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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2006-24076; Directorate Identifier 2006-NM-015-AD; Amendment 39-14640; AD 2006-12-14]

RIN 2120-AA64

Airworthiness Directives; Empresa Brasileira del Aeronautica S.A. (EMBRAER) Model EMB-120, -120ER, -120FC, -120QC, and -120RT Airplanes

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

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain EMBRAER Model EMB-120, -120ER, -120FC, -120QC, and -120RT airplanes. This AD requires replacing the shut-off and crossbleed valves of the bleed air system with new valves having hermetically sealed switches. This AD results from fuel system reviews conducted by the manufacturer. We are issuing this AD to prevent a potential source of ignition near a fuel tank, which, in combination with flammable fuel vapors, could result in a fuel tank explosion and consequent loss of the airplane.

DATES: This AD becomes effective July 18, 2006.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of July 18, 2006.

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: Dan Rodina, Aerospace Engineer, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2125; fax (425) 227-1149.

SUPPLEMENTARY INFORMATION:

Examining the Docket

You may examine the airworthiness directive (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 notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to certain EMBRAER Model EMB-120, -120ER, -120FC, -120QC, and -120RT airplanes. That NPRM was published in the Federal Register on March 7, 2006 (71 FR 11333). That NPRM proposed to require replacing the shut-off and crossbleed valves of the bleed air system with new valves having hermetically sealed switches.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comments received.

Request To Withdraw the NPRM

Charter Air Transport states that installing modified flow control valves (bleed air) valves that include hermetically sealed switches is specified in both EMBRAER Service Bulletin 120-36-0016, Revision 01, dated October 4, 2004 (which was specified in the NPRM as the appropriate source of service information for accomplishing the proposed requirements of this AD), and Service Bulletin 120-30-0034, Revision 01, dated September 22, 2004. (EMBRAER Service Bulletin 120-30-0034, Revision 01, is cited as the appropriate source of service information for accomplishing a related NPRM that has the same applicability as this NPRM.) Charter Air Transport states that it will cost \$13,451 per airplane to comply with both service bulletins. Charter Air Transport asserts that a more effective method of correcting the unsafe condition at a much-reduced cost would be to install air-purging louvers in certain rear lower fuselage and leading edge fairings, which would vent any fuel vapors away from any potential ignition source in the affected area. Charter Air Transport requests that EMBRAER consider this suggestion as an appropriate method of compliance to address the unsafe condition.

We infer that the commenter is asking us to withdraw the NPRM until EMBRAER reviews the specified modification and determines a more appropriate method to correct the unsafe condition. We do not agree. EMBRAER has determined that installing modified flow control valves is the appropriate method of correcting this unsafe condition. Further, Charter Air Transport provided no data to demonstrate that the proposed louver installation provides an equivalent level of safety or is more effective than installing modified flow control valves. We have not changed the AD in this regard. However, Charter Air Transport may request an alternative method of compliance (AMOC) in accordance with paragraph (i) of the AD, provided that sufficient data are submitted to substantiate that the proposed AMOC would provide an acceptable level of safety.

Request To Remove Paragraph (g) of the NPRM

A private citizen asserts that paragraph (g) of the NPRM would result in a big waste of parts for the operator and would incur additional costs to replace those parts before the compliance time specified in the AD. In addition the commenter states that there are currently no parts available.

We infer that the commenter is requesting that we remove paragraph (g) of the AD. We do not agree to remove that paragraph. In general, once we have determined that an unsafe condition exists, our normal policy specifies not to allow that condition to be re-introduced into the fleet. In developing the technical information on which every AD is based, we consider the availability of spare parts that the AD will require to be installed. When we have determined that those (safe) parts are immediately available to operators, our policy prohibits installation of the unsafe parts after the effective date of the AD.

In this case, we contacted the manufacturer and vendor to verify the parts availability, and have determined that the parts may not be available until August of this year. To accommodate this delay in parts availability, we have revised paragraph (g) of the AD to specify that, as of 90 days after the effective date of this AD, no person may install any shut-off or crossbleed valve of the bleed air system with any shut-off or crossbleed valve that does not have hermetically sealed switches.

Request for Additional Information

The same commenter also states that he is unable to get the following information from the manufacturer: "Can existing valves be modified? Do we have to purchase new valves? Cost of the modification? Can valves be modified in-house? Is there an exchange program?"

We have contacted the manufacturer and have been advised of the following in reference to the commenter's questions: Yes, the existing valves may be modified. Yes, you do have to purchase new valves. A repair and upgrade would cost \$4,575. No, valves cannot be modified in-house. And, finally, no, there is not an exchange program. However, the valves may be returned for upgrade at an estimated cost of \$2,322.

Request To Determine Compliance

The same commenter also states that it is cumbersome to control AD updating on individual part replacements. He specified two scenarios in which he requested whether or not the conditions in the scenarios met the AD requirements. In the first scenario, the commenter states that a valve is cannibalized from one airplane to the other, specifically, a "-1" removed and a "-1" installed. The vacated position was replaced with a new valve. The commenter asks if the position the cannibalized part was installed in does not meet the requirements of the AD. In the second scenario, the commenter states that a valve was moved from one position on the same airplane to another for troubleshooting purposes. The valve was verified to be bad. The bad valve was replaced with a valve having a new part number. The valves were not swapped back to original positions prior to replacing with a new valve. The commenter asks whether or not the airplane meets the requirements of the AD?

We acknowledge that it may be time consuming to track individual part replacements. However, in this case, it is necessary to ensure the safety of the fleet. In response to the question of whether the airplanes meet the requirements of the AD in both of the scenarios described above, the intent of this AD is to require replacement of the valves with the new valves in each of the three positions. When that has been accomplished, compliance with paragraph (f) of the AD has been achieved.

Request To Clarify Costs

This same commenter states that EMBRAER has not verified the cost of new valves that were specified in the NPRM.

We infer that the commenter would like the cost of the new valves that were specified in the NPRM verified by the manufacturer. We have contacted the manufacturer and verified that the figure in the NPRM is correct.

Request To Revise the Reason for the NPRM

One commenter, EMBRAER, requests that we add additional wording to the explanation for the reason the NPRM was issued. EMBRAER requests that, in addition to the words "This AD results from fuel system reviews conducted by the manufacturer," we add the words "associated to new regulations related to prevention of sources of ignition near fuel tanks applicable to several aircraft categories."

We do not agree to revise the AD. The statement that the manufacturer has conducted fuel system reviews is sufficient. The statement following that sentence in the AD provides the fact that we are issuing this AD to prevent a potential source of ignition near a fuel tank, which, in combination with flammable fuel vapors, could result in a fuel tank explosion and consequent loss of the airplane. In addition, the "Discussion" section of the NPRM explains the background and issuance of the FAA regulation titled "Transport Airplane Fuel Tank System Design Review, Flammability Reduction and Maintenance and Inspection Requirements" (67 FR 23086, May 7, 2001). No change is necessary to this AD in that regard.

Editorial Change

Since the issuance of the NPRM, we have received a copy of EMBRAER Service Bulletin 120-36-0016, dated October 30, 2003. We have added a new paragraph (h) to the AD to provide credit for accomplishing the actions specified in that service bulletin. Subsequent paragraphs of the AD have been re-identified.

Conclusion

We have carefully reviewed the available data, including the comments received, 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 180 airplanes of U.S. registry. The required actions will take about 3 work hours per airplane, at an average labor rate of \$65 per work hour. Required parts would cost about \$10,305 per airplane. Based on these figures, the estimated cost of the proposed AD for U.S. operators is \$1,890,000, or \$10,500 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

www.faa.gov/aircraft/safety/alerts/
www.gpoaccess.gov/fr/advanced.html

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



2006-12-14 Empresa Brasileira de Aeronautica S.A. (Embraer): Amendment 39-14640. Docket No. FAA-2006-24076; Directorate Identifier 2006-NM-015-AD.

Effective Date

(a) This AD becomes effective July 18, 2006.

Affected ADs

(b) None.

Applicability

(c) This AD applies to EMBRAER Model EMB-120,-120ER, -120FC, -120QC, and -120RT airplanes, as identified in EMBRAER Service Bulletin 120-36-0016, Revision 01, dated October 4, 2004; certificated in any category.

Unsafe Condition

(d) This AD results from fuel system reviews conducted by the manufacturer. We are issuing this AD to prevent a potential source of ignition near a fuel tank, which, in combination with flammable fuel vapors, could result in a fuel tank explosion and consequent loss of the airplane.

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.

Replacing the Shut-off and Crossbleed Valves

(f) Within 5,000 flight hours after the effective date of this AD, replace the shut-off and crossbleed valves of the bleed air system with new shut-off and crossbleed valves having hermetically sealed switches, in accordance with EMBRAER Service Bulletin 120-36-0016, Revision 01, dated October 4, 2004.

Parts Installation

(g) As of 90 days after the effective date of this AD, no person may install any shut-off or crossbleed valve of the bleed air system with any shut-off or crossbleed valve that does not have hermetically sealed switches.

Acceptable Method of Compliance

(h) Accomplishment of the actions specified in EMBRAER Service Bulletin 120-36-0016, dated October 30, 2003, before the effective date of this AD is an acceptable method of compliance with the requirements of paragraph (f) of this AD.

Alternative Methods of Compliance (AMOCs)

(i)(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

(j) Brazilian airworthiness directive 2005-12-03, effective January 19, 2006, also addresses the subject of this AD.

Material Incorporated by Reference

(k) You must use EMBRAER Service Bulletin 120-36-0016, Revision 01, dated October 4, 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), P.O. 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 May 31, 2006.

Kalene C. Yanamura,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 06-5245 Filed 6-12-06; 8:45 am]

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