

## AIRCRAFT MECHANIC

### JOB DESCRIPTION

**Classification Responsibilities:** An Aircraft Mechanic performs skilled technical work involved in the routine inspection, maintenance, repair of accessories, equipment, and overhaul of the Mesa Police Department's rotorcraft-helicopter fleet in accordance with Federal Aviation Administration (FAA) and Mesa Police Department regulations. An employee of this class is responsible for ensuring and certifying the airworthiness of assigned aircraft in conformance with Federal Aviation Regulations (FAR) Airworthiness Directives as issued by the FAA and Manufacturer's Service Bulletins. Work includes: conducting FAA approved phase maintenance programs; conducting specified periodic inspections of engines and airframes; identifying and correcting defects and malfunctions; servicing, repairing, and modifying engines, airframes, and accessories; replacement of parts; and maintaining records and logs of all inspections, discrepancies, replacements, check lists, and the daily status of aircraft. In addition, the Aircraft Mechanic is responsible for contacting vendors to obtain quotes and order parts. This class performs related duties as required.

**Distinguishing Features:** An Aircraft Mechanic is assigned to the Police Department Air Support Unit and receives supervision from the Aviation Administrator. The duties and responsibilities of this class are governed by established maintenance schedules, limitations of shop and field maintenance facilities, and Federal Aviation Regulations. The work requires considerable initiative and independent judgment in the inspection and maintenance of aircraft. An Aircraft Mechanic may ride with pilots to observe and record findings of test flights, make repairs and modifications as a result of test flight findings, and troubleshoot pilot complaints. Work is subject to on-call and weekend assignments. This class is FLSA nonexempt.

### QUALIFICATIONS

**Employee Values:** All employees of the City of Mesa are expected to uphold and exhibit the City's shared employee values of Knowledge, Respect, and Integrity.

**Minimum Qualifications Required.** Any combination of training, education, and experience equivalent to graduation from high school or GED. A minimum of three years' experience maintaining rotorcraft-helicopters.

**Special Requirements.** Must possess a valid Class D Arizona Driver's License by hire or promotion date. Possession of a valid Mechanic's License with an airframe and power plant (A&P) rating issued by the FAA, and the absence of violations of FAA regulations by hire or promotion date. Because of the confidential, sensitive nature of information handled, successful completion of a background investigation is required. Must possess SAE (Society of Automotive Engineers) hand tools necessary for the proper and efficient maintenance of aircraft and engines.

**Substance Abuse Testing.** Due to the safety and/or security sensitive nature of this classification, individuals shall be subject to pre-employment/pre-placement and random alcohol, drug, and/or controlled substance testing as outlined in City policy and procedures.

**Preferred/Desirable Qualifications.** A current Inspection Authorization (IA) rating. Experience maintaining fixed-wing aircraft. Factory training and experience in the repair and maintenance of MD 500E/530FF Helicopters and Cessna aircraft.

## **ESSENTIAL FUNCTIONS**

**Communication:** Communicates with departmental personnel, other City employees, outside agencies, vendors, and manufacturers regarding maintenance, repairs, performance, and serviceability of aircraft. Prepares written documents as required by the FAA, manufacturer, and department including making appropriate entries on maintenance logs and checklists and reporting on the daily status of aircraft.

**Manual/Physical:** Observes and inspects the work product of others to ensure compliance with standard operating procedures and FAA standards. Inspects, cleans, removes, disassembles, rebuilds, and repairs all aircraft components including the: main rotor blades, main rotor hub assembly, engine mounts, dampers, swash plate control systems, power plant and engine compartment, transmission, horizontal stabilizer, tail rotor blades and hub assemblies, tail rotor drive and control system, accessory drive assemblies, body and landing gear, electrical systems and components, fuselage components, flight controls, hydraulic and pivot systems, and clutch assemblies. Repair and maintain police specific mission equipment. Cleans, adjusts, and replaces control cables. Removes and reinstalls instruments. Lubricates all component parts. Drains and cleans oil filters. Checks quality of fuels and oils relative to maintenance requirements. Uses common or specialized tools, power tools, and precision instruments to perform maintenance and repair tasks. Moves objects including aircraft parts and assemblies weighing up to 100 pounds using assistive devices (example: cart, power winches, rigging equipment, etc.) for distances up to 10 feet while performing maintenance and repair tasks. Ability to climb in-out of unit aircraft. Use of staired maintenance platforms and ladders (greater than 5') to perform required maintenance. Distinguishes colors while working with electrical wires. Performs precision measurements using devices such as micrometers and calipers. Operates and maintains ground support equipment (GSE), aircraft facilities, equipment, and materials in a clean, orderly condition. Performs physical inventories of equipment and supplies. Repaints and refinishes aircraft bodies. Uses specialized, non-routine protective equipment when exposed to fumes from hazardous agents and chemicals. Operates specialized aircraft-towing vehicles which requires a standard Class D Arizona Driver's License. Rides with pilots to observe and record findings of test flights. Detects noises in order to identify malfunctions of aircraft. Works in a variety of weather conditions while maintaining and repairing aircraft. Enters data into a personal computer (PC) in order to store and retrieve maintenance records.

**Mental:** Monitors and evaluates the condition and performance of rotary and fixed-wing aircraft to determine compliance with FAA and departmental regulations and manufacturers' specifications. Investigates, analyzes, and corrects reported and apparent malfunctions in all aircraft. Ensures proper fueling and lubrication of aircraft in accordance with manufacturers' instructions. Requisitions parts, supplies, and equipment; and maintains a parts inventory, including records of parts used and/or parts due for replacement. Maintains records of all inspections, discrepancies, replacements, directive and service bulletin compliance, component history, and daily status of aircraft. Interprets electrical conditions such as: measuring capacitance, inductance, voltage, current, resistance, continuity, and leakage; and performs mathematical calculations to measure conductivity and electrical power and solves ratio proportion and percentage problems. Identifies and selects appropriate non-destructive

testing methods, fuels, and cleaning materials. Understands and interprets wiring and schematic diagrams and complex technical instructions. Comprehends and makes inferences from written material including federal air regulations, manufacturers' specifications, Airworthiness Directives issued by the FAA, technical manuals, maintenance schedules and records, and departmental procedures. Learns job-related material through on-the-job training and in a classroom setting regarding the maintenance and repair of fixed-wing and rotary aircraft.

**Knowledge/Skills/Abilities:**

Knowledge of:

rotary and fixed-winged aircraft maintenance and repair methods and procedures, including applicable Federal Aviation Regulations (FAR) pertaining to airworthiness of aircraft and engines;  
aircraft, engine, and component function and operation, including mechanical, electrical, structural, aerodynamic, and instrumentation systems;  
the use, care, and calibration of tools and equipment including precision measuring, adjustment, and defect detection and analysis tools and instrumentation;  
occupational hazards involved in shop and field aircraft maintenance/repair and appropriate safety precautions;  
FAA regulations concerning inspection, maintenance, and repair of aircraft;  
welding and brazing procedures required in airframe repair and modifications;  
sources of information concerning operating, maintenance, and repair problems; and  
models of aircraft to be maintained.

Skill in:

using all common and special purpose aircraft maintenance tools and test equipment;  
repairing sheet metal and composite structures;  
diagnosing and repairing aircraft components;  
preparing and applying various aircraft finishes;  
tracking and balancing main rotor and tail rotor systems;  
diagnosing and repairing electrical wiring and components; and  
interpreting schematic and complex technical diagrams.

Ability to:

make repairs in the time frame allowed and return all aircraft to airworthy condition mechanically;  
work unsupervised for short periods of time;  
remain in a standing position for extended periods of time;  
operate a PC in order to enter or retrieve data; and  
establish and maintain effective working relationships.

The duties listed above are intended only as general illustrations of the various types of work that may be performed. Specific statements of duties not included does not exclude them from the position if the work is similar, related, or a logical assignment to the position. Job descriptions are subject to change by the City as the needs of the City and requirements of the job change.

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CDP/ah

CS4226.DOCX

EEO-SCW

JOB FCTN-MEC

Non-DOT Safety and Security-Y

CDL-N

RESP-N

PAY GRADE: 51

IND-7403

SWORN-No

Non-DOT Random-N

DOT-N

INCREMENTS 07-200