



AIRCRAFT MAINTENANCE MANUAL

FADEC HARNESS - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to remove and install the FADEC harnesses from the pylon to the rear electronic compartment. These procedures are applicable to the LH and RH engines.
- B. The procedures in this section are given in the sequence below. The tasks identified with (♦) are part of the Scheduled Maintenance Requirements Document (SMRD).

TASK NUMBER	DESCRIPTION	EFFECTIVITY
73-22-03-000-801-A	FADEC HARNESS - REMOVAL	ALL
73-22-03-400-801-A	FADEC HARNESS - INSTALLATION	ALL



EMB145 – EMB135

AIRCRAFT
MAINTENANCE MANUAL

TASK 73-22-03-000-801-A

EFFECTIVITY: ALL

2. FADEC HARNESS - REMOVAL

A. General

- (1) This task gives the procedures to remove the FADEC harnesses from the pylon to the rear electronic compartment.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-43-00/100	- COMPONENT LOCATION
AMM TASK 25-51-01-000-801-A/400	BAGGAGE COMPARTMENT LINING - REMOVAL
AMM TASK 25-81-01-000-801-A/400	-
AMM TASK 53-01-03-000-801-A/400	BAGGAGE-COMPARTMENT FLOOR PANELS - REMOVAL
AMM TASK 71-00-00-000-801-A/400	ENGINE - REMOVAL
AMM TASK 71-11-01-000-801-A/400	ENGINE UPPER COWLING - REMOVAL
AMM TASK 73-22-01-000-801-A/400	FADEC - REMOVAL

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
272	272DR	Rear electronic compartment
813	813AW	Baggage compartment door
424	424AB	Pylon
414	414AB	Pylon
424	424EB	Pylon
414	414EB	Pylon

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Workstand	To get access to the engine	1

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

<i>QTY</i>	<i>FUNCTION</i>	<i>PLACE</i>
1	Does the task	Baggage compartment and rear electronic compartment
1	Does the task	Pylon

I. Preparation
SUBTASK 841-002-A

- (1) Make sure that the aircraft is deenergized.
- (2) Remove the upper cowling ([AMM TASK 71-11-01-000-801-A/400](#)).
- (3) Open the baggage door.
- (4) Open the rear electronic compartment door.
- (5) Remove the baggage compartment lining ([AMM TASK 25-51-01-000-801-A/400](#)).
- (6) Remove the thermoacoustic insulation (AMM TASK 25-81-01-000-801-A/400).
- (7) Remove the baggage-compartment floor panels ([AMM TASK 53-01-03-000-801-A/400](#)).
- (8) Remove access panels 414AB or 424AB and 414EB or 424EB, as applicable. Refer to [AMM MPP 06-43-00/100](#).

J. Removal of FADEC A Harness ([Figure 401](#))
SUBTASK 020-002-A

- (1) **NOTE:** To remove the FADEC harness from the pylon to the engine, refer to [AMM TASK 71-00-00-000-801-A/400](#).

In the forward part of the pylon, cut and remove the heat-shrinkable boots (16) of FADEC A harness (10), as applicable.

- (2) Disconnect the electrical connector of FADEC A harness (10) installed in the pylon.
- (3) Get access to access panel 414AB or 424AB, as applicable, and do as follows:
 - Remove the clamp (11).
 - Remove the screws, washers and nuts that attach the connector (14) to the pylon.
- (4) On the side of the baggage compartment, remove the sealant from the contour of the seal plates (8).

CAUTION: BE CAREFUL WHEN YOU REMOVE THE SEAL PLATES NOT TO BREAK THE TORQUE OF THE OTHER FEEDTHROUGHS INSTALLED ON THEM.

- (5) Remove the screws (6) and washers (12) of the seal plates (8).
- (6) Disconnect the seal plates (8) from the aircraft fairing.

- (7) Disconnect the seal plates (8) from the feedthrough (7).
- (8) Pull the FADEC A harness (10) into the baggage compartment.
- (9) Remove all the clamps installed along the FADEC A harness (10) in the baggage compartment.

NOTE: Correctly identify the harness. Make marks to show its positioning. This will make the installation procedure easier and help you install it correctly.

- (10) Disconnect the harness (10) from the pressure transducer sensor (P0 sensor) (2).
- (11) In the rear electronic compartment, disconnect the FADEC A harnesses. Refer to [AMM TASK 73-22-01-000-801-A/400](#).

K. Removal of FADEC B Harness (Figure 401)

SUBTASK 020-003-A

- (1) **NOTE:** To remove the FADEC harness from the pylon to the engine, refer to [AMM TASK 71-00-00-000-801-A/400](#).

In the aft part of the pylon, cut and remove the heat-shrinkable boots (17) of FADEC B harness (9), as applicable.

- (2) Disconnect the electrical connector of FADEC B harness (9) installed in the pylon.
- (3) Get access to access panel 414EB or 424EB, as applicable, and remove the screws, washers and nuts that attach the connector (15) to the pylon.
- (4) On the side of the baggage compartment, remove the sealant from the contour of the seal plates (5).

CAUTION: BE CAREFUL WHEN YOU REMOVE THE SEAL PLATES NOT TO BREAK THE TORQUE OF THE OTHER FEEDTHROUGHS INSTALLED ON THEM.

- (5) Remove the screws (4) and washers (13) of the seal plate (5).
- (6) Disconnect the seal plates (8) from the aircraft fairing.
- (7) Disconnect the seal plates (5) from the feedthrough (3).
- (8) Pull the FADEC B harness (9) into the baggage compartment.
- (9) Remove all the clamps installed along the FADEC B harness (9) in the baggage compartment.

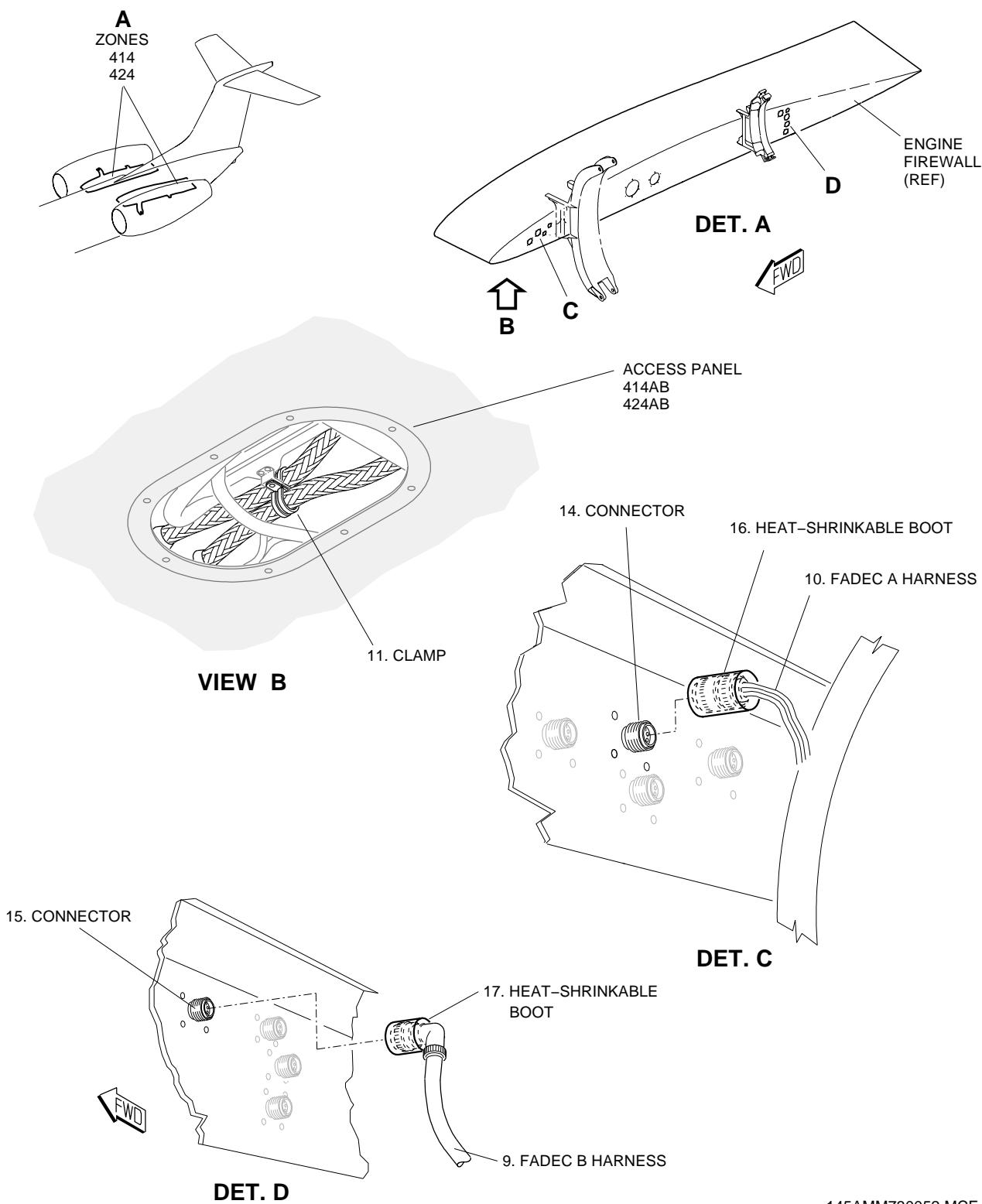
NOTE: Correctly identify the harness. Make marks to show its positioning. This will make the installation procedure easier and help you install it correctly.

- (10) Disconnect the harness from the pressure transducer sensor (P0 sensor) (2).
- (11) In the rear electronic compartment, disconnect the FADEC B harnesses. Refer to [AMM TASK 73-22-01-000-801-A/400](#).

EFFECTIVITY: ALL

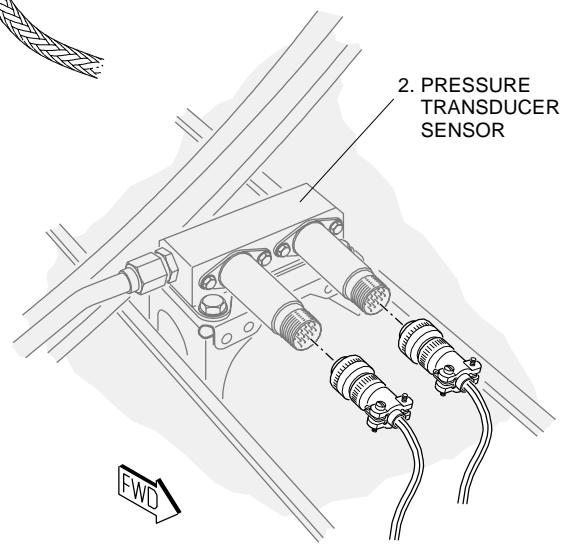
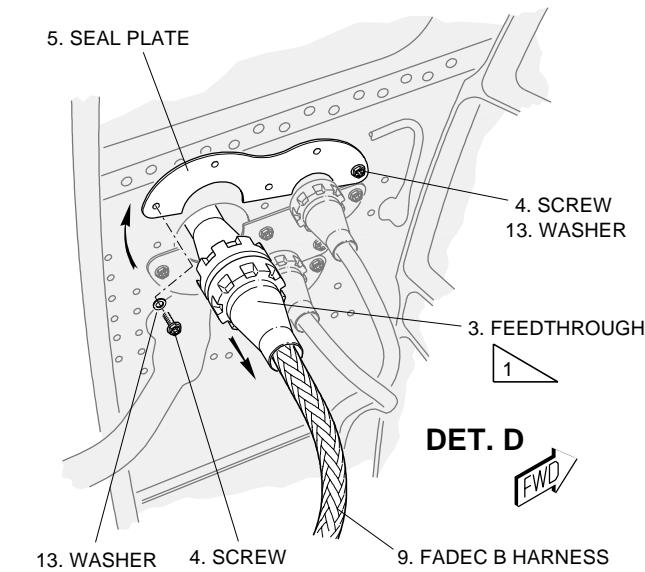
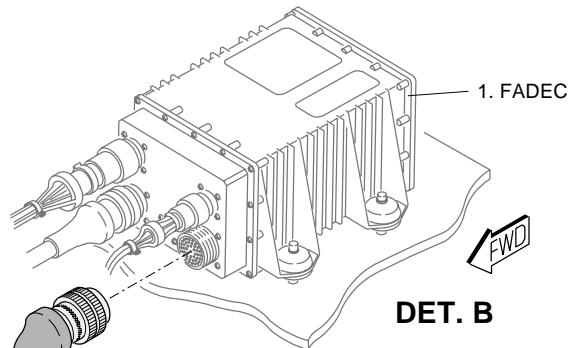
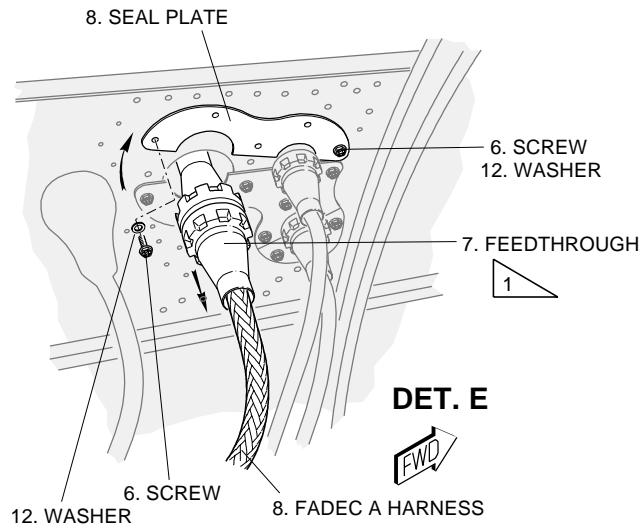
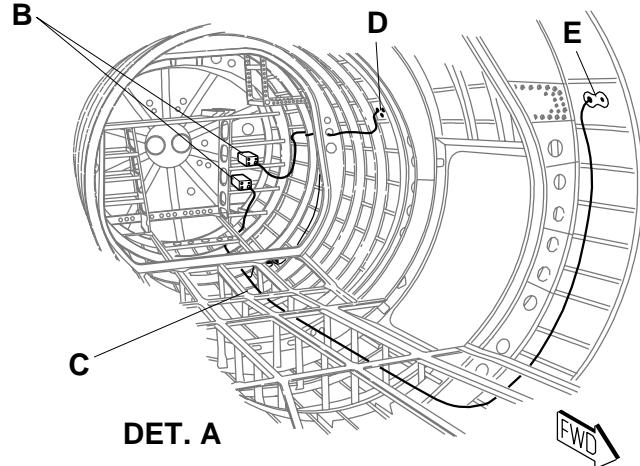
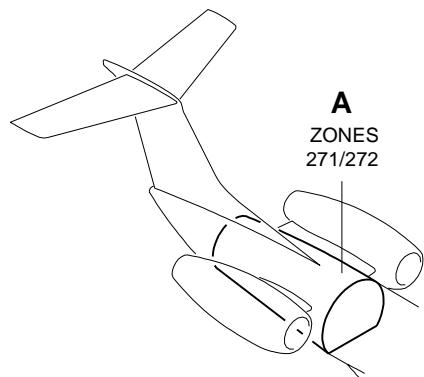
FADEC Harness - Removal/Installation

Figure 401 - Sheet 1



145AMM730052.MCE

EFFECTIVITY: ALL
FADEC Harness - Removal/Installation
Figure 401 - Sheet 2



TORQUE: 10.7 TO 11.3 Nm (95 TO 100 lb.in)

145AMM730053.MCE



AIRCRAFT MAINTENANCE MANUAL

TASK 73-22-03-400-801-A

EFFECTIVITY: ALL

3. FADEC HARNESS - INSTALLATION

A. General

- (1) This task gives the procedures to install the FADEC harnesses from the pylon to the rear electronic compartment.

B. References

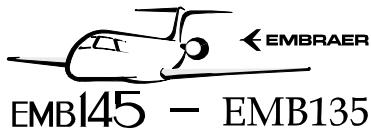
REFERENCE	DESIGNATION
AMM MPP 06-43-00/100	- COMPONENT LOCATION
AMM TASK 25-51-01-400-801-A/400	BAGGAGE COMPARTMENT LINING - INSTALLATION
AMM TASK 25-81-01-400-801-A/400	-
AMM TASK 53-01-03-400-801-A/400	BAGGAGE-COMPARTMENT FLOOR PANELS - INSTALLATION
AMM TASK 71-00-00-400-801-A/400	ENGINE - INSTALLATION
AMM TASK 71-00-01-910-801-A/200	ENGINE START PROCEDURE (NORMAL)
AMM TASK 71-11-01-400-801-A/400	ENGINE UPPER COWLING - INSTALLATION
AMM TASK 73-22-01-400-801-A/400	FADEC - INSTALLATION
SRM 51-20-01	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
272	272DR	Rear electronic compartment
813	813AW	Baggage compartment door
424	424AB	Pylon
414	414AB	Pylon
424	424EB	Pylon
414	414EB	Pylon

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Heating gun	To shrink the original heat-shrinkable boot size	
Commercially available	Torque Wrench (For the torque range, refer to figure 401)	To torque the feedthrough	
GSE 403	Wrench-torque, feedthrough	To torque the feedthrough	



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Workstand	To get access to the engine	1

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
MIL-S-8802 Type II, class B	Sealant PR-1440 B2 or PR-1440 B1/2	AR
MIL-PRF-81733 Type VI, class C	Sealant P/S 870-C12	AR
FIT-621-3, HRNF-300-S or CFHR-TW-3000	Heat-shrinkable boot	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Baggage compartment and rear electronic compartment
1	Does the task	Pylon

I. Installation of FADEC A Harness (Figure 401)

SUBTASK 420-002-A

- (1) NOTE: To install the FADEC harness from the pylon to the engine, refer to [AMM TASK 71-00-00-400-801-A/400](#).

In the forward part of the baggage compartment, with the seal plates (8) moved up, put the harness through the seal plates (8) into the pylon until it comes at the external part of the pylon.

- (2) Get access to access panel 414AB or 424AB, as applicable, and do as follows:
- Install the screws, washers and nuts that attach the connector (14) to the pylon.
 - Install the clamp (11).
- (3) Put all feedthroughs into the seal plates (8).

CAUTION: BE CAREFUL WHEN YOU INSTALL THE SEAL PLATES NOT TO BREAK THE TORQUE OF THE OTHER FEEDTHROUGHS INSTALLED ON THEM.

- (4) On the side of the baggage compartment, do the sealing of the seal plates (8), with sealant P/S 870-C12. Refer to SRM 51-20-01.
- (5) Install the seal plates (8) and tighten the screws (6) and washers (12).
- (6) Torque the feedthrough (7) with GSE 403 and the torque wrench. For torque values, refer to (Figure 401).

- (7) Fillet-seal the contour of the seal plates (8), with sealant PR-1440 B2 or PR-1440 B1/2. Refer to SRM 51-20-01.
 - (8) Seal the interface between the FADEC A harness (10) and the feedthrough (7) with sealant PR-1440 B2 or PR-1440 B1/2 (in the baggage compartment and the pylon).
 - (9) Shrink the feedthrough (7) with the heating gun.
 - (10) Install all the clamps along the FADEC A harness (10) in the baggage compartment.
- NOTE:** Make sure that you obey the positions identified during the removal procedure. This will make the installation procedure easier and help you install the harness correctly.
- (11) Connect the harness to the pressure transducer sensor (P0 sensor) (2).
 - (12) In the rear electronic compartment, connect the FADEC A harnesses. Refer to [AMM TASK 73-22-01-400-801-A/400](#).
 - (13) On the pylon, cover the FADEC A harness (10) with the heat-shrinkable boots (16) and connect the electrical connector of FADEC A harness (10) to the pylon.
 - (14) Shrink the heat-shrinkable boots (16) with the heating gun.

J. Installation of FADEC B Harness (Figure 401)

SUBTASK 420-003-A

- (1) **NOTE:** To install the FADEC harness from the pylon to the engine, refer to [AMM TASK 71-00-00-400-801-A/400](#).

In the aft part of the baggage compartment, with the seal plates (5) moved up, put the harness through the seal plate (5) into the pylon until it comes at the external part of the pylon.

- (2) Get access to access panel 414EB or 424EB, as applicable, and install the screws, washers and nuts that attach the connector (15) to the pylon.
- (3) Put all feedthroughs into the seal plates (5).

CAUTION: BE CAREFUL WHEN YOU INSTALL THE SEAL PLATES NOT TO BREAK THE TORQUE OF THE OTHERS FEEDTHROUGHS INSTALLED ON THEM.

- (4) On the side of the baggage compartment, do the sealing of the seal plates (5), with sealant P/S 870-C12. Refer to SRM 51-20-01.
- (5) Install the seal plates (5) and tighten the screws (4) and washers (13).
- (6) Torque the feedthrough (3) with GSE 403 and the torque wrench. For torque values, refer to (Figure 401).
- (7) Fillet-seal the contour of the seal plates (5), with sealant PR-1440 B2 or PR-1440 B1/2. Refer to SRM 51-20-01.
- (8) Seal the interface between the FADEC B harness (9) and the feedthrough (3) with sealant PR-1440 B2 or PR-1440 B1/2 (inside the baggage compartment and the pylon).

- (9) Shrink the feedthrough (3) with the heating gun.
- (10) Install all the clamps along the FADEC B harness (9) in the baggage compartment.
NOTE: Make sure that you obey the positions identified during the removal procedure. This will make the installation procedure easier and help you install the harness correctly.
- (11) Connect the harness to the pressure transducer sensor (P0 sensor) (2).
- (12) In the rear electronic compartment, connect the FADEC B harnesses. Refer to [AMM TASK 73-22-01-400-801-A/400](#).
- (13) On the pylon, cover the FADEC B harness (9) with the heat-shrinkable boots (17) and connect the electrical connector of FADEC B (9) harness to the pylon.
- (14) Shrink the heat-shrinkable boots (17) with the heating gun.

K. Follow-on

SUBTASK 842-002-A

- (1) Install access panels 414AB or 424AB and 414EB or 424EB, as applicable. Refer to [AMM MPP 06-43-00/100](#).
- (2) Install the baggage compartment floor panels ([AMM TASK 53-01-03-400-801-A/400](#)).
- (3) Install the thermoacoustic insulation ([AMM TASK 25-81-01-400-801-A/400](#)).
- (4) Install the baggage compartment lining ([AMM TASK 25-51-01-400-801-A/400](#)).
- (5) Close the rear electronic compartment door.
- (6) Close the baggage door.
- (7) Install the upper cowling ([AMM TASK 71-11-01-400-801-A/400](#)).
- (8) Do an engine start procedure ([AMM TASK 71-00-01-910-801-A/200](#)).