

**State of Michigan
Civil Service Commission**
Capitol Commons Center, P.O. Box 30002
Lansing, MI 48909

Position Code 1. HYEQMCHEA28R

POSITION DESCRIPTION

This position description serves as the official classification document of record for this position. Please complete the information as accurately as you can as the position description is used to determine the proper classification of the position.

2. Employee's Name (Last, First, M.I.)	8. Department/Agency TRANSPORTATION CENTRAL OFFICE
3. Employee Identification Number	9. Bureau (Institution, Board, or Commission) Highways
4. Civil Service Position Code Description HEAVY EQUIPMENT MECHANIC-E	10. Division Metro Region
5. Working Title (What the agency calls the position) Heavy Equipment Mechanic 8/9/10	11. Section Operations
6. Name and Position Code Description of Direct Supervisor GOVE, MARK W; HEAVY EQUIPMENT MCH SPV-2	12. Unit Auburn Hills Maintenance Facility
7. Name and Position Code Description of Second Level Supervisor WOOD, JEFFREY; TRANSPORTATION MAINT SPV-3	13. Work Location (City and Address)/Hours of Work 2925 Lapeer Road, Auburn Hills / M-F 6:00 a.m. to 4:30 p.m. (hours may vary)

14. General Summary of Function/Purpose of Position

This position provides maintenance and repair services to Michigan Department of Transportation (MDOT) vehicles and equipment. This position provides a full range of maintenance, repair, and service activities on heavy equipment and prepares work orders and cost/materials estimates using computerized programs. This position provides mobile service to the Detroit Maintenance Garage as needed.

Operate a vehicle or vehicle/trailer combination with a Gross Vehicle Weight Rating (GVWR) of 26,001 pounds or more (e.g., heavy-duty trucks) when performing maintenance and repair activities.

15. Please describe the assigned duties, percent of time spent performing each duty, and what is done to complete each duty.

List the duties from most important to least important. The total percentage of all duties performed must equal 100 percent.

Duty 1

General Summary:

Percentage: 30

Perform maintenance and repair activities on various pieces of heavy equipment including but not limited to, heavy-duty trucks, track type vehicles, excavators, boring and sampling machines, skid steer and articulating loaders, high pressure pumps, rotary screw air compressors, graders, crawler tractors, backhoes, street sweepers, cranes, aerial towers and man lifts, some specialized equipment such as, cement saws, trailers, utilized in transport of this equipment.

Individual tasks related to the duty:

- Perform routine maintenance checks and adjustments including but not limited to, fluid levels, hoses, belts, brakes, tires, and clutches; change filters and oil and lubricates vehicles and motor driven equipment.
- Service, diagnose, repair, and maintain single or multi axle drives with air or electric shift and automatic or driver controlled locking differentials, heavy duty multi-axle suspensions, both conventional steel leaf, rubber or air springs, and walking beam suspensions.
- Tune gas and diesel engines and service fuel filters and turbo chargers.
- Overhaul/replace engines and rebuild components.
- Perform annual vehicle inspections required by MDOT Regulations.
- Perform any necessary repairs and services for light-to-heavy transport trailers (e.g., lights, brakes, suspension, etc.)
- Purchase parts and equipment according to state purchasing guidelines.

Duty 2

General Summary:

Percentage: 30

Diagnose, service, and repair various systems that are found on pieces of heavy equipment to include mechanical and computer electronic controls including anti-lock air brake systems.

Individual tasks related to the duty:

- Diagnose problems, disassemble units, repair/replace parts, and reassemble units.
- Repair or replace shoes, pads, drums, hoses, calipers, cylinders, and any heavy-duty air brake components.
- Flush radiators, replace hoses and thermostats, repair/replace radiators, water pumps, fan drives, DCA treatment filters, air intercoolers and oil coolers.
- Repair and replace drive shafts, differentials, axles, manual, automatic and sophisticated computer-controlled transmissions, clutches, transfer cases, power take-off systems, transmission reversers, hydrostatic drives, all-wheel drive steering axles and final drives.
- Repair or replace fuses, batteries, lights, instruments, warning devices, controls and switches, computer controls, modules, alternators, starters, and defective cables and wiring. This includes 12 volt and up and modifications, as necessary.
- Replace mufflers, manifolds, catalytic converters, turbochargers, blowers, and pipes.
- Repair or replace heater cores, condensers, compressors, hoses, and controls; repair/recharge air conditioning systems.

Duty 3

General Summary:

Percentage: 20

Troubleshoot and repair malfunctions in components of specialized equipment.

Individual tasks related to the duty:

- Repair and service track drive sprockets, rails, idler wheels, hard bars, track adjusters, hydraulic reversers, final drives, brake bands, steering clutches and hydrostatic transmissions typically found on dozers, skid steer loaders, horizontal boring machines, shot blasters, paint removing machines, cement saws, trenchers and other track mounted vehicles.
- Service, repair and maintain components of high volume, rotary screw air compressors including but not limited to, air dryers, air coolers, air/oil separators, volume controls and pressure switches.
- Service, repair and maintain systems of high voltage generators/welders, propane and battery powered equipment, arrow boards and message boards with motor driven or solar charging systems.
- Replace consumable components such as saw blades, shot blaster nozzles, brushes, ripper teeth and grinding tools.
- Install, repair, maintain, service and program the various ground speed controls and hydraulics systems associated with MDOT's fleet of snowplow equipment including but not limited to, computerized controls of hydraulic systems, hydraulic drives and actuating cylinders, conveyors, spinners, and chutes with air actuated cylinders.
- Perform all repairs and maintenance on aerial man-lifts, cranes and scissors lifts to include the truck driven hydraulics with air or electric controls, all safety controls and automatic leveling devices, charging systems, hydraulic and electric drives, lifting mechanisms of truck mounted or battery powered, self-propelled scissors lifts, cables and winches of cranes, etc. Perform safety inspections outlined in the owner's manual, American National Standard Institute (ANSI) and the Michigan Occupational Safety and Health Administration (MIOSHA).
- Perform repairs and/or diagnostic support for the department's Automated Vehicle Location (AVL) and Maintenance decisions Support System (MDSS) equipment.

Duty 4**General Summary:****Percentage: 10**

Fabricate, modify, and install special equipment or replacement parts utilizing welders, torch sets, plasma cutters and metal cutting saws.

Individual tasks related to the duty:

- Fabricate new and replacement equipment and/or components.
- Weld truck frames or components on trucks with computerized engine controls.
- Install special devices such as hitch plates, distance measuring devices, throttle controls, safety lighting, etc.

Duty 5**General Summary:****Percentage: 5**

Utilize computerized engine/transmission diagnostic equipment and maintain service logs.

Individual tasks related to the duty:

- Perform diagnostics utilizing Prolink, EZ-Tech or lap top computers and software to analyze problems of computerized controls on gas or diesel engines, transmissions, and ground speed controlled hydraulic systems.
- Road test vehicles for diagnosis and after final repair.
- Maintain service logs with current repairs/services, prepare work orders and cost materials estimates utilizing the M-5 program.
- Practice good safety according to MIOSHA shop regulations and published MDOT directives. Keep tools, equipment, and work area clean, organized, and in good working condition.
- Maintain Dickey John and Control Point salt control systems.
- Process P-Card purchases according to MDOT guidelines. Code purchase receipts daily. Provide documentation as requested.

Duty 6**General Summary:****Percentage: 5**

Utilize forklift, loader or snowplow.

Individual tasks related to the duty:

- Utilize a forklift to move material or assist in elevating materials in the repair of MDOT's equipment.
- Utilize tractor mounted or articulating loaders in moving heavy materials (e.g., snowplow build-up, dump bodies, spreaders, snow removal in the yard, etc.)
- Act as a snowplow operator in emergency situations.
- Other duties as assigned.

16. Describe the types of decisions made independently in this position and tell who or what is affected by those decisions.

Independent judgement of necessary tools and methods of repairs and/or parts required, cost/quality of parts utilized. Make an informed decision of where to purchase required parts.

17. Describe the types of decisions that require the supervisor's review.

Decisions involving repairs exceeding \$300.00. Decisions to determine priority of repair projects.

18. What kind of physical effort is used to perform this job? What environmental conditions in this position physically exposed to on the job? Indicate the amount of time and intensity of each activity and condition. Refer to instructions.

Able to move equipment weighing up to 100 pounds. Install equipment and inspect vehicles including over and under equipment/vehicles. Constant exposure to exhaust fumes and various chemicals. Duties may need to be performed outdoors in all weather conditions. This position is required to operate a vehicle or vehicle/trailer combination with a GVWR of 26,001 pounds or more. This position provides mobile service to the Detroit Maintenance Garage as needed. Be available outside normal working hours for maintenance/emergency operations, in all weather conditions.

19. List the names and position code descriptions of each classified employee whom this position immediately supervises or oversees on a full-time, on-going basis.

Additional Subordinates

20. This position's responsibilities for the above-listed employees includes the following (check as many as apply):

- | | |
|---|--|
| ☐ Complete and sign service ratings. | ☐ Assign work. |
| ☐ Provide formal written counseling. | ☐ Approve work. |
| ☐ Approve leave requests. | ☐ Review work. |
| ☐ Approve time and attendance. | ☐ Provide guidance on work methods. |
| ☐ Orally reprimand. | ☐ Train employees in the work. |

22. Do you agree with the responses for items 1 through 20? If not, which items do you disagree with and why?

Yes

23. What are the essential functions of this position?

This position provides maintenance and repair services to MDOT vehicles and equipment. This position provides a full range of maintenance, repair, and service activities on heavy equipment and prepares work orders and cost/materials estimates using computerized programs. This position provides mobile service to the Detroit Maintenance Garage as needed. Operate a vehicle or vehicle/trailer combination with a GVWR of 26,001 pounds or more (e.g., heavy-duty trucks) when performing maintenance and repair activities.

24. Indicate specifically how the position's duties and responsibilities have changed since the position was last reviewed.

25. What is the function of the work area and how does this position fit into that function?

The function of the Auburn Hills Garage is to provide support to the MDOT's fleet of vehicles in the Metro Region.

This position is one of a team of mechanics that provide repairs, maintenance, and assembly services for Metro Region.

26. What are the minimum education and experience qualifications needed to perform the essential functions of this position.

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.

KNOWLEDGE, SKILLS, AND ABILITIES:

Knowledge of:

- The standard practices, materials, tools, and equipment used in the repair and maintenance of motor vehicles and

engines.

- Safety issues in the use of tools, equipment and supplies used in the repair of motorized vehicles and equipment.
- Body and frame construction.
- The requirements to weld to truck frames and equipment with computerized engine controls.
- Electrical systems.

Skill in:

- The use of gas and electric cutting/welding equipment.
- The use of mechanized tools.
- Jacks and hoists.
- A variety of diagnostic testing and tuning equipment.

Ability to:

- Pressure check fuel systems, adjust injector heights, fuel racks, valves, governors, etc.
- Check and adjust computerized engine controls utilizing proper scan tools and/or software and laptop computers.
- Fabricate some components to facilitate installation.
- Use a welder, acetylene torch, plasma cutter and metal cutting saw.

**CERTIFICATES, LICENSES,
REGISTRATIONS:**

Possession of a Commercial Learner's Permit (CPL) is required upon appointment to the position. Continuing employment requires possession of a Commercial Driver's License (CDL) Group A with either an N or X endorsement and no air brake restrictions which must be obtained within 12 months of the date of hire into the position and must be maintained throughout employment in the position.

NOTE: Civil Service approval does not constitute agreement with or acceptance of the desired qualifications of this position.

I certify that the information presented in this position description provides a complete and accurate depiction of the duties and responsibilities assigned to this position.

Supervisor

Date

TO BE FILLED OUT BY APPOINTING AUTHORITY

Indicate any exceptions or additions to the statements of employee or supervisors.

None

I certify that the entries on these pages are accurate and complete.

ASHLEY PARSONS

10/17/2025

Appointing Authority

Date

I certify that the information presented in this position description provides a complete and accurate depiction of the duties and responsibilities assigned to this position.

Employee

Date