

Federal Wage System Job Grading Standard for Aircraft Pneudraulic Systems Mechanic, 8268

Table of Contents

| | |
|---|---|
| WORK COVERED | 2 |
| WORK NOT COVERED..... | 2 |
| TITLES | 2 |
| GRADE LEVELS | 3 |
| HELPER AND INTERMEDIATE JOBS | 3 |
| AIRCRAFT PNEUDRAULIC SYSTEMS MECHANIC, GRADE 10 | 3 |

WORK COVERED

This standard covers nonsupervisory work involved in the maintenance, modification, and repair of hydraulic and pneumatic systems associated with aircraft. The work requires: knowledge of the physical principles governing the behavior of fluids (liquids and gases) as they pertain to hydraulic and pneumatic systems and their components; knowledge of aircraft structures and the relationship of hydraulic pneumatic systems to the structure and other aircraft systems; knowledge of basic electrical and mechanical principles; the ability to use technical manuals and schematics and to test for and isolate malfunctions in hydraulic and pneumatic systems; and the skill to effect modifications, repairs, or maintenance required.

WORK NOT COVERED

This standard does not cover the following work:

- Troubleshooting, repairing, maintaining, or modifying hydraulic and pneumatic systems or components where the work does not require: (1) a substantive knowledge of aircraft structures and of the relationship of pneudraulic systems to the structure and to other systems aboard the aircraft; and (2) a knowledge (for efficiency and safety) of the work of mechanics in other trades, for example, electrical and sheet metal, working in the environs of the aircraft structure. (See [Job Grading Standard for Pneudraulic Systems Mechanic, 8255.](#))
- Overhauling, modifying, or repairing aircraft engines, engine systems, assemblies, accessories and components where the work requires the full range of knowledge, skills, and abilities of an aircraft engine mechanic. (See [Job Grading Standard for Aircraft Engine Mechanic, 8602.](#))
- Maintaining and repairing a variety of models of fixed and rotary wing aircraft systems, airframes, and assemblies where the work requires the full range of knowledge, skills, and abilities of an aircraft mechanic. (See [Job Grading Standard for Aircraft Mechanic, 8852.](#))

TITLES

Jobs graded by this standard at grade 10 or above are to be titled *Aircraft Pneudraulic Systems Mechanic*.

Jobs graded by this standard below grade 10 (other than helper and intermediate jobs) are to be titled *Aircraft Pneudraulic Systems Worker*.

GRADE LEVELS

This standard does not describe all possible grades for this occupation. Some jobs may differ substantially from the levels of skill, knowledge, and other work requirements of the grade described in the standard. Such jobs may be graded above or below this grade based on sound job-grading methods.

The typical combination of duties described at a grade level in this standard is not mandatory but is an example. Variations in duty combinations will occur in actual work situations. Such variations must be evaluated to determine that at a grade level they match in total the difficulty and scope of the duties described at the grade level in the standard.

HELPER AND INTERMEDIATE JOBS

Helper and intermediate jobs are covered by the job grading standards for [Helper](#) and [Intermediate](#) Jobs. (Grade-10 in this standard is to be used as the Journey level in applying the Intermediate Job Grading Standard.)

AIRCRAFT PNEUDRAULIC SYSTEMS MECHANIC, GRADE 10

General: Grade 10 mechanics inspect, maintain, modify, troubleshoot, repair, overhaul and test aircraft hydraulic and pneumatic systems and components. They:

- Inspect or troubleshoot brake mechanisms and struts, wing and cowl flaps, windshield wipers, pressure regulators, pumps, pressure relief valves, brake cabin pressurization systems, shimmy dampers and other aircraft hydraulic and pneumatic accessories.
- Jack aircraft to flight configuration, hook up power sources, and using cockpit controls and gauges and additional precision instruments, check operations of such items as landing gear doors, ground and flight spoilers, and steering and brake systems for performance and conformance to operational specifications.
- Test systems using test stands.
- Diagnose malfunctions and overhaul pneudraulic accessories by disassembling, cleaning, and examining parts for corrosion, wear, scratches, cracks or other damage, replacing gaskets and worn parts; reassemble accessories, adjusting and testing to insure proper operation in accordance with standards in technical specifications.
- Rig cables and adjust associated pneudraulic equipment on landing gear doors, bomb bay and ramp doors, and other aircraft features involving pneudraulics.
- Fabricate fuel, oil, and vacuum hose lines, and test as provided in technical orders.

- Make modification of aircraft pneumatic equipment required by technical orders.
- Repair and maintain aircraft lifting jacks 4500-18000 kilograms (10,000-40,000 pound hydraulic jacks), test stands, and other similar pneumatic equipment as necessary.

Skill and Knowledge: Grade 10 mechanics must have and use:

- Knowledge of hydraulic and pneumatic principles, the physical laws governing the behavior of fluids (liquids and gases).
- Knowledge of aircraft pneumatic systems and pneumatic equipment used in maintaining and checking aircraft pneumatic equipment such as test stands and hydraulic jacks.
- Knowledge of aircraft structures and the relationship of aircraft pneumatic systems to the structure and to other aircraft systems.
- Knowledge of basic electrical and mechanical principles.
- Knowledge of troubleshooting procedures designed to isolate malfunctions in aircraft pneumatic systems.
- Knowledge of basic Information sources, technical orders and other applicable publications and forms.
- Knowledge of the relationship of the work of aircraft pneumatic systems mechanic to the work of aircraft mechanic, aircraft electrician, and sheet metal mechanic (aircraft.)
- Ability to plan work sequence.
- Ability to read and interpret technical orders, microfilm, manufacturer's specification manuals, parts supply books, and blueprints and schematic diagrams.
- Ability to operate test panels and ground power equipment such as hydraulic test stands, gas and electric air compressors and portable rectifiers.
- Ability to isolate and diagnose the cause of malfunctions, and make necessary adjustment or repair.
- Ability to use hand tools, jigs, fixtures, and special tools and instruments.
- Ability to learn and retain information on new pneumatic systems, procedures and operations.

Responsibility: The supervisor of grade 10 mechanics assigns work either orally or through written instructions, describing the equipment to be worked and the priority order. The mechanic makes independent judgments and decisions within the framework of these oral and

written instructions, accepted trade practices, processes, and procedures while accomplishing assignments. Utilizes a variety of technical manuals, equipment specifications, and test calibration procedures in performing the work. The mechanic independently completes work assignments without in-progress checks. The supervisor is usually available for consultation on unique problems related to design variations, configuration changes, and deviation from standard work practices made to meet established tolerances, prescribed test results, or to achieve systems reliability. The supervisor checks completed work to insure compliance with specifications and accepted trade practices.

Physical Effort: Grade 10 mechanics are active. They sit, stand, lift equipment weighing 9 kilograms (20 pounds) and occasionally items weighing up to 27 kilograms (60 pounds), push heavy jacks and test stands, stoop, bend, stretch and work in cramped, tiring, uncomfortable positions. They are subject to high intensity and higher frequency sounds, that impose a physical burden.

Working Conditions: Work is performed inside and outside, exposed to weather, toxic fumes, dirt, oil, grease, and hydraulic fluids. Grade 10 mechanics are in danger of injury by:

- Fluids subject to high pressures (9,000-10,000 pounds per square inch).
- Falling from aircraft, work stands, or slips on oily floors.
- Falling objects, or cockpits containing explosive devices.
- Cuts, shocks, strains, or skin and eye irritations.
- High intensity and higher frequency sound waves.