

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2000-NM-385-AD; Amendment 39-12444; AD 2001-19-04]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 767-200 and -300 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to certain Boeing Model 767-200 and -300 series airplanes. This action requires repetitive inspections to find discrepancies of the barrel nuts that attach the vertical fin to body section 48, and follow-on actions. For certain airplanes, this action requires replacement of certain bolts with new bolts. This action also provides for optional terminating actions for the repetitive inspections. This action is necessary to find and fix corroded, cracked or broken barrel nuts that attach the vertical fin to body section 48, which could result in reduced structural integrity of the vertical fin attachment joint, loss of the vertical fin, and consequent loss of controllability of the airplane. This action is intended to address the identified unsafe condition.

DATES: Effective October 9, 2001.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of October 9, 2001.

Comments for inclusion in the Rules Docket must be received on or before November 20, 2001.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2000-NM-385-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9 a.m. and 3 p.m., Monday through Friday, except Federal holidays. Comments may be submitted via fax to (425) 227-1232. Comments may also be sent via the Internet using the following address: 9-anm-iarcomment@faa.gov. Comments sent via fax or the Internet must contain "Docket No. 2000-NM-385-AD" in the subject line and need not be submitted in triplicate. Comments sent via the Internet as attached electronic files must be formatted in Microsoft Word 97 for Windows or ASCII text.

The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: John Craycraft, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2782; fax (425) 227-1181.

SUPPLEMENTARY INFORMATION: The FAA has received several reports of corroded and/or broken barrel nuts on certain Boeing Model 767-200 and -300 series airplanes. One operator indicated that cracked and bulging sealant of two attachment barrel nuts of the vertical fin at body section 48 was found on an airplane having 9,795 total flight hours and 4,184 total flight cycles. A torque check confirmed low torque at these locations, and removal of the sealant revealed that both barrel nuts were corroded and broken. Further investigation revealed that the broken barrel nuts fractured due to stress corrosion cracks that started at corrosion pits. Examination of the attachment bolts showed inadequate sealant on the bolt threads and shank. The lack of sealant initiated galvanic corrosion between the H-11 steel barrel nut and the Inconel bolt, which created the corrosion pits. Nuts made of H-11 steel alloy are susceptible to stress corrosion cracking. Another operator reported cracked sealant and barrel nut corrosion on an airplane having 20,655 total flight hours and 4,768 total flight cycles. Of the sixteen barrel nuts removed from that airplane and inspected, several were found to be corroded.

A recent report was received of four cracked barrel nuts found on a Boeing Model 767-300 series airplane; three of those four were found on one side of the airplane. This report revealed that the issue was more urgent than initial reports indicated. Subsequently, another report was received from an operator of a Group 1 airplane (Group 1 airplanes were delivered with H-11 alloy steel bolts and nuts), indicating that a broken barrel nut was found and both the bolt and the barrel nut were H-11 alloy steel (no dissimilar metal). This report revealed that the unsafe condition also exists on Group 1 airplanes with H-11 alloy steel bolts installed.

Such conditions, if not corrected, could result in reduced structural integrity of the vertical fin attachment joint, loss of the vertical fin, and consequent loss of controllability of the airplane.

Explanation of Relevant Service Information

The FAA has reviewed and approved Boeing Service Bulletin 767-53-0085, dated May 14, 1998, and Boeing Alert Service Bulletin 767-53A0085, Revision 1, dated July 1, 1999. The service bulletins describe procedures for repetitive internal and external visual inspections to find discrepancies (i.e., cracked or damaged sealant, signs of corrosion damage, cracked or broken barrel nuts), of the barrel nuts that attach the vertical fin to body section 48, and follow-on actions. The follow-on actions include, but are not limited to, the following:

- Replacement of the barrel nut with a new Inconel barrel nut if any discrepancy is found at any barrel nut location.
- A torque check on each attachment bolt of the vertical fin if no discrepancy is found at any barrel nut location.
- Replacement of the barrel nut with a new Inconel barrel nut if a bolt can be turned during the torque check.
- Repeat of the internal and external visual inspections.

The service bulletins also provide an optional replacement of all 16 H-11 steel alloy barrel nuts of the vertical fin with Inconel barrel nuts, which would eliminate the need for the repetitive inspections.

Explanation of the Requirements of the Rule

Since an unsafe condition has been identified that is likely to exist or develop on other products of this same type design, the AD would require accomplishment of the actions specified in the service bulletin described previously, except as discussed below.

Differences Between Alert Service Bulletin and This AD

While the service bulletin specifies internal and external visual inspections to detect discrepancies of the sealant of the barrel nuts that attach the vertical fin to body section 48, this AD requires internal and external detailed visual inspections to detect discrepancies of the sealant. A note has been included in this AD to define that inspection.

Where the compliance time in the service bulletin specifies doing the internal and external visual inspections 1 year after receipt of the service bulletin, this AD requires those inspections be done within 45 days after the effective date of this AD. In developing an appropriate compliance time for this AD, the FAA considered not only the manufacturer's recommendation, but the degree of urgency associated with addressing the subject unsafe condition, the average utilization of the affected fleet, and the time necessary to perform the actions. In light of all of these factors, the FAA finds that the compliance time for completing the required inspections represents an appropriate interval of time allowable for affected airplanes to continue to operate without compromising safety.

Although the service bulletin specifies that no more work is necessary for Group 1 airplanes if the H-11 steel alloy attachment bolts of the vertical fin have not been replaced with Inconel bolts, this AD requires the inspections and follow-on actions for both Group 1 and Group 2 airplanes. This changes the applicability in the AD from that specified in the service bulletin, which was divided into two groups, one having line numbers 1 through 154 inclusive, and the other having line numbers 155 through 574 inclusive; to specify line numbers 1 through 574 inclusive.

Figure 5 of the Accomplishment Instructions of the service bulletin specifies that a bolt can be reinstalled if no corrosion, cracks, thread damage, or shank damage is found. However, for Group 1 airplanes with H-11 steel alloy bolts, this AD requires replacement of an H-11 steel alloy bolt with an Inconel bolt, if an Inconel barrel nut is installed at that location.

Interim Action

This is considered to be interim action until final action is identified, at which time the FAA may consider further rulemaking.

Determination of Rule's Effective Date

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified under the caption ADDRESSES. All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Submit comments using the following format:

- Organize comments issue-by-issue. For example, discuss a request to change the compliance time and a request to change the service bulletin reference as two separate issues.
- For each issue, state what specific change to the AD is being requested.
- Include justification (e.g., reasons or data) for each request.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2000-NM-385-AD." The postcard will be date stamped and returned to the commenter.

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.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, 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.

Sec. 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 "av-info.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).

2001-19-04 Boeing: Amendment 39-12444. Docket 2000-NM-385-AD.

Applicability: Model 767-200 and -300 series airplanes, line numbers 1 through 574 inclusive, certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (g) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To find and fix corroded, cracked or broken barrel nuts that attach the vertical fin to body section 48, which could result in reduced structural integrity of the vertical fin attachment joint, loss of the vertical fin, and consequent loss of controllability of the airplane; accomplish the following:

Internal/External Detailed Visual Inspections

(a) Do internal and external detailed visual inspections of the barrel nuts at the 16 locations that attach the vertical fin to body section 48 to find discrepancies (i.e., cracked or damaged sealant, signs of corrosion damage, cracked or broken barrel nuts). Do the inspections at the times specified in paragraphs (a)(1) and (a)(2) of this AD, as applicable; per Part 1 of the Accomplishment Instructions of Boeing Service Bulletin 767-53-0085, dated May 14, 1998, or Boeing Alert Service Bulletin 767-53A0085, Revision 1, dated July 1, 1999.

Note 2: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

(1) For airplanes on which the inspections specified in paragraph (a) of this AD have been done within the last 3 years per Boeing 767 Maintenance Planning Document (MPD) D622T001, Items 5380-311-021 and 5380-312-021: Do the inspections at the later of the times specified in paragraphs (a)(1)(i) and (a)(1)(ii) of this AD.

(i) Within 3 years or 6,000 flight cycles after doing the most recent inspection per the MPD, whichever comes first.

(ii) Within 45 days after the effective date of this AD.

(2) For airplanes on which the inspections specified in paragraph (a) of this AD have NOT been done within the last 3 years per Boeing 767 MPD D622T001, Items 5380-311-021 and 5380-312-021: Do the inspections within 45 days after the effective date of this AD.

Follow-On Actions

(b) If no discrepancies are found as a result of any inspection specified in paragraph (a) of this AD: Before further flight, do a torque check of each of the 16 bolts in the barrel nuts that attach the vertical fin to body section 48 to determine if any bolt turns, per Part 2 of the Accomplishment Instructions of Boeing Service Bulletin 767-53-0085, dated May 14, 1998, or Boeing Alert Service Bulletin 767-53A0085, Revision 1, dated July 1, 1999.

(1) If no bolt turns: Repeat the inspections required by paragraph (a) of this AD (and applicable follow-on actions) every 3 years or 6,000 flight cycles, whichever comes first; until paragraphs (d) and (e) of this AD are done, as applicable.

(2) If any bolt turns: Before further flight, do the actions specified in paragraphs (b)(2)(i) and (b)(2)(ii) of this AD, as applicable. Then repeat the inspections required by paragraph (a) of this AD (and applicable follow-on actions) every 3 years or 6,000 flight cycles, whichever comes first; until paragraphs (d) and (e) of this AD are done, as applicable.

(i) For all airplanes: Replace the barrel nut at that bolt with a new, Inconel barrel nut per Part 3 of the Accomplishment Instructions of the service bulletin. No further action is required for that barrel nut only.

(ii) For Group 1 airplanes: If an H-11 steel alloy bolt is installed with the affected barrel nut, replace the bolt with a new, Inconel bolt per Figure 5 of the Accomplishment Instructions of the service bulletin. No further action is required for that bolt only.

(c) If any discrepancy of any barrel nut is found as a result of any inspection specified in paragraph (a) of this AD: Before further flight, do the actions specified in paragraphs (c)(1) and (c)(2) of this AD, as applicable.

(1) For all airplanes: Replace the affected barrel nut with a new, Inconel barrel nut per Part 3 of the Accomplishment Instructions of Boeing Service Bulletin 767-53-0085, dated May 14, 1998, or Boeing Alert Service Bulletin 767-53A0085, Revision 1, dated July 1, 1999. No further action is required for that barrel nut only.

(2) For Group 1 airplanes: If an H-11 steel alloy bolt is installed with the affected barrel nut, replace the bolt with a new, Inconel bolt per Figure 5 of the Accomplishment Instructions of the service bulletin. No further action is required for that bolt only.

Optional Terminating Actions

(d) For all airplanes: Except as provided by paragraph (e) of this AD, replacement of all 16 H-11 steel alloy barrel nuts that attach the vertical fin to body section 48, with new, Inconel barrel nuts per Part 3 of the Accomplishment Instructions of Boeing Service Bulletin 767-53-0085, dated May 14, 1998, or Boeing Alert Service Bulletin 767-53A0085, Revision 1, dated July 1, 1999; ends the repetitive inspections required by this AD.

(e) For Group 1 airplanes: Accomplishment of paragraph (d) of this AD and replacement of the H-11 steel alloy bolts having an Inconel barrel nut installed at the same location, with new, Inconel bolts per Figure 5 of the Accomplishment Instructions of Boeing Service Bulletin 767-53-0085, dated May 14, 1998, or Boeing Alert Service Bulletin 767-53A0085, Revision 1, dated July 1, 1999; ends the repetitive inspections required by this AD.

Spares

(f) As of the effective date of this AD: No person shall install, on any airplane, an Inconel vertical fin attach bolt, unless an Inconel barrel nut is installed at the same location; nor shall any person install an H-11 steel alloy attachment nut or bolt on the vertical fin on any airplane.

Alternative Methods of Compliance

(g) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office, FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

Note 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(h) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(i) The actions shall be done in accordance with Boeing Service Bulletin 767-53-0085, dated May 14, 1998; or Boeing Alert Service Bulletin 767-53A0085, Revision 1, dated July 1, 1999. 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 Airplane Group, 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 Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(j) This amendment becomes effective on October 9, 2001.

Issued in Renton, Washington, on September 14, 2001.

Ali Bahrami,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 01-23418 Filed 9-20-01; 8:45 am]

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