

JOB SHEET A6D2 Charging System Diagnosis

Name: _____ Start Date: _____
Make: _____ Model: _____ End Date: _____
VIN: _____ Year: _____
Mileage: _____

LEARNING OBJECTIVE/NATEF TASK



- Perform charging system output test; determine necessary action **NATEF TASK A6/D1, P1. ICS160, ICS167**
- Diagnose charging system for the cause of undercharge, no-charge, and overcharge conditions. **NATEF TASK A6/D2, P1. ICS160, ICS167**

MATERIALS

Classroom Vehicle (s), OEM service information

PROCEDURE

- Wear Safety Glasses for this entire procedure.
- Locate in the OEM service information the procedure for testing and diagnosing the charging system output for the vehicle you are using. Submit this procedure to your instructor or mentor for approval.

Your Instructor **MUST** stamp or initial the box to the right before you can proceed with this job sheet.



2. What Safety Precautions are necessary during charging system output testing?

3. Set the vehicle parking brake and place the vehicle in neutral. Observe all standard shop safety practices and precautions.

A6/U5/L2 CHARGING SYSTEM DIAGNOSIS & SERVICE

4. Perform a preliminary charging system output test; determine action:

| PRELIMINARY CHECKS | NECESSARY ACTION |
|--------------------|------------------|
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5. What diagnostic equipment are you going to use to test the condition of the charging system? _____

6. List the steps used to perform a voltage output test on a charging system.

7. Perform a voltage output test on the charging system. List the results:

- Battery OCV test: _____
- Charging system output voltage at 1,500 rpm: _____

8. List the steps to perform a current output test on a charging system:

9. Perform a current output test on a charging system. Record the results:

- System specifications: _____
- Charging current output: _____

10. List the steps and precautions to fully field a charging system and determine if the regulator is performing as designed:

11. Perform a full-field regulator by-pass test and record the results below:

- Charging system current output before full-field test: _____
- Charging system current output during a full-field test: _____

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12. List the causes and corrections for low charging system output:

| LOW OUTPUT CAUSES: | LOW OUTPUT CORRECTIONS: |
|--------------------|-------------------------|
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TASK SUMMARY

- Now that you have completed this NATEF task, can you think of anything (tools, information, knowledge etc.) that would have made this task easier.

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- List a customer complaint together with the cause determined by this diagnostic/inspection task that might appear on a work order, and then list the NATEF Task CORRECTION you would use to resolve the complaint.

COMPLAINT: _____

1. Perform Checks/Inspect: _____

2. Referencing Bulletin: _____

CAUSE: _____

1. Diagnosis: **USED THIS NATEF DIAGNOSIS TASK**

2. Operating as designed: _____

3. Cause identified as: _____

CORRECTION: _____

1. Other Correction: _____

2. Correction Verified By: _____

Use this Rubric to RATE the completion of Job Sheet

1 = Demonstrated exposure/observation of the competency

2 = Applies the competency but only mastered a few essential attributes of the competency

3 = Capable of the competency but needs further practice

4 = Performs the competency satisfactorily

5 = MASTERED the competency



Instructor _____ **Mentor** _____