[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0701; Directorate Identifier 2013-NM-073-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 all The Boeing Company Model 727 airplanes. This proposed AD is intended to complete certain mandated programs intended to support the airplane reaching its limit of validity (LOV) of the engineering data that support the established structural maintenance program. This proposed AD would require repetitive inspections for cracking of small repairs done on the vertical flange of the rib chord, repetitive inspections for cracking along the upper fillet radius of the rib chord, and a large repair or preventive modification if necessary. Accomplishment of a large repair or preventive modification would terminate the actions of the proposed AD. We are proposing this AD to prevent cracks in the rib upper chord, which could result in the inability of the wing structure to support the limit load condition, and consequent loss of structural integrity of the wing.

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 proposed AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet https://www.myboeingfleet.com. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at http://www.regulations.gov; 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: Galib Abumeri, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office (ACO), 3960 Paramount Blvd., Suite 100, Lakewood, CA 90712-4137; phone: 562-627-5324; fax: 562-672-5210; email: galib.abumeri@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-2013-0701; Directorate Identifier 2013-NM-073-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

As described in FAA Advisory Circular 120-104 (http://www.faa.gov/documentLibrary/media/Advisory_Circular/120-104.pdf), several programs have been developed to support initiatives that will ensure the continued airworthiness of aging airplane structure. The last element of those initiatives is the requirement to establish a limit of validity (LOV) of the engineering data that support the structural maintenance program under 14 CFR 26.21. This proposed AD is the result of an assessment of the previously established programs by Boeing during the process of establishing the LOV for Model 727 airplanes. The actions specified in this proposed AD are necessary to complete certain programs to ensure the continued airworthiness of aging airplane structure and to support an airplane reaching its LOV.

Cracks have been reported on at least 8 airplanes in the upper vertical flange of the wing-to-body rib upper chord at body station 760. The cracks were detected when the

airplanes had reached between 19,700 and 49,000 total flight cycles, and between 35,000 and 54,000 total flight hours. Cracks in the rib upper chord, if not corrected, could result in the inability of the wing structure to support the limit load condition, and consequent loss of structural integrity of the wing.

Related Rulemaking

AD 90-06-09, Amendment 39-6488 (55 FR 8370, March 7, 1990), which affects Model 727 series airplanes, requires, among other things, structural modifications specified in Boeing Service Bulletin 727-57-0112, Revision 2, dated May 19, 1988.

AD 94-07-08, Amendment 39-8866 (59 FR 14545, March 29, 1994), which affects certain Boeing Model 727 series airplanes, requires structural inspections specified in Boeing Service Bulletin 727-57-0112, Revision 2, dated May 19, 1988, and corrective actions if necessary. The corrective actions include small repairs, large repairs, and modifications. AD 94-07-08 requires repetitive inspections for cracks, but does not require repetitive inspections of small repairs. Accomplishment of the modification specified in AD 94-07-08 terminates those repetitive inspections.

Relevant Service Information

We reviewed Boeing Service Bulletin 727-57-0112, Revision 5, dated July 31, 1997. For information on the procedures and compliance times, see this service information at http://www.regulations.gov by searching for Docket No. FAA-2013-0701.

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 repetitive inspections for cracking of any small repairs done on the vertical flange of the rib chord from the inboard side. The proposed AD would require a large repair or modification if any cracking is found. Accomplishment of a large repair or preventive modification would terminate the actions of the proposed AD.

Differences Between the Proposed AD and the Service Information

This proposed AD would require repetitive inspections for cracks along the upper fillet radius of the rib chord. Boeing Service Bulletin 727-57-0112, Revision 5, dated July 31, 1997, does not specify this inspection if a small repair is done. This difference has been coordinated with Boeing.

Costs of Compliance

We estimate that this proposed AD affects 106 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
Inspections (per wing)	6 work-hours X $85 per hour = $510 per inspection cycle	$0	$510 per inspection cycle	$54,060 per inspection cycle

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Large repair[1,2]	300 work-hours X $85 per hour = $25,500	$12,139	$37,639
Preventive modification[1,3]	57 work-hours X $85 per hour = $4,845	$10,614	$15,459

[1]Cost for on-condition actions (either [2] or [3]), per wing.

[2]Cost for large repair, per wing.

[3]Cost for preventive modification, per wing.

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.

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-2013-0701; Directorate Identifier 2013-NM-073-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 all The Boeing Company Model 727, 727C, 727-100, 727-100C, 727-200, and 727-200F series airplanes, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 57, Wings.

(e) Unsafe Condition

This AD is intended to complete certain mandated programs intended to support the airplane reaching its limit of validity (LOV) of the engineering data that support the established structural maintenance program. We are issuing this AD to prevent cracks in the rib upper chord, which could result in the inability of the wing structure to support the limit load condition, and consequent loss of structural integrity of the wing.

(f) Compliance

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

(g) Post-Repair Inspection

For any small repair that has been done as specified in Boeing 727 Service Bulletin 57-112; or Part III of the Accomplishment Instructions of Boeing Service Bulletin 727-57-0112: Within 3,500 flight cycles after the small repair was installed or inspected as specified in Boeing Service Bulletin 727-57-0112, or within 18 months after the effective date of this AD, whichever occurs latest, do a high frequency eddy current inspection for cracking of the vertical flange of the rib chord from the inboard side, and do a detailed (close visual) inspection for cracking along the upper fillet radius of the rib chord, in accordance with Part III of the Accomplishment Instructions of Boeing Service Bulletin 727-57-0112, Revision 5, dated July 31, 1997. Repeat the inspections thereafter at intervals not to exceed 3,500 flight cycles until accomplishment of the repair or modification specified in paragraph (i) or (j) of this AD.

(h) Inspection Definition

For the purposes of this AD, a detailed inspection is an intensive examination of a specific item, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirror, magnifying lenses, etc., may be necessary. Surface cleaning and elaborate procedures may be required.

(i) Corrective Action for Cracks

If any crack is found during any inspection required by paragraph (g) of this AD, before further flight, do either action specified in paragraph (i)(1) or (i)(2) of this AD. Accomplishment of either action terminates the requirements of paragraphs (g) and (h) of this AD.

(1) Do a large repair, in accordance with Part IV of the Accomplishment Instructions of Boeing Service Bulletin 727-57-0112, Revision 5, dated July 31, 1997.

(2) Do a preventive modification, in accordance with Part V of the Accomplishment Instructions of Boeing Service Bulletin 727-57-0112, Revision 5, dated July 31, 1997.

(j) Optional Terminating Action

Accomplishment of the actions specified in either paragraph (j)(1) or (j)(2) of this AD terminates the requirements of paragraphs (g), (h), and (i) of this AD.

(1) A large repair, in accordance with Part IV of the Accomplishment Instructions of Boeing Service Bulletin 727-57-0112, Revision 5, dated July 31, 1997. Any crack found must be repaired before further flight using a method approved in accordance with the procedures specified in paragraph (l) of this AD.

(2) A preventive modification, in accordance with Part V of the Accomplishment Instructions of Boeing Service Bulletin 727-57-0112, Revision 5, dated July 31, 1997. Any crack found must be repaired before further flight using a method approved in accordance with the procedures specified in paragraph (l) of this AD.

(k) Credit for Previous Actions

This paragraph provides credit for the inspections, large repair, and modification specified in this AD, if those actions were performed before the effective date of this AD using Boeing Service Bulletin 727-57-0112, Revision 4, dated October 29, 1992.

(l) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office (ACO), 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 ACO, send it to the attention of the person identified in the Related Information section 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 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, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(m) Related Information

(1) For more information about this AD, contact Galib Abumeri, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office (ACO), 3960 Paramount Blvd, Suite 100, Lakewood, CA 90712-4137; phone: 562-627-5324; fax: 562-672-5210; email: galib.abumeri@faa.gov.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet https://www.myboeingfleet.com. You may review copies of the referenced service

information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on August 16, 2013.

Jeffrey E. Duven,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

[FR Doc. 2013-20840 Filed 08/26/2013 at 8:45 am; Publication Date: 08/27/2013]