





Unit/Standard Number	 pennsylvania DEPARTMENT OF EDUCATION	<u>High School Graduation Years 2017, 2018 and 2019</u>	Proficiency Level Achieved: (X) Indicates Competency Achieved to Industry Proficiency Level
	Medium/Heavy Vehicle and Truck Technology/Technician CIP 47.0613 Task Grid		
	Secondary Competency Task List		
100	ORIENTATION AND SAFETY		
101	RESERVED		
102	Identify and explain diesel occupations and certification programs.		
103	Identify truck classifications and configurations.		
104	Demonstrate use of service manuals and online service information.		
105	Demonstrate safety procedures and safe equipment operation.		
106	RESERVED		
107	Follow EPA standards for cleaning and disposal of waste and fluids.		
108	Demonstrate professional/personal standards and work habits/ethics in a diesel shop.		
109	Comply with OSHA regulations.		
200	TOOLS AND FASTENERS/HARDWARE		
201	Identify and demonstrate the proper use of basic hand tools and power tools.		
202	Identify and demonstrate the proper use of fasteners, fittings and hardware.		
203	Drill and use threading tools and extractors.		
204	Demonstrate the proper use of fractional and precision measuring tools both standard and metric.		
205	RESERVED		
206	Set up/Shut down, cut and heat with Oxy-Acetylene Torch.		
300	SUSPENSION AND STEERING SYSTEMS		
301	Inspect, repair, or replace steering linkage.		
302	Inspect and adjust basic wheel alignment/inspect tires.		
303	RESERVED		
304	Inspect, test/service power steering system.		
305	Service wheel bearings and hubs, according to TMC Guidelines.		
306	Inspect, repair, or replace shock absorbers.		
307	Inspect, repair, or replace king pins.		
308	Inspect, repair, or replace leaf springs.		
309	Inspect, repair or replace air suspension components.		
310	Inspect and service wheel assemblies.		

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400	PREVENTIVE MAINTENANCE		
401	Identify and determine preventive maintenance intervals and procedures.		
402	Perform preventive maintenance inspection.		
403	RESERVED		
500	BRAKE SYSTEM		
501	Inspect, repair, or replace hydraulic disc brakes components.		
502	Inspect, repair, or replace hydraulic drum brakes components.		
503	Inspect, repair, or replace S-cam drum brakes components.		
505	RESERVED		
506	Inspect, repair, or replace and adjust air governors.		
507	Replace hydraulic brake lines/bleed brakes.		
508	Inspect, repair, or replace air brake lines.		
509	Inspect, diagnose, or replace air brake chamber.		
510	Inspect, diagnose, or replace master cylinder and hydraulic system components.		
511	Diagnose, repair, or replace ABS components.		
512	Inspect, repair, or replace air brake valves.		
513	Inspect, repair, or replace air dryers.		
514	Inspect, repair, or replace calipers.		
515	Inspect, repair, or replace rotors.		
516	Inspect, repair, or replace drums.		
517	Inspect, repair, or replace slack adjusters.		
600	DIESEL ENGINES		
601	Explain diesel engine operation and identify parts.		
602	Remove, inspect, or install camshaft, and valve train components.		
603	Remove, inspect, or install piston, connecting rod, and liner.		
604	Remove, inspect, or install crankshaft and bearings (mains and rods).		
605	Replace engine oil seal.		
606	Perform diesel tune-up (set overhead).		

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607	Remove, inspect, or install cylinder head and gasket.	
608	Remove, inspect, or install oil pump.	
609	Remove, inspect, or install vibration dampener and flywheel.	
700	AIR INTAKE AND EXHAUST SYSTEMS	
701	Inspect, repair, or replace air induction system components.	
702	Inspect, repair, or replace exhaust system and components.	
703	Inspect, repair, or replace charge air-coolers and after coolers.	
704	Inspect, repair, or replace turbocharger.	
800	COOLING SYSTEMS	
801	Inspect/replace belts and pulleys.	
802	Inspect/replace hoses and clamps.	
803	Test/replace thermostat.	
804	Drain, flush, refill and bleed cooling system.	
805	Test anti-freeze and supplemental coolant additives.	
806	RESERVE	
807	Inspect/replace water pump.	
808	Test/inspect/repair fan drives.	
809	Inspect, pressure test cooling system components.	
900	FUEL SYSTEM	
901	Replace fuel filters/strainers.	
902	Inspect/replace fuel lines, tank, cap, and fittings.	
903	Prime and bleed fuel system.	
904	RESERVE	
905	Perform fuel supply and return system tests.	
906	Remove and install injector/nozzle.	
1000	ELECTRICAL/ELECTRONIC SYSTEM	
1001	Test/service battery.	

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1002	Test/replace/adjust bulbs and lamps.	
1003	Diagnose, repair/replace electrical circuits and components.	
1004	Test starting system and replace component assemblies.	
1005	Test charging system output and replace component assemblies.	
1006	Analyze and interpret schematics.	
1007	Perform computer systems tests and analyze codes.	
1100	DRIVE LINE	
1101	Diagnose, replace and adjust drive-line components.	
1102	Perform clutch/clutch brake maintenance and adjustment.	