

## **WESTERN MICHIGAN UNIVERSITY**

**TITLE:**                                   **Appliance Repairperson – Custodial Services**

**GRADE:**                               **ST2**

**FUNCTIONS:**

This position maintains and repairs mechanical and power driven appliances and equipment employed in Custodial Services, including extractors, vacuums, wet/dry vacuums, burnishers, floor scrubbers, eraser cleaners, and electric pressure washers. The incumbent overhauls and repairs motors and auxiliary components, electrical, mechanical and hydraulic systems, transmissions, cooling systems, differentials and braking systems. This position inspects and changes tires; replaces and/or repairs squeegees and buffing plates; lubricates mechanical systems; repairs and replaces pullies and drive belts; repairs and replaces electrical wiring and systems and safety switches; tears down and rewinds motors; rebuilds pumps; replaces and services batteries and charging equipment and performs additional maintenance as specified in manuals. The incumbent tests equipment to ensure that it is correctly tuned and operating properly. The incumbent demonstrates to employees the proper use of auto-scrubbers and autonomous, robotic scrubbers and vacuums.

The incumbent must be familiar with the theory and operation of autonomous auto scrubbers, and vacuums, as to properly diagnose and calibrate cameras, and other sensors used to operate the equipment. The incumbent must be familiar with the function and operation of the (BMS) Battery Management System to properly diagnose and repair Lithium Battery operated equipment and charging systems. The incumbent must be aware of and follow required safety practices while working on equipment such as the Ozone Water Machines which requires electrical power sources of 120 volts, and creates an internal electrical charge/arc. The Incumbent must be aware of and follow safety practices, including lockout tagout, while working on equipment.

This position utilizes manual and power wrenches and screwdrivers, channel locks, and other hand and power tools and instruments to tune engines, remove and replace nuts, bolts and screws, and perform other maintenance and repairs. In addition to wrenches and screw drivers, the incumbent may employ hammers, chisels, mallets, crowbars, wedges and other devices to dismantle engine housings, disengage squeegees and plates and to assemble/disassemble equipment. The incumbent employs a soldering gun and other tools to repair electrical wiring and systems, and employs arc and acetylene welding torches to repair equipment. The incumbent employs a drill press to fabricate replacement parts when necessary. This position uses manual and hydraulic jacks, chain pulls and blocks, and electrical chain hoists to lift equipment in order to gain access to axles, plates, wheels and other components. The incumbent employs a lug wrench to loosen wheel covers/wheels. The incumbent employs hydraulic and/or mechanical jacks to lift appliances and equipment, and operates a motor vehicle with hydraulic lift gate to remove disabled appliances/equipment from campus locations and transport appliances/equipment which cannot be repaired in the field to the repair facility.

This position also provides carpentry services, such as installing and repairing custodial racks, counters, shelves, dispensers, and disposal containers. The incumbent orders and maintains working inventories of replacement parts, supplies, dispensers and other items, and informs supervisory personnel of the appropriate types and quantities of supplies and parts needed. This position organizes assigned work so as to minimize man-hours and materials required for proper completion of the work. The incumbent maintains records of preventive maintenance and repair work performed, and instructs others in the operation of, and performance of operator maintenance for, appliances and equipment.

This position maintains the repair facility, motor vehicle 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, gloves and goggles when using arc, acetylene, MIG and TIG welding equipment. Safety glasses and gloves may be required when using power tools and presses, and other protective gear must be worn when appropriate as required by MIOSHA rules and regulations. 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.

### **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 manuals for custodial and floor care appliances and equipment. Basic writing ability is required to maintain service records and maintenance logs and to prepare supply orders. The incumbent must be able to interpret complex blueprints, diagrams, written specifications and operating instructions. Must have the ability to familiarize themselves with electronic communication devices for work orders and other communication. Operating knowledge of electrical motors, of arc, acetylene, MIG and TIG welding equipment, and small hand power tools used in the trade is required. A valid Michigan Driver's License is required for operation of any vehicle use to transport tools, supplies, materials, and equipment between work sites. The incumbent must possess, or be able to obtain within 90 days of hire, certification from one or more appliance manufacturers. A minimum of five (5) years employment experience in small engine maintenance and repair is required, as is completion of a registered apprenticeship program or an established, certified training program recognized by the University. Familiarity and experience with robotics is preferred.

In order to perform the essential functions of the job, the incumbent must be able to raise fifty pounds (50 lbs) dead weight to a height of four feet (48") with or without mechanical assistance, and must be able to lift 3,000 lbs to a height of two feet (24") with the use of hydraulic jacks and other devices. The incumbent must be able to move mechanical devices carrying loads up to 2,000 lbs a distance of 0.5 miles to remove disabled equipment to loading docks for transfer to appropriate vehicles for transportation to the repair facility. The incumbent must be able to exert 50-60 pounds of pressure to a hammer and chisel to remove brushes and plates from equipment for repairs and/or replacement. The incumbent may be required to maneuver equipment weighing up to 3,000 lbs onto/into an appropriate vehicle with the assistance of other tradespersons and mechanical and hydraulic devices. The incumbent must be able to enter/exit a standard sized van or pickup truck at a height of 18" above

the ground up to 50 times per day in order to transport tools and supplies to field sites to repair equipment and to transport equipment to the repair facility for preventive maintenance and repairs which cannot be properly completed in the field.

The incumbent must be able to move, manipulate and maneuver equipment, parts, motors and hand and power tools. The incumbent must be able to operate and test custodial and floor care equipment and operate hydraulic lift-gates. The incumbent must be able to use screwdrivers, wrenches and other tools to dismantle, repair, adjust, reassemble, and otherwise maintain motors and equipment. The incumbent is required to adjust threaded rods to rewind motors. Removing and replacing plates, brushes, etc., repairing and maintaining undercarriages and axles, and other maintenance and repair functions require the incumbent to work at floor/ground level up to six (6) hours per day. The incumbent must be able to descend to/ascend from 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 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 motors 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 controls, safety switches and other electronic components of equipment. The incumbent must have excellent auditory acuity with or without audiological appliances in order to identify appropriate and inappropriate motor sounds and the appropriate level of motor noise.

The incumbent must be able to move forward, backward and sideways while operating and testing mechanical devices and self-propelled electrically powered equipment. The incumbent must be able to tolerate exposure to oils and lubricants, hydraulic fluids, coolants, graphite compounds, solvents and degreasing compounds. The incumbent must also be able to tolerate exposure to shampoos, cleaning compounds, stripping compounds, sealers and finishes used in connection with the appliances and equipment which this position maintains and repairs, as well as to dirt, dust, mildew and airborne contaminants. The incumbent must be able to tolerate exposure to the full range of weather conditions and must be able to enter and maneuver in confined spaces in order to load and unload equipment, to work underneath equipment and to maintain and repair controls located in the interiors of larger, ride-on 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.