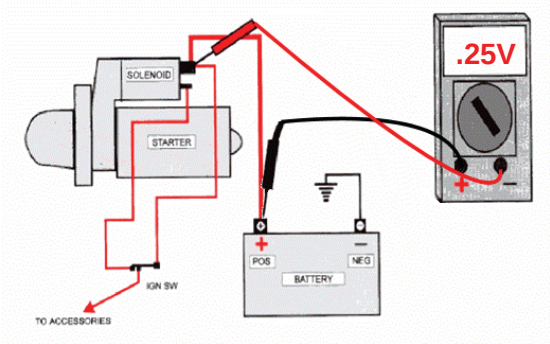
The Voltage Drop

Locating the voltage drop is done by a very simple test. This test should be done anywhere a voltage drop is indicated. To test the positive battery cable, connect the positive voltmeter lead to the positive post of the battery, **not to the battery cable end.** Connect the negative lead to the starter terminal where the battery cable is attached (See diagram below).



Crank the engine while observing the voltmeter. The reading should not exceed .25 volts. **Make sure you remove at least one voltmeter lead before the starter motor is turned off.** The starter motor can sometimes generate a spike voltage and damage the voltmeter. If the reading is over .25 volts excessive resistance is occurring in that cable. To test the negative battery cable, connect the negative voltmeter lead to the negative post of the battery, not the battery cable end. Connect the positive voltmeter lead to the starter case, being sure to make metal contact. Perform this test in the same manner as with the positive battery cable.

Testing the Solenoid Switch Voltage

Many times the voltage supply to the starter solenoid is overlooked. Due to the long lengths of wiring from the key switch to the solenoid, sever voltage drops can occur in this circuit after a period of time. Even though the starter may seem to be working OK, **low voltage to the switch circuit can cause intermittent operation** of the solenoid contacts and shorten the life of the solenoid and starter motor. Connect the voltmeter as shown below and crank the engine while observing the meter. **The voltage reading at this terminal should read at least 9.5 volts.** If the voltage is below 9.5 a simple cure is to install a booster solenoid. (Refer to Pg.10)