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[Page 16477-16481]
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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-21593; Directorate Identifier 2002-NM-328-AD; Amendment 39-14537; AD 2006-07-10]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 727 Airplanes

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 airplanes. That AD currently requires repetitive visual inspections for cracking of the forward entry doorway forward frame and repair if necessary. That AD also provides an optional modification that constitutes terminating action. This new AD requires adding new post-repair and post-modification inspections for previously repaired or modified airplanes, mandating the optional modification, and adding airplanes to the applicability of the AD. This AD results from reports of cracking of the forward entry doorway forward frame of airplanes previously modified. We are issuing this AD to prevent the loss of the structural integrity of the forward entry doorway due to cracking of the frame at Body Station 303.9, and consequent cracking of the fuselage skin and rapid decompression of the airplane.

DATES: This AD becomes effective May 8, 2006.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of May 8, 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 91-09-07, amendment 39-6982 (56 FR 18687, April 24, 1991). The existing AD applies to certain Boeing Model 727 series airplanes. That NPRM was published in the Federal Register on June 22, 2005 (70 FR 36064). That NPRM proposed to require adding new post-repair and post-modification inspections for previously repaired or modified airplanes, mandating the optional modification, and adding airplanes to the applicability of the AD.

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 To Revise Paragraph (l) of the NPRM

The Boeing Company requests that paragraph (l) of the NPRM be revised to apply the one-time inspections only to most Group 1 airplanes. The commenter states that operators of most Group 1 airplanes have been planning on doing the modification in accordance with AD 90-06-09, amendment 39-6488 (55 FR 8370, March 7, 1990) and Boeing Document D6-54860. The commenter asserts that mandating the modification in the final rule is redundant because it is already required by AD 90-06-09. The commenter further explains that Revision 7 of Boeing Alert Service Bulletin (ASB) 727-53A0153, dated August 14, 2003, added some new airplanes to the Group 1 list as well as all of the Group 2 airplanes.

We do not agree. We do acknowledge that, for most Group 1 airplanes, AD 90-06-09 also mandates the same modification as paragraph (l) of this AD, in that Boeing ASB 727-53-153 is referenced in Boeing Document D6-54860, "Aging Airplane Service Bulletin Structural Modification Program–Model 727," Revision C, dated December 11, 1989, which is the appropriate source of service information required by AD 90-06-09. We do not agree to require only the inspection for most of Group 1, since the service bulletin does not distinguish those airplanes that were added to Group 1. We have provided an alternative method of compliance statement in paragraph (n)(4) of this AD to allow credit for the modification accomplished in accordance with AD 90-06-09.

Request To Revise the Compliance Time

The Boeing Company also requests that paragraph (l) of the NPRM be revised to extend the grace period for some Group 1 airplanes and all of the Group 2 airplanes. The commenter suggests using the wording, "Before the accumulation of 60,000 total flight cycles, or within the earlier of 4 years or 7,200 flight cycles after the effective date of this AD." The commenter notes that some Group 1 airplanes and all of the Group 2 airplanes have been added to Revision 7 of Boeing ASB 727-53A0153, and consequently, they were not addressed by Boeing Document D6-54860 or AD 90-06-09. The commenter explains that both Revision 7 of Boeing ASB 727-53A0153 and Boeing

Document D6-54860 have a 60,000 flight cycle threshold to do the modification. However, the commenter states that the grace period in Boeing Document D6-54860 allows up to 4 years beyond the 60,000 flight cycle threshold to allow operators to schedule the airplane modification during a major maintenance check period. The commenter advises that Model 727 airplanes fly an average of 1,800 flight cycles per year or 7,200 flight cycles in 4 years. For those airplanes past the 60,000 flight cycle threshold, safety would be mitigated by the inspections at 3,700 flight cycle intervals until reaching the 7,200 flight cycle or 4-year limit, whichever occurs first. The commenter states that revising the grace period also would provide the consistency with the compliance times specified in Boeing Document D6-54860.

We agree that the compliance time may be revised for the reasons given by the commenter. We have revised paragraph (l) and added a new paragraph (m) of this AD to accommodate revision of the compliance time. This revision does not change the grace period for modification of Group 1 airplanes applicable to AD 90-06-09.

Editorial Changes

We have revised paragraph (f) of this AD to correctly reference sub-paragraphs (f)(1) and (f)(2) of this AD.

We also have revised this AD to clarify the appropriate procedure for notifying the principal inspector before using any approved AMOC on any airplane to which the AMOC applies.

In addition, we inadvertently specified in paragraph (k) of the NPRM that any cracking found during any HFEC inspection required certain corrective actions. Our intention was to specify that any cracking found during any inspection would require certain corrective actions. We have revised paragraph (k) of this AD to state that, if any cracking is detected during any inspection, certain corrective actions must be accomplished.

Explanation of Change To Applicability

We have revised the applicability of the existing AD to identify model designations as published in the most recent type certificate data sheet for the affected models.

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 changes described previously. We have determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

There are about 1,038 Model 727 airplanes of the affected design in the worldwide fleet. This AD will affect about 616 airplanes of U.S. registry.

The actions that are required by AD 91-09-07 and retained in this AD take about 58 work hours per airplane, at an average labor rate of $65 per work hour. Based on these figures, the estimated cost of the currently required actions is $3,770 per airplane, per inspection cycle.

The new inspections will take about 5 to 6 work hours per airplane, depending on the airplane configuration, at an average labor rate of $65 per work hour. Based on these figures, the estimated cost of the new actions required by this AD is between $325 and $390 per airplane, per inspection cycle.

The terminating action specified in this AD will affect airplanes on which the previous optional modification has not been accomplished, and will take between 14 and 40 work hours per airplane, depending on the airplane configuration, at an average labor rate of $65 per work hour. Required

parts for the terminating modification will cost between $877 and $6,749 per airplane, depending on the airplane configuration. Based on these figures, the estimated cost of the terminating action specified in this AD is between $1,787 and $9,349 per airplane.

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 39-6982 (56 FR 18687, April 24, 1991) and by adding the following new airworthiness directive (AD):

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

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

www.faa.gov/aircraft/safety/alerts/

2006-07-10 Boeing: Amendment 39-14537. Docket No. FAA-2005-21593; Directorate Identifier 2002-NM-328-AD.

Effective Date

(a) This AD becomes effective May 8, 2006.

Affected ADs

(b) This AD supersedes AD 91-09-07.

Applicability

(c) This AD applies to Boeing Model 727, 727C, 727-100, 727-100C, 727-200, and 727-200F airplanes, certificated in any category; as identified in Boeing Alert Service Bulletin 727-53A0153, Revision 7, dated August 14, 2003.

Unsafe Condition

(d) This AD was prompted by reports of cracking of the forward frame of the forward entry doorway of airplanes previously modified. We are issuing this AD to prevent the loss of the structural integrity of the forward entry doorway due to cracking at Body Station (BS) 303.9, and consequent cracking of the fuselage skin and 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.

Restatement of Certain Requirements of AD 91-09-07

(f) For airplanes listed in Boeing Service Bulletin 727-53-0153, Revision 5, dated December 14, 1989: Visually inspect the forward entry doorway frame for cracks in accordance with Boeing Service Bulletin 727-53-0153, dated February 1, 1980, or Revisions 1 through 5, at the earlier of the times indicated in subparagraphs (f)(1) or (f)(2) of this AD. Repeat the inspection at intervals not to exceed 3,700 landings until accomplishment of the one-time high frequency eddy current (HFEC) inspection for cracking and the one-time dimensional inspection for anomalies required by paragraph (i) of this AD, or the one-time dimensional inspection for anomalies and the initial HFEC inspection

for cracking of the forward frame of the forward entry doorway at BS 303.9 specified in paragraph (h) of this AD, as applicable.

(1) Within the next 1,850 landings after March 11, 1983 (the effective date of AD 83-03-01, amendment 39-4561), or prior to accumulating a total of 25,000 landings, whichever occurs later; or

(2) Within the next 1,850 landings after May 16, 1986 (the effective date of AD 83-03-01 R1, amendment 39-5283), or prior to accumulating a total of 15,000 landings, whichever occurs later.

(g) For airplanes modified in accordance with Boeing Service Bulletin 727-53-0153, dated February 1, 1980; through Revision 4, dated November 8, 1985; conduct the inspections described in paragraph (f) of this AD prior to the accumulation of 10,000 landings after the modification or within the next 3,700 landings after May 28, 1991 (the effective date of AD 91-09-07), whichever occurs later. Repeat the inspection at intervals not to exceed 3,700 landings until accomplishment of the one-time HFEC inspection for cracking and the one-time dimensional inspection for anomalies required by paragraph (i) of this AD, or the one-time dimensional inspection for anomalies and the initial HFEC inspection for cracking of the forward frame of the forward entry doorway at BS 303.9 specified in paragraph (h) of this AD, as applicable.

New Requirements of This AD

Repetitive Inspections for Certain Airplanes

(h) For Group 1 airplanes as defined by Boeing Alert Service Bulletin (ASB) 727-53A0153, Revision 7, dated August 14, 2003, with the exception of certain Group 1 airplanes specified in paragraph (i) of this AD: Perform a one-time dimensional inspection for anomalies (e.g., minimum dimension requirements, jagged edges, chafing, nicks, or gouges) of the web cutouts at stringers S-15 and S-16, and HFEC inspections for cracking of the forward frame of the forward entry doorway at BS 303.9; in accordance with Figure 1 of the Accomplishment Instructions of Revision 7 of the ASB at the times specified in paragraph (h)(1) or (h)(2) of this AD, as applicable. With the exception of the one-time dimensional inspection (Step 1 of Figure 1) of the web cutouts at S-15L and S-16L, repeat the HFEC inspections for cracking of the forward frame of the forward entry doorway at BS 303.9 at intervals not to exceed 3,700 flight cycles until the requirements of paragraph (l) of this AD have been accomplished.

(1) For Group 1 airplanes that have not been modified or repaired in accordance with any issue of the service bulletin through Revision 7 inclusive specified in Table 1 of this AD: Perform the inspection before the accumulation of 15,000 total flight cycles, or within 1,800 flight cycles after the effective date of this AD, whichever occurs later.

TABLE 1.—SERVICE BULLETIN REVISIONS

Service bulletin	Revision level	Date
Boeing Service Bulletin 727–53–153	Original	February 1, 1980.
Boeing Service Bulletin 727–53–153	Revision 1	June 19, 1981.
Boeing Service Bulletin 727–53–153	Revision 2	December 3, 1982.
Boeing Service Bulletin 727–53–153	Revision 3	June 17, 1983.
Boeing Service Bulletin 727–53–153	Revision 4	November 8, 1985.
Boeing Service Bulletin 727–53–0153	Revision 5	December 14, 1989.
Boeing Service Bulletin 727–53–0153	Revision 6	August 27, 1992.
Boeing Alert Service Bulletin 727–53A153	Revision 7	August 14, 2003.

(2) For Group 1 airplanes that have been modified as specified in Boeing Repair Kit 65C20303-1 in accordance with any issue of the service bulletin through Revision 4 inclusive as specified in Table 1 of this AD: Perform the inspection before the accumulation of 10,000 flight cycles after the modification, or within 1,800 flight cycles after the effective date of this AD, whichever occurs later.

One-Time Inspections and Terminating Actions for Certain Other Airplanes

(i) For Group 1 airplanes, as defined by Boeing ASB 727-53A0153, Revision 7, dated August 14, 2003, that have been modified in accordance with Revision 5 or 6 of Boeing Service Bulletin 727-53-0153 as specified in Table 1 of this AD, or that have been repaired in accordance with Boeing Repair Kit 65C20303-8 or -25 as specified in Revision 2 through Revision 6 inclusive of the service bulletin as specified in Table 1 of this AD: Within 4,500 flight cycles after the effective date of this AD, do a one-time HFEC for cracking and a dimensional inspection for any anomaly (e.g., minimum dimension requirements, jagged edges, chafing, nicks or gouges) of the web cutouts at stringers S-15L and S-16L of the forward frame of the forward entry doorway at BS 303.9, in accordance with Step 1 and Step 2 of Figure 1 of the Accomplishment Instructions of Boeing ASB 727-53A0153, Revision 7, dated August 14, 2003. For these airplanes, accomplishment of the HFEC, dimensional inspections, and any applicable corrective actions, constitutes terminating action for all the repetitive inspection requirements of this AD.

Inspections for Group 2 Airplanes

(j) For Group 2 airplanes, as defined by Boeing ASB 727-53A0153, Revision 7, dated August 14, 2003, that have not been modified or repaired in accordance with Revision 7 of the ASB: Before the accumulation of 17,000 total flight cycles, or within 4,500 flight cycles after the effective date of this AD, whichever occurs later, perform a one-time dimensional inspection for anomalies (e.g., minimum dimension requirements, jagged edges, chafing, nicks, or gouges) of the web cutouts at stringers S-15 and S-16, and HFEC inspections for cracking of the forward frame of the forward entry doorway at BS 303.9; in accordance with Figure 2 of the Accomplishment Instructions of Revision 7 of the ASB. With the exception of the one-time dimensional inspection (Step 1 of Figure 2) of the web cutouts at S-15L and S-16L, repeat the HFEC inspections for cracking of the forward frame of the forward entry doorway at BS 303.9 at intervals not to exceed 3,700 flight cycles until the requirements of paragraph (l) of this AD have been accomplished.

Corrective Actions

(k) If any cracking is detected during any inspection, or any anomaly is detected during any dimensional inspection required by this AD: Before further flight, accomplish the actions in paragraph (k)(1) or (k)(2) of this AD, as applicable.

(1) For any cracking that is within the limits specified in the Accomplishment Instructions of Boeing ASB 727-53A0153, Revision 7, dated August 14, 2003: Repair the cracking in accordance with Revision 7 of the ASB.

(2) For any cracking that is outside the limits specified in the Accomplishment Instructions of Boeing ASB 727-53A0153, Revision 7, dated August 14, 2003, or for any anomaly that is detected during any dimensional inspection required by this AD: Repair in accordance with a method approved by the Manager, Seattle Aircraft Certification (ACO), FAA; or in accordance with the procedures specified in paragraph (n) of this AD.

Terminating Actions for Certain Airplanes

(l) For airplanes specified in paragraph (l)(1) or (l)(2) of this AD: At the time specified in paragraph (m) of this AD, perform the inspections specified in Figure 1 or Figure 2, as applicable, of Revision 7 of Boeing ASB 727-53A0153, dated August 14, 2003, and as specified by paragraph (h) or (j) of this AD, as applicable. Before further flight, following the inspections, modify the forward frame in accordance with the Accomplishment Instructions of Revision 7 of the ASB. Concurrent accomplishment of the inspections and modification constitutes terminating action for the repetitive inspections required by this AD.

(1) Group 1 airplanes that have not been modified or repaired in accordance with Boeing Repair Kit 65C20303-8 or -25, as specified in Boeing Service Bulletin 727-53-153, Revision 2, dated December 3, 1982; Revision 3, dated June 17, 1983; or Revision 4, dated November 8, 1985; Boeing Service Bulletin 727-53-0153, Revision 5, dated December 14, 1989; or Revision 6, dated August 27, 1992; or Boeing ASB 727-53A0153, Revision 7, dated August 14, 2003.

(2) Group 2 airplanes that have not been repaired or modified in accordance with Revision 7 of Boeing ASB 727-53A0153, dated August 14, 2003.

Note 1: Accomplishment of the terminating actions specified in paragraph (i) or (l) of this AD does not relieve the operator of responsibility to comply with the inspection requirements of the operator's standard structural maintenance program.

Compliance Times for the Requirements of Paragraph (l) of This AD

(m) Accomplish the actions required in paragraph (l) of this AD at the later of the times specified in paragraph (m)(1) or (m)(2) of this AD.

(1) Prior to the accumulation of 60,000 total flight cycles.

(2) Within 48 months or 7,200 flight cycles after the effective date of this AD, whichever occurs first.

Alternative Methods of Compliance (AMOCs)

(n)(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) AMOCs approved previously in accordance with AD 91-09-07, amendment 39-6982, are approved as AMOCs with the corresponding requirements and provisions of this AD.

(5) Accomplishment of the actions specified in paragraph (l) of this AD constitutes an AMOC with paragraph A. of AD 90-06-09, amendment 39-6488, only for the structural modification requirements of Boeing Service Bulletin 727-53-153, as specified in Boeing Document D6-54860, Revision C, dated December 11, 1989, which is the appropriate source of service information specified by AD 90-06-09.

Material Incorporated by Reference

(o) You must use the applicable service bulletins or alert service bulletin specified in Table 2 of this AD to perform the actions that are required by this AD, unless the AD specifies otherwise. Boeing Service Bulletin 727-53-153, Revision 1, including Addendum, dated June 19, 1981, contains the following effective pages:

Page No.	Revision level shown on page	Date shown on page
1–25	1	June 19, 1981.
26	Original	February 1, 1980.
	Addendum	
1–6	1	June 19, 1981.

Boeing Service Bulletin 727-53-153, Revision 4, including Addendum, dated November 8, 1985, contains the following effective pages:

Page number	Revision level shown on page	Date shown on page
1–11, 13–19, 21	4	November 8, 1985.
12, 20, 22	3	June 17, 1983.
	Addendum	
1, 4	3	June 17, 1983.
2, 3, 5, 6	4	November 8, 1985.

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. 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*.

TABLE 2.—MATERIAL INCORPORATED BY REFERENCE

Service bulletin	Revision level	Date
1. Boeing Service Bulletin 727–53–153	Original	February 1, 1980.
2. Boeing Service Bulletin 727–53–153, including Addendum	Revision 1	June 19, 1981.
3. Boeing Service Bulletin 727–53–153, including Addendum	Revision 2	December 3, 1982.
4. Boeing Service Bulletin 727–53–153, including Addendum	Revision 3	June 17, 1983.
5. Boeing Service Bulletin 727–53–153, including Addendum	Revision 4	November 8, 1985.
6. Boeing Service Bulletin 727–53–0153, including Addendum	Revision 5	December 14, 1989.
7. Boeing Alert Service Bulletin 727–53A0153	Revision 7	August 14, 2003.

Issued in Renton, Washington, on March 17, 2006.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 06-3065 Filed 3-31-06; 8:45 am]

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