

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-1415; Directorate Identifier 2011-NM-145-AD; Amendment 39-17089; AD 2012-12-09]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for all The Boeing Company Model 717-200 airplanes. This AD was prompted by reports of cracks found on the center section ribs of the horizontal stabilizers. This AD requires repetitive inspections for cracking of the aft face of the left and right rib hinge bearing lugs of the center section of the horizontal stabilizer; and crack measurement, repairs, post-repair repetitive inspections, and installation of a new center section rib if necessary. We are issuing this AD to detect and correct cracking in the left and right bearing lugs of the rib hinge spreading at the same time, which could result in failure of both hinge bearing lugs. Failure of the hinge bearing lugs could result in the inability of the horizontal stabilizer to sustain flight loads and thereby reduce the controllability of the airplane.

DATES: This AD is effective July 23, 2012.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of July 23, 2012.

ADDRESSES: For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, 3855 Lakewood Boulevard, MC D800-0019, Long Beach, California 90846-0001; phone: 206-544-5000, extension 2; fax: 206-766-5683; 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: George Garrido, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office (ACO), 3960 Paramount Boulevard, Lakewood, California 90712-4137; phone: 562-627-5357; fax: 562-627-5210; email: George.Garrido@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 January 19, 2012 (77 FR 2664). That NPRM proposed to require repetitive eddy current high frequency (ETHF) inspections for cracks on the aft face on the left and right rib hinge bearing lugs of the center section of the horizontal stabilizer; and crack measurement, repairs, post-repair repetitive inspections, and installation of a new center section rib if necessary.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal (77 FR 2664, January 19, 2012), and the FAA's response to each comment.

Support for NPRM (77 FR 2664, January 19, 2012)

Boeing stated it supports the NPRM (77 FR 2664, January 19, 2012).

Request To Decrease Inspection Interval

Kristianna Sciarraa requested we change the repetitive inspection interval in the NPRM (77 FR 2664, January 19, 2012) from every 10,500 flight cycles to every 18 months when no cracking is found after the initial inspection. The commenter stated that more frequent inspections would increase early detection of fatigue cracking and would be workable with operator schedules. The commenter also stated that the costs associated with the decreased inspection interval are minimal when compared to the cost to an operator if an accident occurs due to fatigue cracking.

We disagree with changing the repetitive inspection interval because the repetitive inspection interval is based on damage tolerance (crack growth) analysis of the hinge bearing lug of the horizontal stabilizer center section. The analysis accounts for the loading and stress in the specific location and considers worse case crack growth from detectable to critical size and allows for multiple opportunities to detect a crack. We have not changed the final rule in this regard.

Request To Require Reporting

Kristianna Sciarraa requested we include mandatory reporting of inspection results in the NPRM (77 FR 2664, January 19, 2012). The commenter stated that Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011, specifies reporting and that providing the manufacturer with such information would foster an important exchange of information with an end goal of creating safe and reliable aircraft to ensure passenger and operator protection.

We disagree with requiring mandatory reporting of inspection results. Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011, already specifies submitting information to the manufacturer. This final rule does not include that requirement because we understand the unsafe condition, and we do not want to add an additional burden on the operators. We require reporting of inspection reports if the unsafe condition is a result of quality control issues or if we are trying to understand the scope of the unsafe condition. We have not changed the final rule 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 as proposed.

Costs of Compliance

We estimate that this AD affects 129 airplanes of U.S. registry.
We estimate the following costs to comply with this AD:

Estimated Costs				
Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
ETHF Inspection	6 work-hours X \$85 per hour = \$510 per inspection cycle	\$0	\$510 per inspection cycle	\$65,790 per inspection cycle

We have received no definitive data that would enable us to provide cost estimates for the on-condition labor costs specified in this AD. The estimated parts cost for a replacement rib is \$16,387.

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):



2012-12-09 The Boeing Company: Amendment 39-17089; Docket No. FAA-2011-1415; Directorate Identifier 2011-NM-145-AD.

(a) Effective Date

This AD is effective July 23, 2012.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all The Boeing Company Model 717-200 airplanes, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 5510, Horizontal Stabilizer Structure.

(e) Unsafe Condition

This AD was prompted by reports of cracks found on the center section ribs of the horizontal stabilizers. We are issuing this AD to detect and correct cracking in the left and right bearing lugs of the rib hinge spreading at the same time, which could result in failure of both hinge bearing lugs. Failure of the hinge bearing lugs could result in the inability of the horizontal stabilizer to sustain flight loads and thereby reduce the controllability of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Repetitive Eddy Current High Frequency (ETHF) Inspections

Before the accumulation of 35,000 total flight cycles, or within 8,275 flight cycles after the effective date of this AD, whichever occurs later: Do an ETHF inspection for cracks of the aft face on the left and right rib hinge bearing lugs of the center section of the horizontal stabilizer, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011. If no crack is found, repeat the inspection thereafter at intervals not to exceed 10,500 flight cycles.

(h) Crack Measurement

If any crack is found during any inspection required by paragraph (g) of this AD: Before further flight, measure the length of the crack, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011.

(i) Blend Out Repair, ETHF Inspections, and Corrective Action for Certain Crack Lengths

For any crack that meets "Condition 2A" of Table 1 of 1.E., "Compliance," of Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011: Do the actions in paragraphs (i)(1) and (i)(2) of this AD.

(1) Before further flight, do a blend out repair, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011.

(2) Within 14,200 flight cycles after accomplishing the blend out repair required by paragraph (i)(1) of this AD: Do an ETHF inspection of the blend out repair area for cracking, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011. If no cracking is found, repeat the inspection thereafter at intervals not to exceed 5,400 flight cycles.

(i) If any crack is found during the ETHF inspection required by paragraph (i)(2) of this AD: Before further flight, remove the cracked center section rib of the horizontal stabilizer and install a new center section rib, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011.

(ii) Within 35,000 flight cycles after the installation of the new center section rib, do the actions in paragraph (g) of this AD.

(j) Corrective Action for Certain Crack Lengths

For any crack that meets "Condition 2D" of Table 1 of 1.E., "Compliance," of Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011: Before further flight, remove the cracked center section rib of the horizontal stabilizer and install a new center section rib, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011. Within 35,000 flight cycles after the installation of the new rib, do the actions in paragraph (g) of this AD.

(k) No Reporting Requirement

Although Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011, specifies to submit certain information to the manufacturer, this AD does not include that requirement.

(l) Alternative Methods of Compliance (AMOCs)

(1) The Manager Los Angeles 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.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles 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.

(m) Related Information

For more information about this AD, contact George Garrido, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office (ACO), 3960 Paramount Boulevard, Lakewood, California 90712-4137; phone: 562-627-5357; fax: 562-627-5210; email: George.Garrido@faa.gov.

(n) Material Incorporated by Reference

(1) You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) of the following service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(i) Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, 3855 Lakewood Boulevard, MC D800-0019, Long Beach, California 90846-0001; phone: 206-544-5000, extension 2; fax: 206-766-5683; Internet: <https://www.myboeingfleet.com>.

(3) 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.

(4) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on June 7, 2012.
Michael Kaszycki,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.