



# 適航指令發布單

## Airworthiness Directive Issuance Form

民航局AD編號 AD number	CAA-2024-11-007	發布日期 Date issued	2024/11/29
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	This AD applies to all The Boeing Company Model 787-8, 787-9, and 787-10 airplanes, certificated in any category.		
主旨摘要 Subject	This AD requires doing a check of maintenance records or an inspection to determine if certain drag brace lower lock link assemblies are installed, and applicable on-condition actions. and also prohibits the installation of affected parts.		
民航局 CAA  <input type="radio"/> 本國產品 Native product  <input type="radio"/> 其他個案 Other	設計國民航主管機構 Original Authority  <input checked="" type="radio"/> FAA <input type="radio"/> Germany LBA <input type="radio"/> EASA <input type="radio"/> CAA-NL <input type="radio"/> Brazil <input type="radio"/> UK CAA <input type="radio"/> Transport Canada Civil Aviation <input type="radio"/> Japan CAB <input type="radio"/> DGAC <input type="radio"/> CAA of Israel <input type="radio"/> Other_____		
	設計國AD編號 Original AD number	2024-22-05	
	1. 直接採用原AD之內容? (Is the original AD directly adopted?) <input checked="" type="radio"/> 是(Yes) <input type="radio"/> 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="radio"/> 需要(Yes) <input checked="" type="radio"/> 不需要(No)		
備註 Note	ATA 32. Ref. Boeing Alert Requirements Bulletin B787-81205-SB320048-00 RB, Issue 001, dated November 20, 2023.		

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,

[adcaa@mail.caa.gov.tw](mailto: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 Aviation Administration on Tel : (02)2349-6330 / 6332,  
Fax : (02)2545-8464, [adcaa@mail.caa.gov.tw](mailto:adcaa@mail.caa.gov.tw)

[Federal Register, Volume 89 Number 228 (Tuesday, November 26, 2024)]  
[Rules and Regulations]  
[Pages 93154-93157]  
From the Federal Register Online via the Government Publishing Office [www.gpo.gov]  
[FR Doc No: 2024-27596]

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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2024-2008; Project Identifier AD-2024-00122-T; Amendment 39-22876; AD 2024-22-05]**

**RIN 2120-AA64**

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

#### **AGENCY:**

Federal Aviation Administration (FAA), DOT.

#### **ACTION:**

Final rule.

#### **SUMMARY:**

The FAA is adopting a new airworthiness directive (AD) for all The Boeing Company Model 787-8, 787-9, and 787-10 airplanes. This AD was prompted by a report that during manufacture of drag brace lower lock link assemblies for the main landing gear (MLG), a certain required inspection was not performed. This AD requires doing a check of maintenance records or an inspection to determine if certain drag brace lower lock link assemblies are installed, and applicable on-condition actions. This AD also prohibits the installation of affected parts. The FAA is issuing this AD to address the unsafe condition on these products.

#### **DATES:**

This AD is effective December 31, 2024.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of December 31, 2024.

#### **ADDRESSES:**

*AD Docket:* You may examine the AD docket at *regulations.gov* under Docket No. FAA-2024-2008; 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.

#### *Material Incorporated by Reference:*

- For material 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; website [myboeingfleet.com](http://myboeingfleet.com).
- You may view this material 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 [regulations.gov](http://regulations.gov) under Docket No. FAA-2024-2008.

#### **FOR FURTHER INFORMATION CONTACT:**

Joseph Hodgin, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 206-231-3962; email: [joseph.j.hodgin@faa.gov](mailto:joseph.j.hodgin@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 all The Boeing Company Model 787-8, 787-9, and 787-10 airplanes. The NPRM published in the **Federal Register** on August 1, 2024 ([89 FR 62685](#)). The NPRM was prompted by a report that during manufacture of drag brace lower lock link assemblies for the MLG, a certain required inspection was not performed. In the NPRM, the FAA proposed to require doing a check of maintenance records or an inspection to determine if certain drag brace lower lock link assemblies are installed, and applicable on-condition actions. The FAA is issuing this AD to address unsafe condition on these products.

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

##### **Comments**

The FAA received comments from an individual who supported the NPRM without change.

The FAA received additional comments from three commenters, including Boeing, United Airlines, and American Airlines. The following presents the comments received on the NPRM and the FAA's response to each comment.

##### **Request To Correct Part Number**

American Airlines, United Airlines, and Boeing requested that the affected landing gear drag brace lower lock link assembly part number be corrected from part number 531Z2010-501, to part number 513Z2010-501. American Airlines, United Airlines, and Boeing stated that paragraph (i) of the proposed AD contains a typo for the affected landing gear drag brace lower lock link assembly part number. The commenters stated that the part number listed in the proposed AD is 531Z2010-501, the correct part number is 513Z2010-501. American Airlines stated it reviewed Boeing Alert Requirements Bulletin B787-81205-SB320048-00 RB, Issue 001, dated November 20, 2023, and confirmed that the correct part number is 513Z2010-501. Boeing noted that the part number in the

proposed AD does not match Boeing Alert Requirements Bulletin B787-81205-SB320048-00 RB, Issue 001, dated November 20, 2023.

The FAA agrees that the correct affected landing gear drag brace lower lock link assembly part number is 513Z2010-501. The FAA has revised paragraph (i) of this AD to reflect the correct part number.

### **Request To Withdraw the NPRM**

American Airlines stated that it appears that an airworthiness directive is not necessary as the safety issue is being addressed between Boeing and the affected operator(s) via the alert service bulletin. American Airlines also stated that compliance will require the unnecessary burden at all worldwide operators and MROs ( *i.e.*, certified repair stations) to create safeguards to look for these four serial numbers any time maintenance is performed on the life limited part component of the lock link assembly, the lower lock link assembly itself, the next higher assembly lock link assembly, the next higher assembly drag brace assembly, the next higher level landing gear, and the airplane throughout the remaining life of the entire 787 worldwide fleet. The FAA infers that American Airlines is requesting that the NPRM be withdrawn.

The FAA disagrees with the request to withdraw the NPRM. Operators are not required to accomplish Boeing Alert Requirements Bulletin B787-81205-SB320048-00 RB, Issue 001, dated November 20, 2023, until an AD mandates accomplishment. This AD addresses the identified unsafe condition by mandating the actions in that material, which ensures that the affected (unsafe) parts are removed from the airplanes identified in paragraph (g) of this AD. In addition, due to rotability of the affected parts, the parts installation prohibition specified in paragraph (i) of this AD is the only way to ensure the affected parts are not installed on all airplanes identified in paragraph (c) of this AD. 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. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

### **Material Incorporated by Reference Under [1 CFR Part 51](#)**

The FAA reviewed Boeing Alert Requirements Bulletin B787-81205-SB320048-00 RB, Issue 001, dated November 20, 2023. This material specifies procedures for doing a check of maintenance records or an inspection of the drag brace lower lock link assembly on the right and left MLG for affected serial numbers and applicable on-condition actions. On-condition actions include replacing any affected drag brace lower lock link assembly on the MLG with a serviceable drag brace lower lock link assembly.

This material 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**

The FAA estimates that this AD affects 156 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
Inspection or records check	1 work-hour × \$85 per hour = \$85	\$0	\$85	\$13,260

The FAA estimates the following costs to do any necessary replacement 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 this replacement:

#### On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Replacement of one drag brace lower lock link assembly	18 work-hours × \$85 per hour = \$1,530	\$39,119	\$40,649

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:

**2024-22-05 The Boeing Company:** Amendment 39-22876; Docket No. FAA-2024-2008; Project Identifier AD-2024-00122-T.

#### (a) Effective Date

This airworthiness directive (AD) is effective December 31, 2024.

#### (b) Affected ADs

None.

#### (c) Applicability

This AD applies to all The Boeing Company Model 787-8, 787-9, and 787-10 airplanes, certificated in any category.

#### (d) Subject

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

#### (e) Unsafe Condition

This AD was prompted by a report that during manufacture of drag brace lower lock link assemblies for the main landing gear (MLG), a certain inspection was not performed. The FAA is issuing this AD to address undetected cracks that could lead to fracture of the drag brace lower lock link

assembly. The unsafe condition, if not addressed, could result in MLG collapse, which could result in loss of directional control while the airplane is on the ground, with the potential for off-runway excursion or penetration of the wing box fuel tank.

#### **(f) Compliance**

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

#### **(g) Required Actions**

For airplanes with an original airworthiness certificate or original export certificate of airworthiness issued on or before the effective date of this AD: 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-SB320048-00 RB, Issue 001, dated November 20, 2023, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin B787-81205-SB320048-00 RB, Issue 001, dated November 20, 2023. The actions specified in Boeing Alert Requirements Bulletin B787-81205-SB320048-00 RB, Issue 001, dated November 20, 2023, apply to airplanes not listed in Boeing Alert Requirements Bulletin B787-81205-SB320048-00 RB, Issue 001, dated November 20, 2023.

#### **Note 1 to paragraph (g):**

Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin B787-81205-SB320048-00, Issue 001, dated November 20, 2023, which is referred to in Boeing Alert Requirements Bulletin B787-81205-SB320048-00 RB, Issue 001, dated November 20, 2023.

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

Where the Compliance Time column of the table in the “Compliance” paragraph of Boeing Alert Requirements Bulletin B787-81205-SB320048-00 RB, Issue 001, dated November 20, 2023, refers to the Issue 001 date of Requirements Bulletin B787-81205-SB320048-00 RB, this AD requires using the effective date of this AD.

#### **(i) Parts Installation Prohibition**

As of the effective date of this AD, no person may install a drag brace lower lock link assembly, part number 513Z2010-501 and serial number 19ZHQ00772, 19ZHQ00773, 19ZHQ00890, or 19ZHQ00891, on any airplane.

#### **(j) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, AIR-520, Continued Operational Safety 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 paragraph (k)(1) of this AD. Information may be emailed to: [AMOC@faa.gov](mailto:AMOC@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 that has been authorized by the Manager, AIR-520, Continued Operational Safety 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.

#### **(k) Related Information**

(1) For more information about this AD, contact Joseph Hodgin, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 206-231-3962; email: [joseph.j.hodgin@faa.gov](mailto:joseph.j.hodgin@faa.gov).

(2) Material identified in this AD that is not incorporated by reference is available at the address specified in paragraph (l)(3) of this AD.

#### **(l) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the material listed in this paragraph under [5 U.S.C. 552\(a\)](#) and [1 CFR part 51](#).

(2) You must use this material as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Alert Requirements Bulletin B787-81205-SB320048-00 RB, Issue 001, dated November 20, 2023.

(ii) [Reserved]

(3) For the material 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; website [myboeingfleet.com](http://myboeingfleet.com).

(4) You may view this material 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 material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit [www.archives.gov/federal-register/cfr/ibr-locationsoremailfr.inspection@nara.gov](http://www.archives.gov/federal-register/cfr/ibr-locationsoremailfr.inspection@nara.gov).

Issued on October 24, 2024.

Peter A. White,

Deputy Director, Integrated Certificate Management Division, Aircraft Certification Service.

[[FR Doc. 2024-27596](#) Filed 11-25-24; 8:45 am]

BILLING CODE 4910-13-P