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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-0175; Directorate Identifier 2009-NM-187-AD; Amendment 39-16319; AD 2010-11-14]

RIN 2120-AA64

Airworthiness Directives; Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model ERJ 190-100 STD, -100 LR, -100 IGW, -200 STD, -200 LR, and -200 IGW 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) originated 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:

During ERJ 190 airplane full scale fatigue test, cracks were found in some structural components of the airplane. Analysis of these cracks resulted in modifications on the airplane Airworthiness Limitation Items (ALI), to include new inspections tasks or modification of existing ones and its respective thresholds and intervals.

Failure to inspect these components according to the new tasks, thresholds and intervals could prevent a timely detection of fatigue cracks. Undetected fatigue cracks in these areas could adversely affect the structural integrity of these airplanes.

* * * * *

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

DATES: This AD becomes effective July 6, 2010.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of July 6, 2010.

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

FOR FURTHER INFORMATION CONTACT: Kenny Kaulia, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone (425) 227-2848; fax (425) 227-1149.

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 March 4, 2010 (75 FR 9814). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

During ERJ 190 airplane full scale fatigue test, cracks were found in some structural components of the airplane. Analysis of these cracks resulted in modifications on the airplane Airworthiness Limitation Items (ALI), to include new inspections tasks or modification of existing ones and its respective thresholds and intervals.

Failure to inspect these components according to the new tasks, thresholds and intervals could prevent a timely detection of fatigue cracks. Undetected fatigue cracks in these areas could adversely affect the structural integrity of these airplanes.

* * * * *

The corrective action is revising the Airworthiness Limitations Section of the Instructions for Continued Airworthiness to incorporate new and modified structural inspections. You may obtain further information by examining the MCAI in the AD docket.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM or on the determination of the cost to the public.

Conclusion

We reviewed the available data 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 our FAA policies. Any such differences are highlighted in a Note within the AD.

Costs of Compliance

We estimate that this AD will affect 65 products of U.S. registry. We also estimate that it will take about 1 work-hour per product to comply with the basic requirements of this AD. The average

labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$5,525, or \$85 per product.

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 the 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 Operations office 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 Operations 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:



2010-11-14 Empresa Brasileira de Aeronautica S.A. (EMBRAER): Amendment 39-16319.
Docket No. FAA-2010-0175; Directorate Identifier 2009-NM-187-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective July 6, 2010.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to all Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model ERJ 190-100 STD, -100 LR, -100 IGW, -200 STD, -200 LR, and -200 IGW airplanes, certificated in any category.

Note 1: This AD requires revisions to certain operator maintenance documents to include new inspections. Compliance with these inspections is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by these inspections, the operator may not be able to accomplish the inspections described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (g)(1) of this AD. The request should include a description of changes to the required inspections that will ensure the continued operational safety of the airplane.

Subject

- (d) Air Transport Association (ATA) of America Code 53: Fuselage; 57: Wings.

Reason

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

During ERJ 190 airplane full scale fatigue test, cracks were found in some structural components of the airplane. Analysis of these cracks resulted in modifications on the airplane Airworthiness Limitation Items (ALI), to include new inspections tasks or modification of existing ones and its respective thresholds and intervals.

Failure to inspect these components according to the new tasks, thresholds and intervals could prevent a timely detection of fatigue cracks. Undetected fatigue cracks in these areas could adversely affect the structural integrity of these airplanes.

* * * * *

The corrective action is revising the Airworthiness Limitations Section (ALS) of the Instructions for Continued Airworthiness (ICA) to incorporate new and modified structural inspections.

Actions and Compliance

(f) Unless already done, do the following actions.

(1) Within 90 days after the effective date of this AD: Revise the ALS of the ICA to include the tasks specified in Table 1 of this AD. These tasks are identified in EMBRAER Temporary Revision (TR) 2-5, dated December 6, 2007; and EMBRAER TR 2-6, dated February 12, 2008; to Appendix A, Part 2, Airworthiness Limitation Inspections (ALI)—Structures, of the EMBRAER 190 Maintenance Review Board Report (MRBR) MRB-1928.

Note 2: The actions required by paragraph (f)(1) of this AD may be done by inserting a copy of EMBRAER TR 2-5 and TR 2-6 into the ALS of the EMBRAER 190 MRBR MRB-1928. When these TRs have been included in general revisions of the EMBRAER 190 MRBR MRB-1928, the general revisions may be inserted in the EMBRAER 190 MRBR MRB-1928, provided the relevant information in the general revision is identical to that in EMBRAER TR 2-5 and TR 2-6, and these TRs may be removed.

(2) The initial compliance times for the tasks specified in EMBRAER TR 2-5, dated December 6, 2007; and EMBRAER TR 2-6, dated February 12, 2008; to Appendix A, Part 2, Airworthiness Limitation Inspections (ALI)—Structures, of the EMBRAER 190 MRBR MRB-1928; start at the later of the times specified in paragraphs (f)(2)(i) and (f)(2)(ii) of this AD. For certain tasks, the compliance times depend on the pre-modification and post-modification condition of the associated service bulletin, as specified in the "Applicability" column of these TRs.

(i) Within the applicable threshold times specified in these TRs.

(ii) At the applicable compliance time specified in Table 1 of this AD.

Table 1 – MRBR TRs and tasks, with compliance times

EMBRAER MRBR TR	Subject	MRBR task number	Compliance time
TR 2-5, dated December 6, 2007	Wing stub main box lower skin and splices—internal	57-01-002-0002	250 flight cycles after effective date of this AD
TR 2-5, dated December 6, 2007	Wing stub spar 3—internal/external	57-01-008-0003	500 flight cycles after effective date of this AD
TR 2-5, dated December 6, 2007	Wing stub spar 3—external	57-01-008-0004	500 flight cycles after effective date of this AD
TR 2-5, dated December 6, 2007	Wing lower skin panel stringers—internal	57-10-007-0004	500 flight cycles after effective date of this AD
TR 2-5, dated December 6, 2007	Wing main box rib 11—internal	57-10-012-0003	500 flight cycles after effective date of this AD
TR 2-6, dated December 12, 2008	Nose landing gear wheel well metallic structure	53-10-021-0004	500 flight cycles after effective date of this AD

(iii) Thereafter, except as provided in paragraph (g) of this AD, no alternative replacement times or structural inspection intervals may be approved for these tasks.

FAA AD Differences

Note 3: This AD differs from the MCAI and/or service information as follows:

Although the MCAI specifies both revising the airworthiness limitations and doing repetitive inspections, this AD only specifies the revision. Requiring revision of the airworthiness limitations, rather than requiring individual repetitive inspections, is advantageous for operators because it allows them to record AD compliance status only at the time that they make the revision, rather than after every inspection. It also has the advantage of keeping all airworthiness limitations, whether imposed by original certification or by AD, in one place within the operator's maintenance program, thereby reducing the risk of non-compliance because of oversight or confusion.

Other FAA AD Provisions

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

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, 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: Kenny Kaulia, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2848; fax (425) 227-1149. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards 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.

(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 Brazilian Airworthiness Directive 2009-04-02, effective April 29, 2009; and EMBRAER TR 2-5, dated December 6, 2007, and EMBRAER TR 2-6, dated February 12, 2008, to Appendix A, Part 2, Airworthiness Limitation Inspections (ALI)—Structures, of the EMBRAER 190 MRBR MRB-1928; for related information.

Material Incorporated by Reference

(i) You must use EMBRAER Temporary Revision 2-5, dated December 6, 2007; and EMBRAER Temporary Revision 2-6, dated February 12, 2008; to Appendix A, Part 2, Airworthiness Limitation Inspections (ALI)—Structures, of the EMBRAER 190 Maintenance Review Board Report MRB-1928; 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. (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; e-mail: 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 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 May 13, 2010.

John Piccola,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.