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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2006-25390; Directorate Identifier 2005-NM-224-AD; Amendment 39-15844; AD 2009-06-08]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 767 Airplanes

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

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Boeing Model 767 airplanes. This AD requires repetitive inspections for cracking of the wing skin, and related investigative/corrective actions if necessary. This AD results from reports of cracks found in the lower wing skin originating at the forward tension bolt holes of the aft pitch load fitting. We are issuing this AD to detect and correct cracking in the lower wing skin for the forward tension bolt holes at the aft pitch load fitting, which could result in a fuel leak and reduced structural integrity of the airplane.

DATES: This AD becomes effective April 28, 2009.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of April 28, 2009.

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

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (telephone 800-647-5527) is the Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Tamara Anderson, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6421; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

Discussion

The FAA issued a supplemental notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to certain Boeing Model 767 airplanes. That supplemental NPRM was published in the Federal Register on May 23, 2008 (73 FR 30009). That supplemental NPRM proposed to require repetitive inspections for cracking of the wing skin, and related investigative/corrective actions if necessary.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comments received.

Support for the Supplemental NPRM

Boeing concurs with the contents of the proposed rule.

Request To Revise Compliance Time in Paragraph (f)(1) of the Supplemental NPRM

Continental Airlines requests that we change the compliance time in paragraph (f)(1) of the supplemental NPRM from "prior to the accumulation of 10,000 total flight cycles or 30,000 total flight hours, whichever occurs first" to "prior to the accumulation of 10,000 total flight cycles or 50,000 total flight hours, whichever occurs first." Continental states that the reported cracks have been on airplanes with moderate (13,000+) to high (20,000+) to very high (37,000+) total flight cycles. According to Continental, in all cases but one, all of the findings have been on airplanes with moderate (44,000+) to high (67,000+) flight hours. Further, Continental states that in the case of the one airplane with high flight cycles (20,000+) and low flight hours (less than 23,000 hours), cyclic stresses have played a major role.

We disagree with the request to change the compliance time. The manufacturer set the flight-hour threshold based on equivalent fatigue damage caused by flight hours as compared to flight cycles. The threshold for inspection is set below where the cracking is found. Setting the threshold at 50,000 total flight hours would set the threshold above five of eight reports. We have not changed the AD in this regard. However, under the provisions of paragraph (o) of this AD, we will consider requests for approval of an alternative compliance time if sufficient data are submitted to substantiate that the change in compliance time would provide an acceptable level of safety.

Request To Revise Compliance Time in Paragraph (h) of the Supplemental NPRM

UPS requests that we change the flight-cycle threshold for the inspection specified in paragraph (h) of the supplemental NPRM. UPS recommends that the compliance time be 16,500 flight cycles from the last accomplishment of the inspection required by paragraph (g) of this AD, rather than 3,000 flight cycles. UPS states that the open-hole high frequency eddy current (HFEC) inspection is set up such that a crack originating at the forward tension bolt hole of the aft pitch load fitting would be detected at the crack initiation. UPS adds that the corresponding interval of 16,500 flight cycles is such that if a crack were to develop immediately following the initial bolt open-hole HFEC

inspection, it would not grow to a critical size before detection at the next inspection interval of 16,500 flight cycles.

We disagree with the request to revise the compliance time. The external inspection specified in Part 1 of the Accomplishment Instructions of Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007, will not detect cracks that are hidden by the fitting, but will detect these cracks only when a crack grows beyond the fitting. In particular, the Part 1 inspection will not detect large cracks growing aft that are hidden by the fitting. Also, there is a preload in the skin due to "clamp-up stress" from the bolts. These clamp-up stresses add to uncertainty in the analysis. The 3,000-flight-cycle threshold will allow for additional opportunities to detect possible cracks once they grow beyond the fitting. In addition, the open-hole HFEC inspection does not detect cracks until they reach a detectable crack length. We have not changed the AD in this regard. However, under the provisions of paragraph (o) of this AD, we will consider requests for approval of an alternative compliance time if sufficient data are submitted to substantiate that the change in compliance time would provide an acceptable level of safety.

Request To Change "and" to "or" in Paragraph (g)(1) of the Supplemental NPRM

UPS requests that we change the "and" in paragraph (g)(1) of the supplemental NPRM to an "or." That part of paragraph (g)(1) of the supplemental NPRM states, "Do the inspection at the later time specified in paragraph (g)(1)(i) and (g)(1)(ii) of this AD." UPS interprets that the intent of paragraph (g)(1)(ii) of the supplemental NPRM is to allow airplanes that are approaching or have surpassed the paragraph (g)(1)(i) threshold a reasonable timeframe to accomplish Part 2 of the Accomplishment Instructions of Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007. UPS also states that similar paragraphs elsewhere in the NPRM use "or" rather than "and."

We agree with the request to change the "and" to an "or" for the reasons stated. We have revised paragraph (g)(1) of this AD accordingly. We have also revised paragraph (g)(2) of this AD to make the same change for consistency.

Request To Limit Wording to Repaired Fastener Holes Only

UPS requests that we revise the wording in paragraph (j)(1) of the supplemental NPRM to change "the repaired wing only" to "repaired fastener hole(s) only." UPS states that, as the supplemental NPRM is written, a freeze plug repair on either the inboard or outboard forward tension bolt hole of the aft pitch load fitting would end the repetitive inspections of paragraphs (f) and (g) of the supplemental NPRM for both the inboard and outboard forward tension bolt holes on that wing.

We disagree with the request to change the wording in paragraph (j)(1) of this AD. Our intention is that after doing the freeze plug repair specified in paragraph (j)(1) of this AD, the inspections specified in paragraphs (f) and (g) of this AD need not be done for the repaired wing and not just for the repaired fastener hole(s) as the commenter suggests. Instead of the inspections required by paragraphs (f) and (g) of this AD, the inspections required by paragraph (k) of this AD must be done. We have not changed the AD in this regard.

Request To Expand Inspection Area in Service Bulletin

Continental requests that Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007 ("the service bulletin"), include instructions for what to do if an operator finds cracks in the expanded area of inspection beyond the two bolt holes; or, as an option, a statement to contact Boeing for further disposition. Continental points out that Part 2 of the Work Instructions in the service bulletin provides disposition for any finding around the two bolt hole areas only.

We disagree that instructions need to be added. The inspections specified in Part 1 of the service bulletin are accomplished as given in Figure 3 of the service bulletin. The accomplishment instructions in Part 1 of the service bulletin give instructions for repairing any crack before further

flight. The instructions in Figure 3 of the service bulletin specify that operators should contact "The Boeing Company" for repair instructions. Paragraph (l) of this AD states that where the service bulletin specifies to contact Boeing for appropriate action, operators must repair the cracking using a method approved in accordance with the procedures specified in paragraph (o) of this AD. We have not changed the AD in this regard.

Conclusion

We have carefully reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD with the change described previously. We have determined that this change will neither increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

There are about 918 airplanes of the affected design in the worldwide fleet, and about 387 airplanes of U.S. Registry. The following table provides the estimated costs, at an average labor rate of \$80 per hour, for U.S. operators to comply with this AD.

Estimated Costs				
Action	Work hours	Parts	Cost per airplane	Fleet cost
Repetitive inspections, per inspection cycle (Part 1)	8	None	\$640, per inspection cycle	\$247,680
Inspection, rework, and bolt installation (Part 2)	8	Between \$303 and \$12,716	Between \$943 and \$13,356	Between \$364,941, and \$5,168,772
Repetitive inspections for certain airplanes (Part 4)	4	None	\$320, per inspection cycle	\$123,840, per inspection cycle

Authority for This Rulemaking

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

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

Regulatory Findings

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

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

- (1) Is not a "significant regulatory action" under Executive Order 12866;

(2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

List of Subjects in 14 CFR Part 39

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

Adoption of the Amendment

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

PART 39—AIRWORTHINESS DIRECTIVES

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

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

§ 39.13 [Amended]

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



2009-06-08 Boeing: Amendment 39-15844. Docket No. FAA-2006-25390; Directorate Identifier 2005-NM-224-AD.

Effective Date

- (a) This AD becomes effective April 28, 2009.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to Boeing Model 767-200, -300, -300F, and -400ER series airplanes, certificated in any category; as identified in Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007.

Unsafe Condition

(d) This AD results from reports of cracks found in the lower wing skin originating at the forward tension bolt holes of the aft pitch load fitting. We are issuing this AD to detect and correct cracking in the lower wing skin for the forward tension bolt holes at the aft pitch load fitting, which could result in a fuel leak and reduced structural integrity of the airplane.

Compliance

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

External Inspections of the Wing Skin

(f) For airplanes identified as Group 1, Configuration 1, 2, 3, or 6; Group 2, Configuration 1, 2, 3, or 6; and Group 3, Configuration 1 or 3; in Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007: At the later of the times specified in paragraph (f)(1) or (f)(2) of this AD, perform the detailed inspection and the external high frequency eddy current (HFEC) or dye penetrant inspections for cracking as specified in Part 1 of the Accomplishment Instructions of Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007. Repeat the inspections at intervals not to exceed 3,000 flight cycles or 12,000 flight hours, whichever occurs first, until the actions required by paragraph (g) or (j) of this AD are accomplished.

(1) Prior to the accumulation of 10,000 total flight cycles or 30,000 total flight hours, whichever occurs first.

(2) Within 3,000 flight cycles or 12,000 flight hours after the effective date of this AD, whichever occurs first.

Internal Inspections of the Wing Skin

(g) For airplanes identified in paragraphs (g)(1) and (g)(2) of this AD: Perform the bolt open-hole inspections for cracking in accordance with Part 2 of the Accomplishment Instructions of Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007, at the times specified in paragraph (g)(1) or (g)(2) of this AD, as applicable, until the requirement of paragraphs (h) or (j)(1) of this AD are accomplished. Doing the actions in this paragraph terminates the requirements of paragraph (f) of this AD.

(1) For airplanes on which the modifications of the nacelle strut and wing structure specified in any service bulletin listed in Table 1 of this AD have been done: Do the inspection at the later time specified in paragraph (g)(1)(i) or (g)(1)(ii) of this AD. Repeat the inspections at intervals not to exceed 16,500 flight cycles or 65,000 flight hours, whichever occurs first.

(i) Within 16,500 flight cycles or 65,000 flight hours, whichever occurs earlier, after accomplishment of a service bulletin identified in Table 1 of this AD.

(ii) Within 3,000 flight cycles or 12,000 flight hours after the effective date of this AD, whichever occurs first.

Table 1 – Threshold Service Bulletins

Boeing Service Bulletin –	Revision Level –	Dated –
767-54-0080	Original	October 7, 1999
767-54-0080	1	May 9, 2002
767-54-0081	Original	July 29, 1999
767-54-0081	1	February 7, 2002
767-54-0082	Original	October 28, 1999
767-54-0082	1	November 4, 2004
767-54-0082	3	September 20, 2007

(2) For airplanes on which the modifications of the nacelle strut and wing structure specified in any service bulletin listed in Table 1 of this AD have not been done: Do the inspection at the later of the times specified in paragraph (g)(2)(i) or (g)(2)(ii) of this AD. Repeat the inspections at intervals not to exceed 16,500 flight cycles or 65,000 flight hours, whichever occurs first.

(i) Before the accumulation of 20,000 total flight cycles or 60,000 total flight hours, whichever occurs earlier.

(ii) Within 72 months after the effective date of this AD.

Acceptable Method of Compliance With Paragraph (g) of This AD

(h) For all airplanes: Doing the actions in both paragraphs (h)(1) and (h)(2) of this AD is an acceptable method of compliance for the repetitive inspection requirements of paragraph (g) of this AD after the initial paragraph (g) inspection is accomplished.

(1) Accomplishing the inspections specified in Part 1 of the Accomplishment Instructions of Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007, within 3,000 flight cycles or 12,000 flight hours, whichever occurs first, after the accomplishment of the most recent inspection done in accordance with paragraph (g) of this AD (Part 2 of the Accomplishment Instructions of Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007).

(2) Repeating the inspections specified in Part 1 of the Accomplishment Instructions of Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007, at intervals not to exceed 3,000 flight cycles or 12,000 flight hours, whichever occurs first.

Repair of Cracking

(i) If cracking is found during any inspection required by paragraph (f) or (h) of this AD: Before further flight, repair in accordance with the procedures specified in paragraph (o) of this AD.

(j) If cracking is found during any inspection required by paragraph (g) of this AD: Before further flight, oversize the fastener hole in accordance with Part 2 of the Accomplishment Instructions of Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007, except as provided by paragraphs (j)(1) and (j)(2) of this AD.

(1) If any cracking cannot be removed by oversizing the fastener hole in accordance with Part 2 of the Accomplishment Instructions of Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007, before further flight, accomplish the freeze plug repair in accordance with Part 3 of the Accomplishment Instructions of Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007, except as provided by paragraph (j)(2) of this AD. Accomplishing the freeze plug repair ends the repetitive inspections required by paragraphs (f) and (g) of this AD for the repaired wing only.

(2) If any cracking is outside the limits specified for the freeze plug repair in Part 3 of the Accomplishment Instructions of Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007, before further flight, repair in accordance with the procedures specified in paragraph (o) of this AD.

Repetitive Inspections Required After Freeze Plug Repair

(k) For airplanes on which of the requirements of paragraph (j)(1) of this AD have been accomplished, perform the repetitive inspections specified in paragraphs (k)(1) and (k)(2) of this AD at the times specified.

(1) At the later time in paragraph (k)(1)(i) or (k)(1)(ii) of this AD: Accomplish the external inspections specified in Part 1 of the Accomplishment Instructions of Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007. If any cracking is found during any inspection required by this paragraph, before further flight, repair in accordance with the procedures specified in paragraph (o) of this AD. Repeat the external inspections at intervals not to exceed 3,000 flight cycles or 12,000 flight hours, whichever occurs earlier.

(i) Prior to the accumulation of 37,500 total flight cycles or 90,000 total flight hours, whichever occurs earlier.

(ii) Within 18 months after accomplishment of the freeze plug repair specified in Part 3 of the Accomplishment Instructions of Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007.

(2) At the later of the times specified in paragraph (k)(2)(i) or (k)(2)(ii) of this AD: Perform an internal HFEC for cracking, in accordance with Part 4 of the Accomplishment Instructions of Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007. If any cracking is found during any inspection required by this paragraph, before further flight, repair in accordance with the procedures specified in paragraph (o) of this AD. Repeat the inspections at intervals not to exceed 12,000 flight cycles or 48,000 flight hours, whichever occurs earlier.

(i) Prior to the accumulation of 37,500 total flight cycles or 90,000 total flight hours, whichever occurs earlier.

(ii) Within 72 months after accomplishment of the freeze plug repair specified in Part 3 of the Accomplishment Instructions of Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007.

Repair of Certain Cracking

(l) If any cracking is found during any inspection required by this AD, and Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007, specifies to contact Boeing for appropriate action: Before further flight, repair the cracking using a method approved in accordance with the procedures specified in paragraph (o) of this AD.

No Reporting Requirement

(m) Although Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007, specifies to submit certain information to the manufacturer, this AD does not include that requirement.

Credit for Actions Accomplished Previously

(n) Actions done before the effective date of this AD in accordance with Boeing Alert Service Bulletin 767-57A0097, dated September 29, 2005, are acceptable for compliance with the corresponding requirements of this AD.

Alternative Methods of Compliance (AMOCs)

(o)(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, ATTN: Tamara Anderson, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6421; fax (425) 917-6590; has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD, if it is approved by an Authorized Representative for the Boeing Commercial Airplanes Delegation Option Authorization Organization who has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

Material Incorporated by Reference

(p) You must use Boeing Service Bulletin 767-57A0097, Revision 1, dated October 18, 2007, to do the actions required by this AD, unless the AD specifies otherwise.

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

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

(3) You may review copies of the service information that is incorporated by reference at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221 or 425-227-1152.

(4) You may also review copies of the service information at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on February 27, 2009.
Ali Bahrami,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.