CHAPTER

46

INFORMATION SYSTEMS



CHAPTER 46 INFORMATION SYSTEMS

Subject/Page	Date	coc	Subject/Pa	ge Date	coc	Subject/Pag	ge Date	COC
46-EFFECTIV	E PAGES		46-11-02	(cont)		46-11-03	(cont)	
1 thru 3	SEP 05/2018		406	Sep 05/2017		228	May 05/2016	
4	BLANK		407	Sep 05/2017		229	May 05/2016	
46-CONTENTS	S		408	Jan 05/2015		230	May 05/2016	
1	Jan 05/2016		409	May 05/2017		231	May 05/2017	
2	May 05/2016		410	BLANK		232	May 05/2016	
3	May 05/2018		46-11-02			233	May 05/2017	
4	May 05/2017		701	Sep 05/2017		234	May 05/2016	
5	Jul 25/2018		702	Sep 05/2017		235	May 05/2016	
6	May 05/2017		46-11-03			236	Sep 05/2017	
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8	BLANK		202	May 05/2016		238	Sep 05/2017	
46-11-00			203	May 05/2016		239	Sep 05/2017	
201	Jan 05/2016		204	May 05/2016		240	BLANK	
202	Jan 05/2016		205	May 05/2016		46-11-03		
203	Jan 05/2016		206	May 05/2016		401	May 05/2018	
R 204	Sep 05/2018		207	May 05/2016		402	Sep 05/2017	
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504	Jan 05/2015		214	May 05/2016		46-11-07		
505	Jan 05/2015		215	May 05/2016		201	May 05/2018	
506	BLANK		216	May 05/2016		202	May 05/2017	
46-11-02			217	May 05/2016		203	May 05/2017	
201	Jan 05/2015		218	May 05/2016		204	May 05/2017	
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203	Jan 05/2015		220	May 05/2016		206	May 05/2018	
204	May 05/2017		221	May 05/2016		207	May 05/2018	
46-11-02			222	May 05/2016		208	May 05/2018	
401	Jan 05/2015		223	May 05/2016		209	May 05/2018	
402	Sep 05/2017		224	May 05/2016		210	May 05/2018	
403	May 05/2017		225	May 05/2016		211	May 05/2018	
404	May 05/2015		226	May 05/2016		212	May 05/2017	
405	Sep 05/2017		227	May 05/2016		213	May 05/2017	

 $\mbox{A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change} \label{eq:added}$

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46-11-07	(cont)		46-13-00	(cont)		46-13-00	(cont)	
214	BLANK		208	May 05/2018		244	May 05/2018	
46-11-07			209	Jul 25/2018		245	May 05/2018	
401	Sep 05/2016		210	Jan 05/2018		246	May 05/2018	
402	Sep 05/2017		211	Jul 25/2018		247	May 05/2018	
403	May 05/2017		212	Jul 25/2018		248	May 05/2018	
404	Jul 25/2018		213	May 05/2018		249	May 05/2018	
405	Jul 25/2018		214	May 05/2017		250	BLANK	
406	Jul 25/2018		215	May 05/2017		46-13-01		
46-11-07			216	May 05/2018		201	May 05/2017	
501	May 05/2018		217	May 05/2018		202	Jul 25/2018	
502	May 05/2018		218	May 05/2018		203	Jul 25/2018	
503	May 05/2018		219	May 05/2018		204	Jul 25/2018	
504	Jan 05/2018		220	May 05/2017		205	Jul 25/2018	
505	Jan 05/2018		221	May 05/2017		206	Jul 25/2018	
506	Jan 05/2018		222	May 05/2017		207	Jul 25/2018	
507	May 05/2018		223	May 05/2017		208	Jul 25/2018	
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509	Jan 05/2018		225	May 05/2018		210	Jul 25/2018	
510	Jan 05/2018		226	May 05/2017		211	Jul 25/2018	
46-11-08			227	May 05/2017		212	Jul 25/2018	
401	May 05/2018		228	May 05/2017		213	Jul 25/2018	
402	Sep 05/2017		229	May 05/2018		214	Jul 25/2018	
403	May 05/2017		230	May 05/2017		215	Jul 25/2018	
404	Jan 05/2018		231	May 05/2017		216	Jul 25/2018	
405	Sep 05/2017		232	May 05/2017		217	Jul 25/2018	
406	Sep 05/2017		233	May 05/2017		218	Jul 25/2018	
407	Sep 05/2017		234	May 05/2018		219	Jul 25/2018	
408	BLANK		235	May 05/2017		220	Jul 25/2018	
46-13-00			236	May 05/2017		221	Jul 25/2018	
201	May 05/2018		237	May 05/2018		222	Jul 25/2018	
202	Jan 05/2017		238	May 05/2018		223	Jul 25/2018	
203	Jan 05/2017		239	May 05/2018		224	Jul 25/2018	
204	May 05/2017		240	May 05/2018		225	Jul 25/2018	
205	May 05/2018		241	May 05/2018		226	Jul 25/2018	
206	May 05/2018		242	May 05/2018		227	Jul 25/2018	
207	Jul 25/2018		243	May 05/2018		228	Jul 25/2018	

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46-13-01	(cont)		46-13-02	(cont)				
229	Jul 25/2018		407	Sep 05/2017				
230	Jul 25/2018		408	BLANK				
231	Jul 25/2018		46-13-02					
232	May 05/2017		501	May 05/2018				
233	May 05/2018		502	May 05/2017				
234	May 05/2017		46-19-00					
46-13-01	Config 1		201	Jan 05/2015	С			
401	Sep 05/2016		202	Jan 05/2015	С			
402	May 05/2018		203	Sep 05/2016	С			
403	Sep 05/2017		204	Jan 05/2015	С			
404	May 05/2017		205	Jan 05/2015	С			
405	May 05/2018		206	Jan 05/2015	С			
406	Jul 25/2018		207	Jan 05/2015	С			
407	Jul 25/2018		208	Jan 05/2015	С			
408	Jul 25/2018		209	Jan 05/2015	С			
46-13-01			210	Jan 05/2015	С			
501	May 05/2018		211	Jan 05/2015	С			
502	Jan 05/2017		212	Jan 05/2015	С			
503	Jan 05/2017		213	Jan 05/2015	С			
504	BLANK		214	Jan 05/2015	С			
46-13-02			215	Jan 05/2015	С			
201	Sep 05/2016		216	Sep 05/2016	С			
202	May 05/2018		217	Jan 05/2015	С			
203	Jan 05/2018		218	Jan 05/2015	С			
204	Jan 05/2018		219	Jan 05/2015	С			
205	Jan 05/2018		220	Jan 05/2015	С			
206	May 05/2018		221	Jan 05/2015	С			
207	May 05/2018		222	Sep 05/2016	С			
208	May 05/2017		223	Sep 05/2016	С			
46-13-02			224	Jan 05/2015	С			
401	Jan 05/2016							
402	Sep 05/2017							
403	Jan 05/2015							
404	May 05/2018							
405	Sep 05/2017							
406	Sep 05/2017							

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Electronic Flight Bag - Activation TASK 46-11-00-440-801		201	ARO ALL
Electronic Flight Bag Input Monitoring Check TASK 46-11-00-700-801		202	ARO ALL
Electronic Flight Bag - Program Item Number (PIN) Check TASK 46-11-00-700-802		204	ARO ALL
Fiber Optic Connector Inspection and Cleaning TASK 46-11-00-200-801		205	ARO ALL
ELECTRONIC FLIGHT BAG - ADJUSTMENT/TEST	46-11-00	501	ARO ALL
Electronic Flight Bag - Operational Test TASK 46-11-00-710-801		501	ARO ALL
Electronic Flight Bag - System Test TASK 46-11-00-730-801		502	ARO ALL
DISPLAY UNIT - MAINTENANCE PRACTICES	46-11-02	201	ARO ALL
Touchscreen Calibration Test TASK 46-11-02-700-801		201	ARO ALL
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DISPLAY UNIT - REMOVAL/INSTALLATION	46-11-02	401	ARO ALL
Display Unit Removal TASK 46-11-02-000-801		401	ARO ALL
Display Unit Installation TASK 46-11-02-400-801		404	ARO ALL
EFB DISPLAY UNIT - CLEANING/PAINTING	46-11-02	701	ARO ALL
EFB DU Display Surface Cleaning TASK 46-11-02-100-801		701	ARO ALL



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ELECTRONIC UNIT - MAINTENANCE PRACTICES	46-11-03	201	ARO ALL
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Electronic Unit Software Installation Using Portable Data Loader TASK 46-11-03-470-802		204	ARO ALL
Electronic Unit - Crossload Software Installation TASK 46-11-03-470-801		211	ARO ALL
Electronic Unit - Software Removal TASK 46-11-03-860-804		214	ARO ALL
Electronic Unit - Software Check TASK 46-11-03-860-803		216	ARO ALL
Electronic Unit - Data Download to Portable Data Loader TASK 46-11-03-470-803		218	ARO ALL
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Staged Loads - LSAP Installation TASK 46-11-03-860-808		223	ARO ALL
EFB Staged Loads Removal TASK 46-11-03-470-806		226	ARO ALL
Electronic Unit - Configuration Comparison TASK 46-11-03-860-806		227	ARO ALL
EFB Communication Link Test TASK 46-11-03-860-807		228	ARO ALL
Print Test Text Check TASK 46-11-03-710-804		232	ARO ALL
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Wireless WAN Unit - Deactivation TASK 46-11-07-860-802			204	ARO ALL
Wireless WAN Unit Software Installation TASK 46-11-07-470-801			207	ARO ALL
Wireless WAN Unit Software Check TASK 46-11-07-860-803			208	ARO ALL
Wireless WAN Unit SIM Card - Replacement TASK 46-11-07-960-801			209	ARO ALL
WIRELESS WAN UNIT - REMOVAL/INSTALLATION	46-11-07		401	ARO ALL
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Wireless WAN Unit - Installation TASK 46-11-07-400-801			404	ARO ALL
WIRELESS WAN UNIT - ADJUSTMENT/TEST	46-11-07		501	ARO ALL
Wireless WAN Unit - Operational Test TASK 46-11-07-710-801			501	ARO ALL
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WIRELESS WAN UNIT PRIMARY ANTENNA - REMOVAL/INSTALLATION	46-11-08		401	ARO ALL
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WWU Antenna - Installation TASK 46-11-08-400-801			404	ARO ALL



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ONBOARD NETWORK SYSTEM - MAINTENANCE PRACTICES	46-13-00	201	ARO ALL
Onboard Network System Maintenance Laptop Connection TASK 46-13-00-480-801		201	ARO ALL
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Onboard Network System Airplane Credentials Check TASK 46-13-00-750-803		207	ARO ALL
Onboard Network System Server Credentials Check TASK 46-13-00-750-801		212	ARO ALL
Onboard Network System Client Credentials Check TASK 46-13-00-750-802		215	ARO ALL
Onboard Network System Input Monitoring Check TASK 46-13-00-720-803		218	ARO ALL
Onboard Network System Configuration Check TASK 46-13-00-720-804		225	ARO ALL
Onboard Network System LRU Software Installation TASK 46-13-00-470-801		228	ARO ALL
Onboard Network System Printer Check TASK 46-13-00-710-801		233	ARO ALL
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Network File Server Drive Reformat Procedure TASK 46-13-01-070-801			213	ARO 001-010; ARO 011-013 PRE SB 777-46-0066
Network File Server Reset Data Procedure TASK 46-13-01-070-803			216	ARO 014-999; ARO 011-013 POST SB 777-46-0066
Network File Server Reimage Procedure TASK 46-13-01-470-802			218	ARO 014-999; ARO 011-013 POST SB 777-46-0066
Network File Server Initial Data Load Software Installation TASK 46-13-01-470-803			220	ARO 014-999; ARO 011-013 POST SB 777-46-0066
Network File Server Fault Check TASK 46-13-01-800-801			225	ARO ALL
Network File Server Log File Check TASK 46-13-01-800-802			228	ARO ALL
Network File Server Software Check TASK 46-13-01-860-801			232	ARO ALL
NETWORK FILE SERVER - REMOVAL/INSTALLATION	46-13-01	1	401	ARO ALL
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NETWORK FILE SERVER - ADJUSTMENT/TEST	46-13-01		501	ARO ALL
Network File Server Operational Test TASK 46-13-01-720-801			501	ARO ALL
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Network Extension Device Software Check TASK 46-13-02-720-802		20	7 ARO 005-999
NETWORK EXTENSION DEVICE - REMOVAL/INSTALLATION	46-13-02	40	1 ARO 005-999
Network Extension Device Removal TASK 46-13-02-000-801		40	1 ARO 005-999
Network Extension Device Installation TASK 46-13-02-400-801		40	4 ARO 005-999
NETWORK EXTENSION DEVICE - ADJUSTMENT/TEST	46-13-02	50	1 ARO 005-999
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ADEL EU Compare Configuration TASK 46-19-00-700-801		21	3 ARO ALL
ADEL EU Data LSAP Removal TASK 46-19-00-070-802		21	4 ARO ALL
ADEL EU Data LSAP Installation TASK 46-19-00-470-804		21	5 ARO ALL
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Electronic Logbook Enable Procedure TASK 46-19-00-860-801			222	ARO ALL
Electronic Logbook Replicate Logbook Databases Between EFB EUs TASK 46-19-00-470-803			222	ARO ALL
Electronic Logbook Delete TEMP Procedure TASK 46-19-00-070-803			223	ARO ALL
Electronic Logbook Paper Sign Procedure (Non-Cabin Server Configuration) TASK 46-19-00-860-802			223	ARO ALL
Electronic Logbook Paper Sign Procedure (Cabin Server Configuration) TASK 46-19-00-860-803			224	ARO ALL



ELECTRONIC FLIGHT BAG - MAINTENANCE PRACTICES

1. General

- A. This section gives maintenance tasks that support the Electronic Flight Bag (EFB) on a system level.
- B. The tasks include:
 - (1) Electronic flight bag Deactivation
 - (2) Electronic flight bag Activation
 - (3) A status check of inputs from other systems that interface with EFB.
 - (4) A check for the correct left and right Electronics Unit (EU) program pin designation.
 - (5) An inspection and cleaning for the EFB fiber optic connectors.

TASK 46-11-00-040-801

2. Electronic Flight Bag - Deactivation

A. General

(1) This task removes electrical power to the electronic flight bag.

B. Location Zones

Zone	Area
117	Main Equipment Center, Left
211	Flight Compartment, Left
212	Flight Compartment, Right

C. Procedure

SUBTASK 46-11-00-860-013

(1) Open these circuit breakers:

Overhead Circuit Breaker Panel, P11

Row	Col	Number	Name
E	8	C46406	CAPTAIN ELECTRONIC FLIGHT BAG
F	21	C46407	F/O FLECTRONIC FLIGHT BAG

D. Electronic Flight Bag - Tryout

NOTE: This tryout is to make sure that the electronic flight bag is in a zero energy state.

SUBTASK 46-11-00-210-001

(1) Make sure both of the EFB displays are blank and no backlight illumination is present.

SUBTASK 46-11-00-700-002

(2) Press the menu button and verify that the display remains blank.



TASK 46-11-00-440-801

3. Electronic Flight Bag - Activation

A. General

(1) This task adds electrical power to the electronic flight bag.

B. Location Zones

Zone	Area
117	Main Equipment Center, Left

ARO ALL



(Continued)

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

C. Procedure

SUBTASK 46-11-00-860-014

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

Overhead Circuit Breaker Panel, P11

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	8	C46406	CAPTAIN ELECTRONIC FLIGHT BAG
Е	21	C46407	F/O ELECTRONIC FLIGHT BAG

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

TASK 46-11-00-700-801

4. Electronic Flight Bag Input Monitoring Check

A. General

This task shows you how to make sure that information systems connected to the Electronic Flight Bag (EFB) are active.

B. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
31-33-00-710-801	Flight Compartment Printing - Operational Test (P/B 501)
31-41-00-710-801	Airplane Information Management System (AIMS) - Operational Test (P/B 501)
31-61-00-710-801	Primary Display System - Operational Test (P/B 501)
34-31-00-710-801	Instrument Landing System - Operational Test (P/B 501)

C. Location Zones

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

D. Prepare for the Procedure

SUBTASK 46-11-00-861-002

(1) If the airplane is not energized, supply electrical power.

Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 46-11-00-865-004

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

Left Power Management Panel, P110

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 00	1-013		
В	27	C46411	NETWORK FILE SERVER
ARO 014	4-999		
В	27	C46418	NFS - L

ARO ALL

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ARO 014-999 (Continued)

Overhead Circuit Breaker Panel, P11

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO AL	L		
Е	8	C46406	CAPTAIN ELECTRONIC FLIGHT BAG
Е	21	C46407	F/O ELECTRONIC FLIGHT BAG

This circuit breaker is inoperative and should remain open:

Right Power Management Panel, P210

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 01	4-999		
В	11	C46419	NFS - R (INOP)

ARO ALL

SUBTASK 46-11-00-700-001

- (3) Make sure these systems are energized:
 - (a) AIMS, Airplane Information Management System (AIMS) Operational Test, TASK 31-41-00-710-801.
 - (b) Flight deck printer, Flight Compartment Printing Operational Test, TASK 31-33-00-710-801.
 - (c) MMR/GPSSU, Instrument Landing System Operational Test, TASK 34-31-00-710-801.
 - (d) Cursor control device, Primary Display System Operational Test, TASK 31-61-00-710-801.

E. Procedure

SUBTASK 46-11-00-860-010

- Set the captain's, and first officer's display units to show the GEN INPUT MONITOR page.
 - (a) Push the MENU bezel key to show the MAIN MENU.
 - (b) Push the SYSTEM button, or adjacent line select key (LSK).
 - (c) Push the EFB MAINTENANCE button.
 - (d) Push the INPUT MONITORING button.
 - (e) Push the GEN INPUT MONITOR button.
 - 1) Make sure that the GEN INPUT MONITOR page shows on the Display Unit (DU).

SUBTASK 46-11-00-710-003

(2) Make sure that each interface on the page shows the condition PRESENT, or ABSENT.

NOTE: If the INPUT ACTIVITY shows as PRESENT, or ABSENT, then the EFB senses the interface. The ABSENT condition tells you that the interface is installed, but is not serviceable.

The GEN INPUT MONITOR page only shows the interface when that system is installed. If a system is not installed, it does not show on the page.

- (a) PR1 Printer
- (b) ACARS LEFT message handling (captain's DU only)
- (c) ACARS2 LEFT message handling (captain's DU only)

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- (d) ACARS RIGHT ARINC communications addressing and reporting system (first officer's DU only)
- (e) ACARS2 RIGHT ARINC communications addressing and reporting system (first officer's DU only)
- (f) CCD Cursor Control Device
- (g) GN1 MMR/GPSSU
- (h) IR3 AIMS IRS
- (i) GP1 AIMS General Purpose BUS 4
- (j) FM1L Left AIMS General Purpose BUS 1
- (k) FM1R RIGHT AIMS General Purpose BUS 1
- (I) AD3 AIMS General Purpose BUS 3
- (m) OFFSIDE EU WINDOWS

ARO 001-017

(n) VIDEO - flight deck entry video surveillance system

ARO ALL

I

F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-00-840-002

(1) Remove electrical power if it is not necessary for other tasks. This is the task:

Remove Electrical Power, TASK 24-22-00-860-806.



TASK 46-11-00-700-802

5. Electronic Flight Bag - Program Item Number (PIN) Check

A. General

- (1) This task lets you make sure that captain's, and first officer's Electronic Flight Bag (EFB) show the correct Program Item Number (PIN).
- (2) The PIN shows on the ANALOG DISCRETES page.
 - (a) The PIN is specified by the EU shelf location, and is not a setting in EU memory.
- (3) Do the check on both the captain's, and first officer's EFB.

NOTE: The sequence of steps is the same for the captain's DU and first officer's DU.

B. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)

C. Location Zones

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

D. Prepare for the Procedure

SUBTASK 46-11-00-861-001

(1) If the airplane is not energized, supply electrical power:

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Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 46-11-00-865-003

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

Overhead Circuit Breaker Panel, P11

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	8	C46406	CAPTAIN ELECTRONIC FLIGHT BAG
Ε	21	C46407	F/O ELECTRONIC FLIGHT BAG

E. Procedure

SUBTASK 46-11-00-710-001

- (1) Set the captain's, or first officer's EFB Display Unit (DU) to show the ANALOG DISCRETES page:
 - (a) Push the MENU key on the DU.
 - 1) Make sure that the EFB MAIN MENU page shows on the DU.
 - (b) Push the SYSTEM key on the DU.
 - 1) Make sure that the system page shows on the DU.
 - (c) Push the EFB MAINTENANCE key on the DU.
 - 1) Make sure that the EFB MAINTENANCE page shows on the DU.
 - (d) Push the INPUT MONITORING key on the DU.
 - 1) Make sure that the INPUT MONITORING page shows on the DU.
 - (e) Push the ANALOG DISCRETES key on the DU.
 - 1) Make sure that the ANALOG DISCRETES pages shows on the DU.

SUBTASK 46-11-00-860-008

- (2) Examine the analog discretes page for the PIN.
 - (a) Make sure that the PIN shows as follows:
 - 1) Captain's display: 2F4
 - 2) First officer's display: 2F1.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-00-840-001

(1) Remove electrical power if it is not necessary for other tasks.

Remove Electrical Power, TASK 24-22-00-860-806.

——— END OF TASK ———

TASK 46-11-00-200-801

6. Fiber Optic Connector Inspection and Cleaning

A. General

- This procedure tells you how to clean and check Electronic Flight Bag (EFB) fiber optic connectors.
- (2) The EFB uses 1000Base-F fiber optic cables to make connections between Electronics Unit (EU) and Display Unit (DU). Fiber optic cable also connects the captain's and first officer's DUs.
- (3) There are two types of fiber optic connectors:

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- The type-A connector is a multi-channel butt type connector. This connector places the fiber optic cables end-to-end.
- The type-B connector is a multi-channel expanded beam connector. This connector uses a lens to project the light through the connector and onto the lens of the opposite connector.

B. References

Reference	Title
24-22-00-860-806	Remove Electrical Power (P/B 201)
46-11-02-000-801	Display Unit Removal (P/B 401)
46-11-02-400-801	Display Unit Installation (P/B 401)
46-11-03-400-801	Electronic Unit Installation (P/B 401)
SWPM 20-12-11	S280W701-() FIBER OPTIC CABLE ASSEMBLIES

C. Prepare for the Procedure

SUBTASK 46-11-00-020-001

(1) Remove the applicable DU, N46103 or N46203. This is the task: Display Unit Removal, TASK 46-11-02-000-801.

SUBTASK 46-11-00-020-002

(2) Remove the applicable EU, N46102 or N46202. This is the task: Electronic Unit Installation, TASK 46-11-03-400-801.

D. Procedure

SUBTASK 46-11-00-200-001

(1) For the connector inspection, and cleaning, do the applicable procedures in SWPM 20-12-11.

E. After the Procedure

SUBTASK 46-11-00-420-001

(1) Install the applicable EU, N46102 or N46202. This is the task: Electronic Unit Installation, TASK 46-11-03-400-801.

SUBTASK 46-11-00-420-002

(2) Install the applicable DU, N46103 or N46203. This is the task:

Display Unit Installation, TASK 46-11-02-400-801.

(a) Make sure you do the TAIL ID check specified in the DU installation task.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-00-840-003

(1) Remove electrical power if it is not necessary for other tasks:

Remove Electrical Power, TASK 24-22-00-860-806.

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

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ELECTRONIC FLIGHT BAG - ADJUSTMENT/TEST

1. General

- A. This procedure has these tasks:
 - (1) An operational test of the electronic flight bag system.
 - (2) A system test of the electronic flight bag system.

TASK 46-11-00-710-801

2. Electronic Flight Bag - Operational Test

A. General

- (1) The operational test does a quick check of the electronic flight bag system. The test makes sure the system is serviceable.
- (2) The same sequence of steps is used for the captain's EFB or the first officer's EFB.

B. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)

C. Location Zones

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

D. Prepare For Test

SUBTASK 46-11-00-865-001

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

Overhead Circuit Breaker Panel, P11

Row	<u>Col</u>	<u>Number</u>	Name
Ε	8	C46406	CAPTAIN ELECTRONIC FLIGHT BAG
Ε	21	C46407	F/O ELECTRONIC FLIGHT BAG

SUBTASK 46-11-00-860-002

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

E. Display Unit Operational Test

SUBTASK 46-11-00-860-001

- (1) Push the MAIN MENU key on the applicable display unit (DU).
 - (a) Make sure that the EFB MAIN MENU page shows on the DU.

SUBTASK 46-11-00-860-003

(2) Make sure all applications on the MAIN MENU are active and selectable.

NOTE: Button application backgrounds are dim at first powerup. However, after the application fully loads, the application changes to gray in color to show it is now available for selection.

- (a) Push the bezel key (or the touchscreen button) for the first application.
 - 1) Make sure the application launches.
 - 2) Push the MENU bezel to return to the MAIN MENU.

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- (b) Continue to push the bezel key (or the touchscreen button) for each application on the main menu.
 - 1) Make sure the application launches.
 - 2) Push the MENU bezel to return to the MAIN MENU.

SUBTASK 46-11-00-862-001

(3) Do this task: Remove Electrical Power, TASK 24-22-00-860-806.

——— END OF TASK ———

TASK 46-11-00-730-801

3. Electronic Flight Bag - System Test

A. General

- (1) The system test does a complete check of the electronic flight bag system. The test makes sure the system operates satisfactorily.
- (2) The same sequence of steps is used for the captain's EFB or the first officer's EFB.

B. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
31-33-00-710-801	Flight Compartment Printing - Operational Test (P/B 501)
31-41-00-710-801	Airplane Information Management System (AIMS) - Operational Test (P/B 501)
31-61-00-710-801	Primary Display System - Operational Test (P/B 501)
34-31-00-710-801	Instrument Landing System - Operational Test (P/B 501)
46-11-00-700-801	Electronic Flight Bag Input Monitoring Check (P/B 201)
46-11-00-700-802	Electronic Flight Bag - Program Item Number (PIN) Check (P/B 201)
46-11-03-860-805	TAIL ID Check (P/B 201)
FIM 23-27 TASK 913	DCMF in Right AIMS has no input from Electronic Flight Bag (L) on EFB Datalink Bus - Fault Isolation
FIM 23-27 TASK 914	DCMF in Left AIMS has no input from Electronic Flight Bag (L) on EFB Datalink bus - Fault Isolation
FIM 23-27 TASK 915	DCMF in Right AIMS has no input from Electronic Flight Bag (R) on EFB Datalink Bus - Fault Isolation
FIM 23-27 TASK 916	DCMF in Left AIMS has no input from Electronic Flight Bag (R) on EFB Datalink Bus - Fault Isolation

C. Location Zones

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

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D. Prepare For Test

SUBTASK 46-11-00-865-002

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

Overhead Circuit Breaker Panel, P11

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	8	C46406	CAPTAIN ELECTRONIC FLIGHT BAG
Ε	21	C46407	F/O ELECTRONIC FLIGHT BAG

SUBTASK 46-11-00-860-004

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 46-11-00-860-005

- (3) Do these steps:
 - (a) Make sure that the EFB MAIN MENU page shows on the captain's DU.
 - 1) If the MAIN MENU does not show on the captain's DU, push the MENU bezel key.
 - (b) Make sure that the EFB MAIN MENU page shows on the first officer's DU.
 - If the MAIN MENU does not show on the first officer's DU, push the MENU bezel key.
 - 2) From the MAIN MENU, on the first officer's DU, push the IDENT page button.
 - 3) Make sure the IDENT page shows on the first officer's DU.

SUBTASK 46-11-00-730-001

- (4) Make sure these systems are operational:
 - (a) AIMS, Airplane Information Management System (AIMS) Operational Test, TASK 31-41-00-710-801.
 - (b) Flight deck printer, Flight Compartment Printing Operational Test, TASK 31-33-00-710-801.
 - (c) MMR/GPSSU, Instrument Landing System Operational Test, TASK 34-31-00-710-801.
 - (d) Cursor control device, Primary Display System Operational Test, TASK 31-61-00-710-801.

E. EU and DU Fiber Optic Interface Test

SUBTASK 46-11-00-730-002

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- (1) Do these steps to test the EU and DU fiber optic interface:
 - (a) Push the XFR key on the captain's DU.
 - Make sure the IDENT page from the first officer's DU now shows on the captain's DU.
 - (b) Push the XFR key on the captain's DU again.
 - 1) Make sure the MAIN MENU page shows again on the captain's DU.
 - (c) Push the XFR key on the first officer's DU.
 - 1) Make sure the EFB MAIN MENU page from the captain's DU now shows on the first officer's DU.
 - (d) Push the XFR key on the first officer's DU again.
 - 1) Make sure the IDENT page shows again on the first officer's DU.



F. Applications Test

SUBTASK 46-11-00-730-003

(1) Do these steps to test the application selection keys:

NOTE: The same sequence of steps is used for the first officer's EFB.

- (a) Make sure that the EFB MAIN MENU page shows on the captain's DU.
- (b) Push the bezel key (or the touchscreen button) for the first application.
 - 1) Make sure the application launches.
 - Push the MENU bezel to return to the MAIN MENU.
- (c) Continue to push the bezel key (or the touchscreen button) for each application on the main menu.
 - 1) Make sure the application launches.
 - 2) Push the MENU bezel to return to the MAIN MENU.

G. Input Monitoring Check

SUBTASK 46-11-00-730-009

(1) Do a check to make sure that the EFB receives inputs from other information systems. Do this task:

Electronic Flight Bag Input Monitoring Check, TASK 46-11-00-700-801

H. PIN Check

SUBTASK 46-11-00-710-002

(1) On the captain's, and first officer's EFB, do a check of the Program Item Number (PIN). This is the task:

Electronic Flight Bag - Program Item Number (PIN) Check, TASK 46-11-00-700-802.

I. Display Lighting Test

SUBTASK 46-11-00-730-006

- (1) Do these steps to verify the master brightness control of the display units:
 - (a) Make sure the MASTER BRIGHTNESS switch on the P5 overhead panel is on.

NOTE: The inner toggle switch, push in to turn on, push again (out) to turn off

(b) Turn the MASTER BRIGHTNESS switch to the bright position (clockwise).

NOTE: The switch is outer and rotary.

- 1) Make sure the intensity of the EFB DU screen and the bezel key labels increases.
- (c) Turn the MASTER BRIGHTNESS switch to the dim position (counterclockwise).
 - 1) Make sure the intensity of the EFB DU screen and the bezel key labels decreases.

SUBTASK 46-11-00-730-007

(2) Do these steps to verify the captain's DU BRT/DIM rocker switch:

NOTE: The BRT/DIM rocker switch regulates the screen's brightness and background illumination for the bezel key labels.

NOTE: The same sequence of steps is used for the first officer's EFB.

- (a) Push the BRT of the BRT/DIM rocker switch on the captain's DU.
 - 1) Make sure the intensity of the screen and the bezel key labels increases.
- (b) Push the DIM of the BRT/DIM rocker switch on the captain's DU.
 - Make sure the intensity of the screen and the bezel key labels decreases.

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SUBTASK 46-11-00-730-008

(3) Do these steps to verify the captain's DU back light control switch:

<u>NOTE</u>: The same sequence of steps is used for the first officer's EFB.

- (a) Push the PWR switch on the captain's DU.
 - 1) Make sure the DU back light is off.
- (b) Push the PWR switch on the captain's DU again.
 - 1) Make sure the DU back light is on.

J. TAIL ID Test

SUBTASK 46-11-00-860-006

(1) Do this task: TAIL ID Check, TASK 46-11-03-860-805

K. EFB and DCMF Datalink Interface Test

SUBTASK 46-11-00-710-004

- (1) Using the Maintenance Access Terminal (MAT), do these steps that follow.
 - (a) Make your selection: ONBOARD MAINTENANCE.
 - (b) Make your selection: EXTENDED MAINTENANCE.
 - (c) Make your selection: EXISTING FAULTS.
 - (d) Examine the result. Look for these words: 23 AIMS Data Communication Management.
 - If 23 AIMS Data Communication Management does not show, then the EFB-to-DMCF datalink interface is serviceable.
 - 2) If 23 AIMS Data Communication Management shows, then continue.
 - (e) Make your selection: 23 AIMS Data Communication Management.
 - 1) Make your selection: CONTINUE.
 - (f) Examine the result. If one or more of these maintenance messages show, then corrective action is required.
 - 23-71710, (refer to FIM 23-27 TASK 913)
 - 23-71711, (refer to FIM 23-27 TASK 914)
 - 23-71712, (refer to FIM 23-27 TASK 915)
 - 23-71713, (refer to FIM 23-27 TASK 916).

L. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-00-860-012

(1) Return the airplane to normal configuration. Do this task: Remove Electrical Power, TASK 24-22-00-860-806.

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

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DISPLAY UNIT - MAINTENANCE PRACTICES

1. General

- A. This procedure has these tasks:
 - (1) Touch screen calibration test
 - (2) Calibration of the touch screen.
- B. Do the touch screen calibration test if you replace the DU.

TASK 46-11-02-700-801

2. Touchscreen Calibration Test

A. General

- (1) This task provides instructions to perform the touchscreen calibration test.
- (2) Do the touchscreen calibration test:
 - (a) After you install a new Display Unit (DU).
 - (b) After you install a new Electronics Unit (EU).
 - (c) When you think that the touchscreen is not calibrated.
- (3) If the DU fails the touchscreen calibration test, you must do the touchscreen calibration task.

B. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)

C. Location Zones

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

D. Prepare for the Procedure

SUBTASK 46-11-02-861-001

(1) If the aircraft is not energized, supply electrical power.

Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 46-11-02-865-003

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

Overhead Circuit Breaker Panel, P11

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	8	C46406	CAPTAIN ELECTRONIC FLIGHT BAG
E	21	C46407	F/O ELECTRONIC FLIGHT BAG

E. Procedure

SUBTASK 46-11-02-860-009

- (1) Make sure that the MAIN MENU shows on the captain's, or first officer's DU.
 - (a) To show the MAIN MENU, push the MENU bezel key.

SUBTASK 46-11-02-860-014

(2) Use your fingertip to touch 3 different random locations on the screen (other than the MAIN MENU buttons).

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(a) Make sure the cursor shows each time in the same place where your fingertip touches the screen.

SUBTASK 46-11-02-820-001

(3) If the cursor does not show each time, in the same place where your fingertip touches the screen, do this task:

Display Unit - Touchscreen Calibration Procedure, TASK 46-11-02-820-801.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-02-840-001

(1) Return the CCD's and EFB to their normal configuration.

SUBTASK 46-11-02-862-003

(2) Remove electrical power if it is not necessary for other tasks. This is the task: Remove Electrical Power, TASK 24-22-00-860-806.

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

TASK 46-11-02-820-801

3. Display Unit - Touchscreen Calibration Procedure

(Figure 201)

A. General

- (1) This task gives the steps to calibrate the Display Unit (DU) touchscreen.
- (2) If the calibration is unserviceable, you can navigate to the calibration page using the bezel keys, and line select keys.
- (3) The aircraft must be on the ground to do this task.

B. Location Zones

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

C. Prepare for the Procedure

SUBTASK 46-11-02-865-002

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

Overhead Circuit Breaker Panel, P11

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	8	C46406	CAPTAIN ELECTRONIC FLIGHT BAG
Ε	21	C46407	F/O ELECTRONIC FLIGHT BAG

D. DU Calibration Procedure

SUBTASK 46-11-02-860-015

- (1) Set the DU to show the TOUCHSCREEN CALIBRATION page:
 - (a) Push the MENU bezel key.
 - (b) Push the SYSTEM PAGE button.
 - (c) Push the EFB MAINTENANCE button.
 - (d) Push the TOUCHSCREEN CALIBRATION button.

SUBTASK 46-11-02-860-021

(2) Follow the instructions that show on the TOUCHSCREEN CALIBRATION screen.

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SUBTASK 46-11-02-710-001

(3) Make sure the touchscreen is calibrated: Touchscreen Calibration Test, TASK 46-11-02-700-801

E. Put the Aircraft Back to Its Usual Condition

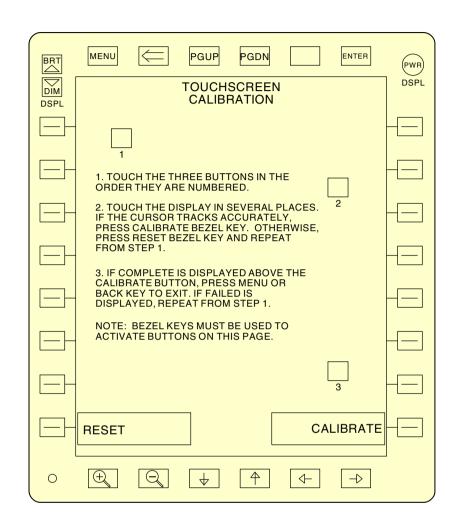
SUBTASK 46-11-02-840-002

- (1) Push the MENU bezel key.
 - (a) Make sure that the MAIN MENU shows.

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

ARO ALL 46-11-02





NOTE:

THE DATA SHOWN ON THE DISPLAY IS ONLY AN EXAMPLE.

391406 S0000133662_V3

Display Unit - Touchscreen Calibration Figure 201/46-11-02-990-802

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DISPLAY UNIT - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
 - (1) A removal of the display unit (DU).
 - (2) An installation of the DU which includes an installation test.
 - (3) There are optional instructions in the DU installation task to inspect for and if necessary, to correct any gap between the DU and the surrounding trim panels. This check is not required for every DU installation. Do those steps only if there is a gap between the DU and the surrounding trim panels.
- B. The two display units are in the flight compartment. One is at the captain's station and one is at the first officer's station.

TASK 46-11-02-000-801

2. Display Unit Removal

Figure 401

A. General

- (1) This task gives the steps to remove the Electronic Flight Bag (EFB) Display Unit (DU).
 - Captain's DU, N46103, installed in panel P13-2.
 - First officer's DU, N46203, installed in panel P14.

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	DU	46-11-02-01-005	ARO ALL

C. Location Zones

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

D. Removal Procedure

SUBTASK 46-11-02-860-024

- (1) Examine the captain's and first officer's DU [3]. If the EFB is energized, do these steps:
 - (a) Push the MENU bezel key.
 - (b) On the MAIN MENU, make sure that all buttons for the Windows applications show gray in color.

NOTE: Windows applications can include: Performance, Terminal Charts, Documents, Logbook, Video, or other names.

SUBTASK 46-11-02-860-003

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

Overhead Circuit Breaker Panel, P11

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	8	C46406	CAPTAIN ELECTRONIC FLIGHT BAG
Ε	21	C46407	F/O ELECTRONIC FLIGHT BAG

SUBTASK 46-11-02-010-001

(3) Loosen the four jam nuts [4] and move the DU [3] away from the forward auxiliary panel.

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SUBTASK 46-11-02-860-004



DO NOT LET THE DU HANG BY THE FIBER-OPTIC CABLE. THE WEIGHT OF THE DU CAN CAUSE DAMAGE TO THE FIBER-OPTIC CONNECTOR.

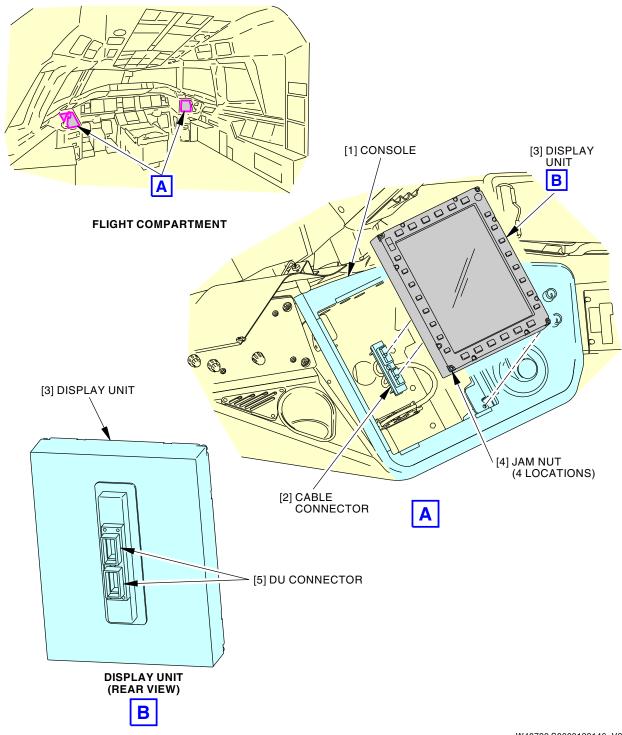
- (4) Remove the DU [3] as follows:
 - (a) Hold the DU [3] and carefully pull the DU [3] away from the console [1] until you can get access to the DU connector [5].
 - (b) Disconnect the cable connector [2] from the DU connector [5].
 - (c) Put a protective cover on the front of the DU [3].NOTE: If provided, you can use the display cover from the new DU.
 - (d) Carefully lift the DU [3] out of the console [1].
 - (e) Put dust caps on the DU connector [5] and the cable connector [2].

——— END OF TASK ———

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Display Unit Installation Figure 401/46-11-02-990-801

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TASK 46-11-02-400-801

3. Display Unit Installation

Figure 401

A. General

- (1) This Display Unit (DU) installation task has instructions for:
 - (a) An optional DU fit check and trim panel adjustment.

NOTE: The fit check and subsequent adjustment of EFB DU trim panels is only required if there is a gap between the DU and the surrounding trim panels.

- (b) The DU installation.
- (c) A test of the touch screen calibration.
- (d) A test of the DU after installation.

B. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
46-11-02-700-801	Touchscreen Calibration Test (P/B 201)
46-11-03-860-805	TAIL ID Check (P/B 201)
SWPM 20-12-21	BACC68A AND BACC68D FIBER OPTIC CONNECTORS
SWPM 20-74-12	ASSEMBLY OF BACC65AA AND BACC65AB CONNECTORS

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-4897	Alignment Fixture - Electronic Flight Bag (EFB)
	Part #: J46001-1 Supplier: 81205

D. Location Zones

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

E. Installation Procedure

SUBTASK 46-11-02-980-001

(1) If necessary, before you install the DU, adjust the surrounding trim panels as follows: Figure 402

NOTE: This fit check and subsequent adjustment of EFB DU trim panels is only required if there is a gap between the DU and the surrounding trim panels.

(a) Install the EFB alignment fixture, SPL-4897, in the DU mount.

NOTE: If the DU fit-check tool is not available, it is acceptable to use a Display Unit (DU) for the fit-check. If you use the DU as a fit-check tool, make sure the DU has a protective cover installed.

1) If the top of the EFB alignment fixture, SPL-4897, is flush with the forward console without the DU trim piece installed, no adjustment is necessary. Remove the EFB alignment fixture, SPL-4897, and do the DU installation steps below.

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- 2) If the top of the EFB alignment fixture, SPL-4897, is not flush with the forward console without the DU trim piece installed, adjustment is necessary. Remove the EFB alignment fixture, SPL-4897, and continue.
- (b) Examine the two display unit side-support brackets [6].
 - 1) Make sure the two support brackets are securely attached to the side structure.
 - 2) Make sure the two support brackets are parallel to each other.
 - Make sure the two support brackets are equal distance from the top of the DU mount compartment.
- (c) Disconnect and remove all items that attach to the applicable forward console assembly as follows:
 - 1) Disconnect and remove the tiller handle.
 - 2) Disconnect and remove the gasper air fitting.
 - 3) Remove all lighting control knobs.
- (d) Remove and adjust the applicable captain's or first officer's forward console assembly as follows:
 - 1) Carefully lift off the forward console panel.
 - NOTE: There are three brackets that connect the forward console to adjacent panels. One bracket is on the bottom and one bracket is on the forward side of the forward console. These two brackets connect the forward console to the trim panel below and forward of the DU mount. The third bracket is on the aft side of the forward console and connects the forward console to the side panel.
 - 2) Remove all snap-on nut plates attached to the forward console that interface with the surrounding trim panels.
 - Install the EFB alignment fixture, SPL-4897.
 - 4) Place the forward console in position.
 - 5) Make adjustments as necessary to the forward bracket, the aft bracket and the bottom bracket until the top of the DU fit-check tool is flush with the forward console without the DU trim piece installed.
 - Re-install all attaching parts and make sure all close-out panels are correctly installed.
 - Remove the EFB alignment fixture, SPL-4897, and continue with the DU installation.

SUBTASK 46-11-02-860-001

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

Overhead Circuit Breaker Panel, P11

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	8	C46406	CAPTAIN ELECTRONIC FLIGHT BAG
Ε	21	C46407	F/O ELECTRONIC FLIGHT BAG

(3) Install the DU [3] as follows:





DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONNECTORS ON THE DU. IF YOU TOUCH THESE CONNECTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE DU.

- (a) Remove the dust caps on the DU connector [5] and the cable connector [2].
- (b) Examine the connector inserts, sockets, and pins for dirt and damage.
 - 1) If one or more of the fiber optic connectors is cracked, bent or broken, repair the connector (SWPM 20-12-21).
 - 2) If one or more electrical connector pins are bent or broken, repair the connector (SWPM 20-74-12).
- (c) If installed, remove the display cover on the front of the DU [3].
- (d) Carefully lower the DU [3] onto the forward auxiliary panel console [1].
- (e) Connect the cable connector [2] to the DU connector [5].
- (f) Install the DU [3] onto the console [1].
- (g) Tighten the four jam nuts [4] to a torque of 25 in-lb (3 N·m).

F. Installation Test

SUBTASK 46-11-02-420-001

- (1) Make sure power is removed from the applicable EFB for a minimum of two minutes. The two minutes starts at the time you open the circuit breaker for removal and ends at the time you close the EFB circuit breaker after installation.
 - NOTE: Power must be removed from the EFB for a minimum of two minutes to allow the EFB system to do a DU power-up test (PBIT).
 - NOTE: During the PBIT, it is possible the DU screen will flash intermittently. This is not a fault, it is normal operation and part of the PBIT.
 - (a) After you close the applicable EFB circuit breaker, make sure you do not touch any bezel keys or buttons on the DU until after the MAIN MENU shows.
 - NOTE: The MAIN MENU shows in approximately six (6) minutes after you close the EFB circuit breaker and after PBIT is complete.

SUBTASK 46-11-02-860-005

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 46-11-02-860-006

(3) For the applicable DU [3],

Remove the safety tags and close these circuit breakers:

Overhead Circuit Breaker Panel, P11

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	8	C46406	CAPTAIN ELECTRONIC FLIGHT BAG
Ε	21	C46407	F/O ELECTRONIC FLIGHT BAG

SUBTASK 46-11-02-860-022

(4) On the applicable DU, do a test of the display unit power switch as follows:

NOTE: This does not remove power from the EFB. The DISPLAY ON/OFF switch only removes power from the DU.

- (a) Push the DSPL (DISPLAY) PWR (Power) key, and make sure the DU goes off.
- (b) Push the PWR bezel key again, and make sure the DU comes on.

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SUBTASK 46-11-02-820-002

(5) Make sure the touchscreen is calibrated.

Touchscreen Calibration Test, TASK 46-11-02-700-801

SUBTASK 46-11-02-730-001

- (6) Do this test of the XFER (Transfer) function:
 - (a) Make sure that the EFB MAIN MENU page shows on the captain's DU and first officer's DU.
 - (b) On the first officer's DU, from the EFB MAIN MENU, push the IDENT PAGE key and make sure the IDENT PAGE shows.
 - (c) Push the XFER key on the captain's DU.
 - (d) Make sure that the IDENT page displayed on the first officer's DU gets displayed on the captain's DU.
 - (e) Push the XFER key on the captain's DU again.
 - (f) Make sure that the EFB MAIN MENU page originally displayed on the captain's DU is redisplayed.
 - (g) Push the XFER key on the first officer's DU.
 - (h) Make sure that the EFB MAIN MENU page displayed on the captain's DU gets displayed on the first officer's DU.
 - (i) Push the XFER key on the first officer's DU again.
 - (j) Make sure that the IDENT page shows again on the first officer's DU.
 - (k) Push the MENU key to display the EFB MAIN MENU on the first officer's DU.

SUBTASK 46-11-02-700-004

- (7) Do this test of the DU brightness level:
 - (a) On the DU, push the BRT/DIM rocker switch up and make sure the DU brightness level increases.
 - (b) On the DU, push the BRT/DIM rocker switch down and make sure the DU brightness level decreases.

SUBTASK 46-11-02-860-023

(8) Do the TAIL ID verification check. TAIL ID Check, TASK 46-11-03-860-805

SUBTASK 46-11-02-710-002

- (9) Do these steps to verify the master brightness control of the DU:
 - (a) Make sure the MASTER BRIGHTNESS switch on the P5 overhead panel is on.
 - NOTE: The inner toggle switch, push in to turn on, push again (out) to turn off.
 - (b) Turn the MASTER BRIGHTNESS switch to the bright position (clockwise).

NOTE: The switch is outer and rotary.

- 1) Make sure the intensity of the screen and the bezel key labels increases.
- (c) Turn the MASTER BRIGHTNESS switch to the dim position (counterclockwise).
 - 1) Make sure the intensity of the screen and the bezel key labels decreases.

SUBTASK 46-11-02-710-003

(10) Do a test of the Remote Light Sensor (RLS) as follows:

NOTE: If you installed the left DU, use the captain's RLS and DU for this test. If you installed the right DU, use the first officer's RLS and DU for this test.

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

Overhead Circuit Breaker Panel, P11

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	1	C31625	CAPT DISPLAY-OUTBD
D	14	C31626	F/O DISPLAY-OUTBD

- (b) Turn on a flashlight and hold it so the light points into the applicable (Left or Right) RLS slit aperture and sensor.
- (c) Make sure the DU brightness increases.

NOTE: If the MASTER BRIGHTNESS CONTROLLER (MBC) is engaged, the DU brightness level will not increase significantly.

- (d) Remove the flashlight and hold your hand over the applicable (Left or Right) RLS so the sensor housing is completely covered and light does not enter the RLS slit aperture.
- (e) Make sure the DU brightness level decreases.

<u>NOTE</u>: It is possible the brightness decrease is not seen for approximately 60 seconds.

(f) Remove your hand.

SUBTASK 46-11-02-710-004

(11) Do a test of the applicable DU bezel light interface as follows:

NOTE: If you installed the left DU, use the captain's Forward Brightness Panel and DU for this test. If you installed the right DU, use the first officer's Forward Brightness Panel and DU for this test.

- (a) On the applicable Forward Brightness Panel, make sure the PNL/FLOOD knob is operational.
- (b) Turn the PNL knob in a clockwise and counterclockwise direction.
- (c) Make sure the DU bezel panel light intensity increases and decreases.

<u>NOTE</u>: If the MASTER BRIGHTNESS CONTROLLER (MBC) is engaged, the DU bezel brightness level will not increase significantly.

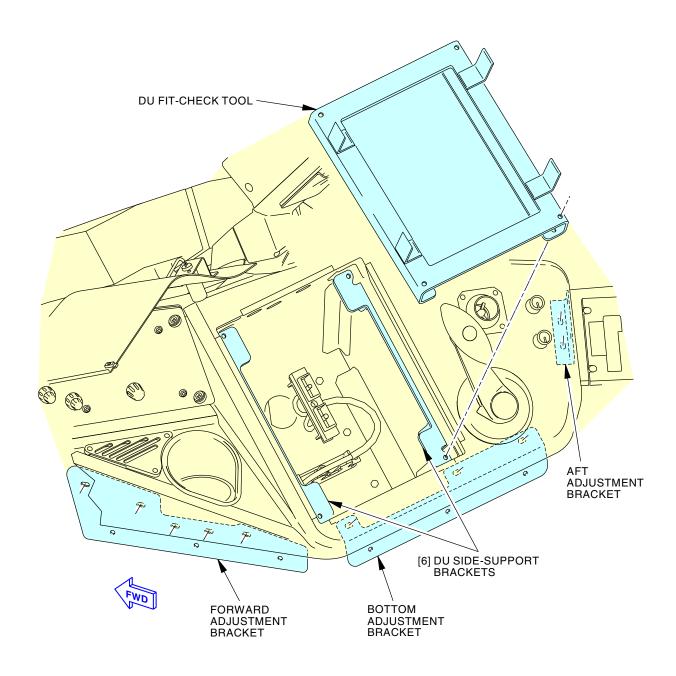
(d) Return the PNL/FLOOD knob to its normal configuration.

SUBTASK 46-11-02-862-002

(12) Do this task: Remove Electrical Power, TASK 24-22-00-860-806.

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





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Display Unit Installation - Correct Fit Verification Figure 402/46-11-02-990-803

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EFB DISPLAY UNIT - CLEANING/PAINTING

1. General

- A. This procedure tells how to clean the display surface of the EFB display unit (DU).
- B. The two display units are in the flight compartment. One is at the captain's station and one is at the first officer's station.
- C. Do not use abrasive materials when you clean the display surface. Abrasive materials will cause scratches in the display surface.

TASK 46-11-02-100-801

2. EFB DU Display Surface Cleaning

A. General

- (1) This task gives the steps to clean the Electronic Flight Bag (EFB) Display Unit (DU) as follows:
 - (a) Exterior surfaces except touchscreen.
 - (b) Display surface (touchscreen).
 - (c) Light sensor.
- (2) Cleaning materials of equal description and quality to those specified are approved for use.
- (3) The DU power button controls only the fluorescent back-light. When the captain's or first officer's EFB is energized, the applicable DU is also energized.

B. Tools/Equipment

Reference	Description
STD-123	Brush - Soft Bristle

C. Consumable Materials

Reference	Description	Specification
B00130	Alcohol - Isopropyl	TT-I-735
B50117	Detergent - General	
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5 Class A
G01043	Cloth - Lint-free	
G02418	Water - De-ionized	
G02457	Cleaner - Wet/Dry Anti-Static Sachet - ALGLAS Visial ALG/CR 215	

D. Location Zones

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

E. Procedure - Bezel, Sides, Rear, and Connector Inserts

SUBTASK 46-11-02-160-001



DO NOT USE ABRASIVE MATERIALS WHEN YOU CLEAN THE DISPLAY SURFACE. ABRASIVE MATERIALS WILL CAUSE SCRATCHES IN THE DISPLAY SURFACE.

(1) Remove all dust particles from the bezel, bezel keys, side and back surfaces, and connector inserts with a clean, soft bristle brush, STD-123, or a clean, dry, lint-free cloth, G01043.

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SUBTASK 46-11-02-100-002



DO NOT USE ABRASIVE MATERIALS WHEN YOU CLEAN THE DISPLAY SURFACE. ABRASIVE MATERIALS WILL CAUSE SCRATCHES IN THE DISPLAY SURFACE.

(2) Remove all particles from the display surface with a clean, soft, natural-bristle soft bristle brush, STD-123.

SUBTASK 46-11-02-160-002

(3) To remove oils or embedded dirt, wipe the surfaces with a cotton wiper, G00034 moistened with alcohol, B00130, or a mild mixture of general detergent, B50117 and de-ionized water, G02418.

NOTE: Make sure that you do not cause liquid to go into, or under the bezel frame.

F. Procedure - Touchscreen

SUBTASK 46-11-02-160-003



DO NOT USE ABRASIVE MATERIALS WHEN YOU CLEAN THE DISPLAY SURFACE. ABRASIVE MATERIALS WILL CAUSE SCRATCHES IN THE DISPLAY SURFACE.

(1) Wipe away all dust particles from the touchscreen with a clean, soft bristle brush, STD-123.

SUBTASK 46-11-02-100-003



DO NOT USE TOO MUCH FORCE WHEN YOU CLEAN THE DISPLAY SURFACE. TOO MUCH FORCE WILL CAUSE DAMAGE TO THE DISPLAY SURFACE.

- (2) Clean the display surface with the wet and dry anti-static sachets (ALGLAS Visial cleaner, G02457):
 - (a) Use the wet sachet to carefully clean the display surface. Wipe in a straight-line motion from top to bottom.

NOTE: Make sure that you do not push liquid under the bezel frame.

- (b) Gradually move from one side of the display surface to the opposite side, while you clean from top to bottom.
- (c) When the display surface is clean, use the dry sachet to carefully dry the display surface. Wipe in a straight-line motion, from top to bottom.

G. Procedure - Light Sensor

SUBTASK 46-11-02-160-004

- (1) Find the light sensor in the bezel frame, and remove all dust particles and unwanted material with a clean, soft bristle brush, STD-123.
 - (a) Carefully examine the sensor hole to make sure there is no unwanted material present.

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· EFFECTIVITY

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ELECTRONIC UNIT - MAINTENANCE PRACTICES

1. General

- A. This procedure contains these tasks:
 - (1) How to transfer software parts from compact disk to the portable data loader.
 - (2) How to do EFB EU software installation with a portable data loader.
 - (3) How to use the DUs to crossload software from one EU to the other EU.
 - (4) How to delete software from the EUs.
 - (5) How to do an EU software check for correct software part numbers.
 - (6) How to download data from the EU with the data loader.
 - (7) How to install software from the staging area to one, or both EUs.
 - (8) How to erase software parts from the EU staged loads partition.
 - (9) How to verify tail ID, and if necessary, how to change the tail ID.
 - (10) How to do a software configuration comparison check of EU-L and EU-R.
 - (11) How to do the EFB Comm Link Test
 - (12) How to print a test page of text using the PRINT TEST TEXT function.

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(13) How to print a test page of graphics using the WIN PRINT MANAGER function.

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- (14) How to reimage the Windows partition.
- (15) How to reimage the Linux partition.

TASK 46-11-03-860-801

2. Compact Disk to Portable Data Loader Software Installation

A. General

- (1) This procedure gives the steps to transfer software from a Compact Disc (CD) to a portable data loader, for future installation in the Electronic Flight Bag (EFB).
- (2) The EFB requires an ARINC 615A compliant data loader. These tool combinations are approved and recommended:
 - (a) ARINC 615/615A data loader, COM-4963 with LoadStar application software, COM-7085 installed.
 - (b) laptop, STD-11661 with LoadStar application software, COM-7085 installed.
- (3) This task gives two ways to load software:
 - (a) Use the recommended procedure when Loadable Software Airplane Part (LSAP) are found and installed by the installation program.
 - (b) Use the alternate procedure when you must find and install LSAPs manually using Microsoft Windows.

NOTE: The Boeing Company recommends that you install software into the EFB EU(s) from the data loader's internal disk drive. It is not recommended to install software from compact disk (CD), or removable media, directly to the EU.

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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
COM-4963	Loader - Data, ARINC 615/615A (Model is PMAT 2000)
	Part #: P2K-615A-06 Supplier: 0BAW0 Opt Part #: 80000-05 Supplier: 0BAW0
COM-7085	Software - LoadStar Application
STD-11661	Laptop - Generic (Minimum requirements: Windows XP SP2, 500MHz processor, 256MB RAM, 10/100 BaseT Ethernet port, CD-ROM/DVD media drive, 60GB hard drive, English Language)

C. Prepare for the Software Installation

SUBTASK 46-11-03-470-007

- (1) Prepare the ARINC 615/615A data loader, COM-4963, or laptop, STD-11661. Do these steps:
 - (a) If your data loader requires an external CD drive, connect the drive to the data loader.
 - (b) Energize the portable data loader.
 - (c) Complete the log-in using the correct user name and password.
 - (d) Load the CD into the CD drive of the data loader.
 - (e) Activate the LoadStar application.
 - On the ARINC 615/615A data loader, COM-4963, select LoadStar from the MAIN MENU.
 - On a laptop, STD-11661, select the LoadStar desktop icon, or find using the Windows Start menu.

SUBTASK 46-11-03-480-003

(2) Log-in to the LoadStar application.

NOTE: If LoadStar is set to log-in automatically, disregard this step.

- (a) For log-in user name and password, follow your airline procedure, or push the space bar.
- (b) If there is no log-in specified, the tool is set to log-in automatically.

D. Software Installation - Recommended Procedure

SUBTASK 46-11-03-470-033

- (1) Do a transfer of software (or, loads) from CD to the New Load directory. Do these steps:
 - (a) On the LoadStar main menu, select the LIBRARY tab.
 - 1) The tab is on the right-hand edge of the screen.
 - (b) Click once on the INSTALL SOFTWARE box.
 - (c) Below the words GET LOADS FROM, select CD ROM.
 - (d) Click on the NEXT button.
 - (e) When the confirmation box shows, select YES.
 - The LoadStar application will transfer all available software to the New Loads directory.
 - 2) Let the system work until the Install Software windows shows again.

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- (f) On the drop-down menu that shows, use a check mark to select the applicable media part number.
- (g) Click on NEXT.
- (h) Make sure the INSTALL SOFTWARE window shows.
- (i) Select the applicable airplane model and tail number.
- (j) Click on NEXT.
- (k) When the LoadStar message window shows "Do you want to continue", select YES.
- (I) At load completion, click on OK.

E. Software Installation - Alternate Procedure

SUBTASK 46-11-03-860-007

- (1) Use this alternate procedure to load software into the LoadStar application software, COM-7085 as follows:
 - NOTE: Use this alternate procedure when the media part number that you want to load does not show in the CONFIRM MOVING MEDIA SET window. Use the recommended procedure above when the media part number that you want to load shows in the CONFIRM MOVING MEDIA SET window.
 - (a) Energize the portable data loader.
 - 1) For log-in user name and password, follow your airline procedure, or push the space bar.
 - (b) Put the correct CD into the CD drive of the data loader.
 - For data loaders that require an external CD drive, connect the CD drive to the data loader.
 - (c) Make a new directory as follows:
 - 1) Open Windows Explorer.
 - Make sure c:\Datafiles\Newloads\<PART FOLDER NAME>\DISK001 shows.
 - 3) Rename <PART FOLDER NAME>
 - NOTE: If there is not a specific name to be used, try using the applicable system that the software is being installed for. Use a name such as <AIMS II> or <EFB>. The DISK001 is mandatory and must be spelled as shown.
 - 4) Using Windows Explorer, copy the contents from the CD drive to the new directory you made in the previous step.
 - (d) Select the LoadStar icon from the main menu of the data loader.
 - 1) If the main menu does not show, double-click on the main menu shortcut on the desktop.
 - (e) If prompted, enter:
 - 1) USER NAME
 - 2) PASSWORD
 - NOTE: Follow your recommended airline procedure for this step. if user name and password is not required, press the space bar.
 - (f) Select the LIBRARY tab.
 - (g) Select INSTALL SOFTWARE.
 - (h) Make sure the GETS LOAD FROM: is set to NEW LOAD DIRECTORY.

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- (i) Select the correct folder name in the window labeled NEW LOADS. This is the part folder name you created earlier.
- (j) Select the button labeled NEXT.
- (k) Confirm the diskette part number, and software part number.
- (I) Select MODEL.
- (m) Select tail number.
- (n) Select the button labeled NEXT.
- (o) When the installation is complete, select OK.
- (p) If you want to transfer another CD, repeat these steps starting with "Put the correct CD in the CD-ROM drive".
- (g) Remove the CD from the CD-ROM drive when the software installation is complete.



TASK 46-11-03-470-802

3. Electronic Unit Software Installation Using Portable Data Loader

Figure 201 or Figure 202

A. General

- (1) This procedure gives the steps to install Loadable Software Airplane Part (LSAP) into the Electronic Flight Bag (EFB) Electronics Unit (EU).
- (2) The EFB requires an ARINC 615A compliant data loader. These two tool combinations are approved and recommended:
 - (a) ARINC 615/615A data loader, COM-4963 with dataloader, COM-11626 installed. Connect using adapter cable, COM-12461.
 - (b) laptop, STD-11661 with dataloader, COM-12463 installed. Connect using adapter cable, COM-12462.
- (3) The airplane must be on the ground to install software.
- (4) Make sure you know and install the correct LSAP part numbers.
- (5) Estimated software installation times are as follows:
 - (a) To install all software parts, including WinOS and Linux OS, is approximately 25 minutes.
 - (b) To install WinOS only is approximately 15 minutes.
 - (c) To install all Linux parts is approximately four minutes.
 - (d) To install one Windows or Linux software part is approximately 15 seconds to 10 minutes.
 NOTE: The file size sets the installation time.

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	
COM-4963	Loader - Data, ARINC 615/615A (Model is PMAT 2000)	
	Part #: P2K-615A-06 Supplier: 0BAW0	
	Opt Part #: 80000-05 Supplier: 0BAW0	

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(Continued)

Reference	Description
COM-11626	Dataload Software - ARINC 615A, PMAT2000 (EFB)
	Part #: 82112 Supplier: 0BAW0
COM-12461	Cable - Adapter, Electronic Flight Bag, PMAT2000 (EFB)
	Part #: 80072-4 Supplier: 0BAW0
COM-12462	Cable - Adapter, Electronic Flight Bag, Laptop (EFB)
	Part #: 80088-1 Supplier: 0BAW0
COM-12463	Dataload Software - ARINC 615A, Laptop (EFB)
STD-11661	Laptop - Generic (Minimum requirements: Windows XP SP2,
	500MHz processor, 256MB RAM, 10/100 BaseT Ethernet port,
	CD-ROM/DVD media drive, 60GB hard drive, English Language)

C. Location Zones

Zone	Area	
212	Flight Compartment, Right	

D. Before the Procedure

SUBTASK 46-11-03-470-022

(1) Make sure that the LSAPs to install are available on the internal drive of the ARINC 615/615A data loader, COM-4963, or laptop, STD-11661. Refer to this task:

Compact Disk to Portable Data Loader Software Installation, TASK 46-11-03-860-801

NOTE: The Boeing Company recommends that you install software into the EFB EU(s) from the data loader's internal disk drive. It is not recommended to install software from compact disk (CD), or removable media, directly to the EU.

SUBTASK 46-11-03-490-002

- (2) Connect the portable data loader (PDL) to the FLT DK EFB PORT, on the second observer's panel, P18-1.
 - (a) If using the ARINC 615/615A data loader, COM-4963, connect using adapter cable, COM-12461.
 - (b) If using laptop, STD-11661, connect using adapter cable, COM-12462.
 - (c) Energize the data loader.

SUBTASK 46-11-03-480-002

- (3) Activate the 615A DATALOADER application. Do these steps:
 - (a) Select ARINC 615A DATALOADER from the main menu.
 - 1) On ARINC 615/615A data loader, COM-4963, select from the main menu.
 - 2) On laptop, STD-11661, find and select the desktop icon.
 - (b) Make sure 615A DATALOADER x.x.x screen appears.
 - (c) Enter the correct USER NAME, or press the space bar.
 - NOTE: Follow your airline's procedure for USER NAME.
 - (d) Select the correct tail number.
 - (e) For the connection type, make your selection: ELECTRONIC FLIGHT BAG (EFB).
 - (f) Select CONTINUE.
 - 1) Make sure that the operation menu shows, with the words 615A DATALOADER.

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E. Software Installation Procedure

SUBTASK 46-11-03-860-047

(1) Set the applicable EFB Display Unit (DU) to show the EXTERNAL DATALOAD page.

NOTE: To install software into EU-L, you must set the captain's DU.

To install software into EU-R only, or EU-L and EU-R at the same time, you must set the captain's and first officer's DUs.

- (a) Push the MENU bezel key.
- (b) Make sure the Windows-OS based application buttons show gray in color.

NOTE: Windows OS-based applications can include Performance, Terminal Charts, Documents, Logbook, Video, or others.

- (c) Push the SYSTEM PAGE button, or adjacent Line Select Key (LSK).
- (d) Push the EFB MAINTENANCE button.
- (e) Push the LOAD MODE button.

NOTE: Let the system boot into load mode. This can take approximately three minutes.

During the reboot sequence, the DU can show the words NO INPUT, followed by NO VIDEO. Also, the Windows desktop can show intermittently. This is its usual operation, and not a fault.

- (f) Push the LSK adjacent to EXTERNAL DATALOAD.
 - <u>NOTE</u>: When in load mode, you must push the LSK adjacent to your selection. The touchscreen function is not active when in load mode.
 - NOTE: To stop the dataload operation, select the MENU bezel key or the BACK key (<=). When the options CANCEL and CONFIRM show, push CONFIRM to stop the dataload operation. Push CANCEL to go back to the dataload operation.

SUBTASK 46-11-03-860-011

- (2) Do the steps that follow to install one or more LSAPs.
 - (a) Using the 615A DATALOADER application, from the operation menu, make your selection: UPLOAD.
 - 1) Make sure the SELECT A TARGET window shows.
 - (b) Select the GREEN BOX for target (EU-L, EU-R or both) you want to load.

NOTE: The data loader will not see a target unless the target EFB is set to EXTERNAL DATALOAD, and you have correct connections.

- 1) If the data loader does not show a target EU, make sure cables are connected properly and the applicable DU(s) show the DATA LOAD page.
- 2) If the data loader shows TARGET NOT FOUND, then make sure that the applicable DU shows the DATA LOAD page.
- (c) Select CONTINUE.
- (d) Make sure the UPLOAD EU window shows.
- (e) Set the SELECT LSAP SOURCE as follows:



- Select the INTERNAL MSD if the software is installed on the hard drive with the LOADSTAR system.
 - NOTE: It is very important that you install software into the EFB EU(s) from the data loader's internal disk drive. The Boeing Company does not recommend you install software to the EFB EU(s) from a removable media source.
- 2) Or, select the REMOVABLE MEDIA, CD-ROM drive.
- (f) If applicable, select the correct model and tail number.
- (g) Select the software part number(s) to install.

Figure 201 or Figure 202

NOTE: The installation of Windows OS takes approximately 15 minutes.

- (h) Select CONTINUE and make sure the CONFIRM UPLOAD window shows.
- (i) Select CONTINUE UPLOAD.
- (j) When the software installation is complete, the PROGRESS bar is green in color and STATUS changes to COMPLETED.
 - 1) To get data about the installation, make your selection: SHOW REPORT. This step is optional.
 - 2) If you have more software to install, start at the step above that says "Select UPLOAD".
 - 3) If the Portable Data Loader (PDL) shows FAILED or ABORTED, and the progress bar is red in color, then install the software again.
- (k) When the software installation is complete, push the MENU button key or the BACK button (<=) on the applicable DUs.
 - 1) When the CANCEL and CONFIRM options show, select CONFIRM.
 - NOTE: Before you push the REBOOT TO MAIN button and exit LOAD MODE, make sure you are complete with all operations in LOAD MODE.
 - 2) Push the REBOOT TO MAIN button and make sure the EFB MAIN MENU shows on the applicable DU(s).

SUBTASK 46-11-03-700-008

(3) Make sure that the software is loaded and operates correctly.

Electronic Unit - Software Check, TASK 46-11-03-860-803.

Figure 201 or Figure 202, and

(a) Make sure that you do the configuration comparison specified in the software check.

F. Put the Airplane Back to Its usual Condition

SUBTASK 46-11-03-080-002

- (1) If there is no additional requirement, shut-down the PDL. Do the steps that follow:
 - (a) If using the ARINC 615/615A data loader, COM-4963, click once on the GO BACK button.
 - 1) Make sure that the PMAT 2000 MAIN MENU shows.
 - 2) Make your selection: Shutdown System.
 - NOTE: The shutdown function causes the dataloader to stop operation. The EFB continues to operate.
 - 3) Disconnect the adapter cable, COM-12461.

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- (b) If using the laptop, STD-11661:
 - 1) Make your selection: File > Close from the browser's drop-down menu.
 - 2) Make your selection: Start button (lower left corner of screen) > Shut Down.
 - 3) Disconnect the adapter cable, COM-12462.

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LSAP NAME 1	P/N 1	NOTES
ADM	ACZxx-811F-yyyy	2
DACORE	ACZxx-7YWU-yyyy	2
FLIGHT_MM	ACZxx-811G-yyyy	2
MAINTENANCE MODE	ACZxx-8049-yyyy	3
PART 121 LINUX	BFBxx-L121-yyyy	
PART 25 LINUX	BFBxx-L025-yyyy	

EFB LINUX SYSTEM - MANDATORY SOFTWARE PARTS

LSAP NAME 1	P/N 1	NOTES
ADC APPLICATION	BFBxx-ADCP-yyyy	
ADC CUSTOMER CONFIG	BFBxx-ADCC-yyyy	
ADC SUPPLIER CONFIG	BFBxx-ADCS-yyyy	
APP_SYS_SUP	ACZxx-805A-yyyy	
DDM APPLICATION	JEPxx-DMEP-yyyy	
EFB SERVICES	BFBxx-ESRV-yyyy	
EFB WIRELESS SW	OPTxx-EWCB-yyyy	
PART 121 WINDOWS	BFBxx-W121-yyyy	
PART 25 WINDOWS	BFBxx-W025-yyyy	
WINDOWS OS	ACZxx-8241-yyyy	
WPM APPLICATION	BFBxx-WPMA-yyyy	
WPM CFG AND DRIVERS	BFBxx-WPMC-yyyy	

EFB WINDOWS SYSTEM - MANDATORY SOFTWARE PARTS

1	SPECIFIC	PARTS	DATA	SHOW	N IS	FOR	EXAMPL	.E	ONLY		REFER	T0
	OPERATOR	'S ENG	INEER	ING F	OR TI	HE C	ORRECT	PΑ	RTS	DAT	Α.	

2 TO REMOVE THIS LSAP, YOU MUST REIMAGE THE PARTITION.

THIS LSAP IS INSTALLED INTO FLASH MEMORY USING LOAD MODE. THE LSAP CAN BE UPDATED, BUT NOT ERASED OR REMOVED.

1879504 S0000344440_V3

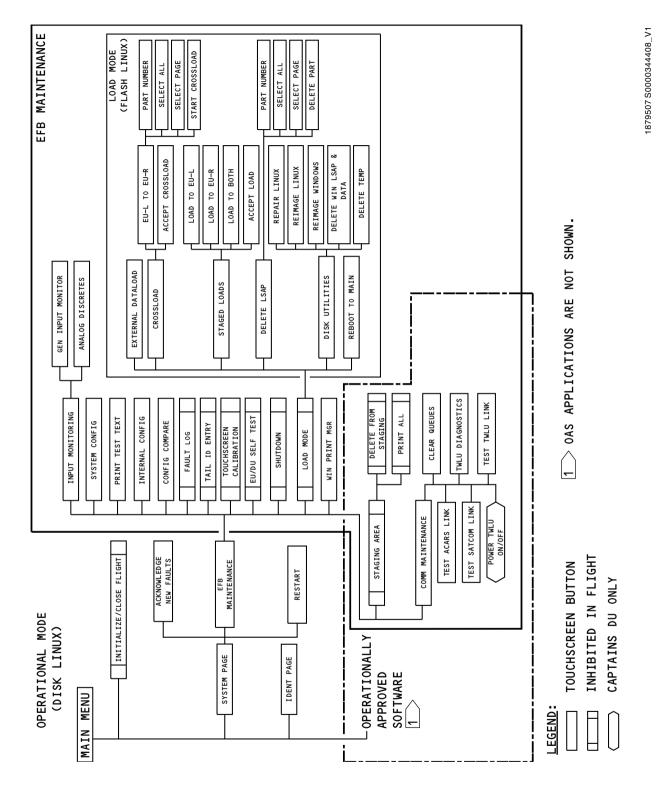
EFB Software Figure 201/46-11-03-990-823

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EFB - Menu Flow Diagram Figure 202/46-11-03-990-822

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TASK 46-11-03-470-801

4. Electronic Unit - Crossload Software Installation

A. General

- (1) This procedure gives the steps to install software to one Electronics Unit (EU) from the side-opposite EU.
- (2) The aircraft must be on the ground before you can crossload software.
- (3) Estimated software installation times are as follows:
 - (a) To crossload all software parts, including WinOS and Linux OS, is approximately 25 minutes.
 - (b) To crossload WinOS only is approximately 15 minutes.
 - (c) To crossload all Linux parts is approximately four minutes.
 - (d) To crossload one Windows or Linux software part is approximately 15 seconds to 10 minutes.

NOTE: The file size sets the installation time.

B. References

Reference	Title
46-19-00-470-801	ADEL EU Crossload Data LSAPs (P/B 201)
46-19-00-970-803	How to Find if EU Software was Installed with ADEL or Load Mode (P/B 201)

C. Location Zones

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

D. Determine the Airplane Configuration

SUBTASK 46-11-03-860-089

- (1) Do these steps before you continue to the Crossload Procedure below.
 - (a) Look at the EFB Main Menu to find if the airplane is ADEL-Enabled.
 - (b) If the EFB Main Menu shows a DATA LOAD button, the airplane is ADEL-Enabled. Do the steps that follow:
 - 1) Do this task: (How to Find if EU Software was Installed with ADEL or Load Mode, TASK 46-19-00-970-803).
 - a) If the list of LSAP(s) to be crossloaded was installed with only ADEL, do not continue with the Crossload Procedure below. Do this alternate task: (ADEL EU Crossload Data LSAPs, TASK 46-19-00-470-801).
 - b) If the list of LSAP(s) to be crossloaded was installed with only LOAD MODE, continue with the Crossload Procedure below.
 - c) If the list of LSAP(s) to be crossloaded was installed with LOAD MODE and ADEL:
 - <1> Continue with the Crossload Procedure below for LSAPs installed with LOAD MODE.
 - Then, do this alternate task for the LSAPs installed with ADEL: (ADEL EU Crossload Data LSAPs, TASK 46-19-00-470-801).

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- (c) If the EFB Main Menu does not show a DATA LOAD button, the airplane is not ADEL-Enabled.
 - 1) Continue with the steps that follow.

E. Crossload Procedure

SUBTASK 46-11-03-860-057

- (1) Set the captain's and first officer's EFB display units to show the CROSSLOAD page:
 - (a) Push the MENU bezel key.
 - (b) Make sure the Windows-OS based application buttons show gray in color.

NOTE: Windows OS-based applications can include Performance, Terminal Charts, Documents, Logbook, Video, or others.

- (c) Push the SYSTEM PAGE button, or adjacent Line Select Key (LSK).
- (d) Push the EFB MAINTENANCE button.
- (e) Push the LOAD MODE button.

NOTE: After you make the LOAD MODE selection, the touchscreen buttons show cyan in color, the message IN PROGRESS shows above the LOAD MODE button, and then the LOAD MODE page shows. This sequence can take approximately three minutes.

The load mode function causes the EU to operate from the flash Linux partition. During this sequence, the DU can show the words NO INPUT, followed by NO VIDEO. Also, the Windows desktop can show intermittently. This is its usual operation, and not a fault.

- (f) Push the CROSSLOAD button.
 - Make sure that the CROSSLOAD page shows on both the captain's, and first officer's DU.

SUBTASK 46-11-03-860-058

(2) Set the target EFB as follows:

NOTE: The target EFB is the EU that will receive the software installation. You must set the target EFB before you set the source EFB.

- (a) Push the LSK adjacent to ACCEPT CROSSLOAD.
- (b) To stop and exit with no software changes, push the BACK (<=) bezel key. When the words CANCEL and CONFIRM show, then push CONFIRM to stop and exit the crossload. Or, push CANCEL to continue with the crossload.

SUBTASK 46-11-03-860-059

(3) Set the source EFB as follows:

NOTE: The source EFB is the EU that will install the software into the target EU.

- (a) Push the LSK adjacent to CROSSLOAD SOFTWARE.
- (b) To stop and exit with no software changes, push the BACK (<=) bezel key. When the words CANCEL and CONFIRM show, then push CONFIRM to stop and exit the crossload. Or, push CANCEL to continue with the crossload.

SUBTASK 46-11-03-470-035

- (4) Make your selection of one or more software part number(s) to crossload. Do the steps that follow.
 - (a) Push the LSK adjacent to applicable software part number, or part numbers.

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- 1) To deselect a part, push again the LSK adjacent to that part.
- (b) To select all part numbers on the current page, push the LSK adjacent to SELECT PAGE.
 - To deselect all part numbers on the current page, push the LSK adjacent to DESELECT PAGE.
- (c) To select all part numbers on all pages, push the LSK adjacent to SELECT ALL.
 - To deselect all part numbers on all pages, push the LSK adjacent to DESELECT ALL.

SUBTASK 46-11-03-470-026

- (5) On the source DU, find and push the LSK adjacent to START CROSSLOAD LSK.
 - (a) The START CROSSLOAD button shows on the last page of software parts.
 - (b) On the source Display Unit (DU), make sure the CROSSLOADING page shows, and that it shows all software parts as they load, one part number at a time.
 - (c) Let the sequence continue until the word COMPLETE shows above the START CROSSLOAD button.

SUBTASK 46-11-03-860-060

- (6) Set the target and source EFB to reboot each into flight mode, and show the MAIN MENU. Do these steps on each EFB.
 - (a) Push the MENU bezel key, or back (<=) bezel key, to show the LOAD MODE page.
 - (b) Make your selection: REBOOT TO MAIN.
 - 1) Let the EFB re-boot into flight mode, and show the main menu. This can take approximately eight minutes.

SUBTASK 46-11-03-470-034

- (7) If you installed the Windows OS separately, then do a software installation of all additional LSAP specified by your airline or operator.
 - (a) To begin the crossload procedure again, go to Subtask 46-11-03-860-057 (Step (1) above) of the Crossload Procedure.

F. Installation Check

SUBTASK 46-11-03-710-023

(1) Do a check of the software installation:

Electronic Unit - Software Check, TASK 46-11-03-860-803.

(a) Make sure that you do the configuration comparison check specified in that task. (Electronic Unit - Configuration Comparison, TASK 46-11-03-860-806).

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-03-840-007

- (1) On the captain's and first officer's DU, push the MENU bezel key.
 - (a) Make sure that the captain's and first officer's DUs show the MAIN MENU.

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TASK 46-11-03-860-804

5. Electronic Unit - Software Removal

A. General

- (1) This procedure gives you the steps to remove (erase, or delete) Loadable Software Airplane Part (LSAP) from the Electronic Flight Bag (EFB) electronics unit (EU):
 - EU-L. N46102
 - EU-R, N46202.
- (2) The airplane must be on the ground before you can erase software.
- (3) If you erase Part 121 Linux, or Part 25 Linux, you must install replacements before you exit LOAD MODE.
- (4) To remove one or more of the software parts that follow, you must use the REIMAGE LINUX function. Refer to this task:

Reimage Linux Partition, TASK 46-11-03-470-805.

NOTE: These parts do not show on the DELETE LSAP page.

- ADM
- · APP SYS SUP
- DA CORE
- FLIGHT MM

B. References

Reference	Title
46-19-00-070-802	ADEL EU Data LSAP Removal (P/B 201)
46-19-00-970-803 How to Find if EU Software was Installed with ADEL or Load Mode (P/B 201)	

C. Location Zones

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

D. Determine the Airplane Configuration

SUBTASK 46-11-03-860-090

- (1) Do these steps before you continue to the Software Removal Procedure below.
 - (a) Look at the EFB Main Menu to find if the airplane is ADEL-Enabled.
 - (b) If the EFB Main Menu shows a DATA LOAD button, the airplane is ADEL-Enabled. Do the steps that follow:
 - 1) Do this task: (How to Find if EU Software was Installed with ADEL or Load Mode, TASK 46-19-00-970-803).
 - a) If the list of LSAP(s) to be removed was installed with only ADEL, do not continue with the Software Removal Procedure below. Do this alternate task: (ADEL EU Data LSAP Removal, TASK 46-19-00-070-802).
 - b) If the list of LSAP(s) to be removed was installed with only LOAD MODE, continue with the Software Removal Procedure below.
 - If the list of LSAP(s) to be removed was installed with LOAD MODE and ADEL:

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- <1> Continue with the Software Removal Procedure below for the LSAPs installed with LOAD MODE.
- <2> Then, do this alternate task for the LSAPs installed with ADEL: (ADEL EU Data LSAP Removal, TASK 46-19-00-070-802).
- (c) If the EFB Main Menu does not show a DATA LOAD button, the airplane is not ADEL-Enabled.
 - 1) Continue with the steps that follow.

E. Software Removal Procedure

SUBTASK 46-11-03-860-062

- (1) Determine which Electronics Unit (EU) (right, or left) you will change.
 - (a) To remove software from EU-L, you must use the captain's Display Unit (DU).
 - (b) To remove software from EU-R, you must use the first officer's DU.

SUBTASK 46-11-03-860-063

- (2) Set the applicable DU to show the DELETE LSAP page:
 - (a) Push the MENU bezel key, or BACK (<=) bezel key to show the MAIN MENU page.
 - (b) Make sure the Windows-OS based application buttons show gray in color.
 - <u>NOTE</u>: Windows OS-based applications can include Performance, Terminal Charts, Documents, Logbook, Video, or others.
 - (c) Push the SYSTEM page button.
 - (d) Push the EFB MAINTENANCE button.
 - (e) Push the LOAD MODE button.
 - NOTE: After you make the LOAD MODE selection, the touchscreen buttons show cyan in color, the message IN PROGRESS shows above the LOAD MODE button, and then the LOAD MODE page shows. This sequence can take approximately three minutes.

The load mode function causes the EU to boot from the flash Linux partition. During this sequence, the DU can show the words NO INPUT, followed by NO VIDEO. Also, the Windows desktop can show intermittently. This is its usual operation, and not a fault.

(f) From the LOAD MODE page, push the Line Select Key (LSK) adjacent to DELETE LSAP.

NOTE: When in load mode, you must push the LSK adjacent to the touchscreen button. The touchscreen function does not operate when in load mode.

SUBTASK 46-11-03-470-027

- (3) On the DELETE LSAP page, make your selection of one or more LSAPs to erase:
 - (a) Use the PGUP (page-up) and PGDN (page-down) keys to read all of the pages.
 - (b) To select all LSAPs on the page shown, push the LSK adjacent to SELECT PAGE.
 - NOTE: The SELECT PAGE button will change to show DESELECT PAGE.

 (c) To select all LSAPs on all of the pages, push the LSK adjacent to SELECT ALL.
 - NOTE: The SELECT ALL button will change to show DESELECT ALL.
 - (d) To de-select an LSAP, push the LSK again.

SUBTASK 46-11-03-470-028

(4) Complete the DELETE PARTS step:

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- (a) Push the PGDN bezel key to go to the last page of the list.
- (b) Find and push the LSK adjacent to DELETE PARTS.
 - 1) Make sure the page shows "DO YOU WANT TO CONTINUE TO DELETE?"
- (c) To erase, push the LSK adjacent to CONFIRM.
 - 1) To stop the erase step, push the LSK adjacent to CANCEL.
 - a) The DU shows the DELETE LSAP page with no change.
 - 2) To delete the LSAP(s), push the LSK adjacent to CONFIRM.
 - a) The DU shows the DELETE LSAP page after the changes.
- (d) Set the DU to show the LOAD MODE page:
 - 1) Push the BACK (<=) bezel key.

SUBTASK 46-11-03-470-030

- (5) If you erased one or more of these software parts, you must install replacements at this time:
 - Part 25 Linux
 - · Part 121 Linux.

Use one of these tasks to replace LSAPs:

Electronic Unit Software Installation Using Portable Data Loader, TASK 46-11-03-470-802 or Electronic Unit - Crossload Software Installation, TASK 46-11-03-470-801.

SUBTASK 46-11-03-860-064

- (6) To return to the LOAD MODE page, push the MENU button key, or the BACK button (<=), on the applicable DUs.
 - (a) If the CANCEL and CONFIRM options show, select CONFIRM.

NOTE: Before you push the REBOOT TO MAIN button and exit LOAD MODE, make sure you are complete with all operations in LOAD MODE.

(b) Push the LSK adjacent to REBOOT TO MAIN.

NOTE: The EFB can take up to eight minutes to complete the REBOOT TO MAIN sequence. During this sequence, the DU can show the words NO INPUT, followed by NO VIDEO. Also, the Windows desktop can show intermittently. This is its usual operation, and not a fault.

1) Make sure the EFB MAIN MENU shows on the applicable DU(s).

F. Put the Aircraft Back to Its Usual Condition

SUBTASK 46-11-03-840-008

- (1) Push the MENU bezel key.
 - (a) Make sure the MAIN MENU shows, and the application buttons show gray in color.

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

TASK 46-11-03-860-803

6. Electronic Unit - Software Check

A. General

- (1) This task gives the steps to do a check of the Electronic Flight Bag (EFB) software installed in the left, or right Electronics Unit (EU).
 - EU-L, N46102
 - EU-R, N46202.

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- (2) The color of each part shown on the SYSTEM CONFIG page tells you its condition.
 - (a) An LSAP that shows white in color is serviceable.
 - (b) An LSAP that shows amber in color is unserviceable.
 - (c) An LSAP that shows cyan in color is in the check process. If it is cyan for more than eight minutes, it is unserviceable.

B. References

Reference	Title
46-19-00-970-802	ADEL EU Software Check (P/B 201)

C. Location Zones

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

D. Determine the Airplane Configuration

SUBTASK 46-11-03-860-091

- (1) Do these steps before you continue to the EU Software Check Procedure below.
 - (a) Look at the EFB Main Menu to find if the airplane is ADEL-Enabled.
 - (b) If the EFB Main Menu shows a DATA LOAD button, the airplane is ADEL-Enabled. Do the steps that follow:
 - 1) Do this alternate task: ADEL EU Software Check, TASK 46-19-00-970-802.
 - 2) Do not continue with the EU Software Check Procedure below.
 - (c) If the EFB Main Menu does not show a DATA LOAD button, the airplane is not ADEL-Enabled.
 - 1) Continue with the steps that follow.

E. EU Software Check Procedure

SUBTASK 46-11-03-860-068

- (1) Determine which EU (left or right) you will check.
 - (a) To check EU-L, you must use the captain's Display Unit (DU).
 - (b) To check EU-R, you must use the first officer's DU.

SUBTASK 46-11-03-860-069

- (2) Set the applicable DU to show the SYSTEM CONFIG page.
 - (a) Push the MENU bezel key, or BACK (<=) key to show the EFB MAIN MENU page.
 - (b) Push the SYSTEM PAGE button.
 - (c) Push the EFB MAINTENANCE button.
 - (d) Push the SYSTEM CONFIG button.

SUBTASK 46-11-03-860-070

- (3) Examine the SYSTEM CONFIG page.
 - (a) Use the PGDN and PGUP bezel keys to read all of the pages.
 - (b) Make sure that each LSAP shows white in color.
 - (c) Make sure the correct Loadable Software Airplane Part (LSAP) part numbers show.

NOTE: SYSTEM CONFIG shows the sequence of parts according to the alpha-numeric part number, and not by part name.

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SUBTASK 46-11-03-710-025

- (4) Make sure that EU-L and EU-R each have the same software. Do this task: (Electronic Unit -Configuration Comparison, TASK 46-11-03-860-806).
 - (a) If the software in EU-L and EU-R do not agree, you must correct the problem.

SUBTASK 46-11-03-860-086

- (5) Do a check of the IDENT PAGE on the captain's and first officer's DU:
 - (a) Push the MENU bezel key.
 - (b) Push the IDENT PAGE button.
 - (c) Make sure the effectivity of installed software is within the date range required.

F. Return the Aircraft to its Usual Condition

SUBTASK 46-11-03-860-075

- (1) Push the MENU bezel key on the captain's, and first officer's DU.
 - (a) Make sure the MAIN MENU shows.



TASK 46-11-03-470-803

7. Electronic Unit - Data Download to Portable Data Loader

A. General

- (1) This task gives the steps to download data from the captain's, and first officer's Electronics Unit (EU) to the portable data loader.
- (2) Do this procedure when you want to copy data from the EU(s) to the portable data loader (PDL), or to removable media.
- (3) The EFB requires an ARINC 615A compliant data loader. These combinations are approved and recommended:
 - (a) ARINC 615/615A data loader, COM-4963 with dataloader, COM-11626 installed.
 - (b) laptop, STD-11661 with dataloader, COM-12463 installed.
- (4) The airplane must be on the ground to do this task.

B. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)

C. Tools/Equipment

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

Reference	Description
COM-4963	Loader - Data, ARINC 615/615A (Model is PMAT 2000)
	Part #: P2K-615A-06 Supplier: 0BAW0
	Opt Part #: 80000-05 Supplier: 0BAW0
COM-11626	Dataload Software - ARINC 615A, PMAT2000 (EFB)
	Part #: 82112 Supplier: 0BAW0
COM-12461	Cable - Adapter, Electronic Flight Bag, PMAT2000 (EFB)
	Part #: 80072-4 Supplier: 0BAW0

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Reference	Description	
COM-12462	Cable - Adapter, Electronic Flight Bag, Laptop (EFB)	
	Part #: 80088-1 Supplier: 0BAW0	
COM-12463	Dataload Software - ARINC 615A, Laptop (EFB)	
STD-11661	Laptop - Generic (Minimum requirements: Windows XP SP2, 500MHz processor, 256MB RAM, 10/100 BaseT Ethernet port, CD-ROM/DVD media drive, 60GB hard drive, English Language)	

D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. Prepare for the Procedure

SUBTASK 46-11-03-861-007

If the aircraft is not energized, then supply electrical power.
 Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 46-11-03-865-004

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

Overhead Circuit Breaker Panel, P11

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	8	C46406	CAPTAIN ELECTRONIC FLIGHT BAG
E	21	C46407	F/O ELECTRONIC FLIGHT BAG

F. Download Procedure

SUBTASK 46-11-03-860-085

(1) Set the captain's, or first officer's Display Unit (DU) to show the EXTERNAL DATALOAD page. Do the steps that follow:

NOTE: If you want to download data from EU-R or both EUs, then do the set-up steps that follow using the captain's and first officer's DUs.

If you want to download data only from EU-L, then do the set-up steps that follow for only using the captain's DU.

- (a) On the target EFB, push the MENU bezel key.
- (b) Make sure application buttons for the Windows-OS based applications show gray in color

NOTE: The Boeing Company recommends that the Windows-OS based applications be serviceable (that is, show gray in color) before you reboot into load mode. These applications can include Performance, Terminal Charts, Documents, Logbook, Video, or others. Airport Moving map is a Linux application and can be excluded.

- (c) From the MAIN MENU, select the SYSTEM PAGE button.
- (d) Push the EFB MAINTENANCE button.
- (e) Push the LOAD MODE button.

NOTE: The EFB shows the LOAD MODE page approximately three minutes after you push the LOAD MODE button. During this sequence, the DU can show the words NO INPUT, followed by NO VIDEO. Also, the Windows desktop can show intermittently. This is its usual operation, and not a fault.

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- (f) From the LOAD MODE page, push the EXTERNAL DATALOAD button.
 - 1) Make sure the DU shows the words DATA LOAD.

NOTE: To stop the download operation, push the MENU bezel key or the (<=) (BACK) key. When the words CANCEL and CONFIRM show, push CONFIRM to stop the download operation, or push CANCEL to continue.

SUBTASK 46-11-03-490-001

- (2) Connect the portable data loader to the FLT DK EFB PORT, on the second observer's panel, P18-1
 - (a) If using ARINC 615/615A data loader, COM-4963, connect with adapter cable, COM-12461.
 - (b) If using laptop, STD-11661, connect with adapter cable, COM-12462.
 - (c) Energize the data loader.

SUBTASK 46-11-03-860-015

- (3) Activate the ARINC 615A DATALOADER. Do these steps:
 - (a) If using the ARINC 615/615A data loader, COM-4963 and dataloader, COM-11626, then select from the main menu.
 - (b) If using laptop, STD-11661 and dataloader, COM-12463, then find and select the desktop icon.
 - (c) Make sure 615A DATALOADER x.x.x screen appears.
 - (d) Enter the correct USER NAME, or press the space bar.
 - NOTE: Follow your airline's procedure for USER NAME.
 - (e) Select the correct tail number.
 - (f) Select ELECTRONIC FLIGHT BAG (EFB) for the connection type.
 - (g) Select CONTINUE.
 - 1) Make sure that the operation menu shows, with the words 615A DATALOADER.

SUBTASK 46-11-03-470-031

- (4) Set the application to do an operator-defined download. These are the steps:
 - <u>NOTE</u>: Operator-defined download refers to the transfer of data from the EU to the internal drive of the portable data loader.
 - (a) Select the function: Operator Defined Download.
 - 1) Make sure the window shows with the words: SELECT A TARGET.
 - (b) Set the target EU to download.
 - 1) Select the green box adjacent the target name.
 - 2) You can select EU-L, EU-R, or the two together.
 - If the target EU does not show in the window, make sure the EFB DU shows the words DATA LOAD.
 - (c) Select the CONTINUE button.
 - 1) Make sure the window shows with the words DOWNLOAD LIST.
 - (d) Make your selection of one, or more files for download.
 - 1) You can select one or more at a time, or use the SELECT ALL button.
 - 2) You un-do your selection using the CLEAR SELECTION button.



- (e) Push the START button.
- (f) Let the system work until the progress bar shows green, or red in color.
 - 1) A green bar shows the transfer was successful.
 - 2) A red bar shows the transfer was unsuccessful.
- (g) Adjacent to the colored progress bar, select the CLOSE button.
- (h) You can find the downloaded files at this data loader location:C:\datafiles\Downloads\615A\<date and time stamp>\<filename>.

SUBTASK 46-11-03-470-032

- (5) To exit and show the 615A DATALOADER menu, select the button: GO BACK.
 - (a) When the words CLOSE LOADER, and ONE OR MORE SESSIONS ARE STILL RUNNING, then select YES.
 - (b) Make sure the MAIN MENU shows.

SUBTASK 46-11-03-860-016

- (6) Set the applicable DU, or DUs, to show the MAIN MENU:
 - (a) Push the MENU bezel key, or BACK (<=) bezel key.
 - (b) Select the CONFIRM option.
 - NOTE: Make sure you are complete with all LOAD MODE actions before you select REBOOT TO MAIN and exit LOAD MODE.
 - (c) Select REBOOT TO MAIN.
 - NOTE: The EFB takes approximately eight minutes to reboot, and show the main menu. During this time, the DU can show the words NO VIDEO, and NO INPUT. This is its usual operation, and is not a fault.
 - (d) Make sure the MAIN MENU screen shows on the DU.

G. Put the Aircraft Back to its Usual Condition

SUBTASK 46-11-03-090-001

 Disconnect the data cable from the FLT DK EFB PORT on panel P18-1, if its not needed for other tasks.



TASK 46-11-03-860-805

TAIL ID Check

A. General

(1) This procedure gives the steps to do a check of the aircraft tail identification (ID) number recorded in captain's, and first officer's EFB display units.

NOTE: The TAIL ID number is recorded in the memory of the display unit (DU).

- (2) This procedure shows you how to set the tail ID number in the DU.
- (3) The tail ID numbers entered in the captain's, and first officer's DUs must agree with the tail ID number recorded on the flight compartment placard.
- (4) The aircraft must be on the ground to set, or change the tail identification data.

B. References

Reference	Title	
24-22-00-860-805	Supply Electrical Power (P/B 201)	

ARO ALL



(Continued)

Reference	Title
24-22-00-860-806	Remove Electrical Power (P/B 201)

C. Location Zones

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

D. Prepare for the Tail ID Check

SUBTASK 46-11-03-861-011

(1) If the airplane is not energized, supply electrical power:

Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 46-11-03-865-005

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

Overhead Circuit Breaker Panel, P11

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	8	C46406	CAPTAIN ELECTRONIC FLIGHT BAG
Ε	21	C46407	F/O ELECTRONIC FLIGHT BAG

E. Tail ID Check Procedure

SUBTASK 46-11-03-860-019

(1) Find and examine the aircraft placard, and make a record of the aircraft registration number (tail number).

SUBTASK 46-11-03-860-054

(2) Set the captain's and first officer's DUs to show the IDENT page:

NOTE: Do these steps on both the left and right DUs.

- (a) Push the MENU bezel key.
- (b) Push the IDENT button.

SUBTASK 46-11-03-860-055

- (3) Make sure that each DU agrees with the aircraft registration number:
 - (a) Make sure the captain's DU shows the correct aircraft registration number.
 - 1) If the data is correct, push the MENU bezel key.
 - (b) Make sure the first officer's DU shows the correct aircraft registration number.
 - 1) If the data is correct, push the MENU bezel key.
 - (c) If the TAIL ID on the IDENT page and on the placard do not agree, then do the Set Tail ID procedure that follows.

F. Set the Tail Identification Procedure

SUBTASK 46-11-03-860-020

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(1) Set the target DU to show the TAIL ID ENTRY page:

NOTE: The side-opposite DU must remain serviceable, and not in load mode.

- (a) Push the Back (<=) bezel key, or MENU button.
- (b) Push the SYSTEM PAGE button.
- (c) Push the EFB MAINTENANCE button.



(d) Push the TAIL ID ENTRY button.

NOTE: When you select TAIL ID ENTRY, the EU automatically compares TAIL ID numbers recorded in DU-L and DU-R.

SUBTASK 46-11-03-860-056

- (2) Use the touchscreen keypad, and enter the correct aircraft registration number, and then push SAVE TAIL ID.
 - (a) Make sure that the condition changes to COMPLETE.
 - (b) Make sure the CURRENT TAIL ID agrees with the aircraft registration number.

SUBTASK 46-11-03-860-076

(3) Restart the captain's and first officer's EFBs. Do these steps:

NOTE: This step is required to make sure all applications use the correct data.

- (a) Push the MENU bezel key.
- (b) Push the SYSTEM PAGE button.
- (c) Push the RESTART button.
 - Let the EFB reboot and show the MAIN MENU. This can take approximately eight minutes.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-03-862-004

(1) Remove electrical power if it is not necessary for other tasks:

Remove Electrical Power, TASK 24-22-00-860-806



TASK 46-11-03-860-808

9. Staged Loads - LSAP Installation

A. General

- (1) This task gives the steps to install Loadable Software Airplane Part (LSAP) into the Electronic Flight Bag (EFB) Electronics Unit (EU).
 - (a) EU-L, N46102.
 - (b) EU-R, N46202.
- (2) You can install LSAP from staged loads to EU-L, EU-R, or two at the same time.
- (3) Use this task only when the specified LSAP is available in the staged loads partition of the EU.
 - (a) The LSAP is sent to the EU only by using wireless functions and a ground access point.
 - (b) You can not add LSAP to the staged loads partition.

B. Location Zones

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

C. Before the Installation

SUBTASK 46-11-03-860-027

- (1) Using the captain's Display Unit (DU), make sure that the loadable software airplane parts (LSAPs) are available in the staging area. These are the steps:
 - (a) Push the MENU bezel key.



- (b) Make your selection: SYSTEM PAGE.
- (c) Make your selection: EFB MAINTENANCE.
- (d) Make your selection: STAGING AREA.
- (e) Examine the page for the necessary LSAP.

NOTE: If the part number is not shown, use the touchscreen scroll-bar to continue down the page. The scroll-bar is only available when the page is full.

- 1) Make sure that the necessary LSAP shows as COMPLETE.
- 2) If the LSAP shows the condition PROCESSING, then the LSAP is unserviceable.
- If the work order specifies more than one part, repeat the steps for each LSAP.

D. LSAP Installation - Procedure

SUBTASK 46-11-03-860-028

(1) Set the captain's DU to show the STAGED LOADS page:

NOTE: If you must install an LSAP in EU-R, then do these steps on EFB-L and EFB-R at the same time.

- (a) Push the MENU bezel key.
- (b) Make your selection: SYSTEM PAGE.
- (c) Make your selection: EFB MAINTENANCE.
- (d) Make your selection: LOAD MODE.

NOTE: The EFB shows the LOAD MODE page approximately three minutes after you push the LOAD MODE button. During the reboot sequence, the DU can show the words NO INPUT, followed by NO VIDEO. Also, the Windows desktop can show intermittently. This is its usual operation, and not a fault.

(e) Make your selection: STAGED LOADS.

NOTE: When in load mode, you must use the line select keys in the bezel frame. The touchscreen function does not operate in load mode.

SUBTASK 46-11-03-860-029

- (2) Set the LSAP Destination:
 - (a) On the captain's DU, select one of these three targets:
 - LOAD TO EU-L
 - LOAD TO EU-R
 - · LOAD TO BOTH.
 - (b) Make sure that the page shows LOAD TO XXXX (LOAD TO EU-L, LOAD TO EU-R, or LOAD TO BOTH).
 - (c) To install an LSAP in EU-R, use the first officers DU and make your selection: ACCEPT LOAD.

SUBTASK 46-11-03-470-008

- (3) Select and Install Parts:
 - (a) On the captain's DU, set the list of LSAP to install.
 - To select an LSAP, push the Line Select Key (LSK) adjacent to that LSAP.
 NOTE: Highlighted LSAPs that show green in color will be installed.
 - To cancel a selection, push the LSK adjacent to that LSAP again.

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- To select all of the parts on that page as one selection, push the SELECT PAGE LSK.
- 4) To select all parts on the full list, push the SELECT ALL LSK.
- 5) Make sure that each LSAP that shows green in color is correct for installation.
- (b) If the START LOAD button does not show, use the PGUP/PGDN bezel key to go to the last page.
- (c) On the captain's DU, push the START LOAD LSK.
 - 1) Make sure that LOADING FROM STAGING AREA shows.
 - 2) When the procedure is complete, the DU shows the LOAD TO XXXX page, and COMPLETE above the START LOAD button.
 - 3) If FAILED shows above the START LOAD button, then start again at step (4) above, Select and Install Parts.
- (d) On the captain's DU, press the MENU bezel key.
 - 1) Make sure that the LOAD MODE page shows on the captain's DU.
- (e) If the first officer's DU shows DATA LOAD, set the DU to show the LOAD MODE page:
 - 1) On the first officer's DU, push the MENU or BACK (<=) bezel key.
 - a) Make sure that the DU shows the CANCEL and CONFIRM buttons.
 - 2) Press the CONFIRM LSK.
 - a) Make sure that the first officer's DU shows the LOAD MODE page.

SUBTASK 46-11-03-860-087

- (4) After you complete all LSAP installation tasks, set the two DUs to show the MAIN MENU:
 - (a) On the captain's DU, push the LSK adjacent to REBOOT TO MAIN.
 - (b) If the first officer's DU also shows the LOAD MODE page, push the LSK adjacent to REBOOT TO MAIN.
 - (c) Make sure that the MAIN MENU page shows on each DU.
 NOTE: This step can use approximately six minutes to complete.
 - (d) Continue with the LSAP installation check that follows.

E. Installation Check

SUBTASK 46-11-03-860-031

- (1) Make sure that the installed part, or parts are serviceable. Do this task: (Electronic Unit Software Check, TASK 46-11-03-860-803).
 - (a) Make sure that you do the configuration comparison specified in the software check.

F. Put the Aircraft Back to its Usual Condition

SUBTASK 46-11-03-862-007

- (1) On the captain's and first officer's DUs, push the MENU bezel key.
 - (a) Make sure the MAIN MENU shows.

	END	OF	TASK	
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TASK 46-11-03-470-806

10. EFB Staged Loads Removal

A. General

- (1) This task shows you how to erase loadable software airplane parts (LSAP) from EU-L, and EU-R.
 - NOTE: DU-L and DU-R each can erase staged loads from the applicable EU.
- (2) You can not manually install LSAP to the protected staging area. A staged LSAP is sent to the EU only by an active wireless connection from the ground access point to the Terminal Wireless LAN Unit (TWLU). This can occur automatically. This ground-based server system is referred to as the Boeing e-Plane Ground Support System (BEGSS).
- (3) The airplane must be on the ground to do this task.

B. Location Zones

Zone	Area
117	Main Equipment Center, Left
212	Flight Compartment, Right

C. Staged Load Removal - Procedure

SUBTASK 46-11-03-860-045

- (1) Set the captain's and first officer's Display Unit (DU) to show the DELETE FROM STAGING page:
 - (a) From the MAIN MENU, push the SYSTEM PAGE button, or adjacent line select key (LSK).
 - (b) On the SYSTEM PAGE, push the EFB MAINTENANCE button.
 - (c) On the EFB MAINTENANCE page, push STAGING AREA.
 - (d) On the STAGING AREA CONFIG page, push DELETE FROM STAGING.
 - 1) Make sure that the DELETE FROM STAGING page shows.

SUBTASK 46-11-03-860-046

- (2) Make your selection of staged software parts to erase as follows:
 - (a) To select one software part at a time, push the applicable touchscreen button, or adjacent LSK.
 - (b) To select all software parts that show on the page, push the SELECT PAGE button.
 - (c) To select all software parts that show on all pages, push the SELECT ALL button.

SUBTASK 46-11-03-470-019

(3) To erase all selected software parts, push the DELETE PARTS button, or adjacent LSK.

SUBTASK 46-11-03-710-020

- (4) Do a check of the STAGING AREA CONFIG page.
 - (a) From the EFB MAINTENANCE page, push STAGING AREA.
 - (b) Examine the software parts shown, and make sure that the parts you erased are not present.
 - (c) If the parts shows again, the wireless network has replaced the LSAP automatically. If the part is not the required part, then tell your EFB administrator about this problem.

END		FACIZ	
FNI)	() -	TASK	

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TASK 46-11-03-860-806

11. Electronic Unit - Configuration Comparison

A. General

(1) This procedure gives the steps to make sure that the same Loadable Software Airplane Part (LSAP) are installed on EU-L and EU-R.

B. References

Reference	Title
46-19-00-700-801	ADEL EU Compare Configuration (P/B 201)

C. Location Zones

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

D. Determine the Airplane Configuration

SUBTASK 46-11-03-860-092

- (1) Do these steps before you continue to the Configuration Comparison Procedure below.
 - (a) Look at the EFB Main Menu to find if the airplane is ADEL-Enabled.
 - (b) If the EFB Main Menu shows a DATA LOAD button, the airplane is ADEL-Enabled. Do the steps that follow:
 - 1) Do this alternate task: ADEL EU Compare Configuration, TASK 46-19-00-700-801
 - 2) Do not continue with the Configuration Comparison Procedure below.
 - (c) If the EFB Main Menu does not show a DATA LOAD button, the airplane is not ADEL-Enabled.
 - 1) Continue with the steps that follow.

E. Configuration Comparison Procedure

SUBTASK 46-11-03-860-065

(1) Set the captain's or first officer's Display Unit (DU) to show the CONFIG COMPARE page. Do the steps that follow.

NOTE: For this check, you need to operate only one of the EFBs. It will automatically do a check of the opposite side.

- (a) Push the MENU bezel key.
- (b) Push the SYSTEM PAGE button.
- (c) Push the EFB MAINTENANCE button.
- (d) Push the CONFIG COMPARE button.
 - 1) Let the system operate until a result is shown.
 - When the DU shows the condition NO MISMATCH, then the two EUs contain the same software. This condition is serviceable.

NOTE: The page will show one of four conditions: IN PROGRESS, NO MISMATCH, SOFTWARE MATCH UNABLE, or, THESE PARTS FOUND ONLY ON ONE SIDE.

To print a record of the result, make your selection: PRINT ALL.

NOTE: The print-all button shows only when a mismatch condition exists. This is normal operation, and is not fault.

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- (e) Push the BACK (<=) bezel key.
 - 1) Make sure the EFB MAINTENANCE page shows.

F. Put the Aircraft Back to its Usual Condition

SUBTASK 46-11-03-860-067

- (1) On the captain's and first officer's DUs, push the MENU bezel key.
 - (a) Make sure the MAIN MENU shows.

	OF TASK	
	UE IASK	

TASK 46-11-03-860-807

12. EFB Communication Link Test

A. General

- (1) The COMM LINK test is a check to make sure that the Electronic Flight Bag (EFB) can send, and receive messages through the specified communication link.
- (2) To do this test, you must have access to an active wireless connection for each communication interface to be tested.
- (3) To check the EFB link condition using the TWLU, do the procedure identified as TWLU LINK CHECK.
- (4) To check the EFB link condition using ACARS, do the procedure identified as ACARS LINK CHECK.

B. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
31-41-00-710-801	Airplane Information Management System (AIMS) - Operational Test (P/B 501)
46-11-00-710-801	Electronic Flight Bag - Operational Test (P/B 501)
46-11-07-860-801	Wireless WAN Unit - Activation (P/B 201)

C. Location Zones

Zone	Area
117	Main Equipment Center, Left
118	Main Equipment Center, Right
211	Flight Compartment, Left
212	Flight Compartment, Right

D. Prepare For Test

ARO ALL

SUBTASK 46-11-03-860-022

(1) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 46-11-03-710-016

(2) Make sure that the data communications management function (DCMF) is operational, (Airplane Information Management System (AIMS) - Operational Test, TASK 31-41-00-710-801).

NOTE: DCMF is a software function contained in AIMS.

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SUBTASK 46-11-03-860-039

- (3) Make sure that EFB is operational, (Electronic Flight Bag Operational Test, TASK 46-11-00-710-801).
 - (a) Make sure that the EFB MAIN MENU page shows on the captain's, or first officer's Display Unit (DU).
 - 1) If the MAIN MENU does not show, push the MENU bezel key.

E. TWLU Link Check

SUBTASK 46-11-03-720-002

- (1) Set the EFB to show the COMM MAINTENANCE page as follows:
 - NOTE: To test the links from EU-L, use the captain's display unit. To check the links from EU-R, use the first officer's display unit.
 - (a) Push the MENU bezel button.
 - 1) Make sure that the MAIN MENU page shows on the DU.
 - (b) Push the SYSTEM PAGE button, or adjacent Line Select Key (LSK).
 - 1) Make sure that the SYSTEM PAGE shows on the DU.
 - (c) Push the EFB MAINTENANCE button, or adjacent LSK.
 - 1) Make sure that the EFB MAINTENANCE page shows on the DU.
 - (d) Push the COMM MAINT button, or adjacent LSK.
 - Make sure the COMM MAINTENANCE page shows on the DU.

SUBTASK 46-11-03-750-005

- (2) Do a check of the TWLU Link as follows:
 - (a) On the captain's, or first officer's DU, examine the COMM MAINTENANCE page for TWLU status.
 - 1) Power to the TWLU is set automatically by the network file server.
 - (b) Make sure that the TWLU link condition shows AVAILABLE.
 - The condition shows above the center of the touchscreen, adjacent to the name TWLU.
 - 2) If the condition does not continue beyond ASSOCIATING, then make sure the off-airplane ground access point is serviceable.
 - NOTE: As the TWLU link condition initializes a link with the ground access point, a sequence of conditions will show (for example; associating, associated, securing network, or connecting ECMF). These messages show that the TWLU is negotiating a connection. Allow up to two minutes for each condition to complete.
 - 3) Make sure the condition of the target link shows AVAILABLE.
 - (c) Push the TEST TWLU LINK button.
 - Make sure that the condition, shown above the TEST LINK button, changes to IN PROGRESS.
 - 2) Let the test continue until the result changes to PASSED.
 - NOTE: The time allowed to complete a link test is set by the airline or operator. Each link type can have a different time limit.
 - 3) When the result shows PASSED, then the TWLU link is serviceable.

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F. ACARS Link Check

SUBTASK 46-11-03-750-006

- (1) Do a check of the ACARS link as follows:
 - (a) Examine the ACARS link condition.
 - The condition shows near the center of the touchscreen, adjacent to the ACARS: name.
 - (b) If the condition shows AVAILABLE, push the TEST ACARS LINK button.
 - Make sure that the condition, shown above the TEST LINK button, changes to IN PROGRESS
 - 2) Let the test continue until the result changes to PASSED.
 - NOTE: The time allowed to complete a link test is set by the airline or operator. Each link type can have a different time limit.
 - 3) When the result shows PASSED, then the ACARS link is serviceable.

G. Put the Aircraft Back to its Usual Condition

SUBTASK 46-11-03-440-003

- (1) On the EFB COMM MAINTENANCE page, set the TWLU condition to ENABLED. These are the steps:
 - (a) On the captain's display unit (DU), push the MENU bezel key.
 - (b) Push the SYSTEM PAGE button.
 - (c) Push the EFB MAINTENANCE button.
 - (d) Push the COMM MAINTENANCE button.
 - (e) Push the ENABLE TWLU button.
 - Make sure that the page shows the TWLU condition as AVAILABLE.
 NOTE: The aircraft must be within range of a serviceable Gatelink connection.

SUBTASK 46-11-03-440-001

(2) Activate the TWLU using the NFS maintenance application. Do this task: Wireless WAN Unit - Activation, TASK 46-11-07-860-801

SUBTASK 46-11-03-840-005

(3) Remove electrical power, if its not required for other tasks. This is the task: Remove Electrical Power, TASK 24-22-00-860-806.

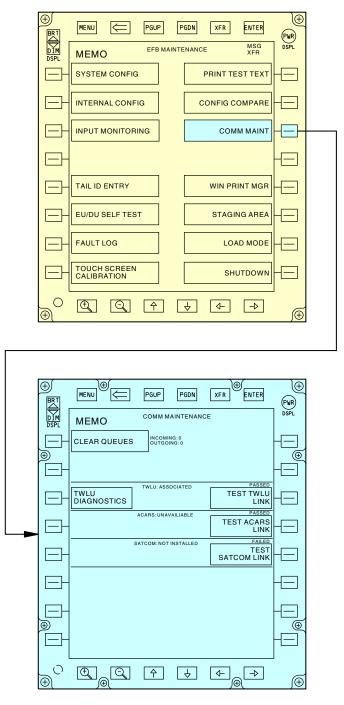


46-11-03

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NOTE:

THE DATA SHOWN ON THE DISPLAY IS ONLY AN EXAMPLE.

1480134 S0000270330_V2

COMMUNICATIONS LINK TEST Figure 203/46-11-03-990-819

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TASK 46-11-03-710-804

13. Print Test Text Check

(Figure 204)

A. General

(1) This check gives you the steps to print ARINC-429 formatted text from the electronic flight bag (EFB) to the flight compartment printer.

NOTE: This task does not apply for graphics-based printing.

(2) You can do this check from the captain's, or first officer's EFB Display Unit (DU).

B. Print Test Text - Procedure

SUBTASK 46-11-03-860-080

- (1) Set the captain's, or first officer's EFB DU to show the PRINT TEST TEXT page as follows:
 - (a) Push the MENU bezel key.
 - (b) Push the SYSTEM PAGE button, or adjacent Line Select Key (LSK).
 - (c) Push the EFB MAINTENANCE button, or adjacent LSK.
 - (d) Push the PRINT TEST TEXT button, or adjacent LSK.
 - 1) Make sure that DU shows the words PRINTER TEST TEXT.
 - Make sure the words PRINTER READY shows in the lower right corner, above the PRINT button.

SUBTASK 46-11-03-860-081

- (2) Push the PRINT button, or the adjacent LSK.
 - (a) Make sure that the printer gives you a page that agrees with the text specified on DU.

C. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-03-860-082

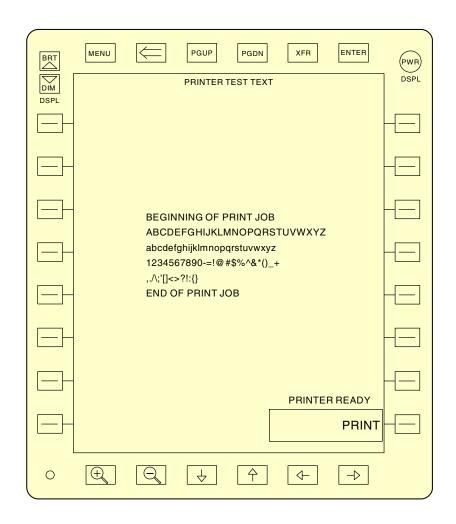
EFFECTIVITY

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- (1) Push the MENU bezel key.
 - (a) Make sure the MAIN MENU shows, and the application buttons show gray in color.

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





NOTE:

THE DATA SHOWN ON THE DISPLAY IS ONLY AN EXAMPLE.

1934438 S0000366364_V2

Display Unit - Print Test Text Page Figure 204/46-11-03-990-824

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46-11-03

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TASK 46-11-03-710-802

14. Windows Print Manager Check

A. General

- (1) This check gives you the steps to print a standard graphical image file to the flight deck printer.

 NOTE: This check does not apply to ARINC 429 text data.
- (2) The EFB and the flight deck printer must be serviceable to complete this check.
- (3) You can do this check from the captain's, or first officer's EFB Display Unit (DU).

B. Location Zones

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

C. Print Manager Check - Procedure

SUBTASK 46-11-03-860-038

- (1) Set the captain's, or first officer's EFB DU to show the WINDOWS PRINT MANAGER page as follows:
 - (a) Push the MENU bezel key.
 - (b) Push the SYSTEM PAGE button, or adjacent Line Select Key (LSK).
 - (c) Push the EFB MAINTENANCE button, or adjacent LSK.
 - (d) Push the WIN PRINT MGR button, or adjacent LSK.
 - 1) Make sure that the DU shows the Windows Print Manager page.

SUBTASK 46-11-03-710-014

- (2) On the Windows Print Manager page, push the TEST PRINT button, or adjacent LSK.
 - (a) Make sure that the printer gives you a page that agrees with the data specified on DU.

D. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-03-860-077

- (1) Push the MENU bezel key.
 - (a) Make sure the MAIN MENU shows, and the application buttons show gray in color.

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 END	OF TA	15K -	

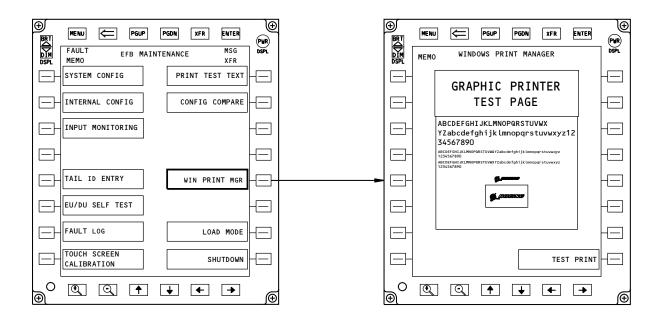
46-11-03

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NOTE: THE DATA SHOWN ON

THE DISPLAY IS ONLY

AN EXAMPLE.

1370929 S0000248464_V1

EFB Windows Print Manager Figure 205/46-11-03-990-810

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TASK 46-11-03-470-804

15. Reimage Windows Partition

General

This task gives the steps to re-image (erase) the Windows drive-partition in the captain's, or first officer's Electronics Unit (EU).

NOTE: If you reimage WINDOWS, the WINDOWS O/S (BFB-xx-W2KT-zzzz) will be deleted. To reload the WINDOWS O/S requires approximately fifteen minutes.

After the partition is erased, you must install again the Windows operating system, all applicable software applications, and data files.

References B.

Reference	Title
46-11-00-710-801	Electronic Flight Bag - Operational Test (P/B 501)

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-4963	Loader - Data, ARINC 615/615A (Model is PMAT 2000)
	Part #: P2K-615A-06 Supplier: 0BAW0
	Opt Part #: 80000-05 Supplier: 0BAW0

D. Location Zones

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

E. Prepare for the Procedure

SUBTASK 46-11-03-470-011



MAKE SURE THAT YOU KNOW AND OBEY YOUR AIRLINE PROCEDURE. THE REIMAGE WINDOWS FUNCTION ERASES FILES. YOUR AIRLINE PROCEDURE CAN REQUIRE YOU TO COPY ALL DOWNLOADABLE LOG FILES BEFORE YOU REIMAGE WINDOWS. IF YOU DO NOT KEEP A COPY OF THE DATA, ALL FILES AND DATA WILL BE ERASED.

Make a back-up copy all essential data from the EU to the ARINC 615/615A data loader, (1) COM-4963. Do this task:

Electronic Unit - Data Download to Portable Data Loader, TASK 46-11-03-470-803.

F. Reimage Windows Procedure

SUBTASK 46-11-03-470-012

EFFECTIVITY

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- Set the captain's, or first officer's Display Unit (DU) to show the DISK UTILITIES page.
 - From the MAIN MENU, push the SYSTEM PAGE button, or adjacent Line Select Key (LSK).
 - (b) Push the EFB MAINTENANCE button.

46-11-03

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(c) Push the LOAD MODE button.

NOTE: The EFB shows the LOAD MODE page approximately three minutes after you push the LOAD MODE button. During the reboot sequence, the DU can show the words NO INPUT, followed by NO VIDEO. Also, the Windows desktop can show intermittently. This is its usual operation, and not a fault.

(d) Push the LSK adjacent to DISK UTILITIES.

NOTE: When in LOAD MODE, the touchscreen is not active. You must push the bezel key adjacent to your selection.

SUBTASK 46-11-03-470-013

- (2) Push the LSK adjacent to REIMAGE WINDOWS.
 - (a) Read and understand the warning message on the DU.
 - To stop the task, with no changes to the software, push the LSK adjacent to CANCEL.
 - 2) To continue the task, and erase the Windows partition, push the LSK adjacent to CONFIRM.
 - (b) After the reimage function is complete, push the MENU bezel key.
 - 1) Make sure the DU shows the LOAD MODE page.

NOTE: Do not select REBOOT TO MAIN. You must install the new operating system before you exit LOAD MODE.

SUBTASK 46-11-03-710-017

- (3) Make sure that the reimage is successful.
 - (a) From the LOAD MODE page, push the button adjacent to DELETE LSAP.
 - 1) Make sure that DELETE LSAP page shows no software parts.

SUBTASK 46-11-03-470-014

(4) Make sure you install the new Windows operating system, and all applicable applications and files. Do one of these tasks:

Electronic Unit Software Installation Using Portable Data Loader, TASK 46-11-03-470-802 or Electronic Unit - Crossload Software Installation, TASK 46-11-03-470-801.

SUBTASK 46-11-03-710-018

(5) Make sure that you do an operational check. This is the task:

Electronic Flight Bag - Operational Test, TASK 46-11-00-710-801



TASK 46-11-03-470-805

16. Reimage Linux Partition

A. General

(1) This task gives the steps to re-image (erase) the Linux drive-partition in the captain's, or first officer's Electronics Unit (EU).

NOTE: If you reimage Linux, the Linux O/S will be erased. To install again the Linux O/S requires approximately fifteen minutes.

(2) After the partition is erased, you must install again the Linux operating system, all applicable software applications, and data files.

ARO ALL



B. References

Reference	Title
46-11-00-710-801	Electronic Flight Bag - 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		
COM-4963	Loader - Data, ARINC 615/615A (Model is PMAT 2000)		
	Part #: P2K-615A-06 Supplier: 0BAW0		
	Opt Part #: 80000-05 Supplier: 0BAW0		

D. Location Zones

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

E. Prepare for the Procedure

SUBTASK 46-11-03-470-015



MAKE SURE THAT YOU KNOW AND FOLLOW YOUR AIRLINE PROCEDURE. THE REIMAGE LINUX FUNCTION ERASES FILES. YOUR AIRLINE PROCEDURE CAN REQUIRE YOU TO COPY ALL DOWNLOADABLE LOG FILES BEFORE YOU REIMAGE LINUX. IF YOU DO NOT KEEP A COPY OF ALL APPLICABLE LINUX PARTITIONS, ALL FILES AND DATA WILL BE ERASED.

(1) Make a back-up copy all essential data from the EU to the ARINC 615/615A data loader, COM-4963. Do this task:

Electronic Unit - Data Download to Portable Data Loader, TASK 46-11-03-470-803.

F. Reimage Linux Procedure

SUBTASK 46-11-03-860-041

- (1) Set the captain's, or first officer's Display Unit (DU) to show the DISK UTILITIES page. Do the steps that follow.
 - (a) Push the MENU bezel key.
 - (b) Make sure the Windows-OS based application buttons show gray in color.

<u>NOTE</u>: Windows applications can include: Performance, Terminal Charts, Documents, Logbook, Video, or other names.

- (c) Push the SYSTEM PAGE button, or adjacent Line Select Key (LSK).
- (d) Push the EFB MAINTENANCE button.
- (e) Push the LOAD MODE button.

NOTE: The EFB shows the LOAD MODE page approximately three minutes after you push the LOAD MODE button. During the reboot sequence, the DU can show the words NO INPUT, followed by NO VIDEO. Also, the Windows desktop can show intermittently. This is its usual operation, and not a fault.

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ARO ALL



(f) Push the LSK adjacent to DISK UTILITIES.

NOTE: When in LOAD MODE, the touchscreen is not active. You must push the bezel key adjacent to your selection.

SUBTASK 46-11-03-470-016

- (2) Push the LSK adjacent to REIMAGE LINUX.
 - (a) Read and understand the warning message on the DU.
 - To stop the task, with no changes to the software, push the LSK adjacent to CANCEL.
 - To continue the task, and erase the Linux partition, push the LSK adjacent to CONFIRM.
 - (b) After the reimage function is complete, push the MENU bezel key.
 - 1) Make sure the DU shows the LOAD MODE page.

NOTE: Do not select REBOOT TO MAIN. You must install the new operating system before you exit LOAD MODE.

SUBTASK 46-11-03-860-042

- (3) Make sure that the reimage is successful.
 - (a) From the LOAD MODE page, push the button adjacent to DELETE LSAP.
 - 1) Make sure that DELETE LSAP page shows no software parts.

SUBTASK 46-11-03-470-017

(4) Make sure you install the new Linux operating system, and all applicable applications and files. Do one of these tasks:

Electronic Unit Software Installation Using Portable Data Loader, TASK 46-11-03-470-802 or Electronic Unit - Crossload Software Installation, TASK 46-11-03-470-801.

SUBTASK 46-11-03-710-019

· EFFECTIVITY ·

ARO ALL

(5) Make sure that you do an operational check. This is the task:

Electronic Flight Bag - Operational Test, TASK 46-11-00-710-801

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



ELECTRONIC UNIT - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
 - (1) Removal of the electronic unit (EU)
 - (2) Installation of the EU.
- B. To make sure the EU is installed correctly, you must do the EU System Test.
- C. The left and right EUs are installed in the main equipment center. The left EU is in the E1-3 shelf. The right EU is in the E4-2 shelf.

TASK 46-11-03-000-801

2. Electronic Unit Removal

(Figure 401)

A. General

- (1) This task gives the steps to remove the Electronic Flight Bag (EFB) Electronics Unit (EU).
 - (a) EU-L, N46102, is installed at shelf E1-3.
 - (b) EU-R, N46202, is installed at shelf E4-2.

B. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)
20-10-01-000-801	E/E Box Removal (P/B 401)
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity	
1	Electronic unit	25-17-01-32-255	ARO ALL	
		25-71-91-50-155	ARO ALL	
		46-11-03-01-011	ARO ALL	
		46-11-03-02-011	ARO ALL	

D. Location Zones

Zone	Area
117	Main Equipment Center, Left
118	Main Equipment Center, Right
211	Flight Compartment, Left
212	Flight Compartment, Right

E. Access Panels

Number	Name/Location		
117AL	Main Equipment Center Access Door		

F. Removal Procedure

SUBTASK 46-11-03-000-001

- (1) Get access to the main equipment center.
 - (a) Refer to:(Finding an Access Door or Panel on the Fuselage, TASK 06-41-00-800-801).

ARO ALL



(b) Open this access panel:

117AL Main Equipment Center Access Door

SUBTASK 46-11-03-860-084

- (2) Examine the captain's and first officer's electronic unit [1]. If the EFB is energized, do these steps:
 - (a) Push the MENU bezel key.
 - (b) On the MAIN MENU, make sure that all buttons for the Windows applications show gray in color.

NOTE: Windows applications can include: Performance, Terminal Charts, Documents, Logbook, Video, or other names.

(c) If the EFB is in LOAD MODE, you must reboot to show the MAIN MENU and gray application buttons before you remove electrical power.

SUBTASK 46-11-03-000-002

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

Left Power Management Panel, P110

Row	Col	Number	<u>Name</u>
ARO 00	1-013		
В	27	C46411	NETWORK FILE SERVER
ARO 01	4-999		
В	27	C46418	NFS - L

Overhead Circuit Breaker Panel, P11

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO AL	L		
Е	8	C46406	CAPTAIN ELECTRONIC FLIGHT BAG
Е	21	C46407	F/O ELECTRONIC FLIGHT BAG

This circuit breaker is inoperative and should remain open:

Right Power Management Panel, P210

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 01	4-999		
В	11	C46419	NFS - R (INOP)

ARO ALL

SUBTASK 46-11-03-020-001



DO NOT LOOK INTO THE END OF A FIBER-OPTIC CABLE. THERE IS A RISK OF LASER RADIATION, WHICH YOU WILL NOT SEE. LASER RADIATION IS DANGEROUS FOR YOUR EYES.



DO NOT TOUCH THE LRU CONNECTOR PINS. THE LRU IS SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE LRU.

(4) To remove the applicable electronic unit [1], do these tasks:

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EFFECTIVITY



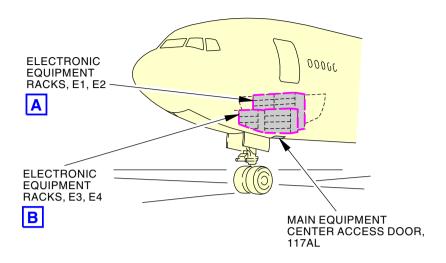
ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803, and E/E Box Removal, TASK 20-10-01-000-801.

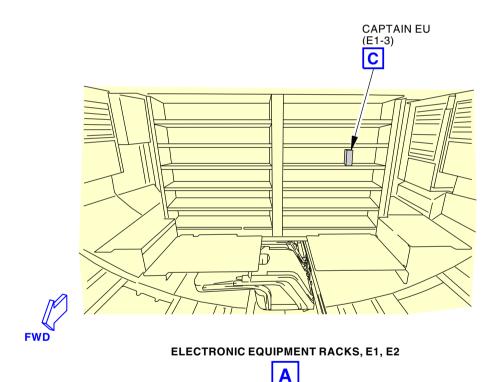
(a) Put protective caps on the electrical connectors.

——— END OF TASK ———

ARO ALL







W37761 S0000122663_V2

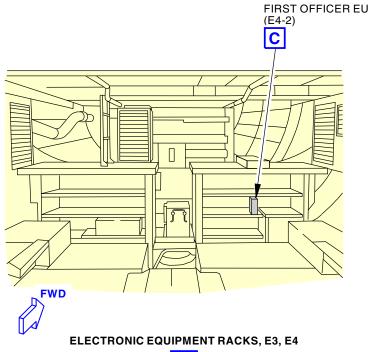
ELECTRONIC UNIT (EU) INSTALLATION Figure 401/46-11-03-990-801 (Sheet 1 of 2)

ARO ALL
D633W101-ARO

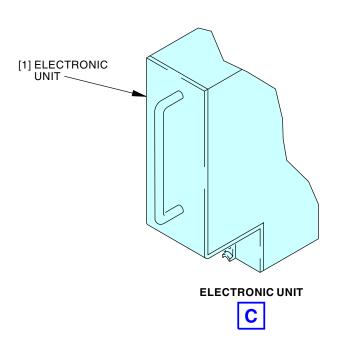
46-11-03

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W37764 S0000122666_V2

ELECTRONIC UNIT (EU) INSTALLATION Figure 401/46-11-03-990-801 (Sheet 2 of 2)

ARO ALL
D633W101-ARO

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TASK 46-11-03-400-801

3. Electronic Unit Installation

(Figure 401)

A. General

- (1) This task gives the steps to install the Electronic Flight Bag (EFB) Electronics Unit (EU).
 - (a) EU-L, N46102, is installed at shelf E1-3.
 - (b) EU-R, N46202, is installed at shelf E4-2.

B. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)
20-10-01-400-801	E/E Box Installation (P/B 401)
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
46-11-00-710-801	Electronic Flight Bag - Operational Test (P/B 501)
46-11-03-860-803	Electronic Unit - Software Check (P/B 201)

C. Location Zones

Zone	Area
117	Main Equipment Center, Left
118	Main Equipment Center, Right
211	Flight Compartment, Left
212	Flight Compartment, Right

D. Access Panels

Number	Name/Location
117AL	Main Equipment Center Access Door

E. Prepare for Installation

SUBTASK 46-11-03-820-001

(1) For the applicable electronic unit [1]:

Make sure that these circuit breakers are open:

Overhead Circuit Breaker Panel, P11

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Е	8	C46406	CAPTAIN ELECTRONIC FLIGHT BAG
Е	21	C46407	F/O ELECTRONIC FLIGHT BAG

SUBTASK 46-11-03-010-001

(2) Make sure that this access panel is open:

<u>Number</u>	Name/Location
117AL	Main Equipment Center Access Door

(a) You can refer to:(Finding an Access Door or Panel on the Fuselage, TASK 06-41-00-800-801).

F. EFB Electronic Unit Installation

SUBTASK 46-11-03-910-001

(1) Do this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-41-01-400-803.

ARO ALL

46-11-03

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SUBTASK 46-11-03-420-001



DO NOT LOOK INTO THE END OF A FIBER-OPTIC CABLE. THERE IS A RISK OF LASER RADIATION, WHICH YOU WILL NOT SEE. LASER RADIATION IS DANGEROUS FOR YOUR EYES.



MAKE SURE THAT THE FIBER-OPTIC CONNECTOR AND RECEPTACLE ARE CLEAN WHEN YOU CONNECT THEM. DIRTY CONNECTORS CAN CAUSE DAMAGE TO EQUIPMENT.



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

(2) To install the electronic unit [1], do this task: E/E Box Installation, TASK 20-10-01-400-801.

G. Installation Test

SUBTASK 46-11-03-865-007

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

Left Power Management Panel, P110

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 00	1-013		
В	27	C46411	NETWORK FILE SERVER
ARO 01	4-999		
В	27	C46418	NFS - L

Overhead Circuit Breaker Panel, P11

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO AL	L		
E	8	C46406	CAPTAIN ELECTRONIC FLIGHT BAG
E	21	C46407	F/O ELECTRONIC FLIGHT BAG

This circuit breaker is inoperative and should remain open:

Right Power Management Panel, P210

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 01	4-999		
В	11	C46419	NFS - R (INOP)

ARO ALL

SUBTASK 46-11-03-860-002

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 46-11-03-710-002

(3) Let the EFB operate until the Display Unit (DU) shows the MAIN MENU.

NOTE: The EFB can take up to eight (8) minutes to show the main menu. During this time, the DU can flash intermittently, and show the words NO INPUT, and NO VIDEO. This is normal, and is not a fault.

ARO ALL



SUBTASK 46-11-03-710-027

(4) Do this task: Electronic Flight Bag - Operational Test, TASK 46-11-00-710-801.

SUBTASK 46-11-03-710-003

(5) Make sure the correct software parts are installed in the electronic unit [1]. Do this task: Electronic Unit - Software Check, TASK 46-11-03-860-803.

H. Put the Aircraft Back to its Usual Condition

SUBTASK 46-11-03-860-040

- EFFECTIVITY -

ARO ALL

(1) Remove electrical power. This is the task: Remove Electrical Power, TASK 24-22-00-860-806.

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



WIRELESS WAN UNIT - MAINTENANCE PRACTICES

1. General

- A. This procedure contains the tasks that follow.
 - (1) How to energize and activate the Wireless WAN Unit (WWU).
 - (2) How to deactivate and de-energize the WWU.
 - (3) How to install software parts into the WWU.
 - (4) How to identify the software installed in the WWU.
 - (5) How to replace the SIM card in the WWU.

TASK 46-11-07-860-801

2. Wireless WAN Unit - 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) To do this task, the weight-on-wheels discrete must be in the on-ground condition.

B. References

Reference	Title
24-22-00 P/B 201	AC GENERATION AND BUS CONTROL - MAINTENANCE PRACTICES
24-22-00-860-806	Remove Electrical Power (P/B 201)
45-10-00-910-810	How to Operate the MAT in the Flight Compartment (P/B 201)
46-13-00-480-801	Onboard Network System 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 - Maintenance
	Part #: G45004-1 Supplier: 81205
	Part #: G45004-3 Supplier: 81205
	Opt Part #: G45001-101 Supplier: 81205
	Opt Part #: G45002-1 Supplier: 81205
	Opt Part #: G45002-10 Supplier: 81205
	Opt Part #: G45002-20 Supplier: 81205
	Opt Part #: G45002-25 Supplier: 81205
	Opt Part #: G45002-29 Supplier: 81205
	Opt Part #: J45001-1 Supplier: 81205
	Opt Part #: J45003-1 Supplier: 81205

ARO ALL



D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. Prepare for the Procedure

SUBTASK 46-11-07-860-009

(1) If the aircraft is not energized, then supply electrical power, (PAGEBLOCK 24-22-00/201).

ARO 001-004

SUBTASK 46-11-07-480-003

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

ARO 005-999

SUBTASK 46-11-07-480-006

- (3) Get access to the ONS maintenance browser.
 - (a) You can use the Maintenance Access Terminal (MAT) (How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810).
 - (b) You can use the maintenance device, SPL-11321, (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

ARO ALL

F. Discrete Status using TWLU Discretes - Procedure

ARO 001-010

SUBTASK 46-11-07-440-001

- (1) Set the ONS maintenance browser to show TWLU DISCRETES page. These are the steps:
 - (a) Using the ONS maintenance browser, make your selection: CONDITION MONITORING
 > OFFBOARD LINKS > TWLU.
 - (b) In the row of TWLU functions, make your selection: TWLU DISCRETES.
 - (c) Below the words TWLU Discrete Control, examine the TWLU Status, and AirLAN Discrete Status.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-11-07-440-007

- (2) Set the ONS maintenance browser to show TWLU DISCRETES page. These are the steps:
 - (a) Using the ONS maintenance browser, make your selection: Extended Maintenance > Off-board Links.
 - (b) On the Offboard Links page, make your selection: TWLU.
 - (c) In the row of TWLU functions, make your selection: TWLU DISCRETES.
 - (d) Below the words TWLU Discrete Control, examine the TWLU Status, and AirLAN Discrete Status.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-440-009

(3) Set the ONS maintenance browser to show TWLU DISCRETES page. These are the steps:

ARO ALL



ARO 014-999; ARO 011-013 POST SB 777-46-0066 (Continued)

- (a) Using the ONS maintenance browser, make your selection: EXTENDED MAINTENANCE > OFF-BOARD LINKS.
- (b) On the off-board links page, make your selection: TWLU.
- (c) In the row of TWLU functions, make your selection: DISCRETES.
- (d) Below the words Discrete Control, examine the RF Status.

ARO 001-010: ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-11-07-440-002

- (4) If the AirLAN Discrete Status shows the condition OFF, then make your selection: RF ON.
 - (a) Make sure the AirLAN Discrete Status then shows the word: ON.

ARO 014-999: ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-440-010

- (5) If the RF Status shows the condition OFF, then make your selection: ON.
 - (a) Make sure the RF Status BUTTON shows: ON, and green in color.

ARO ALL

G. Discrete Status using Cellular Control - Procedure

ARO 001-010

SUBTASK 46-11-07-440-005

- (1) Set the ONS maintenance browser to show CELLULAR CONTROL page. These are the steps:
 - (a) Using the ONS maintenance browser, make your selection: CONDITION MONITORING > OFFBOARD LINKS > CELLULAR.
 - (b) In the row of CELLULAR functions, make your selection: CELLULAR CONTROL.
 - (c) Examine the AirLAN Discrete Status.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-11-07-440-008

- (2) Set the ONS maintenance browser to show CELLULAR CONTROL page. These are the steps:
 - (a) Using the ONS maintenance browser, make your selection: Extended Maintenance > Off-board Links.
 - (b) On the Offboard Links page, make your selection: Cellular.
 - (c) In the row of Cellular functions, make your selection: Cellular Control.
 - (d) Examine the AirLAN Discrete Status.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-440-011

- (3) Set the ONS maintenance browser to show CELLULAR DISCRETES page. These are the steps:
 - (a) Using 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, make your selection: DISCRETES.

ARO ALL 46-11-07



ARO 014-999; ARO 011-013 POST SB 777-46-0066 (Continued)

(d) Below the words Discrete Control, examine the RF Status.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-11-07-440-006

- (4) If the AirLAN Discrete shows the condition OFF, then make your selection: RF ON.
 - (a) Make sure AirLAN Discrete Status then shows the word: ON.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-440-012

- (5) If the RF Status shows the condition OFF, then make your selection: ON.
 - (a) Make sure the RF Status BUTTON shows: ON, and green in color.

ARO ALL

H. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-07-080-002

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

SUBTASK 46-11-07-840-009

(2) Remove electrical power if it is not required for another task (Remove Electrical Power, TASK 24-22-00-860-806).



TASK 46-11-07-860-802

3. Wireless WAN Unit - Deactivation

A. General

- (1) This task gives two ways to operate the wireless WAN unit (WWU) Radio Disable discrete.
 - (a) The RF OFF function shows on the CELLULAR CONTROL page.
 - (b) The same RF OFF 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) To do this task, the weight-on-wheels discrete must be in the on-ground condition.

B. References

Reference	Title
24-22-00 P/B 201	AC GENERATION AND BUS CONTROL - MAINTENANCE PRACTICES
24-22-00-860-806	Remove Electrical Power (P/B 201)
45-10-00-910-810	How to Operate the MAT in the Flight Compartment (P/B 201)
46-13-00-480-801	Onboard Network System Maintenance Laptop Connection (P/B 201)

ARO ALL 46-11-07



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 - Maintenance
GF L-11321	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205
	Opt Part #: G45002-29 Supplier: 81205
	Opt Part #: J45001-1 Supplier: 81205
	Opt Part #: J45003-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. Prepare for the Procedure

SUBTASK 46-11-07-840-006

(1) If the aircraft is not energized, then supply electrical power, (PAGEBLOCK 24-22-00/201).

ARO 001-004

SUBTASK 46-11-07-480-004

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

ARO 005-999

SUBTASK 46-11-07-480-007

- (3) Get access to the ONS maintenance browser.
 - (a) You can use the Maintenance Access Terminal (MAT) (How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810).
 - (b) You can use the maintenance device, SPL-11321, (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

ARO ALL

F. Discrete Status using TWLU Discretes - Procedure

ARO 001-010

SUBTASK 46-11-07-860-014

- (1) Set the ONS maintenance browser to show TWLU DISCRETES. These are the steps:
 - (a) Using the ONS maintenance browser, make your selection: CONDITION MONITORING > OFFBOARD LINKS > TWLU.
 - (b) In the row of TWLU functions, make your selection: TWLU DISCRETES.
 - (c) Below the words TWLU Discrete Control, examine the TWLU Status, and AirLAN Discrete Status.

ARO ALL



ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-11-07-860-015

- Set the ONS maintenance browser to show TWLU Discretes page. These are the steps:
 - Using the ONS maintenance browser, make your selection: Extended Maintenance > Off-board Links.
 - (b) On the Off-board Links page, make your selection: TWLU.
 - (c) In the row of TWLU functions, make your selection: TWLU Discretes.
 - Below the words TWLU Discrete Control, examine the TWLU Status, and AirLAN Discrete Status.

ARO 014-999: ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-040-007

- Set the ONS maintenance browser to show TWLU DISCRETES page. These are the steps:
 - Using the ONS maintenance browser, make your selection: EXTENDED MAINTENANCE > OFF-BOARD LINKS.
 - On the off-board links page, make your selection: TWLU.
 - (c) In the row of TWLU functions, make your selection: DISCRETES.
 - (d) Below the words Discrete Control, examine the RF Status.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-11-07-040-003

- (4) If the AirLAN Discrete Status shows the condition ON, then make your selection: RF OFF.
 - (a) Make sure the AirLAN Discrete Status then shows the word: OFF.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-040-008

- (5) If the RF Status shows the condition ON, then make your selection: OFF.
 - (a) Make sure the RF Status BUTTON shows: OFF.

ARO ALL

G. Discrete Status using Cellular Control - Procedure

ARO 001-010

SUBTASK 46-11-07-040-004

- Set the ONS maintenance browser to show CELLULAR CONTROL page. These are the steps:
 - Using the ONS maintenance browser, make your selection: CONDITION MONITORING > OFFBOARD LINKS > CELLULAR.
 - (b) In the row of CELLULAR functions, make your selection: CELLULAR CONTROL.
 - Examine the AirLAN Discrete Status.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-11-07-040-006

- Set the ONS maintenance browser to show CELLULAR CONTROL page. These are the steps:
 - Using the ONS maintenance browser, make your selection: Extended Maintenance > Off-board Links.
 - (b) On the Off-board Links page, make your selection: Cellular.

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ARO 011-013 PRE SB 777-46-0066 (Continued)

- (c) In the row of Cellular functions, make your selection: Cellular Control.
- (d) Examine the AirLAN Discrete Status.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-040-009

- (3) Set the ONS maintenance browser to show CELLULAR DISCRETES page. These are the steps:
 - (a) Using the ONS maintenance browser, make your selection: EXTENDED MAINTENANCEOFF-BOARD LINKS.
 - (b) On the off-board links page, make your selection: CELLULAR.
 - (c) In the row of CELLULAR functions, make your selection: DISCRETES.
 - (d) Below the words Discrete Control, examine the RF Status.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-11-07-040-005

- (4) If the AirLAN Discrete Status shows the condition ON, then make your selection: RF OFF.
 - (a) Make sure the AirLAN Discrete Status then shows the word: OFF.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-040-010

- (5) If the RF Status shows the condition ON, then make your selection: OFF.
 - (a) Make sure the RF Status BUTTON shows: OFF.

ARO ALL

H. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-07-840-007

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

SUBTASK 46-11-07-840-008

(2) Remove electrical power if it is not required for another task (Remove Electrical Power, TASK 24-22-00-860-806).



TASK 46-11-07-470-801

4. Wireless WAN Unit Software Installation

A. General

- (1) This task gives the steps to install software into the wireless WAN unit (WWU), from the mass storage device (MSD).
 - (a) WWU, M44360, installed in the ceiling crown at STA 740, between S-1L and S-3L.
- (2) To do this task, the weight-on-wheels discrete must be in the on-ground condition.

B. References

Reference	Title
46-13-00-470-801	Onboard Network System LRU Software Installation (P/B 201)

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(Continued)

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C.

Reference	Title
46-13-00-720-801	Onboard Network System NFS Message Check (P/B 201)
46-13-00-720-804	Onboard Network System Configuration Check (P/B 201)
Location Zones	
Zone Area	

D. Before the NFS Software Installation

Flight Compartment, Right

SUBTASK 46-11-07-860-002

(1) Get a record of correct software part number for the target aircraft and WWU.

SUBTASK 46-11-07-470-001

- Do a check of the WWU software already installed (Onboard Network System Configuration Check, TASK 46-13-00-720-804).
 - (a) If the installed software and the requirement do not agree, then do the software installation that follows.

E. WWU Software Installation - Procedure

SUBTASK 46-11-07-470-002

 Install the correct software part. Do this task: (Onboard Network System LRU Software Installation, TASK 46-13-00-470-801).

NOTE: The WWU Operational Program Configuration (OPC) must be reloaded when WWU Operational Program Software (OPS) is installed.

F. Software Installation Check

SUBTASK 46-11-07-860-003

- (1) Do a check of the WWU software, (Onboard Network System Configuration Check, TASK 46-13-00-720-804).
 - (a) Make sure the result agrees with the requirement specified by your airline or operator.

SUBTASK 46-11-07-860-004

- (2) Do a check of the NFS messages. This is the task: (Onboard Network System NFS Message Check, TASK 46-13-00-720-801).
 - (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 NFS messages page.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-07-080-001

 If the laptop is no longer required, stop the ONS maintenance browser and disconnect the laptop.



TASK 46-11-07-860-803

5. Wireless WAN Unit Software Check

A. General

- (1) This task gives the steps to do a software check of the wireless WAN unit (WWU).
 - (a) WWU, M44360, is installed in the ceiling crown at STA 740, between S-1L and S-3L.

ARO ALL



(2) To do this task, the weight-on-wheels discrete must be in the on-ground condition.

B. References

	Reference	•	Title
	24-22-00 F	P/B 201	AC GENERATION AND BUS CONTROL - MAINTENANCE PRACTICES
	24-22-00-8	360-806	Remove Electrical Power (P/B 201)
	46-13-00-7	720-801	Onboard Network System NFS Message Check (P/B 201)
	46-13-00-7	720-804	Onboard Network System Configuration Check (P/B 201)
C. Location Zones		Zones	
	Zone	Area	
	212	Flight Compartme	nt, Right

D. Prepare for the Procedure

SUBTASK 46-11-07-860-005

(1) If the aircraft is not energized, then supply electrical power, (PAGEBLOCK 24-22-00/201).

SUBTASK 46-11-07-860-006

(2) Get a record of correct software part number for the WWU on the target aircraft.

E. Software Installation Check

SUBTASK 46-11-07-860-007

- (1) Do a check of the WWU software, (Onboard Network System Configuration Check, TASK 46-13-00-720-804).
 - (a) Make sure the result agrees with the requirement specified by your airline or operator.

SUBTASK 46-11-07-860-008

- (2) Do a check of the Network File Server (NFS) messages. This is the task: (Onboard Network System NFS Message Check, TASK 46-13-00-720-801).
 - (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 NFS messages page.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-07-840-002

(1) If the laptop is no longer required, stop the ONS maintenance browser and disconnect the laptop.

SUBTASK 46-11-07-840-004

(2) Remove electrical power, if it is not necessary for another task (Remove Electrical Power, TASK 24-22-00-860-806).



TASK 46-11-07-960-801

6. Wireless WAN Unit SIM Card - Replacement

(Figure 201)

A. General

- This task includes the steps to replace the Wireless WAN Unit (WWU) SIM card(s).
- (2) Up to two SIM cards can be installed in the WWU module, in SIM card slots SIM 1 and SIM 2.
- (3) The procedure for replacing the SIM cards in the slot SIM 1 and slot SIM 2 are the same.

ARO ALL



Tools/Equipment

Reference	Description
STD-1048	Stepladder - 6 foot (1.83m)

C.

Location Zones			
Zone	Area		
233	Area Above Passenger Compartment Ceiling, Left - Section 43		

D. Prepare for the Replacement

SUBTASK 46-11-07-010-003

- (1) Get access to the wireless WAN unit:
 - (a) Loosen the fasteners that secure the galley ceiling panel between the M-1 and M-2 galleys.
 - (b) Lower the panel so it hangs vertically.
 - (c) Put a 6 foot (1.83m) stepladder, STD-1048 in the ceiling panel opening.

E. Procedure

SUBTASK 46-11-07-960-001

- To remove the SIM card access door [2], do these steps (Figure 201):
 - If there is a SIM CONFIGURATION label over the SIM card access door [2], remove and discard the label.

NOTE: When installing the SIM card(s) for the first time, there may be a SIM CONFIGURATION label placed over the SIM card access door. The label should be removed and discarded.

- (b) Loosen the captive screw [3] on the SIM card access door [2].
- (c) Remove the SIM card access door [2].
- To release the SIM card holder [4], do these steps:
 - Slide the metallic latch [5] to the inward direction as indicated by the arrows on the SIM card slot.

NOTE: The SIM card holder [4] will be loosen up.

- (b) Lift the SIM card holder [4] up at about 45 degrees angle.
- To remove the SIM card [1], carefully slide the SIM card [1] out from the slot on the SIM card holder [4].
- To install the SIM card [1], carefully insert the SIM card [1] that you want to install inside the SIM card holder [4].
 - (a) Make sure that the chamfered corner of the SIM card [1] is at the correct corner.
- To close the SIM card holder [4], do these steps:
 - (a) Gently push the SIM card holder [4] down.
 - (b) Make sure that the SIM card holder [4] is flat down.
 - (c) Slide the metallic latch [5] to the outward direction to lock the SIM card holder [4] in place.
- To install the SIM card access door [2], do these steps:
 - (a) Place the SIM card access door [2] in its position.
 - (b) Tighten the captive screw [3].



F. Put the Airplane Back to Its Usual Condition

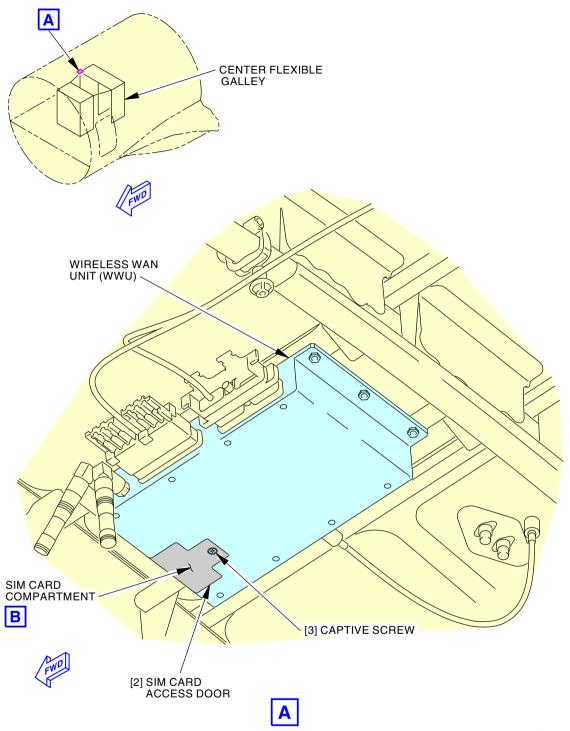
SUBTASK 46-11-07-410-001

- (1) Close and latch the galley ceiling panel.
 - (a) Remove the 6 foot (1.83m) stepladder, STD-1048.

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

ARO ALL





2433875 S0000564133_V2

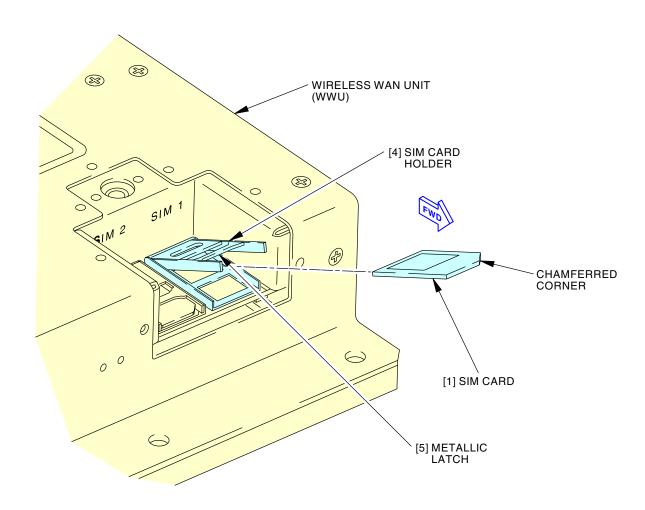
WWU SIM Card Installation Figure 201/46-11-07-990-802 (Sheet 1 of 2)

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SIM CARD COMPARTMENT (SIM CARD ACCESS DOOR REMOVAL)



2433987 S0000564135_V2

WWU SIM Card Installation Figure 201/46-11-07-990-802 (Sheet 2 of 2)

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WIRELESS WAN UNIT - REMOVAL/INSTALLATION

1. General

- A. This procedure contains these tasks:
 - (1) How to remove the wireless WAN unit (WWU).
 - (2) How to install the WWU.

TASK 46-11-07-000-801

2. Wireless WAN Unit - Removal

(Figure 401)

A. General

- (1) This task gives the steps to remove the wireless WAN unit (WWU), M44360.
 - (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 739-755, between stringers S1-L and S-3L.

B. References

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

C. Tools/Equipment

Reference	Description	
STD-1048	Stepladder - 6 foot (1.83m)	

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity	
1	Wireless WAN unit	23-95-51-01-025	ARO ALL	

E. Location Zones

Zone	Area
233	Area Above Passenger Compartment Ceiling, Left - Section 43

F. WWU Removal Procedure

SUBTASK 46-11-07-040-001

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

Right Power Management Panel, P210

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Δ	3	C44404	WWII POWER

SUBTASK 46-11-07-010-002

- (2) Get access to the wireless WAN unit [1]:
 - (a) Loosen the fasteners that secure the galley ceiling panel between the M-1 and M-2 galleys.
 - (b) Lower the panel so it hangs vertically.
 - (c) Put a 6 foot (1.83m) stepladder, STD-1048 in the ceiling panel opening.

SUBTASK 46-11-07-020-002

(3) Do this task: (ESDS Handling for Metal Encased Unit Installation, TASK 20-41-01-400-803).

ARO ALL



SUBTASK 46-11-07-020-001



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

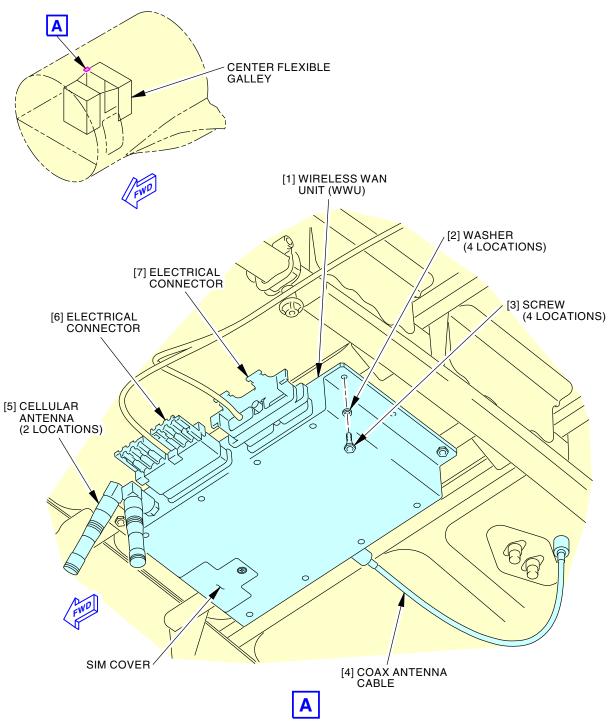
- (4) Remove the wireless WAN unit [1] as follows:
 - (a) Disconnect the electrical connectors [6] and [7] from the wireless WAN unit [1].
 - (b) Disconnect the antenna coax cable [4] from the wireless WAN unit [1].
 - (c) Remove the two cellular antennas [5].
 - (d) Put protective covers on the wireless WAN unit [1] electrical and coax connectors.
 - (e) Remove the four screws [3] and washers [2] that attach the wireless WAN unit [1] to the brackets.
 - (f) Remove the wireless WAN unit [1] from the overhead location.

	END	OF TASK	·
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- EFFECTIVITY ·





2201500 S0000489935_V2

Wireless WAN Unit Installation Figure 401/46-11-07-990-801

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TASK 46-11-07-400-801

3. Wireless WAN Unit - Installation

(Figure 401)

A. General

- (1) This task gives the steps to install the wireless WAN unit (WWU), M44360.
 - (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 739-755, between stringers S1-L and S-3L.

B. References

Reference	Title
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
46-11-07-710-801	Wireless WAN Unit - Operational Test (P/B 501)
46-11-07-860-803	Wireless WAN Unit Software Check (P/B 201)
46-13-00-750-802	Onboard Network System Client Credentials Check (P/B 201)

C. Tools/Equipment

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

D. Consumable Materials

Reference	Description	Specification
B50119	Solvent - Chlorinated	BAC5750

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Wireless WAN unit	23-95-51-01-025	ARO ALL

F. Location Zones

Zone	Area
233	Area Above Passenger Compartment Ceiling, Left - Section 43

G. WWU Installation Procedure

SUBTASK 46-11-07-860-001

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

Right Power Management Panel, P210

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	3	C44404	WWU POWER

SUBTASK 46-11-07-010-001

- (2) Get access to the wireless WAN unit [1]:
 - (a) Loosen the fasteners that secure the galley ceiling panel between the M-1 and M-2 galleys.
 - (b) Lower the panel so it hangs vertically.
 - (c) Put a 6 foot (1.83m) stepladder, STD-1048 in the ceiling panel opening.

SUBTASK 46-11-07-420-002

(3) Do this task: (ESDS Handling for Metal Encased Unit Installation, TASK 20-41-01-400-803).

ARO ALL



SUBTASK 46-11-07-420-003

(4) Prepare the mating surfaces of the wireless WAN unit [1], and mount structure. Do these steps:

NOTE: Do not remove the finish from the WWU box.

- (a) Solvent clean the mating surfaces of the wireless WAN unit [1] with chlorinated solvent, B50119
- (b) On the mounting structure, wipe clean using chlorinated solvent, B50119 the area within 0.5 in. (12.7 mm) of the four fastener holes.

SUBTASK 46-11-07-420-001



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

- (5) Install the wireless WAN unit [1]:
 - (a) Put the wireless WAN unit [1] in the installed position on the mounting brackets.
 - (b) Install the four screws [3], and four washers [2] to attach the wireless WAN unit [1] to the brackets.
 - 1) Hand-tighten the screws.
 - (c) Remove the protective cover on the WWU electrical connectors.
 - (d) Examine the electrical connectors for bent or broken pins, dirt, and damage.
 - 1) Repair the problems that you find.
 - (e) Attach the two cellular antennas [5] to the two TNC connectors.
 - (f) Attach the antenna cable [4] to the WWU coaxial primary connector.
 - (g) Connect the electrical connectors [6] and [7] to the WWU.

SUBTASK 46-11-07-760-001

- (6) Do a resistance check of the WWU 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 46-11-07-860-010

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

Right Power Management Panel, P210

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	3	C44404	WWU POWER

SUBTASK 46-11-07-840-001

- (8) Close and latch the galley ceiling panel.
 - (a) Remove the 6 foot (1.83m) stepladder, STD-1048.

H. WWU Installation Test

SUBTASK 46-11-07-470-003

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- (1) Do this task: (Onboard Network System Client Credentials Check, TASK 46-13-00-750-802).
 - (a) Make sure that the WWU client credential is serviceable.

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SUBTASK 46-11-07-470-004

(2) Do this task: (Wireless WAN Unit Software Check, TASK 46-11-07-860-803).

SUBTASK 46-11-07-710-001

- (3) Do an operational test: (Wireless WAN Unit Operational Test, TASK 46-11-07-710-801).
- I. Put the Aircraft Back to its Usual Condition

SUBTASK 46-11-07-080-003

(1) Stop the ONS maintenance browser, and disconnect the laptop, if it is not needed for other tasks.

SUBTASK 46-11-07-840-005

- EFFECTIVITY -

ARO ALL

(2) Remove electrical power if it is not required for another task (Remove Electrical Power, TASK 24-22-00-860-806).

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



WIRELESS WAN UNIT - ADJUSTMENT/TEST

1. General

- A. This procedure has two tasks:
 - (1) How to do an operational test, that you can complete using onboard systems.
 - (2) How to do a ground operational test of the cellular communication functions.

TASK 46-11-07-710-801

2. Wireless WAN Unit - Operational Test

A. General

- (1) This procedure gives the steps to do an operational check of the wireless WAN unit (WWU), M44360.
 - (a) There is a check for IEEE 802.11 Wi-Fi.
 - (b) There is a check for Cellular communications.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

(c) There is a check for Manual Airport Locations.

ARO ALL

(2) To do this task, the aircraft must be on the ground with its weight compressing the landing gear.

B. References

Reference	Title
24-22-00 P/B 201	AC GENERATION AND BUS CONTROL - MAINTENANCE PRACTICES
24-22-00-860-806	Remove Electrical Power (P/B 201)
46-13-00-480-801	Onboard Network System 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 - Maintenance
	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205 Opt Part #: J45001-1 Supplier: 81205
	Opt Part #: J45003-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment, Right

ARO ALL



E. Prepare for the Procedure

SUBTASK 46-11-07-840-003

(1) If the aircraft is not energized, then supply electrical power, (PAGEBLOCK 24-22-00/201).

SUBTASK 46-11-07-480-002

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

F. WWU WI-FI Operational Test

ARO 001-010

SUBTASK 46-11-07-860-011

- (1) Set the ONS Maintenance browser to show the TWLU Discrete Control function:
 - (a) Use the cursor, and select this path in the drop-down menu: CONDITION MONITORING> OFFBOARD LINKS > TWLU.
 - (b) Make your selection: TWLU DISCRETES.
 - (c) Make sure the condition of the AirLAN Discrete Status is ON.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-11-07-860-016

- (2) Set the ONS Maintenance browser to show the TWLU Discrete Control function:
 - (a) Use the cursor, and select this path in the drop-down menu: Extended Maintenance > Offboard Links.
 - (b) On the Offboard Links page, make your selection: TWLU.
 - (c) Make your selection: TWLU DISCRETES.
 - (d) Make sure the condition of the AirLAN Discrete Status is ON.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-860-017

- (3) Set the ONS maintenance browser to show the TWLU DISCRETES page. These are the steps:
 - (a) Using the ONS maintenance browser, make your selection: EXTENDED MAINTENANCE > OFF-BOARD LINKS.
 - (b) On the off-board links page, make your selection: TWLU.
 - (c) In the row of TWLU functions, make your selection: DISCRETES.
 - (d) Below the words: Discrete Control, examine the RF Status.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-11-07-040-002

- (4) On the TWLU DISCRETES page, make your selection: RF OFF.
 - (a) Make sure the condition of the AirLAN Discrete Status is OFF.

SUBTASK 46-11-07-440-004

- (5) On the TWLU DISCRETES page, make your selection: RF ON.
 - (a) Make sure the condition of the AirLAN Discrete Status is ON.



ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-860-018

- (6) If the RF Status shows the condition OFF, then make your selection: ON.
 - (a) Make sure the RF Status button shows ON.

ARO 001-010: ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-11-07-860-012

(7) Make your selection: WIRELESS SCAN.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-860-019

(8) Make your selection: SCAN.

ARO ALL

SUBTASK 46-11-07-860-013

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

(9) Examine the result below the words TWLU Wireless Neighborhood Scan.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

(10) Examine the result below the words Discrete Control.

ARO ALL

(11) Make sure result shows at least one service set identifier (SSID).

ARO 014-999; ARO 011-013 POST SB 777-46-0066

G. WWU Manual Airport Location Test

SUBTASK 46-11-07-860-023

- (1) Set the ONS maintenance browser to show the WI-FI> DISCRETES. These are the steps:
 - (a) Using the ONS maintenance browser, make your selection: EXTENDED MAINTENANCE > OFF-BOARD LINKS.
 - (b) On the off-board links page, make your selection: WI-FI.
 - (c) In the row of WI-FI functions, make your selection: DISCRETES.

SUBTASK 46-11-07-860-024

- (2) Examine the result for the Aircraft Location. If the result is not correct, then do these steps:
 - NOTE: Use the scroll bar, along the right-hand edge, to see all of the page.
 - NOTE: A list of available locations will be shown based on the corresponding entries in the customer built 46 NFS EXCOMM UMS part.
 - (a) Find the row with the words: Aircraft Location.
 - 1) Select, or click on the > symbol.
 - (b) Select, or click the radio button for the correct Airport Location.
 - (c) Make your selection: Back to WI-FI Discretes.

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H. WWU Cellular Operational Test

ARO 001-010

SUBTASK 46-11-07-710-002

- (1) Set the ONS Maintenance browser to show the CELLULAR CONTROL page.
 - (a) Use the cursor, and select this path in the drop-down menu: CONDITION MONITORING > OFFBOARD LINKS > CELLULAR.
 - (b) In the second row of functions, make your selection: CELLULAR CONTROL.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-11-07-710-012

- (2) Set the ONS Maintenance browser to show the CELLULAR CONTROL page.
 - (a) Use the cursor, and select this path in the drop-down menu: Extended Maintenance > Offboard Links.
 - (b) On the Offboard Links page, make your selection: CELLULAR.
 - (c) In the second row of functions, make your selection: CELLULAR CONTROL.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-860-020

- (3) Set the ONS Maintenance browser to show the CELLULAR > DISCRETES page. These are the steps:
 - (a) Use the cursor, and select this path in the drop-down menu: EXTENDED MAINTENANCE > OFF-BOARD LINKS.
 - (b) On the off-board links page, make your selection: CELLULAR.
 - (c) In the row of TWLU functions, make your selection: DISCRETES.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-11-07-710-003

- (4) Examine the result for Aircraft Location. If the result is not correct, then do the steps that follow.
 - (a) Make your selection: SELECT LOCATION.
 - (b) A box will show with the words CELLULAR CONTROL.
 - (c) Choose the correct aircraft location, and click on it once to highlight.
 - (d) Make your selection: CONTINUE.
 - (e) Make sure the display again shows the CELLULAR CONTROL page.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-860-021

- (5) Examine the result for Aircraft Location. If the result is not correct, then do these steps:
 - NOTE: Use the scroll bar, along the right-hand edge, to see all of the page.
 - (a) Find the row with the words: Aircraft Location.
 - Select, or click on the > symbol.
 - (b) Select, or click on the radio button for the correct Airport Location.
 - (c) Make your selection: Back to Cellular Discretes.



ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-11-07-710-004

- (6) On the CELLULAR CONTROL page, examine the result for Active Profile. If the result is not correct, then do the steps that follow.
 - NOTE: The WWU has two internal cellular radio cards. There can be one profile for each radio card. Your airline or operator can configure the WWU to have one, or two cards in service at a time.
 - (a) Make your selection: SELECT PROFILE.
 - (b) A box will show with the words CELLULAR CONTROL.
 - (c) Choose the correct profile name, and click on it once to highlight.
 - (d) Make your selection: CONTINUE.
 - (e) Make sure the display again shows the CELLULAR CONTROL page.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-860-022

- (7) Examine the value for parameter: Active Profile. If the value is not correct, then do the steps that follow.
 - NOTE: The WWU has two internal cellular radio cards. There can be one profile for each radio card. Your airline or operator can configure the WWU to have one or two cards in service at the same time.
 - (a) In the row for Aircraft Profile, click on the > symbol.
 - (b) Choose the correct profile name, and click on it once to highlight.
 - (c) Make your selection: CONTINUE.
 - (d) Make sure the display again shows the OFF-BOARD LINKS > CELLULAR page.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-11-07-710-005

- (8) Do the steps that follow to activate the test link function.
 - (a) Make your selection: CELLULAR CONDITION.
 - (b) Examine each parameter and value.
 - (c) Make your selection: TEST LINK.
 - (d) In the confirmation box, make your selection: CONTINUE.
 - (e) Let the system operate until the result shows.
 - (f) If the result shows the word SUCCESS, then the cellular link for that profile is serviceable.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-710-014

- (9) Do the steps that follow to activate the test link function.
 - (a) Make your selection: CONDITION.
 - (b) Examine each parameter and value.
 - (c) Make your selection: TEST LINK.
 - (d) In the confirmation box, make your selection: CONTINUE.
 - (e) Let the system operate until the result shows.

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ARO 014-999; ARO 011-013 POST SB 777-46-0066 (Continued)

(f) If the result shows the word SUCCESS, then the cellular link for that profile is serviceable.

ARO ALL

SUBTASK 46-11-07-710-006

- (10) If your WWU has two profiles installed, then do the steps again using the second profile.
 - (a) Continue with the step shown before, following the words: WWU Cellular Operational Test.

I. Put the Aircraft Back to its Usual Condition

SUBTASK 46-11-07-080-004

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

SUBTASK 46-11-07-840-010

(2) Remove electrical power if it is not required for another task (Remove Electrical Power, TASK 24-22-00-860-806).



TASK 46-11-07-730-802

3. Wireless WAN Unit - Cellular Operational Test

A. General

- (1) This procedure gives the steps to do an check of onboard network system (ONS) cellular communications.
- (2) To do this task, the aircraft must be on the ground with its weight compressing the landing gear.

B. References

Reference	Title
24-22-00 P/B 201	AC GENERATION AND BUS CONTROL - MAINTENANCE PRACTICES
24-22-00-860-806	Remove Electrical Power (P/B 201)
45-10-00-910-810	How to Operate the MAT in the Flight Compartment (P/B 201)
46-13-00-480-801	Onboard Network System 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.

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Reference	Description	
SPL-11321	Device - Maintenance	
3FL-11321	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205	
	Opt Part #: G45002-29 Supplier: 81205	
	Opt Part #: J45001-1 Supplier: 81205	
	Opt Part #: J45003-1 Supplier: 81205	

D. Prepare for the Procedure

SUBTASK 46-11-07-840-011

(1) If the aircraft is not energized, then supply electrical power, (PAGEBLOCK 24-22-00/201).

ARO 001-004

SUBTASK 46-11-07-480-005

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

ARO 005-999

SUBTASK 46-11-07-480-008

- (3) Get access to the ONS maintenance browser.
 - (a) You can use the Maintenance Access Terminal (MAT) (How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810).
 - (b) You can use the maintenance device, SPL-11321, (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

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E. WWU Cellular Operational Test

ARO 001-010

SUBTASK 46-11-07-710-007

- (1) Set the ONS Maintenance browser to show the CELLULAR CONTROL page.
 - (a) Use the cursor, and select this path in the drop-down menu: CONDITION MONITORING > OFFBOARD LINKS > CELLULAR.
 - (b) In the second row of functions, make your selection: CELLULAR CONTROL.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-11-07-710-013

- (2) Set the ONS Maintenance browser to show the CELLULAR CONTROL page.
 - (a) Use the cursor, and select this path in the drop-down menu: Extended Maintenance > Off-board Links.
 - (b) On the Offboard Links page, make your selection: CELLULAR.
 - (c) In the second row of functions, make your selection: CELLULAR CONTROL.

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ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-710-015

- (3) Set the ONS Maintenance browser to show the CELLULAR page.
 - (a) Use the cursor, and select this path in the drop-down menu: EXTENDED MAINTENANCE > OFF-BOARD LINKS.
 - (b) On the navigation bar, make your selection: CELLULAR.
 - (c) In the lower row of TWLU functions, make your selection: DISCRETES.

ARO 001-010: ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-11-07-710-008

- (4) Examine the result for Aircraft Location. If the result is not correct, then do the steps that follow.
 - (a) Make your selection: SELECT LOCATION.
 - (b) A box will show with the words CELLULAR CONTROL.
 - (c) Choose the correct aircraft location, and click on it once to highlight.
 - (d) Make your selection: CONTINUE.
 - (e) Make sure the display again shows the CELLULAR CONTROL page.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-710-016

- (5) Examine the result for Aircraft Location. If the result is not correct, then do the steps that follow.
 - (a) Use the scroll bar and find the row: Aircraft Location.
 - (b) Select the > symbol on the Aircraft Location row.
 - (c) Select the radio button for your target Aircraft Location.
 - (d) Make your selection: Back to Cellular Discretes.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-11-07-710-009

- (6) On the CELLULAR CONTROL page, examine the result for Active Profile. If the result is not correct, then do the steps that follow.
 - NOTE: The WWU has two internal cellular radio cards. There can be one profile for each radio card. Your airline or operator can configure the WWU to have one, or two cards in service at a time.
 - (a) Make your selection: SELECT PROFILE.
 - (b) A box will show with the words CELLULAR CONTROL.
 - (c) Choose the correct profile name, and click on it once to highlight.
 - (d) Make your selection: CONTINUE.
 - (e) Make sure the display again shows the CELLULAR CONTROL page.

ARO 014-999: ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-710-017

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- (7) Examine the result for Active Profile. If the result is not correct, then do the steps that follow.
 - (a) Use the scroll bar and find the row: Aircraft Profile.
 - (b) Select the > symbol on the Aircraft Profile row.
 - (c) Select the radio button for your target Aircraft Profile.

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ARO 014-999; ARO 011-013 POST SB 777-46-0066 (Continued)

(d) Make your selection: Back to Cellular Discretes.

SUBTASK 46-11-07-710-011

- (8) On WWU with two profiles installed, examine the second Active Profile. If the result is not correct, then do the steps that follow.
 - (a) Use the scroll bar and find the row: Aircraft Profile.
 - (b) Select the > symbol on the Aircraft Profile row.
 - (c) Select the radio button for your target Aircraft Profile.
 - (d) Make your selection: Back to Cellular Discretes.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-11-07-710-010

- (9) Do the steps that follow to activate the test link function.
 - (a) Make your selection: CELLULAR CONDITION.
 - (b) Examine each parameter and value.
 - (c) Make your selection: TEST LINK.
 - (d) In the confirmation box, make your selection: CONTINUE.
 - (e) Let the system operate until the result shows.
 - (f) If the result shows the word SUCCESS, then the cellular link for that profile is serviceable.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-710-018

- (10) Do the steps that follow to activate the test link function.
 - (a) Make your selection: CONDITION, located at the lower left corner.
 - (b) Examine each parameter and value.
 - (c) Make your selection: TEST LINK.
 - (d) In the confirmation box, make your selection: CONTINUE.
 - (e) Let the system operate until the result shows.
 - (f) If the result shows the word SUCCESS, then the cellular link for that profile is serviceable.

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F. Put the Aircraft Back to its Usual Condition

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-11-07-840-013

- (1) To exit OFF-BOARD LINKS, you can do one of these steps:
 - (a) To show the main menu, click on the HOME icon at the upper left-hand corner.
 - (b) To end the ONS Maintenance session and show Windows desktop, click once on the wheel, in the upper right-hand corner.

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SUBTASK 46-11-07-080-005

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

SUBTASK 46-11-07-840-012

(3) Remove electrical power if it is not required for another task (Remove Electrical Power, TASK 24-22-00-860-806).

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

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WIRELESS WAN UNIT PRIMARY ANTENNA - REMOVAL/INSTALLATION

1. General

- A. This procedure contains two tasks.
 - (1) Removal of the wireless WAN unit (WWU) primary antenna, M44330.
 - (2) Installation of the WWU primary antenna.

TASK 46-11-08-000-801

2. WWU Antenna - Removal

(Figure 401)

A. General

- (1) This task gives the steps to remove the WWU antenna, M44330, from the aircraft fuselage.
- (2) The antenna is installed externally at STA 751, WL 343, BL 0. You must have access to the top centerline 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: (Wireless WAN Unit Removal, TASK 46-11-07-000-801).

B. References

Reference	Title
46-11-07-000-801	Wireless WAN Unit - Removal (P/B 401)
46-11-07-860-802	Wireless WAN Unit - 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.

Reference	Description	
COM-2481	Tool - Sealant Removal, BAC5000, PSD 6-184 Approved	
33 <u>2</u>	Part #: 1-6390-A Supplier: 63318 Part #: 10810 Supplier: \$0855 Part #: 234350 Supplier: \$0857 Part #: 311 Supplier: F6892 Part #: 411B60 Supplier: 3DN12 Part #: 411B90 Supplier: 3DN12 Part #: DAD5013 Supplier: \$0856 Part #: DFD5019 Supplier: \$0856 Part #: J5-0275-2010 Supplier: 435R8 Part #: SCD5019 Supplier: \$0856 Part #: ST982LF-9 Supplier: 62176	
	Part #: TS1275-4 Supplier: 1DWR5	

D. Consumable Materials

Reference	Description	Specification
A02315	Sealant - Low Density, Synthetic Rubber. 2	BMS5-142 Type II
	Part	

E. Location Zones

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

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F. Antenna Removal Procedure

SUBTASK 46-11-08-040-001

(1) Deactivate the WWU, (Wireless WAN Unit - Deactivation, TASK 46-11-07-860-802).

SUBTASK 46-11-08-860-002

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

Right Power Management Panel, P210

Row	<u>Col</u>	Number	<u>Name</u>
Α	3	C44404	WWU POWER

SUBTASK 46-11-08-010-001

(3) Get access to the antenna [1], on the top, centerline of the aircraft, at approximately station 750 (door 2L).

SUBTASK 46-11-08-020-001



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

- (4) Remove the sealant, A02315 with the sealant removal tool, COM-2481 as follows:
 - (a) Remove the sealant, A02315 from the heads of the four bolts [2].
 - (b) Remove the aerodynamic fillet seal around the flange of the antenna [1].

SUBTASK 46-11-08-020-002

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

SUBTASK 46-11-08-020-003

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

SUBTASK 46-11-08-020-005

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

SUBTASK 46-11-08-020-004

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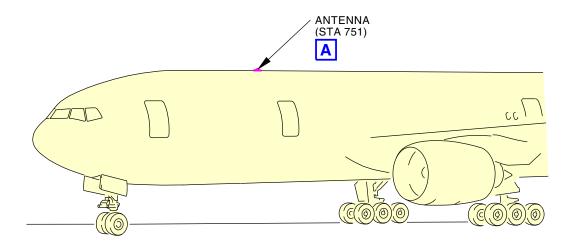
- (8) Remove the O-ring [4] from the antenna [1].
 - (a) Discard the O-ring [4].

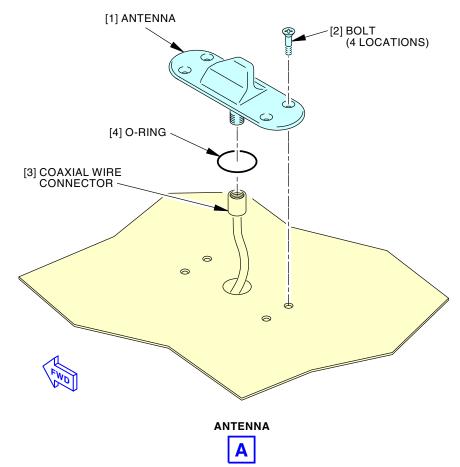
------ END OF TASK ------

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WWU Antenna Installation Figure 401/46-11-08-990-801

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TASK 46-11-08-400-801

3. WWU Antenna - Installation

(Figure 401)

A. General

- (1) This task gives the steps to install the WWU antenna, M44330, from the aircraft fuselage.
- (2) The antenna is installed externally at STA 751, WL 343, BL 0. You must have access to the top centerline 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: (Wireless WAN Unit Removal, TASK 46-11-07-000-801).
- (4) To do the operational test that follows, you must have access to an active wireless connection from a remote access terminal, or airport messaging terminal.

B. References

Reference	Title
20-30-84-910-801	Final Cleaning of Metal Prior to Painting (Series 84) (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
46-11-07 P/B 401	WIRELESS WAN UNIT - REMOVAL/INSTALLATION
46-11-07-000-801	Wireless WAN Unit - Removal (P/B 401)
46-11-07-710-801	Wireless WAN Unit - Operational Test (P/B 501)
51-21-03-100-801	Corrosion Removal and Control (P/B 701)
51-21-04-620-801	Alodine 600, 1000, 1200, and 1200S Coating Application (P/B 701)
51-31-01-390-804	Fillet Seal Application (P/B 201)
51-31-01-390-805	Fastener Seal Application (P/B 201)

C. Tools/Equipment

Reference	Description
STD-1048	Stepladder - 6 foot (1.83m)
STD-9906	Stepladder - 8foot

D. Consumable Materials

Reference	Description	Specification
A02315	Sealant - Low Density, Synthetic Rubber. 2 Part	BMS5-142 Type II
A50009	Sealant - Low Density, Non-Chromate Type. (Formerly Chromate - Synthetic Rubber)	BMS5-142 Type II Class B-1 or B-2
B01004	Solvent - Final Cleaning Of Metal Prior To Painting - Series 84	
C00175	Primer - Urethane Compatible, Corrosion Resistant (Less Than 1% Aromatic Amines)	BMS10-79 Type III
D00633	Grease - Aircraft General Purpose	BMS3-33
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5 Class A
G50237	Compound - Corrosion Inhibiting, Non-drying - Cor-Ban 27L	BMS3-38

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E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity	
1	Antenna	46-11-05-28-060	ARO 005-999	
Location Zones				

F. L

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

G. Prepare for the Installation

SUBTASK 46-11-08-860-001

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

Right Power Management Panel, P210

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	3	C44404	WWU POWER

SUBTASK 46-11-08-390-001



DO NOT GET SOLVENTS IN YOUR MOUTH, YOUR EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM SOLVENTS. SOLVENTS ARE DANGEROUS MATERIALS. SOLVENTS CAN BE FLAMMABLE. OBEY THE MATERIAL SAFETY DATA SHEETS (MSDS) FOR SOLVENTS. OBEY LOCAL REGULATIONS FOR THE CORRECT PROCEDURES TO USE OR DISCARD SOLVENTS. SOLVENTS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- Clean the airplane mating surface with Series 84 solvent, B01004 (TASK 20-30-84-910-801). (2)
 - Make a clean cotton wiper, G00034 moist (not soaked) with Series 84 solvent, B01004 (TASK 20-30-84-910-801).
 - Rub the airplane mating surface with the cotton wiper, G00034 until the surface is clean.
- If the finish on the airplane mating surface has corrosion or other damage, clean and prepare the surface as follows:
 - (a) If it is necessary, do this task: (Corrosion Removal and Control, TASK 51-21-03-100-801).
 - (b) Do this task: (Alodine 600, 1000, 1200, and 1200S Coating Application, TASK 51-21-04-620-801).

NOTE: This procedure has steps to clean and prepare the surface before you apply the

- Make sure the alodine layer is approximately 0.25 in. (6.35 mm) larger than the antenna baseplate.
- (c) Apply two layers of primer, C00175 to the mating surface.
 - Make sure the primer, C00175 layer is approximately 0.25 in. (6.35 mm) larger than the antenna baseplate.

SUBTASK 46-11-08-390-002

- Do these steps to do the corrosion protection for the mating surfaces:
 - Apply a very thin layer of Cor-Ban 27L Compound, G50237 to the surfaces that follow:
 - 1) The antenna connector hole in the skin.
 - 2) The hole of each nutplate.
 - The threads and shank of each bolt [2].

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- (b) Do not get Cor-Ban 27L Compound, G50237 on the O-ring [4] or O-ring groove.
- (c) Do not get Cor-Ban 27L Compound, G50237 on any mating surface of the coaxial wire connector [3].

SUBTASK 46-11-08-390-003

- (5) Coat the O-ring, and O-ring groove, with a thin layer of grease, D00633.
 - (a) Make sure the O-ring is not damaged.

H. Installation Procedure

SUBTASK 46-11-08-860-003

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

Right Power Management Panel, P210

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	3	C44404	WWU POWER

SUBTASK 46-11-08-410-001

- (2) If necessary, to get access to the WWU and coaxial antenna cable, refer to (PAGEBLOCK 46-11-07/401).
 - (a) Loosen the fasteners that secure the galley ceiling panel between the M-1 and M-2 galleys.
 - (b) Lower the panel so it is hanging vertically.
 - (c) Put a 6 foot (1.83m) stepladder, STD-1048 in the ceiling panel opening.

SUBTASK 46-11-08-420-001



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

- (3) Install the antenna [1].
 - (a) Examine the coaxial wire connector [3] for damage.
 - 1) Repair the problems that you find.
 - (b) Insert the coaxial wire connector [3] through the O-ring [4], and connect to the antenna [1].
 - (c) Position the antenna [1] against the airplane skin.
 - (d) Install the four bolts [2] and tighten to 4 ft-lb (5 N·m).

SUBTASK 46-11-08-390-004

(4) Apply aerodynamic faying surface seal with sealant, A02315 to the forward leading edge of the antenna and skin.

Fillet Seal Application, TASK 51-31-01-390-804

SUBTASK 46-11-08-390-005

(5) Apply weather faying surface seal with sealant, A50009 around the remaining unsealed edge of the antenna.

Fillet Seal Application, TASK 51-31-01-390-804.

SUBTASK 46-11-08-390-006

(6) Apply sealer to the four bolts [2].

Fastener Seal Application, TASK 51-31-01-390-805.

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SUBTASK 46-11-08-410-002

- (7) Close the galley overhead access panel:
 - (a) Remove the 8 foot stepladder, STD-9906.
 - (b) Close and latch the galley ceiling panel.

SUBTASK 46-11-08-860-004

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

Right	Power	Manageme	nt Panel, P210
Row	<u>Col</u>	<u>Number</u>	<u>Name</u>

A 3 C44404 WWU POWER

I. Installation Test

SUBTASK 46-11-08-710-001

- (1) Do an operational test: (Wireless WAN Unit Operational Test, TASK 46-11-07-710-801).
 - NOTE: To do the operational test, you must have access to an active wireless connection from a remote access terminal, or airport messaging terminal.
 - (a) Make sure you set the WWU discrete status to ON, as specified in the task.

J. Put the Airplane Back to Its Usual Condition

SUBTASK 46-11-08-080-001

(1) If the laptop is no longer required, stop the ONS maintenance browser and disconnect the laptop.

SUBTASK 46-11-08-840-001

EFFECTIVITY -

ARO ALL

(2) Remove electrical power if it is not required for another task (Remove Electrical Power, TASK 24-22-00-860-806).

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

46-11-08



ONBOARD NETWORK SYSTEM - MAINTENANCE PRACTICES

1. General

- A. This section gives maintenance tasks that support the onboard network system (ONS) and mass storage device (MSD).
 - (1) ONS tasks show the steps to operate the ONS browser, to interface with other line replaceable units (LRU).
 - (2) MSD tasks show the steps to maintain loadable software airplane parts (LSAP) hosted by network file server's internal drive.

TASK 46-13-00-480-801

2. Onboard Network System Maintenance Laptop Connection

A. General

(1) This task gives the steps to connect the maintenance device, SPL-11321 with the onboard network system (ONS), and start the ONS Maintenance browser.

ARO 001-013

(a) ONS Maintenance is a web site hosted by the network file server (NFS), M46009.

ARO 014-999

(b) ONS Maintenance is a web site hosted by the network file server - left (NFS-L), M46013.

ARO ALL

(c) The desktop icon tells the laptop's browser to connect with ONS Maintenance.

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 - Maintenance
	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205
	Opt Part #: J45001-1 Supplier: 81205
	Opt Part #: J45003-1 Supplier: 81205
STD-9080	Cable - Ethernet (Cat 5E, RJ-45 Connectors)

C. Location Zones

Zone	Area	
212	Flight Compartment, Right	

ARO ALL



D. Before Laptop Connection

ARO 001-004

SUBTASK 46-13-00-860-004

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

Left Power Management Panel, P110

Row	<u>Col</u>	Number	<u>Name</u>
В	27	C46411	NETWORK FILE SERVER

ARO 005-999

SUBTASK 46-13-00-860-007

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

Left Power Management Panel, P110

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 01	1-999		
		C46414	NED-DG
ARO 00	5-013		
В	27	C46411	NETWORK FILE SERVER
ARO 014	4-999		
В	27	C46418	NFS - L
ARO 00	5-999		

These circuit breakers are inoperative and should remain open:

Left Power Management Panel, P110

Row	Col	Number	<u>Name</u>
ARO 00	5-010		
F	23	C46414	NED-DG (INOP)

Right Power Management Panel, P210

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 01	4-999		
В	11	C46419	NFS - R (INOP)

ARO ALL

E. Procedure Using 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 maintenance device, SPL-11321. Connect the opposite end to one of these Ethernet ports:

ARO 001-013

• E/E bay, shelf E04, network file server panel port, M46009.

ARO 014-999

• E/E bay, shelf E04, network file server panel port, M46013.

ARO 005-999

• Flight deck, second observer's panel, P18, M23218.

ARO ALL



ARO 005-010

Flight deck, second observer's panel, P18–1, M25935.

ARO ALL

SUBTASK 46-13-00-480-002

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

SUBTASK 46-13-00-480-003

- (3) 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.

ARO 001-010

SUBTASK 46-13-00-860-001

(4) Set your web browser to show the ONS Maintenance menu.

NOTE: The desktop icon contains the URL: http://ms.ons.pnet:8080.

- (a) Double-click on the ONS Maintenance desktop icon, or use your web browser and input this URL: http://ms.ons.pnet:8080.
- (b) Make sure the ONS Maintenance main menu shows.

ARO 011-013

SUBTASK 46-13-00-860-013

(5) Set your web browser to show the ONS Maintenance menu.

NOTE: The desktop icon contains the URL: http://ms.ons.pnet, or http://ms.ons.pnet:80.

On some configurations, the desktop icon contains a shortcut to "C:\Boeing\ONSL\onsl.exe."

- (a) Double-click on the ONS Maintenance desktop icon, or use your web browser and input this URL: http://ms.ons.pnet.
 - 1) If the URL does not work, you can change it to include the port number: http://ms.ons.pnet:80.
- (b) Make sure the ONS Maintenance main menu shows.

ARO 014-999

SUBTASK 46-13-00-860-037

(6) Set your web browser to show the ONS Maintenance menu.

NOTE: The desktop icon contains the URL: http://ms.ons.pnet, or http://ms.ons.pnet:80.

On some configurations, the desktop icon contains a shortcut to "C:\Boeing\ONSL\onsl.exe."

- (a) Double-click on the ONS Maintenance desktop icon, or use your web browser and input this URL: http://ms.ons.pnet.
 - 1) If the URL does not work, you can change it to include the port number: http://ms.ons.pnet:80.
- (b) Make sure the ONS Maintenance main menu shows.



ARO 014-999 (Continued)

(c) Make sure the chain-link icon at the top right of the main menu shows as unbroken.

ARO ALL

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

TASK 46-13-00-720-801

3. Onboard Network System NFS Message Check

A. General

ARO 001-010: ARO 011-013 PRE SB 777-46-0066

- This task gives the steps to do a check of the network file server (NFS) fault messages.
 - (a) When the fault results show no LRU names, and no messages, then the NFS senses normal operation of each interface.
 - (b) When the fault results show an LRU, there is an interface problem between that LRU and NFS
 - (c) When a message shows for the NFS, it can refer to an internal fault or software configuration problem.
 - (d) When a message shows for an LRU other than NFS, it refers to an interface fault with NFS, or a fault reported by the LRU.
 - (e) The NFS Message page shows the condition at the time you made the page selection. To examine the present message condition, you must refresh the browser page. You can click once on the refresh button, or select a different page and then select again the NFS Message page.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

- (2) This task gives the steps to do a check of the network file server (NFS) fault messages.
 - (a) When the fault results show no messages, then the NFS senses normal operation of each interface.
 - (b) When a message shows, it can refer to an internal fault, a software configuration problem, or an interfacing system fault.
 - (c) The NFS message page updates automatically while the page shows on your display.
 - 1) A new fault that occurs will show the status: ACTIVE. The messages shows automatically, without manually refreshing the data.
 - a) The NFS is serviceable when no fault messages show the condition ACTIVE.
 - 2) An existing fault that clears will update the status to show: NOT ACTIVE.

ARO ALL

B. References

Reference	Title
45-10-00-910-810	How to Operate the MAT in the Flight Compartment (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.

ARO ALL



Reference	Description
SPL-11321	Device - Maintenance
	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205 Opt Part #: J45001-1 Supplier: 81205 Opt Part #: J45003-1 Supplier: 81205
1	

D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. Before the Fault Check

ARO 001-004

SUBTASK 46-13-00-480-004

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

ARO 005-999

SUBTASK 46-13-00-480-019

- (2) Get access to the ONS maintenance browser.
 - (a) You can use the Maintenance Access Terminal (MAT) (How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810).
 - (b) You can use the maintenance device, SPL-11321, (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

ARO ALL

F. NFS Message Check of Interfacing Systems

ARO 001-010

SUBTASK 46-13-00-720-001

- (1) Using the ONS maintenance browser, make your selection: CONDITION MONITORING > NFS > NFS MESSAGES.
 - (a) Examine the message adjacent to each LRU.

NOTE: The result only shows an LRU client when there is a message. When there is no message, the LRU does not show.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-720-020

- (2) Using the ONS maintenance browser, make your selection: Extended Maintenance > ONS Maintenance > Existing Faults.
 - (a) Examine the message adjacent to each LRU.

NOTE: The result only shows an LRU client when there is a message. When there is no message, the LRU does not show.

ARO ALL



ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-720-036

- (3) Using the ONS maintenance browser, do these steps:
 - (a) Make your selection: EXTENDED MAINTENANCE > EXISTING FAULTS.
 - (b) Below the words: Select ATA System, make your selection: 46 Onboard Network System. NOTE: You can make a selection only when the system name shows white in color.
 - (c) Make your selection: Faults, in the navigation bar.
 - (d) Examine the message, or messages shown.
 - 1) Messages that show the NOT ACTIVE condition have already been corrected.
 - 2) Messages that show the ACTIVE condition are unserviceable.
 - a) A Maintenance action is required.
 - (e) Use the scroll bar to see the complete list of messages.
 - (f) If you find a problem, then a maintenance action is required.

ARO 014-999

SUBTASK 46-13-00-720-052

- (4) Using the ONS maintenance browser, do these steps:
 - (a) Make your selection: EXTENDED MAINTENANCE > EXISTING FAULTS.
 - (b) Below the words: Select ATA System, make your selection: 46 Onboard Network System. NOTE: You can make a selection only when the system name shows white in color.
 - (c) Make your selection: CONTINUE, in the bottom right corner.
 - (d) Examine the message, or messages shown.
 - 1) Messages that show the NOT ACTIVE condition have already been corrected.
 - 2) Messages that show the ACTIVE condition are unserviceable.
 - a) A Maintenance action is required.
 - (e) Use the scroll bar to see the complete list of messages.
 - (f) If you find a problem, then a maintenance action is required.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-720-002

- (5) Select one target LRU at a time, and examine the fault details. Do these steps:
 - (a) Click once on the LRU name.
 - (b) Examine the specific fault data in the Fault Details box.
 - (c) Use the scroll bar to see the complete message, or multiple messages.
 - (d) Do the steps again for each LRU.
 - (e) If you find a problem, then a maintenance action is required.

ARO ALL

G. Put the Aircraft Back to it's Usual Condition

SUBTASK 46-13-00-840-003

(1) To exit EXISTING FAULTS, and show the ONS menu, select the Home icon, in the upper left-hand corner.

ARO ALL



SUBTASK 46-13-00-080-002

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



TASK 46-13-00-750-803

4. Onboard Network System Airplane Credentials Check

A. General

- (1) This task contains four sections.
 - (a) Steps to do a check of the airplane credential installed in the network file server (NFS).
 - (b) 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.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

(c) Steps to install the serviceable software part (or, NFS OAS airplane keys) into the NFS operating system.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

(d) Steps to install the serviceable software part (specifically; 46 NFS OAS AIRPLANE KEYS UMS) into the NFS operating system.

ARO ALL

ARO ALL

- (e) Installation check.
- (2) There can be multiple ways to transmit the CSR. Refer to your Engineering department for the preferred method.
 - Manual using an approved data loader or laptop.
 - Automatic using Boeing Electronic Distribution of Software (BEDS).
- (3) To do this task, the aircraft must be on the ground with its weight compressing the landing gear.
- (4) Make sure that the aircraft is outside of the hanger with line of sight to the GPS.

B. References

Reference	Title
45-10-00-910-810	How to Operate the MAT in the Flight Compartment (P/B 201)
46-13-01-470-801	Network File Server Software Installation (P/B 201)

C. Tools/Equipment

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



Reference	Description
SPL-11321	Device - Maintenance
	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205 Opt Part #: J45001-1 Supplier: 81205 Opt Part #: J45001-1 Supplier: 81205 Opt Part #: J45003-1 Supplier: 81205
Location Zones	

D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. Before the Procedure

ARO 001-004

SUBTASK 46-13-00-480-007

- (1) Connect the maintenance device, SPL-11321 to the NFS. Do this task: (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).
 - (a) Activate the ONS maintenance browser.

ARO 005-999

SUBTASK 46-13-00-480-015

- (2) Get access to the ONS maintenance browser.
 - (a) You can use the Maintenance Access Terminal (MAT) (How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810).
 - (b) You can use the maintenance device, SPL-11321, (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

ARO ALL

F. Airplane Credentials Check

ARO 001-010

SUBTASK 46-13-00-720-003

- (1) On the ONS maintenance browser menu bar, make your selection: LINE MAINTENANCE > SECURITY > AIRPLANE CREDENTIALS.
 - (a) A progress window can show temporarily.
 - (b) Examine the result in the box below the words Airplane Credentials Status.
 - 1) If the conditions that follow exist, then the credential is serviceable.
 - a) The result shows the words: A valid, CA-signed Airplane Certificate exists.
 - b) The time/date stamp agrees with your airline or operator's requirements.
 - 2) If you find a problem, then continue.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-720-021

(2) From the ONS Maintenance browser menu bar, do these steps:

ARO ALL

46-13-00

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ARO 011-013 PRE SB 777-46-0066 (Continued)

- (a) Make your selection: Line Maintenance.
- (b) Make your selection: Security.
- (c) Make your selection: Security Airplane Credentials.
- (d) A progress window can show temporarily.
- (e) Examine the result in the box below the words Airplane Credentials Status.
 - 1) If the conditions that follow exist, then the credential is serviceable.
 - a) The result shows the words: A valid, CA-signed Airplane Certificate exists.
 - b) The time/date stamp agrees with your airline or operator's requirements.
 - 2) If you find a problem, then continue.

ARO 014-999: ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-720-039

- (3) From the ONS Maintenance browser menu bar, do these steps:
 - (a) Make your selection: LINE MAINTENANCE > SECURITY.
 - (b) Make your selection: AIRPLANE CREDENTIALS.
 - (c) Examine the result in the box below the words Credentials Status.
 - 1) If the conditions that follow exist, then the credential is serviceable.
 - a) The result shows the words: A valid, CA-signed Airplane Certificate exists.
 - If a valid credential does not exist, or the Engineering department has requested a new Certificate Signing Request to replace and expired or invalidated certificate, then continue.

ARO ALL

G. Credential Signing Request - Procedure

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-470-004

- To make a new certificate signing request (CSR), do the steps that follow.
 - (a) Click once on the GENERATE CREDENTIALS button.
 - (b) When the confirmation box shows, confirm the data shown and push CONTINUE.
 - (c) Examine the result in the box below the words Key Generation Status.
 - If the result shows a file was successfully created, then make a record of this file name

NOTE: You will need the file name to locate and upload the file in the next step.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-470-028

- (2) To make a new certificate signing request (CSR), do the steps that follow.
 - (a) Make your selection: Generate, at the lower right-hand corner of the page.
 - (b) When the confirmation box shows, confirm the data shown and make your selection: CONTINUE.
 - (c) Examine the result in the box below the words Credential Generation Status.

ARO ALL



ARO 014-999; ARO 011-013 POST SB 777-46-0066 (Continued)

 If the result shows a file was successfully created, then make a record of this file name.

NOTE: You will need the file name to locate and transfer the file in the next step.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-470-005

- (3) Transfer the CSR file from the NFS to the maintenance laptop.
 - (a) Using the maintenance browser, make your selection: LINE MAINTENANCE > CLIENT FILES.
 - (b) Below the words CLIENT NAME, make your selection NFS.OAS, and then select CONTINUE.
 - (c) Find the CSR file and click on it once, to highlight it.
 - NOTE: The CSR file will show in this format: GMTdate-GMTtime-<Tail ID>-CSR.
 - (d) Make your selection COPY, and then select CONTINUE.
 - (e) Make your selection SAVE, and then navigate to save the file to a directory on the maintenance laptop.

ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-470-018

- (4) Transfer the CSR file from the NFS to the maintenance laptop.
 - (a) Using the maintenance browser, make your selection: LINE MAINTENANCE > DOWNLOAD MANAGER.
 - (b) Select the check box adjacent to the name: NFS:OAS.
 - (c) Make your selection: FILES.
 - (d) Find the CSR file, and select the adjacent check box.
 - (e) Make your selection: TRANSFER.
 - (f) Select the radio button adjacent to: Portable Maintenance Device.
 - (g) Make your selection: SEND.
 - (h) Using the system navigation window, save the file to a directory on the maintenance laptop.
 - (i) To exit, make your selection: CANCEL.

ARO 014-999

SUBTASK 46-13-00-470-031

- (5) Transfer the CSR file from the NFS to the maintenance laptop.
 - (a) Using the maintenance browser, make your selection: LINE MAINTENANCE > DOWNLOAD MANAGER.
 - (b) Select the check box adjacent to the name: NFS:OAS.
 - (c) Make your selection: FILES.
 - (d) Find the CSR file, and select the adjacent check box.
 - (e) Make your selection: REPORT.



ARO 014-999 (Continued)

- (f) Select the radio button adjacent to: Portable Maintenance Device or Portable Maintenance Device (xml).
- (g) Make your selection: SEND.
- (h) Using the system navigation window, save the file to a directory on the maintenance laptop.
- (i) To exit, make your selection: CLOSE.

ARO ALL

SUBTASK 46-13-00-800-001

(6) Transmit the file to your engineering department, or network operator for processing.

H. Airplane Keys Installation Procedure

SUBTASK 46-13-00-470-006

(1) Receive the new Loadable Software Airplane Part (LSAP), and transfer the part from the laptop to the MSD. Do this task: (Mass Storage Device Software Part Installation, TASK 46-13-00-470-802).

NOTE: When BEDS is serviceable, you can disregard this step. The LSAP is sent to the MSD automatically by the network administrator.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

NOTE: Typically, this LSAP is identified as: 46 NFS OAS AIRPLANE KEYS AMI.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

NOTE: Typically, this LSAP is identified as: 46 NFS OAS AIRPLANE KEYS UMS.

ARO ALL

SUBTASK 46-13-00-470-007

(2) On the MSD, find this same LSAP, and install into the NFS operating system. Do this task: (Network File Server Software Installation, TASK 46-13-01-470-801).

NOTE: 46 NFS MEF UMS, 46 NFS EXCOMM UMS, and 46 NFS OAS AIRLINE CERTS UMS should be installed prior or at the same time as 46 NFS OAS AIRPLANE KEYS UMS.

I. Installation Test

ARO 001-010

SUBTASK 46-13-00-720-004

- (1) On the ONS maintenance browser menu bar, make your selection: LINE MAINTENANCE > SECURITY > AIRPLANE CREDENTIALS.
 - (a) Examine the result in the box below the words Airplane Credentials Status.
 - Make sure the result shows the words: A valid, CA-signed Airplane Certificate exists.
 - 2) Make sure the time/date stamp agrees with the credential you just installed.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-720-022

- (2) On the ONS maintenance browser menu bar, make your selection: Line Maintenance > Security > Security Airplane Credentials.
 - (a) Examine the result in the box below the words Credentials Status.

ARO ALL



ARO 011-013 PRE SB 777-46-0066 (Continued)

- 1) Make sure the result shows the words: A new, self-signed Airplane Certificate was generated.
- 2) Make sure the time/date stamp agrees with the credential you just installed.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-720-044

- (3) On the ONS maintenance browser menu bar, make your selection: LINE MAINTENANCE > SECURITY > AIRPLANE CREDENTIALS.
 - (a) Examine the result in the box below the words Credentials Status.
 - Make sure the result shows the words: A valid, CA-signed Airplane Certificate exists.

ARO ALL

SUBTASK 46-13-00-720-005

- (4) Do a check of the NFS fault messages. This is the task: (Onboard Network System NFS Message Check, TASK 46-13-00-720-801).
 - (a) If you find a problem, then a maintenance action is required.

J. Put the Aircraft Back to it's Usual Condition

SUBTASK 46-13-00-080-004

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



TASK 46-13-00-750-801

5. Onboard Network System Server Credentials Check

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, new client credentials are also made at the same time.
- (2) The Boeing Company recommends that you make a new server credential only when specified by a maintenance order.
- (3) To do this task, the aircraft must be on the ground with its weight compressing the landing gear.

B. References

Reference	Title
45-10-00-910-810	How to Operate the MAT in the Flight Compartment (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.

ARO ALL



Reference	Description
SPL-11321	Device - Maintenance
	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205 Opt Part #: J45001-1 Supplier: 81205 Opt Part #: J45003-1 Supplier: 81205
Location Zones	

D.

Zone	Area
212	Flight Compartment, Right

E. Before the Procedure

ARO 001-004

SUBTASK 46-13-00-480-005

- (1) Connect the maintenance device, SPL-11321. Do this task: (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).
 - (a) Activate the ONS maintenance browser.

ARO 005-999

SUBTASK 46-13-00-480-017

- (2) Get access to the ONS maintenance browser.
 - (a) You can use the Maintenance Access Terminal (MAT) (How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810).
 - You can use the maintenance device, SPL-11321, (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

ARO ALL

F. Server Credentials Check

ARO 001-010

SUBTASK 46-13-00-750-001

- (1) On the ONS maintenance browser menu bar, make your selection: LINE MAINTENANCE > SECURITY > SERVER CREDENTIALS.
 - (a) Wait for the result to show below the words: Select server(s) to generate new credentials.
 - (b) Examine the result in the box as follows:
 - The data shows a time-date stamp when the last credentials were made.
 - 2) If you find a problem, then continue.
 - NOTE: Know and follow the policies and procedures set by your airline or operator. If the credentials do not show, or are expired based on your operator's policy, then continue with the next step.

46-13-00

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ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-750-004

- (2) On the ONS maintenance browser menu bar, make your selection: Line Maintenance > Security > Security Server Credentials
 - (a) Wait for the result to show below the words: Server Credentials Status.
 - (b) Examine the result in the box as follows:
 - 1) The data shows a time-date stamp when the last credentials were made.
 - 2) If you find a problem, then continue.

NOTE: Know and follow the policies and procedures set by your airline or operator. If the credentials do not show, or are expired based on your operator's policy, then continue with the next step.

ARO 014-999: ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-750-005

- (3) On the ONS maintenance browser menu bar, make your selection: LINE MAINTENANCE > SECURITY.
 - (a) Make your selection: SERVER CREDENTIALS, on the navigation bar.
 - 1) Make sure the SERVER CREDENTIALS tab is selected, and shows green in color.
 - (b) Examine the result below the words: Credentials Status.
 - 1) The data shows a time-date stamp when the last credentials were made.
 - 2) If you find a problem, then continue.

NOTE: Know and follow the policies and procedures set by your airline or operator. If the credentials do not show, or are expired based on your operator's policy, then continue with the next step.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-470-001

- (4) 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 CREDENTIALS button.
 - (b) When the confirmation box shows, click once on CONTINUE.
 - (c) A progress box will show. Wait for the result.
 - (d) Examine the result in the box below the words: Server Credentials Results.
 - A successful result will show these words:
 - Credentials last generated on: <date/time stamp of the credential>
 - NFS1: Successfully retrieved and installed credentials.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-470-029

- (5) 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) Make your selection: GENERATE, at the lower right-hand corner of the page.

ARO ALL



ARO 014-999; ARO 011-013 POST SB 777-46-0066 (Continued)

- (b) When the confirmation box shows, make your selection: CONTINUE.
- (c) A progress icon can show. Wait for the result.
- (d) Examine the result in the box below the words: Credentials Generation Status.
 - 1) A successful result will show these words:
 - Credentials last generated on: <date/time stamp of the credential>

ARO ALL

G. Put the Aircraft Back to it's Usual Condition

ARO 014-999: ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-840-005

- (1) To exit SECURITY, you can do one of these steps:
 - (a) To show the main menu, click on the HOME icon at the upper left-hand corner.
 - (b) To end the ONS Maintenance session and show Windows desktop, click once on the gear icon, in the upper right-hand corner.
 - 1) Make your selection: EXIT ONS.

ARO ALL

SUBTASK 46-13-00-080-001

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



TASK 46-13-00-750-802

6. Onboard Network System Client Credentials Check

A. General

- (1) This task gives the steps to do a check, and if necessary, to update the client credentials.
 NOTE: Each LRU must have a serviceable client credential to communicate with the server.
- (2) To do this task, the aircraft must be on the ground with its weight compressing the landing gear.

B. References

Reference	Title
45-10-00-910-810	How to Operate the MAT in the Flight Compartment (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.

ARO ALL 46-13-00



Reference	Description
SPL-11321	Device - Maintenance
	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205 Opt Part #: J45001-1 Supplier: 81205 Opt Part #: J45003-1 Supplier: 81205
Location Zones	

D. I

Zone	Area
212	Flight Compartment, Right

Before the Procedure

ARO 001-004

SUBTASK 46-13-00-480-006

- Do this task: Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801.
 - Using the maintenance device, SPL-11321, activate the ONS maintenance browser.

ARO 005-999

SUBTASK 46-13-00-480-016

- Get access to the ONS maintenance browser.
 - You can use the Maintenance Access Terminal (MAT) (How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810).
 - You can use the maintenance device, SPL-11321, (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

ARO ALL

F. Client Credentials Check

ARO 001-010

SUBTASK 46-13-00-470-002

- On the ONS maintenance browser menu bar, make your selection: LINE MAINTENANCE > SECURITY > CLIENT CREDENTIALS.
 - (a) Wait for the result to show below the words: Select client(s) to generate new credentials.
 - (b) Examine the record to find each client, and the condition of its credential.
 - NOTE: Typically, the credentials status will show the words "Last generated" with a date and time stamp. If the status shows the words: No credentials exist, then this condition is unserviceable.
 - If you find a problem, then continue.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-470-016

On the ONS maintenance browser menu bar, make your selection: Line Maintenance > Security > Security Client Credentials.

· EFFECTIVITY -**ARO ALL**



ARO 011-013 PRE SB 777-46-0066 (Continued)

- (a) Wait for the result to show below the words: Select client(s) to generate new credentials.
- (b) Examine the record to find each client, and the condition of its credential.
 - NOTE: Typically, the credentials status will show the words "Last generated" with a date and time stamp. If the status shows the words: No credentials exist, then this condition is unserviceable.
 - 1) If you find a problem, then continue.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-470-019

- (3) On the ONS maintenance browser menu bar, make your selection: LINE MAINTENANCE > SECURITY.
 - (a) Make sure the CLIENT CREDENTIALS tab is selected, and shows green in color.
 - (b) Examine the record to find the client name, and the credential status.
 - NOTE: Typically, the credentials status will show the words "Last generated" with a date and time stamp. If the status shows the words: No credentials exist, then this condition is unserviceable.
 - 1) If you find a problem, then continue.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-470-003

- (4) To make one or more new client credentials, do these steps:
 - NOTE: Each client (or, LRU) must have its own unique credential.
 - (a) Click once on the client name to highlight it.
 - (b) Make your selection GENERATE CREDENTIALS.
 - (c) In the confirmation box, make your selection CONTINUE.
 - (d) Examine the result in the box below the words Credentials Generation Status.
 - A credential is serviceable when the status shows the words: Successfully retrieved and installed credentials
 - 2) Use the scroll bar to see all of the clients and the status.
 - (e) Let the NFS operate for at least two minutes before you do the next ONS maintenance task.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-470-020

- (5) To make one or more new client credentials, do these steps:
 - NOTE: Each client (or, LRU) must have its own unique credential.
 - (a) Click on the check box adjacent to the client name.
 - (b) Make your selection: GENERATE.
 - (c) In the confirmation box, make your selection CONTINUE.
 - 1) A spinning icon will show.
 - (d) Examine the result in the box below the words Credentials Generation Status.

ARO ALL



ARO 014-999; ARO 011-013 POST SB 777-46-0066 (Continued)

- A credential is serviceable when the status shows the words: Successfully retrieved and installed credentials
- 2) Use the scroll bar to see all of the clients and the status.
- (e) Let the NFS operate for at least two minutes before you do the next ONS maintenance task.

ARO ALL

G. Put the Aircraft Back to it's Usual Condition

SUBTASK 46-13-00-080-003

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



TASK 46-13-00-720-803

7. Onboard Network System Input Monitoring Check

A. General

ARO 001-013

(1) This task gives the steps to do a check of the analog and digital inputs of the network file server (NFS), M46009.

ARO 014-999

(2) This task gives the steps to do a check of the analog and digital inputs of the network file server - left (NFS-L), M46013.

ARO ALL

- (3) This task gives you the condition of the communication channels that follow, for the targeted unit:
 - Ethernet
 - 429 receive
 - · 429 transmit
 - · Input discretes
 - · Output discretes.
- (4) You can do this task on the ground, or during flight.

B. References

Reference	Title
45-10-00-910-810	How to Operate the MAT in the Flight Compartment (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.

ARO ALL



Reference	Description
SPL-11321	Device - Maintenance
	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205 Opt Part #: J45001-1 Supplier: 81205 Opt Part #: J45003-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. Before the Check

ARO 001-004

SUBTASK 46-13-00-480-008

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

ARO 005-999

SUBTASK 46-13-00-480-020

- (2) Get access to the ONS maintenance browser.
 - (a) You can use the Maintenance Access Terminal (MAT) (How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810).
 - (b) You can use the maintenance device, SPL-11321, (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

ARO ALL

F. ONS Input Monitoring Check - Procedure

ARO 001-010

SUBTASK 46-13-00-720-006

- (1) Set the ONS browser to show the INPUT MONITORING page as follows:
 - (a) From the menu bar, make the selection: OTHER FUNCTIONS > INPUT MONITORING.
 - (b) Select NFS and then click once on CONTINUE.
 - 1) Make sure the result shows the correct target, and these buttons:
 - Ethernet
 - 429 Receive
 - 429 Transmit
 - Input Discretes
 - · Output Discretes.



ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-720-030

- (2) Set the ONS browser to show the INPUT MONITORING page as follows:
 - (a) From the menu bar, make the selection: Extended Maintenance > Input Monitoring.
 - (b) Select NFS and then click once on CONTINUE.
 - 1) Make sure the result shows the correct target, and these buttons:
 - Ethernet
 - 429 Receive
 - · 429 Transmit
 - · Input Discretes
 - · Output Discretes.

ARO 014-999: ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-720-045

- (3) Set the ONS browser to show the INPUT MONITORING page as follows:
 - (a) From the menu bar, make the selection: EXTENDED MAINTENANCE > INPUT MONITORING.
 - (b) Select NFS.
 - 1) Make sure the result show these buttons:
 - ETHERNET
 - 429 RECEIVE
 - 429 TRANSMIT
 - INPUT DISCRETES
 - OUTPUT DISCRETES
 - 717 RECEIVE

ARO 001-010

SUBTASK 46-13-00-720-007

- (4) Click once on the Ethernet button.
 - (a) Examine the result for each port shown.
 - 1) If the status shows UP, the connection is serviceable.
 - 2) If the status shows DOWN or UNAVAILABLE, the connection is unserviceable.
 - 3) Use the NEXT and PREVIOUS buttons to show more pages of data.
 - (b) To return to the input monitor page, click once on RETURN.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-720-025

- (5) Click once on the Ethernet button.
 - (a) Examine the result for each port shown.
 - 1) If the status shows UP, the connection is serviceable.
 - If the status shows DOWN or UNAVAILABLE, the connection is unserviceable.
 - 3) Use the NEXT and PREVIOUS buttons to show more pages of data.

ARO ALL



ARO 011-013 PRE SB 777-46-0066 (Continued)

(b) To return to the input monitor menu, click once on BACK.

ARO 014-999: ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-720-046

- (6) Click once on the ETHERNET button.
 - (a) Examine the result for each port shown.
 - 1) If the status shows Up, the connection is serviceable.
 - 2) If the status shows Down, Unavailable, or Admin Down, the connection is unserviceable.

<u>NOTE</u>: The Admin Down condition shows that the interface is set to OFF in the configuration software part, and no data is expected.

- (b) Use the scroll bar to examine all of the data on the page.
- (c) To exit INPUT MONITORING, do one of these steps:
 - 1) Click on the HOME icon, to show the main menu.
 - 2) Click on the gear icon, and make your selection: EXIT ONS.

ARO 001-010

SUBTASK 46-13-00-720-008

- (7) Click once on the 429 Receive button.
 - (a) Examine the result for each port shown.
 - 1) If the status shows UP, the connection is serviceable.
 - 2) If the status shows DOWN or UNAVAILABLE, the connection is unserviceable.
 - 3) Use the NEXT and PREVIOUS buttons to show more pages of data.
 - (b) To return to the input monitor page, click once on RETURN.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-720-026

- (8) Click once on the 429 Receive button.
 - (a) Examine the result for each port shown.
 - 1) If the status shows UP, the connection is serviceable.
 - 2) If the status shows DOWN or UNAVAILABLE, the connection is unserviceable.
 - 3) Use the NEXT and PREVIOUS buttons to show more pages of data.
 - (b) To return to the input monitor page, click once on BACK.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-720-047

- (9) Click once on the 429 RECEIVE button.
 - (a) Examine the result for each bus shown.
 - 1) If the status shows High or Low, the connection is serviceable.



ARO 014-999; ARO 011-013 POST SB 777-46-0066 (Continued)

 If the status shows Failed, Unavailable, or Disabled, the connection is unserviceable.

NOTE: The Disabled condition shows that the interface is set to OFF in the configuration software part, and no data is expected.

- (b) Use the scroll bar to examine all of the data on the page.
- (c) To exit INPUT MONITORING, do one of these steps:
 - 1) Click on the HOME icon, to show the main menu.
 - 2) Click on the gear icon, and make your selection: EXIT ONS.

ARO 001-010

SUBTASK 46-13-00-720-009

- (10) Click once on the 429 Transmit button.
 - (a) Examine the result for each port shown.
 - 1) If the status shows UP, the connection is serviceable.
 - 2) If the status shows DOWN or UNAVAILABLE, the connection is unserviceable.
 - 3) Use the NEXT and PREVIOUS buttons to show more pages of data.
 - (b) To return to the input monitor page, click once on RETURN.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-720-027

- (11) Click once on the 429 Transmit button.
 - (a) Examine the result for each port shown.
 - 1) If the status shows UP, the connection is serviceable.
 - 2) If the status shows DOWN or UNAVAILABLE, the connection is unserviceable.
 - 3) Use the NEXT and PREVIOUS buttons to show more pages of data.
 - (b) To return to the input monitor page, click once on BACK.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-720-048

- (12) Click once on the 429 TRANSMIT button.
 - (a) Examine the result for each port shown.
 - 1) If the status shows High or Low, the connection is serviceable.
 - 2) If the status shows Failed, Unavailable, or Disabled, the connection is unserviceable.
 - (b) Use the scroll bar to examine all of the data on the page.
 - (c) To exit INPUT MONITORING, do one of these steps:
 - 1) Click on the HOME icon, to show the main menu.
 - 2) Cllck on the gear icon, and make your selection: EXIT ONS.

ARO 001-010

SUBTASK 46-13-00-720-010

(13) Click once on the Input Discretes button.

ARO ALL



ARO 001-010 (Continued)

- (a) Examine the result for each port shown.
 - 1) If the status shows UP, the connection is serviceable.
 - 2) If the status shows DOWN or UNAVAILABLE, the connection is unserviceable.
 - 3) Use the NEXT and PREVIOUS buttons to show more pages of data.
- (b) To return to the input monitor page, click once on RETURN.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-720-028

- (14) Click once on the Input Discretes button.
 - (a) Examine the result for each port shown.
 - 1) If the status shows UP, the connection is serviceable.
 - 2) If the status shows DOWN or UNAVAILABLE, the connection is unserviceable.
 - 3) Use the NEXT and PREVIOUS buttons to show more pages of data.
 - (b) To return to the input monitor page, click once on BACK.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-720-049

- (15) Click once on the INPUT DISCRETES button.
 - (a) Examine the result for each discrete shown.
 - 1) If the status shows Open or Ground, the connection is serviceable.
 - 2) If the status shows Unavailable, the connection is unserviceable.
 - (b) Use the scroll bar to examine all of the data on the page.
 - (c) To exit INPUT MONITORING, do one of these steps:
 - 1) Click on the HOME icon, to show the main menu.
 - 2) Click on the gear icon, and make your selection: EXIT ONS.

ARO 001-010

SUBTASK 46-13-00-720-011

- (16) Click once on the Output Discretes button.
 - (a) Examine the result for each port shown.
 - 1) If the status shows UP, the connection is serviceable.
 - 2) If the status shows DOWN or UNAVAILABLE, the connection is unserviceable.
 - 3) Use the NEXT and PREVIOUS buttons to show more pages of data.
 - (b) To return to the input monitor page, click once on RETURN.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-720-029

- (17) Click once on the Output Discretes button.
 - (a) Examine the result for each port shown.
 - 1) If the status shows UP, the connection is serviceable.
 - 2) If the status shows DOWN or UNAVAILABLE, the connection is unserviceable.

ARO ALL



ARO 011-013 PRE SB 777-46-0066 (Continued)

- 3) Use the NEXT and PREVIOUS buttons to show more pages of data.
- (b) To return to the input monitor page, click once on BACK.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-720-050

- (18) Click once on the OUTPUT DISCRETES button.
 - (a) Examine the result for each discrete shown.
 - 1) If the status shows Open or Ground, the connection is serviceable.
 - 2) If the status shows Unavailable, the connection is unserviceable.
 - (b) Use the scroll bar to examine all of the data on the page.
 - (c) To exit INPUT MONITORING, do one of these steps:
 - 1) Click on the HOME icon, to show the main menu.
 - 2) Click on the gear icon, and make your selection: EXIT ONS.

ARO 016-999

SUBTASK 46-13-00-720-053

- (19) Do a check of the 717 RECEIVE bus for the flight data recorder Input. These are the steps:
 - (a) On the P10 control panel, put the left or right fuel control lever from the CUTOFF position to the RUN position.
 - 1) Wait approximately 2 minutes.
 - (b) On the MAT display, select the center bezel button.
 - (c) On the MAT display, select the MAIN tab screen.
 - 1) Make sure that the ONS button is displayed.
 - (d) Select ONS to display the ONS main screen.
 - (e) Select ONBOARD NETWORK SYSTEM.
 - (f) Select the EXTENDED MAINTENANCE button.
 - (g) Select the INPUT MONITORING button.
 - (h) Select the NFS option.
 - (i) Select the 717 RECEIVE button.
 - 1) Make sure that the BUS 1 status field shows ACTIVE.
 - (j) On the P10 control panel, put the left or right fuel control lever from the RUN position to the CUTOFF position.

ARO ALL

G. Put the Aircraft Back to it's Usual Condition

SUBTASK 46-13-00-080-005

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

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ARO ALL

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TASK 46-13-00-720-804

8. Onboard Network System Configuration Check

A. General

- (1) This task gives you the serial number, hardware number, and software part number from the target server, or radio.
- (2) This procedure is applicable to the unit, or units that follow:

ARO 001-013

• Network file server (NFS), M46009

ARO 014-999

• Network file server - left (NFS-L), M46013

ARO ALL

• Wireless LAN unit (WWU), M44360.

ARO 005-999

• Network extension device-domain guard (NED-DG), M46010.

ARO ALL

(3) To do this task the aircraft must be on the ground, with its weight compressing the landing gear.

B. References

Reference	Title
45-10-00-910-810	How to Operate the MAT in the Flight Compartment (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.

Description
Device - Maintenance
Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205
Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205 Opt Part #: J45001-1 Supplier: 81205 Opt Part #: J45003-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment, Right

ARO ALL



E. ONS Configuration Check - Procedure

ARO 001-004

SUBTASK 46-13-00-480-009

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

ARO 005-999

SUBTASK 46-13-00-480-018

- (2) Get access to the ONS maintenance browser.
 - (a) You can use the Maintenance Access Terminal (MAT) (How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810).
 - (b) You can use the maintenance device, SPL-11321, (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

ARO 001-010

SUBTASK 46-13-00-720-017

- (3) Using the ONS maintenance browser, make your selection: LINE MAINTENANCE > SYSTEM CONFIGURATION.
 - (a) Make sure the result shows the words System Configuration, and a table of data.
 - (b) Find your target LRU type, and click once to highlight it.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-720-024

- (4) Using the ONS maintenance browser, make your selection: Line Maintenance > ONS Configuration.
 - (a) Make sure the result shows the words ONS Configuration, and a table of data.
 - (b) Find your target LRU, and click once to highlight it.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-720-032

- (5) Using the ONS Maintenance browser, do these steps:
 - (a) Make your selection: LINE MAINTENANCE > SYSTEM CONFIGURATION.
 - (b) Below the words: Select ATA System, make your selection.
 - Click once on the radio button to select your target system or LRU.
 NOTE: Only selections that show white in color are available.
 - (c) Make your selection: CONFIGURATION, on the navigation bar.
 - (d) The result shows the ATA SYSTEM > CONFIGURATION page for the selected system.
 - 1) Wait for all results to show. The word Pending will be replaced with specific data.
 - 2) The page shows each connected LRU configuration with part numbers and nomenclatures.
 - 3) Use the scroll bar to examine all of the data on the page.



ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-720-018

- (6) If necessary, make a record of the data for your target LRU.
 - LRU name
 - · Software part number
 - · Nomenclature.
 - (a) To print a complete record of the software parts shown, make your selection: PRINT REPORT.
 - (b) To download a complete record of the software parts shown, make your selection: DOWNLOAD REPORT, and follow the onscreen commands.
 - (c) To examine the hardware part number and serial number, click once on the target LRU, below the words LRU NAME, to highlight.
 - 1) The hardware data shows below the words: Details of Selected Hardware.
 - (d) Make sure the data agrees with the requirement specified by your airline or operator.

ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-720-034

- (7) You can print a record, or save a digital record of one or more selected parts.
 - (a) To print a record, do these steps:
 - 1) At the lower right-hand corner, make your selection: TRANSFER.
 - a) The result shows a dialog box with the words: Select Destination.
 - 2) Make your selection: FlightDeck.
 - 3) Make your selection: SEND.
 - 4) Make your selection: CANCEL to exit and show the configuration page.
 - (b) To save the record as a digital file, do these steps:
 - 1) At the lower right-hand corner, make your selection: TRANSFER.
 - a) The result shows a dialog box with the words: Select Destination.
 - 2) To make a digital file, make your selection: Portable Maintenance Device.
 - 3) Make your selection: SEND.
 - 4) Use the operating system's navigation window to save the file to your target directory.
 - 5) Make your selection: CANCEL to exit and show the configuration page.

ARO 014-999

SUBTASK 46-13-00-720-051

- (8) You can print a record, or save a digital record of one or more selected parts.
 - (a) To print a record, do these steps:
 - 1) At the lower right-hand corner, make your selection: REPORT.
 - a) The result shows a dialog box with the words: Select Destination.
 - 2) Make your selection: FlightDeck.
 - NOTE: Planes with optional cabin printer will also have optional selection: Cabin
 - 3) Make your selection: SEND.

ARO ALL



ARO 014-999 (Continued)

- 4) Make your selection: CLOSE to exit and show the configuration page.
- (b) To save the record as a digital file, do these steps:
 - 1) At the lower right-hand corner, make your selection: REPORT.
 - a) The result shows a dialog box with the words: Select Destination.
 - 2) To make a digital file, make your selection: Portable Maintenance Device or Portable Maintenance Device (xml).
 - 3) Make your selection: SEND.
 - 4) Use the operating system's navigation window to save the file to your target directory.
 - 5) Make your selection: CLOSE to exit and show the configuration page.

ARO 011-999

SUBTASK 46-13-00-860-025

(9) Click once on the HOME icon to exit the SYSTEM CONFIGURATION page.

ARO ALL

F. Put the Aircraft Back To Its Usual Condition

SUBTASK 46-13-00-080-006

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



TASK 46-13-00-470-801

9. Onboard Network System LRU Software Installation

A. General

- (1) This procedure gives the steps to operate the ONS maintenance browser to do a software installation.
 - (a) You can use the maintenance device, SPL-11321.

ARO 005-999

- (b) You can use the Maintenance Access Terminal (MAT), except as noted.
 - 1) To change the operating system into the NFS, you must use only the maintenance device, SPL-11321.
 - 2) Software installation into other systems can use the laptop or the MAT.

ARO ALL

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

ARO 005-999

Network extension device-domain guard (NED-DG).

ARO ALL

- · Wireless wide area network unit (WWU).
- · Network File Server (NFS).

ARO ALL



ARO 014-999; ARO 011-013 POST SB 777-46-0066

- (3) You can install software into one or more LRUs at the same time only when the LRUs are the same type. For example;
 - (a) You can install to one or more WAP units at the same time, if present
 - (b) You can install to the NED-DG and NED-2 at the same time, if present.

ARO ALL

- (4) The ONS maintenance browser is a web site hosted by the network file server (NFS).
- (5) The LSAP to be installed is saved on the mass storage device (MSD), which is a function of the NFS.
- (6) Refer to the software installation task for your specific LRU for additional steps and checks.

ARO 001-010

(7) To do this task the aircraft must be on the ground`, with its weight compressing the landing gear.

ARO 011-013 PRE SB 777-46-0066

- (8) To do this task, these conditions must exist:
 - (a) The weight-on-wheels discrete must show the GROUND condition.
 - (b) The ground speed must show less than 2 knots (4 km/h).
 - (c) The Computed Airspeed (CAS) must show less than 30 knots (56 km/h).

ARO 014-999; ARO 011-013 POST SB 777-46-0066

- (9) To do this task, these conditions must exist:
 - (a) The weight-on-wheels discrete must show the GROUND condition.
 - (b) CMC Flight Phase must be the Default, or Power-On condition.

ARO ALL

B. References

Reference	Title
45-10-00-910-810	How to Operate the MAT in the Flight Compartment (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 - Maintenance
	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205
	Opt Part #: G45002-25 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205 Opt Part #: J45001-1 Supplier: 81205 Opt Part #: J45003-1 Supplier: 81205

ARO ALL



D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. Before Software Installation

ARO 001-004

SUBTASK 46-13-00-480-010

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

ARO 005-999

SUBTASK 46-13-00-480-025

- (2) Get access to the ONS maintenance browser.
 - (a) You can use the MAT (How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810), except as noted.
 - 1) To change the operating system into the NFS, you must use only the maintenance device, SPL-11321.
 - (b) You can use the maintenance device, SPL-11321, (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

ARO ALL

SUBTASK 46-13-00-720-014

- (3) Do this task: (Mass Storage Device Software Parts Check, TASK 46-13-00-720-805).
 - (a) Make sure that the correct software parts, those required for the target LRU, are available in the MSD.

F. ONS Maintenance Browser Operation - LRU Software Installation

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-470-008

 Using the ONS maintenance browser, make the selection: LINE MAINTENANCE > DATA LOAD.

SUBTASK 46-13-00-470-009

- (2) In the DATA LOAD window, find and select the target LRU.
 - (a) Select CONTINUE.
 - (b) If another pop-up box shows (for example, to select left or right), make your selection and click once on CONTINUE.
 - (c) Make sure a window shows with the words: Select part number(s) to load to the selected LRU(s).

SUBTASK 46-13-00-470-010

- Select one or more parts to install.
 - (a) Click once on each software part to highlight it.
 - (b) Click once on the SELECT button.

NOTE: The SELECT button causes a second box to show with your selections.

ARO ALL 46-13-00



ARO 001-010; ARO 011-013 PRE SB 777-46-0066 (Continued)

- (c) Make sure the parts in the box shown below the words Selected Parts are correct.
 - NOTE: To remove a part from the group, click once on the part to highlight. Then click once on UNSELECT.
- (d) Click once on CONTINUE.

SUBTASK 46-13-00-470-015

- (4) If one or more confirmation window shows, do these steps:
 - (a) Read and follow the instruction shown.
 - (b) Make your selection: CONFIRM.

SUBTASK 46-13-00-470-012

- (5) Examine the DATA LOAD RESULT page.
 - (a) Adjacent to each part number installed, make sure the LOAD STATUS shows the word SUCCESS.

ARO 014-999: ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-470-021

- (6) Using the ONS maintenance browser, make your selection: EXTENDED MAINTENANCE > DATA LOAD.
 - (a) Make sure the DATA LOAD page shows.

SUBTASK 46-13-00-470-022

- (7) Make your ATA System selection: Onboard Network System.
 - (a) The result shows available LRUs below the words: Select LRU.

ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-470-023

- (8) Select your target LRU, or LRUs.
 - (a) Use the scroll bar to see all of the page.
 - (b) Click to put a check mark ($\sqrt{}$) adjacent to your target LRU.
 - (c) Your first selection can inhibit the availability of other LRU selections.
 - (d) Only LRUs that are compatible can be selected two or more at the same time.
 - (e) Make your selection: LSP on the navigation bar.
 - 1) The result shows a table with the words: Select the Load Part Number.

ARO 014-999

SUBTASK 46-13-00-470-032

- (9) Select your target LRU, or LRUs.
 - (a) Use the scroll bar to see all of the page.
 - (b) Click to put a check mark ($\sqrt{}$) adjacent to your target LRU.
 - (c) Your first selection can inhibit the availability of other LRU selections.
 - (d) Only LRUs that are compatible can be selected two or more at the same time.
 - (e) Make your selection: LSP on the navigation bar or CONTINUE button at lower right corner.
 - 1) The result shows a table with the words: Select MSD Load Part Number.

ARO ALL



ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-470-024

- (10) Select your target loadable software parts (LSP).
 - (a) Click to put a check mark ($\sqrt{}$) adjacent to your target LSP.
 - For the NFS, NED-DG, or NED-2, you can install one or more parts at the same time.
 - (b) Make your selection: SUMMARY on the navigation bar.
 - 1) The result shows a new page with a table showing your selections for Source, Destination, Part Number and Nomenclature.

ARO 014-999

SUBTASK 46-13-00-470-033

- (11) Select your target loadable software parts (LSP).
 - (a) Click to put a check mark ($\sqrt{}$) adjacent to your target LSP.
 - For the NFS, NED-DG, or NED-2, you can install one or more parts at the same time
 - (b) Make your selection: SUMMARY on the navigation bar or CONTINUE at lower right corner.
 - 1) The result shows a new page with a table showing your selections for Source, Destination, Part Number and Nomenclature.

SUBTASK 46-13-00-470-025

- (12) Examine the summary data.
 - (a) If correct, make your selection: PRECONDITIONS on the navigation bar or CONTINUE at lower right corner.
 - 1) The result shows a new page, and can show precondition messages or instructions.

ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-470-026

- (13) Examine the precondition data.
 - (a) If correct, make your selection: LOAD, or START LOAD at lower left corner.
 - NOTE: The exact button text is specified by the software part and LRU selections. If you observe different words, this is not a fault.
 - 1) The result shows the LOAD page, with destination, part number, nomenclature, and status.

ARO 014-999

SUBTASK 46-13-00-470-034

- (14) Examine the precondition data.
 - (a) If correct, make your selection: LOAD on the navigation bar or CONTINUE at lower right corner.
 - <u>NOTE</u>: The exact button text is specified by the software part and LRU selections. If you observe different words, this is not a fault.
 - 1) The result shows the LOAD page, with destination, part number, nomenclature, and status.

46-13-00

ARO ALL



ARO 014-999 (Continued)

SUBTASK 46-13-00-470-030

- (15) Examine the Progress data.
 - (a) If correct, make your selection: START LOAD at lower right corner.

ARO 014-999: ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-470-027

- (16) Wait for the installation to complete.
 - (a) When the word SUCCESS shows, the LSP has been installed.
 - (b) Make sure you do the additional instructions, if shown (for example; LRU reboot required).

ARO 011-999

SUBTASK 46-13-00-840-004

(17) Click on the HOME icon to exit the DATA LOAD pages.

ARO ALL

G. Installation Check

SUBTASK 46-13-00-750-002

(1) 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.

H. Put the Aircraft Back to it's Usual Condition

SUBTASK 46-13-00-080-007

(1) Stop the ONS maintenance browser, and disconnect the maintenance device, SPL-11321 if it is no longer required.



TASK 46-13-00-710-801

10. Onboard Network System Printer Check

A. General

- (1) This task gives the steps to do a check of the printer condition.
 - (a) For airplanes with more than one network printer, you can choose the default printer.
 - (b) If a print request has not printed, you can examine or delete that job.

B. References

Reference	Title
45-10-00-910-810	How to Operate the MAT in the Flight Compartment (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.

ARO ALL



Reference	Description
SPL-11321	Device - Maintenance
	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205 Opt Part #: J45001-1 Supplier: 81205 Opt Part #: J45001-1 Supplier: 81205 Opt Part #: J45003-1 Supplier: 81205
Location Zones	

D. I

Zone	Area
212	Flight Compartment, Right

E. Prepare for the Procedure

ARO 001-004

SUBTASK 46-13-00-480-013

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

ARO 005-999

SUBTASK 46-13-00-480-021

- Get access to the ONS maintenance browser.
 - You can use the Maintenance Access Terminal (MAT) (How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810).
 - You can use the maintenance device, SPL-11321, (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

ARO ALL

F. ONS Printer Check

ARO 001-010

SUBTASK 46-13-00-720-015

- (1) On the ONS maintenance browser menu bar, make your selection: CONDITION MONITORING > PRINTER CONDITION.
 - (a) For each printer shown, examine the pending jobs, status, and fault type.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-720-019

- On the ONS maintenance browser menu bar, make your selection: Extended Maintenance > Printer Condition.
 - (a) For each printer shown, examine the pending jobs, status, and fault type.

46-13-00

· EFFECTIVITY **ARO ALL**



ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-720-043

- (3) On the ONS maintenance browser menu bar, make your selection: EXTENDED MAINTENANCE > PRINTER CONDITION.
 - (a) For each printer shown, examine the pending jobs, status, and fault type.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-860-005

- (4) To set a specific printer as the default printer, do these steps:
 - (a) Click once on the printer name to highlight the row.
 - (b) Make your selection SET DEFAULT.
 - (c) In the pop-up window, click on the target printer to highlight.
 - (d) Make your selection: CONTINUE.

ARO 001-010

SUBTASK 46-13-00-720-016

- (5) To examine specific print jobs for that printer, do these steps:
 - (a) Click once on the target printer name to highlight the row.
 - (b) Make your selection: SHOW JOBS.
 - (c) To remove the job from the queue, select DELETE JOB.
 - (d) To remove all jobs from the queue, select DELETE ALL.
 - (e) To return to the printer status page, select BACK.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-720-023

- (6) To examine specific print jobs for that printer, do these steps:
 - (a) Click once on the target printer name to highlight the row.
 - (b) Make your selection: SHOW JOBS.
 - (c) To remove the job from the queue, select DELETE JOB.
 - (d) To remove all jobs from the queue, select DELETE ALL.
 - (e) To return to the printer status page, select BACK.

ARO 014-999: ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-720-037

- (7) To examine specific print jobs for that printer, do these steps:
 - (a) Click once on the radio button adjacent to the target printer name.
 - (b) Make your selection: PENDING JOBS, on the navigation bar.
 - (c) To remove the job from the queue, do these steps:
 - 1) Select the check-box adjacent to that job.
 - 2) Make your selection: DELETE.
 - 3) Make your selection: CONTINUE.
 - (d) Make your selection: COMPLETED JOBS, on the navigation bar.
 - 1) Examine the record of finished work.

ARO ALL



ARO 014-999; ARO 011-013 POST SB 777-46-0066 (Continued)

(e) To return to the printer status page, make your selection: PRINTERS.

ARO 011-999

SUBTASK 46-13-00-860-026

(8) Click on the HOME icon to show the main menu.

ARO ALL

G. Put the Aircraft Back to it's Usual Condition

SUBTASK 46-13-00-080-010

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



ARO 011-999

TASK 46-13-00-860-801

11. Onboard Network System Aircraft Identification Check

A. General

- (1) This task gives the steps to do a check, and if necessary, to update the airplane identification in network file server (NFS).
 - (a) If ONS senses that Airplane Identification data is missing, a pop-up message shows when you get access to the ONS maintenance web site.
 - (b) Without Airplane Identification information, some ONS Maintenance functions are unserviceable.
- (2) You can set only the Aircraft Type.
 - (a) The Aircraft Type recorded on the flight compartment placard must agree with the ONS Aircraft Type selection.
- (3) To do this task, the aircraft must be on the ground with its weight compressing the landing gear.

B. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
45-10-00-910-810	How to Operate the MAT in the Flight Compartment (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.

46-13-00

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ARO 011-999 (Continued)

Reference	Description
SPL-11321	Device - Maintenance
0. 2 11021	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205
	Opt Part #: G45002-29 Supplier: 81205
	Opt Part #: J45001-1 Supplier: 81205
	Opt Part #: J45003-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. Before the Procedure

SUBTASK 46-13-00-840-001

(1) If the aircraft is not energized, then supply electrical power, (Supply Electrical Power, TASK 24-22-00-860-805).

SUBTASK 46-13-00-480-028

- (2) Get access to the ONS maintenance browser.
 - (a) You can use the Maintenance Access Terminal (MAT) (How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810).
 - (b) You can use the maintenance device, SPL-11321, (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

F. Airplane Identification Check

SUBTASK 46-13-00-860-014

(1) Find and examine the aircraft placard, and make a record of the aircraft type.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-860-015

- (2) Using the ONS maintenance browser, make your selection: Line Maintenance > Airplane Identification.
 - (a) Examine the data shown for Aircraft Type.
 - 1) If the aircraft type and placard data agree, then click once on the Home icon, in the upper left corner. No additional action is necessary.
 - 2) If the aircraft type and placard data do not agree, then continue.

ARO 014-999: ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-860-028

- (3) Using the ONS maintenance browser, make your selection: LINE MAINTENANCE > AIRPLANE IDENTIFICATION.
 - (a) Examine the data shown for Aircraft Type.
 - If the aircraft type and placard data agree, then click once on the Home icon, in the upper left corner. No additional action is necessary.

ARO ALL



ARO 014-999; ARO 011-013 POST SB 777-46-0066 (Continued)

2) If the aircraft type and placard data do not agree, then continue.

ARO 011-999

G. Airplane Identification Changes

SUBTASK 46-13-00-860-016

- (1) Adjacent to the words Aircraft Type, make the correct selection from the drop-down menu.
 - (a) Make your selection: SAVE.
 - (b) Click once on the home icon, in the upper left corner.

H. Put the Aircraft Back to it's Usual Condition

SUBTASK 46-13-00-840-002

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

ARO ALL



TASK 46-13-00-070-801

12. Mass Storage Device Software Removal

A. General

- (1) This task gives the steps to remove one or more software parts from the onboard network server (ONS) mass storage device (MSD).
 - (a) Removal prevents that file from future installation into the target Line Replaceable Unit (LRU).
 - (b) After removal, an electronic software delivery system can attempt to replace the part with the same, or similar part. Coordinate your action with your network operator.

B. References

Reference	Title
45-10-00-910-810	How to Operate the MAT in the Flight Compartment (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 - Maintenance	
	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205	
	Opt Part #: J45001-1 Supplier: 81205 Opt Part #: J45003-1 Supplier: 81205	

ARO ALL



D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. Before Software Installation

ARO 001-004

SUBTASK 46-13-00-480-012

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

ARO 005-999

SUBTASK 46-13-00-480-022

- (2) Get access to the ONS maintenance browser.
 - (a) You can use the Maintenance Access Terminal (MAT) (How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810).
 - (b) You can use the maintenance device, SPL-11321, (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

ARO ALL

F. MSD Software Part Removal - Procedure

ARO 001-010

SUBTASK 46-13-00-070-002

- (1) Make the selection: LINE MAINTENANCE > MANAGE MSD.
 - (a) Examine the data that shows below the words: Select LSAP(s) to erase.
 - (b) Use the scroll bar to see the complete record.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-070-004

- (2) Using ONS Maintenance, do these steps:
 - (a) On main menu bar, make your selection: Line Maintenance.
 - (b) On the sub-menu, make your selection: MSD.
 - (c) Make your selection: MSD Manage.
 - (d) Examine the data that shows below the words: Select LSAP(s) to erase from ONS.
 - (e) Use the scroll bar to see the complete record.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-070-003

- (3) To make your selection and remove one or more parts. Do these steps:
 - (a) Click once on the part to highlight your selection.
 - 1) To deselect, click again on the part.
 - 2) The page will let you select one, some, or all of the parts.
 - (b) Click once on the ERASE button.
 - (c) When the confirmation box shows, click once on CONTINUE.

ARO ALL 46-13-00



ARO 001-010; ARO 011-013 PRE SB 777-46-0066 (Continued)

- (d) Make sure that the progress box shows with the words: Successfully erased the selected LSAP(s).
- (e) In the confirmation box, click once on the OK button.

ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-070-005

- (4) Using the ONS maintenance browser, do these steps that follow:
 - (a) Make your selection: EXTENDED MAINTENANCE > MSD.
 - (b) Below the words: Select the MSD, click once on the radio button adjacent to ONS MSD.
 - 1) The result shows a record of Loadable Software Airplane Part (LSAP) on the MSD.
 - (c) Select the LSAPs to delete.
 - (d) In the lower right-hand corner, make your selection: DELETE.
 - The result shows a dialog box with the words: Are you sure you want to delete the selected LSAPs?
 - (e) Make your selection: CONTINUE.
 - NOTE: This step erases the part, and can not be undone.
 - (f) Make sure the part has been removed from the MSD page.

ARO 014-999

SUBTASK 46-13-00-860-029

- (5) Using the ONS maintenance browser, do these steps that follow:
 - (a) Make your selection: EXTENDED MAINTENANCE > MASS STORAGE DEVICE.
 - (b) Below the words: Select the MSD, click once on the radio button adjacent to ONS MSD.
 - 1) The result shows a record of LSAP on the MSD.
 - (c) Select the LSAPs to delete.
 - (d) In the lower right-hand corner, make your selection: DELETE.
 - The result shows a dialog box with the words: Are you sure you want to delete the selected LSAPs?
 - (e) Make your selection: CONTINUE.
 - NOTE: This step erases the part, and can not be undone.
 - (f) Make sure the part has been removed from the MASS STORAGE DEVICE page.

ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-860-027

- (6) Optionally, you can make a printed, or digital record of one or more remaining parts. These are the steps:
 - (a) Below the words: Select the Load Part Number, click once to add a check-mark ($\sqrt{}$) adjacent to the target part.
 - 1) You can add more parts, or all parts to your record.
 - (b) At the lower right-hand corner, make your selection: TRANSFER.
 - 1) The result shows a dialog box with the words: Select Destination.
 - (c) To make a digital file, make your selection: Portable Maintenance Device.

ARO ALL



ARO 011-013 POST SB 777-46-0066 (Continued)

- 1) Make your selection: SEND.
- (d) To make a paper record, make your selection: Flight Deck (printer).
 - 1) Make your selection: SEND.
- (e) To remove the TRANSFER dialog box, make your selection: CANCEL.

ARO 014-999

SUBTASK 46-13-00-860-038

- (7) Optionally, you can make a printed, or digital record of one or more remaining parts. These are the steps:
 - (a) Below the words: Select the Load Part Number, click once to add a check-mark ($\sqrt{}$) adjacent to the target part.
 - 1) You can add more parts, or all parts to your record.
 - (b) At the lower center, make your selection: REPORT.
 - 1) The result shows a dialog box with the words: Select Destination.
 - (c) To make a digital file, make your selection: Portable Maintenance Device or Portable Maintenance Device (xml).
 - 1) Make your selection: SEND.
 - (d) To make a paper record, make your selection: Flight Deck (printer).
 - 1) Make your selection: SEND.
 - (e) To remove the REPORT dialog box, make your selection: CLOSE.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-860-010

- (8) To exit MSD-Manage, you can do one of these steps:
 - (a) To show the main menu, click on the HOME icon at the upper left-hand corner.
 - (b) To end the ONS Maintenance session and show Windows desktop, click once on the X at the upper right-hand corner.

ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-860-024

- (9) To exit the MSD page, you can do one of these steps:
 - (a) To show the main menu, click on the HOME icon at the upper left-hand corner.
 - (b) To end the ONS Maintenance session and show Windows desktop, click once on the gear icon, in the upper right-hand corner.
 - 1) Make your selection: EXIT ONS.

ARO 014-999

SUBTASK 46-13-00-860-030

- (10) To exit the MASS STORAGE DEVICE page, you can do one of these steps:
 - (a) To show the main menu, click on the HOME icon at the upper left-hand corner.
 - (b) To end the ONS Maintenance session and show Windows desktop, click once on the gear icon, in the upper right-hand corner.

ARO ALL



ARO 014-999 (Continued)

1) Make your selection: EXIT ONS.

ARO ALL

G. Put the Aircraft Back to it's Usual Condition

SUBTASK 46-13-00-080-009

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

——— END OF TASK ———

TASK 46-13-00-470-802

13. Mass Storage Device Software Part Installation

A. General

(1) This task gives the steps to install (or, transfer) software parts from the maintenance laptop (ML) to the Network File Server (NFS) mass storage device (MSD). These parts are for future installation into the applicable Line Replaceable Unit (LRU).

NOTE: Software parts saved on the MSD can be referred to as staged software.

- (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.

B. References

Reference	Title
45-10-00-910-810	How to Operate the MAT in the Flight Compartment (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 - Maintenance
	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205 Opt Part #: G45001-1 Supplier: 81205 Opt Part #: J45001-1 Supplier: 81205
	Opt Part #: J45003-1 Supplier: 81205

D. Location Zones

Zone	Area	
212	Flight Compartment, Right	

ARO ALL



E. Before Software Installation

ARO 001-004

SUBTASK 46-13-00-480-011

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

ARO 005-999

SUBTASK 46-13-00-480-023

- Get access to the ONS maintenance browser.
 - (a) You can use the Maintenance Access Terminal (MAT) (How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810).
 - (b) You can use the maintenance device, SPL-11321, (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

ARO ALL

SUBTASK 46-13-00-860-002

(3) To do a check of software already installed on the MSD, refer to (Mass Storage Device Software Parts Check, TASK 46-13-00-720-805).

F. MSD Software Installation

SUBTASK 46-13-00-470-013

- (1) Put the source media into the maintenance laptop.
 - (a) Your source data can be a compact disk (CD), or a USB memory stick, or other method specified by your airline or operator.

ARO 001-010

SUBTASK 46-13-00-860-003

- (2) From the ONS maintenance browser, make your selection: LINE MAINTENANCE > TRANSFER TO MSD.
 - (a) Make sure the page shows the words: Select a file with parts to transfer.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-860-008

- (3) From the ONS maintenance browser, make your selection: Line Maintenance > MSD > MSD Transfer.
 - (a) Make sure the page shows the words: Select a file with parts to transfer.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-470-014

- (4) Find, select, and upload a software part as follows:
 - (a) Click once on the Browse button.
 - (b) When the Choose File window shows, find your software part on the laptop.
 - (c) Click once on that part to select, and then click on the Open button.
 - 1) Make sure the part shows adjacent to the browse button.
 - (d) Click once on the TRANSFER button.
 - 1) A progress window can show intermittently.

ARO ALL



ARO 001-010; ARO 011-013 PRE SB 777-46-0066 (Continued)

- (e) In the Transfer Results box, make sure the correct part shows, and the status shows SUCCESS.
- (f) To add another software part to the MSD, do the steps again. Refer back to the step: Click once on the Browse button.

ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-860-017

- (5) Using the ONS maintenance browser, do these steps that follow:
 - (a) Make your selection: EXTENDED MAINTENANCE > MSD.
 - (b) Below the words: Select the MSD, click once on the radio button adjacent to ONS MSD.
 - 1) The result shows a record of Loadable Software Airplane Part (LSAP) on the MSD.
 - (c) At the bottom of the page, make your selection: (+) ADD.
 - 1) The result shows a page with the words: Select a file with software parts to load.
 - (d) In the lower right-hand corner, make your selection: BROWSE.
 - 1) The result shows the Windows navigation window, with the words: File Upload.
 - (e) Find and select one or more target software parts.
 - 1) The parts can be found on the media you mounted earlier.
 - (f) Make your selection: Open.
 - 1) The result shows a process box, with the words: Uploading part.
 - (g) The part is uploaded to the MSD when STATUS shows the word SUCCESS.

ARO 014-999

SUBTASK 46-13-00-860-031

- (6) Using the ONS maintenance browser, do these steps that follow:
 - (a) Make your selection: EXTENDED MAINTENANCE > MASS STORAGE DEVICE.
 - (b) Below the words: Select the MSD, click once on the radio button adjacent to ONS MSD.
 - 1) The result shows a record of LSAP on the MSD.
 - (c) At the bottom of the page, make your selection: (+) ADD.
 - 1) The result shows a page with the words: Select a file with software parts to load.
 - (d) In the lower right-hand corner, make your selection: BROWSE.
 - 1) The result shows the Windows navigation window, with the words: File Upload.
 - (e) Find and select one or more target software parts.
 - 1) The parts can be found on the media you mounted earlier.
 - (f) Make your selection: Open.
 - 1) The result shows a process box, with the words: Uploading part.
 - (g) The part is uploaded to the MSD when STATUS shows the word SUCCESS.

ARO ALL

ARO ALL



G. Installation Check

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-750-003

- (1) Do a check of the software installed, (Mass Storage Device Software Parts Check, TASK 46-13-00-720-805).
 - (a) Make sure installed part is serviceable.

NOTE: When you save an LSAP to the MSD, you can then install to the Target LRU. Refer to the software installation task for that specific LRU.

ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-470-017

(2) Make sure your part, or parts shows on the MSD page.

NOTE: When you save an LSAP to the MSD, you can then install to the Target LRU. Refer to the software installation task for that specific LRU.

ARO 014-999

SUBTASK 46-13-00-860-032

(3) Make sure your part, or parts shows on the MASS STORAGE DEVICE page.

NOTE: When a part is saved to the MSD, it is available for installation into a network-connected LRU. If you must now install this software into the target LRU, refer to the software installation task for that specific LRU.

ARO ALL

H. Put the Aircraft Back to it's Usual Condition

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-860-011

(1) To exit MSD-Manage and show the main menu, click on the HOME icon at the upper left-hand corner.

ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-860-023

- (2) To exit the MSD page, you can do one of these steps:
 - (a) To show the main menu, click on the HOME icon at the upper left-hand corner.
 - (b) To end the ONS Maintenance session and show Windows desktop, click once on the gear icon, in the upper right-hand corner.
 - 1) Make your selection: EXIT ONS.

ARO 014-999

SUBTASK 46-13-00-860-033

- (3) To exit the MASS STORAGE DEVICE page, you can do one of these steps:
 - (a) To show the main menu, click on the HOME icon at the upper left-hand corner.
 - (b) To end the ONS Maintenance session and show Windows desktop, click once on the gear icon, in the upper right-hand corner.
 - 1) Make your selection: EXIT ONS.

ARO ALL

ARO ALL



SUBTASK 46-13-00-080-008

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

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TASK 46-13-00-720-805

14. Mass Storage Device Software Parts Check

A. General

(1) This task gives the steps to do a check of software parts hosted by the mass storage device (MSD).

NOTE: The MSD refers to the file server environment available to the overall network. In contrast, this task is not applicable to check software that operates the network file server.

- (a) These parts contain the software to be installed into a connected Line Replaceable Unit (LRU).
- (b) Before you can install parts into a network-connected LRU, you must make sure the correct parts are on the server.
- (2) To do this task, you will operate the Onboard Network System (ONS) maintenance browser using a maintenance laptop (ML).
- (3) This task gives access to a screen that can erase software parts from the MSD. If you must remove software, refer to this task: (Mass Storage Device Software Removal, TASK 46-13-00-070-801).
- (4) To do this task the aircraft must be on the ground, with its weight compressing the landing gear.

B. References

Reference	Title
45-10-00-910-810	How to Operate the MAT in the Flight Compartment (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 - Maintenance
	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205
	Opt Part #: J45001-1 Supplier: 81205 Opt Part #: J45003-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment, Right

ARO ALL



E. Prepare for the Check

ARO 001-004

SUBTASK 46-13-00-480-014

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

ARO 005-999

SUBTASK 46-13-00-480-024

- (2) Get access to the ONS maintenance browser.
 - (a) You can use the Maintenance Access Terminal (MAT) (How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810).
 - (b) You can use the maintenance device, SPL-11321, (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

ARO ALL

F. Software Parts Check of Mass Storage Device - Procedure

ARO 001-010

SUBTASK 46-13-00-860-006

- (1) Make the selection: LINE MAINTENANCE > MANAGE MSD.
 - (a) Examine the table of data below the words: Select LSAP(s) to erase.
 - (b) Use the scroll bar to see the complete record.
 - (c) To make a record of the complete table, click once on the PRINT REPORT button.
 - (d) Make sure the parts shown agrees with the requirement specified by your airline or operator.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-860-009

- (2) Make the selection: Line Maintenance > MSD > MSD Manage.
 - (a) In the pop-up window, make your selection: ONS, and click once on CONTINUE.
 - (b) Examine the table of data below the words: Select LSAP(s) to erase from ONS.
 - (c) Use the scroll bar to see the complete record.
 - (d) To make a record of the complete table, click once on the PRINT REPORT button.
 - (e) Make sure the parts shown agrees with the requirement specified by your airline or operator.

ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-860-020

- (3) Using the ONS maintenance browser, do these steps that follow:
 - (a) Make your selection: EXTENDED MAINTENANCE > MSD.
 - (b) Below the words: Select the MSD, click once on the radio button adjacent to ONS MSD.
 - 1) The result shows a record of Loadable Software Airplane Part (LSAP) on the MSD.
 - (c) Below the words: Select the Load Part Number, examine the parts available for installation. The table gives these column headings:

ARO ALL



ARO 011-013 POST SB 777-46-0066 (Continued)

- ATA
- Part Number
- Nomenclature.
- (d) To get the file size for one or more parts, do these steps:
 - Make a selection in the box, below the words: Select the Load Part Number, for each LSAP.
 - 2) In the lower left-hand corner of the page, make your selection: DETAILS.

ARO 014-999

SUBTASK 46-13-00-860-034

- (4) Using the ONS maintenance browser, do these steps that follow:
 - (a) Make your selection: EXTENDED MAINTENANCE > MASS STORAGE DEVICE.
 - (b) Below the words: Select the MSD, click once on the radio button adjacent to ONS MSD.
 - 1) The result shows a record of LSAP on the MSD.
 - (c) Below the words: Select the Load Part Number, examine the parts available for installation. The table gives these column headings:
 - ATA
 - Part Number
 - · Nomenclature.
 - (d) To get the file size for one or more parts, do these steps:
 - Make a selection in the box, below the words: Select the Load Part Number, for each LSAP.
 - 2) In the lower left-hand corner of the page, make your selection: DETAILS.

ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-860-022

- (5) You can make a printed, or digital record of one or more selected parts. These are the steps:
 - (a) Below the words: Select the Load Part Number, click once to add a check-mark ($\sqrt{}$) adjacent to the target part.
 - 1) You can add more parts, or all parts to your record.
 - (b) At the lower right-hand corner, make your selection: TRANSFER.
 - 1) The result shows a dialog box with the words: Select Destination.
 - (c) To make a digital file, make your selection: Portable Maintenance Device.
 - 1) Make your selection: SEND.
 - (d) To make a paper record, make your selection: Flight Deck (printer).
 - 1) Make your selection: SEND.
 - (e) To remove the TRANSFER dialog box, make your selection: CANCEL.

ARO 014-999

SUBTASK 46-13-00-860-035

(6) You can make a printed, or digital record of one or more selected parts. These are the steps:

ARO ALL



ARO 014-999 (Continued)

- (a) Below the words: Select the Load Part Number, click once to add a check-mark ($\sqrt{}$) adjacent to the target part.
 - 1) You can add more parts, or all parts to your record.
- (b) At the lower right-hand corner, make your selection: REPORT.
 - 1) The result shows a dialog box with the words: Select Destination.
- (c) To make a digital file, make your selection: Portable Maintenance Device or Portable Maintenance Device (xml).
 - 1) Make your selection: SEND.
- (d) To make a paper record, make your selection: FlightDeck.

NOTE: Planes with optional cabin printer will also have optional selection: Cabin

- 1) Make your selection: SEND.
- (e) To remove the REPORT dialog box, make your selection: CLOSE.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-00-860-012

- (7) To exit MSD-Manage, you can do one of these steps:
 - (a) To show the main menu, click on the HOME icon at the upper left-hand corner.
 - (b) To end the ONS Maintenance session and show Windows desktop, click once on the X at the upper right-hand corner.

ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-00-860-021

- (8) To exit the MSD page, you can do one of these steps:
 - (a) To show the main menu, click on the HOME icon at the upper left-hand corner.
 - (b) To end the ONS Maintenance session and show Windows desktop, click once on the gear icon, in the upper right-hand corner.
 - Make your selection: EXIT ONS.

ARO 014-999

SUBTASK 46-13-00-860-036

- (9) To exit the MASS STORAGE DEVICE page, you can do one of these steps:
 - (a) To show the main menu, click on the HOME icon at the upper left-hand corner.
 - (b) To end the ONS Maintenance session and show Windows desktop, click once on the gear icon, in the upper right-hand corner.
 - 1) Make your selection: EXIT ONS.

ARO ALL

G. Put the Aircraft Back to it's Usual Condition

SUBTASK 46-13-00-080-011

(1) If the ML is no longer required, stop the ONS maintenance browser, and disconnect the ML.

END	OF TASK	· ——
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ARO ALL



NETWORK FILE SERVER - MAINTENANCE PRACTICES

1. General

- A. This procedure gives you tasks to maintain the Network File Server (NFS) as follows:
 - (1) A software installation task, to install software that operates the NFS.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

(2) A task that erases the NFS operational drive, and installs the NFS operating system.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

- (3) A reset data procedure removes all applications data and system logs, but leaves the operating system, restricted security files, certificate signing requests (CSR), and the mass storage device (MSD) data unchanged.
 - a) After reset, you do a software installation of all airline or operator specified software.
- (4) A reimage procedure that erases all applications and data, and installs the minimum software necessary to boot-up NFS into BootOS.
 - (a) After reimage, you do the initial data load, and full software installations.
- (5) An initial data loader (IDL) software installation procedure. IDL uses the installed BootOS to install the minimum software parts necessary to boot-up NFS to show the NFS main menu.
 - (a) After IDL, you do a software installation of all airline or operator specified software.
 - (b) Typically, this procedure is necessary for new or spares NFS units.

ARO ALL

- (6) A fault log check, to examine faults recorded by the NFS.
- (7) A log file check, to view log files, copy (or download) files, or delete files from the NFS.
- (8) A software configuration check, to examine the operational software parts installed in the NFS.
- B. For tasks that require a serviceable NFS to maintain the onboard network system, and mass storage device, refer to: (ONBOARD NETWORK SYSTEM MAINTENANCE PRACTICES, PAGEBLOCK 46-13-00/201).

TASK 46-13-01-470-801

2. Network File Server Software Installation

A. General

ARO 001-013

- (1) This task gives the steps to install operational software into the Network File Server (NFS), M46009, from the mass storage device (MSD).
 - (a) This task is applicable to software hosted by the NFS operating system:

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

- NFS SERVER OS
- NFS OPC
- NFS NETMANAGER APP
- NFS BOOT OS
- NED OPS
- NED OPC

ARO ALL



ARO 011-013 POST SB 777-46-0066

- NED OPS
- NED OPC
- NFS BOOT OS
- NFS MEF OPS
- NFS NETMANAGER APP
- NFS SERVER OS
- NFS OPC

ARO 001-013

REF: AIPC 46-00-00-46J

ARO 014-999

- (2) This task gives the steps to install operational software into the NFS, M46013, from the mass storage device (MSD).
 - (a) This task is applicable to software hosted by the NFS operating system:
 - NFS NSP OPS
 - NFS NSP OPC
 - NFS BOOT OS
 - NFS MEF OPS
 - NFS NETMANAGER APP
 - NFS SERVER OS
 - NFS OPC

REF: AIPC 46-00-00-46J

- (3) This task may be used to install customer UMS parts. Examples include:
 - NFS AIRPLANE KEYS UMS
 - NFS MEF UMS
 - NFS EXCOMM UMS
 - · NFS AIRLINE CERTS UMS
 - NFS AIRLINE CRL UMS
- (4) This task may be used to install add-on application parts. Examples include:
 - NFS AIMS OPS
 - NFS DATA RECORDER OSS
 - NFS DATA RECORDER OPS
 - · NFS DATA MONITOR OPS

ARO ALL

(5) To do this task, the aircraft must be on the ground with its weight compressing the landing gear.

B. References

Reference	Title
46-13-00-470-801	Onboard Network System LRU Software Installation (P/B 201)

ARO ALL



(Continued)

Reference	Title
46-13-00-480-801	Onboard Network System Maintenance Laptop Connection (P/B 201)
46-13-00-720-801	Onboard Network System NFS Message Check (P/B 201)
46-13-00-720-805	Mass Storage Device Software Parts Check (P/B 201)
46-13-00-750-802	Onboard Network System Client Credentials Check (P/B 201)
AIPC 46-00-00-46J	Aircraft Illustrated Parts Catalog

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 - Maintenance
	Part #: G45004-1 Supplier: 81205
	Part #: G45004-3 Supplier: 81205
	Opt Part #: G45001-101 Supplier: 81205
	Opt Part #: G45002-1 Supplier: 81205
	Opt Part #: G45002-10 Supplier: 81205
	Opt Part #: G45002-20 Supplier: 81205
	Opt Part #: G45002-25 Supplier: 81205
	Opt Part #: G45002-29 Supplier: 81205
	Opt Part #: J45001-1 Supplier: 81205
	Opt Part #: J45003-1 Supplier: 81205

D. Location Zones

Zone	Area	
212	Flight Compartment, Right	

E. Before the NFS Software Installation

SUBTASK 46-13-01-860-001

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

Left Power Management Panel, P110 Row Col Number Name ARO 001-013 B 27 C46411 NETWORK FILE SERVER ARO 014-999 B 27 C46418 NFS - L

ARO ALL

This circuit breaker is inoperative and should remain open:

Right Power Management Panel, P210			
Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 01	4-999		
В	11	C46419	NFS - R (INOP)

ARO ALL

ARO ALL



SUBTASK 46-13-01-470-002

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

SUBTASK 46-13-01-470-003

(3) Make sure that the new software part, or parts, are available on the MSD. Do this task: (Mass Storage Device Software Parts Check, TASK 46-13-00-720-805).

F. NFS Software Installation - Procedure

ARO 001-010

SUBTASK 46-13-01-470-004

- Using the ONS maintenance browser, make your selection: LINE MAINTENANCE > SYSTEM CONFIGURATION.
 - (a) Make sure the result shows the words System Configuration, and a table of data.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-01-470-028

- (2) Using the ONS maintenance browser, make your selection: Line Maintenance > ONS Configuration.
 - (a) Make sure the result shows the words ONS Configuration, and a table of data.

ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-01-470-034

- (3) Examine the existing configuration of the NFS software. These are the steps:
 - (a) Using the ONS maintenance browser, make your selection: LINE MAINTENANCE > SYSTEM CONFIGURATION.
 - (b) Below the words: Select ATA System, make your selection: 46 Onboard Network System.
 - (c) Make your selection: CONFIGURATION on the navigation bar.
 - (d) Examine all of the data.
 - 1) Use the scroll bar to see all of the page.
 - 2) You can print a record, or save the record as a digital file.
 - a) Make your selection: TRANSFER.
 - b) Follow the on-screen instructions.

ARO 014-999

SUBTASK 46-13-01-470-052

- (4) Examine the existing configuration of the NFS software. These are the steps:
 - (a) Using the ONS maintenance browser, make your selection: LINE MAINTENANCE > SYSTEM CONFIGURATION.
 - (b) Below the words: Select ATA System, make your selection: 46 Onboard Network System.
 - (c) Make your selection: CONFIGURATION on the navigation bar.
 - (d) Examine all of the data.
 - Use the scroll bar to see all of the page.
 - 2) You can print a record, or save the record as a digital file.

ARO ALL 46-13-01



ARO 014-999 (Continued)

- a) Make your selection: REPORT.
- b) Follow the on-screen instructions.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-01-470-027

- (5) Make a record of the NFS hardware and software configuration. You can print, download, or get the data one line at a time.
 - (a) To print the data, make your selection: PRINT REPORT.
 - (b) To download the record as a software file, make your selection DOWNLOAD REPORT.
 - 1) Follow the on-screen instructions.
 - (c) To examine the data manually, do these steps that follow.
 - 1) In the column for LRU NAME, use the cursor to click once on NFS.
 - a) Examine the data below the words: Details of Selected Hardware.
 - 2) Make a record of the data for the NFS:
 - Serial number
 - · Hardware part number
 - · Software part number.
 - (d) Compare the data with the requirement specified by your airline or operator.

ARO ALL

SUBTASK 46-13-01-470-006

(6) Install the new software part, or parts. This is the task: (Onboard Network System LRU Software Installation, TASK 46-13-00-470-801).

<u>NOTE</u>: During software installation to the NFS, the installation program will install the parts, shut down, and reboot the NFS.

G. Software Installation Check

ARO 001-010

SUBTASK 46-13-01-720-024

- (1) Using the ONS browser, make your selection: LINE MAINTENANCE > SYSTEM CONFIGURATION.
 - (a) Make sure the result shows the words System Configuration, and a table of data.
 - (b) In the column for LRU NAME, use the cursor to click once on NFS.
 - 1) Examine the data below the words: Details of Selected Hardware.
 - (c) Update your record of NFS data:
 - · Serial number
 - · Hardware number
 - Software part number.
 - (d) Make sure the result agrees with the requirement specified by your airline or operator.
 - (e) Make sure that each of the six LSAP that follows, with the nomenclature shown, is installed in the NFS.

NOTE: These parts are the minimum configuration necessary for the NFS to boot.

ARO ALL



ARO 001-010 (Continued)

- 46 NFS BOOT OS
- 46 NFS OPC
- 46 NFS SERVER OS
- 46 NFS NETMANAGER APP
- 46 NED OPC
- 46 NED OPS.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-01-720-025

- (2) Using the ONS browser, make your selection: Line Maintenance > ONS Configuration.
 - (a) Make sure the result shows the words ONS Configuration, with a table of data.
 - (b) In the column for LRU NAME, use the cursor to click once on NFS.
 - 1) Examine the data below the words: Details of Selected Hardware.
 - (c) Update your record of NFS data:
 - · Hardware Part Number
 - · Hardware Serial Number.
 - (d) To print a record of NFS software part numbers installed, make your selection: PRINT REPORT.
 - (e) Make sure the result agrees with the requirement specified by your airline or operator.
 - (f) Make sure that each of the six LSAP that follows, with the nomenclature shown, is installed in the NFS.

NOTE: These parts are the minimum configuration necessary for the NFS to boot.

- 46 NFS BOOT OS
- 46 NFS OPC
- 46 NFS SERVER OS
- 46 NFS NETMANAGER APP
- 46 NED OPC
- 46 NED OPS.

ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-01-720-027

- (3) Do a check of the installed software. These are the steps:
 - (a) Examine the existing configuration of the NFS software. These are the steps:
 - Using the ONS maintenance browser, make your selection: LINE MAINTENANCE > SYSTEM CONFIGURATION.
 - Below the words: Select ATA System, make your selection: 46 Onboard Network System.
 - 3) Make your selection: CONFIGURATION on the navigation bar.
 - 4) Examine all of the data.
 - a) Use the scroll bar to see all of the page.
 - b) You can print a record, or save the record as a digital file.

ARO ALL



ARO 011-013 POST SB 777-46-0066 (Continued)

- <1> Make your selection: TRANSFER.
- <2> Follow the on-screen instructions.
- 5) Make sure the result agrees with the requirement specified by your airline or operator.
- 6) Make sure that each of the seven LSAP that follows, with the nomenclature shown, is installed in the NFS.

NOTE: These parts are the minimum configuration necessary for the NFS to boot.

- 46 NFS BOOT OS
- 46 NFS MEF OPS
- 46 NFS OPC
- 46 NFS SERVER OS
- 46 NFS NETMANAGER APP
- 46 NED OPC
- 46 NED OPS.

ARO 014-999

SUBTASK 46-13-01-470-053

- (4) Do a check of the installed software. These are the steps:
 - (a) Examine the existing configuration of the NFS software. These are the steps:
 - Using the ONS maintenance browser, make your selection: LINE MAINTENANCE > SYSTEM CONFIGURATION.
 - 2) Below the words: Select ATA System, make your selection: 46 Onboard Network System.
 - 3) Make your selection: CONFIGURATION on the navigation bar.
 - 4) Examine all of the data.
 - a) Use the scroll bar to see all of the page.
 - b) You can print a record, or save the record as a digital file.
 - <1> Make your selection: REPORT.
 - <2> Follow the on-screen instructions.
 - Make sure the result agrees with the requirement specified by your airline or operator.
 - 6) Make sure that each of the seven LSAP that follows, with the nomenclature shown, is installed in the NFS.

NOTE: These parts are the minimum configuration necessary for the NFS to boot.

- 46 NFS BOOT OS
- 46 NFS MEF OPS
- 46 NFS OPC
- 46 NFS SERVER OS
- 46 NFS NETMANAGER APP
- 46 NFS NSP OPC

ARO ALL



ARO 014-999 (Continued)

46 NFS NSP OPS

ARO ALL

SUBTASK 46-13-01-720-002

- (5) Do a check of the client credentials. Do this task: (Onboard Network System Client Credentials Check, TASK 46-13-00-750-802).
 - (a) If you find a problem, then you must generate new client credentials.

SUBTASK 46-13-01-720-003

- (6) Do a check of the NFS messages. This is the task: (Onboard Network System NFS Message Check, TASK 46-13-00-720-801).
 - (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 NFS messages page.

H. Put the Airplane Back to Its Usual Condition

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-01-840-004

- (1) To exit the SYSTEM CONFIGURATION page, you can do one of these steps:
 - (a) To show the main menu, click on the HOME icon at the upper left-hand corner.
 - (b) To end the ONS Maintenance session and show Windows desktop, click once on the gear icon, in the upper right-hand corner.
 - 1) Make your selection: EXIT ONS.

ARO ALL

SUBTASK 46-13-01-080-001

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



TASK 46-13-01-070-802

3. Network File Server Software Removal Procedure

A. General

ARO 001-013

- (1) This task gives the steps to remove operational software parts from the Network File Server (NFS), M46009.
 - (a) This task is applicable to software hosted by the NFS operating system.

ARO 014-999

- (2) This task gives the steps to remove operational software parts from the NFS, M46013.
 - (a) This task is applicable to software hosted by the NFS operating system.

ARO ALL

3) To do this task, you will operate the Onboard Network System (ONS) maintenance browser using a maintenance laptop.

ARO ALL



(4) To do this task, the aircraft must be on the ground with its weight compressing the landing gear.

B. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
46-13-00-480-801	Onboard Network System Maintenance Laptop Connection (P/B 201)
46-13-00-720-804	Onboard Network 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 - Maintenance	
	Part #: G45004-1 Supplier: 81205	
	Part #: G45004-3 Supplier: 81205	
	Opt Part #: G45001-101 Supplier: 81205	
	Opt Part #: G45002-1 Supplier: 81205	
	Opt Part #: G45002-10 Supplier: 81205	
	Opt Part #: G45002-20 Supplier: 81205	
	Opt Part #: G45002-25 Supplier: 81205	
	Opt Part #: G45002-29 Supplier: 81205	
	Opt Part #: J45001-1 Supplier: 81205	
	Opt Part #: J45003-1 Supplier: 81205	

D. Location Zones

Zone	Area
117	Main Equipment Center, Left
212	Flight Compartment, Right

E. Prepare for Software Removal

SUBTASK 46-13-01-840-002

(1) If the airplane is not energized, supply electrical power (Supply Electrical Power, TASK 24-22-00-860-805).

SUBTASK 46-13-01-860-013

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

Left Power Management Panel, P110

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 00	1-013		
В	27	C46411	NETWORK FILE SERVER
ARO 01	4-999		
В	27	C46418	NFS - L

46-13-01

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ARO 014-999 (Continued)

(Continued)

Left Power Management Panel, P110

Row Col Number Name

ARO ALL

This circuit breaker is inoperative and should remain open:

Right Power Management Panel, P210

Row Col Number Name

ARO 014-999

B 11 C46419 NFS - R (INOP)

ARO ALL

SUBTASK 46-13-01-480-006

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

F. NFS Software Removal - Procedure

ARO 001-010

SUBTASK 46-13-01-070-003

- Using the ONS maintenance browser, make your selection: LINE MAINTENANCE > SYSTEM CONFIGURATION.
 - (a) Make sure the result shows the words System Configuration, and a table of data.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-01-070-010

- (2) Using the ONS maintenance browser, make your selection: Line Maintenance > ONS Configuration.
 - (a) Make sure the result shows the words ONS Configuration, and a table of data.

ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-01-070-011

- (3) Erase one or more LSAP from the NFS. These are the steps:
 - (a) Using the ONS maintenance browser, make your selection: EXTENDED MAINTENANCE > NFS MAINTENANCE.
 - The result shows the UNINSTALL LSAPS page, and the tab shows a green background.
 - (b) Put a check-mark ($\sqrt{}$) adjacent to each part number for removal.
 - (c) Make your selection: DELETE at the lower right-hand corner.
 - (d) Make your selection: CONTINUE in the confirmation box.
 - 1) A pop-up window with the words: UNINSTALL LSAPS shows.
 - (e) When the pop-up window closes, the process is complete.
 - 1) The result will show the UNINSTALL LSAPS page, and will update with a new record of parts.
 - 2) You can continue, or wait for the new record and then continue.

ARO ALL



ARO 014-999

SUBTASK 46-13-01-070-015

- (4) Erase one or more LSAP from the NFS. These are the steps:
 - (a) Using the ONS maintenance browser, make your selection: EXTENDED MAINTENANCE > NETWORK FILE SERVER.
 - 1) The result shows the UNINSTALL LSAPS page, and the tab shows a green background.
 - (b) Put a check-mark ($\sqrt{}$) adjacent to each part number for removal.
 - (c) Make your selection: DELETE at the lower right-hand corner.
 - (d) Make your selection: CONTINUE in the confirmation box.
 - 1) A pop-up window with the words: UNINSTALL LSAPS shows.
 - (e) When the pop-up window closes, the process is complete.
 - 1) The result will show the UNINSTALL LSAPS page, and will update with a new record of parts.
 - 2) You can continue, or wait for the new record and then continue.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-01-070-004

(5) Make your selection: UNINSTALL NFS PARTS.

SUBTASK 46-13-01-070-006

- (6) Below the words SOFTWARE PART NUMBER:
 - (a) Click once on each LSAP to highlight the row.
 - 1) You can select one or more parts at this time.
 - (b) Make your selection: SELECT.

SUBTASK 46-13-01-070-007

- (7) Below the words: Selected Parts:
 - (a) Make sure that each LSAP shown is correct for removal.
 - To remove an LSAP from the group, click once to highlight and make your selection: UNSELECT.
 - (b) Make your selection: CONTINUE.

NOTE: In the selected parts box, all parts shown (highlighted or not) will be erased.

SUBTASK 46-13-01-070-008

- (8) In the confirmation box, make your selection: CONTINUE.
 - (a) Make sure the box shows the words: Uninstalling selected parts.

SUBTASK 46-13-01-070-009

(9) In the results window, make sure the status for each LSAP shows the word: Successful.

ARO 001-010

SUBTASK 46-13-01-860-014

- (10) To print or download a record of the new software configuration, you can do the steps that follow:
 - (a) Using the ONS menu bar, make your selection: LINE MAINTENANCE > SYSTEM CONFIGURATION.

ARO ALL



ARO 001-010 (Continued)

- (b) To print, make your selection: PRINT REPORT.
 - 1) Follow the on-screen instructions.
- (c) To download, make your selection: DOWNLOAD.
 - 1) Follow the on-screen instructions.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-01-860-018

- (11) To print or download a record of the new software configuration, you can do the steps that follow:
 - (a) Using the ONS menu bar, make your selection: Line Maintenance > ONS Configuration.
 - (b) To print, make your selection: PRINT REPORT.
 - 1) Follow the on-screen instructions.
 - (c) To download, make your selection: DOWNLOAD.
 - 1) Follow the on-screen instructions.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-01-860-022

(12) To examine the new configuration, or print a record, you can refer to (Onboard Network System Configuration Check, TASK 46-13-00-720-804)

ARO ALL

G. Put the Airplane Back to Its Usual Condition

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-01-840-005

- (1) To exit the CONFIGURATION page, you can do one of these steps:
 - (a) To show the main menu, click on the HOME icon at the upper left-hand corner.
 - (b) To end the ONS Maintenance session and show Windows desktop, click once on the gear icon, in the upper right-hand corner.
 - 1) Make your selection: EXIT ONS.

ARO ALL

SUBTASK 46-13-01-080-008

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

SUBTASK 46-13-01-840-003

(3) Remove electrical power if it is not necessary for other tasks: (Remove Electrical Power, TASK 24-22-00-860-806).

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	() -	TASK	

46-13-01

ARO ALL

EFFECTIVITY

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ARO 001-010; ARO 011-013 PRE SB 777-46-0066

TASK 46-13-01-070-801

4. Network File Server Drive Reformat Procedure

A. General

- (1) This task gives the steps to erase all software parts on the Network File Server (NFS) operational drive, and to install the minimum operating system software parts.
 - (a) You will reboot the NFS to operate from the BOOT OS, and then replace the software on the operational drive.
 - (b) You will use the init data loader (IDL) function, a selection in the ONS maintenance browser, to install the compressed (or, crated) parts into the operational drive.
 - NOTE: The maintenance access terminal (MAT) can not operate the IDL function. You must use the laptop to operate IDL.
- (2) To do this task, the aircraft must be on the ground with its weight compressing the landing gear.

B. References

Reference	Title
46-13-00-470-802	Mass Storage Device Software Part Installation (P/B 201)
46-13-00-480-801	Onboard Network System Maintenance Laptop Connection (P/B 201)
46-13-00-720-804	Onboard Network System Configuration Check (P/B 201)
46-13-00-720-805	Mass Storage Device Software Parts Check (P/B 201)
46-13-00-750-802	Onboard Network System 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 - Maintenance
	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205 Opt Part #: J45001-1 Supplier: 81205 Opt Part #: J45001-1 Supplier: 81205 Opt Part #: J45003-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. Prepare for NFS Software Installation

SUBTASK 46-13-01-480-005

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

ARO ALL



ARO 001-010; ARO 011-013 PRE SB 777-46-0066 (Continued)

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

SUBTASK 46-13-01-470-012

2) If the NFS is serviceable, download applicable log files from the NFS to the maintenance laptop. Do this task: (Network File Server Log File Check, TASK 46-13-01-800-802).

NOTE: Know and follow your airline's requirement for retention of log files. The steps that follow will erase all data from the NFS.

ARO 011-013 PRE SB 777-46-0066

F. NFS Drive Reformat - Procedure

SUBTASK 46-13-01-470-029

(1) Reboot the system into Boot OS. These are the steps:

NOTE: The URL for BootOS is: http://ms.ons.pnet:8080. The Boeing Company recommends you type this URL into the browser's navigation bar, or make a desktop icon. The Reboot button is programmed to specify port 80, but port 8080 is required. A solution will be in a future ONS revision.

- (a) Close the browser session.
 - 1) Click once on the X, in the upper right-hand corner.
- (b) Activate a new browser session from the laptop's desktop.
- (c) Type this URL into the navigation bar: http://ms.ons.pnet:8080, and then select Enter.
- (d) If one or more pop-ups show, then follow the on-screen steps.
 - 1) Make sure the status screen shows.

NOTE: The NFS can take approximately five minutes to reboot into Boot OS, and show the status screen.

SUBTASK 46-13-01-470-030

- 2) Mount the source data using the maintenance device, SPL-11321. These are the steps:
 - (a) Make your selection: INITIAL DATA LOAD > IMPORT PARTS.
 - 1) Make sure the part import page shows.
 - (b) Make your selection: Browse.
 - (c) Put the source media into the maintenance laptop.
 - 1) The source data can be a compact disc (CD), USB memory stick, or other method specified by your airline or operator.

SUBTASK 46-13-01-470-031

(3) Import the three specified software parts. Do these steps that follow:

NOTE: You must install all three software parts, and only the three parts specified, or the NFS will not operate.

- (a) Make your selection: NFS SERVER OS.
- (b) Make your selection: Open.
 - 1) Make sure the file path shows adjacent to the Browse button.
- (c) Make your selection: IMPORT.
 - 1) Make sure the result shows the words: Successful upload of part.
- (d) Make your selection: NFS NETMANAGER APP.

ARO ALL



ARO 011-013 PRE SB 777-46-0066 (Continued)

- (e) Make your selection: Open.
 - 1) Make sure the file path shows adjacent to the Browse button.
- (f) Make your selection: IMPORT.
 - 1) Make sure the result shows the words: Successful upload of part.
- (g) Make your selection: NFS OPC.
- (h) Make your selection: Open.
 - 1) Make sure the file path shows adjacent to the Browse button.
- (i) Make your selection: IMPORT.
 - 1) Make sure the result shows the words: Successful upload of part.

SUBTASK 46-13-01-470-032

- (4) Complete the software installation of the three parts. Do these steps:
 - (a) On the browser's main menu bar, make your selection: INITIAL DATA LOAD > EXECUTE DATA LOAD.
 - (b) Make sure the applicable target and software parts are specified.
 - (c) Make your selection: CONTINUE.
 - 1) Let the system do the installation, and reboot automatically.
 - 2) When the ONS Maintenance browser shows, the installation is complete.

ARO 001-010: ARO 011-013 PRE SB 777-46-0066

G. Software Check - Procedure

SUBTASK 46-13-01-470-033

- (1) Do a restoration of LSAP to the ONS mass storage device (MSD). These are the tasks: (Mass Storage Device Software Parts Check, TASK 46-13-00-720-805 and Mass Storage Device Software Part Installation, TASK 46-13-00-470-802).
 - (a) Make sure that these three parts, with the nomenclature shown, are available on the MSD:
 - 46 NED OPC (for NFS-1 [NED-0])
 - 46 NED OPS (for NFS-1 [NED-0])
 - 46 NFS BOOT OS.

SUBTASK 46-13-01-720-013

- (2) Do a check of the NFS operational software. Do this task: (Onboard Network System Configuration Check, TASK 46-13-00-720-804).
 - (a) Make sure that all required software parts are installed.
 - NOTE: Make sure the six minimum LSAP are installed, as specified in the configuration check procedure, or the NFS will not operate.
 - (b) If you must install parts in the NFS operational drive, refer to this task: (Network File Server Software Installation, TASK 46-13-01-470-801).

SUBTASK 46-13-01-720-014

- (3) Do this task: (Mass Storage Device Software Parts Check, TASK 46-13-00-720-805).
 - (a) Make sure that all required software parts are installed.



ARO 001-010; ARO 011-013 PRE SB 777-46-0066 (Continued)

(b) If you must install parts in the MSD, refer to this task: (Mass Storage Device Software Part Installation, TASK 46-13-00-470-802).

H. Credentials Check - Procedure

SUBTASK 46-13-01-470-015

(1) You must generate new credentials for each network client. Do this task: (Onboard Network System Client Credentials Check, TASK 46-13-00-750-802).

I. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-080-006

(1) If the laptop is no longer required, stop the ONS maintenance browser, and disconnect the laptop.



ARO 014-999; ARO 011-013 POST SB 777-46-0066

TASK 46-13-01-070-803

5. Network File Server Reset Data Procedure

A. General

ARO 011-013 POST SB 777-46-0066

- (1) This procedure gives the steps to the Reset Data procedure to the network file server (NFS), M46009. The reset function does these actions:
 - (a) Erases all application data.
 - (b) Erases all system logs.

ARO 014-999

- (2) This procedure gives the steps to the Reset Data procedure to the network file server (NFS), M46013. The reset function does these actions:
 - (a) Erases all application data.
 - (b) Erases all system logs.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

- (3) The reset function does not make these changes:
 - (a) Does not remove security logs that are restricted by date.
 - (b) Does not remove certificate signing request (CSR) files.
 - (c) Does not remove software part from the mass storage device (MSD).
- (4) To do this task, the aircraft must be on the ground with its weight compressing the landing gear.

B. References

Reference	Title
46-13-00-480-801	Onboard Network System Maintenance Laptop Connection
	(P/B 201)

ARO ALL



ARO 014-999; ARO 011-013 POST SB 777-46-0066 (Continued)

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 - Maintenance
GF E-11321	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205
	Opt Part #: G45002-29 Supplier: 81205 Opt Part #: J45001-1 Supplier: 81205
	Opt Part #: J45003-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. Prepare for NFS Reset Procedure

SUBTASK 46-13-01-480-012

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

SUBTASK 46-13-01-860-026

(2) If the NFS is serviceable, download applicable log files from the NFS to the maintenance laptop. Do this task: (Network File Server Log File Check, TASK 46-13-01-800-802).

NOTE: Know and follow your airline's requirement for retention of log files. The steps that follow will erase all data from the NFS.

F. NFS Reset Procedure

ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-01-070-014

- (1) Erase all LSAP, application data, and unrestricted log files from the NFS. Do these steps:
 - (a) Using the ONS maintenance browser, make your selection: EXTENDED MAINTENANCE > NFS MAINTENANCE.
 - 1) The result shows the UNINSTALL LSAPS page, and the tab shows a green background.
 - (b) Make your selection: RESET DATA in the navigation bar.
 - (c) Make your selection: RESET, using the icon in the lower right corner.
 - (d) Make your selection: CONTINUE in the confirmation box.
 - 1) A progress window with the words: RESET DATA shows.
 - 2) The NFS will reboot automatically.

ARO ALL



ARO 011-013 POST SB 777-46-0066 (Continued)

(e) The process is complete when the RESET DATA page shows the word SUCCESS below the word DESCRIPTION.

ARO 014-999

SUBTASK 46-13-01-070-016

- (2) Erase all application data, and unrestricted log files from the NFS. Do these steps:
 - (a) Using the ONS maintenance browser, make your selection: EXTENDED MAINTENANCE > NETWORK FILE SERVER.
 - The result shows the UNINSTALL LSAPS page, and the tab shows a green background.
 - (b) Make your selection: RESET DATA in the navigation bar.
 - (c) Make your selection: RESET, using the icon in the lower right corner.
 - (d) Make your selection: CONTINUE in the confirmation box.
 - 1) A progress window with the words: RESET DATA shows.
 - 2) The NFS will reboot automatically.
 - (e) The process is complete when the RESET DATA page shows the word SUCCESS below the word DESCRIPTION.



ARO 014-999; ARO 011-013 POST SB 777-46-0066

TASK 46-13-01-470-802

6. Network File Server Reimage Procedure

A. General

- (1) This procedure gives the steps to reimage the NFS operational drive.
 - (a) The reimage function removes all customer data, all log files, and most software parts from the server. Only parts with these part names will remain:
 - 46 NFS BOOT OS
 - 46 NED OPC
 - 46 NED OPS.
 - (b) After reimage, the NFS shows the Boot OS (operating system).
 - 1) You must do the initial data load (IDL) procedure before you can return the NFS to service.
 - The NFS internal NED continues in operation and is unchanged by the reimage procedure.
- (2) To do this task, the aircraft must be on the ground with its weight compressing the landing gear.

B. References

Reference	Title
46-13-00-480-801	Onboard Network System Maintenance Laptop Connection
	(P/B 201)

ARO ALL



ARO 014-999; ARO 011-013 POST SB 777-46-0066 (Continued)

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 - Maintenance
SPL-11321	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205
	Opt Part #: G45002-29 Supplier: 81205
	Opt Part #: J45001-1 Supplier: 81205
	Opt Part #: J45003-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. Prepare for NFS Reimage Procedure

SUBTASK 46-13-01-480-010

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

SUBTASK 46-13-01-860-023

(2) If the NFS is serviceable, download applicable log files from the NFS to the maintenance laptop. Do this task: (Network File Server Log File Check, TASK 46-13-01-800-802).

NOTE: Know and follow your airline's requirement for retention of log files. The steps that follow will erase all data from the NFS.

F. NFS Reimage Procedure

ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-01-070-012

- (1) To do the reimage process, do these steps:
 - (a) Using the ONS browser, make your selection: EXTENDED MAINTENANCE > NFS MAINTENANCE.
 - (b) Make your selection: REIMAGE on the navigation bar.
 - (c) On the icon at the lower right corner, make your selection: REIMAGE.
 - (d) A confirmation box shows the words: Are you sure you want to reimage NFS?
 - 1) Make your selection: CONTINUE.
 - 2) A progress message shows the words REIMAGE NFS.

ARO ALL 46-13-01



ARO 011-013 POST SB 777-46-0066 (Continued)

3) When complete, the browser shows the Boot OS Initial Data Load page.

NOTE: You must complete the NFS IDL procedure that follows. The NFS is unserviceable until all necessary software is installed, and no active faults show.

ARO 014-999

SUBTASK 46-13-01-070-017

- (2) To do the reimage process, do these steps:
 - (a) Using the ONS browser, make your selection: EXTENDED MAINTENANCE > NETWORK FILE SERVER.
 - (b) Make your selection: REIMAGE on the navigation bar.
 - (c) On the icon at the lower right corner, make your selection: REIMAGE.
 - (d) A confirmation box shows the words: Are you sure you want to reimage NFS?
 - 1) Make your selection: CONTINUE.
 - 2) A progress message shows the words REIMAGE NFS.
 - 3) When complete, the browser shows the Boot OS Initial Data Load page.

NOTE: You must complete the NFS IDL procedure that follows. The NFS is unserviceable until all necessary software is installed, and no active faults show.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-01-470-035

(3) Do this task: (Network File Server Initial Data Load Software Installation, TASK 46-13-01-470-803).



TASK 46-13-01-470-803

7. Network File Server Initial Data Load Software Installation

A. General

ARO 011-013 POST SB 777-46-0066

- (1) This procedure gives the steps to do the initial data load (IDL) software installation for Network File Server (NFS), M46009. Typically, there are three situations where you do this procedure:
 - (a) Immediately after NFS Reimage (TASK 46-13-01-470-802).
 - (b) On a new NFS stores or spares unit, where only the minimum BootOS is installed. Typically, this can refer to an NFS unit received direct from the manufacturer.
 - (c) When specified by a maintenance action.

ARO 014-999

- (2) This procedure gives the steps to do the initial data load (IDL) software installation for NFS, M46013. Typically, there are three situations where you do this procedure:
 - (a) Immediately after NFS Reimage (TASK 46-13-01-470-802).
 - (b) On a new NFS stores or spares unit, where only the minimum BootOS is installed. Typically, this can refer to an NFS unit received direct from the manufacturer.

ARO ALL



ARO 014-999 (Continued)

(c) When specified by a maintenance action.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

- (3) This IDL procedure gives steps for two configurations of 46 NFS BootOS. You observe the maintenance browser appearance at initial boot up, and determine which version is present.
 - (a) If the browser shows the older INIT DATA LOAD page, you install three specified parts, then reboot which shows an alert message. You then install the fourth LSAP (specifically, 46 NFS MEF OPS) and reboot again.
 - (b) If the browser shows the newer NFS MAINTENANCE > REIMAGE page, you select the four parts one at a time, then install all four at the same time.
 - (c) The two methods give you the same result, with these four parts installed:
 - 46 NFS MEF OPS
 - 46 NFS NETMANAGER APP
 - 46 NFS OPC
 - 46 NFS SERVER OS.

NOTE: These four parts are necessary to show the NFS Main Menu after reboot.

- (4) After this IDL software installation, the NFS remains unserviceable until all airline or operator-specified software is installed.
- (5) To do this task, the aircraft must be on the ground with its weight compressing the landing gear.

B. References

Reference	Title
46-13-00-470-801	Onboard Network System LRU Software Installation (P/B 201)
46-13-00-480-801	Onboard Network System Maintenance Laptop Connection (P/B 201)
AIPC 46-00-00-46J	Aircraft Illustrated Parts Catalog

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.

Maintenance G45004-1 Supplier: 81205
G45004-1 Supplier: 81205
G45004-3 Supplier: 81205 t #: G45001-101 Supplier: 81205 t #: G45002-1 Supplier: 81205 t #: G45002-10 Supplier: 81205 t #: G45002-20 Supplier: 81205 t #: G45002-25 Supplier: 81205 t #: G45002-29 Supplier: 81205
t #: J45001-1 Supplier: 81205 t #: J45003-1 Supplier: 81205
֡

ARO ALL



ARO 014-999; ARO 011-013 POST SB 777-46-0066 (Continued)

D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. Prepare for NFS IDL Procedure

SUBTASK 46-13-01-860-027

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

Left Power Management Panel, P110

Row	Col	Number	<u>Name</u>
ARO 011	-013 P	OST SB 777-	46-0066

B 27 C46411 NETWORK FILE SERVER

ARO 014-999

B 27 C46418 NFS - L

ARO 014-999; ARO 011-013 POST SB 777-46-0066

This circuit breaker is inoperative and should remain open:

Right Power Management Panel, P210

Row	Col	Number	<u>Name</u>
ARO 01	4-999		
В	11	C46419	NFS - R (INOP)

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-01-480-011

(2) Do this task: (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

NOTE: You must use the maintenance laptop. NFS BootOS can not communicate with the

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

SUBTASK 46-13-01-860-028

- (3) Examine the page result on the laptop display.
 - (a) If the words INIT DATA LOAD show in the upper left corner, then do the NFS IDL Software Installation using Block-4 BootOS that follows.
 - (b) If the words NFS MAINTENANCE show at the top, and REIMAGE shows in the green tab, then do the NFS IDL Software Installation using OS6 or OS7 BootOS that follows.

F. NFS IDL Software Installation Using Block-4 BootOS - Procedure

SUBTASK 46-13-01-470-047

- (1) Mount the source data using the maintenance device, SPL-11321. These are the steps:
 - (a) Make your selection: INITIAL DATA LOAD > IMPORT PARTS.
 - 1) Make sure the part import page shows.
 - (b) Make your selection: Browse.
 - (c) Put the source media into the maintenance laptop.
 - 1) The source data can be a compact disc (CD), USB memory stick, or other method specified by your airline or operator.

ARO ALL



ARO 014-999; ARO 011-013 POST SB 777-46-0066 (Continued)

SUBTASK 46-13-01-470-048

- (2) Import the three specified software parts. Do these steps that follow:
 - NOTE: You must install all three software parts, and only the three parts specified, or the NFS will not operate.
 - (a) Make your selection: NFS SERVER OS.
 - (b) Make your selection: Open.
 - 1) Make sure the file path shows adjacent to the Browse button.
 - (c) Make your selection: IMPORT.
 - 1) Make sure the result shows the words: Successful upload of part.
 - (d) Make your selection: NFS NETMANAGER APP.
 - (e) Make your selection: Open.
 - 1) Make sure the file path shows adjacent to the Browse button.
 - (f) Make your selection: IMPORT.
 - 1) Make sure the result shows the words: Successful upload of part.
 - (g) Make your selection: NFS OPC.
 - (h) Make your selection: Open.
 - 1) Make sure the file path shows adjacent to the Browse button.
 - (i) Make your selection: IMPORT.
 - 1) Make sure the result shows the words: Successful upload of part.

SUBTASK 46-13-01-470-049

- (3) Complete the software installation of the three parts. Do these steps:
 - (a) On the browser's main menu bar, make your selection: INITIAL DATA LOAD > EXECUTE DATA LOAD.
 - (b) Make sure the applicable target and software parts are specified.
 - (c) Make your selection: CONTINUE.
 - 1) Let the system do the installation, and reboot automatically.
 - (d) The result shows a new page format, with the words REIMAGE ALERT, Missing part: OPTMEFB.
 - NOTE: The new version of BootOS shows. The alert shows that the fourth LSAP is missing. You will add the fourth part to complete the installation. This is not a fault and is its usual operation.
 - 1) Make your selection: CANCEL.

SUBTASK 46-13-01-470-050

- (4) Add the LSAP: 46 NFS MEF OPS to the import record. Do these steps:
 - (a) Make your selection: BROWSE using the icon at the lower left corner.
 - (b) Find and select the part: 46 NFS MEF OPS from the correct directory.
 - (c) Make your selection: OPEN.
 - (d) Make sure the NFS accepts the part for installation. These changes will show:
 - 1) The part shows on the screen with a part number.
 - 2) The color of the part name and number changes to white, from orange.

ARO ALL



ARO 014-999; ARO 011-013 POST SB 777-46-0066 (Continued)

SUBTASK 46-13-01-470-051

- (5) Make your selection: DATA LOAD, using the icon in the lower right corner.
 - a) The IDL installation is complete when these steps occur automatically:
 - 1) Data Load Status shows the words: Installation complete Rebooting.
 - 2) The NFS reboots.
 - 3) The ONS Main Menu shows.

G. NFS IDL Software Installation Using OS6 or OS7 BootOS - Procedure

SUBTASK 46-13-01-470-036

- (1) Do the initial data load (IDL) software installation. These are the steps:
 - (a) Using the ONS browser, make sure the data load page shows after boot-up.
 - 1) Make sure the navigation bar shows the REIMAGE tab, green in color.
 - 2) Below the Configuration, the NFS shows with a BootOS version.
 - 3) Below the words: Select a file with parts to import, four NFS parts show orange in color, and no part numbers show.

NOTE: If only three parts show, and the row for MEF Part Number does not show, this indicates ONS BP4 is present, and requires extra steps included below.

SUBTASK 46-13-01-470-039

- (2) Add the LSAP: 46 NFS SERVER OS to the import record. Do these steps: (AIPC 46-00-00-46J)
 - (a) Make your selection: BROWSE.
 - (b) Find and select the part: 46 NFS SERVER OS from the correct directory.
 - (c) Make your selection: OPEN.
 - (d) Make sure the NFS accepts the part for installation. These changes will show:
 - 1) The part shows on the screen with a part number.
 - 2) The color of the part name changes to white, from orange.

SUBTASK 46-13-01-470-040

- (3) Add the LSAP: 46 NFS NETMANAGER APP to the import record. Do these steps:
 - (a) Make your selection: BROWSE.
 - (b) Find and select the part: 46 NFS NETMANAGER APP from the correct directory.
 - (c) Make your selection: OPEN.
 - (d) Make sure the NFS accepts the part for installation. These changes will show:
 - 1) The part shows on the screen with a part number.
 - 2) The color of the part name and number changes to white, from orange.

SUBTASK 46-13-01-470-041

- (4) Add the LSAP: 46 NFS OPC to the import record. Do these steps:
 - (a) Make your selection: BROWSE.
 - (b) Find and select the part: 46 NFS OPC from the correct directory.
 - (c) Make your selection: OPEN.
 - (d) Make sure the NFS accepts the part for installation. These changes will show:

ARO ALL



ARO 014-999; ARO 011-013 POST SB 777-46-0066 (Continued)

- 1) The part shows on the screen with a part number.
- 2) The color of the part name and number changes to white, from orange.

SUBTASK 46-13-01-470-042

- (5) Add the LSAP: 46 NFS MEF OPS to the import record. Do these steps:
 - (a) Make your selection: BROWSE.
 - (b) Find and select the part: 46 NFS MEF OPS from the correct directory.
 - (c) Make your selection: OPEN.
 - (d) Make sure the NFS accepts the part for installation. These changes will show:
 - 1) The part shows on the screen with a part number.
 - 2) The color of the part name and number changes to white, from orange.

SUBTASK 46-13-01-470-037

- (6) Make your selection: DATA LOAD, using the icon in the lower right corner.
 - (a) The IDL installation is complete when these steps occur automatically:
 - 1) Data Load Status shows the words: Installation complete Rebooting.
 - 2) The NFS reboots.
 - 3) The ONS Main Menu shows.

H. After the NFS IDL Software Installation

SUBTASK 46-13-01-470-045

(1) To return the NFS to serviceable condition, you must install all additional software parts specified by your airline or operator, (Onboard Network System LRU Software Installation, TASK 46-13-00-470-801).

ARO ALL



TASK 46-13-01-800-801

8. Network File Server Fault Check

A. General

ARO 001-013

(1) This task gives the steps to do a fault log check of the Network File Server (NFS), M46009.

ARO 014-999

(2) This task gives the steps to do a fault log check of the NFS, M46013.

ARO ALL

(3) To do this check, the aircraft must be on the ground.

B. References

Reference	Title
45-10-00-910-810	How to Operate the MAT in the Flight Compartment (P/B 201)
46-13-00-480-801	Onboard Network System Maintenance Laptop Connection (P/B 201)

ARO ALL



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 - Maintenance
	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205 Opt Part #: J45001-1 Supplier: 81205 Opt Part #: J45001-1 Supplier: 81205 Opt Part #: J45003-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. NFS Fault Log Check Procedure

ARO 001-004

SUBTASK 46-13-01-480-002

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

ARO 005-999

SUBTASK 46-13-01-480-007

- Get access to the ONS maintenance browser.
 - (a) You can use the Maintenance Access Terminal (MAT) (How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810).
 - (b) You can use the maintenance device, SPL-11321, (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

ARO 001-010

SUBTASK 46-13-01-720-005

- (3) Using the ONS maintenance browser, make your selection: CONDITION MONITORING > NFS > NFS MESSAGES.
 - (a) If the result shows no Line Replaceable Unit (LRU), and no fault message, then the NFS is serviceable.
 - (b) If one or more LRUs shows, then continue.

NOTE: The result only shows an LRU client when there is a 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.

ARO ALL 46-13-01



ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-01-720-026

- (4) Using the ONS maintenance browser, make your selection: Extended Maintenance > ONS Maintenance > Existing Faults.
 - (a) If the result shows no LRU, and no fault message, then the NFS is serviceable.
 - (b) If one or more LRUs shows, then continue.

NOTE: The result only shows an LRU client when there is a 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.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-01-720-006

- (5) Select one target LRU at a time, and examine the fault details. Do these steps:
 - (a) Click once on the LRU name.
 - (b) Make a record of each fault code shown in the Fault Details box.
 - (c) Use the scroll bar to see the message, or messages.
 - (d) Do the steps for each LRU shown in the Fault Results box.
 - (e) If you find one or more maintenance messages, then a maintenance action is required.

ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-01-720-028

- (6) Using the ONS maintenance browser, do these steps:
 - (a) Make your selection: EXTENDED MAINTENANCE > EXISTING FAULTS.
 - (b) Below the words: Select ATA System, make your selection: 46 Onboard Network System. NOTE: You can make a selection only when the system name shows white in color.
 - (c) Make your selection: Faults, in the navigation bar.
 - (d) Examine the message, or messages shown.
 - 1) Messages that show the NOT ACTIVE condition have been corrected.
 - One or more NFS messages with the ACTIVE condition makes the NFS unserviceable.
 - a) A Maintenance action is required.
 - 3) When all NFS messages show NOT ACTIVE, and no NFS messages show ACTIVE condition, then the NFS is serviceable.

NOTE: ONS (the network) is unserviceable until all ACTIVE messages for all LRUs show the NOT ACTIVE condition.

- (e) Use the scroll bar to see the complete list of messages.
- (f) If you find a problem, then a maintenance action is required.

ARO 014-999

SUBTASK 46-13-01-720-030

- (7) Using the ONS maintenance browser, do these steps:
 - (a) Make your selection: EXTENDED MAINTENANCE > EXISTING FAULTS.

ARO ALL



ARO 014-999 (Continued)

- (b) Below the words: Select ATA System, make your selection: 46 Onboard Network System.

 NOTE: You can make a selection only when the system name shows white in color.
- (c) Make your selection: CONTINUE, in the bottom right.
- (d) Examine the message, or messages shown.
 - 1) Messages that show the NOT ACTIVE condition have been corrected.
 - One or more NFS messages with the ACTIVE condition makes the NFS unserviceable.
 - a) A Maintenance action is required.
 - 3) When all NFS messages show NOT ACTIVE, and no NFS messages show ACTIVE condition, then the NFS is serviceable.

NOTE: ONS (the network) is unserviceable until all ACTIVE messages for all LRUs show the NOT ACTIVE condition.

- (e) Use the scroll bar to see the complete list of messages.
- (f) If you find a problem, then a maintenance action is required.

ARO ALL

F. Put the Aircraft Back to its Usual Condition

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-01-840-006

 To exit EXISTING FAULTS, and show the ONS menu, select the Home icon, in the upper left-hand corner.

ARO ALL

SUBTASK 46-13-01-080-004

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



TASK 46-13-01-800-802

9. Network File Server Log File Check

A. General

- (1) This procedure gives access to the Network File Server (NFS) log files. You can do three tasks as follows:
 - (a) View a record of available log files.
 - (b) Make a copy of one or more log files to the laptop's internal drive, or removable media.
 - (c) Delete (or, erase) one or more log files from the NFS.
- (2) To do this check, you will operate the ONS maintenance browser using the maintenance device, SPL-11321.
- (3) To do this check, the aircraft must be on the ground.

B. References

Reference	Title
45-10-00-910-810	How to Operate the MAT in the Flight Compartment (P/B 201)

ARO ALL

46-13-01

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(Continued)

Reference	Title
46-13-00-480-801	Onboard Network System 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 - Maintenance
	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205
	Opt Part #: G45004-3 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205
	Opt Part #: G45002-10 Supplier: 81205
	Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205
	Opt Part #: G45002-29 Supplier: 81205 Opt Part #: J45001-1 Supplier: 81205
	Opt Part #: J45003-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. Log File Check Procedure

ARO 001-004

SUBTASK 46-13-01-480-001

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

ARO 005-999

SUBTASK 46-13-01-480-008

- (2) Get access to the ONS maintenance browser.
 - (a) You can use the Maintenance Access Terminal (MAT) (How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810).
 - (b) You can use the maintenance device, SPL-11321, (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

ARO 001-010

SUBTASK 46-13-01-860-004

- (3) Set the ONS maintenance browser to show the NFS LOGS page.
 - (a) Make your selection: CONDITION MONITORING > NFS > NFS LOGS.
 - If the condition monitoring tab is missing, use the triangle buttons (◄, ▶) to scroll right or left to find the tab.
 - (b) In the NFS LOGS box, make your selection.
 - 1) Click once on one of the log types:

ARO ALL



ARO 001-010 (Continued)

- performance
- · security
- · syslogs.
- 2) Click once on the CONTINUE button.

ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-01-860-019

- (4) Set the ONS maintenance browser to show the NFS LOGS page.
 - (a) Make your selection: Extended Maintenance > ONS Maintenance > Logs.
 - (b) In the NFS LOGS box, make your selection.
 - 1) Click once on one of the log types:
 - Performance
 - · Security
 - · Syslogs.
 - 2) Click once on the CONTINUE button.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-01-860-024

- (5) Do a check of installed applications and file type. These are the steps:
 - (a) Using the ONS maintenance browser, make your selection: Line Maintenance > Download Manager.
 - (b) Make sure the FILTERS tab shows green in color.
 - (c) Click once to put a check-mark ($\sqrt{}$) adjacent to APPLICATION:FILE TYPE.
 - NOTE: Download Manager lets you narrow your search, or filter the result using the file type selections. When all selections have the check-mark, the result will show all file types. When a selection does not have a check-mark, those file types will not show.
 - 1) Make sure there is a check-mark adjacent to each file type shown.
 - 2) You can remove the check-mark adjacent to unwanted file type selections.
 - (d) Make your selection: FILES on the navigation bar.
 - (e) Examine the result.

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-01-860-017

- (6) If your selection was SYSLOG, then do this step:
 - (a) Make your selection: GET LATEST LOGS.

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-01-860-025

(7) For file types LOG:SYSTEM, and LOG:SECURITY, make sure the latest data shows. Do these steps:

NOTE: This step is necessary for log files that update continuously.

(a) Make your selection: Get Current.

ARO ALL



ARO 014-999; ARO 011-013 POST SB 777-46-0066 (Continued)

- (b) If enabled, the Get Current function updates the log file to the most recent version.
- (c) If the Get Current function is not enabled, disregard this step and continue.

ARO 001-010: ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-01-860-016

- (8) The result can contain many files, on one or more pages. To examine all files, do these steps:
 - (a) If shown, use the vertical scroll bar to examine all records on the page.
 - (b) If shown, use the FIRST, LAST, PREVIOUS, or NEXT buttons to examine all pages. NOTE: A page can show 100 log files.

SUBTASK 46-13-01-860-005

- (9) To download a log file, do the steps that follow.
 - (a) Click once on the target log file. You can highlight one, some, or all of the log files.
 NOTE: For SYSLOG files that will be sent to Boeing, make your selection: GET ALL.
 - (b) Click once on the DOWNLOAD button.
 - (c) When the operating system shows the navigation box, save the log files into a folder on the internal drive, or removable media.

ARO 014-999: ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-01-860-020

- (10) Select and transfer the applicable log files to a portable maintenance device. These are the steps:
 - (a) Click once on the check box adjacent to your target log file.
 - 1) You can select one, some, or all of the log files to transfer at one time.
 - (b) Make your selection: TRANSFER using the icon in the lower right corner.
 - 1) A pop-up box shows with the words TRANSFER, and Select Destination.
 - (c) Click once on the radio button adjacent to Download Manager.
 - (d) Make your selection: SEND.
 - 1) The system shows your browser's file navigation window.
 - NOTE: The operating system shows a pop-up box from where you can select the location to save the log files. By default, E:\ (Portable Device or Removable Disk) will be selected. If this is the case, go to "My Computer" and select the USB drive from the menu.
 - (e) Save the log files to a directory on the portable maintenance device, or external media.
 - (f) When complete, make your selection: CANCEL.

ARO 001-010: ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-01-070-001

- (11) To erase a log file from the NFS, do the steps that follow.
 - (a) Click once on the target log file.
 - 1) You can highlight one, some, or all of the log files.
 - (b) Click once on the DELETE button.
 - (c) When the confirmation box shows, click once on the CONFIRM button.

ARO ALL



ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-01-070-013

(12) To erase a log file from the NFS, do the steps that follow.

NOTE: Some log files with the file type LOG:SECURITY are not available for removal.

Certification requires that this file type remain on the server for a minimum amount of time. The system automatically prevents log file removal until the restriction expires.

- (a) Click once on the check box adjacent to your target file.
 - 1) You can select one, some, or all of the log files to erase at one time.
 - 2) The FILE TYPE selection adds, or removes the check marks for all files shown.
- (b) Make your selection: DELETE using the icon in the lower right corner.
 - 1) A confirmation box shows.
- (c) Make your selection: CONTINUE.
- (d) When complete, make your selection: CANCEL.

ARO ALL

F. Put the Airplane Back to Its Usual Condition

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-01-840-007

- (1) To exit DOWNLOAD MANAGER, you can do one of these steps:
 - (a) To show the main menu, click on the HOME icon at the upper left-hand corner.
 - (b) To end the ONS Maintenance session and show Windows desktop, click once on the gear icon, in the upper right-hand corner.
 - 1) Make your selection: EXIT ONS.

ARO ALL

SUBTASK 46-13-01-080-003

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



TASK 46-13-01-860-801

10. Network File Server Software Check

A. General

(1) This procedure gives the steps to examine the software installed in the network file server (NFS).

NOTE: The software in the task refers to the parts that operate the server.

- (2) To do this task, you will use the maintenance device, SPL-11321 to operate the ONS maintenance browser.
- (3) The aircraft must be on the ground before you can install software.

B. References

Reference	Title
46-13-00-720-804	Onboard Network System Configuration Check (P/B 201)

ARO ALL



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 - Maintenance
31 E-11321	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205
	Opt Part #: J45001-1 Supplier: 81205 Opt Part #: J45003-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. Prepare for the Procedure

SUBTASK 46-13-01-860-002

(1) Get a record of correct software part numbers for the NFS on the target aircraft.

SUBTASK 46-13-01-860-003

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

Left Power Management Panel, P110

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 00	1-013		
В	27	C46411	NETWORK FILE SERVER
ARO 01	4-999		
В	27	C46418	NFS - L
ARO AL	L		

This circuit breaker is inoperative and should remain open:

Right Power Management Panel, P210

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 01	4-999		
В	11	C46419	NFS - R (INOP)

ARO ALL

F. Procedure

SUBTASK 46-13-01-720-004

- (1) Do a check of the NFS operational software. This is the task: (Onboard Network System Configuration Check, TASK 46-13-00-720-804).
 - (a) Make sure that all software parts installed on the NFS agree with the software specified in your record.

ARO ALL 46-13-01



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SUBTASK 46-13-01-080-002

(1)	Exit the ONS browser,	and disconnect the	maintenance I	aptop, if	f not required t	for another t	task

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

ARO ALL



NETWORK FILE SERVER - REMOVAL/INSTALLATION

1. GENERAL

A. This procedure contains two tasks:

ARO 001-013

(1) Removal of the the network file server (NFS), M46009.

ARO 014-999

(2) Removal of the the network file server (NFS), M46013.

ARO 001-013

(3) Installation of the NFS, M46009.

ARO 014-999

(4) Installation of the NFS, M46013.

ARO ALL

TASK 46-13-01-000-801-001

2. Network File Server Removal

Figure 401

A. General

(1) This task gives the steps to remove the network file server (NFS).

ARO 001-013

(a) Network file server, M46009, installed on shelf E4–2 in the E/E bay.

ARO 014-999

(b) Network file server, M46013, installed on shelf E4-2 in the E/E bay.

ARO ALL

B. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)
20-10-01-000-801	E/E Box Removal (P/B 401)
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)
46-13-01-800-802	Network File Server Log File 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.

ARO ALL



Reference	Description
SPL-11321	Device - Maintenance
3FL-11321	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205
	Opt Part #: G45002-29 Supplier: 81205
	Opt Part #: J45001-1 Supplier: 81205
	Opt Part #: J45003-1 Supplier: 81205

D. Location Zones

Zone	Area
117	Main Equipment Center, Left

E. Access Panels

Number	Name/Location
117AL	Main Equipment Center Access Door

F. Prepare for the Procedure

SUBTASK 46-13-01-470-022-001

(1) The Boeing Company recommends you make a back-up copy of the applicable files from the NFS to the maintenance device, SPL-11321. Do this task: (Network File Server Log File Check, TASK 46-13-01-800-802).

NOTE: Know and follow your airline or operator's procedure for record retention.

SUBTASK 46-13-01-860-010-001

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

Left Power Management Panel, P110

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 00	1-013		
В	27	C46411	NETWORK FILE SERVER
ARO 01	4-999		
В	27	C46418	NFS - L
ARO AL	L		

This circuit breaker is inoperative and should remain open:

Right Power Management Panel, P210

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 01	4-999		
В	11	C46419	NFS - R (INOP)

ARO ALL

· EFFECTIVITY ·

ARO ALL

SUBTASK 46-13-01-010-004-001

- (3) Get access to the main equipment center.
 - (a) Refer to:(Finding an Access Door or Panel on the Fuselage, TASK 06-41-00-800-801).

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(b) Open this access panel:

Number Name/Location

117AL Main Equipment Center Access Door

G. NFS Removal Procedure

SUBTASK 46-13-01-020-004-001

(1) Do this task: (ESDS Handling for Metal Encased Unit Installation, TASK 20-41-01-400-803). SUBTASK 46-13-01-020-005-001



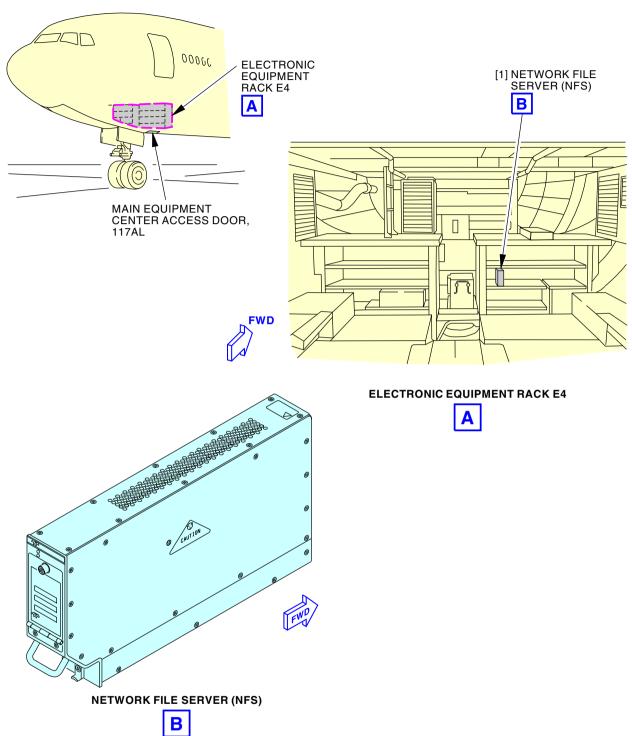
DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE UNIT. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE UNIT.

- (2) Remove the network file server [1]. This is the task: (E/E Box Removal, TASK 20-10-01-000-801).
 - (a) Put protective covers on the electrical connectors.

	END OF	TASK -	
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ARO ALL 46-13-01





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Network File Server Installation Figure 401/46-13-01-990-802-001

ARO ALL
D633W101-ARO

46-13-01

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TASK 46-13-01-400-801-001

3. Network File Server Installation

(Figure 401)

A. General

ARO 001-013

(1) This task gives the steps to install the network file server (NFS), M46009.

ARO 014-999

(2) This task gives the steps to install the network file server (NFS), M46013.

ARO ALL

- (3) The NFS is installed on shelf E4–2 in the E/E bay.
- (4) To complete this task, a maintenance device, SPL-11321 is required.

B. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)
20-10-01-400-801	E/E Box Installation (P/B 401)
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)
46-11-07-860-801	Wireless WAN Unit - Activation (P/B 201)
46-13-00-470-802	Mass Storage Device Software Part Installation (P/B 201)
46-13-00-720-804	Onboard Network System Configuration Check (P/B 201)
46-13-00-720-805	Mass Storage Device Software Parts Check (P/B 201)
46-13-00-750-802	Onboard Network System Client Credentials Check (P/B 201)
46-13-01-470-801	Network File Server Software Installation (P/B 201)
46-13-01-470-803	Network File Server Initial Data Load Software Installation (P/B 201)
46-13-01-720-801	Network File Server Operational Test (P/B 501)
46-13-01-860-801	Network File Server 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 - Maintenance
	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205
	Opt Part #: G45002-23 Supplier: 61205 Opt Part #: J45001-1 Supplier: 81205 Opt Part #: J45003-1 Supplier: 81205

ARO ALL

46-13-01

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D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity	
1	Server	46-50-01-43-010	ARO 001-013	
		46-50-01-43-015	ARO 014-999	

E. Location Zones

Zone	Area
117	Main Equipment Center, Left

F. Access Panels

Number	Name/Location
117AL	Main Equipment Center Access Door

G. Prepare for the Installation

SUBTASK 46-13-01-860-011-001

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

Left Power Management Panel, P110

Row	Col	Number	<u>Name</u>
ARO 00	1-013		
В	27	C46411	NETWORK FILE SERVER
ARO 01	4-999		
В	27	C46418	NFS - L
ARO AL	L		

This circuit breaker is inoperative and should remain open:

Right Power Management Panel, P210

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 01	4-999		
В	11	C46419	NFS - R (INOP)

ARO ALL

SUBTASK 46-13-01-860-012-001

(2) Make sure that this access panel is open:

<u>Number</u>	<u>Name/Location</u>
117AL	Main Equipment Center Access Door

(a) You can refer to:(Finding an Access Door or Panel on the Fuselage, TASK 06-41-00-800-801).

H. NFS Installation Procedure

SUBTASK 46-13-01-720-020-001



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 20-41-01-400-803).

SUBTASK 46-13-01-820-001-001

- (2) Examine the electrical connectors and wires for damage, and dirt.
 - (a) Repair the problems that you find.

46-13-01

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SUBTASK 46-13-01-420-002-001

(3) Install the server [1]. This is the task: (E/E Box Installation, TASK 20-10-01-400-801).

SUBTASK 46-13-01-440-001-001

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

Left Power Management Panel, P110

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 00	1-013		
В	27	C46411	NETWORK FILE SERVER
ARO 01	4-999		
В	27	C46418	NFS - L
ARO AL	.L		

AITO ALL

This circuit breaker is inoperative and should remain open:

Right Power Management Panel, P210

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 01	4-999		
В	11	C46419	NFS - R (INOP)

ARO ALL

I. LRU Post-Installation Test

ARO 001-010; ARO 011-013 PRE SB 777-46-0066

SUBTASK 46-13-01-720-019-001

- (1) Do a check of the NFS operational software. This is the task: (Onboard Network System Configuration Check, TASK 46-13-00-720-804).
 - (a) Make sure that all required software parts are installed.
 - (b) If you must install parts in the NFS operational drive, refer to this task: (Network File Server Software Installation, TASK 46-13-01-470-801).

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-01-720-029-001

- (2) Do a check of the NFS operational software, (Network File Server Software Check, TASK 46-13-01-860-801
 - (a) If NFS boots to show the ONS Main Menu, then do the software check.
 - (b) If the NFS boots to show one of two pages as follows, then do these tasks: (Network File Server Initial Data Load Software Installation, TASK 46-13-01-470-803, and Network File Server Software Installation, TASK 46-13-01-470-801).
 - If the words INIT DATA LOADER shows in the upper left-corner, you are viewing an earlier version of NFS BootOS. Do the specified IDL software installation.
 - If the words NFS MAINTENANCE, and the tab REIMAGE with a green background shows. you are viewing an up-to-date version of NFS BootOS. Do the specified IDL software installation.
 - When the two software installations and the specified software check are complete, then continue.

ARO ALL

ARO ALL

46-13-01

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SUBTASK 46-13-01-720-021-001

- (3) Do this task: (Mass Storage Device Software Parts Check, TASK 46-13-00-720-805).
 - (a) Make sure that all required software parts are installed.
 - If you must install parts in the MSD, refer to this task: (Mass Storage Device Software Part Installation, TASK 46-13-00-470-802).

SUBTASK 46-13-01-470-023-001

You must generate new credentials for each network client. Do this task: (Onboard Network System Client Credentials Check, TASK 46-13-00-750-802).

SUBTASK 46-13-01-720-022-001

Make sure the terminal wireless LAN unit (TWLU) is activated, (Wireless WAN Unit -Activation, TASK 46-11-07-860-801).

SUBTASK 46-13-01-720-023-001

Do an operational test. Do this task: (Network File Server Operational Test, TASK 46-13-01-720-801).

J. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-01-080-007-001

(1) Stop the ONS maintenance browser, and disconnect the laptop.

SUBTASK 46-13-01-410-001-001

(2) Close this access panel:

<u>Number</u>	Name/Location
117AL	Main Equipment Center Access Door
	——— END OF TASK ——

46-13-01

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D633W101-ARO



NETWORK FILE SERVER - ADJUSTMENT/TEST

1. General

- A. This procedure has one task:
 - (1) An operational test to make sure that the network file server (NFS) is serviceable.

TASK 46-13-01-720-801

2. Network File Server Operational Test

A. General

(1) This procedure makes sure that the network file server (NFS) is serviceable.

ARO 001-013

• NFS, M46009 on shelf E4-2, in the E/E bay.

ARO 014-999

• NFS-L, M46013 on shelf E4-2, in the E/E bay.

ARO ALL

(2) The aircraft must be on the ground before you do this task.

B. References

Reference	Title
45-10-00-910-810	How to Operate the MAT in the Flight Compartment (P/B 201)
46-13-00-480-801	Onboard Network System Maintenance Laptop Connection (P/B 201)
46-13-00-720-801	Onboard Network System NFS Message Check (P/B 201)
46-13-00-720-803	Onboard Network System Input Monitoring Check (P/B 201)
46-13-01-800-801	Network File Server Fault 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 - Maintenance	
	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205	
	Opt Part #: G45001-101 Supplier: 81205	
	Opt Part #: G45002-1 Supplier: 81205	
	Opt Part #: G45002-10 Supplier: 81205	
	Opt Part #: G45002-20 Supplier: 81205	
	Opt Part #: G45002-25 Supplier: 81205	
	Opt Part #: G45002-29 Supplier: 81205	
	Opt Part #: J45001-1 Supplier: 81205	
	Opt Part #: J45003-1 Supplier: 81205	

D. Location Zones

Zone	Area	
212	Flight Compartment, Right	

ARO ALL



E. Before the Operational Test

SUBTASK 46-13-01-860-006

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

Left Power Management Panel, P110

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 00	1-013		
В	27	C46411	NETWORK FILE SERVER
ARO 01	4-999		
В	27	C46418	NFS - L
ARO AL	L		

This circuit breaker is inoperative and should remain open:

Right Power Management Panel, P210

Row	Col	Number	<u>Name</u>
ARO 01	4-999		
В	11	C46419	NFS - R (INOP)

ARO ALL

F. Operational Test Procedure

ARO 001-004

SUBTASK 46-13-01-480-003

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

ARO 005-999

SUBTASK 46-13-01-480-009

- Get access to the ONS maintenance browser.
 - (a) You can use the Maintenance Access Terminal (MAT) (How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810).
 - (b) You can use the maintenance device, SPL-11321, (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

ARO ALL

SUBTASK 46-13-01-860-007

- (3) Do this task: (Network File Server Fault Check, TASK 46-13-01-800-801).
 - (a) If you find a problem, then a maintenance action is required.

SUBTASK 46-13-01-720-007

- (4) Do a check of the NFS input monitoring. This is the task: (Onboard Network System Input Monitoring Check, TASK 46-13-00-720-803).
 - (a) In that task, when you must select an item to monitor, make your selection NFS. You can ignore the other items to monitor.
 - (b) Make sure the specified ports and busses are serviceable.

SUBTASK 46-13-01-720-008

(5) Do a check of the NFS Messages. This is the task: (Onboard Network System NFS Message Check, TASK 46-13-00-720-801).

ARO ALL



(a) If no NFS messages show, then the NFS is serviceable.

G.	Put the	Aircraft	Back to	its Usual	Condition

SUBTASK 46-13-01-070-002

(1) Exit the ONS browser, and disconnect the maintenance device, SPL-11321, if not required for another task.

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

ARO ALL



NETWORK EXTENSION DEVICE - MAINTENANCE PRACTICES

1. General

- A. This procedure contains these tasks:
 - (1) How to install software into the network extension device (NED).
 - (2) How to do a check of the NED fault log.
 - (3) How to do a check of the NED software.

TASK 46-13-02-470-801

2. Network Extension Device Software Installation

A. General

(1) This task gives the steps to install software into a network extension device (NED).

NOTE: This task uses the acronym NED to refer to the network extension device-domain guard (NED-DG). The two names refer to the same LRU.

- (a) NED-DG, M46010, installed at STA 453, LBL 99, WL 167.
- (2) These software parts operate the NED:
 - 46 NED OPS
 - 46 NED-DG OPC

(AIPC 46-00-00-46K)

- (3) To do the software installation, these conditions must exist:
 - (a) The weight-on-wheels discrete must be set to ground.
 - (b) You must have access to the E/E bay.
 - (c) To boot the LRU into load mode, you must follow the sequence specified.

B. References

Title
Finding an Access Door or Panel on the Fuselage (P/B 201)
Mass Storage Device Software Removal (P/B 201)
Onboard Network System LRU Software Installation (P/B 201)
Onboard Network System NFS Message Check (P/B 201)
Onboard Network System Configuration Check (P/B 201)
Onboard Network System Client Credentials Check (P/B 201)
Aircraft Illustrated Parts Catalog

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.

EFFECTIVITY 46-13-02



Reference	Description
SPL-11321	Device - Maintenance
3FL-11321	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205
	Opt Part #: G45002-29 Supplier: 81205
	Opt Part #: J45001-1 Supplier: 81205
	Opt Part #: J45003-1 Supplier: 81205

D. Location Zones

Zone	Area
121	Forward Cargo Compartment, Left
212	Flight Compartment, Right

E. Access Panels

Number	Name/Location
117AL	Main Equipment Center Access Door

F. Before the NED Software Installation

SUBTASK 46-13-02-860-006

(1) Get a record of the correct NED software part number.

SUBTASK 46-13-02-860-005

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

Left Power Management Panel, P110

Row	Col	Number	<u>Name</u>
ARO 01	1-999		
		C46414	NED-DG
ARO 00	5-013		
В	27	C46411	NETWORK FILE SERVER
ARO 014	4-999		
В	27	C46418	NFS - L
ARO 00	5-999		

These circuit breakers are inoperative and should remain open:

Left Power Management Panel, P110

Row	Col	Number	<u>Name</u>
ARO 00	5-010		
F	23	C46414	NED-DG (INOP)

Right Power Management Panel, P210

<u>Row</u>	Col	<u>number</u>	<u>name</u>
ARO 01	4-999		
В	11	C46419	NFS - R (INOP)

ARO 005-999

ARO 005-999



SUBTASK 46-13-02-720-002

- (3) Do a check of the NED software already installed (Onboard Network System Configuration Check, TASK 46-13-00-720-804).
 - (a) Make sure that the NED software parts agree with those specified by your record.
 - 1) If you find a problem, then continue.

G. NED Software Installation - Procedure

SUBTASK 46-13-02-040-001

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

Left Power Management Panel, P110

Row Col Number Name

ARO 011-999

--- C46414 NED-DG

ARO 005-999

This circuit breaker is inoperative and should remain open:

Left Power Management Panel, P110

Row Col Number Name

ARO 005-010

F 23 C46414 NED-DG (INOP)

ARO 005-999

SUBTASK 46-13-02-010-004

(2) Open this access panel:

Number Name/Location

117AL Main Equipment Center Access Door

(a) To find the door, you can refer to (Finding an Access Door or Panel on the Fuselage, TASK 06-41-00-800-801).

SUBTASK 46-13-02-470-002

(3) Set the NED-DG LOAD MODE switch, S46002, to the LOAD position.

NOTE: When NED-DG is set to load mode, all communication between the MAT and AIMS is unserviceable.

SUBTASK 46-13-02-440-002

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

Left Power Management Panel, P110

 Row
 Col
 Number
 Name

 ARO 011-999
 -- C46414
 NED-DG

 ARO 005-999

This circuit breaker is inoperative and should remain open:

Left Power Management Panel, P110

 Row
 Col
 Number
 Name

 ARO 005-010
 F
 23
 C46414
 NED-DG (INOP)

ARO 005-999

ARO 005-999



(a) Let the NED boot-up. This can take approximately two minutes.

SUBTASK 46-13-02-470-003

(5) Install the serviceable Loadable Software Airplane Part (LSAP). Do this task: (Onboard Network System LRU Software Installation, TASK 46-13-00-470-801).

SUBTASK 46-13-02-040-002

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

Left Power Management Panel, P110

<u>Row Col Number Name</u>

ARO 011-999
--- C46414 NED-DG

ARO 005-999

This circuit breaker is inoperative and should remain open:

Left Power Management Panel, P110

 Row
 Col
 Number
 Name

 ARO 005-010
 F
 23
 C46414
 NED-DG (INOP)

ARO 005-999

SUBTASK 46-13-02-440-003

(7) Set the NED-DG LOAD MODE switch, S46002, to the NORMAL MODE.

SUBTASK 46-13-02-440-004

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

Left Power Management Panel, P110

 Row
 Col
 Number
 Name

 ARO 011-999
 -- C46414
 NED-DG

 ARO 005-999

This circuit breaker is inoperative and should remain open:

Left Power Management Panel, P110

 Row
 Col
 Number
 Name

 ARO 005-010
 F
 23
 C46414
 NED-DG (INOP)

ARO 005-999

(a) Let the NED boot into NORMAL mode. This can take approximately two minutes.

SUBTASK 46-13-02-470-005

- (9) Do a check of the client credentials. Do this task: (Onboard Network System Client Credentials Check, TASK 46-13-00-750-802).
 - (a) If this is the initial installation of this NED unit on this airplane, do the steps to generate a new credential.

H. Software Installation Check

SUBTASK 46-13-02-720-003

(1) Do a check of the NED software, (Onboard Network System Configuration Check, TASK 46-13-00-720-804).

ARO 005-999



(a) Make sure the result agrees with the requirement specified by your airline or operator.

SUBTASK 46-13-02-720-004

- (2) Do a check of the NFS messages. This is the task: (Onboard Network System NFS Message Check, TASK 46-13-00-720-801).
 - (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 NFS messages page.

SUBTASK 46-13-02-070-001

(3) Erase the installation LSAP, with the nomenclature 46 NED-DG OPC, from the mass storage device (MSD). Do this task: (Mass Storage Device Software Removal, TASK 46-13-00-070-801).

NOTE: This step is necessary for network security conformance.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 46-13-02-410-002

(1) Close this access panel:

<u>Number</u>	Name/Location
117AL	Main Equipment Center Access Door

ARO 005-013

SUBTASK 46-13-02-840-005

- (2) To exit the MSD page, you can do one of these steps:
 - (a) To show the main menu, click on the HOME icon at the upper left-hand corner.
 - (b) To end the ONS Maintenance session and show Windows desktop, click once on the gear icon, in the upper right-hand corner.
 - 1) Make your selection: EXIT ONS.

ARO 014-999

SUBTASK 46-13-02-840-009

- (3) To exit the MASS STORAGE DEVICE page, you can do one of these steps:
 - (a) To show the main menu, click on the HOME icon at the upper left-hand corner.
 - (b) To end the ONS Maintenance session and show Windows desktop, click once on the gear icon, in the upper right-hand corner.
 - 1) Make your selection: EXIT ONS.

ARO 005-999

SUBTASK 46-13-02-080-003

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

——— FND OF TASK ——							
		V	C	T۸	١.		

46-13-02

ARO 005-999



TASK 46-13-02-720-801

3. Network Extension Device Fault Log Check

A. General

- (1) This task gives the steps to do a fault log check of the network extension device (NED).
 - NOTE: This task uses the acronym NED to refer to the network extension device-domain guard (NED-DG). The two names refer to the same LRU.
 - (a) NED-DG, M46010, installed at STA 453, LBL 99, WL 167.
- (2) To do this check, the aircraft must be on the ground.

B. References

Reference	Title
45-10-00-910-810	How to Operate the MAT in the Flight Compartment (P/B 201)
46-13-00-480-801	Onboard Network System Maintenance Laptop Connection (P/B 201)
46-13-01-800-801	Network File Server Fault 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 - Maintenance
	Part #: G45004-1 Supplier: 81205
	Part #: G45004-3 Supplier: 81205
	Opt Part #: G45001-101 Supplier: 81205
	Opt Part #: G45002-1 Supplier: 81205
	Opt Part #: G45002-10 Supplier: 81205
	Opt Part #: G45002-20 Supplier: 81205
	Opt Part #: G45002-25 Supplier: 81205
	Opt Part #: G45002-29 Supplier: 81205
	Opt Part #: J45001-1 Supplier: 81205
	Opt Part #: J45003-1 Supplier: 81205

D. NED Fault Log Check - Procedure

SUBTASK 46-13-02-480-004

- (1) Get access to the ONS maintenance browser.
 - (a) You can use the Maintenance Access Terminal (MAT) (How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810).
 - (b) You can use the maintenance device, SPL-11321, (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801).

SUBTASK 46-13-02-710-001

EFFECTIVITY

ARO 005-999

- Do this task: (Network File Server Fault Check, TASK 46-13-01-800-801).
 - (a) Make sure the NED is serviceable.
 - (b) If you find a problem, then a maintenance action is required.



E. Put the Aircraft Back to its Usual Condition

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-02-840-006

- (1) To exit the faults page, you can do one of these steps:
 - (a) To show the main menu, click on the HOME icon at the upper left-hand corner.
 - (b) To end the ONS Maintenance session and show Windows desktop, click once on the gear icon, in the upper right-hand corner.
 - 1) Make your selection: EXIT ONS.

ARO 005-999

SUBTASK 46-13-02-080-002

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



TASK 46-13-02-720-802

4. Network Extension Device Software Check

A. General

(1) This procedure gives the steps to examine the software installed in a network extension device (NED).

NOTE: This task uses the acronym NED to refer to the network extension device-domain guard (NED-DG). The two names refer to the same LRU.

- (a) NED-DG, M46010, installed at STA 453, LBL 99, WL 167.
- (2) To do this task, the weight-on-wheels discrete must be set to ground.

B. References

Reference	Title
46-13-00-720-804	Onboard Network 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 - Maintenance
	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205 Opt Part #: G45001-1 Supplier: 81205
	Opt Part #: J45003-1 Supplier: 81205

46-13-02

EFFECTIVITY



D. Location Zones

Zone	Area
121	Forward Cargo Compartment, Left
212	Flight Compartment, Right

E. Prepare for the Procedure

SUBTASK 46-13-02-860-008

(1) Get a record of correct software part numbers for the NED on the target aircraft.

F. Software Check Procedure

SUBTASK 46-13-02-480-003

- (1) Do a check of the NED software, (Onboard Network System Configuration Check, TASK 46-13-00-720-804).
 - (a) Make sure that all software parts installed on the NED agree with the software specified in your record.
 - (b) If you find a problem, then a maintenance action is required.

G. Put the Aircraft Back To Its Usual Condition

ARO 014-999: ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-02-840-007

- (1) To exit the configuration page, you can do one of these steps:
 - (a) To show the main menu, click on the HOME icon at the upper left-hand corner.
 - (b) To end the ONS Maintenance session and show Windows desktop, click once on the gear icon, in the upper right-hand corner.
 - 1) Make your selection: EXIT ONS.

ARO 005-999

EFFECTIVITY

ARO 005-999

SUBTASK 46-13-02-080-004

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

——— END OF TASK ———



NETWORK EXTENSION DEVICE - REMOVAL/INSTALLATION

1. General

- A. This procedure contains the tasks to remove, and install a network extension device (NED).
- B. NED-DG, M46010, installed in the E/E bay.

TASK 46-13-02-000-801

2. Network Extension Device Removal

A. General

(1) This task gives the steps to remove the network extension device (NED).

NOTE: This task uses the acronym NED to refer to the network extension device-domain guard (NED-DG). The two names refer to the same LRU.

(a) NED-DG, M46010, is installed in the E/E bay, at STA 453, LBL 99, WL 167.

B. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)

C. Location Zones

Zone	Area
121	Forward Cargo Compartment, Left

D. Access Panels

Number	Name/Location
117AL	Main Equipment Center Access Door

E. Prepare for the Procedure

SUBTASK 46-13-02-860-001

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

Left Power Management Panel, P110

Row	Col	<u>Number</u>	<u>Name</u>
ARO 01	1-999		
		C46414	NED-DG
ARO 00	5-999		

This circuit breaker is inoperative and should remain open:

Left Power Management Panel, P110

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 00	5-010		
F	23	C46414	NED-DG (INOP)

ARO 005-999

F. NED Removal Procedure

SUBTASK 46-13-02-010-001

(1) Open this access panel:

<u>Number</u>	Name/Location
117AL	Main Equipment Center Access Door

ARO 005-999



(a) To find the door, you can refer to (Finding an Access Door or Panel on the Fuselage, TASK 06-41-00-800-801).

SUBTASK 46-13-02-010-002

- (2) Find and get access to the NED.
 - (a) NED-DG, M46010, is at STA 453, LBL 99, WL 167.

SUBTASK 46-13-02-020-001



DO NOT LOOK INTO THE END OF A FIBER-OPTIC CABLE. THERE IS A RISK OF LASER RADIATION, WHICH YOU WILL NOT SEE. LASER RADIATION IS DANGEROUS FOR YOUR EYES.



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

(3) Disconnect the three electrical connectors from the NED [1].

SUBTASK 46-13-02-020-002

(4) Remove the six screws [3] and six washers [4].

SUBTASK 46-13-02-020-003

- (5) Remove the NED [1] from the support [2].
 - (a) Put protective caps on the electrical connectors.

SUBTASK 46-13-02-020-004

EFFECTIVITY

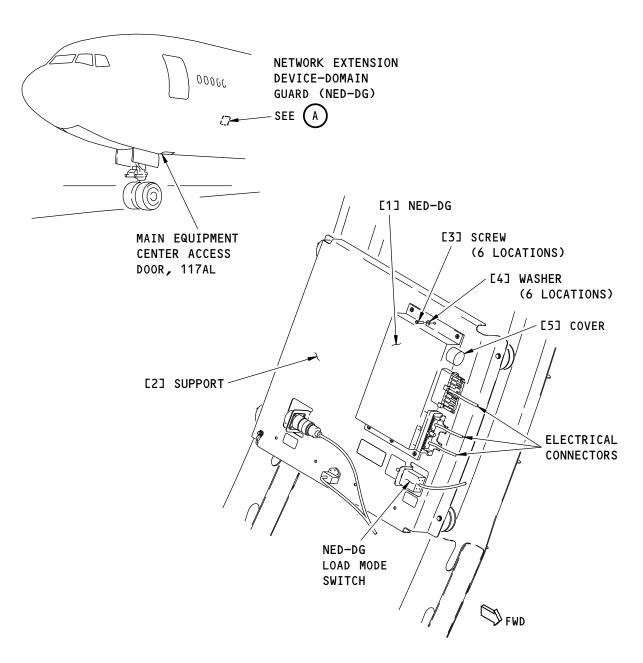
ARO 005-999

- (6) Remove the threaded cover [5] from the NED J3 plug.
 - (a) Keep the plug for installation on the serviceable NED.
 - (b) Install a protective cap on the J3 connector.

NOTE: The cover is an approved aircraft part. It is necessary for NED installation.

——— END OF TASK ———





NETWORK EXTENSION DEVICE-DOMAIN GUARD (NED-DG)



2269003 S0000509915_V3

Network Extension Device Installation Figure 401/46-13-02-990-801

ARO 005-999

D633W101-ARO

46-13-02

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TASK 46-13-02-400-801

3. Network Extension Device Installation

(Figure 401)

A. General

(1) This task gives the steps to install the network extension device (NED).

NOTE: This task uses the acronym NED to refer to the network extension device-domain guard (NED-DG). The two names refer to the same LRU.

(a) NED-DG, M46010, is installed in the E/E bay, at STA 453, LBL 99, WL 167.

B. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)
46-11-07-860-801	Wireless WAN Unit - Activation (P/B 201)
46-13-00-750-802	Onboard Network System Client Credentials Check (P/B 201)
46-13-02-720-802	Network Extension Device Software Check (P/B 201)
46-13-02-720-803	Network Extension Device - 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 - Maintenance	
3FL-11321	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205	
	Opt Part #: G45002-29 Supplier: 81205	
	Opt Part #: J45001-1 Supplier: 81205	
	Opt Part #: J45003-1 Supplier: 81205	

D. Consumable Materials

Reference	Description	Specification
B00130	Alcohol - Isopropyl	TT-I-735
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5 Class A

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	NED	46-13-50-03-015	ARO 011-999

F. Location Zones

Zone	Area
121	Forward Cargo Compartment, Left

ARO 005-999



G. Access Panels

Number	Name/Location
117AL	Main Equipment Center Access Door

H. Before the NED Installation

SUBTASK 46-13-02-860-002

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

Left Power Management Panel, P110

<u>Row Col Number Name</u>

ARO 011-999
--- C46414 NED-DG

.__ ...

ARO 005-999

This circuit breaker is inoperative and should remain open:

Left Power Management Panel, P110

 Row
 Col
 Number
 Name

 ARO 005-010
 F
 23
 C46414
 NED-DG (INOP)

ARO 005-999

SUBTASK 46-13-02-010-003

(2) Make sure that this access panel is open:

Number117ALMain Equipment Center Access Door

(a) To find the door, you can refer to (Finding an Access Door or Panel on the Fuselage, TASK 06-41-00-800-801).

I. NED Installation Procedure

SUBTASK 46-13-02-840-001



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 20-41-01-400-803).

SUBTASK 46-13-02-420-001

(2) Using a cotton wiper, G00034 wet with alcohol, B00130, wipe clean all mating surfaces of the NED [1], support [2], screws [3], washers [4].

SUBTASK 46-13-02-420-002

- (3) Put the NED [1] in position on the support [2].
 - (a) Install the six screws [3] and six washers [4].
 - (b) Hand-tighten the six screws [3].

SUBTASK 46-13-02-420-003

- (4) Remove the protective covers from electrical connectors J1-A, J1-B and J2.
 - (a) Examine the electrical connectors and wires for damage and dirt.
 - (b) Repair the problems that you find.
 - (c) Connect the three electrical connectors to the NED [1].

ARO 005-999 46-13-02



SUBTASK 46-13-02-420-004



USE THE APPROVED CAP. OTHER CAPS CAN COME OFF. FOD CAUSES DAMAGE.

(5) Install the cover [5] on the NED J3 plug, and hand-tighten.

NOTE: The correct cover has internal threads and a gasket.

SUBTASK 46-13-02-860-004

- (6) Make sure the NED-DG load mode switch, S46002, is set to NORMAL.
 - (a) The switch is located below the NED [1].

SUBTASK 46-13-02-860-003

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

Left Power Management Panel, P110

<u>Col</u>	<u>Number</u>	<u>Name</u>
-999		
	C46414	NED-DG
	I-999	1-999

ARO 005-999

This circuit breaker is inoperative and should remain open:

Left Power Management Panel, P110

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 00	5-010		
F	23	C46414	NED-DG (INOP)

ARO 005-999

(a) Let the NED reboot. This can take approximately two minutes.

J. NED Installation Check

SUBTASK 46-13-02-470-006

(1) Make a new NED client credential in the NFS. This is the task: (Onboard Network System Client Credentials Check, TASK 46-13-00-750-802).

SUBTASK 46-13-02-720-001

- (2) Do a check of the NED software, (Network Extension Device Software Check, TASK 46-13-02-720-802).
 - (a) Make sure the result agrees with the requirement specified by your airline or operator.
 - (b) If you find a problem, then a maintenance action is required.

SUBTASK 46-13-02-440-005

(3) Activate the TWLU. Do this task: (Wireless WAN Unit - Activation, TASK 46-11-07-860-801).

SUBTASK 46-13-02-710-002

(4) Do this task: (Network Extension Device - Operational Test, TASK 46-13-02-720-803).

46-13-02

ARO 005-999

EFFECTIVITY



K. Put the Aircraft Back To Its Usual Condition

SUBTASK 46-13-02-410-001

(1) Close this access panel:

Number117ALMain Equipment Center Access Door

SUBTASK 46-13-02-080-001

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

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



NETWORK EXTENSION DEVICE - ADJUSTMENT/TEST

1. General

- A. This procedure contains one task:
 - (1) A task to make sure that the network extension device (NED) is serviceable.

TASK 46-13-02-720-803

2. Network Extension Device - Operational Test

A. General

(1) This procedure gives the steps to make sure that the network extension device (NED) is serviceable.

NOTE: This task uses the acronym NED to refer to the network extension device-domain guard (NED-DG). The two names refer to the same LRU.

(a) NED-DG, M46010, is located in the E/E bay, at STA 453, LBL 99, WL 167.

B. References

Reference	Title
46-13-00-720-803	Onboard Network System Input Monitoring 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 - Maintenance
	Part #: G45004-1 Supplier: 81205 Part #: G45004-3 Supplier: 81205 Opt Part #: G45001-101 Supplier: 81205 Opt Part #: G45002-1 Supplier: 81205 Opt Part #: G45002-10 Supplier: 81205 Opt Part #: G45002-20 Supplier: 81205 Opt Part #: G45002-25 Supplier: 81205 Opt Part #: G45002-29 Supplier: 81205 Opt Part #: J45001-1 Supplier: 81205 Opt Part #: J45003-1 Supplier: 81205

D. Location Zones

Zone	Area
121	Forward Cargo Compartment, Left
212	Flight Compartment, Right

E. **NED Operational Test**

SUBTASK 46-13-02-860-009

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

Left Power Management Panel, P110					
Row Col		<u>Number</u>	<u>Name</u>		
ARO 01	1-999				
		C46414	NED-DG		

ARO 005-999



ARO 011-999 (Continued)

(Continued)

Left Power	Management	Panel,	P110
------------	------------	--------	------

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 00	5-013		
В	27	C46411	NETWORK FILE SERVER
ARO 01	4-999		
В	27	C46418	NFS - L
ARO 005-999			

These circuit breakers are inoperative and should remain open:

Left Power Management Panel, P110

Row Col		<u>Number</u>	<u>Name</u>
ARO 00	5-010		
F	23	C46414	NED-DG (INOP)

Right Power Management Panel, P210

Row	<u>Col</u>	Number	<u>Name</u>	
ARO 01	4-999			
В	11	C46419	NFS - R (INOP)	

ARO 005-999

SUBTASK 46-13-02-710-004

- (2) For the NED-DG, do the Ethernet input monitoring check, (Onboard Network System Input Monitoring Check, TASK 46-13-00-720-803).
 - (a) Make sure the condition of AIMS-LEFT is UP.
 - (b) Make sure the condition of AIMS-RIGHT is UP.

NOTE: The UP condition shows that communications between NFS and AIMS-L, and AIMS-R is serviceable. The NED-DG, and client-server credentials are serviceable.

F. Put the Aircraft Back to it's Usual Condition

ARO 014-999; ARO 011-013 POST SB 777-46-0066

SUBTASK 46-13-02-840-008

- (1) To exit input monitoring, you can do one of these steps:
 - (a) To show the main menu, click on the HOME icon at the upper left-hand corner.
 - (b) To end the ONS Maintenance session and show Windows desktop, click once on the gear icon, in the upper right-hand corner.
 - Make your selection: EXIT ONS.

ARO 005-999

SUBTASK 46-13-02-840-004

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

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ARO 005-999



EFB - P121 APPLICATIONS - MAINTENANCE PRACTICES

ARO 1.	General
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- ARO A. This procedure contains the tasks that follow.
 - (1) EFB Applications Delete Temp
 - (2) EFB Applications Windows Restart
 - (3) EFB Applications Download CNAS Log Files from ONS
 - (4) How to determine if software was loaded with ADEL or Load Mode
- ARO (5) ADEL EU Software Check
 - (6) ADEL EU Compare Configuration
 - (7) ADEL EU Data LSAP Removal
 - (8) ADEL EU Data LSAP Installation
 - (9) ADEL EU Crossload Data LSAPs
 - (10) Electronic Logbook Ground Load Procedure
 - (11) Electronic Logbook Enable Procedure
 - (12) Electronic Logbook Replicate Logbook Databases Between EFB EUs
- ARO (13) Electronic Logbook Delete TEMP Procedure
 - (14) Electronic Logbook Paper Sign Procedure (Non-Cabin Server Configuration)
 - (15) Electronic Logbook Paper Sign Procedure (Cabin Server Configuration)

B. Introduction

- (1) These procedures are added to the Airplane Maintenance Manual (AMM) as a customer courtesy and all data in this procedure is customer originated data (COC). The data is extracted from Electronic Flight Bag (737-777) Application Maintenance Manual, D6-84023-4601.
- (2) This data is for Class 3 Electronic Flight Bag (EFB) P121 applications. It provides additional maintenance instructions for various EFB applications that are not included in existing ATA 46-11 EFB aircraft maintenance documentation. These procedures may be expanded to include maintenance information on each EFB application as the data becomes available.

C. Purpose and Audience

- (1) The purpose of these procedures is to provide additional supporting data for maintenance personnel that are performing maintenance on the EFB. These procedures apply only to maintenance required by specific EFB Application Loadable Software Airplane Parts (LSAPs) and does not cover EFB Core software parts. These procedures are to be used with those procedures in ATA 46-11 of the AMM and FIM.
- D. List of Acronyms and Commonly Used Terms
 - (1) The following table includes acronyms or terms listed as application names in this procedure.

ACRONYMS AND TERMS

ADEL	Application Data Enhanced Loading
ВР	Block Point
Class 3	Class3 EFB is one of three classes of EFB defined in AC120-76A.
CRC	Cyclic redundancy check

ARO ALL

46-19-00

D633W101-ARO



ACRONYMS AND TERMS (Continued)

ARO	EFB	Electronic Flight Bag
ARO	ELB	Electronic Logbook
ARO	LSAP	Loadable Software Airplane Part
ARO	os	Operating System
ARO	USB	Universal Serial Bus
ARO	UTC	Coordinated Universal Time

E. Using this Class 3 EFB Application Maintenance Manual

(1) This document is intended to be used in conjunction with the aircraft model AMM for Class 3 EFB in ATA 46-11, as that manual contains common maintenance tasks such as re-booting the system, re-loading software or downloading logs. This section contains procedures peculiar and specific to selected EFB applications that are not covered in ATA 46-11 of the AMM. The applications that may be covered in this manual are as follows:

Application Name
Electronic Documents Browser (EDB)
On-board Performance Tool (OPT)
Network File Server (NFS) / Core Network Application System (CNAS)
Electronic Logbook (ELB)
Electronic Logbook (ELB) on Cabin Server
EFB Wireless Communication Software (EWCB)
Airport Moving Map (AMM)
Terminal Charts (TC)
WPM (Graphics Printer)
Terminal Wireless LAN Unit (TWLU)
Electronic Flight Folder
CDS
Video
Application Dispatch Controller (ADC)
Application Data Enhanced Loading (ADEL or ELA)
CDAF
Enroute

- F. Requesting Assistance from Boeing
 - (1) The preferred method for obtaining customer support for CIS Products and Services is to initiate a Service Request (SR) using the Service Requests application found on the MyBoeingFleet.com portal. When creating the Service Request, to ensure that your Service Request is routed to the CIS Customer Support organization, select the following within the Service Requests application:
 - Product Type: Airplane
- ATA: 4611-00

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- ARO (2) It is also recommended that you include the following contacts:
 - (a) ciscustomersupport@boeing.com (CIS Customer Support group mailbox)
 - (b) An alternate method for obtaining support for CIS products and services is to send an email to the CIS Customer Support Group mailbox: ciscustomersupport@boeing.com
 - G. Downloading and Sending Log Files
 - (1) Because of their size, log files must be compressed (zipped), then forwarded to Boeing using Message Courier to ciscustomersupport@boeing.com. Log files can also be compressed and attached to the Service Request but limitations apply. Individual attachments to Service Requests can not be greater than 30 MB and all of the attachments can not exceed 50 MB. When attaching a .zip file to a BCS message, the file extension must be renamed from .zip to .zap as .zip files will be removed from the incoming message by Boeing network security software.

TASK 46-19-00-070-801

2. EFB Applications Delete Temp

A. General

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ARO ARO (1) This task gives the steps to erase all temporary data from the EFB.

B. Location Zones

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

C. Procedure

SUBTASK 46-19-00-070-001

- (1) Do the Delete Temp steps as follows:
 - (a) Go to the EFB MAIN MENU page.
 - (b) From the Main Menu, push the SYSTEM page button.
 - (c) From the System page, push the EFB MAINTENANCE button.
 - (d) On the EFB Maintenance page, push the LOAD MODE button.

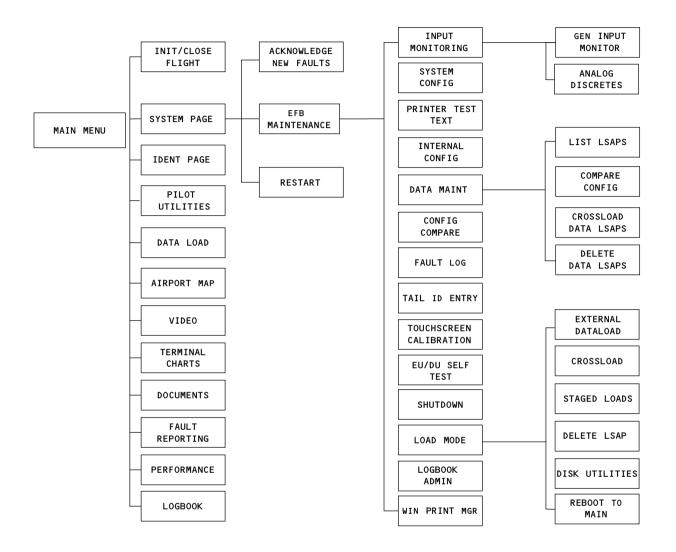
NOTE: After you make the LOAD MODE selection, the touch screen buttons show cyan in color, the message IN PROGRESS shows above the LOAD MODE button, and then the LOAD MODE page shows. This sequence can take approximately three minutes.

- (e) From the LOAD MODE page, push the LINE SELECT KEY (LSK) adjacent to DISK UTILITIES.
- (f) On the DISK UTILITIES page, push the DELETE TEMP button.
- (g) Push CONFIRM to start the DELETE TEMP operation.
- (h) When the delete temp operation is complete, push the BACK bezel key to return to the LOAD MODE page.

——— END OF TASK ———

ARO ALL





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EFB MENU FLOW Figure 201/46-19-00-990-801

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46-19-00

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ARO	TASK	46-19	9-00-4	440-8 0	1

ARO 3. EFB Applications Windows Restart

A. General

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ARO ARO This procedure gives the steps to reboot Windows.

B. Location Zones

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

C. Procedure

SUBTASK 46-19-00-440-001

- (1) Do the Windows restart steps as follows:
 - (a) Go to the EFB MAIN MENU page.
 - (b) From the Main Menu, push the SYSTEM page button.
 - (c) Push the RESTART button.

——— END OF TASK ———

TASK 46-19-00-970-801

4. EFB Applications Download CNAS Log Files from ONS

A. General

(1) This task gives the steps to download the Core Network Application System (CNAS) log files from the ONS.

B. Location Zones

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

C. Procedure

SUBTASK 46-19-00-970-001

- (1) Do the steps that follow to download the CNAS log files from ONS:
 - (a) On the maintenance laptop, set the web browser to show the ONS application framework page.
 - Input this URL: http://ms.ons.pnet:8081/cnas.
 - (b) Log in to access the CNAS pages.
 - (c) Select AdminApp tab from the CNAS framework pages.
 - (d) Select the Logs button as follows:
 - 1) Click the FSS XFR button to access the logs page.
 - 2) Click the Transfer button to transfer the CNAS logs.
 - 3) Wait for the log transfer process to complete.

SUBTASK 46-19-00-970-002

- (2) To save and download the log files to an external device, do the following:
 - (a) Set the web browser to show the ONS Maintenance menu.
 - NOTE: The desktop icon contains the URL: http://ms.ons.pnet:8080.

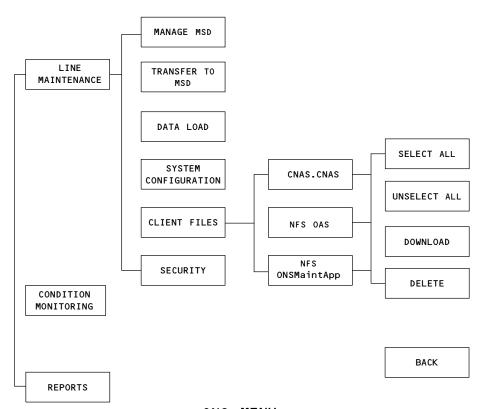
ARO ALL



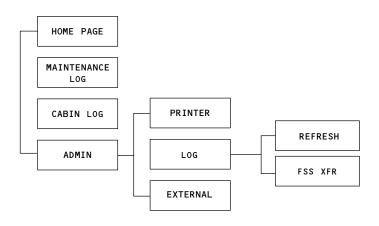
ARO	——— END OF TASK ———
ARO	(e) Save the log files on the maintenance laptop or external drive.
ARO	(d) Select the log files for downloading and click DOWNLOAD button.
ARO	(c) Click CONTINUE
ARO	(b) Select LINE MAINTENANCE > CLIENT FILES > CNAS.CNAS Client Files.
ARO	2) Ensure the ONS Maintenance main menu shows.
ARO ARO	 Double click on the ONS Maintenance desktop icon, or use the web browser and input this URL: http://ms.ons.pnet:8080.

ARO ALL





ONS MENU



CNAS MENU

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ARO ARO ONS MENU and CNAS MENU Figure 202/46-19-00-990-802

ARO ALL
D633W101-ARO

46-19-00

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ARO TASK 46-19-00-970-803

ARO 5. How to Find if EU Software was Installed with ADEL or Load Mode

ARO A. General

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- (1) This task gives the steps to do a check of the Electronic Flight Bag (EFB) software in the left or right Electronics Unit (EU). Do this task when it is necessary to find if an LSAP was installed with ADEL or LOAD MODE. It is necessary to do this before you do an LSAP Removal or an LSAP Crossload procedure.
- (2) The airplane must be on the ground before you do this task.

ARO B. Location Zones

ARO	Zone	Area
ARO	211	Flight Compartment, Left
ARO	212	Flight Compartment, Right

C. Prepare for the Procedure

SUBTASK 46-19-00-970-003

(1) Make a record of the software part number(s) to be deleted or crossloaded.

SUBTASK 46-19-00-970-004

- (2) Determine which EU (right or left) to check.
 - (a) To do a software check software on EU-L, use the Captain's Display Unit (DU).
 - (b) To do a software check on EU-R, use the first officer's DU.

D. Procedure

SUBTASK 46-19-00-860-021

- (1) Set the applicable DU to show the LIST LSAPS page.
 - (a) Push the MENU bezel key, or BACK (<=) bezel key to show the MAIN MENU page.
 - (b) Push the SYSTEM page button.
 - (c) Push the EFB MAINTENANCE page button.
 - (d) Push the DATA MAINT button.
 - (e) From the DATA MAINT page, push the LIST LSAPS button.

SUBTASK 46-19-00-970-005

(2) Look at the LIST LSAPS page.

NOTE: The LIST LSAPS page uses a view to change the list of LSAPs that are displayed. The default view is CURRENT and will display all LSAPs currently in use on the EFB regardless of loading method.

- (a) Press the drop-down list for all available views.
- (b) Select the ALL view for the current task:

NOTE: The "ALL" view shows all LSAPs that were installed with LOAD MODE or ADEL.

- (c) Look at the record you made of software part number(s) to be removed or crossloaded and make sure they show on the Display Unit.
- (d) Press the drop-down list for available views and select the DATA MAINT view.

NOTE: DATA MAINT shows a list of all LSAPs that were installed with the ADEL functionality. This list of LSAPs can only be deleted or crossloaded with the DATA MAINT function on the EFB.

ARO ALL



ARO ARO			(e)	Look at the identified LSAP part numbers that show on this list. These LSAPs can only be deleted or crossloaded with the DATA MAINT function on the EFB.
ARO ARO ARO			(f)	Look at the identified LSAP part numbers that showed in the ALL view, but not in the DATA MAINT view. These LSAPs were installed with LOAD MODE and can only be deleted or crossloaded with the LOAD MODE function on the EFB.
ARO			SUBTASK 46	.19-00-860-022
ARO			(3) Set	the DU to show the DATA MAINT page.
ARO			(a)	Push the BACK (<=) bezel key.
ARO			(b)	Do other DATA MAINT tasks or go back return to the MAIN MENU.
ARO		E.	Put the	Airplane Back to Its Usual Condition
ARO			SUBTASK 46	.19-00-860-023
ARO			(1) Set	the DU to show the MAIN MENU.
ARO			(a)	Push the MENU bezel key.
ARO ARO				NOTE: When you go to the MAIN MENU, if LIST LSAPS was the only DATA MAINT function used, all applications will be immediately available.
ARO				NOTE: If the DELETE DATA LSAPS or CROSSLOAD DATA LSAPS were also used, the
ARO				ADEL Enabled applications installed on the EFB will be restarted. These
ARO				applications will be cyan in color and will return to gray when they are ready to
ARO				——— END OF TASK ———
ARO		TAS	SK 46-19-0	00-970-802
ARO ARO	6.			0-970-802 tware Check
	6.			
ARO	6.	ADI	EL EU Sof General	tware Check
ARO ARO	6.	ADI	General (1) Thi	s task gives the steps to do a check of the Electronic Flight Bag (EFB) software installed in left or the right Electronics Unit (EU). These steps are applicable if you installed software
ARO ARO ARO	6.	ADI	General (1) Thi	s task gives the steps to do a check of the Electronic Flight Bag (EFB) software installed in
ARO ARO ARO ARO	6.	ADI	General (1) Thi	s task gives the steps to do a check of the Electronic Flight Bag (EFB) software installed in left or the right Electronics Unit (EU). These steps are applicable if you installed software in LOAD MODE or ADEL. The airplane must be on the ground before you can do this task.
ARO ARO ARO ARO	6.	ADI	General (1) Thi the with Location	s task gives the steps to do a check of the Electronic Flight Bag (EFB) software installed in left or the right Electronics Unit (EU). These steps are applicable if you installed software a LOAD MODE or ADEL. The airplane must be on the ground before you can do this task. Tones Area
ARO ARO ARO ARO ARO ARO ARO ARO	6.	ADI	General (1) Thi the with Location Zone 211	s task gives the steps to do a check of the Electronic Flight Bag (EFB) software installed in left or the right Electronics Unit (EU). These steps are applicable if you installed software a LOAD MODE or ADEL. The airplane must be on the ground before you can do this task. 1 Zones Area Flight Compartment, Left
ARO ARO ARO ARO ARO ARO ARO	6.	ADI	General (1) Thi the with Location Zone 211 212	s task gives the steps to do a check of the Electronic Flight Bag (EFB) software installed in left or the right Electronics Unit (EU). These steps are applicable if you installed software a LOAD MODE or ADEL. The airplane must be on the ground before you can do this task. Tables Area Flight Compartment, Left Flight Compartment, Right
ARO	6.	ADI	General (1) Thi the with Location Zone 211	s task gives the steps to do a check of the Electronic Flight Bag (EFB) software installed in left or the right Electronics Unit (EU). These steps are applicable if you installed software a LOAD MODE or ADEL. The airplane must be on the ground before you can do this task. Tables Area Flight Compartment, Left Flight Compartment, Right
ARO	6.	ADI	General (1) Thi the with Location Zone 211 212 Procedu SUBTASK 46	s task gives the steps to do a check of the Electronic Flight Bag (EFB) software installed in left or the right Electronics Unit (EU). These steps are applicable if you installed software a LOAD MODE or ADEL. The airplane must be on the ground before you can do this task. In Zones Area Flight Compartment, Left Flight Compartment, Right Inter Flight Compartment, Right
ARO	6.	ADI	General (1) Thi the with Location Zone 211 212 Procedu SUBTASK 46 (1) De	s task gives the steps to do a check of the Electronic Flight Bag (EFB) software installed in left or the right Electronics Unit (EU). These steps are applicable if you installed software in LOAD MODE or ADEL. The airplane must be on the ground before you can do this task. In Zones Area Flight Compartment, Left Flight Compartment, Right ITE 19-00-860-015 termine which EU (right or left) you will check.
ARO	6.	ADI	General (1) Thi the with Location Zone 211 212 Procedu subtask 46 (1) De (a)	s task gives the steps to do a check of the Electronic Flight Bag (EFB) software installed in left or the right Electronics Unit (EU). These steps are applicable if you installed software in LOAD MODE or ADEL. The airplane must be on the ground before you can do this task. To Zones Area Flight Compartment, Left Flight Compartment, Right ITE In 19-00-860-015 Itermine which EU (right or left) you will check. To do a check of software on EU-L, use the Captain's Display Unit (DU).
ARO	6.	ADI	General (1) Thi the with Location Zone 211 212 Procedu SUBTASK 46 (1) De	s task gives the steps to do a check of the Electronic Flight Bag (EFB) software installed in left or the right Electronics Unit (EU). These steps are applicable if you installed software in LOAD MODE or ADEL. The airplane must be on the ground before you can do this task. In Zones Area Flight Compartment, Left Flight Compartment, Right ITE 19-00-860-015 termine which EU (right or left) you will check.
ARO	6.	ADI	General (1) Thi the with Location Zone 211 212 Procedu SUBTASK 46 (1) De (a) (b) SUBTASK 46	stask gives the steps to do a check of the Electronic Flight Bag (EFB) software installed in left or the right Electronics Unit (EU). These steps are applicable if you installed software in LOAD MODE or ADEL. The airplane must be on the ground before you can do this task. In Zones Area Flight Compartment, Left Flight Compartment, Right ITTE 19-00-860-015 Itermine which EU (right or left) you will check. To do a check of software on EU-L, use the Captain's Display Unit (DU). To do a check of software on EU-R, use the first officer's DU.
ARO	6.	ADI	General (1) Thi the with Location Zone 211 212 Procedu SUBTASK 46 (1) De (a) (b) SUBTASK 46	Is task gives the steps to do a check of the Electronic Flight Bag (EFB) software installed in left or the right Electronics Unit (EU). These steps are applicable if you installed software in LOAD MODE or ADEL. The airplane must be on the ground before you can do this task. In Zones Area Flight Compartment, Left Flight Compartment, Right Ince Incolumntary Steps of Software on EU-L, use the Captain's Display Unit (DU). To do a check of software on EU-R, use the first officer's DU. Incolumntary Steps of Software Software on EU-R, use the first officer's DU. Incolumntary Software Softw
ARO	6.	ADI	General (1) Thi the with Location Zone 211 212 Procedu SUBTASK 46 (1) De (a) (b) SUBTASK 46	stask gives the steps to do a check of the Electronic Flight Bag (EFB) software installed in left or the right Electronics Unit (EU). These steps are applicable if you installed software in LOAD MODE or ADEL. The airplane must be on the ground before you can do this task. In Zones Area Flight Compartment, Left Flight Compartment, Right ITTE 19-00-860-015 Itermine which EU (right or left) you will check. To do a check of software on EU-L, use the Captain's Display Unit (DU). To do a check of software on EU-R, use the first officer's DU.

ARO ALL

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(c) Push the EFB MAINTENANCE button.

(d) Push the DATA MAINT button.

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(e) From the DATA MAINT button, push the LIST LSAPS button.



ARO SUBTASK 46-19-00-860-017 Examine the LIST LSAPS page as follows: **ARO** NOTE: The LIST LSAPS page uses a view to change the list of LSAPs that show. The default **ARO** view is CURRENT and will display all LSAPs currently in use on the EFB regardless of **ARO** loading method. Press the drop-down list for all available views. **ARO** (a) Select the appropriate view for the current task: **ARO** · CURRENT - displays list of LSAPs currently in use on the EFB. ARO · CURRENT AND FUTURE - Displays all CURRENT LSAPs, plus any LSAPs that are **ARO** loaded into the EFB repository and will become current based on either a satisfaction of **ARO** dependencies, passing of a future effective date, or by pressing the LOAD button on ARO the DATA LOAD page. **ARO** ALL - Displays all CURRENT AND FUTURE, plus any LSAPs that were loaded via **ARO** LOAD MODE but are not currently in use on the EFB because the LSAP was replaced **ARO ARO** by a newer version via the ADEL functionality. DATA MAINT - Displays a list of all LSAPs that were loaded via the ADEL functionality. **ARO** This list of LSAPs can only be DELETED or CROSSLOADED using the DATA MAINT **ARO** function on the EFB. **ARO** ARO Make sure the correct Loadable Software Airplane Parts (LSAP) part number(s) show. NOTE: LIST LSAPs shows the list by alpha-numeric part number, and not by part name. **ARO** Using the CURRENT, CURRENT AND FUTURE and ALL views, the LSAPs will ΔRO **ARO** always show Cyan in color. This does not indicate that the list of LSAPs that show is serviceable or unserviceable. **ARO** To confirm the condition of LSAPs on the EFB, use the SYSTEM CONFIG **ARO** page for LSAPs loaded with LOAD MODE and use the DATA MAINT view on **ARO** the LIST LSAPS page for LSAPs loaded with the ADEL function. **ARO** When you use the DATA MAINT view, it will show the LSAPs in one of three colors: **ARO** · Cyan - An LSAP that shows cyan in color is in the check process. If it is cyan for ARO more than eight minutes, it is unserviceable. **ARO** Amber - An LSAP that shows amber in color is unserviceable **ARO** ARO White - An LSAP that shows white in color is serviceable. Use the PGDN and PGUP bezel keys or the scroll bar to read all of the pages. **ARO** Push the PRINT button to print the currently displayed list of LSAPs based on the ΔRO current view. **ARO** ARO NOTE: Do NOT press the PRINT button again until the list of LSAPs has completed printing **ARO** Set the DU to show the DATA MAINT page: **ARO** Push the BACK (<=) bezel key. ARO Perform other DATA MAINT tasks or return to the MAIN MENU. **ARO** Set the DU to show the MAIN MENU: **ARO** 1) Push the MENU bezel key. **ARO**

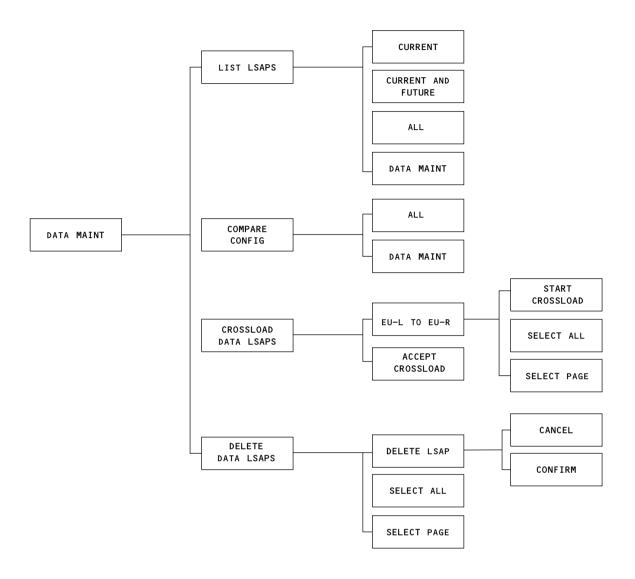
ARO ALL



ARO		END OF TASK
ARO		and will return to GRAY when ready to use.
ARO		applications installed on the EFB will be restarted. These applications will be CYAN
ARO		DATA LSAPS or CROSSLOAD DATA LSAPS were also used, the ADEL Enabled
ARO		function used, all applications will be immediately available. If either of the DELETE
ARO	2)	When you return to the MAIN MENU, if LIST LSAPS was the only DATA MAINT

ARO ALL

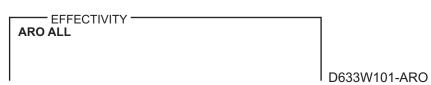




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ARO ARO

ADEL MENU Figure 203/46-19-00-990-803



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ARO TASK 46-19-00-700-801

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7. ADEL EU Compare Configuration

A. General

(1) This task gives the steps to make sure that the same Loadable Software Airplane Parts (LSAPs) are installed in the left and the right Electronics Unit (EU). Use these steps when software is installed with LOAD MODE or ADEL.

B. Location Zones

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

C. Procedure

SUBTASK 46-19-00-470-001

- (1) Make sure the Captain's and First Officer's Electronic Flight Bag (EFB) are serviceable, and set to show the MAIN MENU.
 - (a) Push the MENU bezel key.
 - (b) Make sure the MAIN MENU shows.

SUBTASK 46-19-00-470-002

(2) Set the applicable captain's or first officer's Display Unit (DU) to show the COMPARE CONFIG page:

NOTE: For this check, you need to operate only one of the EFBs. It will automatically do a check of the opposite side.

- (a) Push the SYSTEM page button.
- (b) Push the EFB MAINTENANCE button.
- (c) Push the DATA MAINT button.
- (d) From the DATA MAINT button, push the COMPARE CONFIG button.
 - 1) Let the system operate until a result is shown.

NOTE: The page will show one of four conditions: IN PROGRESS, NO MISMATCH, SOFTWARE MATCH UNABLE, or THESE PARTS FOUND ONLY ON ONE SIDE.

NOTE: SOFTWARE MATCH UNABLE shows when one of the EU's is not in the operational mode. The compare configuration function will not operate if one of the EU's is in LOAD MODE.

- When the DU shows the condition NO MISMATCH, then the two EUs contain the same software. This condition is serviceable and the task is complete.
- If the MISMATCH screen appears, there is a mismatch in configuration between the two EFBs.
- 4) When the DU shows THESE PARTS FOUND ONLY ON ONE SIDE, the page uses views to change the list of LSAPs that show. The default view is ALL. Press the View box for a drop-down list of available views and then select the view appropriate for the current task:
 - ALL Displays a list of all mismatches for all software load methods (LOAD MODE or ADEL Load Function).
 - DATA MAINT Displays a list of only mismatches that were loaded with the ADEL Load function. This list of LSAPs can only be DELETED or CROSSLOADED

ARO ALL



ARO					using the DATA MAINT function on the EFB.
ARO				(e)	To print a record of the result, push the PRINT ALL button.
ARO				(0)	NOTE: Do NOT press the PRINT ALL button again until the list of LSAPs has completed
ARO					printing.
ARO			SUBT	ASK 46-1	9-00-470-003
ARO			(3)	Set	the DU to show the DATA MAINT page.
ARO				(a)	Push the BACK (<=) bezel key.
ARO				(b)	Perform other DATA MAINT tasks or return to the MAIN MENU.
ARO			SUBT	ASK 46-1	9-00-470-004
ARO			(4)	Set	the DU to show the MAIN MENU.
ARO				(a)	Push the MENU bezel key.
ARO				(b)	When returning to the MAIN MENU, if COMPARE CONFIG was the only DATA MAINT
ARO ARO					function used, all applications will be immediately available. If either of the DELETE DATA LSAPS or CROSSLOAD DATA LSAPS were also used, the ADEL Enabled applications
ARO					installed on the EFB will be restarted. These applications will be CYAN and will return to
ARO					GRAY when ready to use.
ARO					——— END OF TASK ———
ARO		TAS	SK 46	-19-0	0-070-802
ARO	8.	ADI	EL EL	J Data	a LSAP Removal
ARO		A.	Ger	neral	
ARO			(1)		task gives the steps to remove (erase, or delete) Loadable Software Airplane Parts
ARO			(1)	(LS	AP) from the Electronic Flight Bag (EFB) electronics unit (EU). Use this procedure only
ARO ARO			(1)	(LS) whe	AP) from the Electronic Flight Bag (EFB) electronics unit (EU). Use this procedure only in software is installed with the Application Data Enhanced Loading (ADEL) function. This
ARO			(1)	(LS) whe	AP) from the Electronic Flight Bag (EFB) electronics unit (EU). Use this procedure only
ARO ARO ARO		В.	` ,	(LS) whe prod wire	AP) from the Electronic Flight Bag (EFB) electronics unit (EU). Use this procedure only in software is installed with the Application Data Enhanced Loading (ADEL) function. This sedure will not erase LSAPs that were loaded with LOAD MODE. Only LSAPs delivered
ARO ARO ARO		В.	` ,	(LS) whe prod wire	AP) from the Electronic Flight Bag (EFB) electronics unit (EU). Use this procedure only in software is installed with the Application Data Enhanced Loading (ADEL) function. This cedure will not erase LSAPs that were loaded with LOAD MODE. Only LSAPs delivered lessly and loaded with the ADEL function will show for selection.
ARO ARO ARO ARO		B.	Loc	(LS/ whe prod wire ation	AP) from the Electronic Flight Bag (EFB) electronics unit (EU). Use this procedure only in software is installed with the Application Data Enhanced Loading (ADEL) function. This redure will not erase LSAPs that were loaded with LOAD MODE. Only LSAPs delivered elessly and loaded with the ADEL function will show for selection. Zones
ARO ARO ARO ARO ARO		B.	Loc Zoi	(LS) whe prod wire ation	AP) from the Electronic Flight Bag (EFB) electronics unit (EU). Use this procedure only in software is installed with the Application Data Enhanced Loading (ADEL) function. This sedure will not erase LSAPs that were loaded with LOAD MODE. Only LSAPs delivered elessly and loaded with the ADEL function will show for selection. Zones Area
ARO ARO ARO ARO ARO ARO		B.	Loc Zoi 211 212	(LS) whe prod wire ation	AP) from the Electronic Flight Bag (EFB) electronics unit (EU). Use this procedure only in software is installed with the Application Data Enhanced Loading (ADEL) function. This redure will not erase LSAPs that were loaded with LOAD MODE. Only LSAPs delivered elessly and loaded with the ADEL function will show for selection. Zones Area Flight Compartment, Left Flight Compartment, Right
ARO ARO ARO ARO ARO ARO ARO			Zoi 211 212 Pro	(LS/ whe prod wire ation ne 2 cedu	AP) from the Electronic Flight Bag (EFB) electronics unit (EU). Use this procedure only in software is installed with the Application Data Enhanced Loading (ADEL) function. This redure will not erase LSAPs that were loaded with LOAD MODE. Only LSAPs delivered elessly and loaded with the ADEL function will show for selection. Zones Area Flight Compartment, Left Flight Compartment, Right re
ARO ARO ARO ARO ARO ARO ARO ARO ARO			Zoi 211 212 Pro	(LS/ whe prod wire ation ne 2 cedu	AP) from the Electronic Flight Bag (EFB) electronics unit (EU). Use this procedure only in software is installed with the Application Data Enhanced Loading (ADEL) function. This bedure will not erase LSAPs that were loaded with LOAD MODE. Only LSAPs delivered elessly and loaded with the ADEL function will show for selection. Zones Area Flight Compartment, Left Flight Compartment, Right re 9-00-070-002 ermine from which Electronics Unit (EU) (right, or left) you will delete software.
ARO			201 211 212 Pro	(LS/ whe prod wire ation ne 2 cedu	AP) from the Electronic Flight Bag (EFB) electronics unit (EU). Use this procedure only in software is installed with the Application Data Enhanced Loading (ADEL) function. This redure will not erase LSAPs that were loaded with LOAD MODE. Only LSAPs delivered elessly and loaded with the ADEL function will show for selection. Zones Area Flight Compartment, Left Flight Compartment, Right re
ARO			201 211 212 Pro	(LS/ whe prod wire ation ne 2 cedui ASK 46-1	AP) from the Electronic Flight Bag (EFB) electronics unit (EU). Use this procedure only in software is installed with the Application Data Enhanced Loading (ADEL) function. This bedure will not erase LSAPs that were loaded with LOAD MODE. Only LSAPs delivered elessly and loaded with the ADEL function will show for selection. Zones Area Flight Compartment, Left Flight Compartment, Right re 9-00-070-002 ermine from which Electronics Unit (EU) (right, or left) you will delete software.
ARO			Loc Zoi 211 212 Pro SUBT. (1)	(LS/whee procedure ation ne Procedure ASK 46-1 (a) (b)	AP) from the Electronic Flight Bag (EFB) electronics unit (EU). Use this procedure only in software is installed with the Application Data Enhanced Loading (ADEL) function. This bedure will not erase LSAPs that were loaded with LOAD MODE. Only LSAPs delivered elessly and loaded with the ADEL function will show for selection. Zones Area Flight Compartment, Left Flight Compartment, Right re 9-00-070-002 ermine from which Electronics Unit (EU) (right, or left) you will delete software. To delete software on EU-L, you must use the captain's Display Unit (DU). To delete software on EU-R, you must use the first officer's DU.
ARO			Zor 211 212 Pro subt. (1)	(LS/whee procedure ation ne Procedure ASK 46-1 (a) (b)	AP) from the Electronic Flight Bag (EFB) electronics unit (EU). Use this procedure only in software is installed with the Application Data Enhanced Loading (ADEL) function. This sedure will not erase LSAPs that were loaded with LOAD MODE. Only LSAPs delivered elessly and loaded with the ADEL function will show for selection. Zones Area Flight Compartment, Left Flight Compartment, Right re 9-00-070-002 ermine from which Electronics Unit (EU) (right, or left) you will delete software. To delete software on EU-L, you must use the captain's Display Unit (DU). To delete software on EU-R, you must use the first officer's DU. 9-00-070-003 the applicable DU to show the DELETE DATA LSAP page:
ARO			Loc Zoi 211 212 Pro SUBT. (1)	(LS/whee procedure ation ne Procedure ASK 46-1 (a) (b)	AP) from the Electronic Flight Bag (EFB) electronics unit (EU). Use this procedure only in software is installed with the Application Data Enhanced Loading (ADEL) function. This sedure will not erase LSAPs that were loaded with LOAD MODE. Only LSAPs delivered elessly and loaded with the ADEL function will show for selection. Zones Area Flight Compartment, Left Flight Compartment, Right re 9-00-070-002 ermine from which Electronics Unit (EU) (right, or left) you will delete software. To delete software on EU-L, you must use the captain's Display Unit (DU). To delete software on EU-R, you must use the first officer's DU. 9-00-070-003 the applicable DU to show the DELETE DATA LSAP page: Push the MENU bezel key, or BACK (<=) bezel key to show the MAIN MENU page.
ARO			Loc Zoi 211 212 Pro SUBT. (1)	(LS/ whe prod wire ation ne 2 cedur Ask 46-1 Dete (a) (b)	AP) from the Electronic Flight Bag (EFB) electronics unit (EU). Use this procedure only in software is installed with the Application Data Enhanced Loading (ADEL) function. This sedure will not erase LSAPs that were loaded with LOAD MODE. Only LSAPs delivered elessly and loaded with the ADEL function will show for selection. Zones Area Flight Compartment, Left Flight Compartment, Right re 9-00-070-002 ermine from which Electronics Unit (EU) (right, or left) you will delete software. To delete software on EU-L, you must use the captain's Display Unit (DU). To delete software on EU-R, you must use the first officer's DU. 9-00-070-003 the applicable DU to show the DELETE DATA LSAP page:
ARO			Loc Zoi 211 212 Pro SUBT. (1)	(LS) whe production me cedulation Detection (a) (b) ASK 46-1 Set (a)	AP) from the Electronic Flight Bag (EFB) electronics unit (EU). Use this procedure only in software is installed with the Application Data Enhanced Loading (ADEL) function. This sedure will not erase LSAPs that were loaded with LOAD MODE. Only LSAPs delivered elessly and loaded with the ADEL function will show for selection. Zones Area Flight Compartment, Left Flight Compartment, Right re 9-00-070-002 ermine from which Electronics Unit (EU) (right, or left) you will delete software. To delete software on EU-L, you must use the captain's Display Unit (DU). To delete software on EU-R, you must use the first officer's DU. 9-00-070-003 the applicable DU to show the DELETE DATA LSAP page: Push the MENU bezel key, or BACK (<=) bezel key to show the MAIN MENU page.
ARO			Loc Zoi 211 212 Pro SUBT. (1)	(LS) whe production wire ation ne Cedural (a) (b) ASK 46-1 Set (a) (b)	AP) from the Electronic Flight Bag (EFB) electronics unit (EU). Use this procedure only in software is installed with the Application Data Enhanced Loading (ADEL) function. This redure will not erase LSAPs that were loaded with LOAD MODE. Only LSAPs delivered elessly and loaded with the ADEL function will show for selection. Zones Area Flight Compartment, Left Flight Compartment, Right re 9-00-070-002 ermine from which Electronics Unit (EU) (right, or left) you will delete software. To delete software on EU-L, you must use the captain's Display Unit (DU). To delete software on EU-R, you must use the first officer's DU. 9-00-070-003 the applicable DU to show the DELETE DATA LSAP page: Push the MENU bezel key, or BACK (<=) bezel key to show the MAIN MENU page. Push the SYSTEM page button.
ARO			Loc Zoi 211 212 Pro SUBT. (1)	(LS) when proceeding action to the control of the c	AP) from the Electronic Flight Bag (EFB) electronics unit (EU). Use this procedure only in software is installed with the Application Data Enhanced Loading (ADEL) function. This sedure will not erase LSAPs that were loaded with LOAD MODE. Only LSAPs delivered elessly and loaded with the ADEL function will show for selection. Zones Area Flight Compartment, Left Flight Compartment, Right re 9-00-070-002 ermine from which Electronics Unit (EU) (right, or left) you will delete software. To delete software on EU-L, you must use the captain's Display Unit (DU). To delete software on EU-R, you must use the first officer's DU. 9-00-070-003 the applicable DU to show the DELETE DATA LSAP page: Push the MENU bezel key, or BACK (<=) bezel key to show the MAIN MENU page. Push the EFB MAINTENANCE button.

ARO ALL



						AIRCRAFT MAINTENANCE MANUAL		
ARO		SUBTASK 46-19-00-070-004						
ARO			(3)			ELETE DATA LSAPS page, make your selection of one or more LSAPs to erase by		
ARO				selecting the individual LSAP button:				
ARO				(a)	Use	the PGUP (page-up) and PGDN (page-down) keys to read all of the pages.		
ARO				(b)	To s	elect all LSAPs on the page shown, push the SELECT PAGE button.		
ARO					NOTE: The SELECT PAGE button will change to show DESELECT PAGE.			
ARO				(c)	To s	To select all LSAPs on all of the pages, push the SELECT ALL button.		
ARO				(d)	To d	e-select an LSAP, push the individual LSAP button again.		
ARO			SUBTA	ASK 46-1	9-00-070	005		
ARO			(4)	Con	nplete	the DELETE DATA LSAPs step:		
ARO				(a)	Pusl	n the PGDN bezel key to go to the last page of the list.		
ARO				(b)	Find	and push the button for DELETE LSAP.		
ARO					1)	Make sure the page shows "DO YOU WANT TO CONTINUE TO DELETE?"		
ARO				(c)	To d	elete the selected LSAP(s), push the CONFIRM button.		
ARO ARO					1)	To stop the delete step, push the CANCEL button. The DU shows the DELETE DATA LSAP page with no change.		
ARO ARO					2)	To delete the LSAPs, push the CONFIRM button. The DU shows the DELETE DATA LSAP page after the changes.		
ARO			SUBTA	ASK 46-1	9-00-070	006		
ARO			(5)	Set the DU to show the DATA MAINT page:				
ARO				(a)	Pusl	n the BACK (<=) bezel key.		
ARO				(b)	Perform other DATA MAINT tasks or return to the MAIN MENU.			
ARO			SUBTA	ASK 46-1	9-00-070	007		
ARO			(6)	Set	the D	J to show the MAIN MENU:		
ARO				(a)	Pusl	n the MENU bezel key.		
ARO				(b)		n the MAIN MENU shows, the ADEL Enabled applications installed on the EFB will		
ARO ARO						estarted. These applications will show CYAN in color and will change to GRAY when y to use.		
ARO								
7						——— END OF TASK ———		
ARO					0-470			
ARO	9.	ADE	EL EU	Data	LSA	P Installation		
ARO		A.	Gen	eral				
ARO			(1)					
ARO ARO				Flight Bag (EFB) Electronics Unit (EU). The procedure is applicable only to LSAPs delivered wirelessly, direct to the EFB, and processed by the Application Data Enhanced Loading				
ARO						nction.		
ARO			(2)	The	airpla	ne must be on the ground to do this procedure.		
ARO		В.	Loc	ation	Zone	s		
ARO			Zor			rea		
ARO			211			ight Compartment, Left		
ARO			212		FI	ight Compartment, Right		

ARO ALL



ARO C. Data LSAP Installation Procedure	ARO (Э.	Data LSAP	Installation	Procedure
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SUBTASK 46-19-00-470-015

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(1) Using the captain's and first officer's EFB Display Unit (DU), do these steps on the two units at the same time:

NOTE: Make sure the software configuration in the captain's EFB, and the first officer's EFB agree.

- (a) Make your selection: MENU.
- (b) Examine the MAIN MENU.
 - 1) Make sure that the INITIALIZE FLIGHT selection shows.
- ARO (c) Examine the MAIN MENU.
 - 1) If the word MEMO does not show, then this procedure is complete.
- **ARO** 2) If the word MEMO shows, then continue.
 - (d) Make your selection: DATA LOAD.
 - (e) Make your selection: LOAD.
 - 1) Wait until the word LOAD changes to COMPLETE.
 - (f) Set the EFB to show the MAIN MENU.
 - 1) Wait for all application buttons to change from CYAN to GRAY in color.
 - 2) When all applications show GRAY in color, the procedure is complete.

——— END OF TASK ———

ARO TASK 46-19-00-470-801

10. ADEL EU Crossload Data LSAPs

A. General

(1) This task gives the steps to install Loadable Software Airplane Parts (LSAP) to one Electronic Flight Bag (EFB) electronics unit (EU) from the other EU. Use this procedure when the EU with the software installed was loaded with the Application Data Enhanced Loading (ADEL) function. This procedure will not crossload LSAPs that were loaded with LOAD MODE. Only LSAPs delivered wirelessly and loaded with the ADEL functionality will show for selection.

B. Location Zones

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

C. Prepare for the Crossload Procedure

SUBTASK 46-19-00-470-005

(1) Make sure that no new data is available to load as follows:

NOTE: This operation must be performed on both the left and the right EFBs.

- (a) Navigate to the EFB Main Menu.
- (b) Make sure the EFB did not have its flight initialized. Look at the bottom right button on the EFB Main Menu and make sure it shows INITIALIZE FLIGHT.
- (c) Look at the EFB to determine if a MEMO notification shows next to the DATA LOAD button.
 - 1) If no, then do the Crossload procedure below.

ARO ALL



ARO		2) If yes, continue with the next step.
ARO	(d)	Select the DATA LOAD button.

- Select the DATA LOAD button.
- (e) Select the LOAD button.
- When the status in the LOAD button changes to COMPLETE, return to the EFB Main
- Wait for all application buttons to change from CYAN to GRAY.
- When all application buttons are GRAY, continue with the next step.

D. Crossload Procedure

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SUBTASK 46-19-00-470-006

- Set the captain's and first officer's DU to show the CROSSLOAD DATA LSAP page.
 - Push the MENU bezel key, or BACK (<=) bezel key to show the MAIN MENU page.
 - Push the SYSTEM page button.
 - (c) Push the EFB MAINTENANCE button.
 - (d) Push the DATA MAINT button.
 - (e) From the DATA MAINT button, push the CROSSLOAD DATA LSAPS button.
 - Make sure the CROSSLOAD page shows on both the captain's and first officer's

SUBTASK 46-19-00-470-007

Set the target EFB as follows:

NOTE: The target EFB is the EU that will receive the software installation. You must set the target EFB before you set the source EFB.

- Push the ACCEPT CROSSLOAD button. (a)
- To stop and exit with no software changes, push the BACK (<=) bezel key. When the words CANCEL and CONFIRM show, push CONFIRM to stop and exit the crossload. Or, push CANCEL to continue with the crossload.

SUBTASK 46-19-00-470-008

Set the source EFB as follows:

NOTE: The source EFB is the EU that will send the software to the target EU.

- Push the EU-x to EU-y button where EU-x equals the source EU and EU-y equals the target EU.
- To stop and exit with no software changes, put the BACK (<=) bezel key. When the words CANCEL and CONFIRM show, push CONFIRM to stop and exit the crossload. Or, push CANCEL to continue with the crossload.

SUBTASK 46-19-00-470-009

- On the source DU, make your selection of one or more software part number(s) to crossload by selecting the individual LSAP button.
 - (a) Use the PGUP (page-up) and PGDN (page-down) keys to read all of the pages.
 - To select all LSAPs on the page shown, push the SELECT PAGE button.

NOTE: The SELECT PAGE button will change to show DESELECT PAGE.

- (c) To select all LSAPs on all of the pages, push the SELECT ALL button.
- To de-select an LSAP, push the individual LSAP button again.

EFFECTIVITY ARO ALL



			SUBT	ASK 46-1	9-00-470-010
ARO ARO			(5) On the source DU, navigate to the last page in the list and press the START CROSSLOAD		
ARO			()	butt	
ARO				(a)	The START CROSSLOAD button shows on the last page of software parts.
ARO ARO				(b)	On the source Display Unit (DU), make sure the CROSSLOADING page shows, and that it shows all software parts as they load, one part number at a time.
ARO ARO				(c)	Let the sequence continue until the word COMPLETE shows above the START CROSSLOAD button.
ARO ARO ARO					NOTE: If one of the EU's (L or R) has a power interrupt during the CROSSLOAD DATA LSAP procedure, the EU that did not lose power must go through a RESTART WINDOWS cycle prior to re-executing and completing the CROSSLOAD DATA LSAP procedure.
ARO			SUBT	ASK 46-1	9-00-470-011
ARO			(6)	Set	the DU to show the DATA MAINT page:
ARO				(a)	Push the BACK (<=) bezel key.
ARO ARO				(b)	Perform a DATA MAINT COMPARE CONFIG to ensure that the EFB configurations are the same after the CROSSLOAD.
ARO			SUBT	ASK 46-1	9-00-470-012
ARO			(7)	Set	the DU to show the MAIN MENU:
ARO				(a)	Push the MENU bezel key.
ARO ARO ARO				(b)	When you return to the MAIN MENU after a CROSSLOAD DATA LSAPs procedure, the ADEL Enabled applications installed on the EFB will be restarted. These applications will show as CYAN in color and will change to GRAY when ready to use.
ARO					END OF TASK
		TASK 46-19-00-470-802			—— END OF TASK ——
ARO		TAS	K 46	-19-00	
ARO ARO	11.				
ARO	11.		tron	c Lo	0-470-802
	11.	Elec	ctroni Ger	c Log	0-470-802 gbook Ground Load Procedure
ARO ARO	11.	Elec	tron	ic Log eral Perf	0-470-802
ARO ARO	11.	Elec	ctroni Ger	c Log eral Perf whe	0-470-802 gbook Ground Load Procedure forming this procedure will upload data from Logbook Data Control to the EFB and is used
ARO ARO ARO	11.	Elec	Ger (1)	eral Perf whe Con	Ground Load Procedure Forming this procedure will upload data from Logbook Data Control to the EFB and is used an neither EFB has a current database, or following the use of Data Entry in the Data
ARO ARO ARO ARO ARO ARO	11.	Elec	Ger (1)	eral Perf whe Con ation	O-470-802 gbook Ground Load Procedure forming this procedure will upload data from Logbook Data Control to the EFB and is used in neither EFB has a current database, or following the use of Data Entry in the Data trol ground system. Zones Area
ARO ARO ARO ARO ARO ARO ARO	11.	Elec	Ger (1) Loc Zoi 211	eral Perf whe Con ation	O-470-802 gbook Ground Load Procedure forming this procedure will upload data from Logbook Data Control to the EFB and is used in neither EFB has a current database, or following the use of Data Entry in the Data trol ground system. Zones Area Flight Compartment, Left
ARO ARO ARO ARO ARO ARO ARO ARO	11.	A.	Ger (1) Loc Zoi 211 212	eral Perf whe Con ation	Corming this procedure will upload data from Logbook Data Control to the EFB and is used in neither EFB has a current database, or following the use of Data Entry in the Data trol ground system. Zones Area Flight Compartment, Left Flight Compartment, Right
ARO ARO ARO ARO ARO ARO ARO ARO ARO	11.	Elec	Ger (1) Loc Zoi 211 212 Pro	Perf whe Con ation ne	depook Ground Load Procedure forming this procedure will upload data from Logbook Data Control to the EFB and is used in neither EFB has a current database, or following the use of Data Entry in the Data trol ground system. Zones Area Flight Compartment, Left Flight Compartment, Right
ARO	11.	A.	Ger (1) Loc Zoi 211 212 Pro SUBTA	Perf whe Con ation ne	O-470-802 gbook Ground Load Procedure forming this procedure will upload data from Logbook Data Control to the EFB and is used in neither EFB has a current database, or following the use of Data Entry in the Data trol ground system. Zones Area Flight Compartment, Left Flight Compartment, Right re
ARO	11.	A.	Ger (1) Loc Zoi 211 212 Pro	eral Perf whe Con ation ne cedui	D-470-802 gbook Ground Load Procedure forming this procedure will upload data from Logbook Data Control to the EFB and is used in neither EFB has a current database, or following the use of Data Entry in the Data trol ground system. Zones Area Flight Compartment, Left Flight Compartment, Right re 9-00-470-013 the Electronic Logbook (ELB) ground load procedure as follows:
ARO	11.	A.	Ger (1) Loc Zoi 211 212 Pro SUBTA	Perf whe Con ation ne cedui ASK 46-1 Do t	gbook Ground Load Procedure forming this procedure will upload data from Logbook Data Control to the EFB and is used in neither EFB has a current database, or following the use of Data Entry in the Data trol ground system. Zones Area Flight Compartment, Left Flight Compartment, Right re 9-00-470-013 the Electronic Logbook (ELB) ground load procedure as follows: Navigate to the EFB MAIN MENU page.
ARO	11.	A.	Ger (1) Loc Zoi 211 212 Pro SUBTA	eral Perf whe Con ation ne cedui	D-470-802 gbook Ground Load Procedure forming this procedure will upload data from Logbook Data Control to the EFB and is used in neither EFB has a current database, or following the use of Data Entry in the Data trol ground system. Zones Area Flight Compartment, Left Flight Compartment, Right re 9-00-470-013 the Electronic Logbook (ELB) ground load procedure as follows:

ARO ALL

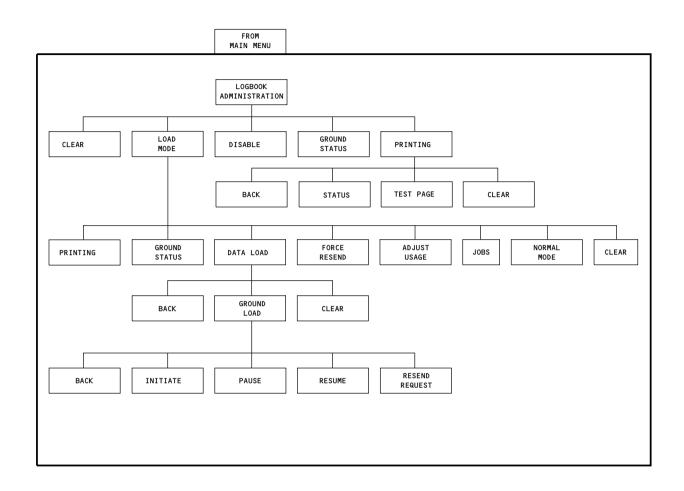


ARO	(d)	Push the LOGBOOK ADMIN button.
ARO ARO		NOTE: The LOGBOOK ADMIN button may be located on the second page of the EFB MAIN MENU depending on the customer-selected configuration.
ARO	(e)	Select LOAD MODE, then OK and wait for the application to start in load mode.
ARO ARO		NOTE: While performing GROUND LOAD on either EU, the other EU is also placed in Load Mode, so no action is required to the other EU at this time.
ARO ARO	(f)	Select GROUND STATUS and ensure that both MESSAGE SENT and MESSAGE RECEIVED are displayed.
ARO	(g)	If there are messages in queue, select FORCE RESEND to send messages again.
ARO	(h)	Select DATA LOAD.
ARO	(i)	Select GROUND LOAD, then OK.
ARO	(j)	Select INITIATE and Ground Load will begin.
ARO ARO		NOTE: When the Ground Load is complete, the status box will indicate 100% and NORMAL MODE button will be enabled.
ARO	(k)	Select NORMAL MODE, then OK to put the EU in operational mode.
ARO ARO	(1)	When the EU is in operational mode, check the opposite EU and if not yet at LOGBOOK ADMIN page, select LOGBOOK ADMIN.
ARO	(m)	On the opposite EU, select NORMAL MODE, then OK to put it in operational mode.
ARO	(n)	On both EUs, select MAIN MENU, then LOGBOOK to begin using ELB.
ARO		END OF TASK

46-19-00

ARO ALL





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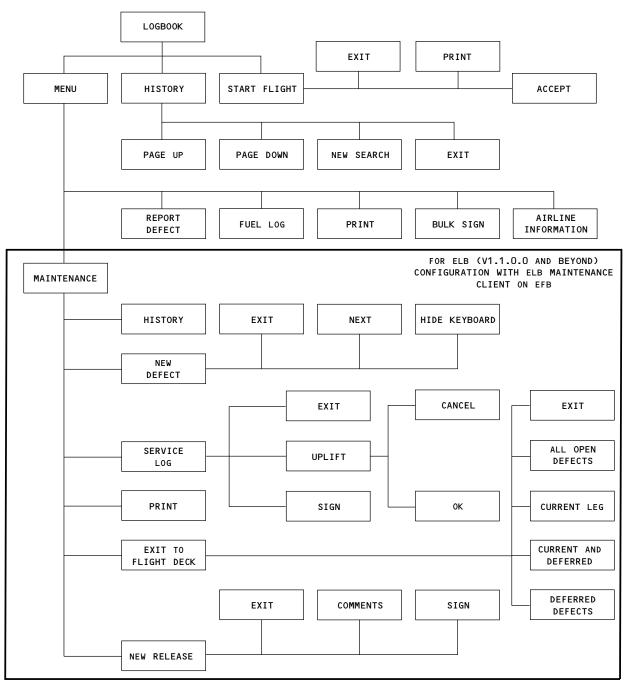
ARO ARO Electronic Logbook Admin Button Flow Figure 204/46-19-00-990-804

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ARO ARO

Electronic Logbook and Maintenance Client Button Flow Figure 205/46-19-00-990-805

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ARO TASK 46-19-00-860-801

ARO 12. Electronic Logbook Enable Procedure

ARO A. General

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(1) Perform this procedure after the Ground Load procedure has been performed on one EU, as the ELB application will need to be enabled on the other EU, or if the ELB was in DISABLE MODE.

B. Location Zones

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

C. Procedure

SUBTASK 46-19-00-860-018

- (1) Do the Electronic Logbook (ELB) enable procedure as follows:
- ARO (a) Navigate to the EFB MAIN MENU page.
 - (b) Push the SYSTEM page button.
 - (c) Push the EFB MAINTENANCE button.
 - (d) Push the LOGBOOK ADMIN button.

NOTE: The LOGBOOK ADMIN button may be located on the second page of the EFB MAIN MENU depending on the customer-selected configuration.

- (e) Select ENABLE, then OK to enable Logbook.
- (f) Wait a few minutes, or until Logbook Administration screen returns with the ENABLE button showing DISABLE.
- (g) From the EFB MAIN MENU page, select LOGBOOK. A "Logbook Starting" message must be displayed.
- (h) Wait a few minutes for the Logbook Dashboard to display. The ELB is now operational.

- END OF TASK -

TASK 46-19-00-470-803

ARO 13. Electronic Logbook Replicate Logbook Databases Between EFB EUs

A. General

(1) This procedure is used to copy the logbook databases from one EU to the other. When Logbook starts up on an EFB, it looks for a local database first, then identifies any other EUs that also have logbook data (sync partners). ELB will then compare databases between the sync partners and will copy the newer one to replace the old one.

B. Location Zones

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

ARO C. Procedure

SUBTASK 46-19-00-470-014

- (1) Do the Electronic Logbook (ELB) replicate logbook database procedure as follows:
- **ARO** (a) Power on both EFB EU's and wait until all MAIN MENU buttons are grey.

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ARO			(k	•
ARO			(0	c) Select LOGBOOK.
ARO			(0	
ARO ARO				the application must be enabled. Do this task: Electronic Logbook Enable Procedure, TASK 46-19-00-860-801.
ARO ARO			(6	e) Wait a few minutes, or until Logbook Administration screen returns with the ENABLE button showing DISABLE.
ARO			(f) Upon EFB startup, Logbook will automatically replicate the database between both EUs.
ARO			(9	
ARO			(3	——— END OF TASK ———
ARO		TΔS	K 46-10	-00-070-803
ARO	14.			Logbook Delete TEMP Procedure
ARO		Α.	Gener	
ARO		Λ.		his procedure is used to delete all the temporary data used by many applications and core
ARO			` '	oftware on the EFB. If starting with a blank ELB database, the Ground Load procedure must
ARO				e performed to upload data from the Logbook Data Control to the onboard system.
ARO		В.	Locati	on Zones
ARO			Zone	Area
ARO			211	Flight Compartment, Left
ARO			212	Flight Compartment, Right
ARO		C.	Proced	dure
ARO			SUBTASK	46-19-00-070-008
ARO			(1) D	o the Electronic Logbook (ELB) delete TEMP procedure as follows:
ARO			N	OTE: For Logbook issues, perform the Delete TEMP task on the Left EU.
ARO			(8	a) Do this task: EFB Applications Delete Temp, TASK 46-19-00-070-801.
ARO			(k	n) Navigate back to the EFB MAIN MENU.
ARO			(0	c) Select LOGBOOK.
ARO ARO			(0	The message "Database for [TAIL ID] does not exist" must display, which confirms that ELB data has been deleted from the Left EU.
ARO ARO			(€	e) If ELB is operational on the Right EU, then do this task: Electronic Logbook Enable Procedure, TASK 46-19-00-860-801.
ARO			(f) If ELB is not operational on the Right EU, then do this task: Electronic Logbook Ground
ARO				Load Procedure, TASK 46-19-00-470-802.
ARO				——— END OF TASK ———
ARO		TASK 46-19-00-860-802		
	15.	Electronic Logbook Paper Sign Procedure (Non-Cabin Server Configuration)		
ARO		_		
ARO ARO		A.	Gener	al
ARO ARO		A.	(1) T	his procedure is used when a signature cannot be validated due to a lack of proper signature
ARO		A.	(1) T	

ARO ALL

departure.

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ARO		B.	Location Zones			
ARO			Zone	Area		
ARO			211	Flight Compartment, Left		
ARO			212	Flight Compartment, Right		
ARO		C.	Proced	dure		
ARO			SUBTASK	46-19-00-860-019		
ARO				o the Electronic Logbook (ELB) Paper Sign Procedure (Non-Cabin Server Configuration) as		
ARO				ollows:		
ARO			N	OTE: Use this task for Defect/Maintenance Action, Service Log or Maintenance Release.		
ARO ARO			(8	 From the Logbook Dashboard, select the Pending (Sent, Queued, or Sign Failed) item, then select PRINT FOR PAPER SIGN button. 		
ARO				NOTE: This will have two paper copies printed.		
ARO			(b	Select CONFIRM SIGN, then select OK to complete the Paper Sign procedure.		
ARO				NOTE: If neither communications or printer are available, users are advised to revert to		
ARO				the airline's paper logbook process or alternate approved airline processes to		
ARO				release the aircraft.		
ARO				——— END OF TASK ———		
ARO		TAS	K 46-19	-00-860-803		
ARO	16.	Elec	ctronic L	ogbook Paper Sign Procedure (Cabin Server Configuration)		
ARO		A.	Genera	General		
ARO				his procedure is used when a signature cannot be validated due to a lack of proper signature		
ARO				redentials or because communications are unavailable. ELB records may be displayed in		
ARO ARO				ign Failed, Sent or Queued stage. Users may use this paper sign procedure to allow aircraft eparture.		
ARO		В.		on Zones		
ARO			Zone	Area		
ARO			211	Flight Compartment, Left		
ARO			212	Flight Compartment, Right		
ARO		C.	Procedure			
ARO			SUBTASK	46-19-00-860-020		
ARO ARO			` '	o the Electronic Logbook (ELB) Paper Sign Procedure (Cabin Server Configuration) as ollows:		
ARO			N	OTE: Use this task for Defect/Maintenance Action, Service Log or Maintenance Release.		
ARO			(a	a) From the Logbook Dashboard, select the record from the Open Items list, then select		
ARO			,	PRINT FOR PAPER SIGN button.		
ARO				NOTE: This will have two paper copies printed.		
ARO			(b	Select CONFIRM SIGN, then select OK to complete the Paper Sign procedure.		
ARO				NOTE: If neither communications or printer are available, users are advised to revert to		
ARO				the airline's paper logbook process or alternate approved airline processes to		
ARO				release the aircraft.		
ARO				END OF TASK		

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