

**► TASK** Diagnose (troubleshoot) the cause of brighter-than-normal, intermittent, dim, or no-light operation; determine needed action.

**MAST**  
**6E1**

CDX Tasksheet Number: C320

**Vehicle used for this activity:**

Year \_\_\_\_\_ Make \_\_\_\_\_ Model \_\_\_\_\_

Odometer \_\_\_\_\_ VIN \_\_\_\_\_

Time off\_\_\_\_\_

Time on \_\_\_\_\_

Total time\_\_\_\_\_

1. List the customer complaint/concern regarding the lighting system fault:
2. If the lights are dim or do not operate, go to step 3. If the lights are too bright, go to step 9.
3. Research the affected lighting system troubleshooting section and the wiring diagram(s) in the appropriate service information for the vehicle you are working on.
4. Turn on the affected light(s), measure the battery voltage, and list it here:  
\_\_\_\_\_ volts
5. Measure the voltage across the power and ground at the light (light illuminated). List the voltage: \_\_\_\_\_ volts
  - a. Calculate the total voltage drop in the circuit and list it here:  
\_\_\_\_\_ volt drop
  - b. Is the voltage drop excessive? Yes: \_\_\_\_\_ No: \_\_\_\_\_
  - c. If yes, go to step 7. If no, go to step 6.
6. Inspect the bulb and connections for any faults (wrong bulb, corroded, or loose connection). List your observations:
7. Measure the voltage drop from the battery positive post to the input terminal of the light.
  - a. List the voltage drop: \_\_\_\_\_ volts
  - b. Is this within specifications? Yes: \_\_\_\_\_ No: \_\_\_\_\_
  - c. Determine any necessary action(s):

8. Measure the voltage drop from the bulb ground to the battery negative post.

- a. List the voltage drop: \_\_\_\_\_ volts
- b. Is this within specifications? Yes: \_\_\_\_\_ No: \_\_\_\_\_
- c. Determine any necessary action(s): \_\_\_\_\_

9. Install exhaust hose(s) and wheel chocks, and set the parking brake. Start the vehicle.

10. Measure the charging system voltage at the battery, with the engine running at 1500 rpm: \_\_\_\_\_ volts

- a. Is this within specification? Yes: \_\_\_\_\_ No: \_\_\_\_\_

**NOTE** If the battery voltage is too high, you will need to perform charging system checks to determine the cause of the overcharge.

11. List your observations: \_\_\_\_\_

12. Determine any necessary action(s): \_\_\_\_\_

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

Performance Rating

CDX Tasksheet Number: C320

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Supervisor/instructor signature \_\_\_\_\_ Date \_\_\_\_\_