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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-0023; Product Identifier 2018-NM-145-AD; Amendment 39-19700; AD 2019-15-07]

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 737-100, 737-200, 737-200C, 737-300, 737-400, and 737-500 series airplanes. This AD was prompted by reports of cracks in the frames below the passenger floor. This AD requires repetitive inspections for cracking of the fuselage lower lobe frames, and applicable on-condition actions. This AD also provides an optional terminating action for certain repetitive inspections. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective September 19, 2019.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of September 19, 2019.

ADDRESSES: For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster 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, Transport Standards 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 http://www.regulations.gov by searching for and locating Docket No. FAA-2019-0023.

Examining the AD Docket

You may examine the AD docket on the internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2019-0023; 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 regulatory evaluation, 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: George Garrido, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5232; fax: 562-627-5210; email: george.garrido@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 737-100, 737-200, 737-200C, 737-300, 737-400, and 737-500 series airplanes. The NPRM published in the Federal Register on March 1, 2019 (84 FR 6984). The NPRM was prompted by reports of cracks in the frames below the passenger floor. The NPRM proposed to require repetitive inspections for cracking of the fuselage lower lobe frames, and applicable on-condition actions. The NPRM also provided an optional terminating action for certain repetitive inspections.

The FAA is issuing this AD to address cracks that could propagate until the frame severs. Continued operation of the airplane with multiple adjacent severed frames, or the combination of a severed frame adjacent to fuselage skin chem-mill cracks, could result in an 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 NPRM and the FAA's response to each comment.

Support for the NPRM

Adam Furman, Eric Jacobsen, and Riya Shah stated support for the NPRM.

Effect of Winglets on Accomplishment of the Proposed Actions

Aviation Partners Boeing stated that accomplishing Supplemental Type Certificate (STC) ST01219SE does not affect compliance with the proposed actions.

The FAA concurs with the commenter. The agency 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 requirement of 14 CFR 39.17.

Request To Revise the Applicability

Boeing requested that the applicability of the proposed AD be changed from “all The Boeing Company Model 737-100, 737-200, 737-200C, 737-300, 737-400, and 737-500 series airplanes” to “The Boeing Company Model 737-100, 737-200, 737-200C, 737-300, 737-400, and 737-500 series airplanes as identified in Boeing Alert Service Bulletin 737-53A1362, dated September 20, 2018.” The commenter stated that this is more accurate because not all line numbers for the identified Model 737 airplanes are affected.

The FAA agrees with the commenter's request. Paragraph 1.A.1. of Boeing Alert Service Bulletin 737-53A1362, dated September 20, 2018, identifies the affected Model 737 airplanes and does not include all of the airplane line numbers. In addition, the affected parts are not rotable, so once a part is removed from an affected airplane it would not be installed on another airplane including airplanes outside the line-number range in the service bulletin. The FAA has changed SUMMARY and the Discussion section in SUPPLEMENTARY INFORMATION of this final rule to "certain The Boeing Company Model 737-100, 737-200, 737-200C, 737-300, 737-400, and 737-500 series airplanes." The FAA has also changed paragraph (c)(1) of this AD (paragraph (c) of the proposed AD) to refer to The Boeing Company Model 737-100, 737-200, 737-200C, 737-300, 737-400, and 737-500 series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 737-53A1362, dated September 20, 2018.

Request To Clarify Terminology Regarding Frames

Boeing requested that the term "frame webs" be changed to "frames" where the location of the cracking was described, throughout the NPRM. The commenter stated that this is more accurate because cracks were found in the frame chords as well as the frame webs, and the reference should be to frames as a whole.

The FAA agrees with the commenter's request for the reasons provided by the commenter. The FAA has revised SUMMARY and the Discussion section in SUPPLEMENTARY INFORMATION of this final rule and paragraph (e) of this AD to refer to cracks in "frames" instead of "frame webs."

Request To Clarify Terminology Regarding Chem-Mill Cracks

Boeing requested that the term "fuselage skin chem-milled cracks" be changed to "fuselage skin chem-mill cracks" throughout the NPRM. The commenter stated that this more accurately describes the condition.

The FAA agrees with the commenter's request for the reason provided by the commenter. The agency has revised the Discussion section of this final rule and paragraph (e) of this AD to refer to "fuselage skin chem-mill" cracks instead of "fuselage skin chem-milled" cracks.

Request To Reduce the Compliance Time

Katie Draus, Shawn McPartland, and an anonymous commenter requested that the compliance time in the proposed AD be reduced. The commenters recommended that the proposed AD be put into effect immediately because of the seriousness of the unsafe condition.

The FAA acknowledges the commenters' concerns, but does not agree to reduce the compliance time of this final rule. In developing an appropriate compliance time for this action, the agency considered the urgency associated with the unsafe condition, the availability of replacement parts, and the practical aspect of accomplishing the required modification within a period of time that corresponds to the normal scheduled maintenance for most affected operators. The FAA has not revised this AD in regard to this issue.

Request To Revise Exceptions to Service Information Specifications

Boeing requested that paragraph (j)(1) of the proposed AD be revised so that instead of mandating the use of "the effective date of this AD," it would state that the "effective date of this AD" can be substituted for the original issue date of Boeing Alert Service Bulletin 737-53A1362, dated September 20, 2018. Boeing stated that mandating "the effective date of this AD" for determining compliance might discourage operators from doing the actions in the service information prior to the effective date of the AD.

Boeing also noted that some of the work instructions in Boeing Alert Service Bulletin 737-53A1362, dated September 20, 2018, contain notes that provide relief from inspection requirements if a Boeing repair was accomplished for the crack condition after the original issue date of the service bulletin. Boeing pointed out that because these notes also contain the phrase “the original issue date of this service bulletin,” requiring the use of “the effective date of this AD” might lead operators to think that an AMOC approval would be needed for relief from inspections on repairs accomplished after the service bulletin release but prior to publication of the final rule. Boeing suggested that changing the wording would clarify that an AMOC approval is not needed.

The FAA acknowledges the commenter's concern regarding this issue. The agency disagrees that the wording would discourage operators from accomplishing the actions in Boeing Alert Service Bulletin 737-53A1362, dated September 20, 2018, prior to the effective date of this AD because paragraph (f) of this AD provides credit for the actions done before the effective date of this AD.

In response to the commenter's concern regarding the use of “the effective date of this AD” instead of “the original issue date of this service bulletin” in the notes of Boeing Alert Service Bulletin 737-53A1362, dated September 20, 2018, the FAA has revised paragraph (j)(1) of this AD to state that “Where BASB 737-53A1362 uses the phrase ‘the original issue date of this service bulletin,' this AD requires using ‘the effective date of this AD,' except where BASB 737-53A1362 uses the phrase ‘the original issue date of this service bulletin' in a note or flag note.”

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 changes described previously and minor editorial changes. The agency has determined that these minor changes:

Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and

Do not add any additional burden upon the public than was already proposed in the NPRM.

The FAA has 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 Service Bulletin 737-53A1362, dated September 20, 2018. The service information describes procedures for repetitive inspections for cracking of the fuselage lower lobe frames, applicable on-condition actions, and an optional modification of the tooling holes and insulation attachment holes. On-condition actions include repetitive inspections for cracking of the lower lobe frames, repair, and repetitive post-repair inspections for cracking.

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 262 airplanes of U.S. registry. The agency estimates the following costs to comply with this AD:

Estimated Costs for Required Actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	Up to 56 work-hours × $85 per hour = $4,760 per inspection cycle	$0	Up to $4,760 per inspection cycle	Up to $1,247,120 per inspection cycle.

Estimated Costs for Optional Actions

Action	Labor cost	Parts cost	Cost per product
Modification	1 work-hour × $85 per hour = $85 per hole	[*]	$85 per hole.

* Parts and materials (e.g., rivets, bolts, collars, primer, adhesive) are supplied by the operator.

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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes and associated appliances to the Director of the System Oversight Division.

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 (AD):

2019-15-07 The Boeing Company: Amendment 39-19700; Docket No. FAA-2019-0023; Product Identifier 2018-NM-145-AD.

(a) Effective Date

This AD is effective September 19, 2019.

(b) Affected ADs

None.

(c) Applicability

(1) This AD applies to The Boeing Company Model 737-100, 737-200, 737-200C, 737-300, 737-400, and 737-500 series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 737-53A1362, dated September 20, 2018 ("BASB 737-53A1362").

(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 reports of cracks in the frames below the passenger floor. The FAA is issuing this AD to address cracks that could propagate until the frame severs. Continued operation of the airplane with multiple adjacent severed frames, or the combination of a severed frame adjacent to fuselage skin chem-mill cracks, could result in an 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 for Group 1 Airplanes

For airplanes identified as Group 1 in BASB 737-53A1362: Within 120 days after the effective date of this AD, accomplish actions to correct the unsafe condition (e.g., inspections and on-condition actions) using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

(h) Required Actions for Group 2 Through 20 Airplanes

For airplanes identified as Group 2 through 20 in BASB 737-53A1362: Except as specified in paragraph (i) of this AD, at the applicable times specified in paragraph 1.E., "Compliance," of BASB 737-53A1362, do all applicable actions identified as "RC" (required for compliance) in, and in accordance with, the Accomplishment Instructions of BASB 737-53A1362.

(i) Optional Terminating Action for Certain Repetitive Inspections

For airplanes identified as Group 2 through 20 in BASB 737-53A1362, accomplishment of part 13, "Preventive Modification of the Frame Web Tooling Hole and Insulation Attachment Hole in the Section 46 Lower Lobe Frame," in accordance with the Accomplishment Instructions of BASB 737-53A1362, terminates the repetitive open hole high frequency eddy current inspections required by paragraph (h) of this AD, for the modified tooling hole or insulation attachment hole location only.

(j) Exceptions to Service Information Specifications

(1) For purposes of determining compliance with the requirements of this AD: Where BASB 737-53A1362 uses the phrase "the original issue date of this service bulletin," this AD requires using "the effective date of this AD," except where BASB 737-53A1362 uses the phrase "the original issue date of this service bulletin" in a note or flag note.

(2) Where BASB 737-53A1362 specifies contacting Boeing for repair instructions or 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 (k) of this AD.

(k) 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 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 (l) of this AD. 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 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, 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) Except as required by paragraph (j)(2) of this AD: For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (k)(4)(i) and (k)(4)(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.

(l) Related Information

For more information about this AD, contact George Garrido, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5232; fax: 562-627-5210; email: george.garrido@faa.gov.

(m) 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 737-53A1362, dated September 20, 2018.

(ii) [Reserved]

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster 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, Transport Standards 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, call 202-741-6030, or go to: http://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued in Des Moines, Washington, on July 30, 2019.
Michael Kaszycki,
Acting Director, System Oversight Division,
Aircraft Certification Service.