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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2008-0412; Directorate Identifier 2007-NM-346-AD; Amendment 39-15870; AD 2009-07-11]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 737-300, -400, and -500 Series 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 all Boeing Model 737-300, -400, and -500 series airplanes. That AD currently requires repetitive inspections for discrepancies of the fuselage skin under the dorsal fin assembly, and repairing if necessary. This new AD requires an inspection for any chafing or crack in the fuselage skin and abrasion resistant coating at the dorsal fin landing, an inspection for damage to the dorsal fin seals, attach clip, and seal retainer, and other specified and corrective actions as necessary. The new requirements will end the need for the existing repetitive inspections. This AD results from a report of an 18-inch crack found in the fuselage skin area under the blade seals of the nose cap of the dorsal fin due to previous wear damage, and additional reports of fuselage skin wear. We are issuing this AD to prevent discrepancies of the fuselage skin, which could result in fatigue cracking due to cabin pressurization and consequent rapid in-flight decompression of the airplane fuselage.

DATES: This AD becomes effective May 14, 2009.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of May 14, 2009.

On November 12, 2004 (69 FR 62567, October 27, 2004), the Director of the Federal Register approved the incorporation by reference of Boeing Message Number 1-QXO35, dated October 13, 2004.

ADDRESSES: For service information identified in this AD, contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207; telephone 206-544-9990; fax 206-766-5682; e-mail DDCS@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

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that supersedes AD 2004-22-05, amendment 39-13833 (69 FR 62567, October 27, 2004). The existing AD applies to all Boeing Model 737-300, -400, and -500 series airplanes. That NPRM was published in the Federal Register on April 24, 2008 (73 FR 22088). That NPRM proposed to continue to require repetitive inspections for discrepancies of the fuselage skin under the dorsal fin assembly, and repairing if necessary. That NPRM also proposed to add an inspection for any chafing or crack in the fuselage skin and abrasion resistant coating at the dorsal fin landing, an inspection for damage to the dorsal fin seals, attach clip, and seal retainer, and other specified and corrective actions as necessary.

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 Clarify Certain Language in Paragraph (i) of the NPRM

Boeing asks that we change certain language in paragraph (i) of the NPRM to add the word "abrasion" as follows: "Do a detailed inspection for any signs of abrasion, chafing, or crack . * * *" Boeing also asks that we change that same paragraph to make the word "retainer" plural as follows: "do a detailed inspection for damage to the dorsal fin seals, attach clip, and seal retainers, and do all applicable other specified and corrective actions * * *" Boeing states that these changes will clarify that the inspection is also for signs of abrasion and that there is more than one seal retainer.

We agree to add the word "abrasion" (in parentheses) to the description of the discrepancies specified in paragraph (i) of the AD because abrasion is a synonym of chafing. We also agree that there are multiple seal retainers and we have also included that in paragraph (i) of the AD for clarification.

Boeing also asks that we change the last sentence in paragraph (i) of the NPRM for clarification to add that paragraph (g) of the NPRM is also terminated by the actions in paragraph (i).

We do not agree to change the last sentence in paragraph (i) of this AD. Paragraph (g) is corrective action that is accomplished if any discrepancy is found during any inspection required by paragraph (f) of the AD. The terminating action in paragraph (i) is for the repetitive inspections in paragraph (f); therefore, if operators are no longer performing those inspections then the corrective action will not be necessary. We have made no change to the AD in this regard.

Request To Expand Inspection to Add the Wear Strip

Japan Transocean Air (JTA) asks that we expand the inspection specified in paragraph (i) of the NPRM to include an inspection of either the fuselage skin or the wear strip. JTA notes that AD 2004-22-05 requires repetitive detailed inspections for discrepancies (wear or cracking) of the fuselage skin under the dorsal fin assembly, and the new requirements retain this inspection. JTA states that it plans to install wear strips in accordance with Boeing Alert Service Bulletin 737-53A1266, dated August 30, 2007. In order to avoid removal of the wear strip, JTA asks that repetitive inspections for either the fuselage skin or the wear strip be included in the NPRM.

We do not agree to include a requirement to inspect either the fuselage skin or the wear strip. Accomplishing all of the applicable actions in paragraph (i) of the AD terminates the repetitive inspections required by AD 2004-22-05; the new requirements do not retain the repetitive inspections as noted by the commenter. Paragraph (i) of the NPRM follows the inspection procedures specified in Boeing Alert Service Bulletin 737-53A1266, dated August 30, 2007. However, according to the provisions of paragraph (l) of this AD, the operator can apply for an alternative method of compliance (AMOC) if supporting data is provided. We have made no change to the AD in this regard.

Request To Add a Note to the Applicability Section

Boeing asks that we add a note to the applicability section of the NPRM to address operators who may have accomplished repairs or modifications in the subject area. Boeing states that some operators have accomplished Boeing Service Bulletin 737-55-1057, dated December 12, 1996, structural repair manual (SRM) repairs, or AD 2004-22-05 in the subject area and some of the repairs are no longer acceptable.

We do not agree to add a note to the applicability section in this AD. The new inspections required by paragraph (i) of the AD are required on all airplanes, as identified in paragraph (c) of this AD. For airplanes on which existing repairs, alterations, or modifications do not allow for the inspections, you must request an AMOC as required by 14 CFR 39.17. We will consider requests for AMOCs under the provisions of paragraph (l) of the AD, which will then be evaluated to ensure that the unsafe condition has been addressed. We have made no change to the AD in this regard.

Request To Clarify Compliance Section

Boeing asks that we clarify the action required in the compliance section as specified at the end of the sentence of paragraph (e) of the NPRM. Paragraph (e) specifies in part "*** unless the actions have already been done." Boeing suggests we change that language in paragraph (e) to read: "*** unless the actions required by this AD have already been done." Boeing states that this change would clarify the actions required by the AD.

We do not agree to clarify paragraph (e) of this AD. We find that the current language is clear as written. We have made no change to the AD in this regard.

Request To Clarify the Purpose of Restating the Requirements in AD 2004-22-05

Boeing asks that we clarify the reason for the requirements specified in paragraphs (f), (g), and (h) of the NPRM. Boeing states that the purpose of restating the requirements of AD 2004-22-05 in the NPRM is unclear and confusing. Boeing notes that we need to clearly indicate if the restatement section is meant to reprint AD 2004-22-05, and if so, those sections should contain the same language and indicate that the previous AD is obsolete. Boeing adds that if the intention of the new AD is to restate some of the requirements of AD 2004-22-05, then Boeing points out that Boeing Service Bulletin 737-55-1057, dated December 12, 1996 (referenced in AD 2004-22-05) has been cancelled; Boeing Message Number I-QXO35, dated October 13, 2004 (also referenced in AD 2004-22-05), has

been superseded by Boeing Alert Service Bulletin 737-53A1266, dated August 30, 2007, which does not require repetitive inspections.

We do not agree that the reason for the requirements specified in paragraphs (f), (g), and (h) of the AD needs clarification because these statements are restating the requirements of AD 2004-22-05, which is being superseded by this AD. As specified in the new requirements in paragraph (i) of this AD, accomplishing the actions in paragraph (i) terminates the repetitive inspections required by paragraph (f) of the AD. Since paragraph (f) restates the requirements in AD 2004-22-05, accomplishing those requirements is no longer necessary after accomplishing the requirements in paragraph (i); however, the requirements of AD 2004-22-05, as restated in this AD, remain in effect until the requirements of paragraph (i) of this AD are accomplished. Paragraph (g) of the AD is the follow-on repair if discrepancies are found, and paragraph (h) just specifies that reporting is not required. Therefore, we have made no change to the AD in this regard.

Request To Change Paragraph (l)(4) of the NPRM

Boeing asks that we change paragraph (l)(4) of the NPRM to specify the following: "AMOCs approved previously in accordance with AD 2004-22-05 and repairs accomplished in accordance with 737-300/-400/-500 SRM 737-53-60-01, repairs 9 and 10, are approved as AMOCs for the corresponding provisions of paragraphs (f) and (g) of this AD, if they fulfill the requirements provided in paragraph (i) of this AD." Boeing states that better clarification of the language is necessary to encompass SRM repairs. Boeing notes that the addition of reference to paragraph (i) is required because some airplanes on which AD 2004-22-05 has been accomplished will not meet the new requirements.

We do not agree to change paragraph (l)(4) of the AD. AMOCs approved previously for AD 2004-22-05 are approved as AMOCs to the provision of paragraphs (f) and (g) of this AD only. All airplanes are subject to the new inspection requirements specified in paragraph (i) of the AD. For airplanes on which existing repairs, alterations, or modifications do not allow for the inspection, we will consider requests for AMOCs under the provisions of paragraph (l) of the AD, which will then be evaluated to ensure that the unsafe condition has been addressed. We have made no change to the AD in this regard.

Request To Exclude Certain Inspections of the Fuselage Skin

KLM Royal Dutch Airlines asks that the NPRM specify that inspections of the fuselage skin aft of body station (BS) 887 and BS 908 are not required if inspections done previously per AD 2004-22-05 have resulted in findings only between BS 857 and BS 887 (no findings aft of BS 887), or BS 857 and BS 908 (no findings aft of BS 908), as applicable; and when a repair has been installed per Boeing 737-300/-400/-500 SRM, Chapter 53-60-01, Repair 9 or Repair 10, as applicable, including installation of CRES 0.016 inch thick wear strips. KLM notes that the following language should be included in the NPRM: "A one-time detailed inspection for damage to dorsal fin seals, attach clip, and seal retainer, and accomplishment of all the applicable corrective actions per the Accomplishment Instructions of Boeing Service Bulletin 737-53A1266-R0 is still required."

We do not agree to exclude the inspections noted above by KLM. Repair 9 of Chapter 53-60-01 of the Boeing 737-300/-400/-500 SRM was revised in 2006 and operators that used the earlier version of Repair 9 are required to comply with the new requirements in this AD. Installation of the latest Repair 9 or Repair 10 of Chapter 53-60-01 of the Boeing 737-300/-400/-500 SRM, including the wear strips, does not eliminate the potential for wear damage aft of the repair location. Operators are still required to inspect this area to ensure there is no damage. However, according to the provisions of paragraph (l) of this AD, we may approve requests for an AMOC if the request includes data that prove that excluding the inspections would provide an acceptable level of safety. We have not changed the AD in this regard.

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 1,963 airplanes of the affected design in the worldwide fleet. This AD affects about 627 airplanes of U.S. registry.

The actions that are required by AD 2004-22-05 and retained in this AD take about 2 work hours per airplane, at an average labor rate of \$80 per work hour. Based on these figures, the estimated cost of the currently required actions for U.S. operators is \$100,320, or \$160 per airplane, per inspection cycle.

The new actions take about 15 work hours per airplane, at an average labor rate of \$80 per work hour. Required parts cost about \$801 per airplane. Based on these figures, the estimated cost of the new actions specified in this AD for U.S. operators is \$1,254,627, or \$2,001 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 39-13833 (69 FR 62567, October 27, 2004) and by adding the following new airworthiness directive (AD):



2009-07-11 Boeing: Amendment 39-15870. Docket No. FAA-2008-0412; Directorate Identifier 2007-NM-346-AD.

Effective Date

(a) This AD becomes effective May 14, 2009.

Affected ADs

(b) This AD supersedes AD 2004-22-05.

Applicability

(c) This AD applies to all Boeing Model 737-300, -400, and -500 series airplanes, certificated in any category.

Unsafe Condition

(d) This AD results from a report of an 18-inch crack found in the fuselage skin area under the blade seals of the nose cap of the dorsal fin due to previous wear damage, and additional reports of fuselage skin wear. We are issuing this AD to prevent discrepancies of the fuselage skin, which could result in fatigue cracking due to cabin pressurization and consequent rapid in-flight decompression of the airplane fuselage.

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 Requirements of AD 2004-22-05

Repetitive Detailed Inspections

(f) For airplanes specified in either paragraph (f)(1), (f)(2), (f)(3), or (f)(4) of this AD: Accomplish a detailed inspection for discrepancies (wear or cracking) of the fuselage skin under the dorsal fin assembly by doing all the actions specified in Boeing Message Number 1-QXO35, dated October 13, 2004. Repeat the inspection thereafter at intervals not to exceed 9,000 flight cycles. Accomplishing all of the applicable actions specified in paragraph (i) of this AD terminates the repetitive inspections required by this paragraph.

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."

(1) For airplanes with line numbers 1001 through 2828 inclusive that have not been inspected as of November 12, 2004 (the effective date of AD 2004-22-05), in accordance with Boeing Service Bulletin 737-55-1057, dated December 12, 1996; or Revision 1, dated July 22, 1999: Inspect before the accumulation of 18,000 total flight cycles, or within 90 days after November 12, 2004, whichever is later.

(2) For airplanes with line numbers 2829 through 3132 inclusive that are not included in the effectivity of Boeing Service Bulletin 737-55-1057, dated December 12, 1996; or Revision 1, dated July 22, 1999: Inspect before the accumulation of 18,000 total flight cycles, or within 90 days after November 12, 2004, whichever is later.

(3) For airplanes with line numbers 1001 through 2828 inclusive that have been inspected, but not repaired or modified as of November 12, 2004, in accordance with Boeing Service Bulletin 737-55-1057, dated December 12, 1996; or Revision 1, dated July 22, 1999: Inspect within 9,000 flight cycles after accomplishing the inspection, or within 90 days after November 12, 2004, whichever is later.

(4) For airplanes with line numbers 1001 through 2828 inclusive that have been inspected and repaired or modified as of November 12, 2004, in accordance with Boeing Service Bulletin 737-55-1057, dated December 12, 1996; or Revision 1, dated July 22, 1999: Inspect within 18,000 flight cycles after accomplishing the repair or modification, or within 90 days after November 12, 2004, whichever is later; and if a repair doubler is installed, before further flight, inspect the repair doubler for discrepancies (wear or cracking).

Note 2: Boeing Message Number 1-QXO35, dated October 13, 2004, references Part I of Boeing Service Bulletin 737-55-1057, Revision 1, dated July 22, 1999, as an additional source of service information for accomplishing the actions required by paragraph (f) of this AD.

Repair

(g) If any discrepancy (wear or cracking) is found during any inspection required by paragraph (f) of this AD, before further flight, repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA; or using a method approved in accordance with the procedures specified in paragraph (1) of this AD.

Reporting Not Required

(h) Although Boeing Message Number 1-QXO35, dated October 13, 2004, specifies to report any fuselage skin cracking found during the detailed inspections, this AD does not include that requirement.

New Requirements of This AD

New Inspections and Other Specified and Corrective Actions

(i) At the applicable compliance times specified in paragraph 1.E. of Boeing Alert Service Bulletin 737-53A1266, dated August 30, 2007, except as provided by paragraph (j) of this AD: Do a detailed inspection for any chafing (abrasion) or crack in the fuselage skin of the dorsal fin landing and abrasion resistant coating, do a detailed inspection for damage to dorsal fin seals, attach clip, and seal retainers, and do all the applicable other specified and corrective actions, by accomplishing all of the applicable actions specified in the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1266, dated August 30, 2007, except as provided by paragraph (k) of this AD. Accomplishing all of the applicable actions specified in this paragraph terminates the repetitive inspections required by paragraph (f) of this AD.

Exception to Compliance Times

(j) Where Boeing Alert Service Bulletin 737-53A1266, dated August 30, 2007, specifies counting the compliance time from " * * * the date on the service bulletin," this AD requires counting the compliance time from the effective date of this AD.

Exception to Corrective Actions

(k) If any damage is found aft of body station 908 during any inspection required by this AD, and Boeing Alert Service Bulletin 737-53A1266, dated August 30, 2007, specifies to contact Boeing for appropriate action: Before further flight, repair the fuselage skin using a method approved in accordance with the procedures specified in paragraph (l) of this AD.

Alternative Methods of Compliance (AMOCs)

(l)(1) The Manager, Seattle Aircraft Certification Office, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(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 appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(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 2004-22-05 are approved as AMOCs for the corresponding provisions of paragraphs (f) and (g) of this AD.

Material Incorporated by Reference

(m) You must use Boeing Alert Service Bulletin 737-53A1266, dated August 30, 2007; and Boeing Message Number 1-QXO35, dated October 13, 2004; as applicable; 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 Boeing Alert Service Bulletin 737-53A1266, dated August 30, 2007, under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) The Director of the Federal Register previously approved the incorporation by reference of Boeing Message Number 1-QXO35, dated October 13, 2004, on November 12, 2004 (69 FR 62567, October 27, 2004).

(3) 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>.

(4) 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.

(5) 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.

Issued in Renton, Washington, on March 25, 2009.
Ali Bahrami,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.