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.

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

Diagram D
Proper wiring of the Voltmeter

Tools and Materials Needed For Installation:
16 Gauge stranded, insulated wire
Insulated ¼” spade connectors
2 ⅛” 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

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!
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.

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 #3]