



# ÚŘAD PRO CIVILNÍ LETECTVÍ

SEKCE TECHNICKÁ

## PŘÍKAZ K ZACHOVÁNÍ LETOVÉ ZPŮSOBILOSTI

**Číslo: FAA AD 2011-04-10**

Ruší FAA AD 2009-23-10

Účinnost od: 25. března 2011

**Boeing Company**

Modely 737-300, -400, -500

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Tento PZZ je vydáván pro výrobek transferovaný pod působnost EASA.

Na základě rozhodnutí EASA je následující Příkaz k zachování letové způsobilosti závazný pro všechny výrobky provozované v EU, na které se daný PZZ vztahuje.

Provedení PZZ, který se vztahuje podle typu a výrobního čísla na výrobek je pro provozovatele/vlastníka letadla zapsaného do leteckého rejstříku závazné. Neprovedením PZZ ve stanoveném termínu dojde ke ztrátě letové způsobilosti výrobku.

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**Poznámky:**

- Provedení tohoto PZZ musí být zapsáno do provozní dokumentace letadla.
- Případné dotazy týkající se tohoto PZZ adresujte na ÚCL sekce technická.
- Pokud to vyžaduje povaha tohoto PZZ, musí být zapracován do příslušné části dokumentace pro obsluhu, údržbu a opravy letadla.

[Federal Register Volume 76, Number 34 (Friday, February 18, 2011)]  
[Rules and Regulations]  
[Pages 9498-9501]  
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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2010-0379; Directorate Identifier 2009-NM-210-AD; Amendment 39-16609; AD 2011-04-10]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Model 737-300, -400, and -500 Series Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** The FAA is superseding an existing airworthiness directive (AD), which applies to all Model 737-300, -400, and -500 series airplanes. That AD currently requires inspecting to determine if certain carriage spindles are installed, repetitive inspections for corrosion and indications of corrosion on affected carriage spindles, and if necessary, related investigative and corrective actions. That AD also provides an optional terminating action. This new AD mandates the optional terminating action, which eliminates the need for the repetitive inspections. This AD results from reports of corrosion found on carriage spindles that are located on the outboard trailing edge flaps. We are issuing this AD to detect and correct corrosion of the carriage spindle, which could result in fracture. Fracture of both the inboard and outboard carriage spindles, in the forward ends through the large diameters, on a flap, could adversely affect the airplane's continued safe flight and landing.

**DATES:** This AD becomes effective March 25, 2011.

On November 24, 2009 (74 FR 57564, November 9, 2009), the Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD.

On August 5, 2008 (73 FR 42259, July 21, 2008), the Director of the Federal Register approved the incorporation by reference of a certain other publication listed in the AD.

**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>.

## **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:** Nancy Marsh, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6440; 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 2009-23-10, Amendment 39-16084 (74 FR 57564, November 9, 2009). The existing AD applies to all Model 737-300, -400, and -500 series airplanes. That NPRM was published in the Federal Register on April 8, 2010 (75 FR 17882). That NPRM proposed to continue to require inspecting to determine if certain carriage spindles are installed, repetitive inspections for corrosion and indications of corrosion on affected carriage spindles, and if necessary, related investigative and corrective actions. The existing AD also provides an optional terminating action. That NPRM also proposed to mandate the optional terminating action, which would eliminate the need for the repetitive inspections.

### **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 (k) of the NPRM**

Boeing, Continental Airlines (CAL), and British Airways Plc requested that paragraph (k) of the NPRM be revised to identify additional replacement parts for the affected high velocity oxy-fuel (HVOF)-coated spindles. (Paragraph (k) of the NPRM proposed to require replacement of HVOF-coated carriage spindles having serial numbers identified in Table 2 or 3 of Appendix A of Boeing Service Bulletin 737-57A1304, Revision 1, dated August 11, 2009, with either a non-HVOF-coated carriage spindle, or with a serviceable HVOF-coated carriage spindle with an 'R' suffix on the serial number. Tables 2 and 3 of that service bulletin identify both part numbers and serial numbers of the affected carriage spindles.)

Boeing requested that we revise paragraph (k) of the NPRM to specify that "new" HVOF-coated carriage spindles with serial numbers not listed in Table 2 or 3 of Appendix A of the referenced Boeing service bulletin are also acceptable replacements.

British Airways Plc requested that we revise paragraph (k) of the NPRM to add "serviceable" carriage spindles not listed in Table 2 or 3 of Appendix A of the referenced Boeing service bulletin as acceptable replacements.

CAL noted that there is no mention in paragraph (k) of the NPRM of "serviceable," non-suspect HVOF-coated carriage spindles that do not have an 'R' suffix. CAL indicated that those particular carriage spindles are not listed in Tables 2 and 3 of Appendix A and, therefore, are not affected by the

NPRM. In light of this, CAL requested that paragraph (k) of the NPRM be revised to specify that the repetitive inspections can be terminated by replacing affected HVOF-coated carriage spindles with serviceable, non-suspect HVOF-coated carriage spindles that do not have an 'R' suffix.

We agree with the commenters' requests. We have revised paragraph (j) of the final rule (paragraph (k) of the NPRM) to include the following carriage spindles as acceptable replacements: (1) Non-HVOF-coated carriage spindles; (2) new or serviceable HVOF-coated carriage spindles having serial numbers that are NOT identified in Table 2 or Table 3 of Appendix A of Boeing Service Bulletin 737-57A1304, Revision 1, dated August 11, 2009, without an 'R' suffix on the serial number; and (3) serviceable HVOF-coated carriage spindles with an 'R' suffix on the serial number.

We also have removed paragraph (j), "Parts Installation," of the NPRM. That paragraph was restated from AD 2009-23-10. Since terminating action is now available, the paragraph is no longer necessary.

## **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 482 airplanes of the affected design in the worldwide fleet. This AD affects about 150 airplanes of U.S. registry.

The inspection that is required by AD 2009-23-10 and retained in this AD takes about 2 work hours per airplane, at an average labor rate of \$85 per work hour. Based on these figures, the estimated cost of the currently required inspection is \$170 per airplane, per inspection cycle.

The replacement of each affected carriage spindle that is required by this AD will take about 17 work hours per spindle (4 spindles per airplane), at an average labor rate of \$85 per work hour. Required parts cost is provided under warranty. Based on these figures, the estimated cost of the replacement specified in this AD for U.S. operators is up to \$867,000 or up to \$5,780 per airplane, or \$1,445 per carriage spindle.

## **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 39-16084 (74 FR 57564, November 9, 2009) and by adding the following new airworthiness directive (AD):



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**2011-04-10 The Boeing Company:** Amendment 39-16609. Docket No. FAA-2010-0379; Directorate Identifier 2009-NM-210-AD.

**Effective Date**

- (a) This AD becomes effective March 25, 2011.

**Affected ADs**

- (b) This AD supersedes AD 2009-23-10, Amendment 39-16084.

**Applicability**

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

**Subject**

- (d) Air Transport Association (ATA) of America Code 57: Wings.

**Unsafe Condition**

- (e) This AD results from reports of corrosion found on carriage spindles that are located on the outboard trailing edge flaps. The Federal Aviation Administration is issuing this AD to detect and correct corrosion of the carriage spindle, which could result in fracture. Fracture of both the inboard and outboard carriage spindles, in the forward ends through the large diameters, on a flap, could adversely affect the airplane's continued safe flight and landing.

**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.

**Restatement of Requirements of AD 2008-15-05, Amendment 39-15617**

**Inspection To Determine Affected Carriage Spindle**

- (g) For all airplanes: Within 30 days after August 5, 2008 (the effective date of AD 2008-15-05), inspect the carriage sub-assembly to determine whether an affected carriage spindle with a high velocity oxy-fuel (HVOF) thermal coating is installed, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-57A1304, dated June 2, 2008. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number and/or serial number of the carriage can be conclusively determined from that review. If no affected carriage spindle is installed, no further action is required by this paragraph.

## **Repetitive Inspections, Related Investigative Actions, and Corrective Action**

(h) For airplanes on which any affected carriage spindle was determined to be installed in accordance with Boeing Alert Service Bulletin 737-57A1304, dated June 2, 2008, as of August 5, 2008; and the spindle is identified in Table 2 of Boeing Service Bulletin 737-57A1304, Revision 1, dated August 11, 2009: At the later of the times specified in paragraphs (h)(1) and (h)(2) of this AD, do a detailed inspection (or, as an option for the forward end of the spindle only, a borescope inspection technique may be used) of the spindle for corrosion and potential indications of corrosion of the carriage spindle, and do all applicable related investigative and corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-57A1304, dated June 2, 2008; or Boeing Service Bulletin 737-57A1304, Revision 1, dated August 11, 2009. Do all applicable related investigative and corrective actions before further flight. Repeat the detailed inspection (or, as an option for the forward end of the spindle only, the borescope inspection) and certain related investigative actions (i.e., the gap-check or optional non-destructive test (NDT) ultrasonic inspection) at the applicable compliance times specified in paragraph 1.E. of Boeing Alert Service Bulletin 737-57A1304, dated June 2, 2008; or Boeing Service Bulletin 737-57A1304, Revision 1, dated August 11, 2009.

(1) Within 30 days after August 5, 2008.

(2) Within 90 days after the installation of a new HVOF-coated spindle.

**Note 1:** Boeing Alert Service Bulletin 737-57A1304, dated June 2, 2008; and Boeing Service Bulletin 737-57A1304, Revision 1, dated August 11, 2009; reference Boeing Alert Service Bulletin 737-57A1277, Revision 1, dated November 25, 2003; for further guidance on accomplishing the related investigative actions.

## **Restatement of Requirements of AD 2009-23-10, Amendment 39-16084**

### **Repetitive Inspections, Related Investigative Actions, and Corrective Action for Certain Airplanes**

(i) For airplanes on which a carriage spindle having a serial number identified in Table 3 of Appendix A of Boeing Service Bulletin 737-57A1304, Revision 1, dated August 11, 2009, is installed: At the latest of the times specified in paragraphs (i)(1), (i)(2), and (i)(3) of this AD, as applicable, do a detailed inspection (or, as an option for the forward end of the spindle only, a borescope inspection technique may be used) of the spindle for corrosion and potential indications of corrosion of the carriage spindle, and do all applicable related investigative and corrective actions, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 737-57A1304, Revision 1, dated August 11, 2009. Do all applicable related investigative and corrective actions before further flight. Repeat the detailed inspection (or, as an option for the forward end of the spindle only, the borescope inspection) and related investigative actions (i.e., the gap-check or optional NDT ultrasonic inspection) at the applicable compliance times specified in paragraph 1.E. of Boeing Service Bulletin 737-57A1304, Revision 1, dated August 11, 2009.

(1) Within 30 days after November 24, 2009 (the effective date of AD 2009-23-10).

(2) Within 90 days after the installation of a new HVOF-coated spindle identified in Table 3 of Appendix A of Boeing Service Bulletin 737-57A1304, Revision 1, dated August 11, 2009.

(3) Within 90 days after doing an inspection in accordance with Boeing Alert Service Bulletin 737-57A1304, dated June 2, 2008.

## **New Requirements of This AD**

### **Terminating Action**

(j) Within 48 months after the effective date of this AD: Replace any HVOF-coated carriage spindle having a serial number identified in Table 2 or Table 3 of Appendix A of Boeing Service Bulletin 737-57A1304, Revision 1, dated August 11, 2009, with a non-HVOF-coated carriage spindle; or a serviceable HVOF-coated carriage spindle with an 'R' suffix on the serial number; or a new or serviceable HVOF-coated carriage spindle having a serial number not identified in Table 2 or Table 3 of Appendix A of Boeing Service Bulletin 737-57A1304, Revision 1, dated August 11, 2009, without an 'R' suffix on the serial number; in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-57A1304, dated June 2, 2008; or Boeing Service Bulletin 737-57A1304, Revision 1, dated August 11, 2009. Replacing all affected carriage spindles terminates the repetitive inspections required by 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: Nancy Marsh, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle ACO, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6440; fax (425) 917-6590. Or, e-mail information to 9-ANM-Seattle-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 Delegation 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.

### **Material Incorporated by Reference**

(l) You must use Boeing Alert Service Bulletin 737-57A1304, dated June 2, 2008; and Boeing Service Bulletin 737-57A1304, Revision 1, dated August 11, 2009; as applicable; to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register previously approved the incorporation by reference of Boeing Service Bulletin 737-57A1304, Revision 1, dated August 11, 2009, on November 24, 2009 (74 FR 57564, November 9, 2009).

(2) The Director of the Federal Register previously approved the incorporation by reference of Boeing Alert Service Bulletin 737-57A1304, dated June 2, 2008, on August 5, 2008 (73 FR 42259, July 21, 2008).

(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.

(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](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Renton, Washington on February 10, 2011.

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