

Maintenance and Light Repair Section B: Competency List

STUDENT NAME: _____ DATE: _____

INSTRUCTOR: _____

Required Supplemental Tasks

Task	Competency
Identify general shop safety rules and procedures.	
Utilize safe procedures for handling of tools and equipment.	
Identify and use proper placement of floor jacks and jack stands.	
Identify and use proper procedures for safe lift operation.	

Utilize proper ventilation procedures for working within the lab/shop area.	
Identify marked safety areas.	
Identify the location and the types of fire extinguishers and other fire safety equipment; demonstrate knowledge of the procedures for using fire extinguishers and other fire safety equipment.	
Identify the location and use of eye wash stations.	
Identify the location of the posted evacuation routes.	
Comply with the required use of safety glasses, ear protection, gloves, and shoes during lab/shop activities.	
Identify and wear appropriate clothing for lab/shop activities.	
Secure hair and jewelry for lab/shop activities.	
Demonstrate awareness of the safety aspects of supplemental restraint systems (SRS), electronic brake control systems, and hybrid vehicle high voltage circuits.	
Demonstrate awareness of the safety aspects of high voltage circuits (such as high intensity discharge (HID) lamps, ignition systems, injection systems, etc.).	
Locate and demonstrate knowledge of material safety data sheets (MSDS).	
Identify tools and their usage in automotive applications.	
Identify standard and metric designation.	

Demonstrate safe handling and use of appropriate tools.	
Demonstrate proper cleaning, storage, and maintenance of tools and equipment.	
Demonstrate proper use of precision measuring tools (i.e. micrometer, dial-indicator, dial-caliper).	
Identify information needed and the service requested on a repair order.	
Identify purpose and demonstrate proper use of fender covers, mats.	
Demonstrate use of the three C's (concern, cause, and correction).	
Review vehicle service history.	
Complete work order to include customer information, vehicle identifying information, customer concern, related service history, cause, and correction.	
Ensure vehicle is prepared to return to customer per school/company policy (floor mats, steering wheel cover, etc.).	

<u>SUSPENSION AND STEERING</u>		
Task	Priority	Competency
<u>Related Suspension and Steering Service</u>		
Inspect rack and pinion steering gear inner tie rod ends (sockets) and bellows boots.	P-1	
Determine proper power steering fluid type; inspect fluid level and condition.	P-1	
Flush, fill, and bleed power steering system.	P-2	
Inspect for power steering fluid leakage; determine necessary action.	P-1	
Remove, inspect, replace, and adjust power steering pump drive belt.	P-1	
Inspect and replace power steering hoses and fittings.	P-2	
Replace power steering pump filter(s).	P-2	
Inspect pitman arm, relay (centerlink/intermediate) rod, idler arm and mountings, and steering linkage damper.	P-1	
Inspect tie rod ends (sockets), tie rod sleeves, and clamps.	P-1	
Inspect upper and lower control arms, bushings, and shafts.	P-1	
Inspect and replace rebound and jounce bumpers.	P-1	

Inspect track bar, strut rods/radius arms, and related mounts and bushings.	P-1	
Inspect upper and lower ball joints (with or without wear indicators).	P-1	
Inspect suspension system coil springs and spring insulators (silencers).	P-1	
Inspect suspension system torsion bars and mounts.	P-1	
Inspect and replace front stabilizer bar (sway bar) bushings, brackets, and links.	P-1	
Inspect strut cartridge or assembly.	P-1	
Inspect front strut bearing and mount.	P-1	
Inspect rear suspension system lateral links/arms (track bars), control (trailing) arms.	P-1	
Inspect rear suspension system leaf spring(s), spring insulators (silencers), shackles, brackets, bushings, center pins/bolts, and mounts.	P-1	
Inspect, remove, and replace shock absorbers; inspect mounts and bushings.	P-1	
Inspect electric power-assisted steering.	P-3	
Identify hybrid vehicle power steering system electrical circuits and safety precautions.	P-2	
Describe the function of the power steering pressure switch.	P-3	
<u>Wheel Alignment</u>		
Perform pre-alignment inspection and measure vehicle ride height; determine necessary action.	P-1	

<u>Wheels and Tires</u>		
Inspect tire condition; identify tire wear patterns; check for correct size and application (load and speed ratings) and adjust air pressure; determine necessary action.	P-1	
Rotate tires according to manufacturer's recommendations.	P-1	
Dismount, inspect, and remount tire on wheel; balance wheel and tire assembly (static and dynamic).	P-1	
Dismount, inspect, and remount tire on wheel equipped with tire pressure monitoring system sensor.	P-2	
Inspect tire and wheel assembly for air loss; perform necessary action.	P-1	
Repair tire using internal patch.	P-1	
Identify and test tire pressure monitoring systems (indirect and direct) for operation; verify operation of instrument panel lamps.	P-2	
Demonstrate knowledge of steps required to remove and replace sensors in a tire pressure monitoring system.	P-2	
<u>BRAKES</u>		
<u>General</u>		
Research applicable vehicle and service information, vehicle service history, service precautions, and technical service bulletins.	P-1	

Describe procedure for performing a road test to check brake system operation, including an anti-lock brake system (ABS).	P-1	
Install Wheel and Torque Lug Nuts	P-1	
<u>Hydraulic System</u>		
Measure brake pedal height, travel, and free play (as applicable); determine necessary action.	P-1	
Check master cylinder for external leaks and proper operation.	P-1	
Inspect brake lines, flexible hoses, and fittings for leaks, dents, kinks, rust, cracks, bulging, wear, loose fittings and supports; determine necessary action.	P-1	
Select, handle, store, and fill brake fluids to proper level.	P-1	
Identify components of brake warning light system.	P-3	
Bleed and/or flush brake system.	P-1	
Test brake fluid for contamination.	P-1	