



**Chapter 7:
Maintenance Procedures**

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Purpose

The purpose of this chapter is to set out the standards to which company facilities, equipment and tools will be maintained in a condition that will maximize the safety of all personnel.

Objectives

The objectives are to:

- Provide a framework of standards to which we are committed for maintenance.
- Provide a general guideline for employee use of hand and power tools.

7.1 Policy on Maintenance

Policy:

It is the policy of this Company to maintain all tools and equipment in a condition that will maximize the safety of all personnel.

To accomplish this, a “Maintenance Program” shall be maintained and shall include the following components:

- Adherence to applicable regulations, standards, and manufacturer’s specifications.
- Services of appropriately qualified maintenance personnel, with ongoing training to ensure current knowledge of equipment operation and repair procedures.
- Periodic preventive maintenance inspections based on elapsed time, operating hours, kilometers traveled, manufacturer’s specifications, Industry Standards, and/or at Request.
- Identification and documentation of all maintenance work through a comprehensive work order repair system.

The supervisor shall be responsible for the application of the program in his/her area of responsibility.

The safety information in this Policy does not take precedence over Occupational Health & Safety Regulations. All employees should be familiar with the OH&S Act, Regulation, and Code.

Bill Turner – President / General Manager
December 1, 2010

7.2 Standards

The Company recognizes the following standards and regulations and uses them as the basis for conducting business:

- Occupational Health & Safety Act and all associated regulations
- National Safety Code (for trucking)
- Alberta Electrical Code
- Canadian Standards Association
- Vehicle Manufacturer's Standards and Specifications
- Equipment Manufacturer's Standards and Specifications

Shop Operation Policy

Our policy is that a record of preventative maintenance and repair for each piece of equipment must be kept and updated as required. It is our intent that absolutely no piece of equipment will knowingly leave our shop in such condition that it does not meet all company rules and outside regulations, for safe operation and incident prevention.

1. Assessment of existing and possible hazards must be incorporated into the planning of all work, and then be eliminated or controlled. (See chapter 2-Hazard Assessment)
2. All unsafe shop equipment will be reported to the appropriate supervisor and placed out of service until properly repaired.
3. It is the duty of all employees witnessing unsafe work practices to notify the offending party. Appropriate steps to rectify the unsafe practice or condition should then be taken.
4. Observe the need for use and the necessary PPE. This includes but is not limited to face shields, hearing protection, exhaust hoses and blocking for elevated equipment.

Field Equipment Operation Policy

It is our policy to institute a program that will carry out shop safe equipment policy into the area of field work. Our policy is that equipment will be regularly checked for safe operation and records will be kept. We will accomplish this by appointing a field equipment repair requirements to our shop personnel.

Field Rules

1. All unsafe mobile equipment will be reported to your immediate supervisor and placed out of service until properly repaired.
2. It is the duty of all employees witnessing unsafe practices to notify the offending party and also the immediate supervisor. Appropriate steps to rectify the unsafe practice or condition must be then be taken.
3. Observe the need for and use the necessary PPE. This includes but is not limited to face shields, ear plugs, blocking for elevated equipment.

Vehicle Maintenance and Repair Check Lists

On the following pages you will find examples of the types of repair and maintenance check lists that will be utilized to keep records of our equipment maintenance and repair. These records are primarily being kept as part of our safe operation policy.



EQUIPMENT SERVICE & REPAIR RECORD

DATE: _____ OFFICE USE ONLY: _____

COMPANY: _____ LOCATION: _____

UNIT NO: _____ PM PROGRAM: _____

HOURS: _____ KILOMETERS: _____

Fluids	Liters	Type	Filters	Quantity	Part #
Engine			Oil		
Hydraulic			Air		
Transmission			Fuel		
Gear			Trans		
Anti-Freeze			Hydra.		
LABOUR					
			HRS		
			Coolant		

Mechanical Inspection

General	OK	Repair	Engine Controls and Steering	OK	Repair
Body, Sheet Metal Fenders and Equipment			Engine Controls		
Occupant Compartment Doors, Latches, Seats			Power-Boosted Steering		
Exterior Compartment Door			Steering Column and Box		
Chassis Frame, Underbody and Body Mounts, Bumpers, Mud Flaps			Wheel Alignment		
Drive Shaft Hanger Brackets and Guards			Steering Linkage		
Mirrors, Windshield and Windows Sun Visors			Suspension		
Fuel System, lines, caps etc.			General		
Exhaust System (including exhaust manifolds)			Air Suspension System		
Fifth Wheel Coupling Device			Electrical Components		
Trailer Hitch, Hitch mountings and connecting devices			Horn		
Brakes			Windshield Washer and Wiper		
Hydraulic, Vacuum and Air System Components			Heating and Defrosting System		
Mechanical Components			Neutral Safety Starting Switch		
Hydraulic Systems and Related Warning Devices			Speedometer		
Power-Boosted Hydraulic Brakes or Full Air Brakes			Lamps, Lights and Reflectors		
Vacuum Gauge and Low Vacuum Warning Device			Tires and Wheels		
Parking Brake, Emergency Brake System, and Service Brakes			Tires		
Brake Drums and Disc Brake Pads			Wheels, Studs, Rims and Bearings		

Comments: _____

Signature _____ **Print Name** _____

Preventative Maintenance Program

- Perform maintenance by qualified personnel to equal or exceed the minimum Schedule for Regular Maintenance and Repair specified by the vehicle manufacturer and National Safety Code Commercial Vehicle Maintenance Standards.

Level of Inspections:

- “C” Inspections
- CVIP done yearly
- Yearly CSA-B-620-98 Standard for Petroleum Tanker (PVIK) on TC 306 & TC 406 code trailers. (where applicable)
- “B” Inspections
- Quarterly Preventative Maintenance Checklist is completed in accordance with Alberta Regulation 118-89 Minimum Vehicle Safety Systems Inspection and Repair Standards.
- “A” Inspections
- Units are inspected and serviced every 250 hours/ or 5,000 kms. All service and repairs are recorded on standard General Equipment Service and Repair Record.
- Drivers perform daily Pre 7 Post trip inspections in accordance with Alberta Regulation 118/89 3(1) (2) & 4.

NSC (National Safety Code)

All contract commercial vehicle owners and company drivers must fulfill the following professional practices as outlined in Wapiti Gravel Suppliers Policies and the National Safety Code:

Maintain Vehicle Files

Wapiti Gravel Suppliers holds a file for every commercial vehicle deployed by the company.

Vehicle Files Must Include :

- Unit/Plate or VIN number, make and year.
- Pre trip inspection reports
- Repair records
- Lubrication records
- Schedule maintenance records
- Modification records
- Manufactures recalls information
- CVIP inspections for the last 5 years

Vehicle Data Reports

Contract commercial vehicle owners must maintain a Vehicle Data Report on commercial vehicles and equipment employed by Wapiti Gravel Suppliers. When replacement equipment is purchased, a new Vehicle Data Report must be produced. Vehicle Data reports detail all information regarding the unit and its equipment, including make, model, year, unit number, the size, serial number and registered owner.

Preventative Maintenance

- All company commercial vehicles and contract commercial vehicles hired by Wapiti Gravel Suppliers will be subject to quarterly preventative maintenance inspections. Inspections may be more frequent for commercial vehicles subjected to abnormal wear and tear due to extreme operating conditions.
- Contract vehicle owners of commercial vehicles will perform preventative maintenance on their own equipment. Copies of these preventative maintenance inspections must be kept at their address of record and be made available for inspection by Wapiti Gravel Suppliers safety department after receiving adequate notice of an intended inspection visit.
- Maintenance inspections are also to be logged on Monthly Vehicle Maintenance reports.

Monthly Vehicle Maintenance

- All Company Commercial vehicles and contract vehicle owners of commercial vehicles must perform monthly Vehicle Maintenance reports. These reports must record all maintenance and inspections, including lubrication, repairs, tire replacement and quarterly preventive maintenance inspections. These files require support documentation on all maintenance performed. You are required to retain this information for the current year and 4 calendar years immediately following or for six months after the vehicle has been retired or permanently disposed of.
- Contract vehicle owners must retain their monthly Vehicle Maintenance report at their address of record and be made available for inspection by Wapiti Gravel Suppliers safety department after receiving adequate notice of an intended inspection visit.

Daily Logs

- All drivers must complete a daily log.
- Company employees must submit copies of their daily logs to their home office within 20 days after completing a daily log.
- Contract truck owners must retain their logs at their address of record and be made available for inspection by Wapiti Gravel Suppliers safety department after receiving adequate notice of an intended inspection visit.
- Copies of daily logs and supporting documentation (fuel receipts, BOL's etc.) must be kept for the previous six months.
- Logs must be completed for every day. Periods of more than one day can be covered on one log sheet. Inclusive days are to be recorded and duty status of these days.
- All drivers, of contract commercial vehicles or company commercial vehicles shall not operate any unit without having in their possession copies of their Daily logs for the last past 7 days. If drivers are operating within a 160 km radius, log books are not required, but the START and FINISH time for every work day must be recorded.

Hours of Service

- Drivers must not exceed the hours of service dictated by the National Safety Code, Alberta Regulation 317/2002
- Dispatch will endeavor to keep track of drivers hours every day; however drivers are responsible for advising their dispatch office or job superintendent when they have reached their limit.
- No Wapiti Gravel Suppliers personnel will knowingly dispatch a driver who has exceeded their hours of service, every driver has the right, and the responsibility to refuse any work that will cause them to be in non-compliance of their Hours of Service.

Trip Inspection Reports

- All drivers of a commercial vehicle with a weight or combined weight of more than 4500 kilograms shall complete a Pre-Trip and a Post-Trip inspection, ensuring that the equipment assigned to them is free from safety defects when operated on highway.
- A written inspection report must be completed prior to operating a commercial vehicle at the beginning of a work shift and after they cease to operate it at the end of a work shift. (Sample of form included in this Chapter).
- An inspection carried out must include an inspection of the following equipment:
 - Air Brake Systems
 - Cab/Driver Area
 - Cargo Securement
 - Coupling Devices
 - Dangerous Goods
 - Driver Seat/Seatbelts
 - Driver Controls
 - Electric Brake System
 - Emergency/Safety Devices
 - Exhaust System
 - Frame and Cargo Body
 - Fuel System
 - Glass/Mirrors
 - Heater/Defroster
 - Horn
 - Hydraulic Brake System
 - Lamp Reflectors
 - Steering
 - Suspension System
 - Tires
 - Wheels/Hubs/Fasteners

- Windshield Wiper /Washer
- A driver of a commercial vehicle shall inform the carrier responsible for that vehicle of any defects of deficiency that would affect the safe operation of the vehicle.
- Contract Truck owners are required to forward a copy of their pre-trip and post-trip inspections to WGS when requested.
- A “Sign-off Subcontractors Checklist” will be executed between Wapiti Gravel Suppliers and Contract Commercial owners.

7.3 Maintenance of Tools

Defective tools can cause serious, painful, and sometimes fatal injuries. If a tool is defective in any way, **DO NOT USE IT.**

Be aware of problems such as:

- Chisels and wedges with mushroomed heads
- Split or cracked handles
- Chipped or broken drill bits
- Wrenches with worn out jaws
- Tools which are not complete, such as files without handles

To ensure safe use of hand tools, remember:

- Never use a defective tool
- Double check all tools prior to use
- Ensure defective tools are repaired

Air, gasoline or electric power tools require skill and complete attention on the part of the user, even when they are in good condition. Don't use power tools when they are defective.

Watch for problems such as:

- Broken or inoperative guards
- Insufficient or improper grounding due to damage on double insulated tools
- No ground wire (on plug) or cords on standard tools
- The on/off switch not in good working order
- Tool blade is cracked
- The wrong grinder wheel is being used
- The guard has been wedged back on a power saw

7.4 Lock Out/Tag Out

1. Wapiti Gravel Suppliers utilizes a 'Lock Out/Tag Out' System to prevent use of defective or unsafe tools and machinery/equipment.
2. Defects observed in tools and/or machinery/equipment are reported to the worker's supervisor immediately.
3. The shop Supervisor is then notified.
4. The tool or piece of equipment is locked out of service.
5. A tag is attached notifying of the defect and that the piece is out of service.
6. The keys and a tag with a description of the defect are handed in to the shop supervisor.
7. The tool or piece of equipment is not used again until it has been repaired or replaced.

7.5 Let's Review

In this Chapter we have discussed the following:

- Maintenance of facilities, equipment and tools is important and should be in accordance with applicable codes and standards.
- Equipment and vehicle manufacturers' specifications for safe operation of their equipment shall be followed.
- Alberta Occupational Health & Safety regulations have specific requirements for maintenance of equipment.
- The National safety Code has specific requirements for maintenance of vehicles.
- Maintenance of Tools
- Lock Out/Tag Out