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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2002-NM-89-AD; Amendment 39-14436; AD 2005-26-15]

RIN 2120-AA64

Airworthiness Directives; Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model EMB-135 Airplanes; and Model EMB-145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain EMBRAER Model EMB-135 airplanes; and Model EMB-145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP airplanes, that requires performing repetitive inspections for cracks, ruptures, or bends in certain components of the elevator control system; replacing discrepant components; and, for certain airplanes, installing a new spring cartridge and implementing new logic for the electromechanical gust lock system. The AD also requires eventual modification of the elevator gust lock system to replace the mechanical system with an electromechanical system, which will terminate the repetitive inspections. The actions specified by this AD are intended to prevent discrepancies in the elevator control system, which could result in reduced control of the elevator and consequent reduced controllability of the airplane. This action is intended to address the identified unsafe condition.

DATES: Effective February 3, 2006.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of February 3, 2006.

ADDRESSES: The service information referenced in this AD may be obtained from Empresa Brasileira de Aeronautica S.A. (EMBRAER), P.O. Box 343–CEP 12.225, Sao Jose dos Campos–SP, Brazil. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington.

FOR FURTHER INFORMATION CONTACT: Todd Thompson, Aerospace Engineer, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1175; fax (425) 227-1149.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain EMBRAER Model EMB-135 and -145 series airplanes was published as a supplemental notice of proposed rulemaking (NPRM) in the Federal Register on September 21, 2005 (70 FR 55310). That action proposed to require performing repetitive inspections for cracks, ruptures, or bends in certain components of the elevator control system; replacing discrepant components; and, for certain airplanes, installing a new spring cartridge and implementing new logic for the electromechanical gust lock system. The proposed AD also would have required eventual modification of the elevator gust lock system to replace the mechanical system with an electromechanical system, which would terminate the repetitive inspections.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments to the proposed AD were received.

Correction to Final Rule

In paragraph (c)(2) of the supplemental NPRM we inadvertently used an incorrect date for EMBRAER Service Bulletin 145-27-0086, Change 04, dated March 21, 2005, and have corrected the date accordingly in the final rule.

Clarification of Appropriate Service Information

We have revised paragraphs (c)(1)(i) and (c)(1)(ii) of this AD to clarify that the actions required by those paragraphs must be done in accordance with EMBRAER Service Bulletin 145-27-0075, Revision 08, dated March 3, 2005.

Clarification of Alternative Method of Compliance (AMOC) Paragraph

We have revised this action to clarify the appropriate procedure for notifying the principal inspector before using any approved AMOC on any airplane to which the AMOC applies.

Explanation of Change to Applicability

We specify model designations in the applicability of this proposed AD as those designations are published in the most recent type certificate data sheet for the affected models. These model designations differ in the referenced service bulletin(s).

Conclusion

We have carefully reviewed the available data 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.

Cost Impact

We estimate that 300 airplanes of U.S. registry will be affected by this AD.

It will take approximately 1 work hour per airplane, per inspection cycle, to accomplish the inspection, at an average labor rate of $65 per work hour. Based on these figures, the cost impact of this action on U.S. operators is estimated to be $19,500, or $65 per airplane, per inspection cycle.

We estimate that 108 airplanes of U.S. registry will be subject to EMBRAER Service Bulletin 145-27-0075, Revision 08, dated March 3, 2005. For these airplanes, it will take up to 65 work hours to accomplish the modification in that service bulletin, at an average labor rate of $65 per work hour. Required parts will cost up to $14,000 per airplane. Based on these figures, the cost impact of this action on U.S. operators is estimated to be up to $1,968,300, or $18,225 per airplane.

We estimate that 192 airplanes of U.S. registry will be subject to EMBRAER Service Bulletin 145-27-0086, Change 04, dated March 21, 2005. For these airplanes, it will take approximately 133 work hours to accomplish the modification in that service bulletin, at an average labor rate of $65 per work hour. Required parts will cost up to $23,164 per airplane. Based on these figures, the cost impact of this action on U.S. operators is estimated to be up to $6,107,328, or $31,809 per airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

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 Impact

The regulations adopted herein 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. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (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. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
Federal Aviation
Administration

We post ADs on the internet at www.faa.gov/aircraft/safety/alerts/

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2005-26-15 Empresa Brasileira de Aeronautica S.A. (EMBRAER): Amendment 39-14436. Docket 2002-NM-89-AD.

Applicability

Model EMB-135BJ, -135ER, -135KE, -135KL, and -135LR airplanes; and Model EMB-145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP airplanes, certificated in any category; serial numbers 145001 through 145189 inclusive, 145191 through 145362 inclusive, 145364 through 145373 inclusive, 145375, 145377 through 145411 inclusive, 145413 through 145424 inclusive, 145426 through 145430 inclusive, 145434 through 145436 inclusive, 145440 through 145445 inclusive, 145448, 145450, and 145801; equipped with a mechanical gust lock system, certificated in any category.

Compliance

Required as indicated, unless accomplished previously.

To prevent discrepancies in the elevator control system, which could result in reduced control of the elevator and consequent reduced controllability of the airplane, accomplish the following:

Repetitive Inspections

(a) Within 800 flight hours after the effective date of this AD, do a detailed inspection of the elevator control system for any crack, rupture, or bend in any component, in accordance with the Accomplishment Instructions of EMBRAER Service Bulletin 145-27-0087, Change 03, dated September 27, 2002. Where this service bulletin specifies to return discrepant parts and report inspection results to the manufacturer, this AD does not require these actions. Repeat the inspection thereafter at intervals not to exceed 2,500 flight hours or 15 months, whichever is first.

Note 1: For the purposes of this AD, a detailed inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

Replacement of Discrepant Parts

(b) If any discrepant part is found during any inspection required by paragraph (a) of this AD, before further flight, replace the discrepant part with a new part, in accordance with the

Accomplishment Instructions of EMBRAER Service Bulletin 145-27-0087, Change 03, dated September 27, 2002.

Modification

(c) Within 10,000 flight hours or 60 months after the effective date of this AD, whichever is first, modify the elevator gust lock by accomplishing paragraph (c)(1) or (c)(2) of this AD, as applicable. This modification terminates the repetitive inspections required by paragraph (a) of this AD.

(1) For airplanes listed in EMBRAER Service Bulletin 145-27-0075, Revision 08, dated March 3, 2005: Do paragraph (c)(1)(i) or (c)(1)(ii) of this AD, as applicable, and install a new spring cartridge and implement new logic for the electromechanical gust lock system by doing all actions in section 3.D. (Part IV) of the Accomplishment Instructions of the service bulletin. After accomplishing the actions in EMBRAER Service Bulletin 145-27-0101; as specified in the Accomplishment Instructions of EMBRAER Service Bulletin 145-27-0075, Revision 08; the airplane flight manual (AFM) revision required by AD 2002-26-51, amendment 39-13008, may be removed from the Limitations section of the EMBRAER EMB-145 AFM. Accomplishing the actions specified in the Accomplishment Instructions of EMBRAER Service Bulletin 145-27-0102; as specified by EMBRAER Service Bulletin 145-27-0075, Revision 08; terminates the repetitive inspections required by AD 2005-24-11, amendment 39-14391.

(i) Replace the mechanical gust lock system with an electromechanical gust lock system, and replace the control stand with a reworked control stand, by doing all the actions (including a detailed inspection to ensure that certain parts have been removed previously per EMBRAER Service Bulletin 145-27-0076) in and per section 3.A. (Part I) or 3.B. (Part II) of the Accomplishment Instructions of EMBRAER Service Bulletin 145-27-0075, Revision 08, as applicable. If the inspection reveals that certain subject parts have not been removed previously, before further flight, remove the subject parts in accordance with EMBRAER Service Bulletin 145-27-0075, Revision 08. Where Parts I and II of the Accomplishment Instructions of EMBRAER Service Bulletin 145-27-0075, Revision 08, specify to remove and "send the control stand to be reworked in a workshop," replace the control stand with a control stand reworked as specified in EMBRAER Service Bulletin 145-27-0075, Revision 08.

(ii) Replace the return spring and spring terminal of the gust lock control lever with improved parts by doing all the actions in and per section 3.C. (Part III) of the Accomplishment Instructions of EMBRAER Service Bulletin 145-27-0075, Revision 08.

Note 2: Part IV of the Accomplishment Instructions of EMBRAER Service Bulletin 145-27-0075, Revision 08, refers to EMBRAER Service Bulletin 145-27-0101, currently at Revision 02, dated December 27, 2004; and EMBRAER Service Bulletin 145-27-0102, currently at Revision 02, dated January 20, 2005; as additional sources of instructions for accomplishing the installation of a new spring cartridge and implementation of the new logic for the electromechanical gust lock system.

(2) For airplanes listed in EMBRAER Service Bulletin 145-27-0086, Change 04, dated March 21, 2005: Do paragraphs (c)(2)(i), (c)(2)(ii), (c)(2)(iii), and (c)(2)(iv) of this AD, as applicable.

(i) Rework the tail carbon box and the horizontal stabilizer by doing all the actions (including the inspection for delamination) in and per section 3.A. (Part I) of the Accomplishment Instructions of the service bulletin. If any delamination is found that is outside the limits specified in the service bulletin, before further flight, repair per a method approved by either the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, or the Departmento de Aviacao Civil (or its delegated agent).

(ii) Install wiring and electrical components by doing all the actions in and per section 3.B. (Part II) of the Accomplishment Instructions of the service bulletin.

(iii) Install and activate the electromechanical gust lock system by doing all actions in section 3.D. (Part IV) of the Accomplishment Instructions of the service bulletin. Where Part IV of the

Accomplishment Instructions of the service bulletin specifies to remove and "send the control stand to be reworked in a workshop," replace the control stand with a control stand reworked as specified in Part III of the service bulletin.

(iv) Install a new spring cartridge and implement new logic for the electromechanical gust lock system by doing all actions in section 3.E. (Part V) of the Accomplishment Instructions of the service bulletin, as applicable. After accomplishing the actions in EMBRAER Service Bulletin 145-27-0101; as specified in the Accomplishment Instructions of EMBRAER Service Bulletin 145-27-0086, Change 04; the AFM revision required by AD 2002-26-51, amendment 39-13008, may be removed from the Limitations section of the EMBRAER EMB-145 AFM. Accomplishing the actions in EMBRAER Service Bulletin 145-27-0102; as specified in the Accomplishment Instructions of EMBRAER Service Bulletin 145-27-0086, Change 04; terminates the repetitive inspections required by AD 2005-24-11, amendment 39-14391.

Note 3: Part V of the Accomplishment Instructions of EMBRAER Service Bulletin 145-27-0086, Change 04, refers to EMBRAER Service Bulletin 145-27-0101, currently at Revision 02, dated December 27, 2004; and EMBRAER Service Bulletin 145-27-0102, currently at Revision 02, dated January 20, 2005; as additional sources of instructions for accomplishing the installation of a new spring cartridge and implementation of the new logic for the electromechanical gust lock system.

Actions Accomplished Previously

(d) Actions accomplished before the effective date of this AD are acceptable for compliance with corresponding requirements of this AD as specified in paragraphs (d)(1), (d)(2), and (d)(3) of this AD.

(1) Modification of the elevator gust lock system before the effective date of this AD in accordance with EMBRAER Service Bulletin 145-27-0075, Change 06, dated July 16, 2002, is acceptable for compliance with paragraph (c)(1) of this AD, provided that, within the compliance time specified in paragraph (c) of this AD, a new spring cartridge is installed and new logic for the electromechanical gust lock system is implemented in accordance with Part IV of EMBRAER Service Bulletin 145-27-0075, Revision 07, dated March 2, 2004, or Revision 08, dated March 3, 2005.

(2) Modification of the elevator gust lock system before the effective date of this AD in accordance with EMBRAER Service Bulletin 145-27-0075, Revision 07, dated March 2, 2004, is acceptable for compliance with paragraph (c)(1) of this AD.

(3) Modification of the elevator gust lock system before the effective date of this AD in accordance with EMBRAER Service Bulletin 145-27-0086, Change 02, dated December 23, 2003; or EMBRAER Service Bulletin 145-27-0086, Change 03, dated April 14, 2004; is acceptable for compliance with paragraph (c)(2) of this AD.

Alternative Methods of Compliance

(e)(1) In accordance with 14 CFR 39.19, the Manager, International Branch, ANM-116, is authorized to approve alternative methods of compliance for this AD.

(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.

Note 4: The subject of this AD is addressed in Brazilian airworthiness directive 2002-01-01R3, dated November 8, 2002.

Material Incorporated by Reference

(f) Unless otherwise specified in this AD, the actions must be done in accordance with the EMBRAER service information listed in Table 1 of this AD. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. EMBRAER Service Bulletin 145-27-0075, Revision 08, dated March 3, 2005, contains the following effective pages:

Page Nos.	Revision level shown on page	Date shown on page
1–6, 8, 30–34, 39, 41, 51, 58, 62, 68, 110	08	March 3, 2005.
7, 9–29, 35–38, 40, 42–50, 52–57, 59–61, 63–67, 69–109, 111–117	07	March 2, 2004.

EMBRAER Service Bulletin 145-27-0086, Change 04, dated March 21, 2005, contains the following effective pages:

Page Nos.	Change level shown on page	Date shown on page
1–2, 5, 11–12, 23, 31, 32, 40, 62, 95	04	March 21, 2005.
3–4, 6–10, 13–22, 24–30, 33–39, 41–61, 63–94, 96–137	03	April 14, 2004.

To get copies of this service information, contact Empresa Brasileira de Aeronautica S.A. (EMBRAER), P.O. Box 343–CEP 12.225, Sao Jose dos Campos–SP, Brazil. To inspect copies of this service information, go to the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or to 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*.

TABLE 1.—MATERIAL INCORPORATED BY REFERENCE

EMBAER service bulletin	Revision/change level	Date
145–27–0075	Revision 08	March 3, 2005.
145–27–0086	Change 04	March 21, 2005.
145–27–0087	Change 03	September 27, 2002.

Effective Date

(g) This amendment becomes effective on February 3, 2006.

Issued in Renton, Washington, on December 13, 2005.
Ali Bahrami,
Manager, Transport Airplane Directorate, Aircraft Certification Service.
[FR Doc. 05-24530 Filed 12-29-05; 8:45 am]
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