[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0338; Directorate Identifier 2014-CE-010-AD; Amendment 39-18495; AD 2016-08-18]

RIN 2120-AA64

Airworthiness Directives; Piper Aircraft, Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Piper Aircraft, Inc. Model PA-31-350 airplanes. This AD was prompted by a report of an engine fire caused by a leak in the fuel pump inlet hose. This AD requires inspecting the fuel hose assembly and the turbocharger support assembly for proper clearance between them, inspecting each assembly for any sign of damage, and making any necessary repairs or replacements. We are issuing this AD to correct the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Piper Aircraft, Inc., 2926 Piper Drive, Vero Beach, Florida 32960; telephone: (772) 567-4361; fax: (772) 978-6573; Internet: www.piper.com/home/pages/Publications.cfm. You may view 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. It is also available on the internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2014-0338.

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-2014-0338; 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 address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Gary Wechsler, Aerospace Engineer, FAA, Atlanta Aircraft Certification Office, 1701 Columbia Avenue, College Park, Georgia 30337; telephone: (404) 474-5575; fax: (404) 474-5606; email: gary.wechsler@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Piper Aircraft, Inc. Model PA-31-350 airplanes. The SNPRM published in the Federal Register on January 26, 2016 (81 FR 4214). We preceded the SNPRM with a notice of proposed rulemaking (NPRM) that published in the Federal Register on June 3, 2014 (79 FR 31888). The NPRM proposed to require inspecting the fuel hose assembly and the turbocharger support assembly for proper clearance between them, inspecting each assembly for any sign of damage, and making any necessary repairs or replacements. The NPRM was prompted by

a report of an engine fire on a Piper Aircraft, Inc. (Piper) Model PA-31-350 airplane. Investigation revealed that the fire was caused by a leak in the fuel pump inlet hose that resulted from repeated contact with an adjacent turbocharger support assembly caused by inadequate clearance between the two assemblies. The SNPRM proposed to require the same actions as proposed in the NPRM using revised service information issued by the manufacturer to clarify which engines are part of the airplane applicability and to revise the instructions for accomplishing the proposed actions.

This condition, if not corrected, could result in damage to the fuel inlet hose assembly, which could cause the fuel pump inlet hose to fail and leak fuel in the engine compartment. This condition could also cause damage to the turbocharger support assembly, which could require the turbocharger support assembly to be repaired or replaced.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the SNPRM (81 FR 4214, January 26, 2016) or on the determination of the cost to the public.

Conclusion

We reviewed the relevant data and determined that air safety and the public interest require adopting this AD as proposed except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the SNPRM (81 FR 4214, January 26, 2016) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the SNPRM (81 FR 4214, January 26, 2016).

Related Service Information under 1 CFR part 51

We reviewed Piper Aircraft, Inc. Service Bulletin No. 1257A, dated August 4, 2015. The service information describes procedures for the following. 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.

- Inspecting for a minimum 3/16-inch clearance between the fuel hose assembly and the turbocharger support assembly and making any necessary adjustments.

- Inspecting the fuel hose assembly for any signs of damage and, if necessary, replacing with a serviceable part.

- Inspecting the turbocharger support assembly for any signs of damage and, if necessary, repairing or replacing with a serviceable part.

- Performing an engine run-up to check for any leaks.

Differences Between this AD and the Service Information

There are differences between the compliance times for the corrective actions in this AD and those in the related service information.

We based the compliance times in this AD on risk analysis and cost impact to operators. There has only been one event of the reported incident in the operational history of Piper Model PA-31-350 airplanes. Cost was also a strong consideration due to the age of the fleet and the number of airplanes still in service.

The one-time inspection required in this AD is very inexpensive and requires minimal time to accomplish. It is expected that almost all airplanes in service can be cleared with a single inspection, and no additional actions or costs would be incurred by the vast majority of the fleet.

We determined that a single inspection with any necessary corrective actions is an adequate terminating action for the unsafe condition. The risk related to future maintenance on the fuel line would be mitigated by the related service information and awareness from this AD.

Costs of Compliance

We estimate that this AD affects 773 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
Inspect for proper clearance between the fuel hose assembly and the turbocharger support assembly	.5 work-hour X $85 per hour = $85	N/A	$42.50	$32,852.50
Inspect the fuel hose assembly for evidence of leaking, cracking, chafing, and any other sign of damage	.5 work-hour X $85 per hour = $42.50	N/A	$42.50	$32,852.50
Inspect the turbocharger support assembly for evidence of chafing and any other sign of damage	.5 work-hour X $85 per hour = $42.50	N/A	$42.50	$32,852.50
Engine run-up/leak check	1 work-hour X $85 = $85 (.5 work hour per engine)	N/A	$85	$65,705

We estimate the following costs to do any necessary follow-on actions that will be required based on the results of the inspection. We have no way of determining the number of airplanes that might need these corrective actions.

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Adjust routing of fuel hose assembly for proper clearance between the fuel hose assembly and the turbocharger support assembly	5.5 work-hours X $85 per hour = $467.50	N/A	$467.50
Replace Piper fuel pump inlet hose assembly, part number 39995-34 (2 per airplane)	1 work-hour X $85 per hour = $85	$1,068	$1,153
Replace Lycoming turbocharger support assembly, part number LW-18302 (2 per airplane)	24 work-hours X $85 per hour = $2,040	$12,874	$14,914

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):

2016-08-18 **Piper Aircraft, Inc.**: Amendment 39-18495; Docket No. FAA-2014-0338; Directorate Identifier 2014-CE-010-AD.

(a) **Effective Date**

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) **Affected ADs**

None.

(c) **Applicability**

This AD applies to Piper Aircraft, Inc. Model PA-31-350 airplanes, serial numbers 31-5001 through 31-5004, 31-7305005 through 31-8452024, and 31-8253001 through 31-8553002, certificated in any category, that are equipped with the following engines and fuel pump hose assemblies:

Table 1 to paragraph (c) of this AD –

Applicable Engines and Fuel Pump Hose Assemblies

Engine	**Manufacturer's Hose Name**	**Manufacturer's Part Number (P/N)**	**Hose Description**
TIO-540-J2B (right wing)	Hose Assembly – Fuel	Piper 39995-034	Inlet fuel hose to engine fuel pump
LTIO-540-J2B (left wing)	Hose, Fuel pump to Injector	Lycoming LW-12877-6S142	Exit fuel hose from engine fuel pump
TIO540-J2BD (right wing)	Hose, Fuel pump to Injector	Lycoming LW-12877-6S142	Exit fuel hose from engine fuel pump
LTIO-540-J2BD (left wing)	Hose Assembly – Fuel	Piper 39995-034	Inlet fuel hose to engine fuel pump

(d) **Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 73: Engine Fuel and Control.

(e) **Unsafe Condition**

This AD was prompted by a report of an engine fire caused by a leak in the fuel pump inlet hose. We are issuing this AD to correct the unsafe condition on these products.

(f) **Compliance**

Comply with this AD within the compliance times specified in paragraphs (g)(1) through (j)(2) of this AD, unless already done.

(g) **Ensure Proper Clearance Between the Fuel Hose Assembly and the Turbocharger Support Assembly**

(1) Within the next 60 hours time-in-service (TIS) after [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] (the effective date of this AD) or within the next 6 months after [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] (the effective date of this AD), whichever occurs first, inspect to determine the clearance between the inlet and exit fuel hose assemblies listed in table 1 to paragraph (c) of this AD, and each turbocharger support assembly, Lycoming P/N LW-18302. There should be a minimum 3/16-inch clearance. Do the inspection following the INSTRUCTIONS section of Piper Aircraft, Inc. Service Bulletin No. 1257A, dated August 4, 2015.

(2) Before further flight after the inspection required in paragraph (g)(1) of this AD, if the measured clearance is less than 3/16-inch, make all necessary adjustments to make the clearance a minimum of 3/16-inch between the inlet and exit fuel hose assemblies listed in table 1 to paragraph (c) of this AD and each turbocharger support assembly, Lycoming P/N LW-18302, following the INSTRUCTIONS section of Piper Aircraft, Inc. Service Bulletin No. 1257A, dated August 4, 2015.

(h) **Visually Inspect the Fuel Hose Assembly and Replace if Necessary**

(1) Within the next 60 hours TIS after [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] (the effective date of this AD) or within the next 6 months after [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] (the effective date of this AD), whichever occurs first, visually inspect the inlet and exit fuel hose assemblies listed in table 1 to paragraph (c) of this AD for evidence of leaking, cracking, chafing, and any other sign of damage. Do the inspection following the INSTRUCTIONS section of Piper Aircraft, Inc. Service Bulletin No. 1257A, dated August 4, 2015.

(2) Before further flight after the inspection required in paragraph (h)(1) of this AD, if any evidence of leaking, cracking, chafing, or any other sign of damage is found in any inlet or exit fuel host assembly listed in table 1 to paragraph (c) of this AD, replace the fuel hose assembly with a serviceable part. Do the replacement following the INSTRUCTIONS section of Piper Aircraft, Inc. Service Bulletin No. 1257A, dated August 4, 2015.

(i) **Visually Inspect the Turbocharger Support Assembly and Replace if Necessary**

(1) Within the next 60 hours TIS after [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] (the effective date of this AD) or within the next 6 months after [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] (the effective date of this AD), whichever occurs first, visually inspect each turbocharger support assembly, Lycoming P/N LW-18302, for evidence of chafing and any other signs of damage. Do the inspection following the INSTRUCTIONS section of Piper Aircraft, Inc. Service Bulletin No. 1257A, dated August 4, 2015.

(2) Before further flight after the inspection required in paragraph (i)(1) of this AD, if any evidence of chafing or any other sign of damage is found on any turbocharger support assembly, replace Lycoming P/N LW-18302 with a serviceable part. Do the replacement following the INSTRUCTIONS section of Piper Aircraft, Inc. Service Bulletin No. 1257A, dated August 4, 2015.

(j) **Engine Run-Up**

(1) If any fuel line component was adjusted or replaced during any actions required in paragraphs (g)(1) through (i)(2) of this AD, before further flight, perform an engine run-up on the ground to check for leaks. Do the engine run-up following the INSTRUCTIONS section of Piper Aircraft, Inc. Service Bulletin No. 1257A, dated August 4, 2015.

(2) If any leaks found during the engine run-up required in paragraph (j)(1) of this AD emanate from any fuel line component adjusted, repaired, or replaced during any actions required in paragraphs (g)(1) through (i)(2) of this AD, before further flight, take all necessary corrective actions following the INSTRUCTIONS section of Piper Aircraft, Inc. Service Bulletin No. 1257A, dated August 4, 2015.

(k) **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.

(l) **Related Information**

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

(m) **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. Service Bulletin No. 1257A, dated August 4, 2015.

(ii) Reserved.

(3) For Piper Aircraft, Inc. service information identified in this AD, contact Piper Aircraft, Inc., 926 Piper Drive, Vero Beach, Florida 32960; telephone: (772) 567-4361; fax: (772) 978-6573; Internet: www.piper.com/home/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 April 14, 2016.

Robert P. Busto,
Acting Manager, Small Airplane Directorate,
Aircraft Certification Service.

[FR Doc. 2016-09238 Filed: 4/29/2016 8:45 am; Publication Date: 5/2/2016]