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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2006-24073; Directorate Identifier 2002-NM-272-AD; Amendment 39-14653; AD 2006-13-01]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 727-200 Series Airplanes Equipped With a No. 3 Cargo Door

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is superseding an existing airworthiness directive (AD), which applies to certain Boeing Model 727-200 series airplanes. That AD currently requires initial and repetitive inspections for cracks in the forward frame of the No. 3 cargo door cutout; and corrective actions, if necessary. The existing AD also provides for an optional structural modification, which terminates the repetitive inspections. This new AD reduces the compliance time for the initial inspections and adds an optional method of inspection for both the initial and repetitive inspections. This AD also adds initial and repetitive inspections of an additional area, and repair if necessary. Additionally, this AD clarifies that the previously optional structural modification is now required by other rulemaking. This AD results from additional reports of cracking in the forward frame of the No. 3 cargo door cutout. We are issuing this AD to detect and correct cracking of the forward frame and fuselage skin of the No. 3 cargo door cutout, which could result in failure of the frame and skin, and consequent rapid decompression of the airplane.

DATES: This AD becomes effective July 25, 2006.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of July 25, 2006.

ADDRESSES: You may examine the AD docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., Nassif Building, Room PL-401, Washington, DC.

Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: Daniel F. Kutz, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6456; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

Examining the Docket

You may examine the airworthiness directive (AD) docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the street address stated in the ADDRESSES section.

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that supersedes AD 86-17-05 R1, amendment 39-5714 (52 FR 32534, August 28, 1987). The existing AD applies to certain Boeing Model 727-200 series airplanes. That NPRM was published in the Federal Register on March 7, 2006 (71 FR 11345). That NPRM proposed to continue to require initial and repetitive inspections for cracks in the forward frame of the No. 3 cargo door cutout; and corrective actions, if necessary. That NPRM proposed to reduce the compliance time for the initial inspections and add an optional method of inspection for both the initial and repetitive inspections. That NPRM also proposed to add initial and repetitive inspections of an additional area, and repair if necessary. Additionally, that NPRM clarified that the previously optional structural modification is now required by other rulemaking.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comments that have been received on the NPRM.

Request for Clarification of Certain Language

Boeing requests that certain language be added to the Actions Since Existing AD was Issued section of the NPRM to clarify that the forward frame is the subject of the findings and that the skin and doubler in the area are also involved as an area of concern.

We agree that adding the suggested language would clarify the location of the subject unsafe condition (i.e., the forward frame of the No. 3 cargo door cutout, along with the surrounding skin and doubler). However, because that section of the NPRM is not restated in the final rule, we find that no change to the AD is necessary in this regard.

Request To Correct AD Number in Restatement of Requirements Heading

Boeing points out that there is a typographical error in the AD number identified in the "REQUIREMENTS OF AD 86-17-05 R1 WITH REDUCED THRESHOLD AND NEW OPTIONAL INSPECTION METHOD:" heading in the regulatory text of the NPRM, and requests that the error, "AD 86-17-05 RL," be corrected to read "AD 86-17-05 R1."

We agree. We have verified that an error did occur in the AD number in that heading during printing of the NPRM. That AD number is correct in this final rule.

Conclusion

We have carefully reviewed the available data, including the comments that have been received, and determined that air safety and the public interest require adopting the AD with the change described previously. We have determined that this change will neither increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

There are about 269 airplanes of the affected design in the worldwide fleet. The new requirements of this AD add no additional economic burden. The current costs for U.S. operators to comply with this AD are repeated for the convenience of affected operators, as follows:

ESTIMATED COSTS

Action	Work hours	Average labor rate per hour	Parts cost	Cost per airplane	Number of U.S.-registered airplanes	Fleet cost
Inspections (required by AD 86-17-05 RI), per inspection cycle.	6	\$65	None	\$390, per inspection cycle	166	\$64,740, 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

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); 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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

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 Federal Aviation Administration (FAA) amends § 39.13 by removing amendment 39-5714 (52 FR 32534, August 28, 1987) and by adding the following new airworthiness directive (AD):

AIRWORTHINESS DIRECTIVE

www.faa.gov/aircraft/safety/alerts/
www.gpoaccess.gov/fr/advanced.html

U.S. Department
of Transportation
**Federal Aviation
Administration**



2006-13-01 Boeing: Amendment 39-14653. Docket No. FAA-2006-24073; Directorate Identifier 2002-NM-272-AD.

Effective Date

(a) This AD becomes effective July 25, 2006.

Affected ADs

(b) This AD supersedes AD 86-17-05 R1.

Applicability

(c) This AD applies to Boeing Model 727-200 series airplanes, certificated in any category, equipped with a No. 3 cargo door, as identified in Boeing Alert Service Bulletin 727-53A0169, Revision 2, dated May 23, 1986.

Unsafe Condition

(d) This AD results from additional reports of cracking in the forward frame of the No. 3 cargo door cutout. We are issuing this AD to detect and correct cracking of the forward frame and fuselage skin of the No. 3 cargo door cutout, which could result in failure of the frame and consequent rapid decompression of the airplane.

Compliance

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

Requirements of AD 86-17-05 R1 With Reduced Threshold and New Optional Inspection Method

Inspections

(f) At the earlier of the times specified in paragraphs (f)(1) and (f)(2) of this AD: Do a penetrant or detailed inspection of the forward frame of the No. 3 cargo door cutout for cracking, in accordance with paragraph C. of the Accomplishment Instructions of Boeing Alert Service Bulletin 727-53A0169, Revision 2, dated May 23, 1986. After the effective date of this AD, the penetrant or detailed inspection must be done in accordance with paragraph 3.B.3. of the Accomplishment Instructions of Boeing Service Bulletin 727-53A0169, Revision 6, dated September 28, 2002. If any cracking is found, repair in accordance with paragraph (h) or (l) of this AD, as applicable. Repeat the inspection at intervals not to exceed 2,200 flight cycles, until the preventative modification specified in paragraph (n) of this AD is done.

(1) Within the next 300 flight cycles after September 3, 1987 (the effective date of AD 86-17-05 R1), or prior to accumulating 29,000 total flight cycles, whichever occurs later, unless accomplished within the last 1,900 flight cycles.

(2) Prior to accumulating 18,000 total flight cycles, or within 2,200 flight cycles after the effective date of this AD, whichever occurs later.

(g) At the earlier of the times specified in paragraphs (g)(1) and (g)(2) of this AD: Do a detailed inspection of the forward frame of the No. 3 cargo door cutout for cracking, in accordance with paragraphs D. and E. of the Accomplishment Instructions of Boeing Alert Service Bulletin 727-53A0169, Revision 2, dated May 23, 1986. After the effective date of this AD, the detailed inspection must be done in accordance with paragraphs 3.B.4. and 3.B.5. of the Accomplishment Instructions of Boeing Service Bulletin 727-53A0169, Revision 6, dated September 28, 2002. If any cracking is found, repair in accordance with paragraph (h) or (l) of this AD, as applicable. Repeat the inspection at intervals not to exceed 2,200 flight cycles, until the preventative modification specified in paragraph (n) of this AD is done.

(1) Within the next 300 flight cycles after September 3, 1987, or prior to accumulating 35,000 total flight cycles, whichever occurs later, unless accomplished within the last 1,900 flight cycles.

(2) Prior to accumulating 18,000 total flight cycles, or within 2,200 flight cycles after the effective date of this AD, whichever occurs later.

Repair

(h) Before further flight, repair any crack in the forward frame of the No. 3 cargo door cutout found before the effective date of this AD during any inspection required by paragraph (f) or (g) of this AD, in accordance with paragraph G. of the Accomplishment Instructions in Boeing Alert Service Bulletin 727-53A0169, Revision 2, dated May 23, 1986. Repeat the inspections specified in paragraphs (f) and (g) of this AD at intervals not to exceed 2,200 flight cycles, for all areas of the forward frame not covered by the repair, in accordance with the Accomplishment Instructions of paragraphs C., D., and E. of Boeing Alert Service Bulletin 727-53A0169, Revision 2, dated May 23, 1986.

New Requirements of This AD

Inspection of Repairs of the Frame Done Before the Effective Date of the AD

(i) For any repair to the forward frame of the No. 3 cargo door cutout done, as required by paragraph (h) of this AD, before the effective date of this AD: Within 18,000 flight cycles following the repair, or 2,200 flight cycles after the effective date of this AD, whichever occurs later, do a detailed inspection of the repair for cracking in accordance with the Accomplishment Instructions of Boeing Service Bulletin 727-53A0169, Revision 6, dated September 28, 2002. Thereafter, repeat the inspection at intervals not to exceed 2,200 flight cycles, until the preventative modification specified in paragraph (n) of this AD is done.

Note 1: For the purposes of this AD, a detailed inspection is: "An intensive examination of a specific item, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirror, magnifying lenses, etc., may be necessary. Surface cleaning and elaborate procedures may be required."

New Inspections of Skin Surrounding the Frame

(j) Prior to the accumulation of 18,000 total flight cycles, or within 2,200 flight cycles after the effective date of this AD, whichever occurs later: Do a penetrant or detailed inspection for cracking of the fuselage skin of the No. 3 cargo door cutout between stringers S-24 and S-27, in accordance with paragraph 3.B.3. of the Accomplishment Instructions of Boeing Service Bulletin 727-53A0169, Revision 6, dated September 28, 2002. Repeat the inspection at intervals not to exceed 2,200 flight cycles, until the preventative modification specified in paragraph (n) of this AD is done.

Repair of Cracked Skin

(k) If any crack is found in the fuselage skin during any inspection required by paragraph (j) of this AD: Before further flight, repair the crack using a method approved in accordance with the procedures specified in paragraph (p) of this AD.

Repair of Cracked Frames and Post–Repair Inspections

(l) If, after the effective date of this AD, any crack is found in the forward frame of the No. 3 cargo door cutout during any inspection required by paragraph (f), (g), or (i) of this AD: Before further flight, do the actions specified in paragraph (l)(1), (l)(2), or (l)(3) of this AD, as applicable. Inspect the repair within 18,000 flight cycles following the repair, in accordance with paragraphs 3.B.4. and 3.B.5. of the Accomplishment Instructions of Boeing Service Bulletin 727-53A0169, Revision 6, dated September 28, 2002. Thereafter, repeat the inspections at intervals not to exceed 2,200 flight cycles, until the preventative modification specified in paragraph (n) of this AD is done.

(1) If cracks have not severed the inner flange, do an interim repair using a method approved in accordance with the procedures specified in paragraph (p) of this AD.

(2) Repair the crack in accordance with paragraph 3.B.7.b. of the Accomplishment Instructions of Boeing Service Bulletin 727-53A0169, Revision 6, dated September 28, 2002.

(3) Replace the cracked segment of the frame with a new or serviceable component and install the frame reinforcement preventative modification, in accordance with paragraph 3.B.7.c. of the Accomplishment Instructions of Boeing Service Bulletin 727-53A0169, Revision 6, dated September 28, 2002. This action terminates the requirements of this AD.

Repairs Done According to Previous Issues of the Service Bulletin

(m) Inspections and repairs done before the effective date of this AD in accordance with Boeing Alert Service Bulletin 727-53A0169, Revision 2, dated May 23, 1986; Boeing Service Bulletin 727-53A0169, Revision 3, dated June 11, 1987; Revision 4, dated January 21, 1988; and Revision 5, dated November 2, 1989, are acceptable for compliance with the corresponding requirements of paragraphs (h), (k), and (l) of this AD, as applicable.

Terminating Modification Required by AD 90-06-09

(n) At the same time as the applicable inspections provided in paragraphs (f), (g), (i), and (j) of this AD are accomplished, doing the frame reinforcement preventative modification required by paragraph A. of AD 90-06-09 or the frame reinforcement preventative modification specified in Figure 2 of Boeing Service Bulletins 727-53A0169, Revision 5, dated November 2, 1989; and Revision 6, dated September 28, 2002; terminates the requirements of this AD. Paragraph A. of AD 90-06-09 references Boeing Document D6-54860, Revision C, dated December 11, 1989, "Aging Airplane Structural Modification Program–Model 727" as the appropriate source of service

information for accomplishing the frame reinforcement preventative modification (along with numerous other structural modifications required by paragraph A. of AD 90-06-09).

Information Submission

(o) Although the service bulletins referenced in this AD specify to submit certain information to the manufacturer, this AD does not include that requirement.

Alternative Methods of Compliance (AMOCs)

(p)(1) The Manager, Seattle ACO, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) Before using any AMOC approved in accordance with § 39.19 on any airplane to which the AMOC applies, notify the appropriate principal inspector in the FAA Flight Standards 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 an Authorized Representative for the Boeing Commercial Airplanes Delegation Option Authorization Organization who 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.

(4) An AMOC approved previously in accordance with AD 86-17-05 R1, is approved as an AMOC with the corresponding requirements and provisions of this AD.

Material Incorporated by Reference

(q) You must use Boeing Alert Service Bulletin 727-53A0169, Revision 2, dated May 23, 1986; or Boeing Service Bulletin 727-53A0169, Revision 6, dated September 28, 2002; as applicable, to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of these documents in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Boeing Alert Service Bulletin 727-53A0169, Revision 2, contains the following effective pages:

Page number	Revision level shown on page	Date shown on page
1, 3-16	2	May 23, 1986.
2	1	March 28, 1986.

Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for a copy of this service information. You may review copies at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Room PL-401, Nassif Building, Washington, DC; on the Internet at <http://dms.dot.gov>; or at the National Archives and Records Administration (NARA). For information on the availability of this material at the NARA, 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 June 9, 2006.

Kalene C. Yanamura,
Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.
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