

**LANDING GEAR - BRAKE CONTROL UNIT (BCU PN 90005034-8) - REPLACEMENT FOR AIRCRAFT
EQUIPPED WITH BCU-7 (BCU PN 90005034-7)**

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This service bulletin supersedes the SB500-32-0016.

1. PLANNING INFORMATION**A. SB EFFECTIVITY**

Aircraft affected:

MODEL	SN
EMB-500 'Phenom 100'	50000395, and 50000400 thru 50000423, equipped with BCU-7 (BCU PN 90005034-7) or all fleet post-mod SB500-32-0016.

In-production effectivity:

EMB-500 "Phenom 100" aircraft SN 50000424 and on have an equivalent modification factory-incorporated.

B. CONCURRENT REQUIREMENTS

None.

C. REASON**(1) HISTORY**

EMBRAER has received reports of perceived low-braking performance during landings with airplanes equipped with BCU-7. Flight Data Recorder (FDR) analysis has shown that the hydraulic pressure measured in one of the brake assemblies was lower than expected during the landing run, leading to an unannounced asymmetrical loss of normal brake system.

(2) OBJECTIVE

To replace the Brake Control Unit currently installed with a new one Part Number 90005034-8.

(3) EXPECTED BENEFITS

The new Brake Control Unit software removes the switching between independent and paired control that could lead to an asymmetrical braking during landing. It also adds field loadable property and corrects the locked wheel function implementation.

(4) REVISION HISTORY

None.

D. DESCRIPTION

This bulletin consists of the replacement of the Brake Control Unit PN 90005034-7 with a new improved one bearing PN 90005034-8, which has an updated software.

To gain access to the work area, it is necessary to remove aft baggage compartment ceiling panel 315ALC.

E. COMPLIANCE

Embraer recommends that this bulletin be accomplished within the next 36 Month(s) or 1800 Flight Hour(s), whichever occurs first.

F. APPROVAL

The changes to the type design specified in this SB have been approved by ANAC - Agência Nacional de Aviação Civil.

This service bulletin was approved based on the airplane's original Embraer delivery configuration or as modified by other Embraer-approved documents.

G. ESTIMATED MANPOWER

This estimate is for direct labor only, performed by experienced personnel, and does not include the time to plan, prepare, or inspect the work.

It is assumed that all the tools, parts, and other means are promptly available when necessary.

This estimate does not include the sealant, paint, or adhesive curing time.

- Access opening: 0.5 man-hours.
- Modification: 1.0 man-hour.
- Access closure: 0.5 man-hours.
- Test: 0.5 man-hours.

H. WEIGHT AND BALANCE

- Change in basic weight: None.
- Change in basic moment: None.

I. ELECTRICAL LOAD DATA

Not changed.

J. SOFTWARE ACCOMPLISHMENT SUMMARY

None.

K. REFERENCES

AMM 500/() Aircraft Maintenance Manual PART II - 20-00-00 - STANDARD PRACTICES-AIRFRAME.

AMM 500/() Aircraft Maintenance Manual PART II - 32-41-01 - LANDING GEAR.

L. PUBLICATIONS AFFECTED

AIPC 500/() Aircraft Illustrated Parts Catalog - 32-41-01 - LANDING GEAR.

AFM 500/() Airplane Flight Manual.

2. MATERIAL INFORMATION**A. MATERIAL - PRICE AND AVAILABILITY**

The BCU PN 90005034-8 necessary for the accomplishment of this bulletin should be procured from Embraer as spare part. See [Item 2.C.\(1\)](#) MATERIAL TO BE PROCURED.

B. INDUSTRY SUPPORT INFORMATION**(1) WARRANTY COVERAGE****(a) Parts**

The BCU-8 will be provided at no charge.

(b) Labor

Embraer will compensate for customers under warranty coverage 2.5 man-hours for the SB incorporation if it is performed at an Embraer-authorized service center.

(c) Expiration

The terms expressed in the warranty coverage will be valid for 36 months after the SB issue date.

C. MATERIAL NECESSARY FOR EACH AIRCRAFT

When applicable, the use of alternative or similar parts in place of the ones specified in the kits is allowable, provided that these alternative or similar parts are approved by Embraer as indicated in the related Embraer Technical Publications or through a formal Embraer communication channel.

The expendable or consumable parts presented in the AMM Tasks referred to in this bulletin, which are necessary for its accomplishment, should be procured from the operator's inventories or ordered as spares.

(1) MATERIAL TO BE PROCURED**(a) Parts**

The Brake Control Unit (BCU) below should be procured from Embraer as spare part.

NEW PN	DESCRIPTION	OLD PN	QTY	DISP
90005034-8	Brake Control Unit (BCU)	90005034-7	01	3

DISPOSITION: 3 = Replace part bearing OLD PN with part bearing NEW PN

NOTE: Send the removed Brake Control Unit (BCU) to Embraer, to the attention of the CORE Return. To do so, log in to the MyTechcare portal (<http://www.techcare.embraer.com>) and go to "Parts & Claim" and fill out the "Core" with Notification Number.

For further information contact Embraer at core.executive@embraer.com

D. MATERIAL NECESSARY FOR EACH SPARE

None.

E. REIDENTIFIED PARTS

None.

F. TOOLING - PRICE AND AVAILABILITY

None.

3. ACCOMPLISHMENT INSTRUCTIONS

The steps below outline the general accomplishment instructions.

The detailed sequence is included in the respective figure, when necessary.

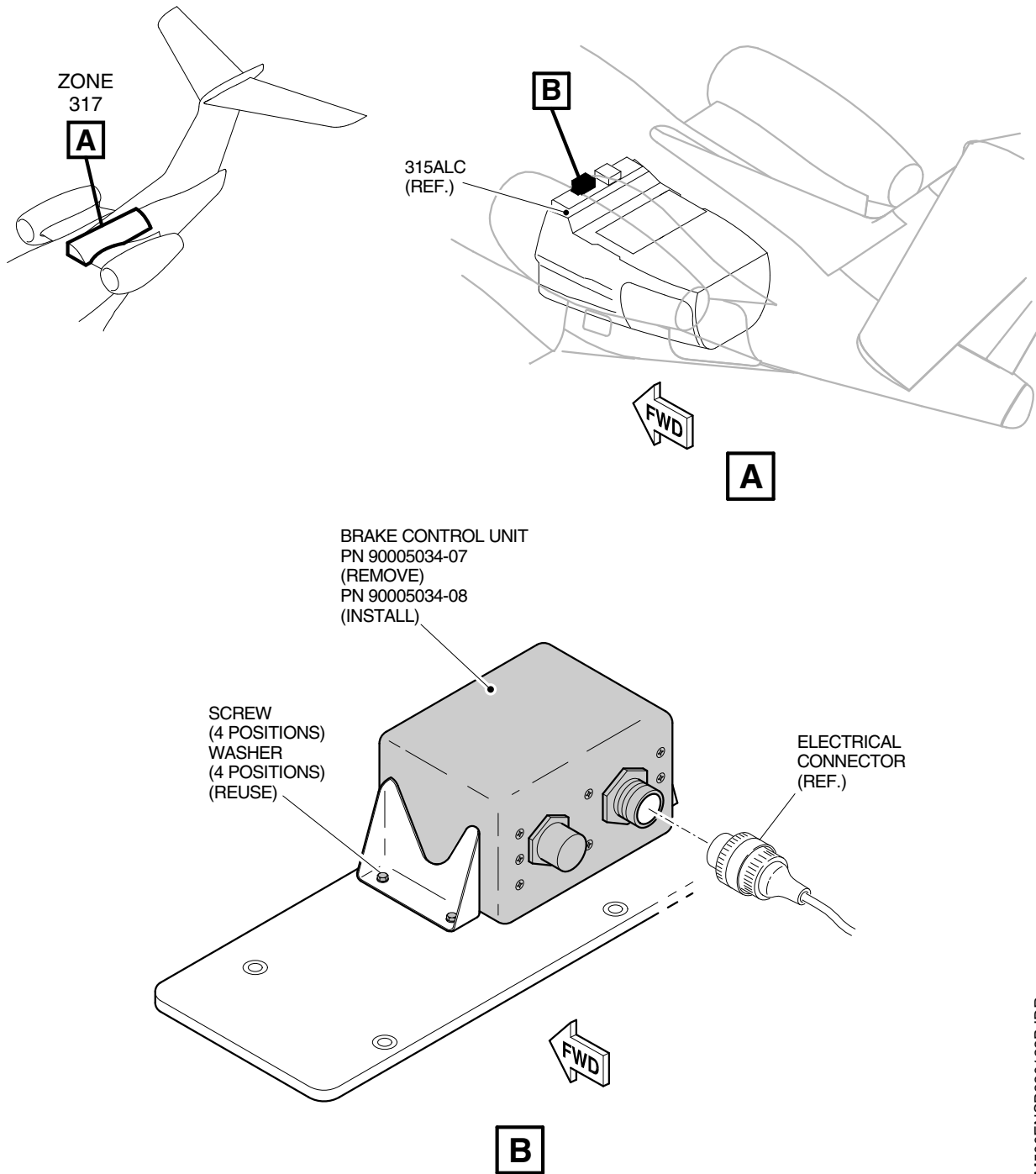
- A. Make sure that the aircraft is safe for maintenance. Refer to [AMM TASK 20-00-00-910-801-A/200](#) - Aircraft Maintenance Safety Procedures.
- B. Remove the existing Brake Control Unit PN 90005034-7 according to the instructions given in according to instructions given in [AMM TASK 32-41-01-000-801-A/400](#) - Brake Control Unit - Removal.

NOTE: Send the removed BCU unit to Embraer. To do this, operators should contact Embraer Executive Jets Contact Center at the address presented in a note [Item 2.C.\(1\)](#) MATERIAL TO BE PROCURED of this service bulletin.

- C. Install the new BCU 90005034-8 according to instructions given in [AMM TASK 32-41-01-400-801-A/400](#) - Brake Control Unit - Installation.
- D. Enter the accomplishment of this service bulletin in the applicable documents.
- E. Please use the online SB evaluation form available on the MyTechcare portal (<http://www.techcare.embraer.com>). Go to "Maintenance > eTechPubs > Utilities > SB Evaluation Form" to inform us about the SBs that you have incorporated in your fleet, as well as the difficulties found during the SB incorporation.

This will allow Embraer to consider your aircraft configuration when providing future modifications.

Your feedback will be much appreciated to improve the quality of Embraer modifications.



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FIGURE 1 - BRAKE CONTROL UNIT (BCU) - REPLACEMENT
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