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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2012-0935; Directorate Identifier 2011-NM-256-AD; Amendment 39-17428; AD 2013-08-11]**

**RIN 2120-AA64**

#### **Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain The Boeing Company Model 737-900 and -900ER series airplanes. This AD was prompted by reports of early fatigue cracks at chem-mill areas on the crown skin panels. This AD requires repetitive inspections for cracking of the fuselage skin along chem-mill steps at certain crown skin and shear wrinkle areas, and repair if necessary. We are issuing this AD to detect and correct fatigue cracking of the skin panel at the specified chem-mill step locations, which could result in rapid decompression of the airplane.

**DATES:** This AD is effective May 30, 2013.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of May 30, 2013.

**ADDRESSES:** 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, 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 address for the Docket Office (phone: 800-647-5527) is Document

Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

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

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM published in the Federal Register on September 18, 2012 (77 FR 57539). That NPRM proposed to require repetitive inspections for cracking of the fuselage skin along chem-mill steps at certain crown skin and shear wrinkle areas, and repair if necessary.

### **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal (77 FR 57539, September 18, 2012) and the FAA's response to each comment.

### **Request to Revise Federal Aviation Regulations Citations**

Boeing stated that references to section 129.109(c)(2) of the Federal Aviation Regulations (14 CFR 129.109(c)(2)) are incorrect, since that paragraph does not exist in the current revision of the Federal Aviation Regulations and that the correct paragraph reference is section 129.109(b)(2). Boeing noted that this error occurred in the second paragraph of the "Differences Between the Proposed AD and the Service Information" section, and in Note 1 to paragraph (1) of the proposed AD (77 FR 57539, September 18, 2012).

We agree that the specified references are incorrect. We agree that the citation in the proposed AD (77 FR 57539, September 18, 2012) is inaccurate, but since that section of the preamble does not reappear in this AD, no corresponding change to this AD is necessary. We have corrected the citation in Note 1 to paragraph (1) of this AD.

### **Winglet Supplemental Type Certificate (STC) Comment**

Aviation Partners Boeing stated that the installation of winglets per STC ST00830SE ([http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgstc.nsf/0/408E012E008616A7862578880060456C?OpenDocument&Highlight=st00830se](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/408E012E008616A7862578880060456C?OpenDocument&Highlight=st00830se)) does not affect the actions specified in the NPRM (77 FR 57539, September 18, 2012).

We concur. We have added paragraph (c)(2) to this AD to state that installation of STC ST00830SE ([http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgstc.nsf/0/408E012E008616A7862578880060456C?OpenDocument&Highlight=st00830se](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/408E012E008616A7862578880060456C?OpenDocument&Highlight=st00830se)) does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST00830SE is installed, a "change in product" alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

## Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (77 FR 57539, September 18, 2012) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (77 FR 57539, September 18, 2012).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

## Costs of Compliance

We estimate that this AD affects 58 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 of chem-mill step locations.	31 work-hours × \$85 per hour = \$2,635, per inspection cycle.	None	\$2,635, per inspection cycle	\$152,830, 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 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 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):



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**2013-08-11 The Boeing Company:** Amendment 39-17428; Docket No. FAA-2012-0935; Directorate Identifier 2011-NM-256-AD.

**(a) Effective Date**

This AD is effective May 30, 2013.

**(b) Affected ADs**

None.

**(c) Applicability**

(1) This AD applies to The Boeing Company Model 737-900 and -900ER series airplanes, certificated in any category, as identified in Boeing Service Bulletin 737-53-1312, dated October 21, 2011, as revised by Boeing Service Bulletin 737-53-1312, Revision 1, dated March 14, 2012.

(2) Installation of Supplemental Type Certificate (STC) ST00830SE ([http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgstc.nsf/0/408E012E008616A7862578880060456C?OpenDocument&Highlight=st00830se](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/408E012E008616A7862578880060456C?OpenDocument&Highlight=st00830se)) does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST00830SE is installed, a "change in product" alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

**(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 early fatigue cracks at chem-mill areas on the crown skin panels. We are issuing this AD to detect and correct fatigue cracking of the skin panel at the specified chem-mill step locations, which could result in rapid decompression of the airplane.

**(f) Compliance**

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

**(g) Inspections of Crown Skin Areas**

At the applicable time specified in paragraph 1.E., "Compliance," of Boeing Service Bulletin 737-53-1312, dated October 21, 2011, as revised by Boeing Service Bulletin 737-53-1312, Revision 1, dated March 14, 2012, except as required by paragraph (k) of this AD: Do an external detailed inspection and an external nondestructive inspection (a medium frequency eddy current (MFEC), magneto optic imager (MOI), C-scan, or ultrasonic phased array (UTPA) inspection) for cracking in

the fuselage skin along the chem-mill steps at certain locations specified in, and in accordance with, the Accomplishment Instructions of Boeing Service Bulletin 737-53-1312, dated October 21, 2011, as revised by Boeing Service Bulletin 737-53-1312, Revision 1, dated March 14, 2012. Repeat the inspections thereafter at the applicable times specified in paragraph 1.E., "Compliance," of Boeing Service Bulletin 737-53-1312, dated October 21, 2011, as revised by Boeing Service Bulletin 737-53-1312, Revision 1, dated March 14, 2012.

**(h) Inspections of Shear Wrinkle Areas**

For Group 1 airplanes as identified in Boeing Service Bulletin 737-53-1312, dated October 21, 2011, as revised by Boeing Service Bulletin 737-53-1312, Revision 1, dated March 14, 2012: At the applicable time specified in paragraph 1.E., "Compliance," of Boeing Service Bulletin 737-53-1312, dated October 21, 2011, as revised by Boeing Service Bulletin 737-53-1312, Revision 1, dated March 14, 2012, except as required by paragraph (k) of this AD, do an external detailed inspection and an external nondestructive inspection (MFEC, MOI, C-scan, or UTPA) for cracking in the fuselage skin along the chem-mill steps at certain shear wrinkle locations specified in, and in accordance with, the Accomplishment Instructions of Boeing Service Bulletin 737-53-1312, dated October 21, 2011, as revised by Boeing Service Bulletin 737-53-1312, Revision 1, dated March 14, 2012. Repeat the inspections thereafter at the applicable times specified in paragraph 1.E., "Compliance," of Boeing Service Bulletin 737-53-1312, dated October 21, 2011, as revised by Boeing Service Bulletin 737-53-1312, Revision 1, dated March 14, 2012.

**(i) Repair**

If any cracking is found during any inspection required by either paragraph (g) or (h) of this AD, before further flight, repair the cracking using a method approved in accordance with the procedures specified in paragraph (m) of this AD. Accomplishing the repair approved in accordance with the procedures specified in paragraph (m) of this AD terminates the repetitive inspection requirement for that area under the repair only.

**(j) Optional Terminating Modification**

Modification of an inspection area specified in paragraph (g) of this AD, including doing an external detailed inspection and an external nondestructive inspection (MFEC, MOI, C-scan, or UTPA) for cracking of the area to be modified, and a high frequency eddy current inspection of all existing holes for cracking as applicable, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 737-53-1312, dated October 21, 2011, as revised by Boeing Service Bulletin 737-53-1312, Revision 1, dated March 14, 2012, terminates the repetitive inspections required by paragraph (g) of this AD for that modified area only. If any cracking is found during any inspection described by this paragraph, before further flight, repair the cracking using a method approved in accordance with the procedures specified in paragraph (m) of this AD.

**(k) Service Bulletin Exception**

Boeing Service Bulletin 737-53-1312, dated October 21, 2011, as revised by Boeing Service Bulletin 737-53-1312, Revision 1, dated March 14, 2012, specifies compliance times "after the original issue date of this service bulletin." However, this AD requires compliance within the specified compliance times "after the effective date of this AD."

## **(l) Post-Modification Inspections**

The post-modification inspections specified in Tables 3 and 4 of paragraph 1.E., "Compliance," of Boeing Service Bulletin 737-53-1312, dated October 21, 2011, as revised by Boeing Service Bulletin 737-53-1312, Revision 1, dated March 14, 2012, are not required by this AD.

Note 1 to paragraph (l) of this AD: The damage tolerance inspections specified in Tables 3 and 4 of paragraph 1.E., "Compliance," of Boeing Service Bulletin 737-53-1312, dated October 21, 2011, as revised by Boeing Service Bulletin 737-53-1312, Revision 1, dated March 14, 2012, may be used in support of compliance with section 121.1109(c)(2) or 129.109(b)(2) of the Federal Aviation Regulations (14 CFR 121.1109(c)(2) or 14 CFR 129.109(b)(2)). The actions specified in Part 5 of the Accomplishment Instructions and corresponding figures of Boeing Service Bulletin 737-53-1312, dated October 21, 2011, as revised by Boeing Service Bulletin 737-53-1312, Revision 1, dated March 14, 2012, are not required by this AD.

## **(m) 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 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 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.

## **(n) Related Information**

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, WA 98057-3356; phone: (425) 917-6447; fax: (425) 917-6590; email: Wayne.Lockett@faa.gov.

## **(o) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Service Bulletin 737-53-1312, dated October 21, 2011.

(ii) Boeing Service Bulletin 737-53-1312, Revision 1, dated March 14, 2012.

(3) 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>.

(4) You may view this service information at 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.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on April 4, 2013.  
Ali Bahrami,  
Manager, Transport Airplane Directorate,  
Aircraft Certification Service.