

**North Montco Technical Career Center
1265 Sunneytown Pike, Lansdale PA 19446**

Performance Evaluation/Assessment

Automotive Technology

NATEF Electrical/Electronic Systems

Standardized Integration Module (SIM)

Task 8: Accessories Diagnosis and Repair

Hours: 30

Date: 9/01/2008

Exit Outcome/Terminal Performance Objective:

- Demonstrates the ability to accessories systems diagnosis and repair.

Enabling Objectives:

- Explains basic accessories systems theory.
- Explains basic accessories systems operation.
- Explains steps to diagnose accessories systems problems.
- Identifies basic accessories systems components.
- Performs basic accessories systems diagnostics.
- Explains steps to repair accessories systems.
- Performs basic accessories systems repairs.
- Locate correct diagnostic, repair, service & maintenance information using ShopKey.

Mastery: All hands-on tasks must be completed to 100% accuracy and to industry standards.

To achieve Mastery of this task, the student must:

1. Participate in a lecture, view either the PowerPoint presentation or video of the material.
2. Participate in a demonstration of the task.
3. Participate in a guided application of the task.
4. Practice the task without the instructor.
5. Complete task to 100% accuracy.
6. Demonstrate or practice the task with another student.

PA Academic Standards/Assessment Anchors/Eligible Content

Science

PA Academic Standard:

3.1.10.C Apply patterns as repeated processes or recurring elements in science and technology.

3.4.10.B Analyze energy sources and transfers of heat.

Assessment Anchor:

S11.C.2.1 Analyze energy sources and transfer of energy, or conversion of energy.

S11.A.1.3 Describe and interpret patterns of change in natural and human-made systems.

Eligible Content:

S11.C.2.1.4 Use Ohm's Law to explain relative resistances, currents, and voltage.

S11.A.1.3.1 Use appropriate quantitative data to describe or interpret change in systems (e.g., biological indices, electrical circuit data, automobile diagnostic systems data).

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Math

PA Academic Standard:

2.8.11.P Analyze and explain systems of equations, systems of inequalities and matrices.

2.8.11.G Solve problems using analytic geometry.

Assessment Anchor:

M11.C.3.1 Solve problems using analytic geometry.

M11.D.1.1 Analyze and/or use patterns or relations.

Eligible Content:

M11.C.3.1.2 Relate slope to perpendicularity and/or parallelism

M11.A.2.1.1 Solve problems using operations with rational numbers including rates and percents (single and multi-step and multiple procedure operations) (e.g., distance, work and mixture problems, etc.).

M11.A.2.1.2 Solve problems using direct and inverse proportions.

Language Arts:

PA Academic Standard:

1.1.11.E Establish a reading vocabulary by identifying and correctly using new words acquired through the study of their relationships to other words.

1.1.11.F Understand the meaning of and apply key vocabulary across the various subject areas.

Assessment Anchor:

R11.A.1.1 Identify and apply the meaning of vocabulary.

R11.A.1.2 Identify and apply word recognition skills.

Eligible Content:

R11.A.1.1.1 Identify and/or apply meaning of multiple-meaning words used in text.

R11.A.1.2.2 Define and/or apply how the meaning of words or phrases changes when using context clues given in explanatory sentences.

Social Studies:

PA Academic Standard:

8.1.12.A Evaluate chronological thinking

Career Education & Work

PA Academic Standard:

13.1.11.A Relate careers to individual interests, abilities and aptitudes.

SAFETY NOTICE: In addition to following all North Montco Technical Career Center Automotive Technology Program Safety and MSDS Policies, refer to the specific vehicle's manufacturer's shop manual for complete safety details when performing these tasks.

NOTE: *Safety is not an option!* Although this information is very thorough, it is general and does not fully cover all safety rules, procedures and hazards.

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PERFORMANCE CRITERIA	Needs Practice	Satisfactory
Safety glasses must be worn at all times! Read all safety materials provided and observe all safety precautions demonstrated by your instructor.		
Diagnose incorrect operation of motor-driven accessory circuits; determine necessary action. P-1		
Diagnose incorrect heated glass, mirror, or seat operation; determine necessary action. P-3		
Diagnose incorrect electric lock operation (including remote keyless entry); determine necessary action. P-1		
Diagnose incorrect operation of cruise control systems; determine necessary action. P-3		
Diagnose supplemental restraint system (SRS) concerns; determine necessary action. P-1		
Disarm and enable the airbag system for vehicle service. P-1		
Diagnose radio static and weak, intermittent, or no radio reception; determine necessary action. P-3		
Remove and reinstall door panel. P-1		
Diagnose body electronic system circuits using a scan tool; determine necessary action. P-2		
Check for module communication (including CAN/BUS systems) errors using a scan tool. P-2		
Diagnose the cause of no anti-theft systems operation of. P-3		
Describe the operation of keyless entry/remote-start systems. P-3		
Perform software transfers, software updates, or flash reprogramming on electronic modules. P-3		
Complete an Outline, Reading Grid, Summary and "Last-Word" Worksheet Packet for Chapters 1-10, 80, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 77, 78 and 79 from <i>Modern Automotive Technology</i>		
Score 80% or better on <i>Modern Automotive Technology</i> chapter tests 1-10 & 80		
Score 80% or better on <i>Modern Automotive Technology</i> chapter tests 29, 30, 31, 32, 33, 34, 37, 38, 77, 78 and 79		
Score 80% or better on Math Intro Lessons 1-5 & Math Lessons 1, 5 and 6 Homework Sheets		
Score 80% or better on ASE Practice Test 6		
Earn a passing grade on the AYES Electrical/Electronic Exit Exam A-6		