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**2012-17-06 Piper Aircraft, Inc.:** Amendment 39-17169; Docket No. FAA-2011-0639; Directorate Identifier 2011-CE-016-AD.

**(a) Effective Date**

This AD is effective October 22, 2012.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to the following Piper Aircraft, Inc. airplanes, certificated in any category:

(1) Model PA-24, serial numbers (S/Ns) 24-1 through 24-3687, with horn part number (P/N) 20397-00 (assembly P/N 20399) installed;

(2) Model PA-24-250, S/Ns 24-1 and 24-103 through 24-3687, with horn P/N 20397-00 (assembly P/N 20399) installed; and

(3) Model PA-24-260, S/Ns 24-3642 and 24-4000 through 24-5034, with horn P/N 20397-00 (assembly P/N 20399) installed.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 27: Flight Controls.

**(e) Unsafe Condition**

This AD was prompted by reports of cracks developing in the stabilator horn assembly. We are issuing this AD to detect and correct corrosion or cracks in the stabilator horn assembly. Corrosion or cracks could lead to failure of the stabilator horn. Consequently, failure of the stabilator horn could lead to a loss of pitch control in flight.

**(f) Compliance**

Comply with this AD following Piper Aircraft, Inc. Service Bulletin No. 1189, dated April 29, 2010, within the compliance times specified in this AD, unless already done (does not eliminate the repetitive actions of this AD).

**(g) Inspection/Replacement**

(1) When a new stabilator horn assembly has been installed (during production or replacement) and the stabilator horn assembly reaches a total of 1,000 hours time-in-service (TIS) or 10 years after installation, or within the next 100 hours TIS after October 22, 2012 (the effective date of this AD), whichever occurs later, do one of the following actions:

(i) Initially inspect the stabilator horn assembly for corrosion or cracks. Repetitively thereafter inspect at intervals not to exceed 500 hours TIS or 5 years, whichever occurs first.

(ii) Replace the stabilator horn assembly with a new stabilator horn assembly. When the new stabilator horn assembly reaches a total of 1,000 hours TIS after replacement or within 10 years after replacement, whichever occurs first, you must do one of the actions in paragraph (g)(1) of this AD.

(iii) Replace the stabilator horn assembly with a used serviceable stabilator horn assembly that has been inspected before installation and found free of cracks or corrosion. Repetitively thereafter inspect at intervals not to exceed 500 hours TIS or 5 years, whichever occurs first.

(2) When a used serviceable stabilator horn assembly that has been inspected before installation and found free of cracks or corrosion has been installed and the stabilator horn assembly reaches a total of 500 hours TIS or 5 years after installation, or within the next 100 hours TIS after October 22, 2012 (the effective date of this AD), whichever occurs later, do one of the following actions:

(i) Initially inspect the stabilator horn assembly for corrosion or cracks. Repetitively thereafter inspect at intervals not to exceed 500 hours TIS or 5 years, whichever occurs first.

(ii) Replace the stabilator horn assembly with a new stabilator horn assembly. When the new stabilator horn assembly reaches a total of 1,000 hours TIS after replacement or within 10 years after replacement, whichever occurs first, you must do one of the actions in paragraph (g)(1) of this AD.

(iii) Replace the stabilator horn assembly with a used serviceable stabilator horn assembly that has been inspected before installation and found free of cracks or corrosion. Repetitively thereafter inspect at intervals not to exceed 500 hours TIS or 5 years, whichever occurs first.

(3) If you do not know the total hours TIS on the stabilator horn assembly, within the next 100 hours TIS after October 22, 2012 (the effective date of this AD) do one of the actions required in paragraph (g)(1)(i), (g)(1)(ii), (g)(1)(iii), (g)(2)(i), (g)(2)(ii), or (g)(2)(iii) of this AD.

(4) If any corrosion or cracks are found during any of the inspections required in paragraph (g)(1)(i), (g)(1)(iii), (g)(2)(i), or (g)(2)(iii) of this AD, before further flight, you must replace the stabilator horn assembly as specified in paragraph (g)(1)(ii), (g)(1)(iii), (g)(2)(ii), or (g)(2)(iii) of this AD, as applicable.

(5) For the bolts common to the torque tube and stabilator horn, install the nuts using a torque of 120-145 in.-lbs. for the actions required by paragraphs (g)(1), (g)(2), or (g)(3) of this AD.

Note 1 to paragraph (g) of this AD: The stated torque value of 120-145 in.-lbs. includes friction drag from the nut's locking element, which is assumed to be 60 in.-lbs. The installation torque can be adjusted according to the actual, measured friction drag. For example, if the friction-drag torque is measured to be 40 in.-lbs. (20 in.-lbs. less than the assumed value of 60 in.-lbs.), then the installation torque will be adjusted to be 100-125 in.-lbs. of torque.

(6) You may at any time replace the stabilator horn assembly with a new stabilator horn assembly, provided no corrosion or cracks were found during an inspection that would require replacement before further flight. When the new stabilator horn assembly reaches a total of 1,000 hours TIS after replacement or within 10 years after replacement, whichever occurs first, you must do one of the actions in paragraph (g)(1) of this AD.

Note 2 to paragraph (g) of this AD: Piper Aircraft, Inc. Service Bulletin No. 1160, dated December 26, 2005; Special Airworthiness Information Bulletin CE-04-88, dated September 15, 2004, at [http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgSAIB.nsf/0/77fc29bb15c8a85b8625721f0052ecb4/\\$FILE/CE-04-88.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgSAIB.nsf/0/77fc29bb15c8a85b8625721f0052ecb4/$FILE/CE-04-88.pdf); and AD 74-13-03, Amendment 39-2588 (41 FR 17371, April 26, 1976), are related to this AD action. For the attached torque tube, you may consider combining that inspection with the requirements of this AD.

## **(h) 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.

## **(i) Related Information**

For more information about this AD, contact Gregory K. 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](mailto:gregory.noles@faa.gov).

## **(j) 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. 1189, dated April 29, 2010.

(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: (772) 567-4361; fax: (772) 978-6573; Internet: <http://www.piper.com/company/publications.asp>.

(4) You may view this service information at the FAA, Small Airplane Directorate, 901 Locust St., 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 August 20, 2012.

John Colomy,  
Acting Manager, Small Airplane Directorate,  
Aircraft Certification Service.