



**AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRAZIL**

## **BRAZILIAN EMERGENCY AIRWORTHINESS DIRECTIVE**

**EAD No: E2024-05-09R01**

**Effective Date: 29 May 2024**

The following Brazilian Emergency Airworthiness Directive (EAD), issued by the Agência Nacional de Aviação Civil (ANAC) in accordance with provisions of Chapter IV, Title III of Código Brasileiro de Aeronáutica - Law No. 7,565 dated 19 December 1986 - and Regulamento Brasileiro da Aviação Civil (RBAC) 39, applies to all aircraft registered in the Registro Aeronáutico Brasileiro. No person may operate an aircraft to which this AD applies, unless it has previously complied with the requirements established herein.

**EAD No. E2024-04-09R01 (EMBRAER) / 39-1564.**

### **APPLICABILITY:**

This Emergency Airworthiness Directive (EAD) applies to Embraer S.A. airplanes models ERJ170-100 and ERJ170-200, serial numbers 1700002 thru 17000964

### **CANCELLATION / REVISION:**

This EAD cancels and supersedes the EAD No. E2024-05-09 / 39-1561, effective date 21 May 2024, and is being issued to update its applicability.

### **REASON:**

The EAD was prompted by a landing gear not locked indication during the final approach, leading the flight crew to declare an emergency. Although the event did not result in serious consequences, it was found that a failure could occur in the main landing gear (MLG) locking-stay bracket assembly, due to the installation of a particular self-locking nut, during the MLG locking-stay bracket assembly replacement. Loss of this self-locking nut may lead to disconnection of the MLG Locking Stay bracket, which can result in uncommanded retraction of the landing gear and consequent loss of directional control.

Since this condition may occur in other airplanes and affects flight safety, preventive action is required. Thus, sufficient reason exists to mandate compliance with this AD in the indicated time limit.

### **REQUIRED ACTION:**

Inspection of the MLG locking-stay bracket assembly (Right hand - RH and Left hand- LH); MLG locking-stay bracket assembly nut replacement and MLG locking-stay bracket assembly replacement, as applicable.

### **COMPLIANCE:**

Required as indicated below, unless already accomplished.

**(b) Inspection of the LH and RH MLG locking-stay bracket assembly - Group 1.**

For airplanes within Group 1, according to Embraer Alert Service Bulletin SB170-32-A094, revision 01, dated 28 May 2024, within the next 50 Flight Cycles (FC) after 21 May 2024, the effective date of EAD E2024-05-09, original revision, check the maintenance record to identify if the airplane was modified according to SB 170-32-0089 original revision or revision 01 or if the MLG was restored during

overhaul maintenance.

**(1)** If the airplane was not modified according to SB 170-32-0089 original revision or revision 01 and the MLG was not restored during overhaul maintenance, no further actions are required by this EAD.

**(2)** If the airplane was modified according to SB 170-32-0089 original revision or revision 01 or the MLG was restored during overhaul maintenance. before next flight, perform a General Visual Inspection (GVI) to verify that the screw with P/N NAS6605D10, washers with P/N NAS1149C0532R, nuts with P/N MS17826-5 or P/N MS14145-5, and cotter pins with P/N MS24665-153 are adequately installed on the bracket P/N 1840A0700-03 or 1840A0700-04, according to Embraer Alert Service Bulletin SB170-32-A094, revision 01, dated 28 May 2024, or further revisions approved by ANAC.

**(i)** If there is no anomaly on the installation of screws P/N NAS6605D10, washers P/N NAS1149C0532R, nuts P/N MS17826-5 or P/N MS14145-5 and cotter pins P/N MS24665-153 on the bracket P/N 1840A0700-03 or 1840A0700-04, check if the nut P/N MS17826-5 is installed.

**(i)** If there is no nut with P/N MS17826-5 installed, apply sealant on screws, washers, nuts and cotter pins, according to instructions provided in Embraer Alert Service Bulletin SB170-32-A094, revision 01, dated 28 May 2024 .

**(ii)** If nuts with P/N MS17826-5 are installed, replace them with nuts P/N MS14145-5, according to the instructions provided in Embraer Alert Service Bulletin SB170-32-A094, revision 01, dated 28 May 2024, or further revisions approved by ANAC, before the next flight.

**(ii)** If any anomaly is detected on the installation of the screws with P/N NAS6605D10, washers with P/N NAS1149C0532R, nuts with P/N MS17826-5 or P/N MS14145-5, and cotter pins with P/N MS24665-153 on the bracket P/N 1840A0700-03 or 1840A0700-04, comply with paragraph **(d)** of this EAD, before the next flight.

**NOTE:** For the purposes of this AD, a General Visual Inspection (GVI) is defined as follows.

**General Visual Inspection (GVI):** A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to enhance visual access to all exposed surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked.

**(c) Inspection of the LH and RH MLG locking-stay bracket assembly - All airplanes except Group 1.**

For airplanes with S/N 1700002 thru 17000964 that are not within Group 1, according to Embraer Alert Service Bulletin SB170-32-A094, revision 01, dated 28 May 2024, within the next 50 Flight Cycles (FC) after the effective date of this EAD, check the maintenance record to identify if the airplane was modified according to SB 170-32-0089 original revision or revision 01 or if the MLG was restored during overhaul maintenance.

**(1)** If the airplane was not modified according to SB 170-32-0089 original revision or revision 01 and the MLG was not restored during overhaul

maintenance, no further actions are required by this EAD.

**(2)** If the airplane was modified according to SB 170-32-0089 original revision or revision 01 or the MLG was restored during overhaul maintenance. before next flight, perform a General Visual Inspection (GVI) to verify that the screw with P/N NAS6605D10, washers with P/N NAS1149C0532R, nuts with P/N MS17826-5 or P/N MS14145-5, and cotter pins with P/N MS24665-153 are adequately installed on the bracket P/N 1840A0700-03 or 1840A0700-04, according to Embraer Alert Service Bulletin SB170-32-A094, revision 01, dated 28 May 2024, or further revisions approved by ANAC.

**(i)** If there is no anomaly on the installation of screws P/N NAS6605D10, washers P/N NAS1149C0532R, nuts P/N MS17826-5 or P/N MS14145-5 and cotter pins P/N MS24665-153 on the bracket P/N 1840A0700-03 or 1840A0700-04, check if the nut P/N MS17826-5 is installed.

**(ii)** If there is no nut with P/N MS17826-5 installed, apply sealant on screws, washers, nuts and cotter pins, according to instructions provided in Embraer Alert Service Bulletin SB170-32-A094, revision 01, dated 28 May 2024 .

**(iii)** If nuts with P/N MS17826-5 are installed, replace them with nuts P/N MS14145-5, according to the instructions provided in Embraer Alert Service Bulletin SB170-32-A094, revision 01, dated 28 May 2024, or further revisions approved by ANAC, before the next flight.

**(iv)** If any anomaly is detected on the installation of the screws with P/N NAS6605D10, washers with P/N NAS1149C0532R, nuts with P/N MS17826-5 or P/N MS14145-5, and cotter pins with P/N MS24665-153 on the bracket P/N 1840A0700-03 or 1840A0700-04, comply with paragraph **(d)** of this EAD, before the next flight.

**(d) LH and RH MLG locking-stay bracket assembly replacement.**

If there is any anomaly on the installation of the screw with P/N NAS6605D10, washers with P/N NAS1149C0532R, nuts with P/N MS17826-5 or P/N MS14145-5, and cotter pins with P/N MS24665-153 on the bracket P/N 1840A0700-03 or 1840A0700-04, replace the bracket assembly PN 1840A0700-03 or -04, according to the instructions provided in Embraer Alert Service Bulletin SB170-32-A094, revision 01, dated May 28, 2024 or further revisions approved by ANAC.

**(e) Prohibition of new installations**

After the effective date of this EAD it is forbidden to install nuts with P/N MS17826-5 on the bracket P/N 1840A0700-03 or 1840A0700-04

**(f) Credit for previous actions**

This paragraph provides credit for the actions specified in paragraphs **(b)** and **(c)** of this EAD. No further action is required per paragraphs **(b)** and **(c)** of this AD if the actions specified in paragraphs **(b)** and **(c)** of this EAD were performed before the effective date of this AD, in accordance with Embraer Alert Service Bulletin SB170-32-A094, original revision, dated May 18, 2024

**(g) Alternative method of compliance.**

**(1)** A different compliance method or a different compliance time for the requirements of this EAD may be used if approved by the Manager of the Continuing

Airworthiness Technical Branch (GTAC).

**(2)** For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs **(g)(2)(i)** and **(g)(2)(ii)** of this AD apply.

**(i)** The steps labeled as RC, including substeps under a RC step and any figures identified in a RC step, must be done to comply with the EAD. If a step or substep is labeled "RC Exempt," then the RC requirement is removed from that step or substep. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

**(ii)** Steps not labeled as RC may deviate from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

**(h) Material incorporated by reference.**

You must use Embraer Alert Service Bulletin SB170-32-A094, revision 01, dated 28 May, 2024, or further revisions approved by ANAC; to do the actions required by this AD, unless this AD specifies otherwise

Record compliance with this EAD in the applicable maintenance log book.

**CONTACT:**

For additional technical information, contact:

National Civil Aviation Agency (ANAC)

Continuing Airworthiness Technical Branch (GTAC)

Rua Doutor Orlando Feirabend Filho, nº 230

Centro Empresarial Aquáriu - Torre B - 14º ao 15º andares

Parque Residencial Aquáriu

ZIP 12246-190 - São José dos Campos - SP.

E-mail: pac@anac.gov.br

**APPROVAL:**

ROBERTO JOSÉ SILVEIRA HONORATO

Head of Airworthiness Department

ANAC

**NOTE:** Original in Portuguese language signed and available in the files of the Continuing Airworthiness Technical Branch (GTAC) of the National Civil Aviation Agency (ANAC).