



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2019-0603; Product Identifier 2019-NM-087-AD; Amendment 39-21013; AD 2019-25-14]**

**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 certain The Boeing Company Model 777-300ER and 777F series airplanes. This AD was prompted by an evaluation by the design approval holder (DAH) indicating that the fuselage stringers, stringer splices, and skin splice straps are subject to widespread fatigue damage (WFD). This AD requires repetitive detailed inspections of certain stringer splices and skin splice straps for any cracks, repetitive high frequency eddy current (HFEC) inspections of certain stringers and stringer splices for any cracks, and applicable on-condition actions. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**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, 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 <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0603.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0603; 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 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:** Eric Lin, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3523; email: [eric.lin@faa.gov](mailto:eric.lin@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

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 777-300ER and 777F series airplanes. The NPRM published in the Federal Register on August 8, 2019 (84 FR 38889). The NPRM was prompted by an evaluation by the DAH indicating that the fuselage stringers, stringer splices, and skin splice straps are subject to WFD. The NPRM proposed to require repetitive detailed inspections of certain stringer splices and skin splice straps for any cracks, repetitive HFEC inspections of certain stringers and stringer splices for any cracks, and applicable on-condition actions.

### **Comments**

The FAA 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**

United Airlines concurred with the NPRM.

### **Request to Use an Approved Document for the Inspections**

FedEx requested that either the service information or the proposed AD be revised to include a repair approved via FAA Form 8110-3 as a repair that would not require a repeat inspection of the affected inspection zone. FedEx noted that Note (a) 2. in Tables 1 through 12 in paragraph 3., Compliance, of Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019, states that "It is not required to do repeat inspections in areas where a repair covers the affected inspection zone provided...the

installed repair was approved by the Boeing Organizational Designation Authorization via a FAA Form 8100-9.” FedEx did not provide further justification for this request.

The FAA does not agree with the request. Note (a) 2. of Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019, addresses repairs that are designed as corrective actions to address the unsafe condition, which include a follow-on inspection program. The FAA allows FAA Form 8100-9 for approved repairs that meet the specified criteria, because it is used by the Boeing Organization Designation Authorization (ODA). The ODA staff are familiar with the unsafe condition addressed by this proposed AD and are able to develop a repair and repetitive inspection program that adequately addresses the unsafe condition. FAA Form 8110-3 is for use by a consultant/company designated engineering representative (DER), who may not have the same data or knowledge of the unsafe condition as the Boeing ODA. For this reason, the FAA does not allow approvals granted via an FAA Form 8110-3 under the provisions of note (a) 2. of Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019. However, operators may utilize DERs with the appropriate authorizations to repair their airplanes and request an alternative method of compliance (AMOC) for the repair in accordance with paragraph (i) of this AD. The AD has not been changed in this regard.

#### **Request to Add Service Information Exception**

FedEx requested an additional exception in paragraph (h) of the proposed AD to be included to state that the notes in paragraph 5.A, General Information, of Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019, are not mandated by the proposed AD. FedEx pointed out that the notes are only general information and should not be subject to the requirements of the proposed AD. FedEx went on to argue that other

operators and maintenance, repair, and overhaul (MRO) services have acceptable maintenance practices that are approved in accordance with 14 CFR 121 and 14 CFR 145. FedEx suggested that, if a note is to be mandated by the proposed AD, then the note should be listed within paragraph (g) of the proposed AD.

The FAA agrees to clarify. Accomplishing the actions specified in the Accomplishment Instructions of Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019, is required in its entirety for compliance with the AD. The notes in paragraph 5.A, General Information, of Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019, are provisions to define or explain the different aspects of the requirements and service information, including inspection types, dimensions and tolerances, and other information. These notes are relieving. If these notes were not included in Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019, operators would have to seek AMOCs for items like approved fastener substitutions and tolerances for different dimensions or torque values. By including the notes, the FAA does not anticipate operators needing AMOCs for items covered by the notes. Operators or MRO services may apply for an AMOC in accordance with paragraph (i) of this AD if they are concerned about a specific note or have an alternative maintenance practice they would like to use. The AD has not been changed in this regard.

#### **Request to Include Inspection for Existing Repairs**

FedEx requested that either the service information or the proposed AD be revised to include an inspection for existing repairs. FedEx reasoned that other related ADs include inspections or corrective actions for existing repairs.

The FAA does not agree with the request. In general, service information and ADs only include instructions to inspect for existing repairs when it has been determined that there are numerous existing repairs in the affected area that could impede an operator's ability to do the required actions in a new AD. In this case, the FAA has determined that there are few, if any, such existing repairs, so an inspection for existing repairs is not necessary. Operators with an existing repair in the affected area can apply for an AMOC in accordance with paragraph (i) of this AD. The AD has not been changed in this regard.

**Request to Revise a Certain Note to this AD**

FedEx requested that Note 1 to paragraph (g) of the proposed AD be removed or revised to refer back to Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019, rather than Boeing Alert Service Bulletin 777-53A0091, dated April 8, 2019. FedEx argued that including the note in the regulatory text of the proposed AD, means that Boeing Alert Service Bulletin 777-53A0091, dated April 8, 2019, is also mandated to accomplish the requirements of the proposed AD. FedEx contended that it does not believe both a service bulletin and a requirements bulletin are required to satisfy the requirements of an AD. FedEx went on to assert that in past ADs, only one of either type of service information was necessary. FedEx suggested that, if the FAA must reference Boeing Alert Service Bulletin 777-53A0091, dated April 8, 2019, for accomplishing the proposed AD, then the proposed AD should only require Boeing Alert Service Bulletin 777-53A0091, dated April 8, 2019.

The FAA agrees to clarify. Paragraph (g) of this AD requires operators to comply with only the actions identified in the Accomplishment Instructions of Boeing Alert

Requirements Bulletin 777-53A0091 RB, dated April 8, 2019. Note 1 to paragraph (g) of this AD does not mandate Boeing Alert Service Bulletin 777-53A0091, dated April 8, 2019. Instead, Note 1 to paragraph (g) of this AD notifies operators that Boeing Alert Service Bulletin 777-53A0091, dated April 8, 2019, provides additional guidance that may be helpful in complying with the requirements of this AD. This language is consistent with the language used in other ADs that refer to Boeing Requirement Bulletins. The AD has not been changed in this regard.

### **Request to Remove Open and Close Access Steps**

FedEx requested that the open and close access steps from Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019, be removed from the AD. FedEx noted that Tables 1 through 12 in paragraph 5.B.1., Requirements, of Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019, include actions for open and close access. FedEx contended that, because these actions are included within Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019, they are actions that are required by the proposed AD. FedEx pointed to Note 1 in paragraph 5.A, General Information, of Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019, which explains “enhanced required for compliance” documents, as further supporting their position that actions for open and close access are required to be accomplished. FedEx reasoned that the justification for using requirements bulletins was to eliminate the need for AMOCs for actions such as access and general maintenance practices. FedEx suggested that, should the FAA not remove the open and close access requirements from Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8,

2019, then Boeing should return to writing only service bulletins with marked “RC” steps.

The FAA agrees to clarify. The open and close access steps are not identified in the “Action” column in the tables in the Accomplishment Instructions of Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019, and therefore are not required by this AD. The open and close access steps in the “Refer to” column in the tables in the Accomplishment Instructions of the Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019, are only there to specify one method for open and close access if needed. Operators may use accepted methods for open and close access in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC. The AD has not been changed in this regard.

#### **Request to Address Service Information Error**

FedEx pointed out that Boeing Alert Service Bulletin 777-53A0091, dated April 8, 2019, references the incorrect Boeing aircraft maintenance manual (AMM) chapter. FedEx stated that the open and close access steps of Boeing Alert Service Bulletin 777-53A0091, dated April 8, 2019, should reference Boeing 777 AMM 25-80-00 instead of Boeing 777 AMM 25-59-02, for removing main deck cargo compartment insulation blankets. FedEx added that it assumes the open and close access steps are required for compliance with the proposed AD, so this change would avoid the need for FedEx to obtain an AMOC.

The FAA agrees to clarify. The FAA concurs that the AMM reference in Boeing Alert Service Bulletin 777-53A0091, dated April 8, 2019, is incorrect and that one source of information for accomplishing this task is Boeing 777 AMM 25-80-00. However, a

revision to the service information is not necessary in order to comply with this AD. As stated previously, the open and close access steps referenced in Boeing Alert Service Bulletin 777-53A0091, dated April 8, 2019, are not required for compliance because they are not identified in the Action column of the tables of the Accomplishment Instructions of Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019. The AD has not been changed in this regard.

### **Request to Clarify the Location of the Unsafe Condition**

Boeing pointed out that the description of the location of the unsafe condition is incorrect in the first sentence of the fifth paragraph of the Discussion section of the NPRM. Boeing explained that the unsafe condition was found beneath certain stringer splices and not beneath certain circumferential splices. Boeing requested that the sentence be changed to read: “The FAA has received a report indicating that aluminum chips and conical burr foreign object debris (FOD), were found on in-production model 777-300ER and 777F airplanes in the interfaces beneath stringer splices at station (STA) 825+210, STA 655, STA 1434+189, and STA 1832.”

The FAA agrees that the description in the NPRM is inaccurate. Since that section of the preamble does not reappear in the final rule, no change to the final rule is necessary.

### **Request to Correct a Typographical Error**

Boeing requested that the FAA correct a typographical error in the Costs of Compliance section of the NPRM. The NPRM stated that “The FAA has have received no definitive data that would enable us to provide cost estimates for the on-condition

actions specified in this AD.” Boeing noted that the word “have” should be removed from the sentence.

The FAA agrees with the commenter that an error was made in the Costs of Compliance section of the NPRM, and the error has been corrected accordingly.

### **Conclusion**

The FAA reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule with the change described previously and minor editorial changes. The FAA has 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.

The FAA 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**

The FAA reviewed Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019. The service information describes procedures for repetitive detailed inspections of certain stringer splices and skin splice straps for any cracks, repetitive HFEC inspections of certain stringers and stringer splices for any cracks, and applicable on-condition actions. On-condition actions include repair.

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**

The FAA estimates that this AD affects 12 airplanes of U.S. registry. The agency estimates the following costs to comply with this AD:

**Estimated costs for required actions**

| <b>Action</b>                 | <b>Labor cost</b>   | <b>Parts cost</b> | <b>Cost per product</b>            | <b>Cost on U.S. operators</b>       |
|-------------------------------|---|-------------------|------------------------------------|-------------------------------------|
| Detailed and HFEC Inspections | Up to 79 work-hours<br>X \$85 per hour = Up to \$6,715 per inspection cycle | \$0               | Up to \$6,715 per inspection cycle | Up to \$80,580 per inspection cycle |

The FAA has received no definitive data that would enable the agency to provide cost estimates for the on-condition actions specified in this AD.

According to the manufacturer, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. The FAA does not control warranty coverage for affected individuals. As a result, the agency has included all known costs in its cost estimate.

**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.

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) 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.

### **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):

**2019-25-14 The Boeing Company:** Amendment 39-21013; Docket No. FAA-2019-0603; Product Identifier 2019-NM-087-AD.

#### **(a) Effective Date**

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

This AD applies to The Boeing Company Model 777-300ER and 777F series airplanes, certificated in any category, as identified in Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019.

#### **(d) Subject**

Air Transport Association (ATA) of America Code 53, Fuselage.

**(e) Unsafe Condition**

This AD was prompted by an evaluation by the design approval holder (DAH) indicating that the fuselage stringers, stringer splices, and skin splice straps are subject to widespread fatigue damage (WFD). The FAA is issuing this AD to address undetected fatigue cracks, which could adversely affect the structural integrity of the airplane.

**(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 777-53A0091 RB, dated April 8, 2019, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 777-53A0091, dated April 8, 2019, which is referred to in Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019.

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

(1) Where Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019, uses the phrase “the original issue date of Requirements Bulletin 777-53A0091 RB” or “the original issue date of this service bulletin,” this AD requires using “the effective date of this AD,” except where Boeing Alert Requirements Bulletin

777-53A0091 RB, dated April 8, 2019, uses the phrase “the original issue date of this service bulletin” in a note or flag note.

(2) Where Boeing Alert Requirements Bulletin 777-53A0091 RB, dated April 8, 2019, specifies contacting Boeing for repair instructions: This AD requires doing the repair before further flight using a method approved in accordance with the procedures specified in paragraph (i) of this AD.

**(i) 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 (j) 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 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.

**(j) Related Information**

For more information about this AD, contact Eric Lin, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3523; email: eric.lin@faa.gov.

**(k) 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 777-53A0091 RB, dated April 8, 2019.

(ii) [Reserved]

(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, 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, email [fedreg.legal@nara.gov](mailto:fedreg.legal@nara.gov), or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Des Moines, Washington, on December 17, 2019.

Jeffrey E. Duven,  
Director,  
System Oversight Division,  
Aircraft Certification Service.  
[FR Doc. 2019-28465 Filed: 1/3/2020 8:45 am; Publication Date: 1/6/2020]