U.S. Office of Personnel Management
Office of Merit Systems Oversight and Effectiveness
Classification Programs

Dallas Oversight Division
1100 Commerce Street, Room 4C22
Dallas, TX 75242-9968

Classification Appeal Decision
Under section 5346 title 5, United States Code

Appellant:	[appellant's name]
Agency classification:	Sheet Metal Mechanic (Aircraft) WG-3806-10
Organization:	[appellant's unit] Directorate of Maintenance [appellant's Logistics Group] Air Education and Training Command Department of the Air Force [name of Air Force Base]
OPM decision:	Sheet Metal Mechanic (Aircraft) WG-3806-10
OPM decision number:	C-3806-10-01

/s/ Bonnie J. Brandon

Bonnie J. Brandon
Classification Appeals Officer

December 15, 2000

Date

As provided in section S7-8 of the *Operating Manual: Federal Wage System*, this decision constitutes a certificate that is mandatory and binding on all administrative, certifying, payroll, disbursing, and accounting officials of the government. There is no right of further appeal. This decision is subject to discretionary review only under conditions and time limits specified in section 532.705(f) of title 5, Code of Federal Regulations (address provided in the *Introduction to the Position Classification Standards*, appendix 4, section H).

Decision sent to:

Appellant:

[appellant's name and address]

Agency:

[servicing civilian personnel office]

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Introduction

On September 8, 2000, the Dallas Oversight Division, U.S. Office of Personnel Management (OPM) accepted a job grading appeal from [the appellant]. [The appellant] is a Sheet Metal Mechanic (Aircraft), WG-3806-10, in the [appellant's unit], Directorate of Maintenance, [appellant's Logistics Group], Air Education and Training Command, Department of the Air Force, at [an Air Force Base]. Although the appellant agrees that his official job description is accurate, he believes his job has been evaluated too low and should be graded at the 11 level. The appellant appealed his job classification to the Department of Defense Civilian Personnel Management Service (CPMS). On July 28, 2000, CPMS issued a decision sustaining the appellant's current grade. The appeal has been accepted as timely and decided under section 5346 of title 5, United States Code (U.S.C.)

In reaching our decision, we carefully reviewed information provided by the appellant and his agency, including the job description of record. We also conducted telephone interviews with the appellant, his immediate supervisor (i.e., mid-shift supervisor), and the Civilian Personnel Office point of contact at [the appellant's] Air Force Base.

General issues

According to the appellant, he first began to believe that his job warranted upgrade when he saw a copy of the Air Force's Standard Core Document (job description) for WG-3806-11. That core document describes duties that also include manufacture of flight control cables, the manufacture and repair of aircraft tubing (i.e., fuel, hydraulic lines), and balancing of aircraft flight controls. Since the appellant performs these duties in his job, and there is no specific mention of them in the Air Force standard core document for WG-3806-10, he reasoned that those duties must be grade controlling for grade 11. The agency, however, has explained to the appellant that the absence of those duties from the grade 10 core document was merely inadvertent and that the duties are not grade controlling in the grade 11 core document. Nevertheless, the appellant continues to believe that Air Force would not have spent valuable resources to develop the core documents without intending that they be used to classify jobs. Therefore, he questions the agency's contention that the core documents cannot be used to classify his job or adjudicate his appeal.

The law (i.e., 5 U.S.C. 5346) requires that jobs be classified solely by comparison of their current duties and responsibilities to the applicable OPM Job Grading Standards (JGS), guidelines, and instructions. Therefore, we have considered the appellant's statements only insofar as they are relevant to making that comparison. The job grading appeal process is an independent, third party review that includes a determination as to the duties and responsibilities assigned by management and performed by the appellant, and constitutes the proper application of the JGS to those duties and responsibilities. We have evaluated the work assigned by management and performed by the appellant according to these job-grading requirements.

The appellant also believes that his agency erred in making cross-series comparisons to other job grading standards (i.e., Boilermaker, WG-3808, and Aircraft Pneudraulic Systems Mechanic, WG-8268) in evaluating duties he performs that are not covered by the WG-3808 JGS, i.e.,

aircraft tubing and cabling work. Longstanding classification guidance, however, provides that when a directly applicable standard does not exist, standards covering similar or comparable work may be cross referenced in evaluating a job. In the appellant's case, the agency used such comparisons to assess the likelihood of that work to exceed the grade 10 equivalency. Although the appellant objects to the use of those two standards, he has not identified alternatives.

Job information

The appellant is officially assigned to core document [number], Sheet Metal Mechanic (Aircraft), WG-3806-10. The appellant and his supervisor agree that, with a minor exception, this is an accurate description of his work. The exception is that the appellant does not perform duties numbered as 6 and 7, that is, performing minor corrosion control and paint removal work (5 percent) and using conventional spray equipment to perform minor painting of components (5 percent). These duties are now performed by a group of grade 9 painters assigned to the unit where the appellant works. The appellant stated that the "extra" 10 percent of his time resulting from relief from those duties has been divided equally between duties numbered as 1 and 2, that is, planning and laying out work from blueprints, sketches, drawings, specifications, and work orders in manufacturing aircraft sheet metal structures and examining aircraft sheet metal structures to locate cracks, breaks, holes, etc. With these exceptions in mind, we find that the remainder of [core document number] is adequate for evaluation.

The maintenance organization performs repairs on four types of aircraft in the Air Force inventory: KC-135, C-5, C-141, and C-17. The C-17 is the newest, state-of-the-art aircraft deployed at the Air Force Base and is programmed to eventually replace the C-141. The C-17 is remarkable in that its construction makes greater use of lightweight composite materials (e.g., graphite, kevlar). The sheet metal work is performed in a three-shift operation, although the appellant has voluntarily elected to continuously work the mid-shift ("graveyard"), from 11:00 p.m. to 7:00 a.m. The [appellant's unit] has a total of 34 WG-3806-10 mechanics. Typically, there are six on duty during the graveyard shift, and they are rotated between the backshop and the flight line, working about 50 percent of the time in each location.

The primary purpose of the appellant's job is to plan, lay out, fabricate, modify, repair, assemble, and install complex aircraft sheet metal parts, items, and assemblies that have combined straight and curved edges of irregular curves and planes. Materials used include various metals (i.e., stainless steel, aluminum, titanium, magnesium, and copper) and advanced composites (i.e., carbon fiber, kevlar). A brief description of the appellant's duties, as contained in core document [number], follows.

- 35 percent. Examine aircraft sheet metal structures to locate cracks, breaks, holes, bulges, dents, and loose or missing rivets. Determine the types and extent of repairs needed to restore original strength to components such as frames, stringers, bulkheads, spars, ribs and stiffeners. Develop patterns and cut, form, join, assemble, and install sheet metal items and systems which have combined straight and curved edges or irregular curves, angles, and planes. Make general repairs by manufacturing and installing new parts, reinforcing, patching, and replacing defective parts.

- 15 percent. Plan and lay out work to be done from blueprints, sketches, drawings, specifications, and work orders in manufacturing aircraft sheet metal structures which have combined straight and curved edges and irregular angles, planes, and curves.

- 15 percent. Fabricate aircraft tubing and local manufacture work orders.

- 15 percent. Perform bonded repairs to metal, fiberglass, and advanced composite (graphite, kevlar) structures. Trim and drill replacement parts and components. Repair and accomplish transition areas on manufactured panels.

- 10 percent. Fabricate aircraft flexible control cables. Determine working length and cut cable and machine swages fittings and terminals to cable.

- 5 percent. Use and maintain tools. Use basic hand and power tools. Operate complex hand and power machines, such as sliproll forming machines, box and pan brakes, saws, swagers, pneumatic riveters, and soldering equipment.

- 5 percent. Utilize safety practices and procedures following established safety rules and regulations and maintain a safe and clean work environment.

Occupation, title, and standard determination

The primary purpose and the vast majority of duties of the appellant's job involve aircraft sheet metal work, which is covered by the Sheet Metal Mechanic, WG-3806, occupation. It covers nonsupervisory jobs that involve fabrication, modification, repair, assembly, and installation of sheet metal parts, items, and assemblies. Metals include but are not restricted to galvanized and black iron, aluminum and aluminum alloys, stainless steel, copper and brass sheets, lead alloys, and bronze. That occupation also includes repair work on aircraft control and flying surfaces, which implies that a balancing jig or machine must be used to ensure that the completed repair has not significantly changed and compromised the aircraft's flight characteristics (e.g., could cause control surface flutter).

The JGS for the 3806 occupation prescribes the title *Sheet Metal Mechanic (Aircraft)* for positions at grade 10 and above that are engaged in the manufacture and installation of aircraft sheet metal items.

The appellant's job also includes duties that are not covered by the 3806 occupation: (a) fabrication of control cables and aircraft tubing (e.g., hydraulic and oxygen lines) and (b) repairs using advanced composite materials. Since there is no directly applicable JGS for the cabling and tubing work in the appellant's position, the agency made cross-series comparisons to the Boilermaker, WG-3808, and Aircraft Pneudraulic Systems Mechanic, WG-8268, occupations to determine whether that work was likely to exceed the grade 10 level. The agency's evaluation statement for core document [number] explains how the work covered by those two standards has some similarities to the appellant's work. For example, Boilermakers examine, split, clean, and evaluate tube conditions; they cut, bend, roll, and shape tubes; and they connect tubes in proper assemblies to assure a steam tight fit. Pneudraulic Systems Mechanics disassemble,

clean, and examine parts for wear and other damage; replace worn parts; and reassemble accessories, adjusting and testing to assure proper operation in accordance with standards in technical specifications. Pneudraulic mechanics also rig cables and adjust associated pneudraulic equipment on landing gear doors, bomb bay and ramp doors, and other aircraft features involving pneudraulics. We concur in the agency's rationale for selecting these standards for cross-series comparison in the absence of a directly applicable standard. The appellant questioned the use of these specific standards, but he has not suggested any, more suitable standards for the comparison.

There also is no published standard for the composites work performed by the appellant on the C-17 aircraft. According to core document [number], this work comprises no more than 15 percent of his work. In our grade determination analysis, however, we have done a cross-series comparison to the Plastic Fabricator, WG-4352, occupation in order to make a reasonable judgment as to whether the appellant's composites work would likely exceed the grade 10 level. The WG-4352 JGS covers nonsupervisory positions that, like the appellant's, are involved in fabricating, modifying, repairing, and installing items, parts, assemblies, and structures, in this case from plastics. Like the composite materials that the appellant uses for aircraft repairs, plastics are formed from resins and are hardened, shaped, and formed into the desired items or parts.

Grade determination

The JGS for the Sheet Metal Mechanic (Aircraft), WG-3806, occupation includes four factors for determining the grade of a position: Skill and Knowledge, Responsibility, Physical Effort, and Working Conditions. The standard includes descriptions of these factors for three different grade levels: 8, 10, and 11. The appellant does not contest the Physical Effort and Working Condition factors, and we agree that they are accurately described and not critical to distinguishing between grades 10 and 11. As a result, we will focus our detailed grade analysis on the first two factors, Skill and Knowledge and Responsibility.

Skill and Knowledge

At the grade 8 level, sheet metal workers plan, lay out, construct, and install items that have predominantly straight edges, regular curves, and standard angles. At this level, workers must have the skill to plan, manufacture, and install cylindrical, square, or rectangular-shaped objects that have easily constructed fastenings. These workers use a knowledge of arithmetic to calculate and scribe patterns. They use shop principles of either parallel or radial line development, but not both on the same item. Grade 8 workers cut and form parts by using basic hand and powered tools. They work under close supervision of a higher graded worker or a supervisor, and they work from clear-cut work orders and instructions from a supervisor or higher graded worker, using predetermined methods, materials, and machines. The appellant's work situation and level of responsibility fully exceeds this level.

At the grade 10 level, sheet metal mechanics must know how to evaluate structural damage to sheet metal systems or items in order to plan and lay out repair and modification projects. Grade 10 mechanics work under general supervision. They develop patterns and lay out, cut,

form, join, assemble, and install items and systems, such as bulkheads, airframes, spars, airscoops, control and flying surfaces, metal furniture, and other items. These items are more difficult than at the grade 8 level because they have combined straight and curved edges and more numerous and irregular angles, curves, and planes. Items at this level are more difficult to construct because the mechanics work with more of a variety of assembly joints, and they operate more complex hand and power machines, such as sliproll formers, box and pan brakes, and hand or powered crimping, burring, turning, and beading machines. Grade 10 mechanics work with more kinds of metals than at the grade 8 level, including stainless steel, magnesium, copper sheet, honeycombed material, and alloys.

The appellant's work situation matches the knowledge and skill requirement at the grade 10 level. The appellant examines and evaluates damage to sheet metal structures on four types of conventional, production aircraft. These structures include frames, stringers, bulkheads, spars, ribs, stiffeners, skin panels, honeycombed panels, rudders, ailerons, ruddervators, elevators, and stabilizers. Many of these items have combined straight and curved edges or irregular curves and planes (e.g., a part where a wing and fuselage come together might have two different curves and three different planes). To create patterns for these items, the appellant applies the principles of radial line development combined with parallel line development. After receiving oral instructions as to his assignment, he examines and evaluates the damage, determines the extent and type of repair or modification needed (usually by consulting a Technical Order manual), plans and lays out the appropriate repair, and constructs and installs the repair. In constructing appropriate repairs and modifications, he uses a wide variety of hand and powered tools, including drills, awls, aviation snips, tinsnips, punches, rivet guns, cornice brakes, box and pan brakes, hydraulic and foot shears, drill presses, orbital sanders, sliproll formers, and shrinking and stretching machines. He also uses a balancing machine or cradle to ensure that repairs to aircraft control and flying surfaces (e.g., wing flaps, ailerons) are within allowable tolerances and have not adversely changed the flight characteristics of the aircraft.

At the grade 11 level, sheet metal mechanics use planning, layout, and construction skills to devise complex templates and patterns. Objects and systems at this level are more difficult to make and join than at the grade 10 level because they are usually *unconventional*, *one-of-a-kind* items, systems, or apparatus for a one-time project or in support of *experimental* or *testing* activities. As a result, mechanics at this level adapt hand and power machines as well as shop practices, methods, and techniques to fit each new situation or project. In addition to parallel-line and radial-line development, mechanics at the WG-11 level frequently use principles of triangulation. Grade 11 mechanics apply a thorough knowledge of metals and how their characteristics fit the needs and requirements of the project because assignments at this grade level are usually expressed only in terms of expected results.

The appellant agrees that he does not work on experimental or test aircraft. He contends, however, that his repairs of damage from bird, hail, and lightening strikes on aircraft are each individually unique, i.e., there is no consistent pattern as to which parts of an aircraft they hit, the strength of the blow, or the extent of the external and internal damage done. Therefore, he believes those repairs constitute the type of "one-time projects" and "one-of-kind items or systems" that are described at the grade 11 level. We disagree. The appellant confuses his occasionally unique or one-of-a–kind *repairs* of items on regular production aircraft with the

repairs to one-of-a-kind *items* that are envisioned at the grade 11 level in the JGS. The grade 11 level is reserved for sheet metal work on aircraft, or certain aircraft parts or systems (e.g., a new wing configuration), that are unconventional in themselves, are the very first of their kind (i.e., prototypes), and are destined for eventual manufacture as standard production items. The emphasis is on the uniqueness of the aircraft part or system and not on the uniqueness of a repair. Typically, the grade 11 type of work situation will be found where experimental aircraft are being designed and tested prior to fielding, and the production dies and detailed Technical Orders have not yet been developed.

In contrast, the appellant works on four types of production aircraft for which dies have been developed and Technical Orders published, covering nearly all of the parts and systems that he might need to repair. On occasion, when the order and delivery of replacement parts will be delayed (e.g., shortages in the supply chain), the appellant may need to fabricate the part so that aircraft can continue to meet mission demands. In those instances, he may construct the part using the old or damaged part as a pattern. He may also make wooden forming blocks to help replicate curves and angles in parts being fabricated. Ultimately, however, those fabricated parts do not serve as prototype items or become standard production items.

The appellant also mentions his work involving one-of-a-kind "locally-manufactured" items. Such work may stem from aircraft crew chiefs requesting some type of cosmetic customization in their planes to give them a sense of individuality and pride, particularly in the older models. As an example, the appellant described how one crew chief asked that the usual Plexiglas top on the navigator's table be replaced with smoked glass. The uniqueness of this type of work, however, does not meet the intent of the grade 11 level either, and the appellant acknowledges that he may perform such work only a half dozen times a year.

While some aspects of the appellant's sheet metal work (e.g., repairing extensive damage from bird strikes) may seem to approach the one-of-a-kind characteristics of the grade 11 level, they do not fully meet the scope and intent of that level. The appellant's sheet metal work, therefore, is evaluated at grade 10.

The appellant's work on damaged flight control cables consists of replacing the entire cable, swaging the appropriate terminal fittings on the ends to reconnect the new cable, and conducting strength ("pull") tests to ensure the integrity of the replacement. He does not make repairs by cutting out and splicing in new sections of cable. In contrast, aircraft tubing (e.g., hydraulic and oxygen lines) is usually too long and passes through too many bulkheads to make total replacement desirable or cost effective. Some aircraft such as the C-17 use expensive titanium lines. Typically, once the lines have been drained and disconnected by hydraulics or other appropriate technicians, the sheet metal mechanic comes in and measures, cuts out the damaged tubing section, manufactures a replacement tube assembly, and crimps the new section into place. Then, other technicians conduct pressurization tests to ensure the integrity of the repair. The skill and knowledge required of the appellant to perform cabling and tubing repairs do not exceed the grade 10 level described in the job grading standards used for cross comparison.

Similarly, our cross-series comparison to the Plastic Fabricator, WG-4352, occupation confirms that the appellant's work with composite materials would not exceed the grade 10 level. At the

grade 11 level, Plastic Fabricators plan, lay out, modify, and fabricate unconventional, one-of-a-kind plastic items for a one-time project or in support of experimental, developmental, or testing activities with a minimum of supervision. At the grade 11 level, Plastic Fabricators apply a thorough knowledge of the newest plastics and possible compound materials in order to recommend and/or select materials to be used for prototype or one-time items. They also experiment with different combinations and amounts of resins and other compound materials as well as with different cure cycles and temperatures in order to obtain the required characteristics for the final product. In comparison, grade 10 Fabricators are skilled in selecting the materials based upon information provided by manufacturers' instructions and specifications. Similarly, while grade 10 Fabricators use any of the accepted manufacturing methods and techniques, grade 11's *adapt* shop practices, methods, and procedures, and they use unorthodox processes to fit each new project. Also, at the grade 11 level, Plastic Fabricators must be able to calculate loads, fits, sizes, and weights not provided in instructions and blueprints, to overcome design flaws and to lay out more complex items. In contrast, we have already established that the appellant does not meet similar criteria of working on unconventional and one-of-a-kind items envisioned in the Sheet Metal Mechanic standard, and we understand that the appellant's work with composite materials is covered by very specific guidelines and tolerances.

Responsibility

At the grade 10 level, sheet metal work is done from written and oral instructions, blueprints, sketches, or personal inspection of the item or system to be manufactured or repaired. Grade 10 mechanics plan their own work or devise a plan for others to follow. They make templates where necessary and select, use, or prescribe methods, materials, and machines most appropriate for the assigned project. Riveting, soldering, and spot-welding are done for appearance as well as strength. The completed work is spot checked by the supervisor for quality and accuracy.

The appellant's work situation is a match for the grade 10 level. When working in the backshop, he gets oral instructions from the shift supervisor on the work to be done. When assigned to work on the flight line, he gets oral instructions relayed by radio from the maintenance operation control center. The appellant works independently. He and his shift supervisor agree that about 80 percent of his repair assignments are covered in detailed Technical Orders (manuals). The shift supervisor reports that when the appellant and the other grade 10 sheet metal mechanics cannot find the type of repair needed to be covered in the Technical Order, they consult the supervisor on how to proceed. When the supervisor is uncertain, a request is submitted for instructions (called "engineering dispositions") from a professional engineer representing the aircraft's manufacturer. In some instances, the grade 10 sheet metal mechanic may take pictures or make a drawing of the damage to help the engineer understand the nature and extent of the damage and determine what needs to be done. Occasionally, the appellant or another grade 10 mechanic might suggest a repair protocol that the engineer reviews and agrees with. It is clear, however, that in these situations the sheet metal mechanics cannot proceed with the repair without the engineer's approval.

At the grade 11 level, mechanics receive their assignments with a minimum of accompanying information concerning methods to be used. They independently plan, construct, and install or direct the installation of the objects or systems. Completed projects are accepted as prototypes,

hardware for attachments to or in experimental devices, or for manufacture as a standard item. At this level, responsibility is greater than at grade 10 because the items or systems are more difficult to plan, construct, and install, with responsibility for assignments from the initial planning to completion.

Similarly, with regard to evaluating the appellant's work with advance composites, grade 11 Plastic Fabricators operate with great independence. They are expected to use great originality and ingenuity in devising changes to methods, materials, and processes to solve fabrication, assembly, design, and related problems. Instead of spot checks of work envisioned at the grade 10 level, the work of grade 11 Fabricators is reviewed by the supervisor on the basis of meeting assigned objectives. We do not find the appellant's degree of responsibility in carrying out his composites work in conformance with detailed technical order instructions and tolerances to equate to the grade 11 level.

Decision

We find the appellant's job is properly graded as Sheet Metal Mechanic (Aircraft), WG-3806-10.