

## AIR DISTRIBUTION VALVE - REMOVAL/INSTALLATION

*EFFECTIVITY: ACFT MODEL(S) EMB-145*

### 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
21-22-01-000-801-A	AIR DISTRIBUTION VALVE - REMOVAL	ACFT MODEL(S) EMB-145
21-22-01-400-801-A	AIR DISTRIBUTION VALVE - INSTALLATION	ACFT MODEL(S) EMB-145
21-22-01-040-801-A	AIR DISTRIBUTION VALVE - DEACTIVATION PROCEDURES	ACFT MODEL(S) EMB-145
21-22-01-440-801-A	AIR DISTRIBUTION VALVE - REACTIVATION PROCEDURES	ACFT MODEL(S) EMB-145

TASK 21-22-01-000-801-A

EFFECTIVITY: ACFT MODEL(S) EMB-145

## 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 53-01-02-000-801-A/400	-

### C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
241	241BF	Passenger cabin floor
241	241DF	Passenger cabin floor
242	242CF	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 841-018-A

- (1) Remove the floor panel (AMM TASK 53-01-02-000-801-A/400 and AMM MPP 06-41-02/100), as applicable:
  - 241BF and 242CF (Forward air distribution valve).
  - 241DF and 242CF (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 020-008-A*

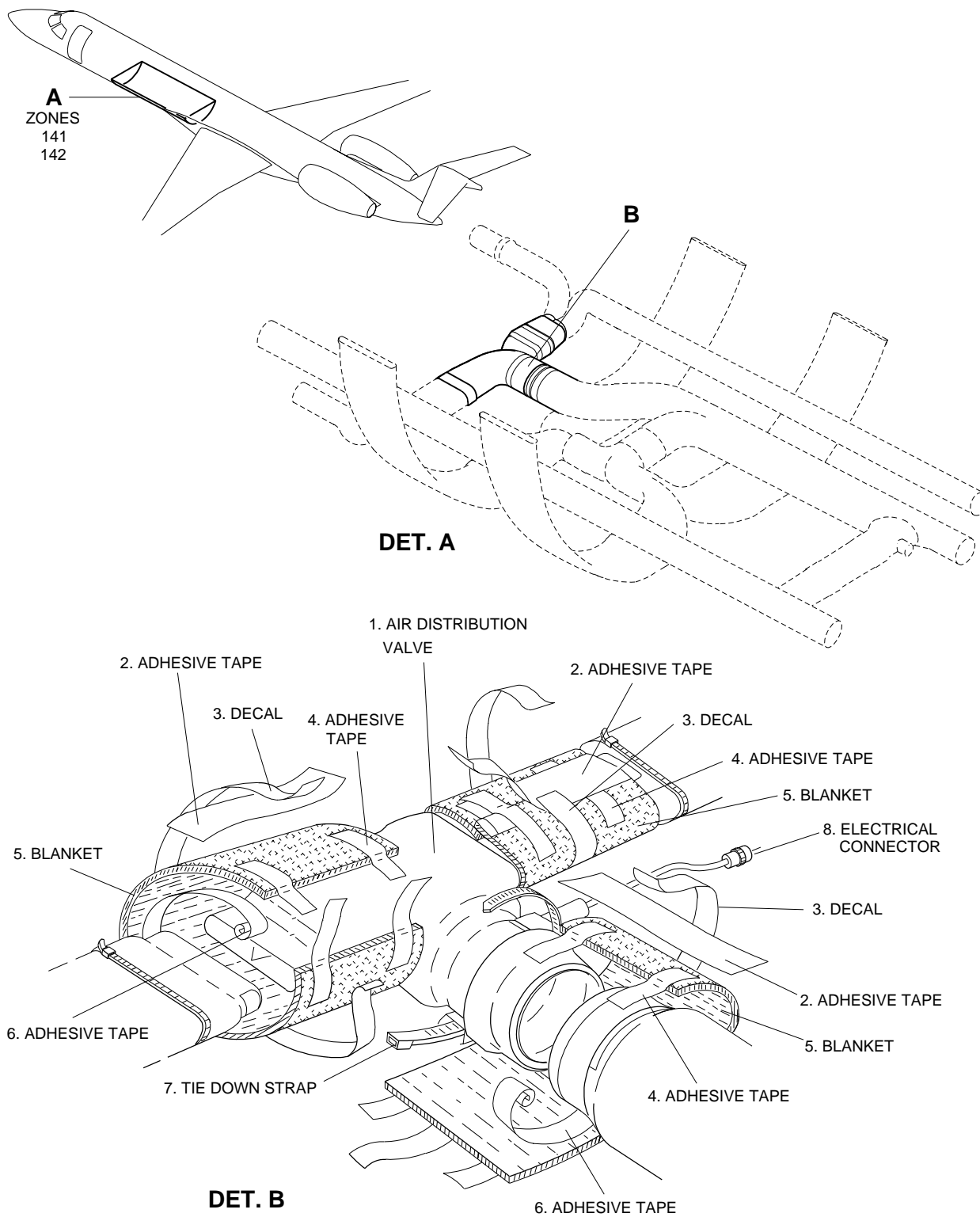
- (1) Cut the adhesive tape (2), the decal (3), and the adhesive tape (4) at the joint of the valve and the tube.
- (2) Remove the insulation blanket (5).
- (3) Remove the adhesive tapes (6).
- (4) Remove the tie down strap (7).
- (5) Disconnect the electrical connector (8).
- (6) Remove the air distribution 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-145

Air Distribution Valve - Removal/Installation

Figure 401 - Sheet 1

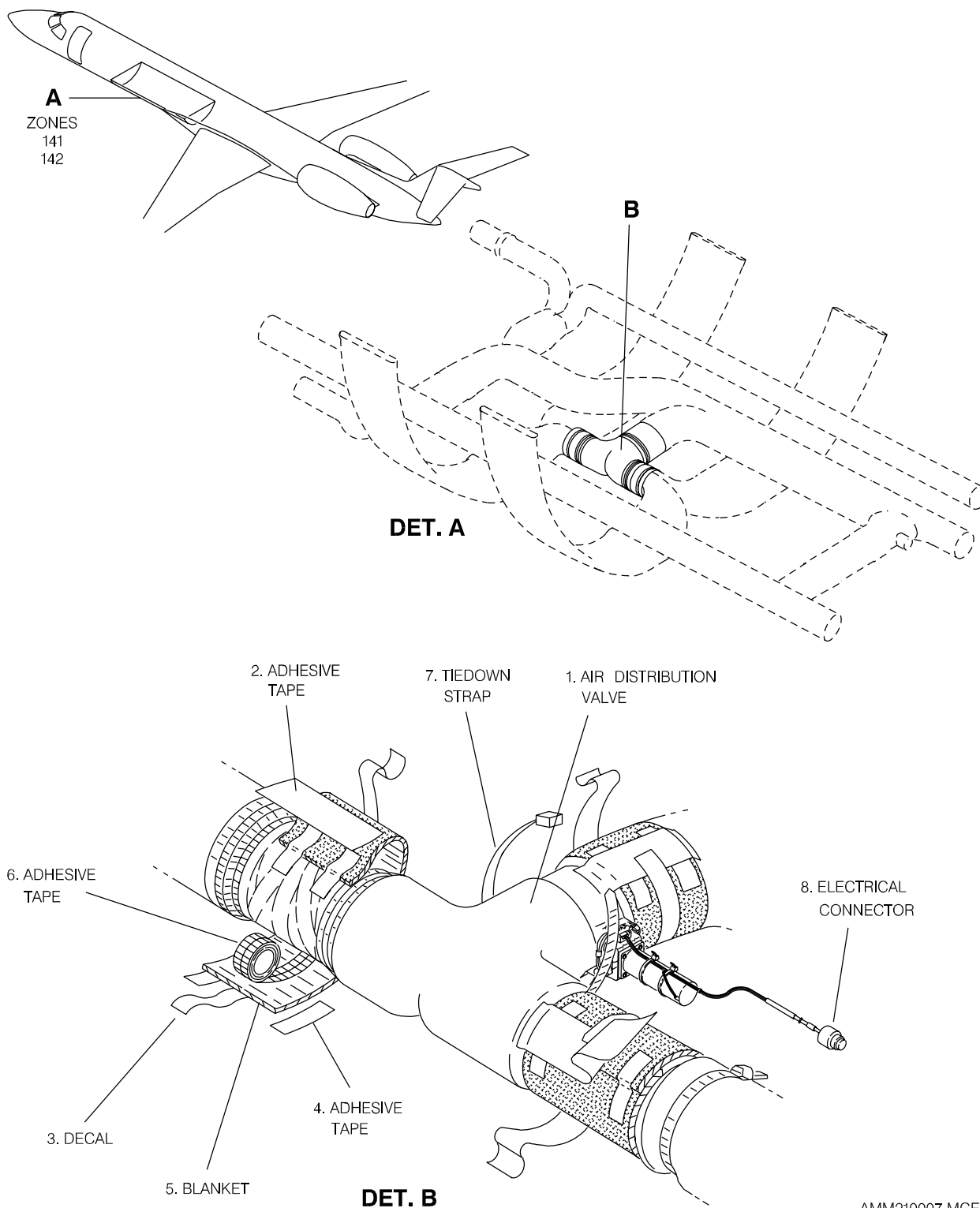


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EFFECTIVITY: ACFT MODEL(S) EMB-145

Air Distribution Valve - Removal/Installation

Figure 401 - Sheet 2



AMM210007.MCE A

TASK 21-22-01-400-801-A

EFFECTIVITY: ACFT MODEL(S) EMB-145

### 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 21-20-01-400-801-A/400	-
AMM TASK 28-41-00-200-801-A/600	-
AMM TASK 53-01-02-400-801-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	242CF	Passenger cabin floor

#### D. Tools and Equipment

Not Applicable

#### E. Auxiliary Items

Not Applicable

#### F. Consumable Materials

SPECIFICATION (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 (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 841-019-A*

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

J. Installation (Figure 401)

*SUBTASK 420-008-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 21-20-01-400-801-A/400.
- (4) Install the tiedown strap (7).
- (5) Connect the electrical connector (8).

K. Follow-on

*SUBTASK 842-012-A*

- (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 53-01-02-400-801-A/400 and AMM MPP 06-41-02/100), as applicable:
  - 241BF and 242CF (Forward air distribution valve).
  - 241DF and 242CF (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-145

#### 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 53-01-02-000-801-A/400	-
AMM TASK 53-01-02-400-801-A/400	-

##### C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
241	241BF	Passenger Cabin Floor
241	241DF	Passenger Cabin Floor
241	241CF	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 841-020-B

- (1) Remove the floor panel (AMM TASK 53-01-02-000-801-A/400 and AMM MPP 06-41-02/100), as applicable:
- 241BF and 242CF (Forward air distribution valve).



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

J. Deactivation Procedures

*SUBTASK 040-004-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 842-013-B*

- (1) Install the floor panel (AMM TASK 53-01-02-400-801-A/400 and AMM MPP 06-41-02/100), as applicable:
  - 241BF and 242CF (Forward air distribution valve).
  - 241DF and 242CF (Aft air distribution valve).

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

EFFECTIVITY: ACFT MODEL(S) EMB-145

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 53-01-02-000-801-A/400	-
AMM TASK 53-01-02-400-801-A/400	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
241	241BF	Passenger Cabin Floor
241	241DF	Passenger Cabin Floor
241	241CF	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 841-021-B**

- (1) Remove the floor panel (AMM TASK 53-01-02-000-801-A/400 and AMM MPP 06-41-02/100), as applicable:

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

J. Reactivation Procedures

*SUBTASK 440-004-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 842-014-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 53-01-02-400-801-A/400 and AMM MPP 06-41-02/100), as applicable:
  - 241BF and 242CF (Forward air distribution valve).
  - 241DF and 242CF (Aft air distribution valve).

