



**AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL – BRAZIL**

**BRAZILIAN AIRWORTHINESS DIRECTIVE**

**AD No.: 2006-10-01R2**

**Effective Date: 11 May 2010**

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 de Homologação Aeronáutica (RBHA) 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. 2006-10-01R2 - EMBRAER - Amendment 39-1296.**

**APPLICABILITY:**

This Airworthiness Directive is applicable to Embraer models EMB-110 (FAB C-95), EMB-110C, EMB-110E, EMB-110F, EMB-110P, EMB-110B1, EMB-110S1, EMB-110P2, EMB-110K1, EMB-110P1 and EMB-110( ) airplanes.

**CANCELLATION / REVISION:**

This AD cancels and supersedes the AD No. 2006-10-01R1 – Amdt 39-1204, dated 30 Aug. 2007, and is being issued to modify its APPLICABILITY and REQUIRED ACTION paragraphs and to include new requirements in its COMPLIANCE.

**REASON:**

It has been found cases of corrosion at the regions of Wings-to-Fuselage attachments, Vertical Stabilizer to Fuselage attachments, Rib 1 Half-wing and Passenger Seat Tracks. Such corrosion may lead to subsequent cracking of the affected parts, compromising the aircraft structural integrity, which may in turn lead to structural failure and/or loss of some control surface.

Since this condition may occur in other aircraft 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:**

Modification of operator's approved maintenance plan and inspection for corrosion at the regions of Wings-to-Fuselage attachments, Vertical Stabilizer to Fuselage attachments, Rib 1 Half-wing and Passenger Seat Tracks and, if applicable, removal of the detected corrosion.

**COMPLIANCE:**

Required as indicated below, unless already accomplished.

**PART I** - Within the next 30 days or 100 flight hours after 25 Oct. 2006, the effective date of the original issue of this AD, whichever occurs first, carry out a general visual inspection (GVI) for corrosion at the regions of wings-to-fuselage attachments, vertical stabilizer to fuselage attachments, rib 1 half-wing and passenger seat tracks, according to Parts I, II and III of the Embraer Service Bulletin No. 110-00-0007 original issue, or further revisions approved by ANAC. All structure found corroded or cracked as a result of the inspections conducted above, must be addressed in accordance with detailed instructions and procedures described in the Embraer Service Bulletin No. 110-00-0007 original issue, or further revisions approved by the ANAC.

**NOTE:** Previous accomplishment of the Embraer Alert Service Bulletin No. 110-00-A007 original issue, or further revisions approved by ANAC, or the implementation of the tasks above required by Section VI of Maintenance Planning Guides TP 110P2/145, PM 110/652 or PM 110/165, released by Embraer, are considered acceptable means of compliance with the requirements of PART I of this AD.

**PART II -** No later than 31 Dec. 2006, accomplish Part IV of the Embraer Service Bulletin No. 110-00-0007 original issue, or further revisions approved by ANAC. All structure found corroded or cracked, as a result of the inspections conducted above, must be addressed in accordance with detailed instructions and procedures described in the Embraer Service Bulletin No. 110-00-0007 original issue, or further revisions approved by the ANAC.

**PART III -** No later than 31 Dec. 2007, accomplish Part V of the Embraer Service Bulletin No. 110-00-0007 original issue, or further revisions approved by ANAC. All structure found corroded or cracked, as a result of the inspections conducted above, must be addressed in accordance with detailed instructions and procedures described in the Embraer Service Bulletin No. 110-00-0007 original issue, or further revisions approved by the ANAC.

**PART IV -** No later than 31 Dec. 2009, accomplish the detailed instructions and procedures described in the Embraer Service Bulletin No. 110-57-0026 Rev. 03, or further revisions approved by ANAC. The accomplishment start must occur within the next 30 days after the effective date of the revision 01 of this AD, as follows:

(a) Carry out a GVI on external and internal auxiliary fittings and forward and rear fittings, located on external areas of wing (refer to CPM 110/1413 – Corrosion Prevention Manual – Section 57 – Wings – Task 57-F – Rib Assembly No. 1 – Inspection and Repair). Repeat this inspection every 6 months;

(b) Carry out a detailed visual inspection (DET) on the regions of eyelets of main fittings of wing-to-fuselage attachments (refer to CPM 110/1413 – Corrosion Prevention Manual – Section 53 – Fuselage – Task 53-F – Attachment Points of the Spar Cap and Spar Web, and Auxiliary Fitting Assembly of Bulkheads 16 and 18 – Inspection and Repair and Task 53-G – Wing-to-Fuselage Attachment Fitting (Bulkheads 16 and 18) – Inspection and Repair). Repeat this inspection every 6 months; and,

(c) Carry out a GVI on internal auxiliary fittings and forward and rear fittings located within the fuel tanks (refer to CPM 110/1413 – Corrosion Prevention Manual – Section 57 – Wings – Task 57-F – Rib Assembly No. 1 – Inspection and Repair). Repeat this inspection every 12 months.

In performing the above inspections, all structure found corroded or cracked must be treated in accordance with the detailed instructions and procedures described in the Embraer Service Bulletin No. 110-57-0026 Rev. 03, or further revisions approved by the ANAC.

**NOTE 1:** If the aircraft has previously accomplished CPCP Implementation Tasks 53-F, 53-G and 57-F, the inspections required by this Part IV do not need to start within the next 30 days after the effective date of this Revision 01 of AD. Nevertheless, all actions required by Part IV of this AD must be accomplished prior to the deadline of 31 Dec. 2009.

**NOTE 2:** After accomplishment of Embraer Service Bulletin No. 110-57-0026 Rev. 3 or further revisions approved by ANAC, the repetitive inspections described in part IV of this AD are no longer necessary.

**PART V -** Within the next 6 months after the effective date of the revision 2 of this AD; revise the operator's approved maintenance plan to include all tasks contained in Section VI of Maintenance Planning Guides (MPG) PM 110/165, Rev. 24 or PM 110/652, Rev. 25 or TP 110P2/145, Rev. 23 or their further revisions issued by Embraer obeying the intervals determined within these documents. In case the airplane has exceeded the new thresholds after the accomplishment of PART V of this AD, the tasks with expired intervals must be accomplished within the next two months after the incorporation of the CPCP to the operator's approved maintenance plan. Tasks with non-expired repetitive inspection intervals must comply with the intervals determined in the respective MPG.

**PART VI -** Additional requirements for Authority reporting system: If, as a result of any inspection conducted as required by Parts I, II, III, IV and V of this AD, corrosion or cracks are found, these data must be reported to the ANAC - Aeronautical Products Certification Branch within the next 96 hours after such finding.

**NOTE 1:** For the purpose of this AD, a general visual inspection (GVI) is: “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 purpose of this AD, a detailed inspection (DET) is: “An intensive examination of a specific item, installation or assembly to detect damage, failure or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirrors, magnifying lenses, etc., may be necessary. Surface cleaning and elaborate access procedures may be required.”

The detailed instructions and procedures to accomplish this AD are described in the Embraer Alert Service Bulletin No. 110-00-A007 original issue, in the Embraer Service Bulletins Nos. 110-00-0007 original issue, 110-57-0026 Rev. 03, or respective further revisions approved by ANAC, and in Section VI of Maintenance Planning Guides PM 110/165, Rev. 24 or PM 110/652, Rev. 25 or TP 110P2/145, Rev. 23 or their further revisions issued by Embraer.

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

**CONTACT:**

For additional technical information, contact:

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**NOTE:** Original in Portuguese language signed and available in the files of the Aeronautical Products Certification Branch (GGCP) of the National Civil Aviation Agency (ANAC).