

EMPLOYEE:

CLAIM #



Job Analysis Form

ALTERNATE FORMAT AVAILABLE

JOB TITLE Electromechanic

JOB CLASSIFICATION Electromechanic

DICTIONARY OF OCCUPATIONAL TITLES (DOT) NUMBER 910.387-014

DOT TITLE Railroad-Car Inspector

DEPARTMENT Transportation

DIVISION Rail Transit

OF POSITIONS IN THE DEPARTMENT WITH THIS JOB TITLE 14

CONTACT'S NAME & TITLE John Zastawniak, Vehicle Maintenance Chief & Rob Blackburn, Vehicle Maintenance Chief

CONTACT'S PHONE 206-255-7596, 206-255-2860

ADDRESS OF WORKSITE

3407 Airport Way South
Seattle, WA 98134

VRC NAME Kyle Pletz

DATE COMPLETED 7/31/09

WORK HOURS

The Rail Operations section operates three shifts (day, swing and graveyard) seven days a week. Openings may occur on all shifts. This position is overtime eligible and swing and graveyard shift employees receive a shift differential. Employees work a 40-hour per week schedule with two consecutive days off, but not necessarily Saturday and Sunday. Work schedules are based on a seniority "pick" system, which occurs three times a year. Graveyard and/or swing shift vacancies will be the most likely openings. Employees must be able and willing to work any shift, including any combination of days off.

OVERTIME (Note: Overtime requirements may change at the employer's discretion)

Optional and varies depending on the business demand. Optional on most occasions, but can be required in emergency situations. Overtime can occur on nights and weekends as work is performed as part of a 24 hour per day operation.

JOB DESCRIPTION

The Rail Section will be responsible for providing rail service on a 13.9 mile double track system from downtown Seattle to the Sea-Tac Airport. The responsibilities of this position include performing journey level, electrical, electronic and mechanical work on light rail vehicles and associated equipment.

ESSENTIAL ABILITIES FOR ALL KING COUNTY JOB CLASSIFICATIONS

1. Ability to demonstrate predictable, reliable, and timely attendance.
2. Ability to follow written and verbal directions and to complete assigned tasks on schedule.
3. Ability to read, write & communicate in English and understand basic math.
4. Ability to learn from directions, observations, and mistakes, and apply procedures using good judgment.
5. Ability to work independently or part of a team; ability to interact appropriately with others.
6. Ability to work with supervision, receiving instructions/feedback, coaching/counseling and/or action/discipline.

JOB SPECIFIC REQUIREMENTS

- Knowledge of current principles and practices of electrical, electronic and mechanical work on light rail vehicles and associated equipment; skill in AC/DC systems, operating principles of analog and digital electronics, electronic control circuitry and associated mechanical systems, heating, lighting, air conditioning, motors, brakes and related systems
- Knowledge and skill in the application of mechanical principles, repair methods, standards and practices typically found in a journey level skilled trades position
- Knowledge of current preventive maintenance requirements and skill in performing maintenance on light rail vehicles and associated equipment, machinery, tools, and equipment; skill in developing, and implementing preventive maintenance and safety inspection procedures
- Skill in the application of testing and inspection methods including solid state circuitry diagnostic and repair techniques and procedures
- Skill in the use of operating portable test equipment, bench type work stations, tools, parts and supply manuals needed in the repair, maintenance, and installation of electrical, electronic and mechanical systems and equipment
- Skill in reading and interpreting schematics, maintenance manuals, technical information in repair manuals, service change bulletins, parts and supply manuals, and specifications
- Skill in maintaining, repairing, troubleshooting, rebuilding and overhauling electrical and mechanical systems
- Skill in preparing written reports, documenting defects and repairs on inspection forms, work orders, and designated computer programs; prepare accurate time and material cost estimates and keeping accurate records
- Skill in applying industrial safety procedures and standards including cleaning and maintaining shop area
- Skill in problem solving, analyzing and diagnosing equipment problems
- Skill in the operation of current Windows based computer software; skill in learning new operating systems and staying current on all new technologies introduced into transit industries as it relates to light rail vehicle maintenance
- Skill in oral and written communications
- Skill in establishing and maintaining cooperative working relationships with a diverse group of individuals
- Skill in working under established deadlines and timeframes
- Skill in leading and training others

- Washington State Class B driver's license or the ability to obtain and maintain a Class B license with airbrake endorsement and light rail vehicle "Yard Operator" certification
- Electronics Technician Certificate is ***desirable***.

ESSENTIAL FUNCTIONS

- Diagnose, test, maintain, repair, and overhaul rail vehicles' electrical, electronic and mechanical systems and equipment in accordance with schematics, drawings, wiring diagrams, operations manuals and manufacturer instructions.
- Conduct safety and preventive maintenance inspections on vehicles, systems and equipment; document defects, maintenance and repairs.
- Troubleshoot, repair, replace, or modify mechanical, electronic and electrical components, analog and solid state electronic systems, and defective parts for a variety of equipment and systems controls.
- Operate and maintain shop equipment and tools.
- Prepare time and material cost estimates and maintain records; prepare various activity and status reports, document defects and repairs on inspection forms, work orders, or designated computer programs.
- Re-rail trains and recover vehicles from accidents.
- Install special electronic testing systems and communication devices on cars; service and maintain microprocessor control systems; calibrate and repair test equipment.
- Inspect, test, maintain, repair, service, rebuild and overhaul electrical, mechanical and electronic subsystems on rail vehicles.
- Maintain parts inventory and computer inventory records.
- Operate computers for testing and diagnosing fault log management and related data input and retrieval.

PERSONAL PROTECTIVE EQUIPMENT USED

Head protection, safety vest, insulated gloves (high and low voltage), harness/fall protection, ear protection, eye protection, leather footwear with safety toe electrical boot, flash retardant clothing, long sleeve shirt, fire retardant clothing, arc resistant clothing, breathing protection and knee pads.

OTHER TOOLS & EQUIPMENT USED

Impact tools, Brandt truck (rail tow rig), aerial platform, high rail equipment, cranes, forklift, hand tools, welder, metal working machines, press, lathe, wheel truing machine, band saw, manual yard switch, ladders, various testers, laptop, electronic testing devices, welding and cutting, hydraulic lifting (railing) equipment.

PHYSICAL DEMANDS AS JOB IS TYPICALLY PERFORMED

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 (such demands are not listed)

Highly Repetitive = Repeating the same motion every few seconds with little or no variation for more than two hours total per day.

This job is classified as

Very Heavy—exerting in excess of 100 pounds of force occasionally, and/or in excess of 50 pounds of force frequently, and/or in excess of 20 pounds of force constantly to move objects.

Standing

Health Care Provider initials if restricted _____

Occasionally on concrete, asphalt, track ballast and uneven surfaces (such as rails) for up to 10-15 minutes hours at a time for up to 1 hour in a work shift. Most commonly occurs while operating band saw, drill press and various shop equipment.

Walking

Health Care Provider initials if restricted _____

Frequently on concrete, track ballast, and uneven ground (such as rails) surfaces for distances of 1500 feet at a time for up to 5.5 miles per day total in a work shift. Most commonly occurs while repairing, installing, or troubleshooting components on light rail vehicles.

Sitting

Health Care Provider initials if restricted _____

Occasionally on an office chair or a seat in the truck for up to 20 minutes at a time for up to 1.5 hours total in a work shift. Most commonly occurs while performing computer duties (work orders, order parts via M5 software), driving and bench work.

Climbing stairs

Health Care Provider initials if restricted _____

Occasionally for up to 22 steps at a time for up to 1 minute at a time for up to 1 hour total in a work shift. Most commonly occurs while accessing the top of the light rail vehicles via upper maintenance platform (22 steps), accessing the maintenance pit and traversing the Brandt Truck (4 steps; 1st step up to 30" off of the ground).

Climbing

Health Care Provider initials if restricted _____

Occasionally on Brandt truck (4 steps; 1st step up to 30" off of the ground) and ladders, to heights of up to 8 feet for up to 1 minute at a time for up to 30 minutes total in a work shift. Most commonly occurs while climbing ladders, platforms and rolling staircases as well as getting in and out of the Brandt Truck.

Balancing

Health Care Provider initials if restricted _____

Frequently to continuously on a rail car at heights of up to 12 feet for up to 2.5-3 hours at a time for up to 6 hours total in a work shift. Most commonly occurs while working on the couplers and working on elevated sections of rail cars.

Bending neck up

Health Care Provider initials if restricted _____

Occasionally for up to 15 minutes at a time for up to 2 hours total in a work shift. Most commonly occurs while performing overhead work as well as inspecting rail cars.

Bending neck down

Health Care Provider initials if restricted _____

Occasionally for up to 15 minutes at a time for up to 2 hours total in a work shift. Most commonly occurs while working on lower areas of the rail cars, bench work, computer work work as well as inspecting rail cars.

Bending/Stooping

Health Care Provider initials if restricted _____

Occasionally on concrete, ballast surfaces for up to 15 minutes at a time for up to 2 hours total in a work shift. Most commonly occurs while working on lower areas of the rail cars, bench work, computer work as well as inspecting rail cars. The employee can alternate between bending/stooping, kneeling or squatting as needed.

Kneeling

Health Care Provider initials if restricted _____

Occasionally on concrete, ballast surfaces for up to 15 minutes at a time for up to 2 hours total in a work shift. Most commonly occurs while working on lower areas of the rail cars, bench work, computer work as well as inspecting rail cars. The employee can alternate between bending/stooping, kneeling or squatting as needed.

Squatting

Health Care Provider initials if restricted _____

Occasionally on concrete, ballast surfaces for up to 15 minutes at a time for up to 2 hours total in a work shift. Most commonly occurs while working on lower areas of the rail cars, bench work, computer work as well as inspecting rail cars. The employee can alternate between bending/stooping, kneeling or squatting as needed.

Operating Controls with Feet

Health Care Provider initials if restricted _____

Frequently to operate tower truck for up to 1.5 hours at a time for up to 1.5 hours total in a work shift while driving the Brandt Truck to tow a disabled train.

Reaching above shoulder height

Health Care Provider initials if restricted _____

Occasionally for up to 1 minute at a time for up to 30 minutes total in a work shift while working in the pit on the underside of a rail car.

Reaching at waist to shoulder height

Health Care Provider initials if restricted _____

Frequently to Continuously & Highly Repetitive for up to 1.5 hours at a time for up to 9 hours total in a work shift while driving the Brandt truck, manipulating tools, operating a fork lift, performing computer duties, performing bench work and operating a crane.

Reaching at knee to waist height

Health Care Provider initials if restricted _____

Occasionally for up to 3 minutes at a time for up to 30 minutes total in a work shift while working on lower sections of the rail cars.

Reaching at floor to knee height

Health Care Provider initials if restricted _____

Occasionally on concrete, rubber blanket, asphalt, brick, track ballast, dirt, vegetation, undeveloped land and uneven surfaces for up to 10 minutes at a time for up to 1 hour total in a work shift. Most commonly occurs while changing wheels.

Lifting 1-10 pounds

Health Care Provider initials if restricted _____

Occasionally for up to 2 minutes at a time for up to 30 minutes total in a work shift. Most commonly occurs with weights of 2-5 pounds while using various hand tools, impact tools and manipulating small parts.

Carrying 1-10 pounds

Health Care Provider initials if restricted _____

Occasionally for up to 2 minutes at a time for up to 30 minutes total in a work shift. Most commonly occurs with weights of 2-5 pounds while using various hand tools, impact tools and manipulating small parts.

Lifting 11-20 pounds

Health Care Provider initials if restricted _____

Occasionally for up to 2 minutes at a time for up to 30 minutes total in a work shift. Most commonly occurs with weights of 12-15 pounds while using various hand tools, impact tools and manipulating various electronic modules and mechanical parts.

Carrying 11-20 pounds

Health Care Provider initials if restricted _____

Occasionally for up to 2 minutes at a time for up to 30 minutes total in a work shift. Most commonly occurs with weights of 12-15 pounds while using various hand tools, impact tools and manipulating various electronic modules and mechanical.

Lifting 21-50 pounds

Health Care Provider initials if restricted _____

Occasionally for up to 2 minutes at a time for up to 30 minutes total in a work shift. Most commonly occurs with weights of 25-35 pounds while manipulating various electronic and mechanical components as well as metal stock.

Carrying 21-50 pounds

Health Care Provider initials if restricted _____

Occasionally for distances up to 20 feet for up to 20 seconds at a time for up to 30 minutes total in a work shift. Most commonly occurs with weights of 25-35 pounds while transporting various electronic and mechanical components to and from GEM cart (battery operated material handling cart).

Lifting 51-100 pounds

Health Care Provider initials if restricted _____

Rarely to Occasionally for up to 1 minute at a time for up to 10 minutes total in a work shift. Most commonly occurs with weights of 60-70 pounds while manipulating sand bags, electrical components and mechanical components on rail cars. Multiple cranes are available for most items.

Carrying 51-100 pounds

Health Care Provider initials if restricted _____

Rarely to Occasionally for up to 1 minute at a time for up to 10 minutes total in a work shift. Most commonly occurs with weights of 60-70 pounds while transporting sand bags, electrical components and mechanical components on rail cars. Multiple cranes are available for most items.

Pushing and Pulling

Health Care Provider initials if restricted _____

Frequently of chain hoists with a force of up to 1-100 pounds for up to 5 minutes at a time for up to 4 hours total in a work shift while using pallet jack, wheel changing machine and manual hand tools such as wrench and ratchet. The employee pushes with up to 100 pound of force when moving motored propulsion truck assembly (two person push) for a distance up to 20 feet. When using a torque wrench the employee needs to loosen/tighten a nut/bolt with up to 600 foot pounds of torque (two person job).

Handling

Health Care Provider initials if restricted _____

Occasionally for up to 10 minutes at a time for up to 2 hours total in a work shift while performing preventative maintenance and repairs using hand and impact tools.

Operating Controls with Hands

Health Care Provider initials if restricted _____

Frequently for up to 30 minutes at a time for up to 4 hours total in a work shift while operating Brandt truck, cranes, hoists, welders, band saw, press, lathe, etc.

Fingering

Health Care Provider initials if restricted _____

Occasionally while repairing switches of small parts for up to 2 minutes at a time for up to 2 hours total in a work shift while completing computer duties as well as manipulating electrical connections, small hand tools and small parts.

Feeling

Health Care Provider initials if restricted _____

Occasionally for up to 1 minute at a time for up to 10 minutes in a work shift. Most commonly occurs when feeling for hidden bolts, nuts and equipment as well as when identifying equipment malfunction and utilizing/manipulating small parts.

Talking

Health Care Provider initials if restricted _____

Frequently for up to 5 minutes at a time for up to 5 hours total in a work shift while conversing with coworkers, supervisors and vendors.

Hearing

Health Care Provider initials if restricted _____

Continuously for up to 9 hours at a time during work shift while listening to traffic, co-workers, supervisor, and/or moving machinery while performing all job duties.

Seeing

Health Care Provider initials if restricted _____

Continuously for up to 3-4 hours at a time for up to 9 hours total in a work shift while watching for moving vehicles, completing inspections, performing repairs, watching for job hazards and watching coworkers for safety purposes.

Working with Heightened Awareness

Health Care Provider initials if restricted _____

Continuously for up to 3-4 hours at a time for up to 9 hours total in a work shift while working on live lines and identifying potential hazards such as moving machinery and electrocution potential.

SIGNATURES

Signatures on this page are obtained before the document becomes available for use and are not required each time the document is reused. Obtained signatures are kept on file at King County Safety & Claims. The Health Care Provider signature section is separate and appears on the following page.

Kyle Pletz, VRC, Vocational Consultant

Printed name & title of VRC evaluator

Signature of VRC evaluator

Date

Printed name & title of contact

Signature of contact

Date

Printed name & title of contact

Signature of contact

Date

HEALTH CARE PROVIDER SECTION

Check all that apply

The employee is released to perform the described duties without restrictions on performance or work hours as of _____.

The employee is released to perform the described duties on a reduced schedule as of _____. The recommended schedule is:

Temporary until _____ Permanent as of _____

The employee is released to perform the described job with the following modifications:

Temporary until _____ Permanent as of _____

The employee is not released to perform the described duties due to the following job functions:

Temporary until _____ Permanent effective _____

The employee is unable to work in any capacity.
A release to work is: anticipated by _____ Not expected

The limitations are due to the following objective medical findings:

Printed or typed name and phone number of Health Care Provider

Signature of Health Care Provider

Date