[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-1254; Directorate Identifier 2010-NM-178-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing CompanyAirplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to supersede an existing airworthiness directive (AD) that applies to certain Model 737-300, -400, and -500 series airplanes. The existing AD currently requires repetitive external detailed inspections or non-destructive inspections to detect cracks in the fuselage skin along the chem-mill steps at stringers S-1 and S-2R, between station (STA) 400 and STA 460, and repair if necessary. Since we issued that AD, we have received reports of additional crack findings of the fuselage skin at the chem-mill steps. This proposed AD would add inspections for cracking in additional fuselage skin locations, and repair if necessary. This proposed AD would also reduce the inspection thresholds and repetitive intervals for certain airplanes. We are proposing this AD to detect and correct fatigue cracking of the fuselage skin panels at the chem-mill steps, which could result in sudden fracture and failure of the fuselage skin panels, and consequent rapid decompression of the airplane.

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

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2011-1254; Directorate Identifier 2010-NM-178-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

On September 11, 2008, we issued AD 2008-19-03, Amendment 39-15670 (73 FR 56958, October 1, 2008), for certain Model 737-300, -400, and -500 series airplanes. That AD requires repetitive external detailed inspections or non-destructive inspections to detect cracks in the fuselage skin along the chem-mill steps at stringers S-1 and S-2R, between STA 400 and STA 460, and repair if necessary. That AD resulted from reports of cracks in the fuselage skin common to stringers S-1 and S-2R, between STA 400 and STA 460. We issued that AD to detect and correct fatigue cracking of the fuselage skin panels at the chem-mill steps, which could result in sudden fracture and failure of the fuselage skin panels, and consequent rapid decompression of the airplane.

Actions Since Existing AD Was Issued

Since we issued AD 2008-19-03, Amendment 39-15670 (73 FR 56958, October 1, 2008), we received reports of new findings of cracking in the fuselage skin at

the chem-mill steps adjacent to the Air Traffic Control antenna. One reported crack was on the inboard side of S-2R at STA 451; the crack measured one inch long. That airplane had accumulated 52,207 total flight cycles. Another reported crack was on the left-hand side of stringer S-1 at STA 431. That airplane had accumulated 43,565 total flight cycles. Other cracks were located on the left-hand side of stringer S-1, between STA 400 and STA 460 on certain airplanes. The cause of the cracking was fatigue due to high-tension stresses and local bending at the edge of the chem-mill pockets of the bonded skin. It was also determined that the detailed inspection alone (one method required by the existing AD) is not adequate to detect the cracking.

Relevant Service Information

We reviewed Boeing Alert Service Bulletin 737-53A1293, Revision 1, dated July 7, 2010; and Boeing Service Bulletin 737-53A1293, Revision 2, dated August 10, 2011. (Boeing Alert Service Bulletin 737-53A1293, dated August 13, 2008, was referred to for accomplishing the actions in AD 2008-19-03, Amendment 39-15670 (73 FR 56958, October 1, 2008)).

Boeing Alert Service Bulletin 737-53A1293, Revision 1, dated July 7, 2010, adds an ultrasonic phased array inspection to the options for non-destructive inspections (NDI) specified in Boeing Alert Service Bulletin 737-53A1293, dated August 13, 2008, and combines the detailed inspection and the NDI in lieu of doing either Option 1 (a detailed inspection) or Option 2 (an NDI). Boeing Service Bulletin 737-53A1293, Revision 2, dated August 10, 2011, clarifies repair instructions for specific findings.

The initial inspection compliance times range between the following, depending on configuration: (1) Before the accumulation 33,000 total flight cycles, or within 500 flight cycles after the date on this service bulletin, whichever is later; and (2) before the accumulation of 35,000 total flight cycles, or within 1,800 flight cycles after the date on this service bulletin, whichever is later.

The repetitive inspection intervals range between 500 and 2,400 flight cycles, depending on the inspection option and configuration.

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 retain certain requirements of AD 2008-19-03, Amendment 39-15670 (73 FR 56958, October 1, 2008). This proposed AD would also require accomplishing the actions specified in Boeing Service Bulletin 737-53A1293, Revision 2, dated August 10, 2011, except as discussed under "Differences Between the AD and the Service Information."

Differences Between the AD and the Service Information

Boeing Service Bulletin 737-53A1293, Revision 2, dated August 10, 2011, specifies contacting the manufacturer for instructions on how to repair a certain condition, but this AD requires repairing that condition in one of the following ways:

- Using a method that we approve; or
- Using data that meet the certification basis of the airplane, and that have been approved by an Authorized Representative for the Boeing Commercial Airplanes Delegation Option Authorization Organization whom we have authorized to make those findings.

The post-repair inspection specified in Tables 4 and 6 of paragraph 1.E., "Compliance," of Boeing Service Bulletin 737-53A1293, Revision 2, dated August 10, 2011, is not required by this proposed AD.

Interim Action

We consider this proposed AD interim action. If final action is identified later, we might consider further rulemaking then.

Costs of Compliance

We estimate that this proposed AD affects 596 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
Inspections (required actions in AD 2008-19-03, Amendment 39-15670 (73 FR 56958, October 1, 2008)	5 work-hours X $85 per hour = $425 per inspection cycle	N/A	$425 per inspection cycle	$253,300 per inspection cycle
New inspections (proposed action)	Between 7 and 15 work-hours, depending on airplane configuration = between $595 and $1,275 per inspection cycle	N/A	Between $595 and $1,275 per inspection cycle	Between $354,620 and $759,900 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 this proposed 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

We have 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 that the 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 removing airworthiness directive (AD) 2008-19-03, Amendment 39-15670 (73 FR 56958, October 1, 2008), and adding the following new AD:

The Boeing Company: Docket No. FAA-2011-1254; Directorate Identifier 2010-NM-178-AD.

Comments Due Date

(a) The FAA must receive comments on this AD action by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

Affected ADs

(b) This AD supersedes AD 2008-19-03, Amendment 39-15670 (73 FR 56958, October 1, 2008).

Applicability

(c) This AD applies to Model 737-300, -400, and -500 series airplanes, certificated in any category; as identified in Boeing Service Bulletin 737-53A1293, Revision 2, dated August 10, 2011.

Subject

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

Unsafe Condition

(e) This AD was prompted by reports of additional crack findings of the fuselage skin at the chem-mill steps. We are issuing this AD to detect and correct fatigue cracking of the fuselage skin panels at the chem-mill steps, which could result in sudden fracture

and failure of the fuselage skin panels, and consequent rapid decompression of the airplane.

Compliance

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

Repetitive Inspections

(g) At the applicable times specified in paragraph 1.E., "Compliance," of Boeing Service Bulletin 737-53A1293, Revision 2, dated August 10, 2011, except as provided by paragraph (j) and (k) of this AD: Do both a detailed inspection and a nondestructive inspection (NDI) (medium frequency eddy current, magneto optical imaging, C-scan, or ultrasonic phased array) to detect cracks in the fuselage skin along the chem-mill steps at stringers S-1 and S-2R, between station (STA) 400 and STA 460, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 737-53A1293, Revision 2, dated August 10, 2011. Repeat the applicable inspections thereafter at intervals not to exceed those specified in paragraph 1.E., "Compliance," of Boeing Service Bulletin 737-53A1293, Revision 2, dated August 10, 2011.

Repair

(h) If any crack is found during any inspection required by paragraph (g) of this AD, before further flight, repair in accordance with the Accomplishment Instructions of Boeing Service Bulletin 737-53A1293, Revision 2, dated August 10, 2011; except as provided by paragraph (i) of this AD. Installation of a repair that meets the conditions specified in paragraph 1.E., "Compliance," of Boeing Service Bulletin 737-53A1293, Revision 2, dated August 10, 2011, terminates the repetitive inspections required by paragraph (g) of this AD for the repaired area only.

(i) If any crack is found during any inspection required by paragraph (g) of this AD and Boeing Service Bulletin 737-53A1293, Revision 2, dated August 10, 2011,

specifies to contact Boeing for repair: Before further flight, repair using a method approved in accordance with the procedures specified in paragraph (n) of this AD.

Exceptions to Service Bulletin

(j) Where Boeing Service Bulletin 737-53A1293, Revision 2, dated August 10, 2011, specifies a compliance time relative to the date on that service bulletin, this AD requires compliance within the specified compliance time after the effective date of this AD.

(k) Where the Condition column of paragraph 1.E., "Compliance," of Boeing Service Bulletin 737-53A1293, Revision 2, dated August 10, 2011, specifies a condition based on whether an airplane has or has not been inspected, this AD bases the condition on whether an airplane has or has not been inspected as of the effective date of this AD.

(l) The post-repair inspection specified in Tables 4 and 6 of paragraph 1.E., "Compliance," of Boeing Service Bulletin 737-53A1293, Revision 2, August 10, 2011, is not required by this AD.

Note 1: The damage tolerance inspections specified in Tables 4 and 6 of paragraph 1.E., "Compliance," of Boeing Service Bulletin 737-53A1293, Revision 2, August 10, 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)).

Credit for Actions Accomplished in Accordance with Previous Service Information

(m) Actions done before the effective date of this AD in accordance with Boeing Alert Service Bulletin 737-53A1293, Revision 1, July 7, 2010, are acceptable for compliance with the corresponding actions required by this AD.

Alternative Methods of Compliance (AMOCs)

(n)(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 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 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.

(4) AMOCs approved for AD 2008-19-03, Amendment 39-15670 (73 FR 56958, October 1, 2008), are approved as AMOCs for the corresponding requirements in this AD.

Related Information

(o) 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, Washington 98057-3356; phone: 425-917-6447; fax: 425-917-6590; e-mail: wayne.lockett@faa.gov.

(p) 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. 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.

Issued in Renton, Washington, on November 16, 2011.

John P. Piccola,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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