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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-20728; Directorate Identifier 2005-NM-003-AD; Amendment 39-14527; AD 2006-07-01]

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 (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain EMBRAER Model EMB-135 airplanes and Model EMB-145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP airplanes. This AD requires replacing the horizontal stabilizer control unit (HSCU) with a modified and reidentified or new, improved HSCU. For certain airplanes, this AD also requires related concurrent actions as necessary. This AD is prompted by reports of loss of the pitch trim system due to a simultaneous failure of both channels of the HSCU. We are issuing this AD to prevent loss of pitch trim and reduced controllability of the airplane.

DATES: This AD becomes effective May 1, 2006.

The incorporation by reference of certain publications listed in the AD is approved by the Director of the Federal Register as of May 1, 2006.

ADDRESSES: You may examine the AD docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, room PL-401, Washington, DC.

Contact Empresa Brasileira de Aeronautica S.A. (EMBRAER), P.O. Box 343-CEP 12.225, Sao Jose dos Campos-SP, Brazil, for service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: Dan Rodina, Aerospace Engineer, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2125; fax (425) 227-1149.

SUPPLEMENTARY INFORMATION:

Examining the Docket

You may examine the airworthiness directive (AD) docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the street address stated in the ADDRESSES section.

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to certain EMBRAER Model EMB-135 airplanes and Model EMB-145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP airplanes. That NPRM was published in the Federal Register on March 30, 2005 (70 FR 16180). That NPRM proposed to require replacing the horizontal stabilizer control unit (HSCU) with a modified and reidentified or new, improved HSCU. For certain airplanes, that action also proposed to require related concurrent actions as necessary.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comments that have been submitted on the NPRM.

Support for Proposed AD

One commenter, the National Transportation Safety Board (NTSB), supports improvements to the pitch-trim system and concurs with the NPRM. Another commenter, Chautauqua Airlines, fully supports the intent of the AD and strongly recommends requiring upgrading the HSCU on all affected aircraft.

Request for Reference to Related AD

Two commenters, EMBRAER and Chautauqua Airlines, request that we revise paragraph (b) of the NPRM to refer to AD 2004-25-21, amendment 39-13909 (69 FR 76605, December 22, 2004). The commenters state that, since certain actions required by that existing AD are specified as prior or concurrent requirements with the proposed requirements of the NPRM, the NPRM should refer to AD 2004-25-21 as an affected AD.

We agree with this request for the reason given by the commenters. We have revised paragraph (b) of the AD to refer to AD 2004-25-21 as an affected AD.

Request To Revise Service Information Citations

One commenter, EMBRAER, requests that we revise the citations of the service information in the NPRM. EMBRAER states that new revisions of the service information have been released and that these latest revisions should be cited to accomplish the proposed requirements of the NPRM.

We agree with this request. We have reviewed EMBRAER Service Bulletin 145-27-0106, Revision 02 (for all affected airplanes except Model EMB-135BJ airplanes), and EMBRAER Service Bulletin 145LEG-27-0016, Revision 02 (for Model EMB-135BJ airplanes only); both dated March 14, 2005. The content of Revision 02 of both service bulletins is essentially the same as that specified in Revision 01, dated August 30, 2004, of both service bulletins; the only difference is that about 5

airplanes have been moved to the in-production effectivity, which will decrease the burden to U.S. operators by about 3 airplanes. Therefore, we have revised the Costs of Compliance section of the AD to reflect the decreased fleet costs, and paragraphs (c) and (f) of the AD to cite the latest revisions of the service bulletins as the appropriate sources of service information to accomplish the requirements of the AD.

Request To Add Alternative Service Information

One commenter, EMBRAER, requests that paragraph (f) of the NPRM be revised to specify EMBRAER Service Bulletins 145LEG-27-0002, Revision 02, dated August 24, 2004; and 145-27-0084, Revision 06, dated March 14, 2005; as alternative sources of service information for installing the new HSCU. EMBRAER states that those service bulletins describe procedures for installing the new HSCU, part number (P/N) 362100-1013. EMBRAER has provided a suggested revision to paragraph (f) of the NPRM to include these service bulletins.

We agree with this request. Therefore, we have revised paragraph (f) of the AD to include EMBRAER Service Bulletin 145LEG-27-0002, Revision 02, dated August 24, 2005; and EMBRAER Service Bulletin 145-27-0084, Revision 06, dated March 14, 2005; as alternative sources of service information for installing the new HSCU.

Request To Clarify Description of Related AD

Two commenters, EMBRAER and Chautauqua Airlines, request that we revise paragraph (g) of the NPRM to clarify which affected airplanes are subject to the prior or concurrent accomplishment of certain requirements of AD 2004-25-51. EMBRAER also requests that we include two additional EMBRAER service bulletins to more clearly identify the airplanes involved. Both commenters further request that we revise paragraph (g) to specify which paragraphs of AD 2004-25-21 are applicable to the affected airplanes identified in the service information. The commenters state that these revisions will help to prevent any operator confusion about these requirements.

We agree with this request for the reasons given. Therefore, we have revised paragraph (g) of the AD to include EMBRAER Service Bulletin 145-27-0084, Revision 04, dated October 21, 2003; and EMBRAER Service Bulletin 145-27-0096, Revision 04, dated March 14, 2005; and to identify paragraphs (a)(1), (a)(2), (b)(2), (b)(3), (b)(4)(i), (b)(4)(ii), (b)(5), (b)(6), and (b)(7) of AD 2004-25-21, as applicable to the affected airplanes.

Request To Revise Paragraph (h) of the NPRM

One commenter, EMBRAER, requests that we revise paragraph (h) of the NPRM to include previous revisions of EMBRAER service bulletins that may be used to accomplish certain requirements of the NPRM. EMBRAER believes this will make it easier for operators to show compliance with the NPRM.

We agree with this request for the reason given. Therefore, we have revised paragraph (h) of the AD to include EMBRAER Service Bulletin 145-27-0106, Revision 01, dated August 30, 2004; EMBRAER Service Bulletin 145LEG-27-0016, Revision 01, dated August 30, 2004; and EMBRAER Service Bulletin 145-27-0084, Revision 05, dated August 24, 2004; as additional sources of service information that are considered acceptable for complying with the applicable actions required by the AD.

Request To Permit Installation of Future Approved Parts

One commenter, EMBRAER, requests that we revise the NPRM to include a note or paragraph permitting operators to install any HSCU that will be approved in the future having P/N 362100-1014, -1015, -1016, and so on. EMBRAER believes this would relieve operators of the burden of additional requirements while allowing them to comply with the intent of the NPRM.

We do not agree with this request. Our policy does not allow installing parts that do not yet exist and are, therefore, not referenced in the AD. However, any operator may submit a request for approval of an alternative method of compliance (AMOC) to install a part having a different P/N, as described in paragraph (j) of the AD. The request must include data substantiating that an acceptable level of safety would be maintained by use of the different part.

Request To Identify Additional Possibly Defective Parts

One commenter, the Modification and Replacement Parts Association (MARPA), requests that the NPRM be revised to apply to all unmodified HSCUs; whether marketed through EMBRAER as original equipment manufacturer (OEM) parts or by the holder of a parts manufacturer approval (PMA); and whether those parts are installed on an airplane or not. MARPA asserts that repair and supply facilities might have defective OEM or PMA parts in stock that could be put into service unless such parts are identified as subject to the requirements of the NPRM.

We concur with MARPA's general request that, if we know that an unsafe condition also exists in PMA parts, the AD should address those parts, as well as the original parts. We are not aware of other PMA parts that have a different part number. However, to ensure that no defective part is put into service, we have added new paragraph (i) to address installation of the identified good parts and accordingly reidentified the subsequent paragraphs of the NPRM in the AD.

MARPA's remarks are timely in that the Transport Airplane Directorate currently is in the process of reviewing this issue as it applies to transport category airplanes. We acknowledge that there may be other ways of addressing this issue to ensure that unsafe PMA parts are identified and addressed. Once we have thoroughly examined all aspects of this issue, including input from industry, and have made a final determination, we will consider whether our policy regarding addressing PMA parts in ADs needs to be revised. We consider that to delay this AD action would be inappropriate, since we have determined that an unsafe condition exists and that replacement of certain parts must be accomplished to ensure continued safety.

Request To Reference PMA Parts

One commenter, MARPA, requests that the wording of the NPRM be changed to provide for approved alternatives to the type-certificated designated part. MARPA suggests that this could be accomplished by adding the phrase "or PMA alternative" to the part number in the proposed requirement. MARPA adds that PMA parts are "by law approved parts and are not, as some regions opine, an AMOC requiring further FAA approval before being installed." MARPA states that the provision in the NPRM to replace an HSCU with a specific part number assigned by the type certificate (TC) holder conflicts with § 21.303 of the Federal Aviation Regulations (14 CFR 21.303) and may be unenforceable.

We do not agree with MARPA's request to revise the AD to permit installation of any equivalent PMA parts so that it is not necessary for an operator to request approval of an AMOC in order to install an "equivalent" PMA part. Whether an alternative part is "equivalent" in adequately resolving the unsafe condition can only be determined on a case-by-case basis based on a complete understanding of the unsafe condition. We are not currently aware of any such parts. Our policy is that, in order for operators to replace a part with one that is not specified in the AD, they must request

an AMOC. This is necessary so that we can make a specific determination that an alternative part is or is not susceptible to the same unsafe condition. However, the Transport Airplane Directorate currently is in the process of reviewing this issue as it applies to transport category airplanes. Once we have thoroughly examined all aspects of this issue and have made a final determination, we will consider whether our policy regarding addressing PMA parts in ADs needs to be revised. We consider that to delay this AD action would be inappropriate, since we have determined that an unsafe condition exists and that replacement of certain parts must be accomplished to ensure continued safety.

In response to MARPA's statement regarding a variance with FAR 21.303, under which the FAA issues PMAs, this statement appears to reflect a misunderstanding of the relationship between ADs and the certification procedural regulations of part 21 of the Federal Aviation Regulations (14 CFR part 21). Those regulations, including section 21.303 of the Federal Aviation Regulations (14 CFR 21.303), are intended to ensure that aeronautical products comply with the applicable airworthiness standards. But ADs are issued when, notwithstanding those procedures, we become aware of unsafe conditions in these products or parts. Therefore, an AD takes precedence over design approvals when we identify an unsafe condition, and mandating installation of a certain part number in an AD is not at variance with section 21.303.

The AD provides a means of compliance for operators to ensure that the identified unsafe condition is addressed appropriately. For an unsafe condition attributable to a part, the AD normally identifies the replacement parts necessary to obtain that compliance. As stated in section 39.7 of the Federal Aviation Regulations (14 CFR 39.7): "Anyone who operates a product that does not meet the requirements of an applicable airworthiness directive is in violation of this section." Unless an operator obtains approval for an AMOC, replacing a part with one not specified by the AD would make the operator subject to an enforcement action and result in a civil penalty. No change to the AD is necessary in this regard.

Explanation of Change to Applicability

We have revised the applicability to identify model designations as published in the most recent type certificate data sheet for the affected models.

Clarification of 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.

Conclusion

We have carefully reviewed the available data, including the comments that have been submitted, 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.

Costs of Compliance

This AD will affect about 613 airplanes of U.S. registry. The required actions will take about 1 work hour per airplane, at an average labor rate of \$65 per work hour. Required parts will be supplied by the manufacturer at no cost. Based on these figures, the estimated cost of the AD for U.S. operators is \$39,845, or \$65 per airplane.

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 have 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 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. See the ADDRESSES section for a location to examine the regulatory evaluation.

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):

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

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).

2006-07-01 Empresa Brasileira de Aeronautica S.A. (EMBRAER): Amendment 39-14527.
Docket No. FAA-2005-20728; Directorate Identifier 2005-NM-003-AD.

Effective Date

- (a) This AD becomes effective May 1, 2006.

Affected ADs

- (b) Accomplishing paragraph (g) of this AD eliminates certain requirements specified by AD 2004-25-21, amendment 39-13909 (69 FR 76605, December 22, 2004).

Applicability

- (c) This AD applies to EMBRAER Model EMB-135BJ, -135ER, -135KE, -135KL, -135LR, -145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP airplanes; certificated in any category; as identified in EMBRAER Service Bulletin 145-27-0106, Revision 02 (for all affected airplanes except Model EMB-135BJ airplanes); and EMBRAER Service Bulletin 145LEG-27-0016, Revision 02 (for Model EMB-135BJ airplanes only); both dated March 14, 2005.

Unsafe Condition

- (d) This AD was prompted by reports of loss of the pitch trim system due to a simultaneous failure of both channels of the horizontal stabilizer control unit (HSCU). We are issuing this AD to prevent loss of pitch trim and reduced controllability of the airplane.

Compliance

- (e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Replacement

- (f) Within 18 months or 4,000 flight hours after the effective date of this AD, whichever occurs first, replace the HSCU with a modified and reidentified or new, improved HSCU having part number 362100-1013, by doing all the actions specified in the Accomplishment Instructions of the applicable EMBRAER service bulletin specified in Table 1 of this AD. Actions accomplished using the alternative sources of service information shown in Table 2 of this AD are considered acceptable

for compliance with the requirements of this paragraph. Doing the requirements of this paragraph before the compliance time specified in paragraph (b) of AD 2004-25-21 eliminates the requirement to accomplish the actions required by paragraph (b)(1) of AD 2004-25-21.

TABLE 1.—SERVICE INFORMATION

EMBRAER service bulletin	Revision level	Dated
145-27-0106	02	March 14, 2005.
145LEG-27-0016	02	March 14, 2005.

TABLE 2.—ALTERNATIVE SERVICE INFORMATION

EMBRAER service bulletin	Revision level	Dated
145-27-0084	06	March 14, 2005.
145LEG-27-0002	02	August 24, 2005.

Airplanes Identified in Certain Other Service Bulletins/Concurrent Requirements

(g) For airplanes identified in the EMBRAER service bulletins listed in Table 3 of this AD: Prior to or concurrently with the actions required by paragraph (f) of this AD, replace the HSCU with a new HSCU with improved features, and having a new part number, in accordance with EMBRAER Service Bulletin 145LEG-27-0002, Revision 01, dated April 15, 2003; or 145-27-0084, Revision 04, dated October 21, 2003; as applicable. Accomplishing this replacement eliminates the requirement to accomplish all actions required by paragraphs (a)(1), (a)(2), (b)(2), (b)(3), (b)(4)(i), (b)(4)(ii), (b)(5), (b)(6), and (b)(7) of AD 2004-25-21.

TABLE 3.—IDENTIFICATION OF AFFECTED AIRPLANES

EMBRAER service bulletin	Paragraph	Revision level	Dated
145-27-0084	1.A.(1), 1.A.(2), 1.A.(3), 1.A.(4), and 1.A.(5)	04	October 21, 2003.
145-27-0096	1.A.(1) and 1.A.(2)	04	March 14, 2005.
145-27-0106	1.A.	02	March 14, 2005.
145LEG-27-0002	1.A.(1) and 1.A.(2)	01	April 15, 2003.
145LEG-27-0016	1.A.	02	March 14, 2005.

Actions Accomplished Per Previous Issues of Service Bulletins

(h) Actions accomplished before the effective date of this AD in accordance with the EMBRAER service bulletins listed in Table 4 of this AD are considered acceptable for compliance with the applicable action in this AD.

TABLE 4.—PREVIOUS ISSUES OF EMBRAER SERVICE BULLETINS

EMBRAER service bulletin	Revision level	Dated
145-27-0084	05	August 24, 2004.
145-27-0106	Original	August 4, 2004.
145-27-0106	01	August 30, 2004.
145LEG-27-0016	Original	August 4, 2004.
145LEG-27-0016	01	August 30, 2004.

Parts Installation

(i) As of the effective date of this AD, no person may install an HSCU on any airplane unless it has been modified according to the requirements of this AD.

Alternative Methods of Compliance (AMOCs)

(j)(1) The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) Before using any AMOC approved in accordance with 14 CFR 39.19 on any airplane to which the AMOC applies, notify the appropriate principal inspector in the FAA Flight Standards Certificate Holding District Office.

Related Information

(k) Brazilian airworthiness directive 2004-11-01, dated November 28, 2004, also addresses the subject of this AD.

Material Incorporated by Reference

(l) You must use the service information specified in Table 5 of this AD, as applicable, to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approves the incorporation by reference of these documents in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Empresa Brasileira de Aeronautica S.A. (EMBRAER), P.O. Box 343–CEP 12.225, Sao Jose dos Campos–SP, Brazil, for copies of this service information. You may view copies at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., room PL-401, Nassif Building, Washington, DC; on the Internet at <http://dms.dot.gov>; or at 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 5.—MATERIAL INCORPORATED BY REFERENCE

EMBRAER service bulletin	Page No.	Revision level shown on page	Date shown on page
145–27–0084, Revision 04, October 21, 2003	1–4, 6, 11, 12, 15 5, 7–10, 13, 14, 16–40	04 03	October 21, 2003.
145–27–0106, Revision 02, March 14, 2005	1–11	02	March 14, 2005.
145LEG–27–0002, Revision 01, April 15, 2003	1, 5 2–4, 6–15	01 Original	April 15, 2003. February 5, 2003.
145LEG–27–0016, Revision 02, March 14, 2005	1–11	02	March 14, 2005.

Issued in Renton, Washington, on March 17, 2006.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 06-2853 Filed 3-24-06; 8:45 am]

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