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[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0256; Directorate Identifier 2013-NM-214-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 certain The Boeing Company Model 777 airplanes. This proposed AD was prompted by reports of dual pitch rate sensor (PRS) failures, resulting in autopilot disconnects. This proposed AD would require an inspection to determine the PRS part number and replacement if necessary. We are proposing 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: 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, 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 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: Marie Hogestad, Aerospace

Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6418; fax: 425-917-6590; email: marie.hogestad@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-2014-0256; Directorate Identifier 2013-NM-214-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 received reports of dual PRS failures on Model 777 airplanes causing the primary flight computers (PFCs) to transition from primary mode to secondary mode, resulting in autopilot disconnects. Vibration testing of the sensors identified a mechanical resonance, which can result in an erroneous sensor output that the PFCs would interpret as a PRS failure. It is suspected that variability in manufacturing tolerances could cause differences in the resonant frequency for

individual PRS and, when combined with variability in the airplane vibration environment, results in a PRS failure. This condition, if not corrected, 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.

Relevant Service Information

We reviewed Boeing Special Attention Service Bulletin 777-27-0115, dated May 22, 2013. For information on the procedures, see this service information at <http://www.regulations.gov> by searching for Docket No. FAA-2014-0256.

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, including an inspection to determine the PRS part number and replacement if necessary.

Costs of Compliance

We estimate that this proposed AD affects 47 airplanes of U.S. registry.

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

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on operators	U.S.
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Inspection	2 work-hours X \$0	\$170	\$7,990
	\$85 per hour =		
	\$170		

We estimate the following costs to do any necessary replacements that would be required based on the results of the proposed inspection. We have received no definitive data that would enable us to provide the cost of parts specified in this proposed AD. We have no way of determining the number of aircraft 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 X \$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

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.

§ 39.13 [Amended]

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

The Boeing Company: Docket No. FAA-2014-0256; Directorate Identifier 2013-NM-214-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 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)(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.

(k) Related Information

(1) For more information about this AD, contact Marie Hogestad, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6418; fax: 425-917-6590; email: marie.hogestad@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, 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.

Issued in Renton, Washington, on April 18, 2014.
Jeffrey E. Duven,
Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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