# VOLTMETER
INSTALLATION INSTRUCTIONS

1 BEFORE YOU START

1. Read instructions completely before installation. **WEAR SAFETY GLASSES.**

2. Install gauges only when engine is cool and ignition is off.

3. Make sure all necessary tools, materials, and parts are on hand.

4. Disconnect negative (-) battery cable before installing gauges.
   NOTE: It may be necessary to reprogram your radio, clock, etc. after reconnecting the battery.

5. Make sure mounting location does not impair visibility or interfere with driving. Also check behind the mounting location for any wiring or components before drilling.

6. Refer to your vehicle's service manual for the location of sensor port, vacuum system, and/or charging system.
   NOTE: Some vehicles use temperature and pressure sensors for engine control functions. Use a T-fitting if necessary when installing gauge sensors.

7. When connecting electrical wires, install crimp terminals (purchased separately) and make wire splices as needed.
   ALWAYS insulate wire splices with electrical tape to prevent shorting.

8. Follow all necessary safety procedures for protection.

2 GAUGE INSTALLATION

1. 2-5/8" gauge mounts in a 2-5/8" diameter hole. Insert gauge through front of PANEL or hole in dashboard.

2. Install U-bracket over gauge mounting studs and secure with two brass nuts and flat washers provided. **TIGHTEN NUTS FINGER-TIGHT ONLY.**

3. Hold gauge case and rotate gauge, as needed, until gauge face is positioned properly on front of panel.

4. After positioning, tighten mounting nuts securely to prevent gauge movement. **DO NOT OVERTIGHTEN NUTS OR U-BRACKET MAY WARP.**
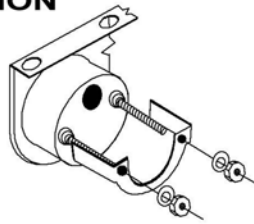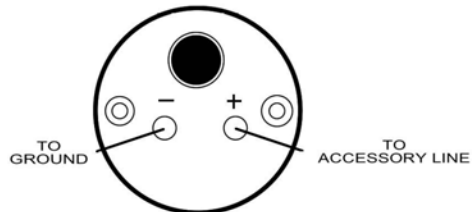
3 LIGHT INSTALLATION

1. Press light socket into the socket hole on the back of the gauge.

2. Splice the free end of each light-socket RED lead wire into an existing lead from any vehicle instrument panel lamp. Insulate the splices with electrical tape to prevent shorting.

3. If the dashboard is plastic or insulated from frame ground, or the gauge is panel or cup mounted, solder a wire from the gauge case to a good ground.

4. The gauge light is now connected to the lighting circuit controlled by the headlight switch. If the vehicle is so equipped, gauge light brightness will be controlled along with the regular instrument panel lamps.
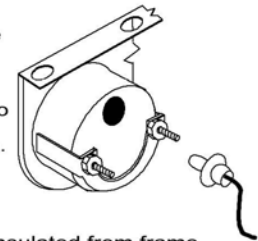
4 VOLTMETER CONNECTION

NOTE: Voltmeter lead wire must be purchased separately. Use wire of same gauge used in vehicle's electrical circuits. If correct wire gauge cannot be determined, use 8 AWG wire when connecting the voltmeter.

1. Determine routing for voltmeter lead wires. Use an existing firewall grommet, or drill a 3/8" (9.5mm) diameter hole through firewall to accommodate lead wires. Install a rubber grommet (purchased separately) in hole, or wrap with electrical tape, to protect lead wires from chaffing or other damage.

2. Install the crimp or solder terminal lugs (purchased separately) on voltmeter positive (+) and negative (-) lead wires, and connect lead wires to voltmeter using two brass nuts and flat washers. **TIGHTEN NUTS AND LUGS SECURELY AND PROPERLY INSULATE ALL CONNECTIONS.**

3. Route lead wires through grommet in firewall.

4. Connect voltmeter negative (-) lead wire to good electrical ground on vehicle.

5. Splice the free end of the positive (+) lead wire into an existing accessory line in the vehicle. Insulate the splices with electrical tape to prevent shorting.

TO GROUND   −   +   TO ACCESSORY LINE

6. Reconnect negative (-) battery cable. With ignition switch on (and engine NOT RUNNING), voltmeter should read between 11.6 and 13.2 volts. A lower reading indicates a low battery, low water level, or defective battery cables. Make necessary repairs/services.

7. Start and run engine. Voltmeter should read between 13.3 and 15.2 volts. A lower reading indicates faulty regulator, slipping belts, faulty alternator, or excessive loads. A higher reading indicates a faulty or jammed voltage regulator. Make necessary repairs/services.
   NOTE: If the voltmeter reads backwards or fails to read, reverse connections. If the voltmeter still fails to read, recheck and tighten all connections.