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| ***VOCATIONAL SKILLS RECORD*** |  | ***WOODROW WILSON CENTER FOR EMPLOYMENT*** |
| Student's Name  | Participant ID: |  | Entry Date |  | Performance Scale |  |  |  |  |  |
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| ***AUTO MECHANICS*** | 4 - competent |  |  |  |  |
| ***General Service Technician*** | 5 - exceeds competency |  |  |  |  |
| O\*NET-SOC  | 49-3023.02 |  | Course Hours | 750 |  |  |  |  |  |  |  |  |
|  | *Note: Entry in General Service Technician is contingent upon completion of Auto Servicing Technician (Tire and Lubrication). See Attachment [Client tested out of tire and lubrication]*  |
|  |  | **Grade Period** |
|  (Page 1 of 5) |  |  |  |  |  |  |  |  |
| **TASKS** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | FINAL |
| **SUPPLEMENT A: STUDENT BEHAVIORS** |  |  |  |  |  |  |  |  |
| A1.1\* Demonstrate ability to work safely. |  |  |  |  |  |  |  |  |
| A1.2\* Demonstrate ability to work independently. |  |  |  |  |  |  |  |  |
| A1.3\* Demonstrate appropriate interpersonal skills. |  |  |  |  |  |  |  |  |
| A1.4\* Follow written and/or verbal instructions. |  |  |  |  |  |  |  |  |
| A1.5\* Maintain good personal hygiene. |  |  |  |  |  |  |  |  |
| A1.6\* Maintain good personal appearance. |  |  |  |  |  |  |  |  |
| A1.7\* Demonstrate ability to be punctual and dependable. |  |  |  |  |  |  |  |  |
| **TOOLS** |  |  |  |  |  |  |  |  |
| 2.1 Demonstrate the ability to commonly used measuring tools |  |  |  |  |  |  |  |  |
| 2.1a Thickness gauge |  |  |  |  |  |  |  |  |
| 2.1b Outside micrometer |  |  |  |  |  |  |  |  |
| 2.2 Demonstrate ability to use commonly used nuts and bolts |  |  |  |  |  |  |  |  |
| 2.2a Differentiate between metric and USC fasteners |  |  |  |  |  |  |  |  |
| 2.2b Identify bolt size |  |  |  |  |  |  |  |  |
| 2.2c Identify wrench size |  |  |  |  |  |  |  |  |
| 2.2d Identify bolt strength |  |  |  |  |  |  |  |  |
| 2.3 Demonstrate the ability to use tap and die to rethread bolts and nuts |  |  |  |  |  |  |  |  |
| 2.4 Demonstrate the ability to use commonly used hand tools |  |  |  |  |  |  |  |  |
| 2.5 Demonstrate the ability to safely use automotive lifts |  |  |  |  |  |  |  |  |
| **GENERAL KNOWLEDGE** |  |  |  |  |  |  |  |  |
| 3.1 Demonstrate general knowledge of the automobile. |  |  |  |  |  |  |  |  |
| 3.1a Identify the four basic systems that support engine operation |  |  |  |  |  |  |  |  |
| 3.1a1 Fuel system |  |  |  |  |  |  |  |  |
| 3.1a2 Ignition system |  |  |  |  |  |  |  |  |
| 3.1a3 Lubrication system |  |  |  |  |  |  |  |  |
| 3.1a4 Cooling system |  |  |  |  |  |  |  |  |
| 3.1b Identify the basic components of the power train |  |  |  |  |  |  |  |  |
| 3.1b1 Clutch |  |  |  |  |  |  |  |  |
| 3.1b2 Transmission or transaxle |  |  |  |  |  |  |  |  |
| 3.1b3 Transfer case |  |  |  |  |  |  |  |  |
| 3.1b4 Driveshaft |  |  |  |  |  |  |  |  |
| 3.1b5 Differential |  |  |  |  |  |  |  |  |
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| O·NET #  | 49-3023.02 |  | Course Hours  | 750 |  |  |  |  |  |  |  |  |
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| (Page 2 of 5) |  |  |  |  |  |  |  |  |
| **TASKS** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | FINAL |
| 3.1c Identify the systems that support the control and handling of the automobile |  |  |  |  |  |  |  |  |
| 3.1c1 Suspension system |  |  |  |  |  |  |  |  |
| 3.1c2 Steering system |  |  |  |  |  |  |  |  |
| 3.1c3 Braking system |  |  |  |  |  |  |  |  |
| **GENERAL SERVICE INFORMATION** |  |  |  |  |  |  |  |  |
| 4.1 Demonstrate the ability to find and use Automotive Service Information  |  |  |  |  |  |  |  |  |
| 4.1a Locate the VIN and describe the information found in the VIN |  |  |  |  |  |  |  |  |
| 4.1b Locate the VECI and describe the information found in the VECI |  |  |  |  |  |  |  |  |
| 4.1c Find information in a standard service manual |  |  |  |  |  |  |  |  |
| 4.1d Find information in a computer based service reference such as AllData  |  |  |  |  |  |  |  |  |
| **MANUAL DRIVE TRAINS/TRANSAXLES** |  |  |  |  |  |  |  |  |
| 5.1 Perform clutch diagnosis and repair |  |  |  |  |  |  |  |  |
| 5.1a Diagnose clutch problems including noise, binding, slippage pulsation, and chatter problems; determine needed repairs |  |  |  |  |  |  |  |  |
| 5.1b Inspect engine block, clutch (bell) housing, and transmission case mating surfaces; determine needed repair |  |  |  |  |  |  |  |  |
| 5.2 Perform manual transaxle diagnosis and repair |  |  |  |  |  |  |  |  |
| 5.2a Diagnose manual transaxle problems including noise, jumping out of gear, and fluid leakage; determine needed repairs |  |  |  |  |  |  |  |  |
| 5.3 Perform manual drive train and axle service |  |  |  |  |  |  |  |  |
| 5.3a Diagnose front wheel drive noise and vibration problems, and determine needed repairs |  |  |  |  |  |  |  |  |
| 5.3b Inspect, service, and replace front wheel drive shafts, yokes, and boots |  |  |  |  |  |  |  |  |
| 5.4 Perform rear axle diagnosis and repair |  |  |  |  |  |  |  |  |
| 5.4a Diagnose noise, vibration and leakage problems in the rear axle; determine needed repairs |  |  |  |  |  |  |  |  |
| 5.4b Diagnose problems in the rear axle shafts, bearings, and seals including noise, vibration, and fluid problems; make needed repairs |  |  |  |  |  |  |  |  |
| **BASIC FUEL SYSTEMS** |  |  |  |  |  |  |  |  |
| 6.1 Perform fuel injection system diagnosis, adjustment, and repair |  |  |  |  |  |  |  |  |
| 6.1a Inspect and repair fuel tank, fuel cap, fuel line, fittings, and hoses |  |  |  |  |  |  |  |  |

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| 6.1b Inspect, test, and replace mechanical and electrical fuel pumps and pump controls system |  |  |  |  |  |  |  |  |
| 6.1c Replace fuel filters |  |  |  |  |  |  |  |  |
| 6.1d Remove, inspect, and test vacuum and electrical components of fuel system; repair/replace as necessary |  |  |  |  |  |  |  |  |
| **BASIC FUEL SYSTEMS (continued)** |  |  |  |  |  |  |  |  |
| 6.2e Inspect and service exhaust manifold, exhaust pipes, muffler(s), catalytic converter(s), resonator(s), tail pipe(s), and heat shield(s) |  |  |  |  |  |  |  |  |
| **ENGINE REPAIR** |  |  |  |  |  |  |  |  |
| 7.4 Perform cooling system diagnosis and repair |  |  |  |  |  |  |  |  |
| 7.4a Inspect, test, and replace water pump |  |  |  |  |  |  |  |  |
| 7.4b Clean, test, and replace fan(s) (electrical and mechanical), fan, clutch, and fan shroud |  |  |  |  |  |  |  |  |
| 7.4c Collect, handle, store, and dispose of used coolant according to current regulations and guidelines |  |  |  |  |  |  |  |  |

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| **STEERING AND SUSPENSION SYSTEMS** |  |  |  |  |  |  |  |  |
| 8.1 Perform steering system diagnosis and repair |  |  |  |  |  |  |  |  |
| 8.1a Disable supplemental restraint systems (SRS) in accordance with manufacturer's procedures |  |  |  |  |  |  |  |  |
| 8.1b Diagnose rack and pinion steering gear problems; replace if needed |  |  |  |  |  |  |  |  |
| 8.1c Remove and replace rack and pinion steering gear; inspect mounting, bushings and brackets |  |  |  |  |  |  |  |  |
| 8.1d Inspect and replace rack and pinion steering gear inner tie rods, ends and bellows boots |  |  |  |  |  |  |  |  |
| 8.1e Inspect steering fluid levels and condition |  |  |  |  |  |  |  |  |
| 8.1f Diagnose power steering fluid leakage; determine needed repairs |  |  |  |  |  |  |  |  |
| 8.1g Remove, inspect, & replace power steering pump, mounts, & pulley |  |  |  |  |  |  |  |  |
| 8.1h Inspect and replace power steering hoses and fittings |  |  |  |  |  |  |  |  |
| 8.1i Inspect and replace as needed conventional steering system components, (pitman arms, idler arms, tie rod ends, tie rod sleeves, etc.) |  |  |  |  |  |  |  |  |
| 8.2 Perform front suspension service |  |  |  |  |  |  |  |  |
| 8.2a Diagnose MacPherson strut suspension system problems; determine needed repairs |  |  |  |  |  |  |  |  |
| 8.2b Remove, inspect, and replace (if necessary) upper and lower ball joints |  |  |  |  |  |  |  |  |
| 8.2c Remove inspect, and replace (if necessary) stabilizer bar bushings, brackets, and links |  |  |  |  |  |  |  |  |
| 8.2d Remove, inspect, and replace (if necessary) MacPherson strut cartridge or assembly, strut coil spring, and insulators |  |  |  |  |  |  |  |  |
| 8.2e Remove, inspect, and replace ball joints on MacPherson strut systems |  |  |  |  |  |  |  |  |
| 8.3 Perform rear suspension service |  |  |  |  |  |  |  |  |

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| **TASKS** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | FINAL |
| 8.3a Remove, inspect, and replace (if necessary) MacPherson strut cartridge or assembly, strut coil spring, and insulators |  |  |  |  |  |  |  |  |
| 8.3b Inspect and replace (if necessary) shock absorbers |  |  |  |  |  |  |  |  |
| **BRAKES** |  |  |  |  |  |  |  |  |
| 9.1 Perform hydraulic system diagnosis and repair |  |  |  |  |  |  |  |  |
| 9.1a Diagnose problems in the hydraulic system; determine needed repairs |  |  |  |  |  |  |  |  |
| 9.1d Flush brake hydraulic system |  |  |  |  |  |  |  |  |
| 9.2 Perform drum and disk brake diagnosis and repair |  |  |  |  |  |  |  |  |
| 9.2a Remove, replace, and reinstall wheel cylinders |  |  |  |  |  |  |  |  |
| 9.2b Remove, replace, and reinstall a disc caliper |  |  |  |  |  |  |  |  |
| 9.2c Clean, inspect , and measure rotor with a dial indicator and micrometer |  |  |  |  |  |  |  |  |
| 9.4 Miscellaneous diagnosis and repair |  |  |  |  |  |  |  |  |
| 9.4a Diagnose wheel bearing problems; determine needed repair |  |  |  |  |  |  |  |  |
| 9.4b Inspect and service the parking brake system including brake cables and warning lights |  |  |  |  |  |  |  |  |
| STUDENT INTERNSHIP PROGRAM (S.I.P.) |  |  |  |  |  |  |  |  |
| Revised 8/22/08 |  |  |  |  |  |  |  |  |
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