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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0665; Project Identifier AD-2021-00270-T; Amendment 39-21848; AD 2021-25-05]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2017-23-02, which applied to certain The Boeing Company Model 737-200, -200C, -300, -400, and -500 series airplanes. AD 2017-23-02 required repetitive inspections, replacement, and applicable on-condition actions for certain fuselage crown skin panels. This AD was prompted by an evaluation by the design approval holder indicating that the fuselage crown skin panels are subject to widespread fatigue damage. This AD retains the actions in AD 2017-23-02, revises certain airplane configurations and inspection locations, and adds airplanes to the applicability. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective February 22, 2022.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of February 22, 2022.

ADDRESSES: For service information identified in this final rule, 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; internet <https://www.myboeingfleet.com>. You may view this service information 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 <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0665.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0665; 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.

FOR FURTHER INFORMATION CONTACT: James Guo, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5357; email: james.guo@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2017-23-02, Amendment 39-19096 (82 FR 52835, November 15, 2017) (AD 2017-23-02). AD 2017-23-02 applied to certain The Boeing Company Model 737-200, -200C, -300, -400, and -500 series airplanes. The NPRM published in the Federal Register on August 24, 2021 (86 FR 47260). The NPRM was prompted by an evaluation by the design approval holder indicating that the fuselage crown skin panels are subject to widespread fatigue damage. In the NPRM, the FAA proposed to retain the actions in AD 2017-23-02, revise certain airplane configurations and inspection locations, and add airplanes to the applicability. The FAA is issuing this AD to address cracking in the fuselage crown skin panels. Multiple adjacent cracks in the fuselage crown skin could link up and lead to decompression or loss of structural integrity of the airplane.

Discussion of Final Airworthiness Directive

Comments

The FAA received a comment from one commenter. The following presents the comment received on the NPRM and the FAA's response.

Effect of Winglets on Accomplishment of the Proposed Actions

Aviation Partners Boeing stated that the installation of winglets per Supplemental Type Certificate (STC) ST01219SE does not affect the actions specified in the proposed AD.

The FAA concurs with the commenter. The FAA has redesignated paragraph (c) of the proposed AD as paragraph (c)(1) of this AD and added paragraph (c)(2) to this AD to state that installation of STC ST01219SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST01219SE is installed, a “change in product” alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Boeing Alert Service Bulletin 737-53A1358, Revision 1, dated February 26, 2021. This service information specifies procedures for repetitive non-destructive inspections for cracking, replacement of certain fuselage crown skin panels, and applicable on-condition actions. On-condition actions include a general visual inspection of certain repairs for any loose or missing fasteners, a low frequency eddy current (LFEC) inspection of certain repairs for cracking, and repair. 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 ADDRESSES.

Costs of Compliance

The FAA estimates that this AD affects 143 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	Up to 507 work-hours × \$85 per hour = Up to \$43,095 per inspection cycle	\$0	Up to \$43,095 per inspection cycle	Up to \$6,162,585 per inspection cycle.
Replacement	304 work-hours × \$85 per hour = \$25,840 per skin panel	\$95,000	\$120,840 per skin panel	\$17,280,120 per skin panel.

The FAA estimates the following costs to do any necessary inspections that would be required based on the results of the inspection. The FAA has no way of determining the number of aircraft that might need these inspections:

On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
LFEC inspection	1 work-hours × \$85 per hour = \$85	\$0	\$85
General visual inspection	1 work-hour × \$85 per hour = \$85	\$0	\$85

The FAA has received no definitive data on which to base the cost estimates for the on-condition repairs specified in this AD.

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) 2017-23-02, Amendment 39-19096 (82 FR 52835, November 15, 2017); and
 - b. Adding the following new AD:



2021-25-05 The Boeing Company: Amendment 39-21848; Docket No. FAA-2021-0665; Project Identifier AD-2021-00270-T.

(a) Effective Date

This airworthiness directive (AD) is effective February 22, 2022.

(b) Affected ADs

This AD replaces AD 2017-23-02, Amendment 39-19096 (82 FR 52835, November 15, 2017) (AD 2017-23-02).

(c) Applicability

(1) This AD applies to The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 737-53A1358, Revision 1, dated February 26, 2021.

(2) Installation of Supplemental Type Certificate (STC) ST01219SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST01219SE is installed, a "change in product" alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by an evaluation by the design approval holder indicating that the fuselage crown skin panels are subject to widespread fatigue damage. This AD was also prompted by a determination that certain airplane configurations and inspection locations need to be revised, and that additional airplanes are subject to the unsafe condition. The FAA is issuing this AD to address cracking in the fuselage crown skin panels. Multiple adjacent cracks in the fuselage crown skin could link up and lead to decompression or loss of structural integrity of the airplane.

(f) Compliance

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

(g) Actions for Group 43 Airplanes

For airplanes identified as Group 43 in Boeing Alert Service Bulletin 737-53A1358, Revision 1, dated February 26, 2021, within 120 days after the effective date of this AD, inspect the airplane and

do all applicable on-condition actions using a method approved in accordance with the procedures specified in paragraph (j) of this AD

(h) Required Actions for Groups 1 Through 42 Airplanes

For airplanes identified as Groups 1 through 42 in Boeing Alert Service Bulletin 737-53A1358, Revision 1, dated February 26, 2021, except as specified by paragraph (i) of this AD: At the applicable times specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-53A1358, Revision 1, dated February 26, 2021, do all applicable actions identified as “RC” (required for compliance) in, and in accordance with, the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1358, Revision 1, dated February 26, 2021. Actions identified as terminating action in Boeing Alert Service Bulletin 737-53A1358, Revision 1, dated February 26, 2021, terminate the applicable required actions of this AD, provided the terminating action is done in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1358, Revision 1, dated February 26, 2021.

(i) Exceptions to Service Information Specifications

(1) Where Boeing Alert Service Bulletin 737-53A1358, Revision 1, dated February 26, 2021, uses the phrase “the original issue date of this service bulletin,” this AD requires using “December 20, 2017” (the effective date of AD 2017-23-02).

(2) Where Boeing Alert Service Bulletin 737-53A1358, Revision 1, dated February 26, 2021, specifies contacting Boeing for repair instructions or for work instructions, this AD requires doing the repair, or doing the work instructions and applicable on-condition actions using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

(3) Part 7 of Boeing Alert Service Bulletin 737-53A1358, Revision 1, dated February 26, 2021, specifies post-modification airworthiness limitation inspections in compliance with 14 CFR 25.571(a)(3) at the modified locations to support compliance with 14 CFR 121.1109(c)(2) or 129.109(b)(2). Although Part 7 is identified as RC, this AD does not require accomplishment of Part 7. As airworthiness limitations, these inspections are required by maintenance and operational rules. It is, therefore, unnecessary to mandate them in this AD. Deviations from these inspections require FAA approval, but do not require an AMOC.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles ACO 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 certification office, send it to the attention of the person identified in Related Information. Information may be emailed to: 9-ANM-LAACO-AMOC-Requests@faa.gov.

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

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) AMOCs approved for AD 2017-23-02 are approved as AMOCs for the corresponding provisions of Boeing Alert Service Bulletin 737-53A1358, Revision 1, dated February 26, 2021, that are required by paragraph (h) of this AD.

(5) Except as specified by paragraph (i)(2) of this AD: For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (j)(5)(i) and (ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or substep is labeled "RC Exempt," then the RC requirement is removed from that step or substep. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(k) Related Information

For more information about this AD, contact James Guo, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5357; email: james.guo@faa.gov.

(l) Material Incorporated by Reference

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

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

(i) Boeing Alert Service Bulletin 737-53A1358, Revision 1, dated February 26, 2021.

(ii) [Reserved]

(3) For service information 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; internet <https://www.myboeingfleet.com>.

(4) You may view this service information 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 service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on November 30, 2021.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

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