



EMB145 – EMB135

AIRCRAFT
MAINTENANCE MANUAL

RUDDER SOLENOID VALVE - 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 solenoid valve of the rudder control system.
- B. The solenoid valve 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
27-22-05-000-801-A	SOLENOID VALVE - REMOVAL	JAA-CERTIFIED AIRCRAFT (POST-MOD SB 145-27-0015 OR FACTORY-MODIFIED)
27-22-05-400-801-A	SOLENOID VALVE - INSTALLATION	JAA-CERTIFIED AIRCRAFT (POST-MOD SB 145-27-0015 OR FACTORY-MODIFIED)



EMB145 – EMB135

AIRCRAFT
MAINTENANCE MANUAL

TASK 27-22-05-000-801-A

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

2. SOLENOID VALVE - REMOVAL

A. General

- (1) This procedure gives the instructions to remove the solenoid valve 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](#)).



EMB145 – EMB135

AIRCRAFT
MAINTENANCE MANUAL

- (2) On the Circuit Breaker Panel, open the AIR/GND C, AIR/GND D, 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

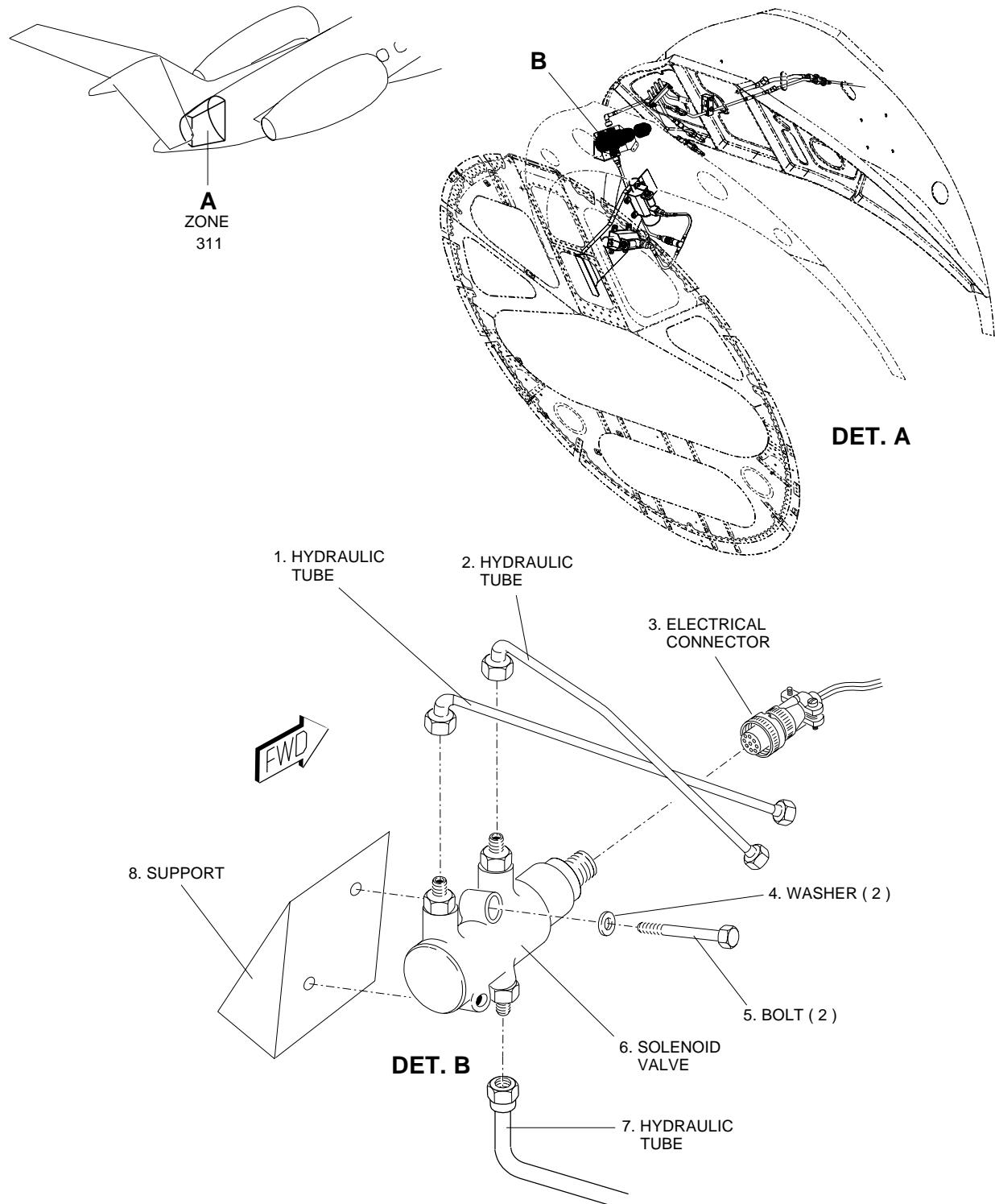
WARNING: THE HYDRAULIC SYSTEM CONTAINS PHOSPHATE-ESTER HYDRAULIC FLUID. THE FLUID CAN CAUSE IRRITATION IN YOUR SKIN OR INJURY TO YOUR EYES. USE THE APPLICABLE RUBBER GOGGLES AND GLOVES. IF THE FLUID TOUCHES YOU, FLUSH YOUR SKIN WITH WATER. IF IT GETS IN YOUR EYES, FLUSH THEM WITH WATER AND GET MEDICAL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

- (1) Disconnect the electrical connector (3) from the solenoid valve (6).
- (2) Disconnect the hydraulic tubes (1), (2), and (7) from the solenoid valve (6).
- (3) Remove the bolts (5) and washers (4) (2 positions) to release the solenoid valve (6) from the support (8).
- (4) Remove the solenoid valve (6).

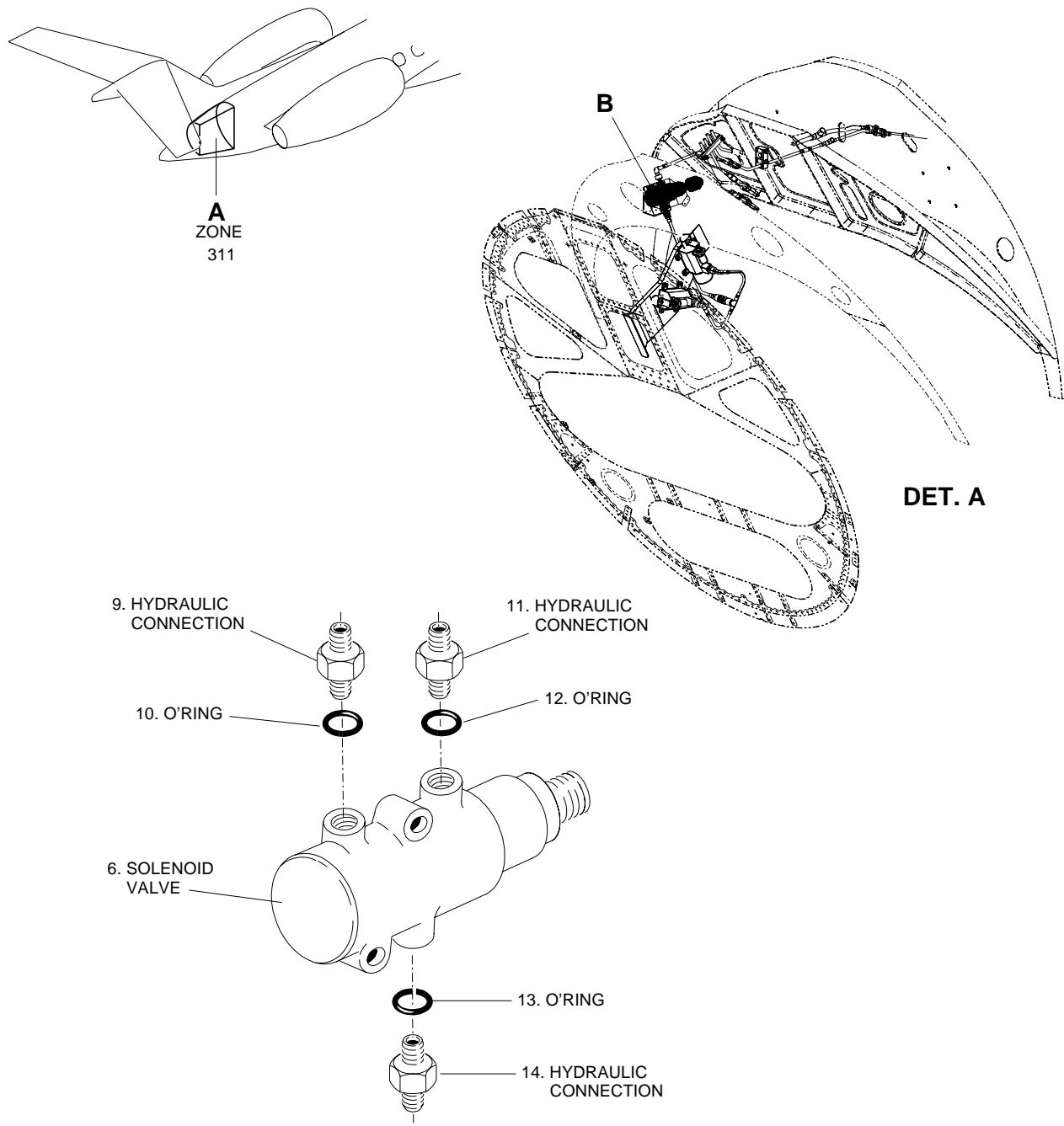
EFFECTIVITY: JAA-CERTIFIED AIRCRAFT (POST-MOD SB 145-27-0015)

Solenoid Valve - Removal/Installation

Figure 401



EM145AMM270349B.DGN

EFFECTIVITY: JAA-CERTIFIED AIRCRAFT (POST-MOD SB 145-27-0015)
Hydraulic Connections of the Solenoid Valve - Removal/Installation
Figure 402

EM145AMM270350B.DGN



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

TASK 27-22-05-400-801-A

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

3. SOLENOID VALVE - INSTALLATION

A. General

- (1) This procedure gives the instructions to install the solenoid valve 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
IPC 27-22-00	RUDDER HYDRAULIC ACTUATION

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

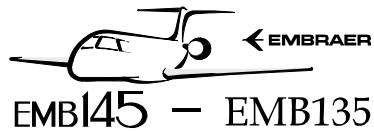
ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Rubber Gloves, Phosphate Ester-Base, Fluid Resistant	Protection for the hands	1 pair
Commercially available	Rubber Goggles, Phosphate Ester-Base, Fluid Resistant	Protection for the eyes	1 pair

F. Consumable Materials

Not Applicable

G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
O-ring	IPC 27-22-00	3/LRU



AIRCRAFT MAINTENANCE MANUAL

H. Persons Recommended

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

I. Preparation (Figure 402)

SUBTASK 841-003-A

- (1) Remove the hydraulic connections (9), (11), and (14) from the solenoid valve (6) and keep them.
- (2) Remove and discard the old O-rings (10), (12), and (13).
- (3) Install the new O-rings (10), (12), and (13) to the solenoid valve (6).
- (4) Install the hydraulic connections (9), (11), and (14) to the solenoid valve (6).

J. 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) Put the solenoid valve (6) on the support (8).
- (2) Attach the solenoid valve (6) to the support (8) with the bolts (5) and washers (4) (2 positions).
- (3) Connect the hydraulic tubes (1), (2), and (7) to the solenoid valve (6).
- (4) Connect the electrical connector (3) to the solenoid valve (6).

K. Follow-on

SUBTASK 842-002-A

- (1) On the Circuit Breaker Panel, close the AIR/GND C, AIR/GND D, 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 solenoid valve.
- (4) Do an operational check of the Rudder-Movable Stop Mechanism System ([AMM TASK 27-21-00-700-801-A/500](#)).
- (5) Close access door 312AR (AMM MPP 06-42-00/100).

