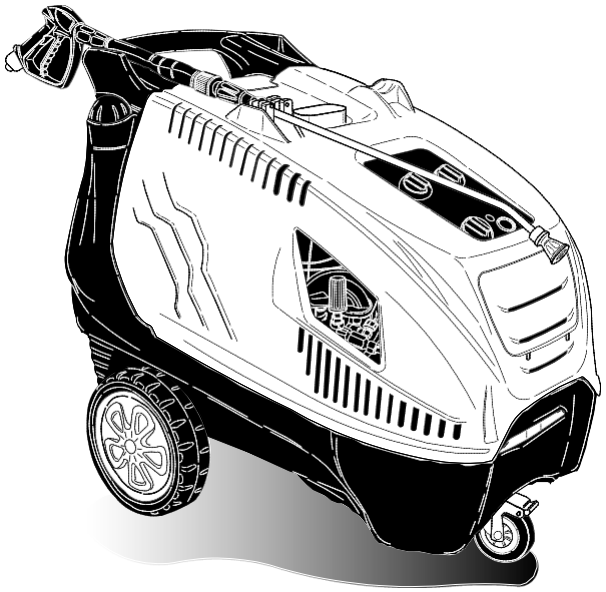
KERRICK®

SAFETY AND OPERATING MANUAL



RUNNER HOT WATER ELECTRIC PRESSURE CLEANER

D 1309P M - D 1012P4 M - D 1310P4 M
D 1813P T - D 1813P4 T - D 1915P4 T - D 2017P4 T

Read Safety & Operating Instructions Before Commencing Operation

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

Your Kerrick Runner hot water cleaner comes complete with a full range of accessories designed to make your cleaning task an easy one. Manufactured in Europe this is a high quality unit, that if treated properly will give many years of service.

This manual must be read before installing, setting up and using the cleaner. The manual is an integral part of the product. Read the warnings and instructions carefully. The contents of this booklet must be brought to the attention of operators using this water blaster or carrying out routine maintenance on it.

The CE mark on your cleaner shows that it has been constructed in compliance with the European Standards on safety.

SAFETY MANAGEMENT PROCEDURES

Failure to follow the safety management procedure recommendations made in this manual may result in injury to the operator, nearby persons, or damage to property, or this machine.

- The H.P. cleaner belongs to **CLASS I** for protection against electric shock.
- The H.P. cleaner is factory set and all its safety devices are sealed. It is forbidden to alter their adjustment values, doing so will void the manufacturer's warranty.
- 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 the 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.
- The H.P. cleaner must always be used on firm, flat ground; furthermore it must not be moved while it is working or connected to the electric supply.
- The electric safety of this machine is only assured when it is properly connected to an efficient grounding system in accordance with the governing laws for electric safety. (In compliance with the provisions of the IEC 60364-1 standard). The manufacturer cannot be held responsible for damages that result due to a lack of electrical grounding.
- The H.P. cleaner must be connected to the electric supply by means of an omnipolar switch with opening contacts of at least 3 mm. This switch must have electric features which are consistent with the appliance. This requisite does not apply to H.P. cleaners with plug and electric power lower than 3 kW.
- The appliance is disconnected from the electric supply only by pulling out the plug or switching off the omnipolar switch. Pressure cleaners with the "Total Stop" devices should be considered as off when the omnipolar switch is in the "O" position or the plug is unplugged from the socket.
- **NEVER** let electric motor switch or electrical cord get wet. **USE AN EARTH LEAKAGE DEVICE**
- Do not touch the appliance with wet or damp hands or feet and do not use the appliance bare-footed or with unsuitable clothing.

- Do not pull the supply cable or the appliance itself in order to disconnect the plug from the electric supply.
- In case of damage or malfunction, switch off the appliance (disconnecting it from the water main and from the electricity main via the omnipolar switch or by unplugging the plug in the case of water cleaners rated at less than 3 kW) without tampering with it.
- Check machine is well ventilated. If the appliance is to be used in an enclosed space, install a flue gas extraction system and guarantee adequate ventilation.
- **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.
- **DO NOT** let the pressure cleaner get wet. **DO NOT** point the water jet at the pressure cleaner.
- 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.
- The flexible hose connecting the lance to the H.P. cleaner must not be damaged. In case of damage, replace immediately.
- Hoses, connections and fittings for high pressure systems are an important factor in guaranteeing the safety of an H.P. cleaner. Only use original spare parts which have the manufacturer's approval.

WARNINGS:

- Failure to observe the above warning absolves the manufacturer of all responsibility & constitutes negligent use of the product.

"CE" CONFORMITY DECLARATION

We declare that the product to which this declaration refers is manufactured in accordance with:

- **European Community Directives:** 2006/42/CE - 2004/108/CE - 2000/14/CE - 97/23/CE.
- **Applied harmonised standards:** EN 12100-1, EN 12100-2, EN 60335-1, EN 60335-2-79, EN 55014-1, EN 55014-2, EN 61000 (part 3-4-6), EN 60704-1.

INTENDED USE

This appliance is intended exclusively for cleaning machines, vehicles, buildings and general surfaces suitable for treatment with a high pressure jet of detergent solution between 25 and 250 bar (360 - 3600 PSI). It has been designed for use with the detergents supplied or recommended by the manufacturer. The use of other detergents or chemicals may negatively influence the safety of the appliance. This H.P. cleaner must be used only for the purpose for which it was specifically designed.

All other uses are to be considered incorrect and therefore unreasonable.

Examples of unreasonable use include:

- Washing surfaces not suitable for cleaning with a high pressure jet.
- Washing people, animals, electric equipment or the machine itself.
- Using unsuitable detergents or chemicals.
- Blocking the trigger (lever) of the lance in the delivery position.

Improper, incorrect or unreasonable use absolves the manufacturer of all liability.

DATA PLATE:

The data plate bearing the main technical characteristics of your cleaner is located on the trolley and is always visible.

WARNING:

- When buying your cleaner, ensure that it has an identification plate. If there is no plate, inform the manufacturer and/or the dealer immediately.
- Machines without a plate must not be used and the manufacturer declines all responsibility for them. Products without a plate must be considered as unapproved by the manufacturer and potentially dangerous.

SET UP PROCEDURES

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

1. **Filling the Fuel Tank**
   Use only the type of fuel indicated on the identification plate (diesel). Check the fuel level from time to time while the cleaner is operating. Attempting to use the cleaner without fuel may cause damage to the fuel pump.

2. **Filling the Detergent Tank**
   i) 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. Choose the one most suited to the washing job to be done and dilute it with water according to the instructions on the pack (fig. 2). Fill the detergent tank with the diluted product (fig. 3).

   ii) Ask your dealer for the catalogue of the detergents that can be used depending on the type of washing job to be done and the type of surface to be treated. After using a detergent, the detergent intake circuit must be flushed out with clean water.

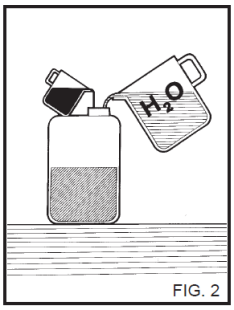


FIG. 2

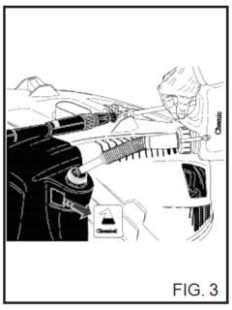


FIG. 3

3. Water Circuit Connection

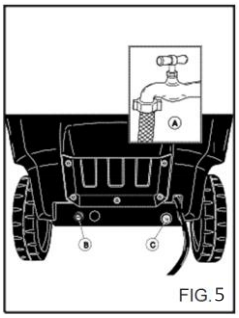


FIG.5

i) Connect the feed hose to the mains (fig. 5A) and to the hose-tail on the H.P. c leaner (fig. 5C). Check that the pressure and quantity of the water supplied by the mains are sufficient for the H.P. cleaner to work properly: 2 to 8 BAR (29 to 116 psi). Maximum temperature of feeding water 50°C (122°F).

ii) Connect the high pressure hose to the cleaner (fig. 5B) and to the lance (fig. 6). The H.P. cleaner must operate with clean water only. Dirty/sandy water, corrosive chemicals and solvents can cause severe damage to the cleaner. Failure to respect the above absolves the manufacturer of all liability and represents negligent use of the product.

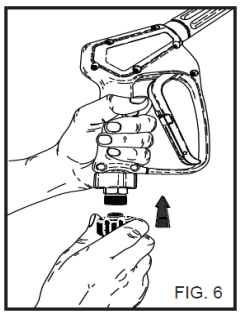


FIG. 6

4. 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.

WARNING:

- Never suck up liquids containing solvents or acids in their pure state e.g. petrol, paint solvents or diesel. The spay mist from the lance may become high flammable, explosive or poisonous.

CONTROL PANEL

The letters below indicate the function of the items labeled in fig 7. These are the most commonly used items on the control panel.

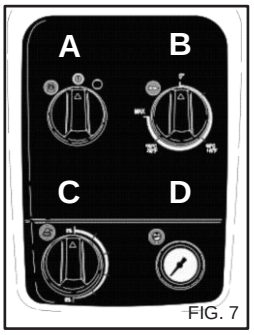


FIG. 7

A - On/off switch

B - Temperature regulator

C - Detergent control tap (if available)

D – Pressure gauge

STARTING YOUR PRESSURE CLEANER

1. Turn on the water supply tap (fig. 5A).
2. Connect the water cleaner to the mains electricity supply via the omnipolar switch or by plugging the plug into the socket.
3. Start the cleaner by turning the selector switch to Position 1 (fig. 7A).

4. The high pressure water jet generates a reaction force in the lance. Keep a firm grip on the lance handle.
5. Press the trigger on the gun and begin washing.
6. To use the cleaner with hot water, turn the temperature regulator (fig. 7B) to the recommended washing values.

NOTE:

- In water cleaners with the "Total Stop" system, the motor starts and stops when the lever on the lance handle is actioned or released.

IMPORTANT – Your First Start Up

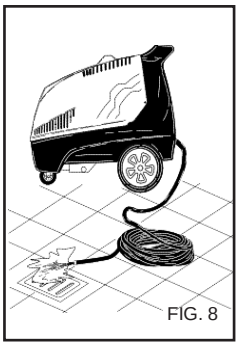


FIG. 8

To eliminate any impurities or air bubbles from the water circuit we advise starting the cleaner for the first time without the lance and letting the water run out for a few seconds.

Impurities could block the nozzle and cause malfunction (Fig. 8).

STOPPING THE CLEANER

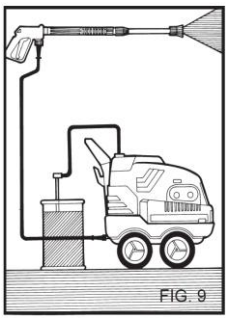
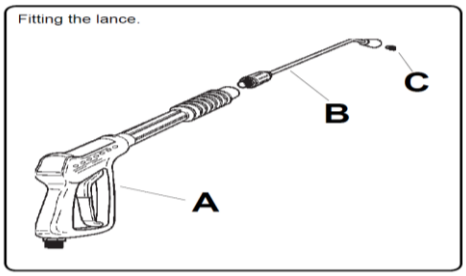
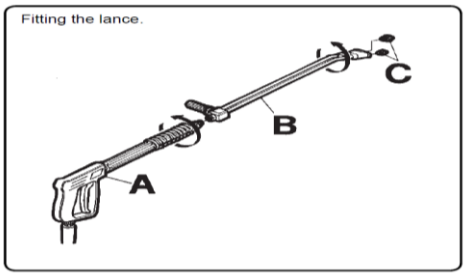


FIG. 9

1. Switch off the burner by turning the pressure regulator to position "0" (fig. 7B).
2. Let the cleaner run with cold water only for at least 30 seconds to cool down the boiler.
3. After using with detergent, flush out the intake circuit. Place the detergent suction hose (fig. 9) in a tank of clean water and let the pump run for 1 minute with the dosing tap turned fully on and the lance in detergent delivery condition.
4. Stop the cleaner by turning the switch to position "0" (fig. 7A).
5. Discharge the pressure from the H.P. hose by pressing the trigger on the gun.
6. Disconnect the water cleaner from the mains electricity supply via the omnipolar switch or by unplugging the plug from the socket.
7. Turn off the water supply tap (fig. 5A).

USE OF THE DOUBLE LANCE





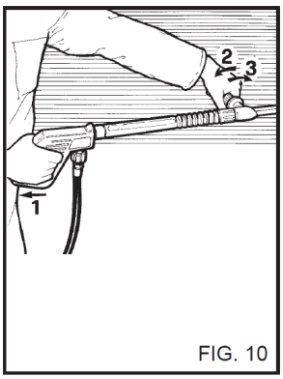


FIG. 10

The double lance allows the operator to select a low or high pressure jet.
The pressure is selected with the gun in position (fig 10) **High pressure:** Position 2. **Low pressure:** Position 3.

WARNING:

- If the water cleaner is left unattended, even temporarily, turn it off by using the omnipolar switch or by unplugging the plug from the socket.
- Water cleaners with the “Total Stop” device should be considered as off when the omnipolar switch is in the “O” position or the plug is unplugged from the socket.
- When the water cleaner is not used, close the safety device on the handle.(fig.11)
- Dry use of the water cleaner causes serious damage to pump gaskets.

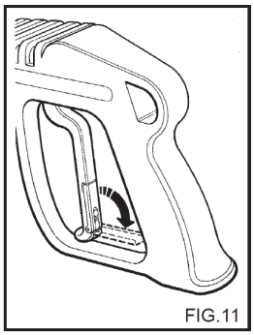


FIG.11

REGULATING PRESSURE AND USING STEAM (If available)

This paragraph concerns only those models provided with the “pressure regulating” device.

The pressure regulator, fig. 12, allows the operator to adjust the working pressure. When knob ‘**C**’ is turned in an anti-clockwise direction ‘**B**’ (minimum), the working pressure is reduced.

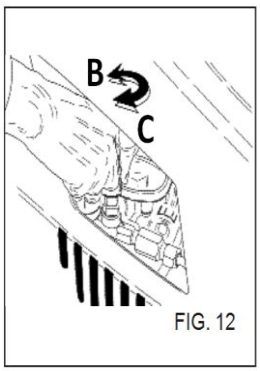


FIG. 12

USING THE STEAM NOZZLE (supplied as an accessory)

Turn the thermostat knob “B” (fig. 7) to steam position to obtain an increase in the temperature of the water at delivery. When you have finished using the "Steam Phase", turn the thermostat knob "B" to position "0" (fig. 7) and let the machine cool down for about 3 minutes with the gun turned on.

WARNING:

- At temperatures higher than 95°C (203°F), the working pressure must be < 32 bar (460 PSI).
- During use with boiling water, "Steam Phase", keep away from the openings for fumes discharge (risk of burns to operator).

OPERATING WITH DETERGENTS

1. Prepare the solution of detergent at the concentration most suitable for the type of dirt and the surface that is to be washed.
2. Start the cleaner, turn on the detergent tap (if present), switch on the detergent suction control on the lance and spray the dirty surface with the diluted product, working from bottom to top.
3. Let it react for a few minutes.
4. Rinse the whole surface well from top to bottom with hot or cold water at high pressure.
5. After using with detergent, flush out the intake circuit; place the detergent suction hose (fig. 9) in a tank of clean water and let the pump run for 1 minute with the dosing tap turned fully on.

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

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.

PRECAUTIONS AGAINST FROST

The cleaner must not be exposed to frost. If the cleaner will be exposed to frost, antifreeze must be used to prevent serious damage to the hydraulic circuit or work must be halted and the unit stored until completely thawed.

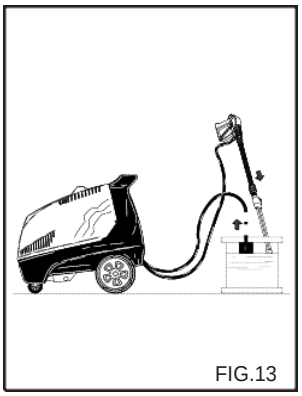


FIG.13

Operations for Using Antifreeze (fig. 13)

1. Turn off the water supply, disconnect the hose and run the cleaner until it is completely empty.
2. Stop the water cleaner by moving the ON/OFF switch to the “0” position.
3. Prepare a container with the solution of antifreeze.
4. Immerse the tube in the container with the antifreeze solution.
5. Start the water cleaner with the ON/OFF switch in the “I” position.
6. Start the cleaner and let it run until antifreeze comes out through the lance.
7. Suck up antifreeze with the detergent intake system too.
8. Disconnect the water cleaner from the mains electricity supply via the omnipolar switch or by unplugging the plug from the socket.
9. For high pressure cleaners provided with water tank, the detergent solution prepared as described in the point 3, must be poured directly into the tank.

WARNINGS:

- Anti-freeze may cause environmental pollution. Always follow the instructions given on the pack. (Dispose of carefully).

PERIODS OF INACTIVITY

If the machine is to remain inactive for a long period, disconnect the supply sources, drain the tank(s) of all the operating fluids and protect any parts that could be damaged by the accumulation of dust. Grease the parts that could be damaged by drying out, such as the supply hoses.

When bringing back into use, ensure that there are no cracks or cuts in the water supply hoses. Oil and chemical products must be disposed of according to current legislation.

MAINTENANCE

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

Once maintenance has been completed, ensure that the closing panels have been correctly reassembled and anchored with the screws provided before reconnecting the cleaner to the mains. Failure to do so may cause a risk of electric shock.

CHECKING PUMP OIL LEVEL AND OIL CHANGE

From time to time check the oil level in the high pressure pump by means of the sight glass (fig. 14A) or the dipstick (fig. 14B).

If the oil has a milky appearance, call Kerrick or a service technician immediately. Change the oil after the first 50 hours' work and subsequently every 500 hours or once a year.
Proceed as follows:

1. Unscrew the drain cap situated under the pump (fig. 15C).
2. Unscrew the cap with the dipstick (fig. 14B).
3. Let all the oil drain off into a container and deliver it to an authorized oil collection and disposal centre.
4. Replace the drain screw and pour fresh oil in through the filling cap on top (fig. 15A) until it reaches the level indicated on the sight glass (fig. 15B). **Use only SAE 15 W40 oil.**

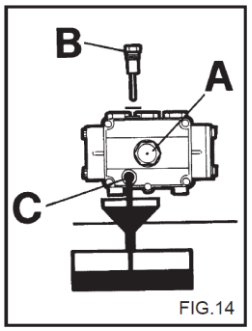


FIG.14

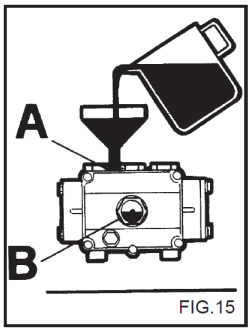


FIG.15

CLEANING THE FUEL FILTER AND TANK

Remove and replace the in-line fuel filter from time to time (fig. 16). Empty the fuel tank. Open the drain cap (fig. 17) (if available) and let any impurities drain out into a container. Flush out the tank with clean fuel and close the drain cap.

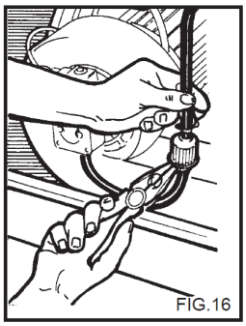


FIG.16

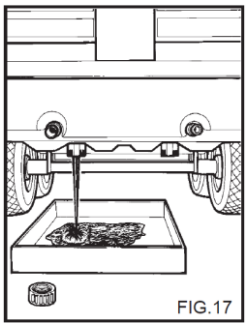


FIG.17

CLEANING THE WATER FILTER

Clean the water intake filter regularly to clear away any impurities like sand, stone and algae (fig. 18).

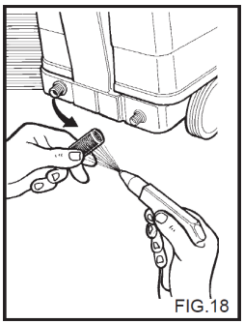


FIG.18

CHANGING THE NOZZLE

The high pressure nozzle fitted on the lance must be changed from time to time, as this component is subject to normal wear and tear during use. Wear may generally be detected by a drop in the working pressure of the cleaner. To replace it, consult Kerrick or you dealer for instructions on the correct type and size of nozzle.

DE-SCALING

Descaling must be carried out every 300 hours. Over time scale deposits build up inside the hydraulic circuit and coil, leading to clogging and reducing efficiency and increasing overall wear and tear on your cleaner. To have your machine descaled take it into Kerrick or your local agent for servicing.

ROUTINE MAINTENANCE TO BE PERFORMED BY THE USER

- Check power cable, pipes, hose and high pressure connectors – Before each use.
- First oil change in high pressure pump – After 50 hours
- Subsequent oil changes in high pressure pump – Every 500 hours
- Change and clean fuel filters – Every 100 hours
- Clean fuel tank – Every 100 hours
- Clean water filter – Every 50 hours

ROUTINE MAINTENANCE TO BE PERFORMED BY A TRAINED SERVICE TECHNICIAN

- Clean coil on boiler – Every 200 hours
- Descale coil on boiler – Every 300 hours
- Clean fuel pump – Every 200 hours
- Change fuel nozzle – Every 200 hours
- Regulate electrodes – Every 200 hours
- Change electrodes – Every 500 hours
- Change seals on H.P. pump – Every 500 hours
- Change lance nozzle – Every 200 hours
- Calibrate and check the safety devices – Once a year

IMPORTANT:

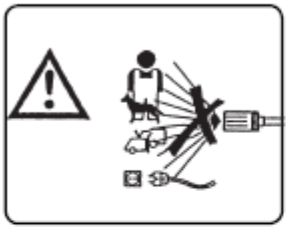
- These intervals refer to normal working conditions. For heavy use decrease the interval for each job.
- For maintenance and/or repairs, use only original spare parts which offer the greatest characteristics of quality and reliability. Failure to use original spare parts absolves the manufacturer from all liability and transfers it to the person carrying out the operation.

TROUBLE SHOOTING

Trouble	Possible Cause	Remedy
Switch is turned on but cleaner doesn't start.	Faulty electric connection	Check the mains voltage
	Thermal protection has tripped	Reset (if it trips again, return to Kerrick or trained technician for servicing)
No water jet **or** Leakage from high pressure water circuit **or** After 30 seconds water cleaner stops (DS versions only)	Faulty water circuit connection	Check it
	Clogged water filter	Clean it
	Mains tap turned off	Turn it on
	Detergent tap turned on	Turn it off

Trouble	Possible Cause	Remedy
Low Pressure	Worn nozzle	Replace nozzle with correct size
	Poor water supply	Increase inlet pressure. Check for restrictions
	Faulty water circuit connection	Disassemble, reseal, and reassemble
	Relief valve stuck, partially plugged or improperly adjusted: valve seat worn	Clean, lube, adjust or replace. **NB: Incorrect adjustment can damage pump or motor**
	Inlet suction strainer clogged or improper size	Clean strainer and replace with correct size if required.
	Dirty or worn valves	Clean and replace as required
	Detergent intake device on the lance is turned on	Turn it off.
When the lance is turned on the pressure rises and falls	Nozzle is clogged or deformed	Clean and replace as required
	Insufficient water supply	Check water source
In by-pass or total stop phase, the water cleaner shuts down (DS version)	Micro-leaks of water from the high pressure circuit	Contact service centre
When thermostat reaches chosen temperature the boiler does not light	No fuel	Check fuel level in the tank and see that the fuel intake circuit is clean (no water)
	Fuel filters are clogged	Change the in-line filter
Water not getting hot enough	Thermostat setting wrong	Check and re-set
	Clogged filters	Clean the fuel filters
	Boiler coil clogged with scale	Return to Kerrick or trained technician for servicing
Too much smoke from the flue	No fuel	Fill the fuel tank
	Incorrect combustion	Clean the various fuel filters
	Impurities or water in fuel	Empty the tank and clean it carefully, also clean the fuel filters
Insufficient detergent suction	Tap turned off	Turn it on
	No detergent in the tank	Fill the detergent tank
	Control on the lance not switched on	Set the control on the lance
	Coil or pipe clogged	Return to Kerrick or trained technician for servicing
Water leaks from head	Gasket worn	Return to Kerrick or trained technician for servicing
Presence of water in oil	Oil seal rings worn	Return to Kerrick or trained technician for servicing

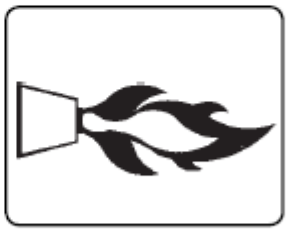
DESCRIPTION OF SYMBOLS ON THE CLEANER



DO NOT DIRECT THE JET AGAINST PEOPLE, ANIMALS, POWER SOCKETS OR THE MACHINE ITSELF.

SWITCHING OF THE PUMP MOTOR.

ATTENTION: RISK OF BURNS.



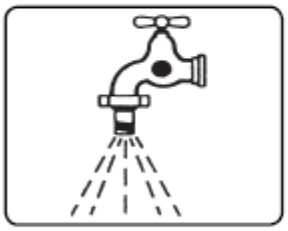
LIGHTING THE BURNER.

ATTENTION: RISK OF ELECTRIC SHOCK.

ADJUSTING THE WATER TEMPERATURE.

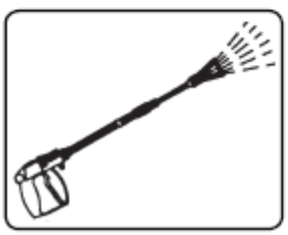
EARTH.

FUEL (DIESEL).



WATER INPUT.

CHEMICHALS (DETERGENT).



WATER OUTPUT.

ANTI-SCALE PRODUCT.

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)

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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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