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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2016-0463; Directorate Identifier 2015-NM-155-AD; Amendment 39-18623; AD 2016-17-10]**

**RIN 2120-AA64**

#### **Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for all The Boeing Company Model 777 airplanes. This AD was prompted by a report of an incident involving a landing in which the pilots needed to input corrections due to airplane yaw and roll to the right; the main landing gear (MLG) aft trunnion pin was later found to be fractured. This AD requires identification and replacement of certain MLG aft trunnion pins. We are issuing this AD to prevent a fractured MLG aft trunnion pin, which could result in collapse of the MLG and consequent loss of control of the airplane during landing.

**DATES:** This AD is effective September 30, 2016.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of September 30, 2016.

**ADDRESSES:** For service information identified in this final rule, 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 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-2016-0463.

#### **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-2016-0463; 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 Docket 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:** Eric Lin, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6412; fax: 415-917-6590; email: eric.lin@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all The Boeing Company Model 777 airplanes. The NPRM published in the Federal Register on February 18, 2016 (81 FR 8164) ("the NPRM"). The NPRM was prompted by a report of an incident involving a landing in which the pilots needed to input corrections due to airplane yaw and roll to the right; the MLG aft trunnion pin was later found to be fractured. The NPRM proposed to require identification and replacement of certain MLG aft trunnion pins. We are issuing this AD to prevent a fractured MLG aft trunnion pin, which could result in collapse of the MLG and consequent loss of control of the airplane during landing.

### **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM and the FAA's response to each comment.

### **Support for the NPRM**

Three commenters indicated their support for the NPRM.

### **Request To Update the Cost Section**

One commenter, Gilles Oriot, asked that we update the cost estimate to reflect the costs shown in Boeing Information Notice 777-32A0103 IN 03, dated February 2, 2015.

We agree with the commenter and have updated the Costs of Compliance to reflect the updated information.

### **Request To Add to Credit Information**

The Boeing Company, American Airlines, Air France, Korean Air, Etihad Airways, and All Nippon Airways requested that we allow installation of pins with serial numbers beginning with "EGL" or "MAL" that have been inspected previously but were not marked "BASE METAL INSPECTED" to fulfill the requirements of the proposed AD. The commenters stated that the previous inspection may have been done as part of a previous overhaul or required inspection using other service information that did not specify to mark "BASE METAL INSPECTED." The commenters also stated that the actions specified in the service information are consistent with the requirements of the proposed AD. The commenters suggested various changes in order to allow installation of these parts.

We acknowledge that previous inspections may have been done as part of an overhaul or previous service requests, but we do not agree with the suggested changes. We disagree because providing credit for the inspections required by this AD undermines the level of record review

required by this AD for compliance, cannot ensure that the various actions taken for each pin are the same actions required by this AD, and may not provide an acceptable level of safety equivalent to this AD. Operators that would like credit for the actions performed before the effective date of this AD may request approval of an alternative method of compliance (AMOC). The request should include a list of affected pin serial numbers, the airplane on which each pin is currently installed (if applicable), and the actions that were performed for each pin with applicable service information. We have not changed this final rule regarding this issue.

**Request To Allow Alternative Part Marking**

FedEx requested that we allow the suffix "BMI" to be allowed for marking the pins. FedEx stated that its record keeping system can only track unique part number and serial number combinations; it is not capable of tracking the additional "BASE METAL INSPECTED" marking.

We disagree with the commenter's request. We disagree because pins can be rotated among other airplanes and operators. Operators need to be consistent with how the pins are identified to comply with this AD and ensure the safety of passengers and crew. We recommend that the commenter work with the manufacturer to identify a suitable method of compliance for future revision of the service information. We have not changed this final rule regarding this issue.

**Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD as proposed, except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

**Related Service Information Under 1 CFR Part 51**

We reviewed Boeing Alert Service Bulletin 777-32A0103, Revision 1, dated December 10, 2015. The service information describes procedures for identifying and replacing certain MLG aft trunnion pins. 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.

**Costs of Compliance**

We estimate that this AD affects 123 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

**Estimated Costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Inspection	2 work-hours × \$85 per hour = \$170	\$0	\$170	\$20,910

We estimate the following costs to do any necessary replacements that would be required based on the results of the inspection. We have no way of determining the number of aircraft that might need this repair:

### On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Replacement of aft trunnion pin	211 work-hours × \$85 per hour = \$17,935	\$5,291	\$23,226

#### 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):



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**2016-17-10 The Boeing Company:** Amendment 39-18623; Docket No. FAA-2016-0463; Directorate Identifier 2015-NM-155-AD.

**(a) Effective Date**

This AD is effective September 30, 2016.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all The Boeing Company Model 777-200, 777-200LR, 777-300, 777-300ER, and 777F series airplanes, certificated in any category.

**(d) Subject**

Air Transport Association (ATA) of America Code 32, Landing gear.

**(e) Unsafe Condition**

This AD was prompted by a report of an incident involving a landing in which the pilots needed to input corrections due to airplane yaw and roll to the right; the main landing gear (MLG) aft trunnion pin was later found to be fractured. We are issuing this AD to prevent a fractured MLG aft trunnion pin, which could result in collapse of the MLG and consequent loss of control of the airplane during landing.

**(f) Compliance**

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

**(g) Aft Trunnion Pin Identification**

For airplanes on which the original airworthiness certificate or the original export certificate of airworthiness was issued on or before the effective date of this AD: Within 36 months after the effective date of this AD, identify the serial number and marking of the MLG aft trunnion pins, in accordance with Part 1 of the Accomplishment Instructions of Boeing Alert Service Bulletin 777-32A0103, Revision 1, dated December 10, 2015.

**(h) MLG Aft Trunnion Pin Replacement**

For any MLG aft trunnion pin that begins with serial number "EGL" or "MAL," on which no "BASE METAL INSPECTED" marking is found, replace with a new or serviceable MLG aft trunnion pin within 36 months after the effective date of this AD, in accordance with Part 2 of the

**(i) Parts Installation Prohibition**

As of the effective date of this AD, no person may install, on any airplane, any MLG aft trunnion pin that begins with serial number "EGL" or "MAL" and is not marked "BASE METAL INSPECTED."

**(j) Credit for Previous Actions**

(1) 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 Multi-Operator Message (MOM) MOM-MOM-15-0303-01B, dated May 13, 2015, which is not incorporated by reference in this AD.

(2) This paragraph provides credit for the actions specified in paragraphs (g) and (h) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin 777-32A0103, dated September 11, 2015, which is not incorporated by reference in this AD.

**(k) 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 (l)(1) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-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, Seattle 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) For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (k)(4)(i) and (k)(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. 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.

**(l) Related Information**

(1) For more information about this AD, contact Eric Lin, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle ACO, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6412; fax: 415-917-6590; email: eric.lin@faa.gov.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (m)(3) and (m)(4) of this AD.

**(m) 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.

(i) Boeing Alert Service Bulletin 777-32A0103, Revision 1, dated December 10, 2015.

(ii) Reserved.

(3) 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>.

(4) You may view this 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.

(5) 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 August 17, 2016.

Dorr M. Anderson,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.