



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2024-0028; Project Identifier AD-2023-00919-T; Amendment 39-23004; AD 2025-07-03]

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) 2021-09-06, which applied to all The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes. AD 2021-09-06 required repetitive inspections for cracking of the left- and right-hand outboard chords of certain frame fittings and failsafe straps at a certain station around eight fasteners, and repair if any cracking is found. This AD was prompted by additional reports of cracking in the area and a subsequent determination that additional inspections are needed to address the unsafe condition. This AD requires repetitive detailed and ultrasonic inspections for cracking of the left- and right-hand sides of certain frame fittings and failsafe straps, and repair if any cracking is found. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES:

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2024-0028; 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 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; 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](https://www.regulations.gov) under Docket No. FAA-2024-0028.

FOR FURTHER INFORMATION CONTACT: Owen Bley-Male, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone 206-231-3992; email owen.f.bley-male@faa.gov.

SUPPLEMENTARY INFORMATION:**Background**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2021-09-06, Amendment 39-21519 (86 FR 23595, May 4, 2021) (AD 2021-09-06). AD 2021-09-06 applied to all The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes. The NPRM published in the *Federal Register* on January 16, 2024 (89 FR 2515). The NPRM was prompted by additional reports of cracking in the area required to be inspected by AD 2021-09-06 and

a subsequent determination that additional inspections are needed to address the unsafe condition. In the NPRM, the FAA proposed to require repetitive detailed and ultrasonic inspections for cracking of the left- and right-hand sides of certain frame fittings and failsafe straps, and repair if any cracking is found. The FAA is issuing this AD to address cracking in the station (STA) 663.75 frame fitting outboard chords and failsafe straps adjacent to the stringer S-18A straps, which could result in failure of a principal structural element (PSE) to sustain limit load. The unsafe condition, if not addressed, could adversely affect the structural integrity of the airplane and result in loss of control of the airplane.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from four commenters, including Air Line Pilots Association, International (ALPA), Boeing, and two individuals, who supported the NPRM without change.

The FAA received additional comments from five commenters, including American Airlines (American), Aviation Partners Boeing (APB), Southwest Airlines (Southwest), Sun Country Airlines (Sun Country), and United Airlines (United). 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

APB stated that the installation of blended or split scimitar winglets per Supplemental Type Certificate (STC) ST00830SE 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 ST00830SE does not affect the ability to accomplish the

actions required by this AD. Therefore, for airplanes on which STC ST00830SE 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.

Effect of Winglets on AMOC Approval Process

APB advised that AMOCs approved by the Boeing Organization Designation Authorization (ODA) in accordance with the process specified in paragraph (i)(3) of the proposed AD would not be valid for airplanes on which STC ST01697SE is installed and which have a split scimitar winglet configuration installed by STC ST00830SE.

The FAA acknowledges and concurs with APB’s assertion. However, paragraph (i)(1) of this AD provides a provision for obtaining an AMOC without using a Boeing ODA. An AMOC approval in accordance with paragraph (i)(1) or (3) of this AD could be provided based on whether the actions needing an AMOC apply to the APB design or the Boeing design. No change to this AD is necessary in this regard.

Request to Add Provision to Accept Certain Previously Approved AMOCs

American, Southwest, Sun Country, and United requested similar changes to the proposed AD to provide credit for accomplishing replacements of the left- and right-side STA 663.75 frame fitting assembly by accepting previously approved AMOCs.

American, Southwest, Sun Country, and United noted that they have replaced several cracked fittings using a method approved by FAA Form 8100-9 or the AMOC process for ADs 2021-09-06; 2019-22-10, Amendment 39-19789 (84 FR 61533, November 13, 2019) (AD 2019-22-10); and 2019-20-02, Amendment 39-19755 (84 FR 52754, October 3, 2019) (AD 2019-20-02). In addition to a request to accept AMOCs previously approved for ADs 2021-09-06, 2019-22-10, and 2019-20-02, Southwest requested acceptance of global AMOC letter 782-22-10680 for an extension of certain inspection thresholds required by AD 2021-09-06. Southwest and United stated that the repair instructions they used specified a 30,000-flight-cycle compliance time before the next

inspection and requested clarification on how that compliance time in the approved repair fits with flagnote (b) in the tables of the “Compliance” paragraph and Accomplishment Instructions of Boeing Service Bulletin 737-53A1414, Revision 1, dated November 20, 2023. Sun Country also expressed concern that flagnote (b)’s reference to repairs approved by Boeing ODAs via FAA Form 8100-9 is “hidden” in the required service bulletin.

The FAA agrees to allow some previously approved AMOCs for AD 2021-09-06, which includes previously approved AMOCs for AD 2019-22-10 and AD 2019-20-02, in this AD. The FAA notes that flagnote (b) in certain tables in the “Compliance” paragraph of Boeing Service Bulletin 737-53A1414, Revision 1, dated November 20, 2023, states that a replaced STA 663.75 frame fitting assembly that was accomplished using instructions approved in FAA Form 8100-9 does not need to be inspected for compliance with this AD. The FAA considers flagnote (b) to address the inspection required by this AD, but flagnote (b) does not apply to follow-on inspections specified in repair instructions. The FAA concurs with that note for the conditions that were identified by Boeing and has not excluded it or modified it in the exceptions identified in paragraph (h) of this AD. It would be impractical to attempt to identify each note or step that could be considered to contain “hidden” information that could be highlighted.

The FAA has added paragraph (h)(3) of this AD to clarify that for airplanes on which the left- and right-side STA 663.75 frame fitting assembly was replaced using instructions approved via FAA Form 8100-9, the airplane is to be considered Configuration 2 of the applicable group identified in Boeing Alert Requirements Bulletin 737-53A1414 RB, Revision 1, dated November 20, 2023.

The FAA has also added paragraph (i)(4) of this AD to provide acceptance for some previously approved AMOCs provided certain conditions are met.

Request for Reduced Inspection Interval Alternative to Corrective Action

Sun Country requested that a reduced inspection schedule monitor be used in lieu of replacement before further flight if cracking is found on the far fasteners during the required ultrasonic inspection. Sun Country explained that based on its experience with certain inspection procedures in the non-destructive testing manual, inspecting the far fasteners as specified might lead to false cracking indications. Sun Country suggested that cracking at the affected failsafe strap location would become evident when inspections are conducted on a reduced interval.

The FAA does not agree with the request. Generally, the FAA does not allow an airplane to fly with a known crack. The FAA does not have the data in this case to substantiate allowing further flight with a known unsafe condition, on the chance that the required inspection returns a false positive result. However, under the provisions specified in paragraph (i) of this AD, the FAA will consider requests to extend the compliance time for repairs if sufficient data are submitted to substantiate that the new compliance time would provide an acceptable level of safety. This AD has not been changed regarding this issue.

Conclusion

The FAA reviewed the relevant data, considered any 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 these products. 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.

Material Incorporated by Reference under 1 CFR Part 51

The FAA reviewed Boeing Alert Requirements Bulletin 737-53A1414 RB, Revision 1, dated November 20, 2023. This material specifies procedures for repetitive

internal detailed inspection for cracking of the frame fitting and visible areas of the failsafe strap at STA 663.73 (left- and right-hand sides), repetitive external detailed and ultrasonic inspections for cracking of the failsafe strap at STA 663.75 (left- and right-hand sides), and repair if any cracking is found. 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 1,911 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	4 work-hours X \$85 per hour = \$340 per inspection cycle	\$0	\$340 per inspection cycle	\$649,740 per inspection cycle

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

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

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) 2021-09-06, Amendment 39-21519 (86 FR 23595, May 4, 2021); and

b. Adding the following new AD:

2025-07-03 The Boeing Company: Amendment 39-23004; Docket No. FAA-2024-0028; Project Identifier AD-2023-00919-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2021-09-06, Amendment 39-21519 (86 FR 23595, May 4, 2021) (AD 2021-09-06).

(c) Applicability

(1) This AD applies to all The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes, certificated in any category.

(2) Installation of Supplemental Type Certificate (STC) ST00830SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST00830SE 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 reports of cracking in the station (STA) 663.75 frame fitting outboard chords and failsafe straps adjacent to the stringer S-18A area and a determination that additional inspections are needed to address the unsafe condition. The FAA is issuing this AD to address cracking in the STA 663.75 frame fitting outboard

chords and failsafe straps adjacent to the stringer S-18A straps, which could result in failure of a principal structural element (PSE) to sustain limit load. The unsafe condition, if not addressed, could adversely affect the structural integrity of the airplane and result in loss of control of the airplane.

(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 737-53A1414 RB, Revision 1, dated November 20, 2023, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 737-53A1414 RB, Revision 1, dated November 20, 2023.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 737-53A1414, Revision 1, dated November 20, 2023, which is referred to in Boeing Alert Requirements Bulletin 737-53A1414 RB, Revision 1, dated November 20, 2023.

(h) Exceptions to Requirements Bulletin Specifications

(1) Where the Condition and Compliance Time columns of the tables in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 737-53A1414 RB, Revision 1, dated November 20, 2023, use the phrase “the original issue date of Requirements Bulletin 737-53A1414 RB,” or “the Revision 1 date of Requirements Bulletin 737-53A1414 RB,” this AD requires using the effective date of this AD.

(2) Where Boeing Alert Requirements Bulletin 737-53A1414 RB, Revision 1, dated November 20, 2023, specifies contacting Boeing for repair instructions: This AD requires doing the repair using a method approved in accordance with the procedures specified in paragraph (i) of this AD.

(3) For airplanes on which the left- and right-side STA 663.75 frame fitting assembly was replaced using instructions approved via FAA Form 8100-9, the airplane is to be considered Configuration 2 of the applicable group as identified in Boeing Alert Requirements Bulletin 737-53A1414 RB, Revision 1, dated November 20, 2023.

(i) Alternative Methods of Compliance (AMOCs)

(1) 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 the certification office, send it to the attention of the person identified in paragraph (j)(1) of this AD. Information may be emailed to:

AMOC@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, AIR-520, Continued Operational Safety 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 previously approved for replacement of the STA 663.75 frame fitting assembly and related work requirements of AD 2021-09-06 are approved as AMOCs for the corresponding provisions of Boeing Alert Requirements Bulletin 737-53A1414 RB, Revision 1, dated November 20, 2023, that are required by paragraph (g) of this AD,

except for AMOCs that include any defined initial (also known as ‘threshold’) and repetitive inspections, which must also meet the conditions specified in paragraphs (i)(4)(i) and (ii) of this AD.

(i) The inspection areas and methods in figure 1 and figure 2 of Boeing Alert Requirements Bulletin 737-53A1414 RB, Revision 1, dated November 20, 2023, are included in all initial (also known as ‘threshold’) and repetitive inspections.

(ii) The initial (or threshold) inspection is the applicable time specified in paragraph (i)(4)(ii)(A) or (B) of this AD.

(A) For airplanes identified as Group 1 airplanes in Boeing Alert Requirements Bulletin 737-53A1414 RB, Revision 1, dated November 20, 2023: Within 30,000 flight cycles from the date of the applicable FAA Form 8100-9 approval.

(B) For airplanes identified as Group 2 airplanes in Boeing Alert Requirements Bulletin 737-53A1414 RB, Revision 1, dated November 20, 2023: Within 18,000 flight cycles from the date of the applicable FAA Form 8100-9 approval.

(j) Related Information

(1) For more information about this AD, contact Owen Bley-Male, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone 206-231-3992; email owen.f.bley-male@faa.gov.

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

(k) 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) Boeing Alert Requirements Bulletin 737-53A1414 RB, Revision 1, dated November 20, 2023.

(ii) [Reserved]

(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; 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 March 25, 2025.

Victor Wicklund,
Deputy Director, Integrated Certificate Management Division,
Aircraft Certification Service.
[FR Doc. 2025-06005 Filed: 4/7/2025 8:45 am; Publication Date: 4/8/2025]