

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-1162; Directorate Identifier 2011-NM-186-AD; Amendment 39-16856; AD 2011-23-05]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Model 737-300, -400, and -500 Series Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are superseding an existing airworthiness directive (AD) for certain Model 737-300, -400, and -500 series airplanes. That AD currently requires repetitive inspections for cracking of the 1.04-inch nominal diameter wire penetration hole, and applicable related investigative and corrective actions. This AD reduces the compliance times for those actions. This AD was prompted by reports of cracking in the frame, or in the frame and frame reinforcement, common to the 1.04-inch nominal diameter wire penetration hole intended for wire routing; and recent reports of multiple adjacent frame cracking found before the compliance time required by the existing AD. Such cracking could reduce the structural capability of the frames to sustain limit loads, and result in cracking in the fuselage skin and subsequent rapid depressurization of the airplane. We are issuing this AD to correct the unsafe condition on these products.

DATES: This AD is effective November 16, 2011.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of November 16, 2011.

We must receive any comments on this AD by December 16, 2011.

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone (206) 544-5000, extension 1; fax (206) 766-5680; email me.boecom@boeing.com; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. 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>; 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 street address for the Docket Office (phone: (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Wayne Lockett, Aerospace Engineer, Airframe Branch, ANM-120S, Seattle Aircraft Certification Office (ACO), FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: (425) 917-6447; fax: (425) 917-6590; email: wayne.lockett@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On August 26, 2009, we issued AD 2009-02-06 R1, Amendment 39-16015 (74 FR 45979, September 8, 2009), for certain Model 737-300, -400, and -500 series airplanes. That AD requires repetitive inspections for cracking of the 1.04-inch nominal diameter wire penetration hole in the frame and in the frame reinforcement, between stringers S-20 and S-21, on both the left and right sides of the airplane, and applicable related investigative and corrective actions. That AD resulted from reports of cracking in the frame, or in the frame and frame reinforcement, common to the 1.04-inch nominal diameter wire penetration hole intended for wire routing. We issued that AD to detect and correct cracking in the fuselage frames and frame reinforcements, which could reduce the structural capability of the frames to sustain limit loads, and result in cracking in the fuselage skin and subsequent rapid depressurization of the airplane.

Actions Since AD Was Issued

Since we issued AD 2009-02-06 R1, Amendment 39-16015 (74 FR 45979, September 8, 2009), we received a report of four adjacent cracked frames at body station (BS) 500B, BS 500C, BS 500D, and BS 520 in the forward cargo compartment between S-20L and S-21L on a Model 737-300 series airplane. The cracks at BS 500B and BS 500C were completely through the frame and fail-safe chord. The BS 500B frame was also cracked on the right-hand side. The cracks were discovered when the airplane had accumulated 44,535 total flight cycles and 44,876 total flight hours—before the compliance time required by AD 2009-02-06 R1.

Relevant Service Information

AD 2009-02-06 R1, Amendment 39-16015 (74 FR 45979, September 8, 2009), referred to Boeing Alert Service Bulletin 737-53A1279, dated December 18, 2007, as the appropriate source of service information for the required actions. Boeing has since revised this service bulletin. We reviewed Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, which shortens the compliance time to 30,000 total flight cycles, with a grace period of 30 or 90 days, and

reduces the repetitive interval from 14,000 to 4,500 flight cycles. The procedures are unchanged from those specified in Boeing Alert Service Bulletin 737-53A1279, dated December 18, 2007.

FAA's Determination

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

AD Requirements

This AD requires accomplishing the actions specified in the service information described previously, except as discussed under "Differences Between the AD and the Service Information."

Differences Between the AD and the Service Information

Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, specifies to contact the manufacturer for instructions on how to repair certain conditions, but this proposed AD would require repairing those conditions in one of the following ways:

- In accordance with a method that we approve; or
- Using data that meet the certification basis of the airplane, and that have been approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) whom we have authorized to make those findings.

Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, specifies compliance with the Part 4 inspection by the later of 4,500 flight cycles or 90 days—both after the date on this service bulletin. In some cases, this compliance time might occur before the Part 2 inspection. This AD (in paragraph (h)) therefore requires the Part 4 inspection within 4,500 flight cycles after accomplishment of the most recent Part 2 or Part 4 inspection, with a grace period of 90 days. We have coordinated this difference with Boeing.

For certain airplanes that have accumulated 40,000 or more total flight cycles, Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, specifies a 30-day compliance time for the Part 2 inspection. Paragraph (k)(2) of this AD extends that compliance time to 90 days for those airplanes, if the original chem.-milled fuselage skins have been replaced with solid skins. This difference has been coordinated with Boeing.

FAA's Justification and Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because cracking in multiple adjacent fuselage frames and frame reinforcements reduces the structural capability of the frames to sustain limit loads, and result in cracking in the fuselage skin and subsequent rapid depressurization of the airplane. Therefore, we find that notice and opportunity for prior public comment are impracticable and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not provide you with notice and an opportunity to provide your comments before it becomes effective. However, we invite you to send any written data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include the Docket No. FAA-2011-1162 and directorate identifier 2011-NM-186-AD at the beginning of your comments. We specifically invite

comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

Costs of Compliance

We estimate that this AD affects 605 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
Inspection	16 work-hours X \$85 per hour = \$1,360 per inspection cycle	None	\$1,360 per inspection cycle	\$822,800 per inspection cycle

We estimate the following costs to do any necessary related investigative actions that would be required based on the results of the HFEC inspections. We have no way of determining the number of aircraft that might need this inspection:

On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
On-condition inspection	2 work-hours X \$85 per hour = \$170	None	\$170

We have received no definitive data that would enable us to provide a cost estimate for the on-condition repair or optional modification 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.

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 part 39 of the Federal Aviation Regulations (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) 2009-02-06 R1, Amendment 39-16015 (74 FR 45979, September 8, 2009), and adding the following new AD:



2011-23-05 The Boeing Company: Amendment 39-16856; Docket No. FAA-2011-1162; Directorate Identifier 2011-NM-186-AD.

(a) Effective Date

This AD is effective November 16, 2011.

(b) Affected ADs

This AD supersedes AD 2009-02-06 R1, Amendment 39-16015 (74 FR 45979, September 8, 2009).

(c) Applicability

This AD applies to The Boeing Company Model 737-300, -400, -500 series airplanes, certificated in any category; as identified in Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by reports of four cracked frames at certain body stations (BS) in the forward cargo compartment. We are issuing this AD to detect and correct cracking in the fuselage frames and frame reinforcements, which could reduce the structural capability of the frames to sustain limit loads, and result in cracking in the fuselage skin and subsequent rapid depressurization of the airplane.

(f) Compliance

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

(g) Inspection

At the applicable time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, except as required by paragraphs (k)(1), (k)(2), and (k)(4) of this AD: Do a high frequency eddy current (HFEC) surface or HFEC hole/edge inspection for any cracking of the 1.04-inch nominal diameter wire penetration hole in the frame and frame reinforcement between stringer S-20 and S-21, in accordance with Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011.

(h) Repetitive Inspection

Within 4,500 flight cycles after accomplishment of the most recent inspection specified in Part 2 or Part 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, or within 90 days after the effective date of this AD, whichever occurs later: Do an HFEC hole/edge inspection for cracking of the 1.04-inch nominal diameter wire penetration hole in the frame and frame reinforcement between S-20 and S-21, in accordance with Part 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011. Repeat the inspection thereafter at intervals not to exceed 4,500 flight cycles.

(i) Repair

If any cracking is found during any inspection required by paragraph (g) or (h) of this AD: Before further flight, repair the crack including doing all related investigative and applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, except as required by paragraph (k)(3) of this AD. All related investigative and applicable corrective actions must be done before further flight. Accomplishment of the requirements of this paragraph terminates the repetitive inspection requirements of paragraph (h) of this AD for the repaired location of that frame.

(j) Optional Terminating Action

Accomplishment of the preventive modification, including doing all related investigative and applicable corrective actions, specified in Part 5 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, except as required by paragraph (k)(3) of this AD, terminates the repetitive inspection requirements of paragraph (h) of this AD for the modified location of that frame, provided the modification is done before further flight after an inspection required by paragraph (g) or (h) of this AD has been done, and no cracking was found on that frame location during that inspection.

(k) Exceptions to Service Bulletin Specifications

The following exceptions apply in this AD.

(1) Where paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, refers to a compliance time "from date on Revision 1 of this service bulletin," this AD requires compliance within the specified compliance time after the effective date of this AD.

(2) For airplanes meeting all of the criteria specified in paragraphs (k)(2)(i), (k)(2)(ii), and (k)(2)(iii) of this AD: The compliance time for the initial inspection specified in Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, and required by paragraph (g) of this AD, may be extended to 90 days after the effective date of this AD.

(i) Model 737-300 series airplanes in Group 1, line numbers 1001 through 2565 inclusive;

(ii) Airplanes that have accumulated 40,000 or more total flight cycles as of the effective date of this AD; and

(iii) Airplanes on which the modification specified in Boeing Service Bulletin 737-53-1273, dated September 20, 2006; Revision 1, dated December 21, 2006; Revision 2, dated June 4, 2007; Revision 3, dated December 7, 2009; or Revision 4, dated July 23, 2010; has been done, including any configuration or deviation that has been approved as an AMOC during accomplishment of these service bulletins, by the Boeing Commercial Airplanes Organization Designation Authorization

(ODA) that has been authorized by the Manager, Seattle Aircraft Certification Office (ACO) to make those findings.

(3) Where Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011 specifies to contact Boeing for appropriate repair instructions: Before further flight, repair the crack using a method approved in accordance with the procedures specified in paragraph (m) of this AD.

(4) The "Condition" column of paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, refers to total flight cycles, "at the date of/on this service bulletin." However, this AD applies to the airplanes with the specified total flight cycles as of the effective date of this AD.

(l) Credit for Actions Accomplished in Accordance With Previous Service Information

Actions done in accordance with Boeing Alert Service Bulletin 737-53A1279, dated December 18, 2007, before the effective date of this AD are acceptable for compliance with the corresponding actions required by paragraphs (g), (h), (i), and (j) of this AD.

(m) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle 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 the Related Information section 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 Boeing Commercial Airplanes 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 paragraphs (h) and (i) of AD 2009-02-06 R1, Amendment 39-16015 (74 FR 45979, September 8, 2009), are approved as AMOCs for the corresponding provisions of paragraphs (g), (h), and (i) of this AD.

(n) Related Information

For more information about this AD, contact Wayne Lockett, Aerospace Engineer, Airframe Branch, ANM-120S, Seattle ACO, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: (425) 917-6447; fax: (425) 917-6590; email: wayne.lockett@faa.gov.

(o) Material Incorporated by Reference

(1) You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) under 5 U.S.C. 552(a) and 1 CFR part 51 of the following service information on the date specified:

(i) Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, approved for IBR November 16, 2011.

(2) If you accomplish the optional actions specified by this AD, you must use the following service information to perform those actions, unless the AD specifies otherwise. The Director of the

Federal Register approved the incorporation by reference (IBR) of the following service information on the date specified:

(i) Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, approved for IBR November 16, 2011.

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

(4) You may review copies of the service information at the FAA, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call (425) 227-1221.

(5) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at an NARA facility, call (202) 741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on October 20, 2011.

Kalene C. Yanamura,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.

SUPERSEDED