[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2025-0010; Project Identifier MCAI-2024-00270-T]

RIN 2120-AA64

Airworthiness Directives; Embraer S.A. (Type Certificate Previously Held by Yaborã Indústria Aeronáutica S.A.; Embraer S.A.; Empresa Brasileira de Aeronáutica S.A. (EMBRAER)) Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to supersede Airworthiness Directive (AD) 2006-20-08, which applies to all Embraer S.A. Model EMB-145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP airplanes. AD 2006-20-08 requires repetitive inspections to detect cracking or failure of the rod ends and fittings of the aileron power control actuator (PCA) and corrective actions if necessary, and provides an optional terminating action. Since the FAA issued AD 2006-20-08, it has been determined that there was an error in identifying a maintenance task number. This proposed AD would continue to require the actions in AD 2006-20-08 and corrects an error in a task number, as specified in an Agência Nacional de Aviação Civil (ANAC) AD, which is proposed for incorporation by reference (IBR). The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA 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, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

• Federal eRulemaking Portal: Go to 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: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

AD Docket: You may examine the AD docket at regulations.gov under Docket No. FAA-2025-0010; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The street address for Docket Operations is listed above.

Material Incorporated by Reference:

• For ANAC material identified in this proposed AD, contact National Civil Aviation Agency (ANAC), Aeronautical Products Certification Branch (GGCP), Rua Dr. Orlando Feirabend Filho, 230 – Centro Empresarial Aquarius – Torre B – Andares 14 a 18, Parque Residencial Aquarius, CEP 12.246-190 – São José dos Campos – SP, Brazil; telephone 55 (12) 3203-6600; email pac@anac.gov.br; website anac.gov.br/en/. You may find this material on the ANAC website at sistemas.anac.gov.br/certificacao/DA/DAE.asp. It is also available at regulations.gov under Docket No. FAA-2025-0010.

• You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

FOR FURTHER INFORMATION CONTACT: Hassan Ibrahim, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 206-231-3653; email hassan.m.ibrahim@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2025-0010; Project Identifier MCAI-2024-00270-T" at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to regulations.gov, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public

docket of this NPRM. Submissions containing CBI should be sent to Hassan Ibrahim, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 206-231-3653; email hassan.m.ibrahim@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA issued AD 2006-20-08, Amendment 39-14777 (71 FR 58487, October 4, 2006) (AD 2006-20-08), for all Embraer Model EMB-145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP airplanes. AD 2006-20-08 was prompted by an MCAI originated by Departmento de Aviacao Civil (DAC), which was the aviation authority for Brazil (now known as ANAC). DAC issued AD 1999-02-01R6, dated June 21, 2004, to correct an unsafe condition.

AD 2006-20-08 requires repetitive inspections to detect cracking or failure/breaking of the rod ends and fittings of the aileron PCA, corrective actions if necessary, and provides an optional terminating action for the requirements. The FAA issued AD 2006-20-08 to detect and correct cracking or breaking of the rod ends and connecting fittings of the aileron PCA, which could result in reduced controllability of the airplane.

Actions Since AD 2006-20-08 Was Issued

Since the FAA issued AD 2006-20-08, ANAC superseded AD 1999-02-01R6, dated June 21, 2004, and issued ANAC AD 1999-02-01R7, effective May 6, 2024; corrected October 11, 2024 (ANAC AD 1999-02-01R7) (also referred to as the MCAI), to correct an unsafe condition for all Embraer S.A. Model EMB-145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP airplanes. The MCAI states that after ANAC AD 1999-02-01R6 was issued it was identified that the visual inspection task number referenced on requirement (c) of that AD (AMM TASK 27-12-01-212-002-A00,

"Aileron PCA Rod Ends/Fitting, Lugs for Integrity and General Condition") was incorrect. ANAC AD 1999-02-01R7 was issued to replace the task reference to MRB-145/1150 TASK 27-12-01-212-002-A05. For airplanes identified in paragraph (c) of ANAC AD 1999-02-01R7, accomplishing repetitive inspections as specified in MRB-145/1150 TASK 27-12-01-212-002-A05 are necessary to address the unsafe condition.

The FAA is proposing this AD to detect and correct cracking or breaking of the rod ends and connecting fittings of the aileron PCA, which could result in reduced controllability of the airplane. You may examine the MCAI in the AD docket at regulations.gov under Docket No. FAA-2025-0010.

Explanation of Retained Requirements

Although this proposed AD does not explicitly restate the requirements of AD 2006-20-08, this proposed AD would retain certain requirements of AD 2006-20-08. Those requirements are referenced in ANAC AD 1999-02-01R7, which, in turn, is referenced in paragraph (g) of this proposed AD.

Material Incorporated by Reference Under 1 CFR Part 51

ANAC AD 1999-02-01R7 specifies procedures for repetitive inspections to detect cracking and failure of the rod ends and PCA fittings of the aileron PCA and corrective actions if necessary, and provides an optional terminating action. Corrective actions include replacing cracked and failed rod ends and PCA fittings. This material 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.

FAA's Determination

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA is issuing this NPRM after

determining that the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements in this NPRM

This proposed AD would retain certain requirements of AD 2006-20-08. This proposed AD would require accomplishing the actions specified in ANAC AD 1999-02-01R7 described previously, except for any differences identified as exceptions in the regulatory text of this proposed AD.

Explanation of Required Compliance Information

In the FAA's ongoing efforts to improve the efficiency of the AD process, the FAA developed a process to use some civil aviation authority (CAA) ADs as the primary source of information for compliance with requirements for corresponding FAA ADs. The FAA has been coordinating this process with manufacturers and CAAs. As a result, the FAA proposes to incorporate ANAC AD 1999-02-01R7 by reference in the FAA final rule. This proposed AD would, therefore, require compliance with ANAC AD 1999-02-01R7 in its entirety through that incorporation, except for any differences identified as exceptions in the regulatory text of this proposed AD. Material required by ANAC AD 1999-02-01R7 for compliance will be available at regulations.gov under Docket No. FAA-2025-0010 after the FAA final rule is published.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 272 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Retained actions from AD 2006-20-08	1 work-hour X $85 per hour = $85	None	$85	$23,120

Estimated costs for optional actions

Labor cost	Parts cost	Cost per product
24 work-hours X $85 per hour = $2,040	$19,817	$21,857

The FAA estimates the following costs to do any necessary on-condition action that would be required based on the results of any required actions. The FAA has no way of determining the number of aircraft that might need this on-condition actions:

Estimated costs of on-condition actions

Labor cost	Parts cost	Cost per product
24 work-hours X $85 per hour = $2,040	$19,817	$21,857

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.

The FAA is 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

The FAA 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) Would not affect intrastate aviation in Alaska, and

(3) Would 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:

a. Removing Airworthiness Directive (AD) 2006-20-08, Amendment 39-14777 (71 FR 58487, October 4, 2006); and

b. Adding the following new AD:

Embraer S.A. (Type Certificate Previously Held by Yaborã Indústria Aeronáutica S.A.; Embraer S.A.; Empresa Brasileira de Aeronáutica S.A. (EMBRAER)): Docket No. FAA-2025-0010; Project Identifier MCAI-2024-00270-T.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2006-20-08, Amendment 39-14777 (71 FR 58487, October 4, 2006) (AD 2006-20-08).

(c) Applicability

This AD applies to all Embraer S.A. (Type Certificate previously held by Yaborã Indústria Aeronáutica S.A.; Embraer S.A.; Empresa Brasileira de Aeronáutica S.A. (EMBRAER)) Model EMB-145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP airplanes, certificated in any category.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by reports of broken rod ends of the aileron power control actuator (PCA) at the aileron or at the wing structure connection points and a determination that an incorrect task number was published in AD 2006-20-08. The FAA is issuing this AD to address cracking or breaking of the rod ends and connecting fittings of the aileron PCA. The unsafe condition, if not addressed, could result in reduced controllability of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraphs (h) and (i) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, Agência Nacional de Aviação Civil (ANAC) AD 1999-02-01R7, effective May 6, 2024; corrected October 11, 2024 (ANAC AD 1999-02-01R7).

(h) Exceptions to ANAC AD 1999-02-01R7

(1) Where ANAC AD 1999-02-01R7 refers to "21 jul. 2004," this AD requires using November 8, 2006 (the effective date of AD 2006-20-08).

(2) This AD does not adopt paragraph (f) of ANAC AD 1999-02-01R7.

(3) Where ANAC AD 1999-02-01R7 specifies "operating days," this AD requires replacing that text with "days."

(4) Where paragraphs (a)2. and (a)3. of ANAC AD 1999-02-01R7 specify to replace cracked and failed rod ends and PCA fittings, for this AD, all applicable replacements must be done before further flight.

(5) Where paragraph (a) of ANAC AD 1999-02-01R7 does not specify an initial compliance time for the repetitive inspections, for this AD the initial compliance time for the inspection is at the applicable time identified in paragraph (h)(5)(i), (ii), or (iii) of this AD.

(i) For airplanes that have PCAs with part number (P/N) 394900-1003 or 394900-1005, do the initial inspection within 3 days after November 8, 2006.

(ii) For airplanes that have PCAs with P/N 394900-1007, do the initial inspection within 14 days after November 8, 2006.

(iii) For airplanes that have PCAs with P/Ns 418800-1001, 418800-1003, 418800-9003, 418800-1005, 418800-9005, 418800-1007, or 418800-9007; and that have new reinforced PCA fittings installed in accordance with paragraph (k) or (l) of AD 2006-20-

08 or paragraph (b) of ANAC AD 1999-02-01R7, do the initial inspection within 500 flight hours after November 8, 2006.

(6) Where paragraph (b) of ANAC AD 1999-02-01R7 specifies to accomplish an installation within "6000 operating cycles," for this AD, the compliance time is at the applicable time specified in paragraph (h)(6)(i) or (ii) of this AD.

(i) For airplanes with PCAs with P/N 394900-1003, 394900-1005, or 394900-1007: At the later of the times in paragraphs (h)(6)(i)(A) or (B) of this AD.

(A) Before the airplane accumulates 6,000 total flight hours.

(B) Within 3 days or 25 flight hours after November 8, 2006 (the effective date of AD 2006-20-08), whichever occurs later.

(ii) For airplanes with PCAs with P/N 418800-1001, 418800-1003, 418800-9003, 418800-1005, 418800-9005, 418800-1007, or 418800-9007: Before the airplane accumulates 6,000 total flight cycles or within 600 flight cycles after November 8, 2006 (the effective date of AD 2006-20-08), whichever occurs later.

(7) Where paragraph (c) of ANAC AD 1999-02-01R7 specifies to do an inspection in accordance with a task, for this AD, inspections done before the effective date of this AD using AMM Task 27-12-01-212-002-A00 or using a method approved by either the Manager, International Validation Branch, FAA, or ANAC (or its delegated agent) are acceptable methods of compliance. Inspections done on or after the effective date of this AD must be done using the task identified in paragraph (c) of ANAC AD 1999-02-01R7 or using a method approved as specified in paragraph (k)(2) of this AD.

(8) Where paragraph (c) of ANAC AD 1999-02-01R7 specifies to accomplish the initial inspection "in conjunction with the new PCA fittings and reinforcement provisions referred on item (b) above," this AD requires replacing that text with "Within 500 flight hours after accomplishing the installation and reinforcements provisions referred to item (b) above."

(9) Where paragraph (c) of ANAC AD 1999-02-01R7 specifies to accomplish the inspections “every 500 flight hours” this AD requires replacing that text with “at intervals not to exceed 500 flight hours.”

(10) Where paragraph (d) of ANAC AD 1999-02-01R7 specifies to accomplish the inspections “every 1000 flight hours” this AD requires replacing that text with “at intervals not exceeding 1,000 flight hours.”

(i) Credit for Previous Actions

This paragraph provides credit for the replacement specified in paragraph (a)2. of ANAC AD 1999-02-01R7 and the optional terminating actions specified in paragraph (d) of ANAC AD 1999-02-01R7, if those actions were performed before the effective date of this AD using EMBRAER Service Bulletin 145-27-0061, dated October 19, 1999.

(j) No Return of Parts

Where the service information identified in ANAC AD 1999-02-01R7 specifies to send parts to the parts manufacturer, that action is not required by this AD.

(k) Additional AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (l)(1) of this AD and email to: AMOC@faa.gov.

(i) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(ii) AMOCs approved previously for AD 2006-20-08 are approved as AMOCs for the corresponding provisions of ANAC AD 1999-02-01R7 that are required by paragraph (g) of this AD.

(2) *Contacting the Manufacturer:* For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, International Validation Branch, FAA; or ANAC; or ANAC's authorized Designee. If approved by the ANAC Designee, the approval must include the Designee's authorized signature.

(l) Additional Information

(1) For more information about this AD, contact Hassan Ibrahim, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 206-231-3653; email hassan.m.ibrahim@faa.gov.

(2) For EMBRAER material identified in this AD that is not incorporated by reference, contact Embraer S.A., 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; email distrib@embraer.com.br; website flyembraer.com.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the material listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this material as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Agência Nacional de Aviação Civil (ANAC) AD 1999-02-01R7, effective May 6, 2024; corrected October 11, 2024.

(ii) [Reserved]

(3) For ANAC material identified in this AD, contact ANAC, Aeronautical Products Certification Branch (GGCP), Rua Dr. Orlando Feirabend Filho, 230 – Centro Empresarial Aquarius – Torre B – Andares 14 a 18, Parque Residencial Aquarius, CEP 12.246-190 – São José dos Campos – SP, Brazil; telephone 55 (12) 3203-6600; email pac@anac.gov.br; website anac.gov.br/en/. You may find this material on the ANAC website at sistemas.anac.gov.br/certificacao/DA/DAE.asp.

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov.

Issued on January 23, 2025.

Steven W. Thompson,
Acting Deputy Director, Compliance & Airworthiness Division,
Aircraft Certification Service.
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