



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2016-8186; Directorate Identifier 2016-NM-074-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 all The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. This proposed AD was prompted by reports of skin cracking found at the corners of the aft entry and aft galley doorways. This proposed AD would require repetitive inspections for cracking of the corners of the aft entry and aft galley doorways; and repair if necessary, which would terminate the repetitive inspections of the repaired areas. We are proposing this AD to detect and correct cracking of the corners of the aft entry and aft galley doorways, which could result in rapid decompression and consequent reduced structural integrity 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 NPRM, 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 this 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. It is also available on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-8186.

### **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-2016-8186; 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; email: [alan.pohl@faa.gov](mailto: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-2016-8186; Directorate Identifier 2016-NM-074-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 reports of skin cracking found at the corners of the aft entry and aft galley doorways. These cracks are most common at the lower forward corners and the upper aft corners of the doorways, and the crack lengths range from 0.25 to 4.50 inches. At the time of crack detection, the airplanes had accumulated between 26,896 and 73,655 total flight cycles. These cracks are caused by fatigue from cyclic pressurization of the fuselage combined with increased stress concentration due to the proximity of the fastener holes to the corners of the doorways. The cracks typically originate at the fastener holes and grow towards the corners of the doorways. This condition, if not corrected, could result in rapid decompression and consequent reduced structural integrity of the airplane.

## **Related Service Information under 1 CFR part 51**

We reviewed Boeing Alert Service Bulletin 737-53A1350, dated May 6, 2016. The service information describes procedures for, among other things, external detailed inspections for cracking of the skin assembly of the corners of the aft entry and aft galley doorways, and repair of any cracking. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

## **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.

## **Explanation of Applicability**

Model 737 airplanes having line numbers 1 through 291 have a limit of validity (LOV) of 34,000 total flight cycles. These airplanes have accumulated total flight cycles beyond that LOV. Although operation of an airplane beyond its LOV is prohibited by 14 CFR 121.1115 and 129.115, this proposed AD would include those airplanes in the applicability so that these airplanes are tracked in the event the LOV is extended in the future.

## **Costs of Compliance**

We estimate that this proposed AD affects 326 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	22 work-hours X \$85 per hour = \$1,870 per inspection cycle	\$0	\$1,870 per inspection cycle	\$609,620 per inspection cycle

We have received no definitive data that would enable us to provide cost estimates 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 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-2016-8186; Directorate Identifier 2016-NM-074-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 all 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 737-53A1350, dated May 6, 2016.

**(d) Subject**

Air Transport Association (ATA) of America Code 53, Fuselage.

**(e) Unsafe Condition**

This AD was prompted by reports of skin cracking found at the corners of the aft entry and aft galley doorways. We are issuing this AD to detect and correct cracking of the corners of the aft entry and aft galley doorways, which could result in rapid decompression and consequent reduced structural integrity of the airplane.

**(f) Compliance**

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

**(g) Inspections for Group 1 Airplanes**

For airplanes identified as Group 1 in Boeing Alert Service Bulletin 737-53A1350, dated May 6, 2016: Within 120 days after the effective date of this AD, inspect the airplane using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

**(h) Repetitive Inspections for Groups 2 through 8 Airplanes**

For airplanes identified as Groups 2 through 8 in Boeing Alert Service Bulletin 737-53A1350, dated May 6, 2016: At the applicable time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1350, dated May 6, 2016, except as required by paragraph (j) of this AD: Do low frequency eddy current and detailed inspections for cracking of the aft entry and aft galley doorway corners, as applicable, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1350, dated May 6, 2016. Repeat the inspections thereafter at the

applicable times specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-53A1350, dated May 6, 2016.

**(i) Repair**

If any crack is found during any inspection required by paragraph (h) of this AD, repair before further flight, in accordance with Part 3 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1350, dated May 6, 2016. Accomplishment of this repair terminates the repetitive inspections required by paragraph (h) of this AD for the repaired doorway corner location only.

**(j) Exception to Service Information Specifications**

Where paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-53A1350, dated May 6, 2016, specifies a compliance time “after the original issue date of this service bulletin,” this AD requires compliance within the specified compliance time after the effective date of this AD.

**(k) 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 (l)(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, modification, or alteration 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. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane and the approval must specifically refer to this AD.

(i) For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (k)(3)(i) and (k)(3)(ii) of this AD apply. The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

**(l) 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) 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 this 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, WA, on August 11, 2016.

Paul R. Bernado,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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