

# POSITION DESCRIPTION

1. Agency PDCN **D1736P01**

<b>2. Reason for Submission</b> <input type="checkbox"/> Redescription <input checked="" type="checkbox"/> New  <input type="checkbox"/> Reestablishment <input type="checkbox"/> Other Explanation (Show Positions Replaced)	<b>3. Service</b> <input type="checkbox"/> HQ <input checked="" type="checkbox"/> Field	<b>4. Empl Office Location</b>	<b>5. Duty Station</b>	<b>6. OPM Cert #</b>
<b>7. Fair Labor Standards Act</b> Not Applicable		<b>8. Financial Statements Required</b> <input type="checkbox"/> Exec Pers Financial Disclosure <input type="checkbox"/> Employment & Financial Interests		<b>9. Subject to IA Action</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>10. Position Status</b> <input type="checkbox"/> Competitive <input checked="" type="checkbox"/> Excepted (32 USC 709) <input type="checkbox"/> SES (Gen) <input type="checkbox"/> SES (CR)		<b>11. Position is</b> <input type="checkbox"/> Supervisory <input type="checkbox"/> Managerial <input checked="" type="checkbox"/> Neither	<b>12. Sensitivity</b> <input type="checkbox"/> Non-Sensitive <input type="checkbox"/> Noncritical Sens <input type="checkbox"/> Critical Sens <input type="checkbox"/> Special Sens	<b>13. Competitive Level</b>  <b>14. Agency Use</b> DUAL STATUS

**15. Classified/Graded by**  
 a. US Office of Pers Mgt  b. Dept, Agency or Establishment  c. Second Level Review  d. First Level Review

Official Title of Position	Pay Plan	Occupational Code	Grade	Initials	Date
Aircraft Ordnance Systems Mechanic	WG	6652	11	ejm	25 May 06

<b>16. Organizational Title</b> (If different from official title)	<b>17. Name of Employee</b> (optional)
<b>18. Dept/Agency/Establishment</b> - National Guard Bureau  a. <b>First Subdivision</b> - State Adjutant General  b. <b>Second Subdivision</b> - Air National Guard Aviation Wing	c. <b>Third Subdivision</b> - Aircraft Maintenance Group  d. <b>Fourth Subdivision</b> - Aircraft Maintenance Squadron  e. <b>Fifth Subdivision</b> - Weapons Element

**19. Employee Review.** This is an accurate description of the major duties and responsibilities of my position. Employee Signature /Date (optional)

**20. Supervisory Certification.** I certify that this is an accurate statement of the major duties and responsibilities of this position and its organizational relationships, and that the position is necessary to carry out Government functions for which I am responsible. This certification is made with the knowledge that this information is to be used for statutory purposes related to appointment and payment of public funds. False or misleading statements may constitute violations of such statutes or their implementing regulations.

a. Typed Name and Title of Immediate Supervisor  Signature _____ Date _____	b. Typed Name and Title of Higher-Level Supervisor/Manager (optional)  Signature _____ Date _____
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<b>21. Classification/Job Grading Certification:</b> I certify this position has been classified/graded as required by Title 5 USC, in conformance with USOPM published standards or, if no published standards apply directly, consistently with the most applicable standards.  Typed Name and Title of Official Taking Action ED MARCHETTI Human Resources Specialist (Classification) Signature _____ Date 25 May 06 //signed//	<b>22. Standards Used in Classifying/Grading Position</b> JGS for Aircraft Ordnance Systems Mechanic, WG-6652, Aug 74. JGS For Electronic Mechanic, WG-2604, Dec 97. JGS for Electronic Integrated Systems Mechanic, WG-2610, Feb 81. Introduction to the Electronic Equipment Installation and Maintenance Family, 2600, dated Aug 81.  Information For Employees. The standards and information on their application are available in the personnel office. The classification of the position may be reviewed and corrected by the agency or OPM. Information on classification/job grading appeals is available from the personnel office.
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23. Position Review	Initials	Date	Initials	Date	Initials	Date	Initials	Date
a. Employee (Opt)								
b. Supervisor								
c. Classifier								

**24. Remarks:** Released from NGB-J1-TNC, CRA 06-1028, dated 25 May 06.  
 Pen-and-Ink Changes released by NGB-J1-T5, CRA 11-1004, dated 20 Jul 11. Pen-and-Ink Changes throughout this document are annotated as follows: Deletions are reflected via strike-through and additions are reflected via **BOLD ITALICS** font. (EJ Marchetti)

**25. Description of Major Duties and Responsibilities** (SEE ATTACHED)

25.

a. INTRODUCTION:

This position is located in an Air National Guard Aviation Wing, Aircraft Maintenance Group, Aircraft Maintenance Squadron, Weapons Element (Flight Line). This PD is applicable for the F-15, and F-16, **F-22, F-35 and A-10** aircraft only. The primary purpose of the position is to troubleshoot, repair, install, modify, test and adjust aircraft ordnance systems, equipment and components. On and/or off-equipment inspection, modification, overhaul, troubleshooting and repair capability of weapons release and gun systems; verifies and analyzes malfunctions, troubleshoots, tests, inspects and loads/unloads conventional munitions; installs/removes weapons delivery equipment, launchers and gun systems.

b. DUTIES AND RESPONSIBILITIES:

(1) Operates, analyzes performance, troubleshoots, inspects, installs, maintains, overhauls, repairs and modifies operational ordnance system(s) and subsystems consisting of numerous complex electronic components in fighter aircraft. Examples of individual subsystems or components are: computerized stores management systems or programmable armament control systems, fire/control avionics, fire control sensing, targeting systems, digital multiplex data bus systems, electronic countermeasures equipment, weapons/avionics video display systems and discrete weapons/avionics systems and ensures compatibility of systems and their interfaces through operational test, system alignment and harmonization.

(2) Analyzes performance and isolate malfunctions to individual subsystems and or components of bombing/navigation, fire-control/weapons delivery, weapons multi-sensor displays and external electro-mechanical weapons systems, electro-optical targeting pod/weapon interfaces, R/F electronic countermeasures systems, target radar tracking and missile tracking radar. Reviews and analyzes aircrew debriefs and data transfer equipment information to aid in resolving in-flight discrepancies encountered and isolates unusual system anomalies within the complete system using technical manuals, schematics, logic and wiring diagrams, tools and test equipment including automatic test equipment. Solves aircraft ordnance malfunctions by analyzing the installation, circuitry and operating characteristics of the electronic ordnance system. Adjusts and aligns sensors, transmitters, power supplies, display devices, controls, actuators, servos, computers and other interrelated components. Performs bore sighting of the complete system to ensure alignment of all components of the electronic weapons delivery system such as radar, aerial gun system, pilot's HUD, Angle Of Attack (AOA) and aircraft Inertial Navigation System (INS). Removes faulty LRU's for shop repair and identifies faulty subassemblies such as bad circuit cards, random access memory, operational flight program (OFP) and various electronic circuits and installs serviceable components into aircraft. Inspects completed maintenance to ensure compliance of technical directives and initiates the necessary forms to ensure documentation is correct and entered in the aircraft historical records.

(3) Removes, repairs, installs, inspects and conducts operational performance checkout of aircraft ordnance and isolates malfunctions and identifies if failures are in specific LRU's, aircraft weapons, avionics multiplex data bus matrix assemblies, or aircraft digital data wiring. Removes faulty units (matrix assemblies) and isolates problems to failing component parts using self-test diagnostics, oscilloscopes, frequency meters, signal generators, digital and differential voltmeters, milliohm meters, computer registers, impedance analyzers/multiplex data bus test equipment, and other special and standard tools and test equipment. Removes and replaces components or assemblies down to the smallest bit, piece, or module authorized, using special and common hand tools, special electronic instruments, and soldering devices along with high-reliability soldering techniques.

(4) Loads/unloads, positions and safeties air munitions using applicable technical data and handling equipment. Tests suspension, launch and release systems to ensure proper manual/electrical release on equipment. Analyzes on equipment malfunctions and repairs systems and performs aircraft weapons systems functional checks utilizing system peculiar electronic testing equipment and special tools and tests the aircraft electronic circuitry for normal operation of the ordnance system and absence of stray electrical power.

(5) Conducts off-equipment troubleshooting and functional checks of electronic weapons control systems to ensure proper manual/electrical release and fire sequence. Performs bench checks to determine extent of repair needed and accomplishes Time Compliance Technical Orders (TCTO) and modifications of components and software and tests for proper operation. Performs scheduled and unscheduled in-use/in-storage inspections and maintenance of on/off equipment components such as launchers, bomb racks, pylons, launcher adapters, gun systems and handling equipment and inspects equipment for serviceability and proper installation on aircraft of components such as suspension devices, launcher, bomb racks and pylons. Examines gun system for defects and removes, disassembles, inspects and repairs the entire gun system. Installs ordnance system on the aircraft and accomplishes operational checkout using hydraulic test stands and external electrical power. Performs scheduled/unscheduled disassembly, assembly, inspection, maintenance, modification, testing and repair of the Ammunition Loading Systems (UALS/ALS) and maintains the applicable forms and historical records for aircraft ordnance systems. Implements preliminary (advance) maintenance plans for assigned weapon systems and schedules immediate weapons maintenance for transient aircraft. Designates, maintains and monitors current weapons maintenance repair priorities of aircraft to ensure actuality and compliance with the flying schedules. Authorizes and assigns aircraft weapons maintenance jobs, job control numbers either manually or through a computerized maintenance system, work priorities and start and completion times for scheduled and unscheduled weapons configurations, weapons loads/unloads, functional checks and all other weapons system maintenance of aircraft. Responsible for the control and dispatch of weapons shop assignments. Monitors progress of job completion by dispatched personal and controls ordnance maintenance on assigned aircraft and related support and training

equipment. Takes prompt and decisive action to make on-the-spot adjustments to weapons maintenance repair priorities necessitated by unscheduled maintenance requirements and incorporates all unscheduled maintenance into a daily plan. Continually keeps flight line expediter updated on all aircraft status. Maintains visual aids depicting status of weapons maintenance actions in progress, weapons personnel availability and status of aerospace vehicles, training equipment, transportation and tow vehicles, munitions loads, arming of guns and munitions and location of aircraft. Maintains a visual daily flying schedule and notes deviations and cancellations of assigned aircraft ordnance.

(6) Ensures all munitions are inventoried at the start and completion of the work shift. Ensures that all munitions expenditures are accurately tracked and recorded on applicable forms. When required will assist the munitions custodian of aircrew training munitions in conducting a weekly munitions inventory and reconciliation.

(7) Coordinates with loading standardization and the weapons element supervisor for all load crew-training requirements and ensures only loading certified/qualified personnel are directed to perform weapons loading tasks and may be required to perform weapons expediting on the flight line.

(8) Maintains and reviews publication files of applicable technical orders, regulations, manuals and local directives. Recommends and rewrites methods to improve maintenance procedures, technical data and equipment and initiates unsatisfactory equipment and technical order deficiency reports.

(9) Provides hands-on training instruction to lower graded personnel concerned with the repair of the electronic ordnance systems within the aircraft. May be required to perform additional duties as a production controller, quality assurance inspector, and bench stock monitor for the work center.

(10) Processes and accounts for due in from maintenance (DIFM) supply assets and ensure materials and equipment are properly stored, protected and maintained and funds are not obligated for material or parts without proper justification.

(11) Adjusts, installs and removes cartridges and squibs for tanks and pylons and chaff/flare systems. Adjusts and installs fusing devices in explosive air munitions. Removes and installs safeing devices on munitions and gun systems and operates Munitions Maintenance Handling Equipment (MMHE) and loading equipment.

(12) Operates fault detection and digital test equipment. Evaluates pilot trouble reports to determine validity and the necessary repair actions. May be required to maintain certification as a weapons load crew chief or load crewmember.

(13) May be required to perform additional duties such as launch/recovery aircraft servicing, fire fighting, crash rescue duty or serve as a member of a team to cope with natural disasters or civil emergencies.

(14) May be required to inspect, troubleshoot, test and maintain the Aerial Gunnery Target System. Analyzes, isolates and repairs off-equipment malfunctions of Aerial Gunnery Target Systems, target sets, digital control displays and associated equipment utilizing digital electronic test equipment and specialized tools. Services and maintains Aerial Gunnery Target System with gaseous nitrogen.

(15) May be delegated authority to clear Red X on aircraft forms.

(16) Performs other duties as assigned.

c. SKILL AND KNOWLEDGE:

- Knowledge and appropriate training in functions of inspection, maintenance, installation, modification and repair of air munitions launch, release, suspension systems, R/F electronic countermeasures system and aircraft gun systems.

- Comprehensive knowledge and skill in troubleshooting procedures, diagnosing problems and determining corrective action in the aircraft ordnance electronic systems.

- Knowledge and skill to troubleshoot, repair, modify, or remove equipment and components such as gun systems, bomb racks, pylons, and the Ammunition Loading Systems (UALS/ALS).

- Knowledge and ability to interpret and trace schematic, logic and wiring diagrams and use a wide variety of test, measurement and diagnostic equipment (TMDE). Ability to perform algebraic and trigonometric formulas to solve work related problems.

- Operational knowledge and skill in the operation, interrelationship and interdependent aspects of each ordnance system within the total complex aircraft electronic system(s) within fighter aircraft. Has extensive knowledge of each system's prerequisites, sequential events, and logic flow and signal input/output requirements for successful target acquisition, lock-on, launch and delivery of air-to-air and air-to-ground weapons.

- Knowledge of the principals of digital and analog circuits, synchro-electro-mechanical devices, solid-state devices theory, digital techniques /servo operation and circuit theory.

- Comprehensive knowledge and skill to exercise judgment and to apply electronic theories and practices to identify, isolate, and repair malfunctions in individual subsystems of complex electronic systems.

- Knowledge of mechanical, hydraulic, pneumatic and optical principals.

- Skill in operating assigned computer systems to document job data and to operate and run test equipment.

- Skilled in high reliability soldering techniques and electrostatic discharge protective techniques is required.

- Knowledge of the Technical Order Distribution System and other technical publications and directives relating to work requirements.

d. RESPONSIBILITY:

The supervisor offers general supervision and makes assignments in the form of work orders, inspection reports, or oral instructions. Incumbent otherwise independently carries assignments through to completion referring only highly unusual or controversial problems to the supervisor. Work is accomplished in accordance with technical orders, local operating instructions, manufacturer handbooks and specifications, and engineering data. Data is often vague and the mechanic is expected to logically reason out the malfunction. Work is subject to spot checks and quality control checks upon completion for acceptability and adherence to instructions and established standards. When required makes recommendations to engineering personnel on the operation and maintenance effects of proposed modifications to systems and equipment.

e. PHYSICAL EFFORT:

Physical effort involves climbing, stooping, standing, bending, stretching, and working in tiring and uncomfortable positions and in hard to reach places. Requires moderate strenuous physical exertion. Frequently lifts equipment and components up to 40 pounds and occasionally with assistance lifts items up to 50 pounds.

f. WORKING CONDITIONS:

Works indoors and outdoors, in inclement weather, and on icy, wet or slippery ramps and aircraft surfaces in temperature and humidity extremes. Subject to dangers from exposure to toxic fumes, high-pressure air and fluids, fast actuating aircraft surfaces such as landing gear, speed brakes and flaps. Dangers also include engine noise, jet blast, jet intakes, explosive munitions, incendiary devices, electrical voltage, cartridge actuated devices, liquid oxygen, fire, and aircraft fuels, lubricants, paints, hydrazine and solvents.

g. OTHER SIGNIFICANT FACTS:

Incumbent may be required to prepare for and support the mission through the accomplishment of duties pertaining to military training, military readiness, force protection and other mission related assignments including, but not limited to, training of traditional Guard members, CWDE/NBC training, exercise participation (ORE/ORI/UCI/MEI/OCI/IG, etc.), mobility exercise participation, FSTA/ATSO exercise

participation, SABC training, LOAC training, weapons qualification training, participation in military formations, and medical mobility processing within the guidelines of NGB/ARNG/ANG/State/TAG rules, regulations and laws.

## EVALUATION STATEMENT

A. Title, Series and Grade: Aircraft Ordnance Systems Mechanic, WG-6652-11.

B. References:

1. USOPM Federal Wage System Job Grading Standard for Aircraft Ordnance Systems Mechanic, WG-6652, Aug 1974.
2. USOPM Federal Wage System Job Grading Standard for Electronic Mechanic, WG-2604, Dec 1997.
3. USOPM Federal Wage System Job Grading Standard for Electronic Integrated Systems Mechanic, WG-2610, Feb 1981.
4. Introduction to the Electronic Equipment Installation and Maintenance Family, 2600, dated Aug 81.

C. Background Information: This position description is specifically for Aircraft Ordnance Systems Mechanic working on the F-15, and F-16, **F-22, F-35 and A-10** aircraft. These aircraft are technological advanced in the area of electronic onboard armament. Technological advances in the area of electronics, i.e., fly-by-wire aircraft have changed and increased the skill and responsibility requirements of the Aircraft Ordnance Systems Mechanic working the ~~se F-16 and F-15~~ aircraft since the standard was published in 1974. The intent is to describe the duties and responsibilities of the Aircraft Ordnance Systems Mechanic on these aircraft and to recognize the increased level of electronics knowledge to diagnose/repair these systems due to the advanced onboard electronic ordnance systems and their involvement with these systems.

D. Pay Plan, Series, Title and Grade Determination:

1. Pay Plan: This position (Aircraft Ordnance Systems Mechanic) is determined to be Wage Grade (WG) as its primary duties involves the performance of physical work that requires knowledge or experience of a trade or craft.

2. Series: The work of this position falls within more than one occupational series.

(a) The position is currently classified in the Aircraft Ordnance Systems Mechanic, WG-6652 occupational series. The primary purpose and paramount knowledge required still fall within the Aircraft Ordnance Systems Mechanic, WG-6652 occupational series. The work involves troubleshooting, repair, installation, modification, and operational and functional testing of components and sub-systems of a variety of aircraft ordnance systems (i.e., computerized stores management systems or programmable armament control systems, fire/control and fire control sensing, targeting systems, weapons/avionics video display systems and discrete weapons/avionics systems).

The work meets the WG-6652, as the job is responsible for the maintenance of the aircraft ordnance on the ~~F-15/16~~ aircraft. The job repairs malfunctions and adjusts the necessary components to ensure the ordnance equipment is set to required specifications. The work requires extensive knowledge of aircraft ordnance systems and how they relate to the aircraft. The ~~F-15/16~~ aircraft ordnance systems utilize mechanical, hydraulic, pneumatic, and electrical principles of operation and require the use of schematics, blueprints, and technical manuals to complete repairs and modifications. This work fully meets the series definition and is properly compared to the WG-6652 Aircraft Ordnance Systems Mechanic.

(b) Technological changes have resulted in the addition of electronic components and systems to the traditional ordnance systems, thus portions of the work falls within the WG-2600, Electronic Equipment Installation and Maintenance family. There are two occupational series within the WG-2600 family potentially covering the electronics work of this position - the Electronic Mechanic, WG-2604 and the Electronic Integrated Systems Mechanic, WG-2610 occupational series.

(1) The electronics work fully meets the requirements for evaluation under the WG-2604 occupational series, as the ~~F-15/16~~ Aircraft Ordnance Systems Mechanic is responsible for the maintenance of the aircraft ordnance systems that are electronically controlled. The work requires extensive knowledge of digital electronics, digital serial multiplex data bus systems, electro-mechanical, pneumatic and hydraulic systems. Skill is required in interpreting complex electronic schematics, drawings, specifications of complete operational systems to recognize the function and interconnections of the various assemblies/subassemblies, components and connecting cable harnesses. The ordnance systems are electronic systems that are joined with almost every system on the aircraft and these systems consist of numerous complex integral electronic components, which require knowledge of a wide range of electronic principles and practices such as circuit elements, digital logic, microprocessors, core memory, and interface circuits. The ~~F-15 and F-16~~ Aircraft Ordnance Systems Mechanic applies this knowledge to troubleshoot, install, repair and maintain malfunctions in aircraft ordnance systems where circuit theory must be used to understand the operation of individual circuits, and the possible interaction of other circuits, which create a malfunction. It was determined that the work being performed by this position is properly compared to the WG-2604 Electronics Mechanic occupation.

(2) The ~~F-15 and F-16~~ aircraft are electronically integrated aircraft that have advanced electronic ordnance systems that the Aircraft Ordnance Systems Mechanic is required to maintain and repair. Because of the electronic nature of the aircraft ordnance work, consideration was also given to the Electronic Integrated Systems Mechanic, WG-2610 Occupation. The WG-2610 standard covers non-supervisory jobs involving rebuilding, overhauling, installing, troubleshooting, repairing, modifying, calibrating, aligning, and maintaining integrated systems, i.e., where the output of a number of sensor subsystems is integrated in a logic subsystem and the resultant used to modify the operation of the total system. As the aircraft ordnance system is electronically linked with the aircraft, an apparent case could be made for coverage by

the WG-2610 standard. However, the level of maintenance and repair performed precludes coverage by the 2610 JGS.

Examples of aircraft ordnance electronic systems/subsystems worked include: computerized stores management systems or programmable armament control systems, fire/control avionics, fire control sensing, targeting systems, digital multiplex data bus systems, electronic countermeasures equipment, weapons/avionics video display systems and discrete weapons/avionics systems and ensures compatibility of systems and their interfaces through operational test, system alignment and harmonization. The Relationship with Electronic Integrated Systems Mechanic section of Reference B4 explains some of the differences between the WG-2604 and WG-2610 occupational series. The last paragraph of that section addresses why some fire control systems are not included in the WG-2610 occupation - systems that require electromechanical skill and knowledge as the paramount requirement. As shown in the Series Determination analysis above, the electrical, mechanical, pneumatic, and hydraulic knowledge of the WG-6652 occupational series are paramount; thus meet this exclusion.

The flight line ordnance mechanics are not required to apply a sufficiently broad knowledge of the complex electronic principles characterizing the work of the 2610 occupation. Their work does not regularly require them to simultaneously draw upon the complete range of electrical, mathematical, and mechanical knowledge as described by the 2610 standard, to correct aircraft system malfunctions that are so interrelated that the malfunction causes breakdown of an entire integrated complex system. According to the "Work Not Covered" section of Reference B3, work on portions of an integrated system where the work does not require the employee to consider the interaction of the item worked upon with the total integrated system are excluded from the WG-2610 occupation. While the complete electronic portion of the ordnance system may be considered an integrated system and some of the sub-systems may in and of themselves be integrated systems, the incumbent of this position repairs the individual systems and subsystems without requiring the broad understanding of how the item being worked upon impacts or effects the other systems and subsystems of the complete ordnance system. Therefore, this job is excluded, from the 2610 occupation.

As shown above, the work of this position is covered by more than one occupational series. IAW Paragraph 5c of section III-A of the Federal Wage System Job Grading System, jobs requiring the performance of work that in two or more occupations on a regular basis are coded to the occupation which is most important for recruitment, selection, placement, promotion, or reduction-in-force purposes. As this position (paramount requirement) is responsible to troubleshoot, install, modify, repair, and adjust a variety of ordnance systems and recruitment is from the traditional forces, who's skills and knowledge are ordnance related, and the reason for and the establishment of this position is for maintaining ordnance on the ~~F-15/16~~ aircraft, the WG-6652 meets these requirements identified in Federal Wage System Job Grading System.

Guidance found in paragraph 3 of Section II-C of the Federal Wage System Job Grading System: Part 1—Explanation of the Federal Wage System Job Grading System, states that a mixed job should be graded in keeping with the highest skill and qualification requirements of the job that are regular and recurring even if these duties are not performed for a majority of the time.

The WG-6652 work is graded at the WG-10 level as evaluated under “4. Grade” below.

The WG-2604 work is graded at the WG-11 level as evaluated under “4. Grade” below.

The series determination of this position is an exception to the typical situation where the position would be graded to the occupation that represents the highest skill and qualification requirements. Because the work appropriate to the Aircraft Ordnance Systems Mechanic is paramount over the Electronic Mechanic duties, the Aircraft Ordnance systems Mechanic WG-6652 series is determined to be the proper occupation.

3. Title: Jobs covered by the WG-6652 standard are titled Aircraft Ordnance Systems Mechanic.

4. Grade: The four factors used in grading most Federal Wage System positions are Skill and Knowledge, Responsibility, Physical Effort and Working Conditions. As this is a mixed-series, mixed-grade job, the Aircraft Ordnance systems Mechanic WG-6652 and Electronics Mechanic WG-2604 will be evaluated individually to determine the proper grade.

### **Aircraft Ordnance Systems Mechanic WG-6652**

#### a Skill and Knowledge:

The Aircraft Ordnance Systems Mechanic has the skill and knowledge to troubleshoot the aircraft ordnance system for electrical, mechanical, etc. using test and measuring devices, repair and modify the ordnance, remove the ordnance equipment and components and to isolate the malfunctions in the aircraft ordnance system. They have the ability to replace or repair components such as indicators, timers, cylinders, solenoids, resistors, etc. They have the skill to plan and lay out the repair sequence, determine which tools and test equipment to use, and the knowledge required to select the best methods and procedures to utilize in troubleshooting, making operational and functional tests, installing and modifying equipment, and adjusting the system to the required specifications. As this standard discusses ordnance equipment from the early 1970s, and this position has a computerized “fire and control” system that exceeds what is identified in the standard the complexity of this position has been increased significantly. The skill and knowledge required of this state of the art system far exceeds the identified requirement in the 6652 standard. The ordnance mechanic not only is required to know the ordnance but the effect the

ordnance equipment has on the aircraft itself. This position fully meets and exceeds the WG-10 of the 6652 standard.

b. Responsibility:

The supervisor offers general supervision and makes assignments in the form of work orders, inspection reports, or oral instructions. Incumbent otherwise independently carries assignments through to completion and refers only highly unusual or controversial problems to the supervisor. Work is accomplished in accordance with technical orders, local operating instructions, manufacturer handbooks and specifications, and engineering data. Incumbent is expected to identify and resolve the often-vague instructions during troubleshooting. Work is subject to spot checks and quality control checks upon completion for acceptability and adherence to instructions and established standards. When required, the incumbent makes recommendations to engineering personnel on the operation and maintenance effects of proposed modifications to systems and equipment.

c. Physical Effort: Mechanics are required to stand, bend stoop, stretch, work in tiring and uncomfortable positions and hard to reach places. They frequently lift parts and equipment weighing up to 40 pounds and occasionally up to 75 pounds. This fully meets the requirements for WG-10.

d. Working Conditions: Mechanics perform the work either inside or outside, and are subject to prevailing weather conditions, noise, slippery or uneven surfaces, and working in confined areas. They are exposed to the possibility of cuts, burns, grease, oil, dirt, electrical shock, and possible injury when de-arming and arming the system. This fully meets the requirements for WG-10.

The grade level for the WG-6652 work performed is, WG-10.

### **Electronic Mechanic WG-2604**

a. Skill and Knowledge:

In comparison to grade 10 mechanics who service functionally independent components of moderate complexity or a system of limited complexity, grade 11 electronics mechanics install, modify, overhaul, maintain, troubleshoot, and repair complex electronics equipment and a complete operational system consisting of numerous complex integral components which require a wide range of electronic principles and practices. The Aircraft Ordnance Systems Mechanic involves maintaining, repairing and conducting tests on electronic ordnance components, using specialized test equipment and precision measurement devices. Duties involve analyzing and isolating system component malfunctions using electronic, pneumatic and pneudraulic test equipment. In addition, work requires interpreting logic flow and wiring diagrams, and evaluating and analyzing technical documents and equipment specifications. Incumbents must apply a comprehensive knowledge of operating

electronic principals such as circuit elements, digital logic, microprocessors, core memory, digital data transmission, signal behavior, amplification and display. They also apply an extensive knowledge of electromechanical, hydraulics and mechanical and electrical systems. Aircraft Ordnance Systems Mechanic's apply this knowledge to troubleshoot, install, repair and maintain malfunctions in complex electronic systems where circuit theory must be used to understand the operation of individual circuits, and the possible interaction of other circuits, which create a malfunction in the system. This position requires skills to diagnose problems and determine corrective action for the complex electronic fire control systems in the F-15, and F16, **F-22, F-35 and A-10** fighter aircraft. The incumbent must understand the interaction of a number of complex, interrelated circuits such as timing circuits, over current protection circuits, redundant data bus circuits, impedance matched transformer networks, pulse forming networks, etc., to determine the cause of a malfunction and the interaction of factors such as ambient temperature, humidity, RF interference (noise), LRU electrical bonding and the power and duration of the signal input, which together cause it to fail.

As discussed, this work exceeds the WG-2604-10, as at this level mechanics apply a knowledge of microminiaturized digital and solid state integrated circuits, transistors, diodes, tube circuits, antennas, signal transmission, oscillation, and amplification.

The

Aircraft Ordnance Systems Mechanic requires an in-depth knowledge and skilled in the operation, interrelationship and interdependent aspects of each ordnance system within the total complex aircraft electronic system(s) within fighter aircraft and has extensive knowledge of each system's prerequisites, sequential events, and logic flow and signal input/output requirements for successful target acquisition, lock-on, launch and delivery of air-to-air and air-to-ground weapons. This knowledge level exceeds that of the 10 level. The skill and knowledge that are essential for adequate performance of the work of this position, as discussed, meets the WG-11 level of the Electronics Mechanic, WG-2604 standard.

This position does not meet the WG-12 level in the 2604 JGS, as the job does not require the mechanic to maintain ongoing prototype systems; implement maintenance and repair procedures on major modifications of systems previously assigned to the activity; maintain unusually complex systems that have frequent engineering changes such as in design, construction, operating and servicing procedures; and may operate and maintain complex computerized automated test equipment in the troubleshooting and repair of LRUs.

b. Responsibility:

The supervisor offers general supervision and makes assignments in the form of work orders, inspection reports, or oral instructions. Incumbent otherwise independently carries assignments through to completion and refers only highly unusual or controversial problems to the supervisor. Work is accomplished in accordance with technical orders, local operating instructions, manufacturer handbooks and specifications, and engineering data and while available they are often vague and

incomplete, and the mechanic is required to fill in the gaps. Incumbent is expected to identify and resolve the often-vague instructions during troubleshooting and is expected to understand the effect of a repair on related components in the system. Work is subject to spot checks and quality control checks upon completion for acceptability and adherence to instructions and established standards. When required, the incumbent makes recommendations to engineering personnel on the operation and maintenance effects of proposed modifications to systems and equipment.

c. Physical Effort: The standard states the physical effort at the WG-11 level is the same as describe at the grade 8 level.

d. Working Conditions: The standard states the working conditions at the WG-11 level are the same as those described at the grade 8 level.

The grade level for the WG-2604 work is WG-11.

The guidance found in paragraph 3 of Section II-C of the Federal Wage System Job Grading System: Part 1—Explanation of the Federal Wage System states that a mixed job should be graded in keeping with the highest skill and qualification requirements of the job that are regular and recurring even if these duties are not performed for a majority of the time. Thus, the appropriate grade level for this position is WG-11

E. Conclusion: As shown above, this position is both mixed-series and mixed-grade as defined in the FWS Job Grading System guide. The series controlling work falls within the Aircraft Ordnance Systems Mechanic, WG-6652 series, while the highest level of work performed, as reflected above in the analysis of the WG-2604 work is WG-11. Aircraft Ordnance Systems Mechanic, WG-6652-11.

CLASSIFIER: ED MARCHETTI, NGB-J1-TNC

Date: 25 May 06