment System, TASK 44-28-00-860-801.

　　(a)   Make sure that the Maintenance screen shows on the iCMT.

　C. DSU Deactivation Procedure with iCMT

　SUBTASK 44-28-00-040-001

　(1)   To deactivate a Digital Server Unit (DSU), do the steps that follow:

　NOTE: This TASK is to be performed using iCMT 1 only.

　NOTE: While you do this procedure, make sure that aircraft power is not Interrupted. Put "work-in-progress" placards by the forward-most Aircraft door and inside the flight deck so as to alert maintenance Personnel. Loss of power can interrupt the procedure and cause Damage to the system.

　　(a)   Log into the iCMT MAINTENANCE screens.

　　(b)   From the iCMT MAINTENANCE screen, select the System Utility button.

　　　1)   Make sure that the SYSTEM UTILITY screen shows.

　　(c)   From the SYSTEM UTILITY screen, select the DSU Deactivation button.

　　　1)   Make sure that the DSU DEACTIVATION screen shows with a list of the DSUs that can be deactivated.

　　　NOTE: Do not deactivate more than one DSU at any time. This will prevent interruption of IFE services to passengers.

　　　NOTE: Deactivating certain DSUs will have an impact on iCMT availability. When deactivating DSU5, communication to iCMT2 will be lost. A DSU can only be restored by reactivation.

　　　NOTE: Any DSU deactivation that affects iCMT availability must be verbally reported to the crew.

　　(d)   From the DSU DEACTIVATION selection screen, select a DSU to deactivate.

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    1) Make sure that a confirmation dialog box shows.

(e) From the confirmation dialog box, select the Yes button to deactivate the selected DSU.

(f) From the DSU DEACTIVATION selection screen, select the System Utility Menu button to return to the SYSTEM UTILITY screen.

(g) From the SYSTEM UTILITY screen, select the Done button to return to the iCMT MAINTENANCE screen.

(h) From the MAINTENANCE screen, select the Customer Login button to return to the iCMT MAIN MENU screen.

D. DSU Reactivation Procedure with iCMT

    SUBTASK 44-28-00-440-001

(1) To reactivate a DSU, do the steps that follow:

(a) Log into the iCMT MAINTENANCE screens.

(b) From the iCMT MAINTENANCE screen, select the System Utility button.

    1) Make sure that the SYSTEM UTILITY screen shows.

(c) From the SYSTEM UTILITY screen, select the DSU Deactivation button.

    1) Maure sure that the DSU DEACTIVATION selection screen shows with a list of DSUs that can be reactivated.

    NOTE: Deactivated DSUs have a check mark against their name.

(d) From the DSU DEACTIVATION selection screen, select a DSU to reactivate.

    1) Make sure that a confirmation dialog box shows.

(e) From the confirmation dialog box, select the Yes button to reactivate the selected DSU.

(f) From the DSU DEACTIVATION selection screen, select the System Utility Menu button to return to the SYSTEM UTILITY screen.

(g) From the SYSTEM UTILITY screen, select the Done button to return to the iCMT MAINTENANCE screen.

(h) From the MAINTENANCE screen, select the Customer Login button to return to the iCMT MAIN MENU screen.

(i) Remove power from the IFES. Power Off the Video Entertainment System, TASK 44-28-00-860-802

(j) Apply power to the IFES. Power On the Video Entertainment System, TASK 44-28-00-860-801

(k) Do a Content Crossload. Content Crossload Procedure, TASK 44-28-00-470-804

———— **END OF TASK** ————

    TASK 44-28-00-070-801

14. Corrupt Software Module Replacement Procedure

    A. Corrupt Software Module Replacement

(1) This procedure shows the operator how to remove and replace software module(s) that report some form of corruption or to identify suspected system issues by process of elimination.

NOTE: This process does not work for the Core 1, Core 2, or Configuration Database files. If any of these items are reported as corrupt, the LRU must be replaced.

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B.   **References**

Reference	Title
44-28-00-730-801	Passenger Entertainment System (PES) Video - System Test (P/B 501)

C.   **Prerequisites**

SUBTASK 44-28-00-860-027

(1)   Make sure that the current Software Media is on a USB memory stick or CD.

D.   **Corrupt Software Module Replacement Procedure**

SUBTASK 44-28-00-070-001

(1)   To remove and replace corrupt software module(s), so the steps that follow:

(a)   Do a BITE Test (Passenger Entertainment System (PES) Video - System Test, TASK 44-28-00-730-801), and/or Configuration Check (Configuration Check Procedure, TASK 44-28-00-750-801) to determine the nomenclature and part number(s) of the software that reports some form of corruption.

(b)   To remove software from the repository, do the steps that follow:

1)   From the iCMT or PDL, log into the MAINTENANCE screen .

2)   From the MAINTENANCE MENU screen, select the Download button.

a)   Make sure that the DOWNLOAD screen shows.

3)   From the DOWNLOAD screen, select the Update Software button.

a)   Make sure that the CURRENT SOFTWARE CONFIGURATION screen shows.

4)   From the CURRENT SOFTWARE CONFIGURATION screen, select the Delete button.

a)   Make sure that the SOFTWARE REMOVAL screen shows.

5)   From the SOFTWARE REMOVAL screen, check the box(es) associated with the software to be removed.

6)   Select the Delete button.

a)   Make sure that the SOFTWARE REMOVAL PROGRESS screen shows.

7)   When the software removal is complete, select the OK button.

a)   Make sure that the CURRENT SOFTWARE CONFIGURATION screen shows.

8)   From the CURRENT SOFTWARE CONFIGURATION screen, make sure that the applicable software was correctly removed.

9)   Select the Done button.

(c)   To remove software from a specific LRU(s), do the steps that follow:

1)   From the iCMT or PDL, log into the MAINTENANCE screen.

2)   From the MAINTENANCE MENU screen, select the Download button.

a)   Make sure that the DOWNLOAD screen shows.

3)   From the MAINTENANCE MENU screen, select the Download button.

a)   Make sure that the LRU LOAD screen shows.

4)   From the LRU LOAD screen, select the applicable LRU type.

5)   Select the Single LRU button to remove software from single LRU or select the All Types LRUs Selected button to delete software from all LRUs of a selected type.

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a) If the Single LRU button is selected, make sure that the LRU SELECTION screen shows.

b) Select the applicable LRU(s).

c) Select the Select button.

   <1> Make sure that the software download begins and the DOWNLOAD FILE PHASE 2 PROGRESS screen shows.

d) If the All Types LRUs Selected button is selected, the software download begins.

   <1> Make sure that the DOWNLOAD FILE PHASE 2 PROGRESS screen shows.

   NOTE: During the load process all software files begin loaded have an MD5 checksum carried out. If any files fail the checksum, no software will be loaded to the LRU. If any MD5 checksum occurs retry the Phase 2 Download.

   NOTE: If the problem persists seek Thales Assistance.

6) Wait approximately 15 to 20 minutes.

7) When the progress bar shows 100 percent or times out, select the OK button.

   a) Make sure that the SYSTEM CONFIG-ENGINEERING screen shows.

   NOTE: If any failures have occurred during the download process, color coding is used to represent these failures. The color coding is as follows:

   • Blue - Hardware Mismatch

   • Yellow - Unexpected software part number

   • Grey - Missing software part number

   • Purple - MD5 Error

8) If the download does not complete and/or times out, repeat the download process.

9) Further fault finding may be required if unable to complete this process.

10) From the SYSTEM CONFIG-ENGINEERING screen, make sure that all the applicable files have been correctly removed from the LRU.

11) Select the Done button to return to the DOWNLOAD screen.

12) Select the Done button to return to the MAINTENANCE screen.

   NOTE: The software removal is complete.

(d) To reload the software into the repository, do the step that follows:

1) Do the Phase 2 Software Download to re-install the software that was previously deleted to the specific LRU(s) (Phase 2 Software Download Procedure, TASK 44-28-00-470-802).

(e) To make sure that no corrupt software is reported, do the step that follows:

1) Do a Configuration Check to make sure that the correct software is installed (Configuration Check Procedure, TASK 44-28-00-750-801).

———— **END OF TASK** ————

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PASSENGER ENTERTAINMENT SYSTEM (PES) VIDEO - ADJUSTMENT/TEST

1. <u>General</u>

    A.   This procedure has these tasks for the Passenger Entertainment System (PES) Video:

    (1)   An operational test

    (2)   A system test.

    TASK 44-28-00-710-801

2. <u>Passenger Entertainment System (PES) Video - Operational Test</u>

    A.   **References**

Reference	Title
44-28-00-860-801	Power On the Video Entertainment System (P/B 201)

    B.   **Location Zones**

Zone	Area
222	Passenger Compartment, Right - Section 41

    C.   **Procedure**

    SUBTASK 44-28-00-860-016

    (1)   Do this task: Power On the Video Entertainment System, TASK 44-28-00-860-801.

    SUBTASK 44-28-00-710-002

    (2)   Do the operational test:

    (a)   From the iCMT Welcome Screen push the Entertainment button.

    (b)   Enter the correct password on the Entertainment Access screen,.

    (c)   From the Flight Info Screen, enter flight number, departure airport, arrival airport.

    (d)   Select Done when finish entering data.

    NOTE: If invalid Data is entered in any of the Flight Information Fields an Invalid entry message shows.

    (e)   From the FLIGHT INFORMATION screen, push the Cabin Services button.

    (f)   From the CABIN SERVICES screen, push the Video Announcement button.

    (g)   From the CABIN SERVICES - VIDEO ANNOUNCEMENT screen, select a video title from the Source Select area.

    (h)   Select an appropriate zone.

    (i)   Push the VA On button.

    1)   Make sure that the video shows on the overhead monitors and at the seat SVDUs.

    2)   Make sure that you hear the announcement clearly from the seats headsets and cabin speakers,

    a)   If necessary, push the VA volume buttons to increase or decrease the audio volume.

    (j)   Push the VA Off button.

    1)   Make sure that the video does not show on the overhead monitors and at the seat SVDUs.

    (k)   If necessary, push the Cabin Services button on the iCMT screen to go back to the CABIN SERVICES screen.

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SUBTASK 44-28-00-710-003

(3)   Do these steps to test the IFE/PASS SEATS switch:

    (a)   On the P5 panel, select the IFE/PASS SEATS switch to OFF.

        1)   Make sure that all the IFE equipment in the purser work station or video control center no longer has electrical power.

           NOTE: Some components may have battery backup units. For these components it may take several minutes before the electrical power is removed.

        2)   Make sure that the overhead video system is off (no video signal, monitor may still be powered).

        3)   Make sure that all the passenger control units on the passenger seats are off (electrical power is removed).

        4)   For airplanes with PC power outlets, make sure that all the PC power outlets do not have electrical power (LED lights do not show).

        5)   For airplanes with powered seats, make sure the powered seats do not operate (electrical power is removed).

        6)   For airplanes with wall mounted telephones, do this step to make sure that the telephone does not operate:

           a)   Swipe a valid credit card through the card reader.

              <1>   Make sure that you do not hear a dial tone.

    (b)   On the P5 panel, select the IFE/PASS SEATS switch to ON.

      ARO ALL

——— END OF TASK ———

    TASK 44-28-00-730-801

3.   **Passenger Entertainment System (PES) Video - System Test**

    A.   **General**

      (1)   The PES system test contains these procedures:

        (a)   A BITE Test

        (b)   A Configuration Check

        (c)   A Communications Test

        (d)   A Static Test

        (e)   An Operational Test

        (f)   A Boarding Music Test

        (g)   A PRAM Test

        (h)   A Personal Electronic Device (PED) Power Test

        (i)   An Overhead Map Test

        (j)   A Overhead Camera Test

        (k)   An Audio and Video On-Demand Test

        (l)   A Broadcast Text Message Test

        (m)   A PA Override Test

        (n)   A Decompression Test

B. **References**

Reference	Title
44-28-00-750-801	Configuration Check Procedure (P/B 201)
44-28-00-860-801	Power On the Video Entertainment System (P/B 201)
44-28-00-860-802	Power Off the Video Entertainment System (P/B 201)

C. **Location Zones**

Zone	Area
200	Upper Half of Fuselage
222	Passenger Compartment, Right - Section 41

D. **BITE Test**

SUBTASK 44-28-00-740-003

(1) To do the BITE test at the iCMT for the Head-end and Distribution LRUs, do the steps that follow:.

    (a) From the Welcome screen push the Maintenance button.

    (b) Enter the Maintenance Access code.

    (c) From the Maintenance screen, select the BITE button.

        1) Make sure that the BITE: HEADEND/DISTRIBUTION – HEADEND & 3rd PARTY screen shows.

    (d) On the BITE: HEADEND/DISTRIBUTION – HEADEND & 3rd PARTY screen, make sure that the Headend/Distribution button is selected.

    (e) Use the LRU Filter drop-down menu and the Severity Filter drop-down menu to select the desired filters.

    (f) Select the Distribution button to show the BITE: HEADEND/DISTRIBUTION – DISTRIBUTION screen.

        NOTE: When selected, the Distribution button changes to the Headend/3rd Party button. Use this button to toggle between the BITE: HEADEND/DISTRIBUTION - HEADEND & 3rd PARTY screen and BITE: HEADEND/DISTRIBUTION - DISTRIBUTION screen as desired.

    (g) On the BITE: HEADEND/DISTRIBUTION - DISTRIBUTION screen or the HEADEND/DISTRIBUTION - HEADEND & 3rd PARTY screen, select the Select Flight button.

        1) Make sure that the LIST OF AVAILABLE FLIGHT LEGS screen shows.

    (h) On the LIST OF AVAILABLE FLIGHT LEGS screen, select the Flight Records button or the Ground Records button.

    (i) Select the Okay button to go to the BITE: HEADEND/DISTRIBUTION - HEADEND & 3rd PARTY screen, or the Cancel button to go back to the previous screen.

    (j) On the BITE: HEADEND/DISTRIBUTION - DISTRIBUTION screen or the HEADEND/DISTRIBUTION - HEADEND & 3rd PARTY screen, select a button for an individual LRU.

        1) Make sure that the BITE: HEADEND/DISTRIBUTION FAILURES: DETAILS screen shows.

    (k) From the BITE: HEADEND/DISTRIBUTION FAILURES: DETAILS screen, select the Failure Description, the LRU History, and/or the Corrective Action tab to see the specific failure description data.

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(l)   Use the buttons on the right side of the screen to perform the action required to correct the failure.

(m) Select the Logout button to go back to the iCMT MAIN MENU screen.

SUBTASK 44-28-00-740-002

(2)   To do a BITE test for the Cabin LRUs, do the steps that follow:

(a)   From the iCMT MAINTENANCE screen, select the BITE button.

1)   Make sure that The BITE: HEADEND/DISTRIBUTION – HEADEND & 3rd PARTY screen shows.

(b)   On the BITE: HEADEND/DISTRIBUTION – HEADEND & 3rd PARTY screen, select the Cabin button.

1)   Make sure that the BITE: CABIN – MAIN DECK screen shows.

(c)   Use the LRU Filter drop-down menu and the Severity Filter drop-down menu to select the desired filters.

(d)   Select the Select Flight button.

1)   Make sure that the LIST OF AVAILABLE FLIGHT LEGS screen shows.

(e)   On the LIST OF AVAILABLE FLIGHT LEGS screen, select the Flight Records button or the Ground Records button.

(f)   Select the Okay button to go to the BITE: CABIN - MAIN DECK screen, or the Cancel button to go back to the previous screen.

(g)   From the BITE: HEADEND/DISTRIBUTION FAILURES: DETAILS screen, select the Failure Description, the LRU History, and/or the Corrective Action tab to see the specific failure description data.

(h)   Use the buttons on the right side of the screen to perform the action required to correct the failure.

(i)   Select the Logout button to go back to the iCMT MAIN MENU screen.

E.   Configuration Check

SUBTASK 44-28-00-730-015

(1)   Do a system Configuration Check: Configuration Check Procedure, TASK 44-28-00-750-801.

F.   Communications Test

SUBTASK 44-28-00-730-016

(1)   To do a Communications Test, do the steps that follow:

(a)   From the FLIGHT INFORMATION screen, enter the flight number, departure airport, and arrival airport.

(b)   Once complete, select the Done button.

1)   Make sure that the flight information shows.

(c)   From the FLIGHT INFORMATION screen, select the System button.

1)   Make sure that the SYSTEM screen shows.

(d)   From the SYSTEM screen, select the Comm Stat - Head End button.

1)   Make sure that the SYSTEM - COMMUNICATION STATUS - HEAD END screen shows.

NOTE: A list of faulty LRUs is highlighted in yellow. If the Details area shows No Fault, indicating no reported failures.

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(e) Select a faulty LRU to show the fault description in the Details area.

(f) Correct any faulty LRU as necessary.

(g) Remove power from the IFES. Do this task: Power Off the Video Entertainment System, TASK 44-28-00-860-802.

(h) After 30 seconds, apply power to the IFES. Do this task: Power On the Video Entertainment System, TASK 44-28-00-860-801.

(i) From the COMMUNICATIONS STATUS screen, make sure that no faulty LRU(s) show on the list.

G. Static Test

SUBTASK 44-28-00-730-012

(1) To do a Static Test, do the steps that follow:

(a) From the MAINTENANCE screen, select the Static Test button.

   1) Make sure that the STATIC TESTS screen shows.

(b) From the STATIC TESTS screen, select a test from the list.

(c) Select the Start button.

   1) Make sure that the Test In Progress indicator shows.

   2) Make sure that the test results show.

(d) Select the Back button to return to the MAINTENANCE screen.

H. Operational Test

SUBTASK 44-28-00-730-002

(1) Do this task: Passenger Entertainment System (PES) Video - Operational Test, TASK 44-28-00-710-801.

I. Boarding Music Test

SUBTASK 44-28-00-730-003

(1) To do the Boarding Music Test, do the steps that follow:

(a) From the FLIGHT INFORMATION screen, select the Cabin Services button.

   1) Make sure that the CABIN SERVICES screen shows.

(b) From the CABIN SERVICES screen, push the Boarding Music button.

   1) Make sure that the CABIN SERVICES - BOARDING MUSIC screen shows.

(c) From the CABIN SERVICES - BOARDING MUSIC screen, push to select a Boarding Music title from the selection list.

(d) Push the play button.

   1) Make sure that you can hear the music through out the cabin PA speakers.

(e) Adjust the Cabin Volume as necessary.

(f) Push the stop button.

   1) Make sure that you do not hear the music from the cabin PA speakers.

J. PRAM Test

SUBTASK 44-28-00-730-004

(1) To do the PRAM test, do the steps that follow:

(a) From the FLIGHT INFORMATION screen, select the Cabin Services button.

   1) Make sure that the CABIN SERVICES screen shows.

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    (b)   From the CABIN SERVICES screen, push the PRAM button.

        1)   Make sure that the Cabin Services - PRAM screen shows.

    (c)   Push to select a PRAM title.

    (d)   Push the play button.

        1)   Make sure that you can hear the announcement through out the cabin PA speakers.

        2)   Make sure that you can hear the announcement from the seat headsets.

    (e)   Adjust the Cabin Volume Up and Down buttons to increase and decreaseas the audio volume..

        1)   Make sure that the volume level of the audio changes accordingly.

    (f)   Push the stop button.

        1)   Make sure that you do not hear the announcement from the cabin PA speakers.

K.   Personal Electronic Device (PED) Power Test

SUBTASK 44-28-00-730-014

(1)   To do the Personal Electronic Device (PED) Power Test at a seat, do the steps that follow:

    (a)   Go to any seat and connect an electronic device to the AC Outlet Unit (ACOU).

    (b)   Power on the PED.

        1)   Make sure that the ACOU LED shows green.

        2)   Make sure that the related In-use Light on the ACOU shows.

    (c)   Re-do the above test, as necessary, for any other seats.

L.   Overhead Map Test

SUBTASK 44-28-00-730-023

(1)   To do the Overhead Map Test, do the steps that follow:

    (a)   From the FLIGHT INFO screen, select the ENT Services button.

        1)   Make sure that the ENT SERVICES screen shows.

    (b)   From the ENT SERVICES screen, make sure that the 3D Maps service is powered on.

    (c)   From the ENT SERVICES screen, select the Cabin Services button.

        1)   Make sure that the CABIN SERVICES screen shows.

    (d)   From the CABIN SERVICES screen, select the Overhead Map button.

        1)   Make sure that the CABIN SERVICES - OVERHEAD MAP screen shows.

    (e)   From the CABIN SERVICES - OVERHEAD MAP screen, select the 3D Maps button.

    (f)   Select the Play button.

        1)   Make sure that the video shows at all overhead video display monitors.

    (g)   Select the Stop button.

        1)   Make sure that you do not see the video shows at all overhead video display monitors.

M.   Overhead Camera Test

SUBTASK 44-28-00-730-024

(1)   To do the Overhead Camera Test, do the steps that follow:

    (a)   From the FLIGHT INFO screen, select the ENT Services button.

        1)   Make sure that the ENT SERVICES screen shows.

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(b)   From the ENT SERVICES screen, make sure that the Camera service is powered on.

(c)   From the ENT SERVICES screen, select the Cabin Services button.

    1)   Make sure that the CABIN SERVICES screen shows.

(d)   From the CABIN SERVICES screen, select the Overhead Camera button.

    1)   Make sure that the CABIN SERVICES - OVERHEAD CAMERA screen shows.

(e)   From the CABIN SERVICES - OVERHEAD CAMERA screen, select a view from the Source Select area.

(f)   Select an appropriate zone.

(g)   Select the OH On button.

    1)   Make sure that the video shows at all overhead video display monitors.

(h)   Select the OH Off button.

    1)   Make sure that the you do not see the video shows at all overhead video display monitors.

N.   Audio and Video On-Demand Test

SUBTASK 44-28-00-730-006

(1)   To do the Audio and Video On-Demand Test, do the steps that follow:

(a)   On the iCMT FLIGHT INFORMATION screen, select the ENT Services button.

    1)   Make sure that the ENT SERVICES screen shows.

(b)   On the ENT SERVICES screen, select the On Demand On/Off button to ON.

(c)   At any seat SVDU, touch to select the video on demand icon.

    1)   Make sure that the Video On Demand screen shows on the SVDU.

(d)   Using the TPCU-sb, the TPMU, or the SVDU touchscreen, navigate to the AVOD selection pages.

(e)   Touch to select a movie from the Video On Demand menu.

    1)   Make sure that the selected movie shows on the SVDU.

    2)   Make sure that the following functions operate properly:

        Play

        Back

        Volume Up

        Volume Down

        Pause

        Skip Forward

        Skip Backward

        Home

(f)   Push the HOME button on the Handset.

    1)   Make sure that the ON DEMAND home page shows on the SVDU.

(g)   Touch to select the audio on demand icon on the SVDU.

    1)   Make sure that the Audio On Demand screen shows on the SVDU.

(h)   Touch to select an audio program from the Audio On Demand menu.

    1)   Make sure that you can hear the selected music from the headset.

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2) Make sure that the following functions operate properly:

Play

Back

Volume Up

Volume Down

Pause

Skip Forward

Skip Backward

Home

(i) Push the HOME button on the Handset.

1) Make sure that the ON DEMAND home page shows on the SVDU.

O. Broadcast Text Message Test

SUBTASK 44-28-00-730-025

(1) To dot the Broadcast Text Messaging Test, do the steps that follow:

(a) From the FLIGHT INFO screen, select the Applications button.

1) Make sure that the APPLICATIONS screen shows.

(b) From the APPLICATIONS screen, select the Broadcast Messages button.

1) Make sure that the APPLICATIONS - BROADCAST MESSAGES screen shows.

(c) From the APPLICATIONS - BROADCAST MESSAGES screen, select the zone to show the text message.

(d) Select a pre-defined text message from the Broadcast Message Selection area.

(e) Select the Broadcast button.

1) Make sure that a confirmation pop-up window shows the message has been sent to the selected areas.

(f) At the passenger seat(s), make sure that the selected message shows only for the selected zone.

P. PA Override Test

SUBTASK 44-28-00-730-007

(1) To do the PA Override Test for the main cabin, do the steps that follow:

(a) Select Video PA or Video Announcement button.

(b) Push to select any media selection from the Source Select menu.

(c) Push the PLAY button.

(d) Push to select the VA On button.

1) Make sure that you hear audio over the seat headsets and the cabin PA speakers.

2) Make sure that the video shows on all the seat and cabin monitors, and on the iCMT preview screen.

(e) Do a PA announcement from the flight attendant station.

1) Push PA ALL (dial Code 46) from any Cabin Interphone Handset.

a) Make sure that the VA does not show on the SVDU.

b) Make sure that the PA in progress shows on the SVDU.

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    c)   Make sure that the Handset shows the PA indicator.

    d)   Make sure that you hear PA announcement over the cabin speakers.

    e)   Make sure that you hear PA announcement on the headsets.

    f)   Make sure that you do not hear any other audio except the announcement.

(f)   Do a PA announcement from the flight deck.

    1)   Push and then release the "PA" mic select switch on the captain's audio control panel.

    2)   Push and hold the PTT switch on the captain's hand mic.

    3)   Make a PA announcement.

        a)   Make sure that the VA does not show on the SVDU.

        b)   Make sure that the PA in progress shows on the SVDU.

        c)   Make sure that the Handset shows the PA indicator.

        d)   Make sure that you hear PA announcement over the cabin speakers.

        e)   Make sure that you hear PA announcement on the headsets.

        f)   Make sure that you do not hear any other audio except the announcement.

    4)   Push the VA Off button on the iCMT.

    5)   Push the Stop button on the Source Control.

    6)   Push the All Classes button to remove selection to all classess.

SUBTASK 44-28-00-730-009

(2)   To do the PA Override Test for the crew rest, do the steps that follow:

(a)   Select the ENT Control button on the left side of the iCMT.

(b)   Push the Crew Rest Audio On/Off button.

(c)   Connect a headset to one bunk in the MDFCR and OFAR.

(d)   Do a PA announcement from the flight attendant station.

    1)   Push PA ALL (dial Code 46) from any Cabin Interphone Handset.

(e)   Make sure that the entertainment audio is overriden.

(f)   Make sure that the announcement can be heard in the headset at the selected bunk in the MDFCR and OFAR.

Q. Decompression Test

SUBTASK 44-28-00-730-008

(1)   To do the Decompression Test, do the steps that follow:

(a)   Push the Cabin Services button on the iCMT.

    1)   Make sure that the Cabin Services screen shows.

(b)   Push the Video PA button.

(c)   Push to select a Video title from the Source Select menu.

(d)   Push the PLAY button to preview the video on the iCMT.

(e)   Push the VA On button to send video to the passenger seat and overhead monitors.

(f)   Push to select All Class from Aircraft Layout of Passenger Accommodations or Aircraft (LOPA)..

    1)   Make sure that you hear audio from the seat headphones and the cabin speakers.

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2) Make sure that the video shows on all the seat and overhead monitors, and on the iCMT preview screen.

(g) Do these steps at the CSCP:

1) From the CABIN MAINTENANCE SCREEN:

a) select CABIN TESTS.

b) Select ENGINEERING TESTS.

c) Select COMMAND OUTPUT.

d) Select PASSENGER ADDRESS/CABIN INTERPHONE (PA/CI).

2) Select DECOMPRESSION OUT 'GROUND'.

a) Make sure that you do not see video on all the seat and overhead monitors.

b) Make sure that the PC power is off.

(h) Make sure that you hear the Pre-Recorded Automated Message over the PA system.

(i) Make sure that the Call Light and Reading Light at any seat in each Class are serviceable.

(j) At the CSCP, select DECOMPRESSION OUT 'OPEN'.

(k) Push the IFE/PASS Seats switch in the Flight Deck (P5 Overhead Panel) to the OFF position.

1) Make sure that the VCC and IFE system Shut down.

(l) Push the MASTER POWER switch in the VCC to the OFF position.

(m) Push the IFE/PASS Seats switch in the Flight Deck (P5 Overhead Panel) to the ON position.

——— **END OF TASK** ———

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AUDIO VIDEO CONTROLLER - DIGITAL (AVC-D) - REMOVAL/INSTALLATION

1. **General**

    A. This procedure has these tasks:

        (1) The removal of a audio video controller-digital (AVC-D).

        (2) The installation of a AVC-D.

    B. The AVC-D is located in the Cabin Equipment Center (CEC).

    TASK 44-28-05-000-801

2. **Audio Video Controller-Digital (AVC-D) Removal**
    (Figure 401)

    A. **References**

Reference	Title
20-10-01-000-801	E/E Box Removal (P/B 401)
25-21-06-000-801	Main Ceiling Panel - Removal (P/B 401)

    B. **Tools/Equipment**

    NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1541	Platform - Access, Cabin Crown
	Part #: 1107WSCHSK Supplier: 6Y876
	Opt Part #: J12005-1 Supplier: 81205
STD-1049	Stepladder - 12 foot

    C. **Location Zones**

Zone	Area
223	Area Above Passenger Compartment Ceiling, Left - Section 41
224	Area Above Passenger Compartment Ceiling, Right - Section 41

    D. **Removal Procedure**

    SUBTASK 44-28-05-860-001

    (1) Open these circuit breakers and install safety tags:

    Left Power Management Panel, P110

Row	Col	Number	Name
D	21	C23355	VOD

    Right Power Management Panel, P210

Row	Col	Number	Name
L	23	C24688	IFE SEATS FLT DECK SW

    SUBTASK 44-28-05-010-001

    (2) Get access to the Cabin Equipment Center (CEC) above the passenger compartment ceiling (Figure 401):

    (a) Remove the main inboard ceiling panel (TASK 25-21-06-000-801).

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(b) Use a 12 foot stepladder, STD-1049 or cabin crown access platform, SPL-1541 to get up on the Cabin Equipment Center (CEC) platform.

   NOTE: There is a CEC area light switch near the access hole in the CEC platform.

(c) Remove the access panels on the front side of the CEC.

   NOTE: There is a light switch inside the CEC at the forward end.

SUBTASK 44-28-05-020-001

⚠ WARNING	MAKE SURE THAT THE CONNECTORS ARE DISCONNECTED FROM THE EQUIPMENT AT THE TWO ENDS. OR SET THE EQUIPMENT TO OFF. THERE IS A RISK OF LASER RADIATION THAT YOU WILL NOT SEE. LASER RADIATION IS DANGEROUS FOR YOUR EYES.
⚠ WARNING	DO NOT LOOK INTO THE END OF A FIBER-OPTIC CABLE. THERE IS A RISK OF LASER RADIATION, WHICH YOU WILL NOT SEE. LASER RADIATION IS DANGEROUS FOR YOUR EYES.
⚠ WARNING	ALWAYS USE GLOVES IF YOU MUST TOUCH BROKEN FIBER-OPTIC CABLES. IF YOU TOUCH CABLES WITH YOUR BARE HANDS, FIBERS CAN GO INTO YOUR BODY THROUGH YOUR SKIN. THIS WILL CAUSE YOU INJURY.
⚠ CAUTION	INSTALL THE PROTECTIVE CAPS IMMEDIATELY AFTER YOU DISCONNECT THE CABLE. IT IS EASY TO CAUSE DAMAGE TO THE FIBER-OPTIC CABLE.
⚠ CAUTION	DO NOT BEND THE FIBER-OPTIC CABLE MORE THAN THE MINIMUM BEND RADIUS. THE CABLE IS EASILY DAMAGED.
⚠ CAUTION	DO NOT PULL OR PUSH THE FIBER-OPTIC CABLE. THE CABLE IS EASILY DAMAGED.
⚠ CAUTION	DO NOT TOUCH THE LRU CONNECTOR PINS. THE LRU IS SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE LRU.

(3) Remove the AVC-D.

(a) To remove the Audio Video Controller-Digital (AVC-D) [1], Do this task: E/E Box Removal, TASK 20-10-01-000-801.

——— END OF TASK ———

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ARO ALL

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DOOR 2

PASSENGER
COMPARTMENT

SEE Ⓐ

DOOR 1

CABIN EQUIPMENT
CENTER (CEC) AND
PLATFORM LOCATED
ABOVE CEILING PANEL

SEE Ⓑ

CEC AREA
LIGHT SWITCH

PASSENGER COMPARTMENT

Ⓐ

FWD

2034021 S0000408604_V1

**Audio Video Controller-Digital (AVC-D) Installation
Figure 401/44-28-05-990-801 (Sheet 1 of 3)**

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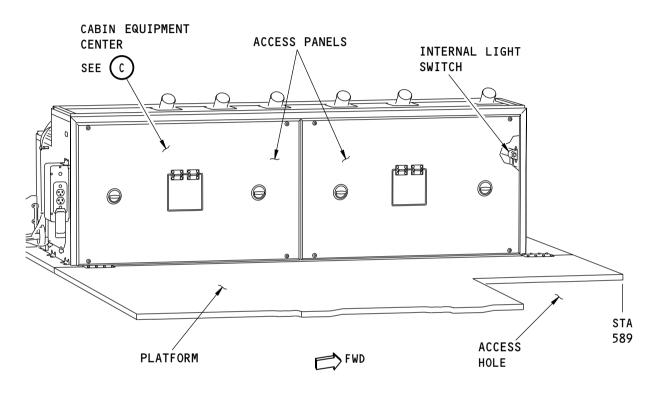
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CABIN EQUIPMENT
CENTER

SEE Ⓒ

ACCESS PANELS

INTERNAL LIGHT
SWITCH

PLATFORM

⇨ FWD

ACCESS
HOLE

STA
589

CABIN EQUIPMENT CENTER (CEC) AND PLATFORM

Ⓑ

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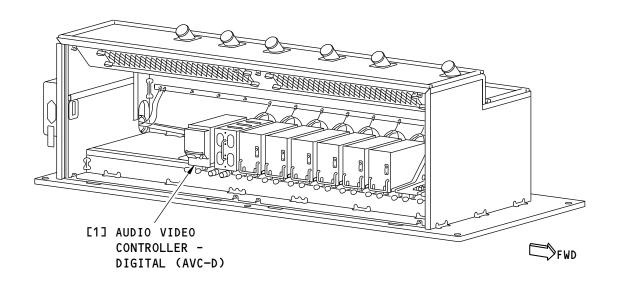
Audio Video Controller-Digital (AVC-D) Installation
Figure 401/44-28-05-990-801 (Sheet 2 of 3)

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[1] AUDIO VIDEO
CONTROLLER –
DIGITAL (AVC–D)

FWD

CABIN EQUIPMENT CENTER (CEC)

(C)

2167313 S0000450844_V1

**Audio Video Controller-Digital (AVC-D) Installation
Figure 401/44-28-05-990-801 (Sheet 3 of 3)**

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TASK 44-28-05-400-801

3. <u>Audio Video Controller-Digital (AVC-D) Installation</u>
    (Figure 401)

A. References

Reference	Title
20-10-01-400-801	E/E Box Installation (P/B 401)
25-21-06-400-801	Main Ceiling Panel - Installation (P/B 401)
44-28-00 P/B 501	PASSENGER ENTERTAINMENT SYSTEM (PES) VIDEO - ADJUSTMENT/TEST
44-28-00-470-801	Phase 1 Software Download Procedure (P/B 201)
44-28-00-470-802	Phase 2 Software Download Procedure (P/B 201)
44-28-00-470-803	Content Loading Procedure (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1541	Platform - Access, Cabin Crown
	Part #: 1107WSCHSK Supplier: 6Y876
	Opt Part #: J12005-1 Supplier: 81205
STD-1049	Stepladder - 12 foot

C. Location Zones

Zone	Area
223	Area Above Passenger Compartment Ceiling, Left - Section 41
224	Area Above Passenger Compartment Ceiling, Right - Section 41

D. Installation Procedure

SUBTASK 44-28-05-860-002

(1) Make sure that these circuit breakers are open and have safety tags:

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	21	C23355	VOD

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	23	C24688	IFE SEATS FLT DECK SW

SUBTASK 44-28-05-420-001

⚠️ **WARNING**	MAKE SURE THAT THE CONNECTORS ARE DISCONNECTED FROM THE EQUIPMENT AT THE TWO ENDS. OR SET THE EQUIPMENT TO OFF. THERE IS A RISK OF LASER RADIATION THAT YOU WILL NOT SEE. LASER RADIATION IS DANGEROUS FOR YOUR EYES.

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(WARNING PRECEDES)

⚠️ **WARNING**	DO NOT LOOK INTO THE END OF A FIBER-OPTIC CABLE. THERE IS A RISK OF LASER RADIATION, WHICH YOU WILL NOT SEE. LASER RADIATION IS DANGEROUS FOR YOUR EYES.
⚠️ **WARNING**	ALWAYS USE GLOVES IF YOU MUST TOUCH BROKEN FIBER-OPTIC CABLES. IF YOU TOUCH CABLES WITH YOUR BARE HANDS, FIBERS CAN GO INTO YOUR BODY THROUGH YOUR SKIN. THIS WILL CAUSE YOU INJURY.
⚠️ **CAUTION**	INSTALL THE PROTECTIVE CAPS IMMEDIATELY AFTER YOU DISCONNECT THE CABLE. IT IS EASY TO CAUSE DAMAGE TO THE FIBER-OPTIC CABLE.
⚠️ **CAUTION**	DO NOT BEND THE FIBER-OPTIC CABLE MORE THAN THE MINIMUM BEND RADIUS. THE CABLE IS EASILY DAMAGED.
⚠️ **CAUTION**	DO NOT PULL OR PUSH THE FIBER-OPTIC CABLE. THE CABLE IS EASILY DAMAGED.
⚠️ **CAUTION**	DO NOT TOUCH THE LRU CONNECTOR PINS. THE LRU IS SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE LRU.

   (2)   Install the AVC-D.

      (a)   To install the Audio Video Controller-Digital (AVC-D) [1], Do this task: E/E Box Installation, TASK 20-10-01-400-801.

SUBTASK 44-28-05-860-003

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

Left Power Management Panel, P110

Row	Col	Number	Name
D	21	C23355	VOD

Right Power Management Panel, P210

Row	Col	Number	Name
L	23	C24688	IFE SEATS FLT DECK SW

E.   Software Installation

SUBTASK 44-28-05-470-001

   (1)   Do the task: Phase 1 Software Download Procedure, TASK 44-28-00-470-801.

   (2)   Do the task: Phase 2 Software Download Procedure, TASK 44-28-00-470-802.

   (3)   Do the task: Content Loading Procedure, TASK 44-28-00-470-803.

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F. **Installation Test**

SUBTASK 44-28-05-730-001

(1) Do the task: PASSENGER ENTERTAINMENT SYSTEM (PES) VIDEO - ADJUSTMENT/TEST, PAGEBLOCK 44-28-00/501.

G. **Put the Airplane Back to Its Usual Condition**

SUBTASK 44-28-05-410-001

(1) Install the access panels on the front of the Cabin Equipment Center (CEC).

SUBTASK 44-28-05-410-002

(2) Remove the 12 foot stepladder, STD-1049 or cabin crown access platform, SPL-1541.

SUBTASK 44-28-05-410-003

(3) Install the main inboard ceiling panel (TASK 25-21-06-400-801).

——————— **END OF TASK** ———————

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CONFIGURATION PLUG (CP) - REMOVAL/INSTALLATION

1. **General**

   A.   This procedure has these tasks:

   (1)   The removal of a configuration plug (CP).

   (2)   The installation of a CP.

   B.   The CP is located in the Cabin Equipment Center (CEC).

   TASK 44-28-06-000-801

2. **Configuration Plug (CP) Removal**

   (Figure 401)

   A.   **References**

Reference	Title
20-10-01-000-801	E/E Box Removal (P/B 401)
25-21-06-000-801	Main Ceiling Panel - Removal (P/B 401)

   B.   **Tools/Equipment**

   NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1541	Platform - Access, Cabin Crown
	Part #: 1107WSCHSK Supplier: 6Y876
	Opt Part #: J12005-1 Supplier: 81205
STD-1049	Stepladder - 12 foot

   C.   **Location Zones**

Zone	Area
223	Area Above Passenger Compartment Ceiling, Left - Section 41
224	Area Above Passenger Compartment Ceiling, Right - Section 41

   D.   **Removal Procedure**

   SUBTASK 44-28-06-010-001

   (1)   Get access to the Cabin Equipment Center (CEC) above the passenger compartment ceiling (Figure 401):

   (a)   Remove the main inboard ceiling panel (Main Ceiling Panel - Removal, TASK 25-21-06-000-801).

   (b)   Use a 12 foot stepladder, STD-104912 foot stepladder, STD-1049 or cabin crown access platform, SPL-1541 to get up on the CEC platform.

   NOTE: There is a CEC area light switch near the access hole in the CEC platform.

   (c)   Remove the access panels on the front side of the CEC.

   NOTE: There is a light switch inside the CEC at the forward end.
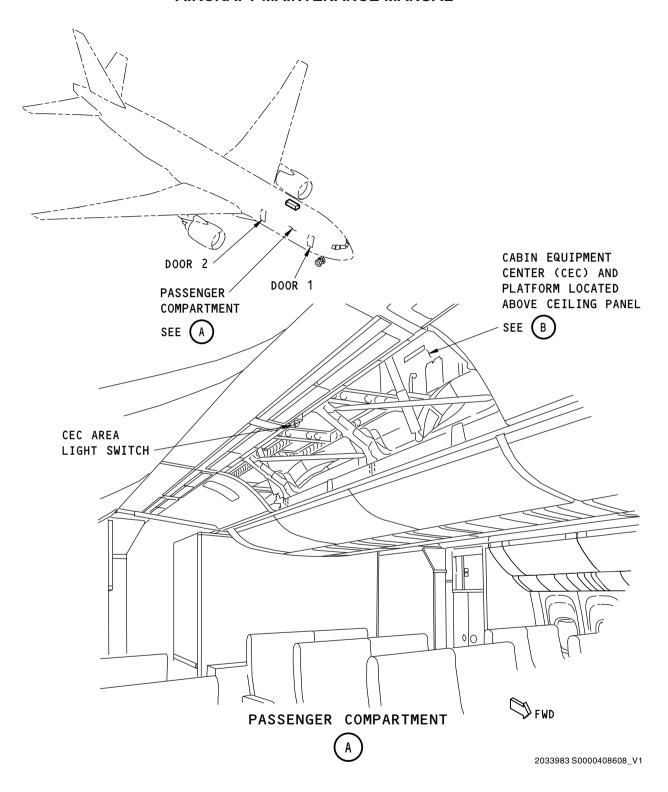
   SUBTASK 44-28-06-020-001

   (2)   Remove the CP.

   (a)   To remove the Configuration Plug (CP) [1], Do this task: E/E Box Removal, TASK 20-10-01-000-801.

———— **END OF TASK** ————

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DOOR 2

PASSENGER
COMPARTMENT

SEE (A)

DOOR 1

CABIN EQUIPMENT
CENTER (CEC) AND
PLATFORM LOCATED
ABOVE CEILING PANEL

SEE (B)

CEC AREA
LIGHT SWITCH

PASSENGER COMPARTMENT

(A)

FWD

2033983 S0000408608_V1

Configuration Plug (CP) Installation
Figure 401/44-28-06-990-801 (Sheet 1 of 3)

EFFECTIVITY
ARO ALL

44-28-06

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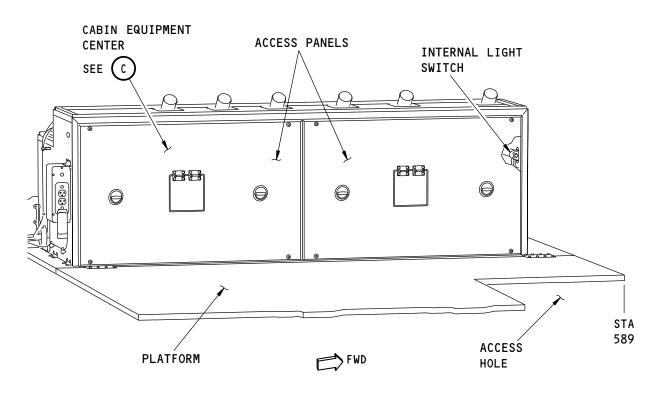
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CABIN EQUIPMENT CENTER (CEC) AND PLATFORM

B

2033985 S0000408609_V1
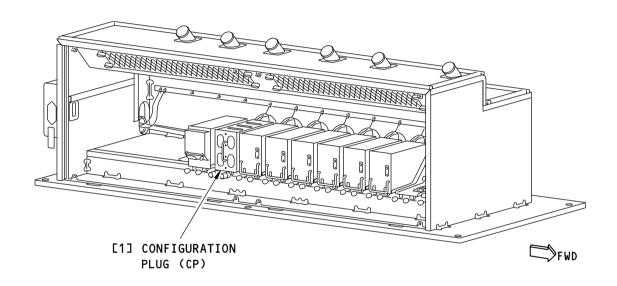
Configuration Plug (CP) Installation
Figure 401/44-28-06-990-801 (Sheet 2 of 3)

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[1] CONFIGURATION
    PLUG (CP)

⟳ FWD

CABIN EQUIPMENT CENTER (CEC)

Ⓒ

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Configuration Plug (CP) Installation
Figure 401/44-28-06-990-801 (Sheet 3 of 3)

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TASK 44-28-06-400-801

3. <u>Configuration Plug (CP) Installation</u>

(Figure 401)

A. **References**

Reference	Title
20-10-01-400-801	E/E Box Installation (P/B 401)
25-21-06-400-801	Main Ceiling Panel - Installation (P/B 401)
44-28-00 P/B 501	PASSENGER ENTERTAINMENT SYSTEM (PES) VIDEO - ADJUSTMENT/TEST

B. **Tools/Equipment**

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1541	Platform - Access, Cabin Crown
	Part #: 1107WSCHSK Supplier: 6Y876
	Opt Part #: J12005-1 Supplier: 81205
STD-1049	Stepladder - 12 foot

C. **Location Zones**

Zone	Area
223	Area Above Passenger Compartment Ceiling, Left - Section 41
224	Area Above Passenger Compartment Ceiling, Right - Section 41

D. **Installation Procedure**

SUBTASK 44-28-06-420-001

(1) Install the CP.

(a) To install the Configuration Plug (CP) [1], Do this task: E/E Box Installation, TASK 20-10-01-400-801.

E. **Installation Test**

SUBTASK 44-28-06-730-001

(1) Do the task: PASSENGER ENTERTAINMENT SYSTEM (PES) VIDEO - ADJUSTMENT/TEST, PAGEBLOCK 44-28-00/501.

F. **Put the Airplane Back to Its Usual Condition**

SUBTASK 44-28-06-410-001

(1) Install the access panels on the front of the CEC.

SUBTASK 44-28-06-410-002

(2) Remove the 12 foot stepladder, STD-1049 or cabin crown access platform, SPL-1541.

SUBTASK 44-28-06-410-003

(3) Install the main inboard ceiling panel (Main Ceiling Panel - Installation, TASK 25-21-06-400-801).

——— **END OF TASK** ———

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1.   General

   A.   This procedure has these tasks:

     (1)   The removal of the Seat Electronics Box (SEB).

     (2)   The installation of the SEB.

   B.   The SEB are in these locations:

     (1)   Passenger seats.

TASK 44-28-07-000-802

2.   **Seat Electronics Box (SEB) Removal**
(Figure 401)

   A.   **References**

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)

   B.   **Location Zones**

Zone	Area
117	Main Equipment Center, Left
118	Main Equipment Center, Right
200	Upper Half of Fuselage

   C.   **Removal Procedure**

SUBTASK 44-28-07-860-004

> ⚠️ **WARNING** OPEN THE SVU CIRCUIT BREAKERS TO PREVENT ELECTRICAL SHOCK. ELECTRICAL SHOCK CAN KILL, OR CAUSE INJURIES TO PERSONNEL.

     (1)   Open these circuit breakers and install safety tags:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
L	23	C24688	IFE SEATS FLT DECK SW

SUBTASK 44-28-07-010-002

     (2)   Do the steps that follow to get access to the SEB:

NOTE: The SEB is installed under the seat.

     (a)   Remove the bottom seat cushion.

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(b)   Remove the seat pan.

NOTE: It may be necessary to remove other seat components like seat arms or seat belts.

SUBTASK 44-28-07-910-003

⚠️ **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.

(3)   Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803.

SUBTASK 44-28-07-020-002
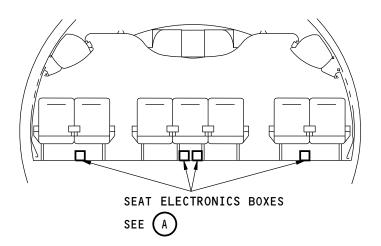
(4)   Remove the Seat Electronics Box (SEB):

(a)   If a shroud is installed over the Seat Electronics Box (SEB) [1], remove the shroud.

(b)   If a retaining strap holds the Seat Electronics Box (SEB) [1], release the retaining strap.

(c)   For the spring-latched Electrical Connector [2], release the spring latches.

(d)   Disconnect the Electrical Connector [2] from the SEB.

(e)   Remove and keep the termination plug, if one is installed.

(f)   While you hold the Seat Electronics Box (SEB) [1], pull the Quick-Release Fastener [3].

(g)   Remove the Seat Electronics Box (SEB) [1].

(h)   Put protective covers on the Electrical Connector [2].

——— **END OF TASK** ———
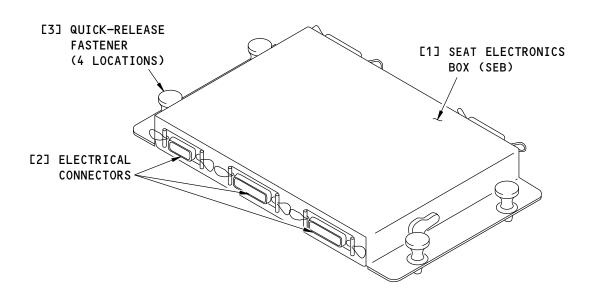
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SEAT ELECTRONICS BOXES

SEE (A)

PASSENGER COMPARTMENT
(EXAMPLE)

[3] QUICK-RELEASE
    FASTENER
    (4 LOCATIONS)

[1] SEAT ELECTRONICS
    BOX (SEB)

[2] ELECTRICAL
    CONNECTORS

SEAT ELECTRONICS BOX (SEB)
(EXAMPLE)

(A)

1873367 S0000340457_V1
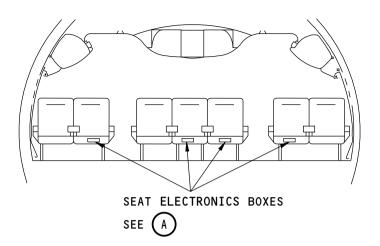
Seat Electronics Box (SEB) Installation
Figure 401/44-28-07-990-802 (Sheet 1 of 2)

EFFECTIVITY
ARO ALL
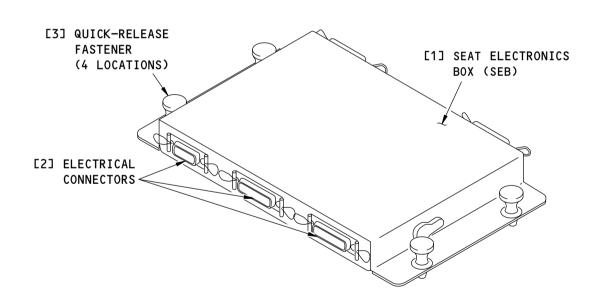
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SEAT ELECTRONICS BOXES

SEE (A)

PASSENGER COMPARTMENT
(EXAMPLE)

[3] QUICK-RELEASE
FASTENER
(4 LOCATIONS)

[1] SEAT ELECTRONICS
BOX (SEB)

[2] ELECTRICAL
CONNECTORS

SEAT ELECTRONICS BOX (SEB)
(EXAMPLE)

(A)

1873376 S0000340458_V1

**Seat Electronics Box (SEB) Installation
Figure 401/44-28-07-990-802 (Sheet 2 of 2)**

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TASK 44-28-07-400-802

3. <u>Seat Electronics Box (SEB) Installation</u>

(Figure 401)

A. **References**

Reference	Title
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)
44-28-00-470-802	Phase 2 Software Download Procedure (P/B 201)
44-28-00-730-801	Passenger Entertainment System (PES) Video - System Test (P/B 501)

B. **Location Zones**

Zone	Area
117	Main Equipment Center, Left
118	Main Equipment Center, Right
200	Upper Half of Fuselage

C. **Installation Procedure**

SUBTASK 44-28-07-860-005

⚠️ **WARNING**	OPEN THE SVU CIRCUIT BREAKERS TO PREVENT ELECTRICAL SHOCK. ELECTRICAL SHOCK CAN KILL, OR CAUSE INJURIES TO PERSONNEL.

(1) Make sure that these circuit breakers are open and have safety tags:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
L	23	C24688	IFE SEATS FLT DECK SW

SUBTASK 44-28-07-910-004

⚠️ **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) Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-41-01-400-803.

SUBTASK 44-28-07-420-001

(3) Install the Seat Electronics Box (SEB):

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> ⚠️ **CAUTION**
> DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE SVU. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE SVU.

(a) Remove the protective covers from the Electrical Connector [2].

(b) Examine the Electrical Connector [2] for bent or broken pins, dirt, and damage.

(c) Position the unit so that the connectors match the cables, and the Quick-Release Fastener [3] are over their matching holes.

(d) Push each Quick-Release Fastener [3] through the aligned holes to engage the fastener.

(e) Connect the Electrical Connector [2] to the Seat Electronics Box (SEB) [1].

> ⚠️ **CAUTION**
> MAKE SURE THAT THE SPRING LATCHES HOLD THE CONNECTORS IN THE FULLY ENGAGED POSITION. IF THE CONNECTORS MOVE, ELECTRICAL ARCING CAN OCCUR. THIS CAN CAUSE DAMAGE TO EQUIPMENT.

(f) For the spring-latched electrical connectors, install the spring latches.

(g) If necessary, install the termination plug.

(h) If a retaining strap holds the Seat Electronics Box (SEB) [1], install the retaining strap.

> ⚠️ **WARNING**
> MAKE SURE THAT THE SVU SHROUD IS INSTALLED CORRECTLY. IF THE SHROUD IS NOT INSTALLED CORRECTLY, ELECTRICAL SHOCKS TO PASSENGERS, AND MAINTENANCE PERSONNEL CAN OCCUR. ELECTRICAL SHOCKS CAN KILL, OR CAUSE INJURIES TO PASSENGERS AND PERSONNEL.

(i) If the Seat Electronics Box (SEB) [1] has a shroud, install the shroud.

SUBTASK 44-28-07-410-002

(4) To close access for the SEB below the seat pan, do these steps:

(a) Install the seat pan.

NOTE: It may be necessary to install other seat components like seat arms or seat belts.

(b) Install the seat cushion.

SUBTASK 44-28-07-860-006

(5) Remove the safety tags and close these circuit breakers:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
L	23	C24688	IFE SEATS FLT DECK SW

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D.   **Software Load Procedure**

SUBTASK 44-28-07-470-001

(1)   Do the task: Phase 2 Software Download Procedure, TASK 44-28-00-470-802.

E.   **Installation Test**

SUBTASK 44-28-07-710-001

(1)   Do the task: Passenger Entertainment System (PES) Video - System Test,
TASK 44-28-00-730-801.

———— **END OF TASK** ————

OVERHEAD DISPLAY UNIT - REMOVAL/INSTALLATION

1. **General**

   A. This procedure has these tasks:

      (1) The removal of a wall mounted display unit.

      (2) The installation of a wall mounted display unit.

   B. The display units are located throughout the passenger cabin.

   TASK 44-28-10-000-801

2. **Overhead Display Unit Removal**

   (Figure 401)

   A. **References**

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)

   B. **Location Zones**

Zone	Area
200	Upper Half of Fuselage

   C. **Removal Procedure**

   SUBTASK 44-28-10-860-001

   (1) Open these circuit breakers and install safety tags:

   Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

   Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
G	12	C23658	IFE MASTER CTL

   SUBTASK 44-28-10-860-002

⚠️ **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) Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803.

   SUBTASK 44-28-10-020-003

   (3) Remove the Overhead Display Unit:

      (a) Remove and retain the screws [3] that secure the shroud [2] to the wall mounting bracket [9].

      (b) Remove the shroud [2].

      (c) Remove and retain the screws [5] that secure the support bracket [4] to the wall mounting bracket [9].
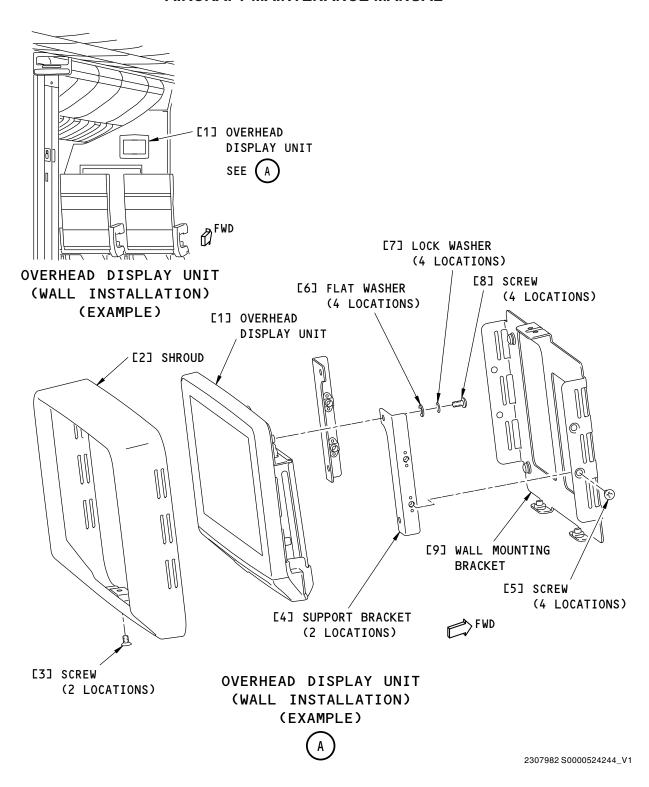
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(d)   Remove the overhead display unit assembly.

(e)   Disconnect the connectors.

(f)   Remove and retain the screws [8], the flat washers [7], and the lock washers [6] that secure the support bracket [4] to the overhead display unit [1].

(g)   Remove the overhead display unit [1].

(h)   Put protective covers on the electrical connectors.

SUBTASK 44-28-10-020-004

(4)   Remove the Overhead Display Unit:

(a)   Remove and retain the screws [4] and the washers [3] that secure the shroud [2] to the wall mounting bracket [7].

(b)   Remove the shroud [2].

(c)   Remove and retain the screws [6] that secure the wall mounting bracket [7] to the wall.

(d)   Remove the overhead display unit assembly.

(e)   Disconnect the connectors.

(f)   Remove and retain the screws [5] that secure the overhead display unit [1] to the wall mounting bracket [7].

(g)   Remove the overhead display unit [1].

(h)   Put protective covers on the electrical connectors.

———— **END OF TASK** ————

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[1] OVERHEAD
DISPLAY UNIT

SEE (A)

FWD

OVERHEAD DISPLAY UNIT
(WALL INSTALLATION)
(EXAMPLE)

[7] LOCK WASHER
(4 LOCATIONS)

[6] FLAT WASHER
(4 LOCATIONS)

[8] SCREW
(4 LOCATIONS)

[1] OVERHEAD
DISPLAY UNIT

[2] SHROUD

[9] WALL MOUNTING
BRACKET

[5] SCREW
(4 LOCATIONS)

[4] SUPPORT BRACKET
(2 LOCATIONS)

FWD

[3] SCREW
(2 LOCATIONS)

OVERHEAD DISPLAY UNIT
(WALL INSTALLATION)
(EXAMPLE)

(A)

2307982 S0000524244_V1

Overhead Display Unit
Figure 401/44-28-10-990-801 (Sheet 1 of 2)

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[1] OVERHEAD
DISPLAY UNIT

SEE (A)

FWD

OVERHEAD DISPLAY UNIT
(WALL INSTALLATION)
(EXAMPLE)

[3] WALL
MOUNTING
BRACKET

[1] OVERHEAD
DISPLAY
UNIT

[4] SCREW
(4 LOCATIONS)

[2] SHROUD

[5] SCREW
(4 LOCATIONS)

[7] WASHER
(2 LOCATIONS)

[6] SCREW
(2 LOCATIONS)

FWD

OVERHEAD DISPLAY UNIT
(WALL INSTALLATION)
(EXAMPLE)

(A)

2308169 S0000524245_V1
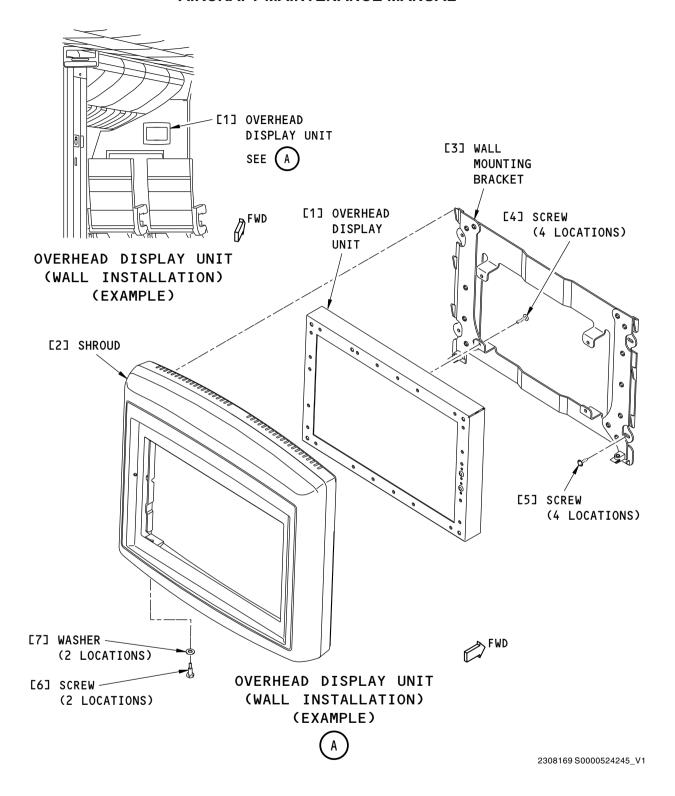
Overhead Display Unit
Figure 401/44-28-10-990-801 (Sheet 2 of 2)

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TASK 44-28-10-400-801

3. **Overhead Display Unit Installation**

(Figure 401)

    A.   **References**

Reference	Title
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)
44-28-00-470-802	Phase 2 Software Download Procedure (P/B 201)
44-28-00-730-801	Passenger Entertainment System (PES) Video - System Test (P/B 501)
44-28-00-750-801	Configuration Check Procedure (P/B 201)

    B.   **Location Zones**

Zone	Area
200	Upper Half of Fuselage

    C.   **Installation Procedure**

SUBTASK 44-28-10-860-003

(1)   Make sure that these circuit breakers are open and have safety tags:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
G	12	C23658	IFE MASTER CTL

SUBTASK 44-28-10-860-004

⚠️ **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)   Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-41-01-400-803.

SUBTASK 44-28-10-420-003

(3)   Install the Overhead Display Unit:

    (a)   Remove the protective covers from the electrical connectors.

    (b)   Examine the connectors for bent or broken pins, dirt, and damage.

    (c)   Connect the connectors to the overhead display unit [1].

    (d)   Install the flat washers [7], the lock washers [6], and the screws [8] to attach the support brackets [4] to the overhead display unit [1].

    (e)   Align the overhead display unit [1] to its mounting location.

    (f)   Install the screws [5] to attach the support brackets [4] to the wall mounting bracket [9].

    (g)   Align the shroud [2] to its mounting location.

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   (h)   Install the screws [3] to attach the shroud [2] to the wall mounting bracket [9].

   (i)   If necessary, clean the screen.

SUBTASK 44-28-10-420-004

(4)   Install the Overhead Display Unit:

   (a)   Remove the protective covers from the electrical connectors.

   (b)   Examine the connectors for bent or broken pins, dirt, and damage.

   (c)   Connect connectors to the overhead display unit [1].

   (d)   Install the screws [5] to attach the wall mounting bracket [7] to the overhead display unit [1].

   (e)   Align the overhead display unit [1] to its mounting location.

   (f)   Install the screws [6] to attach the wall mounting bracket [7] to the wall.

   (g)   Align the shroud [2] to its mounting location.

   (h)   Install the screws [4] and the washers [3] to attach the shroud [2] to the wall mounting bracket [7].

   (i)   If necessary, clean the screen.

SUBTASK 44-28-10-860-005

(5)   Remove the safety tags and close these circuit breakers:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
G	12	C23658	IFE MASTER CTL

D.   Software Installation

SUBTASK 44-28-10-470-001

(1)   Do a Phase 2 Software Download: Phase 2 Software Download Procedure, TASK 44-28-00-470-802.

E.   Overhead Display Unit Installation Test

SUBTASK 44-28-10-710-002

(1)   Do a Configuration Check: Configuration Check Procedure, TASK 44-28-00-750-801.

SUBTASK 44-28-10-710-003

(2)   Do a Static Test: Passenger Entertainment System (PES) Video - System Test, TASK 44-28-00-730-801.

SUBTASK 44-28-10-710-004

(3)   Do an Overhead Video Test: Passenger Entertainment System (PES) Video - System Test, TASK 44-28-00-730-801.

———— **END OF TASK** ————

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SEAT DISPLAY UNIT - SEATBACK - REMOVAL/INSTALLATION

1. **General**

   A. This procedure has these tasks:

      (1) The removal of the Seat Display Unit (SDU) - Seatback.

      (2) The installation of the Seat Display Unit (SDU) - Seatback.

   B. The component in this procedure is referred as the Seat Display Unit (SDU). Alternative names for the SDU are:

      (1) Smart Video Display Unit (SVDU)

   C. The SDU are in these locations:

      (1) Passenger seats.

   TASK 44-28-12-000-801

2. **Seat Display Unit (SDU) - Seatback Removal**
   (Figure 401)

   A. **References**

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)

   B. **Location Zones**

Zone	Area
200	Upper Half of Fuselage

   C. **Removal Procedure**

   SUBTASK 44-28-12-860-001

   (1) Open these circuit breakers and install safety tags:

   Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

   Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4

   SUBTASK 44-28-12-910-001

   > ⚠️ **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) Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803.

   SUBTASK 44-28-12-020-001

   (3) Remove the Seat Display Unit (SDU):

      (a) Remove the screws [2].

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    (b)   Disconnect the cable and connectors.

    (c)   Remove the seat display unit (SDU) [1].

    (d)   Put protective covers on the electrical connectors.

———— **END OF TASK** ————

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SEAT DISPLAY
UNITS

SEE (A)

FWD

PASSENGER SEATS
(EXAMPLE)

[1] SDU

[2] SCREW
(4 LOCATIONS)

SEAT DISPLAY UNIT (SDU)
(EXAMPLE)

(A)

2005625 S0000394007_V1

Seat Display Unit (SDU) - Seatback Installation
Figure 401/44-28-12-990-801

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TASK 44-28-12-400-801

3. **Seat Display Unit (SDU) - Seatback Installation**

(Figure 401)

A. References

Reference	Title
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)
44-28-00 P/B 501	PASSENGER ENTERTAINMENT SYSTEM (PES) VIDEO - ADJUSTMENT/TEST
44-28-00-470-802	Phase 2 Software Download Procedure (P/B 201)
44-28-00-730-801	Passenger Entertainment System (PES) Video - System Test (P/B 501)
44-28-00-750-801	Configuration Check Procedure (P/B 201)
44-28-00-860-801	Power On the Video Entertainment System (P/B 201)
44-28-00-860-802	Power Off the Video Entertainment System (P/B 201)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Installation Procedure

SUBTASK 44-28-12-860-002

(1) Make sure that these circuit breakers are open and have safety tags:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4

SUBTASK 44-28-12-910-002

> ⚠️ **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) Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-41-01-400-803.

SUBTASK 44-28-12-420-001

(3) Install the Seat Display Unit (SDU):

    (a) Remove the protective covers from the electrical connectors.

    (b) Examine the connectors for bent or broken pins, dirt, and damage.

    (c) Connect the cable and connector to the seat display unit (SDU) [1].

    (d) Align the seat display unit (SDU) [1] to its mounting location.

    (e) Install the screws [2] to attach the seat display unit (SDU) [1].

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(f)   If necessary, clean the screen.

SUBTASK 44-28-12-860-003

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

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4

D.   Software Installation

SUBTASK 44-28-12-470-001

(1)   Install the software for the SDU (also referred to as the SVDU) (refer to:Phase 2 Software Download Procedure, TASK 44-28-00-470-802).

(a)   Do the IP Sequencing procedure for the SVDU (refer to: Phase 2 Software Download Procedure, TASK 44-28-00-470-802).

(b)   Make sure that the software part numbers are correct for the SVDU.

E.   Installation Test

SUBTASK 44-28-12-710-001

(1)   Do these steps:.

(a)   Initialize the entertainment system (Power On the Video Entertainment System, TASK 44-28-00-860-801).

(b)   Make selections at the cabin management terminal (CMT) to show a video at the seats.

(c)   Make selections at the seat to show a video on the SDU that you installed.

(d)   Make sure that the video shows on the SDU.

(e)   If it is not necessary to continue to operate the system, do this task: Power Off the Video Entertainment System, TASK 44-28-00-860-802.

SUBTASK 44-28-12-710-002

(2)   Do these steps:

(a)   Make sure that the entertainment system is powered on (Power On the Video Entertainment System, TASK 44-28-00-860-801).

(b)   Do the Configuration Check (Configuration Check Procedure, TASK 44-28-00-750-801).

(c)   Do the BITE Test at the interactive cabin management terminal (iCMT) (refer to: Passenger Entertainment System (PES) Video - System Test, TASK 44-28-00-730-801).

1)   Make sure that there are no faults for the SVDU that you replaced.

(d)   Make selections at the iCMT to show a broadcast video at the seats.

1)   If it is necessary, refer to PASSENGER ENTERTAINMENT SYSTEM (PES) VIDEO - ADJUSTMENT/TEST, PAGEBLOCK 44-28-00/501.

(e)   Make sure that the video shows on the SDU that you replaced.

(f)   Make selections at the iCMT to stop the video.

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(g) If it is not necessary to continue to operate the system, then do this task: Power Off the Video Entertainment System, TASK 44-28-00-860-802.

———— **END OF TASK** ————

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SEAT DISPLAY UNIT - IN ARM - REMOVAL/INSTALLATION

1. **General**

    A. This procedure has these tasks:

    (1) The removal of the Seat Display Unit (SDU) - In Arm.

    (2) The installation of the Seat Display Unit (SDU) - In Arm.

    TASK 44-28-14-000-801

2. **Seat Display Unit (SDU) - In Arm Removal**

    (Figure 401)

    A. **References**

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)

    B. **Location Zones**

Zone	Area
200	Upper Half of Fuselage

    C. **Removal Procedure**

    SUBTASK 44-28-14-860-001

    (1) Open these circuit breakers and install safety tags:

    Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

    Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4

    SUBTASK 44-28-14-910-001

⚠️ **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) Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803.
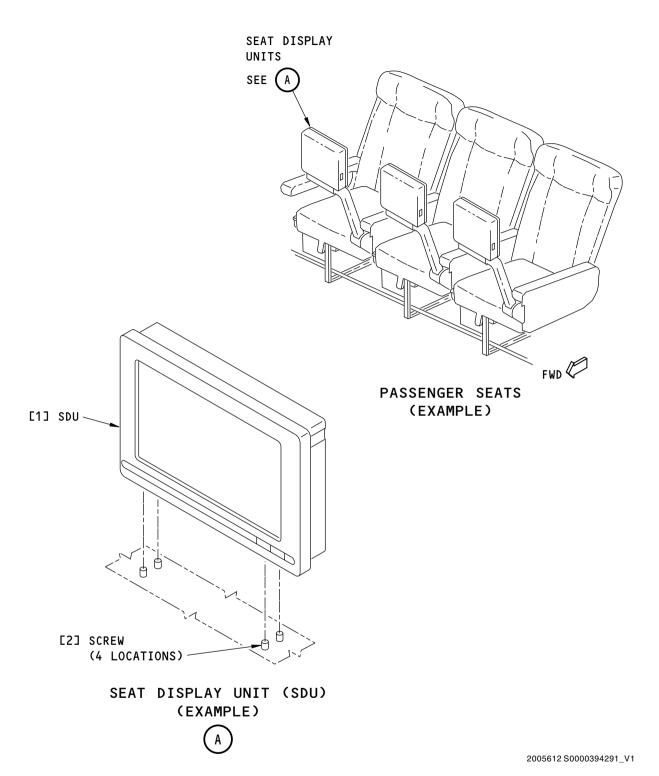
    SUBTASK 44-28-14-020-001

    (3) Remove the Seat Display Unit (SDU):
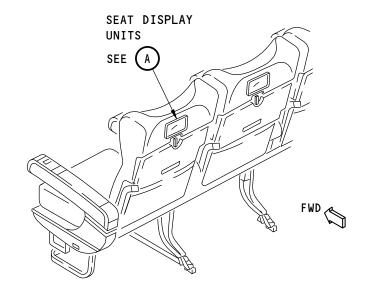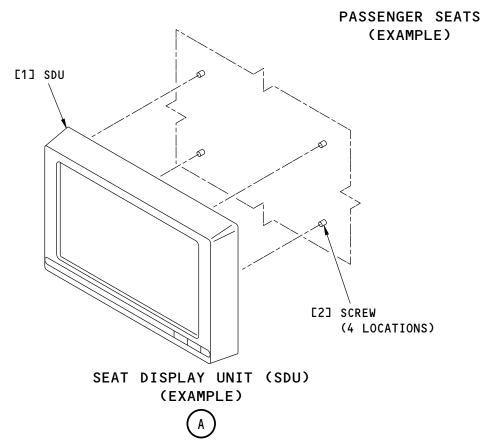
    (a) Remove the screws [2].

    (b) Disconnect the cable and connectors.

    (c) Remove the Seat Display Unit (SDU) [1].

    (d) Put protective covers on the electrical connectors.

    ———— **END OF TASK** ————

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SEAT DISPLAY
UNITS

SEE (A)

PASSENGER SEATS
(EXAMPLE)

FWD

[1] SDU

[2] SCREW
(4 LOCATIONS)

SEAT DISPLAY UNIT (SDU)
(EXAMPLE)

(A)

2005612 S0000394291_V1

Seat Display Unit (SDU) - In Arm Installation
Figure 401/44-28-14-990-802

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TASK 44-28-14-400-801

3. <u>Seat Display Unit (SDU) - In Arm Installation</u>

(Figure 401)

A.   References

Reference	Title
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)
44-28-00 P/B 501	PASSENGER ENTERTAINMENT SYSTEM (PES) VIDEO - ADJUSTMENT/TEST
44-28-00-470-802	Phase 2 Software Download Procedure (P/B 201)
44-28-00-730-801	Passenger Entertainment System (PES) Video - System Test (P/B 501)
44-28-00-750-801	Configuration Check Procedure (P/B 201)
44-28-00-860-801	Power On the Video Entertainment System (P/B 201)
44-28-00-860-802	Power Off the Video Entertainment System (P/B 201)

B.   Location Zones

Zone	Area
200	Upper Half of Fuselage

C.   Installation Procedure

SUBTASK 44-28-14-860-002

(1)   Make sure that these circuit breakers are open and have safety tags:

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4

SUBTASK 44-28-14-910-002

⚠️ **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)   Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-41-01-400-803.

SUBTASK 44-28-14-420-001

(3)   Install the Seat Display Unit (SDU):

(a)   Remove the protective covers from the electrical connectors.

(b)   Examine the connectors for bent or broken pins, dirt, and damage.

(c)   Connect the cable and connector to the Seat Display Unit (SDU) [1].

(d)   Align the Seat Display Unit (SDU) [1] to its mounting location.

(e)   Install the screws [2] to attach the Seat Display Unit (SDU) [1].

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(f)   If necessary, clean the screen.

SUBTASK 44-28-14-860-003

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

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4

D.   Software Installation

SUBTASK 44-28-14-470-001

(1)   Install the software for the SDU (also referred to as the SVDU) (refer to:Phase 2 Software Download Procedure, TASK 44-28-00-470-802).

(a)   Do the IP Sequencing procedure for the SVDU (refer to: Phase 2 Software Download Procedure, TASK 44-28-00-470-802).

(b)   Make sure that the software part numbers are correct for the SVDU.

E.   Installation Test

SUBTASK 44-28-14-710-001

(1)   Do these steps:

(a)   Initialize the entertainment system (Power On the Video Entertainment System, TASK 44-28-00-860-801

(b)   Make selections at the cabin management terminal (CMT) to show a video at the seats.

(c)   Make selections at the seat to show a video on the SDU that you installed.

(d)   Make sure that the video shows on the SDU.

(e)   If it is not necessary to continue to operate the system, do this task: Power Off the Video Entertainment System, TASK 44-28-00-860-802.

SUBTASK 44-28-14-710-002

(2)   Do these steps:

(a)   Make sure that the entertainment system is powered on (Power On the Video Entertainment System, TASK 44-28-00-860-801).

(b)   Do the configuration check (Configuration Check Procedure, TASK 44-28-00-750-801).

(c)   Do the BITE Test at the interactive cabin management terminal (iCMT) (refer to: Passenger Entertainment System (PES) Video - System Test, TASK 44-28-00-730-801).

1)   Make sure that there are no faults for the SVDU that you replaced.

(d)   Make selections at the iCMT to show a broadcast video at the seats.

1)   If it is necessary, refer to PASSENGER ENTERTAINMENT SYSTEM (PES) VIDEO - ADJUSTMENT/TEST, PAGEBLOCK 44-28-00/501.

(e)   Make sure that the video shows on the SDU that you replaced.

(f)   Make selections at the iCMT to stop the video.

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(g)   If it is not necessary to continue to operate the system, then do this task: Power Off the Video Entertainment System, TASK 44-28-00-860-802.

———— **END OF TASK** ————

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SEAT DISPLAY UNIT - WALL/CONSOLE MOUNT - REMOVAL/INSTALLATION

1. **General**

   A. This procedure has these tasks:

      (1) The removal of the Seat Display Unit (SDU) - Wall Mount.

      (2) The installation of the Seat Display Unit (SDU) - Wall Mount.

   TASK 44-28-15-000-801

2. **Seat Display Unit (SDU) - Wall/Console Mount Removal**
   (Figure 401)

   A. **References**

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)

   B. **Location Zones**

Zone	Area
200	Upper Half of Fuselage

   C. **Removal Procedure**

   SUBTASK 44-28-15-860-001

   (1) Open these circuit breakers and install safety tags:

   Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

   Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4

   SUBTASK 44-28-15-910-001

   > ⚠️ **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) Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803.

   SUBTASK 44-28-15-010-001

   (3) If necessary, remove the shroud assembly:

      (a) Remove the screws that hold the shroud.

      (b) Remove the shroud.

   SUBTASK 44-28-15-020-001

   (4) Remove the Seat Display Unit (SDU):

      (a) Remove the screws [2].

      (b) Disconnect the cable and connectors.

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(c)   Remove the Seat Display Unit (SDU) [1].

(d)   Put protective covers on the electrical connectors.

——— **END OF TASK** ———

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[1] SEAT DISPLAY
UNIT (SDU)

SEE Ⓐ

FWD

SEAT DISPLAY UNIT
(WALL INSTALLATION)
(EXAMPLE)

[2] SCREW
(4 LOCATIONS)

[1] SEAT DISPLAY
UNIT (SDU)

WALL SUPPORT
BRACKET

SHROUD

SCREW
(2 LOCATIONS)
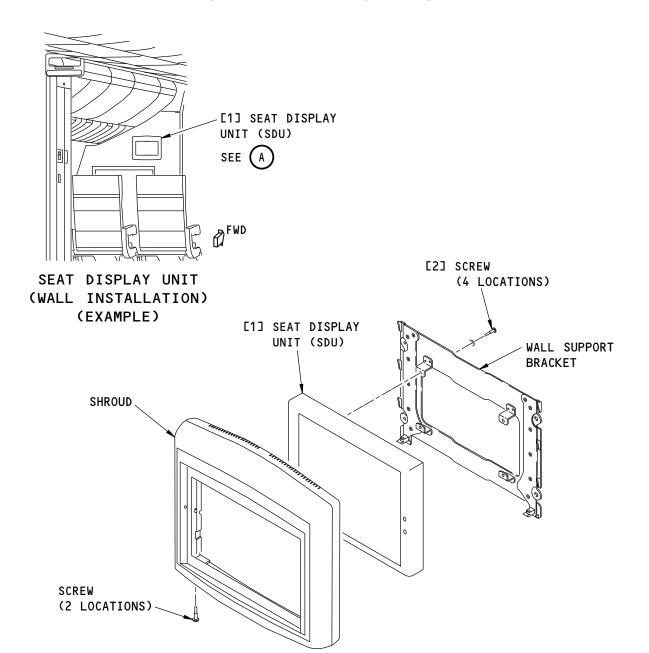
SEAT DISPLAY UNIT (SDU)
(WALL INSTALLATION)
(EXAMPLE)

Ⓐ

2034144 S0000408782_V1

Seat Display Unit (SDU) - Wall Mount Installation
Figure 401/44-28-15-990-801

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TASK 44-28-15-400-801

3.   <u>Seat Display Unit (SDU) - Wall/Console Mount Installation</u>

(Figure 401)

    A.   **References**

Reference	Title
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)
44-28-00 P/B 501	PASSENGER ENTERTAINMENT SYSTEM (PES) VIDEO - ADJUSTMENT/TEST
44-28-00-470-802	Phase 2 Software Download Procedure (P/B 201)
44-28-00-730-801	Passenger Entertainment System (PES) Video - System Test (P/B 501)
44-28-00-750-801	Configuration Check Procedure (P/B 201)
44-28-00-860-801	Power On the Video Entertainment System (P/B 201)
44-28-00-860-802	Power Off the Video Entertainment System (P/B 201)

    B.   **Location Zones**

Zone	Area
200	Upper Half of Fuselage

    C.   **Installation Procedure**

SUBTASK 44-28-15-860-002

(1)   Make sure that these circuit breakers are open and have safety tags:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4

SUBTASK 44-28-15-910-002

> ⚠️ **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)   Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-41-01-400-803.

SUBTASK 44-28-15-420-001

(3)   Install the Seat Display Unit (SDU):

    (a)   Remove the protective covers from the electrical connectors.

    (b)   Examine the connectors for bent or broken pins, dirt, and damage.

    (c)   Connect the cable and connector to the Seat Display Unit (SDU) [1].

    (d)   Align the Seat Display Unit (SDU) [1] to its mounting location.

    (e)   Install the screws [2] to attach the Seat Display Unit (SDU) [1].

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(f)   If necessary, clean the screen.

SUBTASK 44-28-15-410-001

(4)   If necessary, install the shroud assembly:

(a)   Put the shroud above the Seat Display Unit (SDU) [1].

(b)   Install the screws that attach the shroud.

SUBTASK 44-28-15-860-003

(5)   Remove the safety tags and close these circuit breakers:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4

D.   Software Installation

SUBTASK 44-28-15-470-001

(1)   Install the software for the SDU (also referred to as the SVDU) (refer to:Phase 2 Software Download Procedure, TASK 44-28-00-470-802).

(a)   Do the IP Sequencing procedure for the SVDU (refer to: Phase 2 Software Download Procedure, TASK 44-28-00-470-802).

(b)   Make sure that the software part numbers are correct for the SVDU.

E.   Installation Test

SUBTASK 44-28-15-710-001

(1)   Do these steps:

(a)   Initialize the entertainment system (Power On the Video Entertainment System, TASK 44-28-00-860-801).

(b)   Make selections at the cabin management terminal (CMT) to show a video at the seats.

(c)   Make selections at the seat to show a video on the SDU that you installed.

(d)   Make sure that the video shows on the SDU.

(e)   If it is not necessary to continue to operate the system, do this task: Power Off the Video Entertainment System, TASK 44-28-00-860-802.

SUBTASK 44-28-15-710-002

(2)   Do these steps:

(a)   Make sure that the entertainment system is powered on (Power On the Video Entertainment System, TASK 44-28-00-860-801).

(b)   Do the configuration check (Configuration Check Procedure, TASK 44-28-00-750-801).

(c)   Do the BITE Test at the interactive cabin management terminal (iCMT) (refer to: Passenger Entertainment System (PES) Video - System Test, TASK 44-28-00-730-801).

    1)   Make sure that there are no faults for the SVDU that you replaced.

(d)   Make selections at the iCMT to show a broadcast video at the seats.

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    1)   If it is necessary, refer to PASSENGER ENTERTAINMENT SYSTEM (PES) VIDEO - ADJUSTMENT/TEST, PAGEBLOCK 44-28-00/501.

(e)   Make sure that the video shows on the SDU that you replaced.

(f)   Make selections at the iCMT to stop the video.

(g)   If it is not necessary to continue to operate the system, then do this task: Power Off the Video Entertainment System, TASK 44-28-00-860-802.

——— **END OF TASK** ———

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AREA DISTRIBUTION BOX (ADB) - REMOVAL/INSTALLATION

1. **General**

    A. The component in this procedure is referred as the Area Distribution Box (ADB). Alternative names for the ADB are:

        (1) Enhanced Area Distribution Box (EADB).

        (2) Area Distribution Box Gigabit (ADB-G).

    B. This procedure has these tasks:

        (1) The removal of an ADB.

        (2) The installation of an ADB.

    C. The ADB is above the cabin ceiling on the right side of the center stow bin adapter assembly. You must remove the inboard ceiling panel to get access to the ADB.

    D. The removal/installation procedure is the same for all ADBs.

    TASK 44-28-20-000-801

2. **Area Distribution Box (ADB) Removal**

    (Figure 401)

    A. **References**

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)
25-21-06-000-801	Main Ceiling Panel - Removal (P/B 401)

    B. **Tools/Equipment**

    NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1541	Platform - Access, Cabin Crown
	Part #: 1107WSCHSK Supplier: 6Y876
	Opt Part #: J12005-1 Supplier: 81205
STD-1048	Stepladder - 6 foot (1.83m)

    C. **Location Zones**

Zone	Area
200	Upper Half of Fuselage

    D. **Removal Procedure**

    SUBTASK 44-28-20-860-001

    (1) Open these circuit breakers and install safety tags:

    Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3
G	23	C23641	ENTMT CTRL L

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Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
L	23	C24688	IFE SEATS FLT DECK SW

SUBTASK 44-28-20-010-001

(2)   To get access to the ADB, do this task: Main Ceiling Panel - Removal,
TASK 25-21-06-000-801.

SUBTASK 44-28-20-500-001

(3)   Use the cabin crown access platform, SPL-1541 or a 6 foot (1.83m) stepladder, STD-1048 to
get access to the ADB.

SUBTASK 44-28-20-910-001

⚠️ **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.

(4)   Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Removal,
TASK 20-41-01-000-803.

SUBTASK 44-28-20-020-001

⚠️ **WARNING**	MAKE SURE THAT THE CONNECTORS ARE DISCONNECTED FROM THE EQUIPMENT AT THE TWO ENDS. OR SET THE EQUIPMENT TO OFF. THERE IS A RISK OF LASER RADIATION THAT YOU WILL NOT SEE. LASER RADIATION IS DANGEROUS FOR YOUR EYES.

⚠️ **WARNING**	DO NOT LOOK INTO THE END OF A FIBER-OPTIC CABLE. THERE IS A RISK OF LASER RADIATION, WHICH YOU WILL NOT SEE. LASER RADIATION IS DANGEROUS FOR YOUR EYES.

⚠️ **WARNING**	ALWAYS USE GLOVES IF YOU MUST TOUCH BROKEN FIBER-OPTIC CABLES. IF YOU TOUCH CABLES WITH YOUR BARE HANDS, FIBERS CAN GO INTO YOUR BODY THROUGH YOUR SKIN. THIS WILL CAUSE YOU INJURY.

⚠️ **CAUTION**	INSTALL THE PROTECTIVE CAPS IMMEDIATELY AFTER YOU DISCONNECT THE CABLE. IT IS EASY TO CAUSE DAMAGE TO THE FIBER-OPTIC CABLE.

⚠️ **CAUTION**	DO NOT BEND THE FIBER-OPTIC CABLE MORE THAN THE MINIMUM BEND RADIUS. THE CABLE IS EASILY DAMAGED.

⚠️ **CAUTION**	DO NOT PULL OR PUSH THE FIBER-OPTIC CABLE. THE CABLE IS EASILY DAMAGED.

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(CAUTION PRECEDES)

> ⚠️ **CAUTION** DO NOT TOUCH THE LRU CONNECTOR PINS. THE LRU IS SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE LRU.

(5) Remove the ADB from the adapter assembly:

  (a) For the spring latched electrical connectors [4], release the spring latches.

ARO 015-999; ARO 001-014 POST SB 777-44-0029
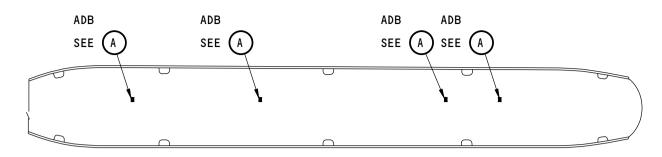
  (b) Loosen the captive screws [7].

  (c) Remove the clamps [8] from the coupling unit.

ARO ALL
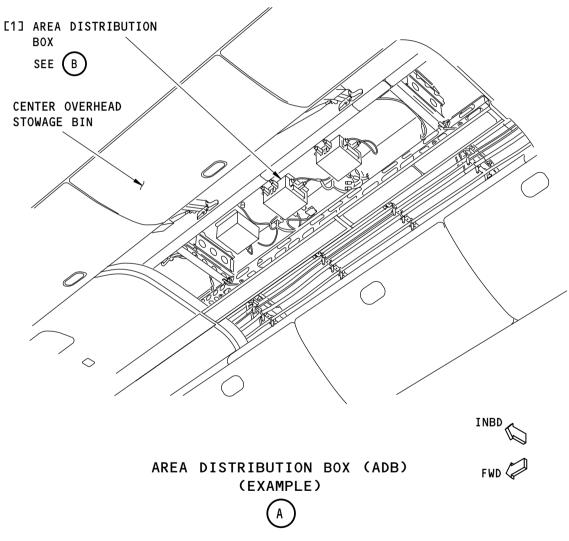
  (d) Disconnect the electrical connectors [4] and the fiber optic connector [6].

  (e) Remove and keep the termination plug, if one is installed.

  (f) Remove the screws [2] and washers [3] that attach the area distribution box (ADB) [1] to the adapter assembly [5].

  (g) Remove the area distribution box (ADB) [1].

  (h) Put protective covers on the electrical connectors [4] and the fiber optic connector [6].

——— **END OF TASK** ———

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ADB SEE (A)   ADB SEE (A)   ADB SEE (A)   ADB SEE (A)

AREA DISTRIBUTION BOX LOCATIONS

[1] AREA DISTRIBUTION
    BOX

    SEE (B)

CENTER OVERHEAD
STOWAGE BIN

INBD

FWD

AREA DISTRIBUTION BOX (ADB)
(EXAMPLE)

(A)

1869726 S0000338626_V1

Area Distribution Box (ADB) Installation
Figure 401/44-28-20-990-801 (Sheet 1 of 3)
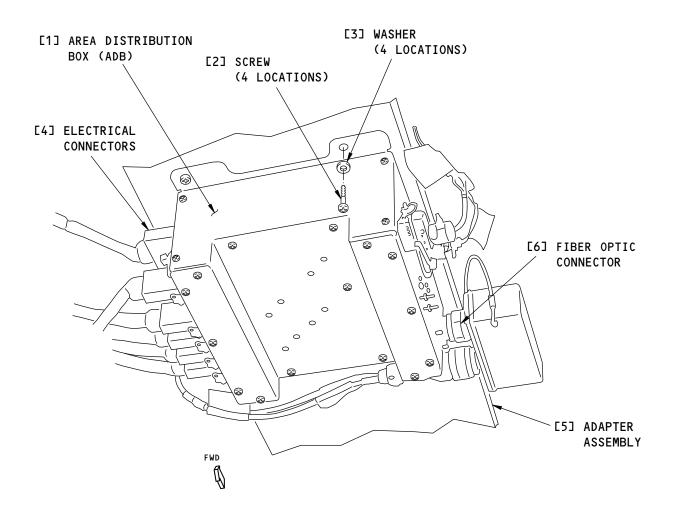
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[1] AREA DISTRIBUTION
    BOX (ADB)

[2] SCREW
    (4 LOCATIONS)

[3] WASHER
    (4 LOCATIONS)

[4] ELECTRICAL
    CONNECTORS

[6] FIBER OPTIC
    CONNECTOR

[5] ADAPTER
    ASSEMBLY

FWD

AREA DISTRIBUTION BOX (ADB)
(EXAMPLE)

B

1869727 S0000338627_V1
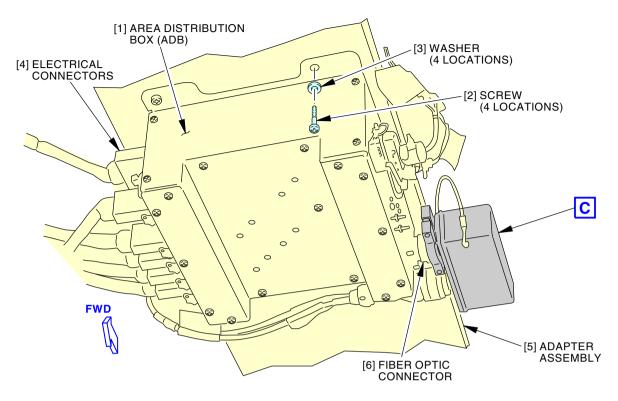
**Area Distribution Box (ADB) Installation
Figure 401/44-28-20-990-801 (Sheet 2 of 3)**

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[1] AREA DISTRIBUTION
BOX (ADB)

[4] ELECTRICAL
CONNECTORS

[3] WASHER
(4 LOCATIONS)

[2] SCREW
(4 LOCATIONS)

C

FWD

[5] ADAPTER
ASSEMBLY

[6] FIBER OPTIC
CONNECTOR

**AREA DISTRIBUTION BOX (ADB)
(EXAMPLE)**

B

[8] CLAMPS

[7] CAPTIVE
SCREWS

FWD

C
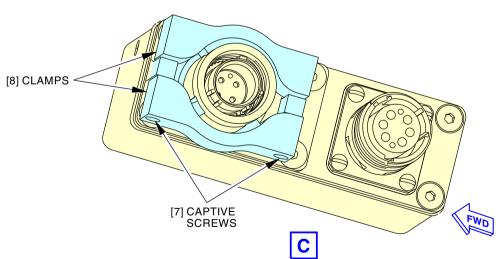
2441948 S0000567374_V2

**Area Distribution Box (ADB) Installation
Figure 401/44-28-20-990-801 (Sheet 3 of 3)**

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TASK 44-28-20-400-801

3. <u>Area Distribution Box (ADB) Installation</u>

(Figure 401)

A. **References**

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)
25-21-06-400-801	Main Ceiling Panel - Installation (P/B 401)
44-28-00 P/B 501	PASSENGER ENTERTAINMENT SYSTEM (PES) VIDEO - ADJUSTMENT/TEST
44-28-00-470-802	Phase 2 Software Download Procedure (P/B 201)
44-28-00-730-801	Passenger Entertainment System (PES) Video - System Test (P/B 501)
44-28-00-860-801	Power On the Video Entertainment System (P/B 201)
44-28-00-860-802	Power Off the Video Entertainment System (P/B 201)

B. **Location Zones**

Zone	Area
200	Upper Half of Fuselage

C. **Installation Procedure**

SUBTASK 44-28-20-860-002

(1) Make sure that these circuit breakers are open and have safety tags:

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3
G	23	C23641	ENTMT CTRL L

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
L	23	C24688	IFE SEATS FLT DECK SW

SUBTASK 44-28-20-910-002

⚠️ **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) Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803.

SUBTASK 44-28-20-420-001

⚠️ **WARNING**	MAKE SURE THAT THE CONNECTORS ARE DISCONNECTED FROM THE EQUIPMENT AT THE TWO ENDS. OR SET THE EQUIPMENT TO OFF. THERE IS A RISK OF LASER RADIATION THAT YOU WILL NOT SEE. LASER RADIATION IS DANGEROUS FOR YOUR EYES.

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(WARNING PRECEDES)

⚠️ **WARNING**	DO NOT LOOK INTO THE END OF A FIBER-OPTIC CABLE. THERE IS A RISK OF LASER RADIATION, WHICH YOU WILL NOT SEE. LASER RADIATION IS DANGEROUS FOR YOUR EYES.
⚠️ **WARNING**	ALWAYS USE GLOVES IF YOU MUST TOUCH BROKEN FIBER-OPTIC CABLES. IF YOU TOUCH CABLES WITH YOUR BARE HANDS, FIBERS CAN GO INTO YOUR BODY THROUGH YOUR SKIN. THIS WILL CAUSE YOU INJURY.
⚠️ **CAUTION**	INSTALL THE PROTECTIVE CAPS IMMEDIATELY AFTER YOU DISCONNECT THE CABLE. IT IS EASY TO CAUSE DAMAGE TO THE FIBER-OPTIC CABLE.
⚠️ **CAUTION**	DO NOT BEND THE FIBER-OPTIC CABLE MORE THAN THE MINIMUM BEND RADIUS. THE CABLE IS EASILY DAMAGED.
⚠️ **CAUTION**	DO NOT PULL OR PUSH THE FIBER-OPTIC CABLE. THE CABLE IS EASILY DAMAGED.
⚠️ **CAUTION**	DO NOT TOUCH THE LRU CONNECTOR PINS. THE LRU IS SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE LRU.

(3) Install the ADB on the adapter assembly:

   (a) Remove the protective covers from the electrical connectors [4] and the fiber optic connector [6].

   (b) Examine the electrical connectors [4] and the fiber optic connector [6] for bent or broken pins, dirt, and damage.

   (c) Put the area distribution box (ADB) [1] on the adapter assembly [5] so that the electrical connectors [4] and the fiber optic connector [6] match the cables.

   (d) Install the screws [2] and washers [3] that attach the area distribution box (ADB) [1] to the adapter assembly [5].

   (e) Install the termination plug on the area distribution box (ADB) [1] if it is necessary.

   (f) Connect the electrical connectors [4] and the fiber optic connector [6].

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   (g) Mount the clamps [8] on the coupling unit.

   (h) Tighten the captive screws [7] to 4.30 in-lb (0.49 N·m) - 5.3 in-lb (0.6 N·m).

      1) Tighten each captive screw [7] before the final torque.

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⚠️ **CAUTION**	MAKE SURE THAT THE SPRING LATCHES HOLD THE CONNECTORS IN THE FULLY ENGAGED POSITION. IF THE CONNECTORS MOVE, ELECTRICAL ARCING CAN OCCUR. THIS CAN CAUSE DAMAGE TO EQUIPMENT.

    (i)   For the spring latched electrical connectors [4], install the spring latches.

SUBTASK 44-28-20-410-001

(4)   Do this task: Main Ceiling Panel - Installation, TASK 25-21-06-400-801.

SUBTASK 44-28-20-860-003

(5)   Close these circuit breakers:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3
G	23	C23641	ENTMT CTRL L

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
L	23	C24688	IFE SEATS FLT DECK SW

D.   Software Installation

SUBTASK 44-28-20-470-001

(1)   Install the software for the ADB:

    (a)   Do the Phase 2 software download procedure for the ADB (Phase 2 Software Download Procedure, TASK 44-28-00-470-802).

    (b)   Make sure that the software part numbers are correct for the ADB.

E.   Installation Test

SUBTASK 44-28-20-720-001

(1)   Do these steps:

    (a)   Make sure the entertainment system is powered on (Power On the Video Entertainment System, TASK 44-28-00-860-801).

    (b)   Do the applicable system test for the ADB (Passenger Entertainment System (PES) Video - System Test, TASK 44-28-00-730-801).

        1)   Make sure that there are no faults for the ADB that was replaced.

    (c)   Make selections at the iCMT to show a broadcast video on the overhead monitors and at the seats.

        1)   If it is necessary, refer to: PASSENGER ENTERTAINMENT SYSTEM (PES) VIDEO - ADJUSTMENT/TEST, PAGEBLOCK 44-28-00/501.

    (d)   At a seat that is connected to the ADB that was replaced, do this step:

        1)   Connect a headset and make selections as necessary to make sure that you hear the audio.

    (e)   Make sure that the video shows on the overhead monitor.

    (f)   Make selections at the iCMT to stop the video.

EFFECTIVITY
ARO ALL

44-28-20

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(g)   If it is not necessary to continue to operate the system, then do this task: Power Off the Video Entertainment System, TASK 44-28-00-860-802.

———— **END OF TASK** ————

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DIGITAL MEDIA SERVER (DMS) - REMOVAL/INSTALLATION

1. **General**

   A.   The component in this procedure is referred to as the digital media server (DMS). Alternative names for the DMS are:

   (1)   Digital Server Unit (DSU).

   B.   Digital Media Server with internet and cell phone capability is called DSU-OMTS.

   C.   This procedure has these tasks:

   (1)   The removal of a Digital Media Server (DMS).

   (2)   The installation of a Digital Media Server (DMS).

   D.   The DMS is located in the Cabin Equipment Center (CEC).

   TASK 44-28-29-000-801

2. **Digital Media Server (DMS) Removal**

   (Figure 401)

   A.   **References**

Reference	Title
20-10-01-000-801	E/E Box Removal (P/B 401)
25-21-06-000-801	Main Ceiling Panel - Removal (P/B 401)

   B.   **Tools/Equipment**

   NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1541	Platform - Access, Cabin Crown
	Part #: 1107WSCHSK Supplier: 6Y876
	Opt Part #: J12005-1 Supplier: 81205
STD-1049	Stepladder - 12 foot

   C.   **Location Zones**

Zone	Area
223	Area Above Passenger Compartment Ceiling, Left - Section 41
224	Area Above Passenger Compartment Ceiling, Right - Section 41

   D.   **Removal Procedure**

   SUBTASK 44-28-29-860-001

   (1)   Open these circuit breakers and install safety tags:

   Left Power Management Panel, P110

Row	Col	Number	Name
D	21	C23355	VOD

   Right Power Management Panel, P210

Row	Col	Number	Name
L	23	C24688	IFE SEATS FLT DECK SW

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SUBTASK 44-28-29-010-001

(2) Get access to the Cabin Equipment Center (CEC) above the passenger compartment ceiling (Figure 401):

    (a) Remove the main inboard ceiling panel (TASK 25-21-06-000-801).

    (b) Use a 12 foot stepladder, STD-1049 or cabin crown access platform, SPL-1541 to get up on the Cabin Equipment Center (CEC) platform.

       NOTE: There is a CEC area light switch near the access hole in the CEC platform.

    (c) Remove the access panels on the front side of the CEC.

       NOTE: There is a light switch inside the CEC at the forward end.

SUBTASK 44-28-29-020-001
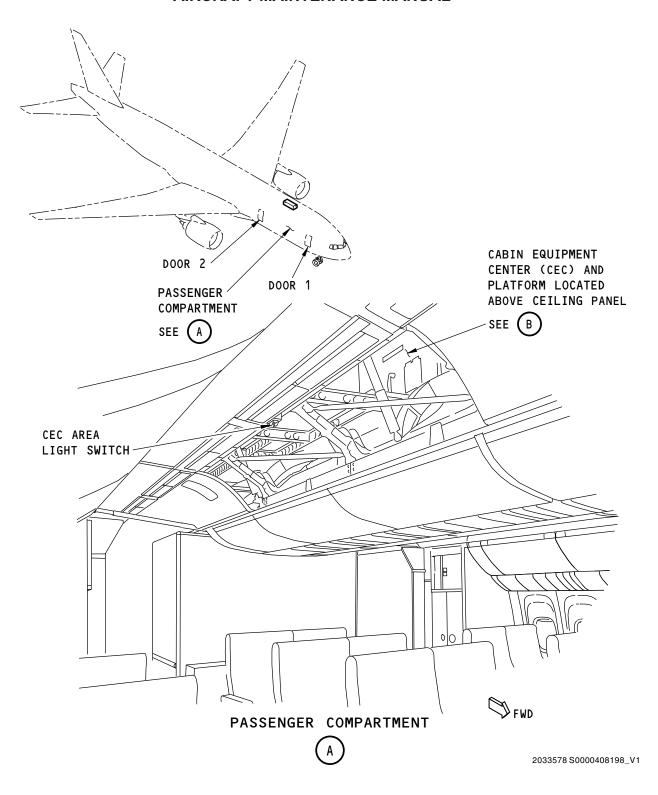
⚠️ **CAUTION**	DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE UNIT. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE UNIT.

(3) Remove the DMS.

    (a) To remove the digital media server (DMS) [1], do the task: E/E Box Removal, TASK 20-10-01-000-801.

——— **END OF TASK** ———

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ARO ALL

44-28-29

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DOOR 2

PASSENGER
COMPARTMENT

DOOR 1

SEE Ⓐ

CABIN EQUIPMENT
CENTER (CEC) AND
PLATFORM LOCATED
ABOVE CEILING PANEL

SEE Ⓑ

CEC AREA
LIGHT SWITCH

PASSENGER COMPARTMENT

Ⓐ

FWD

2033578 S0000408198_V1

**Digital Media Server (DMS) Installation
Figure 401/44-28-29-990-801 (Sheet 1 of 4)**

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CABIN EQUIPMENT CENTER (CEC) AND PLATFORM

B
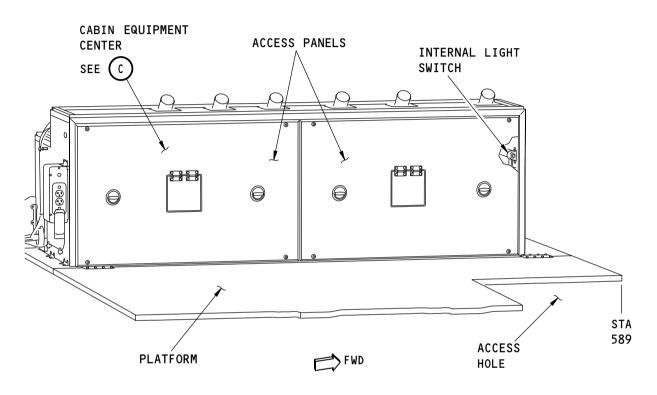
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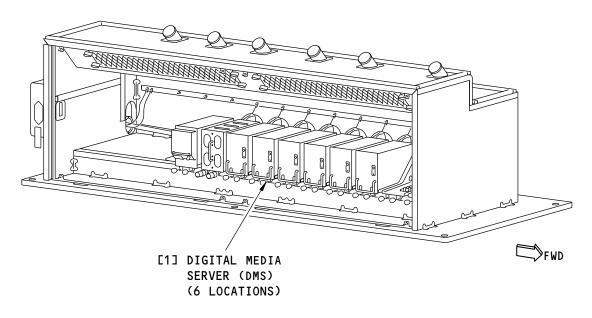
**Digital Media Server (DMS) Installation
Figure 401/44-28-29-990-801 (Sheet 2 of 4)**

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ARO ALL

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[1] DIGITAL MEDIA
    SERVER (DMS)
    (6 LOCATIONS)

CABIN EQUIPMENT CENTER (CEC)

C

FWD

2097438 S0000443972_V1
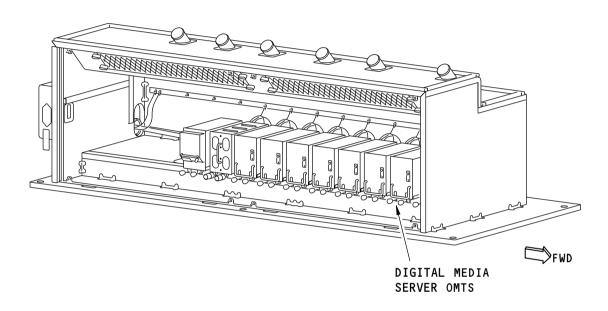
**Digital Media Server (DMS) Installation
Figure 401/44-28-29-990-801 (Sheet 3 of 4)**

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ARO ALL

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DIGITAL MEDIA
SERVER OMTS

FWD

CABIN EQUIPMENT CENTER (CEC)

C

2263453 S0000507740_V1

Digital Media Server (DMS) Installation
Figure 401/44-28-29-990-801 (Sheet 4 of 4)

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TASK 44-28-29-400-801

3. <u>Digital Media Server (DMS) Installation</u>

(Figure 401)

A. **References**

Reference	Title
20-10-01-400-801	E/E Box Installation (P/B 401)
25-21-06-400-801	Main Ceiling Panel - Installation (P/B 401)
44-28-00 P/B 501	PASSENGER ENTERTAINMENT SYSTEM (PES) VIDEO - ADJUSTMENT/TEST
44-28-00-470-802	Phase 2 Software Download Procedure (P/B 201)
44-28-00-470-803	Content Loading Procedure (P/B 201)
44-28-00-730-801	Passenger Entertainment System (PES) Video - System Test (P/B 501)
44-28-00-750-801	Configuration Check Procedure (P/B 201)

B. **Tools/Equipment**

<u>NOTE</u>: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1541	Platform - Access, Cabin Crown
	Part #: 1107WSCHSK Supplier: 6Y876
	Opt Part #: J12005-1 Supplier: 81205
STD-1049	Stepladder - 12 foot

C. **Location Zones**

Zone	Area
223	Area Above Passenger Compartment Ceiling, Left - Section 41
224	Area Above Passenger Compartment Ceiling, Right - Section 41

D. **Installation Procedure**

SUBTASK 44-28-29-860-002

(1) Make sure that these circuit breakers are open and have safety tags:

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	21	C23355	VOD

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	23	C24688	IFE SEATS FLT DECK SW

SUBTASK 44-28-29-420-001

(2) Install the DMS.

(a) To install the digital media server (DMS) [1], do the task: E/E Box Installation, TASK 20-10-01-400-801.

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SUBTASK 44-28-29-860-003

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

Left Power Management Panel, P110

Row	Col	Number	Name
D	21	C23355	VOD

Right Power Management Panel, P210

Row	Col	Number	Name
L	23	C24688	IFE SEATS FLT DECK SW

E.   Software Installation

SUBTASK 44-28-29-470-001

(1)   Do the task: Phase 2 Software Download Procedure, TASK 44-28-00-470-802.

(2)   Do the task: Content Loading Procedure, TASK 44-28-00-470-803.

F.   Installation Test

SUBTASK 44-28-29-730-001

(1)   Do the task: PASSENGER ENTERTAINMENT SYSTEM (PES) VIDEO - ADJUSTMENT/TEST, PAGEBLOCK 44-28-00/501.

SUBTASK 44-28-29-710-001

(2)   Do these steps for the installation test:

    (a)   Do this task: Configuration Check Procedure, TASK 44-28-00-750-801.

    (b)   Do the Audio and Video On-Demand test (Passenger Entertainment System (PES) Video - System Test, TASK 44-28-00-730-801).

G.   Put the Airplane Back to Its Usual Condition

SUBTASK 44-28-29-410-001

(1)   Install the access panels on the front of the Cabin Equipment Center (CEC).

SUBTASK 44-28-29-410-002

(2)   Remove the12 foot stepladder, STD-1049 or cabin crown access platform, SPL-1541.

SUBTASK 44-28-29-410-003

(3)   Install the main inboard ceiling panel (TASK 25-21-06-400-801).

——— **END OF TASK** ———

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ARO ALL

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CABIN MANAGEMENT TERMINAL - REMOVAL/INSTALLATION

1. **General**

   A. The component in this procedure is referred as the Cabin Management Terminal (CMT). Alternative names for the CMT are:

   (1) Crew Terminal.

   (2) Crew Panel.

   (3) Interactive Cabin Management Terminal (iCMT).

   B. This procedure has these tasks:

   (1) Removal of the iCMT.

   (2) Installation of the iCMT.

   C. The iCMT is installed in the Video Control Center (VCC). The VCC can also be referred to as the Purser Station.

   D. The remote iCMT is installed at the aft galley Remote Control Center (RCC).

   TASK 44-28-30-000-801

2. **Interactive Cabin Management Terminal Removal**
   (Figure 401 or Figure 402)

   A. **References**

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)

   B. **Location Zones**

Zone	Area
ARO 001-017	
221	Passenger Compartment, Left - Section 41
ARO ALL	
261	Passenger Compartment, Left - Section 47

   C. **Removal Procedure**

   SUBTASK 44-28-30-860-001

   (1) Open these circuit breakers and install safety tags:

   Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
E	5	C23403	VIDEO PGMS & CTRL
E	8	C23471	VIDEO PGMS & CTRL B
H	8	C23616	ENTMT CTRL R
L	23	C24688	IFE SEATS FLT DECK SW

   This circuit breaker is inoperative and should remain open:

   Right Power Management Panel, P210

Row	Col	Number	Name
C	13	C23405	CABIN PRINTER (INOP)

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ARO ALL

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SUBTASK 44-28-30-860-002

(2)   Open this circuit breaker and install safety tag:

Right Power Management Panel, P210

Row	Col	Number	Name
B	2	C23359	IFE ZIA 4

SUBTASK 44-28-30-010-001

(3)   Get access to the iCMT:

    (a)   Loosen the fasteners on the switch panel door.

    (b)   Open the switch panel door.

SUBTASK 44-28-30-910-001

⚠️ **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.

(4)   Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803.

SUBTASK 44-28-30-020-001

⚠️ **CAUTION**	DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

(5)   To remove the iCMT:

    (a)   For the spring latched electrical connectors, release the spring latches.

    (b)   Disconnect the electrical connectors.

    (c)   Remove the fasteners that hold the top bracket to the switch panel door.

    (d)   Remove the fasteners that hold the Interactive Crew Management Terminal (iCMT) [1] to the lower support bracket.

    (e)   Remove the Interactive Crew Management Terminal (iCMT) [1].

    (f)   Put protective covers on the electrical connectors.

SUBTASK 44-28-30-010-002

(6)   Get access to the remote iCMT:

    (a)   Remove the washers and fasteners that hold the shroud to the wall support bracket assembly.

    (b)   Remove the shroud.

SUBTASK 44-28-30-020-002

⚠️ **CAUTION**	DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

(7)   To remove the remote iCMT:

    (a)   For the spring latched electrical connectors, release the spring latches.

    (b)   Disconnect the electrical connectors.

EFFECTIVITY
ARO ALL

44-28-30

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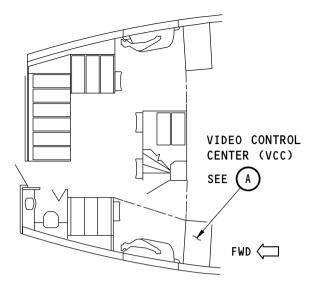
(c)   Remove the fasteners that hold the wall support bracket assembly to the Interactive Crew Management Terminal (iCMT) [1].

(d)   Remove the Interactive Crew Management Terminal (iCMT) [1].

(e)   Put protective covers on the electrical connectors.
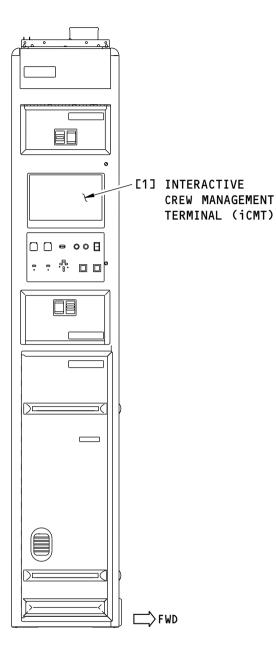
——— **END OF TASK** ———

EFFECTIVITY
ARO ALL

44-28-30

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VIDEO CONTROL
CENTER (VCC)

SEE Ⓐ

FWD ⇦

**PASSENGER AND FLIGHT
COMPARTMENT ENTRYWAY
(EXAMPLE)**

[1] INTERACTIVE
CREW MANAGEMENT
TERMINAL (iCMT)

FWD ⇨

**VIDEO CONTROL CENTER (VCC)
(DOORS NOT SHOWN)
(EXAMPLE)**

Ⓐ

2235442 S0000499189_V1
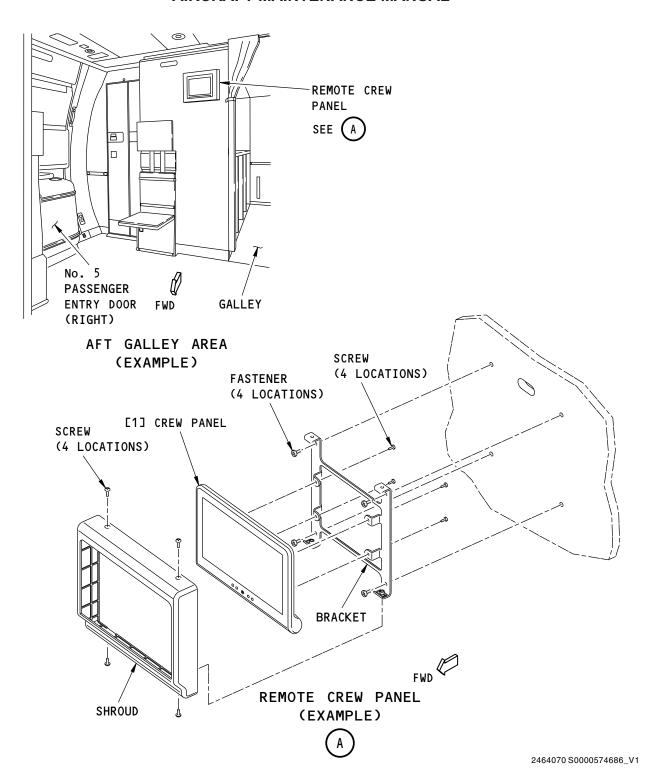
**Interactive Cabin Management Terminal Installation
Figure 401/44-28-30-990-801 (Sheet 1 of 3)**

── EFFECTIVITY ──
ARO ALL

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REMOTE CREW
PANEL

SEE A

No. 5
PASSENGER
ENTRY DOOR
(RIGHT)

FWD

GALLEY

AFT GALLEY AREA
(EXAMPLE)

SCREW
(4 LOCATIONS)

FASTENER
(4 LOCATIONS)

SCREW
(4 LOCATIONS)

[1] CREW PANEL

SCREW
(4 LOCATIONS)

BRACKET

FWD

SHROUD

REMOTE CREW PANEL
(EXAMPLE)

A

2464070 S0000574686_V1

Interactive Cabin Management Terminal Installation
Figure 401/44-28-30-990-801 (Sheet 2 of 3)

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VIDEO
CONTROL
CENTER

SEE Ⓐ

FWD ⟵

PASSENGER AND FLIGHT
COMPARTMENT ENTRYWAY
(EXAMPLE)

[1] INTERACTIVE
CABIN
MANAGEMENT
TERMINAL
(ICMT)

VIDEO CONTROL CENTER
(EXAMPLE)

FWD ⟹

Ⓐ

2306263 S0000523462_V1
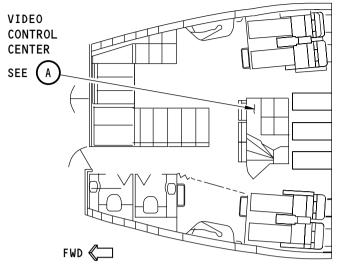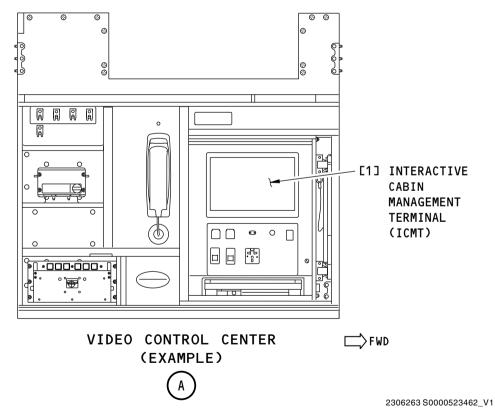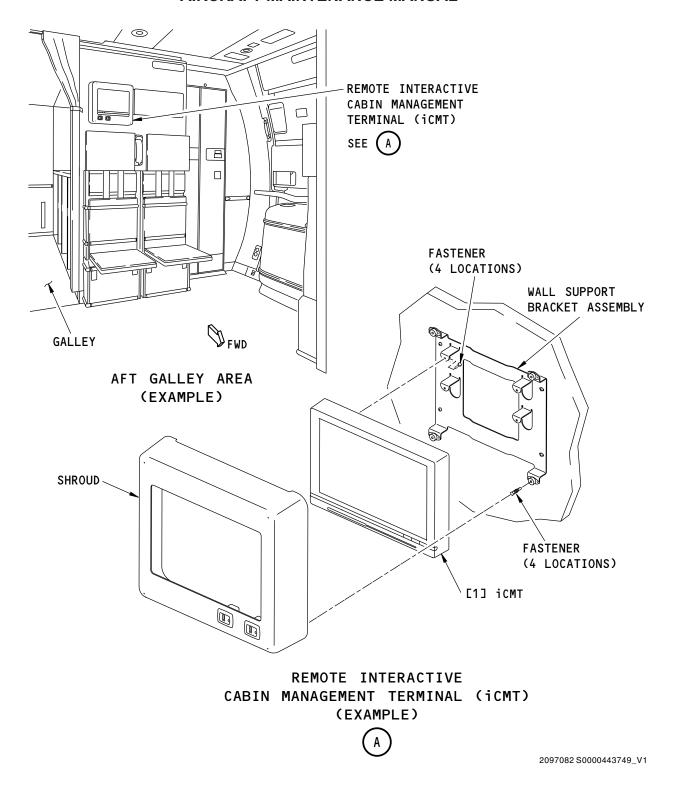
Interactive Cabin Management Terminal Installation
Figure 401/44-28-30-990-801 (Sheet 3 of 3)

EFFECTIVITY
ARO ALL

44-28-30

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REMOTE INTERACTIVE
CABIN MANAGEMENT
TERMINAL (iCMT)

SEE Ⓐ

FASTENER
(4 LOCATIONS)

WALL SUPPORT
BRACKET ASSEMBLY

GALLEY

FWD

AFT GALLEY AREA
(EXAMPLE)

SHROUD

FASTENER
(4 LOCATIONS)

[1] iCMT

REMOTE INTERACTIVE
CABIN MANAGEMENT TERMINAL (iCMT)
(EXAMPLE)

Ⓐ

2097082 S0000443749_V1

**Remote Interactive Cabin Management Terminal Installation
Figure 402/44-28-30-990-802**

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TASK 44-28-30-400-801

3. <u>Interactive Cabin Management Terminal Installation</u>
   (Figure 401 or Figure 402)

   A. **References**

Reference	Title
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)
44-28-00 P/B 501	PASSENGER ENTERTAINMENT SYSTEM (PES) VIDEO - ADJUSTMENT/TEST
44-28-00-470-802	Phase 2 Software Download Procedure (P/B 201)
44-28-00-730-801	Passenger Entertainment System (PES) Video - System Test (P/B 501)
44-28-00-860-801	Power On the Video Entertainment System (P/B 201)
44-28-00-860-802	Power Off the Video Entertainment System (P/B 201)

   B. **Location Zones**

Zone	Area
ARO 001-017	
221	Passenger Compartment, Left - Section 41
ARO ALL	
261	Passenger Compartment, Left - Section 47

   C. **Installation Procedure**

   SUBTASK 44-28-30-860-003

   (1) Make sure that these circuit breakers are open and have safety tags:

   Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
E	5	C23403	VIDEO PGMS & CTRL
E	8	C23471	VIDEO PGMS & CTRL B
H	8	C23616	ENTMT CTRL R
L	23	C24688	IFE SEATS FLT DECK SW

   This circuit breaker is inoperative and should remain open:

   Right Power Management Panel, P210

Row	Col	Number	Name
C	13	C23405	CABIN PRINTER (INOP)

   SUBTASK 44-28-30-860-004

   (2) Make sure that this circuit breaker is open and has safety tag:

   Right Power Management Panel, P210

Row	Col	Number	Name
B	2	C23359	IFE ZIA 4

EFFECTIVITY
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SUBTASK 44-28-30-910-002

⚠️ **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.

(3) Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-41-01-400-803.

SUBTASK 44-28-30-420-001

⚠️ **CAUTION**	DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

(4) To install the iCMT:

    (a) Remove the protective covers from the electrical connectors.

    (b) Examine the electrical connectors for bent or broken pins, dirt and damage.

    (c) Put the Interactive Crew Management Terminal (iCMT) [1] in a position that you have access to the electrical connectors.

    (d) Connect the electrical connectors.

⚠️ **CAUTION**	MAKE SURE THAT THE SPRING LATCHES HOLD THE CONNECTORS IN THE FULLY ENGAGED POSITION. IF THE CONNECTORS MOVE, ELECTRICAL ARCING CAN OCCUR. THIS CAN CAUSE DAMAGE TO EQUIPMENT.

    (e) For the spring latched electrical connectors, install the spring latches.

    (f) Put the Interactive Crew Management Terminal (iCMT) [1] in the installed position.

    (g) Install the fasteners that hold the Interactive Crew Management Terminal (iCMT) [1] to the lower support bracket.

    (h) Install the fasteners that hold the top bracket to the switch panel door.

SUBTASK 44-28-30-410-001

(5) Close the switch panel door.

    (a) Tighten the screws.

SUBTASK 44-28-30-420-002

⚠️ **CAUTION**	DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

(6) To install the remote iCMT:

    (a) Remove the protective covers from the electrical connectors.

    (b) Examine the electrical connectors for bent or broken pins, dirt and damage.

    (c) Put the Interactive Crew Management Terminal (iCMT) [1] in a position that you have access to the electrical connectors.

    (d) Connect the electrical connectors.

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⚠️ **CAUTION**	MAKE SURE THAT THE SPRING LATCHES HOLD THE CONNECTORS IN THE FULLY ENGAGED POSITION. IF THE CONNECTORS MOVE, ELECTRICAL ARCING CAN OCCUR. THIS CAN CAUSE DAMAGE TO EQUIPMENT.

    (e)   For the spring latched electrical connectors, install the spring latches.

    (f)   Put the Interactive Crew Management Terminal (iCMT) [1] in the installed position.

    (g)   Install the fasteners that hold the Interactive Crew Management Terminal (iCMT) [1] to the wall support bracket assembly.

SUBTASK 44-28-30-410-002

(7)   To install the shroud:

    (a)   Put the shroud in its installed position.

    (b)   Install the washers and fasteners that hold the shroud to the wall support bracket assembly.

SUBTASK 44-28-30-860-005

(8)   Remove the safety tags and close these circuit breakers:

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
E	5	C23403	VIDEO PGMS & CTRL
E	8	C23471	VIDEO PGMS & CTRL B
H	8	C23616	ENTMT CTRL R
L	23	C24688	IFE SEATS FLT DECK SW

This circuit breaker is inoperative and should remain open:

Right Power Management Panel, P210

Row	Col	Number	Name
C	13	C23405	CABIN PRINTER (INOP)

SUBTASK 44-28-30-860-006

(9)   Remove the safety tag and close this circuit breaker:

Right Power Management Panel, P210

Row	Col	Number	Name
B	2	C23359	IFE ZIA 4

D.   **Software Installation**

SUBTASK 44-28-30-470-001

(1)   Install the software for the iCMT:

    (a)   Do the Phase 2 software download procedure for the iCMT (Phase 2 Software Download Procedure, TASK 44-28-00-470-802).

    (b)   Do the IP Sequencing procedure for the iCMT (Phase 2 Software Download Procedure, TASK 44-28-00-470-802).

    (c)   Make sure that the software part numbers are correct for the iCMT.

       1)   If necessary, refer to this task: Passenger Entertainment System (PES) Video - System Test, TASK 44-28-00-730-801

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E. **Installation Test**

SUBTASK 44-28-30-710-001

(1) Do these steps:

    (a) Make sure the entertainment system is powered on (Power On the Video Entertainment System, TASK 44-28-00-860-801).

    (b) Make selections at the iCMT to show a broadcast video.

    (c) Make sure that the video shows on the iCMT preview screen.

    (d) Make selections at the iCMT to stop the video.

    (e) If it is necessary, refer to PASSENGER ENTERTAINMENT SYSTEM (PES) VIDEO - ADJUSTMENT/TEST, PAGEBLOCK 44-28-00/501.

    (f) If it is not necessary to continue to operate the system, then do this task: Power Off the Video Entertainment System, TASK 44-28-00-860-802.

———— **END OF TASK** ————

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REMOTE JACK MODULE (RJM) - REMOVAL/INSTALLATION

1. **General**

    A. The component in this procedure is referred to as the Remote Jack Module (RJM). RJMs can include these items:

    (1) Passenger Electronic Device Interface (PED Interface)

    B. This procedure has these tasks:

    (1) The removal of an RJM.

    (2) The installation of an RJM.

    C. An RJM is located in the following location:

    (1) Passenger seats.

    D. The removal and installation procedure is the same for all RJMs.

    TASK 44-28-48-000-801

2. **Remote Jack Module (RJM) - Removal**
    (Figure 401)

    A. **References**

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)

    B. **Location Zones**

Zone	Area
200	Upper Half of Fuselage

    C. **Removal Procedure**

    SUBTASK 44-28-48-860-001

    (1) Open these circuit breakers and install safety tags:

    Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

    Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
E	5	C23403	VIDEO PGMS & CTRL
E	8	C23471	VIDEO PGMS & CTRL B
H	8	C23616	ENTMT CTRL R
L	23	C24688	IFE SEATS FLT DECK SW

    This circuit breaker is inoperative and should remain open:

    Right Power Management Panel, P210

Row	Col	Number	Name
C	13	C23405	CABIN PRINTER (INOP)

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SUBTASK 44-28-48-910-001

⚠️ **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)   Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803.

SUBTASK 44-28-48-020-007

(3)   Do these steps to remove the PED Interface [1]:

    (a)   Loosen the captive fastener [2] to release the PED Interface [1] from the mounting surface.

    (b)   Carefully remove the PED Interface [1] from the mounting surface to get access to the electrical connectors.
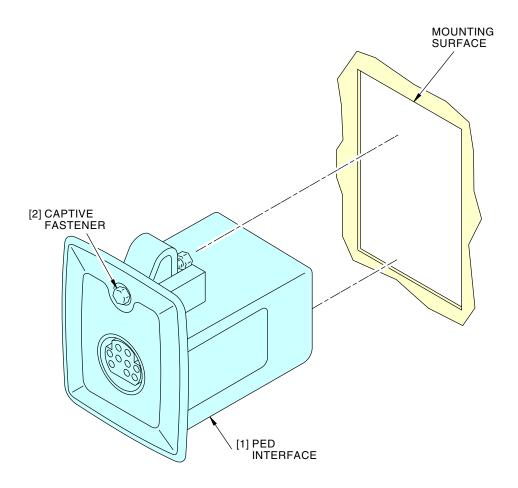
⚠️ **CAUTION**	DO NOT TOUCH THE LRU CONNECTOR PINS. THE LRU IS SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE LRU.

    (c)   Disconnect the electrical connectors.

    (d)   Remove the component PED Interface [1].

———— **END OF TASK** ————

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MOUNTING
SURFACE

[2] CAPTIVE
FASTENER

[1] PED
INTERFACE

2519790 S0000592205_V1

**PED Interface Installation
Figure 401/44-28-48-990-807**

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TASK 44-28-48-400-801

3. **Remote Jack Module (RJM) - Installation**

(Figure 401)

    A. **References**

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)

    B. **Location Zones**

Zone	Area
200	Upper Half of Fuselage

    C. **Installation Procedure**

SUBTASK 44-28-48-860-002

(1)   Make sure that these circuit breakers are open and have safety tags:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
E	5	C23403	VIDEO PGMS & CTRL
E	8	C23471	VIDEO PGMS & CTRL B
H	8	C23616	ENTMT CTRL R
L	23	C24688	IFE SEATS FLT DECK SW

This circuit breaker is inoperative and should remain open:

Right Power Management Panel, P210

Row	Col	Number	Name
C	13	C23405	CABIN PRINTER (INOP)

SUBTASK 44-28-48-910-002

> ⚠️ **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)   Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803.

SUBTASK 44-28-48-420-007

(3)   Do these steps to install the PED Interface:

    (a)   Remove the protective covers from the electrical connector.

    (b)   Examine the electrical connectors for bent or broken pins, dirt, and damage.

    (c)   Connect the electrical connector to the PED Interface [1].

    (d)   Carefully put the PED Interface [1] in its position on the mounting surface.

    (e)   Tighten the captive fastener [2] to lock thePED Interface [1] in the mounting surface.

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SUBTASK 44-28-48-860-003

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

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
E	5	C23403	VIDEO PGMS & CTRL
E	8	C23471	VIDEO PGMS & CTRL B
H	8	C23616	ENTMT CTRL R
L	23	C24688	IFE SEATS FLT DECK SW

This circuit breaker is inoperative and should remain open:

Right Power Management Panel, P210

Row	Col	Number	Name
C	13	C23405	CABIN PRINTER (INOP)

D.   **Installation Test**

SUBTASK 44-28-48-710-001

(1)   Connect a device to the RJM.

(a)   Make sure that a connection is detected.

———— **END OF TASK** ————

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1.   **General**

   A.   This procedure contains:

      (1)   A task to remove the tethered handset.

      (2)   A task to install the tethered handset.

      (3)   A task to remove the touch handset.

      (4)   A task to install the touch handset.

      (5)   A touch handset installation test.

   B.   The handsets are installed at the locations below:

      (1)   In an armrest of a passenger seat.

   TASK 44-28-50-000-801

2.   **Tethered Handset Removal**
   Figure 401

   A.   **General**

      (1)   This procedure contains steps to remove the tethered handset.

   B.   **References**

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)

   C.   **Location Zones**

Zone	Area
200	Upper Half of Fuselage

   D.   **Removal Procedure**

   SUBTASK 44-28-50-860-001

      (1)   Open these circuit breakers and install safety tags:

   Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3
G	23	C23641	ENTMT CTRL L

   Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
E	5	C23403	VIDEO PGMS & CTRL
L	23	C24688	IFE SEATS FLT DECK SW

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SUBTASK 44-28-50-910-001

⚠️ **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) Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803.

SUBTASK 44-28-50-020-005

(3) Do these steps to remove the tethered handset [1]:

    (a) Remove the tethered handset [1] from the cradle [2].

    (b) Remove the screw [3] and screw [4] from the cover [5].

    (c) Remove the screw [6] and disconnect the connector [7] from the tethered handset [1].

    (d) Remove the tethered handset [1].

(4) Do these steps to remove the cradle [2]:

    (a) Release the fasteners [8] and remove the cradle [2].

    (b) Disconnect the connector [9] from the cradle [2].

    (c) Remove the cradle [2].

——— **END OF TASK** ———

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[6] SCREW

[4] SCREW

[3] SCREW

[5] COVER

[1] TETHERED
HANDSET

[7] CONNECTOR

[2] CRADLE

[8] FASTENER

[9] CONNECTOR

2001554 S0000390337_V2

**Tethered Handset Installation
Figure 401/44-28-50-990-803**

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TASK 44-28-50-400-801

3. **Tethered Handset Installation**

Figure 401

A. **General**

(1) This procedure contains steps to install the tethered handset.

B. **References**

Reference	Title
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)
44-28-00-470-802	Phase 2 Software Download Procedure (P/B 201)
44-28-00-730-801	Passenger Entertainment System (PES) Video - System Test (P/B 501)
44-28-00-860-801	Power On the Video Entertainment System (P/B 201)

C. **Location Zones**

Zone	Area
200	Upper Half of Fuselage

D. **Installation Procedure**

SUBTASK 44-28-50-860-002

(1) Make sure that these circuit breakers are open and have safety tags:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3
G	23	C23641	ENTMT CTRL L

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
E	5	C23403	VIDEO PGMS & CTRL
L	23	C24688	IFE SEATS FLT DECK SW

SUBTASK 44-28-50-910-002

⚠️ **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) Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-41-01-400-803.

SUBTASK 44-28-50-420-001

(3) Do these steps to install the cradle [2]:

(a) Connect the connector [9] to the cradle [2].

(b) Install the cradle [2] in its mounting location.

(c) Engage the internal fastener [8] to secure the cradle [2].

(4) Do these steps to install the tethered handset [1]:

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(a) Connect the connector [7] to the tethered handset [1].

(b) Install the screw [6] to secure the connector [7].

(c) Put the cover [5] in place and install the screw [3] and screw [4].

(d) Put the tethered handset [1] into the cradle [2].

SUBTASK 44-28-50-860-003

(5) Remove the safety tags and close these circuit breakers:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3
G	23	C23641	ENTMT CTRL L

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
E	5	C23403	VIDEO PGMS & CTRL
L	23	C24688	IFE SEATS FLT DECK SW

SUBTASK 44-28-50-440-002

(6) Supply power to the IFE system: Power On the Video Entertainment System, TASK 44-28-00-860-801.

E. Software Load Procedure

SUBTASK 44-28-50-470-001

(1) Do these task to load software to the handset: Phase 2 Software Download Procedure, TASK 44-28-00-470-802.

F. Installation Test

SUBTASK 44-28-50-710-001

(1) Do these steps to do an operational test of the handset.

(a) Push the reading light button on the handset.

1) Make sure the reading light comes on.

(b) Push the attendant call button on the handset.

1) Make sure the attendant call light comes on.

(c) Push the attendant call reset button on the handset.

1) Make sure the attendant call light goes off.

(d) Push the channel select button on the handset.

1) Make sure the channels can be changed.

(e) Push the Volume up and down button on the handset.

1) Make sure the Volume can be adjusted.

SUBTASK 44-28-50-700-005

(2) Do the In-seat AVOD test (Passenger Entertainment System (PES) Video - System Test, TASK 44-28-00-730-801).

——— **END OF TASK** ———

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TASK 44-28-50-000-804

4. **Touch Handset Removal**

A. **General**

(1) This procedure contains steps to remove the touch handset.

B. **References**

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)

C. **Location Zones**

Zone	Area
200	Upper Half of Fuselage

D. **Removal Procedure**

SUBTASK 44-28-50-860-011

(1) Open these circuit breakers and install safety tags:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3
G	23	C23641	ENTMT CTRL L

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
E	5	C23403	VIDEO PGMS & CTRL
L	23	C24688	IFE SEATS FLT DECK SW

SUBTASK 44-28-50-910-003

⚠️ **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) Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803.

SUBTASK 44-28-50-020-008

(3) Do these steps to remove the touch handset [10]:

(a) Push the release button and release the touch handset [10] from the bezel [11].

(b) Loosen the screws [12] to open the access door [13].

(c) Remove the connector [14] and ground cable [15].

(d) Replace the access door [13] and install the screw [12] in the touch handset [10].

(e) Remove the touch handset [10].

(4) Do these steps to remove the cradle [16]:

(a) Remove the screws [18].

(b) Remove the bezel [11].

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(c)   Release the fasteners [17] to remove the cradle [16].

(d)   Disconnect the connector [19].

(e)   Remove the cradle [16].

SUBTASK 44-28-50-010-001

(5)   If applicable, do these steps to remove the microSD card [20] from the touch handset [10]:

(a)   Pull the touch handset [10] away from the bezel [11].

(b)   Use a cable clamp to prevent the touch handset [10] from retracting into the bezel [11].

(c)   Remove and retain two screws [12] from the back of the touch handset [10].

(d)   Remove and retain the access door [13].

⚠ **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.
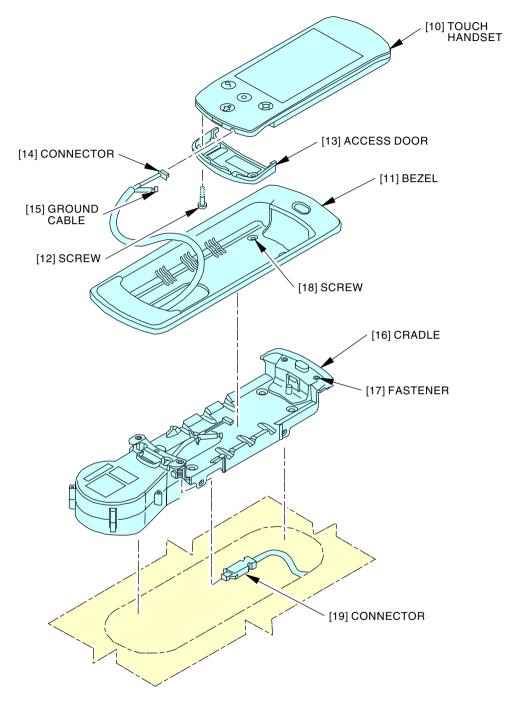
(e)   Gently push in the microSD card [20] to eject it from the touch handset [10].

NOTE: The microSD card connector has a spring lock mechanism that will eject when pushing the card into the touch handset [10].

(f)   Remove the microSD card [20].

(g)   If necessary, position retained access door [13] on the back of the touch handset [10].

1)   Install the retained screws [12] to secure access door [13].

——— END OF TASK ———

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[10] TOUCH
HANDSET

[14] CONNECTOR

[13] ACCESS DOOR

[11] BEZEL

[15] GROUND
CABLE

[12] SCREW

[18] SCREW

[16] CRADLE

[17] FASTENER

[19] CONNECTOR

2304329 S0000522180_V2
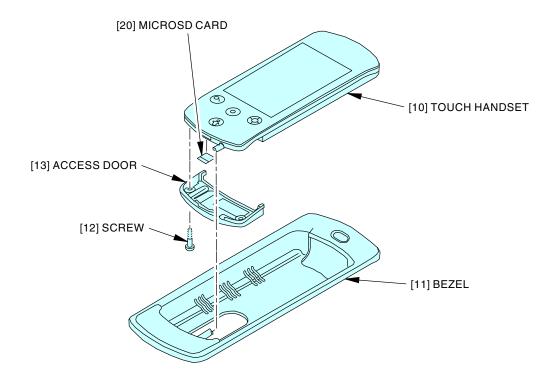
**Touch Handset Installation
Figure 402/44-28-50-990-806**

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[20] MICROSD CARD

[10] TOUCH HANDSET

[13] ACCESS DOOR

[12] SCREW

[11] BEZEL

2304386 S0000522200_V2

**Touch Handset microSD Card Removal
Figure 403/44-28-50-990-807**

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TASK 44-28-50-400-804

5. **Touch Handset Installation**

Figure 402 or Figure 403

A. **General**

(1) This procedure contains steps to install the touch handset.

B. **References**

Reference	Title
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)
44-28-00-470-802	Phase 2 Software Download Procedure (P/B 201)
44-28-00-730-801	Passenger Entertainment System (PES) Video - System Test (P/B 501)
44-28-00-750-801	Configuration Check Procedure (P/B 201)
44-28-00-820-802	Sequence IP Addresses Procedure (P/B 201)
44-28-00-860-801	Power On the Video Entertainment System (P/B 201)

C. **Location Zones**

Zone	Area
200	Upper Half of Fuselage

D. **Installation Procedure**

SUBTASK 44-28-50-860-012

(1) Make sure that these circuit breakers are open and have safety tags:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3
G	23	C23641	ENTMT CTRL L

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
E	5	C23403	VIDEO PGMS & CTRL
L	23	C24688	IFE SEATS FLT DECK SW

SUBTASK 44-28-50-910-004

⚠️ **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) Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-41-01-400-803.

SUBTASK 44-28-50-420-005

(3) If applicable, do these steps to install the microSD card [20] in the touch handset [10]:

(a) Pull the touch handset [10] away from the bezel [11].

(b) If installed, remove and retain two screws [12] from the back of the touch handset [10].

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1)   Remove and retain the access door [13].

| ⚠️ **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.

(c)   Install microSD card [20] into the microSD card connector.

(d)   Push the microSD card [20] in to engage the spring mechanism.

(e)   Position retained access door [13] on the back of the touch handset [10].

(f)   Install the retained screws [12] to secure access door [13].

SUBTASK 44-28-50-420-006

(4)   Do these steps to install the cradle [16]:

(a)   Connect the connector [19] to the cradle [16].

(b)   Place the cradle [16] in its mounting location.

(c)   Engage the fasteners [17] to secure the cradle [16].

(d)   Place the bezel [11] on the cradle [16].

(e)   Install the screws [18] to secure the bezel [11].

(5)   Do these steps to install the touch handset [10]:

(a)   Remove the screw [12].

(b)   Remove the access door [13] from the touch handset [10].

(c)   Connect the connector [14] and ground cable [15] to the touch handset [10].

(d)   Replace the access door [13] in place and install the screw [12].

(e)   Put the touch handset [10] into the cradle [16].

SUBTASK 44-28-50-860-013

(6)   Remove the safety tags and close these circuit breakers:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3
G	23	C23641	ENTMT CTRL L

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
E	5	C23403	VIDEO PGMS & CTRL
L	23	C24688	IFE SEATS FLT DECK SW

SUBTASK 44-28-50-440-001

(7)   Supply power to the IFE system: Power On the Video Entertainment System, TASK 44-28-00-860-801.

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E.   **Software Load Procedure**

SUBTASK 44-28-50-470-002

(1)   Do this task to install software to the handset (Phase 2 Software Download Procedure, TASK 44-28-00-470-802).

SUBTASK 44-28-50-700-002

(2)   Do this task to Sequence the IP Addresses (Sequence IP Addresses Procedure, TASK 44-28-00-820-802).

F.   **Installation Test**

SUBTASK 44-28-50-700-003

(1)   Do the Configuration Check (Configuration Check Procedure, TASK 44-28-00-750-801).

SUBTASK 44-28-50-740-001

(2)   Do the BITE test (Passenger Entertainment System (PES) Video - System Test, TASK 44-28-00-730-801).

SUBTASK 44-28-50-700-004

(3)   Do the Handset Installation test (Touch Handset - Installation Test, TASK 44-28-50-710-801).

————— END OF TASK —————

TASK 44-28-50-710-801

6.   **Touch Handset - Installation Test**

A.   **General**

(1)   This task contains steps to do an installation test of the touch handset.

B.   **Procedure**

SUBTASK 44-28-50-710-004

(1)   To do the touch handset test, do the steps that follow:

(a)   From the touch handset touchscreen, select ATP. An ATP screen is shown.

(b)   From the ATP screen, select Sensors. A Sensors test screen is shown.

1)   Tilt the handset and make sure that the accelerometer values on the Sensors test screen change.

2)   From the Sensors test screen, select the vibrator button and make sure that the handset vibrates.

(c)   From the touch handset touchscreen, select LCD. Make sure that an LCD test picture is shown.

(d)   From the touch handset touchscreen, select Touch Screen. A Touch Screen test screen is shown.

1)   From the Touch Screen test screen, move fingers along touchscreen to make an X pattern.

2)   Make sure that all of the dots from the Touch Screen test screen change color.

(e)   From the touch handset touchscreen, select Buttons & Backlight. A Buttons & Backlight test screen is shown.

1)   On the touch handset, press each of the buttons that follow:

a)   Back

b)   Call Attendant

c)   Reading Light

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2) Make sure that each button starts a visual feedback on the Buttons & Backlight test screen.

——— **END OF TASK** ———

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AUDIO JACK - REMOVAL/INSTALLATION

1. **General**

    A. This procedure has these tasks:

        (1) Audio Jack Removal.

        (2) Audio Jack Installation.

    B. The Audio Jacks provide connection for passenger entertainment headsets.

    C. The Audio Jacks can be installed in these locations.

        (1) Passenger seats.

        (2) Overhead flight crew rest (OFCR).

        (3) Overhead flight attendant rest (OFAR).

    TASK 44-28-60-000-801

2. **Audio Jack - Removal**
    Figure 401

    A. **References**

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-41-01-400-802	Conductive Dust Cap and Connector Cover Removal (P/B 201)

    B. **Location Zones**

Zone	Area
200	Upper Half of Fuselage

    C. **Removal Procedure**

    SUBTASK 44-28-60-860-001

        (1) Open these circuit breakers and install safety tags:

    Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3
G	23	C23641	ENTMT CTRL L

    Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
E	5	C23403	VIDEO PGMS & CTRL
L	23	C24688	IFE SEATS FLT DECK SW

    SUBTASK 44-28-60-910-001

⚠️ **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) Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803

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SUBTASK 44-28-60-020-001

(3)   Do these steps to remove the audio jack.

(a)   Open the seat and get access to the mounting bracket that the audio jack is secured on.

⚠️ **CAUTION**	DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

(b)   Disconnect the electrical connectors.

(c)   Remove the screws that hold the audio jack mounting bracket to its mounting surface.

(d)   Remove the audio jack.
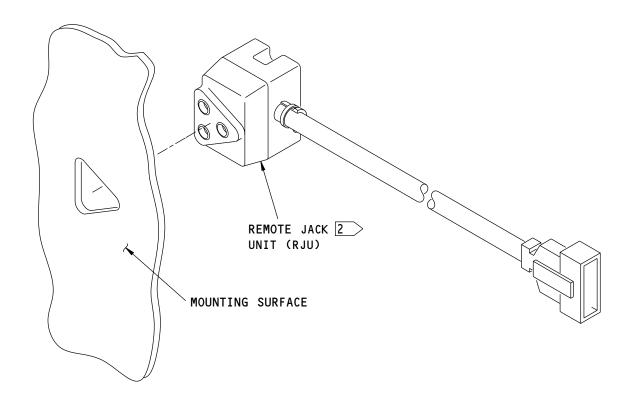
SUBTASK 44-28-60-910-002

(4)   Do this task:Conductive Dust Cap and Connector Cover Removal, TASK 20-41-01-400-802

——— **END OF TASK** ———

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REMOTE JACK 2
UNIT (RJU)

MOUNTING SURFACE

1 IN SOME INSTALLATIONS, THE SCREW IS
ATTACHED FROM THE OPPOSITE SIDE.

2 THE REMOTE JACK UNIT CAN LOOK DIFFERENT.

1865289 S0000335220_V1

Audio Jack - Installation
Figure 401/44-28-60-990-801

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TASK 44-28-60-400-801

3. **Audio Jack - Installation**

Figure 401

A. References

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-41-01-400-802	Conductive Dust Cap and Connector Cover Removal (P/B 201)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Installation Procedure

SUBTASK 44-28-60-860-002

(1) Make sure that these circuit breakers are open and have safety tags:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3
G	23	C23641	ENTMT CTRL L

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
E	5	C23403	VIDEO PGMS & CTRL
L	23	C24688	IFE SEATS FLT DECK SW

SUBTASK 44-28-60-910-003

> ⚠️ **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) Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803.

SUBTASK 44-28-60-910-004

(3) Do this task: Conductive Dust Cap and Connector Cover Removal, TASK 20-41-01-400-802.

SUBTASK 44-28-60-020-002

> ⚠️ **CAUTION** DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

(4) Do these steps to Install the Audio Jack.

(a) Remove the protective covers from the electrical connectors.

(b) Examine the electrical connector for bent or broken pins, dirt, and damage.

(c) Connect the electrical connectors for the audio jack.

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(d) Carefully put the audio jack in its position and place it against the mounting bracket.

(e) Install the screws that hold the audio jack mounting bracket to its mounting surface.

NOTE: Make sure the audio jack is secure.

(f) Close the seat access and put the seat back in its original configuration.

SUBTASK 44-28-60-860-003

(5) Remove the safety tags and close these circuit breakers:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3
G	23	C23641	ENTMT CTRL L

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
E	5	C23403	VIDEO PGMS & CTRL
L	23	C24688	IFE SEATS FLT DECK SW

D. Installation Test

SUBTASK 44-28-60-710-001

(1) Insert a headset into the audio jack that was replaced.

(a) Play any movie or music using the handset.

NOTE: Make sure that audio is heard clearly in the headset.

———— **END OF TASK** ————

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ADVANCED MASTER CONTROL UNIT (AMCU) - REMOVAL/INSTALLATION

1. **General**

    A. The component in this procedure is referred as the Advanced Master Control Unit (AMCU). Alternative names for the AMCU are:

      (1) Master Control Unit (MCU).

    B. This procedure has these tasks:

      (1) Removal of the AMCU.

      (2) Installation of the AMCU.

    C. The AMCU provides power distribution and electrical load management.

    D. A Configuration Module (CM) is installed on the AMCU.

      (1) The CM defines airline-specific parameters for the operational parameters of the AMCU.

    E. The removal and installation procedures are the same for each AMCU and CM.

    TASK 44-28-80-000-801

2. **Advanced Master Control Unit (AMCU) Removal**
    (Figure 401)

    A. **References**

Reference	Title
25-21-06-000-801	Main Ceiling Panel - Removal (P/B 401)

    B. **Location Zones**

Zone	Area
220	Subzone 220 - Section 41
230	Subzone 230 - Section 43
250	Subzone 250 - Section 46

    C. **Removal Procedure**

    SUBTASK 44-28-80-860-001

      (1) Open these circuit breakers and install safety tags:

      Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

      Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4

    SUBTASK 44-28-80-010-001

      (2) To get access to the AMCU, do this task: Main Ceiling Panel - Removal, TASK 25-21-06-000-801.

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SUBTASK 44-28-80-020-001

⚠️ **CAUTION**	DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE UNIT. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE UNIT.

(3)   To remove the AMCU:

    (a)   Remove the electrical connectors from the Advanced Master Control Unit (AMCU) [1].

        1)   Make sure to tag the connectors for identification.

    (b)   Remove the screws and washers that attach the Advanced Master Control Unit (AMCU) [1] to the mounting bracket.

    (c)   Remove the Advanced Master Control Unit (AMCU) [1].

    (d)   Put protective covers on the electrical connectors.

SUBTASK 44-28-80-020-002
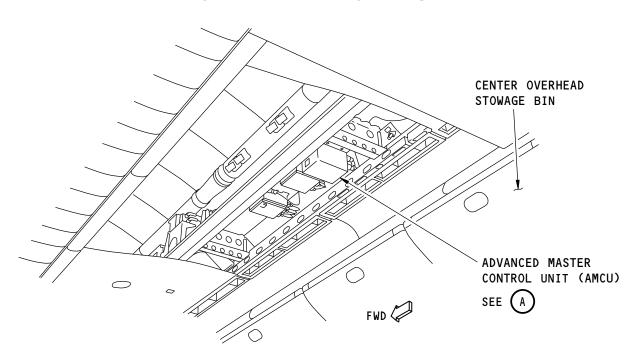
⚠️ **CAUTION**	DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE UNIT. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE UNIT.
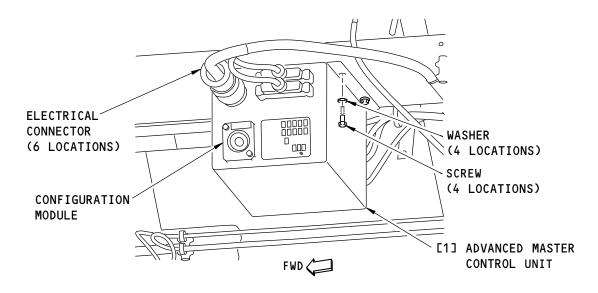
(4)   To remove the Configuration Module (CM):

    (a)   Remove the two captive fasteners that attach the CM to the Advanced Master Control Unit (AMCU) [1] at connector J7.

    (b)   Remove and retain the CM.

——— **END OF TASK** ———

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CENTER OVERHEAD
STOWAGE BIN

ADVANCED MASTER
CONTROL UNIT (AMCU)

SEE (A)

FWD

PASSENGER COMPARTMENT

ELECTRICAL
CONNECTOR
(6 LOCATIONS)

WASHER
(4 LOCATIONS)

SCREW
(4 LOCATIONS)

CONFIGURATION
MODULE

[1] ADVANCED MASTER
CONTROL UNIT

FWD

ADVANCED MASTER CONTROL UNIT (AMCU)
(EXAMPLE)

(A)

1867817 S0000337402_V1

Advanced Master Control Unit (AMCU) Installation
Figure 401/44-28-80-990-801

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TASK 44-28-80-400-801

3. <u>Advanced Master Control Unit (AMCU) Installation</u>

   (Figure 401)

    A.   **References**

Reference	Title
25-21-06-400-801	Main Ceiling Panel - Installation (P/B 401)
44-28-00-730-801	Passenger Entertainment System (PES) Video - System Test (P/B 501)

    B.   **Location Zones**

Zone	Area
220	Subzone 220 - Section 41
230	Subzone 230 - Section 43
250	Subzone 250 - Section 46

    C.   **Installation Procedure**

SUBTASK 44-28-80-860-002

    (1)   Make sure that these circuit breakers are open and have safety tags:

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4

SUBTASK 44-28-80-420-001

⚠️ **CAUTION**	DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE UNIT. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE UNIT.

    (2)   To install the Configuration Module (CM):

        (a)   Install the CM to the connector J7 of the Advanced Master Control Unit (AMCU) [1].

        (b)   Hand tighten the captive fasteners to attach the CM to the Advanced Master Control Unit (AMCU) [1].

SUBTASK 44-28-80-420-002

⚠️ **CAUTION**	DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE UNIT. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE UNIT.

    (3)   To install the AMCU:

        (a)   Remove the protective covers from the electrical connectors.

        (b)   Examine the electrical connectors for bent or broken pins, dirt and damage.

        (c)   Put the Advanced Master Control Unit (AMCU) [1] in its mounting position.

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1) Make sure that the connectors and cables align.

2) Make sure the mounting holes align.

(d) Install the screws and washers that attach the Advanced Master Control Unit (AMCU) [1] to the mounting bracket.

(e) Connect the electrical connectors to the Advanced Master Control Unit (AMCU) [1].

SUBTASK 44-28-80-410-001

(4) Do this task to close access: Main Ceiling Panel - Installation, TASK 25-21-06-400-801.

SUBTASK 44-28-80-860-003

(5) Remove the safety tags and close these circuit breakers:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4

D. **Installation Test**

SUBTASK 44-28-80-710-001

(1) Do this task: Passenger Entertainment System (PES) Video - System Test, TASK 44-28-00-730-801.

——— **END OF TASK** ———

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1. **General**

    A.   This procedure has these tasks:

        (1)   Outlet Unit Removal

        (2)   Outlet Unit Installation

    B.   The outlet units are installed in these locations:

        (1)   Passenger seats.

        (2)   Video Control Center (VCC).

    TASK 44-28-81-000-801

2. **Outlet Unit - Removal**
    Figure 401

    A.   **Location Zones**

Zone	Area
200	Upper Half of Fuselage

    B.   **Removal Procedure**

    SUBTASK 44-28-81-860-001

    (1)   Open these circuit breakers and install safety tags:

    Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3
D	21	C23355	VOD

    Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
E	5	C23403	VIDEO PGMS & CTRL
E	8	C23471	VIDEO PGMS & CTRL B
H	8	C23616	ENTMT CTRL R
L	23	C24688	IFE SEATS FLT DECK SW

    This circuit breaker is inoperative and should remain open:

    Right Power Management Panel, P210

Row	Col	Number	Name
C	13	C23405	CABIN PRINTER (INOP)

    SUBTASK 44-28-81-020-001

    (2)   Do these steps to remove the Outlet Unit [1]:

        (a)   Remove the screws and release the front cover of the Outlet Unit [1].

        (b)   Loosen the screws on the Outlet Unit [1] to release the latches in the rear.

        (c)   Remove the Outlet Unit [1] from the cutout panel.

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(d)   Disconnect the electrical cable.
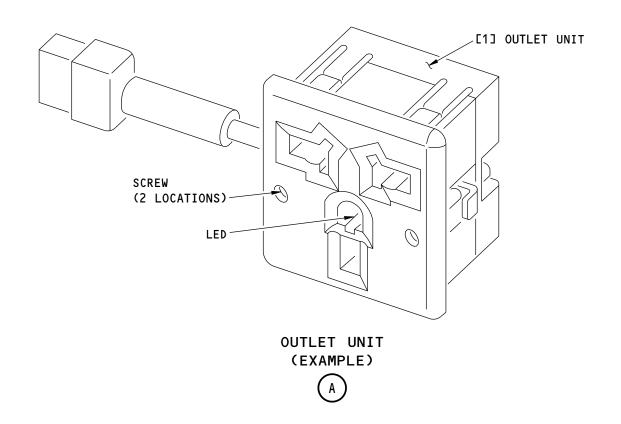
   NOTE: Do not let the electrical connector fall back into the arm rest assembly.

(e)   Put a protective cover on the electrical connector.

———— **END OF TASK** ————

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[1] OUTLET UNIT

SCREW
(2 LOCATIONS)

LED

OUTLET UNIT
(EXAMPLE)

A

2034191 S0000408793_V1

**Outlet Unit Installation
Figure 401/44-28-81-990-801**

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TASK 44-28-81-400-801

3. **Outlet Unit - Installation**

Figure 401

    A.   **References**

Reference	Title
44-28-00-730-801	Passenger Entertainment System (PES) Video - System Test (P/B 501)

    B.   **Location Zones**

Zone	Area
200	Upper Half of Fuselage

    C.   **Installation Procedure**

SUBTASK 44-28-81-860-002

(1)   Make sure that these circuit breakers are open:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3
D	21	C23355	VOD

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
E	5	C23403	VIDEO PGMS & CTRL
E	8	C23471	VIDEO PGMS & CTRL B
H	8	C23616	ENTMT CTRL R
L	23	C24688	IFE SEATS FLT DECK SW

This circuit breaker is inoperative and should remain open:

Right Power Management Panel, P210

Row	Col	Number	Name
C	13	C23405	CABIN PRINTER (INOP)

SUBTASK 44-28-81-420-001

(2)   Do these steps to install the Outlet Unit [1]:

   (a)   Remove the electrical connector covers.

   (b)   Examine the electrical connectors for bent or broken pins, dirt, and damage.

   (c)   Connect the electrical connector.

   (d)   Put the Outlet Unit [1] into the cutout panel and install the screws.

   (e)   Install the Outlet Unit [1] cover and screws.

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SUBTASK 44-28-81-860-003

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

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3
D	21	C23355	VOD

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
E	5	C23403	VIDEO PGMS & CTRL
E	8	C23471	VIDEO PGMS & CTRL B
H	8	C23616	ENTMT CTRL R
L	23	C24688	IFE SEATS FLT DECK SW

This circuit breaker is inoperative and should remain open:

Right Power Management Panel, P210

Row	Col	Number	Name
C	13	C23405	CABIN PRINTER (INOP)

D.   **Installation Test**

SUBTASK 44-28-81-710-002

(1)   Do this task: Passenger Entertainment System (PES) Video - System Test,
TASK 44-28-00-730-801.

──────── END OF TASK ────────

── EFFECTIVITY ──
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IN SEAT POWER CONVERTER (ISPC) - REMOVAL/INSTALLATION

1. **General**

    A. The component in this procedure is referred as the In Seat Power Converter (ISPC). Alternative names for the ISPC are:

    (1) In Seat Power Supply (ISPS).

    B. This procedure has these tasks:

    (1) In seat power converter (ISPC) removal.

    (2) ISPC installation.

    C. The ISPC are in these locations:

    (1) Passenger seats.

    (2) Video Control Center (VCC).

    (a) The VCC is also known as the Purser Work Station.

    TASK 44-28-82-000-801

2. **In Seat Power Converter Removal (ISPC)**

    (Figure 401)

    A. **References**

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)

    B. **Location Zones**

Zone	Area
200	Upper Half of Fuselage

    C. **Removal Procedure**

    SUBTASK 44-28-82-860-001

    (1) Open these circuit breakers and install safety tags:

    Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

    Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
L	23	C24688	IFE SEATS FLT DECK SW

    SUBTASK 44-28-82-910-001

    > ⚠️ **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) Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803.

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SUBTASK 44-28-82-020-001

(3)   Do the steps that follow to remove the In Seat Power Converter (ISPC) [1]:

⚠️ **CAUTION**	DO NOT TOUCH THE ELECTRICAL CONNECTOR CONTACT PINS. STATIC ELECTRICAL CHARGES THAT COLLECT ON THE SKIN CAN CAUSE DAMAGE TO THE ELECTROSTATIC SENSITIVE COMPONENTS INSTALLED IN THIS DEVICE.

(a)   For the spring latched connectors, release the spring latches.

(b)   Disconnect the electrical connectors from the In Seat Power Converter (ISPC) [1].

(c)   While you hold the In Seat Power Converter (ISPC) [1], remove the fasteners [2].

(d)   Remove the In Seat Power Converter (ISPC) [1].

(e)   Put protective covers on the electrical connectors.

─────── **END OF TASK** ───────

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ISPC

SEE Ⓐ

ISPC

SEE Ⓐ

PASSENGER COMPARTMENT
(EXAMPLE)

[1] IN SEAT POWER
CONVERTER

[2] FASTENER
(4 LOCATIONS)
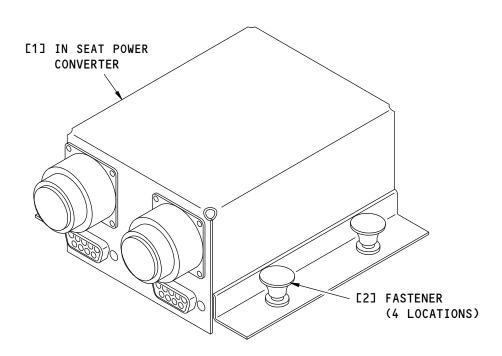
IN SEAT POWER CONVERTER (ISPC)
(EXAMPLE)

Ⓐ

1872853 S0000339980_V1

In Seat Power Converter (ISPC) Installation
Figure 401/44-28-82-990-801 (Sheet 1 of 2)

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ISPC

ISPC

SEE (A)

SEE (A)

PASSENGER COMPARTMENT
(EXAMPLE)

[1] IN SEAT POWER
CONVERTER

[2] FASTENER
(4 LOCATIONS)

IN SEAT POWER CONVERTER (ISPC)
(EXAMPLE)

(A)

1872865 S0000339983_V1

In Seat Power Converter (ISPC) Installation
Figure 401/44-28-82-990-801 (Sheet 2 of 2)

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TASK 44-28-82-400-801

3.   **In Seat Power Converter Installation (ISPC)**

(Figure 401)

A.   References

Reference	Title
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)
44-28-00-730-801	Passenger Entertainment System (PES) Video - System Test (P/B 501)

B.   Location Zones

Zone	Area
200	Upper Half of Fuselage

C.   Installation Procedure

SUBTASK 44-28-82-860-002

(1)   Make sure that these circuit breakers are open and have safety tags:

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
L	23	C24688	IFE SEATS FLT DECK SW

SUBTASK 44-28-82-910-002

> ⚠️ **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)   Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-41-01-400-803.

SUBTASK 44-28-82-420-001

(3)   Do these steps to install the In Seat Power Converter (ISPC) [1]:

> ⚠️ **CAUTION**   DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE UNIT. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE UNIT.

(a)   Remove the electrical connector covers.

(b)   Examine the electrical connectors for bent or broken pins, dirt, and damage.
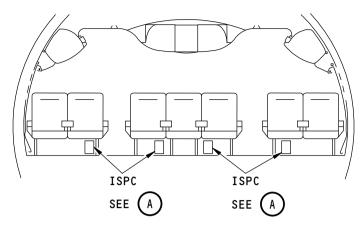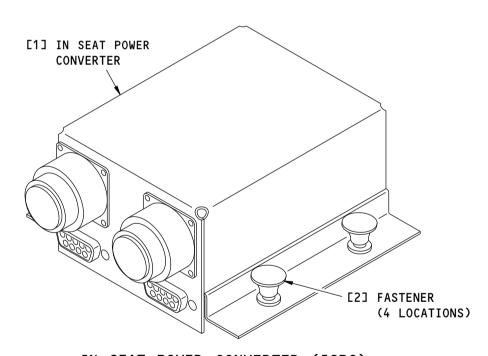
(c)   Put the In Seat Power Converter (ISPC) [1] on its mounting surface.

(d)   Install the fasteners [2].

(e)   Connect the electrical connectors to the In Seat Power Converter (ISPC) [1].

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⚠️ CAUTION	MAKE SURE THAT THE SPRING LATCHES HOLD THE CONNECTORS IN THE FULLY ENGAGED POSITION. IF THE CONNECTORS MOVE, ELECTRICAL ARCING CAN OCCUR. THIS CAN CAUSE DAMAGE TO EQUIPMENT.

    (f)   For spring latched connectors, secure the connectors with the spring latches.

SUBTASK 44-28-82-860-003

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

Left Power Management Panel, P110

Row	Col	Number	Name
A	24	C23357	IFE ZIA 2
A	27	C23358	IFE ZIA 3

Right Power Management Panel, P210

Row	Col	Number	Name
A	5	C23356	IFE ZIA 1
B	2	C23359	IFE ZIA 4
L	23	C24688	IFE SEATS FLT DECK SW

D. Installation Test

SUBTASK 44-28-82-710-001

    (1)   Do this task: Passenger Entertainment System (PES) Video - System Test, TASK 44-28-00-730-801.

——————— END OF TASK ———————

TASK 44-28-82-000-802

4.   In Seat Power Converter (ISPC), Video Control Center Removal
Figure 402

A. References

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)
44-28-30-000-801	Interactive Cabin Management Terminal Removal (P/B 401)

B. Location Zones

Zone	Area
ARO 001-017	
221	Passenger Compartment, Left - Section 41
ARO ALL	

C. Removal Procedure

SUBTASK 44-28-82-860-004

    (1)   Open these circuit breakers and install safety tags:

Left Power Management Panel, P110

Row	Col	Number	Name
D	21	C23355	VOD

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Right Power Management Panel, P210

Row	Col	Number	Name
E	5	C23403	VIDEO PGMS & CTRL
E	8	C23471	VIDEO PGMS & CTRL B
H	8	C23616	ENTMT CTRL R
L	23	C24688	IFE SEATS FLT DECK SW

SUBTASK 44-28-82-010-001

(2) If it is necessary to get access to the SPM, do this:

   (a) Interactive Cabin Management Terminal Removal, TASK 44-28-30-000-801.

SUBTASK 44-28-82-910-003

⚠️ 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.

(3) Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803.

SUBTASK 44-28-82-020-002

(4) Do the steps that follow to remove the In Seat Power Converter (ISPC) [1]:

⚠️ CAUTION	DO NOT TOUCH THE ELECTRICAL CONNECTOR CONTACT PINS. STATIC ELECTRICAL CHARGES THAT COLLECT ON THE SKIN CAN CAUSE DAMAGE TO THE ELECTROSTATIC SENSITIVE COMPONENTS INSTALLED IN THIS DEVICE.

   (a) For the spring latched connectors, release the spring latches.

   (b) Disconnect the electrical connectors from the In Seat Power Converter (ISPC) [1].

   (c) While you hold the In Seat Power Converter (ISPC) [1], remove the fasteners [2].

   (d) Remove the In Seat Power Converter (ISPC) [1].

   (e) Put protective covers on the electrical connectors.

——— END OF TASK ———

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VIDEO CONTROL
CENTER (VCC)

SEE (A)

FWD ⇦

PASSENGER AND FLIGHT
COMPARTMENT ENTRYWAY
(EXAMPLE)

[2] FASTENER
(4 LOCATIONS)

[1] IN SEAT POWER
CONVERTER
(ISPC)

INBD ⇦

(VIEW IN THE AFT DIRECTION)
A−A

VIDEO CONTROL CENTER (VCC)
(DOORS NOT SHOWN)
(EXAMPLE)

(A)

A ⬅

A ⬅

FWD ⇨

2236120 S0000499480_V1
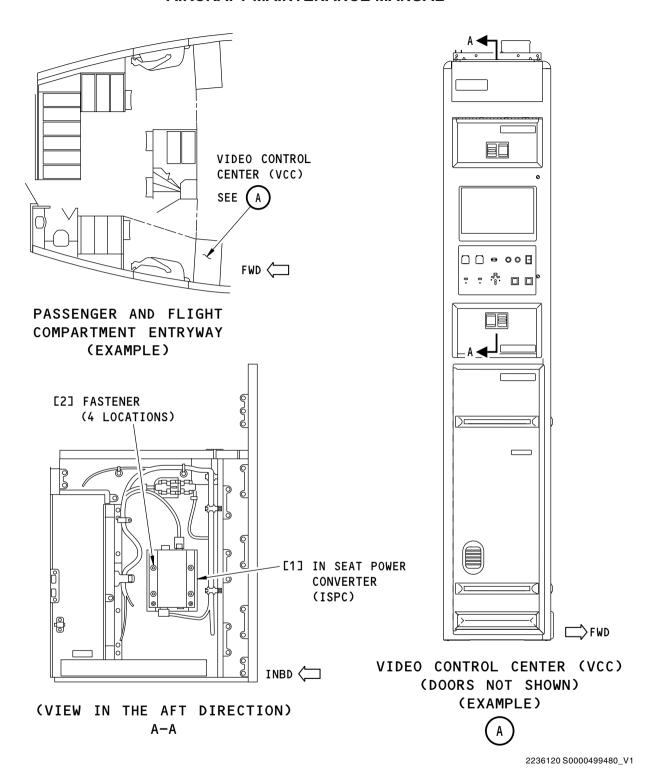
In Seat Power Converter Removal (ISPC) Installation
Figure 402/44-28-82-990-802

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TASK 44-28-82-400-802

5. <u>In Seat Power Converter (ISPC), Video Control Center Installation</u>

Figure 402

A. **References**

Reference	Title
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)
44-28-00-730-801	Passenger Entertainment System (PES) Video - System Test (P/B 501)
44-28-30-400-801	Interactive Cabin Management Terminal Installation (P/B 401)

B. **Location Zones**

Zone	Area
ARO 001-017	
221	Passenger Compartment, Left - Section 41
ARO ALL	

C. **Installation Procedure**

SUBTASK 44-28-82-860-005

(1) Make sure that these circuit breakers are open and have safety tags:

Left Power Management Panel, P110

Row	Col	Number	Name
D	21	C23355	VOD

Right Power Management Panel, P210

Row	Col	Number	Name
E	5	C23403	VIDEO PGMS & CTRL
E	8	C23471	VIDEO PGMS & CTRL B
H	8	C23616	ENTMT CTRL R
L	23	C24688	IFE SEATS FLT DECK SW

SUBTASK 44-28-82-910-004

> ⚠️ **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) Before you touch the unit, refer to this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-41-01-400-803.

SUBTASK 44-28-82-420-002

(3) Do these steps to install the In Seat Power Converter (ISPC) [1]:

> ⚠️ **CAUTION**
> DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE UNIT. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE UNIT.

(a) Remove the electrical connector covers.

(b) Examine the electrical connectors for bent or broken pins, dirt, and damage.

(c) Put the In Seat Power Converter (ISPC) [1] on its mounting surface.

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(d)   Install the fasteners [2].

(e)   Connect the electrical connectors to the In Seat Power Converter (ISPC) [1].

> ⚠️ **CAUTION**
>
> MAKE SURE THAT THE SPRING LATCHES HOLD THE CONNECTORS IN THE FULLY ENGAGED POSITION. IF THE CONNECTORS MOVE, ELECTRICAL ARCING CAN OCCUR. THIS CAN CAUSE DAMAGE TO EQUIPMENT.

(f)   For spring latched connectors, secure the connectors with the spring latches.

SUBTASK 44-28-82-410-001

(4)   If it is necessary to close access to the In Seat Power Converter (ISPC) [1], do this:

    (a)   Interactive Cabin Management Terminal Installation, TASK 44-28-30-400-801.

SUBTASK 44-28-82-860-006

(5)   Remove the safety tags and close these circuit breakers:

Left Power Management Panel, P110

Row	Col	Number	Name
D	21	C23355	VOD

Right Power Management Panel, P210

Row	Col	Number	Name
E	5	C23403	VIDEO PGMS & CTRL
E	8	C23471	VIDEO PGMS & CTRL B
H	8	C23616	ENTMT CTRL R
L	23	C24688	IFE SEATS FLT DECK SW

D.   Installation Test

SUBTASK 44-28-82-710-002

(1)   Do this task: Passenger Entertainment System (PES) Video - System Test, TASK 44-28-00-730-801.

———— **END OF TASK** ————

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SATCOM COMMUNICATION SYSTEM - MAINTENANCE PRACTICES

1. **General**

   A. This procedure has these tasks:

   (1) External Communication Systems Deactivation.

   (2) External Communication Systems Activation.

   (3) Enable Wireless Fidelity (Wi-Fi) Local Service.

   (4) Reset the Wireless Access Point (WAP).

   (5) Reset the Satellite Data Unit (SDU).

   (6) Reset the Network Control Unit (NCU).

   (7) Reset the Base Transceiver Station (BTS).

   (8) Calibrate the Base Transceiver Station (BTS).

   TASK 44-31-00-040-805-001

2. **External Communication Systems - Deactivation**

   A. **General**

   (1) This task will deactivate the External Communication Systems.

   B. **Tools/Equipment**

Reference	Description
STD-858	Tag - DO NOT OPERATE

   C. **Location Zones**

Zone	Area
118	Main Equipment Center, Right
200	Upper Half of Fuselage
211	Flight Compartment, Left

   D. **Access Panels**

Number	Name/Location
117AL	Main Equipment Center Access Door

   E. **Procedure**

   SUBTASK 44-31-00-040-006-001

   (1) Set the BROADBAND COM switch on the Overhead Panel, P5, to the OFF position and attach a DO NOT OPERATE tag, STD-858.

   SUBTASK 44-31-00-040-008-001

   (2) Set the CABIN WIFI switch in the Video Control Center (VCC) to the OFF position and attach a DO NOT OPERATE tag, STD-858.

   SUBTASK 44-31-00-040-007-001

   (3) Set the PICO CELL POWER switch in the Video Control Center (VCC) to the OFF position and attach a DO NOT OPERATE tag, STD-858.

   SUBTASK 44-31-00-860-135-001

   (4) Open this access panel:

Number	Name/Location
117AL	Main Equipment Center Access Door

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SUBTASK 44-31-00-860-136-001

> ⚠️ **WARNING**   BE CAREFUL WHEN YOU DO WORK AROUND ENERGIZED PANELS. HIGH VOLTAGES CAN KILL YOU.

(5)   Open these circuit breakers and install safety tags:

Right Power Management Panel, P210

Row	Col	Number	Name
D	4	C44402	PICO CELL
J	28	C44405	WAP POWER
L	23	C24688	IFE SEATS FLT DECK SW

F.   External Communication Systems - Tryout

NOTE: This tryout is to make sure that the External Communication Systems are in a zero energy state.

SUBTASK 44-31-00-700-005-001

(1)   Make sure that through the cabin that all Overhead Monitors and In-Seat Monitors are powered down.

SUBTASK 44-31-00-700-006-001

(2)   Make sure that the Power ON LED is NOT illuminated or flashing lights within in the Line Replaceable Units (LRUs) in the Video Control Center is an indication that the LRUs are OFF.

SUBTASK 44-31-00-700-007-001

(3)   Make sure that the Power ON LED is NOT illuminated or flashing lights within in the Master Control Units (MCUs) is an indication that the Line Replaceable Units (LRUs) are OFF. Accessing the Master Control Units (MCUs) require removing ceiling planes.

SUBTASK 44-31-00-860-137-001

> ⚠️ **WARNING**   BE CAREFUL WHEN YOU DO WORK AROUND ENERGIZED PANELS. HIGH VOLTAGES CAN KILL YOU.

(4)   Make sure that these circuit breakers are open and have safety tags:

Right Power Management Panel, P210

Row	Col	Number	Name
D	4	C44402	PICO CELL
J	28	C44405	WAP POWER
L	23	C24688	IFE SEATS FLT DECK SW

——— **END OF TASK** ———

TASK 44-31-00-440-804-001

3.   External Communication Systems - Activation

A.   General

(1)   This task will Activate the External Communication Systems.

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B.   Tools/Equipment

Reference	Description
STD-858	Tag - DO NOT OPERATE

C.   Location Zones

Zone	Area
118	Main Equipment Center, Right
200	Upper Half of Fuselage
211	Flight Compartment, Left

D.   Access Panels

Number	Name/Location
117AL	Main Equipment Center Access Door

E.   Procedure

SUBTASK 44-31-00-440-008-001

(1)   This task will Activate the External Communication Systems.

SUBTASK 44-31-00-440-009-001

(2)   Remove the DO NOT OPERATE tag, STD-858 from the BROADBAND COM switch in the Flight Deck P5 Panel.

SUBTASK 44-31-00-440-010-001

(3)   Remove the DO NOT OPERATE tag, STD-858 from the CABIN WIFI switch in the Video Control Center (VCC).

SUBTASK 44-31-00-440-011-001

(4)   Remove the DO NOT OPERATE tag, STD-858 from the PICO CELL POWER switch in the Video Control Center (VCC).

SUBTASK 44-31-00-860-138-001

> ⚠️ **WARNING**   BE CAREFUL WHEN YOU DO WORK AROUND ENERGIZED PANELS. HIGH VOLTAGES CAN KILL YOU.

(5)   Remove the safety tags and close these circuit breakers:

Right Power Management Panel, P210

Row	Col	Number	Name
D	4	C44402	PICO CELL
J	28	C44405	WAP POWER
L	23	C24688	IFE SEATS FLT DECK SW

SUBTASK 44-31-00-410-002-001

(6)   Close this access panel:

Number	Name/Location
117AL	Main Equipment Center Access Door

——— **END OF TASK** ———

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TASK 44-31-00-840-801

4. <u>Enable Wireless Fidelity (Wi-Fi) Local Service</u>

   A. **General**

      (1)   This procedure tells you how to Enable Wireless Fidelity (Wi-Fi) Local Service.

   B. **Procedure**

      SUBTASK 44-31-00-860-053

      (1)   Make sure that the Inflight Entertainment System is serviceable and log into the ENTERTAINMENT screens.

      SUBTASK 44-31-00-840-005

      (2)   To enable Wi-Fi services from the ENTERTAINMENT screens, do the steps that follow:

         (a)   From the FLIGHT INFO screen, select the Applications button.

            1)   Make sure that the APPLICATIONS screen shows.

         (b)   From the APPLICATIONS screen, select the Connectivity button.

            1)   Make sure that the APPLICATIONS - CONNECTIVITY screen shows.

         (c)   From the APPLICATIONS - CONNECTIVITY screen, select the Wi-Fi On/Off button.

            1)   Make sure that the Wi-Fi On/Off button changes to a green color.

               <u>NOTE</u>: The green cloor indicates the Wi-Fi local services are now active.

──────── **END OF TASK** ────────

TASK 44-31-00-840-802

5. <u>Reset the Wireless Access Point (WAP)</u>

   A. **General**

      (1)   This procedure tells you how to reset the Wireless Access Point (WAP).

      (2)   The Wireless Access Point (WAP) is also known as the Cabin Wireless LAN Unit (CWLU).

   B. **Procedure**

      SUBTASK 44-31-00-860-054

      (1)   Make sure that the Inflight Entertainment System is serviceable and log into the MAINTENANCE screens.

      SUBTASK 44-31-00-840-006

      (2)   To reset the WAP, do the steps that follow:

         (a)   From the MAINTENANCE screen, select the Connectivity button.

            1)   Make sure that the CONNECTIVITY CONTROL screen shows.

         (b)   From the CONNECTIVITY CONTROL screen, select the Wi-Fi Service button.

            1)   Make sure that the WI-FI MAINTENANCE GUI screen shows.

         (c)   From the WI-FI MAINTENANCE GUI navigation area, select the System Tools button.

            1)   Make sure that the SYSTEM REBOOT screen shows.

         (d)   To determine which WAP to reset, do the applicable step that follows:

            1)   To reset WAP #1, select the CWLU 1 Reset button.

               a)   Make sure that a confirmation message shows, which indicates that reset has started.

            2)   To reset WAP #2, select the CWLU 2 Reset button.

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a) Make sure that a confirmation message shows, which indicates that reset has started.

3) To reset WAP #3, select the CWLU 3 Reset button.

a) Make sure that a confirmation message shows, which indicates that reset has started.

4) To reset WAP #n, select the CWLU n Reset button; where n is the number related to the WAP number and the CWLU number.

a) Make sure that a confirmation message shows, which indicates that reset has started.

(e) From the WI-FI MAINTENANCE GUI navigation area, select the Status button.

1) Make sure that the STATUS screen shows.

(f) From the STATUS screen, select the Refresh button.

(g) Wait two minutes for the WAP reset procedure to complete.

(h) Select the Refresh button to refresh the STATUS screen.

1) Make sure that the Hardware Status of the reset WAP shows OK.

NOTE: The Refresh button may need to be selected multiple times to refresh the page.

C. Put the Airplane Back to Its Usual Condition, if necessary

SUBTASK 44-31-00-860-063

(1) Put the aircraft back to its initial configuration.

(a) From the WI-FI MAINTENANCE GUI navigation area, select the Done button.

1) Make sure that the CONNECTIVITY CONTROL screen shows.

(b) From the CONNECTIVITY CONTROL screen, select the Done button.

1) Make sure that the MAINTENANCE screen shows.

(c) From the MAINTENANCE screen, select the Customer Login button.

1) Make sure that the MAIN MENU screen shows.

————— **END OF TASK** —————

TASK 44-31-00-840-803

6. **Reset the Satellite Data Unit (SDU)**

A. General

(1) This procedure tells you how to reset the Satellite Data Unit (SDU).

B. Procedure

SUBTASK 44-31-00-860-055

(1) Make sure that the Inflight Entertainment System is serviceable and log into the MAINTENANCE screens.

SUBTASK 44-31-00-840-007

(2) To reset the SDU using the Wi-Fi Maintenance GUI, do the steps that follow:

(a) From the MAINTENANCE screen, select the Connectivity button.

1) Make sure that the CONNECTIVITY CONTROL screen shows.

(b) From the CONNECTIVITY CONTROL screen, select the Wi-Fi Service button.

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    1) Make sure that the WI-FI MAINTENANCE GUI screen shows.

  (c) From the WI-FI MAINTENANCE GUI navigation area, select the System Tools button.

    1) Make sure that the SYSTEM REBOOT screen shows.

  (d) From the SYSTEM REBOOT screen, select the Reset button next to the SDU you would like to reset.

    1) Make sure that you see a note shows at the top of the screen indicating the reset has initiated.

    NOTE: '1_Thales' refers to the Cabin SATCOM SDU, and '2_Honeywell' refers to the Flight Deck SATCOM HSU.

  (e) Wait five minutes for the SDU reset procedure to complete.

  (f) Select the Refresh button to refresh the STATUS screen and make sure that the Hardware Status of the reset SATCOM shows OK.

    NOTE: The Refresh button may need to be selected multiple times to refresh the page.

    NOTE: The Cabin SATCOM can also be reset through the OMTS Maintenance GUI.

C. Put the Airplane Back to Its Usual Condition, if necessary

SUBTASK 44-31-00-860-056

(1) Put the aircraft back to its initial configuration.

  (a) From the WI-FI MAINTENANCE GUI navigation area, select the Done button.

    1) Make sure that the CONNECTIVITY CONTROL screen shows.

  (b) From the CONNECTIVITY CONTROL screen, select the Done button.

    1) Make sure that the MAINTENANCE screen shows.

  (c) From the MAINTENANCE screen, select the Customer Login button.

    1) Make sure that the MAIN MENU screen shows.

——— END OF TASK ———

TASK 44-31-00-840-804

7. Reset the Network Control Unit (NCU)

A. General

(1) This procedure tells you how to reset the Network Control Unit (NCU).

B. Procedure

SUBTASK 44-31-00-860-057

(1) Make sure that the Inflight Entertainment System is serviceable and log into the MAINTENANCE screens.

SUBTASK 44-31-00-840-008

(2) To reset the NCU, do the steps that follow:

  (a) From the MAINTENANCE screen, select the Connectivity button.

    1) Make sure that the CONNECTIVITY CONTROL screen shows.

  (b) From the CONNECTIVITY CONTROL screen, select the OMTS Service button.

    1) Make sure that the OMTS MAINTENANCE GUI screen shows.

    2) Make sure that the SYSTEM CONTROL screen also shows.

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    (c)   If the SYSTEM CONTROL screen does not shows, select the System Control button from the navigation area of the OMTS MAINTENANCE GUI screen.

    (d)   Select the Reset button under the Reset NCU text.

        1)   Make sure that the color of the Reset button changes to red.

    (e)   Wait one minute for the NCU to reset.

        NOTE: The Reset button is red in color while the reset command is sent to the NCU. The color of the Reset button changes to green once the NCU responds to the reset command.

    (f)   The reset procedure is complete when the color of the Reset button changes back to green.

C.   Put the Airplane Back to Its Usual Condition, if necessary

   SUBTASK 44-31-00-860-058

   (1)   Put the aircraft back to its initial configuration.

    (a)   From the OMTS MAINTENANCE GUI navigation area, select the Done button.

        1)   Make sure that the CONNECTIVITY CONTROL screen shows.

    (b)   From the CONNECTIVITY CONTROL screen, select the Done button.

        1)   Make sure that the MAINTENANCE screen shows.

    (c)   From the MAINTENANCE screen, select the Customer Login button.

        1)   Make sure that the MAIN MENU screen shows.

———— **END OF TASK** ————

TASK 44-31-00-840-805

8.   Reset the Base Transceiver Station (BTS)

A.   General

   (1)   This procedure tells you how to reset the Base Transceiver Station (BTS).

B.   Procedure

   SUBTASK 44-31-00-860-061

   (1)   Make sure that the Inflight Entertainment System is serviceable and log into the MAINTENANCE screens.

   SUBTASK 44-31-00-840-009

   (2)   To reset the BTS, do the steps that follow:

    (a)   From the MAINTENANCE screen, select the Connectivity button.

        1)   Make sure that the CONNECTIVITY CONTROL screen shows.

    (b)   From the CONNECTIVITY CONTROL screen, select the OMTS Service button.

        1)   Make sure that the OMTS MAINTENANCE GUI screen shows.

        2)   Make sure that the SYSTEM CONTROL screen also shows.

    (c)   If the SYSTEM CONTROL screen does not shows, select the System Control button from the navigation area of the OMTS MAINTENANCE GUI screen.

    (d)   To determine which BTS to reset, do the steps that follow

        1)   To reset BTS 1, select the Reset button under the Reset BTS 1 text.

           a)   Make sure that the color of the Reset button changes to red.

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    2) To reset BTS 2, select the Reset button under the Reset BTS 2 text.

        a) Make sure that the color of the Reset button changes to red.

  (e) Wait up to one minute for the BTS to reset.

    NOTE: The Reset button is red in color while the reset command is sent to the BTS. The color of the Reset button changes to green once the BTS responds to the reset command.

  (f) The reset procedure is complete when the color of the Reset button changes back to green.

SUBTASK 44-31-00-840-010

(3) To validate the reset, do tthe steps as follows:

  (a) From the OMTS MAINTENANCE GUI screen, select BTS.

    1) Make sure that the BTS screen shows.

  (b) From the BTS screen, select the BTS Table.

    1) Make sure that the BTS table shows.

  (c) Select the Refresh button to refresh the screen.

    NOTE: If reset has initiated, the Error field for the reset BTS will show 'ERROR: Querying bts state failed'.

  (d) Continue to refresh the screen until the message disappears and the Error field shows as blank.

C. Put the Airplane Back to Its Usual Condition, if necessary

SUBTASK 44-31-00-860-062

(1) Put the aircraft back to its initial configuration.

  (a) From the WI-FI MAINTENANCE GUI navigation area, select the Done button.

    1) Make sure that the CONNECTIVITY CONTROL screen shows.

  (b) From the CONNECTIVITY CONTROL screen, select the Done button.

    1) Make sure that the MAINTENANCE screen shows.

  (c) From the MAINTENANCE screen, select the Customer Login button.

    1) Make sure that the MAIN MENU screen shows.

——— END OF TASK ———

TASK 44-31-00-820-801

9. Calibrate the Base Transceiver Station (BTS)

A. General

(1) This procedure tells you how to calibrate the Base Transceiver Station (BTS).

(2) It is recommended to do this calibratation task annually, and .where 1800 MHz GSM is available.

B. Procedure

SUBTASK 44-31-00-860-059

(1) Make sure that the Inflight Entertainment System is serviceable and log into the MAINTENANCE screens.

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SUBTASK 44-31-00-820-001

(2)   To calibrate the BTS, do the steps that follow:

NOTE: It is recommended to open the cabin door that is nearest to the NCU during the calibration task.

(a)   From the MAINTENANCE screen, select the Connectivity button.

1)   Make sure that the CONNECTIVITY CONTROL screen shows.

(b)   From the CONNECTIVITY CONTROL screen, select the OMTS Service button.

1)   Make sure that the OMTS MAINTENANCE GUI screen shows.

2)   Make sure that the SYSTEM CONTROL screen also shows.

(c)   If the SYSTEM CONTROL screen does not shows, select the System Control button from the navigation area of the OMTS MAINTENANCE GUI screen.

(d)   To determine which BTS to calibrate, do the steps that follow:

1)   To calibrate BTS 1, select the Calibrate button under the Calibrate BTS 1 text.

a)   Make sure that the color of the Calibrate button changes to red.

2)   To calibrate BTS 2, select the Calibrate button under the Calibrate BTS 2 text.

a)   Make sure that the color of the Calibrate button changes to red.

(e)   Wait up to five minutes for the selected BTS to finish the calibrate procedure.

NOTE: The Calibrate button of the selected BTS shows red in color for the duration of the calibration process. The color of the Calibrate button changes to green once the selected BTS has completed the calibration procedure.

(f)   The calibration procedure is complete when the color of the Calibrate button changes back to green.

SUBTASK 44-31-00-820-002

(3)   To validate the calibration, do tthe steps as follows:

(a)   From the OMTS MAINTENANCE GUI screen, select BTS.

1)   Make sure that the BTS screen shows.

(b)   From the BTS screen, select the Log Tables link in the first box under BTS/System Info.

1)   Make sure that the BTS Log table shows.

(c)   Find the latest entries with the time stamp of the calibration just completed.

NOTE: The latest entries may not be found at the top or bottom of the table.

1)   Make sure that 'Calibrating BTS' and 'Calibration of BTS <1/0/0> complete <ok>' are shown. The table will show <1/0/0> or <2/0/0> depending on which BTS was calibrated.

(d)   If 'Calibration of BTS <1/0/0> complete <fail>' shows, the calibration did not succeed. It is recommended to do this calibration task again.

C.   Put the Airplane Back to Its Usual Condition, if necessary

SUBTASK 44-31-00-860-060

(1)   Put the aircraft back to its initial configuration.

(a)   From the OMTS MAINTENANCE GUI navigation area, select the Done button.

1)   Make sure that the CONNECTIVITY CONTROL screen shows.

(b)   From the CONNECTIVITY CONTROL screen, select the Done button.

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     1)   Make sure that the MAINTENANCE screen shows.

  (c)   From the MAINTENANCE screen, select the Customer Login button.

     1)   Make sure that the MAIN MENU screen shows.

———— **END OF TASK** ————

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SATCOM COMMUNICATION SYSTEM - ADJUSTMENT/TEST

1.   **General**

   A.   This procedure has the following tasks for the SATCOM Communication System:

   NOTE: Operation of cellular & Wi-Fi enabled devices and/or installed Pico Cell & Wi-Fi systems on this aircraft may be prohibited by the local government communications agency, and violations could result in sanctions.

   It is the responsibility of the airline to adhere to the applicable government regulations for each country of intended operation. Use of cellular & Wi-Fi enabled devices while this aircraft is on the ground may also be subject to local aviation regulations.

   Refer to Boeing Drawing 221W9000 for the aircraft Approved Equipment List and guidance for maintaining Pico Cell & Wi-Fi system operation allowance.

   (1)   The Network Control Unit (NCU) Operational test.

   (2)   The Base Transceiver Station (BTS) Operational test.

   (3)   The Wireless Access Point (WAP) Operational Test.

   (4)   The Satellite Communications (SATCOM) Operational Test.

   TASK 44-31-00-710-802

2.   **Network Control Unit (NCU) - Operational Test**

   A.   **General**

   (1)   This test is to check the hardware status of the Network Control Unit (NCU).

   B.   **Prepare for the Operational Test**

   SUBTASK 44-31-00-840-001

   (1)   Make sure that the Inflight Entertainment System is serviceable and log into the MAINTENANCE screens.

   C.   **Network Control Unit (NCU) Operational Test**

   SUBTASK 44-31-00-710-002

   (1)   To test the NCU, do the steps that follow:

      (a)   From the MAINTENANCE screen, select the Connectivity button.

         1)   Make sure that the CONNECTIVITY CONTROL screen shows.

      (b)   From the CONNECTIVITY CONTROL screen, select the OMTS Service button.

         1)   Make sure that the OMTS MAINTENANCE GUI screen shows.

      (c)   From the OMTS MAINTENANCE GUI navigation area, select the NCU button.

         1)   Make sure that the NCU screen shows.

      (d)   From the NCU screen, make sure that the table shows 'FAIL:0000' in the Error Msg row.

   D.   **Put the Airplane Back to Its Usual Condition**

   SUBTASK 44-31-00-860-049

   (1)   Put the aircraft back to its initial configuration.

      (a)   From the OMTS MAINTENANCE GUI navigation area, select the Done button.

         1)   Make sure that the CONNECTIVITY CONTROL screen shows.

      (b)   From the CONNECTIVITY CONTROL screen, select the Done button.

         1)   Make sure that the MAINTENANCE screen shows.

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(c) From the MAINTENANCE screen, select the Customer Login button.

    1) Make sure that the MAIN MENU screen is shows.

———— **END OF TASK** ————

TASK 44-31-00-710-803

3. <u>Base Transceiver Station (BTS) - Operational Test</u>

  A. **General**

    (1) This test is to check the hardware status of the Base Transceiver Station (BTS).

  B. **Prepare for the Operational Test**

    SUBTASK 44-31-00-840-002

    (1) Make sure that the Inflight Entertainment System is serviceable and log into the MAINTENANCE screens.

  C. **Base Transceiver Station (BTS) Operational Test**

    SUBTASK 44-31-00-710-003

    (1) To test the BTS, do the steps that follow:

      (a) From the MAINTENANCE screen, select the Connectivity button.

        1) Make sure that the CONNECTIVITY CONTROL screen shows.

      (b) From the CONNECTIVITY CONTROL screen, select the OMTS Service button.

        1) Make sure that the OMTS MAINTENANCE GUI screen shows.

      (c) From the OMTS MAINTENANCE GUI navigation area, select the BTS button.

        1) Make sure that the BTS screen shows.

      (d) From the BTS screen, select the BTS table link.

        1) Make sure that the Error field in the BTS table for the newly installed BTS shows blank and no errors show.

  D. **Put the Airplane Back to Its Usual Condition**

    SUBTASK 44-31-00-860-050

    (1) Put the aircraft back to its initial configuration.

      (a) From the OMTS MAINTENANCE GUI navigation area, select the Done button.

        1) Make sure that the CONNECTIVITY CONTROL screen shows.

      (b) From the CONNECTIVITY CONTROL screen, select the Done button.

        1) Make sure that the MAINTENANCE screen shows.

      (c) From the MAINTENANCE screen, select the Customer Login button.

        1) Make sure that the MAIN MENU screen is shows.

———— **END OF TASK** ————

TASK 44-31-00-710-804

4. <u>Wireless Access Point (WAP) Operational Test</u>

  A. **General**

    (1) This test is to check the Wireless Access Point (WAP) hardware status and functionality.

    (2) The Wireless Access Point (WAP) is also known as the Cabin Wireless LAN Unit (CWLU).

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B. Prepare for the Operational Test

SUBTASK 44-31-00-840-003

(1) Make sure that the Inflight Entertainment System is serviceable and log into the MAINTENANCE screens.

C. Wireless Access Point (WAP) Operational Test

SUBTASK 44-31-00-710-004

(1) To check the WAP hardware status, do the steps that follow:

    (a) From the MAINTENANCE screen, select the Connectivity button.

        1) Make sure that the CONNECTIVITY CONTROL screen shows.

    (b) From the CONNECTIVITY CONTROL screen, select the Wi-Fi Service button.

        1) Make sure that the WI-FI MAINTENANCE GUI screen shows.

    (c) From the WI-FI MAINTENANCE GUI navigation area, select the Status button.

        1) Make sure that the STATUS screen shows.

    (d) From the STATUS screen, select the Refresh button.

    (e) Check the Hardware Status of the WAP(s).

        1) Make sure that the Hardware Status of the WAP to be checked shows OK.

SUBTASK 44-31-00-710-005

(2) To check the Wi-Fi functionality, do the steps that follow:

    (a) From the MAINTENANCE screen, select the Connectivity button.

        1) Make sure that the CONNECTIVITY CONTROL screen shows.

    (b) From the CONNECTIVITY CONTROL screen, select the Wi-Fi Service button.

        1) Make sure that the WI-FI MAINTENANCE GUI screen shows.

    (c) From the WI-FI MAINTENANCE GUI navigation area, select the Wi-Fi Test button.

        1) Make sure that the WI-FI TEST screen shows.

    (d) From the WI-FI TEST screen, select the Enable Radio button.

    (e) Select the Update button.

        1) Make sure that all CWLU Radio #2s show as gray and ON.

    (f) Select the ON button for each CWLU Radio #2 so that they will show as OFF.

    (g) Select the OFF button for the CWLU that is under test.

        1) Make sure that the selected CWLU radio #2 shows as green and ON.

    (h) Using a Wi-Fi enabled device, confirm that the AFL SSID (AEROFLOT_OnAir) shows.

D. Put the Airplane Back to Its Usual Condition

SUBTASK 44-31-00-860-051

(1) Put the aircraft back to its initial configuration.

    (a) From the WI-FI MAINTENANCE GUI navigation area, select the Done button.

        1) Make sure that the CONNECTIVITY CONTROL screen shows.

    (b) From the CONNECTIVITY CONTROL screen, select the Done button.

        1) Make sure that the MAINTENANCE screen shows.

    (c) From the MAINTENANCE screen, select the Customer Login button.

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1) Make sure that the MAIN MENU screen shows.

——————— **END OF TASK** ———————

TASK 44-31-00-710-805

5. <u>Satellite Communications (SATCOM) Operational Test</u>

A. **General**

(1) This test is to check the status of the satellite communications (SATCOM).

<u>NOTE</u>: Operation of cellular & Wi-Fi enabled devices and/or installed Pico Cell & Wi-Fi systems on this aircraft may be prohibited by the local government communications agency, and violations could result in sanctions.

It is the responsibility of the airline to adhere to the applicable government regulations for each country of intended operation. Use of cellular & Wi-Fi enabled devices while this aircraft is on the ground may also be subject to local aviation regulations.

Refer to Boeing Drawing 221W9000 for the aircraft Approved Equipment List and guidance for maintaining Pico Cell & Wi-Fi system operation allowance.

B. **Prepare for the Operational Test**

SUBTASK 44-31-00-840-004

(1) Make sure that the Inflight Entertainment System is serviceable and log into the MAINTENANCE screens.

SUBTASK 44-31-00-710-006

(2) To test the SATCOM functionality, do the steps that follow:

(a) From the MAINTENANCE screen, select the Connectivity button.

1) Make sure that the CONNECTIVITY CONTROL screen shows.

(b) From the CONNECTIVITY CONTROL screen, select the Wi-Fi Service button.

1) Make sure that the WI-FI MAINTENANCE GUI screen shows.

(c) From the WI-FI MAINTENANCE GUI navigation area, make sure that 'OK' shows for SATCOM '1_Thales' in the Hardware section.

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(d) From the WI-FI MAINTENANCE GUI navigation area, make sure that 'OK' shows for SATCOM '2_Honey-well' in the Hardware section.

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(e) From the WI-FI MAINTENANCE GUI navigation area, make sure that 'Connected' shows for Link 1_Thales/SBB-1 and Link 1_Thales/SBB-2 in the Contexts section.

ARO 001, 002

(f) From the WI-FI MAINTENANCE GUI navigation area, make sure that 'Connected' shows for Link 2_Honey-well/SBB-1 and Link 2_Honey-well/SBB-2 in the Contexts section.

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C. **Put the Airplane Back to Its Usual Condition**

SUBTASK 44-31-00-860-052

(1) Put the aircraft back to its initial configuration.

(a) From the WI-FI MAINTENANCE GUI navigation area, select the Done button.

1) Make sure that the CONNECTIVITY CONTROL screen shows.

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    (b)   From the CONNECTIVITY CONTROL screen, select the Done button.

        1)   Make sure that the MAINTENANCE screen shows.

    (c)   From the MAINTENANCE screen, select the Customer Login button.

        1)   Make sure that the MAIN MENU screen shows.

——— **END OF TASK** ———

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<u>LEAKY FEEDER ANTENNA - REMOVAL / INSTALLATION</u>

1. <u>General</u>

    A. The Leaky Feeder Antenna is installed in the overhead crown running the length of the airplane on the right side and the left side of the aircraft.

    B. This procedure has these tasks:

        (1) A removal of the Leaky feeder antenna.

        (2) An installation of the Leaky feeder antenna.

    TASK 44-31-13-000-801

2. <u>Leaky Feeder Antenna - Removal</u>

    A. **References**

Reference	Title
SWPM 20, Standard Wiring Practices	Standard Wiring Practices

    B. **Removal Procedure**

    SUBTASK 44-31-13-020-001

        (1) Remove the leaky feeder antenna (cable) per applicable task: SWPM 20, Standard Wiring Practices.

    ———— **END OF TASK** ————

    TASK 44-31-13-400-801

3. <u>Leaky Feeder Antenna - Installation</u>

    A. **References**

Reference	Title
SWPM 20, Standard Wiring Practices	Standard Wiring Practices

    B. **Installation Procedure**

    SUBTASK 44-31-13-420-001

        (1) Install the leaky feeder antenna (cable) per applicable task: SWPM 20, Standard Wiring Practices.

    ———— **END OF TASK** ————

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BASE TRANSCEIVER STATION (BTS) - REMOVAL/INSTALLATION

1. **General**

    A. This procedure has these tasks:

    (1) Base Transceiver Station (BTS) Removal.

    (2) Base Transceiver Station (BTS) Installation.

    TASK 44-31-14-000-801

2. **Base Transceiver Station (BTS) - Removal**

    (Figure 401)

    A. **General**

    (1) This task includes the steps to remove the Base Transceiver Station (BTS).

    B. **References**

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)
25-21-06-000-801	Main Ceiling Panel - Removal (P/B 401)

    C. **Tools/Equipment**

Reference	Description
STD-1048	Stepladder - 6 foot (1.83m)

    D. **Location Zones**

Zone	Area
263	Area Above Passenger Compartment Ceiling, Left - Section 47
264	Area Above Passenger Compartment Ceiling, Right - Section 47

    E. **Prepare for the Removal**

    SUBTASK 44-31-14-860-001

    (1) Open this circuit breaker and install safety tag:

    Right Power Management Panel, P210

Row	Col	Number	Name
D	4	C44402	PICO CELL

    SUBTASK 44-31-14-010-001

    (2) Use a 6 foot (1.83m) stepladder, STD-1048 to get access to the Base Transceiver Station (BTS).

    SUBTASK 44-31-14-010-002

    (3) Remove the aircraft ceiling panel: Main Ceiling Panel - Removal, TASK 25-21-06-000-801.

    SUBTASK 44-31-14-910-001

    > ⚠️ **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.

    (4) Before you touch the unit, refer to: ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803.

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F. **Base Transceiver Station Removal**

SUBTASK 44-31-14-020-001

⚠️ **CAUTION**	DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

(1) To remove the Base Transceiver Station (BTS), do these steps:

    (a) Disconnect the cables.

    (b) Remove and retain the termination plug(s), if installed.

    (c) Loosen the fasteners [2].

    (d) Remove the Base Transceiver Station (BTS) [1].

    (e) Put blanking caps on the disconnected electrical connectors.

————— **END OF TASK** —————

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SEE Ⓐ

ZONE 260

SEE Ⓑ

STA 2200

STA 2067

STA 1832

Ⓐ

SEE Ⓒ

FWD

INBD

Ⓑ

[2] FASTENER
(4 LOCATIONS)

FWD

INBD

[1] BASE TRANSCEIVER
STATION (BTS)

Ⓒ

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Base Transceiver Station Installation
Figure 401/44-31-14-990-801

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TASK 44-31-14-400-801

3. <u>Base Transceiver Station (BTS) - Installation</u>

(Figure 401)

A. **General**

(1) This task includes the steps to install the Base Transceiver Station (BTS).

B. **References**

Reference	Title
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)
25-21-06-400-801	Main Ceiling Panel - Installation (P/B 401)
44-31-00-710-803	Base Transceiver Station (BTS) - Operational Test (P/B 501)

C. **Tools/Equipment**

Reference	Description
STD-1048	Stepladder - 6 foot (1.83m)

D. **Location Zones**

Zone	Area
263	Area Above Passenger Compartment Ceiling, Left - Section 47
264	Area Above Passenger Compartment Ceiling, Right - Section 47

E. **Prepare for the Installation**

SUBTASK 44-31-14-860-002

(1) Make sure that this circuit breaker is open and has safety tag:

Right Power Management Panel, P210

Row	Col	Number	Name
D	4	C44402	PICO CELL

SUBTASK 44-31-14-010-003

(2) Use a 6 foot (1.83m) stepladder, STD-1048 to get access to the Base Transceiver Station (BTS).

SUBTASK 44-31-14-910-002

> ⚠️ **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.

(3) Before you touch the unit, refer to ESDS Handling for Metal Encased Unit Installation, TASK 20-41-01-400-803.

F. **Base Transceiver Station Installation**
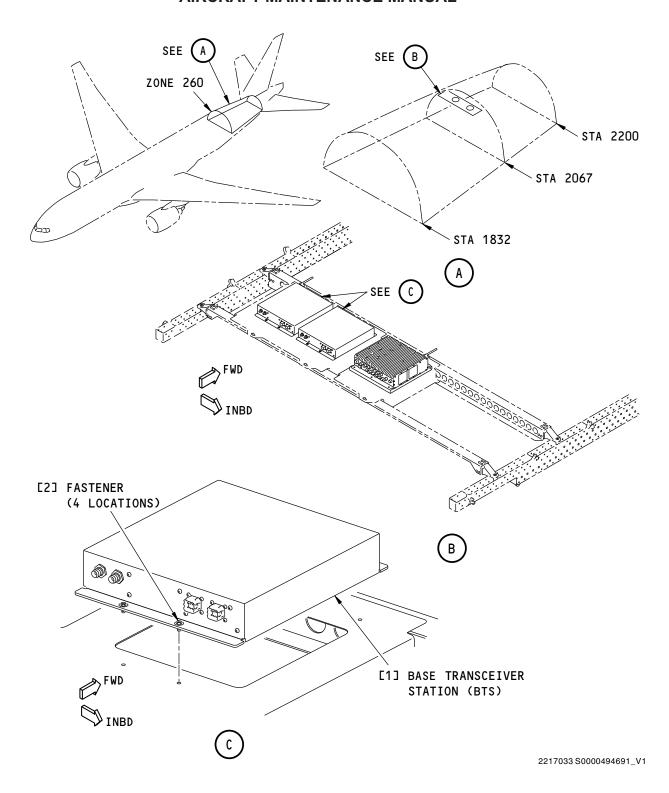
SUBTASK 44-31-14-420-001

> ⚠️ **CAUTION**: DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

(1) To install the Base Transceiver Station (BTS), do these steps:

(a) Remove the blanking caps from the electrical connectors.

(b) Make sure that the electrical connectors are clean and in good condition.

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(c)   Put the Base Transceiver Station (BTS) [1] in its mounting location.

   1)   Make sure the mounting holes align.

(d)   Attach the Base Transceiver Station (BTS) [1] to the mounting location loosely with the fasteners [2].

(e)   Tighten the fasteners [2] to 35.0 inch-pounds (3.95 Nm).

(f)   Install the termination plug(s), if necessary.

(g)   Connect the cables to the Base Transceiver Station (BTS) [1].

SUBTASK 44-31-14-860-003

(2)   Remove the safety tag and close this circuit breaker:

Right Power Management Panel, P210

Row	Col	Number	Name
D	4	C44402	PICO CELL

G.   Base Transceiver Station Installation Test

SUBTASK 44-31-14-720-001

(1)   Do the BTS Test (Base Transceiver Station (BTS) - Operational Test, TASK 44-31-00-710-803).

H.   Put the Airplane back to its usual condition

SUBTASK 44-31-14-410-001

(1)   Install the aircraft ceiling panel (Main Ceiling Panel - Installation, TASK 25-21-06-400-801).

SUBTASK 44-31-14-410-002

(2)   Remove the 6 foot (1.83m) stepladder, STD-1048.

———— **END OF TASK** ————

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NETWORK CONTROL UNIT (NCU) - REMOVAL/INSTALLATION

1. **General**

   A.   This procedure has these tasks:

   (1)   Network Control Unit (NCU) Removal.

   (2)   Network Control Unit (NCU) Installation.

   TASK 44-31-15-000-801

2. **Network Control Unit (NCU) - Removal**

   (Figure 401)

   A.   **General**

   (1)   This task includes the steps to remove the Network Control Unit (NCU).

   B.   **References**

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)
25-21-06-000-801	Main Ceiling Panel - Removal (P/B 401)

   C.   **Tools/Equipment**

Reference	Description
STD-1048	Stepladder - 6 foot (1.83m)

   D.   **Location Zones**

Zone	Area
263	Area Above Passenger Compartment Ceiling, Left - Section 47
264	Area Above Passenger Compartment Ceiling, Right - Section 47

   E.   **Prepare for the Removal**

   SUBTASK 44-31-15-860-001

   (1)   Open this circuit breaker and install safety tag:

   Right Power Management Panel, P210

Row	Col	Number	Name
D	4	C44402	PICO CELL

   SUBTASK 44-31-15-010-001

   (2)   Use a 6 foot (1.83m) stepladder, STD-1048 to get access to the NCU.

   SUBTASK 44-31-15-010-002

   (3)   Remove the aircraft ceiling panel: Main Ceiling Panel - Removal, TASK 25-21-06-000-801.

   SUBTASK 44-31-15-910-001

⚠️ **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.

   (4)   Before you touch the unit, refer to: ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803.

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F.   Network Control Unit Removal

SUBTASK 44-31-15-020-001

⚠️ **CAUTION**	DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

(1)   To remove the NCU, do these steps:

   (a)   Disconnect the cables.

   (b)   Remove and retain the termination plug(s), if installed.

   (c)   Loosen the fasteners [2].

   (d)   Remove the Network Control Unit (NCU) [1].
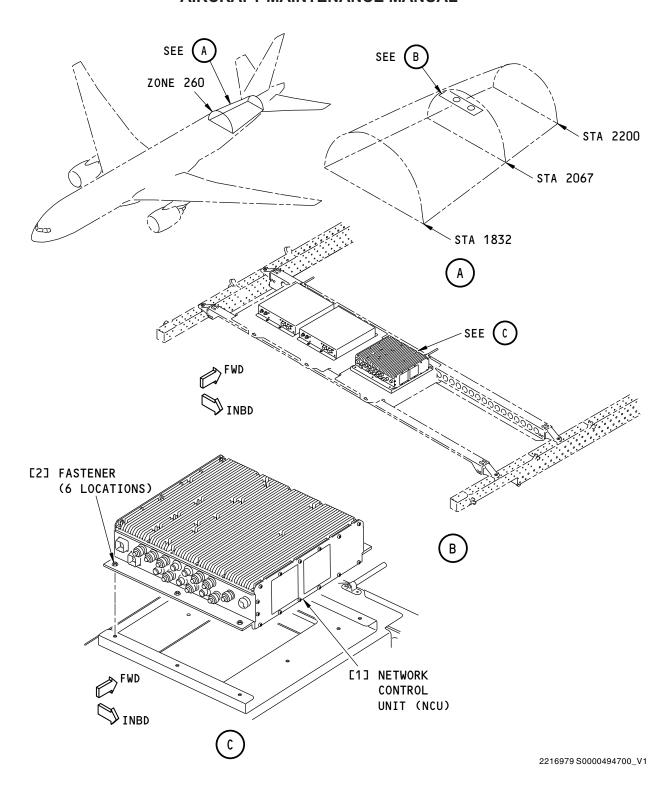
   NOTE: If necessary use a non-metallic scraper as an aid to remove the NCU from the chassis.

   (e)   Put blanking caps on the disconnected electrical connectors.

——— **END OF TASK** ———

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SEE Ⓐ

ZONE 260

SEE Ⓑ

STA 2200

STA 2067

STA 1832

Ⓐ

SEE Ⓒ

FWD

INBD

[2] FASTENER
(6 LOCATIONS)

Ⓑ

FWD

INBD

[1] NETWORK
CONTROL
UNIT (NCU)

Ⓒ

2216979 S0000494700_V1

**Network Control Unit (NCU) Installation
Figure 401/44-31-15-990-801**

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TASK 44-31-15-400-801

3. **Network Control Unit (NCU) - Installation**

   (Figure 401)

   A. **General**

   (1) This task includes the steps to install the Network Control Unit (NCU).

   B. **References**

Reference	Title
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)
25-21-06-400-801	Main Ceiling Panel - Installation (P/B 401)
44-31-00-710-802	Network Control Unit (NCU) - Operational Test (P/B 501)
SWPM 20-20-00	Standard Wiring Practices Manual
SWPM 20-20-00 Paragraph 14.D	Category 2 Fay Sealed Fay Surface Bonds

   C. **Tools/Equipment**

   NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meters - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: T477W Supplier: 01014 Opt Part #: M1B Supplier: 3AD17
STD-764	Scraper - Non-metallic
STD-1048	Stepladder - 6 foot (1.83m)

   D. **Consumable Materials**

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
B00148	Solvent - Methyl Ethyl Ketone (MEK)	ASTM D740
B00184	Solvent - Presealing, Cleaning Solvent	BMS11-7
B00666	Solvent - Methyl Propyl Ketone	BMS11-9
B01026	Solvent - FCC-55	
B01054	Solvent - Methyl Ethyl Ketone and sec-Butyl Alcohol Blend - (MEK:secButyl Alcohol - 42:58 Percent)	BAC5750, ASTM D740/ASTM D1007
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5 Class A
G02339 [P05-055]	Abrasive - Emery Paper	

   E. **Location Zones**

Zone	Area
263	Area Above Passenger Compartment Ceiling, Left - Section 47

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(Continued)

Zone	Area
264	Area Above Passenger Compartment Ceiling, Right - Section 47

F. Prepare for the Installation

SUBTASK 44-31-15-860-002

(1) Make sure that this circuit breaker is open and has safety tag:

Right Power Management Panel, P210

Row	Col	Number	Name
D	4	C44402	PICO CELL

SUBTASK 44-31-15-010-003

(2) Use a 6 foot (1.83m) stepladder, STD-1048 to get access to the NCU.

SUBTASK 44-31-15-910-002

> ⚠️ **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.

(3) Before you touch the unit, refer to ESDS Handling for Metal Encased Unit Installation, TASK 20-41-01-400-803.

SUBTASK 44-31-15-860-004

(4) Prepare the mating fay surfaces for electrical bonding between the chassis of the NCU and support. Refer to SWPM 20-20-00 Paragraph 14.D.

SUBTASK 44-31-15-860-005

(5) Lightly rub the mating fay surfaces with #200 to #325 grit abrasive, G02339 [P05-055].

SUBTASK 44-31-15-100-001

(6) Clean the mating fay surfaces with a clean cotton wiper, G00034 soaked with clean solvent (solvent, B01054, FCC-55 solvent, B01026, solvent, B00666, solvent, B00184 or solvent, B00148).

    (a) Do this until no unwanted material remains.

G. Network Control Unit Installation

SUBTASK 44-31-15-420-001

> ⚠️ **CAUTION**
> DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

(1) To install the NCU, do these steps:

    (a) Remove the blanking caps from the electrical connectors.

    (b) Make sure that the electrical connectors are clean and in good condition.

    (c) Apply the sealant, A00247 to the mating fay surfaces of chassis and NCU.

    (d) Put the Network Control Unit (NCU) [1] in its mounting location.

        1) Make sure the mounting holes align.

    (e) Attach the Network Control Unit (NCU) [1] to the mounting location loosely with the fasteners [2].

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(f)   Tighten the fasteners [2] to 35 in-lb (3.95 N·m).

(g)   Remove any unwanted sealant with a non-metallic scraper, STD-764.

(h)   Install the termination plug(s), if necessary.

(i)   Connect the cables to the Network Control Unit (NCU) [1].

SUBTASK 44-31-15-860-006

(2)   Use the electrical bonding intrinsically safe approved bonding meter, COM-1550, to make sure the resistance between the chassis of the NCU and support measures not more than 0.0025 ohms. Refer to SWPM 20-20-00.

SUBTASK 44-31-15-860-003

(3)   Remove the safety tag and close this circuit breaker:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C44402	PICO CELL

H.   Network Control Unit Installation Test

SUBTASK 44-31-15-720-001

(1)   Do the NCU Test (Network Control Unit (NCU) - Operational Test, TASK 44-31-00-710-802).

I.   Put the Airplane back to its usual condition

SUBTASK 44-31-15-410-001

(1)   Install the aircraft ceiling panel (Main Ceiling Panel - Installation, TASK 25-21-06-400-801).

SUBTASK 44-31-15-410-002

(2)   Remove the 6 foot (1.83m) stepladder, STD-1048.

──────── END OF TASK ────────

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<u>WIRELESS ACCESS POINT (WAP) - REMOVAL/INSTALLATION</u>

1. <u>General</u>

   A. This procedure has these tasks:

      (1) A removal of the wireless access point (WAP).

      (2) An installation of the wireless access point.

   B. Refer to WDM 44-35-12 for the location of each WAP unit.

   C. The procedures for removal and installation of all the WAP units are same.

   TASK 44-31-26-000-801

2. <u>Wireless Access Point Removal</u>
   (Figure 401)

   A. **General**

      (1) This task includes the steps to remove the Wireless Access Point (WAP).

   B. **References**

Reference	Title
20-41-01-000-802	Conductive Dust Cap and Connector Cover Installation (P/B 201)
25-21-06-000-801	Main Ceiling Panel - Removal (P/B 401)

   C. **Location Zones**

Zone	Area
224	Area Above Passenger Compartment Ceiling, Right - Section 41
234	Area Above Passenger Compartment Ceiling, Right - Section 43
244	Area Above Passenger Compartment Ceiling, Right - Section 44
254	Area Above Passenger Compartment Ceiling, Right - Section 46
264	Area Above Passenger Compartment Ceiling, Right - Section 47

   D. **Prepare Procedure**

      SUBTASK 44-31-26-040-001

      (1) Open this circuit breaker and install safety tag:

      Right Power Management Panel, P210

Row	Col	Number	Name
J	28	C44405	WAP POWER

      SUBTASK 44-31-26-010-001

      (2) Remove the applicable ceiling panel(s). To remove the ceiling panel, do this task: Main Ceiling Panel - Removal, TASK 25-21-06-000-801.

   E. **WAP Removal**

      SUBTASK 44-31-26-020-001

      (1) Remove the WAP:

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⚠️ **CAUTION**	DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE COMPONENT. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENT.
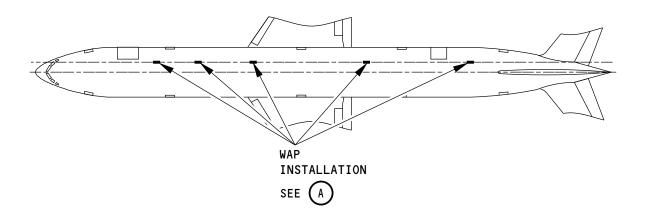
(a)   Disconnect the two electrical connectors [2] and the four coaxial connectors [3] from the WAP [1].

(b)   Disconnect the bond jumper [4] from the WAP.

(c)   Remove the four bolts [5] and washers [6] to remove the WAP from the mounting structure.

(d)   Remove the WAP [1] from its mounting structure.

(e)   Do this task: Conductive Dust Cap and Connector Cover Installation, TASK 20-41-01-000-802.

——— **END OF TASK** ———

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WAP
INSTALLATION
SEE (A)

MOUNTING
STRUCTURE

[1] WAP

[2] ELECTRICAL
CONNECTOR
(2 LOCATIONS)

[3] COAXIAL
CONNECTOR
(4 LOCATIONS)

[5] BOLT
[6] WASHER
(4 LOCATIONS)

[4] BONDING
JUMPER

INBD

FWD

WAP INSTALLATION
(TYPICAL)

(A)

2084443 S0000436226_V1
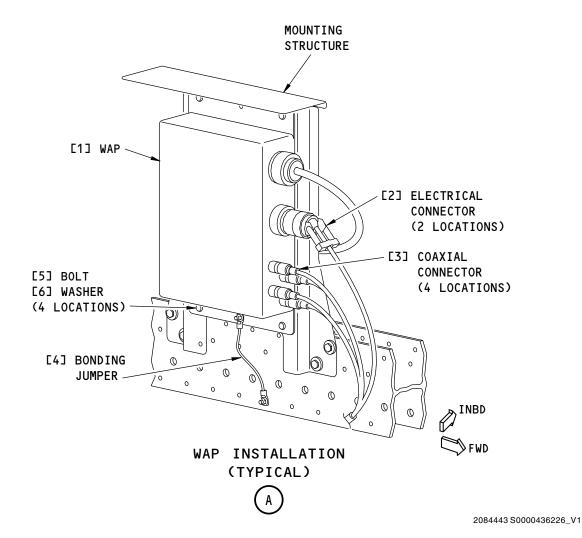
Wireless Access Point (WAP) Installation
Figure 401/44-31-26-990-801

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TASK 44-31-26-400-801

3. <u>Wireless Access Point Installation</u>

(Figure 401)

A. **General**

(1) This task includes the steps to install the Wireless Access Point (WAP).

B. **References**

Reference	Title
20-41-01-400-802	Conductive Dust Cap and Connector Cover Removal (P/B 201)
25-21-06-400-801	Main Ceiling Panel - Installation (P/B 401)
44-31-00-710-804	Wireless Access Point (WAP) Operational Test (P/B 501)
WDM 44-35-11	Wiring Diagram Manual
WDM 44-35-12	Wiring Diagram Manual

C. **Expendables/Parts**

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	WAP	23-95-10-12A-060	ARO ALL
		23-95-10-13A-080	ARO ALL
		23-95-10-17E-080	ARO ALL
		23-95-10-20B-080	ARO ALL
		23-95-10-21E-080	ARO ALL

D. **Location Zones**

Zone	Area
224	Area Above Passenger Compartment Ceiling, Right - Section 41
234	Area Above Passenger Compartment Ceiling, Right - Section 43
244	Area Above Passenger Compartment Ceiling, Right - Section 44
254	Area Above Passenger Compartment Ceiling, Right - Section 46
264	Area Above Passenger Compartment Ceiling, Right - Section 47

E. **WAP Installation**

SUBTASK 44-31-26-420-001

(1) Install the WAP:

⚠️ **CAUTION**	DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE COMPONENT. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENT.

(a) Put the WAP [1] in its position on the mounting structure.

(b) Install the four bolts [5] and washers [6] to attach the WAP [1] to the mounting structure.

(c) Connect the bond jumper [4] to the WAP.

(d) Do this task: Conductive Dust Cap and Connector Cover Removal, TASK 20-41-01-400-802.

(e) Connect the two electrical connectors [2] and the four coaxial connectors [3] to the WAP (WDM 44-35-11, WDM 44-35-12).

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SUBTASK 44-31-26-410-001

(2)   Install the applicable ceiling access panel(s). To install the ceiling panel, do this task: Main Ceiling Panel - Installation, TASK 25-21-06-400-801.

SUBTASK 44-31-26-440-001

(3)   Remove the safety tag and close this circuit breaker:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	28	C44405	WAP POWER

F. Installation Test

SUBTASK 44-31-26-710-005

(1)   Do this task: Wireless Access Point (WAP) Operational Test, TASK 44-31-00-710-804.

——— **END OF TASK** ———

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WIRELESS ACCESS POINT ANTENNA - REMOVAL/INSTALLATION

1. **General**

    A. This procedure has these tasks:

    (1) A removal of the wireless access point (WAP) antenna.

    (2) An installation of the wireless access point antenna.

    B. There are 5 WAP units in the airplane. Each WAP unit has 4 WAP antennas:

    NOTE: WAP antennas are installed on the sides of the WAP bracket assembly or on the remote antenna brackets, located in the cabin crown area.

    - WAP #1 antenna (M44151, M44152, M44153) located at zone 224 (STA 576, WL301, RBL 47)

    - WAP #1 antenna (M44154) located at zone 224 (STA 554, WL301, RBL 47)

    - WAP #2 antenna (M44156, M44157, M44158) located at zone 234 (STA 825+115.0, WL301, RBL 47)

    - WAP #2 antenna (M44159) located at zone 234 (STA 825+127.0, WL301, RBL 47)

    - WAP #3 antenna (M44161, M44162, M44163) located at zone 234 (STA 1081, WL301, RBL 47)

    - WAP #3 antenna (M44164) located at zone 244 (STA 1068, WL301, RBL 47)

    - WAP #4 antenna (M44171, M44172, M44173) located at zone 254 (STA 1434+108.6, WL301, BL R47)

    - WAP #4 antenna (M44174) located at zone 254 (STA 1434+118.3, WL301, RBL 47)

    - WAP #5 antenna (M44181, M44182, M44183) located at zone 264 (STA 1856, WL301, RBL 47)

    - WAP #5 antenna (M44184) located at zone 264 (STA 1856, WL301, RBL 47)

    C. The procedures for removal and installation of all the WAP antennas are same.

    TASK 44-31-27-000-801

2. **Wireless Access Point Antenna Removal**
    (Figure 401)

    A. **General**

    (1) This task includes the steps to remove the WAP antennas.

    B. **References**

Reference	Title
25-21-06-000-801	Main Ceiling Panel - Removal (P/B 401)

    C. **Location Zones**

Zone	Area
224	Area Above Passenger Compartment Ceiling, Right - Section 41
233	Area Above Passenger Compartment Ceiling, Left - Section 43
234	Area Above Passenger Compartment Ceiling, Right - Section 43
244	Area Above Passenger Compartment Ceiling, Right - Section 44
254	Area Above Passenger Compartment Ceiling, Right - Section 46
264	Area Above Passenger Compartment Ceiling, Right - Section 47

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D. **Prepare for the Removal**

SUBTASK 44-31-27-040-001

(1) Open this circuit breaker and install safety tag:

Right Power Management Panel, P210

Row	Col	Number	Name
J	28	C44405	WAP POWER

SUBTASK 44-31-27-010-001

(2) Remove the applicable ceiling panel(s). To remove the ceiling panel, do this task: Main Ceiling Panel - Removal, TASK 25-21-06-000-801.

E. **WAP Antenna Removal**

SUBTASK 44-31-27-020-001
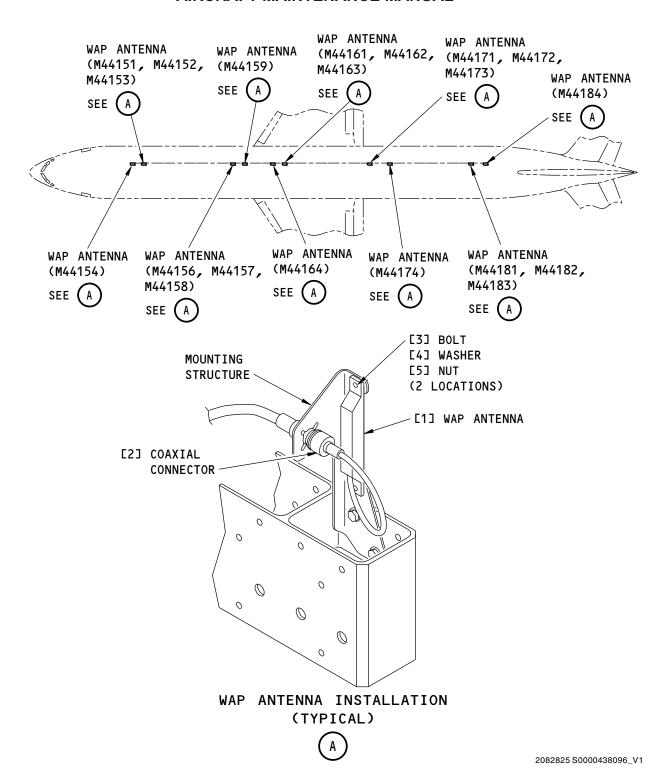
(1) Remove the WAP antenna(s):

(a) Disconnect the applicable WAP antenna's coaxial connector [2] from the WAP antenna's disconnect bracket.

(b) Remove the two bolts [3], washers [4] and nuts [5] that attached to the WAP antenna.

(c) Remove the WAP antenna [1] from its mounting bracket.

——— **END OF TASK** ———

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WAP ANTENNA
(M44151, M44152,
M44153)

SEE (A)

WAP ANTENNA
(M44159)

SEE (A)

WAP ANTENNA
(M44161, M44162,
M44163)

SEE (A)

WAP ANTENNA
(M44171, M44172,
M44173)

SEE (A)

WAP ANTENNA
(M44184)

SEE (A)

WAP ANTENNA
(M44154)

SEE (A)

WAP ANTENNA
(M44156, M44157,
M44158)

SEE (A)

WAP ANTENNA
(M44164)

SEE (A)

WAP ANTENNA
(M44174)

SEE (A)

WAP ANTENNA
(M44181, M44182,
M44183)

SEE (A)

MOUNTING
STRUCTURE

[3] BOLT
[4] WASHER
[5] NUT
(2 LOCATIONS)

[1] WAP ANTENNA

[2] COAXIAL
CONNECTOR

WAP ANTENNA INSTALLATION
(TYPICAL)

(A)

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Wireless Access Point Antenna Installation
Figure 401/44-31-27-990-801

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TASK 44-31-27-400-801

3. <u>Wireless Access Point Antenna Installation</u>

(Figure 401)

A. **General**

(1) This task includes the steps to install the WAP antennas.

B. **References**

Reference	Title
25-21-06-400-801	Main Ceiling Panel - Installation (P/B 401)
44-31-00-710-804	Wireless Access Point (WAP) Operational Test (P/B 501)
WDM 44-35-11	Wiring Diagram Manual
WDM 44-35-12	Wiring Diagram Manual

C. **Expendables/Parts**

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	WAP antenna	23-95-10-12E-020	ARO ALL
		23-95-10-13A-060	ARO ALL
		23-95-10-15D-020	ARO ALL
		23-95-10-17E-060	ARO ALL
		23-95-10-20B-060	ARO ALL
		23-95-10-21E-060	ARO ALL

D. **Location Zones**

Zone	Area
224	Area Above Passenger Compartment Ceiling, Right - Section 41
233	Area Above Passenger Compartment Ceiling, Left - Section 43
234	Area Above Passenger Compartment Ceiling, Right - Section 43
244	Area Above Passenger Compartment Ceiling, Right - Section 44
254	Area Above Passenger Compartment Ceiling, Right - Section 46
264	Area Above Passenger Compartment Ceiling, Right - Section 47

E. **Prepare for the Installation**

SUBTASK 44-31-27-860-001

(1) Make sure that this circuit breaker is open and has safety tag:

Right Power Management Panel, P210

Row	Col	Number	Name
J	28	C44405	WAP POWER

F. **WAP Antenna Installation**

SUBTASK 44-31-27-420-001

(1) Install the WAP antenna(s):

(a) Put the WAP antenna [1] in its position on the mounting bracket.

(b) Install the two bolts [3], washers [4] and nuts [5] to attach the WAP antenna [1] to the mounting bracket. Torque the fasteners to 5 in·lb (1 N·m).

(c) Connect the WAP antenna's coaxial connector [2] to the applicable receptacle on the WAP antenna's disconnect bracket (WDM 44-35-11, WDM 44-35-12).

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SUBTASK 44-31-27-410-001

(2)   Install the applicable ceiling access panel(s). To install the ceiling panel, do this task: Main Ceiling Panel - Installation, TASK 25-21-06-400-801.

SUBTASK 44-31-27-440-001

(3)   Remove the safety tag and close this circuit breaker:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	28	C44405	WAP POWER

G.   Installation Test

SUBTASK 44-31-27-710-005

(1)   Do this task: Wireless Access Point (WAP) Operational Test, TASK 44-31-00-710-804.

————— **END OF TASK** —————

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