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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0654; Directorate Identifier 2014-NM-071-AD; Amendment 39-17983; AD 2014-20-10]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are superseding Airworthiness Directive (AD) 2013-11-14 for certain The Boeing Company Model 777-200 and -300 series airplanes. AD 2013-11-14 required repetitive general visual inspections of the strut forward dry bay for the presence of hydraulic fluid, and related investigative and corrective actions (including checking drain lines for blockage due to hydraulic fluid coking, and cleaning or replacing drain lines to allow drainage) if necessary. This AD adds airplanes to the applicability. This AD was prompted by reports of hydraulic fluid contamination (including contamination caused by hydraulic fluid in its liquid, vapor, and/or solid (coked) form) found in the strut forward dry bay. We are issuing this AD to detect and correct hydraulic fluid contamination of the strut forward dry bay, which could result in hydrogen embrittlement of the titanium forward engine mount bulkhead fittings, and consequent inability of the fittings to carry engine loads, resulting in engine separation. Hydrogen embrittlement also could cause a through-crack formation across the fittings through which an engine fire could breach into the strut, resulting in an uncontained strut fire.

DATES: This AD is effective October 22, 2014.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of October 22, 2014.

We must receive any comments on this AD by November 21, 2014.

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: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may view the 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.

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-2014-0654; 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 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: Kevin Nguyen, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone: 425-917-6501; fax: 425-917-6590; email: kevin.nguyen@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On May 24, 2013, we issued AD 2013-11-14, Amendment 39-17474 (78 FR 35749, June 14, 2013), for certain The Boeing Company Model 777-200 and -300 series airplanes. AD 2013-11-14 required repetitive general visual inspections of the strut forward dry bay for the presence of hydraulic fluid, and related investigative and corrective actions (including checking drain lines for blockage due to hydraulic fluid coking, and cleaning or replacing drain lines to allow drainage) if necessary. AD 2013-11-14 resulted from reports of hydraulic fluid contamination (including contamination caused by hydraulic fluid in its liquid, vapor, and/or solid (coked) form) found in the strut forward dry bay. We issued AD 2013-11-14 to detect and correct hydraulic fluid contamination of the strut forward dry bay, which could result in hydrogen embrittlement of the titanium forward engine mount bulkhead fittings, and consequent inability of the fittings to carry engine loads, resulting in engine separation. Hydrogen embrittlement also could cause a through-crack formation across the fittings through which an engine fire could breach into the strut, resulting in an uncontained strut fire.

Actions Since AD 2013-11-14, Amendment 39-17474 (78 FR 35749, June 14, 2013) was Issued

Since we issued AD 2013-11-14, Amendment 39-17474 (78 FR 35749, June 14, 2013), we have received reports that a production change installed on certain airplanes that would have eliminated the need for the inspections required by AD 2013-11-14 could not be installed; therefore, the inspection of these airplanes is now necessary. We are issuing this AD to correct the unsafe condition on these products.

Relevant Service Information

We reviewed Boeing Special Attention Service Bulletin 777-54-0028, Revision 1, dated December 10, 2013. For information on the procedures and compliance times, see this service information at <http://www.regulations.gov> by searching for Docket No. FAA-2014-0654.

FAA's Determination

We are issuing 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 the same type design.

AD Requirements

Although this AD does not explicitly restate the requirements of AD 2013-11-14, Amendment 39-17474 (78 FR 35749, June 14, 2013), this AD retains all of the requirements of AD 2013-11-14. Those requirements are referenced in the service information identified previously, which, in turn, is referenced in paragraph (g) of this AD. This AD continues to require repetitive general visual inspections of the strut forward dry bay for the presence of hydraulic fluid, and related investigative and corrective actions (including checking drain lines for blockage due to hydraulic fluid coking, and cleaning or replacing drain lines to allow drainage) if necessary, except as discussed under "Differences Between this AD and the Service Information." This AD also adds airplanes to the applicability.

The phrase "related investigative actions" is used in this AD. "Related investigative actions" are follow-on actions that (1) are related to the primary actions, 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 AD. "Corrective actions" are actions that correct or address any condition found. Corrective actions in an AD could include, for example, repairs.

Differences Between this AD and the Service Information

Boeing Special Attention Service Bulletin 777-54-0028, Revision 1, dated December 10, 2013, specifies to contact the manufacturer for instructions on how to repair certain conditions, but this AD would require repairing those conditions 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.

FAA's Justification and Determination of the Effective Date

Since the airplanes added to the applicability are not on the U.S. Register, notice and opportunity for public comment before issuing this AD are unnecessary. Therefore, we find that notice and opportunity for prior public comment are unnecessary and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not provide you with notice and an opportunity to provide your comments before it becomes effective. However, we invite you to send any written data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include the docket number FAA-2014-0654 and

director identifier 2014-NM-071-AD at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this 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 AD.

Costs of Compliance

We estimate that this AD affects 54 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
Inspection per inspection cycle	5 work-hours × \$85 per hour = \$425 per inspection cycle	\$0	\$425 per inspection cycle	\$22,950 per inspection cycle.

Since none of the newly added airplanes is on the U.S. Register, the requirements of this AD add no additional economic burden.

We estimate the following costs to do any necessary actions that would be required based on the results of the inspection. 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
Detailed inspection	16 work-hours × \$85 per hour = \$1,360	\$0	\$1,360
Check drain lines (including cleaning or replacing)	5 work-hours × \$85 per hour = \$425	\$0	\$425
Detailed inspection and high frequency eddy current inspection	16 work-hours × \$85 per hour = \$1,360	\$0	\$1,360
Clean and restore sealant, primer, and leveling compound	5 work-hours × \$85 per hour = \$425	\$0	\$425

We have received no definitive data that would enable us to provide a cost estimate for the on-condition repair specified in this AD.

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

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 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. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2013-11-14, Amendment 39-17474 (78 FR 35749, June 14, 2013), and adding the following new AD:



2014-20-10 The Boeing Company: Amendment 39-17983; Docket No. FAA-2014-0654; Directorate Identifier 2014-NM-071-AD.

(a) Effective Date

This AD is effective October 22, 2014.

(b) Affected ADs

This AD replaces AD 2013-11-14, Amendment 39-17474 (78 FR 35749, June 14, 2013).

(c) Applicability

This AD applies to The Boeing Company Model 777-200 and -300 series airplanes, certificated in any category, equipped with Pratt & Whitney PW4000 series engines.

(d) Subject

Air Transport Association (ATA) of America Code 54, Nacelles/pylons.

(e) Unsafe Condition

This AD was prompted by reports of hydraulic fluid contamination (including contamination caused by hydraulic fluid in its liquid, vapor, and/or solid (coked) form) found in the strut forward dry bay. We are issuing this AD to detect and correct hydraulic fluid contamination of the strut forward dry bay, which could result in hydrogen embrittlement of the titanium forward engine mount bulkhead fittings, and consequent inability of the fittings to carry engine loads, resulting in engine separation. Hydrogen embrittlement also could cause a through-crack formation across the fittings through which an engine fire could breach into the strut, resulting in an uncontained strut fire.

(f) Compliance

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

(g) Inspection

At the applicable times specified in paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 777-54-0028, Revision 1, dated December 10, 2013, except as required by paragraph (h)(1) of this AD: Do a general visual inspection for hydraulic fluid contamination (including contamination caused by hydraulic fluid in its liquid, vapor, and/or solid (coked) form) of the interior of the strut forward dry bay, and do all applicable related investigative and corrective actions (including checking drain lines for blockage due to hydraulic fluid coking, and cleaning or replacing drain lines to allow drainage, as applicable), in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 777-54-0028, Revision 1, dated December 10, 2013, except as required by paragraph (h)(2) of this AD. Repeat the inspection thereafter at the times

specified in paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 777-54-0028, Revision 1, dated December 10, 2013. Do all applicable related investigative and corrective actions at the times specified in paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 777-54-0028, Revision 1, dated December 10, 2013.

(h) Exceptions to the Service Information

(1) Where the Compliance Time column of paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 777-54-0028, Revision 1, dated December 10, 2013, refers to the compliance time "after the Revision 1 date of this service bulletin," this AD requires compliance after the effective date of this AD.

(2) Where Boeing Special Attention Service Bulletin 777-54-0028, Revision 1, dated December 10, 2013, specifies to contact Boeing for repair: At the applicable times specified in paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 777-54-0028, Revision 1, dated December 10, 2013, repair, using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

(i) Credit for Previous Actions

This paragraph provides credit for the actions specified in paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Boeing Special Attention Service Bulletin 777-54-0028, dated May 25, 2012.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle 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 paragraph (k) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOCRequests@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 required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that 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.

(4) AMOCs approved for AD 2013-11-14, Amendment 39-17474 (78 FR 35749, June 14, 2013), are approved as AMOCs for the corresponding provisions of this AD.

(k) Related Information

For more information about this AD, contact Kevin Nguyen, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone: 425-917-6501; fax: 425-917-6590; email: kevin.nguyen@faa.gov.

(l) Material Incorporated by Reference

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

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(3) The following service information was approved for IBR on October 22, 2014.

(i) Boeing Special Attention Service Bulletin 777-54-0028, Revision 1, dated December 10, 2013.

(ii) Reserved.

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

(5) You may view the 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.

(6) You may view this 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 September 23, 2014.

Dionne Palermo,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.