

Sun CONSUMER PRODUCTS

INSTALLATION INSTRUCTIONS

SUN ELECTRIC GAUGES

SEG-1101 &
AMP-45B Ammeters


AMMETER

The ammeter is a device which indicates direction and quantity of current flow in an electrical system. Properly installed, it will indicate the rate of battery discharge or discharge.

In a normal system, the ammeter will show a discharge when electrical accessories are used while the engine is not operating. For a rather brief period after the engine is started the ammeter should show charge to indicate that the electrical power supplied by the battery for starting is being replenished. After the engine has been operated for a reasonable period of time, the ammeter should show zero, or just a little to the plus side.

If the ammeter continuously shows readings quite different than those described above, it is an indication of impending trouble. The battery, the starting system and the charging system should be thoroughly tested and serviced or repaired as necessary.

THE ELECTRICAL SYSTEM

All electrical systems require two paths to carry electrical power. One to carry power from its source to an accessory; and the other, to carry power from the accessory back to its source. In a truck or large boat, its metal structure serves as one of its paths, and is commonly referred to as "ground." A ground symbol, similar to this , is used in diagrams to represent an electrical connection to the vehicle structure.

In simplified terms, the automotive electrical system consists of three main branches that all meet at a common point. One branch leads from the charging system, one leads from most of the accessory circuits, while the third leads from the battery. For proper operation, the ammeter should be connected into the system at a point between the common junction and the branch leading to the battery.

Figures 1 and 2 represent very much simplified diagrams of a vehicle electrical system. Note

that in Figure 1, the main branches come together at a common point somewhere in the wiring harness. Figure 2 shows a system where the common junction point is located at one terminal of the starter switch. For proper indications, the ammeter shunt must be connected into a circuit gap created between the common junction point and the branch leading to the battery. Figures 3 and 4 show correct ammeter shunt connections in the simplified electrical system diagrams. The ammeter shunt should never be connected between the battery and the starter switch.

AMMETER INSTALLATION

1. Select a mounting location that will provide the best visibility from a normal driving position.
2. For panel mounting, cut a round hole into the panel. (2 19/32" for AMP-45B or 2/16" for SEG-1101.)
3. Insert the ammeter into the opening and secure it in place with the mounting bracket as shown in Figure 5.
4. If meter is mounted in a non-metallic panel, install a wire from the mounting bracket to the metal structure of the car as illustrated.

ELECTRICAL CONNECTIONS

1. Disconnect the battery ground cable to avoid accidental grounding and damage to the car's electrical system.
2. Refer to the make and model listing to determine which illustration most closely indicates an ideal place to connect an ammeter shunt into the system of your car.
3. Break into the electrical system as indicated, and securely connect the ammeter shunt into the gap created.
4. Route the ammeter leads through an existing grommet in the firewall and securely connect one to each ammeter terminal.

NOTE: Do not shorten or add wire to the shunt leads. They have been carefully calibrated to give your ammeter a high degree of accuracy.

