



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

# SERVICE NO. 1251 BULLETIN

## PIPER CONSIDERS COMPLIANCE MANDATORY

Date: April 10, 2013 (S)

**SUBJECT:**

**STABILATOR TRIM BARREL INSPECTION**

**MODELS AFFECTED:**

- PA-28-140 Cherokee Cruiser
- PA-28-150 Cherokee
- PA-28-160 Cherokee
- PA-28-180 Cherokee
- PA-28S-160 Cherokee
- PA-28S-180 Cherokee
- PA-28-235 Cherokee Pathfinder
- PA-28-236 Dakota
- PA-28-151 Warrior
- PA-28-161 Cadet
- PA-28-161 Warrior II
- PA-28-161 Warrior III
- PA-28-180 Archer
- PA-28-181 Archer II
- PA-28-181 Archer III
- PA-28-201T Turbo Dakota
- PA-28R-180 Arrow
- PA-28R-200 Arrow
- PA-28R-200 Arrow II
- PA-28R-201 Arrow III
  
- PA-28R-201T Turbo Arrow III
- PA-32-260 Cherokee Six
- PA-32-300 Cherokee Six
- PA-32S-300 Cherokee Six Seaplane
- PA-32R-300 Lance
- PA-32R-301 Saratoga SP
  
- PA-32R-301 Saratoga II HP
  
- PA-32R-301T Turbo Saratoga SP
- PA-32-301 Saratoga
- PA-32-301T Turbo Saratoga
- PA-32R-301T Saratoga II TC
- PA-32-301FT Piper 6X
- PA-32-301XTC Piper 6XT

**SERIAL NUMBERS AFFECTED:**

- All
- All
- All
- All
- All
- All
- All
- All
- All
- All
- All
- All
- All
- All
- 2816110 thru 2816119; 2842001 thru 2842387
- All
- All
- 2890206 thru 2890231; 2843001 thru 2843700
- All
- All
- All
- All
- 28R-7737002 thru 28R-7837317;
- 2837001 thru 2837061; 2844001 thru 2844145
- All
- All
- All
- All
- All
- 32R-8013001 thru 32R-8613006;
- 3213001 thru 3213028; 3213030 thru 3213041
- 3213029; 3213042 thru 3213103;
- 3246001 thru 3246217; 3246219; 3246223
- 3246218; 3246220 thru 3246222;
- 3246224 thru 3246244
- 3229001 thru 3229003
- All
- All
- 3257001 thru 3257493
- 3232001 thru 3232074
- 3255001 thru 3255051

**COMPLIANCE TIME:** To coincide with next regularly scheduled maintenance event, but not to exceed the next one hundred (100) hours time in service.

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

**PURPOSE:** To provide instructions for identifying, replacing, and returning an incorrect vendor supplied stabilator trim barrel.

Left uncorrected, an incorrect stabilator trim barrel could lead to accelerated wear and eventual failure of the stabilator trim cable.

**CAUTION:** IN THE EVENT THAT A STABILATOR TRIM CABLE SHOULD FAIL, REGARDLESS OF THE CAUSE, THE STABILATOR TRIM TAB WILL REMAIN FROZEN IN PLACE UNTIL REPAIRS ARE COMPLETED. IF THIS CONDITION OCCURS DURING FLIGHT, OPERATORS SHOULD DISCONNECT THE AUTOPILOT, AND EXPECT TO EXPERIENCE AN INCREASE IN PITCH CONTROL FORCES WHEN MAKING CHANGES TO AIRCRAFT CONFIGURATION OR AIRSPEED.

## **INSTRUCTIONS:**

### **Part I. Applicability Determination**

1. Some of the aircraft listed in the MODELS AFFECTED section of this service bulletin may have been delivered from the factory with an incorrectly manufactured stabilator trim barrel, Piper part number (P/N) 63530-000. For those aircraft, as identified below, direct examination of the stabilator trim barrel is required. Proceed to Part II.

<u>AIRCRAFT MODEL</u>	<u>SERIAL NUMBER RANGE</u>
PA-28-161 Warrior III	2842373 thru 2842387
PA-28-181 Archer III	2843699 thru 2843700
PA-28R-201 Arrow III	2844145

2. For all other aircraft listed in the MODELS AFFECTED section of this service bulletin, review service history records to determine if the factory original stabilator trim barrel has ever been replaced.
  - If the stabilator trim barrel, Piper P/N 63530-000, was replaced at any time after 01/01/2012, there is a potential that the stabilator trim barrel is an incorrect part. Direct examination of the stabilator trim barrel is required. Proceed to Part II.
  - If the stabilator trim barrel has never been replaced, or if the stabilator trim barrel was replaced prior to 01/01/2012, there is no need for an inspection. Proceed to Part IV.

### **Part II. Inspection**

1. Remove the tailcone access panel, retaining all hardware for reinstallation.

**NOTE:** Removal of the aft stabilator trim cable is not required to accomplish this inspection.

2. Identify the stabilator trim barrel and examine the routing of the stabilator trim cable at the locations shown in Figure 1. Additionally, compare the installed trim barrel against the CORRECT and INCORRECT trim barrel details shown in Figure 2.

**NOTE:** A correct trim barrel is distinguished by visual examination of the stabilator trim cable at the locations where the cable passes through the slots in the upper and lower flanges of the trim barrel. A correct trim barrel will feature diagonally machined grooves in the flange to accommodate the cable routing. The installed cable is nested into these grooves, reducing cable strain. An incorrect trim barrel will have these diagonally machined grooves located on the opposite side of the slot from the cable routing.

- If the geometry of the stabilator trim barrel matches the illustrations marked "CORRECT" in Figure 2, then the stabilator trim barrel is acceptable for continued use. Reinstall the tailcone access panel, and proceed to Part IV.
- If the geometry of the stabilator trim barrel matches the illustration marked "INCORRECT" in Figure 2, replacement of the stabilator trim barrel and aft stabilator trim cable is required. Proceed to Part III.

**Part III. Replacement**

1. Order replacement stabilator trim barrel, as well as replacement aft stabilator trim cable. Refer to the MATERIAL REQUIRED section of this service bulletin for the appropriate replacement part numbers.
2. Using instructions in the appropriate maintenance manual, remove the incorrectly manufactured stabilator trim barrel and aft stabilator trim cable. Return both parts to Piper for examination.
3. Using instructions in the appropriate maintenance manual, install, rig and adjust the new stabilator trim barrel and aft stabilator trim cable.
4. Reinstall the tailcone access panel, and proceed to Part IV.

**Part IV. Documentation of Compliance**

Make a logbook entry indicating compliance with this service bulletin.

**MATERIAL REQUIRED:**

**TABLE 1**

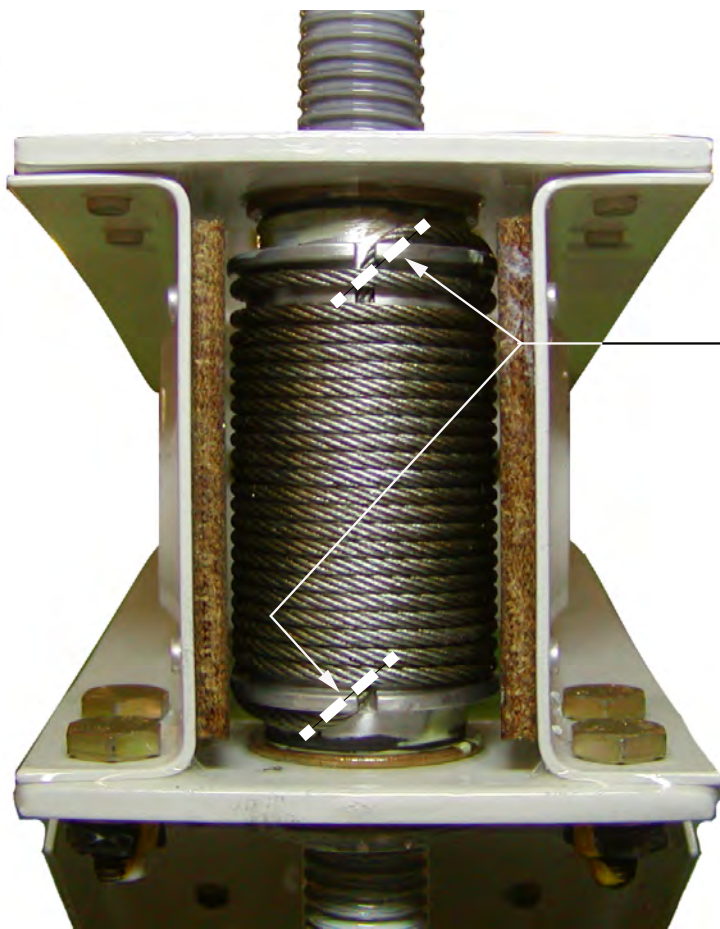
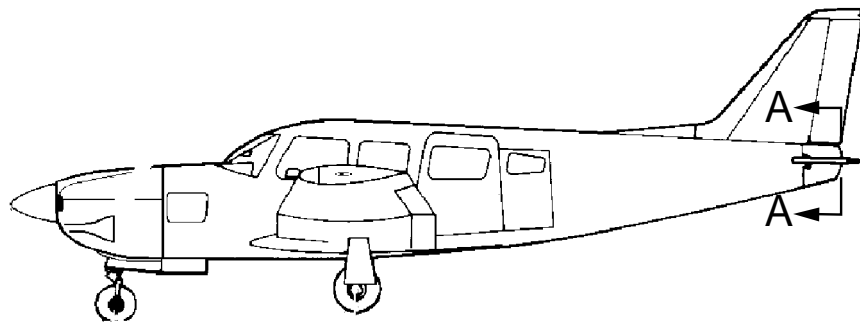
Stabilator trim barrel inspection replacement parts

Qty	Piper Part Number	Nomenclature
1 (on condition)	63530-000	BARREL – Stabilator Trim
1 (on condition)	62701-047**	CABLE – Stabilator Trim, aft (galvanized steel)
	62701-216**	CABLE – Stabilator Trim, aft (stainless steel)

**NOTE:**

\*\* Stainless steel control cables were offered as a factory option on the affected aircraft. Additionally, some aircraft manufactured between 1989 and 2001 were delivered with stainless steel cables as standard equipment. At the operator’s discretion, either replacement cable is acceptable. The critical difference in performance is as follows:

- Galvanized steel control cables typically have a longer service life, due to the lubricating quality of the zinc coating that surrounds each cable strand.
- Stainless steel control cables are more resistant to corrosion, but have a more critical lubrication requirement. Adherence to the lubrication schedule described in the appropriate Piper maintenance manual is essential to the service life of stainless steel control cables.



Dashed lines identify correct geometry of diagonally machined grooves in the stabilator trim barrel flanges.

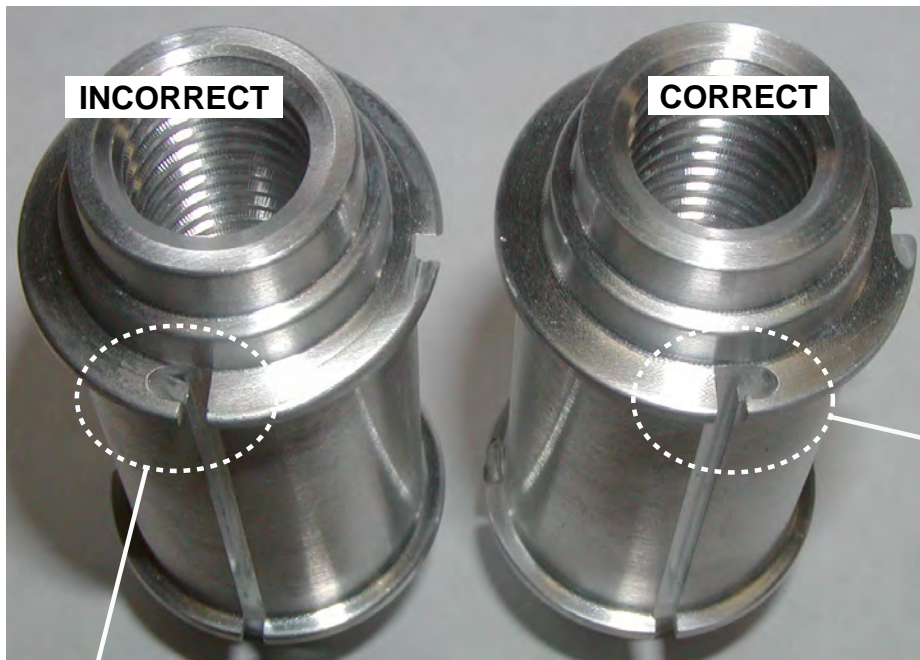
These dashed lines are shown in this figure for illustration purposes only. These dashed lines are not visible on the actual part.

VIEW A-A  
CORRECT

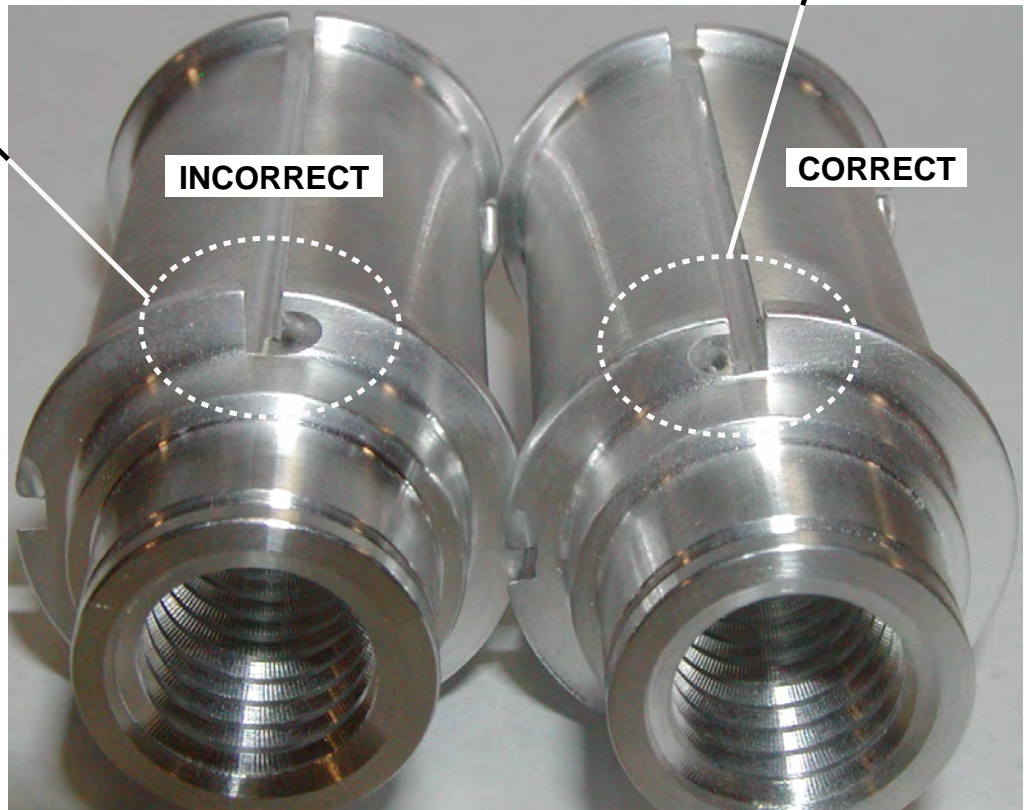
Rear view of correct stabilizer trim barrel, with cable properly routed.

Figure 1

TOP



**INCORRECT** geometry of diagonally machined grooves in the stabilator trim barrel flanges.



BOTTOM

Figure 2

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

**EFFECTIVITY DATE:** This Service Bulletin is effective upon receipt.

**SUMMARY:** Applicable Factory Participation is limited to new aircraft in warranty at the time of compliance. Piper will also cover those aircraft out of warranty where the incorrectly manufactured trim barrel was installed during service. Factory participation will remain in effect for a period of time not to exceed 180 days from the issue date of this service bulletin.

Two (2) hours is the maximum time to be allowed if the replacement of the stabilator trim barrel and stabilator trim aft cable are required.

**NOTE:** To obtain warranty credit under the guidelines outlined in SB 1251, submit the Warranty Claim Form enclosed in this service bulletin along with the required attachments and the incorrectly manufactured trim barrel and cable to the dealer in your area. For dealer locations go to [www.piper.com](http://www.piper.com) and select the Dealer Network link at the bottom of the page.

**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 Support  
2926 Piper Drive  
Vero Beach, FL 32960



Service Bulletin 1251  
Stabilator Trim Barrel Inspection  
Warranty Claim Form

To obtain warranty credit under the guidelines outlined in SB 1251, submit this form and the attachments listed below along with the incorrectly manufactured trim barrel and cable to the dealer in your area. For dealer locations go to [www.piper.com](http://www.piper.com) and select the Dealer Network link at the bottom of the page.

Aircraft Serial Number: \_\_\_\_\_

Aircraft Registration Number: \_\_\_\_\_

Owner Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Phone Number: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Tach Hours (on the incorrectly  
manufactured) Trim Barrel: \_\_\_\_\_

Attachments:

1. A copy of the logbook entry for initial installation of the trim barrel (incorrectly manufactured part). This step is not applicable to aircraft listed in Part I Step 1.
2. A copy of the logbook entry for the installation of a replacement trim barrel (correct part) and cable.
3. A copy of the work order for the replacement trim barrel (correct part) and cable.
4. A copy of the new part invoice for the trim barrel (correct part) and cable.
5. Incorrectly manufactured trim barrel and cable.