

## VOLTMETER GAUGE (cont.)

6. Disconnect the battery ground cable to avoid accidental grounding and damage to the vehicle's electrical system while making the permanent connections.
7. Securely connect the wire from the positive (+) terminal of the gauge to the accessory terminal.

- PRO TIP:**
1. If there are no accessory terminals available, alternate hook-up locations can be found on the accessory terminal of the ignition switch or the radio's power leads.
  2. These instructions apply to vehicles with negative ground systems. For positive ground systems, reverse the leads at the back of the meter.

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## AMMETER GAUGE

The ammeter gauge indicates the amount and direction of current flow to and from the vehicle's battery. This gives you a good indication of the operation and electrical condition of the battery, alternator and voltage regulator.

A needle positioned on the charge or positive (+) side of the gauge indicates that the charging system is supplying enough electrical current to satisfy all of the requirements of the vehicle's electrical system and still has enough current to charge the battery. A needle positioned on the discharge or negative (-) side of the gauge indicates that the charging system is not supplying enough electrical current to satisfy all of the requirements of the vehicle's electrical system and the battery is being discharged to supply this extra needed current.

Normally, after starting the engine, the ammeter will indicate a slight charge. This occurs due to the fact that the battery has to be recharged for the current used to start the engine. After a few minutes, at fast idle or at cruising speeds, the needle should swing towards zero indicating that the charging system has restored the battery to a charged condition and is satisfying all of the electrical needs of the vehicle.

If the ammeter indicates discharging at all engine speeds, there is a problem with the charging system or the current required is above the capability of the charging system. Check for loose connections, loose drive belts, a faulty alternator, a faulty generator, a faulty voltage regulator, or reason for the excessive current load, that should be eliminated. An ammeter reading continuously and excessively in the charge position indicates a battery or voltage regulator problem, poor ground or a loose connection.

### INSTALLATION INSTRUCTIONS

The wires used to connect the ammeter to the vehicle should be insulated and heavy enough to carry the current required on all of the accessories operating simultaneously.

MAXIMUM EXPECTED LOAD	WIRE SIZE REQUIRED
30 amperes	10 gauge
45 amperes	8 gauge
60 amperes	6 gauge

## AMMETER GAUGE (cont.)

**PRO TIP:** The maximum rated output of your alternator or generator is a good guide to use.

1. Disconnect the battery ground cable to avoid the accidental grounding of the electrical system.
2. Securely connect the wires using 2 crimp terminals (not supplied) as illustrated in the Ammeter Application and Figure 8.
3. Route the wires through the firewall making sure that they do not come in contact with any hot surfaces or interfere with the carburetor, transmission or other control linkages. Protect the wire with tape or a rubber grommet where it passes through the firewall.

4. Connect the wires between the washer and the last nut on each post of the ammeter (Figure 7) making sure to observe the polarity of the connections as shown in Figure 8.

5. Reconnect the battery ground cable.

**PRO TIP:** With the engine off, turn the headlights on and note the direction of the needle. It should read on the discharge side. If it reads on the charge side of the scale, disconnect the battery and reverse the leads on the back of the meter.

## AMMETER APPLICATION

Figure 8 is an electrical and not a mechanical diagram. Depending on the vehicle point "A" could represent a connection on the starter relay, horn relay, headlight high beam switch, battery cable or other electrical termination point.

## BEFORE INSTALLATION

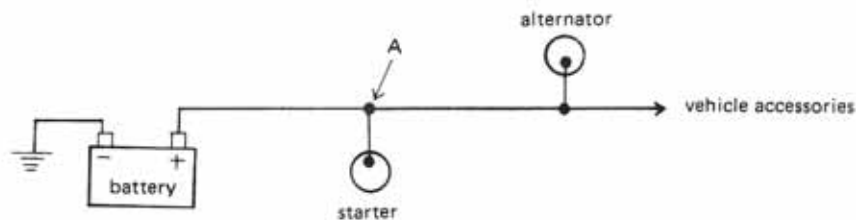


FIGURE 8

## AFTER INSTALLATION

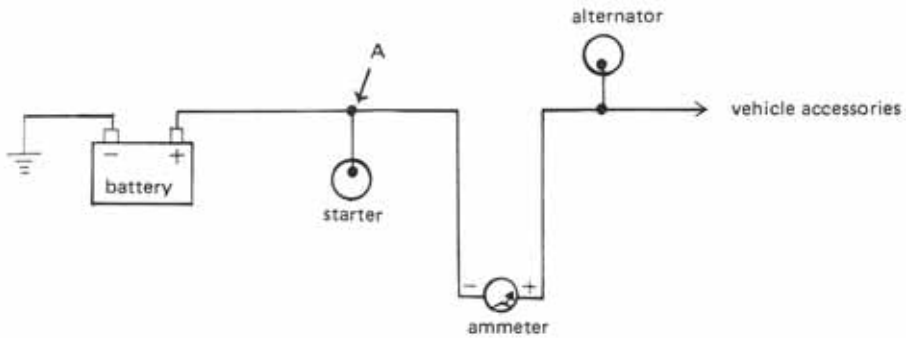


FIGURE 8 (cont.)

## FUEL PRESSURE GAUGE

The fuel pressure gauge measures the engine fuel pressure. It can alert you to a problem that may cause a breakdown.

## ASSEMBLY INSTRUCTION

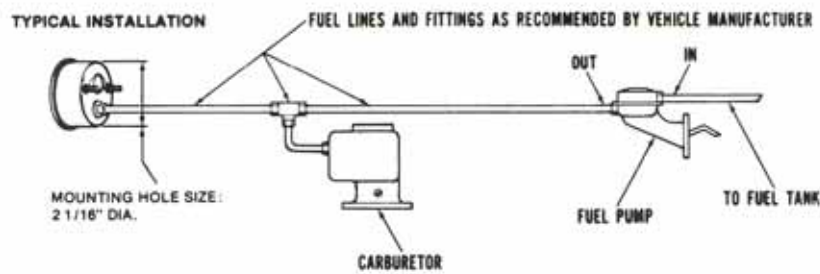


FIGURE 9

USE VEHICLE MANUFACTURER'S RECOMMENDED FUEL LINES, FITTINGS AND SEALS.

**DANGER: DO NOT MOUNT FUEL PRESSURE GAUGE IN PASSENGER COMPARTMENT ON ANY VEHICLE.**

FUEL PRESSURE GAUGES SHOULD ALWAYS BE MOUNTED IN ENGINE COMPARTMENT OF THE VEHICLE AWAY FROM SHIFT LINKAGES, THROTTLE CONTROLS AND INSURE THAT GAUGE LINES DO NOT CONTACT EXHAUST MANIFOLD.