

[Federal Register: June 17, 2005 (Volume 70, Number 116)]  
[Rules and Regulations]  
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[DOCID:fr17jn05-3]

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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. 2003-NM-89-AD; Amendment 39-14134; AD 2005-12-18]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Boeing Model 757 Series Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** This amendment adopts a new airworthiness directive (AD), applicable to all Boeing Model 757 series airplanes. For certain affected airplanes, this action requires repetitive testing of the secondary brakes of the horizontal stabilizer trim actuator (HSTA). For all affected airplanes, this action requires repetitive overhauls of the primary brake and differential assembly of the HSTA, which would constitute terminating action for the repetitive testing of the secondary brake. This action is necessary to prevent grease contamination on the primary HSTA brake and consequent loss of the primary brake function, which, in combination with the loss of the secondary HSTA brake function, could result in loss of control of the airplane. This action is intended to address the identified unsafe condition.

**DATES:** Effective July 22, 2005.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of July 22, 2005.

**ADDRESSES:** The service information referenced in this AD may be obtained from Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or 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)*.

**FOR FURTHER INFORMATION CONTACT:** Kenneth W. Frey, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington; telephone (425) 917-6468; fax (425) 917-6590.

**SUPPLEMENTARY INFORMATION:** A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to all Boeing Model 757 series airplanes was published in the Federal Register on December 22, 2003 (68 FR 71047). For certain affected airplanes, that action proposed to require repetitive testing of the secondary brakes of the horizontal stabilizer trim actuator (HSTA). For all affected airplanes, that action proposed to require repetitive overhauls of the primary brake, ballscrew assembly, and differential assembly of the HSTA, which would constitute terminating action for the repetitive testing of the secondary brake.

## **Comments**

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

### **Request for Alternative Actions to the Overhaul of the HSTA Ballscrew Assembly**

Two commenters request that alternative actions be accomplished instead of the overhaul of the HSTA ballscrew assembly specified in the proposed AD.

One commenter requests that the actions specified in Boeing Alert Service Bulletin 757-27A0144, dated August 7, 2003, be required to address corrosion findings in the ballscrew assemblies. The commenter notes that this service bulletin provides a detailed inspection of the ballscrew primary load path for damage, cracking, corrosion, and wear. In addition, the commenter states the service bulletin provides a freeplay check and an increased lubrication interval for the HSTA. The commenter notes that all of these service bulletin actions are included in the Boeing maintenance planning document (MPD). The commenter contends that these procedures further the airworthiness of the HSTA assembly specific to concerns presented by the proposed AD. The commenter notes that these procedures have not been referenced in the proposed AD. The commenter adds that the initial compliance times of the proposed AD, the availability of spares, and the costs of the initial requirements of the proposed AD pose an industrywide concern over the ability to meet compliance with the proposed AD. The commenter concludes that consideration of the actions provided by the service bulletin would increase the level of safety of the HSTA assembly, lessen impact on component maintenance and spares availability, and help spread the cost associated with the initial requirements of the proposed AD over time.

The other commenter states that the proposed AD specifies that, "\* \* \* all ballscrew assemblies on HSTAs that have been recently overhauled showed corrosion or wear." The commenter notes that this is not consistent with its findings. The commenter believes the lack of data regarding the severity or consequences of corrosion or wear is significant. The commenter suggests that, since the reason for the proposed AD is to address contamination of the primary brake, the corrosion on the ballscrew could be identified and corrected during on-wing detailed inspections and freeplay checks. The commenter states that overhaul of the ballscrew should be based on the condition of the part or at the discretion of the operator since an unsafe condition has not been established.

We agree that alternative actions should be accomplished instead of the requirement to overhaul the ballscrew assembly specified in the proposed AD. The identified unsafe condition in the final rule involves grease contamination on the primary HSTA brake. The corrosion findings in the ballscrew assemblies referenced in Boeing Alert Service Bulletin 757-27A0142, Revision 2, dated October 23, 2003; and Boeing Alert Service Bulletin 757-27A0143, Revision 1, dated October 23, 2003; which are referenced in the final rule; are not related to the identified unsafe condition addressed in this final rule. Thus, we have determined that it is not necessary to mandate the periodic overhaul of the ballscrew assembly. The corrosion findings are addressed in Boeing Alert Service Bulletin 757-27A0144, dated August 7, 2003; and Boeing Alert Service Bulletin 757-27A0145, dated August 7, 2003. The service bulletins provide instructions to perform a freeplay and a detailed inspection/lubrication of the HSTA ballscrew assembly. These service bulletins are intended to

prevent the loss the HSTA primary and secondary load paths. We are planning to review these service bulletins and may consider further rulemaking action. We have removed the requirement to overhaul the ballscrew assembly from paragraphs (a), (b), and (f) of the final rule.

### **Request To Revise the Cost Impact**

Many commenters request that the Cost Impact paragraph of the proposed AD be revised. The commenters state that the estimate in the proposed AD is too low. Several commenters mention that the costs of materials/components are not included in the estimate. One commenter also states that testing is not included in the estimate. The commenters estimate the cost of the overhaul to be between \$40,000 and \$80,000. One commenter also notes there is a high cost impact on operators due to the combination of material costs for the overhaul and performing the overhaul within the initial compliance time. Another commenter also believes that the estimated labor hours in the proposed AD is 20 percent too low.

We partially agree to revise the Cost Impact paragraph in the final rule. We included only an estimate of labor hours for the overhaul and an estimate of the labor hours for the brake test in the proposed AD. We did not include the cost of parts associated with the overhaul. Based on the manufacturer's and operators' estimates, we now estimate the cost to overhaul the primary brake and differential assembly to be \$60,000 per airplane, per overhaul. The cost of overhauling the ballscrew assembly is not included in the estimate, as the final rule does not contain a requirement to overhaul the ballscrew assembly. We have revised the Cost Impact paragraph of the final rule to include an estimate of \$60,000 per airplane for the overhaul.

However, we do not agree with the one commenter that the labor hours specified in the final rule are too low. The labor hours are based on manufacturer estimates and represent only the time necessary to perform the specific actions actually required by the AD. Labor hours typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions. No change is made to the final rule in this regard.

We also acknowledge there is a high cost impact on operators during the initial compliance time. However, the actions required by the final rule must be done within the compliance times specified in the final rule to ensure continued operational safety. In developing an appropriate compliance time for this AD, we considered the safety issues as well as the recommendations of the manufacturer, the availability of necessary repair parts, and the practical aspect of accomplishing the required inspection within an interval of time that corresponds to the normal maintenance schedules of most affected operators.

### **Request To Limit Actions to the Inspection of the Differential Assembly**

One commenter requests that the requirements of the proposed AD for the differential shaft be limited to inspecting the differential assembly for signs of corrosion every 30,000 flight hours as specified in the proposed AD. The commenter notes that the proposed AD specifies that the FAA received reports that " \* \* \* corrosion or cracking was found during HSTA overhaul in some differential assemblies." The commenter believes that the corrosion and cracking discussed in Boeing All Operator Letter M-7200-03-01358, dated September 30, 2003, is the report mentioned in the proposed AD. The commenter states the all operator letter discusses the finding of a single cracked differential shaft. The commenter believes that requiring an overhaul of the differential assembly goes beyond the actions necessary to ensure safety. The commenter states that doing an overhaul is an economic decision that should be based upon the condition of the parts.

While we agree with the commenter that the differential assembly should be inspected for corrosion every 30,000 flight hours as required in the final rule, we do not agree that the inspection should be the only action required. A detailed inspection is not sufficient to detect subsurface cracks in the differential shafts that could propagate and cause the differential shaft to fail. The overhaul

required by the final rule includes a magnetic particle check of the differential assembly for cracking and is necessary to address the identified unsafe condition. No change is made to the final rule in this regard.

### **Request To Test Primary Brake Instead of Doing Overhaul**

One commenter requests that the proposed AD be revised to allow testing of the primary brake every 2 years instead of doing an overhaul. The commenter notes that the proposed AD addresses concerns about grease contamination on the primary HSTA brake. The commenter believes that requiring the overhaul of the primary brake goes beyond addressing the stated safety concern. The commenter states that although Boeing indicated that an effective on-airplane primary brake test is not available, the HSTA could be removed to conduct the brake test. The commenter concludes that the replacement of bearings, etc., should be based on the condition of the parts or on the operator's discretion.

We do not agree with the request to allow a primary brake test every 2 years instead of the overhaul required by the final rule. Even with the grease contamination on the primary brake, a primary brake test may indicate that the primary brake is functioning to its full capacity. It has been shown that grease contamination on the primary brake did not produce repeatable results when the brake test was conducted. Brake test results can change due to environmental conditions of the test setup. The only way to ensure that the primary brake will function to its full capacity is to overhaul the brake assembly using the procedures in the applicable component maintenance manual (CMM) (referenced in Boeing Alert Service Bulletin 757-27A0142, Revision 2, dated October 23, 2003; and Boeing Alert Service Bulletin 757-27A0143, Revision 1, dated October 23, 2003; which are the appropriate sources of service information for accomplishing the required actions). During the overhaul, the HSTA thrust bearings and seal will be replaced. Replacing the thrust bearings and seal at the overhaul intervals specified in the Boeing Alert Service Bulletins should reduce the chance of grease contamination on the primary brake. If the thrust bearings are not changed during the overhaul, it is likely that grease will eventually leak from the thrust bearing and contaminate the primary brake. No change is made to the final rule in this regard.

### **Request To Extend Compliance Time**

One commenter requests that several of the compliance times in the proposed AD be extended. The commenter suggests making the following changes to the compliance times specified in paragraph (a) of the proposed AD:

- Where paragraph A of the table referenced in paragraph (a) of the proposed AD says "Overhaul the primary brake, ballscrew assembly and differential assembly of the HSTA within 2 years," revise it to say "overhaul the primary brake, ballscrew assembly and differential assembly of the HSTA within 3 years after the effective date of this AD."
- Where paragraphs B, C, and D of the table referenced in paragraph (a) of the proposed AD say "Overhaul the primary brake, ballscrew assembly and differential assembly of the HSTA within 5 years or within 2 years after the HSTA reaches 42,000 hours, whichever comes first," revise it to say "overhaul the primary brake, ballscrew assembly and differential assembly of the HSTA within 6 years or within 3 years after the HSTA reaches 42,000 hours, whichever comes first."
- Where paragraph D of the table referenced in paragraph (a) of the proposed AD says "If the HSTA has less than 30,000 hours within five years, overhaul the primary brake, ballscrew assembly and differential assembly of the HSTA when or before the HSTA reaches 30,000 hours," revise it to say "if the HSTA has less than 30,000 hours within 6 years, overhaul the primary brake, ballscrew assembly and differential assembly of the HSTA when or before the HSTA reaches 30,000 hours."

The commenter states that the unsafe condition with the primary brake specified in the proposed AD is overcome by the secondary brakes and would not affect the operation of the HSTA assembly. The commenter also notes that the manufacturer has not reported any Model 757 airplane events

associated with the findings referenced by Boeing Alert Service Bulletin 757-27A0142, Revision 2, dated October 23, 2003; and Boeing Alert Service Bulletin 757-27A0143, Revision 1, dated October 23, 2003. The commenter believes that any in-service difficulty related to the finding on one differential assembly would not result in a "run-away" stabilizer and would be adequately managed by the flightcrew. The commenter concludes that, by revising the proposed AD to require 3-year and 6-year initial compliance times, along with proposed secondary brake checks, the intent of the proposed AD will be accomplished within a timeframe better aligned with scheduled maintenance, and the continued safety of the aircraft will be ensured.

Furthermore, the commenter proposes that more frequent secondary brake checks or consideration of actions specified in Boeing Alert Service Bulletin 757-27A0144, dated August 7, 2003, and the corresponding MPD changes would further increase the level of safety of the HSTA assembly to support the extended initial compliance times. The commenter believes that the extended compliance times and more efficient alignment with scheduled maintenance will reduce the impact of removing airplanes from scheduled service and will help spread the tremendous financial burden associated with the material and initial overhaul cost over time while maintaining a safe Model 757 fleet.

We do not agree with the request to extend the compliance times in the final rule. While we agree the manufacturer has not reported any Model 757 airplane events, the intent of the final rule is to perform the required actions before an airplane event occurs due to the identified unsafe condition. We also do not agree with the commenter that more frequent secondary brake checks or actions specified in Boeing Alert Service Bulletin 757-27A0144, dated August 7, 2003, and the corresponding MPD changes would increase the level of safety of the HSTA assembly. A contaminated primary brake is a latent failure until the HSTA is overhauled. Also, a cracked differential shaft is a latent failure until the HSTA is overhauled. A secondary brake test shows only whether the secondary brake and one of two differential shafts are functioning. Even after passing the secondary brake test, the HSTA assembly may be one failure from the identified unsafe condition. No change is made to the final rule in this regard.

We acknowledge the commenter's statement that the compliance times in the final rule may not align with scheduled maintenance. Generally, we make every effort to establish compliance times that align with operators' scheduled maintenance. In this case, the compliance times in the final rule are based on Boeing airplane-level risk assessment, service history, and input from the lead airline. However, according to the provisions of paragraph (h) of the final rule, we may approve requests to adjust the compliance time if the request includes data that prove that the new compliance time would provide an acceptable level of safety.

### **Request To Reduce Repetitive Inspection Interval**

One commenter requests the repetitive secondary brake test interval required by the proposed AD be revised. The commenter recommends the repetitive interval to be the closest scheduled maintenance (letter) check within every 500 flight hour interval. The commenter states that the test requires two engineers and the use of ground equipment for access, which are not always readily available during normal operational visits. The commenter suggests that its proposed repetitive interval would allow flexibility for operators that have an approved escalated schedule to perform tests at regularly scheduled maintenance intervals.

We do not agree to revise the repetitive secondary brake test interval. Compliance times have to be based on defined intervals to ensure that the required action in a final rule will be done within an appropriate timeframe for safe operation of the airplane. Since maintenance schedules vary among operators, it is not possible to align the compliance time to fit all operators' scheduled maintenance (letter) checks. The repetitive interval of 600 flight hours required in the final rule is based on a Boeing airplane-level risk assessment and input from the lead airline. No change is made to the final rule in this regard. However, according to the provisions of paragraph (h) of the final rule, we may

approve requests to adjust the compliance time if the request includes data that prove that the new compliance time would provide an acceptable level of safety.

### **Request To Revise Initial Compliance Time**

One commenter states the compliance times in Boeing Alert Service Bulletin 757-27A0142, dated February 13, 2003, "range from 2 years for aircraft with 42,000 flight hours or more, to 5 years for aircraft with 30,000 but less than 42,000 flight hours." The commenter notes that its data for the overhaul of HSTAs show that the 2-year compliance time specified in the service bulletin for aircraft with 42,000 flight hours or more is not being complied with. The commenter also points out that the initial compliance time for the same aircraft in the proposed AD (which is 2 years after the effective date of the AD) may result in overhauls not being required to be done until close to 4 years after February 13, 2003, (the issue date of Boeing Alert Service Bulletin 757-27A0142). The commenter is concerned that this compliance time in the proposed AD may result in an unacceptable exposure to the identified unsafe condition.

We infer that the commenter is requesting that the initial compliance time specified in paragraph (c) of the proposed AD be revised from "after the effective date of this AD" to a time closer to or matching after the date of the "initial release of the service bulletin." We do not agree to revise the initial compliance time in the final rule. In developing the compliance time for this AD, we considered not only the safety implications of the identified unsafe condition, but the average utilization rate of the affected fleet, the practical aspects of doing the overhauls of the fleet during regular maintenance periods, and the time necessary for the rulemaking process. We determined that using an initial compliance time following the effective date of the final rule is appropriate. Further, we arrived at the proposed compliance time with manufacturer concurrence.

In addition, reducing the compliance time would necessitate (under the provisions of the Administrative Procedure Act) reissuing the notice, reopening the period for public comment, considering additional comments subsequently received, and eventually issuing a final rule. We have determined that further delay of this final rule is not appropriate. However, if additional data are presented that would justify a shorter compliance time, we may consider further rulemaking on this issue. No change is made to the final rule in this regard.

### **Request To Include Overhaul of Secondary Brake**

Two commenters request that the overhaul of the secondary brake be included in the proposed AD.

One commenter requests the same compliance time for the overhaul of the secondary brake as time specified in the proposed AD for the overhaul of the primary brake, differential, and ballscrew. The commenter notes that the proposed AD does not mandate the overhaul of the secondary brake or hydraulic motor, which are integral parts of the HSTA. The commenter points out that hydraulic fluid leakage from secondary brakes and hydraulic motors into the differential washes the grease off of the differential and leads to corrosion and, therefore, necessitates the overhaul of the differential. The commenter states, "Brakes or motors, which are not overhauled, would likely start leaking as soon as the HSTA is put back into service after overhaul. When the brakes and motors were new (or fully overhauled) such corrosion causing leakage would not likely have begun for several years."

The other commenter requests that the overhaul of the secondary brake be recommended in the proposed AD. The commenter recommends adding notes like the ones specified in Boeing Alert Service Bulletin 757-27A0142, Revision 2, dated October 23, 2003; and Boeing Alert Service Bulletin 757-27A0143, Revision 1, dated October 23, 2003; to paragraphs (a) and (b) of the proposed AD, as follows: "It is recommended that you also do an overhaul of the secondary hydraulic brakes and hydraulic motors of the HSTA. Hydraulic fluid can leak from these components and wash the grease out of the differential assembly." The commenter suggests adding the following note to paragraph (d) of the proposed AD: "It is recommended that you also do an overhaul of the secondary

hydraulic brakes and hydraulic motors of the HSTA. Hydraulic fluid can leak from these components and wash the grease out of the differential assembly. Boeing also recommends that you do an operational test of the HSTA secondary brakes (refer to MPD 27-41-00-5D) when the HSTA reaches 24,000 flight hours." The commenter notes that the proposed AD does not address that the secondary brakes should be overhauled as specified in the service bulletins. The commenter states that the secondary brake was never designed to perform the operation of the primary brake in repetitive circumstances. The commenter indicates that if the secondary brake is subject to the braking requirements of the primary brake, there may be wear to the internal parts in the secondary brake that would not be identified during the limited testing required by the proposed AD. The commenter proposes that the only way to identify any potential premature wear to the rotors or stators in the secondary brake is to disassemble and inspect internal components within the secondary brake.

We do not agree to include the overhaul of the secondary brake in the final rule. The intent of the final rule is to require actions that address the identified unsafe condition, which is the loss of primary and secondary braking function. The overhaul of the secondary brake is a recommended maintenance practice, which does not address the identified unsafe condition. Also, the service history of the secondary brakes shows the brakes are functioning normally, and testing shows that the HSTA secondary brakes could last one airplane life under normal operations with no assistance from any other braking system. No change is made to the final rule in this regard.

In regard to the commenter's statement about hydraulic fluid leakage from the secondary brakes and hydraulic motor, we recognize that hydraulic fluid can leak from the secondary brake or hydraulic motor, washing away grease and leading to corrosion or damage to the differential bearings. The leakage of hydraulic fluid from the secondary brake and hydraulic motor may infrequently cause loss of trim capability in one or both directions and does not affect braking function. Infrequent inability to move the horizontal stabilizer is not related to the identified unsafe condition of the final rule. However, we may consider further rulemaking on this issue of hydraulic fluid leakage if additional data are presented that would justify additional rulemaking.

### **Request To Clarify Scope of the Proposed AD**

One commenter requests that paragraphs (a)(2) and (b) of the proposed AD be revised to clarify the intended scope of the overhaul of the primary brake, ballscrew assembly, and differential assembly in order to differentiate this overhaul from an overhaul of the HSTA assembly. The commenter also recommends that the related service bulletins and CMMs be revised to provide specific work instructions before issuance of the final rule. The commenter notes that CMM 27-41-05 does not define an overhaul of the HSTA assembly nor does it itemize requirements for an overhaul of the primary brake, ballscrew assembly, or differential assembly.

The commenter also points out that the use of the terms "restore" and "overhaul" in various Boeing documents has generated much confusion and discussion throughout the industry regarding the definition of the work scope that will be needed to accomplish the full intent of this HTSA effort and the requirements of the proposed AD. The commenter notes that restoration versus overhaul significantly affects the extent to which part disassembly and inspection are accomplished on the HSTA assembly.

We do not agree that clarification of the scope of the work in the final rule is needed. The final rule requires overhaul of the primary brake and differential assembly of the HSTA. The overhaul of the primary brake and differential assembly consists of inspection, testing and troubleshooting, disassembly, cleaning, check, repair, and assembly as described in the applicable CMM referenced in Boeing Alert Service Bulletin 757-27A0142, Revision 2, dated October 23, 2003; and Boeing Alert Service Bulletin 757-27A0143, Revision 1, dated October 23, 2003. We consider the CMM reference to be of sufficient detail to correct the identified unsafe condition. No change is made to the final rule in this regard.

## **Request To Add Statement To Allow Credit for Secondary Brake Tests**

One commenter requests adding a statement to the "Difference Between the Proposed Rule and Service Bulletin 757-27A0142" paragraph of the proposed AD that allows operators to take credit for secondary brake tests performed according to their scheduled maintenance program at the 4C interval. No specific reason was given for the request.

We do not agree to add a statement allowing credit for secondary brake tests to the "Difference Between the Proposed Rule and Service Bulletin 757-27A0142" paragraph as the "Difference Between the Proposed Rule and Service Bulletin 757-27A0142" paragraph is not restated in the final rule. We also have verified the paragraph and find that no changes are necessary. For actions performed according to methods other than those specified in the final rule or at different compliance times, operators may request an alternative method of compliance (AMOC) according to the provisions of paragraph (h) of the final rule, if sufficient data are included to justify that the AMOC would provide an acceptable level of safety. Because operators' schedules vary substantially, we cannot accommodate every operator's optimal scheduling in the compliance times of each AD. We have not changed the final rule regarding this issue.

## **Request To Clarify Paragraph (g) of the Proposed AD**

Two commenters request clarification of paragraph (g) of the proposed AD, which gives operators credit for overhauls accomplished according to previous issues of the service bulletin. One commenter wants the proposed AD to indicate that the accomplishment of previous issues of the service bulletins constitutes only partial compliance with the proposed AD. The other commenter believes that the overhauls of the ballscrew assembly and differential assembly accomplished according to applicable Thomson Saginaw service bulletins, Boeing service bulletins, or operator's equivalent CMMs (during primary brake overhaul done according to Boeing Alert Service Bulletin 757-27A0142, dated February 13, 2003; or Revision 1, dated April 10, 2003) should be acceptable for compliance with the proposed AD.

We do not find it necessary to change paragraph (g) of the final rule. The paragraph indicates that certain previous overhauls of the primary brakes and tests of the secondary brakes are acceptable for compliance with the corresponding action in the final rule. We do not find it necessary to indicate that this is only partial compliance with the final rule. The remaining actions in the final rule such as the overhaul of the differential assembly are still required. However, for clarity, we have revised the header above paragraph (g) of the final rule from "overhauls accomplished \* \* \*" to "actions accomplished \* \* \*" since paragraph (g) of the final rule describes both overhauls and tests.

Overhaul of the ballscrew assembly is not a requirement of this final rule for the reasons discussed above in the paragraph titled "Request for Alternative Actions to the Overhaul of the HSTA Ballscrew Assembly." We also cannot give credit for overhauls of the differential assembly accomplished according to Boeing service bulletins or operator's equivalent CMMs. The commenter did not provide sufficient data to indicate that previous overhauls of the differential assembly according to these methods would provide an acceptable level of safety. Also, Boeing Alert Service Bulletin 757-27A0142, dated February 13, 2003; and Boeing Alert Service Bulletin 757-27A0142, Revision 1, dated April 10, 2003; do not provide procedures to overhaul the differential assembly. We have not changed the final rule in this regard. However, according to the provisions of paragraph (h) of the final rule, operators may request an AMOC if sufficient data are included to justify that the AMOC would provide an acceptable level of safety.

## **Conclusion**

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes

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

## **Cost Impact**

There are approximately 1,085 airplanes of the affected design in the worldwide fleet. The FAA estimates that 754 airplanes of U.S. registry will be affected by this AD; 722 of the affected airplanes of U.S. registry are Model 757-200, -200PF, and -200CB series airplanes, and 32 are Model 757-300 series airplanes.

For the affected Model 757-200 and Model 757-300 series airplanes, we estimate the cost impact of the overhaul on U.S. operators to be \$45,240,000, or \$60,000 per airplane, per overhaul cycle.

For the affected Model 757-200 series airplanes, the FAA estimates that it will take approximately 1 work hour per airplane to accomplish the test of the HSTA secondary brake, and that the average labor rate is \$65 per work hour. Based on these figures, the cost impact of the secondary brake test on U.S. operators is estimated to be \$46,930, or \$65 per airplane, per test.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

## **Authority for This Rulemaking**

The FAA's authority to issue rules regarding aviation safety is found in Title 49 of the United States Code. 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.

This rulemaking is promulgated 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 AD.

## **Regulatory Impact**

The regulations adopted herein 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. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (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. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

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

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

## **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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. Section 39.13 is amended by adding the following new airworthiness directive:

# AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

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

*We post ADs on the internet at "www.faa.gov"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2005-12-18 Boeing:** Amendment 39-14134. Docket 2003-NM-89-AD.

## Applicability

All Model 757-200, -200PF, -200CB, and -300 series airplanes, certificated in any category.

## Compliance

Required as indicated, unless accomplished previously.

To prevent grease contamination on the primary horizontal stabilizer trim actuator (HSTA) brake and consequent loss of the primary brake function, which, in combination with the loss of the secondary HSTA brake function, could result in loss of control of the airplane, accomplish the following:

### **For Model 757-200, -200CB, and -200PF Series Airplanes: Repetitive Overhauls and Tests**

(a) For Model 757-200, -200CB, and -200PF series airplanes: Except as provided by paragraphs (c), (d), and (e) of this AD, at the applicable time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 757-27A0142, Revision 2, dated October 23, 2003; including the compliance time "since the most recent overhaul of the primary brake, the ballscrew assembly, and the differential assembly"; do the actions specified in paragraphs (a)(1) and (a)(2) of this AD.

(1) Test the secondary brakes of the HSTA in accordance with Part 2 of the Accomplishment Instructions of the service bulletin. If any secondary brake fails, before further flight, replace with a serviceable brake or overhaul in accordance with Part 2 of the Accomplishment Instructions of the service bulletin.

(2) Overhaul the primary brake and differential assembly of the HSTA in accordance with Part 1 of the Accomplishment Instructions of the service bulletin. Accomplishment of the overhaul constitutes terminating action for the repetitive tests of the secondary brake required by paragraph (a)(1) of this AD.

(b) Repeat the overhaul of the primary brake and differential assembly of the HSTA at intervals not to exceed 30,000 flight hours, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 757-27A0142, Revision 2, dated October 23, 2003.

(c) Where the service bulletin specified in paragraph (a) of this AD specifies a date from which the initial compliance time interval starts as being the date of the initial release of the service bulletin, this AD requires compliance within the applicable initial compliance time after the effective date of this AD.

(d) Where the service bulletin specified in paragraph (a) of this AD states "total hours since delivery," this AD requires compliance prior to the accumulation of the applicable number of flight hours since the date of issuance of the original Airworthiness Certificate or the date of issuance of the original Export Certificate of Airworthiness.

(e) Where paragraph D. of the table in paragraph 1.E., "Compliance," of the service bulletin specified in paragraph (a) of this AD states: "Test the HSTA secondary brake when the HSTA reaches 24,000 hours (4C) (this is currently a scheduled maintenance task)"; this AD requires testing secondary brakes that have accumulated between 15,000 and 23,999 flight hours when the HSTA reaches 24,000 flight hours or within 500 flight hours after the effective date of this AD, whichever occurs later. For HSTAs that have accumulated between 24,000 and 29,999 flight hours, this AD requires testing the secondary brake within 500 flight hours after the effective date of this AD. All testing should be done in accordance with the service bulletin.

### **For Model 757-300 Series Airplanes: Repetitive Overhauls**

(f) For Model 757-300 series airplanes: Prior to the accumulation of 30,000 total flight hours, overhaul the primary brake and differential assembly of the HSTA in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 757-27A0143, Revision 1, dated October 23, 2003. Repeat the overhaul thereafter at intervals not to exceed 30,000 flight hours.

### **Actions Accomplished Per Previous Issues of Service Bulletins**

(g) Overhauls of the primary brake and tests of the secondary brakes accomplished before the effective date of this AD in accordance with Boeing Alert Service Bulletin 757-27A0142, dated February 13, 2003; or Revision 1, dated April 10, 2003; and overhauls of the primary brake accomplished before the effective date of this AD in accordance with Boeing Alert Service Bulletin 757-27A0143, dated February 13, 2003; are considered acceptable for compliance with the overhaul of the primary brake only and tests of the secondary brakes specified in this AD.

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

(h) In accordance with 14 CFR 39.19, the Manager, Seattle Aircraft Certification Office (ACO), FAA, is authorized to approve AMOCs for this AD.

### **Incorporation by Reference**

(i) Unless otherwise specified in this AD, the actions shall be done in accordance with Boeing Alert Service Bulletin 757-27A0142, Revision 2, dated October 23, 2003; or Boeing Alert Service Bulletin 757-27A0143, Revision 1, dated October 23, 2003; as applicable. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or 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)*.

**Effective Date**

(j) This amendment becomes effective on July 22, 2005.

Issued in Renton, Washington, on June 3, 2005.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 05-11793 Filed 6-16-05; 8:45 am]

BILLING CODE 4910-13-P