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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2006-26598, Directorate Identifier 2006-CE-087-AD; Amendment 39-15733; AD 2008-23-12]

RIN 2120-AA64

Airworthiness Directives; Empresa Brasileira de Aeronautica S. A. (EMBRAER) Models EMB-110P1 and EMB-110P2 Airplanes

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

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) issued by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

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.

We are issuing this AD to require actions to correct the unsafe condition on these products.

DATES: This AD becomes effective December 22, 2008.

On December 22, 2008, the Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD.

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Karl Schletzbaum, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4146; fax: (816) 329-4090.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on July 8, 2008 (73 FR 38937). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

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 design and affects flight safety, a corrective action is required. Thus, sufficient reason exists to request compliance with this AD in the indicated time limit.

Inspection for corrosion at 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.

Comments

We gave the public the opportunity to participate in developing this AD. We have considered the comment received.

Embraer requests the FAA follow the required actions of the MCAI and work together with the operators to issue AMOCs to relieve them when the required actions are positively identified as unnecessary. Embraer does not agree with the technical modifications proposed in the supplemental NPRM. Embraer's position is that the service instructions developed by Embraer present the necessary actions to adequately address the reported unsafe condition.

Embraer also states that instructions presented in EMBRAER Service Bulletin S.B. No.: 110-00-0007, REVISION No.: 01, dated January 12, 2007, and EMBRAER Service Bulletin S.B. No.: 110-57-0026, REVISION No.: 03, dated April 2, 2007, were developed based on findings of severe corrosion in the worldwide EMB-110 fleet. Embraer does recognize that since corrosion growth depends on several variables, such as operational profile, climatic conditions, and the implementation of recommended preventive maintenance actions, these reports of severe corrosion may not represent the average situation of the fleet. However, Embraer can not assume the reports of severe corrosion are isolated findings.

The FAA does not agree. We previously reviewed comments from U.S. operators and have again reviewed service difficulty reports (SDRs) from the U.S. registered fleet. While there are some reports of corrosion relevant to the areas and topics of the MCAI, the magnitude and scope of the service difficulties in the U.S. fleet does not warrant the imposition of the entire requirements as described in the MCAI. We will continue to evaluate the other MCAI actions and monitor the corrosion issue. We may take future AD action.

We are not changing the AD as a result of this comment.

Conclusion

We reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting the AD as proposed.

Differences Between This AD and the MCAI or Service Information

We have reviewed the MCAI and related service information and, in general, agree with their substance. But we might have found it necessary to use different words from those in the MCAI to ensure the AD is clear for U.S. operators and is enforceable. In making these changes, we do not intend to differ substantively from the information provided in the MCAI and related service information.

We might also have required different actions in this AD from those in the MCAI in order to follow FAA policies. Any such differences are highlighted in a NOTE within the AD.

Costs of Compliance

Based on the service information, we estimate that this AD will affect 38 products of U.S. registry. We also estimate that it will take about 95 work-hours per product to comply with basic requirements of this AD. The average labor rate is \$80 per work-hour.

Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$288,800 or \$7,600 per product.

We have no way of determining the number of products that may need any necessary follow-on actions or the cost associated with those actions.

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 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 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.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains the NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

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 FAA amends § 39.13 by adding the following new AD:



2008-23-12 Empresa Brasileira de Aeronautica S. A. (EMBRAER): Amendment 39-15733;
Docket No. FAA-2006-26598; Directorate Identifier 2006-CE-087-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective December 22, 2008.

Affected ADs

- (b) None.

Applicability

- (c) This AD applies to Models EMB-110P1 and EMB-P2 airplanes, all serial numbers, certificated in any category.

Subject

- (d) Air Transport Association of America (ATA) Code 57: Wings.

Reason

- (e) The mandatory continuing airworthiness information (MCAI) states:

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 design and affects flight safety, a corrective action is required. Thus, sufficient reason exists to request compliance with this AD in the indicated time limit.

Inspection for corrosion at 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.

Actions and Compliance

- (f) Unless already done, do the following actions:

- (1) Within the next 30 days after December 22, 2008 (the effective date of this AD) or within the next 100 hours time-in-service after December 22, 2008 (the effective date of this AD), whichever occurs first, carry out a general visual inspection for corrosion at the regions of the wings-to-fuselage

attachments, vertical stabilizer-to-fuselage attachments, rib 1 half-wing, and passenger seat tracks, following Parts I, II, and III of the Embraer–Empresa Brasileira de Aeronautica S.A. (EMBRAER) Service Bulletin S.B. No.: 110-00-0007, REVISION No.: 01, dated January 12, 2007.

(i) Before further flight, all structures found corroded or cracked as a result of the inspections done above must be addressed following the detailed instructions and procedures described in EMBRAER Service Bulletin S.B. No.: 110-00-0007, REVISION No.: 01, dated January 12, 2007.

(ii) Previous accomplishment of EMBRAER Alert Service Bulletin S.B. No.: 110-00-A007, dated March 6, 2006, or the implementation of the tasks required by section VI of the Maintenance Planning Guides TP 110P2/145, PM 110/652, or PM 110/165, released by EMBRAER, are considered alternative methods of compliance (AMOC) with the requirements of (f)(1) and (f)(1)(i) of this AD.

(2) Within the next 36 months after December 22, 2008 (the effective date of this AD), do a visual and, as applicable, a dye-penetrant inspection in rib 1 external and internal regions, in the auxiliary fittings of the main box half-wings, and in the spar webs of half-wings. Do the inspections following paragraph 3. ACCOMPLISHMENT INSTRUCTIONS of EMBRAER Service Bulletin S.B. No.: 110-57-0026, REVISION No.: 03, dated April 2, 2007. Before further flight, all structures found corroded or cracked as a result of the inspections done above must be corrected following the detailed instructions and procedures described in EMBRAER Service Bulletin S.B. No.: 110-57-0026, REVISION No.: 03, dated April 2, 2007.

Note 1: The FAA is aware that most of the affected airplanes are maintained under operators' approved aircraft inspection and maintenance programs. The AD actions may be integrated into these existing inspection and maintenance programs. We will consider changes in the compliance time or alternative actions following the provisions of paragraph (g)(1) of this AD.

FAA AD Differences

Note 2: This AD differs from the MCAI and/or service information as follows: We determined the requirement to do Part IV and Part V of EMBRAER Service Bulletin S.B. No.: 110-00-0007, REVISION No.: 01, dated January 12, 2007, may go beyond addressing the unsafe condition listed in the MCAI. We have removed those actions from this AD. We will continue to evaluate the additional MCAI actions and monitor the corrosion issue. We may take future AD action if we determine an additional unsafe condition exists or is likely to develop.

Other FAA AD Provisions

(g) The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, Standards Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Karl Schletzbaum, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4146; fax: (816) 329-4090. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) Reporting Requirements: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), the Office of Management and Budget

(OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

Related Information

(h) Refer to MCAI Agencia Nacional de Aviacao Civil (ANAC) AD No.: 2006-10-01R1, dated August 30, 2007; EMBRAER Service Bulletin S.B. No.: 110-00-0007, REVISION No.: 01, dated January 12, 2007; and EMBRAER Service Bulletin S.B. No.: 110-57-0026, REVISION No.: 03, dated April 2, 2007; for related information.

Material Incorporated by Reference

(i) You must use EMBRAER Service Bulletin S.B. No.: 110-00-0007, REVISION No.: 01, dated January 12, 2007, and EMBRAER Service Bulletin S.B. No.: 110-57-0026, REVISION No.: 03, dated April 2, 2007, to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Empresa Brasileira de Aeronautica S. A., Av. Brig. Faria Lima 2170, 12227-901, Sao Jose dos Campos-SP, Brazil; phone: (+55 12) 3927 1000; e-mail: certif.@embraer.com.br; Internet: <http://www.embraer.com/english/content/home>.

(3) You may review copies at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 506, Kansas City, Missouri 64106; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Kansas City, Missouri, on November 4, 2008.

Patrick R. Mullen,
Acting Manager, Small Airplane Directorate,
Aircraft Certification Service.