



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-0984; Product Identifier 2019-NM-161-AD; Amendment 39-21290; AD 2020-21-17]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2018-16-05, which applied to certain The Boeing Company Model 757 airplanes. AD 2018-16-05 required repetitive inspections for skin cracking and shim migration at the upper link drag fittings, diagonal brace cracking, and fastener looseness; and applicable on-condition actions.

This AD retains the actions required by AD 2018-16-05, reduces the compliance times for certain inspections, and adds repetitive inspections at certain fastener hole locations and applicable on-condition actions. This AD was prompted by reports of bolt rotation in the engine drag fitting joint and fastener heads; an inspection of the fastener holes revealed that cracks were found in the skin. This AD was also prompted by a report of multiple cracks in the drag fitting at fastener holes found during an inspection required by AD 2018-16-05. 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 Westminster Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>. You may view this service information at the FAA, 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 on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0984.

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-2019-0984; 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: Chandra Ramdoss, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5239; fax: 562-627-5210; email: chandraduth.ramdoss@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2018-16-05, Amendment 39-19345 (83 FR 38250, August 6, 2018) (“AD 2018-16-05”). AD 2018-16-05 applied to certain The Boeing Company Model 757-200, -200PF, -200CB, and -300 series airplanes. The NPRM published in the Federal Register on December 17, 2019 (84 FR 68822). The NPRM was prompted by reports of bolt rotation in the engine drag fitting joint and fastener heads; an inspection of the fastener holes revealed that cracks were found in the skin. The NPRM was also prompted by a report of multiple cracks found in the drag fitting at fastener holes during inspections required by AD 2018-16-05. The NPRM proposed to continue to require repetitive inspections for skin cracking and shim migration at the upper link drag fittings, diagonal brace cracking, and fastener looseness; and applicable on-condition actions. The NPRM also proposed to reduce the compliance times for certain inspections and add repetitive inspections at certain fastener hole locations and applicable on-condition actions. The FAA is issuing this AD to address cracking in the wing upper skin and forward drag fittings, which could lead to a compromised upper link and reduced structural integrity of the engine strut.

Comments

The FAA gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM and the FAA’s response to each comment.

Support for the NPRM

United Airlines (United) and American Airlines (American) stated their concurrence with the NPRM.

Effect of Winglets on Accomplishment of the Proposed Actions

Aviation Partners Boeing (APB) stated that they have reviewed the NPRM and have determined that the installation of winglets per Supplemental Type Certificate (STC) ST01518SE does not affect the accomplishment of the manufacturer's service instructions.

The FAA agrees with the commenter that STC ST01518SE does not affect the accomplishment of the manufacturer's service instructions. The FAA has redesignated paragraph (c) of the proposed AD as paragraph (c)(1) of this AD and added paragraph (c)(2) to this AD to state that installation of STC ST01518SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST00830SE is installed, a "change in product" alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

Requests to Increase the Inspection Intervals

American and United requested that the repetitive interval for the general visual inspection of the diagonal brace and diagonal brace fittings be increased from 2,100 flight cycles (FC) to 3,000 FC. In addition, American requested that the initial interval for the inspection also be increased to 3,000 FC. The commenters maintained that 2,100 FC does not align with their maintenance program intervals, which causes a significant burden on operators. United and American also stated that they have completed the inspection of 13 and 20 airplanes respectively and found no evidence of cracking, which indicates that the existing 3,000 FC interval is conservative.

The FAA disagrees with the requested change to the indicated repetitive inspection interval and initial interval. The FAA acknowledges that incorporating the interval into the existing maintenance program could be challenging for some operators. However, the inspection involves a visual assessment that requires limited disassembly and could be carried out without placing the aircraft in a heavy maintenance configuration. The reduced intervals are based on the re-assessment of the damage tolerance analysis to adjust for eleven additional crack findings since issuance of Boeing Alert Requirements Bulletin 757-57A0073 RB, dated July 14, 2017. The FAA has determined that the reduced inspection interval is necessary to avoid jeopardizing safety. The FAA has not changed the initial and repetitive inspection intervals required in this AD.

Request for Clarification That Compliance Times Cannot Be Extended

Boeing requested that clarification be added to the proposed AD to specify that the grace period provided for the newly proposed requirements cannot be used to extend compliance times for actions required by AD 2018-16-05. Boeing suggested that the FAA add a new paragraph to the proposed AD that would explicitly re-state the requirements of AD 2018-16-05. Boeing asserted that the new paragraph would maintain the requirements of AD 2018-16-05 only until the actions of paragraph (g) of the proposed AD are implemented.

The FAA does not agree to restate the requirements of AD 2018-16-05 or to add a new paragraph regarding the compliance time for the previously required actions. As explained in the NPRM, the requirements of AD 2018-16-05 are referenced in the service information required in this AD. Except for the diagonal brace inspections, the compliance times given in Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 1, dated August 1, 2019, for all actions required by AD 2018-16-05 are unchanged. The compliance times are defined both in terms of the effective date of

AD 2018-16-05 and the effective date of the service information. For the diagonal brace inspections, the compliance time may provide an additional grace period; however, this affects only one inspection cycle, is applicable to a small number of operators, and is an acceptable compliance time to ensure safety. The FAA has determined all other compliance times will ensure an acceptable level of safety, This AD has not been changed in this regard.

Requests to Clarify the Effective Date of AD 2018-16-05

American and Boeing requested that the proposed AD be revised to include clarification of the effective date of AD 2018-16-05. The commenters observed that some compliance times are given as the number of flight cycles after the “effective date of AD 2018-16-05,” and that where Boeing Alert Requirements Bulletin 757-57A0073 RB, dated July 14, 2017, uses that phrase, the proposed AD should require using “September 10, 2018.” American asserted that the compliance times should be in terms of the date, not of the superseded AD, and that determining the effective date of the replaced AD could be difficult otherwise. The commenters asserted that including this clarification in the new AD would avoid confusion for operators.

The FAA agrees to clarify the effective date of AD 2018-16-05. The FAA has added an exception in paragraph (h)(3) to indicate that, where Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 1, dated August 1, 2019, uses the phrase “the effective date of AD 2018-16-05,” this AD requires using “September 10, 2018 (the effective date of AD 2018-16-05).”

Requests to Give Credit for Previously Accomplished Actions

American, Boeing, and FedEx requested that the proposed AD give credit for previously accomplished actions that were similar to or the same as the actions specified in Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 1, dated August 1, 2019. American noted that Revision 1 of the service bulletin specifies a high frequency

eddy current (HFEC) inspection for cracking at fastener locations 11-18 for airplanes already inspected in accordance with the original issue of the service bulletin. American and Boeing asserted that operators of airplanes with fastener holes 1-10 already inspected per Boeing Alert Requirements Bulletin 757-57A0073 RB, dated July 14, 2017, should get credit for the initial inspection of fastener holes 1-10.

The FAA agrees and has added paragraph (i) to this AD to provide credit for previous actions accomplished using Boeing Alert Requirements Bulletin 757-57A0073 RB, dated July 14, 2017. The FAA has also reidentified subsequent paragraphs accordingly. As specified in Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 1, dated August 1, 2019, the new actions for fastener locations 11-18 must still be accomplished for airplanes on which the original revision of the RB was previously done.

Requests to Allow Certain AMOCs Previously Approved for AD 2018-16-05

American, Delta Air Lines, FedEx, and United requested that the proposed AD be changed to allow AMOCs previously approved for AD 2018-16-05 for the corresponding requirements of this AD. American, FedEx, and United observed that the inspections specified in Boeing Alert Requirements Bulletin 757-57A0073 RB, dated July 14, 2017, relating to fastener locations 1-10, as well as the repetitive inspections for these locations, do not change with Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 1, dated August 1, 2019. The commenters asserted that the repairs and corresponding AMOCs should continue to be acceptable.

The FAA agrees with the requested change. The FAA has changed paragraph (j)(4) of this AD (referred to as paragraph (i)(4) in the proposed AD) to specify that AMOCs granted to AD 2018-16-05 are acceptable as AMOCs to this AD for the corresponding requirements.

Conclusion

The FAA reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes 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 AD.

Related IBR Material under 1 CFR Part 51

The FAA reviewed Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 1, dated August 1, 2019. This service information describes procedures for repetitive inspections, including general visual, detailed, and HFEC inspections, for loose fasteners, skin cracking, and shim migration at the upper link drag fittings and for cracking in the diagonal brace and diagonal brace fittings and applicable on-condition actions. 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 561 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Repetitive inspections (retained actions from AD 2018-16-05)	83 work-hours X \$85 per hour = \$7,055 per inspection cycle	\$0	\$7,055 per inspection cycle	\$3,957,855 per inspection cycle
Repetitive HFEC inspections (new action)	2 work-hours X \$85 per hour = \$170 per inspection cycle	\$0	\$170 per inspection cycle	\$95,370 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.

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

The FAA has determined that 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 removing Airworthiness Directive (AD) 2018-16-05, Amendment 39-19345 (83 FR 38250, August 6, 2018), and adding the following new AD:

2020-21-17 The Boeing Company: Amendment 39-21290 ; Docket

No. FAA-2019-0984; Product Identifier 2019-NM-161-AD.

(a) Effective Date

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

(b) Affected ADs

This AD replaces AD 2018-16-05, Amendment 39-19345 (83 FR 38250, August 6, 2018) (“AD 2018-16-05”).

(c) Applicability

(1) This AD applies to all The Boeing Company Model 757-200, -200PF, -200CB, and -300 series airplanes, certificated in any category.

(2) Installation of Supplemental Type Certificate (STC) ST01518SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST01518SE is installed, a “change in product” alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by reports of bolt rotation in the engine drag fitting joint and fastener heads; an inspection of the fastener holes revealed that cracks were found in the skin. This AD was also prompted by a report of multiple cracks found in the drag fitting at fastener holes during inspections required by AD 2018-16-05. The FAA is issuing this AD to address cracking in the wing upper skin and forward drag fittings, which could lead to a compromised upper link and reduced structural integrity of the engine strut.

(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 757-57A0073 RB, Revision 1, dated August 1, 2019, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 1, dated August 1, 2019.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 757-57A0073, Revision 1, dated August 1, 2019, which is referred to in Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 1, dated August 1, 2019.

(h) Exceptions to Service Information Specifications

(1) Where Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 1, dated August 1, 2019, uses the phrase “the Revision 1 date of Requirements Bulletin 757-57A0073 RB,” this AD requires using “the effective date of this AD.”

(2) Where Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 1, dated August 1, 2019, specifies contacting Boeing for repair instructions: This AD requires doing the repair and applicable on-condition actions before further flight using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

(3) Where Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 1, dated August 1, 2019, uses the phrase “the effective date of AD 2018-16-05,” this AD requires using “September 10, 2018 (the effective date of AD 2018-16-05).”

(i) Credit for Previous Actions

This paragraph provides credit for the actions specified in paragraph (g) of this AD, except for the open-hole high frequency eddy current inspections at fastener locations 11-18, if those actions were performed before the effective date of this AD using Boeing Alert Requirements Bulletin 757-57A0073 RB, dated July 14, 2017.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in

paragraph (k)(1) of this AD. Information may be emailed to: 9-ANM-LAACO-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, Los Angeles ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) AMOCs approved previously for AD 2018-16-05 are approved as AMOCs for the corresponding provisions of Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 1, dated August 1, 2019, that are required by paragraph (g) of this AD.

(k) Related Information

(1) For more information about this AD, contact Chandra Ramdoss, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5239; fax: 562-627-5210; email: chandraduth.ramdoss@faa.gov.

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

(l) Material Incorporated by Reference

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

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

(i) Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 1, dated August 1, 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, 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, email fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on October 7, 2020.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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