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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0021; Project Identifier AD-2020-01283-A; Amendment 39-22060; AD 2022-11-10]

RIN 2120-AA64

Airworthiness Directives; Piper Aircraft, Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Piper Aircraft, Inc. (Piper) Model PA-46-600TP airplanes. This AD was prompted by testing that showed that the wing splice assembly could fail before the assembly reaches its established life limit. This AD requires revising the Airworthiness Limitations section (ALS) of the existing maintenance manual (MM) or instructions for continued airworthiness (ICA) to reduce the life limit of the wing splice assembly. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective June 27, 2022.

ADDRESSES: For service information identified in this final rule, contact Piper Aircraft, Inc., 2926 Piper Drive, Vero Beach, FL 32960; phone: (772) 291-2141; website: <https://www.piper.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0021; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is 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: Fred Caplan, Aviation Safety Engineer, Atlanta ACO Branch, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (404) 474-5507; email: frederick.n.caplan@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain serial-numbered Piper Model PA-46-600TP airplanes. The NPRM published in the Federal Register on February 1, 2022 (87 FR 5428). The NPRM was prompted by testing that showed that the wing splice assembly, part number (P/N) 46W57A100-001, could fail before reaching its established life limit on Model PA-46-600TP airplanes. The wing splice assembly was certificated with a life limit of 5,132 hours time-in-service (TIS); however, the failures of the test assembly occurred before reaching that established life limit. The stress levels used in the life limit analysis were not adequate. After a new fatigue test article analysis, Piper reduced the life limit of the wing splice assembly P/N 46W57A100-001 from 5,132 hours TIS to 3,767 hours TIS and revised the Airworthiness Limitations section in the MM accordingly.

In the NPRM, the FAA proposed to require revising the Airworthiness Limitations section of the existing MM or ICA to reduce the life limit of the wing splice assembly. Failure of the wing splice assembly, if not addressed, could result in loss of airplane control. The FAA is issuing this AD to address the unsafe condition on these products.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from Piper. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request Regarding Applicability and Cost of Compliance

Piper requested that the FAA update the applicable serial numbers. The applicable serial numbers in the proposed AD were based upon the understanding that airworthiness limitations with the new wing splice assembly life limit would be delivered with new airplanes beginning with serial number 4698186. However, while the AD was in development, airworthiness limitations with the new life limit were actually delivered with new airplanes with serial numbers 4698147, 4698149, and 4698158 and larger.

The FAA agrees and has revised the applicability of this AD accordingly.

Based on its comment regarding the applicable serial numbers, Piper also requested that the FAA revise the estimated Costs of Compliance section. Piper stated that the costs would be reduced because there are fewer affected airplanes.

The FAA agrees that the estimated Costs of Compliance should be updated to reflect the correct number of affected airplanes. However, the FAA's original estimate of the number of affected airplanes was in error. The FAA has corrected that error in the Costs of Compliance section of this final rule, resulting in a higher count of airplanes.

Request Regarding Required Actions

Piper stated that operators cannot physically comply with paragraph (g), Action, of the proposed AD, which proposed to require revising the ALS by reducing the life limit of the wing splice assembly. Piper stated that the ICA are delivered with the airplane in an electronic format on a CD-

ROM. Piper requested that the FAA change this action by requiring a logbook entry documenting the change in life limit of the wing splice assembly.

The FAA does not agree that operators are unable to comply with the AD as proposed. While the AD mandates revising the ALS to reduce the life limit, it does not specify any particular method that operators must use to do the revision. One acceptable method is to replace the existing CD-ROM document with a new CD-ROM that includes the new life limit. As long as the ALS of an operator's existing MM or ICA includes the new life limit, then the operator has complied with this AD. The FAA did not change this AD based on this comment.

Request Regarding Related Information

Piper requested that the FAA revise Note 1 to paragraph (g) of the proposed AD to include the December 4, 2020, version of the ALS. Piper stated the initial life limit reduction for wing splice assembly P/N 46W57A100-001 was introduced in the December 4, 2020, version of the ALS. The August 31, 2021, version of the ALS, which was included in the proposed AD, contains the reduced life limit for wing splice assembly P/N 46W57A100-001 and introduces new part numbers for the wing splice assembly (P/N 46W57A100-002) and a service wing assembly (P/N 46W00A700-702).

The FAA agrees that the December 4, 2020, version of the ALS contains the reduced wing splice assembly life limit, but does not agree that a change to this AD is necessary. As previously explained, the AD does not specify any particular method that operators must use to revise the ALS. One acceptable method is incorporating the life limit specified in Piper Aircraft, Inc. PA-46-600TP, M600 Maintenance Manual, Airworthiness Limitations, Page 1, dated December 4, 2020.

The FAA did not change this AD based on this comment.

Conclusion

The FAA reviewed the relevant data, considered the comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for the changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information

The FAA reviewed Piper Aircraft, Inc., PA-46-600TP, M600 Maintenance Manual, Airworthiness Limitations, Section 4-00-00, dated August 31, 2021. This service information specifies the life limits of structural parts for the Model PA-46-600TP airplane and reduces the life limit for the wing splice assembly.

Costs of Compliance

The FAA estimates that this AD affects 139 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated Costs				
Action	Labor cost	Parts cost	Cost per airplane	Cost on U.S. operators
Revise the ALS	1 work-hour × \$85 per hour = \$85	Not Applicable	\$85	\$11,815

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.

The FAA is 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) Will not affect intrastate aviation in Alaska, 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.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

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:



AIRWORTHINESS DIRECTIVE

www.faa.gov/aircraft/safety/alerts/
www.gpoaccess.gov/fr/advanced.html

2022-11-10 Piper Aircraft, Inc.: Amendment 39-22060; Docket No. FAA-2022-0021; Project Identifier AD-2020-01283-A.

(a) Effective Date

This airworthiness directive (AD) is effective June 27, 2022.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Piper Aircraft, Inc. Model PA-46-600TP airplanes, serial numbers 4698001, 4698004 through 4698146 inclusive, 4698148, and 4698150 through 4698157 inclusive, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC) Code 5711, Wing Spar.

(e) Unsafe Condition

This AD results from testing that showed that the wing splice assembly could fail before the assembly reaches its established life limit. The FAA is issuing this AD to prevent failure of the wing splice assembly before the current established life limit. The unsafe condition, if not addressed, could result in loss of airplane control.

(f) Compliance

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

(g) Action

Within 90 days after the effective date of this AD, revise the Airworthiness Limitations section in the existing maintenance manual or instructions for continued airworthiness by reducing the life limit of the wing splice assembly part number 46W57A100-001 to 3,767 hours time-in-service.

Note 1 to paragraph (g): Section 4-00-00 of Piper Aircraft, Inc. PA-46-600TP, M600 Maintenance Manual, Airworthiness Limitations, Page 1, dated August 31, 2021, contains the life limit in paragraph (g) of this AD.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Atlanta ACO Branch, 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 certification office, send it to the attention of the person identified in paragraph (i)(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.

(i) Related Information

(1) For more information about this AD, contact Fred Caplan, Aviation Safety Engineer, Atlanta ACO Branch, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (404) 474-5507; email: frederick.n.caplan@faa.gov.

(2) For service information identified in this AD, contact Piper Aircraft, Inc., 2926 Piper Drive, Vero Beach, FL, 32960; phone: (772) 291-2141; website: <https://www.piper.com>.

(j) Material Incorporated by Reference

None.

Issued on May 17, 2022.

Gaetano A. Sciortino,
Deputy Director for Strategic Initiatives, Compliance & Airworthiness Division, Aircraft
Certification Service.

[FR Doc. 2022-10863 Filed 5-20-22; 8:45 am]