

**Senior Electrical Mechanic (3834)**  
**Task List 2024**

1. Inspects and repairs electrical transmission, distribution, and receiving equipment including circuit breakers, capacitors, current, power, and potential transformers, tap changers, grounding and disconnect switches, motors, busses, generators, batteries and battery chargers, and load interrupting disconnects in order to provide reliable power to the city.
2. Constructs, installs, and maintains wiring, conduit, transformers, and circuit breakers in order to keep the system safe and reliable.
3. Installs and repairs electrical control equipment including relays, remote controls, solid-state controls, logic controls (analog and digital), micro switches, switchboards, pressure recorders, and telemetering equipment in order to keep the system safe and reliable.
4. Maintains and repairs generating equipment including electric driven generators, peaking units (turbines), oil and water pumps, power-operated valves, and high-voltage DC conversion generators in order to provide reliable and clean power to the city.
5. Inspects and repairs pumps and auxiliary electrical equipment at deep well pumping stations, including power-driven pumps and standby engine equipment for pumps and generators in order to guarantee water service throughout the city.
6. Maintains and repairs electrical equipment in DWP buildings and yards including ballasts, heaters, ventilating fans, sump pumps, air conditioning units, lighting fixtures, and fire prevention equipment, emergency generators and automatic transfer switches.
7. Inspects and maintains hand tools and electric, hydraulic, and pneumatic powered tools in order to keep the equipment in good working condition.
8. Inspects and repairs gas, oil, and water leaks on electrical and auxiliary equipment, adds or changes various fluids, cleans cooling coils, and cleans and paints housing and parts as required in order to maintain equipment reliability.
9. Repairs consumer electrical appliances and equipment such as heaters and lighting fixtures when damaged by DWP equipment malfunction or errors in order to ensure accountability of DWP employees.
10. Assembles electrical equipment and facilities, such as emergency transformers, circuit breakers, portable scaffolds, and temporary electrical racks in order to have equipment ready during emergency situations.

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11. Cleans up and recognizes toxic waste and other dangerous material such as PCB, lead, and asbestos using protective equipment in order to comply with DWP procedures and environmental regulations.
12. Checks equipment pressure gauges, motors, and brakes using test instruments and computing readings to determine if equipment is operating properly in order to ensure the equipment is in good working condition.
13. Obtains clearances to de-energize equipment and arranges to/or switches the current to other equipment in order to avoid injuries and damage to the equipment.
14. Determines causes of equipment malfunctions by testing and inspecting in order to determine the extent of repairs and proper repair procedures.
15. Sets up rigging and directs rigging operations to lift and move heavy equipment in order to comply with OSHA standards and avoid injury.
16. Reads and interprets manufacturers' equipment manuals, electrical prints, wiring diagrams, and engineering specifications in order to determine proper methods for installation and repairs.
17. Estimates labor, equipment, tools, materials, and time needed to complete major maintenance or repair jobs in order to efficiently complete tasks.
18. Investigates and reports on trouble complaints from industrial and commercial electric stations in order to ensure the method of repair is properly chosen.
19. Assists in planning, scheduling, and assigning the work of crew members on major maintenance or repair jobs in order to efficiently complete jobs.
20. Trains crew members by explaining and/or by providing practical demonstration in the following:
  - a. reading and analyzing wiring diagrams and schematics.
  - b. functions and operations of relevant electrical and mechanical equipment, tools, and test instruments.
  - c. proper methods and procedures for inspection, maintenance, repair, assembly, and installation of equipment.
  - d. proper safety procedures and precautions.
21. Directs, observes, and evaluates the technical job performance of crew members in the field, and advises them of their job performance in order to ensure the crew members are following proper standards.

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22. Records in log books and asset management system database, maintenance and repair activities including where and when work was done, time spent on work, what authorizations were necessary, equipment worked on, findings of inspections, probable causes of malfunctions, maintenance and repairs performed in order to provide accurate documentation.
23. Fills out various departmental forms such as bid forms, equipment breakdown reports, tailgate safety meetings, requests for material services, bills of lading, and hazardous waste manifests in order to provide accurate documentation.
24. Discusses with the supervisor the status of operations, and with others the scope and extent of field activities in order to keep jobs within schedule and cost.
25. Handles personnel matters according to department policies, procedures, MOU provisions, and advises employees of City rules and Department policies in order to maintain discipline in the workplace.
26. Sets up a safe work area for the crew, leads daily safety tailgate meetings, and ensures crew safety through observation in order to emphasize workplace safety.