



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2017-0418; Directorate Identifier 2016-CE-041-AD]

RIN 2120-AA64

Airworthiness Directives; Aviat Aircraft Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain Aviat Aircraft Inc. Models A-1C-180 and A-1C-200 airplanes equipped with Rapco part number RA1798-00-1 fuel vent check valves. This proposed AD was prompted by a report that the fuel tank vent check valves are sticking in the closed position causing fuel starvation to the engine. This proposed AD would require checking the fuel vent check valves for proper operation and replacing any inoperative fuel vent check valve with an airworthy part. We are proposing this AD to correct the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Aviat Aircraft Inc., P.O. Box 1240, Afton, WY 83110; phone (307) 885-3151; fax: (307) 885-9674; email: aviat@aviataircraft.com; Internet: <http://aviataircraft.com>. You may review this referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0418; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Richard R. Thomas, Aerospace Engineer, FAA, Denver Aircraft Certification Office, 26805 East 68th Avenue, Room 214, Denver, Colorado 80249; phone: (303) 342-1085; fax: (303) 342-1088; email: richard.r.thomas@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2017-0418; Directorate Identifier 2016-CE-041-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We received a report that an owner of an Aviat Aircraft Inc. Model A-1C-180 airplane was forced to make a dead stick landing after the engine shutdown on takeoff. Following the incident, the fuel tank caps were removed and the mechanic heard air rushing into the fuel tanks. Further investigation revealed that the forced landing was a result of fuel exhaustion caused by the fuel tank vent valves sticking in the closed position in both wings. Manual force was required to push the check balls off of their seats. When both vent valves stick, a vacuum of sufficient strength forms on the backside of the fuel and fuel no longer is gravity fed to the engine. Failure of a single vent valve is latent as there is a cross-feed vent between the left and right tanks that allows the properly operating valve to vent both tanks.

The incident airplane was equipped with Rapco part number (P/N) RA1798-00-1 fuel vent check valves. The design of the Rapco P/N RA1798-00-1 is such that the check valve ball seat is nearly the same diameter as the ball and the ball can readily wedge itself in the seat and block the fuel tank vent.

This condition, if not corrected, could cause fuel starvation to the engine and result in the engine shutting down.

Related Service Information under 1 CFR part 51

We reviewed Aviat Aircraft Inc. Mandatory Service Bulletin No. 33, dated November 11, 2016. The service bulletin describes procedures for checking the fuel vent check valve on each wing of the airplane for proper operation and replacing any inoperative fuel vent check valve. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require accomplishing the actions specified in the service information described previously.

The design approval holder is currently developing a modification that will address the unsafe condition identified in this AD. Once this modification is developed, approved, and available, we might consider additional rulemaking.

Costs of Compliance

We estimate that this proposed AD affects 98 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Pre-flight check of the fuel vent check valve for proper operation	.5 work-hour X \$85 per hour = \$42.50 per pre-flight check	N/A	\$42.50	\$4,165

We conservatively estimated the cost to do a single pre-flight check. We recognize the pilot is allowed to perform this check without the assistance of a mechanic, which would significantly reduce the estimated cost. We further recognize that an individual airplane would require this check every pre-flight from the issuance of this proposed AD until the end of its useful life unless both valves are replaced with Duke valves per paragraph (i). We have no way of determining the total cost of repeating this check every pre-flight either for a single product or for all U.S. operators.

We estimate the following costs to do any necessary replacements that would be required based on the results of the proposed pre-flight check. We have no way of determining the number of airplanes that may need these replacements.

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Remove and replace inoperative fuel vent check valve	2 work-hours (1 work-hour to remove and 1 work-hour to replace) X \$85 per hour = \$170 per fuel vent check valve. (There are 2 fuel vent check valves per airplane = \$340 to remove and replace both).	\$200 per fuel vent check valve. (\$400 for both).	\$370 per fuel vent check valve. (\$740 to remove and replace both).

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 determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed 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),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) 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.

List of Subjects in 14 CFR Part 39

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

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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):

Aviat Aircraft Inc.: Docket No. FAA-2017-0418; Directorate Identifier
2016-CE-041-AD

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Aviat Aircraft Inc. Models A-1C-180 and A-1C-200 airplanes, serial numbers 3181 through 3282, that are:

- (1) equipped with Rapco part number (P/N) RA1798-00-1 fuel vent check valves;
- and
- (2) certificated in any category.

Note to paragraph (c) of this AD: Airplanes equipped with Duke P/N 1798-001 fuel vent check valves are not affected by this AD.

(d) Subject

Joint Aircraft System Component (JASC) Code 2820, Fuel Distribution.

(e) Unsafe Condition

This AD was prompted by a report that Rapco P/N RA1798-00-1 fuel vent check valves are sticking in the closed position. We are issuing this AD to detect and correct failure of the fuel tank vent check valve, which could result in fuel starvation to the engine and cause the engine to shut down.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Verify Proper Operation of the Fuel Vent Check Valve on Each Wing

Before further flight after the effective date of this AD, insert Steps 1 through 3 of Aviat Aircraft Inc. (Aviat) Mandatory Service Bulletin (MSB) No. 33, dated November 11, 2016, into the Limitations Section of the airplane flight manual (AFM). This insertion and the steps therein may be performed by the owner/operator (pilot) holding at least a private pilot certificate. The insertion of Steps 1 through 3 in the AFM must be entered into the aircraft records showing compliance with this AD in accordance with 14 CFR 43.9 (a)(1)-(4) and 14 CFR 91.417(a)(2)(v). The record must be maintained as required by 14 CFR 91.417, 121.380, or 135.439. This AFM requirement mandates preflight checks of the fuel vent check valve on each wing for proper operation on the applicable airplanes identified in paragraph (c) of this AD.

(h) Remove Inoperative Fuel Vent Check Valve

During any check required in paragraph (g) of this AD, if one or both of the fuel vent check valves are not operating properly, before further flight, remove the inoperative valve following Steps 4 through 6 of Aviat MSB No. 33, dated November 11, 2016.

(i) Replace Inoperative Fuel Vent Check Valve

Before further flight after removing the inoperative fuel vent check valve required in paragraph (h) of this AD, replace it with an airworthy fuel vent check valve following Steps 8 and 9 of Aviat MSB No. 33, dated November 11, 2016. If both fuel vent check valves, Rapco P/N RA1798-00-1, are replaced with airworthy Duke P/N 1798-001 fuel vent check valves, the repetitive pre-flight checks required in paragraph (g) of this AD are terminated.

(j) Special Flight Permit

Special flight permits are not necessary for the preflight checks. A special flight permit is allowed for this AD per 14 CFR 39.23 with limitations. Special flight permits are permitted for the airplane to be flown VFR only to a location where the inoperative fuel vent check valve can be removed and replaced. No special flight permits are allowed if both valves are found to be inoperative.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Denver Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (l)(1) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(1) Related Information

(1) For more information about this AD, contact Richard R. Thomas, Aerospace Engineer, FAA, Denver ACO, 26805 East 68th Avenue, Room 214, Denver, Colorado 80249; phone: (303) 342-1085; fax: (303) 342-1088; email: richard.r.thomas@faa.gov.

(2) For service information identified in this AD, contact Aviat Aircraft Inc., P.O. Box 1240, Afton, WY 83110; phone (307) 885-3151; fax: (307) 885-9674; email: aviat@aviataircraft.com; Internet: <http://aviataircraft.com>. You may review this referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Issued in Kansas City, Missouri, on April 27, 2017.

Pat Mullen,
Acting Manager, Small Airplane Directorate,
Aircraft Certification Service.

[FR Doc. 2017-09041 Filed: 5/4/2017 8:45 am; Publication Date: 5/5/2017]