



CENTROID  
PRODUCTS

## General Troubleshooting for Centroid Senders

ORDERS ONLY: 386-423-3574 TECH SUPPORT: [help@centroidproducts.com](mailto:help@centroidproducts.com) or fax: 386-423-3709 website: [centroidproducts.com](http://centroidproducts.com)

### Please fill in the blanks in this test rather than summarizing your results separately.

**It's much easier to understand that way, and you're less likely to miss a question. Please email a scan (or cell photo) of your completed form to [help@centroidproducts.com](mailto:help@centroidproducts.com) . Or if it's easier, fax to 386-423-3709 and include an email address. You'll get an answer from an engineer within one business day.**

#### 1. BACKGROUND

- a) What reading are you expecting on the gauge on your dash? \_\_\_\_\_
- b) Where is the needle actually pointing? \_\_\_\_\_
- c) Gasoline \_\_\_\_\_ diesel \_\_\_\_\_ potable water \_\_\_\_\_
- d) Please include a photo of the sender's head so I can see the label and adjustments if any \_\_\_\_\_
- e) If you know the brand of gauge the sender is driving, what is that brand? \_\_\_\_\_

#### 2. INSTALLED VOLTAGES

For all voltage readings, put the black lead of your voltmeter on the sender's Neg terminal, which is ground. Use the red lead of your voltmeter to measure the other terminals. If a reading is \*negative\*, show a minus sign with it:

**NOTE: if the sender has a 3-pin connector, see the footnote at the bottom of this procedure.**

- a) Pos/Neg= \_\_\_\_\_ vdc (expected: maybe +12.5vdc; ie battery voltage)
- b) Send/Neg= \_\_\_\_\_ vdc (expected: a low to medium positive voltage)
- c) Alarm/Neg= \_\_\_\_\_ vdc (if applicable-- most senders dont have an alarm output. Expected: if the alarm light is on, about +0.8vdc. If the alarm light is off, slightly less than the Pos/Neg reading)
- d) With the Send wire disconnected, what does the gauge on the dash read? \_\_\_\_\_ (expected: E or F) and what is the voltage between the disconnected Send harness wire and Neg? \_\_\_\_\_ vdc (expected: higher than when connected)
- e) With the disconnected Send wire touched to Neg, what does the gauge on the dash read? \_\_\_\_\_ (expected: the other end of the dial, unless it is an E0/F5 volt gauge, in which case tests D and E will read empty)

#### 3. OUTSIDE THE TANK

Before taking the sender out of the tank, it's best to label the wires so you get them back on the right terminals. And make a tick mark on the sender head and tank so you get the orientation right when you reinstall.

- a) With the sender wired and powered outside the tank, what is the gauge on the dash reading? \_\_\_\_\_ (expected: ideally Empty)
- b) For fuel senders, what is the voltage between the inner and outer tubes at the bottom of the sender? \_\_\_\_\_ vdc (expected: for senders with Full/Empty potentiometers, nominal is 4.5v. For senders without pots, 2.55v. For water senders, the center wire is sealed so you wont be able to do this measurement)

FOOTNOTE FOR 3-PIN CONNECTOR: if your sender has a 3-pin connector with red/blk/wht wires, you wont be able to measure to "terminals" as written in the procedure (our normal electrical connections are by screw terminals). Instead:

--Power off

--Take the white clip off the back of the sender's connect so you can pop the pins out and plug them directly into the harness connector, taking care to note first which color in the sender mates to which in the harness. For boats it is usually red->purple, wht->pink, blk->blk.

--Loop a small piece of paper around the middle connection like a "U" to insulate it from the other two pins. That will let you measure voltages on the pins without accidentally shorting them to each other.

--As the sender label will say: red=POS, wht=SEND, blk=NEG, for measurements in the above procedure