

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2007-0254; Directorate Identifier 2007-NM-209-AD; Amendment 39-15795; AD 2009-02-05]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Boeing Model 777 Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Boeing Model 777 airplanes. This AD requires installing software upgrades to the airplane information management system (AIMS) located in the flight compartment. This AD results from an investigation that revealed that detrimental effects could occur on certain AIMS software during flight. We are issuing this AD to prevent an unannounced loss of cabin pressure. If an undetected loss of pressure event were to cause an unsafe pressure in the cabin, the flight crew could become incapacitated.

**DATES:** This AD is effective April 2, 2009.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of April 2, 2009.

**ADDRESSES:** 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; telephone 206-544-5000, extension 1, fax 206-766-5680; e-mail [me.boecom@boeing.com](mailto:me.boecom@boeing.com); Internet <https://www.myboeingfleet.com>.

#### **Examining the AD Docket**

You may examine 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 AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (telephone 800-647-5527) is the Document 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:** Jay Yi, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone (425) 917-6494; fax (425) 917-6590.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an airworthiness directive (AD) that would apply to certain Boeing Model 777 airplanes. That NPRM was published in the Federal Register on November 28, 2007 (72 FR 67263). That NPRM proposed to require installing software upgrades to the airplane information management system (AIMS) located in the flight compartment.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We considered the comments received.

### **Request To Incorporate Revised Service Information**

Boeing asks that we reference Boeing Service Bulletins 777-31A0119 and 777-31A0120, both Revision 2, both dated June 12, 2008, in the final rule. Boeing Alert Service Bulletin 777-31A0119, Revision 1, dated March 27, 2007; and Boeing Alert Service Bulletin 777-31A0120, Revision 1, dated March 23, 2007; were referenced in the NPRM as the appropriate sources of service information for accomplishing certain actions. Revision 2 of the service bulletins clarifies the procedures for upgrading to the Airplane Information Management System–1 (AIMS-1) Blockpoint 2006 (BP06) operational software.

We have reviewed Revision 2 of these service bulletins and we agree with the commenter, since no additional work is necessary on airplanes changed in accordance with Revision 1 of the referenced service information; Revision 2 of these service bulletins just provides certain clarifications. We have added Revision 2 of these service bulletins to the applicability specified in paragraph (c) of this AD, and to paragraph (f)(1) of this AD, as the appropriate sources of service information for accomplishing the actions specified. In addition, we have added credit for accomplishing the actions using Revision 1 of these service bulletins to paragraph (g) of this AD.

### **Request To Update Number of U.S. Airplanes**

Boeing also asks that we change the number of U.S. airplanes affected by this AD from 2 to 4 to reflect the production deliveries of airplanes with software requiring an update. Boeing states that there were about 142 AIMS-2 airplanes that were delivered in production on which the affected software design was incorporated. Boeing also recommends adding a statement that about 230 additional airplanes (of which an estimated 70 of those airplanes are of U.S. registry) on which AIMS-1 software has been incorporated will require an update to BP06.

We partially agree with the commenter.

Since the total number of airplanes of the affected design in the worldwide fleet has not increased, we agree to change the number of U.S. airplanes affected by this AD from 2 to 4. The 2 additional U.S.-registered airplanes in need of the software update have been added to the Costs of Compliance section in this AD.

We do not agree to include the statements provided by the commenter, as that language would be added to the Discussion section of the NPRM, which is not carried over to this final rule. We have made no change to the AD in this regard.

## **Request To Reduce Compliance Time**

Air Line Pilots Association, International (ALPA), asks that the 15-month compliance time specified in paragraph (f) of the NPRM be reduced. ALPA states that, given the potentially serious consequences of an undetected loss of pressurization, the number of affected aircraft, and the time required for installation of the software, a shorter compliance time should be imposed.

We do not agree to reduce the compliance time specified in paragraph (f) of this AD. In developing the compliance time for this AD action, we considered not only the safety implications of the identified unsafe condition, but the average utilization rate of the affected fleet and the practical aspects of installing the software during regular maintenance periods. In addition, we considered the manufacturer's recommendation for an appropriate compliance time. After considering all the available information, we determined that the 15-month compliance time represents an appropriate interval of time in which the required actions can be performed in a timely manner within the affected fleet, while still maintaining an adequate level of safety. We have not changed the AD in this regard.

## **Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We also determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

## **Costs of Compliance**

There are about 142 airplanes of the affected design in the worldwide fleet. This AD affects 4 airplanes of U.S. registry. The actions take between 1 and 4 work hours per airplane, at an average labor rate of \$80 per work hour. Based on these figures, the estimated cost of the AD for U.S. operators is between \$320 and \$1,280, or between \$80 and \$320 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**

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.

You can find our regulatory evaluation and the estimated costs of compliance in the AD Docket.

#### **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 AD:



**2009-02-05 Boeing:** Amendment 39-15795. Docket No. FAA-2007-0254; Directorate Identifier 2007-NM-209-AD.

**Effective Date**

- (a) This airworthiness directive (AD) is effective April 2, 2009.

**Affected ADs**

- (b) None.

**Applicability**

(c) This AD applies to Boeing Model 777-200, -200LR, -300, and -300ER series airplanes, certificated in any category; as identified in Boeing Service Bulletins 777-31A0119 and 777-31A0120, both Revision 2, both dated June 12, 2008.

**Unsafe Condition**

(d) This AD results from an investigation that revealed that detrimental effects could occur on certain airplane information management system (AIMS) software during flight. We are issuing this AD to prevent an unannounced loss of cabin pressure. If an undetected loss of pressure event were to cause an unsafe pressure in the cabin, the flight crew could become incapacitated.

**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.

**Software Installation**

(f) Do the actions specified in paragraphs (f)(1) and (f)(2) of this AD at the time specified, as applicable.

(1) Within 15 months after the effective date of this AD: Install the AIMS Blockpoint 2006 (BP06) operational software by doing all the actions in accordance with the Accomplishment Instructions of Boeing Service Bulletin 777-31A0119 or 777-31A0120, both Revision 2, both dated June 12, 2008; as applicable.

(2) Prior to or concurrently with accomplishing the software installation, install the AIMS Blockpoint 2005A (BP05A) software in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 777-31-0098, Revision 1, dated May 3, 2007; or Boeing Special Attention Service Bulletin 777-31-0097, Revision 3, dated February 22, 2007; as applicable.

**Credit for Actions Done Using Previous Service Information**

(g) Actions accomplished before the effective date of this AD in accordance with Boeing Service Bulletin 777-31-0119, dated October 16, 2006, or Boeing Alert Service Bulletin 777-31A0119,

Revision 1, dated March 27, 2007; and Boeing Service Bulletin 777-31-0120, dated October 16, 2006, or Boeing Alert Service Bulletin 777-31A0120, Revision 1, dated March 23, 2007; are considered acceptable for compliance with the corresponding actions specified in this AD.

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

(h)(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, ATTN: Jay Yi, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle ACO, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone (425) 917-6494; fax (425) 917-6590; has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

### **Material Incorporated by Reference**

(i) You must use the service information contained in Table 1 of this AD to do the actions required by this AD, as applicable, unless the AD specifies otherwise.

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

(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; telephone 206-544-5000, extension 1, fax 206-766-5680; e-mail [me.boecom@boeing.com](mailto:me.boecom@boeing.com); Internet <https://www.myboeingfleet.com>.

(3) You may review copies of the service information that is incorporated by reference 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 or 425-227-1152.

(4) You may also review copies of the service information 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/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

**Table 1 – Material Incorporated by Reference**

<b>Service Bulletin</b>	<b>Revision</b>	<b>Date</b>
Boeing Service Bulletin 777-31A0119	2	June 12, 2008
Boeing Service Bulletin 777-31A0120	2	June 12, 2008
Boeing Special Attention Service Bulletin 777-31-0097	3	February 22, 2007
Boeing Special Attention Service Bulletin 777-31-0098	1	May 3, 2007

Issued in Renton, Washington, on January 13, 2009.

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