

NAME \_\_\_\_\_

DATE \_\_\_\_\_

## BTC Diesel Equipment Technology Job Sheet: "OEM"

**Objective:** Test Starting/Charging System

**Procedure:** Follow outline below

**Vehicle:** \_\_\_\_\_

1. First and foremost, ensure that the battery open circuit voltage, engine off is between 12.6 and 12.8 volts.  
Yes\_\_\_ Voltage\_\_\_ No\_\_\_ Voltage\_\_\_
  2. CCA (Cold Cranking Amp) capacity of the battery. Result\_\_\_
  3. Measure voltage at the battery with 50% of CCA load applied for 15 seconds.  
Result\_\_\_
  4. Digital voltage measurement from the negative post of the battery (not the cable) to the frame of the alternator, **while cranking**.  
Result\_\_\_
  5. Digital voltage measurement from the negative post of the battery (not the cable) to the positive post of the starter solenoid, **while cranking**. If not accessible, move on to the next step for now.  
Result\_\_\_
  6. What is the rated output of the alternator?  
Result\_\_\_
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**Do tests 7-10 together; with ALL available electrical accessories turned on; engine running at 1500 - 2000 RPM**

7. Digital voltage measurement from the negative post of the battery to the positive post of the alternator.  
Result\_\_\_
  8. Digital voltage measurement from the negative post of the battery to the frame of the alternator.  
Result\_\_\_
  9. Measure battery voltage  
Result\_\_\_
  10. Measure current (amperage), using an inductive pickup, on the alternator output cable.  
Result\_\_\_
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11. Measure Parasitic Draw, using an inductive pickup around the battery – cables(s) measure current draw with **ALL** loads turned off to ensure that there is less than 10A load. Then hook your meter in series with the ground and verify that the parasitic load is less than 100mA, for MOST systems. See instructor for this procedure.  
Result\_\_\_

System OK

System Needs Service