



Bock Consulting

Job Analysis

Job Title	<u>Operating Engineer Foreman– Loading Bridges (AVM)</u>	Worker	_____
DOT Number	<u>950.382-026 and 950.131-014</u>	Claim Number	_____
Employer	<u>Port of Seattle</u>	Employer Phone #	<u>(206) 787-3000</u>
Employer Contact	<u>Ryan Pazaruski</u>	Date of Analysis	<u>9/22/11; 9/12/16; 12/13/18</u>

Job of Injury
 Transferable Skills Job
 New Job
 10 Hours Per Day
 4 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) Maritime Division, and 3) Economic Development Division.

The Aviation Division owns and operates Seattle-Tacoma International Airport. Sea-Tac Airport handles more than 40 million passengers a year, and offers state-of-the-art air cargo facilities. The Aviation Division employs a maintenance staff which is responsible for all tasks associated with the maintenance and on-going operations at Sea-Tac Airport.

This job analysis is for an individual working as an Operating Engineer Foreman – Loading Bridges¹ for Aviation Maintenance. A Loading Bridge is the tunnel-like structure that allows passengers to board and disembark airplanes parked at the Sea-Tac Airport gates.

Essential Functions:

The Operating Engineer Foremen in Conveyance Systems are responsible for the day-to-day supervision and organization of the Operating Engineers that are responsible for maintaining and repairing the mechanical equipment that allow the loading bridges to move and adjust to various airplanes. A Foreman in Loading Bridges is also



¹ There are several different categories of Operating Engineers working at Sea-Tac Airport. Workers may specialize in conveyance system operations, boiler room operations (including heating and refrigeration systems), or passenger loading bridges (the elevated passages used to move passengers from the terminal building to the aircraft).



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expected to be able to perform any and all trade-specific work on an as needed basis.

There are more than 80 loading bridges at Sea-Tac Airport; more than 70 are maintained by the Port of Seattle (the others are maintained by the respective airlines).

Loading Bridge Operating Engineer Foremen are scheduled 7 days a week and around the clock on three shifts (day, swing, and graveyard) at Sea-Tac Airport. Foremen, therefore, are also staffed 24 hours per day, 365 days a year on three matching shifts. The largest crew scheduled during the graveyard shift (when airport passenger volumes are the lightest and maintenance and repair tasks can be completed when the loading bridges are generally not being used).



The Aviation Maintenance offices are located at ramp level under B1 at Sea-Tac Airport. Foremen spend time in the office, but also work in a remote Loading Bridges shop, and throughout the airport facility.

The work performed by the Conveyance Systems Operating Engineer Foremen can be generally categorized as follows:

Work Category	Estimated Time
Office/desk/administrative work (including meetings)	30-60%
Supervising work and personnel and providing assistance in and around shop	5-15%
Supervising work and personnel and providing assistance in the field	10-20%
Performing trade-specific work	20-30%
Total	100%

Tasks assigned to Operating Engineers-Loading Bridges may include:

- Receive notifications of new work orders/requests (via telephone, email, or job tracking system). Develop plans for completing requested projects. Plan for material, equipment, PPE, and staffing needs.
- Order parts, supplies, and or materials needed for projects. Work with General Foreman or Purchasing to ensure correct products and items are ordered and available when needed. Periodically work with vendors related to supplies and or materials needed.
- Prepare job plans and supporting documentation as needed.
- Prepare personnel schedules and assign work tasks.



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- Coordinate scheduling with other trades to ensure materials, equipment, and workers from other trades are available as needed to complete assigned work orders/projects. Coordinate with outside vendors/contractors and tenants.
- Enter time by work order on a daily basis into job tracking system (Maximo). Review daily time entered by crew and approve, as applicable. Ensure description of work completed is available and or correct in work log.
- Complete all required forms and documents.
- Send and respond to electronic mails.
- Visit project sites and oversee/inspect completed work. Ensure work is being performed in a safe manner.
- Meet/connect with crew (as applicable) daily to manage workflow, address issues, and reassign personnel based on work demands.
- Potentially lead periodic meetings to provide training and discuss important safety issues.
- Attend periodic meetings with supervisors and other entities.
- Coordinate work priorities with supervisors.
- Assist Operating Engineers with technical input, answer questions from crew, and provide troubleshooting advice as needed.
- Coordinate responses to system maintenance calls received from the airlines. Airlines call a central dispatching office, and the service calls are then relayed to the Operating Engineers. Rotating team members are specifically assigned to respond to maintenance calls. If a call is received, the primary responder is sent to the gate to address the issue. If another call is received before the first issue is resolved, the first responder may call a second responder if necessary. The overall goal is to respond to every call in less than 5 minutes. If no one else is available to respond to a call, the Foreman will respond to the call.
- Conduct inspections of loading bridge equipment.
- Foreman may also perform emergency maintenance (“EM”), corrective maintenance (“CM”) or preventive maintenance (“PM”) projects tasks, fabricate/machine a variety of replacement parts used in the systems and equipment maintained by the Operating Engineers, and repair and/or rebuild





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reusable equipment.

- Enter time and work tasks by work order on a daily basis into job tracking system (Maximo).
- Send and respond to electronic mails.
- Attend periodic meetings during which training is provided and important safety issues are discussed.
- Assist other crafts as requested.
- Complete all required forms and documents.
- Perform other tasks as requested.

Necessary skills and abilities include:

- Having the ability to identify and trouble-shoot an issue quickly, identify the best method(s) to address an issue, and correctly complete the identified task.
- Having the physical abilities to perform all of the assigned tasks.
- Having the skills to complete the assigned task(s), using all of the various types of tools and equipment, in a safe manner.
- Being able to follow directions closely, and being detail oriented.
- Being able to work independently, but also within a team environment. Not only do Foremen have to be able to work with other Operating Engineers, but Operating Engineers work in a position considered a “lead craft.” Therefore, Foremen and Operating Engineers need to be able to work with other crafts (such as electricians and electronic technicians) and coordinate work among various types of crafts.
- Ability to read and interpret blueprints and technical drawings.
- Excellent time management and prioritization skill, with the ability to multi-task.
- Ability to manage people and work performed by others.
- Ability to communicate effectively, both verbally and in writing, and excellent interpersonal skills (including on radio).
- Being able to work in various temperatures and work exposed to various kinds of weather.
- Working knowledge of Windows-based computers, related accessories, time tracking software, keyboarding, data input skills, and electronic mail software.





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Machinery, Tools, Equipment, Personal Protective Equipment:

- Computer, computer accessories, and project management software (Maximo). General office equipment, such as desk, chair, fax machine, and telephones. General office supplies, such as pens/pencils, notepads, binders, and paper.
- Hand tools, including wrenches, crowbars, pinch bars, chisels, vice grips, screwdrivers, tape measures, utility knives, and hammers.
- Power tools, including drills, drill presses, chop saws, grinders, and reciprocating saws.
- Grease guns, grease, and other lubricants.
- Metal saws, lathes, mills, drill press, parts washer, and other shop tools.
- 2-way radio for communication.
- MIG, TIG, and stick welding equipment.
- Ladders: step, self-supporting, and extension.
- Man lifts/scissor lifts.
- Engine lift/cherry picker.
- Forklifts. Hand trucks. Wheeled carts.
- Tool boxes or buckets.
- Portable generators.
- Work trucks.
- Overhead hoists. Comealongs.
- Chains, straps, and ropes.



The Port provides all tools and equipment necessary to perform the tasks assigned to the Operating Engineers (no personal tools are allowed).

Workers are required to wear safety vests and approved safety shoes at all times. When working in a construction zone, workers are required to wear a hardhat and eye protection. Ear protection is also required on the Airport Operations Area (“AOA”) and used other times when necessary. Operating Engineers may also wear gloves, kneepads, and fall arrest harnesses as required.



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Education / Training:

Operating Engineers, including the Foremen, are represented by the Operating Engineers Union (Local 302).

The Foremen would be a Journeyman level Operating Engineer with significant experience in the operation and maintenance of mechanical systems.

Training and or enough hands-on experience with computers to have a working knowledge of Windows-based computers and related accessories, time tracking software, keyboarding, data entry, electronic mail software.

Foremen must also complete the Front Line Supervisor Training as a Port of Seattle requirement. This training is offered once a year and must be completed during the first year as a Foreman.

Must possess a valid Washington State driver's license, and pass a required FAA security background check.

Additional training includes AOA training (which allows workers to drive on the airfield), forklift power truck, and pallet jack certifications, Hazardous Materials Management, Asbestos Awareness, and Accident Reporting & Analysis for supervisors.

Per the Dictionary of Occupational Titles (DOT):

950.382-026 Maintenance Engineer

Specific Vocational Preparation (SVP): 7 (From two to four years)

950.131-014 Stationary-Engineer Supervisor

Specific Vocational Preparation (SVP): 7 (From two to four years)



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COGNITIVE AND BEHAVIORAL ELEMENTS/DEMANDS

Frequency Definitions:	
Continuously = Occurs 66-100% of the time.	Occasionally = Occurs 1-33% of the time
Frequently = Occurs 33-66% 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.	Frequently
Using technology/instruments/tools & information systems.	Continuously
Working with two and three dimensional formats.	Occasionally
Remembering	
Remembering spoken instructions.	Continuously
Remembering written instructions.	Continuously
Remembering visual information.	Continuously
Recalling information incidental to task at hand.	Continuously
Memorizing facts or sequences.	Frequently
Remembering simple instructions.	Continuously
Remembering detailed instructions.	Continuously
Learning & Processing	
Effectively learning and mastering information from classroom training.	Occasionally
Effectively learning and mastering information from on-the-job training.	Continuously
Learning from past directions, observations, and/or mistakes.	Continuously
Using common sense in routine decision making.	Continuously
Recognizing and anticipating potential hazards and taking precautions.	Continuously
Thinking critically and making sound decisions.	Continuously
Integrating ideas and data for complex decisions.	Occasionally
Determining and following precise sequences.	Frequently
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.	Continuously
Directing, controlling, or planning for others as necessary for complex tasks.	Frequently
Multi-tasking.	Continuously
Planning, prioritizing, and structuring daily activities.	Continuously



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Use Appropriate Behavior for Professional Work Environment	
Receiving criticism and accepting limits appropriately.	Frequently
Maintaining emotional control and organization under increased stress.	Continuously
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.	Frequently

Frequency Designations: Required Beneficial Not Necessary	
Maintaining Attendance and An Assigned Work Schedule	
Maintaining predictable and reliable attendance each work shift.	Beneficial
Being punctual.	Beneficial
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



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PHYSICAL DEMANDS

N/A: Not Applicable

S: Seldom (1-10% of the time)

O: Occasional (10-30% of the time)

STRENGTH: Sedentary Light

F: Frequent (30%-70% of the time)

C: Constant (Over 70% of the time)

WNL: Within Normal Limits (talking, hearing, etc.)

Medium Heavy Very Heavy

Frequency

Comments

Sitting	F	While performing administrative duties, attending meetings, driving forklift or work truck to work area.
Standing	F	Interchange with walking. Frequency will depend on assigned tasks.
Walking	F	Interchange with standing. Frequency will depend on assigned tasks. Walking may be over concrete, asphalt, tile, grating, dirt/mud, or uneven or slippery surfaces.
Lifting (up to 20 pounds)	F	While lifting paperwork, tools, and smaller parts and system components.
Lifting (20 to 40 pounds)	O	While lifting stair treads/steps (30 lbs.), 20' length of metal used to create handrails (35 lbs.), and smaller tool boxes/bags.
Lifting (40 to 100 pounds)	S	While lifting toolboxes or tool buckets, larger pieces of equipment, rollers used in telescoping loading bridge sections (50 lbs.), and hydraulic pumps (approx. 90 lbs). Periodically the fluids in the loading bridge gearboxes are drained and replaced (the 5 gallon bucket containing the flushed fluid weighs and estimated 45 lbs.). In very rare instances, the Loading Bridge staff may be asked to assist Operating Engineers in the Conveyance Systems group, which may mean lifting luggage (up to 70 lbs.) and clearing jams in the conveyor/luggage handling systems. NOTE: Many of the parts and pieces of equipment used by the Operating Engineers are heavy (motors, gearboxes, pumps), therefore the workers use hoists, lifts, or other mechanical devices to lift and move heavy parts and equipment. When lifting items, workers should ensure that they are using proper lifting techniques, and ask for assistance when needed.
Carrying (up to 20 pounds)	F	While carrying paperwork, tools, and smaller parts and system components.
Carrying (20 to 100 pounds)	S	Generally, workers use wheeled carts, hand trucks, forklifts, engine lift or cherry picker to move materials and equipment around in the shop or on a job site. In very rare instances, the Loading Bridge staff may be asked to assist Operating Engineers in the Conveyance Systems group, which may mean carrying luggage (up to 70 lbs.) and clearing jams in the conveyor/luggage handling systems. NOTE: If a heavy object has to be carried, assistance is available.
Pushing/Pulling (Estimated force up to 35 lbs.)	O	Opening drawers and doors. Moving portable welding equipment around the shop (on wheeled cart), pushing wheeled carts in the shop or around a job site, positioning and maneuvering equipment.



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Climbing Stairs/Ladders	O	Freestanding ladders, ladders attached to structures and trucks, and stairs are used to enter, and move around and in the loading bridges. Manlifts, snorkel lifts, and scissor lifts are used more often than ladders as work platforms. NOTE: Workers may use the elevators in the terminal building to move between floors.
Working at Heights/Balancing	O	Depending on the specifically assigned tasks. Workers use manlifts or ladders to reach work areas, and may work on top of the loading bridges. NOTE: Fall protection must be worn when working at heights.
Bending at Waist	F	While working at desk. Outside the office, while entering work trucks, inspecting or working on issues at or below waist level, gathering parts and items at or below waist level.
Bending Neck	C	While working at desk or outside the office. In a majority of the tasks accomplished by Foremen and Operating Engineers, the ability to move their neck would be considered important.
Twisting at Waist	S	While working at desk. Outside the office, workers can minimize the amount of twisting by moving their feet or positioning work correctly while working.
Crouching/Kneeling	S	When working on equipment or items below waist level, or gathering parts and supplies stored below waist level. Once a quarter, the Operating Engineers are tasked with cleaning the gutters (the outside bottom edges inside the loading bridges where the sections of the loading bridges extend) which is best accomplished while kneeling.
Crawling	S	May crawl while working on equipment or items below waist level, or while cleaning the inside gutters of the loading bridges.
Stooping	S	
Reaching (To shoulder level)	F	While working at desk. Outside the office, while installing parts and equipment, working with shop tools to fabricate and machine parts, and gathering parts and supplies stored below shoulder level.
Reaching (Over the shoulder)	O	While reaching for items on shelves above desk. Outside the office, installing parts and equipment, and gathering parts and supplies stored above shoulder level. NOTE: Workers use lifts and ladders to try and position work at chest level when possible.
Driving	O	Driving work truck, forklift, or other vehicle.
Foot Controls	O	While driving.
Repetitive Motion	N/A	The variety of tasks assigned to Operating Engineers minimizes repetitive motions.
Handling/Grasping	F	40 % Pinch Grasp 60 % Whole Hand Grasp
Fine Finger Manipulation	O	Processing paperwork and other tasks while working at desk. Operating triggers on power tools, using controls on shop tools, operating welding equipment, lubricating machinery, using a 2-way radio, and typing on a computer.
Keyboarding	F	While entering time and work performed on a daily basis, creating and responding to electronic mail. Potentially while documenting inspections and writing reports regarding system issues.
Talking	F	Communicating with supervisors, co-workers, and potentially the public.



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Hearing	C	Communicating with supervisors, co-workers, and potentially the public. Listening for sounds of malfunctioning machinery, danger in and around work areas, and radio traffic.
Seeing	C	Visual abilities would be considered important in this position.
Writing	O	Taking notes in meetings, and documenting completed preventative maintenance items (checklists).
Normal Job Site Hazards	F	Moving/telescoping loading bridges, working at heights on scissor lifts and snorkel lifts, driving vehicle, moving vehicles (including large airplanes), working with heavy parts, and exposure to electrical current, dust, and fumes.
Expected Environmental Conditions	C	Operating Engineers may work outside the loading bridges exposed to the external weather conditions, they may work inside the loading bridges (which are impacted by the external weather conditions), and may work in a shop environment. The workers may also be exposed to environments with loud noises (airplane engine noise), 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? Yes No

Job Analysis Reviewed By: Ryan Pazaruski and Philip Allan

Completed by Vocational Provider Brice York, B.A., CDMS

Date December 13, 2018 Signature of Vocational Provider _____



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Claimant:
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FOR PHYSICIAN’S/EVALUATOR’S USE ONLY

- The injured worker can perform the physical activities described in the job analysis and can return to work on _____
- 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.
- 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):
 - Temporary for _____ weeks _____ months
 - Permanent
- 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):
 - Temporary for _____ weeks _____ months
 - Permanent

COMMENTS:

Date _____ Physician’s/Evaluator’s Signature _____

Physician’s/Evaluator’s Name Printed _____

PLEASE RETURN COMPLETED FORM VIA FACSIMILE TO:

Port of Seattle Employee Health & Safety Department at (206) 787-3406