**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**

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**[ ]  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? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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