DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-1320; Directorate Identifier 2011-NM-208-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 777 airplanes. This proposed AD was prompted by four reports of retaining cross bolt hardware not fully engaged into the fuse pins of the forward trunnion lower housing of the main landing gear (MLG), which could result in an incorrect MLG emergency landing break-away sequence. This proposed AD would require a detailed inspection of the fuse pin cross bolts and fuse pins of the left and right MLG forward trunnion lower housing to verify that the cross bolts are correctly installed and that there are no missing fuse pins, and replacement of the fuse pins if necessary. We are proposing this AD to prevent an incorrect emergency landing MLG break-away sequence, which could result in puncturing of the wing box and consequent fuel leaks and an airplane fire. Failure of the fuse pins could also result in a premature landing gear collapse causing a runway excursion during take-off or landing.

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 proposed AD, contact Boeing
  Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC
  2H-65, Seattle, Washington 98124-2207; phone: 206-544-5000, extension 1; fax:
  206-766-5680; e-mail: me.boecom@boeing.com; 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.

Exercising the AD Docket
  You may exercise 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 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: James Sutherland, Aerospace
  Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office
  (ACO), 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone:
  425-917-6533; fax: 425-917-6590; e-mail: James.Sutherland@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-2011-1320; Directorate Identifier 2011-NM-208-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 received four reports of retaining cross bolt hardware not fully engaged into the fuse pins of the MLG forward trunnion lower housing. Reports indicated the incorrectly installed cross bolts were found during a scheduled C-check inspection, an MLG replacement, a 4C inspection, and a hard landing inspection. All findings indicated that the cross bolt and lock wire were intact, but the cross bolt had not properly engaged in the fuse pin. The cross bolt and lock wire are used to prevent the fuse pin from migrating out of position. A migrated or missing fuse pin in the MLG forward trunnion lower housing can cause the remaining fuse pins in the MLG forward trunnion upper and lower housing to wear at a faster rate and also result in possible failure of the adjacent fuse pins in the MLG forward trunnion upper and lower housing. Failure of the fuse pins in the MLG forward trunnion upper and lower housing could result in an incorrect emergency landing MLG break-away sequence, which will cause the MLG to puncture
the wing box and consequent fuel leaks and possible airplane fire. Failure of the fuse pins could also result in a premature landing gear collapse causing a runway excursion during take-off or landing.

**Relevant Service Information**

We reviewed Boeing Alert Service Bulletin 777-57A0090, dated August 24, 2011. This service information describes procedures for doing a detailed inspection of the fuse pin cross bolts and fuse pins of the left and right MLG forward trunnion lower housing to verify that the cross bolts are correctly installed and that there are no missing fuse pins, and replacing all fuse pins in the MLG forward trunnion upper and lower housing with new fuse pins if necessary.

**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 the same type design.

**Proposed AD Requirements**

This proposed AD would require accomplishing the actions specified in the service information described previously.

**Costs of Compliance**

We estimate that this proposed AD will affect 166 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

<table>
<thead>
<tr>
<th>Estimated costs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Action</strong></td>
</tr>
<tr>
<td>Detailed Inspection</td>
</tr>
</tbody>
</table>
We estimate the following costs to do any necessary replacements that would be required based on the results of the proposed inspection. We have no way of determining the number of aircraft that might need these replacements.

### On-condition costs

<table>
<thead>
<tr>
<th>Action</th>
<th>Labor cost</th>
<th>Parts cost</th>
<th>Cost per product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replace fuse pins</td>
<td>44 work-hours X</td>
<td>Between $15,216</td>
<td>Between $18,956 and $56,360</td>
</tr>
<tr>
<td>$85 per hour =</td>
<td>$3,740</td>
<td>and $52,620</td>
<td>$56,360</td>
</tr>
</tbody>
</table>

According to the manufacturer, some of the costs of this proposed 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**

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.

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

   **The Boeing Company**: Docket No. FAA-2011-1320; Directorate Identifier 2011-NM-208-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 all The Boeing Company Model 777-200, -200LR, -300, -300ER, and 777F series airplanes; certificated in any category.

(d) **Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 57, Wings.

(e) **Unsafe Condition**

This AD was prompted by four reports of retaining cross bolt hardware not fully engaged into the fuse pins of the forward trunnion lower housing of the main landing gear (MLG), which could result in an incorrect MLG emergency landing break-away sequence. We are issuing this AD to prevent an incorrect emergency landing MLG break-away sequence, which could result in puncturing of the wing box and consequent fuel leaks and an airplane fire. Failure of the fuse pins could also result in a premature landing gear collapse causing a runway excursion during take-off or landing.

(f) **Compliance**

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

(g) **Detailed Inspection and Replacement**

Within 1,125 days after the effective date of this AD, perform a detailed inspection of the fuse pin cross bolts and fuse pins of the left and right MLG forward trunnion lower housing to verify that the cross bolts are installed correctly and that there are no missing fuse pins, in accordance with the Accomplishment Instructions of Boeing
Alert Service Bulletin 777-57A0090, dated August 24, 2011. If any cross bolt of the MLG forward trunnion lower housing is not installed correctly, or if any fuse pin of the MLG forward trunnion lower housing is missing: Before further flight, replace all fuse pins in the MLG forward trunnion upper and lower housing, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 777-57A0090, dated August 24, 2011.

Note 1: The service bulletin accomplishment instructions might refer to other procedures. When the words “refer to” are used and the operator has an accepted alternative procedure, the accepted alternative procedure can be used to comply with the AD. When the words “in accordance with” are included in the instruction, the procedure in the design approval holder (DAH) document must be used to comply with the AD.

(h) 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 the Related Information section of this AD. Information may be e-mailed 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 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.

(i) Related Information

(1) For more information about this AD, contact James Sutherland, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6533; fax: 425-917-6590; e-mail: James.Sutherland@faa.gov.

(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; phone: 206-544-5000, extension 1; fax: 206-766-5680; e-mail: me.boecom@boeing.com; 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.

Issued in Renton, Washington, on December 6, 2011.

Ali Bahrami,
Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

[FR Doc. 2011-32077 Filed 12/14/2011 at 8:45 am; Publication Date: 12/15/2011]