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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0836; Directorate Identifier 2013-NM-126-AD; Amendment 39-18011; AD 2014-22-06]

RIN 2120-AA64

Airworthiness Directives; the Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are superseding Airworthiness Directive (AD) 2005-07-12, which applies to certain the Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. AD 2005-07-12 required detailed and eddy current inspections to detect cracking of the frame web around the cutout for the doorstop intercostal strap at the aft side of the station (STA) 291.5 frame at stringer 16R, and corrective action if necessary. Since we issued AD 2005-07-12, we received reports of new findings of cracking at various locations of the STA 277 to STA 291.5 frames and intercostals, including webs, chords, clips, and shear ties, between stringers 7R and 17R. This new AD requires inspections for cracking at the forward galley door cutout, and corrective actions if necessary. This new AD also reduces a certain inspection threshold required by AD 2005-07-12. We are issuing this AD to detect and correct fatigue cracking of the aft frame and frame support structure of the forward galley door, which could result in a severed fuselage frame web, rapid decompression of the airplane, and possible loss of the forward galley door.

DATES: This AD is effective December 17, 2014.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of December 17, 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 copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Ave. 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-2013-0836; 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: Alan Pohl, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6450; fax: 425-917-6590; email: alan.pohl@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2005-07-12, Amendment 39-14036 (70 FR 17596, April 7, 2005). AD 2005-07-12 applied to certain The Boeing Company Model 737-100, -200, -300, -400, and -500 series airplanes. The NPRM published in the Federal Register on October 2, 2013 (78 FR 60804). The NPRM was prompted by reports of new findings of cracking at various locations of the STA 277 to STA 291.5 frames and intercostals, including webs, chords, clips, and shear ties, between stringers 7R and 17R. The NPRM proposed to continue to require detailed and eddy current inspections to detect cracking of the frame web around the cutout for the doorstop intercostal strap at the aft side of the STA 291.5 frame at stringer 16R, and corrective action if necessary. The NPRM also proposed to require new inspections for cracking at the forward galley door cutout, and corrective actions if necessary. In addition, the NPRM also proposed to reduce a certain inspection threshold required by AD 2005-07-12. We are issuing this AD to detect and correct fatigue cracking of the aft frame and frame support structure of the forward galley door, which could result in a severed fuselage frame web, rapid decompression of the airplane, and possible loss of the forward galley door.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM (78 FR 60804, October 2, 2013), and the FAA's response to each comment.

Boeing stated that it concurs with the contents of the NPRM (78 FR 60804, October 2, 2013).

Effect of Winglets on AD

Aviation Partners Boeing stated that accomplishing the installation of winglets per supplemental type certificate (STC) ST01219SE ([http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/082838ee177dbf62862576a4005cdfc0/\\$FILE/ST01219SE.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/082838ee177dbf62862576a4005cdfc0/$FILE/ST01219SE.pdf)) does not affect the actions specified in the NPRM (78 FR 60804, October 2, 2013).

We concur with the commenter. We have redesignated paragraph (c) of the NPRM (78 FR 60804, October 2, 2013) as (c)(1) in this AD and added new paragraph (c)(2) to this AD to state that installation of STC ST01219SE ([http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/082838ee177dbf62862576a4005cdfc0/\\$FILE/ST01219SE.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/082838ee177dbf62862576a4005cdfc0/$FILE/ST01219SE.pdf)) does not affect the ability to accomplish the actions required by this final

rule. 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.

Request To Clarify That Certain Inspections Are Not Required for Areas With Existing Repairs

Southwest Airlines (SWA) requested that paragraph (h)(1) of the NPRM (78 FR 60804, October 2, 2013), be revised to include language stating that when operators are accomplishing Steps 2 and 6 in Part 2 of Paragraph 3.B., “Work Instructions,” of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013, they do not need to do inspections in areas that are common to repairs that were previously approved by Boeing via FAA Form 8100-9, “Statement of Compliance with Airworthiness Standards.” We infer that the basis for SWA's request is that the existing repairs have inspections included in the engineering for those repairs, so the inspections included in the service information are not needed.

SWA also requested that the NPRM (78 FR 60804, October 2, 2013), be revised to clarify that inspections are not required in areas that are common to existing repairs that were installed using a certain repair in the applicable Boeing Model 737 structural repair manual (SRM). SWA noted that Step 6 in Part 2 of Paragraph 3.B., “Work Instructions,” of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013, only addresses repetitive inspections when a new SRM repair is installed. We infer that SWA is suggesting that the service information should have also addressed repetitive inspections for areas with a certain existing SRM repair installed.

We agree with the commenter. The inspections required by paragraph (h)(1) of this AD include detailed and surface eddy current inspections that cannot be accomplished with certain repairs installed. Repairs 1, 15, and 16, of Chapter 53 of the applicable Boeing 737 SRM, are referenced in the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013, and are considered corrective actions for cracking found during the inspections required by paragraph (h)(1) of this AD. These SRM repairs can also be used as a preventive modification.

We revised paragraph (h)(1) in this AD to state that “Accomplishment of a repair specified in Steps 1.a., 2.a., 6.a., or 6.b. of Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013, as applicable, and except as required by paragraph (k)(1) of this AD, terminates the inspections required by this paragraph for the repaired area(s) only.”

Request To Address Notes 11 and 13 in the Service Information Regarding Existing Repairs and Existing Repairs at Certain Body Stations

SWA requested clarification regarding existing repairs common to the inspection areas addressed in Part 2 of Paragraph 3.B., “Work Instructions,” of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013. SWA observed that Notes 11 and 13 in Paragraph 3.A., “General Information,” of that service bulletin include provisions for omitting inspections in areas covered by repairs that were previously approved by Boeing via FAA Form 8100-9, “Statement of Compliance with Airworthiness Standards,” but those notes are not included or referenced in Part 2 of Paragraph 3.B., “Work Instructions.”

SWA also requested approval for existing repairs common to the body station (BS) 291.5 frame at locations from stringer (STR) 8R to STR 15R that were previously approved by Boeing via FAA Form 8100-9, “Statement of Compliance with Airworthiness Standards,” as terminating action for the inspection requirements in paragraph (h)(1) of the NPRM (78 FR 60804, October 2, 2013), for the repaired area only.

Furthermore, SWA requested approval for existing repairs common to the BS 277 frame and shear ties between STR 7R and STR 17R that were previously approved by Boeing via FAA Form 8100-9, "Statement of Compliance with Airworthiness Standards," or that were installed using certain repairs in the applicable Boeing 737 SRM as terminating action for the inspection requirements of paragraph (h)(1) of the NPRM (78 FR 60804, October 2, 2013), for the repaired areas only.

We agree that the existing repairs mentioned by the commenter can be used as terminating action for the inspection requirements of paragraph (h)(1) of this AD. Several SRM repairs are referenced in Steps 6.a. and 6.b. of Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013, and are considered corrective actions for cracking found during the inspections required by paragraph (h)(1) of this AD. The notes to Steps 6.a. and 6.b. state that the SRM repairs terminate the repetitive inspections. As stated previously, paragraph (h)(1) of this AD was revised accordingly.

We have also added a new paragraph (i), Terminating Action, to this AD and redesignated subsequent paragraphs accordingly. Paragraph (i) of this AD states "The inspections required by paragraph (h)(1) of this AD may be terminated at areas with repairs installed prior to the effective date of this AD, provided the repairs meet the conditions specified in note 11 or note 13 of paragraph 3.A., "General Information," of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013."

Request To Include Exception to the Service Information Specifications

SWA requested that the NPRM (78 FR 60804, October 2, 2013) address a typographical error that appears in the title to figure 5 of Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013. SWA noted that the title refers to STR 16R, however, the inspection location is STR 14R.

We agree to address this typographical error in Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013, and have added a new paragraph (k)(3) to this AD to notify operators that the title to figure 5 should reference STR 14R.

Clarification of Affected Airplanes

We have added "certificated in any category" to the applicability specified in paragraph (c)(1) of this AD to clarify the affected airplanes.

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 60804, October 2, 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 60804, October 2, 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 419 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 [retained from AD 2005-07-12, Amendment 39 14036 (70 FR 17596 , April 7, 2005)]	2 work-hours × \$85 per hour = \$170 per inspection cycle	None	\$170 per inspection cycle	\$71,230 per inspection cycle.
Inspections [new proposed action]	40 work-hours × \$85 per hour = \$3,400 per inspection cycle	None	\$3,400 per inspection cycle	\$1,424,600 per inspection cycle.

We have received no definitive data that would enable us to provide a cost estimate for the on-condition actions specified in the service information.

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

We have determined that 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, 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 removing Airworthiness Directive (AD) 2005-07-12, Amendment 39-14036 (70 FR 17596, April 7, 2005), and adding the following new AD:



2014-22-06 The Boeing Company: Amendment 39-18011 ; Docket No. FAA-2013-0836;
Directorate Identifier 2013-NM-126-AD.

(a) Effective Date

This AD is effective December 17, 2014.

(b) Affected ADs

This AD replaces AD 2005-07-12, Amendment 39-14036 (70 FR 17596, April 7, 2005).

(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, as identified in Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013.

(2) Installation of Supplemental Type Certificate (STC) ST01219SE ([http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/082838ee177dbf62862576a4005cdfc0/\\$FILE/ST01219SE.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/082838ee177dbf62862576a4005cdfc0/$FILE/ST01219SE.pdf)) 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 new findings of cracking at various locations of the stations (STA) 277 to STA 291.5 frames and intercostals, including webs, chords, clips, and shear ties, between stringers 7R and 17R. We are issuing this AD to detect and correct fatigue cracking of the aft frame and frame support structure of the forward galley door, which could result in a severed fuselage frame web, rapid decompression of the airplane, and possible loss of the forward galley door.

(f) Compliance

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

(g) Group 1 Airplanes: Inspections and Corrective Actions

For airplanes identified as Group 1 in Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013: Within 120 days after the effective date of this AD, do inspections for cracking from STA 277 to STA 328, stringer 7R to 17R of the forward galley door cutout, using a method

approved in accordance with the procedures specified in paragraph (m) of this AD. Do all applicable corrective actions before further flight using a method approved in accordance with the procedures specified in paragraph (m) of this AD.

(h) Group 2 and Group 3 Airplanes: Inspections and Corrective Actions

(1) For airplanes identified as Group 2 and Group 3 in Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013: Except as provided by paragraph (k)(2) of this AD, at the applicable times specified in tables 1 and 2 in paragraph 1.E, "Compliance," of Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013, do detailed and surface high frequency eddy current (HFEC) inspections, as applicable, for cracking in the forward galley door cutout, in accordance with Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013. Repeat the detailed and surface HFEC inspections thereafter at the applicable intervals specified in tables 1 and 2 in paragraph 1.E, "Compliance," of Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013. If any crack is found, before further flight, do all applicable corrective actions in accordance with Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013, except as required by paragraph (k)(1) of this AD. Accomplishment of a repair specified in Steps 1.a., 2.a., 6.a., or 6.b. of Part 2, of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013, as applicable, and except as required by paragraph (k)(1) of this AD, terminates the inspections required by this paragraph for the repaired area(s) only.

(2) Removal and replacement of a cracked part, in accordance with Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013, does not terminate the repetitive inspections required by paragraph (h)(1) of this AD.

(i) Terminating Action

The inspections required by paragraph (h)(1) of this AD may be terminated at areas with repairs installed prior to the effective date of this AD, provided the repairs meet the conditions specified in note 11 or note 13 of paragraph 3.A., "General Information," of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013.

(j) Optional Terminating Action

Accomplishment of the preventive modification on the STA 291.5 frame web, in accordance with Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013, terminates the inspections required by paragraph (h)(1) of this AD for the area that is common to the preventive modification.

(k) Exceptions to the Service Information

(1) Where Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013, specifies to contact Boeing for a corrective action: Before further flight, do the applicable action using a method approved in accordance with the procedures specified in paragraph (m) of this AD.

(2) Where paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013, specifies a compliance time "after the date on Revision 1 of this service bulletin," this AD requires compliance within the specified compliance time after the effective date of this AD.

(3) The title to each page of figure 5 of Boeing Alert Service Bulletin 737-53A1241, Revision 1, dated June 11, 2013, is incorrect and refers to "Stringer 16R" when it should refer to "Stringer 14R."

(l) Credit for Previous Actions

This paragraph provides credit for the actions specified in paragraph (h)(1) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin 737-53A1241, dated June 13, 2002, which is not incorporated by reference in this AD.

(m) 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 (n)(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 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.

(4) AMOCs approved for the actions specified in AD 2005-07-12, Amendment 39-14036 (70 FR 17596, April 7, 2005), are approved as AMOCs for the corresponding provisions of this AD.

(n) Related Information

(1) For more information about this AD, contact Alan Pohl, Aerospace Engineer, Airframe Branch, ANM-120S, FAA Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6450; fax: 425-917-6590; email: alan.pohl@faa.gov.

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

(o) 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 737-53A1241, Revision 1, dated June 11, 2013. (ii) Reserved.

(3) For Boeing 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, Transport Airplane Directorate, 1601 Lind Ave. 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 October 28, 2014.
Jeffrey E. Duven,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.