AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRAZIL

BRAZILIAN AIRWORTHINESS DIRECTIVE

AD No.: 1999-02-01R7 **Effective Date: 06 Mai. 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. 1999-02-01R7 - EMBRAER / 39-1548.

APPLICABILITY:

This Airworthiness Directive (AD) applies to all Embraer S.A. EMB-145( ) aircraft models in operation, except the EMB-135( ) aircraft models.

CANCELLATION / REVISION:

This AD cancels and supersedes the AD No. 1999-02-01R6 – Amdt 39-1027, dated 21 jul. 2004, and is being issued to correct the visual inpection task number referenced in the previous AD.

REASON:

It has been found the occurrence of broken rod ends of the aileron PCA in different aircraft, either at the aileron or at the wing structure connection points, and, posteriorly, several failures have also occurred in the aileron PCA fittings at the wing side.

After AD 1999-0201R6 was issued it was identified that the visual inspection task number referenced on requirement (c) of that AD (AMM TASK 27-12-01-212-002-A00, "*Aileron PCA Rod Ends/Fitting, Lugs for Integrity and General Condition*") was incorrect. This revision 7 is being issued to replace the task reference to MRB-145/1150 TASK 27-12-01-212-002-A00.

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

REQUIRED ACTION:

Visual inspection for structural integrity and implementation of reinforcements in the aileron PCA rod ends and fittings; and installation of a new PCA.

COMPLIANCE:

Required as indicated below, unless already accomplished.

Repetitive Inpections

(a) For aircraft with PCA P/N 394900-1003, 394900-1005 or 394900-1007: from 21 jul. 2004 (effectivity date of AD 1999-02-01, revision 6), in intervals as especified on item (a)(3) below, perform a repetitive visual inspection of all rod ends and fittings in each PCA (RH and LH) at the aileron and wing structure connection points, using a mirror and flashlight, in accordance with Embraer Service Bulletin No. 145-27-0054 Rev. 2, or further revisions approved by ANAC.

1. If any rod end is found cracked or failed, the PCA must be replaced by a new one P/N 418800-1003, 418800-9003, 418800-1005, 418800-9005, 418800-1007 or 418800-9007, in accordance with Embraer Service Bulletin No. 145-27-0062, original issue, or further revisions approved by ANAC.
2. If any PCA fitting in the wing or aileron side is found cracked or failed, replace it by a new reinforced wing or aileron side PCA fittings in accordance with Embraer Service Bulletins Nos. 145-57-0019 Rev. 1 or 145-27-0061 Rev. 1, as applicable, or further revisions approved by ANAC.
3. The intervals of accomplishment for the repetitive visual inspection of all rod ends and fittings in each PCA (RH and LH) at the aileron and wing structure connection points are as follows:

   (i) For aircraft equipped with PCA P/N 394900-1003 or 394900-1005, at intervals not exceeding 25 flight hours or 3 operating days, whichever occurs later;

   (ii) For aircraft equipped with PCA P/N 394900-1007, at intervals not exceeding 100 flight hours or 14 operating days, whichever occurs later.

(b) For aircraft with PCA P/N 394900-1003, 394900-1005, 394900-1007, 418800-1001, 418800-1003, 418800-9003, 418800-1005, 418800-9005, 418800-1007 or 418800-9007: from 21 jul. 2004 (effectivity date of AD 1999-02-01, revision 6), before the aircraft completes 6000 operating cycles, install the new fittings and reinforcements in accordance with Embraer Service Bulletin Nos. 145-57-0019 Rev. 1 and 145-27-0061 Rev. 1, or further revisions approved by ANAC.

(c) For aircraft equipped with new ailerons PCA P/N 418800-1001, 418800-1003, 418800-9003, 418800-1005, 418800-9005, 418800-1007 or 418800-9007, in conjunction with the new PCA fittings and reinforcement provisions referred on item (b) above, from 21 jul. 2004 (effectivity date of AD 1999-02-01, revision 6), perform visual inspections in accordance with MRB-145/1150 TASK 27-12-01-212-002-A00 every 500 flight hours.

Terminal action

(d) Aircraft equipped with new aileron PCA P/N 418800-1001, 418800-1003, 418800-9003, 418800-1005, 418800-9005, 418800-1007 or 418800-9007, PCA and damper fittings and reinforcements, and aileron damper P/N 41012130-103 or 41012130-104, installed in production line or by incorporation of the Embraer Service Bulletins Nos. 145-27-0063, original issue (damper installation), 145-27-0061 Rev. 1 (aileron damper fitting and reinforcement installation), 145-57-0019 Rev. 1

(wing damper fitting installation) and 145-27-0062, original issue (PCA installation), or further revisions approved by ANAC, are no longer subjected to the provisions of this AD provided the visual inspection of the PCA and damper terminals and fittings at the wing and aileron sides, for structural integrity, established in the EMB-145 MRB document for every 1000 flight hours, are implemented.

Reference publications

(e) The detailed instructions and procedures to accomplish this AD are described in the Embraer Service Bulletins Nos. 145-27-0054 Rev. 2, 145-27-0061 Rev. 1, 145-27-0062, original issue, 145-27-0063, original issue, and 145-57-0019 Rev. 1, or further revisions approved by ANAC.

(f) Register the incorporation of this AD in the applicable maintenance records.

Alternative Means of Compliance (AMOC)

(g) 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 (Gerência Técnica de Aeronavegabilidade Continuada - GTAC).

CONTACT:

For additional technical information, contact:

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APPROVAL:

Original in Portuguese language available at the Continuing Airworthiness Technical Branch (GTAC) of the National Civil Aviation Agency (ANAC). Signed by:

ROBERTO JOSÉ SILVEIRA HONORATO

Head of Department

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ANAC