



# Bock Consulting

## Job Analysis

Job Title	Operating Engineer Foreman – Conveyance Systems (AVM) Worker	Worker	_____
DOT Number	950.382-026 and 950.131-014	Claim Number	_____
Employer	Port of Seattle	Employer Phone #	(206) 787-3000
Employer Contact	Ryan Pazaruski	Date of Analysis	9/22/11, 7/8/16; 2/1/19

- 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 – Conveyance Systems for Aviation Maintenance.

### Essential Functions:

The Operating Engineer Foremen in Conveyance Systems are responsible for the day-to-day supervision and organization of the Operating Engineers who are responsible for the operation and maintenance of the approximately 10 miles of baggage handling systems used to route passengers' luggage throughout the airport. The Foremen are also responsible for overseeing work related to maintaining the overhead doors and security gates on the airport property. A Foreman in Conveyance Systems is also expected to be able to perform any and all trade-specific work on an as needed basis.





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Conveyance Systems Operating Engineers are scheduled 7 days a week and around the clock on three shifts at Sea-Tac Airport. Foremen, therefore, are also staffed 24 hours per day, 365 days a year on three matching shifts. The crew is largest during the day, therefore more than one Foreman is scheduled on the day shift to manage the larger crew (airport passenger volumes are largest during the day).



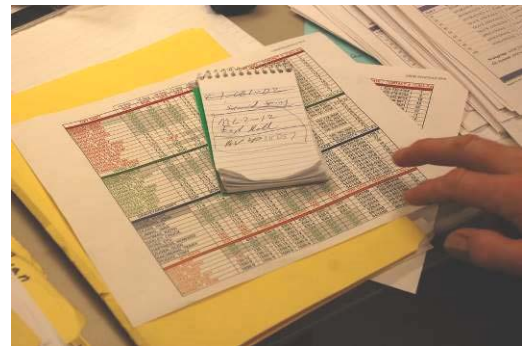
The Aviation Maintenance offices are located under the main terminal at Sea-Tac Airport. Foremen spend time in a central office located under the main terminal at Sea-Tac Airport, but also work throughout the airport facility.

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)	25-60%
Supervising work and personnel and providing assistance in and around shop	5-15%
Supervising work and personnel and providing assistance in the field	10-30%
Performing trade-specific work	10-50%
Total	100%

Tasks assigned to Operating Engineer Foreman 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.
- 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





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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 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. The most frequent calls are related to clearing luggage jams in the conveyor systems. In total, Operating Engineers may clear 25 to 50 jams per shift. This task may include simply pushing or pulling baggage apart or, if related to a more serious problem, workers may have to lift and carry luggage to another conveyor until the repair or maintenance issue can be addressed (such as the replacement of a conveyor motor that is no longer working).
- Foremen may also perform emergency maintenance (“EM”), corrective maintenance (“CM”), or preventive maintenance (“PM”) tasks, fabricate/machine a variety of replacement parts used in the systems and equipment maintained by the Operating Engineers, repair and/or rebuild reusable





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equipment, maintain the overhead doors located throughout the Sea-Tac facilities, and maintain security gates surrounding the airfield.

- Assist other crafts as requested.
- 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 position considered a “lead craft.” Therefore, Foreman and Operating Engineers need to be able to work with other crafts and coordinate work among various types of crafts.
- Being able to work in various temperatures and potentially work exposed to various kinds of weather.
- 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).
- Working knowledge of Windows-based computers, related accessories, time tracking software, keyboarding, data input skills, and electronic mail software.

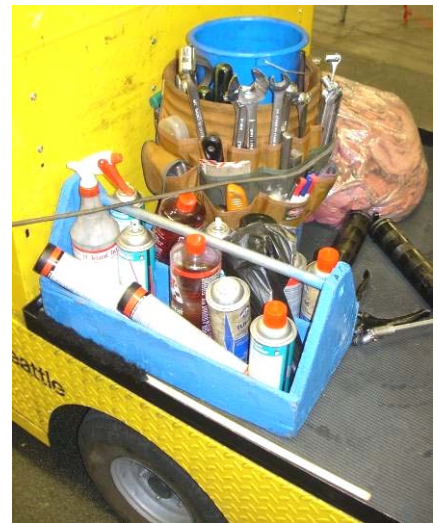




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Machinery, Tools, Equipment, Personal Protective Equipment:

- Computer, computer accessories, and computer maintenance management software (CMMS) (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, tape measures, screwdrivers, utility knives, and hammers. Power tools, including drills, chop saws, grinders, reciprocating saws, and roto-hammers. Grease guns, grease, and lubricants.
- Metal saws, lathes, mills, drill press, parts washer, and other shop tools. Lacing pin machine (used to add connectors to newly constructed conveyor belts).
- 2-way radio for communication.
- MIG, TIG, and stick welding equipment.
- Ladders: step, self-supporting, and extension.
- Man lifts/scissor lifts.
- Forklifts. Motorized pallet jacks. Hand trucks.
- Tool boxes or tool buckets.
- Portable generators. Electric carts/scooters.
- Chain hoists. Comealongs. Chains, straps, and ropes.



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

Approved safety shoes are required at all times. Workers are required to wear safety vests and ear protection when working in the Aircraft Operations Area (“AOA”). When working in a construction zone, workers are required to wear a hardhat and eye protection. Ear protection may also be worn. Workers may also wear gloves, kneepads, and fall arrest harnesses as required.



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Education / Training:

The Operating Engineers in Conveyance Systems, 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 conveyance 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 security background check.

Additional training includes, but is not limited to, AOA training (which allows workers to drive on the airfield), forklift and pallet jack certifications, 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)



High Speed Overhead Door



Security Gate



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**COGNITIVE AND BEHAVIORAL ELEMENTS/DEMANDS**

Frequency Definitions:	
<b>Continuously</b> = Occurs 66-100% of the time.	<b>Occasionally</b> = Occurs 1-33% of the time
<b>Frequently</b> = Occurs 33-66% of the time.	<b>Rarely</b> = May occur less than 1% of the time.
<b>Never</b> = Does not ever occur.	
<b>Comprehension</b>	
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
<b>Remembering</b>	
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
<b>Learning &amp; Processing</b>	
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
<b>Tasking and Planning</b>	
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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<b>Use Appropriate Behavior for Professional Work Environment</b>	
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: <b>Required Beneficial Not Necessary</b>	
<b>Maintaining Attendance and An Assigned Work Schedule</b>	
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	<b>F</b>	Performing administrative duties, attending meetings, driving cart/scooter, forklift, or pickup truck to work area.
Standing	<b>F</b>	Interchange with walking. Frequency will depend on assigned tasks.
Walking	<b>F</b>	Interchange with standing (larger percentage of time is spent walking than 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)	<b>F</b>	Lifting paperwork/document, binders, 2-way radio, smaller parts and system components, tools, and supplies.
Lifting (20 to 50 pounds)	<b>O</b>	Lifting toolboxes or tool buckets (50 lbs.), single conveyor shafts (25 lbs.), 1.5 hp motor without brake clutch assembly (48 lbs.), gearboxes (50 lbs.).
Lifting (50 to 160 pounds)	<b>S</b>	Lifting luggage to clear jams (often up to 70 lbs.), replacement conveyor belts (50 to 100 lbs.), 1.5 hp motor with brake clutch assembly, long arm of baggage pusher assembly (70 lbs.), belt lacing machine (58 lbs.), and metal bars to carry to saw (100 lb. 20-foot pieces generally carried by 2 workers). Lifting pieces of shaped metal/angle iron to carry to a saw (200 lb. 20-foot pieces generally carried by 2 workers). Lifting short arm of baggage pusher assembly (est. 150 lbs.), and 3 hp motor with brake clutch unit (160 lbs.).  NOTE: Many of the parts and pieces of equipment used by the Operating Engineers are heavy. Workers should ensure that they are using proper lifting techniques while working, and ask for assistance when needed. In addition, hoists, lifts, or other mechanical devices should be used whenever possible to lift and move parts and equipment.
Carrying (up to 20 pounds)	<b>F</b>	Carrying paperwork/document, binders, 2-way radio, smaller parts and system components, tools, and supplies.
Carrying (20 to 50 pounds)	<b>F</b>	Carrying toolboxes or tool buckets (50 lbs.), single conveyor shafts (25 lbs.), 1.5 hp motor without brake clutch assembly (48 lbs.), gearboxes (50 lbs.).
Carrying (50 to 160 pounds)	<b>S</b>	Carrying luggage to other conveyors when one conveyor is broken/jammed (often up to 70 lbs.), carrying replacement conveyor belts (50 to 100 lbs.), carrying long arm of baggage pusher assembly (70 lbs.), and metal bars to a saw (100 lb. 20-foot pieces generally carried by 2 workers). Carrying pieces of shaped metal/angle iron to a saw (200 lb. 20-foot pieces generally carried by 2 workers). Carrying short arm of baggage pusher assembly (est. 150 lbs.), and 3 hp motor with brake clutch unit (160 lbs.). Work can be performed by two workers when another worker is available.



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Pushing/Pulling (Force up to 20 pounds)	F	Opening/closing drawers, cabinet doors, drawers containing tools, parts, and hardware, gathering items from shelves, using tools, and moving wheeled carts or wheeled equipment.
Pushing/Pulling (Estimated force 20 to 50 pounds)	S	Using tools, clearing luggage jams, pulling bulk conveyor belt material from large rolls, and using lacing pin machine to add connectors to newly constructed conveyor belts.
Climbing Stairs/Ladders	O	Ladders and short sets of stairs are often used to reach and move in and around areas of the conveyor systems. Many of the conveyor systems are suspended overhead. NOTE: If it is not possible to reach a work area using a manlift, it may be necessary for a worker to carry tools, parts, or pieces of equipment up ladders and/or stairs to reach the work area(s). Some of the items (such as tool buckets, motors, and conveyor belts) may weigh a substantial amount.
Working at Heights/Balancing	O	Workers may use manlifts or ladders to reach work areas. Many of the conveyor systems are suspended overhead.
Bending at Waist	F	Working at desk. Outside the office, in a majority of the tasks accomplished by Foreman and Operating Engineers, the ability to bend at the waist would be considered important.
Bending Neck	C	Working at desk or outside the office. In a majority of the tasks accomplished by Foremen and Operating Engineers, the ability to move one's neck would be considered important.
Twisting at Waist	O	Working at desk. Outside the office, moving in, around and through conveyor systems. Also while clearing luggage jams, and moving luggage from one conveyor system to another if a conveyor needs repair.
Crouching/Kneeling	O	When working on equipment or items below waist level, or gathering parts and supplies stored below waist level. Also when clearing jams or moving baggage on or from the conveyor belts.
Crawling	S	May be necessary when working on equipment or items below waist level. Also when clearing jams or moving baggage on or from the conveyor belts, or working inside the passenger baggage claim carousels.
Stooping	O	Moving in, around and through conveyor systems. Many passageways are only 4 feet high. NOTE: It may be necessary for a worker to carry tools, parts, or equipment while stooping to reach specific work areas.
Reaching (To shoulder level)	F	Working at desk. Outside the office, while clearing luggage jams, installing parts and equipment, working with shop tools to fabricate and mill parts, and gathering parts and supplies stored below shoulder level.
Reaching (Over the shoulder)	O	Reaching for items on shelves above desk. Outside the office, installing parts and equipment, and gathering parts and supplies stored above shoulder level.
Driving	O	Driving electric cart/scooter, forklift, truck, or other vehicle.
Foot Controls	O	While driving.
Repetitive Motion	N/A	The variety of tasks assigned to a Foreman minimizes repetitive motions.
Handling/Grasping	F	50 % Pinch Grasp 50 % Whole Hand Grasp



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Fine Finger Manipulation	F	Processing paperwork, using computer mouse, and other tasks while working at desk. Outside the office, operating triggers on power tools, using controls on shop tools, operating welding equipment, and lubricating machinery.
Keyboarding	F	Entering time and work performed on a daily basis, creating and responding to electronic mail.
Talking	F	Communicating with supervisors, co-workers, and public.
Hearing	C	Communicating with supervisors, Crew, co-workers, and public. Listening for radio traffic and sounds of malfunctioning machinery.
Seeing	C	Visual abilities would be considered important in this position.
Writing	O	Taking notes in meetings or while on the phone. Documenting completed preventative maintenance items (checklists).
Normal Job Site Hazards	C	Administrative tasks are performed in a shop office environment. Outside the office, moving machinery and conveyor belts, moving vehicles (many pulling baggage carts), working at heights, heavy parts, equipment, and baggage, confined spaces, electrical current, overhead doors, noise (conveyor systems and other machinery, and airplanes), dust, and fumes.
Expected Environmental Conditions	C	A majority of the work completed by the Foreman is performed inside (shop office, baggage handling conveyor areas, workshop, and other buildings on the airport grounds). Foreman may be exposed to external weather conditions when working on or overseeing work on external/overhead doors, security gates on the airport property, and walking to a vehicle. Workers may be exposed to temperature changes (generally work areas are not temperature controlled, and may be impacted by outside temperatures), 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

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

Date February 1, 2019 Signature of Vocational Provider



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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**