

AER 0891 - Automotive Engine Performance I

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

Student Name: _____

DETAILED COURSE CONTENT

AUTOMOTIVE ENGINE PERFORMANCE TECHNICIAN - INDUSTRY TITLE

DEMONSTRATE PROFICIENCY IN ENGINE PERFORMANCE GENERAL ENGINE

DIAGNOSIS – The student will be able to:

		P1	P2	P3	Level	Date	Textbook Ch CDX Task
VIII-A-1	Identify and interpret engine performance concerns; determine necessary action.						44: C386
VIII-A-2	Research applicable vehicle and service information, vehicle service history, service precautions, and technical service bulletins.						44: C387
VIII-A-3	Diagnose abnormal engine noise or vibration concerns; determine necessary action.						10: C390
VIII-A-4	Diagnose the cause of excessive oil consumption, coolant consumption, unusual exhaust color, odor, and sound; determine necessary action.						51: C391
VIII-A-5	Perform engine absolute (vacuum/boost) manifold pressure tests; determine necessary action.						10: C392
VIII-A-6	Perform cylinder power balance test; determine necessary action.						10: C393
VIII-A-7	Perform cylinder cranking and running compression tests; determine necessary action.						10: C709
VIII-A-8	Perform cylinder leakage test; determine necessary action.						10: C395
VIII-A-9	Diagnose engine mechanical, electrical, electronic, fuel, and ignition concerns; determine necessary action.						49: C710
VIII-A-10	Verify engine operating temperature; determine necessary action.						46: C398
VIII-A-11	Verify correct camshaft timing.						44: C400

DEMONSTRATE PROFICIENCY IN COMPUTERIZED ENGINE

CONTROLS DIAGNOSIS AND REPAIR – The student will be able to:

		P1	P2	P3	Level	Date	Textbook Ch CDX Task
VIII-B-1	Retrieve and record diagnostic trouble codes, OBD monitor status, and freeze frame data; clear codes when applicable.						49: C659
VIII-B-2	Access and use service information to perform step-by-step (troubleshooting) diagnosis.						47: C841
VIII-B-3	Perform active tests of actuators using scan tool; determine necessary action.						49: C867

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DEMONSTRATE PROFICIENCY IN COMPUTERIZED ENGINE CONTROLS DIAGNOSIS AND REPAIR – continued

		P1	P2	P3	Level	Date	Textbook Ch CDX Task
VIII-B-4	Describe the importance of running all OBDII monitors for repair verification.						49: C661

DEMONSTRATE PROFICIENCY IN IGNITION SYSTEM DIAGNOSIS AND REPAIR -The student will be able to:

VIII-C-1	Diagnose (troubleshoot) ignition system related problems such as no-starting, hard starting, engine misfire, poor driveability, spark knock, power loss, poor mileage, and emissions concerns ; determine necessary action.						47: C712
VIII-C-2	Inspect and test crankshaft and camshaft position sensor(s); perform necessary action.						47: C663
VIII-C-3	Inspect, test, and/or replace ignition control module, powertrain/engine control module; reprogram as necessary.						47: C664
VIII-C-4	Remove and replace spark plugs; inspect secondary ignition components for wear and damage.						47: C960

	P1	P2	P3
Tasks Completed	0	0	0
Total Tasks	12	5	2
% of Total Tasks	0	0	0