

[Federal Register: December 31, 2009 (Volume 74, Number 250)]
[Rules and Regulations]
[Page 69262-69264]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr31de09-7]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2009-0412; Directorate Identifier 2009-NM-022-AD; Amendment 39-16154; AD 2009-26-15]

RIN 2120-AA64

Airworthiness Directives; Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model ERJ 170 Airplanes, and Model ERJ 190-100 LR, -100 IGW, -100 STD, -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:

It has been found the possibility of some aluminum fasteners having been installed instead of titanium ones at bulkhead 1 of the LH (left-hand) and RH (right-hand) pylons of some [Embraer ERJ 170 and] Embraer ERJ 190 aircraft models. * * *

* * * * *

The unsafe condition for Model 170 airplanes is structural damage in the case of bird impact in the region of bulkhead 1 of the pylons, which could adversely affect continued safe flight and landing. The unsafe condition for Model 190 airplanes is damage to the hydraulic lines and electrical generator power cables in the case of bird impact in the region of bulkhead 1 of the pylons, which might lead to presence of fire without indication to the flightcrew. We are issuing this AD to require actions to correct the unsafe condition on these products.

DATES: This AD becomes effective February 4, 2010.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of February 4, 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 May 5, 2009 (74 FR 20659). That NPRM proposed to correct an unsafe condition for the specified products. The mandatory continuing airworthiness information (MCAI) 2008-10-04 states:

It has been found the possibility of some aluminum fasteners having been installed instead of titanium ones at bulkhead 1 of the LH and RH pylons of some Embraer ERJ 170 aircraft models. The structural integrity of the region where these fasteners are installed may be affected in case of bird impact.

* * * * *

MCAI 2008-09-02 states:

It has been found the possibility of some aluminum fasteners having been installed instead of titanium ones at bulkhead 1 of the LH (left-hand) and RH (right-hand) pylons of some Embraer ERJ 190 aircraft models. In the case of a bird strike in the pylon bulkhead 1 equipped with aluminum fasteners there is the possibility where the impact may affect some equipments installed in the region after the bulkhead 1. Damages to the hydraulic lines and electrical generator power cables may lead to presence of fire in the region, without indication to the flight crew.

* * * * *

The unsafe condition for Model 170 airplanes is structural damage in the case of bird impact in the region of bulkhead 1 of the pylons, which could adversely affect continued safe flight and landing. The unsafe condition for Model 190 airplanes is damage to the hydraulic lines and electrical generator power cables in the case of bird impact in the region of bulkhead 1 of the pylons, which might lead to presence of fire without indication to the flightcrew. Corrective actions include inspecting for the presence of aluminum fasteners at pylon bulkhead 1, and replacing all aluminum fasteners with titanium fasteners. 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 considered the comment received from Embraer, the manufacturer.

Support for AD on Model ERJ 190 Airplanes

Embraer supports the AD on Model ERJ 190 airplanes due to the system design characteristics of that model. Embraer states that a bird strike could lead to hydraulic fluid leakage associated with damage to the electrical generator power cables, a situation that would be favorable to fire in a section of the airplane that is not equipped with fire detection or suppression systems.

Request To Exclude Model ERJ 170 Airplanes

Embraer does not agree that an unsafe condition exists for Model ERJ 170 airplanes. Embraer states that, unlike Model ERJ 190 airplanes, Model ERJ 170 airplanes do not have hydraulic system

or electrical generator power cables passing through the pylon forward position, where the aluminum fasteners were installed. The fuel system is installed behind two reinforced structural frames. Embraer states that in the event of a bird strike, the fuel system would unlikely be reached by any part of a bird with sufficient energy to cause any damage. Embraer states that this situation is extremely improbable.

From this comment we infer that Embraer is requesting that we remove Model ERJ 170 airplanes from the applicability of the NPRM. We do not agree. The subject unsafe condition exists for the affected Model ERJ 170 airplanes. We consulted with the issuer of the MCAI, Agência Nacional de Aviação Civil (ANAC). ANAC states that the structure in this region does not have sufficient residual strength for continued safe flight in case of bird impact. We concur with ANAC that an unsafe condition exists for the affected ERJ 170 aircraft models due to the aluminum fasteners installed in the subject area. The purpose of this AD is to ensure that the affected structure has sufficient residual strength for continued safe flight and landing of the airplane following a bird strike, which the manufacturer has not demonstrated. We have not changed the AD in this regard. However, we have clarified the unsafe condition for the Model ERJ 170 airplanes in the Summary, Discussion, and paragraph (e) of this AD.

Request To Exclude Model ERJ 190-ECJ Airplanes

Embraer requests that we remove Model ERJ 190-ECJ airplanes from the applicability of the NPRM because the model is not included in the effectivity of Embraer Service Bulletin 190-54-0008, dated December 21, 2007.

We agree to remove Model ERJ 190-ECJ from the applicability of this AD. We have confirmed with the manufacturer that this model does not have aluminum fasteners installed in the subject location. Therefore, we have removed that model from paragraph (c) of this AD.

Conclusion

We reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting the AD with the change described previously. We determined that this change will not increase the economic burden on any operator or increase the scope of the AD.

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 20 products of U.S. registry. We also estimate that it will take about 2 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$80 per work-hour. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$3,200, or \$160 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:



2009-26-15 Empresa Brasileira de Aeronautica S.A. (EMBRAER): Amendment 39-16154.
Docket No. FAA-2009-0412; Directorate Identifier 2009-NM-022-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective February 4, 2010.

Affected ADs

(b) None.

Applicability

(c) This AD applies to EMBRAER Model ERJ 170-100 LR, -100 STD, -100 SE, -100 SU, -200 LR, -200 STD, and -200 SU airplanes, certificated in any category, serial numbers 17000156 through 17000169 inclusive; and Model ERJ 190-100 LR, -100 IGW, -100 STD, -200 STD, -200 LR, and -200 IGW airplanes, certificated in any category, serial numbers 19000047 through 19000089 inclusive.

Subject

(d) Air Transport Association (ATA) of America Code 54: Nacelles/Pylons.

Reason

(e) Brazilian Airworthiness Directive 2008-09-02, effective September 30, 2008, states:

It has been found the possibility of some aluminum fasteners having been installed instead of titanium ones at bulkhead 1 of the LH (left-hand) and RH (right-hand) pylons of some Embraer ERJ 190 aircraft models. In the case of a bird strike in the pylon bulkhead 1 equipped with aluminum fasteners there is the possibility where the impact may affect some equipments installed in the region after the bulkhead 1. Damages to the hydraulic lines and electrical generator power cables may lead to presence of fire in the region, without indication to the flight crew.

* * * * *

Brazilian Airworthiness Directive 2008-10-04, effective November 10, 2008, states:

It has been found the possibility of some aluminum fasteners having been installed instead of titanium ones at bulkhead 1 of the LH and RH pylons of some Embraer ERJ 170 aircraft models. The structural integrity of the region where these fasteners are installed may be affected in case of bird impact.

* * * * *

The unsafe condition for Model 170 airplanes is structural damage in the case of bird impact in the region of bulkhead 1 of the pylons, which could adversely affect continued safe flight and landing. The unsafe condition for Model 190 airplanes is damage to the hydraulic lines and electrical generator power cables in the case of bird impact in the region of bulkhead 1 of the pylons, which

might lead to presence of fire without indication to the flight crew. Corrective actions include inspecting for the presence of aluminum fasteners at pylon bulkhead 1, and replacing all aluminum fasteners with titanium fasteners.

Actions and Compliance

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

(1) Within 5,000 flight cycles after the effective date of this AD: Inspect the fasteners in bulkhead 1 of the left- and right-hand pylons for the presence of aluminum fasteners, in accordance with Part I of the Accomplishment Instructions of Embraer Service Bulletin 170-54-0007 or 190-54-0008, both dated December 21, 2007; as applicable. If no aluminum fastener is found, this AD requires no further action.

(2) If any aluminum fastener is found, before further flight after the inspection required by paragraph (f)(1) of this AD: Replace any aluminum fastener with a titanium fastener in accordance with Part II of the Accomplishment Instructions of Embraer Service Bulletin 170-54-0007 or 190-54-0008, both dated December 21, 2007; as applicable.

FAA AD Differences

Note 1: This AD differs from the MCAI and/or service information as follows: No differences.

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.

(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 2008-09-02, effective September 30, 2008; MCAI Brazilian Airworthiness Directive 2008-10-04, effective November 10, 2008; and Embraer Service Bulletins 170-54-0007 and 190-54-0008, both dated December 21, 2007; for related information.

Material Incorporated by Reference

(i) You must use Embraer Service Bulletin 170-54-0007, dated December 21, 2007; or Embraer Service Bulletin 190-54-0008, dated December 21, 2007; as applicable; 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 or 425-227-1152.

(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 December 16, 2009.

Stephen P. Boyd,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. E9-30705 Filed 12-30-09; 8:45 am]