

**Department of Human Resources**

Central Employee Services Division
Disability Services Section
500 4th Avenue, Room 500
Seattle, WA 98104
(206) 477-3350
(206) 296-4992 FAX
www.kingcounty.gov

Employee :

Claim # :

JOB ANALYSIS

Job Title:	Mechanic/Auto Machinist I		
Department:	Executive Services	Division:	Fleet
DOT Title:	Automobile Mechanic	DOT #:	620.261-010
SVP:	7	Requestor:	Jeff Casem
Worksite Address:	155 Monroe Avenue Northeast, Bldg G Renton, WA 98056	Office Contact Name/ Phone/ Email:	Lynn Walters 206-263-1075 lynn.walters@kingcounty.gov
Original Analyst:	Kyle Pletz, BA, BA, VRC, CDMS		Analysis Date: 7/31/2009
Update Analyst:	Kyle Pletz, BA, BA, VRC, CDMS		Update Date: 1/6/2021

☒ On-Site ☒ Interview ☐ Representative

JOB DUTIES:

Performing mechanical, electrical, hydraulic and preventive maintenance overhaul and repair work on a variety of vehicles and stationary equipment or related components.

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.

Job Specific Requirements:

1. Perform mechanical, electrical and hydraulic repair work on automobiles, light trucks, other automotive mechanical-related light duty equipment.
2. Perform scheduled preventive maintenance.
3. Troubleshoot and diagnose major and minor mechanical, hydraulic and electrical problems in all types of light duty equipment.
4. Repair, install, adjust, replace or rebuild systems, components and related parts.
5. Mount various types of new and used systems or equipment on new/used vehicles.
6. Document maintenance, repairs, problems on work orders. May prepare reports and maintain records.
7. Provide technical assistance, direction and advice to other workers, and give guidance on complex mechanical repair projects.
8. Install, overhaul, rebuild and perform preventive maintenance on light duty engines and systems.
9. Open and close work orders and schedule inspections. Use computer terminal.
10. Train others to perform technical tasks.
11. Perform oil servicing, sampling, greasing.
12. Repair and machine drums and rotors.
13. Install, repair and maintain automotive systems.



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EXPERIENCE, QUALIFICATIONS, KNOWLEDGE, SKILLS:

- Knowledge of system theory, operation, troubleshooting, maintenance and repair of all light duty gasoline and diesel engines, accessories and associated systems; of brakes, suspension, running gear and associated systems; of electrical, hydraulic and HVAC automotive systems, accessories.
- Knowledge of industrial and shop safety rules, procedures and equipment
- Knowledge of the use of electrical and electronic test equipment
- Knowledge of the operation of vehicles and mounted systems necessary to troubleshoot, test for proper operation of integral or installed systems and proper maintenance
- Knowledge of technical terms used in light duty repair
- Basic knowledge of computer operation
- Communications skills (oral and written)
- Skill in using maintenance, operations and parts manuals to assist in preventive maintenance
- Skill in the use and care of hand and power tools

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

Hand and power tools, such as wrenches, ratchets, screw drivers, saws, cutters, clamps, drills, impact wrench, compressed air tools, pliers, jumper box, vice-grips, floor jack, torch, steam cleaner, pry bars, laptop computer, parts washer, cut-off saw, stools, creepers, various county trucks and vehicles, steel toed boots, forklift, dusk mask, column lift, utility cart, batteries, respirator and hammers as well as a computer.

Eye protection, ear protection, fall protection, foot protection, breathing protection, hand protection, face protection, head protection safety vest and welder helmet.

PHYSICAL REQUIREMENTS

Frequency Scale	Strength	Work Pattern	
N = Never	<input type="checkbox"/> Sedentary	<input checked="" type="checkbox"/> Full-time	
S = Seldom (1-10 %, up to 48 min)	<input type="checkbox"/> Light	<input type="checkbox"/> Part-time	
O = Occasional (11-33%, 49 min. – 2 hr 40 min)	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Seasonal	
F = Frequent (34-66%, 2 hr 41 min – 5 hr 20 min)	<input type="checkbox"/> Heavy	8	Hours Per Day
C = Constant (67-100%, more than 5 hr 20 min)	<input type="checkbox"/> Very Heavy	5	Days Per Week
		FLSA Exempt <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	



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Job Demand	Frequency and Weight (lbs.)					Activity Description
	N	S	O	F	C	
Lifting floor – waist		16-50 75*		1-15		<p>Up to 2 min./time, 4.5 hrs., total with 1-5 lbs., while utilizing hand tools and manipulating various machine parts.</p> <p>Up to 2 min./time, 4.5 hrs., total with 6-15 lbs., while utilizing air tools, cordless tools and manipulating various machine parts such as alternator, starter, etc.</p> <p>Up to 10 sec./time, 1.25 hrs. total with 35-50 lbs., while manipulating various machine parts such as wheels, tires, batteries and exhaust systems, cylinder heads, etc.</p> <p>*Rarely up to 5 sec./time, 2 min. total, with up to 75 lbs., while manipulating, removing or installing a clutch assembly, wheel/tire or a flywheel.</p>
Lifting waist–shoulder		16-50 75*		1-15		Same as lift floor to waist.
Lifting above shoulder		16-30	1-15			<p>Up 2 min./time, 1 hr. total with 1-15 lbs. while working on vehicles on overhead lift; manipulating exhaust, driveline, etc.</p> <p>Up to 10 sec./time 1 min total with 16-30 lbs. while manipulating exhaust, driveline, etc.</p>
Carry (Distance/Surface)		16-50	1-15			<p>Up to 150 yds, 5 min./time, 2.5 hrs. total with 1-15 lbs. while transporting various hand tools and machinery parts between the tool bench and vehicles.</p> <p>Up to 2 min./time,</p> <p>Up to 5 sec./time, 15', 2 min. total with 16-50 lbs. while moving various machine parts such as wheels, tires, batteries and exhaust systems, cylinder heads, jumper box etc.</p>
Pushing/Pulling (Distance/Surface)		26-100		25		<p>Up to 100 feet for up to 1 min./time, with a force of up to 25 lbs., up to 3 hrs. total while using a pry bar, utility cart, floor jack, wrenches, ratchets, torque and wrenches as well as when manipulating wires, hoses and machine parts.</p> <p>Up to 30 sec./time, 10 min total with up to 100 lbs. of force when manipulating large parts, breaking bolts loose, etc.</p>

Physical Demands	Frequency					Activity Description
	N	S	O	F	C	
Sitting				X		Up to 45 min./time, 3 hrs. total on a stool or automobile seat while driving county vehicles, operating County equipment and performing bench work.



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Standing			X			Up to 10 min./time, 1 hr. total on landfill/garbage, cement, asphalt, uneven ground, equipment and gravel surfaces while repairing and maintaining County vehicles and equipment. Standing varies according to duties performed.
Walking				X		Up to 10 min./time, 3-4 hrs. total while traversing between buildings and equipment.
Perform Work on Ladders		X				Up to 5 min./time, 15 min. total while repairing oversized light duty vehicles.
Climbing		X				Up to 4-6' 10 sec./time, 5 min. total while using a ladder/platform combination to access engine compartment of vehicle. The employee may also climb on a box truck to access a roof vent.
Balancing			X			Up to 10 min./time, 1 hr. total while climbing in/out of the back of a pickup or working arounds spills.
Stooping / Bending				X		Up to 20 min./time, 6 hrs. total while leaning over the engine compartment of vehicles when performing maintenance and repairs.
Twisting at Neck				X	X	Up to 15 min./time, to 5-6 hrs. total while working on vehicles that are on a lift as well as when working on oversized light duty vehicles.
Twisting at Waist				X	X	Up to 15 min./time, to 5-6 hrs. total while working on vehicles that are on a lift as well as when working on oversized light duty vehicles.
Squatting / Kneeling				X*		Up to 5 min./time, 3.5 hrs. total replacing brakes and working on lower areas of vehicles. *The worker may be able to alternate with sitting or bending/stooping.
Crawling		X*				Up to 10 sec./time, 5 min total while inspecting the underside of vehicles. *Crawling may be reduced by utilizing a creeper.
Reach waist to shoulder					X	Up to 2.5 hrs./time, 6.5 hrs. total while driving and performing maintenance and repairs on vehicles.
Reach above shoulder				X		Up to 10 min./time, 4 hrs. total while working on the underside of a vehicle. Vehicles may be elevated with a lift/hoist.
Reach below waist				X	X	Up to 20 min./time, 56 hrs. total while replacing brakes and working on lower areas of vehicles.
Keyboarding		X				Up to 5 min./time, 15 min total.
Wrist Flexion/Extension					X	Up to 2.5 hrs./time, 6.5 hrs. total while performing maintenance and repairs on vehicles.
Handle/Grasp				X		Up to 45 min./time, 3.5 hrs. total while driving various vehicles, using a computer mouse and using various diagnostic equipment. Vehicles and equipment may have a manual transmission, which requires shifting gears.
Forceful Grasp		X				Up to 1 min./time 10 min. total while manipulating parts, breaking bolts loose, etc.
Fine Finger Manipulation				X		Up to 10 min./time, 3 hrs. total while writing, typing, working on small automotive parts, turning screws and bolts with fingers, adjusting clamps and hoses, and stripping/manipulating wires.



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Hand Controls			X			Up to 45 min./time, 1.5 hrs. total while driving various vehicles, using a computer mouse and using various diagnostic equipment. Vehicles and equipment may have a manual transmission, which requires shifting gears.
Foot Controls			X			Up to 45 min./time, 1.5 hrs. total while driving various vehicles, using a computer mouse and using various diagnostic equipment. Vehicles and equipment may have a manual transmission, which requires shifting gears.
Repetitive Motion			X			Body Part: Hands/upper extremities Cycles/hr: 200+
Vibratory Tasks – High		X				Impact tools.
Vibratory Tasks – Low			X			Power and impact tools.
Talking				X		Up to 15 min./time, 3 hrs. total while conversing about duties, and giving and receiving directions and instructions. The employee also talks when dealing with vendors and using the tech line for warrantee work.
Hearing				X		Up to 15 min./time, 3 hrs. total while conversing about duties, listening for mechanical failures of vehicles, listening for moving vehicles and giving and receiving directions and instructions. The employee also hears when dealing with vendors and using the tech line for warrantee work.
Visual – Near Acuity				X		Performing maintenance and repairs on vehicles.
Visual – Far Acuity			X			Driving; test-driving.
Visual – Depth Perception				X		Performing maintenance and repairs on vehicles.
Visual – Color Discrimination			X			Identifying color of vehicles, wires, fluids, etc.
Visual – Accommodation			X			Driving.
Visual – Field of Vision			X			Driving; traversing areas with moving vehicles.
Exposure to Weather			X			Performing vehicle repairs at various sites, which can include break-down locations.
Extreme Cold		X				Freezing weather.
Extreme Hot			X			Hot motors, exhaust, etc.
Wet and / or Humidity			X			Vehicle fluids, pressure washer, parts washer etc.
Proximity to Moving Mechanical Parts				X		Diagnosing vehicles while they are running.
Exposure to Explosives		X				Various fuels, batteries and electric drive systems. Sheriff vehicles may contain ammunition, etc.
Atmospheric Conditions			X			Dust, dirt, mist, exhaust.
Exposed Heights		X				Ladders.
Exposure to Electricity				X		Electric components of vehicles, batteries. Works on hybrid and electric drive automobiles.
Exposure to Toxic / Caustic Chemicals			X			Vehicle fluids, compounds, cleaners. Vehicles may contain road flares.
Exposure to Radiation	X					



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Noise Intensity	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Analyst's Comments:

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Possible Employer Modifications:

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Update Comments (*if applicable*):

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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:

Update (if applicable):

Vocational Consultant

Date

Vocational Consultant

Date

Employer Verification:

Employee Verification: (optional)

Name

Date

Name

Date



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MEDICAL PROVIDER:

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