

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2009-0659; Directorate Identifier 2009-NM-060-AD; Amendment 39-16191; AD 2010-03-07]

RIN 2120-AA64

Airworthiness Directives; Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model EMB-135BJ, -135ER, -135KE, -135KL, and -135LR Airplanes; and EMB-145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP 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 occurrences of main landing gear (MLG) trailing arm pins broken due to a fatigue mechanism induced by an excessive torque applied during the assemblage of auxiliary door support attachment and consequent deformation of the MLG trailing arm axle. A broken pin can lead to loss of the MLG trailing arm axle, disconnecting the trailing arm from the main strut, which affects the airplane controllability on ground.

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

DATES: This AD becomes effective March 11, 2010.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of March 11, 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: Todd Thompson, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-1175; 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 July 30, 2009 (74 FR 37965). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

It has been found occurrences of main landing gear (MLG) trailing arm pins broken due to a fatigue mechanism induced by an excessive torque applied during the assemblage of auxiliary door support attachment and consequent deformation of the MLG trailing arm axle. A broken pin can lead to loss of the MLG trailing arm axle, disconnecting the trailing arm from the main strut, which affects the airplane controllability on ground.

* * * * *

Required actions include inspecting for cracks, and, if necessary, replacing the MLG trailing arm pin with a serviceable pin; and modifying the MLG auxiliary door mounting support. You may obtain further information by examining the MCAI in the AD docket.

Relevant Service Information

EMBRAER has issued the following revisions to the service information that was referenced in the NPRM:

- Service Bulletin 145LEG-52-0014, Revision 01, dated June 17, 2009, which adds airplane serial number 145363.
- Service Bulletin 145LEG-32-0033, Revision 01, dated June 18, 2009, which changes the visual inspection to a detailed inspection and includes the option of using the same part number of the landing gear trailing arm pin.
- Service Bulletin 145-32-0122, Revision 01, dated April 29, 2009, which changes the visual inspection to a detailed inspection and includes the option of using the same part number of the landing gear trailing arm pin.

We have revised this final rule to cite the revised service bulletins and to give credit for accomplishment of the actions done in accordance with the earlier service information referred to in the NPRM. We have also revised paragraph (f)(1)(i) and Note 1 of this AD to clarify that the inspection type is a detailed inspection.

Comments

We gave the public the opportunity to participate in developing this AD. We considered the comments received.

Request for Clarification for a Terminating Action

American Eagle Airlines (AEA) requests that we add a statement to paragraph (f) of this AD that clarifies that the accomplishment of paragraph (f) of this AD is a terminating action for the

requirements of this AD. AEA suggests that it is not clear that no further action is required after inspection.

We agree to clarify the requirements. We have added the phrase "one-time" before "detailed inspection" in paragraph (f)(1)(i) of this AD to clarify that no repeat inspections are required after the initial inspection.

Request for Changing Compliance Time

AEA requests that we change the compliance in paragraph (f)(1) of this AD from "whichever occurs first" to "whichever occurs later." AEA explains that the actions specified in the NPRM require jacking the airplane and compressing the landing gear, and that specific tools required to complete these tasks may not be stocked at every maintenance base. AEA explains that increasing the compliance time would allow operators to arrange for having the proper tools in their Main Base Visit program.

While we agree that some of the tools required to perform the tasks may not be stocked at every maintenance base, we do not agree with the commenter's request to extend the compliance time. In developing an appropriate compliance time for this action, we considered the urgency associated with the subject unsafe condition, and the practical aspect of accomplishing the required tasks within a period of time that corresponds to the normal scheduled maintenance for most affected operators. However, according to the provisions of paragraph (g) of the final rule, we may approve requests to adjust the compliance time if the request includes data that prove that the new compliance time would provide an acceptable level of safety. We have not changed the final rule in this regard.

Addition of an Airplane

Based on our original review of the service information, we determined that airplane serial number (S/N) 145363 was not affected. Therefore, the NPRM proposed to exclude airplane S/N 145363 from the applicability. We have now determined that airplane S/N 145363 should be included in the applicability of this final rule, and we have revised this final rule accordingly. This airplane is not on the U.S. Register and is known to be in compliance with the requirements of this AD.

Explanation of Additional Changes Made to This AD

We have revised this AD to identify the legal name of the manufacturer as published in the most recent type certificate data sheet for the affected airplane models.

Conclusion

We 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 determined that these changes 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 711 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. Required parts will cost about \$240 per product. Where the service information lists required parts costs that are covered under warranty, we have assumed that there will be no charge for these parts. As we do not control warranty coverage for affected parties, some parties may incur costs higher than estimated here. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$284,400, or \$400 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:



2010-03-07 Empresa Brasileira de Aeronautica S.A. (EMBRAER): Amendment 39-16191.
Docket No. FAA-2009-0659; Directorate Identifier 2009-NM-060-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective March 11, 2010.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model EMB-135BJ, as identified in EMBRAER Service Bulletin 145LEG-32-0033, dated November 27, 2008; and Model EMB-135ER, -135KE, -135KL, and -135LR airplanes, and Model EMB-145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP airplanes, as identified in EMBRAER Service Bulletin 145-32-0122, dated November 27, 2008; certificated in any category.

Subject

- (d) Air Transport Association (ATA) of America Code 32: Landing Gear.

Reason

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

It has been found occurrences of main landing gear (MLG) trailing arm pins broken due to a fatigue mechanism induced by an excessive torque applied during the assemblage of auxiliary door support attachment and consequent deformation of the MLG trailing arm axle. A broken pin can lead to loss of the MLG trailing arm axle, disconnecting the trailing arm from the main strut, which affects the airplane controllability on ground.

* * * * *

Required actions include inspecting for cracks, and, if necessary, replacing the MLG trailing arm pin with a serviceable pin; and modifying the MLG auxiliary door mounting support.

Actions and Compliance

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

(1) Within 2,500 flight hours or 24 months after the effective date of this AD, whichever occurs first, do the actions specified in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD.

(i) Perform a one-time detailed inspection for cracks on the MLG trailing arm pins, in accordance with EMBRAER Service Bulletin 145-32-0122, Revision 01, dated April 29, 2009; or

145LEG-32-0033, Revision 01, dated June 18, 2009; as applicable. If any crack is found, before further flight, replace the MLG trailing arm pin with a serviceable pin, in accordance with EMBRAER Service Bulletin 145-32-0122, Revision 01, dated April 29, 2009; or 145LEG-32-0033, Revision 01, dated June 18, 2009; as applicable.

(ii) Prior to or concurrently with accomplishing the inspection required by paragraph (f)(1)(i) of this AD, modify the MLG auxiliary door mounting support, in accordance with EMBRAER Service Bulletin 145-52-0047, Revision 01, dated March 31, 2008; or 145LEG-52-0014, Revision 01, dated June 17, 2009; 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 mirrors, magnifying lenses, etc., may be necessary. Surface cleaning and elaborate access procedures may be required."

Note 2: For the purposes of this AD, a "serviceable" pin is a pin that has no cracking.

(2) Modifications and inspections accomplished before the effective date of this AD, according to a service bulletin listed in Table 1 of this AD, are considered acceptable for compliance with the corresponding action specified in this AD.

Table 1 – Credit Service Bulletins

Affected Airplanes	Service Bulletin	Date
Model EMB-135BJ airplanes	EMBRAER Service Bulletin 145LEG-32-0033	November 27, 2008
Model EMB-135BJ airplanes	EMBRAER Service Bulletin 145LEG-52-0014	October 28, 2008
Model EMB-135ER, -135KE, -135KL, and -135LR airplanes, and Model EMB-145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP airplanes	EMBRAER Service Bulletin 145-32-0122	November 27, 2008
Model EMB-135ER, -135KE, -135KL, and -135LR airplanes, and Model EMB-145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP airplanes	EMBRAER Service Bulletin 145-52-0047	July 18, 2005

FAA AD Differences

Note 3: This AD differs from the MCAI and/or service information as follows: Agência Nacional de Aviação Civil (ANAC) Brazilian Airworthiness Directive 2009-02-01, dated February 12, 2009, is applicable to "all EMB-145 and EMB-135 aircraft models in operation." However, this does not agree with the service information specified in Table 2 of this AD, which specifies that only certain Model EMB-145 and EMB-135 airplanes are affected and identifies them by serial number. This AD is applicable only to the airplanes listed in the applicable service bulletins. This difference has been coordinated with the ANAC.

Table 2 – Service Information

Document	Revision	Date
EMBRAER Service Bulletin 145LEG-32-0033	01	June 18, 2009
EMBRAER Service Bulletin 145LEG-52-0014	01	June 17, 2009
EMBRAER Service Bulletin 145-32-0122	01	April 29, 2009
EMBRAER Service Bulletin 145-52-0047	01	March 31, 2008

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: Todd Thompson, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-1175; 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 Agência Nacional de Aviação Civil Airworthiness Directive 2009-02-01, dated February 12, 2009; and the service information contained in Table 3 of this AD; for related information.

Table 3 – Related Service Information

Document	Revision	Date
EMBRAER Service Bulletin 145LEG-32-0033	01	June 18, 2009
EMBRAER Service Bulletin 145LEG-52-0014	01	June 17, 2009
EMBRAER Service Bulletin 145-32-0122	01	April 29, 2009
EMBRAER Service Bulletin 145-52-0047	01	March 31, 2008

Material Incorporated by Reference

(i) You must use the service information contained in Table 4 of this AD to do the actions required by this AD, unless the AD specifies otherwise.

Table 4 – Material incorporated by reference

Document	Revision	Date
EMBRAER Service Bulletin 145LEG-32-0033	01	June 18, 2009
EMBRAER Service Bulletin 145LEG-52-0014	01	June 17, 2009
EMBRAER Service Bulletin 145-32-0122	01	April 29, 2009
EMBRAER Service Bulletin 145-52-0047	01	March 31, 2008

(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 January 22, 2010.

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