



Job Analysis

PCS Operating Engineer – Equipment
Job Title: Operator **Worker:** _____
DOT Number: 869.687-026 **Claim Number:** _____
Employer: Port of Seattle **Employer Phone #:** 206-787-5831
Employer Contact: Terry Dix **Date of Analysis:** June 22, 2013

Job of Injury Previous Job New Job 8 Hours Per Day 5 Days Per Week

Job Description, Essential Functions, Tasks and Skills

The Port of Seattle is a municipal corporation created on September 5, 1911 by the voters of King County. The Port of Seattle is divided into operating divisions, plus other departments that support the divisions and the broad mission of the Port:

- 1) Aviation Division
- 2) Capital Development Division
- 3) Corporate Division
- 4) Real Estate Division
- 5) Seaport Division



This job analysis is for Operating Engineer – Equipment Operator within the Port Construction Services (PCS) group of the Capital Development Division. PCS employs tradesmen specializing in specific trades: Laborers, Teamsters, Operating Engineers, Carpenters, Pile Bucks, Iron Workers, Millwrights and Cement Masons. There are times when a specific skill set is not immediately required on a project, so workers assist in other trades with selected basic tasks.

The primary responsibility of an Operating Engineer is to operate heavy equipment used in construction. PCS projects may include construction or repair of roads, parking lots and structures, constructing sidewalks, curbs and gutters, installing sewers, water mains, irrigation and water control systems. May also include reclamation projects, reservoirs, harbor developments, docks, dry docks, piers, retaining walls, excavation of earth and rock, reinforced earthwork, and site clearing and demolition work.

Assigned Tasks

Responsibilities assigned to the Operating Engineers fall into three categories:

- 1) Operating construction equipment.
- 2) Tasks related to the operation of construction equipment.
- 3) General cross-trade tasks related to the completion of a project.

May grease joints and articulating components of machinery, clean the tracks and tires of equipment before moving it from a job site, and potentially load and unload the equipment from a trailer.

Depending on the size and scope of a project, an Operating Engineer may operate machinery for an extended period of time, or the worker may have to take on more general tasks due to the limited amount of heavy machinery used on a specific project. When a specific skill set is not immediately required on a project, equipment operators may assist other trades by:

- Clear and prepare project sites, including setting up traffic control cones and signs.
- Clean rubble/debris.
- Assist with scaffolding erection.
- Dig, spread, and level dirt and gravel, using pick and/or shovel.



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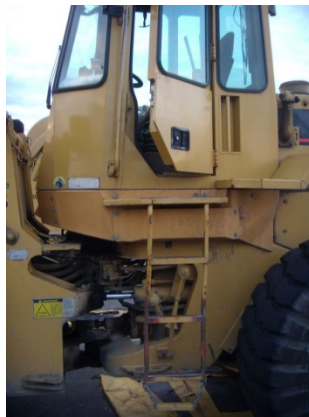
- Move dirt and gravel using wheel barrows or other types of wheeled carts.
- Lift and carry building materials, tools, and supplies.
- Clean tools, equipment, and materials.
- Guide objects, such as jersey barriers, trench boxes, pipes, or water tanks, into place when suspended by a lift or crane.
- Spray water at project sites to control dust.
- Return excess materials and other items to the PCS yard.

Skills and Abilities

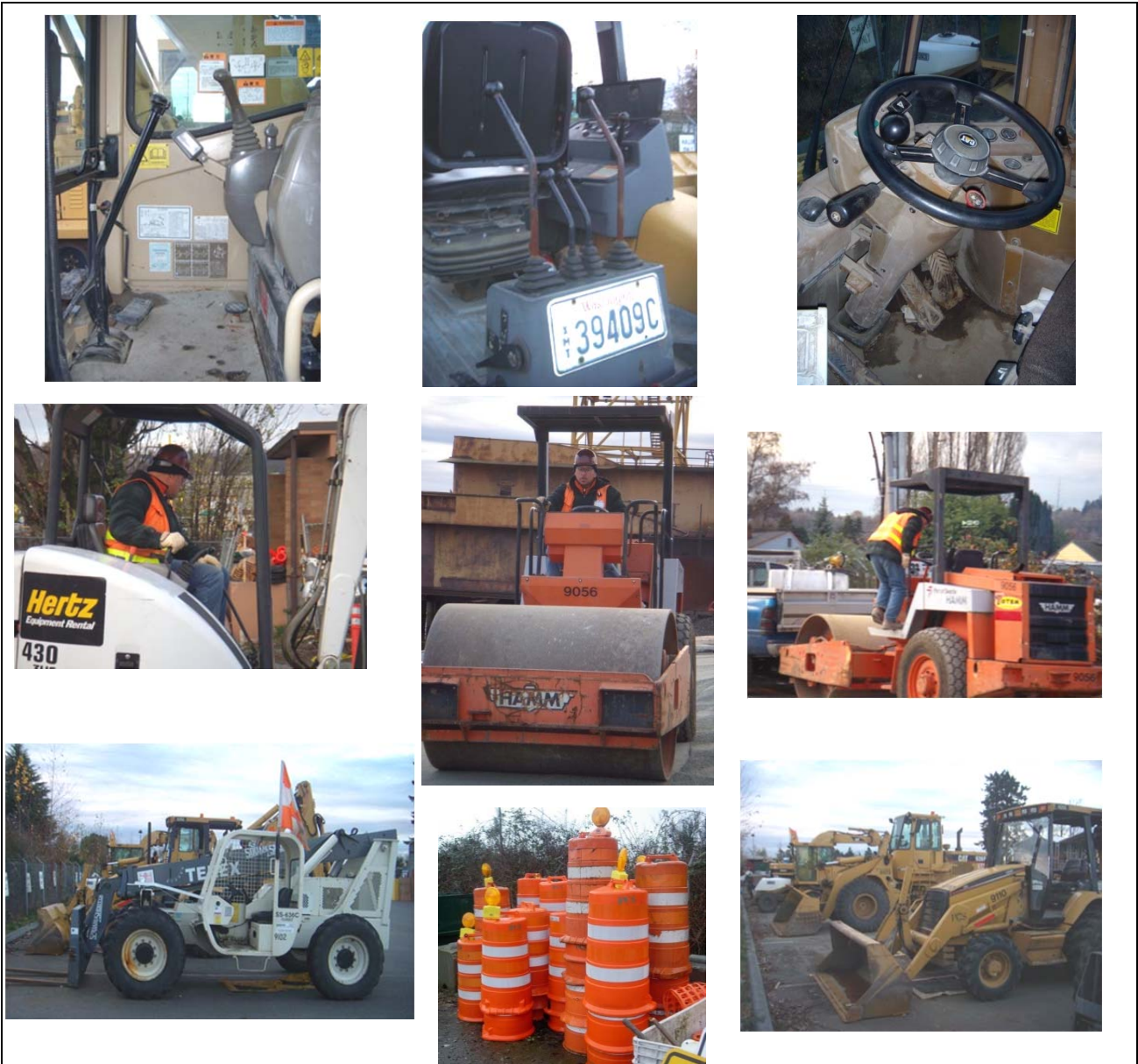
- Excellent technical skills in their selected trade.
- Skill and ability to operate a wide variety of construction-related equipment including boom trucks, loaders, compactors, shovels, excavators, backhoes, track hoes, self-propelled scrapers, large forklifts, sweepers, large boring/drilling machines.
- Knowledge of materials, methods, and tools used in the construction industry.
- Physical ability to accomplish all assigned tasks.
- Good eyesight, hand-eye coordination, and manual dexterity.
- Ability to work both independently and within a team as required.
- Ability to follow directions closely and be detail oriented.
- Ability to identify the best way to accomplish a task, and complete the assigned task in a timely and efficient manner.
- Ability to work in a safe manner in any kind of weather.

Machinery, Tools, Equipment, Personal Protective Equipment

- Heavy construction equipment, including cranes, loaders, compactors, shovels, excavators, backhoes, track hoes, scrapers, sweepers, and boring/drilling machines.
- May use hand and power tools, including shovels, picks, rakes, tampers, levels, measuring tapes, grinders, jack hammers, wheelbarrows and carts, man lifts or other personnel lifts, ladders, saws (chainsaws, circular saws, reciprocating saws, and concrete saws), buckets, water truck with spraying equipment/hoses, grease guns, two-way radio, cell phone.
- Required personal protective equipment includes safety vest, approved safety boots, and hard hats. May also use eye and ear protection, respirators, protective suits, fall protection gear, personal floatation devices, gloves and rain gear.



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Education / Training

The Operating Engineers are members of the International Union of Operating Engineers, Local 302. In general, Operating Engineers, working for PCS, are Journeymen level Operating Engineers that have successfully completed the apprenticeship program offered through the Union.

Per the Dictionary of Occupational Titles (DOT)
859.683-010 Heavy Equipment Operator

Specific Vocational Preparation (SVP)
6 (from one to two years)



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COGNITIVE AND BEHAVIORAL ELEMENTS/DEMANDS

Frequency Definitions	
Continuously = Occurs 66-100% of the time	
Frequently = Occurs 33-66% of the time	
Occasionally = Occurs 1-33% of the time	
Rarely = May occur less than 1% of the time	
Never = Does not ever occur	
Comprehension	
Articulating and comprehending information in conversations.	Continuously
Reading, comprehending, and using written materials.	Frequently
Understanding and solving problems involving math and using the results.	Occasionally
Using technology/instruments/tools & information systems.	Continuously
Working with two and three dimensional formats.	Continuously
Remembering	
Remembering spoken instructions.	Continuously
Remembering written instructions.	Continuously
Remembering visual information.	Continuously
Recalling information incidental to task at hand.	Occasionally
Memorizing facts or sequences.	Occasionally
Remembering simple instructions.	Continuously
Remembering detailed instructions.	Frequently
Learning	
Effectively learning and mastering information from classroom training.	Occasionally
Effectively learning and mastering information from on-the-job training.	Occasionally
Learning from past directions, observations, and/or mistakes.	Occasionally
Using common sense in routine decision making.	Continuously
Recognizing and anticipating potential hazards and taking precautions.	Continuously
Thinking critically and making sound decisions.	Frequently
Integrating ideas and data for complex decisions.	Occasionally
Determining and following precise sequences.	Continuously
Coordinating and compiling data and information.	Occasionally
Analyzing, synthesizing data and information.	Occasionally
Tasking and Planning	
Performing repetitive or short-cycle work.	Continuously
Working under specific instructions.	Continuously
Completing complex tasks.	Occasionally
Directing, controlling, or planning for others as necessary for basic tasks.	Frequently
Directing, controlling, or planning for others as necessary for complex tasks.	Occasionally
Multi-tasking.	Continuously
Planning, prioritizing, and structuring daily activities.	Occasionally
Use Appropriate Behavior for Professional Work Environment	
Receiving criticism and accepting limits appropriately.	Occasionally
Maintaining emotional control and organization under increased stress.	Continuously



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Maintaining socially appropriate affect, temperament, and behavior.	Continuously
Monitoring own quality of performance and altering behaviors to correct mistakes or improve outcome.	Continuously
Working independently and/or unsupervised.	Continuously
Adapting to frequent interruptions, changes in priorities, or changes in work location.	Continuously
Responding effectively to emergency situations.	Occasionally

Frequency Designations	
Required	
Beneficial	
Not Necessary	
Maintaining Attendance and An Assigned Work Schedule	
Maintaining predictable and reliable attendance each work shift.	Required
Being punctual.	Required
Taking rest periods at set times or only at times determined by breaks in job responsibilities.	Required
Adjusting to a flexible schedule of work days and or shifts.	Beneficial
Working overtime as needed.	Beneficial



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PHYSICAL DEMANDS

Constant: Constant (Over 70% of the time) Frequent: Frequent (30%-70% of the time) Occasional: Occasional (10-30% of the time) Seldom: Seldom (1-10% of the time) WNL: Within Normal Limits (talking, hearing, etc.) N/A: Not Applicable					
STRENGTH:	<input type="checkbox"/> Sedentary	<input type="checkbox"/> Light	<input type="checkbox"/> Medium	<input checked="" type="checkbox"/> Heavy	<input type="checkbox"/> Very Heavy
Action		Frequency	Comments		
Sitting		F	Operate machinery.		
Standing		O	Interchange with walking.		
Walking		O	Interchange with standing.		
Lifting (up to 10 pounds)		O	Place lumber under loads carried by a forklift, fuel nozzle/hose, traffic barriers and cones, power and hand tools, shoveling, lumber and boards, lengths of pipe.		
Lifting (11 to 25 pounds)		O	Place lumber under loads carried by a forklift, fuel nozzle/hose, traffic barriers and cones, power and hand tools, shoveling, lumber and boards, lengths of pipe.		
Lifting (26 to 50 pounds)		S	Lumber and boards to place outrigger pads, power tools, sandbags used to weight down tarps (35#), whole bags of sand (50#), lengths of pipe.		
Lifting (50 to 75 pounds)		S	Plywood sheets, power tools, lengths of pipe.		
Lifting (75 to 100 pounds)		S	Bags of concrete (60#); rolls of chain link fencing (to 75#), wooden fencing panel (80#), chunks of concrete broken up by backhoe (up to 100#), bags of cement (93#), hay bales (80#), lengths of pipe.		
Carrying (up to 10 pounds)		O-F	Place lumber under loads carried by a forklift, fuel nozzle/hose, traffic barriers and cones, power and hand tools, shoveling, lumber and boards, lengths of pipe.		
Carrying (11 to 25 pounds)		O-F	Place lumber under loads carried by a forklift, fuel nozzle/hose, traffic barriers and cones, power and hand tools, shoveling, lumber and boards, lengths of pipe.		
Carrying (26 to 50 pounds)		O	Lumber and boards to place outrigger pads, power tools, sandbags used to weight down tarps (35#), whole bags of sand (50#), lengths of pipe.		
Carrying (50 to 75 pounds)		S	Plywood sheets, power tools, lengths of pipe.		
Carrying (75 to 100 pounds)		S	Bags of concrete (60#); rolls of chain link fencing (to 75#), wooden fencing panel (80#), chunks of concrete broken up by backhoe (up to 100#), bags of cement (93#), hay bales (80#), lengths of pipe. NOTE: Heavy items can generally be lifted/moved using a forklift or hoist.		
Pushing/Pulling (up to 10 pounds of force)		O	Operating machinery (steering wheels and levers used to move and operate the equipment), open and close doors on machines, chain equipment to trailer, assist with machine refueling (pulling fuel hose to equipment). Performing cross-trade work: shovel, operate saws, unroll chain link fencing, guide objects suspended by a lift or crane, and demolition.		



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Pushing/Pulling (25 to 50 pounds of force)	O	Same as push/pull up to 10 pounds.
Pushing/Pulling (10 to 20 pounds of force)	S	Open engine covers, shovel, using saws, unroll chain link fencing, guiding suspended objects, demolition.
Climbing Ladders/Stairs	O	Worker must step up into, or use steps or a short ladder to reach the controls/cab of machines. May enter/exit equipment repeatedly throughout a shift. Larger equipment cab floors are between 48 to 70 inches from the ground.
Working at Heights/Balancing	O	Workers use steps or short ladders to enter and exit equipment. May also work on or from a ladder or man lift.
Bending at Waist	F	Enter, operate, and exiting equipment, performing cross-trade work.
Bending Neck	F	Operating equipment, performing cross-trade work.
Reaching (up to shoulder level)	F	Open equipment doors, reach to grab to get into equipment, use levers and steering wheel to operate machinery, grease equipment with grease gun; disconnect hydraulic hoses, use shovel to clear mud and dirt from tracks/tires, open engine covers, direct traffic, assist with cross-trade tasks such as guiding objects suspended by a lift or crane, demolition, digging, and sweeping.
Reaching (over shoulder level)	S	Open equipment doors (taller door handles are up to 72" from ground), reach to grab to get into equipment, grease equipment with grease gun, reach 2-way radio mounted to ceiling of cab, disconnect hydraulic hoses, carry items on shoulder, throw items into a dumpster, gather items from a rack or shelf.
Stooping	O	Grease joint and moving parts of equipment; inspect equipment, cross-trade work.
Kneeling/Squatting	S	Grease joints and other moving parts on equipment, clear dirt and mud from tracks/tires with a shovel, inspect equipment, and perform cross-trade work.
Crawling	S	Grease joints and other moving parts on equipment, inspecting equipment.
Repetitive Motion	S-F	Depends on assigned task. Worker may be assigned a task that requires no repetitive motion, or a task that requires sustained use of the arms to repeatedly dig or scoop dirt using levers and controls to operate machinery.
Twisting at Waist	O	Operating equipment to make sure tasks are being done correctly, to ensure coworkers are clear of equipment, while backing up.
Handling/Grasping	C	20% pinch grasp; 80% whole hand grasp.
Fine Finger Manipulation	O	Using switches and toggles on equipment; 2-way radios and cell phones, writing, using hand tools, pulling triggers on power tools, tying ropes.
Driving	F	Operate equipment and machinery.
Foot Controls	F	Operating equipment and machinery.
Talking	O-F	Communicating with supervisors and coworkers.
Hearing	C	Communicating with supervisors and coworkers.
Seeing	C	Visual abilities would be considered important in this position.
Writing	S	Writing notes and measurements.



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Vibration	F	Operating equipment. Larger vibrations are felt particularly when using an attachment on a backhoe to break concrete, or when driving a large rolling compactor which uses vibration to help compact soil, rock, and asphalt.
Normal Job Site Hazards	C	Using steps/short ladders to enter/exit equipment repeatedly throughout a shift, moving machinery, working near moving vehicles, slippery walking surfaces, fumes, dust, noise, vibrations, falling objects, striking head on overhead objects, carrying heavy objects, working at heights (ladders and man lifts), sharp tools, working from a boat.
Expected Environmental Conditions	C	Work is performed in any environment, typically exposed to weather, although a worker may be covered while working in a piece of equipment. Work may also be performed inside buildings. May be exposed to noisy environments, dust, and fumes.

The above job analysis represents the requirements of a specific job based on personal observations, discussions with employer representatives, and/or workers. On occasion, practicality and feasibility prevent the direct observation and/or gathering of objective quantifiable data. For this reason, a "best estimate" may have been used when reporting physical demand frequencies.

Analysis was done on the job site?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Job Analysis Reviewed By	Terry Dix
Date	May 30, 2013
Completed by Vocational Provider	Nicki Gorski VRC CDMS
Signature of Vocational Provider	<i>Nicki Gorski</i>



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FOR PHYSICIAN'S/EVALUATOR'S USE ONLY	
<input type="checkbox"/>	The injured worker can perform the physical activities described in the job analysis and can return to work on _____.
<input type="checkbox"/>	The injured worker can perform the physical activities described in the job analysis on a part-time basis for _____ hours per day. The worker can be expected to progress to regular duties in _____ weeks/months.
<input type="checkbox"/>	The injured worker can perform the described job, but only with the modifications/ restrictions in the attached report and/or listed below. These modifications/restrictions are (check one): <input type="checkbox"/> Temporary for _____ weeks _____ months <input type="checkbox"/> Permanent
<input type="checkbox"/>	The injured worker cannot perform the physical activities described in the job analysis based on the physical limitations in the attached report and/or listed below. These limitations are (check one): <input type="checkbox"/> Temporary for _____ weeks _____ months <input type="checkbox"/> Permanent

COMMENTS

Physician's/Evaluator's Name (printed) _____

Physician's/Evaluator's Signature _____

Date _____

PLEASE RETURN COMPLETED FORM VIA FACSIMILE TO:
Port of Seattle Health and Safety Department at (206) 787-3406