PERFORMING THE STARTER SYSTEM

VOLTAGE DROP TEST

Tools needed:

1. DVOM- Digital Volt/Ohm meter
2. Extension jumper lead

Step 1: Connect the DVOM between the battery positive post and the main positive connection to the starter motor. Measure the voltage drop during cranking on the voltage side of the starter circuit.

Figure 1: Checking the positive side of Starter Motor Circuit
Step 2: Connect the DVOM between the battery negative post and a clean spot on the starter motor housing. Take a measurement during cranking. This tests the voltage drop on the negative side of the circuit.

![Diagram of negative post and solenoid](image)

**Figure 2:** Check at a clean spot on the starter housing.

Step 3: Connect the DVOM leads as shown. Test the connection between battery positive post and the battery positive cable terminal end **while cranking**.

![Diagram of positive post](image)

**Figure 3:** Checking voltage drop between the positive battery post and the...
Step 4: Next test the positive battery cable for voltage drop. Connect the DVOM as shown to take a reading across the positive battery cable.

Figure 4: Checking the positive battery cable resistance using a voltage drop test.

Step 5: Now check the connection between the battery positive cable and the solenoid while cranking the engine. You are measuring the terminal end and connection.

Figure 5: Checking the voltage drop between the positive battery cable lug and the solenoid stud.
Step 6:  Clean and suspect terminals and replace any faulty components. Then, re-check the system by completing Steps 1 & 2 again.

**REMEMBER:**

All tests are made with the engine cranking.

The rule of thumb is that each termination in the circuit should have a voltage drop of no greater than 0.2 volts.