POSITION DESCRIPTION

1. Agency PDCN 70125000

2. Reason for Submission
☐ Redescription ☒ New
☐ Reestablishment ☐ Other
Explanation (Show Positions Replaced)

3. Service ☐ HQ ☒ Field

4. Empl Office Location

5. Duty Station

6. OPM Cert #

7. Fair Labor Standards Act
Not Applicable

8. Financial Statements Required
☐ Exec Pers Financial Disclosure
☐ Employment & Financial Interests

9. Subject to IA Action
☒ Yes ☐ No

10. Position Status
☐ Competitive
☒ Excepted (32 USC 709)
☐ SES (Gen)
☐ SES (CR)

11. Position is
☐ Supervisory
☐ Managerial
☒ Neither

12. Sensitivity
☐ Non-Sensitive
☐ Noncritical Sens
☐ Critical Sens
☐ Special Sens

13. Competitive Level

14. Agency Use
ENL

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
Electronic Integrated Systems Mechanic	WG	2610	12	d/g/r	26 OCT 98

16. Organizational Title (If different from official title)

17. Name of Employee (optional)

18. Dept/Agency/Establishment - National Guard Bureau
a. First Subdivision - State Adjutant General
b. Second Subdivision - State Aviation Office
c. Third Subdivision - Army Aviation Support Facility; Army Aviation Flight Activity; and Aviation Classification Repair Activity Depot
d. Fourth Subdivision -
e. Fifth Subdivision -

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

21. Classification/Job Grading Certification: *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
SUELLEN L. MATTISON
Personnel Management Specialist

Signature
//signed//

Date
26 OCT 98

22. Standards Used in Classifying/Grading Position
USOPM JGS for Electronic Integrated Systems Mechanic, WG-2610,dtd Feb 81. USOPM Intro to Electronic Equipment Installation & Maint Family, WG-2600, 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.*

23. Position Review

	Initials	Date	Initials	Date	Initials	Date	Initials	Date	Initials	Date
a. Employee (Opt)										
b. Supervisor										
c. Classifier										

24. Remarks:

Released from NGB-HR-CLASSIFICATION DIVISION, CRA98-1013, Dated: 26 Oct 98

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

25.

a. INTRODUCTION:

This position is located in the Electronics Branch of an Army Aviation Support Facility (AASF), Army Aviation Flight Activity (AAFA), or Aviation Classification and Repair Activity Depot (AVCRAD). Its purpose is to perform work involved in installing, troubleshooting, repairing, modifying, calibrating, aligning, and maintaining the complete electronic integrated system on the AH-64 (Apache) helicopter.

b. DUTIES:

(1) Performs operational checks, inspections, tests and troubleshooting on electronic integrated systems composed of a number of sensor subsystems: Integrated Helmet and Display Sight System (IHADDS), the Target Acquisition Designation System (TADS), the Pilot Night Vision System (PNVS), the Air Data Subsystem, the Heading Attitude Reference System (HARS) and Doppler Navigation System (DNS); a logic subsystem-- the Multiplex Data Bus System (MUX) and components including the Fire Control Computer (FCC), the Backup Control System (BUCS) and primary and secondary data buses, Multiplex Remote Terminal Units (MRTU), Data Link Terminal Units (DLTU), and Digital Automatic Stabilization Equipment Computer (DASEC); and actuating subsystems--the Point Target Weapon System (PTWS), Area Weapon System (AWS), Aerial Rocket Control System (ARCS), and the Digital Automatic Stabilization Equipment (DASE), which includes the Stability Augmentation System (SAS), Command Augmentation System (CAS) and Hover Augmentation System (HAS).

(2) Completes operational checks, inspections, tests and troubleshooting of Line Replaceable Units (LRU). Isolates unusual malfunctions using technical manuals, schematics, and wiring diagrams, tools and test equipment including automatic test equipment. Solves problems by analyzing installation, circuitry, and operating characteristics of the systems. Adjusts and aligns sensors, transmitters, amplifiers, power supplies, display devices, controls, actuators, servos, computers and other related components. Removes faulty LRUs for shop repair. Installs serviceable components into aircraft and performs total systems alignment and harmonization in accordance with existing technical manuals and directives. Accomplishes technical manual compliance and modification of components and systems and completes systems checkout for proper operation. Maintains, modifies, calibrates and inspects a wide variety of user test, measurement, and diagnostic equipment (TMDE).

(3) Completes bench check, testing, repair, inspection, modification, programming, reprogramming, mating, adjusting, alignment, and analyzing of LRUs and shop replaceable units. Uses a variety of test equipment such as automatic test equipment (ATE), oscilloscopes, DTA computer, multimeters, powermeters, combined Boresight Harmonization Kits, and special purpose bench test sets. Tests and troubleshoots solid state electronic assemblies and subassemblies such as circuit cards, modules, rate gyros, electronic control amplifiers, electro-mechanical assemblies, random access memories, programmable read-only memories and various integrated circuits. Identifies faulty part and repairs to level authorized. Ensures and certifies operational integrity of various night vision systems, electro-optical components, and integrated helmet and display system devices. Reassembles unit after repair, performs alignment and makes shop checks.

(4) Recommends methods to improve equipment performance, technical data, and maintenance procedures by reporting hardware and software malfunctions, initiates material deficiency reports both on equipment and in technical data, and assists in design changes as necessary. Conducts debriefing of aircrews to determine the nature of system malfunctions, then documents all maintenance performed and records information related to the system, LRU's, or shop repairable units on both aircraft and historical records.

(5) When designated on NGB Flying Status Orders, serves as member of flight crew for the purpose of diagnosing and recording malfunctions, or otherwise determining maintenance and repair requirements.

(6) Guides lower level mechanics in the performance of duties. Conducts on-the-job training on assigned systems and related support equipment and tasks to include classroom instruction as necessary.

(7) Processes and accounts for due-in supply assets. Ensures that material and equipment are properly stored, protected and maintained and that funds are not obligated for material or parts without proper justification.

(8) Prepares for and participates in various types of readiness evaluations such as Operational Readiness Evaluations (ORE), Command Logistics Readiness Inspections (CLRT-X), and Aviation Resource Management Surveys. May be required to perform additional duties such as structural fire fighting, aircraft handling, heavy equipment operation, and maintenance of facilities and equipment, or serve as a member of a team to cope with natural disasters or civil emergencies. Complies with safety, fire, security, and housekeeping regulations.

(9) Performs other duties as assigned.

c. SKILL AND KNOWLEDGE:

(1) Ability to apply electronic theories and practices to identify, isolate and repair malfunctions in one or more complex integrated systems where knowledge of the entire system is necessary to interpret error data and trace back through a number of units of the system to locate deficiencies.

(2) Thorough knowledge of the principles of digital and analog circuits, electro-mechanical devices, solid state devices theory, digital techniques, synchro/servo operation and integrated circuit theory.

(3) 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.

(4) Current certification in high reliability soldering techniques, as well as electrostatic discharge protective techniques.

(5) Knowledge of the Army Maintenance Management System (TAMMS) and other automated programs, publications or directives as may be applicable to the function.

d. RESPONSIBILITY:

Supervisor relies on the technician to independently accomplish the assignments, but provides technical guidance and assistance on highly unusual or controversial problems. Work is accomplished in accordance with technical orders, manufacturer handbooks and specifications, and engineering data. Work is subject to spot check and quality control checks upon completion for acceptability and adherence to instructions and established standards.

e. PHYSICAL EFFORT:

Physical effort involves lifting components and equipment, also working in tiring and uncomfortable positions. Items lifted generally weigh up to 40 pounds. Assistance is usually available with heavier items. Frequent standing, walking, bending, crouching, reaching and stooping is required.

f. WORKING CONDITIONS:

Work is performed inside in well-lighted, heated and ventilated areas or on the aircraft in high or restricted places, under conditions of heat or cold, and occasionally outside in inclement weather. Subject to injuries such as electrical shock, cuts and bruises, as well as burns caused by electrical or Radio Frequency energy, or by soldering irons. Works in high noise environment.

EVALUATION STATEMENT

A. Title Series and Grade: Electronic Integrated Systems Mechanic, WG-2610-12.

B. References:

1. USOPM JGS for Electronic Integrated Systems Mechanic Series, WG-2610, dtd Feb 81.
2. USOPM Introduction to Electronic Equipment Installation and Maintenance Family, 2600, Aug 81.

C. Background: This position description was developed to address the impact of increased duties and responsibilities associated with repair and maintenance of the enhanced electronic "integrated systems" of the AH-64 (Apache) helicopter.

D. Series, Title and Grade Determination:

1. Series:

a. This position closely matches the series definition for the Electronic Integrated Systems Mechanic Series, WG-2610, which involves work associated with rebuilding, overhauling, installing, troubleshooting, repairing, modifying, calibrating, aligning, and maintaining integrated electronic systems, i.e., where the output of a number of sensor subsystems is integrated in a logic subsystem and the resultant output is used to modify the operation of the total system. An electronic integrated system must have a number of sensing subsystems, one or more actuating subsystem, and a central data processing subsystem. The logic subsystem receives the output from the sensors, combines the information, and directs the operation of the actuators. The computer then receives feedback information, either directly or through the sensors, by which it monitors performance and modifies the operation of the actuator. In some instances, performance of sensors is modified as well. The central data processing or logic subsystem is the integrating force, which converts separate linear systems into an integrated system.

b. The AH-64 multiplex system provides the force that integrates the functions of the sensors and actuators on the Apache. It performs the function of command and control of avionics and mission equipment functions through acquisition, conditioning, processing, and channeling weapon systems data for over 1300 signals. A major component of the multiplex system, the Fire Control Computer, computes and processes data for the employment of the point target weapon system, the area weapon system, and the aerial rocket control system; provides data bus control (Bus Controller) of the multiplex system data buses; interrogates fault detection/location (FD/LS) signals and reports the status to each crew member; and performs mathematical functions of accepting, transferring, conditioning, and outputting discrete, analog, and digital signals for armament, fire control, and navigation functions.

2. Title: Jobs graded by the WG-2610 standard are titled Electronic Integrated Systems Mechanic.

3. Grade: The four factors used in grading positions in the WG-2610 series are Skill and Knowledge, Responsibility, Physical Effort and Working Conditions. The first two factors are used in grading this position since Physical Effort and Working Conditions are the same at all grade levels.

a. Skill and Knowledge: The work of this position requires the mechanic to repair, overhaul, rebuild, modify, test, and troubleshoot airborne electronic systems composed of a number of individual subsystems which are linked together and interrelated so that their combined functions accomplish a specific objective and comprise a complete system. The mechanic applies a broad range of electronic principles to correct malfunctions on equipment that is interrelated so that output or functions of one component affect the total system operation and a malfunction may cause error indications in subsystems remote for from the defect. Mechanics at this level match, align, calibrate and otherwise integrate all subsystems into a total functional system. This position is a good match with duties required at the WG-12 level, but falls short of the requirements for the WG-13 level. WG-13 level mechanics perform similar types of work but on a multi-system complex consisting of several complete integrated systems. The system on the Apache is a single complete integrated system.

b. Responsibility: Mechanics at Grade 12 receive oral and written assignments in the form of work orders and a general discussion of the work to be performed. They exercise judgment and independence in determining solutions to maintenance and repair problems, which are complicated by the interactions of the various complex subsystems.

E. Conclusion: Based on the above evaluation, this position is classified as Electronic Integrated Systems Mechanic, WG-2610-12.

Classifiers: Date: 26 0CT 98

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