

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-20223; Directorate Identifier 2004-NM-193-AD; Amendment 39-14334; AD 2005-20-37]

RIN 2120-AA64

Airworthiness Directives; Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model EMB-135BJ, -135ER, -135KE, -135KL, -135LR, -145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all EMBRAER Model EMB-135 airplanes and Model EMB-145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP airplanes. This AD requires repetitive detailed inspections for surface bruising of the main landing gear (MLG) trailing arms and integrity of the MLG pivot axle sealant, and corrective actions if necessary. This AD also provides for optional terminating action for the repetitive detailed inspections. This AD results from a report of a fractured axle of the trailing arm of the MLG due to corrosion of the axle. We are issuing this AD to prevent a broken trailing arm and consequent failure of the MLG, which could lead to loss of control and damage to the airplane during takeoff or landing.

DATES: This AD becomes effective November 16, 2005.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of November 16, 2005.

ADDRESSES: You may examine the AD docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., Nassif Building, room PL-401, Washington, DC.

Contact Empresa Brasileira de Aeronautica S.A. (EMBRAER), P.O. Box 343–CEP 12.225, Sao Jose dos Campos–SP, Brazil, for service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: **Todd** Thompson, Aerospace Engineer, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1175; fax (425) 227-1149.

SUPPLEMENTARY INFORMATION:

Examining the Docket

You may examine the AD docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the street address stated in the ADDRESSES section.

Discussion

The FAA issued a supplemental notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to certain EMBRAER Model EMB-135 and -145 series airplanes. That supplemental NPRM was published in the Federal Register on August 11, 2005 (70 FR 46788). That supplemental NPRM proposed to require repetitive detailed inspections for surface bruising of the main landing gear (MLG) trailing arms and integrity of the MLG pivot axle sealant, and corrective actions if necessary. The supplemental NPRM also proposed to provide optional terminating action for the repetitive detailed inspections.

Comments

We provided the public the opportunity to participate in the development of this AD. No comments have been received on the supplemental NPRM or on the determination of the cost to the public.

Clarification of Costs of Compliance

We determined that the Costs of Compliance of the supplemental NPRM did not clearly indicate that airplanes having MLGs installed that do not have cardan assembly part number (P/N) 2309-2041-003 installed are not subject to all requirements of the AD. We have revised the Costs of Compliance to clarify that only airplanes having MLGs installed that do have cardan assembly P/N 2309-2041-003 installed are subject to all requirements of this AD.

Clarification of Alternative Method of Compliance (AMOC) Paragraph

We have revised this action to clarify the appropriate procedure for notifying the principal inspector before using any approved AMOC on any airplane to which the AMOC applies.

Correction of Typographical Error

Paragraph (j) of this AD is required for all subject MLGs intended to be installed on any affected airplane after the effective date of this AD, therefore, the last sentence of paragraph (f) of the AD should read " * * * except as provided by paragraph (j) of this AD." However, we noticed that paragraph (f) of the supplemental NPRM reads " * * * except as provided by paragraph (i) of this AD." We have revised paragraph (f) of the AD accordingly to correct this typographical error from (i) to (j) as described.

We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD with the changes described previously. We have determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

This AD will affect about 488 airplanes of U.S. registry.

The part number verification will take about 1 work hour per airplane, at an average labor rate of \$65 per work hour. Based on these figures, the estimated cost of the required inspection for U.S. operators is \$31,720, or \$65 per airplane.

If required, the inspection of the MLG trailing arm surface and pivot axle sealant will take about 1 work hour per airplane, at an average labor rate of \$65 per work hour. Based on these figures, the estimated cost of the inspection for U.S. operators is up to \$31,720, or \$65 per airplane, per inspection cycle.

If required, the replacement of the MLG cardan and inspection of the internal surface of the MLG trailing arm pivot axle will take about 1 work hour per MLG (two MLGs per airplane), at an average labor rate of \$65 per work hour. Required parts will cost about \$3,500 per cardan. Based on these figures, the estimated cost of these actions for U.S. operators is \$7,130 per airplane.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866;
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The Federal Aviation Administration (FAA) amends § 39.13 by adding the following new airworthiness directive (AD):

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at www.faa.gov/aircraft/safety/alerts/

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2005-20-37 Empresa Brasileira De Aeronautica S.A. (EMBRAER): Amendment 39-14334.
Docket No. FAA-2005-20223; Directorate Identifier 2004-NM-193-AD.

Effective Date

- (a) This AD becomes effective November 16, 2005.

Affected ADs

- (b) None.

Applicability

- (c) This AD applies to all EMBRAER Model EMB-135BJ, -135ER, -135KE, -135KL, -135LR, -145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP airplanes, certificated in any category.

Unsafe Condition

- (d) This AD was prompted by a report of a fractured axle of the trailing arm of the main landing gear (MLG) due to corrosion of the axle. We are issuing this AD to prevent a broken trailing arm and consequent failure of the MLG, which could lead to loss of control and damage to the airplane during takeoff or landing.

Compliance

- (e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Part Number Verification

- (f) Within 600 flight hours or 180 days after the effective date of this AD, whichever occurs first, inspect the left and right MLG to determine whether cardan assembly part number (P/N) 2309-2041-003 is installed. A review of airplane maintenance records is acceptable in lieu of this inspection if the P/N of the cardan assembly can be conclusively determined from that review. If cardan P/N 2309-2041-003 is not installed in the MLG, no further action is required for that MLG, except as provided by paragraph (j) of this AD. If cardan P/N 2309-2041-003 is installed in the MLG, continue with paragraph (g) of this AD.

Inspection

(g) Within 600 flight hours or 180 days after the effective date of this AD, whichever occurs first, perform a detailed inspection for surface bruising of the MLG trailing arms and integrity of the MLG pivot axle sealant; in accordance with the Accomplishment Instructions of EMBRAER Service Bulletin 145-32-0091, Change 01, dated July 1, 2004. If no sign of sealant failure or bruising of the trailing arm is found, repeat the inspection thereafter at intervals not to exceed 5,500 flight hours or 24 months, whichever occurs first, until paragraph (h) of this AD has been accomplished.

Note 1: For the purposes of this AD, a detailed inspection 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 mirror, magnifying lenses, etc., may be necessary. Surface cleaning and elaborate procedures may be required."

Corrective/Terminating Actions

(h) If any sign of sealant failure or bruising of either trailing arm surface is found during any inspection required by paragraph (g) of this AD, prior to further flight, do paragraphs (h)(1), (h)(2), and (h)(3) of this AD. Do the actions in accordance with the Accomplishment Instructions of EMBRAER Service Bulletin 145-32-0091, Change 01, dated July 1, 2004. Accomplishment of paragraph (h) of this AD for any MLG ends the repetitive inspections required by paragraph (g) for that MLG.

(1) Repair any bruising of the trailing arm surface.

(2) Replace the MLG cardan with a new, improved cardan having P/N 2309-2041-401.

(3) Perform a detailed inspection for corrosion of the internal surface of the trailing arm pivot axle.

(i) If no corrosion is found, prior to further flight, apply protective paint and corrosion inhibitors.

(ii) If corrosion is found, prior to further flight, replace the pivot axle with a new pivot axle and apply corrosion inhibitors.

Note 2: EMBRAER Service Bulletin 145-32-0091, Change 01, dated July 1, 2004, refers to Embraer Liebherr Equipamentos do Brasil S.A. (ELEB) Service Bulletin 2309-2002-32-04, Revision 01, dated May 24, 2004, as an additional source of service information for the inspection and repair of the MLG components. The ELEB service bulletin is included within the EMBRAER service bulletin.

Actions Accomplished According to Previous Issue of Service Bulletin

(i) Actions accomplished before the effective date of this AD according to EMBRAER Service Bulletin 145-32-0091, dated February 19, 2004, are considered acceptable for compliance with the corresponding actions specified in this AD.

Parts Installation

(j) As of the effective date of this AD, no person may install an MLG having a cardan assembly, part number 2309-2041-003, on any affected airplane, unless the requirements of paragraphs (g) and (h) of this AD, as applicable, have been accomplished.

Alternative Methods of Compliance (AMOCs)

(k)(1) The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) Before using any AMOC approved in accordance with § 39.19 on any airplane to which the AMOC applies, notify the appropriate principal inspector in the FAA Flight Standards Certificate Holding District Office.

Related Information

(l) Brazilian airworthiness directive 2004-08-02, dated September 3, 2004, also addresses the subject of this AD.

Material Incorporated by Reference

(m) You must use EMBRAER Service Bulletin 145-32-0091, Change 01, dated July 1, 2004, to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of this document in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Empresa Brasileira de Aeronautica S.A. (EMBRAER), PO Box 343–CEP 12.225, Sao Jose dos Campos–SP, Brazil, for a copy of this service information. You may review copies at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., room PL-401, Nassif Building, Washington, DC; on the Internet at <http://dms.dot.gov>; or at the National Archives and Records Administration (NARA). For information on the availability of this material at the NARA, call (202) 741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on September 28, 2005.

Kalene C. Yanamura,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 05-20066 Filed 10-11-05; 8:45 am]

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