CHAPTER

45

CENTRAL MAINTENANCE SYSTEM (CMS)

CHAPTER 45
CENTRAL MAINTENANCE SYSTEM (CMS)

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

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CHAPTER 45
CENTRAL MAINTENANCE SYSTEM (CMS)

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CENTRAL MAINTENANCE SYSTEM (CMS)

GSE MAINTENANCE LAPTOP - MAINTENANCE PRACTICES

1. General

A. For all instances in the AMM where the use of the Maintenance Access Terminal (MAT) is specified or where the use of the Portable Maintenance Access Terminal (PMAT) is specified, note that your airplane configuration can be different. Your airplane configuration can have one or more of these items:

- Maintenance Access Terminal (MAT) supplied by Rockwell-Collins
- Maintenance Access Terminal (MAT) supplied by CMC Electronics
- Portable Maintenance Access Terminal (PMAT)
- Laptop Maintenance Access Terminal (LMAT)
- Maintenance Laptop (ML)

(1) The Rockwell-Collins MAT and the CMC Electronics MAT are equivalent for all of the MAT functions that you will use in the AMM procedures. For consistency we will use the term MAT when referring to either of these devices unless specifically mentioned.

(2) The Maintenance Laptop (GSE-Laptop or LMAT) is equivalent for all of the PMAT functions that you will use in the AMM procedures. Throughout the AMM, the term PMAT can be used when referring to the PMAT, or the Maintenance Laptop (GSE-Laptop or LMAT).

(3) If your airplane configuration does not have the MAT or the PMAT, then the GSE- Laptop, LMAT, or ML is equivalent unless specifically mentioned.

(4) Refer to the Ground Service Equipment specification G45002 for the latest 777 Maintenance Laptop Specification

(5) Transfers of Loadable Software Parts from an Integrated DVD or physical media set parts to the MAT HDD using a Teledyne PMAT-2000 can be accomplished on the MAT-2000 as well as the MAT-980 MAT HDD. Refer to the PMAT-2000 User Guide 59721 section 15.0 “HDD FUNCTIONS” for specific instructions.

B. This procedure tells how to do these tasks:

(1) Prepare the GSE- LAPTOP for use in the Main Equipment Center or in the Flight Deck.

(2) Start the LMAT-2000 software.

(3) Put the GSE-Laptop back to the initial condition.

(4) Transfer Data between the MAT MSD and the MAT HDD.

(5) Prepare the ML for use in the Main Equipment Center or in the Flight Deck.

(6) Start the Maintenance Access Terminal Application (MATA) software.

(7) Put the ML back to the initial condition.

(8) Transfer Data between the ML’s MSD and the Rockwell-Collins MAT HDD (if installed).

TASK 45-00-01-910-801

2. How to Prepare the GSE-Laptop for use in the Main Equipment Center or in the Flight Deck

A. General

(1) This task tells you how to supply power to the GSE -LAPTOP in the main equipment center on the E-4 rack or in the flight deck.

(2) All CMCS functions available on the MAT and PMAT are also available on the GSE- Laptop.

NOTE: The Maintenance Laptop (ML) can be used with the flight deck Ethernet port if it is labeled as "PMAT" but not if it is labeled "ONS".

B. Location Zones

Zone	Area
118	Main Equipment Center, Right

C. How to prepare the GSE-Laptop for use in the Main Equipment Center or in the flight deck.

SUBTASK 45-00-01-860-001

(1) Get the GSE-Laptop out of the storage case on top of the E-4 rack.

NOTE: The routing for the necessary cables shows on the placard J45001-6 or J45002 that is installed on the GSE-Laptop.

(2) Connect the Ethernet cable to the GSE-Laptop and the airplane connector D174J located on the E-4 rack.

NOTE: To use GSE-Laptop in the flight deck, you can use extended standard Ethernet cable from the airplane connector D174J located on the E-4 rack. You can also connect GSE-Laptop to the PMAT connector in the flight deck, using customer supplied PMAT port adapter cable.

(3) If necessary, connect an external floppy drive to the GSE- Laptop.

(a) If the GSE-Laptop is running Windows 7 and a USB device is being connected (Floppy Drive, USB Stick, PCMCIA[HDD-2000] Card Reader, etc.), then the following steps must be applied to connect the device:

1) Connect the device to the host laptop.

2) Right click on the XP Mode Virtual Machine icon located on the Windows Task Bar.

3) Select “Manage USB Devices” under the Tasks heading.

4) Verify that the “Windows XP Mode - Manage USB Devices” screen is displayed.

5) Select the device on the “Device” list that you want to mount to the Virtual Machine.

NOTE: Devices which are connected and not currently mounted to the Virtual Machine are listed as “Shared” in the “Status” list.

6) Select “Attach” on the “Windows XP Mode - Manage USB Devices” screen.

7) Select “Yes” when the “Attach a shared USB device” notification screen appears.

8) Close the “Windows XP Mode - Manage USB Devices” screen.

(4) To supply power to the GSE-Laptop in the main equipment center or flight deck, do these steps:

(a) Connect the GSE-Laptop power supply (AC/DC Adapter) input to the 115 VAC, 400HZ.

NOTE: You can also use 115VAC, 50/60 HZ external power.

NOTE: It is necessary to use J45001 or J45002 Auxiliary adapter for the airplanes with the special GROUND SERVICE OUTLET D25046 receptacle.

NOTE: You can also use 115 VAC SERVICE OUTLET D25034 on the E3 Rack or D25035 in flight deck or as it is applicable to the airplane per WDM.

(b) Connect the GSE-Laptop power supply (AC/DC Adapter) output to the laptop.

(c) Push the ON/OFF switch on the GSE-Laptop and make sure the PWR light comes on.

(d) Verify that input devices and floppy drive function properly.

D. How to start the LMAT-2000 software on the GSE-Laptop Display

SUBTASK 45-00-01-910-002

(1) To start the LMAT-2000 software do these steps:

(a) Move the cursor over the LMAT-2000 Main Menu icon on the GSE-Laptop display.

(b) Double click the LMAT-2000 icon.

(c) Verify that LMAT-2000 software starts.

(2) To select an item on the GSE-Laptop display, do these steps:

(a) Move the cursor over a selection on the GSE-Laptop display.

(b) Push the left selection switch on the GSE-Laptop mouse.

NOTE: When you select an item on the GSE-Laptop display, the item becomes highlighted (brighter).

E. How to put the GSE-Laptop back to the initial condition in the main equipment center or in the flight deck.

SUBTASK 45-00-01-860-002

(1) To remove power from the GSE-Laptop in the main equipment center or flight deck, do these steps:

(a) Exit the LMAT-2000 software.

(b) Use the start button to Shut Down the GSE-Laptop.

(c) Disconnect the power supply (AC/DC Adapter) from the 115 VAC, 400 HZ and the GSE-Laptop.

(d) Disconnect the Ethernet cable from the GSE-Laptop and the airplane connector D174J located on the E-4 rack.

(e) If the external floppy drive is installed, disconnect the external floppy drive from the GSE-Laptop.

(f) Store the laptop and external devices.

——— END OF TASK ———

TASK 45-00-01-470-802

3. How to Transfer Data Between the MAT MSD and the MAT HDD

A. General

(1) When the MAT transfers software parts, all of the parts on the destination device are removed.

(2) The software parts on the source device are all copied to the destination device.

NOTE: This task outlines the steps necessary for transferring parts to/from the MSD/HDD using the MATA software. A similar operation can be performed utilizing the AIMS MSD Manager Application (AMMA) software residing on the MAT. It should be noted that AMMA allows you to transfer one-to-many of a multitude of different part formats to the ML MSD without deleting any parts already on the target device.

NOTE: The use of AMMA is the preferred option when copying parts between external storage and the MAT due to the risk of deleting software parts.

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)
45-11-05-470-801	MAT – Software Installation (P/B 201)
45-11-05-710-801	MAT - Software Check (P/B 201)

C. Location Zones

Zone	Area
118	Main Equipment Center, Right

D. Prepare for the Procedure

SUBTASK 45-00-01-860-005

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

SUBTASK 45-00-01-730-001

(2) Do this task: MAT - Software Check, TASK 45-11-05-710-801.

SUBTASK 45-00-01-470-003

(3) If necessary, load the MAT OPS and MATA OPS (MAT – Software Installation, TASK 45-11-05-470-801).

E. Procedure

SUBTASK 45-00-01-470-004

(1) Do these steps to transfer parts from the MAT MSD to an external storage (e.g. PCMCIA hard drive/USB stick):

- (a) Make sure a \DATALOAD folder is on the root of the external storage.

  NOTE: A \DATALOAD folder on the root of the PCMCIA card/USB stick is needed for the MATA application to recognize the card as an HDD.

- (b) Insert an external storage into the appropriate MAT EDU's port/slot.
- (c) Make sure the MAT EDU displays the “MAIN” menu.
- (d) Select the “AIMS” buttons.

  NOTE: The “AIMS” button is on the “MAIN” tab menu. You might need to select the “MAIN” tab to see it.

- (e) Select the “System Functions” button.
- (f) Make sure the “MATA System Functions” screen is displayed.
- (g) Select the “MSD/MAT HDD Transfer” button.
- (h) Make sure the “HDD/MSD Copy” screen is displayed.
- (i) Select the “Transfer MSD to MAT HDD” button.
- (j) Make sure the “HDD/MSD Warning” screen is displayed.
- (k) Select “OK”.
- (l) Make sure the “HDD/MSD Copy Status” screen is displayed.
- (m) Wait until the “Percent Complete” shows “100” and the “Copy Success” screen is displayed.
- (n) Select “Go Back”.
- (o) Select “OK” to close the “HDDD/MSD Copy Success” screen.
- (p) Select the “Go Back” button until the “MATA AIMS Main Menu” screen is displayed.
- (q) Select “Exit MATA” to return to the MAT EDU “MAIN” menu.
- (r) Remove the external storage from the MAT EDU.

SUBTASK 45-00-01-470-005

(2) Do these steps to transfer parts from the external storage to the MAT MSD:

NOTE: This transfer/copy function will wipe out the entire MAT MSD prior to copying new parts to it.

(a) Insert the external storage into the MAT EDU's port/slot.

(b) Wait approximately 20 seconds for the MAT EDU to recognize the external storage.

(c) Make sure the MAT EDU displays the “MAIN” menu.

(d) Select the “AIMS” button.

NOTE: The “AIMS” button is on the “MAIN” tab menu. You might need to select the “MAIN” tab to see it.

(e) Select the “System Functions” button.

(f) Make sure the “MATA System Functions” screen is displayed.

(g) Select the “MSD/MAT HDD Transfer” button.

(h) Make sure the “HDD/MSD Copy” screen is displayed.

(i) Select the “Transfer MAT HDD to MSD” button.

(j) Make sure the “HDD/MSD Warning” screen is displayed.

(k) Select the “OK” button.

(l) Make sure the “HDD/MSD Copy Status” screen is displayed.

(m) Wait until the “Percent Complete” shows 100 and the “Copy successful” message is displayed.

(n) Select the “Go Back” button.

(o) Make sure the “HDDD/MSD Copy Success” screen is displayed.

(p) Select the “OK” button.

(q) Select the “Go Back” button until the “MATA AIMS Main Menu” screen is displayed.

(r) Select the “Exit MATA” button to return to the MAT EDU “MAIN” menu.

(s) Remove the external storage from the MAT EDU.

(t) Make sure that the correct parts are installed on the MAT MSD (MAT - Software Check, TASK 45-11-05-710-801).

SUBTASK 45-00-01-860-006

(3) Remove the electrical power if it is not necessary (Remove Electrical Power, TASK 24-22-00-860-806).

——— END OF TASK ———

TASK 45-00-01-910-802

4. How to Prepare the Maintenance Laptop (ML) for use in the Main Equipment Center or in the Flight Deck

A. General

(1) This task tells you how to supply power to the ML in the main equipment center on the E-4 rack or in the flight deck.

(2) All CMCS functions available on the MAT and the PMAT are also available on the ML.

NOTE: The Maintenance Laptop (ML) can be used with the flight deck Ethernet port if it is labeled “PMAT” but not if it is labeled “ONS”.

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 #: J45001-1 Supplier: 81205 Opt Part #: J45003-1 Supplier: 81205

C. Location Zones

Zone	Area
118	Main Equipment Center, Right

D. How to prepare the ML for use in the Main Equipment Center or in the flight deck.

SUBTASK 45-00-01-860-007

(1) Get the ML maintenance device, SPL-11321 out of the storage case on top of the E-4 rack.

NOTE: The routing for the necessary cables shows on the placard G45002 that is installed on the ML.

(2) Connect the Ethernet cable to the ML and to the airplane connector D174J located on the E-4 rack or the Flight Deck Maintenance Laptop port located on the P18 panel in the Flight Deck.

(3) If necessary, connect USB devices such as an external floppy drive, to the ML.

(4) To supply power to the ML in the main equipment center or flight deck, do these steps:

(a) Connect the ML power supply (AC/DC Adapter) input to the 115 VAC, 400HZ.

NOTE: You can also use 115VAC, 50/60 HZ external power.

NOTE: It is necessary to use J45001 or J45002 Auxiliary adapter for the airplanes with the special GROUND SERVICE OUTLET D25046 receptacle.

NOTE: You can also use 115 VAC SERVICE OUTLET D25034 on the E3 Rack or D25035 in flight deck or as it is applicable to the airplane per WDM.

(b) Connect the ML power supply (AC/DC Adapter) output to the laptop.

(c) Push the ON/OFF switch on the ML and make sure the PWR light comes on.

(d) Verify that input devices and floppy drive function properly.

E. How to Start the MATA Software on the ML Display

SUBTASK 45-00-01-910-003

(1) To start the MATA software do these steps:

(a) Move the cursor over the MATA desktop icon on the ML display.

(b) Double click the MATA icon.

(c) Verify that MATA software starts.

(2) To select an item on the ML display, do these steps:

(a) Move the cursor over a selection on the ML display.

(b) Push the left selection switch on the ML mouse.

NOTE: When you select an item on the ML display, the item becomes highlighted (brighter).

F. How to put the ML back to the initial condition in the main equipment center or in the flight deck.

SUBTASK 45-00-01-860-008

(1) To remove power from the ML in the main equipment center or flight deck, do these steps:

(a) Exit the MATA software.

(b) Use the start button to Shut Down the ML.

(c) Disconnect the power supply (AC/DC Adapter) from the 115 VAC, 400 HZ and from the ML.

(d) Disconnect the Ethernet cable from the ML and the airplane connector D174J located on the E-4 rack or the Flight Deck Maintenance Laptop port located on the P18 panel in the Flight Deck.

(e) If external USB devices such as an external floppy drive is installed, disconnect the external floppy drive from the ML.

(f) Store the laptop and external devices.

——— END OF TASK ———

TASK 45-00-01-470-803

5. How to Transfer Data Between the Maintenance Laptop's MSD and the MAT HDD (if installed)

A. General

(1) When the ML transfers parts, all of the parts on the destination device are removed.

NOTE: The following procedure outlines the steps necessary for transferring parts to/from the MSD/HDD using the MATA software. A similar operation can be performed utilizing the AIMS MSD Manager Application (AMMA) software residing on the ML. Refer to the AMMA Reference Guide D639W240-02 for detailed instructions on performing this task. It should be noted that AMMA allows you to transfer one-to-many of a multitude of different part formats to the ML MSD without deleting any parts already on the target device.

NOTE: The use of AMMA is the preferred option when copying parts between external storage and the MAT due to the risk of deleting software parts.

(2) The parts on the source device are all copied to the destination device.

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
118	Main Equipment Center, Right

D. Procedure

SUBTASK 45-00-01-860-009

(1) For transfer of the parts between the ML's MSD and the MAT HDD, do the next step.

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

SUBTASK 45-00-01-470-006

(2) Do these steps to transfer parts from the ML's MSD to the MAT HDD, PCMCIA hard drive, or USB stick.

NOTE: If the ML does not have a PCMCIA card slot, use an equivalent external USB compatible PCMCIA card reader.

(a) If the ML power is not on, then turn on the ML. For instruction on how to prepare the ML for use, do this task: How to Prepare the Maintenance Laptop (ML) for use in the Main Equipment Center or in the Flight Deck, TASK 45-00-01-910-802.

(b) Put the HDD into the PCMCIA slot. Remove the MAT HDD.

(c) Wait for 30 seconds.

(d) Select the MSD/MAT HDD TRANSFER button from System Functions Menu using the MATA software.

(e) The following display will show:

1) TRANSFER MSD TO MAT HDD

2) TRANSFER MAT HDD TO MSD

(f) Select the "TRANSFER MSD TO MAT HDD" from the ML display.

NOTE: ALL SOFTWARE PARTS TRANSFERRED FROM THE SOURCE DEVICE WILL REPLACE ALL SOFTWARE IN THE TARGET DEVICE.

NOTE: During the data transfer the copy dialog is displayed.

NOTE: If HDD has not been inserted into the PCMCIA slot of the laptop prior to selecting the Transfer function, the user is notified with the following display: MAT HARD DISK DRIVE (HDD) DEVICE NOT FOUND!

NOTE: If HDD has been inserted may indicate that the HDD card is not properly inserted. In this case, the HDD card should be removed and reinserted.

(g) When the transfer is complete, do this:

1) Install the MAT HDD.

SUBTASK 45-00-01-470-007

(3) Do these steps to transfer parts from the MAT HDD to the ML's MSD:

(a) Put the HDD into the PCMCIA slot. Remove the MAT HDD.

(b) Select the "TRANSFER MAT HDD TO MSD" from the ML display.

1) A dialog box will display the following:

a) This operation will delete the contents of the internal Mass Storage on this device(MSD) and copy airplane parts from the MAT Hard Disk Drive (HDD) to the MSD.

b) You must accept the transfer by selecting (OK) on the dialog box before the transfer start. If you select Cancel the transfer will be stopped.

2) Install the MAT HDD.

SUBTASK 45-00-01-860-010

(4) Remove the electrical power if it is not necessary. Remove Electrical Power, TASK 24-22-00-860-806

END OF TASK

CENTRAL MAINTENANCE COMPUTING SYSTEM (CMCS) - MAINTENANCE PRACTICES

1. General

A. This procedure tells how to do these tasks:

(1) Find tasks in this procedure by task title
(2) Find tasks in this procedure by task number
(3) Operate the MAT in the Flight Compartment
(4) Operate the CMCF menu on MFD in the Flight Compartment
(5) Select Something on the Display
(6) Start Central Maintenance
(7) Stop Central Maintenance
(8) Use a Scroll Bar
(9) Find a Maintenance Message Correlated to an Inbound Flight Deck Effect
(10) Find a Maintenance Message Correlated to an Existing (Active or Latched) Flight Deck Effect
(11) Do a Ground Test
(12) Find the Hardware or Software Configuration of a System
(13) Find Maintenance Messages from the Present Leg that are Not Correlated
(14) Find the Active or Latched Maintenance Messages in One ATA System
(15) Show More Data for a Maintenance Message
(16) Find the Fault History Data for One ATA System
(17) Find the Fault History Data from One Flight Leg
(18) Erase Fault History Data
(19) Keep and Replace Fault History Data
(20) Install Software
(21) Install the AIMS MSD Manager Application (AMMA)
(22) Remove the AIMS MSD Manager Application (AMMA)
(23) Add software to the MAT MSD with the AIMS MSD Manager Application (AMMA)
(24) Remove software from the MAT MSD with the AIMS MSD Manager Application (AMMA)
(25) See the software installed on the MAT MSD with the AIMS MSD Manager Application (AMMA)
(26) Find Maintenance Memos
(27) Find Maintenance Messages Correlated to Scheduled Maintenance Tasks
(28) Make a Flight Leg for Engine Run Data
(29) Prevent Flight Leg Change During Maintenance
(30) Prevent Fault Storage During Maintenance
(31) Use Input Monitoring
(32) Change Central Maintenance Options
(33) Start the Engine Balancing Function
(34) Find Shop Faults Data
(35) Change the Primary CMCF
(36) Change the AIMS Interface Selection

(37) Start and Stop a Special Function

(38) Show Help Displays

(39) Send a Report to the Printer

(40) Send a Report to a Disk

(41) Send a Report to the Onboard Network System (ONS) Mass Storage Device (MSD)

B. You can use these devices to do the tasks:

   (1) The maintenance access terminal (MAT) in the flight compartment in the second observer's panel.

   (2) The portable maintenance access terminal (PMAT) installed in the main equipment center on the E4 rack.

   (3) A spare PMAT (if one is available) connected to the port at one of these locations:

      (a) On the nose landing gear.

      (b) Near the main landing gear.

      (c) Near the tail.

      (d) In the flight compartment, near the MAT.

C. When you see an instruction to use a maintenance access terminal you can use a MAT or a PMAT.

D. You can also use a Multi-Function Display (MFD) in the Flight Compartment for some tasks.

E. Three maintenance access terminals can operate at the same time.

NOTE: The CMCF menu can operate on only one MFD at a time.

TASK 45-10-00-740-808

2. How to Use the Central Maintenance Computing System

A. General

(1) This task gives the task number for some of the tasks in this section. This task is referenced by other procedures.

B. Procedure

SUBTASK 45-10-00-910-003

(1) For instructions on the MAT operation, do one of these:

   (a) For the MAT, do this task: How to Operate the MAT in the Flight Compartment, TASK 45-10-00-910-810.

   (b) To learn to use a scroll bar, do this task: How to Use a Scroll Bar, TASK 45-10-00-910-808.

(2) For instructions on the CMCF menu on MFD operation, do this task: How to Operate the CMCF menu on MFD in the Flight Compartment, TASK 45-10-00-910-813.

SUBTASK 45-10-00-740-068

(3) To look for maintenance messages or flight deck effects, do one of these:

   (a) To look in Existing Faults, do this task: How to Find Active or Latched Maintenance Messages in One ATA System, TASK 45-10-00-740-818.

   (b) To look in Present Leg Faults, do this task: How to Find Maintenance Messages from the Present Leg that are not Correlated, TASK 45-10-00-740-817.

   (c) To look in Existing Flight Deck Effects, do this task: How to Find a Maintenance Message Correlated to an Existing (Active or Latched) Flight Deck Effect, TASK 45-10-00-740-801.

(d) To look in Inbound Flight Deck Effects, do this task: How to Find a Maintenance Message Correlated to an Inbound Flight Deck Effect, TASK 45-10-00-740-816.

SUBTASK 45-10-00-740-069

(4) For instructions on other onboard maintenance functions, do one of these:
  (a) For ground tests, do this task: How to Do a Ground Test, TASK 45-10-00-740-819.
  (b) For software installation, do this task: How to Install Software, TASK 45-10-00-420-801.
  (c) To find system configuration, do this task: How to Find the Hardware or Software Configuration of a System, TASK 45-10-00-750-803.
  (d) To look for maintenance memos, do this task: How to Find Maintenance Memos, TASK 45-10-00-740-805.
  (e) For special functions, do this task: How to Start and Stop a Special Function, TASK 45-10-00-860-811.
  (f) For input monitoring, do this task: How to Use Input Monitoring, TASK 45-10-00-760-801.

——— END OF TASK ———

TASK 45-10-00-910-810

3. How to Operate the MAT in the Flight Compartment

(Figure 201)

A. General

(1) This task tells you how to operate the maintenance access terminal (MAT) in the flight compartment at the second observer's station.

B. References

Reference	Title
24-22-00-860-805	Supply 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 #: J45001-1 Supplier: 81205 Opt Part #: J45003-1 Supplier: 81205

D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. How to Supply Power to the MAT

SUBTASK 45-10-00-860-001

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

SUBTASK 45-10-00-940-001

(2) Wait for the Aircraft Information Management System (AIMS) cabinets to energize fully before operating the MAT.

F. How to Select Something on the MAT Display

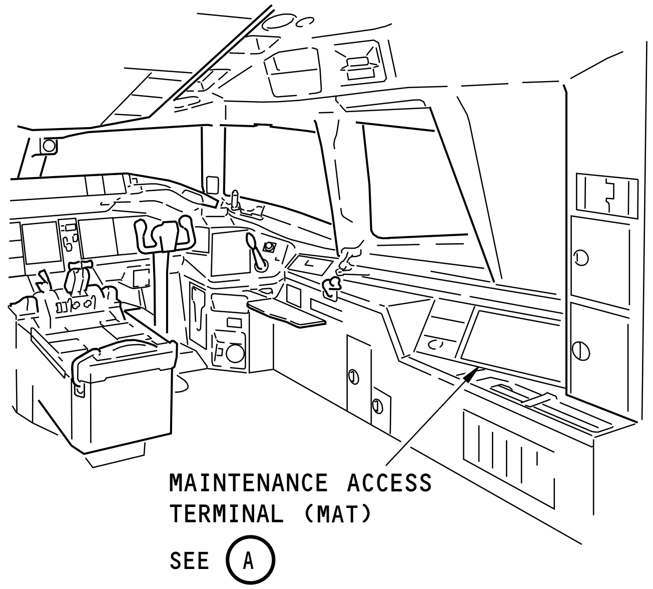
SUBTASK 45-10-00-910-037

(1) The MAT display has a touch screen to let you operate with the Aircraft Information Management System (AIMS).
    (a) The MAT has Universal Serial Bus (USB) ports used to connect compatible Ground Support Equipment (GSE) devices.
        1) Use the MAT's device status menu to check the connection status of the USB device.
    (b) The touch screen Electronic Display Unit (EDU) interfaces with the enhanced electronic modular unit (EEMU).

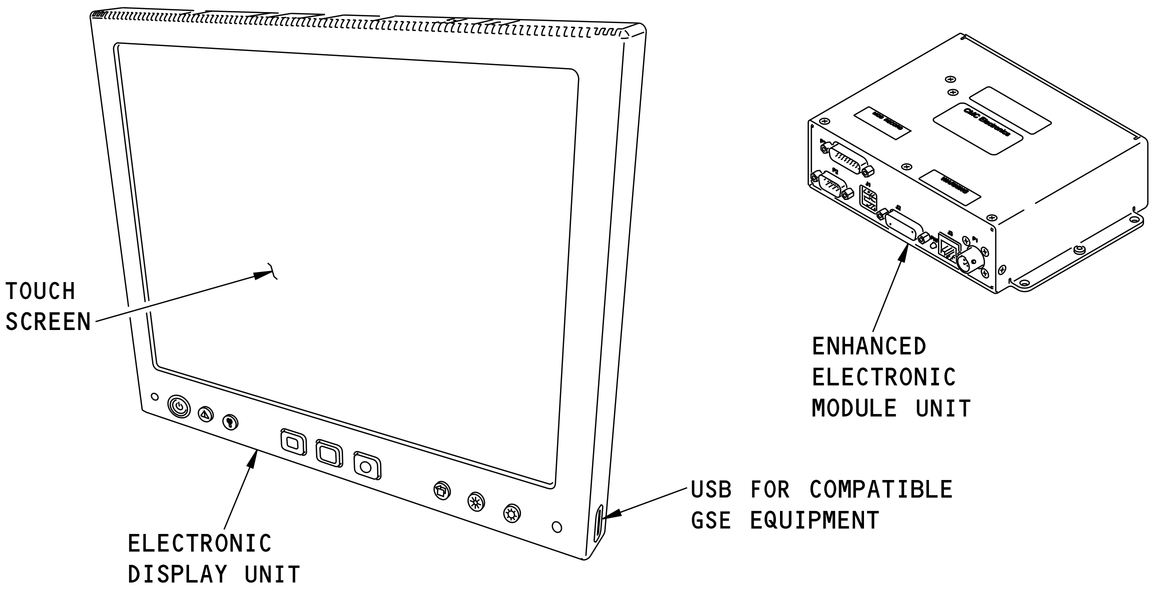
SUBTASK 45-10-00-910-038

(2) The MAT can be used to connect to the Onboard Network System (ONS) as an alternative to the maintenance device, SPL-11321 (Onboard Network System Maintenance Laptop Connection, TASK 46-13-00-480-801). To connect to the ONS from the MAT, do these steps:
    (a) From the MAT main screen, select ONS.
    (b) Select ONBOARD NETWORK SYSTEM.

——— END OF TASK ———



FLIGHT COMPARTMENT



MAINTENANCE ACCESS TERMINAL

A

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How to Operate a Maintenance Access Terminal (MAT)
Figure 201/45-10-00-990-801

TASK 45-10-00-910-813

4. How to Operate the CMCF menu on MFD in the Flight Compartment

(Figure 202)

A. General

(1) This task tells you how to operate the CMCF menu on an MFD in the flight compartment.

NOTE: Not all functions are available when the CMCF menu operates on an MFD.

(2) For more information on operating the MFDs in the flight compartment, see: PRIMARY DISPLAY SYSTEM - MAINTENANCE PRACTICES, PAGEBLOCK 31-61-00/201.

B. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
31-61-00 P/B 201	PRIMARY DISPLAY SYSTEM - MAINTENANCE PRACTICES
31-61-00-800-801	Using the Cursor Control Device (P/B 201)

C. Location Zones

Zone	Area
212	Flight Compartment, Right

D. To Show the CMCF Menu on an MFD

SUBTASK 45-10-00-860-202

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

SUBTASK 45-10-00-860-203

(2) Wait for the Aircraft Information Management System (AIMS) cabinets to energize fully before operating the MFD.

SUBTASK 45-10-00-860-204

(3) On the display select panel (DSP), push the applicable L INBD, R INBD, or LWR CTR switch.

NOTE: The CMCF menu can operate on only one MFD at a time.

SUBTASK 45-10-00-860-205

(4) Push the MENU key on the control display unit (CDU) to show the CDU menu.

SUBTASK 45-10-00-860-206

(5) On the CDU, push the key adjacent to MAINT INFO DISPLAY.

NOTE: The display selection menu shows on the MFD.

SUBTASK 45-10-00-860-207

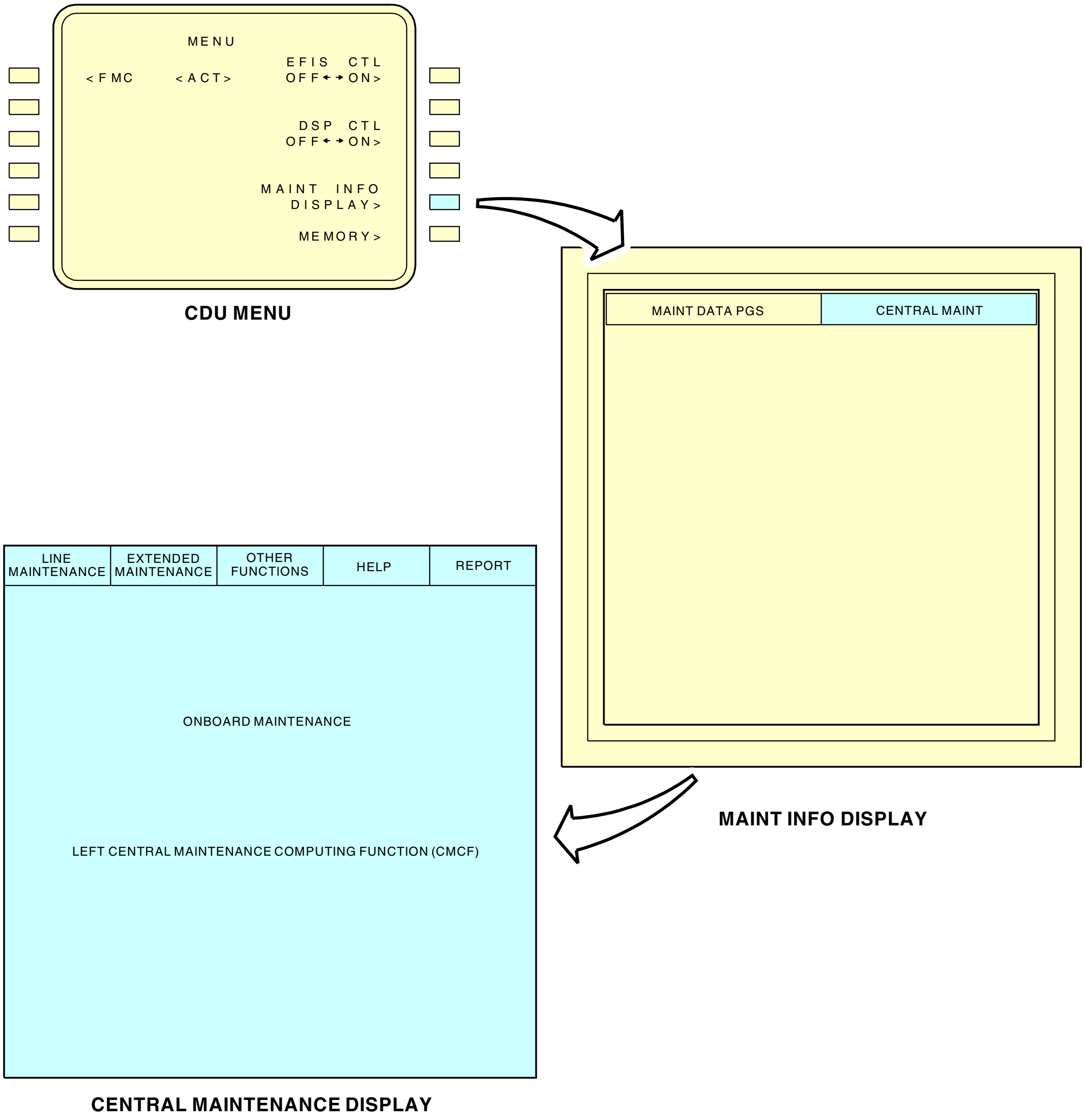
(6) On the MFD, use the cursor control device (CCD) to select CENTRAL MAINT.

(a) For instructions on the CCD operation, do this task: Using the Cursor Control Device, TASK 31-61-00-800-801.

SUBTASK 45-10-00-860-208

(7) On the MFD, use the CCD to navigate the CMCF menu.

——— END OF TASK ———



2519319 S0000591166_V1

How to Operate the CMCF menu on MFD in the Flight Compartment
Figure 202/45-10-00-990-856

TASK 45-10-00-910-805

5. How to Select

(Figure 203)

A. General

(1) Many procedures in the AMM that use a maintenance access terminal tell you to select something on the display or to make a selection.

(2) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(3) This task tells you how to select or make a selection on the MAT and the PMAT.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Select or Make a Selection on the MAT or PMAT

SUBTASK 45-10-00-910-010

(1) To move the cursor on the MAT or PMAT display, move the trackball with your finger.

NOTE: The cursor moves in the direction that you move the trackball.

SUBTASK 45-10-00-910-011

(2) To select something on the MAT or PMAT display, do this:

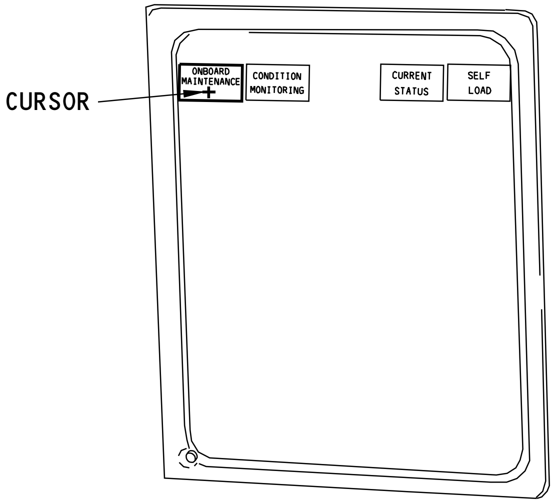
(a) Move the cursor over a selection on the display.

(b) Push the left selection switch.

NOTE: When you select an item on the MAT or PMAT display, the item becomes highlighted (changes color on the MAT; becomes brighter on the PMAT).

D. How to Select or Make a Selection on a Side Display

——— END OF TASK ———



EXAMPLE OF A CURSOR OVER
A SELECTION ON THE DISPLAY

M11578 S0006423333_V1

How to Select
Figure 203/45-10-00-990-802

TASK 45-10-00-910-806

6. How to Start Central Maintenance

(Figure 204)

A. General

(1) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(2) You can start central (onboard) maintenance on the MAT or on a PMAT.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. Procedure

SUBTASK 45-10-00-910-012

(1) To start central maintenance, select ONBOARD MAINTENANCE from the initial menu on the MAT or PMAT.

NOTE: The CMCS main menu shows. The menu has five selections: LINE MAINTENANCE, EXTENDED MAINTENANCE, OTHER FUNCTIONS, HELP, and REPORT. The menu also shows which CMCF, left or right, is in control.

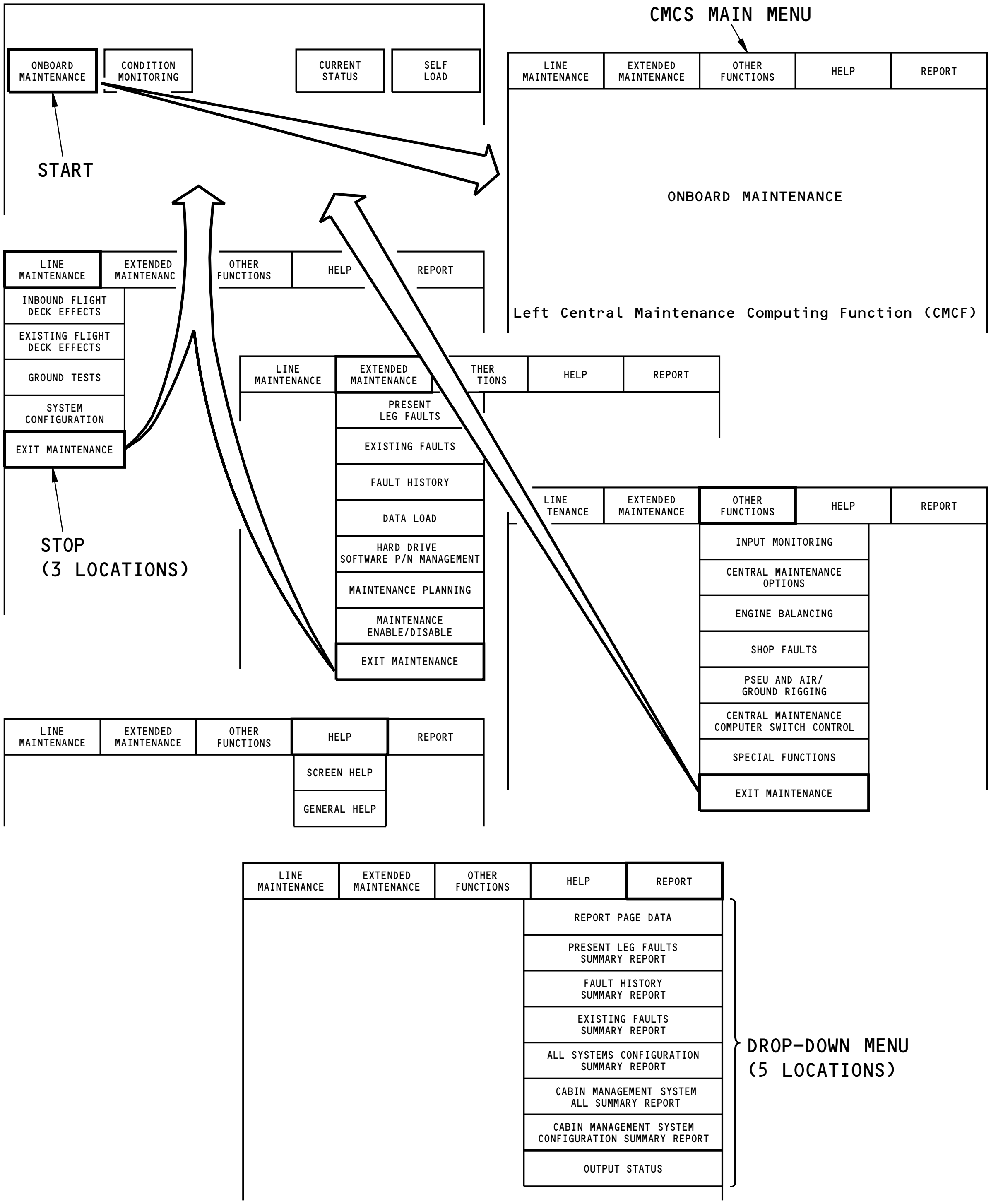
SUBTASK 45-10-00-910-013

(2) To select a function from the menu, do this:

(a) Select one of these from the CMCS main menu: LINE MAINTENANCE, EXTENDED MAINTENANCE, OTHER FUNCTIONS, HELP, or REPORT.

(b) When the drop-down menu shows below your selection, select a function. (For the location of each menu selection, refer to (Figure 204).)

——— END OF TASK ———


CMCS MAIN MENU
ONBOARD MAINTENANCE
CONDITION MONITORING
CURRENT STATUS
SELF LOAD
START
LINE MAINTENANCE
EXTENDED MAINTENANCE
OTHER FUNCTIONS
HELP
REPORT
ONBOARD MAINTENANCE
Left Central Maintenance Computing Function (CMCF)
INBOUND FLIGHT DECK EFFECTS
EXISTING FLIGHT DECK EFFECTS
GROUND TESTS
SYSTEM CONFIGURATION
EXIT MAINTENANCE
STOP (3 LOCATIONS)
PRESENT LEG FAULTS
EXISTING FAULTS
FAULT HISTORY
DATA LOAD
HARD DRIVE SOFTWARE P/N MANAGEMENT
MAINTENANCE PLANNING
MAINTENANCE ENABLE/DISABLE
EXIT MAINTENANCE
INPUT MONITORING
CENTRAL MAINTENANCE OPTIONS
ENGINE BALANCING
SHOP FAULTS
PSEU AND AIR/ GROUND RIGGING
CENTRAL MAINTENANCE COMPUTER SWITCH CONTROL
SPECIAL FUNCTIONS
EXIT MAINTENANCE
SCREEN HELP
GENERAL HELP
REPORT PAGE DATA
PRESENT LEG FAULTS SUMMARY REPORT
FAULT HISTORY SUMMARY REPORT
EXISTING FAULTS SUMMARY REPORT
ALL SYSTEMS CONFIGURATION SUMMARY REPORT
CABIN MANAGEMENT SYSTEM ALL SUMMARY REPORT
CABIN MANAGEMENT SYSTEM CONFIGURATION SUMMARY REPORT
OUTPUT STATUS
DROP-DOWN MENU (5 LOCATIONS)

C72643 S0006423335_V1

How to Start and Stop Central Maintenance
Figure 204/45-10-00-990-803

TASK 45-10-00-910-807

7. How to Stop Central Maintenance

(Figure 204)

A. General

(1) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(2) This task tells how to go back to the main menu of the MAT or PMAT.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. Procedure

SUBTASK 45-10-00-910-014

(1) To stop central maintenance on a MAT or PMAT, do this:

(a) Select GO BACK if it shows.

(b) Select LINE MAINTENANCE, EXTENDED MAINTENANCE, or OTHER FUNCTIONS from the CMCS main menu.

(c) Select EXIT MAINTENANCE from the drop-down menu to go back to the initial menu.

NOTE: The initial menu has the ONBOARD MAINTENANCE selection.

——— END OF TASK ———

TASK 45-10-00-910-808

8. How to Use a Scroll Bar

(Figure 205)

A. General

(1) A scroll bar shows on the right side of a display when you cannot see all of the data on the display. One part of the scroll bar moves. The part that moves is the slider. The size of the slider shows how much of the total display is in view. The position of the slider shows which part of the display is in view.

(2) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(3) You can use these instructions for the MAT or PMAT.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Move the Display Several Lines at a Time

NOTE: This option to move the display is not available with CMCF on MFD.

SUBTASK 45-10-00-910-015

(1) To move down several lines at a time, put the cursor between the slider and the down arrow and push the selection switch.

SUBTASK 45-10-00-910-016

(2) To move up several lines at a time, put the cursor between the slider and the up arrow and push the selection switch.

D. How to Move the Display One Line at a Time

SUBTASK 45-10-00-910-017

(1) To move down one line at a time, put the cursor on the down arrow and push the selection switch.

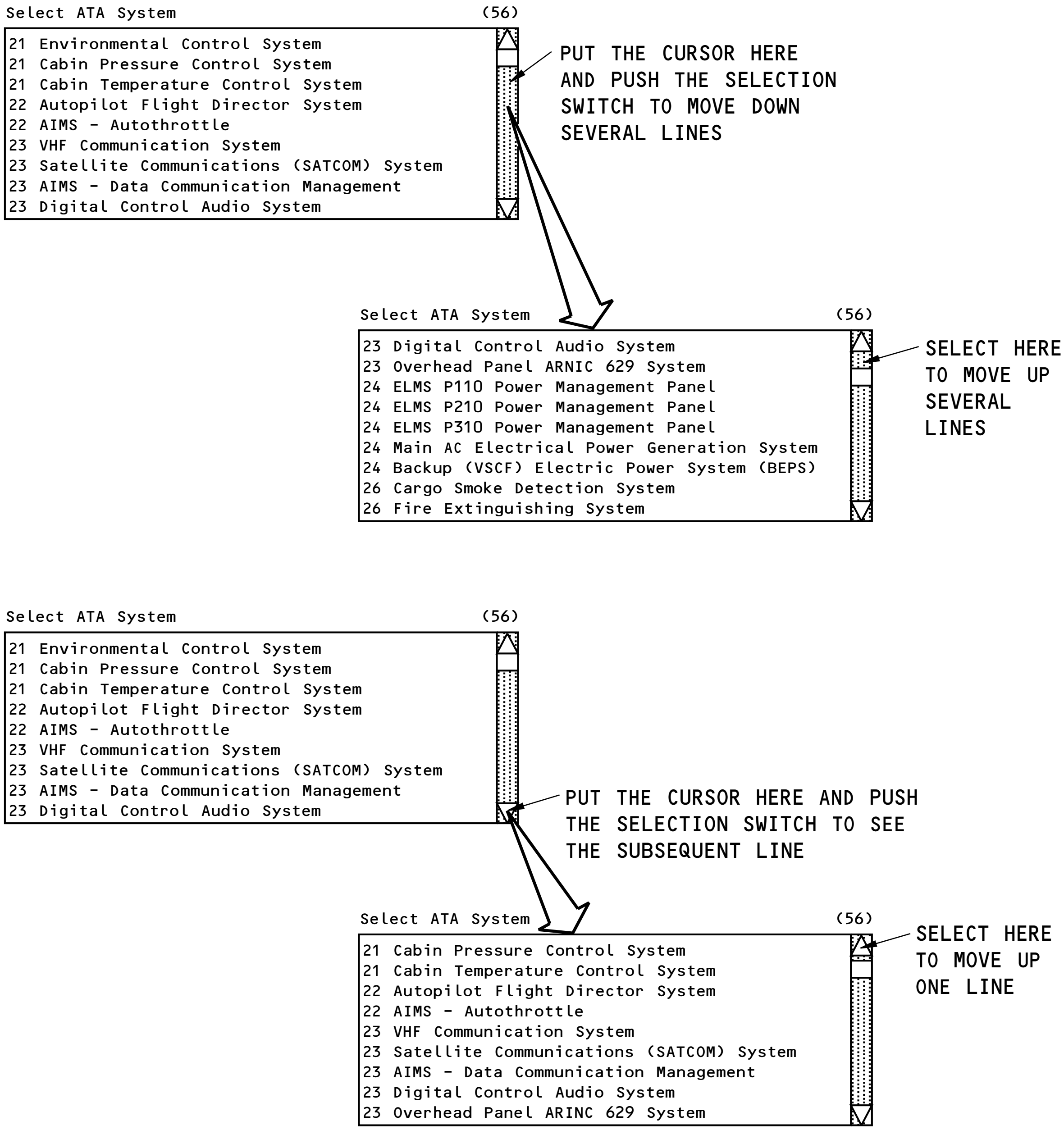
NOTE: With CMCF on MFD, this will move the display down several lines at a time.

SUBTASK 45-10-00-910-018

(2) To move up one line at a time, put the cursor on the up arrow and push the selection switch.

NOTE: With CMCF on MFD, this will move the display up several lines at a time.

——— END OF TASK ———


Select ATA System (56)
21 Environmental Control System
21 Cabin Pressure Control System
21 Cabin Temperature Control System
22 Autopilot Flight Director System
22 AIMS - Autothrottle
23 VHF Communication System
23 Satellite Communications (SATCOM) System
23 AIMS - Data Communication Management
23 Digital Control Audio System
Select ATA System (56)
23 Digital Control Audio System
23 Overhead Panel ARNIC 629 System
24 ELMS P110 Power Management Panel
24 ELMS P210 Power Management Panel
24 ELMS P310 Power Management Panel
24 Main AC Electrical Power Generation System
24 Backup (VSCF) Electric Power System (BEPS)
26 Cargo Smoke Detection System
26 Fire Extinguishing System
Select ATA System (56)
21 Environmental Control System
21 Cabin Pressure Control System
21 Cabin Temperature Control System
22 Autopilot Flight Director System
22 AIMS - Autothrottle
23 VHF Communication System
23 Satellite Communications (SATCOM) System
23 AIMS - Data Communication Management
23 Digital Control Audio System
Select ATA System (56)
21 Cabin Pressure Control System
21 Cabin Temperature Control System
22 Autopilot Flight Director System
22 AIMS - Autothrottle
23 VHF Communication System
23 Satellite Communications (SATCOM) System
23 AIMS - Data Communication Management
23 Digital Control Audio System
23 Overhead Panel ARINC 629 System

PUT THE CURSOR HERE AND PUSH THE SELECTION SWITCH TO MOVE DOWN SEVERAL LINES

SELECT HERE TO MOVE UP SEVERAL LINES

PUT THE CURSOR HERE AND PUSH THE SELECTION SWITCH TO SEE THE SUBSEQUENT LINE

SELECT HERE TO MOVE UP ONE LINE

<u>NOTE</u>: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

C72645 S0006423338_V1

How to Use a Scroll Bar
Figure 205/45-10-00-990-804

TASK 45-10-00-740-816

9. How to Find a Maintenance Message Correlated to an Inbound Flight Deck Effect

(Figure 206)

A. General

(1) Use this task to find one or more maintenance messages that are correlated to a flight deck effect (FDE) that occurred during the inbound (present) flight leg.

(2) Each maintenance message on the display is correlated to a FDE. The correlated maintenance message tells what caused the flight deck effect.

(3) Each FDE and each maintenance message is stored in the fault history data base.

(4) Each FDE and each maintenance message is labeled ACTIVE, NOT ACTIVE, or LATCHED.

(5) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(6) You can use a MAT or a PMAT for this procedure.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Find a Maintenance Message Correlated to an Inbound Flight Deck Effect

SUBTASK 45-10-00-860-136

(1) If you start the engines to move the airplane before maintenance, first, do this task: How to Prevent Flight Leg Change During Maintenance, TASK 45-10-00-860-802.

NOTE: When you start the engines, the flight leg changes unless you prevent it. If the flight leg changes, the CMCS collects failure data in a new flight leg, and failure data from the inbound flight leg shows in fault history leg -1.

SUBTASK 45-10-00-860-003

(2) To show the Inbound Flight Deck Effects display, do this:

(a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

(b) Select LINE MAINTENANCE from the CMCS main menu.

(c) Select INBOUND FLIGHT DECK EFFECTS from the line maintenance menu.

NOTE: The flight deck effects (FDEs) and their correlated maintenance messages from the present (inbound) flight leg show in sequence of FDE occurrence.

SUBTASK 45-10-00-740-001

(3) Look for the flight deck effect. (Use the scroll bar as necessary to see all the FDEs.)

SUBTASK 45-10-00-740-002

(4) Look below the flight deck effect for maintenance messages.

NOTE: Maintenance messages that show below the FDE are correlated to that FDE.

D. How to Show More Data for a Maintenance Message

SUBTASK 45-10-00-740-045

(1) To show more data for a maintenance message, do this:

- (a) Select a maintenance message.
- (b) Select MAINTENANCE MESSAGE DATA.

  NOTE: Data for the selected maintenance message shows. The data includes recommended maintenance action, correlated FDEs, and whether the fault is HARD, INTERMITTENT, or active only during operational mode shown in FIM.
- (c) Select NEXT MESSAGE (if it shows) to see a different maintenance message correlated to the FDE.
- (d) Select GO BACK to go back to the Inbound Flight Deck Effects display.

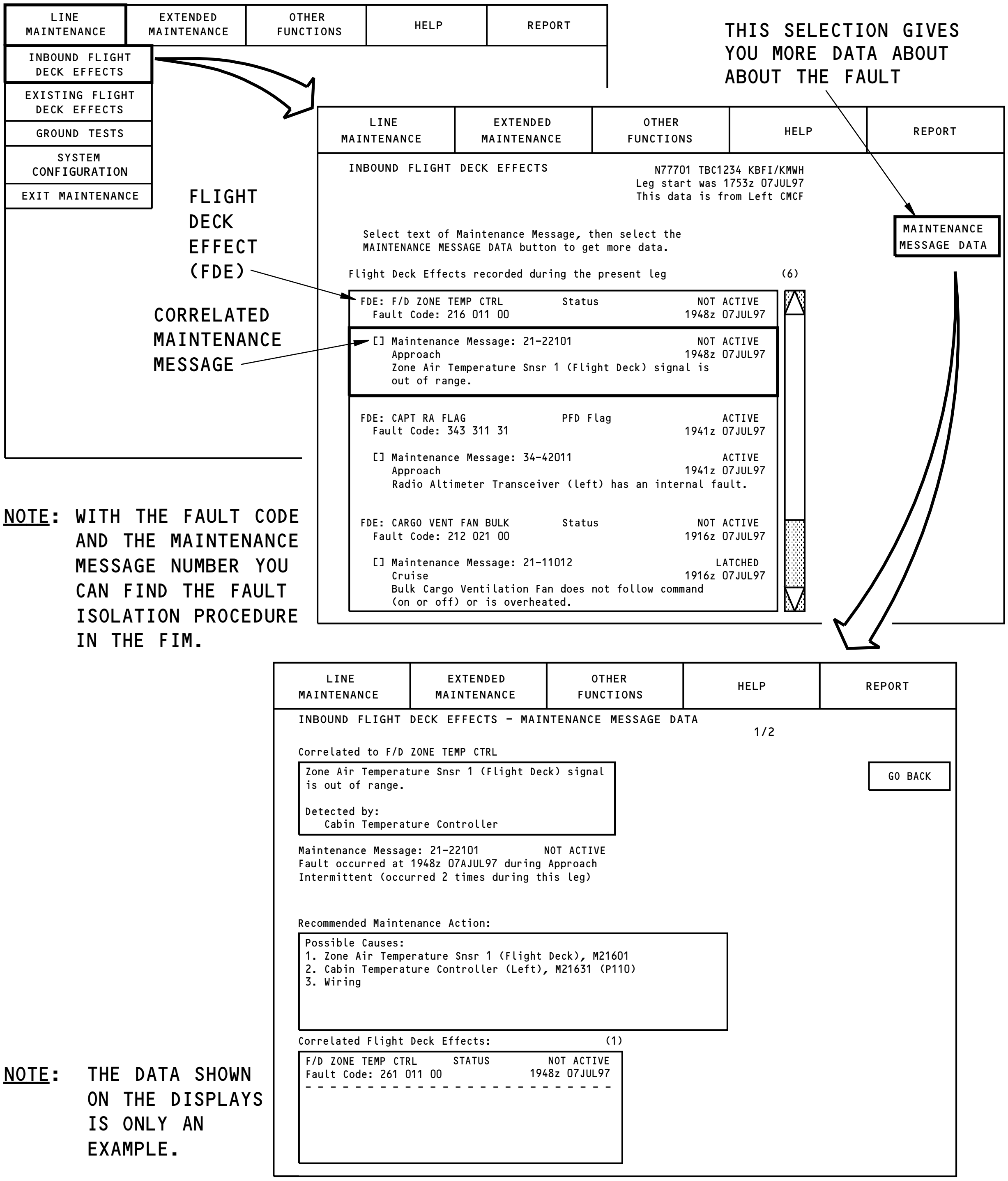
E. Put the Airplane Back to Its Usual Condition

SUBTASK 45-10-00-860-004

(1) To go back to the initial MAT menu, do this:

- (a) Select LINE MAINTENANCE from the CMCS main menu.
- (b) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———



INBOUND FLIGHT DECK EFFECTS

N77701 TBC1234 KBFI/KMWH
Leg start was 1753z 07JUL97
This data is from Left CMCF

Select text of Maintenance Message, then select the MAINTENANCE MESSAGE DATA button to get more data.

Flight Deck Effects recorded during the present leg (6)

FDE: F/D ZONE TEMP CTRL Status NOT ACTIVE
Fault Code: 216 011 00 1948z 07JUL97

☐ Maintenance Message: 21-22101 NOT ACTIVE
Approach 1948z 07JUL97
Zone Air Temperature Snsr 1 (Flight Deck) signal is out of range.

FDE: CAPT RA FLAG PFD Flag ACTIVE
Fault Code: 343 311 31 1941z 07JUL97

☐ Maintenance Message: 34-42011 ACTIVE
Approach 1941z 07JUL97
Radio Altimeter Transceiver (left) has an internal fault.

FDE: CARGO VENT FAN BULK Status NOT ACTIVE
Fault Code: 212 021 00 1916z 07JUL97

☐ Maintenance Message: 21-11012 LATCHED
Cruise 1916z 07JUL97
Bulk Cargo Ventilation Fan does not follow command (on or off) or is overheated.

INBOUND FLIGHT DECK EFFECTS - MAINTENANCE MESSAGE DATA
1/2

Correlated to F/D ZONE TEMP CTRL

Zone Air Temperature Snsr 1 (Flight Deck) signal is out of range.

Detected by:
Cabin Temperature Controller

Maintenance Message: 21-22101 NOT ACTIVE
Fault occurred at 1948z 07AJUL97 during Approach
Intermittent (occurred 2 times during this leg)

Recommended Maintenance Action:

Possible Causes:
1. Zone Air Temperature Snsr 1 (Flight Deck), M21601
2. Cabin Temperature Controller (Left), M21631 (P110)
3. Wiring

Correlated Flight Deck Effects: (1)

F/D ZONE TEMP CTRL STATUS NOT ACTIVE
Fault Code: 261 011 00 1948z 07JUL97

NOTE: WITH THE FAULT CODE AND THE MAINTENANCE MESSAGE NUMBER YOU CAN FIND THE FAULT ISOLATION PROCEDURE IN THE FIM.

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

H39445 S0006423342_V1

How to Find a Maintenance Message Correlated to an Inbound Flight Deck Effect
Figure 206/45-10-00-990-805

TASK 45-10-00-740-801

10. How to Find a Maintenance Message Correlated to an Existing (Active or Latched) Flight Deck Effect

(Figure 207)

A. General

(1) Use this task to find one or more maintenance messages that are correlated to a flight deck effect (FDE) that is active or latched.

(2) Each maintenance message on the display is correlated to a FDE. The correlated maintenance message tells what caused the flight deck effect.

(3) Each FDE and each maintenance message is initially labeled ACTIVE or LATCHED. A FDE or maintenance message that becomes NOT ACTIVE will stay on the display until you select the display again.

(4) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(5) You can use a MAT or a PMAT for this procedure.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Find a Maintenance Message Correlated to an Existing Flight Deck Effect

SUBTASK 45-10-00-860-005

(1) To show the Existing Flight Deck Effects display, do this:

(a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

(b) Select LINE MAINTENANCE from the CMCS main menu.

(c) Select EXISTING FLIGHT DECK EFFECTS from the line maintenance menu.

NOTE: The active or latched flight deck effects and their correlated maintenance messages show in sequence of FDE occurrence.

SUBTASK 45-10-00-740-003

(2) Look for the flight deck effect. (Use the scroll bar as necessary to see all the FDEs.)

SUBTASK 45-10-00-740-004

(3) Look below the flight deck effect for maintenance messages.

NOTE: Maintenance messages that show below the FDE are correlated to that FDE.

D. How to Show More Data for a Maintenance Message

SUBTASK 45-10-00-740-005

(1) To show more data for a maintenance message, do this:

  (a) Select a maintenance message.

  (b) Select MAINTENANCE MESSAGE DATA.

  NOTE: Data for the selected maintenance message shows. The data includes recommended maintenance action and correlated FDEs.

  (c) Select NEXT MESSAGE (if it shows) to see a different maintenance message correlated to the FDE.

  (d) Select GO BACK to go back to the Existing Flight Deck Effects display.

E. Put the Airplane Back to Its Usual Condition

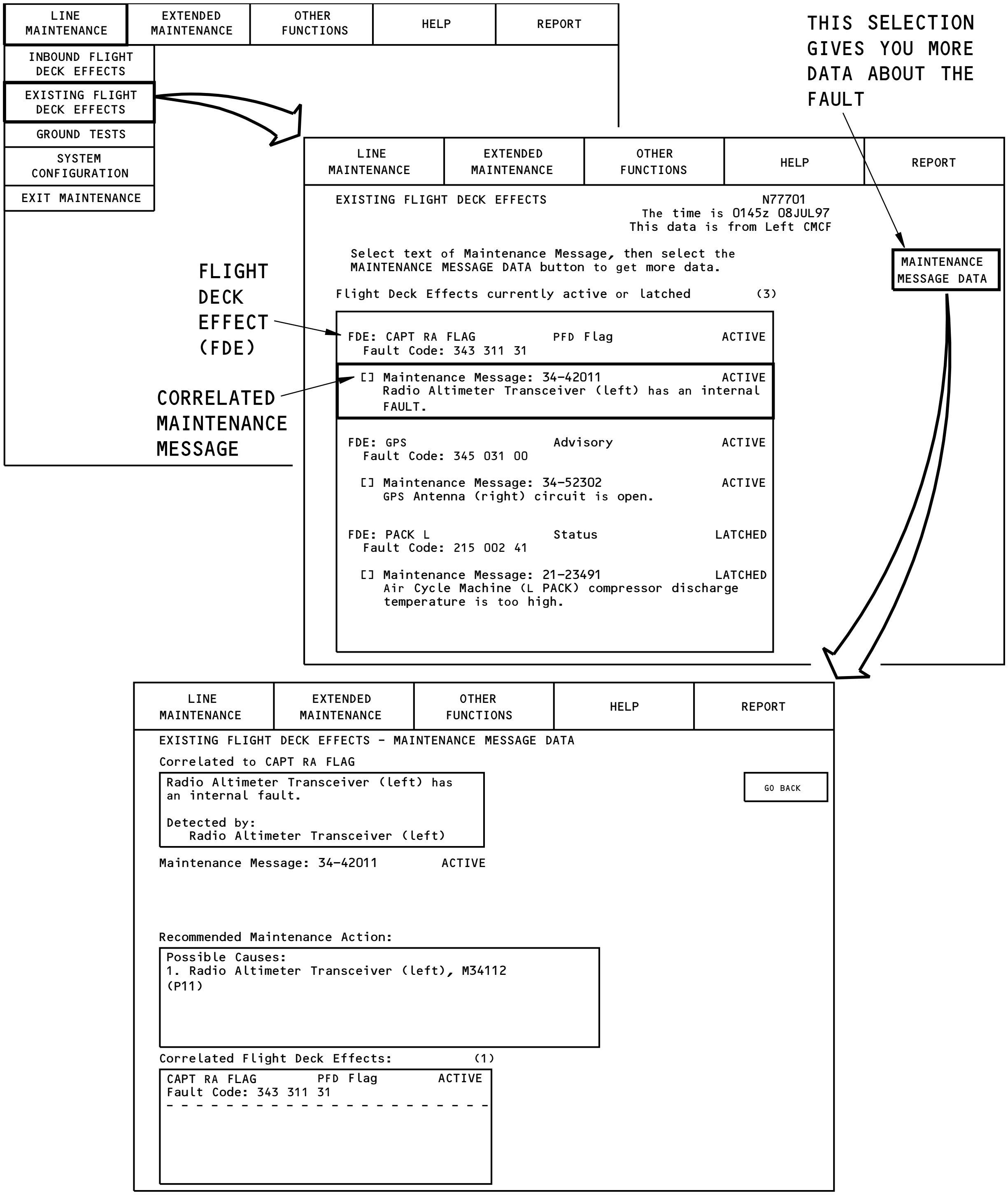
SUBTASK 45-10-00-860-006

(1) To go back to the initial MAT menu, do this:

  (a) Select LINE MAINTENANCE from the CMCS main menu.

  (b) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———



THIS SELECTION GIVES YOU MORE DATA ABOUT THE FAULT

FLIGHT DECK EFFECT (FDE)

CORRELATED MAINTENANCE MESSAGE

```
EXISTING FLIGHT DECK EFFECTS                          N77701
                                           The time is 0145z 08JUL97
                                          This data is from Left CMCF

  Select text of Maintenance Message, then select the
  MAINTENANCE MESSAGE DATA button to get more data.

Flight Deck Effects currently active or latched        (3)

 FDE: CAPT RA FLAG          PFD Flag              ACTIVE
   Fault Code: 343 311 31

   [] Maintenance Message: 34-42011               ACTIVE
      Radio Altimeter Transceiver (left) has an internal
      FAULT.

 FDE: GPS                   Advisory              ACTIVE
   Fault Code: 345 031 00

   [] Maintenance Message: 34-52302               ACTIVE
      GPS Antenna (right) circuit is open.

 FDE: PACK L                Status               LATCHED
   Fault Code: 215 002 41

   [] Maintenance Message: 21-23491              LATCHED
      Air Cycle Machine (L PACK) compressor discharge
      temperature is too high.
```

```
EXISTING FLIGHT DECK EFFECTS - MAINTENANCE MESSAGE DATA
Correlated to CAPT RA FLAG
 Radio Altimeter Transceiver (left) has
 an internal fault.

 Detected by:
    Radio Altimeter Transceiver (left)
Maintenance Message: 34-42011        ACTIVE


Recommended Maintenance Action:
 Possible Causes:
 1. Radio Altimeter Transceiver (left), M34112
 (P11)

Correlated Flight Deck Effects:           (1)
 CAPT RA FLAG        PFD Flag        ACTIVE
 Fault Code: 343 311 31
 - - - - - - - - - - - - - - - - - - - - - -
```

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How to Find A Maintenance Message Correlated to an Existing (Active or Latched) Flight Deck Effect
Figure 207/45-10-00-990-806

TASK 45-10-00-740-819

11. How to Do a Ground Test

A. General

(1) This task tells you how to do a ground test. These three types of ground tests are available: operational tests, system tests, and LRU replacement tests. Not all test types are available for all systems or LRUs.

(2) Each ground test has a set of conditions that the airplane must be in to let the test operate. Instructions on the display tell you what those conditions are. When the test is completed, test results show.

(3) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(4) You can use a MAT or a PMAT for this procedure.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. Prepare to Do a Ground Test

SUBTASK 45-10-00-710-004

(1) Use the table below when you do a ground test. This table is a list of all the ground test selections on the MAT:

Table 201/45-10-00-993-847

MAT GROUND TEST SELECTIONS
21 Environmental Control System
SYSTEM TEST
Aft Cargo Heat
Bulk Cargo Heat
Chiller Boost Fan
Door Area Heater
Equipment Cooling
Forward Cargo Air Conditioning
Lavatory/Galley Ventilation Fan

Table 201/45-10-00-993-847 (Continued)

MAT GROUND TEST SELECTIONS
Forward Cargo Heat
LRU REPLACEMENT TEST
Aft Cargo Heat
Bulk Cargo Heat
Chiller Boost Fan
Door Area Heater
Equipment Cooling
Forward Cargo Air Conditioning
Lavatory/Galley Ventilation Fan
Forward Cargo Heat
OPERATIONAL TEST
LLAR Shut Off Valve
SYSTEM TEST
Left Cabin Pressure Control System
Right Cabin Pressure Control System
21 Cabin Temperature Control System
SYSTEM TEST
Left Pack Actuators
Left System Air On
Left System Air Off
Left Trim Air System
Right Pack Actuators
Right System Air On
Right System Air Off
Right Trim Air System
Recirculation Fan System
LRU REPLACEMENT TEST
Left Cabin Temperature Controller
Left Pack Actuators
Left System Air On
Left System Air Off
Left Trim Air System
Right Cabin Temperature Controller
Right Pack Actuators

Table 201/45-10-00-993-847 (Continued)

MAT GROUND TEST SELECTIONS
Right System Air On
Right System Air Off
Right Trim Air System
Recirculation Fan System
OPERATIONAL TEST
Left Cabin Temperature Controller
Left Pack Actuators
Left System Air On
Left System Air Off
Left Trim Air System
Right Cabin Temperature Controller
Right Pack Actuators
Right System Air On
Right System Air Off
Right Trim Air System
Recirculation Fan System
22 Autopilot Flight Director System
SYSTEM TEST
TO/GA Switch
Autopilot Flight Director Computers
Mode Control Panel
Control Column Backdrive
Control Wheel Backdrive
Rudder Pedal Backdrive
ILS Interface
Autopilot Disconnect Warning
LRU REPLACEMENT TEST
Autopilot Flight Director Computer (left)
Autopilot Flight Director Computer (right)
Autopilot Flight Director Computer (center)
Mode Control Panel
Autopilot Disconnect Switch
TO/GA Switch
Control Column Backdrive Actuator (left)

Table 201/45-10-00-993-847 (Continued)

MAT GROUND TEST SELECTIONS
Control Column Backdrive Actuator (right)
Control Wheel Backdrive Actuator (left)
Control Wheel Backdrive Actuator (right)
Rudder Pedal Backdrive Actuator (left)
Rudder Pedal Backdrive Actuator (right)
22 AIMS - Autothrottle
SYSTEM TEST
Left TMCF - Autothrottle Servo Loop
Right TMCF - Autothrottle Servo Loop
LRU REPLACEMENT TEST
Left TMCF - Autothrottle Switches
Right TMCF - Autothrottle Switches
23 HF Communication System
SYSTEM TEST
Left HF Communication System
Right HF Communication System
23 VHF Communication System
SYSTEM TEST
Left VHF Communication System
Center VHF Communication System
Right VHF Communication System
23 Satellite Communications (SATCOM) System
SYSTEM TEST
Left SATCOM System
23 AIMS - Data Communication Management
OPERATIONAL TEST
Left DCMF - Modem Reset
Left DCMF - FDDI LAN Reset
Right DCMF - Modem Reset
Right DCMF - FDDI LAN Reset
23 Digital Control Audio System
SYSTEM TEST
Digital Control Audio System
23 Overhead Panel ARINC 629 System

Table 201/45-10-00-993-847 (Continued)

MAT GROUND TEST SELECTIONS
SYSTEM TEST
Left Overhead Panel ARINC 629 System
Right Overhead Panel ARINC 629 System
24 Main AC Electrical Power Generation System
LRU REPLACEMENT TEST
Left Generator Control Unit
Right Generator Control Unit
Auxiliary Generator Control Unit
Bus Power Control Unit
OPERATIONAL TEST
Unlatch Sustained Parallel Fault (LGCU)
Unlatch Sustained Parallel Fault (AGCU)
Unlatch Sustained Parallel Fault (RGCU)
24 Backup (VSCF) Electric Power System (BEPS)
LRU REPLACEMENT TEST
Backup Converter
OPERATIONAL TEST
Engine Start Test
26 Cargo Smoke Detection System
SYSTEM TEST
Fwd Cargo Smoke Detection System
Aft Cargo Smoke Detection System
26 Fire Extinguishing System
OPERATIONAL TEST
Cargo Squibs
Engine and APU Squibs
LLAR Bottle Squib
27 Primary Flight Control System
SYSTEM TEST
Actuator Confidence
Actuator Control Electronics Monitors
Air/Ground System to PFC Interface
Alternate Pitch Trim Levers
Column Force Transducer

Table 201/45-10-00-993-847 (Continued)

MAT GROUND TEST SELECTIONS
Column Position
Elevator Feel System
Flap/Slat Electronics Unit Interface to ACE
Flap/Slat Electronics Unit to PFC Interface
Gust Suppression Pressure Transducers
Left Aileron Actuator Confidence
Left Aileron Alignment
Left Aileron Position
Left Elevator Actuator Confidence
Left Elevator Alignment
Left Elevator Oscillation Monitor
Left Elevator Position
Left Flaperon Actuator Confidence
Left Flaperon Alignment
Left Flaperon Position
Modal Suppression Accelerometers
Pitch Rate Transducers
PFC Disconnect Switch
Pedal Position
Primary Flight Computer Reset
Primary Flight Computer Self Test
Primary Flight Computer (C) Lane Reset
Primary Flight Computer (L) Lane Reset
Primary Flight Computer (R) Lane Reset
Radio Altimeter Test Inhibit to PFC Interface
Right Aileron Actuator Confidence
Right Aileron Alignment
Right Aileron Position
Right Elevator Actuator Confidence
Right Elevator Alignment
Right Elevator Oscillation Monitor
Right Elevator Position
Right Flaperon Actuator Confidence
Right Flaperon Alignment

Table 201/45-10-00-993-847 (Continued)

MAT GROUND TEST SELECTIONS
Right Flaperon Position
Rudder Actuator Confidence
Rudder Alignment
Rudder Position
Rudder Trim System
Speedbrake System
Spoiler 1,7,8,14 System
Spoiler 2,13 System
Spoiler 3,6,9,12 System
Spoiler 4,11 System
Spoiler 5,10 System
Stabilizer System
Transmitter Reset Test
Warning Electronic System to PFC Interface
Wheel Force Transducer
Wheel Position
LRU REPLACEMENT TEST
Actuator Control Electronics (C) Replacement
Actuator Control Electronics (L1) Replacement
Actuator Control Electronics (L2) Replacement
Actuator Control Electronics (R) Replacement
Center Primary Flight Computer and Couplers
Left Primary Flight Computer and Couplers
Right Primary Flight Computer and Couplers
27 Stall Warning Management
SYSTEM TEST
Stall Warning
27 High Lift System
SYSTEM TEST
Primary System Test-FSEU 1
Primary System Test-FSEU 2
Secondary System Test-FSEU 1
Secondary System Test-FSEU 2
LRU REPLACEMENT TEST

Table 201/45-10-00-993-847 (Continued)

MAT GROUND TEST SELECTIONS
FSEU 1
FSEU 2
Flaps Primary Control Valve Test-FSEU 1
Flaps Primary Control Valve Test-FSEU 2
Slats Primary Control Valve Test-FSEU 1
Slats Primary Control Valve Test-FSEU 2
Inboard Slat Skew Test-FSEU 1
Inboard Slat Skew Test-FSEU 2
29 Hydraulic System
LRU REPLACEMENT TEST
HYDIM (L)
HYDIM (R)
HYDIM (CL)
HYDIM (CR)
OPERATIONAL TEST
Air Driven Pump (ADP)(C1)
Air Driven Pump (ADP)(C2)
Center Hydraulic Isolation System
Heaters (RAT Generator, ADP C1, and ADP C2)
Landing Gear Auto-off Relay A
Landing Gear Auto-off Relay B
30 Airfoil Cowl Ice Protection System
SYSTEM TEST
Left Engine Anti-Ice (engine running)
Left Engine Anti-Ice (engine not running)
Right Engine Anti-Ice (engine running)
Right Engine Anti-Ice (engine not running)
Wing Anti-Ice (pneumatics available)
Wing Anti-Ice (pneumatics not available)
30 Air Data Sensor Anti-Ice System
OPERATIONAL TEST
Pitot/AOA Heat (Left) Test
Pitot/AOA Heat (Right) Test
Pitot Heat (Center) Test

Table 201/45-10-00-993-847 (Continued)

MAT GROUND TEST SELECTIONS
TAT Probe Heat
30 Window Heat Control System
SYSTEM TEST
Window Heat Control Unit - L
Window Heat Control Unit - R
31 AIMS - Flight Data Recorder System
SYSTEM TEST
Flight Data Recorder System
31 Printer
SYSTEM TEST
Printer System
Printer 2 System
31 AIMS - Airplane Condition Monitoring System
SYSTEM TEST
Left ACMF Software Reset Test
31 AIMS - Left AIMS
SYSTEM TEST
CPM/Comm(M001) in Left AIMS Module Reset
CPM/ACMF(M002) in Left AIMS Module Reset
IOM(M003) in Left AIMS Module Reset
IOM(M004) in Left AIMS Module Reset
IOM(M008) in Left AIMS Module Reset
IOM(M009) in Left AIMS Module Reset
CPM/GG(M010) in Left AIMS Module Reset
CPM/GG(M011) in Left AIMS Module Reset
Left AIMS Cabinet Reset
LRU REPLACEMENT TEST
CPM/Comm(M001) in Left AIMS Module Reset
CPM/ACMF(M002) in Left AIMS Module Reset
IOM(M003) in Left AIMS Module Reset
IOM(M004) in Left AIMS Module Reset
IOM(M008) in Left AIMS Module Reset
IOM(M009) in Left AIMS Module Reset
CPM/GG(M010) in Left AIMS Module Reset

Table 201/45-10-00-993-847 (Continued)

MAT GROUND TEST SELECTIONS
CPM/GG(M011) in Left AIMS Module Reset
OPERATIONAL TEST
IOM(M003) in Left AIMS ARINC 429 Relays
IOM(M004) in Left AIMS ARINC 429 Relays
IOM(M008) in Left AIMS ARINC 429 Relays
IOM(M009) in Left AIMS ARINC 429 Relays
31 AIMS - Right AIMS
SYSTEM TEST
CPM/Comm(M001) in Right AIMS Module Reset
CPM/Basic or CPM/ACMF(M002) in Right AIMS Reset
IOM(M003) in Right AIMS Module Reset
IOM(M004) in Right AIMS Module Reset
IOM(M008) in Right AIMS Module Reset
IOM(M009) in Right AIMS Module Reset
CPM/GG(M010) in Right AIMS Module Reset
CPM/GG(M011) in Right AIMS Module Reset
Right AIMS Cabinet Reset
LRU REPLACEMENT TEST
CPM/Comm(M001) in Right AIMS Module Reset
CPM/Basic or CPM/ACMF(M002) in Right AIMS Reset
IOM(M003) in Right AIMS Module Reset
IOM(M004) in Right AIMS Module Reset
IOM(M008) in Right AIMS Module Reset
IOM(M009) in Right AIMS Module Reset
CPM/GG(M010) in Right AIMS Module Reset
CPM/GG(M011) in Right AIMS Module Reset
OPERATIONAL TEST
IOM(M003) in Right AIMS ARINC 429 Relays
IOM(M004) in Right AIMS ARINC 429 Relays
IOM(M008) in Right AIMS ARINC 429 Relays
IOM(M009) in Right AIMS ARINC 429 Relays
31 Warning Electronic System
SYSTEM TEST
Warning Electronic System

Table 201/45-10-00-993-847 (Continued)

MAT GROUND TEST SELECTIONS
Takeoff Configuration Warning
Landing Configuration Warning
32 Proximity Sensor System (PSS)
SYSTEM TEST
PSEU # 1
PSEU # 2
OPERATIONAL TEST
PSEU # 1 - A01 - Power Supply
PSEU # 1 - A02 - Communication
PSEU # 1 - A03 - Microprocessor
PSEU # 1 - A05 - Driver
PSEU # 1 - A07 - Proximity
PSEU # 1 - A08 - Driver
PSEU # 1 - A09 - Power Supply
PSEU # 1 - A11 - Driver
PSEU # 1 - A13 - Proximity
PSEU # 1 - A15 - Proximity
PSEU # 1 - A16 - Microprocessor
PSEU # 1 - A17 - Communication
PSEU # 1 - A18 - Power Supply
PSEU # 2 - A01 - Power Supply
PSEU # 2 - A02 - Communication
PSEU # 2 - A03 - Microprocessor
PSEU # 2 - A06 - Proximity
PSEU # 2 - A07 - Proximity
PSEU # 2 - A11 - Driver
PSEU # 2 - A13 - Proximity
PSEU # 2 - A15 - Proximity
PSEU # 2 - A16 - Microprocessor
PSEU # 2 - A17 - Communication
PSEU # 2 - A18 - Power Supply
32 Air/Ground System
SYSTEM TEST
Left Air/Ground System

Table 201/45-10-00-993-847 (Continued)

MAT GROUND TEST SELECTIONS
Right Air/Ground System
32 Antiskid/Autobrake Control System
SYSTEM TEST
System Interface
Antiskid Brake Release
Autobrake Application
Wheelspeed Transducer Spin
LRU REPLACEMENT TEST
Brake System Control Unit
Antiskid Valve
Autobrake Valve Module
Wheelspeed Transducer
34 Instrument Landing System
OPERATIONAL TEST
Left Instrument Landing System (using MMR)
Center Instrument Landing System (using MMR)
Right Instrument Landing System (using MMR)
34 Radio Altimeter System
OPERATIONAL TEST
Left Radio Altimeter System
Center Radio Altimeter System
Right Radio Altimeter System
34 Weather Radar System
SYSTEM TEST
Left WXR System
Right WXR System (If installed)
34 Traffic Alert and Collision Avoidance System
SYSTEM TEST
TCAS
34 Ground Proximity Warning System
SYSTEM TEST
Ground Proximity Warning System
34 VOR / Marker Beacon System
OPERATIONAL TEST

Table 201/45-10-00-993-847 (Continued)

MAT GROUND TEST SELECTIONS
Left VOR M/B System
Right VOR System
34 Air Traffic Control (ATC) Mode S System
SYSTEM TEST
Left ATC System
Right ATC System
34 Distance Measuring Equipment System
OPERATIONAL TEST
Left DME System
Right DME System
34 Automatic Direction Finder (ADF) System
OPERATIONAL TEST
Left ADF System
Right ADF System
34 Global Positioning System
SYSTEM TEST
Left Global Positioning System (using MMR)
Right Global Positioning System (using MMR)
34 AIMS - Flight Management Computing System
SYSTEM TEST
Control Display Unit (Left) Reset
Control Display Unit (Center) Reset
Control Display Unit (Right) Reset
36 Air Supply Control System
SYSTEM TEST
Left Air Supply Control System
Right Air Supply Control System
45 Maintenance Access Terminal
SYSTEM TEST
MAT Display Unit System Test
MAT Display Brightness System Test
MAT Display Unit Graphics Pattern System Test
MAT Cursor Control Unit System Test
MAT Dual Disk Drive System Test

Table 201/45-10-00-993-847 (Continued)

MAT GROUND TEST SELECTIONS
MAT AvLAN System Test
LRU REPLACEMENT TEST
MAT Display Unit LRU Replacement Test
47 Nitrogen Generation System
SYSTEM TEST
Nitrogen Generation System
Nitrogen Generation System Electrical
52 Passenger Door Flight Locks
SYSTEM TEST
Passenger Entry Doors, Flight Lock Control Test
52 Cargo and Access Doors
SYSTEM TEST
CGSCU - MDCD Control Subsystem Test
71 - 80 Left Engine
SYSTEM TEST
Left Engine Fuel Driven Actuator Test
Left Engine Air Driven Actuator Test
Left Engine Ignition System Test
Left Engine Reverse Thrust Lever Interlock Test.
Left Engine Debris Monitor System Test
Left Engine Electronic Engine Control Test
71 - 80 Right Engine
SYSTEM TEST
Right Engine Fuel Driven Actuator Test
Right Engine Air Driven Actuator Test
Right Engine Ignition System Test
Right Engine Reverse Thrust Lever Interlock Test
Right Engine Debris Monitor System Test
Right Engine Electronic Engine Control Test

D. How to Select a Ground Test

SUBTASK 45-10-00-740-072

(1) To show the Ground Test selection display, do this:

  (a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

  (b) Select LINE MAINTENANCE from the CMCS main menu.

(c) Select GROUND TESTS from the line maintenance menu.

NOTE: The ATA selection dialog box shows.

SUBTASK 45-10-00-740-073

(2) To select a ground test, use the MAT GROUND TEST SELECTIONS table for guidance, and do these steps:

(a) Select an ATA System.

(b) Select a test type.

(c) Select a test.

(d) Make sure the selections on the display are correct; if not, make the correct selections.

(e) Select CONTINUE.

NOTE: The initial test instructions show.

E. How to Start the Test

(Figure 208)

SUBTASK 45-10-00-740-074

(1) Do the initial test instructions:

(a) Read the test description.

(b) If instructions show on the display, do the instructions.

(c) Select CONTINUE.

NOTE: One of these indications shows adjacent to TEST CONDITION: READY, INHIBITED, or CANNOT OPERATE.

SUBTASK 45-10-00-740-075

(2) If READY shows adjacent to TEST CONDITION, select START TEST.

F. When Test is Inhibited or Cannot Operate

(Figure 209)

SUBTASK 45-10-00-740-076

(1) If INHIBITED or CANNOT OPERATE shows adjacent to TEST CONDITION, select TO TEST.

NOTE: The MAT shows instructions to let the test operate.

(a) Do the instructions that show on the display.

(b) Select CONTINUE.

SUBTASK 45-10-00-740-077

(2) When READY shows adjacent to TEST CONDITION, select START TEST.

G. Test Operation

SUBTASK 45-10-00-740-078

(1) If instructions show on the display, do the instructions.

SUBTASK 45-10-00-740-079

(2) If OPERATING shows adjacent to TEST CONDITION, wait until the test is completed.

H. Problems During the Test

SUBTASK 45-10-00-740-080

(1) If STOPPED shows adjacent to TEST CONDITION, look at the CAUSE.

(a) If a member system stopped the test, select OPERATE TEST AGAIN.

NOTE: The MAT shows instructions to let the test operate.

1) Do the instructions that show on the display.

2) Select CONTINUE.

I. How to Stop a Test Before it is Completed

SUBTASK 45-10-00-740-081

(1) To stop a test before it is completed, select STOP TEST.

NOTE: TEST STOPPED shows adjacent to TEST CONDITION and the OPERATE TEST AGAIN selection becomes available. This indication shows below CAUSE: User stopped test.

J. Test Results

(Figure 210)

SUBTASK 45-10-00-740-082

(1) When the test is completed, make sure that PASSED shows adjacent to TEST CONDITION.

SUBTASK 45-10-00-740-083

(2) If FAILED shows adjacent to TEST CONDITION, find the cause of the test failure:

(a) Look at the maintenance message or messages listed on the MAT.

(b) Select a maintenance message and make sure that it is highlighted.

(c) Select MAINTENANCE MESSAGE DATA.

NOTE: The single maintenance message display shows.

(d) Select NEXT MESSAGE (if it shows) to see a different maintenance message related to the test failure.

K. How to Start the Same Test Again

SUBTASK 45-10-00-740-084

(1) To start the same test again, make these selections:

(a) GO BACK (if it shows)

(b) OPERATE TEST AGAIN.

NOTE: The initial test instructions show.

L. How to Start a Different Test

SUBTASK 45-10-00-740-085

(1) To start a different test, make these selections:

(a) GO BACK (if it shows)

(b) NEW TEST

NOTE: The ATA system selections show.

M. Put the Airplane Back to Its Usual Condition

SUBTASK 45-10-00-860-141

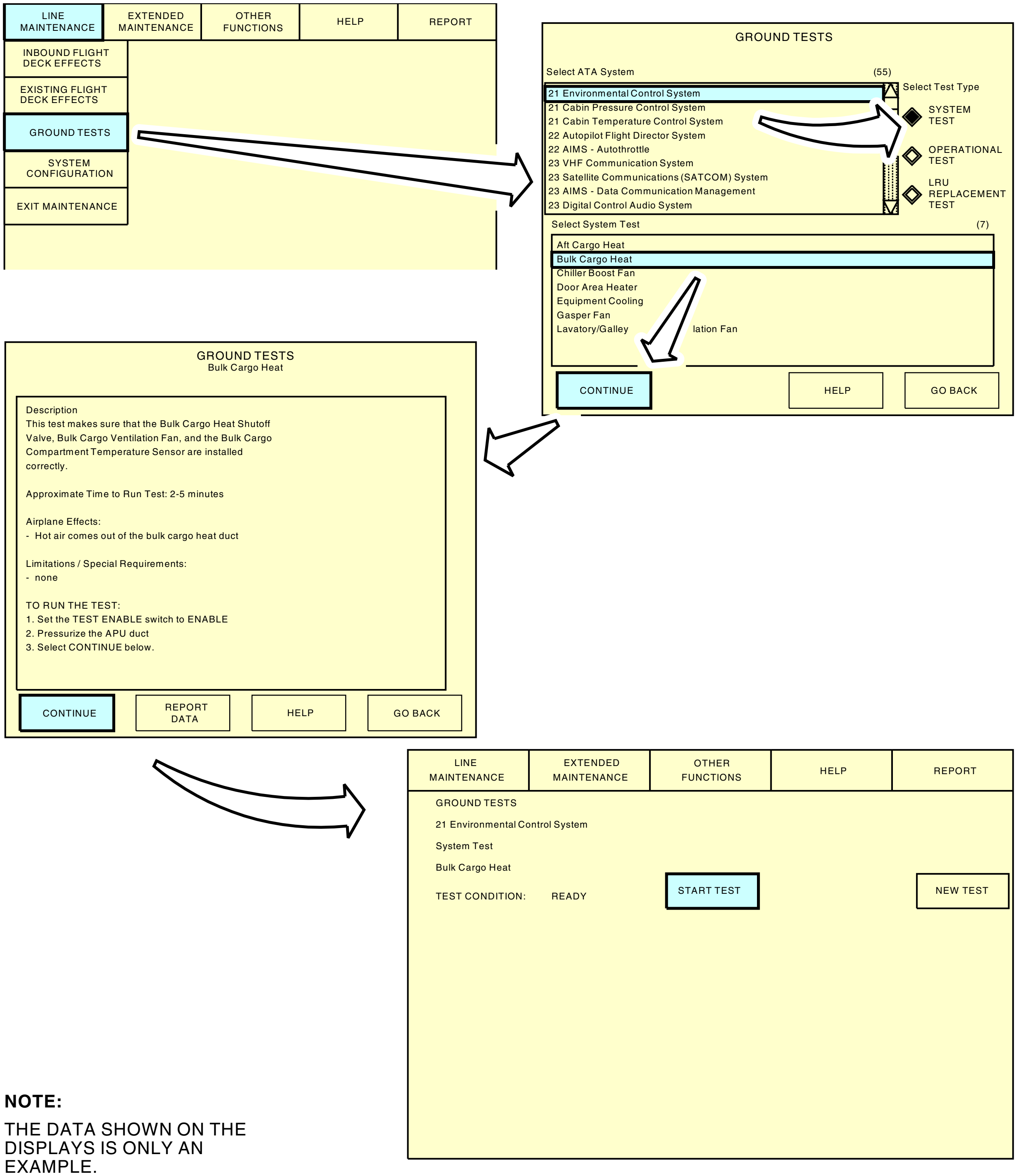
(1) To go back to the initial MAT menu, do this:

(a) Select GO BACK (if it shows).

(b) Select LINE MAINTENANCE from the CMCS main menu.

(c) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———



Description
This test makes sure that the Bulk Cargo Heat Shutoff Valve, Bulk Cargo Ventilation Fan, and the Bulk Cargo Compartment Temperature Sensor are installed correctly.

Approximate Time to Run Test: 2-5 minutes

Airplane Effects:
- Hot air comes out of the bulk cargo heat duct

Limitations / Special Requirements:
- none

TO RUN THE TEST:
1. Set the TEST ENABLE switch to ENABLE
2. Pressurize the APU duct
3. Select CONTINUE below.

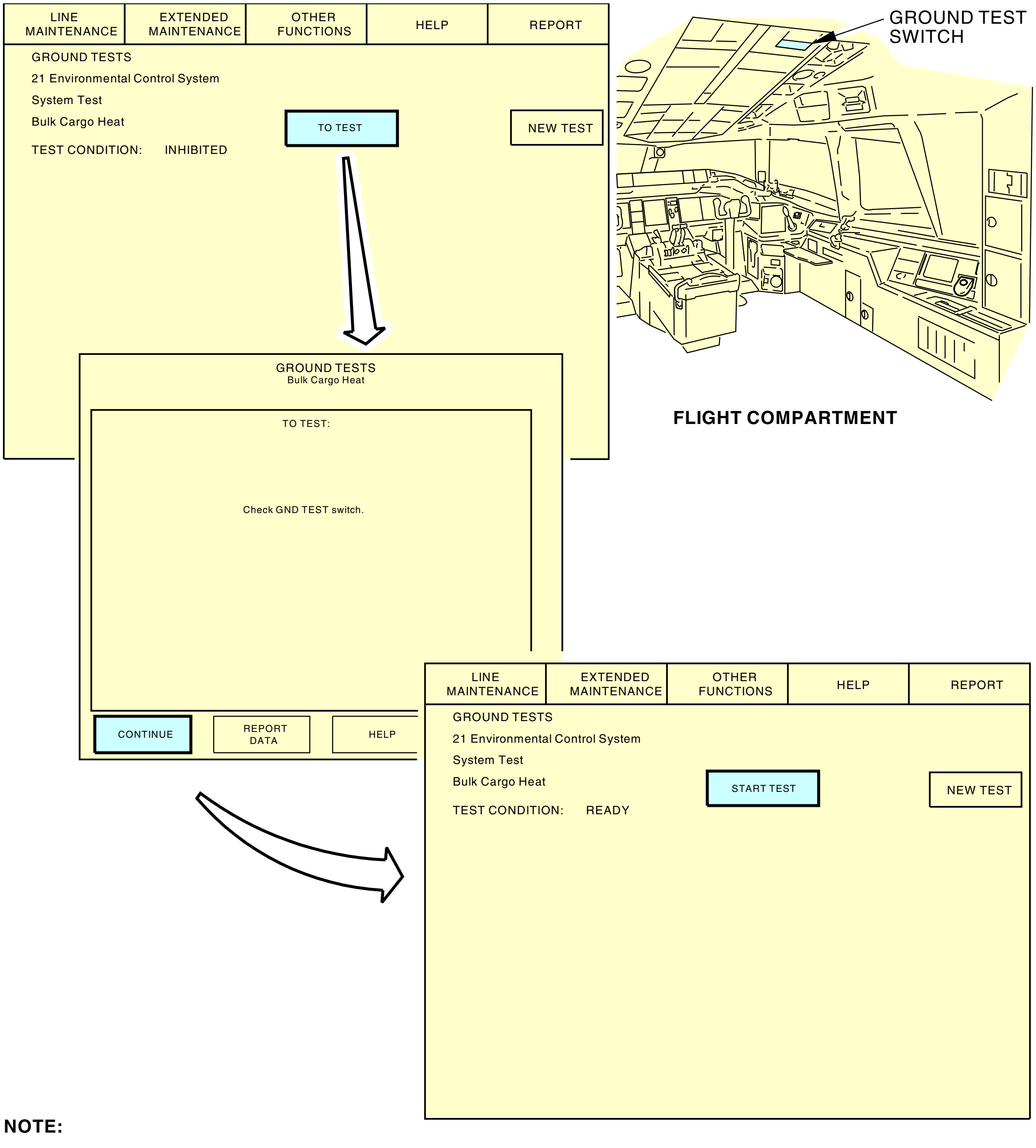
GROUND TESTS
21 Environmental Control System
System Test
Bulk Cargo Heat
TEST CONDITION: READY

NOTE:

THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

H39448 S0006423351_V3

How to Select and Start a Ground Test
Figure 208/45-10-00-990-807



GROUND TESTS
21 Environmental Control System
System Test
Bulk Cargo Heat
TEST CONDITION: INHIBITED

GROUND TESTS
Bulk Cargo Heat
TO TEST:
Check GND TEST switch.

GROUND TESTS
21 Environmental Control System
System Test
Bulk Cargo Heat
TEST CONDITION: READY

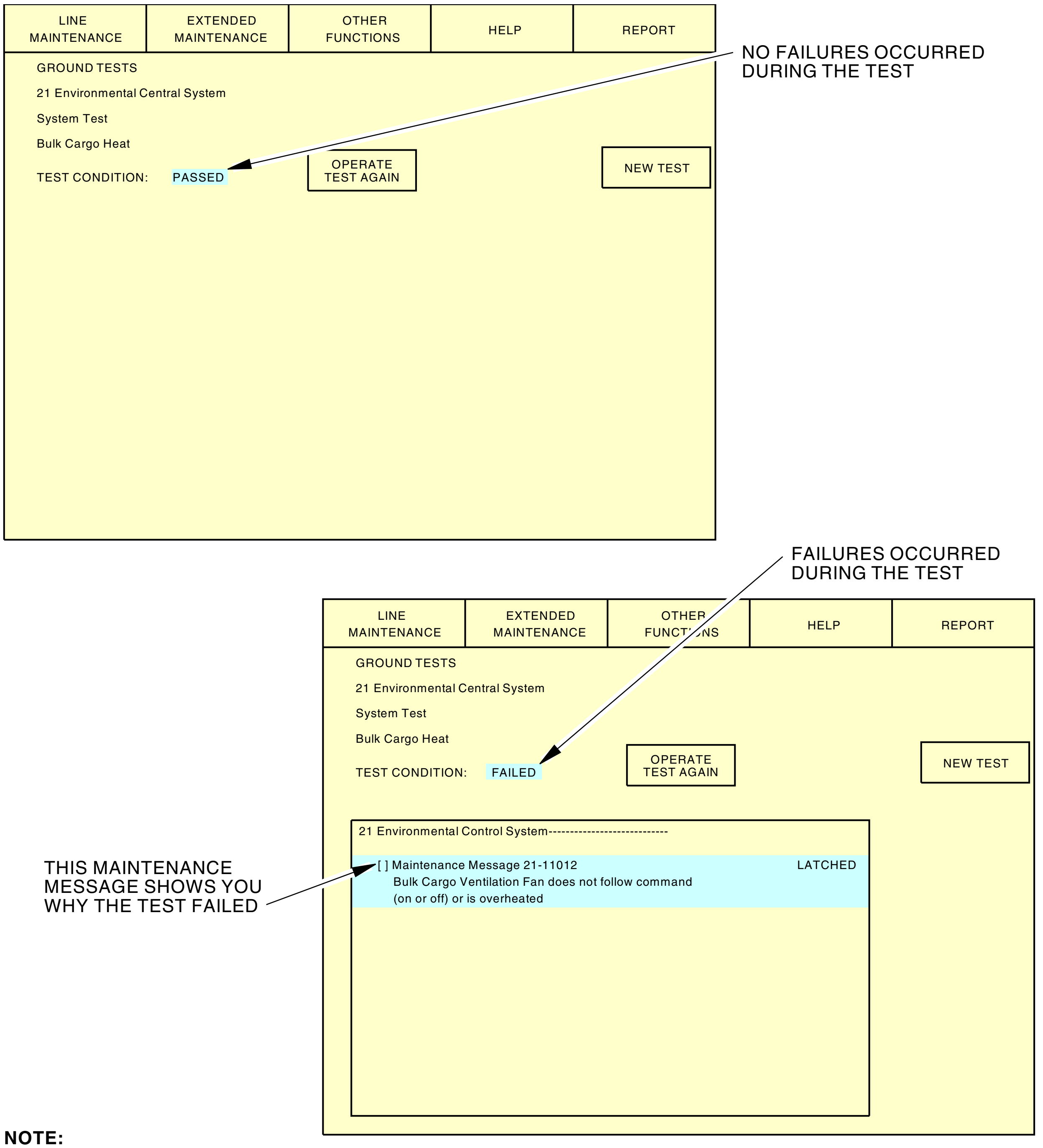
NOTE:

THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

TEST INHIBITED OR CANNOT OPERATE

H39449 S0006423354_V2

When a Ground Test is Inhibited or Cannot Operate
Figure 209/45-10-00-990-808



GROUND TESTS

21 Environmental Central System

System Test

Bulk Cargo Heat

TEST CONDITION: PASSED

NO FAILURES OCCURRED DURING THE TEST

GROUND TESTS

21 Environmental Central System

System Test

Bulk Cargo Heat

TEST CONDITION: FAILED

21 Environmental Control System----------------------------

[ ] Maintenance Message 21-11012 LATCHED
Bulk Cargo Ventilation Fan does not follow command
(on or off) or is overheated

FAILURES OCCURRED DURING THE TEST

THIS MAINTENANCE MESSAGE SHOWS YOU WHY THE TEST FAILED

NOTE:

THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

H39450 S0006423357_V2

Ground Test Results
Figure 210/45-10-00-990-809

TASK 45-10-00-750-803

12. How to Find the Hardware or Software Configuration of a System

(Figure 211)

A. General

(1) This task tells you how to find the hardware and software configuration of the components in a system. When you select a system, the maintenance access terminal shows the configuration data it receives from the selected system.

(2) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(3) You can use a MAT or a PMAT for this procedure.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Find the Configuration of a Component in a System

SUBTASK 45-10-00-860-142

(1) To show the configuration data for a system, do this:

(a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

(b) Select LINE MAINTENANCE from the CMCS main menu.

(c) Select SYSTEM CONFIGURATION from the line maintenance menu.

(d) Select an ATA System.

(e) Select CONTINUE.

NOTE: The display shows the configuration data for the components in the selected ATA system.

SUBTASK 45-10-00-860-143

(2) Find the component name on the display and read the configuration data. (Use the scroll bar to see all data.)

NOTE: The configuration data on the display cannot change until you select SELECT NEW ATA and select the ATA system again.

D. Put the Airplane Back to Its Usual Condition

SUBTASK 45-10-00-860-144

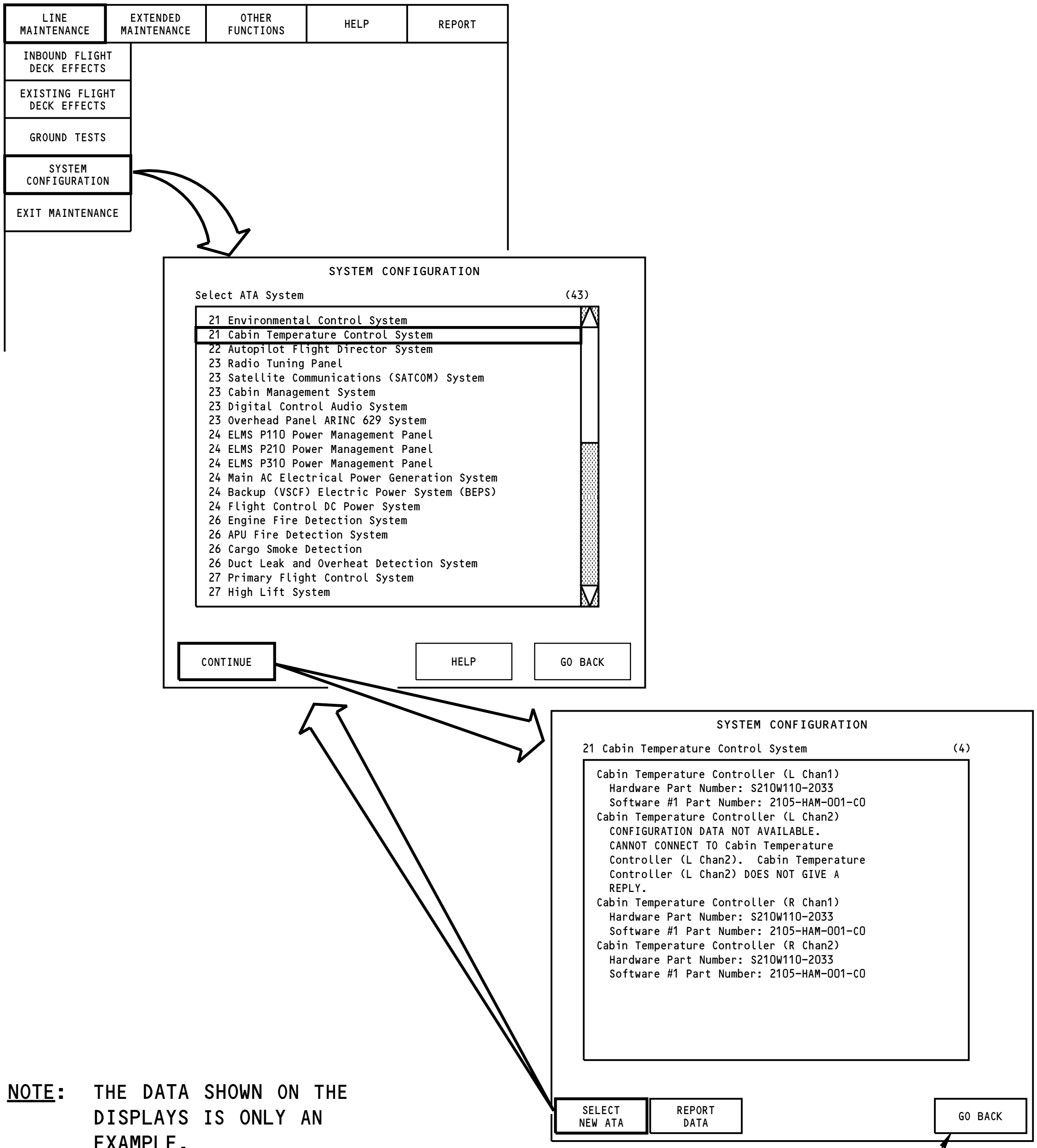
(1) To go back to the initial MAT menu, do this:

(a) Select GO BACK.

(b) Select LINE MAINTENANCE from the CMCS main menu.

(c) Select EXIT MAINTENANCE from the line maintenance menu.

END OF TASK


LINE MAINTENANCE
EXTENDED MAINTENANCE
OTHER FUNCTIONS
HELP
REPORT
INBOUND FLIGHT DECK EFFECTS
EXISTING FLIGHT DECK EFFECTS
GROUND TESTS
SYSTEM CONFIGURATION
EXIT MAINTENANCE
SYSTEM CONFIGURATION
Select ATA System
(43)
21 Environmental Control System
21 Cabin Temperature Control System
22 Autopilot Flight Director System
23 Radio Tuning Panel
23 Satellite Communications (SATCOM) System
23 Cabin Management System
23 Digital Control Audio System
23 Overhead Panel ARINC 629 System
24 ELMS P110 Power Management Panel
24 ELMS P210 Power Management Panel
24 ELMS P310 Power Management Panel
24 Main AC Electrical Power Generation System
24 Backup (VSCF) Electric Power System (BEPS)
24 Flight Control DC Power System
26 Engine Fire Detection System
26 APU Fire Detection System
26 Cargo Smoke Detection
26 Duct Leak and Overheat Detection System
27 Primary Flight Control System
27 High Lift System
CONTINUE
HELP
GO BACK
SYSTEM CONFIGURATION
21 Cabin Temperature Control System
(4)
SELECT NEW ATA
REPORT DATA
GO BACK

```
Cabin Temperature Controller (L Chan1)
  Hardware Part Number: S210W110-2033
  Software #1 Part Number: 2105-HAM-001-C0
Cabin Temperature Controller (L Chan2)
  CONFIGURATION DATA NOT AVAILABLE.
  CANNOT CONNECT TO Cabin Temperature
  Controller (L Chan2).  Cabin Temperature
  Controller (L Chan2) DOES NOT GIVE A
  REPLY.
Cabin Temperature Controller (R Chan1)
  Hardware Part Number: S210W110-2033
  Software #1 Part Number: 2105-HAM-001-C0
Cabin Temperature Controller (R Chan2)
  Hardware Part Number: S210W110-2033
  Software #1 Part Number: 2105-HAM-001-C0
```

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

THIS SELECTION REMOVES THE CONFIGURATION DISPLAY

C86940 S0006423359_V1

How to find the Hardware and Software Configuration of a System
Figure 211/45-10-00-990-810

TASK 45-10-00-740-817

13. How to Find Maintenance Messages from the Present Leg that are not Correlated

(Figure 212)

A. General

(1) Use this task to find the maintenance messages that are not correlated to a flight deck effect (FDE). These maintenance messages occurred during the present leg.

(2) The Present Leg Faults display shows a list of FDEs and their correlated maintenance messages, followed by a list of maintenance messages that are not correlated.

(3) Each FDE and each maintenance message is stored in the fault history data base.

(4) Each FDE and each maintenance message is labeled ACTIVE, NOT ACTIVE, or LATCHED.

(5) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(6) You can use a MAT or a PMAT for this procedure.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Find the Maintenance Messages that are Not Correlated

SUBTASK 45-10-00-860-137

(1) If you start the engines to move the airplane before maintenance, first, do this task: How to Prevent Flight Leg Change During Maintenance, TASK 45-10-00-860-802.

NOTE: When you start the engines, the flight leg changes unless you prevent it. If the flight leg changes, the CMCS collects failure data in a new flight leg, and failure data from the inbound flight leg shows in fault history leg -1.

SUBTASK 45-10-00-860-007

(2) To show the Present Leg Faults display, do this:

- (a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.
- (b) Select EXTENDED MAINTENANCE from the CMCS main menu.
- (c) Select PRESENT LEG FAULTS from the extended maintenance menu.

NOTE: The flight deck effects and their correlated maintenance messages from the present flight leg show in sequence of FDE occurrence. The maintenance messages that do not correlate to a FDE show in a group at the end of the list of FDEs.

SUBTASK 45-10-00-740-006

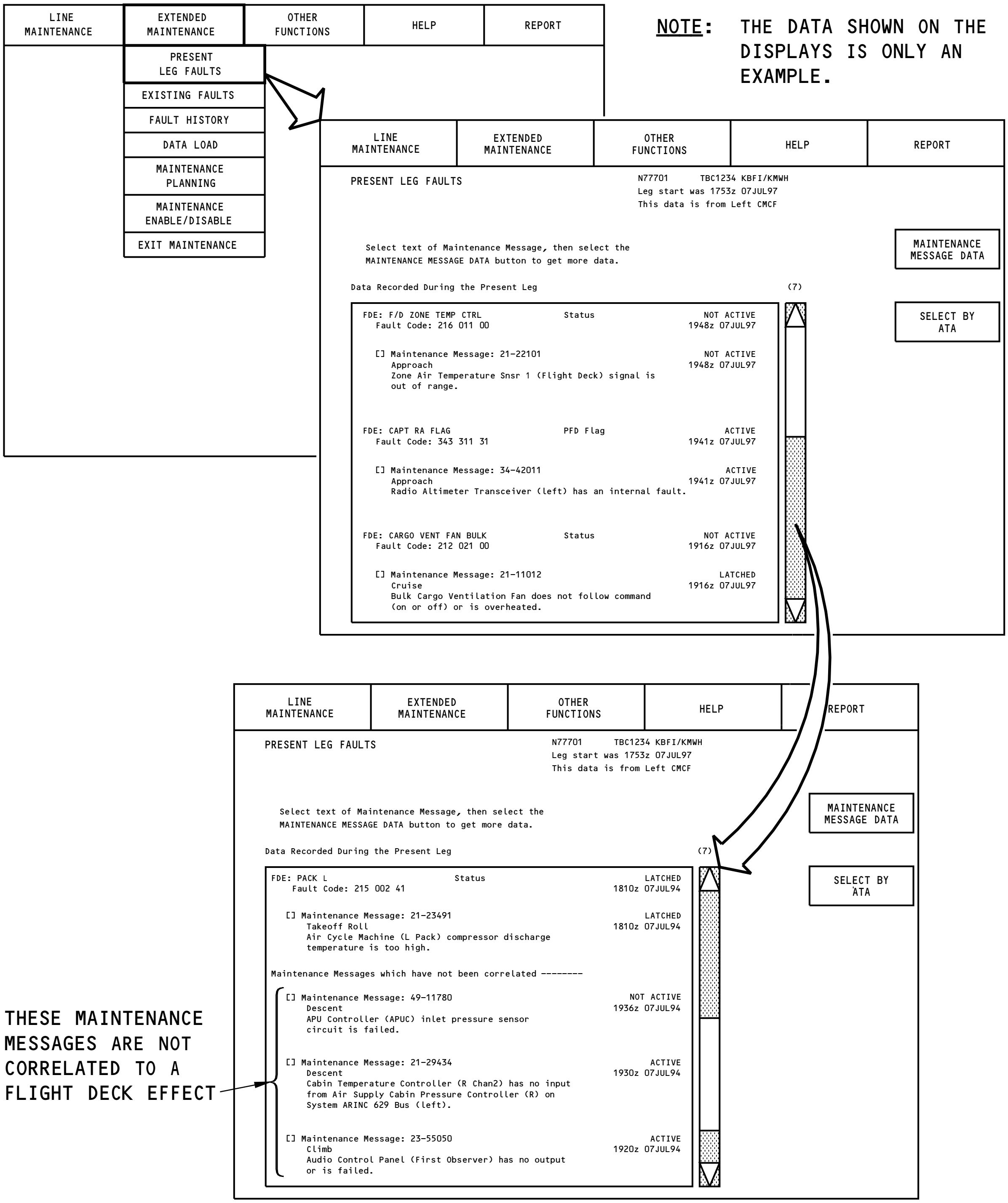
(3) Look at the end of the list of FDEs to find the list of maintenance messages that do not correlate to a FDE. (Use the scroll bar to move to the end of the list of FDEs.)

D. Put the Airplane Back to Its Usual Condition

SUBTASK 45-10-00-860-008

(1) To go back to the initial MAT menu, do this:
   (a) Select LINE MAINTENANCE from the CMCS main menu.
   (b) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———



NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

PRESENT LEG FAULTS

N77701 TBC1234 KBFI/KMWH
Leg start was 1753z 07JUL97
This data is from Left CMCF

Select text of Maintenance Message, then select the MAINTENANCE MESSAGE DATA button to get more data.

Data Recorded During the Present Leg (7)

```
FDE: F/D ZONE TEMP CTRL               Status                 NOT ACTIVE
   Fault Code: 216 011 00                                1948z 07JUL97

  [] Maintenance Message: 21-22101                        NOT ACTIVE
     Approach                                            1948z 07JUL97
     Zone Air Temperature Snsr 1 (Flight Deck) signal is
     out of range.

FDE: CAPT RA FLAG                     PFD Flag                   ACTIVE
   Fault Code: 343 311 31                                1941z 07JUL97

  [] Maintenance Message: 34-42011                           ACTIVE
     Approach                                            1941z 07JUL97
     Radio Altimeter Transceiver (left) has an internal fault.

FDE: CARGO VENT FAN BULK              Status                 NOT ACTIVE
   Fault Code: 212 021 00                                1916z 07JUL97

  [] Maintenance Message: 21-11012                          LATCHED
     Cruise                                              1916z 07JUL97
     Bulk Cargo Ventilation Fan does not follow command
     (on or off) or is overheated.
```

PRESENT LEG FAULTS

N77701 TBC1234 KBFI/KMWH
Leg start was 1753z 07JUL97
This data is from Left CMCF

Select text of Maintenance Message, then select the MAINTENANCE MESSAGE DATA button to get more data.

Data Recorded During the Present Leg (7)

```
FDE: PACK L                      Status                 LATCHED
    Fault Code: 215 002 41                        1810z 07JUL94

  [] Maintenance Message: 21-23491                     LATCHED
     Takeoff Roll                                 1810z 07JUL94
     Air Cycle Machine (L Pack) compressor discharge
     temperature is too high.

Maintenance Messages which have not been correlated --------

  [] Maintenance Message: 49-11780                  NOT ACTIVE
     Descent                                      1936z 07JUL94
     APU Controller (APUC) inlet pressure sensor
     circuit is failed.

  [] Maintenance Message: 21-29434                      ACTIVE
     Descent                                      1930z 07JUL94
     Cabin Temperature Controller (R Chan2) has no input
     from Air Supply Cabin Pressure Controller (R) on
     System ARINC 629 Bus (left).

  [] Maintenance Message: 23-55050                      ACTIVE
     Climb                                        1920z 07JUL94
     Audio Control Panel (First Observer) has no output
     or is failed.
```

THESE MAINTENANCE MESSAGES ARE NOT CORRELATED TO A FLIGHT DECK EFFECT

H39451 S0006423363_V1

How to Find Maintenance Messages from the Present Leg that are Not Correlated
Figure 212/45-10-00-990-811

TASK 45-10-00-740-818

14. How to Find Active or Latched Maintenance Messages in One ATA System

(Figure 213)

A. General

(1) Use this task to find one or more maintenance messages in a selected ATA system that are active or latched.

(2) The Existing Faults display shows no flight deck effects.

(3) Each maintenance message is initially labeled ACTIVE or LATCHED. A maintenance message that becomes NOT ACTIVE will stay on the display until you select the display again.

(4) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(5) You can use a MAT or a PMAT for this procedure.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Find a Maintenance Message in One ATA System

SUBTASK 45-10-00-860-009

(1) To show the Existing Faults ATA Selection dialog box, do this:

  (a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

  (b) Select EXTENDED MAINTENANCE from the CMCS main menu.

  (c) Select EXISTING FAULTS from the extended maintenance menu.

  NOTE: The ATA Selection dialog box shows with all ATA systems that have ACTIVE or LATCHED maintenance messages.

SUBTASK 45-10-00-740-007

(2) To show the Existing Faults display, do this:

  (a) Select an ATA system from the ATA selection dialog box.

  (b) Select CONTINUE.

  NOTE: The active or latched maintenance messages in the selected ATA system show.

D. How to Show Maintenance Messages in a Different ATA System

SUBTASK 45-10-00-740-008

(1) To change the display to show the maintenance messages in a different ATA system, do this:

  (a) Select SELECT NEW ATA.

  (b) Select an ATA system from the ATA selection dialog box.

  (c) Select CONTINUE.

  NOTE: The active or latched maintenance messages in the selected ATA system show.

E. Put the Airplane Back to Its Usual Condition

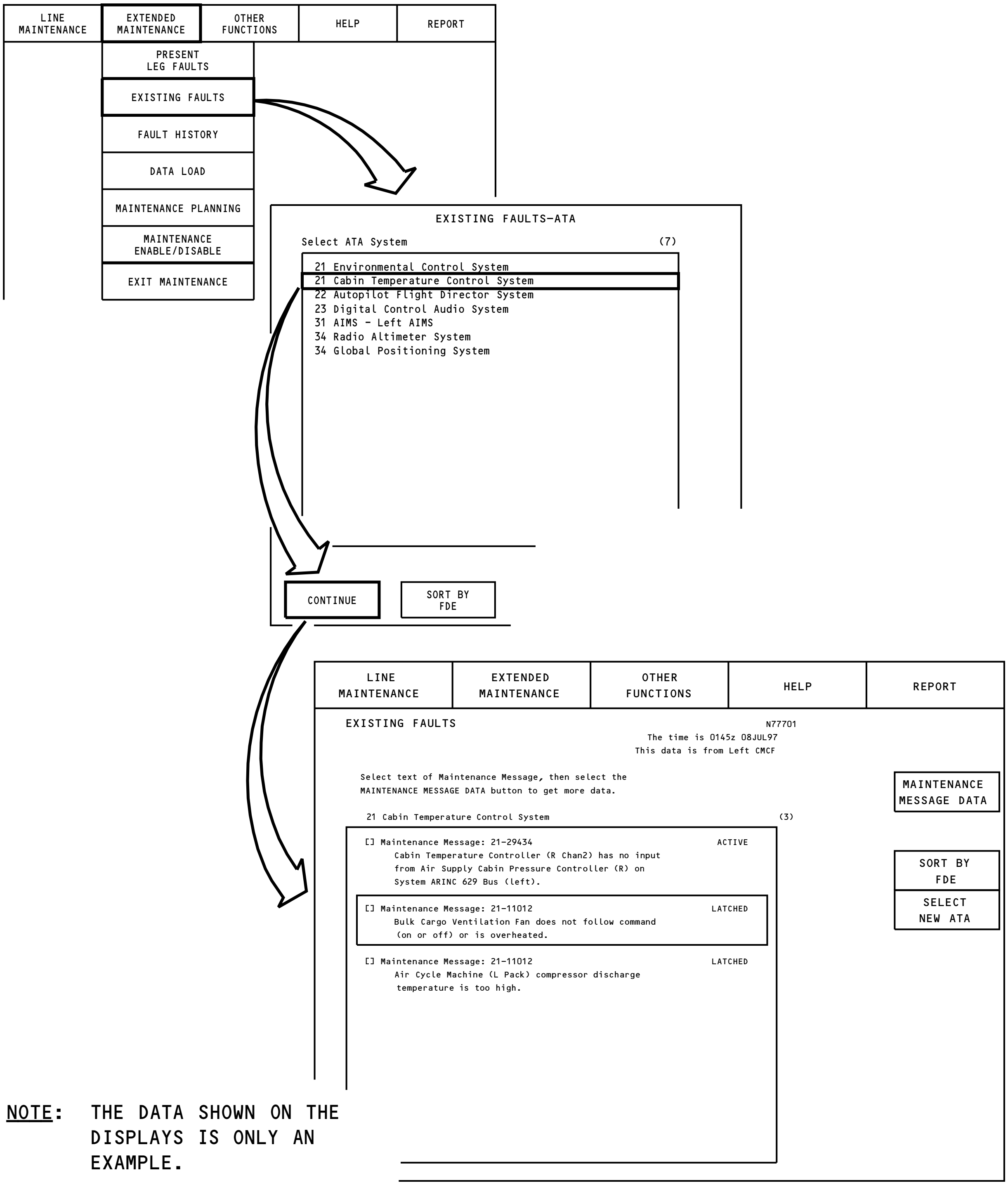
SUBTASK 45-10-00-860-010

(1) To go back to the initial MAT menu, do this:

  (a) Select LINE MAINTENANCE from the CMCS main menu.

  (b) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———



EXISTING FAULTS-ATA

Select ATA System (7)

21 Environmental Control System
21 Cabin Temperature Control System
22 Autopilot Flight Director System
23 Digital Control Audio System
31 AIMS - Left AIMS
34 Radio Altimeter System
34 Global Positioning System

EXISTING FAULTS

N77701
The time is 0145z 08JUL97
This data is from Left CMCF

Select text of Maintenance Message, then select the MAINTENANCE MESSAGE DATA button to get more data.

21 Cabin Temperature Control System (3)

[] Maintenance Message: 21-29434 ACTIVE
Cabin Temperature Controller (R Chan2) has no input from Air Supply Cabin Pressure Controller (R) on System ARINC 629 Bus (left).

[] Maintenance Message: 21-11012 LATCHED
Bulk Cargo Ventilation Fan does not follow command (on or off) or is overheated.

[] Maintenance Message: 21-11012 LATCHED
Air Cycle Machine (L Pack) compressor discharge temperature is too high.

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

H39452 S0006423367_V1

How to Find Active or Latched Maintenance Messages in One ATA System
Figure 213/45-10-00-990-812

TASK 45-10-00-740-812

15. How to Show More Data for a Maintenance Message

(Figure 214)

A. General

(1) This data is available for each maintenance message that shows:

(a) Recommended maintenance action.

(b) Correlated Flight Deck Effects (FDE) (if any)

(2) This data is available for each maintenance message that shows on an Inbound, Present Leg, or History display:

(a) Whether the maintenance message is HARD, INTERMITTENT, or active only during operational mode shown in FIM.

(3) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(4) You can use a MAT or a PMAT for this procedure.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Show More Data for a Maintenance Message

SUBTASK 45-10-00-740-046

(1) To show more data for a maintenance message, do this:

(a) Put the cursor on the maintenance message and push the selection switch.

(b) Select MAINTENANCE MESSAGE DATA.

NOTE: Data for the selected maintenance message shows. The data includes recommended maintenance action and correlated FDEs (if there are any). If you selected this display from Inbound Flight Deck Effects, Present Leg Faults, Inbound Maintenance Memos, Inbound Scheduled Maintenance Tasks, or Fault History, the data includes the label HARD or INTERMITTENT, or this: Message is ACTIVE only during operational mode shown in FIM.

(c) Select GO BACK to go back to the display shown before.

D. Put the Airplane Back to Its Usual Condition

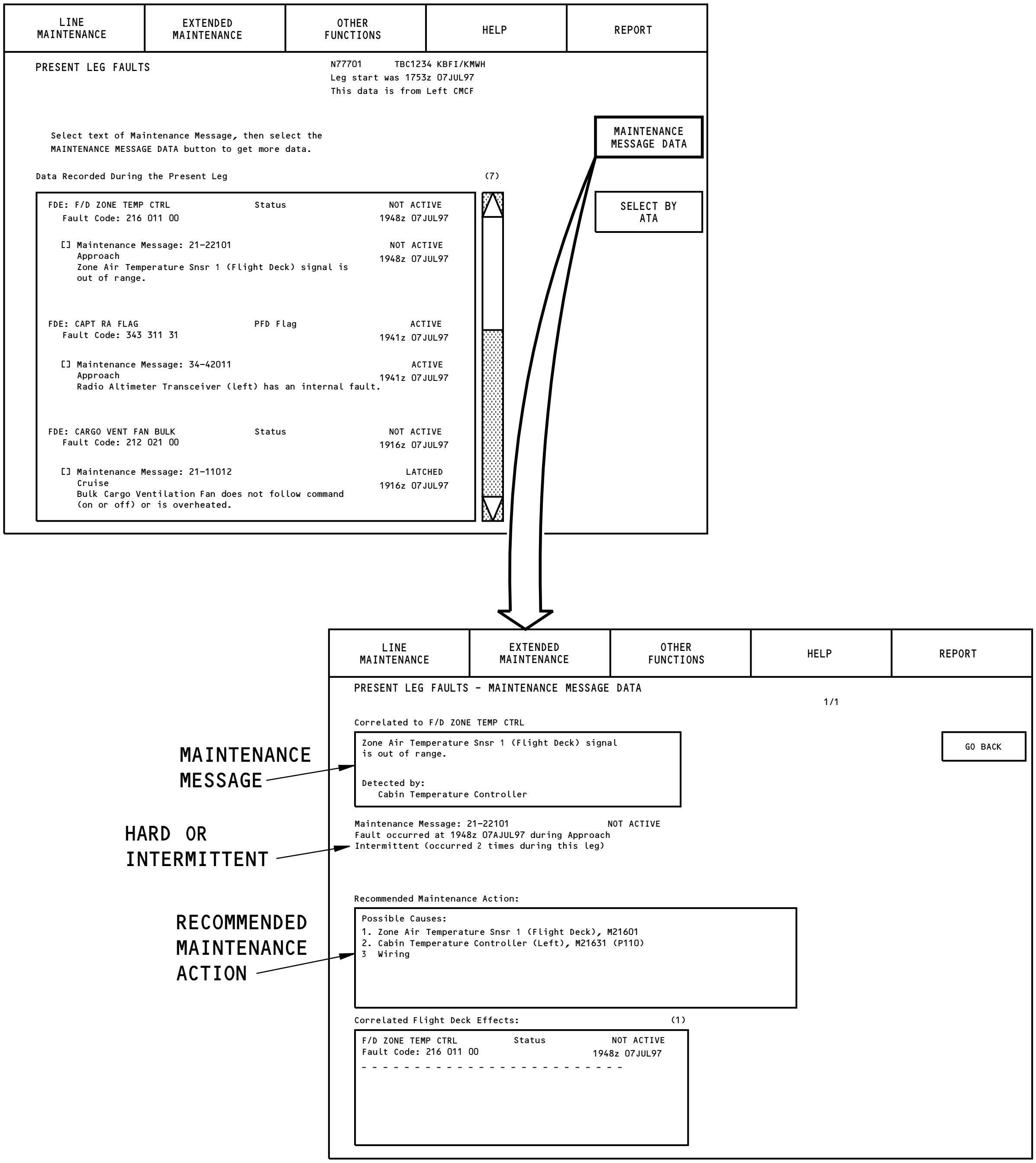
SUBTASK 45-10-00-860-073

(1) To go back to the initial MAT menu, do this:

(a) Select LINE MAINTENANCE from the CMCS main menu.

(b) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———



```
PRESENT LEG FAULTS                                  N77701      TBC1234 KBFI/KMWH
                                                    Leg start was 1753z 07JUL97
                                                    This data is from Left CMCF

   Select text of Maintenance Message, then select the
   MAINTENANCE MESSAGE DATA button to get more data.

Data Recorded During the Present Leg                                        (7)

  FDE: F/D ZONE TEMP CTRL            Status                 NOT ACTIVE
     Fault Code: 216 011 00                                1948z 07JUL97

     [] Maintenance Message: 21-22101                       NOT ACTIVE
        Approach                                           1948z 07JUL97
        Zone Air Temperature Snsr 1 (Flight Deck) signal is
        out of range.

  FDE: CAPT RA FLAG                  PFD Flag                   ACTIVE
     Fault Code: 343 311 31                                1941z 07JUL97

     [] Maintenance Message: 34-42011                           ACTIVE
        Approach                                           1941z 07JUL97
        Radio Altimeter Transceiver (left) has an internal fault.

  FDE: CARGO VENT FAN BULK           Status                 NOT ACTIVE
     Fault Code: 212 021 00                                1916z 07JUL97

     [] Maintenance Message: 21-11012                          LATCHED
        Cruise                                             1916z 07JUL97
        Bulk Cargo Ventilation Fan does not follow command
        (on or off) or is overheated.
```

```
PRESENT LEG FAULTS - MAINTENANCE MESSAGE DATA
                                                             1/1
Correlated to F/D ZONE TEMP CTRL
  Zone Air Temperature Snsr 1 (Flight Deck) signal
  is out of range.

  Detected by:
     Cabin Temperature Controller

Maintenance Message: 21-22101                  NOT ACTIVE
Fault occurred at 1948z 07AJUL97 during Approach
Intermittent (occurred 2 times during this leg)

Recommended Maintenance Action:
  Possible Causes:
  1. Zone Air Temperature Snsr 1 (Flight Deck), M21601
  2. Cabin Temperature Controller (Left), M21631 (P110)
  3  Wiring

Correlated Flight Deck Effects:                          (1)
  F/D ZONE TEMP CTRL          Status            NOT ACTIVE
  Fault Code: 216 011 00                     1948z 07JUL97
  - - - - - - - - - - - - - - - - - - - - - - - - -
```

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

H39453 S0006423371_V1

How to Show More Data for a Maintenance Message
Figure 214/45-10-00-990-813

TASK 45-10-00-740-813

16. How to Find the Fault History Data for One ATA System

(Figure 215)

A. General

(1) Use this task to find the maintenance messages in one ATA System that are stored in the fault history data base of the CMCS.

(2) The CMCS can keep fault history data from as many as 99 flight legs. The present flight leg is identified as Leg 0. The flight legs before the present flight leg have numbers -1, -2, -3, ... Each maintenance message is labeled with the flight leg or legs when it occurred.

(3) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(4) You can use a MAT or a PMAT for this procedure.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Find the Fault History Data for One ATA System

SUBTASK 45-10-00-860-138

(1) If you start the engines to move the airplane before maintenance, first, do this task: How to Prevent Flight Leg Change During Maintenance, TASK 45-10-00-860-802.

NOTE: When you start the engines, the flight leg changes unless you prevent it. If the flight leg changes, the CMCS collects failure data in a new flight leg, and failure data from the inbound flight leg shows in fault history leg -1.

SUBTASK 45-10-00-860-074

(2) To show the Fault History display for an ATA system, do this:

(a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

(b) Select EXTENDED MAINTENANCE from the CMCS main menu.

(c) Select FAULT HISTORY from the extended maintenance menu.

(d) Select an ATA system from the ATA selection dialog box.

(e) Select CONTINUE.

NOTE: The stored maintenance messages in the selected ATA system show.

SUBTASK 45-10-00-740-047

(3) Look for the maintenance message. (Use the scroll bar to see all the maintenance messages.)

NOTE: The data that shows below each maintenance message includes the flight legs in which the maintenance message was stored. The maintenance message is labeled HARD, INTERMITTENT (with the number of times it occurred), or active only during operational mode shown in FIM.

D. How to Find the Fault History Data for a Different ATA System

SUBTASK 45-10-00-740-048

(1) To change the display to show the maintenance messages in a different ATA system, do this:

(a) Select SELECT NEW ATA.

(b) Select an ATA system from the ATA selection dialog box.

(c) Select CONTINUE.

E. Put the Airplane Back to Its Usual Condition

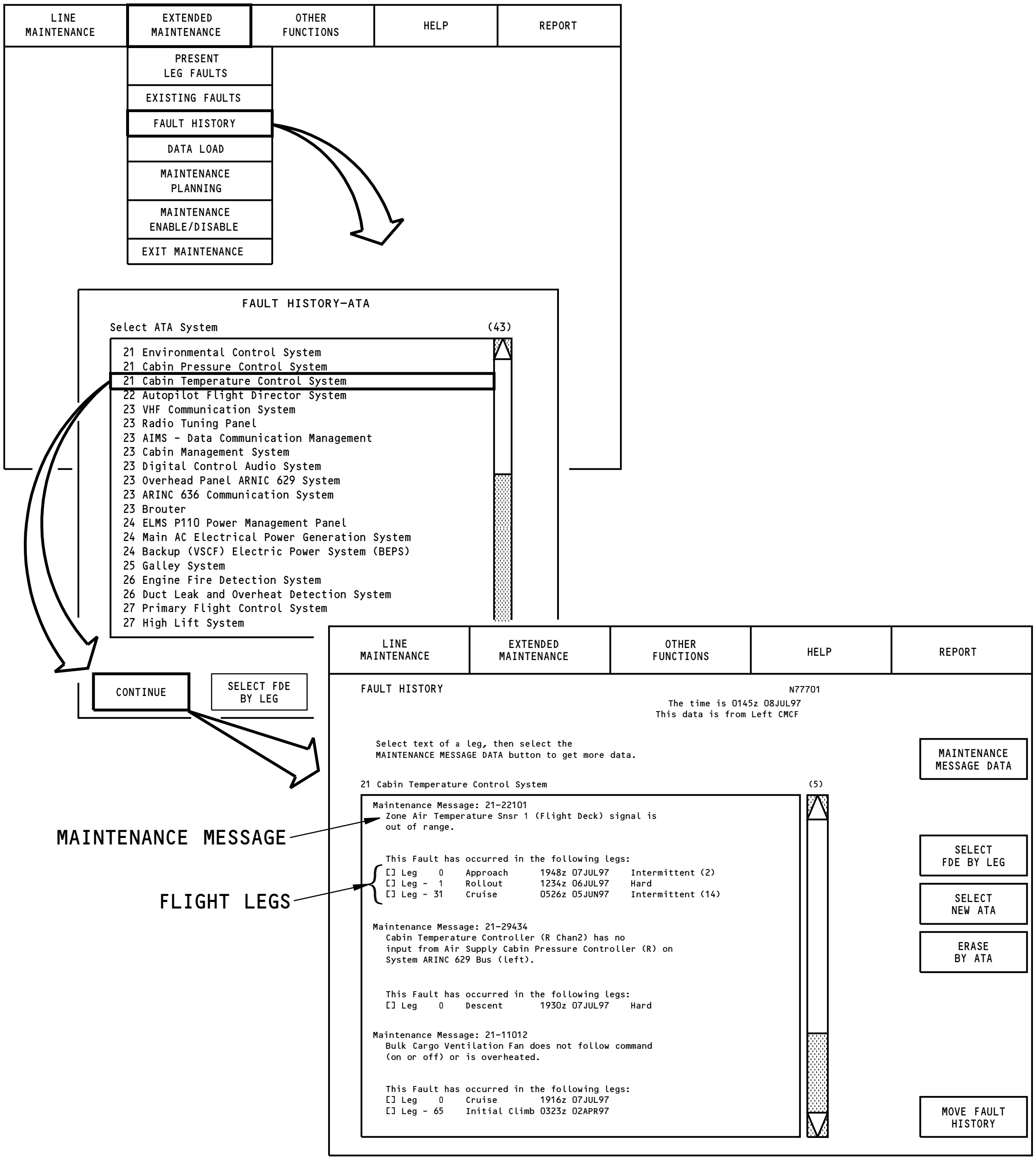
SUBTASK 45-10-00-860-075

(1) To go back to the initial MAT menu, do this:

(a) Select LINE MAINTENANCE from the CMCS main menu.

(b) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———



```
Select ATA System                                      (43)

21 Environmental Control System
21 Cabin Pressure Control System
21 Cabin Temperature Control System
22 Autopilot Flight Director System
23 VHF Communication System
23 Radio Tuning Panel
23 AIMS - Data Communication Management
23 Cabin Management System
23 Digital Control Audio System
23 Overhead Panel ARNIC 629 System
23 ARINC 636 Communication System
23 Brouter
24 ELMS P110 Power Management Panel
24 Main AC Electrical Power Generation System
24 Backup (VSCF) Electric Power System (BEPS)
25 Galley System
26 Engine Fire Detection System
26 Duct Leak and Overheat Detection System
27 Primary Flight Control System
27 High Lift System
```

```
FAULT HISTORY                                                N77701
                                         The time is 0145z 08JUL97
                                        This data is from Left CMCF

   Select text of a leg, then select the
   MAINTENANCE MESSAGE DATA button to get more data.

21 Cabin Temperature Control System                              (5)

 Maintenance Message: 21-22101
   Zone Air Temperature Snsr 1 (Flight Deck) signal is
   out of range.

   This Fault has occurred in the following legs:
   [] Leg    0    Approach      1948z 07JUL97    Intermittent (2)
   [] Leg -  1    Rollout       1234z 06JUL97    Hard
   [] Leg - 31    Cruise        0526z 05JUN97    Intermittent (14)

 Maintenance Message: 21-29434
   Cabin Temperature Controller (R Chan2) has no
   input from Air Supply Cabin Pressure Controller (R) on
   System ARINC 629 Bus (left).

   This Fault has occurred in the following legs:
   [] Leg    0    Descent       1930z 07JUL97    Hard

 Maintenance Message: 21-11012
   Bulk Cargo Ventilation Fan does not follow command
   (on or off) or is overheated.

   This Fault has occurred in the following legs:
   [] Leg    0    Cruise        1916z 07JUL97
   [] Leg - 65    Initial Climb 0323z 02APR97
```

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

H39454 S0006423375_V1

How to Find the Fault History Data from One ATA System
Figure 215/45-10-00-990-814

TASK 45-10-00-740-814

17. How to Find the Fault History Data from One Flight Leg

(Figure 216)

A. General

(1) Use this task to find the maintenance messages from one flight leg that are stored in the fault history data base of the CMCS.

(2) The CMCS can keep fault history data from as many as 99 flight legs. The present flight leg is identified as Leg 0. The flight legs before the present flight leg have numbers -1, -2, -3, ...

(3) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(4) You can use a MAT or a PMAT for this procedure.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Find the Fault History Data from One Flight Leg

SUBTASK 45-10-00-860-139

(1) If you start the engines to move the airplane before maintenance, first, do this task: How to Prevent Flight Leg Change During Maintenance, TASK 45-10-00-860-802.

NOTE: When you start the engines, the flight leg changes unless you prevent it. If the flight leg changes, the CMCS collects failure data in a new flight leg, and failure data from the inbound flight leg shows in fault history leg -1.

SUBTASK 45-10-00-740-062

(2) To show the fault history data from one flight leg, do this:

(a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

(b) Select EXTENDED MAINTENANCE from the CMCS main menu.

(c) Select FAULT HISTORY from the extended maintenance menu.

(d) Select SELECT FDE BY LEG.

(e) Select a flight leg from the display.

(f) Select CONTINUE.

NOTE: All FDEs and maintenance messages that were stored in the selected flight leg show. The flight deck effects and their correlated maintenance messages show in sequence of FDE occurrence. The maintenance messages that do not correlate to a FDE show in a group at the end of the list of FDEs.

SUBTASK 45-10-00-740-063

(3) To show the data from a different flight leg, select SELECT NEW LEG.

D. Put the Airplane Back to Its Usual Condition

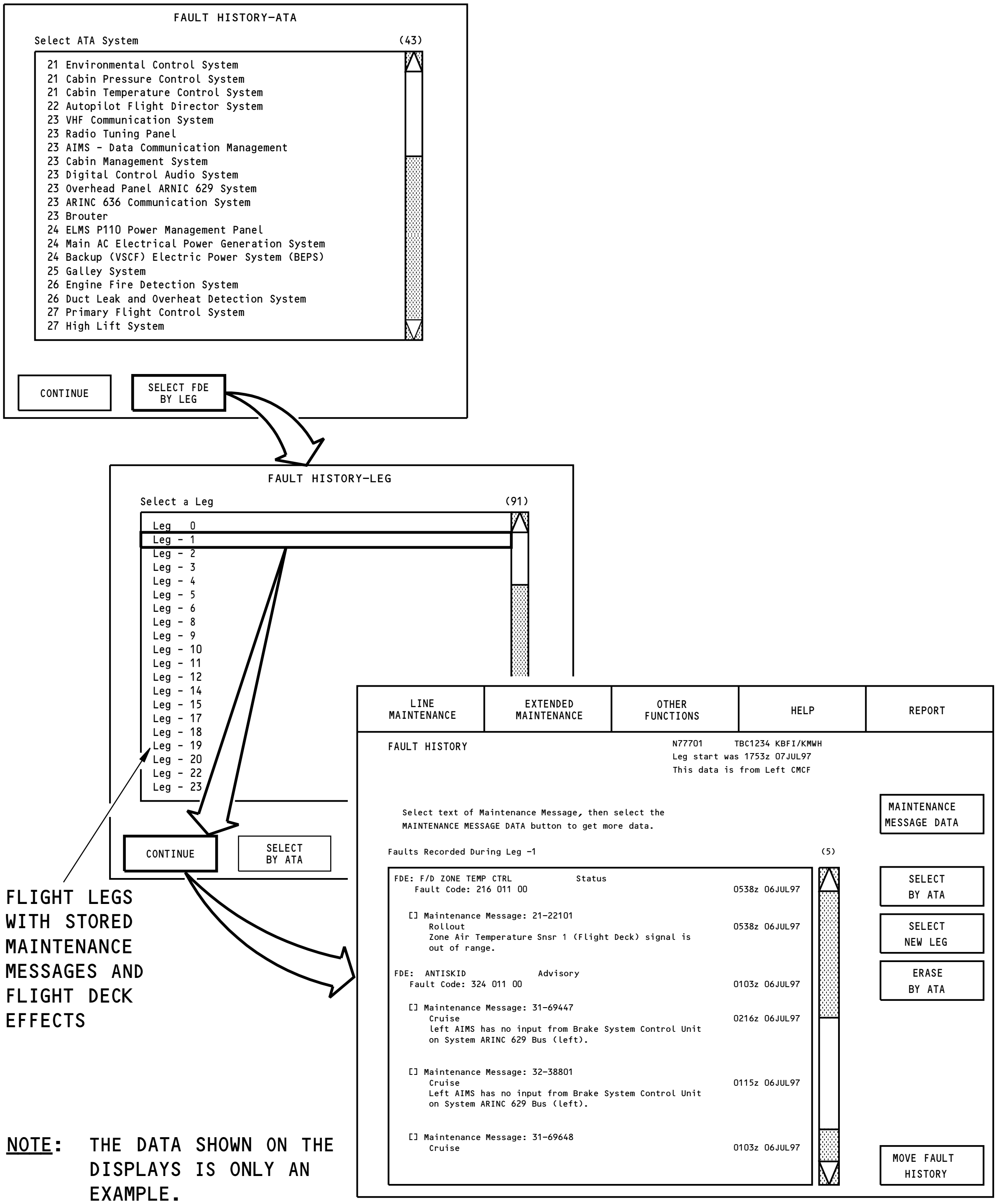
SUBTASK 45-10-00-860-088

(1) To go back to the initial MAT menu, do this:

  (a) Select LINE MAINTENANCE from the CMCS main menu.

  (b) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———



```
Select ATA System                                          (43)
 21 Environmental Control System
 21 Cabin Pressure Control System
 21 Cabin Temperature Control System
 22 Autopilot Flight Director System
 23 VHF Communication System
 23 Radio Tuning Panel
 23 AIMS - Data Communication Management
 23 Cabin Management System
 23 Digital Control Audio System
 23 Overhead Panel ARNIC 629 System
 23 ARINC 636 Communication System
 23 Brouter
 24 ELMS P110 Power Management Panel
 24 Main AC Electrical Power Generation System
 24 Backup (VSCF) Electric Power System (BEPS)
 25 Galley System
 26 Engine Fire Detection System
 26 Duct Leak and Overheat Detection System
 27 Primary Flight Control System
 27 High Lift System
```

```
Select a Leg                                               (91)
 Leg   0
 Leg - 1
 Leg - 2
 Leg - 3
 Leg - 4
 Leg - 5
 Leg - 6
 Leg - 8
 Leg - 9
 Leg - 10
 Leg - 11
 Leg - 12
 Leg - 14
 Leg - 15
 Leg - 17
 Leg - 18
 Leg - 19
 Leg - 20
 Leg - 22
 Leg - 23
```

```
FAULT HISTORY                          N77701      TBC1234 KBFI/KMWH
                                       Leg start was 1753z 07JUL97
                                       This data is from Left CMCF

  Select text of Maintenance Message, then select the
  MAINTENANCE MESSAGE DATA button to get more data.

Faults Recorded During Leg -1                                    (5)

FDE: F/D ZONE TEMP CTRL            Status
    Fault Code: 216 011 00                             0538z 06JUL97

   [] Maintenance Message: 21-22101
       Rollout                                         0538z 06JUL97
       Zone Air Temperature Snsr 1 (Flight Deck) signal is
       out of range.

FDE:  ANTISKID               Advisory
   Fault Code: 324 011 00                              0103z 06JUL97

   [] Maintenance Message: 31-69447
       Cruise                                          0216z 06JUL97
       left AIMS has no input from Brake System Control Unit
       on System ARINC 629 Bus (left).

   [] Maintenance Message: 32-38801
       Cruise                                          0115z 06JUL97
       Left AIMS has no input from Brake System Control Unit
       on System ARINC 629 Bus (left).

   [] Maintenance Message: 31-69648
       Cruise                                          0103z 06JUL97
```

FLIGHT LEGS WITH STORED MAINTENANCE MESSAGES AND FLIGHT DECK EFFECTS

<u>NOTE</u>: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

H39456 S0006423379_V1

How to Find the Fault History Data from One Flight Leg
Figure 216/45-10-00-990-815

TASK 45-10-00-740-802

18. How to Erase Fault History Data

A. General

(1) This task tells you how to erase fault history data. You can erase this data:

  (a) All occurrences of one maintenance message.

  (b) All fault history data in one ATA system.

  (c) All fault history data.

(2) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

  NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(3) You can use a MAT or a PMAT for this procedure.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. Prepare to Erase Fault History Data

SUBTASK 45-10-00-860-011

(1) First, do this to show the Fault History display:

  (a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

  (b) Select EXTENDED MAINTENANCE from the CMCS main menu.

  (c) Select FAULT HISTORY from the extended maintenance menu.

  NOTE: The ATA System dialog box shows.

D. How to Erase All Fault History Data

(Figure 217)

SUBTASK 45-10-00-740-086

(1) To erase all Fault History data, do this:

  (a) Select an ATA system from the list that shows.

  NOTE: Selection of an ATA system is necessary only to get access to the ERASE BY ATA selection. In a subsequent step you select all fault history.

  (b) Select CONTINUE.

  NOTE: Maintenance messages show. The ERASE BY ATA selection also shows.

  (c) Select ERASE BY ATA.

(d) Select All Fault History.

(e) Select ERASE.

NOTE: A dialog box shows the number of maintenance message occurrences that will be erased.

(f) To erase all the fault history data, select ERASE.

E. How to Erase the Fault History Data in One ATA System

SUBTASK 45-10-00-740-010

(1) To erase the Fault History data in one ATA system, do this:

(a) Select an ATA system from the list that shows.

NOTE: Selection of an ATA system is necessary only to get access to the ERASE BY ATA selection. In a subsequent step you select the ATA system to erase.

(b) Select CONTINUE.

NOTE: Maintenance messages show. The ERASE BY ATA selection also shows.

(c) Select ERASE BY ATA.

(d) Select the ATA system to erase.

(e) Select ERASE.

NOTE: A dialog box shows the number of maintenance message occurrences that will be erased.

(f) To erase the fault history data in the selected ATA system from all flight legs, select ERASE.

F. How to Erase All Occurrences of One Maintenance Message

(Figure 218)

SUBTASK 45-10-00-740-087

(1) To erase all occurrences of one maintenance message (when you know the flight leg), do this:

(a) Select SELECT FDE BY LEG at the bottom of the ATA System dialog box to show a list of flight legs.

(b) Select a leg when the message occurred.

(c) Select CONTINUE.

NOTE: Flight deck effects and maintenance messages show.

(d) Select the maintenance message.

(e) Select MAINTENANCE MESSAGE DATA.

(f) Select ERASE FAULT.

NOTE: A dialog box shows the number of maintenance message occurrences that will be erased.

(g) To erase the data for the selected maintenance message for all flight legs, select ERASE.

SUBTASK 45-10-00-740-088

(2) To erase the fault history data for one maintenance message (when you know the ATA system), do this:

(a) Select the ATA system that contains the maintenance message from the ATA System dialog box.

(b) Select CONTINUE.

NOTE: Maintenance messages and flight legs show.

(c) When you find the maintenance message to erase, select a leg in the list below the maintenance message.

(d) Select MAINTENANCE MESSAGE DATA.

(e) Select ERASE FAULT to erase the fault history data for the selected maintenance message for all flight legs.

NOTE: A dialog box shows the number of maintenance message occurrences that will be erased.

(f) To erase the maintenance message data, select ERASE.

G. Put the Airplane Back to Its Usual Condition

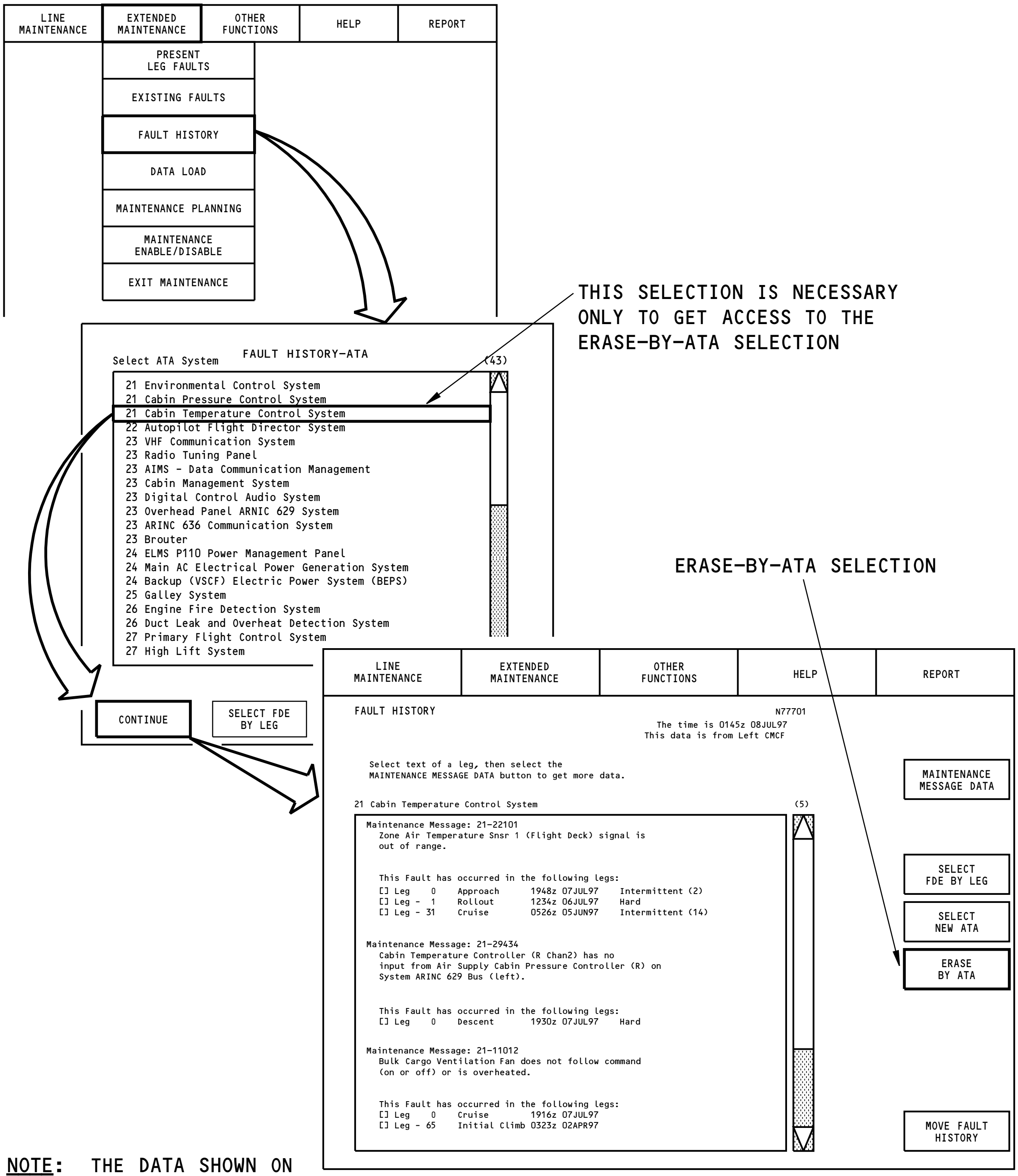
SUBTASK 45-10-00-860-012

(1) To go back to the initial MAT menu, do this:

(a) Select LINE MAINTENANCE from the CMCS main menu.

(b) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———



THIS SELECTION IS NECESSARY ONLY TO GET ACCESS TO THE ERASE-BY-ATA SELECTION

```
                    FAULT HISTORY-ATA
Select ATA System                                    (43)
  21 Environmental Control System
  21 Cabin Pressure Control System
  21 Cabin Temperature Control System
  22 Autopilot Flight Director System
  23 VHF Communication System
  23 Radio Tuning Panel
  23 AIMS - Data Communication Management
  23 Cabin Management System
  23 Digital Control Audio System
  23 Overhead Panel ARNIC 629 System
  23 ARINC 636 Communication System
  23 Brouter
  24 ELMS P110 Power Management Panel
  24 Main AC Electrical Power Generation System
  24 Backup (VSCF) Electric Power System (BEPS)
  25 Galley System
  26 Engine Fire Detection System
  26 Duct Leak and Overheat Detection System
  27 Primary Flight Control System
  27 High Lift System
```

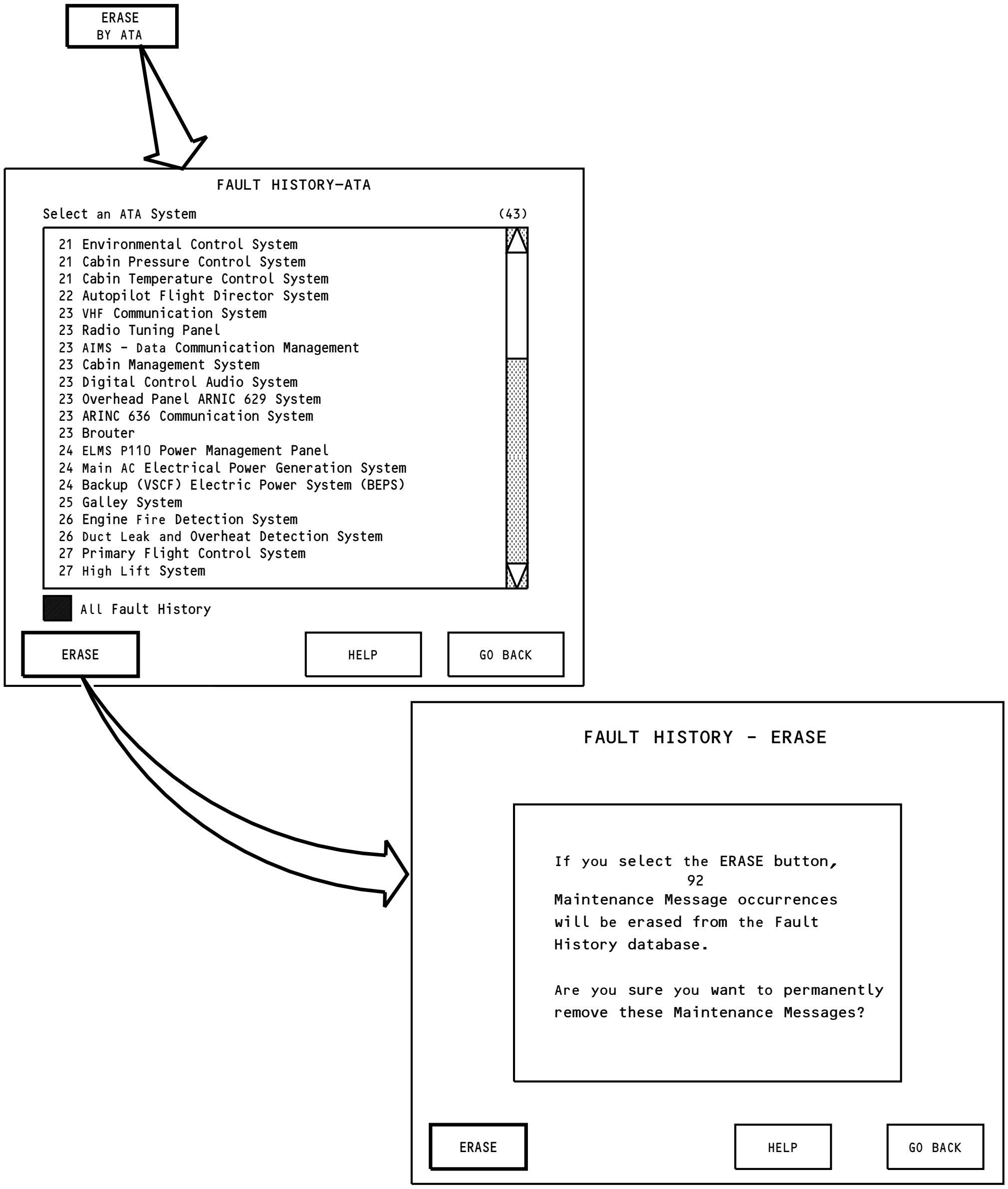
ERASE-BY-ATA SELECTION

```
FAULT HISTORY                                              N77701
                                          The time is 0145z 08JUL97
                                         This data is from Left CMCF

  Select text of a leg, then select the
  MAINTENANCE MESSAGE DATA button to get more data.

21 Cabin Temperature Control System                             (5)
 Maintenance Message: 21-22101
   Zone Air Temperature Snsr 1 (Flight Deck) signal is
   out of range.

   This Fault has occurred in the following legs:
   [] Leg    0    Approach      1948z 07JUL97    Intermittent (2)
   [] Leg -  1    Rollout       1234z 06JUL97    Hard
   [] Leg - 31    Cruise        0526z 05JUN97    Intermittent (14)

 Maintenance Message: 21-29434
   Cabin Temperature Controller (R Chan2) has no
   input from Air Supply Cabin Pressure Controller (R) on
   System ARINC 629 Bus (left).

   This Fault has occurred in the following legs:
   [] Leg    0    Descent       1930z 07JUL97    Hard

 Maintenance Message: 21-11012
   Bulk Cargo Ventilation Fan does not follow command
   (on or off) or is overheated.

   This Fault has occurred in the following legs:
   [] Leg    0    Cruise        1916z 07JUL97
   [] Leg - 65    Initial Climb 0323z 02APR97
```

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

F30909 S0006423384_V1

How to Erase All Fault History Data
Figure 217/45-10-00-990-816 (Sheet 1 of 2)



Select an ATA System (43)

- 21 Environmental Control System
- 21 Cabin Pressure Control System
- 21 Cabin Temperature Control System
- 22 Autopilot Flight Director System
- 23 VHF Communication System
- 23 Radio Tuning Panel
- 23 AIMS - Data Communication Management
- 23 Cabin Management System
- 23 Digital Control Audio System
- 23 Overhead Panel ARNIC 629 System
- 23 ARINC 636 Communication System
- 23 Brouter
- 24 ELMS P110 Power Management Panel
- 24 Main AC Electrical Power Generation System
- 24 Backup (VSCF) Electric Power System (BEPS)
- 25 Galley System
- 26 Engine Fire Detection System
- 26 Duct Leak and Overheat Detection System
- 27 Primary Flight Control System
- 27 High Lift System

■ All Fault History

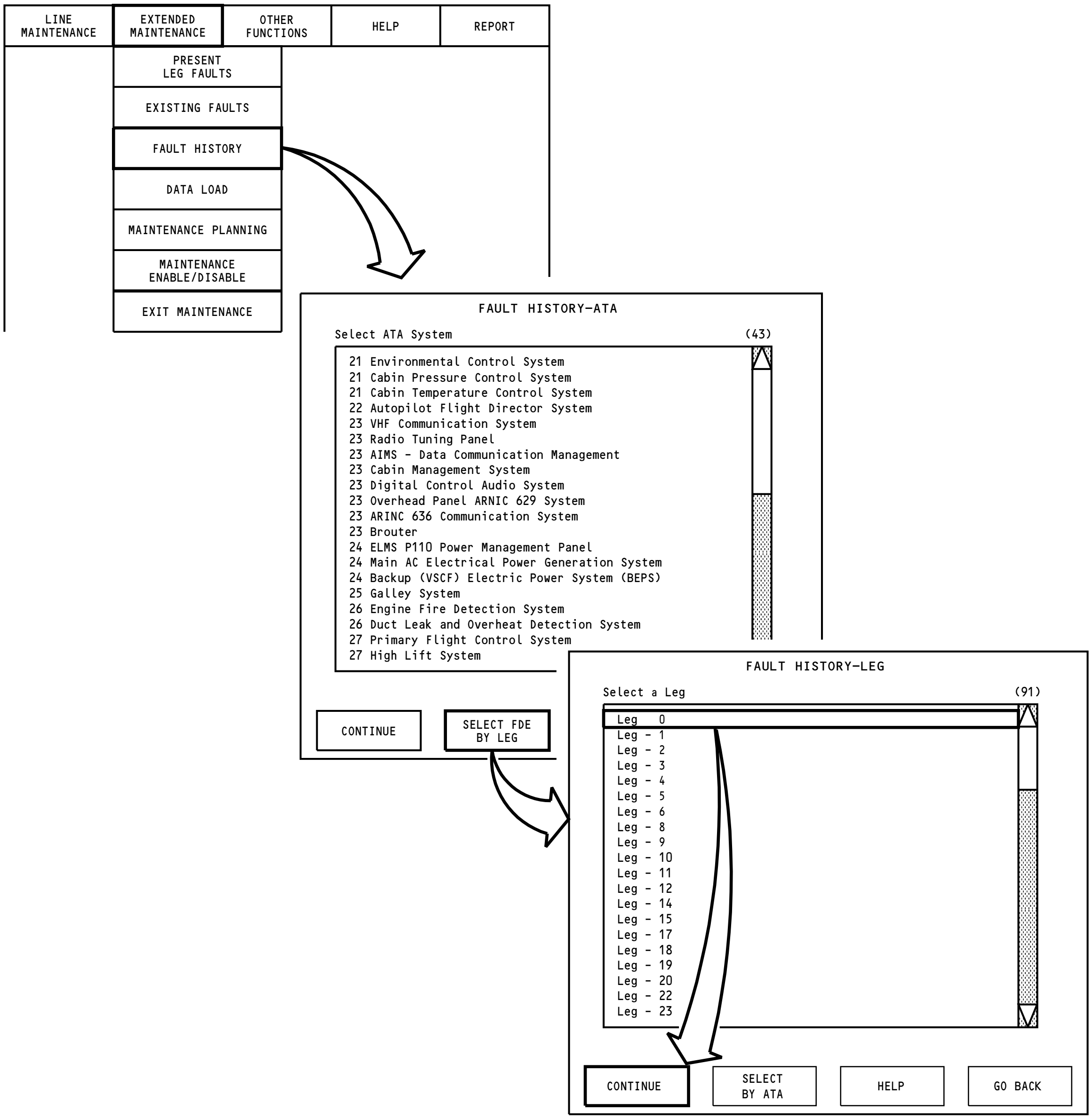
If you select the ERASE button, 92 Maintenance Message occurrences will be erased from the Fault History database.

Are you sure you want to permanently remove these Maintenance Messages?

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

H39463 S0006423385_V1

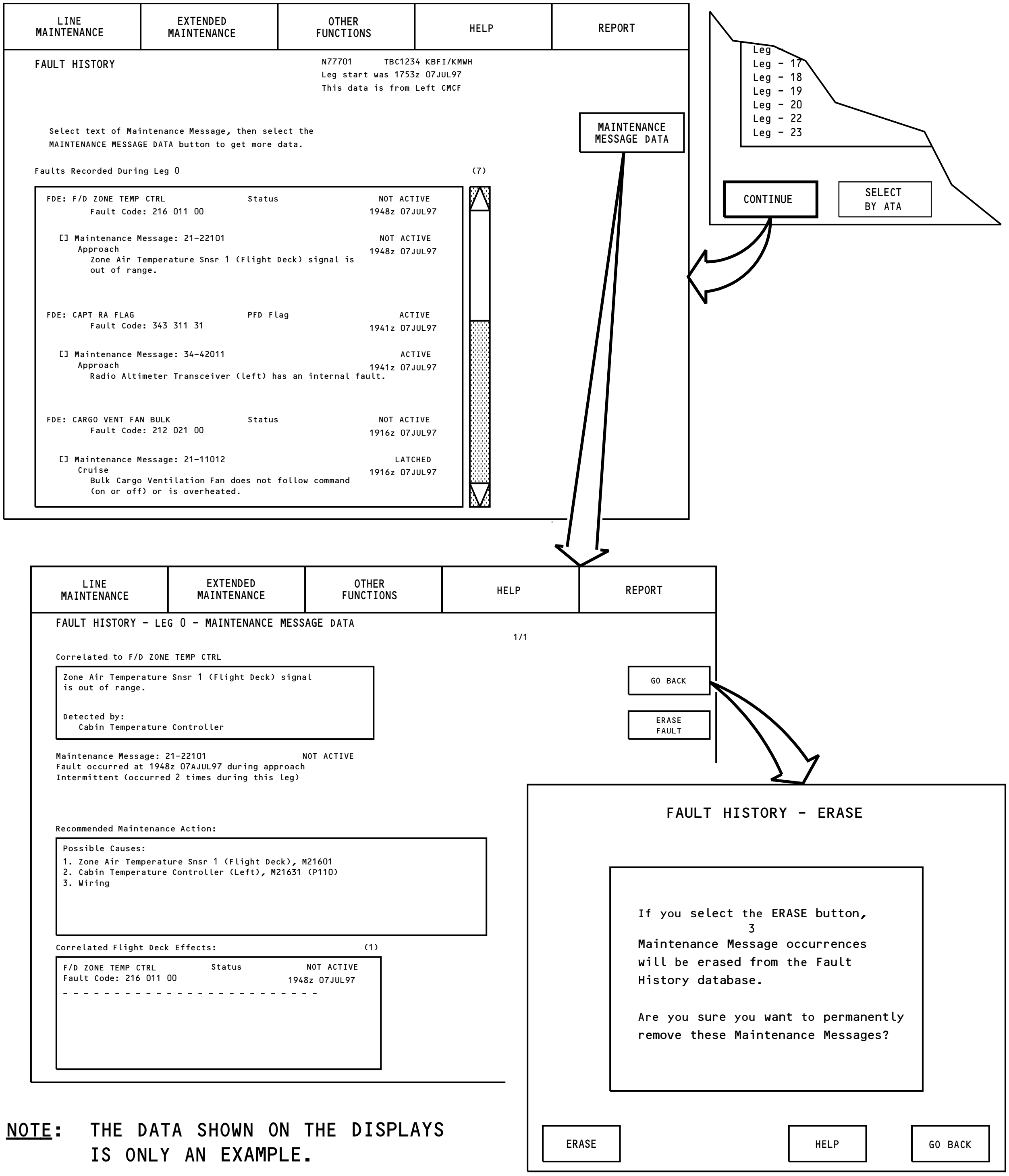
How to Erase All Fault History Data
Figure 217/45-10-00-990-816 (Sheet 2 of 2)


LINE MAINTENANCE
EXTENDED MAINTENANCE
OTHER FUNCTIONS
HELP
REPORT
PRESENT LEG FAULTS
EXISTING FAULTS
FAULT HISTORY
DATA LOAD
MAINTENANCE PLANNING
MAINTENANCE ENABLE/DISABLE
EXIT MAINTENANCE
FAULT HISTORY-ATA
Select ATA System
(43)
21 Environmental Control System
21 Cabin Pressure Control System
21 Cabin Temperature Control System
22 Autopilot Flight Director System
23 VHF Communication System
23 Radio Tuning Panel
23 AIMS - Data Communication Management
23 Cabin Management System
23 Digital Control Audio System
23 Overhead Panel ARNIC 629 System
23 ARINC 636 Communication System
23 Brouter
24 ELMS P110 Power Management Panel
24 Main AC Electrical Power Generation System
24 Backup (VSCF) Electric Power System (BEPS)
25 Galley System
26 Engine Fire Detection System
26 Duct Leak and Overheat Detection System
27 Primary Flight Control System
27 High Lift System
CONTINUE
SELECT FDE BY LEG
FAULT HISTORY-LEG
Select a Leg
(91)
Leg 0
Leg - 1
Leg - 2
Leg - 3
Leg - 4
Leg - 5
Leg - 6
Leg - 8
Leg - 9
Leg - 10
Leg - 11
Leg - 12
Leg - 14
Leg - 15
Leg - 17
Leg - 18
Leg - 19
Leg - 20
Leg - 22
Leg - 23
CONTINUE
SELECT BY ATA
HELP
GO BACK

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

C75415 S0006423386_V1

How to Erase One Maintenance Message from Fault History
Figure 218/45-10-00-990-817 (Sheet 1 of 2)



FAULT HISTORY

N77701 TBC1234 KBFI/KMWH
Leg start was 1753z 07JUL97
This data is from Left CMCF

Select text of Maintenance Message, then select the MAINTENANCE MESSAGE DATA button to get more data.

Faults Recorded During Leg 0 (7)

FDE: F/D ZONE TEMP CTRL Status NOT ACTIVE
Fault Code: 216 011 00 1948z 07JUL97

☐ Maintenance Message: 21-22101 NOT ACTIVE
Approach 1948z 07JUL97
Zone Air Temperature Snsr 1 (Flight Deck) signal is out of range.

FDE: CAPT RA FLAG PFD Flag ACTIVE
Fault Code: 343 311 31 1941z 07JUL97

☐ Maintenance Message: 34-42011 ACTIVE
Approach 1941z 07JUL97
Radio Altimeter Transceiver (left) has an internal fault.

FDE: CARGO VENT FAN BULK Status NOT ACTIVE
Fault Code: 212 021 00 1916z 07JUL97

☐ Maintenance Message: 21-11012 LATCHED
Cruise 1916z 07JUL97
Bulk Cargo Ventilation Fan does not follow command (on or off) or is overheated.

FAULT HISTORY - LEG 0 - MAINTENANCE MESSAGE DATA

1/1

Correlated to F/D ZONE TEMP CTRL

Zone Air Temperature Snsr 1 (Flight Deck) signal is out of range.

Detected by:
Cabin Temperature Controller

Maintenance Message: 21-22101 NOT ACTIVE
Fault occurred at 1948z 07AJUL97 during approach
Intermittent (occurred 2 times during this leg)

Recommended Maintenance Action:

Possible Causes:
1. Zone Air Temperature Snsr 1 (Flight Deck), M21601
2. Cabin Temperature Controller (Left), M21631 (P110)
3. Wiring

Correlated Flight Deck Effects: (1)

F/D ZONE TEMP CTRL Status NOT ACTIVE
Fault Code: 216 011 00 1948z 07JUL97
- -

FAULT HISTORY - ERASE

If you select the ERASE button,
3
Maintenance Message occurrences
will be erased from the Fault
History database.

Are you sure you want to permanently
remove these Maintenance Messages?

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

H39465 S0006423389_V2

How to Erase One Maintenance Message from Fault History
Figure 218/45-10-00-990-817 (Sheet 2 of 2)

TASK 45-10-00-740-820

19. How to Backup and Replace the Fault Database

(Figure 219)

A. General

(1) The fault database is automatically erased at these times:

(a) When battery power is removed.

(b) During software installation (OPS or OPC) in the AIMS IOM (M003) module.

(c) When the CMCF detects a new tail number.

(2) Before the fault database is erased, you can backup the data to removable media. You can then put the fault database back into the CMCF after the procedure that erases the data is complete.

(3) This task tells you how to transmit a copy of the fault database to removable media, and then replace the erased fault database with the data on the media.

(4) This task does not make a copy of fault history data that you can read. To make a copy that you can read, send a Fault History Summary Report to removable media (TASK 45-10-00-970-802).

(5) You can use a MAT or a PMAT as the maintenance access terminal for this procedure.

(6) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(7) You can backup the fault database to a high density disk (1.44 MB) in the MAT disk drive or a USB flash drive in the MAT.

NOTE: You can only use the USB memory stick with a MAT or GSE-Laptop loaded with MATA software. You cannot use the USB flash drive with a PMAT.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Put the Fault Database on Removable Media

SUBTASK 45-10-00-860-173

(1) First, do this to get access to the BACKUP FAULT DATABASE selection:

(a) If using a USB flash drive, connect the USB flash drive to the maintenance access terminal.

(b) On the maintenance access terminal, select ONBOARD MAINTENANCE from the initial menu.

(c) Select EXTENDED MAINTENANCE from the CMCS main menu.

(d) Select FAULT HISTORY from the extended maintenance menu.

(e) Select an ATA system from the list that shows.

NOTE: The ATA system that you select does not affect the fault data that is backed up. All of the fault database is always backed up. Selection of an ATA system is necessary only to get access to the BACKUP FAULT DATABASE selection.

(f) Select CONTINUE.

(g) Make sure that the BACKUP FAULT DATABASE selection shows.

SUBTASK 45-10-00-860-174

(2) To backup the fault database to the removable media, do this:

(a) If using a disk, put the disk (1.44 MB capacity, formatted for DOS, and not write-protected) in the disk drive.

(b) Select BACKUP FAULT DATABASE.

(c) Select Download to Disk Drive or USB Stick.

(d) Select CONTINUE.

NOTE: The fault database is transmitted to the removable media.

(e) When the operation is completed, select CONTINUE.

D. How to Replace the Fault Database

SUBTASK 45-10-00-860-175

(1) First, do this to get access to the BACKUP FAULT DATABASE selection:

(a) If using a USB flash drive, connect the USB flash drive to the maintenance access terminal.

(b) On the maintenance access terminal, select ONBOARD MAINTENANCE from the initial menu.

(c) Select EXTENDED MAINTENANCE from the CMCS main menu.

(d) Select FAULT HISTORY from the extended maintenance menu.

(e) If fault history data is available, make these selections:

NOTE: The ATA system that you select does not affect the quantity of fault data that is replaced. All of the fault database is always replaced. If all fault history is gone, no ATA system is available, and the BACKUP FAULT DATABASE selection shows on the first display.

1) Select an ATA system from the list that shows.

2) Select CONTINUE.

(f) Make sure that the BACKUP FAULT DATABASE selection shows.

SUBTASK 45-10-00-860-176

(2) To put the fault database that is on the removable media back into the CMCF, do this:

(a) If using a disk, put the disk with the fault database in the disk drive.

(b) Select MOVE FAULT HISTORY.

(c) Select Upload from Disk Drive or USB Stick.

(d) Select CONTINUE.

NOTE: A confirmation dialog box shows.

(e) To put the fault database back into the CMCF, select CONTINUE.

(f) When the operation is completed, select CONTINUE.

E. Put the Airplane Back to Its Usual Condition

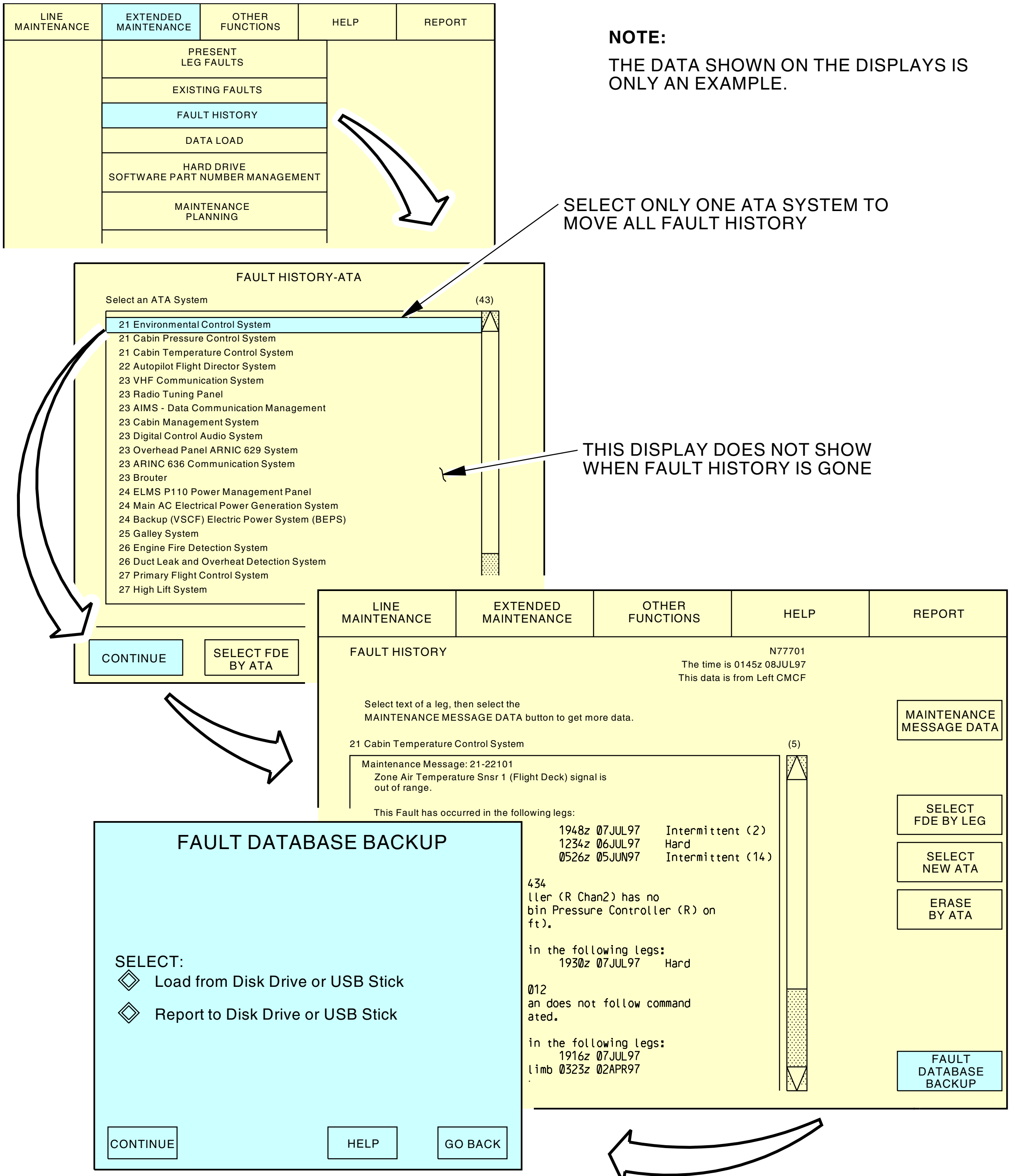
SUBTASK 45-10-00-860-147

(1) To go back to the initial MAT menu, do this:

(a) Select LINE MAINTENANCE from the CMCS main menu.

(b) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———



NOTE:

THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

SELECT ONLY ONE ATA SYSTEM TO MOVE ALL FAULT HISTORY

THIS DISPLAY DOES NOT SHOW WHEN FAULT HISTORY IS GONE

FAULT HISTORY-ATA

Select an ATA System (43)

21 Environmental Control System
21 Cabin Pressure Control System
21 Cabin Temperature Control System
22 Autopilot Flight Director System
23 VHF Communication System
23 Radio Tuning Panel
23 AIMS - Data Communication Management
23 Cabin Management System
23 Digital Control Audio System
23 Overhead Panel ARNIC 629 System
23 ARINC 636 Communication System
23 Brouter
24 ELMS P110 Power Management Panel
24 Main AC Electrical Power Generation System
24 Backup (VSCF) Electric Power System (BEPS)
25 Galley System
26 Engine Fire Detection System
26 Duct Leak and Overheat Detection System
27 Primary Flight Control System
27 High Lift System

FAULT HISTORY

N77701
The time is 0145z 08JUL97
This data is from Left CMCF

Select text of a leg, then select the MAINTENANCE MESSAGE DATA button to get more data.

21 Cabin Temperature Control System (5)

Maintenance Message: 21-22101
Zone Air Temperature Snsr 1 (Flight Deck) signal is out of range.

This Fault has occurred in the following legs:
1948z 07JUL97 Intermittent (2)
1234z 06JUL97 Hard
0526z 05JUN97 Intermittent (14)

434
ller (R Chan2) has no
bin Pressure Controller (R) on
ft).

in the following legs:
1930z 07JUL97 Hard

012
an does not follow command
ated.

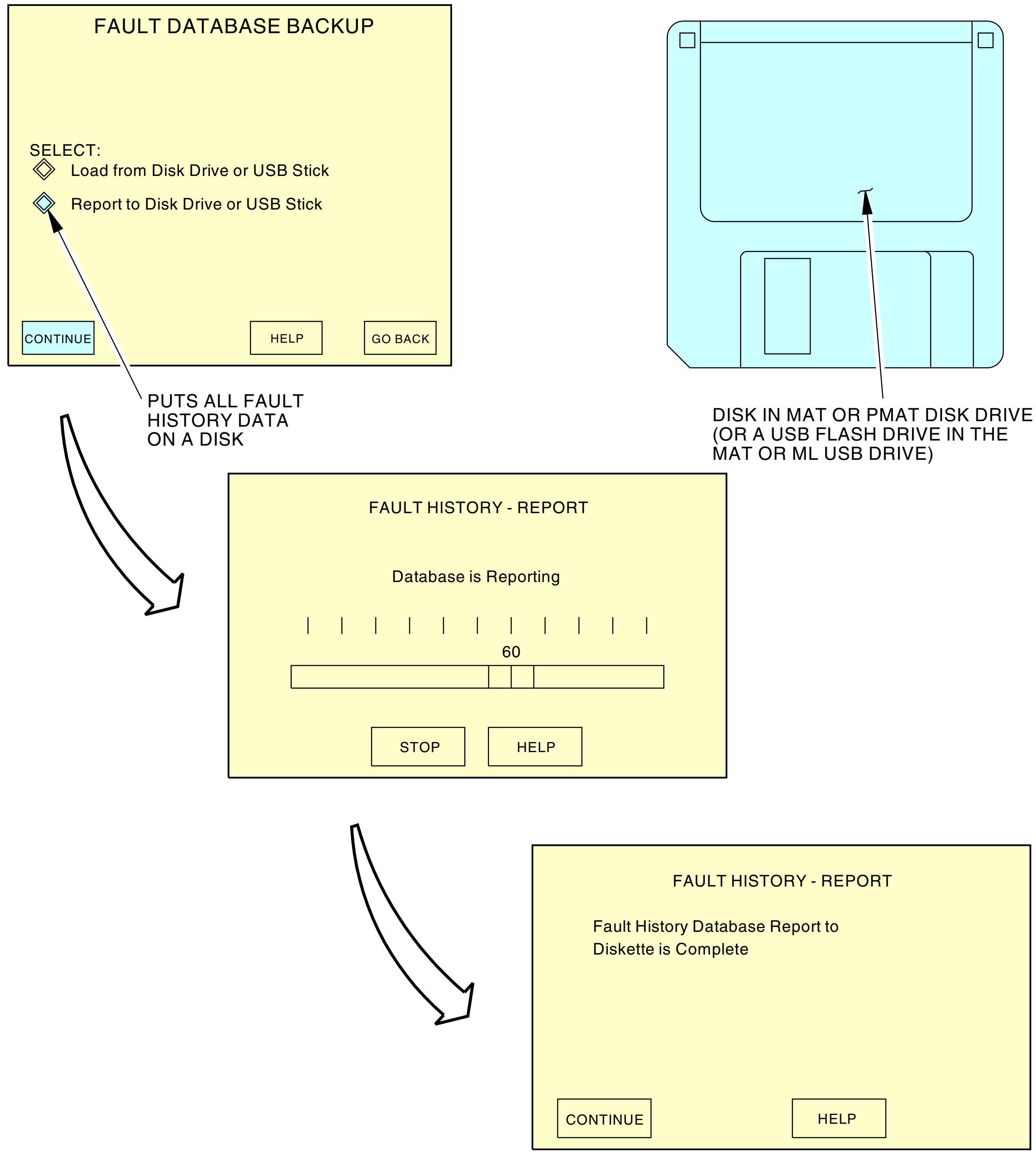
in the following legs:
1916z 07JUL97
limb 0323z 02APR97

FAULT DATABASE BACKUP

SELECT:
◇ Load from Disk Drive or USB Stick
◇ Report to Disk Drive or USB Stick

H39466 S0006423395_V2

How to Keep and Replace the Fault Database
Figure 219/45-10-00-990-818 (Sheet 1 of 3)



FAULT DATABASE BACKUP

SELECT:

◇ Load from Disk Drive or USB Stick

◇ Report to Disk Drive or USB Stick

PUTS ALL FAULT HISTORY DATA ON A DISK

DISK IN MAT OR PMAT DISK DRIVE (OR A USB FLASH DRIVE IN THE MAT OR ML USB DRIVE)

FAULT HISTORY - REPORT

Database is Reporting

FAULT HISTORY - REPORT

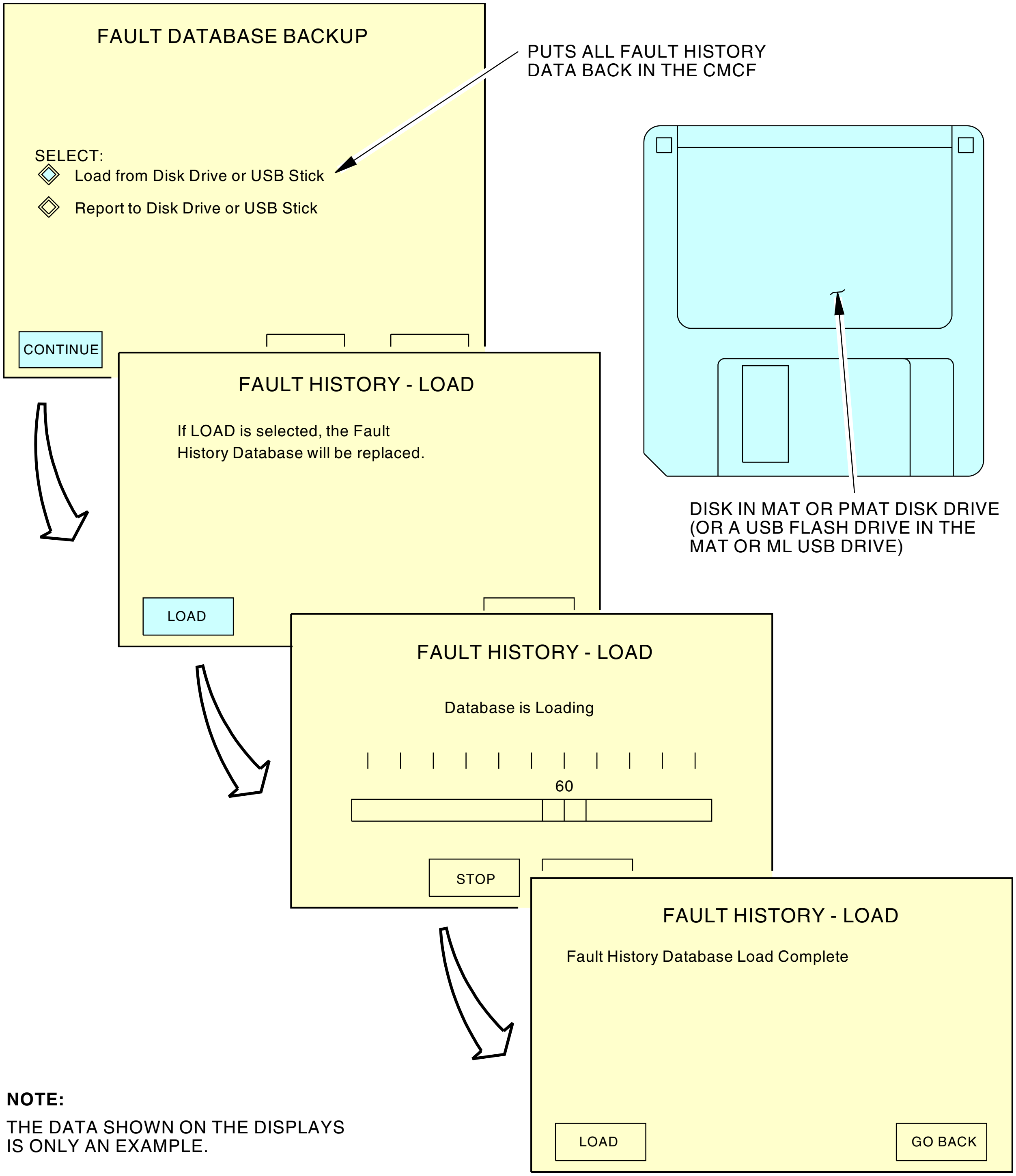
Fault History Database Report to Diskette is Complete

NOTE:

THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

2519340 S0000591232_V1

How to Keep and Replace the Fault Database
Figure 219/45-10-00-990-818 (Sheet 2 of 3)


FAULT DATABASE BACKUP
SELECT:
◇ Load from Disk Drive or USB Stick
◇ Report to Disk Drive or USB Stick
CONTINUE
PUTS ALL FAULT HISTORY DATA BACK IN THE CMCF
DISK IN MAT OR PMAT DISK DRIVE (OR A USB FLASH DRIVE IN THE MAT OR ML USB DRIVE)
FAULT HISTORY - LOAD
LOAD
FAULT HISTORY - LOAD
60
STOP
FAULT HISTORY - LOAD
LOAD
GO BACK

If LOAD is selected, the Fault History Database will be replaced.

Database is Loading

Fault History Database Load Complete

NOTE:

THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

2519348 S0000591233_V1

How to Keep and Replace the Fault Database
Figure 219/45-10-00-990-818 (Sheet 3 of 3)

TASK 45-10-00-420-801

20. How to Install Software

A. General

(1) This procedure supplies general instructions for software installation. The instructions for each LRU or LRM are in the applicable section of the AMM. To find the applicable section of the AMM and to read about the time that is necessary for software installation, do this task: On-Airplane Software Installation, TASK 20-15-11-400-801.

(2) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(3) You can use a MAT or a PMAT for this procedure.

(4) You can use a MAT and a PMAT at the same time to install software.

(5) The airplane must be on the ground with the engines off before you can install software.

B. References

Reference	Title
20-15-11-400-801	On-Airplane 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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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
STD-13361	Cable - USB (1 meter)
STD-13362	ROM Drive - USB CD/DVD
STD-13363	Keyboard - USB

D. How to Prepare for Software Installation

SUBTASK 45-10-00-840-001

(1) Connect the USB CD/DVD ROM Drive, STD-13362 to the EDU's USB ports.

NOTE: The external USB CD/DVD ROM Drive, STD-13362 may need its own power supply.

(a) Connect using a USB Cable, STD-13361.

(2) If necessary, connect the USB Keyboard, STD-13363 to the MAT EDU.

SUBTASK 45-10-00-860-019

(3) If the software is on a disk, put the correct disk in the disk drive (Figure 220).

SUBTASK 45-10-00-860-020

(4) To start the data load function, do this:

(a) If using the MAT, select AIMS from the initial MAT menu, and then select ONBOARD MAINTENANCE.

(b) If using the PMAT, select ONBOARD MAINTENANCE from the initial MAT menu.

(c) Select EXTENDED MAINTENANCE from the CMCS main menu.

(d) Select DATA LOAD from the extended maintenance menu.

NOTE: The main data load display shows. You must first select the destination.

E. How to Select the Software Destination

(Figure 221)

SUBTASK 45-10-00-860-106

(1) To select the destination of the software, do this:

(a) Select SELECT DESTINATION from the main data load display.

NOTE: The destination selection dialog box shows.

(b) Select the appropriate ATA system.

(c) Select the component in which you will install software.

(d) Select ADD.

1) Repeat steps (c) and (d) until all necessary components are added.

(e) Select CONTINUE.

NOTE: The main data load display shows.

F. How to Select the Software Source

(Figure 222)

SUBTASK 45-10-00-860-107

(1) To select the source of the software you will install, do this:

(a) Select SELECT SOURCE from the main data load display.

NOTE: The source selection dialog box shows.

(b) Select the component in which you will install software.

(c) Select the source that contains the software you will install.

(d) Select the software part number you will install.

(e) Select ADD.

1) Repeat steps (b) through (d) until all necessary software part numbers are listed for each component.

(f) Select CONTINUE.

NOTE: The main data load display shows.

G. How to Start and Complete the Software Installation

(Figure 223)

SUBTASK 45-10-00-420-001

(1) To start the software installation, do this:

(a) Select START from the main data load display.

NOTE: The START button will not illuminate until all components have a software part number to install.

(b) If instructions show on the display, do the instructions and then select CONTINUE.

NOTE: Load in Progress shows during software installation.

(c) If the software is on disks and an instruction to change the disk shows, do this:

1) Push the ejection switch to remove the disk.

2) Put the subsequent disk in the disk drive.

NOTE: The software installation continues automatically.

SUBTASK 45-10-00-750-001

(2) When the software installation is completed, make sure that the software part numbers that show are correct and then select CONTINUE.

(3) If the AIMS cabinet reboots during the software installation, select ONBOARD MAINTENANCE on the main data load display.

H. How to Stop Software Installation Before it is Completed

SUBTASK 45-10-00-860-023

(1) If you must stop software installation before it is completed, select STOP.

NOTE: Some systems will not operate if you stop software installation before it is completed. Some systems do not let you stop software installation after a given period of time.

I. How to Switch to the Other Central Maintenance Computing Function

SUBTASK 45-10-00-860-024

(1) If you see instructions to switch to the other Central Maintenance Computing Function, do this:

(a) Select GO BACK.

(b) Select OTHER FUNCTIONS.

(c) Select CENTRAL MAINTENANCE COMPUTER SWITCH CONTROL from the OTHER FUNCTIONS menu.

(d) Select SWITCH TO LEFT or SWITCH TO RIGHT (Select the one that shows).

NOTE: This shows: ARE YOU SURE YOU WANT TO SWITCH TO THE LEFT (RIGHT) CENTRAL MAINTENANCE COMPUTER???

(e) Select YES.

NOTE: After approximately 10-15 seconds, the other CMCF takes control and this shows: COMMUNICATION TO THE CENTRAL MAINTENANCE COMPUTING FUNCTION (CMCF) IS DISCONNECTED. THIS SESSION IS STOPPED.

(f) Select CONTINUE.

(g) Select ONBOARD MAINTENANCE.

(h) Select EXTENDED MAINTENANCE.

(i) Select DATA LOAD from the EXTENDED MAINTENANCE menu.

(j) Start the software installation procedure again.

J. How to Use the SHOW LESS DATA and SHOW MORE DATA Selections

SUBTASK 45-10-00-860-030

(1) After you select the destination, do this to change the source selection display:

(a) Select SHOW LESS DATA to show only the applicable software part numbers for the selected destination.

(b) Select SHOW MORE DATA to show all software part numbers available on the disk (or other source).

NOTE: The SHOW LESS DATA and SHOW MORE DATA selections are not available on the source selection display until a destination is selected on the destination selection display.

SUBTASK 45-10-00-860-031

(2) After you select the source, do this to change the destination selection display:

(a) Select SHOW LESS DATA to show only the applicable systems for the selected software part number.

(b) Select SHOW MORE DATA to show all systems.

NOTE: The SHOW LESS DATA and SHOW MORE DATA selections are not available on the destination selection display until a source is selected on the source selection display.

K. Put the Airplane Back to Its Usual Condition

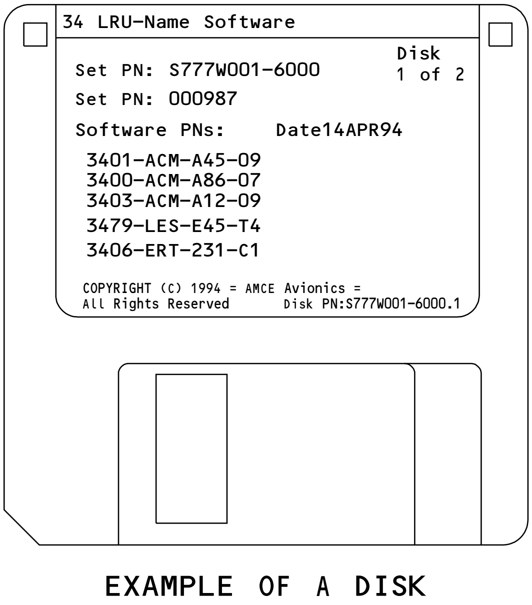
SUBTASK 45-10-00-860-032

(1) To go back to the initial MAT menu, do this:

(a) Select LINE MAINTENANCE from the CMCS main menu.

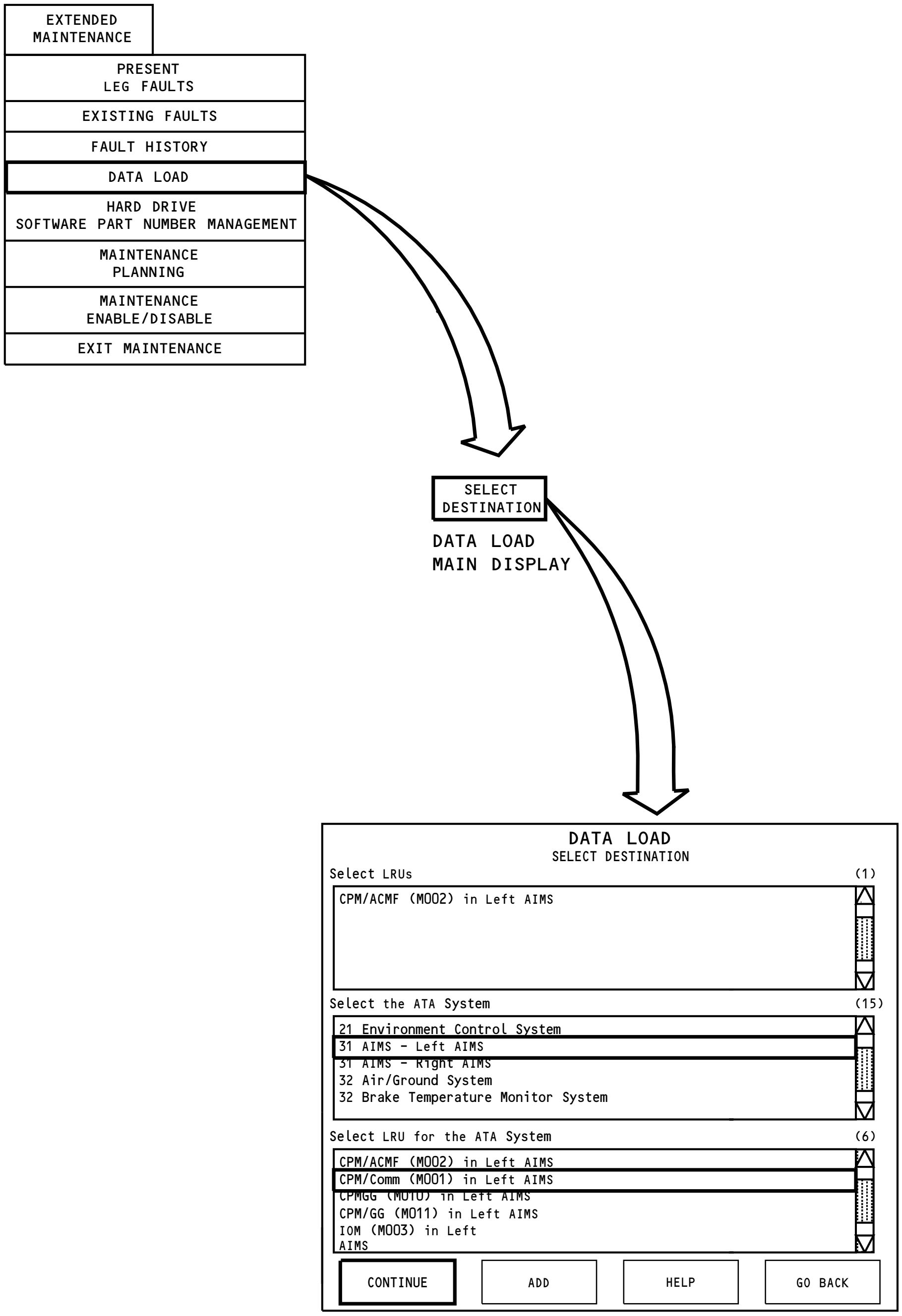
(b) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———



M11580 S0006423399_V1

Example of a Disk
Figure 220/45-10-00-990-819



Select LRUs (1)

CPM/ACMF (M002) in Left AIMS

Select the ATA System (15)

21 Environment Control System
31 AIMS - Left AIMS
31 AIMS - Right AIMS
32 Air/Ground System
32 Brake Temperature Monitor System

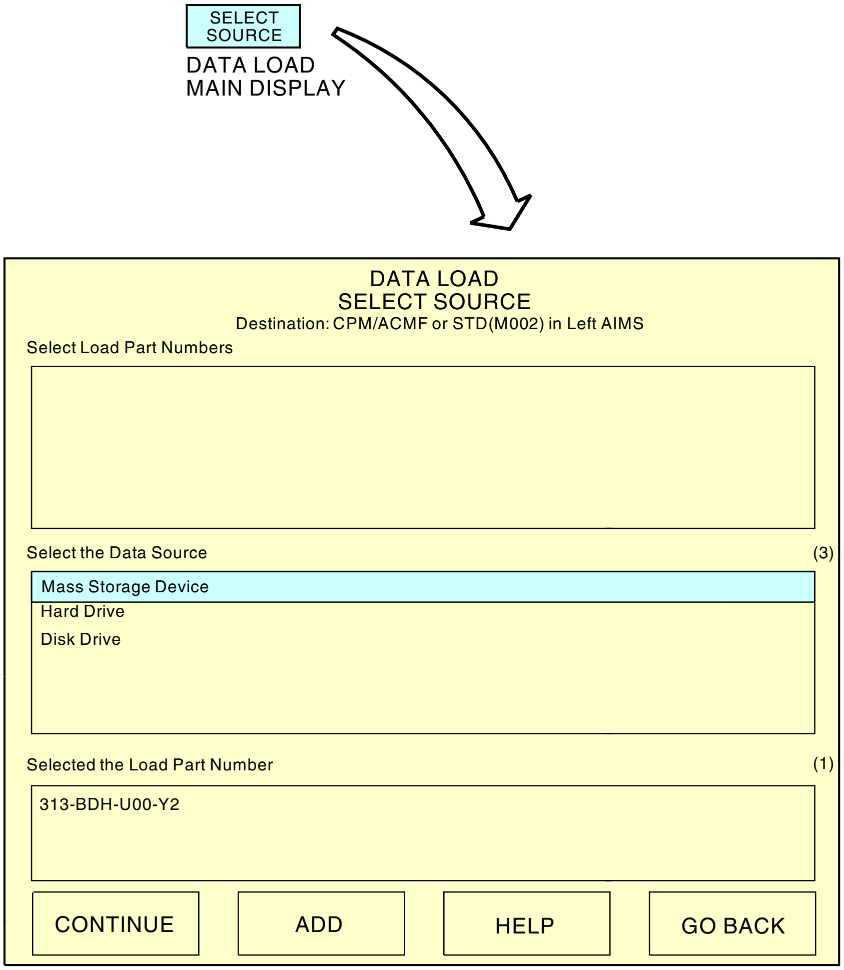
Select LRU for the ATA System (6)

CPM/ACMF (M002) in Left AIMS
CPM/Comm (M001) in Left AIMS
CPMGG (M010) in Left AIMS
CPM/GG (M011) in Left AIMS
IOM (M003) in Left AIMS

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

N32651 S0006423401_V1

How to Select the Software Destination
Figure 221/45-10-00-990-820



DATA LOAD
SELECT SOURCE
Destination: CPM/ACMF or STD(M002) in Left AIMS

Select Load Part Numbers

Select the Data Source (3)

- Mass Storage Device
- Hard Drive
- Disk Drive

Selected the Load Part Number (1)

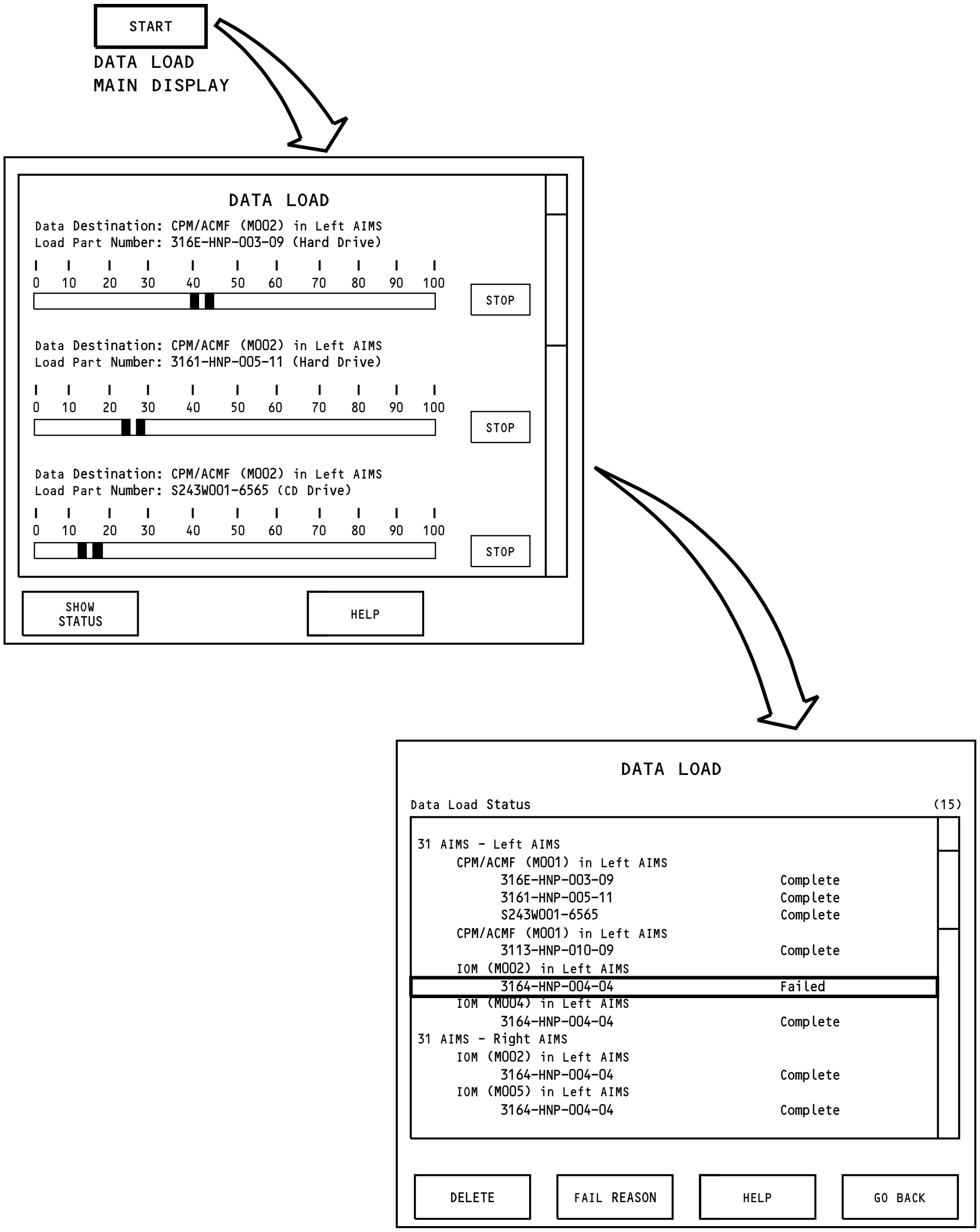
313-BDH-U00-Y2

NOTE:

THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

2518044 S0000591250_V1

How to Select the Software Source
Figure 222/45-10-00-990-821



Data Destination: CPM/ACMF (M002) in Left AIMS
Load Part Number: 316E-HNP-003-09 (Hard Drive)

Data Destination: CPM/ACMF (M002) in Left AIMS
Load Part Number: 3161-HNP-005-11 (Hard Drive)

Data Destination: CPM/ACMF (M002) in Left AIMS
Load Part Number: S243W001-6565 (CD Drive)

```
Data Load Status                                          (15)

31 AIMS - Left AIMS
     CPM/ACMF (M001) in Left AIMS
           316E-HNP-003-09                      Complete
           3161-HNP-005-11                      Complete
           S243W001-6565                        Complete
     CPM/ACMF (M001) in Left AIMS
           3113-HNP-010-09                      Complete
     IOM (M002) in Left AIMS
           3164-HNP-004-04                      Failed
     IOM (M004) in Left AIMS
           3164-HNP-004-04                      Complete
31 AIMS - Right AIMS
     IOM (M002) in Left AIMS
           3164-HNP-004-04                      Complete
     IOM (M005) in Left AIMS
           3164-HNP-004-04                      Complete
```

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

N32808 S0006423408_V1

How to Complete Software Installation
Figure 223/45-10-00-990-822

TASK 45-10-00-470-801

21. How to install the AIMS MSD Manager Application (AMMA)

(Figure 224)

A. General

(1) This task includes the steps to install the AIMS MSD Manager Application (AMMA) onto the MAT.

(2) To do this task, a USB CD/DVD-ROM optical drive is required.

B. Tools/Equipment

Reference	Description
STD-13361	Cable - USB (1 meter)
STD-13362	ROM Drive - USB CD/DVD

C. Location Zones

Zone	Area
212	Flight Compartment, Right

D. Prepare for the Installation

SUBTASK 45-10-00-860-177

(1) If AMMA software is received on DVD or electronically in electronic crate .zip files, unzip the crate containing the AMMA software and copy it to CD or DVD media.

(2) Do these steps to prepare the MAT:

(a) Connect the USB CD/DVD ROM Drive, STD-13362 with the USB Cable, STD-13361 to the MAT EDU's USB port.

NOTE: The external USB CD/DVD ROM Drive, STD-13362 may need its own power supply.

(b) If necessary, press and hold the MAT EDU Power button for about 3 seconds to power up the MAT EDU.

NOTE: If the MAT EDU is already powered up, it can take up to 10 seconds for the operating system to detect the USB CD/DVD ROM Drive.

1) Wait until the MAIN MENU appears.

(c) Select “ENTER” to close the advisory dialog.

SUBTASK 45-10-00-470-003

(3) Insert the media containing the AMMA MSP OPS software into the USB CD/DVD ROM Drive, STD-13362.

E. AMMA Installation

SUBTASK 45-10-00-470-001

(1) Do these steps to install the AMMA:

(a) Select the “TOOLS” tab.

(b) Select “App Dataload.”

(c) Select “Application to install.”

1) Make sure that the ‘‘App DLU - Select application to install’’ screen is shown.

(d) Navigate to the location where the software part is stored.

(e) Select the “.LUH” software part number to be loaded.

NOTE: “.LUH” is the file name.

(f) Select “Open.”

  1) Make sure that the “AIMS MSD Manager Application (AMMA)” screen is shown.

  NOTE: This can take up to 10 seconds.

(g) Select “Install.”

NOTE: The installation can take up to 2 minutes to complete.

  1) Make sure that the “AMMA Installation Complete” screen is shown.

(h) Select “OK.”

  1) Make sure that the “App Dataload - Application installed” screen is shown.

(i) Select “OK.”

NOTE: This will re-start the Main Menu.

(j) Select “ENTER” to close the advisory dialog.

(k) Verify that the “AMMA” button is shown on the Main Menu screen.

F. AMMA Installation Configuration Check

SUBTASK 45-10-00-700-001

(1) Do these steps to check the AMMA software:

(a) Select “AMMA” on the Main Menu screen.

  1) Make sure that the “AIMS MSD Manager Application Main Menu” screen is shown.

(b) Select “AMMA Configuration.”

  1) Make sure that the “AMMA Configuration” screen is shown.

(c) Verify the AMMA software.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 45-10-00-860-185

(1) Remove the media containing the AMMA MSP OPS software from the USB CD/DVD ROM Drive, STD-13362.

SUBTASK 45-10-00-860-178

(2) Do these steps to exit:

(a) Select “Go Back.”

(b) Select “Exit.”

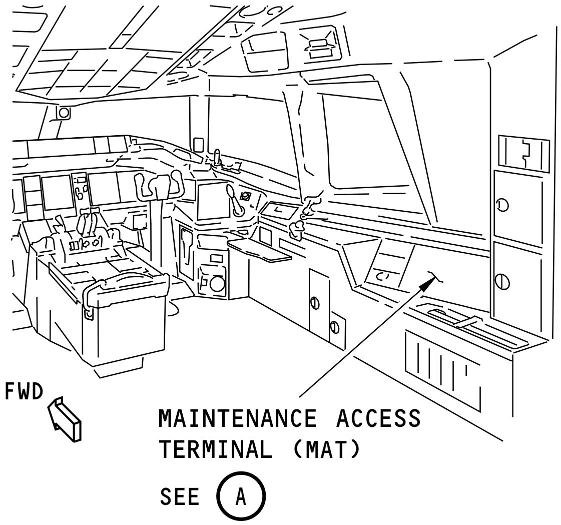
(c) Select “Shutdown.”

(d) Select “Turn Off.”

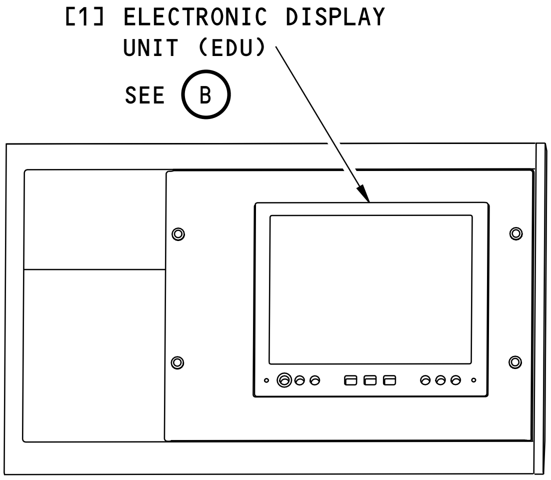
SUBTASK 45-10-00-080-003

(3) Remove the USB CD/DVD ROM Drive, STD-13362 from the MAT EDU's USB port.

——— END OF TASK ———

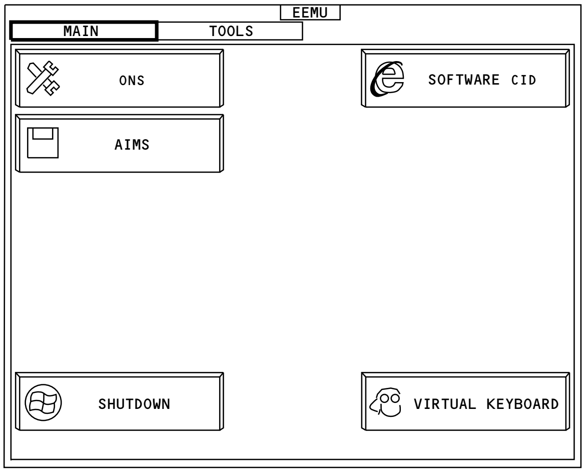


FLIGHT COMPARTMENT



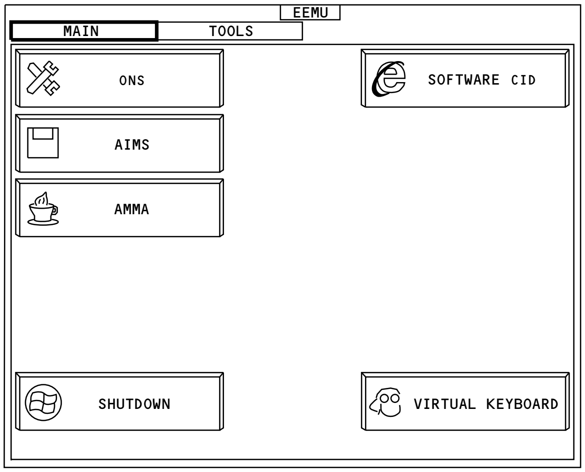
MAINTENANCE ACCESS TERMINAL (MAT)
(SECOND OBSERVERS CONSOLE, P18)

A



EDU MAIN MENU WITH AIMS MSD MANAGEMENT APPLICATION (AMMA)
(NOT INSTALLED)

B



EDU MAIN MENU WITH AIMS MSD MANAGEMENT APPLICATION (AMMA)
(INSTALLED)

B

2291501 S0000518502_V1

AIMS MSD Manager Application (AMMA) Installation
Figure 224/45-10-00-990-850

TASK 45-10-00-070-801

22. How to remove the AIMS MSD Manager Application (AMMA)

(Figure 224)

A. General

(1) This task includes the steps to remove the AIMS MSD Manager Application (AMMA) from the MAT.

(2) To do this task, a USB CD/DVD-ROM optical drive is required.

B. Tools/Equipment

Reference	Description
STD-13361	Cable - USB (1 meter)
STD-13362	ROM Drive - USB CD/DVD

C. Location Zones

Zone	Area
212	Flight Compartment, Right

D. Prepare for the Removal

SUBTASK 45-10-00-860-180

(1) Do these steps to prepare the MAT:

- (a) Connect the USB CD/DVD ROM Drive, STD-13362 with the USB Cable, STD-13361 to the MAT EDU's USB port.

  NOTE: The external USB CD/DVD ROM Drive, STD-13362 may need its own power supply.

- (b) If necessary, press and hold the MAT EDU Power button for about 3 seconds to power up the MAT EDU.

  NOTE: If the MAT EDU is already powered up, it can take up to 10 seconds for the operating system to detect the USB CD/DVD ROM Drive.

  - 1) Wait until the MAIN MENU appears.

- (c) Select “ENTER” to close the advisory dialog.

SUBTASK 45-10-00-470-002

(2) Insert the media containing the AMMA MSP OPS software into the USB CD/DVD ROM Drive, STD-13362.

E. AMMA Removal

SUBTASK 45-10-00-070-001

(1) Do these steps to remove the AMMA:

- (a) Select the “TOOLS” tab.
- (b) Select “App Dataload.”
- (c) Select “Application to install.”
  - 1) Make sure that the ‘‘App DLU - Select application to install’’ window appears.
- (d) Navigate to the location where the software part is stored.
- (e) Select the “.LUH” software part number to be loaded.

  NOTE: “.LUH” is the file name.
- (f) Select “Open.”

1) Make sure that the “AIMS MSD Manager Application (AMMA)” screen is shown.

NOTE: This can take up to 10 seconds.

(g) Select “Uninstall.”

NOTE: This can take up to 30 seconds to complete.

1) Make sure that the “AMMA Uninstall Complete” screen is shown.

(h) Select “OK.”

1) Make sure that the “App Dataload - Application uninstalled” screen is shown.

(i) Select “OK.”

NOTE: This will re-start the Main Menu.

(j) Select “ENTER” to close the advisory dialog.

(k) Verify the “AMMA” button is not shown on the Main Menu screen.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 45-10-00-860-183

(1) Remove the media containing the AMMA MSP OPS software from the USB CD/DVD ROM Drive, STD-13362.

SUBTASK 45-10-00-860-184

(2) Do these steps to exit:

(a) Select “Go Back.”

(b) Select “Exit.”

(c) Select “Shutdown.”

(d) Select “Turn Off.”

SUBTASK 45-10-00-080-002

(3) Remove the USB CD/DVD ROM Drive, STD-13362 from the MAT EDU's USB port.

——— END OF TASK ———

TASK 45-10-00-470-802

23. How to Add Software to the MAT MSD with the AIMS MSD Manager Application (AMMA)

Figure 225 or Figure 226

A. General

(1) This task includes the steps to add software to the MAT MSD with the AIMS MSD Manager Application (AMMA).

(2) To do this task, a USB CD/DVD-ROM optical drive or other USB compatible media is necessary.

(a) USB compatible media includes a USB flash drive.

B. Tools/Equipment

Reference	Description
STD-13361	Cable - USB (1 meter)
STD-13362	ROM Drive - USB CD/DVD

C. Location Zones

Zone	Area
212	Flight Compartment, Right

D. Prepare for the Installation

SUBTASK 45-10-00-860-188

(1) Do these steps to prepare the MAT:

- (a) Connect the applicable USB CD/DVD ROM Drive, STD-13362 with the USB Cable, STD-13361 or the USB compatible media to the EDU's USB port.

  NOTE: The external USB CD/DVD ROM Drive, STD-13362 may need its own power supply.

- (b) If necessary, press and hold the MAT EDU Power button for about 3 seconds to power up the MAT EDU.

  NOTE: If the MAT EDU is already powered up, it can take up to 10 seconds for the operating system to detect the USB compatible media.

  - 1) Wait until the MAIN MENU appears.

- (c) Select “ENTER” to close the advisory dialog.

SUBTASK 45-10-00-470-004

(2) If necessary, put the software media into the USB CD/DVD ROM Drive, STD-13362.

E. Software Installation

SUBTASK 45-10-00-470-005

(1) Do these steps to install the software:

NOTE: AMMA OPS is capable of reading all part types but they must be contained on a single disk format. AMMA does not support multiple floppy disk formatted parts.

- (a) Select “AMMA.”
  - 1) Make sure that the “AMMA Main Menu” screen is shown.
- (b) Select “Source Directory” folder.
  - 1) Make sure that the “Source Directory Selection” screen is shown.
- (c) Select the drive/folder that contains the software.
- (d) Select the “Select” button.
  - 1) Make sure that the software part number is shown in the “Source Directory” screen.

    NOTE: More than one software part number can show.
- (e) Select the software part number to install.

  NOTE: More than one software part number can be selected.

  NOTE: Tap one time to select, tap two times to cancel.
- (f) Select the “Add >>” button.
  - 1) Make sure that the “Confirm Add Parts” screen is shown.
- (g) Select “Yes.”
  - 1) Make sure that the “Add Parts Result” screen is shown with the software added.
- (h) Select “Close.”

F. Software Configuration Check

SUBTASK 45-10-00-700-002

(1) Do these steps to do the software configuration check:

- (a) Select “Check Parts.”

1) Make sure that the “Check Target Drive Parts Integrity” screen is shown.

NOTE: This screen will show all software part numbers installed.

(b) Select “Select ALL.”

1) Make sure that all software part numbers are highlighted.

(c) Select “Check Parts.”

1) Make sure that the “Check Parts Results” screen is shown.

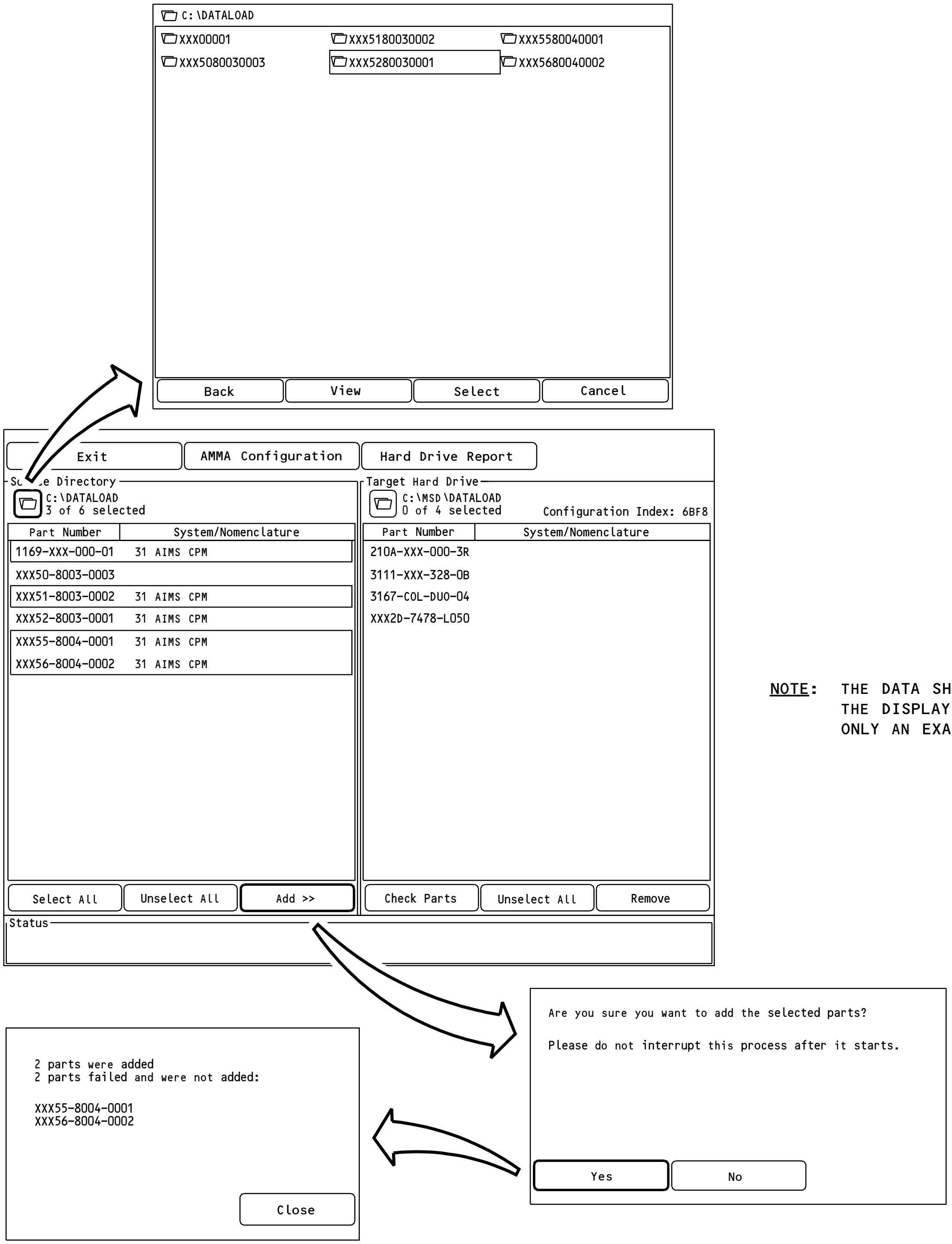
(d) Make sure that all the selected part numbers pass.

NOTE: If the part number shows “failed,” repeat steps to add and check software again. If it continues to fail, get the correct part number and try again.

NOTE: “Failed” means software installation did not pass the integrity check.

(e) Select “Close” two times to go back to the AMMA Main Menu.

——— END OF TASK ———



Source directory: C:\DATALOAD
3 of 6 selected

Part Number	System/Nomenclature
1169-XXX-000-01	31 AIMS CPM
XXX50-8003-0003	
XXX51-8003-0002	31 AIMS CPM
XXX52-8003-0001	31 AIMS CPM
XXX55-8004-0001	31 AIMS CPM
XXX56-8004-0002	31 AIMS CPM

Target Hard Drive: C:\MSD\DATALOAD
0 of 4 selected
Configuration Index: 6BF8

Part Number	System/Nomenclature
210A-XXX-000-3R	
3111-XXX-328-0B	
3167-COL-DU0-04	
XXX2D-7478-L050	

Are you sure you want to add the selected parts?

Please do not interrupt this process after it starts.

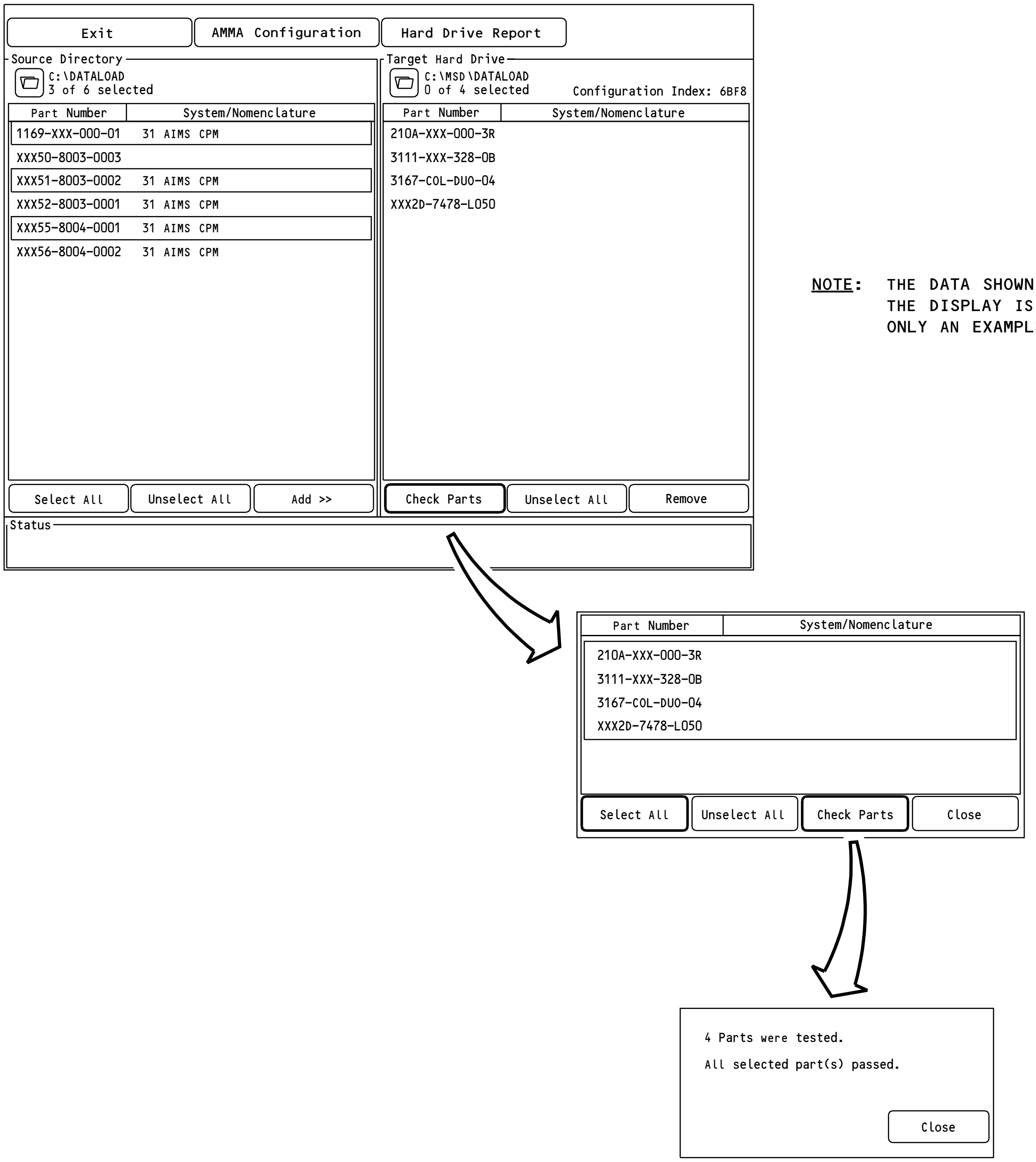
2 parts were added
2 parts failed and were not added:

XXX55-8004-0001
XXX56-8004-0002

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

2392077 S0000549082_V1

How to Add Parts on the MAT MSD with the AIMS MSD Manager Application (AMMA)
Figure 225/45-10-00-990-851



Source Directory
C:\DATALOAD
3 of 6 selected

Part Number	System/Nomenclature
1169-XXX-000-01	31 AIMS CPM
XXX50-8003-0003	
XXX51-8003-0002	31 AIMS CPM
XXX52-8003-0001	31 AIMS CPM
XXX55-8004-0001	31 AIMS CPM
XXX56-8004-0002	31 AIMS CPM

Target Hard Drive
C:\MSD\DATALOAD
0 of 4 selected
Configuration Index: 6BF8

Part Number	System/Nomenclature
210A-XXX-000-3R	
3111-XXX-328-0B	
3167-COL-DUO-04	
XXX2D-7478-L050	

Part Number	System/Nomenclature
210A-XXX-000-3R	
3111-XXX-328-0B	
3167-COL-DUO-04	
XXX2D-7478-L050	

4 Parts were tested.

All selected part(s) passed.

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

2392415 S0000549083_V1

How to Verify Parts on the MAT MSD with the AIMS MSD Manager Application (AMMA)
Figure 226/45-10-00-990-852

TASK 45-10-00-070-802

24. How to Remove Software from the MAT MSD with the AIMS MSD Manager Application (AMMA)

Figure 227

A. General

(1) This task includes the steps to remove software from the MAT MSD with the AIMS MSD Manager Application (AMMA).

B. Location Zones

Zone	Area
212	Flight Compartment, Right

C. Prepare for the Removal

SUBTASK 45-10-00-860-191

(1) If necessary, push and hold the MAT EDU Power button for approximately 3 seconds to power up the MAT EDU.

  (a) Wait until the MAIN MENU is shown.

(2) Select “ENTER” to close the advisory dialog.

D. Software Removal

SUBTASK 45-10-00-070-002

(1) Do these steps to remove software:

  (a) Select “AMMA.”

    1) Make sure that the “AMMA Main Menu” screen is shown.

  (b) Select the software part number to be removed.

  NOTE: More than one software part number can be selected.

  NOTE: Tap one time to select, tap two times to cancel.

  (c) Select “Remove.”

    1) Make sure that the “Confirm Part Removal” screen is shown.

  (d) Select “Yes.”

    1) Make sure that the “Remove Parts Results” screen is shown with the number of parts removed.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 45-10-00-860-192

(1) Do these steps to exit:

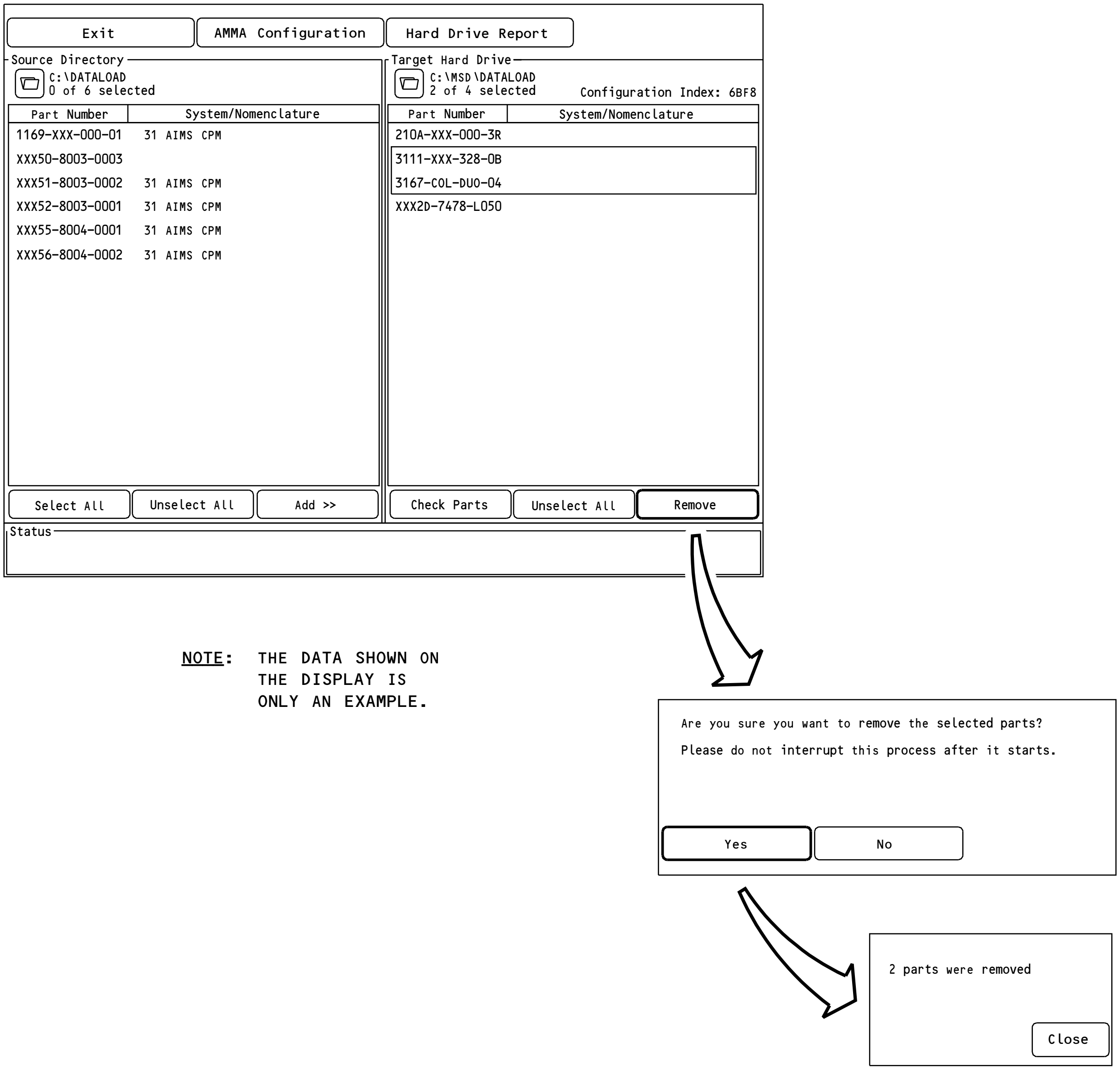
  (a) Select “Close.”

  (b) Select “Exit.”

  (c) Select “Shutdown.”

  (d) Select “Turn Off.”

——— END OF TASK ———



Source Directory
C:\DATALOAD
0 of 6 selected

Part Number	System/Nomenclature
1169-XXX-000-01	31 AIMS CPM
XXX50-8003-0003	
XXX51-8003-0002	31 AIMS CPM
XXX52-8003-0001	31 AIMS CPM
XXX55-8004-0001	31 AIMS CPM
XXX56-8004-0002	31 AIMS CPM

Target Hard Drive
C:\MSD\DATALOAD
2 of 4 selected
Configuration Index: 6BF8

Part Number	System/Nomenclature
210A-XXX-000-3R	
3111-XXX-328-0B	
3167-COL-DU0-04	
XXX2D-7478-L050	

Status

Are you sure you want to remove the selected parts?
Please do not interrupt this process after it starts.

2 parts were removed

<u>NOTE</u>: THE DATA SHOWN ON
THE DISPLAY IS
ONLY AN EXAMPLE.

2392414 S0000549084_V1

How to Remove Software from the MAT MSD with the AIMS MSD Manager Application (AMMA)
Figure 227/45-10-00-990-853

TASK 45-10-00-700-801

25. How to See the Software Installed on the MAT MSD with the AIMS MSD Manager Application (AMMA)

Figure 228

A. General

(1) This task includes the steps on how see the software installed on the MAT MSD with the AIMS MSD Manager Application (AMMA).

B. Location Zones

Zone	Area
212	Flight Compartment, Right

C. Prepare for the Software Check

SUBTASK 45-10-00-860-194

(1) If necessary, push and hold the MAT EDU power button for approximately 3 seconds to power up the MAT EDU.

  (a) Wait until the MAIN MENU is shown.

(2) Select “ENTER” to close the advisory dialog.

D. Software Check

SUBTASK 45-10-00-700-003

(1) Do these steps to do a check of the software installed on the MAT MSD:

  (a) Select “AMMA.”

    1) Make sure that the “AMMA Main Menu” screen is shown.

  (b) Select “Hard Drive Report.”

    1) Make sure that the “777 MAT Hard Drive Report” screen is shown.

    NOTE: This screen shows all software installed on the MAT MSD.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 45-10-00-860-195

(1) Do these steps to exit:

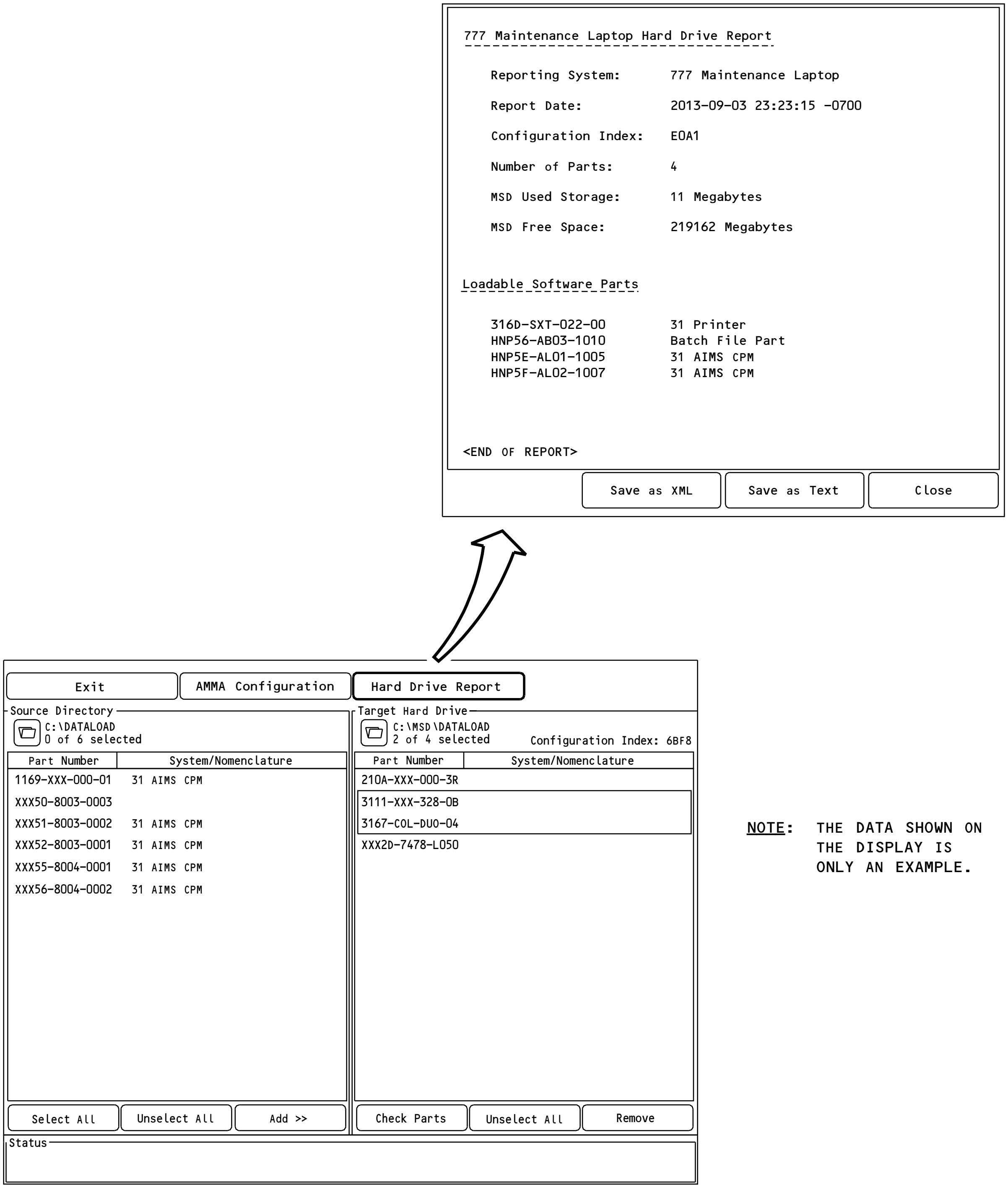
  (a) Select “Close.”

  (b) Select “Exit.”

  (c) Select “Shutdown.”

  (d) Select “Turn Off.”

——— END OF TASK ———



```
777 Maintenance Laptop Hard Drive Report
----------------------------------------

    Reporting System:       777 Maintenance Laptop

    Report Date:            2013-09-03 23:23:15 -0700

    Configuration Index:    E0A1

    Number of Parts:        4

    MSD Used Storage:       11 Megabytes

    MSD Free Space:         219162 Megabytes


Loadable Software Parts
-----------------------

    316D-SXT-022-00         31 Printer
    HNP56-AB03-1010         Batch File Part
    HNP5E-AL01-1005         31 AIMS CPM
    HNP5F-AL02-1007         31 AIMS CPM


<END OF REPORT>
```

Source Directory
C:\DATALOAD
0 of 6 selected

Part Number	System/Nomenclature
1169-XXX-000-01	31 AIMS CPM
XXX50-8003-0003	
XXX51-8003-0002	31 AIMS CPM
XXX52-8003-0001	31 AIMS CPM
XXX55-8004-0001	31 AIMS CPM
XXX56-8004-0002	31 AIMS CPM

Target Hard Drive
C:\MSD\DATALOAD
2 of 4 selected
Configuration Index: 6BF8

Part Number	System/Nomenclature
210A-XXX-000-3R	
3111-XXX-328-0B	
3167-COL-DU0-04	
XXX2D-7478-L050	

Status

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

2392417 S0000549088_V1

How to See the Software Installed on the MAT MSD with the AIMS MSD Manager Application (AMMA)
Figure 228/45-10-00-990-854

TASK 45-10-00-860-812

26. How to Add Software to the Hard Drive

(Figure 229)

A. General

(1) This procedure tells you how to add software media on the MAT or PMAT hard drive.

(a) When the software is on the hard drive, you can use the data load function to install that software in other LRUs.

(b) The software part numbers on the hard drive show on the data load source selection display.

(2) You add software to the hard drive one part number at a time.

(3) The set of software on the hard drive has a configuration name. When you add software to the hard drive, you can change the configuration name to help you keep a record of the configuration of your hard drive.

(4) The set of software on the hard drive also has a configuration index that changes automatically when you add software. You cannot change the configuration index but you can use it to help you keep a record of the configuration of your hard drive.

B. Tools/Equipment

Reference	Description
STD-13361	Cable - USB (1 meter)
STD-13362	ROM Drive - USB CD/DVD
STD-13363	Keyboard - USB

C. Procedure

SUBTASK 45-10-00-860-197

(1) Connect the USB CD/DVD ROM Drive, STD-13362 to the MAT electronic display unit (EDU) USB port.

NOTE: The external USB CD/DVD ROM Drive, STD-13362 may need its own power supply.

(a) Connect using a USB Cable, STD-13361.

(2) If necessary, connect the USB Keyboard, STD-13363 to the MAT EDU.

NOTE: If the software is on a disk, use an external USB floppy drive.

SUBTASK 45-10-00-860-150

(3) Put the media that contains the new software into the drive.

SUBTASK 45-10-00-860-149

(4) Do this to show the hard drive main menu:

(a) On the MAT, select AIMS from the initial MAT menu, and then select ONBOARD MAINTENANCE.

(b) Select EXTENDED MAINTENANCE from the CMCS main menu.

(c) Select HARD DRIVE SOFTWARE PART NUMBER MANAGEMENT from the extended maintenance menu.

SUBTASK 45-10-00-860-151

(5) To put the new software on the hard drive, do this:

(a) Select ADD A NEW PART NUMBER TO THE HARD DRIVE from the hard drive main menu.

(b) Select CONTINUE on the hard drive main menu.

(c) Select the appropriate data source.

(d) Select the part number from the list.

(e) Select CONTINUE.

NOTE: The display shows you the progress.

NOTE: The display shows the configuration name and the new configuration index.

(f) If an instruction to change the disk shows, do this:

1) Push the ejection switch to remove the disk.

2) Put the subsequent disk in the disk drive.

NOTE: The software installation continues automatically.

(6) Make sure “The check has passed, and the part number is serviceable” is displayed.

SUBTASK 45-10-00-860-153

(7) To change the configuration name (Figure 230), do this:

(a) Select ENTER NEW NAME.

(b) Use the keyboard to type a new configuration name (up to 15 characters).

NOTE: Type the configuration name in upper case characters. File names that are not in upper case format will not load to the PMAT hard drive.

(c) Select MAKE CHANGE.

NOTE: The display shows the new configuration name.

SUBTASK 45-10-00-860-154

(8) To add more software, or to do other tasks with the hard drive, select HARD DRIVE MAIN MENU.

SUBTASK 45-10-00-860-155

(9) To stop hard drive management, select GO BACK.

D. Put the Airplane Back to Its Usual Condition

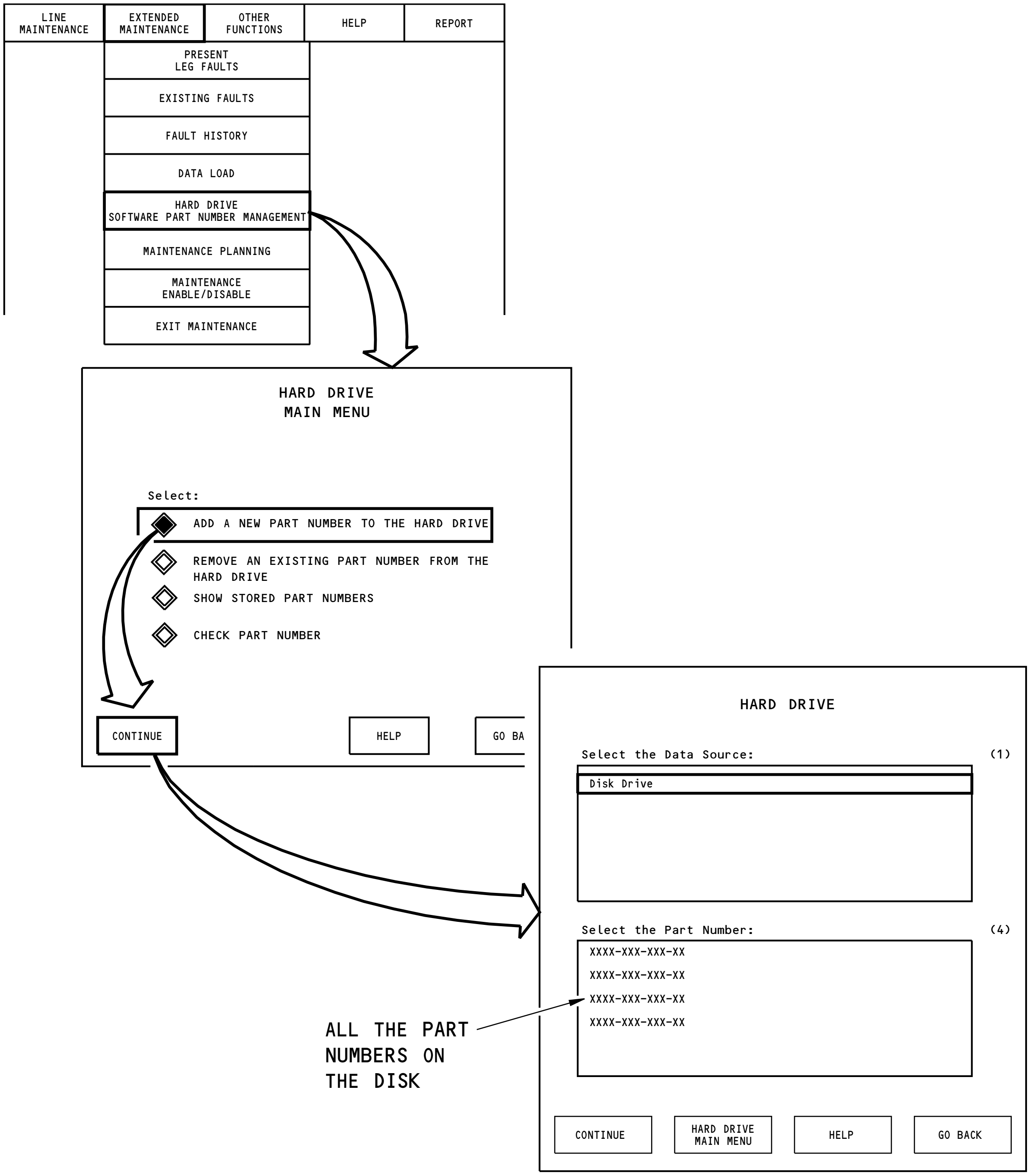
SUBTASK 45-10-00-080-004

(1) Remove the software media from the USB CD/DVD ROM Drive, STD-13362.

SUBTASK 45-10-00-080-005

(2) Remove the USB CD/DVD ROM Drive, STD-13362 from the MAT EDU's USB port.

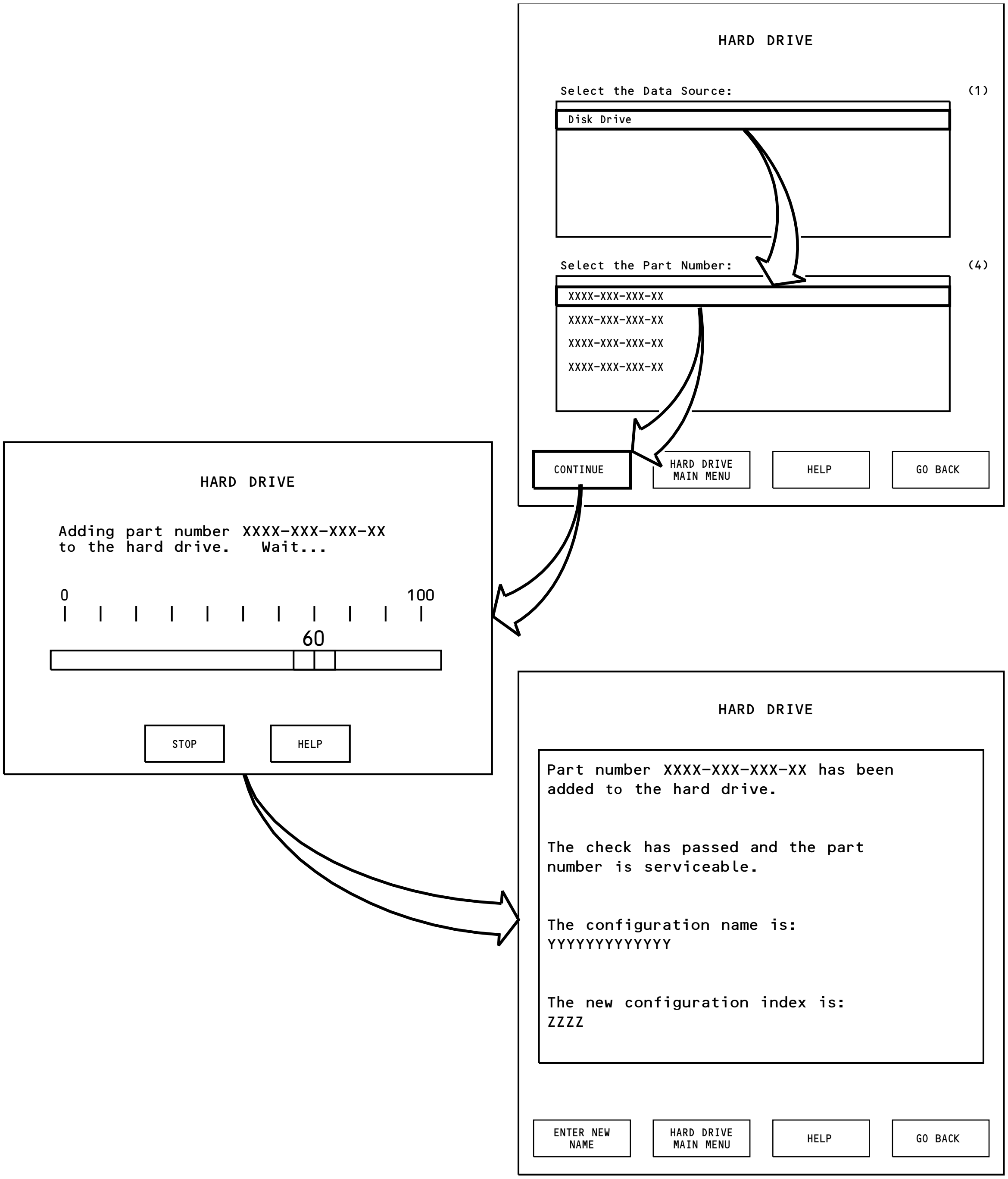
——— END OF TASK ———



NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

F29435 S0006423412_V1

How to Add Software to the Hard Drive
Figure 229/45-10-00-990-823 (Sheet 1 of 2)



Adding part number XXXX-XXX-XXX-XX to the hard drive. Wait...

Part number XXXX-XXX-XXX-XX has been added to the hard drive.

The check has passed and the part number is serviceable.

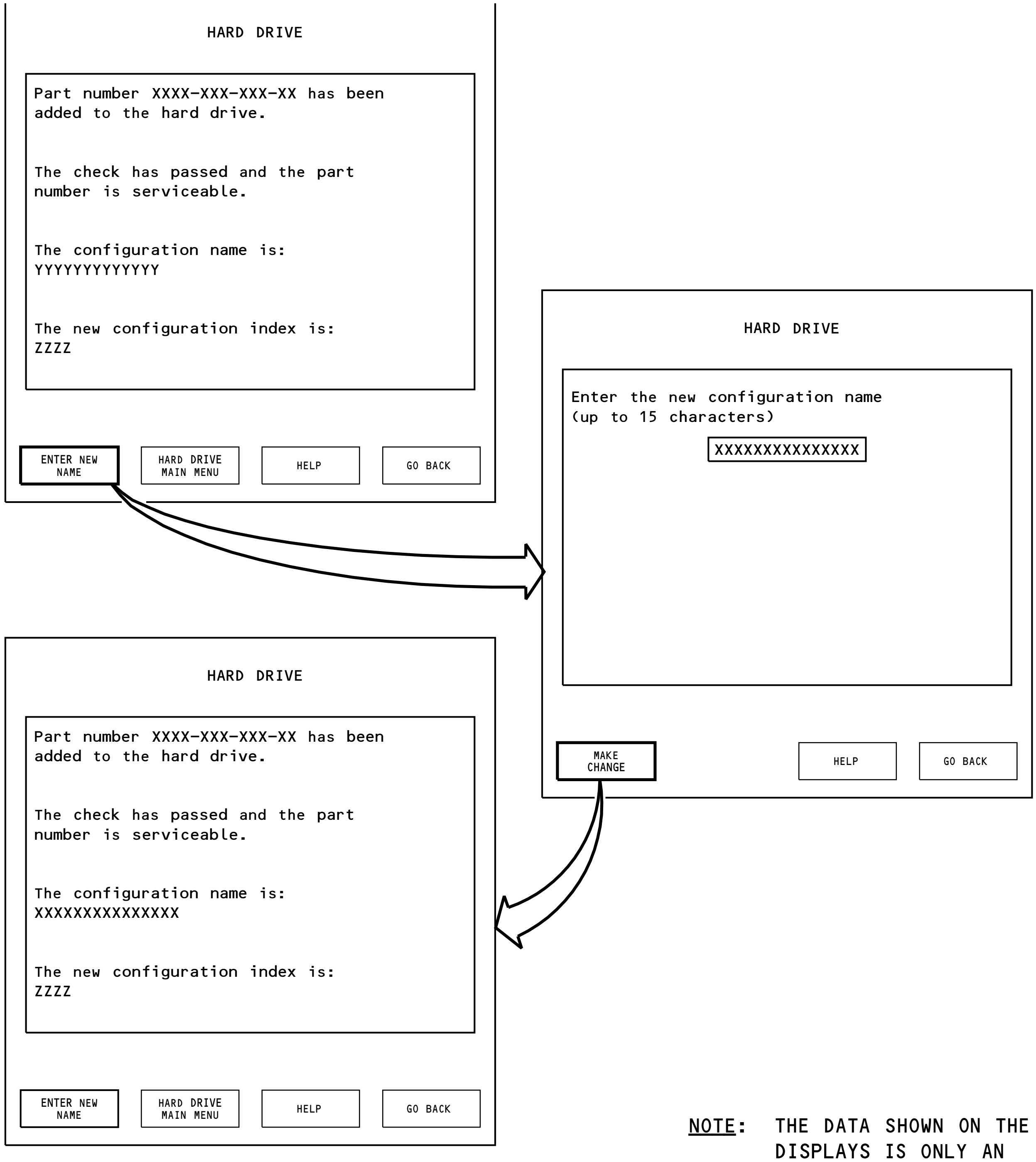
The configuration name is:
YYYYYYYYYYYYY

The new configuration index is:
ZZZZ

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

F29438 S0006423413_V1

How to Add Software to the Hard Drive
Figure 229/45-10-00-990-823 (Sheet 2 of 2)



HARD DRIVE

Part number XXXX-XXX-XXX-XX has been added to the hard drive.

The check has passed and the part number is serviceable.

The configuration name is:
YYYYYYYYYYYYY

The new configuration index is:
ZZZZ

HARD DRIVE

Enter the new configuration name (up to 15 characters)

XXXXXXXXXXXXXXX

HARD DRIVE

Part number XXXX-XXX-XXX-XX has been added to the hard drive.

The check has passed and the part number is serviceable.

The configuration name is:
XXXXXXXXXXXXXXX

The new configuration index is:
ZZZZ

<u>NOTE</u>: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

F29778 S0006423414_V1

How to Change the Hard Drive Configuration Name
Figure 230/45-10-00-990-824

TASK 45-10-00-860-813

27. How to Remove Software from the Hard Drive

(Figure 231)

A. General

(1) This procedure tells you how to remove software from the MAT or PMAT hard drive. (Software part numbers removed from the hard drive do not show on the data load source selection display.) You remove software from the hard drive one part number at a time.

(2) The set of software on the hard drive has a configuration name. When you remove software from the hard drive, you can change the configuration name to help you keep a record of the configuration of your hard drive.

(3) The set of software on the hard drive also has a configuration index that changes automatically when you remove software. You cannot change the configuration index but you can use it to help you keep a record of the configuration of your hard drive.

B. Procedure

SUBTASK 45-10-00-860-157

(1) Do this to show the hard drive main menu:

- (a) Select EXTENDED MAINTENANCE from the CMCS main menu.
- (b) Select HARD DRIVE SOFTWARE PART NUMBER MANAGEMENT from the extended maintenance menu.

SUBTASK 45-10-00-860-158

(2) To remove the software from the hard drive, do this:

- (a) Select REMOVE AN EXISTING PART NUMBER FROM THE HARD DRIVE from the hard drive main menu.
- (b) Select CONTINUE on the hard drive main menu.
- (c) Select the part number from the list that shows.
- (d) Select CONTINUE.

  NOTE: The display shows you the part number you selected.
- (e) If the part number that shows is incorrect, then select GO BACK and select the correct part number.
- (f) If the part number that shows is correct, then select REMOVE.

  NOTE: The display shows you when the software is fully removed. The display also shows the configuration name and the new configuration index.

SUBTASK 45-10-00-860-159

(3) To remove more software from the hard drive, select HARD DRIVE MAIN MENU.

SUBTASK 45-10-00-860-160

(4) To change the configuration name, do this:

- (a) Select ENTER NEW NAME.
- (b) Use the keyboard to type a new configuration name (up to 15 characters).
- (c) Select MAKE CHANGE.

  NOTE: The display shows the new configuration name.

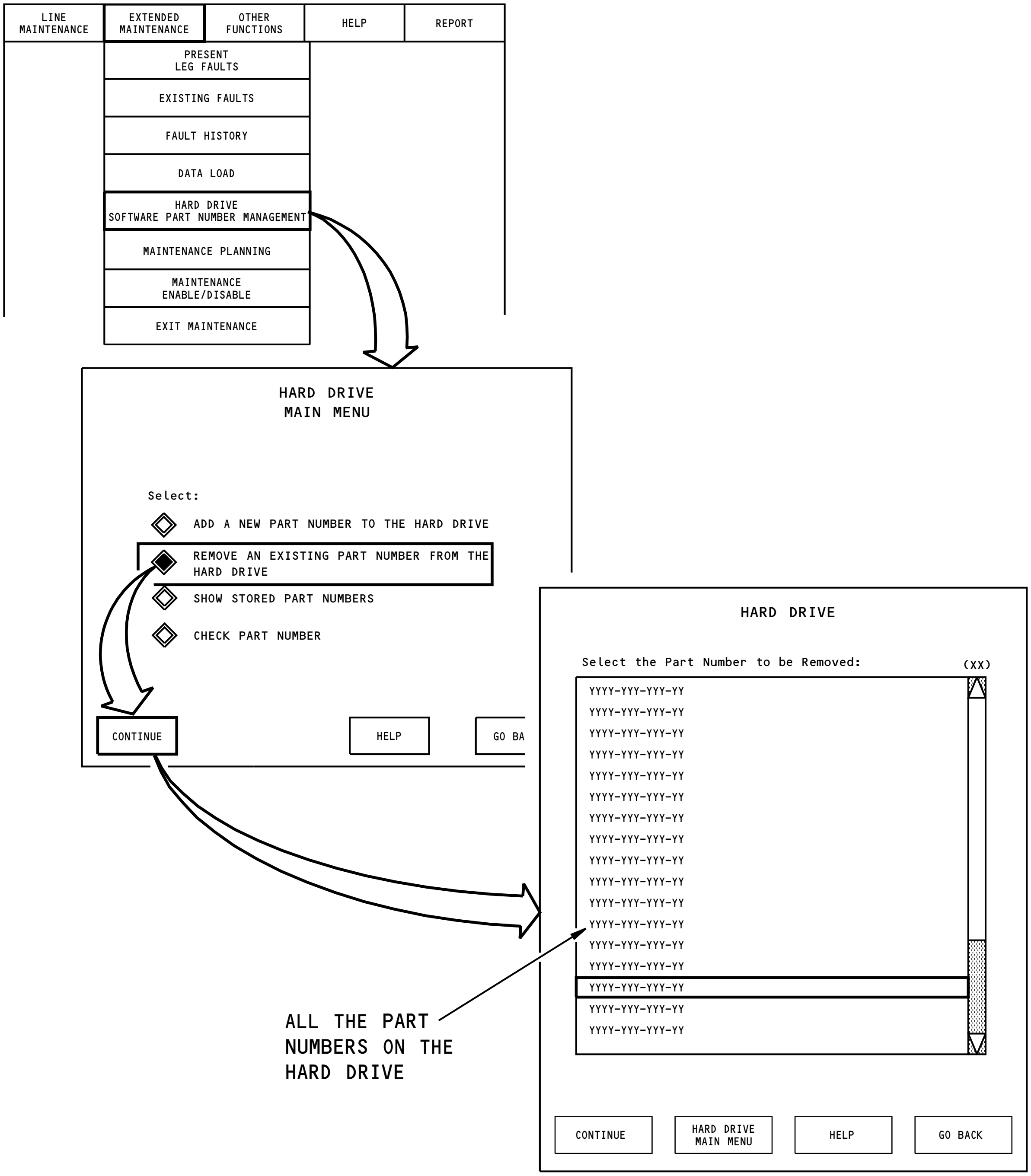
SUBTASK 45-10-00-860-161

(5) To do other tasks with the hard drive, select HARD DRIVE MAIN MENU.

SUBTASK 45-10-00-860-162

(6) To stop hard drive management, select GO BACK.

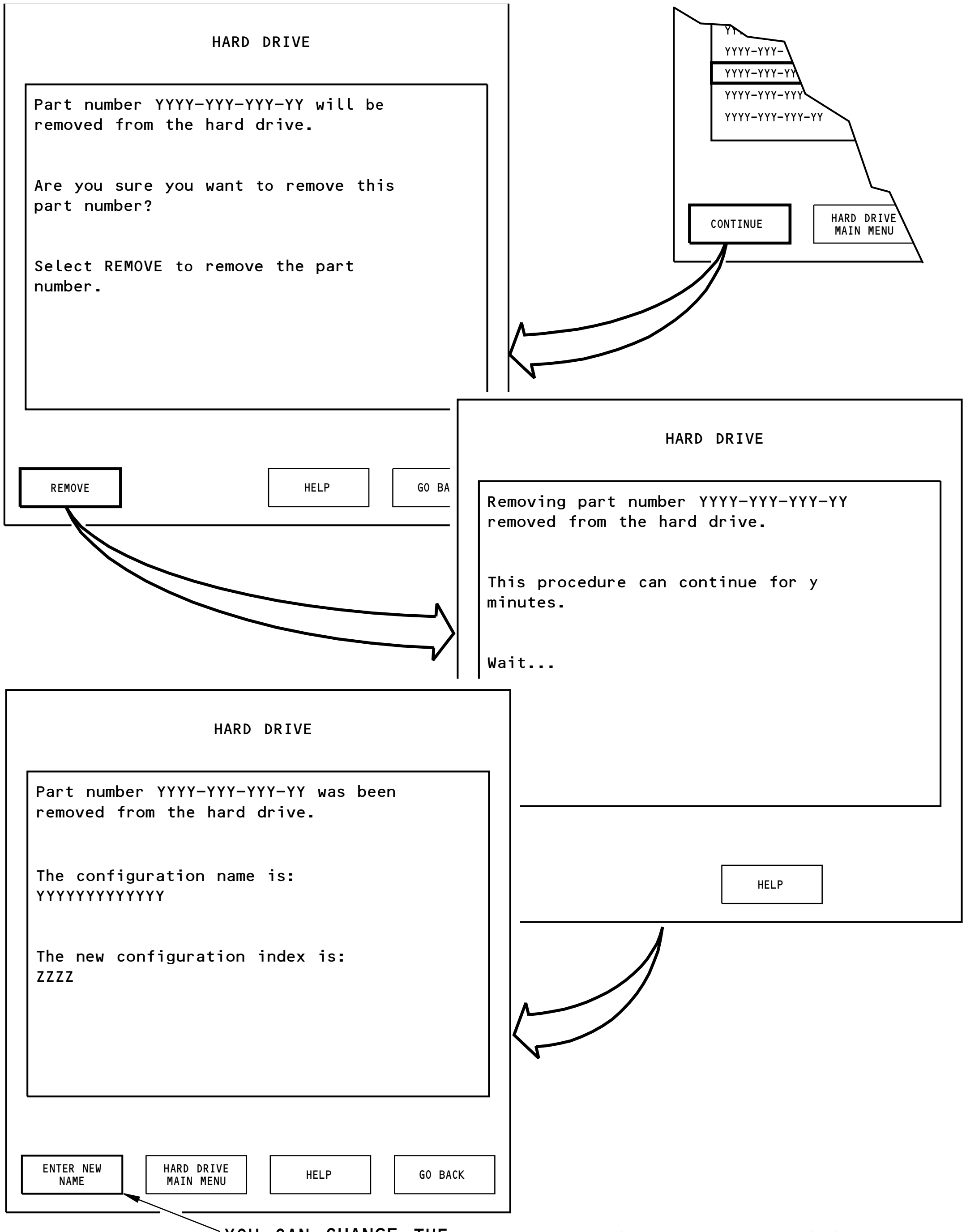
——— END OF TASK ———



NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

F30012 S0006423416_V1

How to Remove Software from the Hard Drive
Figure 231/45-10-00-990-825 (Sheet 1 of 2)



Part number YYYY-YYY-YYY-YY will be removed from the hard drive.

Are you sure you want to remove this part number?

Select REMOVE to remove the part number.

Removing part number YYYY-YYY-YYY-YY removed from the hard drive.

This procedure can continue for y minutes.

Wait...

Part number YYYY-YYY-YYY-YY was been removed from the hard drive.

The configuration name is:
YYYYYYYYYYYYY

The new configuration index is:
ZZZZ

YOU CAN CHANGE THE CONFIGURATION NAME

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

F30388 S0006423417_V1

How to Remove Software from the Hard Drive
Figure 231/45-10-00-990-825 (Sheet 2 of 2)

TASK 45-10-00-860-814

28. How to See what Software is on the Hard Drive

(Figure 232)

A. General

(1) This procedure tells you how to get a list of the part numbers of all the software on the MAT or PMAT hard drive. (When the software is on the hard drive, you can use the data load function to install that software in other LRUs.)

B. Procedure

SUBTASK 45-10-00-860-164

(1) Do this to show the hard drive main menu:

- (a) Select EXTENDED MAINTENANCE from the CMCS main menu.
- (b) Select HARD DRIVE SOFTWARE PART NUMBER MANAGEMENT from the extended maintenance menu.

SUBTASK 45-10-00-860-165

(2) To see the list of software part numbers on the hard drive, do this:

- (a) Select SHOW STORED PART NUMBERS from the hard drive main menu.
- (b) Select CONTINUE on the hard drive main menu.

  NOTE: The display shows the part numbers of the software on the hard drive.

SUBTASK 45-10-00-970-010

(3) To make a paper or electronic copy of the list, select REPORT DATA.

SUBTASK 45-10-00-860-166

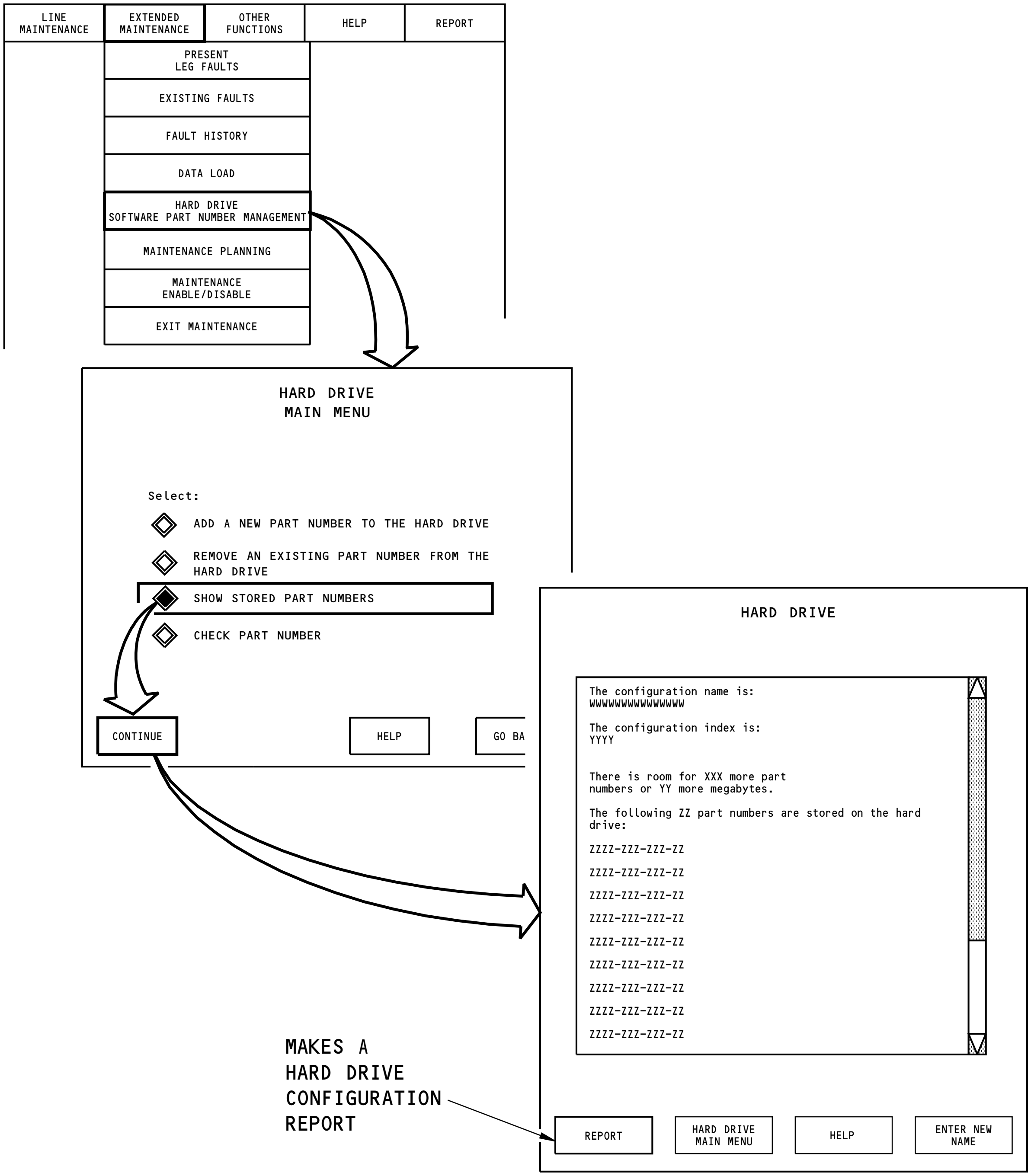
(4) To do other tasks with the hard drive, select HARD DRIVE MAIN MENU.

SUBTASK 45-10-00-860-167

(5) To stop hard drive management, do this:

- (a) Select HARD DRIVE MAIN MENU.
- (b) Select GO BACK.

——— END OF TASK ———



The configuration name is:
WWWWWWWWWWWWWWWW

The configuration index is:
YYYY

There is room for XXX more part numbers or YY more megabytes.

The following ZZ part numbers are stored on the hard drive:

ZZZZ-ZZZ-ZZZ-ZZ

ZZZZ-ZZZ-ZZZ-ZZ

ZZZZ-ZZZ-ZZZ-ZZ

ZZZZ-ZZZ-ZZZ-ZZ

ZZZZ-ZZZ-ZZZ-ZZ

ZZZZ-ZZZ-ZZZ-ZZ

ZZZZ-ZZZ-ZZZ-ZZ

ZZZZ-ZZZ-ZZZ-ZZ

ZZZZ-ZZZ-ZZZ-ZZ

MAKES A HARD DRIVE CONFIGURATION REPORT

<u>NOTE</u>: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

F53805 S0006423419_V1

How to See Which Software is on the Hard Drive
Figure 232/45-10-00-990-826

TASK 45-10-00-860-815

29. How to Check the Software Part Number

A. General

(1) This procedure tells you how to check the part numbers on the MAT or PMAT hard drive. The check part number function checks that an LRU software part number is stored correctly on the hard disk.

B. Procedure

SUBTASK 45-10-00-860-198

(1) Do this to show the hard drive main menu:

(a) Select EXTENDED MAINTENANCE from the CMCS main menu.

(b) Select HARD DRIVE SOFTWARE PART NUMBER MANAGEMENT from the extended maintenance menu.

SUBTASK 45-10-00-860-199

(2) To check the software part number on the hard drive, do this:

(a) Select CHECK PART NUMBER from the hard drive main menu.

(b) Select CONTINUE on the hard drive main menu.

(c) Select the LRU software part number you want to check from this dialog box.

(d) Select CONTINUE

NOTE: The CMCF checks that the part number in the hard drive is serviceable.

SUBTASK 45-10-00-860-200

(3) To do other tasks with the hard drive, select HARD DRIVE MAIN MENU.

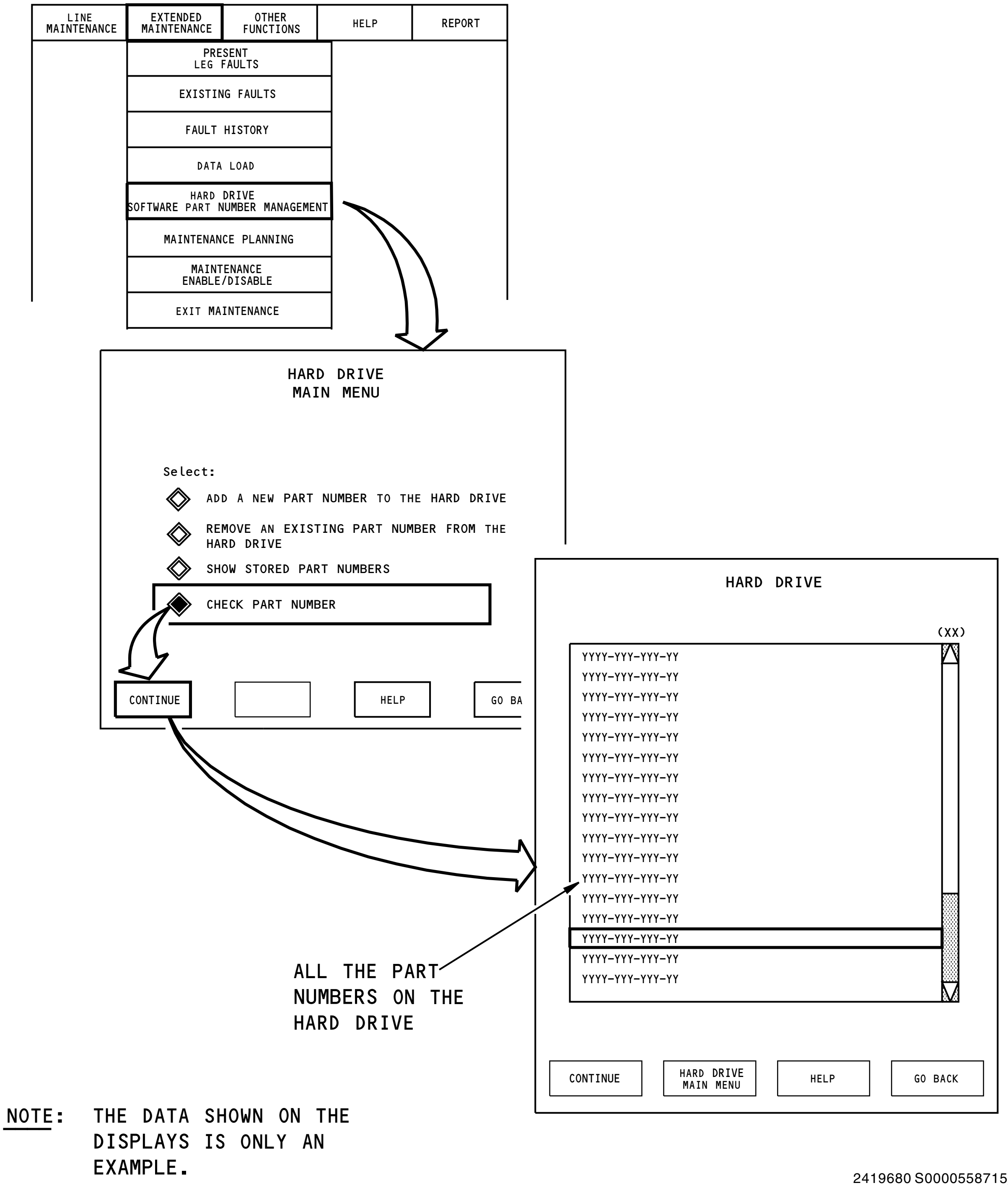
SUBTASK 45-10-00-860-201

(4) To stop hard drive management, do this:

(a) Select HARD DRIVE MAIN MENU.

(b) Select GO BACK.

——— END OF TASK ———



NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

2419680 S0000558715_V1

How to Check the Software Part Number
Figure 233/45-10-00-990-855

TASK 45-10-00-740-805

30. How to Find Maintenance Memos

(Figure 234)

A. General

(1) This task tells you how to find maintenance memos on the Existing Maintenance Memos display and the Inbound Maintenance Memos display.

(2) The Existing Maintenance Memos display includes the active or latched maintenance memos and their correlated maintenance messages (if any). Each maintenance memo and each maintenance message is initially labeled ACTIVE or LATCHED. A maintenance memo or maintenance message that becomes NOT ACTIVE will not be removed from the display until you select the display again.

(3) The Inbound Maintenance Memos display includes the maintenance memos and their correlated maintenance messages (if any) that are stored in the present flight leg. Each maintenance memo and each maintenance message is labeled ACTIVE, NOT ACTIVE, or LATCHED.

(4) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(5) You can use a MAT or a PMAT for this procedure.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Find Maintenance Memos

SUBTASK 45-10-00-740-024

(1) To show the active or latched maintenance memos, do this:

(a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

(b) Select EXTENDED MAINTENANCE from the CMCS main menu.

(c) Select MAINTENANCE PLANNING from the extended maintenance menu.

(d) Select EXISTING MAINTENANCE MEMOS.

(e) Select CONTINUE.

NOTE: The active or latched maintenance memos and their correlated maintenance messages show in sequence of occurrence. The newest maintenance memo is first on the list.

SUBTASK 45-10-00-740-025

(2) To show the maintenance memos from the inbound flight leg, do this:

- (a) If you start the engines to move the airplane before maintenance, first, do this task: How to Prevent Flight Leg Change During Maintenance, TASK 45-10-00-860-802.

  NOTE: When you start the engines, the flight leg changes unless you prevent it. If the flight leg changes, the CMCS collects failure data in a new flight leg, and you cannot see the maintenance memos from the inbound flight leg.

- (b) On a maintenance access terminal, select ONBOARD MAINTENANCE from the initial menu.
- (c) Select EXTENDED MAINTENANCE from the CMCS main menu.
- (d) Select MAINTENANCE PLANNING from the extended maintenance menu.
- (e) Select INBOUND MAINTENANCE MEMOS.
- (f) Select CONTINUE.

  NOTE: The maintenance memos and their correlated maintenance messages from the present leg show in sequence of occurrence. The newest maintenance memo is first on the list.

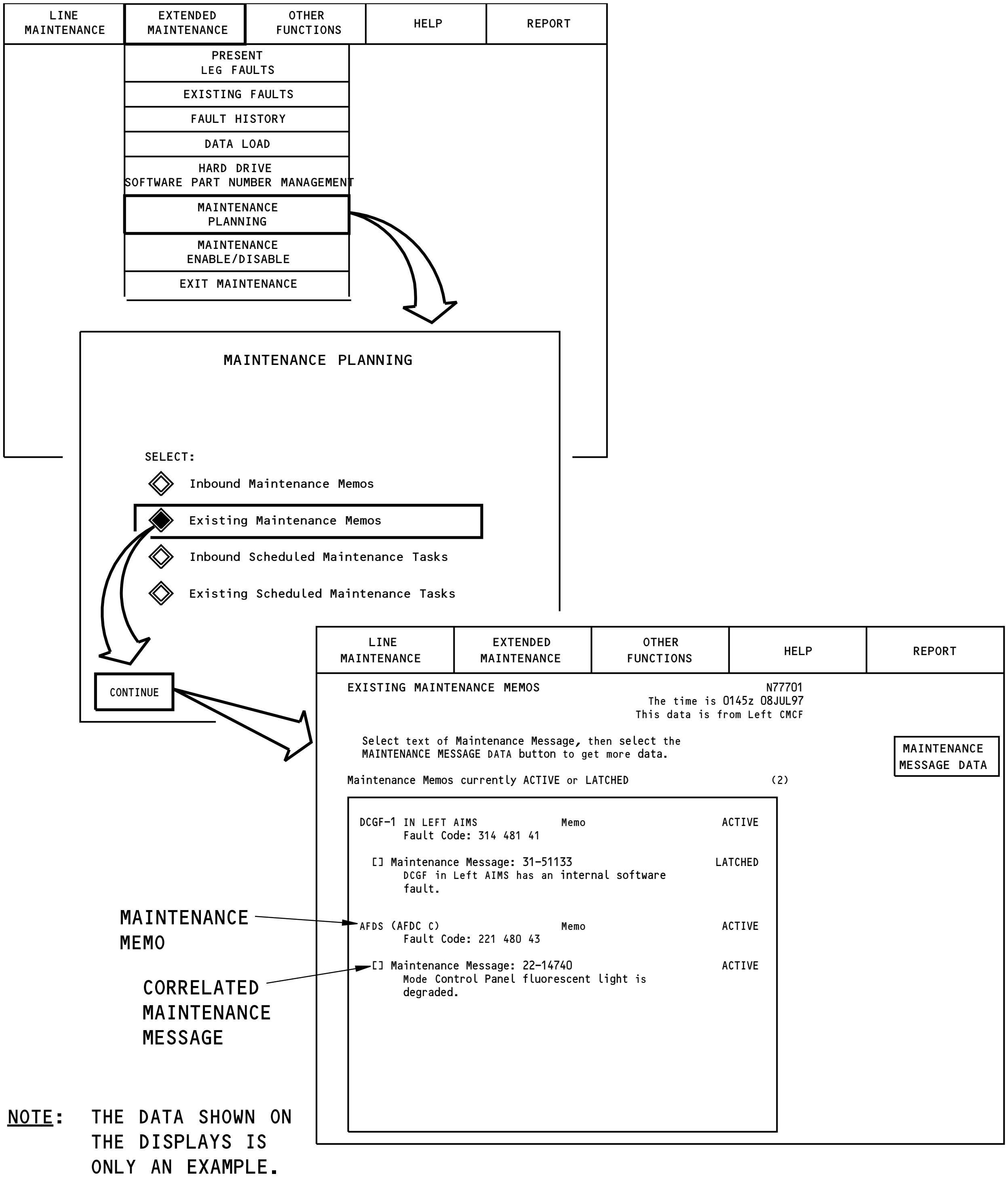
D. Put the Airplane Back to Its Usual Condition

SUBTASK 45-10-00-860-033

(1) To go back to the initial MAT menu, do this:

- (a) Select GO BACK (if it shows).
- (b) Select LINE MAINTENANCE from the CMCS main menu.
- (c) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———



```
EXISTING MAINTENANCE MEMOS                                   N77701
                                           The time is 0145z 08JUL97
                                           This data is from Left CMCF

  Select text of Maintenance Message, then select the
  MAINTENANCE MESSAGE DATA button to get more data.

Maintenance Memos currently ACTIVE or LATCHED                    (2)

DCGF-1 IN LEFT AIMS            Memo                    ACTIVE
       Fault Code: 314 481 41

  [] Maintenance Message: 31-51133                     LATCHED
       DCGF in Left AIMS has an internal software
       fault.

AFDS (AFDC C)                  Memo                    ACTIVE
       Fault Code: 221 480 43

  [] Maintenance Message: 22-14740                     ACTIVE
       Mode Control Panel fluorescent light is
       degraded.
```

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

H39478 S0006423423_V2

How to Find Maintenance Memos
Figure 234/45-10-00-990-827

TASK 45-10-00-740-806

31. How to Find Maintenance Messages Correlated to Scheduled Maintenance Tasks

(Figure 235)

A. General

(1) This task tells you how to find maintenance messages that are correlated to scheduled maintenance tasks (SMT) on the Existing SMTs display and the Inbound SMTs display. Scheduled maintenance tasks can also show on the maintenance task maintenance page on the EICAS multi-function display (TASK 31-61-00-800-815).

(2) The Inbound SMTs display shows the scheduled maintenance tasks and their correlated maintenance messages (if any) that were stored in the present flight leg. Each scheduled maintenance task and each maintenance message is labeled ACTIVE, NOT ACTIVE, or LATCHED.

(3) The Existing SMTs display shows the active or latched scheduled maintenance tasks and their correlated maintenance messages (if any). Each scheduled maintenance task and each maintenance message is initially labeled ACTIVE or LATCHED. A scheduled maintenance task or maintenance message that becomes NOT ACTIVE will stay on the display until you select the display again.

(4) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(5) You can use a MAT or a PMAT for this procedure.

B. References

Reference	Title
31-61-00-800-815	Showing Scheduled Maintenance Tasks (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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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. How to Find Maintenance Messages Correlated to an Active or Latched Scheduled Maintenance Task

SUBTASK 45-10-00-740-026

(1) To show the active or latched scheduled maintenance tasks, do this:

  (a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

  (b) Select EXTENDED MAINTENANCE from the CMCS main menu.

  (c) Select MAINTENANCE PLANNING from the extended maintenance menu.

(d) Select EXISTING SCHEDULED MAINTENANCE TASKS.

(e) Select CONTINUE.

NOTE: The active or latched scheduled maintenance tasks and their correlated maintenance messages show in sequence of occurrence.

SUBTASK 45-10-00-740-051

(2) Look for the scheduled maintenance task.

SUBTASK 45-10-00-740-052

(3) Look below the scheduled maintenance task for maintenance messages.

NOTE: Maintenance messages that show below the SMT are correlated to that SMT.

E. How to Find Maintenance Messages Correlated to an Inbound Scheduled Maintenance Task

SUBTASK 45-10-00-860-140

(1) If you start the engines to move the airplane before maintenance, first, do this task: How to Prevent Flight Leg Change During Maintenance, TASK 45-10-00-860-802.

NOTE: When you start the engines, the flight leg changes unless you prevent it. If the flight leg changes, the CMCS collects failure data in a new flight leg, and you cannot see the scheduled maintenance tasks from the inbound flight leg.

SUBTASK 45-10-00-740-027

(2) To show the scheduled maintenance tasks from the present (inbound) flight leg, do this:

(a) On a maintenance access terminal, select ONBOARD MAINTENANCE from the initial menu.

(b) Select EXTENDED MAINTENANCE from the CMCS main menu.

(c) Select MAINTENANCE PLANNING from the extended maintenance menu.

(d) Select INBOUND SCHEDULED MAINTENANCE TASKS.

(e) Select CONTINUE.

NOTE: The scheduled maintenance tasks and their correlated maintenance messages from the present leg show in sequence of occurrence.

SUBTASK 45-10-00-740-053

(3) Look for the scheduled maintenance task.

SUBTASK 45-10-00-740-054

(4) Look below the scheduled maintenance task for maintenance messages.

NOTE: Maintenance messages that show below the SMT are correlated to that SMT.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 45-10-00-860-034

(1) To go back to the initial MAT menu, do this:

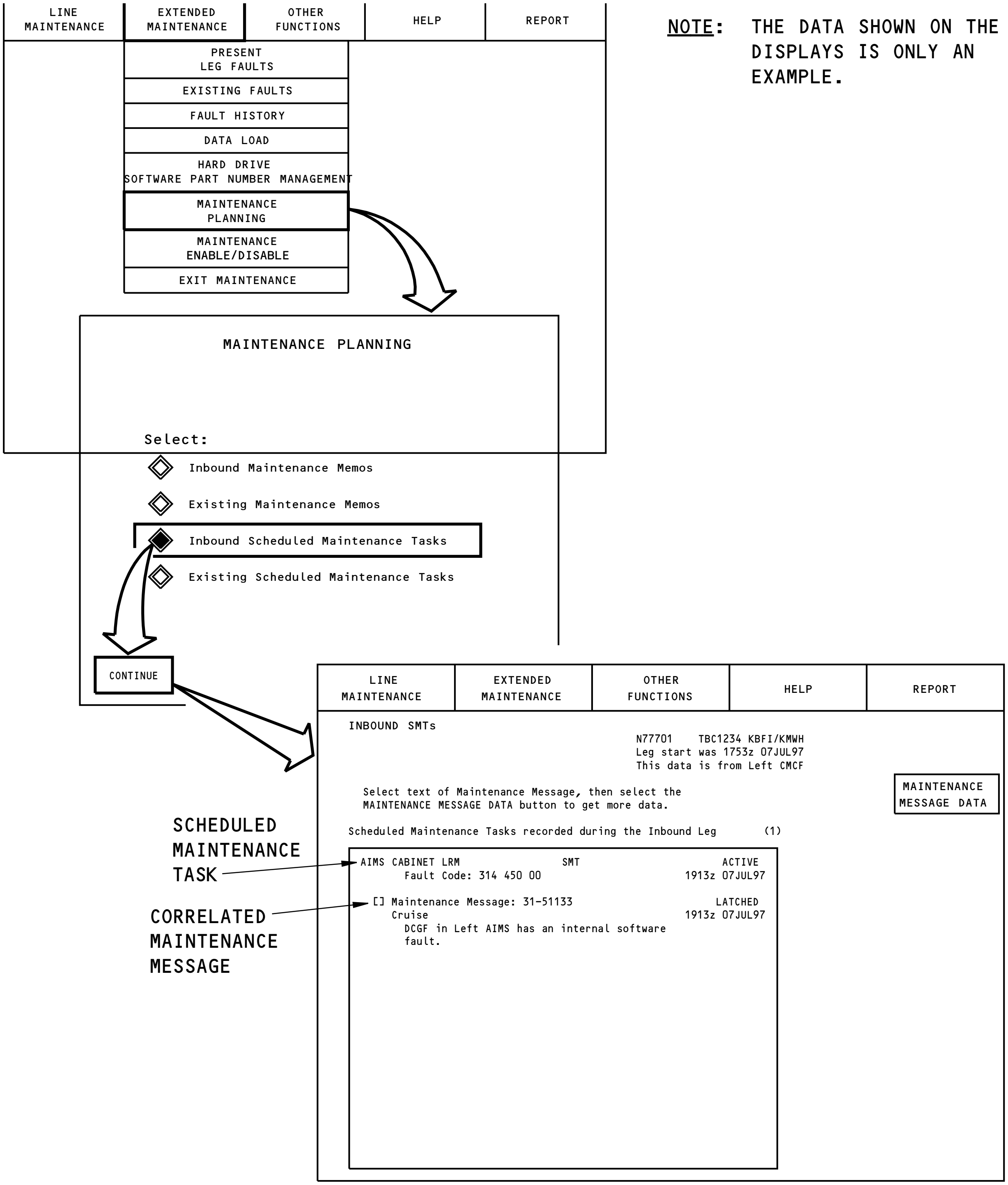
(a) Select GO BACK (if it shows).

(b) Select LINE MAINTENANCE from the CMCS main menu.

(c) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.



```
N77701    TBC1234 KBFI/KMWH
Leg start was 1753z 07JUL97
This data is from Left CMCF

  Select text of Maintenance Message, then select the
  MAINTENANCE MESSAGE DATA button to get more data.

Scheduled Maintenance Tasks recorded during the Inbound Leg       (1)

 AIMS CABINET LRM               SMT                     ACTIVE
       Fault Code: 314 450 00                      1913z 07JUL97

  [] Maintenance Message: 31-51133                     LATCHED
     Cruise                                        1913z 07JUL97
       DCGF in Left AIMS has an internal software
       fault.
```

H39479 S0006423427_V1

How to Find Maintenance Messages Correlated to Scheduled Maintenance Tasks
Figure 235/45-10-00-990-828

TASK 45-10-00-860-801

32. How to Make a Flight Leg for Engine Run Data

(Figure 236)

A. General

(1) This task tells you how to use the Maintenance Enable/Disable function of the CMCS to make a separate flight leg for engine run data.

(2) You can use this procedure to make sure the fault data from the engine runs is not in the same flight leg as the fault data from the subsequent flight.

(3) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(4) You can use a MAT or a PMAT for this procedure.

B. References

Reference	Title
71-00-00-800-835-H00	Engine Start (Selection) (P/B 201)

C. Tools/Equipment

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

Reference	Description
SPL-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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. Procedure

SUBTASK 45-10-00-860-035

(1) To start the engine, do this task: Engine Start (Selection), TASK 71-00-00-800-835-H00.

NOTE: When the first engine starts, the flight leg changes and the CMCS collects fault data in the new flight leg.

SUBTASK 45-10-00-860-103

(2) If a maintenance message display is in view when you start the engine, select the display again after you start the engine to make sure new data shows.

NOTE: When the flight leg changes, new data does not show on the fault displays (Inbound Flight Deck Effects, Existing Flight Deck Effects, Present Leg Faults, Existing Faults, Fault History, and Maintenance Planning) until you select the fault display again.

SUBTASK 45-10-00-860-036

(3) When all engine runs are completed, do this to make sure that the flight leg will change for the subsequent flight:

(a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

(b) Select EXTENDED MAINTENANCE from the CMCS main menu.

(c) Select MAINTENANCE ENABLE/DISABLE from the extended maintenance menu.

(d) Select LEG ENABLE.

NOTE: The flight leg will change the next time an engine is started.

(e) Select GO BACK.

E. Put the Airplane Back to Its Usual Condition

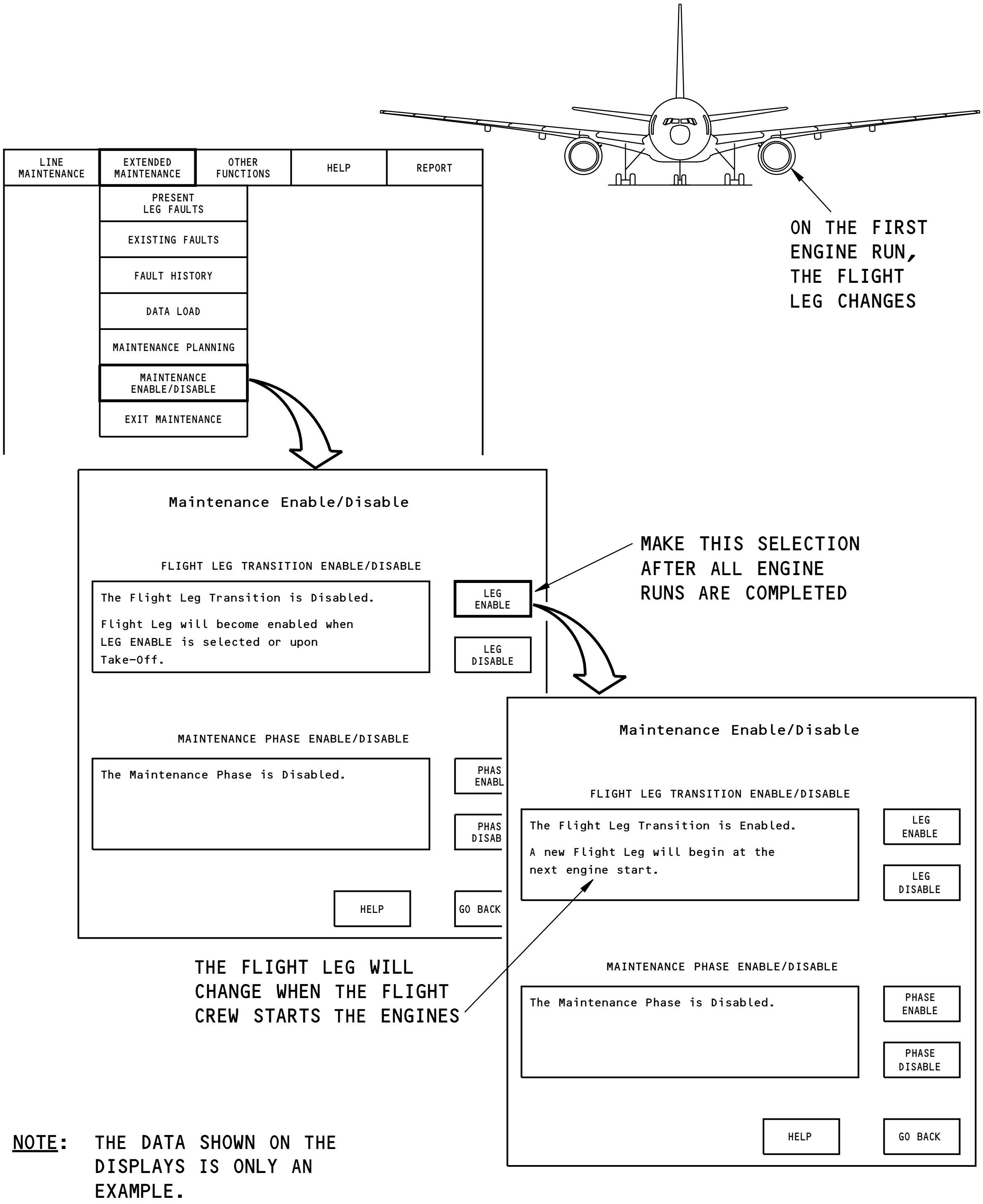
SUBTASK 45-10-00-860-037

(1) To go back to the initial MAT menu, do this:

(a) Select LINE MAINTENANCE from the CMCS main menu.

(b) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———



The Flight Leg Transition is Disabled.

Flight Leg will become enabled when LEG ENABLE is selected or upon Take-Off.

The Maintenance Phase is Disabled.

The Flight Leg Transition is Enabled.

A new Flight Leg will begin at the next engine start.

The Maintenance Phase is Disabled.

ON THE FIRST ENGINE RUN, THE FLIGHT LEG CHANGES

MAKE THIS SELECTION AFTER ALL ENGINE RUNS ARE COMPLETED

THE FLIGHT LEG WILL CHANGE WHEN THE FLIGHT CREW STARTS THE ENGINES

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

C87788 S0006423429_V1

How to Make a Flight Leg for Engine Run Data
Figure 236/45-10-00-990-829

TASK 45-10-00-860-802

33. How to Prevent Flight Leg Change During Maintenance

(Figure 237)

A. General

(1) This task tells you how to use the Maintenance Enable/Disable function of the CMCS to make sure the flight leg does not change during maintenance.

(2) If you start the engines to move the airplane before maintenance, the flight leg will change unless you do this task. If the flight leg changes, the CMCS collects failure data in a new flight leg, and failure data from the inbound flight leg shows in fault history leg -1.

(a) This task tells how to prevent flight leg change when you start the engines.

(b) This task also tells how to permit flight leg change when the pilot starts the engines for the subsequent flight.

(3) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(4) You can use a MAT or a PMAT for this procedure.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. Procedure

SUBTASK 45-10-00-860-038

(1) To make sure the flight leg does not change during maintenance, do this:

(a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

(b) Select EXTENDED MAINTENANCE from the CMCS main menu.

(c) Select MAINTENANCE ENABLE/DISABLE from the extended maintenance menu.

(d) Select LEG DISABLE.

NOTE: The flight leg will not change.

(e) To use other CMCF functions, select GO BACK.

SUBTASK 45-10-00-860-039

(2) After maintenance is completed, do this to make sure that the flight leg will change for the subsequent flight:

(a) Select EXTENDED MAINTENANCE from the CMCS main menu.

(b) Select MAINTENANCE ENABLE/DISABLE from the extended maintenance menu.

(c) Select LEG ENABLE.

NOTE: The flight leg will change the next time an engine is started.

(d) Select GO BACK.

D. Put the Airplane Back to Its Usual Condition

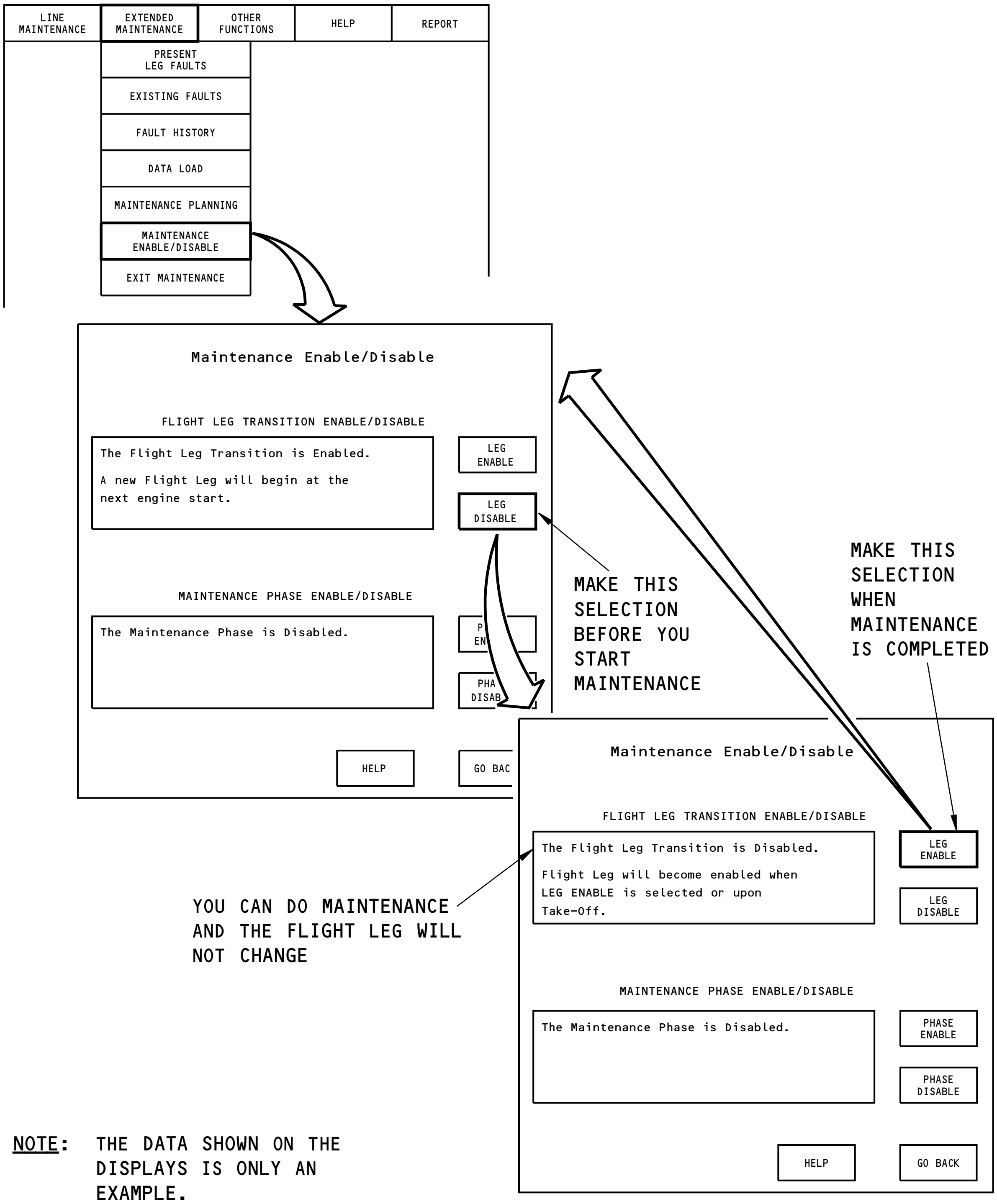
SUBTASK 45-10-00-860-040

(1) To go back to the initial MAT menu, do this:

(a) Select LINE MAINTENANCE from the CMCS main menu.

(b) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———



Maintenance Enable/Disable

FLIGHT LEG TRANSITION ENABLE/DISABLE

The Flight Leg Transition is Enabled.

A new Flight Leg will begin at the next engine start.

MAINTENANCE PHASE ENABLE/DISABLE

The Maintenance Phase is Disabled.

Maintenance Enable/Disable

FLIGHT LEG TRANSITION ENABLE/DISABLE

The Flight Leg Transition is Disabled.

Flight Leg will become enabled when LEG ENABLE is selected or upon Take-Off.

MAINTENANCE PHASE ENABLE/DISABLE

The Maintenance Phase is Disabled.

MAKE THIS SELECTION BEFORE YOU START MAINTENANCE

MAKE THIS SELECTION WHEN MAINTENANCE IS COMPLETED

YOU CAN DO MAINTENANCE AND THE FLIGHT LEG WILL NOT CHANGE

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

C87816 S0006423431_V1

How to Prevent Flight Leg Change During Maintenance
Figure 237/45-10-00-990-830

TASK 45-10-00-860-803

34. How to Prevent Fault Storage During Maintenance

(Figure 238)

A. General

(1) This task tells you how to use the Maintenance Enable/Disable function of the CMCS to do these procedures:

(a) Start the maintenance phase so that new faults are not stored.

(b) Stop the maintenance phase so that new faults are stored.

(2) During the maintenance phase, faults are not stored in the fault history data base. Faults that occur during the maintenance phase will show on the Existing Flight Deck Effects and Existing Faults displays but not on the Inbound Flight Deck Effects and Present Leg Faults displays.

(3) This task does not prevent flight leg change.

(4) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(5) You can use a MAT or a PMAT for this procedure.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Start the Maintenance Phase

SUBTASK 45-10-00-860-041

(1) To put the CMCS into the maintenance phase to make sure that faults are not stored, do this:

(a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

(b) Select EXTENDED MAINTENANCE from the CMCS main menu.

(c) Select MAINTENANCE ENABLE/DISABLE from the extended maintenance menu.

(d) Select PHASE ENABLE.

NOTE: The maintenance phase starts. New faults show in Existing Faults and Existing Flight Deck Effects but do not show in Present Leg Faults, Inbound Flight Deck Effects, or Fault History. New faults are not stored in the fault history data base.

(e) To use other CMCS functions, select GO BACK.

NOTE: The maintenance phase does not prevent flight leg change. If the engine is started, the flight leg will change.

(f) To make sure the flight leg does not change, do this task: How to Prevent Flight Leg Change During Maintenance, TASK 45-10-00-860-802.

D. How to Stop the Maintenance Phase

SUBTASK 45-10-00-860-042

(1) To take the CMCS out of the maintenance phase to make sure that faults are stored, do this:

  (a) Select EXTENDED MAINTENANCE from the CMCS main menu.

  (b) Select MAINTENANCE ENABLE/DISABLE from the extended maintenance menu.

  (c) Select PHASE DISABLE.

  NOTE: The maintenance phase stops. New faults are stored in the fault history data base. New faults show in Present Leg Faults, Inbound Flight Deck Effects, and Fault History.

  (d) Select GO BACK.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 45-10-00-860-043

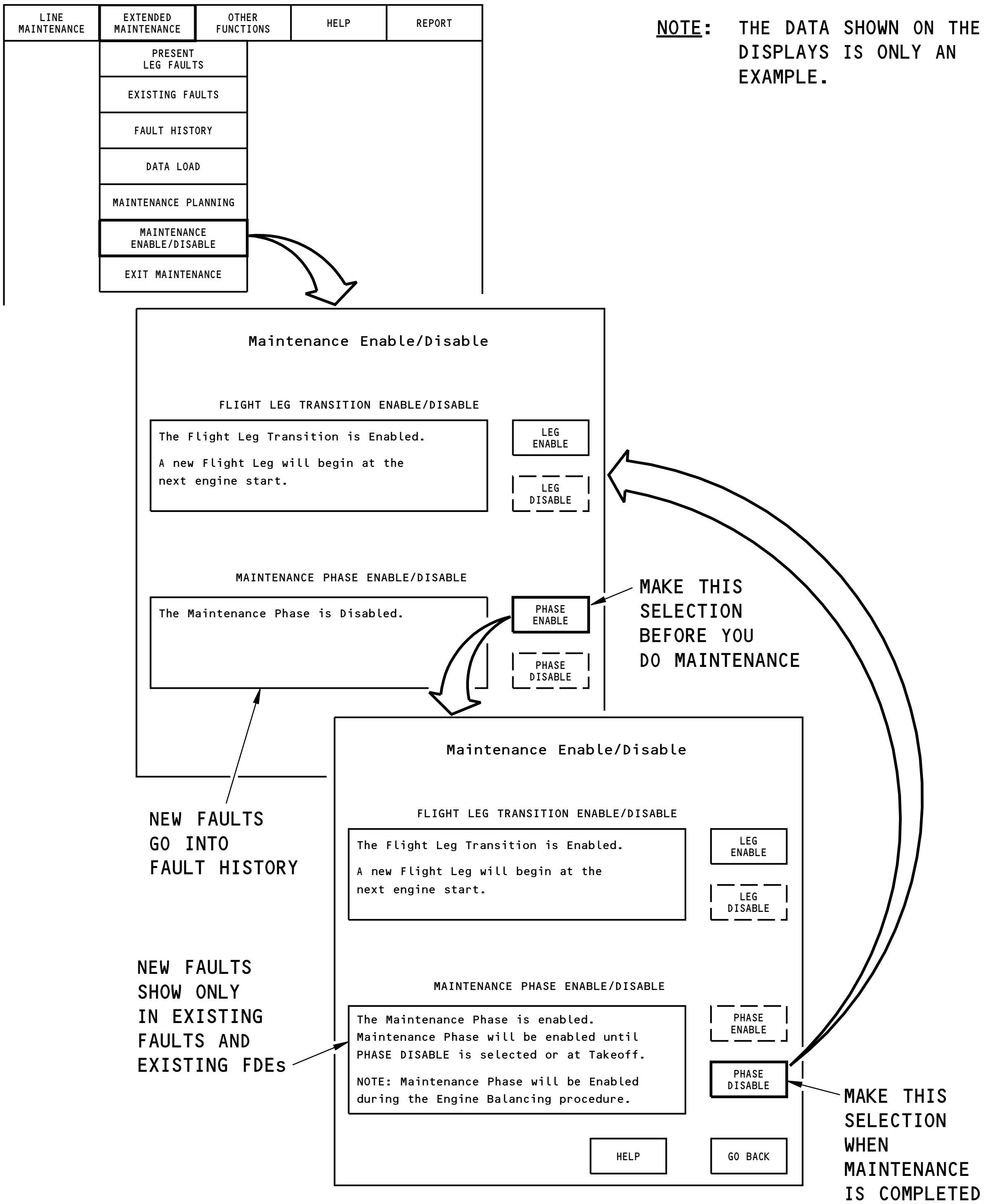
(1) To go back to the initial MAT menu, do this:

  (a) Select LINE MAINTENANCE from the CMCS main menu.

  (b) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.



Maintenance Enable/Disable

FLIGHT LEG TRANSITION ENABLE/DISABLE

The Flight Leg Transition is Enabled.

A new Flight Leg will begin at the next engine start.

MAINTENANCE PHASE ENABLE/DISABLE

The Maintenance Phase is Disabled.

MAKE THIS SELECTION BEFORE YOU DO MAINTENANCE

NEW FAULTS GO INTO FAULT HISTORY

Maintenance Enable/Disable

FLIGHT LEG TRANSITION ENABLE/DISABLE

The Flight Leg Transition is Enabled.

A new Flight Leg will begin at the next engine start.

MAINTENANCE PHASE ENABLE/DISABLE

The Maintenance Phase is enabled.
Maintenance Phase will be enabled until PHASE DISABLE is selected or at Takeoff.

NOTE: Maintenance Phase will be Enabled during the Engine Balancing procedure.

NEW FAULTS SHOW ONLY IN EXISTING FAULTS AND EXISTING FDEs

MAKE THIS SELECTION WHEN MAINTENANCE IS COMPLETED

C87865 S0006423433_V1

How to Prevent Fault Storage During Maintenance
Figure 238/45-10-00-990-831

TASK 45-10-00-760-801

35. How to Use Input Monitoring

A. General

(1) Input Monitoring is an engineering tool that lets you monitor signals that are received by the AIMS cabinets. These are the selections on the input monitoring main menu:

(a) The GENERAL INPUT selection lets you type in a signal specification. You can look at these signals:

1) ARINC 629

2) ARINC 429

3) Analog Discrete

4) Analog Variable

5) AIMS IMM (Inter-Module Memory) Partition.

(b) The ANALOG DISCRETE selection lets you select a signal from a list of all analog discrete signals that go into the AIMS cabinets. The input monitoring data shows OPEN or GROUND.

(c) The ANALOG VARIABLE selection lets you select a signal from a list of all analog variable signals that go into the AIMS cabinets.

(d) The ARINC 629 FULL WORDSTRING selection lets you type in a signal specification or select a signal from a list of aliases.

(2) This task tells you how to select a signal, how to start and stop the monitoring of data, and how to change the units of the data.

(3) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(4) You can use a MAT or a PMAT for this procedure.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Select the Input Monitoring Function

(Figure 239)

SUBTASK 45-10-00-860-044

(1) To select the input monitoring function, do this:

(a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

(b) Select OTHER FUNCTIONS from the CMCS main menu.

(c) Select INPUT MONITORING from the other functions menu.

NOTE: The input monitoring main menu shows.

D. How to Select a Signal to Monitor by Direct Entry

(Figure 239)

SUBTASK 45-10-00-860-045

(1) Select the input monitoring function.

SUBTASK 45-10-00-760-001

(2) If you know the signal specification, do this to start input monitoring:

(a) Select GENERAL INPUT from the input monitoring main menu.

(b) Select CONTINUE.

(c) Put the cursor in a direct entry field.

(d) Use the keyboard to type the signal specification into the direct entry field.

NOTE: It is not necessary to type initial zeros.

(e) Select RUN to start the input monitoring.

NOTE: SAMPLING shows above the input monitoring data.

(f) Select FREEZE to stop the input monitoring.

(3) If you do not know the signal specification, select SIGNALS.

(a) Follow the on-screen instructions to set the necessary signal specification.

(b) Select RUN to start the input monitoring.

NOTE: SAMPLING shows above the input monitoring data.

(c) Select FREEZE to stop the input monitoring.

E. How to Change Units

(Figure 240)

SUBTASK 45-10-00-860-047

(1) To change the units of the data, do this:

(a) Select UNITS.

NOTE: A dialog box shows the units that you can select.

(b) Select a unit.

(c) Select CONTINUE.

NOTE: The input monitoring data shows in the selected units.

F. How to Monitor an Analog Discrete Signal

SUBTASK 45-10-00-860-048

(1) Select the input monitoring function.

SUBTASK 45-10-00-760-003

(2) To select an analog discrete signal, do this:

(a) Select ANALOG DISCRETE from the input monitoring main menu.

(b) Select CONTINUE.

(c) Select a signal from the list.

(d) Select RUN to start the input monitoring.

NOTE: SAMPLING shows above the input monitoring data.

(e) Select FREEZE to stop the input monitoring.

G. How to Monitor an Analog Variable Signal

SUBTASK 45-10-00-860-049

(1) Select the input monitoring function.

SUBTASK 45-10-00-760-004

(2) To select an analog variable signal, do this:

(a) Select ANALOG VARIABLE from the input monitoring main menu.

(b) Select CONTINUE.

(c) Select a signal from the list.

(d) Select RUN to start the input monitoring.

NOTE: SAMPLING shows above the input monitoring data.

(e) Select FREEZE to stop the input monitoring.

H. How to Monitor an ARINC 629 Full Wordstring

SUBTASK 45-10-00-860-050

(1) Select the input monitoring function.

SUBTASK 45-10-00-760-005

(2) To select an ARINC 629 full wordstring, do this:

(a) Select ARINC 629 FULL WORDSTRING from the input monitoring main menu.

(b) Select CONTINUE.

SUBTASK 45-10-00-760-006

(3) If you know the signal specification, do this to start input monitoring:

(a) Put the cursor in a direct entry field.

(b) Use the keyboard to type the signal specification into the direct entry field.

NOTE: It is not necessary to type initial zeros.

I. Put the Airplane Back to Its Usual Condition

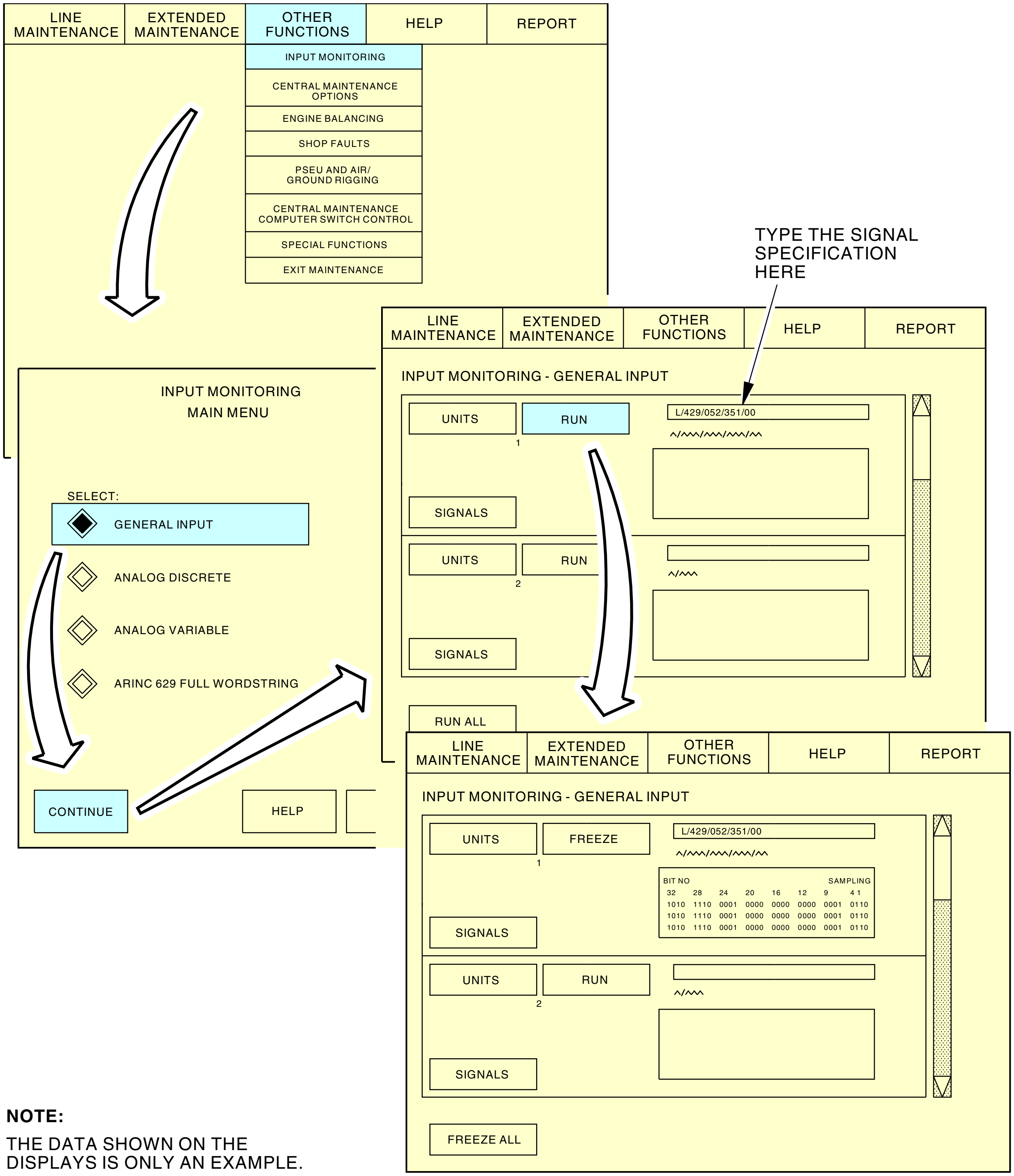
SUBTASK 45-10-00-860-051

(1) To go back to the initial MAT menu, do this:

(a) Select LINE MAINTENANCE from the CMCS main menu.

(b) Select EXIT MAINTENANCE from the line maintenance menu.

END OF TASK



L/429/052/351/00

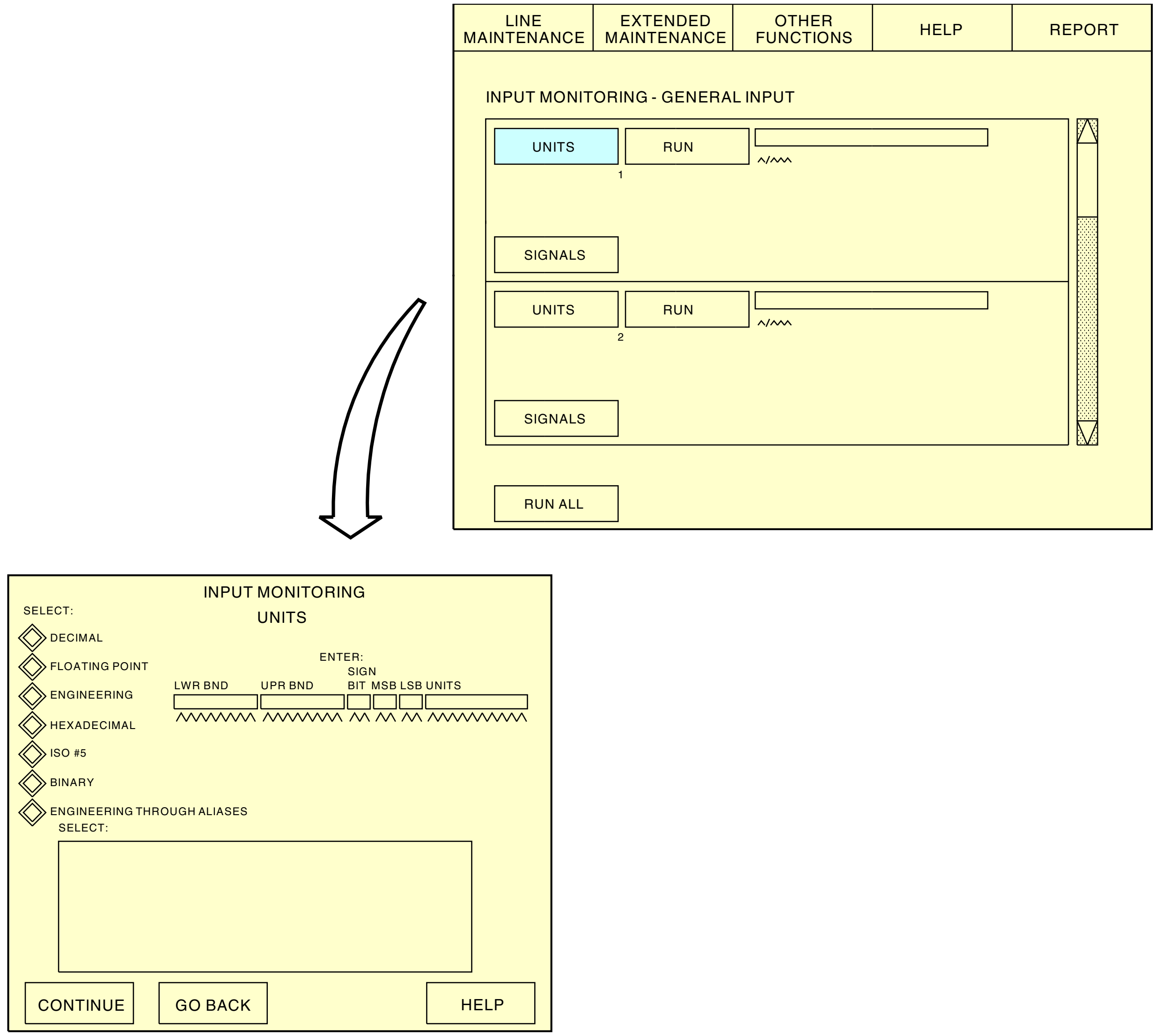
```
BIT NO                                        SAMPLING
 32    28    24    20    16    12    9     4 1
1010  1110  0001  0000  0000  0000  0001  0110
1010  1110  0001  0000  0000  0000  0001  0110
1010  1110  0001  0000  0000  0000  0001  0110
```

NOTE:

THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

2518179 S0000591280_V1

How to Do Input Monitoring with a Known Signal Specification
Figure 239/45-10-00-990-832



NOTE:

THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

2518057 S0000591282_V1

How to Change Input Monitoring Units
Figure 240/45-10-00-990-834

TASK 45-10-00-860-804

36. How to Change Central Maintenance Options

(Figure 241)

A. General

(1) This task tells you how to change the User Interface Controlled Options.

(2) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(3) You can use a MAT or a PMAT for this procedure.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Change Central Maintenance Options

SUBTASK 45-10-00-860-052

(1) To select the Central Maintenance Options function, do this:

(a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

(b) Select OTHER FUNCTIONS from the CMCS main menu.

(c) Select CENTRAL MAINTENANCE OPTIONS from the other functions menu.

NOTE: The available options show. If the box adjacent to the option is filled, then the option is on. If the box is empty, then the option is off.

SUBTASK 45-10-00-860-053

(2) To set an option on or off, do this:

(a) To set an option on, select the box adjacent to the option and make sure that the box is filled.

(b) To set an option off, select the box adjacent to the option and make sure that the box is empty.

(c) Select MAKE CHANGE.

(d) Open and then close these circuit breakers on the P11 panel:

Overhead Circuit Breaker Panel, P11

Row	Col	Number	Name
B	12	C31609	AIMS L-1

(Continued)

Overhead Circuit Breaker Panel, P11

Row	Col	Number	Name
B	13	C31611	AIMS L-2
B	14	C31617	AIMS L-3
B	15	C31619	AIMS L-4
F	12	C31610	AIMS R-1
F	13	C31612	AIMS R-2
F	14	C31618	AIMS R-3
F	15	C31620	AIMS R-4

D. How to Stop the Function an Not Make a Change

SUBTASK 45-10-00-860-054

(1) To stop the function and not make a change, select GO BACK.

NOTE: The display that was in view before you selected the CMCF Options functions shows.

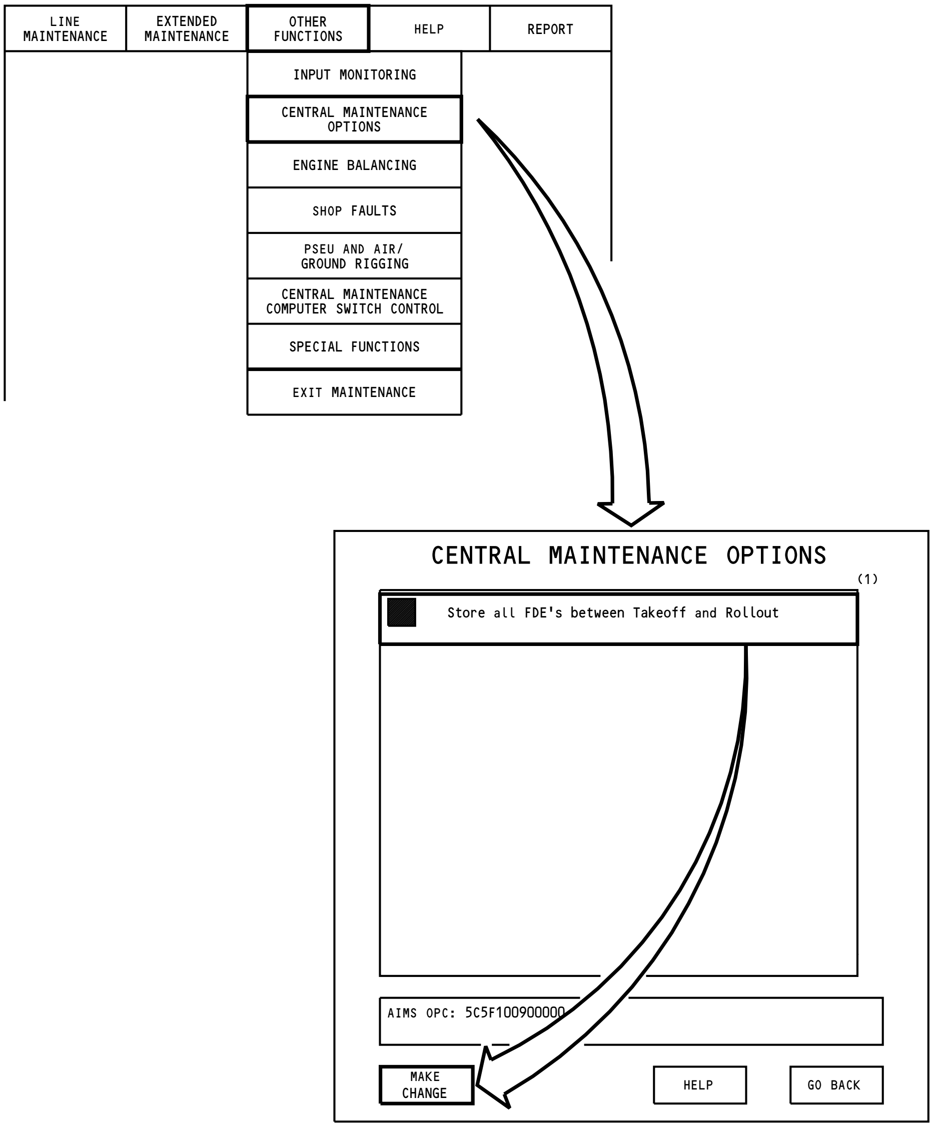
E. Put the Airplane Back to Its Usual Condition

SUBTASK 45-10-00-860-055

(1) To go back to the initial MAT menu, do this:

- (a) Select LINE MAINTENANCE from the CMCS main menu.
- (b) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———



■ Store all FDE's between Takeoff and Rollout

AIMS OPC: 5C5F100900000

<u>NOTE</u>: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

C87906 S0006423442_V1

How to Change Central Maintenance Options
Figure 241/45-10-00-990-835

TASK 45-10-00-820-801

37. How to Start the Engine Balancing Function

(Figure 242)

A. General

(1) The engine balancing function lets you balance an engine without engine ground-runs or carry-on equipment. The airborne vibration monitor (AVM) signal conditioner calculates the balance and uses the CMCS for display and control. The engine balancing main menu has these selections:

(a) The PERFORM BALANCE selection lets you find where to add and remove weights from the engine to reduce noise and vibration.

(b) The CALCULATE SPECIFIC BALANCE COEFFICIENTS/GROUND RUN selection lets you make the AVM calculate and change its balance data to give a more accurate balance based on an engine's past performance.

(2) During the engine balancing procedure, the maintenance phase is automatically enabled so that new faults show only in Existing Faults and Existing Flight Deck Effects.

(3) After the engine balancing procedure is completed, it is necessary to disable the maintenance phase to make sure that new faults go into fault history and all ACMF reports occur. You disable the maintenance phase when you select a different display (such as Inbound Flight Deck Effects) and make sure the engine balancing display does not show. (When an engine balancing display shows, you cannot disable the maintenance phase with the maintenance enable/disable dialog box.) If you do not select a different display, the maintenance phase is disabled automatically at takeoff.

(4) This task tells you how to select the engine balancing function of the CMCS. You must refer to the appropriate section of the maintenance manual to balance an engine.

(5) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(6) You can use a MAT or a PMAT for this procedure.

B. References

Reference	Title
71-00-00-700-811-H01	Test No. 12A - Low Pressure System (Fan/LPT) Trim Balance (For SCU P/N S332W401-200) (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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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. How to Select the Engine Balancing Function

SUBTASK 45-10-00-860-056

(1) To select the engine balancing function, do this:

  (a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

  (b) Select OTHER FUNCTIONS from the CMCS main menu.

  (c) Select ENGINE BALANCING from the other functions menu.

  NOTE: The engine balancing main menu shows.

E. Where to Find Instructions for Engine Balancing

SUBTASK 45-10-00-820-001

(1) To balance an engine, do this task: Test No. 12A - Low Pressure System (Fan/LPT) Trim Balance (For SCU P/N S332W401-200), TASK 71-00-00-700-811-H01.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 45-10-00-860-057

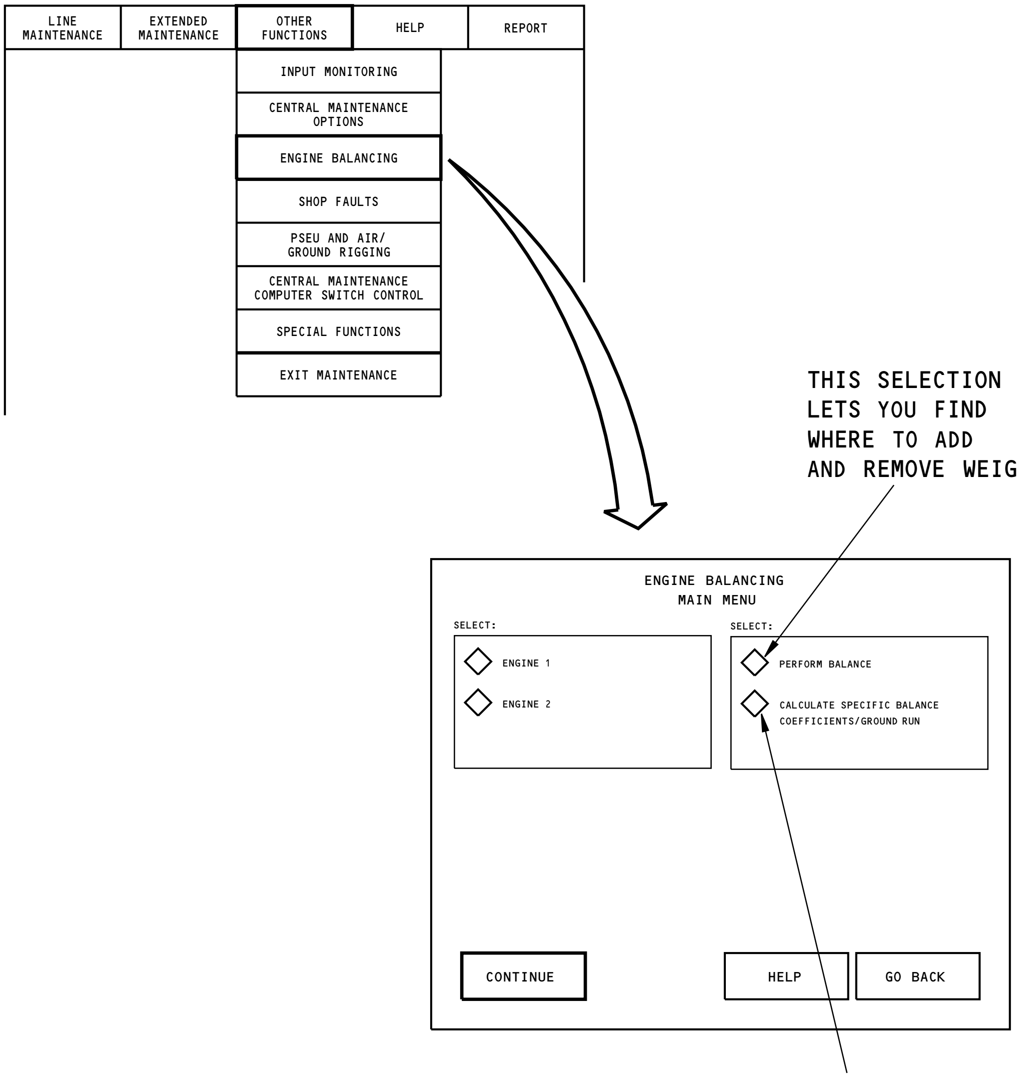
(1) To make sure that new faults go into fault history and all ACMF reports occur, go back to the initial MAT menu and select a different display or select EXIT MAINTENANCE:

  (a) Select GO BACK.

  (b) Select LINE MAINTENANCE from the CMCS main menu.

  (c) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———



THIS SELECTION LETS YOU FIND WHERE TO ADD AND REMOVE WEIGHTS

THIS SELECTION LETS THE AVM CALCULATE AND CHANGE ITS BALANCE DATA TO GIVE A MORE ACCURATE BALANCE

<u>NOTE</u>: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

C87953 S0006423444_V1

How to Start the Engine Balancing Function
Figure 242/45-10-00-990-836

TASK 45-10-00-740-807

38. How to Find Shop Faults Data

A. General

(1) This task tells you how to find the shop faults that are stored in the non-volatile memory of an LRU. Shop faults data is failure data that can be used for repair of the LRU in the shop.

(2) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(3) You can use a MAT or a PMAT for this procedure.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. Prepare to Show Shop Faults Data

SUBTASK 45-10-00-860-168

(1) To prepare to show shop faults data from the EEC, set the EEC MAINT L (R) ENG POWER switch on the P61 overhead panel to the TEST position.

SUBTASK 45-10-00-860-169

(2) To prepare to show shop faults data from the APU, set the APU MAINT APU POWER switch on the P61 overhead panel to the TEST position.

D. How to Select an LRU

(Figure 243)

SUBTASK 45-10-00-860-058

(1) To show the shop faults selection display, do this:

(a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

(b) Select OTHER FUNCTIONS from the CMCS main menu.

(c) Select SHOP FAULTS from the OTHER FUNCTIONS menu.

NOTE: The ATA selection dialog box shows.

SUBTASK 45-10-00-860-172

(2) To select the AIMS MEP ALL PAGES DUMP function do this:

(a) Select an ATA system.

(b) Select an LRU.

(c) Select CONTINUE.

(d) Select ALL PAGES DUMP.

(e) Select output to printer or to disk.

(f) Select CONTINUE.

NOTE: All shop fault pages for the selected LRU will be sent to the printer or disk automatically.

SUBTASK 45-10-00-740-028

(3) To select an LRU, do this:

(a) Select an ATA system.

(b) Select an LRU.

(c) Select CONTINUE.

NOTE: For most LRUs, the shop faults data shows immediately. For some LRUs, a list of contents shows first.

E. How to Use the Contents Pages (If Available)

(Figure 244)

SUBTASK 45-10-00-740-029

(1) To move to a different contents page one page at a time, do this:

(a) Select NEXT PAGE to show the subsequent contents page.

(b) Select PREVIOUS PAGE to show the contents page you saw before.

SUBTASK 45-10-00-740-030

(2) To move quickly to a different contents page, do this:

(a) Select CONTENTS PAGE.

(b) Select the up or down arrow to change the page number in the NEW NUMBER area.

(c) Select SHOW PAGE.

NOTE: The selected contents page shows. The page number is in the upper right corner of the display.

SUBTASK 45-10-00-740-031

(3) To select a fault page from the list of contents, do this:

(a) Select FAULT PAGE.

(b) Select the up or down arrow to change the page number in the NEW NUMBER area.

(c) Select SHOW PAGE.

NOTE: The shop fault data page with the number you selected shows.

SUBTASK 45-10-00-740-071

(4) To go back to the list of contents from a shop faults data page, do this:

(a) Select CONTENTS PAGE.

(b) Select the up or down arrow to change the page number in the NEW NUMBER area.

(c) Select SHOW PAGE.

NOTE: The contents page with the number you selected shows.

F. How to Show a Different Shop Faults Page

(Figure 243)

SUBTASK 45-10-00-740-032

(1) To move to a different fault page one page at a time, do this:

(a) Select NEXT PAGE to show the subsequent fault page.

(b) Select PREVIOUS PAGE to show the fault page you saw before.

SUBTASK 45-10-00-740-033

(2) If the SHOW PAGE selection is available, do this to move quickly to a different fault page:

(a) Select the up or down arrow to change the page number in the NEW NUMBER area.

(b) Select SHOW PAGE.

NOTE: The fault page with the number you selected shows.

G. How to Show the Configuration of the LRU

SUBTASK 45-10-00-750-002

(1) To show the LRU configuration, do this:

(a) Select LRU DATA (if it shows) from the shop faults data page.

NOTE: The LRU configuration data shows. The data includes the hardware part number, the LRU serial number, the software part numbers, and a description of options.

(b) Select GO BACK to go back to the shop faults data display.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 45-10-00-860-059

(1) To go back to the initial MAT menu, do this:

(a) Select GO BACK (if it shows).

(b) Select LINE MAINTENANCE from the CMCS main menu.

(c) Select EXIT MAINTENANCE from the line maintenance menu.

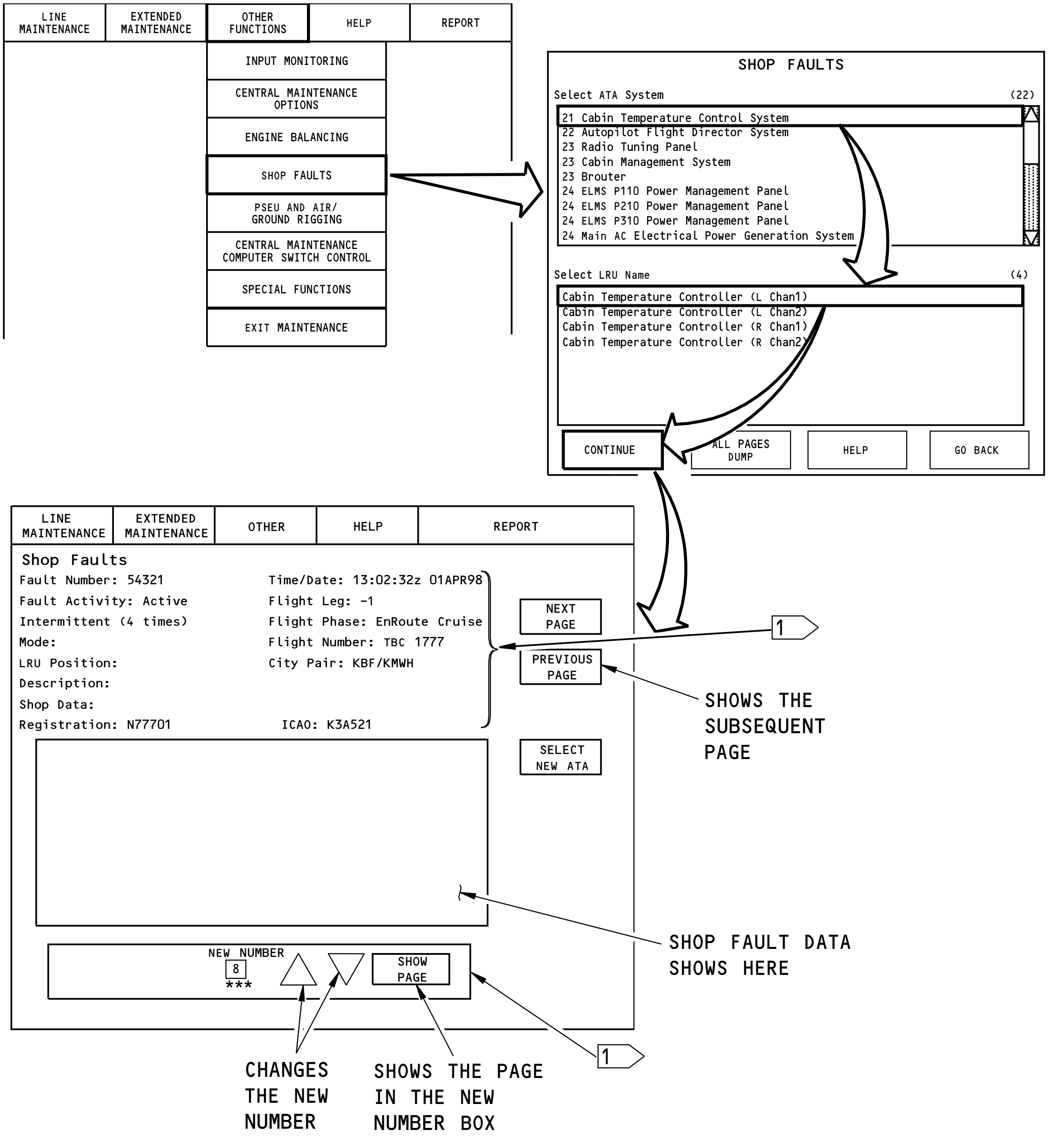
SUBTASK 45-10-00-860-170

(2) If you looked for shop faults data from the EEC, set the EEC MAINT L (R) ENG POWER switch to the NORM position.

SUBTASK 45-10-00-860-171

(3) If you looked for shop faults data from the APU, set the APU MAINT APU POWER switch to the NORM position.

——— END OF TASK ———



SHOP FAULTS

Select ATA System (22)

- 21 Cabin Temperature Control System
- 22 Autopilot Flight Director System
- 23 Radio Tuning Panel
- 23 Cabin Management System
- 23 Brouter
- 24 ELMS P110 Power Management Panel
- 24 ELMS P210 Power Management Panel
- 24 ELMS P310 Power Management Panel
- 24 Main AC Electrical Power Generation System

Select LRU Name (4)

- Cabin Temperature Controller (L Chan1)
- Cabin Temperature Controller (L Chan2)
- Cabin Temperature Controller (R Chan1)
- Cabin Temperature Controller (R Chan2)

Shop Faults

Fault Number: 54321
Fault Activity: Active
Intermittent (4 times)
Mode:
LRU Position:
Description:
Shop Data:
Registration: N77701

Time/Date: 13:02:32z 01APR98
Flight Leg: -1
Flight Phase: EnRoute Cruise
Flight Number: TBC 1777
City Pair: KBF/KMWH
ICAO: K3A521

SHOWS THE SUBSEQUENT PAGE

SHOP FAULT DATA SHOWS HERE

CHANGES THE NEW NUMBER

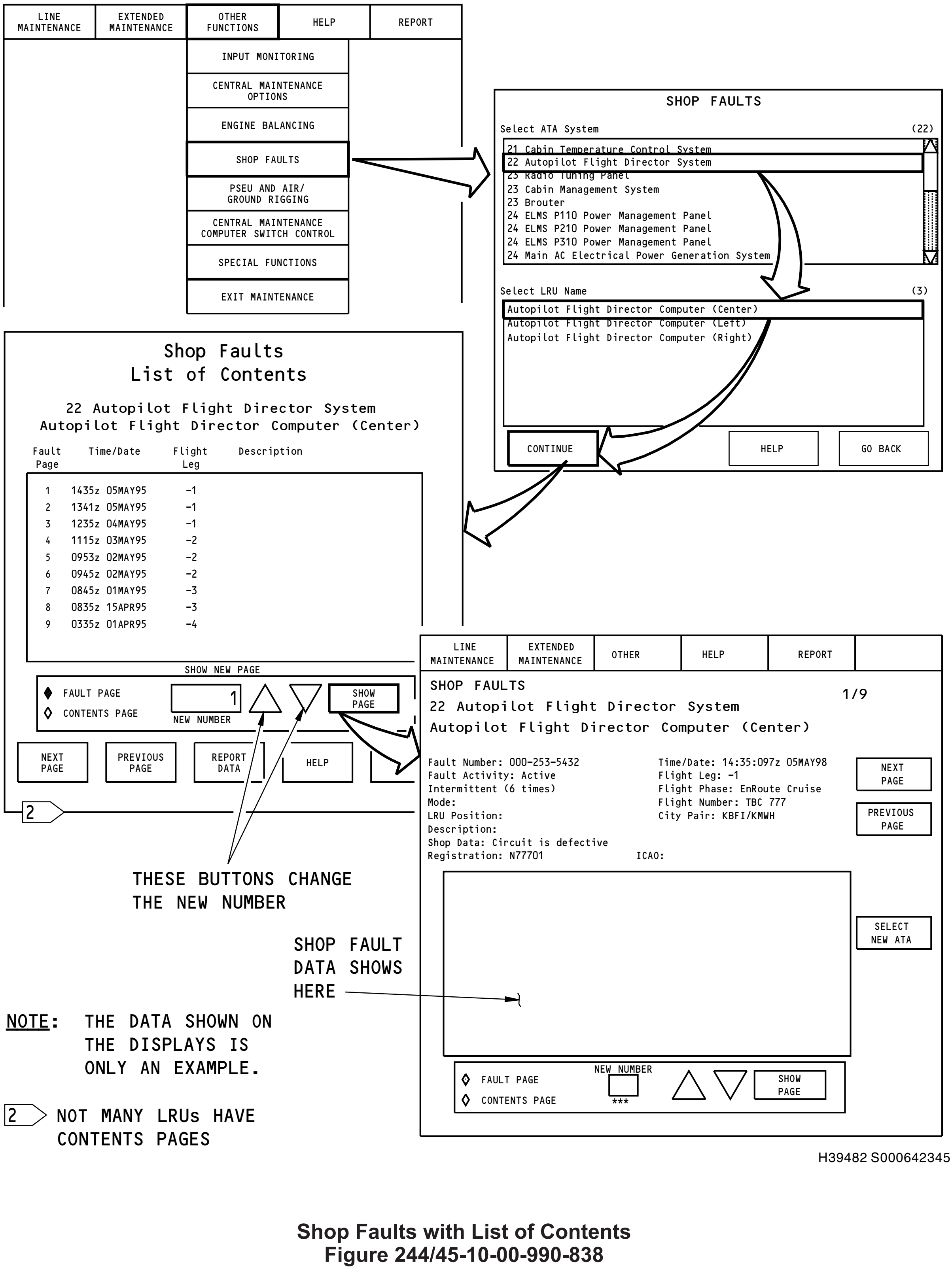
SHOWS THE PAGE IN THE NEW NUMBER BOX

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

1 THIS AREA DOES NOT SHOW FOR SOME LRUs

H39481 S0006423448_V2

How to Find Shop Faults
Figure 243/45-10-00-990-837



SHOP FAULTS

Select ATA System (22)

21 Cabin Temperature Control System
22 Autopilot Flight Director System
23 Radio Tuning Panel
23 Cabin Management System
23 Brouter
24 ELMS P110 Power Management Panel
24 ELMS P210 Power Management Panel
24 ELMS P310 Power Management Panel
24 Main AC Electrical Power Generation System

Select LRU Name (3)

Autopilot Flight Director Computer (Center)
Autopilot Flight Director Computer (Left)
Autopilot Flight Director Computer (Right)

Shop Faults
List of Contents

22 Autopilot Flight Director System
Autopilot Flight Director Computer (Center)

Fault Page	Time/Date	Flight Leg	Description
1	1435z 05MAY95	-1	
2	1341z 05MAY95	-1	
3	1235z 04MAY95	-1	
4	1115z 03MAY95	-2	
5	0953z 02MAY95	-2	
6	0945z 02MAY95	-2	
7	0845z 01MAY95	-3	
8	0835z 15APR95	-3	
9	0335z 01APR95	-4	

SHOP FAULTS 1/9
22 Autopilot Flight Director System
Autopilot Flight Director Computer (Center)

Fault Number: 000-253-5432
Fault Activity: Active
Intermittent (6 times)
Mode:
LRU Position:
Description:
Shop Data: Circuit is defective
Registration: N77701

Time/Date: 14:35:097z 05MAY98
Flight Leg: -1
Flight Phase: EnRoute Cruise
Flight Number: TBC 777
City Pair: KBFI/KMWH
ICAO:

THESE BUTTONS CHANGE THE NEW NUMBER

SHOP FAULT DATA SHOWS HERE

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

2 NOT MANY LRUs HAVE CONTENTS PAGES

H39482 S0006423451_V1

Shop Faults with List of Contents
Figure 244/45-10-00-990-838

TASK 45-10-00-860-810

39. How to Change the Primary CMCF

(Figure 245)

A. General

(1) There are two Central Maintenance Computing Functions (CMCF), a left CMCF and a right CMCF. One CMCF at a time controls the central maintenance computing system. The CMCF that is in control is the primary CMCF.

(2) This task tells you how to use the Central Maintenance Computer Switch Control function to change the primary CMCF from the left to the right or the right to the left.

(3) It can be necessary to change the primary CMCF at these times:

(a) Before software installation of ARINC 429 systems.

(b) Before software installation of the IOM4 (M003) module that contains CMCF software.

(c) To do an operational test of the left and right CMCF.

(d) To do a reset of the two IOM (M003) modules.

(4) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(5) You can use a MAT or a PMAT for this procedure.

(6) You cannot change the primary CMCF at these times:

(a) During a ground test.

(b) During engine balancing.

(c) During software installation.

(d) If one CMCF is failed.

(7) You can cause problems if you change the primary CMCF at these times:

(a) During input monitoring on a different maintenance access terminal.

(b) During a report.

NOTE: If you change the primary CMCF before a report is completed, the report will stop.

(c) During fault history crossload (immediately after AIMS and MAT power-up).

NOTE: Fault history crossload occurs after AIMS power-up and continues for approximately three minutes after the MAT main menu shows. The MAT does not tell you when fault history crossload is completed. You can erase fault history if you change the primary CMCF too soon after AIMS power-up.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Change the Primary Central Maintenance Computing Function (CMCF)

SUBTASK 45-10-00-860-060

(1) To put the other CMCF in control, do this:

(a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

(b) Select OTHER FUNCTIONS from the CMCS main menu.

(c) Select CENTRAL MAINTENANCE COMPUTER SWITCH CONTROL from the OTHER FUNCTIONS menu.

NOTE: The display shows whether the left or the right CMCF is in control.

(d) Select SWITCH TO LEFT or SWITCH TO RIGHT (Select the one that shows).

NOTE: The display shows ARE YOU SURE YOU WANT TO SWITCH TO THE LEFT (RIGHT) CENTRAL MAINTENANCE COMPUTER???

(e) Select YES.

NOTE: The display shows MANUAL SWITCH IS IN OPERATION. After approximately 10-15 seconds, the other CMCF takes control and this shows: COMMUNICATION TO THE CENTRAL MAINTENANCE COMPUTING FUNCTION (CMCF) IS DISCONNECTED. THIS SESSION IS STOPPED.

(f) Select CONTINUE.

NOTE: The MAT main menu shows that the other CMCF is in control.

(g) Select ONBOARD MAINTENANCE and continue with maintenance.

D. What to Do When Problems Occur

SUBTASK 45-10-00-860-061

(1) If the display shows SWITCH TO THE LEFT (RIGHT) CENTRAL MAINTENANCE COMPUTER IS INHIBITED, select GO BACK and wait until the inhibit condition goes away.

NOTE: You cannot change the primary CMCF during a ground test, during engine balancing, or during software installation (data load).

E. Put the Airplane Back to Its Usual Condition

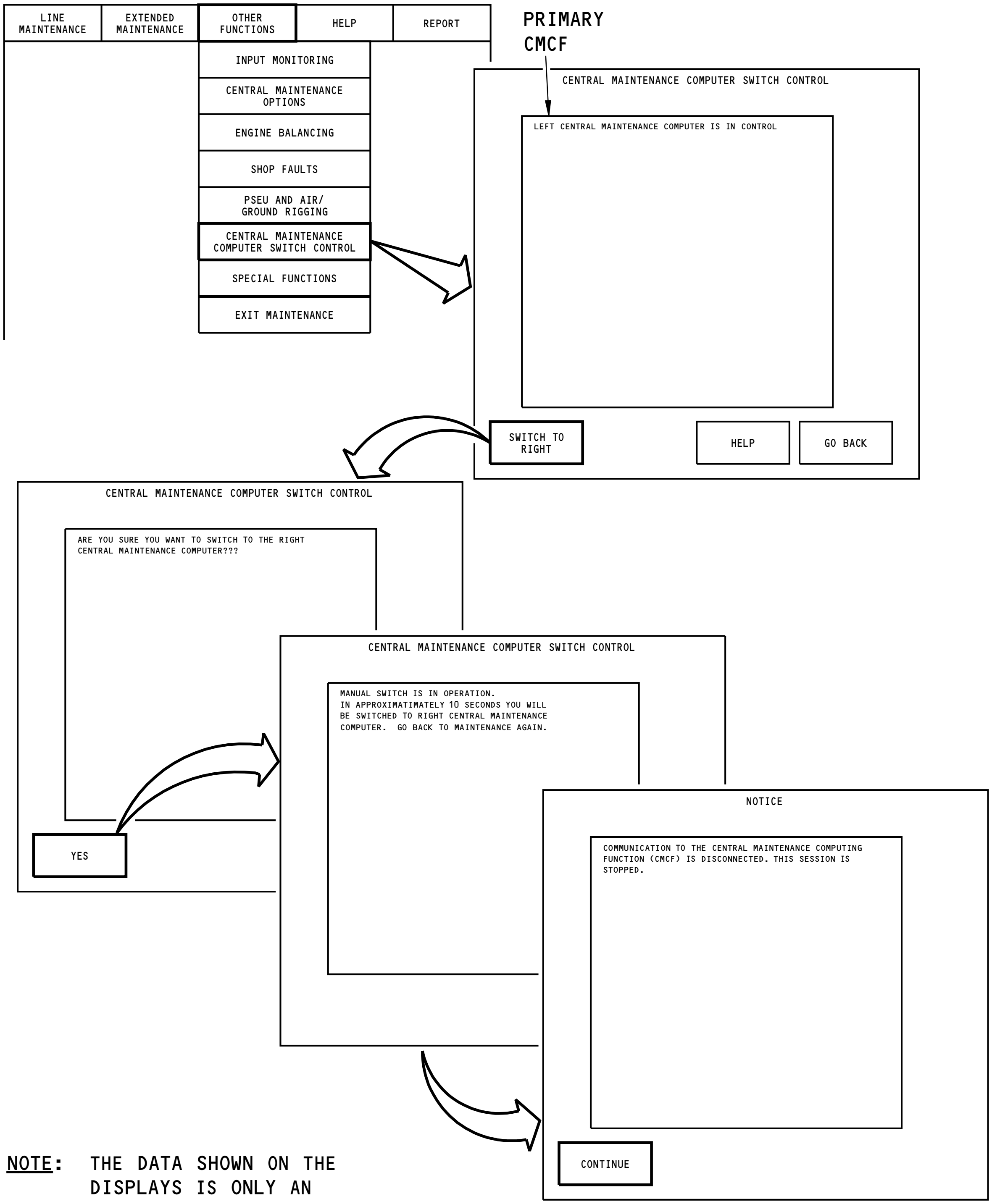
SUBTASK 45-10-00-860-062

(1) To go back to the initial MAT menu, do this:

(a) Select LINE MAINTENANCE from the CMCS main menu.

(b) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———


LINE MAINTENANCE
EXTENDED MAINTENANCE
OTHER FUNCTIONS
HELP
REPORT
INPUT MONITORING
CENTRAL MAINTENANCE OPTIONS
ENGINE BALANCING
SHOP FAULTS
PSEU AND AIR/ GROUND RIGGING
CENTRAL MAINTENANCE COMPUTER SWITCH CONTROL
SPECIAL FUNCTIONS
EXIT MAINTENANCE
PRIMARY CMCF
CENTRAL MAINTENANCE COMPUTER SWITCH CONTROL
SWITCH TO RIGHT
HELP
GO BACK
CENTRAL MAINTENANCE COMPUTER SWITCH CONTROL
YES
CENTRAL MAINTENANCE COMPUTER SWITCH CONTROL
NOTICE
CONTINUE

LEFT CENTRAL MAINTENANCE COMPUTER IS IN CONTROL

ARE YOU SURE YOU WANT TO SWITCH TO THE RIGHT CENTRAL MAINTENANCE COMPUTER???

MANUAL SWITCH IS IN OPERATION.
IN APPROXIMATIMATELY 10 SECONDS YOU WILL BE SWITCHED TO RIGHT CENTRAL MAINTENANCE COMPUTER. GO BACK TO MAINTENANCE AGAIN.

COMMUNICATION TO THE CENTRAL MAINTENANCE COMPUTING FUNCTION (CMCF) IS DISCONNECTED. THIS SESSION IS STOPPED.

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

C88002 S0006423453_V1

How to Change the Primary CMCF
Figure 245/45-10-00-990-839

TASK 45-10-00-860-816

40. How to Change the AIMS Interface Selection

(Figure 246)

A. General

(1) There are two AIMS interfaces that the maintenance access termainl (MAT) or maintenance laptop (ML) can communicate through, a left AIMS interface and a right AIMS interface. One interface at a time can be communicated through.

(2) This task tells you how to use the AIMS Left-Right Selection to change the AIMS interface selection from the left to the right or the right to the left.

(3) It can be necessary to change the primary CMCF at these times:

- (a) Before software installation of the two CPM/Comm modules which contain CMCF software.
- (b) Before an operational test of the left and right CMCF.
- (c) Before a reset of the two CPM/Comm modules.
- (d) Before a system test of the two AIMS cabinets.
- (e) When you shut down only one AIMS cabinet.
- (f) When you change the primary CMCF.

(4) You can use a MAT or ML for this procedure.

(5) You cannot change the AIMS interface at these times:

- (a) During a ground test.
- (b) During engine balancing.
- (c) During software installation.
- (d) If one CPM/Comm is failed.
- (e) If one AIMS cabinet is failed.

(6) You can cause problems if you change the primary CMCF at these times:

- (a) During input monitoring on a different maintenance access terminal.
- (b) During a report.

NOTE: If you change the primary CMCF before a report is completed, the report will stop.

B. How to Change the AIMS Interface

SUBTASK 45-10-00-860-213

(1) If you are in the CMCS menu, do this:

- (a) Select LINE MAINTENANCE from the CMCS main menu.
- (b) Select EXIT MAINTENANCE from the LINE MAINTENANCE menu.
- (c) On the MATA AIMS Main Menu, select INTERFACE L_AIMS or INTERFACE R_AIMS.
- (d) Select ONBOARD MAINTENANCE and continue with maintenance.

NOTE: If the CMCS menu fails to launch, then there may be a fault in the selected AIMS cabinet.

(2) If you are on the MAT main menu, do this:

- (a) Select AIMS from the MAT main menu.
- (b) On the MATA AIMS Main Menu, select INTERFACE L_AIMS or INTERFACE R_AIMS.

(c) Select ONBOARD MAINTENANCE and continue with maintenance.

NOTE: If the CMCS menu fails to launch, then there may be a fault in the selected AIMS cabinet.

C. What to Do When the CMCS Menu Fails to Launch

SUBTASK 45-10-00-860-214

(1) If the CMCS menu fails to launch after a change in AIMS interface, do these steps:

(a) On the MATA AIMS Main Menu, select the original AIMS interface.

(b) Search for existing faults for the 31 - AIMS LEFT or 31 - AIMS RIGHT ATAs: do this task (How to Find Active or Latched Maintenance Messages in One ATA System, TASK 45-10-00-740-818).

(c) Do the related FIM procedure(s) for the listed fault(s).

D. Put the Airplane Back to Its Usual Condition

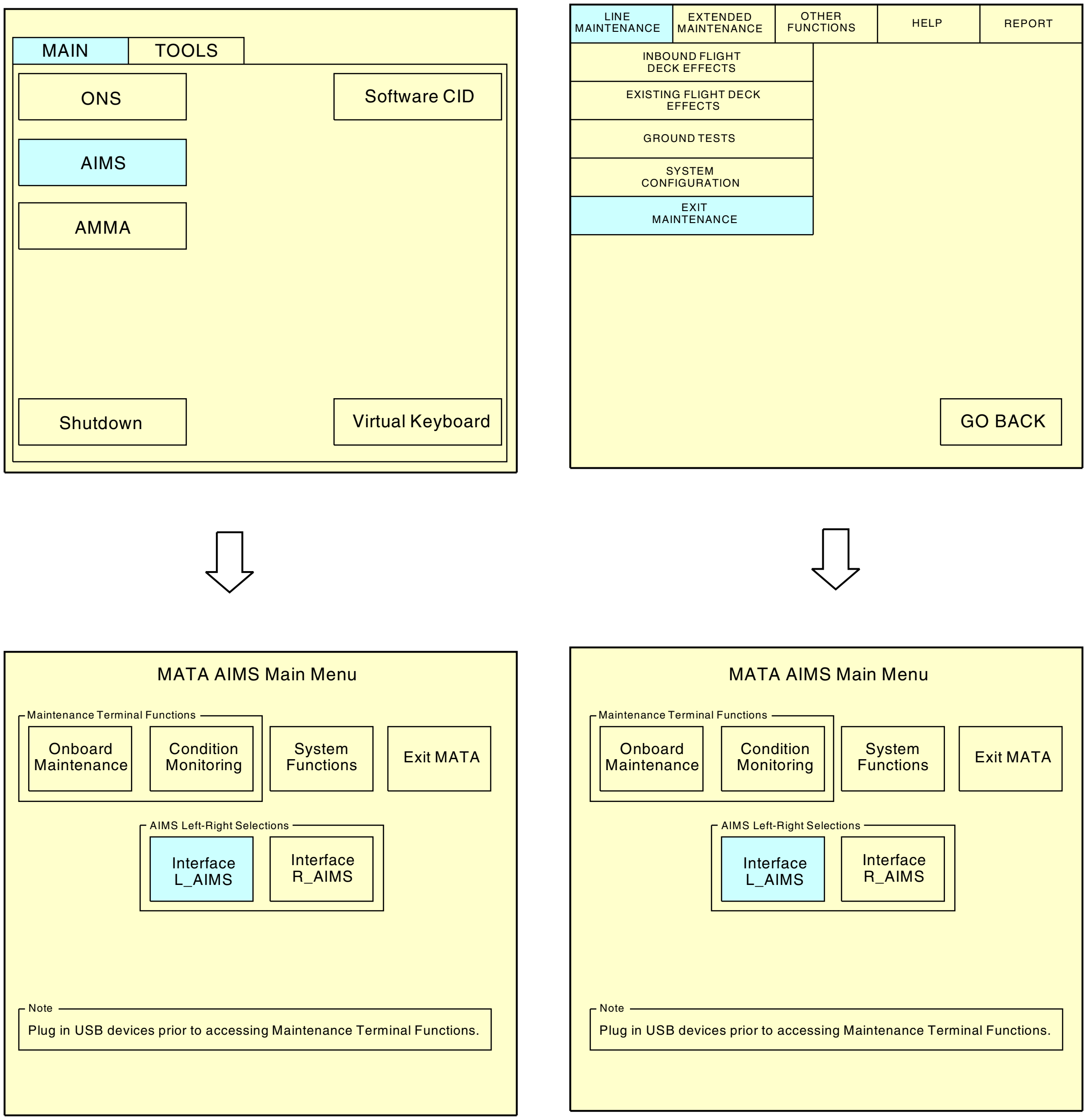
SUBTASK 45-10-00-860-215

(1) To go back to the initial MAT menu, do this:

(a) Select LINE MAINTENANCE from the CMCS main menu.

(b) Select EXIT MAINTENANCE from the LINE MAINTENANCE menu.

——— END OF TASK ———



Plug in USB devices prior to accessing Maintenance Terminal Functions.

Plug in USB devices prior to accessing Maintenance Terminal Functions.

FROM THE MAT MAIN MENU

FROM THE CMCS MAIN MENU

2519603 S0000591289_V1

How to Change the AIMS Interface Selection
Figure 246/45-10-00-990-857

TASK 45-10-00-860-811

41. How to Start and Stop a Special Function

A. General

(1) This task tells you how to use the Special Functions displays. Special Functions are maintenance procedures for LRUs. Special Function displays are similar to Ground Test displays, but special functions are not tests.

(2) Each function has a set of conditions that the airplane must be in to let the function operate. Instructions on the display tell you what those conditions are.

(3) Some special functions stop automatically. You must stop other special functions.

(4) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(5) You can use a MAT or a PMAT for this procedure.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Select a Function

(Figure 247)

SUBTASK 45-10-00-740-035

(1) To show the Special Functions selection display, do this:

(a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

(b) Select OTHER FUNCTIONS from the CMCS main menu.

(c) Select SPECIAL FUNCTIONS from the Other Functions menu.

NOTE: The ATA selection dialog box shows.

SUBTASK 45-10-00-740-036

(2) To select a function, do this:

(a) Select an ATA System.

(b) Select a function.

(c) Make sure the selections on the display are correct; if not, make the correct selections.

(d) Select CONTINUE.

NOTE: The initial instructions show.

D. How to Start the Function

(Figure 247)

SUBTASK 45-10-00-740-037

(1) Do the initial instructions:

  (a) Read the function description.

  (b) If instructions show on the display, do the instructions.

  (c) Select CONTINUE.

  NOTE: One of these indications shows adjacent to FUNCTION CONDITION: READY, INHIBITED, or CANNOT OPERATE.

SUBTASK 45-10-00-740-090

(2) If READY shows adjacent to FUNCTION CONDITION, select START FUNCTION.

E. When the Function is Inhibited or Cannot Operate

(Figure 248)

SUBTASK 45-10-00-740-038

(1) If INHIBITED or CANNOT OPERATE shows adjacent to FUNCTION CONDITION, select TO START FUNCTION.

NOTE: The MAT shows instructions to let the function operate.

  (a) Do the instructions that show on the display.

  (b) Select CONTINUE.

SUBTASK 45-10-00-740-091

(2) When READY shows adjacent to FUNCTION CONDITION, select START FUNCTION.

F. Function Operation

SUBTASK 45-10-00-740-039

(1) Do the instructions that show on the display.

SUBTASK 45-10-00-740-040

(2) If OPERATING shows adjacent to FUNCTION CONDITION, wait until the function is completed.

NOTE: Some special functions stop automatically. You must stop other special functions.

SUBTASK 45-10-00-740-055

(3) When the function is completed, make sure that COMPLETED shows adjacent to FUNCTION CONDITION.

G. How to Stop a Function

(Figure 249)

SUBTASK 45-10-00-740-056

(1) To stop a function that does not stop automatically, select STOP FUNCTION.

NOTE: STOPPED shows adjacent to FUNCTION CONDITION and the OPERATE FUNCTION AGAIN selection becomes available. This indication shows below CAUSE: User stopped function.

H. How to Start the Same Function Again

SUBTASK 45-10-00-740-041

(1) To start the same function again, make these selections:

  (a) GO BACK (if it shows)

(b) OPERATE FUNCTION AGAIN.

NOTE: The initial instructions show.

I. How to Start a Different Function

SUBTASK 45-10-00-740-042

(1) To start a different function, make these selections:

(a) GO BACK (if it shows)

(b) NEW FUNCTION

NOTE: The ATA System selections show.

J. What to Do if Problems Occur

SUBTASK 45-10-00-740-057

(1) If STOPPED shows adjacent to FUNCTION CONDITION, and you did not stop the function, look at the CAUSE.

(a) If a member system stopped the function, select TO START FUNCTION.

NOTE: The MAT shows instructions to let the function operate.

1) Do the instructions that show on the display.

2) Select CONTINUE.

K. Put the Airplane Back to Its Usual Condition

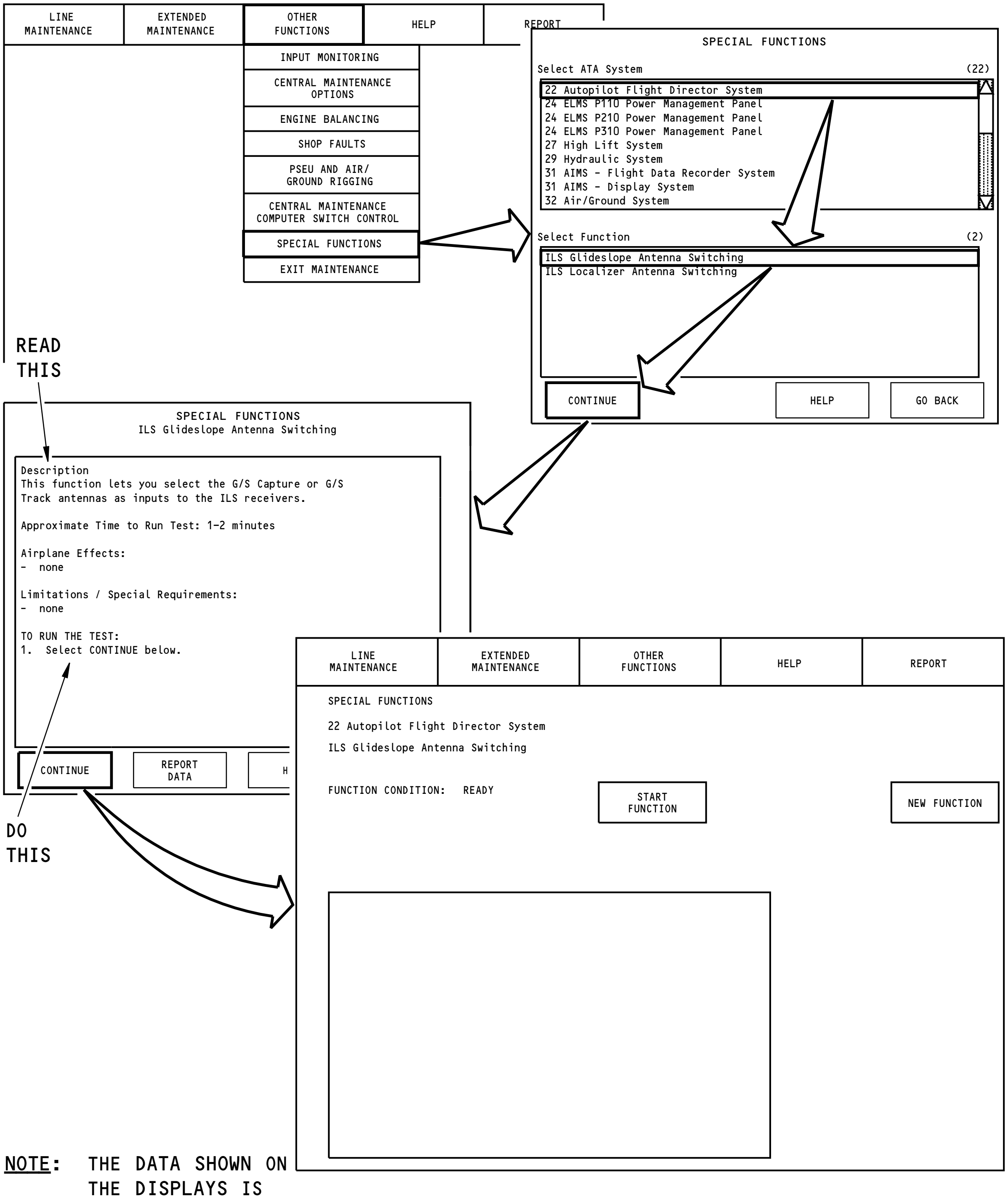
SUBTASK 45-10-00-860-063

(1) To go back to the initial MAT menu, do this:

(a) Select LINE MAINTENANCE from the CMCS main menu.

(b) Select EXIT MAINTENANCE.

——— END OF TASK ———



Description
This function lets you select the G/S Capture or G/S Track antennas as inputs to the ILS receivers.

Approximate Time to Run Test: 1-2 minutes

Airplane Effects:
- none

Limitations / Special Requirements:
- none

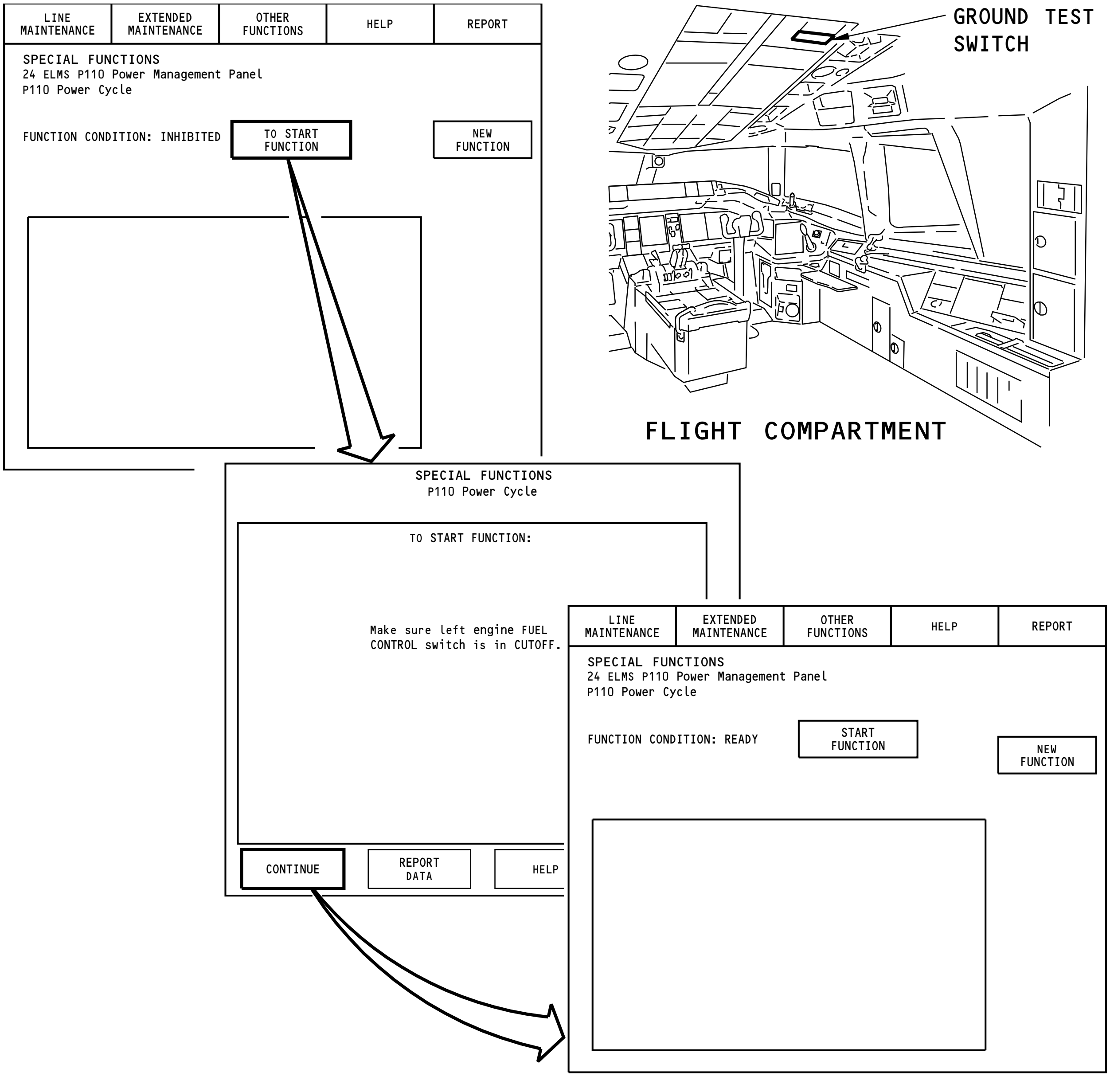
TO RUN THE TEST:
1. Select CONTINUE below.

FUNCTION CONDITION: READY

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

H39515 S0006423457_V1

How to Slect and Start a Special Function
Figure 247/45-10-00-990-840



SPECIAL FUNCTIONS
24 ELMS P110 Power Management Panel
P110 Power Cycle

FUNCTION CONDITION: INHIBITED

SPECIAL FUNCTIONS
P110 Power Cycle

TO START FUNCTION:

Make sure left engine FUEL CONTROL switch is in CUTOFF.

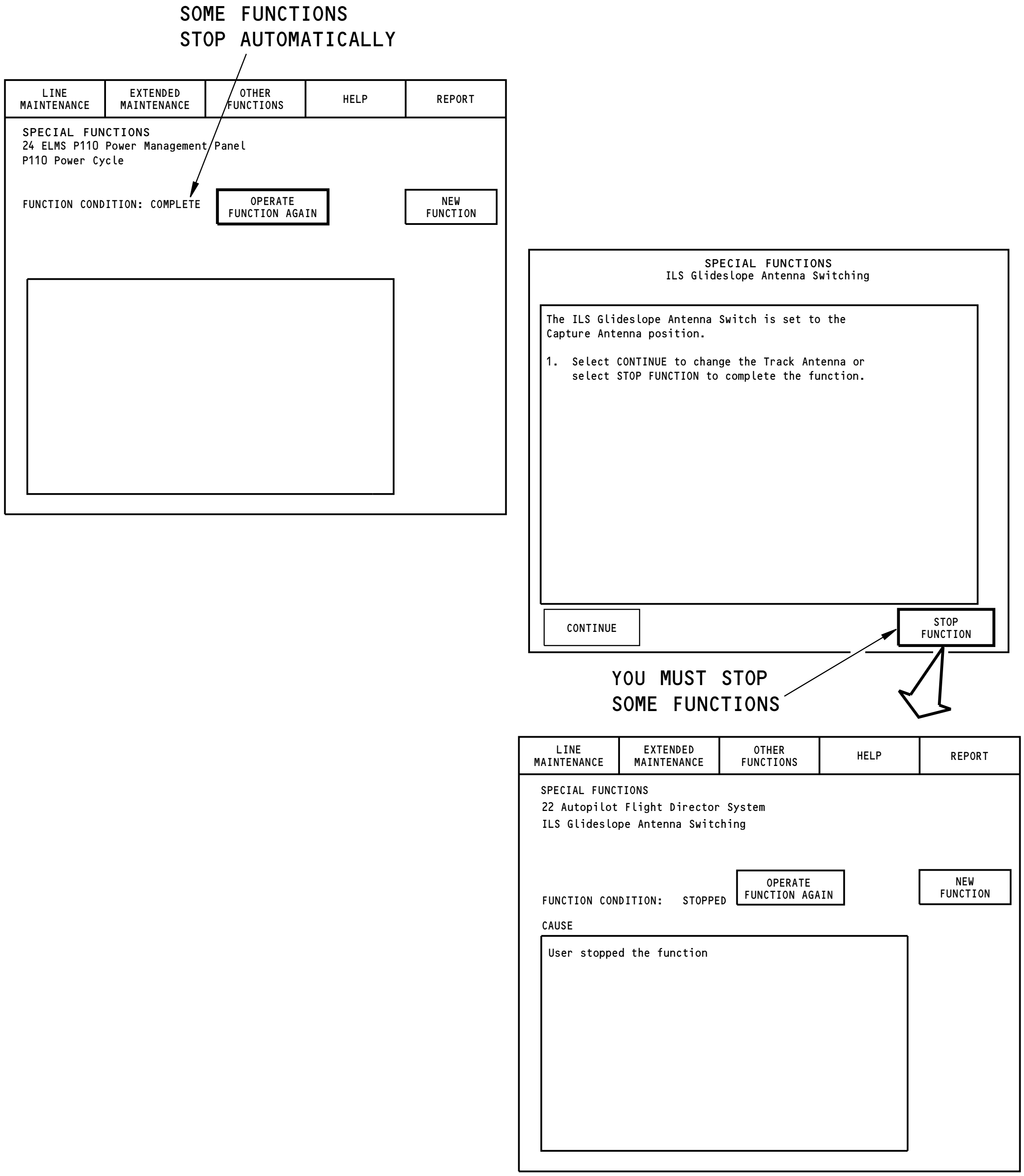
SPECIAL FUNCTIONS
24 ELMS P110 Power Management Panel
P110 Power Cycle

FUNCTION CONDITION: READY

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

H39485 S0006423460_V1

When a Special Function is Inhibited or Cannot Operate
Figure 248/45-10-00-990-841



SOME FUNCTIONS STOP AUTOMATICALLY

SPECIAL FUNCTIONS
24 ELMS P110 Power Management Panel
P110 Power Cycle

FUNCTION CONDITION: COMPLETE

SPECIAL FUNCTIONS
ILS Glideslope Antenna Switching

The ILS Glideslope Antenna Switch is set to the Capture Antenna position.

1. Select CONTINUE to change the Track Antenna or select STOP FUNCTION to complete the function.

YOU MUST STOP SOME FUNCTIONS

SPECIAL FUNCTIONS
22 Autopilot Flight Director System
ILS Glideslope Antenna Switching

FUNCTION CONDITION: STOPPED

CAUSE

User stopped the function

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

H39486 S0006423463_V1

How to Start and Stop a Special Function
Figure 249/45-10-00-990-842

TASK 45-10-00-910-812

42. How to Show Help Displays

A. General

(1) Two types of help are available:

(a) Help with the display that shows (SCREEN HELP or the HELP button on a dialog box).

(b) Help with the operation of CMCS and maintenance access terminals (GENERAL HELP).

(2) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(3) Help is available on the MAT and PMAT.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Get Help with the Display that Shows

(Figure 250)

SUBTASK 45-10-00-910-034

(1) When the CMCS main menu is available, do this to get help with the display that shows:

(a) Select HELP from the CMCS main menu.

(b) Select SCREEN HELP from the drop-down menu.

NOTE: A help dialog box shows how to use the display.

(c) Select GO BACK to remove the help dialog box.

SUBTASK 45-10-00-910-035

(2) When the CMCS main menu is not available because a dialog box shows, do this to get help with the dialog box:

(a) Select HELP on the bottom of the dialog box.

NOTE: A HELP dialog box shows how to use the other dialog box.

(b) Select GO BACK to remove the HELP dialog box.

D. How to Get Help with CMCS Operation

(Figure 251)

SUBTASK 45-10-00-910-036

(1) To get help with the use of CMCS, do this:

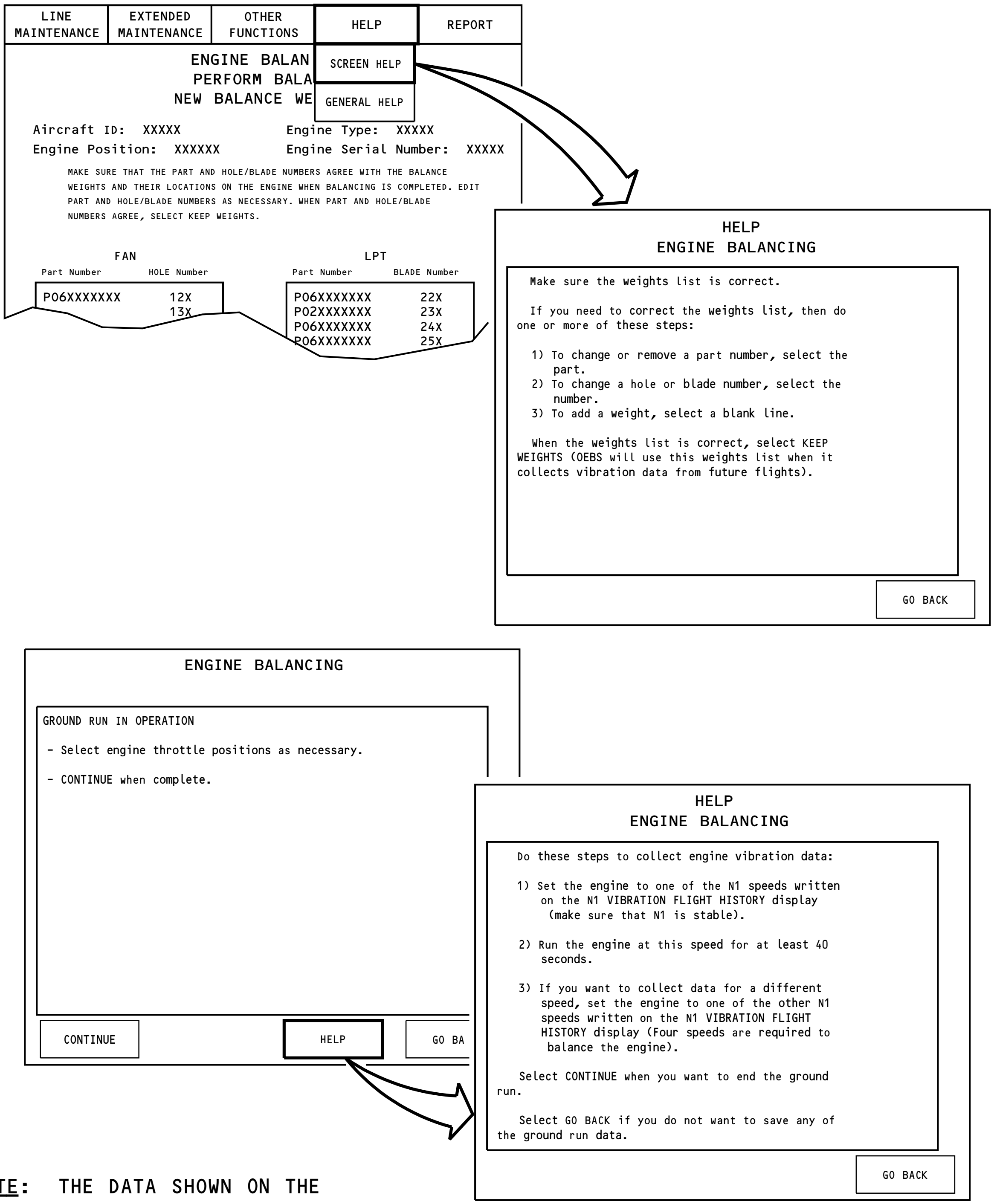
(a) Select HELP from the CMCS main menu.

(b) Select GENERAL HELP from the drop-down menu.

NOTE: A HELP dialog box tells about CMCS. Use the scroll bar to look for the necessary help.

(c) Select GO BACK to remove the HELP dialog box.

——— **END OF TASK** ———



Aircraft ID: XXXXX
Engine Type: XXXXX
Engine Position: XXXXXX
Engine Serial Number: XXXXX

MAKE SURE THAT THE PART AND HOLE/BLADE NUMBERS AGREE WITH THE BALANCE WEIGHTS AND THEIR LOCATIONS ON THE ENGINE WHEN BALANCING IS COMPLETED. EDIT PART AND HOLE/BLADE NUMBERS AS NECESSARY. WHEN PART AND HOLE/BLADE NUMBERS AGREE, SELECT KEEP WEIGHTS.

FAN Part Number	HOLE Number
P06XXXXXXX	12X
	13X

LPT Part Number	BLADE Number
P06XXXXXXX	22X
P02XXXXXXX	23X
P06XXXXXXX	24X
P06XXXXXXX	25X

HELP
ENGINE BALANCING

Make sure the weights list is correct.

If you need to correct the weights list, then do one or more of these steps:

1) To change or remove a part number, select the part.
2) To change a hole or blade number, select the number.
3) To add a weight, select a blank line.

When the weights list is correct, select KEEP WEIGHTS (OEBS will use this weights list when it collects vibration data from future flights).

ENGINE BALANCING

GROUND RUN IN OPERATION

- Select engine throttle positions as necessary.
- CONTINUE when complete.

HELP
ENGINE BALANCING

Do these steps to collect engine vibration data:

1) Set the engine to one of the N1 speeds written on the N1 VIBRATION FLIGHT HISTORY display (make sure that N1 is stable).

2) Run the engine at this speed for at least 40 seconds.

3) If you want to collect data for a different speed, set the engine to one of the other N1 speeds written on the N1 VIBRATION FLIGHT HISTORY display (Four speeds are required to balance the engine).

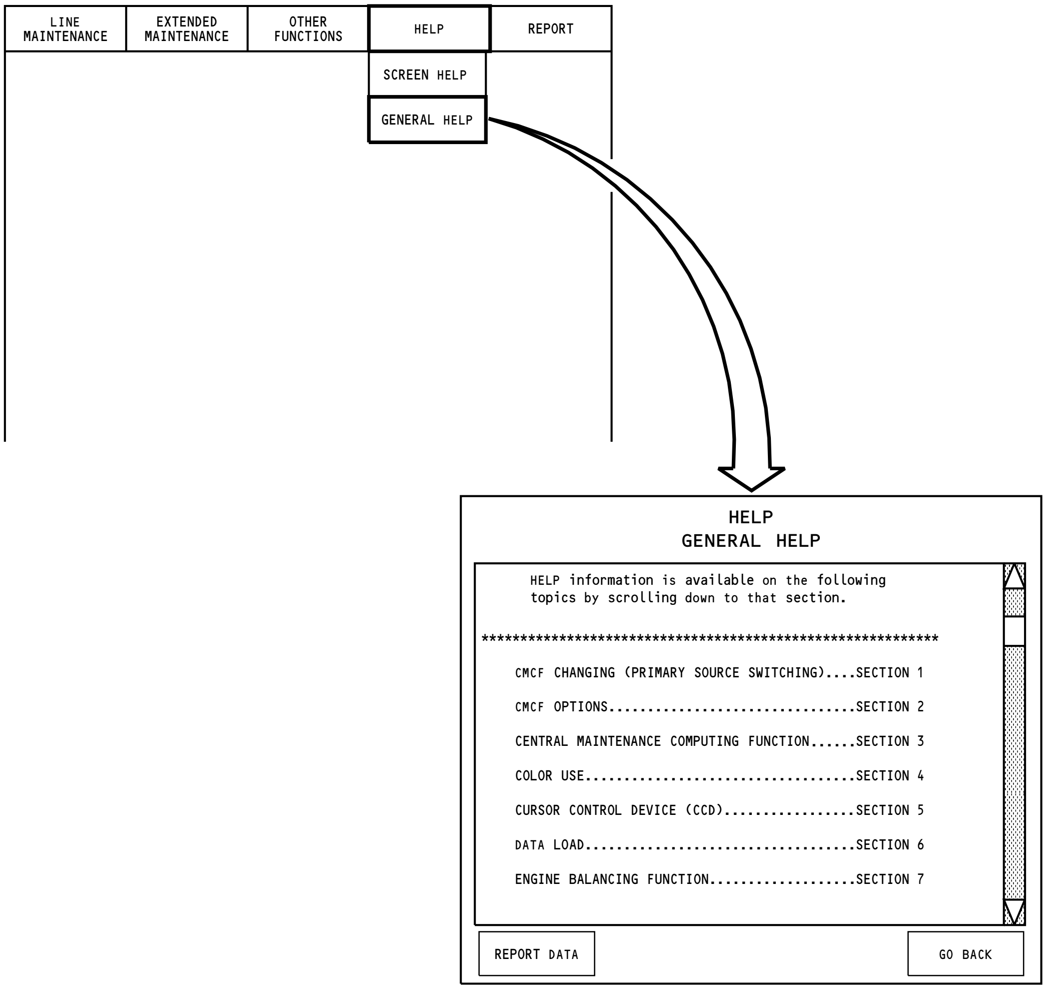
Select CONTINUE when you want to end the ground run.

Select GO BACK if you do not want to save any of the ground run data.

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

E57773 S0006423465_V1

How to Get Help with a Display
Figure 250/45-10-00-990-843



```
     HELP information is available on the following
     topics by scrolling down to that section.

*************************************************************

    CMCF CHANGING (PRIMARY SOURCE SWITCHING)....SECTION 1

    CMCF OPTIONS................................SECTION 2

    CENTRAL MAINTENANCE COMPUTING FUNCTION......SECTION 3

    COLOR USE...................................SECTION 4

    CURSOR CONTROL DEVICE (CCD).................SECTION 5

    DATA LOAD...................................SECTION 6

    ENGINE BALANCING FUNCTION...................SECTION 7
```

NOTE: THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

E57872 S0006423466_V1

How to Get Help with CMCS Operation
Figure 251/45-10-00-990-844

TASK 45-10-00-970-801

43. How to Send a Report to the Printer

(Figure 252)

A. General

(1) Use this task to make a paper copy of central maintenance data that shows on a maintenance access terminal. The paper copy, or printer report, comes out of the flight deck printer in the aisle stand.

(2) You can make a printer report of the data on these displays:

  (a) Inbound Flight Deck Effects
  (b) Existing Flight Deck Effects
  (c) Present Leg Faults sorted by FDE
  (d) Present Leg Faults for a selected ATA system
  (e) Existing Faults for a selected ATA system
  (f) Existing Faults sorted by FDE
  (g) Fault History for a selected flight leg
  (h) Fault History for a selected ATA system
  (i) The single maintenance message display selected from the above displays.
  (j) Ground Tests (inhibits, interference, initial conditions, and results)
  (k) Maintenance Planning (maintenance memos and scheduled maintenance tasks)
  (l) Special Functions
  (m) Hard Drive Contents (software part numbers on hard drive)
  (n) System Configuration
  (o) The single maintenance message displays selected from maintenance planning displays.
  (p) Data Load
  (q) Input Monitoring
  (r) Central Maintenance Options
  (s) Engine Balancing
  (t) Shop Faults
  (u) PSEU and Air/Ground Rigging
  (v) Help
  (w) Notes

(3) You can make a printer report of these summaries:

  (a) Present Leg Faults Summary Report
  (b) Cabin Management System All Summary Report
  (c) Cabin Management System Configuration Summary Report
  (d) Fault History Summary Report
  (e) Existing Faults Summary Report
  (f) All Systems Configuration Summary Report

(4) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(5) You can use a MAT or a PMAT for this procedure.

(6) If the primary CMCF changes before a report is completed, the report will stop.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Make a Printer Report of a Display

SUBTASK 45-10-00-970-002

(1) To make a printer report of the display that is in view, do this:

(a) Select REPORT from the CMCS main menu.

(b) Select REPORT PAGE DATA from the report menu.

(c) Select SEND adjacent to Printer.

NOTE: Transmission In Progress shows.

D. How to Send a Summary Report to the Printer

SUBTASK 45-10-00-860-104

(1) To make a summary report, do this:

(a) On a maintenance access terminal (MAT or PMAT), select ONBOARD MAINTENANCE from the initial MAT menu.

(b) Select REPORT from the CMCS main menu.

(c) Select a summary report from the report menu:

1) PRESENT LEG FAULTS SUMMARY REPORT

NOTE: This report is a list, in FDE sequence, of all maintenance messages and their correlated FDEs (if any) that were stored in the present flight leg. The maintenance messages that are not correlated to a FDE are at the end of the report.

2) FAULT HISTORY SUMMARY REPORT

NOTE: This report is a list, in ATA sequence, of all maintenance message and their correlated FDEs (if any) that are in Fault History. Each maintenance message has a list of flight legs when it occurred.

3) EXISTING FAULTS SUMMARY REPORT

NOTE: This report is a list, in ATA sequence, of all maintenance messages and their correlated FDEs (if any) that are active or latched when the report is selected.

4) ALL SYSTEMS CONFIGURATION SUMMARY REPORT

NOTE: This report is a list in ATA sequence of the hardware and software part numbers of all LRUs that show in the System Configuration function.

5) CABIN MANAGEMENT SYSTEM ALL SUMMARY REPORT

NOTE: This report from the Cabin Management System is a list of the LRUs in the Cabin Management System that require maintenance.

6) CABIN MANAGEMENT SYSTEM CONFIGURATION SUMMARY REPORT

NOTE: This report from the Cabin Management System contains the hardware and software configuration of the Cabin Management System.

(d) Select SEND adjacent to Printer.

NOTE: Transmission In Progress shows.

E. What to Do When Problems Occur

SUBTASK 45-10-00-810-004

(1) If Transmission in Progress shows but the report does not come out of the printer, do this:

(a) Wait for 5 minutes.

NOTE: Although the display shows Transmission in Progress, the report you select cannot start until all FDCF transmissions, ACMF transmissions, and event-triggered reports are completed.

(b) If the report does not come out of the printer, select STOP on the display adjacent to Printer

(c) Then select SEND adjacent to Printer.

(d) If the report does not come out of the printer in 2 minutes, then do this:

1) Select STOP adjacent to Printer.

2) Select GO BACK.

3) If the Left CMCF is in control, put the Right CMCF in control and do this ground test: IOM (M003) in Left AIMS Module Reset.

4) If the Right CMCF is in control, put the Left CMCF in control and do this ground test: IOM (M003) in Right AIMS Module Reset

5) Try to make the report again.

F. How to Stop a Report Before it is Completed

SUBTASK 45-10-00-860-079

(1) To stop the report before it is completed, do this:

(a) Select STOP adjacent to Printer.

(b) Select GO BACK.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 45-10-00-860-082

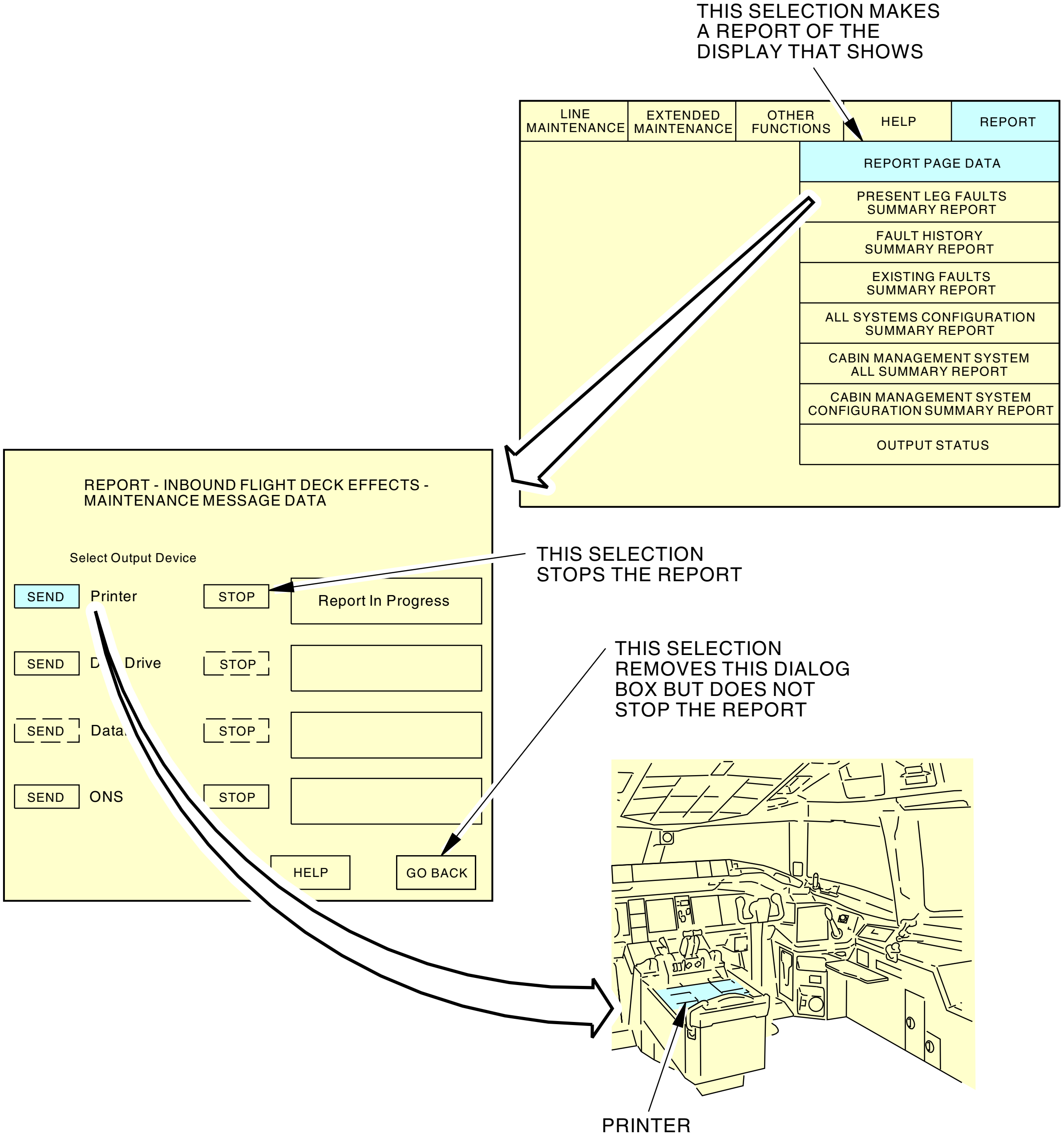
(1) To go back to the initial MAT menu, do this:

(a) Select GO BACK.

(b) Select LINE MAINTENANCE from the CMCS main menu.

(c) Select EXIT MAINTENANCE from the line maintenance menu.

———— END OF TASK ————


THIS SELECTION MAKES A REPORT OF THE DISPLAY THAT SHOWS
LINE MAINTENANCE
EXTENDED MAINTENANCE
OTHER FUNCTIONS
HELP
REPORT
REPORT PAGE DATA
PRESENT LEG FAULTS SUMMARY REPORT
FAULT HISTORY SUMMARY REPORT
EXISTING FAULTS SUMMARY REPORT
ALL SYSTEMS CONFIGURATION SUMMARY REPORT
CABIN MANAGEMENT SYSTEM ALL SUMMARY REPORT
CABIN MANAGEMENT SYSTEM CONFIGURATION SUMMARY REPORT
OUTPUT STATUS
REPORT - INBOUND FLIGHT DECK EFFECTS - MAINTENANCE MESSAGE DATA
Select Output Device
SEND
Printer
STOP
Report In Progress
SEND
D Drive
STOP
SEND
Data
STOP
SEND
ONS
STOP
HELP
GO BACK
THIS SELECTION STOPS THE REPORT
THIS SELECTION REMOVES THIS DIALOG BOX BUT DOES NOT STOP THE REPORT
PRINTER

FLIGHT COMPARTMENT

NOTE:

THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

2519235 S0000591290_V1

How to Send a Report to the Printer
Figure 252/45-10-00-990-845

TASK 45-10-00-970-802

44. How to Send a Report to Removable Media

(Figure 253)

A. General

(1) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(2) Use this task to put a copy of central maintenance fault data on a disk or a USB flash drive. The disk can be in the MAT disk drive or in the disk drive of a PMAT. The data on the disk will be in ACARS format. You can keep the data on the removable media and examine it at a different time.

NOTE: You can only use the USB flash drive with a MAT or GSE-Laptop loaded with MATA software. You cannot use the USB flash drive with a PMAT.

(3) Use a high density disk (1.44 MB) in the MAT disk drive.

(4) You can make a report to disk of the data on these displays:

- (a) Inbound Flight Deck Effects
- (b) Existing Flight Deck Effects
- (c) Present Leg Faults sorted by FDE
- (d) Present Leg Faults for a selected ATA system
- (e) Existing Faults for a selected ATA system
- (f) Existing Faults sorted by FDE
- (g) Fault History for a selected flight leg
- (h) Fault History for a selected ATA system
- (i) The single maintenance message display selected from the above displays.
- (j) Ground Tests (inhibits, interference, initial conditions, and results)
- (k) System Configuration
- (l) Maintenance Planning (maintenance memos and scheduled maintenance tasks)
- (m) Special Functions
- (n) Hard Drive Contents (software part numbers on hard drive)
- (o) The single maintenance message display selected from maintenance planning displays.
- (p) Data Load
- (q) Input Monitoring
- (r) Central Maintenance Options
- (s) Engine Balancing
- (t) Shop Faults
- (u) Help
- (v) Notes

(5) You can make a report to disk of these summaries:

- (a) Present Leg Faults Summary Report
- (b) All Systems Configuration Summary Report

(c) Cabin Management System All Summary Report

(d) Cabin Management System Configuration Summary Report

(e) Fault History Summary Report

(f) Existing Faults Summary Report

(6) You can use a MAT or a PMAT for this procedure.

(7) If the primary CMCF changes before a report is completed, the report will stop.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Send a Summary Report to a Disk

SUBTASK 45-10-00-860-083

(1) To send a summary report to removable media, do this:

(a) Put a disk (1.44 MB capacity, formatted for DOS, and not write-protected) in the MAT disk drive or a USB flash drive in the MAT.

(b) On the maintenance access terminal, select ONBOARD MAINTENANCE from the initial MAT menu.

(c) Select REPORT from the CMCS main menu.

(d) Select a summary report from the report menu:

1) PRESENT LEG FAULTS SUMMARY REPORT

NOTE: This report is a list, in FDE sequence, of all maintenance messages and their correlated FDEs (if any) that were stored in the present flight leg. The maintenance messages that are not correlated to a FDE are at the end of the report.

2) FAULT HISTORY SUMMARY REPORT

NOTE: This report is a list, in ATA sequence, of all maintenance message and their correlated FDEs (if any) that are in Fault History. Each maintenance message has a list of flight legs when it occurred.

3) EXISTING FAULTS SUMMARY REPORT

NOTE: This report is a list, in ATA sequence, of all maintenance messages and their correlated FDEs (if any) that are active or latched when the report is selected.

4) ALL SYSTEMS CONFIGURATION SUMMARY REPORT

NOTE: This report is a list in ATA sequence of the hardware and software part numbers of all LRUs that show in the System Configuration function.

5) CABIN MANAGEMENT SYSTEM ALL SUMMARY REPORT

NOTE: This report from the Cabin Management System is a list of the LRUs in the Cabin Management System that require maintenance.

6) CABIN MANAGEMENT SYSTEM CONFIGURATION SUMMARY REPORT

NOTE: This report from the Cabin Management System contains the hardware and software configuration of the Cabin Management System.

(e) Select SEND adjacent to Disk/USB.

NOTE: If the report is completed, the CMCF dialog box will show that the "Transmission completed to Disk/USB".

NOTE: If the CMCF dialog box does not show the "Transmission completed to Disk/USB". The report did not write to the disk or USB flash drive.

D. How to Stop a Report Before it is Completed

SUBTASK 45-10-00-860-085

(1) To stop the report before it is completed, do this:

(a) Select STOP adjacent to Disk/USB

(b) Select GO BACK.

E. How to Make a Report of a Display

SUBTASK 45-10-00-970-005

(1) To make a report of the display that is in view, do this:

(a) Put a disk (1.44 MB capacity, formatted for DOS, and not write-protected) in the MAT disk drive or a USB flash drive in the MAT.

(b) Select REPORT from the CMCS main menu.

(c) Select REPORT PAGE DATA from the report menu.

(d) Select SEND adjacent to Disk/USB.

NOTE: Transmission In Progress shows.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 45-10-00-860-086

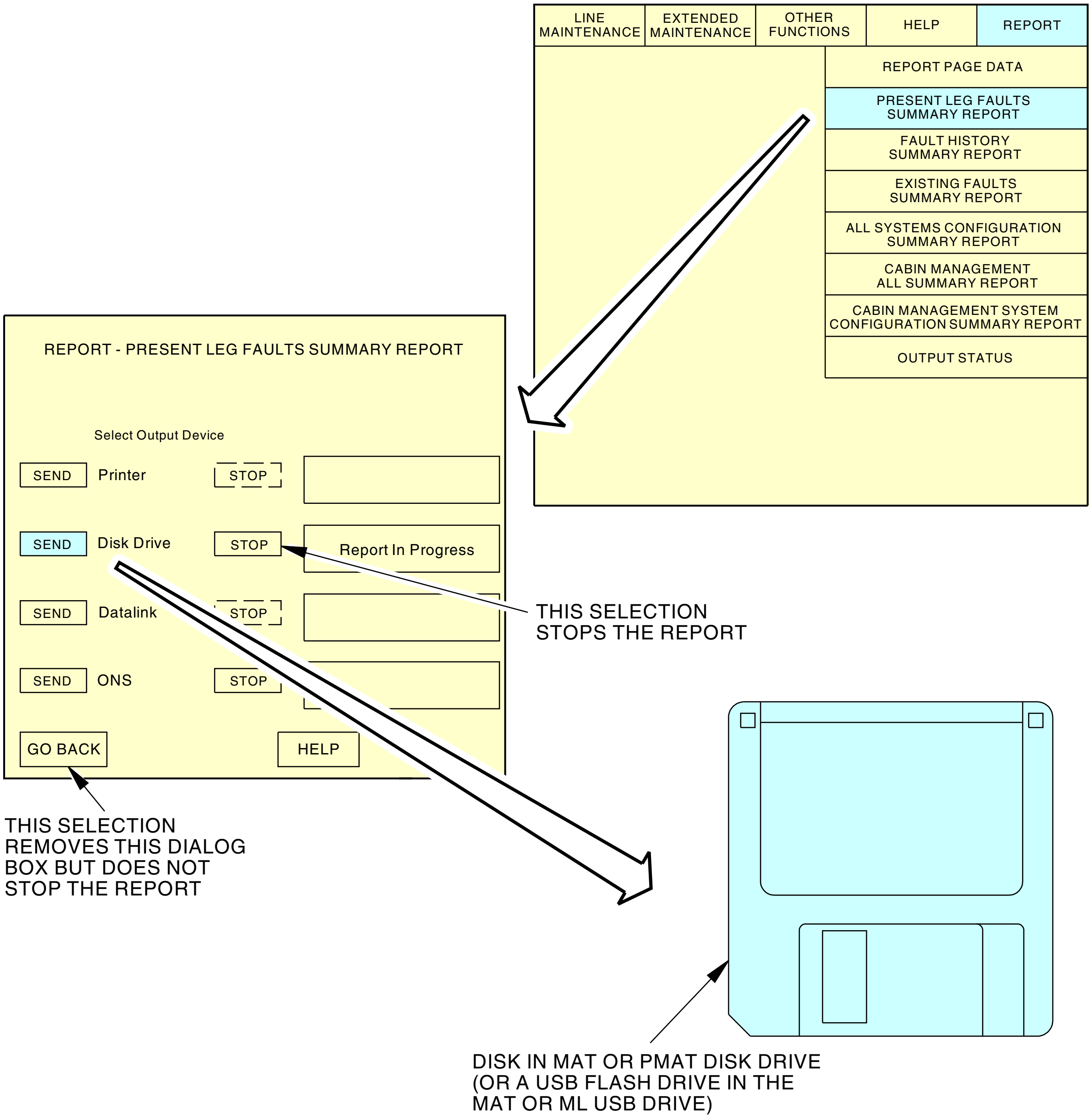
(1) To go back to the initial MAT menu, do this:

(a) Select GO BACK.

(b) Select LINE MAINTENANCE from the CMCS main menu.

(c) Select EXIT MAINTENANCE from the line maintenance menu.

——— END OF TASK ———


LINE MAINTENANCE
EXTENDED MAINTENANCE
OTHER FUNCTIONS
HELP
REPORT
REPORT PAGE DATA
PRESENT LEG FAULTS SUMMARY REPORT
FAULT HISTORY SUMMARY REPORT
EXISTING FAULTS SUMMARY REPORT
ALL SYSTEMS CONFIGURATION SUMMARY REPORT
CABIN MANAGEMENT ALL SUMMARY REPORT
CABIN MANAGEMENT SYSTEM CONFIGURATION SUMMARY REPORT
OUTPUT STATUS
REPORT - PRESENT LEG FAULTS SUMMARY REPORT
Select Output Device
SEND
Printer
STOP
SEND
Disk Drive
STOP
Report In Progress
SEND
Datalink
STOP
SEND
ONS
STOP
GO BACK
HELP

THIS SELECTION STOPS THE REPORT

THIS SELECTION REMOVES THIS DIALOG BOX BUT DOES NOT STOP THE REPORT

DISK IN MAT OR PMAT DISK DRIVE (OR A USB FLASH DRIVE IN THE MAT OR ML USB DRIVE)

NOTE:

THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

2519229 S0000591291_V1

How to Send a Report to a Disk
Figure 253/45-10-00-990-846

TASK 45-10-00-970-803

45. How to Send a Report to the Onboard Network System (ONS) Mass Storage Device (MSD)

A. General

(1) You can use the GSE-Laptop, maintenance device, SPL-5704, as an alternative to the PMAT in this task.

NOTE: The GSE-Laptop and the PMAT are equivalent for all of the PMAT functions that you will use in this task.

(2) Use this task to put a copy of central maintenance fault data on the ONS MSD. You can keep the data on the ONS MSD and examine it at a different time.

(3) You can make a report to ONS of the data on these displays:

- (a) Inbound Flight Deck Effects
- (b) Existing Flight Deck Effects
- (c) Present Leg Faults sorted by FDE
- (d) Present Leg Faults for a selected ATA system
- (e) Existing Faults for a selected ATA system
- (f) Existing Faults sorted by FDE
- (g) Fault History for a selected flight leg
- (h) Fault History for a selected ATA system
- (i) The single maintenance message display selected from the above displays.
- (j) Ground Tests (inhibits, interference, initial conditions, and results)
- (k) System Configuration
- (l) Maintenance Planning (maintenance memos and scheduled maintenance tasks)
- (m) Special Functions
- (n) The single maintenance message display selected from maintenance planning displays.
- (o) Data Load
- (p) Input Monitoring
- (q) Central Maintenance Options
- (r) Engine Balancing
- (s) Shop Faults
- (t) Help
- (u) Notes

(4) You can make a report to ONS of these summaries:

- (a) Present Leg Faults Summary Report
- (b) All Systems Configuration Summary Report
- (c) Cabin Management System All Summary Report
- (d) Cabin Management System Configuration Summary Report
- (e) Fault History Summary Report
- (f) Existing Faults Summary Report

(5) You can use a MAT, PMAT, or CMCF on MFD for this procedure.

(6) If the primary CMCF changes before a report is completed, the report will stop.

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-5704	Device - Maintenance Part #: G45004-1 Supplier: 81205 Part #: G45004-3 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

C. How to Send a Summary Report to the ONS MSD

SUBTASK 45-10-00-860-209

(1) To send a summary report to ONS, do this:

  (a) On the maintenance access terminal, select ONBOARD MAINTENANCE from the initial MAT menu.

  (b) Select REPORT from the CMCS main menu.

  (c) Select a summary report from the report menu:

    1) PRESENT LEG FAULTS SUMMARY REPORT

    NOTE: This report is a list, in FDE sequence, of all maintenance messages and their correlated FDEs (if any) that were stored in the present flight leg. The maintenance messages that are not correlated to a FDE are at the end of the report.

    2) FAULT HISTORY SUMMARY REPORT

    NOTE: This report is a list, in ATA sequence, of all maintenance message and their correlated FDEs (if any) that are in Fault History. Each maintenance message has a list of flight legs when it occurred.

    3) EXISTING FAULTS SUMMARY REPORT

    NOTE: This report is a list, in ATA sequence, of all maintenance messages and their correlated FDEs (if any) that are active or latched when the report is selected.

    4) ALL SYSTEMS CONFIGURATION SUMMARY REPORT

    NOTE: This report is a list in ATA sequence of the hardware and software part numbers of all LRUs that show in the System Configuration function.

    5) CABIN MANAGEMENT SYSTEM ALL SUMMARY REPORT

    NOTE: This report from the Cabin Management System is a list of the LRUs in the Cabin Management System that require maintenance.

    6) CABIN MANAGEMENT SYSTEM CONFIGURATION SUMMARY REPORT

    NOTE: This report from the Cabin Management System contains the hardware and software configuration of the Cabin Management System.

(d) Select SEND adjacent to ONS.

NOTE: If the report is completed, the CMCF dialog box will show that the "Transmission completed to Disk/USB".

NOTE: If the CMCF dialog box does not show the "Transmission completed to ONS". The report did not write to the ONS MSD.

D. How to Stop a Report Before it is Completed

SUBTASK 45-10-00-860-210

(1) To stop the report before it is completed, do this:
  (a) Select STOP adjacent to ONS.
  (b) Select GO BACK.

E. How to Make a Report of a Display

SUBTASK 45-10-00-860-211

(1) To make a report of the display that is in view, do this:
  (a) Select REPORT from the CMCS main menu.
  (b) Select REPORT PAGE DATA from the report menu.
  (c) Select SEND adjacent to ONS.

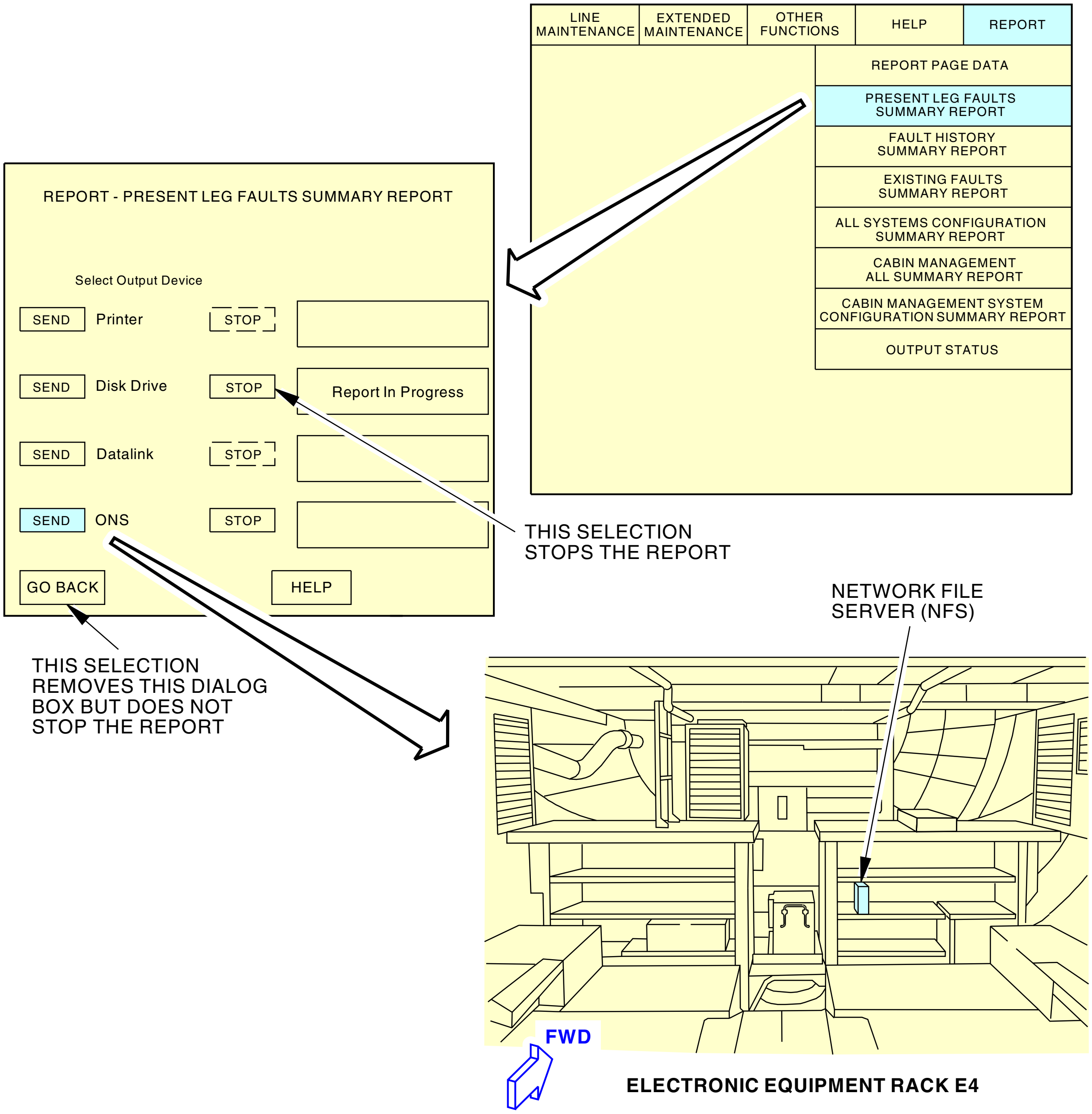
NOTE: Transmission In Progress shows.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 45-10-00-860-212

(1) To go back to the initial MAT menu, do this:
  (a) Select GO BACK.
  (b) Select LINE MAINTENANCE from the CMCS main menu.
  (c) Select EXIT MAINTENANCE from the line maintenance menu.

END OF TASK


LINE MAINTENANCE
EXTENDED MAINTENANCE
OTHER FUNCTIONS
HELP
REPORT
REPORT PAGE DATA
PRESENT LEG FAULTS SUMMARY REPORT
FAULT HISTORY SUMMARY REPORT
EXISTING FAULTS SUMMARY REPORT
ALL SYSTEMS CONFIGURATION SUMMARY REPORT
CABIN MANAGEMENT ALL SUMMARY REPORT
CABIN MANAGEMENT SYSTEM CONFIGURATION SUMMARY REPORT
OUTPUT STATUS
REPORT - PRESENT LEG FAULTS SUMMARY REPORT
Select Output Device
SEND
Printer
STOP
SEND
Disk Drive
STOP
SEND
Datalink
STOP
SEND
ONS
STOP
GO BACK
HELP
FWD

Report In Progress

THIS SELECTION STOPS THE REPORT

THIS SELECTION REMOVES THIS DIALOG BOX BUT DOES NOT STOP THE REPORT

NETWORK FILE SERVER (NFS)

ELECTRONIC EQUIPMENT RACK E4

NOTE:

THE DATA SHOWN ON THE DISPLAYS IS ONLY AN EXAMPLE.

2519224 S0000591292_V1

How to Send a Report to the ONS MSD
Figure 254/45-10-00-990-858

CENTRAL MAINTENANCE COMPUTING SYSTEM (CMCS) - ADJUSTMENT/TEST

1. General

A. This procedure has these tasks:

  (1) An operational test of the central maintenance computing system (CMCS).

  (2) A system test of the CMCS, which includes these:

    (a) A reset test of the two modules in which CMCS is installed.

    (b) A configuration check of the CMCS.

B. The Central Maintenance Computing System (CMCS) includes a left and a right Central Maintenance Computing Function (CMCF). There is a CMCF in each AIMS cabinet. The CMCF in the left AIMS cabinet is the left CMCF; the CMCF in the right AIMS cabinet is the right CMCF. One CMCF at a time is in control of the CMCS.

TASK 45-10-00-710-801

2. Central Maintenance Computing System (CMCS) - Operational Test

A. General

(1) This test makes sure that the left CMCF and the right CMCF are operational.

(2) A maintenance access terminal is necessary for this test. For instructions on how to use a maintenance access terminal, do this task: How to Use the Central Maintenance Computing System, TASK 45-10-00-740-808.

B. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
45-10-00-740-808	How to Use the Central Maintenance Computing System (P/B 201)

C. Location Zones

Zone	Area
212	Flight Compartment, Right

D. Prepare for the Test

SUBTASK 45-10-00-860-089

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

SUBTASK 45-10-00-860-090

(2) On a maintenance access terminal (MAT), select ONBOARD MAINTENANCE.

SUBTASK 45-10-00-710-001

(3) Make sure that the onboard maintenance menu shows.

NOTE: The onboard maintenance menu has these five selections at the top of the display: LINE MAINTENANCE, EXTENDED MAINTENANCE, OTHER FUNCTIONS, HELP, and REPORT. If the onboard maintenance menu shows, then a minimum of one CMCF is operational.

E. Right CMCF Operational Test

SUBTASK 45-10-00-860-091

(1) Put the right CMCF in control:

  (a) Make these selections on the MAT:

        1) OTHER FUNCTIONS
        2) CENTRAL MAINTENANCE COMPUTER SWITCH CONTROL
    (b) If the MAT shows RIGHT CENTRAL MAINTENANCE COMPUTER IS IN CONTROL, select GO BACK.
    (c) If the MAT shows LEFT CENTRAL MAINTENANCE COMPUTER IS IN CONTROL, make these selections:
        1) SWITCH TO RIGHT
        2) YES
        3) CONTINUE
        4) On the MATA AIMS Main Menu, select Interface R_AIMS.

NOTE: You must switch the AIMS interface to avoid MAT disconnect.

SUBTASK 45-10-00-710-002

(2) Show the Inbound Flight Deck Effects display:
    (a) Make these selections on the MAT:
        1) ONBOARD MAINTENANCE
        2) LINE MAINTENANCE
        3) INBOUND FLIGHT DECK EFFECTS
    (b) Make sure the Inbound Flight Deck Effects display shows.
    (c) Make sure this indication shows in the top right corner of the display: This Data is from Right CMCF

NOTE: If the Right CMCF indication shows on the Inbound Flight Deck Effects display, the right CMCF is operational.

F. Left CMCF Operational Test

SUBTASK 45-10-00-860-092

(1) Put the left CMCF in control:
    (a) Make these selections on the MAT:
        1) OTHER FUNCTIONS
        2) CENTRAL MAINTENANCE COMPUTER SWITCH CONTROL
        3) SWITCH TO LEFT
        4) YES
        5) CONTINUE
        6) On the MATA AIMS Main Menu, select Interface L_AIMS.

NOTE: You must switch the AIMS interface to avoid MAT disconnect.

SUBTASK 45-10-00-710-003

(2) Show the Inbound Flight Deck Effects display:
    (a) Make these selections on the MAT:
        1) ONBOARD MAINTENANCE
        2) LINE MAINTENANCE
        3) INBOUND FLIGHT DECK EFFECTS
    (b) Make sure the Inbound Flight Deck Effects display shows.

(c) Make sure this indication shows in the top right corner of the display: This Data is from Left CMCF

NOTE: If the Left CMCF indication shows on the Inbound Flight Deck Effects display, the left CMCF is operational.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 45-10-00-860-093

(1) Make these selections to show the initial MAT menu again:

(a) LINE MAINTENANCE

(b) EXIT MAINTENANCE

——— END OF TASK ———

TASK 45-10-00-730-801

3. Central Maintenance Computing System (CMCS) - System Test

A. General

(1) The Central Maintenance Computing System (CMCS) includes a left and a right Central Maintenance Computing Function (CMCF).

(2) Software for the left CMCF is in the IOM4 (M003) module in the left AIMS cabinet; software for the right CMCF is in the IOM4 (M003) module in the right AIMS cabinet

(3) The reset test of each IOM module makes sure there are no faults related to the functions in the module. Because each module contains software for several systems, faults from systems other than CMCS can show if the reset test fails. For the CMCS system test, it is necessary to look only for faults that are related to CMCS.

NOTE: The left reset test is run from the right AIMS and the right reset test is run from the left AIMS.

(4) The configuration check makes sure that the left CMCF and the right CMCF have the correct software part numbers.

(5) A maintenance access terminal is necessary for this test. For instructions on how to use a maintenance access terminal, do this task: How to Use the Central Maintenance Computing System, TASK 45-10-00-740-808.

NOTE: You can use a portable maintenance access terminal (PMAT/LMAT) or a maintenance access terminal (MAT) to do the system test of the left and right IOM (M003) system test.

B. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
31-41-11-420-806	Input/Output Module (IOM) Software Installation (P/B 201)
45-10-00-740-808	How to Use the Central Maintenance Computing System (P/B 201)

C. Location Zones

Zone	Area
212	Flight Compartment, Right

D. Preparing for the Test

SUBTASK 45-10-00-860-095

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

SUBTASK 45-10-00-860-098

(2) On a maintenance access terminal (MAT), select ONBOARD MAINTENANCE.

E. Right CMCF Reset Test

SUBTASK 45-10-00-860-099

(1) Put the Left CMCF in control:
  (a) Make these selections on the MAT:
    1) OTHER FUNCTIONS
    2) CENTRAL MAINTENANCE COMPUTER SWITCH CONTROL
  (b) If the MAT shows LEFT CENTRAL MAINTENANCE COMPUTER IS IN CONTROL, select GO BACK.
  (c) If the MAT shows RIGHT CENTRAL MAINTENANCE COMPUTER IS IN CONTROL, make these selections:
    1) SWITCH TO LEFT
    2) YES
    3) CONTINUE
    4) On the MATA AIMS Main Menu, select Interface L_AIMS.

    NOTE: You must switch the AIMS interface to avoid MAT disconnect.

SUBTASK 45-10-00-740-092

(2) Do the reset of the right IOM (M003) module, which contains the right CMCF:
  (a) Make these selections on the MAT:
    1) ONBOARD MAINTENANCE
    2) LINE MAINTENANCE
    3) GROUND TESTS
    4) 31 AIMS - Right AIMS
    5) SYSTEM TEST
    6) IOM (M003) in Right AIMS Module Reset
    7) CONTINUE
  (b) Do the instructions that show on the MAT and then make these selections:
    1) CONTINUE
    2) START TEST
  (c) When the test is completed, make sure that PASSED shows adjacent to TEST CONDITION on the MAT.
  (d) If FAILED shows, make sure there is no maintenance message for the right CMCF.
    1) If there is a maintenance message for the right CMCF, refer to the applicable Maintenance Message Index in the FIM or select the maintenance message and select MAINTENANCE MESSAGE DATA.

F. Left CMCF Reset Test

SUBTASK 45-10-00-860-100

(1) Put the Right CMCF in control:
  (a) Make these selections on the MAT:
    1) OTHER FUNCTIONS

2) CENTRAL MAINTENANCE COMPUTER SWITCH CONTROL
3) SWITCH TO RIGHT
4) YES
5) CONTINUE
6) On the MATA AIMS Main Menu, select Interface R_AIMS.

NOTE: You must switch the AIMS interface to avoid MAT disconnect.

SUBTASK 45-10-00-740-093

(2) Do the reset of the left IOM (M003) module, which contains the left CMCF:

(a) Make these selections on the MAT:
1) ONBOARD MAINTENANCE
2) LINE MAINTENANCE
3) GROUND TESTS
4) 31 AIMS - Left AIMS
5) SYSTEM TEST
6) IOM (M003) in Left AIMS Module Reset
7) CONTINUE

(b) Do the instructions that show on the PMAT/ LMAT and then make these selections:
1) CONTINUE
2) START TEST

(c) When the test is completed, make sure that PASSED shows adjacent to TEST CONDITION on the MAT.

(d) If FAILED shows, make sure there is no maintenance message for the left CMCF.
1) If there is a maintenance message for the left CMCF, refer to the applicable Maintenance Message Index in the FIM or select the maintenance message and select MAINTENANCE MESSAGE DATA.

G. Left CMCF Configuration Check

SUBTASK 45-10-00-750-004

(1) Show the configuration data for the left CMCF:

NOTE: Make sure you know the correct software part numbers for the CMCS when you look at the software part numbers on the display. For the CMCS to be an approved installation, the correct software part numbers must be installed.

(a) Make these selections on the MAT:
1) LINE MAINTENANCE
2) SYSTEM CONFIGURATION
3) 31 AIMS - Left AIMS
4) CONTINUE

(b) Find IOM (M003) on the display, look for correct:
1) IOM OPS
2) CMCF AMI
3) CMCF LDI

(c) If the part numbers are incorrect, install the correct part numbers for the IOM (M003) in the left AIMS. Do this task:

1) Input/Output Module (IOM) Software Installation, TASK 31-41-11-420-806.

H. Right CMCF Configuration Check

SUBTASK 45-10-00-750-005

(1) Show the configuration data for the right CMCF:

NOTE: Make sure you know the correct software part numbers for the CMCS when you look at the software part numbers on the display. For the CMCS to be an approved installation, the correct software part numbers must be installed.

(a) Make these selections on the MAT:

1) LINE MAINTENANCE
2) SYSTEM CONFIGURATION
3) 31 AIMS - Right AIMS
4) CONTINUE

(b) Find IOM (M003) on the display and make sure that the software part numbers are correct for these:

1) IOM OPS
2) CMCF AMI
3) CMCF LDI

(c) If the part numbers are incorrect, install the correct part numbers for the IOM (M003) in the right AIMS. Do this task:

1) Input/Output Module (IOM) Software Installation, TASK 31-41-11-420-806.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 45-10-00-860-096

(1) Make these selections to show the initial MAT menu again:

(a) GO BACK
(b) LINE MAINTENANCE
(c) EXIT MAINTENANCE

——— END OF TASK ———

GROUND TEST SWITCH MODULE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the ground test switch module.

(2) An installation of the ground test switch module, which includes an installation test.

B. The ground test switch module is in the flight compartment in the aft overhead maintenance panel, P61.

TASK 45-10-01-000-801

2. Ground Test Switch Module Removal

(Figure 401)

A. Location Zones

Zone	Area
212	Flight Compartment, Right

B. Removal Procedure

SUBTASK 45-10-01-860-006

(1) Set the ground test (GND TEST) switch to NORM.

SUBTASK 45-10-01-860-010

(2) Set the TOWING POWER switch to the OFF position.

SUBTASK 45-10-01-860-011

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

Left Power Management Panel, P110

Row	Col	Number	Name
D	23	C45401	E/E BAY PMAT

Standby Power Management Panel, P310

Row	Col	Number	Name
M	6	C24679	TOW BUS DISTR P310

SUBTASK 45-10-01-020-001

(4) Remove the ground test switch module [1]:

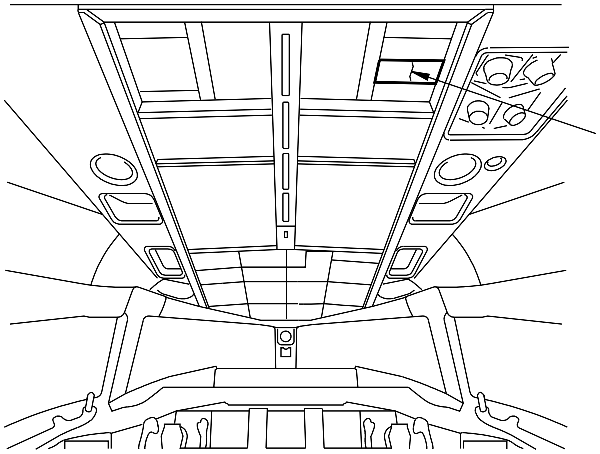
(a) Loosen the four quarter-turn fasteners [2] that attach the ground test switch module [1] to the overhead panel.

(b) Lower the ground test switch module [1] from the overhead panel.

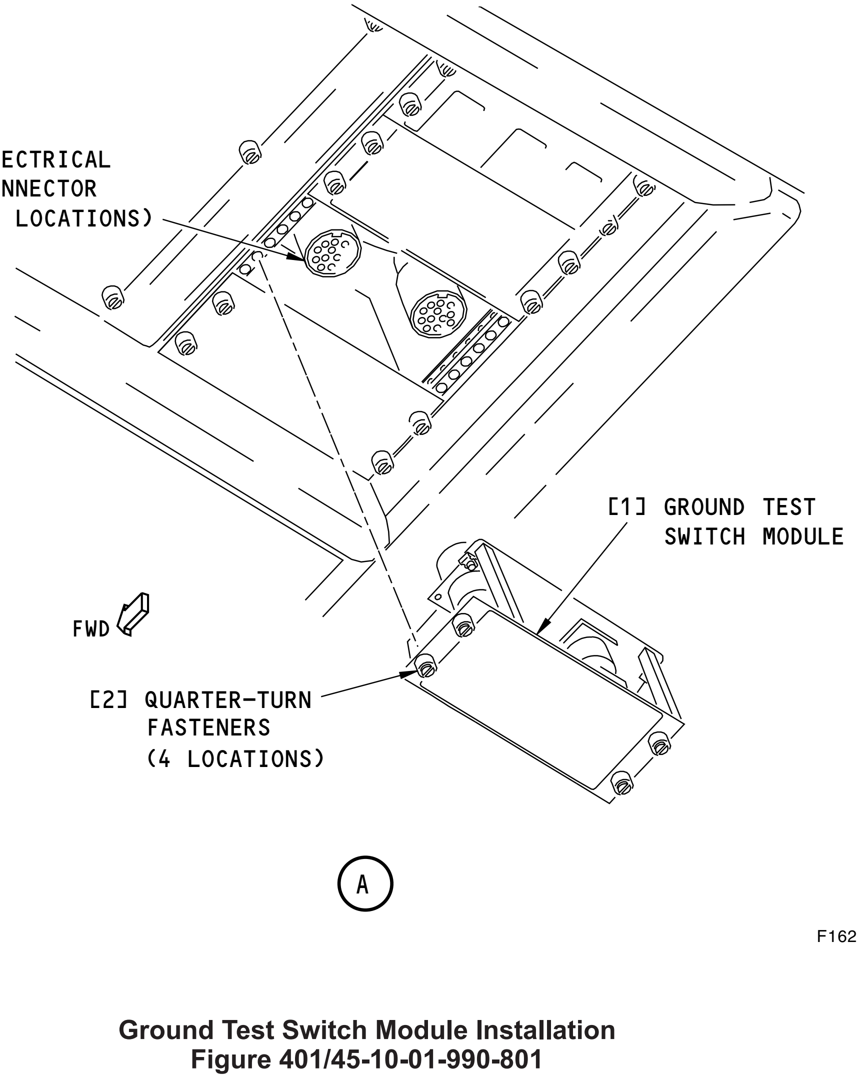
(c) Disconnect each electrical connector [3].

(d) Put protective covers on each electrical connector [3].

——— END OF TASK ———



FLIGHT COMPARTMENT


[3] ELECTRICAL CONNECTOR (2 LOCATIONS)
[1] GROUND TEST SWITCH MODULE
FWD
[2] QUARTER-TURN FASTENERS (4 LOCATIONS)
A

F16260 S0006423479_V1

Ground Test Switch Module Installation
Figure 401/45-10-01-990-801

TASK 45-10-01-400-801

3. Ground Test Switch Module Installation

(Figure 401)

A. References

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

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Ground test switch module	45-10-01-01A-025	ARO ALL

C. Location Zones

Zone	Area
212	Flight Compartment, Right

D. Installation Procedure

SUBTASK 45-10-01-860-012

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

Left Power Management Panel, P110

Row	Col	Number	Name
D	23	C45401	E/E BAY PMAT

Standby Power Management Panel, P310

Row	Col	Number	Name
M	6	C24679	TOW BUS DISTR P310

SUBTASK 45-10-01-420-001

(2) Install the ground test switch module [1]:

- (a) Remove the protective covers from each electrical connector [3].
- (b) Examine each electrical connector [3] for bent or broken pins, dirt, and damage.
- (c) Connect each electrical connector [3].
- (d) Carefully put the ground test switch module [1] into the overhead panel and hold the module.
- (e) Tighten the four quarter-turn fasteners [2] that attach the ground test switch module [1] to the overhead panel.

E. Installation Test

SUBTASK 45-10-01-860-001

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

SUBTASK 45-10-01-860-013

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

Left Power Management Panel, P110

Row	Col	Number	Name
D	23	C45401	E/E BAY PMAT

Standby Power Management Panel, P310

Row	Col	Number	Name
M	6	C24679	TOW BUS DISTR P310

SUBTASK 45-10-01-860-002

(3) Push the STAT switch on the display select panel.

SUBTASK 45-10-01-860-003

(4) Set the ground test (GND TEST) switch to ENABLE.

  (a) Make sure the GROUND TEST ENABLE status message shows on the multi-function display (MFD).

SUBTASK 45-10-01-860-004

(5) Set the GND TEST switch to NORM.

  (a) Make sure the GROUND TEST ENABLE status message goes out of view.

SUBTASK 45-10-01-860-014

(6) Set the TOWING POWER switch to the BAT position.

  (a) Make sure the ON BAT light comes on.

SUBTASK 45-10-01-860-015

(7) Set the TOWING POWER switch to the OFF position.

  (a) Make sure the ON BAT light goes off.

——— END OF TASK ———

MAINTENANCE ACCESS TERMINAL - MAINTENANCE PRACTICES

1. General

A. This procedure contains software installation tasks for the maintenance access terminal (MAT). The tasks are as follows:

NOTE: The user may need to acknowledge any Windows firewall notices that might show during removal or installation.

(1) How to install software into the EEMU.

(2) How to do a check of the software parts installed in the EEMU.

TASK 45-11-05-710-801

2. MAT - Software Check

A. General

(1) This task gives the steps to do a software configuration check of the Maintenance Access Terminal (MAT) Electronic Display Unit (EDU), M15672. You will do a check of these parts:

ARO 001-016 PRE SB 777-46-0079 AND PRE SB 777-46-0078

- MAT OPS SW
- MATA OPS SW
- AMMA OPS SW
- ONSL OPS SW
- CSSL OPS SW.

ARO 017-999; ARO 001-016 POST SB 777-46-0079 OR POST SB 777-46-0078

- MAT OPS OS LOADER
- MAT OPS SW
- AMMA OPS SW
- ONSL OPS SW
- CSSL OPS SW.

ARO ALL

(2) This procedure refers to software parts using their nomenclature. Use your airline or operator approved resources for the correct part numbers.

B. Location Zones

Zone	Area
212	Flight Compartment, Right

C. Prepare for the MAT Software Check

SUBTASK 45-11-05-860-015

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

Left Power Management Panel, P110

Row	Col	Number	Name
D	23	C45401	E/E BAY PMAT

Right Power Management Panel, P210

Row	Col	Number	Name
F	17	C46602	MAINT ACCESS TERM

SUBTASK 45-11-05-860-014

(2) Set the MAT display to show the main menu.

  (a) If the MAT is not energized, press and hold the MAT power button for three seconds.

  (b) Let the MAT boot-up completely to show the main menu.

    1) Allow up to five or six minutes to boot.

D. Maintenance Access Terminal Software Check - Procedure

ARO 001-016 PRE SB 777-46-0079 AND PRE SB 777-46-0078

SUBTASK 45-11-05-860-016

(1) Do this check to get the MAT OPS SW configuration:

  (a) On the main menu, select Software CID.

  (b) On the system configuration page, find the software part number.

  (c) Make sure the installed software part number agrees with your airline or operator's requirement.

    1) If the installed part number is unserviceable, then install the correct part (MAT – Software Installation, TASK 45-11-05-470-801).

  (d) Press the MENU bezel button.

    1) Make sure the MAIN menu shows.

ARO 017-999; ARO 001-016 POST SB 777-46-0079 OR POST SB 777-46-0078

SUBTASK 45-11-05-710-015

(2) Do this check to get the MAT OPS OS LOADER configuration.

  (a) On the MAIN menu, select: Software CID.

  (b) Make sure that the installed part, and your airline or operator's requirement agree.

    1) If MATA OPS OS LOADER is unserviceable, then install the correct part (MAT – Software Installation, TASK 45-11-05-470-801).

  (c) Make your selection: Close.

    1) Make sure the MAIN menu shows, and continue.

ARO ALL

SUBTASK 45-11-05-860-017

(3) Do this check to get the MATA OPS SW configuration.

  (a) On the MAIN menu, select: AIMS.

    1) If the AIMS button does not show on the MAIN menu, then install the MATA OPS software part (MAT – Software Installation, TASK 45-11-05-470-801).

  (b) Make your selection: System Functions.

  (c) Make your selection: Software Configuration.

    1) Make sure that the installed part, and your airline or operator's requirement agree.

      a) If MATA OPS SW is unserviceable, then install the correct part (MAT – Software Installation, TASK 45-11-05-470-801).

2) Make your selection: GO BACK.

3) Make your selection: Exit MATA.

a) Make sure the MAIN menu shows.

SUBTASK 45-11-05-710-010

(4) Do this check to get the AMMA OPS SW configuration.

(a) On the MAIN menu, select: AMMA.

1) If the AMMA button does not show on the MAIN menu, then install AMMA SW part (TASK 45-11-05-470-801).

(b) Make your selection: AMMA Configuration.

1) Make sure that the installed part, and your airline or operator's requirement agree.

a) If AMMA OPS SW is unserviceable, then install the correct part (TASK 45-11-05-470-801).

2) Make your selection: Close.

3) Make your selection: Exit.

a) Make sure the MAIN menu shows, and continue.

ARO 005-999

SUBTASK 45-11-05-710-011

(5) Do this check to get the ONSL OPS SW configuration.

NOTE: The ONSL OPS SW application is for airplanes with Onboard Network System (AMM 46-13).

(a) On the MAIN menu, select: ONS.

1) If the ONS button does not show on the MAIN menu, then install the ONS OPS SW part (TASK 45-11-05-470-802).

ARO 005-016 PRE SB 777-46-0079 AND PRE SB 777-46-0078

(b) Make your selection: ONS Configuration.

ARO 017-999; ARO 005-016 POST SB 777-46-0079 OR POST SB 777-46-0078

(c) Make your selection: ONSL Configuration.

ARO 005-999

(d) Make sure that the installed part, and your airline or operator's requirement agree.

1) If ONS OPS SW is unserviceable, then install the correct part (TASK 45-11-05-470-802).

(e) Make your selection: GO BACK.

(f) Make your selection: EXIT.

1) Make sure the MAIN menu shows.

ARO ALL

SUBTASK 45-11-05-710-014

(6) Do this check to get the CSSL OPS SW configuration.

NOTE: The Cabin Services System Link (CSSL OPS SW) application is for airplanes with Cabin System Services (ATA 23-39).

(a) On the MAIN menu, select: CSS.

1) If the CSS button does not show on the MAIN menu, then install the CSSL OPS SW part (TASK 45-11-05-470-804).

(b) Make your selection: ONS Configuration.

1) Make sure that the installed part, and your airline or operator's requirement agree.

a) If ONS OPS SW is unserviceable, then install the correct part (TASK 45-11-05-470-804).

2) Make your selection: GO BACK.

3) Make your selection: EXIT.

a) Make sure the MAIN menu shows.

——— END OF TASK ———

TASK 45-11-05-470-801

3. MAT – Software Installation

A. General

(1) This task gives the steps to install the following software for the Maintenance Access Terminal (MAT) Electronic Display Unit (EDU), M15672.

ARO 001-016 PRE SB 777-46-0079 AND PRE SB 777-46-0078

(a) The typical sequence to install all MAT software (v.1) parts as follows:

1) Set the MAT BIOS (basic input/output system), and boot the MAT from an external optical drive.

2) Install the MAT OPS software part from an external USB memory drive into the MAT.

3) Reboot the MAT to operate from the MAT internal drive, and continue to install the additional software parts.

4) Install these applications as necessary one at a time, or as a group.

- MATA OPS
- AMMA OPS

ARO 005-016 PRE SB 777-46-0079 AND PRE SB 777-46-0078

- ONSL OPS

ARO 001-004 POST SB 777-23-0369 AND PRE SB 777-46-0079 AND PRE SB 777-46-0078; ARO 005-016 PRE SB 777-46-0079 AND PRE SB 777-46-0078

- CSSL OPS

ARO 001-016 PRE SB 777-46-0079 AND PRE SB 777-46-0078

- Additional software parts as specified by your airline or operator.

ARO 017-999; ARO 001-016 POST SB 777-46-0079 OR POST SB 777-46-0078

(b) The typical sequence to install all MAT software (v.2 and future) parts as follows:

1) First, install the MAT OPS OS LOADER application.

a) Typically, this application is already installed from the supplier.

2) Second, install the MAT OPS software part.

3) Third, install these applications as necessary one at a time, or as a group.

- MATA OPS

ARO 017-999; ARO 001-016 POST SB 777-46-0079 OR POST SB 777-46-0078 (Continued)

- AMMA OPS

ARO 017-999; ARO 005-016 POST SB 777-46-0079 OR POST SB 777-46-0078

- ONSL OPS

ARO 017-999; ARO 001-004 POST SB 777-23-0369 AND (POST SB 777-46-0079 OR POST SB 777-46-0078); ARO 005-016 POST SB 777-46-0079 OR POST SB 777-46-0078

- CSSL OPS

ARO 017-999; ARO 001-016 POST SB 777-46-0079 OR POST SB 777-46-0078

- Additional software parts as specified by your airline or operator.

ARO 001-016 PRE SB 777-46-0079 AND PRE SB 777-46-0078

(2) To do this task, a USB CD/DVD-ROM optical drive with external power supply, and a USB keyboard can be necessary.

ARO ALL

B. References

Reference	Title
45-10-00-470-801	How to install the AIMS MSD Manager Application (AMMA) (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-14399	OS Loader Installer Bootable CD
STD-13361	Cable - USB (1 meter)
STD-13362	ROM Drive - USB CD/DVD
STD-13363	Keyboard - USB
STD-13649	Drive - Flash, USB (2GB Capacity Minimum)

D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. Prepare for the MAT Software Installation

SUBTASK 45-11-05-860-020

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

Left Power Management Panel, P110

Row	Col	Number	Name
D	23	C45401	E/E BAY PMAT

Right Power Management Panel, P210

Row	Col	Number	Name
F	17	C46602	MAINT ACCESS TERM

SUBTASK 45-11-05-710-006

(2) Do this task: MAT - Software Check, TASK 45-11-05-710-801.

  (a) Compare the software part number shown on the display with the part specified by your airline or operator.

  (b) If you find that the parts do not agree with the requirement, then you must correct the problem.

ARO 001-016 PRE SB 777-46-0079 AND PRE SB 777-46-0078

F. MAT OPS Installation

SUBTASK 45-11-05-480-001

NOTE: Installation of MAT OPS erases these LSAPs: MAT MSD and MATA OPS. You must install those LSAPs after you install MAT OPS.

(1) Make sure the MAT EDU is powered off. If not, press and hold the MAT EDU Power button for 15 seconds to power off the MAT EDU.

SUBTASK 45-11-05-480-006

(2) Connect the USB CD/DVD ROM Drive, STD-13362 to the EDU's USB ports with a USB Cable, STD-13361.

  NOTE: An external power supply can be necessary to operate the USB CD/DVD ROM drive.

SUBTASK 45-11-05-480-005

(3) Insert the correct 46 MAT MSP bootable disc (which contains MAT OPS SW) into the USB CD/DVD ROM Drive, STD-13362.

SUBTASK 45-11-05-000-001

(4) If the USB CD/DVD ROM Drive, STD-13362 has two USB cables connected to both USB ports on the MAT EDU, disconnect one of these USB cables from a USB port on the MAT EDU.

SUBTASK 45-11-05-480-007

(5) Connect the USB Keyboard, STD-13363 to the MAT EDU.

  NOTE: The following steps will execute the Utility application that is part of the MAT OPS on the MAT MSP disc to boot up the MAT EDU.

SUBTASK 45-11-05-040-004

(6) Do the following steps to de-energize the MAT.

  (a) On the bezel below the EDU, push the CENTER button (position 5 of 9).

  (b) On the EDU main menu, select Turn off.

SUBTASK 45-11-05-480-004

(7) Do the following steps to boot up the MAT, and show the system BIOS setup:

  (a) Press and hold the MAT Power button for 3 seconds, and then release.

  (b) When the EDU shows the start-up screen and the words: BIOS nnn-nn-nnnn-nnn, then on the keyboard press the “Del” (delete) key three times.

    NOTE: The example, nnn-nn-nnnn-nnn, refers to the BIOS part number.

    1) Make sure the EDU shows the words: System Bios Setup - Utility vX.X.

      a) If the page does not show, and instead continues to show BIOS nnn-nn-nnnn-nnn, then do these steps:

        <1> Press and hold the MAT power button for 10-to-15 seconds, until the MAT is de-energized.

        <2> Press and hold the MAT power button for 3 seconds, and then release.

b) Do the following steps if the EDU continues the boot-up, and shows the MAIN MENU:

<1> Let the boot sequence complete, and show the main menu.

<2> Press Shutdown.

<3> Select Restart.

<4> Press the “Del” key three times.

(c) Using the UP and DOWN arrow keys, select Basic CMOS Configuration.

(d) Push the ENTER key.

1) Make sure the EDU shows the Basic CMOS Configuration page.

(e) Using the arrow keys, select Boot 1st field under BOOT ORDER.

(f) Using the PAGE UP, or PAGE DOWN keys, set the Boot 1st line to show CDROM.

(g) Using the arrow keys, select Boot 2nd field under BOOT ORDER.

(h) Using the PAGE UP, or PAGE DOWN keys, set the Boot 2nd line to show Drive C:.

(i) Push the Esc (escape) key.

1) Make sure the EDU shows the page: System BIOS Setup - Utility vX.X.

(j) Using the arrow keys, select Write to CMOS and Exit.

(k) Push the ENTER key.

1) Make sure the confirmation message shows.

(l) Push the letter Y key, then do these steps:

1) If the USB CD/DVD ROM Drive, STD-13362 has two USB cables, do these steps:

a) Remove the USB Keyboard, STD-13363 from the MAT EDU.

b) Connect both USB cables on the USB CD/DVD ROM Drive, STD-13362 to the EDU.

2) Make sure that the EDU starts to reboot.

NOTE: It can take approximately 5 minutes for the system to reboot using the boot-disk tool.

SUBTASK 45-11-05-470-004

(8) Do the following steps to install the MAT OPS:

(a) Make sure the EDU shows the APC Utility Disk by CMC Electronics Inc. screen.

NOTE: The touch screen is not active during this loading.

NOTE: If using a USB keyboard, use the TAB key to move between fields and the SPACE key to select the desired field.

NOTE: If not using a USB keyboard, use the bezel buttons below the EDU. Use the CENTER button (position 5 of 9) to move between fields and the VIRTUAL KEYBOARD button (position 6 of 9) to select the desired field.

(b) Select Restore.

(c) Select Next.

1) Make sure the RESTORE page shows.

(d) Select Automatic Restore check box.

ARO 001-016 PRE SB 777-46-0079 AND PRE SB 777-46-0078 (Continued)

(e) Select Next.

  1) Make sure the EDU shows the FINISH page.

(f) Select Finish.

  1) Make sure the “Restore operation in progress on Disk” page shows.

  2) Let the system do the restore sequence. This can take approximately 16 minutes.

(g) Make sure the EDU shows the APC Utility Disk by CMC Electronics Inc. screen.

  1) Select the Cancel button. The APC Utility Disk by CMC Electronics Inc. screen is closed.

(h) Remove the MAT MSP disc from the USB CD/DVD ROM Drive, STD-13362.

(i) Press and hold the MAT EDU Power button for about 15 seconds to power off the MAT EDU.

(j) Disconnect the USB CD/DVD ROM Drive, STD-13362, USB Keyboard, STD-13363 (if connected), and USB Cable, STD-13361 from the EDU.

SUBTASK 45-11-05-470-002

(9) Do the following steps to verify MAT OPS part number:

(a) Press and hold the MAT EDU Power button for about 3 seconds to power up the MAT EDU.

  1) Make sure the MAIN menu screen with the advisory dialog is displayed.

  NOTE: The MAT EDU may reboot once during this process.

  2) Do the following steps if the EDU instead shows a window with the words: Found New Hardware Wizard.

    a) Select Next.

    b) Select Finish.

(b) Select ENTER button to close the advisory screen.

(c) On the MAT Main Menu, select Software CID.

  1) Make sure the System Configuration page shows.

  2) Make sure the software part number shown agrees with the part number specified by your airline or operator.

(d) On the MAT EDU bezel frame, push the main menu button.

SUBTASK 45-11-05-470-001

(10) Do the following steps to set the MAT EDU to boot only from its internal hard disk drive:

NOTE: This is to reconfigure the MAT EDU to boot only from its Hard Disk Drive (Drive C) as originally configured to prevent it booting from an external DVD/CD-ROM drive.

(a) If necessary, connect the USB Keyboard, STD-13363 to the MAT EDU.

(b) On the MAT main menu, select: Shutdown.

  1) Make sure the EDU shows the words: Shutdown Computer.

(c) Select Restart.

(d) Press and hold the MAT Power button for 3 seconds, and then release.

ARO 001-016 PRE SB 777-46-0079 AND PRE SB 777-46-0078 (Continued)

(e) When the EDU shows the start-up screen and the words: BIOS nnn-nn-nnnn-nnn, then on the keyboard press the “Del” (delete) key three times.

NOTE: The example, nnn-nn-nnnn-nnn, refers to the BIOS part number.

1) Make sure the EDU shows the words: System Bios Setup - Utility vX.X.

a) Do the following steps if the page does not show, and instead continues to show BIOS nnn-nn-nnnn-nnn:

<1> Press and hold the MAT power button for 10-to-15 seconds, until the MAT is de-energized.

<2> Press and hold the MAT Power button for 3 seconds, and then release.

b) Do the following steps if the EDU continues the boot-up, and shows the MAIN MENU:

<1> Let the boot sequence complete, and show the main menu.

<2> Select Shutdown.

<3> Select Restart.

<4> Press the “Del” key three times.

(f) Using the UP and DOWN arrow keys, select Basic CMOS Configuration.

(g) Push the ENTER key.

1) Make sure the EDU shows the Basic CMOS Configuration page.

(h) Using the arrow keys, select Boot 1st field under BOOT ORDER.

(i) Using the PAGE UP, or PAGE DOWN keys, set the Boot 1st line to show Drive C:.

(j) Using the arrow keys, select Boot 2nd field under BOOT ORDER.

(k) Using the PAGE UP, or PAGE DOWN keys, set the Boot 1st line to show None.

(l) Push the Esc (escape) key.

1) Make sure the EDU shows the page: System BIOS Setup - Utility vX.X.

(m) Using the arrow keys, select Write to CMOS and Exit.

(n) Push the ENTER key.

1) Make sure the confirmation message shows.

(o) On the keyboard, press the “Y” key. This saves your changes.

1) Let the MAT reboot, and show the main menu.

(p) Disconnect the USB Keyboard, STD-13363.

(q) Make sure the EDU shows the MAIN menu screen with the advisory dialog.

1) Select ENTER button to close the advisory dialog.

ARO 017-999; ARO 001-016 POST SB 777-46-0079 OR POST SB 777-46-0078

G. MAT OPS OS LOADER Software Installation

SUBTASK 45-11-05-470-016

(1) Do the steps that follow to install the MAT OPS OS LOADER software.

NOTE: Typically, MAT OPS OS LOADER is already installed from the manufacturer, or has been shop-loaded. This procedure is used when the OS LOADER has been corrupted or not installed.

NOTE: Installation of MAT OPS OS BOOT LOADER software erases all software parts in the EDU, including MAT MSD and MATA OPS. You must install those LSAPs after you install MAT OPS.

(a) Make sure the MAT EDU is powered OFF.
  1) To de-energize, press and hold the MAT EDU Power BUTTON for up to 15 seconds.
(b) To install software from a Virtual USB Drive
  1) Make sure the USB Flash Drive, STD-13649 has been prepared from the correct ISO image, and contains the correct software part.
  2) Connect the USB Flash Drive, STD-13649 to the MAT EDU USB port.
(c) To install software directly from Digital Video Disc (DVD):
  1) Connect the USB CD/DVD ROM Drive, STD-13362to the MAT EDU USB port.
  2) Insert the Boot Disk, SPL-14399 into the DVD drive.
(d) Press the MAT EDU Power button for 3 seconds, to energize.
(e) Press the F7 key when the words show: “Press <DEL> or <F2> to enter setup. Press <F7> for BBS POPUP MENU.”
(f) Make sure the display shows the words “Please select boot device.”
(g) Make your selection: “UEFI: xxx” and press the ENTER key.
  1) The system will boot from the Virtual USB Drive or DVD drive, and will begin installation of MAT OPS OS Loader.
(h) Wait until the menu shows.
(i) Make your selection: INSTALL OS LOADER.
  1) A progress bar shows during installation.
(j) Wait for the words “Install Complete OK.”
(k) Make your selection: RESTART.
  1) The MAT EDU will reboot.
(l) Continue the installation process. Do the MAT OPS software installation that follows.

H. MAT OPS Software Installation

SUBTASK 45-11-05-470-019

(1) MAT OPS Initial Load:

NOTE: Use this procedure to load the MAT OPS on the EDU after the MAT OPS OS LOADER is installed.

(2) Prerequisite:

(a) If loading software from the Virtual USB Drive:
  1) Confirm that the Virtual USB Drive containing uncrated MAT OPS has been created.

(b) If loading software from DVD Drive:

1) Confirm that the physical DVD containing uncrated MAT OPS is available.

(3) Do these steps if loading software from USB Virtual Drive:

(a) Connect the other end of the USB Share Cable to the MAT EDU's USB port.

(4) Do these steps if loading software from DVD Drive:

(a) Connect the USB DVD drive to the EDU's USB port.

NOTE: The USB DVD drive may need its own power supply.

(b) Insert the DVD containing the MAT OPS software into the USB DVD Drive.

(5) Wait for the MAT OPS installation to finish. The screen will show four installation sequences:

(a) First, it shows progress of copying MAT OPS to MAT hard drive.

(b) Second, it shows progress of checking MAT OPS after copying.

(c) Third, it shows the progress of installing MAT OPS.

(d) Final, upon successful installation, the MAT EDU will reboot and Main Menu appears.

(6) Make sure the MAT displays the “MAIN” menu.

(7) Select “ENTER” to close the initialized dialog box.

SUBTASK 45-11-05-470-017

(8) MAT OPS Subsequent Load:

NOTE: Use this procedure to install a new MAT OPS to the EDU once the initial installation has been completed.

(9) Prerequisite:

(a) If loading software from the Virtual USB Drive:

1) Confirm that the Virtual USB Drive containing uncrated MAT OPS has been created.

2) Connect the other end of the USB Share Cable to the MAT EDU's USB port.

(b) If loading software from DVD Drive:

1) Confirm that the physical DVD containing uncrated MAT OPS is available.

2) Connect the USB DVD drive to the EDU's USB port.

NOTE: The USB DVD Drive may need its own power supply.

3) Insert the DVD containing MAT OPS into the USB DVD Drive.

(10) Make sure the MAT displays the “MAIN” menu.

(11) Select “TOOLS” tab.

(a) Make sure the “TOOLS” main screen is displayed.

(12) Select “Install MAT OS.”

(a) The pop-up shows the confirmation.

(13) Select “OK.”

(a) The pop-up shows the caution.

(14) Select “OK.”

(a) Make Sure the “ListLUHFiles” window is displayed.

(15) Select “.LUH” file (example 169616680001.LUH) of the MAT OPS part number to be installed.

ARO 017-999; ARO 001-016 POST SB 777-46-0079 OR POST SB 777-46-0078 (Continued)

(16) Select “Select” button.

(17) If the part number selected is already installed, a Warning screen may appear.

  (a) Select “OK” to proceed.

(18) Wait for part copying and validation to finish.

(19) Select “OK” when a pop-up shows “The MAT will now restart.”

(20) Wait for the MAT to restart and install the MAT OPS. The screen shows the installation in the following order:

  (a) First, it shows the progress of checking MAT OPS.

  (b) Second, it shows the progress of installing MAT OPS.

  (c) Final, upon successful installation the MAT EDU will reboot and Main Menu appears.

(21) Make sure the MAT displays the “MAIN” menu.

(22) Select “ENTER” to close the dialog box.

SUBTASK 45-11-05-470-018

(23) MAT OPS Reload:

NOTE: Use this procedure to reload the existing MAT OPS on the EDU once the initial installation has been completed. No external accessory is needed to reload the MAT OPS, except the power supply.

(24) Make sure the MAT displays the “MAIN” menu.

(25) Select “TOOLS” tab.

  (a) Make sure the “TOOLS” main screen is displayed.

(26) Select “Reload MAT OS.”

  (a) The pop-up shows the confirmation.

(27) Select “OK.”

  (a) The pop-up shows the caution.

(28) Select “OK.”

  (a) The pop-up shows “The MAT will now restart.”

(29) Select “OK.”

(30) Wait for the MAT to restart and reload the MAT OPS. The screen shows the installation in the following order:

  (a) First, it shows the progress of checking MAT OPS.

  (b) Second, it shows the progress of installing MAT OPS.

  (c) Final, upon successful installation, the MAT EDU will reboot and Main Menu appears.

(31) Make sure the MAT displays the “MAIN” menu.

(32) Select “ENTER” to close the dialog box.

ARO ALL

I. MATA OPS Installation

ARO 001-016 PRE SB 777-46-0079 AND PRE SB 777-46-0078

SUBTASK 45-11-05-470-003

(1) Do this task: MAT - Software Check, TASK 45-11-05-710-801.

NOTE: The MAT OPS must already be installed.

(2) If loading the software directly from the CD-ROM, do the following steps:

(a) Connect the USB CD/DVD ROM Drive, STD-13362 to the EDU's USB ports.

NOTE: An external power supply can be necessary to operate the USB CD/DVD ROM drive.

(b) Connect using a USB Cable, STD-13361.

(c) Insert the CD containing the MATA OPS SW P/N per the IP’s BOM into the DVD drive.

(3) If loading the software from BEDS, do the following steps:

(a) Make sure the parts retrieved from BEDS have been unzipped or transferred to the PMAT 2000’s “Newloads” directory as stated in the prerequisite.

(b) Insert an external storage (e.g. PCMCIA hard drive) into the appropriate port/slot of the PMAT 2000.

(c) Copy the MATA OPS part folder from “C:\Datafiles\Newloads” to the external storage (e.g. “E:”).

(d) Remove the external storage from the PMAT 2000.

(e) Insert the external storage just removed from the PMAT 2000 into the appropriate port/slot of the MAT EDU.

(4) Make sure the MAT EDU displays the MAIN menu.

NOTE: If the MAT EDU is OFF, press and hold the MAT EDU Power Key button for 3 seconds to power up the MAT EDU. Wait until the EDU MAIN menu appears and select ENTER button to close the advisory dialog.

(5) If the AIMS button exists, it means that the MATA OPS has been installed. Do the following steps to uninstall the current MATA:

NOTE: Uninstall the current MATA OPS is required prior to loading the correct MATA OPS.

(a) Select TOOLS tab.

(b) Select App Dataload button.

(c) Select the “Select the Application to install” button.

1) Make sure the “App DLU – Select application to install” window appears.

(d) Select the USB DVD drive or external storage containing the MATA OPS.

(e) Select the “TDYXX-.XXXX-YYYY.LUH” file, where “TDYXX-.XXXX-YYYY” is the MATA OPS part number (example: TDY41-7120-8501).

(f) Select the Open button.

(g) Make sure the “MATA-InstallShield Wizard” window appears.

(h) Select, “Remove” option.

(i) Select, Next button.

1) Make sure the removal confirmation window appears.

(j) Select, Yes button.

ARO 001-016 PRE SB 777-46-0079 AND PRE SB 777-46-0078 (Continued)

1) Make sure the uninstallation progress screen is displayed.

(k) Make sure the “Uninstall Complete” screen is displayed.

(l) Select the Finish button.

1) Make sure the message “Please wait while the installer deletes temporary files” is displayed.

(m) Select, OK.

1) Make sure the “App Dataload - Application uninstalled” window appears.

(n) Select, OK.

1) Make sure the MAIN menu screen with the advisory dialog is displayed.

(o) Select ENTER button.

1) Make sure the MAIN menu is displayed and the AIMS button disappears.

(6) If the AIMS button does not exist on the MAIN tab menu. Do the following steps to install the correct MATA OPS part number.

NOTE: Uninstall the current MATA OPS is required prior to loading the correct MATA OPS.

(a) Select TOOLS tab.

(b) Select App Dataload button.

(c) Select the “Select the Application to install” button.

1) Make sure the “App DLU – Select application to install” window appears.

(d) Select the USB DVD drive or external storage containing the MATA OPS part number per the IP’s BOM.

(e) Select the “TDYXX-.XXXX-YYYY.LUH” file, where “TDYXX-.XXXX-YYYY” is the MATA OPS part number (example: TDY41-7120-8501).

(f) Select the Open button.

(g) Make sure the “Welcome to the MATA-InstallShield Wizard for MATA” window appears.

(h) Select the Next button.

1) Make sure the “MATA License Agreement” screen is displayed.

(i) Select the “I accept the terms of the license agreement” option.

(j) Select, Next button.

1) Make sure the “Installing MATA” screen displayed.

(k) Select, Install button.

1) Make sure the “Setup Status” screen is displayed.

NOTE: The installation might take approximately 10-12 minutes.

(l) Make sure the “InstallShield Wizard Complete” screen is displayed.

(m) Select the Finish button.

1) Make sure the message “Please wait while the installer deletes temporary files” is displayed.

(n) Select, OK.

1) Make sure the “App Dataload - Application installed” window appears.

NOTE: The deletion of the temporary files might take approximately 1-2 minutes.

ARO 001-016 PRE SB 777-46-0079 AND PRE SB 777-46-0078 (Continued)

(o) Select, OK.

    1) Make sure the MAIN menu screen with the advisory dialog is displayed.

(p) Select ENTER button.

    1) Make sure the AIMS button appears on the MAIN tab menu screen.

(7) Make sure the correct MATA OPS software part number has been installed. Do this task: MAT - Software Check, TASK 45-11-05-710-801.

ARO 017-999; ARO 001-016 POST SB 777-46-0079 OR POST SB 777-46-0078

SUBTASK 45-11-05-470-020

(8) Make sure the MAT displays the “MAIN” menu.

(9) If the “AIMS” button does not exist on the “MAIN” tab menu:

    (a) Continue with the installation of the correct MATA OPS part number.

(10) If the “AIMS” button exist on the “MAIN” tab menu:

    (a) Perform the following steps to un-install the current MATA OPS:

    NOTE: The software removal is to ensure the software has been erased completely before installing the new software.

        1) If installing from Virtual USB Drive:

            a) Make sure the Virtual USB Drive containing MATA OPS has been created.

            b) Connect the other end of the USB Share Cable to the MAT EDU's USB port.

        2) If installing from DVD:

            a) Connect the USB DVD drive to the EDU's USB port.

            b) Insert a DVD containing MATA OPS.

    (b) Make sure the MAT displays the “MAIN” menu.

    (c) Select “TOOLS” tab.

        1) Make sure the “TOOLS” main screen is displayed.

    (d) Select “App Dataload” button.

        1) Make sure the “App Dataload” window appears.

    (e) Select “Select the Application to install” button.

        1) Make sure the “ListLUHFiles” window appears.

    (f) Select “.LUH” file (example: TDY4371208503.LUH) of the MATA OPS part number to be installed.

    (g) Select “Select” button.

        1) The App Dataload installer will initiate the dataload of the selected application.

    (h) Wait until the “MATA-InstallShield Wizard” window appears.

    (i) Select “Remove” option.

    (j) Select “Next” button.

        1) Make sure the removal confirmation window appears.

    (k) Select “Yes.”

        1) Make sure the uninstallation progress screen appears.

ARO 017-999; ARO 001-016 POST SB 777-46-0079 OR POST SB 777-46-0078 (Continued)

(l) Wait until the “Uninstall Complete” screen is displayed.

(m) Select “Finish” button.

1) Make sure the “Please wait while the installer deletes temporary files” message is displayed.

(n) Select “OK.”

1) Make sure the “App Dataload - Application uninstalled” window appears.

(o) Select “OK.”

1) Make sure the Main menu restarts and the initialized dialog box appears.

(p) Select “ENTER” to close the initialized dialog box.

(q) Make sure the “AIMS” button is removed from the “MAIN” menu.

(r) Continue with the procedure to install the correct MATA OPS software.

(11) Select “TOOLS” tab.

(a) mare sure the “TOOLS” main screen is displayed.

(12) Select “App Dataload” button.

(a) The “App Dataload” window appears.

(13) Select “Select the Application to install” button.

(a) The “ListLUHFiles” window appears.

(14) Select “LUH” file (example: TDY4371208503.LUH) of the MATA OPS part number to be installed.

(15) Select “Select” button. The App Dataload installer will begin the dataload of the selected application.

(16) Wait for the “Welcome to the InstallShield Wizard for MATA” screen to appear.

(17) Select “Next.”

(a) Make sure the “MATA License Agreement” screen is displayed.

(18) Select “ I accept the terms of the License agreement.”

(19) Select “Next.”

(a) Make sure the “Installing MATA” screen is displayed.

(20) Select “Install.”

(a) Make sure the “Setup Status” screen is displayed.

(21) Wait for the Installation to finish.

NOTE: The installation takes approximately 3 to 5 minutes to complete.

(22) Make sure the “InstallShield Wizard Complete” screen is displayed.

(23) Select “Finish.”

(a) Make sure the screen with message “ Please wait while the installer deletes temporary files” is displayed.

(24) Select “OK.”

(a) Make sure the “App Data - Application Installed” window is displayed.

NOTE: The deletion of the temporary files takes approximately 1 to 2 minutes to complete.

ARO 017-999; ARO 001-016 POST SB 777-46-0079 OR POST SB 777-46-0078 (Continued)

(25) Select “OK.”

  (a) Make sure the “MAIN” menu restarts and the initialized dialog box appears.

(26) Select “ENTER” to close the initialized dialog box.

(27) Make sure the “AIMS” button appears on the “MAIN” menu screen.

ARO ALL

J. AIMS MSD Manager Application (AMMA) Software - Installation

SUBTASK 45-11-05-470-026

(1) Install the AMMA software part. Refer to task: (How to install the AIMS MSD Manager Application (AMMA), TASK 45-10-00-470-801) .

ARO 005-999

K. Onboard Network System Link (ONSL) Software - Installation

SUBTASK 45-11-05-470-025

(1) Install the ONSL software application (Onboard Network System Link Software Installation, TASK 45-11-05-470-802).

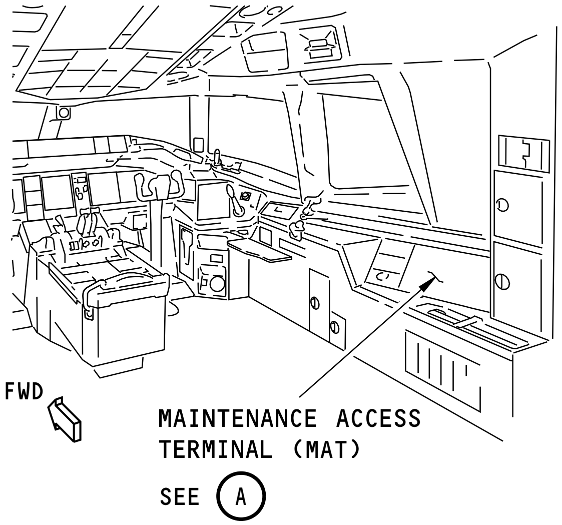
ARO 005-999; ARO 001-004 POST SB 777-23-0369

L. Cabin Services System Link (CSSL) Software - Installation

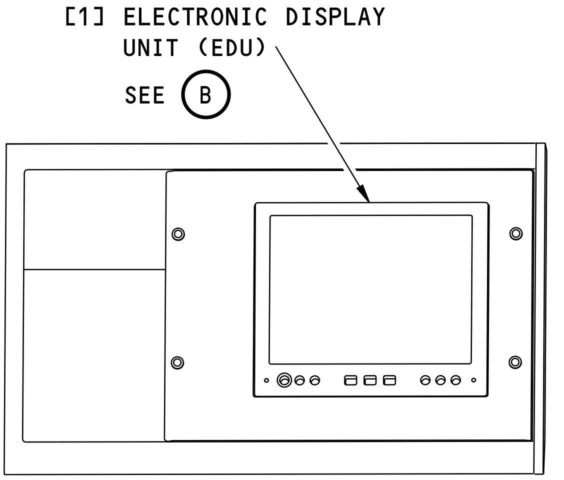
SUBTASK 45-11-05-470-024

(1) Install the CSSL software application (Cabin Services System Link (CSSL) Software Installation, TASK 45-11-05-470-804).

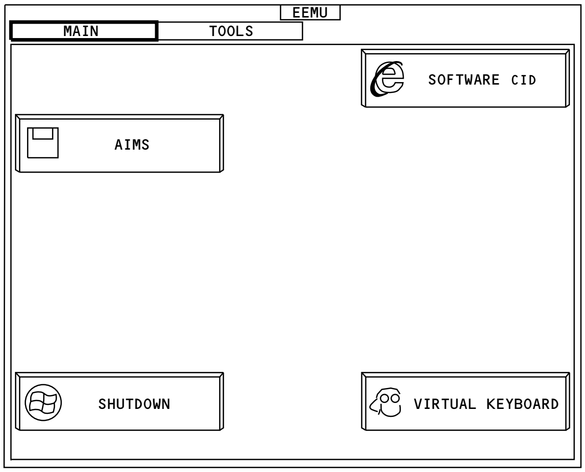
——— END OF TASK ———



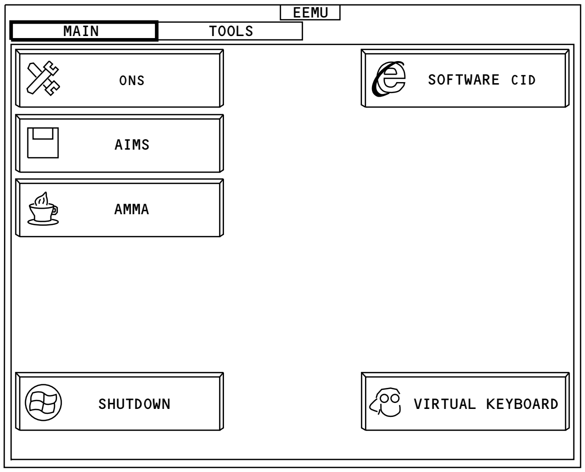
FLIGHT COMPARTMENT



MAINTENANCE ACCESS TERMINAL (MAT)
(SECOND OBSERVERS CONSOLE, P18)
A



EDU MAIN MENU WITHOUT ONBOARD NETWORK SYSTEM LINK (ONSL) (BEFORE INSTALLATION)
B



EDU MAIN MENU WITH ONBOARD NETWORK SYSTEM LINK (ONSL) (AFTER INSTALLATION)
B

2334889 S0000531858_V1

Onboard Network System Link Software Installation
Figure 201/45-11-05-990-807

ARO 005-999

TASK 45-11-05-470-802

4. Onboard Network System Link Software Installation

(Figure 202)

A. General

(1) This task gives the steps to install the following software for the Maintenance Access Terminal (MAT).

(a) Onboard network system link (ONSL) application. The name of the ONSL software is:

- ONSL OPS

REF: AIPC 45-11-05-01C

(2) To do this task, a USB CD/DVD-ROM optical drive and a USB keyboard are required.

B. References

Reference	Title
AIPC 45-11-05-01C	Aircraft Illustrated Parts Catalog

C. Tools/Equipment

Reference	Description
STD-13361	Cable - USB (1 meter)
STD-13362	ROM Drive - USB CD/DVD

D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. Prepare for Software Installation

SUBTASK 45-11-05-860-021

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

Right Power Management Panel, P210

Row	Col	Number	Name
F	17	C46602	MAINT ACCESS TERM

SUBTASK 45-11-05-860-022

(2) Make sure the MAT EDU is energized.

(a) To energize, press and hold the MAT EDU Power button for three seconds.

(b) Wait until the EDU MAIN MENU shows.

(c) To close the pop-up, make your selection: ENTER.

SUBTASK 45-11-05-480-008

(3) Connect the USB CD/DVD ROM Drive, STD-13362 to the EDU's USB ports with a USB Cable, STD-13361.

NOTE: The USB CD/DVD ROM drive, STD-13362, can need external power.

(a) Wait up to 10 seconds for the MAT operating system to mount the USB drive.

F. ONSL Software Installation Procedure

SUBTASK 45-11-05-470-005

(1) Using the MAT, do these steps that follow to install ONSL.

(a) Select the TOOLS tab.

(b) Make your selection: App Dataload.

(c) Make your selection: Select the Application to install.

1) Make sure that EDU shows the words: App DLU - Select application to install.

(d) Use Windows navigation to find and select the installation software part, on the CD/DVD drive.

1) The part name is: .LUH.

2) Click once on the part to highlight.

3) Make your selection: OPEN.

4) Make sure the screen shows the words: 46 ONSL OPS.

NOTE: The system can take approximately 10 seconds to show the message.

(e) Make your selection: Install.

1) Wait for the screen to show the words: App Dataload - Application installed.

NOTE: The installation can take approximately two minutes.

(f) Make your selection: OK.

NOTE: This selection makes the MAT Main Menu reboot.

(g) In the confirmation box, make your selection: ENTER.

G. ONSL Installation Check

SUBTASK 45-11-05-710-007

(1) Using the [1] electronic display unit (EDU) of the MAT, do these steps:

(a) On the main menu, make your selection: ONS (onboard network system).

(b) Make sure the words show: Onboard Network System Link Application Main Menu.

(c) Make your selection: ONSL Configuration.

1) Make sure the display shows the new page: ONSL Configuration.

(d) Make sure the correct ONSL OPS software part number has been installed.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 45-11-05-080-001

(1) Remove the CD/DVD media from the USB CD/DVD ROM Drive, STD-13362.

SUBTASK 45-11-05-040-005

(2) Do these steps to exit ONSL, and turn-off the MAT.

(a) Make your selection: Go Back.

(b) Make your selection: Exit.

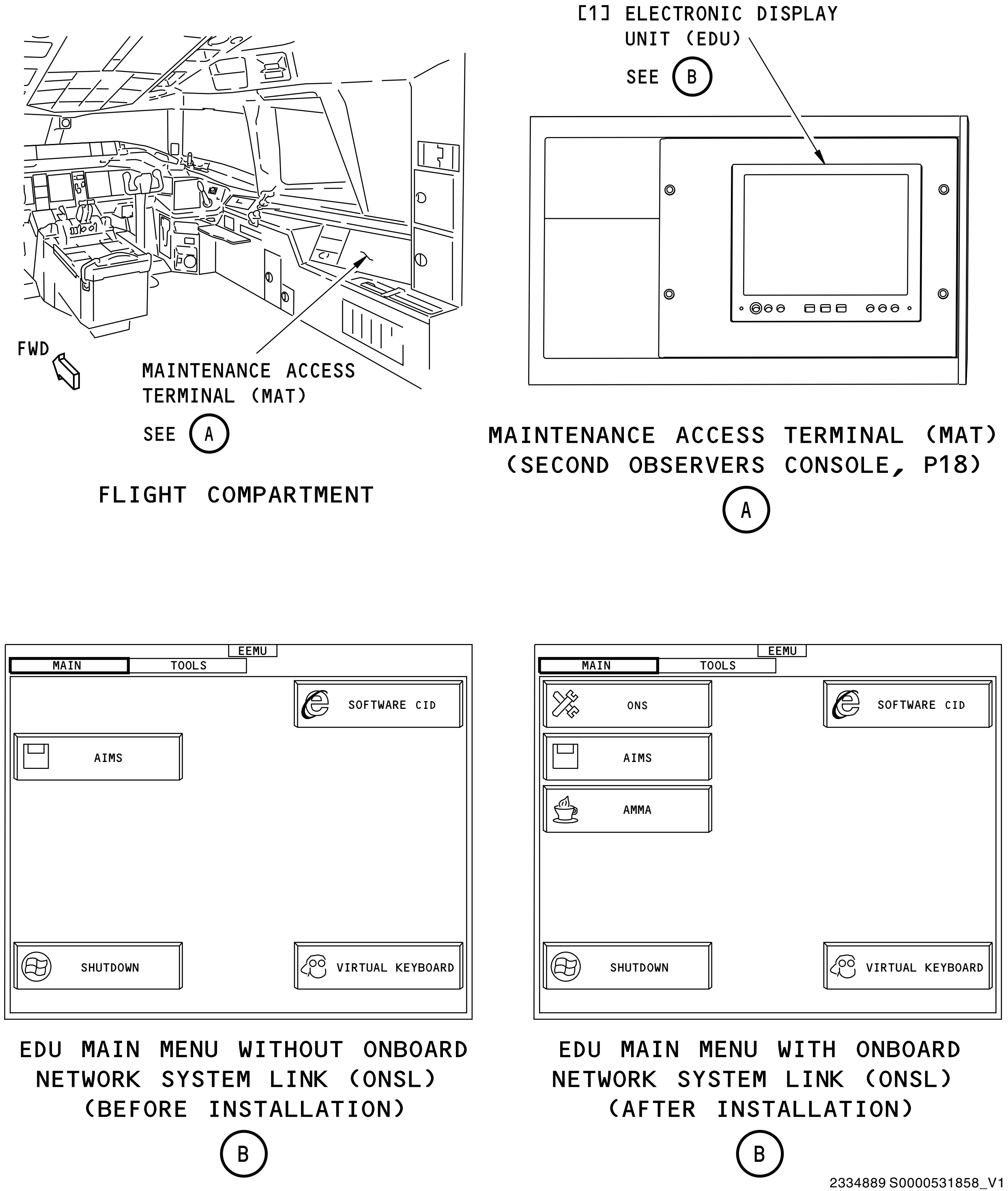
(c) Make your selection: Shutdown.

(d) Make your selection: Turn Off.

SUBTASK 45-11-05-080-002

(3) Disconnect the USB CD/DVD ROM Drive, STD-13362 from the USB port on the EDU.

——— END OF TASK ———



FLIGHT COMPARTMENT

MAINTENANCE ACCESS TERMINAL (MAT) (SECOND OBSERVERS CONSOLE, P18)

A

EDU MAIN MENU WITHOUT ONBOARD NETWORK SYSTEM LINK (ONSL) (BEFORE INSTALLATION)

B

EDU MAIN MENU WITH ONBOARD NETWORK SYSTEM LINK (ONSL) (AFTER INSTALLATION)

B

2334889 S0000531858_V1

Onboard Network System Link Software Installation
Figure 202/45-11-05-990-804

TASK 45-11-05-070-801

5. Onboard Network System Link Software Removal

A. General

(1) This task gives the steps to erase the software part that follows from the Maintenance Access Terminal (MAT).

  (a) Onboard network system link (ONSL) application.

(2) To do this task, a USB CD/DVD-ROM optical drive and a USB keyboard are required.

B. Tools/Equipment

Reference	Description
STD-13361	Cable - USB (1 meter)
STD-13362	ROM Drive - USB CD/DVD

C. Location Zones

Zone	Area
212	Flight Compartment, Right

D. Prepare for Software Installation

SUBTASK 45-11-05-860-023

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

Right Power Management Panel, P210

Row	Col	Number	Name
F	17	C46602	MAINT ACCESS TERM

SUBTASK 45-11-05-840-004

(2) Make sure the [1] MAT EDU is energized.

  (a) To energize, press and hold the [1] MAT EDU Power button for three seconds.

  (b) Wait until the MAIN MENU shows.

  (c) To close the pop-up, make your selection: ENTER.

SUBTASK 45-11-05-480-009

(3) Connect the USB CD/DVD ROM Drive, STD-13362 to the EDU's USB ports with a USB Cable, STD-13361.

  NOTE: The USB CD/DVD ROM drive, STD-13362, can need external power.

  (a) Wait up to 10 seconds for the MAT operating system to mount the USB drive.

E. ONSL Software Removal Procedure

SUBTASK 45-11-05-070-001

(1) Using the [1] MAT EDU, do these steps that follow to remove ONSL.

  (a) Select the TOOLS tab.

  (b) Make your selection: App Dataload.

  (c) Make your selection: Select the Application to install.

    1) Make sure that EDU shows the words: App DLU - Select application to install.

  (d) Use Windows navigation to find and select the software part, with the name .LUH

    1) Click once on the part to highlight.

ARO 005-999 (Continued)

2) Make your selection: OPEN.

3) Make sure the screen shows the words: 46 ONSL OPS.

NOTE: The system can take approximately 10 seconds to show the message.

(e) Make your selection: Uninstall.

1) Wait for the screen to show the words: App Dataload - Application installed.

NOTE: Removal can take approximately 30 seconds to complete.

(f) Make your selection: OK.

NOTE: This selection makes the EDU reboot.

(g) In the confirmation box, make your selection: ENTER.

F. ONSL Removal Check

SUBTASK 45-11-05-710-008

(1) Using the MAT, make sure the main menu does not show the ONS (onboard network system) button.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 45-11-05-080-003

(1) Remove the CD/DVD media from the USB CD/DVD ROM Drive, STD-13362.

SUBTASK 45-11-05-040-006

(2) Do these steps to exit ONSL, and turn-off the MAT.

(a) Make your selection: Go Back.

(b) Make your selection: Exit.

(c) Make your selection: Shutdown.

(d) Make your selection: Turn Off.

SUBTASK 45-11-05-080-004

(3) Disconnect the USB CD/DVD ROM Drive, STD-13362 from the USB port on the EDU.

——— END OF TASK ———

ARO 005-999; ARO 001-004 POST SB 777-23-0369

TASK 45-11-05-470-804

6. Cabin Services System Link (CSSL) Software Installation

Figure 203

A. General

(1) This task includes the steps to install the following software in the Maintenance Access Terminal (MAT):

NOTE: This assumes that the MAT has its operating software pre-loaded.

(a) Cabin Services System Link (CSSL) application. The name of the CSSL software is:

46 CSSL OPS.

(2) To do this task, use an external USB 2.0 DVD drive with its own power supply or able to run off a single USB interface.

NOTE: A USB stick can also be used for this procedure.

ARO 005-999; ARO 001-004 POST SB 777-23-0369 (Continued)

B. Tools/Equipment

Reference	Description
STD-13362	ROM Drive - USB CD/DVD

C. Location Zones

Zone	Area
212	Flight Compartment, Right

D. Prepare for the Software Installation.

SUBTASK 45-11-05-860-029

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

Right Power Management Panel, P210

Row	Col	Number	Name
F	17	C46602	MAINT ACCESS TERM

SUBTASK 45-11-05-840-006

(2) Make sure that the MAT Electronic Display Unit EDU [1] is energized.

  (a) To energize, push and hold the MAT EDU [1] Power button for three seconds.

  (b) Wait until the MAIN MENU shows.

  (c) To close the pop-up, make your selection: ENTER.

SUBTASK 45-11-05-480-010

(3) Connect the USB CD/DVD ROM Drive, STD-13362 to one of the MAT EDU [1] USB ports and insert the 46 CSSL OPS.

  (a) Wait for up to 10 seconds for the MAT operating system to mount the USB drive.

E. Cabin Services System Link (CSSL) Software Installation Procedure

SUBTASK 45-11-05-470-014

(1) Using the MAT, do these steps that follow to install 46 CSSL OPS.

  (a) Select the TOOLS tab.

    1) Make sure the TOOLS screen shows.

  (b) Make your selection: App Dataload.

  (c) Make your selection: Select the Application to install.

    1) Make sure that the screen shows the words: App DLU - Select application to install.

  (d) Use Windows navigation to find and select the installation software part, on the USB CD/DVD ROM Drive, STD-13362 drive.

    1) The part name is [.LUH].

    2) Click once on the part to highlight.

    3) Make your selection: OPEN.

    4) Make sure that the screen shows the words: 46 CSSL OPS.

    NOTE: The system can take approximately 10 seconds to show the message.

  (e) Make your selection: Install.

    1) Wait for the “46 CSSL OPS” window to close.

    NOTE: The installation can take approximately 30 seconds.

ARO 005-999; ARO 001-004 POST SB 777-23-0369 (Continued)

(f) VERIFY the App Dataload.

  1) Make sure Application Installed screen shows.

(g) Make your selection: OK.

  1) Make sure that the main menu re-starts.

(h) Make your selection: ENTER.

  1) Make sure the CSS button is present on the main menu.

(i) Make your selection: CSS.

  1) Make sure that the CSSL Main Menu is displayed.

(j) Make your selection: CSSL Configuration.

  1) Make sure that the CSSL Configuration Screen is displayed.

  2) Make sure that the correct software part is loaded.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 45-11-05-080-007

(1) Remove the 46 CSSL OPS from BERT; if used.

SUBTASK 45-11-05-040-007

(2) Do these steps to exit CSSL, and switch off the MAT:

  (a) Make your selection: Go Back.

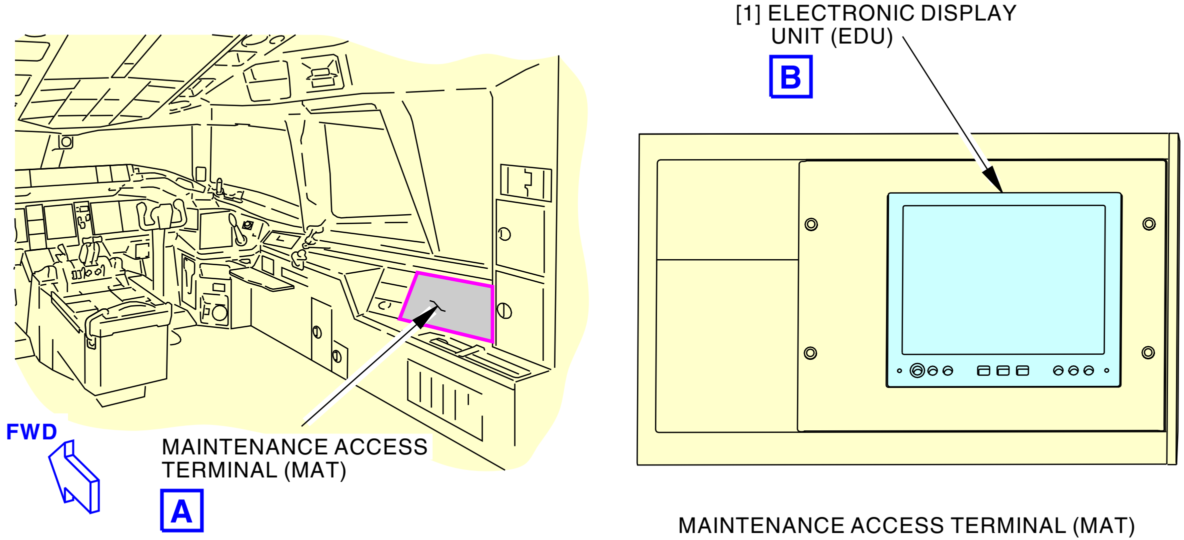
  (b) Make your selection: Exit.

  (c) Make your selection: Shutdown.

SUBTASK 45-11-05-080-008

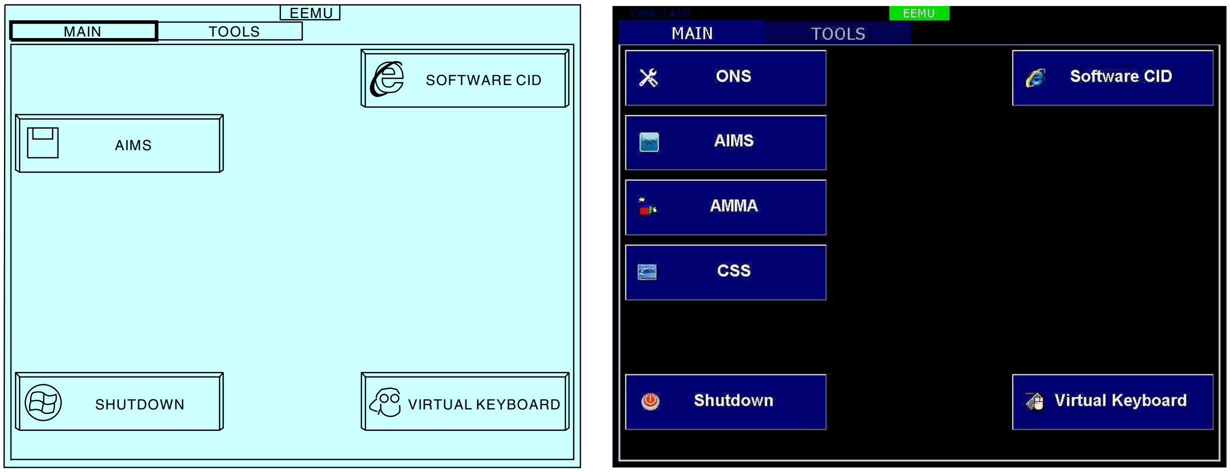
(3) Disconnect USB CD/DVD ROM Drive, STD-13362 or the USB stick if used from the USB port on the MAT EDU [1].

——— END OF TASK ———


[1] ELECTRONIC DISPLAY UNIT (EDU)
B
FWD
MAINTENANCE ACCESS TERMINAL (MAT)
A

FLIGHT COMPARTMENT

MAINTENANCE ACCESS TERMINAL (MAT)
(SECOND OBSERVERS CONSOLE, P18)
A

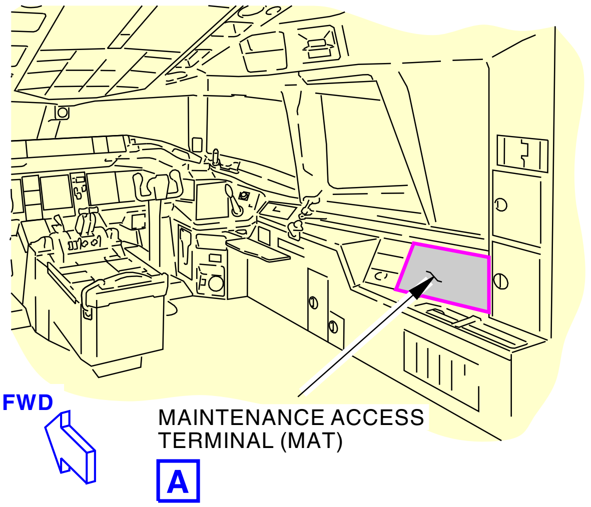


EDU MAIN MENU WITHOUT CABIN SERVICES
SYSTEM LINK (CSSL)
(BEFORE INSTALLATION)
B

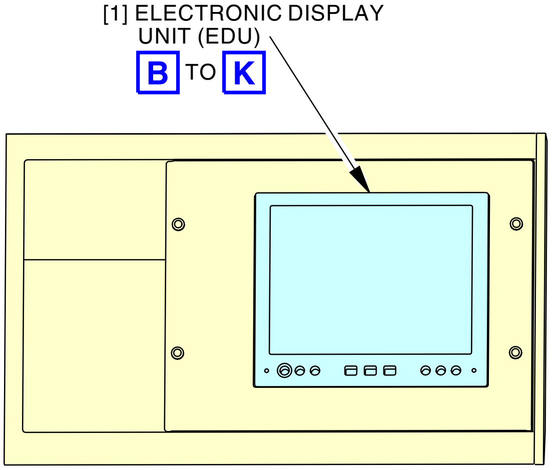
EDU MAIN MENU WITH CABIN SERVICES
SYSTEM LINK (CSSL)
(AFTER INSTALLATION)
B

2552242 S0000606807_V1

Cabin Services System Link (CSSL) Software Installation
Figure 203/45-11-05-990-808

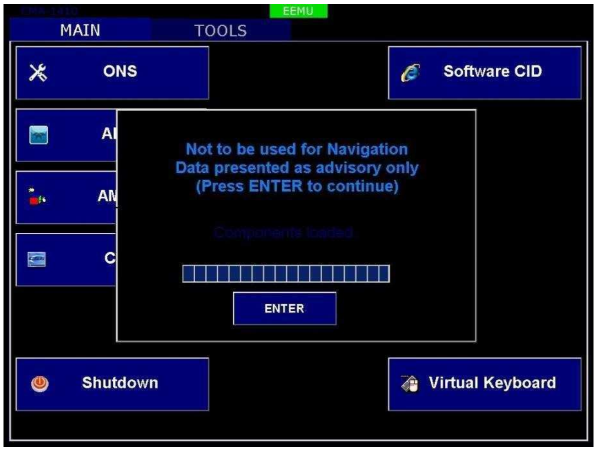


FLIGHT COMPARTMENT



MAINTENANCE ACCESS TERMINAL (MAT)
(SECOND OBSERVERS CONSOLE, P18)

A

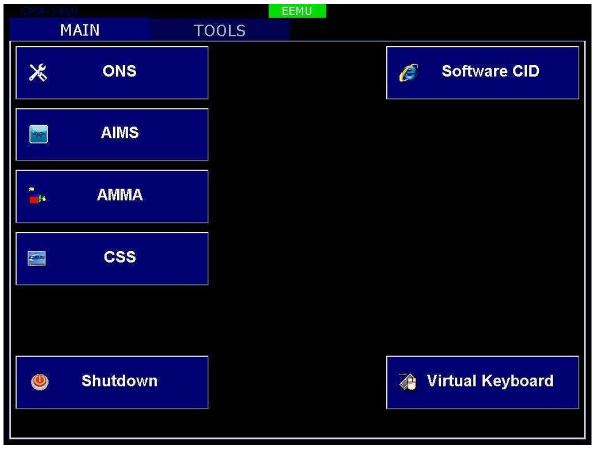


Not to be used for Navigation
Data presented as advisory only
(Press ENTER to continue)

Components loaded

EDU MAIN MENU WITH CABIN
SERVICES SYSTEM LINK (CSSL)
(BEFORE UNINSTALL)

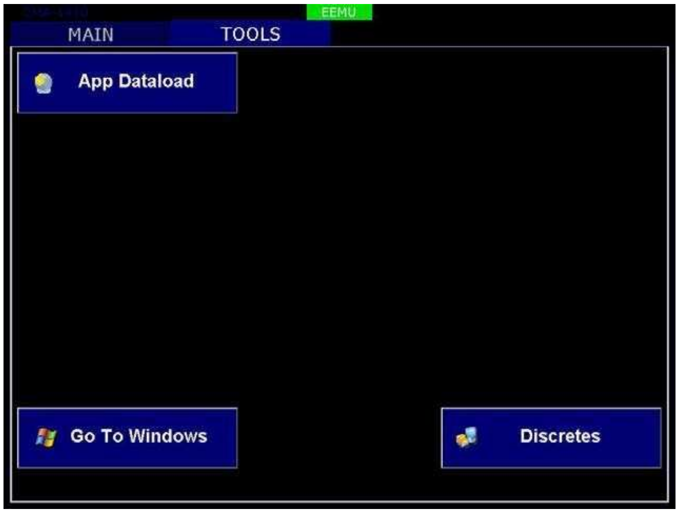
B



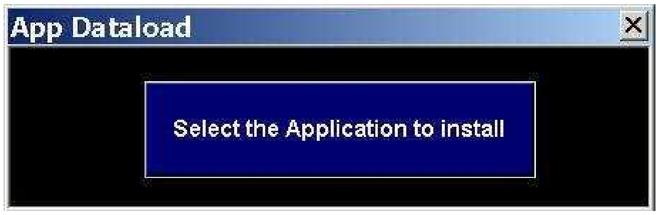
C

2552392 S0000606809_V1

Cabin Services System Link (CSSL) Software Removal
Figure 204/45-11-05-990-809 (Sheet 1 of 4)

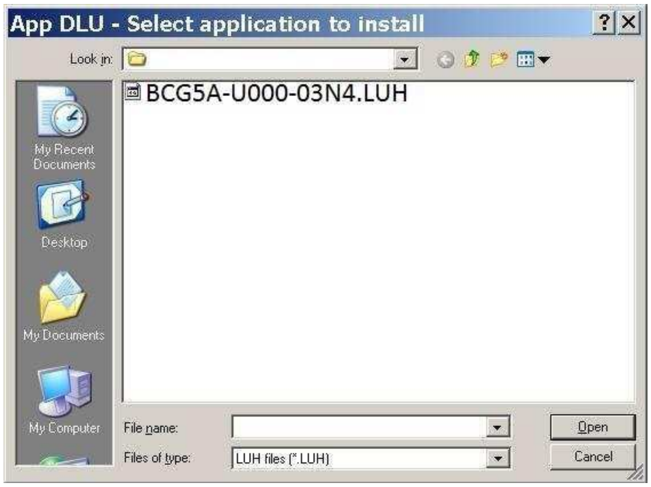


D



Select the Application to install

E



BCG5A-U000-03N4.LUH

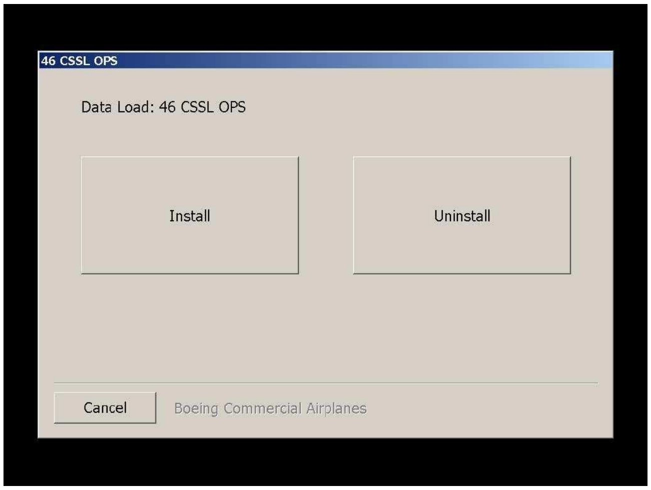
File name:

Files of type: LUH files (*.LUH)

F

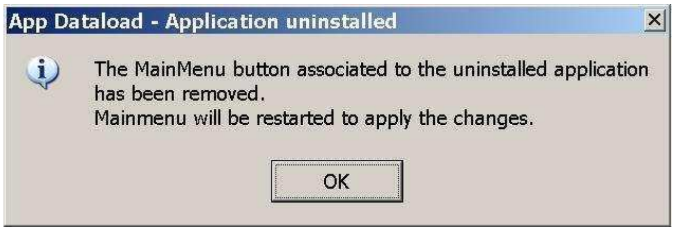
2552395 S0000608176_V1

Cabin Services System Link (CSSL) Software Removal
Figure 204/45-11-05-990-809 (Sheet 2 of 4)



Data Load: 46 CSSL OPS

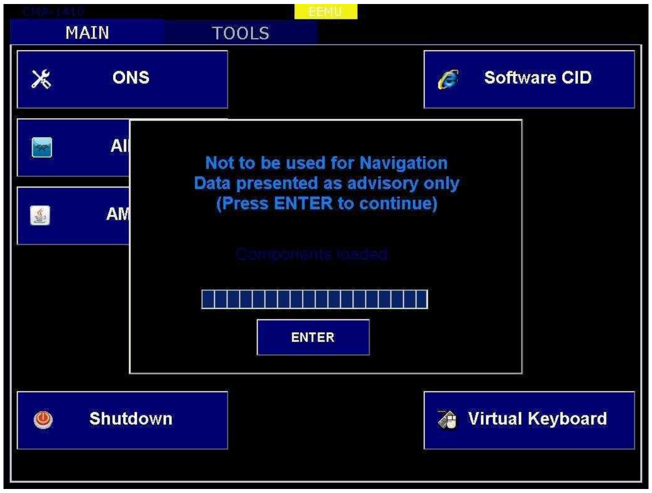
G



App Dataload - Application uninstalled

The MainMenu button associated to the uninstalled application has been removed.
Mainmenu will be restarted to apply the changes.

H



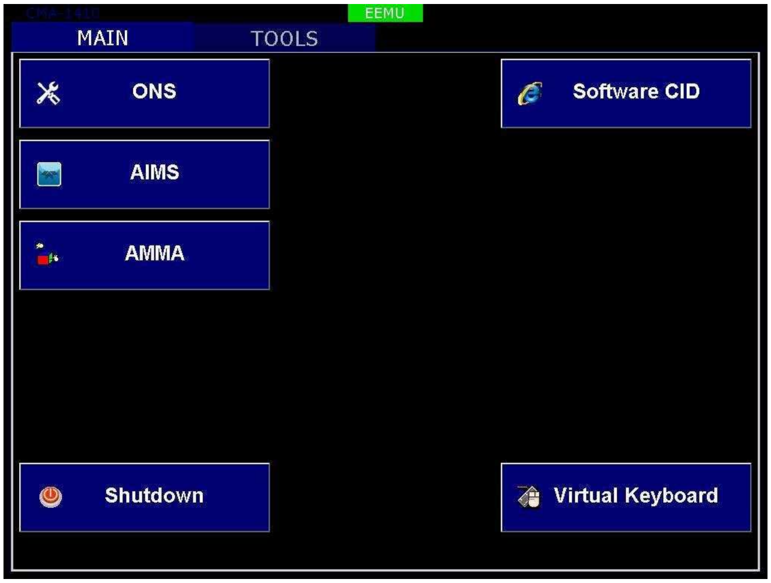
Not to be used for Navigation
Data presented as advisory only
(Press ENTER to continue)

Components loaded.

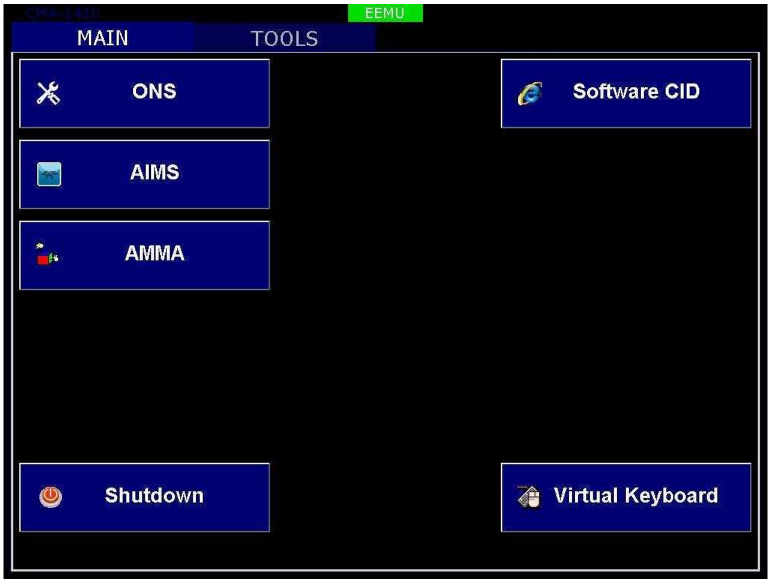
I

2552396 S0000608177_V1

Cabin Services System Link (CSSL) Software Removal
Figure 204/45-11-05-990-809 (Sheet 3 of 4)



J



K

2552397 S0000608178_V1

Cabin Services System Link (CSSL) Software Removal
Figure 204/45-11-05-990-809 (Sheet 4 of 4)

TASK 45-11-05-070-802

7. Cabin Services System Link (CSSL) Software Uninstall

Figure 204

A. General

(1) This task includes the steps to uninstall the following software from the Maintenance Access Terminal (MAT).

  (a) Cabin Services System Link (CSSL) application. The name of the CSSL software is: 46 CSSL MSP.

(2) To do this task, use an external USB 2.0 DVD drive with its own power supply or that can operate from a USB interface.

NOTE: A USB stick can also be used for this procedure.

B. Tools/Equipment

Reference	Description
STD-13362	ROM Drive - USB CD/DVD

C. Location Zones

Zone	Area
212	Flight Compartment, Right

D. Prepare for the Software Removal.

SUBTASK 45-11-05-860-030

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

Right Power Management Panel, P210

Row	Col	Number	Name
F	17	C46602	MAINT ACCESS TERM

SUBTASK 45-11-05-840-007

(2) Make sure that the MAT Electronic Display Unit EDU [1] is energized.

  (a) To energize, push and hold the MAT EDU [1] Power button for three seconds.

  (b) Wait until the MAIN MENU shows.

  (c) To close the pop-up, make your selection: ENTER.

SUBTASK 45-11-05-480-011

(3) Connect the USB CD/DVD ROM Drive, STD-13362 to one of the MAT EDU [1] USB ports and insert the 46 CSSL OPS.

  (a) Wait for up to 10 seconds for the MAT operating system to mount the USB drive.

E. Cabin Services System Link (CSSL) Software Removal Procedure

SUBTASK 45-11-05-070-002

(1) Using the MAT, do the steps that follow to uninstall 46 CSSL OPS:

  (a) Select the TOOLS tab.

    1) Make sure the TOOLS screen shows

  (b) Make your selection: App Dataload.

  (c) Make your selection: Select the Application to uninstall.

1) Make sure that the screen shows the words: App DLU - Select application to uninstall..

(d) Use Windows navigation to find and select the installation software part, on the USB CD/DVD ROM Drive, STD-13362 drive.

1) The part name is [.LUH].

2) Click once on the part to highlight.

3) Make your selection: OPEN.

4) Make sure that the screen shows the words: 46 CSSL OPS.

NOTE: The system can take approximately 10 seconds to show the message.

(e) Make your selection: Uninstall.

1) Wait for the “46 CSSL OPS” window to close.

NOTE: The installation can take approximately 30 seconds.

(f) VERIFY the App Download

1) Make sure Application Unstalled screen shows.

(g) Make your selection: OK

1) Make sure that the main menu re-starts..

F. CSSL Removal Check

SUBTASK 45-11-05-710-013

(1) Using the MAT make sure that the Main Menu does not show the CSS button.

(a) Make your selection: Shutdown.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 45-11-05-080-009

(1) Remove the DVD from USB CD/DVD ROM Drive, STD-13362, if used.

SUBTASK 45-11-05-040-008

(2) Do these steps to exit CSSL, and switch off the MAT:

(a) Make your selection: Go Back.

(b) Make your selection: Exit.

(c) Make your selection: Shutdown.

SUBTASK 45-11-05-080-010

(3) Disconnect the USB CD/DVD ROM Drive, STD-13362 or the USB stick if used from the USB port on the MAT EDU [1].

——— END OF TASK ———

MAINTENANCE ACCESS TERMINAL - REMOVAL/INSTALLATION

1. General

A. This procedure contains tasks to remove and install the line-replaceable units (LRU) of the maintenance access terminal (MAT).

(1) Remove, and install the electronic display unit (EDU), M15672.

(2) Remove, and install the enhanced electronic modular unit (EEMU), M15671.

B. The MAT is in the flight compartment in the second observer's panel.

TASK 45-11-05-000-802

2. MAT Electronic Display Unit - Removal

(Figure 401)

A. General

(1) This task removes the Electronic Display Unit (EDU), M15672.

(a) The EDU is installed in the second observer's console, P18.

B. References

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)
45-00-01-470-802	How to Transfer Data Between the MAT MSD and the MAT HDD (P/B 201)

C. Tools/Equipment

Reference	Description
STD-13383	Bit - Torx, #6

D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. Prepare for the Removal

SUBTASK 45-11-05-470-015

(1) If necessary, transfer Loadable Software Airplane Part (LSAP) for each Airplane Information Management System (AIMS) member system Line Replaceable Unit (LRU) (How to Transfer Data Between the MAT MSD and the MAT HDD, TASK 45-00-01-470-802).

SUBTASK 45-11-05-040-001

(2) Do these steps to shutdown the Maintenance Access Terminal (MAT).

(a) On the MAT EDU, select: SHUTDOWN.

1) When the system has stopped, continue.

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

Left Power Management Panel, P110

Row	Col	Number	Name
D	23	C45401	E/E BAY PMAT

Right Power Management Panel, P210

Row	Col	Number	Name
F	17	C46602	MAINT ACCESS TERM

F. Electronic Display Unit Removal

SUBTASK 45-11-05-020-004

(1) Do this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803.

SUBTASK 45-11-05-020-005

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

(2) Do the following steps to remove the electronic display unit [1] and the EDU adapter plate [4]:

- (a) Remove the four quarter-turn fasteners [2] and the cover plate [3].
- (b) Remove the six screws [5] that attach the adapter plate [4] to the console.
- (c) On the EEMU [6], disconnect the adapter electrical connector [7].
- (d) Remove the EDU [1] and adapter plate [4] together.

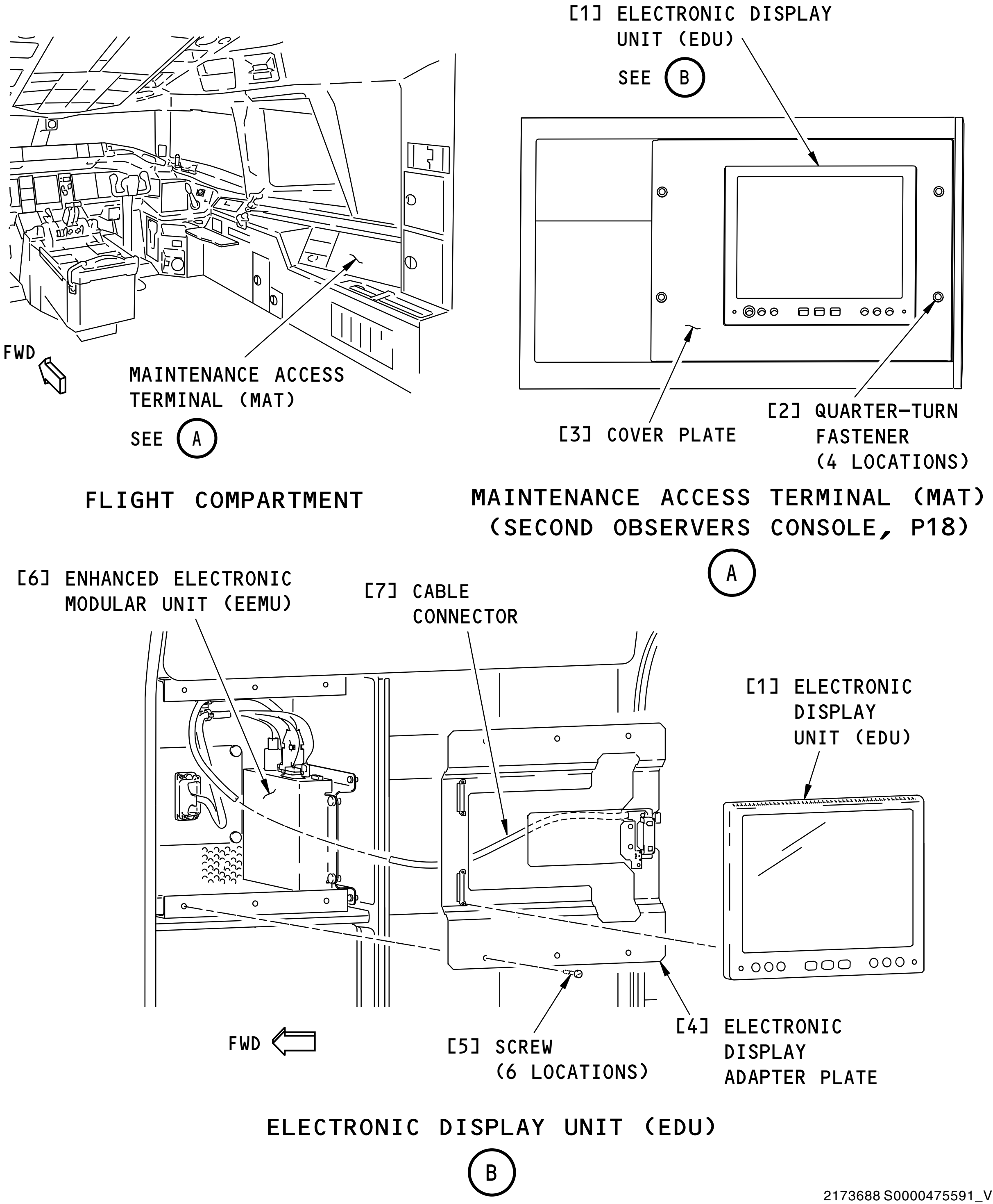
SUBTASK 45-11-05-020-006

(3) Do the following steps to separate the electronic display unit [1] from the adapter plate [4]:

- (a) Using a #6 torx bit, STD-13383, remove the two screws that attach the latch lock.
- (b) Set the latch to the unlocked position.
- (c) Remove the electronic display unit [1] from the mount.

  NOTE: Do not cause damage to the electrical connector pins.
- (d) Apply protective caps to the electrical connectors.

END OF TASK


[1] ELECTRONIC DISPLAY UNIT (EDU)
SEE B
FWD
MAINTENANCE ACCESS TERMINAL (MAT)
SEE A
[3] COVER PLATE
[2] QUARTER-TURN FASTENER (4 LOCATIONS)
FLIGHT COMPARTMENT
MAINTENANCE ACCESS TERMINAL (MAT) (SECOND OBSERVERS CONSOLE, P18)
A
[6] ENHANCED ELECTRONIC MODULAR UNIT (EEMU)
[7] CABLE CONNECTOR
[1] ELECTRONIC DISPLAY UNIT (EDU)
FWD
[5] SCREW (6 LOCATIONS)
[4] ELECTRONIC DISPLAY ADAPTER PLATE
ELECTRONIC DISPLAY UNIT (EDU)
B

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Electronic Display Unit Installation
Figure 401/45-11-05-990-802

TASK 45-11-05-400-802

3. MAT Electronic Display Unit - Installation

(Figure 401)

A. General

(1) This task installs the electronic display unit (EDU), M15672.

(a) The EDU is installed in the second observer's console, P18.

B. References

Reference	Title
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)
45-00-01-470-802	How to Transfer Data Between the MAT MSD and the MAT HDD (P/B 201)
45-11-05-730-801	Maintenance Access Terminal – System Test (P/B 501)

C. Tools/Equipment

Reference	Description
STD-13383	Bit - Torx, #6

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	EDU	45-11-05-01C-045	ARO 001-016
		45-11-05-01D-045	ARO 017-999

E. Location Zones

Zone	Area
212	Flight Compartment, Right

F. Prepare for the Installation

SUBTASK 45-11-05-860-010

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

Left Power Management Panel, P110

Row	Col	Number	Name
D	23	C45401	E/E BAY PMAT

Right Power Management Panel, P210

Row	Col	Number	Name
F	17	C46602	MAINT ACCESS TERM

G. Electronic Display Unit Installation

SUBTASK 45-11-05-420-007

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

SUBTASK 45-11-05-420-008

CAUTION

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

(2) Do the following steps to install the EDU [1].

(a) Examine the electrical connectors on the EDU [1], and EDU adapter plate [4] for damage.

1) If you find damage, you must correct the problem.

(b) Install the EDU [1] into the EDU adapter plate [4].

1) Make sure that the two metal mounting plates on the back of the EDU align with the adapter plate.

(c) Put the latch handle to the lock position.

(d) Install the two latch screws using a #6 torx bit, STD-13383.

(e) Connect the electrical connector [7] from the EDU adapter plate [4] to the EEMU [6].

1) Make sure the minimum radius of the electrical cable is more than 1.25 in. (3.18 cm).

(f) Install the EDU and EDU adapter plate [4] into the console, P18, with six screws [5].

(g) Install the cover plate [3] into the console, P18, with four quarter-turn fasteners [2].

H. Electronic Display Unit Post-Installation Test

SUBTASK 45-11-05-860-011

(1) Energize the MAT and show the main menu. These are the steps:

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

Left Power Management Panel, P110

Row	Col	Number	Name
D	23	C45401	E/E BAY PMAT

Right Power Management Panel, P210

Row	Col	Number	Name
F	17	C46602	MAINT ACCESS TERM

(b) Below the EDU, push and hold down the left bezel button for three seconds.

1) Make sure the MAT main menu shows.

(c) When the EDU shows the words: components loaded, make your selection: ENTER.

1) Make sure EDU shows the MAT main menu.

SUBTASK 45-11-05-710-009

(2) If the Loadable Software Airplane Part (LSAP) for AIMS Member System LRUs were stored on the USB Drive during MAT EDU Removal, transfer it to the MAT MSD (How to Transfer Data Between the MAT MSD and the MAT HDD, TASK 45-00-01-470-802).

NOTE: Software Parts for AIMS Member System LRU's are not stored on to the MAT MSD in the new CMC Electronics EDU, they need to be transferred or uploaded if required.

SUBTASK 45-11-05-710-001

(3) Do this task: (Maintenance Access Terminal – System Test, TASK 45-11-05-730-801).

I. Put the Airplane Back to Its Usual Condition

SUBTASK 45-11-05-840-001

(1) Make sure you remove the USB memory drive, external keyboard, and media disks.

——— END OF TASK ———

TASK 45-11-05-000-803

4. MAT Enhanced Electronic Modular Unit - Removal

(Figure 402)

A. General

(1) This task gives the steps to remove the Enhanced Electronic Module Unit (EEMU), M15671.

  (a) The Enhanced Electronic Module Unit (EEMU) is installed in the second observers panel, P18.

  (b) To get access to the Enhanced Electronic Module Unit (EEMU), it is necessary to remove the Electronic Display Unit (EDU).

B. References

Reference	Title
20-41-01-000-803	ESDS Handling for Metal Encased Unit Removal (P/B 201)

C. Location Zones

Zone	Area
212	Flight Compartment, Right

D. Prepare for the Removal

SUBTASK 45-11-05-040-002

(1) Do the following steps to shut-down the maintenance access terminal (MAT).

  (a) On the Electronic Display Unit (EDU) main menu, select: SHUTDOWN.

  (b) In the confirmation box, make your selection: Turn off.

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

Left Power Management Panel, P110

Row	Col	Number	Name
D	23	C45401	E/E BAY PMAT

Right Power Management Panel, P210

Row	Col	Number	Name
F	17	C46602	MAINT ACCESS TERM

E. EEMU Removal

SUBTASK 45-11-05-840-002

(1) Do this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-41-01-000-803.

SUBTASK 45-11-05-020-007

(2) Do this task: (MAT Electronic Display Unit - Removal, TASK 45-11-05-000-802).

SUBTASK 45-11-05-020-008

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

(3) Do the following steps to remove the enhanced electronic modular unit [1].

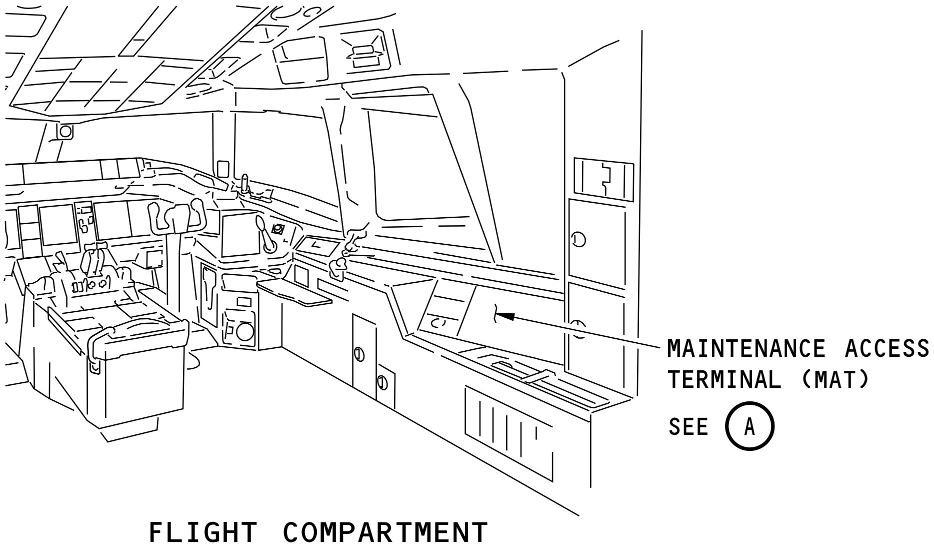
  (a) Disconnect the four EEMU cable connectors from the enhanced electronic modular unit [1].

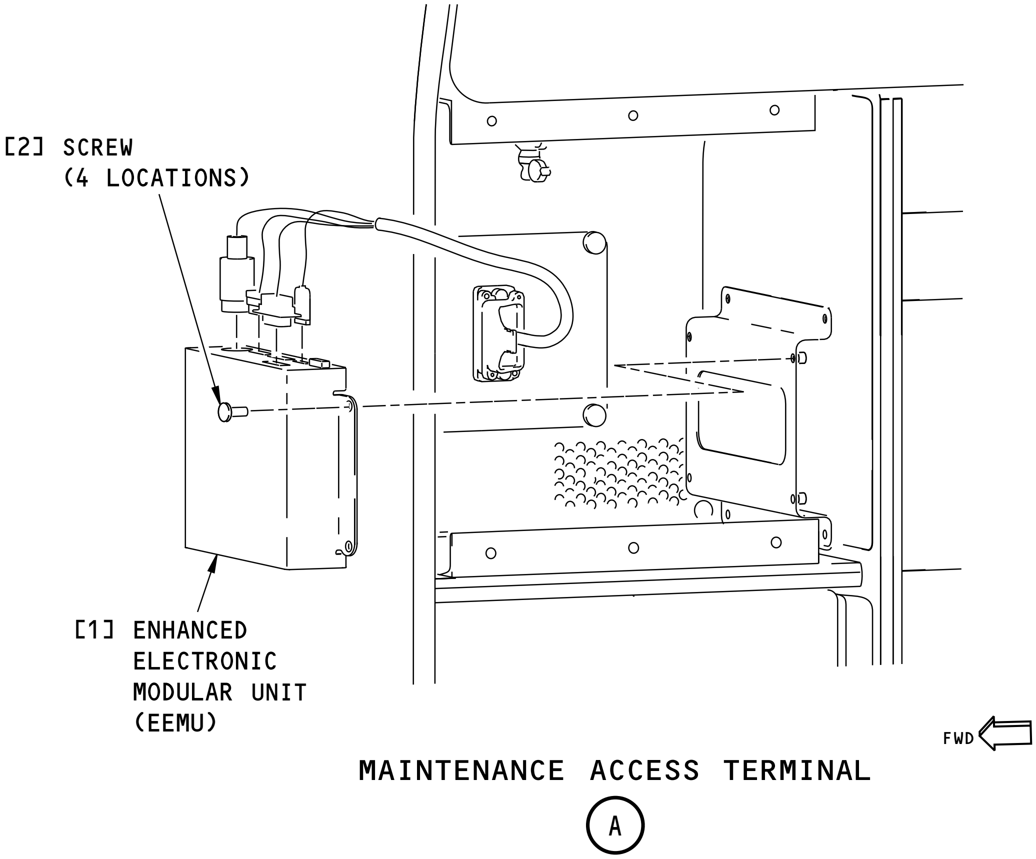
(b) Remove the four screws [2] that attach the enhanced electronic modular unit [1] to the mounting bracket.

(c) Remove the enhanced electronic modular unit [1].

(d) Put protective caps on the electrical connectors.

——— END OF TASK ———




[2] SCREW (4 LOCATIONS)
[1] ENHANCED ELECTRONIC MODULAR UNIT (EEMU)
FWD
MAINTENANCE ACCESS TERMINAL
A

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Enhanced Electronic Modular Unit Installation
Figure 402/45-11-05-990-803

TASK 45-11-05-400-803

5. MAT Enhanced Electronic Modular Unit - Installation

Figure 402

A. General

(1) This task gives the steps to install the enhanced electronic modular unit (EEMU), M15671

(a) The EEMU is installed inside the second observers panel, P18.

B. References

Reference	Title
20-41-01-400-803	ESDS Handling for Metal Encased Unit Installation (P/B 201)
45-11-05-730-801	Maintenance Access Terminal – System Test (P/B 501)

C. Location Zones

Zone	Area
212	Flight Compartment, Right

D. Prepare for the Installation

SUBTASK 45-11-05-860-012

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

Left Power Management Panel, P110

Row	Col	Number	Name
D	23	C45401	E/E BAY PMAT

Right Power Management Panel, P210

Row	Col	Number	Name
F	17	C46602	MAINT ACCESS TERM

E. EEMU Installation

SUBTASK 45-11-05-420-009

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

SUBTASK 45-11-05-420-010

(2) Do the following steps to install the enhanced electronic modular unit [1].

(a) Put the enhanced electronic modular unit [1] onto the EEMU mounting bracket, and attach with four screws [2].

1) Hand-tighten the four screws [2].

(b) Examine the electrical connectors on the enhanced electronic modular unit [1], and EEMU cable for damage.

1) If you find damage, you must correct the problem.

(c) Connect the four electrical connectors to the enhanced electronic modular unit [1].

SUBTASK 45-11-05-420-011

(3) Do this task: MAT Electronic Display Unit - Installation, TASK 45-11-05-400-802.

F. EEMU Post-Installation Test

SUBTASK 45-11-05-860-013

(1) Do the following steps to energize the MAT and show the main menu:

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

Left Power Management Panel, P110

Row	Col	Number	Name
D	23	C45401	E/E BAY PMAT

Right Power Management Panel, P210

Row	Col	Number	Name
F	17	C46602	MAINT ACCESS TERM

(b) Below the EDU, push and hold down the left bezel button for 3 seconds.

1) Make sure the MAT main menu shows.

(c) When the EDU shows the words: components loaded, make your selection: ENTER.

1) Make sure EDU shows the MAT main menu.

SUBTASK 45-11-05-710-003

(2) Do this task: Maintenance Access Terminal – System Test, TASK 45-11-05-730-801.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 45-11-05-840-003

(1) Make sure you remove the external USB drive, USB keyboard, and media disks.

——— END OF TASK ———

MAINTENANCE ACCESS TERMINAL - ADJUSTMENT/TEST

1. **General**
   A. This procedure contains the system test that does a complete check of all interfaces and functions.

TASK 45-11-05-730-801

2. **Maintenance Access Terminal – System Test**

   A. **General**
      (1) This task gives the steps to do a system test of the Maintenance Access Terminal (MAT). The MAT system includes the components that follow.
         (a) Electronic display unit (EDU), M15672
         (b) Enhanced electronic module unit (EEMU), M15671
         (c) EDU adapter-mount cable.

   B. **References**

Reference	Title
45-11-05-710-801	MAT - Software Check (P/B 201)

   C. **Location Zones**

Zone	Area
212	Flight Compartment, Right

   D. **Prepare for the System Test**

SUBTASK 45-11-05-860-018

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

Overhead Circuit Breaker Panel, P11

Row	Col	Number	Name
B	12	C31609	AIMS L-1
B	13	C31611	AIMS L-2
B	14	C31617	AIMS L-3
B	15	C31619	AIMS L-4
F	12	C31610	AIMS R-1
F	13	C31612	AIMS R-2
F	14	C31618	AIMS R-3
F	15	C31620	AIMS R-4

Right Power Management Panel, P210

Row	Col	Number	Name
F	17	C46602	MAINT ACCESS TERM

Standby Power Management Panel, P310

Row	Col	Number	Name
J	6	C31651	AIMS L
J	7	C31650	AIMS R

E. MAT System Test

SUBTASK 45-11-05-860-019

(1) Make sure the EDU buttons operate correctly.

NOTE: To identify the buttons for this task, count from left to right, positions one through nine. Buttons at positions #3, #4, #7 are not used.

(a) Push the main menu button (center, position 5).

1) Make sure the EDU shows the main menu.

(b) Push the health-and-monitor button (position 2).

1) Make sure the EDU shows the health-and-monitor page.

(c) Push the virtual keyboard button (position 6).

1) Make sure the EDU shows the virtual keyboard.

(d) Push the dim and brighten buttons (position 8 and 9).

1) Make sure the EDU screen becomes more or less bright.

(e) Push the main menu button (center, position 5).

1) Make sure the EDU shows the main menu.

SUBTASK 45-11-05-710-004

(2) Do this task: MAT - Software Check, TASK 45-11-05-710-801.

SUBTASK 45-11-05-710-005

(3) Do a check to get access to the Aircraft Information Management System (AIMS).

(a) On the main menu, select: AIMS.

(b) Make sure that the MATA AIMS Main Menu is displayed.

(c) Select Onboard Maintenance

1) Make sure that the AIMS Onboard Maintenance menu is displayed.

(d) Select LINE MAINTENANCE.

(e) Select Exit Maintenance

——— END OF TASK ———

MAINTENANCE ACCESS TERMINAL - CLEANING/PAINTING

1. General

A. This procedure contains one task.

(1) This give the steps to clean the display surface of the electronic display unit (EDU).

B. The MAT is in the flight compartment in the second observer's panel.

TASK 45-11-05-100-802

2. Electronic Display Unit – Cleaning

A. General

(1) This task gives the steps to clean the display surface of the electronic display unit (EDU), M15672.

(a) The EDU is installed in the second observers console, P18.

B. Tools/Equipment

Reference	Description
STD-123	Brush - Soft Bristle

C. Consumable Materials

Reference	Description	Specification
B01057	Cleaner - Glass, Standard Household	
G50138	Cloth - Soft Cotton	
G50316	Cloth - Clean, Dry, Lint-free, White, Cotton	

D. Location Zones

Zone	Area
212	Flight Compartment, Right

E. Prepare for EDU Cleaning

SUBTASK 45-11-05-040-003

(1) If time permits, do a shut-down of the EDU. Do the steps that follow.

(a) On the Electronic Display Unit (EDU) main menu, make your selection: SHUTDOWN.

(b) In the confirmation box, make your selection: Turn off.

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

Left Power Management Panel, P110

Row	Col	Number	Name
D	23	C45401	E/E BAY PMAT

Right Power Management Panel, P210

Row	Col	Number	Name
F	17	C46602	MAINT ACCESS TERM

F. EDU Cleaning

SUBTASK 45-11-05-160-001

CAUTION 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 45-11-05-160-002

(2) Moisten a non-abrasive cotton cloth, G50316, or soft cotton cloth, G50138 with glass cleaner, B01057. Wipe clean the display surface.

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

G. Put the Airplane Back to Its Usual Condition

SUBTASK 45-11-05-440-001

(1) Do the following steps to energized the EDU:

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

Left Power Management Panel, P110

Row	Col	Number	Name
D	23	C45401	E/E BAY PMAT

Right Power Management Panel, P210

Row	Col	Number	Name
F	17	C46602	MAINT ACCESS TERM

(b) Make sure the EDU is energized and shows the main menu.

(c) Below the EDU, push and hold down the left bezel button for 3 seconds.

1) Make sure the MAT main menu shows.

(d) When the EDU shows the words: components loaded, make your selection: ENTER.

1) Make sure EDU shows the MAT main menu.

——— END OF TASK ———

FLIGHT DECK PMAT INTERFACE MODULE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the PMAT interface module.

(2) An installation of the PMAT interface module, which includes an installation test.

B. The flight deck PMAT interface module is in the second observer's panel, P18, in the flight compartment.

TASK 45-12-11-000-801

2. PMAT Interface Module Removal

(Figure 401)

A. Location Zones

Zone	Area
212	Flight Compartment, Right

B. Removal Procedure

SUBTASK 45-12-11-020-001

(1) Remove the PMAT interface module [1]:

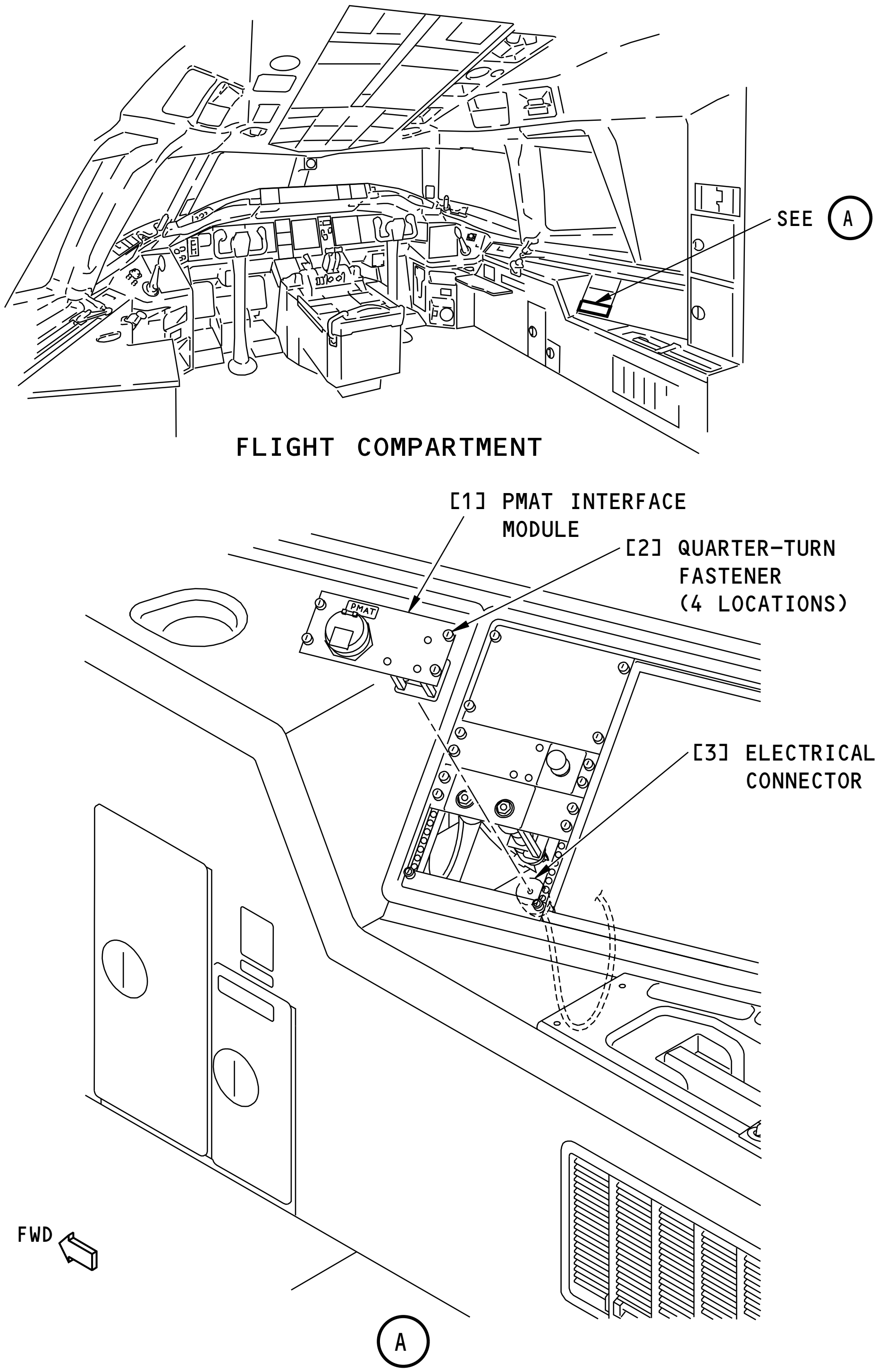
(a) Loosen the four quarter-turn fasteners [2] that attach the PMAT interface module [1] to the panel.

(b) Pull the PMAT interface module [1] from the panel.

(c) Disconnect the electrical connector [3].

(d) Put protective covers on the electrical connector [3].

——— END OF TASK ———



PMAT Interface Module Installation
Figure 401/45-12-11-990-801

TASK 45-12-11-400-801

3. PMAT Interface Module Installation

(Figure 401)

A. References

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

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Module	31-10-01-01-630	ARO 001-013
		31-10-01-01B-010	ARO 014-999

C. Location Zones

Zone	Area
212	Flight Compartment, Right

D. Installation Procedure

SUBTASK 45-12-11-420-001

(1) Install the PMAT interface module [1]:

   (a) Remove the protective covers from the electrical connector [3].

   (b) Examine the electrical connector [3] for bent or broken pins, dirt, and damage.

   (c) Connect the electrical connector [3].

   (d) Carefully put the PMAT interface module [1] into the panel and hold the module.

   (e) Tighten the four quarter-turn fasteners [2] that attach the PMAT interface module [1] to the panel.

E. Installation Test

SUBTASK 45-12-11-860-001

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

SUBTASK 45-12-11-710-001

(2) Make sure that a spare PMAT connected to the interface port can connect to AIMS:

   (a) Connect a spare PMAT to the flight deck PMAT interface port.

   (b) Push the ON/OFF switch or key to turn on the PMAT power.

   (c) When the PMAT shows the configuration display, select CONTINUE.

   (d) When the PMAT main menu shows, select ONBOARD MAINTENANCE.

   (e) Make sure the CMCF main menu shows.

   NOTE: The CMCF main menu has these selections: LINE MAINTENANCE, EXTENDED MAINTENANCE, OTHER FUNCTIONS, HELP, and REPORT.

   (f) Select LINE MAINTENANCE.

   (g) Select EXIT MAINTENANCE.

   (h) Push the ON/OFF switch or key to off the PMAT power.

   (i) Disconnect the spare PMAT.

——— END OF TASK ———