

# Battery Charging

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

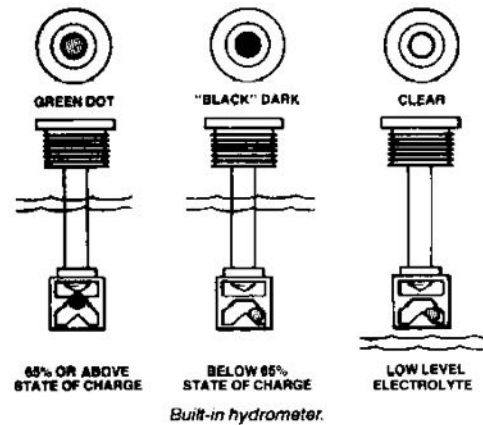
Name \_\_\_\_\_ Date \_\_\_\_\_ Time on Task \_\_\_\_\_

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



\_\_\_\_\_ 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 =  $\frac{CCA}{100}$

\_\_\_\_\_ 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).

