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.

measurment

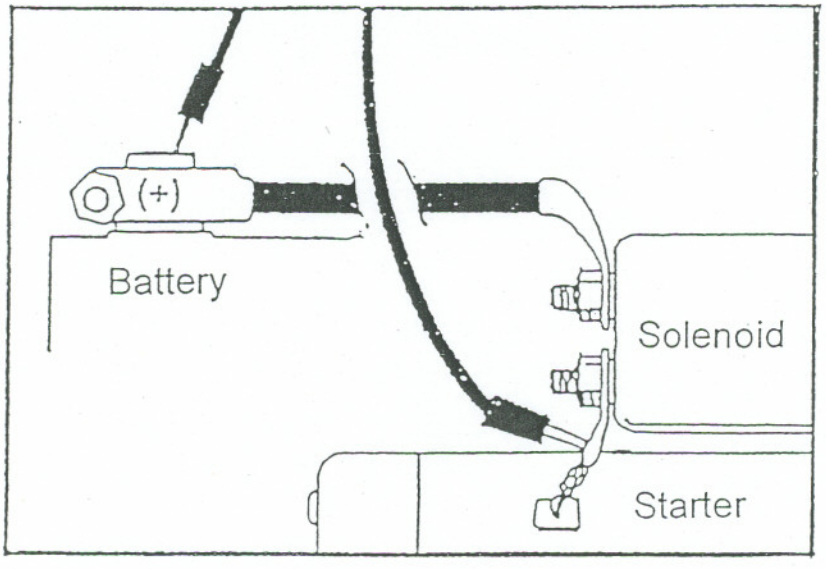

Figure 1: Checking the positive side of Starter Motor Circuit

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.

measurement

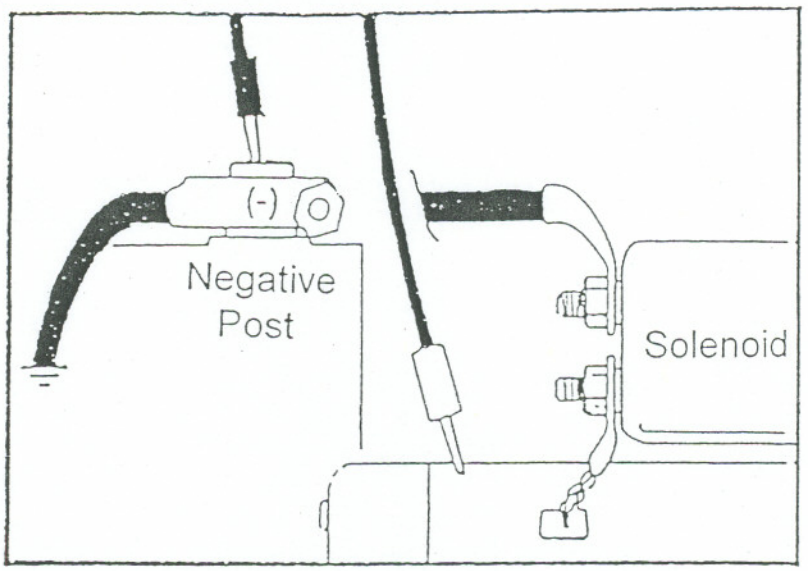

Figure 2: Check at a clean spot on the starter housing

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

measurement

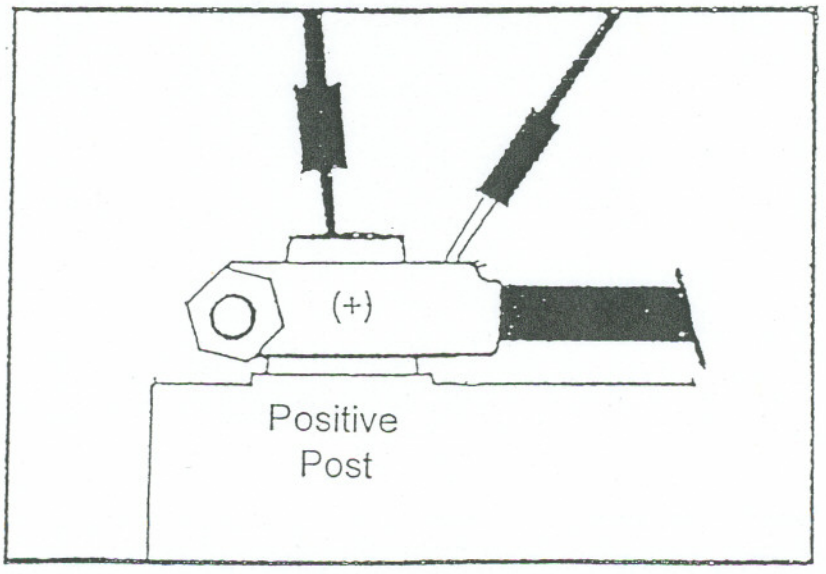

Figure 3: Checking voltage drop between the positive battery post and the

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.

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measurement

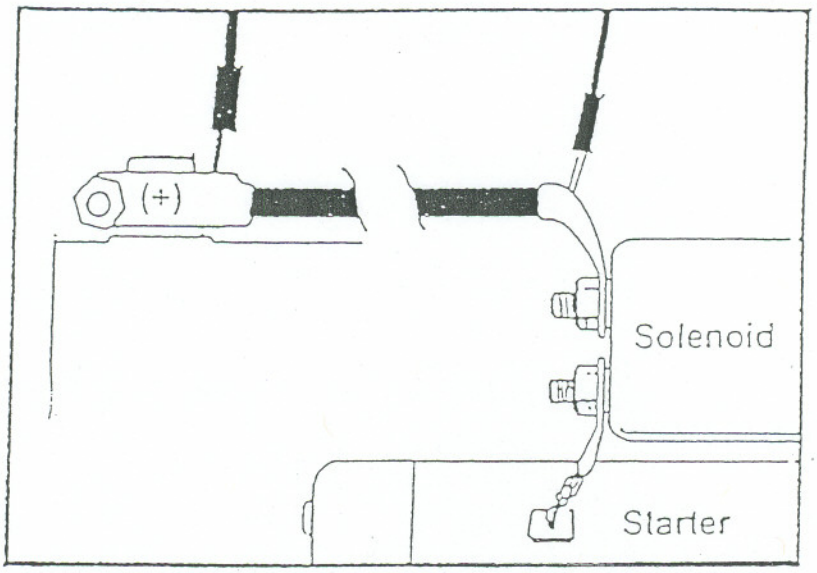

Figure 4: Checking the positive battery cable resistance using a voltage drop test.

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.

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measurement

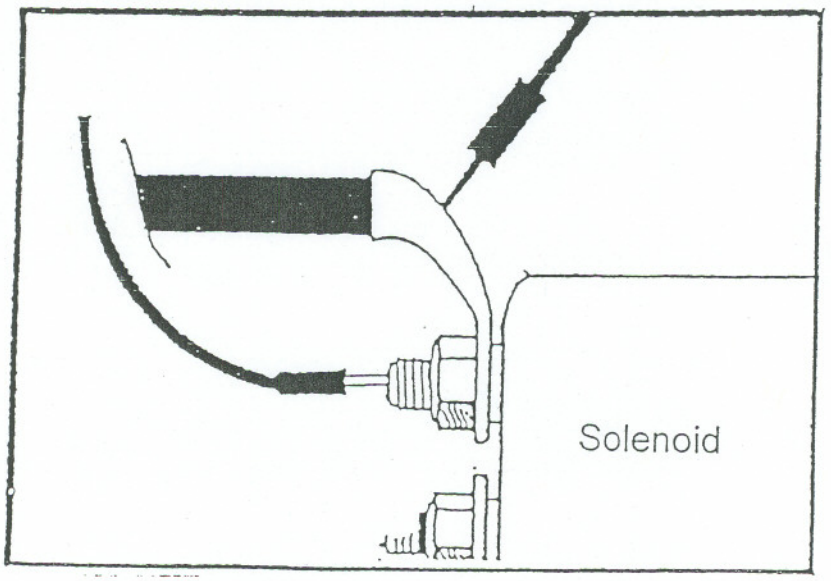

Figure 5: Checking he voltage drop between the positive battery cable lug and the solenoid stud.

Step 6: Clean and suspect terminals and replace any faulty components. Then, re-check the system by completing Steps 1 & 2 again.

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measurement

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 that 0.2 volts.