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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-20355; Directorate Identifier 2004-NM-198-AD; Amendment 39-14177; AD 2005-13-40]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 727 Airplanes, Equipped With an Auxiliary Fuel Tank Having a Fuel Pump Installed

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

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for Boeing Model 727 airplanes equipped with an auxiliary fuel tank having a fuel pump installed. This AD requires revising the airplane flight manual to include limitations on operating the fuel pumps for the auxiliary fuel tank. This AD is prompted by a design review of the fuel pump installation, which revealed a potential unsafe condition related to the auxiliary fuel tank(s). We are issuing this AD to prevent dry operation of the fuel pumps for the auxiliary fuel tank, which could create a potential ignition source inside the auxiliary fuel tank that could result in a fire or explosion of the auxiliary fuel tank.

DATES: This AD becomes effective August 4, 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.

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 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. This docket number is FAA-2005-20355; the directorate identifier for this docket is 2004-NM-198-AD.

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to Boeing Model 727 airplanes equipped with an auxiliary fuel tank having a fuel pump installed. That NPRM was published in the Federal Register on February 15, 2005 (70 FR 7695). That NPRM proposed to require revising the airplane flight manual (AFM) to include limitations on operating the fuel pumps for the auxiliary fuel tank.

Comments

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

Support for the Proposed AD

One commenter supports the proposed AD.

Request To Withdraw Proposed AD

One commenter notes that Revision 47 to the Boeing 727 AFM, dated May 17, 2004, includes procedural changes that are similar to the information that the proposed AD would require be inserted into the Limitations section of the AFM. The commenter feels that the requirements of the proposed AD are adequately addressed by incorporating Revision 47 to the AFM and that it would be more appropriate for the new information to be placed in the Normal Procedures section of the AFM rather than the Limitations section.

We do not agree. The wording in paragraph (f) of this AD is not identical to that in Revision 47 to the Boeing 727 AFM. Revision 47 contains a note that would allow the auxiliary tank pump(s) to remain "on" in certain situations. We find that the auxiliary tank pumps must be switched off immediately when the respective auxiliary tank fuel pump low pressure light illuminates. Thus, to ensure that the unsafe condition is adequately addressed, we find it necessary to require that the information specified in paragraph (f) of this AD be included in the Limitations section of the AFM, as proposed. Further, the limitation section of the AFM is the only section that is mandatory for operators. The unsafe condition which this AD is intended to correct is of such significance to necessitate mandating the procedure. We have not changed the final rule in this regard.

Request to Clarify Wording of AFM Revision

The same commenter requests that we revise paragraph (f) to be consistent with similar wording in Revision 47 to the Boeing 727 AFM. The commenter notes that paragraph (f) of the proposed AD states "Auxiliary tank fuel pump switches must not be positioned 'ON* * *,'" and "Auxiliary tank(s) fuel pumps must not be 'ON* * *.'" The commenter points out that the wording for the same instructions in Revision 47 of the AFM states that the "pumps must be off."

We agree. We find that the wording referenced by the commenter is clearer, though the meaning is the same. We have revised paragraph (f) of this AD accordingly.

Request To Clarify Intent of Proposed AD

The same commenter states that is unclear if the intent of the proposed AD is to delete Note [1] in Revision 47 of the AFM, which states:

"If an auxiliary tank fuel pump LOW PRESSURE light illuminates during takeoff or climb, the auxiliary tank pump(s) may remain on until the climb attitude is reduced and the light(s) extinguishes or workload allows for pump(s) to be positioned 'OFF.' "

The commenter notes that this statement qualifies the preceding statement in Revision 47 of the AFM: "Each auxiliary tank fuel pump switch must be positioned 'OFF' without delay when the respective auxiliary tank fuel pump low pressure light illuminates." The commenter opines that this note should be retained as it does have value in certain situations. The commenter recommends that, if the FAA intends to delete the note, the proposed wording should be revised to clearly state this intent.

We agree with the commenter's request to clarify our intent. Our intent was that this qualifying note should not be included in the AFM revision required by paragraph (f) of this AD. As stated previously, we do not agree with the note in Revision 47 to which the commenter refers because we have determined that, to prevent dry operation of the fuel pumps for the auxiliary fuel tank, the affected auxiliary tank pumps must be switched off without delay when the auxiliary tank fuel pump low pressure light illuminates. We have revised paragraph (f) of this AD to clarify that we intend no exceptions to the requirement to switch off each auxiliary tank fuel pump as soon as the applicable low pressure light illuminates.

Explanation of Additional Editorial Change

We have revised the second paragraph of the AFM revision specified in paragraph (f) of this AD to read, "When established in a level attitude at cruise, if the auxiliary tank(s) contain usable fuel and the auxiliary tank(s) pump switches are 'OFF,' the auxiliary tank(s) pump switches should be positioned 'ON' again." The word "pump" was inadvertently omitted in this statement in the proposed AD.

Conclusion

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

Costs of Compliance

There are about 300 airplanes of the affected design in the worldwide fleet. This AD will affect about 200 airplanes of U.S. registry. The AFM revision will take about 1 work hour per airplane, at an average labor rate of \$65 per work hour. Based on these figures, the estimated cost of the AD for U.S. operators is \$13,000, or \$65 per airplane.

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. 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.

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 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).

2005-13-40 Boeing: Amendment 39-14177. Docket No. FAA-2005-20355; Directorate Identifier 2004-NM-198-AD.

Effective Date

- (a) This AD becomes effective August 4, 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; certificated in any category; equipped with an auxiliary fuel tank having a fuel pump installed.

Unsafe Condition

(d) This AD was prompted by a design review of the fuel pump installation, which revealed a potential unsafe condition related to the auxiliary fuel tank(s). We are issuing this AD to prevent dry operation of the fuel pumps for the auxiliary fuel tank, which could create a potential ignition source inside the auxiliary fuel tank that could result in a fire or explosion of the auxiliary 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.

Airplane Flight Manual (AFM) Revision

(f) Within 30 days after the effective date of this AD, revise the Limitations section of the Boeing 727 AFM to contain the following information. This may be done by inserting a copy of this AD in the AFM.

"Auxiliary Tank Fuel Pumps

Auxiliary tank fuel pump switches must be positioned 'OFF' unless the auxiliary tank(s) contain fuel. Auxiliary tank(s) fuel pumps must be 'OFF' unless personnel are available in the flight deck to monitor low pressure lights.

When established in a level attitude at cruise, if the auxiliary tank(s) contain usable fuel and the auxiliary tank(s) pump switches are 'OFF,' the auxiliary tank(s) pump switches should be positioned 'ON' again.

Each auxiliary tank fuel pump switch must be positioned 'OFF' without delay, for all conditions including takeoff and climb, when the respective auxiliary tank fuel pump low pressure light illuminates."

Note 1: When text identical to that in paragraph (f) of this AD has been included in the general revisions of the AFM, the general revisions may be inserted into the AFM, and the copy of this AD may be removed from the AFM.

Alternative Methods of Compliance (AMOCs)

(g) 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

(h) None.

Issued in Renton, Washington, on June 21, 2005.

Ali Bahrami,
Manager, Transport Airplane Directorate, Aircraft Certification Service.
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