



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2017-1119; Product Identifier 2017-CE-037-AD]

RIN 2120-AA64

Airworthiness Directives; Embraer S.A. Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for Embraer S.A. Models EMB-500 and EMB-505 airplanes. This proposed 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 improperly tied castle nuts on the aileron, rudder, and elevator trim tab (or autotab) attachment bolts. We are issuing this proposed AD to require actions to address the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30,

West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE.,
Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except
Federal holidays.

For service information identified in this proposed AD, contact Embraer S.A.,
Phenom Maintenance Support, Avenida Brigadeiro Faria Lima, 2170, São José dos
Campos – SP - 12227-901, P.O. Box 36/2, Brasil; phone: +55 12 3927 1000; fax: +55 12
3927-2619; email: phenom.reliability@embraer.com.br; Internet:
<http://www.embraer.com.br/en-US/Pages/home.aspx>. You may review this referenced
service information at the FAA, Policy and Innovation Division, 901 Locust, Kansas City,
Missouri 64106. For information on the availability of this material at the FAA, call (816)
329-4148.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by
searching for and locating Docket No. FAA-2017-1119; or in person at the Docket
Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal
holidays. The AD docket contains this proposed AD, the regulatory evaluation, any
comments received, and other information. The street address for the Docket Office
(telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available
in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Jim Rutherford, Aerospace Engineer,
FAA, Small Airplane Standards Branch, 901 Locust, Room 301, Kansas City, Missouri
64106; telephone: (816) 329-4165; fax: (816) 329-4090; email: jim.rutherford@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2017-1119; Product Identifier 2017-CE-037-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

The Agência Nacional de Aviação Civil (ANAC), which is the aviation authority for Brazil, has issued AD No.: 2017-11-01, dated November 10, 2017 (referred to after this as “the MCAI”), to correct an unsafe condition for Embraer S.A. Models EMB-500 and EMB-505 airplanes. The MCAI states:

This [ANAC] AD results of a report of one airplane having improperly tied castle nut on the aileron, rudder and elevator trim tab (or autotab) attachment bolts. A disconnected surface may cause an increase in dynamic loads and probable flutter, which may cause structural failure and possible loss of control of the airplane.

Since this condition may occur in other airplanes of the same type and affects flight safety, a corrective action is required. Thus, sufficient reason exists to request compliance with this [ANAC] AD in the indicated time limit without prior notice.

You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-1119.

Related Service Information under 1 CFR part 51

Embraer S.A. has issued PHENOM by Embraer Alert Service Bulletin 500-27-A026, Revision 1, dated October 6, 2017; and PHENOM by Embraer Alert Service Bulletin 505-27-A028, Revision 2, dated October 6, 2017. For the applicable models, the service information describes procedures for inspection of the aileron trim tab, rudder trim tab, and elevator trim tab, and, if required, application of torque and installation of a cotter pin. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section of this NPRM.

FAA's Determination and Requirements of the Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with this State of Design Authority, they have notified us of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

Costs of Compliance

We estimate that this proposed AD will affect 114 products of U.S. registry. We also estimate that it would take about 1 work-hour per product to comply with the basic requirements of this proposed AD. The average labor rate is \$85 per work-hour.

Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be \$9,690, or \$85 per product.

In addition, we estimate that any necessary follow-on actions would take about 3 work-hours and require parts costing \$50, for a cost of \$305 per product. We have no way of determining the number of products that may need these 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.

This proposed AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to small airplanes, gliders, and domestic business jet transport airplanes to the Director of the Policy and Innovation Division.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 proposed regulation:

(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),

(3) Will not affect intrastate aviation in Alaska, and

(4) 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.

List of Subjects in 14 CFR Part 39

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

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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:

Embraer S.A.: Docket No. FAA-2017-1119; Product Identifier 2017-CE-037-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Embraer S.A. Models EMB-500 and EMB-505 airplanes, serial numbers 50000246, 50000267, 50000286, 50000289, 50000291, 50000299, 50000304, 50000305, 50000306, 50000310, 50000348, 50000359, 50000368, 50000370, 50000372, 50000376, 50000377, 50000378, 50000379, 50000380, 50500118, 50500122, 50500148, 50500151, 50500167, 50500176, 50500179, 50500185, 50500188, 50500191, 50500197, 50500203, 50500207, 50500209, 50500212, 50500214, 50500215, 50500219, 50500225, 50500226, 50500231, 50500242, 50500244, 50500246, 50500248, 50500250, 50500256, 50500260, 50500266, 50500273, 50500275, 50500277, 50500280, 50500282, 50500285, 50500287, 50500288, 50500289, 50500292, 50500293, 50500294, 50500296, 50500297, 50500298, 50500300, 50500302, 50500304, 50500306, 50500309, 50500311, 50500317, 50500318, 50500323, 50500328, 50500331, 50500333, 50500335, 50500338, 50500340, 50500344, 50500345, 50500348, 50500351, 50500357, 50500361, 50500362, 50500363, 50500364, 50500365, 50500367, 50500368, 50500371, 50500372, 50500379, 50500381, 50500382, 50500385, 50500386, 50500390, 50500391, 50500394, 50500395, 50500397, 50500398, 50500399, 50500400, 50500402, 50500403, 50500404, 50500407, 50500410, 50500415, 50500418, and 50500424, certificated in any category.

(d) Subject

Air Transport Association of America (ATA) Code 27: Flight Controls.

(e) Reason

This AD was prompted by 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 improperly tied castle nuts on the aileron, rudder and elevator trim tab (or autotab) attachment bolts. We are issuing this proposed AD to inspect the aileron trim tab, rudder

trim tab and elevator trim tab (or autotab), and correct any discrepancy, which if not corrected, may cause an increase in dynamic loads and possible flutter, leading to structural failure and loss of control.

(f) Actions and Compliance

Unless already done, do the following actions in paragraphs (f)(1) and (2) of this AD following the Accomplishment Instructions in PHENOM by Embraer Alert Service Bulletin (SB) No.: 500-27-A026, Revision 1, dated October 6, 2017; or PHENOM by Embraer Alert SB No.: 505-27-A028, Revision 2, dated October 6, 2017, as applicable:

(1) Within the next 25 hours time in service (TIS) after the effective date of this AD or within the next 12 months after the effective date of this AD, whichever occurs first, inspect the aileron trim tab, rudder trim tab, and elevator trim tab attachment points to make sure the cotter pin is installed on the castle nut of the attaching bolts.

(2) If any discrepancy is found during the inspection required in paragraph (f)(1) of this AD, before further flight, correct the discrepancy.

(g) Credit for Actions Accomplished in Accordance with Previous Service Information

This AD allows credit for the actions required in paragraph (f) of this AD if done before the effective date of this AD following PHENOM by Embraer Alert SB No. 500-27-A026, original issue, dated September 29, 2017; PHENOM by Embraer Alert SB No. 505-27-A028, original issue, dated September 28, 2017; or PHENOM by Embraer Alert SB 505-27-A028, Revision 01, dated September 29, 2017; as applicable.

(h) Reporting Requirement

Although PHENOM by Embraer Alert SB No.: 500-27-A026, Revision 1, dated October 6, 2017; and PHENOM by Embraer Alert SB No.: 505-27-A028, Revision 2, dated October 6, 2017; specify to submit certain information to the manufacturer, this AD does not require that action.

(i) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, Small Airplane Standards Branch, 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: Jim Rutherford, Aerospace Engineer, FAA, Small Airplane Standards Branch, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4165; fax: (816) 329-4090; email: jim.rutherford@faa.gov. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, Small Airplane Standards Branch, FAA; or Agência Nacional de Aviação Civil (ANAC), which is the aviation authority for Brazil.

(j) Related Information

Refer to MCAI Agência Nacional de Aviação Civil (ANAC), which is the aviation authority for Brazil, AD No.: 2017-11-01, dated November 10, 2017; PHENOM by Embraer Alert Service Bulletin (SB) No.: 500-27-A026, Revision 1, dated October 6, 2017; and PHENOM by Embraer Alert SB No.: 505-27-A028, Revision 2, dated October 6, 2017, for related information. You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-1119. For service information related to this AD, contact Embraer S.A., Phenom Maintenance Support, Avenida Brigadeiro Faria Lima, 2170, São José dos Campos – SP - 12227-901,

P.O. Box 36/2, Brasil; phone: +55 12 3927 1000; fax: +55 12 3927-2619; email: phenom.reliability@embraer.com.br; Internet: <http://www.embraer.com.br/en-US/Pages/home.aspx>. You may review this referenced service information at the FAA, Policy and Innovation Division, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148. Issued in Kansas City, Missouri, on November 21, 2017.

Melvin J. Johnson,
Deputy Director, Policy & Innovation Division,
Aircraft Certification Service

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