



MACKAY **PRESSURE CLEAN HIRE**

Standard Operating Procedure Petrol and Diesel Pressure Cleaner

Before attempting to operate your machines, please read all of the instructions to ensure safe and trouble free service from your cleaning machine.

Pre-Operation Instructions

- (1) Ensure the engine power is turned off. (Ignition switch)
- (2) Ensure adequate water supply
- (3) Connect water supply into water connection on the side of the unit
- (4) Fill fuel tank until full.
- (5) Check oil dipstick to ensure oil level is FULL.
- (6) Check Pump and Gearbox oil levels.
- (7) Connect high-pressure hose to machine, turn the water on & pull the trigger on handgun to bleed air from the unit.

Engine Start Up Instructions

- (1) Turn ON/OFF fuel tap located under the fuel tank to the ON Position (If applicable)
- (2) If the engine is cold, put the choke into the on position (If applicable)
- (3) Turn ignition to the START position and pull the pull start until it starts, or turn key to start if electric start.
- (4) Once engine is running, turn off the choke, and allow it to run for approx 30 seconds to warm up.

Gun Operation

- (1) Depress gun trigger aiming away from area to be cleaned. This will flush any foreign objects from the system & check correct operation of the unit.
- (2) Point the lance towards the object to be cleaned and depress the trigger on the gun.
- (3) DO NOT at any time point the gun towards yourself or others.

Refuelling

- (1) Always ensure machine is shut down before refuelling
- (2) Ensure you are using the correct fuel type, either Unleaded Petrol or Diesel
- (3) Use a funnel with hard to reach fuel tanks
- (4) Never refuel around naked flames

Shut Down of Machine

- (1) Turn ignition switch to the OFF position.
- (2) Turn water supply OFF & Disconnect hose.
- (3) Pull the trigger on the gun to release any backpressure.
- (4) Detach high-pressure hose from machine and gun.

Important Safety Precautions

- (1) Never direct the spray jet at any person or electrical appliance.
- (2) Never place any part of your body over the nozzle.
- (3) Never direct the spray jet towards either the machine itself or any electrical item.
- (4) After use pull the trigger on the gun to release any backpressure.
- (5) When not in use, ensure that the machine is switched off and is disconnected from inlet water supply.
- (6) Do not attempt any mechanical repair yourself. Should your machine require service or repair then please contact Mackay Pressure Clean Hire.
- (7) Never supply any liquid other than Potable water to the water inlet.
- (8) Never pull on the high-pressure hose if it has formed kinks or nooses.
- (9) Never drag the hose over sharp objects.
- (10) Do not attempt to disconnect either the hose or any couplings whilst there is pressure in the hose. Refer to point (4) above.
- (11) Do not operate the machine whilst on a ladder.
- (12) Never allow children to either operate or play with the machine.
- (13) The use of safety glasses is recommended when using the machine to prevent any loose particles disturbed by the high-pressure spray coming into contact with your eyes.

Tips & Hints

- (1) Regularly check the oil level in the pump. The oil level should be maintained at the level indicated on the pump.
- (2) Top up the oil in the pump when required using SAE 30W oil. Never mix different grades of oil.
- (3) Do not use any water supply hotter than 50°C as this will damage both the valves and seals in the pump.
- (4) Ensure that the tap on the water supply is fully opened before operating the machine.

Daily Checks

- (1) Check fuel level in fuel tank
- (2) Check engine oil and top up where necessary. (SAE 30)
- (3) Check high pressure pump oil level is half way on sight glass and top up where necessary.

Trouble Shooting

The following table is provided as a general guide only.
Please refer to your local agent for service, repairs or specific advice.

Fault	Probable Cause	Possible Remedy
Pump runs normally but pressure does not achieve rated value.	Pump is sucking air.	Check that all hoses and fittings are airtight.
	Valves are worn or dirty.	Check, clean or replace.
	Unloader valve packing worn.	Check and replace.
	Nozzle incorrect or worn.	Check and replace.
	Worn piston packing.	Check and replace.
Fluctuating pressure.	Dirty filter.	Check and clean.
	Valves dirty, worn or stuck.	Check, clean or replace.
	Pump sucking air.	Check that all hoses and fittings are airtight.
Presence of water in oil.	Worn piston packing.	Check and replace.
	Dirty filter.	Check and clean.
	High humidity in air.	Check and change oil twice as often.
Water dripping from pump.	Piston packing or oil seal worn.	Check and replace.
	Water entering through breather.	Excessive water on machine.
Dripping oil.	Piston packing worn.	Check and replace.
	Piston guide o'rings worn.	Check and replace.
	Worn oil seals.	Check and replace.
	Oil coming out of breather.	Pump oil level overfull.

STANDARD OPERATING PROCEDURES

HIGH PRESSURE CLEANERS

SPECIAL INSTRUCTION:

1. High pressure cleaning should be carried out in an area isolated from other workers, or steps taken to prevent exposure of persons to the cleaning process.
2. Persons should not operate high pressure cleaners unless they have been instructed in the hazards and the means of safe use of the equipment.
3. All persons using high pressure cleaners are to use personal protective equipment appropriate for the task and the equipment used.

Task sequence	Identified hazards in task	Key processes to be followed	Precautions / PPE required
1. Preparation	Electric Shock Skin irritation Burns, risk of fire	Care must be taken to ensure that electric leads are kept out of water, and preferably above ground. Follow manufacture's instructions when adding cleaning agents to cleaners. Exercise caution when igniting gas or oil burners on steam cleaners.	Safety switch or RCD must be used. Hand protection must be worn. No smoking in vicinity.
2. Operation	Foreign matter in eyes Skin irritation Burns Slips and falls Noise	Water splash will contain cleaning agent and foreign matter from article being cleaned, which may splash back towards operator. Overspray and splash back will result in operator's clothing becoming wet with contaminated water from cleaner. Protect hands from hot water and heat from lance. Keep work areas clean – remove grease and other matter from floors. Larger units and steam cleaners may generate unsafe noise levels.	Wear safety goggles and/or face shield. Wet weather clothing and waterproof footwear required. Wear PVC gloves. Wear hearing protection.
3. Risks to other persons	Splashing	The distance that water will be ejected over depends on the shape and velocity of the water jet. Exclusion of persons other than those actually involved in the cleaning task should be made to prevent injury from water and water-borne particles and cleaning agents.	Prevent unauthorised entry into are where cleaning is being carried out.

Where applicable, suitable safety and warning signs should be displayed in areas where this procedure is carried out.

Preparation	Operation	Risk to other persons
		