



HEAVY EQUIPMENT TECHNICIAN ENTRY
HEAVY EQUIPMENT TECHNICIAN 1
HEAVY EQUIPMENT TECHNICIAN 2

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SERIES CONCEPT

Heavy Equipment Technicians maintain, repair, modify, and restore medium (GVWR 10,500-26,000 lbs.) and heavy (GVWR greater than 26,000 lbs.) maintenance and construction equipment and power generation equipment including diesel and gasoline powered engines and generators (3 – 200 hundred kilowatts), single and tandem axle dump trucks, motor graders, asphalt paving equipment, truck mounted backhoes, forklifts (standard to 10, 000 lb lift capacity), cranes and bucket trucks, diesel powered snow blowers, water trucks, front end loaders, tractor/trailer combinations and truck mounted excavators, drill rigs, snow cats, dozers and pavement grinding machines.

Work involves the repair, rebuild, replacement or restoration of chassis and component parts, brakes, clutches and transmissions, engines, pneumatic and hydraulic brake systems, electrical systems (high and low voltage), boilers, fuel injection systems, fuel pumps, high pressure pumps and carburetors.

Design and fabricate mechanical apparatus such as truck mounted tanks, battery holders, toolboxes, utility bodies, snow plows and mounting brackets for lights and signs; design, layout and order appropriate materials; weld sections together and mount apparatus on equipment.

Determine the cause and extent of component or system failure through test drives, pressure and temperature checks, disassembly, inspection, use of computerized and electronic diagnostic equipment, and reference to technical manuals, blueprints and schematic manuals; order parts required for repairs by researching parts manual; contact vendors and complete purchase requisitions. Test drive or operate equipment to verify proper operation.

Employees may direct adult and youth inmate or patient workers to follow rules, policies, procedures and security guidelines; instruct and train on work techniques and procedures, and in safe and efficient operations of tools and equipment.

DISTINGUISHING FEATURES

The **Heavy Equipment Technician Entry** (Underfill Only) assists with the completion of maintenance, repair and modification of equipment. The work at this level is planned and facilitates the training needs of an entry level technician.

The **Heavy Equipment Technician 1** completes diagnosis, maintenance, repair and modification of equipment. The work at this level is planned and assigned through supervisors or lead workers and work is usually completed in a shop environment.

The **Heavy Equipment Technician 2** completes inspections, initial diagnosis, maintenance, repair and modification of equipment. The work at this level is usually unplanned and completed in unfavorable environmental conditions.

MINIMUM QUALIFICATIONS & SKILLS

Heavy Equipment Technician Entry (Underfill Only) – A two year certificate in Diesel or Heavy Equipment Mechanics **AND** four (4) years of progressively responsible work in a diesel or heavy equipment mechanics shop, **OR** six (6) years of progressively responsible work in a diesel or heavy equipment mechanics shop.

SKILL:

- Safely use the tools associated with the repair of diesel and gasoline powered engines, single and tandem axle dump trucks, motor graders, chip spreaders, truck mounted backhoes, diesel

powered snow blowers, water trucks, front end loaders, tractor/trailer combinations and pavement grinding machines.

- Safely work around, in, and under heavy equipment.
- Safely work with chemicals and solvents and exhaust fumes.
- Read and understand the state motor vehicle codes relating to vehicle height, weight, width, length, and lighting requirements; safety manuals, schematics, service alters and instructions; requirements (structural and other) found in the American National Standard Institute's manual; environmental rules and regulations relating to vehicle exhaust and spray requirements; vehicle safety rules in Oregon Administrative Rules, Chapter 437 (OSHA regulations).
- Use mechanical, electrical, or electronic testing equipment.
- Assist in the repair a variety of heavy equipment and their auxiliary electrical, electronic, mechanical, hydraulic, or structural components.
- Assist in the fabrication or modification of equipment or component parts.
- Work cooperatively as a member of a team.

Move parts and equipment safely using appropriate processes and procedures.

Licenses and Certifications: Commercial Drivers License.

NOTE: Some positions require successful candidates to supply tools required for the job. The agency will outline the needed tools at the time of recruitment.

Heavy Equipment Technician 1 - Four (4) years of experience as a journeyman Heavy Equipment Mechanic.

SKILL:

- Safely use the tools associated with the repair of diesel and gasoline powered engines, single and tandem axle dump trucks, motor graders, chip spreaders, truck mounted backhoes, diesel powered snow blowers, water trucks, front end loaders, tractor/trailer combinations and pavement grinding machines.
- Safely work around, in, and under heavy equipment.
- Safely work with chemicals and solvents and exhaust fumes.
- Read, understand and apply the state motor vehicle codes relating to vehicle height, weight, width, length, and lighting requirements; safety manuals, schematics, service alters and instructions; requirements (structural and other) found in the American National Standard Institute's manual; environmental rules and regulations relating to vehicle exhaust and spray requirements; vehicle safety rules in Oregon Administrative Rules, Chapter 437 (OSHA regulations).
- Inspect and diagnose equipment malfunctions accurately using mechanical, electrical, or electronic testing equipment.
- Repair a variety of heavy equipment and their auxiliary electrical, electronic, mechanical, hydraulic, or structural components.
- Use welding and other shop equipment to fabricate or modify equipment or component parts.
- Work cooperatively as a member of a team.
- Move parts and equipment safely using appropriate processes and procedures.

Licenses and Certifications: Commercial Drivers License.

NOTE: Some positions require successful candidates to supply tools required for the job. The agency will outline the needed tools at the time of recruitment.

Heavy Equipment Technician 2 - Six (6) years of experience as a journeyman Heavy Equipment Mechanic.

SKILL:

- Safely use the tools associated with the repair of diesel and gasoline powered engines, single and tandem axle dump trucks, motor graders, chip spreaders, truck mounted backhoes, diesel

powered snow blowers, water trucks, front end loaders, tractor/trailer combinations and pavement grinding machines.

- Safely work around, in, and under heavy equipment.
- Safely work with chemicals and solvents and exhaust fumes.
- Read, understand and apply the state motor vehicle codes relating to vehicle height, weight, width, length, and lighting requirements; safety manuals, schematics, service alters and instructions; requirements (structural and other) found in the American National Standard Institute's manual; environmental rules and regulations relating to vehicle exhaust and spray requirements; vehicle safety rules in Oregon Administrative Rules, Chapter 437 (OSHA regulations).
- Diagnose equipment malfunctions accurately using mechanical, electrical, or electronic testing equipment.
- Repair a variety of heavy equipment and their auxiliary electrical, electronic, mechanical, hydraulic, or structural components.
- Use welding and other shop equipment to fabricate or modify equipment or component parts.
- Work cooperatively as a member of a team.
- Move parts and equipment safely using appropriate processes and procedures.

Licenses and Certifications: Commercial Drivers License.

NOTE: Some positions require successful candidates to supply tools required for the job. The agency will outline the needed tools at the time of recruitment.

DISTINGUISHING FEATURE FROM SIMILAR SERIES

Automotive Technician: The Heavy Equipment Technician series is distinguished from the Automotive Technician series because of the assignment maintain, repair, modify, and restore medium (GVWR 10,500-26,000 lbs.) and heavy (GVWR greater than 26,000 lbs.) maintenance and construction equipment and power generation equipment rather than inspect, diagnose, maintain, repair, and modify fleet equipment comprised of a variety of light, medium, and heavy automotive and maintenance equipment.

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STATE OF OREGON
Dept. of Administrative Services
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