Battery Charging

Meets NATEF Task: (A6-B-5) Perform slow/fast battery charge. (P-2)

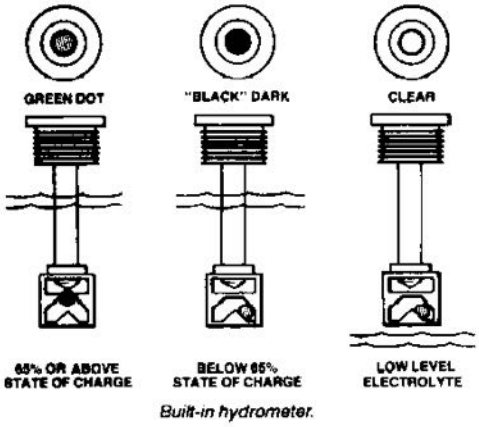
Name _____ **Date** _____ **Time on Task** _____

Make/Model/Year _____ **VIN** _____ **Evaluation: 4 3 2 1**

_____ **1.** Measure the open-circuit voltage of the battery = _____ volts (red lead of the voltmeter to positive [+] and black lead to negative [-]). (If more than 12.6 V, remove the surface charge by turning on the headlights for 1 minute).

_____ **2.** Percentage of charge = _____%.

12.6 V or higher = 100% charged
12.4 V = 75% charged
12.2 V = 50% charged
12.0 V = 25% charged
below 11.9 V = discharged



Built-in hydrometer.

_____ **3.** Determine the cold cranking amperes (CCA) of the battery = _____.

(*The charge rate should be 1% of the CCA.* For example, a battery with a 500 CCA rating should be charged at 5 ampere rate.) Charge Rate = $\frac{\text{CCA}}{100}$

_____ **4.** Determine the reserve capacity in minutes = _____.

(*The charge rate can be determined by dividing the reserve capacity of the battery in minutes by 30.* For example, a 180-minute battery should be charged at 6 ampere rate: 180/30 = 6).

$$\text{Charge Rate} = \frac{\text{Reserve Capacity}}{30}$$

_____ **5.** The battery should be charged at _____ amperes (CCA method) or at _____ amperes (reserve capacity method).