

**MONTGOMERY COUNTY GOVERNMENT
ROCKVILLE, MARYLAND
CLASS SPECIFICATION**

**Code No. 007770
Grade 22**

FIRE/RESCUE APPARATUS AND EQUIPMENT TECHNICIAN

DEFINITION OF CLASS

This is both administrative and highly skilled work managing shop operations and overseeing and performing emergency and routine repair and preventive maintenance on a variety of heavy-duty and highly specialized apparatus and equipment used in the Fire/Rescue Service. Contacts are with Fire/Rescue station and Corporation personnel, and Fire/Rescue personnel from other stations, to exchange information concerning scheduling maintenance and repairs, to provide training, and to provide subject-matter advice based on expertise; with other repair facilities, equipment and parts suppliers, dealers and manufacturers to exchange information, order and obtain parts, schedule repairs and delivery of equipment, services, and parts, and to resolve design and warranty problems.

An employee in this class, working under the general supervision of a Fire/Rescue officer, is responsible for shop management, and for the performance of, and leading others in, preventive maintenance and repair of a variety of specialized Fire/Rescue, and Emergency Medical Services vehicles and equipment including hydraulic, pneumatic and mechanical systems and controls, diesel and gasoline engines, electrical/electronic systems and components, pumps, tanks, piping, nozzles, emergency medical services systems, and self-contained breathing apparatus. Additional responsibilities include maintaining records; ordering and maintaining supply and parts inventories; taking unsafe vehicles and equipment out of service; and ensuring the availability of back-up apparatus and equipment. Work requires independent judgment, and the knowledge and skill to plan and oversee shop operations and regular maintenance schedules; and to diagnose and repair a variety of complex apparatus and equipment. An employee in this class determines the approach to be taken and the methodology to be used, and has full technical responsibility for the work. Work is performed in accordance with established department guidelines and procedures, NFPA standards, manufacturers' technical manuals and specifications, and State and County maintenance requirements which apply generally, but which may require modification or deviation to accommodate unusual problems. Complexity of the work derives from determining appropriate maintenance schedules; developing annual parts and material inventories, and maintenance/repair/rehabilitation cost estimates for apparatus and equipment for the Budget; determining causes of complex equipment and system malfunctions, and tracing and locating problems; and selecting and employing the correct tools and devices to conduct tests and make appropriate repairs. The proper performance of this work affects the safe and reliable operation of Fire/Rescue apparatus and equipment, and the availability of that apparatus and equipment for service. Work requires strenuous physical effort for prolonged periods of time, and the occasional lifting of parts and equipment weighing in excess of one hundred pounds. Work is performed both in and out-of-doors as required. The employee is exposed to dust, grease, heat, fumes, dirt, and other irritants, to adverse weather conditions, and to the risk of physical injury from equipment and caustic materials. Strict adherence to safety precautions/procedures and the use of protective clothing are necessary. The employee may be required to work outside of normal business hours.

EXAMPLES OF DUTIES: (Illustrative Only)

- Plans, schedules, organizes, and carries out a wide variety of repair and preventive maintenance tasks on light and heavy-duty Fire/Rescue apparatus, Emergency Medical Services apparatus and equipment, and other specialized Fire/Rescue equipment.
- Instructs and leads others in the performance of maintenance and repair activities; inspects work in progress and/or on completion.
- Manages shop operations, including maintenance of parts stock, fuel, and general inventory; obtains bids to purchase equipment and parts, including fuels, lubricants and oils, consistent with established policy; maintains records of repair and maintenance work performed and time and materials required, and prepares reports as necessary; develops and provides costs and information for the annual budget for apparatus, equipment, tools, parts, materials and services, and monitors expenditures.
- Develops, maintains and monitors a regular maintenance, inspection and testing schedule.
- Performs difficult diagnoses of malfunctions, often using complex diagnostic equipment, and determines and implements corrective action.
- Performs major repairs, fabricating parts and housings for unobtainable items.
- Furnishes technical advice to other personnel on difficult/complex jobs.
- Selects and complies with appropriate repair specifications and procedures.
- Connects, meshes, aligns, and adjusts items and systems to assure proper operation of the complete system or vehicle.
- Reads and interprets technical manuals and service recall bulletins.
- Reads and interprets sketches, specifications, and service manuals.
- Meets with and talks to vendors to discuss and obtain prices and specifications concerning parts, supplies, tools, and equipment.
- Conducts tests of parts and equipment to improve the safety and economy of repair and preventive maintenance operations.
- Welds and, as necessary, fabricates parts and tools for older modified fire and rescue apparatus.
- Maintains firefighting and emergency medical service small tools and equipment, such as fans, hydraulic tools, Hurst tools, chain saws, circular saws, and other similar appliances.
- Maintains and repairs self-contained breathing apparatus.
- Performs minor body and component repairs.
- Makes emergency road calls to deal with emergency vehicular breakdowns during the day, weekends, and at night, as required.
- Responds to, and monitors the performance of, Fire/Rescue apparatus on major incidents.
- Conducts State, County, and corporation-required annual service tests on Fire and Rescue Service pumpers and aerial ladders; and performs yearly State-required inspections.
- Participates in the investigation of auto accidents involving Fire/Rescue equipment, and provides damage estimates for insurance purposes.
- Prepares specifications for the replacement of apparatus and equipment, Invitations for Bid (IFBs), and participates in the bid selection process.
- Maintains sirens, lights, and other warning devices.
- Ensures that the work area is clean and orderly.
- Performs related duties as required.

KNOWLEDGE, SKILLS AND ABILITIES:

- Thorough knowledge of the mechanical makeup, operation, and working relationships of a variety of heavy-duty systems, assemblies, mechanisms, and parts, including major systems such as diesel and gasoline engines, automatic and non-automatic transmissions and gear reduction systems, and driveline assemblies, including differentials, power divides, and dual speed axles; knowledge of hydraulic lifting, turning, and positioning systems, including their mechanical, hydraulic, pneumatic, electronic and computerized controls.
- Thorough knowledge of electrical systems and components.
- Thorough knowledge of current safety practices, repair and preventive maintenance methods and practices, test equipment and tools used in the repair and maintenance of heavy duty vehicles, including Fire/Rescue apparatus.
- Considerable knowledge of multiple firefighting vehicular components and small tools and equipment, including fire pumps, tanks, piping, nozzles, Hurst tools, circular saws, and small motorized engines.
- Considerable knowledge of welding equipment and its use.
- Considerable knowledge of, and the ability to apply, National Fire Protection Association (NFPA) Standards for fire pumps, automotive apparatus, fire aerial devices, and related preventive maintenance; Maryland and Federal Department of Transportation (DOT) Standards; manufacturers' maintenance and repair manuals; and OSHA and MOSH Standards as they relate to the inspection, maintenance and repair of Fire/Rescue apparatus and equipment.
- Skill in the use of hand and power tools and other equipment associated with the heavy mechanic trade.
- Skill in removing and tearing down major and specialized components and assemblies such as engines, transmissions, power take-off, pumps, and ladder assemblies, and in rebuilding, adjusting, reinstalling, aligning, and meshing such components and assemblies.
- Ability to lead others; and provide guidance, training and assistance to Department Mechanics, Firefighter/Rescuers, and other staff in the use, repair and maintenance of Fire/Rescue apparatus and equipment.
- Ability to operate all types of Fire/Rescue equipment and apparatus which must be maintained and repaired, including pumps and aerial ladders.
- Ability to diagnose difficult and complex repair problems and to take appropriate corrective action.
- Ability to discuss and obtain corrective action from manufacturers when apparatus and equipment under warranty fail.
- Ability to interpret repair manuals, charts, graphs, and wiring diagrams.
- Ability to perform shop mathematics.
- Ability to communicate clearly and effectively, both orally and in writing; and to maintain records and prepare reports as required.
- Ability to estimate cost of parts and repairs which must be contracted out.
- Ability to weld and to fabricate essential parts.
- Ability to maintain self-contained breathing apparatus.
- Ability to lift and move objects weighing up to and occasionally more than one hundred (100) pounds.
- Ability to work overhead or in stretched, cramped, awkward, tiring, and uncomfortable positions for prolonged periods.
- Ability to distinguish between colors.

- Ability to use and wear personal protective clothing and equipment when exposed to dust, fumes, and other irritants to eyes, nose, ears, and respiratory system.

MINIMUM QUALIFICATIONS:

Experience: Eight (8) years of journey-level experience in the maintenance and repair of automotive or heavy mobile equipment, at least six (6) years of which involved maintenance and repair of fire/rescue apparatus, other heavy-duty vehicles and mobile equipment, or commercial transit equipment, and at least one (1) year of which must have involved lead level/supervisory and/or shop management responsibility.

Education: Graduation from high school or High School Certificate completion recognized in the State of Maryland.

Equivalency: An equivalent combination of education and experience may be substituted.

Training: Successful completion of all training courses and certifications required by the Montgomery County Fire/Rescue Commission.

LICENSE AND CERTIFICATION REQUIREMENTS:

- Possession and maintenance at all times of a valid Class "A" or "B" (or equivalent) Commercial Driver's License from the applicant's state of residence appropriate to the equipment on which the employee works.
- Certification for maintenance of self-contained breathing apparatus for firefighting, if required for assigned position.

Note: There will be no substitutions for this section.

PROBATIONARY PERIOD:

Individuals appointed or promoted to this class will be required to serve a probationary period of six (6) months, during which time performance will be carefully evaluated. Continuation in this class will be contingent upon successful completion of the probationary period.

MEDICAL EXAM PROTOCOL: Core II Exam.

Class Established: November, 1990

Revised: February, 1992

October, 1997 (M)

October, 2003 (M)

August, 2013

October, 2014