

MICHIGAN CIVIL SERVICE COMMISSION
JOB SPECIFICATION
HEAVY EQUIPMENT MECHANIC

JOB DESCRIPTION

Employees in this job perform a variety of activities to service, repair, and maintain pieces of state-owned heavy equipment.

Position Code Title - Heavy Equipment Mechanic-E

Heavy Equipment Mechanic 8

This is the entry level. The employee performs a range of maintenance, repair, and service activities on heavy equipment while learning the methods of the work.

Heavy Equipment Mechanic 9

This is the intermediate level. The employee performs an expanding range of maintenance, repair, and service activities on heavy equipment in a developing capacity.

Heavy Equipment Mechanic E10

This is the experienced level. The employee performs a full range of maintenance, repair, and service activities on heavy equipment and uses independent judgment to make decisions in specific work situations.

Position Code Title - Heavy Equipment Mechanic-A

Heavy Equipment Mechanic 11

This is the advanced level. The employee serves as a lead worker overseeing lower-level Heavy Equipment Mechanics and performing experienced level Heavy Equipment Mechanic assignments; or as a senior worker performing the most complex assignments.

NOTE: Employees can progress to the experienced level based on satisfactory performance and possessing required experience.

JOB DUTIES

NOTE: Listed job duties are typical examples of work of positions in this classification. Not all duties assigned to every position are included, nor will all positions be assigned every duty. The general description of job duties does not authorize performance contrary to any state or federal licensing or certification requirements.

Performs maintenance and repair activities on various pieces of heavy equipment including heavy-duty truck and semi-tractors, material spreader, 6-wheel drive military type vehicles, excavators, skidders, high pressure pumps, 25 ton and smaller bulldozers, graders, cranes, snowmobile groomers, underbody blades, dump bodies, snow plows, crawler tractors and trailers, backhoes, trailers, electronic message boards and signs, street sweepers, aerial towers, and man lifts.

Diagnoses, services and repairs various systems that are found on pieces of heavy equipment such as mechanical and computer electronic controls, air brake systems, transmissions, computer controlled automatic and 13 speed manual transmissions, high voltage generators, propane powered equipment, and pneumatic systems.

Troubleshoots malfunctions using diagnostic software in the repair of vehicles and equipment.

Repairs and services track drive sprockets, rails, idler wheels, hard bars, track adjusters, hydraulic reversers, final drives, brake bands, steering clutches, and hydrostatic transmissions.

Fabricates, modifies, and installs special equipment or replacement parts.

Performs routine maintenance checks and adjustments on vehicles and motor driven equipment and performs road tests.

Services, diagnoses, repairs, and maintains speed tandem drive axles with air or electric shift, hydrostatic driven, heavy duty multi-axle suspensions, both conventional steel or air springs.

Tunes gas and diesel engines, services valves, fuel filters and turbo chargers, and pressure checks fuel filters, adjust injector heights, fuel racks, governors, etc.

Diagnoses problems, disassembles units, repairs or replaces parts, and reassembles units in the following systems: brake, cooling, drive, electrical, exhaust and emission control, heating and air conditioning, hydraulic, air, and steering and suspension.

Adjusts, repairs, inspects, and replaces fifth wheel hitches and pintle hitches.

Overhauls, replaces, and rebuilds engines.

Maintains service logs.

Prepares work orders and cost estimates.

Cleans and maintains tools and equipment.

Assists in training lower-level workers in mechanical repair techniques.

Performs related work and other tasks as assigned.

Additional Job Duties

Heavy Equipment Mechanic 11 (Lead Worker)

Assigns work to crew members.

Instructs and trains in proper work methods and processes.

Reviews job performance by observing and critiquing work techniques and completed assignments.

Prepares and maintains records related to the work.

Heavy Equipment Mechanic 11 (Senior Worker)

Performs inspections on a variety of heavy equipment in the field throughout the state.

Makes emergency field repairs to a variety of specialized wildfire suppression vehicles.

Maintains inventory and orders equipment and supplies.

Assists other mechanics with the most difficult assignments.

Performs layout work for fabrication of parts and equipment.

JOB QUALIFICATIONS

Knowledge, Skills, and Abilities

NOTE: Some knowledge is required at the entry level, developing knowledge is required at the intermediate level, considerable knowledge is required at the experienced level, and thorough knowledge is required at the advanced level.

Knowledge of the standard practices, materials, tools, and equipment used in the repair and maintenance of motor vehicles and engines.

Knowledge of occupational hazards and safety precautions applicable to the work.

Knowledge of body and frame construction.

Skill in the use of a variety of hand and mechanized tools including jacks, hoists, and welding equipment.

Skill in using computers and electronic equipment to diagnose and solve mechanical and technical problems.

Ability to use manuals and schematics.

Ability to rebuild engines and major driveline components.

Ability to communicate effectively.

Additional Knowledge, Skills, and Abilities

Heavy Equipment Mechanic 11 (Lead Worker)

Ability to train and oversee the work of others.

Ability to prioritize, organize, and coordinate the work of the unit.

Ability to prepare and maintain records related to the work.

Working Conditions

Some jobs require an employee to work in an environment that involves exposure to unpleasant and noxious fumes and odors.

Some jobs require an employee to be exposed to inclement weather conditions.

Physical Requirements

The job duties require an employee to lift and/or move heavy objects.

The job duties may require an employee to traverse rough terrain.

Education

Education typically acquired through completion of high school.

Experience

Heavy Equipment Mechanic 8

No specific type or amount is required.

Heavy Equipment Mechanic 9

Two years of experience assisting skilled trades workers in the repair and maintenance of heavy equipment.

Heavy Equipment Mechanic E10

Four years of experience assisting skilled trades workers in the repair and maintenance of heavy equipment, including two years equivalent to a Heavy Equipment Mechanic 9.

Heavy Equipment Mechanic 11

Five years of experience assisting skilled trades workers in the repair and maintenance of heavy equipment, including one year equivalent to a Heavy Equipment Mechanic E10.

Alternate Education and Experience

Heavy Equipment Mechanic

Possession of an associate degree in Heavy Duty Truck/Heavy Equipment Repair may be substituted for two years of experience assisting skilled trades workers in the repair and maintenance of heavy equipment.

OR

Completion of 12 semester (18 term) credits in one or more of the following coursework areas: heavy duty truck, heavy equipment repair, diesel engines, math, or physics may be substituted for one year of experience assisting skilled trades workers in the repair and maintenance of heavy equipment.

OR

Two years of experience assisting skilled trades workers in the repair and maintenance of automobiles maybe be substituted for one year of experience assisting skilled trades workers in the repair and maintenance of heavy equipment.

NOTE: Civil Service can individually evaluate equivalent combinations of education and experience providing required knowledge, skills, and abilities to qualify.

Special Requirements, Licenses, and Certifications

See individual position descriptions for other requirements.

JOB CODE, POSITION TITLES AND CODES, AND COMPENSATION INFORMATION

Job Code

HVYEQTMCH

Job Code Description

HEAVY EQUIPMENT MECHANIC

Position Title

Heavy Equipment Mechanic-A

Heavy Equipment Mechanic-E

Position Code

HYEQMCHA

HYEQMCHE

Pay Schedule

A31-018

A31-030

EC

09/01/2024