

BOROUGH OF BELLEFONTE POSITION DESCRIPTION

POSITION TITLE: Mechanic
DEPARTMENT: Public Works
REPORTS TO: Public Works - Superintendent
FLSA STATUS: Non-Exempt
CLASSIFICATION: 5, 6 or 7

Overall Objective of Job:

The fundamental reason this job exists is to perform highly skilled work in the diagnosis, maintenance and repair of trucks, heavy equipment, automobiles, and motorcycles to ensure Borough vehicles are well maintained and serviced. The essential functions are: service in the diagnosis, maintenance, repair of large trucks, off-road heavy equipment, automobiles, light trucks, motorcycles, small engines; performs equipment repair work on light, medium and heavy duty trucks, and off-road equipment; communicates with other department Public Works personnel and the Administrative Office.

Essential Functions of Job:

- Repairs various large trucks and off-road heavy equipment, to include front-end work, engine, transmission, differentials, exhaust systems, and/or ignition systems;
- Operates vehicles and equipment in order to diagnose problems and to determine if vehicles or equipment is functioning properly after repairs have been made;
- Adjusts wheel bearings to include repacking with grease and re-installing wheel bearings and tightening wheel bearing to proper specifications being certain not to over tighten;
- Repairs or replaces air system components to include compressors, valves, governors, lines, hoses, and fittings;
- Inspects air valves, fittings, and hoses for leaks and replaces fittings, hoses, brake chambers, axle seals, gaskets, or parts to air system components such as compressors, valves, and governors;
- Diagnoses and replaces fuel system parts such as fuel injectors, fuel injection pumps, glow plug components, fuel filters, clamps, and fuel lines;
- Test drives vehicles or equipment to determine the safety of the vehicle or equipment and determines if the vehicle or equipment should be taken out of service;
- Bleeds fuel system to remove air;

- Diagnoses and repairs fuel injection systems such as setting injectors, cleaning injection systems and replacing worn components;
- Diagnoses and repairs cooling system and inspects for leaks and removes and replaces parts such as water pump, thermostat, and belt-driven fan;
- Tears down and rebuilds gasoline and diesel engines, carburetors, transmissions, turbo chargers, engine head, sleeves, pistons, and rings;
- Performs general maintenance on cooling systems to include checking gauges, air and hydraulic fan clutches, fan motors, relay switches, water pumps, radiators, and hose assemblies;
- Replaces defective engines and sub-assemblies such as power take-offs and two speed axle motors;
- Diagnoses and repairs clutches in various maintenance equipment;
- Fabricates materials to repair damaged or broken parts of equipment and vehicles such as fenders or shields;
- Sands down and paints various parts of equipment and vehicles in order to restore equipment into proper condition;
- Runs diagnostic tests in order to identify code problems and to isolate the problem for repair;
- Replaces various sensors such as oxygen sensors to restore engines and transmissions to proper working condition;
- Calls businesses or dealers to discuss problems and repair procedures on equipment or vehicles;
- Responds to telephone calls or inquiries from supervisor or other department staff regarding the status of vehicle or equipment repairs or to report vehicle or equipment maintenance needs;
- Orders parts for vehicles and equipment;
- Reviews maintenance history of vehicles using computer or paper files;
- Oversees the commissioning of new automobiles, trucks, and heavy equipment as needed to prepare the vehicle or equipment for use to include ensuring vehicle or equipment meets specifications, stamping tires, inventorying parts, checking features of the vehicle, installing emergency lights and decals;
- Oversees the de-commissioning of old automobiles, trucks, heavy equipment, and prepares for sale or disposal to include replacing tires, removing decals and emergency lights, inspecting vehicle or equipment to identify problems and arranging for repainting;
- Troubleshoots and repairs vehicle electrical systems to include replacing lights, garbage-packing system, charging systems, and vehicle computer systems;
- Troubleshoots and replaces electrical gauges in vehicles;
- Troubleshoots and repairs or replaces wiring harness, controls, and switches;
- Troubleshoots, repairs and replaces wiring, relay switches, and solenoid valves;
- Repairs hydraulic system on heavy equipment to include leaks on cylinders, lines, and valves;
- Adjusts valves on hydraulic system to include sequence valve if system is not functioning properly;
- Repairs electrical circuitry valves, switches and controls that operate the hydraulic system to include repairing or replace wiring, and switches;

- Repairs power take-off systems to include replacing lines, hoses, couplings, and gaskets and tightening loose bolts where the system attaches to the transmission;
- Repairs conventional, anti-lock, and air-over-hydraulic brakes to include turning drums and rotors use a brake lathe, brake bleeder (on standard and high-pressure systems), mounting tires using a computer tire balancer or high performance tire changer;
- Inspects air brake systems components such as shoes, wheel cylinders for wear, and brake drums for wear or stretch;
- Rebuilds wheel cylinders to include taking cylinders apart, replacing parts, and re-assembling the cylinder;
- Replaces, repairs and/or adjusts air and hydraulic brakes, compressors, master cylinders, valves, pumps, brake shoes, and pads, wheel cylinders, cams, drums, and hardware.
- Other duties as assigned.

Supervision Received:

Public Works Superintendant, Assistant Superintendant

Supervision Given:

None.

Working Conditions:

- Primarily an indoor environment but some exposure to varied elements of heat, cold, rain; and snow;
- Exposure to loud noise and vibration;

Essential Physical Demands:

- This position requires physical effort at frequent intervals and the employee must be able to lift up to 90 pounds without assistance;
- The employee must be able to continuously bend, lift, stoop, climb, and reach to perform the essential functions of the position;
- Must be able to work in extreme weather conditions;
- The position requires the employee to be able to tolerate high levels of noise associated with the operation of equipment and machinery;

Qualifications:

A. Education/Training:

- High school diploma or the equivalent required;
- Class B Commercial Drivers License
- Must have achieved and maintain the State mandated, Department of Environmental Protection –Water Certification B, E with Subclass 8 and 11, as issued by the State Board for Water and Wastewater Systems Operators (required within 2 years of date of hire) .

- PA State Inspection License
- PA State Emissions License

B. Work Experience:

Minimum Qualifications for Classification 5 : Applicants must have at least three (3) years of experience as an automotive, diesel engine, heavy equipment, or fire apparatus mechanic at the journeyman level within the past five years.

Minimum Qualifications for a Classification 6: Applicants must have at least five (5) years of experience as an automotive, diesel engine, heavy equipment, or fire apparatus mechanic at the journeyman level within the past five years.

Minimum Qualifications for a Classification 7: Applicants must have at least ten (10) years of experience as an automotive, diesel engine, heavy equipment, or fire apparatus mechanic at the journeyman level within the past five years. In addition, five (5) of those ten (10) years-experience must be working for Bellefonte Borough as a mechanic.

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Knowledge, Skills and Abilities Required:

Knowledge of automotive air conditioning systems on automobiles, trucks, and heavy equipment to include the operation and location of parts, procedures for repairing or replacing parts, and safety precautions as needed to make repairs or replace parts.

Knowledge of the principles of operation and repair of gasoline and diesel powered engines or components to include fuel, air, cooling, and oil systems as needed to diagnose problems, and repair or replace parts.

Knowledge of the principles of operation and repair of hydraulic systems on heavy equipment to include methods of repairing leaks on cylinders, lines, valves, circuitry valves, adjusting valves, and replacing lines, hoses, couplings, and gaskets on power-take off systems as needed to make repairs or replace parts.

Knowledge of electrical systems on automobiles, trucks, motorcycles, and heavy equipment to include procedures for repairing or replacing parts, recognition of parts, safety precautions, and the location and operation of parts as needed to make repairs or replace parts.

Knowledge of the principles of operation and repair of hydraulic, anti-lock, and air-over-hydraulic brake systems on automobiles, trucks, motorcycles, farm equipment and heavy equipment to include how to inspect systems, conduct diagnostic tests, adjust or replace parts, and inspect parts for damage or wear as needed to make repairs or replace parts.

Knowledge of the occupational hazards and safety rules, regulations, and precautions of the mechanical trade to include proper lifting techniques, keeping hands and limbs free from potentially threatening conditions and performing maintenance only after safety precautions as needed to prevent injury to self or other mechanics.

Knowledge of various hand, electric, diagnostic, and air tools used in troubleshooting and making mechanical repairs to include the purpose, practical, and proper uses of each tool as needed to perform repairs and make adjustments on various makes and models of automobiles, trucks, motorcycles, farm equipment, and heavy equipment.

Knowledge of the manufacturers' specifications for proper torque adjustments on vehicles/equipment such as foot pounds or inch pounds as needed to perform preventive maintenance and repairs.

Skill at using hand tools in the repair of heavy equipment such as wrenches, chisels, brass punches, screwdrivers, nut drivers, pliers, and wire cutters as needed to make repairs, replace parts, or perform preventive maintenance.

Skill at using air tools when making repairs to automobiles, trucks, motorcycles, and

heavy equipment such as drill, drive ratchet, impact wrench, air drive wrench and socket, air chisel, and air sander as needed to make repairs, replace parts, or perform preventive maintenance on vehicles/equipment.

Skill at repairing hydraulic systems on various makes and models of heavy equipment to include cylinders, lines, valves, circuitry valves, transfer valves, wiring, switches and controls using proper tools.

Skill at repairing electrical systems on various makes and models of heavy equipment to include lights, gauges, ignition system, wiring harness, batteries, controls and switches using proper tools.

Skill at repairing or replacing brake systems on various makes and models of heavy equipment such as shoes, drums, brake chambers, wheel cylinders, diaphragms, air compressors, and o-rings, using proper tools.

Skill at diagnosing and isolating defects in engine or body parts or operating systems on automobiles, trucks, motorcycles, farm equipment and heavy equipment such as determining if parts are worn or defective, and isolating the problem using diagnostic tools or equipment.

Ability to communicate verbally to include the proper use of technical jargon associated with mechanical repairs, ensuring instructions or questions are clear and knowing when to clarify information or instructions or to ask additional questions as needed to isolate and diagnose problems, determine the method of repairs, or explain the precautions or steps that are necessary for the operator to ensure proper maintenance or operation of the equipment.

Ability to read, comprehend, and interpret complex oral and written technical instructions provided by supervisor or manufacturer's or owner's manuals, and vendor catalogues as needed to make repairs, service equipment, locate vendors, train other employees, or diagnose problems.