

Appendix I

Description of Key Ranking Jobs

Laundry Worker

Grade: 1

- Does various manual duties in a laundry.
- Shakes out and separates different laundry items.
- Hand feeds items into automatic flatwork ironer or spreader by holding items, straightening edges, and smoothing wrinkles.
- Catches, folds, and stacks flatwork.
- Wraps and seals laundry bundles and ties by hand or with automatic tying machines.
- Wipes off laundry equipment.
- Follows a few specific and easily understood oral instructions to perform assignments.
- Continually handles objects weighing up to 4.5 kg (10 pounds) and occasionally objects up to 9.1 kg (20 pounds).
- Works inside in areas that are usually hot, humid, and noisy.
- Is exposed to the possibility of cuts and bruises.

Janitor (Light)

Grade: 1

- Does a variety of janitorial duties, including the operation of lightweight hand or powered cleaning equipment.
- Sweeps, dry-mops, waxes, and polishes floors.
- Dusts and polishes furniture and fixtures.
- Empties ashtrays and wastebaskets.
- Wipes room partitions and fixtures that can be reached without use of ladders.
- Follows a few specific and easily understood oral instructions concerning what to clean and how to clean it.
- Continually handles objects weighing up to 4.5 kg (10 pounds) and occasionally objects up to 9.1 kg (20 pounds).
- Works inside in areas that usually have adequate light, heat, and fresh air.
- Is exposed to some unpleasant odors and to the possibility of cuts, chapped hands, and bruises.

Janitor (Heavy)

Grade: 2

- Does a variety of janitorial duties including the operation of heavy industrial type power operated equipment.
- Scrubs, wet-mops, waxes, and polishes floors.
- Cleans walls, ceilings, and room partitions and polishes fixtures that can be reached only by ladder.
- Washes and replaces Venetian blinds.
- Removes stains from a variety of surfaces such as rugs, drapes, walls, floors, and fixtures by

use of chemicals and cleaning solutions.

- Moves furniture, cabinets, boxes, crates, and equipment to clean areas.
- Follows a few specific and easily understood instructions concerning what to clean and what cleaning methods and equipment to use.
- Continually handles objects weighing up to 9.1 kg (20 pounds) and occasionally objects weighing up to 18.1 kg (40 pounds).
- Works inside in areas that usually have adequate light, heat, and fresh air.
- Is exposed to some unpleasant odors and to the possibility of cuts, chapped hands, and bruises.

Food Service Worker

Grade: 2

- Does various duties in connection with the preparation and serving of foods and beverages.
- Makes coffee, tea, and other beverages.
- Washes, peels, scrapes, and cuts vegetables and fruits.
- Prepares simple salads and toast.
- Dishes out portions of foods on trays or plates and pours beverages.
- Prepares dining and serving areas by setting up counters, stands, and tables.
- Places food containers in serving order, fills salt and peppershakers, and places linen and silverware on tables.
- Cleans kitchen equipment, pots and pans, counters, and tables.
- Sweeps and mops floors.
- Follows a few specific and easily understood oral instructions concerning what foods to prepare and how to prepare them, what dining and serving areas to set up, and with what materials.
- Frequently handles objects weighing up to 18.1 kg (40 pounds).
- Works inside in areas that are usually hot and humid.
- Is exposed to the possibility of cuts, bruises, and burns.

Laborer (Light)

Grade: 2

- Does various laboring duties requiring moderately heavy physical effort.
- Loads and unloads materials.
- Moves supplies by hand, hand truck, or dolly.
- Sorts and stacks various items by obvious breakdowns.
- Opens and closes packages and boxes by using hammers, shears, and crowbars.
- Loads material in bailing presses.
- Runs hand or powered lawnmowers.
- Washes cars and trucks.
- Follows a few specific and easily understood oral instructions concerning what materials to handle, what to do with them, and when the work should be completed.
- Frequently handles objects weighing up to 18.1 kg (40 pounds).
- Works inside in areas that are usually dusty and dirty and outside, sometimes in bad weather.
- Is exposed to the possibility of cuts and bruises.

Laborer (Heavy)***Grade: 2***

- Does various laboring duties requiring very heavy physical effort.
- Digs ditches and trenches using pick and shovel, involving some simple sloping and grading.
- Breaks up pavement, concrete, or other hard surfaces using jackhammers.
- Fills, tamps, and levels holes.
- Mixes, pours, and pushes wheelbarrow loads of concrete, asphalt, hot mix, gravel, and other materials to worksite.
- Removes forms after concrete has set.
- Lays and repairs railroad tracks.
- Carries ties and rails, and places on railbed.
- Drives spikes, shovels ballast under ties, and tightens bolts between rails.
- Follows a few specific and easily understood oral instructions concerning what to do and when and where to do it.
- Frequently handles objects weighing over 22.7 kg (50 pounds).
- Works inside in areas that are usually dusty and dirty and outside in all kinds of weather.
- Is exposed to the possibility of cuts and bruises.

Sales Store Worker***Grade: 4***

- Does various manual stock handling duties in commissary stores, self-service supply centers, and clothing sales stores.
- Moves stock items from storage areas.
- Stacks and replenishes empty spaces in display shelves and cases.
- Arranges stock in a neat and orderly manner and rotates items based on stamped code dates, age, or freshness of stock.
- Sets aside damaged goods for salvage or disposal.
- Measures, weighs, and marks prices on items based on master price lists or oral instructions.
- Answers questions concerning item location and prices.
- Assists in checking out customer purchases by placing items in paper bags or boxes and lifting into push carts.
- Assists in inventories of stock by counting containers on shelves and giving totals to responsible person.
- Assists in unloading incoming trucks by checking container markings and quantities against figures shown on receiving reports.
- Reports damaged items.
- Places items in stockroom or freezer locations, stacking containers in groups by commodity, brand, and size.
- Follows various oral instructions, written price lists, and receiving reports which indicate what stock to move and what to do with it, current prices of items, and types and quantities of stock received.
- Frequently handles objects weighing up to 18.1 kg (40 pounds).
- Works inside in areas that sometimes are damp and drafty and occasionally outside, sometimes in bad weather.
- Is exposed to the possibility of cuts and bruises.

Forklift Operator***Grade: 5***

- Operates electric, gasoline, or diesel powered forklift trucks capable of lifting loads up to, but not including, 4500 kg (10,000 pounds) to a height of 427 cm (168 inches).
- Operates the lifting and tilting controls and steers the vehicle into position to load, transport, and stack goods and materials contained on pallets, skids, crates, or boxes about warehouses, piers, shipsides, or railroad car sidings.
- Must be able to pass operator's test, read traffic signs, and fill out trip tickets.
- Follows written or oral orders concerning location and priority of assignments and instructions concerning the movement and placement of materials.
- Follows safety and traffic rules and drives carefully to prevent damage to vehicle and materials and injury to others.
- Uses light physical effort in operating hand and foot controls.
- Works inside in areas that are sometimes damp and drafty and occasionally outside in all kinds of weather.
- Is exposed to the possibility of cuts and bruises.

Warehouse Worker***Grade: 5***

- Receives, stores, and ships bin and bulk supplies, materials, and equipment.
- Verifies quantity, nomenclature, and unit of issue against receiving documents; notes discrepancies and reports finding.
- Selects specific storage locations within the framework of general warehousing plan.
- Stores, stacks, and palletizes items considering use, size, shape, weight, quantity, spoilage, pilferage, contamination, and safety to others.
- Examines stock for deterioration and damage and reports findings.
- Conducts inventory of stock on hand and reports reasons for overages, shortages, and misplacements.
- Selects designated items from storage and assembles for shipment.
- Assures that items are properly marked, tagged, and labeled and in properly marked containers.
- Accomplishes final loading in trucks and freight cars.
- Completes and signs receiving and shipping documents.
- Records and updates stock location cards showing location, nomenclature, stock number, quantity on hand, and unit of issue.
- Uses hand tools.
- Moves stock by hand, hand truck, and dollies.
- Follows accepted warehousing methods, procedures, and techniques and various written or oral instructions on day-to-day operations.
- Frequently handles objects weighing up to 18.1 kg (40 pounds).
- Works inside in areas that are sometimes damp and drafty and outside, sometimes in bad weather.
- Is exposed to the possibility of cuts and bruises.

Helper (Trades)***Grade: 5***

- Assists journeyman in a skilled trade by performing the least skilled duties of the trade.
- Engages in joint operations with the journeyman as instructed.
- Uses hand and powered tools of the trade to perform such tasks as cutting holes in walls and floors and cutting threads on piping.
- Supplies, lifts, and holds materials and tools for journeyman.
- Applies knowledge gained from previous work assignments.
- Receives detailed instructions with each new assignment.
- Work is reviewed while in progress and when it is finished.
- Frequently handles objects weighing up to 18.1 kg (40 pounds).
- Works inside in areas that are usually dusty, dirty, or greasy and outside, sometimes in bad weather.
- Is exposed to the possibility of cuts, bruises, and scrapes.

Truck Driver (Light)***Grade: 5***

- Drives one or more types of trucks with rated weight capacities up to and including .9 metric ton (1 ton) in hauling cargo or passengers within Government installations and over public roads.
- Usually loads and unloads cargo.
- Must be able to pass driver's test, read traffic signs, and fill out trip tickets.
- Follows written or oral orders and schedules concerning where to go and what to do.
- Follows safety and traffic rules and drives carefully to prevent damage to truck and materials and injury to others.
- Uses light physical effort in operating hand and foot controls.
- Frequently handles objects weighing up to 9.1 kg (20 pounds) and occasionally objects weighing over 22.7 kg (50 pounds) while loading and unloading trucks.
- Works outside and occasionally is exposed to bad weather conditions while loading and unloading trucks.
- Drives in all types of traffic and weather and is exposed to the possibility of serious accidents.

Truck Driver (Medium)***Grade: 6***

- Drives one or more types of trucks with rated weight capacities of over 0.9 metric ton (1 ton) and up to, but not including, 3.6 metric tons (4 tons) in hauling cargo or passengers within Government installations and over public roads.
- Double clutches.
- Occasionally directs or assists in loading or unloading cargo and checks to see that loads are properly distributed, secured, and within maximum weight capacity.
- Must be able to pass driver's test, read traffic signs, and fill out trip tickets.
- Follows written or oral orders and schedules concerning where to go and what to do.
- Follows safety and traffic rules and drives carefully to prevent damage to truck and materials and injury to others.

- Uses light physical effort in operating hand and foot controls.
- Frequently handles objects weighing up to 9.1 kg (20 pounds) and occasionally objects weighing over 22.7 kg (50 pounds) while loading and unloading trucks.
- Works outside and occasionally is exposed to bad weather conditions while loading and unloading trucks.
- Drives in all types of traffic and weather and is exposed to the possibility of serious accidents.

Packer

Grade: 6

- Performs a variety of duties involved in packing for shipment or storage different kinds of material or equipment including items of a large, heavy, or fragile nature.
- Checks items against shipping document to insure correct identification and quantity.
- Follows written packing instructions and manuals.
- Selects proper size and type of container, cushioning, and other packaging materials, taking into consideration the destination, method of shipment, weight, configuration, fragility, and nature of items to be packed.
- Packs items in wood, plywood and fiberboard boxes, metal containers, and cartons.
- Blocks, braces, cushions, applies desiccants, and secures container by sealing, banding, or wiring.
- Over-packs previous packed materials for greater protection when necessary.
- Uses special techniques such as slot hanging, bracketing, and suspending within boxes and crates.
- Completes and signs various documents.
- Stencils necessary identification and affixes standard and special labels and markings on containers.
- Makes independent judgments and decisions within the framework of oral or written instructions and accepted methods, techniques, and procedures.
- Frequently handles objects weighing up to 18.1 kg (40 pounds).
- Works inside in areas that usually have adequate light, heat, and fresh air.
- Is exposed to the possibility of cuts and bruises.

Stockroom Attendant

Grade: 6

- Receives, stores, and issues a variety of hand and powered tools and equipment, shop supplies, and common and special parts.
- Identifies item being requested from descriptions of item shop nomenclature, parts number, or intended usage.
- Checks catalogs and listings for more specific identification and to determine substitute or interchangeable items.
- Makes visual and operational checks of returned items, some of which require the use of specialized measuring instruments such as micrometers.
- Determines items needing repair or maintenance and accomplishes those of a minor nature such as preserving with oil and grease, replacing broken handles, and sharpening rough edges with hand files.

- Requests reasons for damaged items and reports those requiring major repair.
- Segregates, assembles, and rearranges items in stock based on size, convenience in handling, similarity in nomenclature and kind, and available space.
- Inventories items for quantities and conditions and reports reasons for overages, shortages, and damages.
- Requisitions new or additional items based on predetermined stock levels and, based on shop workload requirements, recommends changes in stock levels.
- Assures that stock items are properly marked, tagged, labeled, and placed in proper locations.
- Uses hand tools.
- Follows established receiving, storing, and issuing methods and procedures.
- Assures that adequate levels of stock are maintained and in workable condition to support shop workload requirements.
- Frequently handles objects weighing up to 4.5 kg (10 pounds) and occasionally objects weighing up to 18.1 kg (40 pounds).
- Works inside in areas that sometimes are damp and drafty.
- Is exposed to the possibility of cuts and bruises.

Sewing Machine Operator

Grade: 6

- Sets up and runs a variety of domestic and industrial type power operated sewing machines and related special purpose machines such as buttonhole, basting, and feed-off-the-arm machines.
- Does all work involved in the sewing of textiles and fabrics for such items as clothing, blankets, linens, tents, and other heavy fabrics.
- Makes, alters, repairs, and modifies items that require difficult sewing because of their large size, weight, or appearance, such as setting coat sleeves, taping, and stitching the edges of coats with seaming tape requiring very close stitching.
- Makes independent judgments and decisions within the framework of oral or written instructions and accepted methods, techniques, and procedures.
- Continually handles objects weighing up to 4.5 kg (10 pounds) and occasionally objects weighing up to 9.1 kg (20 pounds).
- Works inside in areas that usually have adequate light, heat, and fresh air.
- Is exposed to the possibility of cuts and bruises.

Bindery Worker

Grade: 7

- Sets up and operates powered paper staplers, drills, punches, and plastic binding machines to trim, assemble, and package printed material.
- Selects proper drills, dies, punches, and combs.
- Makes sure that machines are working correctly and makes necessary operating adjustments.
- Lays out and collates material from round tables and rack assemblies.
- Assists higher grade workers in running power paper cutters, folders, and collators.
- Must be familiar with different sizes, kinds, weights, and colors of papers.
- Makes independent judgments and decisions within framework of oral and written instructions and accepted methods, techniques, and procedures.

- Follows detailed oral instructions while assisting higher grade workers.
- Continually handles objects weighing up to 4.5 kg (10 pounds) and occasionally objects weighing up to 18.1 kg (40 pounds).
- Works inside in areas that are occasionally noisy.
- Is exposed to the possibility of cuts, bruises, and broken bones.

Office Appliance Repairer

Grade: 7

- Repairs and maintains various kinds of standard office appliances and machines such as standard (manual) typewriters, small manual or electric accounting machines having limited automatic parts, envelope opening and sealing machines, and address plate and embossing machines.
- Reads basic sketches, blueprints, and wiring diagrams.
- Determines work sequence, materials, and tools to be used.
- Uses standard repair techniques.
- Makes operational tests, diagnoses malfunctions, disassembles, replaces parts, reassembles, adjusts, and makes final operational tests.
- Uses a variety of hand tools.
- Makes independent judgments and decisions within the framework of oral and written instructions and accepted methods, techniques, and procedures.
- Frequently handles objects weighing up to 18.1 kg (40 pounds).
- Works inside in areas that usually have adequate light, heat, and fresh air.
- Is exposed to the possibility of cuts and bruises.

Truck Driver (Heavy)

Grade: 7

- Drives one or more types of trucks without trailers, with rated weight capacities of 3.6 metric tons (4 tons) and over, in hauling cargo or passengers within Government installations and over public roads.
- Occasionally directs or assists in loading or unloading cargo and checks to see that loads are properly distributed, secured, and within the maximum rated weight capacity.
- Must be able to pass driver's test, read traffic signs, and fill out trip tickets.
- Follows written or oral orders and schedules concerning where to go and what to do.
- Follows safety and traffic rules and drives carefully to prevent damage to truck and materials and injury to others.
- Uses moderate physical effort in operating hand and foot controls.
- Occasionally handles objects weighing over 22.7 kg (50 pounds) while loading and unloading trucks.
- Works outside and is occasionally exposed to bad weather conditions while loading and unloading trucks.
- Drives in all types of traffic and weather and is exposed to the possibility of serious accidents.

Truck Driver (Trailer)***Grade: 8***

- Drives truck or truck tractor with trailer or semitrailer to haul cargo within Government installations and over public roads.
- Backs and drives vehicles in traffic, over uneven roads and ground, and in narrow or crowded areas.
- Carefully applies hydraulic or air brakes to prevent slipping, tipping, or jackknifing.
- Directs or occasionally assists in loading or unloading cargo and checks to see that loads are properly distributed, secured, and within maximum rated weight capacity.
- Must be able to pass driver's test, read traffic signs, and fill out trip tickets.
- Follows written or oral orders and schedules concerning where to go and what to do.
- Follows safety and traffic rules and drives carefully to prevent damage to truck and materials and injury to others.
- Uses moderate physical effort in operating hand and foot controls.
- Occasionally handles objects weighing over 22.7 kg (50 pounds) while loading and unloading vehicle.
- Works outside and is occasionally exposed to bad weather conditions while loading and unloading vehicle.
- Drives in all types of traffic and weather and is exposed to the possibility of serious accidents.

Cook***Grade: 8***

- Prepares and cooks all kinds of food in bulk or individual servings using a wide variety of cooking methods and techniques.
- Cooks foods for standard and special diets.
- Prepares and cooks meats, fish, poultry, vegetables, soups, sauces, gravies, dressings, and desserts by frying, roasting, baking, broiling, braising, steaming, and boiling.
- Uses various standard tests to determine that food is properly cooked and assures that high nutritive value and good taste are achieved.
- Prevents waste and spoilage.
- Uses a variety of cooking utensils, tools, and powered kitchen equipment.
- Makes independent judgments and decisions within the framework of oral and written instructions and accepted methods, techniques, and procedures.
- Continually handles objects weighing up to 4.5 kg (10 pounds) and occasionally objects weighing up to 18.1 kg (40 pounds).
- Works inside in areas that are usually hot and humid.
- Is exposed to the possibility of cuts, bruises, and serious burns.

Machine Tool Operator***Grade: 8***

- Operates one or more types of machine tools such as lathes, boring mills, milling machines, shapers, grinding machines, planers, and drill presses to machine castings, forgings, or bar stock of various metals and metal alloys.
- Normally operates machines of only one type or closely related types.

- Carries out production runs involving standard operations.
- Aligns metal part in machine according to set methods and given reference points.
- Controls machine speed and feed and uses different tools in successive operations.
- Checks dimensions as necessary, using various standard or preset gages.
- Changes tools as necessary.
- Makes minor changes in machine setup, such as realigning for different sizes of workpiece or changes in shape.
- Follows detailed oral and written instructions concerning machine speeds, tools to be used, alignment process, and predetermined machined dimensions.
- Frequently handles objects weighing up to 4.5 kg (10 pounds) and occasionally objects weighing up to 18.1 kg (40 pounds).
- Works inside in areas that are usually noisy and dirty.
- Is exposed to fumes and to the possibility of cuts, bruises, and scrapes.

Water Plant Tool Operator

Grade: 9

- Operates, cleans, and maintains water pumping and treating equipment to purify and supply water for domestic and industrial use.
- Accomplishes such treatment processes as filtration, softening, fluoridation, chlorination, demineralization, and ammoniation.
- Operates a variety of automatic or manually controlled pumps and related equipment by adjustment valves to control rates of feed of various chemicals as well as water flow; and reading various meters, gages, thermometers, and charts to determine when pumps should be started, stopped, or adjusted.
- In accordance with standard methods and procedures, performs a variety of tests to determine the bacterial, physical, and chemical content of the water.
- Selects and mixes chemical compounds in correct amounts and feeds into equipment in correct quantities and sequence.
- Adjusts equipment to regulate chemical input as well as water flow.
- Checks operation of plant equipment and accomplishes minor repairs of maintenance such as cleaning and replacing gaskets, valves, and piping and fixing leaks by replacing packing.
- Reports damages requiring major repairs.
- Prepares reports showing test results, water flow, pressures, and temperatures.
- Makes independent judgments and decisions within the framework of written and oral instructions and accepted practices, processes, and procedures while completing assignments.
- Frequently handles objects weighing up to 4.5 kg (10 pounds) and occasionally objects weighing up to 18.1 kg (40 pounds).
- Occasionally works in awkward and cramped positions.
- Works inside in areas that are usually noisy but have adequate light and heat and outside, sometimes in bad weather.
- Is exposed to some unpleasant odors and to the possibility of burns, cuts, bruises, and broken bones.

Painter***Grade: 9***

- Paints wood, metal parts, equipment, interiors and exteriors of buildings, vessels, and other structures, using brushes, rollers, and spray guns.
- Examines surfaces to determine proper coating materials.
- Prepares wood, metal, and other surfaces by sanding and scraping.
- Blends color and mixes paint and other surfacing materials.
- Applies prime, intermediate, and finished coats including decorative finishes by stippling, graining, marbling, and mottling.
- Makes independent judgments and decisions within the framework of oral and written instructions and accepted trade practices, processes, and procedures while completing assignments.
- Continually handles objects weighing up to 4.5 kg (10 pounds) and occasionally handles objects weighing up to 18.1 kg (40 pounds).
- Works inside and outside, sometimes in bad weather, and is usually exposed to paint spray and fumes.
- Experiences discomfort while wearing respirator.
- Is exposed to the possibility of cuts, bruises, and broken bones.

Carpenter***Grade: 9***

- Builds, repairs, alters, and installs wooden articles and structures.
- Constructs and installs window frames, door frames, inside walls, floors, ceilings, closets, counters, shelves, casings, wood foundations, and similar structures.
- Lays beams, shingles, and clapboards.
- Plans and lays out work from blueprints, drawings, and verbal instructions.
- Determines work sequence, materials, and tools to be used.
- Measures and cuts material to required lengths.
- Uses hand and portable power tools of the carpentry trade, shop woodworking equipment, and standard measuring instruments such as rulers, carpenter's square, and levels.
- Makes independent judgments and decisions within the framework of oral and written instructions and accepted trade practices, processes, and procedures while completing assignments.
- Continually handles objects weighing up to 4.5 kg (10 pounds) and occasionally handles objects weighing up to 22.7 kg (50 pounds).
- Occasionally works in awkward and cramped positions.
- Works inside in areas that are usually dusty and noisy and outside, sometimes in bad weather.
- Is exposed to the possibility of cuts, bruises, and broken bones.

Plumber***Grade: 9***

- Assembles, installs, and repairs pipes, fittings, and fixtures of heating, water, and drainage systems.
- Installs and repairs various fixtures and facilities such as watermains, sewage lines, hydrants,

unit gas heaters, water heaters, hot water tanks, garbage disposal units, dishwashers, and water softeners.

- Plans and lays out work from blueprints, drawings, and verbal instructions.
- Determines work sequence, materials, and tools to be used.
- Measures, cuts, reams, threads, bends, fits, and assembles pipe and pipe fittings.
- Installs piping through floors, walls, and ceiling of various structures.
- Joins pipes by use of screws, bolts, fittings, or solder, and caulks joints.
- Locates source and determines cause of malfunctions; checks piping, fittings, and fixtures for defective parts or connections.
- Uses hand and powered tools of the plumbing trade.
- Makes independent judgments and decisions within the framework of oral and written instructions and accepted trade practices, processes, and procedures while completing assignments.
- Frequently handles objects weighing up to 18.1 kg (40 pounds).
- Frequently works in awkward and cramped positions.
- Works inside in areas that are usually dusty, dirty, or greasy and outside, sometimes in bad weather.
- Is exposed to fumes and the possibility of burns, infection, scrapes, and broken bones.

Motor Grade Operator

Grade: 10

- Operates pneumatic-tired gasoline or diesel-powered motor graders to perform excavating, backfilling, and leveling of earth to rough grading requirements.
- Starts and checks the operation of the power unit.
- Assures that control levers, tires, blade, scarifier, and leaning wheel control are in proper position and working order, making adjustments as necessary.
- Steers grader and operates clutches, brakes, levers, and valves in accomplishing required grading.
- Operates graders close to buildings, around obstructions, and in open areas.
- Performs rough grading such as digging and cleaning ditches and roadbeds; spreading crushed rock, gravel, and sand; cleaning highways and airfields of rocks, boulders, and snow; performing rough bank sloping and building; removing light stumps, small rocks, and roots; and operating scarifier while building and grading road shoulders.
- Follows oral instructions concerning the location of the job and what has to be done.
- Follows safety rules and operates motor graders carefully to prevent damage to the grader and injury to others.
- Uses strenuous physical effort in operating hand and foot controls.
- Occasionally handles objects weighing up to 22.7 (60 pounds).
- Operates motor grader in all types of weather and is exposed to the possibility of serious accidents.

Automotive Mechanic

Grade: 10

- Overhauls, repairs, and maintains vehicles such as automobiles, buses, trucks, forklifts, warehouse tractors, and light ground maintenance equipment.

- Within the framework of inspection reports or instructions, determines nature and extent of repairs required on engines, transmissions, suspension, steering, and braking systems and related electrical, fuel, hydraulic, wheel, and engine assemblies.
- Following instructions in technical manuals, tears down, adjusts, repairs, reassembles, and runs operational checks on components of these systems.
- Tunes and adjusts vehicle components to prescribed operating tolerances.
- Uses specialized testing equipment such as compression testers, motor analyzers, test benches, and specialized measuring instruments such as micrometers, vernier calipers, and dial indicators.
- Makes independent judgments and decisions within the framework of oral and written instructions and accepted trade practices, processes, and procedures while completing assignments.
- Continually handles objects weighing up to 9.1 kg (20 pounds) and occasionally handles objects weighing up to 22.7 kg (50 pounds).
- Frequently works in awkward and cramped positions.
- Works inside in areas that are usually noisy, dirty, and greasy.
- Is exposed to the possibility of cuts, bruises, shocks, scrapes, and burns.

Aircraft Mechanic

Grade: 10

- Makes repairs, adjustments, and modifications to a variety of reconnaissance, fighter, bomber, or cargo aircraft.
- Within the framework of discrepancies noted by the pilot, inspection reports, periodic maintenance checklists, or engineering modification work orders, determines nature and extent of repairs or adjustments required on engines, fuel systems, landing gear, flight control surfaces and systems, heating, cooling and de-icing systems, and hydraulic systems.
- Following instructions in technical manuals or engineering work orders, removes items to be inspected, repaired, or replaced; installs, makes adjustment, and makes repairs to items.
- Installs and adjusts engine accessories, control surfaces, fuel tanks and lining, oil, fuel, and hydraulic fluid tubing, propellers and propeller governors, wings, seats, tail assemblies, armament mounts, canopies, wheels, and landing gear mechanisms.
- Makes visual and functional check of items installed, repaired, or adjusted.
- Uses hand tools, power tools, jigs, fixtures, test stands, external power sources, and specialized measuring instruments such as gages, micrometers, vernier calipers, and templates.
- Uses a knowledge of overall aircraft systems.
- Makes independent judgments and decisions within the framework of oral and written instructions and accepted trade practices, processes, and procedures while completing assignments.
- Continually handles objects weighing up to 9.1 kg (20 pounds) and occasionally weighing up to 22.7 kg (50 pounds).
- Frequently works in awkward and cramped positions.
- Works inside in areas that are usually noisy, dirty and greasy, and outside, sometimes in bad weather.
- Is exposed to the possibility of cuts, bruises, shocks, scrapes, broken bones, and burns.

Welder***Grade: 10***

- Repairs, modifies, and fabricates all types of metal and alloy parts and equipment by use of electric, gas, or inert gas-shielded welding processes.
- Plans and lays out work from blueprints, sketches, drawings, and work orders.
- Determines work sequence.
- Selects proper materials and processes to be applied.
- Sets up and adjusts equipment.
- Welds, in vertical, horizontal, flat, and overhead positions, items of various sizes and shapes.
- Brazes, flame-cuts, beads, heat-treats, pressures, and tacks welds.
- Welds are subject to X-ray analysis, magnaflux inspection, dye check, water or gas tight pressure, and other tests.
- Uses hand and power tools of the welding trade.
- Uses templates in measuring, marking, scribing, and cutting.
- Makes independent judgments and decisions within the framework of oral and written instructions and accepted trade practices, processes, and procedures while completing assignments.
- Continually handles objects weighing up to 9.1 kg (20 pounds) and occasionally objects weighing up to 22.7 kg (50 pounds).
- Frequently works in awkward and cramped positions.
- Works inside in areas that are usually noisy and dirty and outside, sometimes in bad weather.
- Experiences considerable discomfort while wearing welding helmet.
- Is exposed to fumes and heat and to the possibility of cuts and bruises, scrapes, shock, broken bones, and serious burns.

Pipefitter***Grade: 10***

- Installs, repairs, and maintains high pressure piping systems such as steam heating, steam power, hydraulic, and high pressure air or oil line systems.
- Determines nature and extent of necessary repairs.
- Plans and lays out work from blueprints, drawings, technical manuals, or specifications.
- Determines work sequence and tools to be used.
- Works with a variety of pipe and pipe fittings including those made of copper, brass, lead, glass, and plastic.
- Measures, cuts, bends, threads, packs, and joins piping to pipe fittings.
- Installs valves, traps, thermostats, and gages to maintain flow and pressure.
- Makes pressure test of piping system to assure pressure-tight joints and proper circulation and flow.
- Uses hand and power tools of the pipefitting trade.
- Makes independent judgments and decisions within the framework of oral and written instructions and accepted trade practices, processes, and procedures while completing assignments.
- Frequently handles objects weighing up to 22.7 kg (50 pounds) and occasionally handles objects weighing over 22.7 kg (50 pounds).
- Frequently works in awkward and cramped positions.

- Works inside in areas that are usually dusty and dirty and outside, sometimes in bad weather.
- Is exposed to the possibility of cuts, bruises, burns, and broken bones.

Sheet Metal Worker

Grade: 10

- Fabricates, repairs, and installs a variety of standard sheet-metal articles and equipment such as heating, air-conditioning and ventilating systems, downspouts, gutters, partitions, and refrigeration compartments.
- Plans and lays out work from blueprints, drawings, sketches, and work orders.
- Determines work sequence.
- Selects materials, equipment, and tools to be used.
- Sets up and operates a variety of sheet-metal machines to bend and form light gage metals into desired shapes, allowing for seams, joints, laps, and shrinkage.
- Joins parts by riveting, soldering, and spot-welding.
- Installs sheet-metal sections with bolts, rivets, screws, and other fastening devices.
- Uses hand and power tools of the sheet-metal trade.
- Uses shop mathematics in developing templates and patterns used to lay out work.
- Makes independent judgments and decisions within the framework of oral and written instructions and accepted trade practices, processes, and procedures while completing assignments.
- Continually handles objects weighing up to 9.1 kg (20 pounds) and occasionally handles objects weighing up to 22.7 kg (50 pounds).
- Frequently works in awkward and cramped positions.
- Works inside in areas that are usually dirty and noisy and outside, sometimes in bad weather.
- Is exposed to the possibility of cuts, bruises, burns, and broken bones.

Electrician

Grade: 10

- Installs, maintains, repairs, and tests electrical systems, electric shop equipment, and internal electrical power distribution facilities including connections of power and control circuits to motors, industrial equipment, and alarm systems.
- Determines nature and extent of repairs required.
- Plans and lays out work from blueprints, sketches, wiring diagrams, technical manuals, and other specifications.
- Determines work sequence.
- Makes standard computations relating to load requirements of wiring or electrical equipment.
- Uses specialized measuring instruments such as voltmeters, ammeters, wattmeters, ohmmeters, and meggers.
- Makes independent judgments and decisions within the framework of oral and written instructions and accepted trade practices, processes, and procedures while completing assignments.
- Frequently handles objects weighing up to 9.1 kg (20 pounds).
- Occasionally works in awkward and cramped positions.
- Works inside in areas that are usually dirty and greasy and outside, sometimes in bad weather.

- Is exposed to the possibility of cuts, bruises, shocks burns, and broken bones.

Machinist

Grade: 10

- Sets up and operates various machine tools such as engine lathes, milling machines, boring mills, planers, shapers, and precision grinders for machining casting, forgings, and bar stock of various metal and metal alloys from raw stock to finished product.
- Plans and lays out work from blueprints, work orders, sketches, and other specifications.
- Determines work procedures, machines, tools, equipment, and attachments to be used.
- Decides on type and size of raw stock to be used.
- Determines speeds, feed tolerances, and sequence of machine operations.
- Makes complex setups and adjustments.
- Cuts, turns, drills, bores, taps, reams, shapes, grinds, and finishes item.
- Uses specialized measuring instruments such as vernier calipers, inside and outside micrometers, surface gages, center-head protractors, and dial indicators.
- Uses shop mathematics and standard handbook formulas in computing dimensions for planning and laying out work.
- Uses a high degree of manual skill and works within close tolerances.
- Makes independent judgments and decisions within the framework of oral and written instructions and accepted trade practices, processes, and procedures while completing assignments.
- Frequently handles objects weighing up to 4.5 kg (10 pounds) and occasionally handles objects weighing up to 18.1 kg (40 pounds).
- Works inside in areas that are usually noisy and dirty.
- Is exposed to the possibility of cuts, bruises, scrapes, and burns.

Electronic Equipment Mechanic

Grade: 11

- Tests, overhauls, repairs, modifies, aligns, and installs various electronic equipment and related devices involving audio and video electronic circuits including all components in a complete standard operational system.
- Works on radar, radio, sonar, loran units, radio teletype, and related equipment which require an extensive knowledge of a wide range of the principles of the electronic mechanic's trade.
- Determines nature and extent of repairs required.
- Plans and lays out work from blueprints, schematic diagrams, wiring diagrams, technical manuals, and other specifications.
- Determines work sequence.
- Selects specialized testing and measuring instruments such as spectrum analyzer, oscilloscope, wave meter, voltmeter, and frequency meter.
- Performs complete operational tests to assure that all components of systems are working within prescribed close tolerances.
- Makes independent judgments and decisions within the framework of oral and written instructions and accepted maintenance shop practices, processes, and procedures while completing assignments.
- Continually handles objects weighing up to 4.5 kg (10 pounds) and occasionally objects

weighing up to 18.1 kg (40 pounds).

- Occasionally works in cramped and awkward positions.
- Works inside in areas that have adequate light, heat, and fresh air and outside, sometimes in bad weather.
- Is exposed to the possibility of cuts, bruises, scrapes, shock, broken bones, and serious burns.

Radar Mechanic (Ground)

Grade: 12

- Performs trouble analysis, complete overhaul, and final alignment on complete complex ground radar systems, such as search height finders, ground approaches, bomb scoring devices, and gap fillers.
- Following technical orders, factory test specifications, and preoverhaul survey reports, analyzes intricate relationships among, and signal flow through, all subsystems, circuits, and components.
- Determines significant defects, such as burning power supplies, overloaded amplifiers, arcing magnetrons, improper indicator sweep rotations, and excessive power consumptions.
- Applies advanced radar theory and special data flow tests which are complex because of frequent technological changes in system.
- Determines modifications, parts replacements, relocation of consoles, and repair of components to be made by lower grade workers.
- Performs final operational tests in terms of continuity, power, amplitude, signal frequency, voltage, amperage, and resistance.
- Aligns all system component, circuits, and subsystems to assure their optimum operating effectiveness.
- Makes independent judgments and decisions within the framework of oral or written instructions and accepted maintenance shop practices, processes, and procedures while completing assignments.
- Frequently handles objects weighing up to 4.5 kg (10 pounds) and occasionally objects weighing up to 18.1 kg (40 pounds).
- Frequently works in cramped and awkward positions.
- Works inside in areas that usually have adequate light, heat, and fresh air and outside, in all kinds of weather.
- Is exposed to the possibility of cuts, bruises, broken bones, and burns.

Tool, Die, and Gage Maker

Grade: 13

- Fabricates and repairs tools, jigs, fixtures, dies, punches, and gages used in the manufacture, overhaul, and repair of equipment.
- Fabricates molds and dies for use in the forming of metals, plastics, and other types of materials.
- Determines the structural characteristics of the item based on how it will be used bearing in mind the intricate working relationship of holes or surfaces in the functioning of the end item.
- Determines the dimensions and layout of broken lines, compound radii, or holes.
- Determines need for, sets up, and operates a variety of types of machine tool equipment.

- Works with a variety of kinds of metals and metal alloys.
- Uses specially constructed devices to hold work at a position or angle.
- Calibrates work while in process and upon completion.
- Accomplishes precision fitting and assembly of end items.
- Uses specialized and precision measuring instruments such as computing devices, toolmaker's microscopes, air gage devices, optical flats, and master gage blocks.
- Uses shop mathematics to calculate the sizes and dimensional relationships of parts and working tolerances and clearances.
- Uses a very high degree of manual dexterity and works within extremely close tolerances.
- Makes independent judgments and decisions within the framework of oral and written instructions.
- Uses originality and ingenuity by frequently adapting or modifying existing tools and dies and work processes and procedures in fabricating and repairing items.
- Frequently handles objects weighing up to 4.5 kg (10 pounds) and occasionally handles objects weighing up to 18.1 kg (40 pounds).
- Works inside in areas that are usually noisy and dirty.
- Is exposed to the possibility of cuts, bruises, scrapes, and burns.

Die Sinker

Grade: 14

- Machines and grinds matched impressions in two blocks of steel simultaneously to make impression dies or molds used in forging hammers and presses.
- Studies blueprints, templates, or drawings of the product as well as the die or mold.
- Plans sequences of operations, visualizing shape of die or mold in reverse of item to be produced.
- Measures, marks, and scribes steel stock to lay out for machining.
- Determines needs for, sets up, and operates a variety of types of machine tool equipment to machine outer dimensions and contoured cavity of die or mold to extremely close tolerances.
- Grinds, files, and sands parts using handtools such as files, emery cloth, and power grinders to smooth and finish cavity for precision fitting and assembling.
- Fastens die halves and pours in molten lead to make casting from which final checks of dies can be made.
- Verifies dimensions, using such specialized measuring instruments as micrometers, calipers, planer gages, and dial indicators.
- Use shop mathematics to calculate the sizes and dimensional relationship of parts and working tolerances and clearances.
- Uses a very high degree of manual dexterity.
- Makes independent judgments and decisions within the framework of oral and written instructions.
- Uses originality and ingenuity by frequently adapting or modifying existing dies and molds and work processes and procedures in fabricating items.
- Frequently handles objects weighing over 22.7 kg (50 pounds).
- Works inside in areas that are usually noisy and dirty.
- Is exposed to the possibility of cuts, bruises, scrapes, and burns.

Model Maker

Grade: 14

- Fabricates, installs, tests, modifies, and repairs a variety of different types of models or various major component parts made of ferrous and nonferrous metals and metal alloys.
- Makes complete models and model parts, usually used in experimental or developmental work, to a full, reduced, or enlarged scale within extremely close tolerances.
- Follows blueprints, sketches, or oral information that indicates the design data that is required to achieve specific test applications.
- Discusses with scientists and engineers design characteristics that cannot be met by fabrication processes and indicates what designs could be achieved by different component alignment and placement, and changes in size, weight, or dimensional relationships of parts.
- Determines from nature of test, experiment, or other use what material to use and work methods and operational sequence to follow.
- Considers such factors as shrinkage, warpage, desired life, location of component members, and surface finish of models.
- Lays out work which involves a wide variety of interrelated dimensions such as unusual contours and shapes and variety of irregularly shaped parts at varying angles and planes.
- Performs precision machining or hand work by use of a variety of machine and hand tools.
- Fabricates and assembles interrelated parts and provides for access holes, cover plates, or other comparable assembly and operational considerations.
- Devises and makes special tools, templates, molds, jigs, gages, fixtures, and securing devices needed in fabrication or assembly of models.
- Accomplishes precision fitting and assembling of complete model.
- Observes test of models to determine if any defects result from or can be corrected by methods of fabrication or assembly.
- Uses a variety of specialized and precision measuring instruments such as micrometers; vernier calipers; height, limit, and surface gages; and master gage blocks.
- Uses shop mathematics to calculate the sizes and dimensional relationships of parts, working tolerances and clearances, and machine tool settings.
- Uses a very high degree of manual dexterity and works within extremely close tolerances.
- Makes independent judgments and decisions in determining how to fabricate a model to meet the precise specifications established by the scientists or engineers responsible for testing the model.
- Uses originality and ingenuity in modifying or adapting standard tools and machines and work processes to accomplish required fabricates.
- Frequently handles objects weighing up to 4.5 kg (10 pounds) and occasionally handles objects weighing up to 18.1 kg (40 pounds).
- Works inside in areas that are usually noisy and dirty.
- Is exposed to the possibility of cuts, bruises, scrapes, burns, and shock.

Instrument Maker

Grade: 15

- Fabricates, modifies, and tests a variety of mechanical and electrical instruments for special purpose use, such as one-time research and development models, special laboratory equipment, or highly precise instruments used to record accurate and uniform physical

measurements.

- Makes complete operating instruments or modifies existing instruments which have fine mechanical or electromechanical movements to measure and regulate factors such as heat, distance, time, pressure, illumination, and sound.
- Works with a wide variety of materials such as ferrous and non-ferrous metals and metal alloys, plastics, wood, rubber, stone, and porcelain.
- Discusses with scientists and engineers how the instrument will be used, the operating and environmental conditions under which it will operate, and the desired size and shape.
- Determines what materials to use, considering the special purpose of the instrument.
- Determines the most economical and effective fabrication and modification methods and procedures, considering such factors as use of new or rare materials, the physical properties and reactions of different materials, component alignment and placement, safe-loading requirements, and unusual experimental conditions.
- Plans and lays out work which involves unique and varied fabrication sequences and methods.
- Performs highly precise machining by using a variety of special machine tools which often includes the fabrication of special tools, jigs, gages, fixtures, and securing devices.
- Constructs complex electrical circuitry and determines values for electrical parts and accessories, considering wire size and gage, insulation, fuse, and the physical placement of instrument components.
- Assembles instruments by fitting and mounting various electrical parts and circuitry and installing precision components, such as timing devices, springs, gear trains in housing, and balance mechanisms, which often require the use of a jeweler's lathe, tweezers, eyepiece, and specialized hand tools.
- Tests, aligns, and calibrates instruments to determine if any defects can be corrected by methods of fabrication.
- Uses a variety of highly specialized and precise measuring instruments such as electronic indicators, super micrometers, and shadowgraphs.
- Uses advanced shop mathematics to calculate the sizes and dimensional relationships of parts, working tolerances and clearances, and special tool settings.
- Uses a very high degree of manual dexterity and works within extremely fine tolerances and precise finishes.
- Makes unreviewed trade judgments and decisions on how the instrument will be fabricated, including determinations of precise specifications required to achieve the final operating characteristics by scientists and engineers.
- Uses considerable originality and ingenuity in making an instrument without detail design specifications.
- Frequently handles objects weighing up to 4.5 kg (10 pounds) and occasionally handles objects weighing up to 18.1 kg (40 pounds).
- Works inside in areas that usually have adequate light, heat, and fresh air.
- Is exposed to the possibility of cuts, bruises, shocks, and burns.