



IDENTIFICATION

Department	Position Title	
Infrastructure	Heavy Equipment Mechanic/ Airfield Maintenance Technician	
Position Number	Community	Division/Region
33-7726	Fort Simpson	Airports / Deh Cho

PURPOSE OF THE POSITION

The Heavy Equipment Mechanic/Airfield Maintenance Technician contributes to the safe and reliable operation of the Fort Simpson Airport by performing maintenance and repairs to all mobile equipment and stationary power units. The incumbent must also be certified as an Airport Maintenance Specialist (AMS), so when required they can assist the AMS team with summer and winter airport maintenance duties.

SCOPE

The Government of the Northwest Territories (GNWT) owns and operates all airports in the NWT. The Airports Division has the responsibility to ensure that airports facilities are in place to meet the demand of the air industry, and that those airports are operated according to federal regulations and standards.

This position is located at the Fort Simpson Airport and reports to the Supervisor, Surface and Mobile. The Heavy Equipment Mechanic (HEM) implements and maintains a planned service, maintenance and repair program for all mobile equipment and stationary power units at the Fort Simpson Airport.

The Airfield Maintenance Technician maintains all airport surfaces, including runways, taxiways, aprons, and roadways at the Fort Simpson airport. This includes snow removal, ice control, and maintenance of grounds (landscaping, brush control, fencing, signage, wildlife, painting, drainage, and foreign object debris control) to ensure effective operation of the Fort Simpson surface infrastructure. The incumbent follows the Winter Maintenance Plan, the Summer Operating Procedures Manual and Transport Canada regulations and standards, and communicates with CARS Specialists while performing maintenance duties to ensure that clearing and maintenance continues with minimum interruption of air traffic.

RESPONSIBILITIES

- 1. Reconditions components that have a shorter lifespan than the equipment frames or bodies, to restore the components to original specified capability by:**
 - Analyzing and inspecting failure to determine cause and extent of repairs as necessary;
 - Dismantling components such as engines, transmissions, differentials, electrical equipment, hydraulic systems, air systems, etc.;
 - Measuring surfaces and refurbishing by polishing;
 - Identifying parts within a component;
 - Reassembling components and adjusting to original specifications.

- 2. Repair equipment that has failed mechanically to restore it to its original specified capability by:**
 - Analyzing failure to determine cause and extent of repairs needed;
 - Dismantling equipment;
 - Inspecting and measuring for worn and failed components;
 - Identifying parts required and preparing parts orders;
 - Replacing components;
 - Reassembling equipment and adjusting to original OEM specifications;
 - Cleaning and painting components or whole equipment.

- 3. Services equipment to reduce incidence of early or untimely failure by:**
 - Conducting preventative maintenance servicing using the preventative maintenance program;
 - Adjusting components in accordance with service manuals;
 - Cleaning components;
 - Checking or replacing fluid and filters.

- 4. Perform other duties such as:**
 - Welding, brazing and soldering;
 - Completing service reports and time cards;
 - Maintaining shop equipment and tools;
 - Assisting operators by relating required maintenance procedures;
 - Keeping work area clean and free of safety hazards.

- 5. Some field work is required to provide service and repairs to mobile fleet, given the same responsibilities as outlined in duty numbers 1 through 4. The incumbent will be required from time to time to work outside in harsh weather conditions.**

- 6. Recondition, rebuild and repair equipment with a dollar value of \$100 to \$60,000 in parts and materials per unit:**
 - Controlling the extent and nature of repairs within the original estimates. Where during the course of the work the HEM finds cost estimates will increase, they will bring this to the attention of the Airport Manager for review.

- 7. Complete preventative maintenance (PM) checks A, B, & C with a dollar value of \$100 to \$2,000 dependent of level of PM and type of equipment.**
 - Determining the timing and requirement for level of PM for the particular unit and proceeding at own discretion.

- 8. Complete condition reports where inspections of a particular unit can lead to repair in the amounts shown above or recommendation for surplus and replacement of the unit. Replacement costs of mobile equipment range from \$1,000 to \$500,000:**
 - Completing reports based on experience and knowledge and making recommendations for repair or replacement to the Airport Manager and the Fleet Manager.

- 9. Carry out work plans for the maintenance and repair of airfield surfaces, systems and structures to meet or exceed Transport Canada regulations and standards.**
 - Removing snow, water, ice and other impediments from airfield/ airport surfaces;
 - Maintaining and improving the condition of the apron, taxiway, runways, public access roads, parking areas, meteorological and telecommunication sites and other airfield surfaces;
 - Applying ice control chemicals as directed by the supervisor;
 - Providing Canadian Runway Friction Index (CRFI) checks and publishing NOTAM's as per airport operational requirements;
 - Operating appropriate heavy and specialized equipment using approved practices and procedures;
 - Reporting on Runway Surface Condition and Foreign Object Damage;
 - Installing and maintaining fencing, signage and hardware;
 - Installing, maintaining and repairing storm drainage systems;
 - Maintaining all paved aircraft movement surfaces and roadways by applying crack sealing and jet sealants;
 - Painting all airside runways, taxiways, ramp areas and road surfaces with centerlines, hold lines and numbers;
 - Performing bird and mammal control to prevent aircraft damage;
 - Performing landscaping, determining grades, slopes, seeding, turf maintenance, drainage and ditches;
 - Advising the supervisor of materials needed for pavement maintenance;
 - Assisting in installing airfield lighting systems and replacing airfield lighting system lamps, fixtures, windsocks and markers;
 - Assisting other trades and staff members as required.

WORKING CONDITIONS

Physical Demands

All duties require some level of physical effort. Most include strenuous physical effort for the full duration of the workday. Effort would include heavy lifting, stretching, reaching, and operating tools and other heavy equipment. Both upper and lower body physical strength and agility are required.

Environmental Conditions

Although most of the duties are conducted within a heated and ventilated workshop, there will be some requirement to conduct these duties in the field, outdoors, in extreme summer/winter conditions and in remote locations. All duties will include exposure to dust, dirt, fumes, fuels, oils, lubricants, noise, vibrations, other solvents and somewhat dangerous or hazardous working conditions.

Sensory Demands

All five senses are needed in all duties to investigate and determine the nature of problems in equipment servicing and repair. Attention of all senses, in particular hearing, sight and smell must be paid during the course of the work to ensure the worker safety is maintained.

Mental Demands

Creativity, innovation and well thought out approaches to equipment servicing and repair are required in all duties to ensure economic and efficient maintenance of the equipment.

KNOWLEDGE, SKILLS AND ABILITIES

Technical

- Considerable knowledge of standard repair methods, tools, equipment and techniques.
- Broad knowledge of all equipment, from heavy to light mobile equipment to stationary units such as generator sets.
- Ability to locate and diagnose mechanical problems, as well as to interpret diagrams and specifications.
- Ability to understand apprenticeship theory, training and interpret service and parts manuals.
- Able to operate snow blowers, runway sweepers, motor graders, highway trucks, tractors, loaders and crawler tractors.
- Ability to understand and practice safety policies, rules and guidelines. Must wear, use and maintain personal safety equipment.

Managerial or Supervisory

- Teaching, supervisory and communication skills required to train apprentice mechanics.
- Good management of time and organization of paperwork to be able to estimate resource requirements for repairs and to complete the necessary shop repair orders and condition reports.
- Leadership skills required to act in a Supervisory position while others are on leave.
- Ability to prioritize work based on operational demand and to make sound decisions.

Communication

- Verbal communication skills are required to relay information on equipment repair/service requirements to operators, Mechanical Foreman, Parts Person, Suppliers/Manufacturers and Field Supervisors.
- Some written communication skills required to complete estimates, shop repair orders, condition reports and other paperwork associated with equipment service and repair.

- Daily contacts are made to the Airport Manager, Field Supervisor and other HEM's to do with servicing, repair and follow-up instructions regarding equipment maintenance. Occasional contact with the equipment operators to give maintenance instructions on newly repaired equipment.

Typically, the above qualifications would be attained by:

- Completing a minimum of a grade 12 diploma;
- Have obtained a Red Seal endorsement that also allows holder to sign off equipment, train apprentice mechanics and carry out the duties of the job efficiently;
- Minimum of five years directly related work experience post Journeyperson certification, with considerable experience on snow blowers, runway sweepers, motor graders, highway trucks, tractors, loaders and crawler tractors;
- Class 3 Drivers Permit with Air brake endorsement to operate equipment for test purposes;
- Must have full set of mechanic hand tools of proven quality, typical personnel investment in tools \$25,000- \$35,000.

ADDITIONAL REQUIREMENTS

Position Security (check one)

- No criminal records check required
- Position of Trust – criminal records check required
- Highly sensitive position – requires verification of identity and a criminal records check

French language (check one if applicable)

- French required (must identify required level below)
 - Level required for this Designated Position is:
 - ORAL EXPRESSION AND COMPREHENSION
 - Basic (B) Intermediate (I) Advanced (A)
 - READING COMPREHENSION:
 - Basic (B) Intermediate (I) Advanced (A)
 - WRITING SKILLS:
 - Basic (B) Intermediate (I) Advanced (A)
- French preferred

Indigenous language: Select language

- Required
- Preferred