
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 141: DIESEL ELECTRICAL/ELECTRONIC SYSTEMS I

Task	Satisfactory	Unsatisfactory
A. ELECTRICAL/FUNDAMENTALS		
1. Understand the principles of electricity.		
2. Define the following:		
a. A simple circuit		
b. Voltage		
c. Current		
d. Resistance		
e. Series circuit		
f. Parallel circuit		
g. Series-parallel circuit		
3. Demonstrate knowledge of working safely with electrical/electronic components on a vehicle.		
B. ELECTRICAL/ELECTRONIC SYSTEMS Battery Diagnosis and Repair		
4. Perform battery load test; determine needed action.		
5. Determine battery state of charge using an open circuit voltage test.		
6. Inspect, clean, and service battery; replace as needed.		
7. Inspect and clean battery boxes, mounts, and hold downs; repair or replace as needed.		
8. Charge battery using slow or fast charge method as appropriate.		

	Task	Satisfactory	Unsatisfactory
9.	Inspect, test, and clean battery cables and connectors; repair or replace as needed.		
10.	Jump start a vehicle using jumper cables and a booster battery or auxiliary power supply P-1 using proper safety procedures.		
11.	Perform battery capacitance test; determine needed action.		
C.	ELECTRICAL/ELCTRONIC SYSTEMS Starting System Diagnosis and Repair		
12.	Perform starter circuit cranking voltage and voltage drop tests; determine needed action.		
13.	Inspect and test components (key switch, push button and/or magnetic switch) and wires P-2 in the starter control circuit; replace as needed.		
14.	Inspect and test, starter relays and solenoids/switches; replace as needed.		
15.	Remove and replace starter; inspect flywheel ring gear or flex plate.		
16.	Diagnose instrument panel mounted volt meters and/or indicator lamps that show a no P-1 charge, low charge, or overcharge condition; determine needed action.		
17.	Diagnose the cause of a no charge, low charge, or overcharge condition; determine needed P-1 action.		
18.	Inspect and replace alternator drive belts, pulleys, fans, tensioners, and mounting brackets; P-1 adjust drive belts and check alignment.		
19.	Perform charging system voltage and amperage output tests; determine needed action.		
20.	Perform charging circuit voltage drop tests; determine needed action.		
21.	Remove and replace alternator.		
22.	Inspect, repair, or replace connectors and wires in the charging circuit.		
23.	Diagnose AC voltage leakage (failed rectifier) at alternator output; determine needed action.		

Teacher signature _____ Date _____