

Iowa Department of Administrative Services – Human Resources Enterprise
Job Classification Description

Mechanic

Definition

Performs skilled mechanical work in the maintenance and repair of all motorized and non-motorized equipment such as diesel and gasoline powered automotive equipment; performs related work as required.

The work examples and competencies listed below are for illustrative purposes only and not intended to be the primary basis for position classification decisions.

Work Examples

Inspects, services, repairs, and overhauls transmissions, engines, clutches, drivelines, differentials, front and rear axle assemblies, and ignition systems; repairs and installs hydraulic controls; tunes motors using standard testing equipment. Dismantles, repairs, and reassembles air compressors, hydraulic jacks, pumps, cylinders, and related equipment.

Inspects, repairs, overhauls, and assembles automotive electric components such as alternators, distributors, and starters.

Welds and modifies equipment and fabricates parts; sandblasts and paints equipment; installs truck bodies, lights, light brackets, mirrors, decals, and other accessories.

Coordinates work with district mechanics, maintenance manager, fleet manager, and others regarding equipment maintenance support, modifications, vehicle accidents, and pilot projects.

Completes mandated fleet inspections. Ensures equipment is safe and properly maintained for use on highways and other work areas. Complies with federal and state regulations governing the handling and disposal of refrigerants.

Reports out-of-service equipment and approximate time needed for service to supervisor in order to schedule future projects.

Maintains and repairs automobiles, trucks, tractors, loaders, motor graders, snow blowers, generators, air compressors, etc. Writes repair orders.

Reviews equipment maintenance records and observes employees in the operation of equipment to determine and correct deficiencies and ensure proper maintenance.

Requisitions and stores shop supplies.

Uses a computer to gather information for diagnostics, engine performance, brake and fuel system performance, equipment maintenance, and to request parts and supplies, receive new equipment, complete inventories, and report maintenance/repair activities.

Responds to inquiries by district mechanics, maintenance managers and the fleet manager regarding the performance of equipment and/or changes needed to enhance their performance. Makes recommendations on new equipment.

Assures all equipment meets OSHA standards, and that all repairs and modifications are done in accordance with operational specifications and safety standards.

Recommends equipment turn-ins based on method of repairs, costs, historical data, proposed work, unit plans, and anticipated maintenance programs.

Operates tractors, dozers, loaders, trucks, graders, and snowplows as necessary to perform highway maintenance.

Competencies Required

Knowledge:

- Mechanical – Machines and tools, including their designs, uses, repair, and maintenance.
- Customer Service – Principles and processes for providing customer services, including customer needs assessment, meeting quality standards for services, and evaluating customer satisfaction.
- Engineering and Technology – The practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.
- English Language – The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.
- Computers and Electronics – Circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.
- Mathematics – Arithmetic, algebra, geometry, calculus, statistics, and their applications.

Abilities:

- Control Precision – Quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
- Arm-Hand Steadiness – Keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.
- Manual Dexterity – Quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.
- Finger Dexterity – Make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.
- Multilimb Coordination – Coordinate two or more limbs (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the whole body is in motion.
- Extent Flexibility – Bend, stretch, twist, or reach with your body, arms, and/or legs.
- Static Strength – Exert maximum muscle force to lift, push, pull, or carry objects.
- Trunk Strength – Use your abdominal and lower back muscles to support part of the body repeatedly or continuously over time without 'giving out' or fatiguing.
- Gross Body Coordination – Coordinate the movement of your arms, legs, and torso together when the whole body is in motion.

- Visualization – Imagine how something will look after it is moved around or when its parts are moved or rearranged.
- Near Vision – See details at close range (within a few feet of the observer).
- Deductive Reasoning – Apply general rules to specific problems to produce answers that make sense.
- Problem Sensitivity – Tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

Skills:

- Equipment Maintenance – Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
- Repairing – Repairing machines or systems using the needed tools.
- Troubleshooting – Determining causes of operating errors and deciding what to do about it.
- Equipment Selection – Determining the kind of tools and equipment needed to do a job.
- Quality Control Analysis – Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
- Operation Monitoring – Watching gauges, dials, or other indicators to make sure a machine is working properly.
- Operation and Control – Controlling operations of equipment or systems.
- Active Listening – Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- Critical Thinking – Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- Complex Problem Solving – Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Minimum Qualification Requirements

Applicants must meet at least one of the following minimum requirements to qualify for positions in this job classification:

- 1) Three years of full-time work experience in automotive or heavy equipment mechanic work.
- 2) A total of three years of education and/or full-time experience (as described in number one), where 30 semester hours of post-high-school education in automotive or heavy equipment mechanics equals one year of full-time experience.
- 3) Current, continuous experience in the state executive branch that includes eighteen months of full-time work as a Mechanic Helper.

Notes

Positions in this job class in the Department of Public Defense – Military Division must possess at the time of hire, or be able to obtain within six (6) months of hire, a valid Class A Commercial Driver's License with air brake endorsements.

All of the following apply to Department of Transportation positions only:

- Positions in this class require possession of a valid Commercial Learner's Permit upon hire. Within a timeframe determined by the appointing authority, a valid Commercial Driver's License with the required endorsements and applicable restrictions must be obtained and subsequently maintained to continue employment.
- In conjunction with Title 49 of the Code of Federal Regulations (parts 40 and 382), positions in this job class require a pre-employment drug screen and will require ongoing participation in the employer's random drug and alcohol testing program and will be subject to the regulations regarding the Federal drug and alcohol testing program.
- Prior to starting employment, all persons are required to have a post offer, pre-employment physical verifying the physical ability to perform the duties assigned.
- Employees must be able to travel and may be required to stay away from home overnight during assignments.
- Within a timeframe determined by the appointing authority, field maintenance employees are required to reside within a defined driving time, during normal conditions, from assigned work location.
- Employees must respond to emergency situations as required.
- Employees must have knowledge of winter maintenance operations such as anti-icing and deicing principles, snow and ice principles, and the effects of de-icing equipment on vehicles. They must also have skill in calibrating and maintaining electronic and hydraulic controls to ensure proper amounts of materials are applied to the roadway.
- Employees must be able to work up to 16 consecutive hours.

Effective date: 05/20 KMJ