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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2014-0572; Directorate Identifier 2014-NM-027-AD; Amendment 39-18214; AD 2015-15-05]**

**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 superseding Airworthiness Directive (AD) 98-22-10 for certain The Boeing Company Model 737-100, -200, -200C, and -300 series airplanes. AD 98-22-10 required repetitive inspections for cracking of the aft frame and frame support structure of the forward service doorway, and repair if necessary. AD 98-22-10 also provided an optional terminating action for the repetitive inspection requirements of that AD. This new AD requires new inspections and adds airplanes to the applicability; for certain airplanes, this new AD provides an optional preventive modification, which terminates the repetitive inspections. This AD was prompted by reports of fatigue cracking of the aft frame and frame support structure of the forward service doorway around the six doorstop fittings, and a determination that inspections are needed in additional locations and that additional airplanes might be subject to the identified unsafe condition. We are issuing this AD to detect and correct fatigue cracking of the aft frame and frame support structure of the forward service doorway around the six doorstop fittings, which could result in door deflection and loss of pressurization.

**DATES:** This AD is effective August 28, 2015.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of August 28, 2015.

**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; phone: 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-2014-0572.

## 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-2014-0572; 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 Docket 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:** Nenita Odesa, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office (ACO), 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5234; fax: 562-627-5210; email: [nenita.odesa@faa.gov](mailto:nenita.odesa@faa.gov).

## SUPPLEMENTARY INFORMATION:

### Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 98-22-10, Amendment 39-10858 (63 FR 57240, October 27, 1998). AD 98-22-10 applied to certain The Boeing Company Model 737-100, -200, -200C, and -300 series airplanes. The NPRM was published in the Federal Register on August 26, 2014 (79 FR 50867). The NPRM was prompted by reports of cracking in the surround structure of the forward galley service doorway between body station (STA) 332.1 and STA 344, which are outside the inspection area of AD 98-22-10, and by reports that cracking has been discovered on airplanes outside the applicability of AD 98-22-10. We have determined that inspections are needed in additional locations, and that additional airplanes are subject to the identified unsafe condition.

The NPRM (79 FR 50867, August 26, 2014) proposed to continue to require repetitive inspections for cracking of the aft frame and frame support structure of the forward service doorway, and repair if necessary. The NPRM also proposed to add inspections, add airplanes to the applicability, and for certain airplanes, provide an optional preventive modification, which would terminate the repetitive inspections. We are issuing this AD to detect and correct fatigue cracking of the aft frame and frame support structure of the forward service doorway around the six doorstop fittings, which could result in door deflection and loss of pressurization.

### Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM (79 FR 50867, August 26, 2014) and the FAA's response to each comment.

### **Request To Clarify Wording in NPRM (79 FR 50867, August 6, 2014)**

Boeing stated paragraph 1.E, "Compliance," of Boeing Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014, provides actions for airplanes repaired or modified previously where the preventive modifications have been accomplished. Boeing stated that paragraph (1)(4) of the proposed AD reads: "AMOCs approved for AD 98-22-10, Amendment 39-10858 (63 FR 57240, October 27, 1998), are approved as AMOCs for the corresponding provisions of this AD." Boeing interpreted the latter statement to mean that AMOCs approved for AD 98-22-10 do not supersede (or negate) the additional inspection requirements provided in Boeing Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014, and requested concurrence with its interpretation of this language.

We agree with Boeing's interpretation. Paragraph (m)(4) of this AD (paragraph (l)(4) of the proposed AD) establishes that an AMOC issued for actions performed in accordance with AD 98-22-10, Amendment 39-10858 (63 FR 57240, October 27, 1998), satisfies the corresponding provisions, and only those corresponding provisions, of the this AD. All requirements of this AD must be satisfied, whether by previous AMOC, accomplishment of the specified AD actions, or a new AMOC. We have not changed this AD in this regard.

### **Request To Clarify Actions That Are Not Required**

Southwest Airlines (Southwest) noted that paragraph (h) of the proposed AD (79 FR 50867, August 26, 2014) would provide terminating action for the repetitive inspections required by paragraph (g) of this AD. Southwest requested that we revise the NPRM to state that the post preventive modification inspections specified in tables 9, 10, 11, and 12 in paragraph 1.E, "Compliance," of Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014, would not be required. Southwest also requested that this provision apply to paragraph (k) of the proposed AD (paragraph (l) of this AD), which specifies credit for actions done previously using Boeing Alert Service Bulletin 737-53A1108, Revision 6, dated January 9, 2014.

We agree with the requests. While the post-preventive modification inspections specified by tables 9 through 12 in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014, 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)), those actions are not required by this AD. We have revised paragraph (g) of this AD by specifying the required parts of the service information: Parts 2 and 4. We have also added new paragraph (j) in this final rule to specify that post-preventive modification inspections (Part 6) are not required by this AD. We have redesignated subsequent paragraphs of this AD accordingly.

### **Effect of Winglets on This AD**

Aviation Partners Boeing stated that accomplishing the supplemental type certificate (STC) ST01219SE ([http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgstc.nsf/0/ebd1cec7b301293e86257cb30045557a/\\$FILE/ST01219SE.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/ebd1cec7b301293e86257cb30045557a/$FILE/ST01219SE.pdf)) does not affect accomplishment of the actions specified in the NPRM (79 FR 50867, August 26, 2014).

We concur with the commenter. We have redesignated paragraph (c) of the proposed AD (79 FR 50867, August 26, 2014) as (c)(1) and added new paragraph (c)(2) to this AD to state that installation of STC ST01219SE ([http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgstc.nsf/0/ebd1cec7b301293e86257cb30045557a/\\$FILE/ST01219SE.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/ebd1cec7b301293e86257cb30045557a/$FILE/ST01219SE.pdf)) does not affect the ability to accomplish the actions required by this final rule. Therefore, for airplanes on which STC ST01219SE 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.

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

We have updated the Costs of Compliance section to add existing inspection and repair costs from AD 98-22-10, Amendment 39-10858 (63 FR 57240, October 27, 1998).

We have changed paragraph (b) of this AD to add AD 90-06-02, Amendment 39-6489, (55 FR 8372, March 7, 1990), as an affected AD since accomplishment of the preventative modification required by paragraph (h) of this AD is an alternative method of compliance for paragraph A. of AD 90-06-02.

In various locations, Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014, cites Boeing Alert Service Bulletin 737-53A1108, Revision 6, dated January 9, 2014, instead of

Revision 7 of the service information. We have added a new paragraph (k)(3) in this AD to clarify that, where Revision 7 of the service information specifies accomplishment of a preventative modification be done using Revision 6 of the service information, this AD requires accomplishment of that preventative modification with Revision 7 of this service information.

We also noted a discrepancy in table 4 of paragraph 1.E., "Compliance," in Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014. Although the fourth action is an inspection of the intercostals "and attaching stringers," the corresponding corrective action specified in table 4 is for only a crack in "an intercostal." We have confirmed with Boeing that the "attaching stringers" were inadvertently omitted from this condition in table 4. Repair of a cracked attaching stringer, however, is described in PART 4, paragraph 7, of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014. We have added a new paragraph (k)(4) in this AD to specify that cracking in the attaching stringers also requires repair.

## Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this 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 (79 FR 50867, August 26, 2014) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (79 FR 50867, August 26, 2014).

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

## Related Service Information Under 1 CFR Part 51

We reviewed Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014. The service information describes procedures for inspections for cracking of the aft frame and frame support structure of the forward service doorway, and repair if necessary. 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 of this AD.

## Costs of Compliance

We estimate that this AD affects 419 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 [retained actions from AD 98-22-10, Amendment 39-10858 ( <a href="#">63 FR 57240</a> , October 27, 1998)]	7 work-hours × \$85 per hour = \$595 per inspection cycle	\$0	\$595 per inspection cycle	\$249,305 per inspection cycle.
Inspection [new AD action]	28 work-hours × \$85 per hour = \$2,380 per inspection cycle	None	\$2,380 per inspection cycle	\$997,220 per inspection cycle.

### Estimated Costs for On-Condition Actions

Action	Labor cost	Parts cost	Cost per product
Repair [retained actions from AD 98-22-10, Amendment 39-10858 ( <a href="#">63 FR 57240</a> , October 27, 1998)]	42 work-hours × \$85 per hour = \$3,570	\$913	\$4,483

### Estimated Costs for Optional Modification

Action	Labor cost	Parts cost	Cost per product
Repair/preventive modification [new AD action]	Between 12 and 17 work-hours × \$85 per hour = between \$1,020 and \$1,445	Between \$90 and \$913	Between \$1,110 and \$2,358.

### 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 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 removing Airworthiness Directive (AD) 98-22-10, Amendment 39-10858 (63 FR 57240, October 27, 1998), and adding the following new AD:



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**2015-15-05 The Boeing Company:** Amendment 39-18214; Docket No. FAA-2014-0572; Directorate Identifier 2014-NM-027-AD.

**(a) Effective Date**

This AD is effective August 28, 2015.

**(b) Affected ADs**

- (1) This AD replaces AD 98-22-10, Amendment 39-10858 (63 FR 57240, October 27, 1998).
- (2) This AD affects AD 90-06-02, Amendment 39-6489 (55 FR 8372, March 7, 1990).

**(c) Applicability**

(1) This AD applies to 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 737-53A1108, Revision 7, dated July 7, 2014.

(2) Installation of Supplemental Type Certificate (STC) ST01219SE ([http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgstc.nsf/0/ebd1cec7b301293e86257cb30045557a/\\$FILE/ST01219SE.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/ebd1cec7b301293e86257cb30045557a/$FILE/ST01219SE.pdf)) does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST01219SE 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**

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

**(e) Unsafe Condition**

This AD was prompted by reports of fatigue cracking of the aft frame and frame support structure of the forward service doorway around the six doorstop fittings, and a determination that inspections are needed in additional locations and that additional airplanes might be subject to the identified unsafe condition. We are issuing this AD to detect and correct fatigue cracking of the aft frame and frame support structure of the forward service doorway around the six doorstop fittings, which could result in door deflection and loss of pressurization.

**(f) Compliance**

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

**(g) Inspections and Corrective Actions**

At the applicable times specified in tables 1 through 6 of paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014, except as required by

paragraph (k)(1) of this AD: Do detailed inspections of the frame web between body station (STA) 332.1 and STA 344, intercostal T-brackets, intercostal T-chords, intercostals, and stringers, as applicable; do high frequency eddy current (HFEC) inspections for cracking of door stop intercostal T-brackets, intercostal web, door stop intercostal T-chords, intercostals, and stringers, as applicable; and do all applicable related investigative and corrective actions; in accordance with Parts 2 and 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014, except as required by paragraphs (k)(2) through (k)(4) of this AD. Do all applicable related investigative and corrective actions before further flight. Repeat the inspections at the applicable times specified in tables 1 through 6 of paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014, until the terminating action specified in paragraph (h) of this AD is done.

#### **(h) Optional Terminating Action**

For Group 1, Configuration 1; Group 1, Configuration 2; Group 2; Group 3; Group 4, Configuration 1; and Group 4, Configuration 2 airplanes identified in Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014: Accomplishment of a preventive modification in accordance with Part 5 of Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014, terminates the repetitive inspections required by paragraph (g) of this AD.

#### **(i) Inspections and Corrective Actions for Group 5 Airplanes**

For Group 5 airplanes identified in Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014: Within 120 days after the effective date of this AD, inspect and repair any cracking using a method approved in accordance with the procedures specified in paragraph (m) of this AD. Repair any cracking, before further flight.

#### **(j) Post Preventive Modification Inspections Not Required**

The post preventive modification inspections specified in tables 9 through 12 in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1108, Revision 6, dated January 9, 2014; and Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014; are not required by this AD.

Note 1 to paragraph (j) of this AD: Tables 9 through 12 in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1108, Revision 6, dated January 9, 2014; and Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014; specify that post preventive modification inspections 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 corresponding actions specified in the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1108, Revision 6, dated January 9, 2014; and Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014; are not required by this AD.

#### **(k) Exceptions to the Service Information**

(1) Where Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014, specifies a compliance time "after the issue date of Revision 6 of this service bulletin," this AD requires compliance within the specified time after the effective date of this AD.

(2) Where Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014, specifies to contact Boeing for repair instructions: Before further flight, repair the cracking using a method approved in accordance with the procedures specified in paragraph (m) of this AD.



(3) Where Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014, specifies accomplishment of a preventative modification in accordance with "Revision 6 of this service bulletin," this AD requires accomplishment of those actions to be done in accordance with Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014.

(4) Where table 4 in paragraph 1.E, "Compliance," of Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014, specifies repairing a condition identified as any crack found in "an intercostal," this AD requires repairing a condition identified as any crack found in "an intercostal or attaching stringers."

#### **(l) Credit for Previous Actions**

This paragraph provides credit for the actions required by paragraphs (g) and (h) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin 737-53A1108, Revision 6, dated January 9, 2014. This service information is not incorporated by reference in this AD.

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

(1) The Manager, Los Angeles 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 (n)(1) of this AD. Information may be emailed to: 9-ANM-LAACO-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, Los Angeles 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.

(4) AMOCs approved previously for AD 98-22-10, Amendment 39-10858 (63 FR 57240, October 27, 1998), are approved as AMOCs for the corresponding provisions of this AD.

(5) Accomplishment of the preventive modification in accordance with Boeing Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014, as required by paragraph (h) of this AD, is an AMOC for the structural modification specified in Boeing Alert Service Bulletin 737-53A1108 that is required by paragraph A. of AD 90-06-02, Amendment 39-6489, (55 FR 8372, March 7, 1990), for the airplanes identified in paragraph (h) of this AD.

#### **(n) Related Information**

(1) For more information about this AD, contact Nenita Odesa, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles ACO, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5234; fax: 562-627-5210; email: nenita.odesa@faa.gov.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraph (o)(3) of this AD.

#### **(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 Alert Service Bulletin 737-53A1108, Revision 7, dated July 7, 2014. (ii) Reserved.

(3) For Boeing 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; phone: 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, WA. 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 July 10, 2015.

Jeffrey E. Duven,  
Manager, Transport Airplane Directorate,  
Aircraft Certification Service.