

## DIAGNOSIS AND TESTING (Continued)

Typically, a drain of approximately one amp can be attributed to an underhood lamp, glove compartment lamp, or rear deck lid lamp staying on continually. Other component failures or wiring shorts may be located by selectively pulling fuses or disconnecting fuse links to pinpoint the location of the current drain. When the current drain is found, the current will drop below 50 milliamps or the test lamp will go out. If the short is still not located, after checking all the fuses and fuse links, the drain may be due to the generator/regulator. Disconnect the generator output wire from the output stud and the regulator connector. If this eliminates the drain, check the charging system to locate the concern.

**Charging System****Tools Required:**

- Rotunda Starting and Charging Tester (VAT-40) 078-00005

In order to check the charging system, the use of Rotunda Starting and Charging Tester (VAT-40) 078-00005 or equivalent tester is suggested. Connect the tester to the battery positive and negative posts and also connect the current probe to the generator output lead (to measure generator output). (When measuring generator output, the tester can also be connected to the battery positive or negative cable. In this case, all electrical accessories must be turned off and 10-15 amps added to the reading on the tester due to the engine operation). With the engine running at 2000 rpm, adjust the tester load bank to determine the output of the generator. The generator output should be near to, or exceed the generator rating at 27°C (80°F). Checkout the charging system as indicated and service if required.

**NOTE:** Refer to the Rotunda VAT-40 test procedure manual for complete directions on checking out the charging system.

**Indicator System****Normal Charge Indication**

With this IGR system four conditions can cause the charge indicator to come on during vehicle operation:

1. No generator output: damaged generator or regulator.
2. Over-voltage condition: shorted generator rotor or regulator.
3. No connection at generator output terminal (B+).
4. No connection at battery voltage sensing terminal ('A' terminal).

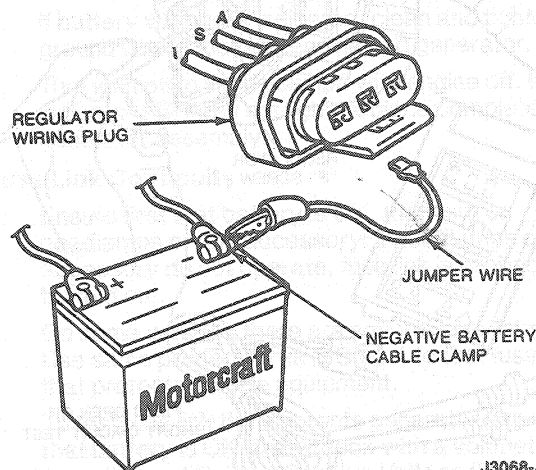
With ignition switch in the OFF position, charge indicator (generator or battery) is off.

With ignition switch in the RUN position (engine not running), charge indicator (generator or battery) is on.

With ignition switch in the RUN position (engine running), charge indicator (generator or battery) is off.

**Indicator Testing**

1. If charge indicator does not come on, disconnect wiring connector from regulator.
2. Connect a jumper wire from wiring connector 'I' terminal to battery negative (-) post cable clamp.



3. Turn ignition switch to RUN position with engine off. If indicator does not light, check for presence of lamp socket resistor. If resistor is present, check for contact of lamp socket leads to the flexible printed circuit. If good, check indicator for continuity and replace if burned out. If indicator checks good, perform Regulator 'I' Circuit Test.
4. If indicator does light, remove jumper wire and reconnect wiring plug to regulator. Connect voltmeter negative lead to battery negative post cable clamp and contact voltmeter position lead to regulator 'A' terminal. Battery voltage should be indicated. If battery voltage is not indicated, service 'A' circuit wiring.
5. If battery voltage is indicated, clean and tighten ground connections to engine, generator and regulator.