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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0535; Directorate Identifier 2013-CE-018-AD; Amendment 39-17489; AD 2013-13-01]

RIN 2120-AA64

Airworthiness Directives; Piper Aircraft, Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Piper Aircraft, Inc. Models PA-46-310P, PA-46-350P, PA-46R-350T, and PA-46-500TP airplanes. This AD requires inspecting the fuel vent valves to identify if the nitrile parts are installed and modifying and eventually replacing the fuel vent valves if the nitrile parts are installed. This AD was prompted by nitrile fuel vent valves not providing the correct ventilation. If not corrected, this unsafe condition may lead to structural damage of the wings, which could result in loss of control. We are issuing this AD to correct the unsafe condition on these products.

DATES: This AD is effective July 10, 2013.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of July 10, 2013.

We must receive comments on this AD by August 26, 2013.

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: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact Piper Aircraft, Inc., 2926 Piper Drive, Vero Beach, FL 32960; telephone: 1-877-879-0275; fax: (772) 978-6573; email: customer.service@piper.com; Internet: <http://www.piper.com/pages/publications.cfm>. You may review copies of the 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>; 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 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: Gary Wechsler, Aerospace Engineer, Atlanta Aircraft Certification Office, FAA, 1701 Columbia Avenue, College Park, Georgia 30337; telephone: (404) 474-5575; fax: (404) 474-5606; email: gary.wechsler@faa.

SUPPLEMENTARY INFORMATION:

Discussion

We were notified by Piper Aircraft, Inc. that during a demonstration emergency descent from 27,000 feet to 14,000 feet there was an incident on a Model PA-46 airplane. The fuel vent valve of the main fuel tank assembly did not provide proper ventilation, which resulted in structural damage to the wing.

The material used to manufacture the fuel vent valve was changed from fluorosilicone to nitrile, which affected the fuel vent valve's ability to vent atmospheric pressure to the main wing fuel tank during the rapid descent. The nitrile-made part did not allow enough air to flow through it because the stiffer nitrile-made part did not expand and open as large as the fluorosilicone-made part under the same pressure and temperature conditions.

Also, in combination with the temperature and pressure changes, the airplane had a low fuel condition, which increased the loading upon the main wing that caused the wing skin and underlying wing structure to buckle.

This condition, if not corrected, may lead to structural damage of the wings, which could result in loss of control.

Relevant Service Information

We reviewed Piper Aircraft, Inc. Mandatory Service Bulletin No. 1258, dated June 5, 2013. The service bulletin describes procedures for inspecting the fuel vent valves to identify if the nitrile parts are installed and modifying and eventually replacing the fuel vent valves if the nitrile parts are installed.

FAA's Determination

We are issuing 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.

AD Requirements

This AD requires accomplishing the actions specified in the service information described previously.

FAA's Justification and Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because nitrile fuel vent valves do not provide correct ventilation and may lead to structural damage of the wings, which could result in loss of control. Therefore, we find that notice and opportunity for prior public comment are impracticable and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, we invite you to send any written data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include the Docket Number FAA-2013-0535 and Directorate Identifier 2013-CE-018-AD at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this 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 AD.

Costs of Compliance

We estimate that this AD affects 1,379 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection to identify installation of nitrile fuel vent valves.	.5 work-hour × \$85 per hour = \$42.50	Not applicable	\$42.50	\$58,607.50

We estimate the following costs to do any necessary modifications and replacements that would be required based on the results of the inspection. We have no way of determining the number of aircraft that might need these modifications and replacements:

On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Modification of the nitrile fuel vent valve (non Oring panels).	6 work-hours × \$85 per hour = \$510	Not applicable	\$510

Modification of the nitrile fuel vent valve (O-ring panels).	2.5 work-hours × \$85 per hour = \$212.50	Not applicable	212.50
Replacement of the nitrile fuel vent valve with a fluorosilicone fuel vent valve (non O-ring panels).	6 work-hours × \$85 per hour = \$510	\$9	519
Replacement of the nitrile fuel vent valve with a fluorosilicone fuel vent valve (O-ring panels).	2.5 work-hours × \$85 per hour = \$212.50	\$9	221.50

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

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),
- (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.

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):



2013-13-01 Piper Aircraft, Inc.: Amendment 39-17489; Docket No. FAA-2013-0535; Directorate Identifier 2013-CE-018-AD.

(a) Effective Date

This AD is effective July 10, 2013.

(b) Affected ADs

None.

(c) Applicability

This AD applies to the following Piper Aircraft, Inc. airplanes, listed in table 1 of paragraph (c) of this AD, certificated in any category:

Table 1 of Paragraph (c) of This AD—Applicable Airplanes

Model	Serial Nos.
PA-46-310P (Malibu)	46-8408001 through 46-8408087; 46-8508001 through 46-8508109; 46-8608001 through 46-8608067; and 4608001 through 4608140.
PA-46-350P (Mirage)	4622001 through 4622200; 4636001 through 4636591; and 4636593.
PA-46R-350T (Matrix)	4692001 through 4692190 and 4692192.
PA-46-500TP (Meridian)	4697001 through 4697520.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 2810, Fuel Storage.

(e) Unsafe Condition

This AD was prompted by certain fuel vent valves not providing the correct ventilation. If not corrected, this unsafe condition may lead to structural damage of the wings, which could result in loss of control. We are issuing this AD to correct the unsafe condition on these products.

(f) Compliance

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

(g) Inspection and Modification

(1) Within the next 10 hours time-in-service (TIS) after July 10, 2013 (the effective date of this AD), inspect the left and right fuel vent valves of the main fuel tank vent assemblies to identify if they are the nitrile (black) valves following Part I of Piper Aircraft Inc. Mandatory Service Bulletin No. 1258, dated June 5, 2013.

(2) If during the inspection required in paragraph (g)(1) of this AD, you find that a nitrile (black) fuel vent valve is not installed, except for the requirement of paragraph (h)(3) of this AD, no further action is required by this AD.

(3) If during the inspection required in paragraph (g)(1) of this AD, you find that a nitrile (black) fuel vent valve is installed, before further flight, modify the fuel vent valve following Part II of Piper Aircraft, Inc. Mandatory Service Bulletin No. 1258, dated June 5, 2013. This includes the limitations requirement in paragraphs 3 and 4 of Part II of the service bulletin.

(4) In lieu of doing the modification required in paragraph (g)(3) of this AD, you may within the next 10 hours TIS after July 10, 2013 (the effective date of this AD), do the fuel vent valve replacement required in paragraph (h)(1) of this AD following Part III of Piper Aircraft, Inc. Mandatory Service Bulletin No. 1258, dated June 5, 2013.

(h) Replacement

(1) If during the inspection required in paragraph (g)(1) of this AD, you find that a nitrile (black) fuel vent valve is installed, within the next 90 days after July 10, 2013 (the effective date of this AD) if not already done before further flight as specified in paragraph (i)(4) of this AD, replace the nitrile (black) fuel vent valve with the fluorosilicone (orange) fuel vent valve following Part III of Piper Aircraft, Inc. Mandatory Service Bulletin No. 1258, dated June 5, 2013. This would include removing the limitations requirement in paragraphs 3 and 4 of Part II of the service bulletin.

(2) You may at any time before 90 days after July 10, 2013 (the effective date of this AD), replace the nitrile (black) fuel vent valve with the fluorosilicone (orange) fuel vent valve. This would include removing the limitations requirement in paragraphs 3 and 4 of Part II of the service bulletin.

(3) After July 10, 2013 (the effective date of this AD), do not install the nitrile (black) fuel vent valve on any of the affected airplanes.

(i) Positioning Flight

For the purpose of complying with paragraph (g)(1) of this AD, a single-positioning flight is allowed to a location where the inspection required in paragraph (g)(1) can be done provided the actions and limitations specified in paragraphs (i)(1) through (i)(4) of this AD are followed, and the flight is done within the initial 10-hour TIS inspection compliance time. A copy of the limitations from paragraphs 3 and 4 of Part II of Piper Aircraft, Inc. Mandatory Service Bulletin No. 1258, dated June 5, 2013, must be inserted in the pilot's operating handbook before the positioning flight and removed after the flight. An owner/operator (pilot) holding at least a private pilot certificate is allowed to insert these limitations and do the action of paragraph (i)(1) of this AD.

(1) During normal procedures checklist of every preflight inspection, check condition of wing surface for buckling, skin wrinkling, distortion or other damage. If any damage is found during the preflight inspection, before further flight, repairs must be done. Contact Piper Aircraft, Inc. at contact information found in paragraph (l)(3) of this AD for an FAA-approved repair and incorporate the repair. At the operator's discretion, this preflight inspection may be delegated to an appropriately certified mechanic.

(2) Flights must be limited to the minimum required crew. No passenger flights are allowed.

(3) Outside air temperature must not be lower than -34 degrees Celsius (-30 degrees Fahrenheit) during all phases of flight.

(4) Avoid unnecessary rapid decent maneuvers.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Atlanta 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 the Related Information section 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.

(k) Related Information

For more information about this AD, contact Gary Wechsler, Aerospace Engineer, Atlanta ACO, FAA, 1701 Columbia Avenue, College Park, Georgia 30337; telephone: (404) 474-5575; fax: (404) 474-5606; email: gary.wechsler@faa.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Piper Aircraft, Inc. Mandatory Service Bulletin No. 1258, dated June 5, 2013.

(ii) Reserved.

(3) For Piper Aircraft, Inc. service information identified in this AD, contact Piper Aircraft, Inc., 2926 Piper Drive, Vero Beach, FL 32960; telephone: 1-877-879-0275; fax: (772) 978-6573; email: customer.service@piper.com; Internet: <http://www.piper.com/pages/publications.cfm>.

(4) You may view this service information at 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.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Kansas City, Missouri, on June 18, 2013.

James E. Jackson,
Acting Manager, Small Airplane Directorate,
Aircraft Certification Service.