



**Piper Aircraft, Inc.**  
2926 Piper Drive  
Vero Beach, Florida, U.S.A. 32960

# SERVICE NO. 1189 BULLETIN

## PIPER CONSIDERS COMPLIANCE MANDATORY

Date: April 29, 2010

(S) (M)

**SUBJECT:**

**STABILATOR HORN ASSEMBLY INSPECTION**

**MODELS AFFECTED:**

PA-24 Comanche  
PA-24-250 Comanche  
PA-24-260 Comanche  
PA-24-400 Comanche  
PA-30 Twin Comanche  
PA-39 Twin Comanche C/R

**SERIAL NUMBERS AFFECTED:**

24-1 through 24-3687  
24-1; 24-103 through 24-3687  
24-3642 & 24-4000 through 24-5034  
26-2 through 26-148  
30-1 through 30-2000  
39-1 through 39-162

**COMPLIANCE TIME:**

Perform a first-time inspection of the Stabilator Horn Assembly upon reaching the initial one thousand (1000) hours of flight, with a recurring inspection to take place every one hundred (100) hours of operation thereafter. Installation of a new Stabilator Horn Assembly will relieve the repetitive inspection requirement, until the new Stabilator Horn reaches one thousand (1000) hours of operation.

The inspection schedule defined in this Service Bulletin shall apply until superseded by requirements added to the Service Manual.

**APPROVAL:**

The technical content of this Service Bulletin has been shown to comply with the applicable Federal Aviation Regulations and is FAA approved.

**PURPOSE:**

Reports have been received of cracks developing in the Stabilator Horn Assembly. Left uncorrected, this condition could cause separation of the Stabilator Horn from the Stabilator Torque Tube, leading to a reduction in pitch control.

**INSTRUCTIONS:**

1. Remove the Stabilator Horn Assembly (includes Stabilator Horn and the longitudinal Balance Weight Tube that is press-fit into the Stabilator Horn) from the aircraft. Proper inspection will require the disassembly of the Stabilator Horn Assembly from the Balance Weight, Stabilator Control Cable, and Stabilator Torque Tube. Refer to the appropriate Piper Service Manual for specific procedures.

**NOTE:** Examine all hardware and components that are removed during the inspection procedure, and repair or replace on condition.

**NOTE:** Since the Balance Weight Tube is press-fit into the Stabilator Horn and bolted together through a close-tolerance hole that is match-drilled at the factory, disassembly of these two parts is not recommended, nor is it required to accomplish this inspection.

(OVER)

ATA: 5510

**INSTRUCTIONS: (continued)**

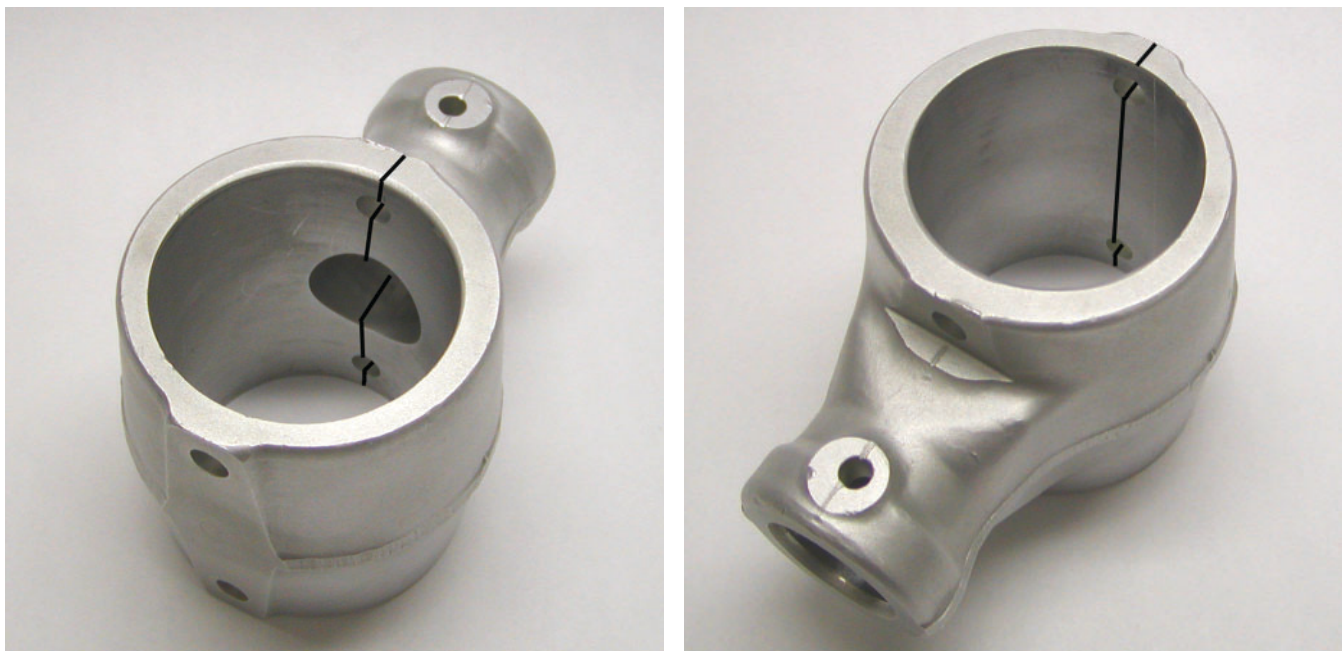
2. Inspect the inside and outside of the Balance Weight Tube for signs of corrosion. No service limits exist for the outside diameter and wall thickness of this tube. Therefore, any measurable corrosion requires replacement of the Stabilator Horn Assembly.
3. Clean the inner surface of the Stabilator Horn with isopropyl alcohol, and perform dye penetrant inspection per AC 43.13-1B (Aircraft Inspection and Repair Manual), with specific emphasis on the areas denoted by heavy lines in Figure 1.

**NOTE:** When cracks occur, they have been found to originate at an inner surface of the Stabilator Horn, as shown in Figure 1. Therefore, removal of exterior paint is not required for inspection. However, the Stabilator Horn **MUST** be removed from the Stabilator Torque Tube, in order to gain visual access to these areas.

4. If cracking or corrosion is discovered in the Balance Weight Tube or Stabilator Horn, order and install a replacement Stabilator Horn Assembly. Refer to Table 1 for the applicable part number.

**NOTE:** The Horn Assemblies shown in Table 1 are supplied with a Stabilator Balance Block Tube that has (2) undersized holes common to the Stabilator Balance Weight, in order to provide a precise match-up with the existing Stabilator Balance Weight. Prior to installing the Horn Assembly in the aircraft, assemble the existing Stabilator Balance Weight to the new Horn Assembly, as follows: Slide the shaft of the Stabilator Balance Weight into the open end of the Stabilator Balance Block Tube. Align the (2) fastener holes in the shaft of the Stabilator Balance Weight with the undersized holes in the Stabilator Balance Block. Line ream the holes to a final size of .251 to .249 inches in diameter, 2 places. Install fasteners per the appropriate Illustrated Parts Catalog.

5. If no cracking or corrosion is discovered, clean inspection areas with isopropyl alcohol to remove dye penetrant. Reinstall all serviceable parts (Refer to the appropriate Piper Service Manual). At locations where paint was removed, apply two coats of epoxy primer. Treat bare metal surfaces with Dinitrol AV8 or CRC Protector 100 Corrosion Inhibitor.
6. Make a logbook entry indicating compliance with this Service Bulletin and return aircraft to service.



**Figure 1**  
**Lines indicate Inspection Area**

**MATERIAL REQUIRED:**

<b>MODEL</b>	<b>HORN ASSEMBLY</b>	<b>AC S/N AFFECTED</b>
PA-24 Comanche	20399-004	24-1 through 24-102
PA-24 Comanche	20399-005	24-103 through 24-3687
PA-24-250 Comanche	20399-004	24-1
PA-24-250 Comanche	20399-005	24-103 through 24-3687
PA-24-260 Comanche	20399-005	24-3642 through 24-5028
PA-24-400 Comanche	22882-003	26-2 through 26-148
PA-30 Twin Comanche	22882-003	30-2 through 30-2000
PA-39 Twin Comanche	22882-003	39-1 through 39-155

**Table 1**

**AVAILABILITY OF PARTS:** Your Piper Service Facility.

**EFFECTIVITY DATE:** This Service Bulletin is effective as of release date.

**SUMMARY:** Applicable Factory Participation is limited to new aircraft in warranty at the time of compliance. Factory Participation will remain in effect for a period of time not to exceed 180 days from the date of this Service Bulletin.

Please contact your Factory Authorized Piper Service Facility to make arrangements for compliance with this Service Bulletin in accordance with the compliance time indicated.

**NOTE:** Please notify the factory of any address/ownership corrections. Changes should include aircraft model, serial number, current owner's name and address.

Corrections and/or changes should be directed to:

PIPER AIRCRAFT, INC.  
Attn: Customer Service  
2926 Piper Drive  
Vero Beach, FL 32960