



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2016-9570; Directorate Identifier 2016-NM-185-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all The Boeing Company Model 707 airplanes and Model 720 and 720B series airplanes. This proposed AD was prompted by a determination that undetected web fatigue cracking caused by oil canning may exist in the station 1440 aft pressure bulkhead web. This proposed AD would require repetitive detailed inspections for any oil canning or cracking of the station 1440 aft pressure bulkhead web, and related corrective actions if necessary. We are proposing this AD to address the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone: 562-797-1717; Internet: <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9570.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9570; 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 proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: George Garrido, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office (ACO), 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5232; fax: 562-627-5210; email: george.garrido@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section.

Include “Docket No. FAA-2016-9570; Directorate Identifier 2016-NM-185-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We have determined that undetected web fatigue cracking caused by oil canning may exist in the station 1440 aft pressure bulkhead web. Oil canning is defined as a locally buckled forward area of the aft pressure bulkhead web between the radial stiffeners and the circumferential tear straps, which can pop outward when the fuselage is pressurized, causing a stress reversal cycle during each flight that may lead to fatigue cracking of the aft pressure bulkhead web. Oil canning may lead to cracking and related damage (including sharp creases; gouges; cracks; deformation to a radial stiffener, circumferential tear strap, Y-chord, or terminal fitting splice plate; or damaged holes) or irregularity (including loose or missing fasteners, pressure leakage, fasteners within 1 inch of any oil canning location, or an oil canning location within 2 inches of another oil canning location). This condition, if not corrected, could result in an undetected fatigue crack in the aft pressure bulkhead web growing to a length that could result in reduced structural integrity of the web and lead to rapid decompression of the airplane.

Related Service Information under 1 CFR part 51

We reviewed Boeing 707 Alert Service Bulletin A3543, dated September 15, 2016 (“ASB A3543, Revision 0”). The service information describes procedures for

repetitive detailed inspections for any oil canning or cracking of the station 1440 aft pressure bulkhead web, and related corrective actions. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA’s Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of these same type designs.

Proposed AD Requirements

This proposed AD would require accomplishing the actions specified in the service information described previously, except as discussed under “Differences Between this Proposed AD and the Service Information.” For information on the procedures and compliance times, see this service information at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9570.

The phrase “related investigative actions” is used in this proposed AD. Related investigative actions are follow-on actions that (1) are related to the primary action, and (2) further investigate the nature of any condition found. Related investigative actions in an AD could include, for example, inspections.

The phrase “corrective actions” is used in this proposed AD. Corrective actions correct or address any condition found. Corrective actions in an AD could include, for example, repairs.

Differences Between this Proposed AD and the Service Information

ASB A3543, Revision 0, specifies to contact the manufacturer for certain instructions, but this proposed AD would require using repair methods, modification deviations, and alteration deviations in one of the following ways:

- In accordance with a method that we approve; or

- Using data that meet the certification basis of the airplane, and that have been approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) whom we have authorized to make those findings.

Costs of Compliance

We estimate that this proposed AD affects 12 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection for oil canning	6 work-hours X \$85 per hour = \$510 per inspection cycle	\$0	\$510 per inspection cycle	\$6,120 per inspection cycle

We estimate the following costs to do any additional inspections that would be required based on the results of the initial proposed inspection. These cost estimates are for one canning location. We have no way of determining the number of aircraft that might need these actions:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Oil canning zone determination and inspection	1 work-hour X \$85 per hour = \$85	\$0	\$85
Detailed inspection and eddy current inspection for cracks	13 work-hours X \$85 per hour = \$1,105	\$0	\$1,105
High frequency eddy current inspection for crack location, length, and orientation	2 work-hours X \$85 per hour = \$170	\$0	\$170

We have received no definitive data that would enable us to provide cost estimates for certain corrective actions specified in this proposed AD.

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 determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under the 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.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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):

The Boeing Company: Docket No. FAA-2016-9570; Directorate Identifier 2016-NM-185-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None.

(c) Applicability

This AD applies to the airplanes, certificated in any category, as identified in Boeing 707 Alert Service Bulletin A3543, dated September 15, 2016 (“ASB A3543, Revision 0”), and in paragraphs (c)(1) and (c)(2) of this AD.

(1) The Boeing Company Model 707-100 Long Body, -200, -100B Long Body, and -100B Short Body series airplanes; and Model 707-300, -300B, -300C, and -400 series airplanes.

(2) The Boeing Company Model 720 and 720B series airplanes.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by a determination that undetected web fatigue cracking caused by oil canning may exist in the station 1440 aft pressure bulkhead web. We are issuing this AD to detect and correct fatigue cracking of the aft pressure bulkhead web, which could grow in length and ultimately reduce the structural integrity of the web and lead to rapid decompression of the airplane.

(f) Compliance

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

(g) Repetitive Inspections and Related Investigative and Corrective Actions

At the applicable time specified in paragraph 1.E., “Compliance,” of ASB A3543, Revision 0, except as required by paragraph (h)(1) of this AD: Do all applicable actions specified in paragraphs (g)(1), (g)(2), and (g)(3) of this AD, in accordance with the Accomplishment Instructions of ASB A3543, Revision 0, except as required by paragraph (h)(2) of this AD.

(1) Do a detailed inspection of the station 1440 aft pressure bulkhead web for any oil canning. Repeat the inspection at the applicable time specified in paragraph 1.E., “Compliance,” of ASB A3543, Revision 0.

(2) Do all applicable related investigative actions, including detailed, eddy current, and high frequency eddy current (HFEC) inspections. Repeat the applicable

inspections thereafter at the applicable time specified in paragraph 1.E., “Compliance,” of ASB A3543, Revision 0.

(3) Do all applicable corrective actions at the applicable time specified in paragraph 1.E., “Compliance,” of ASB A3543, Revision 0.

(h) Service Information Exceptions

(1) Where ASB A3543, Revision 0, specifies a compliance time “after the original issue date of this service bulletin,” this AD requires compliance within the specified compliance time after the effective date of this AD.

(2) Where Boeing Alert Service Bulletin A3543, dated September 15, 2016, specifies to contact Boeing for repair instructions, and specifies that action as Required for Compliance (RC), this AD requires repair using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

(i) Special Flight Permit

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 airplane can be repaired, but if any crack is found as identified in ASB A3543, Revision 0, concurrence by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA, is required before issuance of the special flight permit.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles 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 paragraph (k)(1) of this AD. Information may be emailed to: 9-ANM-LAACO-AMOC-Requests@faa.gov.

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

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration 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. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) Except as required by paragraph (h) of this AD: For service information that contains steps that are labeled as RC, the provisions of paragraphs (j)(4)(i) and (j)(4)(ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or substep is labeled “RC Exempt,” then the RC requirement is removed from that step or substep. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator’s maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(k) Related Information

(1) For more information about this AD, contact George Garrido, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles ACO, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5232; fax: 562-627-5210; email: george.garrido@faa.gov.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone: 562-797-1717; Internet: <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on December 27, 2016.

Jeffrey E. Duven,
Manager,
Transport Airplane Directorate,
Aircraft Certification Service.
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