WAGE GRADE CAREER PATH

WG 3806	Sheet Metal Worker / Sheet Metal Mechanic

This occupation covers nonsupervisory jobs involved in the repair, fabrication, modification, and installation of sheet metal parts, items, and assemblies. Sheet metal mechanic work requires knowledge of the physical properties and working characteristics of sheet metal, knowledge of tools and equipment required in the sheet metal trade, and knowledge of shop mathematics and principles.
Sheet metal work requires skill and knowledge in:
• using shop mathematics to determine curves, angles, and pitch; • planning and making pattern and template layouts;
• using measuring instruments;
• operating shop tools and equipment to construct manufactured items and systems with various seams; and
• working with various kinds of metal, including magnesium, honeycomb material, galvanized and black iron, aluminum and aluminum alloys, stainless steel, copper and brass sheets, lead alloys, and bronze.

	Step	
		Part 1
	1	Complete New Hire Orientation
	2	Complete Civilian Training Plan requirements for current position
		Part 2
WG08		**Trade/Less than Journeyman**
	1	Continue required on-the-job and formal classroom training required in Civilian Training Plan
	2	Complete task qualifications for current position
	3	Complete task certifications for current position
	4	Master common to complex work tasks. Grade 8 sheet metal workers plan, lay out, construct, and install articles such as deflectors, pans, straps, containers, wing patches and flaps, metal furniture, and other items with predominately straight edges and regular curves. They assist higher-graded mechanics in the full range of their layout and construction duties. Workers routinely use personal computers or computer terminals to reference technical manuals, order supplies and tools, and track components in process. Grade 8 sheet metal workers apply knowledge of arithmetic to calculate and scribe patterns and apply shop principles of parallel or radial line development and triangulation. These workers have skill in: • planning, manufacturing, and installing cylindrical, square, or rectangular objects with easily constructed fastenings such as single- and double-hem edges and single, double, or grooved seams; • using measuring instruments such as pocket rules, hook rules, flexible and semi-flexible rules, compasses, and other hand measuring plans and patterns; • using basic hand and powered tools such as hammers, chisels, hand snips, band and circle saws, squaring shears, seamers, bar folders, brakes, and stakes to cut and form; and • assembling parts by seaming, bolting, screwing, riveting, tacking, spot-welding, and soldering
	5	Maintain successful to above average performance ratings
		Part 3
		Journeyman
	1	Continue required on-the-job and formal classroom training required in Civilian Training Plan
	2	Complete task qualifications for current position
	3	Complete task certifications for current position
	4	Master common to complex work tasks. Grade 10 sheet metal mechanics develop patterns and lay out, cut, form, join, assemble, and install items such as heating, air conditioning, and ventilating pipes; conduits; drying ovens; bulkheads; airframes; spars; air scoops; control and flying surfaces; metal furniture; and other items and systems with combined straight and curved edges or irregular curves and planes. The items constructed are more difficult to plan and lay out than those at grade 8 because of the number of irregular angles, planes, and curves. The items are also more difficult to cut, bend, and form than those manufactured or installed by grade 8 workers whose work mainly involves standard curves and angles. Sheet metal mechanics at grade 10 use items that may be bent or formed to a variety of angles or curves with varying pitch or circumference. These items are also more difficult to construct, because the mechanic works with a variety of assembly joints, hems, and edges and operates more complex hand and power machines such as sliproll forming machines, box and pan brakes, rotary machines with extra forming rolls, crimpers, and beading machines. The grade 10 mechanic may also work on aircraft or aircraft parts or systems. To devise patterns for these items, the grade 10 mechanic applies principles of radial line development combined with parallel line development and triangulation. The grade 8 worker generally does not use both radial and parallel line development in the same item, because they work with less complex patterns usually developed by the use of one method.
	5	Master common to complex work tasks. Sheet metal mechanics at Grade 11 lay out and develop templates to construct, assemble, and install irregular items and systems. The sheet metal items and systems used by sheet metal mechanics at this level have various combinations of features including: cornices, canopies, transition elbows, and oblique, truncated, or frustum cones. Objects and systems with these features are more difficult to make and join than those at grade 10, because they are usually unconventional, one-of-a-kind items, systems, or apparatuses used for a one-time project or in support of experimental or testing activities. In addition to the parallel line and radial line development typical at the grade 10 level, the grade 11 mechanic more frequently uses triangulation principles. The grade 11 level is also appropriate for sheet metal work on certain unconventional, first of their kind (i.e., experimental or prototypic), and destined for eventual manufacture as standard production items for ships, submarines, missile systems, combat vehicles, aircraft, aircraft parts, or aircraft systems (e.g., a new wing configuration). The emphasis is on the uniqueness of the part or system and not on the uniqueness of the repair. Typically, the grade 11 work situation will be found in locations with experimental or testing activities and when the production dies and detailed technical orders have not been developed.
	6	Maintain successful to above average performance ratings

This list is not all inclusive. For more information on your series, visit the OPM site below. Copy and paste the link in your browser.
OPM Classification Standards