

## AER 0692 - Electrical and Electronic Systems II

2013 NATEF JOB TASKS COMPLETION REQUIREMENT: **P1 - 95% P2 - 80% P3 - 50%**

Student Name: \_\_\_\_\_

### DETAILED COURSE CONTENT

AUTOMOTIVE ELECTRICAL/ELECTRONIC SYSTEM TECHNICIAN

#### DEMONSTRATE PROFICIENCY IN CHARGING SYSTEM DIAGNOSIS AND REPAIR -

The student will be able to:

		P1	P2	P3	Level	Date	Textbook Ch CDX Task
VI-D-1	Perform charging system output test; determine necessary action.						38: C315
VI-D-2	Diagnose (troubleshoot) charging system for causes of undercharge, no-charge, or overcharge conditions.						38: C316
VI-D-3	Inspect, adjust, or replace generator (alternator) drive belts; check pulleys and tensioners for wear; check pulley and belt alignment.						38: C317
VI-D-4	Remove, inspect, and re-install generator (alternator).						38: C318
VI-D-5	Perform charging circuit voltage drop tests; determine necessary action.						38: C319

#### DEMONSTRATE PROFICIENCY IN LIGHTING SYSTEM DIAGNOSIS AND REPAIR -

The student will be able to:

VI-E-1	Diagnose (troubleshoot) the causes of brighter-than-normal, intermittent, dim, or no light operation; determine necessary action.						39: C320
VI-E-2	Inspect interior and exterior lamps and sockets including headlights and auxiliary lights (fog lights/driving lights); replace as needed.						39: C956
VI-E-3	Aim headlights.						39: C321
VI-E-4	Identify system voltage and safety precautions associated with high intensity discharge headlights.						39: C564

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### DEMONSTRATE PROFICIENCY IN GAUGES, WARNING DEVICES, AND DRIVER INFORMATION SYSTEMS DIAGNOSIS

AND REPAIR – The student will be able to:

		P1	P2	P3	Level	Date	Textbook Ch CDX Task
VI-F-1	Inspect and test gauges and gauge sending units for causes of abnormal gauge readings;						39: C646
	determine necessary action.						
VI-F-2	Diagnose (troubleshoot) the causes of incorrect operation of warning devices and other						39: C325
	driver information systems; determine necessary action.						

### DEMONSTRATE PROFICIENCY IN HORN AND WIPER/WASHER DIAGNOSIS

AND REPAIR – The student will be able to:

VI-G-1	Diagnose (troubleshoot) causes of incorrect horn operation; perform necessary action.						40: C327
VI-G-2	Diagnose (troubleshoot) incorrect wiper operation; diagnose wiper speed control and						40: C328
	park problems; perform necessary action.						
VI-G-3	Diagnose (troubleshoot) windshield washer problems; perform necessary action.						40: C329

### DEMONSTRATE PROFICIENCY IN ACCESSORIES DIAGNOSIS

AND REPAIR – The student will be able to:

VI-H-1	Diagnose (troubleshoot) incorrect operation of motor-driven accessory circuits;						40: C330
	determine necessary action.						
VI-H-2	Diagnose (troubleshoot) incorrect electric lock operation (including remote keyless entry);						40: C647
	determine necessary action.						
VI-H-3	Diagnose (troubleshoot) incorrect operation of cruise control systems; determine necessary action.						40: C333
VI-H-4	Diagnose (troubleshoot) supplemental restraint system (SRS) problems; determine						40: C861
	necessary action.						
VI-H-5	Disable and enable an airbag system for vehicle service; verify indicator lamp operation.						40: C335

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### DEMONSTRATE PROFICIENCY IN ACCESSORIES DIAGNOSIS

#### AND REPAIR – Continued

		P1	P2	P3	Level	Date	Textbook Ch CDX Task
VI-H-6	Remove and reinstall door panel.						40: C337
VI-H-7	Check for module communication errors (including CAN/BUS systems) errors using a scan tool.						40: C821
VI-H-8	Describe the operation of keyless entry/remote-start systems.						40: C648
VI-H-9	Verify operation of instrument panel gauges and warning/indicator lights. Reset maintenance indicators.						40: C957
VI-H-10	Verify windshield wiper and washer operation, replace wiper blades necessary action.						40: C958

	P1	P2	P3
	0	0	0
Total Tasks	12	10	2
% of Total Tasks	0	0	0