

HELICOPTER MECHANIC, 3742

4-16-93

HELICOPTER MECHANIC SUPERVISOR, 3749

Summary of Duties: Repairs, overhauls, inspects, maintains, services, cleans, and returns City owned helicopters and fixed-wing aircraft to service; or supervises and coordinates the work of Helicopter Mechanics and other employees in this work; applies sound supervisory principles and techniques in building and maintaining an effective work force; fulfills affirmative action responsibilities; and does related work.

Distinguishing Features: A **Helicopter Mechanic** is responsible for field and shop repair and maintenance of City helicopters and fixed-wing aircraft to assure airworthiness. The duties and responsibilities of this class are governed by established maintenance schedules, limitations of shop and field maintenance facilities, and Federal Aviation Administration regulations. Inspections performed by employees of this class are limited to those mechanics who have a current Air Frame and Power Plant License. Although employees of this class receive craft supervision, they must rely on their own judgement in determining the type and extent of needed repairs. However, all engine rebuilding is performed by private shops through outside contracts.

A **Helicopter Mechanic Supervisor** is a working supervisor. In addition to the above duties, the incumbent is responsible for planning, assigning, and spot checking helicopter repair work. Employees assigned to these positions are expected to maintain a current inspection authorization to approve and return helicopters to service after major repairs and alterations.

A **Helicopter Mechanic Supervisor** may be assigned to the Air Worthiness Quality Control Section with primary responsibility for conducting or for directing quality control inspections of all completed work and selected work in progress relating to restoring and maintaining the air-worthiness of the City's helicopter fleet.

Incumbents in the class of Helicopter Mechanic Supervisor may advance either to a position with responsibility for directing the Air Worthiness Quality Control Section, as described above, or a position which has full responsibility for supervising employees engaged in the repair and maintenance of City helicopters and for coordinating the activities of the helicopter repair shop, including planning, assigning, and inspecting helicopter repair work. An employee in this position anticipates the need for parts and equipment requisitions, prepares specifications for replacement and modification of helicopter parts, and organizes the repair function to assure the safety and airworthiness of helicopters. A Helicopter Mechanic Supervisor in either of these positions must maintain a

current inspection authorization to supervise all inspections of helicopters and to approve and return them to service after major repairs and alterations. Helicopter Mechanic Supervisors assigned to these positions receive general supervision from an Equipment Superintendent.

Incumbents in the class of Helicopter Mechanic Supervisor, as bona fide supervisors, are responsible for the performance of the full range of supervisory activities including the application of discipline, processing and resolution of grievances, and evaluation of performance.

Employees of these classes may be called upon to work during off hours to repair helicopters or to prepare them for flight during emergencies. Helicopter Mechanic Supervisors, may be required to ride in the helicopters during maintenance test evaluation flights.

Examples of Duties:

Helicopter Mechanic:

Inspects, overhauls, maintains, troubleshoots, and repairs helicopter parts, components, and/or assemblies to keep equipment functioning effectively, including:

- Rotor blades and rotor hub assemblies,
- Engines, engine mounts, and power plant components,
- Power train components including drive shafts and gear boxes,
- Flight control systems,
- Air Frames, landing gear, and aircraft bodies,
- Fuel systems, including tanks, controls, pumps, and lines,
- Electrical systems and components,
- Instruments, such as tachometers, air pressure and temperature instruments,
- Hydraulic control systems,
- Other helicopter parts, such as door latches or windows.

Examines and interprets information received from pilots and/or from tests to make original adjustments and/or repairs, to troubleshoot identified problems, and to "fine tune" dynamic balance of rotor assemblies and drive shafts.

Reads and interprets manufactures' maintenance manuals, wiring diagrams and plans, and parts schematics to guide inspection, maintenance, and repair activities.

Removes parts when defective, or at prescribed intervals, replacing with new or reconditioned parts and sending removed parts for non-destructive tests if indicated, or repairing or rebuilding as needed.

Disassembles geared assemblies, inspects them for wear and smoothness of action, cleans them with solvents, and either overhauls them or sends them to be tested for internal

flaws or cracks.

Fabricates special parts or specialized tools, using power equipment, including metal shears, saws, metal framing tools, and lathes.

Tests electrical circuits for breaks, shorts, grounds, and proper insulation using devices such as multi-meters, circuit testers, and specialized electronic control circuit testing equipment.

Makes minor repairs to electrical equipment and circuits such as replacing defective wires or replacing connectors or other parts.

Tests in place or removes and tests instruments and electronic components using circuit testers, and specialized testing equipment for electronic control circuits.

Tests units or assemblies while they are operating by selecting the correct test equipment and/or computer program, observing reading and/or collecting data on computer disks or other media on maintenance test flights.

Prepares painted parts, such as hub assembly housings, for tests for internal flaws or cracks, by removing paint using chemical stripping compounds or dry media.

Paints parts or touches up damaged exterior paint using spray equipment, spray booth or brushes.

Maintains hand and hand held power tools in condition for use.

Makes preflight, periodic, or other inspections as required by manufactures, regulations, or as needed with a current inspection authorization, determining required work and preparing work orders.

Completes inspection forms, prepares brief written reports, or informal notes to confirm required inspection and maintenance schedules, record repair time estimates, or to inform supervisors of parts, materials, and tools needed.

Makes entries to aircraft records such as maintenance logs and other records.

Helicopter Mechanic Supervisor: In addition to the above:

Supervises a crew of Helicopter Mechanics or a helicopter maintenance facility and may be on call 24 hours a day for emergency work.

May plan, direct, review, and approve the activities of Helicopter Mechanics and other employees engaged in repairing and maintaining City helicopters and accessories.

Advises mechanics concerning City repair procedures.

Approves work orders completed by mechanics and schedules and coordinates helicopter maintenance with flight schedules.

Examines, inspects, and approves helicopters as airworthy after major repairs and alterations and signs inspection reports.

Rides on test flights to observe and record results, utilizing those records as a basis for further tests and/or repairs.

Arranges for a stock of spare parts and the procurement of needed repair parts and obtains repair procedures and parts procurement information from manufacturers' representatives.

Prepares reports and keeps records of work performed and shop activity, as required by the Federal Aviation Administration.

Assists in maintaining a technical library on helicopter maintenance requirements and regulations.

Establishes and supervises preventive maintenance programs.

Prepares cost estimates of maintenance and repair work and may prepare budget recommendations.

Schedules and supervises all inspections as required by manufacturer specifications and FAA

regulations.

Inspects the shop and repair facility to ensure that it is maintained in a safe and serviceable condition and enforces all applicable job safety measures.

Inspects repair equipment to ensure that it is maintained in good condition.

Sets, adjusts, calibrates, and makes minor repairs on testing and diagnostic equipment such as multi-meters, gauges, and electronic instruments in order to ensure accurate readings.

Communicates equal employment/affirmative action information to employees.

Applies job-related criteria in selecting, orienting, assigning, training, counseling, evaluating, and disciplining subordinates.

Assists employees in preparing for promotion as described in the City's Affirmative Action Program.

Both Classes: May occasionally be assigned other duties for training purposes or to meet technological changes or emergencies.

Qualifications: Incumbents must have the following knowledges and abilities:

	Helicopter Mechanic	Helicopter Mechanic Supervisor
Knowledges of:		
Methods of inspecting helicopters, of locating and diagnosing mechanical, electrical, hydraulic, structural, and other troubles, and of maintaining, repairing, and overhauling engines, airframes, and accessory equipment.	Good	Good
Operation and preventive maintenance requirements of helicopters and small fixed-wing aircraft.	Good	Good
Principles of safety including occupational hazards involved in shop and field helicopter maintenance and repair.	Good	Good
Federal Aviation Administration regulations concerning inspection, maintenance, and repair of helicopters.	Good	Good
Welding and brazing procedures required in airframe repair and modification.	Working	Working
Arithmetic, algebra, and plane geometry sufficient to perform calculations such as determination of clearances or magnitude of required adjustments.	Working	Working
English and metric measuring systems sufficient to work on aircraft using either system to convert from one to the other.	Working	Working
Electrical theory sufficient to properly connect and utilize electrical equipment such as testing meters, controls, circuits, switches, wiring, and protective devices correctly.	Working	Working
Purchasing procedures and practices.		General
Sources of information on operating, maintenance, and repair problems.		General
Supervisory principles and practices, including planning, delegating, and controlling the work of subordinates.		Good
Techniques of training, instructing, and evaluating subordinate work performance.		Good
Techniques for counseling, disciplining, and motivating subordinate personnel.		Good
Procedures for grievance handling.		Good
Supervisory responsibility for equal employment opportunity and affirmative action as set forth in the City's Affirmative Action Program.		Good

Memoranda of understanding as they apply to subordinate personnel
 City personnel rules, policies, and procedures.

General

Ability to:

Use the tools, equipment, materials, and methods of the trade.	x	x
Paint helicopters and work with the fabrics, plastics, and metals used in helicopters.	x	x
Operate a lathe and other power tools of the trade.	x	x
Read, interpret, and work from blueprints, diagrams, sketches, and technical manuals.	x	x
Write reports and keep helicopter maintenance logs, and shop, equipment, and other records.	x	x
Make time and material estimates and determine whether it is more economical to replace or to repair equipment.	x	x
Design and prepare working sketches of equipment modification.		x
Plan, lay out, and direct the work of a group of employees, and maintain established operating and performance standards.		x
Establish and maintain a work environment to enhance both employee morale and productivity.		x

Minimum Requirements:

Helicopter Mechanic: Three years of full-time paid experience in the maintenance and repair of helicopters as a licensed Airframe and Power Plant Mechanic, two years of which was in maintenance, repair, and major component overhaul of turbine powered helicopters within the past three years.

Helicopter Mechanic Supervisor: Four years of full-time paid experience in the maintenance and repair of helicopters as a licensed Airframe and Power Plant Mechanic, three years of which was in the maintenance, repair and major component overhaul of turbine powered helicopters within the past four years.

Licenses: Both classes:

1. A valid Mechanic's license with Airframe and Powerplant ratings issued by the Federal Aviation Administration, a copy of which must be submitted with the application.
2. A valid California driver's license and a good driving record are required prior to appointment.

For **Helicopter Mechanic Supervisor:** A current inspection authorization issued by the Federal Aviation Administration is required prior to appointment.

Physical Requirements: Both Classes: Strength to perform average lifting up to 35 pounds and occasionally over 70 pounds or perform other equivalent strenuous work; back and leg coordination involved in activities such as frequent standing, walking, climbing (ladder, with weight), stooping, kneeling, and crouching; arm, hand, and finger dexterity involved in activities such as reaching, grasping, and feeling; good hearing ability; good eyesight and color perception.

Some Helicopter Mechanic Supervisor positions only require strength to perform average lifting up to 15 pounds and occasionally over 25 pounds; frequent walking and standing as required when inspecting work in progress; arm, hand, and finger dexterity with at least one hand involved in reaching, grasping, and feeling, and using small tools; good hearing ability and good eyesight.

Those with medical limitations may be able to perform the duties of some positions with reasonable accommodation. The decision to accommodate someone's limitations will be made on an individual basis and depends on the types of limitations, what the hiring department can reasonably do to accommodate them, and the specific qualifications for the job.

Medical Testing:

Some positions in **both classes** may require incumbents to pass an annual or periodic work fitness evaluation to determine their eligibility for continued employment in the classes.

Fair Labor Standards Act Status:

None of the positions in the class of **Helicopter Mechanic** qualify for an exemption from the minimum wage and overtime requirements of the Fair Labor Standard Act.

Depending upon certain conditions, some of the positions in the class of **Helicopter Mechanic Supervisor** may qualify for an executive exemption from the minimum wage and overtime requirements of the Fair Labor Standards Act.

As provided in Civil Service Commission Rule 2.5 and Section 4.55 of the Administrative Code, this specification is descriptive, explanatory and not restrictive. It is not intended to declare what all of the duties and responsibilities of any position shall be.