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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0609; Project Identifier AD-2021-00274-T; Amendment 39-21861; AD 2021-26-03]

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 certain The Boeing Company Model 737-300, -400, and -500 series airplanes. This AD was prompted by an evaluation by the design approval holder (DAH) indicating that the frame splice between certain stringers is subject to widespread fatigue damage (WFD). This AD requires an inspection of certain fuselage frame splices for existing repairs, repetitive inspections of certain fuselage frame splices for cracking, and applicable on-condition actions. 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-2021-0609.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0609; 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:

Wayne Ha, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5238; fax: 562-627-5210; email: wayne.ha@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 certain The Boeing Company Model 737-300, -400, and -500 series airplanes. The NPRM published in the **Federal Register** on August 24, 2021 ([86 FR 47255](#)). The NPRM was prompted by an evaluation by the DAH indicating that the frame splice between certain stringers is subject to WFD. In the NPRM, the FAA proposed to require an inspection of certain fuselage frame splices for existing repairs, repetitive inspections of certain fuselage frame splices for cracking, and applicable on-condition actions. The FAA is issuing this AD to address upper frame cracking

common to the frame splice between stringer S-13 and S-14, which could interact with stringer S-14 skin lap splice lower fastener row cracking in lower skin and result in an uncontrolled decompression of the airplane and loss of structural integrity.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from Aviation Partners Boeing and Boeing. The following presents the comments received on the NPRM and the FAA's response to each comment.

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 accomplishment of the manufacturer's service instructions.

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](#).

Request To Add Inspection Method

Boeing requested that the words “high frequency eddy current (HFEC)” be added to the sentence that describes the repetitive inspections in the “Related Service Information under [1 CFR part 51](#)” section of the proposed AD. Boeing stated that the HFEC inspection should be mentioned because that is the inspection that mitigates the unsafe condition.

The FAA agrees with the request. The requested wording has been added to the specified section of this final rule.

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 Requirements Bulletin 737-53A1388 RB, dated October 27, 2020. This service information specifies procedures for a general visual inspection (GVI) of the fuselage frame splices between stringer S-13 and S-14 station (STA) 360 to STA 520 and STA 727A to STA 907 for existing repairs, repetitive high frequency eddy current (HFEC) inspections of the fuselage frame splices between stringer S-13 and S-14 from STA 360 to STA 520 and STA 727A to STA 907 for cracking, and applicable on-condition actions. On-condition actions include an open hole HFEC inspection for cracking at all fastener hole locations where a fastener was removed due to finding a cracked doubler, repair, or replacement. 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 66 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
Repetitive Inspections	Up to 267 work-hours × \$85 per hour = Up to \$22,695 per inspection cycle	\$0	Up to \$22,695 per inspection cycle	Up to \$1,497,870 per inspection cycle.
GVI	2 work-hours × \$85 per hour = \$170	0	\$170	\$11,220.

The FAA has received no definitive data on which to base the cost estimates for the on-condition actions 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 adding the following new airworthiness directive:

2021-26-03 The Boeing Company: Amendment 39-21861; Docket No. FAA-2021-0609; Project Identifier AD-2021-00274-T.

(a) Effective Date

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

(b) Affected ADs

None.

(c) Applicability

(1) This AD applies to The Boeing Company Model 737-300, -400, and -500 series airplanes, certificated in any category, as identified in Boeing Alert Requirements Bulletin 737-53A1388 RB, dated October 27, 2020.

(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 (DAH) indicating that the frame splice between stringer S-13 and S-14 is subject to widespread fatigue damage (WFD). The FAA is issuing this AD to address upper frame cracking common to the frame splice between stringer S-13 and S-14, which could interact with stringer S-14 skin lap splice lower fastener row cracking in lower skin and result in an uncontrolled decompression of the airplane and loss of structural integrity.

(f) Compliance

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

(g) Required Actions

Except as specified by paragraph (h) of this AD: At the applicable times specified in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 737-53A1388 RB, dated October 27, 2020, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 737-53A1388 RB, dated October 27, 2020.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 737-53A1388, dated October 27, 2020, which is referred to in Boeing Alert Requirements Bulletin 737-53A1388 RB, dated October 27, 2020.

(h) Exceptions to Service Information Specifications

(1) Where Boeing Alert Requirements Bulletin 737-53A1388 RB, dated October 27, 2020, uses the phrase “the Original Issue date of Requirements Bulletin 737-53A1388 RB,” this AD requires using “the effective date of this AD,” except where Alert Requirements Bulletin 737-53A1388 RB, dated October 27, 2020, uses the phrase “the Original Issue date of Requirements Bulletin 737-53A1388 RB,” in a note or flag note.

(2) Where Boeing Alert Requirements Bulletin 737-53A1388 RB, dated October 27, 2020, specifies contacting Boeing for repair instructions or for alternative inspections: This AD requires doing the repair, or doing the alternative inspections and applicable on-condition actions using a method approved in accordance with the procedures specified in paragraph (i) of this AD.

(i) 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.

(j) Related Information

For more information about this AD, contact Wayne Ha, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5238; fax: 562-627-5210; email: wayne.ha@faa.gov.

(k) 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 Requirements Bulletin 737-53A1388 RB, dated October 27, 2020.

(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, fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on December 8, 2021.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2022-00584 Filed 1-14-22; 8:45 am]

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