

EQUIPMENT MECHANIC III (CNG)

JOB DESCRIPTION

Classification Responsibilities: An Equipment Mechanic III Compressed Natural Gas (CNG) performs skilled diagnostic, maintenance, and repair of heavy-duty gasoline, diesel, and CNG powered equipment. Work requires a high degree of technical knowledge as well as the ability to exercise independent judgment in determining the method of repair as assignments are received in the form of general oral or written work orders. Work involves diagnosing and repairing electrical and hydraulic systems, and performing major repairs on a wide range of vehicles, including heavy construction and refuse equipment. In addition, this classification will be responsible for working on heavy-duty CNG trucks which requires more in-depth training, knowledge of CNG operating systems, CNG tank and line inspections, and CNG safety awareness. Specific duties include: verifying CNG engine operation complaints; checking for and retrieving fault codes to determine further diagnosis; inspecting CNG engine assembly and engine compartment for natural gas, oil, coolant, exhaust, or other leaks; inspecting CNG engine components and compartment wiring harness, connectors, seals, and locks; checking for proper routing and terminal/connector condition to determine needed repair; checking CNG engine exhaust for odor, smoke, or excessive temperatures; performing CNG fuel supply system tests; checking fuel for contamination and consumption; performing air intake system restriction and leakage tests; and performing CNG Intake manifold pressure tests.

This classification will also be responsible for training and mentoring employees in the Equipment Mechanic II Trainee, Equipment Mechanic II, Senior Equipment Mechanic II, and Equipment Repair Assistant classifications. This will include cross training in areas of specialization that the incumbents are certified in. As a part of this the incumbents will be required to maintain a current State of Arizona Diesel Emission Certificate along with at least six Automotive Service Excellence (ASE) Medium-Heavy Truck certifications, four of which must be CNG Transit (H1), Diesel Engine (T2), Brakes (T4), and Electrical/Electronic Systems (T6). Additionally, this class will be required to successfully complete the Cummins ISL-G Natural Gas training class, complete the Cummins CNG Virtual College course, CSA CNG Tank Inspector class, and have knowledge of National Fire Protection Agency (NFPA) 52 regulations prior to criteria-based promoting into this class. This class is also responsible for performing related duties as required.

Distinguishing Features: The Equipment Mechanic III (CNG) is distinguished from the Senior Equipment Mechanic II by the responsibility for working on specialized CNG equipment and training Senior Equipment Mechanic II's in CNG. Incumbents may be assigned to a shift that includes nights, weekends, and holidays, and work is subject to rotational stand-by. Employees are required to use the appropriate safety equipment and procedures in performing assignments. The Equipment Mechanic III (CNG) receives supervision and work assignments from a Shop Supervisor, and work is reviewed through spot check observation, conferences, problems encountered, and overall results achieved. This class is FLSA nonexempt.

QUALIFICATIONS

Employee Values: All employees of the City of Mesa are expected to uphold and exhibit the City's shared employee values of Knowledge, Respect, and Integrity.

Minimum Qualifications Required. Any combination of training, education, or experience equivalent to a minimum of five years' experience as a journey-level mechanic, including a minimum of two years' experience as a City of Mesa Equipment Mechanic II and/or Senior Equipment Mechanic II. A current Arizona Department of Environmental Quality (ADEQ) FD Vehicle Emissions Inspector license. Six ASE Medium-Heavy Truck certifications, four of which must be: CNG Transit (H1), Diesel Engine (T2), Brakes (T4), and Electrical/Electronic Systems (T6). Successful completion of the following: Cummins ISL-G Natural Gas training class, Cummins CNG Virtual College course, CSA CNG Tank Inspector class. Knowledge of NFPA 52 regulations.

Special Requirements. Must provide own basic hand tools and rollaway box. Must possess a valid Arizona Driver's License by promotion date. Must obtain an International Mobile Air Conditioning Association (IMACA) Certification to perform air conditioning work within 90 days of hire. Must meet the qualifications to wear a tight fitting respirator by passing a medical evaluation in accordance with Code of Federal Regulations (CFR) 1910.134 by hire or promotion date and must maintain certification (*by assignment*).

Substance Abuse Testing. Due to the safety and/or security sensitive nature of this classification, individuals shall be subject to pre-employment or pre-placement alcohol, drug and/or controlled substance testing as outlined in City policy and procedures. Certain positions within this class are subject to Department of Transportation (DOT) Federal Motor Carrier Safety Administration (FMCSA) drug and alcohol testing as outlined in 49 CFR Part 382 (*by assignment*).

Preferred/Desirable Qualifications. An Associate's degree in Diesel Mechanics and Technology or equivalent is highly desirable. An ASE Medium-Heavy Truck Master Technician status certification is highly desirable.

ESSENTIAL FUNCTIONS

Communication: Communicates with equipment operators, coworkers and user department representatives in order to locate disabled vehicles during service calls or to determine the appropriate repair for the City's vehicles and equipment. Writes comments on repair orders to exchange information and reports progress during the course of repair work. Estimates cost and time to determine the most cost-effective method of repair.

Manual/Physical: Diagnose and repair drivability concerns on equipment utilizing electronic tools, shop manuals, and other reference material. Overhauls and repairs hydraulic, electronic and brake systems. Tests, adjusts, and repairs fuel systems, transmissions, brake components, and other mechanical devices. Performs vehicle emissions testing on diesel engines. Sets hydraulic pressures to manufacturer specifications. Troubleshoots and repairs hydraulic and electrical problems, including: stuck valves, damaged pumps, and bypassing cylinders. Removes and installs hydraulic cylinders and components. Measures distances to determine wear values, such as brake drums and internal engine components, and to correct mechanical discrepancies. Operates vehicles and equipment requiring a standard Arizona Driver's License to road test. Uses screwdrivers, wrenches, air-powered tools, etc., in completing repair work. Detects air leaks while inspecting air brakes. Detects vapors from hydraulic, motor, and transmission oils, brake fluids, diesel fuel, gasoline, etc. Inspects equipment and vehicles to assist in problem diagnosis. Traces electrical systems. Works with brake cleaners and solvents. Cleans work area and equipment. Uses a respirator when performing duties requiring exposure to hazardous fumes and/or when working in a confined space. Moves refuse to gain access to the area behind packer

blades in performing repair work. Must be physically able to safely lift a minimum of 50 pounds. Moves heavy (50 - 800 pounds) objects, such as transmissions, engines, etc., with the assistance of a forklift or other device. Works in small, cramped areas, at heights greater than ten feet, in repairing lighting systems on vehicles and performing operational and safety inspections on aerial manlift equipment. Works in a variety of weather conditions in performing field service or road calls. Works around or uses potentially hazardous materials requiring the use of specialized equipment. Meets scheduling and attendance requirements.

Mental: Diagnoses operational problems on heavy-duty equipment, such as gasoline, diesel, and CNG engines, transmissions, brakes, hydraulic systems, etc., in order to determine the source of a problem. Comprehends, interprets, and makes inferences, and applies knowledge from shop service manuals to follow recommended repair procedures. Prioritizes own work assignments. Reads and interprets schematic drawings in diagnosing and correcting wiring problems. Learns job-related material regarding electrical and hydraulic systems through on-the-job training. Learns proper repair techniques as recommended by the manufacturer in classroom settings.

Knowledge and Abilities: (The knowledge and abilities listed may not apply to all positions.)

Knowledge of:

the hazards and safety precautions of the mechanic's trade;
CNG leak detection methods and procedures;
NFPA 52 Regulations;
CNG hazards, storage, and installation;
CNG turbochargers, CNG high pressure regulators, CNG low pressure regulators, CNG Tank mounting and bleeding of fuel pressure to replace components under pressure;
the methods, materials, tools, and standard practices of the heavy-duty mechanic's trade;
the principles of operation of internal combustion and diesel engines;
steering and suspension systems, and electrical systems and equipment;
the operating and maintenance requirements of heavy-duty equipment;
the installation and repair of major systems, including air conditioning, air brakes, and air systems;
the state gas or diesel engine emissions testing requirements; and
the techniques and practices of gas and arc welding.

Ability to:

diagnose and repair operational problems on heavy-duty equipment;
make crucial measurements and decisions in determining whether system components comply with existing state, federal, and NFPA 52 regulations;
understand and effectively carry out verbal and written instructions;
prepare and maintain accurate work records of maintenance work;
handle all physical requirements of the class; and
establish and maintain effective working relationships with management, coworkers, supervisors, and user departments.

The duties listed above are intended only as general illustrations of the various types of work that may be performed. Specific statements of duties not included does not exclude them from the position if the

work is similar, related, or a logical assignment to the position. Job descriptions are subject to change by the City as the needs of the City and requirements of the job change.

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INCREMENTS 81-200

PAY GRADE: 48

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