

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2005-20475; Directorate Identifier 2004-NM-157-AD; Amendment 39-14250; AD 2005-18-10]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Boeing Model 777-200 and -300 Series Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain Boeing Model 777-200 and -300 series airplanes. This AD requires modification of the splice plate assemblies installed under the floor panels at the forward and aft edges of the cabin aisle. This AD results from reports of cracking of the aluminum splice plates under the floor panels in the cabin aisle. We are issuing this AD to prevent loss of the capability of the cabin floor and seat track structure to support the airplane interior inertia loads under emergency landing conditions. Loss of this support could lead to galley or seat separation from attached restraints, which could result in blocking of the emergency exits and consequent injury to passengers and crew.

**DATES:** This AD becomes effective October 19, 2005.

The incorporation by reference of a certain publication listed in the AD is approved by the Director of the Federal Register as of October 19, 2005.

**ADDRESSES:** For service information identified in this AD, contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207.

*Docket:* The AD docket contains the proposed AD, comments, and any final disposition. You can examine the AD docket on the Internet at <http://dms.dot.gov>, or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the U.S. Department of Transportation, 400 Seventh Street SW, room PL-401, Washington, DC. This docket number is FAA-2005-20475; the directorate identifier for this docket is 2004-NM-157-AD.

**FOR FURTHER INFORMATION CONTACT:** Gary Oltman, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6443; fax (425) 917-6590.

**SUPPLEMENTARY INFORMATION:** The FAA proposed to amend 14 CFR part 39 with an AD for certain Boeing Model 777-200, -200ER, and -300 series airplanes. That action, published in the Federal Register on March 3, 2005 (70 FR 10337), proposed to require modification of the splice plate assemblies installed under the floor panels at the forward and aft edges of the cabin aisle.

## **Comments**

We provided the public the opportunity to participate in the development of this AD. We have considered the comments that have been submitted on the proposed AD.

## **Request To Add Optional Inspection Program**

One commenter asks that, in addition to the terminating action specified in the proposed AD, an optional inspection program be implemented to do inspections of the most affected areas, with replacement or repair of affected parts on attrition. The commenter states that such an inspection should be added as a compliance option, in lieu of a full modification, or in conjunction with a longer compliance time. The commenter adds that, in order to accomplish the modification, access to some locations will be difficult; therefore, consideration should be given to adding inspections to extend the compliance time. The commenter suggests adding to the proposed AD an internal general visual inspection of the floor splice plates that are visible from the forward and aft pit. In addition, the commenter recommends inspecting from above for flexing and "clicking" noises commonly associated with splice plate cracking of the remaining areas located in the overwing section and not viewable from the pits. The commenter suggests that the inspections be done at intervals no longer than 48 months apart, and that a full general visual inspection of all affected splice plates be done within a 72-month period to allow for normal maintenance cycles that facilitate the inspection.

The commenter states that it was instrumental in identifying and reporting cracked splice plate discrepancies to the airplane manufacturer in December 1999. The reports brought about changes addressing the subject issue that were added to both the structural repair and airplane maintenance manuals for Boeing Model 777 airplanes. The commenter adds that its findings were significant enough to justify creating a specific maintenance program that contained procedures for finding and addressing the cracking in most affected areas. The inspections revealed an overwhelming propensity for cracking in the aisle nearest the passenger entry doors 1L and 2L. The commenter concludes that the approach of inspecting aisle and entry floor panels at 3C intervals has been highly effective in managing this issue.

We do not agree with the commenter's request. We understand that there are splice plates in some areas that can be inspected from below, but there are several inaccessible areas where difficulty gaining access would not allow for an inspection. The inspection methods suggested by the commenter are not reliable for those inaccessible areas. Further, inspection of other splice plates from below is of questionable reliability in determining the onset of cracking. Also, partially cracked splice plates and splice plates with repairs of unknown reliability are not acceptable for addressing the unsafe condition. For these reasons, we have determined that the modification required by the AD is the most effective method of addressing the identified unsafe condition. We note that the 60-month compliance time should allow for modification during normal maintenance cycles for most affected operators. However, under the provisions of paragraph (h) of this AD, if adequate technical justification is provided, affected operators may request approval of an alternative method of compliance (AMOC).

## **Request To Consider Alternative Action**

One commenter states that it has paperwork in place to accomplish the proposed AD, but has some concerns about the methods proposed for solution to the described problem. The commenter notes that it appears that the unsafe condition specified in the proposed AD is a design flaw, though the airplane manufacturer has not accepted the responsibility for a resolution. The commenter concludes that, because of that fact, the manufacturer should re-address the problem and come up with a secondary solution that would not require replacement of the splice straps.

We do not agree with the commenter. The airplane manufacturer has developed an improved splice plate to correct the unsafe condition. The FAA has determined that the proposed modification (replacement of the splice straps) is necessary to address the unsafe condition specified in the proposed AD, which is due to cracking of the aluminum splice plates. We did not include the option of accomplishing inspections because access to many of the affected areas is limited, so an inspection would not provide reliable results. Therefore, replacing the splice straps with new, improved splice straps is the most effective way to address the unsafe condition. Additionally, the proposed AD allows a 60-month compliance time to allow for accomplishing the modification during regular maintenance visits. However, under the provisions of paragraph (h) of this AD, if adequate technical justification is provided, affected operators may request approval of AMOC.

## **Request To Change Costs of Compliance Section**

One commenter states that, because the cause of the unsafe condition specified in the proposed AD is a design flaw that has not been resolved, the commenter must bear the cost of 48 work hours per airplane to accomplish the proposed modification. The commenter adds that gaining access to some locations to accomplish the modification will be difficult, and estimates that this modification would cost approximately \$200,000 for labor and \$308,000 for material for its entire fleet. The commenter does not provide a specific request.

We infer that the commenter is asking us to change the "Costs of Compliance" section of this AD. We do not agree. The estimate of 28 work hours per airplane is based on the best data available to date, and is consistent with the manufacturer's estimate contained in the service bulletin. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. We recognize that in accomplishing the requirements of any AD, operators may incur incidental costs in addition to the direct costs. However, the cost analysis in AD rulemaking actions typically does not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions. Because incidental costs may vary significantly from operator to operator, they are almost impossible to calculate. We have not changed the AD in this regard.

## **Explanation of Change to Proposed AD**

The applicability in the proposed AD addresses "Boeing Model 777-200, -200ER, and -300 series airplanes." We inadvertently included Model 777-200ER series airplanes, which are not specified on the type certificate data sheet and are encompassed within the Model 777-200 series. Our intent is that the AD apply to certain Boeing Model 777-200 and -300 series airplanes; therefore, we have changed the applicability in this AD accordingly.

## **Conclusion**

We have carefully reviewed the available data, including the comments that have been received, and determined that air safety and the public interest require adopting the AD with the change

described previously. This change will neither increase the economic burden on any operator nor increase the scope of the AD.

## **Costs of Compliance**

There are about 330 airplanes of the affected design in the worldwide fleet. This AD affects about 131 airplanes of U.S. registry. The modification will take about 28 work hours per airplane, at an average labor rate of \$65 per work hour. Required parts will cost between \$4,717 and \$9,099 per airplane. Based on these figures, the estimated cost of the AD for U.S. operators is between \$856,347 and \$1,430,389, or between \$6,537 and \$10,919 per airplane.

## **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 have determined that 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); and
- (3) 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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD. See the ADDRESSES section for a location to examine the regulatory evaluation.

## **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):

# AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at [www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2005-18-10 Boeing:** Amendment 39-14250. Docket No. FAA-2005-20475; Directorate Identifier 2004-NM-157-AD.

## Effective Date

- (a) This AD becomes effective October 19, 2005.

## Affected ADs

- (b) None.

## Applicability

- (c) This AD applies to Boeing Model 777-200 and -300 series airplanes, certificated in any category; as identified in Boeing Special Attention Service Bulletin 777-53-0042, dated April 15, 2004.

## Unsafe Condition

- (d) This AD results from reports of cracking of the aluminum splice plates under the floor panels in the cabin aisle. We are issuing this AD to prevent loss of the capability of the cabin floor and seat track structure to support the airplane interior inertia loads under emergency landing conditions. Loss of this support could lead to galley or seat separation from attached restraints, which could result in blocking of the emergency exits and consequent injury to passengers and crew.

## Compliance

- (e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

## Modification

- (f) Within 60 months after the effective date of this AD: Except as provided by paragraph (g) of this AD, modify the splice plate assemblies installed under the floor panels at the forward and aft edges of the cabin aisle (including replacement of damaged fasteners with new fasteners) in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 777-53-0042, dated April 15, 2004.

(g) The referenced service bulletin recommends marking the service bulletin number on the top of the floor panel assembly, but this AD does not require that action.

### **Alternative Methods of Compliance (AMOCs)**

(h) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

### **Material Incorporated by Reference**

(i) You must use Boeing Special Attention Service Bulletin 777-53-0042, dated April 15, 2004, to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of this document in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for a copy of this service information. You may review copies at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., Room PL-401, Nassif Building, Washington, DC; on the Internet at <http://dms.dot.gov>; or at the National Archives and Records Administration (NARA). For information on the availability of this material at the NARA, call (202) 741-6030, or go to <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on September 2, 2005.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

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