

NATEF TASK SHEET --- SECTION A6 A.1,6,9,13 B.1,2 C.1 D.1,3 (P-1)

SC11: COMPLETE DIAGNOSIS OF THE STARTING-CHARGING SYSTEM

This is what a good technician will do to check out the starting-charging system!

Student: _____ Date: _____ Period: _____

VIN: _____ Year: _____ Make: _____ Model: _____

Engine: _____ Transmission: _____ Production Date: _____

Objective: Student will perform a complete Starting-Charging system diagnosis and recommend repairs necessary to bring system to factory specifications.

- Materials:**
1. **EYE PROTECTION**
 2. Volt-Ohm-Meter w/Milliamp Meter
 3. VAT 45 and Conductance Tester
 4. Test Lamp and Battery Terminal Wrench
 5. Vehicle with fully charged battery (12.4 VDC or higher) (see instructor)

Procedure: **WEAR EYE PROTECTION!*** Use fender cover, seat covers, and floor mats.**
 Student will perform a complete Starting-Charging system diagnosis and recommend repairs necessary to bring systems to factory specifications.

Test	Test/Inspection	Test Result/Observation	Pass / Fail
Battery Inspection	Inspect battery, terminals, hold-down hardware, and tray		
State-Of-Charge	Voltage and Percentage full	/	
Conductance Test Battery	CCA Rating / Actual CCA Measured	/	
Alternator Output	Voltage Off and Running	/	
Alternator Belt Inspection	Is it there? Is it worn? Is it cracked, frayed, or damaged?		
Starter Test	Expected Amps, Actual Amps, and Lowest Voltage Reading	/ /	
Draw Test -- Test Lamp or Milliamp Meter	Is the test lamp bright, dim, or not lit? How many milliamps are there supposed to be? Specifications/Measured	/	

LIST ANY WORK NEEDED TO BE DONE TO TEST VEHICLE HERE: _____

How long should it take a good technician to do this diagnosis? ____ min.

How long did you take? ____ min.

How much labor time do most shops charge for doing this diagnosis? ____ min.

PROBLEMS / CONCERNS: _____

INSTRUCTORS EVALUATION

LEVEL OF SKILL ATTAINED	Initial	OVERALL SKILL EVALUATION	Points
DEMONSTRATES MASTERY (5)		DOCUMENTATION COMPLETENESS (1)	
PERFORMED INDEPENDENTLY (4)		SAFETY COMPLIANCE* (1)	
CAPABLE, NEEDS PRACTICE (3)		WORK PROFESSIONALISM** (3)	
ASSISTED IN PERFORMING (2)		LEVEL OF SKILL ATTAINED (1-5)	
EXPOSURE, OBSERVATION (1)		TOTAL SCORE	

INSTRUCTOR'S SIGNATURE: _____

Complete Starting-Charging System Diagnosis / SC11-2011 / 10-25-11 / vdb