

Federal Wage System Job Grading Standard For Equipment Cleaning, 7009

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WORK COVERED

This standard is to be used to grade nonsupervisory work involved in the cleaning of such equipment as aircraft, ships, engines, electronic equipment, storage and fuel tanks, immersion vats, grease pits, sumps, and traps. This work is accomplished using ultrasonic vibration methods, automated and non-automated immersion tanks, steam cleaners, brushes, buffers, scrapers, sanders, grinders, files, and any other necessary tools or processes to remove paint, sludge, grease, carbon, oil, corrosion, rust, and radioactive contaminants. The final product must meet specified finish requirements such as smoothness, brightness, thickness, and cleanliness.

WORK NOT COVERED

- Work that involves dipping, coating, or otherwise applying preservative materials to items to be shipped or stored. (See [Job Grading Standard for Preservation Servicing, 7006.](#))
- Work that involves the operation of sand, grit, steel shot, and other similar blasting equipment. (See [Job Grading Standard for Sandblasting, 5423.](#))
- Work that involves the cleaning of floors, walls, windows, venetian blinds, etc. (See [Job Grading Standard for Custodial Working, 3566](#), or [Laboring, 3502.](#))
- Work that involves the pickling and other processing of parts preparatory to electroplating. (See [Job Grading Standard for Electroplating, 3711.](#))
- Work that involves the preservation of mechanical and metal items, and large powered mechanical systems; vehicles; craft; and weapons against corrosion, deterioration, and similar damage, and performing related disassembly and assembly. (See [Job Grading Standard for Preservation Servicing, 7006.](#))

TITLES

Jobs covered by this standard are to be titled *Equipment Cleaner*.

GRADES

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

EQUIPMENT CLEANER, GRADE 4

General: Work at the grade 4 level involves cleaning a variety of parts and equipment on a repetitive basis to restore cleanliness by removing accumulations of paint, corrosion, rust, sludge, carbon, grease, dirt, and oils. The grade 4 equipment cleaner uses such cleaning methods as brushing, chipping, scraping, spraying, buffing, pumping, and steam cleaning (including steam cleaning by mobile units). There is a requirement for a knowledge of equipment operation (e.g., steam cleaners, buffers, grinders, pumps, etc.) in order to accomplish specified rough finish requirements. The grade 4 equipment cleaner uses the appropriate tools, equipment, and cleaning agents as directed, and performs the work under normal supervision, subject to occasional checks upon completion.

Skill and Knowledge: At the grade 4 level, the equipment cleaner removes matter such as paint, rust, corrosion, sludge, oils, grease, and dirt using pumps, brushes, scrapers, steam cleaning equipment, immersion tanks or vats (normally hand dipping type utilizing overhead hoists), and spray-on cleaning agents. The grade 4 equipment cleaner uses the above methods to clean parts and equipment such as liquid storage tanks, sanitary tanks, bilges, superheaters, mud drums battery wells, varsol booths electronic equipment, ship structures, aircraft parts, and machining equipment.

The grade 4 equipment cleaner, when operating equipment for cleaning purposes, must be able to make adjustments to the cleaning equipment to insure the proper mixing of cleaning solutions, water temperatures, and steam pressures, in order to obtain maximum cleaning results without damaging other items such as electrical wiring, fiberglass, and electrical motors.

The grade 4 equipment cleaner, on repetitive assignments, knows the appropriate tools, equipment, cleaning agents, and methods to use, and the extent of cleaning required to restore cleanliness without detailed instructions. On assignments of a non-repetitive nature, the tools, equipment, cleaning agents, and methods to be used are furnished by the supervisor.

The grade 4 equipment cleaner follows specific instructions concerning the alteration of temperature settings, and in mixing detergents, acids, caustics, and other cleaning agents and chemicals in proper proportions for use as cleaning agents.

The work at this level primarily involves the skill to clean equipment and parts in a repetitive operation, such as moving metal baskets filled with parts or equipment utilizing an overhead hoist from one cleaning solution to another or to a rinsing tank, or through a group of tanks or vats; receiving parts and equipment processed by the above methods and touching up by brushing, scraping, chipping, or buffing areas not totally free from foreign matter. The grade 4 equipment cleaner cleans gasoline tanks, superheaters, mud drums, boiler sections, etc., with high pressure steam and vacuum steam methods, connects suction lines, discharge lines, air, water, etc., for cleaning and pumping operations.

Responsibility: The supervisor assigns work through oral and written instructions indicating the items to be cleaned, agents to be applied, and methods and procedures to be used. The grade 4 equipment cleaner is responsible for adhering to these instructions and insuring that the items cleaned meet the required specifications. The supervisor gives advice on unusual problems and checks to see that completed work meets specified requirements. The supervisor in this work situation is normally in the immediate work area and is available for solving problems.

Physical Efforts: Equipment cleaners at this level work in shop areas, hangars, docks, and other locations where they are required to stand, stoop, bend, climb, crawl, hold and control high pressure spraying hoses and nozzles, and occasionally work in strenuous positions. They are required to frequently lift, move, or carry objects weighing up to 23 kilograms (50 pounds).

Working Conditions: Work is performed in either inside or outside areas which may have poor lighting and ventilation. Equipment cleaners are constantly exposed to dirt, dust, fumes, grease, oils, and cleaning agents. Working conditions include the possibility of falls, cuts, bruises, scrapes, burns from steam, and skin, nose, and eye irritation when working with or in close proximity to toxic chemicals such as muriatic, nitric, and sulfuric acids. They may be required to wear protective clothing such as aprons, gloves, goggles, boots, hats, face shields, and respirators.

EQUIPMENT CLEANER, GRADE 5

General: Equipment cleaners at the grade 5 level are concerned with the condition of parts and equipment after cleaning (e.g., total removal of pitting caused by corrosion) as well as the degree of cleanliness. In addition to the cleaning methods used at the grade 4 level, grade 5 equipment cleaners use equipment such as sanders, grinders, automated immersion units, high pressure spraying units, and vapor honing units. Work examples include total removal of radioactive or harmful contaminants, corrosion removal and its treatment, and the removal of paint or rust on interiors and exteriors of ships and aircraft, without damage to the structure of the item being cleaned, and the proper operation of equipment used to accomplish desired results such as smoothness, brightness, and thickness.

Skill and Knowledge: The equipment cleaner at the grade 5 level is able to determine from cleaning manuals, technical orders, specifications, and instructions, the appropriate tools, equipment, materials, and cleaning agents to utilize in the cleaning process depending on the types of metals, fiberglass, plastics or other synthetic materials, and the degree of cleanliness and finish required.

The grade 5 equipment cleaner must exercise greater skill than the grade 4 cleaner in the application of cleaning agents to avoid overexposure to surfaces (e.g., aircraft skins, covered pipes and special tanks in ships, rubber, fiberglass, and electrical accessories) which could cause possible damage. They also insure complete removal of harmful contaminants such as radiator cleaning agents containing high acidic levels, or potentially harmful fumes, prior to work on the equipment for other purposes. Equipment cleaners at this level use pumps, brushes, scrapers,

steam cleaning equipment, spray-on cleaning agents, and automated immersion vats and tanks that utilize ultrasonic vibration or various types of acids such as muriatic, nitric and sulfuric.

The grade 5 equipment cleaner follows specific requirements as to how long to leave items immersed in chemicals, how long to leave sprayed-on chemicals on items before neutralizing or removing, and the proper temperature settings, chemical mixes, and pressurizations applicable to the operation of equipment such as vapor honing units (e.g., Vacu Blast), immersion units, steam cleaning apparatus, and high pressure spraying units.

In cleaning situations not covered by previous instructions the cleaner has the ability to recognize potential problems and contacts the supervisor, who either makes a decision concerning the problem or contacts the professional staff (e.g., engineering or chemical laboratory) for advice in the proper methods and procedures for cleaning a particular item or surface.

Responsibility: The supervisor assigns work through oral and written instructions, accompanied by technical orders, engineering requirements, and specifications, that indicate what is to be cleaned, what chemicals to use, time frames involved before removing chemicals, temperature settings, and the surface finish results expected. At this level greater care is exercised to avoid damage to surfaces being cleaned. The supervisor spot checks the work for conformance with instructions and acceptability.

Cleaners at this level are normally part of a crew, which is held responsible for completing the cleaning operation.

Physical Effort: Physical effort at this grade level is the same as that described at the [grade 4 level](#).

Working Conditions: Working conditions at this grade level are similar to those at the [grade 4 level](#). However, lighting and ventilation are normally better and there is less frequent exposure to burns from steam, and irritation of skin, nose, and eyes when working with or in close proximity to toxic chemicals.

EQUIPMENT CLEANER, GRADE 6

General: Equipment cleaners at the grade 6 level are concerned with the condition of equipment after cleaning (e.g., surface finish and corrosion depths when cleaning by abrasive methods) as well as the degree of overall cleanliness. Work examples include the location and treatment of corrosion, and the total removal of all paint and rust from the interiors and exteriors of ships and aircraft without damage to the structure of the equipment being cleaned. Equipment cleaners at this level use the same cleaning equipment found at the grade 4 and 5 levels to accomplish the desired results such as smoothness, brightness, and thickness. However, the equipment cleaner at this level exercises a greater degree of independence in making determinations such as how long to leave chemicals applied to surfaces before removing, and

making adjustments to steam cleaning equipment, immersion vats, and Vacu-Blast units in order to obtain maximum cleaning efficiency.

Skill and Knowledge: The equipment cleaner at the grade 6 level follows cleaning guides or makes recommendations concerning the proper chemical mixture of cleaning solutions based on a general knowledge of their applications after reviewing cleaning manuals, technical orders, specifications, and instructions concerning the types of metals, fiberglass or other synthetic materials to be cleaned, and the degree of cleanliness and finish required, tests the cleaning solution on a sample area for proper results. As a result of the sample tests the cleaner may recommend altering the chemical mixture ratio in order to achieve desired cleaning results.

Within the limits indicated by specifications or other guides, the grade 6 equipment cleaner decides how long to leave chemical cleaning solutions applied to equipment or components before removing, using a knowledge of the metallic composition of the equipment being cleaned and the proper cleaning solutions required (e.g., excessive exposure to an acid process may cause hydrogen embrittlement).

The grade 6 equipment cleaner recognizes improper temperature settings for steam cleaning equipment and chemical immersion tanks and makes the proper adjustments required for maximum cleaning efficiency.

The cleaner at this level also makes adjustments to the pressure levels of equipment such as steam cleaners and Vacu-Blast units in order to avoid damaging the equipment being cleaned.

Responsibility: The supervisor assigns work through oral and written instructions accompanied by technical orders, engineering requirements, and specifications. The instructions indicate what is to be cleaned, chemicals to use, and finish results expected. Working under general supervision, the cleaner at this level makes adjustments to cleaning equipment in order to alter such things as steam flow, pressure, temperature settings, and recommends chemical ratio changes in order to achieve desired cleaning results. Work is reviewed by the supervisor for acceptable quality and conformance with instructions.

Physical Effort: Physical effort at this grade level is the same as that described at the [grade 4 level](#).

Working Conditions: Working conditions at this grade level are the same as those described at the [grade 5 level](#).