

APPS SENSOR INSTALLATION INSTRUCTIONS

1. Disconnect battery cables
2. Remove the plastic APPS cover.

Next remove the six, 10 mm headed bolts that hold the bellcrank assembly on. When that is removed, you will see the sensor on the back. A T20 Torx is needed here.

***Caution**, these screws have loctite on them. So make sure that the bit is engaged fully into the screw head, so they do not strip, or you will need to use visegrips to remove them. NOTE: 2 new screws are provided.

3. After the old sensor is removed, take the new sensor and look at the side that bolts to the bracket. In the center, you will see the slot that engages in the tang of the bellcrank shaft. Next, line up the slot with the tang and push the sensor onto the mounting surface.

***If** a sensor does not mate flat to the mounting surface, the slot is not engaged properly, try again.

4. When you are sure the tang is engaged properly, rotate the sensor **clockwise**, until the screw holes are aligned, and start the screws. **Just before the screws are tight, twist the sensor clockwise and tighten the screws.**
5. Remount the bellcrank assembly to the bracket.
6. Next procedure is setting the idle voltage, using a digital voltmeter, and turning the idle stop screw **clockwise. Hook batteries up and turn key on to check voltage.**

***Caution**, the screw has loctite on it from factory. You will need a T20 Torx bit with a ¼ inch ratchet to turn it. Make sure the bit is engaged fully into the head before attempting to turn. Be careful not to strip the torx head!

***If needed**, a propane torch, VERY CAREFULLY, can be used to heat the screw; this will soften the loctite and allow it to break free. Only heat it for a couple seconds at a time and attempt to turn clockwise.

Next look on the back of the 6 pin electrical connector, it is numbered. With the paperclip provided insert it into the back of the connector PIN # 3 (Green wire). Or insert it into the back of the factory plug(light blue wire w/black tracer) just make sure its PIN #3. This will get hooked to the positive lead of the voltmeter. The ground lead can be hooked to the ground terminal of the battery. Turn your voltmeter to the low voltage DC scale. **Make sure paperclip does not contact ground.** Proceed to plug the sensor into the factory harness and then hook the batteries up. Turn the key to the ON position. Now read the voltmeter, it should read .600-.700. Next turn the idle stop screw **clockwise**, NOTE you may turn for a little bit before the voltage actually rises. **As soon as the voltage begins to rise, turn the screw backwards ½ turn and you are done with the idle screw.** To check the full throttle voltage, move lever by hand to full throttle. The voltage will be about 3.8V. Some voltmeters can vary a little so don't be alarmed if reading are NOT to the exact tenth of a volt.

7. Turn key off, disconnect voltmeter, and pull paperclip out of pin #3.
8. Last procedure, turn key ON, press accelerator pedal slowly to the floor and then let up slowly. During this procedure the ECM learns the new APPS voltage.

The most common asked question is calibration.

This is a primitive drawing but helps to simplify understanding the concept. It is fairly simple.

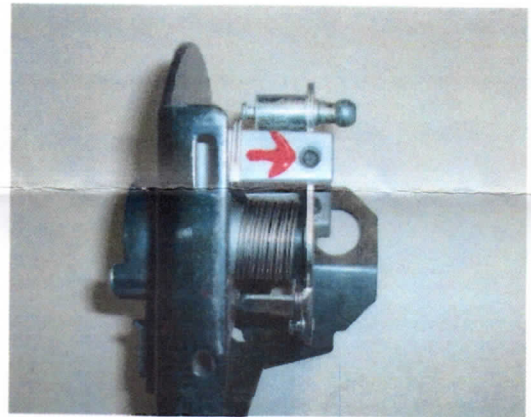
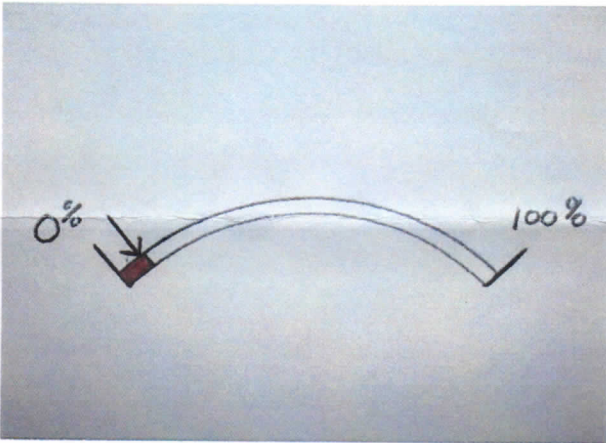
The stock sensor has an "IDLE VOLTAGE" stamped on the back which the sensor needs to be "SET" at in order to work properly and not set any DTC codes.

My replacement sensor is designed a bit differently only in the "IDLE VOLTAGE" portion of it. Look at the drawing and take notice to the area shaded in red. The first few degrees of movement in the beginning is the "IDLE VOLTAGE". The voltage stays constant (does not rise). The end of the red shaded area is the point at which voltage rises, thus engine RPM's increase.

When you install the replacement sensor you want to adjust the idle stop screw to find the point at which voltage begins to rise. (That would be the end of the red shaded area) The arrow indicates where I want you to set it, just a hair before the point voltage begins to rise.

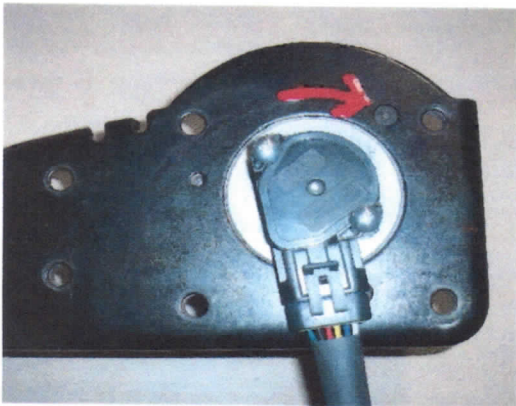
You could indeed bolt the sensor on and go. The result would be a little bit of pedal movement in the beginning that the engine wouldn't respond, like free play let's call it. NO "check engine" light will occur if the adjustment is not made.

Below is the location of the idle stop screw.



The picture belows shows which direction to twist the sensor before tightening the screws. The objective is to remove all the play from the bolt holes as possible.

The picture belows shows how to bend the paperclip and then insert it along the wire to backprobe the connector. When the bracket is remounted it is easier to probe the factory connector #3 (light blue w black tracer).



03-04 models the fac. side color may be different. Still check voltage on pin #3

