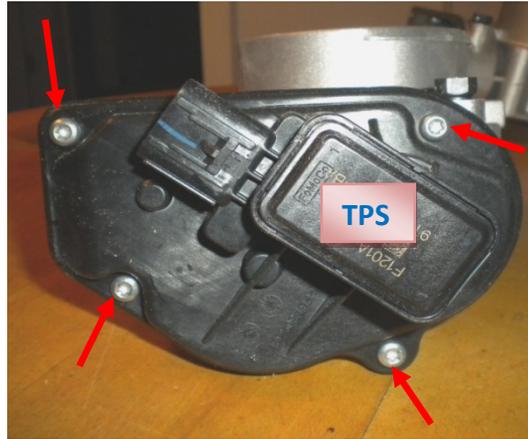


Replacing the Throttle Position Sensor on V6 Mazda Throttle Bodies

The electronic Throttle Position Sensor (TPS) is built into the black plastic gear cover attached to the throttle body casting using 4 TORX style screws as shown below:



Casting on Left – Gear cover on Right



4 x T20 TORX screws holding the gear cover

Step 1: Remove the original throttle body:

With the ignition turned off let the engine cool down for at least 30-45 minutes. Carefully remove the engine cover and set aside. Remove the air hose and unplug the electrical plug from the throttle body. Remove the 4 bolts and lift the throttle body off of the engine manifold. The coolant hoses will need to be removed or cut.

Step 2: Remove the Gear Cover Screws-

With your original throttle body resting on a work bench, use a T15 TORX driver bit to remove the 4 screws securing the gear cover to the throttle body casting.

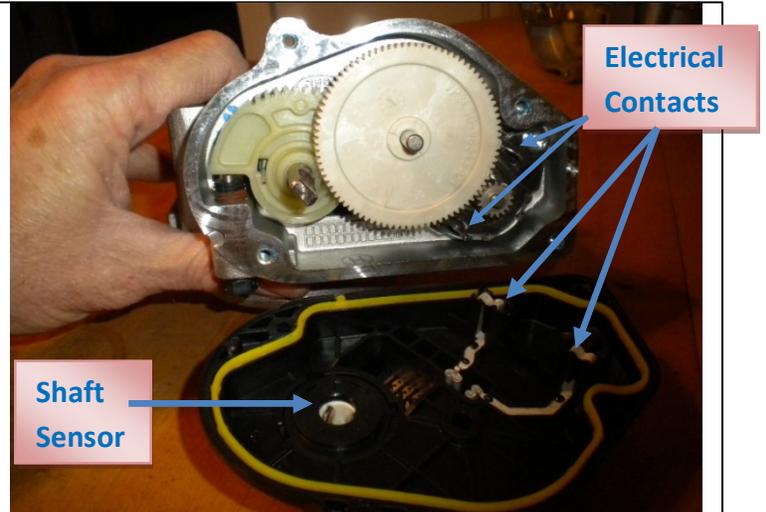


Step 3: Remove the Gear Cover-

With the 4 screws removed gently wiggle and separate the gear cover from the throttle body casting. Once loosened carefully pull the gear cover straight up and off of the throttle body. Note the position of the shaft sensor as it will align with the rectangular throttle shaft end.



Loosen the gear cover and separate it from the throttle body.



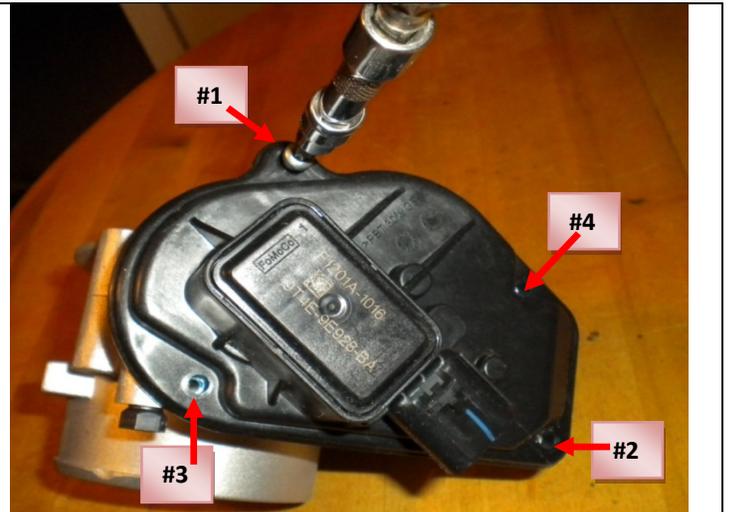
Remove the cover from the throttle body. Note the location of the electrical contacts and the position of the shaft sensor.

Step 4: Replace the New Gear Cover-

Take note of the shaft sensor position and orient it to match the position of the old / removed cover. Place the new gear cover onto your throttle body. Verify that the electrical contacts fit together and push the cover until it is fully seated on the casting.



Make sure that the cover fits all the way onto the throttle body. Note the small plastic locating tab on the cover which should fit into the notch on the casting.



Once the cover is properly installed on the casting, replace the 4 Torx screws and re-tighten the screws in a criss-cross (X) pattern.

Final Step:

Replace the throttle body on the engine making sure to replace all hoses and electrical connections.