
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.

DSL 181: INTRODUCTION TO DIESEL MAINTENANCE AND REPAIR

Task	Satisfactory	Unsatisfactory
1. Check engine starting/operation (including unusual noises, vibrations, exhaust smoke, etc.); record idle and governed rpm.		
2. Inspect vibration damper.		
3. Inspect belts, tensioners, and pulleys; check and adjust belt tension; check belt alignment.		
4. Check engine oil level; check engine for oil, coolant, and fuel leaks (Engine Off).		
5. Inspect engine mounts for looseness and deterioration.		
6. Check engine for oil, coolant, air, fuel, and exhaust leaks (Engine Running).		
7. Check electrical wiring, routing, and hold-down clamps, including Engine Control Module/Powertrain Control Module (ECM/PCM).		
Cooling System		
8. Check operation of fan clutch.		
9. Inspect radiator (including air flow restriction, leaks, and damage) and mountings.		
10. Inspect fan assembly and shroud.		
11. Pressure test cooling system and radiator cap.		
12. Inspect coolant hoses and clamps.		
13. Inspect coolant recovery system.		
14. Check coolant for contamination, supplemental coolant additives (SCA) concentration, and protection level (freeze point).		

Task	Satisfactory	Unsatisfactory
15. Service coolant filter/conditioner.		
16. Inspect water pump for leaks and bearing play.		
Lubrication System		
17. Change engine oil and filters; visually check oil for coolant or fuel contamination; inspect and clean magnetic drain plugs.		
18. Take an engine oil sample.		
Instruments and Controls		
19. Inspect key condition and operation of ignition switch.		
20. Check warning indicators.		
21. Check instruments; record oil pressure and system voltage.		
22. Check mechanical, electronic, and emergency shut down operation.		
23. Check heater, ventilation, and air conditioning (HVAC) controls.		
24. Check operation of all accessories.		
25. Using diagnostic tool or on-board diagnostic system; extract engine monitoring information.		
Safety Equipment		
26. Check operation of electric/air horns and back-up warning devices.		
27. Check condition and documentation of safety flares, spare fuses, triangles, fire extinguisher, and all required decals.		
28. Inspect seat belts and sleeper restraints.		
29. Inspect wiper blades and arms.		
Hardware		
30. Check wiper and washer operation.		
31. Inspect windshield glass for cracks or discoloration; check sun visor.		
32. Check seat condition, operation, and mounting.		
33. Check door glass and window operation.		

Task	Satisfactory	Unsatisfactory
34. Inspect steps and grab handles.		
35. Inspect mirrors, mountings, brackets, and glass.		
36. Record all observed physical damage.		
37. Lubricate all cab and hood grease fittings.		
38. Inspect and lubricate door and hood hinges, latches, strikers, lock cylinders, safety latches, linkages, and cables.		
39. Inspect cab mountings, hinges, latches, linkages and ride height; service as needed.		
Air Brakes		
40. Check parking brake operation.		
41. Record air governor cut-out setting (psi).		
42. Check air drier drain valve operation.		
43. Check air system for leaks (brakes released).		
44. Check air system for leaks (brakes applied).		
45. Test one-way and double-check valves.		
46. Check low air pressure warning devices.		
47. Check air governor cut-in pressure.		
48. Check emergency (spring) brake control/modulator valve, if applicable.		
49. Check tractor protection valve.		
50. Test air pressure build-up time.		
51. Inspect coupling air lines, holders, and gladhands.		
52. Check brake chambers and air lines for secure mounting and damage.		
53. Service air drier.		
54. Inspect and record brake lining/pad condition, thickness, and contamination.		
55. Inspect and record condition of brake drums/rotors.		
56. Check operation of brake manual slack adjusters; adjust as needed.		

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57. Check operation and adjustment of brake automatic slack adjusters.		
58. Lubricate all brake component grease fittings.		
59. Check condition and operation of hand brake (trailer) control valve.		
60. Perform antilock brake system (ABS) operational system self-test.		
61. Drain air tanks and check for contamination.		
62. Check condition of pressure relief (safety) valves.		
Hydraulic Brakes		
63. Check master cylinder fluid level and condition.		
64. Inspect brake lines, fittings, flexible hoses, and valves for leaks and damage.		
65. Check parking brake operation; inspect parking brake application and holding devices; adjust as needed.		
66. Check operation of hydraulic system: pedal travel, pedal effort, pedal feel (drift).		
67. Inspect wheel cylinders/calipers for leakage and damage.		
68. Inspect power brake booster(s), hoses and check/control valves; check power brake booster, reservoir fluid level and condition.		
69. Inspect and record brake lining/pad condition, thickness, and contamination.		
70. Inspect and record condition of brake drums/rotors.		
71. Adjust drum brakes.		
Suspension and Steering Systems		
72. Check steering wheel operation for free play or binding.		
73. Check power steering pump, mounting, and hoses for leaks, condition, and routing; check fluid level.		
74. Change power steering fluid and filter.		
75. Inspect steering gear for leaks and secure mounting.		
76. Inspect steering shaft U-joints, pinch bolts, splines, pitman arm-to-steering sector shaft, tie rod ends,		

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linkage, and linkage-assist power steering cylinders.		
77. Check king pin wear.		
78. Check wheel bearings for looseness and noise.		
79. Check oil level and condition in all non-drive hubs; check for leaks.		
80. Remove and inspect wheel bearings; reassemble and adjust.		
81. Inspect springs, hangers, shackles, spring U-bolts, and insulators.		
82. Inspect shock absorbers for leaks and secure mounting.		
83. Inspect air suspension springs, mounts, hoses, valves, linkage, and fittings for leaks and damage.		
84. Check and record suspension ride height.		
85. Lubricate all suspension and steering grease fittings.		
86. Check toe adjustment.		
87. Check tandem axle alignment and spacing.		
88. Check axle locating components (radius, torque, and/or track rods).		
Tires and Wheels		
89. Inspect tires for irregular wear patterns and proper mounting of directional tires.		
90. Inspect tires for cuts, cracks, bulges, and sidewall damage.		
91. Inspect valve caps and stems; replace as needed.		
92. Measure and record tread depth; probe for imbedded debris.		
93. Check and record air pressure; adjust air pressure in accordance with manufacturers' specifications.		
94. Check for loose lugs and/or slipped wheels; check mounting hardware condition; service as needed.		
95. Retorque lugs in accordance with manufacturers' specifications.		
96. Inspect wheels and spacers for cracks or damage.		
97. Check tire matching (diameter and tread) on dual tire		

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installations.		
98. Remove, repair tire on disc wheel		
99. Remove, repair tire on cast spoke wheel		
100. Understand, and demonstrate the proper use of nonpower-driven hand tools, portable electric power tools, pneumatic power tools, and stationary equipment.		
101. Effectively use personal protective equipment.		
102. Recognize, understand, and use warning labels, Material Safety Data Sheets (MSDS) and Workplace Hazardous Material Information Systems (WHMIS)		
103. Demonstrate the ability to complete a safety test with 100% accuracy		
104. Demonstrate the ability to identify truck classifications.		
105. Demonstrate the ability to identify truck systems and components		
106. Design a well-planned preventive maintenance program.		
107. Understand and perform a pre-trip inspection procedure.		

Teacher signature _____ Date _____