

JOB TITLE: Millwright  
EMPLOYEE:

DOT #:638.281-018  
CLAIM #



**King County**

## **KING COUNTY ON SITE JOB ANALYSIS**

**JOB TITLE** Millwright

**JOB CLASSIFICATION** Millwright

**DOT TITLE** Millwright

**DOT NUMBER** 638-281.018

**DEPARTMENT** Transit

**DIVISION** Vehicle Maintenance

**# OF POSITIONS IN THE DEPARTMENT WITH THIS JOB TITLE** 9

**JOB STATUS** Full time career service, Local 587

### **ADDRESS OF WORKSITE**

640 South Massachusetts  
Seattle, WA 981134-1622

**CONTACT'S NAME** Chu Nornang

**CONTACT'S PHONE** (206) 684-2922

**CONTACT'S JOB TITLE** Supervisor of Vehicle Maintenance

**DATE COMPLETED** 12/17/01

**VRC NAME** Jeff Casem

**DATE REVISED** 5/11/09

**WORK HOURS** 40 hour per week. Two fifteen minute breaks and one, half-hour lunch break per day. 6:00am-2:30pm.

### **OVERTIME**

Frequent

### **JOB DESCRIPTION**

Millwrights perform skilled mechanical maintenance on a variety of Base equipment, such as bus washers, bus hoists, compressors, automatic doors, steam cleaners, fuel pumps and nozzles, hydraulic equipment and other equipment necessary for performing vehicle maintenance. This is a single level classification and is distinguished from other classifications by its responsibility for performing mechanical maintenance on transit base equipment. Tasks, duties and assignments vary greatly requiring worker to perform a single task for an extended period of time on various days.

**ESSENTIAL ABILITIES FOR ALL KING COUNTY JOB CLASSIFICATIONS**

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**King County Job Analysis Form Revised 11/9/01**

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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 judgement.
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**

Demonstrate high level of knowledge to diagnose and repair both simple and complex transit base devices/systems. Maintain current knowledge of transit base equipment and test equipment for same. Capability of troubleshooting transit base equipment, system problems and direct repairs.

### **ESSENTIAL FUNCTIONS Listed in order of importance**

1. Demonstrate high level of knowledge to diagnose and repair both simple and complex transit base devices/systems.
2. Inspect, diagnose and repair a variety of base equipment
3. Establish, maintain and ensure scheduling of preventative maintenance on transit base equipment.
4. Plan and conduct major overhauls of equipment as directed by manufacturer and supervisory personnel.
5. Provide supervisor with information regarding equipment that is down or not working at full capacity. Provide information regarding materials and time spent on equipment repairs.
6. Design and fabricate parts.
7. Install, remove, relocate, align and anchor equipment.
7. Operate drill presses, lathes, hydraulic presses and welding equipment.
8. Coordinate construction and modifications of facilities with outside contractors and consultants.
9. Obtain/maintain a valid WA state driver's license and other certification to operate and drive equipment such as a forklift, push tractors and shop trucks.
10. Obtain/maintain Confined Space certification.
11. Maintain records of orders, completed repairs, time worked and materials used; input and extract data using a computer terminal, as required.
12. Work during adverse weather conditions.
13. Work in confined spaces.

### **TOOLS, MACHINES, EQUIPMENT, PRODUCTS, AND SERVICES USED**

Wide variety of hand tools that may include hammers, wrenches, pliers, saws, screwdrivers etc. Also uses power tools such as drill, grinders, and saws. Worker may also use a drill press, lathe, threading machine, scissors or boom lift, and welding equipment.

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**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

Rare = may occur less than 1% of the time

Never = does not ever occur (such demands are not listed)

**This job is classified as**

Heavy

**Standing**

Frequently to continuously on flat, cement surfaces for 2 hours at a time for up to 8 hours total in a work shift. Most commonly occurs while repairing equipment.

**Walking**

Frequently to Continually on flat cement surfaces for distances of several hundred feet for one hour at a time for up to 6 hours total in a work shift. Most commonly occurs while moving from one work area to another and moving tools and materials on carts.

**Sitting**

Occasionally on office chair for one hour at a time for up to 4 hours total in a work shift. Most commonly occurs while performing paperwork tasks and computer work.

**Climbing**

Occasionally to frequently on a ladder to heights of 8 feet for 15 minute<sup>2</sup> at a time for up to 2-3 hours total in a work shift. Most commonly occurs while repairing bus washers. Man lifts are available for most tasks.

**Bending/Stooping**

Frequently on flat cement surfaces for 15 minutes at a time for up to 3 hours total in a work shift. Most commonly occurs while repairing and maintaining machinery.

**Kneeling**

Frequently on flat cement surfaces for 15 minutes at a time for up to 3 hours total in a work shift. Most commonly occurs while repairing and maintaining lower parts of machinery.

**Crouching**

Frequently on flat cement surfaces for 15 minutes at a time for up to 3 hours total in a work shift. Most commonly occurs while repairing and maintaining lower parts of machinery.

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**Reaching above shoulder height**

Occasionally to Frequently for 5 minutes at a time for up to 4 hours total in a work shift while working on bus washer machinery overhead for an entire project ranging from 5 min. to 4 hrs., with 15 min. breaks.

**Reaching at waist to shoulder height**

Occasionally to Frequently for 15 minutes at a time for up to 4 hours total in a work shift while repairing machinery.

**Reaching at knee to waist height**

Occasionally to Frequently for 15 minutes at a time for up to 4 hours total in a work shift while repairing machinery.

**Reaching at floor to knee height**

Occasionally to Frequently for 15 minutes at a time for up to 4 hours total in a work shift while repairing machinery.

**Lifting 1-10 pounds**

Frequently for 20 minutes at a time for up to 6 hours total in a work shift. Most commonly occurs with weights of five pounds while using tools and holding machine parts.

**Carrying 1-10- pounds**

Frequently for 5 minutes at a time for up to 3 hours total in a work shift. Most commonly occurs with weights of ten pounds while carrying tools and machine parts to various work areas.

**Lifting 11-20 pounds**

Frequently for 5 minutes at a time for up to 3 hours total in a work shift. Most commonly occurs with weights of ten pounds while carrying tools and upholstery materials to various work areas. May move seat pieces from overhead storage areas.

**Carrying 11-20 pounds**

Frequently for 5 minutes at a time for up to 3 hours total in a work shift. Most commonly occurs with weights of 15 pounds while transporting tools and machine parts to various work areas.

**Lifting 21-50 pounds**

Occasionally for 30 seconds at a time for up to 15 minutes in a work shift. Most commonly occurs with weights of 30 pounds while moving tools and machine parts.

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**Carrying 21-50 pounds**

Occasionally for 30 seconds at a time for up to 15 minutes in a work shift. Most commonly occurs with weights of 30 pounds while moving tools and machine parts.

**Lifting 51-100 pounds**

Rare for 10 seconds at a time for up to 5 minutes total in a work shift. Most commonly occurs with weights of 75-100 pounds while removing a machine engine.

**Carrying 51-100 pounds**

Rare for distances of 5 feet for 10 seconds at a time for up to 5 minutes total in a work shift. Most commonly occurs with weights of 75-100 pounds while moving a machine motor.

**Pushing and Pulling**

Frequently of carts for distances of 10-100 feet at a time with a force of 50-100 pounds for up to 3 hours total in a work shift while transporting tools and machine parts. Push and pull cart with tools and machine parts, around shop, yard area, up slight inclines and across uneven surfaces inside and out of doors in foul weather conditions.

**Handling**

Continuously for 2 hours at a time for up to 8 hours total in a work shift while using a stapler, C-clamp, vice grip and webbing stretcher.

**Operating Controls with Hands**

Continuously for 2 hours at a time for up to 8 hours total in a work shift while using various hand tools and while driving.

**Fingering**

Frequently for 2 hours at a time for up to 6 hours total in a work shift sewing materials by hand, removing staples, assembling and disassembling machines, and loosening or tightening screws with fingers.

**Talking**

Continuously for 2 hours at a time for up to 8 hours total in a work shift while conversing about duties, receiving directions and instructions, and talking to parts distributors.

**Hearing**

Continuously for 2 hours at a time for up to 8 hours total in a work shift while listening to machines to detect problems or malfunctions.

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### **Tasting/Smelling**

Occasionally for 10 seconds at a time for up to 2 hours total in a work shift while smelling machinery to identify problems such as over heating, burning oil, or electronic malfunction. Must also be able to identify gas leaks.

### **Depth perception—three dimensional vision**

Continuously for 2 hours at a time for up to 8 hours total in a work shift while working on machinery and identifying appropriate placement of machine components.

### **Near acuity—clarity of vision at 20 inches or less**

Continuously for 2 hours at a time for up to 8 hours total in a work shift while performing computer tasks, reading instruction manuals, inspecting serial numbers, looking for small flaws in machinery, and repairing and maintaining various machines.

### **Far acuity—clarity of vision at 20 feet or more**

Continuously for 2 hours at a time for up to 8 hours total in a work shift while observing operations of machines and recognizing moving vehicles.

### **Color vision—ability to identify and distinguish colors**

Occasionally for 15 minutes at a time for up to 2 hours total in a work shift while identifying color coated wires and hoses on machines.

## **TEMPERAMENTS**

Influencing people in their opinions, attitudes, and judgements

Directing, controlling, or planning activities of others: Frequently

Performing a variety of duties: Continuously

Expressing personal feelings: Occasionally

Attaining precise set limits, tolerances, and standards: Continuously

Working under specific instructions: Continuously

Working alone or apart in physical isolation from others: Occasionally

Working with others: Frequently

Making judgements and decisions: Frequently

## **ENVIRONMENTAL FACTORS**

Millwright workers primarily work on concrete floors but also work on slight inclines and uneven surfaces inside and out of doors in foul weather conditions.

There is exposure to fuels, oils, cleaning solvents and fumes from machines and automobiles. The noise level is moderately loud

### **Workers are exposed to**

Outside weather: Occasionally

Extreme cold: Occasionally

Extreme heat: Occasionally

Wet: Occasionally

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Fumes: Occasionally  
Odors: Occasionally  
Moving mechanical parts: Frequently  
Dust: Rare  
Gases: Rare  
Poor ventilation: rare  
Vibration: Occasionally  
Working in high, exposed places: Occasionally

**POTENTIAL MODIFICATIONS TO JOB**

Orthopedic shoes may increase comfort during long periods of standing and walking.

\_\_\_\_\_  
Signature & title of evaluator

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature & title of contact

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature & title of employee

\_\_\_\_\_  
Date

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**HEALTH CARE PROVIDER SECTION**  
Check all that apply

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

The employee is released to perform the described duties on a reduced schedule. 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