

AIRCRAFT MAINTENANCE MANUAL

AILERON DAMPER - REMOVAL/INSTALLATION

EFFECTIVITY: ON AIRCRAFT POST-MOD SB 145-27-0063 OR FAA/CTA-CERTIFIED AIRCRAFT

1. General

- A. This section gives the procedures to remove and install the aileron damper.
- 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
27-12-03-000-801-A	AILERON DAMPER - REMOVAL	ON AIRCRAFT POST-MOD SB 145-27-0063 OR FAA/CTA-CERTIFIED AIRCRAFT
27-12-03-400-801-A	AILERON DAMPER - INSTALLATION	ON AIRCRAFT POST-MOD SB 145-27-0063 OR FAA/CTA-CERTIFIED AIRCRAFT
27-12-03-040-801-A	AILERON DAMPER - DEACTIVATION	ON AIRCRAFT POST-MOD SB 145-27-0063 OR FAA/CTA-CERTIFIED AIRCRAFT
27-12-03-440-801-A	AILERON DAMPER - REACTIVATION	ON AIRCRAFT POST-MOD SB 145-27-0063 OR FAA/CTA-CERTIFIED AIRCRAFT

TASK 27-12-03-000-801-A
EFFECTIVITY: ON AIRCRAFT POST-MOD SB 145-27-0063 OR FAA/CTA-CERTIFIED AIRCRAFT
2. AILERON DAMPER - REMOVAL
A. General

- (1) This task gives the procedures to remove the aileron damper.

B. References

REFERENCE	DESIGNATION
AMM TASK 29-10-00-860-801-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH HTS
AMM TASK 57-56-04-000-801-A/400	AILERON LOWER SHROUD - REMOVAL

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 058	Kit, rig pin, flight controls	To lock the aileron control system in the neutral position	

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Rubber Gloves, Phosphate Ester-Base, Fluid-Resistant	Protection for the hands	1
Commercially available	Rubber Goggles, Phosphate Ester-Base, Fluid-Resistant	Protection for the eyes	1

F. Consumable Materials

Not Applicable

G. Expandable Parts

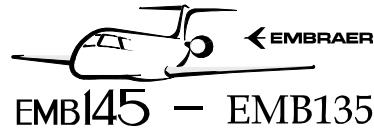
Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Wing

I. Preparation
SUBTASK 841-002-A

- (1) Do not do other tasks on the aileron system.
- (2) Release the pressure of the hydraulic system ([AMM TASK 29-10-00-860-801-A/200](#)).
- (3) Remove the aileron lower shroud ([AMM TASK 57-56-04-000-801-A/400](#)).



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- (4) Install the rig pin (GSE 058) to the aileron fuselage sector. Refer to [Figure 401](#).

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

SUBTASK 020-002-A

WARNING: • THE HYDRAULIC SYSTEM CONTAINS PHOSPHATE-ESTER HYDRAULIC FLUID. THE FLUID CAN CAUSE IRRITATION IN YOUR SKIN OR INJURY TO YOUR EYES. USE THE APPLICABLE RUBBER GOGGLES AND GLOVES. IF THE FLUID TOUCHES YOU, FLUSH YOUR SKIN WITH WATER. IF IT GETS IN YOUR EYES, FLUSH THEM WITH WATER AND GET MEDICAL HELP.

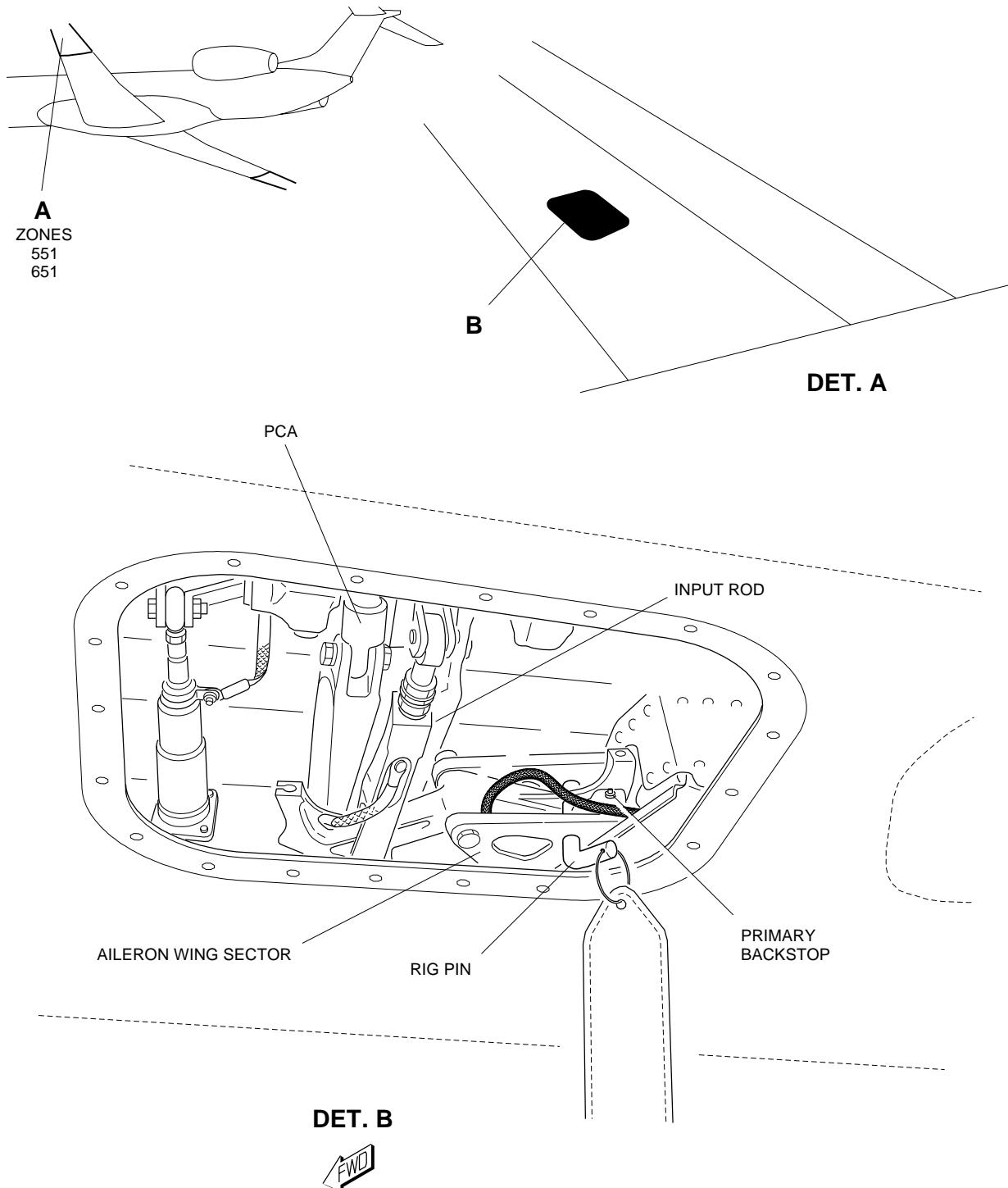
• CA-1000 CORROSION-INHIBITING COMPOUND IS TOXIC TO SKIN, EYES, AND RESPIRATORY TRACT. USE PVC GLOVES AND EYE PROTECTION. USE ONLY IN WELL VENTILATED AREAS. OBEY THE MANUFACTURERS' HEALTH AND SAFETY INSTRUCTIONS.

- (1) Remove bolt (14) and washers (10), (12), and (13) to release jumper (11) from the wing side and (21) from the aileron side. Refer to DET. C
- (2) Remove the hose (4) and union (3) from the damper (1). Remove and discard the O-ring (2). Put a cap on the hose end. Refer to DET. B
- (3) Remove and discard the cotter pins (5) and (20). Refer to DET. B and DET. D.
- (4) Remove the bolt (15), washers (16) and (18), bushing (17), and nut (19) to remove the damper (1) from the aileron. Refer to DET. D.
- (5) Remove the bolt (9), bushing (8), washers (7), and nut (6) to remove the damper (1) from the wing. Refer to DET. B.

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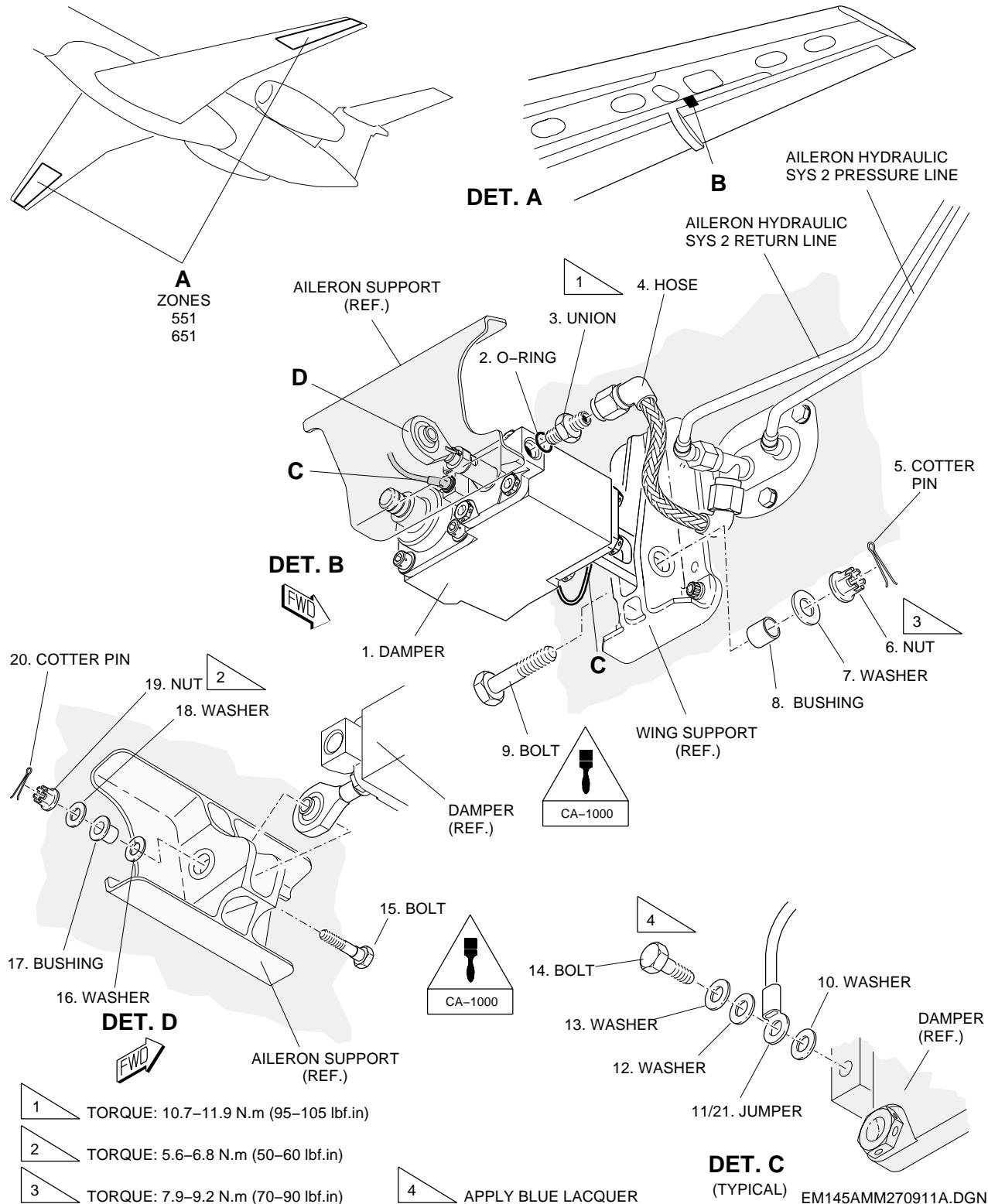
Rig Pins Location in the Fuselage Sector

Figure 401



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EFFECTIVITY: ON AIRCRAFT POST-MOD SB 145-27-0063 OR FAA/CTA-CERTIFIED AIRCRAFT
Aileron Damper - Removal/Installation
Figure 402



TASK 27-12-03-400-801-A
EFFECTIVITY: ON AIRCRAFT POST-MOD SB 145-27-0063 OR FAA/CTA-CERTIFIED AIRCRAFT
3. AILERON DAMPER - INSTALLATION
A. General

- (1) This task gives the procedures to install the aileron damper.

B. References

<i>REFERENCE</i>	<i>DESIGNATION</i>
AMM TASK 27-12-01-000-801-A/400	AILERON POWER-CONTROL ACTUATOR (PCA) - REMOVAL
AMM TASK 27-12-03-870-801-A/300	AILERON DAMPER BLEEDING
AMM TASK 57-56-04-400-801-A/400	AILERON LOWER SHROUD - INSTALLATION
IPC 27-12-00	AILERON HYDRAULIC ACTUATION

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

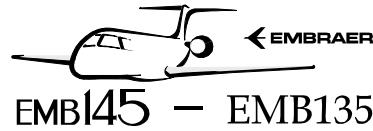
<i>ITEM</i>	<i>DESCRIPTION</i>	<i>PURPOSE</i>	<i>QTY</i>
GSE 058	Kit, rig pin, flight controls	To lock the aileron control system in the neutral position	
GSE 070	Digital Protractor	To measure the deflections of the aileron.	

E. Auxiliary Items

<i>ITEM</i>	<i>DESCRIPTION</i>	<i>PURPOSE</i>	<i>QTY</i>
Commercially available	Rubber Gloves, Phosphate Ester-Based, Fluid-Resistant	Protection for the hands	1
Commercially available	Rubber Goggles, Phosphate Ester-Based, Fluid-Resistant	Protection for the eyes	1

F. Consumable Materials

<i>SPECIFICATION (BRAND)</i>	<i>DESCRIPTION</i>	<i>QTY</i>
MEP 09-060	Corrosion-Inhibiting Compound	As necessary
MS20995C20	Lockwire	As necessary
TT-L-32	Blue Lacquer	As necessary



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G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
O-ring	IPC 27-12-00	1/LRU
cotter pin	IPC 27-12-00	1/LRU
cotter pin	IPC 27-12-00	1/LRU

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Wing

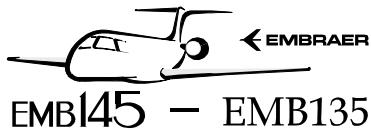
I. Installation (Figure 402)

SUBTASK 420-002-A

- WARNING:** • THE HYDRAULIC SYSTEM CONTAINS PHOSPHATE-ESTER HYDRAULIC FLUID. THE FLUID CAN CAUSE IRRITATION IN YOUR SKIN OR INJURY TO YOUR EYES. USE THE APPLICABLE RUBBER GOGGLES AND GLOVES. IF THE FLUID TOUCHES YOU, FLUSH YOUR SKIN WITH WATER. IF IT GETS IN YOUR EYES, FLUSH THEM WITH WATER AND GET MEDICAL HELP.
- CA-1000 CORROSION-INHIBITING COMPOUND IS TOXIC TO SKIN, EYES AND RESPIRATORY TRACT. USE PVC GLOVES AND EYE PROTECTION. USE ONLY IN WELL VENTILATED AREAS. OBEY THE MANUFACTURERS' HEALTH AND SAFETY INSTRUCTIONS.

- (1) Apply corrosion-inhibiting compound as shown in Figure 402. For this, use gloves and goggles.
- (2) Use the bolt (9), bushing (8), washers (7), and nut (6) to install the damper (1) to the wing. Refer to DET. B.
- (3) Use the bolt (15), washers (16) and (18), bushing (17), and nut (19) to install the damper (1) to the aileron. Refer to DET. D.
- (4) Install the union (3) and O-ring (2) to the damper (1). Apply torque as shown in Figure 402. Then, install the hose (4). Apply torque to the hose (4) as shown in Figure 402. Refer to DET. B.
- (5) Remove the rig pin (GSE 058) from the aileron fuselage sector. Refer to Figure 401.
- (6) Do the check of the deflection of the aileron as follows.
 - (a) Install Digital Protractor GSE 070 to the aileron. For this, use a double-face adhesive-tape.
 - (b) Set the aileron to the neutral position.

NOTE: The neutral position of the aileron occurs when the aileron and the wing trailing edges are aligned.



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- (c) Disconnect the PCA from the aileron surface ([AMM TASK 27-12-01-000-801-A/400](#)).
- (d) Manually move the aileron up and down. Refer to Table 401 for the aileron correct deflection.

Table 401 - AILERON DEFLECTION

AILERON UP	29.2 degrees \pm 1 degree ^[1]
AILERON DOWN	20 degrees \pm 1 degree ^[1]

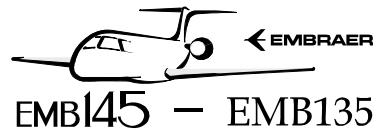
[1] These deflections are applicable when the aileron is disconnected from the PCA and the damper is installed to the aileron.

- (e) If necessary, cut the lockwire of the rod end of the damper and adjust until you get these deflections. Then, safety it.
 - (f) Remove the digital protractor from the aileron.
- (7) Torque as shown in (Figure 402). Install the cotter pins (5) and (20).
- (8) Use the bolt (14) and washers (10), (12), and (13) to install the jumper (11) to the wing side and (21) to the aileron side. Apply a thin coat of the blue lacquer, specification TT-L-32, in the bolt, washers and jumper, after assemblage.
- (9) Reconnect the PCA to the aileron surface ([AMM TASK 27-12-01-000-801-A/400](#))

J. Follow-on

SUBTASK 842-002-A

- (1) Bleed the aileron damper ([AMM TASK 27-12-03-870-801-A/300](#)).
- (2) Install the aileron lower shroud ([AMM TASK 57-56-04-400-801-A/400](#)).



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TASK 27-12-03-040-801-A

EFFECTIVITY: ON AIRCRAFT POST-MOD SB 145-27-0063 OR FAA/CTA-CERTIFIED AIRCRAFT

4. AILERON DAMPER - DEACTIVATION

A. General

- (1) This task gives the procedures to deactivate the aileron damper.

B. References

REFERENCE	DESIGNATION
AMM TASK 27-12-01-200-802-A/600	AILERON PCA ROD ENDS/FITTING LUGS FOR INTEGRITY AND GENERAL CONDITION - GENERAL VISUAL INSPECTION
AMM TASK 29-10-00-860-801-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH HTS
AMM TASK 57-56-04-000-801-A/400	AILERON LOWER SHROUD - REMOVAL
AMM TASK 57-56-04-400-801-A/400	AILERON LOWER SHROUD - INSTALLATION

C. Zones and Accesses

Not Applicable

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	Wing

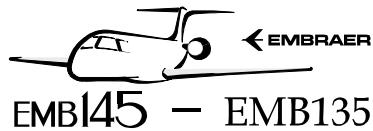
I. Preparation

SUBTASK 841-003-A

- (1) Do not do other tasks on the aileron system.
- (2) Release the pressure of the hydraulic system ([AMM TASK 29-10-00-860-801-A/200](#)).
- (3) Remove the aileron lower shroud ([AMM TASK 57-56-04-000-801-A/400](#)).
- (4) Install the rig pin (GSE 058) to the aileron fuselage sector.

J. Deactivation (Figure 401)

SUBTASK 040-002-A



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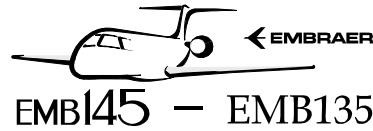
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- (1) Perform the aileron damper removal procedure SUBTASK 27-12-03-020-001-A00.

K. Follow-on

SUBTASK 842-003-A

- (1) Pressurize the aircraft hydraulic system ([AMM TASK 29-10-00-860-801-A/200](#)).
- (2) Make sure that there are no leaks at the cap.
- (3) Install the aileron lower shroud ([AMM TASK 57-56-04-400-801-A/400](#)).
- (4) Do a visual inspection of the PCA rod ends and fittings as given in [AMM TASK 27-12-01-200-802-A/600](#).



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TASK 27-12-03-440-801-A

EFFECTIVITY: ON AIRCRAFT POST-MOD SB 145-27-0063 OR FAA/CTA-CERTIFIED AIRCRAFT

5. AILERON DAMPER - REACTIVATION

A. General

(1) This task gives the procedures to reactivate the aileron damper.

B. References

REFERENCE	DESIGNATION
AMM TASK 27-12-03-870-801-A/300	AILERON DAMPER BLEEDING
AMM TASK 29-10-00-860-801-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH HTS
AMM TASK 57-56-04-000-801-A/400	AILERON LOWER SHROUD - REMOVAL
AMM TASK 57-56-04-400-801-A/400	AILERON LOWER SHROUD - INSTALLATION
IPC 27-12-00	AILERON HYDRAULIC ACTUATION

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 070	Digital Protractor	To measure the deflections of the aileron.	

E. Auxiliary Items

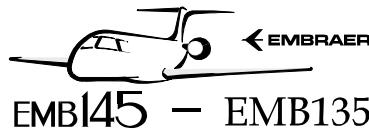
ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Rubber Gloves resistant to Phosphate Ester-Base Fluid	Protection for the hands	1
Commercially available	Rubber Goggles resistant to Phosphate Ester-Base Fluid	Protection for the eyes	1

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
MEP 09-060	Corrosion-Inhibiting Compound	As necessary
MS20995C20	Lockwire	As necessary
TT-L-32	Blue Lacquer	As necessary

G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
O-ring	IPC 27-12-00	1/LRU



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(Continued)

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
cotter pin	IPC 27-12-00	1/LRU
cotter pin	IPC 27-12-00	1/LRU

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Wing

I. Preparation

SUBTASK 841-004-A

- (1) Do not do other tasks on the aileron system.
- (2) Release the pressure of the hydraulic system ([AMM TASK 29-10-00-860-801-A/200](#)).
- (3) Remove the aileron lower shroud ([AMM TASK 57-56-04-000-801-A/400](#)).

J. Reactivation (Figure 401)

SUBTASK 440-002-A

- (1) Do the aileron damper installation procedure SUBTASK 27-12-03-420-002-A00.

K. Follow-on

SUBTASK 842-004-A

- (1) Remove the rig pin (GSE 058) from the aileron fuselage sector.
- (2) Bleed the aileron damper ([AMM TASK 27-12-03-870-801-A/300](#)).
- (3) Install the aileron lower shroud ([AMM TASK 57-56-04-400-801-A/400](#)).