



INDEPENDENT HOT WATER HIGH PRESSURE WASHERS

HW KART

Use and maintenance manual

PLEASE CAREFULLY READ THIS MANUAL BEFORE INSTALLING AND USING THE HIGH-PRESSURE WASHER



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GENERAL DESCRIPTION OF THE HIGH PRESSURE WASHER



- 1. Ventilation opening.
- 2. Handles (2) to open top hood.
- 3. Exhaust pipe.
- 4. Hinges (2).
- 5. Water inlet valve with filter.
- 6. Key lock.
- 7. Painted steel skid supports (2).
- 8. Fuel tank.
- 9. Control panel.
- 10. Handlebar.

MODEL	PRESSURE	DELIVERY	ENGINE POWER	ENGINE	FEED	TEMPERATURE
	BAR	L/min	HP - rpm	TYPE	TYPE	MIN - MAX °C
HW KART 21.200 D	200	21	18 - 1450	KUBOTA	DIESEL	30 - 140
HW KART 18.300 D	300	18	18 - 1450	KUBOTA	DIESEL	30 - 140

INSTRUCTIONS FOR THE SAFE USE OF THE HIGH PRESSURE WASHERS

For your own safety, please read this Manual carefully before installing and using the high-pressure washer.

The unauthorized transfer of all or any part of the contents of this Manual is not permitted.

The contents of this Manual are subject to change without notice. Every effort has been made to ensure that this Manual is correct. However, if you find any mistakes, please advise us.

The CE mark on the high-pressure washer guarantees that this product has been manufactured in compliance with the European Safety Standards.

The user must observe the conditions of use of the high-pressure washer prescribed by the Rules.

THE HIGH PRESSURE WASHER MUST NOT BE USED BY CHILDREN OR UNAUTHORIZED OPERATORS.

The high-pressure washer must be placed in a dry environment.

If placed outdoors, it must not be used in adverse weather conditions that may create moisture in its internal parts.

If placed indoors, the smoke generated by the combustion chamber must be vented outside.

The high-pressure washer should always be in sight of the operator.

As indicated in the chapter "SYMBOLS ON THE HIGH PRESSURE WASHER", it is prohibited to direct the jet against people, animals, sockets or the cleaner itself. The pressure washer cannot be washed with its own jet, but it has to be washed manually.

It should be noted that the components of the high-pressure washer are protected against water jets and splashes, but its covers have large air passages for adequate cooling. For this reason, the jet must not be directed against the high pressure cleaner nor the machine can be used in adverse weather conditions or if there is excessive moisture.

Moreover, the introduction of water through the chimney would jeopardize the proper functioning of the cleaner.

1. WATER CIRCUIT CONNECTION

Before connecting to the water supply, make sure that the pressure value of the incoming water supply is between 1, 5 and 4 bar (21,7 and 58 PSI) and that the water temperature is not higher than 50° C (122° F).

The supply water must be clean, without sand or other impurities.

Do not connect the high-pressure pump directly to drinkable water tanks.

The machine must not suck in liquids containing inflammable or noxious contents such as solvents for paint, petrol, oil, trichloethylene, etc.

Periodically make sure that the high-pressure flexible hose that connects the lance to the high-pressure washer is undamaged. In case of damage, replace it immediately with an original Sirmac hose.

High-pressure hoses, connections and fittings must be periodically checked. Use only original spare parts recommended by the manufacturer.

Do not use the high-pressure washer when persons or animals are in its action field.

High-pressure jets must never be directed to the high-pressure washer itself, to electric appliances, to persons nor animals.

Always hold the spray gun and the lance firmly with both hands to compensate the reaction power on the lance created by the high-pressure water jet.

During use, the high-pressure water jet can throw up solid contaminated materials. It is important to protect oneself by wearing adequate clothing. Regulations and safety conditions must be followed according to the area where the cleaning operation is performed, in particular in food plants, pharmaceutical plants, etc.

Do not direct the water jet at your own or other people's body in order to clean clothes or shoes.

Do not lock the spray gun open. When the operator releases the washing gun, the jet has to stop immediately.

Use diesel oil for vehicles for water heating. The use of any other fuel is not permitted as it can cause serious dangers.

The safety devices must be checked at least once a year by a Sirmac qualified engineer from one of our service centres.

The hot water high-pressure washer must always be supervised while it is working.

No obstacle must obstruct the smoke extraction system or the ventilation openings to allow the ejection of heat produced by the high-pressure washer.

In case of damage or malfunctioning of the high-pressure washer, follow this procedure:

- Switch off the appliance.
- Disconnect the water supply flexible hose.
- Do not tamper with the appliance.
- CONTACT ONE OF OUR AUTHORIZED TECHNICAL SERVICE CENTRES

2. MAINTENANCE AND REPAIRING

The manufacturer is not liable in case of tampering, unauthorized changes, repairs and maintenances carried out on the machine by an unauthorized third party.

The user must keep all documents regarding the service schedules.

Have the safety devices and rated values checked at one of our technical service centres at least once a year, with particular attention to the values of exhaust gases.

The rating done by the manufacturer determines the following values:

- CO content of exhaust gas lower than 0,04%
- Smoke coming out of the smoke extraction system corresponding to a smoke point nr. 2 Shell-Bacharach

The machine is produced for outdoor use. For indoor use of the machine (not advisable) an efficient ventilation system as well as an excellent exhaust suction system must be available.

FAILURE TO OBSERVE THE ABOVE-MENTIONED RULES AND INSTRUCTIONS MAY ENDANGER THE SAFETY OF THE APPLIANCE.

Keep this manual for future consultations. The user of the high-pressure washer and anyone who is responsible for routine maintenance must be aware of its content.

3. DATA PLATE

The data plate bearing the main technical characteristics of the high-pressure washer is always visible.

SIRMAC s.r.l. Via Tamborlani 12 29027 Podenzano Pc - Italy	
MODEL	
SERIAL NUMBER	
DATE	
KW	
V	Hz
A	
IP	
BAR	BAR MAX
L/M	NOZZLE
°C	kW
MADE IN ITALY	 

4. SYMBOLS ON THE HIGH PRESSURE WASHER

DIESEL

REFUELLING

WARNING : BURN HAZARD



WARNING: KEEP HANDS AWAY FROM GEARS

DO NOT DIRECT THE JET AGAINST PEOPLE, ANIMALS, POWER SOCKETS AND THE H.P. WASHER ITSELF.



5. UNPACKING

Packaging (cardboard box- wood - plastic - nail, etc...) should be kept out of reach of children because it is potentially dangerous. It should be disposed of or retained in respect of national environmental legislation.

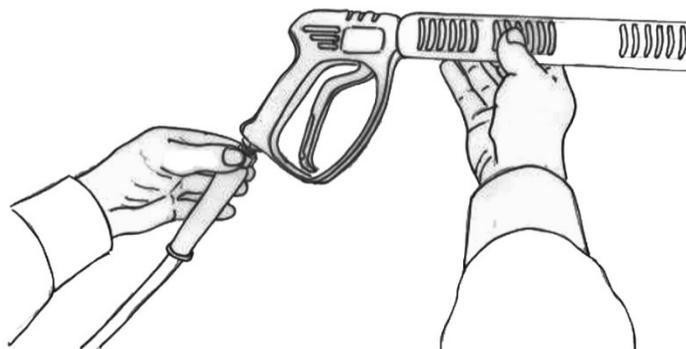
After unpacking ensure that the high-pressure washer is undamaged.

IN CASE OF DOUBT, DO NOT USE THE APPLIANCE.

Place the washer in the place chosen for the washing.

Connect the end of the high-pressure hose to the high pressure fitting.

Connect the end of the high-pressure hose to the gun.



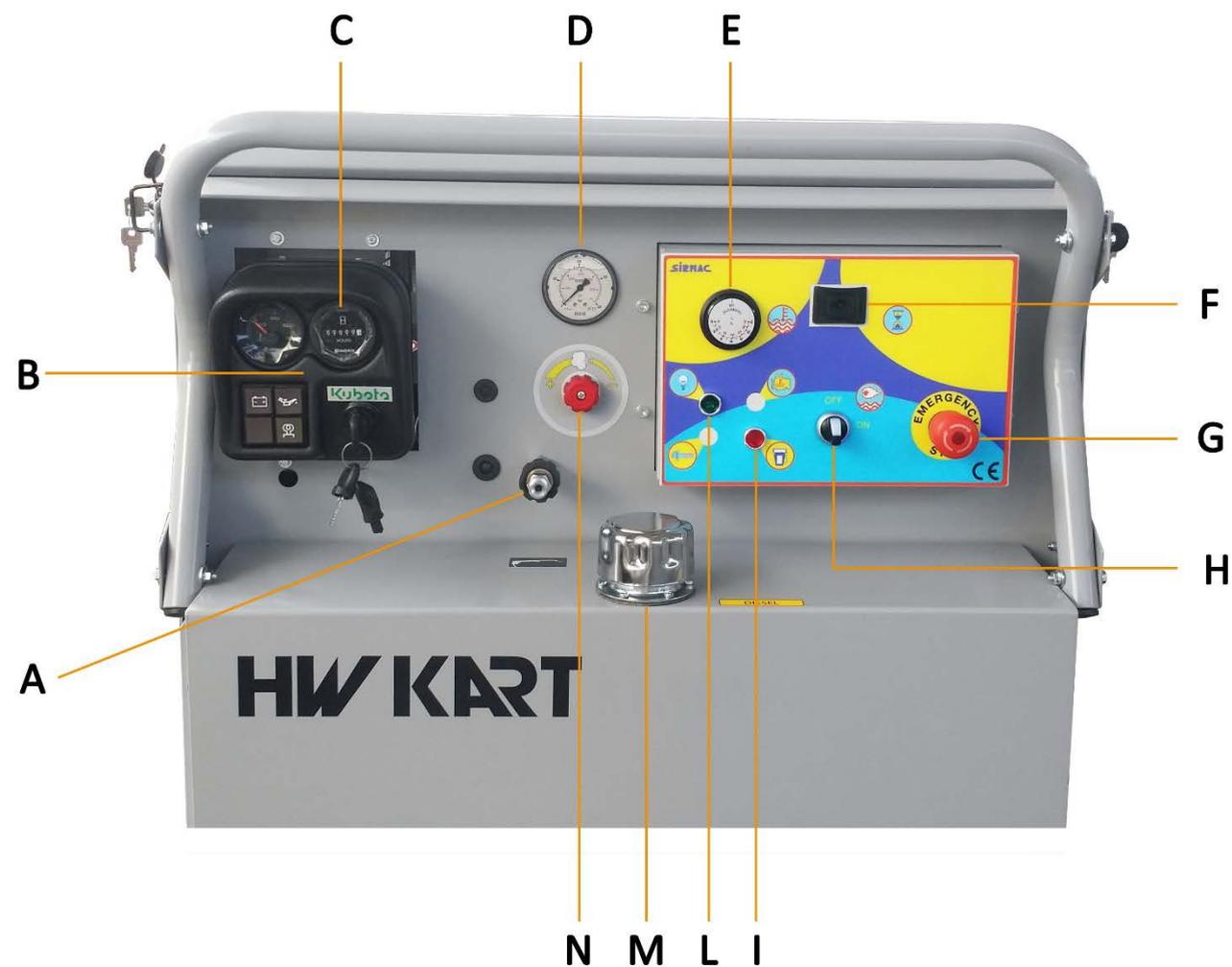
WARNING ! Do not connect the lance before having carried out the operations 1, 2, 3 and 4 as described in chapter "STARTING THE HIGH PRESSURE WASHER".

Connect the water supply hose to the low pressure fitting.

Fill the fuel tank with diesel oil for vehicles.

Connect the other end of the water supply hose to the mains.

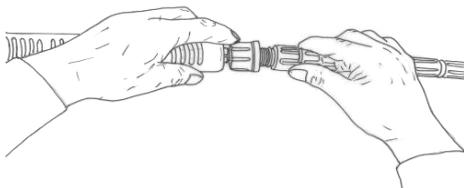




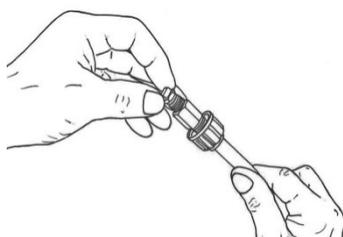
- | | |
|---|---|
| A. High pressure outlet. | G. Emergency stop. |
| B. Diesel engine control panel (please carefully read its specific manual). | H. Burner ON/OFF switch. |
| C. Hour meter. | I. Low fuel level indicator (with burner stop). |
| D. Pressure gauge. | L. 12V voltage indicator. |
| E. Thermostat for temperature regulation. | M. Fuel tank cap. |
| F. Control panel keylock. | N. Steam valve. |

8. STARTING THE HIGH PRESSURE WASHER

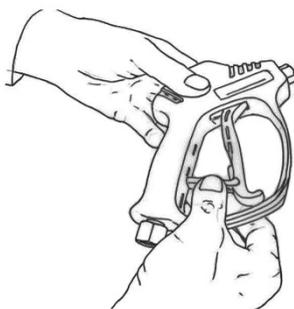
1. Turn the water supply tap on.
2. Hold the gun before connecting the lance.
3. Start the engine following its own instruction manual. The high-pressure washer will deliver low pressure water eliminating impurities and air in the circuit.
4. When the water flow coming out of the lance is clean and without any air, stop the pump following the instructions on the manual.
5. Connect the lance to the gun.



6. Assemble the nozzle.



7. Start the engine keeping the gun closed. The pump and the motor will start at low speed.
8. Firmly holding the gun and the lance with both hands and pushing the trigger, the engine will increase its revolutions speed and a high-pressure water jet will be delivered immediately.
9. In order to stop the cleaner, release the trigger of the spraygun; the engine will automaticallly decrease its revolutions speed. Turn the key to switch it off.
10. Discharge the pressure from the high-pressure hose by pressing the trigger on the gun.
11. When the high-pressure washer is not in use, close the safety device on the handle.



9. MAINTENANCE

For all maintenance operations regarding the boiler, the high-pressure pump, the hydraulic parts of the high-pressure circuit and all elements that are involved in the safety functions, the user must contact our approved technical centre or dealer.

THE USER MUST NOT CARRY OUT THE ABOVE MENTIONED OPERATIONS.

Before undertaking any maintenance work, turn off the engine using the key switch; disconnect the high-pressure washer from the water mains by closing the water supply tap.

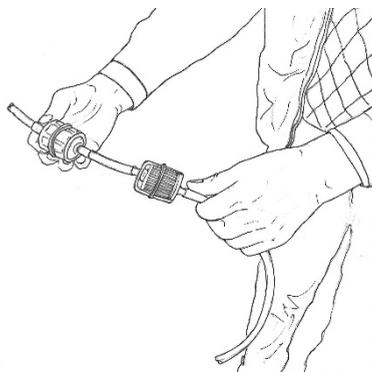
10. PRECAUTIONS AGAINST FROST DAMAGE

The high-pressure washer must be protected from frost. During the cold season, if the high-pressure washer is exposed to frost, it is necessary to carry out the following operations:

turn off the tap of the water supply | run the engine | run the pump of the high pressure washer until the whole circuit is completely empty | turn off the engine.

11. REPLACEMENT OF FUEL FILTERS

Change the fuel filters periodically and every time at least one of the filters has impurities.



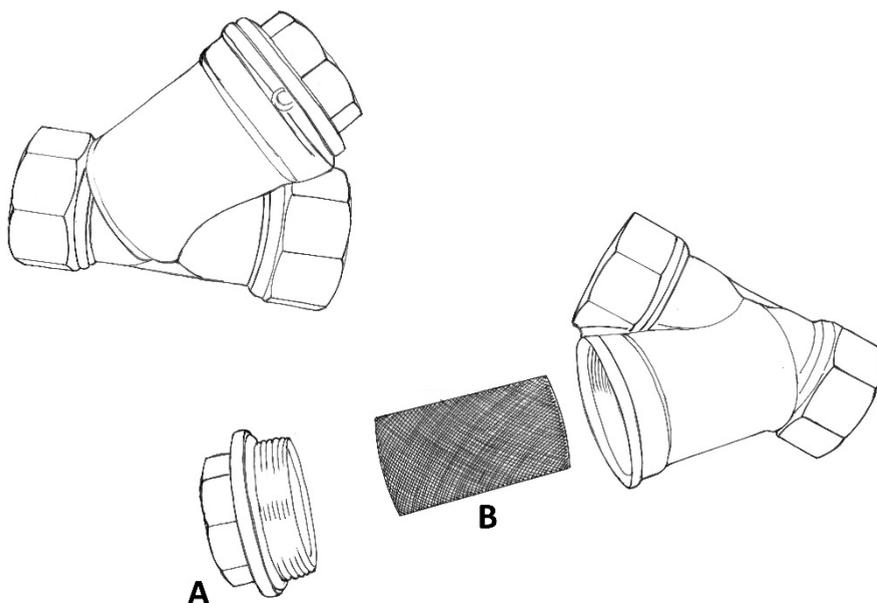
12. CLEANING THE FUEL TANK

Empty the fuel tank by opening the drain cap. Let its content drain out into a container. Eliminate any impurities. Flush out the tank with clean fuel. Close the drain cap and fill the tank with clean fuel.

13. CLEANING THE WATER FILTERS

WATER INLET FILTER

Periodically unscrew the cap **A** and clean the stainless steel filter **B**.



LIST OF ROUTINE MAINTENANCE TO BE PERFORMED BY THE USER

- CHECK GENERAL CONDITIONS: every time before using the high-pressure washer
- PUMP OIL CHANGE: first check after 50 hours – the subsequent ones every 500 hours
- FUEL FILTER CHANGE: every 300 hours or when it presents impurities
- FUEL TANK CLEANING: once a year
- WATER FILTER CLEANING: every 50-100 hours

LIST OF EXTRAORDINARY MAINTENANCE TO BE PERFORMED BY THE AUTHORIZED SIRMAC SERVICE CENTRES

- CHECK THE FUEL PUMP: every 200 hours
- CHECK AND POSSIBLE CHANGE OF THE FUEL NOZZLE: every 400 hours
- REGULATION AND POSSIBLE CHANGE OF ELECTRODES: every 400 hours
- CHECK THE SEALS ON HIGH PRESSURE PUMP AND POSSIBLE REPLACEMENT OF THE FITTINGS: every 500 hours
- CHECK WORKING PRESSURE AND POSSIBLE REPLACEMENT OF THE HIGH PRESSURE NOZZLE: every 200 hours
- CHECK AND CALIBRATE SAFETY DEVICES: once a year

TROUBLESHOOTING

FAULTS	POSSIBLE CAUSES	REMEDIES
<ul style="list-style-type: none"> PUSHING ON THE SWITCHES THE H. P. WASHER DOESN'T WORK. 		<ul style="list-style-type: none"> Contact our authorized service centre.
<ul style="list-style-type: none"> FEEBLE WATER DELIVERY OR NO DELIVERY AT ALL. 	<ul style="list-style-type: none"> Dirty or clogged water supply filter 	<ul style="list-style-type: none"> Clean the water filter
<ul style="list-style-type: none"> LEAKAGE FROM HIGH PRESSURE WATER CIRCUIT. 	<ul style="list-style-type: none"> Leakages in the high-pressure circuit. Leakages in the water supply circuit. Breakdown of the pump. 	<ul style="list-style-type: none"> Contact the authorized technical service centre.
<ul style="list-style-type: none"> THE PUMP IS RUNNING BUT DOESN'T REACH THE SET PRESSURE 	<ul style="list-style-type: none"> Clogged water supply filter. Faulty connection to the main water supply. Worn high-pressure nozzle. The steam valve is open. Dirty or worn valves. 	<ul style="list-style-type: none"> Clean the filter. Check and remedy Change the nozzle. Close the valve. Contact the authorized technical service centre.
<ul style="list-style-type: none"> AFTER TURNING THE THERMOSTAT KNOB E, THE BOILER DOESN'T START. 	<ul style="list-style-type: none"> There is no fuel. There's water in the fuel tank. 	<ul style="list-style-type: none"> Check the fuel level in the tank. Empty and clean the tank as detailed in chapter « CLEANING THE FUEL TANK ».
<ul style="list-style-type: none"> THE HIGH-PRESSURE WASHER DOES NOT REACH THE REQUIRED TEMPERATURE. 	<ul style="list-style-type: none"> Faulty position of the regulation knob E of the thermostat. Clogged fuel filter. Heating coil clogged with scale. 	<ul style="list-style-type: none"> Check the regulation knob. Change the filter. Address to the authorized technical service centre.
<ul style="list-style-type: none"> EXCESSIVE SMOKE COMING OUT OF THE CHIMNEY. 	<ul style="list-style-type: none"> Faulty combustion. Impurities or water in the fuel tank. 	<ul style="list-style-type: none"> Change the fuel filter. If the problem persists, apply to the technical service centre. Empty the tank and clean as detailed in chapter « CLEANING THE FUEL TANK ». If the problem persists, contact the technical service centre.
<ul style="list-style-type: none"> WARNING LED I IS ON. 	<ul style="list-style-type: none"> Empty fuel tank. 	<ul style="list-style-type: none"> Fill the tank.
<ul style="list-style-type: none"> WATER LEAKAGE FROM THE MANIFOLD OF THE PUMP. OIL LEAKAGE FROM THE PUMP. 	<ul style="list-style-type: none"> Worn gaskets. 	<ul style="list-style-type: none"> Contact the authorized technical service centre.



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