



EMB145 - EMB135

AIRCRAFT  
MAINTENANCE MANUAL

**EMERGENCY/PARKING BRAKE SYSTEM - ADJUSTMENT/TEST**

*EFFECTIVITY: ALL*

1. General

- A. This section gives the procedure to do a check of the emergency/parking brake system.
- 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>
32-44-00-700-801-A ♦	EMERGENCY/PARKING BRAKE SYSTEM ALL - FUNCTIONAL CHECK	



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TASK 32-44-00-700-801-A

EFFECTIVITY: ALL

2. EMERGENCY/PARKING BRAKE SYSTEM - FUNCTIONAL CHECK

A. General

(1) This procedure gives the instructions to do a check of the emergency/parking brake system.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM SDS 23-51-00/1	
AMM TASK 10-10-01-500-801-A/200	AIRCRAFT NORMAL PARKING
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 29-10-00-860-801-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH HTS
AMM TASK 32-40-00-800-801-A/200	NORMAL BRAKE AND EMERGENCY PARKING BRAKE SYSTEMS - BLEEDING
AMM TASK 32-44-02-700-801-A/500	EMERGENCY/PARKING BRAKE ACCUMULATOR - CHECK
AMM TASK 32-44-10-600-801-A/300	LUBRICATE EMERGENCY/PARKING BRAKE CONTROL
AMM TASK 32-44-11-700-801-A/500	EMERGENCY/PARKING BRAKE - ADJUSTMENT

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
193	193JR	Service Panel of Sys 2
721		RH MLG
731		LH MLG

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 467	Kit, brake pressure measurement	To do a check of the brake pressure	
Commercially available	Pressure Gage (range 5000 psi)	To do a check of the brake pressure	

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	Outside of aircraft
1	To help the other technician	Cockpit

**I. Preparation**
**SUBTASK 841-002-A**

- (1) Put chocks at the landing gear wheels ([AMM TASK 10-10-01-500-801-A/200](#)).
- (2) Open access door 193JR (AMM MPP 06-41-01/100).
- (3) Connect the ramp interphone (AMM 23-51-00/1).
- (4) Make sure that the emergency/parking brake accumulator has a pre-charge of nitrogen ([AMM TASK 32-44-02-700-801-A/500](#)).

**WARNING: ALWAYS PUT ON GLOVES AND GOGGLES TO MAKE SURE THAT THE SKYDROL DOES NOT TOUCH YOU. SKYDROL IS CORROSIVE AND CAN CAUSE INJURES TO YOUR EYES AND SKIN.**

- (5) Put on rubber gloves and rubber goggles to do the steps where the hydraulic fluid Skydrol LD-4 can touch you.
- (6) Make sure that the bleeder valves (3) (in zones 731 and 721) are closed.
- (7) In zone 731 and 721 connect GSE 467 to the brake units as follows ([Figure 501](#)).
  - (a) Remove the screw (1) and washer (2) from the bleeder valve (3).
  - (b) Connect GSE 467 together with the pressure gage to the bleeder valve (3).
  - (c) Open the bleeder valve (3).
- (8) Energize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).
- (9) Pressurize hydraulic system 2 ([AMM TASK 29-10-00-860-801-A/200](#)).
- (10) Set the two thrust levers to IDLE position.
- (11) Make sure that the emergency/parking brake system is adjusted ([AMM TASK 32-44-11-700-801-A/500](#)).

**J. Functionally Check Emergency Parking Brake System ([Figure 501](#))**
**SUBTASK 720-002-A**

- (1) Do the check as follows:

**NOTE:** To prevent hydraulic fluid transference from system 1 to system 2 or vice versa, first apply brakes with the pedals and then pull or release the emergency/parking brake handle.

- (a) Set the LH thrust lever to THRUST SET position.
- (b) Slowly pull the emergency/parking brake handle until the BRAKE ON lights come on at the instrument and ramp panels.

Result:

- 1 The pressure gage must show  $150 \pm 15$  psi.
- 2 The EICAS shows the NO TAKE-OFF CONFIG warning message.
- 3 The aural warning system starts the TAKE-OFF BRAKES message.

- (c) Pull the emergency/parking brake handle fully.
- (d) Set the LH thrust lever to the IDLE position.

Result:

- 1 The NO TAKE-OFF CONFIG warning message goes out of view on the EICAS display.
- 2 The aural warning system stops the TAKE-OFF BRAKES message.
- 3 The BRAKE ON lights stay on, on the instrument and ramp panels.

- (e) Do steps (a) thru (d) for the RH thrust lever again.
- (f) Pull the emergency/parking brake handle as far as its end of stroke and keep it in this position.

Result:

- 1 The line pressure gage shows  $2900 \pm 200$  psi.

- (g) De-pressurize hydraulic system 2 ([AMM TASK 29-10-00-860-801-A/200](#)).
- (h) Slowly push and pull the emergency/parking brake handle (approximately 3 complete cycles) until the EICAS shows the EMERG BRK LO PRESS caution message.

Result:

- 1 The accumulator pressure gage must indicate  $2325 \pm 75$  psi.

- (i) Pressurize hydraulic system 2 ([AMM TASK 29-10-00-860-801-A/200](#)).

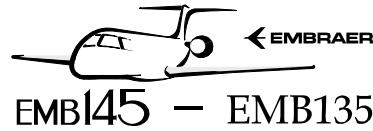
Result:

- 1 The EMERG BRK LO PRESS caution message goes out of view on the EICAS display.

- (j) Make sure that the emergency/parking brake handle is free movement and properly lubricate. Refer to [AMM TASK 32-44-10-600-801-A/300](#).

**NOTE:**

- The emergency/parking brake control cable does not have tension, then it can be a little free (not stretched).
- To prevent hydraulic fluid transference from system 1 to system 2 or vice versa, first apply brakes with the pedals and then pull or release the emergency/parking brake handle.



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- (k) With the emergency/parking brake handle not pulled and hydraulic system 2 pressurized, make sure that the pressure on the line pressure gage is lower than 50 psi.

K. Follow-on

SUBTASK 842-002-A

- (1) De-pressurize hydraulic system 2 ([AMM TASK 29-10-00-860-801-A/200](#)).
- (2) De-energize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).
- (3) Remove the GSE 467 and the pressure gage.
- (4) Tighten each bleeder valve (3) to a torque of 3.9 to 6.2 Nm (35 to 55 lb.in)
- (5) Install a washer (2) and screw (1) to each bleeder valve (3).
- (6) Do the brake bleeding ([AMM TASK 32-40-00-800-801-A/200](#)).
- (7) With the accumulator pressurized and the emergency/parking brake handle pulled, make sure that the pressure on the pressure gage of the accumulator does not decrease during the subsequent 2 hours.

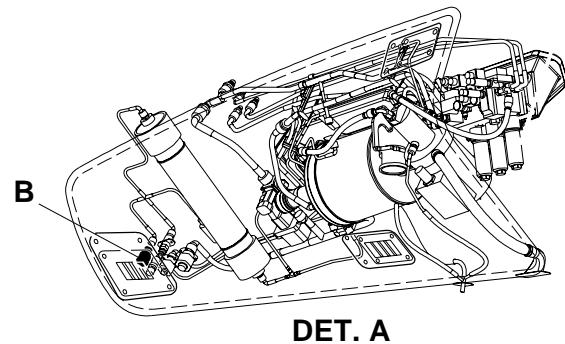
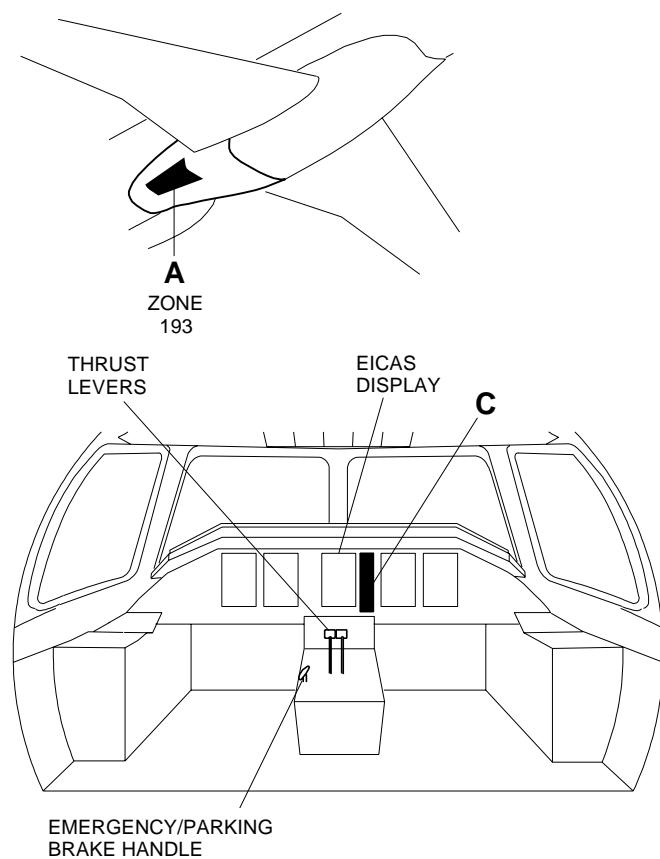
NOTE: To prevent hydraulic fluid transference from system 1 to system 2 or vice versa, first apply brakes with the pedals and then pull or release the emergency/parking brake handle.

- (8) Remove the ramp interphone ([AMM SDS 23-51-00/1](#)).
- (9) Close access door 193JR (AMM MPP 06-41-01/100).

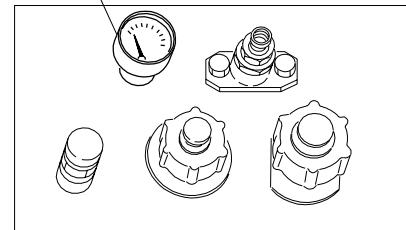
**EFFECTIVITY: ALL**

Emergency/Parking Brake System - Functional Check

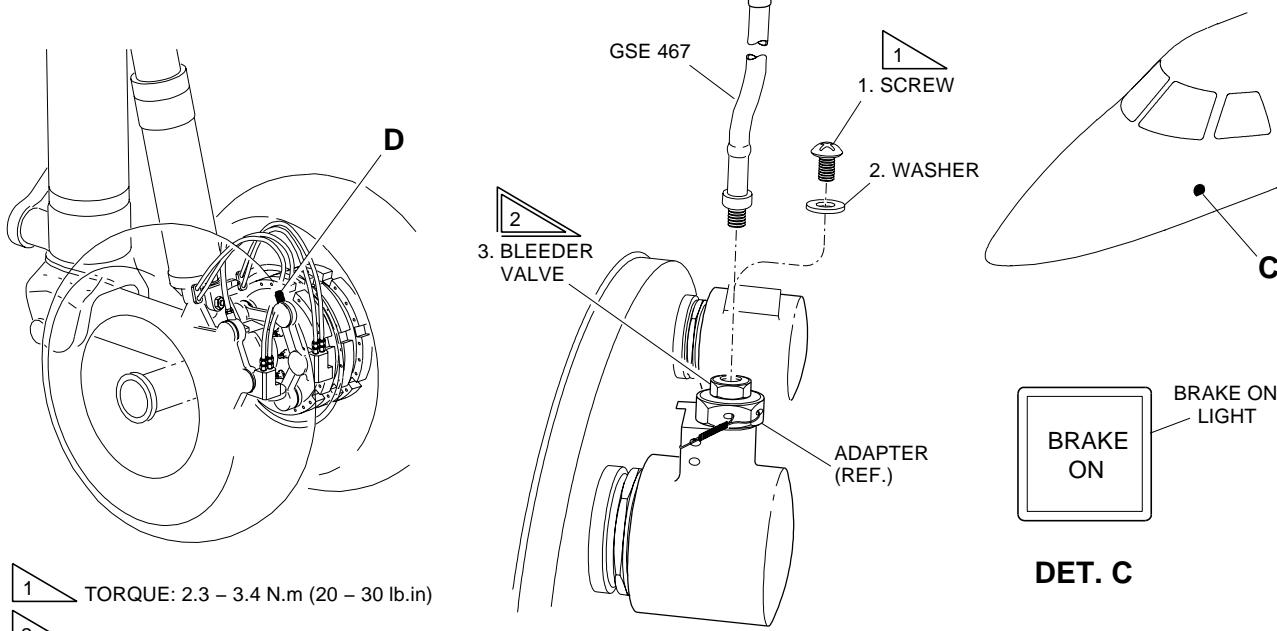
Figure 501



PRESSURE GAGE OF ACCUMULATOR



**DET. B**



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