



Disability Services
Safety and Claims Management
Department of Executive Services
Human Resources Management Division
P.O. Box 80283
Seattle, WA 98108
(206) 205-8575
(206) 296-0514 FAX

JOB ANALYSIS

Job Title:	Transit Maintenance Analyst	DOT Title:	Maintenance-Mechanic Supervisor
SVP:	8	DOT #:	638.131-022
Location of Analysis:	South Base	Name of Employee:	
Analyst:	Kyle Pletz, VRC, CDMS	JA Source:	Aliza Hauser
Presenting VRC:		Employer Contact:	Susan Eddy
Date Analysis Completed:	11/18/14	Supervisor Contact Information	Phone: 206-477-6003 E-mail:

☐ On-Site ☐ Interview ☐ Representative

JOB DUTIES:

Essential Functions according to the employer:

All King County jobs require ability/essential function to:

- Demonstrate predictable, reliable, and timely attendance.
- Follow written and verbal directions to complete assigned tasks on schedule.
- Read, write, and communicate in English & understand basic math.
- Learn from directions, observations, and mistakes and apply procedures using good judgment.
- Work independently or as part of a team and interact appropriately with others.

This position will conduct feasibility studies and perform analytical tasks including failure analysis that contribute to the safety, reliability and efficiency of operations of the Vehicle Maintenance Section within the Transit Division of the King County Department of Transportation. Work with vendors correcting technical problems on buses. Write technical service bulletins describing repair procedures for a mixed fleet of vehicles. Administer one or more major programs in the support of Vehicle Maintenance, including: quality assurance, apprenticeship, bus procurement, Roadeo, accident investigation, fire investigation, new system analysis and implementation, computer tracking and data base development. Transit trades and craft workers on safe work procedures and the maintenance of all Metro vehicles. Prepare training materials and related aids for classroom presentation. Manage major projects as determined by the Fleet Engineering Superintendent in support of Transit.

King County Metro Transit is a regional leader in helping people move quickly throughout the region, reducing commuter stress, greening the environment and radically improving urban air quality, by providing comfortable, effective transit services for the thousands of commuters and other residents of King County, Washington. Working for Metro means working for a leader in this nation's public transportation industry.

- Conduct feasibility studies; gather and analyze project data; prepare analyses, plans, policies, budgets, or projects.
- Provide reports to management on the ongoing status of assigned projects.
- Compile performance indicators and project workload information for the budget. Analyze budget



King County Job Analysis Completed on: 11/18/14

Employee:

DOT #: 638.131-022

Job Title: Transit Maintenance Analyst

Claim # (if applicable):

impact of new projects.

- Study alternative solutions, determine efficient and cost effective repair approaches and recommend actions to management.
- Develop and maintain Microsoft Access database applications to manage service documentation and employee data (e.g. track employee certification expiration dates; apprentice program progress; customize database for management viewing at their worksites).
- Consult with Original Equipment Manufacturers (OEM) to develop standard operating procedures; develop training and certification programs in compliance with federal, state and local laws and regulations.
- Plan, organize and teach classes for maintenance personnel on safe, efficient maintenance practices for various systems, sub-systems and components of transit vehicles including major component overhaul practices.
- Develop and conduct Vehicle Maintenance Section New Employee Orientation.
- Supervise the Mechanic Apprentice program; develop, revise and implement hiring procedures; develop and administer written and skill tests for applicants; recommend candidates for hire; monitor and document apprentices; attendance and progression through the program.
- Conduct needs assessments and analysis of safety, technical proficiency and productivity issues.
- Write and/or disseminate information through maintenance service and parts bulletins, service alerts and/or training when procedures or materials are modified.
- Develop layouts, drawings and installation procedures for designing parts and/or equipment modifications; conduct quality control and production analysis of on-site bus building and project work; convene supervisory staff to develop changes to improve quality and production standards.
- Advise management of types and causes of equipment/component failure including unsafe conditions and recommend corrective actions.
- Plan, coordinate and expedite repairs, retro-fits and modifications to revenue vehicles. Maintain Master Vehicle Configuration documentation of all retro-fits and modifications performed on the revenue fleet.
- Apply journey-level knowledge of theory, operation and repair of major systems and sub-systems of heavy-duty diesel and electric powered transit vehicles and electrified rail vehicles.
- Conduct inspections, recommend changes to improve quality and production standards and prepare action plans addressing correction of issues found during inspections.
- Oversee safety program for assigned work groups, conduct inspections of work sites; develop and conduct safety training; oversee hazardous waste materials handling program as assigned; ensure compliance with established laws and agency regulations; participate in inspections of facilities/equipment for external regulatory agencies; prepare responses as required.
- Perform other duties as assigned.
- Approximately 95% of the duties are performed in the office or in a training classroom. On a rare occasion they will observe mechanical work performed by the Heavy Duty Mechanics to ensure safety bulletins and changes work accordingly.
- Perform software updates in office or mechanical bay.



King County Job Analysis Completed on: 11/18/14

Employee:

DOT #: 638.131-022

Job Title: Transit Maintenance Analyst

Claim # (if applicable):

EXPERIENCE, QUALIFICATIONS, KNOWLEDGE, SKILLS:

- A minimum of four years of journey level experience in fleet maintenance is required. Full-time instructional experience may be substituted on a year-for-year basis for up to two years of the journey-level experience.
- Skill in defining problem areas and evaluating, recommending and implementing alternative solutions to complex issues and problems, including engineering/architectural problems.
- Knowledge of principles, practices, methods and techniques of management.
- Knowledge of system theory, operations, troubleshooting, maintenance and repair of all types and sizes of gasoline and diesel engines, accessories and associated systems.
- Knowledge of project management techniques, including scope, schedule and budget.
- Experience with developing, managing and maintaining detailed project schedules.
- Ability to self-manage a complex work program; organize and execute a long-term work plan.
- Skill in writing technical reports and delivering oral presentations; skill in communicating clearly and effectively, both verbally and in writing with technical and non-technical audiences.
- Skill in establishing cooperative relations with staff, contractors, technical committees, community organizations, representatives of federal, state, regional and city agencies and in working with a variety of individuals from diverse backgrounds.
- Ability to effectively work and contribute in a team environment.
- Valid Washington State driver's license and demonstrated ability to drive in a safe and responsible manner.
- Obtain and maintain a Class A, Commercial Driver's License with passenger endorsement, with no air brake restrictions.
- Knowledge of computers and various software programs.
- Knowledge of software to aid in presentation of training materials and database is desirable.
- Some licenses, certifications and other requirements determined to be necessary to meet the business needs of the employing unit may be required.

NECESSARY SPECIAL QUALIFICATIONS:

Applicants for positions defined as safety sensitive are required to undergo drug testing prior to employment and, subsequent to commencement of employment, will be subject to random, post-accident, reasonable suspicion, return to duty, and follow up drug and alcohol testing in compliance with federal DOT alcohol and controlled substances testing program protocols.

Machines, Tools, Special Equipment, Personal Protective Equipment Used:

Computer, diagnostic software, training materials, Microsoft office (Word, Excel, PowerPoint), various coach parts, manuals, etc.

PHYSICAL REQUIREMENTS

Frequency Scale	Strength	Work Pattern
N = Never	<input type="checkbox"/> Sedentary	<input type="checkbox"/> Full-time
S = Seldom (1-10 %, up to 48 min)	<input checked="" type="checkbox"/> Light	<input type="checkbox"/> Part-time
O = Occasional (11-33%, 48 min. – 2 hr 25 min)	<input type="checkbox"/> Medium	<input type="checkbox"/> Seasonal
F = Frequent (34-66%, 2 hr 26 min – 5 hr 35 min)	<input type="checkbox"/> Heavy	8 Hours Per Day
C = Constant (67-100%, more than 5 hr 35 min)	<input type="checkbox"/> Very Heavy	40 Days Per Week

This is classified as a MEDIUM job by the US Department of Labor, adjusted to LIGHT for this position.



King County Job Analysis Completed on: 11/18/14

Employee:

DOT #: 638.131-022

Job Title: Transit Maintenance Analyst

Claim # (if applicable):

PHYSICAL DEMANDS		FREQUENCY					ACTIVITY DESCRIPTION
	% Time	N	S	O	F	C	
Sitting					X		Up to 1-2hrs./time, 6 hrs. total, performing computer duties, attending training, reviewing manuals, etc.
Standing				X			Up to 15 min./time, 1hr. total, conducting training, overseeing repairs and inspecting parts.
Walking				X			Up to 10 min./time, 1-2 hrs./total, traversing between facilities and within maintenance bay.

Lifting floor – waist	N	S	O	F	C	lbs.	Up to 30 sec./time up to 5 min. total, manipulating office supplies (5 lbs.) and vehicle parts (up to 20 lbs.)
		1-20*					
Lifting waist–shoulder	N	S	O	F	C	lbs.	Up to 30 sec./time up to 5 min. total, manipulating office supplies (5 lbs.) and vehicle parts (up to 20 lbs.)
		1-20*					
Lifting above shoulder	N	S	O	F	C	lbs.	Up to 30 sec./time up to 5 min. total, manipulating office supplies (5 lbs.) and vehicle parts (up to 20 lbs.)
		1-20*					
Carry (Dist.)	N	S	O	F	C	lbs.	Up to 10', 10 sec./time up to 1 min. total, manipulating office supplies (5 lbs.) and vehicle parts (up to 20 lbs.) on to cart.
		1-20*					
Pushing/ Pulling	N	S	O	F	C	Minimal	Opening and closing doors, manipulating parts up to 10 minutes total in a shift.
		<10				lbs force	

*Lifting assistance and assistive lifting devices are available for all items over 20 lbs.

	N	S	O	F	C	
Climbing		X				Up to 1 flight of stairs/time, up to 2x per shift.
Balancing		X				Up to 15 min/time, 30 min total, loading docks, maintenance pits, ice/snow, oil spills in maintenance bay.
Stooping / Bending		X				Up to 1-2 min./time, 10 min. total, looking at coach parts on a lift, utilizing low drawers and shelves.
Twisting		X				Up to 1-2 min./time, 1 hr. total, looking at coach parts on a lift. *this is not performed on a daily, most likely on a weekly basis.
Squatting / Kneeling		X				Up to 1-2 min./time, 10 min. total, looking at coach parts on a lift, utilizing low drawers and shelves.
Crawling	X					
Foot Controls		X*				Up to 1 hr./time, 2 hrs. total with county vehicles and Transit coaches between bases. *Normally performed only once per week.



King County Job Analysis Completed on: 11/18/14

Employee:

DOT #: 638.131-022

Job Title: Transit Maintenance Analyst

Claim # (if applicable):

	N	S	O	F	C	
Reaching (Level) Forward Below Waist Above Shoulder				X		Up to 2 hrs./time, 6 hrs. total, writing, typing, reviewing manuals and driving.
		X				Up to 1-2 min./time, 10 min. total, looking at coach parts on a lift, utilizing low drawers and shelves.
		X				Up to 1-2 min./time, 10 min. total, accessing upper shelves and drawers.
Handle/Grasp			X			Up to 1 hr./time, 2 hrs. total while driving, manipulating training materials and coach parts.
Fine Finger Manipulation				X		Up to 1 hr./time, 6 hrs. total while typing, writing, manipulating manuals/parts, etc.
Hand Controls				X		Up to 1 hr./time, 3-4 hrs. total while driving and utilizing a computer mouse.
Repetitive Motion	X					Body part: Cycles/hr.
Vibratory Tasks	X					

	N	S	O	F	C	
Talking					X	Up to 1 hr./time, 7 hrs. total while conducting training; interacting with mechanics, conversing with coworkers, contractors, supervisors, vendors, etc.
Hearing					X	Up to 1 hr./time, 7 hrs. total while conducting training; interacting with mechanics, conversing with coworkers, contractors, supervisors, vendors, etc.

Visual:

Constant while using computer, reviewing manuals, traversing engine bays and driving. Employee required to maintain CDL.

ENVIRONMENTAL CONDITIONS	FREQUENCY					ENVIRONMENTAL CONDITIONS	FREQUENCY				
	N	S	O	F	C		N	S	O	F	C
Exposure to Weather			X			Noise Intensity			X		
Extreme Cold		X				Atmospheric Conditions		X			
Extreme Hot		X				Exposed Heights		X			
Wet and / or Humidity	X					Exposure to Electricity			X		
Proximity to Moving Mechanical Parts			X			Exposure to Toxic / Caustic Chemicals		X			
Exposure to Explosives	X					Exposure to Radiation		X			
Other:											

Analyst's Comments:



King County Job Analysis Completed on: 11/18/14

Employee:

DOT #: 638.131-022

Job Title: Transit Maintenance Analyst

Claim # (if applicable):

Possible Employer Modifications:

Note: The information for this job analysis was gathered by either on-site observation, interview and / or is representative of the labor market as indicated on page one. Additional data may have been obtained from standardized industry resources such as the DOT, GOE, COJ, OOH, WOIS and O-NET. 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.

Analyst:

Presenting VRC signature:

Vocational Consultant

Date

Vocational Consultant

Date

Employer Verification:

Employee Verification: (optional)

Name

Date

Name

Date



King County Job Analysis Completed on: 11/18/14

Employee:

DOT #: 638.131-022

Job Title: Transit Maintenance Analyst

Claim # (if applicable):

MEDICAL PROVIDER:

- ☐ I agree that the employee can perform the physical activities described in this job analysis and can return to work.

State date employee is released to return to work if different from today's date _____

- ☐ I agree the employee can perform the described job but only with modifications (describe in comments section). Modifications are needed on a permanent ☐ or temporary ☐ basis.

- ☐ The employee **temporarily** cannot perform this job based on the following physical limitations:

Anticipated release date: _____

Treatment plan: _____

- ☐ The employee is **permanently** restricted from performing the physical activities described in this job analysis based on the following physical limitations (state objective medical findings):

Comments:

Signature

Date

Print Name

- | | | |
|--|---|---|
| <input type="checkbox"/> Attending Physician | <input type="checkbox"/> Consulting Physician | <input type="checkbox"/> Pain Program Physician |
| <input type="checkbox"/> IME Physican | <input type="checkbox"/> PCE Therapist | <input type="checkbox"/> OT / PT Therapist |
| <input type="checkbox"/> PEP Physician | | |