

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 Systems 300

- 1 Inspect and repair or replace steering linkage. 301
- 2 Inspect and adjust basic wheel alignment and inspect tires. 302

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

14 Inspect and repair or replace air disc brake components. 514

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

9 Inspect and pressure test cooling system components. 809

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