Job Class Profile: Heavy Equipment Technician

Pay Level: CG-29 Point Band: 622-675

Factor	Knowledge	Interpersonal Skills	Physical Effort	Concentration	Complexity	Accountability & Decision Making	Impact	Development and Leadership	Environmental Working Conditions	Total Points
Rating	5	2	5	6	3	3	3	2	6	
Points	233	33	32	29	90	65	62	43	64	651

JOB SUMMARY

Performs skilled journeyperson level work associated with identification, repair and maintenance of light and heavy vehicles and related equipment and includes fabricating parts and components, performing cutting and welding processes and ensuring the mechanical safety of vehicles through preventative maintenance and inspection. Types of equipment may include fire fighting equipment, school bus transportation fleet, highway equipment, airport snow clearing equipment, etc.

Key and Periodic Activities:

- Diagnoses, services, repairs, adjusts, rebuilds and maintains engine management systems, electrical and electronic systems, hydraulic and hydrostatic drive systems, steering and suspension systems, braking systems, snow and ice control systems, etc.
- Diagnoses, services, repairs, adjusts, replaces, rebuilds and maintains drive train components which includes diesel and gas engines, transmissions, drive lines and differentials, etc.
- Rebuilds and fabricates parts and components of light and heavy vehicles, its systems and related equipment.
- Performs vehicle repairs using lap top, scan tools and other hand tools.
- Performs preventative maintenance and servicing on vehicles and equipment.
- Performs welding procedures and machining operations.
- Maintains various types of records on repair work & prepares condition reports.
- Maintains inventory for parts and orders parts and supplies.
- Operates and test drives vehicles and equipment.
- Performs emergency road service and makes field repairs as needed. Makes minor and emergency repairs throughout the province.
- Performs inspections of vehicles to ensure compliance with all applicable Acts, regulations and standards. Issues inspection certificates.
- Inspects newly purchased equipment and vehicles to ensure compliance with tendering specifications.
- Oversees apprenticeship technicians.

SKILL

Knowledge

General and Specific Knowledge:

- Knowledge of the appropriate legislation and regulations.
- Knowledge of Safe Work Procedures.
- Knowledge of new developments in technology.
- Knowledge of computer technology trends in the service industry, i.e. diagnostic programs and service manuals.

Formal Education and/or Certification(s):

— Minimum: Journeyperson (Heavy Equipment Mechanic)

— May require a specific class of driver's license.

Years of Experience:

— Minimum: 3 to 4 years apprenticeship training

Competencies:

— Ability to keep ahead of technological trends and developments.

— Ability to develop new solutions and techniques to solve problems related to new and/or different equipment.

— Diagnostic and problem solving skills.

— Ability to use computer diagnostic software.

— Ability to repair, calibrate and operate various types of machinery/equipment.

— Ability to work independently.

Interpersonal Skills

— A range of interpersonal skills used are listening to equipment operators and supervisors to get information to diagnose problems with equipment, asking questions to obtain information about equipment, providing advise to apprenticeship students and coworkers and working in a team environment to gain the cooperation of coworkers in order to complete work, solve problems and make decisions.

— The most significant contacts are with the immediate supervisor to discuss schedule of equipment repairs, coworkers to discuss repair procedures and share information, and equipment operators to determine the problem and required repairs.

EFFORT

Physical Effort

— The demands of the job occasionally result in considerable fatigue, requiring periods of rest. Examples of the kinds of physical demands include crawling under vehicles, climbing on ladders, bending, stretching, twisting while working in confined spaces, standing or kneeling on cement floors, lifting and/or moving heavy objects such as tires, rims, brake drums, etc.

— Constantly required to lift or move objects less than 10 lbs. Regularly required to lift or move objects 10 to 25 lbs. Regularly required to lift or move objects 25 to 50 lbs and lifting or moving objects over 50 lbs is required on a regular basis.

— Sit and drive occasionally, walk and climb regularly and stand constantly. Examples include

climbing up on heavy equipment to perform repairs, working under vehicles, standing while working on equipment or standing on ladder or uneven objects to complete a task.

— Manual or physical activities include using hand tools that require accurate control and steadiness, using gross motor skills, using machinery or equipment that requires very controlled movement, using equipment that requires rapid physical movement and reflexes and maintaining physical balance. Fine finger or precision work and operating heavy equipment are performed on an occasional basis.

Concentration

— **Visual and hearing concentration, other sensory concentration such as touch, eye/hand coordination and alertness for the health and safety of others** is required when performing all phases of mechanical maintenance, repair and overhaul work on light and heavy vehicles and other diesel and gasoline powered equipment.

— Alertness and concentration are required when performing **repetitive** tasks such as using power tools, welding and cutting processes, operating overhead cranes, brake inspections, brake shoe replacements and electrical repairs.

— Impacted by **time pressures and deadlines** to ensure equipment and machinery are in operating order, particularly during seasonal operations, when equipment has to be repaired as quickly as possible to ensure public safety, i.e. fire season and winter snow clearing operations. Annual vehicle inspections must also be completed within specific time frames.

— **Exact results and precision** are required when performing annual safety inspections, performing vehicle maintenance and repairs, operating power tools and fabrication of parts to exact tolerances and measurements.

Complexity

— Work involves tasks and activities which are similar/related in terms of the knowledge and skills used (i.e. various types of equipment repair and maintenance work) and are usually well defined.

— Typical challenges include the breakdown or overhaul of various types of light and heavy diesel and gasoline powered equipment which can be electrical, hydraulic, pneumatic or mechanical related.

— References include service manuals, computer programs, scan tools, manufacturer support help lines, policies and procedures, Highway Traffic Act, Occupational Health and Safety Regulations, supervisors/managers and co-workers, however, troubleshooting and diagnosis sometimes requires analysis and development of new solutions due to the different types of equipment being serviced and advancing computer technology.

RESPONSIBILITY

Accountability and Decision-Making

— Works in a structured environment and work tasks and activities are assigned by the Supervisor and are highly controlled or monitored.

— Decisions can be made on how to repair the equipment, to replace/reorder parts that are in stock, and to issue inspection certificates as required under the Highway Traffic Act.

— Approval is required for large scale purchases of tools and parts and purchases of tools and

parts not in stock, large financial decisions, major repairs, travel, overtime, policy changes, training, etc.

— Discretion and independence of action may be exercised to determine if a vehicle should be taken out of service, to determine if parts are within specification or must be replaced, repair requirements when performing a roadside repair service and to determine if equipment is safe to operate.

— Advice, support and guidance are provided to apprenticeship students and coworkers.

Impact

— Work results can have an impact within immediate work area, within and outside department/group, within and outside organization and on equipment operators and the general public.

— Proper diagnosis and repair of equipment contributes to the health and safety of the equipment operator and the general public.

— Mistakes or errors can significantly impact the immediate work area, general public, equipment, finances, health and safety and corporate image.

— An error on installation or repair can cause an accident or equipment breakdown and result in downtime of machinery, increase repair expenses and potentially impact transportation routes as well as the health and safety of the public and corporate image.

— Work tasks and activities are highly monitored and controlled and mistakes or errors tend to be identified and resolved within hours of problem identification.

Development and Leadership of Others

— Typically no requirement to supervise staff.

— Required to oversee and evaluate apprenticeship students as well as provide training and support to new employees that are hired.

WORKING CONDITIONS

Environmental Working Conditions

— Personal risks require safety equipment or precautions including goggles, gloves, hard hat, safety boots, ear protection, safety vest, reflective clothing, welding helmets, hearing protection, dust masks, coveralls, respirator, safety ladders, jack stands, fire extinguishers, safe work practices, etc.

— The likelihood of minor cuts, bruises, abrasions or minor illnesses is significant while fractures, partial disability or total disability are limited given that all health and safety regulations are followed.

— Constantly exposed to dirt, dust, filth or garbage; limited lighting; odours; physical dangers; and heavy machinery.

— Regularly exposed to unusual/distracting noise; glare; fumes; limited ventilation; hazardous chemicals; toxic or poisonous substances; wet or slippery surfaces; awkward or confining workspaces; temperature extremes; and sharp objects.

— Occasionally exposed to dangerous heights or depths; electrical shocks; isolation; fire; adverse weather conditions and travel.