HEAVY DUTY FIRE EQUIPMENT MECHANIC

DEFINITION

Provides lead supervision to a crew of mechanics and performs the more difficult work involving the inspection, maintenance, diagnosis, repair and testing of a variety of fire apparatus, light and heavy support vehicles and other specialized firefighting equipment.

DISTINGUISHING CHARACTERISTICS

Incumbents of this class normally work on construction, road maintenance, firefighting, and other equipment generally of a heavy nature and requiring special techniques and practices. Occasionally they may do some automobile and truck maintenance and repair work. A Heavy Duty Equipment Mechanic may work in a construction equipment repair shop or may be assigned to make repairs in the field, sometimes under inclement weather conditions. In the shop, Heavy Duty Equipment Mechanics are normally subject to supervision and usually receive detailed assignments, either orally or in the form of plans, sketches, or written work orders. A Heavy Duty Equipment Mechanic frequently is required to hand fit and adjust various parts made for special equipment, using hand tools and common shop machines such as drill presses and grinders. The work does not require the skilled operation of precision machine tools, although the use of overhead cranes and other hoisting gear is necessary. Employees of this class may be assigned to work with an apprentice for training purposes.

EXAMPLES OF DUTIES

Provides technical guidance to a crew of fire equipment mechanics and participates in the inspection, maintenance, repair and testing, including major and minor overhaul of power plants, drive trains and other component parts of a variety of fire apparatus, light and heavy support vehicle and other specialized firefighting equipment. Lays out jobs, estimates labor hours and material requirements. Controls the parts and materials needed for repair work requisitioned by mechanics. Maintains productivity standards and quality control and makes written reports to the Fire Fleet Services Managers as necessary. May perform the work of a Fire Equipment Mechanic as required.

• Repairs heavy construction, road maintenance, or firefighting equipment, such as gasoline, diesel and alternative fuel, such as compressed natural gas, tractors, motor graders, flushers, sweepers, skiploaders, rollers, power shovels, fire apparatus, cranes, manlift devices hoists, trenching machines, backfillers, concrete mixers, compressors, generators, pumps, riding mowers**,** and pneumatic tools;

• May repair automobiles, buses, and trucks;

• Removes, repairs, overhauls, and installs engines, brake systems, clutches, transmissions, differential assemblies, hydraulic pumps and systems, low and high pressure water pumps, valves,

piping systems, tanks, fuel injection systems, and accessories commonly found on construction, road maintenance, and firefighting equipment;

• Installs pistons, rings, and pins;

• Adjusts bearings;

• Cleans carburetors;

• Tunes motors;

• Refaces and reseats valves;

• Repairs ignition systems;

• Repairs track rollers, carriers, and idlers;

• Replaces broken gas lines, brake lines, hoist cables, steering gears, drive shafts, and other parts;

• Checks and aligns front ends;

• Repairs fire equipment bodies;

• Straightens frames and axles;

• Repairs and overhauls mechanical equipment and accessories on fireboats;

• May repair or install lights, wiring systems, and other electrical parts;

• Inspects heavy equipment in the field to detect operating faults and to make minor repairs;

• Writes reports on the condition of equipment, outlining repair work to be done in the shop;

• May use a data terminal or personal computer to input and retrieve maintenance information.

• Assembles trailers and mounts special equipment, such as air compressors, water pumps, or hoists;

• Alters equipment to meet special requirements;

• Road tests equipment;

• Uses electric drills, grinders, valve facers, drill presses, hydraulic presses, hoists, and other shop machines;

• Operates motor analyzers, dynamometers, and various gauges;

• Performs rough welding and brazing;

• Inspects equipment in the shop to determine necessary work;

• Follows oral instructions, blueprints or sketches;

• Makes routine reports and keeps routine records;

• May direct a helper;

• May train an apprentice;

• May drive an automobile or light truck in field repair work.

Employees of this class occasionally may be assigned other duties for training purposes or to meet technological changes or emergencies.

SPECIAL REQUIREMENTS

California Class B Driver License.

Training and Experience: Any combination of training and experience which would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Work Background: Two years of progressively responsible and varied level work experience performing skilled maintenance and repair work on fire apparatus, fire equipment, automotive, and other power-driven equipment, including extensive experience on diesel engines and hydraulic systems.

Completion of a recognized apprenticeship or attainment of journey-level rank as a heavy duty equipment mechanic; or

• Two years of full-time paid experience as a journey-level equipment mechanic which includes the repair of a variety of heavy duty gasoline and diesel powered vehicles or construction equipment; or

• Five years of full-time paid experience as a helper to an equipment mechanic, of which two years must have been as a helper to a heavy duty equipment mechanic;