

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 39**

[Docket No. FAA-2004-19679; Directorate Identifier 2003-NM-132-AD]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 727, 727C, 727-100, 727-100C, 727-200, and 727-200F Series 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 certain Boeing Model 727, 727C, 727-100, 727-100C, 727-200, and 727-200F series airplanes. This proposed AD would require repetitive inspections of the carriage attach fittings on the foreflaps of each wing for cracking and other discrepancies, and corrective actions if necessary. For certain airplanes, the proposed AD would also concurrently require various other actions related to the subject area. This proposed AD also provides for an optional terminating action for the repetitive inspection requirements and for an optional replacement that would defer the repetitive inspections. This proposed AD is prompted by reports of damaged or failed outboard foreflaps with a cracked or failed carriage attach fitting of the foreflap sequencing carriage. We are proposing this AD to detect and correct fatigue cracking of the attach fittings of the foreflap carriage of the wings, which could result in partial or complete loss of the foreflap and consequent loss of controllability of the airplane.

DATES: We must receive comments on this proposed AD by January 10, 2005.

ADDRESSES: Use one of the following addresses to submit comments on this proposed AD.

- DOT Docket Web site: Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.
- Government-wide rulemaking Web site: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
- Mail: Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., Nassif Building, room PL-401, Washington, DC 20590.
- By fax: (202) 493-2251.
- Hand Delivery: Room PL-401 on the plaza level of the Nassif Building,

400 Seventh Street SW., Washington, DC, 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, P.O. Box 3707, Seattle, Washington 98124-2207.

You can examine the contents of this AD docket on the Internet at <http://dms.dot.gov>, or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., room PL-401, on the plaza level of the Nassif Building, Washington, DC. This docket number is FAA-2004-19679; the directorate identifier for this docket is 2003-NM-132-AD.

FOR FURTHER INFORMATION CONTACT:

Technical information: Daniel F. Kutz; Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6456; fax (425) 917-6590.

Plain language information: Marcia Walters, marcia.walters@faa.gov.

SUPPLEMENTARY INFORMATION:

Docket Management System (DMS)

The FAA has implemented new procedures for maintaining AD dockets electronically. As of May 17, 2004, new AD actions are posted on DMS and assigned a docket number. We track each action and assign a corresponding directorate identifier. The DMS AD docket number is in the form "Docket No. FAA-2004-99999." The Transport Airplane Directorate identifier is in the form "Directorate Identifier 2004-NM-999-AD." Each DMS AD docket also lists the directorate identifier ("Old Docket Number") as a cross-reference for searching purposes.

Comments Invited

We invite you to submit any relevant written data, views, or arguments regarding this proposed AD. Send your comments to an address listed under **ADDRESSES**. Include "Docket No. FAA-2004-19679; Directorate Identifier 2003-NM-132-AD" in the subject line of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the proposed AD. We will consider all comments submitted by the closing date and may amend the proposed AD in light of those comments.

We will post all comments we receive, without change, to <http://dms.dot.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA

personnel concerning this proposed AD. Using the search function of that website, anyone can find and read the comments in any of our dockets, including the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You can review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477-78), or you can visit <http://dms.dot.gov>.

We are reviewing the writing style we currently use in regulatory documents. We are interested in your comments on whether the style of this document is clear, and your suggestions to improve the clarity of our communications that affect you. You can get more information about plain language at <http://www.faa.gov/language> and <http://www.plainlanguage.gov>.

Examining the Docket

You can examine the AD docket on the Internet at <http://dms.dot.gov>, or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the DOT street address stated in the **ADDRESSES** section. Comments will be available in the AD docket shortly after the DMS receives them.

Discussion

We have received several reports of damaged or failed outboard foreflaps with a cracked or failed carriage attach fitting of the foreflap sequencing carriage on certain Boeing Model 727, 727C, 727-100, 727-100C, 727-200, and 727-200F series airplanes. Investigation revealed that fatigue cracking of the fitting is possible due to high fit-up stress combined with airloads. Such fatigue cracking, if not detected and corrected, could result in partial or complete loss of the foreflap and consequent loss of controllability of the airplane.

Relevant Service Information

We have reviewed Boeing Alert Service Bulletin 727-57A0135, Revision 3, dated June 27, 2002. The service bulletin describes the following inspection and corrective procedures for the two carriage attach fittings on the inboard and outboard foreflaps of each wing:

- Repetitive detailed inspections to detect cracks and surface deviations on all edges, surfaces, and lug attachment fastener holes;

- Repetitive high frequency eddy current inspections (HFEC) to detect cracks at the lug attachment fastener holes; and
- For cases where any crack is detected at a lug attachment fastener hole or any surface deviation beyond certain limits is detected on any edge, surface, or lug attachment fastener hole: Replacement of that carriage attach fitting with a new, improved fitting or a new fitting having the same part number as the existing fitting.

The service bulletin also describes the following two optional procedures:

- Replacing the two carriage attach fittings on the inboard and outboard foreflaps of each wing with a new, improved fitting. Accomplishment of this replacement and the applicable procedures specified in Boeing Service Bulletin 57-59, Revision 1, dated September 27, 1965; Boeing Service Bulletin 727-27-133, Revision 1, dated May 9, 1972; and Boeing Service Bulletin 57-72, dated September 21, 1966 (all three described below); as applicable; would eliminate the need for the repetitive inspections described above.

- Replacing the two carriage attach fittings on the inboard and outboard foreflaps of each wing with new fittings having the same part number as the existing fittings. Accomplishment of this replacement and the applicable procedures specified in Boeing Service Bulletins 57-59, 727-27-133, and 57-72 would defer the next inspections described above for an additional 10,000 flight cycles.

In addition, the service bulletin also describes procedures for inspecting for interference between the carriage attach fitting and the carriage lug fitting, and other related investigative/corrective actions if necessary. The related investigative actions include measuring the radius for minimum permitted radius and inspecting surface finish for maximum permitted finish. The corrective actions include adding a shim; reworking the carriage attach lug; and contacting the airplane manufacturer if rework of the improved fitting is required; as applicable.

We have also reviewed Boeing Service Bulletin 57-59, Revision 1, dated September 27, 1965. The service bulletin describes procedures for installation of guide blocks and bushings in the midflap ribs.

In addition, we have reviewed Boeing Service Bulletin 727-27-133, Revision 1, dated May 9, 1972. The service bulletin describes procedures for performing a one-time inspection for foreflap airload roller travel on the foreflap track; repair if necessary; and modifying the control drum of the inboard flap and inboard jackscrews of the outboard flap; as applicable. The modification includes installing a stop plate on the control drum of the inboard flap, and replacing the down stop at the inboard jackscrews of the outboard flap; as applicable.

In addition, we have reviewed Boeing Service Bulletin 57-72, dated September 21, 1966. The service bulletin describes procedures for chamfering the upper and lower flanges at the aft end of the foreflap tracks; performing a standard magnetic particle inspection of the entire foreflap tracks for cracks; performing a one-time general inspection of the track rib faces to verify if the opening in the spars is flush with or clear of the plane of the track rib faces; and rework if necessary. This rework includes trimming the midflap front and rear spar webs. The service bulletin also describes procedures for a one-time general visual inspection of the head or shank of bolts by securing the foreflap links to the foreflap tracks to verify if they protrude beyond the edge of the track flange, and rework if necessary. This rework includes installing a laminated washer under the bolt head.

Accomplishing the actions specified in the service information described above is intended to adequately address the unsafe condition.

FAA’s Determination and Requirements of the Proposed AD

We have evaluated all pertinent information and identified an unsafe condition that is likely to exist or develop on other airplanes of this same

type design. Therefore, we are proposing this AD, which would require repetitive inspections of the carriage attach fittings on the foreflaps of each wing for cracking and other discrepancies, and corrective actions if necessary. For certain airplanes, the proposed AD would also concurrently require various other actions related to the subject area. This AD also provides for an optional terminating action for the repetitive inspection requirements and for an optional replacement that would defer the repetitive inspections. The actions, if accomplished, would be required to be accomplished in accordance with the service bulletins described previously, except as discussed under “Difference Between the Proposed AD and Service Bulletins.”

Difference Between the Proposed AD and Service Bulletins

Boeing Alert Service Bulletin 727-57A0135 and Boeing Service Bulletin 727-27-133 specify that the manufacturer may be contacted for disposition of certain rework and repair conditions. In addition, Boeing Service Bulletin 57-72 does not specify what to do for cases of crack findings during a standard magnetic particle inspection of the entire foreflap tracks. However, unlike those service bulletins, this proposal would require the rework and repair of those conditions to be accomplished in accordance with a method approved by the FAA, or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative who has been authorized by the FAA to make such findings.

Costs of Compliance

There are about 1,292 airplanes of the affected design in the worldwide fleet. We estimate that 855 airplanes of U.S. registry would be affected by this proposed AD. The average labor rate is \$65 per work hour. The following table provides the estimated costs for U.S. operators to comply with this proposed AD.

ESTIMATED COSTS

For	Action	Work hours	Parts cost	Cost
All airplanes	Inspections of the carriage attach fittings ...	4	None	\$222,300, \$260 per airplane, per inspection cycle.
Certain airplanes	Installation of guide blocks	32	Free	\$2,080 per airplane.
Certain airplanes	Inspection of foreflap airload roller travel	4	None	\$260 per airplane.
Certain airplanes	Modification of the inboard jackscrews on the outboard flap.	4	Free	\$260 per airplane.
Certain airplanes	Inspection of the entire track and of the track rib faces.	12	None	\$780 per airplane.

Regulatory Findings

We have 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. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); 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.

We prepared a regulatory evaluation of the estimated costs to comply with this proposed AD. See the ADDRESSES section for a location to examine the regulatory evaluation.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, 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):

Boeing: Docket No. FAA-2004-19679; Directorate Identifier 2003-NM-132-AD.

Comments Due Date

(a) The Federal Aviation Administration (FAA) must receive comments on this AD action by January 10, 2005.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Boeing Model 727, 727C, 727-100, 727-100C, 727-200, and 727-200F series airplanes, as listed in Boeing Alert Service Bulletin 727-57A0135,

Revision 3, dated June 27, 2002; certificated in any category.

Unsafe Condition

(d) This AD was prompted by reports of damaged or failed outboard foreflaps with a cracked or failed carriage attach fitting of the foreflap sequencing carriage. We are issuing this AD to detect and correct fatigue cracking of the attach fittings of the foreflap carriage of the wings, which could result in partial or complete loss of the foreflap and consequent loss of controllability of the airplane.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Inspections

(f) Except as provided by paragraph (o) of this AD: Within 1,000 flight cycles after the effective date of this AD, and thereafter at intervals not to exceed 1,000 flight cycles, inspect as specified in paragraphs (f)(1) and (f)(2) of Table 1 of this AD in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 727-57A0135, Revision 3, dated June 27, 2002. Table 1 is as follows:

TABLE 1.—INSPECTION REQUIREMENTS

Requirements—	Description—
(1) Area to inspect	The two carriage attach fittings on the inboard and outboard foreflaps of each wing.
(2) Type of inspections	(i) A detailed inspection to detect cracks and surface deviations on all edges, surfaces, and lug attachment fastener holes. (ii) A high frequency eddy current (HFEC) inspection to detect cracks at the lug attachment fastener holes.

Crack or Surface Deviation Findings: Replacement

(g) If any crack is detected or if any surface deviation beyond the limits specified in the service bulletin is detected during any inspection required by paragraph (f) of this AD, before further flight, replace the carriage attach fitting with a new, improved fitting or a new fitting having the same part number as the existing fitting, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 727-57A0135, Revision 3, dated June 27, 2002.

Measurement and Associated Corrective Action(s)

(h) Within 3,500 flight cycles after the effective date of this AD, inspect for interference between the carriage attach fitting and the carriage lug fitting, and do other related investigative actions by accomplishing all the actions specified in paragraph 3.C. and Figure 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 727-57A0135, Revision 3, dated June 27, 2002. Do the actions in accordance with the service bulletin.

(i) If any discrepancy is found during any action required by paragraph (h) of this AD, before further flight, accomplish applicable corrective action(s) (e.g., adding a shim or reworking the carriage attachment lug assembly) in accordance with paragraph 3.C. and Figure 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 727-57A0135, Revision 3, dated June 27, 2002. Where the service bulletin specifies to contact the manufacturer if rework of the improved fitting is required: Before further flight, rework in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative (DER) who has been authorized by the FAA to make such findings. For a repair method to be approved, the approval must specifically reference this AD.

Concurrent Requirements

(j) For Model 727 airplanes listed in Boeing Service Bulletin 57-59, Revision 1, dated

September 27, 1965: Before or at the same time with the requirements of paragraph (h) of this AD, install guide blocks and bushings in the midflap ribs in accordance with the Accomplishment Instructions of the service bulletin.

(k) For Model 727 airplanes listed in Boeing Service Bulletin 727-27-133, Revision 1, dated May 9, 1972: Before or at the same time with the requirements of paragraph (h) of this AD, do the actions specified in paragraphs (k)(1) and (k)(2) of this AD, as applicable.

(1) For Groups I and II airplanes identified in the service bulletin: Do a one-time inspection of the airload support roller for travel on the foreflap track in accordance with Part I of the Accomplishment Instructions of the service bulletin.

(i) If the airload support roller travels within the limits specified in the service bulletin, modify the control drum of the inboard flap and inboard jackscrews of the outboard flap, in accordance with Part II of the Accomplishment Instructions of the service bulletin.

(ii) If the airload support roller travels beyond the limits specified in the service bulletin, repair in accordance with a method approved by the Manager, Seattle ACO, FAA or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company DER who has been authorized by the FAA to make such findings.

(2) For Group III airplanes identified in the service bulletin: Modify the inboard jackscrews of the outboard flap (*i.e.*, replacing the down stop at the inboard jackscrews of the outboard flap) in accordance with Part II of the Accomplishment Instructions of the service bulletin.

(l) For Model 727 airplanes listed in Boeing Service Bulletin 57-72, dated September 21, 1966: Before or at the same time with the requirements of paragraph (h) of this AD, do the actions specified in paragraphs (l)(1) through (l)(4) of this AD.

(1) Chamfer the upper and lower flanges at the aft end of the foreflap tracks in accordance with the Accomplishment Instructions of the service bulletin.

(2) Do a standard magnetic particle inspection of the entire foreflap tracks for cracks in accordance with the Accomplishment Instructions of the service bulletin. If any crack is detected, before further flight, repair in accordance with a method approved by the Manager, Seattle ACO, FAA or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company DER who has been authorized by the FAA to make such findings. For a repair method to be approved, the approval must specifically reference this AD.

(3) Do a general visual inspection of the track rib faces at the front and rear spars to verify if the opening in the spars is flush with or clear of the plane of the rib faces, in accordance with the Accomplishment Instructions of the service bulletin. If the opening is not flush or clear with the plane, before further flight, rework the spar opening in accordance with the Accomplishment Instructions of the service bulletin.

(4) Do a general visual inspection of the head or shank of bolts by securing the foreflap links to the foreflap tracks to verify if they protrude beyond the edge of the track flange in accordance with the Accomplishment Instructions of the service bulletin. If the head or shank of the bolts protrude beyond the edge of the track flange, before further flight, rework in accordance with the Accomplishment Instructions of the service bulletin.

Note 1: For the purposes of this AD, a general visual inspection is defined as: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to enhance visual access to all exposed surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or droplight and may require removal or opening of access panels or doors.

Stands, ladders, or platforms may be required to gain proximity to the area being checked."

(m) For airplanes other than those identified in the service bulletins specified in paragraphs (j) through (l) of this AD: Before or at the same time with the requirements of paragraph (h) of this AD, do an inspection to verify if any of the parts listed in the "Spares Affected" paragraph of each service bulletin referenced in paragraphs (j) through (l) of this AD are installed on the airplane. If any part identified in that paragraph is found installed, before further flight, do the applicable corrective and investigative action(s) specified in paragraphs (j) through (l) of this AD.

Optional Terminating Actions

(n) Replacement of the two carriage attach fittings on the inboard and outboard foreflaps of each wing with new, improved fittings, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 727-57A0135, Revision 3, dated June 27, 2002; and accomplishment of the actions specified in paragraphs (j) through (m) of this AD, as applicable, before or concurrently with the replacement; constitutes terminating action for the requirements of this AD.

Optional Deferral of Inspection

(o) Replacement of the two carriage attach fittings on the inboard and outboard foreflaps of each wing with new fittings having the same part number as the existing fittings, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 727-57A0135, Revision 3, dated June 27, 2002; and accomplishment of the actions specified in paragraphs (j) through (m) of this AD, as applicable, before or concurrently with the replacement; defers the next inspection required by paragraph (f) of this AD for 10,000 flight cycles after the replacement. Thereafter, repeat the inspections required by paragraph (f) of this AD at intervals not to exceed 1,000 flight cycles.

Credit for Previously Accomplished Service Bulletins

(p) Installations accomplished before the effective date of this AD in accordance with Boeing Service Bulletin 57-59, dated September 2, 1965; are acceptable for compliance with the requirements of paragraph (j) of this AD.

(q) Inspections and modifications accomplished before the effective date of this AD in accordance with Boeing Service Bulletin 727-27-133, dated October 7, 1971; are acceptable for compliance with the requirements of paragraph (k) of this AD.

Alternative Methods of Compliance (AMOCs)

(r)(1) In accordance with 14 CFR 39.19, the Manager, Seattle ACO, FAA, is authorized to approve alternative methods of compliance for this AD.

(2) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD, if it is approved by a Boeing Company Designated Engineering Representative who has been authorized by the Manager, Seattle ACO, to make those

findings. For a repair method to be approved, the approval must specifically refer to this AD.

Issued in Renton, Washington, on November 19, 2004.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 04-26028 Filed 11-23-04; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2004-19678; Directorate Identifier 2004-NM-62-AD]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747-400F Series 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 certain Boeing Model 747-400F series airplanes. This proposed AD would require initial detailed and open-hole high frequency eddy current inspections for cracking of the web, upper chord, and upper chord strap of the upper deck floor beams, and repair of any cracking. This proposed AD also would require a preventive modification of the upper deck floor beams, and repetitive inspections for cracking after accomplishing the modification. This proposed AD is prompted by reports of fatigue cracking found on the upper deck floor beam to frame attachment points. We are proposing this AD to prevent fatigue cracks in the upper chord, upper chord strap, and the web of the upper deck floor beams and resultant failure of the floor beams. Failure of a floor beam could result in damage to critical flight control cables and wire bundles that pass through the floor beam, and consequent loss of controllability of the airplane. Failure of the floor beam also could result in the failure of the adjacent fuselage frames and skin, and consequent rapid decompression of the airplane.

DATES: We must receive comments on this proposed AD by January 10, 2005.

ADDRESSES: Use one of the following addresses to submit comments on this proposed AD.

- **DOT Docket Web site:** Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.