



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-1021; Project Identifier AD-2020-00847-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 adopt a new airworthiness directive (AD) for all The Boeing Company Model 727 series airplanes. This proposed AD was prompted by a determination that excessive sealant coating on internal wing Structural Significant Items (SSIs) may not reveal cracks during inspections required by AD 98-11-03 R1. This proposed AD would require revising the existing maintenance or inspection program, as applicable, to incorporate inspections that will give no less than the required damage tolerance rating (DTR) for certain SSIs of the wing. This proposed AD would also require repetitive inspections for cracking of the affected SSIs and repair if necessary. 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.

- 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 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.

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-2020-1021; 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. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Mohit Garg, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5264; fax: 562-627-5210; email: mohit.garg@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 the ADDRESSES section. Include “Docket No. FAA-2020-1021; Project Identifier AD-2020-00847-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 Mohit Garg, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712 4137; phone: 562-627-5264; fax: 562-627-

5210; email: mohit.garg@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.

Discussion

The FAA has determined that excessive sealant coating on internal wing SSIs may prevent the detection of cracks during inspections required by AD 98-11-03 R1, Amendment 39-10983 (64 FR 989, January 7, 1999) (AD 98-11-03 R1) for The Boeing Company Model 727 airplanes. AD 98-11-03 R1 refers to Boeing Document No. D6-48040-1, Volumes 1 and 2, “Supplemental Structural Inspection Document” (SSID), Revision H, dated June 1994, as the appropriate source of service information for the required inspections. Boeing SSID document No. D6-48040-1, Revision H, dated June 1994, assumes that wing structural components such as fastener caps, splice plates, splice fittings stringers, collars, chords, webs, and wing skins are accessible for nondestructive testing (NDT), general visual (GVI) and detailed (DET) internal inspections. An investigation determined excessive sealant might have been applied during production on The Boeing Company Model 727 airplanes and might prevent the detection of cracks during SSI inspections. This condition, if not addressed, could result in propagation of structural cracks that could lead to the inability of a wing SSI to sustain limit load and result in loss of control of the airplane.

Related Service Information under 1 CFR Part 51

The FAA reviewed Boeing 727 Supplemental Structural Inspection Document D6-48040-1, Volume I, Temporary Revision 08-1001, dated February 2020; and Boeing 727 Supplemental Structural Inspection Document D6-48040-1, Volume II, Temporary Revision 11-1001, dated February 2020. In combination, this service information describes repetitive inspections for cracking of internal wing SSIs. 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

The FAA is proposing this AD because the agency 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 revising the existing maintenance or inspection program, as applicable, to incorporate inspections that will give no less than the required DTR for certain SSIs of the wing. This proposed AD would also require repetitive inspections for cracking of the affected SSIs and repair if necessary.

This proposed AD does not supersede AD 98-11-03 R1. Rather, the FAA has determined that a stand-alone AD would be more appropriate to address the changes.

Accomplishing the revision required by paragraph (g)(1) of this proposed AD and the accomplishing the initial inspections required by paragraph (g)(2) of this proposed AD, which are identified in Boeing 727 Supplemental Structural Inspection Document D6-48040-1, Volume I, Temporary Revision 08-1001, dated February 2020; and Boeing 727 Supplemental Structural Inspection Document D6-48040-1, Volume II, Temporary Revision 11-1001, dated February 2020, would terminate the corresponding SSI inspections specified in Boeing Document No. D6-48040-1, Volumes 1 and 2, "Supplemental Structural Inspection Document" (SSID), Revision H, dated June 1994, as required by AD 98-11-03 R1. All other SSI inspections specified in the SSID document, dated June 1994, that do not specifically correspond to SSID inspections referenced in the SSID documents, dated February 2020, remain fully applicable and must be complied with accordingly.

Costs of Compliance

The FAA estimates that this proposed AD affects 40 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this proposed AD:

The FAA has determined that revising the existing maintenance or inspection program takes an average of 90 work-hours per operator, although the agency recognizes that this number may vary from operator to operator. In the past, the FAA has estimated that this action takes 1 work-hour per airplane. Since operators incorporate maintenance or inspection program changes for their affected fleet(s), the FAA has determined that a per-operator estimate is more accurate than a per-airplane estimate. Therefore, the FAA estimates the average total cost per operator to be \$7,650 (90 work-hours x \$85 per work-hour).

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspections	48 work-hours X \$85 per hour = \$4,080 per inspection cycle	\$0	\$4,080 per inspection cycle	\$163,200 per inspection cycle

* Table does not include estimated costs for revising the existing maintenance or inspection program.

The FAA has received no definitive data on which to base the cost estimates for the on-condition repairs 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.

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 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) 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 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:

The Boeing Company: Docket No. FAA-2020-1021; Project Identifier

AD-2020-00847-T.

(a) Comments Due Date

The FAA must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected Airworthiness Directives (ADs)

This AD affects AD 98-11-03 R1, Amendment 39-10983 (64 FR 989, January 7, 1999) (AD 98-11-03 R1).

(c) Applicability

This AD applies to all The Boeing Company 727, 727C, 727-100, 727-100C, 727-200, and 727-200F series airplanes, certificated in any category.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by a determination that excessive sealant coating on internal wing Structural Significant Items (SSIs) may not reveal cracks during inspections required by AD 98-11-03 R1. The FAA is issuing this AD to address excessive sealant coating on internal wing SSIs that may prevent the detection of cracks during inspections. This condition, if not addressed, could result in propagation of structural cracks that could lead to the inability of a wing SSI to sustain limit load and result in loss of control of the airplane.

(f) Compliance

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

(g) Maintenance or Inspection Program Revision, Repetitive Inspections, and Repair

(1) Prior to reaching the applicable time specified in paragraph (g)(2)(i) or (ii) of this AD, incorporate a revision into the existing maintenance or inspection program, as

applicable, that provides no less than the required damage tolerance rating (DTR) for each SSI of the wing listed Boeing 727 Supplemental Structural Inspection Document D6-48040-1, Volume I, Temporary Revision 08-1001, dated February 2020; and Boeing 727 Supplemental Structural Inspection Document D6-48040-1, Volume II, Temporary Revision 11-1001, dated February 2020.

(2) At the applicable time specified in paragraph (g)(2)(i) or (ii) of this AD, perform initial inspections to detect cracks in the SSIs identified in Boeing 727 Supplemental Structural Inspection Document D6-48040-1, Volume I, Temporary Revision 08-1001, dated February 2020; and Boeing 727 Supplemental Structural Inspection Document D6-48040-1, Volume II, Temporary Revision 11-1001, dated February 2020.

(i) For Model 727-100C and 727-200F series airplanes: Inspect prior to the accumulation of 46,000 total flight cycles, or within 12 months after the effective date of this AD, whichever occurs later.

(ii) For all airplanes except for those airplanes identified in paragraph (g)(2)(i) of this AD: Inspect prior to the accumulation of 55,000 total flight cycles, or within 3,000 flight cycles measured from the date 12 months after the effective date of this AD, whichever occurs later.

(3) At the intervals specified in in Boeing 727 Supplemental Structural Inspection Document D6-48040-1, Volume I, Temporary Revision 08-1001, dated February 2020; and Boeing 727 Supplemental Structural Inspection Document D6-48040-1, Volume II, Temporary Revision 11-1001, dated February 2020, as applicable, repeat the inspections required by paragraph (g)(2) of this AD.

(4) If any cracked structure is found during any inspections required by paragraph (g) of this AD, repair before further flight using an FAA-approved method or using a method approved in accordance with the procedures specified in paragraph (j) of

this AD. Within 12 months after repair, incorporate a revision into the maintenance or inspection program, as applicable, to include a damage-tolerance-based alternative inspection program for the repaired structure. Thereafter, inspect the affected structure in accordance with the alternative program. The inspection method and compliance times (i.e., threshold and repetitive intervals) of the alternative program must be approved in accordance with the procedures specified in paragraph (j) of this AD.

(h) No Alternative Actions or Intervals

After the existing maintenance or inspection program has been revised as required by paragraph (g)(1) of this AD, no alternative actions (e.g., inspections), intervals, may be used unless the actions, intervals, are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (j) of this AD.

(i) Terminating Action for Certain Inspections Required by AD 98-11-03 R1

Accomplishing the revision required by paragraph (g)(1) of this AD and the initial inspections identified in Boeing 727 Supplemental Structural Inspection Document D6-48040-1, Volume I, Temporary Revision 08-1001, dated February 2020; and Boeing 727 Supplemental Structural Inspection Document D6-48040-1, Volume II, Temporary Revision 11-1001, dated February 2020, as required by paragraph (g)(2) of this AD, terminate the corresponding SSI inspections specified in Boeing Document No. D6-48040-1, Volumes 1 and 2, “Supplemental Structural Inspection Document” (SSID), Revision H, dated June 1994, as required by AD 98-11-03 R1.

(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 98-11-03 R1 are approved as AMOCs for the corresponding provisions of this AD for the SSIs identified in Boeing 727 Supplemental Structural Inspection Document D6-48040-1, Volume I, Temporary Revision 08-1001, dated February 2020; and Boeing 727 Supplemental Structural Inspection Document D6-48040-1, Volume II, Temporary Revision 11-1001, dated February 2020.

(k) Related Information

(1) For more information about this AD, contact Mohit Garg, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5264; fax: 562-627-5210; email: mohit.garg@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 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 November 5, 2020.

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

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