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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0256; Directorate Identifier 2013-NM-214-AD; Amendment 39-18020; AD 2014-23-04]

RIN 2120-AA64

Airworthiness Directives; the Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain The Boeing Company Model 777-200LR, -300, -300ER, and 777F series airplanes. This AD was prompted by reports of dual pitch rate sensor (PRS) failures causing the primary flight computers to transition from primary mode to secondary mode, resulting in autopilot disconnects. This AD requires an inspection to determine the PRS part number, and replacement if necessary. We are issuing this AD to prevent a dual PRS failure that could cause an automatic disengagement of the autopilot and autoland, which may prevent continued safe flight and landing if disengagement occurs at low altitude and the flight crew is unable to safely assume control and execute a go-around or manual landing.

DATES: This AD is effective December 26, 2014.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of December 26, 2014.

ADDRESSES: 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 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.

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-2014-0256; 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 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: Douglas Tsuji, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6546; fax: 425-917-6590; email: douglas.tsuji@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 certain the Boeing Company Model 777 airplanes. The NPRM published in the Federal Register on April 25, 2014 (79 FR 22908). The NPRM was prompted by reports of dual PRS failures, resulting in autopilot disconnects. The NPRM proposed to require an inspection to determine the PRS part number, and replacement if necessary. We are issuing this AD to prevent a dual PRS failure that could cause an automatic disengagement of the autopilot and autoland, which may prevent continued safe flight and landing if disengagement occurs at low altitude and the flight crew is unable to safely assume control and execute a go-around or manual landing.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM (79 FR 22908, April 25, 2014), and the FAA's response to each comment.

Support for the NPRM (79 FR 22908, April 25, 2014)

Boeing stated that it concurs with the contents of the NPRM (79 FR 22908, April 25, 2014).

Request To Revise Alternative Method of Compliance (AMOC) Approval Authority

American Airlines requested that we revise paragraph (j) of the NPRM (79 FR 22908, April 25, 2014) to add information regarding Boeing's authority to approve an AMOC. American Airlines stated that paragraph (j) of the NPRM does not provide operators information as to whether Boeing has the ability to grant AMOC approvals.

We do not agree with the commenter's request. At this time, the FAA has delegated AMOC approvals to Boeing Authorized Representatives for structural modifications only. This AD requires an inspection or maintenance records check to determine the part numbers of the four PRSs, and replacement if necessary. This AD does not require, and Boeing Special Attention Service Bulletin 777-27-0115, dated May 22, 2013, does not include, any structural modifications. We have not changed this 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 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 (79 FR 22908, April 25, 2014) for correcting the unsafe condition; and

- Do not add any additional burden upon the public than was already proposed in the NPRM (79 FR 22908, April 25, 2014).

Costs of Compliance

We estimate that this AD affects 47 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	2 work-hours × \$85 per hour = \$170	\$0	\$170	\$7,990

We estimate the following costs to do any necessary replacements that would be required based on the results of the inspection. We have received no definitive data that would enable us to provide the cost of parts specified in this AD. We have no way of determining the number of airplanes that might need these replacements:

On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Replacement (Up to 4 PRSs per airplane)	Up to 4 work-hours × \$85 per hour = \$340	\$0	Up to \$340.

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):



2014-23-04 The Boeing Company: Amendment 39-18020; Docket No. FAA-2014-0256; Directorate Identifier 2013-NM-214-AD.

(a) Effective Date

This AD is effective December 26, 2014.

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 777-200LR, -300, -300ER, and 777F series airplanes, certificated in any category, as identified in Boeing Special Attention Service Bulletin 777-27-0115, dated May 22, 2013.

(d) Subject

Air Transport Association (ATA) of America Code 27, Flight Controls.

(e) Unsafe Condition

This AD was prompted by reports of dual pitch rate sensor (PRS) failures causing the primary flight computers to transition from primary mode to secondary mode, resulting in autopilot disconnects. We are issuing this AD to prevent a dual PRS failure that could cause an automatic disengagement of the autopilot and autoland, which may prevent continued safe flight and landing if disengagement occurs at low altitude and the flight crew is unable to safely assume control and execute a go-around or manual landing.

(f) Compliance

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

(g) Inspection

Within 60 months after the effective date of this AD, inspect to determine the part numbers of all four PRSs, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 777-27-0115, dated May 22, 2013. For airplanes in group 1, as identified in Boeing Special Attention Service Bulletin 777-27-0115, dated May 22, 2013: A review of airplane maintenance records is acceptable in lieu of this inspection if the part number of the PRS can be conclusively determined from that review.

(h) Replacement

If any PRS having P/N 402875-05-01 is found during the inspection required by paragraph (g) of this AD: Before further flight, replace with a PRS having P/N 402875-03-01, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 777-27-0115, dated May 22, 2013.

(i) Parts Installation Prohibition

As of the effective date of this AD, no person may install a PRS having P/N 402875-05-01 on any airplane.

(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-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.

(k) Related Information

For more information about this AD, contact Douglas Tsuji, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6546; fax: 425-917-6590; email: douglas.tsuji@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.

(i) Boeing Special Attention Service Bulletin 777-27-0115, dated May 22, 2013.

(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 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 November 5, 2014.

Jeffrey E. Duven,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.