



AIRWORTHINESS DIRECTIVE

CIVIL AVIATION AUTHORITY
CZECH REPUBLIC
Airworthiness Division

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Number: CAA-AD-053/2004

Date of issue: June 10, 2004

**EMBRAER
EMB-145()**

This AD has been issued in accordance with Decision No.: 2/2003 of the Executive Director of the EASA (ADs issued by the state of design are automatically adopted in EU member states).

AIRCRAFT - POWER CONTROL ACTUATOR - INSPECTION/REPLACEMENT

Applicability: Embraer EMB-145() aircraft models in operation, except the EMB-135() aircraft models.

Effective date: August 05, 2004

Compliance: Required as indicated DAC AD 1999-02-01 R6.

Remarks: The compliance of this AD must be recorded in Aircraft Logbook, where applicable the requirements of this AD must be integrated into Aircraft Technical Documentation. Address inquiries concerning this AD to: Civil Aviation Authority, Airworthiness Division, Ruzyně Airport, 160 08 Prague 6, Czech Republic, tel.: 420 2 33320922, fax: 420 2 20562270.

Ing. Pavel MATOUŠEK
Director

BRAZILIAN AIRWORTHINESS DIRECTIVE
AD No.: 1999-02-01R6

EFFECTIVE DATE: 21 Jun. 2004

The following Airworthiness Directive (AD), issued by the Departamento de Aviação Civil (DAC) 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. 1999-02-01R6 - EMBRAER - Amendment 39-1027.

APPLICABILITY:

This Airworthiness Directive is applicable to all Embraer EMB-145() aircraft models in operation, except the EMB-135() aircraft models.

CANCELLATION / REVISION:

This AD cancels and supersedes the AD No. 1999-02-01R5 – Amdt 39-996, dated 02 jul. 2003, and is being issued to include a new aileron damper P/N.

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, more recently, several failures have also occurred in the aileron PCA fittings at the wing side.

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.

(a) Aircraft with PCA P/N 394900-1003, 394900-1005 or 394900-1007: 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 the CTA.

(1) If any rod end is found cracked or failed, the PCA must be replaced by new ones 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 the CTA.

(2) If any PCA fitting in the wing or aileron side is found cracked or failed, replace by 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 the CTA.

(3) The time 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 is 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) 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:

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 the CTA.

(c) 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, perform the visual inspections in accordance with AMM TASK 27-12-01-212-002-A00, "Aileron PCA Rod Ends/Fitting, Lugs for Integrity and General Condition" every 500 flight hours.

(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 the CTA, are no longer subject 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.

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 the CTA.

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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NOTE: Original in Portuguese language signed and available in the files of the Registro Geral de Aeronavegabilidade (RGA/TE-1/STE) of the Departamento de Aviação Civil.