

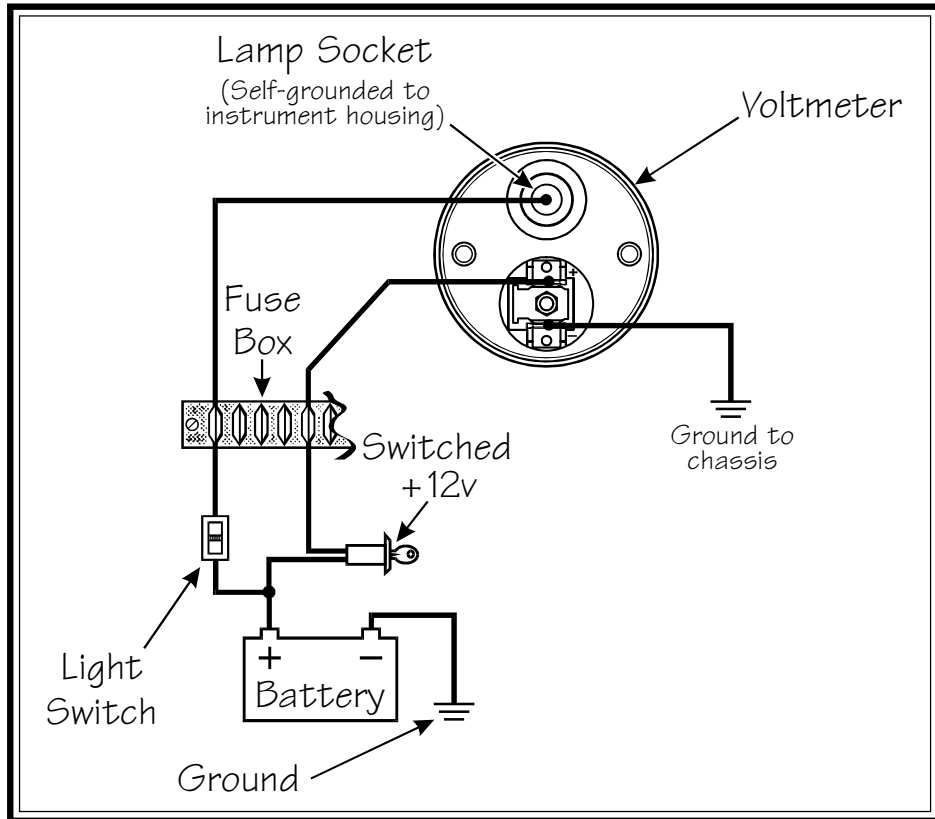
### 3 FINISH HERE

4. Ground the sender wire. On all pressure and fuel gauges, the pointer will go to "0". On all temperature gauges, the pointer will go to the extreme right.

SW senders.

If these four functions occur as stated, the instrument is in proper working order. If the gauges do not respond as described above, you probably have a faulty sender or other sender problem.

**NOTE:** Items 2,3, & 4 will be in the reverse operating condition when you are using



**Diagram D**  
Proper wiring of the Voltmeter

### VDO Limited Warranty

VDO North America warrants all merchandise against defects in factory workmanship and materials for a period of 24 months after purchase. This warranty applies to the first retail purchaser and covers only those products exposed to normal use or service. Provisions of this warranty shall not apply to a VDO product used for a purpose for which it is not designed, or which has been altered in any way that would be detrimental to the performance or life of the product, or misapplication, misuse, negligence or accident. On any part or product found to be defective after examination by VDO North America, VDO North America will only repair or replace the merchandise through the original selling dealer or on a direct basis. VDO North America assumes no responsibility for diagnosis, removal and/or installation labor, loss of vehicle use, loss of time, inconvenience or any other consequential expenses. The warranties herein are in lieu of any other expressed or implied warranties, including any implied warranty of merchantability or fitness, and any other obligation on the part of VDO North America, or selling dealer.

(NOTE: This is a "Limited Warranty" as defined by the Magnuson-Moss Warranty Act of 1975.)

VDO North America · 188 Brooke Rd. · P.O. Box 2897 · Winchester, VA 22603 · Phone: 540-665-2428

### 1 BEGIN HERE

**CAUTION:** Read these instructions thoroughly before making installation. Do not deviate from assembly or wiring instructions. Always disconnect battery ground before making any electrical connections. If in doubt, please contact your dealer or VDO Instruments at (540) 665-2428.

**IMPORTANT:** Mounting dimensions vary for different gauges. Please be certain to follow the instructions for your specific gauge as described below.

#### Gauge Installation:

1. Select the location for the instrument and cut either a 2 5/8" hole (or use a VDO mounting accessory [1,2, & 3 hole chrome and black] or VDO mounting cup [chrome

or black]).  
2. Insert the gauge and secure it.  
**DO NOT OVERTIGHTEN.**  
(Refer to Diagram A)

#### Wiring the Gauge:

**NOTE:** On all oil and water temperature gauges, 14-gauge wire is required for gauge ground; it must be a dedicated ground to insure gauge accuracy and to eliminate any erratic gauge readings.

1. Run wires from the instrument location through the firewall to:

- the positive (+) terminal on the battery (after the ignition switch, and after the fuse box);
- the light switch (also after the fuse in the fuse box);

[text continues at #2] →

### Parts List

Item	Description	Quantity
1.	Temperature, Pressure, Fuel Gauge or Voltmeter (2 5/8" [65 mm] diameter)	1
2.	Lamp Socket	1
3.	Light Bulb	1
4.	Mounting bracket	1
5.	Installation Instructions	1

#### Tools and Materials Needed For Installation:

16 Gauge stranded, insulated wire  
Insulated 1/4" spade connectors  
2 5/8" hole saw  
Drill and drill bit set  
Half-round file  
Tape measure or ruler  
Small tools: wrench or nut driver, utility knife, pliers, etc.  
Various engine adapters

### CAUTION!!!

The bezel diameter is only a few millimeters larger than the gauge itself. With that in mind, measure and precisely mark the gauge location before cutting any holes!

**VDO® North America**

**Electric Temperature, Pressure,  
Fuel Gauge or Voltmeter**

**Installation Instructions**

Instruction Sheet #0 511 011 812  
Rev. 3/99

INSTRUCTIONS FOR THE INSTALLATION OF THE ELECTRIC TEMPERATURE, PRESSURE, FUEL GAUGE AND/OR VOLTMETER ARE CONTAINED HEREIN. USE IS RESTRICTED TO 12-VOLT NEGATIVE GROUND ELECTRICAL SYSTEMS. LIGHT BULB, IF SUPPLIED, IS 12 VOLT.

To Begin, go to #1

## 2 CONTINUE HERE

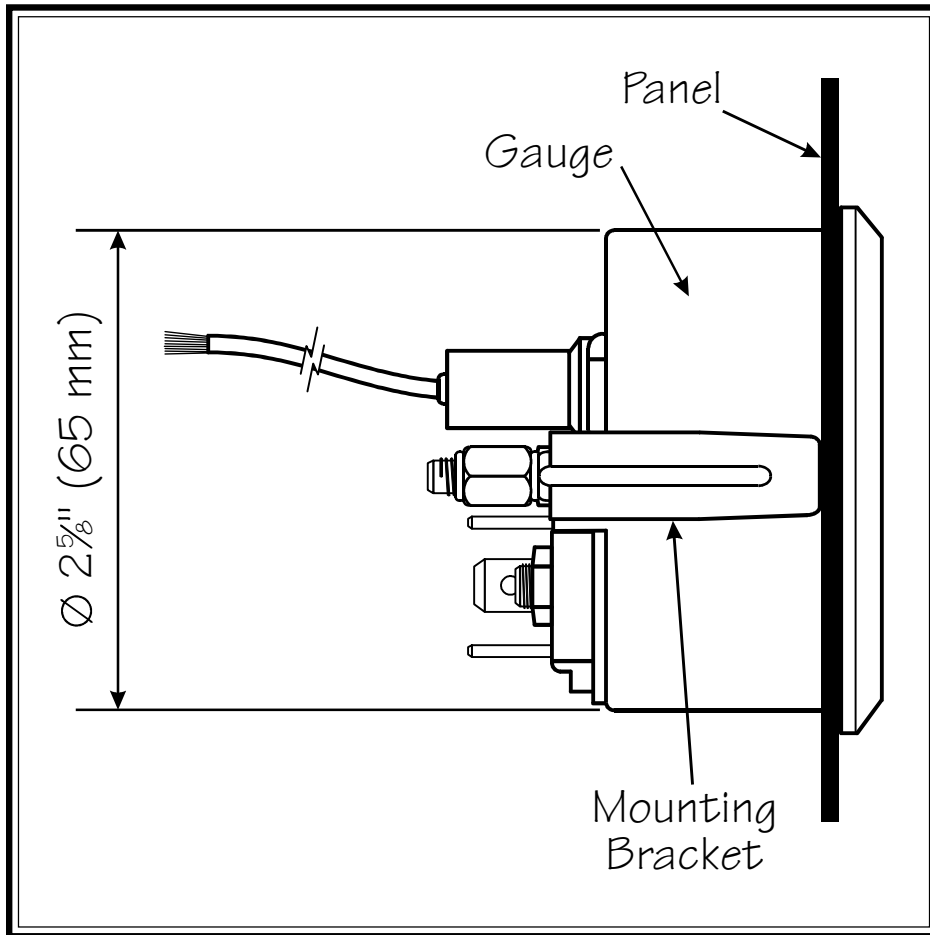
- c) a good, dedicated ground location (i.e., where the negative (-) battery pole is connected to the chassis of the vehicle); and
- d) from the instrument sender terminal to the terminal on the sending unit.

2. Connect the appropriate positive (+),

ground (negative [-]), and signal wires to the gauge and gauge lamp socket as shown in Diagram B or C.

3. If you are using a VDO sender with a built-in warning contact terminal, run a wire (again, minimum 16-gauge, stranded) from the sender terminal marked "WK" to one terminal on the warning light.

Run another wire from the other warning light terminal to a switched ignition source.



**Diagram A**  
Gauge dimensions

**NOTE:** Do not use teflon tape on the sender threads which act as an electrical ground source for the unit.

Water temperature senders work best if they are installed near the thermostat housing. Oil temperature senders can be used to replace the manufacturer's oil pan drain plug. The oil pressure sender is installed in the same location as the factory sender or warning light switch.

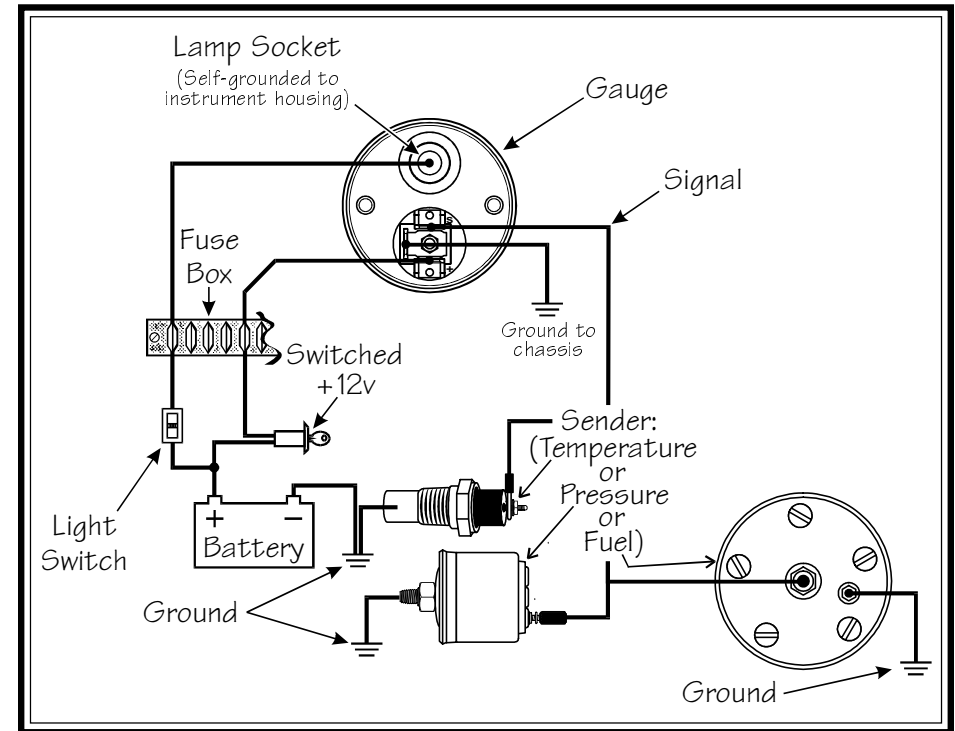
**Remember:** These gauges measure ohm resistance which is created by the sender. The ohm range of the sender and gauge **MUST MATCH** or the gauge will not be accurate. VDO sells many gauges which work with other manufacturer's senders; but you must know the correct sender ohm range before you buy any of these gauges.

### Troubleshooting:

Make sure the instrument is wired properly, then:

1. On all electric instruments, the pointer will be to the extreme left when power is off.
2. On pressure instruments, the pointer will go to "0" when the power is turned on. On temperature gauges, the pointer will indicate current fluid temperature when power is turned on. When power is applied to fuel gauges, the pointer will show how much fuel is currently in the tank.
3. Pull the sender wire off the sender. On pressure and fuel gauges, pointers go to the extreme right; pointers go to the extreme left on temperature instruments.

[text continues at #②] →



**Diagram B**  
Proper wiring of the Temperature, Pressure or Fuel Gauge