



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0336; Directorate Identifier 2011-NM-213-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 737-500 series airplanes. This proposed AD was prompted by reports of chem-mill step cracking on the aft lower lobe fuselage skins. This proposed AD would require inspections of the fuselage skin at the chem-mill steps, and repair if necessary. We are proposing this AD to detect and correct cracking on the aft lower lobe fuselage skins, which could result in 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, 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, 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 (ACO), 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6447; fax: 425-917-6590; e-mail: wayne.lockett@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-2012-0336; Directorate Identifier 2011-NM-213-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

More than 300 incidents of skin chem-mill cracks on 26 airplanes have been reported from body station (STA) 727 to 1016, and from stringer S-14 to S-25 (left and right sides). The affected airplanes had accumulated between 29,808 and 53,454 total flight cycles. Most of the skin cracks were found aft of STA 747 on the left side. Several of the reported cracks occurred in multiple adjacent bays. On the existing skin panel assembly, the doubler is chem-milled to the skin. At these skin panel locations on the airplanes, the loads could cause a condition where skin cracks could form along the longitudinal edges of the doubler. This condition, if not corrected, could result in decompression of the airplane.

Relevant Service Information

We reviewed Boeing Special Attention Service Bulletin 737-53-1315, dated July 29, 2011. For information on the procedures and compliance times, see this service information at <http://www.regulations.gov> by searching for Docket No. FAA-2012-0336. “Related investigative actions” and “corrective actions” are those actions specified in the service information that are necessary to address the identified unsafe condition.

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 the same type design.

Proposed AD Requirements

This proposed AD would require various repetitive inspections for cracking in the fuselage skin at the chem-mill steps. For airplanes on which cracking is found, this proposed AD would require doing one of the following:

- A time-limited repair, followed by related investigative actions (including a general visual inspection for loose or missing fasteners; an internal detailed inspection and a high frequency eddy current (HFEC) inspection for disbonding and cracks of the bonded doubler); corrective actions if necessary (i.e., replacing any loose or missing fastener, and contacting Boeing for repair instructions and doing the repair); and making the time-limited repair permanent; or
- A permanent repair, including a detailed inspection of the bonded doubler for disbonding, and an HFEC inspection for cracks in the bonded doubler; and repair of any cracks and disbonding. Accomplishment of the permanent repair would terminate the repetitive inspections required by this proposed AD for the area(s) of the repair only.

Difference Between the Proposed AD and the Service Information

Boeing Special Attention Service Bulletin 737-53-1315, dated July 29, 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.

Costs of Compliance

We estimate that this proposed AD affects 91 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	23 work-hours X \$85 per hour = \$1,955 per inspection cycle	\$0	\$1,955 per inspection cycle	\$177,905 per inspection cycle

We estimate the following costs to do any necessary corrective actions 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 corrective actions:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Inspection	2 work-hours X \$85 per hour = \$170	\$0	\$170
Repair	7 work-hours X \$85 per hour = \$595	\$0	\$595

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-2012-0336; Directorate Identifier 2011-NM-213-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 737-500 series airplanes, certificated in any category, as identified in Boeing Special Attention Service Bulletin 737-53-1315, dated July 29, 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 chem-mill step cracking on the aft lower lobe fuselage skins. We are issuing this AD to detect and correct step cracking on the aft lower lobe fuselage skins, which could result in decompression 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 Special Attention Service Bulletin 737-53-1315, dated July 29, 2011, except as required

by paragraph (i)(1) of this AD: Do an external detailed inspection; and, as applicable, do an external or internal subsurface eddy current, magneto optic imager, or C-scan inspection; to detect cracks in the fuselage skin at the chem-mill steps; in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-53-1315, dated July 29, 2011. Repeat the inspections thereafter at the applicable times specified in paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 737-53-1315, dated July 29, 2011.

(h) Repair

If any crack is found during any inspection required by paragraph (g) of this AD: At the applicable times specified in paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 737-53-1315, dated July 29, 2011, do all the actions specified in either paragraph (h)(1) or (h)(2) of this AD.

(1) Do a time-limited repair; followed by applicable related investigative actions, corrective actions, and making the time-limited repair permanent; in accordance with Boeing Special Attention Service Bulletin 737-53-1315, dated July 29, 2011, except as required by paragraph (i)(2) of this AD.

(2) Do a permanent repair, including a detailed inspection of the bonded doubler for disbonding and a high frequency eddy current inspection for cracks of the bonded doubler, in accordance with Boeing Special Attention Service Bulletin 737-53-1315, dated July 29, 2011. Repair any cracks and disbonding before further flight, in accordance with Boeing Special Attention Service Bulletin 737-53-1315, dated July 29, 2011, except as required by paragraph (i)(2) of this AD. Accomplishment of the permanent repair terminates the repetitive inspections required by this AD for the area(s) of the repair only.

(i) Exceptions to Service Bulletin Specifications

The exceptions specified in paragraphs (i)(1) and (i)(2) of this AD apply to this AD.

(1) Where Boeing Special Attention Service Bulletin 737-53-1315, dated July 29, 2011, specifies a compliance time after the date on this service bulletin, this AD requires compliance within the specified compliance time after the effective date of this AD.

(2) Where Boeing Special Attention Service Bulletin 737-53-1315, dated July 29, 2011, specifies to contact Boeing for repair instructions: Before further flight, repair using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

(j) 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, 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 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.

(k) Related Information

(1) For more information about this AD, contact Wayne Lockett, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6447; fax: 425-917-6590; e-mail: wayne.lockett@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, 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 also review the referenced service information in the docket at www.regulations.gov (refer to Docket No. FAA-2012-0336). You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington 98057-3356. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on April 5, 2012.

Ali Bahrami,
Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

[FR Doc. 2012-9177 Filed 04/16/2012 at 8:45 am; Publication Date: 04/17/2012]