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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2017-0807; Product Identifier 2017-NM-080-AD; Amendment 39-19126; AD 2017-25-12]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for all The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. This AD was prompted by reports of cracking in the webs of the stub beams at certain fuselage stations. These cracks are the result of fatigue caused by cyclical loading from pressurization, wing loads, and landing loads. This AD requires repetitive inspections for cracking of the webs of the stub beams at certain fuselage stations, and applicable on-condition actions. We are issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective January 22, 2018.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of January 22, 2018.

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 referenced service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW, Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0807.

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-2017-0807; or in person at the Docket Management Facility 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 the Docket Office (phone: 800-647-5527) is Docket Management Facility, 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: Galib Abumeri, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5324; fax: 562-627-5210; email: galib.abumeri@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. The NPRM published in the Federal Register on August 30, 2017 (82 FR 41179). The NPRM was prompted by reports of cracking in the webs of the stub beams at certain fuselage stations. These cracks are a result of fatigue caused by cyclical loading from pressurization, wing loads, and landing loads. The NPRM proposed to require repetitive inspections for cracking of the webs of the stub beams at certain fuselage stations, and applicable on-condition actions.

Comments

We 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

Boeing concurred with 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 the ability to accomplish the actions specified in the NPRM.

We concur with the commenter's request. We have redesignated paragraph (c) of the proposed AD as paragraph (c)(1) 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 methods of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

Conclusion

We 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. We have determined that these minor changes:

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

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

Additional Report of Cracking Since NPRM Was Issued

Since we issued the NPRM, Boeing received a report indicating that stub beam cracking occurred at station (STA) 685 outside of the inspection areas described in Boeing Alert Service Bulletin 737-53A1364, dated May 24, 2017. The cracking occurred at the upper chord inboard corner radius near the buttock line (BL) 45.5 longitudinal floor beam, and the lower chord outboard flange file radius. The cracks were approximately 1.1 and 4.3 inches long, and could be seen while performing the inspections specified in Boeing Alert Service Bulletin 737-53A1364, dated May 24, 2017. Concurrently with doing the inspections required by paragraphs (g) and (h) of this AD, operators are encouraged to inspect for cracking in the upper chord inboard radius near the BL 45.5 longitudinal floor beam, and the lower chord outboard flange file radius of the STA 685 stub beam. We are considering issuing a separate rulemaking action to address the stub beam cracking at STA 685 that occurred outside of the inspection areas specified in this AD.

Related Service Information Under 1 CFR Part 51

We reviewed Boeing Alert Service Bulletin 737-53A1364, dated May 24, 2017. This service information describes procedures for high frequency eddy current and detailed inspections for cracking of the fuselage stub beam webs below the passenger floor at STA 685, STA 695, and STA 706, and applicable on-condition actions. 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

We estimate that this AD affects 160 airplanes of U.S. registry. We estimate the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspections	Up to 13 work-hours × \$85 per hour = \$1,105 per inspection cycle	\$0	Up to \$1,105 per inspection cycle	Up to \$176,800 per inspection cycle.

We have received no definitive data that will enable us 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.

We are 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 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) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) 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):



2017-25-12 The Boeing Company: Amendment 39-19126; Docket No. FAA-2017-0807; Product Identifier 2017-NM-080-AD.

(a) Effective Date

This AD is effective January 22, 2018.

(b) Affected ADs

None.

(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.

(2) Installation of Supplemental Type Certificate (STC) ST01219SE (http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/EBD1CEC7B301293E86257CB30045557A?OpenDocument&Highlight=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 cracking in the webs of the stub beams at certain fuselage stations. These cracks are a result of fatigue caused by cyclical loading from pressurization, wing loads, and landing loads. We are issuing this AD to detect and correct cracking in the webs of the stub beams at certain fuselage stations, which, if not corrected, could result in the loss of structural integrity of the airframe during flight, collapse of the main landing gear, and failure of the pressure deck.

(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 Boeing Alert Service Bulletin 737-53A1364, dated May 24, 2017, within 120 days after the effective date of this AD, inspect the stub beam webs for any

cracking, 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 Group 2, 3, 4, 5, and 6 Airplanes

Except as required by paragraph (i) of this AD: For Group 2, 3, 4, 5, and 6 airplanes, as identified in Boeing Alert Service Bulletin 737-53A1364, dated May 24, 2017, at the applicable times specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-53A1364, dated May 24, 2017, do all applicable actions identified as “RC” (required for compliance) in, and in accordance with, the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1364, dated May 24, 2017.

(i) Exceptions to Service Information Specifications

(1) For purposes of determining compliance with the requirements of this AD, the phrase “the effective date of this AD” may be substituted for “the original issue date of this service bulletin,” as specified in Boeing Alert Service Bulletin 737-53A1364, dated May 24, 2017.

(2) Where Boeing Alert Service Bulletin 737-53A1364, dated May 24, 2017, specifies contacting Boeing, and specifies that action as RC: This AD requires using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

(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 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) 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 Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles 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.

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

(k) Related Information

For more information about this AD, contact Galib Abumeri, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5324; fax: 562-627-5210; email: galib.abumeri@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 737-53A1364, dated May 24, 2017.

(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, Transport Standards Branch, 1601 Lind Avenue SW, Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(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 Renton, Washington, on December 5, 2017.

Dionne Palermo,
Acting Director, System Oversight Division,
Aircraft Certification Service.