



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2017-0779; Product Identifier 2017-NM-040-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 airplanes. This proposed AD was prompted by reports of degraded bond-line performance of co-bonded upper wing stringer-to-skin joints. This proposed AD would require repetitive inspections of certain upper wing stringers for any disbond and corrective actions, if necessary; and a terminating preventative modification of installing disbond arrestment (DBA) fasteners. This proposed AD would also require revising the inspection or maintenance program to incorporate an airworthiness limitation. 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, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0779.

### **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-2017-0779; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Allen Rauschendorfer, Aerospace Engineer, Airframe Branch, FAA, Seattle ACO Branch, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6487; fax: 425-917-6590; email: [allen.rauschendorfer@faa.gov](mailto:allen.rauschendorfer@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-2017-0779; Product Identifier 2017-NM-040-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

### **Discussion**

We have received reports of degraded bond-line performance of co-bonded upper wing stringer-to-skin joints. The co-bonded upper wing stringer-to-skin joints were determined to have degraded bond-line performance due to the exposure of the bond surface with the use of BMS 8-308 peel ply to cure times that exceeded 4 hours at a temperature of 345 degrees Fahrenheit (F) plus or minus 10 F. The upper wing stringer-to-skin joint disbonding can reduce the structural capability to where it cannot sustain limit load, which could adversely affect the structural integrity of the airplane.

### **Related Service Information under 1 CFR part 51**

We have reviewed Boeing Alert Service Bulletin B787-81205-SB570030-00, Issue 001, dated March 17, 2017 (“ASB B787-81205-SB570030-00, Issue 001”). This service information describes procedures for inspection of certain upper wing stringers for any disbond and repairs; and for a preventative modification which consists of, depending on airplane configuration, applying copper foil to the upper wing at certain stringer and rib bay locations, installing DBA fasteners on the upper flanges of the upper wing stringers at the stringer and rib bay locations, applying cap seals to the DBA

fasteners, and applying edge sealant to the stringers at the DBA fastener installation locations.

We have also reviewed Airworthiness Limitation (AWL) 57-AWL-13, “Inspection Requirements for In-Tank Fasteners and Edge Seal near Disbond Arrestment (DBA) Fastener Installations of Lightning Zone 2,” of Boeing 787 Special Compliance Items/Airworthiness Limitations, D011Z009-03-04, dated February 2017. This service information describes tasks for inspecting in-tank fasteners and edge seals near DBA fastener installations of lightning zone 2.

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 accomplishing the actions specified in the service information described previously, except as discussed under “Differences Between this Proposed AD and the Service Information.” For information on the procedures and compliance times in ASB B787-81205-SB570030-00, Issue 001, see this service information at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0779.

This AD requires revisions to certain operator maintenance documents to include new actions (e.g., inspections). Compliance with these actions is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by this proposed AD, the operator may not be able to accomplish the

actions described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (l) of this proposed AD. The request should include a description of changes to the required actions that will ensure the continued damage tolerance of the affected structure.

The phrase “corrective actions” is used in this proposed AD. Corrective actions correct or address any condition found. Corrective actions in an AD could include, for example, repairs.

### **Differences Between this Proposed AD and the Service Information**

ASB B787-81205-SB570030-00, Issue 001, specifies to contact the manufacturer for certain instructions, but this proposed AD would require using repair methods, modification deviations, and alteration deviations in one of the following ways:

- In accordance with a method that we approve; or
- Using data that meet the certification basis of the airplane, and that have been approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) whom we have authorized to make those findings.

### **Explanation of Applicability**

In the applicability of this proposed AD, we refer to the airplanes identified in ASB B787-81205-SB570030-00, Issue 001. In addition, we have included line numbers 10, 13, 15, 16, 17, 18, and 19 in the applicability of this proposed AD because those line numbers are included in the applicability for AWL 57-AWL-13. Those line numbers are not listed in ASB B787-81205-SB570030-00, Issue 001, and the actions specified in ASB B787-81205-SB570030-00, Issue 001 are not required for those line numbers because the actions in the service information were completed during production.

## Costs of Compliance

We estimate that this proposed AD affects 24 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	49 work-hours X \$85 per hour = \$4,165 per inspection cycle	\$0	\$4,165 per inspection cycle	\$99,960 per inspection cycle
Modification	Up to 352 work-hour X \$85 per hour = \$29,920	\$1,902	Up to \$31,822	Up to \$763,728
Maintenance or Inspection Program Revision	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$2,040

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

### Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

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-2017-0779; Product Identifier 2017-NM-040-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 Model 787-8 airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin B787-81205-SB570030-00, Issue 001, dated March 17, 2017 (“ASB B787-81205-SB570030-00, Issue 001”), and line numbers 10, 13, 15, 16, 17, 18, and 19.

**(d) Subject**

Air Transport Association (ATA) of America Code 57; Wings.

**(e) Unsafe Condition**

This AD was prompted by reports of degraded bond-line performance of co-bonded upper wing stringer-to-skin joints. We are issuing this AD to prevent upper wing stringer-to-skin joint disbonding, which can reduce the structural integrity of the airplane.

**(f) Compliance**

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

**(g) Inspections and Corrective Actions**

For airplanes identified in ASB B787-81205-SB570030-00, Issue 001: Except as specified in paragraph (k)(1) of this AD, at the applicable time specified in paragraph 5., “Compliance,” of ASB B787-81205-SB570030-00, Issue 001: Do an ultrasonic inspection for any disbond on the left side and right side upper wing stringers; and do all applicable corrective actions; in accordance with the Accomplishment Instructions of ASB B787-81205-SB570030-00, Issue 001, except as specified in paragraph (k)(2) of this AD. Do all applicable corrective actions before further flight. Repeat the inspection of the upper wing stringers thereafter at the applicable intervals specified in paragraph 5., “Compliance,” of ASB B787-81205-SB570030-00, Issue 001 until the actions required by paragraph (j) of this AD are done.

**(h) Maintenance or Inspection Program Revision**

(1) For airplanes identified in ASB B787-81205-SB570030-00, Issue 001: Prior to or concurrently with accomplishing the actions required by paragraph (g) of this AD, revise the inspection or maintenance program, as applicable, to incorporate Airworthiness Limitation (AWL) 57-AWL-13. “Inspection Requirements for In-Tank Fasteners and Edge Seal near Disbond Arrestment (DBA) Fastener Installations of Lightning Zone 2,” of Boeing 787 Special Compliance Items/Airworthiness Limitations, D011Z009-03-04, dated February 2017. The initial compliance time for accomplishing the tasks specified in AWL 57-AWL-13 is within 24,000 flight cycles or 12 years, whichever occurs first, after accomplishing the actions specified in ASB B787-81205-SB570030-00, Issue 001.

(2) For airplanes having line numbers 10, 13, and 15 through 19 inclusive: Within 60 days after the effective date of this AD, revise the inspection or maintenance program, as applicable, to incorporate AWL 57-AWL-13, “Inspection Requirements for In-Tank Fasteners and Edge Seal near Disbond Arrestment (DBA) Fastener Installations of Lightning Zone 2,” of Boeing 787 Special Compliance Items/Airworthiness Limitations,

D011Z009-03-04, dated February 2017. The initial compliance time for accomplishing the tasks specified in AWL 57-AWL-13 is prior to the accumulation of 24,000 total flight cycles or within 12 years after the date of issuance of the original airworthiness certificate or date of issuance of the original export certificate of airworthiness, whichever occurs first.

**(i) No Alternative Actions or Intervals**

After the action required by paragraph (h) of this AD has been done, no alternative actions (e.g., inspections) or intervals may be used unless the actions or intervals are approved as an AMOC in accordance with the procedures specified in paragraph (l) of this AD.

**(j) Inspection and Modification**

For airplanes identified in ASB B787-81205-SB570030-00, Issue 001, that have not done “PART 3: PREVENTIVE MODIFICATION” of the Accomplishment Instructions of ASB B787-81205-SB570030-00, Issue 001, at all of the unrepaired areas of the upper wing stringers: At the applicable time specified in paragraph 5., “Compliance,” of ASB B787-81205-SB570030-00, Issue 001, do the actions specified in paragraphs (j)(1) and (j)(2) of this AD, in accordance with the Accomplishment Instructions of ASB B787-81205-SB570030-00, Issue 001, except as specified in paragraph (k)(2) of this AD. Doing the actions required by this paragraph terminates the repetitive inspections required by paragraph (g) of this AD.

(1) Do an ultrasonic inspection for any disbond on the left side and right side upper wing stringers, and do all applicable corrective actions. Do all applicable corrective actions before further flight.

(2) Do the preventative modification in accordance with “PART 3: PREVENTIVE MODIFICATION” of the Accomplishment Instructions of ASB B787-81205-SB570030-00, Issue 001.

**(k) Exceptions to Service Information**

(1) Where paragraph 5., “Compliance,” of ASB B787-81205-SB570030-00, Issue 001, specifies a compliance time “after the Issue 001 date of this service bulletin,” this AD requires compliance within the specified compliance time after the effective date of this AD.

(2) Although ASB B787-81205-SB570030-00, Issue 001, specifies to contact Boeing for repair instructions, and specifies that action as “RC” (Required for Compliance), this AD requires repair before further flight using a method approved in accordance with the procedures specified in paragraph (l) 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 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 (m)(1) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been

authorized by the Manager, Seattle ACO Branch, 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) Except as required by paragraph (k)(2) of this AD: For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (l)(4)(i) and (l)(4)(ii) 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.

**(m) Related Information**

(1) For more information about this AD, contact Allen Rauschendorfer, Aerospace Engineer, Airframe Branch, FAA, Seattle ACO Branch, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6487; fax: 425-917-6590; email: allen.rauschendorfer@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, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on August 9, 2017.

Dionne Palermo,  
Acting Director,  
System Oversight Division,  
Aircraft Certification Service.

[FR Doc. 2017-17543 Filed: 8/24/2017 8:45 am; Publication Date: 8/25/2017]