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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-22558; Directorate Identifier 2005-NM-107-AD; Amendment 39-14491; AD 2006-04-10]

RIN 2120-AA64

Airworthiness Directives; Cessna Model 500, 550, S550, 560, 560XL, and 750 Airplanes

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

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Cessna Model 500, 550, S550, 560, 560XL, and 750 airplanes. This AD requires installing identification sleeves on the wires for the positive and negative terminal studs of the engine and/or auxiliary power unit (APU) fire extinguishing bottles, as applicable, and re-connecting the wires to the correct terminal studs. This AD results from a report of mis-wired fire extinguishing bottles. We are issuing this AD to ensure that the fire extinguishing bottles are activated in the event of an engine or APU fire, and that flammable fluids are not supplied during a fire, which could result in an unextinguished fire in the nacelle or APU.

DATES: This AD becomes effective March 24, 2006.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of March 24, 2006.

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 Cessna Aircraft Co., P.O. Box 7706, Wichita, Kansas 67277, for service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: Robert D. Adamson, Aerospace Engineer, Systems and Propulsion Branch, ACE-116W, FAA, Wichita Aircraft Certification Office, 1801 Airport Road, room 100, Mid-Continent Airport, Wichita, Kansas 67209; telephone (316) 946-4145; fax (316) 946-4107.

SUPPLEMENTARY INFORMATION:

Examining the Docket

You may examine the airworthiness directive (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 certain Cessna Model 500, 550, S550, 560, 560XL, and 750 airplanes. That NPRM was published in the Federal Register on September 30, 2005 (70 FR 57213). That NPRM proposed to require installing identification sleeves on the wires for the positive and negative terminal studs of the engine and/or auxiliary power unit (APU) fire extinguishing bottles, as applicable, and re-connecting the wires to the correct terminal studs.

Comments

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

Request To Use Parts Other Than Factory Kit

The commenter sees the need for the proposed AD, but does not like the fact that it is tied to a factory service bulletin. The commenter states that the kits specified in the service bulletin that are necessary to do the actions in the NPRM are often out of stock at the manufacturer. The commenter further points out that the actions in the NPRM can be accomplished without waiting for the kit because the actions can be done using standard items and practices in the field. In addition, the commenter states that the kits are much more costly than the estimate provided in the NPRM.

We infer that the commenter is requesting confirmation that the factory-provided kits are available for all affected airplanes to accomplish the required actions, and that the kits will not be more costly than stated in the NPRM. The manufacturer has assured us that the kits are available and that the parts costs cited in the NPRM are correct. The manufacturer also noted that there is no cost for kits if the affected airplane is within its five-year warranty period. If the commenter has difficulty getting a kit or kits, or wishes to use standard items and practices in the field, the commenter can apply for an alternative method of compliance in accordance with the procedures in paragraph (j) of this AD.

We have not changed the AD in this regard.

Request To Correct Incorrect Statement Regarding Shutoff Valves

Another commenter supports the need for the proposed AD, but states that the "Discussion" section incorrectly indicates that the mis-wiring will cause the shutoff valves for the main engine fuel and hydraulic firewall to open. The commenter suggests that we delete this statement. The commenter explains that the valves are motor-operated and remain in the last position when power is absent. They close in less than one second when the illuminated engine fire light/switch is pressed, which also arms the circuits for the fire extinguishing bottles, but does not apply power to the fire extinguishing bottles. The commenter states that if the fire extinguishing bottles are mis-wired, the valves would stay closed upon subsequent activation of the fire extinguishing bottle discharge switch

and tripping of the circuit breaker. The commenter further states that the valve-closed annunciation would go off when the circuit breaker tripped.

We disagree with the commenter. The tripped circuit breaker removes power from the fuel and hydraulic shutoff valves and the associated cockpit annunciations, except for the Model 750 APU installation. The fuel and hydraulic shutoff valves are powered closed from a normally open state. Cessna has tested the fuel and hydraulic shutoff valves and found that these valves may not close before the circuit breaker trips and removes power from the valve. Testing also showed that the time required before the circuit breaker trips varies from airplane to airplane. When power is removed, the valves could be in any position ranging from fully opened to fully closed. Therefore, if there is a fire, flammable fluids could continue to be supplied to the fire. As a result of this time variation, we included this condition in the Discussion section of the proposed AD. In addition, the Discussion section of the preamble does not reappear in the final rule. We have not changed the AD in this regard.

Conclusion

We have carefully reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD as proposed.

Costs of Compliance

There are about 2,801 airplanes of the affected design in the worldwide fleet, including about 2,369 airplanes of the affected design of U.S. Registry. The following table provides the estimated costs for U.S. operators to comply with this AD.

Estimated Costs

Modification for Cessna Model—	Work hours	Average labor rate per hour	Parts	Cost per airplane	Number of U.S.-registered airplanes	Fleet cost
500, 550, S550, and 560 airplanes	3	\$65	\$50	\$245	1,827	\$447,615
560XL airplanes	4	65	100	360	331	119,160
750 airplanes	2	65	25	155	211	32,705

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**

www.faa.gov/aircraft/safety/alerts/

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).

2006-04-10 Cessna Aircraft Company: Amendment 39-14491. Docket No. FAA-2005-22558; Directorate Identifier 2005-NM-107-AD.

Effective Date

- (a) This AD becomes effective March 24, 2006.

Affected ADs

- (b) None.

Applicability

- (c) This AD applies to Cessna Model 500, 550, S550, 560, 560XL, and 750 airplanes, certificated in any category; as identified in the service bulletins in Table 1 of this AD.

Table 1.—Cessna Service Bulletins

Cessna service bulletin	Revision	Date	Cessna model
SB500-26-02	Original	April 1, 2005	500 airplanes.
SB550-26-05	Original	April 1, 2005	550 airplanes.
SB560-26-01	Original	April 1, 2005	560 airplanes.
SB560XL-26-02	1	December 22, 2004	560XL airplanes.
SB750-26-05	Original	November 24, 2004	750 airplanes.
SBS550-26-02	Original	April 1, 2005	S550 airplanes.

Unsafe Condition

- (d) This AD results from a report of mis-wired fire extinguishing bottles. We are issuing this AD to ensure that the fire extinguishing bottles are activated in the event of an engine or auxiliary power unit (APU) fire, and that flammable fluids are not supplied during a fire, which could result in an unextinguished fire in the nacelle or APU.

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.

Installation

(f) Within 100 flight hours or 60 days after the effective date of this AD, whichever occurs first: Install identification sleeves on the wires for the positive and negative terminal studs of the applicable fire extinguishing bottles identified in paragraphs (f)(1), (f)(2), and (f)(3) of this AD; re-connect the wires to the correct studs; test the connection; and re-connect the wires again as applicable until the connection tests correctly. Do all actions in accordance with the Accomplishment Instructions of the applicable service bulletin identified in Table 1 of this AD.

- (1) For Cessna Model 500, 550, S550, and 560 airplanes: The engine fire extinguishing bottles.
- (2) For Cessna Model 560XL airplanes: The engine and the APU fire extinguishing bottles.
- (3) For Cessna Model 750 airplanes: The APU fire extinguishing bottle.

No Reporting Requirement

(g) Although the Accomplishment Instructions of the service bulletins identified in Table 1 of this AD describe procedures for submitting a maintenance transaction report to the manufacturer, this AD does not require that action.

Actions Accomplished in Accordance With Earlier Revision of Service Bulletin

(h) Actions done before the effective date of this AD in accordance with the Accomplishment Instructions of Cessna Service Bulletin SB560XL-26-02, dated November 22, 2004, are acceptable for compliance with the corresponding action in this AD.

Parts Installation

(i) After the effective date of this AD, no person may install on any airplane a fire-extinguishing bottle unless identification sleeves on the wires for the positive and negative terminal studs have been installed in accordance with paragraph (f) of this AD.

Alternative Methods of Compliance (AMOCs)

(j)(1) The Manager, Wichita 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) Before using any AMOC approved in accordance with § 39.19 on any airplane to which the AMOC applies, notify the appropriate principal inspector in the FAA Flight Standards Certificate Holding District Office.

Material Incorporated by Reference

(k) You must use the service information listed in Table 2 of this AD 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 these documents in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Cessna Aircraft Co., P.O. Box 7706, Wichita, Kansas 67277, 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.

Table 2.–Material Incorporated by Reference

Cessna service bulletin	Revision level	Date
SB500–26–02, including Service Bulletin Supplemental Data	Original	April 1, 2005.
SB550–26–05, including Service Bulletin Supplemental Data	Original	April 1, 2005.
SB560–26–01, including Service Bulletin Supplemental Data	Original	April 1, 2005.
SB560XL–26–02, including Service Bulletin Supplemental Data, dated November 22, 2004, and excluding Attachment.	1	December 22, 2004.
SB750–26–05, including Service Bulletin Supplemental Data	Original	November 24, 2004.
SBS550–26–02, including Service Bulletin Supplemental Data	Original	April 1, 2005.

Issued in Renton, Washington, on February 7, 2006.

Kalene C. Yanamura,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

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