



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0723; Directorate Identifier 2011-NM-137-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain The Boeing Company Model 737-600, -700, -700C, -800, and -900 series airplanes. This proposed AD was prompted by a report of cracks found in the skin at body station (STA) 540 just below stringer S-22L on a Model 737-700 series airplane. This proposed AD would require repetitive detailed and high frequency eddy current inspections for cracking of the skin around the eight fasteners common to the ends of the STA 540 bulkhead chords between stringers S-22 and S-23, left and right sides; and corrective actions and preventive modification if necessary. We are proposing this AD to detect and correct fatigue cracking in the skin, which can result in rapid decompression of the cabin.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, 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: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed 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 review copies of the 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>; 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 proposed 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: 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; e-mail: alan.pohl@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2012-0723; Directorate Identifier 2011-NM-137-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed 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 proposed AD.

Discussion

We received a report of cracks found in the skin at body station (STA) 540 just below stringer S-22L on a Model 737-700 series airplane. Subsequent investigation revealed that the design at the STA 540 bulkhead chords has insufficient load path where the chords meet between stringers S-22 and S-23 on both the left and right sides of the airplane. This condition, if not corrected, could result in fatigue cracking in the skin, which can result in rapid decompression of the cabin.

Relevant Service Information

We reviewed Boeing Special Attention Service Bulletin 737-53-1294, dated March 31, 2011. The service information describes procedures for repetitive detailed and high frequency eddy current (HFEC) inspections for cracking of the skin around the eight fasteners common to the ends of the STA 540 bulkhead chords between stringers S-22 and S-23, and corrective actions and preventive modification if necessary. The preventive

modification includes doing an open-hole HFEC inspection for cracking of the skin and STA 540 bulkhead chords, installing a new chord splice plate, and repair if necessary. The corrective actions include repairing cracking, and doing preventive modifications on any side on which cracking is not found.

FAA's Determination

We are proposing 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 these same type designs.

Proposed AD Requirements

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

Differences Between the Proposed AD and the Service Information

Boeing Special Attention Service Bulletin 737-53-1294, dated March 31, 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.

Clarification of Repetitive Inspections

The Repeat Interval column of table 1 of paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 737-53-1294, dated March 31, 2011, specifies

repetitive detailed and HFEC inspections at intervals not to exceed 4,000 flight cycles, and the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-53-1294, dated March 31, 2011, specify repetitive detailed inspections only. We have determined that doing both repetitive detailed and HFEC inspections is necessary to address the unsafe condition of this AD.

Clarification of Post-Repair Inspections

Paragraph (j), and Note 1 to paragraph (j), of this proposed AD clarify that the post-repair inspections specified in Table 2 of paragraph 1.E., “Compliance,” of Boeing Special Attention Service Bulletin 737-53-1294, dated March 31, 2011, are not required by this proposed AD.

Costs of Compliance

We estimate that this proposed AD affects 903 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection (left and right sides)	3 work-hours X \$85 per hour = \$255 per inspection cycle	\$0	\$255 per inspection cycle	\$230,265 per inspection cycle

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

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Preventive modification (each side)	6 work-hours X \$85 per hour = \$510	\$894	\$1,404
Skin repair (each side)	55 work-hours X \$85 per hour = \$4,675	Up to \$5,635	Up to \$10,310

According to the manufacturer, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

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 determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the 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.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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):

The Boeing Company: Docket No. FAA-2012-0723; Directorate Identifier 2011-NM-137-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 737-600, -700, -700C, -800, and -900 series airplanes; certificated in any category; as identified in Boeing Special Attention Service Bulletin 737-53-1294, dated March 31, 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 a report of cracks found in the skin at body station (STA) 540 just below stringer S-22L. We are issuing this AD to detect and correct fatigue cracking in the skin, which can result in rapid decompression of the cabin.

(f) Compliance

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

(g) Inspection and Corrective Action

(1) Except as required by paragraphs (g)(2), (i)(2), (i)(3), and (i)(4) of this AD, at the applicable time specified in table 1 of paragraph 1.E. "Compliance," of Boeing Special Attention Service Bulletin 737-53-1294, dated March 31, 2011: Do detailed and high frequency eddy current (HFEC) inspections of the skin for cracking in the area around the eight fasteners securing the STA 540 bulkhead chords between stringers S-22 and S-23, and do all applicable corrective actions, in accordance with Parts 1, 2, 3, 4, and 5 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-53-1294, dated March 31, 2011, except as required by paragraph (i)(1) of this AD. If no cracking is found, repeat the detailed and HFEC inspections at the intervals specified in table 1 of paragraph 1.E., "Compliance," of Boeing Special Attention Service

Bulletin 737-53-1294, dated March 31, 2011, except as required by paragraph (g)(2) of this AD, until the optional preventive modification specified in paragraph (h) of this AD is done. Do all applicable corrective actions before further flight.

(2) For airplanes that have incorporated Boeing Business Jet Lower Cabin Altitude Supplemental Type Certificate (STC) ST01697SE (6,500 feet maximum cabin altitude in lieu of 8,000 feet), the flight-cycle related compliance times are different from those specified in Boeing Special Attention Service Bulletin 737-53-1294, dated March 31, 2011. All initial compliance times specified in total flight cycles or flight cycles must be reduced to half of those specified in Boeing Special Attention Service Bulletin 737-53-1294, dated March 31, 2011. All repetitive interval compliance times specified in flight cycles must be reduced to one-quarter of those specified in Boeing Special Attention Service Bulletin 737-53-1294, dated March 31, 2011.

(h) Optional Preventive Modification

Accomplishing the preventive modification, including an HFEC inspection for cracking of the skin and STA 540 bulkhead chords, and all applicable repairs, in accordance with paragraph 3.B, Part 2 or Part 4 (left side), and Part 3 or Part 5 (right side), of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-53-1294, dated March 31, 2011, terminates the inspection requirements of paragraph (g) of this AD for the side on which the modification is done, except as required by paragraph (i)(1) of this AD.

(i) Exceptions to Service Bulletin Specifications

(1) If any cracking is found during any inspection required by this AD, and Boeing Special Attention Service Bulletin 737-53-1294, dated March 31, 2011, 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 Special Attention Service Bulletin 737-53-1294, dated March 31, 2011, specifies to do the action after the original issue date of that service bulletin, this AD requires the compliance time after the effective date of this AD.

(3) Where the Condition column of table 1 of paragraph 1.E., “Compliance,” of Boeing Special Attention Service Bulletin 737-53-1294, dated March 31, 2011, specifies a condition as of the original issue date of that service bulletin, this AD specifies the condition as of the effective date of this AD.

(4) Note 1 of paragraph 3.A. of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-53-1294, dated March 31, 2011, is to be disregarded when accomplishing the actions required by this AD.

(j) Post-Repair Inspections

The post-repair inspections, specified in Table 2 of paragraph 1.E., “Compliance,” of Boeing Special Attention Service Bulletin 737-53-1294, dated March 31, 2011, are not required by this AD.

Note 1 to paragraph (j) of this AD: The damage tolerance inspections specified in Table 2 of paragraph 1.E., “Compliance,” of Boeing Special Attention Service Bulletin 737-53-1294, dated March 31, 2011, may be used in support of compliance with Section 121.1109(c)(2) or 129.109(c)(2) of the Federal Aviation Regulations (14 CFR 121.1109(c)(2) or 14 CFR 129.109(c)(2)). The corresponding actions specified in the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-53-1294, dated March 31, 2011, are not required by this AD.

(k) 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, it may be e-mailed 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 Aircraft Certification Office (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.

(I) 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; e-mail: alan.pohl@faa.gov.

(2) 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 review copies of the 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.

Issued in Renton, Washington, on July 17, 2012.

Michael Kaszycki,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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