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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2015-2434; Directorate Identifier 2015-CE-023-AD; Amendment 39-18196; AD 2015-13-09]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Piper Aircraft, Inc. Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Piper Aircraft, Inc. Models PA-46-350P and PA-46-500TP airplanes. This AD requires installing cable ties around the cabin altitude encoder and the supporting structure, adding thread-locking compound to the threads of the existing single fastener; and repetitively inspecting the cable ties and the fastener to ensure security and proper condition. This AD was prompted by a report that a cabin altitude encoder came free from its mounting bracket, which interfered with motion of the elevator flight control. We are issuing this AD to correct the unsafe condition on these products.

**DATES:** This AD is effective July 13, 2015.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of July 13, 2015.

We must receive comments on this AD by August 21, 2015.

**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, Florida 32960; telephone: (877) 879-0275; email: customer.service@piper.com; Internet: www.piper.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. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-2434.

### **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-2015-2434; 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:** Gregory "Keith" Noles, Aerospace Engineer, FAA, Atlanta Aircraft Certification Office (ACO), 1701 Columbia Avenue, College Park, Georgia 30337; phone: (404) 474-5551; fax: (404) 474-5606; email: gregory.noles@faa.gov.

### **SUPPLEMENTARY INFORMATION:**

#### **Discussion**

We received a report that a Piper Aircraft, Inc. (Piper) Model PA-46-500TP airplane experienced a pitch control system problem that resulted in a limited ability to control the elevator. The pilot was able to land the aircraft safely with a combination of primary pitch control and pitch trim. Initial speculation was that this was an installation error.

Follow-on investigation revealed that a Garmin avionics box installed behind the instrument panel had fallen down on the elevator control sector adjacent to the column and jammed the primary pitch control. The box is the cabin altitude encoder and is installed upside down above the elevator control sector. This configuration was introduced in December 2014 as part of a type design change to Piper Model PA-46-500TP airplanes. A similar configuration was also introduced on the PA-46-350P through a type design change. The box is installed with one fastener with no locking features. The one fastener uses a knurled nut that is also installed upside down. Vibration and low installation torque could easily cause the nut to come loose. The reported airplane had only 12 hours time in service.

This condition, if not corrected, could result in loss of control. We are issuing this AD to correct the unsafe condition on these products.

#### **Related Service Information Under 1 CFR Part 51**

We reviewed Piper Aircraft, Inc. Mandatory Service Bulletin No. 1283, dated June 12, 2015. The service bulletin describes procedures for installing cable ties around the avionics box and the supporting structure; repetitively inspecting the cable ties and the knurled nut to ensure security and proper condition; and applying thread-locking compound to the knurled nut to ensure proper security. 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 of this AD.

## **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.

## **Differences Between the AD and the Service Information**

Piper Aircraft, Inc. Mandatory Service Bulletin No. 1283, dated June 12, 2015, includes more airplane serial numbers than we have included in this AD. The cabin altitude encoders on the airplanes for the additional serial numbers affected in the service bulletin use a similar installation, but are located and oriented differently so that they do not create the unsafe condition. Piper is working on a permanent modification to incorporate on all airplanes affected by the service bulletin.

## **Interim Action**

We consider this AD interim action. The design approval holder is currently developing a modification to correct the unsafe condition identified in this AD. Once this modification is developed, approved, and available, we might consider additional rulemaking.

## **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 if the cabin altitude encoder mouting becomes loose and intereferes with the elevator control system, this 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-2015-2434 and Directorate Identifier 2015-CE-023-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 28 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
Modify the encoder mounting installation by installing 2 cable ties and thread-locking compound	1 work-hour × \$85 per hour = \$85	\$10	\$95	\$2,660
Inspect the encoder mounting installation to verify proper condition and security of the cable ties and security of the knurled nut	1 work-hour × \$85 per hour = \$85 (per inspection cycle)	Not applicable	85	2,389

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

### On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Replace cable ties and/or apply thread-locking compound	1 work-hour × \$85 per hour = \$85	\$10	\$95

### 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):



**2015-13-09 Piper Aircraft, Inc.:** Amendment 39-18196; Docket No. FAA-2015-2434; Directorate Identifier 2015-CE-023-AD.

**(a) Effective Date**

This AD is effective July 13, 2015.

**(b) Affected ADs**

None.

**(c) Applicability**

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

**Table 1 of Paragraph (c) of This AD—Applicability**

<b>Model</b>	<b>Serial No.</b>
PA-46-350P	4636652 through 4636662.
PA-46-500TP	4697549, 4697569, 4697582 through 4697591, 4697593 through 4697595, 4697597, and 4697598.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 2130, Cabin Pressure Control System.

**(e) Unsafe Condition**

This AD was prompted by a report that a cabin altitude encoder came free from its mounting bracket, which interfered with motion of the elevator flight control. This condition, if not prevented, 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 as specified in paragraphs (g) and (h) of this AD, including all subparagraphs, unless already done.

**(g) Modification**

Do one of the following in paragraphs (g)(1) or (g)(2) of this AD:

(1) Before further flight after July 13, 2015 (the effective date of this AD), modify the encoder mounting installation by installing two cable ties and adding thread-locking compound to the knurled holddown nut. Do the modification following Part I of Piper Aircraft, Inc. Mandatory Service Bulletin No. 1283, dated June 12, 2015.

(2) Before each flight after July 13, 2015 (the effective date of this AD) do a pre-flight security check by grasping the knurled holddown nut with a bare hand and verifying that the nut is tight and secure. Within the next 10 hours time-in-service after July 13, 2015 (the effective date of this AD), you must do the modification required in paragraph (g)(1) of this AD.

(i) The pre-flight security check required in paragraph (g)(2) of this AD may be performed by the owner/operator holding at least a private pilot certificate as authorized by section 43.7 of the Federal Aviation Regulations (14 CFR 43.7), and must be entered into the aircraft records showing compliance with this AD in accordance with section 43.9 of the Federal Aviation Regulations (14 CFR 43.9).

Note 1 to paragraph (g)(2)(i): Piper Aircraft, Inc. Mandatory Service Bulletin No. 1283, dated June 12, 2015, which is incorporated by reference in this AD, includes pictures for accessing and locating the cabin altitude encoder and can be used as guidance for performing this preflight check. See paragraphs (l)(3) and (l)(4) for the availability of this service information.

(ii) The pre-flight security check required in paragraph (g)(2) of this AD is no longer necessary after the modification required by either paragraph (g)(1) or (g)(2) of this AD.

#### **(h) Inspection**

Within 50 hours TIS after doing the modification required in paragraph (g)(1) or (g)(2) of this AD and repetitively thereafter not to exceed 50 hours TIS, inspect the encoder mounting installation to verify the proper condition and security of the cable ties and the security of the knurled holddown nut. Do the inspection following Part II of Piper Aircraft, Inc. Mandatory Service Bulletin No. 1283, dated June 12, 2015.

(1) If the cable ties are found to not be properly secure or are not in proper condition during the inspection required in paragraph (h) of this AD, before further flight, replace with new cable ties following Part I of Piper Aircraft, Inc. Mandatory Service Bulletin No. 1283, dated June 12, 2015.

(2) If the knurled holddown nut is found to not be properly secure during the inspection required in paragraph (h) of this AD, before further flight, apply thread-locking compound following Part I of Piper Aircraft, Inc. Mandatory Service Bulletin No. 1283, dated June 12, 2015.

#### **(i) Special Flight Permit**

Special flight permits are permitted with the following limitation: The pre-flight security check required in paragraph (g)(2) of this AD must be done.

#### **(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 paragraph (k) 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 Gregory "Keith" Noles, Aerospace Engineer, FAA, Atlanta ACO, 1701 Columbia Avenue, College Park, Georgia 30337; phone: (404) 474-5551; fax: (404) 474-5606; email: gregory.noles@faa.gov.

## **(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. 1283, dated June 12, 2015.

(ii) Reserved.

(3) For Piper Aircraft, Inc. service information identified in this AD, contact Piper Aircraft, Inc., 2926 Piper Drive, Vero Beach, Florida 32960; telephone: (877) 879-0275; email: customer.service@piper.com; Internet: www.piper.com.

(4) You may view this service information at FAA, 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 24, 2015.

Earl Lawrence,  
Manager, Small Airplane Directorate,  
Aircraft Certification Service.