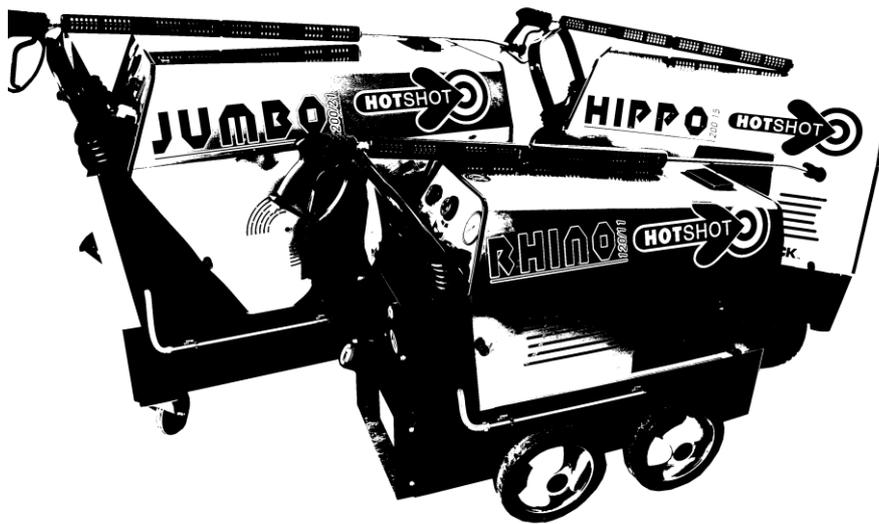




SAFETY AND OPERATING MANUAL



HOT WATER ELECTRIC WATER BLASTERS

**Read Safety & Operating Instructions
Before Commencing Operation**

**THESE INSTRUCTIONS MUST BE READ AND ADHERED TO
BEFORE OPERATING THIS MACHINE.**

SAFETY MANAGEMENT PROCEDURES

Failure to do so may result in injury to the operator, nearby persons, or damage to property, or this machine.

- This machine can cause severe injury if the water jet is pointed at any part of the body. Keep feet, hands, clothing and any part of the body out of the pressure jet.
- **ALWAYS** wear protective goggles and suitable protective clothing when operating appliance. Non-slip rubber footwear must be worn when operating the machine.
- If the machine fails to operate, turn off and call an authorised service person. **DO NOT** attempt to fix or repair the unit.
- **DO NOT** let the pressure cleaner get wet. **DO NOT** point the water jet at the pressure cleaner.
- **NEVER** let electric motor switch or electrical cord get wet. **USE AN EARTH LEAKAGE DEVICE**
- Check machine is well ventilated.
- **NEVER use PETROL with this machine as it may cause an explosion.** The Hot Water coil uses **DIESEL** to heat it.
- Store diesel in a safe place and never **SMOKE** when decanting fuel into the machine or when operating it.
- **NEVER** run the machine without water in the pump.
- Check tap water connections are tight and that there are no leaks from the machine.
- **DO NOT** work the machine for more than 1 to 2 minutes with gun in **CLOSED** position.
- After switching machine '**OFF**', point lance in a safe direction and press trigger on gun handle to release any built-up pressure before moving or working on this unit.
- Protect machine from weather. **DO NOT** leave out in rain or freezing conditions. **DO NOT** use if water pipes have frozen or if temperatures fall below zero, without taking special precautions.
- Putting acids, solvents or highly corrosive materials through pump will result in pump damage.

SET UP PROCEDURES

CHECK CLEANER FOR DAMAGE CAUSED BY TRANSPORTATION, IMMEDIATELY AFTER UNPACKING. IF DAMAGE IS FOUND CONTACT SUPPLIER IMMEDIATELY.

1. Electrical Supply

- i) For single phase machines the supply voltage must be **New Zealand:** 230v, 50Hz or **Australia:** 240v, 50Hz single phase.
- ii) For three phase machines the supply voltage must be **New Zealand:** 420v, 50Hz or **Australia:** 400v, 50Hz three phase.
- iii) Power supply should be protected by a 15amp fuse for all single phase units.
- iv) The use of extension cords is not recommended, however if they are used they must be of 15 amp capacity or larger. **DO NOT** use domestic type extension cords.
- v) With single phase units, an appropriate earth leakage device is recommended.

2. Water Supply

- i) The water inlet flow rate should be at a supply of at least 20 litres per minute for all models, with the exception of 25 l/min models which require a supply of 30 l/min.
- ii) Maximum inlet water temperature must not exceed 60°C or an input pressure of 70 psi (5 bar).
- iii) Observe the regulations of your water supply authority, both in regard to the supply of water and the disposal of waste water. Make sure that adequate precautions are taken to ensure correct drainage for the disposal of waste water.

3. Fuel Requirement

The high pressure cleaner burns light diesel, distillate, 50:50 diesel/kerosene mix or lighting kerosene. Generally light diesel or distillates are preferred, having a density of 0.830. The use of high sulphur content fuel should be avoided as it causes exterior corrosion of the heating coil.

WARNING:

- NEVER USE PETROL WITH THIS MACHINE, IT WILL CAUSE AN EXPLOSION.

4. Detergent

All pressure cleaners are fitted with either a lower pressure venturi system, or a high pressure soap system. It is recommended that high quality liquid detergents having an alkaline pH be used. Avoid the use of acid based detergents or solvents that can cause damage to pump seals or the heating coil. It is further recommended that the detergent should have water softening properties. Use Kerrick detergents for best results.

START UP PROCEDURES

Every pressure cleaner has been thoroughly tested and adjustments made prior to shipping. Rough handling during transportation may cause the loosening of plumbing or change some of the adjustments. It is recommended that the following procedures be carried out before starting to ensure satisfactory operation. If you note any problems please contact your supplier or nearest Kerrick branch. **DO NOT** attempt to fix.

- a) Connect water supply hose to intake on machine. A standard hose fitting and threaded screw connector is supplied with your machine.
- b) Connect the high pressure hose to the machine. Assemble the lance and shut off gun, connecting them to the other end of the high pressure hose.
- c) **Models without float tanks**
PRIOR to connecting the electrical supply, turn on the tap water to the machine, hold the shut off trigger open, and check that there a flow of water through the machine. Visually inspect and tighten any loose plumbing connections.
Models with float tanks
Having turned on the supply of water to the machine, inspect the float valve for freedom of operation. The ball float must be tightly secure to the float valve arm, and must not bind against the side of the float tank. To carry out the above flow check with models that have a float tank it is necessary to turn the motor on for a very short time, to check that water flows throughout the whole system. Make sure that the trigger on the shut off gun is open, and only run the machine for a maximum of 10 seconds to check that water is flowing. Visually inspect and tighten any loose plumbing connections.
- d) Check that pump has correct oil content. Oil level should be visible to mark on oil gauge window. Generally oil should be half way up sight glass. If necessary add oil. The oil must be non-detergent hydraulic oil. Use Kerrick CC500 oil. Motor oil is **NOT** recommended and will void the warranty.
- e) Fill the fuel tank with fuel. Fuel storage and dispensing equipment must be free from dirt, water, or other foreign matter to prevent damage to fuel pump or burner nozzle.

WARNINGS:

- **Never use petrol with this machine. It will cause an explosion.**
- **Never ever let the fuel supply tank empty If operated without fuel the fuel pump will quickly scour and cause damage beyond repair.** Even when machine is operating on the cold cycle, fuel must in the tank, as fuel may be on some models continually re-circulated.
- Never ever let electric cords lie in pools of water
- Keep lugs and motors dry at all times
- Do not use long extension cords
- Use and earth leakage device

- f) Fill the detergent tank with detergent. Ensure that the detergent filter is at the bottom of the detergent tank and covered with liquid at all times. Make sure prior to starting that soap metering valve (if fitted) is closed and at no time the machine draws air through the detergent system. If air is drawn through it will cause the pressure pump to pulse.
- g) Check electrical cords, switches and plugs for any damage. Do not use **IF DAMAGE IS FOUND OR ELECTRICAL WIRE IS SUSPECT**. Call an electrician if in doubt.
- h) Before starting point the lance to a safe position and open the gun trigger to release any build up of pressure within the system. Having carried out all other checks and with the machine in the 'off' position, finally plug the unit into the electrical supply. With single phase machines an earth leakage device is recommended.

- i) Turn machine switch on, holding trigger on shut off gun open. Once again check that water is drawn into the pump and that a normal pressure build up in the nozzle of the pressure gun is achieved. Releasing the trigger will shut off the flow of water. If the machine fails to come up to pressure, or shut off gun fails to operate, shut off, turn machine off at wall. Contact your service agent or nearest Kerrick branch for assistance. **DO NOT** attempt to make repairs yourself.
- j) If the machine is coming up to pressure with an adequate water flow, the burner maybe turned on, by depressing the burner switch to the on position. Under normal temperature conditions, solution temperature will rise to operating level within two minutes. With extremely cold supply water a longer period may be required.
- k) Lower temperatures can be achieved by turning back the temperature dial.

NOTE: If the unit smokes heavily, it should be shut down. If adjustments are to be made, make sure that the machine is switched off at the wall before adjusting the air regulator, or cleaning the burner nozzle. Never attempt this operation yourself. Refer to an authorised Kerrick person.

WARNINGS:

- **Never let the unit run for more than 1 to 2 minutes with the gun closed.** Water will recycle within the pump head and heat up, causing damage to seals.
- **Never let pump run dry of water** as this can cause catastrophic damage to the pump.
- Units fitted with a water tank can be run for slightly longer with the gun closed, however the water will eventually heat up and damage the pump.

NOTE: Some series are fitted with total stop. After 20 seconds with the gun closed, the unit will shut down. To restart simply pull the trigger. Remember to turn unit off at the wall if the machine has shut itself down through the Total Stop cycle. Do not leave overnight stopped in the Total Stop cycle. If a hose bursts, the machine will restart and pump water everywhere.

Store machine so that it does not freeze. If there is the possibility of overnight freezing, prime water system with anti freeze. **DO NOT** use machine if water pipes have frozen, or the machine has got wet from rain.

REMEMBER:

- Follow safety instructions.
- Open trigger on gun when starting to back off pressure.
- Do not run unit dry of water or fuel.
- Do not leave running with shut off gun closed for more than 1 or 2 minutes
- Keep electric motor, switch, electric lead and plugs dry. Use an earth leakage device.
- Release pressure in gun when shutting down.
- Regularly check oil level in pump.
- Never use PETROL in this machine.

ALWAYS TURN OFF POWER SUPPLY AT THE WALL SOCKET AFTER USE, OR IF MACHINE FAILS TO CORRECTLY OPERATE.

MAINTENANCE

PRIOR TO CARRYING OUT ANY MAINTENANCE TURN OFF POWER SUPPLY AT WALL SOCKET. DO NOT UNDERTAKE ANY MAINTENANCE WITH POWER TO THE MACHINE.

- a) **Pump Oil** – Check pump oil level every time the appliance is used. Change oil initially after the first 25 hours, thereafter at 3 monthly intervals or 500 hours. Use Kerrick oil CC500 or Telus 150C. Oil should sit halfway up the sight glass. Motor oil not recommended.
- b) **Water Filter** – Every 6- 8 weeks clean the water intake filter in the inlet connection to the pump or in the float tank if fitted.
- c) **Fuel Filter** – Clean the fuel filter by removing the filter element and blowing with compressed air.
- d) **THIS PROCEDURE SHOULD ONLY BE UNDERTAKEN BY AUTHORISED KERRICK SERVICE PERSON.** The heating coil must be periodically cleaned every 180 - 200 working hours.
 - i) Carefully remove the burner manifold assembly.
 - ii) Clean with compressed air the nozzle filter which is situated behind the nozzle itself.
 - iii) Check position of electrodes.
 - iv) Remove the top cover by unscrewing the three retaining nuts. Clean the deflector on the lower side of the top cover.
 - v) Lift out the coil retaining plate, with flue attached.
 - vi) Gently tip unit on it's side to undo the locking nuts and slide the heating coil out.
 - vii) Clean the coil with an iron brush and steam clean. In particular make sure the layers between coils are cleaned.
 - viii) Suck out with a vacuum any soot in the coil shell. Clean out thoroughly. In cleaning out the coil shell you will remove the insulation at the bottom of the coil shell. Replace with heavy weight castable.
 - ix) Re-assemble coil and burner assembly in reverse order.

GENERAL CARE OF EQUIPMENT

This machine should be cleaned daily after use, and checked for any maintenance requirements. After using the detergent system should be flushed with clean water. Simply stand the detergent intake in a clean bucket of water and run the machine with the pump nozzle or valve open for one minute. Check and clean all hoses, making sure they are stored with no kinks in them. If the hoses are damaged in anyway, replace immediately.

Check oil levels in both pump and motor, make sure that any diesel is safely stored. Allow motor to cool down before storage.

Release any pressure in the hoses by depressing trigger on gun. Drain surplus water from hoses before storage. Never leave equipment outside unprotected from the elements. In particular do not allow equipment to freeze in near or sub-zero temperatures. In very cold conditions it may be necessary to protect equipment by flushing it with anti freeze.

To do so:

- a) Mix up anti freeze mixture in a separate container.
- b) Couple container to intake of machine and gravity feed to pump.
- c) Run machine for one minute to ensure system is primed with anti freeze mixture.
- d) On stopping machine, release pressure in hose by pulling trigger.

REMEMBER: If machine is operated in an area where freezing occurs, always check that water lines are not frozen and take precautions to ensure that water does not freeze with the pump. **BEFORE STARTING** check that the water flow is normal. If in doubt do not use the machine.

REMEMBER:

- Follow safety instructions.
- Open trigger on gun when starting to back off pressure.
- Do not run unit dry of water or fuel.
- Do not leave running with shut off gun closed for more than 1 or 2 minutes
- Keep electric motor, switch, electric lead and plugs dry. Use an earth leakage device.
- Release pressure in gun when shutting down.
- Regularly check oil level in pump.
- Never use PETROL in this machine.

NOTE: Incorrect use or failure to follow operating and maintenance procedures may produce an injury to a person or damage to the equipment.

IF ANY ASSISTANCE IS REQUIRED CONTACT YOUR NEAREST KERRICK BRANCH , SERVICE AGENT OR DISTRIBUTOR.

- **NEW ZEALAND:** 0800 2 KERRICK (0800 253 774)
- **AUSTRALIA :** 1300 KERRICK (1300 537 742)

KERRICK SERVICING

Kerrick's workshop facilities are staffed by experienced technicians providing servicing, repair and manufacturing for a range of products including; water blasters, vacuum cleaners, extractors, pressure cleaners, pumps and more.

We work on everything from commercial and light industrial to large heavy duty equipment and offer customized design build services. We also warehouse and ship a comprehensive range of spare parts for your convenience.

For more information on your product, to book in a service or repair or to order spare parts give Kerrick a call or send through and enquiry on our website. Contact details can be seen below:

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