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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0191; Directorate Identifier 2012-NM-035-AD; Amendment 39-16980; AD 2012-05-08]

RIN 2120-AA64

Airworthiness Directives; Empresa Brasileira de Aeronautica S.A. (EMBRAER) Airplanes

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

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for all Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model ERJ 170 airplanes. This AD requires repetitive inspections for fuel leakage and cracks on the wing spar II, close to the rib 10 area, and repair if necessary. This AD was prompted by reports of fuel seepage at the left-hand wing, close to the rib 10 area in two airplanes. We are issuing this AD to detect and correct cracking on the wing spar II, which could result in a fuel leak, consequent reduced structural integrity of the airplane, and possible fire.

DATES: This AD becomes effective April 4, 2012.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of April 4, 2012.

We must receive comments on this AD by May 4, 2012.

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Examining the AD Docket

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

FOR FURTHER INFORMATION CONTACT: Cindy Ashforth, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone 425-227-2768; fax 425-227-1149.

SUPPLEMENTARY INFORMATION:

Discussion

The Agência Nacional de Aviação Civil (ANAC), which is the aviation authority for Brazil, has issued Brazilian Airworthiness Directive 2012-02-01, dated February 22, 2012 (referred to after this as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

It has been found cases of fuel seepage at the Left Hand (LH) wing and close to the Rib 10 area in two different airplanes. Further investigation revealed that the seepage was caused by a crack at the LH wing spar II close to the Rib 10. The ANAC is issuing this AD to detect and correct cracking in the wing spar II, which could result in a fuel leak and reduced structural integrity of the airplane.

* * * * *

This AD requires repetitive general visual inspections for fuel leakage on the wing spar II, close to the rib 10 area; repetitive detailed inspections for cracks on the wing spar II, spar cap third, and main box lower skins of the wings, close to the rib 10 area; an eddy current inspection for cracks on the wing spar II if necessary; and repair if necessary. You may obtain further information by examining the MCAI in the AD docket.

Relevant Service Information

EMBRAER has issued Alert Service Bulletin 170-57-A053, dated February 13, 2012. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA's Determination and Requirements of This AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are issuing this AD because we evaluated all pertinent information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

Interim Action

This AD is considered interim action to address the unsafe condition. If final action is later identified, we might consider further rulemaking then.

Differences Between the AD and the MCAI or Service Information

The MCAI requires actions only for airplanes that have exceeded 12,000 total flight cycles, but the requirements of this (FAA) AD apply to all Model 170 airplanes.

For airplanes with fuel leakage but no crack, this AD, in paragraph (j)(2), requires repeating the general visual and detailed inspections. The MCAI does not require that this inspection be repeated under those conditions.

We have coordinated these differences with ANAC.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because of fuel leaks caused by spar cracks, which could result in reduced structural integrity of the wing, and possible fire. Therefore, we determined that notice and opportunity for public comment before issuing this AD are impracticable and that good cause exists for making this amendment effective in fewer than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not precede it by notice and opportunity for public comment. We invite you to send any written relevant data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2012-0191; Directorate Identifier 2012-NM-035-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

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 that this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;

2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);

3. Will not affect intrastate aviation in Alaska; and

4. 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.

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:



2012-05-08 Empresa Brasileira de Aeronautica S.A. (EMBRAER): Amendment 39-16980.
Docket No. FAA-2012-0191; Directorate Identifier 2012-NM-035-AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective April 4, 2012.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model ERJ 170-100 LR, -100 STD, -100 SE., and -100 SU airplanes; and Model ERJ 170-200 LR, -200 SU, and -200 STD airplanes; certificated in any category.

(d) Subject

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

(e) Reason

This AD was prompted by reports of fuel seepage at the left-hand wing, close to the rib 10 area in two airplanes. We are issuing this AD to detect and correct cracking on the wing spar II, which could result in a fuel leak, consequent reduced structural integrity of the airplane, and possible fire.

(f) Compliance

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

(g) General Visual Inspection for Fuel Leakage

At the applicable time specified in paragraph (g)(1), (g)(2), or (g)(3) of this AD: Do a general visual inspection for fuel leakage on the wings, close to the rib 10 area, while both tanks are fully fueled, in accordance with Part I of the Accomplishment Instructions of EMBRAER Alert Service Bulletin 170-57-A053, dated February 13, 2012.

Note 1 to paragraph (g) of this AD: Guidance on performing the inspection for fuel leakage can be found in Task 28-11-00-790-801-A, Wing Tank–Fueled Tank Leakage Check, of the EMBRAER 170/175 Aircraft Maintenance Manual.

(1) For airplanes that have accumulated 11,999 or fewer total flight cycles as of the effective date of this AD: Inspect before the accumulation of 12,000 total flight cycles, or within 150 flight cycles after the effective date of this AD, whichever occurs later.

(2) For airplanes that have accumulated more than 11,999 total flight cycles but fewer than 13,926 total flight cycles as of the effective date of this AD: Inspect within 150 flight cycles after the effective date of this AD.

(3) For airplanes that have accumulated more than 13,925 total flight cycles as of the effective date of this AD: Inspect before the accumulation of 14,075 total flight cycles, or within 75 flight cycles after the effective date of this AD, whichever occurs later.

(h) Detailed Inspection for Cracks (Leakage Found)

If any sign of fuel leakage is found during any inspection required by paragraph (g) of this AD, before further flight, do a detailed inspection for cracks on spar II, spar cap third, and main box lower skin of the wings, close to the rib 10, in accordance with Part II or Part III, as applicable, of the Accomplishment Instructions of EMBRAER Alert Service Bulletin 170-57-A053, dated February 13, 2012. Repeat the inspection thereafter at intervals not to exceed 50 flight cycles until accomplishment of the requirements of paragraph (j) of this AD.

(i) Detailed Inspection for Cracks (No Leakage Found)

If no sign of fuel leakage is found during the most recent inspection required by paragraph (g) of this AD, within 450 flight cycles after accomplishing the inspection, repeat the general visual inspection required by paragraph (g) of this AD and do a detailed inspection for cracks on spar II, spar cap third, and main box lower skin of the wings, close to the rib 10, in accordance with Part II and Part III of the Accomplishment Instructions of EMBRAER Alert Service Bulletin 170-57-A053, dated February 13, 2012. Repeat both inspections thereafter at intervals not to exceed 450 flight cycles.

(j) Special Detailed Inspection (Leakage Found)

If any fuel leakage is found during any inspection required by paragraph (g) or (i) of this AD: Within 150 flight cycles after the most recent inspection, do an eddy current special detailed inspection for cracks on spar II of the wings, and a defueled tank leak check for fuel leakage, in accordance with Part IV and Part V, as applicable, of the Accomplishment Instructions of EMBRAER Alert Service Bulletin 170-57-A053, dated February 13, 2012.

(1) If any crack is found: Do the actions specified in paragraph (k) of this AD.

(2) If no crack is found: Repeat the general visual inspection specified in paragraph (g) of this AD and the detailed inspection specified in paragraph (i) of this AD at intervals not to exceed 450 flight cycles.

(k) Repair

If any cracking or fuel leakage is found during any inspection or check required by this AD: Before further flight, repair using a method approved by either the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the Agência Nacional de Aviação Civil (ANAC) (or its delegated agent). Repair of any crack terminates the repetitive inspection requirements required by this AD for that side of the wing.

Note 2 to paragraph (k) of this AD: Guidance on the classification of "fuel leakage" and the disposition of fuel leaks can be found in Task 28-11-00-790-801-A, Wing Tank–Fueled Tank Leakage Check, of the EMBRAER 170/175 Aircraft Maintenance Manual.

(l) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, ANM-116, send it to ATTN: Cindy Ashforth, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone 425-227-2768; fax 425-227-1149. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(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.

(m) Special Flight Permits

Special flight permits, as described in Section 21.197 and Section 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199), are not allowed.

(n) Related Information

Refer to MCAI Brazilian Airworthiness Directive 2012-02-01, dated February 22, 2012; and EMBRAER Alert Service Bulletin 170-57-A053, dated February 13, 2012; for related information.

(o) Material Incorporated by Reference

(1) You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) of the following service information under 5 U.S.C. 552(a) and 1 CFR part 51:

(i) Embraer Alert Service Bulletin 170-57-A053, dated February 13, 2012.

(2) For service information identified in this AD, contact Empresa Brasileira de Aeronautica S.A. (EMBRAER), Technical Publications Section (PC 060), Av. Brigadeiro Faria Lima, 2170-Putim-12227-901 São Jose dos Campos-SP-BRASIL; telephone +55 12 3927-5852 or +55 12 3309-0732; fax +55 12 3927-7546; email distrib@embraer.com.br; Internet <http://www.flyembraer.com>.

(3) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(4) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at an NARA facility, 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 March 7, 2012.

Ali Bahrami,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.