



# Bock Consulting

## Job Analysis

Job Title	Automotive Mechanic Foreman – STS Shop – Aviation Maintenance Worker	620.261-010 & 620.131-014	Claim Number	
DOT Number	Port of Seattle	Employer Phone #	(206) 787-6873	
Employer	Tiffany Olson, H&S	Date of Analysis	August 20, 2014	

Job of Injury    Previous 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) Capital Development Division, 3) Real Estate Division, and 4)

Seaport Division. The Aviation Division operates Seattle-Tacoma International Airport. Sea-Tac is the 12th busiest passenger airport in the United States, serving more than 34.7 million passengers in 2013.

This job analysis is for the Foreman performing work and overseeing the work done by another Auto Mechanic on passenger cars used in the Satellite Transit System (“STS”) at Sea-Tac Airport for the Aviation Maintenance Department.

The STS at Sea-Tac Airport consists of a north and a south loop, with a shuttle track connecting the two loops. The Airport has a total of 21 passenger cars that can be configured to meet passenger load demands.

Working on the passenger cars is very similar to working on heavy trucks. But instead of a diesel engine, the cars are powered by electric motors.

### Essential Functions

The Automotive Mechanic Foreman is responsible for the day-to-day supervision and organization of the small group of Automotive Mechanics



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(generally 2 Mechanics, including the Foreman) who are tasked with maintaining the steering, suspension, and braking systems, as well as the tires and wheels on the passenger cars used in the STS. Tasks may include coordinating routine/preventative maintenance and repairs, and responding to critical repair needs when a passenger car needs immediate repair. The Mechanics also repair and maintain machines and equipment used in the STS Shop.



The Foreman spends time at a desk performing administrative duties, however, the Foreman is also expected to be able to perform all the essential functions of an Automotive Mechanic as needed without help from other personnel. In general, the work performed by an Automotive Mechanic Foreman can be categorized as follows:

Work Category	Estimated Time
Office/desk/administrative work (including meetings)	10-15%
Supervising work and personnel and providing assistance in and around shop area	5-10%
Supervising work and personnel and providing assistance in the field	0-5%
Performing trade-specific work	70-85%
Total	100%

Tasks Assigned to the Automotive Mechanic Foreman may include:

- Develop plans for completing maintenance/repair projects. Discuss and coordinate projects with supervisor and other trades. Coordinate work priorities with supervisors.
- Plan for parts, equipment, supplies, and PPE needed to complete projects.
- Discuss or examine items to be repaired. Troubleshoot, identify, and discuss the nature of equipment malfunctions or failures with other Mechanic and STS Shop personnel.
- Refer to technical manuals, charts, and/or written or on-line documentation related to the specific equipment being repaired.
- Order parts and/or supplies needed for projects. Work with Purchasing to ensure correct products and items are ordered and available when needed. May periodically work with vendors related to parts and supplies





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needed.

- Prepare personnel schedules and assign work tasks.
- Enter time by work order on a daily basis into job tracking system (Maximo). Review daily time entered by crew and approve, as applicable.
- Complete all required forms and documents.
- Send and respond to electronic mails.
- Oversee/inspect completed work. Ensure work is being performed in a safe manner.
- Meet/connect with other Mechanic daily to manage workflow, address issues, and reprioritize assigned tasks if needed.
- Lead periodic meetings to provide training and discuss important safety issues.
- Attend periodic meetings with supervisors and other entities.
- Assist other Mechanic with technical input, answer questions, and provide troubleshooting advice as needed.
- Gather parts, supplies, and/or materials needed for project to be completed.
- Perform preventative maintenance tasks on STS passenger cars and other equipment.
  - Perform inspections of systems and equipment.
  - Replace tires.
  - Replace brake pads and/or brake drums.
  - Maintain STS Shop equipment, such as a forklift, steam cleaners, and parts washers.
- Respond to critical mechanical failures and trouble calls related to the STS passenger cars.
- Steam clean the passenger cars to eliminate dirt, dust, and lint that builds-up on the cars and on the air conditioning units installed on the cars. If the radiators are dirty, the air conditioning units do not operate properly. Clean up shop area after steam cleaning cars.
- Complete parts and supplies inventory counts, logs, and paperwork as required to maintain up to date records.
- Perform other tasks as requested.





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Worker's Skills and Traits

- Identifying the best method to correctly complete an assigned task. The ability to utilize critical thinking and judgment in defining, analyzing, and resolving problems.
- The ability to take initiative and be responsible for getting work done with limited supervision in an expedient and timely fashion. Must demonstrate effective judgment and decision making.
- Excellent time management and prioritization skill, with the ability to multi-task.
- Ability to manage people and work performed by others.
- Have the physical abilities and skills to accomplish all of the assigned tasks in a timely and efficient manner. A full range of motion is generally needed to complete all of the tasks assigned to the Automotive Mechanic Foreman. From time to time, it may be necessary to work in awkward positions to perform various tasks.
- Ability to communicate effectively, both verbally and in writing.
- Excellent interpersonal skills (including on radio).
- Ability to read and interpret manuals, instructions, and various technical documents and be detail oriented while working.
- Ability to work independently, but also within a team as required.
- Able to work in a safe and efficient manner. Ability to safely operate a motor vehicle.
- Must be organized, detail oriented, and have the ability to work within specific instructions.
- Must have fundamental knowledge of Windows-based computers, related accessories, have keyboarding and data input skills, and have basic knowledge of Microsoft Office software.
- Ability to weld with MIG or stick equipment beneficial.

Machinery, Tools, Equipment, Personal Protective Equipment

- 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, circuit tester, and insulation piercing test probes.
- Other small tools, such as flashlight, knife, inspection mirror, and tape measure.
- Various mechanical parts and components related to the passenger cars and equipment being maintained and repaired.
- Jacks built into the floor of the STS Shop.
- MIG and stick welding equipment.





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- Tire irons. Wheel balancing machine.
- Brake drum lathe.
- Wheel alignment equipment.
- Rolling/wheeled carts.
- Rolling stools (short, adjustable height).
- Toolboxes.
- Cutting torch. Welding equipment.
- Sand blaster. Parts washer.
- 2-way radios.
- Walk-behind and sit-down forklift.
- Hydraulic table. Hydraulic press.
- Maintenance manuals and reference guides (hard copy and electronic).
- Shop workbenches. Shelving and drawer units for storage. Cabinets.
- Personal protective equipment: Steel toed boots/shoes. Safety glasses/protective eyewear. Hearing protection. Face shield. Gloves. Knee pads.
- Windows-based computers and computer accessories. Inventory management/project management software (Maximo), and Microsoft Office software.
- General office equipment, such as desks, worktable, chairs, and telephones.
- General office supplies, such as pens/pencils, notepads, and copy paper.





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Education / Training

The Automotive Mechanics in the STS Shop, including the Foremen, are members of the International Union of Auto Mechanics Local #289.

The Foremen would be a Journeyman level Mechanic with significant experience in the maintenance and repair of a wide range of vehicles and equipment.

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, pass a security background check, and have the ability to obtain a Commercial Driver's License (CDL) and pass the DOT drug/alcohol screen.

**Per the Dictionary of Occupational Titles (DOT):**

**620.261-010 Vehicle Equipment Mechanic**

Specific Vocational Preparation (SVP): 7 (Two to four years)

**620.131.-014 Supervisor, Garage**

Specific Vocational Preparation (SVP): 7 (Two to four years)





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**COGNITIVE AND BEHAVIORAL ELEMENTS/DEMANDS**

The psychological and cognitive demands of this position vary depending on assignments and duties.

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.		Occasionally
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.	Frequently
Responding effectively to emergency situations.	Occasionally

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.	Required
Being punctual.	Required
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





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**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	<b>O</b>	While performing administrative duties, participating in meetings, sitting on rolling stool, sitting on ground while working, potentially sitting on stool at workbench.
Standing	<b>O-F</b>	Interchange with walking. Depends on assigned tasks. Gathering parts and supplies from shop inventory. Working on passenger cars, or standing at toolbox (top work surface approx. 41" from floor), workbench, or parts washer. Talking with co-workers. Standing may be on concrete or tile, or on a ladder, and may be on wet or oily surfaces.
Walking	<b>O-F</b>	Interchange with standing. Depends on assigned tasks. Walking within shop or between shops. Gathering parts and supplies from shop inventory. Walking to meetings or to talk with co-workers. Walking may be over concrete or tile, and may be on wet or oily surfaces.
Lifting (up to 10 pounds)	<b>F</b>	While lifting paperwork, office supplies, documents, binders, parts, smaller tools and equipment, steam cleaning wand/spray gun, and 2-way radio.
Lifting (10 to 25 pounds)	<b>O</b>	While lifting medium sized parts, larger tools, cases of supplies and parts, and system components.
Lifting (25 to 70 pounds)	<b>S</b>	While lifting large parts and system components, and guide tires with wheel (35 lbs.). Note: There is equipment, including an overhead hoist and a walk-behind forklift located in the shop that can be used to lift heavier items. Also, there is a hydraulic table located in the pit used to perform work under the passenger cars which is used to lower and raise heavy parts and components to reduce the need to hold and lift heavy items under the passenger car. In addition, assistance from co-workers is generally available when lifting heavier items.
Lifting (70 to 100 pounds)	<b>Rare</b>	While changing tires and wheels on the passenger cars (190 lbs. lifted by two Mechanics), removing/installing run flat disc between wheels (approx.. 100 lbs.), and working with large parts (brake drums for passenger cars weigh approx.. 100 lbs.). Note: There is equipment, including an overhead hoist and a walk-behind forklift located in the shop that can be used to lift heavier items. A sit-down forklift is available to use at the loading dock. Also, there is a hydraulic table located in the pit used to perform work under the passenger cars which is used to lower and raise heavy parts and components to reduce the need to hold and lift heavy items under the passenger car. In addition, assistance from co-workers is generally available when lifting heavier items.



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Carrying (up to 10 pounds)	<b>F</b>	While carrying paperwork, office supplies, documents, binders, parts, smaller tools and equipment, steam cleaning wand/spray gun, and 2-way radio.
Carrying (10 to 25 pounds)	<b>S-O</b>	While carrying medium sized parts, larger tools, cases of supplies and parts, and system components. Note: Wheeled carts, overhead hoist, and a walk-behind forklift are available to use to transport heavier items in and around the shop area. In addition, assistance from co-workers is generally available when transporting heavier items.
Carrying (25 to 70 pounds)	<b>S</b>	While carrying large parts and system components for short distances (up to 10 feet). Guide tires with wheel (35 lbs.). Note: There is equipment, including an overhead hoist and a walk-behind forklift, located in the shop that can be used to move heavier items. A sit-down forklift is available to use at the loading dock. Wheeled carts are also available to use to transport heavier items in and around shop. Assistance from co-workers is generally also available when moving heavier items.
Bending at Waist	<b>F</b>	While working at desk, gathering items from or placing items in files, obtaining reference materials, obtaining or replacing items/supplies located below waist level, and performing assigned tasks on vehicles.
Bending Neck	<b>WNL</b>	While performing assigned tasks.
Pushing/Pulling (Up to 20 pounds)	<b>O</b>	While opening/closing doors and drawers, gathering supplies and parts from shelves and drawers, using tools, loosening or tightening bolts, pulling parts from or placing parts on equipment being serviced, rolling tires and/or tires and wheels, operating hoist or hydraulic press or table, positioning steam cleaning or welding equipment, pulling steam cleaner hose while cleaning passenger cars, and positioning wheel alignment equipment.
Pushing/Pulling (20 to 60 pounds)	<b>S</b>	Opening heavy toolbox drawers (up to 25 lbs.), moving large rolling toolbox (approx. 45 lbs. of force). When removing tire and wheel from passenger car, or using tire irons to remove a tire from a wheel. In addition, there may be circumstances where extra force is needed to loosen a bolt or remove a part/component from the equipment being serviced.
Pushing/Pulling (60 to 100 pounds)	<b>Rare</b>	When using tire irons to remove a tire from a wheel, or loosening a frozen bolt.
Climbing Stairs/Ladders	<b>S</b>	Will encounter stairs in the shop area moving to and from office areas, and accessing the pit to work under the passenger cars. Step ladders may be used for some tasks, particularly while working under the passenger cars. The parts/inventory storage area is accessed by stairs.
Crouching/Kneeling	<b>S</b>	Depends on assigned tasks. Working below waist level, or gathering items stored at or below waist level. Note: A short rolling stool helps in some circumstances mitigate crouching/kneeling. Workers may wear knee pads while working.



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Twisting at Waist	S	Accessing hard to reach parts and components on passenger cars, gathering parts and supplies from storage, operating the steam cleaner wand/spray gun, and talking with co-workers. Note: Twisting can be limited if the worker moves feet or uses a wheeled stool while working.			
Reaching (Floor to Shoulder)	F	Depends on assigned tasks. While gathering items on desk or in drawers, obtaining/storing parts and supplies, using tools and equipment, removing, repairing, and replacing parts and components on equipment being serviced, operating controls, knobs, and switches on vehicles and equipment.			
Reaching (Over the Shoulder)	S-O	Depends on assigned tasks. While gathering items stored on shelves over desk or over shoulder height when standing, removing, repairing, and replacing parts and components on equipment being serviced, particularly when working in a pit below a passenger car. The Foreman may lie on a creeper or on the floor under a passenger car to access or replace parts overhead or conduct an inspection.			
Repetitive Motion	N/A	The variety and sequencing of tasks assigned to a Foreman eliminates repetitive motion.			
Handling/Grasping	F	40	% Pinch Grasp	60	% Whole Hand Grasp
Fine Finger Manipulation	F	While processing paperwork, writing notes, using tools, equipment controls, knobs, switches, and keys, repairing and/or replacing parts, hand tightening nuts and other fasteners, leafing through printed manuals, using computer mouse, dialing phone, using 2-way radio, and picking up smaller items and parts.			
Keyboarding	O	While creating and closing work orders in time tracking system, entering time and work performed on a daily basis, creating and responding to electronic mail, creating work schedules, documenting inspections and repairs, using online resources to look up parts and equipment guides.			
Driving	Rare	Driving sit-down forklift at the loading dock.			
Operating Foot Controls	Rare	Operating lift tables that have foot controls (some are controlled with switches operated by hand), and driving sit-down forklift at the loading dock.			
Talking	F	Communicating with co-workers, supervisors, vendors, and potentially the public.			
Hearing	C	Communicating with co-workers, supervisors, vendors, and potentially the public. Listening to sounds of generated by equipment to troubleshoot issues. Listening for hazards and radio traffic.			
Seeing	C	Visual abilities would be considered important in this position.			
Writing	S	Writing notes or parts numbers.			
Normal Job Site Hazards	F	Workers may be exposed to fumes, dust, loud noises, moving machinery, chemicals, solvents, petroleum products, and slippery surfaces.			
Expected Environmental Conditions	C	Workers generally work in a shop environment, but may also need to retrieve passenger cars from the STS tunnels under Sea-Tac Airport.			



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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: John Abernathy (AVM) and Tiffany Olson (H&S)

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

Date August 20, 2014 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**