適航指令發布單
Airworthiness Directive Issuance Form

民航局 AD 編號 AD number	CAA-2019-05-001	發布日期 Date issued	2019/5/7
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	This AD applies to The Boeing Company airplanes, Model 787-8 airplanes identified in Boeing Alert Service Bulletin B787-81205-SB290032-00, Issue 002, dated February 1, 2019. and Model 787-9 airplanes identified in Boeing Alert Service Bulletin B787-81205-SB290033-00, Issue 001, dated November 17, 2017.		
主旨摘要	This AD requires installing hydraulic tubing, a pressure-operated check valve, and new flight control software due to main landing gear (MLG) truck, loss of nose wheel steering, and loss of directional control on the ground when below rudder effectiveness speed.		

民航局
CAA
☐本國產品
Native products

☐其他個案
Other

設計國民航主管機構
Original Authorities

■FAA	☐Germany LBA
☐EASA	☐CAA-NL
☐Brazil	☐UK CAA
☐Transport Canada Civil Aviation	☐Japan CAB
☐DGAC	☐CAA of Israel
	☐Other_____

設計國 AD 編號 Original AD number	2019-08-05

1. 直接採用原 AD 之內容?(Is the original AD directly adopted?)
   ■是(Yes) ☐否(No) _
   a. 生效日期另訂為(Re-specify the effective date as)：_____
   b. 執行時限另訂為(Re-specify the compliance time or period as)：_____
2. 使用人是否需要將 AD 執行結果向民航局提出報告?(Do Users need to report the status of compliance to the CAA?)
   ☐是(Yes) ■否(No)

備註 Note	ATA 29. Boeing Alert Service Bulletin B787-81205-SB270039-00, Issue 002, dated March 8, 2018. and Boeing Alert Service Bulletin B787-81205-SB290032-00, Issue 002, dated February 1, 2019. and Boeing Alert Service Bulletin B787-81205-SB290033-00, Issue 001, dated November 17, 2017.

註：
1. AD 內容後附。
2. 航空器產品使用人得向民航局提出豁免、替代符合方法、執行時限之展延之申請。
3. 如有任何問題，請聯絡交通部民用航空局初始適航科。Tel：(02)2349-6331~3, Fax：(02)2545-8464, e-mail：adcaa@mail.caa.gov.tw

Note：
1. The AD text is enclosed.
2. Exemption, an alternative method of compliance or adjustment of the compliance time may be proposed to the CAA for approval.
3. For further information, please contact Civil Aeronautics Administration on Tel：(02)2349-6331~3, Fax：(02)2545-8464, e-mail：adcaa@mail.caa.gov.tw

[Federal Register Volume 84, Number 85 (Thursday, May 2, 2019)]
[Rules and Regulations]
[Pages 18707-18711]
From the Federal Register Online via the Government Publishing Office [www.gpo.gov]
[FR Doc No: 2019-08916]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2018-0763; Product Identifier 2018-NM-052-AD; Amendment 39-19626; AD 2019-08-05]

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 787-8 and 787-9 airplanes. 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. This AD requires installing hydraulic tubing, a pressure-operated check valve, and new flight control software. We are issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective June 6, 2019.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of June 6, 2019.

ADDRESSES: For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; internet https://www.myboeingfleet.com. You may view this 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 Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the

regulatory evaluation, any comments received, and other information. The address for Docket Operations (phone: 800-647-5527) is 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: 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:

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 787-8 and 787-9 airplanes. The NPRM published in the Federal Register on August 31, 2018 (83 FR 44508). The NPRM 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 MLG truck, loss of nose wheel steering, and loss of directional control on the ground when below rudder effectiveness speed.

The NPRM proposed to require installing hydraulic tubing, a pressure-operated check valve, and new flight control software.

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.

Comments

We gave the public the opportunity to participate in developing this final rule. The following presents the comments received on the NPRM and the FAA's response to each comment.

Support for the NPRM

The Air Line Pilots Association, International (ALPA) stated it agrees with the intent of the NPRM. Boeing stated it concurs with the contents of the NPRM.

Request To Include Service Information Notice in Paragraph (g)(1) of the Proposed AD

American Airlines asked that Boeing Information Notice B787-A-29-00-0032-01A-931E-D, Issue 001, dated June 12, 2018, be added to paragraph (g)(1) of the proposed AD as an additional source of service information for accomplishing the required actions. American Airlines stated that the information notice contains corrections to Boeing Alert Service Bulletin B787-81205-SB290032-00, Issue 001, dated November 17, 2017, including to the aircraft configuration and accomplishment instructions. American Airlines added that, as written, the proposed AD would require an alternative method of compliance for operators to accomplish the modification following the instructions in this service information.

We agree to address the corrections in Boeing Information Notice B787-A-29-00-0032-01A-931E-D, Issue 001, dated June 12, 2018, in this AD. Boeing has issued Boeing Alert Service Bulletin B787-81205-SB290032-00, Issue 002, dated February 1, 2019, which includes the corrections and clarifications specified in Boeing Information Notice B787-A-29-00-0032-01A-931E-D, Issue 001, dated June 12, 2018. We have determined these corrections and clarifications to the service information do not change the substantive requirements of this AD but rather make the requirements more accurate and understandable. We have further determined that Issue 002 of Boeing Alert

Service Bulletin B787-81205-SB290032-00 does not require additional work for airplanes on which the actions specified in Issue 001 have been done.

Therefore, we revised the "Related Service Information under 1 CFR part 51" paragraph of this final rule, and paragraphs (c)(1) and (g)(1) of this AD, to refer to Boeing Alert Service Bulletin B787-81205-SB290032-00 Issue 002, dated February 1, 2019. We also provide credit in this AD for using Boeing Alert Service Bulletin B787-81205-SB290032-00, Issue 001, dated November 17, 2017; and for using Boeing Alert Service Bulletin B787-81205-SB290032-00, Issue 001, dated November 17, 2017, in conjunction with Boeing Information Notice B787-A-29-00-0032-01A-931E-D, Issue 001, dated June 12, 2018.

Request To Address Service Information Errors

Japan Airlines requested that we refer to a revised service bulletin to address two errors found in Boeing Alert Service Bulletin B787-81205-SB290033-00, Issue 001, dated November 17, 2017. Japan Airlines stated that there are incorrect part numbers in multiple locations in Figure 10 and Figure 11. Japan Airlines stated it contacted Boeing to correct the errors, and Boeing stated that a revision was in work.

We agree we should address the errors identified by the commenter in this AD. We have confirmed the errors with Boeing; however, Boeing has not yet issued revised service information. We have included the corrections to the service information, including the part number corrections identified by the commenter, as exceptions in this AD.

Request To Include Credit for Service Information Notice for Paragraph (g)(2) of the Proposed AD

United Airlines asked that Boeing Information Notice B787-A-27-00-0039-01A-931E-D, Issue 001, dated September 7, 2017, be approved as an additional source of service information for accomplishing the required actions (in paragraph (g)(2) of the proposed AD). United Airlines stated that the information notice contains corrections to Boeing Alert Service Bulletin B787-81205-SB270039-00, Issue 001, dated July 31, 2017, but noted the required software part numbers did not change.

We agree with the commenter since the information notice provides the correct software location identification for a couple of steps and refers to an alternative method of compliance to a different AD. We have provided credit in this AD for using Boeing Alert Service Bulletin B787-81205-SB270039-00, Issue 001, dated July 31, 2017, in conjunction with Boeing Information Notice B787-A-27-00-0039-01A-931E-D, Issue 001, dated September 7, 2017.

Change to Paragraph (g)(2) of This AD

Paragraph (g)(2) of the proposed AD specifies to install new software as specified in Boeing Alert Service Bulletin B787-81205-SB270039-00, Issue 002, dated March 8, 2018, for certain Model 787-9 airplanes. In addition to the software identified in Boeing Alert Service Bulletin B787-81205-SB270039-00, Issue 002, dated March 8, 2018, we have determined that later-approved software versions are acceptable for compliance, provided those later-approved versions meet certain conditions. We have revised paragraph (g)(2) of this AD to allow later-approved software versions.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule with the changes described previously and minor editorial changes. We have determined that these minor changes:

Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and

Do not add any additional burden upon the public than was already proposed in the NPRM.

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this final rule.

Related Service Information Under 1 CFR Part 51

We reviewed Boeing Alert Service Bulletins B787-81205-SB290032-00, Issue 002, dated February 1, 2019, and B787-81205-SB290033-00, Issue 001, 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.

Costs of Compliance

We estimate that this AD affects 87 airplanes of U.S. registry. We estimate the following costs to comply with this 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 × $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 × $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 × $85 per hour = $2,805	55,940	58,745	47	2,761,015
Tubing and Pressure-operated Check Valve installation for Model 787-9 airplanes (Groups 1 through 4)	36 work-hours × $85 per hour = $3,060	55,940	59,000	33	1,947,000
Software installation for Model 787-9 airplanes	2 work-hours × $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 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 and associated appliances to the Director of the System Oversight Division.

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):

2019-08-05 The Boeing Company: Amendment 39-19626; Docket No. FAA-2018-0763; Product Identifier 2018-NM-052-AD.

(a) Effective Date

This AD is effective June 6, 2019.

(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 002, dated February 1, 2019.

(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 002, dated February 1, 2019 (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); except as specified in paragraph (h)(1) 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 002, dated February 1, 2019; or Boeing Alert Service Bulletin B787-81205-SB290033-00, Issue 001, dated November 17, 2017, as applicable; except as specified in paragraphs (h)(2) through (h)(8) of this AD.

(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 and, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin B787-81205-SB270039-00, Issue 002, dated March 8, 2018; except where Boeing Alert Service Bulletin B787-81205-SB270039-00, Issue 002, dated March 8, 2018, specifies installing required software, this AD requires installing that software or later-approved software versions. Later-approved software versions are only those Boeing software versions that are approved as a replacement for the applicable software, and are approved as part of the type design by the FAA or the Boeing Commercial Airplanes Organization Designation Authorization (ODA) after issuance of Boeing Alert Service Bulletin B787-81205-SB270039-00, Issue 002, dated March 8, 2018.

(h) Exceptions to Service Information

(1) 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 [/of] this service bulletin" this AD requires using "the effective date of this AD."

(2) Where step 8 in Table 1 of Task 12 of the Accomplishment Instructions of Boeing Alert Service Bulletin B787-81205-SB290033-00, Issue 001, dated November 17, 2017, identifies the part as "652Z1591-95," use part "652Z1591-764."

(3) Where step 10 in Table 1 of Task 12 of the Accomplishment Instructions of Boeing Alert Service Bulletin B787-81205-SB290033-00, Issue 001, dated November 17, 2017, identifies the part as "652Z1591-94," use part "652Z1591-95."

(4) Where step 11 in Table 1 of Task 12 of the Accomplishment Instructions of Boeing Alert Service Bulletin B787-81205-SB290033-00, Issue 001, dated November 17, 2017, identifies the part as "652Z1591-764," use part "652Z1591-94."

(5) Where step 12 in Table 1 of Task 12 of the Accomplishment Instructions of Boeing Alert Service Bulletin B787-81205-SB290033-00, Issue 001, dated November 17, 2017, identifies the part as "658Z1593-48," use part "BACC10MU06100000EP1."

(6) Where step 12 in Table 1 of Task 12 of the Accomplishment Instructions of Boeing Alert Service Bulletin B787-81205-SB290033-00, Issue 001, dated November 17, 2017, identifies the part as "BACS47H3370G200K," use part "BACS47H2370G200K."

(7) Where step 12 in Table 1 of Task 13 of the Accomplishment Instructions of Boeing Alert Service Bulletin B787-81205-SB290033-00, Issue 001, dated November 17, 2017, identifies the part as "658Z1593-48," use part "BACC10MU06100000EP1."

(8) Where step 12 in Table 1 of Task 13 of the Accomplishment Instructions of Boeing Alert Service Bulletin B787-81205-SB290033-00, Issue 001, dated November 17, 2017, identifies the part as "BACS47H3370G200K," use part "BACS47H2370G200K."

(i) Credit for Previous Actions

(1) This paragraph provides credit for the actions specified in paragraph (g)(1) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin B787-81205-SB290032-00, Issue 001, dated November 17, 2017.

(2) This paragraph provides credit for the actions specified in paragraph (g)(1) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin B787-81205-SB290032-00, Issue 001, dated November 17, 2017, in conjunction with Boeing Information Notice B787-A-29-00-0032-01A-931E-D, Issue 001, dated June 12, 2018.

(3) 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.

(4) 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, in conjunction with Boeing Information Notice B787-A-27-00-0039-01A-931E-D, Issue 001, dated September 7, 2017.

(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 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) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (l)(3) and (l)(4) of this AD.

(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 Alert Service Bulletin B787-81205-SB270039-00, Issue 002, dated March 8, 2018.

(ii) Boeing Alert Service Bulletin B787-81205-SB290032-00, Issue 002, dated February 1, 2019.

(iii) Boeing Alert Service Bulletin B787-81205-SB290033-00, Issue 001, dated November 17, 2017.

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; internet https://www.myboeingfleet.com.

(4) You may view this 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.

(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 Des Moines, Washington, on April 17, 2019.

Michael Kaszycki,

Acting Director, System Oversight Division, Aircraft Certification Service.

[FR Doc. 2019-08916 Filed 5-1-19; 8:45 am]