



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2025-0022; Project Identifier MCAI-2023-00910-T]

RIN 2120-AA64

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

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to supersede Airworthiness Directive (AD) 2020-12-12, which applies to all Embraer S.A. Model ERJ 170 airplanes and Model ERJ 190-100 STD, -100 LR, -100 ECJ, -100 IGW, -200 STD, -200 LR, and -200 IGW airplanes. AD 2020-12-12 requires repetitive detailed inspections for cracking of the engine inboard and outboard engine pylon lower link lugs, and repair if necessary. Since the FAA issued AD 2020-12-12, it was determined that certain compliance times must be reduced. This proposed AD would continue to require the actions in AD 2020-12-12, with revised compliance times, 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](https://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: 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-2025-0022; 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 the 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-2025-0022.

- 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: Krista Greer, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: 206-231-3221; email: krista.greer@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 ADDRESSES. Include “Docket No. FAA-2025-0022; Project Identifier MCAI-2023-00910-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 Krista Greer, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: 206-231-3221; email: krista.greer@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 2020-12-12, Amendment 39-19921 (85 FR 41175, July 9, 2020) (AD 2020-12-12), for all Embraer S.A. Model ERJ 170-100 LR, -100 STD, -100 SE, and -100 SU airplanes; Model ERJ 170-200 LR, -200 SU, -200 STD, and -200 LL airplanes; and Model ERJ 190-100 STD, -100 LR, -100 ECJ, -100 IGW, -200 STD, -200 LR, and -200 IGW airplanes. AD 2020-12-12 was prompted by an MCAI originated by ANAC, which is the aviation authority for Brazil. ANAC issued AD 2020-01-02, effective January 28, 2020, to correct an unsafe condition.

AD 2020-12-12 requires repetitive detailed inspections for cracking of the engine inboard and outboard engine pylon lower link lugs, and repair if necessary. The FAA issued AD 2020-12-12 to address cracking of the engine pylon lower link lugs, which could cause the loss of engine pylon integrity, and could result in engine separation from the wing, loss of airplane controllability, and possible injury to persons on the ground.

Actions Since AD 2020-01-02 Was Issued

Since the FAA issued AD 2020-12-12, ANAC superseded AD 2020-01-02, effective January 28, 2020, and issued ANAC AD 2020-01-02R3, effective October 17, 2024; corrected October 15, 2024 (AD 2020-01-02R3) (also referred to as the MCAI), to correct an unsafe condition for certain Embraer S.A. Model ERJ 170-100 LR, -100 SE, -100 STD, and -100 SU airplanes; and Model ERJ 170-200 LL, -200 LR, -200 STD, and -200 SU airplanes; and Model ERJ 190-100 STD, -100 LR, -100 ECJ, -100 IGW, -190 SR, -200 STD, -200 LR, and -200 IGW airplanes. Model ERJ 190-100 SR airplanes are not certified by the FAA and are not included on the U.S. type certificate data sheet; therefore, this proposed AD does not include those airplanes in the applicability.

The MCAI states that optional terminating actions to the repetitive inspections have been included. ANAC AD 2020-01-02R2, effective July 26, 2023, stated the compliance intervals were reduced.

The FAA is proposing this AD to address cracks on the left-hand (LH) and right-hand (RH) sides of engine pylon inboard lower link lugs, which could cause the loss of engine pylon integrity. The loss of integrity of the engine pylon could result in engine separation from the wing affecting the airplane controllability, causing injury to persons on ground. You may examine the MCAI in the AD docket at regulations.gov under Docket No. FAA-2025-0022.

Explanation of Retained Requirements

Although this proposed AD does not explicitly restate the requirements of AD 2020-12-12, this proposed AD would retain all of the requirements of AD 2020-12-12, at revised compliance times. Those requirements are referenced in ANAC AD 2020-01-02R3, which, in turn, is referenced in paragraph (g) of this proposed AD.

Material Incorporated by Reference Under 1 CFR Part 51

ANAC AD 2020-01-02R3 specifies procedures for repetitive detailed inspections, special detailed inspections, and repair, as applicable, of the LH and RH engine inboard and outboard pylon lower link lugs. ANAC AD 2020-01-02R3 also includes an optional terminating action for the repetitive inspections, which consists of revising the maintenance or inspection program, as applicable, to incorporate airworthiness limitations for pylon lower link 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 all requirements of AD 2020-12-12, at revised compliance times. This proposed AD would require accomplishing the actions specified in ANAC AD 2020-01-02R3 described previously.

This proposed AD would allow optional terminating action to revise certain operator maintenance documents to include new actions (e.g., inspections) and Critical Design Configuration Control Limitations (CDCCLs). Compliance with these actions and CDCCLs is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by this proposed AD, the operator may not be able to accomplish the actions described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance (AMOC) according to paragraph (k)(1) of this proposed AD.

Explanation of Change to Manufacturer's Name Specified in this NPRM

The FAA has revised references to the manufacturer's name specified throughout this NPRM to identify the manufacturer name as published in the most recent type certificate data sheet for the affected models.

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 2020-01-02R3 by reference in the FAA

final rule. This proposed AD would, therefore, require compliance with ANAC AD 2020-01-02R3 in its entirety through that incorporation, except for any differences identified as exceptions in the regulatory text of this proposed AD. Service information required by ANAC AD 2020-01-02R3 for compliance will be available at regulations.gov under Docket No. FAA-2025-0022 after the FAA final rule is published.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 659 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

Estimated costs for required actions

	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspections	3 work-hour X \$85 per hour = \$255	\$0	\$255	\$168,045

The FAA has received no definitive data that would enable the agency to provide cost estimates for the on-condition repair specified in this proposed AD.

For the optional terminating action, the FAA has determined that revising the existing maintenance or inspection program takes an average of 90 work-hours per operator, although the agency recognizes that this number may vary from operator to operator. Since operators incorporate maintenance or inspection program changes for their affected fleet(s), the FAA has determined that a per-operator estimate is more accurate than a per-airplane estimate. Therefore, if the optional terminating action is done, the agency estimates the average total cost per operator would be \$7,650 (90 work-hours x \$85 per work-hour).

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) 2020-12-12, Amendment 39-19921 (85 FR 41175, July 9, 2020); and

b. Adding the following new AD:

Embraer S.A. (Type Certificate Previously Held by Yaborã Indústria Aeronáutica S.A.; Embraer S.A.): Docket No. FAA-2025-0022; Project Identifier MCAI-2023-00910-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 2020-12-12, Amendment 39-19921 (85 FR 41175, July 9, 2020).

(c) Applicability

This AD applies to Embraer S.A. (Type Certificate Previously Held by Yaborã Indústria Aeronáutica S.A.; Embraer S.A.) airplanes, certificated in any category, identified in paragraphs (c)(1) and (2) of this AD, as identified in Agência Nacional de Aviação Civil (ANAC) AD 2020-01-02R3, effective October 17, 2024; corrected October 15, 2024 (ANAC AD 2020-01-02R3).

(1) Model ERJ 170-100 LR, -100 STD, -100 SE, -100 SU, -200 LR, -200 SU, -200 STD, and -200 LL airplanes.

(2) Model ERJ 190-100 STD, -100 LR, -100 ECJ, -100 IGW, -200 STD, -200 LR, and -200 IGW airplanes.

(d) Subject

Air Transport Association (ATA) of America Code 54, Nacelles/Pylons.

(e) Unsafe Condition

This AD was prompted by reports of cracking on the left-hand (LH) and right-hand (RH) sides of engine pylon inboard lower link lugs, and by the determination that certain compliance times in AD 2020-12-12 must be reduced and the inboard lower link lugs must be replaced with new titanium lugs on certain airplanes. The FAA is issuing this AD to address cracks on the LH and RH sides of engine pylon inboard lower link lugs. The unsafe condition, if not addressed, could cause the loss of engine pylon integrity, which could result in engine separation from the wing, loss of airplane controllability, and possible injury to persons on ground.

(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, ANAC AD 2020-01-02R3.

(h) Exceptions to ANAC AD 2020-01-02R3

(1) Where ANAC AD 2020-01-02R3 refers to “28 January 2020, the effective date of original revision of this AD,” this AD requires using August 13, 2020 (the effective date of AD 2020-12-12).

(2) Where ANAC AD 2020-01-02R3 refers to “the effective date of the revision 1 of this AD,” this AD requires using the effective date of this AD.

(3) Where ANAC AD 2020-01-02R3 refers to its effective date, this AD requires using the effective date of this AD.

(4) Where the “Threshold” column of the tables in ANAC AD 2020-01-02R3 refer to “FC” and “FH,” for this AD, those flight cycles and flight hours are since the date of issuance of the original airworthiness certificate or the original export certificate of airworthiness, except for the compliance times that correspond to flagnote “[5]” of the table following paragraph (b)(1) of ANAC AD 2020-01-02R3 and flagnote “[3]” of the table following paragraph (b)(2) of ANAC AD 2020-01-02R3.

(5) Where the tables in ANAC AD 2020-01-02R3 refer to “ou,” this AD requires replacing that text with “or.”

(6) Where the last column of the table following paragraph (c)(2) of ANAC AD 2020-01-02R3 refers to “Intervalo,” this AD requires replacing that text with “Interval.”

(7) Where ANAC AD 2020-01-02R3 requires contacting “ANAC and Embraer ... to approve an adequate repair,” for this AD, before further flight obtain repair instructions using the procedures specified in paragraph (k)(2) of this AD and do the repair.

(8) This AD does not adopt paragraph (g)(3) of ANAC AD 2020-01-02R3.

(i) No Reporting Requirement

Although ANAC AD 2020-01-02R3 specifies to submit an inspection report after each inspection, this AD does not include that requirement.

(j) Provisions for Alternative Actions, Critical Design Configuration Control Limitations (CDCCLs), and Intervals

After the existing maintenance or inspection program has been revised as specified in paragraph (g) of this AD, no alternative actions (e.g., inspections), CDCCLs, and intervals are allowed unless they are approved as specified in paragraph (d) of ANAC AD 2020-01-02R3.

(k) Additional AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, AIR-520, Continued Operational Safety 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 AIR-520, Continued Operational Safety Branch, mail it to the address identified in paragraph (l) of this AD. Information may be emailed 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 2020-12-12 are approved as AMOCs for the corresponding provisions of ANAC AD 2020-01-02R3 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, AIR-520, Continued Operational Safety 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

For more information about this AD, contact Krista Greer, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: 206-231-3221; email: krista.greer@faa.gov.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) 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 2020-01-02R3, effective October 17, 2024; corrected October 15, 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 ANAC AD 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 31, 2025.

Suzanne Masterson,
Deputy Director, Integrated Certificate Management Division,
Aircraft Certification Service.

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