

MAINTENANCE MECHANIC- HVAC

BASIC FUNCTION

Performs skilled mechanical maintenance duties in the construction, diagnosis, repair, installation, and alteration of District heating, ventilation, air conditioning and refrigeration (HVAC) systems and related equipment and facilities; performs preventive maintenance and routine servicing of equipment to ensure efficient operation.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from assigned area supervisor. May provide lead direction to temporary staff and/or student workers.

CLASS CHARACTERISTICS

This classification in the Maintenance series is responsible for independently performing skilled mechanical duties in support of the District's HVAC systems. Employees at this level exercise judgment and initiative in their assigned tasks, receive only occasional instruction or assistance as new or unusual situations arise, and are fully aware of the operating procedures and policies of the department.

EXAMPLES OF TYPICAL JOB FUNCTIONS

1. Repairs/rebuilds mechanical drive systems including, but not limited to, replacement of drive bearings, shafting, blower wheel assemblies, multi-pulley and belt drives, and exhaust blower assemblies and motors for HVAC equipment.
2. Maintains and repairs hot and cold-water pumping systems including motor replacement, bearing and shaft seal replacement, mounting and alignment techniques for proper operation, and replacement of rubber and chain drive couplings; repairs and rebuilds triple duty valve/Y strainer assemblies; checks valves, air and sludge separators, air bleeds and water treatment, air scavenging, and sludge removal.
3. Maintains and repairs cooling towers, evaporator condensers, and air-cooled condensers; maintains, repairs, and replaces fills elements, water distributors, filter screenings, piping, electrical components, and control operations.
4. Maintains hot water boiler operation, including electronic and mechanical safety, primary and secondary pump systems and boiler ignition controls, chilled water systems operations, water flow dynamics, and piping-pumping configurations.
5. Maintains and repairs, as necessary, gas fired furnaces, infra-red heaters, and hydraulic systems.
6. Works and meets with contractors and vendors obtaining estimates, evaluations, reports, and pricing, and provides recommendations accordingly.
7. Attends and participates in pre-construction meetings for assigned projects and work.
8. Responds to emergency electrical and plumbing calls; assists other co-workers as required; may serve as contact person in the absence of the supervisor; provides instruction on the use and operation of HVAC equipment; monitors HVAC over DDC/EMS computer systems; updates and maintains service logs.
9. Participates in District-provided in-service training programs.
10. Performs other related duties as assigned; specific duties not listed does not exclude them for this classification if the work is similar or related.

QUALIFICATIONS

Knowledge of:

1. Operational characteristics of various heating and cooling systems.
2. Commercial, industrial, and institutional electrical distribution systems and energy management systems.
3. Programming principles for automated logic and summit tracer type systems.
4. Boiler maintenance, installation, and repair.
5. Chemical usage required for cooling tower maintenance.
6. Diagnostic equipment used to troubleshoot and resolve HVAC system issues.
7. Piping and plumbing systems related to HVAC systems.
8. Industry safety regulations and precautions.
9. Mathematical principles.
10. Applicable federal, state, and local laws, rules, regulations, ordinances, and organizational policies and procedures relevant to assigned area of responsibility.

Ability to:

1. Troubleshoot, diagnose, maintain, and repair a diverse range of heating and cooling systems and devices.
2. Install, evaluate, and make operating adjustments to heating and cooling systems.
3. Estimate materials and time necessary for project related maintenance and repair.
4. Size and design an air conditioning system to fit an application.
5. Read and interpret as-built blueprints and submittals.
6. Attend and participate in construction meetings.
7. Maintain and update maintenance records and schedules.
8. Apply basic knowledge to new and changing machine/system models.
9. Interpret local and state building codes and procedures as the related to HVAC systems.
10. Work with other trades to support and aide in job performance.
11. Place orders for maintenance and repair for building HVAC systems.
12. Exercise independent judgment within general policy, and procedural guidelines.
13. Effectively use computer systems, software applications relevant to work performed, and business equipment to perform a variety of work tasks.
14. Communicate effectively in the course of performing work tasks.
15. Establish, maintain, and foster effective working relationships with those contacted in the course of work.
16. Demonstrate clear evidence of sensitivity and understanding of the diverse academic, socio-economic, disability, and ethnic backgrounds of students, staff, and the community.
17. Provide efficient, high-level customer service to the public, vendors, contractors, and District personnel.

Education and Experience:

Completion of the twelfth (12th) grade and three (3) years of experience installing, maintaining, and repairing HVAC systems; or an equivalent combination of education, training, and/or experience.

Licenses and Certifications:

1. A valid driver's license and proof of insurability may be required to drive a District or personal vehicle.
2. Possession of valid Refrigerant Recovery and Recycling Equipment Certification and maintain certification throughout employment.

PHYSICAL DEMANDS

Must possess mobility to work in the field; strength, stamina, and mobility to perform medium to heavy physical work; ability to sit, stand, and walk on level, uneven, or slippery surfaces; vision to read printed materials and a computer screen, to distinguish colors, and to inspect and operate equipment; and hearing and speech to communicate in person and over the telephone. Employees frequently reach, twist, turn, kneel, bend, stoop, squat, crouch, grasp, and make repetitive hand movements in the performance of daily duties; work in confining spaces; climb and descend ladders; operate varied hand and power tools; operate motor vehicles and visit various District sites. The job involves fieldwork requiring frequent walking in operational areas to identify problems or hazards, which may include working on live electrical wires. Finger dexterity is frequently needed to operate and repair tools and equipment. Must also possess mobility to work in a standard office setting and use standard office equipment, including a computer. Employees must possess the ability to lift, carry, push, and/or pull materials and objects averaging a weight of 50 pounds or heavier weights, with the use of proper equipment and/or assistance from other staff.

The essential functions of this classification must be performed by the incumbents with or without reasonable accommodations.

ENVIRONMENTAL CONDITIONS

Employees in this classification work in the field and are exposed to loud noise levels, extreme cold and hot temperatures, inclement weather conditions, road hazards, vibration, confining workspaces, chemicals, mechanical and/or electrical hazards, hazardous physical substances, and fumes, dust, and air contaminants. Employees may interact with upset individuals in interpreting and enforcing departmental policies and procedures.