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[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-3143; Directorate Identifier 2015-NM-047-AD; Amendment 39-18924; AD 2017-12-09]

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.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Empresa Brasileira de Aeronautica S.A. (Embraer) Model EMB-135 airplanes and Model EMB-145, -145ER, -145MR, -145LR, -145MP, -145EP, and -145XR airplanes. This AD was prompted by a report of chafing found between the fuel pump electrical harness and the fuel pump tubing during scheduled maintenance. This AD requires a detailed inspection for chafing on the electrical harness of each electrical fuel pump in the fuel tanks, replacement of the affected electrical fuel pump with a new or serviceable pump if necessary, and installation of clamps on the fuel pump electrical harnesses. We are issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, 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>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-3143.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-3143; 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 AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone 800-647-5527) is Docket 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: Todd Thompson, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1175; fax 425-227-1149.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Empresa Brasileira de Aeronautica S.A. (Embraer) Model EMB-135 airplanes and Model EMB-145, -145ER, -145MR, -145LR, -145MP, -145EP, and -145XR airplanes. The SNPRM published in the Federal Register on August 5, 2016 (81 FR 51815) (“the SNPRM”). We preceded the SNPRM with a notice of proposed rulemaking (NPRM) that published in the Federal Register on August 21, 2015 (80 FR 50812) (“the NPRM”). The NPRM proposed to require a detailed inspection for chafing on the electrical harness of each electrical fuel pump in the fuel tanks, replacement of the affected electrical fuel pump with a new or serviceable pump if necessary, and installation of clamps on the fuel pump electrical harnesses. The NPRM was prompted by a report of chafing found between the fuel pump electrical harness and the fuel pump tubing during scheduled maintenance. The SNPRM proposed to require a detailed inspection for chafing on the electrical harness of each electrical fuel pump in the fuel tanks, replacement of the affected electrical fuel pump with a new or serviceable pump if necessary, and installation of clamps on the fuel pump electrical harnesses. The SNPRM also proposed to require revising the NPRM by

expanding the proposed applicability and revising the compliance time for the detailed inspection. We are issuing this AD to detect and correct chafing of the fuel pump harnesses with other parts inside the fuel tank, which could present a potential ignition source that could result in a fire or fuel tank explosion.

The Agência Nacional de Aviação Civil (ANAC), which is the aviation authority for Brazil, has issued Brazilian Airworthiness Directive 2015-03-01, effective March 23, 2015 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Empresa Brasileira de Aeronautica S.A. (Embraer) Model EMB-135 airplanes and Model EMB-145, -145ER, -145MR, -145LR, -145MP, and -145EP airplanes. The MCAI states:

Chafing between the fuel pump electrical harness and fuel pump tubing was detected during scheduled maintenance. We are issuing this [Brazilian] AD to protect the fuel pump harnesses against chafing with other parts inside the fuel tank, which could present a potential ignition source that could result in a fire or fuel tank explosion.

The required actions include a detailed inspection for chafing on the electrical harness of each electrical fuel pump in the fuel tanks, replacement of the affected electrical fuel pump with a new or serviceable pump if necessary, and installation of clamps on the fuel pump electrical harnesses. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-3143.

Comments

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

Conclusion

We reviewed the relevant data and determined that air safety and the public interest require adopting this AD as proposed except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the SNPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the SNPRM.

Related Service Information under 1 CFR part 51

We reviewed Embraer Service Bulletin 145-28-0030, Revision 01, dated October 22, 2010; and Embraer Service Bulletin 145LEG-28-0032, Revision 01, dated November 20, 2012. The service information describes procedures for a detailed inspection for chafing on the electrical harness of each electrical fuel pump in the fuel tanks, replacement of the affected electrical fuel pump with a new or serviceable pump if necessary, and installation of clamps on the fuel pump electrical harnesses. These documents are distinct since they apply to different airplane models. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

We estimate that this AD affects 731 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated costs				
Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection and installation	11 work-hours X \$85 per hour = \$935	\$0	\$935	\$683,485

We estimate the following costs to do any necessary replacements that will be required based on the results of the required inspection. We have no way of determining the number of aircraft that might need this replacement:

On-condition costs			
Action	Labor cost	Parts cost	Cost per product
Replacement	6 work-hours X \$85 per hour = \$510	\$11,242	\$11,752

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

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.

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 airworthiness directive (AD):

2017-12-09 Empresa Brasileira de Aeronautica S.A. (Embraer): Amendment

39-18924; Docket No. FAA-2015-3143; Directorate Identifier 2015-NM-047-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to the airplanes specified in paragraphs (c)(1) and (c)(2) of this AD.

(1) Empresa Brasileira de Aeronautica S.A. (Embraer) Model EMB-135ER, -135KE, -135KL, and -135LR airplanes; and Model EMB-145, -145ER, -145MR, -145LR, -145MP, -145EP, and -145XR airplanes, certificated in any category, as identified in Embraer Service Bulletin 145-28-0030, Revision 01, dated October 22, 2010.

(2) Empresa Brasileira de Aeronautica S.A. (Embraer) Model EMB-135BJ airplanes, certificated in any category, as identified in Embraer Service Bulletin 145LEG-28-0032, Revision 01, dated November 20, 2012.

(d) Subject

Air Transport Association (ATA) of America Code 28, Fuel.

(e) Reason

This AD was prompted by a report of chafing found between the fuel pump electrical harness and the fuel pump tubing during scheduled maintenance. We are issuing this AD to detect and correct chafing of the fuel pump harnesses with other parts inside the fuel tank, which could present a potential ignition source that could result in a fire or fuel tank explosion.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Detailed Inspection and Corrective Action

Do the actions specified in paragraphs (g)(1) and (g)(2) of this AD at the applicable times specified in paragraph (h)(1) or (h)(2) of this AD.

(1) Do a detailed inspection for chafing on the electrical harness of each electrical fuel pump in the fuel tanks, in accordance with the Accomplishment Instructions of Embraer Service Bulletin 145-28-0030, Revision 01, dated October 22, 2010 (for Model EMB-135ER, -135KE, -135KL, and -135LR airplanes; and Model EMB-145, -145ER, -145MR, -145LR, -145MP, -145EP, and -145XR airplanes); or Embraer Service Bulletin 145LEG-28-0032, Revision 01, dated November 20, 2012 (for Model EMB-135BJ airplanes). If any chafing is found, before further flight, replace the affected electrical fuel pump with a new or serviceable pump having the same part number, in accordance with the Accomplishment Instructions of Embraer Service Bulletin 145-28-0030, Revision 01, dated October 22, 2010; or Embraer Service Bulletin 145LEG-28-0032, Revision 01, dated November 20, 2012; as applicable.

(2) Install clamps on the fuel pump electrical harnesses, in accordance with the Accomplishment Instructions of Embraer Service Bulletin 145-28-0030, Revision 01, dated October 22, 2010 (for Model EMB-135ER, -135KE, -135KL, and -135LR airplanes; and Model EMB-145, -145ER, -145MR, -145LR, -145MP, -145EP, and -145XR airplanes); or Embraer Service Bulletin 145LEG-28-0032, Revision 01, dated November 20, 2012 (for Model EMB-135BJ airplanes).

(h) Compliance Times

(1) For Model EMB-135ER, -135KE, -135KL, and -135LR airplanes; and Model EMB-145, -145ER, -145MR, -145LR, -145MP, -145EP, and -145XR airplanes: Do the actions specified in paragraph (g) of this AD within 5,000 flight hours or 24 months after the effective date of this AD, whichever occurs first.

(2) For Model EMB-135BJ airplanes: Do the actions specified in paragraph (g) of this AD within 4,800 flight hours or 48 months after the effective date of this AD, whichever occurs first.

(i) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Embraer Service Bulletin 145-28-0030, dated September 1, 2010 (for Model EMB-135ER, -135KE, -135KL, and -135LR airplanes; and Model EMB-145, -145ER, -145MR, -145LR, -145MP, -145EP, and -145XR airplanes); or Embraer Service Bulletin 145LEG-28-0032, dated September 15, 2011 (for Model EMB-135BJ airplanes), as applicable.

(j) Other FAA AD Provisions

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. 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, send it to the attention of the person identified in paragraph (k)(2) of this AD. 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.

(2) Contacting the Manufacturer: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the Agência Nacional de Aviação Civil (ANAC); or ANAC's authorized Designee. If approved by the ANAC Designee, the approval must include the Designee's authorized signature.

(k) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Brazilian Airworthiness Directive 2015-03-01, effective March 23, 2015, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-3143.

(2) For more information about this AD, contact Todd Thompson, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1175; fax 425-227-1149.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (l)(3) and (l)(4) of this AD.

(I) Material Incorporated by Reference

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

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Embraer Service Bulletin 145-28-0030, Revision 01, dated October 22, 2010.
(ii) Embraer Service Bulletin 145LEG-28-0032, Revision 01, dated November 20, 2012.

(3) 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>.

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

(5) You may view this 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on June 2, 2017.

Michael Kaszycki,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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