

CHAPTER

46

**INFORMATION
SYSTEMS**



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WIRELESS WAN UNIT - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

- (1) An activation of the Wireless WAN Unit (WWU)
- (2) A deactivation of the WWU
- (3) A verification of the WWU software
- (4) An installation of the WWU software
- (5) A replacement of the WWU SIM card.

TASK 46-11-03-440-801

2. Wireless WAN Unit (WWU) Activation

A. **General**

- (1) This task gives two ways to operate the Wireless WAN Unit (WWU) radio enable discrete.
 - (a) The RF ON function shows on the CELLULAR CONTROL page.
 - (b) The same RF ON function shows on the TWLU DISCRETES page.
 - (c) Use one of the two procedures that follow.
- (2) When the WWU discrete is set to off, or disabled, the unit remains energized.
 - (a) To remove electrical power, you must open the correct circuit breaker.
- (3) The aircraft must be on the ground to do this task.
- (4) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:
 - Maintenance Laptop (ML)
 - Other type of approved Portable Maintenance Device (PMD).
- (5) WWU will not function unless the CABIN UTILITY switch, on the P5-13 panel, is in the ON position.

B. **References**

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. **Location Zones**

Zone	Area
212	Flight Compartment - Right

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E. Prepare for the Procedure

SUBTASK 46-11-03-480-001

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321, is required for access with a ML or PMD.

F. Discrete Status Using WI-FI Discretes - Procedure

SUBTASK 46-11-03-440-001

- (1) Set the ONS maintenance browser to show the WI-FI DISCRETES page:

SIA 001-014 PRE SB 737-46-1029

- (a) Select EXTENDED MAINTENANCE > OFF-BOARD LINKS > WI-FI.

SIA 001-014 POST SB 737-46-1029

- (b) Select EXTENDED MAINTENANCE > Offboard Communication > WIRELESS.

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- (c) In the row of Wi-Fi functions on the page footer, select DISCRETES.
- (d) Below Discrete & Profile Control, examine the WWU RF Discrete.

SUBTASK 46-11-03-440-002

- (2) If the WWU RF Discrete Status shows the condition OFF, then click the ON/OFF button to turn the RF ON.

- (a) Make sure that the WWU RF Discrete Status shows ON.

NOTE: The ON/OFF button changes based on the RF Discrete Status. If the RF Status is set to OFF, the button displays ON and turns the RF on when clicked. If the RF Status is set to ON, the button displays OFF and turns off the RF when clicked.

G. Discrete Status Using Cellular Discrete - Procedure

SIA 001-014 PRE SB 737-46-1029

SUBTASK 46-11-03-440-003

- (1) Set the ONS maintenance browser to show the CELLULAR DISCRETES page:

- (a) Select EXTENDED MAINTENANCE > OFF-BOARD LINKS.
- (b) Select CELLULAR.
- (c) In the row of Cellular Functions on the page footer, select DISCRETES.
- (d) Examine the WWU RF Discrete Status.

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SUBTASK 46-11-03-440-004

- (2) If the WWU RF Discrete Status shows the condition OFF, then click the ON/OFF button to turn the RF ON.

- (a) Make sure that the WWU RF Discrete Status shows ON.

NOTE: The ON/OFF button changes based on the RF Discrete Status. If the RF Status is set to OFF, the button displays ON and turns the RF on when clicked. If the RF Status is set to ON, the button displays OFF and turns off the RF when clicked.



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H. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-03-080-001

- (1) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— END OF TASK —————

TASK 46-11-03-040-801

3. Wireless WAN Unit (WWU) Deactivation

A. General

- (1) This procedure gives the steps to operate the Wireless WAN Unit (WWU) Radio Disable discrete.
 - (a) The RF OFF function shows on the CELLULAR DISCRETES page.
 - (b) The RF OFF function shows on the WI-FI DISCRETES page.
- (2) When the WWU discrete is set to off, or disabled, the unit remains energized.
 - (a) To remove electrical power, you must open the correct circuit breaker.
- (3) To do this task, the Weight-On-Wheels (WOW) discrete must be set to the on-ground condition.

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Prepare for the Procedure

SUBTASK 46-11-03-480-002

- (1) Do this task: (Maintenance Laptop Connection, TASK 46-13-00-480-801).
 - (a) Using the universal maintenance device, SPL-11321, activate the ONS maintenance browser.

F. Discrete Status using Wi-Fi Discretes - Procedure

SUBTASK 46-11-03-040-001

- (1) Set the ONS maintenance browser to show the Wi-Fi Discretes Page. These are the steps:
 - (a) Using the ONS maintenance browser, make your selection: EXTENDED MAINTENANCE > OFF-BOARD LINKS.

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- (b) On the OFF-BOARD LINKS page, make your selection: Wi-Fi.
- (c) In the row of Wi-Fi functions on the page footer, make your selection: DISCRETES.
- (d) Below the words Discrete & Profile Control, examine the Wi-Fi RF Discrete Status.

SUBTASK 46-11-03-040-002

- (2) If the WWU RF Discrete Status shows the condition ON, click on the ON/OFF button to turn the RF off.
 - (a) Make sure that the WWU RF Discrete Status then shows the word OFF.

NOTE: The ON/OFF button changes based on the RF Discrete Status. If the RF Status is set to OFF, the button displays ON and turns the RF on when clicked. If the RF Status is set to ON, the button displays OFF and turns off the RF when clicked.

G. Discrete Status using Cellular Discrete - Procedure

SUBTASK 46-11-03-040-003

- (1) Set the ONS maintenance browser to show the CELLULAR DISCRETE page. These are the steps:
 - (a) Set the ONS maintenance browser, make your selection: EXTENDED MAINTENANCE > OFF-BOARD LINKS.
 - (b) On the OFF-BOARD LINKS page, make your selection: CELLULAR.
 - (c) In the row of Cellular functions on the page footer, make your selection: DISCRETES.
 - (d) Examine the WWU RF Discrete Status.

SUBTASK 46-11-03-040-004

- (2) If the WWU RF Discrete Status shows the condition ON, click the ON/OFF button to turn the RF off.
 - (a) Make sure that the WWU RF Discrete Status then shows the word OFF.

NOTE: The ON/OFF button changes based on the RF Discrete Status. If the RF Status is set to OFF, the button displays ON and turns the RF on when clicked. If the RF Status is set to ON, the button displays OFF and turns off the RF when clicked.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-03-080-002

- (1) If the universal maintenance device, SPL-11321 is no longer required, stop the ONS maintenance browser and disconnect the laptop.

————— END OF TASK —————

TASK 46-11-03-860-801

4. Wireless WAN Unit (WWU) Software Verification

A. General

- (1) This procedure gives the steps to verify the Operational Program Software (OPS) and Operational Program Configuration (OPC) software installed in the WWU.
- (2) The aircraft must be on the ground to do this task.

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (P/B 201)
46-13-00-710-802	System Configuration Check (P/B 201)

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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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Procedure

SUBTASK 46-11-03-840-001

- (1) To access the Onboard Network System (ONS), do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321 is required for access with a Maintenance Laptop (ML) or PMD.

SUBTASK 46-11-03-840-005

- (2) Do a check of the WWU software (TASK 46-13-00-710-802).
 - (a) Record and make sure that the software part number is correct.
 - 1) If the software part number is not correct, do this task: Wireless WAN Unit Software Installation, TASK 46-11-03-470-801.

NOTE: This can not be done with the Multi Function Display (MFD).

F. Put the Airplane Back To Its Usual Condition

SUBTASK 46-11-03-860-001

- (1) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— END OF TASK —————

TASK 46-11-03-470-801

5. Wireless WAN Unit Software Installation

A. General

- (1) This task gives the steps to install the Operational Program Software (OPS) and Operational Program Configuration (OPC) into the Wireless WAN Unit (WWU), M03182.
- (2) The WWU will not function unless the CABIN UTILITY switch, on the P5-13 panel, is in the ON position.
- (3) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:
 - Maintenance Laptop (ML)
 - Other type of approved Portable Maintenance Device (PMD).

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B. References

Reference	Title
46-13-00-470-801	LRU Software Parts Installation (P/B 201)
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-860-803	Client Credentials Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Wireless WAN Unit Software Installation

SUBTASK 46-11-03-470-001

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321, is required for access with a ML or PMD.

SUBTASK 46-11-03-840-006

- (2) Install the required software into the WWU (TASK 46-13-00-470-801).

NOTE: The OPS must be installed first before the OPC software is installed or both OPS and OPC software can be installed concurrently. Installing the OPS by itself will erase the OPC software then reloading of the OPC software is required.

SUBTASK 46-11-03-840-007

- (3) Set the client credentials for the WWU (TASK 46-13-00-860-803).

NOTE: The credential generation process is required after the WWU software has been installed for the first time or the WWU is removed and replaced.

NOTE: This task is not available when you get access to the ONS maintenance with the MDS.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-03-860-002

- (1) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— END OF TASK —————



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TASK 46-11-03-960-801

6. Wireless WAN Unit (WWU) SIM Card Replacement

A. General

- (1) This task gives you steps to remove and replace the Subscriber Identity Module (SIM) card on the Wireless WAN Unit (WWU).
- (2) There are two SIM cards in the WWU that is accessible through an access door on the top of the Line Replaceable Unit (LRU).

B. References

Reference	Title
25-80-00-000-801	Insulation Blanket Removal (P/B 401)
25-80-00-400-801	Insulation Blanket Installation (P/B 401)
33-51-00-710-801	Emergency Lights Operational Check (P/B 501)

C. Location Zones

Zone	Area
234	Area Above Passenger Compartment Ceiling, Right - Section 43

D. Procedure

SUBTASK 46-11-03-840-002

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

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	11	C00250	PASS CABIN LIGHTING EMER CHGR FWD

F/O Electrical System Panel, P6-5

Row	Col	Number	Name
B	12	C01974	WIRELESS WAN UNIT C/B

SUBTASK 46-11-03-010-001

- (2) Get access to the WWU [1]:
 - (a) Open the forward center overhead stowage box door to the full open position.
 - (b) If required, remove all the contents from the stowage box.
 - (c) Remove the four bolts [3] on the forward wall of the aft center overhead stowage box.
 - (d) Slowly disengage the ceiling spacer panel [4] between the forward and aft center overhead stowage box.
 - (e) Disconnect the emergency light assembly electrical connector [5].
 - (f) Remove the insulation blanket to gain access to the WWU [1] (TASK 25-80-00-000-801).

SUBTASK 46-11-03-900-001

- (3) Remove the screw and SIM card access door from WWU [1].
- (4) Slide the metal latch locking bar forward to release the SIM card [2] latch.
- (5) Lift the latches up to a 45° angle position and carefully slide out the SIM cards [2] from the SIM card slots.
- (6) Keep latches at a 45° angle position and carefully insert SIM cards [2] into the card slot.
 - (a) Make sure that the chamfered corner of each SIM card [2] matches with the angled corner of the card slot.

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- (7) Lower latch to the closed position and slide the metal latch locking bar aft.
- (8) Install the SIM card access door and screw.

SUBTASK 46-11-03-440-005

- (9) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	11	C00250	PASS CABIN LIGHTING EMER CHGR FWD

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C01974	WIRELESS WAN UNIT C/B

E. Put Airplane Back to It's Usual Condition

SUBTASK 46-11-03-410-001

- (1) Do the following instructions:
 - (a) Install the insulation blanket (TASK 25-80-00-400-801).
 - (b) Connect the emergency light assembly electrical connector [5].
 - 1) Do this task: Emergency Lights Operational Check, TASK 33-51-00-710-801.
 - (c) Position the ceiling spacer panel [4] and install the four bolts [3].
 - (d) Put the contents back in the aft center overhead stowage.
 - (e) Close and latch the aft center overhead stowage box door.

———— **END OF TASK** ————

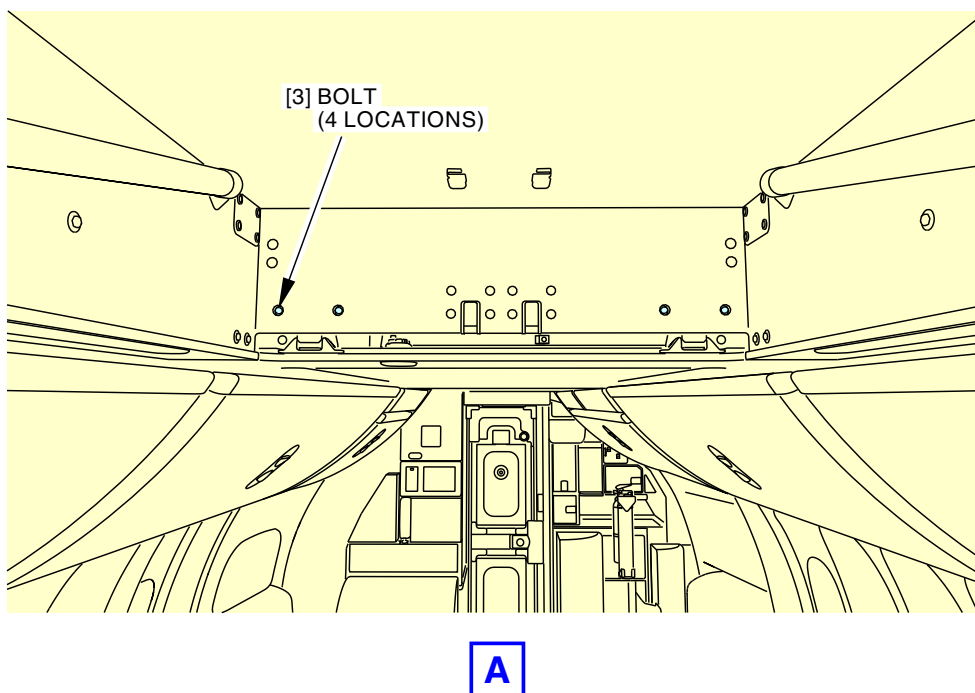
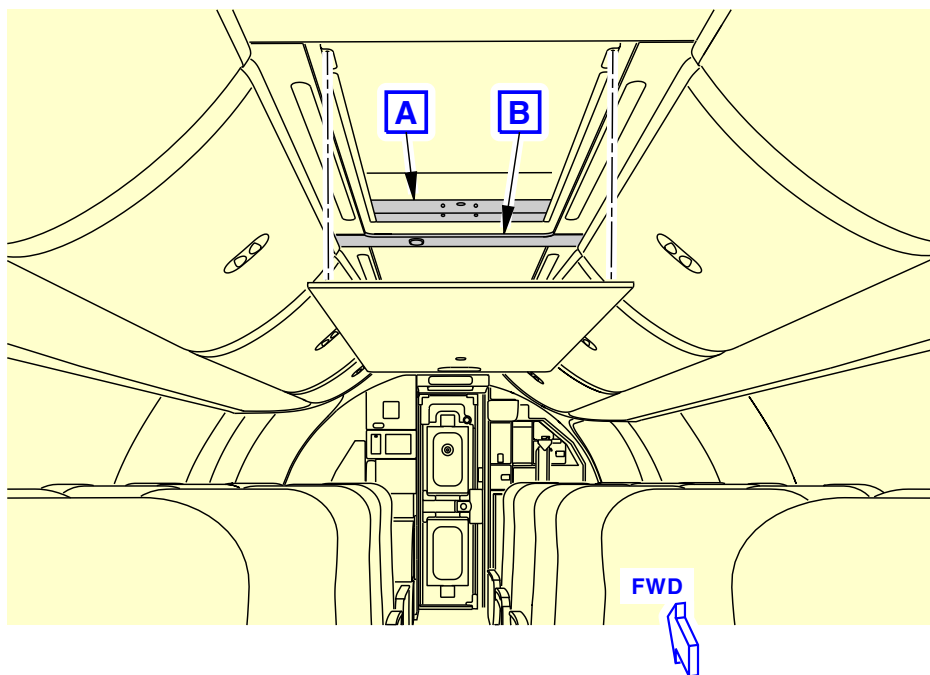
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2500891 S0000587519_V3

Wireless WAN Unit SIM Card Replacement
Figure 201/46-11-03-990-801 (Sheet 1 of 3)

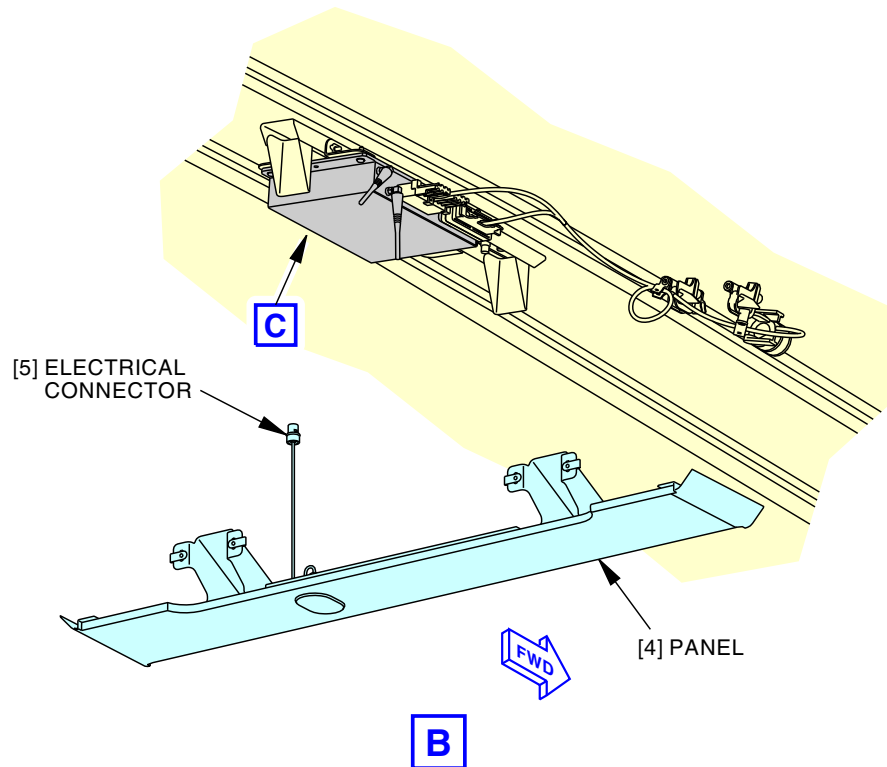
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2588126 S0000622704_V1

Wireless WAN Unit SIM Card Replacement
Figure 201/46-11-03-990-801 (Sheet 2 of 3)

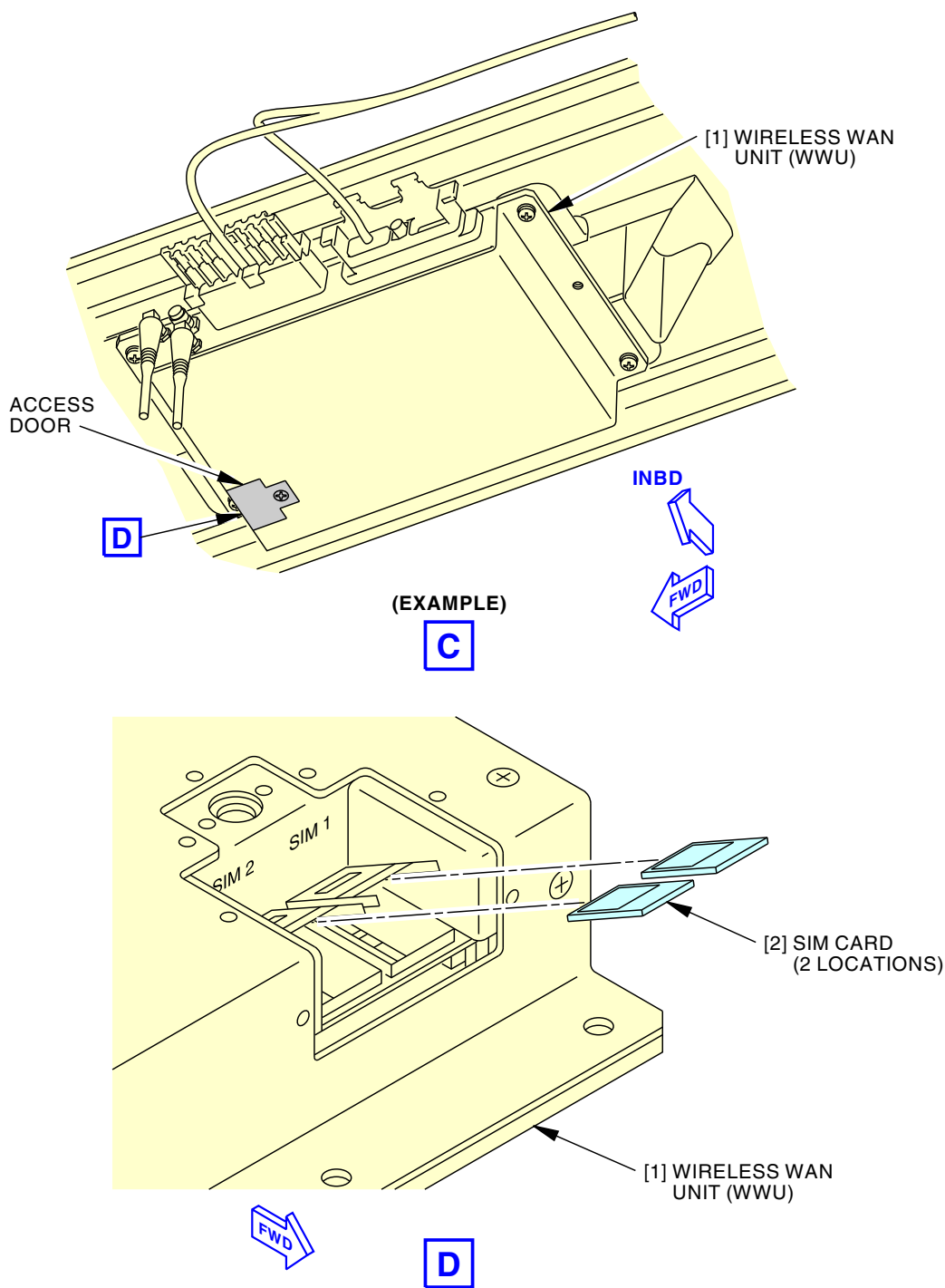
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2500804 S0000587419_V3

Wireless WAN Unit SIM Card Replacement
Figure 201/46-11-03-990-801 (Sheet 3 of 3)

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WIRELESS WAN UNIT - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the WWU
 - (2) An installation of the WWU.

TASK 46-11-03-000-801

2. Wireless WAN Unit Removal

A. General

- (1) This task gives the steps to remove the Wireless WAN Unit (WWU), M3182.
 - (a) WAN refers to Wide Area Network, which includes Wi-Fi and Cellular communications.
- (2) The WWU is installed in the ceiling crown, at STA 469-480, RBL 5.

B. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
25-80-00-000-801	Insulation Blanket Removal (P/B 401)
46-11-03-960-801	Wireless WAN Unit (WWU) SIM Card Replacement (P/B 201)

C. Location Zones

Zone	Area
234	Area Above Passenger Compartment Ceiling, Right - Section 43

D. WWU Removal

SUBTASK 46-11-03-040-005

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

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	11	C00250	PASS CABIN LIGHTING EMER CHGR FWD

F/O Electrical System Panel, P6-5

Row	Col	Number	Name
B	12	C01974	WIRELESS WAN UNIT C/B

SUBTASK 46-11-03-010-009



THE WIRELESS WAN UNIT MUST BE OFF IF YOU ARE LESS THAN 8 INCHES (20 CMS) FROM THE RADIO FREQUENCY ANTENNAS BECAUSE OF THE ELECTROMAGNETIC RADIATION RISK. CAN CAUSE INJURY.

- (2) Get access to the wireless WAN unit [1] (Figure 401).

NOTE: The wireless WAN unit [1] is installed in the ceiling crown, at STA 470, RBL 5.

- (a) Open the forward center overhead stowage box door to the full open position.
- (b) If required, remove all the contents from the stowage box.
- (c) Remove the four bolts [8] on the forward wall of the aft center overhead stowage box.

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- (d) Slowly disengage the ceiling spacer panel [9] between the forward and aft center overhead stowage box.
- (e) Disconnect the emergency light assembly electrical connector [10].
- (f) Remove the insulation blanket to gain access to the wireless WAN unit [1] (TASK 25-80-00-000-801).

SUBTASK 46-11-03-000-001

- (3) Do this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802.

SUBTASK 46-11-03-020-002



DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (4) Remove the wireless WAN unit [1] (Figure 402):
 - (a) Disconnect the electrical connector [5] and electrical connector [6] from the wireless WAN unit [1].
 - (b) Disconnect the WIFI connector [7] from the wireless WAN unit [1].
 - (c) Put protective covers on the wireless WAN unit [1] connectors (TASK 20-40-12-400-802).
 - (d) Remove the six bolts [3] and six washers [2] that attach the wireless WAN unit [1] to the brackets.
 - (e) Remove the wireless WAN unit [1] from the overhead location.
 - (f) Remove the two antennae [4] and save for future installation.
 - (g) Remove the Subscriber Identity Module (SIM) cards and save for future installation (TASK 46-11-03-960-801).

————— **END OF TASK** —————

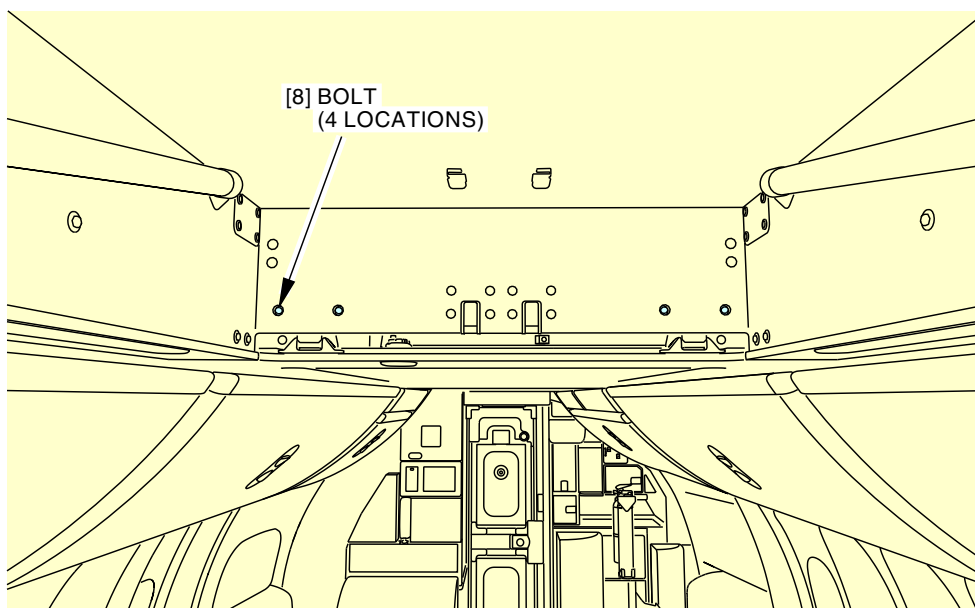
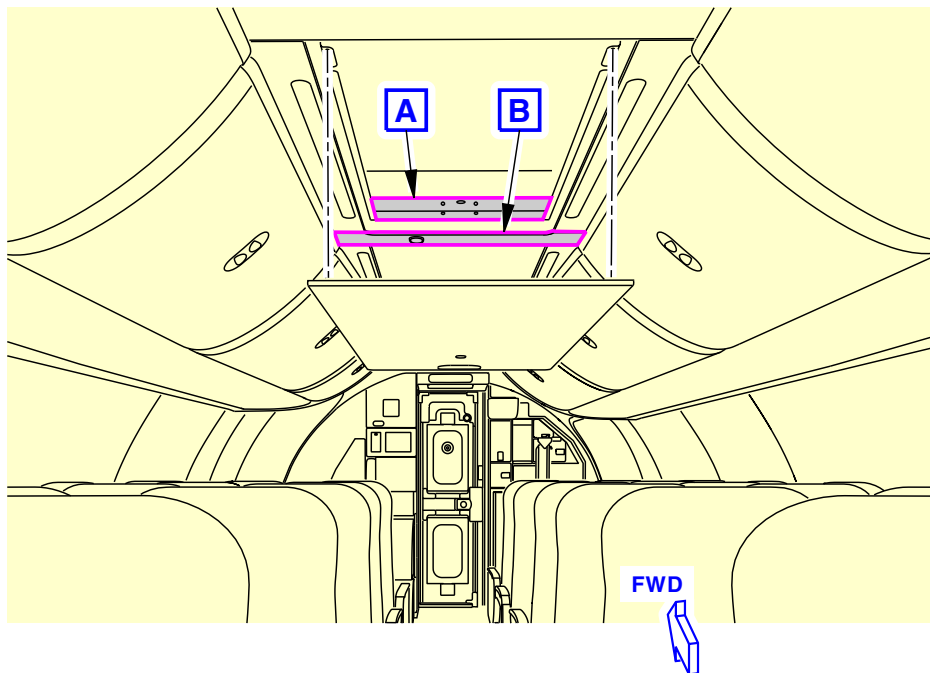
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A

2956550 S0000734026_V1

Wireless WAN Unit Access
Figure 401/46-11-03-990-803 (Sheet 1 of 2)

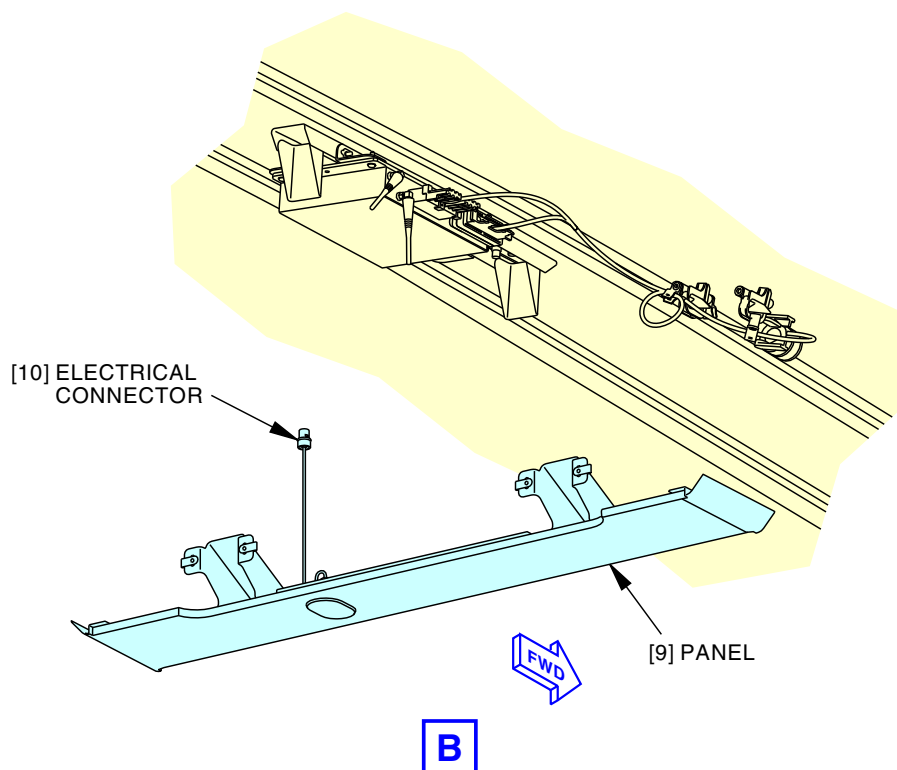
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2956549 S0000734027_V1

Wireless WAN Unit Access
Figure 401/46-11-03-990-803 (Sheet 2 of 2)

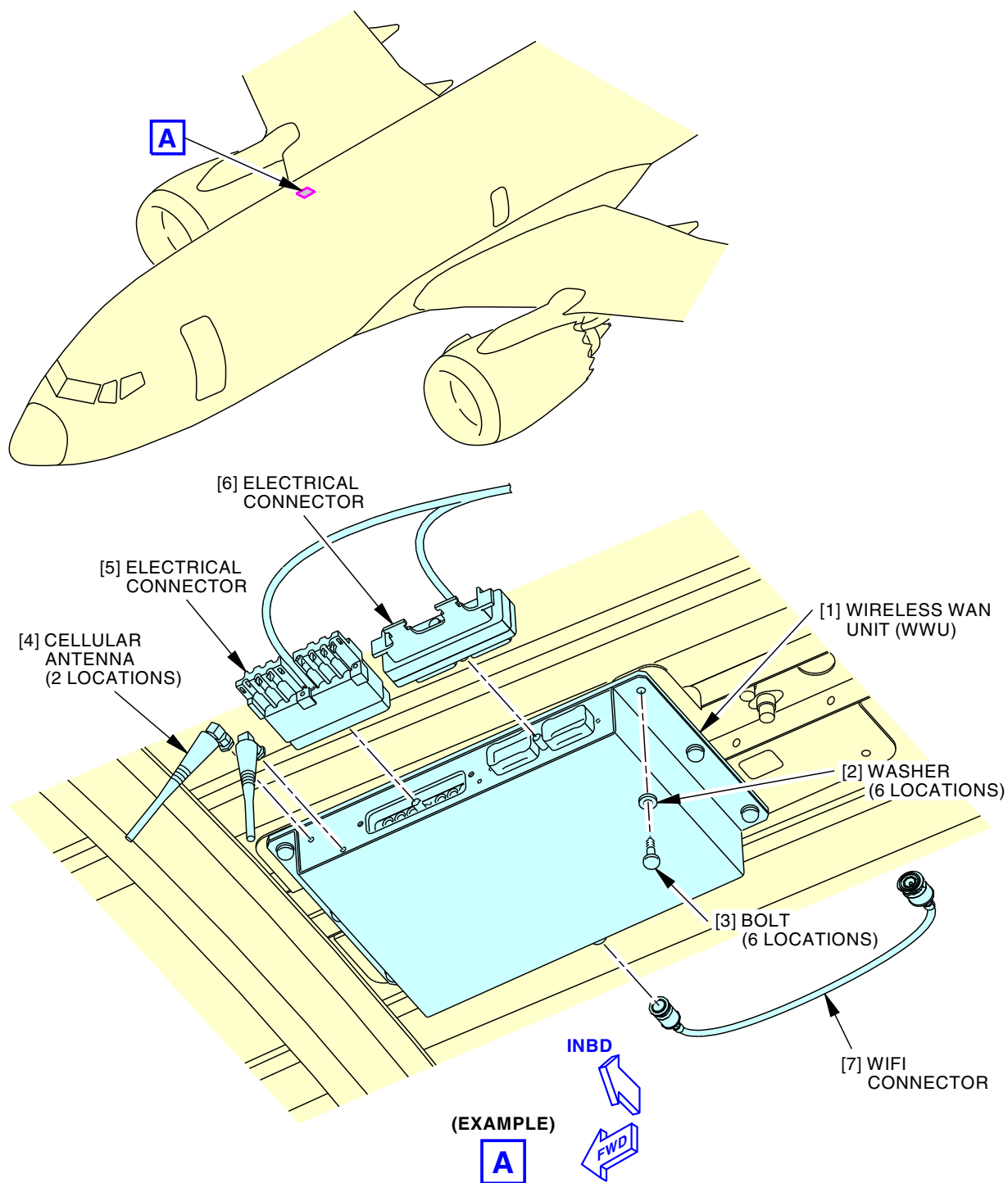
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2555961 S0000609439_V1

Wireless WAN Unit (WWU) Installation
Figure 402/46-11-03-990-802

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TASK 46-11-03-400-801

3. Wireless WAN Unit Installation

A. General

- (1) This task gives the steps to install the Wireless WAN Unit (WWU), M3182.
 - (a) WAN refers to wide area network.
 - (b) For this configuration, the WWU uses the cellular and WiFi communications functions.
- (2) The WWU is installed in the ceiling crown, at STA 467-480, RBL 5.

B. References

Reference	Title
20-10-34-120-801	Hand Clean Metal Surfaces with Abrasives (P/B 701)
20-40-12-000-803	Conductive Dust Cap and Connector Cover Removal (P/B 201)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
25-80-00-400-801	Insulation Blanket Installation (P/B 401)
33-51-00-710-801	Emergency Lights Operational Check (P/B 501)
46-11-03-710-801	Wireless WAN Unit Cellular Operational Test (P/B 501)
46-11-03-730-801	Wireless WAN Unit System Test (P/B 501)
46-11-03-860-801	Wireless WAN Unit (WWU) Software Verification (P/B 201)
46-11-03-960-801	Wireless WAN Unit (WWU) SIM Card Replacement (P/B 201)
46-13-00-860-803	Client Credentials Check (P/B 201)

C. Tools/Equipment

Reference	Description
STD-592	Meter - Milliohms, Range from 0.001 to 100 milliohms

D. Consumable Materials

Reference	Description	Specification
B50095	Solvent	BAC5750
C00064	Coating - Aluminum Chemical Conversion	BAC5719 Type II Class A (MIL-DTL-5541 Class 1A)
G50262	Wiper - Cleaning	BMS15-5
G50590	Metallic Wool - Aluminum	

E. Location Zones

Zone	Area
234	Area Above Passenger Compartment Ceiling, Right - Section 43

F. WWU Installation Procedure

SUBTASK 46-11-03-040-006

- (1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	11	C00250	PASS CABIN LIGHTING EMER CHGR FWD

F/O Electrical System Panel, P6-5

Row	Col	Number	Name
B	12	C01974	WIRELESS WAN UNIT C/B

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SUBTASK 46-11-03-010-007

- (2) Get access to the wireless WAN unit [1].
 - (a) The wireless WAN unit [1] is installed in the ceiling crown, at STA 467.8, RBL 5.

SUBTASK 46-11-03-840-003

- (3) Prepare the mount surface of the aircraft structure. Do these steps to the most inboard hole, closest to the cellular antennas and the most outboard hole, farthest AFT from the cellular antennas.
 - (a) Using aluminum wool, G50590, abrasive clean a circular pattern around the two bolt holes (TASK 20-10-34-120-801).
 - 1) Make the diameter of the bond area at least 0.60 in. (15.24 mm), and not more than 0.70 in. (17.78 mm).
 - (b) Using solvent, B50095 and wiper, G50262, wipe clean the mating surfaces.

SUBTASK 46-11-03-160-001



DO NOT GET ALODINE IN YOUR MOUTH, EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM ALODINE. PUT ON GOGGLES AND GLOVES WHEN YOU USE ALODINE. KEEP ALODINE AWAY FROM SPARKS, FLAME, AND HEAT. ALODINE IS POISONOUS AND FLAMMABLE, AND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (4) Manually apply coating, C00064 to the abraded areas.

SUBTASK 46-11-03-100-001

- (5) Prepare the mating surfaces of the wireless WAN unit [1].
 - (a) Using solvent, B50095 and wiper, G50262, wipe clean the mating surfaces of the wireless WAN unit [1].

SUBTASK 46-11-03-420-004

- (6) Do this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

SUBTASK 46-11-03-420-005



DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (7) Install the wireless WAN unit [1] (Figure 402):
 - (a) Put the wireless WAN unit [1] in the installed position on the mounting brackets.
 - (b) Install the six bolts [3], and six washers [2] to attach the wireless WAN unit [1] to the brackets.
 - 1) Tighten the six bolts [3] to 32 in-lb (37 kg-cm) and not more than 38 in-lb (44 kg-cm).
 - (c) Attach the two antennae [4] to the two TNC connectors at the J3 and the J4 markings on the WWU.
 - 1) Set the AFT antenna so that it points down and AFT.
 - a) Leave a 0.5 in. (1.3 cm) gap between the tip of the AFT antenna and the Environmental Control System (ECS) duct.
 - 2) Set the FORWARD antenna so that it points down and forward.



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- a) Leave a 0.5 in. (1.3 cm) gap between the tip of the FORWARD antenna and the ECS duct.
- 3) Hand-tighten the two coupling nuts. Torque is not to exceed 12 in-lb (14 kg-cm).
- (d) Remove the protective cover on the WWU electrical connectors (TASK 20-40-12-000-803).
- (e) Examine the electrical connectors for bent or broken pins, dirt, and damage.
 - 1) Repair the problems that you find.
- (f) Connect the electrical connector [5] and electrical connector [6] to the WWU.
- (g) Attach the WIFI connector [7] to the TNC connector at the J5 marking on the WWU.
 - 1) Hand-tighten the coupling nut. Torque is not to exceed 12 in-lb (14 kg-cm).

SUBTASK 46-11-03-420-006

- (8) If required install the WWU Subscriber Identity Module (SIM) card (TASK 46-11-03-960-801).

SUBTASK 46-11-03-700-001

- (9) Do a resistance check of the WWU to mounting structure, at the two bolt positions prepared earlier.
 - (a) Use a milliohm meter .001 to 100 milliohms, STD-592.
 - (b) The maximum resistance is .001 ohms (1 milliohm).

SUBTASK 46-11-03-420-007

- (10) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	11	C00250	PASS CABIN LIGHTING EMER CHGR FWD

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C01974	WIRELESS WAN UNIT C/B

G. WWU Installation Test

SUBTASK 46-11-03-470-005

- (1) Do this task: Wireless WAN Unit (WWU) Software Verification, TASK 46-11-03-860-801.

SUBTASK 46-11-03-470-002

- (2) Do this task: Client Credentials Check, TASK 46-13-00-860-803.
 - (a) If the credentials check is unserviceable, then make new credentials as specified in the task.
 - (b) If the credentials check is serviceable, then continue.

SUBTASK 46-11-03-470-003

- (3) Do this task: Wireless WAN Unit (WWU) Software Verification, TASK 46-11-03-860-801.

SUBTASK 46-11-03-730-001

- (4) Do this task: Wireless WAN Unit System Test, TASK 46-11-03-730-801.

SUBTASK 46-11-03-710-002

- (5) Do this task: Wireless WAN Unit Cellular Operational Test, TASK 46-11-03-710-801.



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H. Put the Aircraft Back to its Usual Condition

SUBTASK 46-11-03-410-005



WARNING

THE WIRELESS WAN UNIT MUST BE OFF IF YOU ARE LESS THAN 8 INCHES (20 CMS) FROM THE RADIO FREQUENCY ANTENNAS BECAUSE OF THE ELECTROMAGNETIC RADIATION RISK. CAN CAUSE INJURY.

- (1) Do the following instructions (Figure 401):
 - (a) Install the insulation blanket (TASK 25-80-00-400-801).
 - (b) Connect the emergency light assembly electrical connector [10].
 - 1) Do this task: Emergency Lights Operational Check, TASK 33-51-00-710-801
 - (c) Position the ceiling spacer panel [9] and install the four bolts [8].
 - (d) Put the contents back in the aft center overhead stowage.
 - (e) Close and latch the aft center overhead stowage box door.

————— **END OF TASK** —————

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WIRELESS WAN UNIT - ADJUSTMENT/TEST

1. General

- A. This procedure has these tasks:
- (1) A system test of the WWU
 - (2) An operational test of the WWU cellular
 - (3) An operational test of the WWU Wi-Fi.

TASK 46-11-03-730-801

2. Wireless WAN Unit System Test

A. General

- (1) This task makes sure that the Wireless WAN Unit (WWU) is serviceable.
- (2) The aircraft must be on the ground to do this task.
- (3) Do this task when you get access to the Onboard Network System (ONS) using any of the following:
 - (a) Maintenance Laptop
 - (b) Approved Portable Maintenance Device (PMD)

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
IFIM and do the applicable procedure(s)	Interactive Fault Isolation Manual

C. Location Zones

Zone	Area
212	Flight Compartment - Right

D. WWU System Test

SUBTASK 46-11-03-730-002

- (1) To use a maintenance laptop, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

SUBTASK 46-11-03-730-003

- (2) Select EXTENDED MAINTENANCE.
- (3) Select INPUT MONITORING.
- (4) Select NFS.
 - (a) Make sure the STATUS for PORT 13 is Up.
- (5) Select the INPUT DISCRETES button.
 - (a) Make sure the STATUS for W-Air/Ground Relay is Ground.
- (6) Select the home icon on the menu bar displayed at the upper left hand corner of the browser window.
- (7) Select the LINE MAINTENANCE button.
- (8) Select SECURITY button.
- (9) Select the CLIENT CREDENTIALS button.
- (10) Select CLIENT NAME WWU.

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- (11) Select the GENERATE button.
- (12) Select the CONTINUE button.
 - (a) Make sure the CREDENTIALS GENERATION STATUS for the WWU is Successfully retrieved and installed credentials.
 - (b) Wait for 2 minutes for the WWU to reboot.
- (13) Select the home icon on the menu bar shown at the upper left hand corner of the browser window.
- (14) Select EXTENDED MAINTENANCE button.
- (15) Select the OFF-BOARD LINKS button.
- (16) Select the CELLULAR button on the top of the page.
- (17) Select the DISCRETES button.
- (18) If Aircraft Location field is blank, click on carat (>) for this field.
 - (a) Select the applicable airplane location and click on Back to Cellular Discrettes.
- (19) If Active Profile field is blank, click on the carat (>) for this field.
 - (a) Select Cell and Wifi and click on Back to Cellular Discrettes,
- (20) Select the WWU RF Discrete Status button.

NOTE: The name of the button will change from ON to OFF.

 - (a) Make sure the PARAMETER DETAILS displays RF Discrete is disabled.
- (21) Select the WWU RF Discrete Status button.

NOTE: The name of the button will change from OFF to ON.
- (22) Select the CONDITION button.
 - (a) Make sure RF Status is On.

SUBTASK 46-11-03-730-004

- (23) Push the MFD SYS button on the P9-82 multifunction display (MFD) panel.
- (24) Turn the SELECTOR switch until MAINT is highlighted on the MAX Display System (MDS).
- (25) Push the SEL button on the SELECTOR switch.
- (26) Turn the SELECTOR switch until ONDB MAINT is highlighted on MDS.
- (27) Push the SEL button on the SELECTOR switch.
- (28) Turn the SELECTOR switch until OTHER FUNCTIONS is highlighted on MDS.
- (29) Push the SEL button on the SELECTOR switch.
- (30) Turn the SELECTOR switch until SPECIAL FUNCTIONS is highlighted on MDS.
- (31) Turn the SELECTOR switch until 32- Proximity Switch Electronic Unit is highlighted on MDS.
- (32) Push the SEL button on the SELECTOR switch.
- (33) Turn the SELECTOR switch until PSEU - Air/Ground Override is highlighted on MDS.
- (34) Push the SEL button on the SELECTOR switch.
- (35) Push the SEL button on the SELECTOR switch to select CONTINUE.
- (36) Push the SEL button on the SELECTOR switch to select CONTINUE under PRECONDITIONS.
- (37) Push the SEL button on the SELECTOR switch to select START FUNCTION.
- (38) Turn the SELECTOR switch until Set SYS 2 only IN AIR is highlighted on MDS.



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IN THE AIR MODE MANY OF THE AIRPLANE SYSTEMS CAN OPERATE AND CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (39) Push the SEL button on the SELECTOR switch to select CONTINUE.
 - (a) Make sure that Air/Gnd Override is ACTIVE, SYS 1 is set to GND and SYS 2 is set to AIR on the MDS.
- (40) Select Discretes on the bottom of the page.
- (41) Make sure that the WOW Discrete Status is Air on the ONS Maintenance Screen.

SUBTASK 46-11-03-730-005

- (42) Push the MFD SYS button on P9-82 MFD panel.
- (43) Turn the SELECTOR switch until MAINT is highlighted on the MDS.
- (44) Push the SEL button on the SELECTOR switch.
- (45) Turn the SELECTOR switch until ONBD MAINT is highlighted on MDS.
- (46) Push the SEL button on the SELECTOR switch.
- (47) Turn the SELECTOR switch until the OTHER FUNCTIONS is highlighted on MDS.
- (48) Push the SEL button on the SELECTOR switch.
- (49) Turn the SELECTOR switch until SPECIAL FUNCTIONS is highlighted on MDS.
- (50) Turn the SELECTOR switch until 32- Proximity Switch Electronic Unit is highlighted on MDS.
- (51) Push the SEL button on the SELECTOR switch.
- (52) Turn the SELECTOR switch until PSEU - Air/Ground Override is highlighted on MDS.
- (53) Push the SEL button on the SELECTOR switch.
- (54) Push the SEL button on the SELECTOR switch to select CONTINUE.
- (55) Push the SEL button on the SELECTOR switch to select CONTINUE under PRECONDITIONS.
- (56) Push the SEL button on the SELECTOR switch to select START FUNCTION.
- (57) Turn the SELECTOR switch until Set SYS 2 only ON GND is highlighted on MDS.
- (58) Push the SEL button on the SELECTOR switch to select CONTINUE.
 - (a) Make sure that Air/Gnd Override is ACTIVE, System 1 and 2 are GND on the MDS.

SUBTASK 46-11-03-730-006

- (59) Make sure that WOW Discrete Status is Ground on the Cellular Discretes Tab.
- (60) Select the home icon on the menu bar shown at the upper left hand corner of the browser window.
- (61) Select EXTENDED MAINTENANCE.
- (62) Select INPUT MONITORING.
- (63) Select NFS.
- (64) Select OUTPUT DISCRETES.
 - (a) Make sure the STATUS for WWU RF Enable is Ground.
- (65) Select the home icon on the menu bar shown at the upper left hand corner of the browser window.
- (66) Select EXTENDED MAINTENANCE.

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- (67) Select EXISTING FAULTS
- (68) Select 46 - Network File Server.
NOTE: If there are no ATA 46- Network File Server fault messages, the 46 ATA selection will not be displayed.
- (69) Select CONTINUE.
 - (a) Make sure there are no WWU fault messages.
 - (b) If there are WWU fault messages, refer to IFIM and do the applicable procedure(s).

E. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-03-730-007

- (1) If maintenance laptop is not necessary, select the settings icon on the upper right hand corner and select EXIT ONS to close the ONS Maintenance browser.
- (2) Shutdown the maintenance laptop and disconnect the ethernet cable from the P61 Panel RJ45 ONS port.

————— END OF TASK —————

TASK 46-11-03-710-801

3. Wireless WAN Unit Cellular Operational Test

A. General

- (1) This task makes sure that the Wireless WAN Unit (WWU) cellular function is serviceable.
- (2) To do this task, the Weight-On-Wheels (WOW) discrete must be in the on-ground condition.

B. References

Reference	Title
46-11-03-860-801	Wireless WAN Unit (WWU) Software Verification (P/B 201)
46-13-00-480-801	Maintenance Laptop Connection (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. WWU Cellular Operational Test

SUBTASK 46-11-03-730-008

- (1) Do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.
 - (a) Using the universal maintenance device, SPL-11321, activate the ONS maintenance browser.

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SUBTASK 46-11-03-730-009

- (2) From the ONS maintenance browser main menu, make your selection: EXTENDED MAINTENANCE.
- (3) Select OFF-BOARD LINKS..
- (4) Select the CELLULAR radio button.
- (5) Select SET DEFAULT.
- (6) Select TEST DEFAULT.
 - (a) Make sure the test passes.

SUBTASK 46-11-03-730-010

- (7) Do a check of the WWU system configuration (TASK 46-11-03-860-801).

SUBTASK 46-11-03-730-011

- (8) From the ONS maintenance browser main menu, make your selection: Extended Maintenance.
- (9) Select OFF-BOARD LINKS.
- (10) Select CELLULAR.
- (11) Select DISCRETES.
- (12) Select current Aircraft Location.
- (13) Select Back to Cellular Discrettes.
- (14) Select Active Profile.
- (15) Select Back to Cellular Discrettes and wait up to 5 minutes for Link State.

LINK STATE	DESCRIPTION
Home Network	Cellular connected to home network
Home Network-Default	Cellular to home network and is the default route
Roaming	Cellular connected but not to home network
Roaming-Default	Cellular connected but not to home network and is the default route

- (16) Select Test Link.
 - (a) Make sure that the link test passes.

SUBTASK 46-11-03-730-012

- (17) Contact the ground station and have them request a downlink of the MSD software report.

NOTE: A check of the downlink with a known ground station or airline station must be pre-coordinated before this step is done.
- (18) Contact that the ground station to make sure that they have received the downlinked MSD software report.

SUBTASK 46-11-03-730-013

- (19) Select the home icon on the menu bar shown at the upper left hand corner of the browser window.

NOTE: These steps will do a check of the software uplink over WWU cellular link. Part will be deleted from the MSD if the part is present on the MSD.
- (20) Select EXTENDED MAINTENANCE.
- (21) Select MASS STORAGE DEVICE.
- (22) Select ONS MSD.

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- (23) Select and highlight the part number for the 46 WWU OPS.
- (24) Select the DELETE button and CONTINUE.
- (25) Contact the ground station and have them uplink the 46 WWU OPS part to the airplane MSD.
NOTE: It may take several minutes for the part to upload.
- (26) Select the home icon on the menu bar displayed at the upper left hand corner of the browser window.
- (27) Select EXTENDED MAINTENANCE.
- (28) Select MASS STORAGE DEVICE.
- (29) Select ONS MSD.
 - (a) Make sure that the 46 WWU OPS part number is listed and loaded in the MSD.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-03-730-014

- (1) If maintenance laptop is not necessary, select the settings icon on the upper right hand corner and select EXIT ONS to close the ONS Maintenance browser.
- (2) Shutdown the maintenance laptop and disconnect the ethernet cable from the P61 Panel RJ45 ONS port.

————— END OF TASK —————

TASK 46-11-03-710-802

4. Wireless WAN Unit Wi-Fi Operational Test

A. General

- (1) This procedure makes sure that the Wireless WAN Unit (WWU) Wi-Fi function is serviceable.
- (2) To do this task, the Weight-On-Wheels (WOW) discrete must be in the on-ground condition.

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. WWU Wi-Fi Operational Test

SUBTASK 46-11-03-480-003

- (1) Do this task: (Maintenance Laptop Connection, TASK 46-13-00-480-801).

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- (a) Using the universal maintenance device, SPL-11321, activate the ONS maintenance browser.

SUBTASK 46-11-03-710-003

- (2) From the ONS maintenance browser main menu, make your selection: EXTENDED MAINTENANCE.
- (3) Select OFF-BOARD LINKS.
- (4) Select the WI-FI radio button.
- (5) From the list of functions on the WIFI page footer, select DISCRETES.
- (6) Make sure the condition of the WWU RF Discrete Status is ON.

NOTE: The ON/OFF button changes based on the RF Discrete Status. If the RF Status is set to OFF, the button shows ON and turns the RF ON when clicked. If the RF Status is ON, the button shows OFF and turns OFF the RF when clicked.

SUBTASK 46-11-03-710-004

- (7) On the WWU DISCRETES page, click the ON/OFF button next to the RF Discrete Status.
 - (a) Make sure the WWU RF Discrete Status is OFF.

NOTE: The ON/OFF button changes based on the RF Discrete Status. If the RF Status is set to OFF, the button shows ON and turns the RF ON when clicked. If the RF Status is ON, the button shows OFF and turns OFF the RF when clicked.

SUBTASK 46-11-03-710-005

- (8) On the WWU DISCRETES page, click the ON/OFF button next to the RF Discrete Status.
 - (a) Make sure the WWU RF Discrete Status is ON.

NOTE: The ON/OFF button changes based on the RF Discrete Status. If the RF Status is set to OFF, the button shows ON and turns the RF ON when clicked. If the RF Status is ON, the button shows OFF and turns OFF the RF when clicked.

SUBTASK 46-11-03-710-006

- (9) From the list of Wi-Fi functions on the page footer, make your selection: SCAN.

SUBTASK 46-11-03-710-007

- (10) Examine the Scan Results.
 - (a) Make sure the results shows at least one service set identifier (SSID).

F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-03-080-003

- (1) If the universal maintenance device, SPL-11321, is not necessary, stop the ONS maintenance browser and disconnect the laptop.

————— END OF TASK —————



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WIRELESS WAN UNIT ANTENNA - REMOVAL/INSTALLATION

1. **General**

A. This procedure has these tasks:

- (1) A removal of the WWU antenna, M03183.
- (2) An installation of the WWU antenna.

TASK 46-11-04-000-801

2. **Wireless WAN Unit Antenna Removal**

(Figure 401)

A. **General**

- (1) This task gives the steps to remove the Wireless WAN Unit (WWU) antenna, M03183, from the aircraft fuselage.
- (2) The antenna is installed externally at approximately STA 476, WL 306, RBL 005. You must have access to the top of the fuselage to do this task.
- (3) To get access to the coaxial cable from inside of the aircraft, refer to the WWU removal task (TASK 46-11-03-000-801).

B. **References**

Reference	Title
46-11-03-000-801	Wireless WAN Unit Removal (P/B 401)
46-11-03-040-801	Wireless WAN Unit (WWU) Deactivation (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.



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Reference	Description
COM-2481	Sealant Removal Tool (meets BSS7384 requirements) Part #: 1-6390-A Supplier: 63318 Part #: 10810 Supplier: \$0855 Part #: 10811 Supplier: \$0855 Part #: 10812 Supplier: \$0855 Part #: 234350 Supplier: 5HCF1 Part #: 235072 Supplier: 5HCF1 Part #: 235073 Supplier: 5HCF1 Part #: 235074 Supplier: 5HCF1 Part #: 235075 Supplier: 5HCF1 Part #: 235076 Supplier: 5HCF1 Part #: 311/03 Supplier: F6892 Part #: 311/14 Supplier: F6892 Part #: 311/25 Supplier: F6892 Part #: 311/37 Supplier: F6892 Part #: AS1 Supplier: \$1351 Part #: AS2 Supplier: \$1351 Part #: AS3 Supplier: \$1351 Part #: DAD5013 Supplier: 7RKH2 Part #: DFD5019 Supplier: 7RKH2 Part #: JNT411B60 Supplier: 3DN12 Part #: JNT411B90 Supplier: 3DN12 Part #: SCD5019 Supplier: 7RKH2 Part #: ST982LF-9 Supplier: 81205 Part #: TS1275-4 Supplier: 22975

D. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95

E. Location Zones

Zone	Area
234	Area Above Passenger Compartment Ceiling, Right - Section 43

F. Wireless WAN Unit Antenna Removal

SUBTASK 46-11-04-040-001

- (1) Deactivate the WWU (TASK 46-11-03-040-801).

SUBTASK 46-11-04-860-001

- (2) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-5

Row	Col	Number	Name
B	12	C01974	WIRELESS WAN UNIT C/B

SUBTASK 46-11-04-010-001

- (3) Get access to the antenna [1], on the top of the aircraft, at approximately station 476.

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SUBTASK 46-11-04-020-001



CAUTION

BE CAREFUL WHEN YOU REMOVE THE SEAL WITH THE SEALANT REMOVAL TOOL. DAMAGE TO THE AIRPLANE SKIN CAN OCCUR.

- (4) Remove sealant, A00247, with the sealant removal tool, COM-2481:
 - (a) Remove sealant, A00247, from the heads of the bolts [2].
 - (b) Remove the aerodynamic fillet seal around the flange of the antenna [1].

SUBTASK 46-11-04-020-002

- (5) Remove the bolts [2] that attach the antenna [1] to the aircraft.

SUBTASK 46-11-04-020-003

- (6) Lift the antenna [1] away from the skin.

SUBTASK 46-11-04-020-004

- (7) Disconnect the coaxial connector [3] from the antenna [1].
 - (a) Be prepared to stop the coaxial cable from falling into the skin cutout.

SUBTASK 46-11-04-020-005

- (8) Remove the gasket [4] from the antenna [1].
 - (a) Discard the gasket [4].

———— **END OF TASK** ————

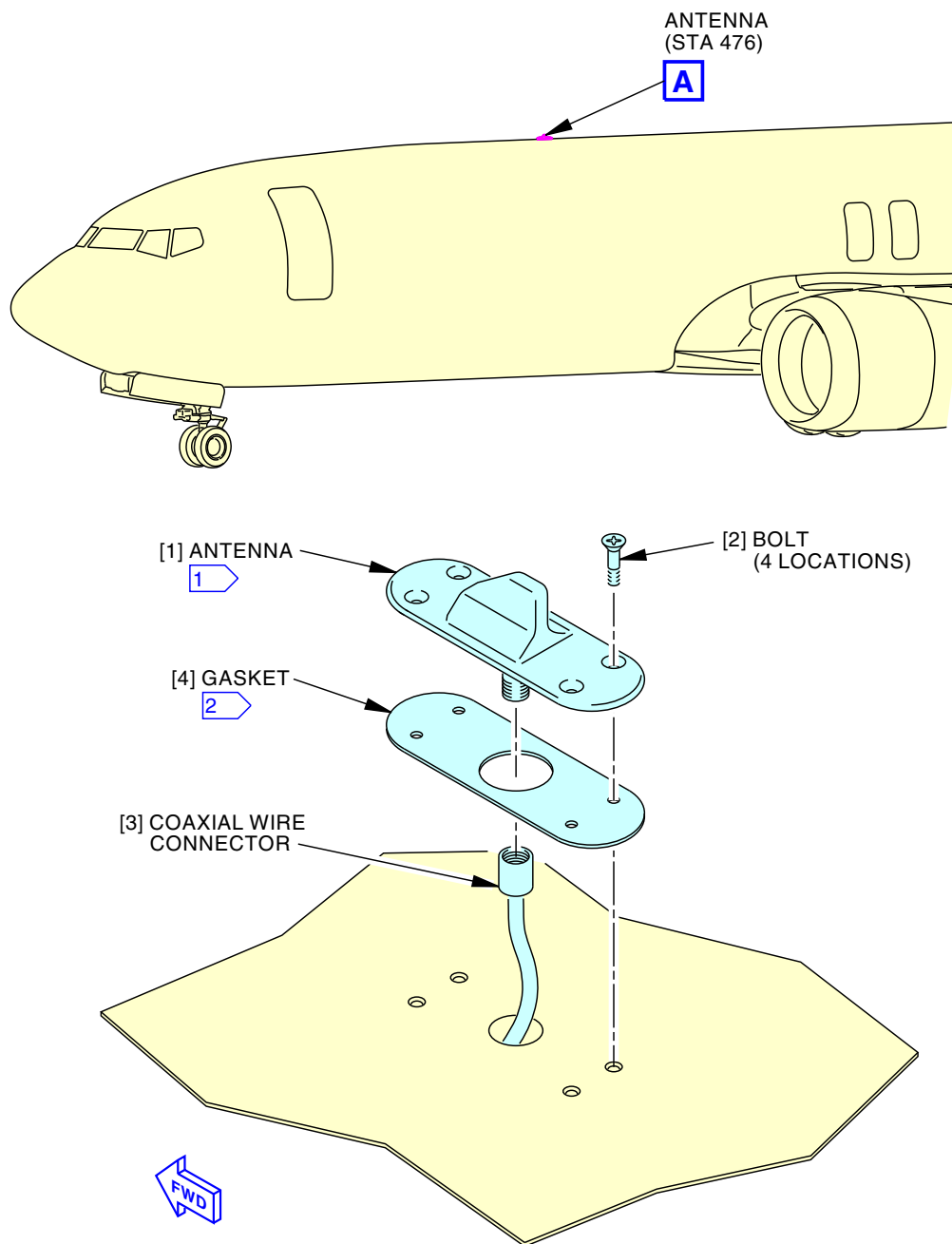
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NOTES:

- 1 DISCARD O-RING SUPPLIED WITH ANTENNA
- 2 REMOVE FILM FROM GASKET PER INSTALLATION STEPS

ANTENNA



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**WWU Antenna Installation
Figure 401/46-11-04-990-801**

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TASK 46-11-04-400-801

3. Wireless WAN Unit Antenna Installation

(Figure 401)

A. General

- (1) This task gives the steps to install the Wireless WAN Unit (WWU) antenna, M03183, to the aircraft fuselage.
- (2) The antenna is installed externally at STA 476, WL 306, RBL 005. You must have access to the top of the fuselage to do this task.
- (3) To get access to the coaxial cable from inside the aircraft, refer to the WWU removal task (TASK 46-11-03-000-801).
- (4) To do the operation test after the antenna installation, you must have access to an active wireless connection from a remote access terminal, or airport messaging terminal.

B. References

Reference	Title
25-24-40-000-801	Center Overhead Stowage Box Removal (P/B 401)
25-24-40-400-801	Center Overhead Stowage Box Installation (P/B 401)
46-11-03-000-801	Wireless WAN Unit Removal (P/B 401)
46-11-03-710-802	Wireless WAN Unit Wi-Fi Operational Test (P/B 501)
51-22-00-390-806	Fillet Seal Application (P/B 201)
SWPM 20-20-00	ELECTRICAL BONDING PROCESSES

C. Tools/Equipment

Reference	Description
STD-592	Meter - Milliohms, Range from 0.001 to 100 milliohms
STD-765	Scraper - Plastic
STD-1048	Stepladder - 6 foot (1.83m)

D. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
B00094	Solvent - Toluene	A-A-59107
B00130	Alcohol - Isopropyl	TT-I-735
B00148	Solvent - Methyl Ethyl Ketone (MEK)	ASTM D740
B00666	Solvent - Methyl Propyl Ketone	BMS11-9
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CLA)

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Antenna	46-11-04-01-020	SIA 001-014
4	Gasket	46-11-04-01-015	SIA 001-014

F. Location Zones

Zone	Area
234	Area Above Passenger Compartment Ceiling, Right - Section 43

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G. Prepare for the Installation

SUBTASK 46-11-04-860-002

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C01974	WIRELESS WAN UNIT C/B

SUBTASK 46-11-04-390-001



DO NOT GET SOLVENTS IN YOUR MOUTH, EYES, OR SKIN. DO NOT BREATHE FUMES FROM SOLVENTS. REFER TO PRODUCT MATERIAL SAFETY DATA SHEETS (MSDS) AND LOCAL REQUIREMENTS FOR PROPER HANDLING. SOLVENTS ARE HAZARDOUS MATERIALS AND MAY BE FLAMMABLE OR HARMFUL TO THE ENVIRONMENT.

- (2) Clean the airplane mating surface with solvent, B00094, or alcohol, B00130:
- (a) Make a clean cotton wiper, G00034, moist (not soaked) with solvent, B00094, or alcohol, B00130.
 - (b) Rub the airplane mating surface with cotton wiper, G00034, until the surface is clean.

SUBTASK 46-11-04-390-003

- (3) Clean the antenna [1] mating surface with solvent, B00094, or alcohol, B00130:
- (a) Do not solvent clean the antenna nameplate.
 - (b) Make a clean cotton wiper, G00034, moist (not soaked) with solvent, B00094, or alcohol, B00130.
 - (c) Rub the antenna [1] mating surface with the cotton wiper, G00034, until the surface is clean.

H. Wireless WAN Unit Antenna Installation

SUBTASK 46-11-04-860-003

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C01974	WIRELESS WAN UNIT C/B

SUBTASK 46-11-04-010-002



THE WIRELESS WAN UNIT MUST BE OFF IF YOU ARE LESS THAN 8 INCHES (20 CMS) FROM THE RADIO FREQUENCY ANTENNAS BECAUSE OF THE ELECTROMAGNETIC RADIATION RISK. CAN CAUSE INJURY.

- (2) If it is necessary, get access to the WWU and coaxial cable.
- (a) Get access to the WWU.
 - (b) If it is necessary, do this task: Center Overhead Stowage Box Removal, TASK 25-24-40-000-801.
 - 1) Put a 6 foot (1.83m) stepladder, STD-1048, in the center stowage box opening.

SUBTASK 46-11-04-420-001

- (3) Install the antenna [1]:
- (a) Discard the O-ring supplied with the antenna [1].

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- (b) Examine the coaxial connector [3] for damage.
 - 1) Repair all problems that you find.
- (c) Remove the protective film from the side of the new gasket [4] that will be next to the antenna [1] base.
- (d) Place the exposed gasket [4] onto the antenna [1] base.
 - 1) Make sure that the gasket [4] holes line up to the antenna [1] holes.

NOTE: The fasteners can be used to help align the gasket onto the antenna and antenna on to the fuselage.
 - 2) Firmly press the gasket [4] to the antenna [1] base.
- (e) Remove the protective film from the side of the gasket [4] that will be next to the fuselage skin.
- (f) Attach the coaxial connector [3] to the antenna [1].
- (g) Position the antenna [1] against the airplane skin.
- (h) Apply sealant, A00247, to the thread and shank of the bolts [2].
- (i) Install the bolts [2].
 - 1) Tighten the bolts [2] to 30 in-lb (35 kg-cm).
 - 2) Wait 15 minutes.
 - 3) Tighten the bolts [2] to 35 in-lb (40 kg-cm).
 - 4) Remove excess sealant.
 - a) Make a clean cotton wiper, G00034, moist (not soaked) with solvent, B00148, or solvent, B00666.
 - b) Wipe away the excess sealant with cotton wiper, G00034.

SUBTASK 46-11-04-390-002

- (4) If it is necessary, remove any excess gel squeeze out from the antenna gasket installation.
 - (a) Use a plastic scraper, STD-765, to remove the excess squeeze out.
 - (b) A cotton wiper, G00034, wet with alcohol, B00130, can be used as an aid to remove the squeeze out.
- (5) Apply an aerodynamic faying surface seal with sealant, A00247, to the antenna and skin (TASK 51-22-00-390-806).
 - (a) Make sure that gaps between the antenna base and fuselage are filled.

SUBTASK 46-11-04-760-001

- (6) Measure the electrical bonding resistance between the WWU antenna base and fuselage skin (SWPM 20-20-00).
 - (a) Use a milliohm meter .001 to 100 milliohms, STD-592.
 - (b) Make sure that the resistance is 0.001 ohms (1 milliohm) or less.

SUBTASK 46-11-04-860-004

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C01974	WIRELESS WAN UNIT C/B

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I. Wireless WAN Unit Antenna Installation Test

SUBTASK 46-11-04-710-001

- (1) Do an operational test of the WWU (TASK 46-11-03-710-802).

NOTE: To do the operational test, you must have access to an active wireless connection from a remote access terminal, or airport messaging terminal.

- (a) Make sure that you set the WWU discrete status to the ON position, as specified in the test.

J. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-04-410-001



THE WIRELESS WAN UNIT MUST BE OFF IF YOU ARE LESS THAN 8 INCHES (20 CMS) FROM THE RADIO FREQUENCY ANTENNAS BECAUSE OF THE ELECTROMAGNETIC RADIATION RISK. CAN CAUSE INJURY.

- (1) If it is necessary, install the center stowage box (TASK 25-24-40-400-801).
 - (a) Remove the 6 foot (1.83m) stepladder, STD-1048.

SUBTASK 46-11-04-080-001

- (2) If the laptop is not necessary, stop the ONS maintenance browser and disconnect the laptop.

————— **END OF TASK** —————

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WIRELESS WAN UNIT HIGH PASS FILTER - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) Removal of the WWU High Pass Filter, M03243.
 - (2) Installation of the WWU High Pass Filter, M03243.
- B. The High Pass Filter is installed in the ceiling crown, located next to the WWU, at approximately STA 475, WL, 304, RBL 8.

TASK 46-11-05-000-801

2. Wireless WAN Unit High Pass Filter Removal

Figure 401

A. **General**

- (1) This task gives the steps to remove the Wireless WAN Unit (WWU) High Pass Filter.
- (2) The High Pass Filter is installed in the ceiling crown, next to the WWU, at STA 475, WL 304, RBL 8.

B. **References**

Reference	Title
25-21-45 P/B 401	CEILING PANEL - REMOVAL/INSTALLATION

C. **Location Zones**

Zone	Area
234	Area Above Passenger Compartment Ceiling, Right - Section 43

D. **WWU High Pass Filter removal**

SUBTASK 46-11-05-860-001

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

F/O Electrical System Panel, P6-5

Row	Col	Number	Name
B	12	C01974	WIRELESS WAN UNIT C/B

SUBTASK 46-11-05-010-001

- (2) Get access to the WWU high pass filter [1], (CEILING PANEL - REMOVAL/INSTALLATION, PAGEBLOCK 25-21-45/401

NOTE: The unit is installed in the ceiling crown at STA 475, RBL 8.

SUBTASK 46-11-05-020-001

- (3) Disconnect the coaxial connectors [2] on both ends of the high pass filter.

SUBTASK 46-11-05-020-002

- (4) Remove the screw [4].
- (5) Remove the clamp [3] and high pass filter [1].

———— **END OF TASK** ————

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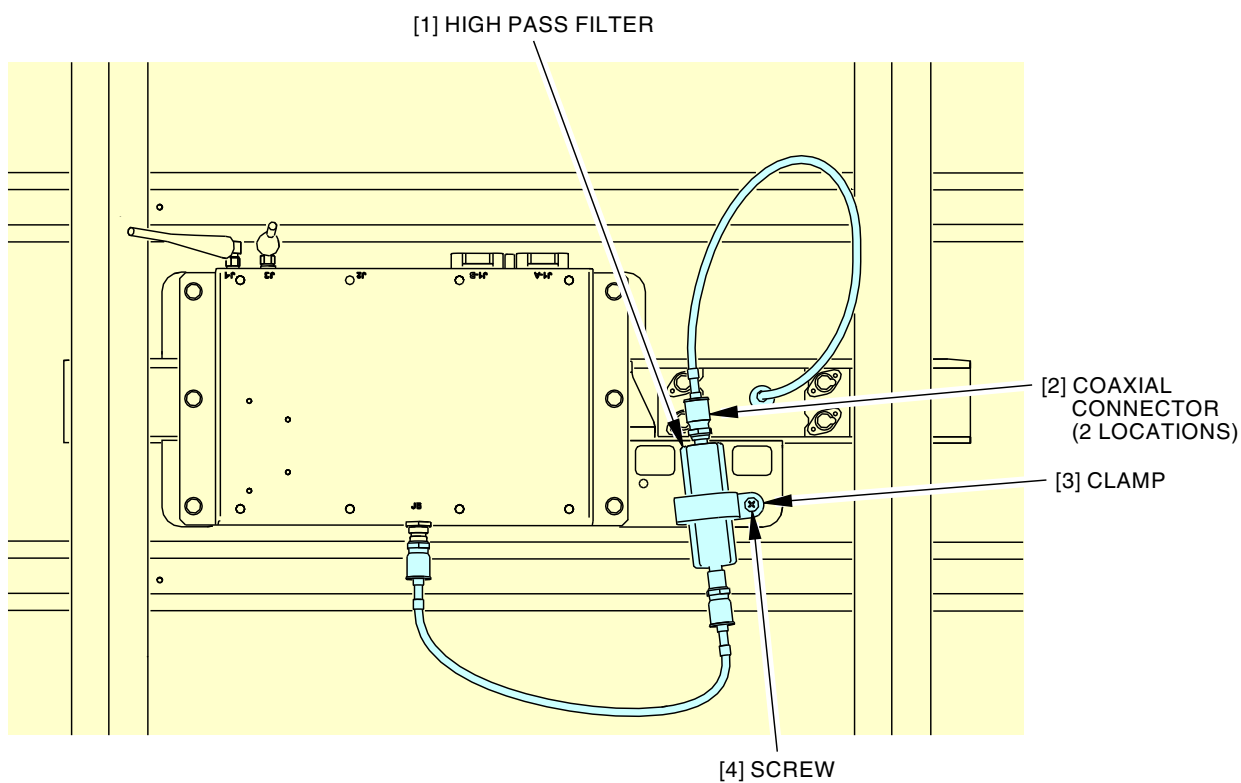
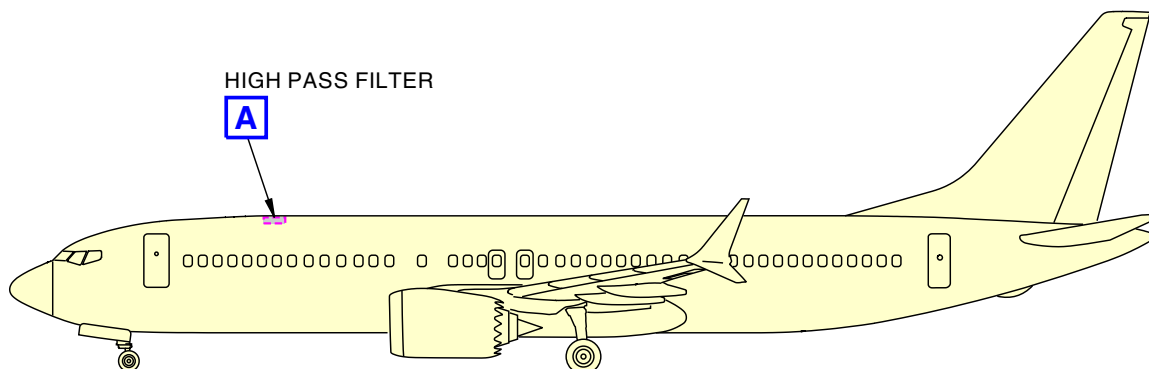
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HIGH PASS FILTER
(VIEW IN THE UP DIRECTION)



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WWU High Pass Filter Installation
Figure 401/46-11-05-990-801

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TASK 46-11-05-400-801

3. Wireless WAN Unit High Pass Filter Installation

Figure 401

A. General

- (1) This task gives the steps to install the Wireless WAN Unit (WWU) High Pass Filter, M03243.
- (2) The High Pass Filter is installed in the ceiling crown, next to the WWU, at STA 475, WL 304, RBL 8.

B. References

Reference	Title
25-21-45 P/B 401	CEILING PANEL - REMOVAL/INSTALLATION
46-11-03-710-802	Wireless WAN Unit Wi-Fi Operational Test (P/B 501)

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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205
STD-13563	Torque Wrench (0-50 in-lbs)

D. Location Zones

Zone	Area
234	Area Above Passenger Compartment Ceiling, Right - Section 43

E. WWU High Pass Filter Installation

SUBTASK 46-11-05-860-002

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

F/O Electrical System Panel, P6-5

Row	Col	Number	Name
B	12	C01974	WIRELESS WAN UNIT C/B

SUBTASK 46-11-05-420-001

- (2) Install the high pass filter [1]:
 - (a) Put the clamp [3] around the high pass filter [1].
 - (b) Put the high pass filter [1] in the installed position.
 - (c) Install the screw [4] to attach the high pass filter [1] to the bracket.
 - 1) Using a torque wrench, STD-13563, torque the screw [4] to 32 in-lb (3.6 N·m) - 38 in-lb (4.3 N·m).

SUBTASK 46-11-05-420-002

- (3) Connect the two coaxial connectors [2] to the ends of the high pass filter [1].

SUBTASK 46-11-05-410-001

- (4) Close the access panel that was opened, CEILING PANEL - REMOVAL/INSTALLATION, PAGEBLOCK 25-21-45/401.

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SUBTASK 46-11-05-860-003

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C01974	WIRELESS WAN UNIT C/B

F. Installation Test

SUBTASK 46-11-05-710-001

- (1) Do this task: (Wireless WAN Unit Wi-Fi Operational Test, TASK 46-11-03-710-802).

NOTE: To do the operational test, you must have access to an active wireless connection from a remote access terminal, or airport messaging terminal.

- (a) Make sure you set the WWU discrete status to ON, as specified in the test.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-05-080-001

- (1) If the universal maintenance device, SPL-11321 is no longer required, stop the ONS maintenance browser and disconnect the laptop.

———— **END OF TASK** ————

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ONBOARD NETWORK SYSTEM - MAINTENANCE PRACTICES

1. General

- A. This section gives maintenance tasks that support the Onboard Network System (ONS) and the Mass Storage Device (MSD).
- B. This procedure has the tasks that follow:
 - (1) Onboard Network System Maintenance Laptop Connection.
 - (2) Onboard Network System Multifunction Display (MFD).
 - (3) Onboard Network System Airplane Credentials Check.
 - (4) Onboard Network System 46 NFS OAS AIRPLANE KEYS UMS Installation.
 - (5) Onboard Network System Server Credentials Check.
 - (6) Onboard Network System Client Credentials Check.
 - (7) Onboard Network System Airplane Identification Check.
 - (8) Onboard Network System Input Monitoring Check.
 - (9) Onboard Network System Configuration Check.
 - (10) Onboard Network System LRU Software Parts Installation.
 - (11) Mass Storage Device Software Parts Check.
 - (12) Mass Storage Device Software Parts Removal.
 - (13) Stage Software Parts on a Mass Storage Device via Universal Maintenance Device (UMD).
 - (14) Download Files using the Software Management Tool (SMT).
 - (15) Stage Software Parts on a Mass Storage Device via Ground Network or Software Management Tool.

TASK 46-13-00-480-801

2. Maintenance Laptop Connection

A. General

- (1) This task gives the steps to connect the universal maintenance device, SPL-11321, to the Onboard Network System (ONS) and to start an ONS maintenance browser session.
- (2) You can connect a laptop using an Ethernet cable, or with a wireless connection to the optional Crew Wireless LAN Unit (CWLU).
 - (a) To connect with an Ethernet cable, do the Connection Procedure with Ethernet Cable below.
 - (b) To connect wirelessly, do the Connection Procedure with the Optional CWLU below.

NOTE: Wireless access requires installation of the CWLU hardware. If your airplane does not have a CWLU installed, the wireless task is not applicable and should not be performed.
- 1) To determine whether the optional CWLU is installed, run a system configuration for ATA "46 - Information Systems". Do this task: System Configuration Check, TASK 46-13-00-710-802.

NOTE: "Wireless Access Point 1" will show on the system configuration if the CWLU is installed.

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- 2) To verify the required UMS parts, run a system configuration for ATA "46 - Information Systems". Do this task: System Configuration Check, TASK 46-13-00-710-802.

NOTE: Serviceable user-modifiable software (UMS) parts must be installed on the Network File Server (NFS) for the CWLU to work. The required UMS parts are:

- 46 NFS OAS AIRPLANE KEYS UMS
- 46 NFS EXCOMM UMS
- 46 NFS OAS AIRLINE CERTS UMS
- 46 NFS OAS AIRLINE CRL UMS

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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205
STD-9080	Cable - Ethernet (Cat 5E, RJ-45 Connectors)

C. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right
212	Flight Compartment - Right

D. Connection Procedure with Ethernet Cable

SUBTASK 46-13-00-480-001

- (1) Connect one end of the RJ-45 Ethernet cable, STD-9080, to the RJ45 port of the universal maintenance device, SPL-11321.
- (2) Connect the opposite end to one of these data ports:
 - Flight Compartment - On the P61 Panel, find the RJ45 ONS port on the Maintenance BITE Panel.
 - E/E Bay - On the E4-2 rack, find the RJ45 port behind the door on the Network File Server (NFS) front panel.

SUBTASK 46-13-00-860-001

- (3) Energize the universal maintenance device, SPL-11321.
 - (a) When it shows Welcome to Windows, then continue.

SUBTASK 46-13-00-860-002

- (4) Log-in as follows:
 - (a) Push the CTRL, ALT and DELETE keys at the same time.
 - 1) Make sure it shows: Log On to Windows.
 - (b) Enter the User Name and Password and then select OK.

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SUBTASK 46-13-00-860-003

- (5) Do these steps to launch the ONS maintenance application:
 - (a) Double-click on the ONS maintenance browser desktop icon.
 - 1) If the ONS maintenance application fails to connect, then refer to the IFIM and do the applicable procedure(s).

E. Connection Procedure using the Optional Crew Wireless LAN Unit

SUBTASK 46-13-00-860-004

- (1) Get the crew wireless access code:
 - (a) Use one of the large inboard displays (Captain's or First Officer's Multi Function Display (MFD)).
 - (b) On the P61 Maintenance BITE Panel or on one of the two forward console locations, set the outer MAINT SELECTOR switch to the L(ef) or to the R(ight) MFD position.
 - (c) Turn the inner SEL knob until you see MAINT on the MFD.
 - 1) If the MAINT button does not show on the MFD, push the SYS key on the Multi-Function Panel (P9-82).
 - 2) If the MAINT button still does not show on the MFD, then refer to the IFIM and do the applicable procedure(s).
 - (d) Set the cursor on the word MAINT and push the SEL knob.
 - (e) Select ONBD MAINT.
 - 1) If the MFD shows "ONBD MAINT NOT AVAILABLE" in amber or white color text, then refer to the IFIM and do the applicable procedure(s) based on the text color.
 - (f) From the Onboard Maintenance menu, make the LINE MAINT selection.
 - (g) On the LINE MAINT menu, make the CREW WIRELESS ACCESS CODE selection.

NOTE: It may take up to one minute for the CREW WIRELESS ACCESS CODE selection to show after selecting LINE MAINT.

 - 1) If the crew wireless access code shows, then make a record of the access code and the expiration.

SIA 001-014 PRE SB 737-46-1029

NOTE: The time that shows is in minutes and seconds. The access code is valid for ten minutes.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

NOTE: The time that shows is in minutes and seconds. The access code is valid for five minutes.

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- 2) If the crew wireless access code does not show and the word "Expired" shows, then make the "NEW ACCESS CODE" selection.
 - a) Make sure that a new crew wireless access code shows. Make a record of the access code and the expiration.

SUBTASK 46-13-00-860-005

- (2) Use a Wi-Fi enabled, universal maintenance device, SPL-11321, to do the steps that follow.
 - (a) Energize the laptop and show the desktop.
 - (b) With the cursor, find and select the Network icon.

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- 1) You can left-click on the network icon, in the Windows task tray.
- 2) You can get access using the Windows Start icon, and control panel selection.
- (c) Select the correct wireless network, and click on the word Connect.
 - 1) The wireless network name is: Maintenance-[tail ID].
 - 2) Examine the signal strength bars that show in the task tray to make sure the network connection is serviceable.

SUBTASK 46-13-00-860-006

- (3) Do these steps to launch the ONS maintenance application:
 - (a) Double-click on the ONS Maintenance desktop icon.
 - 1) If the ONS Maintenance desktop icon does not open, then refer to the IFIM and do the applicable procedure(s).
 - (b) Enter the Crew Wireless Access Code that you recorded from the steps above and click on SAVE.

NOTE: A keyboard is necessary to enter a code. If the universal maintenance device, SPL-11321, does not have a keyboard which shows automatically when you click to enter the code, you need to go into Windows and manually show the keyboard.
 - (c) Make sure the ONS Maintenance main menu shows.

————— **END OF TASK** —————

TASK 46-13-00-480-803

3. Multi Function Display Connection

A. General

- (1) This task gives the steps to access the Onboard Network System (ONS) using the Multi Function Display (MFD) and to start an ONS maintenance browser session.

B. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right
212	Flight Compartment - Right

C. Connection Procedure with Multifunction Display

SUBTASK 46-13-00-860-037

- (1) Do these steps to access the ONS using the MFD:
 - (a) Use one of the large inboard displays (Captain or First Officer's MFD).
 - (b) On the P61 Maintenance BITE Panel or on one of the two forward console locations, set the outer MAIN SELECTOR switch to the L (left) or to the R (right) MFD position.

NOTE: If the cursor gets stuck on the screen, rotate the Rotary Selector knob to reset the cursor to the upper left-hand section of the screen.

 - 1) To navigate/tab through the selectable elements on the MFD, turn the Rotary Selector knob on the P9-82 panel or the MAINT SELECTOR knob on the P61-4 panel clockwise or counter-clockwise until the desired element is highlighted.
 - 2) To make a selection on the MFD, push the center selection button "SEL" of the Rotary Selector knob on the P9-82 panel or the MAINT SELECTOR knob on the P61-4 panel.

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- (c) Turn the inner SEL knob until you see MAINT on the MFD.
 - 1) If the MAINT button does not show on the MFD, push the SYS key on the Multi-Function Panel (P9-82).
 - 2) If the MAINT button still does not show on the MFD, then refer to the IFIM and do the applicable procedure(s).
 - (d) Set the cursor on the word MAINT and push the SEL knob.
 - (e) Select the ONBD MAINT button from the Maintenance Menu bar.
- NOTE:** Not all functionality on the UMD is available on the MFD. Whether a function is available on the MFD or not will be noted as needed.
- 1) If the MFD shows "ONBD MAINT NOT AVAILABLE" in amber or white color text, then refer to the IFIM and do the applicable procedure(s) based on the text color.

———— **END OF TASK** ————

TASK 46-13-00-860-801

4. Airplane Credentials Check

(Figure 201)

A. General

- (1) This task contains two sections.
 - (a) There are steps to do a check of the airplane credential installed in the Network File Server (NFS).
 - (b) There are steps to make (or, generate) a certificate signing request (CSR).
- NOTE:** The Boeing Company recommends that you make a CSR only when specified by a maintenance order.
- (2) There are different procedures to transmit the CSR. Contact your Engineering department for the preferred method.
 - Manual - use an approved data loader or maintenance device.
 - Automatic - use Boeing Electronic Distribution of Software (BEDS).
 - (3) The aircraft must be on the ground to do this task.
 - (4) This task is available when the Onboard Network System (ONS) is accessed with the Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

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D. Location Zones

Zone	Area

212	Flight Compartment - Right

E. Prepare for the Airplane Credentials Check

SUBTASK 46-13-00-480-017

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321 is required for access.

SUBTASK 46-13-00-700-007

- (2) Make sure that the Airplane Identification information is completely populated (TASK 46-13-00-750-801).

F. Airplane Credentials Check

SUBTASK 46-13-00-860-007

- (1) To do the Airplane Credentials Check, do these steps:

SIA 001-014 PRE SB 737-46-1029

- (a) Select LINE MAINTENANCE > SECURITY > AIRPLANE CREDENTIALS.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) Select LINE MAINTENANCE > Security > AIRPLANE CREDENTIALS.

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- (c) Examine the results in the box below Credential Status.
- 1) If the result shows "A valid, CA-signed Airplane Certificate exists", then the credential is serviceable. Go to step "Put the Airplane Back to Its Usual Condition"
 - 2) If the result shows "No Valid Airplane Certificate exists", then continue to the next step.

NOTE: If a valid CSR previously existed, and this result is unexpected, then refer to the IFIM and do the applicable procedure(s).

G. Certificate Signing Request

SUBTASK 46-13-00-470-001

- (1) To make a new Certificate Signing Request (CSR), do the steps that follow:

NOTE: The Boeing Company recommends that you make a CSR only when specified by a maintenance order.

- (a) Select the GENERATE button.
- (b) When the GENERATE AIRPLANE CREDENTIALS box shows, make sure that all fields are populated and correct and then press CONTINUE (Figure 201).

NOTE: If the data fields are not populated and new Client Credentials were recently created, wait up to two (2) minutes and try again.

NOTE: System Date, System Time, Tail Number, and Airplane ID are automatically populated by the Display Processing Computer (DPC). The Aircraft Type must be set manually (TASK 46-13-00-750-801).

- (c) Wait for the new credentials to be created.

NOTE: In the Credentials Generation Status box, the progress indicator will turn until the operation is complete.

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- (d) Make sure that the Credential Status box shows that a new self-signed Airplane Certificate was generated and downlinked for signing on the current date and time.
- (e) Make sure that the Credentials Generation Status box shows a message that credentials were successfully created, with a file name.
- (f) Make a record of the file name and file location.

NOTE: The file name is necessary to find and upload the file in the next step.

SUBTASK 46-13-00-470-002

- (2) To download the CSR file from the NFS to the UMD using the Download Manager, do these steps:

SIA 001-014 PRE SB 737-46-1029

- (a) Select LINE MAINTENANCE > DOWNLOAD MANAGER.
- (b) On the FILTERS tab page, select the "NFS:OAS" filter.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (c) Select LINE MAINTENANCE > Download Manager.
- (d) On the Select Application menu, select the NFS button.
- (e) On the Select Type menu, select "NFS:OAS" filter.

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- (f) Select CONTINUE.
- (g) On the FILES tab page, select the most recent file with "CSR" in the file name.
- (h) Select the REPORT icon.

SIA 001-014 PRE SB 737-46-1029

- (i) Make sure that the destination "Portable Maintenance Device" is selected.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (j) Make sure that the destination "Maintenance Device" is selected.

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- (k) Select the SEND button.
- (l) When the Windows popup shows, select where the data will be downloaded on the UMD.

NOTE: The Boeing Company recommends to use the auto-created file name. The file is named as follows: airplane identification/tail ID, filter type (NFS-OAS), date and time.

- (m) Select the CLOSE button.

SUBTASK 46-13-00-470-019

- (3) To download the CSR file from the NFS to the UMD with the Software Management Tool (SMT), do this step:
 - (a) Make sure that the date and time information of the CSR is known.
 - (b) Do this task: Download Files using the Software Management Tool (SMT), TASK 46-13-00-470-803.

SUBTASK 46-13-00-470-003

- (4) Send the file to the engineering department, or network operator for processing.

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SUBTASK 46-13-00-070-001

- (5) If there are one or more obsolete CSR files on the NFS, remove them.

NOTE: Do not erase the last CSR file that was sent to engineering.

- (a) Click once on the CSR file to highlight.
(b) Click once on the ERASE button.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-00-080-001

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
- (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.
- (3) If the 46 NFS OAS AIRPLANE KEYS UMS needs to be installed, then continue to this task: 46 NFS OAS AIRPLANE KEYS UMS Installation, TASK 46-13-00-860-805.

————— **END OF TASK** —————

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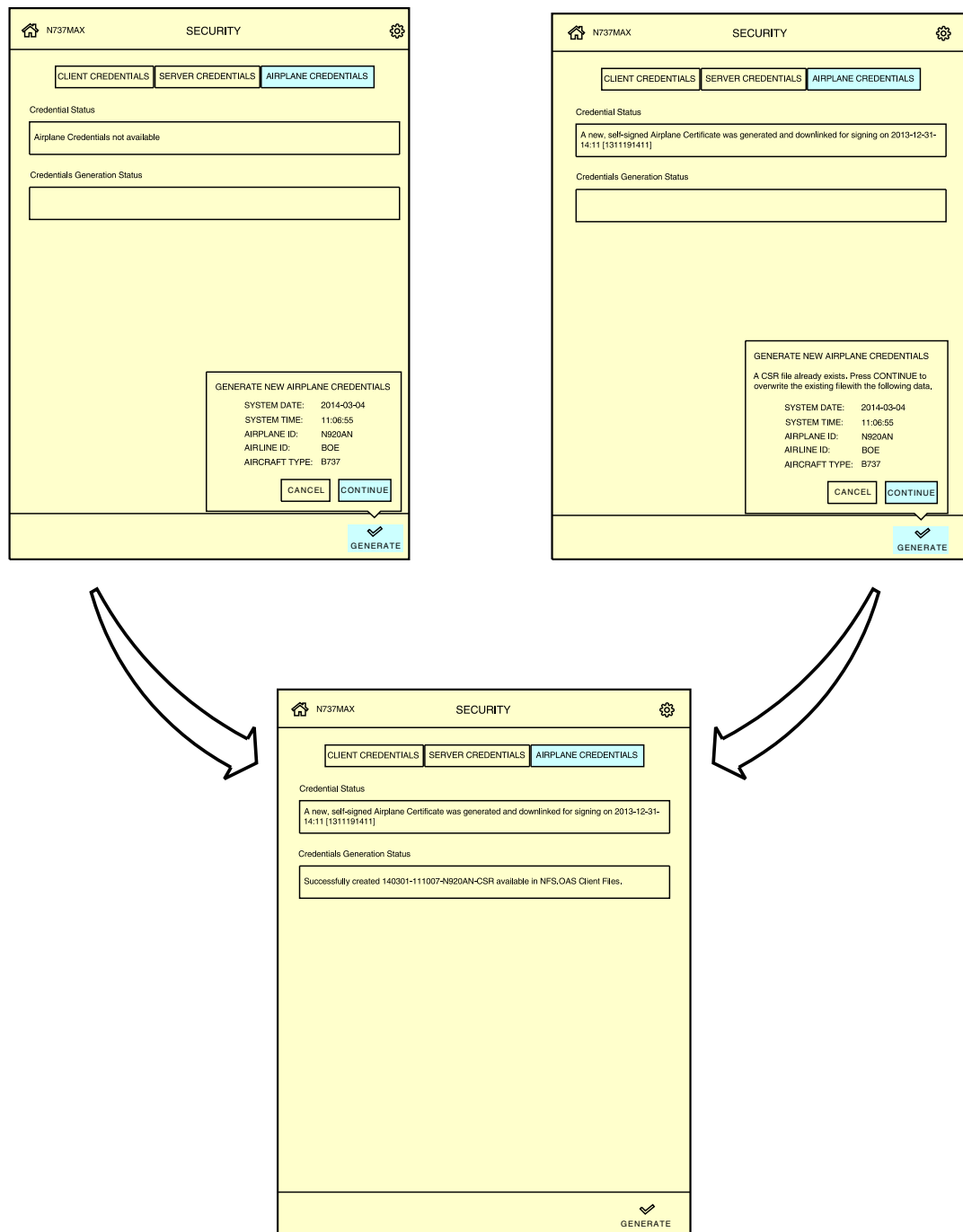
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NOTE:
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2475689 S0000580813_V1

Airplane Credentials Check Figure 201/46-13-00-990-810

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TASK 46-13-00-860-805

5. 46 NFS OAS AIRPLANE KEYS UMS Installation

A. General

- (1) This task contains two sections.
 - (a) There are steps to install the 46 NFS OAS AIRPLANE KEYS UMS into the Network File Server (NFS) operating system.
 - (b) There are steps to verify if the 46 NFS OAS AIRPLANE KEYS UMS were installed successfully.
- (2) Contact your Engineering department to generate the 46 NFS OAS AIRPLANE KEYS UMS.
- (3) The aircraft must be on the ground to do this task.
- (4) This task is available when the Onboard Network System (ONS) is accessed with the Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Prepare for the Airplane Keys UMS Installation

SUBTASK 46-13-00-480-020

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.
NOTE: A universal maintenance device, SPL-11321 is required for access.

E. Airplane Keys Installation

SUBTASK 46-13-00-470-043

- (1) Get the new Loadable Software Airplane Part (LSAP) 46 NFS OAS AIRPLANE KEYS UMS. Stage the part from the UMD to the Mass Storage Device (MSD). Do this task: Stage Software Parts on a Mass Storage Device via Universal Maintenance Device (UMD), TASK 46-13-00-470-802.

NOTE: This step is not applicable if BEDS is serviceable and a network administrator sends the 46 NFS OAS AIRPLANE KEYS UMS LSAP to the MSD automatically.

SUBTASK 46-13-00-470-044

- (2) Dataload the 46 NFS OAS AIRPLANE KEYS UMS to the NFS. Do this task: LRU Software Parts Installation, TASK 46-13-00-470-801.

F. Installation Test

SUBTASK 46-13-00-860-041

- (1) On the ONS maintenance browser menu bar:

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SIA 001-014 PRE SB 737-46-1029

- (a) Select LINE MAINTENANCE > SECURITY > AIRPLANE CREDENTIALS.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) Select LINE MAINTENANCE > Security > AIRPLANE CREDENTIALS.

SIA ALL

- (c) Examine the result in the box below Airplane Credentials Status.
 - 1) Make sure that the result shows: A valid, CA-signed Airplane Certificate exists.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-00-080-014

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— END OF TASK —————

TASK 46-13-00-860-802

6. Server Credentials Check

(Figure 202)

A. General

- (1) This task gives the steps to do a check, and if necessary, to make new server credentials.

NOTE: When a new server credential is made, all client credentials that show "No credentials exist" must be made again (TASK 46-13-00-860-803).
- (2) The Boeing Company recommends to make a new server credential only when specified by a maintenance order.
- (3) The aircraft must be on the ground to do this task.
- (4) This task is available when the Onboard Network System (ONS) is accessed with the Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

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D. Location Zones

Zone	Area

212	Flight Compartment - Right

E. Prepare for the Check

SUBTASK 46-13-00-480-003

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321 is required for access.

F. Server Credentials Check

SUBTASK 46-13-00-470-034

- (1) To do the Server Credentials Check, do these steps:

SIA 001-014 PRE SB 737-46-1029

- (a) Select LINE MAINTENANCE > SECURITY > SERVER CREDENTIALS.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) Select LINE MAINTENANCE > Security > SERVER CREDENTIALS.

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- (c) Examine the Credential Status box:

- 1) Make sure that the data shows a valid time-date stamp when the last credentials were made (or, were "last generated").

NOTE: A valid time-date stamp is any date between the year 2017 and the current year.

- a) If a valid time-stamp exists, then no action is required for the remainder of this task.
b) If an invalid time-date stamp shows, then continue.

NOTE: If the time-date stamp shows the year 1999 or anything beyond 2038, do not continue and instead refer to the IFIM and do the applicable procedure(s).

SUBTASK 46-13-00-470-006

- (2) To make a new server credential, do these steps:

NOTE: The Boeing Company recommends that you do this only when specified by a maintenance order.

- (a) Click once on the GENERATE button.
(b) When the confirmation box shows, click once on CONTINUE.
(c) In the Credentials Generation Status box, make sure that the progress indicator turns and wait for the result.

NOTE: It is necessary to wait 10 minutes after the credential generation is initiated.

- (d) Examine the results to make sure that the process is complete:

- 1) The Credentials Status box shows "Credentials last generated on <current date / time stamp of the credential>".

SIA 001-014 PRE SB 737-46-1029

- 2) The Credentials Generation Status box shows "Successfully created <current date / file name / file location>".

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SIA 015-999; SIA 001-014 POST SB 737-46-1029

- 3) The Credentials Generation Status box shows “generated on board certificate authority”.

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SUBTASK 46-13-00-470-037

- (3) If a new server credential was made, make sure that all LRUs have valid client credentials. Do this task: Client Credentials Check, TASK 46-13-00-860-803.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-00-080-002

- (1) Verify that there are no active maintenance messages for ATA “46 - Information Systems”. Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

———— **END OF TASK** ————

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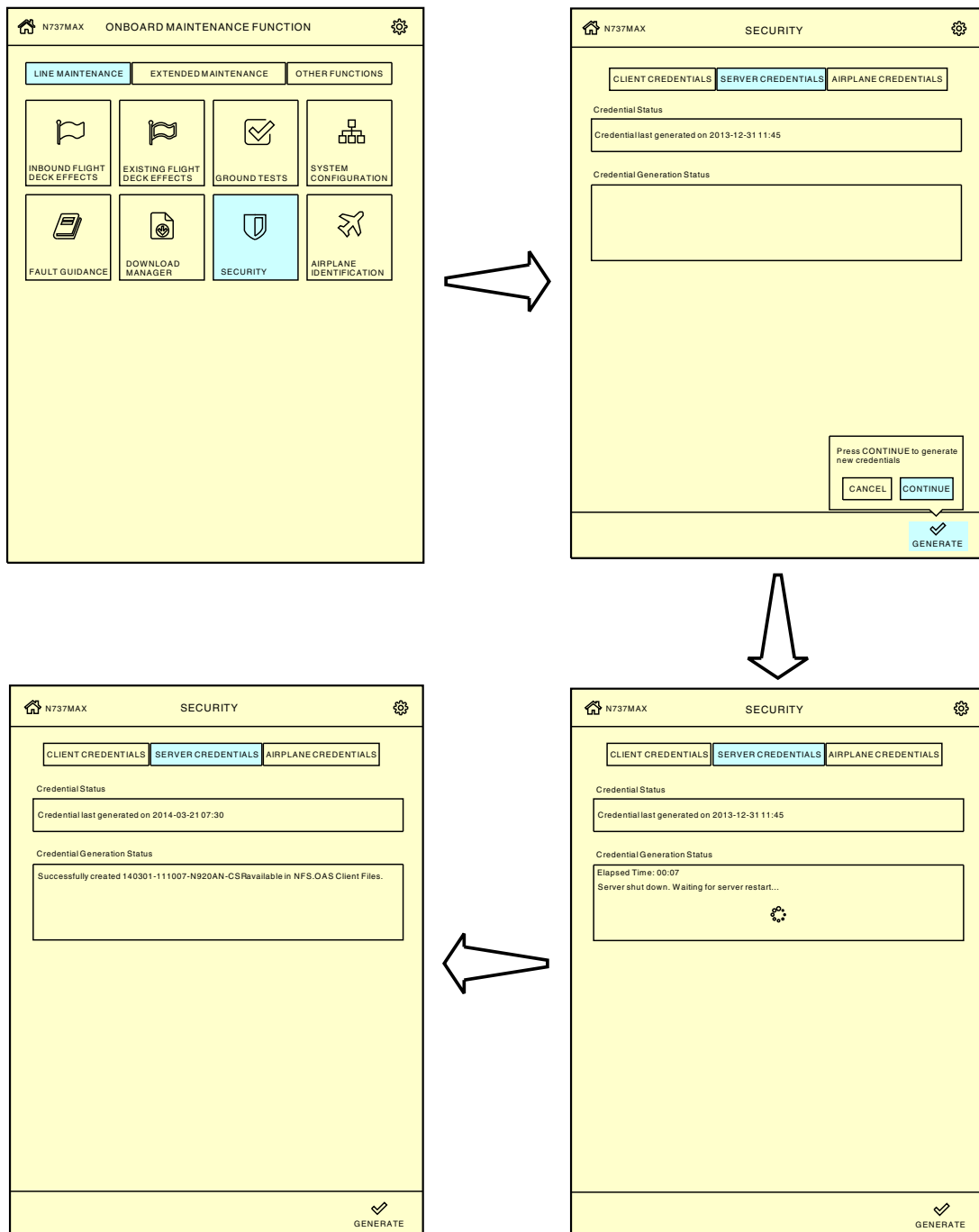
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NOTE:
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2475691 S0000580814_V1

Onboard Network System Server Credentials Check
Figure 202/46-13-00-990-809

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TASK 46-13-00-860-803

7. Client Credentials Check

(Figure 203)

A. General

- (1) This task gives the steps to do a check, and if necessary, to make and install a new client credential.

NOTE: Each Line Replaceable Unit (LRU) must have a client credential to communicate with the Network File Server (NFS).

- (2) The client LRUs are:

SIA 015-999

- Aircraft Interface Device (AID)

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- DFDAU
- EEC-1 (two channels)
- EEC-2 (two channels)
- NFS

SIA 001-014

- WWU

SIA ALL

- (3) The aircraft must be on the ground to do this task.
- (4) This task is available when the Onboard Network System (ONS) is accessed with the Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-01-000-801	Network File Server Removal (P/B 401)
46-13-01-020-801	Network File Server SD Media Card Removal (P/B 201)
46-13-01-400-801	Network File Server Installation (P/B 401)
46-13-01-420-801	Network File Server SD Media Card Installation (P/B 201)
46-13-01-470-811	Network File Server OS Upgrade OS7.1 to OS9.1 (P/B 201)
46-13-01-470-812	Network File Server OS Downgrade OS9.1 to OS7.1 (P/B 201)
46-13-02-700-805	Existing Faults Check (P/B 201)
73-21-05-970-802-G00	Electronic Engine Control (EEC) Data Download (On Wing) Using the ONS (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.

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Reference	Description
SPL-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Prepare for the Client Credentials Check

SUBTASK 46-13-00-480-004

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321, is required for access.

F. Client Credentials Check

SUBTASK 46-13-00-860-010

- (1) To do the Client Credentials Check, do these steps:

- (a) Make sure that power is supplied to any LRU(s) that require a credential check for at least 3 minutes.

NOTE: Power must be supplied to the AID for at least 7 minutes.

SIA 001-014 PRE SB 737-46-1029

- (b) Select LINE MAINTENANCE > SECURITY > CLIENT CREDENTIALS.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (c) Select LINE MAINTENANCE > Security > CLIENT CREDENTIALS.

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- (d) Wait for the page to show "Select the client(s) to generate new credentials".

- (e) Examine the page to find each client, and the condition of its credential.

NOTE: The credentials status should show the words "Last generated" with a date and time stamp.

- 1) Make sure that each credential status does not show "No credentials exist".
- 2) If you find a missing credential, then continue.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

SUBTASK 46-13-00-470-039

- (2) To prepare the Electronic Engine Control (EEC)s for the client credentials, do these steps:

NOTE: For ONS OS9.1, There are three methods to generate EEC client credentials. Method 1 or method 2 is used on an EEC that does not have preloaded credentials. Method 3 is used on an EEC that has preloaded credentials.

- METHOD 1- NFS Downgrade/Upgrade: Downgrade NFS to OS7.1 > Generate EEC Client Credentials > Upgrade NFS to OS9.1. This process requires a reimage, which will wipe all data off the NFS. Please ensure all desired data is downloaded from the NFS before conducting the below method. If necessary, save a system configuration report (System Configuration Check, TASK 46-13-00-710-802) and a mass storage device report (Mass Storage Device Software Parts Check, TASK 46-13-00-860-804).

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- METHOD 2- Preloaded OS7.1 NFS Swap: Remove OS9.1 NFS > Install OS7.1 NFS > Generate EEC Credentials > Remove OS7.1 NFS > Install OS9.1 NFS. Do NOT change the airplane ID during this procedure.
- METHOD 3- Server Credential Generation and EEC Power Cycle.

(a) **METHOD 1: NFS DOWNGRADE/UPGRADE**

- 1) Downgrade the NFS from OS9.1 to OS7.1, do this task: Network File Server OS Downgrade OS9.1 to OS7.1, TASK 46-13-01-470-812.
 - a) Ensure no SD card is installed in the NFS before conducting the reimage step, do this task: Network File Server SD Media Card Removal, TASK 46-13-01-020-801.

NOTE: Do not conduct steps 4-9 of SUBTASK 46-13-01-470-057.

2) Power on the EECs.

- a) If the EECs are not powered, do these steps:
 - <1> On the Multi Function Display (MFD), select MAINT CTRL PGS.
 - <2> Select MISC SYSTEM CTRLS (MSC).
 - <3> In the EEC MAINT POWER box, power on ENG 1 EECs.
 - <a> Select TEST under ENG 1 to power on ENG 1 EECs.
 - Verify ENG 1 STATUS shows ON after 30 seconds.
 - <4> In the EEC MAINT POWER box, power on ENG 2 EECs.
 - <a> Select TEST under ENG 2 to power on ENG 2 EECs.
 - Verify ENG 2 STATUS shows ON after 30 seconds.
- b) If the EECs are already powered, conduct a power cycle of the EECs.
 - <1> On the MFD, select MAINT CTRL PGS.
 - <2> Select MISC SYSTEM CTRLS (MSC).
 - <3> In the EEC MAINT POWER box, if ENG 1 STATUS shows ON:
 - <a> Select NORM under ENG 1 to power off ENG 1 EECs.
 - Verify ENG 1 STATUS shows OFF after 15 seconds.
 - <4> In the EEC MAINT POWER box, if ENG 2 STATUS shows ON:
 - <a> Select NORM under ENG 2 to power off ENG 2 EECs.
 - Verify ENG 2 STATUS shows OFF after 15 seconds.
 - <5> In the EEC MAINT POWER box, power on ENG 1 EECs.
 - <a> Select TEST under ENG 1 to power on ENG 1 EECs.
 - Verify ENG 1 STATUS shows ON after 30 seconds.
 - <6> In the EEC MAINT POWER box, power on ENG 2 EECs.
 - <a> Select TEST under ENG 2 to power on ENG 2 EECs.
 - Verify ENG 2 STATUS shows ON after 30 seconds.

3) Generate EEC client credentials for EEC-1A, EEC-1B, EEC-2A, and EEC-2B.

- a) On the ONS browser, select LINE MAINTENANCE > SECURITY > CLIENT CREDENTIALS.
- b) Select EEC-1A, EEC-1B, EEC-2A, and EEC-2B.

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- c) Select GENERATE > CONTINUE.
 - d) Verify each EEC credential status shows the words "Last generated" with a current date and time stamp.
- 4) Upgrade the NFS from OS7.1 to OS9.1, do this task: Network File Server OS Upgrade OS7.1 to OS9.1, TASK 46-13-01-470-811.
 - a) Ensure no SD card is installed in the NFS before conducting the reimage step, do this task: Network File Server SD Media Card Removal, TASK 46-13-01-020-801.
- 5) Make sure that power is supplied to the DFDAU and any installed WWU or AID LRUs.
- 6) Cycle power on the EECs:
 - a) On the MFD, select MAINT CTRL PGS.
 - b) Select MISC SYSTEM CTRLS (MSC).
 - c) In the EEC MAINT POWER box, if ENG 1 STATUS shows ON:
 - <1> Select NORM under ENG 1 to power off ENG 1 EECs.
 - <2> Verify ENG 1 STATUS shows OFF after 15 seconds.
 - d) In the EEC MAINT POWER box, if ENG 2 STATUS shows ON:
 - <1> Select NORM under ENG 2 to power off ENG 2 EECs.
 - <2> Verify ENG 2 STATUS shows OFF after 15 seconds.
 - e) In the EEC MAINT POWER box, power on ENG 1 EECs.
 - <1> Select TEST under ENG 1 to power on ENG 1 EECs.
 - <2> Verify ENG 1 STATUS shows ON after 30 seconds.
 - f) In the EEC MAINT POWER box, power on ENG 2 EECs.
 - <1> Select TEST under ENG 2 to power on ENG 2 EECs.
 - <2> Verify ENG 2 STATUS shows ON after 30 seconds.
- 7) Generate new Server Credentials, do this task: Server Credentials Check, TASK 46-13-00-860-802.
- 8) Upon completion of the Server Credential generation (after approximately 10 minutes), do these steps to cycle power on the EECs:
 - a) On the MFD, select MAINT CTRL PGS.
 - b) Select MISC SYSTEM CTRLS (MSC).
 - c) In the EEC MAINT POWER box, if ENG 1 STATUS shows ON:
 - <1> Select NORM under ENG 1 to power off ENG 1 EECs.
 - <2> Verify ENG 1 STATUS shows OFF after 15 seconds.
 - d) In the EEC MAINT POWER box, if ENG 2 STATUS shows ON:
 - <1> Select NORM under ENG 2 to power off ENG 2 EECs.
 - <2> Verify ENG 2 STATUS shows OFF after 15 seconds.
 - e) In the EEC MAINT POWER box, power on ENG 1 EECs.
 - <1> Select TEST under ENG 1 to power on ENG 1 EECs.

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- <2> Verify ENG 1 STATUS shows ON after 30 seconds.
 - f) In the EEC MAINT POWER box, power on ENG 2 EECs.
 - <1> Select TEST under ENG 2 to power on ENG 2 EECs.
 - <2> Verify ENG 2 STATUS shows ON after 30 seconds.
 - 9) On the ONS Maintenance main menu, select LINE MAINTENANCE > Security.
NOTE: The Client Credentials page will not be updated automatically. The Security page must be left and then returned to.
 - 10) Wait for the result to show "Select the client(s) to generate new credentials".
 - 11) Examine the record to find each EEC client, and the condition of its credential.
 - a) Make sure that the credentials status shows "Last generated" with a date and time stamp matching time of the steps above.
 - 12) Stage all missing Mass Storage Device software parts to put the Mass Storage Device back to normal configuration, do this task: Stage Software Parts on a Mass Storage Device via Universal Maintenance Device (UMD), TASK 46-13-00-470-802.
 - 13) If applicable, install the SD Media Card into the NFS, do this task: Network File Server SD Media Card Installation, TASK 46-13-01-420-801.
 - 14) If applicable, generate a CSR and dataload a KEYS UMS, do this task: Airplane Credentials Check, TASK 46-13-00-860-801.
 - 15) If this task was not performed immediately after an EEC replacement, any data present on the EEC before the credential generation must be downloaded to the NFS via the EEC Data Download page, do this task: Electronic Engine Control (EEC) Data Download (On Wing) Using the ONS, TASK 73-21-05-970-802-G00.
- (b) METHOD 2: PRELOADED OS7.1 NFS SWAP
- 1) Remove the OS9.1 NFS, do this task: Network File Server Removal, TASK 46-13-01-000-801.
 - 2) Install the OS7.1 NFS, do this task: Network File Server Installation, TASK 46-13-01-400-801.
 - 3) Power on the EECs.
 - a) If the EECs are not powered, do these steps:
 - <1> On the MFD, select MAINT CTRL PGS.
 - <2> Select MISC SYSTEM CTRLS (MSC).
 - <3> In the EEC MAINT POWER box, power on ENG 1 EECs.
 - <a> Select TEST under ENG 1 to power on ENG 1 EECs.
 - Verify ENG 1 STATUS shows ON after 30 seconds.
 - <4> In the EEC MAINT POWER box, power on ENG 2 EECs.
 - <a> Select TEST under ENG 2 to power on ENG 2 EECs.
 - Verify ENG 2 STATUS shows ON after 30 seconds.
 - b) If the EECs are already powered, conduct a power cycle of the EECs.
 - <1> On the MFD, select MAINT CTRL PGS.
 - <2> Select MISC SYSTEM CTRLS (MSC).

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- <3> In the EEC MAINT POWER box, if ENG 1 STATUS shows ON:
 - <a> Select NORM under ENG 1 to power off ENG 1 EECs.
 - Verify ENG 1 STATUS shows OFF after 15 seconds.
 - <4> In the EEC MAINT POWER box, if ENG 2 STATUS shows ON:
 - <a> Select NORM under ENG 2 to power off ENG 2 EECs.
 - Verify ENG 2 STATUS shows OFF after 15 seconds.
 - <5> In the EEC MAINT POWER box, power on ENG 1 EECs.
 - <a> Select TEST under ENG 1 to power on ENG 1 EECs.
 - Verify ENG 1 STATUS shows ON after 30 seconds.
 - <6> In the EEC MAINT POWER box, power on ENG 2 EECs.
 - <a> Select TEST under ENG 2 to power on ENG 2 EECs.
 - Verify ENG 2 STATUS shows ON after 30 seconds.
- 4) Generate EEC client credentials for EEC-1A, EEC-1B, EEC-2A, and EEC-2B.
- a) On the ONS browser, select LINE MAINTENANCE > SECURITY > CLIENT CREDENTIALS.
 - b) Select EEC-1A, EEC-1B, EEC-2A, and EEC-2B.
 - c) Select GENERATE > CONTINUE.
 - d) Verify each EEC credential status shows the words "Last generated" with a current date and time stamp.
- 5) Remove the OS7.1 NFS, do this task: Network File Server Removal, TASK 46-13-01-000-801.
- 6) Install the OS9.1 NFS, do this task: Network File Server Installation, TASK 46-13-01-400-801.
- 7) Make sure that power is supplied to the DFDAU and any installed WWU or AID LRUs.
- 8) Cycle power on the EECs:
- a) On the MFD, select MAINT CTRL PGS.
 - b) Select MISC SYSTEM CTRLS (MSC).
 - c) In the EEC MAINT POWER box, if ENG 1 STATUS shows ON:
 - <1> Select NORM under ENG 1 to power off ENG 1 EECs.
 - <2> Verify ENG 1 STATUS shows OFF after 15 seconds.
 - d) In the EEC MAINT POWER box, if ENG 2 STATUS shows ON:
 - <1> Select NORM under ENG 2 to power off ENG 2 EECs.
 - <2> Verify ENG 2 STATUS shows OFF after 15 seconds.
 - e) In the EEC MAINT POWER box, power on ENG 1 EECs.
 - <1> Select TEST under ENG 1 to power on ENG 1 EECs.
 - <2> Verify ENG 1 STATUS shows ON after 30 seconds.
 - f) In the EEC MAINT POWER box, power on ENG 2 EECs.
 - <1> Select TEST under ENG 2 to power on ENG 2 EECs.

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- <2> Verify ENG 2 STATUS shows ON after 30 seconds.
- 9) Generate new Server Credentials, do this task: Server Credentials Check, TASK 46-13-00-860-802.
- 10) Upon completion of the Server Credential generation (after approximately 10 minutes), do these steps to cycle power on the EECs:
- a) On the MFD, select MAINT CTRL PGS.
 - b) Select MISC SYSTEM CTRLS (MSC).
 - c) In the EEC MAINT POWER box, if ENG 1 STATUS shows ON:
 - <1> Select NORM under ENG 1 to power off ENG 1 EECs.
 - <2> Verify ENG 1 STATUS shows OFF after 15 seconds.
 - d) In the EEC MAINT POWER box, if ENG 2 STATUS shows ON:
 - <1> Select NORM under ENG 2 to power off ENG 2 EECs.
 - <2> Verify ENG 2 STATUS shows OFF after 15 seconds.
 - e) In the EEC MAINT POWER box, power on ENG 1 EECs.
 - <1> Select TEST under ENG 1 to power on ENG 1 EECs.
 - <2> Verify ENG 1 STATUS shows ON after 30 seconds.
 - f) In the EEC MAINT POWER box, power on ENG 2 EECs.
 - <1> Select TEST under ENG 2 to power on ENG 2 EECs.
 - <2> Verify ENG 2 STATUS shows ON after 30 seconds.
- 11) On the ONS Maintenance main menu, select LINE MAINTENANCE > Security.
NOTE: The Client Credentials page will not be updated automatically. The Security page must be left and then returned to.
- 12) Wait for the result to show "Select the client(s) to generate new credentials".
- 13) Examine the record to find each EEC client, and the condition of its credential.
 - a) Make sure that the credentials status shows "Last generated" with a date and time stamp matching time of the steps above.
- 14) If this task was not performed immediately after an EEC replacement, any data present on the EEC before the credential generation must be downloaded to the NFS via the EEC Data Download page, do this task: Electronic Engine Control (EEC) Data Download (On Wing) Using the ONS, TASK 73-21-05-970-802-G00.
- (c) METHOD 3: SERVER CREDENTIAL GENERATION AND EEC POWER CYCLE
- 1) Make sure that power is supplied to the DFDAU and any installed WWU or AID LRUs.
 - 2) Cycle power on the EECs:
 - a) On the MFD, select MAINT CTRL PGS.
 - b) Select MISC SYSTEM CTRLS (MSC).
 - c) In the EEC MAINT POWER box, if ENG 1 STATUS shows ON:
 - <1> Select NORM under ENG 1 to power off ENG 1 EECs.
 - <2> Verify ENG 1 STATUS shows OFF after 15 seconds.
 - d) In the EEC MAINT POWER box, if ENG 2 STATUS shows ON:

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- <1> Select NORM under ENG 2 to power off ENG 2 EECs.
 - <2> Verify ENG 2 STATUS shows OFF after 15 seconds.
 - e) In the EEC MAINT POWER box, power on ENG 1 EECs.
 - <1> Select TEST under ENG 1 to power on ENG 1 EECs.
 - <2> Verify ENG 1 STATUS shows ON after 30 seconds.
 - f) In the EEC MAINT POWER box, power on ENG 2 EECs.
 - <1> Select TEST under ENG 2 to power on ENG 2 EECs.
 - <2> Verify ENG 2 STATUS shows ON after 30 seconds.
- 3) Generate new Server Credentials, do this task: Server Credentials Check, TASK 46-13-00-860-802.
- 4) Upon completion of the Server Credential generation (after approximately 10 minutes), do these steps to cycle power on the EECs:
 - a) On the MFD, select MAINT CTRL PGS.
 - b) Select MISC SYSTEM CTRLS (MSC).
 - c) In the EEC MAINT POWER box, if ENG 1 STATUS shows ON:
 - <1> Select NORM under ENG 1 to power off ENG 1 EECs.
 - <2> Verify ENG 1 STATUS shows OFF after 15 seconds.
 - d) In the EEC MAINT POWER box, if ENG 2 STATUS shows ON:
 - <1> Select NORM under ENG 2 to power off ENG 2 EECs.
 - <2> Verify ENG 2 STATUS shows OFF after 15 seconds.
 - e) In the EEC MAINT POWER box, power on ENG 1 EECs.
 - <1> Select TEST under ENG 1 to power on ENG 1 EECs.
 - <2> Verify ENG 1 STATUS shows ON after 30 seconds.
 - f) In the EEC MAINT POWER box, power on ENG 2 EECs.
 - <1> Select TEST under ENG 2 to power on ENG 2 EECs.
 - <2> Verify ENG 2 STATUS shows ON after 30 seconds.
- 5) On the ONS Maintenance main menu in the upper left-hand corner, select LINE MAINTENANCE > Security.

NOTE: The Client Credentials page will not be updated automatically. The Security page must be left and then returned to.
- 6) Wait for the page to show "Select the client(s) to generate new credentials".
- 7) Examine the record to find each EEC client, and the condition of its credential.
 - a) Make sure that the credentials status shows "Last generated" with a date and time stamp matching time of the steps above.

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SUBTASK 46-13-00-470-007

- (3) To make one or more new client credentials, do these steps:

NOTE: Each client (or LRU) must have a unique credential.

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- (a) Make sure that power is supplied to any LRU(s) that require new client credentials for at least three minutes.
- (b) Click once on the box adjacent to the client name(s) where "No credentials exist" is shown.
 - 1) Make sure that check mark(s) show in the box.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- 2) Do not select the EEC boxes.

NOTE: For OS9.1, client credentials for the EEC must be generated with METHOD 1, 2, or 3.

SIA ALL

- (c) When all selections are complete, select GENERATE.
- (d) In the confirmation box, select CONTINUE.
- (e) Wait for the credentials to be created.

NOTE: In the Credentials Generation Status box, the progress indicator will turn until the operation is complete.

- (f) Examine the results in the Credentials Generation Status box.

- 1) Make sure that the Overall Status shows "All keys were successfully generated".

NOTE: If the Overall Status shows "Keys were not generated for one or more clients", examine the results to determine which LRU(s) did not generate a client credential and take maintenance action accordingly.

- 2) If necessary, use the scroll bar to see all of the clients and the status.

- (g) Wait for at least five minutes before making the next credential or other ONS maintenance task.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-00-080-003

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems".
 - (a) Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (b) If there is an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

———— **END OF TASK** ————

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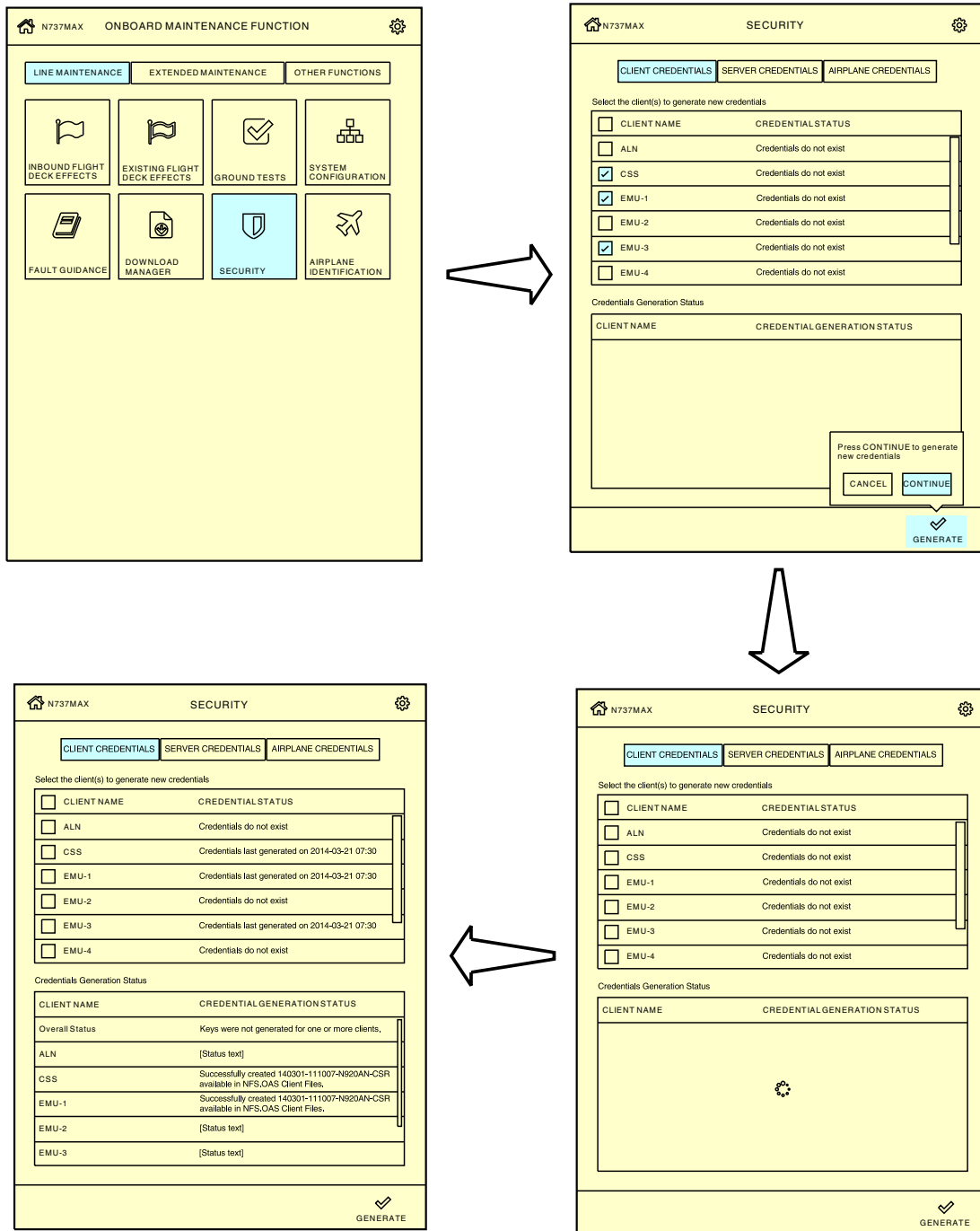
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NOTE:
THE DATA THAT SHOWS ON THE DISPLAY IS ONLY AN EXAMPLE.

2475702 S0000580815_V1

**Onboard Network System Client Credentials
Figure 203/46-13-00-990-804**

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TASK 46-13-00-750-801

8. Airplane Identification Check

(Figure 204)

A. General

- (1) This task gives the steps to do a check, and if necessary, to update the airplane identification in the Network File Server (NFS).
 - (a) If the Onboard Network System (ONS) does not find Airplane Identification data, a pop-up message shows when the ONS maintenance browser is accessed.
 - (b) When there is no Airplane Identification data, some ONS and Onboard Maintenance Function (OMF) are not serviceable.
- (2) It is necessary that the tail ID on the ONS is the same as the tail ID on the auxiliary outboard displays.
 - (a) The auxiliary outboard displays show on the outboard part of the LEFT and RIGHT outboard display units.
- (3) The aircraft must be on the ground to do this task.
- (4) This task is available when the ONS is accessed with the Universal Maintenance Device (UMD).
- (5) The Airplane Identification Data can also be accessed and updated with the Multi Function Display (MFD) (TASK 31-65-00-970-804).

B. References

Reference	Title
31-65-00-970-804	Airplane Config Data (ACD) Page Function (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Prepare for the Check

SUBTASK 46-13-00-860-012

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321, is required for access.

F. Airplane Identification Check

SUBTASK 46-13-00-970-001

- (1) On the auxiliary outboard displays, find and make a record of the aircraft registration number (tail number).

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SUBTASK 46-13-00-860-013

(2) On the ONS maintenance browser:

SIA 001-014 PRE SB 737-46-1029

(a) Select LINE MAINTENANCE > AIRPLANE IDENTIFICATION.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

(b) Select LINE MAINTENANCE > Airplane Identification.

SIA ALL

(c) Compare the data on the page with the auxiliary outboard displays.

- 1) If Airline ID, Aircraft Type, and Airplane ID all agree, skip to step "Put the Airplane Back to Its Usual Condition".
- 2) If one or more data records do not agree, then continue.

G. Airplane Identification Changes

SUBTASK 46-13-00-970-002

(1) Enter the correct data.

SIA 001-014 PRE SB 737-46-1029

(a) Select the correct Aircraft Type from the Airline ID drop-down menu.

AIRCRAFT	DROPDOWN LIST AIRCRAFT TYPE
BOEING 737-600	B736 (737-600)
BOEING 737-700	B737 (737-700)
BOEING 737 MAX 7	B737 (737 MAX 7)
BOEING 737-800	B738 (737-800)
BOEING 737 MAX 8	B738 (737 MAX 8)
BOEING 737-900	B739 (737-900)
BOEING 737 MAX 9	B739 (737 MAX 9)

SIA 015-999; SIA 001-014 POST SB 737-46-1029

(b) Select the correct Aircraft Type from the Airline ID drop-down menu.

AIRCRAFT	DROPDOWN LIST AIRCRAFT TYPE
BOEING 737-600	B736 (737-600)
BOEING 737-700	B737 (737-700)
BOEING 737-800	B738 (737-800)
BOEING 737-900	B739 (737-900)
BOEING 737 MAX 7	B37M (737 MAX 7)
BOEING 737 MAX 8	B38M (737 MAX 8)
BOEING 737 MAX 200	B38M (737 MAX 200)
BOEING 737 MAX 9	B39M (737 MAX 9)
BOEING 737 MAX 10	B3XM (737 MAX 10)

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- (c) Using the MFD, enter the correct Airplane ID. Do this task: Airplane Config Data (ACD) Page Function, TASK 31-65-00-970-804.

NOTE: The airplane ID is called "TAIL NUMBER" on the MFD.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

NOTE: If the DPCs are off or unavailable, the Airplane ID can be manually entered on the ONS Airplane Identification page. Once the Airplane ID is entered on the Airplane Identification page, select SAVE.

SIA ALL

NOTE: When you change the Airplane ID, this clears the OMF fault history.

NOTE: After saving a new Airplane ID, wait 2 minutes and then power cycle the NFS. The NFS will take approximately 10 minutes to reboot.

- (d) Using the MFD, enter the correct Airline ID. Do this task: Airplane Config Data (ACD) Page Function, TASK 31-65-00-970-804.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

NOTE: If the DPCs are off or unavailable, the Airline ID can be manually entered on the ONS Airplane Identification page. Once the Airline ID is entered on the Airplane Identification page, select SAVE.

SIA ALL

H. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-00-080-004

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

———— **END OF TASK** ————

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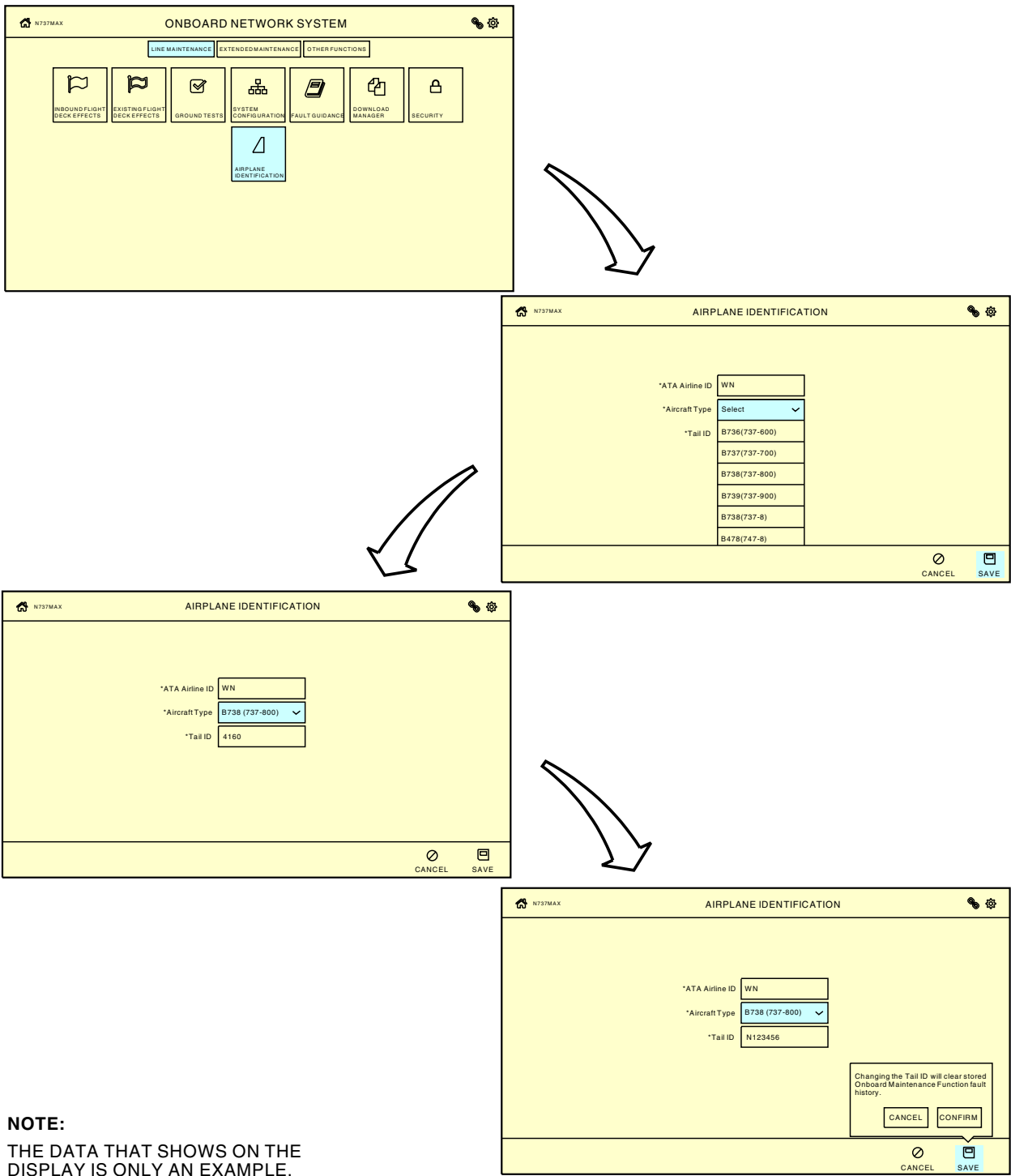
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NOTE:
THE DATA THAT SHOWS ON THE
DISPLAY IS ONLY AN EXAMPLE.

2475686 S0000580826_V3

Onboard Network System Airplane Identification
Figure 204/46-13-00-990-808

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TASK 46-13-00-710-801

9. Input Monitoring Check

(Figure 205)

A. General

- (1) This task gives the steps to do a check of the analog and digital inputs of the Network File Server (NFS), M2898.
- (2) This task gives the condition of the communication channels that follow, for the applicable unit:
 - ETHERNET
 - 429 RECEIVE
 - 429 TRANSMIT
 - INPUT DISCRETES
 - OUTPUT DISCRETES

SIA 001-014 PRE SB 737-46-1029

- 717 RECEIVE

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- QAR RECEIVE

SIA ALL

- (3) This task is available when the Onboard Network System (ONS) is accessed with the Universal Maintenance Device (UMD).

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (4) If a system is installed and enabled but input monitoring shows the bus is unserviceable, maintenance action is necessary.

SIA ALL

B. References

Reference	Title
31-31-22-860-802	Digital ACMS Recorder (DAR) 717 Activation (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

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E. Prepare for the Check

SUBTASK 46-13-00-860-014

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321 is required for access.

F. ONS Input Monitoring Check- NFS

SUBTASK 46-13-00-860-015

- (1) On the ONS Maintenance Browser:

SIA 001-014 PRE SB 737-46-1029

- (a) Select EXTENDED MAINTENANCE > INPUT MONITORING.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) Select EXTENDED MAINTENANCE > Input Monitoring.

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- (c) Select NFS.
- 1) Make sure that the result shows the correct LRU and that these buttons show on the bottom of the display:
- ETHERNET
 - 429 RECEIVE
 - 429 TRANSMIT
 - INPUT DISCRETES
 - OUTPUT DISCRETES

SIA 001-014 PRE SB 737-46-1029

- 717 RECEIVE

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- QAR RECEIVE

SIA ALL

SUBTASK 46-13-00-700-001

- (2) Click once on the ETHERNET button.
- (a) Examine the status for each port that is configured.

Ethernet Input Monitoring

PORT	END CONNECTION ^{*[1]}
NP1	
NP2	
NP3	FLIGHT DECK CREW PORT
NP4	
NP5	
1	RESERVED
2	MMR-L
3	MMR-R

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Ethernet Input Monitoring (Continued)

PORT	END CONNECTION ^{*[1]}
4	AID-FWD
5	WAP-1
6	DFDAU
7	DPC-1
8	DPC-2
9	EEC-1A
10	EEC-1B
11	EEC-2A
12	EEC-2B
13	WWU
14	SDU-L
15	EGPWS
16	

*[1] If Unconfigured is displayed on a port, the airplane is not configured for this option.

NOTE: The END CONNECTION ports will only show systems that are configured for the airplane being checked. If the system is not monitored, UNCONFIGURED is displayed in the END CONNECTION column of input monitoring table.

- 1) If the status shows Up, the NFS senses the ethernet interface is operational.
- 2) If the status shows Down, the NFS senses the ethernet interface is non-operational.
- 3) If the status shows Unavailable, the NFS cannot currently provide status for the interface.
- 4) If the status shows Admin Down, the interface is not configured.
- 5) Use the scroll bar to show more rows of data.

SUBTASK 46-13-00-700-002

- (3) Click once on the 429 RECEIVE button.
 - (a) Examine the result for each bus that shows.

ARINC 429 Receive Port

BUS ID	DISPLAY NAME ^{*[1]}	NOTES
1	DATA LOAD IN #1	Operational and shows High during data load of target LRU
2	Unconfigured	
3	W-FMC-1 Relay FMC-02	Shows Low when FMC-1 is operational and transmitting on the ARINC 429 bus
4	W-FMC-1 Relay FMC-09	Shows High when FMC-1 is operational and transmitting on the ARINC 429 bus
5	W-ADIRU-L ADR-4	Shows Low when ADIRU is operational and transmitting on the ARINC 429 bus

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ARINC 429 Receive Port (Continued)

BUS ID	DISPLAY NAME^{*[1]}	NOTES
6	W-ADIRU-L IR-3	Shows High when ADIRU is operational and transmitting on the ARINC 429 bus
7	W-DPC-1 MDS-GP 1	Shows High when DPC-1 is powered up and transmitting on the ARINC 429 bus
8	W-DPC-2 MDS-GP 1	Shows High when DPC-2 is powered up and transmitting on the ARINC 429 bus
9	W-CMU OUTPUT BUS 3	Shows Low when CMU is powered up and transmitting on the ARINC 429 bus
10	Unconfigured	
11	W-MMR-1 GNSS Data 3	Shows High when MMR-1 is powered up and transmitting on the ARINC 429 bus
12	W-ATC-1 General Output 1	Shows High when ATC-1 is powered up and transmitting on the ARINC 429 bus

*[1] If Unconfigured is displayed on a Bus, the airplane is not configured for this option.

- 1) If the status shows Low, the low speed ARINC 429 bus is operational.
- 2) If the status shows High, the high speed ARINC 429 bus is operational.
- 3) If the status shows Disabled, the bus is not configured.
- 4) If the status shows Failed, the NFS is not sensing ARINC 429 bus activity.
- 5) If the status shows Unavailable, the NFS cannot currently provide status for ARINC 429 bus.
- 6) Use the scroll bar to show more rows of data.

SUBTASK 46-13-00-700-003

- (4) Click once on the 429 TRANSMIT button.
 - (a) Examine the result for each bus that shows.

ARINC 429 Transmit Port

BUS ID	DISPLAY NAME^{*[1]}	NOTES
1	DATA LOAD OUT	Operational and shows High during data load of target LRU
2	BITE	Shows Low when NFS is sending ARINC 429 data to the FMC 1 and FMC 2
3	Unconfigured	
4	CABIN TERMINAL 1 TO CMU	Shows Low when NFS is sending ARINC 429 data to the CMU
5	Unconfigured	
6	Unconfigured	

*[1] If Unconfigured is displayed on a Bus, the airplane is not configured for this option.

- 1) If the status shows Low, the low speed ARINC 429 bus is operational.
- 2) If the status shows High, the high speed ARINC 429 bus is operational.
- 3) If the status shows Disabled, the bus is not configured.
- 4) If the status shows Failed, the NFS is not sensing ARINC 429 bus activity.

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- 5) If the status shows Unavailable, the NFS cannot currently provide status for ARINC 429 bus.
- 6) Use the scroll bar to show more rows of data.

SUBTASK 46-13-00-700-004

- (5) Click once on the INPUT DISCRETES button.
 - (a) Examine the result for each input discrete that shows.

Input Discrete

DISCRETE ID	DISPLAY NAME ^{*[1]}	NOTES
1	Unconfigured	
2	Unconfigured	
3	Unconfigured	
4	Unconfigured	
5	Unconfigured	
6	W-Air/Ground Relay	Status is Ground when relay is set on-ground and Open when relay is in-air

*[1] If Unconfigured is displayed on a Discrete ID, the airplane is not configured for this option.

- 1) If the status shows Open, the discrete signal is sensed as open.
- 2) If the status shows Ground, the discrete signal is sensed as grounded.
- 3) If the status shows Unavailable, the discrete is unconfigured or status is not available.
- 4) Use the scroll bar to show more rows of data.

SUBTASK 46-13-00-700-005

- (6) Click once on the OUTPUT DISCRETES button.
 - (a) Examine the result for each output discrete that shows.

Output Discrete

DISCRETE ID	DISPLAY NAME ^{*[1]}	NOTES
1	Unconfigured	
2	WWU RF Enable	Ground when WWU RF is enabled. Open when WWU RF is not enabled
3	DL FUNC DISC 1	Grounded as needed to support data load to target LRU
4	DL FUNC DISC 2	Grounded as needed to support data load to target LRU
5	DL FUNC DISC 3	Grounded as needed to support data load to target LRU
6	WAP-1 Power Enable	Ground when WAP-1 power is enabled. Open when WAP-1 power is not enabled
7	WAP RF Enable	Ground when WAP RF is enabled. Open when WAP RF is not enabled
8	DL RELAY CONTROL	Ground when Data Load from NFS to target LRU in progress
9	WAP-2 Power Enable	Ground when WAP-2 power is enabled. Open when WAP-2 power is not enabled

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Output Discrete (Continued)

DISCRETE ID	DISPLAY NAME ^{*[1]}	NOTES
10	Unconfigured	
11	Unconfigured	
12	Unconfigured	

*[1] If Unconfigured is displayed on a Discrete ID, the airplane is not configured for this option.

- 1) If the status shows Open, the discrete signal is sensed as open.
- 2) If the status shows Ground, the discrete signal is sensed as grounded.
- 3) If the status shows Unavailable, the discrete is unconfigured or status is not available.
- 4) Use the scroll bar to show more rows of data.

SIA 001-014 PRE SB 737-46-1029

SUBTASK 46-13-00-700-006

- (7) Click once on the 717 RECEIVE button.
 - (a) Examine the result for 717 receive bus that shows.

717 Receive

BUS	END CONNECTION	NOTES
1	DAR	When engines are not running, status will show Failed.

- 1) If the status shows Active, the interface is operational.
- 2) If the status shows Failed, there is no interface activity or engines are OFF.
 - a) To set 717 Receive to Active, do this task: Digital ACMS Recorder (DAR) 717 Activation, TASK 31-31-22-860-802.
- 3) Use the scroll bar to show more pages of data.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

SUBTASK 46-13-00-860-039

- (8) Click once on the QAR RECEIVE button.
 - (a) Examine the result for QAR receive bus that shows.

QAR Receive

BUS	END CONNECTION	NOTES
1	DAR	When engines are not running, status will show Inactive
2	RS422	When engines are not running, status will show Inactive

- 1) If the status shows Active, the interface is operational.
- 2) If the status shows Inactive, there is no interface activity or engines are OFF.
 - a) To set QAR Receive to Active, do this task: Digital ACMS Recorder (DAR) 717 Activation, TASK 31-31-22-860-802.

SIA ALL

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G. ONS Input Monitoring Check- Avionics Parameter

SUBTASK 46-13-00-860-040

- (1) Select the Avionic Parameters radio button at the top of the page.
 - (a) Make sure that the result shows the correct parameters on the display:
 - Airline ID
 - Aircraft Tail ID
 - Aircraft Type
 - ICAO Address
 - Time
 - Date
 - Origin
 - Destination
 - Weight on Wheels

SIA 015-999; SIA 001-014 POST SB 737-46-1029

NOTE: Airline ID and Aircraft Tail ID are populated by the DPCs. If the DPCs are off or unavailable, the Airline ID and Aircraft Tail ID can be manually entered on the Airplane ID page. This is the task: Airplane Identification Check, TASK 46-13-00-750-801.

SIA 001-014 PRE SB 737-46-1029

NOTE: Airline ID and Aircraft Tail ID are populated by the DPCs. If the DPCs are off or unavailable, the Airline ID and Aircraft Tail ID will be Unavailable.

SIA ALL

NOTE: ICAO address is populated by the ATC Transponder.

NOTE: Aircraft Type must be manually entered on the Airplane ID page. This is the task: Airplane Identification Check, TASK 46-13-00-750-801.

NOTE: Origin and Destination are populated via the FMC flight plan. If the airplane has not flown since NFS installation or reimage, a flight plan can be manually entered into the FMC and then loaded to the NFS.

NOTE: Time and Date are populated by the DPCs. If the DPCs are off or unavailable, time and date are populated by the MMRs. If the MMRs are not available, but the DPCs are available, Time and Date can be manually entered to the DPCs.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-00-080-005

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— END OF TASK —————

EFFECTIVITY
SIA ALL

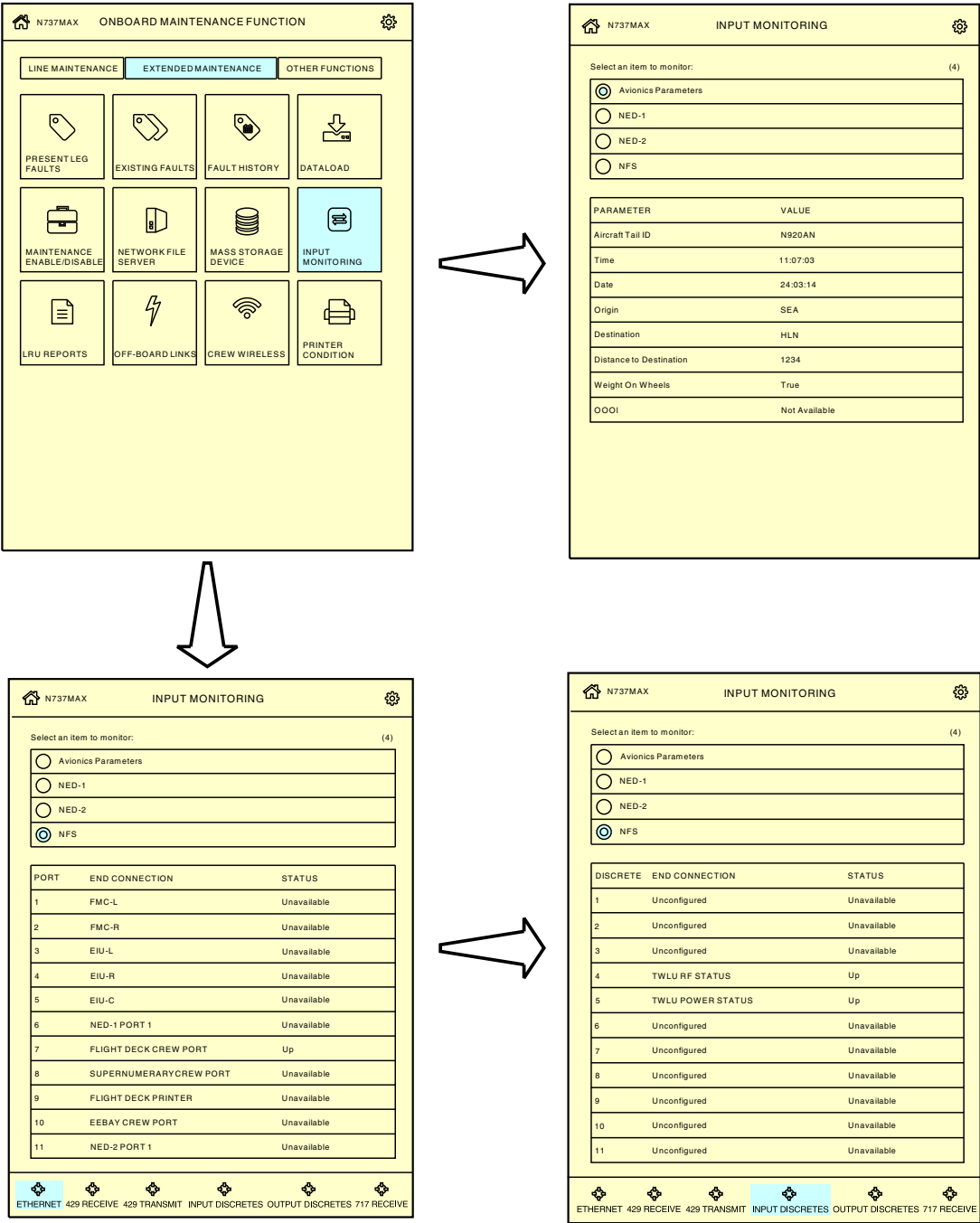
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NOTE:
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2475683 S0000580676_V1

Onboard Network System Input Monitoring Check
Figure 205/46-13-00-990-802

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TASK 46-13-00-710-802

10. **System Configuration Check**

(Figure 206)

A. General

- (1) This task gives the serial number, the hardware part number, and software part number(s) for the applicable Line Replaceable Unit (LRU).
- (2) This task can be used to determine the OS version of the Network File Server (NFS) by viewing the 46 NFS Boot OS software part number in the NFS system configuration. The following 46 NFS Boot OS software part numbers are tied to the following OS versions:

Boot OS Software Part Number	OS Version
BCG57-U000-02E3	OS7.0
BCG2A-U000-0458	OS7.1
BCG2X-U000-0XXX	OS9.1

- (3) This procedure is applicable to the units that follow:

- Integrated Air System Controller (IASC)
- Spoiler Control Electronics (SCE)
- Display Processing Computer (DPC)
- Proximity Sensing Electronics Unit (PSEU)
- Tire/Brake Monitoring Unit (TBMU) (Optional)
- Multi-Mode Receiver (MMR)
- NFS

SIA 001-014

- Wireless WAN Unit (WWU)

SIA ALL

- Auxiliary Power Unit (APU) Electronic Control Unit (ECU)
- Electronic Engine Control (EEC)
- Wireless Access Point (WAP)

SIA 015-999

- Aircraft Interface Device (AID)

SIA ALL

- (4) See the software installation task for the specific LRU for additional steps and checks that may be required to perform this task.
- (5) The aircraft must be on the ground to do this task.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (6) To do this task, more than ten minutes must have passed since an NFS power up was initiated.

SIA ALL

- (7) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:
 - Multi Function Display (MFD),
 - Other type of approved Universal Maintenance Device (UMD).

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- (8) The DATA REPORTS software parts are installed on the Mass Storage Device (MSD), but not dataloaded, so they will not show on a system configuration report. To do a check of the DATA REPORTS software parts, do this task: Mass Storage Device Software Parts Check, TASK 46-13-00-860-804. This task must be done with a UMD.

B. References

Reference	Title
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. ONS Configuration Check

SUBTASK 46-13-00-860-016

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321 is required for access.

SIA 001-014 PRE SB 737-46-1029

- (a) Select LINE MAINTENANCE > SYSTEM CONFIGURATION.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) Select LINE MAINTENANCE > System Configuration.

SIA ALL

- (c) To see the system configuration report for a specific ATA, do the steps that follow:
- 1) Select an ATA system.
 - 2) Select the CONTINUE button.
 - 3) Make sure that the LRU(s) show for the ATA selected and the data shows hardware part number(s), hardware serial number(s), software location description(s), and software part numbers.
- (d) To see the configuration of all ATA systems, do the steps that follow:
- 1) Select the ALL SYSTEMS button.
 - 2) Make sure that all the LRUs show for all ATAs selected and the data shows hardware part numbers, hardware serial numbers, software location descriptions, and software part numbers.

NOTE: It can take approximately five minutes before the REPORT button is enabled (turns from blue to white).

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- (e) If it is necessary, make a record of the data for your target LRU(s)
 - 1) To download a complete record of the data that shows, select REPORT, and follow the on-screen commands for the applicable destination.
 - 2) Make sure that the data agrees with the requirement specified by your airline or operator.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-00-080-006

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the Interactive Fault Isolation Manual (IFIM) and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

———— **END OF TASK** ————

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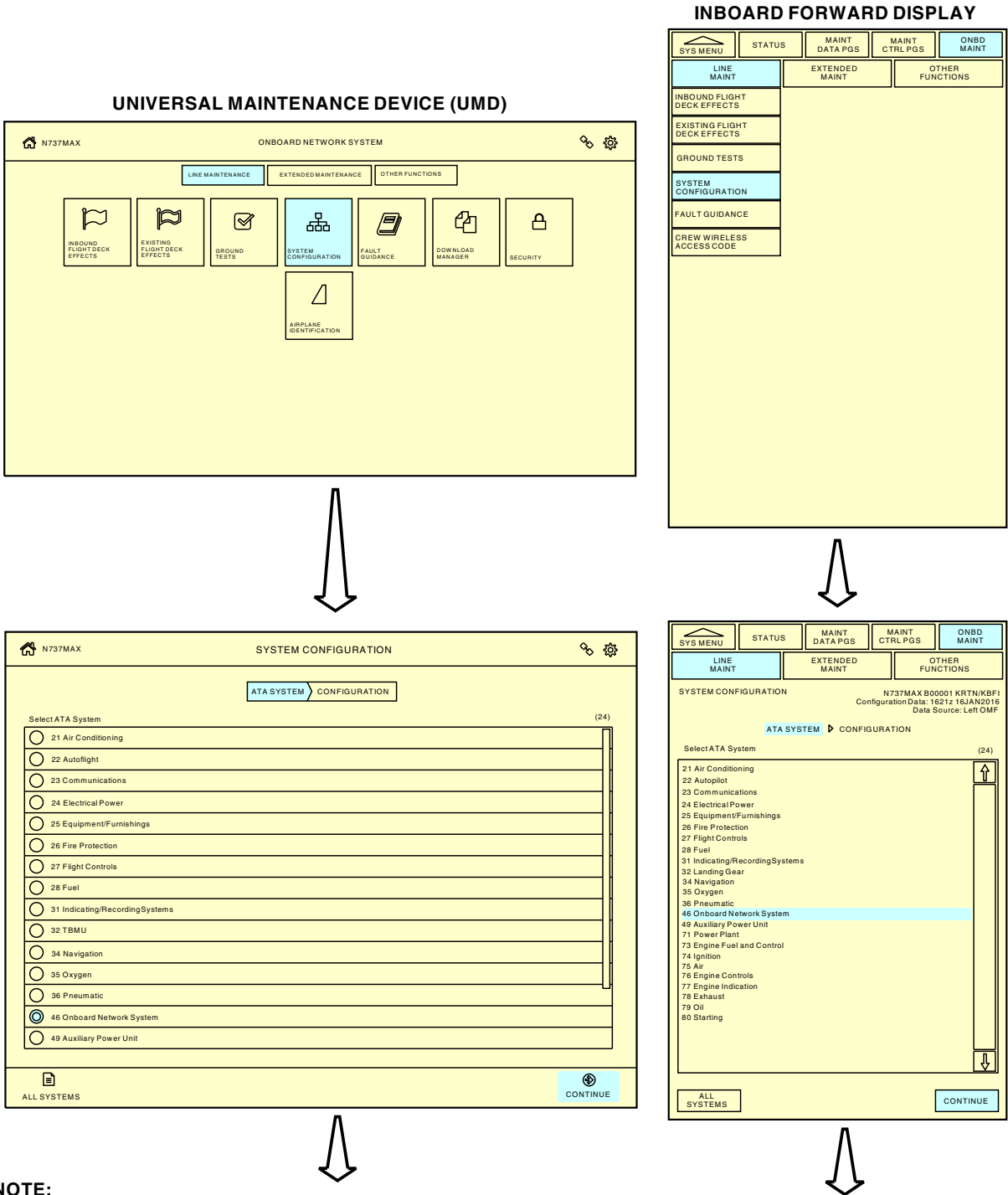
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NOTE:
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2476293 S0000580590_V3

Onboard Network System (ONS) System Configuration Check
Figure 206/46-13-00-990-803 (Sheet 1 of 2)

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UNIVERSAL MAINTENANCE DEVICE (UMD)

 N737MAX

SYSTEM CONFIGURATION



ATA SYSTEM

CONFIGURATION

46 Onboard Network System

(7)

CWLU-1

Hardware Part Number:
[PART NUMBER]

Serial Number:
[PART NUMBER]

Software Location Description:
[DESCRIPTION]

Part Number:
[PART NUMBER]

Part Number:
[PART NUMBER]

CWLU-2

Hardware Part Number:
[PART NUMBER]

Serial Number:
[PART NUMBER]

Software Location Description:
[DESCRIPTION]

Part Number:
[PART NUMBER]

Part Number:
[PART NUMBER]

CWLU-2

Hardware Part Number:
[PART NUMBER]

Serial Number:
[PART NUMBER]

Software Location Description:
[DESCRIPTION]

Part Number:
[PART NUMBER]

Part Number:
[PART NUMBER]

NED-1

 GO BACK

 REPORT

INBOARD FORWARD DISPLAY

 SYS MENU

STATUS

MAIN
DATA PGS

MAINT
CTRL PGS

ONBD
MAINT

LINE
MAINT

EXTENDED
MAINT

OTHER
FUNCTIONS

SYSTEM CONFIGURATION

N737MAX800001 KRTN/KBF1
Configuration Data: 1621z 16JAN2016
Data Source: Left OMF

ATA SYSTEM

CONFIGURATION

46 Onboard Network System

(45)

CWLU-1

Hardware Part Number:
[PART NUMBER]

Serial Number:
[PART NUMBER]

Software Location Description:
[DESCRIPTION]

Part Number:
[PART NUMBER]

Part Number:
[PART NUMBER]

CWLU-2

Hardware Part Number:
[PART NUMBER]

Serial Number:
[PART NUMBER]

Software Location Description:
[DESCRIPTION]

Part Number:
[PART NUMBER]

Part Number:
[PART NUMBER]

CWLU-3

Hardware Part Number:
[PART NUMBER]

Serial Number:
[PART NUMBER]

 GO BACK

 REPORT

NOTE:
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2476296 S0000580591_V3

Onboard Network System (ONS) System Configuration Check
Figure 206/46-13-00-990-803 (Sheet 2 of 2)

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TASK 46-13-00-470-801

11. LRU Software Parts Installation

(Figure 207)

A. General

- (1) This procedure gives the steps to install software into Line Replaceable Unit (LRU) with the Onboard Network System (ONS).
- (2) This procedure is applicable to the LRU that follow:
 - Flight Control Computer (FCC)

SIA 001-014

- ACARS Communications Management Unit (CMU)

SIA ALL

- SATCOM Satellite Data Unit (SDU)
- Forward Attendant Control Panel (ACP)
- Spoiler Control Electronics (SCE)
- Digital Flight Data Acquisition Unit (DFDAU)

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- Airplane Condition And Monitoring System (ACMS)

SIA ALL

- Display Processing Computer (DPC)
- Control Display Unit (CDU)
- Flight Management Computer (FMC)
- Enhanced Ground Proximity Warning Computer (EGPWC)
- Multimode Receiver (MMR)

SIA 001-014

- Wireless WAN Unit (WWU)

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- Auxiliary Power Unit Electronic Control Unit (APU ECU)
- Wireless Access Point (WAP)
- Network File Server (NFS)
- Electronic Engine Control (EEC)

SIA 015-999

- Aircraft Interface Device (AID)

SIA ALL

- (3) Confirm that the Loadable Software Airplane Part (LSAP) to be installed is saved on the NFS Mass Storage Device (MSD) (TASK 46-13-00-860-804).
 - (a) If the LSAP is not saved, install those parts to the NFS MSD (TASK 46-13-00-470-802).
- (4) See the software installation task for your specific LRU for additional steps and checks that may be required to perform this task.
- (5) The aircraft must be on the ground to do this task.

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(6) This task is available when the ONS is accessed with the methods that follow:

- Multi Function Display (MFD),
- Other type of approved Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-01-860-802	Network File Server Reimage Procedure (P/B 201)
46-13-02-700-805	Existing Faults Check (P/B 201)
46-13-02-970-802	Download Manager (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

SIA 001-014 PRE SB 737-46-1029

E. OMF Data Load Operation - LRU Software Installation via the UMD

SUBTASK 46-13-00-470-027

- (1) If not previously completed, check if the software is in the MSD (TASK 46-13-00-860-804). This task must be done with a UMD.

SUBTASK 46-13-00-480-018

- (2) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321, is required for access.

SUBTASK 46-13-00-470-009

- (3) Select EXTENDED MAINTENANCE > DATA LOAD.

SUBTASK 46-13-00-470-011

- (4) Install the software into the LRU, these are the steps:

- (a) Make sure that the DATA LOAD screen shows.

NOTE: On the DATA LOAD screen, look for these five tabs or function descriptions: DESTINATION (which is highlighted), LSP, SUMMARY, PRECONDITIONS and LOAD.

- (b) On the DESTINATION function tab, select the applicable ATA system.

ONS Dataload - ATA System LRU Mapping

ATA System	LRU
22 - AUTO FLIGHT	FCC-L, FCC-R

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SIA 001-014 PRE SB 737-46-1029 (Continued)

ONS Dataload - ATA System LRU Mapping (Continued)

ATA System	LRU
23 - COMMUNICATIONS	ACP*[1]
23 - COMMUNICATIONS	CMU
23 - COMMUNICATIONS	SDU-L
27 - FLIGHT CONTROLS	SCE-Lane-1, SCE-Lane-2, SCE-Lane-3
31 - INDICATING/RECORDING SYSTEMS	ACMS, DFDAU
	DPC-1, DPC-2
34 - NAVIGATION	EGPWS
	FMC-L, FMC-R
	MCDU-L, MCDU-R
	MMR-L, MMR-R
46 - INFORMATION SYSTEMS	NFS
	WAP-1, WAP-2
46 - INFORMATION SYSTEMS	WWU
49 - AIRBORNE AUXILIARY POWER	APU ECU
73 - ELECTRONIC ENGINE CONTROL	EEC-1A, EEC-1B, EEC-2A, EEC-2B

*[1] The AFT Attendant Control Panel (ACP) is also software loadable, but only when the ACP Crossload function is used to install software from the FWD ACP to the AFT ACP.

- (c) Select the applicable LRU.
- (d) Select the CONTINUE button at the bottom right of the screen.
 - 1) Make sure that the LSP (loadable software part) function tab is highlighted and that the necessary software part shows.
- (e) On the LSP tab, select one or more software parts to install.
 - 1) Click once to select the part(s).
- (f) Select CONTINUE at the bottom right of the screen.
 - 1) Make sure that SUMMARY is highlighted.
- (g) On the SUMMARY tab, make sure that only the selected part to be installed shows.
- (h) Select CONTINUE at the bottom of the screen.
 - 1) Make sure that the highlighted PRECONDITIONS tab shows.
- (i) Follow the instructions that show on the PRECONDITIONS tab.
- (j) Select CONTINUE at the bottom of the screen.
 - 1) Make sure that the highlighted LOAD tab shows.
- (k) Select START LOAD at the bottom of the screen.
- (l) If software is installed into the Rockwell CMU, do these steps after START LOAD is selected:
 - 1) Select DATALOAD* LSK on the CDU.
 - 2) Select PROCEED WITH DATALOAD LSK on the CDU.

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SIA 001-014 PRE SB 737-46-1029 (Continued)

- 3) Make sure that the message SCREEN WILL BLANK WHILE DATALOAD IS IN PROGRESS appears on CDU, then the MENU shows without the ACARS prompt.
- (m) Wait for the load progress indication on the LOAD tab to show that the data transfer is complete.
NOTE: The percent for progress status comes from the LRU. The information that shows and the update frequency will be different for different system LRUs.
- (n) Make sure that all software parts show Success in the Status field. If necessary, clear the modal that lists the load result.
- (o) If necessary, do the steps that follow to install a different part:
 - 1) For the UMD, select DESTINATION from the tab menu and start again at this step above:
 - “On the DESTINATION tab, select the applicable ATA system”.
 - 2) For the MFD, start again at this step above:
 - “For the MFD, select EXTENDED MAINT > DATA LOAD”.
- (p) Verify system logs are available under Download Manager, do this task: Download Manager, TASK 46-13-02-970-802.
NOTE: Logs may not be available until GET CURRENT is selected.
NOTE: If logs are not available after selecting GET CURRENT, the NFS must be reimaged. This is the task: Network File Server Reimage Procedure, TASK 46-13-01-860-802.
- (q) If software installation is complete, go to the next step.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

F. OMF Data Load Operation - LRU Software Installation via the UMD

SUBTASK 46-13-00-470-030

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.
NOTE: A universal maintenance device, SPL-11321 is required for access.

SUBTASK 46-13-00-470-033

- (2) Select EXTENDED MAINTENANCE > Data Load.
 - (a) Make sure that the DATA LOAD screen shows.
NOTE: On the DATA LOAD screen, look for these three tabs or function descriptions: SUMMARY (which is highlighted), PRECONDITIONS, and LOAD.
 - (b) Select the applicable ATA and LRU.
NOTE: Both the ATA number and the applicable LRU are selected as one option in the left-hand column of the page. This column is labeled “Select LRU Destination.”

ONS Dataload - ATA and LRU Mapping

ATA	LRU
22	FCC-L, FCC-R
23	ACP ^[1]

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SIA 015-999; SIA 001-014 POST SB 737-46-1029 (Continued)

ONS Dataload - ATA and LRU Mapping (Continued)

ATA	LRU
SIA 001-014 POST SB 737-46-1029	
23	CMU
SIA 015-999; SIA 001-014 POST SB 737-46-1029	
23	SDU-L
27	SCE-Lane-1, SCE-Lane-2, SCE-Lane-3
31	ACMS, DFDAU
	DPC-1, DPC-2
34	EGPWS
	FMC-L, FMC-R
	MCDU-L, MCDU-R
	MMR-L, MMR-R
46	NFS
	WAP-1, WAP-2
SIA 001-014 POST SB 737-46-1029	
46	WWU
SIA 015-999	
46	AID-FWD
SIA 015-999; SIA 001-014 POST SB 737-46-1029	
49	APU-ECU
73	EEC-1A, EEC-1B, EEC-2A, EEC-2B

*[1] The AFT Attendant Control Panel (ACP) is also software loadable, but only when you use the ACP Crossload function to install software from the FWD ACP to the AFT ACP.

- (c) Find the correct software and select one or more parts to install by clicking once on the part(s).

NOTE: The correct software is located under the SUMMARY tab on the right-hand column on the page. This column is labeled "Select Part Number." When parts are selected, they will show up at the bottom of the page in the "Load Queue" box.

- (d) Select the CONTINUE button at the bottom right of the screen.
- (e) Make sure that the highlighted PRECONDITIONS tab shows.
- (f) Follow the instructions that show on the PRECONDITIONS tab.
- (g) Select CONTINUE at the bottom right of the screen.
- (h) Make sure that the highlighted STATUS tab shows.
- (i) Select START LOAD at the bottom of the screen.

NOTE: Do not pull the Network File Server circuit breaker while a dataload is in progress.

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SIA 015-999; SIA 001-014 POST SB 737-46-1029 (Continued)

- (j) If software is installed into the Rockwell CMU, do these steps after START LOAD is selected:
 - 1) Select DATALOAD* LSK on the CDU.
 - 2) Select PROCEED WITH DATALOAD LSK on the CDU.
 - 3) Make sure that the message SCREEN WILL BLANK WHILE DATALOAD IS IN PROGRESS appears on CDU, then the MENU shows without the ACARS prompt.
- (k) Wait for the load progress indication on the START LOAD tab to show that the data transfer is complete.

NOTE: The percent for progress status comes from the LRU. The information that shows and the update frequency will be different for different system LRUs.
- (l) Make sure that all software parts show Success in the Status field.
- (m) Do the steps that follow to install a different part:
 - 1) Select GO BACK at the bottom left of the screen and start again at this step above:
 - “Select the applicable ATA and LRU.”
- (n) If software installation is complete, go to the next step.

SIA ALL

G. OMF Data Load Operation - LRU Software Installation via the MFD

SUBTASK 46-13-00-470-040

- (1) If not previously completed, check if the software is in the MSD (TASK 46-13-00-860-804). This task must be done with a UMD.

SUBTASK 46-13-00-480-019

- (2) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

SUBTASK 46-13-00-470-041

- (3) Select EXTENDED MAINT > DATA LOAD.

SUBTASK 46-13-00-470-042

- (4) Install the software into the LRU, these are the steps:
 - (a) Make sure that the DATA LOAD screen shows.

NOTE: On the DATA LOAD screen, look for these five tabs or function descriptions: DESTINATION (which is highlighted), LSP, SUMMARY, PRECONDITIONS and LOAD.
 - (b) On the DESTINATION function tab, select the applicable ATA system.

ONS Dataload - ATA System LRU Mapping

ATA System	LRU
22 - AUTO FLIGHT	FCC-L, FCC-R
23 - COMMUNICATIONS	ACP*[1]
SIA 001-014	
23 - COMMUNICATIONS	CMU

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SIA 001-014 (Continued)

ONS Dataload - ATA System LRU Mapping (Continued)

ATA System	LRU
SIA ALL	
23 - COMMUNICATIONS	SDU-L
27 - FLIGHT CONTROLS	SCE-Lane-1, SCE-Lane-2, SCE-Lane-3
31 - INDICATING/RECORDING SYSTEMS	ACMS, DFDAU
	DPC-1, DPC-2
34 - NAVIGATION	EGPWS
	FMC-L, FMC-R
	MCDU-L, MCDU-R
	MMR-L, MMR-R
46 - INFORMATION SYSTEMS	NFS
	WAP-1, WAP-2
SIA 001-014	
46 - INFORMATION SYSTEMS	WWU
SIA 015-999	
46 - INFORMATION SYSTEMS	AID-FWD
SIA ALL	
49 - AIRBORNE AUXILIARY POWER	APU-ECU
73 - ELECTRONIC ENGINE CONTROL	EEC-1A, EEC-1B, EEC-2A, EEC-2B

*[1] The AFT Attendant Control Panel (ACP) is also software loadable, but only when the ACP Crossload function is used to install software from the FWD ACP to the AFT ACP.

- (c) Select the applicable LRU.
- (d) Select the CONTINUE button at the bottom right of the screen.
 - 1) Make sure that the LSP (loadable software part) function tab is highlighted and that the necessary software part shows.
- (e) On the LSP tab, select one or more software parts to install.
 - 1) Click once to select the part(s).
- (f) Select CONTINUE at the bottom right of the screen.
 - 1) Make sure that SUMMARY is highlighted.
- (g) On the SUMMARY tab, make sure that only the selected part to be installed shows.
- (h) Select CONTINUE at the bottom of the screen.
 - 1) Make sure that the highlighted PRECONDITIONS tab shows.
- (i) Follow the instructions that show on the PRECONDITIONS tab.

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SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (j) Make sure that the signatures and certificates of the parts to be staged match the 46 NFS OAS AIRLINE CERT UMS.

SIA ALL

- (k) Select CONTINUE at the bottom of the screen.
 - 1) Make sure that the highlighted LOAD tab shows.
- (l) Select START LOAD at the bottom of the screen.
- (m) If software is installed into the Rockwell CMU, do these steps after START LOAD is selected:
 - 1) Select DATALOAD* LSK on the CDU.
 - 2) Select PROCEED WITH DATALOAD LSK on the CDU.
 - 3) Make sure that the message SCREEN WILL BLANK WHILE DATALOAD IS IN PROGRESS appears on CDU, then the MENU shows without the ACARS prompt.
- (n) Wait for the load progress indication on the LOAD tab to show that the data transfer is complete.

NOTE: The percent for progress status comes from the LRU. The information that shows and the update frequency will be different for different system LRUs.

- (o) Make sure that all software parts show Success in the Status field.
 - 1) If necessary, clear the modal that lists the load result.
- (p) If it is necessary, do the steps that follow to install a different part:
 - 1) Start again at this step above:
 - Select EXTENDED MAINT > DATA LOAD.

SIA 001-014 PRE SB 737-46-1029

- (q) Verify system logs are available under Download Manager, do this task: Download Manager, TASK 46-13-02-970-802. This task must be done with a UMD.

NOTE: Logs may not be available until GET CURRENT is selected.

NOTE: If logs are not available after selecting GET CURRENT, the NFS must be reimaged. This is the task: Network File Server Reimage Procedure, TASK 46-13-01-860-802.

SIA ALL

- (r) If software installation is complete, go to the next step.

H. LRU Software Installation Test

SUBTASK 46-13-00-470-012

- (1) To do a software configuration check, return to the software installation procedure for your applicable LRU.

NOTE: The software installation task for the applicable LRU will give you specific steps to do the software installation check.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-00-080-007

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems", do this task: Existing Faults Check, TASK 46-13-02-700-805.

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- (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).

SUBTASK 46-13-00-020-001

- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

———— **END OF TASK** ————

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MAINTENANCE LAPTOP

N737MAX ONBOARD MAINTENANCE FUNCTION

LINE MAINTENANCE EXTENDED MAINTENANCE OTHER FUNCTIONS

PRESENT LEG FAULTS EXISTING FAULTS FAULT HISTORY DATALOAD

MAINTENANCE ENABLE/DISABLE NETWORK FILE SERVER MASS STORAGE DEVICE INPUT MONITORING

LRU REPORTS OFF-BOARD LINKS CREW WIRELESS PRINTER CONDITION

INBOARD FORWARD DISPLAY

SYS MENU STATUS MAINT DATA PGS MAINT CTRL PGS ONBD MAINT

LINE MAINT EXTENDED MAINT OTHER FUNCTIONS

PRESENT LEG FAULTS EXISTING FAULTS FAULT HISTORY DATALOAD MAINTENANCE ENABLE/DISABLE

N737MAX DATA LOAD

DESTINATION LSP SUMMARY PRECONDITIONS LOAD

Select ATA System (31)

☐ 33 Lights
☐ 34 Navigation
☐ 35 Oxygen
☐ 36 Pneumatic
☐ 38 Water/Waste
☒ 46 Onboard Network System
☐ 49 Auxiliary Power Unit
☐ 71-80 Left Engine

Select LRU (7)

☐ CWLU 1
☐ CWLU 2
☐ CWLU 3
☒ NED 1
☐ NED 2
☐ NFS

CONTINUE

SYS MENU STATUS MAINT DATA PGS MAINT CTRL PGS ONBD MAINT

LINE MAINT EXTENDED MAINT OTHER FUNCTIONS

DATA LOAD

DESTINATION LSP SUMMARY PRECONDITIONS LOAD

Select ATA System (38)

31 INDICATING/RECORDING SYSTEMS
32 LANDING GEAR
33 LIGHTS
34 NAVIGATION
35 OXYGEN
36 PNEUMATIC
38 WATER/WASTE
46 ONBOARD NETWORK SYSTEM
49 AUXILIARY POWER UNIT
71-80 LEFT ENGINE

Select LRU (7)

☐ CWLU 1
☐ CWLU 2
☐ CWLU 3
☒ NED 1
☐ NED 2
☐ NFS

CONTINUE

NOTE:
THE DATA ON THIS DISPLAY IS ONLY AN EXAMPLE.

2476933 S0000581167_V1

LRU Software Installation
Figure 207/46-13-00-990-807 (Sheet 1 of 4)

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N737MAX DATA LOAD

DESTINATION LSP SUMMARY PRECONDITIONS LOAD

Select MSD Load Part Number (2)

☐ NET-Z-NEDS-50CA	46 NED OPC
☐ NET-Z-NEDS-50CB	46 NED OPC
☒ [MEDIA SET NUMBER]	[NOMENCLATURE]
[LSAP NUMBER]	
[LSAP NUMBER]	
[LSAP NUMBER]	

GO BACK CONTINUE

INBOARD FORWARD DISPLAY

SYS MENU STATUS MAINT DATA PGS MAINT CTRL PGS ONBD MAINT

LINE MAINT EXTENDED MAINT OTHER FUNCTIONS

DATA LOAD

DESTINATION LSP SUMMARY PRECONDITIONS LOAD

Select MSD Load Part Number (2)

☐ NET-Z-NEDS-50CA	46 NED OPC
☐ NET-Z-NEDS-50CB	46 NED OPC
☒ [MEDIA SET NUMBER]	[NOMENCLATURE]
[LSAP NUMBER]	
[LSAP NUMBER]	
[LSAP NUMBER]	

GO BACK CONTINUE

N737MAX DATALOAD

DESTINATION LSP SUMMARY PRECONDITIONS LOAD

Review Data Load Contents (1)

46 Onboard Network System > NED1
[MEDIA SET NUMBER] [NOMENCLATURE]
[LSAP NUMBER]
[LSAP NUMBER]
[LSAP NUMBER]

GO BACK CONTINUE

SYS MENU STATUS MAINT DATA PGS MAINT CTRL PGS ONBD MAINT

LINE MAINT EXTENDED MAINT OTHER FUNCTIONS

DATA LOAD

DESTINATION LSP SUMMARY PRECONDITIONS LOAD

Review Data Load Contents (1)

46 Onboard Network System > NED1
[MEDIA SET NUMBER] [NOMENCLATURE]
[LSAP NUMBER]
[LSAP NUMBER]
[LSAP NUMBER]

GO BACK CONTINUE

NOTE:
THE DATA ON THIS DISPLAY IS ONLY AN EXAMPLE.

2476935 S0000581170_V1

LRU Software Installation
Figure 207/46-13-00-990-807 (Sheet 2 of 4)

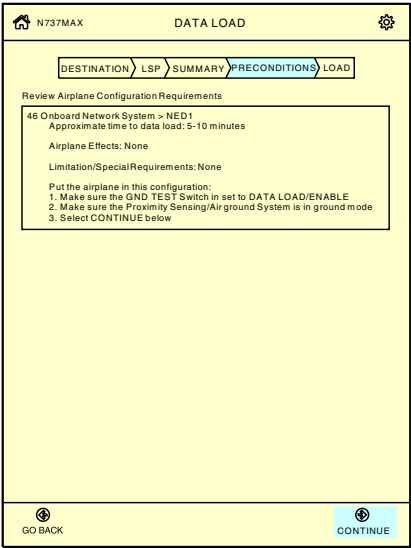
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↓



N737MAX DATA LOAD

DESTINATION LSP SUMMARY PRECONDITIONS LOAD

Review Airplane Configuration Requirements

46 Onboard Network System > NED1
Approximate time to data load: 5-10 minutes

Airplane Effects: None
Limitation/Special Requirements: None

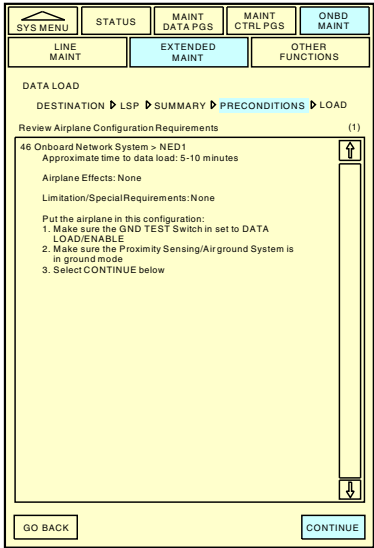
Put the airplane in this configuration:

1. Make sure the GND TEST Switch is set to DATA LOAD/ENABLE
2. Make sure the Proximity Sensing/Air ground System is in ground mode
3. Select CONTINUE below

GO BACK CONTINUE

INBOARD FORWARD DISPLAY

↓



SYS MENU STATUS MAINT DATA PGS MAINT CTRL PGS ONBD MAINT

LINE MAINT EXTENDED MAINT OTHER FUNCTIONS

DATA LOAD

DESTINATION LSP SUMMARY PRECONDITIONS LOAD

Review Airplane Configuration Requirements

46 Onboard Network System > NED1
Approximate time to data load: 5-10 minutes

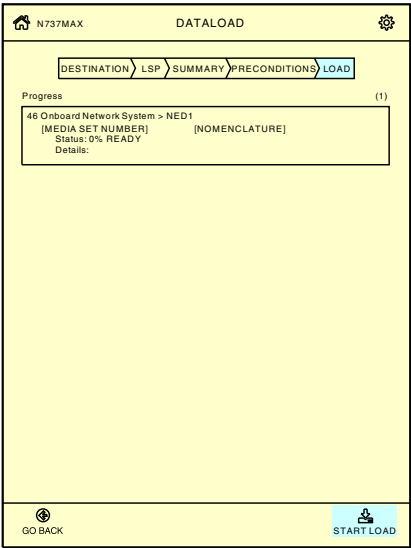
Airplane Effects: None
Limitation/Special Requirements: None

Put the airplane in this configuration:

1. Make sure the GND TEST Switch is set to DATA LOAD/ENABLE
2. Make sure the Proximity Sensing/Air ground System is in ground mode
3. Select CONTINUE below

GO BACK CONTINUE

↓



N737MAX DATA LOAD

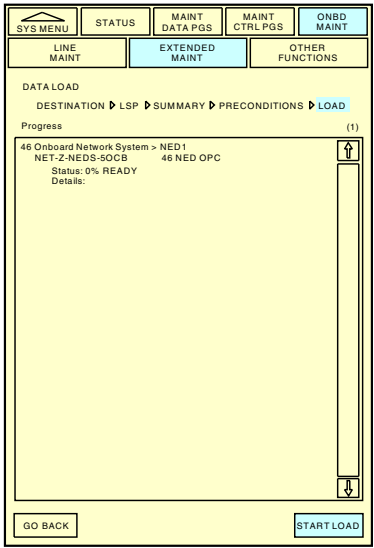
DESTINATION LSP SUMMARY PRECONDITIONS LOAD

Progress (1)

46 Onboard Network System > NED1
[MEDIA SET NUMBER] [NOMENCLATURE]
Status: 0% READY
Details:

GO BACK START LOAD

↓



SYS MENU STATUS MAINT DATA PGS MAINT CTRL PGS ONBD MAINT

LINE MAINT EXTENDED MAINT OTHER FUNCTIONS

DATA LOAD

DESTINATION LSP SUMMARY PRECONDITIONS LOAD

Progress (1)

46 Onboard Network System > NED1
NET-Z-NEDS-SOCB 46 NED OPC
Status: 0% READY
Details:

GO BACK START LOAD

NOTE:
THE DATA ON THIS DISPLAY IS ONLY AN EXAMPLE.

2476937 S0000581252_V1

LRU Software Installation
Figure 207/46-13-00-990-807 (Sheet 3 of 4)

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N737MAX

DATA LOAD

DESTINATION

LSP

SUMMARY

PRECONDITIONS

LOAD

Progress

(1)

46 Onboard Network System > NED1

[MEDIA SET NUMBER]

[NOMENCLATURE]

Status: 1% IN PROGRESS

Details:

GO BACK

STOP LOAD

INBOARD FORWARD DISPLAY



SYS MENU

STATUS

MAINT DATA PGS

MAINT CTRL PGS

ONBD MAINT

LINE MAINT

EXTENDED MAINT

OTHER FUNCTIONS

DATA LOAD

DESTINATION

LSP

SUMMARY

PRECONDITIONS

LOAD

Progress

(1)

46 Onboard Network System > NED1

NET-Z-NEDS-SOCB

46 NED OPC

Status: 1% IN PROGRESS

Details:

GO BACK

STOP LOAD



N737MAX

DATA LOAD

DESTINATION

LSP

SUMMARY

PRECONDITIONS

LOAD

Progress

(1)

46 Onboard Network System > NED1

[MEDIA SET NUMBER]

[NOMENCLATURE]

Status: 100% COMPLETE

Details: Loaded to disk.

GO BACK

NEW LOAD



SYS MENU

STATUS

MAINT DATA PGS

MAINT CTRL PGS

ONBD MAINT

LINE MAINT

EXTENDED MAINT

OTHER FUNCTIONS

DATA LOAD

DESTINATION

LSP

SUMMARY

PRECONDITIONS

LOAD

Progress

(1)

46 Onboard Network System > NED1

NET-Z-NEDS-SOCB

46 NED OPC

Status: 100% COMPLETE

Details: Loaded to disk.

GO BACK

NEW LOAD

NOTE:
THE DATA ON THIS DISPLAY IS ONLY AN EXAMPLE.

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LRU Software Installation
Figure 207/46-13-00-990-807 (Sheet 4 of 4)

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TASK 46-13-00-860-804

12. **Mass Storage Device Software Parts Check**

(Figure 208)

A. General

- (1) This task gives the steps to do a check of software parts on the Network File Server (NFS) Mass Storage Device (MSD).
- (2) The aircraft must be on the ground to do this task.
- (3) This task is available when the Onboard Network System (ONS) is accessed with the Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Prepare for the Check

SUBTASK 46-13-00-860-022

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321 is required for access.

F. Mass Storage Device Software Parts Check

SUBTASK 46-13-00-860-023

- (1) For the Mass Storage Device Software Parts Check, do these steps:

SIA 001-014 PRE SB 737-46-1029

- (a) Select EXTENDED MAINTENANCE > MASS STORAGE DEVICE.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) Select EXTENDED MAINTENANCE > Mass Storage Device.

SIA ALL

- (c) Select ONS MSD.
 - 1) Examine the data that shows below the words: Select the Load Part Number.
 - 2) Use the scroll bar to see the complete list of software parts.
 - 3) Make sure that the software parts that show agree with the requirement specified by your airline or operator.

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SUBTASK 46-13-00-070-002

- (2) If it is necessary to remove software parts from the MSD, do this task: Mass Storage Device Software Parts Removal, TASK 46-13-00-070-801.

SUBTASK 46-13-00-470-013

- (3) If it is necessary to stage software parts to the MSD, do this task: Stage Software Parts on a Mass Storage Device via Universal Maintenance Device (UMD), TASK 46-13-00-470-802.

SUBTASK 46-13-00-470-045

- (4) If it is necessary to save a report, do these steps:
 - (a) Select REPORT.
 - (b) Select the radio button for Maintenance Device.
 - (c) Select SEND.
 - (d) Select the save location.
 - (e) Save the report.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-00-080-008

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— END OF TASK —————

EFFECTIVITY
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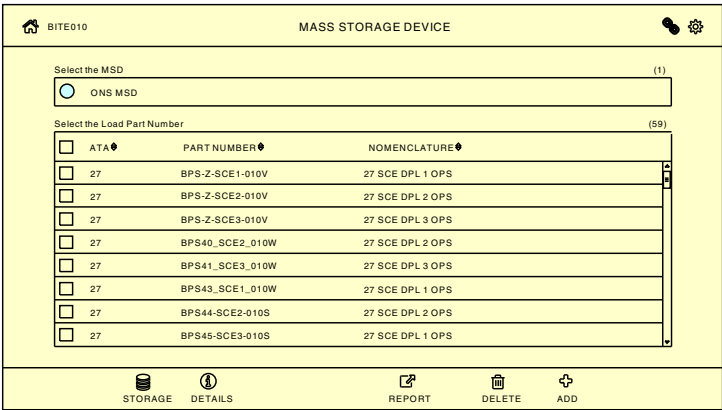
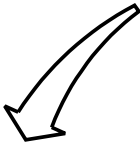
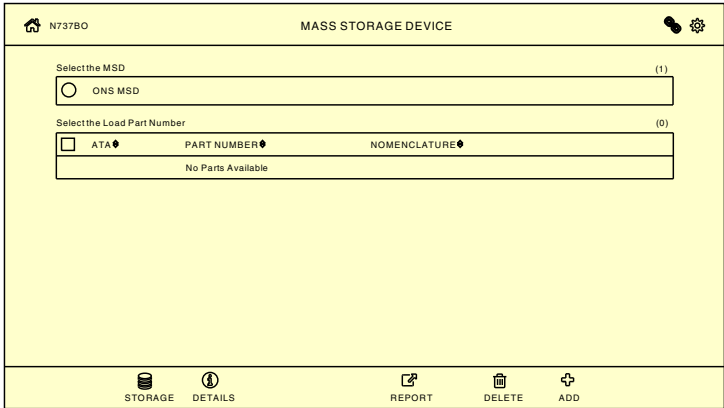
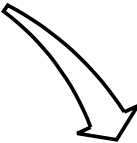
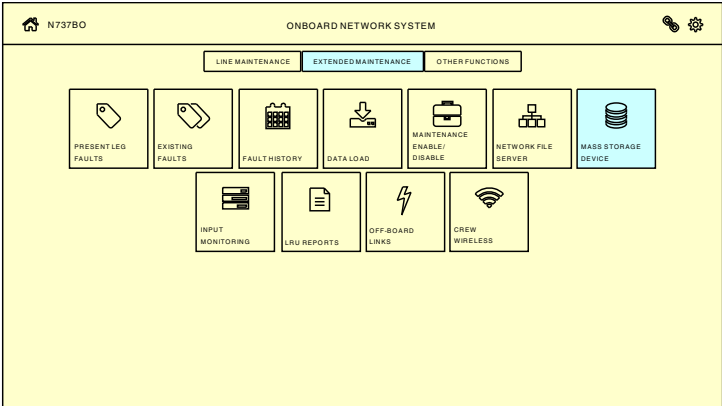
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NOTE:
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2472980 S0000578915_V3

Mass Storage Device (MSD) Software Parts Check
Figure 208/46-13-00-990-801

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TASK 46-13-00-070-801

13. **Mass Storage Device Software Parts Removal**

(Figure 209)

A. General

- (1) This task gives the steps to remove one or more software parts from the Network File Server (NFS) Mass Storage Device (MSD).
 - (a) Removal prevents that software part from future installation to the applicable Line Replaceable Unit (LRU).
 - (b) Removal does not uninstall the software from the applicable LRU.
- (2) This task is available when the Onboard Network System (ONS) is accessed with the Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Prepare for the Software Part Removal

SUBTASK 46-13-00-860-024

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321 is required for access.

F. MSD Software Part Removal

SUBTASK 46-13-00-860-025

- (1) For the MSD Software Part Removal, do these steps:

SIA 001-014 PRE SB 737-46-1029

- (a) Select EXTENDED MAINTENANCE > MASS STORAGE DEVICE.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) Select EXTENDED MAINTENANCE > Mass Storage Device.

SIA ALL

- (c) Select ONS MSD.
 - 1) Examine the data that shows below Select the Load Part Number.
 - 2) If necessary, use the scroll bar to see the complete record of software parts.

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SUBTASK 46-13-00-070-003

- (2) To select and to remove one or more parts, do these steps:
 - (a) Click on the part to put a check mark in the box adjacent to your selection.
 - 1) To deselect, click again on the part.
 - 2) The page will let you select one, more than one, or all of the parts.
 - (b) Click DELETE.
 - (c) When the confirmation box shows, click CONTINUE.
 - (d) Make sure that the deleted software does not show in the list of software parts.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-00-080-009

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

———— **END OF TASK** ————

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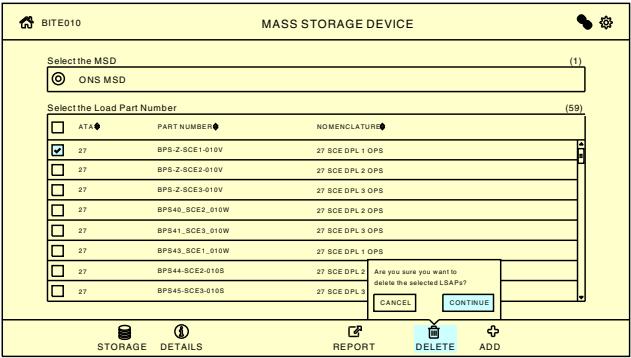
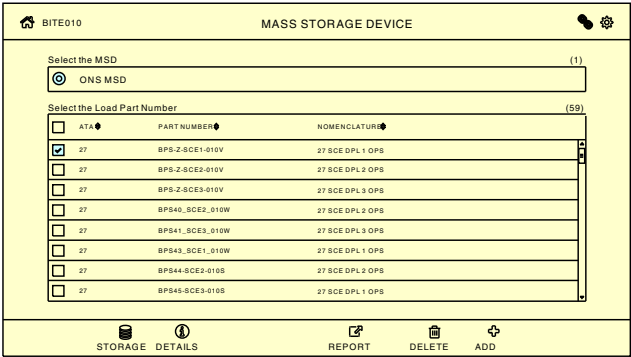
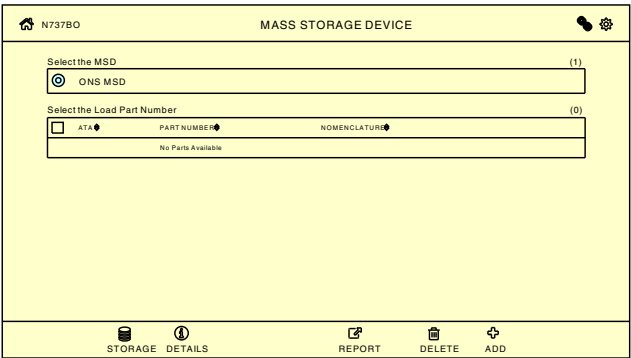
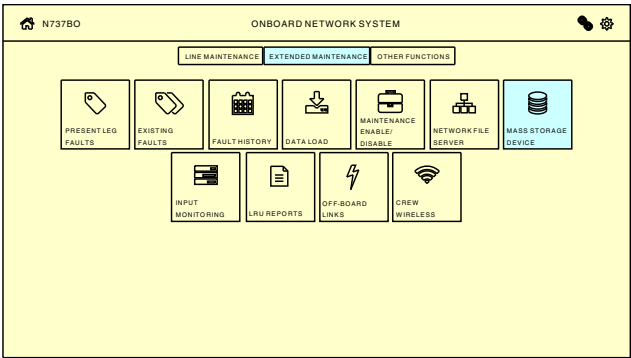
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NOTE:
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2475656 S0000580625_V2

**Mass Storage Device (MSD) Software Parts Removal
Figure 209/46-13-00-990-805**

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TASK 46-13-00-470-802

14. **Stage Software Parts on a Mass Storage Device via Universal Maintenance Device (UMD)**
(Figure 210)

A. General

- (1) This task gives the steps to stage software parts from the Universal Maintenance Device (UMD) to the Network File Server (NFS) Mass Storage Device (MSD). These parts are for future installation into the applicable Line Replaceable Unit (LRU).
 - (a) Gather all the software parts you need on a removable media or UMD before going to the airplane.
- (2) Typically, the software parts are compressed (or; crated, zipped) into the .zip format.
- (3) To do this task the aircraft must be on the ground, with its weight compressing the landing gear.
- (4) This task is available when the Onboard Network System (ONS) is accessed with the UMD.

NOTE: This task is not available when you get access to ONS maintenance with the MAX Display System (MDS) two forward Multi Function Display (MFD).

B. References

Reference	Title
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Prepare for the Software Installation

SUBTASK 46-13-00-860-026

- (1) Do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.
 - (a) Use the universal maintenance device, SPL-11321, to get access to the ONS Maintenance browser main menu.

SUBTASK 46-13-00-470-014

- (2) To confirm the software is not already installed on the MSD, refer to this task: Mass Storage Device Software Parts Check, TASK 46-13-00-860-804.

F. Mass Storage Device Software Part Installation

SUBTASK 46-13-00-470-015

- (1) Put the source media into the UMD, if the software is not already on the UMD.

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- (a) Your source data can be a compact disk (CD), or a USB memory stick, or other method specified by your airline or operator.

SUBTASK 46-13-00-470-016

- (2) From the ONS Maintenance browser main menu, make your selection:

SIA 001-014 PRE SB 737-46-1029

- (a) EXTENDED MAINTENANCE > MASS STORAGE DEVICE.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) EXTENDED MAINTENANCE > Mass Storage Device.

SIA ALL

- (c) From the Mass Storage Device menu, make the selection: ONS MSD.
 - 1) Select the ADD (+ sign icon) button.
 - 2) Make sure that the "Select a file with software parts to load" page shows.

SUBTASK 46-13-00-470-017

- (3) Find, select, and upload a software part as follows:

- (a) Select the BROWSE button.
- (b) When the File Upload window shows, go to the location of the file you want to add to the MSD.
- (c) Look for the applicable software File Name and Part Number in the upload window.
- (d) Click once on that software part to select it.
 - 1) Then, select OPEN in the file upload window.

NOTE: The software part should start uploading from the UMD.

NOTE: If a window appears that says "Not a valid OBEDS crate", then refer to the IFIM and do the applicable procedure(s).

- (e) When the software transfer operation is complete, make sure these indications show on the current MSD page:
 - 1) The software part that you selected shows in the FILE NAME column.
 - 2) The correct software part number shows in the PART NUMBER column.
 - 3) The STATUS column shows the word SUCCESS.

NOTE: The File transfer status may progress from TRANSFERRED to DELIVERED before showing SUCCESS. Large files may take several minutes to complete before showing SUCCESS.

NOTE: If the operation is unsuccessful, the STATUS column shows the word Error. Refer to the IFIM and do the applicable procedure(s).

- (f) To add another software part to the MSD, select the BROWSE icon and do the steps again.

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G. Mass Storage Device Software Part Installation Test

SUBTASK 46-13-00-470-018

- (1) Select the "Back to ONS MSD LSAPs" button in the top left of the screen and make sure the part(s) are listed.

NOTE: When a part is saved to the MSD, it is available for installation into a Data Loadable LRU. If you must now install this software into the target LRU, refer to the software installation task in the AMM for that specific LRU. This is the task: LRU Software Parts Installation, TASK 46-13-00-470-801.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-00-080-010

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the UMD is no longer necessary, stop the ONS maintenance browser session, and disconnect maintenance device.

————— **END OF TASK** —————

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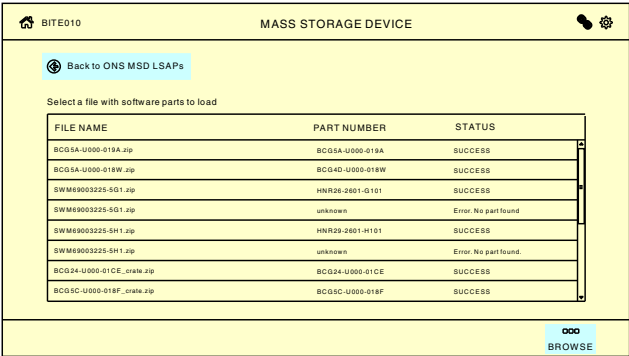
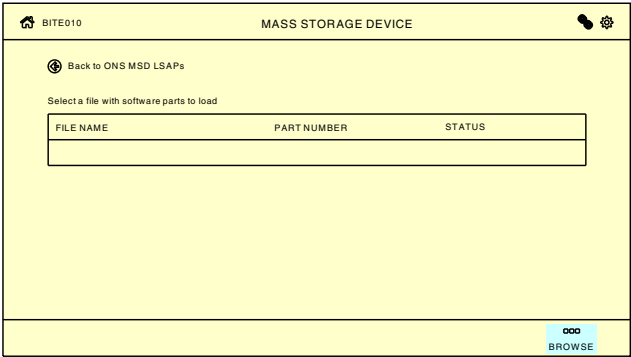
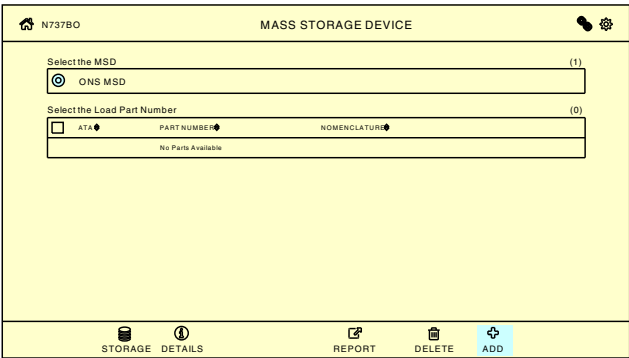
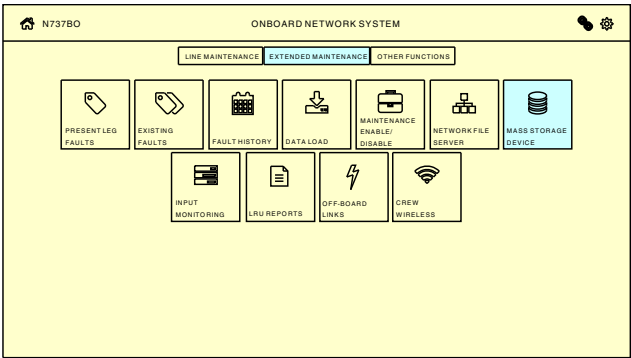
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NOTE:
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Mass Storage Device (MSD) Software Parts Installation
Figure 210/46-13-00-990-806

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TASK 46-13-00-470-803

15. Download Files using the Software Management Tool (SMT)

A. 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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

B. General

SUBTASK 46-13-00-800-001

- (1) This task instructs how to download a file that is stored in the NFS Mass Storage Device (MSD) to the Universal Maintenance Device (UMD).
- (2) Do this task when you get access to the Onboard Network System (ONS) maintenance browser with the UMD.

NOTE: This task is not available when you get access to ONS maintenance with the MAX Display System (MDS) two forward Multi Function Display (MFD).

C. Prepare for the Procedure

SUBTASK 46-13-00-480-005

- (1) Do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.
 - (a) Make sure that the universal maintenance device, SPL-11321 is connected to the airplane by a Wired or Wireless connection.

SUBTASK 46-13-00-860-032

- (2) Start the Software Management Tool (SMT) on the universal maintenance device, SPL-11321.
 - (a) Make sure that the desktop of the universal maintenance device, SPL-11321 is shown.
 - (b) If the "LSAPL-SMT" icon shows on the desktop of the universal maintenance device, SPL-11321, double-click on the icon.
 - 1) Make sure that the Software Management Tool window shows.
 - (c) If the "LSAPL-SMT" icon does not show, do these steps:
 - 1) Click of the Start button on the desktop menu bar.

NOTE: The Start button is usually located at the bottom left of the desktop window.
 - 2) Click on All Programs.

NOTE: The subsequent menu shows.
 - 3) Click on LSAPL-SMT.

NOTE: The subsequent menu shows.
 - 4) Click on LSAPL-SMT on the menu.
 - a) Make sure that the Software Management Tool window shows.
 - (d) Select "Get Data from Airplane" button on the SMT screen.



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- (e) If the “Unable to connect to the airplane...” message shows in the Status Messages section, do these steps:
 - 1) Wait a minimum of two (2) minutes.
 - 2) Select the “Get Data from Airplane” button.
 - 3) If the error message still shows, then refer to the IFIM and do the applicable procedure(s).
- (f) Make sure the “Successfully connected to airplane...” message with the current date and time shows in the Status Messages section.
- (g) Make sure the Airplane Tail ID is correct.

NOTE: The Airplane Tail ID is shown at the upper right corner of the screen as “Airplane: xxxxxx”.
- (h) Select the “This SMT” button in the “Redirect Downlinks to” box.

D. Check the Files Downloaded to the Maintenance Laptop

SUBTASK 46-13-00-860-035

- (1) Do these steps on the Software Management Tool (SMT) window:
 - (a) Verify the files in the “List of Airplane Data for XXXXXX” frame are correct.

NOTE: XXXXXX is the airplane Tail ID.

 - 1) Make sure that the File Name, Airplane and Received information of the files are correct.

NOTE: The Location will show the location where the file is stored on the UMD.
 - 2) Make sure that the download is completed.

NOTE: The Status will show SUCCESS when the download is completed.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-00-080-011

- (1) Close the Onboard Storage Management (OSM) window.
- (2) Close the Software Management Tool (SMT) window.
- (3) If necessary, disconnect the universal maintenance device, SPL-11321 from the airplane.
 - (a) To disconnect the Wired Connection, do the following steps:
 - 1) Disconnect the Ethernet cable from the airplane.
 - 2) Disconnect the Ethernet cable from the universal maintenance device, SPL-11321.
 - (b) To disconnect the Wireless Connection, do the following steps:
 - 1) Left-click on the Wireless Utility icon in the taskbar.
 - 2) Left-click on the current connection.
 - 3) Click the DISCONNECT button.

———— **END OF TASK** ————

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TASK 46-13-00-470-804

16. Stage Software Parts on a Mass Storage Device via Ground Network or Software Management Tool

A. General

- (1) Make sure to have all software parts on the Universal Maintenance Device (UMD) before going to the airplane.
- (2) This task includes the steps to stage parts to the airplane's Mass Storage Device (MSD) from:
 - (a) Ground Network:
 - 1) Loadable Software Airplane Part (LSAP) Librarian
 - 2) LSAP Librarian Proxy Server
 - (b) Software Maintenance Tool (SMT)
 - (c) Other
- (3) These are the steps to send part(s) to the airplane:
 - (a) Get the part(s) from the Ground Network, SMT, or other location and store them on the UMD.
 - (b) Send the part(s) from the UMD to the MSD on the airplane.
 - (c) Send the data report back to the Ground Network.
- (4) A universal maintenance device, SPL-11321 is necessary for this task.

SIA 001-014 PRE SB 737-46-1029

- (5) Not all OPCs enable Part Signature Validation/Field-Loadable Software Signature Checking. The 46 NFS OAS AIRLINE CERT UMS is required to support staging software to the MSD only if Part Signature Validation/Field-Loadable Software Signature Checking is included in the OPC.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (6) The 46 NFS OAS AIRLINE CERT UMS is required to support staging software to the MSD.

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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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

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D. Prepare for Loading

SUBTASK 46-13-00-470-020

- (1) Start the Software Maintenance Tool (SMT) application on the universal maintenance device, SPL-11321.
 - (a) To start the SMT, do this task: Download Files using the Software Management Tool (SMT), TASK 46-13-00-470-803.

SUBTASK 46-13-00-470-021

- (2) Make sure that the airplane time is correct.

NOTE: Time mismatch between the airplane and the universal maintenance device, SPL-11321 can prevent the staging of the LSAP.

E. Get Scheduled Parts onto the Maintenance Laptop

SUBTASK 46-13-00-480-006

- (1) Make sure that the universal maintenance device, SPL-11321 is connected to the Ground Network through a ground-wired Ethernet connection.

SUBTASK 46-13-00-470-022

- (2) To get scheduled parts, do these steps:
 - (a) Select the "Get Parts Scheduled" button on the SMT screen (Figure 211 (Sheet 1)).
 - (b) Make sure that the status shows "SUCCESS" for all parts.
 - (c) Select the Finish button.

NOTE: After you select the Finish button, the "View Parts on SMT" module will show.

NOTE: If you selected the Ground Network location, SMT disconnects from the Ground Network.

F. Get Unscheduled Parts onto the Maintenance Laptop

SUBTASK 46-13-00-470-023

- (1) To get parts, do these steps:
 - (a) If you want to search for parts from the Ground Network, make sure that the universal maintenance device, SPL-11321 is connected to the Ground Network through a ground-wired Ethernet connection.
 - (b) Select the "Get Parts Unscheduled" button on the SMT screen (Figure 211 (Sheet 2) and Figure 211 (Sheet 3)).

NOTE: The Get Parts Unscheduled screen will show Page 1 of 4.
 - (c) Select a location to search for part(s) in the lower half of the screen.
 - 1) Select SMT or Ground Network or Other.

NOTE: The SMT option lets you search for parts on SMT residing on the UMD.
The Ground Network option lets you search for parts in LSAP Librarian or LSAP Librarian Proxy Server associated with the current SMT Location.
The Other option lets you to search for parts from other media.

NOTE: You can enter the full or partial of a part name in the "Enter part name" field to filter your search.
 - (d) Select the Next button.

NOTE: The subsequent screen will show Page 2 of 4.

 - 1) If you select Other, find the part(s) on the directory.

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- (e) Make sure that the search results are shown.
 - (f) Select the correct parts in the Part Results table.
 - 1) Select the box adjacent to the parts or click on the parts.

NOTE: You can select multiple parts.
 - (g) Make sure that a check mark shows in the box adjacent to the selected part(s).
 - (h) Select the Next button.
- NOTE: The subsequent screen will show Page 3 of 4.

SUBTASK 46-13-00-470-024

- (2) Select the Tail # and Destination to create uplink tasks for the part(s), do these steps:
 - (a) Make sure that the selected parts shown in the “Select Parts to Transfer” table.
 - (b) Select the airplane for the parts.
 - 1) Click on the cell under the “Airplane” column for the part.

NOTE: Tail # should automatically fill in.

 - a) If the Tail # does not automatically fill in, do these steps:
 - <1> If a drop-down box shows, select the correct Airplane #.
 - <2> If a drop-down box does not show, enter the correct Airplane #.
 - 2) Select the Tail # for all parts.
 - (c) Select a destination system for each part.

NOTE: The destination system for the part should automatically fill in after the Airplane # is selected.

 - 1) If the destination system for a part does not show, do these steps:
 - a) Click on the cell in the Destination System column for the part.
 - b) Select a destination system from the drop-down box.
 - c) Make sure that the destination system is correct.
 - (d) Select the Next button.
- NOTE: The subsequent screen will show Page 4 of 4.
- (e) Make sure that the uplink tasks in the Status Messages window are correct.
 - (f) Select the Finish button.
- NOTE: After you select the Finish button, the “View Parts on SMT” module will show.
- NOTE: If you selected the Ground Network location, SMT disconnects from the Ground Network.

G. Send Parts to the Airplane

SUBTASK 46-13-00-480-007

- (1) Connect the universal maintenance device, SPL-11321 to the airplane. Do these steps:
 - (a) If the universal maintenance device, SPL-11321 is ground-wired connected to the Ground Network, disconnect the universal maintenance device, SPL-11321 from the Ground Network.
 - (b) To connect the UMD to the airplane, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

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- 1) Make sure that the UMD is connected to the airplane by a Wired, Wireless Limited or Wireless Full connection.

NOTE: The Connection feature on the Maintenance Control Display Function (MCDF) banner shows how the UMD is connected to the airplane.

SUBTASK 46-13-00-470-025

- (2) To send the parts to the airplane, do these steps:
 - (a) Select the "Send Parts to Airplane" button on the SMT screen (Figure 211 (Sheet 4)).
 - (b) If the "Unable to connect to the airplane..." message shows in the Status Messages section, do these steps:
 - 1) Wait a minimum of two minutes.
 - 2) Select the "Send Parts to Airplane" button.
 - (c) Make sure that the "Successfully connected to airplane..." message with the current date and time shows in the Status Messages section.
 - (d) Make sure that the airplane Tail ID is correct.

NOTE: The airplane Tail ID is shown at the upper right corner of the screen as "Tail #: xxxxx".
 - (e) Select the part(s) to send to the airplane from the "Select Part(s) for Transfer to the Airplane" section:
 - 1) Click on the box adjacent to a part or click on a row to select.

NOTE: You can select multiple parts.

To select all parts, click on the box adjacent to Select All.
 - (f) Select the Next button.

NOTE: The subsequent screen will show Page 2 of 2.

NOTE: Parts will start uplinking. The Status column shows the progress of the uplink.
 - (g) Make sure that all uplinks are success.

NOTE: The word "SUCCESS" will show in the Status for each successfully uplinked part.

NOTE: If software parts are not transferred after 60 minutes, the software parts will be deleted and the status will show a timed out error code.
 - (h) For CSS, to verify parts were delivered, do these steps:

NOTE: For certain CSS fault conditions, the status will not show. Do these steps to make sure that software parts are transferred to the CSS MSD even if the SMT status does not show.

 - 1) Go to a Cabin Attendant Panel (CAP).
 - 2) Select the CABIN MAINTENANCE button.
 - 3) Select the CABIN DATA LOAD button.
 - 4) Select the REGISTRY SET-UP button.
 - 5) Make sure that the CSS parts show.

NOTE: The amount of time it takes for the parts to show in the Registry Set-up screen depends on how many CSS parts are being transferred and how many non-CSS parts are being transferred to other systems. If only CSS parts are being transferred, it can take up to 20 minutes for a full set of CSS parts.



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- (i) Select the Finish button.

NOTE: After you select the Finish button, the “View Parts on SMT” module will show.

SUBTASK 46-13-00-080-012

- (3) Disconnect the universal maintenance device, SPL-11321 from the airplane.

H. Send Data to Ground Network

SUBTASK 46-13-00-480-008

- (1) Connect the universal maintenance device, SPL-11321 to the ground network through a ground-wired Ethernet connection.

SUBTASK 46-13-00-470-026

- (2) Select the “Send Data to Ground Network” button on the SMT window (Figure 211 (Sheet 5)).

NOTE: When “Send Data to Ground Network” button is selected, SMT automatically connects to the LSAP Librarian or LSAP Librarian Proxy Server. When connected, SMT automatically returns successfully uplinked tasks, failed uplink tasks, downlinked files, and event logs.

NOTE: The Status Messages section will show the status.

- (3) Select the Finish button.

NOTE: After you select the Finish button, the “View Parts on SMT” module will show.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-00-080-013

- (1) If necessary, close the Software Maintenance Tool.
 - (a) Select Exit SMT on the SMT screen.

————— **END OF TASK** —————

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AIRCRAFT MAINTENANCE MANUAL

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NOTE:

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2608068 S0000625870_V2

Software Maintenance Tool
Figure 211/46-13-00-990-811 (Sheet 1 of 5)

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View Parts on SMT

Get Parts Scheduled

Get Parts Unscheduled

View All Parts for All Airplanes

Send Parts to Airplane

Get Data from Airplane

View All Data from All Airplanes

Send Data to Ground Network

Exit SMT

Get Parts Unscheduled

Page 1 of 4

SMT Location Seattle

Status Messages

Search

Select where to search for part:

☐ SMT Inventory

☐ Ground Network

☐ Other Location

Optional

Enter LSAP name (some of all):

< BACK

NEXT >

CANCEL

View Parts on SMT

Get Parts Scheduled

Get Parts Unscheduled

View All Parts for All Airplanes

Send Parts to Airplane

Get Data from Airplane

View All Data from All Airplanes

Send Data to Ground Network

Exit SMT

Get Parts Unscheduled

Page 2 of 4

SMT Location: Seattle

Status Messages

Mon May 19 20:32:07 GMT 2008 - uq281a - Browsing inventory in Ground Network....
Mon May 19 20:32:08 GMT 2008 - uq281a - Found 87 LSAPs from Ground Network matching specified search criteria %
Mon May 19 20:32:59 GMT 2008 - uq281a - Attempting to connect to ground Network....
Mon May 19 20:32:59 GMT 2008 - uq281a - Connected to Ground Network....
Mon May 19 20:32:59 GMT 2008 - uq281a - Browsing inventory in Ground Network....
Mon May 19 20:32:59 GMT 2008 - uq281a - Found 87 LSAPs from Ground Network matching specified search criteria %

Part Results

☐ Select All

Parts	Nomenclature	Expires	Size
☐ BCG42-1234-3333	This is a rather short description	2034-07-14 00:38:43.0	
☐ BCG52-0000-00AU	This is a rather short description	2034-07-14 00:38:43.0	
☐ BCG-Z-0000-001U	BCG22-0000-001U	2034-07-14 00:38:43.0	
☐ BCG-Z-0000-00AU	This is a rather short description	2034-07-14 00:38:43.0	
☐ COL30-0002-001A	This is a rather short description	2034-07-14 00:38:43.0	
☐ COL444	ASDFA	2034-07-14 00:38:43.0	
☐ CSCWORK37216	This is a rather short description	2034-07-14 00:38:43.0	
☐ CSH_LSAPL_12345	This is a rather short description	2034-07-14 00:38:43.0	
☐ DDD	This is a rather short description	2034-07-14 00:38:43.0	
☐ DDD-ZDDDDDDDDDD	This is a rather short description	2034-07-14 00:38:43.0	
☐ DON-Z-123-456-0	This is a rather short description	2034-07-14 00:38:43.0	

< BACK

Next >

CANCEL

NOTE:
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2608069 S0000625871_V1

Software Maintenance Tool
Figure 211/46-13-00-990-811 (Sheet 2 of 5)

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Software Maintenance Tool

File Tools Help

View Parts on SMT

Get Parts Scheduled

Get Parts Unscheduled

View All Parts for All Airplanes

Send Parts to Airplane

Get Data from Airplane

View All Data from All Airplanes

Send Data to Ground Network

Exit SMT

Get Parts Unscheduled

Page 3 of 4

Status Messages

SMT location: Seattle

Mon May 19 20:32:50 GMT 2008 - uq281a - Part inventory item BCG-Z-0000-00AU is loaded on the Maintenance Laptop
Mon May 19 20:32:53 GMT 2008 - uq281a - Part inventory item ENG48-CD50-5003 is loaded on the Maintenance Laptop
Mon May 19 20:32:53 GMT 2008 - uq281a - Selected LSAPs have been transferred to your SMT
Mon May 19 20:32:53 GMT 2008 - uq281a - Enter a Destination System and a Tail #
Mon May 19 20:32:44 GMT 2008 - uq281a - Selected LSAPs have been transferred to your SMT
Mon May 19 20:32:44 GMT 2008 - uq281a - Enter a Destination System and a Tail #

Select Part(s) for Transfer to the Airplane

Parts	Nomenclature	Destination	Tail #	Expires	Size	Status
BCG-Z-0000-00AU	This is a rather short desc.	CIS.OSM	N415RC	2034-07-14	0	
ENG48-CD50-5003	This is a rather short desc.	CMCF - C	<Click to	2034-07-14	0	

< BACK

NEXT >

CANCEL

Software Maintenance Tool

File Tools Help

View Parts on SMT

Get Parts Scheduled

Get Parts Unscheduled

View All Parts for All Airplanes

Send Parts to Airplane

Get Data from Airplane

View All Data from All Airplanes

Send Data to Ground Network

Exit SMT

Get Parts Unscheduled

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Status Messages

SMT Location: Seattle

Mon May 19 20:54:34 GMT 2008 - uq281a - Created uplink command for BCG-Z-0000-00AU_crate.zip to OSM - DATA Load Onboard
Mon May 19 20:54:34 GMT 2008 - uq281a - Created uplink command for ENG48-CD50-5003_crate.zip to CMCF - Central Maintenance
Mon May 19 20:54:34 GMT 2008 - uq281a - LSAPs are ready to be transferred to the airplane
Mon May 19 20:54:34 GMT 2008 - uq281a - Step complete

< BACK

FINISH

CANCEL

NOTE:
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2608070 S0000625872_V1

Software Maintenance Tool
Figure 211/46-13-00-990-811 (Sheet 3 of 5)

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View Parts on SMT

Get Parts Scheduled

Get Parts Unscheduled

View All Parts for All Airplanes

Send Parts to Airplane

Get Data from Airplane

View All Data from All Airplanes

Send Data to Ground Network

Exit SMT

Send Parts to Airplane

Page 1 of 2

Tail #: N415RC

Mon May 19 21:02:47 GMT 2008 - uq281a - Attempting to connect to the airplane...

Mon May 19 21:02:48 GMT 2008 - uq281a - Successfully connected to airplane N415RC...

Select Part(s) for Transfer to the Airplane

Select All

Parts	Nomenclature	Destination	Tail #	Expires	Size	Status
☐ BCG-Z-0000-00AU	This is a rather short desc...	CIS:OSM	N415RC	2034-07-14	0	
☐ ENG48-CD50-5003	This is a rather short desc...	CMC:CMC	N415RC	2034-07-14	0	
☐ XXX2A-1931-140M	This is a rather short desc...	ACM:AC	N415RC	2034-07-14	573794	SUCCESS
☐ XXX2C-4654-532C	21 EE COOLING OPS	CSS:CSSUP	N415RC	2034-07-14	1032651	
☐ XXX37-9621-5021	21 ICS CRU OPS	CMC:CMC	N415RC	2034-07-14	1030722	
☐ XXX38-9790-210T	21 EE COOLING OPS	ACM:AC	N415RC	2034-07-14	1032849	
☐ XXX38-9790-210T	21 EE COOLING OPS	CIS:OSM	N415RC	2034-07-14	1032849	
☐ XXX8Z-A000-0100	XXX8Z-A000-0100	CSS:CSSUP	N415RC	2034-07-14	145411	

< BACK

NEXT >

CANCEL

View Parts on SMT

Get Parts Scheduled

Get Parts Unscheduled

View All Parts for All Airplanes

Send Parts to Airplane

Get Data from Airplane

View All Data from All Airplanes

Send Data to Ground Network

Exit SMT

Send Parts to Airplane

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Tail #: N415RC

Mon May 19 20:32:07 GMT 2008 - uq281a - Error uplinking cmd 50A80168011A02F64FBFC43202EF45F4n airplane N415RC due to: E

Part(s) transferring to the Airplane

Parts	Nomenclature	Destination	Tail #	Expires	Size	Status
BCG-Z-0000-00AU	This is a rather short desc...	CIS:OSM	N415RC	2034-07-14	0	SUCCESS
ENG48-CD50-5003	This is a rather short desc...	CMC:CMC	N415RC	2034-07-14	0	ERROR: Target sys...
XXX2A-1931-140M	This is a rather short desc...	ACM:AC	N415RC	2034-07-14	573794	SUCCESS
XXX2C-4654-532C	21 EE COOLING OPS	CSS:CSSUP	N415RC	2034-07-14	1032651	SUCCESS
XXX37-9621-5021	21 ICS CRU OPS	CMC:CMC	N415RC	2034-07-14	1030722	
XXX38-9621-210T	21 EE COOLING OPS	ACM:AC	N415RC	2034-07-14	1032849	
XXX38-9621-210T	21 EE COOLING OPS	CIS:OSM	N415RC	2034-07-14	1032849	
XXX8Z-A000-0100	XXX8Z-A000-0100	CSS:CSSUP	N415RC	2034-07-14	145411	

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CANCEL

NOTE:

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Software Maintenance Tool
Figure 211/46-13-00-990-811 (Sheet 4 of 5)

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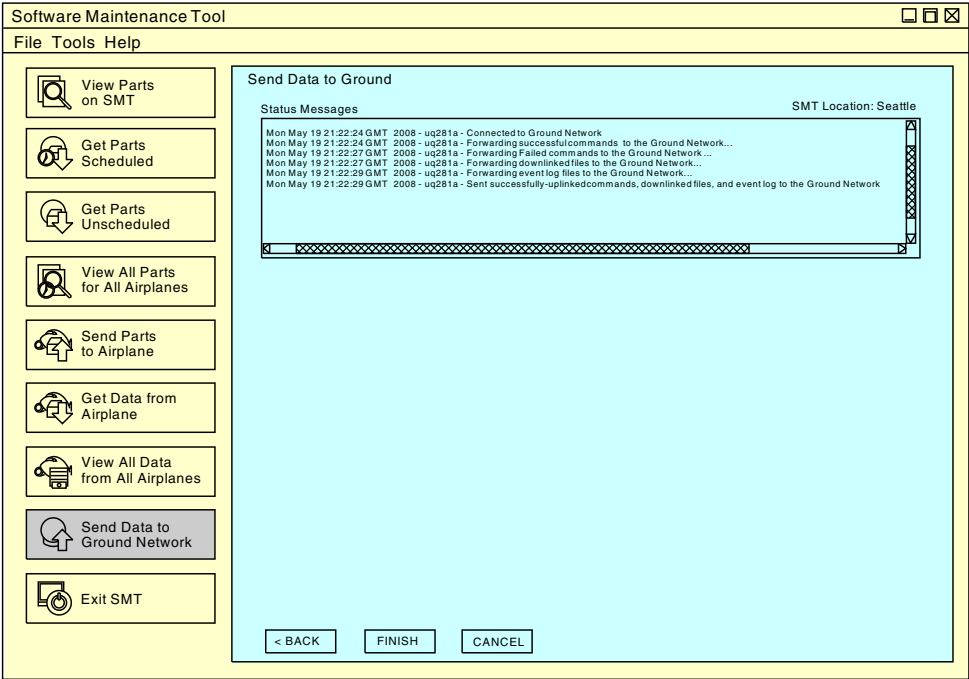
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Software Maintenance Tool
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NETWORK FILE SERVER - MAINTENANCE PRACTICES

1. General

- A. This procedure gives you the tasks to do maintenance to the Network File Server (NFS), M02898. These tasks are as follows:
- (1) A software configuration check, to examine the operational software parts installed in the NFS.
 - (2) A software installation task, to install software that operates the NFS.
 - (3) A task that deletes software parts from the NFS.
 - (4) A task that reimages the NFS.
 - (5) A task to install the minimum operating system software parts to the NFS.
 - (6) A task to reboot the NFS.
 - (7) A task to reset NFS data.
 - (8) A task to remove the NFS SD media card.
 - (9) A task to install the NFS SD media card.
 - (10) A task to manually initialize the NFS SD media card.
 - (11) A task to check the status of the NFS SD media card.
 - (12) A task to manually backup the NFS to the NFS SD media card.
 - (13) A task to use automatic NFS Stage 1 restore function.
 - (14) A task to use manual NFS Stage 1 restore function.
 - (15) A task to use NFS Stage 2 restore function.
 - (16) A task to upgrade NFS software OS 7.0 to OS 7.1.
 - (17) A task to upgrade NFS software OS 7.0 to OS 9.1.
 - (18) A task to upgrade NFS software OS 7.1 to OS 9.1.
 - (19) A task to downgrade NFS software OS 9.1 to OS 7.1.
 - (20) A task to downgrade NFS software OS 9.1 to OS 7.0.
 - (21) A task to downgrade NFS software OS 7.1 to OS 7.0.

TASK 46-13-01-860-801

2. Network File Server Software Check

A. General

- (1) This task gives the steps to examine the software installed in the Network File Server (NFS).
- (2) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:
 - Multi Function Display (MFD),
 - Other type of approved Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (P/B 201)
46-13-00-710-802	System Configuration Check (P/B 201)
46-13-02-700-805	Existing Faults Check (P/B 201)

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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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Prepare for the Procedure

SUBTASK 46-13-01-970-001

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321 is required for access.

NOTE: Do not attempt to connect wirelessly.

SUBTASK 46-13-01-970-009

- (2) Make sure that the correct software part numbers for the NFS are known.

F. Network File Server Software Check

SUBTASK 46-13-01-860-001

- (1) Do a check of the NFS operational software (TASK 46-13-00-710-802).

NOTE: The NFS operational software is listed under ATA 46.

- (a) Make sure that all software parts installed on the NFS agree with the operator requirement.
 - 1) If the NFS NSP OPC and/or NSP OPS software part(s) show "Not Available", then refer to the IFIM and do the applicable procedure(s).
- (b) Save a report if necessary using the REPORT button located in the bottom right-hand corner of the page that shows the system configuration.

G. Put the Airplane Back To Its Usual Condition

SUBTASK 46-13-01-080-001

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

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TASK 46-13-01-470-801

3. Network File Server Software Installation

A. General

- (1) This task gives the steps to install software into the Network File Server (NFS) from the Mass Storage Device (MSD).
 - (a) If the software is not already staged to the MSD, gather all the software parts you need on removable media or Universal Maintenance Device (UMD) before leaving for the airplane.
 - (b) If the software is not already staged to the MSD, a UMD is required to stage the software before installation.
- (2) The aircraft must be on the ground to do this task.
- (3) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:
 - Multi Function Display (MFD),
 - Other type of approved UMD.

B. References

Reference	Title
46-13-00-470-801	LRU Software Parts Installation (P/B 201)
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (P/B 201)
46-13-00-710-802	System Configuration Check (P/B 201)
46-13-00-860-802	Server Credentials Check (P/B 201)
46-13-00-860-803	Client Credentials Check (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Prepare for NFS Software Installation

SUBTASK 46-13-01-470-035

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321 is required for access.

NOTE: Do not attempt to connect wirelessly.

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F. NFS Software Installation - Procedure

SUBTASK 46-13-01-470-004

- (1) Install the new NFS software part, or parts (TASK 46-13-00-470-801).

NOTE: During software installation to the NFS, the NFS will install the parts, shut down, and reboot.

- (a) Wait approximately ten minutes for the NFS to reboot after the software installation.

G. Software Installation Check

SUBTASK 46-13-01-860-003

- (1) Do a check of the NFS software (TASK 46-13-00-710-802).

SUBTASK 46-13-01-710-002

- (2) Do this task: Server Credentials Check, TASK 46-13-00-860-802.

NOTE: Do not generate server credentials if a valid server credentials already exists.

SUBTASK 46-13-01-710-001

- (3) Do this task: Client Credentials Check, TASK 46-13-00-860-803.

NOTE: Do not generate any client credentials if all LRUs already have valid client credentials.

SUBTASK 46-13-01-810-001

- (4) Do this task for ATA 46: Existing Faults Check, TASK 46-13-02-700-805.

- (a) If a fault is shown, then do the required maintenance action.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-080-002

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.

- (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).

- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— **END OF TASK** —————

TASK 46-13-01-070-801

4. Network File Server Software Removal

A. General

- (1) This task gives the steps to uninstall loadable software airplane parts (LSAPs) from the Network File Server (NFS).

NOTE: This task does not remove the LSAPs from the NFS Mass Storage Device (MSD).

- (2) This task is available when the Onboard Network System (ONS) is accessed with the Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-710-802	System Configuration Check (P/B 201)
46-13-02-700-805	Existing Faults Check (P/B 201)

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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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Prepare for NFS Software Removal

SUBTASK 46-13-01-970-002

- (1) Make sure that a list of NFS software parts to be removed is available from the engineering department.

SUBTASK 46-13-01-070-001

- (2) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321 is required for access.

NOTE: Do not attempt to connect wirelessly.

F. NFS Software Removal Procedure

SUBTASK 46-13-01-860-004

- (1) To do the NFS Software Removal Procedure, do these steps:

SIA 001-014 PRE SB 737-46-1029

- (a) Select EXTENDED MAINTENANCE > NETWORK FILE SERVER.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) Select EXTENDED MAINTENANCE > Network File Server.

SIA ALL

- (c) Select the UNINSTALL LSAPS tab on the Network File Server menu.

SIA 001-014 PRE SB 737-46-1029

NOTE: When an option is selected, it shows green in color.

SIA ALL

- (d) In the column labeled "Select the Load Part Number", do this step:
 - 1) Select the software parts to remove and make sure that a green check mark shows in the box adjacent to the LSAP.
- (e) Select the DELETE icon.

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- (f) Select the CONTINUE button.

NOTE: The UNINSTALLING LSAPS progress indicator may show and turn until the operation is complete.

NOTE: When the removal operation is complete, the NFS reboot operation will automatically start.

NOTE: The broken chain link icon will show in the upper right corner during the reboot operation. After the NFS reboots, the unbroken chain link icon will show when ONS communication is serviceable.

- (g) Wait approximately ten minutes for the NFS to reboot.
(h) After the NFS reboot is complete, make sure that the removed parts do not show on the UNINSTALL LSAPs tab.

SUBTASK 46-13-01-860-005

- (2) View the ATA 46 system configuration to see the NFS operational software (TASK 46-13-00-710-802).
(a) Make sure that none of the removed software parts are installed on the NFS.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-860-006

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
(a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
(2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— END OF TASK —————

TASK 46-13-01-860-802

5. Network File Server Reimage Procedure

A. General

- (1) This task gives the instructions to reimage the Network File Server (NFS). The reimage operation erases all software parts and data, except the Boot OS. It is then necessary to install the minimum operating system software parts.
NOTE: Do not stage software parts on the Mass Storage Device (MSD) before the reimage. The reimage operation deletes all files on the MSD. If necessary, make a record of the software parts on the MSD before the NFS reimage.
(2) Do this task only when instructed by your engineering department.
(3) To do this task, the aircraft must be on the ground with its weight compressing the landing gear.
(4) If a manual Initial Data Load (IDL) is necessary after the reimage, remove the SD card from the NFS before the reimage.
(a) To remove the SD card, do this task: Network File Server SD Media Card Removal, TASK 46-13-01-020-801.
(5) If an automatic stage 1 restore is necessary after the reimage, make sure that an SD card is installed to the NFS with a valid backup before the reimage.

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- (a) To install an SD card, do this task: Network File Server SD Media Card Installation, TASK 46-13-01-420-801.
- (b) To backup the SD card, do this task: Network File Server Backup to SD Media Card, TASK 46-13-01-470-803.
- (6) This task is available only when the Onboard Network System (ONS) maintenance browser is accessed with the Universal Maintenance Device (UMD).
- (7) Gather all the software parts you need on a removable media or UMD before leaving for the airplane.

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-02-970-802	Download Manager (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Prepare for NFS Reimage

SUBTASK 46-13-01-860-007

- (1) Do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: Do not attempt to connect wirelessly.

- (a) Use a universal maintenance device, SPL-11321 to get access to the ONS Maintenance browser.

SUBTASK 46-13-01-970-003

- (2) Make sure that any necessary software parts are available on the UMD.

SUBTASK 46-13-01-970-004

- (3) If the NFS is serviceable, do a check with your engineering department to download any necessary files that show in the Download Manager (Download Manager, TASK 46-13-02-970-802).

NOTE: Follow your airline's requirement for record keeping of NFS files. The steps that follow will erase all data from the NFS.

F. NFS Reimage Procedure

SUBTASK 46-13-01-800-001

- (1) Do the reimage procedure as follows:

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SIA 001-014 PRE SB 737-46-1029

- (a) Select EXTENDED MAINTENANCE > NETWORK FILE SERVER.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) Select EXTENDED MAINTENANCE > Network File Server.

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- (c) From the NETWORK FILE SERVER maintenance menu, select the REIMAGE tab.
- (d) Make sure that the REIMAGE Function and Description shows.
- (e) Read and understand the REIMAGE Function block and the Description block and then, follow all instructions.
- (f) Click on the REIMAGE icon.
- (g) Click on the CONTINUE icon when the confirmation pop up window shows.
- (h) Wait for the reimage procedure to complete.

NOTE: The reimage procedure takes approximately five minutes. The NFS will reboot to the Initial Data Load (IDL) screen when the reimage procedure is complete.

SIA 001-014 PRE SB 737-46-1029

- (i) Click on the CANCEL icon when the REIMAGE Alert pop up window shows.

NOTE: This does not cancel the reimage.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (j) Click on the OK icon when the REIMAGE NFS pop up window shows.

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- (k) If an SD card was not installed, do this task: Network File Server Initial Data Load (IDL) Software Installation, TASK 46-13-01-470-807.
- (l) If an SD card was installed, do this task: Network File Server Automatic Stage 1 Restore Function, TASK 46-13-01-470-804.

————— END OF TASK —————

TASK 46-13-01-470-807

6. Network File Server Initial Data Load (IDL) Software Installation

A. General

- (1) This task gives the instructions to do the Initial Data Load (IDL) software installation for the Network File Server (NFS). The IDL installs the minimum operating system and configuration software parts.
 - (a) Gather all the software parts you need on a removable media or Universal Maintenance Device (UMD) before leaving for the airplane.
- (2) Do this task:
 - (a) On a new or replacement NFS LRU if only a 46 NFS BOOT OS is installed.
 - (b) Immediately after the NFS Reimage procedure.
- (3) Use the IDL page to import the specified parts, one at a time, and then install the parts as a group.
- (4) These main software parts will be installed to get the NFS operational:
 - 46 NFS SERVER OS

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- 46 NFS OPC
- 46 NFS MEF OPS
- 46 NFS NETMANAGER APP

NOTE: These main software parts must be uploaded in the order listed on the IDL page to activate the DATA LOAD button at the bottom right of the IDL page.

- (5) To do this task, the aircraft must be on the ground with its weight compressing the landing gear.
- (6) This task is available only when the NFS INITIAL DATA LOAD page is accessed with the UMD.
- (7) An SD card must not be installed to complete this task. If an SD card with a valid backup is installed at any point while on the NFS INITIAL DATA LOAD screen, do this task: Network File Server Automatic Stage 1 Restore Function, TASK 46-13-01-470-804.

B. References

Reference	Title
46-13-00-470-801	LRU Software Parts Installation (P/B 201)
46-13-00-470-802	Stage Software Parts on a Mass Storage Device via Universal Maintenance Device (UMD) (P/B 201)
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-860-801	Airplane Credentials Check (P/B 201)
46-13-00-860-802	Server Credentials Check (P/B 201)
46-13-00-860-803	Client Credentials Check (P/B 201)
46-13-02-970-802	Download Manager (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Prepare for NFS Initial Data Load

SUBTASK 46-13-01-860-025

- (1) Do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.
 - (a) Use the universal maintenance device, SPL-11321, to get access to the ONS Maintenance browser.

F. NFS Initial Data Load

SUBTASK 46-13-01-470-024

- (1) Do the IDL as follows:
 - (a) Make sure that the NFS has been powered up for at least 3 minutes.

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- (b) Double-click on the ONS maintenance browser desktop icon.

NOTE: If the ONS maintenance application fails to connect, then refer to the IFIM and do the applicable procedure(s).

- (c) Make sure that the IDL screen appears.

SIA 001-014 PRE SB 737-46-1029

- 1) If the REIMAGE Alert dialogue window shows, select CANCEL to close it.

NOTE: This does not cancel the IDL.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- 2) If the REIMAGE NFS dialogue window shows, select OK to close it.

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- (d) Make sure that the IDL screen shows the list of software parts to be imported in an amber color under the heading "Select a file with parts to import".

- (e) Make sure that the Boot OS part number shown in the Configuration section of the IDL page matches that given by your engineering department.

- Boot OS 7.0: BCG57-U000-02E3
- Boot OS 7.1: BCG2A-U000-0458
- Boot OS 9.1: BCG27-U000-0895

NOTE: If the incorrect Boot OS is loaded, use the applicable NFS software downgrade or NFS software upgrade task to complete the IDL instead of this task.

- (f) On the IDL page, click the BROWSE button.
- (g) Select the directory that contains the software parts.
- (h) Select the applicable software part and then click the OPEN button to import it.
- 1) Make sure that the software parts are imported in the order listed on the IDL page.
- (i) After the part is imported, make sure that the part changes from amber to white.
- NOTE: The START LOAD button is disabled (cyan in color) until all of the IDL parts are imported.
- (j) Click on the BROWSE button and do the steps above again to select a different software part to import.
- (k) Continue to import all applicable software parts.
- (l) Make sure that all parts change from amber to white and the START LOAD button is enabled after all necessary parts are imported.

NOTE: The START LOAD button changes from cyan to white in color to show the function is enabled.

SUBTASK 46-13-01-470-025

- (2) Do these steps to complete the software installation of the part numbers imported:
- (a) Make sure that the applicable target and software part numbers are specified in white under the heading "Select a file with parts to import".
- (b) At the bottom right of the INITIAL DATA LOAD page, select START LOAD.
- 1) The NFS will do the installation and reboot automatically.
- 2) Wait ten minutes for the reboot to complete.

NOTE: The NFS is not fully functional until ten minutes have passed.

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- 3) If AIRPLANE IDENTIFICATION MISSING dialog box is shown after IDL reboot, select IGNORE.
- (c) Verify at least one System Log file is present under Download Manager. This is the task: Download Manager, TASK 46-13-02-970-802.
NOTE: On the System Log page, select GET CURRENT before completing the verification.
NOTE: It is not necessary to download or delete any system logs.
- (d) If a system log is not present after selecting GET CURRENT, the NFS must be reimaged and the IDL must be restarted. Do this task: Network File Server Reimage Procedure, TASK 46-13-01-860-802.

SUBTASK 46-13-01-470-031

- (3) Stage all missing Mass Storage Device (MSD) software parts to put the MSD back to normal configuration (TASK 46-13-00-470-802).

SUBTASK 46-13-01-470-057

- (4) Dataload all missing NFS software parts. Do this task: LRU Software Parts Installation, TASK 46-13-00-470-801.

NOTE: A 46 NFS OAS AIRPLANE KEYS UMS that was created before the IDL cannot be dataloaded after the IDL. A new 46 NFS OAS AIRPLANE KEYS UMS must be created using a new CSR. Refer to this task: Airplane Credentials Check, TASK 46-13-00-860-801.

SUBTASK 46-13-01-470-059

- (5) Do this task: Server Credentials Check, TASK 46-13-00-860-802.
 - (a) Do not make a server credential if one is already made.

SUBTASK 46-13-01-470-060

- (6) Do this task: Client Credentials Check, TASK 46-13-00-860-803.
 - (a) Do not make new client credentials for any LRUs that already have client credentials.

SUBTASK 46-13-01-470-061

- (7) If applicable, do this task: Network File Server SD Media Card Installation, TASK 46-13-01-420-801.

SUBTASK 46-13-01-470-062

- (8) If applicable, do this task: Network File Server Backup to SD Media Card, TASK 46-13-01-470-803.

————— **END OF TASK** —————

TASK 46-13-01-800-801

7. Network File Server Reboot Procedure

A. General

- (1) This task gives the steps to reboot the Network File Server (NFS).
NOTE: It is necessary to wait approximately ten minutes for the NFS to reboot.
- (2) The NFS should be rebooted at least once every six weeks.
- (3) The aircraft must be on the ground to do this task.
- (4) This task is available when the Onboard Network System (ONS) is accessed with the Universal Maintenance Device (UMD).

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B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Prepare for NFS Reboot

SUBTASK 46-13-01-860-009

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321 is required for access.

NOTE: Do not attempt to connect wirelessly.

F. NFS Reboot Procedure

SUBTASK 46-13-01-800-002

- (1) Do the reboot procedure as follows:

SIA 001-014 PRE SB 737-46-1029

- (a) Select EXTENDED MAINTENANCE > NETWORK FILE SERVER.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) Select EXTENDED MAINTENANCE > Network File Server.

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- (c) Select the REBOOT tab.
- (d) Make sure that the REBOOT screen shows the Function and Description and the REBOOT icon in the page footer.
- (e) Select the REBOOT icon at the bottom of the page.
- (f) Click on the CONTINUE button.
- (g) Make sure that the REBOOTING NFS message shows.
- (h) Wait approximately ten minutes for the NFS to reboot.
NOTE: The broken chain link icon shows in amber at the top right corner adjacent to the settings icon during the reboot operation. After the NFS reboots, the unbroken chain link shows in white when the ONS is serviceable.
- (i) After the reboot is complete, make sure that the screen goes to the ONS maintenance browser home page.

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- 1) If it does not go to the home page after an additional three minutes, refresh the screen.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-860-010

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— END OF TASK —————

TASK 46-13-01-800-802

8. Network File Server Reset Data Procedure

A. General

- (1) This task gives the steps to reset the Network File Server (NFS) data.
- (2) The data reset operation cannot be undone. It restores applications to their default state.
- (3) The data reset operation removes application data and system logs. The installed software, Mass Storage Device (MSD) data, security credentials, and security logs are not removed.
- (4) The aircraft must be on the ground to do this task.
- (5) This task is available when the Onboard Network System (ONS) is accessed with the Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

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E. Prepare for NFS Data Reset

SUBTASK 46-13-01-860-011

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321 is required for access.

NOTE: Do not attempt to connect wirelessly.

F. NFS Data Reset Procedure

SUBTASK 46-13-01-800-003

- (1) Do the data reset procedure as follows:

SIA 001-014 PRE SB 737-46-1029

- (a) Select EXTENDED MAINTENANCE > NETWORK FILE SERVER.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) Select EXTENDED MAINTENANCE > Network File Server.

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- (c) On the Network File Server menu, select the RESET DATA tab.
- (d) Make sure that the RESET DATA screen shows the Function and Description and the RESET icon in the page footer.
- (e) Select the RESET icon at the bottom of the page.
- (f) Make sure that the reset confirmation screen shows.
- (g) Click on the CONTINUE button.
- (h) Make sure that the RESETING NFS message is shown.

NOTE: It may take up to 10 minutes for the NFS to reset.
- (i) After the reset is complete, make sure that the screen goes to the ONS maintenance browser home page.
 - 1) If it does not go to the home page after three minutes, refresh the screen.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-860-012

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— END OF TASK —————

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TASK 46-13-01-020-801

9. Network File Server SD Media Card Removal

Figure 201

A. General

- (1) This task tells you how to remove the Network File Server (NFS) Secure Digital (SD) media card from the NFS.
- (2) Wait 3 minutes following a successful NFS Manual Backup to SD Media Card, (Network File Server Backup to SD Media Card, TASK 46-13-01-470-803) before removing the SD Media Card from the NFS.

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left

C. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

D. Removal of SD Media Card

SUBTASK 46-13-01-040-003

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

F/O Electrical System Panel, P6-5

Row	Col	Number	Name
C	1	C01958	NETWORK FILE SERVER

SUBTASK 46-13-01-010-008

- (2) Get access to the main equipment center.

- (a) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

SUBTASK 46-13-01-010-009

- (3) Loosen thumbscrew on the front panel of the NFS and swing NFS cover downward.

SUBTASK 46-13-01-000-001

- (4) Push SD media card as far as it will go and release pressure on the SD card.

NOTE: Releasing pressure will unlatch the SD media card causing it to protrude from the SD media card slot to enable removal.

- (5) If necessary, retain SD media card for installation to the new NFS.

———— **END OF TASK** ————

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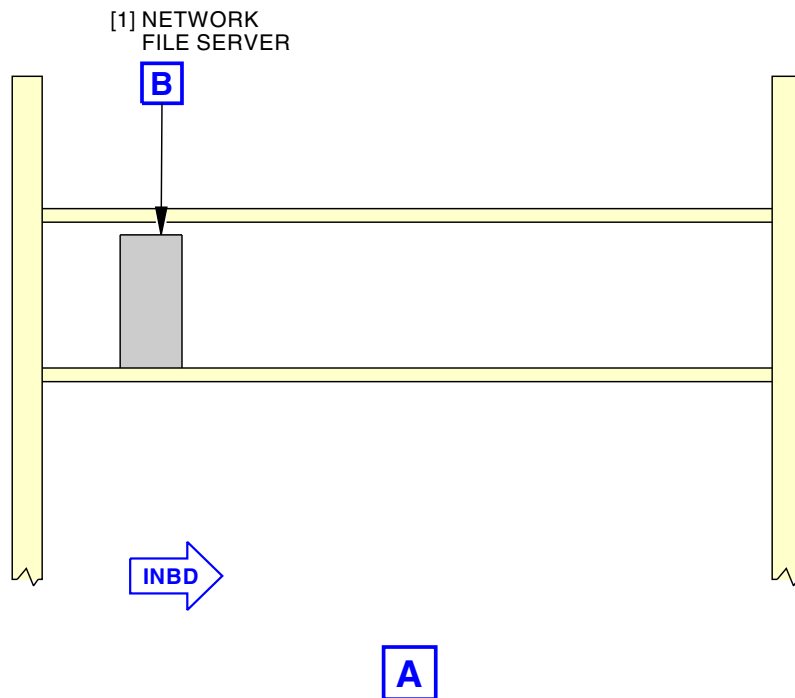
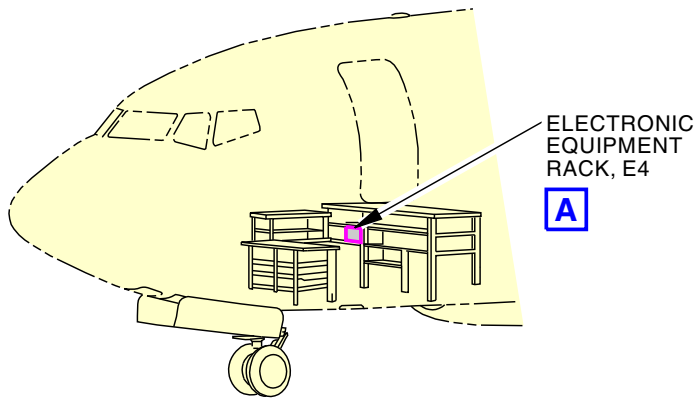
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2581523 S0000621357_V1

NFS SD Media Card Installation
Figure 201/46-13-01-990-802 (Sheet 1 of 2)

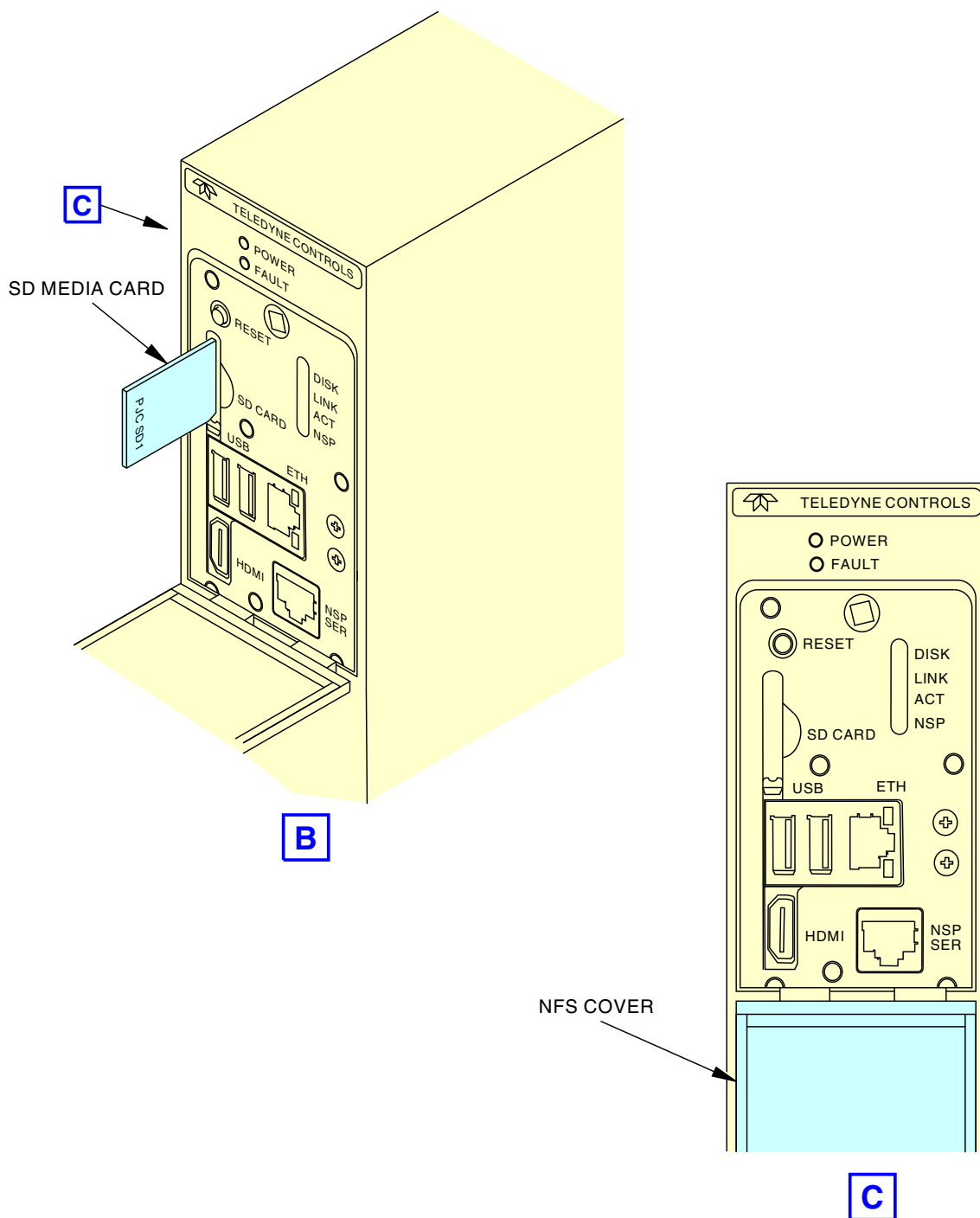
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2581526 S0000621880_V1

NFS SD Media Card Installation
Figure 201/46-13-01-990-802 (Sheet 2 of 2)

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TASK 46-13-01-420-801

10. Network File Server SD Media Card Installation

Figure 201

A. General

- (1) This task gives the steps to install the Network File Server (NFS) Secure Digital (SD) media card into the NFS.
 - (a) Do not use a Micro SD Media Card with an SD adapter.
 - (b) Follow Boeing guidance for SD card sizing and brand.
- (2) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:
 - Multi Function Display (MFD),
 - Other type of approved Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (P/B 201)
46-13-00-750-801	Airplane Identification Check (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left

E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

F. Installation of SD Media Card

SUBTASK 46-13-01-040-002

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

F/O Electrical System Panel, P6-5

Row	Col	Number	Name
C	1	C01958	NETWORK FILE SERVER

SUBTASK 46-13-01-010-006

- (2) Get access to the main equipment center.

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- (a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 46-13-01-010-007

- (3) Loosen thumbscrew on the front panel of the NFS and swing the NFS cover downward.

SUBTASK 46-13-01-420-002

- (4) Put the SD media card into the SD card slot and push the card until the SD card latches in place.

- (a) Make sure that the SD media card contacts face left and towards the NFS when inserted into the SD card slot.

SUBTASK 46-13-01-010-012

- (5) Close the NFS cover and tighten thumbscrew.

SUBTASK 46-13-01-440-001

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C01958	NETWORK FILE SERVER

G. Automatic SD Media Card Initialization

NOTE: If a SD media card has not been initialized by the NFS Backup And Restore Service (BARS), it is automatically initialized when the NFS is booted-up.

NOTE: To complete SD media card initialization, the MAX Display System (MDS) must be powered ON for the NFS to receive the Airplane ID parameter.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

NOTE: If the MDS cannot be powered, the Airplane ID parameter can be manually entered to the NFS. Refer to Airplane Identification Check, TASK 46-13-00-750-801.

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SUBTASK 46-13-01-480-004

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321 is required for access.

NOTE: Do not attempt to connect wirelessly.

SUBTASK 46-13-01-470-021

- (2) Do these steps to access BARS to view the automated initialization:

- (a) For the MFD, select EXTENDED MAINT > BACKUP AND RESTORE.

SIA 001-014 PRE SB 737-46-1029

- (b) For the UMD, select EXTENDED MAINTENANCE > BACKUP & RESTORE.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (c) For the UMD, select EXTENDED MAINTENANCE > Network File Server > BACKUP & RESTORE.

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- (d) While the initialization is in progress, the Media Status shows the current status of the operation.

NOTE: The SD media card initialization may take up to three minutes.

- (e) When the initialization is complete, the Media Card Status shows "Initialized".
- (f) Do a manual backup to the SD Media card (TASK 46-13-01-470-803).

H. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-080-010

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
- (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— END OF TASK —————

TASK 46-13-01-470-802

11. Network File Server SD Media Card Manual Initialization

A. General

- (1) This procedure gives the steps to manually initialize the Network File Server (NFS) Secure Digital (SD) media card.

SIA 001-014 PRE SB 737-46-1029

- (2) The SD Media Card will not initialize if the Aircraft Configuration Data (ACD) is not correct on both Display Processing Computer (DPC). The Missing Airplane Identification message will be shown and initialization can not be performed.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (3) If the DPC is inactive, the Airplane ID parameter can be manually entered to the NFS. Refer to Airplane Identification Check, TASK 46-13-00-750-801.

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- (4) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:
- Multi Function Display (MFD),
 - Other type of approved Universal Maintenance Device (UMD).

B. References

Reference	Title
31-65-00-970-804	Airplane Config Data (ACD) Page Function (P/B 201)
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (P/B 201)
46-13-00-750-801	Airplane Identification Check (P/B 201)
46-13-02-700-805	Existing Faults Check (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.

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Reference	Description
SPL-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Prepare for Initialization of SD Media Card

SUBTASK 46-13-01-970-012

- (1) To verify the Airplane ID on the MFD, do these steps:
 - (a) Do this task: Multi Function Display Connection, TASK 46-13-00-480-803.
 - (b) On the MFD main function menu:
 - 1) Select MAINT.
 - 2) Select MAINT CTRL PGS.
 - 3) Select AIRPLANE CONFIG DATA (ACD).
 - (c) Set the DISPLAY SOURCE switch on the P5-28 overhead panel to the ALL ON 1 position and record the data.

NOTE: When the DISPLAY SOURCE switch is set to ALL ON 1, DPC 1 will be the source of the ACD data. When the DISPLAY SOURCE switch is set to ALL ON 2, DPC 2 will be the source of the ACD data.
 - (d) Set the DISPLAY SOURCE switch on the P5-28 overhead panel to the ALL ON 2 position and record the data.
 - 1) Make sure that the ACD data is correct for the airplane.
 - a) If the ACD data is not correct, do this task: Airplane Config Data (ACD) Page Function, TASK 31-65-00-970-804.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

SUBTASK 46-13-01-970-011

- (2) To verify the Airplane ID on the UMD, do these steps:
 - (a) Do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321 is required for access.

NOTE: Do not attempt to connect wirelessly.
 - (b) Select LINE MAINTENANCE > Airplane ID.
 - (c) Enter the correct Airline ID, Aircraft Type, and Airplane ID and select SAVE. If the correct Airline ID, Aircraft Type, and Airplane ID are already present, no action is required.

NOTE: If the DPCs are powered, the Airline ID and Airplane ID will be grayed out and they must be changed via the ACD page on the MFD.

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F. Manual Initialization of SD Media Card

SUBTASK 46-13-01-470-038

- (1) To do the manual initialization of the SD media card, do these steps:

SIA 001-014 PRE SB 737-46-1029

- (a) For the UMD, select EXTENDED MAINTENANCE > BACKUP & RESTORE.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) For the UMD, select EXTENDED MAINTENANCE > Network File Server > BACKUP & RESTORE.

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- (c) For the MFD, select EXTENDED MAINT > BACKUP AND RESTORE.
(d) Select MEDIA CARD DETAILS in the lower left corner of the page.
(e) Select INITIALIZE MEDIA CARD on Media Card Details window.

NOTE: This process will remove all data on the SD card.

- (f) Select CONFIRM.

NOTE: The SD Media Card initialization may take up to three minutes.

- 1) Do not remove the SD Media Card from the Network File Server while a manual initialization is in progress.
(g) While the initialization is in progress, the INITIALIZE MEDIA CARD window will show the current status of the operation.
(h) For the UMD, "INITIALIZE MEDIA CARD COMPLETE" is shown when the initialization is complete.
(i) For the MFD, "The Media Card Initialization was completed successfully" is shown when the initialization is complete.
(j) Select OK to close the INITIALIZE MEDIA CARD window.
(k) Do this task: Network File Server Backup to SD Media Card, TASK 46-13-01-470-803.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-080-011

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
(a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
(2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— END OF TASK —————

TASK 46-13-01-700-801

12. Network File Server SD Media Card Status Check

A. General

- (1) This procedure gives the steps to check the status of the Secure Digital (SD) media card that is installed in the Network File Server (NFS).
(2) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:

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- Multi Function Display (MFD),
- Other type of approved Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Prepare for the Status Check

SUBTASK 46-13-01-470-039

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321 is required for access.

NOTE: Do not attempt to connect wirelessly.

F. SD Media Card Status Check

SUBTASK 46-13-01-700-001

- (1) To check the SD Media Card Status, do these steps:

SIA 001-014 PRE SB 737-46-1029

- (a) For the UMD, select EXTENDED MAINTENANCE > BACKUP & RESTORE.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) For the UMD, select EXTENDED MAINTENANCE > Network File Server > BACKUP & RESTORE.

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- (c) For the MFD, select EXTENDED MAINT > BACKUP AND RESTORE.
- (d) Select the MEDIA CARD DETAILS button in the lower left corner of the Backup And Restore Service (BARS) page.
 - 1) Examine the summary of the SD media card content.
- (e) Select CANCEL to close the MEDIA CARD DETAILS window.

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G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-080-012

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— **END OF TASK** —————

TASK 46-13-01-470-803

13. Network File Server Backup to SD Media Card

A. General

- (1) Encrypted Backup:

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (a) For airplanes with Wireless WAN Unit (WWU) and/or Crew Wireless LAN Unit (CWL), the Network File Server (NFS) will have the 46 NFS OAS AIRPLANE KEYS UMS software part installed. The Backup And Restore Service (BARS) requires this software part to be back-up encrypted. To enable encrypted backup, the 46 NFS MEF UMS and 46 BARS SECURITY UMS software parts must be installed to the NFS.
- (b) If the Onboard Network System (ONS) is not configured to support encrypted backup, the 46 NFS OAS AIRPLANE KEYS UMS software part will not be backed-up by BARS.

SIA 001-014 PRE SB 737-46-1029

- (c) For airplanes with WWU and/or CWL, the NFS will have the 46 NFS OAS AIRPLANE KEYS UMS and the 46 NFS CRL UMS software parts installed. The Backup And Restore Service (BARS) requires these software part to be back-up encrypted. To enable encrypted backup, the 46 NFS MEF UMS and 46 BARS SECURITY UMS software parts must be installed to the NFS.
- (d) If the ONS is not configured to support encrypted backup, the 46 NFS OAS AIRPLANE KEYS UMS and the 46 NFS CRL UMS software parts will not be backed-up by BARS.

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- (2) Automatic Backup:
 - (a) The ONS is configured to automatically perform a backup of the NFS to the Secure Digital (SD) media card whenever the airplane transitions from Ground to Air.
- (3) Manual Backup:
 - (a) This procedure gives the steps to manually backup the NFS to the Secure Digital (SD) media card.
 - (b) The SD media card must be installed and initialized before doing a backup.
 - (c) This task is available when the ONS is accessed with the methods that follow:
 - Multi Function Display (MFD),
 - Other type of approved Universal Maintenance Device (UMD).

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B. References

Reference	Title
46-13-00-470-801	LRU Software Parts Installation (P/B 201)
46-13-00-470-802	Stage Software Parts on a Mass Storage Device via Universal Maintenance Device (UMD) (P/B 201)
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (P/B 201)
46-13-00-710-802	System Configuration Check (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

E. NFS Encrypted Backup to SD Media Card

SUBTASK 46-13-01-470-011

- (1) To enable encrypted back-up capability, do these steps:
 - (a) Make sure that 46 NFS MEF UMS and 46 BARS SECURITY UMS software parts are installed to the NFS by checking the NFS system configuration. Do this task: System Configuration Check, TASK 46-13-00-710-802.
 - 1) If the software parts are not installed, stage the 46 NFS MEF UMS and 46 BARS SECURITY UMS to the NFS. Do this task: Stage Software Parts on a Mass Storage Device via Universal Maintenance Device (UMD), TASK 46-13-00-470-802.

NOTE: This step cannot be done on the MFD.
 - 2) Dataload the 46 NFS MEF UMS and 46 BARS SECURITY UMS software parts to the NFS. Do this task: LRU Software Parts Installation, TASK 46-13-00-470-801.

F. NFS Manual Backup to SD Media Card

SUBTASK 46-13-01-480-005

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321 is required for access.

NOTE: Do not attempt to connect wirelessly.

SUBTASK 46-13-01-470-042

- (2) To do an NFS manual backup to a SD Media Card, do these steps:

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SIA 001-014 PRE SB 737-46-1029

- (a) For the UMD, select EXTENDED MAINTENANCE > BACKUP & RESTORE.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) For the UMD, select EXTENDED MAINTENANCE > Network File Server > BACKUP & RESTORE.

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- (c) For the MFD, select EXTENDED MAINT > BACKUP AND RESTORE.
- (d) Verify that the Status in the Median Card box shows "Initialized".
- 1) If the SD card status shows "Failed", do the following tasks:
 - a) Remove the SD card (TASK 46-13-01-020-801).
 - b) Install a new SD card (TASK 46-13-01-420-801).
 - c) Manually initialize the new SD card (TASK 46-13-01-470-802).
 - 2) If the SD card status shows "Not Installed", do the following tasks:
 - a) Install a new SD card (TASK 46-13-01-420-801).
 - b) Manually initialize the SD card (TASK 46-13-01-470-802).
 - 3) If the Status shows "Pending" or "INITIALIZATION IN PROGRESS", wait at least 5 minutes for the status to change to "Initialized".
- (e) Select the BACKUP TO MEDIA CARD button in the lower portion of BARS page.
- 1) Do not remove the SD Media Card from the Network File Server while a manual backup is in progress.
- NOTE:** The backup status is shown on the BACKUP TO MEDIA CARD window.
- (f) Make sure that a backup to media card message is shown when the backup is complete.
- (g) Select OK to close the BACKUP TO MEDIA CARD window.
- (h) Select MEDIA CARD DETAILS in the lower corner of the page to view a summary of the SD media card content.
- (i) Make sure that the size of the last backup is not zero.
- 1) If the size is 0, attempt the backup again.
 - 2) If the size is still 0 after the second attempt, retrieve and install a new SD card. Do this task: Network File Server SD Media Card Installation, TASK 46-13-01-420-801.
- (j) Select CANCEL to close the MEDIA CARD DETAILS window.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-080-013

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— **END OF TASK** —————

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TASK 46-13-01-470-804

14. Network File Server Automatic Stage 1 Restore Function

A. General

- (1) The automatic Stage 1 restore process for the Network File Server (NFS) automatically starts when the NFS turns ON when:
 - (a) The NFS is installed with BOOT OS 7.1 (BCG2A-U000-0458) or BOOT OS 9.1 (BCG27-U000-0895).
 - (b) The BOOT OS version for the media card backup is the same version of the BOOT OS installed in the NFS.
 - (c) The NFS does not have the Initial Data Load (IDL) software parts installed.
 - (d) A Secure Digital (SD) media card with the Backup And Restore Service (BARS) backup image is installed in the NFS.
 - (e) The Airplane Identification on the SD media card matches the Airplane Identification on the Display Processing Computer (DPC).

NOTE: The BARS SD card contains the Tail ID from the airplane where the backup images were created, and the restore process will not be allowed if the Airplane Identification on the SD card does not agree with the Airplane Identification on the DPC.

- (2) The automatic Stage 1 restores all of the Onboard Network System (ONS) software parts to the NFS that do not need encryption. The automatic Stage 1 restore also restores all software parts to the Mass Storage Device (MSD).
- (3) The automatic Stage 1 restore does not need any user interaction to initiate or complete.
 - (a) During the restore process, ONS functions will not be available.
 - (b) The amber fault light on the front panel of the NFS flashes in a pattern of three seconds on and one-half second off.

NOTE: The restore process may take over 30 minutes to complete and may take longer depending on the MSD contents. If the amber fault light is steady ON (not flashing) for more than 5 minutes, the restore process has failed.

NOTE: The restore process is complete when any of the following are shown:

- The Universal Maintenance Device (UMD) shows an active home page,
- The Multi Function Display (MFD) is able to access ONS functions.

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (P/B 201)
46-13-02-700-805	Existing Faults Check (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.

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Reference	Description
SPL-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

F. Automatic Stage 1 Restore Procedure

SUBTASK 46-13-01-010-010

- (1) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

SUBTASK 46-13-01-470-014

- (2) To do the automatic stage 1 restore, do these steps:

- (a) Make sure that the SD media card with the BARS backup image is installed in the NFS.
- 1) If the SD media card is not installed, do this task: Network File Server SD Media Card Installation, TASK 46-13-01-420-801.
- (b) Reboot the NFS:
- 1) Open and close this circuit breaker:

F/O Electrical System Panel, P6-5

Row	Col	Number	Name
C	1	C01958	NETWORK FILE SERVER

- a) Make sure that the circuit breaker is open for at least five seconds before closing it.
- (c) Make sure that the amber fault light on the front panel of the NFS begins flashing in a pattern of three seconds ON and one-half second OFF.
- (d) For the MFD, make sure that the amber ONBD MAINT IS NOT AVAILABLE window is shown for approximately 30 minutes during the automated restore and reboot.
- (e) For the UMD, wait for approximately 30 minutes since the ONS will not be accessible during the automated restore and reboot.
- NOTE:** When the stage 1 restore is complete, the MFD and UMD can be used to access ONS functions.
- (f) After 30 minutes, access the ONS.
- 1) To access the ONS via the forward display, do this task: Multi Function Display Connection, TASK 46-13-00-480-803.
- a) If a "NFS RESTORE COMPLETE" modal shows, select OK.

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- b) If directed by your engineering department to conduct a stage 2 restore, do this task: Network File Server Stage 2 Restore, TASK 46-13-01-470-806.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- 2) To access the ONS via UMD, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321, is required for access.

NOTE: Do not attempt to connect wirelessly.

- a) If a "NFS RESTORE COMPLETE" modal shows, select OK.
b) If a "NFS RESTORE PENDING FOR CONNECTIVITY" shows, do this task: Network File Server Stage 2 Restore, TASK 46-13-01-470-806.

SIA 001-014 PRE SB 737-46-1029

- 3) To access the ONS BARS page via UMD, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321, is required for access.

- a) Select EXTENDED MAINTENANCE > BACKUP & RESTORE.
b) If a "NFS RESTORE COMPLETE" modal shows, select OK.
c) If a "NFS RESTORE PENDING FOR CONNECTIVITY" shows, do this task: Network File Server Stage 2 Restore, TASK 46-13-01-470-806.

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- (g) If ONS is not accessible after 30 minutes, the Stage 1 restore has failed and a manual Initial Data Load must be completed. Do the following tasks:
1) Remove the SD media card (TASK 46-13-01-020-801).
2) Conduct a manual Initial Data Load (TASK 46-13-01-470-807).

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-080-014

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
(a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
(2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— **END OF TASK** —————

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TASK 46-13-01-470-805

15. Network File Server Manual Stage 1 Restore

A. General

- (1) This procedure gives the steps to manually restore the Network File Server (NFS) with a Secure Digital (SD) media card with a Backup And Restore Service (BARS) backup image.

NOTE: The NFS must be configured with Onboard Network System (ONS) OS7.1 BOOT OS (BCG2A-U000-0458) or OS9.1 BOOT OS (BCG27-U000-0895) to enable the BARS function.

NOTE: The BOOT OS version used when creating the Media Card Backup must be the same version of BOOT OS installed in the NFS.

- (2) This task is available when the ONS is accessed with the methods that follow:

- Multi Function Display (MFD),
- Other type of approved Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Prepare for the Manual Stage 1 Restore

SUBTASK 46-13-01-470-048

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321, is required for access.

NOTE: Do not attempt to connect wirelessly.

F. Manual Stage 1 Restore

SUBTASK 46-13-01-470-051

- (1) For the Manual Stage 1 Restore do these steps:

- (a) For the UMD, do these steps:

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SIA 001-014 PRE SB 737-46-1029

- 1) Select EXTENDED MAINTENANCE > BACKUP & RESTORE.

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- 2) Select EXTENDED MAINTENANCE > Network File Server > BACKUP & RESTORE.

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- 3) Verify the Status in the Media Card box shows "Initialized".
 - a) If the SD card status shows "Failed", do the following tasks:
 - <1> Remove the SD card (TASK 46-13-01-020-801).
 - <2> Install a new SD card (TASK 46-13-01-420-801).
 - <3> Manually initialize the new SD card (TASK 46-13-01-470-802).
 - <4> Manually backup the new SD card (TASK 46-13-01-470-803).
 - b) If the SD card status shows "Not Installed", do the following tasks:
 - <1> Install a new SD card (TASK 46-13-01-420-801).
 - <2> Manually initialize the new SD card (TASK 46-13-01-470-802).
 - <3> Manually backup the new SD card (TASK 46-13-01-470-803).
 - c) If the Status shows "Pending" or "INITIALIZATION IN PROGRESS", wait at least 5 minutes for the status to change to "Initialized".
- 4) Verify the "Last Restorable Backup" in the Media Card box shows a valid date and time. If it shows an invalid date and time, or there is no backup, do the following tasks:
 - a) Manually initialize the new SD card (TASK 46-13-01-470-802).
 - b) Manually backup the new SD card (TASK 46-13-01-470-803).
- 5) Select RESTORE TO NFS in the lower right portion of the page.
- 6) Select CONFIRM.
- 7) Make sure that "Restoring from the [AIRPLANE ID] Media Card" window is shown.
- (b) For the MFD, do these steps:
 - 1) Select EXTENDED MAINT > BACKUP AND RESTORE.
 - 2) Select RESTORE TO NFS in the lower right portion of the page.
 - 3) Select CONFIRM.
 - 4) Make sure that an amber ONBD MAINT IS NOT AVAILABLE window is shown while the stage 1 restore is in process.

NOTE: On the UMD, the connection status icon in the top right corner will change from a white connected chain to an amber broken chain-link during the restore process.

NOTE: The ONS functions that are normally accessible from the UMD and MFD will not be available while the phase 1 restore is in process. The restore process may take over 30 minutes to complete and may take longer depending on the Mass Storage Device (MSD) contents.

SUBTASK 46-13-01-470-052

- (2) After 30 minutes, verify that the stage 1 restore is complete:
 - (a) For the UMD, do these steps:

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- 1) Select EXTENDED MAINTENANCE > BACKUP & RESTORE.

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- 2) If a "NFS RESTORE COMPLETE" modal shows, select OK.
- 3) If a "NFS RESTORE PENDING FOR CONNECTIVITY" modal shows, do this task:
Network File Server Stage 2 Restore, TASK 46-13-01-470-806.
- (b) For the MFD, do these steps:
 - 1) If a "NFS RESTORE COMPLETE" modal shows, select OK.
 - 2) If it is necessary to conduct a stage 2 restore, do this task: Network File Server Stage 2 Restore, TASK 46-13-01-470-806.
- (3) If ONS is not accessible after 30 minutes, the Stage 1 restore has failed and a manual Initial Data Load must be completed. Do the following tasks:
 - (a) Remove the SD media card (TASK 46-13-01-020-801).
 - (b) Conduct a manual Initial Data Load (TASK 46-13-01-470-807).

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-080-015

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— END OF TASK —————

TASK 46-13-01-470-806

16. Network File Server Stage 2 Restore

A. General

- (1) This procedure tells you how to do the Stage 2 restoration of the Network File Server (NFS) with a Secure Digital (SD) media card containing the Backup And Restore Service (BARS) backup image. Stage 2 restore can only be done using a Universal Maintenance Device (UMD).
 - (a) Gather all the software parts you need on a removable media or UMD before leaving the airplane.

NOTE: While a Stage 2 Restore is in progress, do not use the MAX forward displays (MFDs) to access or use ONS functionality.

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- (2) At least one DPC must be connected and operational so that an Airplane ID is provided for the Stage 2 restore. If the DPC input data is not active, the stage 2 restore cannot be completed as the software does not allow for a manual Airplane ID input between stage 1 and stage 2 restore.

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- (3) The Stage 2 restore is required to support off-board communications.

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B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-710-802	System Configuration Check (P/B 201)
46-13-00-750-801	Airplane Identification Check (P/B 201)
46-13-00-860-802	Server Credentials Check (P/B 201)
46-13-00-860-803	Client Credentials Check (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Stage 2 Restore of NFS Using a Universal Maintenance Device (UMD)

SUBTASK 46-13-01-470-018

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321, is required for access.

NOTE: Do not attempt to connect wirelessly.

- (2) If a "NFS RESTORE COMPLETE" modal shows, select OK.
- (3) An "NFS RESTORE PENDING FOR CONNECTIVITY" modal will show with the following options:

NOTE: If the modal does not show, then refer to the IFIM and do the applicable procedure(s).

- (a) DISABLE

NOTE: DISABLE is used to cancel the stage 2 restore. Once the stage 2 restore is cancelled, Crew Wireless or Off-Board Communication functionality will not be available until a new CSR is generated and a new 46 NFS OAS AIRPLANE KEYS UMS software part is created.

- (b) NOT NOW

NOTE: NOT NOW is used to pause the Stage 2 restore process, which allows navigation to other Onboard Network System (ONS) functions. To resume the stage 2 restore, return to the BACKUP AND RESTORE menu page to continue with the installation of the 46 NFS BARS SECURITY UMS part. This allows Crew Wireless or Off-Board Communication functionality.

- (c) CONTINUE

- (4) Select CONTINUE to proceed with the stage 2 restore.

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- (5) Select BROWSE and select the 46 NFS BARS SECURITY UMS software part.
- (6) Select CONTINUE to initiate the stage 2 restore.
NOTE: The RESTORE TO NFS window appears while the stage 2 restore is in progress.
NOTE: The RESTORE TO NFS window displays "The Restore from the [Airplane ID] Media Card completed Successfully." when stage 2 restore is complete.
- (7) Select OK to close the RESTORE TO NFS window.
 - (a) If the BARS stage 2 restore fails, then refer to the IFIM and do the applicable procedure(s).
- (8) Verify that there are valid server credentials. Do this task: Server Credentials Check, TASK 46-13-00-860-802.
NOTE: Do not generate new server credentials if there are valid server credentials present.
- (9) Verify that there are valid client credentials for all LRUs. Do this task: Client Credentials Check, TASK 46-13-00-860-803.
NOTE: Do not generate new client credentials if there are valid client credentials present for all LRUs.
- (10) Verify all expected software is dataloaded to the NFS. Do this task: System Configuration Check, TASK 46-13-00-710-802.
- (11) Verify the Aircraft Type is set. Do this task: Airplane Identification Check, TASK 46-13-00-750-801.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-080-016

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the UMD is no longer necessary, stop the Onboard Network System (ONS) maintenance browser session and disconnect the maintenance device.

————— END OF TASK —————

TASK 46-13-01-470-808

17. Network File Server OS Upgrade OS7.0 to OS7.1

A. General

- (1) This task gives the steps to upgrade the Network File Server (NFS) OS7.0 to OS7.1.
 - (a) Gather all the software parts you need on removable media or Universal Maintenance Device (UMD) before leaving for the airplane.
NOTE: The OS7.0 46 NFS Boot OS is: BCG57-U000-02E3.
NOTE: The OS7.1 46 NFS Boot OS is: BCG2A-U000-0458.
- (2) To do this task, the weight-on-wheels discrete must be in the GROUND condition.
- (3) Do this task when you get access to the Onboard Network System (ONS) maintenance browser with the UMD.

B. References

Reference	Title
46-13-00-470-801	LRU Software Parts Installation (P/B 201)

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Reference	Title
46-13-00-470-802	Stage Software Parts on a Mass Storage Device via Universal Maintenance Device (UMD) (P/B 201)
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-710-802	System Configuration Check (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Procedure

SUBTASK 46-13-01-470-030

- (1) Use a universal maintenance device, SPL-11321, to do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

SUBTASK 46-13-01-470-068

- (2) If the NFS is in an Initial Data Load state with only the OS7.0 Boot OS loaded, do this task to load the core OS7.0 software parts: Network File Server Initial Data Load (IDL) Software Installation, TASK 46-13-01-470-807.

NOTE: After the core OS7.0 software is loaded, do not continue the IDL Software Installation task and instead return here to continue the upgrade.

NOTE: If the NFS already has a full suite of the OS7.0 parts loaded, skip this step.

NOTE: Only an NFS with all the core OS7.0 software parts can be upgraded.

- (a) Stage the OS7.1 46 NFS BOOT OS to the Mass Storage Device (MSD). Do this task: Stage Software Parts on a Mass Storage Device via Universal Maintenance Device (UMD), TASK 46-13-00-470-802.
- (b) Install the OS7.1 46 NFS BOOT OS to the NFS. Do this task: LRU Software Parts Installation, TASK 46-13-00-470-801.
NOTE: The Dataload status of the OS7.1 46 NFS BOOT OS will say "Installing..." for approximately ten minutes, and then that status will update to "Not Installed." This status may be incorrect and the part may be installed.
- (c) Run a system configuration of the NFS to ensure the OS7.1 46 NFS BOOT OS software part has successfully installed. Do this task: System Configuration Check, TASK 46-13-00-710-802.
- (d) Remove all OS7.0 software parts from the NFS. Do this task: Network File Server Reimage Procedure, TASK 46-13-01-860-802.

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- (e) Install the OS7.1 software parts and return the NFS to a fully operational state. Do this task: Network File Server Initial Data Load (IDL) Software Installation, TASK 46-13-01-470-807.
- (f) Run a system configuration of the NFS to ensure all OS7.0 software parts have been replaced with OS7.1 software parts. Do this task: System Configuration Check, TASK 46-13-00-710-802.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-080-019

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the UMD is no longer necessary, stop the ONS maintenance browser session and disconnect the maintenance device.

————— END OF TASK —————

TASK 46-13-01-470-809

18. Network File Server OS Upgrade OS7.0 to OS9.1

A. General

- (1) This task gives the steps to upgrade the Network File Server (NFS) OS7.0 to OS9.1.
 - (a) Gather all the software parts you need on removable media or Universal Maintenance Device (UMD) before leaving for the airplane.

NOTE: The OS7.0 46 NFS Boot OS is: BCG57-U000-02E3.

NOTE: The OS9.1 46 NFS Boot OS is: BCG27-U000-0895.
- (2) To do this task, the weight-on-wheels discrete must be in the GROUND condition.
- (3) Do this task when you get access to the Onboard Network System (ONS) maintenance browser with the UMD.

B. References

Reference	Title
46-13-00-470-801	LRU Software Parts Installation (P/B 201)
46-13-00-470-802	Stage Software Parts on a Mass Storage Device via Universal Maintenance Device (UMD) (P/B 201)
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-710-802	System Configuration Check (P/B 201)
46-13-02-700-805	Existing Faults Check (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.

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Reference	Description
SPL-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Procedure

SUBTASK 46-13-01-470-054

- (1) Use a universal maintenance device, SPL-11321, to do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

SUBTASK 46-13-01-470-053

- (2) If the NFS is in an Initial Data Load state with only the OS7.0 Boot OS loaded, do this task to load the core OS7.0 software parts: Network File Server Initial Data Load (IDL) Software Installation, TASK 46-13-01-470-807.

NOTE: After the core OS7.0 software is loaded, do not continue the IDL Software Installation task and instead return here to continue the upgrade.

NOTE: If the NFS already has a full suite of the OS7.0 parts loaded, skip this step.

NOTE: Only an NFS with all the core OS7.0 software parts can be upgraded.

- (a) Stage the OS9.1 46 NFS BOOT OS to the Mass Storage Device (MSD). Do this task: Stage Software Parts on a Mass Storage Device via Universal Maintenance Device (UMD), TASK 46-13-00-470-802.
- (b) Install the OS9.1 46 NFS BOOT OS to the NFS. Do this task: LRU Software Parts Installation, TASK 46-13-00-470-801.
NOTE: The Dataload status of the OS9.1 46 NFS BOOT OS will say "Installing..." for approximately ten minutes, and then that status will update to "Not Installed." This status may be incorrect and the part may be installed.
- (c) Run a system configuration of the NFS to ensure the OS9.1 46 NFS BOOT OS software part has successfully installed. Do this task: System Configuration Check, TASK 46-13-00-710-802.
- (d) Remove all OS7.0 software parts from the NFS. Do this task: Network File Server Reimage Procedure, TASK 46-13-01-860-802.
- (e) Install the OS9.1 software parts and return the NFS to a fully operational state. Do this task: Network File Server Initial Data Load (IDL) Software Installation, TASK 46-13-01-470-807.
- (f) Run a system configuration of the NFS to ensure all OS7.0 software parts have been replaced with OS9.1 software parts. Do this task: System Configuration Check, TASK 46-13-00-710-802.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-080-017

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.

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- (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the UMD is no longer necessary, stop the ONS maintenance browser session and disconnect the maintenance device.

————— **END OF TASK** —————

TASK 46-13-01-470-811

19. Network File Server OS Upgrade OS7.1 to OS9.1

A. General

- (1) This task gives the steps to upgrade the Network File Server (NFS) OS7.1 to OS9.1.
 - (a) Gather all the software parts you need on removable media or Universal Maintenance Device (UMD) before leaving for the airplane.

NOTE: The OS7.1 46 NFS Boot OS is: BCG2A-U000-0458.

NOTE: The OS9.1 46 NFS Boot OS is: BCG27-U000-0895.
- (2) To do this task, the weight-on-wheels discrete must be in the GROUND condition.
- (3) Do this task when you get access to the Onboard Network System (ONS) maintenance browser with the UMD.

B. References

Reference	Title
46-13-00-470-801	LRU Software Parts Installation (P/B 201)
46-13-00-470-802	Stage Software Parts on a Mass Storage Device via Universal Maintenance Device (UMD) (P/B 201)
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-710-802	System Configuration Check (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Procedure

SUBTASK 46-13-01-470-066

- (1) Use a universal maintenance device, SPL-11321, to do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

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SUBTASK 46-13-01-470-067

- (2) If the NFS is in an Initial Data Load state with only the OS7.1 Boot OS loaded, do this task to load the core OS7.1 software parts: Network File Server Initial Data Load (IDL) Software Installation, TASK 46-13-01-470-807.

NOTE: After the core OS7.1 software is loaded, do not continue the IDL Software Installation task and instead return here to continue the upgrade.

NOTE: If the NFS already has a full suite of the OS7.1 parts loaded, skip this step.

NOTE: Only an NFS with all the core OS7.1 software parts can be upgraded.

- (a) Stage the OS9.1 46 NFS BOOT OS to the Mass Storage Device (MSD). Do this task: Stage Software Parts on a Mass Storage Device via Universal Maintenance Device (UMD), TASK 46-13-00-470-802.

- (b) Install the OS9.1 46 NFS BOOT OS to the NFS. Do this task: LRU Software Parts Installation, TASK 46-13-00-470-801.

NOTE: The Dataload status of the OS9.1 46 NFS BOOT OS will say "Installing..." for approximately ten minutes, and then that status will update to "Not Installed." This status may be incorrect and the part may be installed.

- (c) Run a system configuration of the NFS to ensure the OS9.1 46 NFS BOOT OS software part has successfully installed. Do this task: System Configuration Check, TASK 46-13-00-710-802.

- (d) Remove all OS7.1 software parts from the NFS. Do this task: Network File Server Reimage Procedure, TASK 46-13-01-860-802.

- (e) Install the OS9.1 software parts and return the NFS to a fully operational state. Do this task: Network File Server Initial Data Load (IDL) Software Installation, TASK 46-13-01-470-807.

- (f) Run a system configuration of the NFS to ensure all OS7.1 software parts have been replaced with OS9.1 software parts. Do this task: System Configuration Check, TASK 46-13-00-710-802.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-080-021

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.

- (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).

- (2) If the UMD is no longer necessary, stop the ONS maintenance browser session and disconnect the maintenance device.

————— END OF TASK —————

TASK 46-13-01-470-812

20. Network File Server OS Downgrade OS9.1 to OS7.1

A. General

- (1) This task gives the steps to downgrade the Network File Server (NFS) OS9.1 to OS7.1.

- (a) Gather all the software parts you need on removable media or Universal Maintenance Device (UMD) before leaving for the airplane.

NOTE: The OS7.1 46 NFS Boot OS is: BCG2A-U000-0458.

NOTE: The OS9.1 46 NFS Boot OS is: BCG27-U000-0895.

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- (2) The aircraft must be on the ground to do this task.
- (3) This task is available when the Onboard Network System (ONS) is accessed with the UMD.

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-710-802	System Configuration Check (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Procedure

SUBTASK 46-13-01-470-055

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321, is required for access.

NOTE: Do not attempt to connect wirelessly.

SUBTASK 46-13-01-470-056

- (2) If the NFS is in a fully operational OS9.1 state, reimage the NFS. Do this task: Network File Server Reimage Procedure, TASK 46-13-01-860-802.

NOTE: If only the OS9.1 Boot OS is present on the NFS (the NFS is in an Initial Data Load state), skip this step.

- (3) Install the core OS7.1 software parts. Do this task: Network File Server Initial Data Load (IDL) Software Installation, TASK 46-13-01-470-807.

NOTE: The IDL Software Installation task can be used to install the remaining OS7.1 software parts and return the NFS to a fully operational state.

NOTE: When staging and dataloading the rest of the OS7.1 software parts after the IDL, make sure to stage and install the OS7.1 Boot OS as well.

- (4) Run a system configuration of the NFS to ensure all OS9.1 software parts have been replaced with OS7.1 software parts. Do this task: System Configuration Check, TASK 46-13-00-710-802.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-080-018

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.

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- (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

———— **END OF TASK** ————

TASK 46-13-01-470-813

21. Network File Server OS Downgrade OS9.1 to OS7.0

A. General

- (1) This task gives the steps to downgrade the Network File Server (NFS) OS9.1 to OS7.0.
 - (a) Gather all the software parts you need on removable media or Universal Maintenance Device (UMD) before leaving for the airplane.

NOTE: The OS7.0 46 NFS Boot OS is: BCG57-U000-02E3.

NOTE: The OS9.1 46 NFS Boot OS is: BCG27-U000-0895.
- (2) The aircraft must be on the ground to do this task.
- (3) This task is available when the Onboard Network System (ONS) is accessed with the UMD.

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-710-802	System Configuration Check (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Procedure

SUBTASK 46-13-01-470-069

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321, is required for access.

NOTE: Do not attempt to connect wirelessly.

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SUBTASK 46-13-01-470-070

- (2) If the NFS is in a fully operational OS9.1 state, reimage the NFS. Do this task: Network File Server Reimage Procedure, TASK 46-13-01-860-802.

NOTE: If only the OS9.1 Boot OS is present on the NFS (the NFS is in an Initial Data Load state), skip this step.

- (3) Install the core OS7.0 software parts. Do this task: Network File Server Initial Data Load (IDL) Software Installation, TASK 46-13-01-470-807.

NOTE: The IDL Software Installation task can be used to install the remaining OS7.0 software parts and return the NFS to a fully operational state.

NOTE: When staging and dataloading the rest of the OS7.0 software parts after the IDL, make sure to stage and install the OS7.0 Boot OS as well.

- (4) Run a system configuration of the NFS to ensure all OS9.1 software parts have been replaced with OS7.0 software parts. Do this task: System Configuration Check, TASK 46-13-00-710-802.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-080-020

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

— END OF TASK —

TASK 46-13-01-470-814

22. Network File Server OS Downgrade OS7.1 to OS7.0

A. General

- (1) This task gives the steps to downgrade the Network File Server (NFS) OS7.1 to OS7.0.
 - (a) Gather all the software parts you need on removable media or Universal Maintenance Device (UMD) before leaving for the airplane.

NOTE: The OS7.0 46 NFS Boot OS is: BCG57-U000-02E3.

NOTE: The OS7.1 46 NFS Boot OS is: BCG2A-U000-0458.
- (2) The aircraft must be on the ground to do this task.
- (3) This task is available when the Onboard Network System (ONS) is accessed with the UMD.

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-710-802	System Configuration Check (P/B 201)
46-13-02-700-805	Existing Faults Check (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.

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Reference	Description
SPL-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Procedure

SUBTASK 46-13-01-470-071

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321, is required for access.

NOTE: Do not attempt to connect wirelessly.

SUBTASK 46-13-01-470-072

- (2) If the NFS is in a fully operational OS7.1 state, reimage the NFS. Do this task: Network File Server Reimage Procedure, TASK 46-13-01-860-802.

NOTE: If only the OS7.1 Boot OS is present on the NFS (the NFS is in an Initial Data Load state), skip this step.

- (3) Install the core OS7.0 software parts. Do this task: Network File Server Initial Data Load (IDL) Software Installation, TASK 46-13-01-470-807.

NOTE: The IDL Software Installation task can be used to install the remaining OS7.0 software parts and return the NFS to a fully operational state.

NOTE: When staging and dataloading the rest of the OS7.0 software parts after the IDL, make sure to stage and install the OS7.0 Boot OS as well.

- (4) Run a system configuration of the NFS to ensure all OS7.1 software parts have been replaced with OS7.0 software parts. Do this task: System Configuration Check, TASK 46-13-00-710-802.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-080-022

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.

(a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).

- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— END OF TASK —————

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NETWORK FILE SERVER - REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks:

- (1) Removal of the network file server (NFS), M02898.
- (2) Installation of the NFS.

TASK 46-13-01-000-801

2. Network File Server Removal

Figure 401

A. **General**

- (1) This task gives the steps to remove the Network File Server (NFS).
 - (a) The Network File Server, M02898, is installed on shelf E4-2.

B. **References**

Reference	Title
20-10-07-000-801	E/E Box Removal (P/B 401)
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
46-13-00-470-803	Download Files using the Software Management Tool (SMT) (P/B 201)
46-13-01-020-801	Network File Server SD Media Card Removal (P/B 201)
46-13-02-970-802	Download Manager (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. **Location Zones**

Zone	Area
118	Electrical and Electronics Compartment - Right
212	Flight Compartment - Right

E. **Access Panels**

Number	Name/Location
117A	Electronic Equipment Access Door

F. **Prepare for the Procedure**

SUBTASK 46-13-01-970-005

- (1) Before you remove the NFS, The Boeing Company recommends that you make a back-up copy of the applicable files; to include Log files (Security, Syslog, and Performance) from the NFS to the universal maintenance device, SPL-11321. This can be done with SMT or the Download Manager.

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- (a) To use SMT, do this task: Download Files using the Software Management Tool (SMT), TASK 46-13-00-470-803.
- (b) To use the Download Manager, do this task: Download Manager, TASK 46-13-02-970-802.

NOTE: Know and follow your airline or operator's procedure for record retention.

NOTE: If the NFS has a solid amber fault light, it will not be possible to download files. The NFS must be removed without downloading files.

SUBTASK 46-13-01-860-013

- (2) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C01958	NETWORK FILE SERVER

SUBTASK 46-13-01-010-001

- (3) Get access to the main equipment center.
 - (a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

G. NFS Removal Procedure

SUBTASK 46-13-01-020-003

- (1) Do this task: Network File Server SD Media Card Removal, TASK 46-13-01-020-801.

SUBTASK 46-13-01-020-001

- (2) Do this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802.

SUBTASK 46-13-01-020-002

 CAUTION	DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (3) Remove the network file network file server [1]. This is the task: (E/E Box Removal, TASK 20-10-07-000-801).
 - (a) Put protective covers on the electrical connectors.

———— **END OF TASK** ————

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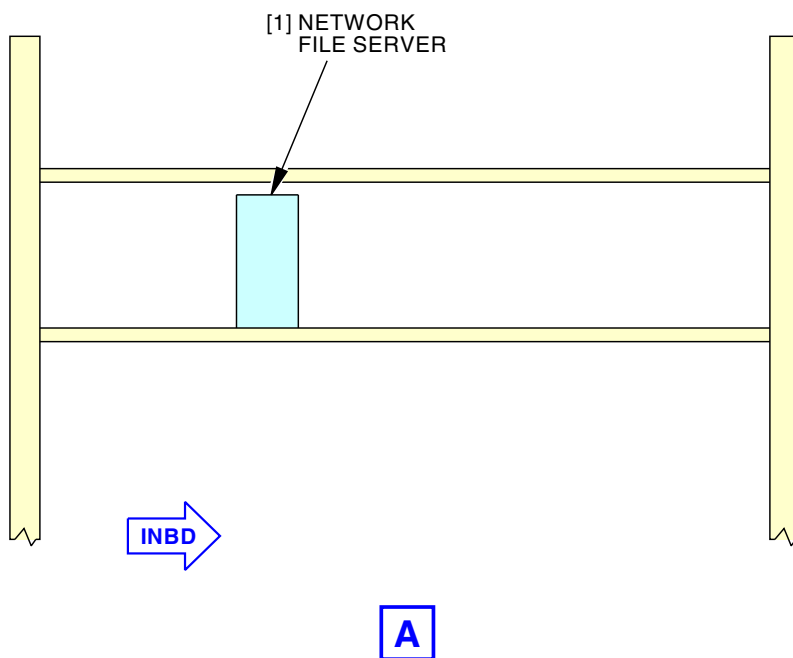
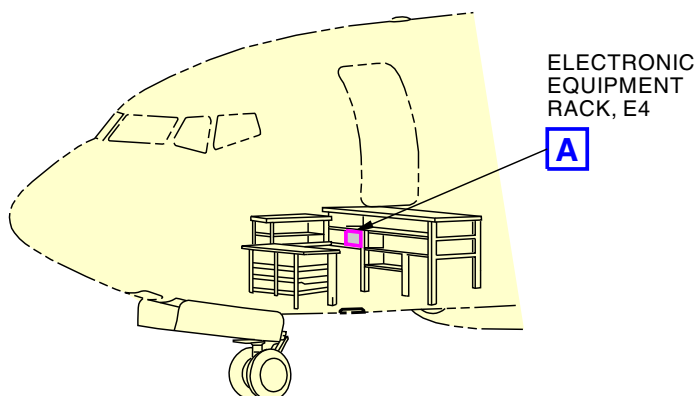
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Network File Server Installation
Figure 401/46-13-01-990-801

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TASK 46-13-01-400-801

3. Network File Server Installation

Figure 401

A. General

- (1) This task gives the steps to install the network file server (NFS), M02898.
- (2) The NFS is installed on shelf E4-2 in the E/E bay.
- (3) To complete this task, a universal maintenance device, SPL-11321 is required.

B. References

Reference	Title
20-10-07-400-801	E/E Box Installation (P/B 401)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
46-13-00-860-801	Airplane Credentials Check (P/B 201)
46-13-01-020-801	Network File Server SD Media Card Removal (P/B 201)
46-13-01-420-801	Network File Server SD Media Card Installation (P/B 201)
46-13-01-470-804	Network File Server Automatic Stage 1 Restore Function (P/B 201)
46-13-01-470-806	Network File Server Stage 2 Restore (P/B 201)
46-13-01-470-807	Network File Server Initial Data Load (IDL) Software Installation (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Network file server	46-13-01-01-010	SIA ALL

E. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right
212	Flight Compartment - Right

F. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

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G. Prepare for the Installation

SUBTASK 46-13-01-860-014

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C01958	NETWORK FILE SERVER

SUBTASK 46-13-01-010-002

- (2) Make sure that this access panel is open:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

H. NFS Installation Procedure

SUBTASK 46-13-01-860-015



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.

- (1) Do this task: (ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802).

SUBTASK 46-13-01-010-003

- (2) Remove the protective covers from the connectors and examine the electrical connectors and wires for damage, and dirt.

- (a) Repair the problems that you find.

SUBTASK 46-13-01-420-001

- (3) Install the network file server [1]. This is the task: (E/E Box Installation, TASK 20-10-07-400-801).

SUBTASK 46-13-01-470-020

- (4) If applicable, do this task: Network File Server SD Media Card Installation, TASK 46-13-01-420-801.

SUBTASK 46-13-01-860-016

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C01958	NETWORK FILE SERVER

NOTE: If the NFS contains an SD Card with a valid backup, and has ONS 7.1 or later, the NFS will automatically initiate a stage 1 restore upon power up, as described in Network File Server Automatic Stage 1 Restore Function, TASK 46-13-01-470-804. The NFS will automatically install software parts, shutdown, and reboot. The process will take approximately 30 minutes.

- (6) If the NFS does not automatically restore data from the SD Media Card, or an SD Media Card is not present, do this task: Network File Server Initial Data Load (IDL) Software Installation, TASK 46-13-01-470-807.

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SUBTASK 46-13-01-860-028

- (7) If the automatic Stage 1 Restore fails, remove the SD Media Card (TASK 46-13-01-020-801) and conduct a manual Initial Data Load (TASK 46-13-01-470-807).

NOTE: The automatic Stage 1 Restore has failed if the NFS does not become operational on the UMD or the MFD 30 minutes after closing the NFS circuit breaker.

SUBTASK 46-13-01-470-029

- (8) If the automatic Stage 1 Restore completes successfully, and the airplane requires the 46 NFS OAS AIRPLANE KEYS UMS, do this task: Network File Server Stage 2 Restore, TASK 46-13-01-470-806.
- (9) If the automatic Stage 1 Restore failed, and the Network File Server (NFS) was manually loaded, a new CSR must be generated and a new 46 NFS OAS AIRPLANE KEYS UMS must be created. This is the task: Airplane Credentials Check, TASK 46-13-00-860-801.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-860-019

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
- (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) Stop the ONS maintenance browser, and disconnect the laptop.

SUBTASK 46-13-01-410-001

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

————— **END OF TASK** —————

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NETWORK FILE SERVER - ADJUSTMENT/TEST

1. General

A. This procedure has two tasks:

- (1) An operational test to make sure that the network file server (NFS), M02898, is serviceable.
- (2) A functional test to make sure that the NFS, M02898, is serviceable.

TASK 46-13-01-710-801

2. Network File Server Operational Test

A. **General**

- (1) This task makes sure that the Network File Server (NFS) is serviceable.
- (2) The airplane must be on the ground to do this task.
- (3) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:
 - Multi Function Display (MFD),
 - Other type of approved Universal Maintenance Device (UMD).

B. **References**

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. **Location Zones**

Zone	Area
118	Electrical and Electronics Compartment - Right
212	Flight Compartment - Right

E. **Access Panels**

Number	Name/Location
117A	Electronic Equipment Access Door

F. **Prepare for the Operational Test**

SUBTASK 46-13-01-860-020

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321 is required for access.

NOTE: Do not attempt to connect wirelessly.

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SUBTASK 46-13-01-010-004

- (2) Get access to the main equipment center.
 - (a) Open this access door:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

G. Network File Server Operational Test

SUBTASK 46-13-01-810-002

- (1) For the UMD, make sure that the Onboard Maintenance browser main menu is shown.
 - (a) Make sure that the unbroken chain link icon shows in the top right corner next to the settings icon.

NOTE: When the chain is unbroken and is white in color, this indicates that the NFS interface is active and the ONS system is serviceable.

NOTE: When the chain is broken and is amber in color, this shows the NFS has lost communication or the NFS is rebooting. Wait approximately ten minutes before you continue.

SUBTASK 46-13-01-810-004

- (2) For the MFD, make sure that the window OBND MAINT IS UNAVAILABLE does not show.

SUBTASK 46-13-01-210-003

- (3) If the access method is not able to connect, examine the LED on the NFS front panel.
 - (a) Make sure that the POWER LED (green in color) is ON.
 - 1) If the POWER LED is not ON, close the NFS circuit breaker and wait 10 minutes before checking the POWER LED again.

Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C01958	NETWORK FILE SERVER

- (b) Make sure that the FAULT LED (amber in color) is OFF.
 - 1) Refer to the IFIM and do the applicable procedure(s) if any of the following conditions are observed:
 - The FAULT LED is ON
 - The FAULT LED flashes ON once per second
 - The FAULT LED flashes ON every three seconds

H. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-080-004

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— END OF TASK —————

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TASK 46-13-01-720-801

3. Network File Server Functional Test

A. General

- (1) This task includes the steps to make sure that the Network File Server (NFS) is serviceable.
 - The NFS, M02898 is in the E/E bay on shelf E4-2.
- (2) The aircraft must be on the ground before you do this task.
- (3) To do this task, use the Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (P/B 201)
46-13-00-750-801	Airplane Identification Check (P/B 201)
73-21-00-800-801-G00	EEC Maintenance Power Selection (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right
212	Flight Compartment - Right

E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

F. Prepare for the Functional Test

SUBTASK 46-13-01-480-001

- (1) Do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.
 - (a) Use the universal maintenance device, SPL-11321, to get access to the Onboard Network System (ONS) maintenance browser.

NOTE: Do not attempt to connect wirelessly.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

SUBTASK 46-13-01-480-003

- (2) If desired at any point below, instead of manually adding an Airplane Data Monitor parameter, the JSON file "Network File Server Functional Test - ADM Parameters.json" file can be imported using the following steps:
 - (a) Go to OTHER FUNCTIONS > Airplane Data Monitor
 - (b) Select IMPORT

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SIA 015-999; SIA 001-014 POST SB 737-46-1029 (Continued)

- (c) Select the JSON file
- (d) Select OPEN
- (e) All parameters relevant to the bus check steps should populate the ADM page

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SUBTASK 46-13-01-860-021

- (3) On the UMD, make sure that the Onboard Maintenance browser main menu shows.
 - (a) Look at the page that shows and make sure that the unbroken chain link icon shows in the top right corner next to the settings icon.

NOTE: When the chain is unbroken and is white in color, this indicates that the NFS interface is active and ONS is serviceable.

NOTE: When the chain is broken and is amber in color, this shows the NFS has lost communication or the NFS is rebooting. Wait approximately ten minutes before you continue.

SUBTASK 46-13-01-010-005

- (4) Get access to the main equipment center.
 - (a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 46-13-01-720-002

- (5) In the equipment bay, look at the NFS front panel and examine the LEDs.
 - (a) Make sure that the POWER LED (green in color) is on.
 - 1) If the POWER LED is not ON, close the NFS circuit breaker and wait 10 minutes before checking the POWER LED again.

Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C01958	NETWORK FILE SERVER
 - (b) Make sure that the FAULT LED (amber in color) is OFF.
 - 1) Refer to the IFIM and do the applicable procedure(s) if any of the following conditions are observed:
 - The FAULT LED is ON
 - The FAULT LED flashes ON once per second
 - The FAULT LED flashes ON every three seconds

G. Airplane Identification Check

SUBTASK 46-13-01-720-003

- (1) Do this task: Airplane Identification Check, TASK 46-13-00-750-801.
 - (a) Make sure that the airline identification in the "Airline ID" field is correct and is the same as the airline Identification on the MAX Display System (MDS) Airplane Config Data Screen.
 - (b) Make sure that the data in the "Airplane ID" field is correct and is the same as data on the MDS Airplane Config Data Screen.

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- (c) Make sure that the data in the "Aircraft Type" field is correct. If the field is not filled out, use the drop down menu to select the correct Aircraft Type and hit SAVE.
- (d) Make sure that the correct tail number shows on the top left of the "ONBOARD MAINTENANCE" screen.

H. ADIRU ADR-4 and IR-3 Bus Checks

SUBTASK 46-13-01-720-004

- (1) Do these steps to make sure that the ADIRU ADR-4 and IR-3 Buses are functional.
 - (a) Set the Left and Right ADIRUs to the NAV mode.
 - (b) On the ONS Main menu, select "OTHER FUNCTIONS" and then "Airplane Data Monitor".
 - (c) Select "ADD", "ARINC 429" and enter the following data:
 - 1) Parameter Name: adrequipid
 - 2) Bus: W-ADIRU-L ADR-4
 - 3) Label: 377
 - 4) SDI: 01
 - 5) Data Type: Binary Representation (BIN)
 - 6) MSB-LSB: 22-11
 - (d) Select SAVE.
 - 1) Make sure that the "Value" that shows with adrequipid is "006".
 - 2) Make sure that the time that shows with adrequipid is updating.
 - (e) On the Airplane Data Monitor page, select "ADD", "ARINC 429" and enter the following data:
 - 1) Parameter Name: irequipid
 - 2) Bus: W-ADIRU-L IR-3
 - 3) Label: 377
 - 4) SDI: 01
 - 5) Data Type: Binary Representation (BIN)
 - 6) MSB-LSB: 22-9
 - (f) Select SAVE.
 - 1) Make sure that the "Value" that shows with irequipid is "001".
 - 2) Make sure that the time displayed with irequipid is updating.

I. DPC GP Bus Check

SUBTASK 46-13-01-720-005

- (1) Do these steps to make sure that the DPC GP Bus is functional.
 - (a) On the Airplane Data Monitor page, select "ADD", "ARINC 429" and enter the following data:
 - 1) Parameter Name: dsw01a
 - 2) Bus: W-DPC-1 MDS-GP 1
 - 3) Label: 270
 - 4) SDI: 01
 - 5) Data Type: Binary Representation (BIN)

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- 6) MSB-LSB: 31-9
- (b) Select SAVE.
- 1) Make sure that the time that shows with dsw01a is updating.
- NOTE: It is not necessary to confirm the value that shows. This check is to make sure that the data is present and you see the time change.

- (c) Open these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C04023	DISPLAY DPC 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C04022	DISPLAY DPC 1 HOLDUP

- (d) Make sure that the time that shows with dsw01a is not updating.
- (e) Close these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C04023	DISPLAY DPC 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C04022	DISPLAY DPC 1 HOLDUP

NOTE: The wait time for DPC 1 power-up is approximately three minutes.

- (f) On the Airplane Data Monitor page, select "Add", "ARINC 429" and enter the following data:
- 1) Parameter Name: dsw02a
- 2) Bus: W-DPC-2 MDS-GP 1
- 3) Label: 270
- 4) SDI: 01
- 5) Data Type: Binary Representation (BIN)
- 6) MSB-LSB: 31-9
- (g) Select SAVE.
- 1) Make sure that the "Value" that shows with dsw02a is updating.
- NOTE: It is not necessary to confirm the value that shows. This check is to make sure that the data is present and you see the time change.

- (h) Open these circuit breakers:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C04024	DISPLAY DPC 2 HOLDUP
D	11	C04025	DISPLAY DPC 2 PRI

- (i) Make sure that the time that shows with dsw02a is not updating.

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- (j) Close these circuit breakers:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C04024	DISPLAY DPC 2 HOLDUP
D	11	C04025	DISPLAY DPC 2 PRI

NOTE: The wait time for DPC 2 power-up is approximately three minutes.

J. FMC-02 and FMC-09 Bus Check

SUBTASK 46-13-01-860-022

- (1) Set the Flight Management Computer (FMC) source select switch, on the P5 forward overhead panel, to BOTH ON L.

SUBTASK 46-13-01-720-006

- (2) Do these steps to make sure that the FMC-02 and FMC-09 Busses are functional.
- (a) On the Airplane Data Monitor page, select "ADD", "ARINC 429" and enter the following data:
- 1) Parameter Name: fmcdisc1
 - 2) Bus: W-FMC-1 Relay FMC-02
 - 3) Label: 270
 - 4) SDI: XX
 - 5) Data Type: Binary Representation (BIN)
 - 6) MSB-LSB: 31-9
- (b) Select SAVE.
- (c) Select "ADD", "ARINC 429" and enter the following data:
- 1) Parameter Name: fmcdisc2a
 - 2) Bus: W-FMC-1 Relay FMC-09
 - 3) Label: 271
 - 4) SDI: XX
 - 5) Data Type: Binary Representation (BIN)
 - 6) MSB-LSB: 31-9
- (d) Select SAVE.
- 1) Make sure that the time that shows with fmcdisc1 and fmcdisc2a is updating.
- NOTE: It is not necessary to confirm the value that shows. This check is to make sure that the data is present and you see the time change.
- (e) Open this circuit breaker:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C01017	FMCS CMPTR 1

- (f) Make sure that the time that shows with fmcdisc1 and fmcdisc2a is not updating.

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- (g) Close this circuit breaker:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C01017	FMCS CMPTR 1

K. ATC Bus Check

SUBTASK 46-13-01-720-007

- (1) Do these steps to make sure that the Air Traffic Control (ATC) Bus is functional.
- (a) On the Airplane Data Monitor page, select “ADD”, “ARINC 429” and enter the following data:
- 1) Parameter Name: atcdata
 - 2) Bus: W-ATC-1 General Output 1
 - 3) Label: 275
 - 4) SDI: XX
 - 5) Data Type: Binary Representation (BIN)
 - 6) MSB-LSB: 31-9
- (b) Select SAVE.
- 1) Make sure that the time that shows with atcdata is updating.
- NOTE:** It is not necessary to confirm the value that shows. This check is to make sure that the data is present and you see the time change.
- (c) Open this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	5	C00186	ATC 1

- (d) Make sure that the time that shows with atcdata is not updating.
- (e) Close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	5	C00186	ATC 1

L. MMR Bus Check

SUBTASK 46-13-01-720-008

- (1) Do these steps to make sure that the Multi-Mode Receiver (MMR) Bus is functional.
- (a) On the Airplane Data Monitor page, select “ADD”, “ARINC 429” and enter the following data:
- 1) Parameter Name: mmrequipid
 - 2) Bus: W-MMR-1 GNSS Data 3
 - 3) Label: 377
 - 4) SDI: XX
 - 5) Data Type: Binary Representation (BIN)
 - 6) MSB-LSB: 31-9
- (b) Select SAVE.

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- 1) Make sure that the time that shows with mmrequipid is updating.

NOTE: It is not necessary to confirm the value that shows. This check is to make sure that data is present and you see the time change.

- (c) Open this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

- (d) Make sure that the time that shows with mmrequipid is not updating.
- (e) Close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

M. CMU Bus Check

SUBTASK 46-13-01-720-009

- (1) Do these steps to make sure that the Communications Management Unit (CMU) Bus is functional.

NOTE: The CMU is an optional Line Replaceable Unit (LRU). This test is not required if CMU is not installed.

- (a) On the Airplane Data Monitor page, select "ADD", "ARINC 429" and enter the following data:
 - 1) Parameter Name: OutStatusWord1
 - 2) Bus: W-CMU Output Bus 3
 - 3) Label: 270
 - 4) SDI: 00
 - 5) Data Type: Binary Representation (BIN)
 - 6) MSB-LSB: 31-9
- (b) Select SAVE.
 - 1) Make sure that the time that shows with OutStatusWord1 is updating.

NOTE: It is not necessary to confirm the value that shows. This check is to make sure that the data is present and you see the time change.
- (c) Open this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C01483	CMU-1 AC

This circuit breaker is inoperative and should remain open:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	9	C01500	CMU/ACARS DC (INOP)

- (d) Make sure that the time that shows with OutStatusWord1 is not updating.

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- (e) Close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C01483	CMU-1 AC

This circuit breaker is inoperative and should remain open:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	9	C01500	CMU/ACARS DC (INOP)

N. Weight on Wheels Discrete Check

SIA 001-014 PRE SB 737-46-1029

SUBTASK 46-13-01-720-010

- (1) Make sure that the Weight-On-Wheels (WOW) Discrete pin is functional.
 - (a) On the Airplane Data Monitor page, select "ADD".
 - (b) Select "PREDEFINED".
 - (c) Select "wow".
 - (d) Select SAVE.
 - (e) Make sure that the wow value is true.
 - (f) Make sure that the time that shows with WOW is updating.
 - (g) Push the "SYS" button on the P9-82 Multi Function Display (MFD) panel.
 - (h) Select the "MAINT" on the MDS.
 - 1) If MAINT does not show, then refer to the IFIM and do the applicable procedure(s).
 - (i) Select "ONBD MAINT".
 - 1) If ONBD MAINT does not show, then refer to the IFIM and do the applicable procedure(s).
 - (j) Select "OTHER FUNCTIONS".
 - (k) Select "SPECIAL FUNCTIONS".
 - (l) Select "32 - Proximity Switch Electronic Unit".
 - (m) Select "PSEU - Air/Ground Override".
 - (n) Select CONTINUE.
 - (o) Verify the preconditions have been followed and select CONTINUE.
 - (p) Set "GND TEST ENABLE SWITCH" to "ENABLE" on the MAINT/BITE PANEL (P61).
 - (q) Select "START FUNCTION".



MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE CONTROL SURFACES AND LANDING GEAR DOOR AREAS. THE CONTROL SURFACES, THE LANDING GEAR, AND THE LANDING GEAR DOORS CAN MOVE WHEN YOU DO THE AIR MODE SIMULATION. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (r) Select "Set SYS 1 and 2 IN AIR".
- (s) Select CONTINUE.

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- (t) Make sure that the following is observed on the MDS: Air/Gnd Override is ACTIVE, System 1: AIR, and System 2: AIR.
- (u) Make sure that the WOW value is "false" on the UMD.
- (v) Make sure that the time that shows with WOW is updating on the UMD.
- (w) Go back to the MDS.
- (x) Select "OPERATE TEST AGAIN".
- (y) Select CONTINUE.
- (z) Select "Set SYS 1 and 2 ON GND".
- (aa) Select CONTINUE.
- (ab) Make sure that the following is observed on the MDS: Air/Gnd Override is NOT ACTIVE, System 1: GND, and System 2: GND.
- (ac) Select STOP FUNCTION.

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SUBTASK 46-13-01-720-014

- (2) Make sure that the WOW Discrete pin is functional.
 - (a) On the Airplane Data Monitor page, select "ADD".
 - (b) Select "PREDEFINED".
 - (c) Select "wow".
 - (d) Select SAVE.
 - (e) Make sure that the wow value is true.
 - (f) Make sure that the time that shows with wow is updating.
 - (g) To use the MDS two inboard displays (MFDs), do this task: Multi Function Display Connection, TASK 46-13-00-480-803 .
 - (h) Push the "SYS" button on the P9-82 MFD panel.
 - (i) Select "OTHER FUNCTIONS" on the MDS.
 - (j) Select "SPECIAL FUNCTIONS" .
 - (k) Select "32 - Proximity Switch Electronic Unit" under Select ATA System.
 - (l) Select "PSEU - Air/Ground Override" under Select System Function.
 - (m) Select Continue.
 - (n) Select Continue under PRECONDITIONS.
 - (o) Set "GND TEST ENABLE SWITCH" to "ENABLE" on the MAINT/BITE PANEL (P61).
 - (p) Select "START FUNCTION" under FUNCTION.
 - (q) Select "Set SYS 1 and 2 IN AIR".



MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE CONTROL SURFACES AND LANDING GEAR DOOR AREAS. THE CONTROL SURFACES, THE LANDING GEAR, AND THE LANDING GEAR DOORS CAN MOVE WHEN YOU DO THE AIR MODE SIMULATION. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (r) Select CONTINUE.

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- (s) Make sure that the following is observed on the MDS: Air/Gnd Override is ACTIVE, System 1: AIR, and System 2: AIR.
- (t) Make sure that the WOW value is "false" on the UMD.
- (u) Make sure that the time that shows with WOW is updating on the UMD.
- (v) Make sure that the time that shows with WOW is updating on the UMD.
- (w) Go back to the MDS.
- (x) Select "OPERATE TEST AGAIN" .
- (y) Select CONTINUE.
- (z) Select "Set SYS 1 and 2 ON GND".
- (aa) Select CONTINUE.
- (ab) Make sure that the following is observed on the MDS: Air/Gnd Override is NOT ACTIVE, System 1: GND, and System 2: GND.
- (ac) Select STOP FUNCTION.

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O. Ethernet Interfaces Check

SIA 001-014 PRE SB 737-46-1029

SUBTASK 46-13-01-720-011

- (1) Make sure that the Ethernet Interfaces are functional.
 - (a) Select "EXTENDED MAINTENANCE" and then "Input Monitoring" (on the maintenance device "ONBOARD MAINTENANCE" screen).
 - (b) Select "NFS" under "Select an item to monitor".
 - (c) Select "ETHERNET" on the bottom of the webpage.
 - (d) Make sure that the "Status" of DPC-1 is "Up".
 - (e) Make sure that the "Status" of DPC-2 is "Up".
 - (f) Open these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C04023	DISPLAY DPC 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C04022	DISPLAY DPC 1 HOLDUP

- 1) Make sure that the "Status" of DPC-1 is "Down".

- (g) Close these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C04023	DISPLAY DPC 1 PRI

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F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C04022	DISPLAY DPC 1 HOLDUP

- (h) Make sure that the "Status" of DFDAU is "Up".
- (i) Make sure that the "Status" of WAP-1 is "Up".
- (j) Make sure that the "Status" of WWU is "Up".
- (k) Push the "SYS" button on the P9-82 MFD panel.
- (l) Select the "MAINT".
 - 1) If MAINT does not show, then refer to the IFIM and do the applicable procedure(s).
- (m) Select "MAINT CTRL PGS".
- (n) Select "MISC SYSTEM CTRLS (MSC)".
- (o) Select "TEST" for ENG 1 (under EEC MAINT POWER box).
- (p) Select "TEST" for ENG 2 (under EEC MAINT POWER box).
- (q) Make sure that the "STATUS: PWR" is now displayed below ENG 1 and 2.
- (r) Set "GND TEST ENABLE SWITCH" to "ENABLE" on the MAINT/BITE PANEL (P61).
- (s) Check the following items in input monitoring on the UMD:
 - 1) Make sure that the "Status" of EEC-1A is "Up".
 - 2) Make sure that the "Status" of EEC-1B is "Up".
 - 3) Make sure that the "Status" of EEC-2A is "Up".
 - 4) Make sure that the "Status" of EEC-2B is "Up".
 - 5) Make sure that the "Status" of EGPWS is "Up".
- (t) Set the "GND TEST ENABLE SWITCH" to "NORM" on the MAINT/BITE PANEL (P61).

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SUBTASK 46-13-01-720-015

- (2) Make sure that the Ethernet Interfaces are functional.
 - (a) Use a UMD to do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.
NOTE: Do not attempt to connect wirelessly.
 - (b) Select "EXTENDED MAINTENANCE" and then "Input Monitoring" (on the maintenance device "ONBOARD MAINTENANCE" screen).
 - (c) Select "NFS" under "Select an item to monitor".
 - (d) Select "ETHERNET" on the bottom of the webpage.
 - (e) Make sure that the "Status" of DPC-1 is "Up".
 - (f) Make sure that the "Status" of DPC-2 is "Up".
 - (g) Open these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C04023	DISPLAY DPC 1 PRI

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F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C04022	DISPLAY DPC 1 HOLDUP

- 1) Make sure that the "Status" of DPC-1 is "Down".

- (h) Close these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C04023	DISPLAY DPC 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C04022	DISPLAY DPC 1 HOLDUP

- (i) Make sure that the "Status" of DFDAU is "Up".
- (j) Make sure that the "Status" of MMR-1 is "Up".
- (k) Make sure that the "Status" of MMR-2 is "Up".
- (l) Make sure that the "Status" of WAP-1 is "Up".
- (m) Make sure that the "Status" of WWU is "Up".
- (n) To use the MDS two inboard displays (MFDs), do this task: Multi Function Display Connection, TASK 46-13-00-480-803.
- (o) Select "MAINT CTRL PGS".
- (p) Select "MISC SYSTEM CTRLS (MSC)".
- (q) Select the "TEST" screen element Diamond for ENG 1 (under EEC MAINT POWER box)
- (r) Select the "TEST" screen element Diamond for ENG 2 (under EEC MAINT POWER box)
- .
- (s) Make sure that the "STATUS: PWR" is now displayed below ENG 1 and 2.
- (t) Check the following items in input monitoring on the UMD:
 - 1) Make sure that the "Status" of EEC-1A is "UP".
 - 2) Make sure that the "Status" of EEC-1B is "UP".
 - 3) Make sure that the "Status" of EEC-2A is "UP".
 - 4) Make sure that the "Status" of EEC-2B is "UP".
 - 5) Make sure that the "Status" of EGPWS is "UP".

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P. DFDAU A717 Receive Busses Check

SUBTASK 46-13-01-720-012

- (1) Make sure that the A717 receive buses from the Digital Flight Data Acquisition Unit (DFDAU) to the NFS are functional.
 - (a) Select the MENU button on Control Display Unit (CDU).
 - (b) Select ACMS.
 - (c) Select MAINTENANCE.

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- (d) Select INTERFACE TESTS.
- (e) Select RECORDER.
- (f) Select CONFIG DAR OUTPUT.
- (g) Select LSK2 LEFT "ON".

NOTE: The preceding instructions enable DAR output from DFDAU, the SUBFRAME counts up on the bottom of the CDU screen.

NOTE: There is a delay before INPUT MONITORING page shows "A717 STATUS ACTIVE".

- (h) Use a UMD to do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.
NOTE: Do not attempt to connect wirelessly.
- (i) Select "EXTENDED MAINTENANCE" and then "Input Monitoring" (on the maintenance device "ONBOARD MAINTENANCE" screen).
- (j) Select NFS.

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- (k) Select 717 RECEIVE on the bottom of the webpage.
 - 1) Make sure that the status of the DAR Bus shows ACTIVE.

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- (l) Select QAR RECEIVE on the bottom of the webpage.
 - 1) Make sure that the status of the DAR and RS422 Buses show ACTIVE.

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Q. DFDAU Avionic Data Stream to NFS Check

SUBTASK 46-13-01-720-013

- (1) Do these steps to make sure that the DFDAU Avionic Data Stream to NFS is functional.

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- (a) Select the horizontal striped menu icon on the top left of the screen, then select the Home Button within the ONS window.

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- (b) Select the HOME button at the upper left of the ONS window.

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- (c) Select "LINE MAINTENANCE".

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- (d) Select "Security".

SIA 001-014 PRE SB 737-46-1029

- (e) Select "SECURITY".

SIA ALL

- (f) Select the "DFDAU" checkbox.
- (g) Select the "GENE RATE" button.
- (h) Select "CONTINUE".

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- (i) Make sure that the DFDAU shows "Successfully retrieved and installed credentials" under CREDENTIAL GENERATION STATUS.

R. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-080-005

- (1) Exit the ONS maintenance browser and disconnect the UMD.

SUBTASK 46-13-01-040-001

- (2) If it is necessary, remove poifimwer from the EEC (TASK 73-21-00-800-801-G00).

SUBTASK 46-13-01-410-002

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

———— **END OF TASK** ————

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ONBOARD MAINTENANCE FUNCTION - MAINTENANCE PRACTICES

1. **General**

A. This document has the Onboard Maintenance Function (OMF) tasks that follow:

- (1) OMF Ground Test
- (2) Fault Guidance Check
- (3) Crew Wireless Access Code Procedure
- (4) Inbound Flight Deck Effects Check
- (5) Existing Flight Deck Effects Check
- (6) Present Leg Faults Check
- (7) Existing Faults Check
- (8) Fault History Check
- (9) Maintenance Enable/Disable Operation
- (10) Special Functions
- (11) Download Manager
- (12) LRU Reports
- (13) Off-board Links
- (14) Shop Faults
- (15) Maintenance Data Pages
- (16) Erasing a Latched Status Message - Verification Check

TASK 46-13-02-710-801

2. **Onboard Maintenance Function Ground Test**

(Figure 201)

A. General

- (1) This task gives the steps to do the Onboard Maintenance Function (OMF) Ground Test.
- (2) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:
 - Multi Function Display (MFD),
 - Other type of approved Universal Maintenance Device (UMD).
- (3) There are three types of ground tests:
 - System Test.
 - Operational Test.
 - Line Replaceable Unit (LRU) Replacement Test.

NOTE: It is possible that there is more than one ATA system test, or operational test, or LRU replacement test. It is necessary to first make a selection of the ATA system. Then, select the applicable test to operate the ground test function.

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- (a) All three test types are not available for all ATA systems. The types of ground tests that are available to you automatically show after you make the ATA system selection.

NOTE: Ground tests are interactive or non-interactive. It is possible that the ground test you select is an Interactive Test. Interactive Tests have instructions and steps that you do while the test is in operation. These steps and instructions include opening and closing circuit breakers, moving switch settings, and other types of actions. Non-interactive tests do not require actions while the test is in progress.

NOTE: If the Network File Server circuit breaker is opened at any time, wait at least 5 seconds before closing the circuit breaker.

- (b) These are the ground tests available:

GROUND TESTS

ATA	TEST TYPE	TEST NAME	INTERACTIVE TEST?
21 - Air Conditioning	System Test	Air Conditioning IBIT - Left	NO
21 - Air Conditioning	System Test	Air Conditioning IBIT - Right	NO
21 - Air Conditioning	System Test	Air Conditioning IBIT with Flow Sensor Test - Left	NO
21 - Air Conditioning	System Test	Air Conditioning IBIT with Flow Sensor Test - Right	NO
27 - Flight Controls - Stall Management Yaw Damper System	System Test	SMYD 1 - Self Test	YES
27 - Flight Controls - Stall Management Yaw Damper System	System Test	SMYD 1 - Servo Test	YES
27 - Flight Controls - Stall Management Yaw Damper System	System Test	SMYD 2 - Self Test	YES
27 - Flight Controls - Stall Management Yaw Damper System	System Test	SMYD 2 - Servo Test	YES
27 - Spoiler Control	Operational Test	Control Wheel	YES
27 - Spoiler Control	Operational Test	SCE Test	YES
27 - Spoiler Control	Operational Test	Speedbrake Lever	YES
27 - Spoiler Control	System Test	Flight Spoilers	YES
27 - Spoiler Control	System Test	Ground Spoilers	YES
31 - Indicating System	System Test	DPC-1 CMU Chime Test	YES
31 - Indicating System	System Test	DPC-1 MAINT Light Test	YES
31 - Indicating System	System Test	DPC-2 CMU Chime Test	YES
31 - Indicating System	System Test	DPC-2 MAINT Light Test	YES
31 - Indicating System	LRU Replacement Test	DPC-1 NVM Erase Function	NO
31 - Indicating System	LRU Replacement Test	DPC-1 Replacement Test	NO
31 - Indicating System	LRU Replacement Test	DPC-2 NVM Erase Function	NO

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(Continued)

ATA	TEST TYPE	TEST NAME	INTERACTIVE TEST?
31 - Indicating System	LRU Replacement Test	DPC-2 Replacement Test	NO
32 - Proximity Switch Electronic Unit	Operational Test	PSEU - LGTV Test	NO
32 - Proximity Switch Electronic Unit	Operational Test	PSEU - Self Test	NO
32 - Proximity Switch Electronic Unit	LRU Replacement Test	PSEU - Replacement Test	YES
32 - Antiskid/Autobrake system	Operational Test	AACU Operational Test	YES
36 - Pneumatics	Operational Test	Protection Gate - Left	YES
36 - Pneumatics	Operational Test	Protection Gate - Right	YES
36 - Pneumatics	System Test	Pneumatic Engine ON - Left	YES
36 - Pneumatics	System Test	Pneumatic Engine ON - Right	YES
36 - Pneumatics	LRU Replacement Test	Electrical LRU - Left	YES
36 - Pneumatics	LRU Replacement Test	Electrical LRU - Right	YES
36 - Pneumatics	LRU Replacement Test	Pneumatic Engine OFF - Left FAMV	YES
36 - Pneumatics	LRU Replacement Test	Pneumatic Engine OFF- Right FAMV	YES
36 - Pneumatics	LRU Replacement Test	Pneumatic Engine OFF - Left HPSOV	YES
36 - Pneumatics	LRU Replacement Test	Pneumatic Engine OFF - Right HPSOV	YES
36 - Pneumatics	LRU Replacement Test	Pneumatic Engine OFF - Left PRSOV	YES
36 - Pneumatics	LRU Replacement Test	Pneumatic Engine OFF- Right PRSOV	YES
71 - 80 Left Engine	Operational Test	Actuator Test	YES
71 - 80 Left Engine	Operational Test	Thrust Reverser Interlock Test	YES
71 - 80 Left Engine	System Test	Electronic Engine Controller Blower Test	YES
71 - 80 Left Engine	System Test	Electronic Engine Controller Test	NO
71 - 80 Left Engine	System Test	Engine Idle Test	YES
71 - 80 Left Engine	System Test	Harness Test	YES
71 - 80 Left Engine	System Test	Ignition Channel A Test	YES
71 - 80 Left Engine	System Test	Ignition Channel B Test	YES
71 - 80 Left Engine	System Test	Wet Motor Test	YES
71 - 80 Right Engine	Operational Test	Actuator Test	YES
71 - 80 Right Engine	Operational Test	Thrust Reverser Interlock Test	YES
71 - 80 Right Engine	System Test	Electronic Engine Controller Blower Test	YES

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(Continued)

ATA	TEST TYPE	TEST NAME	INTERACTIVE TEST?
71 - 80 Right Engine	System Test	Electronic Engine Controller Test	NO
71 - 80 Right Engine	System Test	Engine Idle Test	YES
71 - 80 Right Engine	System Test	Harness Test	YES
71 - 80 Right Engine	System Test	Ignition Channel A Test	YES
71 - 80 Right Engine	System Test	Ignition Channel B Test	YES
71 - 80 Right Engine	System Test	Wet Motor Test	YES

B. References

Reference	Title
29-11-00 P/B 201	HYDRAULIC SYSTEMS A AND B - MAINTENANCE PRACTICES
31-65-00-970-804	Airplane Config Data (ACD) Page Function (P/B 201)
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Prepare for the Test

SUBTASK 46-13-02-480-013

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321 is required for access.

SUBTASK 46-13-02-860-053

- (2) If hydraulic power was removed, do these steps:



WARNING

KEEP PERSONS AND EQUIPMENT CLEAR OF THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (a) Supply hydraulic power to the applicable system (PAGEBLOCK 29-11-00/201).
(b) Cycle the LRU/flight control before performing the ground test(s).

NOTE: Ground tests may fail if LRU/flight controls are not cycled before running the ground test.

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F. Ground Test Procedure

SUBTASK 46-13-02-700-019

- (1) Verify the correct time and date is shown on the Airplane Configuration Data (ACD) page. This is the task: Airplane Config Data (ACD) Page Function, TASK 31-65-00-970-804.

SUBTASK 46-13-02-700-001

- (2) Do the applicable ground test:
 - (a) On the P61 maintenance Built-In-Test Equipment (BITE) panel, lift the switchguard and set the GND TEST switch to ENABLE.

SIA 001-014 PRE SB 737-46-1029

- (b) For the UMD, select LINE MAINTENANCE > GROUND TEST.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (c) For the UMD, select LINE MAINTENANCE > Ground Test.

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- (d) For the MFD, select LINE MAINT > GROUND TESTS.
- (e) On the Ground Test page, select the ATA system.

NOTE: Use the scroll bar, the up or down arrows, or the page numbers (1, 2, 3) to find the ATA if it does not show.
- (f) Select the test type (System, Operational, or LRU Replacement).

NOTE: All three test types are not available for all ATA systems. The types of ground tests that are available show after you make the ATA system selection.
- (g) Select the applicable test.
- (h) Select the CONTINUE button.
 - 1) Make sure that the test PRECONDITIONS screen shows.
- (i) Follow all steps and instructions that show on the PRECONDITIONS screen.
- (j) After you do a check to make sure that all preconditions that show are set and are correct on this page, select the CONTINUE button.
- (k) Make sure the TEST screen shows and continues to show through the test sequence.
- (l) Make sure that TEST CONDITION: READY shows.

NOTE: If TEST CONDITION: READY does not show, the preconditions have not been met.
- (m) Select the START TEST button.

NOTE: It is possible that a percent -complete progress indicator shows.

 - 1) Make sure that TEST CONDITION: OPERATING shows and that the START TEST button changes to STOP TEST.

NOTE: The STOP TEST button may be grey indicating that the test is stoppable or cyan indicating that the test is not stoppable.
 - 2) Make sure that you do not see TEST CONDITION: INHIBITED, or TEST INTERFERENCE, or CANNOT OPERATE, or STOPPED.
 - 3) If the test is interactive, make sure that you do all the steps that show.

NOTE: If interactive test is not performed in a timely manner, it may result in the test timing out and not completing.

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- (n) Make sure that when the test is complete, there are no faults and you see the TEST CONDITION: PASS message.
- (o) If you see TEST CONDITION: FAILED, then review the fault messages on the current screen. Refer to the Interactive Fault Isolation Manual (IFIM) and do the applicable procedure(s).
- (p) To see the POST CONDITIONS screen, select the POST CONDITIONS icon on the footer at the bottom of the page.
- (q) Follow all steps and instructions that show on the POST CONDITIONS screen to put the airplane to its normal condition.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-02-860-002

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.
- (3) On the P61 Panel, set the GND TEST switch to NORM and close the switchguard.

— END OF TASK —

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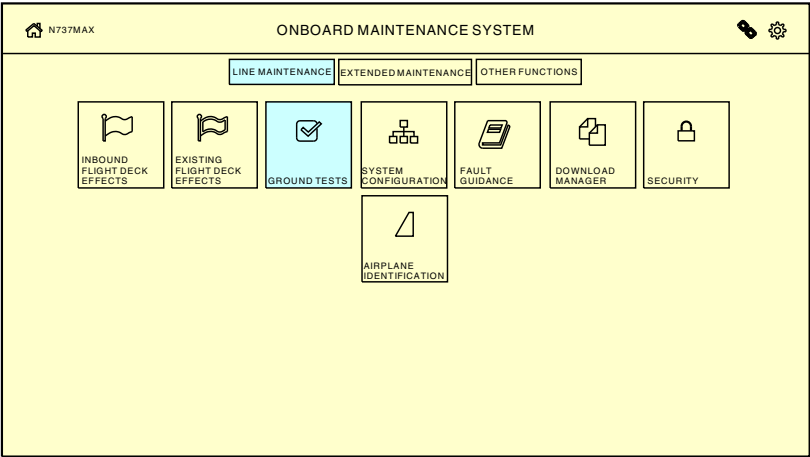
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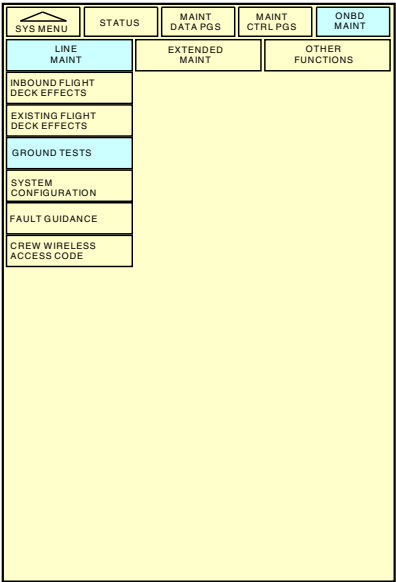
46-13-02

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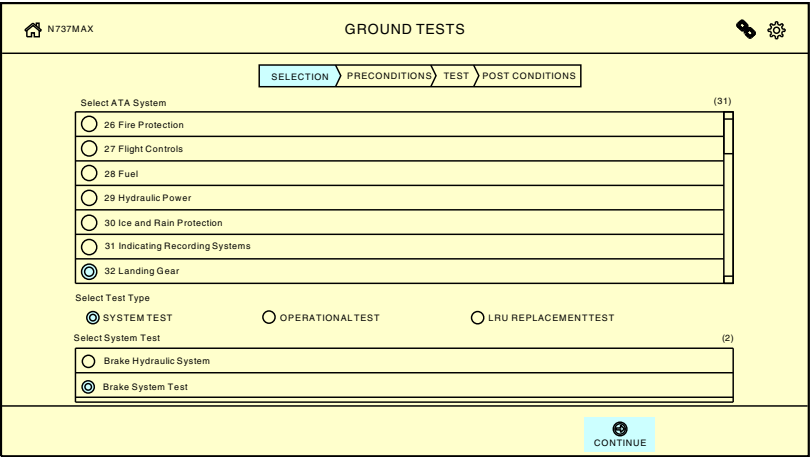
737-7/8/8200/9/10
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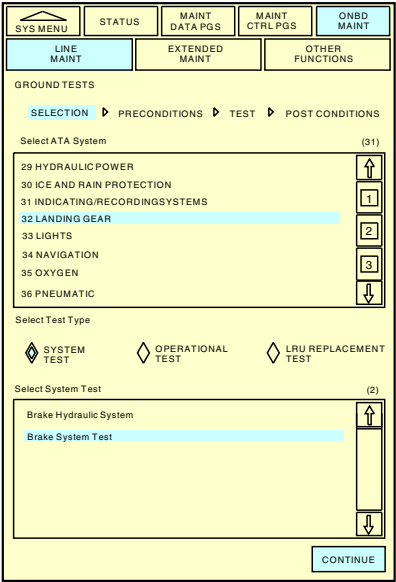
UNIVERSAL MAINTENANCE DEVICE (UMD)



INBOARD FORWARD DISPLAY



UNIVERSAL MAINTENANCE DEVICE (UMD)



INBOARD FORWARD DISPLAY

NOTE:
THE DATA SHOWN HERE ON THE DISPLAY IS ONLY AN EXAMPLE.

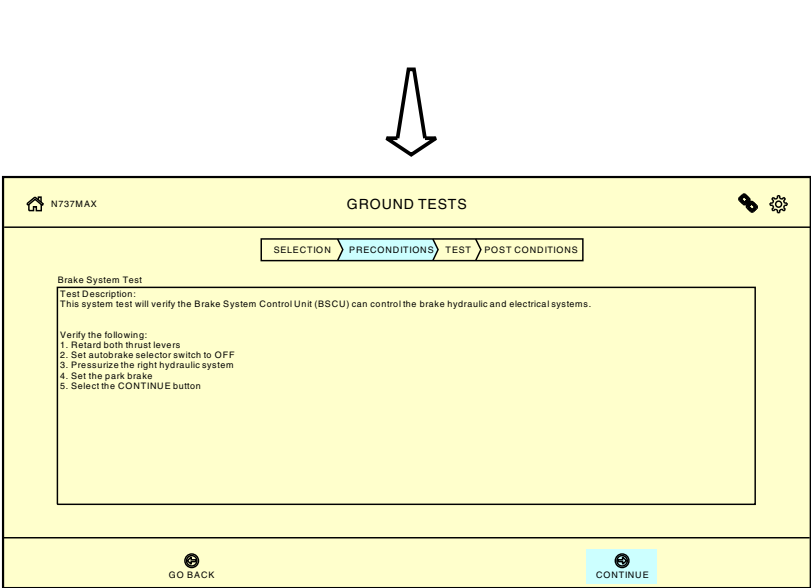
2478749 S0000582015_V3

Onboard Maintenance Function Ground Test
Figure 201/46-13-02-990-801 (Sheet 1 of 4)

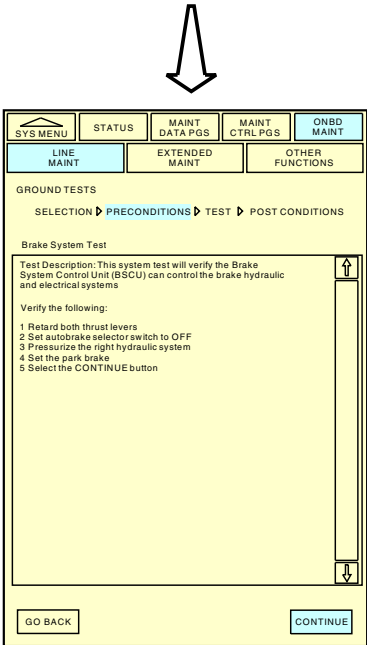
EFFECTIVITY
SIA ALL

46-13-02

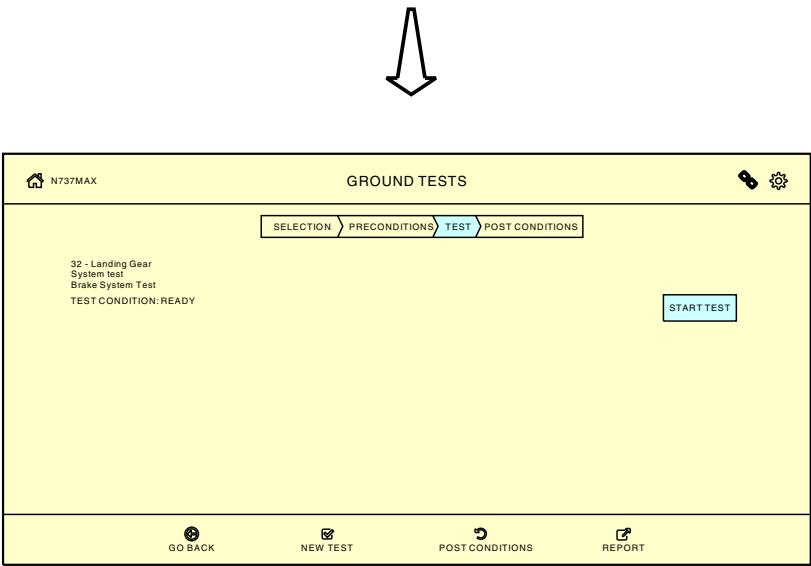
737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



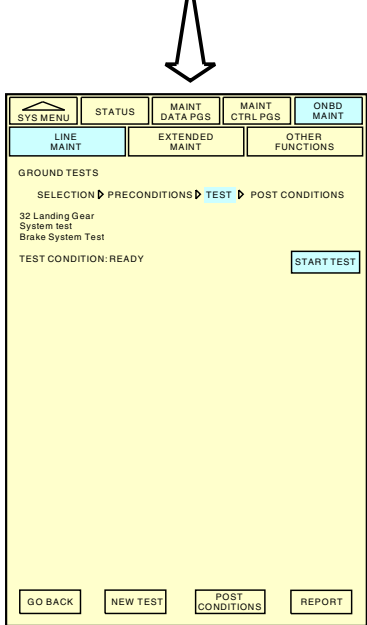
UNIVERSAL MAINTENANCE DEVICE (UMD)



INBOARD FORWARD DISPLAY



UNIVERSAL MAINTENANCE DEVICE (UMD)



INBOARD FORWARD DISPLAY

NOTE:
THE DATA SHOWN HERE ON THE DISPLAY IS ONLY AN EXAMPLE.

2478753 S0000582059_V3

Onboard Maintenance Function Ground Test
Figure 201/46-13-02-990-801 (Sheet 2 of 4)

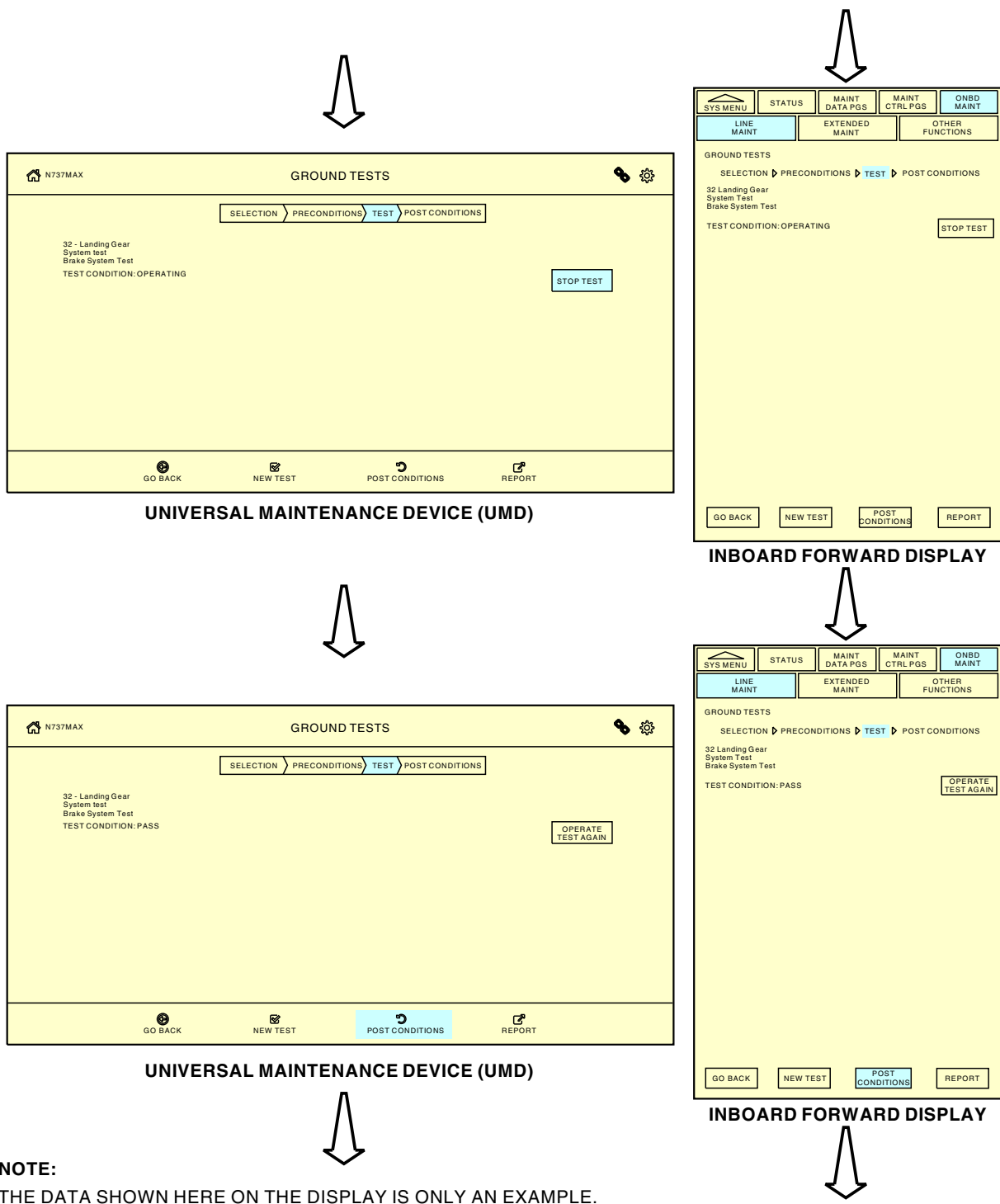
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NOTE:
THE DATA SHOWN HERE ON THE DISPLAY IS ONLY AN EXAMPLE.

2478754 S0000582060_V4

Onboard Maintenance Function Ground Test
Figure 201/46-13-02-990-801 (Sheet 3 of 4)

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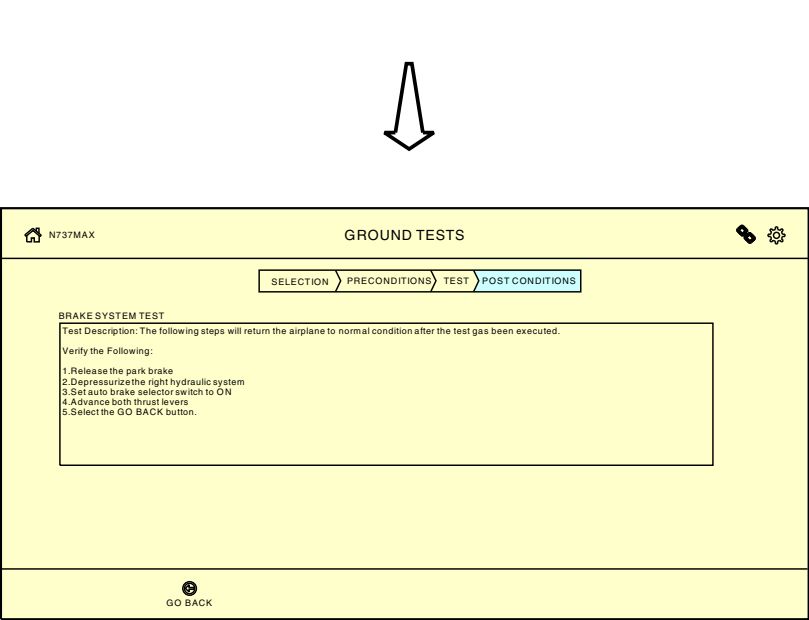
D633AM101-SIA

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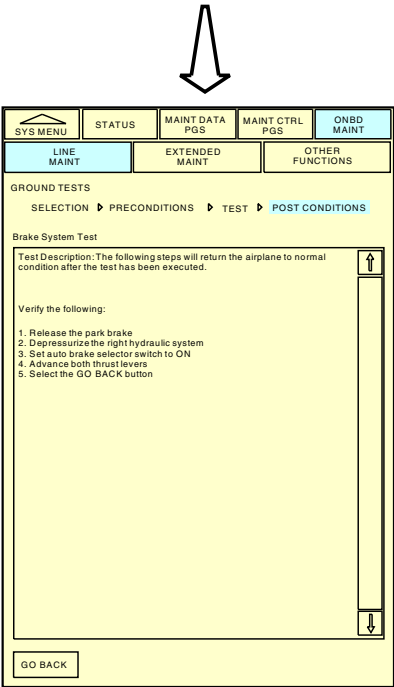
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UNIVERSAL MAINTENANCE DEVICE (UMD)



INBOARD FORWARD DISPLAY

NOTE:
THE DATA SHOWN HERE ON THE DISPLAY IS ONLY AN EXAMPLE.

2478755 S0000582061_V3

Onboard Maintenance Function Ground Test
Figure 201/46-13-02-990-801 (Sheet 4 of 4)

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TASK 46-13-02-700-801

3. Fault Guidance Check

(Figure 202)

A. General

- (1) This procedure gives the instructions to do a fault guidance check.
- (2) Fault guidance shows the information that follows:
 - ATA Chapter-Section.
 - ATA Abbreviated System Name.
 - Indication if maintenance information is available at the LRU BITE Panel, CDU and/or via Onboard Maintenance Function (OMF) and where information resides.
 - There is a placeholder for IFIM reference, but it is blank for all systems currently and may be used for future functionality.
- (3) Use this task when you require general information about faults at the ATA level.
- (4) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:
 - Multi Function Display (MFD),
 - Other type of approved Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Prepare for the Procedure

SUBTASK 46-13-02-480-016

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321 is required for access.

F. Procedure

SUBTASK 46-13-02-700-002

- (1) Do the Fault Guidance Check as follows:

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SIA 001-014 PRE SB 737-46-1029

- (a) For the UMD, select LINE MAINTENANCE > FAULT GUIDANCE.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) For the UMD, select LINE MAINTENANCE > Fault Guidance.

SIA ALL

- (c) For the MFD, select LINE MAINT > FAULT GUIDANCE.
- (d) Review the Fault Guidance page to see troubleshooting information.
- (e) Use the scroll bar if necessary to show additional faults.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-02-080-002

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

———— **END OF TASK** ————

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UNIVERSAL MAINTENANCE DEVICE (UMD)

N737MAX

ONBOARD MAINTENANCE FUNCTION

LINE MAINTENANCE

EXTENDED MAINTENANCE

OTHER FUNCTIONS

INBOUND FLIGHT DECK EFFECTS

EXISTING FLIGHT DECK EFFECTS

GROUND TESTS

SYSTEM CONFIGURATION

FAULT GUIDANCE

DOWNLOAD MANAGER

SECURITY

AIRPLANE IDENTIFICATION



N737MAX

FAULT GUIDANCE

N737MAX B00001

The time is: 1800z 16JAN2016

Data Source: OMF

Maintenance Manual References (21)

32-42
Antiskid/Autobrake Control System
Look for Fault Messages on the AACU Front Panel
FIM Reference:

34-21
Air Data Inertial Reference System
Look for Fault Messages on the CDU BITE Front Panel
FIM Reference:

34-31
ILS or Multi-Mode Receiver
Look for Fault Messages on the ILS or MMR Front Panel
FIM Reference:

34-33
Low Range Radio Altimeter
Look for Fault Messages on the Onboard Maintenance Function
FIM Reference:

32-42
Antiskid/Autobrake Control System
Look for Fault Messages on the AACU Front Panel
FIM Reference:

34-21
Air Data Inertial Reference System
Look for Fault Messages on the CDU BITE Front Panel
FIM Reference:

34-31
ILS or Multi-Mode Receiver
Look for Fault Messages on the ILS or MMR Front Panel
FIM Reference:

MULTIFUNCTION DISPLAY

SYS MENU

STATUS

MAINT DATA PGS

MAINT CTRL PGS

ONBD MAINT

LINE MAINT

EXTENDED MAINT

OTHER FUNCTIONS

INBOUND FLIGHT DECK EFFECTS

EXISTING FLIGHT DECK EFFECTS

GROUND TESTS

SYSTEM CONFIGURATION

FAULT GUIDANCE

CREW WIRELESS ACCESS CODE



SYS MENU

STATUS

MAINT DATA PGS

MAINT CTRL PGS

ONBD MAINT

LINE MAINT

EXTENDED MAINT

OTHER FUNCTIONS

FAULT GUIDANCE

N737MAX B00001

The time is: 1800z 16JAN2016

Data Source: Left OMF

Maintenance Manual References (15)

32-42
Antiskid/Autobrake Control System
Look for Fault Messages on the AACU Front Panel
FIM Reference:

34-21
Air Data Inertial Reference System
Look for Fault Messages on the CDU BITE Front Panel
FIM Reference:

34-31
ILS or Multi-Mode Receiver
Look for Fault Messages on the ILS or MMR Front Panel
FIM Reference:

34-33
Low Range Radio Altimeter
Look for Fault Messages on the Onboard Maintenance Function
FIM Reference:

34-21
Air Data Inertial Reference System
Look for Fault Messages on the CDU BITE Front Panel
FIM Reference:

NOTE:
THE DATA ON THE DISPLAY IS ONLY AN EXAMPLE.

2478058 S0000581841_V4

Fault Guidance Check
Figure 202/46-13-02-990-802

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46-13-02



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TASK 46-13-02-970-801

4. Crew Wireless Access Code Check

(Figure 203)

A. General

- (1) This task gives the steps to do a check of the Crew Wireless Access Code. It also tells you how to make a new crew wireless access code if the code is expired.
- (2) Do this task on the MAX Display System (MDS).

SIA 001-014 PRE SB 737-46-1029

- (a) On the MDS, it is necessary to set one of the large inboard displays (Captains or First Officers) to the Multi Function Display (MFD).

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) Do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803

SIA 001-014 PRE SB 737-46-1029

- (3) The access code is only valid for ten (10) minutes.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (4) The access code is only valid for five (5) minutes.

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- (5) The access code is used to wirelessly connect the maintenance laptop to the airplane's ONS/OMF network.
- (6) This task is applicable only when the airplane has a Crew Wireless LAN Unit (CWLU) installed.
 - (a) To determine whether the optional CWLU is installed, run a system configuration for ATA "46 – Information Systems". "Wireless Access Point 1" will show on the system configuration if CWLU is installed. Do this task: System Configuration Check, TASK 46-13-00-710-802.
 - (b) To verify the required UMS parts, run a system configuration for ATA "46 - Information Systems". Do this task: System Configuration Check, TASK 46-13-00-710-802.

NOTE: Serviceable user-modifiable software (UMS) parts must be installed on the Network File Server (NFS) for the CWLU to work. The required UMS parts are:

- 46 NFS OAS AIRPLANE KEYS UMS
- 46 NFS EXCOMM UMS
- 46 NFS OAS AIRLINE CERTS UMS
- 46 NFS OAS AIRLINE CRL UMS

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (P/B 201)
46-13-00-710-802	System Configuration Check (P/B 201)

C. Location Zones

Zone	Area
212	Flight Compartment - Right

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D. Crew Wireless Access Code Check

SIA 001-014 PRE SB 737-46-1029

SUBTASK 46-13-02-970-001

- (1) Get the crew wireless access code as follows:
 - (a) From the Onboard Maintenance menu, make the LINE MAINT selection.
 - (b) On the LINE MAINT menu, make the CREW WIRELESS ACCESS CODE selection.
 - 1) If the crew wireless access code shows, then make a record of the crew wireless access code and the expiration.

NOTE: The time that shows is in minutes and seconds. The access code is valid for approximately ten (10) minutes.
 - 2) If the crew wireless access code does not show and the word "Expired" shows, then make the NEW ACCESS CODE selection.
 - a) Make sure that a new crew wireless access code shows.
 - b) Make a record of the access code and the expiration.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

SUBTASK 46-13-02-970-002

- (2) Get the crew wireless access code as follows:
 - (a) To use the MAX Display System (MDS) two inboard displays (MFDs), do this task: Multi Function Display Connection, TASK 46-13-00-480-803.
 - (b) Select LINE MAINT > CREW WIRELESS ACCESS CODE
 - 1) If the crew wireless access code shows, then make a record of the crew wireless access code and the expiration.

NOTE: The time that shows is in minutes and seconds. The access code is valid for five (5) minutes.
 - 2) If the crew wireless access code does not show and the word "Expired" shows, then make the NEW ACCESS CODE selection.
 - a) Make sure that a new crew wireless access code shows.
 - b) Make a record of the access code and the expiration.

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SUBTASK 46-13-02-480-002

- (3) Use the access code to do the Maintenance Laptop wireless connection part of this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

————— **END OF TASK** —————

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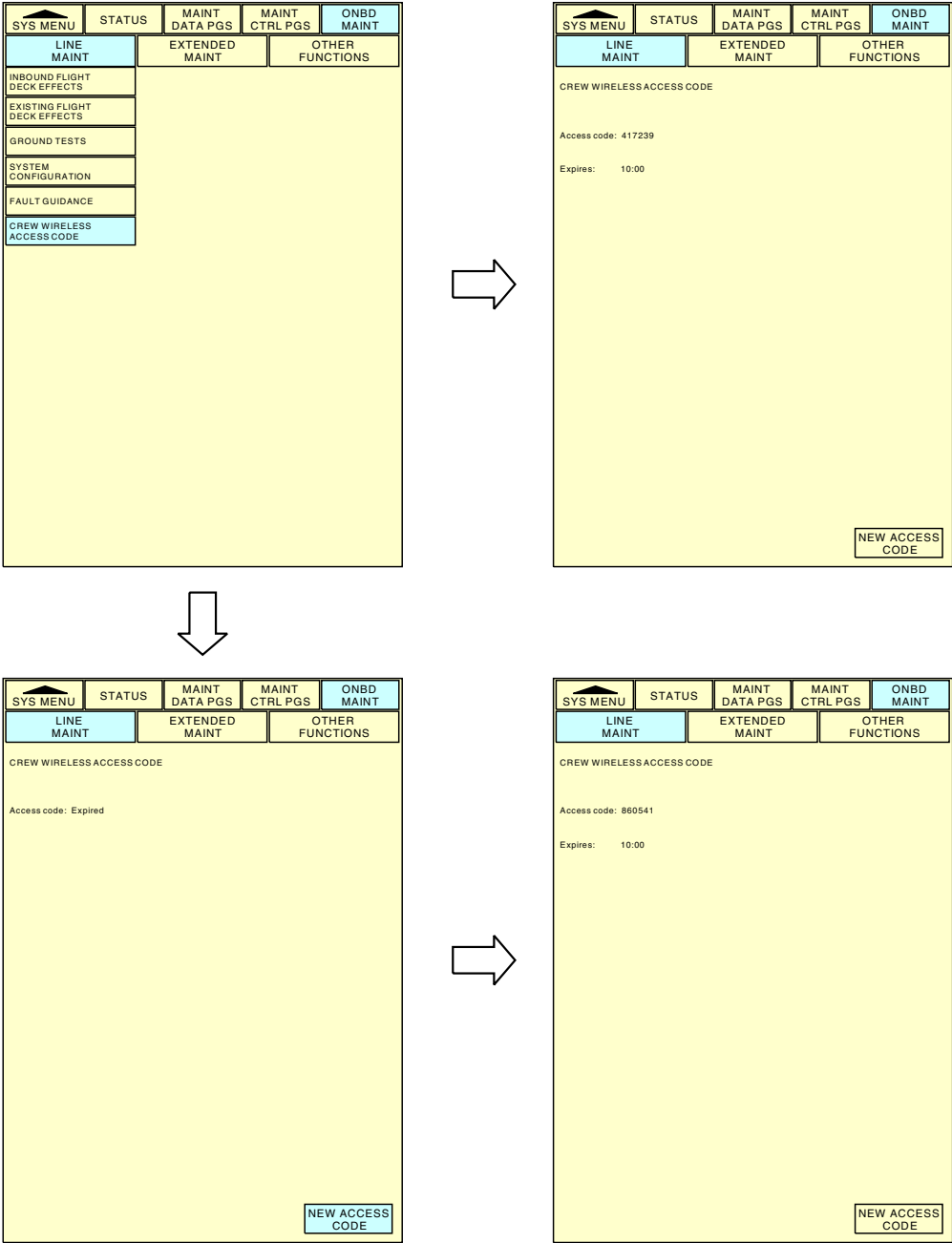
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NOTE:
THE DATA ON THE DISPLAY IS ONLY AN EXAMPLE.

2480598 S0000582468_V2

Crew Wireless Access Code Check
Figure 203/46-13-02-990-803

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TASK 46-13-02-700-802

5. Inbound Flight Deck Effects Check

Figure 204

A. General

- (1) This procedure gives the instructions to do an inbound flight deck effects check.

NOTE: If performance on the Inbound Flight Deck Effects page is slow, this may be due to a large amount of maintenance message instances. To fix this issue, delete the fault history (TASK 46-13-02-700-806). If no action is taken, all functionality on the Inbound Flight Deck Effects page will still be available but performance may be slower.

- (2) Inbound flight deck effects (FDE) show the FDE's recorded during the present leg.
- (3) The information that is shown includes:
 - (a) An initial summary and status of correlated FDE's with date and time, fault description, type, fault code, and maintenance message(s).
 - (b) A summary and status of all FDE's with date and time, fault description, type, fault code and correlated maintenance message(s), if applicable.
 - (c) An option to make a selection from the FDE summary of a single maintenance message to see these details:
 - 1) Date, time and flight phase when message occurred.
 - 2) If message is currently active.
 - 3) Number of occurrences during the current leg.
 - 4) If message occurred in previous leg.

NOTE: When selecting a single maintenance message, do not navigate away from the selection until the maintenance message has fully loaded.

- (d) Recommended maintenance actions to fix the message.
 - (e) Correlated FDE's.
 - (f) Additional selections for Fault History and Flight Legs, if available.
- NOTE: When you select the FLIGHT LEGS option, there is a SHOW LEG tab and SHOW DATA tab.
- NOTE: The FLIGHT LEGS icon, SHOW LEG tab, and SHOW DATA tab do not show on the Multi Function Display (MFD).
- 1) A flight leg graph shows when you select the SHOW LEG tab.
 - 2) A flight leg data table shows when you select the SHOW DATA tab.
- (4) Use this task when you want to see faults for the inbound leg grouped by FDE and sorted by time with the most recent FDE first.
 - (5) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:
 - MFD,
 - Other type of approved Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (P/B 201)

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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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Prepare for the Procedure

SUBTASK 46-13-02-480-037

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321 is required for access.

F. Procedure

SUBTASK 46-13-02-860-007

- (1) Do the Inbound Flight Deck Effects check as follows:

SIA 001-014 PRE SB 737-46-1029

- (a) For the UMD, select LINE MAINTENANCE > INBOUND FLIGHT DECK EFFECTS.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) For the UMD, select LINE MAINTENANCE > Inbound Flight Deck Effects.

SIA ALL

- (c) For the MFD, select LINE MAINT > INBOUND FLIGHT DECK EFFECTS.
- (d) Find the faults and make a record of them, if necessary.

NOTE: It is possible to look at correlated flight deck effects (FDE's). These are FDEs with a corresponding maintenance message. You can also look at all FDEs that are with and without a correlated maintenance message.

- (e) Use the scroll bar if necessary to show additional faults.
- (f) If applicable, select the REPORT button to make a record of the inbound FDE's.
- (g) If applicable, refer to the IFIM and do the applicable procedure(s) to troubleshoot and correct the faults that show.

————— END OF TASK —————

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MAINTENANCE LAPTOP

N737MAX ONBOARD MAINTENANCE FUNCTION

LINE MAINTENANCE	EXTENDED MAINTENANCE	OTHER FUNCTIONS	

INBOUND FLIGHT DECK EFFECTS	EXISTING FLIGHT DECK EFFECTS	GROUND TESTS	SYSTEM CONFIGURATION

FAULT GUIDANCE	DOWNLOAD MANAGER	SECURITY	AIRPLANE IDENTIFICATION

INBOARD FORWARD DISPLAY

SYS MENU	STATUS	MAINT DATA PGS	MAINT CTRL PGS	ONBD MAINT

LINE MAINT	EXTENDED MAINT	OTHER FUNCTIONS

INBOUND FLIGHT DECK EFFECTS		
EXISTING FLIGHT DECK EFFECTS		
GROUND TESTS		
SYSTEM CONFIGURATION		
FAULT GUIDANCE		
CREW WIRELESS ACCESS CODE		

N737MAX INBOUND FLIGHT DECK EFFECTS

N737MAX B00001 KRTN/KBFI
The time is: 1621z 16JAN2016
Data Source: OMF

Flight Deck Effects recorded during the present leg (6)

FDE: ENG 1 OVERHEAT light is on FAULT CODE: 261 61 151	Panel Light	ACTIVE	1730z 16JAN2016
Maintenance Message: 26-00050 Descent ENGINE-1 COMBUSTOR BURN THROUGH (CBT) LOOP A OVERHEAT DETECTED BY: ENGINE FIRE DETECTION CONTROL UNIT (EFDCU)		ACTIVE	1730z 16JAN2016
FDE: CAPT RA FLAP FAULT CODE: 732 001 4242	PFD Flag	ACTIVE	1738z 16JAN2016
Maintenance Message: 34-25111 Approach RADIO ALTIMETER #1 HAS NO OUTPUT ON RA BUS.		ACTIVE	1738z 16JAN2016
FDE: [LHA Value] FAULT CODE: [NNN NNN NN]	[FDE Type]	[STATUS]	[TIME][DATE]
Maintenance Message: [NN-NNNN] [Phase] [DESCRIPTION]		[STATUS]	[TIME][DATE]
FDE: ENG L IGNITER 2 FAULT CODE: 732 001 42	STATUS	ACTIVE	1739z 16JAN2016
Maintenance Message: 73-32321 Descent ENG-L IGNITER #2 FAILED TO LIGHT IN CONT MODE.		ACTIVE	1739z 16JAN2016
FDE: [LHA Value] FAULT CODE: [NNN NNN NN]	[FDE Type]	[STATUS]	[TIME][DATE]
Maintenance Message: [NN-NNNN] [Phase] [DESCRIPTION]		[STATUS]	[TIME][DATE]

SHOW ALL FDES REPORT

SYS MENU	STATUS	MAINT DATA PGS	MAINT CTRL PGS	ONBD MAINT

LINE MAINT	EXTENDED MAINT	OTHER FUNCTIONS

INBOUND FLIGHT DECK EFFECTS N737MAX B00001 KRTN/KBFI
The time is: 1800z 04FEB2016
Data Source: Left OMF

Flight Deck Effects recorded during the present leg (3)

FDE: ENG 1 OVERHEAT light is on FAULT CODE: 261 61 151	Panel Light	ACTIVE	1730z 16JAN2016
[] Maintenance Message: 26-00050 Descent ENGINE-1 COMBUSTOR BURN THROUGH (CBT) LOOP A OVERHEAT DETECTED BY: ENGINE FIRE DETECTION CONTROL UNIT (EFDCU)		ACTIVE	1730z 16JAN2016
FDE: CAPT RA FLAG FAULT CODE: 732 001 42	PFD FLAG	INACTIVE	1738z 16JAN2016
[] Maintenance Message: 34-25111 Approach RADIO ALTIMETER #1 HAS NO OUTPUT ON RA BUS.		ACTIVE	1738z 16JAN2016
FDE: [LHA Text] FAULT CODE: [NNN NNN NN]	[FDE Type]	[STATUS]	[TIME][DATE]
[] Maintenance Message: [NN] - [NNNNN] [Phase] [DESCRIPTION...]		[STATUS]	[TIME][DATE]
FDE: ENG L IGNITER 2 FAULT CODE: 732 001 42	STATUS	ACTIVE	1730z 16JAN2016
[] Maintenance Message: 70-02021 Descent ENG-L IGNITER #2 FAILED TO LIGHT IN CONT MODE.		ACTIVE	1730z 16JAN2016

MAINT MSG DATA SHOW ALL FDFS REPORT

NOTE:
THE DATA ON THIS DISPLAY IS ONLY AN EXAMPLE.

2478705 S0000582072_V1

Inbound Flight Deck Effect Check
Figure 204/46-13-02-990-804 (Sheet 1 of 4)

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MAINTENANCE LAPTOP

N737MAX

INBOUND FLIGHT DECK EFFECTS

N737MAX B00001 KRTN/KBF1

The time is: 1621z 16JAN2016

Data Source: OMF

Flight Deck Effects recorded during the present leg (6)

FDE: ENG 1 OVERHEAT light is on FAULT CODE: 261 61 151	Panel Light	ACTIVE	1730z 16JAN2016
Maintenance Message: 26-00050 Descent ENGINE-1 COMBUSTOR BURN THROUGH (CBT) LOOP A OVERHEAT DETECTED BY: ENGINE FIRE DETECTION CONTROL UNIT (EFDCU)		ACTIVE	1730z 16JAN2016
FDE: CAPTRA FLAP FAULT CODE: 732 001 4242	PFD Flag	ACTIVE	1738z 16JAN2016
Maintenance Message: 34-25111 Approach RADIO ALTIMETER #1 HAS NO OUTPUT ON RA BUS.		ACTIVE	1738z 16JAN2016
FDE: [LHA Value] FAULT CODE: [NNN NNN NN]	[FDE Type]	[STATUS] [TIME][DATE]	
Maintenance Message: [NN-NNNN] [Phase] [DESCRIPTION]		[STATUS] [TIME][DATE]	
FDE: ENG L IGNITER 2 FAULT CODE: 732 001 42	STATUS	ACTIVE	1739z 16JAN2016
Maintenance Message: 73-32321 Descent ENG-L IGNITER #2 FAILED TO LIGHT IN CONT MODE.		ACTIVE	1739z 16JAN2016
FDE: [LHA Value] FAULT CODE: [NNN NNN NN]	[FDE Type]	[STATUS] [TIME][DATE]	
Maintenance Message: [NN-NNNN] [Phase] [DESCRIPTION]		[STATUS] [TIME][DATE]	

SHOW ALL FDES

REPORT

INBOARD FORWARD DISPLAY

SYS MENU

STATUS

MAINT DATA PGS

MAINT CTRL PGS

ONBD MAINT

LINE MAINT

EXTENDED MAINT

OTHER FUNCTIONS

INBOUND FLIGHT DECK EFFECTS N737MAX B00001 KRTN/KBF1
The time is: 1800z 04FEB2016
Data Source: Left OMF

Flight Deck Effects recorded during the present leg (3)

FDE: ENG 1 OVERHEAT light is on FAULT CODE: 261 61 151	Panel Light	ACTIVE	1730z 16JAN2016
[] Maintenance Message: 26-00050 Descent ENGINE-1 COMBUSTOR BURN THROUGH (CBT) LOOP A OVERHEAT DETECTED BY: ENGINE FIRE DETECTION CONTROL UNIT (EFDCU)		ACTIVE	1730z 16JAN2016
FDE: CAPT RA FLAG FAULT CODE: 732 001 42	PFD FLAG	INACTIVE	1738z 16JAN2016
[] Maintenance Message: 34-25111 Approach RADIO ALTIMETER #1 HAS NO OUTPUT ON RA BUS.		ACTIVE	1738z 16JAN2016
FDE: [LHA Text] FAULT CODE: [NNN NNN NN]	[FDE Type]	[STATUS] [TIME][DATE]	
[] Maintenance Message: [NN][NNNN] [Phase] [DESCRIPTION...]		[STATUS] [TIME][DATE]	
FDE: ENG L IGNITER 2 FAULT CODE: 732 001 42	STATUS	ACTIVE	1730z 16JAN2016
[] Maintenance Message: 73-32321 Descent ENG-L IGNITER #2 FAILED TO LIGHT IN CONT MODE.		ACTIVE	1730z 16JAN2016

MAINT MSG DATA

SHOW ALL FDES

REPORT

MAINTENANCE LAPTOP

N737MAX

INBOUND FLIGHT DECK EFFECTS

N737MAX B00001 KRTN/KBF1

The time is: 1621z 16JAN2016

Data Source: OMF

MAINTENANCE MESSAGE DATA Correlated to ENG L IGNITER 2 1 of 2

ENG-L IGNITER #2 FAILED TO LIGHT IN CONT
MODE.

NEXT MESSAGE

PREVIOUS MESSAGE

Maintenance Message: 73-32321 ACTIVE

Occurred at 1730z 16JAN2016 during Descent
Intermittent (occurred 3 times) during this leg
This message occurred in another leg

Recommended Maintenance Action:

- 1) See Fault Isolation Procedure
- 2) Possible Failures shown below:
 - A) High Pressure Turbine Active Clearance Control (HPTACC) Valve
 - B) Fuel Watering Unit (FWU)
 - C) Electronic Engine Control (EEC)
 - D) W09 Harness, Electrical
 - E) [PLACEHOLDER]

Correlated Flight Deck Effects: (10)

ENG L IGNITER 2 FAULT CODE: 732 001 42	STATUS	ACTIVE	1730z 16JAN2016
[PLACEHOLDER]			
[PLACEHOLDER]			
[PLACEHOLDER]			
[PLACEHOLDER]			
[PLACEHOLDER]			

GO BACK

FAULT HISTORY

FLIGHT LEGS

REPORT

INBOARD FORWARD DISPLAY

SYS MENU

STATUS

MAINT DATA PGS

MAINT CTRL PGS

ONBD MAINT

LINE MAINT

EXTENDED MAINT

OTHER FUNCTIONS

INBOUND FLIGHT DECK EFFECTS - MAINT MSG DATA 1 of 2
Correlated to ENG L IGNITER 2

ENG-L IGNITER #2 FAILED TO LIGHT IN CONT MODE.

Detected by:

Maintenance Message: 73-32321 ACTIVE
Occurred at 1730z 16JAN2016 during Descent

Recommended Maintenance Action:

- 1) See Fault Isolation Procedure
- 2) Possible Failures shown below:
 - A) High Pressure Turbine Active Clearance Control (HPTACC) Valve
 - B) Fuel Watering Unit (FWU)
 - C) Electronic Engine Control (EEC)
 - D) W09 Harness, Electrical
 - E) [PLACEHOLDER]

Correlated Flight Deck Effects: (10)

ENG L IGNITER 2 FAULT CODE: 732 001 42	STATUS	ACTIVE	1730z 16JAN2016
[PLACEHOLDER]			
[PLACEHOLDER]			
[PLACEHOLDER]			
[PLACEHOLDER]			
[PLACEHOLDER]			

GO BACK

FAULT HISTORY

REPORT

NOTE:
THE DATA ON THIS DISPLAY IS ONLY AN EXAMPLE.

2478713 S0000582121_V1

Inbound Flight Deck Effect Check Figure 204/46-13-02-990-804 (Sheet 2 of 4)

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MAINTENANCE LAPTOP

N737MAX INBOUND FLIGHT DECK EFFECTS

N737MAX B00001 KRTN/KBFI
The time is: 1621z 16JAN2016
Data Source: OMF

Fault History for Maintenance Message 75-30362 (1)

Maintenance Message: 73-32321
ENG-L IGNITER #2 FAILED TO LIGHT IN CONT MODE.

This fault occurred in the following legs:

- [] Leg 0 Enroute Start 1305z 01APR16 Intermittent (7)
- [] Leg -1 Enroute Cruise 1215z 31MAR16 Intermittent (2)
- [] Leg -5 Enroute Cruise 0835z 01APR16 HARD

GO BACK FAULT HISTORY FLIGHT LEGS REPORT



INBOARD FORWARD DISPLAY

SYS MENU STATUS MAINT DATA PGS MAINT CTRL PGS ONBD MAINT

LINE MAINT EXTENDED MAINT OTHER FUNCTIONS

INBOUND FLIGHT DECK EFFECTS N737MAX B00001 KRTN/KBFI
The time is: 1621z 16JAN2016
Data Source: Left OMF

Fault History for Maintenance Message 75-30362 (1)

Maintenance Message: 73-32321
ENG-L IGNITER #2 FAILED TO LIGHT IN CONT MODE.

This fault occurred in the following legs:

- [] Leg 0 Enroute Start 1305z 01APR16 Intermittent (7)
- [] Leg -1 Enroute Cruise 1215z 31MAR16 Intermittent (2)
- [] Leg -5 Enroute Cruise 0835z 01APR16 HARD

GO BACK REPORT



N737MAX INBOUND FLIGHT DECK EFFECTS

N737MAX B00001 KRTN/KBFI
The time is: 1621z 16JAN2016
Data Source: Left OMF

Fault History for Maintenance Message 75-30362 (1)

Maintenance Message: 73-32321
ENG-L IGNITER #2 FAILED TO LIGHT IN CONT MODE.

This fault occurred in the following legs:

- [] Leg 0 Enroute Start 1305z 01APR16 Intermittent (7)
- [] Leg -1 Enroute Cruise 1215z 31MAR16 Intermittent (2)
- [] Leg -5 Enroute Cruise 0835z 01APR16 HARD

GO BACK FAULT HISTORY FLIGHT LEGS REPORT



SYS MENU STATUS MAINT DATA PGS MAINT CTRL PGS ONBD MAINT

LINE MAINT EXTENDED MAINT OTHER FUNCTIONS

INBOUND FLIGHT DECK EFFECTS N737MAX B00001 KRTN/KBFI
The time is: 1621z 16JAN2016
Data Source: Left OMF

Fault History for Maintenance Message 75-30362 (1)

Maintenance Message: 73-32321
ENG-L IGNITER #2 FAILED TO LIGHT IN CONT MODE.

This fault occurred in the following legs:

- [] Leg 0 Enroute Start 1305z 01APR16 Intermittent (7)
- [] Leg -1 Enroute Cruise 1215z 31MAR16 Intermittent (2)
- [] Leg -5 Enroute Cruise 0835z 01APR16 HARD

GO BACK REPORT

NOTE:

THE DATA ON THIS DISPLAY IS ONLY AN EXAMPLE.

STOP! THE SCREENS ON THE PAGE THAT FOLLOWS DO NOT SHOW ON THE MAX DISPLAY SYSTEM (MDS).

2478715 S0000582122_V1

Inbound Flight Deck Effect Check Figure 204/46-13-02-990-804 (Sheet 3 of 4)

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TASK 46-13-02-700-803

6. Existing Flight Deck Effects Check

(Figure 205)

A. General

- (1) This procedure gives the instructions to do an existing flight deck effects check.

NOTE: If performance on the Existing Flight Deck Effects page is slow, this may be due to a large amount of maintenance message instances. To fix this issue, delete the fault history (TASK 46-13-02-700-806). If no action is taken, all functionality on the Existing Flight Deck Effects page will still be available but performance may be slower.

- (2) Existing Flight Deck Effects (EFDE) show active faults that are grouped by Flight Deck Effect (FDE). The EFDE list shows the newest FDE first.

- (3) The information that you see includes:

- (a) An initial summary and status of correlated FDE's with date and time, fault description, type, fault code, and maintenance message(s).
- (b) A summary and status of all FDE's with date and time, fault description, type, fault code and correlated maintenance message(s), if applicable.
- (c) An option to make a selection from the FDE summary of a single maintenance message to see these details:
 - 1) Date, time and flight phase when message occurred.
 - 2) If message is currently active.
 - 3) Number of occurrences during the current leg.
 - 4) If message occurred in previous leg.

NOTE: When selecting a single maintenance message, do not navigate away from the selection until the maintenance message has fully loaded.

NOTE: If GPS time is received after the time has been manually set, or if GPS time jumps occur, the change of time may cause inactive faults to be listed when entering this page.

- (d) Recommend maintenance actions to fix the message.
- (e) Correlated FDE's.
- (f) Additional selections for Fault History and Flight Legs, if available.

NOTE: When you select the FLIGHT LEGS option, there is a SHOW LEG tab and SHOW DATA tab.

NOTE: The FLIGHT LEGS icon, SHOW LEG tab, and SHOW DATA tab do not show on the Multi Function Display (MFD).

- 1) A flight leg graph shows when you select the SHOW LEG tab.
- 2) A flight leg data table shows when you select the SHOW DATA tab.

- (4) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:

- MFD,
- Other type of approved Universal Maintenance Device (UMD).

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B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Prepare for the Procedure

SUBTASK 46-13-02-480-004

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321 is required for access.

F. Procedure

SUBTASK 46-13-02-860-009

- (1) Do the EFDE check as follows:

SIA 001-014 PRE SB 737-46-1029

- (a) For the UMD, select LINE MAINTENANCE > EXISTING FLIGHT DECK EFFECTS.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) For the UMD, select LINE MAINTENANCE > Existing Flight Deck Effects.

SIA ALL

- (c) For the MFD, select LINE MAINT > EXISTING FLIGHT DECK EFFECTS.
- (d) Find the faults and make a record of them, if necessary.

NOTE: It is possible to look at correlated FDEs. These are FDEs with a corresponding maintenance message. You can also look at all FDEs that have and do not have a correlated maintenance message.

- (e) Use the scroll bar if necessary to show additional faults.
- (f) If applicable, select the REPORT button or icon to make a record of the inbound FDEs.
- (g) If applicable, refer to the IFIM and do the applicable procedure(s) to troubleshoot and correct the faults that show.

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G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-02-860-048

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

———— **END OF TASK** ————

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AIRCRAFT MAINTENANCE MANUAL

MAINTENANCE LAPTOP

N737MAX

ONBOARD MAINTENANCE FUNCTION

LINE MAINTENANCE

EXTENDED MAINTENANCE

OTHER FUNCTIONS

INBOUND FLIGHT DECK EFFECTS

EXISTING FLIGHT DECK EFFECTS

GROUND TESTS

SYSTEM CONFIGURATION

FAULT GUIDANCE

DOWNLOAD MANAGER

SECURITY

AIRPLANE IDENTIFICATION



INBOARD FORWARD DISPLAY

SYS MENU

STATUS

MAINT DATA PGS

MAINT CTRL PGS

ONBD MAINT

LINE MAINT

EXTENDED MAINT

OTHER FUNCTIONS

INBOUND FLIGHT DECK EFFECTS

EXISTING FLIGHT DECK EFFECTS

GROUND TESTS

SYSTEM CONFIGURATION

FAULT GUIDANCE

CREW WIRELESS ACCESS CODE



N737MAX

EXISTING FLIGHT DECK EFFECTS

N737MAX B00001 KRTN/KBF1

The time is: 1621z 16JAN2016

Data Source: OMF

Flight Deck Effects currently active (6)

FDE: ENG L IGNITER 2 STATUS ACTIVE

FAULT CODE: 732 001 42

Maintenance Message: 73-32321 ACTIVE

ENG-L IGNITER #2 FAILED TO LIGHT IN CONT MODE.

Maintenance Message: 75-30361 ACTIVE

ENG-L HPTACC POSITION SIGNAL IS OUT OF RANGE.

FDE: CAPTRAF LAF PFD FLAG ACTIVE

FAULT CODE: 732 001 4242

Maintenance Message: 34-25111 ACTIVE

RADIO ALTIMETER #1 HAS NO OUTPUT ON RABUS.

FDE: CAPTRAF LAF PFD FLAG [STATUS]

FAULT CODE: 732 001 4242

Maintenance Message: NN-NNNN [STATUS]

[DESCRIPTION]

Maintenance Message: NN-NNNN [STATUS]

[DESCRIPTION]

FDE: [LHA Value] [FDE Type] [STATUS]

FAULT CODE: [NNN NNN NN]

Maintenance Message: NN-NNNN [STATUS]

SHOW ALL FDES

REPORT



NOTE:
THE DATA ON THE DISPLAY IS AN EXAMPLE.

SYS MENU

MAINT DATA PGS

MAINT CTRL PGS

ONBD MAINT

LINE MAINT

EXTENDED MAINT

OTHER FUNCTIONS

EXISTING FLIGHT DECK EFFECTS N737MAX B00001 KRTN/KBF1

The time is: 1621z 16JAN2016

Data Source: Left OMF

Flight Deck Effects currently active (9)

FDE: ENG L IGNITER 2 STATUS ACTIVE

FAULT CODE: 732 001 42

[] Maintenance Message: 73-32321 ACTIVE

ENG-L IGNITER #2 FAILED TO LIGHT IN CONT MODE.

[] Maintenance Message: 75-30361 ACTIVE

ENG-L HPTACC POSITION SIGNAL IS OUT OF RANGE.

FDE: CAPT RA FLAG PFD FLAG INACTIVE

FAULT CODE: 732 001 42

[] Maintenance Message: 34-25111 ACTIVE

RADIO ALTIMETER #1 HAS NO OUTPUT ON RABUS.

FDE: [LHA Text] [FDE Type] [STATUS]

FAULT CODE: [NNN NNN NN]

[] Maintenance Message: [NN]-[NNNNN] [STATUS]

[DESCRIPTION...]

[] Maintenance Message: [NN]-[NNNNN] [STATUS]

[DESCRIPTION...]

[] Maintenance Message: [NN]-[NNNNN] [STATUS]

[DESCRIPTION...]

[] Maintenance Message: [NN]-[NNNNN] [STATUS]

[DESCRIPTION...]

MAINT MSG DATA

SHOW ALL FDES

REPORT



Existing Flight Deck Effects Check
Figure 205/46-13-02-990-806 (Sheet 1 of 2)

EFFECTIVITY
SIA ALL

46-13-02



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N737MAX

EXISTING FLIGHT DECK EFFECTS



N737MAX B00001 KRTN/KBF1
The time is: 1621z 16JAN2016
Data Source: OMF

Flight Deck Effects currently active (12)

FDE: Fire handle light is on (engine 1)
FAULT CODE: 261 61 552

ACTIVE

FDE: Fire handle light is on (engine 2)
FAULT CODE: 261 61 552

ACTIVE

FDE: ENG 1 OVERHEAT light is on
FAULT CODE: 261 61 151

ACTIVE

Maintenance Message: 26-00050

ACTIVE

ENGINE-1 COMBUSTOR BURN THROUGH (CBT) LOOP A
OVERHEAT DETECTED BY: ENGINE FIRE DETECTION CONTROL
UNIT (EFDCU)

ACTIVE

FDE: Overheat/fire protection FAULT light is on
FAULT CODE: 261 61 300

ACTIVE

FDE: CAPT RA FLAP
FAULT CODE: 732 001 4242

ACTIVE

Maintenance Message: 34-25111

ACTIVE

RADIO ALTIMETER #1 HAS NO OUTPUT ON RA BUS.

FDE: [LHA Value]
FAULT CODE: 261 61 300

[STATUS]

FDE: [LHA Value]
FAULT CODE: 261 61 300

[STATUS]

FDE: [LHA Value]
FAULT CODE: [NNN NNN NN]

[STATUS]

Maintenance Message: NN-NNNNN

[STATUS]

[DESCRIPTION]

HIDE UNCORRELATED FDES

REPORT



SYS MENU

STATUS

MAINT
DATA PGS

MAINT
CTRL PGS

ONBD
MAINT

LINE
MAINT

EXTENDED
MAINT

OTHER
FUNCTIONS

EXISTING FLIGHT DECK EFFECTS

N737MAX B00001 KRTN/KBF1
The time is: 1800z 04FEB2016
Data Source: Left OMF

Flight Deck Effects currently active (21)

FDE: Fire handle light is on
(engine 1)
FAULT CODE: 261 61 152

ACTIVE

FDE: Fire handle light is on
FAULT CODE: 261 61 152

ACTIVE

FDE: ENG 1 OVERHEAT light is
on
FAULT CODE: 261 61 151

ACTIVE

[] Maintenance Message: 26-00050

ACTIVE

ENGINE-1 COMBUSTOR BURN THROUGH (CBT) LOOP A
OVERHEAT DETECTED BY: ENGINE FIRE DETECTION
CONTROL UNIT (EFDCU)

ACTIVE

FDE: Overheat/fire protection
FAULT light is on
FAULT CODE: 261 61 151

ACTIVE

FDE: CAPT RA FLAG
FAULT CODE: 732 001 42

INACTIVE

[] Maintenance Message: 34-25111

ACTIVE

RADIO ALTIMETER #1 HAS NO OUTPUT ON RA BUS.

FDE: [LHA Value]
FAULT CODE: [NNN NNN NN]

[STATUS]

MAINT
MSG DATA

HIDE
UNCORRELATED FDES

REPORT

NOTE:
THE DATA ON THE DISPLAY IS AN EXAMPLE.

2480775 S0000582886_V2

Existing Flight Deck Effects Check
Figure 205/46-13-02-990-806 (Sheet 2 of 2)

EFFECTIVITY
SIA ALL

46-13-02



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 46-13-02-700-804

7. Present Leg Faults Check

Figure 206

A. General

- (1) This procedure gives the instructions to do a check of the present leg faults.

NOTE: If performance on the Present Leg Faults page is slow, this may be due to a large amount of maintenance message instances. To fix this issue, delete the fault history (TASK 46-13-02-700-806). If no action is taken, all functionality on the Present Leg Faults page will still be available but performance may be slower.

- (2) The Present Leg Faults page shows faults for the current leg grouped by flight deck effect (FDE). The faults are sorted by time with the newest FDEs showing first.

- (a) Faults from the present leg that do not correlate to an FDE are grouped together at the end of the correlated list as non-correlated faults.
- (b) Another option is to show faults grouped by ATA and sorted by ATA chapter number.
- (c) It is also possible to select a maintenance message from this screen. After you select the maintenance message, you see details that include possible cause, status of the message (active, inactive), date and time of occurrence, etc.

NOTE: When selecting a single maintenance message, do not navigate away from the selection until the maintenance message has fully loaded.

- (3) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:

- Multi Function Display (MFD),
- Other type of approved Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

EFFECTIVITY
SIA ALL

46-13-02

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E. Prepare for the Procedure

SUBTASK 46-13-02-480-021

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321 is required for access.

F. Procedure

SUBTASK 46-13-02-860-011

- (1) Do the Present Leg Faults check as follows:

SIA 001-014 PRE SB 737-46-1029

- (a) For the UMD, select EXTENDED MAINTENANCE > PRESENT LEG FAULTS.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) For the UMD, select EXTENDED MAINTENANCE > Present Leg Faults.

SIA ALL

- (c) For the MFD, select EXTENDED MAINT > PRESENT LEG FAULTS.
- (d) Make sure that the display shows a list of data (faults) recorded during the present leg.

NOTE: The list can be sorted by ATA or by flight deck effect (FDE).

- (e) Use the scroll bar if necessary to show additional faults.

NOTE: After a maintenance message is selected, details of the fault message are shown. The details include date and time of the message, flight phase when the message was triggered, possible causes, and message status.

- (f) If applicable, select the REPORT button to make a record of the Present Leg Faults.
- (g) If applicable, refer to the IFIM and do the applicable procedure(s) to troubleshoot and correct the faults that show.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-02-080-004

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

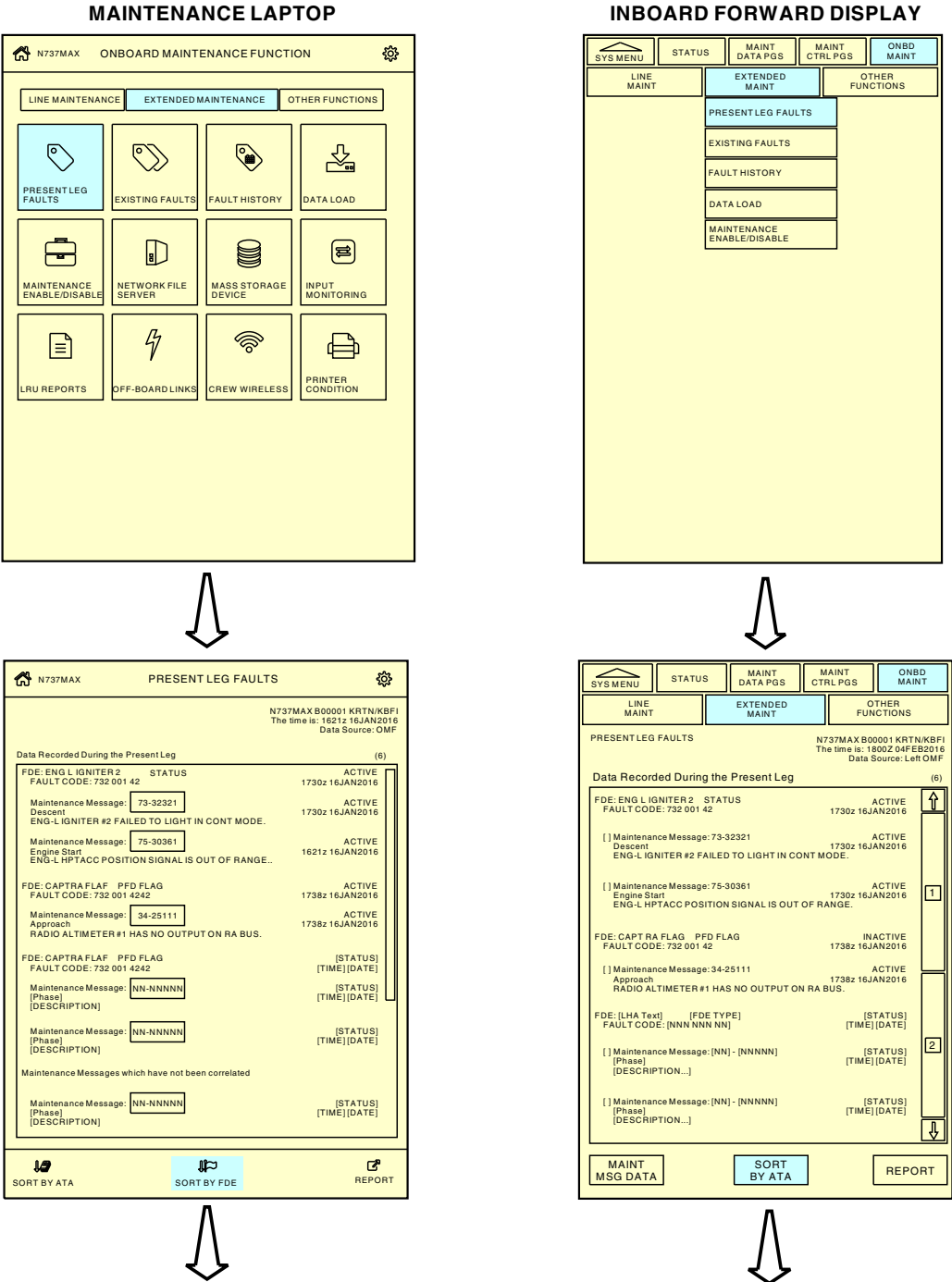
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NOTE:
THE DATA ON THE DISPLAY IS ONLY AN EXAMPLE.

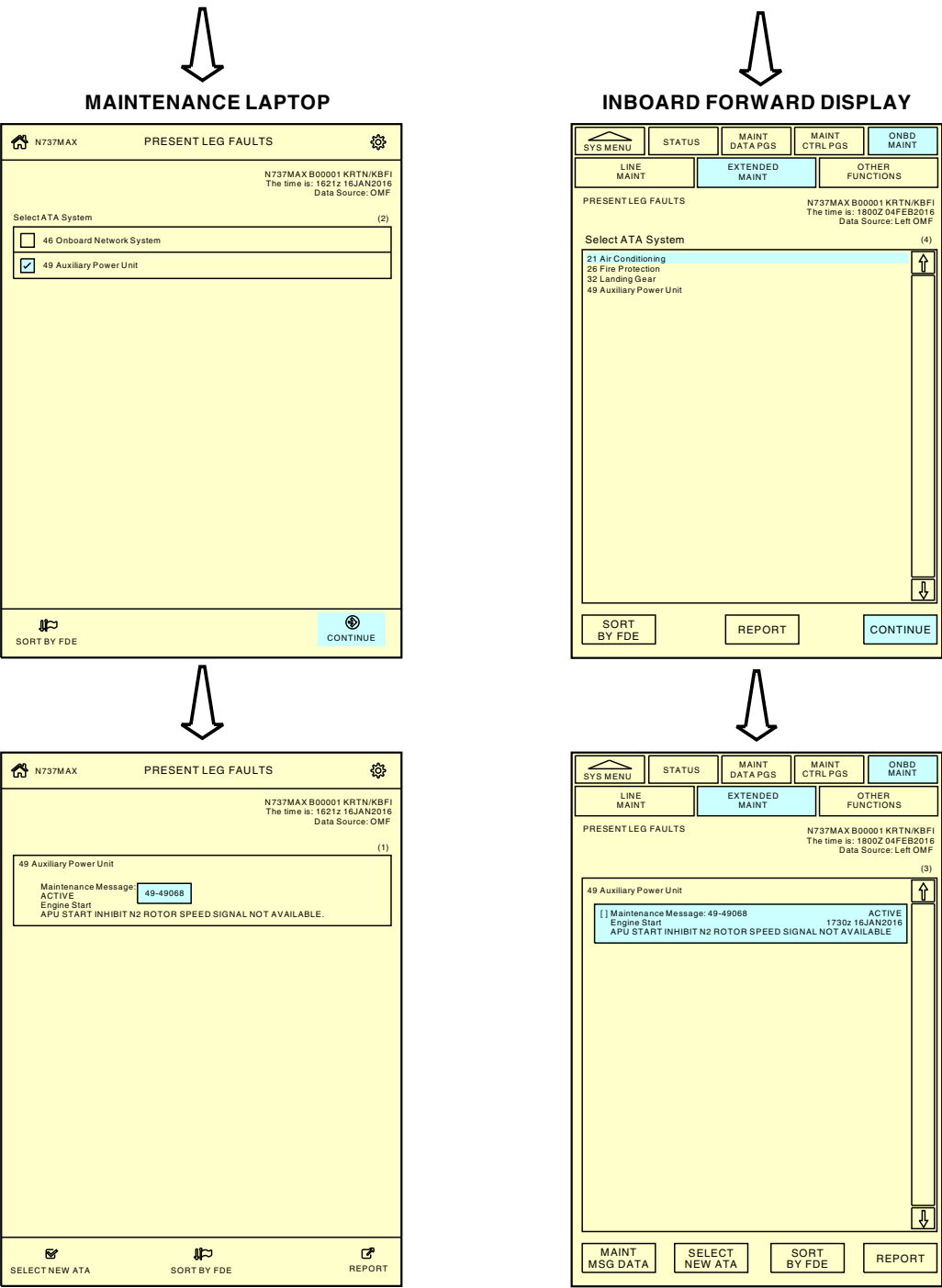
2483872 S0000584146_V1

Present Leg Faults Check
Figure 206/46-13-02-990-807 (Sheet 1 of 2)

EFFECTIVITY
SIA ALL

46-13-02

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AIRCRAFT MAINTENANCE MANUAL



NOTE:
THE DATA ON THE DISPLAY IS ONLY AN EXAMPLE.

2483878 S0000584147_V1

Present Leg Faults Check
Figure 206/46-13-02-990-807 (Sheet 2 of 2)

EFFECTIVITY
SIA ALL

46-13-02



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 46-13-02-700-805

8. Existing Faults Check

A. General

- (1) This procedure gives the instructions to do a check of existing faults.

NOTE: If performance on the Existing Faults page is slow, this may be due to a large amount of maintenance message instances. To fix this issue, delete the fault history (TASK 46-13-02-700-806). If no action is taken, all functionality on the Existing Faults page will still be available but performance may be slower.

- (2) Existing faults show the information that follows:

- Currently active maintenance messages on the airplane.
- Currently active FDE's and their correlated active maintenance messages.

NOTE: If GPS time is received after the time has been manually set, or if GPS time jumps occur, the change of time may cause inactive faults to be listed when entering this page.

- (3) Use this task when you need active maintenance messages for a selected ATA, or active Flight Deck Effects (FDEs) and their correlated active maintenance messages.
- (4) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:
- Multi Function Display (MFD),
 - Other type of approved Universal Maintenance Device (UMD).

B. References

Reference	Title
05-00-00-750-801	Scheduled Maintenance Task (SMT) - Repair Time Limits (P/B 201)
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Prepare for the Procedure

SUBTASK 46-13-02-480-024

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321 is required for access.

EFFECTIVITY
SIA ALL

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F. Procedure

SUBTASK 46-13-02-700-003

- (1) Do the Existing Faults check as follows:

SIA 001-014 PRE SB 737-46-1029

- (a) For the UMD, select EXTENDED MAINTENANCE > EXISTING FAULTS.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) For the UMD, select EXTENDED MAINTENANCE > Existing Faults.

SIA ALL

- (c) For the MFD, select EXTENDED MAINT > EXISTING FAULTS.

- (d) Make sure that the Select ATA System menu shows.

NOTE: It is possible to sort by flight deck effect.

- (e) From the Select ATA System menu, make your ATA selection(s).

NOTE: It is possible to select more than one ATA at the same time.

- (f) Select the CONTINUE option.

NOTE: When you select the specific ATA chapter and then the CONTINUE button, this shows the list of existing faults for that ATA system.

- (g) Select a maintenance message.

- 1) Do not navigate away from the selection until the maintenance message has fully loaded.

- (h) If applicable, refer to the IFIM and do the applicable procedure(s) to troubleshoot and correct the faults that show.

- (i) For Scheduled Maintenance Tasks (SMT) flight deck effects, go to Scheduled Maintenance Task (SMT) - Repair Time Limits, TASK 05-00-00-750-801.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-02-860-047

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.

- (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).

- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

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UNIVERSAL MAINTENANCE DEVICE (UMD)

N737MAX ONBOARD MAINTENANCE FUNCTION

LINE MAINTENANCE EXTENDED MAINTENANCE OTHER FUNCTIONS

PRESENT LEG FAULTS EXISTING FAULTS FAULT HISTORY DATA LOAD MAINTENANCE ENABLE/DISABLE NETWORK FILE SERVER MASS STORAGE DEVICE

INPUT MONITORING LRU REPORTS OFF-BOARD LINKS CREW WIRELESS



N737MAX EXISTING FAULTS

N737MAX B00001 KRTN/KBF1
The time is: 1621z 16JAN2016
Data Source: OMF

Select ATA System (4)

☒ 21 Air Conditioning

☐ 26 Fire Protection

☐ 32 Landing Gear

☒ 49 Auxiliary Power Unit

SORT BY FDE

CONTINUE



NOTE:
THE DATA ON THE DISPLAY IS AN EXAMPLE.

INBOARD FORWARD DISPLAY

SYS MENU STATUS MAINT DATA PGS MAINT CTRL PGS ONBD MAINT

LINE MAINT EXTENDED MAINT OTHER FUNCTIONS

PRESENT LEG FAULTS

EXISTING FAULTS

FAULT HISTORY

DATA LOAD

MAINTENANCE ENABLE/DISABLE



SYS MENU STATUS MAINT DATA PGS MAINT CTRL PGS ONBD MAINT

LINE MAINT EXTENDED MAINT OTHER FUNCTIONS

EXISTING FAULTS N737MAX B00001 KRTN/KBF1
The time is: 1800Z 04FEB2016
Data Source: Left OMF

Select ATA System (4)

21 Air Conditioning

26 Fire Protection

32 Landing Gear

49 Auxiliary Power Unit

SORT BY FDE

CONTINUE



2484061 S0000584107_V3

Existing Faults Check
Figure 207/46-13-02-990-808 (Sheet 1 of 2)

EFFECTIVITY
SIA ALL

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AIRCRAFT MAINTENANCE MANUAL

UNIVERSAL MAINTENANCE DEVICE (UMD)

 N737MAX

EXISTING FAULTS



N737MAX B00001 KRTNKBFI
The time is: 1621z 16JAN2016
Data Source: OMF

(3)

21 Air Conditioning

Maintenance Message: 21-55360 ACTIVE

ONBOARD MAINTENANCEFUNCTION HAS NO INPUT FROM IASC-L (AIR COND)

Maintenance Message: 21-55361 ACTIVE

ONBOARD MAINTENANCEFUNCTION HAS NO INPUT FROM IASC-R (AIR COND)

49 Auxiliary Power Unit

Maintenance Message: 49-49068 ACTIVE

APU START INHIBIT N2 ROTOR SPEED SIGNAL NOT AVAILABLE.

 SELECT NEW ATA

 SORT BY FDE

 REPORT

INBOARD FORWARD DISPLAY

 SYS MENU

STATUS

MAINT DATA PGS

MAINT CTRL PGS

ONBD MAINT

LINE MAINT

EXTENDED MAINT

OTHER FUNCTIONS

EXISTING FAULTS

N737MAX B00001 KRTNKBFI
The time is: 1800Z 04FEB2016
Data Source: Left OMF

(3)

21 Air Conditioning

[] Maintenance Message: 21-55360 ACTIVE

ONBOARD MAINTENANCEFUNCTION HAS NO INPUT FROM IASC-L (AIR COND)

[] Maintenance Message: 21-55361 ACTIVE

ONBOARD MAINTENANCEFUNCTION HAS NO INPUT FROM IASC-R (AIR COND)

49 Auxiliary Power Unit

[] Maintenance Message: 49-49068 ACTIVE

APU START INHIBIT N2 ROTOR SPEED SIGNAL NOT AVAILABLE

MAINT MSG DATA

SELECT NEW ATA

SORT BY FDE

REPORT

EXISTING FAULTS

 N737MAX

EXISTING FAULTS



MAINTENANCEMESSAGE DATA

1 of 2

APU START INHIBIT N2 ROTOR SPEED SIGNAL NOT AVAILABLE.

NEXT MESSAGE

PREVIOUS MESSAGE

Maintenance Message: 73-32321

ACTIVE

Recommended Maintenance Action:

1) See Fault Isolation Procedure
2) Possible Causes:
A) HPTACC Valve, [indictedRefDesig]
B) EEC, [indictedRefDesig]
C) Wiring

Correlated Flight Deck Effects:

(1)
ENG L IGNITER 2
FAULT CODE - 732 001 42

ACTIVE

GO BACK

FAULT HISTORY

FLIGHT LEGS

REPORT

EXISTING FAULTS - MAINT MSG DATA

 SYS MENU

STATUS

MAINT DATA PGS

MAINT CTRL PGS

ONBD MAINT

LINE MAINT

EXTENDED MAINT

OTHER FUNCTIONS

EXISTING FAULTS - MAINT MSG DATA

1 of 2

APU START INHIBIT N2 ROTOR SPEED SIGNAL NOT AVAILABLE

Detected by:

Maintenance Message: 75-30362 LATCHED

Recommended Maintenance Action:

1) See Fault Isolation Procedure
2) Possible Failures shown below:
A) <PLACEHOLDER>
B) <PLACEHOLDER>
C) <PLACEHOLDER>

Correlated Flight Deck Effects:

(1)
ENG L IGNITER 2
FAULT CODE - 732 001 42

ACTIVE

GO BACK

FAULT HISTORY

REPORT

NOTE:
THE DATA ON THE DISPLAY IS AN EXAMPLE.

2484087 S0000584108_V3

Existing Faults Check
Figure 207/46-13-02-990-808 (Sheet 2 of 2)

EFFECTIVITY
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TASK 46-13-02-700-806

9. Fault History Check

A. General

- (1) This procedure gives the instructions to do a check of fault history.

NOTE: If performance on the Fault History page is slow, this may be due to a large amount of maintenance message instances. To fix this issue, delete the fault history (TASK 46-13-02-700-806). If no action is taken, all functionality on the Fault History page will still be available but performance may be slower.

- (2) A fault history check shows the information that follows:

- Fault history and Flight Deck Effects (FDE) sorted by ATA.
- Fault History and FDE sorted by Flight Leg.
- Maintenance messages with details.
- Faults recorded for each flight leg, flight phase, and fault type.
- Recommended maintenance actions.

- (3) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:

- Multi Function Display (MFD),
- Other type of approved Universal Maintenance Device (UMD).

B. References

Reference	Title
05-00-00-750-801	Scheduled Maintenance Task (SMT) - Repair Time Limits (P/B 201)
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Prepare for the Procedure

SUBTASK 46-13-02-480-027

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321 is required for access.

EFFECTIVITY
SIA ALL

46-13-02

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

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F. Procedure

SUBTASK 46-13-02-700-004

- (1) Do the Fault History check as follows:

SIA 001-014 PRE SB 737-46-1029

- (a) For the UMD, select EXTENDED MAINTENANCE > FAULT HISTORY.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) For the UMD, select EXTENDED MAINTENANCE > Fault History.

SIA ALL

- (c) For the MFD, select EXTENDED MAINT > FAULT HISTORY.

- (d) Make sure that the "Select ATA System" menu shows.

- (e) From the Select ATA System menu, make your ATA selection.

NOTE: It is possible to select more than one ATA at the same time.

- (f) Select the CONTINUE option.

- (g) Select a maintenance message to show details of when the fault occurred and recommended maintenance action.

NOTE: When selecting a single maintenance message, do not navigate away from the selection until the maintenance message has fully loaded.

- (h) Select the maintenance message again to show recommended maintenance action.

- (i) Make the LEG selection to show a menu of flight legs.

- (j) Make a leg selection and then select CONTINUE.

NOTE: This shows all faults recorded during the selected leg.

- (k) If applicable, select the IMPORT/EXPORT option and follow the steps on the IMPORT/EXPORT pop-up window and select CONTINUE.

NOTE: The maintenance messages cannot be imported from/exported to the MFD. This function exists only on the UMD.

- 1) When the Windows pop-up shows, follow your airline procedures for file-naming convention and file location.

- (l) If applicable, refer to the IFIM and do the applicable procedure(s) to troubleshoot and correct the faults that show.

- (m) For Scheduled Maintenance Tasks (SMT), go to Scheduled Maintenance Task (SMT) - Repair Time Limits, TASK 05-00-00-750-801.

- (n) To delete all fault history, select the DELETE ALL button, then CONTINUE, then CONFIRM.

NOTE: It is not possible to delete one fault, or to select a group of faults. It is possible to delete only the complete fault history.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-02-860-049

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.

- (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).

EFFECTIVITY
SIA ALL

D633AM101-SIA

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- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

— END OF TASK —

TASK 46-13-02-860-801

10. Maintenance Enable/Disable Operation

A. General

- (1) This procedure gives the instructions to do the Maintenance Enable/Disable operation.
- (2) The Maintenance Enable/Disable operation has two functions:
 - Flight Leg Transition (Leg Enable or Leg Disable).
 - Maintenance Phase (Phase Enable or Phase Disable).
- (3) To stop the Onboard Maintenance Function (OMF) from rolling a flight leg every time an engine starts, there is a "flight leg enable" function. If the leg is enabled, starting an engine will roll a leg and disable future leg rolls. During normal operation, the flight leg will be re-enabled automatically when the airplane hits 80 kts; setting the airplane up for the next leg after it hits the ground again. The flight leg enable/disable menu will allow the operator to override that enable setting.
- (4) When you enable the Maintenance Phase, the OMF stops storing faults in fault history while the phase is active. For example, enabling the maintenance phase allows the mechanic to work an air crew reported fault but not create additional faults on the ground when opening circuit breakers and disconnecting connectors while troubleshooting the original fault. If the Maintenance Phase is left enabled accidentally, the OMF will end the maintenance phase and revert back to normal phases at takeoff.
- (5) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:
 - Multi Function Display (MFD),
 - Other type of approved Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

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E. Prepare for the Procedure

SUBTASK 46-13-02-480-030

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321 is required for access.

F. Flight Leg Transition

SUBTASK 46-13-02-700-005

- (1) Do a check of the Flight Leg Transition status:

SIA 001-014 PRE SB 737-46-1029

- (a) For the UMD, select EXTENDED MAINTENANCE > MAINTENANCE ENABLE/DISABLE.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) For the UMD, select EXTENDED MAINTENANCE > Maintenance Enable/Disable.

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- (c) For the MFD, select EXTENDED MAINT > MAINTENANCE ENABLE/DISABLE.
- (d) Make a note of the Flight Leg Transition status.
 - 1) If the Flight Leg Transition status is Disabled, make the LEG ENABLE selection.
NOTE: Flight Leg will become enabled when LEG ENABLE is selected or upon take-off.
 - 2) If the Flight Leg Transition status is Enabled, make the LEG DISABLE selection.
NOTE: A new flight leg will begin at the next engine start.

G. Maintenance Phase

SUBTASK 46-13-02-700-006

- (1) Do a check of the Maintenance Phase status:

SIA 001-014 PRE SB 737-46-1029

- (a) For the UMD, select EXTENDED MAINTENANCE > MAINTENANCE ENABLE/DISABLE.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) For the UMD, select EXTENDED MAINTENANCE > Maintenance Enable/Disable.

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- (c) For the MFD, select EXTENDED MAINT > MAINTENANCE ENABLE/DISABLE.
- (d) Make a note of the Maintenance Phase status.
 - 1) If the Maintenance Phase is Disabled, make the PHASE ENABLE selection.
NOTE: Maintenance Phase will be enabled until Phase Disable is selected or at take-off.
 - 2) If the Maintenance Phase is Enabled, make the PHASE DISABLE selection.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-02-860-052

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).

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- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

———— **END OF TASK** ————

TASK 46-13-02-860-802

11. Special Functions

A. General

- (1) This task gives a general procedure to operate the special functions feature.
- (2) This task is used in this list of Special Functions.
- (3) Refer to the applicable ATA system when and where to use the Special Functions feature:
- PSEU - Air/Ground Override
 - PSEU - Tailskid Extend
 - PSEU - Reset Latches

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- Landing Gear – Brake Release Function
- Landing Gear – Wheel Speed Transducer Spin Function
- Landing Gear – Memory Clear Function
- Landing Gear – Autobrake Application Function

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- AACU - Brake 1 Release Function
- AACU - Brake 2 Release Function
- AACU - Brake 3 Release Function
- AACU - Brake 4 Release Function
- AACU - Wheel 1 Speed Transducer Spin Function
- AACU - Wheel 2 Speed Transducer Spin Function
- AACU - Wheel 3 Speed Transducer Spin Function
- AACU - Wheel 4 Speed Transducer Spin Function
- AACU - Memory Clear Function
- AACU - Autobrake Application Function
- PSEU - Air/Ground Override
- PSEU - Tailskid Extend
- PSEU - Reset Latches
- APU - Reset Hours since Installation
- APU - Ice Break Logic
- APU - Limited Restart
- Engine - L (R) - Fuel System Preservation
- Engine - L (R) - Water Wash
- Engine - L (R) - Engine Serial Number Entry
- Engine - L (R) - Menu Mode Hardware Code Entry
- Engine - L (R) - Erase All Channel A Faults

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- Engine - L (R) - Erase All Channel B Faults
 - Engine - L (R) - Debris Monitoring System Reset Channel B
 - Engine - L (R) - Debris Monitoring System Reset
 - Engine - L (R) - Thrust Reverser Cycle
 - Engine - L (R) - Engine Running Simulation
 - Engine - L (R) - Lamp Check Out
 - Engine - L (R) - Starter Air Valve Manual Start.
- (4) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:
- Multi Function Display (MFD)
 - Other type of approved Universal Maintenance Device (UMD).

B. References

Reference	Title
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)
32-09-10-750-801	Proximity Switch Electronics Unit Special Functions (P/B 501)
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (P/B 201)
49-11-00-400-801	APU Power Plant Installation (Selection) (P/B 401)
71-00-00-700-801-G00	Test No. 25 - Fuel System Preservation Special Functions Test (P/B 501)
71-00-00-700-802-G00	Test No. 26 - Debris Monitoring System Channel B Special Functions Test (P/B 501)
71-00-00-700-805-G00	Test No. 29 - Water Wash Special Functions Test (P/B 501)
71-00-00-700-806-G00	Test No. 30 - Engine Running Simulation Special Functions Test (P/B 501)
71-00-00-700-809-G00	Test No. 33 - Lamp Check Out Special Functions Test (P/B 501)
71-00-00-700-810-G00	Test No. 34 - Menu Mode Hardware Code Entry Special Functions Test (P/B 501)
71-00-00-700-811-G00	Test No. 35 - Erase All Channel A Faults Special Functions Test (P/B 501)
71-00-00-700-812-G00	Test No. 36 - Erase All Channel B Faults Special Functions Test (P/B 501)
71-00-00-700-813-G00	Test No. 37 - Engine Serial Number Entry Special Functions Test (P/B 501)
71-00-00-700-816-G00	Test No. 38 - Thrust Reverser Cycle Special Functions (P/B 501)
71-00-00-800-804-G00	Power Plant Test Reference Table (P/B 501)

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.

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Reference	Description
SPL-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. List of Procedures

SUBTASK 46-13-02-860-015

- (1) These AMM tasks use the Onboard Maintenance Function (OMF) Special Function:
- (a) PSEU - Air/Ground Override - Proximity Switch Electronics Unit Special Functions, TASK 32-09-10-750-801
 - (b) PSEU - Tailskid Extend - Proximity Switch Electronics Unit Special Functions, TASK 32-09-10-750-801
 - (c) PSEU - Reset Latches - Proximity Switch Electronics Unit Special Functions, TASK 32-09-10-750-801
 - (d) APU - Reset Hours since Installation - APU Power Plant Installation (Selection), TASK 49-11-00-400-801
 - (e) Engine - L (R) - Fuel System Preservation - Test No. 25 - Fuel System Preservation Special Functions Test, TASK 71-00-00-700-801-G00
 - (f) Engine - L (R) - Water Wash - Test No. 29 - Water Wash Special Functions Test, TASK 71-00-00-700-805-G00
 - (g) Engine - L (R) - Engine Serial Number Entry - Test No. 37 - Engine Serial Number Entry Special Functions Test, TASK 71-00-00-700-813-G00
 - (h) Engine - L (R) - Fan Accelerometer Selection - Test No. 34 - Menu Mode Hardware Code Entry Special Functions Test, TASK 71-00-00-700-810-G00
 - (i) Engine - L (R) - Erase All Channel A Faults - Test No. 35 - Erase All Channel A Faults Special Functions Test, TASK 71-00-00-700-811-G00
 - (j) Engine - L (R) - Erase All Channel B Faults - Test No. 36 - Erase All Channel B Faults Special Functions Test, TASK 71-00-00-700-812-G00
 - (k) Engine - L (R) - Debris Monitoring System Reset Channel B - Test No. 26 - Debris Monitoring System Channel B Special Functions Test, TASK 71-00-00-700-802-G00
 - (l) Engine - L (R) - Thrust Reverser Cycle - Test No. 38 - Thrust Reverser Cycle Special Functions, TASK 71-00-00-700-816-G00
 - (m) Engine - L (R) - Engine Running Simulation - Test No. 30 - Engine Running Simulation Special Functions Test, TASK 71-00-00-700-806-G00
 - (n) Engine - L (R) - Lamp Check Out - Test No. 33 - Lamp Check Out Special Functions Test, TASK 71-00-00-700-809-G00
 - (o) Engine - L (R) - Engine Starter Air Valve Manual Start - Power Plant Test Reference Table, TASK 71-00-00-800-804-G00.

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F. Prepare for the Procedure

SUBTASK 46-13-02-860-019

- (1) Make sure that no other MAX Display System (MDS) maintenance test function is active.

SUBTASK 46-13-02-860-020

- (2) Make sure that the air/ground system is in ground mode (TASK 32-09-00-860-802).

SUBTASK 46-13-02-480-033

- (3) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321, is required for access.

G. Special Functions Procedure

SUBTASK 46-13-02-860-060

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (1) For the UMD, select OTHER FUNCTIONS > Special Functions.

SIA 001-014 PRE SB 737-46-1029

- (2) For the UMD, select OTHER FUNCTIONS > SPECIAL FUNCTIONS.

SIA ALL

SUBTASK 46-13-02-860-076

- (3) For the MFD, select OTHER FUNCTIONS > SPECIAL FUNCTIONS.

SUBTASK 46-13-02-860-061

- (4) Select the applicable ATA system.

NOTE: The page shows these systems under 'Select ATA System':

- 32 - Landing Gear
- 32 - Proximity Switch Electronic Unit
- 49 - Auxiliary Power Unit
- 71 - Left Engine
- 71 - Right Engine.

SUBTASK 46-13-02-860-062

- (5) Select the applicable System Function.

NOTE: The page shows these systems under 'Select System Function':

- Landing Gear - Brake 1 (2,3,4) Release Function
- Landing Gear - Wheel 1 (2,3,4) Speed Transducer Spin Function
- Landing Gear – Memory Clear Function
- Landing Gear – Autobrake Application Function
- PSEU - Air/Ground Override
- PSEU - Tailskid Extend
- PSEU - Reset Latches
- APU - Reset Hours since Installation
- APU - Ice Break Logic
- APU - Limited Restart
- Engine - L (R) - Fuel System Preservation

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- Engine - L (R) - Water Wash
- Engine - L (R) - Engine Serial Number Entry
- Engine - L (R) - Fan Accelerometer Selection
- Engine - L (R) - Erase All Channel A Faults
- Engine - L (R) - Erase All Channel B Faults
- Engine - L (R) - Debris Monitoring System Reset Channel B
- Engine - L (R) - Thrust Reverser Cycle
- Engine - L (R) - Engine Running Simulation
- Engine - L (R) - Lamp Check Out
- Engine - L (R) - Starter Air Valve Manual Start.

SUBTASK 46-13-02-860-063

- (6) Select CONTINUE.

SUBTASK 46-13-02-860-064

- (7) Do the instructions that show on the PRECONDITIONS.
- (a) Make sure that you check and follow the inhibited conditions instructions closely.

NOTE: If one of the inhibited conditions is not met, the special function will fail.

SUBTASK 46-13-02-860-065

- (8) Select CONTINUE.

SUBTASK 46-13-02-860-066

- (9) Set the GND TEST ENABLE SWITCH, on the P61-4 Maintenance Built-In-Test Equipment Panel (MBITEP), to the ENABLE position.

SUBTASK 46-13-02-860-067

- (10) Select the START FUNCTION screen button under FUNCTION.
- (a) Follow any additional instructions for that special function.

SUBTASK 46-13-02-860-068

- (11) Select STOP FUNCTION to stop the function.

SUBTASK 46-13-02-860-069

- (12) Select the OPERATE FUNCTION AGAIN button to operate the function again.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-02-860-043

- (1) Set the GND TEST ENABLE SWITCH, on the P61-4 MBITEP, to the NORM position.

SUBTASK 46-13-02-080-006

- (2) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
- (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (3) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— **END OF TASK** —————

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TASK 46-13-02-970-802

12. Download Manager

(Figure 208)

A. General

- (1) This task has the steps to get access to and use the download manager function.
- (2) Download Manager lets the mechanic select files (such as system logs, QAR data, and engine data) to transfer from ONS to the UMD. You can also delete the files from the ONS. Files can be filtered by application and file type.
- (3) Do this task when you get access to the Onboard Maintenance Function (OMF) with the Universal Maintenance Device (UMD).

SIA 001-014 PRE SB 737-46-1029

NOTE: This task is not available when you get access to OMF with the two inboard, forward Multi-function Displays (MFD's).

SIA ALL

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Prepare for the Download Manager

SUBTASK 46-13-02-480-009

- (1) Do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

SIA 001-014 PRE SB 737-46-1029

- (a) Use the universal maintenance device, SPL-11321, to get access to the OMF menu.

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F. Download Manager Procedure

SIA 001-014 PRE SB 737-46-1029

SUBTASK 46-13-02-860-016

- (1) From the ONS main menu, make the selection: LINE MAINTENANCE > DOWNLOAD MANAGER.
 - (a) Select the Application and FILE TYPE filter.

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SIA 001-014 PRE SB 737-46-1029 (Continued)

- 1) Make sure that a green checkmark shows adjacent to each of your selections.
- (b) Select CONTINUE.
- (c) Select GET CURRENT on the page footer.
NOTE: A popup window with GETTING CURRENT FILES and a progress indicator shows.
- (d) Select the files.
 - 1) Make sure that a green check mark shows adjacent to your selection.
NOTE: If you see a check mark in the TRANSFERRED column it shows files that have been downloaded.
NOTE: If you select DETAILS, you can see the number and size of the files.
- (e) To delete the files, select the DELETE icon.
NOTE: Delete the files only when directed by your engineering department.
- (f) To download the files, select the REPORT icon.
- (g) Make sure that destination "Maintenance Device" is selected.
- (h) Select the SEND button.
- (i) When the Windows popup shows, make your location selection on the UMD where the data will be downloaded.
NOTE: The Boeing Company recommends that you use the auto-created file name. The file name is created automatically. The naming convention is airplane identification/tail ID, filter type (ADR-QAR, for example), date and time.
- (j) Make sure that you see the message "Transmission in Progress" followed by "Complete".
NOTE: If "Complete" does not show after 5 minutes, refer to the IFIM and do the applicable procedure(s).
 - 1) Wait ten (10) seconds after the "Complete" message shows.
- (k) Select the CLOSE button.
- (l) Eject the media in Windows prior to removing media from the UMD.
NOTE: Failure to eject the media using Windows can result in an incomplete download of the files.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

SUBTASK 46-13-02-860-070

- (2) From the ONS main menu, make the selection: LINE MAINTENANCE > Download Manager.
 - (a) Select the Application and FILE TYPE filter by clicking the box(es) next to your selections.
 - 1) Make sure that a green checkmark appears in the selected box(es).
 - (b) Select CONTINUE.
 - (c) Select GET CURRENT (if active) on the page footer.
NOTE: A popup window with GETTING CURRENT FILES and a progress indicator shows.
 - (d) Select the files
NOTE: To select all files not previously transferred, select UNTRANSFERRED on the page footer.

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SIA 015-999; SIA 001-014 POST SB 737-46-1029 (Continued)

- 1) Make sure that a green check mark shows adjacent to your selection.

NOTE: If a check mark is displayed in the TRANSFERRED column, then the files have already been downloaded.

NOTE: If you select DETAILS, you can see the number and size of the files.

- (e) To delete the files, select the DELETE icon.

NOTE: Delete the files only when directed by your engineering department.

- (f) To download the files, select the REPORT icon.
- (g) Make sure that destination "Maintenance Device" is selected.
- (h) Select the SEND button.

- (i) When the Windows popup shows, make your location selection on the UMD where the data will be downloaded.

NOTE: The Boeing Company recommends that you use the auto-created file name. The file name is created automatically. The naming convention is airplane identification/tail ID, filter type (ADR-QAR, for example), date and time.

- (j) Wait until you see the message "Complete".

- 1) If "Complete" does not show after 5 minutes, refer to the IFIM and do the applicable procedure(s).

- (k) Wait ten (10) seconds after the "Complete" message shows.

- (l) Select the CLOSE button.

- (m) Eject the media in Windows prior to removing media from the UMD and wait for Windows to indicate "Safe To Remove".

NOTE: Failure to eject the media using Windows can result in an incomplete download of the files.

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G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-02-080-001

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.

- (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).

- (2) If the universal maintenance device, SPL-11321, is not necessary, stop the Onboard Network System (ONS) maintenance browser session and disconnect the maintenance device.

———— **END OF TASK** ————

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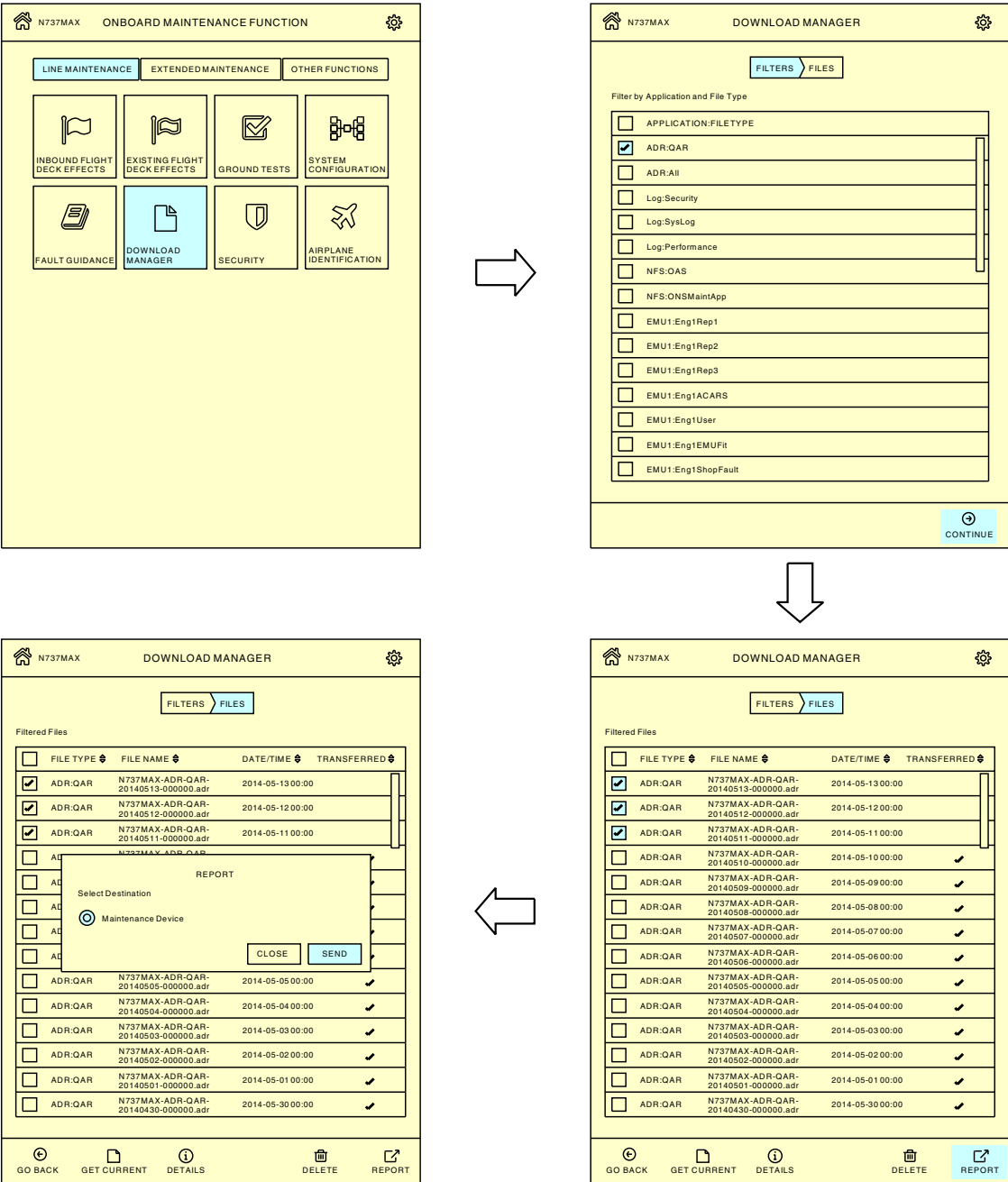
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NOTE:
THE DATA ON THE DISPLAY IS ONLY AN EXAMPLE.

2479773 S0000582248_V1

Download Manager
Figure 208/46-13-02-990-805 (Sheet 1 of 2)

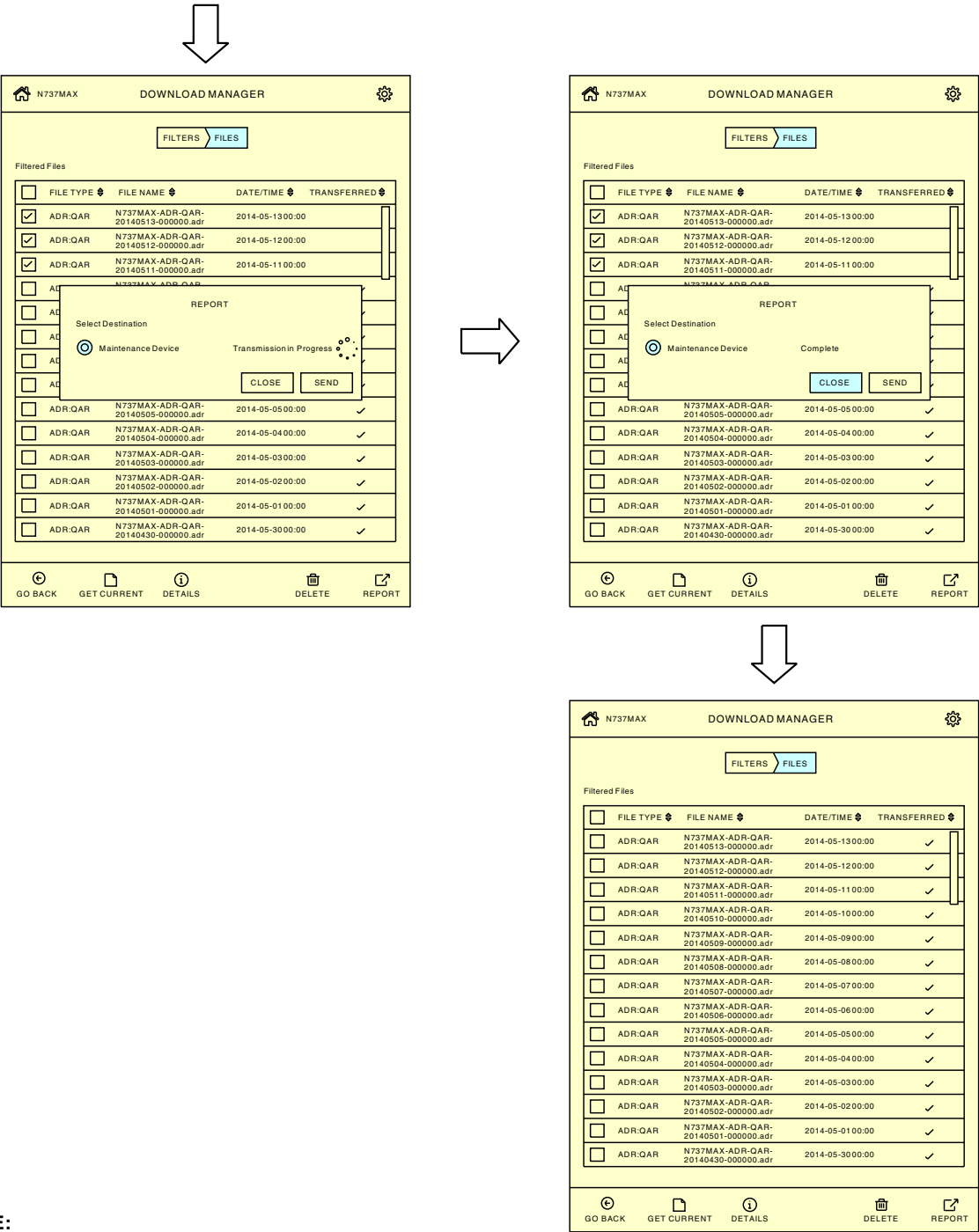
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NOTE:
THE DATA ON THE DISPLAY IS ONLY AN EXAMPLE.

2479851 S0000582250_V1

Download Manager
Figure 208/46-13-02-990-805 (Sheet 2 of 2)

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TASK 46-13-02-970-803

13. LRU Reports

A. General

- (1) This procedure gives the instructions to create an LRU Report.
- (2) This procedure is applicable to the units that follow:
 - Flight Control Computer (FCC)
 - Forward Attendant Control Panel (ACP)
 - Display Processing Computer (DPC)
 - Flight Management Computer (FMC)

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- Spoiler Control Electronics (SCE)

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- (3) LRU Reports show the data that follows:
 - Hardware serial number.
 - Hardware part number.
 - Software part numbers.
- (4) When a report is generated, it can be read and then deleted by navigating to another page or it can be downloaded.
- (5) To do this task, the DATA REPORTS parts for the applicable LRU must be installed on the Onboard Network System (ONS) Mass Storage Device (MSD).
- (6) This task is available when the ONS is accessed with the Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-00-470-802	Stage Software Parts on a Mass Storage Device via Universal Maintenance Device (UMD) (P/B 201)
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-860-804	Mass Storage Device Software Parts Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

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E. Prepare for the Task

SUBTASK 46-13-02-480-010

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321 is required for access.

SUBTASK 46-13-02-470-001

- (2) Make sure that the applicable DATA REPORTS parts are installed in the MSD (TASK 46-13-00-860-804).
 - (a) If it is necessary, do this task: Stage Software Parts on a Mass Storage Device via Universal Maintenance Device (UMD), TASK 46-13-00-470-802.

F. LRU Reports Procedure

SUBTASK 46-13-02-700-007

- (1) Do the LRU Reports procedure as follows:
 - (a) Select EXTENDED MAINTENANCE > LRU REPORTS.
 - (b) On the ATA SYSTEM tab, scroll down until you see the applicable ATA.
 - (c) Select the applicable ATA.

NOTE: It is not possible to select more than one ATA at the same time.
 - (d) If it is necessary, scroll down the LRU list and then select the applicable LRU.

NOTE: It is not possible to select more than one LRU at the same time.
 - (e) Select the CONTINUE icon.
 - (f) Make sure that the next screen that shows is the PRECONDITIONS tab.
 - (g) Do the steps and instructions that show on the PRECONDITIONS tab.

NOTE: If there are no preconditions necessary, this message shows: "No LRU Precondition message was reported."
 - (h) Select the CONTINUE icon.
 - (i) Make sure that the "RETRIEVING REPORT TYPES" popup window shows with a progress indicator.
 - (j) Make sure that the REPORT TYPES tab shows and a report type list with nomenclature shows.
 - 1) If the REPORT TYPES tab does not show a report type list, make sure that the applicable DATA REPORTS part is installed in the MSD (TASK 46-13-00-860-804).
 - (k) From the REPORT TYPES tab, select the applicable report.
 - (l) Select CONTINUE.
 - (m) Make sure that the DATA REPORTING popup window shows with a progress indicator.
 - (n) Make sure that the RETRIEVED REPORTS tab shows and status shows the word "COMPLETED" adjacent to the report name.
 - (o) Make sure that all pop ups have been closed before navigating to other tabs on the LRU Reports page.

NOTE: After a report is generated, options become available to the user that will generate popups on the RETRIEVED REPORTS page.
 - (p) Select the DETAILS icon to see the report summary with report size.
 - (q) To delete the report, do the steps that follow:
 - 1) Select the DELETE icon.

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- 2) Select CONTINUE.
- (r) To download the report, do the steps that follow:
 - 1) Select the REPORT icon.
 - 2) Select the destination (Maintenance Device or Download Manager).
 - 3) Select SEND.
 - 4) When the Windows Explorer window shows, select the location on the maintenance device where the data will be downloaded.

NOTE: The Boeing Company recommends that you use the auto-created file name. The file name is created automatically.

- 5) Wait until you see the message "Complete".
- 6) Select the CLOSE button.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-02-860-051

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
- (2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— END OF TASK —————

TASK 46-13-02-860-803

14. Off-Board Links

A. General

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (1) This procedure gives the instructions for Offboard Communication.
- (2) The Off-Board Communications screens allow the user to view the status of off-board links to the ONS, such as the WWU or AID. The status indicates if the interface is active.

NOTE: This function requires a connectivity option, such as the WWU or AID, to be installed in the airplane.

- (a) To determine whether the optional WWU is installed, run a system configuration for ATA "46 – Information Systems". "Wireless WAN Unit" will show on the system configuration if WWU is installed. Do this task: System Configuration Check, TASK 46-13-00-710-802.
- (b) To determine whether the optional AID is installed, run a system configuration for ATA "46 – Information Systems". "Aircraft Interface Device – Forward (AID-FWD)" will show on the system configuration if AID is installed. Do this task: System Configuration Check, TASK 46-13-00-710-802 .

SIA 001-014 PRE SB 737-46-1029

- (3) This procedure gives the instructions for Off-board Links.
- (4) The OFFBOARD LINKS screens allow the user to view the status of off-board links to the ONS, such as the WWU. The status indicates if the interface is active.

NOTE: This function requires a connectivity option, such as the WWU, to be installed in the airplane.

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SIA 001-014 PRE SB 737-46-1029 (Continued)

- (a) To determine whether the optional WWU is installed, run a system configuration for ATA "46 – Information Systems". "Wireless WAN Unit" will show on the system configuration if WWU is installed. Do this task: System Configuration Check, TASK 46-13-00-710-802.

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- (5) This function also lets the user to do a test of the link.
(6) There are these tabs in the off-board links function:

SIA 001-014 PRE SB 737-46-1029

- (a) LINK STATUS

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) LINKS

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- (c) WIRELESS
(d) CELLULAR

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (e) ACARS
(f) MESSAGING

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- (7) This task is available when the Onboard Network System (ONS) is accessed with the Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-710-802	System Configuration Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Prepare for the Procedure

SUBTASK 46-13-02-480-011

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321 is required for access.

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F. Default Link Status Test

SUBTASK 46-13-02-700-018

(1) Do a status test as follows:

SIA 001-014 PRE SB 737-46-1029

(a) Select EXTENDED MAINTENANCE > OFF-BOARD LINKS.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

(b) Select EXTENDED MAINTENANCE > Offboard Communications.

SIA 001-014 PRE SB 737-46-1029

(c) On the LINK STATUS tab, do a test of the default link status as follows:

SIA 015-999; SIA 001-014 POST SB 737-46-1029

(d) On the LINKS tab, do a test of the default link status as follows:

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(e) Make a record of which link has the green check mark in the DEFAULT column.

1) If no link has a green check mark in the DEFAULT column, refer to the IFIM and do the applicable procedure(s).

(f) Select the TEST DEFAULT icon.

(g) Make sure that the TEST DEFAULT LINK window shows with a progress indicator.

(h) When the test is complete, make sure that a green check mark shows in the TEST column.

NOTE: The green check mark now shows in the same row for the same link as the green check mark in the DEFAULT column.

SIA 001-014

G. Wi-Fi Link Test

SUBTASK 46-13-02-700-010

(1) Do a test of the Wi-Fi link as follows:

SIA 001-014 PRE SB 737-46-1029

(a) Select EXTENDED MAINTENANCE > OFF-BOARD LINKS.

SIA 001-014 POST SB 737-46-1029

(b) Select EXTENDED MAINTENANCE > Offboard Communications.

SIA 001-014

(c) Select the WIRELESS tab.

(d) Select DIAGNOSTICS.

(e) Make sure that the Link State is "Active".

1) If the link is not active, refer to the IFIM and do the applicable procedure(s).

SIA ALL

H. Cellular Link Test

SUBTASK 46-13-02-700-011

(1) Do a test of the cellular link as follows:

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SIA 001-014 PRE SB 737-46-1029

- (a) Select EXTENDED MAINTENANCE > OFF-BOARD LINKS.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) Select EXTENDED MAINTENANCE > Offboard Communications.

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- (c) Select the CELLULAR tab.
(d) Select DIAGNOSTICS.
(e) Make sure that the Link State shows the following:

LINK STATE	DESCRIPTION
Home Network	Cellular connected to home network
Home Network-Default	Cellular connected to home network and is the default route
Roaming	Cellular connected but not to home network
Roaming-Default	Cellular connected but not to home network and is the default route

- 1) If one of the links above is not shown, then refer to the IFIM and do the applicable procedure(s).

———— **END OF TASK** ————

TASK 46-13-02-700-807

15. Shop Faults

A. General

- (1) This procedure gives the instructions to do a Shop Faults check.
- (2) The purpose of the OMF Shop Faults function is to provide a means for maintenance personnel to display and report shop fault data stored in member systems. That shop fault data could be used directly by the maintenance personnel or sent (upon request) to either Boeing or an LRU supplier that is performing troubleshooting.
- (3) Present Leg Faults, Inbound Flight Deck Effects, Existing Faults and other fault and flight deck effect applications show airplane faults at the system level. Mechanics use these applications to access the Interactive Fault Isolation Manual (IFIM) for maintenance and troubleshooting guidance. Shop Faults however, give a deeper level of troubleshooting down to the specific LRU level.
- (a) The Boeing Company does not determine the Shop Fault content.
- (b) The member system's supplier defines what information shows.
- (c) Shop fault data is a combination of standard LRU maintenance information and failure information detected by member system BITE.
- (d) The Onboard Maintenance Function (OMF) provides access and outputs to shop fault data when you use the Universal Maintenance Device (UMD).
- (4) Use this task when Shop Fault content is sent to Boeing or LRU suppliers for specific LRU troubleshooting purposes.
- (5) This task is available when the Onboard Network System (ONS) is accessed with the UMD.

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B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment - Right

E. Prepare for the Task

SUBTASK 46-13-02-480-012

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321, is required for access.

F. Shop Faults Check Procedure

SUBTASK 46-13-02-700-012

- (1) Do the Shop Faults Check procedure as follows:

SIA 001-014 PRE SB 737-46-1029

- (a) Select OTHER FUNCTIONS > SHOP FAULTS.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (b) Select OTHER FUNCTIONS > Shop Faults.

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- (c) On the ATA SYSTEM tab, scroll down until you see the applicable ATA.
(d) Select the applicable ATA.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- 32 - Landing Gear

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- 49 - Airborne Auxiliary Power Unit
- 71 - Engine-1
- 71 - Engine-2

NOTE: It is not possible to select more than one ATA at the same time.

- (e) If necessary, scroll down the LRU list and then select the applicable LRU.

NOTE: It is not possible to select more than one LRU at the same time.

- (f) Select the CONTINUE icon.
(g) Make sure that the "Retrieving Fault Data" popup shows with a progress indicator.

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- (h) Make sure that the fault data shows for the ATA and the LRU.

NOTE: The fault data includes flight leg information, UTC time and date when the fault occurred, airplane registration, and flight phase. The fault data also shows fault ID (or fault code), the type of fault and number of occurrences, fault description and fault ATA chapter-section.

- (i) If necessary, select the NEXT PAGE icon to show more fault data.
(j) If applicable, select the REPORT icon.

NOTE: The REPORT icon will only create a report of the current page of fault data being viewed on the screen. To report all data for the ATA, each page must be individually selected by using the PREVIOUS PAGE or NEXT PAGE button and then selecting REPORT on each page.

- (k) Make sure that the REPORT page shows with "SELECT DESTINATION" options.
(l) Select the applicable destination:
 1) Maintenance Device.
 2) Download Manager.
 3) Flight Deck Printer.
(m) Select SEND.
(n) If applicable, follow the onscreen instructions.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-02-860-050

- (1) Verify that there are no active maintenance messages for ATA "46 - Information Systems". Do this task: Existing Faults Check, TASK 46-13-02-700-805.
(a) If you find an active maintenance message, then refer to the IFIM and do the applicable procedure(s).
(2) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— **END OF TASK** —————

TASK 46-13-02-860-805

16. Maintenance Data Pages

Figure 209

A. General

- (1) This tasks gives the steps to access the Maintenance Data pages for system status of the different airplane systems.

B. Location Zones

Zone	Area
211	Flight Compartment - Left

C. Prepare for Maintenance Data Page Access

SUBTASK 46-13-02-860-054

- (1) If you use one of the large inboard displays (Captain's or First Officer's MFD) to do the ground test, do the steps that follow:

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- (a) Push the MFD SYS button on the P9-82 panel, MULTIFUNCTION DISPLAY (MFD) panel.

NOTE: The Synoptic page will display with the MAINT button highlighted.

- (b) Push the SEL button on the knob.
- (c) Make sure that you see the main Maintenance Menu on the MFD.

SUBTASK 46-13-02-860-073

- (2) Select MAINT DATA PGS.

SUBTASK 46-13-02-860-074

- (3) Push the SEL button on the knob.

SUBTASK 46-13-02-860-075

- (4) Select desired ATA DISPLAY button to view system data.

NOTE: Some ATA systems have more than one data page. To navigate through the other pages, use the NEXT PAGE or the PREV PAGE button.

———— **END OF TASK** ————

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SYS MENU		STATUS	MAINT DATA PGS	MAINT CTRL PGS	ONBD MAINT
DISPLAY SELECTION		PRINT SELECTION	DATALINK SELECTION	ERASE SELECTION	
ATA SYSTEM		REAL	MANUAL	AUTO	
21	AIR CONDITIONING	DISPLAY	SHOW LIST	SHOW LIST	
27	FLIGHT CONTROL	DISPLAY	SHOW LIST	SHOW LIST	
27	SMYO	DISPLAY	SHOW LIST	SHOW LIST	
31	MDS	DISPLAY			
32	PSEU	DISPLAY	SHOW LIST	SHOW LIST	
36	AIR SUPPLY	DISPLAY	SHOW LIST	SHOW LIST	
49	APU	DISPLAY	SHOW LIST	SHOW LIST	
71	PERFORMANCE	DISPLAY	SHOW LIST	SHOW LIST	
71	EPCS	DISPLAY	SHOW LIST	SHOW LIST	
71	ENGINE 1 EXCEEDANCE			DISPLAY	
71	ENGINE 2 EXCEEDANCE			DISPLAY	

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ATA System Page
Figure 209/46-13-02-990-809

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TASK 46-13-02-860-806

17. **Erasing a Latched Status Message - Verification Check**

A. General

- (1) This procedure contains the steps to follow after erasing a latched STATUS message with the inoperative Network File Server (NFS).

B. References

Reference	Title
12-13-31-200-801	APU Oil Level Inspection (P/B 301)
21-51-00-700-802	Pack Flow Control Valve Operational Test (P/B 501)
21-61-22 P/B 401	INTEGRATED AIR SYSTEMS CONTROLLER - REMOVAL/INSTALLATION
27-32-00-740-801	Stall Management Yaw Damper (SMYD) BITE Test - Existing Faults (P/B 501)
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-10 P/B 401	PROXIMITY SWITCH ELECTRONICS UNIT (PSEU) - REMOVAL/INSTALLATION
32-51-00-700-801	Nose Wheel Steering System Test (Airplane on Ground) (P/B 501)
34-61-00-730-801	Flight Management Computer System - System Test (P/B 501)
49-15-00-710-801	APU Air Inlet Door Test (P/B 501)
52-71-00-730-801	Door Warning System Test (P/B 501)
71-00-00-700-808-G00	Test No. 32 - Engine Idle System Test (P/B 501)
71-00-00-910-803-G00	Start the Engine (Normal Start) (P/B 201)
71-00-00-910-806-G00	Stop the Engine (Usual Engine Stop) (P/B 201)
73-21-00-800-801-G00	EEC Maintenance Power Selection (P/B 201)

C. Erasing a Latched Status Message - Verification Check Procedure

SUBTASK 46-13-02-860-078

- (1) Do the verification steps after erasing a latched STATUS message.
- (a) Use the Table 201 if the STATUS message latched by the MAX Display System (MDS).
- (b) Use the Table 202 if the STATUS message latched by other Line Replaceable Unit (LRU).

Table 201/46-13-02-993-801 Latched STATUS messages from MDS

Status Text	Dispatch Relief	Alternate Reset Procedure
APU OIL QTY	N/A	1) Do this task: APU Oil Level Inspection, TASK 12-13-31-200-801.
APU DOOR	Y	1) Do this task: APU Air Inlet Door Test, TASK 49-15-00-710-801.

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Table 201/46-13-02-993-801 Latched STATUS messages from MDS (Continued)

Status Text	Dispatch Relief	Alternate Reset Procedure
ENG 1 EEC OVERHEAT ENG 2 EEC OVERHEAT ENG 1 FUEL FILTER ENG 2 FUEL FILTER ENG 1 FUEL STRAINER ENG 2 FUEL STRAINER ENG 1 FUEL MAIN HX ENG 2 FUEL MAIN HX ENG 1 PSS OVERHEAT ENG 2 PSS OVERHEAT ENG 1 OIL PRESS SENSOR ENG 2 OIL PRESS SENSOR ENG 1 OIL DEBRIS ENG 2 OIL DEBRIS ENG 1 OIL TEMP SENSOR ENG 2 OIL TEMP SENSOR	N	1) Do this task: EEC Maintenance Power Selection, TASK 73-21-00-800-801-G00.
ENG 1 FAN COMP OVHT ENG 2 FAN COMP OVHT ENG 1 FAN COMP OVHT SENSOR ENG 2 FAN COMP OVHT SENSOR	N	1) Do this task: EEC Maintenance Power Selection, TASK 73-21-00-800-801-G00.
ENG 1 CONTROL ENG 2 CONTROL ENG 1 OVERSPEED PROTECT ENG 2 OVERSPEED PROTECT ENG 1 LPTACC VALVE ENG 2 LPTACC VALVE	N	1) Do this task: EEC Maintenance Power Selection, TASK 73-21-00-800-801-G00. 2) Do this task: Test No. 32 - Engine Idle System Test, TASK 71-00-00-700-808-G00.
ENG 1 FUEL FILTER SENSOR ENG 2 FUEL FILTER SENSOR ENG 1 FUEL STRAINER SENSOR ENG 2 FUEL STRAINER SENSOR ENG 1 FUEL MAIN HX SENSOR ENG 2 FUEL MAIN HX SENSOR ENG 1 OIL FILTER SENSOR ENG 2 OIL FILTER SENSOR ENG 1 OIL DEBRIS SENSOR ENG 2 OIL DEBRIS SENSOR	Y	1) Do this task: EEC Maintenance Power Selection, TASK 73-21-00-800-801-G00.
ENG 1 MTC VALVE ENG 2 MTC VALVE ENG 1 HPTACC VALVE ENG 2 HPTACC VALVE ENG 1 VIBRATION MONITOR ENG 2 VIBRATION MONITOR	Y	1) Do this task: EEC Maintenance Power Selection, TASK 73-21-00-800-801-G00. 2) Do this task: Test No. 32 - Engine Idle System Test, TASK 71-00-00-700-808-G00.

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Table 201/46-13-02-993-801 Latched STATUS messages from MDS (Continued)

Status Text	Dispatch Relief	Alternate Reset Procedure
ENG 1 REVERSER ENG 2 REVERSER	Y	Cycle the thrust reversers with the engines on. Do these steps: 1) Do this task: Start the Engine (Normal Start), TASK 71-00-00-910-803-G00. 2) Move the applicable reverse thrust lever up and aft to the extend position. 3) Make sure that the green REV indication shows when the thrust reverser fully deployed. 4) Wait a minimum of 20 seconds. 5) Move the applicable reverse thrust lever forward and down to the retract (stow) position. 6) Do this task: Stop the Engine (Usual Engine Stop), TASK 71-00-00-910-806-G00.
SPOILER LOAD ALLEVIATION	Y	1) Refer to the observed fault code 276 105 00 in the Interactive Fault Isolation Manual (IFIM).
STALL WARNING SYS L STALL WARNING SYS R	N	1) Do this task: Stall Management Yaw Damper (SMYD) BITE Test - Existing Faults, TASK 27-32-00-740-801.
TAT DISAGREE	N	1) Do this task: Flight Management Computer System - System Test, TASK 34-61-00-730-801.

Table 202/46-13-02-993-802 Latched STATUS Messages from non-MDS LRUs

Status Text	Dispatch Relief	Alternate Reset Procedure
AIR/GND SYS MLG L SENSOR MLG R SENSOR NLG SENSOR	N	1) Open and close the circuit breakers for the Proximity Switch Electronic Unit (PSEU), M2061 (PAGEBLOCK 32-09-10/401). 2) Put the airplane in the air mode with deactuators (alternate method) to do the operational check of the landing gear sensors (TASK 32-09-00-860-801).
ALTN NOSE STEERING	N	1) Open and close the circuit breakers for the PSEU, M2061 (PAGEBLOCK 32-09-10/401). 2) Do the test of the alternate steering system (TASK 32-51-00-700-801).
AUTOSLAT FAIL SMYD 1 AUTOSLAT FAIL SMYD 2 YAW DAMPER SYS	Y	1) Do this task: Stall Management Yaw Damper (SMYD) BITE Test - Existing Faults, TASK 27-32-00-740-801.
AUTOSLAT FAIL	N	1) Do this task: Stall Management Yaw Damper (SMYD) BITE Test - Existing Faults, TASK 27-32-00-740-801.

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Table 202/46-13-02-993-802 Latched STATUS Messages from non-MDS LRUs (Continued)

Status Text	Dispatch Relief	Alternate Reset Procedure
DOOR AFT CARGO DOOR AFT ENTRY DOOR AFT SERVICE DOOR EE ACCESS DOOR EQUIP IND DOOR FWD CARGO DOOR FWD ENTRY DOOR FWD SERVICE DOOR L MID CABIN FLTLOCK DOOR L OVERWING FLTLOCK DOOR L OVERWING DOOR R MID CABIN FLTLOCK DOOR R OVERWING FLTLOCK DOOR R OVERWING	Y	1) Open and close the circuit breakers for the PSEU, M2061 (PAGEBLOCK 32-09-10/401). 2) Do this task: Door Warning System Test, TASK 52-71-00-730-801.
PACK FLOW CTRL SENSOR L PACK FLOW CTRL VALVE L PACK FLOW PRIMARY L PACK TEMP CTRL PRIMARY L	Y	1) Open and close the circuit breakers for the Left Integrated Air System Controller (IASC), M2939 (PAGEBLOCK 21-61-22/401). 2) Do this task: Pack Flow Control Valve Operational Test, TASK 21-51-00-700-802.
PACK FLOW CTRL SENSOR R PACK FLOW CTRL VALVE R PACK FLOW PRIMARY R PACK TEMP CTRL PRIMARY R	Y	1) Open and close the circuit breakers for the Right IASC, M2957 (PAGEBLOCK 21-61-22/401). 2) Do this task: Pack Flow Control Valve Operational Test, TASK 21-51-00-700-802.

————— END OF TASK —————

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WIRELESS ACCESS POINT - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

- (1) A software check that can identify the Wireless Access Point (WAP) software part number or version.
- (2) A WAP software installation task.
- (3) A WAP fault log message check.

TASK 46-13-06-860-801

2. Wireless Access Point Software Check

A. General

- (1) This task gives the steps to do a software check of the Wireless Access Point (WAP).
- (2) WAP-1, M03106, is installed at STA 500F - 500G, WL 304, LBL 1.
- (3) WAP-2, M03107, is installed at STA 967 - 1006, WL 300, LBL 19.
- (4) The aircraft must be on the ground to do this task.

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (P/B 201)
46-13-00-710-802	System Configuration Check (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Prepare for the Procedure

SUBTASK 46-13-06-860-001

- (1) To access the Onboard Network System (ONS), do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321 is required for access with a Maintenance Laptop (ML) or PMD.

E. Software Installation Check

SUBTASK 46-13-06-860-002

- (1) Do a check of the WAP software (TASK 46-13-00-710-802).
 - (a) Make sure that the result agrees with the requirement specified by the airline or operator.

SUBTASK 46-13-06-860-003

- (2) Do this task: Existing Faults Check, TASK 46-13-02-700-805.

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- (a) If you find a problem, then maintenance action is required.
- (b) The software installation is serviceable when no Line Replaceable Unit (LRU), and no messages, show on the Existing Faults page.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-06-080-001

- (1) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— END OF TASK —————

TASK 46-13-06-470-801

3. Wireless Access Point Software Installation

A. General

- (1) This task gives the steps to install operational software into one or more Wireless Access Point (WAP) units, from the Onboard Network System (ONS) Mass Storage Device (MSD).
 - WAP-1, M03106, is installed at STA 500F-500G, WL 304, LBL 1.
 - WAP-2, M03107, is installed at STA 967-1006, WL 300, LBL 19.
- (2) The aircraft must be on the ground to do this task.
- (3) This task is available when the ONS is accessed with the methods that follow:
 - Maintenance Laptop (ML),
 - Other type of approved Portable Maintenance Device (PMD).

B. References

Reference	Title
46-13-00-470-801	LRU Software Parts Installation (P/B 201)
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-710-802	System Configuration Check (P/B 201)
46-13-00-860-803	Client Credentials Check (P/B 201)
46-13-00-860-804	Mass Storage Device Software Parts Check (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Prepare for the Software Installation

SUBTASK 46-13-06-480-001

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321 is required for access with a ML or PMD.

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SUBTASK 46-13-06-860-004

- (2) Make sure that the new software part, or parts, are available on the MSD (TASK 46-13-00-860-804).

E. Wireless Access Point Software Installation Procedure

SUBTASK 46-13-06-860-005

- (1) Do this task: System Configuration Check, TASK 46-13-00-710-802.
 - (a) Make a record of the data for the WAP:
 - Serial Number
 - Hardware Part Number
 - Software Part Number
 - (b) Compare the data with the requirement specified by the airline or operator.

SUBTASK 46-13-06-470-001

- (2) Install the new software part, or parts (TASK 46-13-00-470-801).

NOTE: During software installation to the WAP, the installation program will install the parts, shut down, and reboot the WAP.

F. Software Installation Check

SUBTASK 46-13-06-720-001

- (1) Do this task: System Configuration Check, TASK 46-13-00-710-802.
 - (a) Make a record of the data for the WAP:
 - Serial Number
 - Hardware Part Number
 - Software Part Number
 - (b) Make sure the result agrees with the requirement specified by the airline or operator.

SUBTASK 46-13-06-720-002

- (2) Do this task: Client Credentials Check, TASK 46-13-00-860-803.
 - (a) If you find a problem, then new client credentials must be generated.

SUBTASK 46-13-06-720-003

- (3) Do this task: Existing Faults Check, TASK 46-13-02-700-805.
 - (a) If you find a problem, then maintenance action is required.
 - (b) The software installation is serviceable when no LRU, and no messages, show on the Existing Faults page.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-06-080-002

- (1) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

————— END OF TASK —————

TASK 46-13-06-700-801

4. Wireless Access Point Fault Log Check

A. General

- (1) This task gives the steps to do a fault log check of one or more Wireless Access Point (WAP) units.

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- WAP-1, M03106, is installed at STA 500F-500G, WL 304, LBL 1.
 - WAP-2, M03107, is installed at STA 967-1006, WL 300, LBL 19.
- (2) The aircraft must be on the ground to do this task.
- (3) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:
- Multi Function Display (MFD),
 - Maintenance Laptop (ML),
 - Other type of approved Portable Maintenance Device (PMD).

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Prepare for the Procedure

SUBTASK 46-13-06-480-002

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801 or Multi Function Display Connection, TASK 46-13-00-480-803.

NOTE: A universal maintenance device, SPL-11321 is required for access with a ML or PMD.

E. Wireless Access Point Fault Log Check

SUBTASK 46-13-06-720-004

- (1) Do this task: Existing Faults Check, TASK 46-13-02-700-805.
- (a) If the result shows no Line Replaceable Unit (LRU), and no fault messages, the WAP-1 and WAP-2 are serviceable.
- (b) If the result shows one or more WAP units, with one or more messages, then maintenance action is required.

NOTE: The Existing Faults page shows an LRU only when the LRU client has a maintenance message. When there is no message, the LRU does not show. When an LRU does show, typically the message refers to an NFS-to-LRU interface problem, or an NFS software or hardware problem. Some conditions can cause more than one message to show.

NOTE: NFS is serviceable only when no LRUs show with no maintenance messages.

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F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-06-080-003

- (1) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.
 - (a) To stop the CWLAN connection:
 - 1) Click on the WIRELESS icon, typically in the lower-right task tray.
 - 2) Select DISCONNECT.

———— **END OF TASK** ————

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WIRELESS ACCESS POINT -REMOVAL/INSTALLATION

1. General

A. This procedure contains these tasks:

- (1) Removal of a WAP.
- (2) Installation of a WAP.

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- (3) Removal of a WAP antenna.
- (4) Installation of a WAP antenna.

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TASK 46-13-06-000-801

2. Wireless Access Point Removal

Figure 401

A. General

- (1) This task gives the steps to remove a Wireless Access Point (WAP).
 - WAP-1, M03106, installed at STA 500F-500G, WL 304, LBL 1.

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- WAP-2, M03107, installed at STA 967–1006, WL 300, LBL 19.

SIA ALL

B. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
25-21-45 P/B 401	CEILING PANEL - REMOVAL/INSTALLATION
25-21-71 P/B 401	LOWERED CEILING PANELS - REMOVAL/INSTALLATION

C. Location Zones

Zone	Area
234	Area Above Passenger Compartment Ceiling, Right - Section 43

D. Prepare for the Removal

SUBTASK 46-13-06-040-001

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

F/O Electrical System Panel, P6-5

Row	Col	Number	Name
B	11	C01973	CREW WAP PWR

SUBTASK 46-13-06-010-001

- (2) Get access to the forward wireless access point [1], refer to (CEILING PANEL - REMOVAL/INSTALLATION, PAGEBLOCK 25-21-45/401).

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SUBTASK 46-13-06-010-002

- (3) Get access to the aft wireless access point [1], refer to (LOWERED CEILING PANELS - REMOVAL/INSTALLATION, PAGEBLOCK 25-21-71/401).

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E. Wireless Access Point Removal

SUBTASK 46-13-06-860-006

- (1) Do this task: (ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802).

SUBTASK 46-13-06-020-001

SIA 001-005



DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (2) Remove the wireless access point [1] as follows:
- (a) Disconnect the two primary electrical connectors [2] from the wireless access point [1].
 - (b) Disconnect the four (4) antenna connectors [3] from the wireless access point [1].
 - (c) Disconnect the electrical bond strap [4] from the wireless access point [1].
 - 1) Remove the screw [5] and washer [6].
 - 2) Keep the hardware for the installation task.
 - (d) Put protective covers on the wireless access point [1] electrical connectors.
 - (e) Remove the five screws [5] and five washers [6] that attach the wireless access point [1] to the brackets.
 - 1) Keep the hardware for the installation task.
 - (f) Remove the wireless access point [1] from its overhead location.

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DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (3) Remove the wireless access point [1] as follows:
- (a) Disconnect the two ethernet cables [9] from the wireless access point [1].
 - (b) Disconnect the electrical connector [2] from the wireless access point [1].
 - (c) Disconnect the electrical bond strap [4] from the wireless access point [1].
 - 1) Remove the screw [5], washer [8], and washer [6].
 - 2) Keep the hardware for the installation task.
 - (d) Put protective covers on the wireless access point [1] electrical connector and Ethernet cables.
 - (e) Remove the five screws [5] and five washers [7] that attach the wireless access point [1] to the brackets.
 - 1) Keep the hardware for the installation task.

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- (f) Remove the wireless access point [1] from its overhead location.

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————— END OF TASK —————

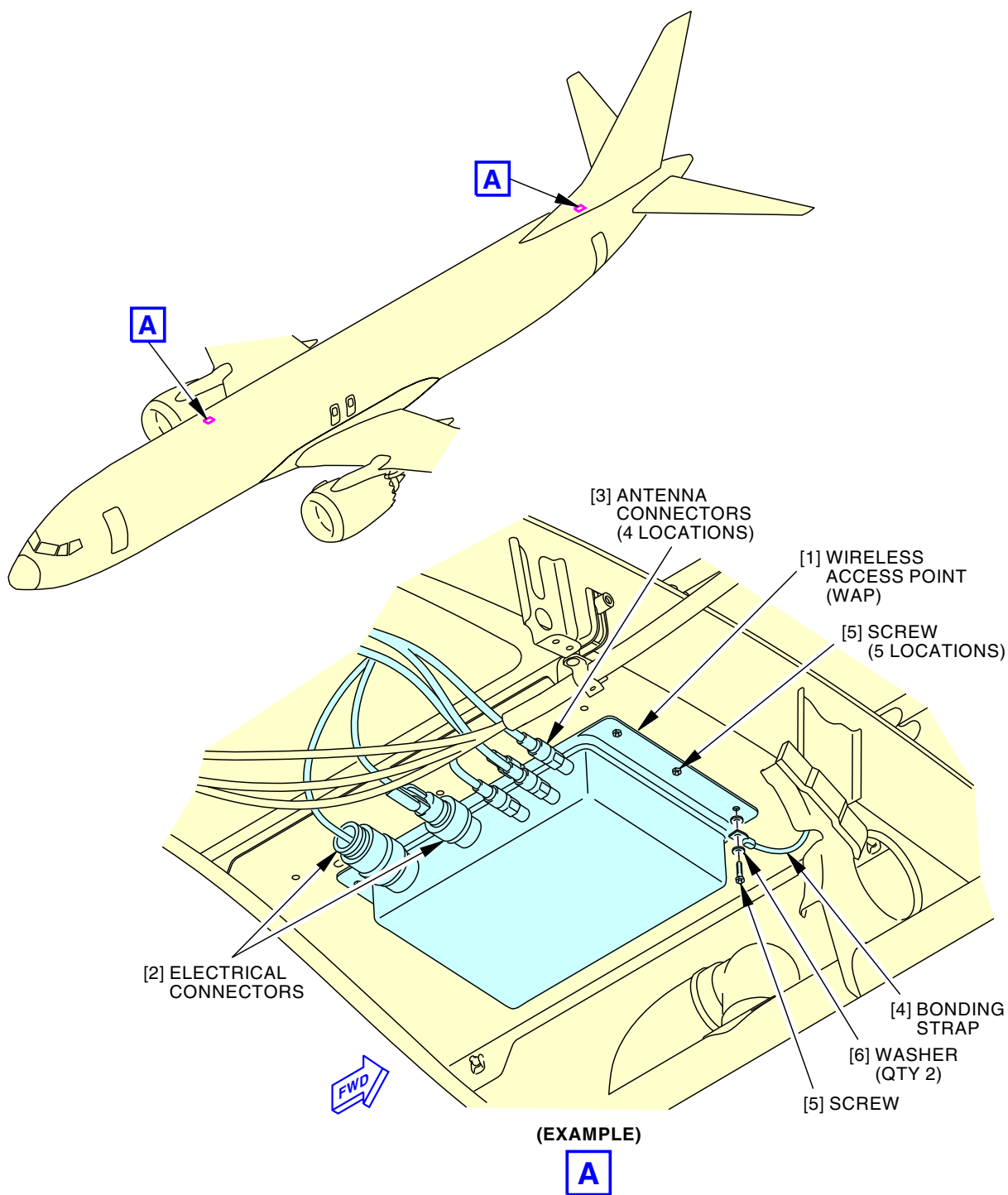
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2550142 S0000607397_V1

Wireless Access Point (WAP) Installation
Figure 401/46-13-06-990-803 (Sheet 1 of 2)

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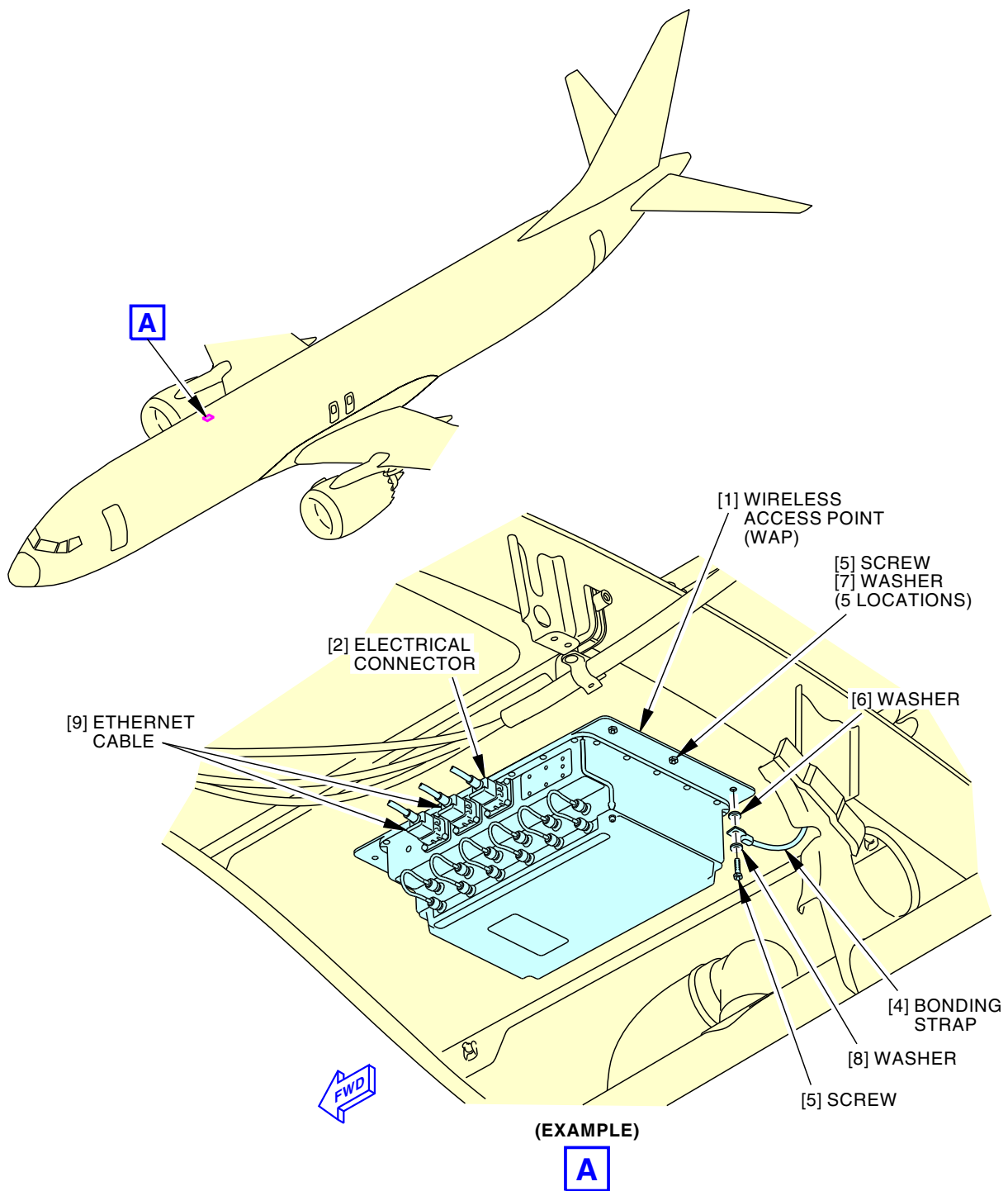
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2814290 S0000648514_V1

Wireless Access Point (WAP) Installation
Figure 401/46-13-06-990-803 (Sheet 2 of 2)

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TASK 46-13-06-400-801

3. Wireless Access Point Installation

Figure 401

A. General

- (1) This task gives the steps to install a Wireless Access Point (WAP).
- WAP-1, M03106, installed at STA 500F-500G, WL 304, LBL 1.

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- WAP-2, M03107, installed at STA 967–1006, WL 300, LBL 19.

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- (a) The WAP is an Line Replaceable Unit (LRU) of the crew wireless local area network (CWLAN).

B. References

Reference	Title
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
25-21-45 P/B 401	CEILING PANEL - REMOVAL/INSTALLATION
25-21-71 P/B 401	LOWERED CEILING PANELS - REMOVAL/INSTALLATION
46-13-00-860-803	Client Credentials Check (P/B 201)
46-13-06-710-801	Wireless Access Point Operational Test (P/B 501)
46-13-06-860-801	Wireless Access Point Software Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205
STD-592	Meter - Milliohms, Range from 0.001 to 100 milliohms
STD-1018	Wrench - Torque, 0 to 500 in-lbs (0 to 56.49 N·m)

D. Consumable Materials

Reference	Description	Specification
B50119	Solvent - Chlorinated	BAC5150

E. Location Zones

Zone	Area
234	Area Above Passenger Compartment Ceiling, Right - Section 43

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F. Prepare for the Installation

SUBTASK 46-13-06-860-007



WARNING

KEEP ALL PERSONNEL A MINIMUM OF 8 INCHES (0.2032 METER), AWAY FROM THE WAP ANTENNA WHILE THE WIRELESS SYSTEM HAS POWER. THIS IS A MANDATORY FCC RULE. RADIO FREQUENCY FIELDS NEAR THE ANTENNA CAN CAUSE INJURIES TO PERSONNEL.

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	11	C01973	CREW WAP PWR

G. Wireless Access Point Installation

SUBTASK 46-13-06-160-001

- (1) Prepare the mating surfaces of the wireless access point [1], and attach to the structure. Do these steps:

NOTE: Do not remove the finish from the WAP housing.

- (a) Solvent clean the mating surfaces of the wireless access point [1] with chlorinated solvent, B50119.
- (b) On the mounting structure, wipe clean using chlorinated solvent, B50119 on the area within 0.5 in. (12.7 mm) of the six fastener holes.

SUBTASK 46-13-06-860-008

- (2) Do this task: (ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802).

SUBTASK 46-13-06-420-001

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CAUTION

DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (3) Install the wireless access point [1]:
 - (a) Put the wireless access point [1] in the installed position on the mounting brackets.
 - (b) Install the five short screws [5] to connect the wireless access point [1] to the brackets.
 - (c) Connect the electrical bond jumper to the flange of the wireless access point [1].
 - 1) At the sixth hole, install the longer screw [5], washer [6], bond strap [4] and second washer [6].
 - (d) Using a torque wrench, STD-1018, torque the six screws [5] to 20 in-lb (2 N·m).

NOTE: The stud can have a hex hole on the back side. You can use an allen wrench to prevent nut rotation.

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CAUTION

DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (4) Install the wireless access point [1]:

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SIA 006-999 (Continued)

- (a) Put the wireless access point [1] in the installed position on the mounting brackets.
- (b) Install the five screws [5] and five washers [7] to connect the wireless access point [1] to the brackets.
- (c) Connect the electrical bond jumper to the flange of the wireless access point [1].
 - 1) At the sixth hole, install the screw [5], washer [8], bond strap [4] and second washer [6].
- (d) Using a torque wrench, STD-1018, torque the six screws [5] to 20 in-lb (2 N·m).

NOTE: The stud can have a hex hole on the back side. You can use an allen wrench to prevent nut rotation.

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SUBTASK 46-13-06-720-005

- (5) Do a resistance check of the wireless access point [1] to mounting structure at each of the four screws.
 - (a) Use a milliohm meter .001 to 100 milliohms, STD-592.
 - (b) The maximum resistance is .001 ohms (or 1 milliohm).

SUBTASK 46-13-06-420-002

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- (6) Examine the electrical connectors [2] for bent or broken pins, dirt, and damage.
 - (a) Remove the protective cover on the electrical connectors.
 - (b) Repair problems that you find.

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- (7) Examine the electrical connector [2] and ethernet cables [9] for bent or broken pins, dirt, and damage.
 - (a) Remove the protective cover on the electrical connectors and Ethernet cables.
 - (b) Repair problems that you find.

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SUBTASK 46-13-06-420-003

SIA 001-005

- (8) Attach the four cellular antenna connectors to the WAP [1].

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- (9) Connect the ethernet cables [9] to the wireless access point [1].

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SUBTASK 46-13-06-420-004

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- (10) Connect the two electrical connectors [2] to the wireless access point [1].

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- (11) Connect the electrical connector [2] to the wireless access point [1].

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SUBTASK 46-13-06-410-001

- (12) For the forward WAP, close the ceiling panel (CEILING PANEL - REMOVAL/INSTALLATION, PAGEBLOCK 25-21-45/401).

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SUBTASK 46-13-06-410-002

- (13) For the aft WAP, close the aft doorway ceiling panel (LOWERED CEILING PANELS - REMOVAL/INSTALLATION, PAGEBLOCK 25-21-71/401).

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SUBTASK 46-13-06-860-009

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	11	C01973	CREW WAP PWR

H. Wireless Access Point Installation Test

SUBTASK 46-13-06-710-001

- (1) Do this task: (Client Credentials Check, TASK 46-13-00-860-803).
(a) Make sure that the WAP client credential is serviceable.

SUBTASK 46-13-06-710-002

- (2) Do this task: (Wireless Access Point Software Check, TASK 46-13-06-860-801).

SUBTASK 46-13-06-720-006

- (3) Do this task: (Wireless Access Point Operational Test, TASK 46-13-06-710-801).

I. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-06-080-004

- (1) If the universal maintenance device, SPL-11321 is no longer necessary, exit the ONS maintenance browser and disconnect the laptop.

————— END OF TASK —————

SIA 001-005

TASK 46-13-06-000-802

4. Wireless Access Point Antenna Removal

Figure 402

A. General

- (1) This task gives the steps to remove a Wireless Access Point (WAP) antenna.
- (a) For the forward mounted WAP-1:
- 1) Antenna M03108 is at the forward WAP antenna tray 2, STA 500E-500F, stringer 3L.
 - 2) Antenna M03109 is at the forward WAP antenna tray 1, STA 500D-500E, stringer 3L.
 - 3) Antenna M03110 is at the forward WAP antenna tray 1, STA 500D-500E, stringer 3L.
 - 4) Antenna M03111 is at the forward WAP antenna tray 1, STA 500D-500E, stringer 3L.

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- (b) For the aft-mounted WAP-2:
- 1) Antenna M03112 is at the aft WAP antenna tray 2, STA 967–986.5, stringer 3L.
 - 2) Antenna M03113 is at the aft WAP antenna tray 1, STA 986.5–1006, stringer 3L.
 - 3) Antenna M03114 is at the aft WAP antenna tray 1, STA 986.5–1006, stringer 3L..
 - 4) Antenna M03115 is at the aft WAP antenna tray 1, STA 986.5–1006, stringer 3L.
- (2) The WAP units and each antenna are components of the crew wireless local area network (CWLAN).

B. References

Reference	Title
25-21-45 P/B 401	CEILING PANEL - REMOVAL/INSTALLATION
25-21-71 P/B 401	LOWERED CEILING PANELS - REMOVAL/INSTALLATION

C. Location Zones

Zone	Area
234	Area Above Passenger Compartment Ceiling, Right - Section 43

D. Prepare for the Removal

SUBTASK 46-13-06-860-010



WARNING

KEEP ALL PERSONNEL A MINIMUM OF 8 INCHES (0.2032 METER), AWAY FROM THE WAP ANTENNA WHILE THE WIRELESS SYSTEM HAS POWER. THIS IS A MANDATORY FCC RULE. RADIO FREQUENCY FIELDS NEAR THE ANTENNA CAN CAUSE INJURIES TO PERSONNEL.

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

F/O Electrical System Panel, P6-5

Row	Col	Number	Name
B	11	C01973	CREW WAP PWR

SUBTASK 46-13-06-010-003

- (2) Get access to the forward wireless access point antenna [1], (CEILING PANEL - REMOVAL/INSTALLATION, PAGEBLOCK 25-21-45/401).

SUBTASK 46-13-06-010-004

- (3) Get access to the aft wireless access point antenna [1], (LOWERED CEILING PANELS - REMOVAL/INSTALLATION, PAGEBLOCK 25-21-71/401).

E. Wireless Access Point Antenna Removal

SUBTASK 46-13-06-020-002



CAUTION

DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (1) Remove the wireless access point antenna [1]:
- (a) Disconnect the antenna connector [3].
 - (b) Remove the two antenna screws [2].
 - (c) Remove the wireless access point antenna [1].

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SIA 001-005 (Continued)

- (d) Put protective covers on the male and female antenna connectors [3].

———— **END OF TASK** ————

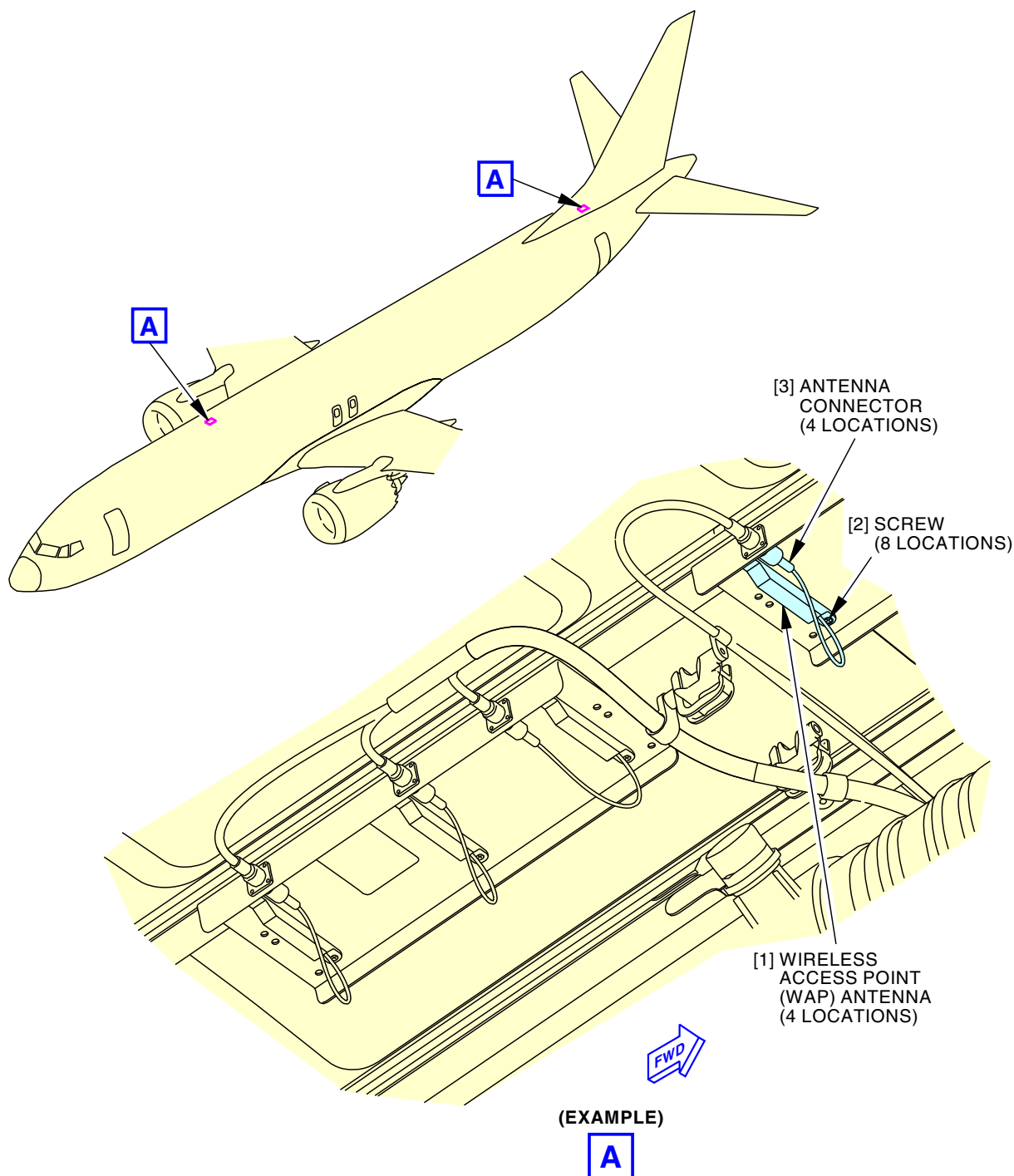
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Wireless Access Point (WAP) Antenna Installation
Figure 402/46-13-06-990-804

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SIA 001-005 (Continued)

TASK 46-13-06-400-802

5. Wireless Access Point Antenna Installation

Figure 402

A. General

- (1) This task gives the steps to install a Wireless Access Point (WAP) antenna.
 - (a) For the forward mounted WAP-1:
 - 1) Antenna M03108 is at the forward WAP antenna tray 2, STA 500E-500F, stringer 3L.
 - 2) Antenna M03109 is at the forward WAP antenna tray 1, STA 500D-500E, stringer 3L.
 - 3) Antenna M03110 is at the forward WAP antenna tray 1, STA 500D-500E, stringer 3L.
 - 4) Antenna M03111 is at the forward WAP antenna tray 1, STA 500D-500E, stringer 3L.
 - (b) For the aft-mounted WAP-2:
 - 1) Antenna M03112 is at the aft WAP antenna tray 2, STA 967–986.5, stringer 3L.
 - 2) Antenna M03113 is at the aft WAP antenna tray 1, STA 986.5–1006, stringer 3L.
 - 3) Antenna M03114 is at the aft WAP antenna tray 1, STA 986.5–1006, stringer 3L..
 - 4) Antenna M03115 is at the aft WAP antenna tray 1, STA 986.5–1006, stringer 3L.
- (2) The WAP units and each antenna are components of the crew wireless local area network (CWLAN).

B. References

Reference	Title
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
25-21-45 P/B 401	CEILING PANEL - REMOVAL/INSTALLATION
25-21-71 P/B 401	LOWERED CEILING PANELS - REMOVAL/INSTALLATION
46-13-06-710-801	Wireless Access Point Operational Test (P/B 501)

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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205
STD-1018	Wrench - Torque, 0 to 500 in-lbs (0 to 56.49 N·m)

D. Location Zones

Zone	Area
234	Area Above Passenger Compartment Ceiling, Right - Section 43

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SIA 001-005 (Continued)

E. Prepare for the Installation

SUBTASK 46-13-06-860-011

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	11	C01973	CREW WAP PWR

SUBTASK 46-13-06-010-005

- (2) Make sure that you have access to the wireless access point antenna [1].
- (a) For WAP-1, refer to ceiling panel removal, (CEILING PANEL - REMOVAL/INSTALLATION, PAGEBLOCK 25-21-45/401).
- (b) For WAP-2, refer to ceiling panel removal, (LOWERED CEILING PANELS - REMOVAL/INSTALLATION, PAGEBLOCK 25-21-71/401).

F. Wireless Access Point Installation

SUBTASK 46-13-06-860-012



DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (1) Do this task: (ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802).

SUBTASK 46-13-06-420-005

- (2) Install the wireless access point antenna [1].
- (a) Put the wireless access point antenna [1] in the installed position on the mounting bracket.
- (b) Install the two screws [2] to attach the wireless access point antenna [1] to the mounting bracket.
- (c) Using a torque wrench, STD-1018, torque each screw [2] to 5 in-lb (0.6 N·m).
- (d) Remove the protective cover from the coaxial cable [3].
- (e) Examine the coaxial connector for bent or broken pins, dirt, and damage.
- 1) Repair any problems that you find.
- (f) Connect the antenna coaxial cable [3] to the CWLU coaxial connector.

SUBTASK 46-13-06-410-003

- (3) For the forward WAP-1, close the ceiling panel, (CEILING PANEL - REMOVAL/INSTALLATION, PAGEBLOCK 25-21-45/401).

SUBTASK 46-13-06-410-004

- (4) For the aft WAP-2, close the ceiling panel, (LOWERED CEILING PANELS - REMOVAL/INSTALLATION, PAGEBLOCK 25-21-71/401).

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SUBTASK 46-13-06-860-013

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	11	C01973	CREW WAP PWR

G. Wireless Access Point Antenna Installation Test

SUBTASK 46-13-06-710-003

- (1) Do an operational test: (Wireless Access Point Operational Test, TASK 46-13-06-710-801).

H. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-06-080-005

- (1) If the universal maintenance device, SPL-11321 is no longer required, exit the ONS maintenance browser and disconnect the laptop.

————— **END OF TASK** —————

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WIRELESS ACCESS POINT - ADJUSTMENT/TEST

1. General

A. This procedure has this task:

- (1) An operational check of the WAP and antennas.

TASK 46-13-06-710-801

2. Wireless Access Point Operational Test

A. **General**

- (1) This procedure gives the steps to make sure that the Wireless Access Point (WAP) is serviceable.

(a) WAP-1 antennae

- M03109, antenna 1
- M03110, antenna 2
- M03111, antenna 3
- M03108, antenna 4

(b) WAP-2 antennae:

- M03113, antenna 1
- M03114, antenna 2
- M03115, antenna 3
- M03112, antenna 4

- (2) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:

- Maintenance Laptop (ML),
- Other type of approved Portable Maintenance Device (PMD).

B. **References**

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-710-801	Input Monitoring Check (P/B 201)
46-13-02-700-805	Existing Faults Check (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-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

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D. Prepare for the Procedure

SUBTASK 46-13-06-480-003

- (1) To access the ONS, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

NOTE: A universal maintenance device, SPL-11321 is required for access with a ML or PMD.

E. Wireless Access Point Operational Test

SIA 001-014 PRE SB 737-46-1029

SUBTASK 46-13-06-710-004

- (1) Do a check of NFS input monitoring for WAP-1:
- (a) Select EXTENDED MAINTENANCE > INPUT MONITORING.
 - (b) Select NFS.
 - (c) In the confirmation box, select CONTINUE.
 - (d) Select ETHERNET.
 - (e) Make sure that the status of WAP-1 shows the word UP.
 - (f) On the top left of the page, select HOME.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

SUBTASK 46-13-06-710-007

- (2) Do this task: Input Monitoring Check, TASK 46-13-00-710-801.
- (a) Make sure that WAP-1 shows up under the Ethernet tab.

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SUBTASK 46-13-06-710-005

- (3) Do this task: Existing Faults Check, TASK 46-13-02-700-805.
- (a) Make sure that the WAP-1 and WAP-2 faults do not show in the Information System selection.
- NOTE: When the Information System selection does not show, there are not fault codes for WAP 1 and WAP-2, and the units are serviceable.
- 1) If you find one or more fault codes, then correct the problem.

SIA 001-014 PRE SB 737-46-1029

- (b) Select the HOME button.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (c) Select the horizontal striped menu icon at the top left, then the Home Icon.

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SUBTASK 46-13-06-710-006

- (4) Do a check of the conditions shown in the Crew Wireless Application:
- (a) Select EXTENDED MAINTENANCE.

SIA 001-014 PRE SB 737-46-1029

- (b) Select CREW WIRELESS.

NOTE: By default, WAP is selected with a table of data below the four tabs: WAP, RADIOS, SERVICES, and CLIENTS.

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SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (c) Select Crew Wireless.

NOTE: By default, WAP is selected with a table of data below the four tabs: WAP, RADIOS, SERVICES, and CLIENTS.

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- (d) Below STATUS, make sure that each radio shows RUNNING.
- (e) Below POWER, make sure that each radio shows ON.
- (f) Below RF STATUS, make sure that each radio shows ON.
- (g) Make sure that the wireless icon in the page footer shows white in color with TURN OFF RF.
 - 1) If the icon shows white in color with TURN ON RF, click on the icon to start wireless access.

SIA 001-014 PRE SB 737-46-1029

- (h) Select the HOME button.

SIA 015-999; SIA 001-014 POST SB 737-46-1029

- (i) Select the horizontal striped menu icon at the top left, then the Home Icon.

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F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-06-080-006

- (1) If the universal maintenance device, SPL-11321, is not necessary, close the ONS maintenance browser and disconnect the maintenance device.

———— **END OF TASK** ————

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AIRCRAFT INTERFACE DEVICE - MAINTENANCE PRACTICES

1. **General**

- A. This procedure has these tasks:
- (1) Aircraft Interface Device activation.
 - (2) Aircraft Interface Device deactivation.
 - (3) Aircraft Interface Device software verification.
 - (4) Aircraft Interface Device software installation.
 - (5) Aircraft Interface Device SIM replacement.

TASK 46-13-52-440-801

2. **Aircraft Interface Device (AID) Activation**

A. General

- (1) This task gives two ways to operate the Aircraft Interface Device (AID) radio enable discrete.
 - (a) The Cellular RF Status ON function shows on the CELLULAR DISCRETES page.
 - (b) The Wi-Fi RF Status ON function shows on the WIRELESS DISCRETES page.
- (2) When the Radio Frequency (RF) Status functions are set to off, or disabled, the AID remains energized.
 - (a) To remove electrical power from the AID, you must open the correct circuit breaker.
- (3) The aircraft must be on the ground to do this task.

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-860-803	Client Credentials Check (P/B 201)

C. Location Zones

Zone	Area
212	Flight Compartment - Right

D. Prepare for the Activation

SUBTASK 46-13-52-480-001

- (1) Do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

E. Wireless Discrete Activation

SUBTASK 46-13-52-440-001

- (1) On the Onboard Network System (ONS) maintenance browser:
 - (a) Select EXTENDED MAINTENANCE > Offboard Communication.
 - (b) Select WIRELESS on the top of the page.
 - (c) Select DISCRETES.
 - (d) Below the words DISCRETE & PROFILE CONTROL, examine the Wi-Fi RF Status.
 - (e) If the Wi-Fi RF Status shows OFF, select the ON/OFF button to turn the Wi-Fi RF Status to ON.

NOTE: The label of the button changes from OFF to ON.

- 1) If the Wi-Fi RF Status button is grayed out, do this task: Client Credentials Check, TASK 46-13-00-860-803.



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F. Cellular Discrete Activation

SUBTASK 46-13-52-440-003

- (1) On the ONS maintenance browser:

NOTE: If necessary, make sure that SIM card 1 (J10) and/or SIM card 2 (J9) are installed.

- (a) Select EXTENDED MAINTENANCE > Offboard Communication.
- (b) Select CELLULAR on the top of the page.
- (c) Select DISCRETES.
- (d) Below the words DISCRETE & PROFILE CONTROL, examine the Cellular RF Status.
- (e) If the Cellular RF Status shows OFF, select the ON/OFF button to turn the Cellular RF Status to ON.

NOTE: The label of the button changes from OFF to ON.

- 1) If the Cellular RF Status button is grayed out, do this task: Client Credentials Check, TASK 46-13-00-860-803.

————— **END OF TASK** —————

TASK 46-13-52-040-801

3. Aircraft Interface Device (AID) Deactivation

A. General

- (1) This task gives two ways to operate the Aircraft Interface Device (AID) radio disable discrete.
 - (a) The Cellular RF Status OFF function shows on the CELLULAR DISCRETES page.
 - (b) The Wi-Fi RF Status OFF function shows on the WIRELESS DISCRETES page.
- (2) When the Radio Frequency (RF) discrete status function is set to off, or disabled, the AID remains energized.
 - (a) To remove electrical power from the AID, you must open the correct circuit breaker.
- (3) The aircraft must be on the ground to do this task.

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-860-803	Client Credentials Check (P/B 201)

C. Location Zones

Zone	Area
212	Flight Compartment - Right

D. Prepare for the Deactivation

SUBTASK 46-13-52-480-002

- (1) Do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

E. Wireless Discrete Deactivation

SUBTASK 46-13-52-040-001

- (1) On the Onboard Network System (ONS) maintenance browser:
 - (a) Select EXTENDED MAINTENANCE > Offboard Communication.
 - (b) Select WIRELESS on the top of the page.
 - (c) Select DISCRETES.



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- (d) Below the words DISCRETE & PROFILE CONTROL, examine the Wi-Fi RF Status.
- (e) If the Wi-Fi RF Status shows ON, select the ON/OFF button to turn the Wi-Fi RF Status to OFF.

NOTE: The label of the button changes from ON to OFF.

- 1) If the Wi-Fi RF Status button is grayed out, do this task: Client Credentials Check, TASK 46-13-00-860-803.

F. Cellular Discrete Deactivation

SUBTASK 46-13-52-040-003

- (1) On the ONS maintenance browser:
 - (a) Select EXTENDED MAINTENANCE > Offboard Communication.
 - (b) Select CELLULAR on the top of the page.
 - (c) Select DISCRETES.
 - (d) Below the words DISCRETE & PROFILE CONTROL, examine the Cellular RF Status.
 - (e) If the Cellular RF Status shows ON, select the ON/OFF button to turn the Cellular RF Status to OFF.

NOTE: The label of the button changes from ON to OFF.

- 1) If the Cellular RF Status button is grayed out, do this task: Client Credentials Check, TASK 46-13-00-860-803.

————— **END OF TASK** —————

TASK 46-13-52-470-801

4. Aircraft Interface Device (AID) Software Verification

A. General

- (1) This task gives the steps to make sure that the Operational Program Software (OPS) and Operational Program Configuration (OPC) software installed in the Aircraft Interface Device (AID).
- (2) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:
 - Multi Function Display (MFD),
 - Universal Maintenance Device (UMD).

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (P/B 201)
46-13-00-710-802	System Configuration Check (P/B 201)

C. Location Zones

Zone	Area
212	Flight Compartment - Right

D. Aircraft Interface Device (AID) Software Verification

SUBTASK 46-13-52-840-001

- (1) Access the ONS via these methods:

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- (a) To access the ONS via the UMD, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.
- (b) To access the ONS via the MFD, do this task: Multi Function Display Connection, TASK 46-13-00-480-803.

SUBTASK 46-13-52-840-005

- (2) Do a check of the AID software (TASK 46-13-00-710-802).
 - (a) Record and make sure that the software part numbers are correct.
 - 1) If the software part number is not correct, do this task: Aircraft Interface Device (AID) Software Installation, TASK 46-13-52-470-802.
 - 2) If there are still problems with the AID software, or if the AID System Config does not show, then refer to the IFIM and do the applicable procedure(s).

————— END OF TASK —————

TASK 46-13-52-470-802

5. Aircraft Interface Device (AID) Software Installation

A. General

- (1) This task gives the steps to install the Operational Program Software (OPS) and Operational Program Configuration (OPC) into the Aircraft Interface Device (AID) from the Mass Storage Device (MSD) to the AID.
- (2) If the software parts are not already staged to the MSD, then gather all of the software parts you need on removable media or the Universal Maintenance Device (UMD) before going to the airplane.
- (3) This task is available when the Onboard Network System (ONS) is accessed with the methods that follow:
 - Multi Function Display (MFD),
 - UMD.

B. References

Reference	Title
46-13-00-470-801	LRU Software Parts Installation (P/B 201)
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-480-803	Multi Function Display Connection (P/B 201)
46-13-00-860-803	Client Credentials Check (P/B 201)

C. Location Zones

Zone	Area
212	Flight Compartment - Right

D. Procedure

SUBTASK 46-13-52-470-007

- (1) Access the ONS via these methods:
 - (a) To access the ONS via the UMD, do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.
 - (b) To access the ONS via the MFD, do this task: Multi Function Display Connection, TASK 46-13-00-480-803.



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SUBTASK 46-13-52-470-005

- (2) Do this task to install the applicable AID software: LRU Software Parts Installation, TASK 46-13-00-470-801.

NOTE: Install the OPC and OPS at the same time.

- (a) If the AID software load is failed, then refer to the IFIM and do the applicable procedure(s).

SUBTASK 46-13-52-470-006

- (3) Do this task to make and install new client credentials for the AID: Client Credentials Check, TASK 46-13-00-860-803.

NOTE: It is necessary to install new credentials after the AID software is installed on a new AID unit.

NOTE: Wait 10 minutes after the AID restarts before generating client credentials.

————— END OF TASK —————

TASK 46-13-52-480-801

6. Aircraft Interface Device (AID) SIM Card Replacement

(Figure 201)

A. General

- (1) This task contains the procedures to replace the Subscriber Identity Module (SIM) cards on the Aircraft Interface Device (AID).
- (2) The AID is installed in the ceiling crown at STA 467, WL 305, RBL 5.
- (3) Up to two SIM cards can be installed in the AID.
- SIM card 1 is installed at slot J10.
 - SIM card 2 is installed at slot J9.

B. References

Reference	Title
25-21-45-000-801	Main Ceiling Panel - Removal (P/B 401)
25-21-45-400-801	Main Ceiling Panel - Installation (P/B 401)
25-24-40-000-801	Center Overhead Stowage Box Removal (P/B 401)
25-24-40-400-801	Center Overhead Stowage Box Installation (P/B 401)
25-80-00-000-801	Insulation Blanket Removal (P/B 401)
25-80-00-400-801	Insulation Blanket Installation (P/B 401)
46-13-52-710-801	Aircraft Interface Device (AID) Operational Test - Cellular Connection (P/B 501)

C. Location Zones

Zone	Area
234	Area Above Passenger Compartment Ceiling, Right - Section 43

D. Aircraft Interface Device (AID) SIM Card Replacement

SUBTASK 46-13-52-840-004

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

F/O Electrical System Panel, P6-5

Row	Col	Number	Name
B	12	C04113	AID PWR C/B

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SUBTASK 46-13-52-010-008



THE AIRCRAFT INTERFACE DEVICE MUST BE OFF IF YOU ARE LESS THAN 8 INCHES (20 CMS) FROM THE RADIO FREQUENCY ANTENNAS. IF YOU DO NOT OBEY, INJURY FROM ELECTROMAGNETIC RADIATION CAN OCCUR.

- (2) Get access to the AID [1]:
 - (a) If it is necessary, remove the center overhead stowage box (TASK 25-24-40-000-801).
 - (b) If it is necessary, remove the applicable ceiling panels (TASK 25-21-45-000-801).
 - (c) Remove the applicable insulation (TASK 25-80-00-000-801).

SUBTASK 46-13-52-020-003

- (3) If there is a SIM CONFIGURATION label on the access door [2], remove and discard the label.

SUBTASK 46-13-52-420-012

- (4) Loosen the captive screws [3] on the access door [2].

SUBTASK 46-13-52-420-013

- (5) Open the access door [2].

SUBTASK 46-13-52-420-014

- (6) For the SIM cards [5], do these steps:
 - SIM card 1 is installed at slot J10.
 - SIM card 2 is installed at slot J9.
 - (a) To remove the card(s), carefully push on the applicable card to release it.
 - (b) To install the card(s), carefully push on the applicable card until it latches.
 - 1) Make sure that the cut corner is in the correct position (Figure 201).

SUBTASK 46-13-52-420-016

- (7) Close the access door [2].

SUBTASK 46-13-52-420-017

- (8) Tighten the captive screws [3].

SUBTASK 46-13-52-440-005

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C04113	AID PWR C/B

E. AID SIM Replacement Test

SUBTASK 46-13-52-710-003

- (1) Do this task: Aircraft Interface Device (AID) Operational Test - Cellular Connection, TASK 46-13-52-710-801.

NOTE: To do the operational test, you must have access to an active wireless connection from a remote access terminal, or airport messaging terminal.



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F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-52-860-005

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C04113	AID PWR C/B

SUBTASK 46-13-52-410-003



THE AIRCRAFT INTERFACE DEVICE MUST BE OFF IF YOU ARE LESS THAN 8 INCHES (20 CMS) FROM THE RADIO FREQUENCY ANTENNAS. IF YOU DO NOT OBEY, INJURY FROM ELECTROMAGNETIC RADIATION CAN OCCUR.

- (2) Close access to the AID [1]:
- (a) Install the applicable insulation (TASK 25-80-00-400-801).
 - (b) If removed, install the applicable ceiling panels (TASK 25-21-45-400-801).
 - (c) If removed, install the center overhead stowage box (TASK 25-24-40-400-801).

SUBTASK 46-13-52-860-006

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C04113	AID PWR C/B

———— END OF TASK ————

EFFECTIVITY
SIA 015-999

D633AM101-SIA

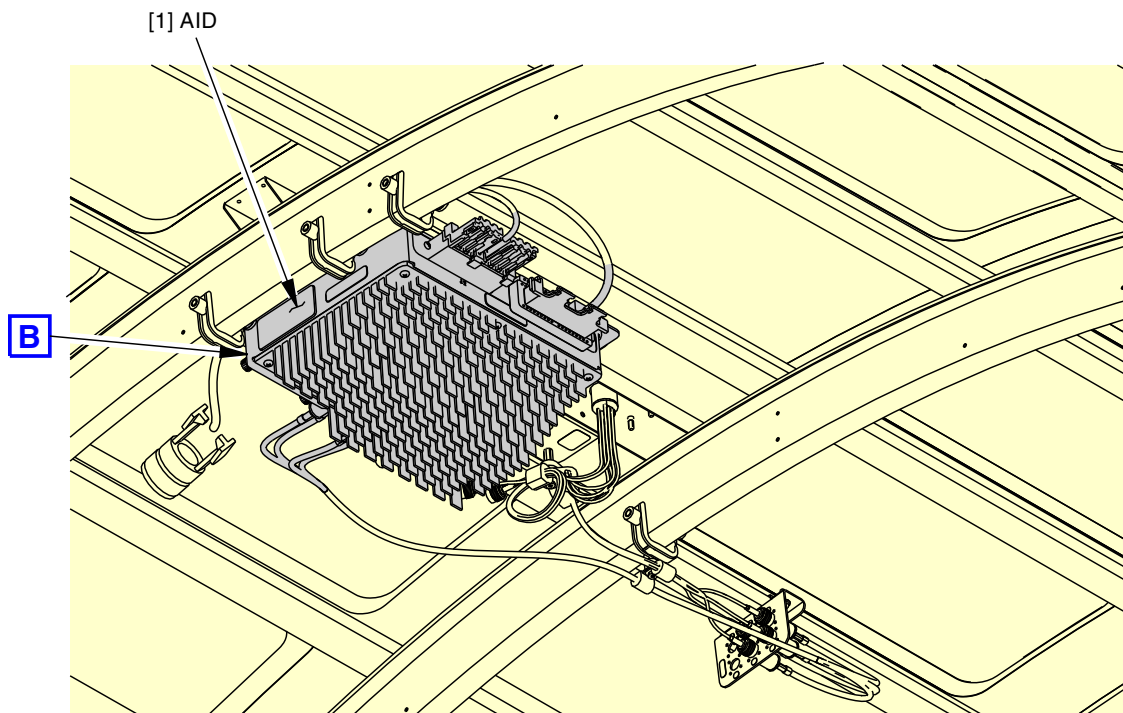
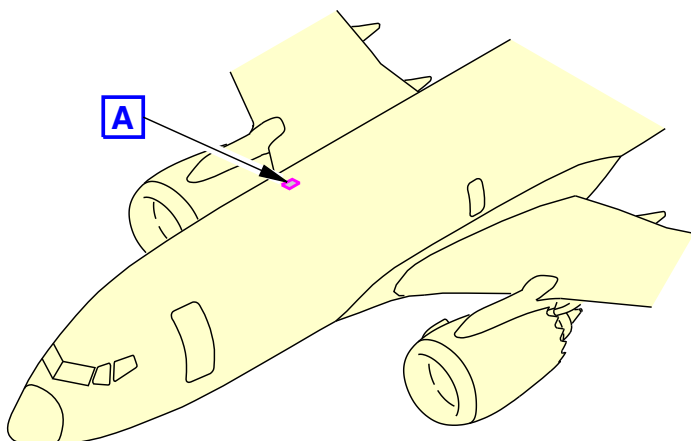
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2938480 S0000710367_V2

Aircraft Interface Device (AID) SIM Card Replacement
Figure 201/46-13-52-990-801 (Sheet 1 of 2)

EFFECTIVITY
SIA 015-999

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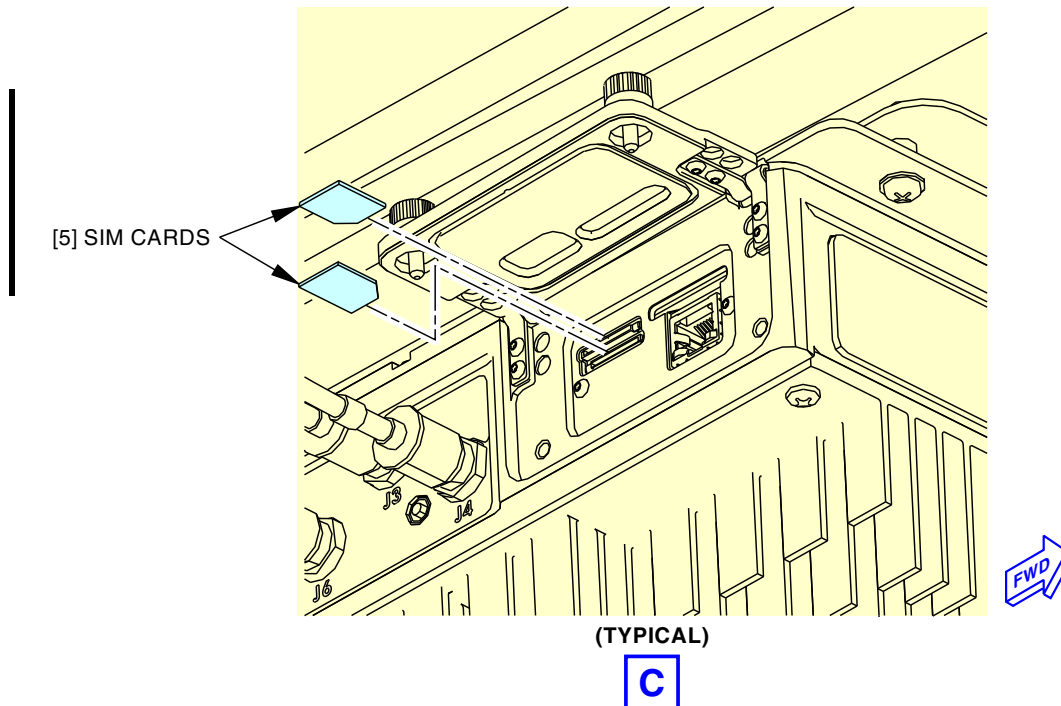
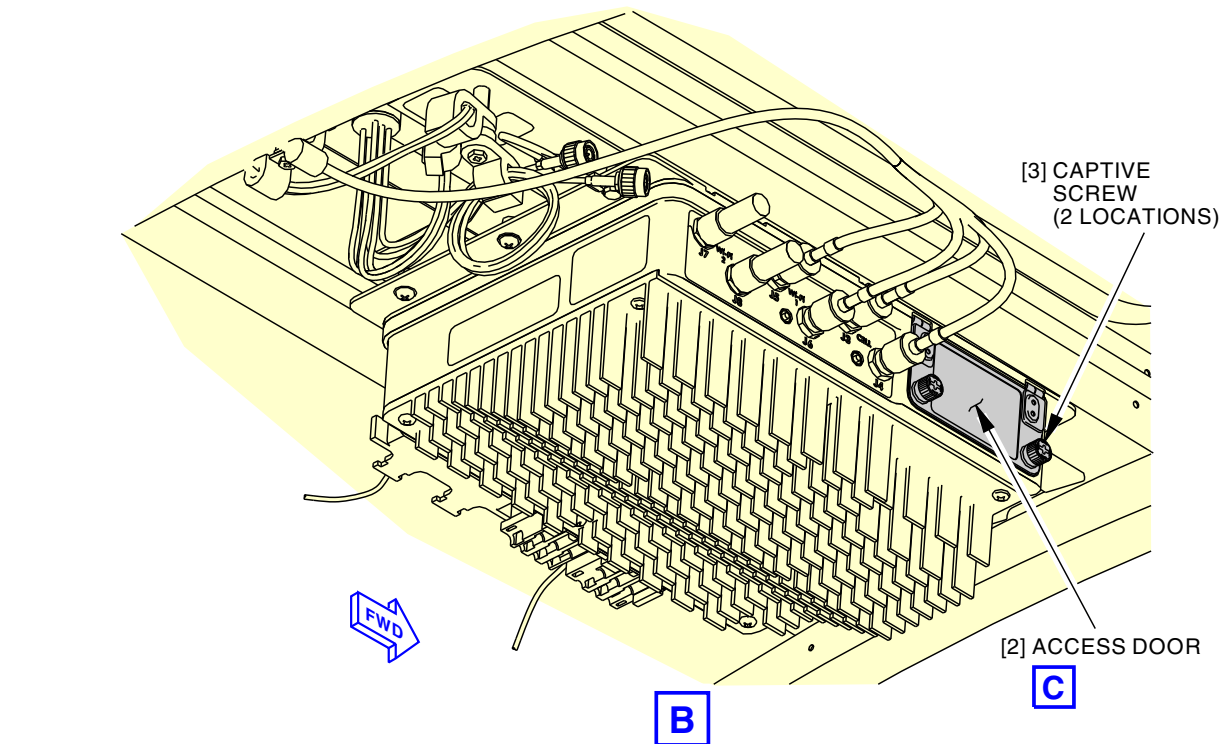
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2938481 S0000710368_V5

Aircraft Interface Device (AID) SIM Card Replacement
Figure 201/46-13-52-990-801 (Sheet 2 of 2)

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AIRPLANE INTERFACE DEVICE - REMOVAL/INSTALLATION

1. **General**

- A. This procedure has these tasks:
- (1) Aircraft Interface Device Removal
 - (2) Aircraft Interface Device Installation.

TASK 46-13-52-000-801

2. **Aircraft Interface Device Removal**

(Figure 401)

A. **General**

- (1) This task gives the steps to remove the Aircraft Interface Device (AID).
- (2) The AID is installed in the ceiling crown at STA 467, WL 305, RBL 5.

B. **References**

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-40-12-400-803	Conductive Dust Cap and Connector Cover Installation (P/B 201)
25-21-45-000-801	Main Ceiling Panel - Removal (P/B 401)
25-24-40-000-801	Center Overhead Stowage Box Removal (P/B 401)
25-80-00-000-801	Insulation Blanket Removal (P/B 401)
46-13-52-480-801	Aircraft Interface Device (AID) SIM Card Replacement (P/B 201)

C. **Location Zones**

Zone	Area
234	Area Above Passenger Compartment Ceiling, Right - Section 43

D. **Prepare for the Removal**

SUBTASK 46-13-52-040-008

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

F/O Electrical System Panel, P6-5

Row	Col	Number	Name
B	12	C04113	AID PWR C/B

SUBTASK 46-13-52-010-006



THE AIRCRAFT INTERFACE DEVICE MUST BE OFF IF YOU ARE LESS THAN 8 INCHES (20 CMS) FROM THE RADIO FREQUENCY ANTENNAS. IF YOU DO NOT OBEY, INJURY FROM ELECTROMAGNETIC RADIATION CAN OCCUR.

- (2) Get access to the AID [1]:
 - (a) If it is necessary, remove the center overhead stowage box (TASK 25-24-40-000-801).
 - (b) If it is necessary, remove the applicable ceiling panels (TASK 25-21-45-000-801).
 - (c) Remove the applicable insulation (TASK 25-80-00-000-801).

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E. AID Removal

SUBTASK 46-13-52-000-001

(1) Do this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802.

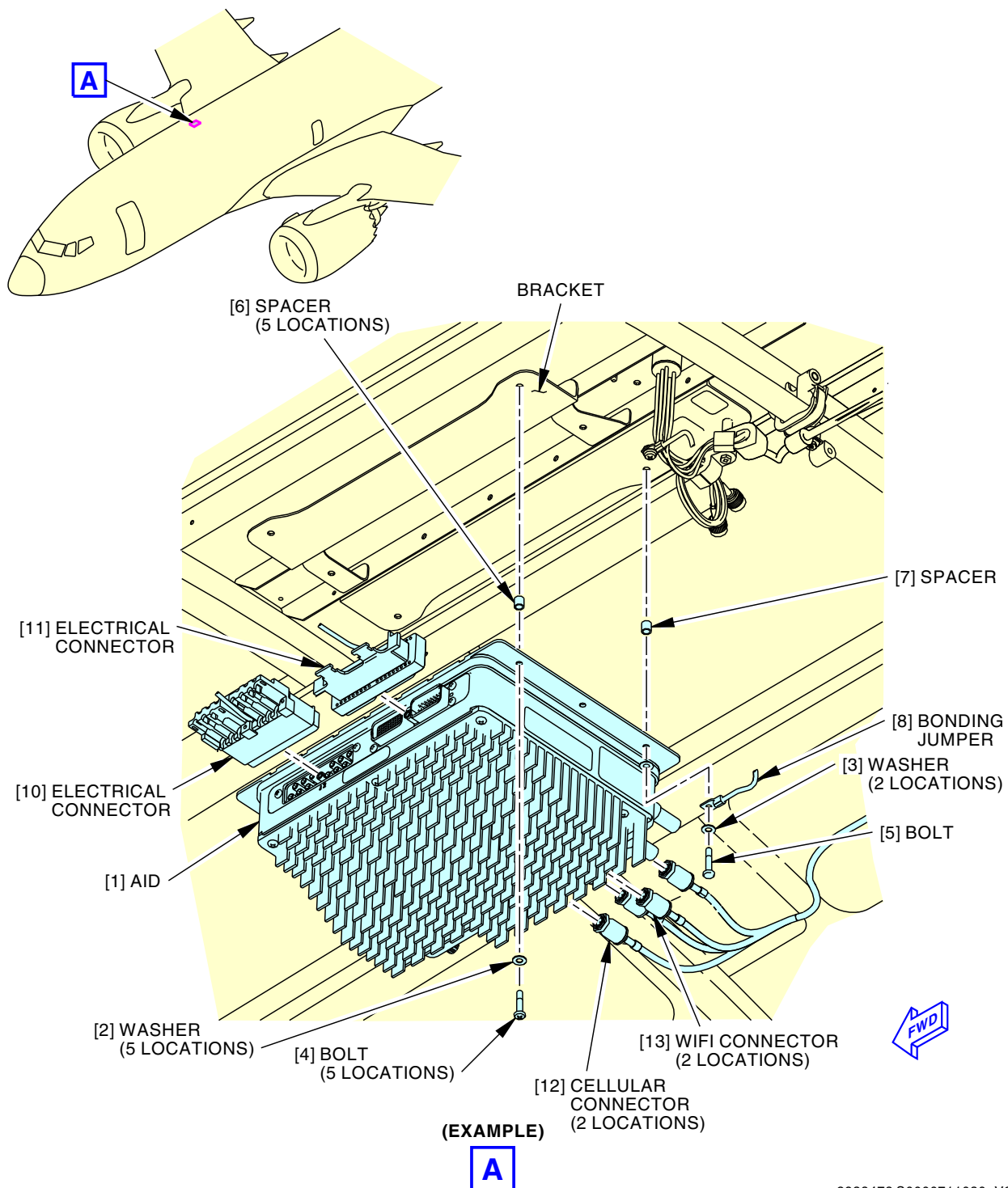
SUBTASK 46-13-52-020-002



DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (2) Remove the AID [1] as follows:
- (a) Disconnect the electrical connector [10] and electrical connector [11] from the AID [1].
 - (b) Disconnect the WIFI connectors [13] and the cellular connectors [12] from the AID [1].
 - (c) Put the protective covers on the AID connectors (TASK 20-40-12-400-803).
 - (d) Put the protective covers on all other connectors.
 - (e) Remove the bolt [5], washers [3], spacer [7], and bonding jumper [8] from the AID [1].
 - (f) Remove the bolts [4], washers [2], and spacers [6] from the AID [1].
 - (g) Remove the AID [1] from the overhead location.
 - (h) If it is necessary, remove the AID Subscriber Identity Module (SIM) card and Secure Digital (SD) card (TASK 46-13-52-480-801).

———— **END OF TASK** ————



2938478 S0000711030_V2

Aircraft Interface Device (AID) - Installation
Figure 401/46-13-52-990-802

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TASK 46-13-52-400-801

3. Aircraft Interface Device Installation

(Figure 401)

A. General

- (1) This task gives the steps to install the Aircraft Interface Device (AID).
- (2) The AID is installed in the ceiling crown at STA 467, WL 305, RBL 5.

B. References

Reference	Title
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
25-21-45-400-801	Main Ceiling Panel - Installation (P/B 401)
25-24-40-400-801	Center Overhead Stowage Box Installation (P/B 401)
25-80-00-400-801	Insulation Blanket Installation (P/B 401)
46-13-52-470-801	Aircraft Interface Device (AID) Software Verification (P/B 201)
46-13-52-470-802	Aircraft Interface Device (AID) Software Installation (P/B 201)
46-13-52-480-801	Aircraft Interface Device (AID) SIM Card Replacement (P/B 201)
46-13-52-710-801	Aircraft Interface Device (AID) Operational Test - Cellular Connection (P/B 501)
46-13-52-730-801	Aircraft Interface Device (AID) System Test (P/B 501)
51-21-00-160-801	Surface Preparation Of Aluminum Bonding Surfaces For Antenna Installations (P/B 701)
51-21-41-370-802	Apply Bonderite M-CR 600, Bonderite M-CR 1200, Bonderite M-CR 600RTU, or Bonderite M-CR 1200S Solution (P/B 701)
51-21-72-370-804	BMS10-11 Primer - Application (P/B 701)

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 Meter - 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 #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659

D. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
C00064	Coating - Aluminum Chemical Conversion	BAC5719 Type II Class A (MIL-DTL-5541 Class 1A)
C00259	Coating - Chemical And Solvent Resistant Finish, Corrosion Inhibiting Primer	BMS10-11 Type I

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E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	AID	46-13-52-01-045	SIA 015-999

F. Location Zones

Zone	Area
234	Area Above Passenger Compartment Ceiling, Right - Section 43

G. Prepare for the Installation

SUBTASK 46-13-52-040-007

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

F/O Electrical System Panel, P6-5

Row	Col	Number	Name
B	12	C04113	AID PWR C/B

H. AID Installation

SUBTASK 46-13-52-840-003

- (1) Abrasive clean the area around the hole for bolt [5] on the AID [1] (TASK 51-21-00-160-801).

SUBTASK 46-13-52-420-018

- (2) Apply a layer of primer, C00259, on the unpainted surface around the holes for bolts [4] (TASK 51-21-72-370-804).

SUBTASK 46-13-52-420-004

- (3) Do this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

SUBTASK 46-13-52-420-005



CAUTION

DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (4) Install the AID [1]:
- Put the AID [1] in position on the bracket.
 - Install the AID [1] with the bolts [4], washers [2], and spacers [6].
 - Apply sealant, A00247, to the surfaces that follow:
 - The threads and the shank of the bolt [5].
 - The washers [3], spacer [7], and the terminal of the bonding jumper [8].
 - Install the bolt [5], washers [3], bonding jumper [8], and spacer [7].
 - Tighten the bolts [4] and bolt [5] to 32 in-lb (3.62 N·m) - 38 in-lb (4.29 N·m).
 - Use an intrinsically safe approved bonding meter, COM-1550, to measure the resistance between the terminal of the bonding jumper [8] and the flange of the AID [1].
 - Make sure that the resistance is 0.001 ohms (1 milliohm) or less.

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WARNING

DO NOT GET CHEMICAL CONVERSION COATING SOLUTION IN YOUR MOUTH, IN YOUR EYES, ON YOUR SKIN, OR ON YOUR CLOTHES. DO NOT BREATHE THE FUMES FROM THIS MATERIAL. AIR MUST FLOW FREELY THROUGH THE WORK AREA. USE THE NECESSARY RESPIRATORY PROTECTION. KEEP THIS MATERIAL AWAY FROM SPARKS, FLAME, AND HEAT. THIS MATERIAL IS POISONOUS AND FLAMMABLE AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

- (g) Manually apply coating, C00064, on the bolt [5] and adjacent bare metal surfaces (TASK 51-21-41-370-802).
- (h) Apply a layer of primer, C00259 on the bolt [5] and adjacent bare metal surfaces (TASK 51-21-72-370-804).



CAUTION

DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (i) Remove the protective covers from the AID electrical connectors.
- (j) Make sure that the electrical connectors do not have bent or broken pins, dirt, or damage.
- (k) Connect the electrical connector [10] and electrical connector [11] to the AID [1].
- (l) Connect the WIFI connectors [13] to the AID [1].
- (m) Connect the cellular connectors [12] to the AID [1].

SUBTASK 46-13-52-420-006

- (5) If it is necessary, install the AID Subscriber Identity Module (SIM) card and Secure Digital (SD) card (TASK 46-13-52-480-801).

I. AID Installation Test

SUBTASK 46-13-52-470-004

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C04113	AID PWR C/B

SUBTASK 46-13-52-470-008

- (2) Dataload the OPS and OPC software to the AID: Aircraft Interface Device (AID) Software Installation, TASK 46-13-52-470-802.

SUBTASK 46-13-52-470-002

- (3) Verify that the OPS and OPC software is installed in the AID: Aircraft Interface Device (AID) Software Verification, TASK 46-13-52-470-801.

SUBTASK 46-13-52-750-001

- (4) Do this task: Aircraft Interface Device (AID) System Test, TASK 46-13-52-730-801.

SUBTASK 46-13-52-710-002

- (5) Do this task: Aircraft Interface Device (AID) Operational Test - Cellular Connection, TASK 46-13-52-710-801.

NOTE: To do the operational test, you must have access to an active wireless connection from a remote access terminal, or airport messaging terminal.



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J. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-52-860-003

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C04113	AID PWR C/B

SUBTASK 46-13-52-410-004



THE AIRCRAFT INTERFACE DEVICE MUST BE OFF IF YOU ARE LESS THAN 8 INCHES (20 CMS) FROM THE RADIO FREQUENCY ANTENNAS. IF YOU DO NOT OBEY, INJURY FROM ELECTROMAGNETIC RADIATION CAN OCCUR.

- (2) Close access to the AID [1]:
- (a) Install the applicable insulation (TASK 25-80-00-400-801).
 - (b) If removed, install the applicable ceiling panels (TASK 25-21-45-400-801).
 - (c) If removed, install the center overhead stowage box (TASK 25-24-40-400-801).

SUBTASK 46-13-52-860-004

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C04113	AID PWR C/B

———— END OF TASK ————

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AIRCRAFT INTERFACE DEVICE - ADJUSTMENT/TEST

1. General

A. This procedure has these tasks:

- (1) Aircraft interface device operational test - cellular connection.
- (2) Aircraft interface device operational test - Wi-Fi connection.
- (3) Aircraft interface device system test.

TASK 46-13-52-710-801

2. Aircraft Interface Device (AID) Operational Test - Cellular Connection

A. General

- (1) This task makes sure that the Aircraft Interface Device (AID) cellular function is serviceable. This task should only be completed if the aircraft is configured for cellular function.
- (2) The aircraft must be on the ground to do this task.
- (3) UMS parts must be installed to the Network File Server (NFS) to do this task.
- (4) A SIM card must be installed to the AID to do this task.

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-860-803	Client Credentials Check (P/B 201)
46-13-52-470-801	Aircraft Interface Device (AID) Software Verification (P/B 201)

C. Location Zones

Zone	Area
212	Flight Compartment - Right

D. AID Operational Test - Cellular Connection

SUBTASK 46-13-52-730-001

- (1) Do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

SUBTASK 46-13-52-730-010

- (2) If not already completed, then verify that the OPS and OPC software is installed in the AID (Aircraft Interface Device (AID) Software Verification, TASK 46-13-52-470-801).

SUBTASK 46-13-52-730-011

- (3) If not already completed, then verify that the AID has a client credential (Client Credentials Check, TASK 46-13-00-860-803).

SUBTASK 46-13-52-730-004

- (4) On the Onboard Network System (ONS) maintenance browser:
 - (a) Select EXTENDED MAINTENANCE > Offboard Communication.
 - (b) Select CELLULAR on the top of the page.
 - (c) Select DISCRETES.
 - (d) If the Aircraft Location field is empty, select the arrow (>) for this field.
 - 1) Select the applicable airplane location.
 - 2) Select Back to Cellular Discretes.
 - (e) If the Active Profile field is empty, select the arrow (>) for this field.



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- 1) Select an available profile.
- 2) Select Back to Cellular Discretes.
- (f) Select DIAGNOSTICS.
 - 1) Make sure that a sim serial number populates next to “Sim Serial Number”.
NOTE: If necessary, use the scroll bar to find “Sim Serial Number”.
 - 2) Make sure that the applicable Link State is shown.
NOTE: It may take a few minutes for the Link State to populate.

LINK STATE	DESCRIPTION
Home Network	Cellular connected to home network
Home Network-Default	Cellular to home network and is the default route
Roaming	Cellular connected but not to home network
Roaming-Default	Cellular connected but not to home network and is the default route

- (g) Select TEST LINK.
 - 1) Make sure that the link test says “Success”.
NOTE: It may take a few minutes for the link test to complete.
- (h) Select MESSAGING.
 - 1) Verify that an active link shows for the service “OBEDS”.
NOTE: An active link will show in green text. An inactive link will show in orange text.
- (i) Select the three-line icon on the menu bar at the upper left-hand corner.
- (j) Select HOME.
- (k) Select EXTENDED MAINTENANCE > Offboard Communication.
- (l) Select the CELLULAR radio button under “LINK”.
- (m) If the SET DEFAULT button is not grayed out, then do the steps that follow:
 - 1) Select SET DEFAULT.
 - 2) Select TEST DEFAULT.
 - a) Verify that a green check mark appears under “TEST” for the CELLULAR link.
- (n) If the SET DEFAULT button is grayed out, then do the steps that follow:
 - 1) Select TEST DEFAULT.
 - a) Verify that a green check mark appears under “TEST” for the CELLULAR link.
 - 2) Select the CELLULAR tab in the horizontal menu at the top of the page.
 - 3) Select CONDITION.
 - a) Make sure that the Active Profile and Associated Network Speciation fields are not empty.
 - b) Make sure that PARAMETERS show the values that follow:
 - the WWU RF Status is On.
 - The WWU WOW Status is Ground.



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- The Controller State is Running.

————— END OF TASK —————

TASK 46-13-52-710-802

3. Aircraft Interface Device (AID) Operational Test - Wi-Fi Connection

A. General

- (1) This task makes sure that the Aircraft Interface Device (AID) Wi-Fi function is servicable. This task should only be completed if the aircraft is configured for Wi-Fi function.
- (2) The aircraft must be on the ground to do this task.
- (3) UMS parts must be installed to the Network File Server (NFS) to do this task.

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-860-803	Client Credentials Check (P/B 201)
46-13-52-470-801	Aircraft Interface Device (AID) Software Verification (P/B 201)

C. Location Zones

Zone	Area
212	Flight Compartment - Right

D. AID Operational Test - Wi-Fi Connection

SUBTASK 46-13-52-730-012

- (1) Do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

SUBTASK 46-13-52-730-013

- (2) If not already completed, then verify that the OPS and OPC software is installed in the AID (Aircraft Interface Device (AID) Software Verification, TASK 46-13-52-470-801).

SUBTASK 46-13-52-730-014

- (3) If not already completed, then verify that the AID has a client credential (Client Credentials Check, TASK 46-13-00-860-803).

SUBTASK 46-13-52-730-015

- (4) On the Onboard Network System (ONS) maintenance browser:
 - (a) Select EXTENDED MAINTENANCE > Offboard Communication.
 - (b) Select WIRELESS on the top of the page.
 - (c) Select DISCRETES.
 - (d) If the Aircraft Location field is empty, select the arrow (>) for this field.
 - 1) Select the applicable airplane location.
 - 2) Select Back to Wireless Discretets.
 - (e) If the Active Profile field is empty, select the arrow (>) for this field.
 - 1) Select an available profile.
 - 2) Select Back to Wireless Discretets.
 - (f) Select DIAGNOSTICS.
 - 1) Make sure that the applicable Link State is shown.

NOTE: It may take a few minutes for the Link State to populate.



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LINK STATE	DESCRIPTION
Connected	Offboard Wi-Fi is connected
Connected - Default	Offboard Wi-Fi is connected and is the default route

- (g) Select TEST LINK.
 - 1) Make sure that the link test says "Success".
NOTE: It may take a few minutes for the link test to complete.
- (h) Select MESSAGING.
 - 1) Verify that an active link shows for the service "OBEDS".
NOTE: An active link will show in green text. An inactive link will show in orange text.
- (i) Select the three-line icon on the menu bar at the upper left-hand corner.
- (j) Select HOME.
- (k) Select EXTENDED MAINTENANCE > Offboard Communication.
- (l) Select the TWLU radio button under "LINK".
- (m) If the SET DEFAULT button is not grayed out, then do the steps that follow:
 - 1) Select SET DEFAULT.
 - 2) Select TEST DEFAULT.
 - a) Verify that a green check mark appears under "TEST" for the CELLULAR link.
- (n) If the SET DEFAULT button is grayed out, then do the steps that follow:
 - 1) Select TEST DEFAULT.
 - a) Verify that a green check mark appears under "TEST" for the CELLULAR link.
 - 2) Select the WIRELESS tab in the horizontal menu at the top of the page.
 - 3) Select CONDITION.
 - a) Make sure that the Active Profile and Associated SSID fields are not empty.
 - b) Make sure that PARAMETERS show the values that follow:
 - the WWU RF Status is On.
 - The WWU WOW Status is Ground.
 - The Controller State is Running.

————— END OF TASK —————

TASK 46-13-52-730-801

4. Aircraft Interface Device (AID) System Test

A. General

- (1) This task makes sure that the Aircraft Interface Device (AID) is serviceable.
- (2) The aircraft must be on the ground to do this task.
- (3) No 46 NFS UMS parts are needed to be installed to the NFS to complete this task.
- (4) No sim card needs to be installed to the AID to complete this task.

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B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-00-860-803	Client Credentials Check (P/B 201)
46-13-52-470-801	Aircraft Interface Device (AID) Software Verification (P/B 201)

C. Location Zones

Zone	Area
212	Flight Compartment - Right

D. AID System Test

SUBTASK 46-13-52-480-003

- (1) Do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

SUBTASK 46-13-52-730-016

- (2) If not already completed, then verify that the OPS and OPC software is installed in the AID (Aircraft Interface Device (AID) Software Verification, TASK 46-13-52-470-801).

SUBTASK 46-13-52-730-017

- (3) If not already completed, then verify that the AID has a client credential (Client Credentials Check, TASK 46-13-00-860-803).

SUBTASK 46-13-52-730-008

- (4) On the Onboard Network System (ONS) maintenance browser:
- (a) Select EXTENDED MAINTENANCE > Input Monitoring.
 - (b) Select NFS.
 - 1) Make sure that the END CONNECTION for PORT 4 is AID-FWD.
 - 2) Make sure that the STATUS for PORT 4 is Up.
 - (c) Select INPUT DISCRETES.
 - 1) Make sure that the STATUS for W-Air/Ground Relay is Ground.
 - (d) Select the three-line icon on the menu bar at the upper left-hand corner.
 - (e) Select HOME.
 - (f) Select EXTENDED MAINTENANCE > Offboard Communication.
 - (g) Select WIRELESS on the top of the page.
 - (h) Select DISCRETES.
 - (i) If the outline of the Wi-Fi RF Status toggle is white and operable:
 - 1) Make sure that the Wi-Fi RF Status is ON.
 - a) If the Wi-Fi RF Status is OFF, then select the Wi-Fi RF Status button from OFF to ON.
 - 2) Select CONDITION.
 - a) Make sure that the WWU RF Status is ON.
 - 3) Select DISCRETES.
 - 4) Set the Wi-Fi RF Status button from ON to OFF.
 - 5) Select CONDITION.
 - a) Make sure that the WWU RF Status is OFF.
 - (j) Select CELLULAR at the top of the page.



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- (k) Select DISCRETES.
- (l) If the outline of the Cellular RF Status toggle is white and operable:
 - 1) Make sure that the Cellular RF Status is ON.
 - a) If the Cellular RF Status is OFF, then select the Cellular RF Status button from OFF to ON.
 - 2) Select CONDITION.
 - a) Make sure that the WWU RF Status is ON.
 - 3) Select DISCRETES.
 - 4) Set the Cellular RF Status button from ON to OFF.
 - 5) Select CONDITION.
 - a) Make sure that the WWU RF Status is OFF.

SUBTASK 46-13-52-730-018

- (5) Do the steps that follow to set the PSEU SYS 2 to IN AIR using the Onboard Maintenance Function (OMF) functionality in the ONS, and to make sure that the state of the Weight on Wheels (WOW) discrete from the PSEU to AID is set to AIR:
 - (a) Select the SYS button on the P9-82 Multi Function Display (MFD) panel.
 - (b) Select MAINT > ONBD MAINT > OTHER FUNCTIONS > SPECIAL FUNCTIONS.
 - (c) Select the 32-Proximity Switch Electronic Unit under "Select ATA System".
 - (d) Select PSEU-Air/Ground Override under "Select System Function".
 - (e) Select CONTINUE.
 - (f) Verify the preconditions are met and then select CONTINUE.
 - (g) Select START FUNCTION under "FUNCTION".
 - (h) Select Set SYS 2 only IN AIR.
 - (i) Select CONTINUE.
 - 1) Make sure that the following is shown on the MAX Display System (MDS).
 - Air/Gnd Override is ACTIVE
 - System 1: GND
 - System 2: AIR
 - (j) Select the menu icon in the upper left corner of the ONS maintenance screen on the Universal Maintenance Device (UMD).
 - (k) Select HOME > EXTENDED MAINTENANCE > Offboard Communication > CELLULAR > CONDITION.
 - 1) Make sure that the WWU WOW Status is Air.
 - (l) Select DISCRETES.
 - 1) Make sure that the Cellular RF Status is OFF and cannot be toggled ON.
 - (m) Select WIRELESS > CONDITION.
 - 1) Make sure that the WWU WOW Status is Air.
 - (n) Select DISCRETES.
 - 1) Make sure that the Wi-Fi RF Status is OFF and cannot be toggled ON.



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SUBTASK 46-13-52-730-019

- (6) Do the steps that follow to set the PSEU SYS 2 to ON GND using the OMF functionality in the ONS, and to make sure that the state of the Weight on Wheels (WOW) discrete from the PSEU to AID is set to GND:
- Select the SYS button on the P9-82 MFD panel.
 - Select MAINT > ONBD MAINT > OTHER FUNCTIONS > SPECIAL FUNCTIONS.
 - Select the 32-Proximity Switch Electronic Unit under "Select ATA System".
 - Select PSEU-Air/Ground Override under "Select System Function".
 - Select CONTINUE.
 - Verify the preconditions are met and then select CONTINUE.
 - Select START FUNCTION under "FUNCTION".
 - Select Set SYS 2 only ON GND.
 - Select CONTINUE.
 - Make sure that the following is shown on the MDS.
 - Air/Gnd Override is NOT ACTIVE
 - System 1: GND
 - System 2: GND
 - Select the menu icon in the upper left corner of the ONS maintenance screen on the UMD.
 - Select HOME > EXTENDED MAINTENANCE > Offboard Communication.
 - Select WIRELESS > DISCRETES.
 - If the outline of the Wi-Fi RF Status toggle is white and operable:
 - Make sure that the Wi-Fi RF Status is ON.
 - If the Wi-Fi RF Status is OFF, then select the Wi-Fi RF Status button from OFF to ON.
 - Select CELLULAR > DISCRETES.
 - If the outline of the Cellular RF Status toggle is white and operable:
 - Make sure that the Cellular RF Status is ON.
 - If the Cellular RF Status is OFF, then select the Cellular RF Status button from OFF to ON.

SUBTASK 46-13-52-730-020

- (7) Do the steps that follow to do a check of the AID antenna and coax connections:
- Select the menu icon in the upper left-hand corner of the browser client window.
 - Select HOME > EXTENDED MAINTENANCE > Offboard Communication.
 - Select WIRELESS > DISCRETES.
 - If the outline of the Wi-Fi RF Status toggle is white and operable:
 - Make sure that the Wi-Fi RF Status is ON.
 - If the Wi-Fi RF Status is OFF, then select the Wi-Fi RF Status button from OFF to ON.
 - Select SCAN.
 - Select CONFIRM.



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- 5) Verify that the "Scan Results" table populates with at least one result.
- (e) Select CELLULAR > DISCRETES.
- (f) If the outline of the Cellular RF Status toggle is white and operable:
 - 1) Make sure that the Cellular RF Status is ON.
 - 2) If the Cellular RF Status is OFF, then select the Cellular RF Status button from OFF to ON.
 - 3) Select SCAN.
 - 4) Select CONFIRM.
 - 5) Verify that the "Scan Results" table populates with at least one result.

SUBTASK 46-13-52-730-021

- (8) Do the steps that follow to do a check for existing faults of the AID.
 - (a) Select the three-line icon on the menu bar at the upper left-hand corner.
 - (b) Select EXTENDED MAINTENANCE > Existing Faults.
 - (c) Select 46 - Information Systems.

NOTE: If there are no fault messages for ATA 46 - Information System, then the selection will not be displayed.
 - (d) Select CONTINUE.
 - 1) Make sure that there are no active AID fault messages.
 - 2) If there are active AID fault messages, then refer to the IFIM and do the applicable procedure(s).

———— **END OF TASK** ————



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AIRCRAFT INTERFACE DEVICE ANTENNA - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) Aircraft Interface Device Antenna Removal
 - (2) Aircraft Interface Device Antenna Installation.

TASK 46-13-53-000-801

2. Aircraft Interface Device Antenna Removal

(Figure 401)

A. General

- (1) This task gives the steps to remove the Aircraft Interface Device (AID) antenna from the aircraft fuselage.
- (2) The antenna is installed externally at approximately STA 477, WL 306, RBL 5.
- (3) You must have access to the top and the interior crown of the fuselage to do this task.

B. References

Reference	Title
25-21-45-000-801	Main Ceiling Panel - Removal (P/B 401)
25-24-40-000-801	Center Overhead Stowage Box Removal (P/B 401)
25-80-00-000-801	Insulation Blanket Removal (P/B 401)
46-13-52-040-801	Aircraft Interface Device (AID) Deactivation (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.



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Reference	Description
COM-2481	Sealant Removal Tool (meets BSS7384 requirements) Part #: 1-6390-A Supplier: 63318 Part #: 10810 Supplier: \$0855 Part #: 10811 Supplier: \$0855 Part #: 10812 Supplier: \$0855 Part #: 234350 Supplier: 5HCF1 Part #: 235072 Supplier: 5HCF1 Part #: 235073 Supplier: 5HCF1 Part #: 235074 Supplier: 5HCF1 Part #: 235075 Supplier: 5HCF1 Part #: 235076 Supplier: 5HCF1 Part #: 311/03 Supplier: F6892 Part #: 311/14 Supplier: F6892 Part #: 311/25 Supplier: F6892 Part #: 311/37 Supplier: F6892 Part #: AS1 Supplier: \$1351 Part #: AS2 Supplier: \$1351 Part #: AS3 Supplier: \$1351 Part #: DAD5013 Supplier: 7RKH2 Part #: DFD5019 Supplier: 7RKH2 Part #: JNT411B60 Supplier: 3DN12 Part #: JNT411B90 Supplier: 3DN12 Part #: SCD5019 Supplier: 7RKH2 Part #: ST982LF-9 Supplier: 81205 Part #: TS1275-4 Supplier: 22975

D. Location Zones

Zone	Area
234	Area Above Passenger Compartment Ceiling, Right - Section 43

E. Prepare for the Removal

SUBTASK 46-13-53-040-002

- (1) Do this task: Aircraft Interface Device (AID) Deactivation, TASK 46-13-52-040-801.

SUBTASK 46-13-53-860-005

- (2) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-5

Row	Col	Number	Name
B	12	C04113	AID PWR C/B

SUBTASK 46-13-53-040-001



WARNING

THE AIRCRAFT INTERFACE DEVICE MUST BE OFF IF YOU ARE LESS THAN 8 INCHES (20 CMS) FROM THE RADIO FREQUENCY ANTENNAS. IF YOU DO NOT OBEY, INJURY FROM ELECTROMAGNETIC RADIATION CAN OCCUR.

- (3) Get access to the AID antenna [1]:
- (a) If it is necessary, remove the center overhead stowage box (TASK 25-24-40-000-801).
 - (b) If it is necessary, remove the applicable ceiling panels (TASK 25-21-45-000-801).
 - (c) Remove the applicable insulation (TASK 25-80-00-000-801).

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F. AID Antenna Removal

SUBTASK 46-13-53-020-001

- (1) At the interior crown of the aircraft (at approximately STA 488):
- (a) Disconnect the coaxial connectors [4] from the coaxial receptacles [5].
 - (b) Remove the screw [10], screw [9], spacer [12] from the clamp [8], clamp [7], and clamp [6].
 - (c) Put the protective covers on the coaxial connectors [4] and coaxial receptacles [5].

SUBTASK 46-13-53-020-002

- (2) On the top of the aircraft:

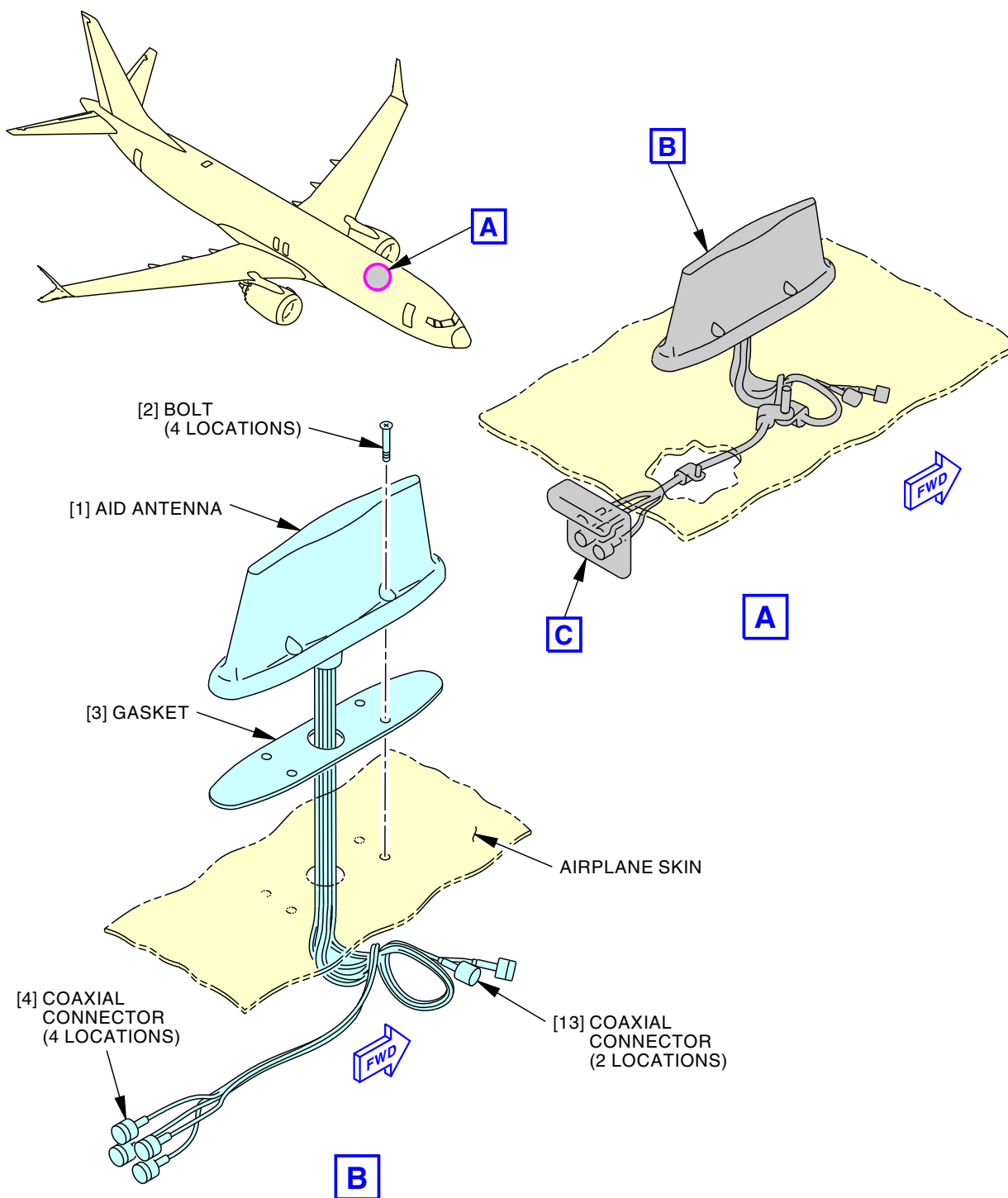


CAUTION

BE CAREFUL WHEN YOU REMOVE THE SEAL WITH THE SEALANT REMOVAL TOOL. DAMAGE TO THE AIRPLANE SKIN CAN OCCUR.

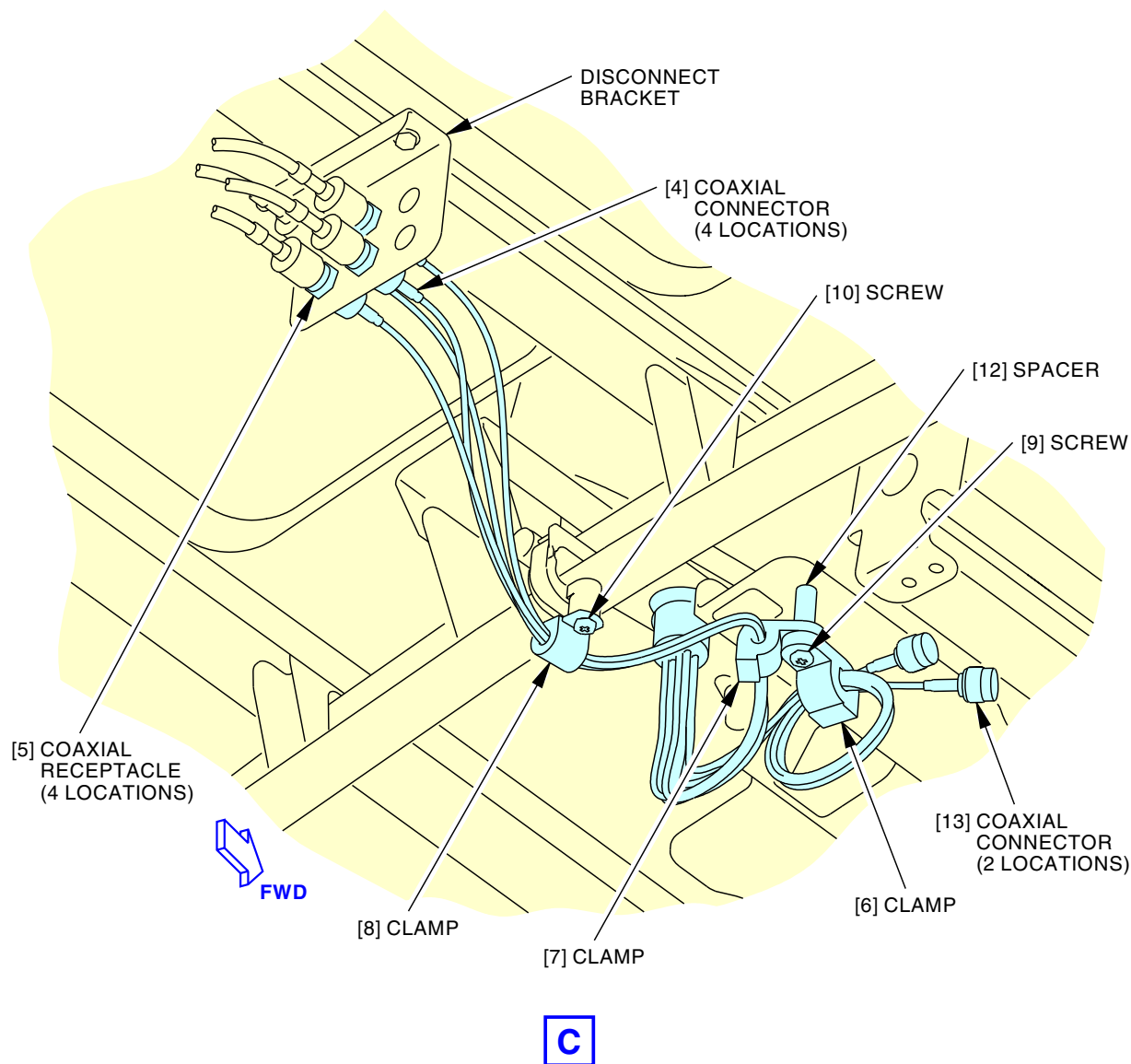
- (a) Remove the sealant, with the sealant removal tool, COM-2481.
 - 1) Remove the sealant, from the heads of the bolts [2].
 - 2) Remove the aerodynamic fillet seal around the base of the AID antenna [1].
- (b) Remove the bolts [2] from the AID antenna [1].
- (c) Remove the AID antenna [1].
- (d) Remove and discard the gasket [3].

———— **END OF TASK** ————



2938163 S0000712339_V3

AID Antenna Installation
Figure 401/46-13-53-990-801 (Sheet 1 of 2)



2938164 S0000714484_V2

AID Antenna Installation
Figure 401/46-13-53-990-801 (Sheet 2 of 2)

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TASK 46-13-53-400-801

3. Aircraft Interface Device Antenna Installation

(Figure 401)

A. General

- (1) This task gives the steps to install the Aircraft Interface Device (AID) antenna to the aircraft fuselage.
- (2) The AID antenna is installed externally at approximately STA 477, WL 306, RBL 5.
- (3) You must have access to the top and the interior crown of the fuselage to do this task.

B. References

Reference	Title
20-10-34-110-802	Clean Bare, Clad, or Plated Metal with Solvent (P/B 701)
25-21-45-400-801	Main Ceiling Panel - Installation (P/B 401)
25-24-40-400-801	Center Overhead Stowage Box Installation (P/B 401)
25-80-00-400-801	Insulation Blanket Installation (P/B 401)
46-13-52-440-801	Aircraft Interface Device (AID) Activation (P/B 201)
46-13-52-710-801	Aircraft Interface Device (AID) Operational Test - Cellular Connection (P/B 501)
51-21-31-350-801	Removal and Control of Corrosion for Aluminum and Aluminum Alloys (P/B 701)
51-21-41-370-802	Apply Bonderite M-CR 600, Bonderite M-CR 1200, Bonderite M-CR 600RTU, or Bonderite M-CR 1200S Solution (P/B 701)
51-22-00-390-809	Aerodynamic Smoother Application (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
COM-1550	Bonding Meter - 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 #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659
STD-765	Scraper - Plastic

D. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
B00062	Solvent - Acetone (99.5% Grade)	ASTM D 329 (Supersedes O-A-51)
B00130	Alcohol - Isopropyl	TT-I-735
B00184	Solvent - Presealing, Cleaning Solvent	BMS11-7

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Reference	Description	Specification
C50033	Coating - Chemical Conversion - Bonderite M-CR 1200S Aero (Formerly Alodine 1200)	BAC5719 Class A, C or D, MIL-DTL-81706 Type I Class 1A or 3
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CL A)

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	AID antenna	46-13-52-05-065	SIA 015-999

F. Location Zones

Zone	Area
234	Area Above Passenger Compartment Ceiling, Right - Section 43

G. Prepare for the Installation

SUBTASK 46-13-53-860-002

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

F/O Electrical System Panel, P6-5

Row	Col	Number	Name
B	12	C04113	AID PWR C/B

H. AID Antenna Installation

SUBTASK 46-13-53-390-001



WARNING

DO NOT GET SOLVENTS IN YOUR MOUTH, EYES, OR SKIN. DO NOT BREATHE FUMES FROM SOLVENTS. REFER TO PRODUCT MATERIAL SAFETY DATA SHEETS (MSDS) AND LOCAL REQUIREMENTS FOR PROPER HANDLING. SOLVENTS ARE HAZARDOUS MATERIALS AND MAY BE FLAMMABLE OR HARMFUL TO THE ENVIRONMENT.

- (1) Solvent clean the mating surfaces between the AID antenna [1] and the aircraft skin (TASK 20-10-34-110-802).

SUBTASK 46-13-53-840-001

- (2) If there is corrosion on the airplane skin below the AID antenna [1], do the steps that follow to prepare the airplane skin:
- (a) To remove the corrosion, do this task: Removal and Control of Corrosion for Aluminum and Aluminum Alloys, TASK 51-21-31-350-801.



WARNING

DO NOT GET SOLVENTS IN YOUR MOUTH, EYES, OR SKIN. DO NOT BREATHE FUMES FROM SOLVENTS. REFER TO PRODUCT MATERIAL SAFETY DATA SHEETS (MSDS) AND LOCAL REQUIREMENTS FOR PROPER HANDLING. SOLVENTS ARE HAZARDOUS MATERIALS AND MAY BE FLAMMABLE OR HARMFUL TO THE ENVIRONMENT.

- (b) Clean the airplane skin in the area of the corrosion with solvent, B00062 or solvent, B00184.
- (c) Apply a layer of Bonderite M-CR 1200S Aero coating, C50033, to the airplane skin in the area where the AID antenna [1] touches the skin (TASK 51-21-41-370-802).

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SUBTASK 46-13-53-020-007

- (3) If a new AID antenna [1] will be installed, discard the O-ring supplied with the AID antenna [1].

SUBTASK 46-13-53-420-003

- (4) On the top of the aircraft:

- (a) Make sure that the coaxial connectors [4] do not have bent or broken pins, dirt, or damage.
- (b) Remove the protective film from the AID antenna [1] side of the gasket [3].
- (c) Align the gasket [3] to the fastener and the connector holes of the AID antenna [1].
- (d) Press the gasket [3] firmly onto the AID antenna [1] base.
- (e) Remove the protective film from the airplane side of the gasket [3].
- (f) Put the coaxial connectors [4] and coaxial connectors [13] through the airplane skin connector hole.
- (g) Put the AID antenna [1] on the airplane skin.
- (h) Apply the sealant, A00247, to the threads and shank of the bolts [2].
 - (i) Install the AID antenna [1] with the bolts [2].
 - (j) Tighten the bolts [2] to 30.0 in-lb (3.4 N·m).
 - (k) Wait 15 minutes.

NOTE: The gasket gel material can compress during this time.

- (l) Tighten the bolts [2] to 35.0 in-lb (4.0 N·m).
- (m) Use an intrinsically safe approved bonding meter, COM-1550 to measure the resistance between the base of the AID antenna [1] and the airplane skin.
 - 1) Make sure that the electrical bonding resistance is 0.001 ohms (1.0 milliohms) or less.
- (n) Remove the unwanted sealant, A00247 from the bolts [2].
- (o) Remove the unwanted gel squeeze out from the gasket [3] with a plastic scraper, STD-765.
 - 1) If it is necessary, use a clean cotton wiper, G00034, moist (not soaked) with alcohol, B00130, to help remove the unwanted gel.
- (p) Apply an aerodynamic fillet seal around the base of the AID antenna [1] with sealant, A00247 (TASK 51-22-00-390-809).
 - 1) Make sure that there are no gaps between the AID antenna [1] base and the aircraft skin.

SUBTASK 46-13-53-410-002

- (5) At the interior crown of the aircraft (at approximately STA 488)
- (a) Connect the coaxial connectors [4] to the coaxial receptacles [5] at the disconnect bracket.
 - (b) Attach the coaxial connectors [4] and coaxial connectors [13] as follows:
 - 1) Install the clamp [6], clamp [7], clamp [8], spacer [12], screw [9], and screw [10].

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I. AID Antenna Installation Test

SUBTASK 46-13-53-440-001

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C04113	AID PWR C/B

SUBTASK 46-13-53-710-002

- (2) Do this task: Aircraft Interface Device (AID) Activation, TASK 46-13-52-440-801.

SUBTASK 46-13-53-710-001

- (3) Do this task: Aircraft Interface Device (AID) Operational Test - Cellular Connection, TASK 46-13-52-710-801.

NOTE: To do the operational test, you must have access to an active wireless connection from a remote access terminal, or airport messaging terminal.

J. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-53-860-006

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C04113	AID PWR C/B

SUBTASK 46-13-53-410-001



THE AIRCRAFT INTERFACE DEVICE MUST BE OFF IF YOU ARE LESS THAN 8 INCHES (20 CMS) FROM THE RADIO FREQUENCY ANTENNAS. IF YOU DO NOT OBEY, INJURY FROM ELECTROMAGNETIC RADIATION CAN OCCUR.

- (2) Close access to the AID antenna [1]:
- (a) Install the applicable insulation (TASK 25-80-00-400-801).
 - (b) If removed, install the applicable ceiling panels (TASK 25-21-45-400-801).
 - (c) If removed, install the center overhead stowage box (TASK 25-24-40-400-801).

SUBTASK 46-13-53-860-007

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

F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C04113	AID PWR C/B

————— END OF TASK —————

