

## NATEF TASK SHEET --- SECTION A.6 B.1, C.1 (P-1)

### SC8: STARTER DRAW TEST

*Is that starter any good?*

Student: \_\_\_\_\_ Date: \_\_\_\_\_ Period \_\_\_\_\_

VIN: \_\_\_\_\_ Year: \_\_\_\_\_ Make: \_\_\_\_\_ Model: \_\_\_\_\_

Engine: \_\_\_\_\_ Transmission: \_\_\_\_\_ Production Date: \_\_\_\_\_

**OBJECTIVE:** Student will determine the condition and amperage draw from a starter motor and determine if replacement is necessary.

- MATERIALS:**
1. **EYE PROTECTION**
  2. Hand tools
  3. Volt-Ohm-Meter
  4. VAT 45 Charging system analyzer or Equivalent
  5. Vehicle with fully charged "GOOD" battery (see instructor).

**PROCEDURES: WEAR EYE PROTECTION!**

Watch power point **SC8** and fill in blanks below.

- Normal Starter Draws:** 4 Cylinder ~ \_\_\_\_\_ Amps  
 6 Cylinder ~ \_\_\_\_\_ Amps  
 8 Cylinder ~ \_\_\_\_\_ Amps

Use fender cover, seat covers, and floor mats. Connect test equipment according to manufacturers specifications. Disable ignition or fuel system so that engine **will not start**. Determine battery voltage. If below \_\_\_\_ volts, charge battery. Recheck battery voltage. When above \_\_\_\_ volts, then proceed with test. **For VAT 45 tester**, follow directions on tester. Record results below.

**For other testers**, crank engine for \_\_\_\_ seconds. Note voltage at \_\_\_\_ seconds while still cranking. **Voltage** should be at or above minimum specified above.  
 \_\_\_\_ volts or higher – **PASS**      \_\_\_\_ volts or lower - **FAIL**

**TEST VEHICLE NOW AND RECORD RESULTS:**

**INITIAL VOLTAGE** reading \_\_\_\_\_ (Before test)

Cranking average **VOLTAGE** reading \_\_\_\_\_

Cranking average **AMPERAGE** reading \_\_\_\_\_

**STARTER TEST RESULTS:** ..... **PASS** \_\_\_\_\_ **FAIL** \_\_\_\_\_

**YOUR RECOMMENDATIONS:** \_\_\_\_\_

( Does the starter need to be replaced? )

**INSTRUCTORS EVALUATION**

LEVEL OF SKILL ATTAINED	Initial	OVERALL SKILL EVALUATION	Points
DEMONSTRATES MASTERY (5)		DOCUMENTATION COMPLETENESS (1)	
PERFORMS SATISFACTORILY (4)		SAFETY COMPLIANCE (1)	
CAPABLE, NEEDS PRACTICE (3)		WORK PROFESSIONALISM (3)	
ASSISTED IN PERFORMING (2)		<b>LEVEL OF SKILL ATTAINED (1-5)</b>	
EXPOSURE, OBSERVATION (1)		<b>TOTAL SCORE</b>	
<b>INSTRUCTOR'S SIGNATURE:</b>			

**SC8STARTERTEST/07-10-07/vdb**