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FEDERAL WAGE SYSTEM JOB GRADING STANDARD FOR PARACHUTE PACKING, 7010

Workforce Compensation and Performance Service

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PARACHUTE PACKING, 7010

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WORK COVERED

This standard is used to grade nonsupervisory work that involves unpacking, cleaning, examining, assembling, and packing cargo, drag (deceleration), special weapons, personnel, experimental, and other similar types of parachutes and parachute systems. The work requires a knowledge of parachute packing procedures.

WORK NOT COVERED

This standard does not cover the following work:

- Repairing; modifying, and manufacturing Parachute canopies, suspension lines, harnesses, and similar parts (see Job Grading Standard for Fabric Working, 3105);

- Folding, making, repairing, and testing rubber equipment such as life rafts; life vests, flotation equipment, and survival kits (see Pliable Materials Work Family, 4300);

- Repairing, modifying, refilling and testing oxygen equipment (see Fluid Systems Maintenance Family, 8200);

- Examining parachute material or equipment for acceptability when a knowledge of parachute packing procedures is not required (see Job Grading Standard for Material Examining and Identifying, 6912);

- Inspecting parachute repairing work, or inspecting parachute packing work to determine if procedures performed during the packing process are properly accomplished (see Job Grading Standard for Inspectors);

- Packing and repacking various loose and packaged items to protect them from damage during shipment and storage (see Job Grading Standards for Packing, 7002);

- Receiving, examining, repairing, modifying, maintaining, storing, and issuing personal flight equipment such as survival gear, parachutes, and helmets to flight crews (see Aircraft Survival Flight Equipment Repairing Series, 4818).

TITLES

Jobs graded by this standard are to be titled *Parachute Packer*.

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 grades described in the standard. Such jobs may be graded above or below these grades based on sound job grading methods.

NOTES TO USERS

1. **Related Duties**-- The examination, adjustment, replacement, testing, and assembly of the mechanical components of a parachute are included in parachute packer work. However, some employees who pack parachutes also engage in other work not covered by this standard. Examples of work not covered include the fabrication, modification, and repair of the fabric parts of parachutes and associated survival equipment. Mixed positions such as these should be graded in accordance with instructions in Introduction to the Job Grading System. When the parachute packing work of a mixed job is at the same grade level as the other work performed, such a job should be titled and coded as Parachute Packer if the parachute packing work is most important in terms of the total job, the purposes of the job, and the career ladder in which it is located.

2. **Relationship with the Fabric Worker Standard, 3105**-- Many parachute workers examine parachutes in conjunction with packing and/or repairing them. Where the work involves examining parachutes to insure that their observable physical condition is acceptable for packing, it is covered by this standard. Where it involves examining parachutes to determine what fabric repairs should (or should not) be made, the type of repairs, etc., the work is covered by the Fabric Worker standard. In evaluating mixed positions involving the repair and packing of parachutes, careful consideration must be given to the kinds of fabric work regularly being performed. For example, such difficult and major operations as replacing canopy sections and suspension lines are rarely performed on many parachutes. In other cases, major parachute repair is done by only a limited number of a shop's personnel or is performed at other locations. For all such mixed positions, it is necessary to determine exactly what repair and packing duties are present and to closely compare them with the appropriate standards.

7010-5 PARACHUTE PACKER, GRADE 5 7010-5

General: Grade 5 parachute packers unpack, examine, assemble, and pack parachutes which are characterized by predominately fabric components, few mechanized systems, and relatively noncritical tolerance requirements. For example, cargo and deceleration (drag) parachutes that have these characteristics are typical of parachutes packed at this level. Grade 5 packers follow standard procedures in performing basic packing tasks such as visually examining the fabric and equipment of the parachute for serviceability, stowing canopy and suspension lines, installing reefing line and cutters, and folding and fastening pilot and extraction parachutes.

Skill and Knowledge: At this level packers must know the sequence of procedures for packing parachute assemblies with the characteristics listed above. This entails memorizing lengthy and detailed processes, and reading and understanding diagrams and instructions from technical manuals. They must be skilled in straightening, folding, and evenly stowing canopy and suspension lines; threading reefing line through canopy hem grommets; installing explosive-charged cutters; folding and attaching pilot chutes to main or extraction chutes; simple needle and thread tacking; and tying surgeon, square, hitch, and other common knots.

Following specific written guidelines, grade 5 packers determine when the fabric of canopies, suspension lines, pack harnesses, deployment bags, risers, lanyards, and static lines is serviceable, and ascertain the condition of such components as cutters, explosive capsules, clevises, and connector links. This involves checking fabric for rips, frays, holes, snags, broken stitching, burns, raveling, and discoloration; checking explosive capsules for expiration date; and examining metal components for cracks, dents, corrosion, bends, and operation of snap. They use hand tools such as packing paddles to stow canopy, screw drivers to tighten connector link screws, scissors and ruler to cut and measure twine, and line separators to arrange suspension lines.

Responsibility: Grade 5 packers receive assignments orally or through work orders. They are responsible for rigidly adhering to packing instructions provided in technical manuals and use judgment in determining that procedures, such as checking fabric for defects and stowing canopy evenly, are performed properly. They are responsible for ensuring the acceptability of the parachute equipment and material before packing. After the completion of certain critical steps in the packing process of many parachutes, mandatory technical checks are performed on the packed work by other qualified personnel to verify the proper accomplishment of those procedures. Beyond that review, the supervisor checks work in progress and provides assistance when unusual problems occur. Once a parachute is packed, it is virtually impossible to completely examine for proper packing unless it is unpacked again.

7010-5 **7010-5**

Physical Effort: The work involves frequent standing, walking, stooping, bending, and kneeling. Packers lift and pull parachute parts and equipment weighing up to 34 kilograms (75 pounds) and occasionally, loads in excess of that weight. They may be required to wield heavy hammers to compact parachutes.

Working Conditions: The work is performed indoors, in areas of adequate heat, light, and ventilation. Grade 5 packers are frequently exposed to the possibility of minor cuts and bruises from hammers, taking needles, and other hand tools. They are subject to static shock and to mishaps with small charges of explosives.

7010-7 PARACHUTE PACKER, GRADE 7 7010-7

General: Grade 7 parachute packers unpack, examine, assemble, and pack complex parachute systems requiring the execution of numerous mechanical assembly and fabric packing procedures, the performance of equipment tests, and adherence to numerous and close tolerances. For example, the packing of emergency ejection personnel parachutes with these characteristics is found at this level. In addition to basic grade 5 packing duties such as stowing canopy and suspension lines, attaching pilot chutes, and placing reeling line cutters, grade 7 packers examine, adjust, and align mechanical components to rigid specifications and assemble and link numerous subsystems, requiring a knowledge of how those assemblies interjoin, and the ability to perform numerous precision procedures. For example, grade 7 packers examine, assemble, and pack automatic release systems, ballistic spreading gun assemblies, and forced deployment systems; install locator beacons, lowering devices, dual housing clamp assemblies, and oxygen equipment; and examine and pack ripcord assemblies and automatic survival kit activators.

Skill and Knowledge: Parachutes packed by grade 7 workers have more numerous and varied parts, and involve more critical tolerances than parachutes packed at the grade 5 level. Parachutes packed at this higher level contain assemblies such as automatic ripcord releases which involve mechanical sequences requiring the packer to perform complicated and precise processes to assemble and install them. Because of these complexities, grade 7 packers apply knowledge of a wider range of packing procedures and perform more exacting operations than grade 5 packers. Grade 7 packers also have a basic understanding of mechanical systems and the ability to apply that knowledge in assembling, testing, and connecting those components properly.

For example, in addition to the skills, knowledge, and procedures listed at the lower level, grade 7 packers need skill in examining the interior mechanisms of automatic ripcord releases for freedom of movement of the power cable and hammer assembly; the proper attachment of the power cable eye, arming cable housing, arming pin, and shear pin; aneroid leakage; proper operation of timer; and security of the barrel snap-lock and gasket seal. They use testing devices such as altitude chambers to test and adjust aneroid assemblies; micrometers to measure distance between ballistic spreading plates; and various pull gauges to test resistance on ripcord handles and arming pins. Grade 7 packers examine the operation of ballistic spreading guns, including performing pull tests on firing pins and checking other mechanical and fabric parts for security, corrosion, snags, and burns. Grade 7 packers examine the ripcord assembly for proper operation, including testing ripcord pins with block gauge; checking pins for smooth extraction from secure pack grommets; examining the ripcord for rust spots, broken strands, or improperly swaged cable ball; and examining the ripcord handle and pocket. Grade 7 packers also check canopy releases for damage, corrosion, and smoothness of operation, performing pull tests and providing lubrication. Grade 7 packers install dual housing clamps and join automatic ripcord releases with manual ripcords by connecting cable eyes with ripcord locking pins. Grade 7 packers also install such accessory equipment as automatic survival kit activations,

radio beacons, oxygen cylinders, survival kits, lowering devices, and chaff. These operations generally involve hand tacking, examination of components such as lanyards and pockets, and a knowledge of the particular packing procedures involved.

Responsibility: Differences exist between the responsibility levels of grades 5 and 7 parachute packers because at the higher level, technical manuals that are used contain more complicated and numerous instructions; because closer and more critical tolerances must be met in assembling and packing mechanical systems; and because the increased quantity and complexity of mechanical components in these parachutes require more frequent and difficult decisions in determining the acceptability of parts and in properly assembling and packing them. Grade 7 packers are assigned work orally or through work orders, they rigidly adhere to specific guidelines provided in technical manuals, and their work review consists of mandatory technical checks by others during the packing process. (It is impossible to examine a packed parachute for proper packing.)

Physical Effort: The physical effort is similar to that described at the grade 5 level.

Working Conditions: The working conditions are similar to those described at the grade 5 level, except that workers at the grade 7 level are exposed to larger charges of explosives.