



EMB145 – EMB135

AIRCRAFT  
MAINTENANCE MANUAL

**RUDDER HYDRAULIC RESTRICTOR - REMOVAL/INSTALLATION**

**EFFECTIVITY:** JAA-CERTIFIED AIRCRAFT (POST-MOD SB 145-27-0015 OR FACTORY-MODIFIED)

1. General

- A. This section gives the procedures to remove and install the hydraulic restrictor of the rudder control system.
- B. The hydraulic restrictor is installed in the compartment behind the rear pressure bulkhead.
- 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
27-22-06-000-801-A	HYDRAULIC RESTRICTOR - REMOVAL	JAA-CERTIFIED AIRCRAFT (POST-MOD SB 145-27-0015 OR FACTORY-MODIFIED)
27-22-06-400-801-A	HYDRAULIC RESTRICTOR - INSTALLATION	JAA-CERTIFIED AIRCRAFT (POST-MOD SB 145-27-0015 OR FACTORY-MODIFIED)



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TASK 27-22-06-000-801-A

EFFECTIVITY: JAA-CERTIFIED AIRCRAFT (POST-MOD SB 145-27-0015 OR FACTORY-MODIFIED)

2. HYDRAULIC RESTRICTOR - REMOVAL

A. General

- (1) This procedure gives the instructions to remove the hydraulic restrictor of the rudder control system.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-42-00/100	-
AMM TASK 29-10-00-860-801-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH HTS

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
311	312AR	Compartment behind the rear pressure bulkhead

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

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

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Compartment behind the rear pressure bulkhead

I. Preparation

SUBTASK 841-002-A

- (1) Release the pressure of the hydraulic system ( [AMM TASK 29-10-00-860-801-A/200](#)).



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- (2) On the Circuit Breaker Panel, open the ELEC PUMP 1 and ELEC PUMP 2 circuit breakers and attach a DO-NOT-CLOSE tag to them.
- (3) Open access door 312AR (AMM MPP 06-42-00/100).

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

SUBTASK 020-002-A

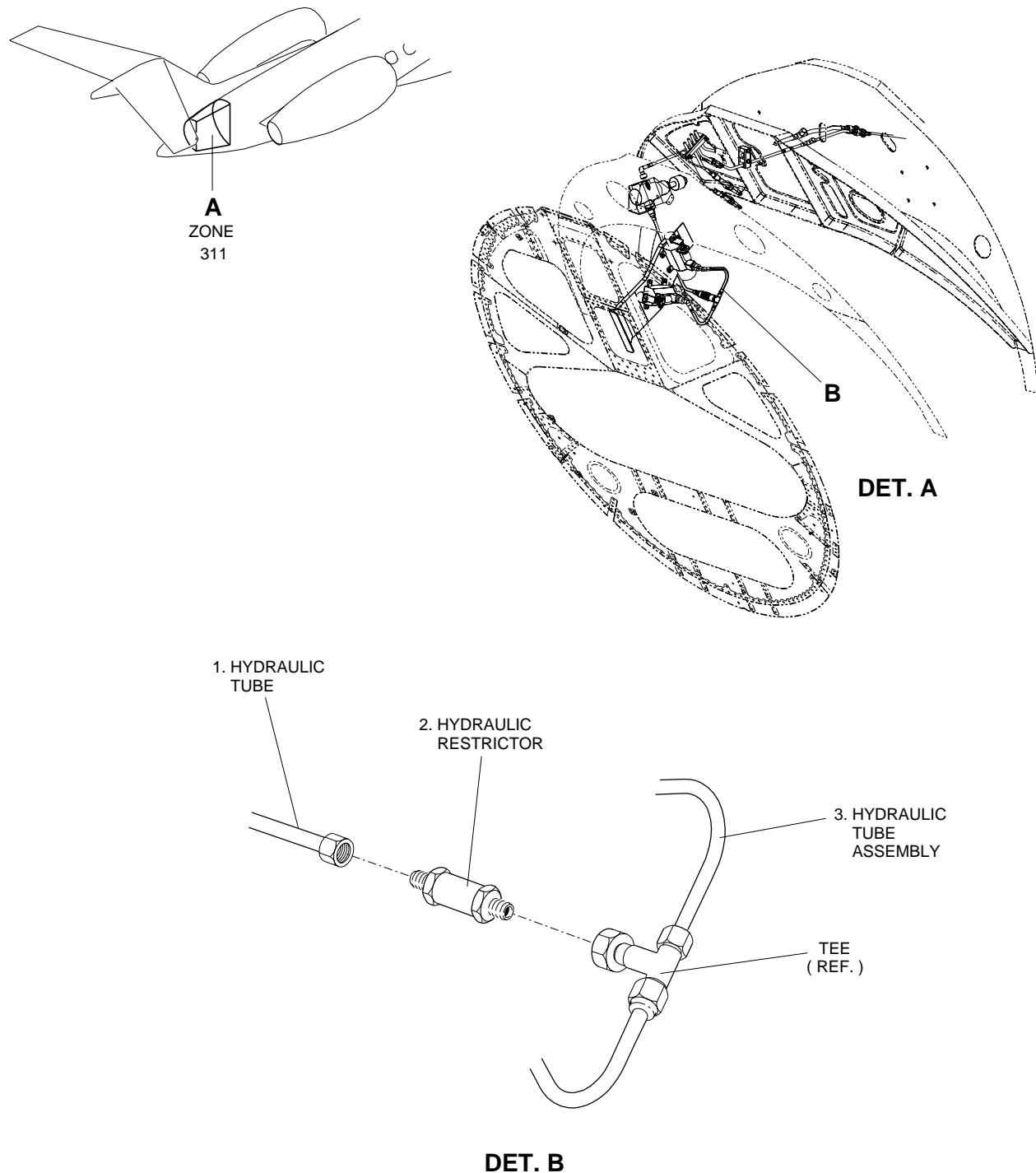
**WARNING:** THE HYDRAULIC SYSTEM CONTAINS PHOSPHATE-ESTER HYDRAULIC FLUID. THE FLUID CAN CAUSE IRRITATION IN YOUR SKIN OR INJURY TO YOUR EYES. USE THE APPLICABLE RUBBER GOGGLES AND GLOVES. IF THE FLUID TOUCHES YOU, FLUSH YOUR SKIN WITH WATER. IF IT GETS IN YOUR EYES, FLUSH THEM WITH WATER AND GET MEDICAL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

- (1) Disconnect the hydraulic tube (1) from the hydraulic restrictor (2).
- (2) Disconnect the hydraulic restrictor (2) from the tee at the hydraulic tube assembly (3).

**EFFECTIVITY: JAA-CERTIFIED AIRCRAFT (POST-MOD SB 145-27-0015)**

Hydraulic Restrictor - Removal/Installation

Figure 401



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TASK 27-22-06-400-801-A

EFFECTIVITY: JAA-CERTIFIED AIRCRAFT (POST-MOD SB 145-27-0015 OR FACTORY-MODIFIED)

3. HYDRAULIC RESTRICTOR - INSTALLATION

## A. General

- (1) This procedure gives the instructions to install the hydraulic restrictor of the rudder control system.

## B. References

REFERENCE	DESIGNATION
AMM MPP 06-42-00/100	-
AMM TASK 27-21-00-700-801-A/500	RUDDER MOVABLE PRIMARY STOP MECHANISM - OPERATIONAL CHECK
AMM TASK 29-10-00-860-803-A/200	HYDRAULIC SYSTEM - BLEED OF AIR

## C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
311	312AR	Compartment behind the rear pressure bulkhead

## D. Tools and Equipment

Not Applicable

## E. Auxiliary Items

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

## F. Consumable Materials

Not Applicable

## G. Expandable Parts

Not Applicable

## H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Compartment behind the rear pressure bulkhead



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I. Installation (Figure 401)

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.

- (1) Connect the hydraulic restrictor (2) to the tee at the hydraulic tube assembly (3).
- (2) Connect the hydraulic tube (1) to the hydraulic restrictor (2).

J. Follow-on

SUBTASK 842-002-A

- (1) On the Circuit Breaker Panel, close the ELEC PUMP 1 and ELEC PUMP 2 circuit breakers and remove the DO-NOT-CLOSE tag from them.
- (2) Bleed the air from the hydraulic system lines ([AMM TASK 29-10-00-860-803-A/200](#)).
- (3) Make sure that there are no leaks in the hydraulic restrictor.
- (4) Do an operational check of the Movable Stop Mechanism System ([AMM TASK 27-21-00-700-801-A/500](#)).
- (5) Close access door 312AR (AMM MPP 06-42-00/100).