



Code: 7638

Family: Construction, Maintenance, and Skilled Labor

Service: Operation and Construction

Group: Steam and Operation Engineering Group

Series: Hoisting and Conveying Operation

CLASS TITLE: HOISTING ENGINEER – MECHANIC

CHARACTERISTICS OF THE CLASS

Under supervision, repairs and maintains heavy duty and off-road equipment and machinery at field sites or in a service shop/garage, and performs related duties as required

ESSENTIAL DUTIES

- Performs mechanical, electrical, and hydraulic repairs on heavy and off-road equipment (e.g., front-end high lift, crawler tractors, backhoes, compactors, pavers, cranes, graders, and excavators) to ensure their safe and proper operation
- Diagnoses, troubleshoots, and repairs systems on heavy equipment such as mechanical and electronic controls, air brake systems, transmissions, propane powered equipment and pneumatic systems
- Diagnoses problems, disassembles units, repairs, or replaces parts and reassembles units in systems including cooling systems, 12- and 24-volt electrical systems, exhaust and emissions control, heating and air conditioning, and steer and suspension systems
- Operates equipment and machinery to diagnose malfunctions and to test completed repairs
- Overhauls engines, replaces engines and rebuilds components
- Services, diagnoses, repairs and maintains speed tandem drive axles with air or electric shift, hydrostatic driven, heavy duty multi-axle suspensions, both conventional steer or air springs
- Removes and replaces worn parts and fittings to maintain equipment and ensure proper operation
- Fabricates, modifies, and installs special equipment or replacement parts using welders, plasma cutters and metal cutting saws
- Performs preventive maintenance work on equipment including changing oil and tires, checking fluid levels, steam cleaning and lubricating parts and equipment
- Tunes gas and diesel engines, service valves, fuel filters and turbo chargers, and pressure checks fuel filters, adjusts injector heights and fuel racks
- Initiates orders for parts and lubricants
- Maintains records and submits reports regarding repair and maintenance work

NOTE: *The list of essential duties is not intended to be inclusive; there may be other duties that are essential to particular positions within the class.*

MINIMUM QUALIFICATIONS

Education, Training, and Experience

- Successful completion of a US Department of Labor registered Operating Engineer – Heavy Equipment Technician apprenticeship training program and journeyman status, or an equivalent combination of education, training, and experience

Licensure, Certification, or Other Qualifications

- A commercial driver's license (CDL), Class A or B, as issued by the State of Illinois required

WORKING CONDITIONS

- Exposure to loud noise, fumes or dust, oily or wet environment
- Exposure to hazardous conditions (e.g., heavy machinery)

EQUIPMENT

- Computers and peripheral equipment (e.g., personal computer, computer terminals, hand-held computer)
- Personal protective equipment (e.g., hard hat, shoes, glasses, gloves, vest, pads)
- Standard tools used in servicing heavy duty and off-road equipment and machinery (hand, electrical, hydraulic, pneumatic and mechanical tools)
- Testing and monitoring equipment (e.g., computerized diagnostic equipment)
- Hydraulic jacks and hoists

PHYSICAL REQUIREMENTS

- Heavy lifting (up to 75 pounds) is required
- Ability to stand and walk for extended or continuous periods of time
- Ability to quickly bend, stretch, twist, or reach out with one's body, arms, and/or legs
- Ability to operate applicable hand tools, power tools, and equipment

KNOWLEDGE, SKILLS, ABILITIES, AND OTHER WORK REQUIREMENTS**Knowledge**

Good knowledge of:

- heavy duty and off-road equipment and machinery mechanical and electrical/electronic systems
- applicable hand and power tools and diagnostic testing equipment
- equipment, materials, and test instruments specific to the heavy equipment / machinist trade
- repair, maintenance, and preventative maintenance methods, practices, and procedures
- general shop safety rules and applicable safety and code standards
- manufacturers' manuals for servicing equipment
- use of safety equipment and protective gear

Knowledge of applicable City and department policies, procedures, rules, and regulations

Skills

- **ACTIVE LEARNING** - Understand the implications of new information for both current and future problem-solving and decision-making
- **ACTIVE LISTENING** - Give full attention to what other people are saying, take time to understand the points being made, ask questions as appropriate, and not interrupt at inappropriate times
- **EQUIPMENT MAINTENANCE** - Perform routine maintenance on equipment and determine when and what kind of maintenance is needed
- **EQUIPMENT SELECTION** - Determine the kind of tools and equipment needed to do a job
- **INSTALLATION** - Install equipment, machines, wiring, or programs to meet specifications

- REPAIRING - Repair machines or systems using the needed tools
- TROUBLESHOOTING - Determine causes of operating errors and decide what to do about it

Abilities

- COMPREHEND ORAL INFORMATION - Listen to and understand information and ideas presented through spoken words and sentences
- SPEAK - Communicate information and ideas in speaking so others will understand
- COMPREHEND WRITTEN INFORMATION - Read and understand information and ideas presented in writing
- RECOGNIZE PROBLEMS - Tell when something is wrong or is likely to go wrong
- REASON TO SOLVE PROBLEMS - Apply general rules to specific problems to produce answers that make sense

Other Work Requirements

- INITIATIVE - Demonstrate willingness to take on job challenges
- STAMINA - Demonstrate energy and stamina to accomplish work tasks
- DEPENDABILITY - Demonstrate reliability, responsibility, and dependability and fulfill obligations
- ATTENTION TO DETAIL - Pay careful attention to detail and thoroughness in completing work tasks

All employees of the City of Chicago must demonstrate commitment to and compliance with applicable state and federal laws, and City ordinances and rules; the City's Ethics standards; and other City policies and procedures.

The City of Chicago will consider equivalent foreign degrees, accreditations, and credentials in evaluating qualifications.

* May be required at entry.

City of Chicago
Department of Human Resources

November, 2021