



SERVICE BULLETIN

SB-190

Contains information pertaining to a threat to the continued safe operation of an aircraft or to the safety of persons or property on the ground unless some specific action is taken by the aircraft owner.

ATA 7603

DATE: March 1, 2005

SUBJECT: **Throttle Cables**

MODEL/SERIALS AFFECTED: AG-5B 99998, 10000 through 10174 and
10201 through 10246

TIME OF COMPLIANCE: Part A: Prior to each flight.
Part B: Within the next 25 hours time in service or the next scheduled inspection, which ever occurs first and every 100 hours thereafter until the installation of Service Kit No. 156.

GENERAL:

We have received reports of throttle cables, P/N A920-0410, installed on the above listed aircraft, failing in service which could result in loss of engine power control. These failures have occurred on the carburetor end of the cable where the actuator sleeve is swaged into the swivel collar. Some actuator sleeves have separated from the collar. This allows the sleeve to slide down the actuator shaft, exposing the wire cable, which allows the cable to buckle when the throttle lever is advanced. It is suspected that the cause of the failure is due to wear of the swivel joint caused by vibration and contamination.

INSPECTION:

Part A. Prior to each flight, until the installation of Service Kit 156, inspect the throttle cable as follows:

Refer to Figure 1

1. Open the left engine cowl door and secure with the cowl prop rod.
2. Locate throttle cable (1) and sleeve (2).
3. Grasp sleeve (2) as depicted in Figure 1 and attempt to pull the sleeve downward from swivel collar (3) using hand force.
 - a. If sleeve (2) remains secure in the swivel, the cable is satisfactory for flight. Close and latch the left cowl door.
 - b. If sleeve (2) pulls away from the swivel, a serviceable throttle cable must be installed prior to further flight.

Part B. Within the next 25 hours time in service or at the next scheduled inspection, whichever occurs first and at each 100 hours thereafter until the installation of Service Kit 156, accomplish the following:

Reference Figure 2

1. Open the left side engine cowl door and secure with the cowl prop rod.
2. Locate the throttle control cable (1).
3. Remove nuts, bolts and washers securing the throttle rod end bearing (5) to throttle arm (8).
4. Remove safety wire (9), and two nuts, washers and bolts (6) and pull the cable free of attach bracket (4).

Reference Figure 3

5. Route the cable over the top of the engine mount and engine to gain access to the cable end.
6. Remove the two rubber boots [Figure 2 items (3) and (7)] from sleeve (2) and inspect for cracks and/or deterioration of the boots.
7. Install a "C" clamp on sleeve (2) approximately 0.50 inch from swivel collar (10).

CAUTION: Do not over tighten the clamp as damage to the sleeve may occur.

Reference Figure 4

8. Push the sleeve as far as possible into swivel collar (10) then, using calipers, measure and record the distance from the "C" clamp to the edge of the swivel collar.
9. Pull the cable guide outward from swivel collar (10) as far as possible using hand force then measure and record the distance from the "C" clamp to the edge of the swivel collar.
10. If the difference between the in and out distance from the clamp to the swivel collar is 0.045 inch or greater, the throttle cable must be replaced with a serviceable cable prior to further flight. If the difference is less than 0.045 inch, reinstall the cable end in the opposite order as removed. If the rubber boots show signs of cracks and/or deterioration, install new rubber boots.
11. Reattach the throttle cable and rig as follows:

Reference Figure 5

- (a) Position shim (9) and throttle cable housing (12) in the support bracket (7) and install the clamp (6).

NOTE: The clamp tang must engage the slot in the throttle plunger sleeve to secure the throttle cable at the support bracket.

- (b) Install safety wire to secure throttle cable to support bracket. (Detail A)
- (c) Install the boot (5) and (10) on the actuator sleeve (4).
- (d) Check carburetor throttle arm (2) with the arm against full open stop. The arm should be 5° forward of vertical. If the throttle arm requires adjustment, re-torque the attaching nut (13) to 30 - 48 inch-pounds and install the cotter pin after adjustment.

- (e) Place a 1/8 inch spacer between the throttle control lever and its mechanical forward stop at the throttle quadrant.
- (f) Adjust the threaded rod end bearing (1) to position carburetor throttle arm (2) against the full open stop with the rod end attached to the inner hole of the throttle arm. Ensure there is a minimum of 3/16 inch rod end engagement. Secure with bolt, washers and nut (13). ***It is essential that the large washer is located under the head of the bolt as shown in Detail B.***
- (g) The space between the throttle control lever and its forward stop must be 1/8 to 1/4 inch when the carburetor full throttle stop is reached.
- (h) The space between the throttle control lever and its aft stop must be 1/8 to 1/4 inch when the carburetor idle stop is reached.
- (i) Check all attachments including jam nuts and safety devices to ensure proper installation.
- (j) Check throttle for smooth operation.
- (k) Close cowl.

12. Record compliance in the aircraft log book.

13. Complete the green Compliance Card and mail to:

Tiger Aircraft LLC
226 Pilot Way
Martinsburg, WV 25401

Labor Allowance:

Inspection A: No labor will be paid for this inspection.

Inspection B: Aircraft covered under the Tiger Aircraft LLC Warranty will be given a 1-hour labor credit for the inspection only, 2 hours plus parts cost if throttle cable replacement is required.

For questions regarding this Service Bulletin, call Tiger Aircraft Technical Support at 304-267-1000.

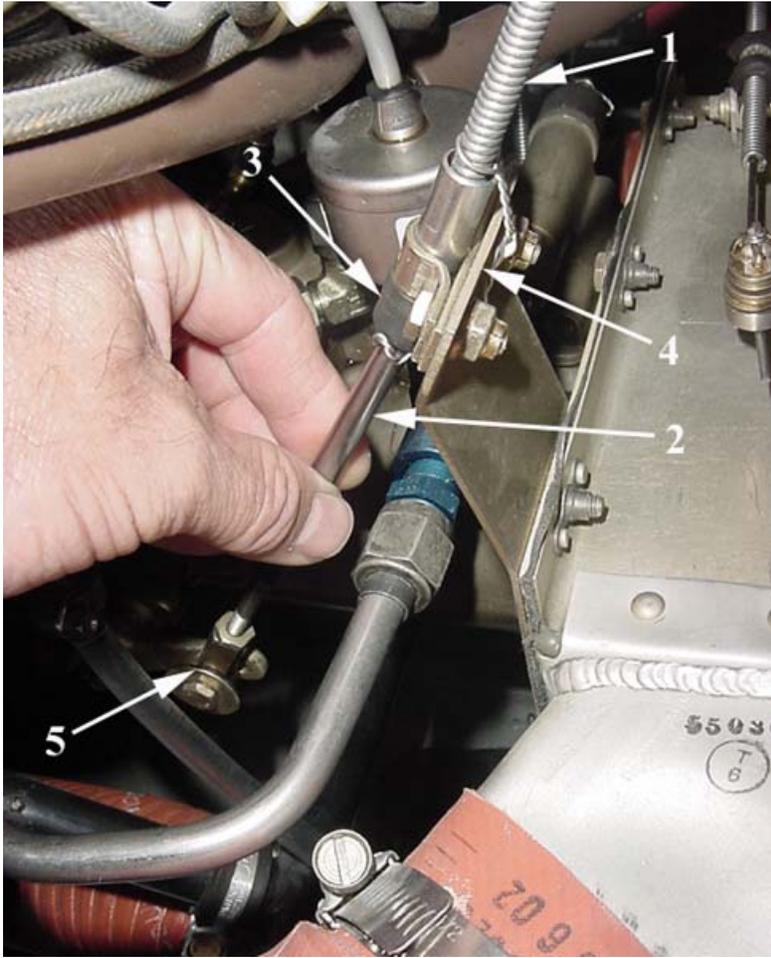


Figure 1

- Figures 1, 2, 3 & 4**
1. Throttle Cable
 2. Sleeve
 3. Swivel Collar (Under Boot)
 4. Cable Attach Bracket
 5. Rod End Bearing
 6. Bolt, Nut & Washer
 7. Rubber Boot
 8. Throttle Arm
 9. Safety Wire
 10. Swivel Collar

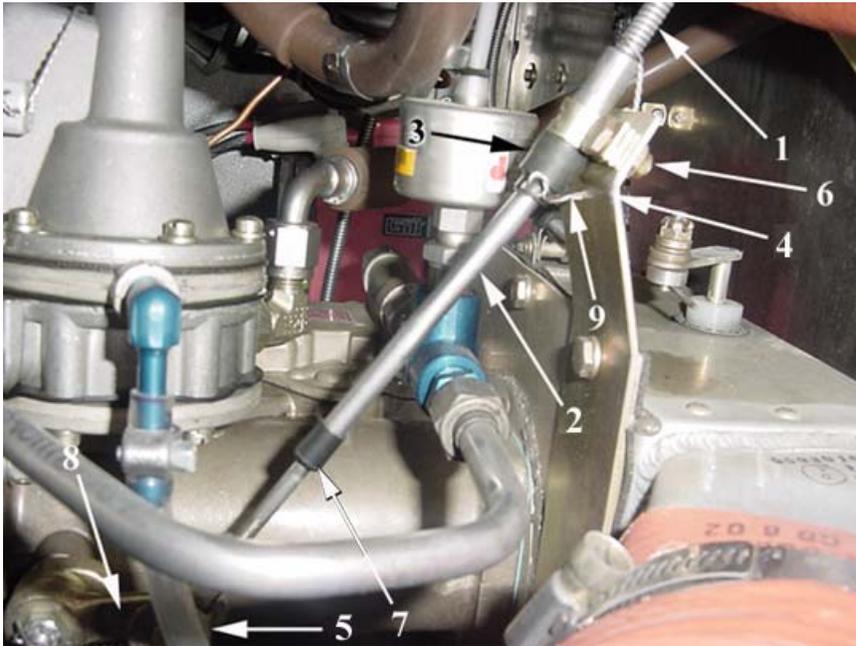


Figure 2

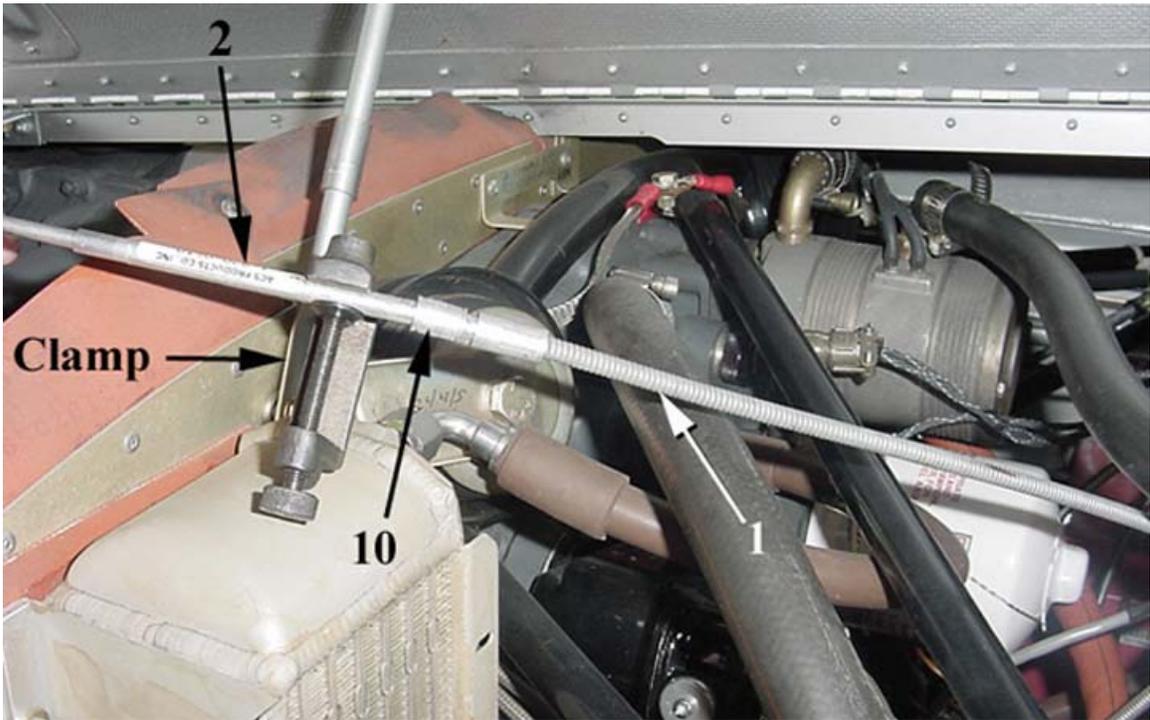


Figure 3

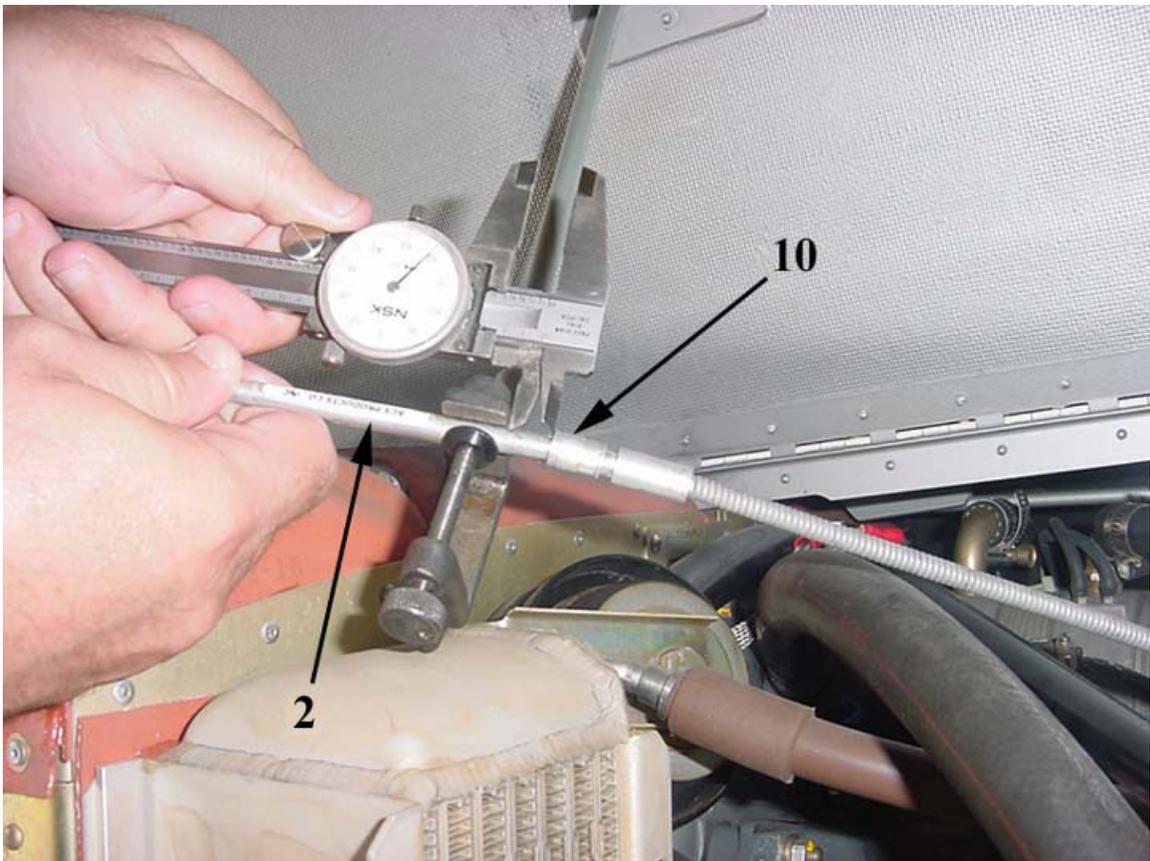


Figure 4

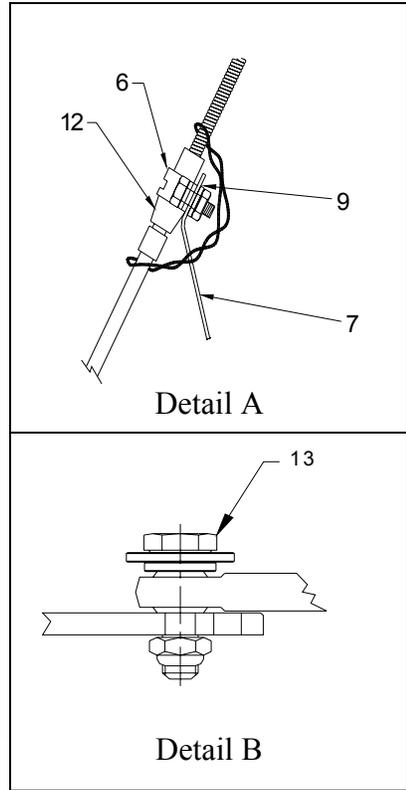
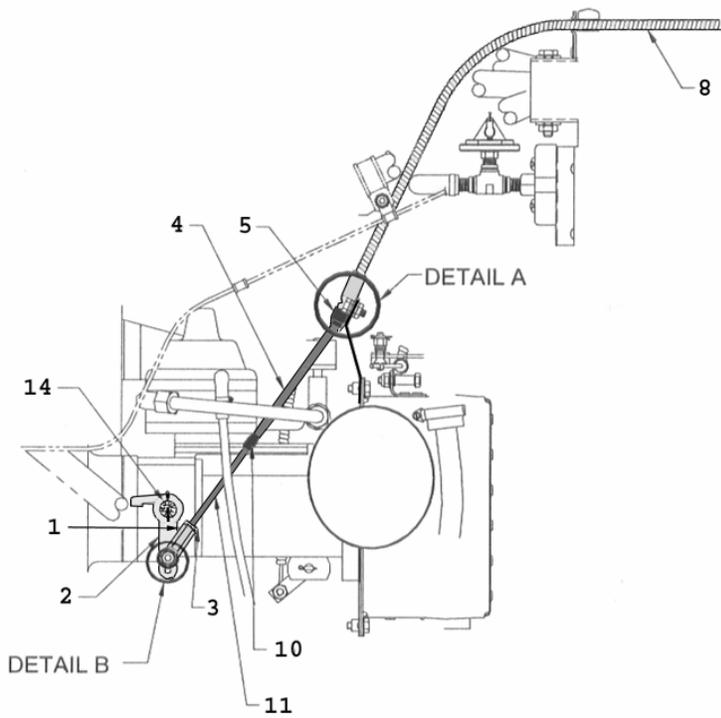


Figure 5