Vocational Instructional Technician – Diesel Mechanics

FLSA Status: Nonexempt
EEOC Job Category: Technicians
Union Representation: Represented

GENERAL PURPOSE
Under general supervision; provides vocational instruction support in the diesel mechanics trades program; prepares equipment, materials, supplies and training aids for classroom instruction and student laboratory assignments; provides instruction and assists students in the proper use and operation of shop equipment; maintains a clean, safe and orderly learning environment; and performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS
Vocational Instructional Technician – Diesel Mechanics is responsible for assisting in maintaining and operating the District’s diesel mechanics shop and supporting the instructional program, including ordering and maintaining an inventory of equipment, tools, supplies and materials and preparing equipment and materials shop for class instruction, demonstrations and student laboratory exercises. The incumbent is responsible for performing a variety of support functions to assist faculty in the general operation of the auto mechanics instructional program. The incumbent may supervise the work of assigned work study students. Work assigned requires a detailed knowledge of subject areas applicable to the specific trades program and the ability to provide instruction to others in an effective manner.

ESSENTIAL DUTIES AND RESPONSIBILITIES
The duties listed below are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to this class.

1. Assists instructors in planning for and conducting class sessions; provides input on class session content and laboratory exercises; prepares equipment and tool trays; rebuilds and repairs hydraulic pumps and hoses prepares other training aids for class sessions; demonstrates techniques, processes and methods for students; tutors students in small groups or on an individual basis on class session material and demonstrated techniques, processes and methods; answers questions and monitors the work of students in completing homework and lab assignments; provides instruction on the proper and safe use of equipment, tools and materials; issues tools and supplies to students for classroom and laboratory use.

2. Prepares equipment, materials, tools and supplies required for class sessions and student laboratory assignments; as necessary, inspects, troubleshoots, rebuilds, repairs, services and/or fabricates engine/transmission stands and other items required; maintains and repairs injectors and fuel pump test equipment and sets up for instructor demonstrations; refers to hard-copy and online manuals, hydraulic and electrical system schematics, wiring diagrams and uses diagnostic tools to determine and repair causes of equipment malfunction; checks out and organizes tools required for student and laboratory use; inspects tools for damage and defects; recommends or sends items out for repair.
3. Demonstrates and tutors students on the use of online programs, including the Cummins QuickService and Caterpillar SIS programs; troubleshoots student computer problems.

4. Operates and demonstrates the use of diesel repair equipment, including engine and electrical system computer diagnostic equipment, truck hoists, chain hoists, engine/transmission stands, hydraulic presses, lathes, milling machines, refrigeration vacuum pumps, pneumatic tools, welding equipment and other specialized equipment and tools; performs basic maintenance to ensure proper operational condition; operates, recharges and demonstrates the use of refrigerant recovery equipment, following EPA guidelines and proper safety procedures.

5. Supervises work study students assigned to the program; coordinates and assigns work; monitors and provides instruction on safe work practices and procedures; provides performance feedback.

6. Prepares requisitions and places orders to maintain an inventory of shop equipment, tools, materials and supplies; picks up ordered items from vendors when necessary; maintains security of lab equipment, materials and facilities; opens and closes shop.

7. Maintains computer, systems and software applicable to the program; performs general administrative and clerical duties in support of program activities, including: forecasting and monitoring expenditures, tracking budget accounts, and maintaining fiscal records; maintaining purchasing and inventory records; preparing and submitting time cards for student workers; maintaining program-specific databases.

8. Assists in maintaining a safe, clean and orderly learning environment to ensure the health and safety of instructors, students, work study assistants and staff; maintains, inspects, repairs and cleans shop facilities and equipment or arranges for their repair and/or replacement; ensures proper storage and handling of hazardous materials and wastes in accordance with all regulatory procedures; arranges for the removal of hazardous materials and wastes in accordance with District risk management procedures.

**OTHER DUTIES**

1. Cleans, sands, prepares and paints equipment; ensure demarcation of the painting area in accordance with regulatory requirements; makes a variety of other shop and building repairs.

2. Performs monthly maintenance on large high pressure steam cleaner and parts washer in compliance with environmental safety requirements.

3. Operates hand trucks and hydraulic pallet jacks.


**QUALIFICATIONS**

Knowledge of:

1. Methods, techniques, parts, tools and materials used in the overhaul, maintenance and repair of heavy duty diesel-powered equipment and vehicles, such as Caterpillar and Cummins equipment, and diesel fuel systems.
2. Operation and maintenance of a wide variety of hand, power and shop tools and equipment common to the trade.

3. Properties of vehicle lubrication systems, including oils and greases used in servicing and maintaining vehicles and equipment.

4. Methods, practices and safety requirements for the diagnosis, repair and recharging of refrigerant systems.

5. Safe work methods and safety regulations pertaining to the work.


7. Welding properties of various metals and alloys.

8. Federal, state and local laws and regulations pertaining to the handling and disposal of hazardous materials and clean air requirements, including EPA requirements applicable to refrigerant systems.

9. Methods and practices of student instruction and tutoring.

10. Administrative practices and procedures, including purchasing and record keeping.

**Ability to:**

1. Diagnose and repair a wide variety of diesel-powered equipment, including fuel, transmission, brake and refrigerant systems.

2. Demonstrate work processes, methods and techniques to students clearly and effectively.

3. Operate and maintain a wide variety of hand, power and shop tools and equipment used in the work.

4. Follow, demonstrate and enforce safe work practices, safety precautions and safety policies and procedures when working with students and student workers.

5. Estimate necessary materials and equipment to complete assignments.

6. Read and interpret manuals, schematics, diagrams, specifications and drawings applicable to the work.

7. Use shop mathematics to make calculations.

8. Organize, set priorities and exercise sound judgment within areas of responsibility.

9. Organize and maintain records and files.

10. Communicate clearly and effectively, both orally and in writing.

11. Understand and follow written and oral instructions.

12. Use tact, discretion, courtesy and patience in dealing with sensitive and difficult students and situations.
13. Establish and maintain effective working relationships with instructors, faculty, staff, vendors, students, the public and others encountered in the course of work.

**Education, Training and Experience:**
A typical way of obtaining the knowledge, skills and abilities outlined above is graduation from high school or G.E.D. equivalent; and two years of journey-level diesel mechanics experience; or an equivalent combination of training and experience. An Associate's degree in automotive technology is highly desirable.

**Licenses; Certificates; Special Requirements:**
A valid California Class B driver's license and the ability to maintain insurability under the District’s vehicle insurance policy.

A valid forklift operator's certificate.

An Automotive ASE Refrigerant Recovery, Recycle and Reuse Certification and an ARI Institute Universal AC/Ref Certification.

OSHA Safety Certification.

**PHYSICAL AND MENTAL DEMANDS**
The physical and mental demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

**Physical Demands**
While performing the duties of this class, an employee is regularly required to use hands to finger, handle, feel or operate objects, tools, or controls and reach with hands and arms. The employee is frequently required to stand and talk or hear conversations and equipment signal warnings. The employee is frequently required to walk; sit; climb or balance; stoop, kneel, crouch or crawl.

The employee must frequently lift and/or move up to 50 pounds and occasionally lift and or move up to 100 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception and the ability to adjust focus.

**Mental Demands**
While performing the duties of this class, the employee is regularly required to use written and oral communication skills; read and interpret documents and information; analyze and solve problems; observe and interpret people and situations; use basic math; learn and apply new information or skills; work under intensive deadlines with constant interruptions and interact with District instructors, faculty, staff, students, the public and others encountered in the course of work.
WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The employee works in an automotive mechanics shop near moving mechanical equipment and parts and works on wet, slippery surfaces. The employee is regularly exposed to fumes or airborne particles, toxic or caustic chemicals and risk of electrical shock. The noise level is frequently loud.