

Student Name _____

High School or Vocational Center _____

COMPETENCY RECORD FOR ARTICULATION

Baker College

Please check below each skill the student has mastered with a minimum of 80 percent accuracy or with an A or B grade.

AST231A AUTOMOTIVE SUSPENSION/STEERING

Task	Satisfactory	Unsatisfactory
General Suspension and Steering System Diagnosis		
Demonstrate how to fill out a work order using customer information, service history and cause and correction. P-1		
Identify and interpret suspension and steering concerns and repair as needed. P-1		
Locate and interpret the vehicle VIN number and research applicable vehicle service information, such as service precautions and service history. Two P-1s		
Steering System Diagnosis and Repair.		
Demonstrate how to disable and enable a SRS. P-1		
Practice removing and replacing a steering wheel; center/time SRS coil and clock spring. P-1		
Diagnose steering column noises, looseness and binding concerns, repair as needed. P-2		
Diagnose both non rack and pinion and rack and pinion steering gear problems, such as binding uneven turning noise and fluid leakage, repair as needed. Two P-3s		
Inspect steering shaft u-joints, flexible couplings, and collapsible column and lock cylinders repair as needed. P-2		
Demonstrate how to adjust a non rack and pinion worm gear bearing preload and sector lash. P-3		
Remove a rack and pinion steering gear; remove both inner and outer tie rod ends, and boots. Two P-1s		
Flush, fill and bleed a power steering system, determine proper power steering fluid type, checking for proper level. One P-1 one P-2		
Diagnose power steering fluid leaks, repair as needed. P-2		
Remove and replace a power steering pump, and power		

Task	Satisfactory	Unsatisfactory
steering pump pulley, checking for alignment of the belt. Replace power steering belt. One P-1 Two P-3		
Inspect and replace power steering hoses. P-2		
Inspect and replace pitman arm, center link, idler arms, steering dampers, inner and outer tie rods sleeves and clamps. One P-1 One P-2.		
Test components of an electronically controlled steering system, repair as needed. P-3		
Inspect and test a non-hydraulic electric-power assist steering. P-3		
Identify hybrid vehicle power steering circuits, service and safety precautions. P-3		
Suspension System Diagnosis and Repair.		
1. Front Suspension		
Diagnose short arm and long arm suspension systems for noise, uneven ride height and body sway. Repair as needed. One P-1		
Diagnose strut suspension system for noise, uneven ride height, and body sway. Repair as needed. P-1		
Remove and replace upper and lower ball joints, control arm bushings, rebound bumpers, strut rods, coil springs and steering knuckle assemblies. One P-1 two P-2s two P-3s		
Inspect and remove and reinstall and adjust torsion bars, and mounts. P-3		
Remove and replace stabilizer bar bushings and brackets and links. P-2		
Remove and replace strut cartridge or full strut assembly, coil spring and upper strut bearing mounts. P-1		
Lubricate the suspension and steering system if possible. P-2		
2. Rear Suspension		
Remove and inspect and reinstall coil springs and spring insulators. P-2		
Remove and replace transverse links, control arms, bushing and mounts. P-2		
Remove and reinstall a leaf spring, spring insulators and shackles and mounts. P-3		
Demonstrate how to remove and reinstall a rear strut assembly. P-2		

Task	Satisfactory	Unsatisfactory
3. Miscellaneous Service		
Demonstrate how to remove and replace shock absorbers. P-1		
Remove and inspect and service front and rear wheel bearings. P-1		
Demonstrate how to use a scan tool to diagnose components of electronically controlled suspension systems, repair as needed. P-3		
Wheel Alignment Diagnosis, Adjustment, and Repair		
Diagnose vehicle wander, drift, hard steering, bump steer, memory steer, torque steer and steering return problems. Repair as needed. P-1		
Perform pre-alignment inspection, measure vehicle ride height. Repair as needed. Two P-1s		
Check and adjust caster, camber, toe and center steering wheel. Three P-1s		
Check for toe out on turns. Adjust as needed. P-2		
Check SAI and included angle. Determine what needs to be done to repair. P-2		
Check and adjust rear wheel toe, caster, camber and check thrust angle, repair or adjust as needed. P-1		
Check for front wheel setback; repair as needed.		
Check front cradle (subframe) for proper alignment; repair as needed. P-3		
Wheel and Tire Diagnosis and Repair		
Inspect tire wear patterns; check and adjust tire pressure		
Diagnose wheel / tire vibration, shimmy and noise; determine what must be done to repair. P-2		
Rotate tires according to manufacturer's recommendations. P-1		
Demonstrate how to measure wheel, tire, and hub runout; repair as needed. P-2		
Diagnose tire pull; repair as needed.		
Dismount, inspect and remount a tire on a wheel. P-2		
Balance the tire and rim assembly. P-1		
Dismount, inspect and remount a tire on a wheel equipped with a tire pressure sensor. P-3		
Reinstall a wheel; torque lug nuts. P-1		

Task	Satisfactory	Unsatisfactory
Perform a pressure test on a tire to see if there is any loss of air. P-2		
Repair tire using internal patch. P-2		
Inspect, diagnose and calibrate tire pressure monitoring system. P-3		

Teacher signature _____ Date _____