



STATE OF NEW YORK
DEPARTMENT OF LABOR

APPENDIX A

OPERATING ENGINEER (GRADE & PAVING EQUIPMENT)

D.O.T. CODE 859.683-010

O*NET CODE 47-2073.02

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>Graders</u>	500 – 700
1. Assist in servicing, maintaining, and adjusting the machine (if applicable)	
2. Operate and assist in the different types of work the machine does, such as fine grading, back sloping, mixing, and laying oil, etc.	
3. Operate elevating graders; maintenance (if applicable)	
4. Assist in installing and using different types of laser guidance systems and/or global positioning attachments	
B. <u>Scrapers, Self-Propelled</u>	300 – 400
1. Operate various motor and motor-electric driven machines	
2. Make proper cuts and fills to the grade stakes	
3. Assist in servicing, maintaining, and repairing the different makes of machines (if applicable)	
C. <u>Compaction Equipment</u>	200 – 300
1. Operate different types of rollers and other compaction equipment using different procedures for compacting various materials	

D.	<u>Tractor-Type Skip Loaders/Hi-Lifts</u>	350 – 500
	1. Operate; service and make minor repairs and adjustments (if applicable)	
E.	<u>Wheel-Type Tractors, including Forklifts, Lumber Carriers, etc.</u>	250 - 300
	1. Assist in servicing, maintaining, and making minor repairs and adjustments (if applicable)	
	2. Operate	
F.	<u>Grade Stakes</u>	400 – 600
	1. Check, read, and set grade stakes and read plans	
G.	<u>Trenching Machines</u>	300 – 500
	1. Operate all types and sizes of machines; maintain and repair (if applicable)	
H.	<u>Bulldozer</u>	300 – 450
	1. Operate on the different types of work assigned the dozer from pioneer and rough excavation to finish work	
	2. Assist in making minor adjustments and repairs, and work with the mechanic on major repairs (if applicable)	
I.	<u>Scrapers, Towed</u>	350 – 550
	1. Operate properly	
	2. Service, adjust, and change cables on cable-controlled machines (if applicable)	
J.	<u>Miscellaneous Equipment</u>	300 – 500
	1. Operate all types of pumps; service and	

J. Miscellaneous Equipment – continued

- adjust (if applicable)
- 2. Operate all pumping machines, such as pump crete machine, concrete pump, gunite machine, etc.; maintain machines (if applicable)
- 3. Install and operate well-point systems; maintain (if applicable)
- 4. Operate all types of mechanical heaters; service and adjust (if applicable)
- 5. Operate all types of electric generating plants; service and adjust (if applicable)
- 6. Operate all other types of equipment, air compressors, and all auxiliary equipment; service and adjust (if applicable)

K. Asphalt and Concrete Paver

400 – 650

- 1. Operate and also become familiar with control of mixing time apparatus
- 2. Assist in making adjustments and repairs and to service machines (if applicable)
- 3. Operate and set-up screed; make mechanical and electronic adjustments (if applicable)
- 4. Operate and set-up finishing machine; make mechanical and electronic adjustments (if applicable)

L. Special Paving Equipment

250 – 350

- 1. Operate gutter pavers, curb pavers, vibrators, concrete saws, pavement breakers, and similar equipment; service and adjust (if applicable)
- 2. Operate chip spreader; make adjustments and repairs (if applicable)

M. Maintenance; Cutting and Burning; Greases and Oils

100 – 200

- 1. Use various welders and welding equipment
- 2. Assist in making minor repairs and adjustments (if applicable)
- 3. Perform minor welding repair (if applicable)

Operating Engineer (Grade & Paving Equipment) – continued

Approximate Hours

M. Maintenance; Cutting and Burning; Greases and Oils – continued

- and cutting
- 4. Use proper types of greases and oils (if applicable)

N. Handling Hazardous Materials (optional)

40 – 300

Total Hours 4,040 – 6,300

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

OPERATING ENGINEER (GRADE & PAVING EQUIPMENT)

RELATED INSTRUCTION

Safety and Health

- Drug & alcohol awareness
- OSHA rules and regulations
- OSHA 10-Hour Construction Course – if required for Public Work
- First aid/CPR (minimum 6.5 hours every 3 years)

Commercial Driver's License Preparation

- Testing requirements
- Inspection stipulations
- Driving course

Use of Grade Instruments and Plans

- Transit and hand level
- Theodolite
- Leveling rods
- Measurement instruments
- Stakes

Soil Compaction

Equipment Skills (technical training and seat time)

- Forklift and skidsteer loader/driver; forklift certification
- Backhoe
- Dragline
- Forklift and skidsteer loader/dozer
- Compactor
- Clam

Mechanical Systems (if applicable)

- Basic hydraulics
- Power trains

Maintenance and Adjustments to Equipment (if applicable)

- Fuels and lubricants
- Fuels, oils, grease and equipment
- Grease truck and tools
- Hydraulic systems

Operating Engineer (Grade & Paving Equipment) Related Instruction – continued

HazMat Training (required if Work Process “N” on Appendix A is selected)

40-hour certification course

Safety review, refresher training, and re-certification as required

Interpersonal Workplace Skills

Industrial and labor relations

History and background (6 hours, first year)

Current laws and practices (14 hours, second year)

Sexual harassment prevention training (minimum 3 hours)

Suggested Additional Courses

Diversity

Other Related Courses as Necessary

A minimum of 144 hours of Related Instruction are required for each apprentice for each year, with a minimum requirement of three years (432 hours).