

118860 Rev 1: 1/3/05

# Installation Instructions

1-1/2" Electric Gauges

#### **PRECAUTIONS:**

- □ Read ALL instructions before installing instrument.
- Follow ALL safety precautions when working on vehicle-wear safety glasses!
- ALWÁYS disconnect (-) negative battery cable before making electrical connections.

#### HELP?:

- ☐ If after reading these instructions you don't fully understand how to install your instrument(s), contact your local Stewart Warner distributor, or contact our Technical Support Team toll free at 1-866-797-7223 (SWP-RACE).
- Additional applications information may be found at www.SW-Performance.com.

# GENERAL APPLICATION:

12-volt DC negative (-) ground electrical systems only (11-16 VDC operating voltage range).

#### **SENDER INSTALLATION TIPS/CAUTIONS:**

- Sender is grounded through its threads to the engine. DO NOT USE sealing tape on threads. Instead, use a thread sealing compound to prevent leaks.
- □ When installing this gauge, DO NOT REMOVE existing factory-installed senders (e.g. on engine); use an alternate location or port. Computer controlled engines may trigger a fault code (check engine light) if the factory senders are removed. Consult a factory technician for help.
- Disconnect negative (-) battery cable before making electrical connections. Incorrect wiring may damage sender or cause personal injury. Stewart Warner Performance recommends that qualified automotive technicians perform installations.

**NOTE**: Use a grommet when passing wires through firewall to protect wires from damage.

**NOTE**: Any wire that supplies 12V (ignition, switched, constant, etc.) should be properly FUSED (recommended fuse sizing: 1 amp fuse for a single gauge, 10 amp fuse for a full set) to prevent damage to instruments, or vehicle fire if wire is short-circuited.

#### EQUIPMENT:

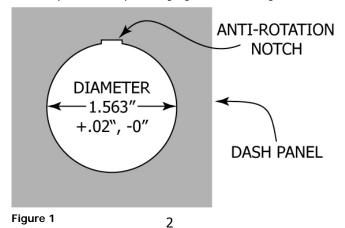
- ☐ 18-gauge wire
- ☐ Red "eye" crimp connectors
- Wire crimper/cutter

# GAUGE MOUNTING (Figure 1 & 2):

**NOTE**: Instructions apply to 1-1/2" gauges.

- □ Recommended panel cutout (hole size) for 1-1/2" gauge is 1.563" +0.02", -0.0" with an anti-rotation notch at the top. The notch is 0.03" deep and 0.25" wide.
- ☐ Secure the gauge in the hole using the supplied retaining bracket, stud and nut. Torque to 6 in.-lb. maximum.

TIP: It may be easier to pre-wire gauge before installing!



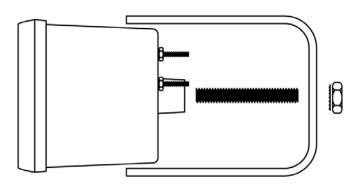


Figure 2

### PRESSURE GAUGE WIRING (Figure 3):

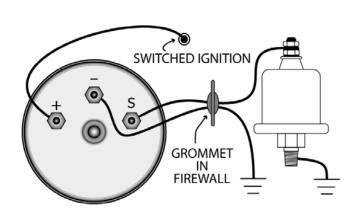
- 1. Disconnect negative (-) battery cable.
- Using 18-ga. wire, connect the (-) terminal to a clean (rust/paint-free) engine ground near the oil pressure sender.
- 3. Using 18-ga. wire, connect the (+) terminal to a switched +12V source.
- Using 18-ga. wire, connect the (S) sender terminal of the gauge to the pressure sender.
- Double check all connections, then reconnect the negative (-) battery cable & test instrument to ensure that it is working.

#### **PRESSURE SENDER INSTALLATION:**

Install pressure sender in appropriate pressure port.

- If sender is used in a high-vibration environment such as a full race engine, it is recommended to isolate the sender by remote mounting to the firewall or fender well.
- ☐ To ensure proper grounding with isolated mounting, use Stewart Warner Performance SS braided hose. See catalog.
- Some installations may require an adapter bushing. See catalog or web site for adapters.

5



6

4

Figure 3

#### TEMPERATURE GAUGE WIRING (Figure 4):

- 1. Disconnect negative (-) battery cable.
- Using 18-ga. wire, connect the (-) terminal to a clean (rust/paint-free) ground surface near the temperature sender.
- 3. Using 18-ga. wire, connect the (+) terminal to a switched +12V source.
- Using 18-ga. wire, connect the (S) sender terminal of the gauge to the temperature sender.
- Double check all connections, then reconnect the negative (-) battery cable & test instrument to ensure that it is working.

### TEMPERATURE SENDER INSTALLATION:

Install Temperature sender in appropriate water, engine oil, or transmission oil port.

- Use a wrench on the hex portion of the sender to tighten.
- ☐ When installing temperature sender, be sure there is sufficient clearance in the port so the sender is not damaged when it is tightened or by internal moving parts.
- ☐ If the sender is to be used in an oil pan where there is no port, drill a hole, braze the provided adapter into the oil pan, and install the sender in the adapter.

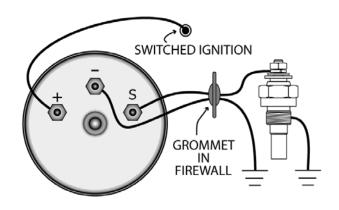


Figure 4

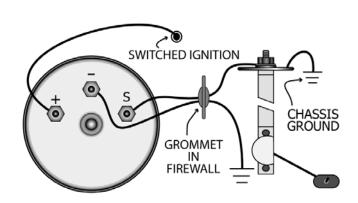
#### FUEL LEVEL GAUGE WIRING (Figure 5):

**NOTE**: The sender must provide  $240\Omega$  empty and  $33\Omega$  full.

- 1. Disconnect negative (-) battery cable.
- Using 18-ga. wire, connect the (-) terminal to a clean (rust/paint-free) fuel tank ground.

7

- 3. Using 18 gauge wire, connect the (+) terminal to a switched +12V source.
- 4. Using 18-gauge wire, connect the **(S)** sender terminal of the gauge to the fuel level sender.
- 5. Double check all connections, then reconnect the negative (-) battery cable & test instrument to ensure that it is working.



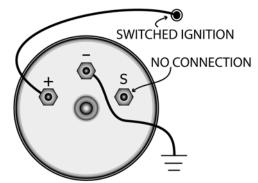
8

Figure 5

9 10

### **VOLTMETER WIRING (Figure 6):**

- Using 18-ga. wire, connect the (-) terminal to a clean (rust/paint-free) ground.
- 2. Using 18 gauge wire, connect the (+) terminal to a switched +12V source; This is the voltage that the gauge will indicate.
- Double check all connections, then reconnect the negative (-) battery cable & test instrument to ensure that it is working.



11

Figure 6

### **CLEANING DIRECTIONS:**

☐ For proper cleaning of instrumentation/accessories, use a glass cleaner or mild detergent with a spray on and wipe method.

## **WARRANTY INFORMATION:**

TWO (2) YEAR LIMITED WARRANTY. SWP products are warranted against defects in workmanship and materials for a period of two (2) years from the date of purchase. Proof-of-purchase is required; otherwise, the warranty period shall default to two (2) years from date-of-manufacture (as indicated by the date code on the product). See detailed Warranty Policy for other Terms & Conditions

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12