

Electrical/Electronic Systems: Fundamentals

Student/intern information:

Name _____ Date _____ Class _____

Vehicle used for this activity:

Year _____ Make _____ Model _____

Odometer _____ VIN _____

Learning Objective/Task	CDX Tasksheet Number	2013 MLR NATEF Reference Number; Priority Level	2013 AST NATEF Reference Number; Priority Level	2013 MAST NATEF Reference Number; Priority Level
• Use wiring diagrams to trace electrical/electronic circuits.	C289	6A3; P-1	6A7; P-1	6A7; P-1
• Use wiring diagrams during the diagnosis (troubleshooting) of electrical/electronic circuit problems.	N/A	N/A	N/A	N/A
• Demonstrate the proper use of a digital multimeter (DMM) when measuring source voltage, voltage drop (including grounds), current flow, and resistance.	C641	6A4; P-17	6A3; P-1	6A3; P-1
• Check operation of electrical circuits with a test light.	C291	6A6; P-2	6A5; P-2	6A5; P-2
• Check operation of electrical circuits with fused jumper wires.	C295	6A7; P-2	6A6; P-2	6A6; P-2
• Inspect and test fusible links, circuit breakers, and fuses; determine necessary action.	C298	6A9; P-1	6A9; P-1	6A9; P-1
• Demonstrate knowledge of the causes and effects from shorts, grounds, opens, and resistance problems in electrical/electronic circuits.	C296	6A5; P-1	6A4; P-1	6A4; P-1
• Inspect and test switches, connectors, relays, solenoid solid-state devices, and wires of electrical/electronic circuits; determine necessary action.	C299		6A10; P-1	6A10; P-1
• Check electrical/electronic circuit waveforms; interpret readings and determine needed repairs.	C642			6A14; P-2

Time off _____

Time on _____

Total time _____

Materials Required

- Printed copy of wiring diagram
- Crayons, highlighters, or colored pencils
- Calculator
- Vehicle/simulator with an electrical malfunction present
- DMM/DVOM
- Test light
- Fused jumper wires

Some Safety Issues to Consider

- 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