



EMB145 – EMB135

AIRCRAFT
MAINTENANCE MANUAL

BRAKE CONTROL VALVE - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to remove and install the brake control valve.
- 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
32-41-06-000-801-A	BRAKE CONTROL VALVE - REMOVAL	ALL
32-41-06-400-801-A	BRAKE CONTROL VALVE - INSTALLATION	ALL



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TASK 32-41-06-000-801-A

EFFECTIVITY: ALL

2. BRAKE CONTROL VALVE - REMOVAL

A. General

- (1) This task gives the procedures to remove the brake control valve.
- (2) This procedure is applicable to the brake control valve of hydraulic system 1 and to the brake control valve of hydraulic system 2.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 29-10-00-860-802-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH EMDP
AMM TASK 32-44-02-910-801-A/200	HYDRAULIC ACCUMULATOR EMERGENCY/PARKING BRAKE - RELEASE

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
114	114CR	Nose hydraulic compartment - RH
192	192AL	Center lower fairing - LH
192	192BR	Center lower fairing - RH

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
Commercially available	Rubber Goggles, Phosphate Ester-Base, Fluid-Resistant	Protection for the Eyes	1

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable



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H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	LH/RH wing stubs

I. Preparation

SUBTASK 841-002-A

- (1) Energize the aircraft with the external AC power supply ([AMM TASK 20-40-01-860-801-A/200](#)).
- (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 114CR (AMM MPP 06-41-01/100).
- (4) Depressurize hydraulic system 1 and hydraulic system 2 ([AMM TASK 29-10-00-860-802-A/200](#)).
- (5) Control the rudder to the left and to the right, until the pressure of the hydraulic system shows zero PSI on the EICAS.
- (6) Fully release the pressure from the fluid chamber of the emergency/parking brake system hydraulic accumulator ([AMM TASK 32-44-02-910-801-A/200](#)).
- (7) Open access panel 192AL (hydraulic system 1) and access panel 192BR (hydraulic system 2) (AMM MPP 06-41-01/100).

J. Removal ([Figure 401](#)) ([Figure 403](#))

SUBTASK 020-002-A

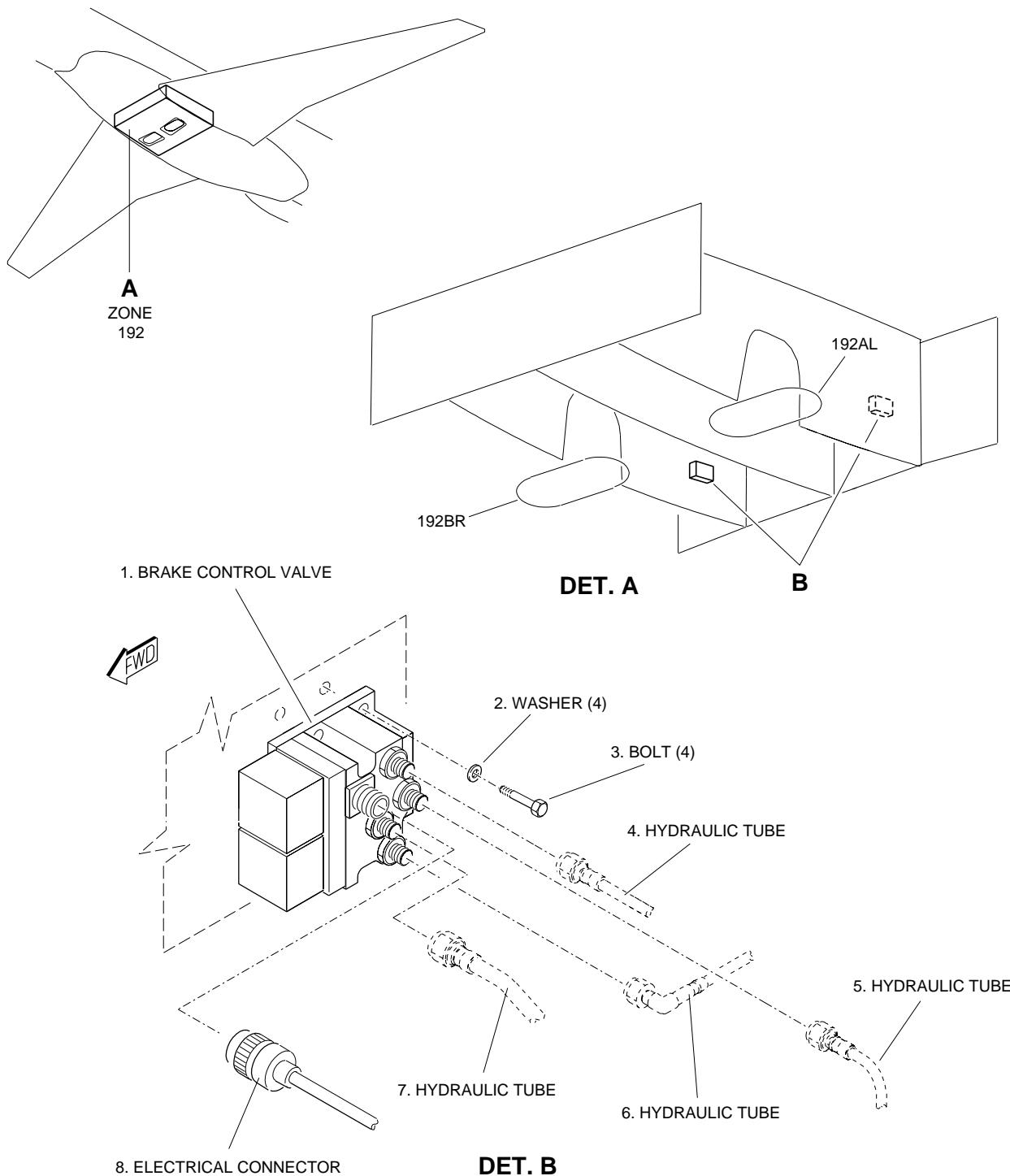
WARNING: THE HYDRAULIC SYSTEM CONTAINS PHOSPHATE-ESTER HYDRAULIC FLUID. THE FLUID CAN CAUSE IRRITATION IN YOUR SKIN OR INJURY TO YOUR EYES. USE THE APPLICABLE RUBBER GOGGLES AND GLOVES. IF THE FLUID TOUCHES YOU, FLUSH YOUR SKIN WITH WATER. IF IT GETS IN YOUR EYES, FLUSH THEM WITH WATER AND GET MEDICAL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

- (1) Disconnect the electrical connector (8).
- (2) Disconnect the hydraulic tube (4).
- (3) Disconnect the hydraulic tube (5).
- (4) Disconnect the hydraulic tube (6).
- (5) Disconnect the hydraulic tube (7).
- (6) Remove the bolts (3).
- (7) Remove the washers (2).
- (8) Remove the brake control valve (1).

EFFECTIVITY: EMB-145ER/EP/EU/MP AND EMB-135ER MODELS

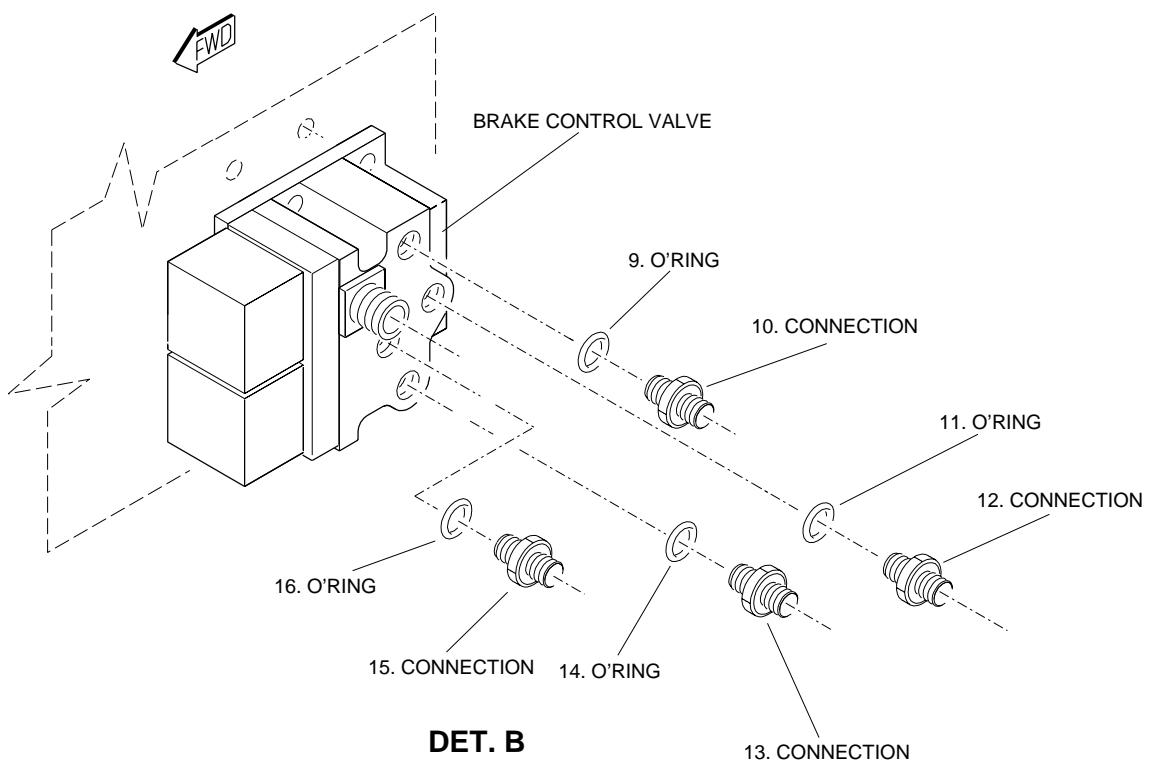
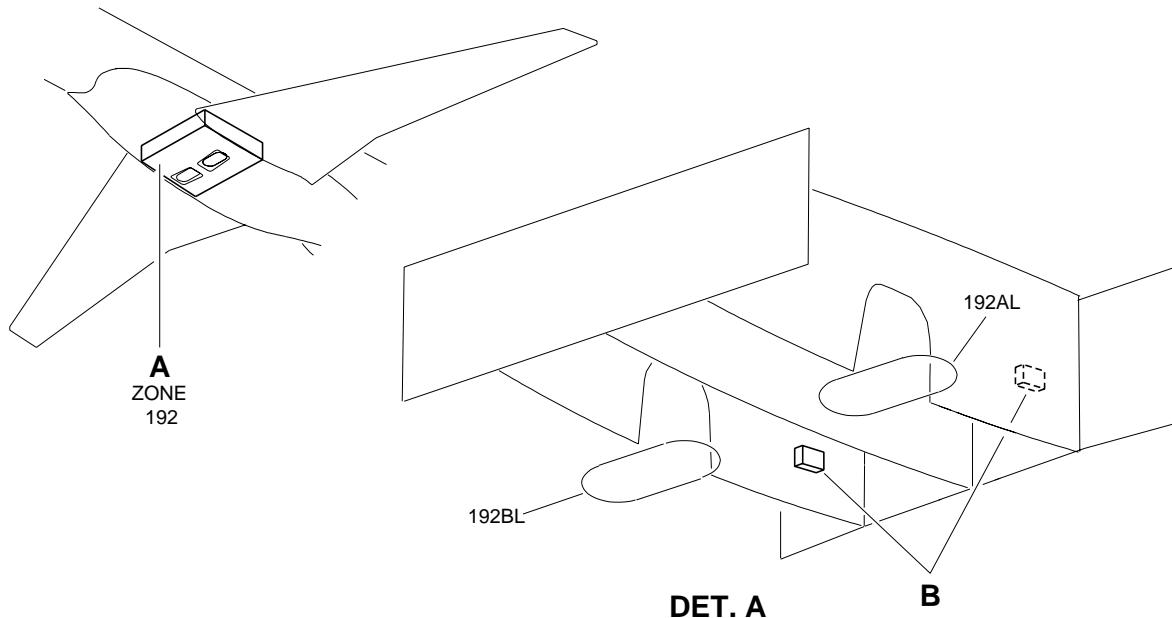
Brake Control Valve - Removal/Installation

Figure 401



145AMM320101.MCE B

EFFECTIVITY: EMB-145ER/EP/EU/MP AND EMB-135ER MODELS
 Connections of the Brake Control Valve - Removal/Installation
 Figure 402

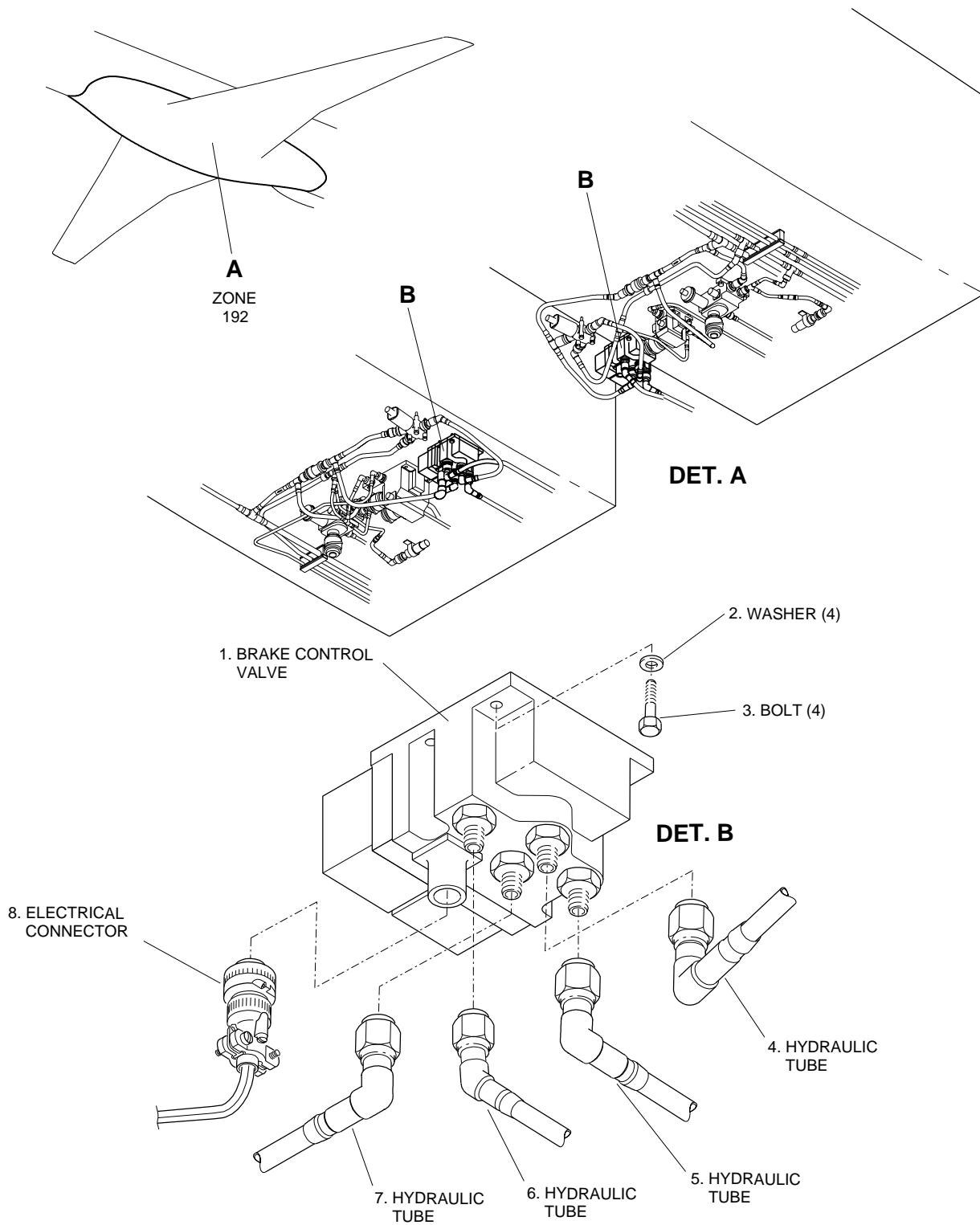


145AMM320102.MCE B

EFFECTIVITY: EMB-145LR/LU AND EMB-135LR MODELS

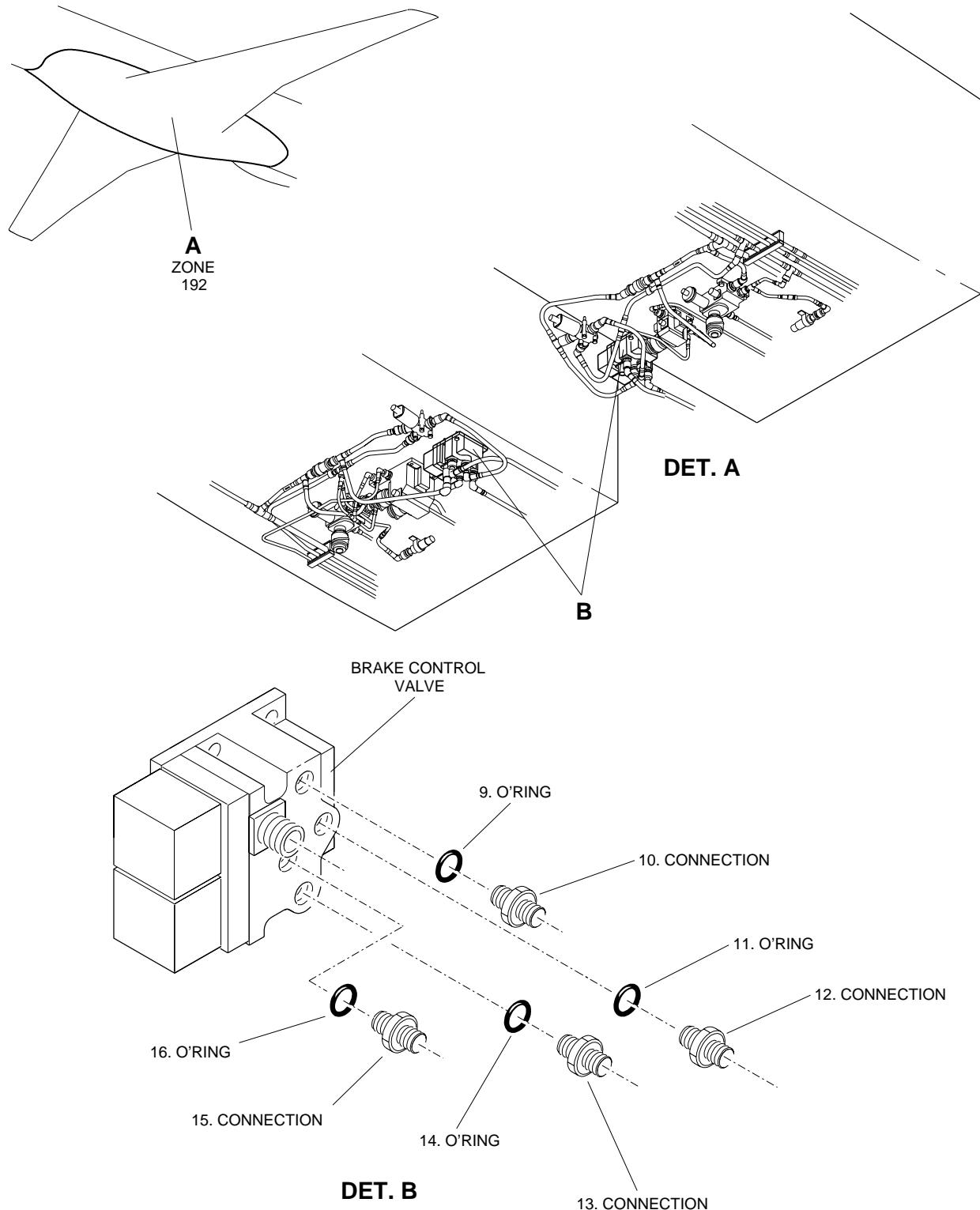
Brake Control Valve - Removal/Installation

Figure 403



145AMM320300.MCE A

EFFECTIVITY: EMB-145LR/LU AND EMB-135LR MODELS
 Connections of the Brake Control Valve - Removal/Installation
 Figure 404



145AMM320304.MCE A



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TASK 32-41-06-400-801-A

EFFECTIVITY: ALL

3. BRAKE CONTROL VALVE - INSTALLATION

A. General

- (1) This task gives the procedures to install the brake control valve.
- (2) This procedure is applicable to the brake control valve of hydraulic system 1 and to the brake control valve of hydraulic system 2.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 28-41-00-200-801-A/600	-
AMM TASK 29-10-00-860-802-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH EMDP
AMM TASK 32-40-00-800-801-A/200	NORMAL BRAKE AND EMERGENCY PARKING BRAKE SYSTEMS - BLEEDING
AMM TASK 32-41-00-700-801-A/500	MAIN BRAKE SYSTEM - FUNCTIONAL CHECK
IPC 32-41-06	BRAKES CONTROL VALVE

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
114	114CR	Nose hydraulic compartment - RH
192	192AL	Center lower fairing - LH
192	192BR	Center lower fairing - RH

D. Tools and Equipment

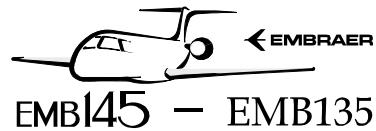
Not Applicable

E. Auxiliary Items

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

F. Consumable Materials

Not Applicable



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G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
O-rings	IPC 32-41-06	4

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	LH/RH wing stubs

I. Preparation (Figure 402) (Figure 404)

SUBTASK 841-003-A

- (1) Remove and keep the connections (10), (12), (13), and (15).
- (2) Remove and discard the old O-rings (9), (11), (14), and (16).
- (3) Install the new O-rings (9), (11), (14), and (16).
- (4) Install the connections (10), (12), (13), and (15).

J. Installation (Figure 401) (Figure 403)

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) Install the brake control valve (1).
- (2) Install the washers (2).
- (3) Install the bolts (3).
- (4) Connect the hydraulic tube (7).
- (5) Connect the hydraulic tube (6).
- (6) Connect the hydraulic tube (5).
- (7) Connect the hydraulic tube (4).

WARNING: DO NOT GET LUBRICANT AND ANTICORROSION FILM PN LEKTRO-TECH SUPER CORR-A IN YOUR MOUTH OR EYES, OR ON YOUR SKIN. PUT ON A PROTECTIVE SPLASH GOGGLE AND GLOVES WHEN YOU USE LUBRICANT AND ANTICORROSION FILM PN LEKTRO-TECH SUPER CORR-A. KEEP LUBRICANT AND ANTICORROSION FILM PN LEKTROTECH SUPER CORR-A AWAY FROM SPARKS, FLAME, AND HEAT. LUBRICANT AND ANTICORROSION FILM PN LEKTRO-TECH SUPER CORR-A IS A POISONOUS AND FLAMMABLE SUBSTANCE.

- (8) Connect the electrical connector (8).

NOTE: Before you connect the connector, apply Lektro-Tech Super Corr-A into the plug connector to prevent corrosion and clean the contacts.

K. 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) Pressurize the hydraulic system 1 and hydraulic system 2 ([AMM TASK 29-10-00-860-802-A/200](#)).
- (3) Do a check on the hydraulic connections of the brake control valve for leaks.
- (4) Bleed the Normal Brake and Emergency Parking Brake Systems ([AMM TASK 32-40-00-800-801-A/200](#)).
- (5) Do the functional check of the Main Brake System ([AMM TASK 32-41-00-700-801-A/500](#)).
- (6) 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 (Section 6) of the Maintenance Review Board Report (MRB).

- (7) Close access panel 192AL (hydraulic system 1) and access panel 192BR (hydraulic system 2) ([AMM MPP 06-41-01/100](#)).
- (8) Close access door 114CR ([AMM MPP 06-41-01/100](#)).
- (9) De-energize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).