



AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL – BRAZIL

BRAZILIAN EMERGENCY AIRWORTHINESS DIRECTIVE

EAD No: 2024-10-02

Effective Date: 21 Oct. 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. 2024-10-02 - EMBRAER / 39-1574.

APPLICABILITY:

(a) This Emergency Airworthiness Directive applies to EMBRAER S.A. airplanes model EMB-545 and EMB-550, as identified in EMBRAER Service Bulletin (SB) No. 550-32-0019, revision 01, dated October 11, 2024; equipped with the following affected parts:

(1) Nose Landing Gear (NLG) down lock spring assemblies with Part Number (P/N) 200-4250-003 and NI-22117148 identification.

(2) Left Hand (LH) and Right Hand (RH) Main Landing Gear (MLG) down lock spring assemblies with P/N 200-3900-001 and NI-23012594, NI-23012595, NI-23070802 or NI-23071561 identifications.

CANCELLATION / REVISION:

Not applicable.

REASON:

It has been found the occurrence of corrosion, damage and rupture on MLG and NLG down lock spring assemblies installed on the airplane, which, under specific loads conditions on ground, may compromise the locking and holding of the MLG and NLG in its correct kinematics position. The failure of these down lock springs may cause a non-annunciated loss of down locking capability, which may collapse the MLG and the NLG structure during takeoff or landing operations of the airplane.

Since this condition may occur in other airplanes of the same type and affect flight safety, an immediate corrective action is required. Thus, sufficient reason exists to request compliance with this EAD in the indicated time limit without prior notice.

REQUIRED ACTION:

Inspection and replacement, if applicable, of the MLG and NLG down lock springs.

COMPLIANCE:

Required as indicated below, unless already accomplished.

(b) Inspection of the NLG down lock spring assemblies.

(1) Within the next 10 Flight Cycles (FC) or 10 days after the effective date of this EAD, whichever occurs first, perform a General Visual Inspection (GVI) on the NLG down lock spring assemblies to check if there is any down lock spring with the affected part according to the (a)(1) paragraph of this EAD.

(i) If both down lock springs do have an affected part according to the (a)(1)

paragraph of this EAD, before the next flight, replace at least one affected spring with a new one bearing the same P/N with a non-affected part 1. Replace the other affected spring within the next 100 FC or 4 months after the effective date of this EAD, whichever occurs first, with a new one bearing the same P/N with a non-affected part 1.

(ii) If only one down lock spring does have an affected part according to the (a)(1) paragraph of this EAD, within the next 100 FC or 4 months after the effective date of this EAD, whichever occurs first, replace the affected spring with a new one bearing the same P/N with a non-affected part 1.

(iii) If both down lock springs do not have an affected part according to the (a)(1) paragraph of this EAD, no action is required at this time.

NOTE 1: For the purposes of this EAD, 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.

NOTE 2: For the purposes of this EAD, a non-affected part 1 is an airworthy part according to the applicable requirements and is not an affected part according to the (a)(1) paragraph of this EAD.

(c) Inspection of the LH and RH MLG down lock spring assemblies.

(1) Within the next 10 FC or 10 days after the effective date of this EAD, whichever occurs first, perform a GVI on the LH and RH MLG down lock spring assemblies to check if there is any down lock spring with the affected part according to the (a)(2) paragraph of this EAD.

(i) If both down lock springs of the LH MLG or both down lock springs of the RH MLG do have an affected part according to the (a)(2) paragraph of this EAD, before the next flight, replace at least one affected spring of the LH and one affected spring of the RH MLG, as applicable, with new ones bearing the same P/N with a non-affected part 2. Replace the other affected spring of the LH and the other affected spring of the RH MLG, as applicable, within the next 100 FC or 4 months after the effective date of this EAD, whichever occurs first, with new ones bearing the same P/N with a non-affected part 2.

(ii) If only one down lock spring of the LH MLG or only one down lock spring of the RH MLG does have an affected part according to the (a)(2) paragraph of this EAD, within the next 100 FC or 4 months after the effective date of this EAD, whichever occurs first, replace the affected spring of the LH and the affected spring of the RH MLG, as applicable, with new ones bearing the same P/N with a non-affected part 2.

(iii) If both down lock springs of the LH MLG and both down lock springs of the RH MLG do not have an affected part according to the (a)(2) paragraph of this EAD, no action is required at this time.

NOTE 3: For the purposes of this EAD, a non-affected part 2 is an airworthy part according to the applicable requirements and is not an affected part according to the (a)(2) paragraph of this EAD.

(d) Prohibition of parts installation.

After the effective date of this EAD, it is prohibited to install on the airplane the affected parts described in the paragraph APPLICABILITY of this EAD.

(e) Interim action.

This EAD is considered an interim action. The ANAC may consider further mandatory actions.

(f) Credit for previous actions.

This paragraph provides credit for the actions specified in paragraphs **(b)** and **(c)** of this EAD, if those actions were performed before October 21, 2024, the effective date of this EAD, according to the detailed instructions and procedures described in the Embraer Service Bulletin No. 550-32-0019, original issue, dated October 09, 2024.

(g) Alternative methods of compliance (AMOCs).

A different method or a different compliance time, with the requirements of this AD, may be used if approved by the Manager of the Continuing Airworthiness Technical Branch (GTAC) of ANAC.

(h) Material incorporated by reference.

You must use the Embraer Service Bulletin No. 550-32-0019, revision 01, dated October 11, 2024; or further revisions approved by ANAC, to do the actions required by this AD, unless this AD specifies otherwise.

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

CONTACT:

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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).