



Mechanical and Electrical Maintenance Worker IV

DEFINITION

Under general supervision, repairs, maintains, and installs electrical circuits, pumps, motors, controls, regulators, and related equipment; and to do related work as required.

DISTINGUISHING CHARACTERISTICS

This is the advanced journey-level in the Mechanical and Electrical Maintenance Worker series. This classification has primary responsibility for performing a wide variety of journey level tasks related to electrical work, involving both low and high voltage circuits. The work may involve all specialties of the trade, including supervisory controls and telemetering functions. In addition, mechanical repair and installation duties will be assigned to the individual. They are able to work independently but may train others or perform as lead-workers on specific projects and assignments.

EXAMPLES OF DUTIES

Primary responsibilities and duties include, but are not limited to, the following:

- Inspects, maintains, repairs, installs, and tests electrical, mechanical and pneumatic equipment, including circuits, transformers, switches, lighting fixtures, motor starters, motors, outlets and control panels;
- performs the more difficult assignments and uses the tools and testing equipment common to the electrical and electromechanical trades;
- installs conduit and pulls wire for motors, control panels, lighting fixtures, outlets and other related work;
- installs power poles, cross-arms, braces and supporting fixtures;
- directs the work of sub-journeymen and sees that proper safety precautions are observed, with particular emphasis on work performed on energized circuits and establishing electrically safe work conditions and utilizing safe work practices and PPE for testing, troubleshooting, and voltage measuring;
- makes rough estimates of labor, materials, and supplies required to perform specific assignments;
- makes as-built drawings of electrical circuits;
- maintains, repairs, and installs a variety of mechanical equipment, including pumps, motors, regulators and relief valves;
- follows applicable safety rules and regulations;
- performs troubleshooting and diagnostic work on a variety of equipment;
- installs and maintains high voltage (2400 Volt AC) to low voltage (4-20 milliamp) circuitry;
- may design electrical system for new installation or upgrading existing equipment, or to modify a system for safety or efficiency; and
- may make minor electronic repairs.

QUALIFICATIONS FOR EMPLOYMENT

Knowledge of:

- Terms, practices and procedures common to the electrical trade;
- applicable electrical codes and safety regulations;
- operating principles of various mechanical and electrical diagrams;
- tools and equipment used in the repair, maintenance and installation of mechanical and electrical equipment; and
- National Electrical Code.

Ability to:

- Repair and maintain mechanical and electrical equipment;
- read and understand engineering plans and mechanical and electrical diagrams;
- maintain accurate records;
- supervise and train others;
- work cooperatively with others;
- design simple electrical, hydraulic, pneumatic or mechanical systems;
- understand and carry out written and oral instructions;
- work safely with and around hazardous chemicals and electrical equipment; and
- drive a vehicle.

Training and Experience: Any combination equivalent to experience and education that could likely provide the required knowledge and abilities would be qualifying. A typical way to obtain the knowledge and abilities would be:

- Completion of the twelfth grade or its equivalent; and,
- two years of experience as a Mechanical and Electrical Maintenance Worker III.

OTHER REQUIREMENTS

- Per California Government Code, Title 1, Division 4, Chapter 8, Section 3100 "all public employees are hereby declared to be disaster service workers subject to such disaster service activities as may be assigned to them by their superiors or by law."
- Work on an "on call" basis for emergency situations.

LICENSES AND/OR CERTIFICATIONS

- Possession of an appropriate California driver's license issued by the State Department of Motor Vehicles and satisfactory driving record.
- Possession of a valid D1 Distribution Operator certification issued by the California State Water Resources Control Board (SWRCB) is required prior to completion of the probationary period.

PHYSICAL DEMANDS

During the course of performing job duties, the employee will need the mobility to operate equipment, which may include office and/or field equipment, or specialized instruments or tools requiring repetitive arm/hand movement and/or the coordinated movement of more than one limb simultaneously. The employee frequently stands, walks, bends at neck and waists, twists at neck and waist, uses simple and power grasping with both hands, uses fine manipulation of both hands and fingers, and may require use of the arms above the shoulder, climb or balance; stoop, kneel or crouch. While working in the field the employee may walk on uneven or un-level ground surfaces such as hills, slopes, ditches or trenches, on or in tanks, and may work at heights up to ten to twelve feet climbing ladders or stairs. The employee must use small mechanical hand tools, handle small parts, hold and operate heavy tools, pull cable and wire and performs manual labor for extended periods such as frequently lifting 10 to 25 pounds and carrying equipment, and occasionally lift 50 to 75 pounds. This position requires that the employee demonstrate adequate hearing and speech to detect warning alarms, converse in person and over the telephone or radio, and vision to read printed materials, see small parts and color coded wiring, and use a computer screen.

The noise level in the work environment is moderate to loud noise. The employee is exposed to moving vehicles and other moving equipment and machinery, excessive noise, extremes in temperature, humidity, wetness and dust, and must work around high, medium and low voltage circuitry using normal and specialized protective equipment. The position ~~may~~ requires the ability to work overtime and weekends as needed.

Employees who drive on District business to carry out job-related duties must possess a California driver's license for the class of vehicle driven and meet automobile insurability requirements of the District including review of a recent DMV history. In order to drive, individuals must be physically capable of operating the vehicles and equipment safely.

ADDITIONAL PHYSICAL DEMANDS

- The employee must be capable of obtaining and maintaining a proper facial seal in order to fit and properly wear District respiratory equipment.
- Exposure to potentially hazardous materials, low to medium voltage, solvents, odors, fumes, laboratory chemicals and microbiological pathogens.
- The employee must be able to work in above ground or subsurface confined spaces.

To be successful in this job, an individual must be able to satisfactorily perform each of the listed duties. These duties are representative of the knowledge, skill and/or ability required for the position. Reasonable accommodations may be made to enable individuals with disabilities to perform the duties and functions of the position. Requests for reasonable accommodation should be directed to the Human Resources Manager.

Established: March 2004
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Approved by: Human Resources Manager