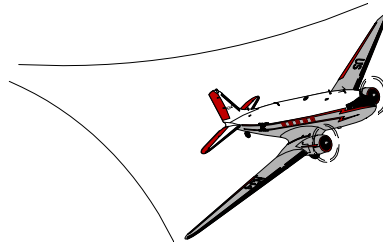


SPECIAL AIRWORTHINESS INFORMATION BULLETIN



U.S. Department
of Transportation

**Federal Aviation
Administration**

CE-04-88
September 15, 2004

Aircraft Certification Service
Washington, DC

www.faa.gov/certification/aircraft

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) alerts you, owners and operators of **The New Piper, Inc. PA-23, PA-24, PA-30, and PA-39 aircraft**, of potential corrosion of the stabilator torque tube, attached fittings, and attaching fasteners.

Model	Serial Number
PA-23-235	27-505 through 27-622
PA-23-250 (Navy UO-1)	27-1 through 27-4916, and 27-7304917 through 27-7554168
PA-E23-250	27-2505 through 27-4916, and 27-7304917 through 27-7554168. For S/N 27-7654001 through 27-8154030
PA-24	24-1 through 24-3687
PA-24-250	24-1, 24-103 through 24-3687
PA-24-260	24-3642, 24-4000 through 24-5034
PA-24-400	26-2 through 26-148
PA-30	30-1 through 30-2000
PA-39	39-1 through 39-162

Background

There is a possibility of corrosion in the stabilator torque tube, attached fittings (horn and balance weight), and attaching fasteners (bolts) on all subject aircraft listed above. The corrosion is in an area that may not be readily accessible and may progress undetected. Failure of the subject parts may lead to a loss of pitch control.

The inspection recommended below is beyond what is addressed in Airworthiness Directive (AD) 74-13-10 and Piper Service Letters 667A and 772. The AD requires, and the Service Letters specify, inspection of only the four bolts (two per side) that attach the stabilator halves to the torque tube. It does not address inspection of the tube, fittings, or other fasteners common to the torque tube.

We received a letter from the International Comanche Society's Technical Advisor who has extensive experience maintaining the Piper models. The letter included documentation that these areas are prone to corrosion. We further investigated service difficulty records, and confirmed additional reports of corrosion. We've included pictures of some corroded parts.



Corroded Torque Tube (PA-24)



Corroded Attach Bolt

Recommendation

After reviewing the data from this investigation, we recommend that you **perform the following inspections within the next 100 hours (unless previously accomplished) to determine if corrosion exists in either the stabilator torque tube, attached fittings (horn and balance weight), or attaching fasteners.** Repetitive inspections should then be accomplished at intervals not to exceed 3 years or 500 hundred hours. Initial and repetitive inspection intervals are the same as in AD 74-13-10. Note that the data also found corroded stainless steel bolts, even though these are currently considered terminating action to AD 74-13-03 inspections.

Disassemble and clean parts, as required, to inspect the following for corrosion or other signs of distress (i.e. elongated holes):

- Internal and external bore of the torque tube.
- Balance weight fitting, including internal bore.
- Control horn, including internal bore (same as balance weight fitting on PA-23 models).
- All fasteners common to the tube assembly. You are also encouraged to inspect the surrounding area for evidence of corrosion, cracking, elongated holes and other signs of distress. ADs and Piper service documents pertaining to the local area should also be identified and reviewed for compliance.

If you find corrosion, replace or repair the damaged parts. See Advisory Circular (AC) 43.13-1B, Acceptable Methods, Techniques, and Practices-Aircraft Inspection and Repair, and AC 43-4A, Corrosion Control for Aircraft for corrosion removal procedures.

At this time, we haven't determined acceptable allowances for material removal. Acceptable amounts of material removal may be location-dependent. Higher-stressed areas will be less tolerant of material removal. For repairs that involve material removal (without reinforcement), you must define a clear, accurate, and complete description of negligible damage limits. All repairs must be shown to comply with Subpart C–Strength Requirements and Subpart D–Design and Construction of Civil Aviation Regulations 3, as noted in the “Certification Basis” of Type Certificate Data Sheet 1A10 for the PA-23, 1A15 for the PA-24 Series, and A1EA for the PA-30/-39, or later regulations.

Also, we request you notify us if damage is found, at the address for the Atlanta Aircraft Certification Office listed below. Please include as much information as possible, including model number, serial number, time in service on aircraft and parts, physical description of damage (location, length, orientation, parts cracked, etc.), and if possible, pictures of the damage.

***Note:** Based on current information we only recommend these actions. We will continue this investigation and analyze any added information. We may require additional actions, such as the issuance of an AD based on this analysis.*

For Further Information, Contact

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