DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0503; Project Identifier AD-2021-00163-T]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to supersede Airworthiness Directive (AD) 2005-05-18, which applies to certain The Boeing Company Model 737-600, -700, -700C, -800, and -900 series airplanes. AD 2005-05-18 requires repetitive inspections for cracking of the webs of the aft pressure bulkhead at a certain body station, and corrective action if necessary. Since the FAA issued AD 2005-05-18, cracking was found in that inspection area on airplanes not identified in the applicability of AD 2005-05-18. This proposed AD would retain the requirements of AD 2005-05-18, revise the applicability to include additional airplanes, and add an inspection for existing repairs on the newly added airplanes. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA 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 https://www.regulations.gov. Follow the instructions for submitting comments.

• Fax: 202-493-2251.

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 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 at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0503.

Examining the AD Docket

You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0503; 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 NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Wayne Lockett, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3524; email: wayne.lockett@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include
“Docket No. FAA-2021-0503; Project Identifier AD-2021-00163-T” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to https://www.regulations.gov, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this proposed AD.

**Confidential Business Information**

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Wayne Lockett, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3524; email: wayne.lockett@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

**Background**

The FAA issued AD 2005-05-18, Amendment 39-14007 (70 FR 12410,
March 14, 2005) (AD 2005-05-18), for certain The Boeing Company Model 737-600, 700, -700C, -800, and -900 series airplanes. AD 2005-05-18 was prompted by a report of cracks found, during fatigue testing, at several of the fastener rows in the web lap splices at the dome apex of the aft pressure bulkhead. AD 2005-05-18 requires repetitive detailed, low frequency eddy current (LFEC), and high frequency eddy current (HFEC) inspections for cracking of the webs of the aft pressure bulkhead at body station (BS) 1016, and corrective action if necessary. The FAA issued AD 2005-05-18 to detect and correct fatigue cracks in the webs of the aft pressure bulkhead, which could result in rapid decompression of the airplane.

**Actions Since AD 2005-05-18 Was Issued**

Since the FAA issued AD 2005-05-18, cracking has been found at apex webs on airplanes outside the applicability of AD 2005-05-18, which includes line numbers 1 through 1166 inclusive. Line numbers 1167 through 1755 inclusive, which are included in this proposed AD, use a revised fastener pattern in the 0.032-inch webs that was intended to correct the cracking addressed by AD 2005-05-18. During the assembly process on line numbers 1167 through 1755, the fasteners in the apex dome region are subjected to fuselage pressurization fatigue cycles and clamp-up stresses. Cracks in the inspection area of AD 2005-05-18 have now been found on airplanes within the range of line numbers 1167 through 1755 inclusive. At one location, the crack was linked from the first to the second fastener row. This cracking was identified during an inspection for cracking of the web lap splice of the aft pressure bulkhead, as required by AD 2017-10-22, Amendment 39-18896 (82 FR 23507, May 23, 2017) (AD 2017-10-22). The inspections and intervals specified in AD 2017-10-22 are not adequate to address the specific fatigue cracking occurring in the web apex area that is the subject of this NPRM.
FAA’s Determination

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Related Service Information under 1 CFR Part 51

The FAA reviewed Boeing Alert Service Bulletin 737-53A1251, Revision 2, dated January 20, 2021. This service information specifies procedures for a general visual inspection for existing repairs, repetitive detailed and HFEC inspections for cracks around the web fasteners, repetitive LFEC inspection for cracks around the hidden web lap splice fastener locations, and repair of cracks. 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.

Proposed AD Requirements in this NPRM

Although this proposed AD does not explicitly restate the requirements of AD 2005-05-18, this proposed AD would retain all of the requirements of AD 2005-05-18. Those requirements are referenced in the service information identified previously, which, in turn, is referenced in paragraph (g) of this proposed AD. This proposed AD would revise the applicability to include additional airplanes, and add an inspection for existing repairs on those airplanes. This proposed AD would also require accomplishment of the actions identified as “RC” (required for compliance) in the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1251, Revision 2, dated January 20, 2021, described previously, except for any differences identified as exceptions in the regulatory text of this proposed AD.

For information on the procedures and compliance times, see this service information at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0503.
Differences Between this Proposed AD and the Service Information

For Group 1 airplanes, the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1251 Revision 2, dated January 20, 2021, do not include any “RC” (required for compliance) steps. The RC tagging was inadvertently removed from Boeing Alert Service Bulletin 737-53A1251 Revision 2, dated January 20, 2021. For Group 1 airplanes, this proposed AD would therefore require treating Step 3.B.2. of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1251 Revision 2, dated January 20, 2021, as an RC step.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 744 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

<table>
<thead>
<tr>
<th>Estimated costs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Action</strong></td>
</tr>
<tr>
<td>Detailed, HFEC, and LFEC inspections</td>
</tr>
<tr>
<td>General visual inspection (194 airplanes)</td>
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</tbody>
</table>

The FAA estimates the following costs to do any necessary repairs that would be required based on the results of the proposed inspections. The FAA has no way of determining the number of aircraft that might need these repairs:

<table>
<thead>
<tr>
<th>On-condition costs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Action</strong></td>
</tr>
<tr>
<td>Repair</td>
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*Repair costs will vary depending on size of the repair required.
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 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 that the proposed regulation:

(1) Is not a “significant regulatory action” under Executive Order 12866,
(2) Would not affect intrastate aviation in Alaska, and
(3) Would 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:

      (70 FR 12410, March 14, 2005), and

   b. Adding the following new AD:

   The Boeing Company: Docket No. FAA-2021-0503; Project Identifier
   AD-2021-00163-T.

   (a) Comments Due Date

      The FAA must receive comments on this airworthiness directive (AD) action by
      [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL
      REGISTER].

   (b) Affected ADs

      This AD replaces AD 2005-05-18, Amendment 39-14007 (70 FR 12410,

   (c) Applicability

      This AD applies to The Boeing Company Model 737-600, -700, -700C, -800, and
      -900 series airplanes, certificated in any category; as identified in Boeing Alert Service

   (d) Subject

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

This AD was prompted by a report of cracks found at several of the fastener rows in the web lap splices at the dome apex of the aft pressure bulkhead, and the determination that airplanes not affected by AD 2005-05-18 are subject to this unsafe condition. The FAA is issuing this AD to address fatigue cracks in the webs of the aft pressure bulkhead, which could result in rapid decompression 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 paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-53A1251 Revision 2, dated January 20, 2021, do all applicable actions identified as “RC” (required for compliance) in, and in accordance with, the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1251 Revision 2, dated January 20, 2021. For Group 1 airplanes, as defined in Boeing Alert Service Bulletin 737-53A1251 Revision 2, dated January 20, 2021: Step 3.B.2. of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1251 Revision 2, dated January 20, 2021, is an RC step, and the provisions of paragraphs (j)(5)(i) and (ii) of this AD apply.

(h) Exceptions to Service Information Specifications

(1) Where Boeing Alert Service Bulletin 737-53A1251 Revision 2, dated January 20, 2021, uses the phrase “the Revision 1 date of this service bulletin,” this AD requires using “the effective date of this AD.”

(2) Where Boeing Alert Service Bulletin 737-53A1251, Revision 2, dated January 20, 2021, specifies contacting Boeing for repair instructions or for alternative inspections: This AD requires doing the repair, or doing the alternative inspections and
applicable on-condition actions using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

(i) Credit for Previous Actions

(1) For airplanes having line numbers 1 through 1166 inclusive: This paragraph provides credit for the corresponding actions of Boeing Alert Service Bulletin 737-53A1251 Revision 2, dated January 20, 2021, that are required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Boeing Service Bulletin 737-53-1251, dated June 3, 2004, which was incorporated by reference in AD 2005-05-18.

(2) This paragraph provides credit for the corresponding actions of Boeing Alert Service Bulletin 737-53A1251 Revision 2, dated January 20, 2021, that are required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin 737-53-1251, Revision 1, dated September 22, 2020, which is not incorporated by reference in this AD.

(j) 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.

(4) AMOCs approved for AD 2005-05-18 are approved as AMOCs for the corresponding provisions of Boeing Alert Service Bulletin 737-53A1251 Revision 2, dated January 20, 2021, that are required by paragraph (g) of this AD.

(5) Except as specified by paragraph (h) of this AD: For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (j)(5)(i) and (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.

(k) Related Information

(1) For more information about this AD, contact Wayne Lockett, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3524; email: wayne.lockett@faa.gov.
(2) For service information identified in this AD, 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 referenced 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.

Issued on June 11, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.
[FR Doc. 2021-13930 Filed: 6/29/2021 8:45 am; Publication Date: 6/30/2021]