



AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRAZIL

BRAZILIAN AIRWORTHINESS DIRECTIVE

AD No.: 2022-09-01R1

Effective Date: 02 Jun. 2023

The following Brazilian Airworthiness Directive (AD), 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.

AD No. 2022-09-01R1 - EMBRAER / 39-1523.

APPLICABILITY:

(a) This Airworthiness Directive (AD) applies to Embraer S.A. airplanes model ERJ 190-300 and ERJ 190-400 with Serial Number (S/N) identified below.

(1) Airplanes with S/N 19020029, 19020034 thru 19020036, 19020039, and 19020042 thru 19020045, as identified in Embraer Service Bulletin N. 190E2-27-0017, revision 3, dated October 3, 2022.

(2) Airplanes with 19020022, 19020024 thru 19020027, 19020029, 19020031, 19020034 thru 19020036, 19020040, and 19020042 thru 19020045, as identified in Embraer Service Bulletin N. 190E2-27-0017, revision 3, dated October 3, 2022.

(3) Airplanes with 19020028 and 19020039, as identified in Embraer Service Bulletin N. 190E2-27-0017, revision 3, dated October 3, 2022.

(4) Airplanes with 19020021, 19020023, 19020032, 19020033, and 19020038, as identified in Embraer Service Bulletin N. 190E2-27-0017, revision 3, dated October 3, 2022.

NOTE: Observe that the airplanes with S/N identified in paragraph **(a)(1)** may also be identified in paragraphs **(a)(2)** to **(a)(4)** of the revision 1 of this AD.

CANCELLATION / REVISION:

This AD cancels and supersedes the AD No. 2022-09-01 / 39-1500, dated 07 September 2022, and is being issued to revise its applicability and associate compliance.

REASON:

It has been detected some Power Control Units (PCU) of the airplane elevators and rudder surfaces excessively operated, when disengaged, during manufacturing line hydraulic decontamination procedures, which may damage these PCU internal parts accelerating their wearing. The accelerated wear in both PCU of these flight control surfaces may leave them unprotected from aeroelastic phenomena and compromise the airplane structural integrity.

Since this condition may occur in other airplanes of the same type and affects flight safety, a corrective action is required. Thus, sufficient reason exists to request compliance with this AD in the indicated time limit.

REQUIRED ACTION:

Replacement of the airplane elevators and rudder PCU.

COMPLIANCE:

Required as indicated below, unless already accomplished.

(b) Replacement of the Left Hand (LH) and Right Hand (RH) elevators PCU.

For airplanes identified in the paragraph **(a)(1)** of the revision 1 of this AD, within the next 7,500 Flight Hours (FH) or 36 months after 07 September 2022, the effective date of original issue of this AD, whichever occurs first, replace both PCU with Part Number (P/N) CB67100-003 of the LH and RH airplane elevators by other ones airworthy bearing the same P/N.

(c) Replacement of the lower and upper rudder PCU.

For airplanes identified in the paragraph **(a)(2)** of the revision 1 of this AD, within the next 7,500 FH or 36 months after 07 September 2022, the effective date of original issue of this AD, whichever occurs first, replace both lower and upper rudder PCU with P/N CB66900-002 of the airplane rudder by other ones airworthy bearing the same P/N.

(d) Replacement of the upper rudder PCU.

For airplanes identified in the paragraph **(a)(3)** of the revision 1 of this AD, within the next 7,500 FH or 36 months after 07 September 2022, the effective date of original issue of this AD, whichever occurs first, replace the upper rudder PCU with P/N CB66900-002 of the airplane rudder by other one airworthy bearing the same P/N.

(e) Replacement of the lower rudder PCU.

For airplanes identified in the paragraph **(a)(4)** of the revision 1 of this AD, within the next 7,500 FH or 36 months after 07 September 2022, the effective date of original issue of this AD, whichever occurs first, replace the lower rudder PCU with P/N CB66900-002 of the airplane rudder by other one airworthy bearing the same P/N.

NOTE: For the purposes of this AD, a PCU will be airworthy when it is new or it has been properly repaired and considered suitable for return to service.

(f) Credit for previous actions.

This paragraph provides credit for the actions specified in paragraph **(b)**, **(c)**, **(d)** and **(e)** of the revision 1 of this AD, if those actions were performed before the effective date of this AD according to Embraer Service Bulletin N. 190E2-27-0017, original issue, dated April 29, 2021, Embraer Service Bulletin N. 190E2-27-0017, revision 1, dated August 10, 2021 or Embraer Service Bulletin N. 190E2-27-0017, revision 2, dated November 30, 2021.

(g) Alternative methods of compliance (AMOCs).

(1) 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.

(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 AD. 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 be deviated 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 the Embraer Service Bulletin N. 190E2-27-0017, revision 3, dated October 3, 2022; 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:

For additional technical information, contact:

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APPROVAL:

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