

(4) AMOCs approved for AD 2020–03–20 are approved as AMOCs for the corresponding provisions of this AD.

(n) Related Information

(1) For more information about this AD, contact Douglas Tsuji, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 206–231–3548; Douglas.Tsuji@faa.gov.

(2) Material identified in this AD that is not incorporated by reference is available at the addresses specified in paragraph (o)(3) of this AD.

(o) 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 the AD specifies otherwise.

(i) Boeing Alert Requirements Bulletin 737–34A3572 RB, dated October 15, 2020.

(ii) Boeing Alert Requirements Bulletin 737–34A3573 RB, dated August 5, 2020.

(iii) Boeing Alert Requirements Bulletin 777–34A0385 RB, Revision 1, dated March 8, 2021.

(3) For Boeing material identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110–SK57, Seal Beach, CA 90740–5600; telephone 562–797–1717; website myboeingfleet.com.

(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 16, 2025.

Suzanne Masterson,

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

[FR Doc. 2025–02376 Filed 2–7–25; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2024–1887; Project Identifier MCAI–2023–01237–T; Amendment 39–22929; AD 2025–01–05]

RIN 2120–AA64

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

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2022–25–07, which applied to all Embraer S.A. Model ERJ 170–100 LR, –100 STD, –100 SE, and –100 SU airplanes; and Model ERJ 170–200 LR, –200 SU, –200 STD, and –200 LL airplanes. AD 2022–25–07 required revising the existing maintenance or inspection program, as applicable, to incorporate new or more restrictive airworthiness limitations. This AD was prompted by a determination that new or more restrictive airworthiness limitations are necessary. This AD continues to require all actions in AD 2022–25–07 and requires revising the existing maintenance or inspection program, as applicable, to incorporate new or more restrictive airworthiness limitations, and certain structural modifications, as specified in an Agência Nacional de Aviação Civil (ANAC) AD, which is incorporated by reference. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective March 17, 2025.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of March 17, 2025.

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of January 23, 2023 (87 FR 77493, December 19, 2022).

The Director of the Federal Register approved the incorporation by reference of certain other publications listed in this AD as of February 10, 2020 (85 FR 453, January 6, 2020).

ADDRESSES:

AD Docket: You may examine the AD docket at regulations.gov under Docket No. FAA–2024–1887; 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 final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

• For ANAC material identified in this 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.

• For Embraer material, 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; internet flyembraer.com.

• 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. It is also available at regulations.gov under Docket No. FAA–2024–1887.

FOR FURTHER INFORMATION CONTACT:

Joshua Bragg, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 817–222–5366; email joshua.k.bragg@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2022–25–07, Amendment 39–22263 (87 FR 77493, December 19, 2022) (AD 2022–25–07). AD 2022–25–07 applied to all Embraer S.A. Model ERJ 170–100 LR, –100 STD, –100 SE, and –100 SU airplanes; and Model ERJ 170–200 LR, –200 SU, –200 STD, and –200 LL airplanes. AD 2022–25–07 required revising the existing maintenance or inspection program, as applicable, to incorporate new or more restrictive airworthiness limitations. The FAA issued AD 2022–25–07 to address fatigue cracking of various principal structural elements (PSEs); such cracking could result in reduced structural integrity of the airplane. AD 2022–25–07 addressed safety significant latent failures; such failures, in combination with one or more other specified failures or events, could result in a hazardous or catastrophic failure condition of avionics, hydraulic systems, fire detection systems, fuel systems, or other critical systems. Furthermore, AD 2022–25–07 addressed the potential ignition sources inside fuel tanks caused by latent failures, alterations, repairs, or maintenance actions; such failures, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

The NPRM published in the **Federal Register** on July 18, 2024 (89 FR 58295). The NPRM was prompted by AD 2023–12–01, effective December 15, 2023, issued by ANAC, which is the aviation authority for Brazil (ANAC AD 2023–12–01) (also referred to as the MCAI). The MCAI states that new or more restrictive airworthiness limitations have been developed for Part 1—Certification Maintenance Requirements, Part 2—Airworthiness Limitation Inspections (ALI)—Structures, Part 3—Fuel System Limitation Items, and Part 4—Life Limited Items of the EMBRAER 170/175 maintenance review board report (MRBR). The MCAI also stated that only airplanes with certain serial numbers are affected.

In the NPRM, the FAA proposed to continue to require the airworthiness limitations specified in paragraphs (g) and (i) of AD 2022–25–07 until incorporation of the new or more restrictive airworthiness limitations and structural modifications, as specified in ANAC AD 2023–12–01 and required by paragraph (l) of this AD. The FAA is issuing this AD to address fatigue cracking of various principal structural elements (PSEs); such cracking could result in reduced structural integrity of the airplane. This AD also addresses safety significant latent failures; such failures, in combination with one or more other specified failures or events, could result in a hazardous or catastrophic failure condition of avionics, hydraulic systems, fire detection systems, fuel systems, or other critical systems. Furthermore, this AD addresses potential ignition sources inside fuel tanks caused by latent failures, alterations, repairs, or maintenance actions; such failures, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA–2024–1887.

Discussion of Final Airworthiness Directive

Comments

The FAA received a comment from the Air Line Pilots Association, International (ALPA), who supported the NPRM without change.

The FAA received additional comments from Horizon Air. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request To Update MRB Revision

Horizon Air requested that the FAA update the revision for Appendix A—Airworthiness Limitations of EMBRAER 170/175 Maintenance Review Board Report (MRBR), MRB–1621, Revision 14, dated September 27, 2018, to Revision 19, dated July 14, 2023, referenced in paragraphs (p)(5)(i) and (ii) of this AD. Horizon Air asserted that Revision 19 is required to be incorporated by the MCAI referenced in paragraph (l) of this AD.

FAA does not agree with the request. Appendix A—Airworthiness Limitations of EMBRAER 170/175 MRBR, MRB–1621, Revision 19, dated July 14, 2023, is not explicitly referenced in this AD, since this AD directs operators to comply with the MCAI, which is incorporated by reference in this AD. Therefore, Revision 19 of that MRB is not incorporated by reference. The only MRBR document explicitly referenced in the AD requirements is Revision 14, as specified in the retained requirements in paragraph (g) of this AD. This AD has not been changed regarding this request.

Request To Allow for Incorporation of Temporary Revisions (TRs)

Horizon stated that since the issuance of the MCAI, which requires Appendix A—Airworthiness Limitations of EMBRAER 170/175 Maintenance Review Board Report (MRBR), MRB–1621, Revision 19, dated July 14, 2023, ANAC has issued two TRs, TR 19–1, dated October 31, 2023, and TR 19–2, dated March 21, 2024. Horizon requested that the FAA clarify whether paragraph (m)(2) of the proposed AD allows incorporating approved temporary revisions (TRs) of MRB–1621 subsequent to Revision 19, dated July 14, 2023. If TR 19–1 and 19–2 are not specifically allowed, Horizon requested that the proposed AD be revised to allow use of TR 19–1 and 19–2 and further revisions allowed by ANAC.

Paragraph (m)(2) of this AD allows the use of alternative inspections and intervals published in later ANAC-approved revisions. The operators are allowed to incorporate Revision 19 of the MRB as modified by TR 19–1 and TR 19–2. This AD has not been changed regarding this request.

Request To Terminate Exceptions Related to Retained Actions

Horizon requested that the FAA terminate the exceptions paragraphs related to retained actions. Horizon stated that the new actions in paragraph (l) of the proposed AD terminate the

retained actions in paragraphs (g) and (i) of the AD. Those paragraphs had their own exceptions paragraphs that also carried over from AD 2022–25–07. Those exceptions paragraphs are no longer applicable.

The FAA agrees the retained restrictions and exceptions are no longer applicable once the terminating action is accomplished. The FAA does not agree with the need to terminate paragraphs (h), (j), and (k) of the AD because those provisions no longer apply once the actions of paragraph (l) of this AD are accomplished. This AD has not been changed regarding this request.

Conclusion

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 reviewed the relevant data, considered the comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on this product. Except for minor editorial changes, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Material Incorporated by Reference Under 1 CFR Part 51

ANAC AD 2023–12–01, effective December 15, 2023, specifies new or more restrictive airworthiness limitations for certification maintenance requirements, airplane structures, fuel systems, and safe life limits.

This AD also requires ANAC AD 2022–02–01, effective February 9, 2022, which the Director of the Federal Register approved for incorporation by reference as of January 23, 2023 (87 FR 77493, December 19, 2022).

This AD also requires Appendix A—Airworthiness Limitations of EMBRAER 170/175 Maintenance Review Board Report (MRBR), MRB–1621, Revision 14, dated September 27, 2018; and Embraer Temporary Revision (TR) 14–1, dated November 13, 2018, to Part 4—Life-Limited Items, of Appendix A of EMBRAER 170/175 Maintenance Review Board Report (MRBR), MRB–1621, Revision 14, dated September 27, 2018; which the Director of the Federal Register approved for incorporation by reference as of February 10, 2020 (85 FR 453, January 6, 2020).

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.

Costs of Compliance

The FAA estimates that this AD affects 662 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

The FAA estimates the following costs to comply with the retained actions from AD 2022–25–07:

ESTIMATED COSTS FOR REQUIRED ACTIONS *

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Retained structural modifications	196 work-hours × \$85 per hour = \$16,660	\$98,860	\$115,520	Up to \$76,474,240.

* Table does not include estimated costs for revising the existing maintenance or inspection program.

The FAA estimates the total cost per operator for the retained revision of the existing maintenance or inspection program from AD 2022–25–07 to be \$7,650 (90 work-hours × \$85 per work-hour).

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.

The FAA estimates the total cost per operator for the new actions to be \$7,650 (90 work-hours × \$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

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) Will not affect intrastate aviation in Alaska, 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.

List of Subjects in 14 CFR Part 39

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

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:
 - a. Removing Airworthiness Directive (AD) 2022–25–07, Amendment 39–22263 (87 FR 77493, December 19, 2022); and
 - b. Adding the following new AD:

2025–01–05 Embraer S.A. (Type Certificate Previously Held by Yaborã Indústria Aeronáutica S.A.; Embraer S.A.): Amendment 39–22929; Docket No. FAA–2024–1887; Project Identifier MCAI–2023–01237–T.

(a) Effective Date

This airworthiness directive (AD) is effective March 17, 2025.

(b) Affected ADs

This AD replaces AD 2022–25–07, Amendment 39–22263 (87 FR 77493, December 19, 2022) (AD 2022–25–07).

(c) Applicability

This AD applies to Embraer S.A. Model ERJ 170–100 LR, –100 SE, –100 STD, and –100 SU airplanes; and Model ERJ 170–200 LR, –200 STD, –200 SU, and –200 LL airplanes; certificated in any category, with manufacturer serial numbers 17000002, 17000004 through 17000013 inclusive, and 17000015 through 17000948 inclusive.

(d) Subject

Air Transport Association (ATA) of America Code 05, Time Limits/Maintenance Checks.

(e) Unsafe Condition

This AD was prompted by a determination that new or more restrictive airworthiness limitations are necessary. The FAA is issuing this AD to address fatigue cracking of various principal structural elements (PSEs); such cracking could result in reduced structural integrity of the airplane. The FAA is also issuing this AD to address safety significant latent failures; such failures, in combination with one or more other specified failures or events, could result in a hazardous or catastrophic failure condition of avionics, hydraulic systems, fire detection systems, fuel systems, or other critical systems. Furthermore, the FAA is issuing this AD to address potential ignition sources inside fuel tanks caused by latent failures, alterations, repairs, or maintenance actions; such failures, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

(f) Compliance

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

(g) Retained Revision of the Existing Maintenance or Inspection Program From AD 2019–25–16, Amendment 39–21015 (85 FR 453, January 6, 2020) (AD 2019–25–16), With No Changes

This paragraph restates the requirements of paragraph (g) of AD 2022–25–07, with no changes. For Model ERJ 170–100 LR, –100 STD, –100 SE, and –100 SU airplanes; and Model ERJ 170–200 LR, –200 SU, –200 STD, and –200LL airplanes; manufacturer serial numbers 17000002, 17000004 through 17000013 inclusive, and 17000015 through 17000761 inclusive: Within 90 days after February 10, 2020 (the effective date of AD 2019–25–16), revise the existing maintenance or inspection program, as applicable, to

incorporate the information specified in Part 1—Certification Maintenance Requirements, Part 2—Airworthiness Limitation Inspections (ALI) Structures, Part 3—Fuel System Limitation Items, and Part 4—Life Limited Items; and EMBRAER Temporary Revision (TR) 14-1, dated November 13, 2018, to Part 4—Life Limited Items; of Appendix A of the EMBRAER 170/175 MRBR, MRB-1621, Revision 14, dated September 27, 2018 (EMBRAER 170/175 MRB-1621, Revision 14). The initial compliance time for doing the tasks is at the later of the times specified in paragraphs (g)(1) and (2) of this AD.

(1) Within the applicable times specified in EMBRAER 170/175 MRB-1621, Revision 14. For the purposes of this AD, the initial compliance times (identified as “Threshold” or “T” in EMBRAER 170/175 MRB-1621, Revision 14) are expressed in “total flight cycles” or “total flight hours,” as applicable.

(2) Within 90 days or 600 flight cycles after February 10, 2020 (the effective date of AD 2019-25-16), whichever occurs later.

(h) Retained Restrictions on Alternative Actions, Intervals, and CDCCLs, With No Changes

This paragraph restates the requirements of paragraph (h) of AD 2022-25-07, with no changes. Except as required by paragraphs (i) and (l) of this AD: After the existing maintenance or inspection program has been revised as required by paragraph (g) of this AD, no alternative actions (e.g., inspections), intervals, or CDCCLs may be used unless the actions, intervals, and CDCCLs are approved as an AMOC in accordance with the procedures specified in paragraph (n)(1) of this AD.

(i) Retained Revision of the Existing Maintenance or Inspection Program, With No Changes

This paragraph restates the requirements of paragraph (i) of AD 2022-25-07, with no changes. For Embraer S.A. Model ERJ 170-100 LR, -100 STD, -100 SE, and -100 SU airplanes; and Model ERJ 170-200 LR, -200 SU, -200 STD, and -200 LL airplanes: Except as specified in paragraph (j) of this AD, comply with all required actions and compliance times specified in, and in accordance with, ANAC AD 2022-02-01, dated February 9, 2022 (ANAC AD 2022-02-01). Accomplishing the revision of the existing maintenance or inspection program required by this paragraph terminates the requirements for Part 2—Airworthiness Limitation Inspections (ALI) Structures specified in paragraph (g) of this AD only. Accomplishing the revision of the existing maintenance or inspection program required by paragraph (l) of this AD terminates the requirements of this paragraph.

(j) Retained Exceptions to ANAC AD 2022-02-01

(1) Where ANAC AD 2022-02-01 refers to its effective date, this AD requires using January 23, 2023 (the effective date of AD 2022-25-07).

(2) The “Alternative method of compliance (AMOC)” section of ANAC AD 2022-02-01 does not apply to this AD.

(3) Where paragraph (b)(1) of ANAC AD 2022-02-01 specifies incorporating all

airworthiness limitations in Part 2 of the material specified in paragraph (b)(1) of ANAC AD 2022-02-01, for this AD, do not incorporate the threshold and interval for maintenance review board report (MRBR) task number 57-30-002-0002, “Enhanced Wingtip to Wing Spar Attachments—Internal.”

Note 1 to paragraph (j)(3): AD 2022-11-51, Amendment 39-22074 (87 FR 33623, June 3, 2022) (AD 2022-11-51), requires, among other actions, incorporating alternate thresholds and intervals for MRBR task number 57-30-002-0002. The airplanes affected by MRBR task number 57-30-002-0002 are identified in paragraph (c) of AD 2022-11-51.

(k) Retained Provisions for Alternative Actions and Intervals, With a New Exception

This paragraph restates the requirements of paragraph (k) of AD 2022-25-07, with no changes. Except as required by paragraph (l) of this AD: After the existing maintenance or inspection program has been revised as required by paragraph (i) of this AD, no alternative actions (e.g., inspections), intervals, or CDCCLs are allowed unless they are approved as specified in paragraph (f) of ANAC AD 2022-02-01.

(l) New Revision of the Existing Maintenance or Inspection Program

Except as specified in paragraph (m) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, Agência Nacional de Aviação Civil (ANAC) AD 2023-12-01, effective December 15, 2023 (ANAC AD 2023-12-01). Accomplishing the revision of the existing maintenance or inspection program required by this paragraph terminates the requirements in paragraphs (g) and (i) of this AD.

(m) Exceptions to ANAC AD 2023-12-01

(1) Where ANAC AD 2023-12-01 refers to its effective date, this AD requires using the effective date of this AD.

(2) Where paragraph (c) of ANAC AD 2023-12-01 refers to “no alternative inspections or inspection intervals may be used unless the alternative inspection or interval is published in revisions approved by ANAC of the MRB-1621 which are subsequent to Revision 19, dated July 14th, 2023, or approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (d) of this AD,” for this AD, replace that text with “no alternative actions (e.g., inspections), intervals, and CDCCLs may be used unless the alternative action (e.g., inspection), interval, or CDCCL is published in revisions approved by ANAC of the MRB-1621 which are subsequent to Revision 19, dated July 14th, 2023.”

(3) This AD does not adopt paragraph (d) of ANAC AD 2023-12-01.

(4) Where paragraph (b)(1) of ANAC AD 2023-12-01 specifies incorporating all airworthiness limitations in Part 2 of the service information specified in paragraph (b)(1) of ANAC AD 2023-12-01, for this AD, do not incorporate the threshold and interval for MRBR task number 57-30-002-0002,

“Enhanced Wingtip to Wing Spar Attachments—Internal.”

Note 2 to paragraph (m)(4): AD 2022-11-51, requires, among other actions, incorporating alternate thresholds and intervals for MRBR task number 57-30-002-0002. The airplanes affected by MRBR task number 57-30-002-0002 are identified in paragraph (c) of AD 2022-11-51.

(n) 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, mail it to the address identified in paragraph (o) of this AD. Information may be emailed to: AMOC@faa.gov.

(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.

(o) Additional Information

For more information about this AD, contact Joshua Bragg, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 817-222-5366; email joshua.k.bragg@faa.gov.

(p) 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.

(3) The following material was approved for IBR on March 17, 2025.

(i) Agência Nacional de Aviação Civil (ANAC) AD 2023-12-01, effective December 15, 2023.

(ii) [Reserved]

(4) The following material was approved for IBR on January 23, 2023 (87 FR 77493, December 19, 2022).

(i) ANAC AD 2022-02-01, effective February 9, 2022.

(ii) [Reserved]

(5) The following material was approved for IBR on February 10, 2020 (85 FR 453, January 6, 2020).

(i) Appendix A—Airworthiness Limitations of EMBRAER 170/175 Maintenance Review Board Report (MRBR), MRB-1621, Revision 14, dated September 27, 2018.

(ii) Embraer Temporary Revision (TR) 14-1, dated November 13, 2018, to Part 4—Life-Limited Items, of Appendix A of EMBRAER 170/175 Maintenance Review Board Report (MRBR), MRB-1621, Revision 14, dated September 27, 2018.

(6) For ANAC ADs, 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 on the ANAC website at sistemas.anac.gov.br/certificacao/DA/DAE.asp.

(7) For Embraer material, contact Embraer S.A., Technical Publications Section (PC 060), Av. Brigadeiro Faria Lima, 2170—Putim—12227–901 Sao 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; internet flyembraer.com.

(8) 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.

(9) 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 6, 2025.

Victor Wicklund,

Deputy Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2025–02381 Filed 2–7–25; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2024–1690; Project Identifier AD–2024–00083–T; Amendment 39–22938; AD 2025–02–05]

RIN 2120–AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all The Boeing Company (Boeing) Model 747–100, 747–100B, 747–100B SUD, 747–200B, 747–200C, 747–200F, 747–300, 747–400, 747–400D, 747–400F, 747SP, and 747SR series airplanes. This AD was prompted by a report of improper inner diameter grinding of landing gear outer cylinders, resulting in possible heat damage to the outer cylinder of the nose landing gear (NLG), body landing gear (BLG), and wing landing gear

(WLG). This AD requires replacing any affected outer cylinders. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective March 17, 2025.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of March 17, 2025.

ADDRESSES:

AD Docket: You may examine the AD docket at regulations.gov under Docket No. FAA–2024–1690; 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 final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For The Boeing Company material identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Boulevard, MC 110–SK57, Seal Beach, CA 90740–5600; telephone 562–797–1717; website myboeingfleet.com.
- 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. It is also available at regulations.gov under Docket No. FAA–2024–1690.

FOR FURTHER INFORMATION CONTACT:

Stefanie Roesli, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone 206–231–3964; email stefanie.n.roesli@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Boeing Model 747–100, 747–100B, 747–100B SUD, 747–200B, 747–200C, 747–200F, 747–300, 747–400, 747–400D, 747–400F, 747SP, and 747SR series airplanes. The NPRM published in the **Federal Register** on June 20, 2024 (89 FR 51861). The NPRM was prompted by a report of improper inner diameter grinding of landing gear outer cylinders, resulting in possible heat damage to the outer cylinder of the NLG, BLG, and WLG. In the NPRM, the FAA proposed to require replacing any affected outer cylinders. The FAA is

issuing this AD to address the unsafe condition on these products.

Discussion of Final Airworthiness Directive

Comments

The FAA received one comment from The Air Line Pilots Association, International (ALPA) who supported the NPRM without change.

The FAA received two additional comments from Boeing. The following presents the comments received on the NPRM and the FAA’s response to each comment.

Request To Clarify Affected Outer Cylinder Serial Numbers

Boeing requested that an exception paragraph be added to clarify affected outer cylinder numbers. Boeing stated Boeing Alert Requirements Bulletin 747–32A2535 RB, dated January 22, 2024, inadvertently lists nine serial numbers without the correct number of leading zeros. Boeing requested that the FAA add the following language to paragraph (h) of the proposed AD, “Where Appendix B of Boeing Alert Requirements Bulletin 747–32A2535 RB, Original Issue dated January 22, 2024, specifies two-digit serial numbers, add two leading zeros (e.g., serial number 47 should be 0047). Where Appendix B of Boeing Alert Requirements Bulletin 747–32A2535 RB, Original Issue dated January 22, 2024, specifies three-digit serial numbers, add one leading zero (e.g., serial number 109 should be 0109).”

The FAA concurs with the comment. The serial numbers listed in Appendix B of Boeing Alert Requirements Bulletin 747–32A2535 RB, dated January 22, 2024, are part of the required action to find the parts affected by the unsafe condition. Furthermore, the two-digit and three-digit serial numbers listed in Appendix B of Boeing Alert Requirements Bulletin 747–32A2535 RB, dated January 22, 2024, do not exist and the request is for clarification only. The FAA has revised this AD accordingly.

Request To Add a Parts Installation Prohibition

Boeing requested that a parts installation prohibition paragraph be added to the proposed AD. Boeing stated the outer cylinders of the NLG, BLG, and WLG are rotatable structural components which may be moved from one airplane to another. Boeing stated the applicability of the AD covers all in-service Model 747 airplanes noted in Boeing Alert Requirements Bulletin 747–32A2535 RB, dated January 22, 2024; however the parts installation