DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration

14 CFR Part 39


RIN 2120–AA64

Airworthiness Directives; Empresa Brasileira de Aeronáutica S.A. (EMBRAER) Model ERJ 170 Airplanes; and Model ERJ 190–100 STD, ERJ 190–100 LR, ERJ 190–200 STD, ERJ 190–200 LR, and ERJ 190–200 IGW Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for the products listed above. This proposed 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:

The occurrence of drill marks [has been found] at the lower ring region of the rear pressure bulkhead between [the] circumferential splice joint and rear skin located between stringers 12 and 13. These marks may result in formation of fatigue cracks accelerated by corrosion reducing the structural strength of the rear pressure bulkhead, which may cause a sudden decompression of the passenger cabin.

The proposed AD would require actions that are intended to address the unsafe condition described in the MCAI.

DATES: We must receive comments on this proposed AD by March 28, 2011.

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.


Hand Delivery: U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–40, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT:

SUPPLEMENTARY INFORMATION:

Comments Invited
We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA–2011–0038; Directorate Identifier 2010–NM–153–AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on 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 proposed AD.

Discussion
The Agência Nacional de Aviação Civil (ANAC), which is the aviation authority for Brazil, has issued Brazilian Airworthiness Directives 2010–06–01R1 and 2010–06–02R1, both dated August 25, 2010 (referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

The occurrence of drill marks [has been found] at the lower ring region of the rear pressure bulkhead between [the] circumferential splice joint and rear skin located between stringers 12 and 13. These marks may result in formation of fatigue cracks accelerated by corrosion reducing the structural strength of the rear pressure bulkhead, which may cause a sudden decompression of the passenger cabin.

The required actions include doing a detailed inspection for signs of drill marks and repairing if necessary. You may obtain further information by examining the MCAI in the AD docket.

Relevant Service Information
EMBRAER has issued Service Bulletins 170–53–0082 and 190–53–0042, both Revision 01, both dated April 28, 2010. 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 Proposed 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 proposing this AD because we evaluated all pertinent information and determined an unsafe condition as:

- The occurrence of drill marks [has been found] at the lower ring region of the rear pressure bulkhead between [the] circumferential splice joint and rear skin located between stringers 12 and 13. These marks may result in formation of fatigue cracks accelerated by corrosion reducing the structural strength of the rear pressure bulkhead, which may cause a sudden decompression of the passenger cabin.
- The proposed AD would require actions that are intended to address the unsafe condition described in the MCAI.

We must receive comments on this proposed AD by March 28, 2011.
condition exists and is likely to exist or develop on other products of the same type design.

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 proposed 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 proposed AD.

Costs of Compliance

Based on the service information, we estimate that this proposed AD would affect about 241 products of U.S. registry. We also estimate that it would take about 1 work-hour per product to comply with the basic requirements of this proposed AD. The average labor rate is $85 per work-hour. Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be $20,485, or $85 per product.

In addition, we estimate that any necessary follow-on actions would take about 2 work-hours and require parts costing $20, for a cost of $190 per product. We have no way of determining the number of products that may need these 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 proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 proposed regulation:
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 proposed 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.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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), 40131, 44701.

§39.13 [Amended]

2. The FAA amends §39.13 by adding the following new AD:


Comments Due Date

(a) We must receive comments by March 28, 2011.

Affected ADs

(b) None.

Applicability

(c) This AD applies to 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; certified in any category; serial numbers 17000002, 17000004 through 17000013 inclusive, 17000015 through 170000212 inclusive, 170000216 through 17000233 inclusive, 17000236, 17000269, 17000281 through 17000291 inclusive, and 17000293; and Model ERJ 190–100 STD, ERJ 190–100 LR, ERJ 190–100 IGW, ERJ 190–200 STD, ERJ 190–200 LR, and ERJ 190–200 IGW airplanes; certified in any category; serial numbers 19000002, 19000004, 19000006 through 19000108 inclusive, 19000110 through 19000139 inclusive, 19000141 through 19000157 inclusive, 19000160, 19000165, 19000167 through 19000176 inclusive, 19000178 through 19000199 inclusive, 19000273 through 19000276 inclusive, 19000279 through 19000286 inclusive, 19000288 through 19000295 inclusive, 19000297 through 19000304 inclusive, and 19000309.

Subject

(d) Air Transport Association (ATA) of America Code 53: Fuselage.

Reason

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

[T]he occurrence of drill marks [has been found] at the lower ring region of the rear pressure bulkhead between [the] circumferential splice joint and rear skin located between stringers 12 and 13. These marks may result in formation of fatigue cracks accelerated by corrosion reducing the structural strength of the rear pressure bulkhead, which may cause a sudden decompression of the passenger cabin.

Compliance

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

Actions

(g) Before the accumulation of 20,000 flight cycles, do a detailed inspection for signs of drill marks at the left and right lower ring region of the rear pressure bulkhead between the circumferential splice joint and rear skin between stringers 12 and 13, in accordance with EMBRAER Service Bulletin 170–53–0082 or 190–53–0042, both Revision 01, both dated April 28, 2010, as applicable. If drill marks are found, repair before further flight, in accordance with EMBRAER Service Bulletin 170–53–0082 or 190–53–0042, both Revision 01, both dated April 28, 2010, as applicable.

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.”

FAA AD Differences

Note 2: This AD differs from the MCAI and/or service information as follows:
Although EMBRAER Service Bulletins 170–53–0082 and 190–53–0042, both Revision 01, both dated April 28, 2010, specify doing a
Other FAA AD Provisions

(h) 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: 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 e-mailed 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.

Related Information

(i) Refer to MCAI Brazilian Airworthiness Directives 2010–06–01R1 and 2010–06–02R1, both dated August 25, 2010; and EMBAER Service Bulletins 170–53–0082 and 190–53–0042, both Revision 01, both dated April 28, 2010; for related information.

Issued in Renton, Washington, on February 3, 2011.

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

For service information identified in this proposed AD, contact Boeing Commercial Airlines, Attention: Data & Services Management, P.O. Box 3707, MC 2H–65, Seattle, Washington 98124–2207; telephone 206–544–5000, extension 1; fax 206–766–5680; e-mail me.boecom@boeing.com; Internet https://www.myboeingfleet.com. You may review copies of the referenced 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.

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 this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800–647–5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

For further information contact:
Marcia Smith, Aerospace Engineer,
Cabin Safety & Environmental Systems Branch, ANM–150S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue, SW., Renton, Washington 98057–3356; phone: 425–917–6484; fax: 425–917–6590; e-mail: marcia.smith@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA–2011–0041; Directorate Identifier 2010–NM–227–AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed 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 proposed AD.

Discussion

We have received a report of a loss of bus control unit number 1 and generator control units numbers 1 and 2 while the airplane was on the ground, and multiple operator reports of cracked MEC drip shields. Cracking in the MEC drip shield and exhaust plenum has been identified as part of the water leak path into the MEC. This condition, if not corrected, could result in water penetration into the MEC, which could result in the loss of flight critical systems.

Relevant Service Information

We reviewed Boeing Alert Service Bulletin 747–25A3588, dated July 19, 2010. The service information describes procedures for performing a general visual inspection of the MEC drip shield for cracks and holes, performing repairs if necessary, and installing a fiberglass reinforcing overcoat to the MEC drip shield. Additionally, for airplanes identified as Groups 1 and 3, the service information describes procedures for installing MEC drip shield panel stiffeners.

FAA’s Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or