

## AIR DISTRIBUTION VALVE - REMOVAL/INSTALLATION

*EFFECTIVITY: ACFT MODEL(S) EMB-135*

### 1. General

- A. This section gives the procedures to remove, install, deactivate, and reactivate the air distribution valves.
- B. The two air distribution valves are installed under the passenger cabin floor in center fuselage II and they control the airflow to the cold or hot air distribution ducts.
- C. One valve starts the air distribution through the upper ducts in the overhead bin panels when air temperature is less than 24 °C (cold air), and the other valve starts the air distribution through the lower ducts in the dado panels when air temperature is more than 24 °C (hot air).
- D. 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              |
|--------------------|--|--------------------------|
| 21-22-01-000-802-A | AIR DISTRIBUTION VALVE - REMOVAL                 | ACFT MODEL(S)<br>EMB-135 |
| 21-22-01-400-802-A | AIR DISTRIBUTION VALVE - INSTALLATION            | ACFT MODEL(S)<br>EMB-135 |
| 21-22-01-040-801-A | AIR DISTRIBUTION VALVE - DEACTIVATION PROCEDURES | ACFT MODEL(S)<br>EMB-135 |
| 21-22-01-440-801-A | AIR DISTRIBUTION VALVE - REACTIVATION PROCEDURES | ACFT MODEL(S)<br>EMB-135 |

TASK 21-22-01-000-802-A

EFFECTIVITY: ACFT MODEL(S) EMB-135

## 2. AIR DISTRIBUTION VALVE - REMOVAL

### A. General

(1) This task gives the procedures to remove the air distribution valves.

### B. References

| REFERENCE                       | DESIGNATION |
|---------------------------------|-------------|
| AMM MPP 06-41-02/100            | -           |
| AMM TASK 53-01-02-000-802-A/400 | -           |

### C. Zones and Accesses

| ZONE | PANEL/DOOR | LOCATION              |
|------|------------|-----------------------|
| 241  | 241BF      | Passenger cabin floor |
| 241  | 241DF      | Passenger cabin floor |
| 242  | 242BF      | Passenger cabin floor |

### D. Tools and Equipment

Not Applicable

### 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 | Under the passenger cabin floor |

### I. Preparation

#### SUBTASK 841-022-B

- (1) Remove the floor panel (AMM TASK 53-01-02-000-802-A/400 and AMM MPP 06-41-02/100), as applicable:
  - 241BF and 242BF (Forward air distribution valve).
  - 241DF and 242BF (Aft air distribution valve).
- (2) On the overhead circuit breaker panel, open the DISTR VALVES circuit breaker and attach a DO-NOT-CLOSE tag to it.

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

*SUBTASK 020-009-A*

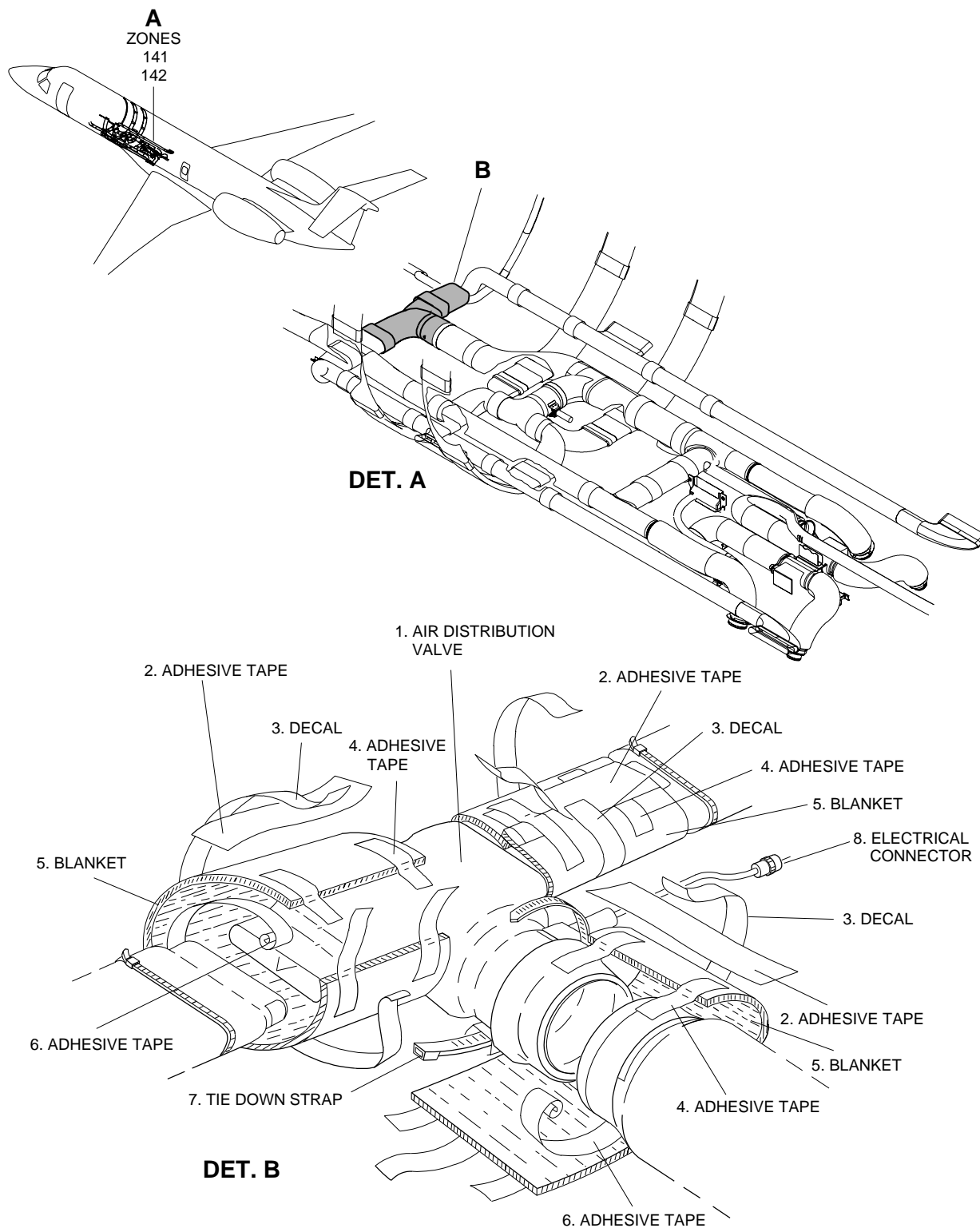
- (1) Cut the adhesive tape (2), the decal (3), and the adhesive tape (4) at the joint of the valve and the tube.
- (2) Remove the insulation blanket (5).
- (3) Remove the adhesive tapes (6).
- (4) Remove the tie down strap (7).
- (5) Disconnect the electrical connector (8).
- (6) Remove the air distribution valve (1).

NOTE: Carefully remove the valve. The valve coupling points are of the fitting-type or the butting-type, which permits the removal of the valve.

EFFECTIVITY: ACFT MODEL(S) EMB-135

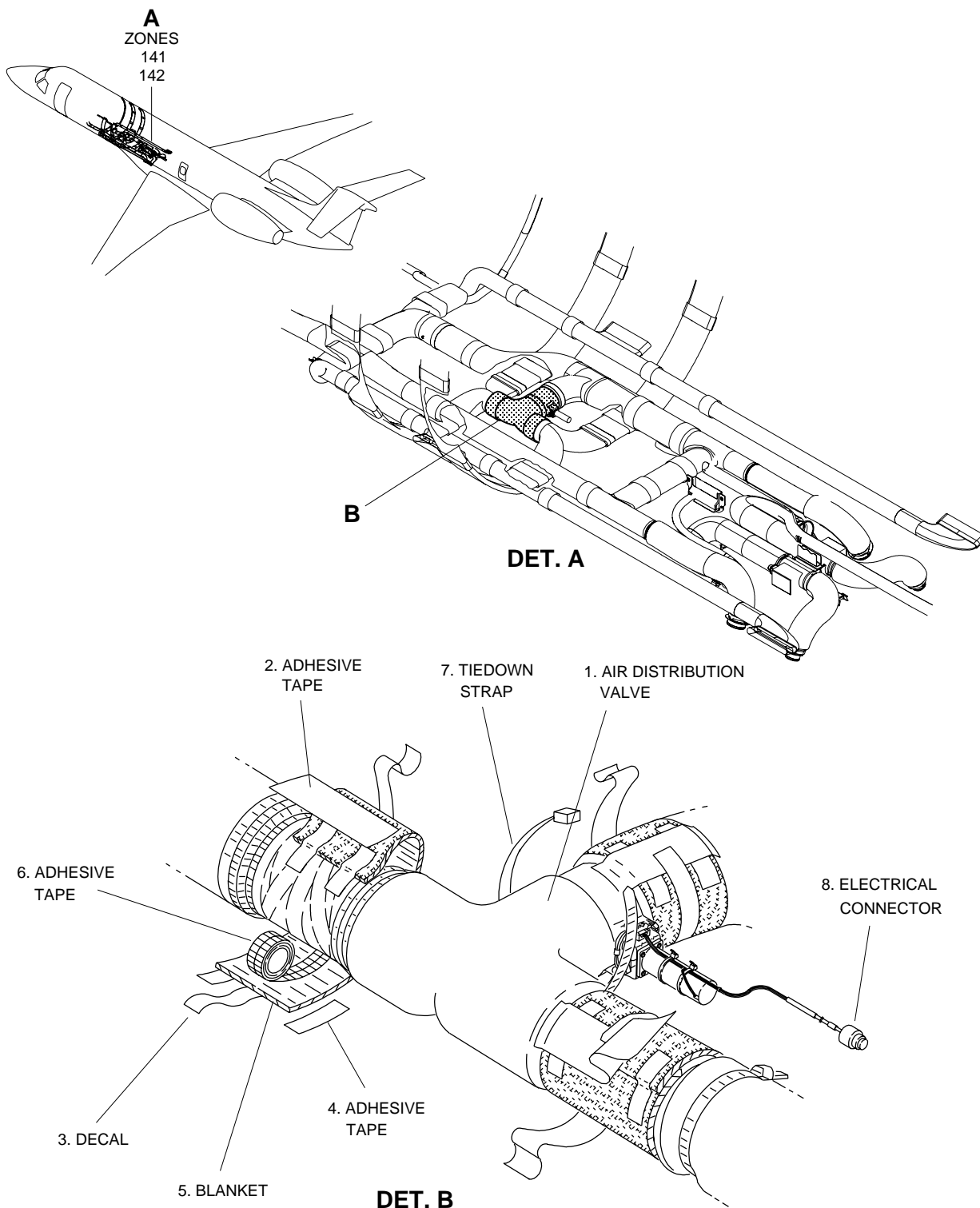
Air Distribution Valve - Removal/Installation

Figure 401 - Sheet 1



145AMM210232.MCE A

EFFECTIVITY: ACFT MODEL(S) EMB-135  
Air Distribution Valve - Removal/Installation  
Figure 401 - Sheet 2



145AMM210233.MCE A

**TASK 21-22-01-400-802-A**

**EFFECTIVITY: ACFT MODEL(S) EMB-135**

**3. AIR DISTRIBUTION VALVE - INSTALLATION**

**A. General**

(1) This task gives the procedures to install the air distribution valves.

**B. References**

| REFERENCE                                       | DESIGNATION   |
|---|---|
| AMM MPP 06-41-02/100                            | -   |
| <a href="#">AMM TASK 21-20-00-700-801-A/500</a> | CONDITIONED AIR DISTRIBUTION SYSTEM - OPERATIONAL CHECK |
| AMM TASK 21-20-01-400-802-A/400                 | -   |
| AMM TASK 28-41-00-200-801-A/600                 | -   |
| AMM TASK 53-01-02-400-802-A/400                 | -   |
| IPC 21-22-01                                    | AIR DISTRIBUTION VALVE                                  |

**C. Zones and Accesses**

| ZONE | PANEL/DOOR | LOCATION              |
|------|------------|-----------------------|
| 241  | 241BF      | Passenger cabin floor |
| 241  | 241DF      | Passenger cabin floor |
| 242  | 242BF      | Passenger cabin floor |

**D. Tools and Equipment**

Not Applicable

**E. Auxiliary Items**

Not Applicable

**F. Consumable Materials**

| SPECIFICATION<br>(BRAND)   | DESCRIPTION   | QTY |
|----------------------------|---------------|-----|
| KB 42/38 - 38 mm (1.5 in)  | Adhesive Tape | AR  |
| KB 42/75 - 75 mm (2.95 in) | Adhesive Tape | AR  |
| PE43035-1                  | Decal         | AR  |

**G. Expendable Parts**

| ITEM          | IPC REFERENCE<br>(VENDOR REFERENCE) | QTY   |
|---------------|-------------------------------------|-------|
| Tiedown strap | IPC 21-22-01                        | 1/LRU |

H. Persons Recommended

| QTY | FUNCTION      | PLACE                           |
|-----|---------------|---------------------------------|
| 1   | Does the task | Under the passenger cabin floor |

I. Preparation

*SUBTASK 841-023-B*

- (1) Make sure that the DISTR VALVES circuit breaker is open and safetied.

J. Installation (Figure 401)

*SUBTASK 420-009-A*

- (1) Put the air distribution valve in the installation position.

NOTE: The valve coupling points are of the fitting-type or of the butting-type, which permits the installation of the valve.

- (2) Attach the valve to the air conditioning tubing with 5 (five) turns of the adhesive tape (6).
- (3) Install the insulating blanket (5) at the joint. Refer to AMM TASK 21-20-01-400-802-A/400.
- (4) Install the tiedown strap (7).
- (5) Connect the electrical connector (8).

K. Follow-on

*SUBTASK 842-015-B*

- (1) Do [AMM TASK 21-20-00-700-801-A/500](#).
- (2) Do an inspection on the fuel quantity indication harness (AMM TASK 28-41-00-200-801-A/600).

NOTE: The inspection of fuel quantity indication harness is a part of Critical Design Configuration Control Limitations (CDCCL) in the Airworthiness Limitations (Section 6) of the Maintenance Review Board Report (MRB).

- (3) Install the floor panel (AMM TASK 53-01-02-400-802-A/400 and AMM MPP 06-41-02/100), as applicable:
  - 241BF and 242BF (Forward air distribution valve).
  - 241DF and 242BF (Aft air distribution valve).
- (4) On the overhead circuit breaker panel, close the DISTR VALVES circuit breaker and remove the DO-NOT-CLOSE tag from it.

TASK 21-22-01-040-801-A

EFFECTIVITY: ACFT MODEL(S) EMB-135

#### 4. AIR DISTRIBUTION VALVE - DEACTIVATION PROCEDURES

##### A. General

(1) This task gives the procedures to deactivate the Air Distribution Valve.

- This task refers to item 21-24-03 - Air Distribution Valves - of DDPM.
- One valve may be inoperative provided remaining valve is deactivated in open position.

##### B. References

| REFERENCE                       | DESIGNATION |
|---------------------------------|-------------|
| AMM MPP 06-41-02/100            | -           |
| AMM TASK 53-01-02-000-802-A/400 | -           |
| AMM TASK 53-01-02-400-802-A/400 | -           |

##### C. Zones and Accesses

| ZONE | PANEL/DOOR | LOCATION              |
|------|------------|-----------------------|
| 241  | 241BF      | Passenger Cabin Floor |
| 241  | 241DF      | Passenger Cabin Floor |
| 242  | 242BF      | Passenger Cabin Floor |

##### D. Tools and Equipment

Not Applicable

##### 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 | Under the passenger cabin floor |

##### I. Preparation

###### SUBTASK 841-024-B

- (1) Remove the floor panel (AMM TASK 53-01-02-000-802-A/400 and AMM MPP 06-41-02/100), as applicable:
- 241BF and 242BF (Forward air distribution valve).

- 241DF and 242BF (Aft air distribution valve).

J. Deactivation Procedures

*SUBTASK 040-005-B*

(1) Cold Air Distribution Valve Inoperative:

To lock open the warm air distribution valve:

- (a) Change the passenger cabin air temperature to warm until the warm air distribution valve opens.
- (b) Check for normal passenger cabin airflow from the lower ducts.
- (c) Pull and safety the DISTR VALVES circuit breaker (F27) and attach a DO-NOT-CLOSE tag to it.
- (d) Control the passenger cabin temperature as required from the cockpit/attendant's control panel.

(2) Warm Air Distribution Valve Inoperative:

To lock open the cold air distribution valve:

- (a) Change the passenger cabin air temperature to cold until the cold air distribution valve opens.
- (b) Check for normal passenger cabin airflow from the upper ducts.
- (c) Pull and safety the DISTR VALVES circuit breaker (F27) and attach a DO-NOT-CLOSE tag to it.
- (d) Control the passenger cabin temperature as required from the cockpit/attendant's control panel.

NOTE: Air distribution valve is stuck closed if there is little or no airflow in the passenger cabin as well as in the cockpit.

- (3) Write in the aircraft technical logbook that you did the deactivation procedure for the respective Air Distribution Valve.

K. Follow-on

*SUBTASK 842-016-B*

- (1) Install the floor panel (AMM TASK 53-01-02-400-802-A/400 and AMM MPP 06-41-02/100), as applicable:
  - 241BF and 242BF (Forward air distribution valve).
  - 241DF and 242BF (Aft air distribution valve).

TASK 21-22-01-440-801-A

*EFFECTIVITY: ACFT MODEL(S) EMB-135*

**5. AIR DISTRIBUTION VALVE - REACTIVATION PROCEDURES**

**A. General**

(1) This task gives the procedures to reactivate the Air Distribution Valve.

- This task refers to item 21-24-03 - Air Distribution Valves - of DDPM.

**B. References**

| REFERENCE                                       | DESIGNATION   |
|---|---|
| AMM MPP 06-41-02/100                            | -   |
| <a href="#">AMM TASK 21-20-00-700-801-A/500</a> | CONDITIONED AIR DISTRIBUTION SYSTEM - OPERATIONAL CHECK |
| AMM TASK 28-41-00-200-801-A/600                 | -   |
| AMM TASK 53-01-02-000-802-A/400                 | -   |
| AMM TASK 53-01-02-400-802-A/400                 | -   |

**C. Zones and Accesses**

| ZONE | PANEL/DOOR | LOCATION              |
|------|------------|-----------------------|
| 241  | 241BF      | Passenger Cabin Floor |
| 241  | 241DF      | Passenger Cabin Floor |
| 242  | 242BF      | Passenger Cabin Floor |

**D. Tools and Equipment**

Not Applicable

**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 | Under the passenger cabin floor |

**I. Preparation**

**SUBTASK 841-025-B**

- (1) Remove the floor panel (AMM TASK 53-01-02-000-802-A/400 and AMM MPP 06-41-02/100), as applicable:

- 241BF and 242BF (Forward air distribution valve).
- 241DF and 242BF (Aft air distribution valve).

J. Reactivation Procedures

*SUBTASK 440-005-B*

- (1) Do the troubleshooting and the applicable corrective maintenance procedure for the respective Air Distribution Valve.
- (2) On the overhead circuit breaker panel, close the DISTR VALVES circuit breaker (F27) and remove the DO-NOT-CLOSE tag from it.
- (3) Write in the aircraft technical logbook to show that you did the reactivation procedure for the respective Air Distribution Valve.

K. Follow-on

*SUBTASK 842-017-B*

- (1) Do the Conditioned Air Distribution System - Operational Check ( [AMM TASK 21-20-00-700-801-A/500](#)).
- (2) Do an inspection on the fuel quantity indication harness (AMM TASK 28-41-00-200-801-A/600).

NOTE: The inspection of fuel quantity indication harness is part of Critical Design Configuration Control Limitations (CDCCL) in the Airworthiness Limitations of the Aircraft Maintenance Program.

- (3) Install the floor panel (AMM TASK 53-01-02-400-802-A/400 and AMM MPP 06-41-02/100), as applicable:
  - 241BF and 242BF (Forward air distribution valve).
  - 241DF and 242BF (Aft air distribution valve).

