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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2011-1093; Directorate Identifier 2010-NM-149-AD; Amendment 39-17163; AD 2012-16-16]**

**RIN 2120-AA64**

#### **Airworthiness Directives; The Boeing Company Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for all The Boeing Company Model 757 airplanes. This AD was prompted by a report of extensive corrosion of the ballscrew of the drive mechanism of the horizontal stabilizer trim actuator. This AD requires repetitive detailed inspections for discrepancies of the horizontal stabilizer ballscrew assembly; repetitive lubrication of the horizontal stabilizer trim control system; repetitive measurements for discrepancies of the ballscrew to ballnut freeplay; and corrective actions, if necessary. We are issuing this AD to prevent undetected failure of the primary and secondary load paths for the ballscrew in the horizontal stabilizer, which could lead to loss of control of the horizontal stabilizer and consequent loss of control of the airplane.

**DATES:** This AD is effective September 26, 2012.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of September 26, 2012.

**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; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal

holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Kenneth Frey, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: (425) 917-6468; fax: (425) 917-6590; email: kenneth.frey@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM published in the Federal Register on October 25, 2011 (76 FR 65991). That NPRM proposed to require repetitive detailed inspections for discrepancies of the horizontal stabilizer ballscrew assembly; repetitive lubrication of the horizontal stabilizer trim control system; repetitive measurements for discrepancies of the ballscrew to ballnut freeplay; and corrective actions, if necessary.

### **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal (76 FR 65991, October 25, 2011) and the FAA's response to each comment.

### **Requests To Withdraw the NPRM (76 FR 65991, October 25, 2011)**

Airlines for America (A4A), on behalf of its member American Airlines (AAL), asked that the NPRM (76 FR 65991, October 25, 2011) be withdrawn. A4A stated that in view of previously implemented maintenance procedures designed to prevent malfunctions of the horizontal stabilizer trim actuator (HSTA), and maintenance data gathered in accomplishing those and other related procedures, the NPRM is not necessary. A4A added that those procedures include instructions mandated by AD 2005-12-18, Amendment 39-14134 (70 FR 35166, June 17, 2005), which requires inspection and overhaul of the primary brake of the HSTA, "upgrades to HSTA maintenance in the Boeing maintenance planning document (MPD), and corresponding upgrades to air carrier maintenance programs." AAL stated that the "Discussion" section of the NPRM specifies "Jackscrews and ballscrews are similar in function and have similar airplane level failure modes." AAL noted that this statement is not accurate in defining the risk posed by the ballscrew design. AAL added that the ballscrew uses ball bearings for the primary load path, and a male thread nut for the secondary load path is more tolerant of inadequate lubrication conditions than the jackscrew/acme nut design used on Model MD-80 airplanes. AAL also stated that the NPRM specifies that the unsafe condition is likely to exist or develop on other products of the same type design, which misrepresents the level of risk to the Model 757 worldwide fleet.

We disagree with the requests to withdraw the NPRM (76 FR 65991, October 25, 2011). Although the maintenance procedures in AD 2005-12-18, Amendment 39-14134 (70 FR 35166, June 17, 2005), will prevent grease contamination on the primary HSTA brake, the repetitive intervals for the subject actions are not frequent enough to prevent corrosion in the ballscrew of the drive mechanism of the HSTA, which could result in undetected failure of both the primary and secondary load paths. In light of this, we have determined that the unsafe condition is likely to exist or develop

on the affected airplanes. As a result of that determination, we are issuing this AD in order to eliminate the unsafe condition by requiring that the actions be done at the required intervals.

### **Request To Issue Emergency Airworthiness Directive**

Captain Rick Petersen, a private citizen, asked that a "more deliberate emergency type directive" be issued instead of an NPRM (76 FR 65991, October 25, 2011). The commenter stated that extensive corrosion found on any flight control mechanism is enough evidence to justify an emergency type directive.

We do not agree with the commenter's request. Before issuing the NPRM (76 FR 65991, October 25, 2011), we considered the urgency of the identified unsafe condition and the actions required to correct that unsafe condition. We also considered appropriate compliance times for requiring that those actions be done, in order to correct the unsafe condition in a timely manner to ensure continued safety. We coordinated those times with the manufacturer. At that time, we determined that it was practicable to provide notice and opportunity for public comment. In addition, in consideration of the amount of time that has already elapsed since issuance of the original notice, we find that to further delay issuance of this final rule by converting it to another type of AD rulemaking is inappropriate and unnecessary. Therefore, we have not changed the AD in this regard.

### **Requests To Change Flight Cycles to Flight Hours**

A4A, on behalf of its members AAL and UPS, and Boeing requested that the airplane groups specified in paragraphs (g) and (h) of the NPRM (76 FR 65991, October 25, 2011) be identified in terms of flight hours instead of flight cycles. UPS stated that Boeing Alert Service Bulletin 757-27A0144, Revision 1, dated January 20, 2010, identifies flight hours for that determination. UPS added that in order to maintain consistency, flight cycles should be changed to flight hours. Boeing also noted that this is a grammatical error.

We agree with the commenters' requests. We inadvertently specified "total flight cycles" instead of "total flight hours." Boeing Alert Service Bulletins 757-27A0144, and 757-27A0145, both Revision 1, both dated January 20, 2010, specify groups that "\* \* \* have completed less than or equal to 15,000 flight hours" and that "have completed more than 15,000 flight hours." We did not intend to differ from the service information. All the compliance times specified in paragraphs (g) and (h) of the NPRM (76 FR 65991, October 25, 2011) were expressed in terms of flight hours and we did not give notice in the NPRM that we were differing from the service information in this regard. Therefore, we have changed the term "total flight cycles" to "total flight hours" in the description of the affected airplanes for paragraphs (g) and (h) of this AD.

### **Requests To Revise Compliance Times**

Boeing and A4A requested that we revise certain compliance times. Boeing asked that paragraphs (g)(1)(ii), (g)(3)(ii), (h)(1)(ii), (h)(3)(ii), (i)(1)(ii), and (i)(3)(ii) of the NPRM (76 FR 65991, October 25, 2011) be deleted, and that the compliance times in each sub-paragraph be consolidated into one compliance time in the applicable parent paragraph. Boeing stated that Boeing Alert Service Bulletins 757-27A0144 and 757-27A0145, both Revision 1, both dated January 20, 2010, do not differentiate between the airplanes on which a detailed inspection has or has not been done previously, and added that it is not included in the "Differences" section of the NPRM. Boeing noted that the only difference between the paragraphs (g)(1) and (g)(2) of the NPRM, paragraphs (g)(3) and (g)(4) of the NPRM, paragraphs (h)(1) and (h)(2) of the NPRM, paragraphs (h)(3) and (h)(4) of the NPRM, and paragraphs (i)(3) and (i)(4) of the NPRM is whether there is a 6 or 18 month compliance time allowance. Boeing also noted the only difference between paragraphs (i)(1) and (i)(2) of the NRPM is whether the HSTA has been overhauled. Boeing noted that this complicates the

related actions in the NPRM, and is not necessary for the continued airworthiness of airplanes on which an HSTA is installed.

A4A, on behalf of its member AAL, requested that we revise the compliance times specified in paragraphs (g)(1), (h)(1), (i)(1), (g)(2), (h)(2), and (i)(2) of the NPRM (76 FR 65991, October 25, 2011), so that airplanes previously inspected and airplanes not previously inspected have the same compliance times, rather than allowing a longer compliance time for airplanes that have not been inspected. A4A also requested that we revise the compliance times specified in paragraphs (g)(3), (h)(3), (i)(3), (g)(4), and (h)(4) of the NPRM, so that HSTAs that have been previously lubricated are provided a longer compliance time.

We agree with the commenter's requests. Boeing Alert Service Bulletins 757-27A0144 and 757-27A0145, both Revision 1, both dated January 20, 2010, do not differentiate between the airplanes on which a detailed inspection has or has not been done previously. In light of this fact, we have deleted paragraphs (g)(1)(i), (g)(1)(ii), (g)(2), (g)(3)(i), (g)(3)(ii), (g)(4), (h)(1)(i), (h)(1)(ii), (h)(2), (h)(3)(i), (h)(3)(ii), (h)(4), (i)(1)(i), (i)(1)(ii), (i)(2), (i)(3)(i), (i)(3)(ii), and (i)(4) of the NPRM (76 FR 65991, October 25, 2011). The compliance times and the initial inspection and lubrication tasks specified in paragraphs (g), (h), and (i) of this AD have been consolidated to include the actions in those subparagraphs, and to simplify the compliance times. These changes are relieving and allow operators more time to incorporate the requirements of this AD into their maintenance schedules.

These compliance times differ from the compliance times in the referenced service information in that certain compliance times in this AD are based on time after the effective date of this AD. The compliance times in this AD will prevent airplanes from immediately being out of compliance with the AD requirements, because they will prevent grounding an airplane if it has already exceeded the compliance times specified in Boeing Alert Service Bulletins 757-27A0144, and 757-27A0145, both Revision 1, both dated January 20, 2010. The compliance times in this AD have precedence over the compliance times specified in Boeing Alert Service Bulletins 757-27A0144, and 757-27A0145, both Revision 1, both dated January 20, 2010. We have changed paragraphs (g), (h), and (i) of this AD accordingly by including the initial compliance times in revised paragraphs (g)(1), (g)(2), (h)(1), (h)(2), (i)(1), and (i)(2) of this AD. Paragraphs (g)(5), (h)(5), and (i)(5) of the NPRM (76 FR 65991, October 25, 2011), are specified as paragraphs (g)(3), (h)(3), and (i)(3) in this AD. We have clarified the compliance time in paragraph (i)(3)(i) of this AD (paragraph (i)(5)(i) of the NPRM) by revising the compliance time "Before the accumulation of 15,000 total flight hours after accomplishing an overhaul \* \* \*" to specify "Within 15,000 flight hours after accomplishing an overhaul \* \* \*."

### **Request To Provide Clarification of Freeplay Measurement**

Boeing asked that we clarify the freeplay measurement language in the "Differences" section and paragraph (k) of the NPRM (76 FR 65991, October 25, 2011) to avoid misinterpretation by operators. Boeing stated that 0.001 inch of freeplay is sufficient to verify that the ballnut rolling elements are free and there is room for grease action. Boeing added that page 704 of the supplier Component Maintenance Manual (CMM) 27-41-10, specifies that axial lash of 0.002 to 0.006 inch is acceptable for assembly at overhaul. Boeing noted that that some margin of error on the low side of 0.002 inch is necessary to avoid unwarranted removal of units built to the low limit of tolerance, in addition to clarifying that there is a high limit (0.016 inch) as well as a low limit (0.001 inch). Boeing concluded that the acceptable range specified in paragraph (k) of the NPRM could be interpreted as 0.002 to 0.006 inch, which is not what was intended.

We agree with the request to clarify the freeplay measurement requirement, for the reasons provided. We have changed paragraph (k) of this AD accordingly. However, since the "Differences" section of the preamble does not reappear in the final rule, no change to the AD is necessary in this regard.

## **Request To Remove Certain Language From Paragraph (l) of the NPRM (76 FR 65991, October 25, 2011)**

A4A, on behalf of its member AAL, asked that the language "hard time replacement program" be removed from the credit language specified in paragraph (l) of the NPRM (76 FR 65991, October 25, 2011). AAL stated that paragraph (l) of the NPRM provides credit for installation of new or overhauled HSTAs, but added that the quoted language could limit that credit. AAL noted that paragraph (l) of the NPRM specifies that the overhaul, when conducted as part of a hard time replacement program "meets the intent of one detailed inspection, one freeplay inspection, and one lubrication of the HSTA." AAL stated that any overhaul that includes removal of the HSTA, and overhaul of the stabilizer ballscrew that are done in accordance with the instructions in the original equipment manufacturer CMM, should meet the intent of the subject actions, regardless of whether the overhaul is done as part of a "hard time replacement program." AAL added that all overhauls, regardless of the reasons for removal, would meet the proposed requirements.

We agree with the request for the reasons provided. We have removed the subject language from paragraph (l) of this AD accordingly.

## **Request To Remove Note 1 of the NPRM (76 FR 65991, October 25, 2011)**

UPS asked that Note 1 of the NPRM (76 FR 65991, October 25, 2011) be removed because it serves no practical purpose. UPS stated that this note provides additional guidance for verification of the measurement in Subject 27-41-10, "Stabilizer Trim Ballscrew Freeplay," of Chapter 27, "Flight Controls," of the Boeing 757 Airplane Maintenance Manual (AMM), Revision 101, dated May 20, 2011. UPS added that, if this note refers to the measurement in paragraph (k) of the NPRM, it should also refer to CMM 27-41-05 for HSTA guidance for the 0.002 inch measurement.

We disagree with the request. The reference to Subject 27-41-10, "Stabilizer Trim Ballscrew Freeplay," of Chapter 27, "Flight Controls," of the Boeing 757 Airplane Maintenance Manual (AMM), Revision 101, dated May 20, 2011, is correct. The guidance in Note 1 of this AD refers maintenance personnel to the procedures that verify the measurement was not made in error when the ballnut freeplay measurement is less than the measurement required by the AD. We have made no change to the AD in this regard.

## **Request To Correct Grammatical Errors**

Boeing asked that we correct grammatical errors in the "Differences" and "Relevant Service Information" sections and paragraph (k) of the NPRM (76 FR 65991, October 25, 2011). Boeing stated that the word "then" was used instead of "than."

We agree for the reason provided. We have changed the error in paragraph (k) of this AD; however, since the "Differences" and "Relevant Service Information" sections of the preamble do not reappear in the final rule, no change to the AD is necessary in this regard.

## **Request To Revise Cost Estimate**

AAL asked that the cost estimate provided in the NPRM (76 FR 65991, October 25, 2011) be increased. AAL stated that the 13 work-hours specified in the "Costs of Compliance" section of the NPRM only include the time for initial accomplishment of the required actions. AAL added that the work-hours necessary for the repetitive actions are not included.

We agree that the economic analysis in the NPRM (76 FR 65991, October 25, 2011) did not include the cost of the work-hours necessary for the repetitive actions. We have changed the "Costs of Compliance" section below to include those work-hours.

## **Request To Remove Reference to AMM**

A4A, on behalf of its member UPS, requested that we revise paragraph (j) of the NPRM (76 FR 65991, October 25, 2011) to remove reference to the AMM. UPS stated that, by referring to a specific revision of the AMM, operators would have to request an alternative method of compliance (AMOC) in order to use any later revisions of the AMM. UPS also suggested that Boeing revise Boeing Alert Service Bulletin 757-27A0144, Revision 1, dated January 2010, to include replacement procedures, and that we refer to that revised service bulletin.

We do not agree to revise paragraph (j) of this AD. We do not consider that delaying this action until after the manufacturer revises the service bulletin is warranted, since operators can accomplish the actions in accordance with the AMM. We also cannot use the phrase, "or later FAA-approved revisions," in an AD when referring to the service document because doing so violates Office of the Federal Register (OFR) regulations for approval of materials "incorporated by reference" in rules. See paragraph (f) of section 51.1 of the Code of Federal Regulations (1 CFR 51.1(f)).

To allow operators to use later revisions of the referenced document (issued after publication of the AD), either we must revise the AD to reference specific later revisions, or operators must request approval to use later revisions as an alternative method of compliance with this AD under the provisions of paragraph (n) of this AD. We have not changed this AD in this regard.

## **Request To Allow Credit for Certain Actions**

A4A, on behalf of its member UPS, requested that we revise the NPRM (76 FR 65991, October 25, 2011) to allow credit for actions accomplished per the Boeing maintenance review board report/maintenance planning document (MRBR/MPD). UPS noted that these documents refer to the same AMM sections and tasks specified in Boeing Alert Service Bulletin 757-27A0144, Revision 1, dated January 20, 2010. UPS stated that an operator that performs actions following its maintenance program is not allowed credit for accomplishment of the task, and that the next required inspection should be done in accordance with the compliance times specified in Boeing Alert Service Bulletin 757-27A0144, Revision 1, dated January 20, 2010.

As stated previously, we have revised the compliance times in this AD so that the times do not depend on whether actions were done in accordance with Boeing Alert Service Bulletin 757-27A0144, Revision 1, dated January 20, 2010. Therefore, operators that did actions using the MRBR/MPD have the same initial compliance times as operators that did actions using Boeing Alert Service Bulletin 757-27A0144, Revision 1, dated January 20, 2010. We have not changed this AD in this regard.

## **Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We also determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

## **Costs of Compliance**

We estimate that this AD affects 730 airplanes of U.S. registry. We also estimate that it takes about 13 work-hours per inspection, lubrication and measurement cycle per product to comply with this AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$806,650, or \$1,105 per product, per inspection, lubrication, and measurement cycle.

We estimate that it takes about 26 work-hours to do any HSTA replacement required based on the results of the inspection. We have no way of determining the number of aircraft that might need

these replacements. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of this replacement to the U.S. operators to be \$2,210 per product, excluding parts costs, which vary depending on airplane configuration.

### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

#### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):



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**2012-16-16 The Boeing Company:** Amendment 39-17163; Docket No. FAA-2011-1093; Directorate Identifier 2010-NM-149-AD.

**(a) Effective Date**

This AD is effective September 26, 2012.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all The Boeing Company Model 757-200, -200PF, -200CB, and -300 series airplanes, certificated in any category.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 27: Flight Controls.

**(e) Unsafe Condition**

This AD was prompted by a report of extensive corrosion of the ballscrew of the drive mechanism of the horizontal stabilizer trim actuator (HSTA). We are issuing this AD to prevent undetected failure of the primary and secondary load paths for the ballscrew in the horizontal stabilizer, which could lead to loss of control of the horizontal stabilizer and consequent loss of control of the airplane.

**(f) Compliance**

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

**(g) Group 1, Configuration 1 Airplanes—Repetitive Inspections, Lubrications, Freeplay Checks**

For Group 1, Configuration 1 airplanes identified in Boeing Alert Service Bulletin 757-27A0144 (for Model 757-200, -200CB, and 200PF series airplanes) or 757-27A0145 (for Model 757-300 series airplanes), both Revision 1, both dated January 20, 2010, that have accumulated 15,000 total flight hours or fewer as of the effective date of this AD: Do the actions required by paragraphs (g)(1), (g)(2), and (g)(3) of this AD, at the times specified in those paragraphs, and in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 757-27A0144 (for Model 757-200, -200CB, and -200PF series airplanes) or 757-27A0145 (for Model 757-300 series airplanes), both Revision 1, both dated January 20, 2010.

(1) Within 3,500 flight hours or 2 years after the effective date of this AD, whichever occurs first: Do a detailed inspection for discrepancies of the horizontal stabilizer ballscrew assembly. Repeat the inspection thereafter at intervals not to exceed 3,500 flight hours or 2 years, whichever occurs first.

(2) Within 2,000 flight hours or 1 year after the effective date of this AD, whichever occurs first: Lubricate the horizontal stabilizer trim control system. Repeat the lubrication thereafter at intervals not to exceed 2,000 flight hours or 1 year, whichever occurs first.

(3) Do the stabilizer ballscrew to ballnut freeplay check for discrepancies at the later of the times specified in paragraphs (g)(3)(i) and (g)(3)(ii) of this AD. Repeat the freeplay check thereafter at intervals not to exceed 18,000 flight hours or 5 years, whichever occurs first.

(i) Before the accumulation of 15,000 total flight hours.

(ii) Within 18 months after the effective date of this AD.

#### **(h) Group 1, Configuration 2 Airplanes—Repetitive Inspections, Lubrications, Freeplay Checks**

For Group 1, Configuration 2 airplanes identified in Boeing Alert Service Bulletin 757-27A0144 (for Model 757-200, -200CB, and 200PF series airplanes) or 757-27A0145 (for Model 757-300 series airplanes), both Revision 1, both dated January 20, 2010, that have accumulated more than 15,000 total flight hours as of the effective date of this AD: Do the actions required by paragraphs (h)(1), (h)(2), and (h)(3) of this AD, at the times specified in those paragraphs, and in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 757-27A0144 (for Model 757-200, -200CB, and 200PF series airplanes) or 757-27A0145 (for Model 757-300 series airplanes), both Revision 1, both dated January 20, 2010.

(1) Within 3,500 flight hours or 18 months after the effective date of this AD, whichever occurs first: Do a detailed inspection for discrepancies of the horizontal stabilizer ballscrew assembly. Repeat the inspection thereafter at intervals not to exceed 3,500 flight hours or 2 years, whichever occurs first.

(2) Within 2,000 flight hours or 1 year after the effective date of this AD, whichever occurs first: Lubricate the horizontal stabilizer trim control system. Repeat the lubrication thereafter at intervals not to exceed 2,000 flight hours or 1 year, whichever occurs first.

(3) Do the stabilizer ballscrew to ballnut freeplay check for discrepancies within 18 months after the effective date of this AD. Repeat the freeplay check thereafter at intervals not to exceed 18,000 flight hours or 5 years, whichever occurs first.

#### **(i) Group 1, Configuration 3 Airplanes—Repetitive Inspections, Lubrications, Freeplay Checks**

For Group 1, Configuration 3 airplanes identified in Boeing Alert Service Bulletin 757-27A0144 (for Model 757-200, -200CB, and 200PF series airplanes) or 757-27A0145 (for Model 757-300 series airplanes), both Revision 1, both dated January 20, 2010: Do the actions required by paragraphs (i)(1), (i)(2), and (i)(3) of this AD, at the time specified in those paragraphs, and in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 757-27A0144 (for Model 757-200, -200CB, and -200PF series airplanes) or 757-27A0145 (for Model 757-300 series airplanes), both Revision 1, both dated January 20, 2010.

(1) Within 3,500 flight hours or 2 years after the effective date of this AD, whichever occurs first: Do a detailed inspection for discrepancies of the stabilizer ballscrew assembly. Repeat the inspection thereafter at intervals not to exceed 3,500 flight hours or 2 years, whichever occurs first.

(2) Within 2,000 flight hours or 1 year after the effective date of this AD, whichever occurs first: Lubricate the horizontal stabilizer trim control system. Repeat the lubrication thereafter at intervals not to exceed 2,000 flight hours or 1 year, whichever occurs first.

(3) Do the stabilizer ballscrew to ballnut freeplay check for discrepancies at the later of the times specified in paragraphs (i)(3)(i) and (i)(3)(ii) of this AD. Repeat the freeplay check thereafter at intervals not to exceed 18,000 flight hours or 5 years, whichever occurs first.

(i) Within 15,000 flight hours after accomplishing an overhaul specified in Boeing Alert Service Bulletin 757-27A0142, Revision 2, dated October 23, 2003 (for Model 757-200, -200CB, and -200PF series airplanes); or Boeing Alert Service Bulletin 757-27A0143, Revision 1, dated October 23, 2003 (for Model 757-300 series airplanes).

(ii) Within 18 months after the effective date of this AD.

#### **(j) Corrective Actions**

If any discrepancy is found during any action required by paragraph (g), (h), or (i) of this AD: Before further flight, do the replacement specified in paragraph (j)(1) or (j)(2) of this AD, in accordance with Subject 27-41-10, "Stabilizer Trim Ballscrew Freeplay," of Chapter 27, "Flight Controls," of the Boeing 757 Airplane Maintenance Manual (AMM), Revision 101, dated May 20, 2011; except as provided by paragraph (k) of this AD.

(1) Replace the HSTA with a new or overhauled HSTA.

(2) Replace the HSTA with a HSTA that is not new or overhauled on which a detailed inspection, freeplay measurement, and lubrication of that actuator are performed in accordance with paragraph (g), (h), or (i) of this AD, as applicable, and no discrepancies are found during the inspection and freeplay measurement.

#### **(k) No Action Required**

No action is required if a freeplay measurement greater than or equal to 0.001 inch but less than 0.016 inch, is found and the measurement is verified to have been performed correctly. This AD requires HSTA replacement, as specified in paragraph (j) of this AD, if a freeplay measurement is less than 0.001 inch, or greater than or equal to 0.016 inch.

Note 1 to paragraph (k) of this AD: Additional guidance for the verification of the measurement can be found in Subject 27-41-10, "Stabilizer Trim Ballscrew Freeplay," of Chapter 27, "Flight Controls," of the Boeing 757 AMM, Revision 101, dated May 20, 2011.

#### **(l) Method of Compliance for Replacement of HSTA**

Any HSTA overhauled before the effective date of this AD, or within the compliance time specified in paragraph (g), (h), or (i) of this AD, as applicable—that included removal of the HSTA from the airplane and overhaul of the stabilizer ballscrew, as specified in Linear Motion Component Maintenance Manual with Illustrated Parts List, Ball Screw Assembly, Linear Motion Part No. 7820700, Boeing Part No. (S251N201-1), 27-41-10, Revision 3, dated October 2, 2007—meets the intent of one detailed inspection, one freeplay inspection, and one lubrication of the HSTA, as specified in paragraphs (g), (h), and (i) of this AD; and therefore, is considered acceptable for compliance with the initial accomplishment of the actions specified in paragraph (g), (h), or (i) of this AD, as applicable, and the repetitive interval for those actions may be determined from the performance date of that overhaul.

#### **(m) Parts Installation Prohibition**

As of the effective date of this AD, no person may install, on any airplane, a horizontal stabilizer trim actuator that is not new or overhauled, unless a detailed inspection, freeplay measurement, and lubrication of that actuator are performed in accordance with paragraph (g), (h), or (i) of this AD, as applicable, and no discrepancies are found during the inspection and freeplay measurement.

## **(n) Alternative Methods of Compliance (AMOCs)**

(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. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be emailed 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.

## **(o) Related Information**

For more information about this AD, contact Kenneth Frey, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, Seattle ACO, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: (425) 917-6468; fax: (425) 917-6590; email: kenneth.frey@faa.gov.

## **(p) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Alert Service Bulletin 757-27A0144, Revision 1, dated January 20, 2010.

(ii) Boeing Alert Service Bulletin 757-27A0145, Revision 1, dated January 20, 2010.

(iii) Subject 27-41-10, "Stabilizer Trim Ballscrew Freeplay," of Chapter 27, "Flight Controls," of the Boeing 757 Airplane Maintenance Manual, Revision 101, dated May 20, 2011.

(iv) Linear Motion Component Maintenance Manual with Illustrated Parts List, Ball Screw Assembly, Linear Motion Part No. 7820700, Boeing Part No. (S251N201-1), 27-41-10, Revision 3, dated October 2, 2007.

(3) For Boeing service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>.

(4) For Linear Motion service information identified in this AD, contact Linear Motion LLC, 628 North Hamilton Street, Saginaw, Michigan 48602; phone: (989) 759-8300; Internet: <http://www.thomsonaerospace.com>.

(5) You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington 98057-3356. For information on the availability of this material at the FAA, call 425-227-1221.

(6) You may view this 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/cfr/index.html>.

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