



## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2019-0705; Product Identifier 2019-NM-098-AD;

Amendment 39-21396; AD 2021-02-13]

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 737-600, -700, -700C, -800, and -900 series airplanes. This AD was prompted by reports of cracks in the bear strap from station (STA) 290 to STA 296, and between stringers S-8R and S-9R, sometimes common to fasteners in the gap cover and emanating from rough sanding marks found on the surface of the bear strap. This AD requires inspections of the fuselage skin and bear strap at the forward galley door between certain stations for cracks, and applicable on-condition actions. 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:** 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; phone: 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 on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0705.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0705; 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:** Michael Bumbaugh, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3522; email: [michael.bumbaugh@faa.gov](mailto:michael.bumbaugh@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Discussion**

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 737-600, -700, -700C, -800, and -900 series airplanes. The NPRM published in the *Federal Register* on October 1, 2019 (84 FR 52047). The NPRM was prompted by reports of cracks in the bear strap between certain stations, sometimes common to fasteners in the gap cover and emanating from rough sanding marks found on the surface of the bear strap. The NPRM proposed to require inspections of the fuselage skin and bear strap at

the forward galley door between certain stations for cracks, and applicable on-condition actions.

The FAA issued a supplemental NPRM (SNPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain The Boeing Company Model 737-600, -700, -700C, -800, and -900 series airplanes. The SNPRM published in the *Federal Register* on May 1, 2020 (85 FR 25348). The FAA issued the SNPRM to revise certain inspections to provide the correct thickness callouts for the fuselage skin and bear strap.

The FAA is issuing this AD to address cracking of the bear strap, which could result in severing of the bear strap, possibly leading to uncontrolled decompression and loss of structural integrity of the airplane.

### **Comments**

The FAA gave the public the opportunity to participate in developing this final rule. The following presents the comments received on the SNPRM and the FAA's response to each comment.

### **Support for the SNPRM**

United Airlines stated that it has no technical objection to the SNPRM and that it concurs with the proposed rulemaking.

### **Request for an Alternative Method of Compliance for a Certain Repair**

Southwest Airlines (SWA) requested that the Boeing 737-700/-800 Structural Repair Manual (SRM) 53-10-01, Repair 6, be approved as an alternative method of compliance (AMOC) to certain corrective actions specified in Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 2020. SWA contended that this repair covers the affected inspection zone, and that this SRM repair should be a terminating action to the inspections specified in Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 2020, because the entire inspection area covered is common to the repair given in Boeing 737-700/-800 SRM 53-10-01,

Repair 6. SWA asserted that operators should be able to accomplish this SRM repair without contacting Boeing, provided there are no deviations and that the findings meet the criteria listed in the Boeing 737-700/-800 SRM 53-10-01, Repair 6. SWA also noted that the SRM was published after Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 2020, so there was no way to reference the SRM repair within it.

The FAA disagrees with the request because the referenced SRM repair has not yet been approved for the specified conditions. However, under the provisions of paragraph (j) of this AD, the FAA will consider requests for approval of an AMOC if a proposal is submitted that is supported by technical data indicating that the proposed repair will provide an acceptable level of safety. If the referenced SRM repair is determined to be acceptable to address the specified conditions, the FAA may approve, and Boeing may issue, a global AMOC for the SRM repair. The FAA has not changed this AD as a result of this comment.

**Request for an Altered Compliance Time for Condition 1, Action 1, of the Service Information**

Southwest Airlines requested that where table 1 of paragraph 1.E., “Compliance,” of Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 2020, states a compliance time of “Before further flight” for certain on-condition actions, the proposed AD should specify this compliance time as “Before 15,000 total flight cycles or within 6,000 flight cycles after the original issue of the AD, whichever occurs later.” Southwest Airlines also requested that the FAA clarify the requirement of Condition 1, Action 1, and Condition 3 and Condition 4.1.1, within Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 2020, paragraph 1.E., “Compliance,” in Tables 1 and 2, to do the alternative inspections and applicable on-condition action(s) before further flight. SWA asserted that there is an equivalent level of safety between an airplane without a repair reaching the compliance time threshold to

perform the Boeing service bulletin inspection and an airplane with a repair reaching the compliance time threshold before an action is required. Therefore, the compliance times for obtaining the alternative inspection(s) for the existing repairs should align with the compliance times allowed for the initial service bulletin general visual inspection in lieu of “before further flight.” SWA proposed that this allowance be listed within paragraph (h) of the proposed AD, similar to the allowance provided by paragraph (i) of the proposed AD.

The FAA agrees that allowing the AD compliance time for an airplane with an existing repair to be the same as an aircraft without an existing repair will provide an acceptable level of safety. Any alternative inspection program including compliance times must be done in accordance with an approved AMOC. The FAA has added paragraph (h)(3) of this AD to address this change.

### **Request to Clarify Authority for Approval of Alternative Inspection Programs**

Southwest Airlines requested that the FAA clarify who has the authority to approve an alternative inspection program for any repair found during Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 2020, paragraph 1.E, “Compliance,” Table 1, Condition 1, Action 1. Paragraph (j)(1) of the proposed AD clearly indicated that the manager of the Seattle ACO Branch has that authority; paragraph (j)(3) of the proposed AD provided the path to obtain an AMOC by The Boeing Company Organization Designation Authorization (ODA) as delegated only for a repair, modification, and alteration. SWA requested clarification whether paragraph (j)(3) of the proposed AD encompasses both existing repairs and repairs installed as a result of inspection findings. SWA asserted that it is unclear whether the reference to the repair is for an existing repair that is located in the inspection area or for a repair that is installed as a result of any crack finding.

The FAA agrees to clarify. The Boeing Company ODA has authority to approve AMOCs as authorized and delegated for repairs installed prior to the AD and repairs due to a crack finding, as well as repairs not due to a crack finding. An operator would need to provide The Boeing Company ODA with all details and geometry needed to design and analyze the repair data.

### **Request to Clarify the Use of “Covers” in the Service Information**

SWA commented that Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 2020, paragraph 1.E., “Compliance,” Table 1, note (b), omits the inspection in areas where a repair covers the affected zone, provided conditions 1 and 2 are met. A similar note is included in paragraph 1.E., “Compliance,” Table 2, note (c). SWA would like clarification of the word “covers” as it relates to repairs in the area. Since the configuration has changed because of the repair, SWA stated that the repair’s damage tolerance program provides an equivalent level of safety for this area.

The FAA has coordinated with Boeing to clarify the intent of the wording in this section. Note (b) in Table 1 and note (c) in Table 2 of Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 2020, paragraph 1.E., “Compliance,” apply to the area “covered by” a repair, but not for the area “common to” a repair. A repair that is “common to” the area, meaning physically in the same area as the NPRM-proposed repair, but that was not meant to address the issue specified in the NPRM (i.e., “covered” areas), could potentially be obscuring the inspections that would detect crack growth which this AD is meant to mitigate. Therefore, if a repair was not done as a corrective action for a crack in the bear strap, and the operator does not perform the inspections specified in the Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 2020, it may result in the unsafe condition. The FAA has not changed this AD as a result of this comment.

### **Request to Include Inspection Programs**

SWA commented that paragraph (j)(3) of the proposed AD (in the SNPRM) stated that an AMOC may be used for any required repair, modification, or alteration if approved by The Boeing Company ODA. SWA stated that inspection programs should be included in this list of conditions for which The Boeing Company ODA can provide an AMOC, as paragraph (h)(2) explicitly states it is acceptable to accomplish alternative inspections approved in accordance with the procedures specified in paragraph (j) of the proposed AD.

The FAA agrees with the assertion that the inspection program may be part of the AMOC because the inspection program for the repaired area may be part of the repair, which in turn is part of the AMOC. However, the FAA disagrees with changing this AD because an AMOC issued for a repair will include the inspection program. The request to add certain inspection programs to The Boeing Company ODA-authorized list of AMOC approvals is outside the scope of this rulemaking. Therefore, the FAA has not changed this AD in this regard.

### **Conclusion**

The FAA reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule with the change described previously and minor editorial changes. The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the SNPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the SNPRM.

The FAA also determined that these changes will not increase the economic burden on any operator or increase the scope of this final rule.

## Related Service Information under 1 CFR Part 51

The FAA reviewed Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 2020. This service information describes procedures for inspecting for cracks of the fuselage skin and bear strap at the forward galley door between certain stations, through the use of two alternative inspection methods for the initial inspections: (1) Internal and external general visual inspections and internal surface high frequency eddy current (HFEC) inspections, and (2) external general visual and external eddy current inspections. This service information also describes procedures for applicable on-condition actions including inspections for cracks, HFEC inspections for cracks, low frequency eddy current (LFEC) inspections for cracks, and repair, depending on the inspection method selected. 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 the ADDRESSES section.

### Costs of Compliance

The FAA estimates that this AD affects 752 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

#### Estimated costs for required actions: Option 1

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Internal general visual inspection	11 work-hours X \$85 per hour = \$935	\$0	\$935	\$703,120
External general visual inspection	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$63,920
Internal Surface HFEC inspections	3 work-hours X \$85 per hour = \$255 per inspection cycle	\$0	\$255 per inspection cycle	\$191,760 per inspection cycle



## Estimated costs for required actions: Option 2

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
External general visual inspection	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$63,920
External LFEC and HFEC inspections	18 work-hours X \$85 per hour = \$1,530 per inspection cycle	\$0	\$1,530 per inspection cycle	\$1,150,560 per inspection cycle

The FAA has received no definitive data that would enable the agency to provide 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.

**Adoption of 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:

**2021-02-13 The Boeing Company:** Amendment 39-21396; Docket No. FAA-2019-0705; Product Identifier 2019-NM-098-AD.

**(a) Effective Date**

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

**(b) Affected ADs**

None.

**(c) Applicability**

(1) This AD applies to The Boeing Company Model 737-600, -700, -700C, -800, and -900 series airplanes, certificated in any category, as identified in Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 2020.

(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 cracks in the bear strap from station (STA) 290 to STA 296, and between stringers S-8R and S-9R, sometimes common to fasteners in the gap cover and emanating from rough sanding marks found on the surface of the bear strap. The FAA is issuing this AD to address cracking of the bear strap, which could result in severing of the bear strap, possibly leading to uncontrolled decompression and loss of structural integrity 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 737-53A1383 RB, Revision 1, dated February 19, 2020, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 2020.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 737-53A1383, Revision 1, dated February 19, 2020, which is referred to in Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 2020.

#### **(h) Exceptions to Service Information Specifications**

(1) Where Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 2020, uses the phrase “the original issue date of Requirements Bulletin 737-53A1383 RB,” this AD requires using “the effective date of this AD,” except where Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 2020, uses the phrase “the original issue date of Requirements Bulletin 737-53A1383 RB” in a note or flag note.

(2) Where Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 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 and compliance time approved in accordance with the procedures specified in paragraph (j) of this AD.

(3) Where Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 2020, in Tables 1 and 2, Condition 1 (Action 1), Condition 3, and Condition 4.1.1 (Action 1), specifies a compliance time of “before further flight”: This AD requires compliance before 15,000 total flight cycles or within 6,000 flight cycles after the effective date of this AD, whichever occurs later.

#### **(i) Credit for Previous Actions**

This paragraph provides credit for the actions specified in paragraph (g) of this AD, if those actions were performed before the effective date of this AD, using Boeing Alert Requirements Bulletin 737-53A1383 RB, dated May 9, 2019, except for airplanes on which Option 2, Condition 4, has been done. For airplanes on which Option 2, Condition 4, has been done, credit is given for Boeing Alert Requirements Bulletin 737-53A1383 RB, dated May 9, 2019, provided operators do the external low frequency eddy current (LFEC) inspection of the forward galley door bear strap and external high frequency eddy current (HFEC) inspection of the fuselage skin for any crack in

accordance with Figure 4 of the Accomplishment Instructions of Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 2020. The compliance time for accomplishing these actions is at the later of the times specified in paragraphs (i)(1) and (2) of this AD. Except as specified in paragraph (h)(3), do all applicable on-condition actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 2020, at the applicable times specified in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 2020.

(1) Before 15,000 total flight cycles.

(2) Within 6,000 flight cycles after the effective date of this AD.

**(j) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle 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 local Flight Standards District 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 (k)(1) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district 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, Seattle ACO Branch, 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.

**(k) Related Information**

(1) For more information about this AD, contact Michael Bumbaugh, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3522; email: michael.bumbaugh@faa.gov.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (1)(3) and (4) of this AD.

**(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 Requirements Bulletin 737-53A1383 RB, Revision 1, dated February 19, 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; phone: 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 [fedreg.legal@nara.gov](mailto:fedreg.legal@nara.gov), or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on January 14, 2021.

Gaetano A. Sciortino, Deputy Director for Strategic Initiatives,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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