Pennsylvania CTE

Medium/Heavy Vehicle and Truck Technology/Technician (2023-2025)

Orientation and Safety 100

1 RESERVED 101

2 Research diesel occupations and certification programs. 102

3 Identify truck classifications and configurations. 103

4 Use service manuals and online service information. 104

5 Follow safety procedures and safe equipment operation. 105

6 RESERVED 106

7 Follow Environmental Protection Agency (EPA) standards for cleaning and disposal of waste and fluids. 107

8 Exhibit professional and personal standards and work habits and ethics in a diesel shop. 108

9 Comply with Occupational Safety and Health Administration (OSHA) regulations. 109

Tools and Fasteners/Hardware 200

1 Use basic hand tools and power tools. 201

2 Use fasteners, fittings, and hardware. 202

3 Drill and use threading tools and extractors. 203

4 Use precision measuring tools. 204

5 RESERVED 205

6 Set up/Shut down, cut, and heat with an oxy-acetylene torch. 206

Suspension and Steering Sy

1 Inspect and repair or replace steering linkage. 301

nspect and adjust basic wheel alignment and inspect tires. 302

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	3 **RESERVED** 303
	4 **Inspect and test/service a power steering system.** 304
	5 **Service wheel bearings and hubs according to Transportation Motor Control (TMC) guidelines.** 305
	6 **Inspect and replace shock absorbers.** 306
	7 **Inspect and replace king pins.** 307
	8 **Inspect and replace leaf springs.** 308
	9 **Inspect and repair or replace air suspension components.** 309
	10 **Inspect and service wheel assemblies.** 310
Preventive Maintenance 400	1 **Determine preventive maintenance intervals and procedures.** 401
	2 **Perform preventive maintenance inspection.** 402
	3 **RESERVED** 403
Brake System 500	1 **Inspect and repair or replace hydraulic disc brake components.** 501
	2 **RESERVED** 502
	3 **Inspect and repair or replace S-cam drum brake components.** 503
	5 **RESERVED** 505
	6 **Inspect and replace or adjust air governors.** 506
	7 **Replace hydraulic brake lines and bleed brakes.** 507
	8 **Inspect and repair or replace air brake lines** 508
	9 **Inspect and diagnose and replace air brake chambers.** 509
	10 **Inspect and diagnose and replace master cylinder and hydraulic system components.** 510
	11 **Diagnose and repair or replace anti-lock brake system (ABS) components.** 511
	12 **inspect and repair or replace air brake valves.** 512
	13 **Inspect and repair or replace air dryers.** 513
	Inspect and repair or replace air disc brake components. 514

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	15 **RESERVED** 515
	16 **RESERVED** 516
	17 **Inspect and replace and adjust slack adjusters.** 517
Diesel Engines 600	1 **Explain diesel engine operation and identify parts.** 601
	2 **Remove, inspect, and install camshaft and valve train components.** 602
	3 **Remove, inspect, and install piston, connecting rod, and liner.** 603
	4 **Remove, inspect, and install crankshaft and bearings (mains and rods).** 604
	5 **Replace engine oil seal.** 605
	6 **Perform diesel tune-up (set overhead).** 606
	7 **Remove, inspect, and install cylinder head and gasket.** 607
	8 **Remove, inspect, and install oil pump.** 608
	9 **Remove, inspect, and install vibration dampener and flywheel.** 609
Air Intake and Exhaust Systems 700	1 **Inspect and repair or replace air induction system components.** 701
	2 **Inspect and repair or replace exhaust system and components.** 702
	3 **Inspect and replace charge air coolers and after coolers.** 703
	4 **Inspect and repair or replace turbocharger.** 704
Cooling Systems 800	1 **Inspect and replace belts and pulleys.** 801
	2 **Inspect and replace hoses and clamps.** 802
	3 **Test and replace thermostat.** 803
	4 **Drain, flush, refill, and bleed cooling system.** 804
	5 **Test anti-freeze and supplemental coolant additives.** 805
	6 **RESERVED** 806
	7 **Inspect and replace water pump.** 807
	8 **Inspect fan drives.** 808
	nspect and pressure test cooling system components. 809

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Fuel System 900	1	**Replace fuel filters and strainers.** 901
	2	**Inspect and replace fuel lines, tank, cap, and fittings.** 902
	3	**Prime and bleed fuel system.** 903
	4	**RESERVED** 904
	5	**Perform fuel supply and return system tests.** 905
	6	**Remove and install injector/nozzle.** 906
Electrical/Electronic System 1000	1	**Test and service battery.** 1001
	2	**Test, replace and adjust bulbs and lamps.** 1002
	3	**Diagnose and repair or replace electrical circuits and components.** 1003
	4	**Test starting system and replace component assemblies.** 1004
	5	**Test charging system output and replace component assemblies.** 1005
	6	**Analyze and interpret wiring diagrams.** 1006
	7	**Perform computer systems tests and analyze codes.** 1007
Drive Line 1100	1	**Diagnose, replace, and adjust drive-line components.** 1101
	2	**Perform clutch/clutch brake maintenance and adjustment.** 1102
	3	**Remove and install clutch assembly.** 1103
	4	**RESERVED** 1104