

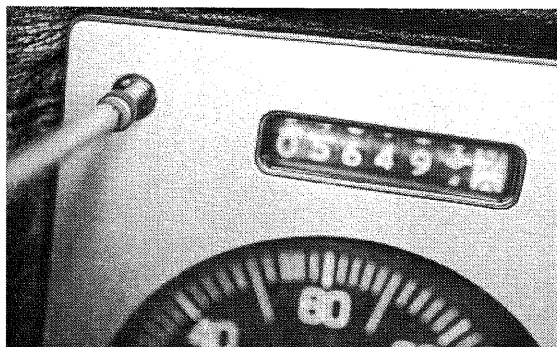
## Tachometer Modifications for Engine Conversions

by Joe Wynman

The tachometer in the Fiero is a useful device for a number of reasons. Many times making changes to the tachometer would be desirable. The most common changes are to make the GT style backlit tachometer work with the four cylinder Fieros. The second common application is to use the tachometer with an engine swap. The engine swap could include a V-8 for either the four or six cylinder engines. Then again changing over the four cylinder to a V-6 or V-8 is also popular.

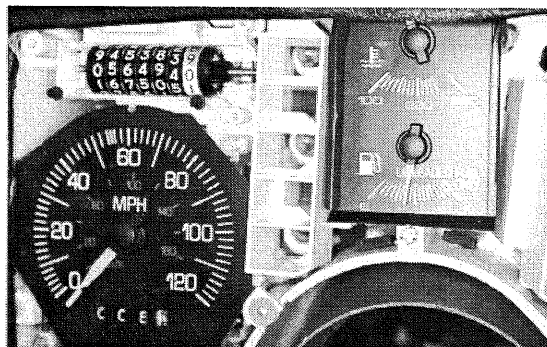
The tachometer you have in your Fiero was designed to work with either the stock four cylinder or the V-6 engine. If you leave the stock tachometer untouched, it will read incorrectly. The stock Fiero tachometer can easily be modified to work with the V-8 engine. The hardest part of the conversion is the removal of the tachometer from the dash of the Fiero. In reality, the removal process is easier than you may think. This is one of those jobs where you won't even get dirty, and most of the steps can be performed as you sit comfortably in the Drivers seat of your Fiero. Once it has been removed, you will have to remove one of the parts off the circuit board, and replace it with three small parts. Some soldering is required, but it is a simple operation, which can be done at home with a few simple tools. All of the parts required for the conversion are available at your local Radio Shack store at a cost of less than \$2.00.

- (1) If you have tilt steering, raise it to the highest position. Remove lower valance by removing the four 7-mm screws.
- (2) If you have tilt steering, lower the steering column to its lowest position. Remove the front decorative bezel, which is over the tachometer, temperature gage, fuel gage, and speedometer, by removing the four T-15 Torx screws which hold the panel in place.
- (3) Using a 7/32" socket and drive, remove the four or five screws holding the plastic bezel in place.

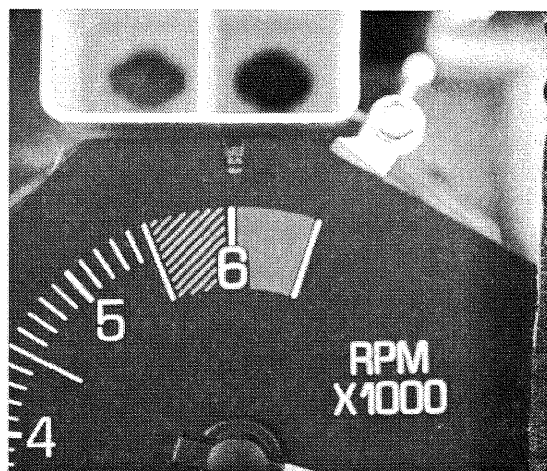


Remove the plastic bezel.

- (4) The tachometer is being held in place with two 7/32" screws. Remove both of these screws.



- (5) Using only your fingers, carefully pry the tachometer away from the instrument cluster. It is being held in place by three spring clips.



- (6) Lay the face of the tachometer face down on a soft cloth.
- (7) There is a small cylindrical object located near the top of the tachometer circuit board. This component is called a capacitor. The value of this capacitor determines whether it will read accurately for a four, six, or now, eight cylinder engine.
- (8) Clip the leads off the capacitor near the capacitor body.
- (9) Using a soldering iron, heat up the solder holding the remaining capacitor wires to the circuit board. Now carefully remove the remaining solder revealing the two mounting holes.
- (10) The new correct capacitor value is 0.049 uf for the V-8 application, and .082 uf for a V-6 engine.

### Power Tips

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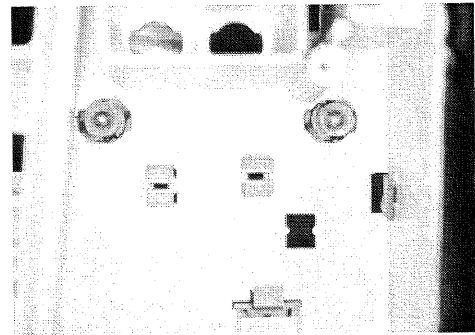
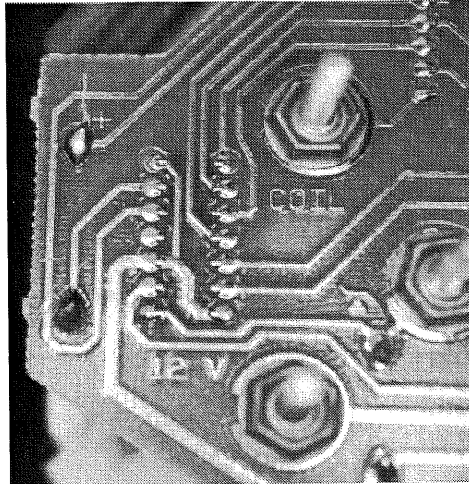
by Joe Wynman of Associated Auto, Inc.

# The BIG Fiero Parts Book

an official publication of the The National Kit Car Club

For informational purposes, the four-cylinder tach has a 0.1 uf capacitor. In the case of the 0.049 uf capacitor it is not a readily available part, so one will have to be made out of three other capacitors. Purchase a 0.047uf and two 0.001uf capacitors at your local Radio Shack. In the case of the other two applications, exact capacitors are available.

grasping it and pulling it straight out of the cluster. Insert the replacement bulb by pressing it straight into the socket. Once again, illuminate the parking lamps to verify the replacement bulb is operational.



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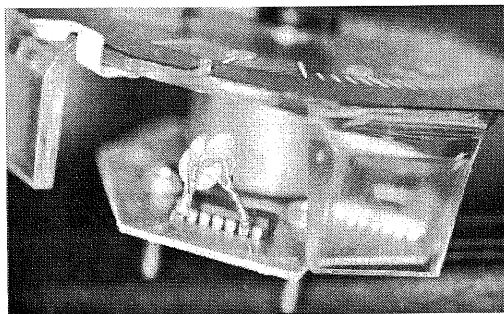
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- (11) Place the leads of the 0.047uf capacitor through the two mounting holes used by the old capacitor. Now carefully wrap the leads of a 0.001uf around the leads of the already mounted 0.047uf capacitor. Repeat this step for the last 0.001 capacitor.
- (12) Solder the two leads of the 0.047uf capacitor to the circuit board.
- (13) Solder the leads of the two 0.001uf capacitors to the leads of the 0.047uf capacitor. See the picture below for clarification.
- (14) Carefully bend the three-capacitor assembly away from the edge of the circuit board.



- (15) Since the tachometer has been temporarily removed from the instrument cluster, the Tachometer illumination bulbs are exposed and readily accessible for a quick replacement. Using the normal parking light switch, illuminate the parking lights. Verify that the two type 194 lamps illuminate. If either one does not, replace the bulb by

- (16) Carefully replace the tachometer. This is accomplished by lining up the three "long" bolt threads over the three receiving clips. Gently press the tachometer into place. Secure the tachometer by replacing the two 7/32" screws.
- (17) Clean the clear instrument cluster bezel. Slip it back over the instrument cluster and secure it in place with four 7/32" screws.
- (18) Clean, then replace the black bezel over the clear lens of the instrument cluster. Secure it in place with two 7/32" screws.
- (19) Replace the decorative bezel and secure it in place with the four T-15 Torx screws.
- (20) If you have a tilt steering column, raise the column to its highest position. Replace the lower valance by replacing the four 7-mm screws.
- (21) If you have tilt steering, set it to the normal driving position. Start the Fiero and verify the Tachometer is needle is moving. In order to verify it's accuracy, one of two methods can be used. Either connect a "test" tachometer to the ignition coil found in the engine compartment or connect a scan tool to the ALDL connector. This is the preferred approach since it is a simpler connection and the reading will be more accurate. Compare the reading of the modified tachometer to that of the scan tool or test tachometer. If it is 100% accurate, or close enough for your satisfaction, you conversion is a complete success. If the converted tachometer is reading higher than the true engine RPM, you will have to repeat the procedure listed above and remove one of the two 0.001uf capacitors. If the converted tachometer is reading lower than the true engine RPM, you will have to repeat the procedure listed above and add another 0.001uf capacitor to the three already installed.

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