[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-7525; Directorate Identifier 2015-NM-064-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 747-400, 747-400D, and 747-400F series airplanes; Model 757 airplanes; and Model 767 airplanes. This proposed AD was prompted by reports of uncommanded autopilot engagement events resulting in incorrect stabilizer trim adjustment during takeoff. This proposed AD would require, depending on the model/configuration for Model 747 airplanes, installing an on-ground stabilizer autotrim inhibit system, doing routine functional testing of the automatic stabilizer trim inhibit system and corrective actions if necessary; for Model 757 airplanes and Model 767 airplanes, installing relays and related wiring to open and close the flight control computer (FCC) analog output that controls the stabilizer trim adjustment, doing routine functional testing of the automatic stabilizer trim inhibit system, and corrective actions if necessary; and for Model 767-300, and -300F series airplanes, installing new operational program software (OPS) into the FCCs. We are proposing this AD to prevent stabilizer mistrim, which could result in a high-speed rejected takeoff and runway overrun, or reduced controllability of the airplane after takeoff due to insufficient pitch control.

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. It is also available on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2015-7525.

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-2015-7525; 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: Fnu Winarto, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6659; fax: 425-917-6590; email: fnu.winarto@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-2015-7525; Directorate Identifier 2015-NM-064-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 reports of uncommanded autopilot engagement events resulting in incorrect stabilizer trim adjustment during takeoff. The current configuration of affected airplanes allows engagement of the autopilot while on the ground. This engagement can result in the stabilizer trim being positioned to a trim setting outside of the acceptable takeoff setting range. The root cause is unknown, but the erroneous autopilot engage request is believed to have come from the mode control panel (MCP) and to have been caused by contamination within the MCP. Incorrect stabilizer trim adjustment during takeoff, if not corrected, could result in a high-speed rejected takeoff

and runway overrun, or reduced controllability of the airplane after takeoff due to insufficient pitch control.

Related Service Information under 1 CFR part 51

We reviewed the following service information.

- Boeing Special Attention Service Bulletin 747-22-2256, dated March 6, 2015. This service information describes procedures for installing an on-ground stabilizer autotrim inhibit system, and doing functional testing.
- Boeing Special Attention Service Bulletin 757-22-0096, dated March 23, 2015. This service information describes procedures for modifying relays and wiring to open and close the FCC analog output that controls the stabilizer trim adjustment, and doing functional testing.
- Boeing Special Attention Service Bulletin 767-22-0143, Revision 1, dated July 6, 2015. This service information describes procedures for modifying relays and wiring to open and close the FCC analog output that controls the stabilizer trim adjustment, and doing functional testing.
- Boeing Special Attention Service Bulletin 767-22-0146, Revision 1, dated June 25, 2015. This service information describes procedures for installing new OPS into the FCCs.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section of this NPRM.

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 these same type designs.

Proposed AD Requirements

This proposed AD would require accomplishing the actions specified in the service information described previously. For information on the procedures and compliance times, see this service information at http://www.regulations.gov by searching for and locating Docket No. FAA-2015-7525.

Differences Between this Proposed AD and the Service Information

For Model 747 airplanes, this proposed AD would require doing post-modification routine functional testing of the automatic stabilizer trim inhibit system, and corrective actions if necessary, at intervals not to exceed 1,500 flight hours. The service information does not require these actions.

Explanation of "RC" Steps in Service Information

The FAA worked in conjunction with industry, under the Airworthiness Directive Implementation Aviation Rulemaking Committee (ARC), to enhance the AD system. One enhancement was a new process for annotating which steps in the service information are required for compliance with an AD. Differentiating these steps from other tasks in the service information is expected to improve an owner's/operator's understanding of crucial AD requirements and help provide consistent judgment in AD compliance. The steps identified as Required for Compliance (RC) in any service information identified previously have a direct effect on detecting, preventing, resolving, or eliminating an identified unsafe condition.

For service information that contains steps that are labeled as RC, the following provisions apply: (1) the steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD, and an AMOC is required for any deviations to RC steps, including substeps and identified figures; and (2) steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an

AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

Costs of Compliance

We estimate that this proposed AD affects 1,220 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 U.S. operators
Model 747 series airplane modification (136 airplanes)	123 work-hours X $85 per hour = $10,455	$2,714	$13,169	$1,790,984
Model 747 series airplane functional test (136 airplanes)	4 work-hours X $85 per hour = $340	$0	$340 per test	$46,240 per test
Model 757 series airplane modification (678 airplanes)	83 work-hours X $85 per hour = $7,055	$3,236	$10,291	$6,977,298
Model 757 series airplane functional test (678 airplanes)	3 work-hours X $85 per hour = $255 per test	$0	$255 per test	$172,890 per test
Model 767 series airplane modification (406 airplanes)	121 work-hours X $85 per hour = $10,285	$6,076	$16,361	$6,642,566
Model 767 series airplane software modification (23 airplanes)	1 work-hour X $85 per hour = $85	$0	$85	$1,955
Model 767 series airplane functional test (406 airplanes)	5 work-hours X $85 per hour = $425 per test	$0	$425 per test	$172,550 per test

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 available costs in our cost estimate.

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this proposed AD.

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-2015-7525; Directorate Identifier 2015-NM-064-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 certain The Boeing Company airplanes, certificated in any category, identified in paragraphs (c)(1) through (c)(4) of this AD.

(1) Model 747-400, 747-400D, and 747-400F series airplanes, as identified in Boeing Special Attention Service Bulletin 747-22-2256, dated March 6, 2015.

(2) Model 757-200, -200PF, -200CB, and -300 series airplanes, as identified in Boeing Special Attention Service Bulletin757-22-0096, dated March 23, 2015.

(3) Model 767-200, -300, -300F, and -400ER series airplanes, as identified in Boeing Special Attention Service Bulletin 767-22-0143, Revision 1, dated July 6, 2015.

(4) Model 767-300, and -300F series airplanes, as identified in Boeing Special Attention Service Bulletin767-22-0146, Revision 1, dated June 25, 2015.

(d) Subject

Air Transport Association (ATA) of America Code 22, Auto flight.

(e) Unsafe Condition

This AD was prompted by reports of uncommanded autopilot engagement events resulting in incorrect stabilizer trim adjustment during takeoff. We are issuing this AD to prevent stabilizer mistrim, which could result in a high-speed rejected takeoff and runway overrun, or reduced controllability of the airplane after takeoff due to insufficient pitch control.

(f) Compliance

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

(g) Model 747 Airplane Modification and Repetitive Functional Testing

For airplanes identified in paragraph (c)(1) of this AD: Within 24 months after the effective date of this AD, install new wiring and relays to reroute the four autotrim arm signals through new or existing air/ground determination source select switches, and do functional testing, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-22-2256, dated March 6, 2015. If the functional test fails, before further flight, do corrective actions, repeat the test, and do all applicable corrective actions until the functional test is passed, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-22-2256, dated March 6, 2015. Repeat the functional test of the automatic stabilizer trim system specified in

step 250. of paragraph 3.B. of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-22-2256, dated March 6, 2015, thereafter at intervals not to exceed 1,500 flight hours. If any functional test fails, before further flight, do corrective actions, repeat the test, and do all applicable corrective actions until the functional test is passed, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-22-2256, dated March 6, 2015.

(h) Model 757 Airplane Modification and Repetitive Functional Testing

For airplanes identified in paragraph (c)(2) of this AD: Within 24 months after the effective date of this AD, install wiring to inhibit the automatic stabilizer trim arm discrete when the airplane is on ground, install a two-position momentary contact test switch in the main equipment center, and do the functional test and all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 757-22-0096, dated March 23, 2015. Repeat the functional test of the automatic stabilizer trim system and all applicable corrective actions specified in step 11. of paragraph 3.B. of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 757-22-0096, dated March 23, 2015, thereafter at intervals not to exceed 1,500 flight hours.

(i) Model 767-200, -300, -300F, and -400ER Series Airplane Modification and Repetitive Functional Testing

For airplanes identified in paragraph (c)(3) of this AD: Within 24 months after the effective date of this AD, install relays and wiring to open and close the flight control computer (FCC) analog output that controls the stabilizer trim adjustment, install a momentary action ground test switch, and do the functional testing and all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 767-22-0143, Revision 1, dated July 6, 2015. Repeat the functional test of the automatic stabilizer trim system and all applicable corrective actions specified in steps 5.a. through 5.g. of Paragraph 3.B. of the Accomplishment

Instructions of Boeing Special Attention Service Bulletin 767-22-0143, Revision 1, dated July 6, 2015, thereafter at intervals not to exceed 1,500 flight hours.

(j) Model 767-300 and -300F Series Airplane Modification

For airplanes identified in paragraph (c)(4) of this AD: Within 16 months after the effective date of this AD, install new operational program software into the FCCs, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 767-22-0146, Revision 1, dated June 25, 2015.

(k) Credit for Actions Accomplished in Accordance with Previous Service Information

(1) This paragraph provides credit for actions required by paragraph (i) of this AD, if those actions were performed before the effective date of this AD using Boeing Special Attention Service Bulletin 767-22-0143, dated March 6, 2015.

(2) This paragraph provides credit for actions required by paragraph (j) of this AD, if those actions were performed before the effective date of this AD using Boeing Special Attention Service Bulletin 767-22-0146, dated March 24, 2015.

(l) 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 (m)(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.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration 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. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (l)(4)(i) and (l)(4)(ii) apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(m) Related Information

(1) For more information about this AD, contact Fnu Winarto, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6659; fax: 425-917-6590; email: fnu.winarto@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 December 8, 2015.

Michael Kaszycki,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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