

There are three types of Smiths tach: external current loop, internal current loop, and electronic pulse sensing (late models). Current sensing tachs have a wire loop with two turns that passes the coil current through a pickup at the tach. This loop can be external or internal. Electronic tachs have a trigger wire that connects to the COIL- terminal.

### MODIFICATION OF SMITHS CURRENT SENSING TACHS

Some older British vehicles use Smiths current sensing tachs. The wire from the coil positive terminal to the ignition switch passes through a current pickup at the tach. Installation of a electronic ignition may cause erratic operation of a current sensing tach, due to the higher coil current. Modification of the current pickup to reduce the signal level will usually eliminate the problem.

1. Remove the Smiths tach from the instrument panel. The tach has two threaded studs that are retained from the rear of the panel. Label all wires to avoid errors upon reinstallation. **WARNING:** Improper connection may damage the tach.
2. Locate the external current pickup on the rear of the tach. Refer to **Figure 27**. If your tach does not resemble this figure but has coil and ignition key wires going to a plug, it may have an internal current pickup. In this case, it will be necessary to disassemble the tach. Once the tach is disassembled, you can use the same general procedure as explained in step 3.
3. Modify the current pickup by removing one loop of wire as shown in **Figure 28**. Note the direction that the wire passes through the pickup. If this direction is reversed, the tach will not function.
4. Recalibrate the tach for best accuracy. Connect a test tach and have a helper rev the engine. Hold the tach in the same position it is mounted (orientation may affect calibration). Adjust the calibration screw on the back of Smiths tach until the reading matches the test tach. 4,000 RPM is a reasonable engine RPM to use for calibration. Please note that older Smiths tachs may vary as much as 500 RPM throughout the RPM range. This variation is not the fault of the ignition system.
5. Reinstall tach in instrument panel. Check all wire connections.

### TROUBLESHOOTING

#### SMITHS ELECTRONIC TACHS

In some cases the tach will not read the correct RPM after installation of a electronic ignition. A calibration screw on the back of the tach can usually be adjusted to give correct readings. If the tach still reads high, put a resistor in the tach wire to reduce the signal level. Start with a 10K ohm 1/2 watt. You can go as low as 1K ohm 1/2 watt. You can buy the resistors from Radio Shack or other electronic suppliers. Solder into tach wire and wrap with electrical tape for protection.

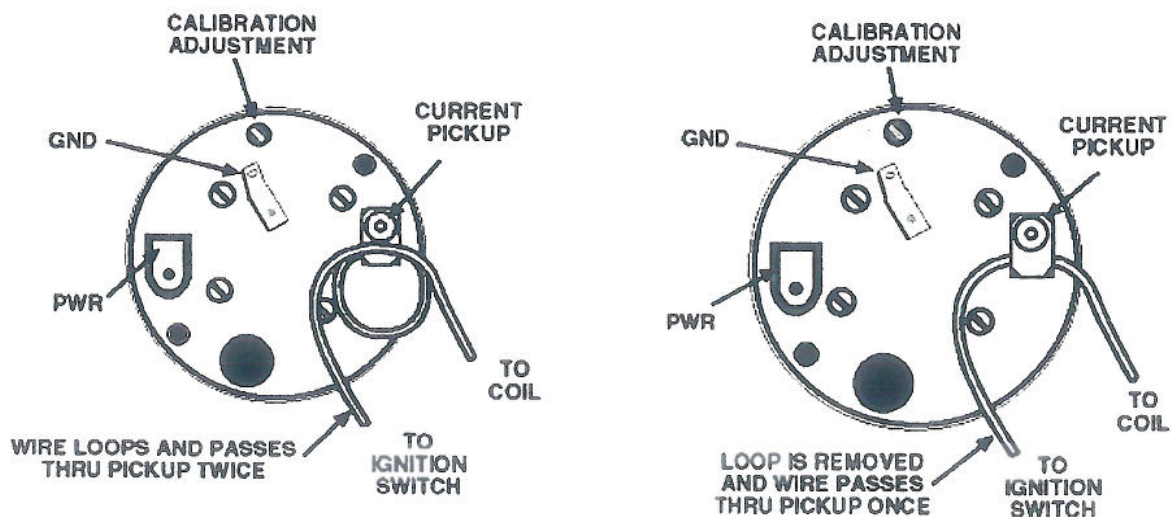


Figure 27. Smiths Tach