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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-0646; Directorate Identifier 2009-NM-223-AD; Amendment 39-16558; AD 2011-01-05]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Model 727, 727C, 727-100, 727-100C, 727-200, and 727-200F Series Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This AD requires repetitive detailed inspections of the aft pressure bulkhead web for cracking, and repair if necessary. For certain airplanes, this AD also provides for an optional preventative modification of the aft pressure bulkhead web, which would terminate certain repetitive detailed inspections. This AD was prompted by reports of cracks in the aft pressure bulkhead web. We are issuing this AD to detect and correct cracking in the aft pressure bulkhead web, which could adversely affect the structural integrity of the airplane, resulting in difficulty maintaining cabin pressurization or rapid decompression of the airplane.

DATES: This AD is effective February 14, 2011.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of February 14, 2011.

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>. 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: Berhane Alazar, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6577; 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 the specified products. That NPRM was published in the Federal Register on July 1, 2010 (75 FR 38066). That NPRM proposed to require repetitive detailed inspections of the aft pressure bulkhead web for cracking, and repair if necessary. For certain airplanes, that NPRM also proposed an optional preventative modification of the aft pressure bulkhead web, which would terminate certain repetitive detailed inspections.

Comments

We gave the public the opportunity to participate in developing this AD. The following paragraphs present the comments received on the proposal and the FAA's response to each comment.

Request To Rephrase Unsafe Condition Statement in the AD

Boeing requested that we change the second sentence of paragraph (e) of the AD to state that the FAA "is issuing this AD to detect and repair cracking, or to modify structure to prevent cracking, in the aft pressure bulkhead web * * *" The commenter stated that the original paragraph specified that the AD is being issued "to prevent cracking," whereas the AD provides modification instructions to prevent cracking, as well as instructions to repair cracking, and the requested language is more correct.

We partially agree with the commenter's request. We agree to change the AD to say "detect and correct cracking" because the AD provides those instructions, and we have changed paragraph (e) accordingly. We disagree with including "modify structure to prevent cracking" because the AD does not mandate the preventive modification. The modification to prevent cracking is available as an option in the AD and in Boeing Special Attention Service Bulletin 727-53-0232, dated September 23, 2009, the service information referenced in the NPRM; we have made no further change to the AD in this regard.

Request To Remove Description From Paragraph (g) of the AD

Boeing requested that we remove "* * *" in the area around the hydraulic line support bracket on the left side * * *" from paragraph (g) of the AD. The commenter stated that airplanes in Group 1, Configuration 2, do not have that hydraulic bracket installed, and therefore cannot be inspected "around the bracket." Boeing stated further that the service bulletin specifies an inspection in the entire bay of the web, and the requested change would cover all the subject airplanes and prevent confusion.

We agree with the commenter's request, for the reasons given, and we have changed paragraph (g) of the AD accordingly.

Request To Correct Table Reference in Paragraph (g)(2) of the AD

Boeing requested that in paragraph (g)(2) of the NPRM we refer only to Table 2 of paragraph 1.E., "Compliance," in Boeing Special Attention Service Bulletin 727-53-0232, dated September 23, 2009, for the applicable compliance time. The commenter stated that paragraph (g)(2) of the AD covers only airplanes of Group 1, Configuration 2, which are addressed only in Table 2 of paragraph 1.E. of that service bulletin.

We agree with the commenter's request, for the reasons given, and we have changed paragraph (g)(2) of the AD accordingly. We have also changed paragraph (g)(1)(ii) of this AD to only refer to Table 1 of paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 727-53-0232, dated September 23, 2009.

Clarification of Terminating Action

We have clarified that for Group 1, Configuration 1 airplanes, and Group 2 airplanes, as identified in Boeing Special Attention Service Bulletin 727-53-0232, dated September 23, 2009, doing the repair specified in paragraph (h) of the AD terminates the repetitive inspections required by paragraph (g)(1)(ii) of the AD.

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.

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 243 airplanes of U.S. registry. The following table provides the estimated costs for U.S. operators to comply with this AD.

Table – Estimated costs

Action	Work hours	Average labor rate per hour	Parts	Cost per product	Number of U.S.-registered airplanes	Fleet cost
Detailed inspection, per inspection cycle	1	\$85	None	\$85, per inspection cycle	243	\$20,655, per inspection cycle
Preventative modification	4	\$85	Negligible ¹	\$340	Up to 243	Up to \$82,620

¹ The cost of material for the modification would depend on the size and location of the repair; the materials necessary for the modification are standard shop materials that would be provided out of the operator's stock.

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):



2011-01-05 The Boeing Company: Amendment 39-16558; Docket No. FAA-2010-0646; Directorate Identifier 2009-NM-223-AD.

Effective Date

(a) This AD is effective February 14, 2011.

Affected ADs

(b) None.

Applicability

(c) This AD applies to all The Boeing Company Model 727, 727C, 727-100, 727-100C, 727-200, and 727-200F series airplanes, certificated in any category.

Subject

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

Unsafe Condition

(e) This AD results from reports of cracks in the aft pressure bulkhead web. The Federal Aviation Administration is issuing this AD to detect and correct cracking in the aft pressure bulkhead web, which could adversely affect the structural integrity of the airplane, resulting in difficulty maintaining cabin pressurization or 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.

Repetitive Inspections and Corrective Actions

(g) At the applicable initial compliance time specified in Tables 1 and 2 of paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 727-53-0232, dated September 23, 2009; except as provided by paragraph (j) of this AD: Perform a detailed inspection for cracking on the aft side of the aft pressure bulkhead web between water line (WL) 217 to WL 230, and buttock line (BL) 48 left to BL 66 left. Do the inspection in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 727-53-0232, dated September 23, 2009.

(1) For Group 1, Configuration 1 airplanes, and Group 2 airplanes, as identified in Boeing Special Attention Service Bulletin 727-53-0232, dated September 23, 2009: If no cracking is found during the inspection required by paragraph (g) of this AD, do the actions specified in paragraph (g)(1)(i) or (g)(1)(ii) of this AD in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 727-53-0232, dated September 23, 2009.

(i) Accomplish the preventative modification specified in Part 3 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 727-53-0232, dated September 23, 2009, before further flight.

(ii) Repeat the detailed inspection at the applicable interval specified in Table 1 of paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 727-53-0232, dated September 23, 2009. Accomplishing the preventative modification specified in paragraph (g)(1)(i) of this AD terminates the repetitive inspections required by this paragraph.

(2) For Group 1, Configuration 2 airplanes, as identified in Boeing Special Attention Service Bulletin 727-53-0232, dated September 23, 2009: If no cracking is found during the inspection required by paragraph (g) of this AD, repeat the detailed inspection at the applicable interval specified in Table 2 of paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 727-53-0232, dated September 23, 2009.

Note 1: The damage tolerance inspections specified in Table 3 of paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 727-53-0232, dated September 23, 2009, may be used in support of compliance with section 121.1109(c)(2) or 129.109(c)(2) of the Federal Aviation Regulations (14 CFR 121.1109(c)(2) or 14 CFR 129.109(c)(2)).

(h) If any crack is found during any inspection required by paragraph (g) of this AD, before further flight, repair in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 727-53-0232, dated September 23, 2009; except as provided by paragraph (i) of this AD. For Group 1, Configuration 1 airplanes, and Group 2 airplanes, as identified in Boeing Special Attention Service Bulletin 727-53-0232, dated September 23, 2009: Accomplishing this repair terminates the repetitive inspections required by paragraph (g)(1)(ii) of this AD.

(i) If any cracking is found during any inspection required by this AD, and Boeing Special Attention Service Bulletin 727-53-0232, dated September 23, 2009, specifies to contact Boeing for appropriate action: Before further flight, repair the cracking using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

(j) Where Boeing Special Attention Service Bulletin 727-53-0232, dated September 23, 2009, specifies a compliance time after the date on that service bulletin, this AD requires compliance within the specified compliance time after the effective date of this AD.

Alternative Methods of Compliance (AMOCs)

(k)(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: Berhane Alazar, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6577; fax (425) 917-6590. Information may be e-mailed 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 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.

Related Information

(l) For more information about this AD, contact Berhane Alazar, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6577; fax (425) 917-6590.

Material Incorporated by Reference

(m) You must use Boeing Special Attention Service Bulletin 727-53-0232, dated September 23, 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.

(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 an NARA facility, call 202-741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on December 17, 2010.

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