

Job Description:

AIRCRAFT ENVIRONMENTAL SYSTEMS MAINTENANCE

1. **SPECIALTY SUMMARY:** Installs, inspects, repairs, operates, troubleshoots, overhauls and modifies aircraft oxygen, heating, air conditioning, cabin pressurization, anti-icing, air turbine, engine bleed air distribution and fire extinguisher systems, components and associated equipment; services, inspects, overhauls; performs intermediate maintenance on cryogenic storage containers; and supervises aircraft environmental systems maintenance activities.

2. **DUTIES AND RESPONSIBILITIES:**

a. **ADVISES ON TECHNICAL PROBLEMS OF REPAIR, OVERHAUL, MODIFICATION AND INSTALLATION OF AIRCRAFT ENVIRONMENTAL SYSTEMS:**

(1) Solves maintenance problems by studying wiring diagrams, schematic diagrams and appropriate technical publications.

(2) Supervises and accomplishes inspections, testing, overhauling, calibrating and troubleshooting of oxygen systems and components such as oxygen converters, filler valves, regulators, pressure reducing valves, relief valves, flow indicators and pressure gauges; air conditioning systems and components such as flow control valves, shut-off valves, heat exchanger, cooling turbines, electrical and electronic temperature regulators, temperature sensing devices, temperature control valves, transducers and water separators; cabin pressurization systems and components such as pressure controllers, outflow valves, safety valves and canopy seals and locks, anti-icing systems and components such as air pressure and flow regulators, air shut-off valves, temperature controls and temperature sensing devices; air turbine motors and components such as shut-off valves, modulating valves, speed control governors and overspend mechanisms; engine bleed air and ducting, air and fire extinguishing systems and components such as cylinder and control valves.

(3) Supervises and inspects replacement of tubing, ducting, sleeves, gaskets and clamps in aircraft environmental systems.

(4) Follows and devises maintenance operating procedures and recommends revised policies to ensure full utilization of personnel and equipment.

b. **INSTALLS, REPAIRS, OVERHAULS AND MODIFIES AIRCRAFT ENVIRONMENTAL SYSTEMS AND COMPONENTS:** Supervises and performs operational checks, testing and trouble-shooting of environmental systems and components by using electrical and electronic meters and test equipment such as manometers, flow meters, cabin pressure leak tester, cabin temperature control system testers, cabin pressure accessories calibrator sets, air conditioning valve test panels and calibrator sets, bellows deflection testers, anti-G suit valve testers, thermal switch testers, air turbine motor testers, oxygen regulator test stands, liquid oxygen accessories test stands and liquid oxygen system

field testers.

c. PERFORMS INTERMEDIATE MAINTENANCE ON CRYOGENIC STORAGE CONTAINERS:

- (1) Supervises and performs intermediate maintenance and repair of mobile and skid mounted oxygen/nitrogen storage containers.
- (2) Removes and replaces valves, gauges and LOX converters.
- (3) Performs vacuum and purge checks.

d. SUPERVISES AIRCRAFT ENVIRONMENTAL SYSTEMS MAINTENANCE PERSONNEL:

- (1) Plans and schedules work assignments.
- (2) Establishes work methods, production controls and performance standards.
- (3) Ensures availability of required maintenance equipment, tools and spare parts.
- (4) Interprets and complies with policies and work orders.
- (5) Follows, identifies deficient and recommends improvement in maintenance directives, regulations and technical orders.
- (6) Evaluates performance of subordinates.
- (7) Plans and conducts on-the-job training.

3. SPECIALTY QUALIFICATIONS:

a. **KNOWLEDGE:** Knowledge of electrical, electronic and mechanical principles that apply to fabrication, operation and maintenance of aircraft pressurization, air conditioning, heating, engine bleed air distribution, air turbine, oxygen, fire extinguisher and anti-icing systems and components; concepts and application of series and supporting publications; and use and interpretation of wiring diagrams, blueprints and technical publications is mandatory.

b. **EDUCATION:** A 12th grade education with courses in general science or mechanics is desirable.

c. **EXPERIENCE:** Experience in functions such as installation, maintenance or repair of aircraft environmental systems is mandatory prior to the award of the 5-level AFSC.

d. TRAINING:

(1) Completion of a basic environmental systems maintenance course is mandatory.

(a) Career development course.

(b) Religious course.

e. OTHER:

(1) Normal color vision is mandatory.