Name:_____ Date:_____ Class_____

▶ TASK Perform battery state-of-charge test; determine necessary action.

MLR 6B1 | AST 6B1 | MAST 6B1

Time off_____

Time on_____

Total time_____

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1. Research the following specifications for this vehicle in the appropriate service information.
   a. **Specified battery capacity: _____ cold cranking amps (CCA)**
   b. **Group size, if specified**: _____ **BCI group**

> **NOTE** Check with your supervisor/instructor which of the following tests you are to perform, or whether you should perform all of them.

2. Perform a Specific Gravity Test. The battery must have removable vent caps.
   a. Locate and review the "Specific Gravity State of Charge Test" in the appropriate service information.
   b. Clean the top of the battery.

> **NOTE** This must be done prior to the removal of the vent caps.

   c. Remove the vent caps.
   d. Verify that the electrolyte level is high enough above the cells to fill the hydrometer.
   e. Draw enough electrolyte from a cell so the float is suspended. Determine the specific gravity reading and return the electrolyte into the cell. Repeat this for each cell and record your readings below. Be sure to compensate for temperature if you are using a hydrometer that is not automatically temperature compensated.

      Cell #1: _____
      Cell #2: _____
      Cell #3: _____
      Cell #4: _____
      Cell #5: _____
      Cell #6: _____

   f. **Calculate the maximum difference between the cell readings:** _____
   g. **What is the maximum allowable difference in cell readings:** _____
   h. **Compare the readings to the information in the service information, and list the state of charge:** _____ **%**
   i. Clean the hydrometer and tools.

3. Perform an Open Circuit Voltage Test. This test is for maintenance-free or non-vented batteries.
   a. Locate and review the "Open Circuit Voltage Test" in the service Information.
   b. Make sure the engine is off and the battery is stabilized. If the battery has just been recharged, you must remove the surface charge. Wait at least 5 minutes after removing the surface charge before measuring the open circuit voltage. Please follow the manufacturer's recommendations closely.

c. Prepare the digital volt/ohm meter (DVOM) to measure voltage.
d. Place the red lead on the positive post/terminal and the black lead on the negative post/terminal.
e. **What is the measured voltage (open-circuit voltage) of the battery?** _____ volts
f. The table below represents the open-circuit voltage of the battery. Please select the battery's percent of charge as it relates to the voltage measured.

Voltage	Percent Charge
12.6 or greater	100
12.4–12.6	75–100
12.2–12.4	50–75
12.0–12.2	25–50
11.7–12.0	0–25
0.0–11.7	0; no charge

4. Perform a Conductance Test.

a. Review the process for performing a battery conductance test.
b. Connect the conductance tester to the battery terminals (some testers require the removal of the battery cable for accuracy).
c. Follow the prompts on the conductance tester for the type and CCAs of the battery being tested.
d. Start the conductance test.
e. **List the state of charge (usually a % of charge):** _____ **%**
f. **Record the available CCAs listed on the conductance tester:** _____

5. **Determine any necessary action(s)**:

6. Have your supervisor/instructor verify satisfactory completion of this procedure, any observations found, and any necessary action(s) recommended.

Performance Rating

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☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4

Supervisor/instructor signature _____ Date _____