

# WAGE GRADE CAREER PATH

**WG 6641**

## ORDNANCE EQUIPMENT MECHANIC

This occupation covers nonsupervisory jobs involved in installing, aligning, modifying, troubleshooting, repairing, overhauling, testing, and calibrating a variety of instruments containing electric, mechanical, pneumatic, hydraulic, and/or electronic components, assemblies, and controls. The work includes using both manual and automated test equipment such as pneumatic, hydraulic, or vacuum test stands or computer controlled electronic test consoles to test, align, and calibrate instruments. The work also includes maintaining, repairing, and calibrating precision instruments and standards such as dial indicators, concentricity gauges, sinebars, micrometers, and plug and ring gauges. The work requires knowledge and application of electrical and mechanical principles; knowledge of pneumatic and/or hydraulic mechanisms; and, in some work situations, knowledge of electronic principles and theory.

### Trade/Less than Journeyman

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|------|---|---|
| WG08 | 1 | Continue required on-the-job and formal classroom training required in Civilian Training Plan   |
|      | 2 | Complete task qualifications for current position   |
|      | 3 | Complete task certifications for current position   |
|      | 4 | Master common to complex work tasks. Grade 8 Ordnance Equipment Repairers have the skill to repair, rebuild, and maintain a variety of limited function mechanical, electrical, pneumatic and hydraulic components and assemblies. They are able to disassemble items and perform visual examination to detect worn or damaged parts such as broken or discolored wires, worn gears, leaking seals or gaskets, and other deficiencies. They lubricate parts as required and remove dirt or other foreign matter with appropriate solvents. They perform minor repairs and adjustments; adjust spring tension poppets and mechanical linkages; and perform hand soldering of wire connections. They have the ability to use a variety of general purpose test equipment and the skill to perform resistance, continuity, and other functional tests of items to verify the adequacy of repairs in accordance with test procedures and instructions which explain the precise steps to be performed. They are skilled in the use of such measurement devices as calipers, micrometers, and feeler gauges and apply a knowledge of arithmetic to perform dimensional measurements and maintain precise tolerances. They have a fundamental knowledge of electrical principles to test, repair, or replace such components as resistors, capacitors, potentiometers, switches, and motors while using wiring diagrams to locate defective parts. They are able to use such test instruments as ohmmeters, voltmeters, and muggers to measure and adjust electrical quantities, and be familiar with the makeup and operation of such pneumatic and hydraulic devices as actuators, accumulators, valves, cylinders, and pumps to assure proper repair, assembly, and functional checkout of the items serviced in accordance with detailed instructions and procedures. |
|      | 5 | Provide production support services   |
|      | 6 | Maintain successful to above average performance ratings  |

### Journeyman

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| WG10 | 1 | Continue required on-the-job and formal classroom training required in Civilian Training Plan   |
|      | 2 | Complete task qualifications for current position   |
|      | 3 | Complete task certifications for current position   |
|      | 4 | Master common to complex work tasks. Grade 10 mechanics are skilled in a variety of troubleshooting, defect isolation, and repair processes related to more complex ordnance equipment and multi-component devices which are usually composed of a number of interrelated electrical, mechanical, pneumatic and hydraulic assemblies and components. This involves complete or partial disassembly of equipment and making repairs which are often complicated by critical tolerances and dimensions which require the mechanics to rework or hand finish replacement parts. They must apply sound judgment in the selection of repair techniques and achieving specified accuracies and tolerances. They are skilled in the use of all precision measurement instruments common to the trade such as height gages, micrometers, dial indicators, optical comparators, and surface gages to assure dimensional accuracy of such critical parts as gears, shafts, bearing spacers, hydraulic valve sleeves and pistons, and a variety of mating and directional control surfaces. They are able to measure and evaluate such characteristics as concentricity, eccentricity, angularity, and surface finishes. They possess the ability to independently interpret and apply the requirements contained in blueprints, wiring diagrams, equipment specifications, and other technical documents in order to plan, lay out, and effect disassembly, modification, repair, and test of ordnance equipment. They use more complicated shop mathematics and handbook formulas to provide for critical dimensions and calculate angles, fits, clearances, flatness, parallelism, and squareness. They perform intricate hand work such as filing, scraping, and grinding to provide surface finishes and assemble equipment and are skilled in the use and operation of such shop machinery as bench lathes, drill presses, grinding, gear, and other machine tools to rework or finish replacement parts.<br><br>Grade 10 mechanics are skilled in the use of more complex test consoles and use a variety of pneumatic and hydraulic power units and such electrical equipment as phase-angle meters and oscilloscopes to measure and adjust such quantities as input-output voltage and pressure, continuity, dielectric strength, electrical and mechanical nulls and linearity, and other parameters of interest. They have the ability to analyze recorded data by mathematical computation or with rulers, overlays, or graphs; and apply a working knowledge of the makeup, operation, and installation of ordnance systems and equipment usually containing a number of interrelated devices. They possess the ability to make all adjustments to operating tolerances and connect and align the surfaces, assemblies, and parts with one another; are skilled in the application of more complicated structural and operational test techniques; and are familiar with such factors as the sequence and impact of malfunctions on related components and assemblies and the electrical, mechanical, pneumatic, and hydraulic operating relationships of the equipment serviced. |
|      | 5 | Provide production support services   |
|      | 6 | Maintain successful to above average performance ratings  |

*This list is not all inclusive. For more information on your series, visit the OPM site below. Copy and paste the link in your browser.*

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