

# FUEL GAUGE ECU installation

## Connections

The OEM green/black wire that connects the OEM sensor to the gauge must be cut. Then you can connect my gray and purple wires to the cut wires.

Black wire is ground. Note connect this and the sensor ground to the black wire that was on the OEM fuel level sensor.

Red wire is 12-volt power for the ECU. Key on power recommended. Running from fuel pump possible.

White wire for low fuel light. (drives to ground, light green/orange harness wire)

Gray wire goes to the gauge (was green/black harness wire)

Purple wire for sensor wire. (was green/black harness wire)

## Calibration

When calibrating the gauge, it's important to get your eyes directly over the gauge needle. If you are looking at an angle you won't be able to calibrate exactly. Jumper J1 is shorted on both pins to put the unit into calibration mode. Move the jumper to only one pin (hanging off one side) to put the ECU into normal run mode.

Setting the low and high gauge adjustment.

Jumper J1, turn the POT R6 fully counter clockwise, the gauge should move to empty. The low fuel light will also come on so you can verify that is working. Let the gauge heat up for about 10 minutes. Adjust R3 to get the gauge exactly on the empty line.

Now move POT R6 fully clockwise. Your gauge should now move to the full mark. It takes about one minute for the gauge to settle. Adjust R1 to get the gauge exactly on the full line. Make very small adjustments and wait for the gauge to settle. The full end of the gauge has very slow movement.

Checking the  $\frac{1}{4}$  mark accuracy.

Move POT R6 full counterclockwise and then slowly turn a little clockwise until your gauge moves from empty to the  $\frac{1}{4}$  full mark. Note how close the needle points to the  $\frac{1}{4}$  mark. Now slowly turn R6 some more clockwise until the gauge moves to the  $\frac{1}{2}$  full mark. Then again turn R6 until the gauge moves to the  $\frac{3}{4}$  mark. If I get a lot of customers showing those quarter marks are reading low or reading high, I may need to adjust my software. I used one new fuel gauge to set those quarter marks when I designed the software.

Adjusting the sensor calibration.

Right now, I'm adjusting these via POTs R2 and R8. These set your high and low reading incase your sensor is not moving the full range empty or full. For you to make these adjustments would require you to have a full tank and an empty tank. I adjust them with your sensor specifications unless you provide me with resistance measurements when you order my unit.

#### Gauge filtering.

When not in calibration mode, R6 provides the user to select one of three filtering settings. Filtering is required to not show "tank slosh" when gas in your tank is moving back and forth. Full counterclockwise set on R6 provides very little filtering and is used mostly for testing a new sensor. Setting R6 to mid position provides about 10 times the filtering of the first setting. Setting R6 full clockwise provide filtering about 10 times the second setting. This last setting is very long but will keep up to fuel usage as long as you don't develop a leak in the fuel system.

Note when the unit is first power on the gauge will move quickly to what the sensor is reading. So assuming you are parked level it will be accurate very quickly.