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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-20799; Directorate Identifier 2004-NM-264-AD; Amendment 39-14212; AD 2005-16-07]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 727 Airplanes

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

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Boeing Model 727 airplanes. This AD requires determining whether any float switches are installed in the fuel tanks, and corrective actions if necessary. This AD results from reports of contamination of the fueling float switch by moisture or fuel, and chafing of the float switch wiring against the fuel tank conduit. We are issuing this AD to prevent such contamination and chafing, which could present an ignition source inside the fuel tank that could cause a fire or explosion.

DATES: Effective September 13, 2005.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of September 13, 2005.

ADDRESSES: You may examine 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., Nassif Building, Room PL-401, Washington, DC.

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

FOR FURTHER INFORMATION CONTACT: Sulmo Mariano, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6501; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

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 street address stated in the ADDRESSES section.

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to all Boeing Model 727 airplanes. That NPRM was published in the Federal Register on April 4, 2005 (70 FR 16979). That NPRM proposed to require determining whether any float switches are installed in the fuel tanks, and corrective actions if necessary.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comments that have been received on the NPRM.

Support for Proposed AD

One commenter, the airplane manufacturer, concurs with the content of the proposed AD.

Request To Change Applicability

One commenter asks that the applicability specified in the proposed AD be limited to Boeing Model 727 airplanes that have float switches installed. The commenter states that the effectivity of the proposed AD will encompass all Boeing Model 727-100 airplanes operated by them, even though Model 727-100 airplanes are not included in the effectivity specified in the service bulletin referenced in the proposed AD. The commenter adds that the effectivity in the referenced service bulletin is limited to airplanes with factory installed auxiliary fuel tanks; the design for Model 727-100 airplanes does not include float switches in the main fuel tanks because those airplanes utilize the Volumetric Top-Off system instead. The commenter realizes that we are concerned that the effectivity of the referenced service bulletin may not encompass all possible scenarios involving the subject float switches, as stated in the Supplementary Information section of the proposed AD. In consideration of this concern, the commenter notes that the effectivity of the proposed AD can be reduced to include only airplanes where the design, as delivered or modified, utilizes float switches in the airplane fuel tanks. The commenter adds that, the requested change has no effect on safety, but does remove the burden of showing compliance to a known non-applicable configuration.

We do not agree with the commenter. The planning information specified in the referenced service bulletin identifies only Boeing Model 727-100 airplanes delivered with two auxiliary fuel tanks installed. However, the effectivity specified in the service bulletin identifies all Boeing Model 727-100 and -200 airplanes with active Boeing fueling float switch shutoff systems installed. We point out that the subject of this AD is the float switch itself—regardless of the airplane model on which it is installed. To help operators determine if a particular airplane is subject to this AD, we have included all airplane models on which the float switch may be installed in the applicability of this AD. However, operators must determine if the float switch is installed on their airplanes. As specified in the AD, this determination can be made by a review of airplane maintenance records, instead of an inspection of the fuel tanks; such a review would not result in an undue burden to operators. We have made no change to the final rule in this regard.

Explanation of Change to Applicability

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

Conclusion

We have carefully reviewed the available data, including the comments that have been received, and determined that air safety and the public interest require adopting the AD with the change described previously. This change will neither increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

There are about 1,300 airplanes of the affected design in the worldwide fleet. This AD affects about 800 airplanes of U.S. registry.

The inspections (for presence and model of float switch) take about 1 work hour, at an average labor rate of \$65 per hour. Based on these figures, the estimated cost of the inspections for U.S. operators is \$52,000, or \$65 per airplane.

The following table provides the estimated costs for U.S. operators to replace the float switches, if necessary. We estimate that about 162 airplanes may require parts replacement.

ESTIMATED COSTS						
Airplane group	Airplane model	Number of auxiliary fuel tanks	Work hours	Average hourly labor rate	Parts	Cost per airplane
1	727-200	0	27	\$65	\$4,174	\$5,929
2	727-200	1	9	65	1,542	2,127
3	727-200	2	14	65	3,108	4,018
4	727-200	3	18	65	4,626	5,796
5	727-200	4	23	65	6,168	7,663
6	727-100	2	14	65	3,079	3,989

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 this AD:

(1) Is not a "significant regulatory action" under Executive Order 12866;

(2) Is not a "significant rule" under 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 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 adding the following new airworthiness directive (AD):

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

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

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) 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 14 CFR part 39, subpart 39.3).

2005-16-07 Boeing: Amendment 39-14212. Docket No. FAA-2005-20799; Directorate Identifier 2004-NM-264-AD.

Effective Date

- (a) This AD becomes effective September 13, 2005.

Affected ADs

- (b) None.

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 was prompted by reports of contamination of the fueling float switch by moisture or fuel, and chafing of the float switch wiring against the fuel tank conduit. We are issuing this AD to prevent such contamination and chafing, which could present an ignition source inside the fuel tank that could cause a fire or explosion.

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.

Inspection for Float Switches

- (f) Within 48 months after the effective date of this AD, inspect the wing and auxiliary fuel tanks to determine if any float switches are present. Instead of an inspection of the fuel tanks, a review of airplane maintenance records is acceptable if the presence of any float switch can be conclusively determined from that review.

(1) If no float switches are present: No further work is required by this paragraph.

(2) If any float switch is present: Before further flight, inspect to identify the float switch models.

Instead of an inspection of the fuel tanks, a review of airplane maintenance records is acceptable if the identity of the float switch can be conclusively determined from that review.

(i) If a float switch other than an Ametek Model F8300-146 float switch is installed: Before further flight, install a liner system inside the float switch electrical cable conduit in the fuel tanks by doing all applicable actions specified in the Accomplishment Instructions of Boeing Alert Service Bulletin 727-28A0127, dated August 26, 2004.

(ii) If any Ametek Model F8300-146 float switch is installed: Before further flight, replace it with a new switch and install a liner system inside the float switch electrical cable conduit in the fuel tanks, by doing all applicable actions specified in the Accomplishment Instructions of Boeing Alert Service Bulletin 727-28A0127, dated August 26, 2004.

Note 1: Boeing Alert Service Bulletin 727-28A0127 segregates the work into nine work packages for the six fuel tank configurations identified in the service bulletin. The work packages do not have to be completed sequentially. Each work package can be done independently or simultaneously. However, all work packages, as applicable for each fuel tank configuration, must be done to complete the requirements of this AD.

Parts Installation

(g) As of the effective date of this AD, no person may install an Ametek Model F8300-146 float switch in a fuel tank on any airplane.

Alternative Methods of Compliance (AMOCs)

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

Material Incorporated by Reference

(i) You must use Boeing Alert Service Bulletin 727-28A0127, dated August 26, 2004, to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of this document in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. 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 Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., Room PL-401, Nassif Building, Washington, DC; on the internet at <http://dms.dot.gov>; or at the National Archives and Records Administration (NARA). For information on the availability of this material at the NARA, call (202) 741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on July 29, 2005.

Kevin M. Mullin,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 05-15587 Filed 8-8-05; 8:45 am]

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