

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-28254; Directorate Identifier 2007-NM-054-AD; Amendment 39-15065; AD 2007-11-08]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 727 Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule; request for comments.

SUMMARY: The FAA is superseding an existing airworthiness directive (AD) that applies to all Boeing Model 727 airplanes. The existing AD requires a boost pump dry bay inspection to detect leakage of fuel through an arc-through conduit, and corrective action as necessary. The existing AD also requires repetitive inspections of the in-tank fuel boost pump wiring to detect chafing of the wire insulation, evidence of electrical arcing, or arc-through of the conduit wall, and applicable corrective action; and installation of sleeving over the in-tank fuel boost pump wires as a method to protect the wiring from chafing. This new AD removes certain inspection requirements from the existing AD. This new AD adds new repetitive inspections for damage of the electrical wire and sleeve that run to the fuel boost pump through a conduit in the fuel tank, and arcing damage of the conduit and signs of fuel leakage into the conduit; applicable investigative and corrective actions; and a new repetitive engine fuel suction feed operational test. Initiation of the new inspections terminates the requirements of the existing AD. This AD results from reports of a fuel tank explosion on a Model 727-200F airplane on the ground; and of chafed wires and a damaged power cable sleeve of a fuel boost pump that were discovered during an inspection required by an existing AD on a Model 737-300 airplane. We are issuing this AD to detect and correct chafing of the fuel boost pump electrical wiring and leakage of fuel into the conduit, and to prevent electrical arcing between the wiring and the surrounding conduit, which could result in arc-through of the conduit, and consequent fire or explosion of the fuel tank.

DATES: This AD becomes effective June 6, 2007.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of June 6, 2007.

On June 28, 1999 (64 FR 33394, June 23, 1999), the Director of the Federal Register approved the incorporation by reference of Boeing Alert Service Bulletin 727-28A0126, dated May 24, 1999.

We must receive any comments on this AD by July 23, 2007.

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

Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for service information identified in this AD.

You may examine the contents of the 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, Washington, DC. This docket number is FAA-2007-28254; the directorate identifier for this docket is 2007-NM-054-AD.

FOR FURTHER INFORMATION CONTACT: Suzanne Lucier, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6438; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

Discussion

On June 15, 1999, we issued AD 99-12-52, amendment 39-11199 (64 FR 33394, June 23, 1999) (originally issued on May 24, 1999, as telegraphic AD T99-12-52). That AD applies to all Boeing Model 727 series airplanes. That AD requires a boost pump dry bay inspection to detect leakage of fuel through an arc-through conduit, and corrective action, as necessary. That AD also requires repetitive detailed inspections of the in-tank fuel boost pump wiring to detect chafing of the wire insulation, evidence of electrical arcing, or arc-through of the conduit wall on Model 727 series airplanes, and applicable corrective action; and installation of sleeving over the in-tank fuel boost pump wires as a method to protect the wiring from chafing. That AD resulted from reports of severe wear of in-tank fuel boost pump wiring, and arc-through of the surrounding conduit on two Model 727 series airplanes. The actions specified in that AD are intended to prevent fuel tank explosion resulting from arc-through of the fuel boost pump wiring conduits.

Actions Since AD Was Issued

Since we issued that AD, we received a report that a fuel tank explosion occurred on a Model 727-200F airplane on the ground. Investigation revealed evidence of arcing in the metal conduit that carries power wires from the front spar through the fuel tank to the dry bay of the 1 aft fuel boost pump. In a separate incident, we received a report from Boeing that chafed power wires and a damaged power cable sleeve of a fuel boost pump were discovered during an inspection required by AD 99-12-52 on a Model 737-300 series airplane. That inspection was done at 21,000 flight hours rather than the repetitive interval of 30,000 flight hours specified by that AD. The fuel boost pump installation on certain Model 737 airplanes is almost identical to the installation on Model 727 airplanes.

Other Relevant Rulemaking

Operators should note that we are considering issuing a separate AD to address the identified unsafe condition as it relates to Model 737 airplanes.

Relevant Service Information

We have reviewed Boeing Alert Service Bulletin 727-28A0132, dated February 22, 2007. The alert service bulletin describes procedures for doing new repetitive detailed inspections for damage of the electrical wire and sleeve that run to the fuel boost pump through a conduit in the fuel tank, and for arcing damage of, and signs of fuel leakage into, the conduit; doing a new engine fuel suction feed operational test; doing related investigative and corrective actions, as applicable; and sending inspection results and damaged parts to the manufacturer. Related investigative and corrective actions include replacing the wire sleeve with a new, smaller wire sleeve; replacing, with BMS 13-60T09C03G018 wire, any wire that is damaged or has any part number other than BMS 13-60T09C03G018 or BMS 13-60T12C03G018; doing leak testing of the conduit if signs of fuel are discovered on the wire or sleeve during any inspection; and repairing any damaged conduit or replacing it with a new conduit.

AD 99-12-52 refers to Boeing Alert Service Bulletin 727-28A0126, dated May 24, 1999, as the appropriate source of service information for accomplishment of the detailed inspection and related investigative/corrective actions; that requirement is new paragraph (i) in this AD. That service bulletin has since been revised. Revision 1, dated May 18, 2000, is essentially the same as the original and provides no new actions.

FAA's Determination and Requirements of This AD

The unsafe condition described previously is likely to exist or develop on other airplanes of the same type design. For this reason, we are issuing this AD to supersede AD 99-12-52. This new AD retains certain requirements of the existing AD. This AD also requires accomplishing the actions specified in the alert service bulletin described previously, which, when initiated, terminates certain requirements.

Explanation of Changes Made to Existing AD

We have revised the applicability of the existing AD to identify model designations as published in the most recent type certificate data sheet for the affected models.

The FAA has changed all references to a "detailed visual inspection" in the existing AD to "detailed inspection" in this action.

Interim Action

We consider this AD interim action. If final action is later identified, we might consider further rulemaking then.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD; therefore, providing notice and opportunity for public comment before the AD is issued is impracticable, and good cause exists to make this AD effective in less than 30 days.

Comments Invited

This AD is a final rule that involves requirements that affect flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to submit any relevant written data, views, or arguments regarding this AD. Send your comments to an address listed in the ADDRESSES section. Include “Docket No. FAA-2007-28254; Directorate Identifier 2007-NM-054-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the AD that might suggest a need to modify it. 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 AD. Using the search function of that Web site, 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 may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78), or you may visit <http://dms.dot.gov>.

Examining the Docket

You may 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 Docket Management System receives them.

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 have 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 the 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 AD and placed it in the AD docket. 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, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends part 39 of the Federal Aviation Regulations (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 Federal Aviation Administration (FAA) amends § 39.13 by removing amendment 39-11199 (64 FR 33394, June 23, 1999) and adding the following new airworthiness directive (AD):



2007-11-08 Boeing: Docket No. FAA-2007-28254; Directorate Identifier 2007-NM-054-AD; Amendment 39-15065.

Effective Date

- (a) This AD becomes effective June 6, 2007.

Affected ADs

- (b) This AD supersedes AD 99-12-52.

Applicability

- (c) This AD applies to all Boeing Model 727, 727C, 727-100, 727 -100C, 727-200, and 727-200F series airplanes, certificated in any category.

Unsafe Condition

(d) This AD results from reports of a fuel tank explosion on a Model 727-200F airplane on the ground, and chafed wires and a damaged power cable sleeve of a fuel boost pump that were discovered during an inspection required by an existing AD on a Model 737-300 airplane, which has a fuel boost pump installation that is almost identical to the installation on Model 727 airplanes. We are issuing this AD to detect and correct chafing of the fuel boost pump electrical wiring and leakage of fuel into the conduit, and to prevent electrical arcing between the wiring and the surrounding conduit, which could result in arc-through of the conduit, and consequent fire or explosion of the fuel tank.

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.

Restatement of Certain Requirements of AD 99-12-52

- (f) For airplanes with 50,000 or more total flight hours as of June 28, 1999 (the effective date of AD 99-12-52): Within 20 days after June 28, 1999, accomplish the requirements of paragraph (i) of this AD.

- (g) For airplanes with less than 50,000 total flight hours, but more than 30,000 total flight hours, as of June 28, 1999: Within 30 days after June 28, 1999, accomplish the requirements of paragraph (i) of this AD.

- (h) For airplanes with 30,000 total flight hours or less, as of June 28, 1999: Within 90 days after June 28, 1999, accomplish the requirements of paragraph (i) of this AD.

Detailed Inspection, Corrective Action, and Installation

(i) Perform a detailed inspection of the in-tank fuel boost pump wire bundles, and applicable corrective actions; and, except as provided in paragraph (j) of this AD, install sleeving over the wire bundles; in accordance with Boeing Alert Service Bulletin 727-28A0126, dated May 24, 1999; Boeing Service Bulletin 727-28A0126, Revision 1, dated May 18, 2000; or Boeing Alert Service Bulletin 727-28A0132, dated February 22, 2007.

Note 1: 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."

Installation: Possible Deferral

(j) Installation of sleeving over the wire bundles, as required by paragraph (i) of this AD, may be deferred if, within 18 months or 6,000 flight hours, whichever occurs first, after accomplishment of the inspection and applicable corrective actions required by paragraph (i), the following actions are accomplished: Perform a detailed inspection of the in-tank fuel boost pump wire bundles, and applicable corrective actions; and install sleeving over the wire bundles; in accordance with Boeing Alert Service Bulletin 727-28A0126, dated May 24, 1999, or Boeing Service Bulletin 727-28A0126, Revision 1, dated May 18, 2000; or Boeing Alert Service Bulletin 727-28A0132, dated February 22, 2007.

Repetitive Inspections and Corrective Actions

(k) Repeat the detailed inspection and applicable corrective actions required by paragraphs (i) and (j) of this AD at intervals not to exceed 30,000 flight hours, until the initial inspection, applicable corrective actions, and engine fuel suction feed operational test required by paragraph (l) of this AD have been done.

New Requirements of This AD

Inspection, Test, and Related Investigative and Corrective Actions

(l) For all airplanes: Within 120 days after the effective date of this AD or 5,000 flight hours after the last inspection or corrective action done before the effective date of this AD as required by paragraph (i), (j), or (k), as applicable, of this AD, whichever occurs later, do a detailed inspection for damage of the sleeve and electrical wire of the fuel boost pump, and do an engine fuel suction feed operational test; and, before further flight, do related investigative and corrective actions, as applicable; by doing all applicable actions in and in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 727-28A0132, dated February 22, 2007. Repeat the detailed inspection and engine fuel suction feed operational test thereafter at intervals not to exceed 15,000 flight cycles. Accomplishment of the initial inspection, applicable corrective actions, and engine fuel suction feed operational test of this paragraph terminates the requirements of paragraphs (i), (j), and (k) of this AD.

Inspection Report and Disposition of Damaged Parts

(m) At the applicable time(s) specified in paragraph (m)(1) or (m)(2) of this AD: Submit a report of the findings (both positive and negative) of any inspection required by this AD and send any

damaged parts to the manufacturer, as described in Boeing Alert Service Bulletin 727-28A0132, dated February 22, 2007. The report must include the information specified in Appendix A of the alert service bulletin. Under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), the Office of Management and Budget (OMB) has approved the information collection requirements contained in this AD and has assigned OMB Control Number 2120-0056.

(1) For any inspection done after the effective date of this AD: Submit the report within 30 days after the inspection.

(2) For any inspection done before the effective date of this AD: Submit the report within 30 days after the effective date of this AD.

Alternative Methods of Compliance (AMOCs)

(n)(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(3) AMOCs approved previously in accordance with AD 99-12-52 are approved as AMOCs for the corresponding provisions of this AD.

Material Incorporated by Reference

(o) You must use applicable Boeing service bulletins specified in Table 1 of this AD to perform the actions that are required by this AD, unless the AD specifies otherwise.

Table 1 – All Material Incorporated by Reference

Boeing Service Information	Revision Level	Date
Alert Service Bulletin 727-28A0126	Original	May 24, 1999
Alert Service Bulletin 727-28A0132	Original	February 22, 2007
Service Bulletin 727-28A0126	1	May 18, 2000

(1) The Director of the Federal Register approved the incorporation by reference of Boeing Alert Service Bulletin 727-28A0132, dated February 22, 2007; and Boeing Service Bulletin 727-28A0126, Revision 1, dated May 18, 2000; in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(2) On June 28, 1999 (64 FR 33394, June 23, 1999), the Director of the Federal Register approved the incorporation by reference of Boeing Alert Service Bulletin 727-28A0126, dated May 24, 1999.

(3) Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for a copy of this service information. You may review copies at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on May 1, 2007.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. E7-9799 Filed 5-21-07; 8:45 am]