

# WESTERN MICHIGAN UNIVERSITY

**TITLE:** Vehicle Mechanic - Licensed

**GRADE:** ST2

**FUNCTIONS:**

The incumbent provides highly skilled craft labor required for the maintenance and repair of all motor vehicles and the electrical, mechanical and hydraulic systems thereof. This position overhauls and repairs engines and auxiliary components, transmissions, cooling systems, differentials and braking systems. The incumbent tunes engines, adjusts emissions control systems, changes oil and lubricates mechanical systems. The incumbent repairs, mounts and balances automobile, truck and other tires; services diesel engines; and services mechanical, electrical and hydraulic systems.

This position uses hydraulic jacks and/or chain hoists to raise vehicles to gain access to mechanical units bolted to vehicle undercarriages. The incumbent pulls engines, transmissions and differentials; dismantles and inspects engines, transmissions and differentials; repairs or replaces damaged or deteriorated parts, including pistons, rods, gears, valves, and bearings. This position overhauls or replaces carburetors, blowers, generators, distributors, starters and pumps, and rebuilds crankshafts and cylinder blocks as necessary. The incumbent rewires ignition systems, lights and instrument panels. This position relines and adjusts brakes, aligns front ends, repairs or replaces shock absorbers, and repairs cooling systems. The incumbent performs body maintenance and repairs, hammering out and/or filling in dents, and welding broken metal parts. This position replaces and adjusts headlights and installs and repairs accessories.

The incumbent performs scheduled maintenance on vehicles, monitoring oil, transmission fluid and coolant levels and changing/adding oil, transmission fluid and coolant as required. The incumbent changes points, plugs and filters; lubricates moving mechanical parts; and adjusts/replaces belts.

This position utilizes wrenches, screw drivers, socket sets, hammers, chisels, pliers, specialized wrenches, crow bars and other tools and devices to dismantle, adjust, install and reassemble parts, mechanical assemblies and systems. The incumbent employs lathes, shapers, drill presses and welding equipment to rebuild parts. This position uses soldering guns to solder ignition and other electrical systems, and employs sledgehammers, lug wrenches, tire irons and other devices to remove and replace wheels, tires and wheel covers.

The incumbent operates a tow truck to remove disabled vehicles from field sites and to transport equipment to the repair facility. This position hooks equipment to, and operates, an electric or hydraulic winch to lift and tow vehicles.

The incumbent determines inventory requirements for supplies and replacement parts and notifies supervisory personnel when (re) ordering is necessary. The incumbent maintains records of preventive maintenance work performed and logs vehicle operation as required. This position

organizes assigned work so as to minimize manhours and materials required for proper completion of work. The incumbent instructs others in the operation of, and performance of preventive maintenance for, all related equipment.

This position maintains the repair facility, tow truck and other assigned vehicle(s) in a neat, clean and orderly condition and performs all work in accordance with established safety practices. The incumbent must wear MIOSHA approved safety shoes at all times and must wear a hard hat, leather gloves, leather vest and face shield when using arc and acetylene welding equipment. Safety glasses and gloves may be required when using power tools and grinders, and other protective gear must be worn as required by MIOSHA Rules. The incumbent must wear no loose-fitting clothing which might become entangled in equipment and machinery, posing a hazard to incumbent's safety. This position performs additional duties as requested by supervisory personnel, including, but not limited to, emergency maintenance and repair of heavy equipment, including endloaders, dump trucks, back hoes, pick-up trucks, tractors, portable generator sets, pumps, etc.

### **QUALIFICATIONS:**

The incumbent must be able to read and comprehend written instructions and safety regulations governing the performance of job duties, and must be able to interpret and apply instructions and diagrams contained in the operator's manuals for vehicles and equipment. Basic writing ability is required to maintain service records and maintenance logs and to prepare supply orders. Must have the ability to familiarize themselves with electronic communication devices for work orders and other communication. Operating knowledge of diesel and gasoline engines, of arc and acetylene welding equipment, and small hand power tools used in the trade is required. A valid Michigan Commercial Driver's License (CDL, class "b" with airbrakes) is required for tow truck operation. The incumbent must possess, or be able to obtain within 90 days of hire, a State of Michigan Master Automobile Mechanic's License. A minimum of five (5) years employment experience in all aspects of the repair and maintenance of automobiles and trucks is required.

In order to perform the essential functions of the job, the incumbent must be able to raise seventy-five pounds (75 lbs) to a height of four feet (48") with or without mechanical assistance and must be able to raise 300 lbs to a height of twelve inches (12") with mechanical assistance. The incumbent must be able to transport seventy-five (75) pounds distances up to forty feet (40') as often as five times per day. The incumbent must be able to exert 200 pounds of force to wrenches and other devices work on job related components. In order to change tires, the incumbent must be able to exert 100 lbs of torque to a lug wrench a minimum of six (6) times per day.

The incumbent must be able to transport, manipulate and maneuver equipment, parts, engines and hand and power tools. The incumbent must be able to attach towing hooks to disabled equipment. The incumbent must be able to use screwdrivers, wrenches and other tools to dismantle, repair, adjust, reassemble, and otherwise maintain engines and other components and systems. The incumbent must be able to perform all maintenance and repair work for vehicles and heavy equipment in a safe and efficient manner. Repairing and maintaining undercarriages and axles, and other maintenance and repair functions require the incumbent to work at ground/floor level and/or underneath vehicles and equipment up to six (6) hours per day. The incumbent may be required to work on a creeper underneath vehicles or equipment for as long as two hours per day. Repairing

and maintaining engines and mechanical systems require the incumbent to reach into vehicle/equipment engines for as much as six (6) hours per day. The incumbent must be able to descend to and ascend from ground/floor level as often as 200 times per day. The incumbent may be required to work above head level while working on equipment held by a hoist.

In order to obtain a valid Michigan commercial driver's license, the incumbent must possess 20/40 vision with or without corrective lenses. The incumbent must possess 20/20 vision with or without corrective lenses in order to fine tune engines and properly calibrate and set tolerances. The incumbent must be able to accurately distinguish colors in order to identify and accurately match electrical wires in ignitions, and other electronic components of vehicles. The incumbent must have excellent auditory acuity with or without audiological appliances in order to identify appropriate and inappropriate engine sounds and the appropriate level of engine noise.

The incumbent must be able to tolerate exposure to gasoline and diesel fuel and fumes, motor oils and other petroleum products, grease, hydraulic and transmission fluids, antifreeze, graphite compounds, alcohol, ether, propane gas, mineral spirits and degreasing compounds. The incumbent must also be able to tolerate exposure to exhaust fumes and the full range of weather conditions, as the incumbent performs repairs both in the shop and at work sites in the field. The incumbent must be able to tolerate noise levels up to 70 decibels when testing engines indoors and operating grinders, and must be able to tolerate confined spaces in order to work under vehicle hoods, between truck cabs and cargo boxes and underneath vehicles, and to repair and maintain controls located in the cabs of loaders and heavy equipment.

A physical examination administered by the employer's designated physician is required to determine the incumbent's ability to perform the essential functions of the job and/or to identify the need for a reasonable job accommodation.