

## Adjusting the TPS

**Accufab tech hotline call: 909-930-1751**

After you have replaced your original throttle body with your new one, remove the TPS from the original throttle body and install it on your new Accufab throttle body. If new screws have been provided in the package from Accufab, use these screws (they are shorter). If not, reuse the original or stock screws. Reconnect the TPS to the wire harness.

You will need to adjust the TPS to get the correct voltage at idle. Changes to the idle speed can ONLY be made by adjusting the TPS. **DO NOT ADJUST THE STOP SCREW ON THE THROTTLE BODY UNDER ANY CIRCUMSTANCES.** This has been pre-adjusted at the factory to insure a proper “air gap” around the throttle blade in the fully closed position. If by chance this stop screw has been re-adjusted in the field (by those that adjust first and read the instructions last), it may be necessary to return it to Accufab for re-calibration. Before sending it back, call first and we may be able to give you re-calibration instructions over the phone.

The TPS is connected to the main wire harness with three separate, color-coded wires. You will see a “gray & red” wire, a “gray & white” wire, and a “brown & white” wire.

The “gray & red” wire is the ground wire (on some TPS’s it could also be a black wire).

The “gray & white” wire provides the positive voltage information to the ECM (on some TPS’s it could also be a green wire).

The “brown & white” wire provides a positive 5-volt reference signal **WITH THE KEY ON** (on some TPS’s it could also be an orange wire).

If you have any problem identifying the different colors or if the wires are different colors from those described, check inside the plastic quick disconnect plug. The plug connection tangs should have an “A”, “B”, and “C” next to each tang. “A” is the “gray & red” wire, “B” is the “gray & white” wire, and “C” is the “brown & white” wire. Because of the different suppliers of TPS’s (and the potential for different wire colors), you may need to “poke around” on the wires in order to determine the positive and negative leads. An easy way to take voltage readings is to stick a safety pin through the individual wires, and then make contact with your Volt Meter probes to the safety pins.

To check voltage, **THE IGNITION KEY NEEDS TO BE IN THE “ON” POSITION BUT THE ENGINE DOES NOT NEED TO BE RUNNING.** With the positive (+) lead from your voltmeter, pierce the “gray & white” wire. With the negative (-) lead from your voltmeter, pierce the “gray and red” wire. The voltmeter should read no less than .98 volts nor more than 1.0 volts. If the voltage is too high, loosen (but do not remove) the two screws holding the TPS to the throttle body, and rotate the unit counter-clockwise, until the voltage is correct. Rotating the unit clockwise will increase the corresponding voltage. When the voltage is correct, re-tighten the two screws. The only adjustment is the “slop” between the inside diameter of the holes and the outside diameter of the screws, so we are dealing with just a few degrees of rotation.

Usually, the space between the inside diameter of the holes in the plastic TPS body and the outside diameter of the screws will allow a rotation (clockwise or counter clockwise) of three or four degrees in either direction. This is usually enough to get the correct voltage setting. If its not enough, a small rat-

tailed file (like the kind that hobby stores sell for working on jewelry) may be used to file a small slot into the holes to achieve additional rotation.

The Ford ECM's are very "unforgiving" when it comes to ANY engine modifications from stock. The addition of an Accufab throttle body should not have any negative effect on idle speed, off-idle performance (tip-in) or the RPM returning to idle speed (within a second or two) when the throttle is closed.

If on the other hand, modifications to the stock engine may include additional supercharger boost with the use of different supercharger pulleys (particularly noticeable on supercharged 2003-2004 Mustang Cobra's) or adding a "re-programming" chip or add-on computer module, the standard TPS voltage readings and other drivability issues may be noticeable, and could include an overly fast idle and a resistance of the ECM to "allow" the throttle to close properly, resulting in a delay between removing your foot from the gas pedal and the engine returning to idle.

These are not throttle body problems. The throttle body is a mechanical device with only one moving part. As long as the throttle body slams shut when you close the throttle (key off, engine not running), the throttle body is functioning correctly. Any other problem is associated with the ECM and the feedback it is receiving, either due to the increased boost at idle (more air supply) or the add-on computer chip sending incorrect (or unknown) data to the ECM.