



AIRCRAFT MAINTENANCE MANUAL

THERMAL SWITCH - REMOVAL/INSTALLATION

EFFECTIVITY: ACFT MODEL(S) EMB-145

1. General

- A. This section gives the procedures to remove and install the thermal switches of the Bleed Air System.
- 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
36-20-02-000-801-A	THERMAL SWITCHES - REMOVAL	ACFT MODEL(S) EMB-145
36-20-02-400-801-A	THERMAL SWITCHES - INSTALLATION	ACFT MODEL(S) EMB-145



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TASK 36-20-02-000-801-A

EFFECTIVITY: ACFT MODEL(S) EMB-145

2. THERMAL SWITCHES - REMOVAL

A. General

- (1) This task gives the instructions to remove the thermal switches of the Bleed Air System.
- (2) This task is applicable to the thermal switches installed near each point of connection of the bleed air ducts.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-30-00/100	-
AMM MPP 06-41-01/100	-
AMM MPP 06-41-02/100	-
AMM MPP 06-41-05/100	- COMPONENT LOCATION
AMM MPP 06-43-00/100	- COMPONENT LOCATION
AMM TASK 25-51-01-000-801-A/400	BAGGAGE COMPARTMENT LINING - REMOVAL
AMM TASK 52-44-01-000-801-A/400	REAR ELECTRONIC-COMPARTMENT DOOR - REMOVAL
AMM TASK 53-01-02-000-801-A/400	-
AMM TASK 53-01-03-000-801-A/400	BAGGAGE-COMPARTMENT FLOOR PANELS - REMOVAL
AMM TASK 53-04-20-000-801-A/400	LATERAL WING-TO-FUSELAGE FAIRING - REMOVAL
AMM TASK 53-04-30-000-801-A/400	-
AMM TASK 55-34-00-000-801-A/400	DORSAL FIN - REMOVAL
AMM TASK 55-35-00-000-801-A/400	VERTICAL-STABILIZER LEADING EDGE - REMOVAL

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
193	193	Aft wing-to-fuselage fairing
194	194	RH side of wing-to-fuselage fairing
195	195	LH side of wing-to-fuselage fairing
261	261BF	Passenger floor panel
261	261DF	Passenger floor panel
262	262AF	Passenger floor panel
262	262BF	Passenger floor panel
262	262CF	Passenger floor panel
271	271AF	Floor panel of the baggage compartment
271	271BF	Floor panel of the baggage compartment

(Continued)

ZONE	PANEL/DOOR	LOCATION
271	271BLW	Inside baggage compartment
272	272DR	In the aft electronic compartment
272	272AF	Floor panel of the baggage compartment
272	272BF	Floor panel of the baggage compartment
272	272CRW	Inside baggage compartment
320	322	Dorsal Fin
320	323	Vertical Stabilizer Leading Edge
414	414DB	LH pylon
424	424DB	RH pylon
813	813	Baggage compartment

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Soldering Iron - 30 W	To disconnect electrical terminals	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Location of installation of the thermal switch

I. Preparation
SUBTASK 841-010-B

- (1) Make sure that, on the overhead panel, the BLEED 1, APU BLEED, and BLEED 2 push-button are not pushed and the bar lights are on.
- (2) On the overhead circuit breaker panel, open these circuit breakers and attach DO-NOT-CLOSE tags to them:
 - DAU 2A (Location tip: DC BUS 1/ESSENTIAL DC BUS 2/EICAS DAU 2A).
 - DAU 2B (Location tip: DC BUS 2/NAV/EICAS DAU 2B).

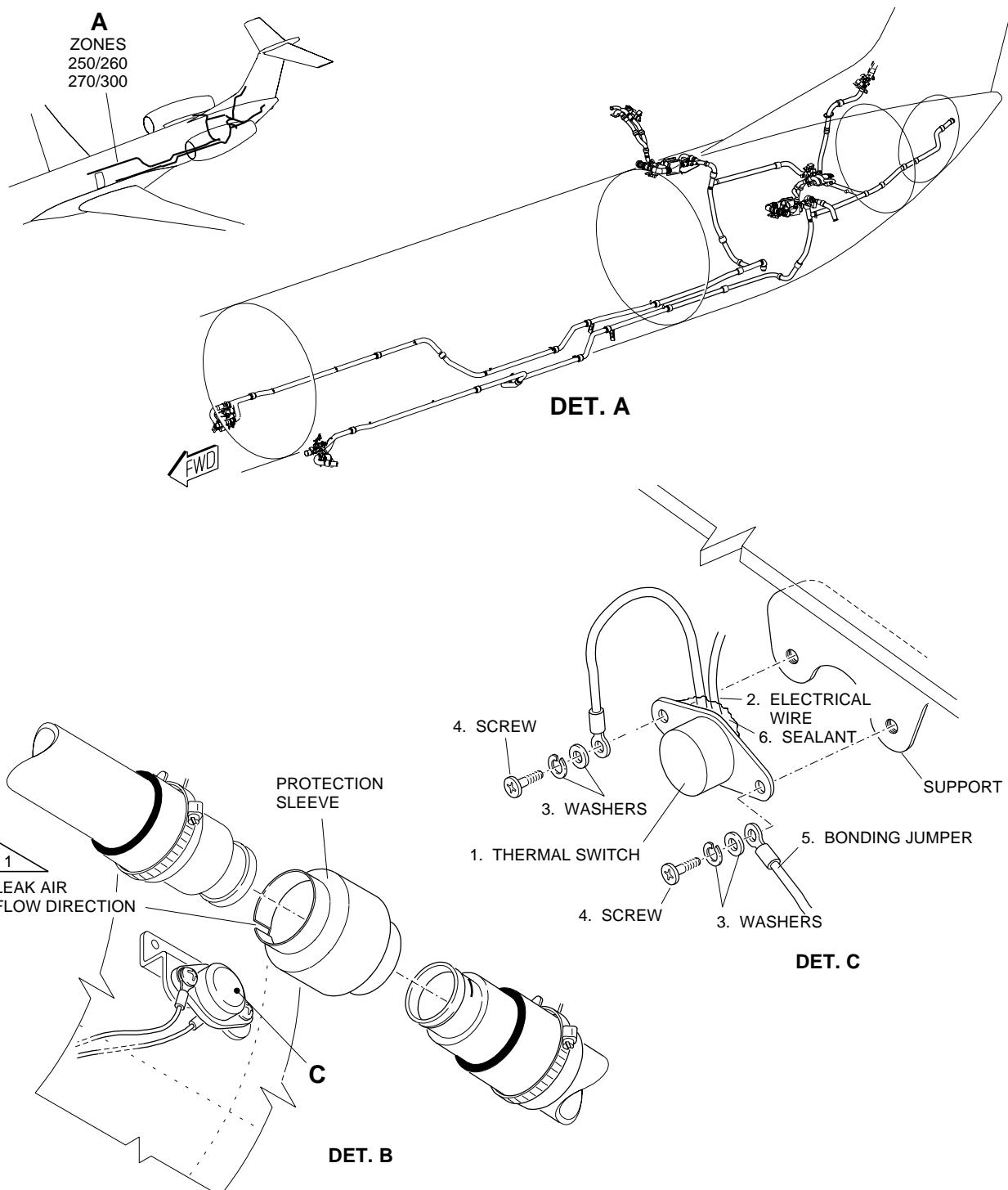
- (3) Remove access panel 272DR (AMM MPP 06-41-01/100 and [AMM TASK 52-44-01-000-801-A/400](#)).
- (4) Open baggage compartment door 813 (AMM MPP 06-30-00/100).
- (5) Remove sidewall linings 271BLW and 272CRW ([AMM MPP 06-41-05/100](#) and [AMM TASK 25-51-01-000-801-A/400](#)).
- (6) Remove floor panels 271AF, 271BF, 272AF, and 272BF (AMM MPP 06-41-02/100 and [AMM TASK 53-01-03-000-801-A/400](#)), 261BF, 261DF, 262AF, 262BF, and 262CF (AMM MPP 06-41-02/100 and AMM TASK 53-01-02-000-801-A/400), as applicable.
- (7) Remove fairing 193 (AMM MPP 06-30-00/100 and AMM TASK 53-04-30-000-801-A/400).
- (8) Remove fairings 194 and 195 (AMM MPP 06-30-00/100 and [AMM TASK 53-04-20-000-801-A/400](#)).
- (9) Remove access panels 414DB and 424DB ([AMM MPP 06-43-00/100](#))
- (10) Remove the Dorsal Fin access panel 322 (AMM MPP 06-30-00/100 and [AMM TASK 55-34-00-000-801-A/400](#) and the Vertical-Stabilizer Leading-Edge access panel 323 (AMM MPP 06-30-00/100 and [AMM TASK 55-35-00-000-801-A/400](#)), as applicable.

J. Removal ([Figure 401](#)) ([Figure 402](#))

SUBTASK 020-010-B

WARNING: DO NOT TOUCH THE BLEED-AIR SYSTEM DUCTS OR COMPONENTS IMMEDIATELY AFTER THE ENGINE OR APU STOPS BECAUSE OF THE HIGH BLEED-AIR TEMPERATURE.

- (1) For thermal switch P/N M1-195-xxxxxx, do as follow; refer to ([Figure 401](#)), DET B:
 - (a) Remove the screws (4) and the washers (3).
 - (b) Remove the sealant (6).
 - (c) If applicable, release the bonding jumper (5).
 - (d) Disconnect the electrical wire (2) with a soldering iron.
 - (e) Remove the thermal switch (1).
- (2) For thermal switch P/N 11041-xxxx, do as follow; refer to ([Figure 402](#)), DET. B:
 - (a) Release the screws (7) and the washers (6).
 - (b) If applicable, release the bonding jumper (5).
 - (c) Cut the electric wire (1) near the splice (2) to disconnect it from the electric wire (3).
 - (d) Cut the electric wire (9) near the splice (10) to disconnect it from the electric wire (11).
 - (e) Remove the thermal switch (8).

EFFECTIVITY: FOR THERMAL SWITCH P/N M1-195-xxxxxx
Thermal Switches - Removal/Installation
Figure 401


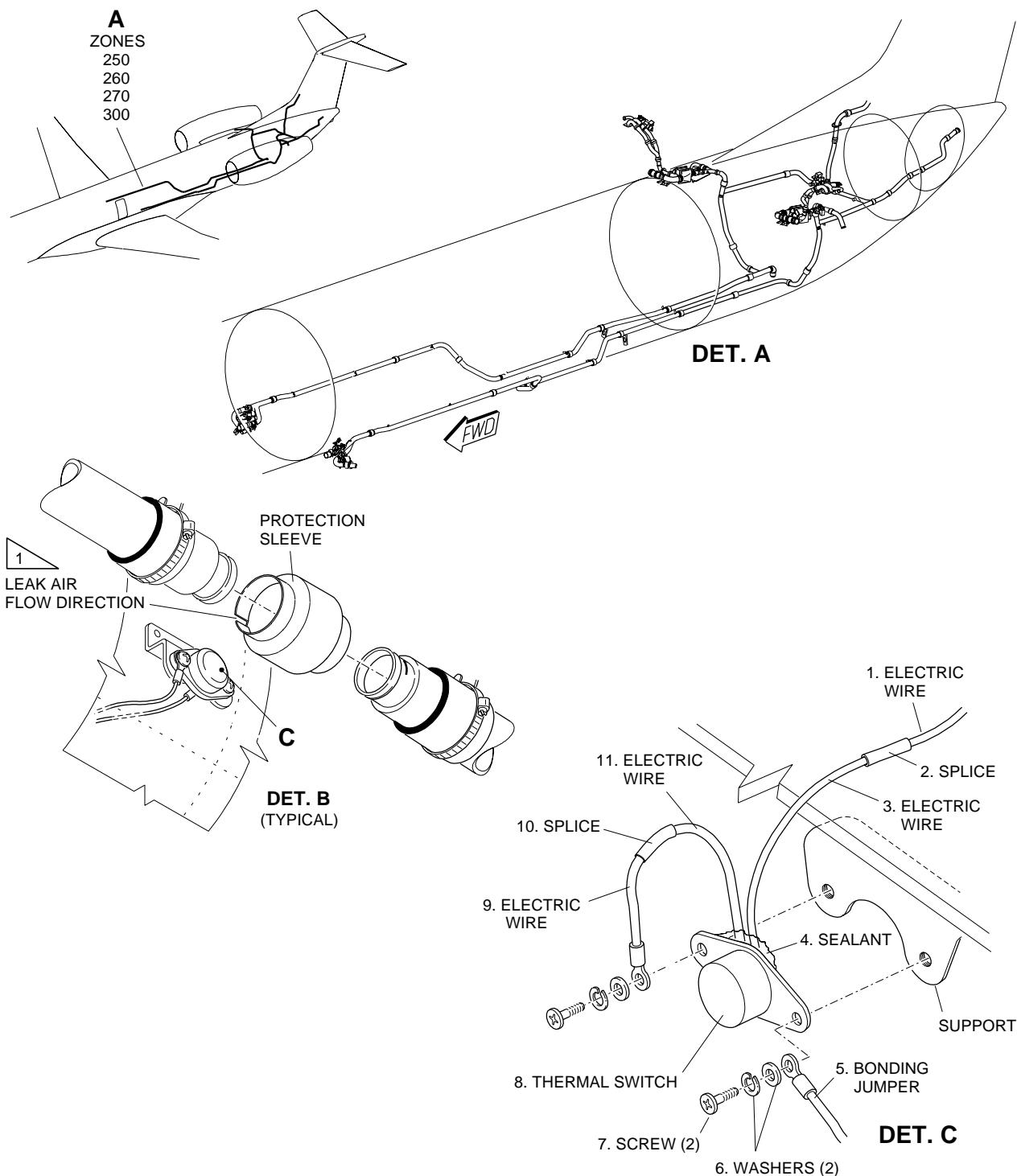
MAKE SURE THAT THE OPENING OF THE PROTECTION SLEEVE OVERLAPPING IS TURNED TO THE THERMAL SWITCHES USED TO DETECT BLEED-AIR LEAKAGE.

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EFFECTIVITY: FOR THERMAL SWITCH P/N 11041-xxxx

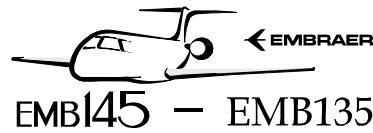
Thermal Switches - Removal/Installation

Figure 402



 MAKE SURE THAT THE OPENING OF THE PROTECTION SLEEVE OVERLAPPING IS TURNED TO THE THERMAL SWITCHES USED TO DETECT BLEED-AIR LEAKAGE.

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TASK 36-20-02-400-801-A

EFFECTIVITY: ACFT MODEL(S) EMB-145

3. THERMAL SWITCHES - INSTALLATION

A. General

- (1) This task gives the instructions to install the thermal switches of the Bleed Air System.
- (2) This task is applicable to the thermal switches installed near each point of connection of the bleed air ducts.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-30-00/100	-
AMM MPP 06-41-01/100	-
AMM MPP 06-41-02/100	-
AMM MPP 06-41-05/100	- COMPONENT LOCATION
AMM MPP 06-43-00/100	- COMPONENT LOCATION
AMM TASK 25-51-01-400-801-A/400	BAGGAGE COMPARTMENT LINING - INSTALLATION
AMM TASK 36-20-02-700-801-A/500	-
AMM TASK 36-20-02-700-802-A/500	-
AMM TASK 52-44-01-400-801-A/400	REAR ELECTRONIC-COMPARTMENT DOOR - INSTALLATION
AMM TASK 53-01-02-400-801-A/400	-
AMM TASK 53-01-03-400-801-A/400	BAGGAGE-COMPARTMENT FLOOR PANELS - INSTALLATION
AMM TASK 53-04-20-400-801-A/400	LATERAL WING-TO-FUSELAGE FAIRING - INSTALLATION
AMM TASK 53-04-30-400-801-A/400	-
AMM TASK 55-34-00-400-801-A/400	DORSAL FIN - INSTALLATION
AMM TASK 55-35-00-400-801-A/400	VERTICAL-STABILIZER LEADING EDGE - INSTALLATION
WM 20-21-00/2	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
193	193	Aft wing-to-fuselage fairing
194	194	RH side of wing-to-fuselage fairing
195	195	LH side of wing-to-fuselage fairing
261	261BF	Passenger floor panel
261	261DF	Passenger floor panel
262	262AF	Passenger floor panel
262	262BF	Passenger floor panel
262	262CF	Passenger floor panel



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ZONE	PANEL/DOOR	LOCATION
271	271AF	Floor panel of the baggage compartment
271	271BF	Floor panel of the baggage compartment
271	271BLW	Inside baggage compartment
272	272DR	In the aft electronic compartment
272	272AF	Floor panel of the baggage compartment
272	272BF	Floor panel of the baggage compartment
272	272CRW	Inside baggage compartment
320	322	Dorsal Fin
320	323	Vertical Stabilizer Leading Edge
414	414DB	LH pylon
424	424DB	RH pylon
813	813	Baggage compartment

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Soldering Iron - 30 W	To disconnect electrical terminals	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
TT-S-00230	Sealant RTV 780	AR
MIL-S-81824	Splice	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Location of installation of the thermal switch



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I. Installation (Figure 401) (Figure 402)

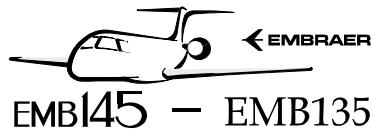
SUBTASK 420-009-B

- (1) For thermal switch P/N M1-195-xxxxxx, do as follow; refer to (Figure 401), DET B:
 - (a) Connect the electric wire (2) with a soldering iron.
 - (b) Apply sealant (6) to the electric terminals.
 - (c) If applicable, attach the bonding jumper (5).
 - (d) Install the thermal switch (1) and tighten the screws (4) and washers (3).
- (2) For thermal switch P/N 11041-xxxx, do as follow; refer to (Figure 402), DET. B:
 - (a) Connect the electric wire (1) to the electric wire (3) with a splice (2) (WM 20-21-00/2).
NOTE: Cut the electric wire (3) to the correct length.
 - (b) Connect the electric wire (9) to the electric wire (11) with a splice (10) (WM 20-21-00/2).
NOTE: Cut the electric wire (11) to the correct length.
 - (c) Apply sealant (4) to the electric terminals.
 - (d) If applicable, attach the bonding jumper (5).
 - (e) Install the thermal switch (8) and tighten the screws (7) and washers (6).

J. Follow-on

SUBTASK 842-009-B

- (1) On the overhead circuit breaker panel, close these circuit breakers and remove the DO-NOT-CLOSE tags from them:
 - DAU 2A (Location tip: DC BUS 1/ESSENTIAL DC BUS 2/EICAS DAU 2A).
 - DAU 2B (Location tip: DC BUS 2/NAV/EICAS DAU 2B).
- (2) Do the Thermal Switch - Operational Check (AMM TASK 36-20-02-700-801-A/500 or AMM TASK 36-20-02-700-802-A/500), as applicable.
- (3) Install sidewall linings 271BLW and 272CRW ([AMM MPP 06-41-05/100](#) and [AMM TASK 25-51-01-400-801-A/400](#)).
- (4) Install floor panels 271AF, 271BF, 272AF, and 272BF (AMM MPP 06-41-02/100 and [AMM TASK 53-01-03-400-801-A/400](#)), 261BF, 261DF, 262AF, 262BF, and 262CF (AMM MPP 06-41-02/100 and AMM TASK 53-01-02-400-801-A/400), as applicable.
- (5) Close baggage compartment door 813 (AMM MPP 06-30-00/100)
- (6) Install access panel 272DR (AMM MPP 06-41-01/100 and [AMM TASK 52-44-01-400-801-A/400](#)).



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- (7) Install fairing193 (AMM MPP 06-30-00/100 and AMM TASK 53-04-30-400-801-A/400).
 - (8) Install fairings 194 and 195 (AMM MPP 06-30-00/100 and [AMM TASK 53-04-20-400-801-A/400](#)).
 - (9) Install access panels 414DB and 424DB ([AMM MPP 06-43-00/100](#)).
 - (10) Install the Dorsal Fin access panel 322 (AMM MPP 06-30-00/100 and [AMM TASK 55-34-00-400-801-A/400](#)and the Vertical-Stabilizer Leading-Edge access panel 323 (AMM MPP 06-30-00/100 and [AMM TASK 55-35-00-400-801-A/400](#)), as applicable.