

Viper Series Engine Does Not Run

Problem: the bike will not turn over or will not fire

- (1) Verify there is fuel in the fuel tank and petcock is turned to the ON position.



- (2) Attempt to start the engine.
- Verify the kill switch is set to the 'O' position. If the vehicle is a Viper 90R, place the selector switch in the neutral (N) position.
 - Hold the LH brake.
 - Turn the ignition key to the ON position.
 - Press the starter button.



- (3) If the starter motor does not turn:
- Check for power at the starter relay.
 - If none, check the battery voltage. Battery voltage should be at least 13V. If below, charge the battery at 7 amps for 10 hours on a trickle charger. If the voltage is not above 13V after charging, replace the battery (part number **650559**).
 - Unplug the relay and jump across the connector pins (red to black/red). (See figure 1)
 - If starter motor turns, replace relay (part number **650459**) and go back to step (1). (See figure 2)
 - Test the starter motor to ground. If it turns, there is a bad ground.
 - If the motor does not turn, replace the starter motor. Specify part number **650239** for the 50 models, or **650511** for the 90 models. (See figure 3)



Fig 1



Fig 2



Fig 3

Fuel verified

Attempted to start engine

Battery voltage verified

Power at the relay

Jumped relay to test starter

Confirmed faulty starter motor (if applicable)



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(4) If the starter motor turns:

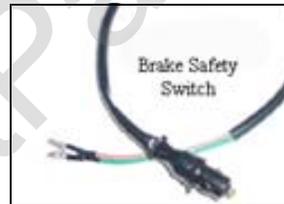
- i. Remove spark plug
- ii. Insert into ignition cap and ground out against the motor
- iii. Press the starter button and check for fire.

(5) If there is no fire at the spark plug:

i. Check the ignition switch (normally open double pole switch) by turning it to the OFF position and testing across the red and brown leads with a multi-meter. It should test 12V with key off across the red wire and ground. If power is at the brown wire with the key off, replace with part number **650720**. Power should only be on the brown wire with the ignition key ON.



ii. With the ignition turned ON, probe the red and brown wires. If there is no current, replace the switch.



iii. Check the LH brake safety switch. The rear brake lights will stay on if the switch is faulty. If the lights do not activate when the LH brake lever is depressed, perform a continuity test on it (it is a normally open switch).

iv. Check all wire connections at the main harness at the CDI box and at the A/C generator assembly.

v. Perform the ignition test as shown in Solution Check List #2 (SCL-0002).

After ignition tests have been performed and there is still no fire, contact the ETON tech department. You may fax the completed form to ETON technical service at **(864)-278-9590**.

Phone: _____ Fax: _____

Technician signature: _____ Date: _____

Fire tested

Ignition switch tested (OFF)

Ignition switch tested (ON)

LH brake tested

Connections tested

SCL-0002 test performed

