



## 適航指令發布單

### Airworthiness Directive Issuance Form

民航局 AD 編號 AD number	CAA-2022-02-013	發布日期 Date issued	2022/2/25
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	Boeing Company Model 787-8, 787-9, and 787-10 airplanes, certificated in any category, as identified in Boeing Alert Requirements Bulletin B787-81205-SB320045-00 RB, Issue 001, dated November 9, 2020.		
主旨摘要 Subject	This AD requires repetitive lubrications of the left and right MLG truck beams and inner cylinder pivot joints; a review of the maintenance program documentation to verify that certain lubrication tasks are incorporated; repetitive inspections of the MLG inner cylinder pivot pins and inner cylinder bushings of the MLG truck beams and inner cylinder joints to detect friction, heat damage, excessive wear, cracking, and smearing of bushing material; and applicable on-condition actions.		
民航局 CAA <input type="checkbox"/> 本國產品 Native product  <input type="checkbox"/> 其他個案 Other	<div style="text-align: center;">設計國民航主管機構 Original Authority</div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> FAA  <input type="checkbox"/> EASA  <input type="checkbox"/> Brazil  <input type="checkbox"/> Transport Canada Civil Aviation  <input type="checkbox"/> DGAC               </div> <div style="width: 45%;"> <input type="checkbox"/> Germany LBA  <input type="checkbox"/> CAA-NL  <input type="checkbox"/> UK CAA  <input type="checkbox"/> Japan CAB  <input type="checkbox"/> CAA of Israel  <input type="checkbox"/> Other _____               </div> </div>		
	設計國 AD 編號 Original AD number	2022-02-14	
	1. 直接採用原 AD 之內容?(Is the original AD directly adopted?) <input checked="" type="checkbox"/> 是(Yes) <input type="checkbox"/> 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?) <input type="checkbox"/> 是(Yes) <input checked="" type="checkbox"/> 否(No)		
備註 Note	ATA 32. Ref. Boeing Alert Requirements Bulletin B787-81205-SB320045-00 RB, Issue 001, dated November 9, 2020.		
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)2349-6330 / 6332, Fax：(02)2545-8464, e-mail： <a href="mailto:adcaa@mail.caa.gov.tw">adcaa@mail.caa.gov.tw</a> 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)2349-6330 / 6332, Fax： (02)2545-8464, e-mail： <a href="mailto:adcaa@mail.caa.gov.tw">adcaa@mail.caa.gov.tw</a>			

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2021-0457; Project Identifier AD-2020-01461-T; Amendment 39-21911; AD 2022-02-14]**

**RIN 2120-AA64**

### **Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

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**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain The Boeing Company Model 787-8, 787-9, and 787-10 airplanes. This AD was prompted by a report that during a fleet sampling inspection, cracks were found on the inner cylinder pivot pins of the left and right main landing gear (MLG) on one of the airplanes. This AD requires repetitive lubrications of the left and right MLG truck beams and inner cylinder pivot joints; a review of the maintenance program documentation to verify that certain lubrication tasks are incorporated; repetitive inspections of the MLG inner cylinder pivot pins and inner cylinder bushings of the MLG truck beams and inner cylinder joints to detect friction, heat damage, excessive wear, cracking, and smearing of bushing material; and applicable on-condition actions. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective March 30, 2022.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of March 30, 2022.

**ADDRESSES:** For service information identified in this final rule, 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 service information at the FAA, Airworthiness Products Section, Operational Safety 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 at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0457.

## **Examining the AD Docket**

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0457; 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, any comments received, and other information. The address for Docket Operations 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:** Allen Rauschendorfer, Senior Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3528; email: [allen.rauschendorfer@faa.gov](mailto:allen.rauschendorfer@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Background**

The FAA 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, 787-9, and 787-10 airplanes. The NPRM published in the Federal Register on June 30, 2021 (86 FR 34656). The NPRM was prompted by a report that during a fleet sampling inspection, cracks were found on the inner cylinder pivot pins of the left and right MLG on one of the airplanes. In the NPRM, the FAA proposed to require repetitive lubrications of the left and right MLG truck beams and inner cylinder pivot joints; a review of the maintenance program documentation to verify that certain lubrication tasks are incorporated; repetitive inspections of the MLG inner cylinder pivot pins and inner cylinder bushings of the MLG truck beams and inner cylinder joints to detect friction, heat damage, excessive wear, cracking, and smearing of bushing material; and applicable on-condition actions. The FAA is issuing this AD to address any heat damage and cracking to the MLG inner cylinder pivot pin, which could result in a fractured pivot pin and lead to loss of all or part of the pivot pin assembly, and subsequent collapse of the MLG and reduced controllability of the airplane during takeoff and landing.

### **Discussion of Final Airworthiness Directive**

#### **Comments**

The FAA received comments from The Air Line Pilots Association, International (ALPA) and Boeing. ALPA and Boeing supported the NPRM without change.

The FAA received additional comments from four commenters, including American Airlines (AAL), Japan Airlines (JAL), United Airlines (UAL), and Virgin Atlantic Airways (VAA). The following presents the comments received on the NPRM and the FAA's response to each comment.

#### **Request To Exclude Certain Airplanes From the Proposed AD**

UAL requested that the FAA revise the applicability of the proposed AD to exclude Model 787-9 and 787-10 airplanes on which the left and right MLG truck beams and inner cylinder pivot joints have been repetitively lubricated with MIL-PRF-32014 grease from the date of airplane delivery. UAL stated that the compliance actions specified in Boeing Alert Service Bulletin B787-81205-SB320045-00, Issue 001, dated November 9, 2020, do not give any consideration to operators who have met the requirements of CMR item number 32-CMR-01 of Section G, "Certification Maintenance Requirement Task," of Boeing 787 Certification Maintenance Requirements (CMRs), D011Z009-03-03, dated June 2020 (specified in paragraph (i) of the proposed AD for the optional maintenance/inspection program revision), since airplane delivery, as specified in Table 1 in the

Work Instructions of the service bulletin. UAL also commented that Boeing Alert Service Bulletin B787-81205-SB320045-00, Issue 001, dated November 9, 2020, provides an option to terminate the repetitive inspections if copper-nickel-tin inner cylinder bushings are installed, and current or prior accomplishment of the increased lubrication interval with MIL-PRF-32014 grease has been done (not to exceed the time specified in Table 5 of the Compliance Section), but the service bulletin makes no such provision for the initial inspection.

The FAA disagrees with excluding Boeing Model 787-9 and 787-10 airplanes that have been lubricated with MIL-PRF-32014 grease since the date of airplane delivery from the applicability in this final rule. Because the unsafe condition was discovered during a fleet sampling inspection, the initial inspection is intended to ensure that the entire fleet has no friction or heat damage that leads to the unsafe condition. Therefore, regardless of previous lubrication or inspection, this AD requires the entire fleet to undergo an initial inspection. If additional findings are discovered in the fleet, the need for an adjustment to the lubrication intervals or inspection requirements will be re-evaluated, and the FAA might consider additional rulemaking at that time. The FAA has not changed this AD in this regard.

### **Requests To Revise Certain Compliance Times**

JAL requested that the FAA revise a certain compliance time in the proposed AD. JAL stated that its fleet is affected by the compliance times specified for the airplanes in Group 1, Configurations 1 and 2, and Group 2 of Boeing Alert Service Bulletin B787-81205-SB320045-00, Issue 001, dated November 9, 2020. JAL noted that the proposed compliance time for the airplanes in Group 1, Configuration 1, was “within 24 months after the Issue 001 date of the Requirements Bulletin B787-81205-SB320045-00RB, or within 36 months after the date of issuance of the original standard certificate of airworthiness or the original export certificate of airworthiness, whichever occurs later.” JAL requested that the compliance time relative to the Issue 001 date of Requirements Bulletin B787-81205-SB320045-00RB be changed from 24 months to 36 months after that issue date. JAL commented that a compliance time of at least 3 years after the effective date of the published AD would be appropriate.

JAL stated that although it is trying to accomplish the actions in the service bulletin during heavy maintenance, for some airplanes it cannot plan to incorporate the actions in the service information at that time. JAL commented that some airplanes have planned heavy maintenance at MRO (maintenance, repair and overhaul) locations outside of Japan and require special tools that are not available at an MRO. Thus, JAL stated, operators may be forced to accomplish the actions in the service information within line maintenance on some of its Model 787 airplanes, which may take 5 days. JAL also commented that it estimates at least 3 years from the effective date of this AD to complete the actions on all of its affected airplanes. JAL stated that the proposed compliance time would cause a burden to daily operations.

Virgin Atlantic Airways (VAA) requested that the FAA revise the compliance time interval to 3 years for all Model 787-9 airplanes with improved copper-nickel-tin bushings installed at the MLG inner cylinder pivot joint location. VAA stated that Boeing has increased confidence of not seeing the friction and heat transfer damage on copper-nickel-tin bushings seen on the inferior aluminum-nickel-bronze bushings installed on the same part on Model 787-8 airplanes.

VAA stated that the 3-year compliance time interval would allow operators with Model 787-9 airplanes installed with the improved bushings to perform the very labor-intensive inspection at a C-check which is the correct environment for this type of inspection (i.e., jacking and to allow for recovery for any potential fall-out findings). VAA commented that it understands that Boeing has major issues on insurance spares and tooling, thus further reinforcing VAA's request to give operators of Model 787-9 airplanes the opportunity to align the service information inspection with a C-check. VAA also commented that it understands that all findings to date have been on Model 787-8 airplanes with the inferior aluminum-nickel-bronze bushings installed. VAA stated that this information is from the 6-year on-wing sampling inspections, early overhauls and the service

information inspections to date, and have resulted in nil findings. VAA commented that it believes that operators of Model 787-9 airplanes should not have a restrictive timeline to perform the one-off inspection of the MLG truck beam pivot pin outer diameters and the MLG inner cylinder bushing inner diameters.

The FAA disagrees to revise the compliance time in this AD. The compliance time in this AD were derived from the most current fleet and test data available at the time of service information development. In addition, in developing an appropriate compliance time for this AD, the FAA considered the significant safety issues in collaboration with the manufacturer based on fleet findings, available engineering data, material characteristics, the availability of necessary repair parts, and the practical aspect of accomplishing the required inspection within an interval of time that corresponds to the normal maintenance schedules of most operators to minimize the risk of an incident. However, under the provisions of paragraph (l) of this AD, the FAA will consider requests for approval of an extension of the compliance time if sufficient data are submitted to substantiate that the extension would provide an acceptable level of safety. The FAA has not changed this final rule in this regard.

### **Request To Revise the Reidentification of Parts Requirement**

AAL requested that Boeing revise Boeing Alert Service Bulletin B787-81205-SB320045-00, Issue 001, dated November 9, 2020, to change the reidentification of parts for the inner cylinder assembly for airplanes in Group 1, Configuration 1. AAL stated that this affects manufacturer part numbers (P/Ns) 512Z2001-1, P/N 512Z2001-2, and P/N 512Z2001-3. AAL commented that the service bulletin states to reidentify the inner cylinder assembly if copper-nickel-tin bushings are installed, and also states that there is no equivalent Boeing part number for the changed part. AAL stated that the statement is not entirely correct and that Boeing created inner cylinder assembly P/N 512Z2001-4 from P/N 512Z2001-3 solely by replacing the inner cylinder lug bushings with copper-nickel-tin bushings. Therefore, AAL stated, P/N 512Z2001-3 should be reidentified as P/N 512Z2001-4 after copper-nickel-tin bushings are installed. AAL commented that inner cylinder assemblies P/N 512Z2001-1 and P/N 512Z2001-2 do not have similar part number changes after installation of copper-nickel-tin bushings.

AAL also stated that it considers this a latent compliance trap as not all existing parts ordering systems have provisions for tracking a service bulletin in isolation of a part number change and that there is no description in the service bulletin to physically differentiate between the aluminum-nickel-bronze and copper-nickel-tin bushings. AAL also stated that Boeing has not made bushing drawing 512Z3002 available to operators to know where the bushing part number labeling is located, and when operators order next-higher assemblies, such as the strut assembly or main landing gear, there is no way to indicate that copper-nickel-tin bushings are installed or if the bushings are no longer physically accessible; for any repair and overhaul work via the component maintenance manuals (CMMs), there are no service bulletin notations to differentiate configuration differences.

In addition, AAL requested adding a provision in the proposed AD to require an inner cylinder assembly part number change to indicate installation of copper-nickel-tin bushings as an incremental requirement for termination of the repetitive inspection requirements for Group 1 airplanes identified in the service bulletin. AAL stated that CMMs, such as 32-11-74, do not have adequate effectivity controls in place to prevent installation of aluminum-nickel-bronze bushings (subject to the repetitive inspection requirements of the service bulletin) on inner cylinder assemblies (including those that have had repetitive inspection requirements terminated by installation of aluminum-nickel-tin bushings or post-production inner cylinder assemblies originally fitted with aluminum-nickel-tin bushings). AAL commented that this issue was raised with Boeing, and the illustrated parts list in the CMM dated December 30, 2021, was updated.

The FAA does not control service bulletin content, but disagrees that the requested changes are necessary because the specifics of the reidentification of the reworked assemblies are not required for compliance in this AD. This AD requires compliance using Boeing Alert Requirements Bulletin B787-81205-SB320045-00 RB, Issue 001, dated November 9, 2020; Boeing Alert Service Bulletin

B787-81205-SB320045-00, Issue 001, dated November 9, 2020, is for guidance only. Each operator uses unique part marking and tracking systems so this AD provides the flexibility to identify reworked assemblies under each operator's internal processes. The "Parts Modified and Reidentified" section is contained within Boeing Alert Service Bulletin B787-81205-SB320045-00, Issue 001, dated November 9, 2020, only. Any changes to parts of Boeing Alert Service Bulletin B787-81205-SB320045-00, Issue 001, dated November 9, 2020, that are not specified in Boeing Alert Requirements Bulletin B787-81205-SB320045-00 RB, Issue 001, dated November 9, 2020, can be discussed with Boeing without affecting compliance with this AD. If there is any conflict between the CMM and this AD regarding the requirements for reinstallation of the aluminum-nickel-bronze bushing, this AD prevails. The FAA has not changed this AD in this regard.

## **Conclusion**

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Except for minor editorial changes, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

## **Related Service Information Under 1 CFR Part 51**

The FAA reviewed Boeing Alert Requirements Bulletin B787-81205-SB320045-00 RB, Issue 001, dated November 9, 2020. This service information specifies procedures for repetitive lubrication of the left and right MLG truck beams and inner cylinder pivot joints with MIL-PRF-32014 grease; a review of the maintenance program documentation to verify that it includes lubrication tasks for the left and right MLG truck beams and inner cylinder pivot joints with MIL-PRF-32014 grease; repetitive detailed and fluorescent penetrant (FPI) inspections of the left and right MLG pivot pin outer diameter (OD) surface for friction and heat damage; repetitive detailed inspections of the left and right MLG inner cylinder bushing inner diameter (ID) surfaces for excessive wear, cracking, and smearing of bushing material; and applicable on-condition actions.

On-condition actions include updating the maintenance program to incorporate lubrication tasks for the left and right MLG truck beams and inner cylinder pivot joints with MIL-PRF-32014 grease, doing detailed and FPI inspections on the inner cylinder lug bore for heat and friction damage, installing a new pivot pin, applying lubrication using MIL-PRF-32014 grease and making sure lubrication passages are clear, installing new aluminum-nickel-bronze inner cylinder bushings, installing new copper-nickel-tin inner cylinder bushings, and repairing damage.

The FAA reviewed Boeing 787 Certification Maintenance Requirements (CMRs), D011Z009-03-03, dated June 2020. This service information specifies, among other scheduled maintenance requirements, CMR item number 32-CMR-01 of Section G, "Certification Maintenance Requirement Tasks," for lubricating the main landing gear truck beam pivot joint.

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 ADDRESSES.

## **Costs of Compliance**

The FAA estimates that this AD would affect 131 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

### Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Repetitive lubrications	1 work-hour × \$85 per hour = \$85 per lubrication cycle	\$0	\$85 per lubrication cycle	\$11,135 per lubrication cycle.
Verification of lubrication tasks	1 work-hour × \$85 per hour = \$85	0	\$85	\$11,135.
Repetitive inspections	40 work-hours × \$85 per hour = \$3,400 per inspection cycle	0	\$3,400 per inspection cycle	\$445,400 per inspection cycle.

The FAA estimates the following costs to do any necessary on-condition actions that would be required based on the results of the inspection. The agency has no way of determining the number of aircraft that might need these on-condition actions:

### On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Installation of new pivot pin	8 work-hours × \$85 per hour = \$680	\$97,517 per pivot pin component assembly	\$98,197
Installation of new bushings	1 work-hour × \$85 per hour = \$85	\$5,968 per bushing	6,053
Lubrication and making sure lubrication passages are clear	1 work-hour × \$85 per hour = \$85	\$0	85
Detailed and FPI inspections on the inner cylinder lug bore	2 work-hour × \$85 per hour = \$170	\$0	170
Update lubrication tasks (except for CMR item number 32-CMR-01 incorporation)	1 work-hour × \$85 per hour = \$85	\$0	85

The FAA has received no definitive data on which to base the cost estimates for the on-condition repairs specified in this AD.

For the optional action to revise the existing maintenance or inspection program by incorporating CMR item number 32-CMR-01, the FAA has determined that revising the existing maintenance or inspection program takes an average of 90 work-hours per operator, although the agency recognizes that this number may vary from operator to operator. In the past, the FAA has estimated that this action takes 1 work-hour per airplane. Since operators incorporate maintenance or inspection program changes for their affected fleet(s), the FAA has determined that a per-operator estimate is more accurate than a per-airplane estimate. Therefore, the FAA estimates the average total cost per operator to be \$7,650 (90 work-hours x \$85 per work-hour).

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

## **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.

The FAA is 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) Will not affect intrastate aviation in Alaska, and
- (3) 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 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:





**FAA**  
**Aviation Safety**

## **AIRWORTHINESS DIRECTIVE**

[www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)  
[www.gpoaccess.gov/fr/advanced.html](http://www.gpoaccess.gov/fr/advanced.html)

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**2022-02-14 The Boeing Company:** Amendment 39-21911; Docket No. FAA-2021-0457; Project Identifier AD-2020-01461-T.

**(a) Effective Date**

This airworthiness directive (AD) is effective March 30, 2022.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to The Boeing Company Model 787-8, 787-9, and 787-10 airplanes, certificated in any category, as identified in Boeing Alert Requirements Bulletin B787-81205-SB320045-00 RB, Issue 001, dated November 9, 2020.

**(d) Subject**

Air Transport Association (ATA) of America Code 32, Main landing gear.

**(e) Unsafe Condition**

This AD was prompted by a report that during a fleet sampling inspection, cracks were found on the inner cylinder pivot pins of the left and right main landing gear (MLG) on one of the airplanes. The FAA is issuing this AD to address any heat damage and cracking to the MLG inner cylinder pivot pin, which could result in a fractured pivot pin and lead to loss of all or part of the pivot pin assembly, and subsequent collapse of the MLG and reduced controllability of the airplane during takeoff and landing.

**(f) Compliance**

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

**(g) Required Actions**

Except as specified by paragraph (h) of this AD: At the applicable times specified in the "Compliance" paragraph of Boeing Alert Requirements Bulletin B787-81205-SB320045-00 RB, Issue 001, dated November 9, 2020, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin B787-81205-SB320045-00 RB, Issue 001, dated November 9, 2020. Actions identified as terminating action in Boeing Alert Requirements Bulletin B787-81205-SB320045-00 RB, Issue 001, dated November 9, 2020, terminate the applicable required actions of this AD, provided the terminating action is done in accordance with

the Accomplishment Instructions of Boeing Alert Requirements Bulletin B787-81205-SB320045-00 RB, Issue 001, dated November 9, 2020.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin B787-81205-SB320045-00, Issue 001, dated November 9, 2020, which is referred to in Boeing Alert Requirements Bulletin B787-81205-SB320045-00 RB, Issue 001, dated November 9, 2020.

#### **(h) Exceptions to Service Information Specifications**

(1) Where Boeing Alert Requirements Bulletin B787-81205-SB320045-00 RB, Issue 001, dated November 9, 2020, uses the phrase “the Issue 001 date of Requirements Bulletin B787-81205-SB320045-00 RB,” this AD requires using “the effective date of this AD.”

(2) Where Boeing Alert Requirements Bulletin B787-81205-SB320045-00 RB, Issue 001, dated November 9, 2020, specifies contacting Boeing for repair instructions: This AD requires doing the repair using a method approved in accordance with the procedures specified in paragraph (l) of this AD.

(3) Where the action for “CONDITION 2” in Table 7 of the “Compliance” paragraph of Boeing Alert Requirements Bulletin B787-81205-SB320045-00 RB, Issue 001, dated November 9, 2020, specifies “Do a detailed FPI inspection of the inner cylinder lug bore for heat and friction damage,” for this AD, the action is “Do a detailed and FPI inspection on the inner cylinder lug bore for heat and friction damage.”

#### **(i) Optional Terminating Action**

Revising the existing maintenance or inspection program, as applicable, to incorporate the information in CMR item number 32-CMR-01 of Section G, “Certification Maintenance Requirement Tasks,” of Boeing 787 Certification Maintenance Requirements (CMRs), D011Z009-03-03, dated June 2020, terminates the repetitive lubrications required by paragraph (g) of this AD.

#### **(j) No Alternative Actions and Intervals**

After the existing maintenance or inspection program has been revised as required by paragraph (i) of this AD, no alternative actions (e.g., inspections) and intervals may be used unless the actions and intervals are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (l) of this AD.

#### **(k) Parts Installation Prohibition**

At the applicable time specified in paragraph (k)(1) or (2) of this AD, do not install an aluminum-nickel-bronze inner cylinder bushing on a MLG inner cylinder on any airplane.

(1) For airplanes with aluminum-nickel-bronze inner cylinder bushings installed on a MLG inner cylinder as of the effective date of this AD: After the bushing has been replaced with a copper-nickel-tin inner cylinder bushing.

(2) For airplanes with copper-nickel-tin inner cylinder bushings installed on a MLG inner cylinder as of the effective date of this AD: As of the effective date of this AD.

#### **(l) 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 responsible Flight Standards Office, as appropriate. If

sending information directly to the manager of the certification office, send it to the attention of the person identified in Related Information. 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 responsible Flight Standards 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 Company 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.

#### **(m) Related Information**

For more information about this AD, contact Allen Rauschendorfer, Senior Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3528; email: allen.rauschendorfer@faa.gov.

#### **(n) 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 Requirements Bulletin B787-81205-SB320045-00 RB, Issue 001, dated November 9, 2020.

(ii) Boeing 787 Certification Maintenance Requirements (CMRs), D011Z009-03-03, dated June 2020.

(3) 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>.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety 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, [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov), or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

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Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

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