

[Federal Register: May 17, 2010 (Volume 75, Number 94)]
[Rules and Regulations]
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[DOCID:fr17my10-3]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2009-0714; Directorate Identifier 2009-NM-041-AD; Amendment 39-16290; AD 2010-10-11]

RIN 2120-AA64

Airworthiness Directives; Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model EMB-135 and -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 was reported that after commanding the landing gear lever to down the three green landing gear positioning indication was displayed followed by the LG/LEVER DISAGREE EICAS [engine indicating and crew alerting system] message. The crew decided to continue the approach and landing procedure. As soon as the crew identified that the landing gear was not extended properly, a go-around procedure was successfully performed. During maneuver, the airplane settled momentarily onto the flaps and belly. * * * * *

The unsafe condition is the landing gear remaining in the up and locked position during approach and landing. This condition could be accompanied by an invalid EICAS landing gear position indication, which could result in landing with gear in the up position and eliminate controllability of the airplane on the ground. This may consequently result in structural damage to the airplane. We are issuing this AD to require actions to correct the unsafe condition on these products.

DATES: This AD becomes effective June 21, 2010.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of June 21, 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 supplemental notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That supplemental NPRM was published in the Federal Register on February 23, 2010 (75 FR 7998). That supplemental NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

It was reported that after commanding the landing gear lever to down the three green landing gear positioning indication was displayed followed by the LG/LEVER DISAGREE EICAS [engine indicating and crew alerting system] message. The crew decided to continue the approach and landing procedure. As soon as the crew identified that the landing gear was not extended properly, a go-around procedure was successfully performed. During maneuver, the airplane settled momentarily onto the flaps and belly. * * * * *

The unsafe condition is the landing gear remaining in the up and locked position during approach and landing. This condition could be accompanied by an invalid EICAS landing gear position indication, which could result in landing with gear in the up position and eliminate controllability of the airplane on ground. This may consequently result in structural damage to the airplane. Required actions include replacing the landing gear electronic unit with a new one having a new part number. 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 received no comments on the supplemental NPRM or on the determination of the cost to the public.

Clarification of Credit Paragraph

We have revised paragraph (g)(5) of this AD to clarify that doing replacements in accordance with one of the service bulletins identified in Table 1 of this AD, if done before the effective date of this AD, is acceptable for compliance with the corresponding replacement required by paragraph (g)(1) or (g)(3) of this AD.

Conclusion

We reviewed the available data, 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 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 \$85 per work-hour. Required parts will cost about \$0 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 \$120,870, or \$170 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:



2010-10-11 Empresa Brasileira de Aeronautica S.A. (EMBRAER): Amendment 39-16290.
Docket No. FAA-2009-0714; Directorate Identifier 2009-NM-041-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective June 21, 2010.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model EMB-135BJ, -135ER, -135KE, -135KL, -135LR, -145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP airplanes; certificated in any category; equipped with landing gear electronic unit (LGEU) having part number (P/N) 355-022-002.

Subject

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

Reason

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

It was reported that after commanding the landing gear lever to down the three green landing gear positioning indication was displayed followed by the LG/LEVER DISAGREE EICAS [engine indicating and crew alerting system] message. The crew decided to continue the approach and landing procedure. As soon as the crew identified that the landing gear was not extended properly, a go-around procedure was successfully performed. During maneuver, the airplane settled momentarily onto the flaps and belly. * * * * * The unsafe condition is the landing gear remaining in the up and locked position during approach and landing. This condition could be accompanied by an invalid EICAS landing gear position indication, which could result in landing with gear in the up position and eliminate controllability of the airplane on the ground. This may consequently result in structural damage to the airplane. Required actions include replacing the LGEU with a new one having a new part number.

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) Unless already done, do the following actions:

(1) Within 12 months after the effective date of this AD, replace any LGEU having P/N 355-022-002 having a serial number (S/N) 1000 through 1999 inclusive with a new LGEU having P/N 355-022-003, in accordance with the Accomplishment Instructions of EMBRAER Service Bulletin 145-32-0120, Revision 02, dated February 17, 2009; or 145LEG-32-0032, Revision 02, dated February 17, 2009; as applicable.

(2) As of 12 months after the effective date of this AD, no person may install on any airplane an LGEU having a P/N 355-022-002 having a S/N 1000 through 1999 inclusive.

(3) Within 30 months after the effective date of this AD, replace any LGEU having P/N 355-022-002 having a serial number not identified in paragraph (g)(1) of this AD, with a new LGEU having P/N 355-022-003, in accordance with the Accomplishment Instructions of EMBRAER Service Bulletin 145-32-0120, Revision 02, dated February 17, 2009; or 145LEG-32-0032, Revision 02, dated February 17, 2009; as applicable.

(4) As of 30 months after the effective date of this AD, no person may install on any airplane an LGEU having a P/N 355-022-002 and a serial number not identified in paragraph (g)(1) of this AD.

(5) Replacing the LGEU is also acceptable for compliance with the corresponding requirement of paragraph (g)(1) or (g)(3) of this AD if done before the effective date of this AD in accordance with one of the service bulletins identified in Table 1 of this AD.

Table 1 – Credit service bulletins

EMBRAER Service Bulletin–	Revision –	Dated –
145LEG-32-0032	Original	October 8, 2008
145LEG-32-0032	01	November 4, 2008
145-32-0120	Original	September 15, 2008
145-32-0120	01	November 4, 2008

FAA AD Differences

Note 1: This AD differs from the MCAI and/or service information as follows:

Although EMBRAER Service Bulletins 145LEG-32-0032, Revision 02, dated February 17, 2009; and 145-32-0120, Revision 02, dated February 17, 2009; specify that no person may install on any airplane an LGEU having P/N 355-022-002 as of 30 months after the effective date of this AD, we have determined that no LGEU having P/N 355-022-002 with a S/N 1000 through 1999 inclusive may be installed as of 12 months after the effective date of this AD. Allowing installation of those serial numbers beyond 12 months would not address the identified unsafe condition and ensure an adequate level of safety. This difference has been coordinated with the Agência Nacional de Aviação Civil (ANAC).

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: 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

(i) Refer to MCAI Brazilian Airworthiness Directive 2009-01-01, effective January 8, 2009, as corrected by Brazilian Airworthiness Directive Errata, effective January 20, 2009; EMBRAER Service Bulletin 145-32-0120, Revision 02, dated February 17, 2009; and EMBRAER Service Bulletin 145LEG-32-0032, Revision 02, dated February 17, 2009; for related information.

Material Incorporated by Reference

(j) You must use EMBRAER Service Bulletin 145-32-0120, Revision 02, dated February 17, 2009; and EMBRAER Service Bulletin 145LEG-32-0032, Revision 02, dated February 17, 2009; 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.

(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 April 29, 2010.

Jeffrey E. Duven,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.