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[Page 47251-47253]  
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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. 2002-NM-129-AD; Amendment 39-12823; AD 2002-14-23]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Empresa Brasileira de Aeronautica S.A.**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule; request for comments.

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**SUMMARY:** This amendment adopts a new airworthiness directive (AD) that is applicable to certain EMBRAER Model EMB-135 and -145 series airplanes. This action requires a one-time inspection of the clutch assembly of the horizontal stabilizer actuator (HSA) to verify that at least one locking tab on the key washer is bent into the locking groove of the clutch nut, and follow-on actions. This action is necessary to prevent a loose or disengaged clutch nut on the HSA clutch assembly, which could result in loss of pitch trim and consequent reduced controllability of the airplane. This action is intended to address the identified unsafe condition.

**DATES:** Effective August 2, 2002.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of August 2, 2002.

Comments for inclusion in the Rules Docket must be received on or before August 19, 2002.

**ADDRESSES:** Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2002-NM-129-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9 a.m. and 3 p.m., Monday through Friday, except Federal holidays. Comments may be submitted via fax to (425) 227-1232. Comments may also be sent via the Internet using the following address: [9-anm-iarcomment@faa.gov](mailto:9-anm-iarcomment@faa.gov). Comments sent via fax or the Internet must contain "Docket No. 2002-NM-129-AD" in the subject line and need not be submitted in triplicate. Comments sent via the Internet as attached electronic files must be formatted in Microsoft Word 97 for Windows or ASCII text.

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 FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; at the FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Robert Capezzuto, Aerospace Engineer, Systems and Flight Test Branch, ACE-116A, FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia 30349; telephone (770) 703-6071; fax (770) 703-6097.

**SUPPLEMENTARY INFORMATION:** The Departamento de Aviacao Civil (DAC), which is the airworthiness authority for Brazil, recently notified the FAA that an unsafe condition may exist on certain EMBRAER Model EMB-135 and -145 series airplanes. The DAC advises that, on one airplane, a loose clutch nut has been found on the clutch assembly of the primary horizontal stabilizer actuator (HSA). Investigation revealed that none of the locking tabs on the key washer for the HSA clutch assembly were bent into the locking groove of the clutch nut. This condition, if not corrected, could result in a loose or disengaged clutch nut on the HSA clutch assembly, which could result in loss of pitch trim and consequent reduced controllability of the airplane.

### **Explanation of Relevant Service Information**

EMBRAER has issued Service Bulletin 145-27-0088, dated February 1, 2002, which specifies a visual inspection to verify that at least one locking tab on the key washer for the HSA clutch assembly is bent into the locking groove of the clutch nut. The EMBRAER service bulletin refers to Parker Service Bulletin 362200-27-231, dated December 21, 2001, as the appropriate source of service information for accomplishment of this inspection. (A copy of the Parker service bulletin is contained within the EMBRAER service bulletin.) The Parker service bulletin describes procedures for the visual inspection, as well as for follow-on actions. If at least one locking tab is bent into the locking groove of the clutch nut, follow-on actions include an inspection for damage of the O-ring at the base of the HSA motor, replacement of the O-ring if necessary, and an inspection of the sealing surface for damage. If no locking tab is bent into the locking groove of the clutch nut, the Parker service bulletin specifies to replace the HSA assembly with a serviceable HSA assembly. Accomplishment of the actions specified in these service bulletins is intended to adequately address the identified unsafe condition. The DAC classified the EMBRAER service bulletin as mandatory and issued Brazilian airworthiness directive 2002-04-01, dated April 24, 2002, to ensure the continued airworthiness of these airplanes in Brazil.

### **FAA's Conclusions**

These airplane models are manufactured in Brazil and are type certificated for operation in the United States under the provisions of Sec. 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Pursuant to this bilateral airworthiness agreement, the DAC has kept the FAA informed of the situation described above. The FAA has examined the findings of the DAC, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.

## **Explanation of Requirements of Rule**

Since an unsafe condition has been identified that is likely to exist or develop on other airplanes of the same type design registered in the United States, this AD is being issued to prevent a loose or disengaged clutch nut on the HSA clutch assembly, which could result in loss of pitch trim and consequent reduced controllability of the airplane. This AD requires accomplishment of the actions specified in the EMBRAER service bulletin described previously, except as discussed below.

## **Differences Between the Service Information, the Brazilian Airworthiness Directive, and This AD**

The EMBRAER service bulletin and the Brazilian airworthiness directive described previously refer to a "visual" inspection. For the purposes of this AD, the FAA has determined that the inspection procedures in the service bulletins constitute a "detailed inspection." Note 2 of this AD defines such an inspection.

Further, the follow-on actions in the service information include inspections for damage (e.g., nicks, tears, scarring) of the O-ring at the base of the HSA motor and the sealing surface of the HSA housing. While the service information does not identify the type of inspections that are necessary, we have determined that detailed inspections are necessary.

Also, the service information does not specify a corrective action if any damage of the sealing surface of the HSA housing is found during the follow-on inspection of that area. We find it necessary to require replacement of the HSA assembly with a serviceable assembly if any damage to the sealing surface of the housing is found. The replacement of the HAS assembly has been coordinated and concurred with by the DAC.

The applicability for the Brazilian airworthiness directive includes "all EMBRAER EMB-135 and -145 series airplanes," but also specifies a preliminary verification of the part numbers and serial numbers of the HSAs installed on those models. However, for this AD, we have determined that it will be more clear to identify affected airplanes in the same way they are identified in the EMBRAER service bulletin. The effectivity of that service bulletin lists airplanes equipped with HSAs having certain part numbers and serial numbers, but does not provide for preliminary verification of HSA part numbers and serial numbers as the Brazilian airworthiness directive does.

## **Determination of Rule's Effective Date**

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

## **Comments Invited**

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified under the caption ADDRESSES. All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Submit comments using the following format:

- Organize comments issue-by-issue. For example, discuss a request to change the compliance time and a request to change the service bulletin reference as two separate issues.
- For each issue, state what specific change to the AD is being requested.
- Include justification (e.g., reasons or data) for each request.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2002-NM-129-AD." The postcard will be date stamped and returned to the commenter.

## **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.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, 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.

### **Sec. 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.airweb.faa.gov/rgl](http://www.airweb.faa.gov/rgl)"*

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).

**2002-14-23 Empresa Brasileira de Aeronautica S.A. (EMBRAER):** Amendment 39-12823.  
Docket 2002-NM-129-AD.

**Applicability:** Model EMB-135 and -145 series airplanes, certificated in any category; equipped with horizontal stabilizer actuator (HSA) assemblies having part numbers and serial numbers as listed in EMBRAER Service Bulletin 145-27-0088, dated February 1, 2002.

**Note 1:** This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

**Compliance:** Required as indicated, unless accomplished previously.

To prevent a loose or disengaged clutch nut on the HSA clutch assembly, which could result in loss of pitch trim and consequent reduced controllability of the airplane, accomplish the following:

## Detailed Inspection and Follow-On Actions

(a) Within 30 days after the effective date of this AD, perform a one-time detailed inspection of the HSA clutch assembly to verify that at least one locking tab on the key washer is bent into the locking groove of the clutch nut, per EMBRAER Service Bulletin 145-27-0088, dated February 1, 2002.

**Note 2:** 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."

**Note 3:** EMBRAER Service Bulletin 145-27-0088 refers to Parker Service Bulletin 362200-27-231, dated December 21, 2001, as the appropriate source of service information for accomplishment of the inspection described in paragraph (a) of this AD. A copy of the Parker service bulletin is contained within the EMBRAER service bulletin.

(1) If at least one locking tab is bent into the locking groove of the clutch nut: Before further flight, perform all applicable follow-on actions per the service bulletin. The follow-on actions include a detailed inspection for damage (e.g., nicks, tears, scarring) of the O-ring at the base of the HSA motor, replacement of the O-ring with a new O-ring if any damage is found, and a detailed inspection for damage (e.g., nicks, tears, scarring) of the sealing surface. If any damage is found on the sealing surface, before further flight, replace the HSA assembly with a serviceable assembly, per the service bulletin.

(2) If no locking tab is bent into the locking groove of the clutch nut: Before further flight, replace the HSA assembly with a serviceable HSA assembly, per the service bulletin.

## **Spares**

(b) As of the effective date of this AD, no person may install on any airplane an HSA assembly with a part number and serial number included in the applicability statement of this AD, unless the HSA assembly has been inspected according to paragraph (a) of this AD and found to have at least one locking tab bent into the locking groove of the clutch nut.

## **Alternative Methods of Compliance**

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Atlanta Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta ACO.

**Note 4:** Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Atlanta ACO.

## **Special Flight Permits**

(d) Special flight permits may be issued in accordance with Secs. 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

## **Incorporation by Reference**

(e) The actions shall be done in accordance with EMBRAER Service Bulletin 145-27-0088, dated February 1, 2002. 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. Copies may be obtained from Empresa Brasileira de Aeronautica S.A. (EMBRAER), P.O. Box 343–CEP 12.225, Sao Jose dos Campos–SP, Brazil. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; at the FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**Note 5:** The subject of this AD is addressed in Brazilian airworthiness directive 2002-04-01, dated April 24, 2002.

**Effective Date**

(f) This amendment becomes effective on August 2, 2002.

Issued in Renton, Washington, on July 11, 2002.

Lirio Liu-Nelson,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 02-18026 Filed 7-17-02; 8:45 am]

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