



United States
Office of Personnel Management

FWS Job Grading Standard for

Rigger

5210

TS-19, 1/72

**Workforce Compensation and Performance Service
Classification Programs Division
June 1998, HRCD-5**

WORK COVERED

This standard covers nonsupervisory work involved in the selection, installation and use of cables, ropes, chains, and other weight handling gear to lift, move, and position heavy loads; and the assembly, repair, and installation of standing and running rigging used to support, secure, or operate equipment, machinery, and other items. This work requires a knowledge of rigging practices and weight handling techniques; the ability to plan and select the appropriate gear; and the skill to assemble, repair, and install rigging on a variety of objects.

WORK NOT COVERED

Work involving the splicing of electrical cables is not covered by this standard. (See [Electrical Installation and Maintenance Family, 2800](#).)

TITLES

Jobs graded by this standard below the grade 10 level are to be titled *Rigging Worker*. Jobs graded by this standard at or above the grade 10 level are to be titled *Rigger*.

GRADE LEVELS

This standard does not describe all possible levels at which jobs may be established. If jobs differ substantially from the level of skill, knowledge, and other work requirements described in the grade levels of the standard, they may warrant grading either above or below these grades based on the application of sound job grading methods.

HELPER AND INTERMEDIATE JOBS

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

The grade 8 level in this standard covers continuing jobs that involve the more routine tasks of selecting, assembling, repairing, and installing weight handling gear used to lift, move, and position heavy loads. It is not descriptive of jobs that are part of a planned program of training and development of skills for advancement to a higher grade; such jobs are covered by the job grading standard for Intermediate Jobs.

5210-8**RIGGING WORKER, GRADE 8****5210-8**

General: Grade 8 rigging workers select and install weight handling gear such as cables, ropes, slings, and chains used to lift, move, and position a variety of large and heavy equipment, machinery, and supply items. Objects to be moved are usually in open areas of shops, storage facilities, or loading docks, and are rigged for movement by crane or other mobile material handling equipment. Rigging workers cut, splice, assemble, and repair slings, nets, pendants, and other rigging gear used in day-to-day operations. They work under the supervision of a higher graded worker or a supervisor.

Skill and Knowledge: Grade 8 rigging workers use a basic knowledge of established trade practices and techniques to select and install weight handling gear used in lifting, moving, and positioning a variety of large and heavy objects. They use, for example, knowledge of the breaking strains, safe working loads, and other physical characteristics of basic rigging materials and equipment such as jacks, tackle blocks, chain falls, shackles, and various wire and fiber ropes to select and install the appropriate type and size of gear needed to support the load. They apply a knowledge of cubic foot weights of various materials such as steel, lead, and cast iron to estimate the weight and center of gravity of large and irregularly shaped objects. They use this knowledge in determining the exact placement of the gear to assure that the load is safely secured and balanced. They cover easily damaged parts of the load with protective boards, mats, or planks, and attaches load tag lines when necessary to control the drift and swing of the load during movement. Grade 8 rigging workers use hand signals to guide crane operators in hoisting, moving, and lowering the load into the desired location.

Grade 8 rigging workers use skill in cutting and splicing rope and wire cable, and in installing various fittings used in the assembly and repair of slings, nets, and other weight handling gear. They are skilled in using a variety of tools and equipment such as marlin spikes, fids, serving mallets, rigger's screw, and swaging machine to splice, form, and finish the rigging gear.

Responsibility: Grade 8 rigging workers work from oral or written instructions which indicate the work location and type of item to be moved. Within the framework of established rigging practices and procedures, they determine the work sequences to be followed and the tools, materials, and equipment to be used. They check ropes, cables, and equipment before beginning the work and obtain replacements for those which are badly worn or damaged. They follow standard safety rules and regulations, and report unsafe conditions to his supervisor. They advise the crane operator of clearances between the load and other objects, and of other possibly hazardous conditions observed from the ground level. Their work is spot checked to assure that established rigging methods and safety practices are being followed.

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Physical Effort: Grade 8 rigging workers frequently lift and carry moderately heavy objects such as cables, chains, and jacks. They continually reach, bend, stoop, push, and pull while attaching rigging to the object to be moved. They frequently use their entire body weight to push or pull suspended loads, chain falls, or load tag lines while moving objects into desired positions. They stand and walk for prolonged periods of time, and frequently climb on platforms or other structures to signal the crane operator.

Working Conditions: Grade 8 rigging workers work both indoors and outdoors in all types of weather. They are subject to possible cuts and burns while handling wire and fiber ropes. They are exposed to cuts, bruises, and broken bones from falls while climbing and attaching rigging to the load and while signaling the crane operator from platforms or other structures. They are frequently exposed to serious injury from swinging loads, breaking slings, and falling objects. Various protective devices such as hard hats, safety shoes, and gloves are used to minimize these conditions.

5210-10**RIGGER, GRADE 10****5210-10**

General: Grade 10 riggers plan, lay out, assemble, repair, and install complex weight handling gear and various standing and running rigging. In comparison with grade 8 rigging workers who select and install weight handling gear for objects to be moved by crane or other mobile material handling equipment, grade 10 riggers use equipment such as chain falls, gin poles, tackle blocks, gallows frames, or combinations of these to rig and move objects through confined areas where cranes or other mobile material handling equipment cannot be used because of the object's size, shape, and location. In addition to the cutting, splicing, assembling, and repairing of standard weight handling gear done by grade 8 rigging workers, grade 10 riggers make and install complex standing and running rigging used to support, secure, or operate equipment, machinery, and other items having critically fit, tension, and operational requirements. They follow established rigging practices and procedures on their own and clear unusual problems with their supervisor.

Skill and Knowledge: Grade 10 riggers apply more skill and knowledge in planning, laying out, assembling, and installing rigging than grade 8 rigging workers, because they make more complex and critical judgments to rig and move objects in confined areas, e.g., engine rooms, machine shops, or ship passageways without the aid of cranes' or other mobile material handling equipment. They make, for example, difficult load routing judgments by considering such factors as size, shape, and location of the object; availability and strength of overhead support structures; surface conditions; obstacles; and size of surrounding openings in relationship to the size of the object. Based on these judgments, grade 10 riggers determine the exact placement of such items as paddies, beam clamps, and chain falls used to support and balance the load along the route.

In addition to grade 8 rigging workers' abilities to select and install the type and size of gear needed to support the load, grade 10 riggers use complex multi point suspension techniques to permit maneuvering over, under, and around obstacles by tilting, dipping, and turning the suspended load. This requires a greater knowledge of equipment capacities and limitations than at the grade 8 level where predominantly straight lifts are made. Grade 10 riggers compensate for variations in the lifting capacity of the gear caused by such things as size of cable, type of splice, type of connecting fittings, and angle of the lashings. Grade 10 riggers are alert to possible safety hazards and take steps to eliminate or control hazards such as damaged cables, connecting fittings, or equipment; overloaded gear; or unauthorized personnel in the area of the move.

Grade 10 riggers apply more skill in cutting, splicing, assembling, repairing, and installing a variety of complex standing and running rigging used to support, secure, or operate items such as elevators, mechanized stagings, antennas, and boat davits. These items are more difficult to plan, lay out, and assemble than those mentioned at the grade 8 level because they must meet critical fit, tension, and operational requirements.

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Responsibility: Grade 10 riggers work from written or oral instructions, blueprints, sketches, and on-site surveys. They carry out assigned duties on their own and may depart from normal trade practices when necessary to accomplish the work. Assignments cover a wide variety of tasks involving varying procedures and techniques. They are expected to complete assignments as quickly as possible as delays usually affect the work of other trades. Grade 10 riggers are responsible for the safety of equipment and material handled, and for the safety of workers near the rigged object. Unusual rigging situations or those involving the rigging of loads which are near the capacity of the equipment are normally cleared through the supervisor.

Physical Effort: The physical effort is substantially the same as that described at the [grade 8 level](#), with the exception that grade 10 riggers work in cramped and awkward positions while installing rigging in confined areas.

Working Conditions: The working conditions are substantially the same as those of the [grade 8 Rigging Worker](#), with the exception that grade 10 Riggers are exposed to a greater possibility of injury from swinging loads while working in confined areas of ships, shops, or drydocks. They are also exposed to more serious injury from falls while working aloft on antennas, stagings, masts, or cranes.