



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2018-0763; Product Identifier 2018-NM-052-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 787-8 and 787-9 airplanes. This proposed AD was prompted by a determination that certain areas in the tire/wheel threat zones could be susceptible to damage, which could result in loss of braking on one main landing gear (MLG) truck, loss of nose wheel steering, and loss of directional control on the ground when below rudder effectiveness speed. This proposed AD would require installing hydraulic tubing, a pressure-operated check valve, and new flight control software. We are proposing this AD to address the unsafe condition on these products.

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 NPRM, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0763.

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-2018-0763; 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 NPRM, 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: Kelly McGuckin, Aerospace Engineer, Systems and Equipment Section, FAA, Seattle ACO Branch, 2200 South 216th Street, Des Moines, WA 98198; phone and fax: 206-231-3546; email: Kelly.McGuckin@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-2018-0763; Product Identifier 2018-NM-052-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM 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

Boeing determined that certain areas in the tire/wheel threat zones could be susceptible to damage due to a thrown tire tread or tire burst. This could result in a loss of braking on one MLG truck, loss of nose wheel steering, and loss of directional control on the ground when below rudder effectiveness speed. The Model 787 hydraulic system is configured with a reserve steering system intended to maintain the nose wheel steering function in the event that a thrown tire tread or tire burst leads to a brake system failure such that differential braking cannot be used for directional control. Boeing has determined that damage from a MLG thrown tire tread or tire burst event could also result in the loss of the reserve steering system, resulting in loss of directional control on the ground and consequent runway excursion.

Related Service Information under 1 CFR part 51

We reviewed Boeing Alert Service Bulletins B787-81205-SB290032-00 and B787-81205-SB290033-00, both Issue 001, both dated November 17, 2017. This service information describes procedures for installing hydraulic tubing and installing a pressure-operated check valve. These documents are distinct since they apply to different airplane models.

We also reviewed Boeing Alert Service Bulletin B787-81205-SB270039-00, Issue 002, dated March 8, 2018. This service information describes procedures for installing new flight control software.

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.

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 accomplishment of the actions identified as "RC" (required for compliance) in the Accomplishment Instructions of the service information described previously, except for any differences identified as exceptions in the regulatory text of this proposed AD.

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-2018-0763.

Difference Between this Proposed AD and the Service Information

This proposed AD would require the software installation specified in Boeing Alert Service Bulletin B787-81205-SB270039-00, Issue 002, dated March 8, 2018, prior to or concurrently with the tubing and valve installation on Model 787-9 airplanes. The effectivity in this service information applies to Model 787-8 and 787-9 airplanes; however, this proposed AD would only require those actions be accomplished on Model 787-9 airplanes.

Possible Additional Rulemaking for Software Installation

We are considering additional rulemaking for Model 787-8 and 787-9 airplanes to require the software installation specified in Boeing Alert Service Bulletin B787-81205-SB270039-00, Issue 002, dated March 8, 2018, within a compliance time that may occur earlier than that for the tubing and valve installation specified in this proposed AD.

Costs of Compliance

We estimate that this proposed AD affects 87 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product	Number of affected airplanes	Cost on U.S. operators
Tubing and Pressure-operated Check Valve installation for Model 787-8 airplanes (Groups 1 and 3)	37 work-hours X \$85 per hour = \$3,145	\$55,940	\$59,085	7	\$413,595
Tubing and Pressure-operated Check Valve installation for Model 787-8 airplanes (Group 2)	36 work-hours X \$85 per hour = \$3,060	\$55,940	\$59,000	0	\$0
Tubing and Pressure-operated Check Valve installation for Model 787-8 airplanes (Groups 4 through 6)	33 work-hours X \$85 per hour = \$2,805	\$55,940	\$58,745	47	\$2,761,015

Action	Labor cost	Parts cost	Cost per product	Number of affected airplanes	Cost on U.S. operators
Tubing and Pressure-operated Check Valve installation for Model 787-9 airplanes (Groups 1 through 4)	36 work-hours X \$85 per hour = \$3,060	\$55,940	\$59,000	33	\$1,947,000
Software installation for Model 787-9 airplanes	2 work-hours X \$85 per hour = \$170	\$0	\$170	33	\$5,610

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.

This proposed AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive

Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

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-2018-0763; Product Identifier
2018-NM-052-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 airplanes, certificated in any category, as identified in paragraphs (c)(1) and (c)(2) of this AD.

(1) Model 787-8 airplanes identified in Boeing Alert Service Bulletin B787-81205-SB290032-00, Issue 001, dated November 17, 2017.

(2) Model 787-9 airplanes identified in Boeing Alert Service Bulletin B787-81205-SB290033-00, Issue 001, dated November 17, 2017.

(d) Subject

Air Transport Association (ATA) of America Code 29, Hydraulic Power.

(e) Unsafe Condition

This AD was prompted by a determination that certain areas in the tire/wheel threat zones could be susceptible to damage, which could result in loss of braking on one main landing gear (MLG) truck, loss of nose wheel steering, and loss of directional control on the ground when below rudder effectiveness speed. We are issuing this AD to address damage from a MLG thrown tire tread or tire burst event, which could result in loss of directional control on the ground and consequent runway excursion.

(f) Compliance

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

(g) Required Actions

(1) At the applicable time specified in paragraph 5., “Compliance,” of Boeing Alert Service Bulletin B787-81205-SB290032-00, Issue 001, dated November 17, 2017 (for Model 787-8 airplanes); or Boeing Alert Service Bulletin B787-81205-SB290033-00, Issue 001, dated November 17, 2017 (for Model 787-9 airplanes); as applicable; except as specified in paragraph (i) of this AD: Do all applicable actions identified as “RC” (required for compliance) in, and in accordance with, the Accomplishment Instructions of Boeing Alert Service Bulletin B787-81205-SB290032-00, Issue 001, dated November 17, 2017; or Boeing Alert Service Bulletin B787-81205-SB290033-00, Issue 001, dated November 17, 2017, as applicable.

(2) For Model 787-9 airplanes: Prior to or concurrently with accomplishing the actions required by paragraph (g)(1) of this AD, do all applicable actions (including software installation) identified as RC, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin B787-81205-SB270039-00, Issue 002, dated March 8, 2018.

(h) Credit for Previous Actions

This paragraph provides credit for the actions specified in paragraph (g)(2) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin B787-81205-SB270039-00, Issue 001, dated July 31, 2017.

(i) Exception to Service Information

For purposes of determining compliance with the requirements of this AD: Where the service information identified in paragraph (g)(1) of this AD uses the phrase “the Issue 001 date on this service bulletin,” this AD requires using “the effective date of this AD.”

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle ACO Branch, 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 certification office, 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.

(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 Branch, FAA, 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 RC, the provisions of paragraphs (j)(4)(i) and (j)(4)(ii) of this AD 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. If a step or substep is labeled “RC Exempt,” then the RC requirement is removed from that step or substep. 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.

(k) Related Information

(1) For more information about this AD, contact Kelly McGuckin, Aerospace Engineer, Systems and Equipment Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3546; email: Kelly.McGuckin@faa.gov.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued in Des Moines, Washington, on August 17, 2018.

Michael Kaszycki,
Acting Director,
System Oversight Division,
Aircraft Certification Service.

[FR Doc. 2018-18812 Filed: 8/30/2018 8:45 am; Publication Date: 8/31/2018]