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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2009-0788; Directorate Identifier 2009-NM-193-AD; Amendment 39-16167; AD 2010-01-09]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Model 737-300, -400, and -500 Series 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 Model 737-300, -400, and -500 series airplanes. This AD requires repetitive external non-destructive inspections to detect cracks in the fuselage skin along the chem-mill step at stringers S-1 and S-2 right, between station (STA) 827 and STA 847, and repair if necessary. This AD results from a report of a hole in the fuselage skin common to stringer S-1 and S-2 left, between STA 827 and STA 847 on an airplane that diverted to an alternate airport due to cabin depressurization and subsequent deployment of the oxygen masks. We are issuing this AD to detect and correct fatigue cracking of the fuselage skin panels at the chem-milled steps, which could result in sudden fracture and failure of the fuselage skin panels, and consequent rapid decompression of the airplane.

**DATES:** This AD is effective February 16, 2010.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of February 16, 2010.

**ADDRESSES:** 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>.

#### **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 (telephone 800-647-5527) is the 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, Washington 98057-3356; telephone (425) 917-6447; fax (425) 917-6590.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an airworthiness directive (AD) that would apply to certain Model 737-300, -400, and -500 series airplanes. That NPRM was published in the Federal Register on September 15, 2009 (74 FR 47148). That NPRM proposed to require repetitive external non-destructive inspections to detect cracks in the fuselage skin along the chem-mill step at stringers S-1 and S-2 right, between station (STA) 827 and STA 847, and repair if necessary.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We considered the comments received from the three commenters.

### **Support for the NPRM**

Boeing and the National Transportation Safety Board concur with the NPRM.

### **Request To Revise Criteria for Optional Terminating Action**

Southwest Airlines (SWA) requests that we revise paragraph (i) of the NPRM to remove the first criterion specified for the optional terminating action so that repairs installed prior to September 3, 2009, would be allowed. SWA did not provide justification for this request.

We do not agree to remove the criterion in paragraph (i) of this AD. As we stated in the NPRM, September 3, 2009, is the date Boeing Service Bulletin 737-53A1301 became available to operators to address the identified unsafe condition. However, affected operators may request approval to use a repair installed prior to September 3, 2009, as an alternative method of compliance, under the provisions of paragraph (j) of the final rule. We have made no change to this final rule in this regard.

### **Explanation of Changes Made to This AD**

We have revised this AD to identify the legal name of the manufacturer as published in the most recent type certificate data sheet for the affected airplane models.

In addition, Boeing Commercial Airplanes has received an Organization Designation Authorization (ODA), which replaces their previous designation as a Delegation Option Authorization (DOA) holder. We have revised paragraphs (i)(2) and (j) of this AD to delegate the authority to approve an alternative method of compliance for any repair required by this AD to the Boeing Commercial Airplanes ODA.

### **Conclusion**

We reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We also

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

### **Interim Action**

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

### **Costs of Compliance**

We estimate that this AD affects 135 airplanes of U.S. registry. The following table provides the estimated costs for U.S. operators to comply with this AD.

**Table – Estimated costs**

<b>Action</b>	<b>Work hours</b>	<b>Average labor rate per hour</b>	<b>Cost per product</b>	<b>Number of U.S.- registered airplanes</b>	<b>Fleet cost</b>
Inspection	2	\$80	\$160, per inspection cycle	135	\$21,600, per inspection cycle

### **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), and
- (3) 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.

You can find our regulatory evaluation and the estimated costs of compliance in the AD Docket.

### **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 AD:



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**2010-01-09 The Boeing Company:** Amendment 39-16167. Docket No. FAA-2009-0788; Directorate Identifier 2009-NM-193-AD.

**Effective Date**

(a) This airworthiness directive (AD) is effective February 16, 2010.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to The Boeing Company Model 737-300, -400, and -500 series airplanes, certificated in any category; as identified in Boeing Alert Service Bulletin 737-53A1301, dated September 3, 2009.

**Subject**

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

**Unsafe Condition**

(e) This AD results from a report of a hole in the fuselage skin common to stringer S-1 and S-2 left, between STA 827 and STA 847 on an airplane that diverted to an alternate airport due to cabin depressurization and subsequent deployment of the oxygen masks. We are issuing this AD to detect and correct fatigue cracking of the fuselage skin panels at the chem-milled steps, which could result in sudden fracture and failure of the fuselage skin panels, and consequent rapid decompression of the airplane.

**Compliance**

(f) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

**Initial and Repetitive Inspections**

(g) Before the accumulation of 35,000 total flight cycles, or within 500 flight cycles after the effective date of this AD, whichever occurs later: Except as provided by paragraph (i) of this AD, do an external non-destructive inspection (NDI) to detect cracks in the fuselage skin along the chem-mill steps at stringers S-1 and S-2 right, between STA 827 and STA 847, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1301, dated September 3, 2009. If no cracking is found, repeat the inspection thereafter at intervals not to exceed 500 flight cycles, except as provided by paragraph (i) of this AD.

## **Repair**

(h) If any crack is found during any inspection required by this AD, and Boeing Alert Service Bulletin 737-53A1301, dated September 3, 2009, specifies to contact Boeing for repair instructions: Before further flight, repair the crack using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

## **Optional Terminating Action for Repetitive Inspections**

(i) Installing an external repair doubler along the chem-milled steps at stringers S-1 and S-2 right, between STA 827 and STA 847, constitutes terminating action for the repetitive inspections required by paragraph (g) of this AD for the repaired area only, provided all of the conditions specified in paragraphs (i)(1), (i)(2), and (i)(3) of this AD are met. The initial inspection required by paragraph (g) of this AD must be accomplished.

(1) The repair is installed after September 3, 2009;

(2) The repair was approved by the FAA or by a Boeing Company Authorized Representative or the Boeing Commercial Airplanes Organization Designation Authorization (ODA) authorized by the FAA to make such findings; and

(3) The repair extends a minimum of three rows of fasteners on each side of the chem-mill line in the circumferential direction.

## **Alternative Methods of Compliance (AMOCs)**

(j)(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. Send information to ATTN: Wayne Lockett, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle ACO, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6447; fax (425) 917-6590. Or, e-mail information to 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office. The AMOC approval letter must specifically reference this AD.

(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, and the approval must specifically refer to this AD.

## **Material Incorporated by Reference**

(k) You must use Boeing Alert Service Bulletin 737-53A1301, dated September 3, 2009, to do the actions required by this AD, unless the AD specifies otherwise.

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

(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>.

(3) You may review copies of the 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 or 425-227-1152.

(4) You may also review copies of the 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/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Renton, Washington, on December 21, 2009.

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