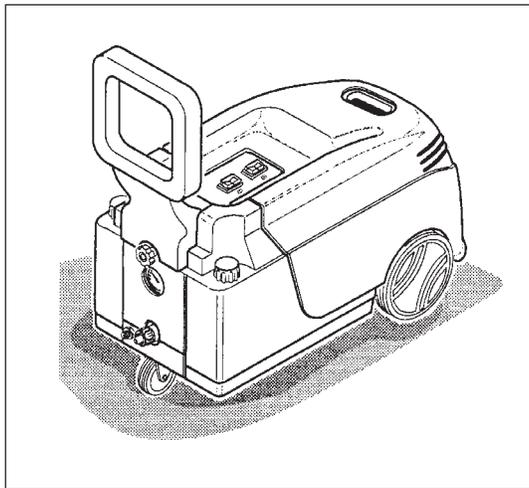


ClarkeTM POWER WASHER

OPERATING & MAINTENANCE INSTRUCTIONS



KING 120 HOT WASHER

CE

PART No. 7320500

Thank you for purchasing this CLARKE KING 120 Hot Washer.

This machine is a lightweight, portable, high pressure power washer, designed for DIY use in and around the home.

It comprises an electric motor, a pump, a high pressure hose with a trigger and lance, and an adaptor for injecting foam or cleaning agents into the water jet. Additionally, a burner is incorporated to provide hot water when required for hot washing.

Before attempting to use your Hot Washer, please read this instruction manual thoroughly and follow all instructions carefully. By doing so you will ensure the safety of yourself and that of others around you, and you can look forward to it giving you long and satisfactory service.

GUARANTEE

This CLARKE product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt as proof of purchase. This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission. This guarantee does not effect your statutory rights.

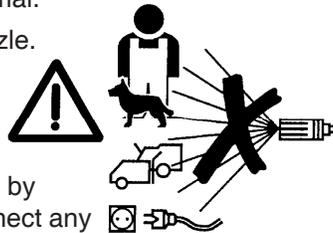
SAFETY PRECAUTIONS

WARNING

Water at high pressure can be dangerous and may cause severe damage to persons or property if subject to misuse.

NEVER allow anyone to operate this equipment unless they are thoroughly reliable, and completely familiar with the safety precautions.

1. Never direct the spray jet at any person or animal.
2. Never hold a finger over the high pressure nozzle.
3. Never direct the spray jet at the machine itself or any other electrical equipment.
4. After use, and before disconnecting hoses, release the pressure in the high pressure hose by operating the trigger. Do not attempt to disconnect any hose or coupling with pressure still in the hose.
5. Never operate the machine with any of the covers removed.



6. Do not, attempt any electrical or mechanical repair. If you have a problem with your machine contact your local dealer or Clarke Customer Services Dept., tel: 0181-556-4443
7. Never supply any liquid other than water to the water inlet.
8. Use only chemical cleaning agents (detergents) approved for power washing when using the chemical injection facility.
9. Never use the chemical injection facility to introduce solvents e.g.. paint thinners, petrol, oil, etc.
10. Do not operate the machine whilst standing on ladders: use a platform tower or scaffolding.
11. Children should not be allowed to use the machine.
12. We recommend the use of safety goggles when using machine in any application where loose particles of stone or grit etc. may be blown around by the high pressure spray.
13. When not in use, disconnect from the water and electrical supply's, and ensure the system is completely drained. Store in a dry, frost free environment.
14. Disconnect from the mains supply before carrying out any maintenance or servicing.
15. Never pull the washer by the power cable, or yank the cable it to disconnect from the socket. Keep the cable away from heat, oil or sharp edges.
16. Observe all precautions regarding the use of flammable liquids when filling the fuel tank.
17. Take care when handling the lance when hot washing. The metal components can become very hot. It is strongly advised that a good pair of industrial gloves be worn.
18. DO NOT operate the machine indoors or in enclosed areas without adequate ventilation, or in areas where flammable vapours (Petrol, solvents etc.), may be present.



IMPORTANT: If the machine must be used in an enclosed area, ensure the burner exhaust is vented to the outside atmosphere. All venting must be in accordance with applicable laws and local ordinances for such installations.

ELECTRICAL CONNECTIONS

WARNING: THIS MACHINE MUST BE EARTHED.

This product is provided with a standard 13 amp, 230 volt (50Hz), BS 1363 plug, for connection to a standard, domestic electrical supply.

Should the plug need changing at any time, ensure that a plug of identical specification is used. **IMPORTANT:** The wires in the mains lead should be wired up in accordance with the following colour code:

Green & Yellow	---	Earth
Blue	---	Neutral
Brown	---	Live

As the colours of the wires in the mains lead may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

a Connect GREEN & YELLOW coloured cord to plug terminal marked with letter "E" or Earth symbol "⏏".

Connect BROWN coloured cord to plug terminal marked letter "L"

Connect BLUE coloured cord to plug terminal marked letter "N"

We recommend that this machine is connected to the mains supply through a Residual Current Device (RCD).

FUSE RATING

The fuse in the plug for this appliance must be rated at **13 amps**

IMPORTANT:

If this appliance is fitted with a plug which is moulded onto the electric cable (i.e. non-rewireable) :

1. The plug must be thrown away if it is cut from the electric cable. There is a danger of electric shock if it is subsequently inserted into a socket outlet.
2. Never use the plug without the fuse cover fitted.
3. Should you wish to replace a detachable fuse carrier, ensure that the correct replacement is used (as indicated by marking or colour code).
4. Replacement fuse covers can be obtained from your local dealer or most electrical stockists.
5. The fuse in the plug must be replaced with one of the same rating (**13 amps**) and this replacement must be ASTA approved to BS1362.

EXTENSION CABLES

If an extension cable is used, always ensure it is fully unwound. When used outdoors, ensure the extension cable is specifically designed for outdoor use.

The maximum extension length is 25 metres. Ensure that the wire sizes in the cable are at least 2.5mm² in cross section. As a general rule, the extension cable must be thicker than the cable supplied with the washer.

IF IN DOUBT, CONSULT A QUALIFIED ELECTRICIAN.

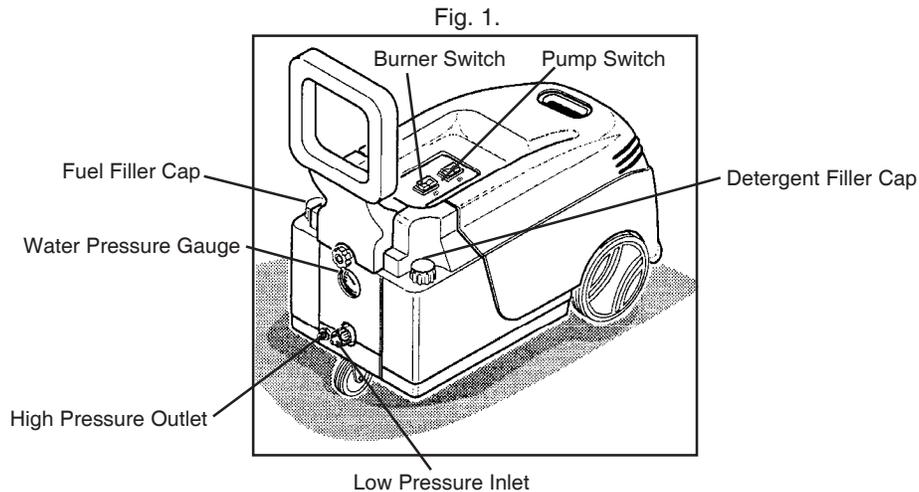
Do not attempt any electrical repairs yourself.

ASSEMBLY AND PREPARATION FOR USE

The machine is fully assembled except for the handle which is hinged and lies flat for transit purposes. Raise the handle and secure in position with the screw provided on the rear of the machine.

The lance is assembled by screwing the two sections together. Screw one end of the high pressure hose to the lance, and the other to the high pressure outlet, shown in fig. 1

The low pressure water inlet, which carries a 3/4" BSP thread, is shown in fig. 1. A 3/4" BSP adapter with a 1/2" hose connector is provided, so that a suitable hose (not supplied), may be attached, with a worm drive clip (not supplied), and connected to your water supply. We recommend that you connect a filter to the inlet hose, to prevent the possibility of foreign bodies entering the pump.



IMPORTANT:

Before use, ensure the water supply is of adequate volume for your needs, e.g., if you use a water butt - ensure it contains sufficient water.

Unscrew the YELLOW fuel filler cap and fill the tank with diesel fuel or paraffin, but DO NOT mix them.

IMPORTANT: DO NOT USE PETROL

If you intend to use the chemical injection facility, fill the detergent tank with the requisite detergent. Use ONLY those detergents specifically designed for use with Power Washers. We recommend the use of CLARKE Traffic Film Remover, which is a powerful low foaming agent for car cleaning, patio cleaning etc., or CLARKE Wash & Wax, both available from your CLARKE dealer.

OPERATION

A. COLD WASH

Make certain the PUMP ON/OFF switch is set in the OFF position. The ON/OFF switch is the front of the two switches mounted on the top panel as shown in fig. 1, and is identified by the symbol 

Connect the plug to the mains supply, preferably via a Residual Current Device. Turn the water tap fully on.

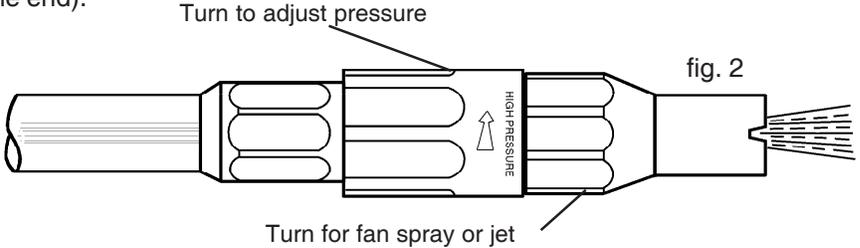
When starting, it is **IMPORTANT** that you adopt the following procedure: In order to ease the starting process, and to prevent the possibility of blown fuses, pull the trigger on the lance - it may be necessary to release the safety latch in order to do so. Hold the trigger in that position whilst switching the pump ON, and allow the pump to develop full pressure. You may release the trigger once full pressure is developed.

WARNING

Ensure the operator is aware that when the trigger is pulled, water at high pressure can cause the lance to kick it should therefore be held firmly. In addition, care must be taken to ensure that the nozzle is NOT aimed at an area where the water jet will cause damage. i.e. away from people, animals, windows - greenhouses etc., and be aware that splash back could also cause damage if the jet is trained on a nearby wall etc.

For the reasons given above, it is strongly recommended that you ALWAYS set the jet to its LOW PRESSURE setting before switching ON.

NOTE: Water pressure is regulated by turning the adjuster at the nozzle end of the lance, (as shown by the arrows on the ferrule - see fig. 2), ANTICLOCKWISE to INCREASE pressure and CLOCKWISE to DECREASE, (looking from the handle end).



If you wish to use the chemical injection facility, note that it will ONLY operate at LOW pressure. **IMPORTANT:** Ensure you read and comply with the manufacturers instructions regarding the use of chemical detergents.

If you desire a fan spray, turn the nozzle fully anticlockwise - for a high pressure jet, turn it fully clockwise - see fig.2.

In the event that you switch the machine OFF, but intend to continue with its use after a few minutes or so, DO NOT depress the trigger, but set the safety latch to prevent it from being accidentally pulled. This will ease and assist the subsequent restarting of the motor as pressures will remain equalised on either side of the pump, thereby reducing the load on the motor when restarting.

NEVER attempt to run the machine with water supply disconnected or turned off.

B. HOT WASH

Follow the same procedure as for the cold wash, but switch the burner ON once the pump has been switched ON, by pressing the rear rocker switch on top of the unit, marked ON/OFF, and identified by the symbol. 

Take care when using the HOT WASH facility.

DO NOT forget that certain components get extremely hot during operation, and will remain so for a period after switching OFF. DO NOT allow anyone, particularly children, near the unit during hot wash operations.

All notes and observations as in A above apply.

C. SHUTTING DOWN THE MACHINE

If the burner has been used, switch it OFF by pressing the rocker switch on top of the unit.

If the chemical injection facility has been used, turn the pressure adjuster on the end of the lance to HIGH pressure, and allow the pump to run for a minute or so until the water being ejected is foam free, then switch OFF the pump.

Disconnect from the mains electrical supply, and turn OFF the water supply - disconnect where appropriate.

Operate the lance trigger once more to ensure there is no pressure in the high pressure hose. NEVER disconnect High pressure hose without operating trigger.

MAINTENANCE

WARNING: Ensure the plug is removed from the socket before carrying out any adjustment, servicing or maintenance.

AFTER EACH USE

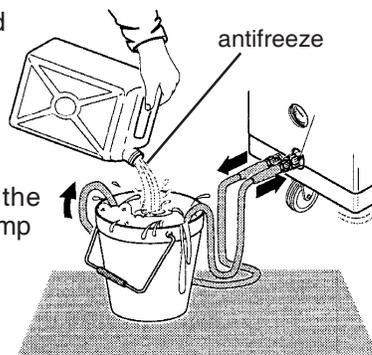
When using chemical detergents, always ensure the system is thoroughly flushed out after use.

Ensure the hoses and power cable are coiled and properly stowed. DO NOT allow them to be left casually, in a heap. This invites damage and will cause rapid deterioration. Take care NOT to drape the hoses/cables over the hot exhaust.

STORAGE

Store the Hot Washer in an horizontal position, preferably under cover, protected from the elements.

If there is a danger of freezing, the pump should be filled with antifreeze by inserting the inlet and outlet hoses into a bucket of antifreeze as shown in the diagram, start the machine and allow the antifreeze to circulate. After a short time stop the machine using the procedure outlined on page 7, and store the machine with the antifreeze still within the pump body.



SERVICING

1. Oil burner

It is recommended that the oil burner be serviced yearly, or as needed depending upon the machines' usage. Please contact the CLARKE International Service Dept. on 0181 556 4443.

2. Limescale

Periodically, check the heating coil for limescale buildup. This will be dependant upon the relative hardness of your water supply.

When de-scaling is required, use a large water tank as your water supply and add 2kg of de-scaler.

Remove the lance extension from the handle assembly, place the handle assembly in the water tank, with the trigger held in the depressed position by some means, and run the pump and heater for approx. 40 mins

When completed, switch off the heater, and flush out the system with clean water by connecting to a water supply or replacing the contaminated water in the water tank.

3. Soot Build up

Poor grades of fuel oil or inadequate combustion will cause heavy build up of soot on the heating coil. This deposit will insulate the coil and reduce efficiency. It will restrict air flow through the coil, further aggravating the soot build up. Contact your CLARKE dealer or CLARKE International Service Dept. when de-sooting is required.

ACCESSORIES

A range of accessories designed for use with your washer are available from your Clarke dealer, as follows:

	Part No.
Rotary Brush	7310160
Water Sandblaster	7310161
Drain Cleaner	7310163
Heavy Duty Extension Hose (10M)	7310162
Traffic Film Remover 5 litre	3050821
Traffic Film Remover 25 litre	3050820
Wash 'n Wax 5 litre	3050815

TROUBLE SHOOTING

FAULT	CAUSE	REMEDY
Pressure drop	Air in system	Bleed system by quickly switching off pistol grip several times. If necessary operate the machine briefly without the high pressure hose connected.
	Worn high pressure nozzle. Pressure regulator incorrectly set	Renew nozzle Set to required working pressure by turning hand grip
Pressure fluctuations or pressure drop	No water	Turn on water tap
	Water supply hose too long/too small diameter No water due to clogged filter	Use minimum 1/2" dia. water supply hose Clean water filter (never operate without filter)
Oil leakage	Worn seals	Contact your CLARKE Distributor
Motor does not start when switched on	Plug is not connected properly.	Check plug and lead and have them replaced by a qualified electrician if necessary
	Mains fuse blown/switched off	Rectify
Motor hums when switched on and does not start	Mains voltage too low	Have electrical connection checked
	Incorrect dia cable resulting in voltage drop Trigger Switch not operated	Use correct diameter of cable Operate trigger
Motor cuts out	Motor protection switch has been activated due to overheating or motor overload	Ensure supply voltage and unit voltage are equal. Switch off and allow to cool for at least three minutes before trying again.
	Nozzle clogged	Clean using the supplied nozzle cleaning needle
Additives are not being supplied	Injector clogged	Clean
	Additive container empty Lance not correctly set	Fill additive container Set the lance to low pressure by screwing the pressure adjuster clockwise

PARTS LIST

Item	Description	Qty	Part No.
1	Cover	1	FP85030000
2	Gun.	1	FP65001200
3	Lance Extension with nozzle	1	FP67503400
4	Hose Standard	1	FP68502200
5	Wheel	2	FP17804400
6	Retaining Clip	2	FP17802600
7	Trim	2	FP17805000
8	Detergent Tank	1	FP85030600
9	Fuel Tank	1	FP85030500
10	Fuel Filler Cap	1	FP18106200
11	Fuel Hose - Clear Plastic	1	FP15609700
12	Detergent Filler Cap	1	FP18106200
13	Screw M6x15	4	FP10108100
14	Castor	1	FP17804000
15	Screw M6x15	4	FP10108100
16	Handle Assy	1	FP85030100
17	Securing Screw D25	1	FP14802300
18	Washer M6x24	1	FP12900900



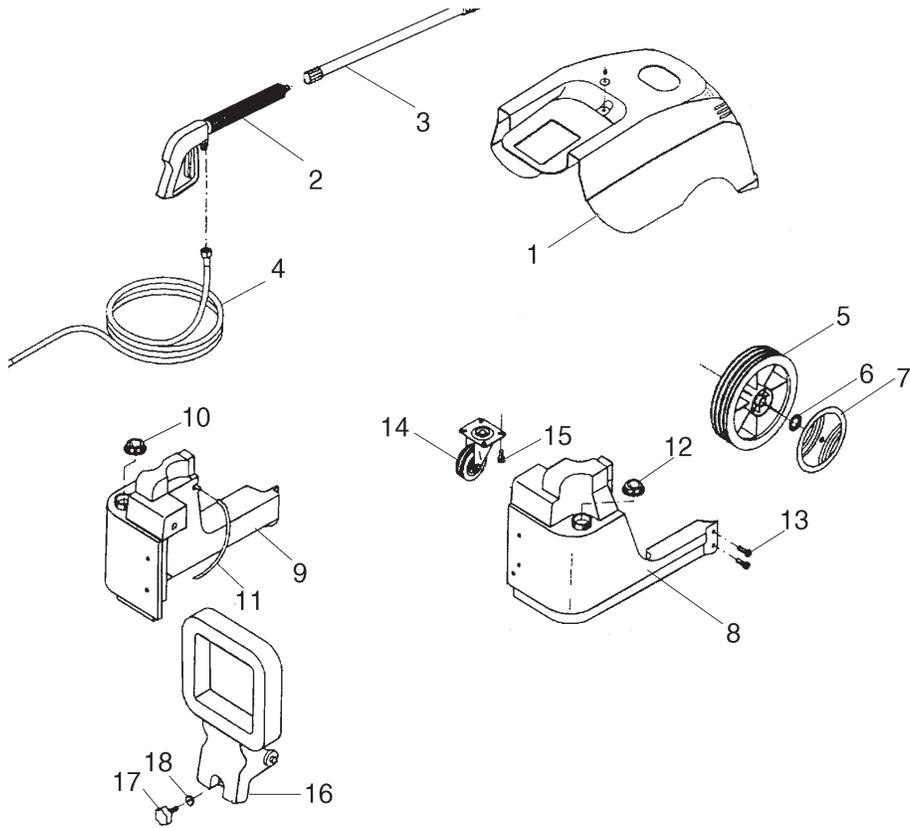
For Spare Parts and Servicing, please contact your nearest dealer, or
CLARKE International, on one of the following numbers.

PARTS - 0181 558 6696 SERVICE - 0181 556 4443

PARTS & SERVICE FAX - 0181 558 3622

Please note that the details and specifications contained herein, are correct at the time of going to print. However, CLARKE International reserve the right to change specifications at any time without prior notice.

PARTS DIAGRAM



SPECIFICATIONS

Motor	230V 50hz
Power Rating	1.5kW
Noise Level	73dBA
Max. Pump Pressure	100bar
Hot Wash Operating Temp.	90°C
Water Flow Rate	7.5 l/min
Fuel Capacity	5.9 litres
Fuel Consumption	2.5 litres/hr
Detergent Capacity	6 litres
Dimensions	750x400x500mm