Ignition System

Student/Intern information:

Name _____ Date _____ Class _____

Vehicle used for this activity:

Year _____ Make _____ Model _____

Odometer _____ VIN _____

Time off _____

Time on _____

Total time _____

Learning Objective/Task	CDX Tasksheet Number	2017 MAST NATEF Reference Number; Priority Level
• Remove and replace spark plugs; inspect secondary ignition components for wear and damage.	C960	8C4; P-1
• Inspect and test crankshaft and camshaft position sensor(s); determine needed action.	C663	8C2; P-1
• Inspect, test, and/or replace ignition control module, powertrain/engine control module; reprogram/initialize as needed.	C664	8C3; P-3
• 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 needed action.	C712	8C1; P-2
• Access and use service information to perform step-by-step (troubleshooting) diagnosis.	C841	8B2; P-1

Materials Required

- Vehicle(s) with ignition-related concern(s)
- DMM/DVOM
- Spark tester
- Problem-specific tools and equipment such as scan tool, lab scope, etc.

Some Safety Issues to Consider

- Diagnosis of this fault may require test-driving the vehicle on the school grounds or on a hoist, both of which carry severe risks. Attempt this task only with full permission from your supervisor/instructor and follow all the guidelines exactly.
- When running any vehicles in the shop, make sure you use the shop's exhaust ventilation system to discharge all exhaust gas safely outside.
- Because the vehicle will be running for an extended amount of time, make sure the vehicle cannot move or roll by applying the parking brake and using wheel chocks.
- You will be working under the hood of a running vehicle. Keep your hands and fingers away from moving belts, fans, and other parts.
- Modern ignition systems are capable of creating extremely high voltage (many over 80,000 volts). While there is a small risk of death directly from the shock, it can cause substantial pain, leading to injury from jerking away from it and into a sharp object or moving belt.

- Comply with personal and environmental safety practices associated with clothing; eye protection; hand tools; power equipment; proper ventilation; and the handling, storage, and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations.

Performance Standard

0—No exposure: No information or practice provided during the program; complete training required

1—Exposure only: General information provided with no practice time; close supervision needed; additional training required

2—Limited practice: Has practiced job during training program; additional training required to develop skill

3—Moderately skilled: Has performed job independently during training program; limited additional training may be required

4—Skilled: Can perform job independently with no additional training