

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [64 FR 33394 No. 120 06/23/99]

[Docket No. 99-NM-121-AD; Amendment 39-11199; AD 99-12-52]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 727 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This document publishes in the **Federal Register** an amendment adopting Airworthiness Directive (AD) T99-12-52 that was sent previously to all known U.S. owners and operators of all Boeing Model 727 series airplanes by individual telegrams. This AD requires a boost pump dry bay inspection to detect leakage of fuel through an arced-through conduit, and corrective action, as necessary. This AD also requires repetitive detailed visual 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. This action is prompted by 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 by this AD are intended to prevent fuel tank explosion resulting from arc-through of the fuel boost pump wiring conduits.

DATES: Effective June 28, 1999, to all persons except those persons to whom it was made immediately effective by telegraphic AD T99-12-52, issued May 24, 1999, which contained the requirements of this amendment.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of June 28, 1999.

Comments for inclusion in the Rules Docket must be received on or before August 23, 1999.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 99-NM-121-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056.

The applicable service information may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton,

Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Jon Regimbal, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, S.W., Renton, Washington 98055-4056; telephone (425) 227-2687; fax (425) 227-1181.

SUPPLEMENTARY INFORMATION:

Issuance of Telegraphic AD T99-12-51

On May 21, 1999, the FAA issued telegraphic AD T99-12-51, which is applicable to all Boeing Model 727 series airplanes, to require a boost pump dry bay inspection to detect leakage of fuel through an arced-through conduit, and corrective action, as necessary.

Telegraphic AD T99-12-51 was prompted by reports of severe wear of the in-tank fuel boost pump wiring, and arc-through of the surrounding conduit on two Model 727 series airplanes that had accumulated in excess of 50,000 total flight hours. The wear and arc-through condition of the conduit surrounding the in-tank fuel boost pump wiring has been attributed to chafing between the in-tank fuel boost pump wiring and the wall of the surrounding conduit, exposing the electrical conductor of the boost pump power wire and placing it in contact with the aluminum wall of the conduit, resulting in arc-through of the conduit wall. Arc-through of the conduit presents an ignition source inside the fuel tank. In addition, the resultant hole in the conduit provides a path for fuel to leak from the fuel tank. The actions required by telegraphic AD T99-12-51 were intended to detect and correct fuel boost pump wiring conduits which have experienced severe chafing and electrical arcing, resulting in burn-through of the conduit. This condition, if not corrected, could result in ignition of fuel vapors in a fuel tank, and a fuel tank explosion.

Issuance of Telegraphic AD T99-12-52

On May 24, 1999, the FAA issued telegraphic AD T99-12-52, applicable to all Model 727 series airplanes, which superseded telegraphic AD T99-12-51 to continue to require a boost pump dry bay inspection to detect leakage of fuel through an arced-through conduit, and corrective action, as necessary.

Telegraphic AD T99-12-52 adds a requirement for repetitive detailed visual 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. In addition, this telegraphic AD requires installation of sleeving over the in-tank fuel boost pump wires as a method to protect the wiring from chafing. If the initial inspection of the wiring is performed before the inspection of the fuel boost pump dry bay for fuel leaks, the inspection of the fuel boost pump dry bay for fuel leaks is not required.

Telegraphic AD T99-12-52 was prompted by the same reports that are described in the Summary of this AD and in telegraphic AD T99-12-51.

Explanation of Relevant Service Information

The FAA has reviewed and approved Boeing Alert Service Bulletin 727-28A0126, dated May 24, 1999, which describes procedures for performing a boost pump dry bay inspection to detect leakage of fuel through an arced-through conduit. That alert service bulletin also describes procedures for performing detailed inspections of the in-tank fuel boost pump wire bundles, installing wire bundle sleeving, replacing the conduit if fuel leakage is detected, and performing applicable corrective actions. In addition, the alert service bulletin describes procedures for performing leak checks of the replaced conduit and installing the new fuel boost pump wire.

Explanation of Requirements of the Rule

Since the unsafe condition described is likely to exist or develop on other airplanes of the same type design, the FAA issued telegraphic AD T99-12-52 to prevent fuel tank explosion resulting from arc-through of the fuel boost pump wiring conduits. This AD supersedes telegraphic AD T99-12-51 to continue to require a boost pump dry bay inspection to detect leakage of fuel through an arced-through conduit, and corrective action, as necessary. This AD adds a requirement for repetitive detailed visual 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. In addition, this AD requires installation of sleeving over the in-tank fuel boost pump wires as a method to protect the wiring from chafing. If the initial inspection of the wiring is performed before the inspection of the boost pump dry bay for fuel leaks, the inspection of the fuel boost pump dry bay for fuel leaks is not required.

Except as described in the "Differences" paragraph below, the actions are required to be accomplished in accordance with Boeing All Operator Message (AOM) M-7200-99-04035, dated May 21, 1999, (for the boost pump dry bay inspection), and Boeing Alert Service Bulletin 727-28A0126, dated May 24, 1999, (for the boost pump dry bay inspection and the wiring inspection).

Differences Between this AD and the Service Information

Although the Boeing AOM describes general procedures for inspecting the fuel boost pump wire bundles and installing new fuel boost pump wire bundles and sleeving, the FAA considers that use of the more specific instructions included in Boeing Alert Service Bulletin 727-28A0126, dated May 24, 1999, is necessary to ensure that the wire inspections are performed properly.

However, if the wire bundle inspection or wire bundle replacement has been accomplished in accordance with the Boeing AOM, these actions may provide the basis for an alternative method of compliance as provided in paragraph (l) of this AD.

Since it was found that immediate corrective action was required, notice and opportunity for prior public comment thereon were impracticable and contrary to the public interest, and good cause existed to make the AD effective immediately by individual telegrams issued on May 24, 1999, to all known U.S. owners and operators of all Model 727 series airplanes. These conditions still exist, and the AD is hereby published in the **Federal Register** as an

amendment to section 39.13 of the Federal Aviation Regulations (14 CFR 39.13) to make it effective to all persons.

Explanation of Changes Made to the Final Rule

The FAA has determined that reference to a certain paragraph that was included in the "Differences" paragraph and in NOTE 1 of Telegraph AD T99-12-52 is incorrect. The FAA has revised this AD to correctly reference paragraph (l) instead of paragraph (e).

Interim Action

In the preamble to AD T99-12-51, the FAA indicated that the actions required by that AD were considered "interim action" and that further rulemaking action was being considered. The FAA now has determined that further rulemaking action is indeed necessary, and this AD follows from that determination.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified under the caption "ADDRESSES." All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 99-NM-121-AD." The postcard will be date stamped and returned to the commenter.

Regulatory Impact

The regulations adopted herein will not have substantial direct effects 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. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration 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. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460

U.S. Department
of Transportation
**Federal Aviation
Administration**

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, Part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference FAR Subpart 39.3).

99-12-52 BOEING: Amendment 39-11199. Docket 99-NM-121-AD. Supersedes Telegraphic AD T99-12-51.

Applicability: All Model 727 series airplanes, certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (1) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent fuel tank explosion resulting from arc-through of the fuel boost pump wiring conduits, accomplish the following:

(a) For airplanes with 50,000 or more total flight hours as of the date of receipt of AD T99-12-51, within 5 days after the effective date of this AD, accomplish the requirements of paragraph (c) of this AD.

(b) For airplanes with less than 50,000 total flight hours as of the date of receipt of AD T99-12-51, prior to the accumulation of 30,000 total flight hours, or within 10 days after receipt of this AD, whichever occurs later, accomplish the requirements of paragraph (c) of this AD.

Initial Inspection and Corrective Action

(c) Except as provided in paragraphs (d) and (e) of this AD, perform a boost pump dry bay inspection and applicable follow-on corrective actions, in accordance with steps 1 through 6 of the "Boost Pump Dry Bay Inspection," specified in Boeing All Operator

Message M-7200-99-04035, dated May 21, 1999, or in accordance with Boeing Alert Service Bulletin 727-28A0126, dated May 24, 1999.

(d) For airplanes on which the actions specified in step 5-E-3 of Boeing All Operator Message M-7200-99-04035, dated May 21, 1999, are accomplished, the fuel tank in which the conduit has been replaced must be refueled prior to accomplishing step 6.

(e) Accomplishment of the requirements of paragraph (c) of this AD is not required if the requirements of paragraph (i) of this AD are accomplished within the times specified in paragraph (a) or (b) of this AD, as applicable.

New Requirements of this AD:

(f) For airplanes with 50,000 or more total flight hours as of the effective date of this AD, within 20 days after the effective date of this AD, 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 the effective date of this AD, within 30 days after the effective date of this AD, accomplish the requirements of paragraph (i) of this AD.

(h) For airplanes with 30,000 total flight hours or fewer, as of the effective date of this AD, within 90 days after the effective date of this AD, accomplish the requirements of paragraph (i) of this AD.

Detailed Visual Inspection, Corrective Action, and Installation

(i) Perform a detailed visual 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.

NOTE 2: For the purposes of this AD, a detailed visual inspection is defined as an intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirrors, magnifying lenses, etc. may be used. Surface cleaning and elaborate access 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 visual 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.

Repetitive Inspections and Corrective Actions

(k) Repeat the detailed visual inspection and applicable corrective actions required by paragraphs (i) and (j) of this AD at intervals not to exceed 30,000 flight hours.

Alternative Methods of Compliance

(l) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(m) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(n) The actions shall be done in accordance with Boeing All Operator Message (AOM) M-7200-99-04035, dated May 21, 1999, or Boeing Alert Service Bulletin 727-28A0126, dated May 24, 1999, as applicable. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(o) This amendment becomes effective on June 28, 1999, to all persons except those persons to whom it was made immediately effective by telegraphic AD T99-12-52, issued on May 24, 1999, which contained the requirements of this amendment.

FOR FURTHER INFORMATION CONTACT:

Jon Regimbal, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, S.W., Renton, Washington 98055-4056; telephone (425) 227-2687; fax (425) 227-1181.