



## APPENDIX A

### DIESEL ENGINE MECHANIC (Time-Based)

D.O.T. CODE 625.281.010  
O\*NET CODE 49-3031.00

This training outline is a minimum standard for Work Processes and Related Instruction. Changes in technology and regulations may result in the need for additional on-the-job or classroom training.

### WORK PROCESSES

	<u>Approximate Hours</u>
A. <u>Orientation</u>	750
1. Learning and practicing general shop safety.	
2. Developing familiarity with shop routine(s).	
3. Acquiring basic knowledge of shop equipment, tools and terminology.	
4. Introducing general concepts of engine operation and preventive maintenance.	
5. Studying engine prints.	
B. <u>Brakes and Air Systems</u>	675
1. Adjusting and repairing air, electric, and hydraulic-operated brake systems.	
2. Repairing brake and air system components, including but not limited to: S-cam brakes, disc brakes, Anti-lock brake systems (ABS), air dryers, air compressors, air governors and air reservoirs.	

C. <u>Steering and Suspension Systems</u>	675
1. Maintaining, repairing, and replacing steering system components.	
2. Repairing and replacing shock absorbers.	
3. Maintaining, repairing, and replacing power steering systems.	
4. Maintaining, repairing, and replacing hydraulic suspension systems.	
D. <u>Electronics</u>	900
1. Working with alternators and regulators.	
2. Maintaining, repairing, and replacing wire and light systems, and electric motors.	
3. Maintaining, repairing, and replacing batteries, gauges, and electronic control systems.	
E. <u>Engines</u>	1500
1. Learning and recognizing diesel engine components and their functions.	
2. Tuning up engines.	
3. Performing failure analysis.	
4. Maintaining, repairing, and replacing engine systems, including: fuel, cooling, air, lubrication, and computerized controls.	
F. <u>Power Trains</u>	825
1. Working with manual and automatic transmissions.	
2. Working in differentials and power dividers.	
3. Working on clutches and drive shafts.	
4. Maintaining, repairing, and replacing mechanical, pneumatic, hydraulic, and electronic control devices.	
G. <u>Heating, Ventilation, and Air Conditioning (HVAC)</u>	75
1. Performing preventative maintenance on HVAC systems (trade-specific).	
2. Repairing and replacing HVAC systems and components as required.	
3. Testing and issuing EPA emissions certifications.	
H. <u>Hydraulic and Exhaust Systems</u>	600
1. Maintaining, repairing, and replacing hydraulic systems and components.	
2. Maintaining, repairing, and replacing exhaust systems and components.	

Total Hours

6000

*Apprenticeship work processes are applicable only to training curricula for apprentices in approved programs. Apprenticeship work processes have no impact on classification determinations under Article 8 or 9 of the Labor Law. For guidance regarding classification for purposes of Article 8 or 9 of the Labor Law, please refer to <http://www.labor.state.ny.us/workerprotection/publicwork/PDFs/Article8FAQS.pdf>*

APPENDIX B  
DIESEL ENGINE MECHANIC  
RELATED INSTRUCTION

Safety & Health

General Workplace Safety  
Right-to-Know/Material Safety Data Sheets (MSDS)  
First Aid & CPR (minimum 6.5 hours every 3 years)

Engineering and Design Drawings

Diesel Engine Schematics  
Wiring Diagrams and Schematics

Trade Theory and Science

Tools, Machines, and Equipment  
Fundamentals of Electricity  
Engine Design, Controls, and Components (various manufacturers)  
Injection Systems  
Brake Systems  
Suspension Systems  
Electrical Systems and Testing Equipment  
Service Information Systems and Diagnostic Software  
Introduction to Hybrid and Electrical Vehicles  
Diagnostics- Manual and Computer  
Drive Train Theory and Repair

Other Workplace Skills

Sexual Harassment Prevention Training (minimum 3 hours)

Other courses as necessary

A Minimum of 144 Hours of Related Instruction is Required for Each Apprentice for Each Year.