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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0538; Directorate Identifier 2012-NM-212-AD; Amendment 39-17728; AD 2014-01-05]

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 certain the Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. This AD was prompted by a report of cracks in stringer splices at body station STA 360 and STA 908, between stringer (S) S-10L and S-10R; cracks in butt straps between S-5L and S-3L, and S-3R and S-5R; vertical chem-mill fuselage skin cracks at certain butt joints; and an instance of cracking that occurred in all those three structural elements on one airplane. This AD requires repetitive inspections for any cracking of stringer splices and butt straps, and related corrective and investigative actions if necessary. We are issuing this AD to detect and correct cracking in the three structural elements, which could result in the airplane not being able to sustain limit load requirements and possibly result in uncontrolled decompression.

DATES: This AD is effective March 14, 2014.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of March 14, 2014.

ADDRESSES: For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

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-2013-0538; 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 AD, 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: Wayne Lockett, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: (425) 917-6447; fax: (425) 917-6590; email: wayne.lockett@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 certain The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. The NPRM published in the Federal Register on June 27, 2013 (78 FR 38608). The NPRM was prompted by a report of cracks in stringer splices at body station STA 360 and STA 908, between stringer (S) S-10L and S-10R; cracks in butt straps between S-5L and S-3L, and S-3R and S-5R; vertical chem-mill fuselage skin cracks at certain butt joints; and an instance of cracking that occurred in all those three structural elements on one airplane. The NPRM proposed to require repetitive inspections for any cracking of stringer splices and butt straps, and related corrective and investigative actions if necessary. We are issuing this AD to detect and correct cracking in the three structural elements, which could result in the airplane not being able to sustain limit load requirements and possibly result in uncontrolled decompression.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal (78 FR 38608, June 27, 2013) and the FAA's response to each comment.

Request to Clarify That Post-Repair Inspections Are Not Required by This Final Rule

Boeing requested clarification that Table 11, "Stringer Splice Post Repair Inspection," in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012, is not required by paragraph (h) of the NPRM (78 FR 38608, June 27, 2013). Boeing suggested that paragraph (h) of the NPRM be revised to include an exception phrase that references paragraph (i) of the NPRM. Boeing stated that the inspections specified in Table 11, "Stringer Splice Post Repair Inspection," in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012, are required to support operating requirements for complying with section 121.1109(c)(2) or 129.109(b)(2) of the Federal Aviation Regulations (14 CFR 121.1109(c)(2) or 14 CFR 129.109(b)(2)). Boeing also stated that the way the sentences of paragraph (h) of the NPRM are arranged, the sentences for doing corrective actions and repeating inspections seem to link the corrective actions and the repetitive inspections and imply that Table 11, "Stringer Splice Post Repair Inspection," in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012, is required by both the NPRM and the Federal Aviation Regulations.

We agree to provide clarification, but we do not agree to revise this final rule. Paragraph (h) of the final rule indicates that after the corrective actions are accomplished on a cracked stringer splice, the repetitive inspections are terminated for that stringer splice only. The sentence that includes the phrase "repeat the applicable inspections" is not intended to imply any requirement to accomplish the post repair inspections specified in Table 11, "Stringer Splice Post Repair Inspection," in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012. Paragraph (i) of this final rule also indicates that accomplishing Table 11, "Stringer Splice Post Repair Inspection," in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012, is not required. No change to the final rule is necessary in this regard.

Request To Reference Alternative Service Information Instead of Contacting the Manufacturer for Corrective Actions

Southwest Airlines requested that paragraph (j)(1) of the NPRM (78 FR 38608, June 27, 2013) be revised to reference certain service information for corrective action instructions instead of requiring corrective actions that involve contacting the FAA or the Boeing Commercial Airplanes Organization Designation Authorization (ODA) for instructions. Southwest Airlines proposed that paragraph (j)(1) of the NPRM be changed to instead require replacement of cracked butt splice straps using a Boeing production drawing and require inspections for cracking in the fuselage skin using certain portions and revisions of Boeing Service Bulletins 737-53A1210 or 737-53A1234. Southwest Airlines also suggested referencing Repair 31 of section 53-00-01-2R in the Boeing 737-300/-500 Structural Repair Manual as an acceptable means of compliance for repairing any cracking or damage found on the fuselage skins.

We do not agree. The specific skin inspection requirements after finding a cracked butt joint splice strap might not be covered by the inspections provided in Boeing Service Bulletins 737-53A1210 or 737-53A1234. The specific skin inspection requirements will be developed based on the specific butt strap cracking that is found, and specific repairs will be developed based on the skin cracking that is found. Operators may request approval of an alternative method of compliance using the procedures specified in paragraph (k) of this AD. We have not changed this final rule in this regard.

Request To Exclude Service Information Note for Corrosion Findings

Southwest Airlines requested that the NPRM (78 FR 38608, June 27, 2013) be revised to exclude General Information Note 12 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012, from the required actions of the final rule. Southwest Airlines stated that General Information Note 12 specifies to contact Boeing for repair instructions if corrosion is found. Southwest Airlines pointed out that the NPRM does not propose any inspections for corrosion and suggested that any findings of corrosion during the accomplishment of the requirements of this final rule be addressed using the operator's maintenance program.

We agree to revise this final rule. Cracking, not corrosion, is the primary safety concern addressed by this final rule. If any corrosion is found during any inspection for cracking that is required by this final rule, the corrective action for the corrosion should be provided by the operator's maintenance program. We have added paragraph (j)(3) to this final rule to remove the requirement to comply with General Information Note 12 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012.

Request To Exclude Service Information Note for Deviations From Modification Drawings

Southwest Airlines requested that paragraph (j) of the NPRM (78 FR 38608, June 27, 2013) be revised to provide an exclusion of General Information Note 16 from the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012. Southwest

Airlines describes General Information Note 16 as specifying to contact Boeing if the fastener patterns, types, and sizes, or the structure does not agree with the production drawing requirements or applicable modification drawing requirements. Southwest Airlines stated that since there are previous FAA-approved repairs and deviations to modification drawings, and the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012, specify actions to remove and install structure and fasteners, Southwest Airlines expected to encounter numerous conditions that would prevent complying with the actions detailed in the figures of Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012.

We do not agree to exclude General Information Note 16 from the requirements of this final rule to accomplish actions in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012. The previously approved repairs or deviations to modification drawings may require changes to the inspection methods used and structure that may require removal to accomplish the inspection required by this final rule. Any change from the procedures specified in the service information must be approved as an AMOC under paragraph (k) of the final rule. We have not changed this final rule in this regard.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD 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 (78 FR 38608, June 27, 2013) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (78 FR 38608, June 27, 2013).

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

Costs of Compliance

We estimate that this AD affects 612 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 362 work-hours × \$85 per hour = \$30,770, per inspection cycle	None	Up to \$30,770, per inspection cycle	Up to \$18,831,240, per inspection cycle.
Removal and reinstallation of butt strap fastener(s)	Up to 2 work-hours × \$85 per hour = \$170, per inspection cycle	\$0	Up to \$170, per inspection cycle	Up to \$104,040, per inspection cycle.

We estimate the following costs to do any necessary replacements that will be required based on the results of the inspection. We have no way of determining the number of aircraft that might need these replacements:

On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Stringer splice replacement	3 work-hours × \$85 per hour = \$255	Operator-supplied, information not available	\$255

The work-hour estimate and parts cost information are not available for estimating the cost of a butt strap replacement.

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.

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):



2014-01-05 The Boeing Company: Amendment 39-17728; Docket No. FAA-2013-0538; Directorate Identifier 2012-NM-212-AD.

(a) Effective Date

This AD is effective March 14, 2014.

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes, certified in any category, as identified in Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by a report of cracks in stringer splices at body station STA 360 and STA 908, between stringer (S) S-10L and S-10R; cracks in butt straps between S-5L and S-3L, and S-3R and S-5R; vertical chem-mill fuselage skin cracks at certain butt joints; and an instance of cracking that occurred in all those three structural elements on one airplane. We are issuing this AD to detect and correct cracking in the three structural elements, which could result in the airplane not being able to sustain limit load requirements and possibly result in uncontrolled decompression.

(f) Compliance

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

(g) Actions for Group 1 Airplanes

For Group 1 airplanes, as identified in Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012: At the compliance time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012, except as provided by paragraph (j)(2) of this AD, inspect the stringers and butt straps and repair as applicable, using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

(h) Actions for Groups 2 Through 6 Airplanes

For Groups 2 through 6 airplanes, as identified in Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012: At the applicable compliance time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012, do the applicable inspections for cracking identified in paragraphs (h)(1) through (h)(4) of this AD, and all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012, except as provided by paragraph (j) of this AD. Do all applicable corrective actions before further flight. Thereafter, repeat the applicable inspections at the compliance times specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012. Accomplishing the corrective actions for a cracked stringer splice, as specified in Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012, terminates the repetitive inspections required by this paragraph for that stringer splice only.

- (1) Internal detailed inspections of the stringer splices and butt straps.
- (2) Internal high-frequency eddy current (HFEC) surface inspections of the butt straps.
- (3) Internal low-frequency eddy current (LFEC) inspection of the butt straps.
- (4) HFEC open hole rotary probe inspections of butt straps or of one location of a butt strap, as applicable.

(i) Post-Repair Inspections

The post-repair inspection specified in Table 11 of paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012, is not required by this AD.

Note 1 to paragraph (i) of this AD: The post-repair inspections specified in Table 11 of paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012, may be used in support of compliance with section 121.1109(c)(2) or 129.109(b)(2) of the Federal Aviation Regulations (14 CFR 121.1109(c)(2) or 14 CFR 129.109(b)(2)). The corresponding actions specified in the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012, are not required by this AD.

(j) Exceptions to the Service Information

(1) Where Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012, specifies to contact Boeing for appropriate action: Before further flight, repair using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

(2) Where Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012, specifies a compliance time "after the original issue date of this service bulletin," this AD requires compliance within the specified compliance time after the effective date of this AD.

(3) Where General Information Note 12 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1322, dated November 5, 2012, specifies contacting Boeing, this AD does not require the actions specified in that note.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office (ACO), 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 ACO, send it to the attention of the person identified in paragraph (l) 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 required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(l) Related Information

For more information about this AD, contact Wayne Lockett, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: (425) 917-6447; fax: (425) 917-6590; email: wayne.lockett@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 737-53A1322, dated November 5, 2012.

(ii) Reserved.

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>.

(4) You may view this service information at FAA, FAA, Transport Airplane Directorate; 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 January 7, 2014.

Jeffrey E. Duven,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.