Charging Circuit Voltage Drop

Meets ASE Task: A6 – D-4 – P-1

Name:_____ Date:_____ Time on Task:_____

Make/Model/Year:_____ VIN:_____

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

☐ 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? _____

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