Bock Consulting

Job Analysis

Job Title	Automotive Machinist (MM)	Worker	
DOT Number	620.261-010	Claim Number	
Employer	Port of Seattle	Employer Phone #	(206) 787-3000
Employer Contact	Earl Todd	Date of Analysis	8/12/10; 6/11; 12/22/16; 5/3/18

☐ Job of Injury ☐ Transferable Skills Job ☐ New Job ☒ 8 or 10 Hours Per Day ☒ 4 or 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) Maritime Division, and 3) Economic Development Division.

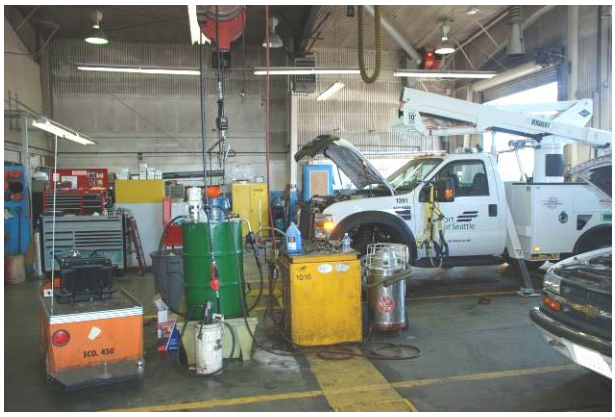
The Maritime Division owns and operates approximately 1,200 acres of moorage, cargo-related, and cruise ship facilities. The Maritime Division employs a maintenance staff, which is responsible for general facility upkeep, pier and moorage system repairs, and utility maintenance.

This job analysis was developed for an Automotive Machinist working for Marine Maintenance.

Essential Functions

Any of the vehicles, equipment, and or power tools used to maintain the Seaport's and Real Estate Division's assets are maintained and repaired by the Automotive Machinists. Tasks may include routine maintenance and repair tasks on a wide variety of mechanical equipment, including lawn mowers, work trucks, automobiles, outboard boat engines, passenger gangways, compressors, and backhoes.

Tasks are performed in the shop and in the field.



Tasks Assigned to the Machinists

Assigned tasks may include:

- Performing preventative maintenance tasks on Marine Maintenance vehicles and other equipment.
  - Replacing brake pads and windshield wipers on Marine Maintenance vehicles.
  - Replacing and adjusting headlights.
  - Replacing hydraulic hoses on heavy equipment.
  - Installing accessories on equipment (such as

11410 NE 124th Street #213, Kirkland, WA 98034
Telephone: 425-823-7115 • Fax: 425-823-7125
www.bockconsulting.com

Job Analysis: Automotive Machinist (Marine Maintenance) – Port of Seattle
DOT # 620.261-010

radios, flashing lights, extra mirrors).
  - Ensuring all safety equipment on vehicles is inspected as outlined by Port and Marine Maintenance policies.
  - Maintaining boat oil and fuel systems.
  - Maintaining metal fabrication machines.
- Discussing the nature of equipment malfunctions with other Marine Maintenance personnel.
- Examining items to be repaired. Troubleshooting issues, and pinpointing issues to repair.

- Referring to technical manuals, charts, and or written documentation related to the specific equipment being repaired. May be printed materials or accessed on a computer (ShopKey software).
- Repairing automobiles, trucks, forklifts, road-licensed vehicles, non road-licensed vehicles, boat engines, and other types of equipment (lawnmowers, concrete cutters, chainsaws, lift pumps, etc.). Vehicles may be powered by compressed natural gas, gasoline, propane, diesel, or electricity. Maintenance and repairs may include:
  - Raising vehicle using hydraulic jack or hoist to gain access to items to be repaired.
  - Removing parts in need of repair or replacement, using hand or pneumatic tools.
  - Disassembling parts/units to inspect for wear.
  - Rebuilding parts/units as applicable.
  - Replacing parts/units as applicable.

- Responding to critical issues, such as flat tires and failed hydraulic hoses to repair (likely in the field) to ensure work can be completed on time.
- Providing feedback to equipment users regarding the nature and extent of malfunction/damage repaired.
- Entering time in computer system to track work hours by assigned task/project.
- Driving fuel truck periodically to job sites and refueling equipment in the field.

<u>Worker's Skills and Traits</u>

- Knowledge of the common and accepted processes, methods, and tools used to perform preventative maintenance tasks and perform mechanical repairs.
- Have the skills to identify the best way to accomplish a task, and complete the assigned task(s) in a timely and efficient manner.

Job Analysis: Automotive Machinist (Marine Maintenance) – Port of Seattle
DOT # 620.261-010

- Ability to work as part of a team, and independently perform assigned tasks without direct immediate supervision.
- Have good communication and personal interaction skills and abilities.
- Have the physical abilities to accomplish all of the assigned tasks. A full range of motion is generally needed to complete all of the tasks assigned to a Machinist. From time to time, it may be necessary for Machinists to work in awkward positions to perform various tasks.
- Ability to follow directions closely and be detail oriented while working.
- Ability to work in a safe manner.
- Good eyesight, hand-eye coordination, and manual dexterity.
- Working knowledge of Windows-based computers, related accessories, time tracking software, keyboarding, data input skills, and electronic mail software

<u>Machinery, Tools, Equipment, Personal Protective Equipment</u>

- Hand tools, including socket sets, wrenches, torque wrench, hex/Allen wrenches, screw drivers, torx bits, pliers, cutters, Channel Locks, vise grip pliers, files, hammers, punches, chisels, and pry bars. Brake service tools, including brake spring pliers, and hold down tool.
- Pneumatic tools, including air ratchets, and air impact wrenches.
- Electrical tools, including multi meter, 12-volt circuit tester, remote starter switch, and insulation piercing test probes.
- Testing equipment, such as cylinder leakage tester, compression gauge, and radiator pressure tester.
- Other small tools, such as flash light, knife, inspection mirror, spark plug gauge, micrometer, and tape measure.
- Vehicle lifts.
- Wheel balancing machine.
- Rolling/wheeled carts.
- Creeper.
- Toolboxes.
- Overhead hoists.
- Cutting torch.
- Parts washer.

Job Analysis: Automotive Machinist (Marine Maintenance) – Port of Seattle
DOT # 620.261-010

- Computer (used to track time and look up parts).
- Two-way radios.
- Work trucks, automobiles, and forklift.
- Maintenance manuals and reference guides (printed and electronic).
- Shop workbenches. Shelving units. Cabinets.
- Computer, computer accessories, and project management software (Maximo). General office equipment, such as fax machine and telephones. General office supplies, such as pens/pencils, notepads, binders, and copy paper.

- Personal protective equipment: Safety vests. Safety glasses/protective eyewear. Hearing protection. Face shield. Gloves.

Education / Training

The Automotive Machinists are represented by the International Union of Auto Machinists Local #289. Automotive Machinists are generally Journeyman level workers that have successfully completed an apprenticeship program offered through the Auto Machinists union. The purpose of the apprenticeship program is to develop a qualified, versatile and safe work force, and the training during the apprenticeship includes both classroom training and on the job experience. To qualify for an apprenticeship, the worker must be a high school graduate (or equivalent).

Some tasks require a CDL-A Driver's License with endorsements (i.e., driving the fuel truck to field sites).

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

Per the Dictionary of Occupational Titles (DOT): Vehicle Equipment Mechanic
Specific Vocational Preparation (SVP): 7 (Two to four years)

Bock Consulting

Job Analysis: Automotive Machinist (Marine Maintenance) – Port of Seattle
DOT # 620.261-010

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.	Frequently
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.	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.	Frequently
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.	Occasionally
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.	Rarely
Directing, controlling, or planning for others as necessary for complex tasks.	Rarely
Multi-tasking.	Frequently
Planning, prioritizing, and structuring daily activities.	Rarely

Bock Consulting

Job Analysis: Automotive Machinist (Marine Maintenance) – Port of Seattle
DOT # 620.261-010

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.	Frequently
	Responding effectively to emergency situations.	Rarely

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.	Not Necessary
	Adjusting to a flexible schedule of work days and or shifts.	Beneficial

Bock Consulting

Job Analysis: Automotive Machinist (Marine Maintenance) – Port of Seattle
DOT # 620.261-010

PHYSICAL DEMANDS

N/A: Not Applicable
S: Seldom (1-10% of the time)
O: Occasional (10-30% of the time)
F: Frequent (30%-70% of the time)
C: Constant (Over 70% of the time)
WNL: Within Normal Limits (talking, hearing, etc.)

STRENGTH: ☐ Sedentary ☐ Light ☒ Medium ☐ Heavy ☐ Very Heavy

	Frequency	Comments
Sitting	**S-O**	**Sitting in vehicle or on ground while working, sitting on stool at workbench, driving to field work sites, operating forklift, participating in meetings.**
Standing	**F**	**Interchange with walking. Picking up parts and supplies from shop inventory, working on vehicles or larger pieces of equipment, or standing at workbench (bench work may be up to 2 hours a week). Standing may be on concrete, asphalt, dirt, gravel, even and uneven surfaces, or wet or oily surfaces.**
Walking	**F**	**Interchange with standing. Picking up parts and supplies from shop inventory, walking within shop, walking between shops (100 years between shops at shop facilities), walking to equipment in field. Walking may be over concrete, asphalt, dirt, gravel, even or uneven surfaces, or wet or oily surfaces.**
Lifting (up to 10 pounds)	**F**	**Lifting parts, supplies, smaller tools and equipment.**
Lifting (10 to 40 pounds)	**O**	**Lifting medium sized parts (alternators weigh 10 to 25 lbs), cases of supplies, system components, smaller batteries, wheels, and tires (separately).**
Lifting (40 to 65 pounds)	**S**	**Lifting large parts (i.e., brake drums for large equipment–70 lbs.), larger batteries (50-60 lbs), and wheels with mounted tires. Note: There is an overhead hoist, forklift, and other equipment located in the shop that can be used to lift heavier items.**
Carrying (up to 10 pounds)	**F**	**Carrying parts, supplies, smaller tools and equipment.**
Carrying (10 to 40 pounds)	**O**	**Carrying medium sized parts (alternators weigh 10 to 25 lbs), cases of supplies, system components, smaller batteries, and wheels and tires (separately).**
Carrying (40 to 65 pounds)	**S**	**Carrying larger parts and larger batteries (50-60 lbs). Note: There are wheeled carts, a forklift, and other equipment available to use to transport heavier items in and around shop area, and potentially in the field.**
Bending at Waist	**F**	**Performing assigned tasks on vehicles, or while working at a workbench.**
Bending Neck	**C**	**Performing assigned tasks.**
Pushing/Pulling (Up to 20 pounds)	**F**	**Using tools, pulling parts from or placing parts in tight locations, seating parts, gathering supplies and parts from shelves, and rolling tires and or tires and wheels.**
Pushing/Pulling (20 to 60 pounds)	**S**	**There are circumstances where extra force may be needed to loosen a bolt to remove a part/component. For example, when a wheel is rusted onto a hub, or a starter is rusted into place.**

Job Analysis: Automotive Machinist (Marine Maintenance) – Port of Seattle
DOT # 620.261-010

Climbing Stairs/Ladders	**S**	**Workers would encounter stairs in the shop facilities (the Crew Chief office is up a flight of stairs), and potentially while working in the field. Ladders may be used for some tasks. Short ladders or stairs attached to a vehicle may be used to reach the cab of the vehicle.**			
Crouching/Kneeling	**O**	**Depending on work assigned.**			
Twisting at Waist	**S**	**Depending on work assigned. Twisting can be limited if the worker moves feet while working.**			
Reaching (Floor to Shoulder)	**F**	**Using tools, removing parts and components of vehicles and equipment, replacing parts, repairing components, operating controls, knobs, and switches on machines.**			
Reaching (Over the Shoulder)	**S-O**	**Depending on tasks assigned. Vehicles may be lifted on a hoist overhead to access parts/components for repair, or a Machinist may lie on a creeper or on the floor under a vehicle to repair or replace parts overhead.**			
Repetitive Motion	**N/A**	**The variety and sequencing of tasks assigned to the Machinist eliminates repetitive motion.**			
Keyboarding	**S**	**Time entry, and electronic equipment guides and parts look-up.**			
Handling/Grasping	**F**	**50**	% Pinch Grasp	**50**	% Whole Hand Grasp
Fine Finger Manipulation	**C**	**Using tools, equipment controls, knobs, and switches, repairing and or replacing parts, hand tightening nuts and other fasteners, leafing through printed manuals, typing or using mouse on a computer, dialing phone, or using 2-way radio.**			
Keyboarding	**S**	**Entering time in time tracking system, and receiving/sending emails.**			
Driving	**S-O**	**Driving to job sites, test driving vehicles and equipment, and moving vehicles.**			
Operating Foot Controls	**S-O**	**Moving vehicles, driving to job sites and test driving vehicles and equipment.**			
Talking	**F**	**Communicating with co-workers, supervisors, and potentially the public.**			
Hearing	**C**	**Communicating with co-workers, supervisors, and potentially the public. Listening for radio traffic and hazards.**			
Seeing	**C**	**Visual abilities would be considered important in this position.**			
Writing	**S**	**Writing notes or parts numbers.**			
Normal Job Site Hazards	**C**	**Workers may be exposed to fumes, dust, loud noise, moving machinery, moving vehicles, hot metal parts (burn hazard), chemicals, solvents, petroleum products, and slippery surfaces. Specifically in the field, workers may be exposed to traffic.**			
Expected Environmental Conditions	**C**	**Workers may work in a shop environment, but may also work in the field, which would expose them to outside weather conditions.**			

Bock Consulting

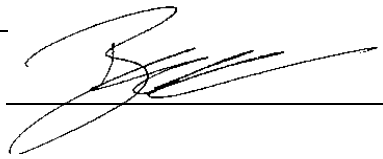
Job Analysis: Automotive Machinist (Marine Maintenance) – Port of Seattle
DOT # 620.261-010

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: Tom Berg and Earl Todd

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

Date **May 3, 2018** Signature of Vocational Provider 

11410 NE 124th Street #213, Kirkland, WA 98034
Telephone: 425-823-7115 • Fax: 425-823-7125
www.bockconsulting.com

Bock Consulting

Job Analysis: Automotive Machinist (Marine Maintenance) – Port of Seattle
DOT # 620.261-010

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

11410 NE 124th Street #213, Kirkland, WA 98034
Telephone: 425-823-7115 • Fax: 425-823-7125
www.bockconsulting.com