



SERVICE LETTER

No. 628

Piper Aircraft Corporation

Lock Haven, Pennsylvania, U.S.A.

September 18, 1972

Subject: Stabilator Trim Control System Inspection

Models Affected:
PA-23-250 (Six Place) and
PA-E23-250 (Six Place) Aztec

Serial Numbers Affected:
27-2850 and up.

Compliance Time: Recommended at the next 100-hour inspection or annual inspection, whichever occurs first.

Purpose: Field reports have been received describing improper function of the stabilator trim system related to the above referenced aircraft series. The problems as described most likely occurred due to slippage of the stabilator trim cable at the Stabilator Trim Cable Pulley (Part No. 31979-00).

Stabilator Trim Control System cable slippage may occur as a result of one or more of the following causes:

1. Worn pulley, causing cable "bottoming" in pulley groove;
2. Incorrect system rigging and cable mis-routing;
3. Cable tension too low;
4. Cable linkage loose or worn;
5. Excessive lubricant build-up on cables; and
6. Improper function (i.e., sticking or binding) of stabilator trim tab control drum.

This service release provides instructions to inspect the stabilator trim control system to detect possible sources of cable slippage and to insure proper operation of the stabilator trim control system.

- Instructions:
1. Gain access to the stabilator trim control system as prescribed in the Aztec Service Manual, Section V, Surface Controls.
 2. Inspect stabilator trim cable pulley, Part No. 31970-00, to insure that cable is not "bottoming" in pulley groove -- see attached sketch. Cable "bottoming" in pulley groove is caused by a worn pulley -- replace pulley.

(over)

Instructions: (continued)

3. Check along length of control cable to insure proper cable routing and travel with respect to rub blocks, guides, idler pulley, etc.
4. Remove excess lubricant build-up from cable by the following:
 - a. Dampen a clean white cloth with Methyl-Ethyl-Kelone (MEK) solvent;
 - b. With MEK-dampened cloth in hand, grasp cable (in vicinity of stabilator trim crank);
 - c. Crank cable full travel fore and aft -- note residue on cloth;
 - d. Repeat until grease residue is barely noticeable on cloth.
5. Gain access to stabilator trim tab control drum; disassemble and
 - a. Check opposing surfaces of the drum and the drum bracket for dirt, grit, burrs, etc. which, if present, could cause drum binding (see attached sketch).
 - b. Brush away dirt or grit with an artist's brush; use MEK sparingly, if necessary. For metal burr removal, emery the burred surfaces. If emery cloth is used, be certain to clean emiered surfaces with an artist's brush and/or MEK.
 - c. Lubricate the trim control drum assembly -- refer to periodic inspection report.
6. Rerig system, according to service manual instructions.
7. Adjust present stabilator trim cable tension to 15 lbs. \pm 20% (refer to Aztec Service Manual Table V-I, Control Surface Travel and Cable Tension).

NOTE: A service manual revision is in process which will reflect the new stabilator trim cable tension setting.

8. Make appropriate log book entry.

Material Required:

One (1) each (per aircraft) Stabilator Trim Control Cable Pulley, Part No. 31970-03, as required per Instructions No. 2, above. Suggested unit list price -- \$11.92 (31970-03 replaces 31970-00).

Availability of Parts:

Your Piper Dealer.

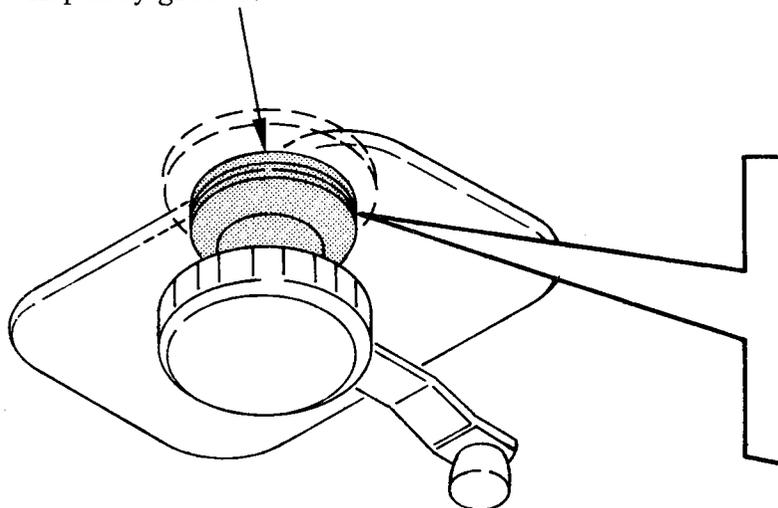
Effectivity Date:

This Service Letter is effective October 2, 1972.

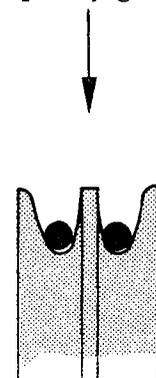
Summary:

Please contact your Piper Dealer to make arrangements for compliance with this Service Letter in accordance with the provisions of Compliance Time, above. The stabilator trim control system inspection procedure denoted in this service release may easily be accomplished at minimum expense to you at the above recommended 100-hour or annual inspection interval, when the subject system is normally exposed for routine inspection.

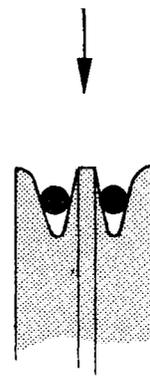
Inspect Stabilator Trim Cable Pulley to insure that cable is not "Bottoming" in pulley groove.



Pulley Worn:
Cable "Bottoms"
in pulley groove.

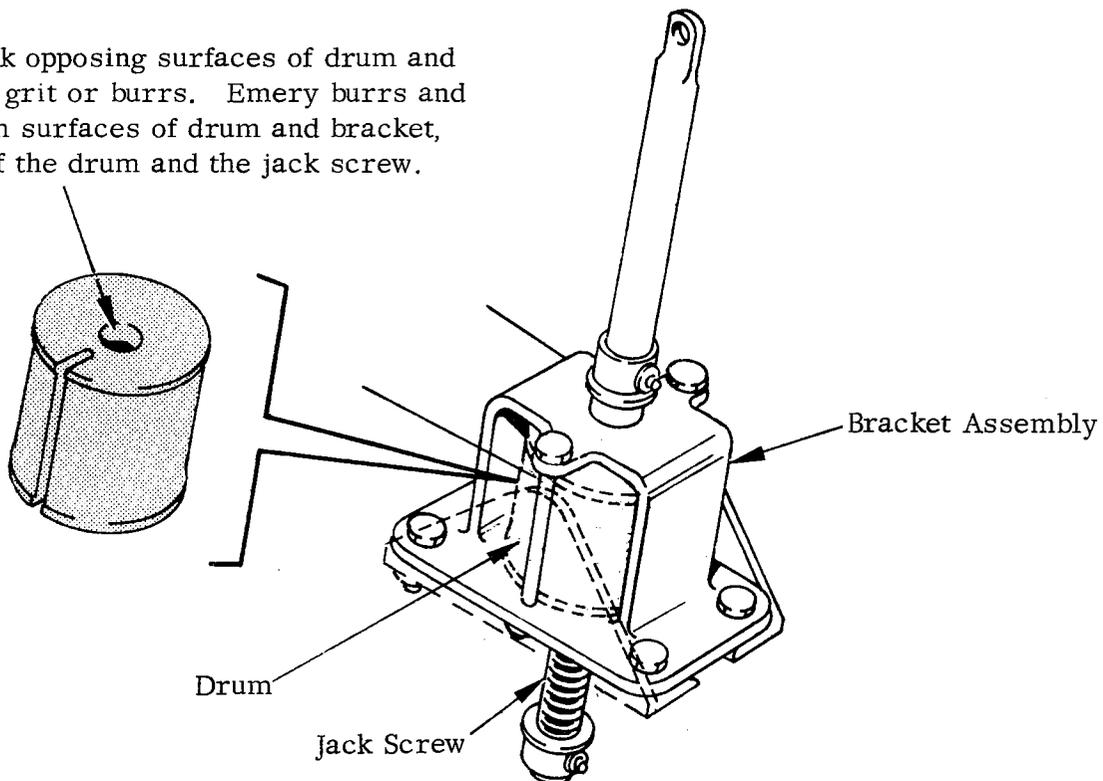


Serviceable Pulley:
Cable rides above
bottom of pulley
groove.



STABILATOR TRIM CONTROL PULLEY

Remove drum and check opposing surfaces of drum and drum bracket for dirt, grit or burrs. Emery burrs and clean dirt and grit from surfaces of drum and bracket, and from the threads of the drum and the jack screw.



STABILATOR TRIM TAB CONTROL DRUM