**Meets ASE Task:** (A6-D-4) P-2 Perform charging circuit voltage drop tests; determine needed action.

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_

Time on Task:\_\_\_\_\_\_\_\_\_\_\_\_\_

Make/Model/Year:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

VIN:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Evaluation (Enter number from 4, 3, 2, 1) :\_\_\_\_\_\_\_\_\_

**Charging Circuit Voltage Drop**

Page 168

**1.** Check service information for specified procedures and voltage drop specifications of

the charging circuit.

**2.** Connect one test lead of a digital multimeter set to read DC volts to the alternator

output terminal and the positive (+) terminal of the battery.

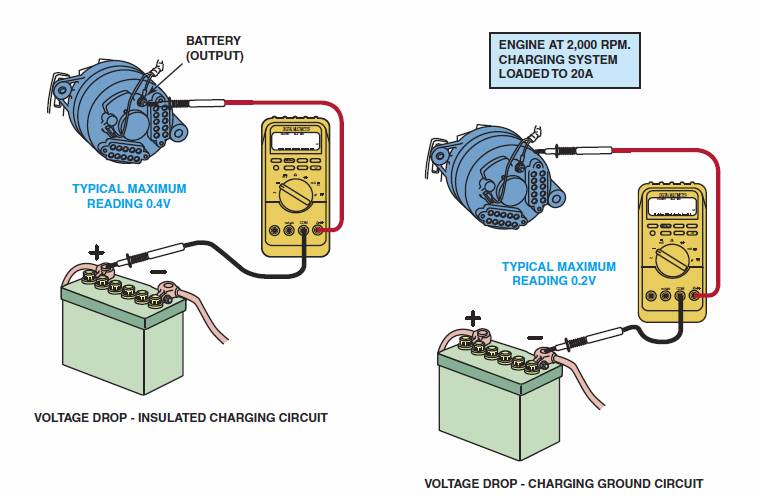
**3.** Start the engine and run to 2,000 RPM (fast idle).

**4.** Turn on the headlights to force the alternator to charge the battery.

**5.** The voltage drop reading should not exceed 0.40 volt.

\_\_\_\_\_ = the voltage drop of the *insulated* (power side) of the charging circuit

(between the output terminal of the alternator and the positive (+)

 terminal of the battery).

**OK  NOT OK**

**6.** To test if the generator is properly grounded,

continue operating the engine at a fast

idle with the lights on, connect the meter

leads to the case of the alternator and the

negative (-) terminal of the battery. A

reading of greater than 0.20 volt indicates a

poor alternator ground.

\_\_\_\_\_ = the voltage drop of the *ground side* of the alternator (between the rear

housing of the alternator and the negative (-) terminal of the battery).

**OK  NOT OK**

**7.** Based on the test results, what is the needed action? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_