



AIRCRAFT MAINTENANCE MANUAL

FLAP VALVE - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to remove/install the flap valves.
- B. Figure 401 shows the location of the flap valves on wing ribs 1, 7, and 19 on aircraft with wet wingstub. Figure 402 shows the location of the flap valves on wing ribs 2, 7, and 19 on all aircraft, except those with wet wingstub.
- C. 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
28-11-04-000-801-A	FLAP VALVES - REMOVAL	ACFT WITH WET WINGSTUB
28-11-04-400-801-A	FLAP VALVES - INSTALLATION	ACFT WITH WET WINGSTUB
28-11-04-000-802-A	FLAP VALVES - REMOVAL	ACFT WITH DRY WINGSTUB
28-11-04-400-802-A	FLAP VALVES - INSTALLATION	ACFT WITH DRY WINGSTUB



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TASK 28-11-04-000-801-A

EFFECTIVITY: ACFT WITH WET WINGSTUB

2. FLAP VALVES - REMOVAL

A. General

(1) This task is applicable to the flap valves installed in the RH and LH fuel tanks.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM MPP 06-44-00/100	- COMPONENT LOCATION
AMM MPP 28-00-00/200	- MAINTENANCE PRACTICES
AMM TASK 12-11-01-600-802-A/300	FUEL-TANK PRESSURE DEFUELING - SERVICING
AMM TASK 28-11-01-000-801-A/400	FUEL-TANK ACCESS PANELS - REMOVAL

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
192	192AL/192BR	Center lower fairing
155	155BZ	LH wing stub undersurface
156	156BZ	RH wing stub undersurface
531	531CB	LH underwing area
631	631CB	RH underwing area
541	541EB	LH underwing area
641	641EB	RH underwing area

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	Fuel tank



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I. Preparation

SUBTASK 841-002-A

- (1) Make sure that the aircraft is safe for maintenance.
- (2) Defuel the applicable fuel tank ([AMM TASK 12-11-01-600-802-A/300](#)).
- (3) Remove the applicable access panels (AMM MPP 06-41-01/100), ([AMM MPP 06-44-00/100](#)) and ([AMM TASK 28-11-01-000-801-A/400](#)) shown below to get access to the flap valves.
 - (a) LH fuel tank:
 - 155BZ/531CB/541EB.
 - (b) RH fuel tank:
 - 156BZ/631CB/641EB.
 - (c) Center lower fairing:
 - 192AL/192BR.

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

SUBTASK 020-002-A

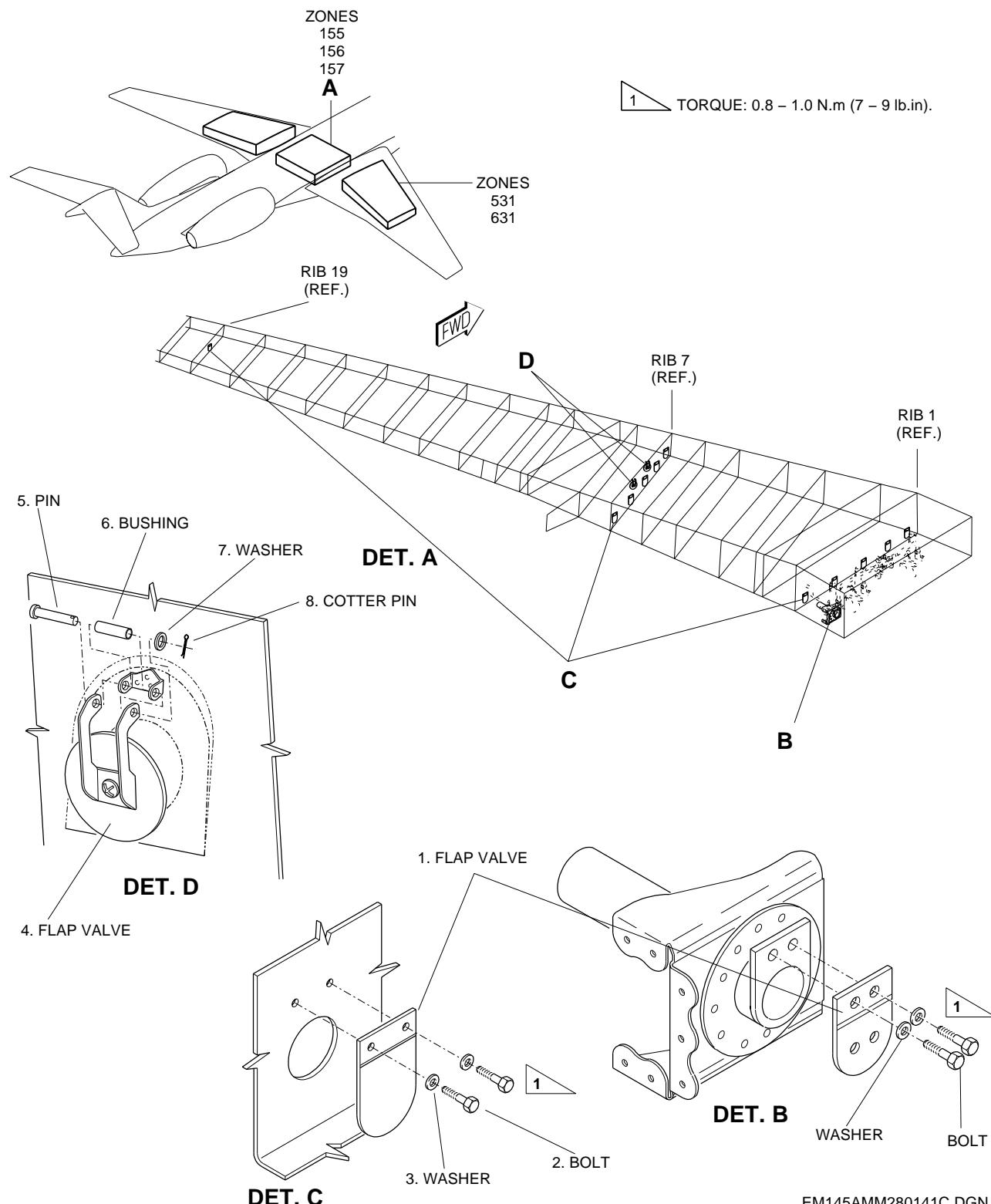
WARNING: BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN AMM MPP 28-00-00/200 TO PREVENT INJURY TO PERSONS AND DAMAGE TO THE MATERIAL.

- (1) Remove the flap valves installed on the lower part of wing ribs 1, 7, and 19 and near the rear electric fuel pump as follows:
 - (a) Remove the bolts (2) and washers (3) which attach the flap valves to the wing rib, and remove the flap valve (1).
- (2) Remove the flap valves installed on the upper part of wing rib 7 as follows:
 - (a) Remove the cotter pin (8), washer (7), and pin (5) and remove the bushing (6) and flap valve (4).

EFFECTIVITY: ACFT WITH WET WINGSTUB

Flap Valves - Removal/Installation

Figure 401



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TASK 28-11-04-400-801-A

EFFECTIVITY: ACFT WITH WET WINGSTUB

3. FLAP VALVES - INSTALLATION

A. General

(1) This task is applicable to the flap valves installed in the RH and LH fuel tanks.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM MPP 06-44-00/100	- COMPONENT LOCATION
AMM MPP 28-00-00/200	- MAINTENANCE PRACTICES
AMM MPP 28-11-01/400	- REMOVAL/INSTALLATION
AMM TASK 12-11-01-600-801-A/300	FUEL-TANK PRESSURE REFUELING - SERVICING
AMM TASK 28-41-00-200-801-A/600	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
192	192AL/192BR	Center lower fairing
155	155BZ	LH wing stub undersurface
156	156BZ	RH wing stub undersurface
531	531CB	LH underwing area
631	631CB	RH underwing area
541	541EB	LH underwing area
641	641EB	RH underwing area

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Torque Wrench (Torque range - Ref. Figure 401)	To apply controlled torque	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable



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H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Fuel tank

I. Installation (Figure 401)

SUBTASK 420-002-A

WARNING: BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN AMM MPP 28-00-00/200 TO PREVENT INJURY TO PERSONS AND DAMAGE TO THE MATERIAL.

- (1) Install the flap valves to the lower part of the wing ribs and near the rear electric fuel pump as follows:
 - (a) Put the flap valve (1) in its installation position.
 - (b) Put the bolts (2) and washer in their installation position. Tighten the bolts.
 - (c) Make sure that the flap valve moves freely and touches correctly against the rib surface.
- (2) Install the flap valve to the upper part of wing rib 7 as follows:
 - (a) Put the flap valve (4) in its installation position, on the fuel tank wing rib.
 - (b) Install the pin (5), spacer (6), washer (7), and cotter pin (8).
 - (c) Make sure that the flap valve moves freely and touches correctly against the rib surface.

J. Follow-on

SUBTASK 842-002-A

- (1) 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 of the Maintenance Review Board Report (MRB).

- (2) Install the applicable access panels (AMM MPP 06-41-01/100), (AMM MPP 06-44-00/100) and (AMM MPP 28-11-01/400) shown below.
 - (a) LH fuel tank:
 - 155BZ/531CB/541EB.
 - (b) RH fuel tank:
 - 156BZ/631CB/641EB.
 - (c) Center lower fairing:
 - 192AL/192BR.



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- (3) Refuel the aircraft ([AMM TASK 12-11-01-600-801-A/300](#)) as applicable.
- (4) Examine the access panels which were removed for fuel leakage. Correct as necessary.



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TASK 28-11-04-000-802-A

EFFECTIVITY: ACFT WITH DRY WINGSTUB

4. FLAP VALVES - REMOVAL

A. General

(1) This task is applicable to the flap valves installed in the RH and LH fuel tanks.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM MPP 06-44-00/100	- COMPONENT LOCATION
AMM MPP 28-00-00/200	- MAINTENANCE PRACTICES
AMM TASK 12-11-01-600-802-A/300	FUEL-TANK PRESSURE DEFUELING - SERVICING
AMM TASK 28-11-01-000-801-A/400	FUEL-TANK ACCESS PANELS - REMOVAL

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
192	192AL/192BR	Wing stub
155	155BZ/155CZ	LH root wing
156	156BZ/156CZ	RH root wing
531	531CB	LH underwing area
631	631CB	RH underwing area
541	541EB	LH underwing area
641	641EB	RH underwing area

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	Fuel tank



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I. Preparation

SUBTASK 841-003-A

- (1) Make sure that the aircraft is safe for maintenance.
- (2) Defuel the applicable fuel tank ([AMM TASK 12-11-01-600-802-A/300](#)).
- (3) Remove the applicable access panels (AMM MPP 06-41-01/100), ([AMM MPP 06-44-00/100](#)) and ([AMM TASK 28-11-01-000-801-A/400](#)) shown below to get access to the flap valves.
 - (a) LH fuel tank:
 - 155BZ/155CZ/531CB/541EB.
 - (b) RH fuel tank:
 - 156BZ/156CZ/631CB/641EB.
 - (c) Wing stub:
 - 192AL/192BR.

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

SUBTASK 020-003-A

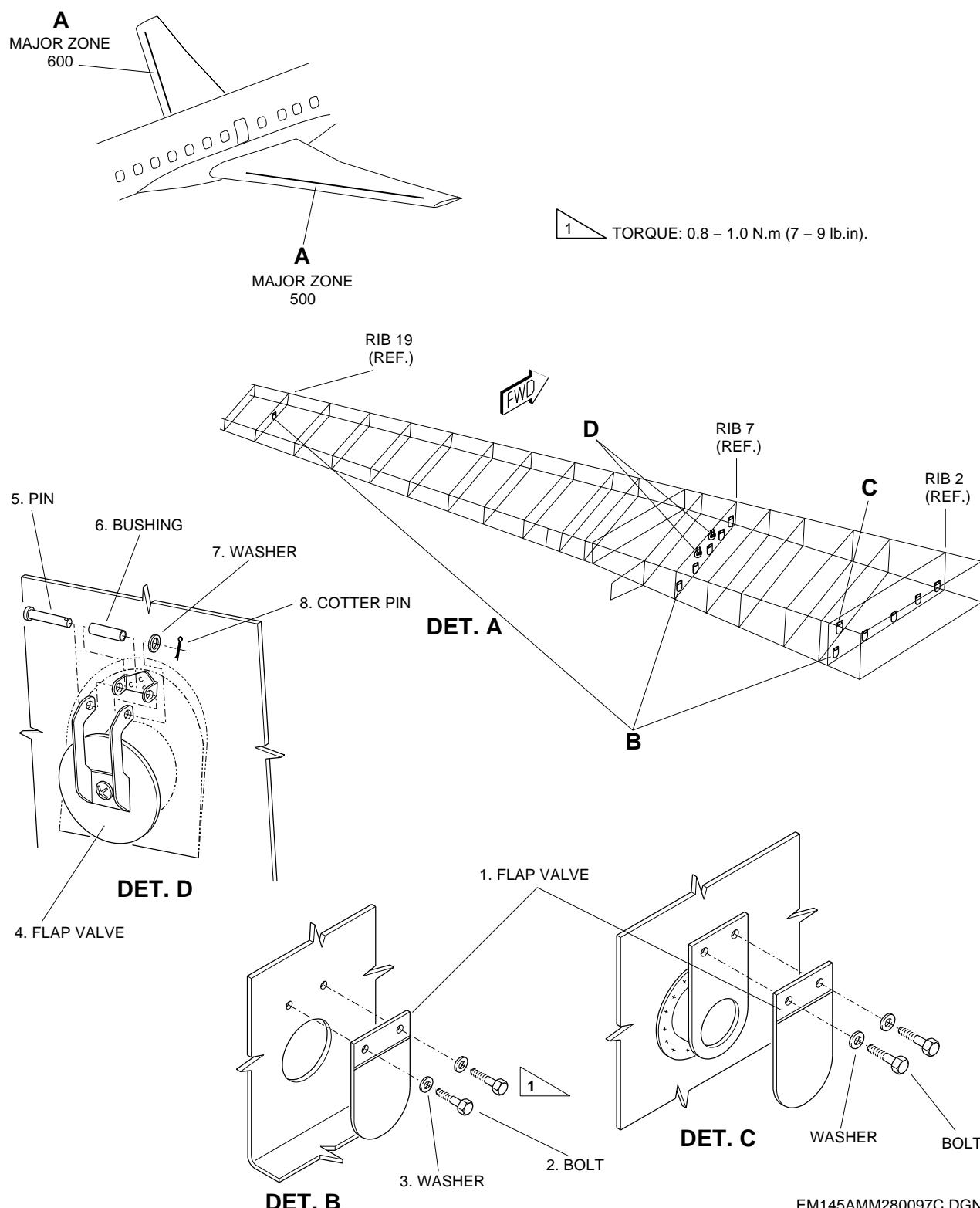
WARNING: BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN AMM MPP 28-00-00/200 TO PREVENT INJURY TO PERSONS AND DAMAGE TO THE MATERIAL.

- (1) Remove the flap valves installed on the lower part of wing ribs 2, 7, and 19 as follows:
 - (a) Remove the bolts (2) and washers (3) which attach the flap valves to the wing rib, and remove the flap valve (1).
- (2) Remove the flap valves installed on the upper part of wing rib 7 as follows:
 - (a) Remove the cotter pin (8), washer (7), and pin (5) and remove the bushing (6) and flap valve (4).

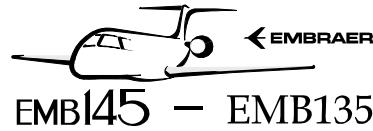
EFFECTIVITY: ACFT WITH DRY WINGSTUB

Flap Valves - Removal/Installation

Figure 402



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TASK 28-11-04-400-802-A

EFFECTIVITY: ACFT WITH DRY WINGSTUB

5. FLAP VALVES - INSTALLATION

A. General

(1) This task is applicable to the flap valves installed in the RH and LH fuel tanks.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM MPP 06-44-00/100	- COMPONENT LOCATION
AMM MPP 28-00-00/200	- MAINTENANCE PRACTICES
AMM MPP 28-11-01/400	- REMOVAL/INSTALLATION
AMM TASK 12-11-01-600-801-A/300	FUEL-TANK PRESSURE REFUELING - SERVICING
AMM TASK 28-41-00-200-801-A/600	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
192	192AL/192BR	Wing stub
155	155BZ/155CZ	LH root wing
156	156BZ156CZ	RH root wing
531	531CB	LH underwing area
631	631CB	RH underwing area
541	541EB	LH underwing area
641	641EB	RH underwing area

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Torque Wrench (Torque range - Ref. Figure 402)	To apply controlled torque	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable



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H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Fuel tank

I. Installation (Figure 402)

SUBTASK 420-003-A

WARNING: BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN AMM MPP 28-00-00/200 TO PREVENT INJURY TO PERSONS AND DAMAGE TO THE MATERIAL.

- (1) Install the flap valves to the lower part of the wing ribs as follows:
 - (a) Put the flap valve (1) in its installation position, on the fuel-tank wing rib.
 - (b) Put the bolts (2) and washers in their installation position. Tighten the bolts.
 - (c) Make sure that the flap valve moves freely and touches correctly against the rib surface.
- (2) Install the flap valve to the upper part of wing rib 7 as follows:
 - (a) Put the flap valve (4) in its installation position, on the fuel tank wing rib.
 - (b) Install the pin (5), spacer (6), washer (7), and cotter pin (8).
 - (c) Make sure that the flap valve moves freely and touches correctly against the rib surface.

J. Follow-on

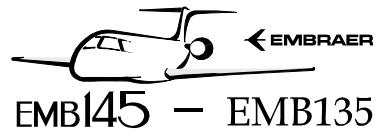
SUBTASK 842-003-A

- (1) 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 of the Maintenance Review Board Report (MRB).

- (2) Install the applicable access panels (AMM MPP 06-41-01/100), (**AMM MPP 06-44-00/100**) and (**AMM MPP 28-11-01/400**) shown below.
 - (a) LH fuel tank:
 - 155BZ/155CZ/531CB/541EB.
 - (b) RH fuel tank:
 - 156BZ/156CZ/631CB/641EB.
 - (c) Wing stub:
 - 192AL/192BR.

- (3) Refuel the aircraft (**AMM TASK 12-11-01-600-801-A/300**) as applicable.



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- (4) Examine the underwing access panels which were removed for fuel leakage. Correct as necessary.

