



EMB145 - EMB135

AIRCRAFT  
MAINTENANCE MANUAL

**ARTIFICIAL FEEL UNIT - REMOVAL/INSTALLATION**

*EFFECTIVITY: ALL*

1. General

- A. This section gives the procedures to remove and install the Artificial Feel Unit (AFU).
- 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).

<i>TASK NUMBER</i>	<i>DESCRIPTION</i>	<i>EFFECTIVITY</i>
27-11-06-000-801-A	ARTIFICIAL FEEL UNIT - REMOVAL	ALL
27-11-06-400-801-A	ARTIFICIAL FEEL UNIT - INSTALLATION	ALL



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TASK 27-11-06-000-801-A

EFFECTIVITY: ALL

2. ARTIFICIAL FEEL UNIT - REMOVAL

A. General

- (1) This task gives the procedures to remove the Artificial Feel Unit (AFU).

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
<a href="#">AMM SDS 24-60-00/1</a>	

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
123	123BL	Area below the cockpit floor - LH

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
<a href="#">GSE 058</a>	Kit, Rig Pins	To lock the aileron system in the neutral position	

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	Area below the cockpit floor

I. Preparation

SUBTASK 841-002-A

- (1) Do not do other tasks on the aileron system.
- (2) On the Circuit Breaker Panel, open the AILERON 1, AILERON 2, PITCH TRIM 1, and ROLL TRIM circuit breakers and attach a DO-NOT-CLOSE tag to them.
- (3) On the left power control/distribution box, open the PITCH TRIM 1 circuit breaker and attach a DO-NOT-CLOSE tag to it ([AMM SDS 24-60-00/1](#)).



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- (4) On the right power control/distribution box, open the PITCH TRIM 2 circuit breaker and attach a DO-NOT-CLOSE tag to it ([AMM SDS 24-60-00/1](#)).
- (5) Remove the control rigging door 123BL (AMM MPP 06-41-01/100).
- (6) Set the actuator of the Roll Trim to the neutral position.
- (7) Install the rig pins to the aileron torque tube.

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

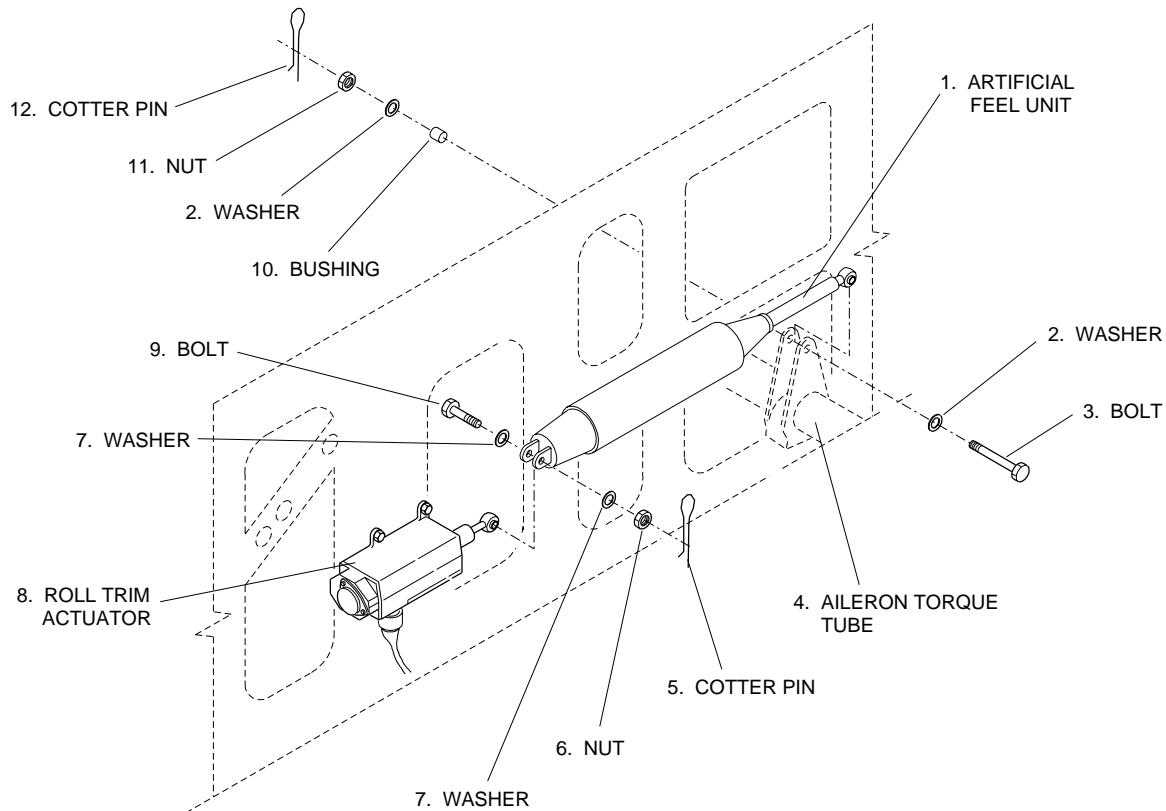
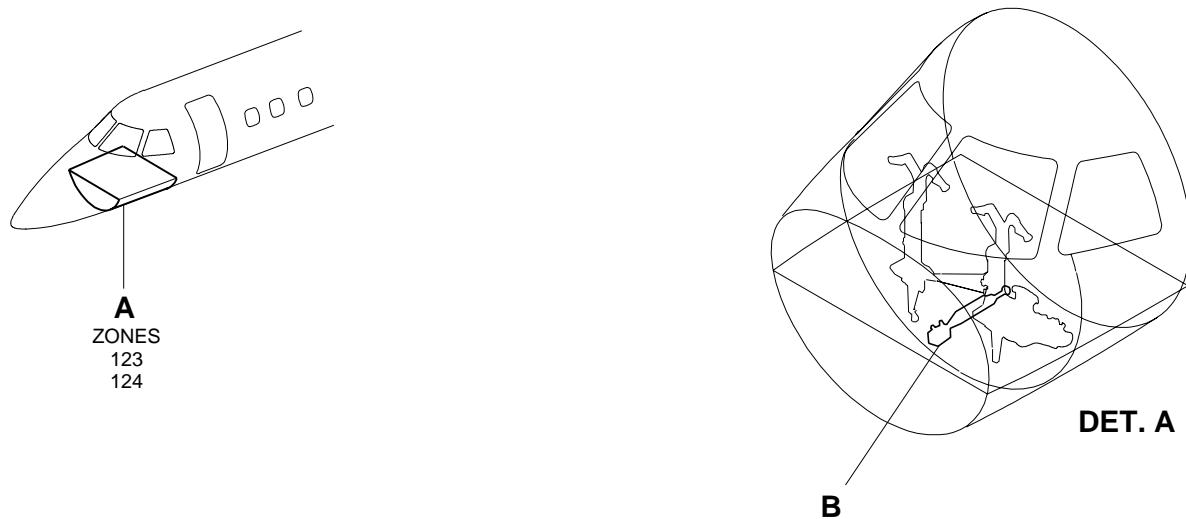
SUBTASK 020-002-A

- (1) Remove the cotter pin (5), nut (6), washers (7), and bolt (9) to disconnect the Artificial Feel Unit (1) from the actuator of the Roll Trim (8).
- (2) Remove the cotter pin (12), nut (11), bolt (3), washers (2), and bushing (10) to release the Artificial Feel Unit (8) from the aileron torque tube (4).
- (3) Remove the Artificial Feel Unit (1).

**EFFECTIVITY: ALL**

Artificial Feel Unit - Removal/Installation

Figure 401



**DET. B**

145AMM270083.MCE B



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TASK 27-11-06-400-801-A

EFFECTIVITY: ALL

3. ARTIFICIAL FEEL UNIT - INSTALLATION

A. General

(1) This task gives the procedures to install the Artificial Feel Unit (AFU).

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM SDS 24-60-00/1	
AMM TASK 27-11-06-700-801-A/500	ARTIFICIAL FEEL UNIT - ADJUSTMENT/TEST
AMM TASK 27-14-00-700-801-A/500	ROLL TRIM - FUNCTIONAL CHECK
IPC 27-14-00	ROLL TRIM

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
123	123BL	Area below the cockpit floor - LH

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 058	Kit, Rig Pins	To lock the aileron system in the neutral position	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
MS20995C15	Lockwire	As necessary

G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
Cotter pin	IPC 27-14-00	2/LRU

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Area below the cockpit floor



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I. Installation (Figure 401)

SUBTASK 420-002-A

- (1) Connect the Artificial Feel Unit (1) to the actuator of the Roll Trim (8). Use the bolt (9), washers (7), and nut (6).
- (2) **NOTE:** When you connect the AFU to the aileron torque tube, do not compress the shaft of the AFU. If necessary, adjust the rod end of the AFU and lockwire it ([AMM TASK 27-11-06-700-801-A/500](#)).

Connect the Artificial Feel Unit (1) to the aileron torque tube (4). Use the bolt (3), washers (2), bushing (10), and nut (11).

- (3) Tighten the nuts (6) and (11) and install the cotter pins (5) and (12).

J. Follow-on

SUBTASK 842-002-A

- (1) On the Circuit Breaker Panel, close the AILERON 1, AILERON 2, PITCH TRIM 1 and ROLL TRIM circuit breakers and remove the DO-NOT-CLOSE tag from them.
- (2) On the left power control/distribution box, close the PITCH TRIM 1 circuit breaker and remove the DO-NOT-CLOSE tag from it ([AMM SDS 24-60-00/1](#)).
- (3) On the right power control/distribution box, close the PITCH TRIM 2 circuit breaker and remove the DO-NOT-CLOSE tag from it ([AMM SDS 24-60-00/1](#)).
- (4) Remove the rig pins from the aileron torque tube.
- (5) Close control rigging door 123BL (AMM MPP 06-41-01/100).
- (6) Do the functional check of the Roll Trim ([AMM TASK 27-14-00-700-801-A/500](#)).