



AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRAZIL

BRAZILIAN AIRWORTHINESS DIRECTIVE

AD No.: 2024-04-02R01

Effective Date: 31 May 2024

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. 2024-04-02R01 - (EMBRAER) / 39-1562.

APPLICABILITY:

(a) This Airworthiness Directive (AD) applies to Embraer S.A. airplane models EMB-120, EMB120RT, EMB-120ER, EMB-120FC e EMB-120QC; all serial numbers.

CANCELLATION / REVISION:

This AD cancels and supersedes the AD No. 2024-04-02 / 39-1547, effective date April 26, 2024, and is being issued to include a grace period for airplanes that have accumulated flight cycles close to the initial inspection limit. In addition, this revision includes the actions required if discrepancies are detected.

REASON:

The reason for this AD is a structural assessment, which indicated that certain Fuselage Center I longitudinal skin splices may be subjected to damage at multiple sites. The cracks in scenarios associated with damage at multiple sites are typically too small to be reliably detected with current inspection methods. Without intervention, these cracks may grow, and eventually compromise the structural integrity of the airplane. This AD is being issued to avoid undetected fuselage crack propagation, which may result in a reduction in the aircraft's structural integrity.

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:

Initial and repetitive inspection of the Fuselage Center I longitudinal skin splice and Fuselage Center I skin panel - frames 22 and 23.

COMPLIANCE:

Required as indicated below, unless already accomplished.

(b) Initial Inspection of the Fuselage center I longitudinal skin splice - frames 22 and 23.

(1) For airplanes identified in paragraph **(a)** of this AD, before the airplane accumulates 50,000 Flight Cycles (FC), carry out a high-frequency eddy current inspection of the fuselage center I longitudinal skin splice - frames 22 and 23, from the internal and external side of the fuselage, according to instructions provided at EMB-120 NONDESTRUCTIVE INSPECTION MANUAL- NDI - 120/985 - task number 5320-240-06 I, dated March 22, 2024 or further revisions approved by ANAC.

(2) For airplanes identified in paragraph **(a)** of this AD that have accumulated more than 49,200 FC in the effective date of this AD, carry out a high-frequency eddy current inspection of the fuselage center I longitudinal skin splice - frames 22 and 23, from the internal and external side of the fuselage, according to instructions provided at EMB-120 NONDESTRUCTIVE INSPECTION MANUAL- NDI - 120/985 - task number 5320-240-06 I, dated March 22, 2024 or further revisions approved by ANAC, in the next 800 FC.

(3) If any discrepancy is found, according to instructions provided in EMB-120 NONDESTRUCTIVE INSPECTION MANUAL - NDI - 120/985 - task number 5320-240-06 I, dated March 22, 2024 or further revisions approved by ANAC:

(i) refer to the Structural Repair Manual (SRM) for applicable instructions and allowable limits.

(ii) If the damage is not included in the SRM, consult Embraer for recommended repair instructions.

(c) Repetitive Inspection of the Fuselage center I longitudinal skin splice - frames 22 and 23.

For airplanes identified in paragraph **(a)** of this AD, repeat the inspections required by paragraph **(b)** of this AD at intervals not exceeding 5,000 FC.

(d) Initial inspection of the Fuselage center I skin panel from the external side of the fuselage - frames 22 and 23.

(1) For airplanes identified in paragraph **(a)** of this AD, before the airplane accumulates 50,000 FC, carry out a high-frequency eddy current inspection of the Fuselage center I skin panel - frames 22 and 23, from the external side of the fuselage, according to instructions provided at EMB-120 NONDESTRUCTIVE INSPECTION MANUAL- NDI - 120/985 - task number 5320-240-06 I, dated March 22, 2024 or further revisions approved by ANAC.

(2) For airplanes identified in paragraph **(a)** of this AD that have accumulated more than 49,200 FC in the effective date of this AD, carry out a high-frequency eddy current inspection of the Fuselage center I skin panel - frames 22 and 23, from the external side of the fuselage, according to instructions provided at EMB-120 NONDESTRUCTIVE INSPECTION MANUAL- NDI - 120/985 - task number 5320-240-06 I, dated March 22, 2024 or further revisions approved by ANAC, in the next 800 FC.

(3) If any discrepancy is found, according to instructions provided in EMB-120 NONDESTRUCTIVE INSPECTION MANUAL - NDI - 120/985 - task number 5320-240-06 I, dated March 22, 2024 or further revisions approved by ANAC:

(i) refer to the Structural Repair Manual (SRM) for applicable instructions and allowable limits.

(ii) If the damage is not included in the SRM, consult Embraer for recommended repair instructions.

(e) Repetitive inspection of the Fuselage center I skin panel from the external side of the fuselage - frames 22 and 23.

For airplanes identified in paragraph (a) of this AD, repeat the inspections required by paragraph (d) of this AD at intervals not exceeding 5,000 FC.

(f) Notification of inspection report

Within the next 96 hours after each inspection conducted according to paragraphs (b), (c), (d) and (e) of this AD, submit an inspection report to pac@anac.gov.br and also to fleet.performance@embraer.com.br and fleet.reliability@embraer.com.br , containing, at least, the following data:

(1) Date of inspection.

(2) Airplane serial number

(3) Total flight hours and cycles accumulated by the airplane on the inspection date.

(4) Results of the inspection.

(g) Alternative methods of compliance (AMOCs).

A different method or a different compliance time from 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 EMB-120 NONDESTRUCTIVE INSPECTION MANUAL- NDI - 120/985 - task number 5320-240-06 I, dated March 22, 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:

For additional technical information, contact:

National Civil Aviation Agency (ANAC)

Continuing Airworthiness Technical Branch (GTAC)

Rua Doutor Orlando Feirabend Filho, nº 230 Centro Empresarial Aquárium - Torre B - 14º ao 18º andares

Parque Residencial Aquárium

ZIP 12246-190 - São José dos Campos - SP

E-mail: pac@anac.gov.br

APPROVAL:

ROBERTO JOSÉ SILVEIRA HONORATO
Head of Airworthiness Department
ANAC

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).

Referência: Processo nº 00066.500011/2016-04

SEI nº 10026889