

Manual

High-Pressure Cleaner

HW 9155



Perfection is our aim

Wilms

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Congratulations! We wish to thank you

for buying this cleaner. You have shown that you do not accept compromises: *you want the best.*

We have prepared this manual to enable to fully appreciate the qualities and high performance that this cleaner can offer you. Please read it completely before using the machine.

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

We can also offer you a wide range of cleaning machines such as:

VACUUM CLEANERS, SCRUBBER DRYERS, SWEEPERS and a complete range of **ACCESSORIES and DETERGENTS** suitable for cleaning all kinds of surfaces.

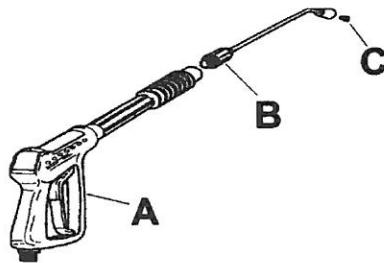
Ask your Dealer for the complete catalogue of our products.

The text has been carefully checked, however any misprints should be notified to the manufacturer. The manufacturer also reserves the right to alter and update this publication without prior notice for the sake of product improvement.

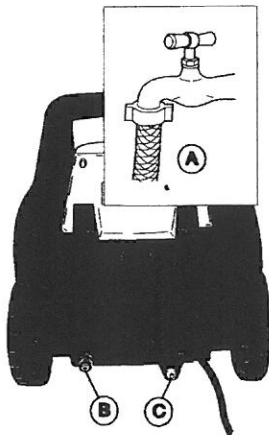
All reproductions of this manual, in whole or in part, are forbidden without the manufacturer's authorization.

PREPARING THE CLEANER

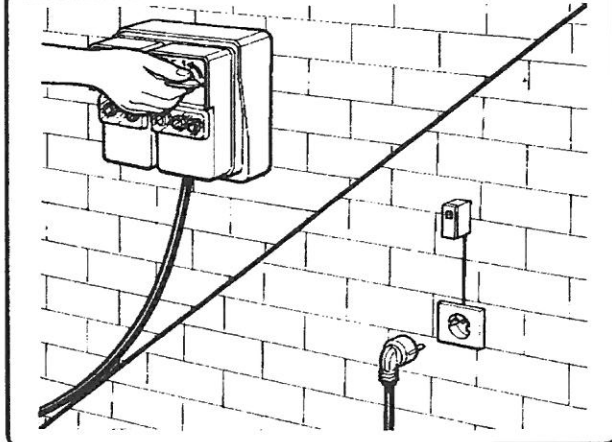
Fitting the lance



Water circuit connection.



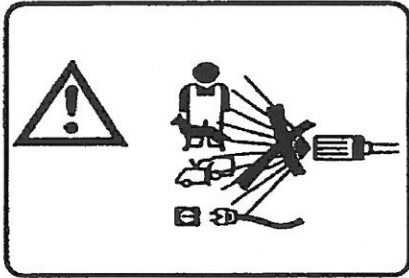
Electrical connection.



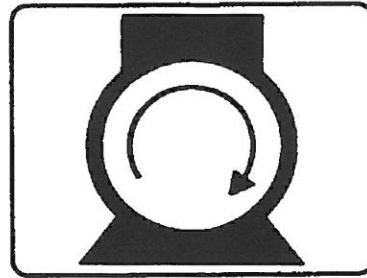
Continue reading this manual without connecting this cleaner to the power mains and the water supply.

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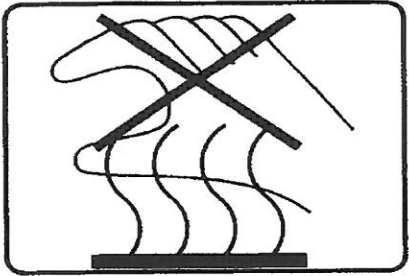
DESCRIPTION OF SYMBOLS ON THE CLEANER



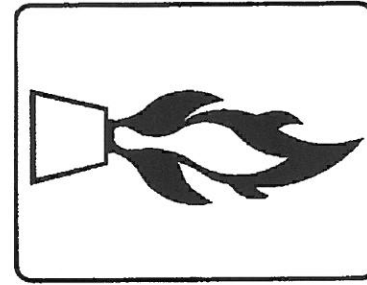
DO NOT DIRECT THE JET AGAINST PEOPLE, ANIMALS, POWER SOCKETS OR THE MACHINE ITSELF.



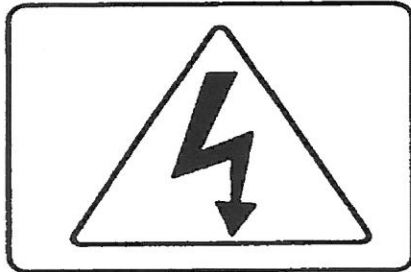
SWITCHING OFF THE PUMP MOTOR.



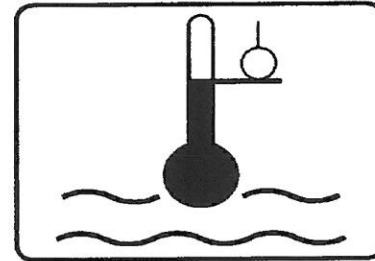
ATTENTION: RISK OF BURNS.



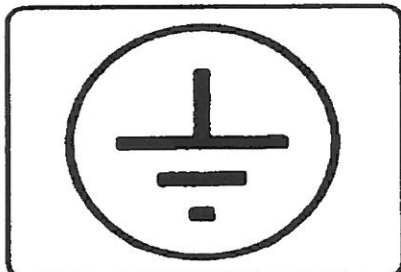
LIGHTING THE BURNER.



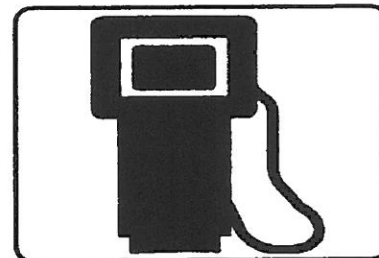
ATTENTION: RISK OF ELECTRIC SHOCK.



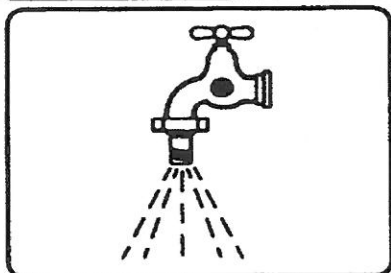
ADJUSTING THE WATER TEMPERATURE.



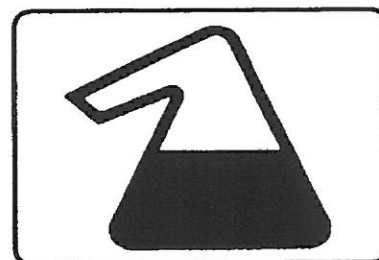
EARTH.



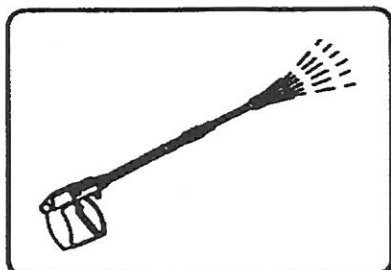
FUEL (DIESEL).



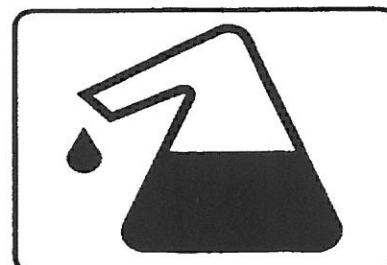
WATER INPUT.



CHEMICALS (DETERGENT).



WATER OUTPUT.




ANTI-SCALE PRODUCT.

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The most important instructions are marked with the symbol:



INTRODUCTION

 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 in this manual carefully as they provide important indications as to **SAFETY in USE and MAINTENANCE**, paying special attention to the general rules for safety.

KEEP THIS MANUAL CAREFULLY FOR FUTURE CONSULTATION.

 **The contents of this manual** must be brought to the attention of persons using this high pressure cleaner and the staff responsible for maintenance.

CLASSIFICATION

The user must observe the conditions for use of the appliance prescribed by the Rules, and particularly he must respect the following classification:

As for the protection against electric shock, the high pressure cleaner belongs to **CLASS 1**.

The high pressure cleaner is factory set and all its safety devices are sealed. **It is forbidden to alter their adjustment values.**

In the Hot water cleaner the water is heated by a burner fed with **Diesel fuel**. The high pressure cleaner must be always used on a firm and flat ground, furthermore it must not be moved while it is working or connected to the electric supply. Failure to observe this prescription may cause danger for the user.

The high pressure cleaner must not be used in the presence of corrosive or potentially explosive atmospheres (vapours or gas). The electric connection must be performed by qualified technicians who are able to work in observance of the governing rules and of the manufacturer's instructions.

A wrong electric connection may cause damage to persons, animals or things, and the manufacturer cannot be considered responsible for these.


The high pressure cleaners are equipped with a plug for connection to the electric supply. In this case please check if the electric power system and the electric sockets are compatible with the max. power of the appliance indicated on the plate (kW). In case of doubt, please apply to qualified personnel. If the socket and the plug of the machine are not compatible, have the plug replaced with a suitable type by qualified personnel.

Before connecting the machine make sure that the data indicated on the plate correspond to those of the electric supply. The electric safety of this machine may be assured only when it is properly connected to an efficient grounding system in accordance with the governing laws for electric safety.

It is necessary to check this essential safety requisite. In case of doubt, ask for accurate control of the power system by qualified personnel.

The manufacturer may not be considered responsible for damages occurred because of the lack of the grounding system.

Failure to respect the above absolves the manufacturer of all liability and represents negligent use of the product.

 High pressure cleaners with the „Total Stop“ device should be considered as off when the omnipolar switch is in the „0“ position or the plug is unplugged from the socket.

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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 170 bar.

This appliance has been designed for use with the detergents supplied or recommended by the manufacturer. The use of other detergents or chemicals may influence the safety of the appliance.

This appliance 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:

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

The manufacturer cannot be held responsible for any damage due to improper, incorrect or unreasonable use. As far as safety rules are concerned, the cleaners are manufactured according to the European Standard 60 335-1 (General standard) and EN 600335 2 79 (Specific standard).

PRELIMINARY OPERATIONS

UNPACKING

After unpacking, ensure that the cleaner is undamaged. If in doubt, do not use the machine. Contact your dealer. Packaging (bags, boxes, nails, etc.) is potentially dangerous and should be kept out of reach of children. It should be disposed off or retained in respect of national environmental legislation.

FITTING THE SEPARATE PARTS OF THE MACHINE


All the fundamental parts and safety devices of the machine are assembled by the manufacturer.

For reasons of packing and transport, some secondary cleaner parts are supplied separately.

The user must fit these parts as explained in the instructions supplied in each assembly kit.


DATA PLATE:

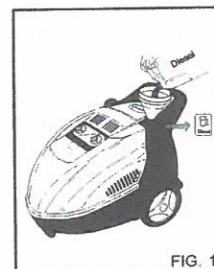
The data plate bearing the main technical characteristics of your cleaner is located on the trolley and is always visible.

 **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 anonymous and potentially dangerous.**

FILLING THE FUEL TANK

Fill the tank with fuel for Diesel motors (fig. 1)

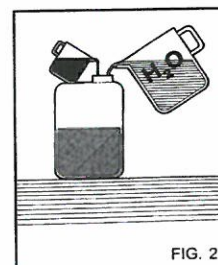
 **Do not use different fuel from that indicated on the identification plate. Check the fuel from time to time while the cleaner is operating. Attempting to use the cleaner without fuel may cause damage to the fuel pump.**



FILLING THE DETERGENT TANK

From the range of recommended products, choose the one most suited to the washing job to be done (fig. 2) and dilute it with water according to the instructions on the pack. Fill the detergent tank with the diluted product (fig. 3).

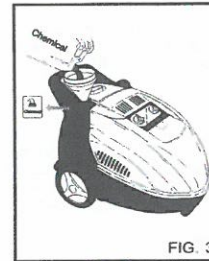
Ask your dealer for the catalogue of the detergents that



can be used depending on the type of washing job to be done and the type of surface to be treated.
After using the detergent, the detergent intake circuit must be flushed out with clean water.

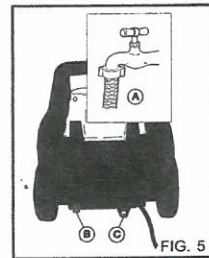
FILLING THE WATER SOFTENER TANK

Fill the tank with water softener solution. Use only products recommended by the manufacturer and/or dealer. Follow the instructions given on the packaging meticulously.

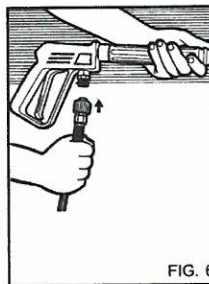


WATER CIRCUIT CONNECTION

Connect the feed hose to the mains (Fig.5A) and to the hosetail on the cleaner (Fig.5B).
Check that the pressure and quantity of the water supplied by the mains are sufficient for the cleaner to work properly: (2 to 8 bar).
Maximum temperature of feeding water 50 ° C (122° F).



Connect the high pressure hose to the cleaner (Fig.5C) and to the lance (Fig.6).



IMPORTANT:

The cleaner must operate with clean water. Dirty or 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.

ELECTRICAL CONNECTION

Connection of the cleaner to the mains must be carried out by skilled technicians able to ensure that all regulations in force are complied with use in respect of current standards and legislation.

Ensure that the mains voltage available is the same as the voltage at which the cleaner is supposed to work (this is indicated on the identification plate).



The electric cable must be protected from accidental crushing.



Do not use the machine if the supply cable is damaged.



The use of any electric appliance requires the respect of some basic rules:

- Do not touch the appliance with wet or damp hands or feet.
- 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.










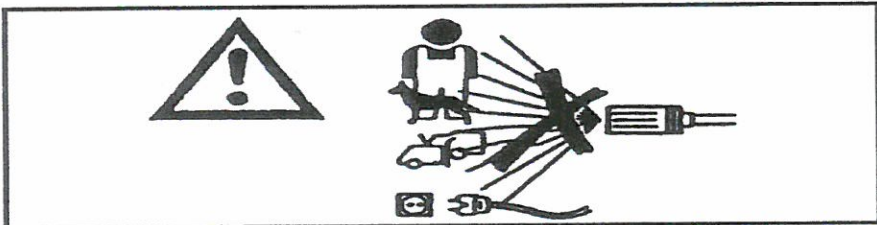











As for the protection against electric shock, the high pressure cleaner belongs to **CLASS I**.



Failure to observe the above warning frees the manufacturer from all responsibility and constitutes negligent use of the product.

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GENERAL WARNINGS ABOUT INSTALLATION AND USE

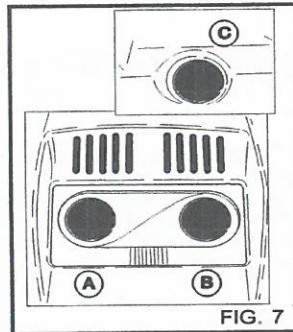
-  The use of any electric appliance requires the respect of some basic rules:
- Do not touch the appliance with wet or damp hands or feet.
 - Do not use the appliance bare-footed or with unsuitable clothing.
 - Do not pull the supply cable or the appliance itself in order to disconnect the plug from the electric supply.
-  The H.P. cleaner must not be used by children, teen-agers or incapable persons (under the influence of alcohol, etc.)
-  Use only original accessories that can allow safe working of the appliance.
-  The flexibel hose connecting the lance to the H.P. cleaner must not be damaged. In case of damage, replace it immediately.
-  Hoses, connections and fittings for high pressure systems are very important to guarantee the safety of the H.P. cleaner. Use only original spare parts which have the manufacturer's approval.
-  Do not use the H.P. cleaner when persons or animals are in its action field.
-  High pressure jets may be dangerous if not properly used. The jet must never be directed at persons or animals, electric appliances or at the appliance itself.
-  The high pressure water jet causes a reaction power on the lance. Hold the lance grip vigorously.
-  The use of the H.P. cleaner must be considered according to the kind of washing which must be performed. Protect yourself against the ejection of solid materials or corrosive substances by means of adequate protective clothing.
- 
-  The use of the H.P. cleaner must be considered according to the place where the washing is performed (for example: food plants, pharmaceutical plants, etc.) Pertinent rules and safety conditions must be followed.
- As for the protection against electric shock, the H.P. cleaner belongs to **CLASS I**.
-  Do not direct the water jets at your own or other people's body in order to clean clothes or shoes.
-  While working it is forbidden, to block the trigger (lever) of the lance in delivery position.
-  In the hot water H.P. cleaners a Diesel fuel burner is used for water heating. The use of other fuels is dangerous.
-  Before starting any cleaning or maintenance operation, disconnect the machine from the electric and water supply networks.
-  Periodically, at least once a year, have the safety devices checked by one of our service centres.
-  If the appliance is to be used in an enclosed space, install a exhaust fame extraction system and guarantee adequate ventilation.
-  Do not use the machine if the supply cable is damaged.
-  For the replacement of the damaged cable apply exclusively to one of our technical service centres.
-  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).
-  The electric power cable must never be under mechanical tension and must be protected against accidental crushing.

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USING THE CLEANER


CONTROL PANEL

- A – On/Off switch
- B – Temperature regulator
- C – Detergent control tap



STARTING THE CLEANER

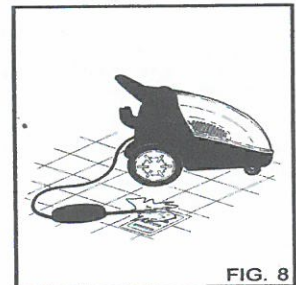
- 1) Turn on the water supply tap (fig. 5A).
- 2) Connect the water cleaner to the mains electricity supply via the omnipolar switch or by plugging the plug into the socket.
- 3) Start the cleaner by turning the selector switch to pos. 1 (fig. 7A).
The high pressure water jet generates a reaction force in the lance. Keep a firm grip on the lance handle.
- 4) Press the trigger on the gun and begin washing.
- 5) To use the cleaner with hot water, turn the temperature regulator (fig. 7B) to the recommended washing values.

 In water cleaners with the „Total Stop“ system, the motor starts and stops when the lever on the lance handle is pulled or released.

 Do not block the handle lever in the delivery position.


IMPORTANT!

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

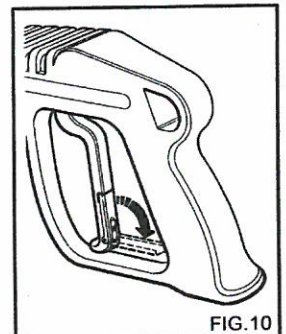
- 1) Switch off the burner by turning the thermostat regulator to pos. „0“ (fig. 7B).
- 2) Let the cleaner run with cold water only for at least 30 seconds to cool down the boiler.
- 3) Stop the cleaner by turning the selector switch to pos. „0“ (fig. 7A).
- 4) Discharge the pressure from the H.P.hose by pressing the trigger on the gun.
- 5) Disconnect the water cleaner from the mains electricity supply via the omnipolar switch or by unplugging the plug from the socket.
- 6) Turn off the water supply tap (fig. 5A).

 If the water cleaner is left, 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 „0“ position or the plug is unplugged from the socket.

 When the water cleaner is not used, close the safety device on the handle (fig. 10).

 Dry use of the water cleaner causes serious damage to pump gaskets.



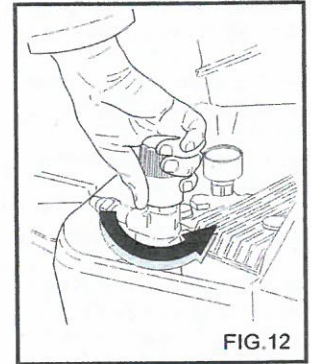
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REGULATING PRESSURE AND USING STEAM

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.

Turn the thermostat knob „B“ (fig. 7) to steam position to obtain an increase in the temperature of the water at delivery.

At work temperatures then are higher than 95°C (203°F), the working pressure must be between 5 and 32 bar.



Steam boiler regulation

Test pressure and design are according to the steam boiler regulation and TRD 801.



During use with boiling water, „Steam Phase“, keep away from the openings for fumes discharge (risk of burning).

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.

ADVICE ON USING DETERGENTS

This cleaner has been designed for use with the detergents supplied or recommended by the manufacturer. The use of other detergents or chemicals may influence the safety of the cleaner.

- 1) For environmental compatibility, we recommend a reasonable use of detergents, according to the instructions on the pack.
- 2) From the range of recommended products, choose the one most suited to the cleaning job to be done and dilute it with water according to the instructions on the pack or in the catalogue of the detergents most suited for the type of hot or cold water cleaner.
- 3) Ask for our detergent catalogue.

OPERATING PHASES FOR CORRECT CLEANING 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, and spray the dirty surface with the diluted product, working from bottom to top. Let it react for a few minutes.
- 3) Rinse the whole surface well from top to bottom with hot or cold water at high pressure.
- 4) After use with detergent, rinse the high pressure water circuit by operating the pump for one minute with the detergent tap completely closed.

MAINTENANCE

**ONLY THE OPERATIONS AUTHORIZED IN THIS INSTRUCTIONS MANUAL MAY BE CARRIED OUT BY THE USER.
ALL OTHER OPERATIONS ARE FORBIDDEN.**



For maintenance of the boiler, high pressure pump, the electrical parts and all parts with a safety function, please apply to our technical service centre.

Disconnect the water cleaner from the mains electricity supply via the omnipolar switch or by unplugging the plug from the socket and close the water supply tap (see chapters on connecting to the electricity and water mains) before carrying out any maintenance jobs. 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!

PRECAUTIONS AGAINST FROST

The cleaner must not be exposed to frost.

If the cleaner is left in premises where it is exposed to frost, when work is over or for storage, antifreeze must be used to prevent serious damage to the hydraulic circuit.

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OPERATIONS FOR USING ANTIFREEZE

- 1) Turn off the water supply (tap), disconnect the hose and run the cleaner until it is completely empty.
- 2) Stop the water cleaner with the ON/OFF switch in the „O“ position.
- 3) Fill the water tank with antifreeze solution.
- 4) Start the water cleaner with the ON/OFF switch in the „I“ position.
- 5) Start the cleaner and let it run until antifreeze comes out through the lance.
- 6) Suck up antifreeze with the detergent intake system too.
- 7) Disconnect the water cleaner from the mains electricity supply via the omnipolar switch or by unplugging the plug from the socket.

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 the technical service centre immediately.

Change the oil after the first 50 hours' work and subsequently every 500 hours or once a year.

Proceed as follows:

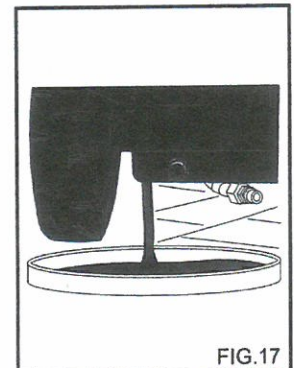
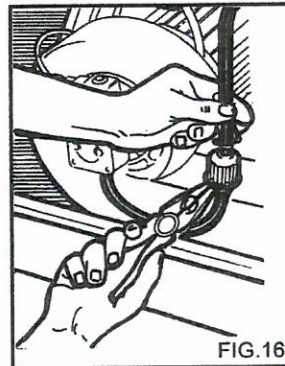
- 1) Unscrew the drain cap situated under the pump (fig. 14C).
- 2) Unscrew the cap with the dipstick (fig. 14).
- 3) Let all the oil drain off into a container and deliver it to an authorized oil collection and disposal centre.
- 4) Replace the drain screw and pour fresh oil in through the filling cap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

Use only SAE 15 W/40 oil!

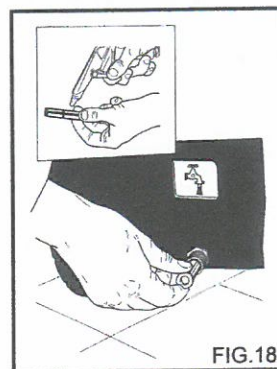
CLEANING THE FUEL FILTER AND TANK.

Remove and replace the inline fuel filter (fig. 16).
Change it from time to time.

Empty the fuel tank.



Open the drain cap (fig. 17) and let any impurities drain out into a container.
Flush out the tank with clean fuel and close the drain cap.



CLEANING THE WATER FILTER.

Clean the water intake filter regularly and free it from any impurities (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 during use. Wear may generally be detected by a drop in the working pressure of the high-pressure-cleaner. To replace it, consult your supplier for instructions.

DESCALING

Descaling must be carried out from time to time because the scale present in the water partially desposits inside the hydraulic circuit and the coil which with time becomes clogged.

Apply to our technical service centre to have the machine descaled from time to time; this will save you money and increase the efficiency of the cleaner.

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TABLE OF ROUTINE MAINTENANCE TO BE PERFORMED BY THE USER

Description of operations:

Check power cable, pipes, high pressure connectors	Each use
1. oil change in H.P.pump	After 50 hours
Subsequent changes in H.P.pump	Every 500 hours
Change and clean fuel filters	Every 100 hours
Clean fuel tank	Every 100 hours
Clean water filter	Every 50 hours

TABLE OF EXTRAORDINARY MAINTENANCE TO BE PERFORMED BY THE TECHNICAL SERVICE CENTRE

Description of operations:

Boiler:

Clean coil	Every 200 hours
Descale coil	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 duty 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.

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 off according to current legislation.

SCRAPPING

If you decide that the cleaner is no longer to be used, render it inoperative by removing the electric power cable. Ensure that all parts of the cleaner that could be a source of danger are made harmless, especially for children who might use the old cleaner for play. As the cleaner is considered special waste, dismantle it and divide the material according to type, then dispose of them as required by the legislation in force.

Do not use parts dismantled for scrap as spare parts.

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TROUBLE-SHOOTING

 **Before carrying out any operations, disconnect the water cleaner from the mains electricity supply via the omnipolar switch or by unplugging the plug from the socket!**

FAULTS	CAUSES	REMEDIES
When the ON-OFF switch is turned the cleaner does not start.	Faulty electric connection. Thermal protection has tripped.	Check the mains voltage. Reset (if it trips again, apply to the technical service centre).
No jet or leakage from high pressure water circuit. After 30 seconds, the water cleaner stops.	Water supply filter clogged. Faulty connection to the mains water supply. Mains water supply tap closed. Leakage from high pressure circuit.	Clean. Check. Open. Contact Service Centre.
The pump functions but does not reach rated pressure.	Water supply filter clogged. Faulty connection to the mains water supply. Pressure regulation valve is set at minimum. Lance nozzle worn. Valves dirty or worn. Detergent tap open. Pressure adjustment devices on lance open.	Clean. Check. Regulate it. Contact Service Centre. Contact Service Centre. Close. Close.
When the lance is open, the pressure drops and rises.	Nozzle clogged or deformed. Inadequate water supply. Detergent tap open.	Clean or contact Service Centre. Check. Close.
In by-pass or total stop phase, the high pressure cleaner shuts down.	Micro-leaks of water from the high pressure circuit.	Contact Service Centre.
When the temperature regulator is brought to the required position, the burner does not start.	No diesel.	Check the level of diesel in the tank and make sure the fuel supply circuit is free of water.
Excessive smoke coming out of chimney.	Incorrect combustion. Fuel contaminated with impurities or water.	Clean or replace diesel filters. Contact Service Centre. Empty the tank and clean thoroughly.
Insufficient detergent suction.	Tap closed. No detergent. Element or tube clogged.	Open. Fill the detergent tank. Contact Service Centre.
Water leakage from head.	Gaskets worn.	Contact Service Centre.
Water in the oil.	Excessive humidity in atmosphere.	Replace oil.

To reset the indicators, rotate the main switch „A“ (fig. 7) to the pos. „0“ and then to the „I“ position.

WILMS HW 9155

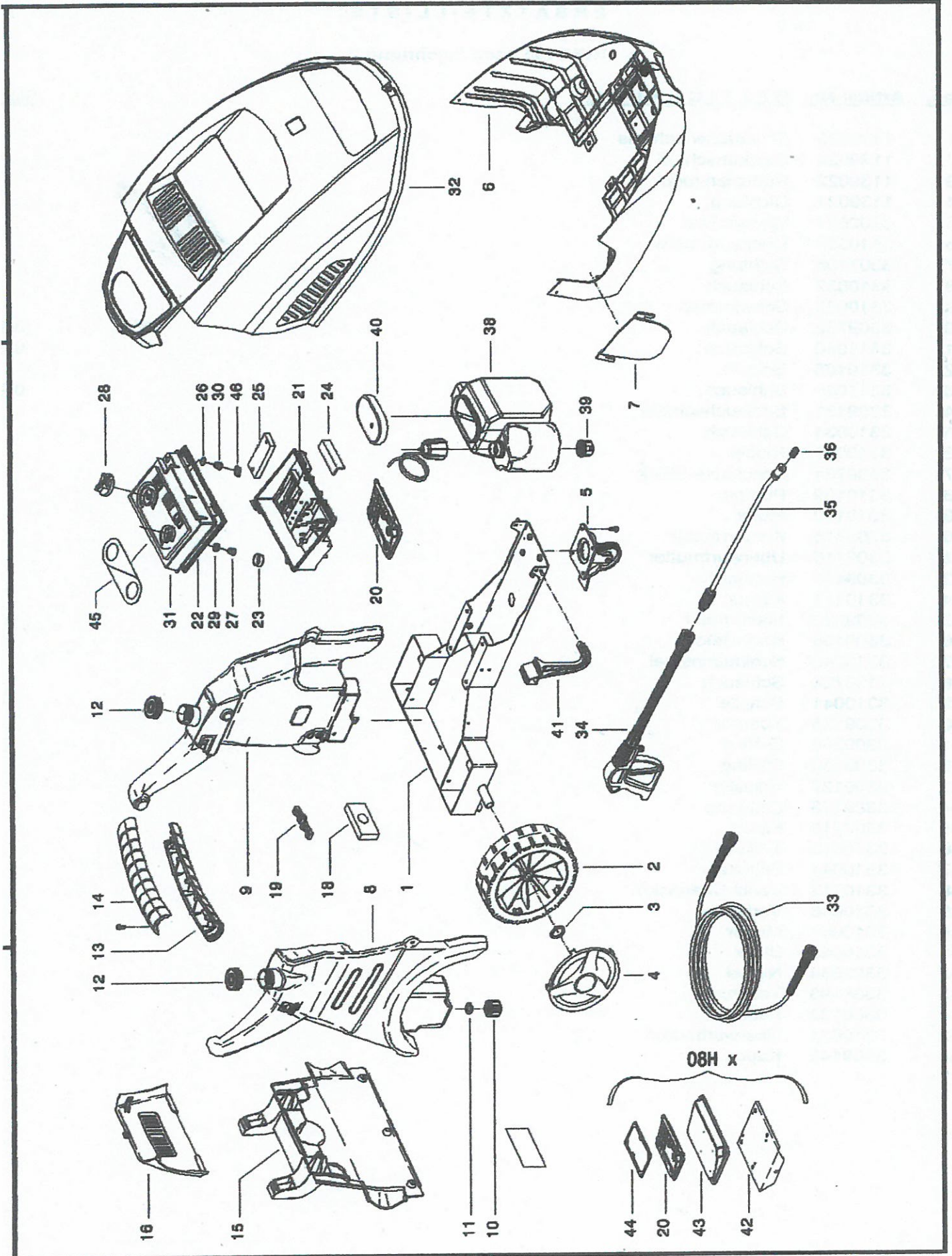
TECHNICAL SPECIFICATIONS HW 9155

Type:	HW 9155
Max. water volume:	12 l/min.
Max. operating pressure:	170 bar
Working-pressure:	40-160 bar
Working-temperature:	30-120 °C
Voltage:	400 V / 50 Hz (3-phase)
Rated current:	7,0 A
Fuse:	16 A
Water-pump:	3-piston high-pressure pump
Motor with overheat protection:	400 V – 50 Hz – 4,0 kW (3-phase)
Oil burner:	robust – widely maintenance-free
Burner nozzle:	0,75 G 45°A – 13 bar
High-pressure hose:	8 m
Permitted water nozzles:	1/4" 2504
Dimensions: L X W X H	980 x 670 x 810 mm
Weight:	80 kg
Noise level: according to EN ISO 11201	dB (A) 78,4

SPARE PARTS LIST

HW 9155 according to drawing 1

<u>Pos.</u>	<u>Order-No.</u>	<u>DESCRIPTION</u>	<u>Qty.</u>
1	3310000	Chassis	1
2	3310001	Wheel	2
3	3308208	Locking Ring	2
4	3310002	Hub Cap	2
5	3310003	Swivel Wheel	1
6	3310004	Cover front	1
7	3310005	Flap	1
8	3310006	Detergent Tank	1
9	3310007	Fuel Tank	1
10	3308113	Drain Plug	2
11	3308112	Gasket	2
12	3310008	Tank Lid	2
13	3310009	Handle bottom	1
14	3310010	Handle top	1
15	3310012	Rear Cover bottom	1
16	3310011	Rear Cover top	1
18	3310014	Support	1
19	1138905	Terminal Lock	1
20	3310015	Plate	1
21	3310038	Control Box bottom	1
22	5913044	Gasket	1
23	3310016	Gasket	1
24	3310105	Support	1
25	3309018	Terminal Lock	1
26	3300116	O-Ring	1
27	1138603	Bushing	1
28	3309016	Knob	3
29	3309209	Sealing Ring	1
30	3309206	Bushing	1
31	3310018	Control Box Lid	1
32	3310019	Cover – white	1
33	6557611	Hose	1
34	3310021	Lance rear	1
35	3308011	Lance front	1
36	1370186	Nozzle – 1/4" - 2504	1
38	3310022	Water Tank	1
39	3309009	Nut	1
40	3310023	Tank Lid	1
41	3310024	Support	2
42	3310025	Motor Plate	1
43	3310026	Plate	1
44	3310027	Gasket	1
45	3310077	Decal	1
46	3309121	Transition Piece	1

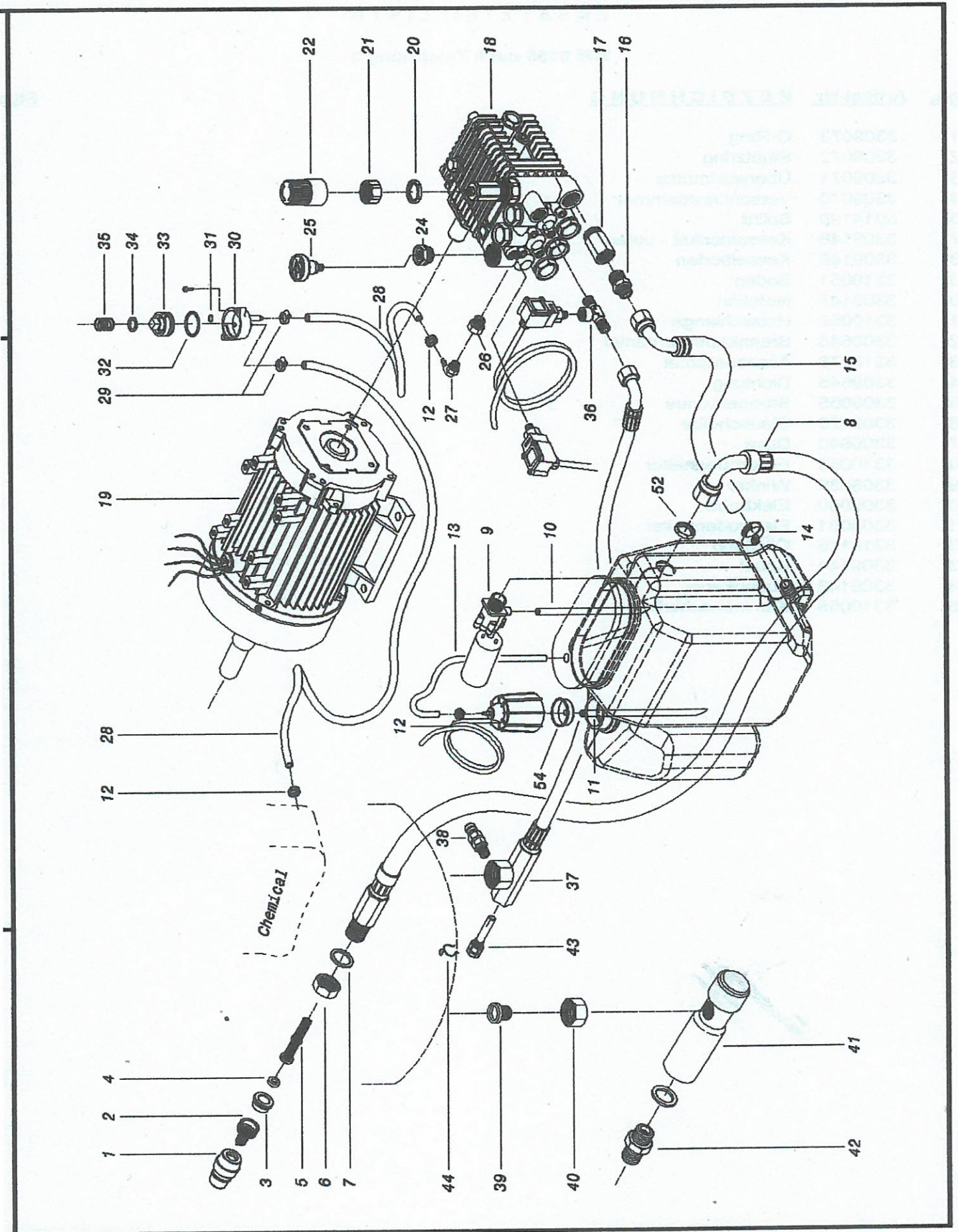


SPARE PARTS LIST

HW 9155 according to drawing 2

<u>Pos.</u>	<u>Order-No.</u>	<u>DESCRIPTION</u>	<u>Qty.</u>
1	1139025	Hose Gasket	1
2	1139024	Coupling	1
3	1139022	Reducer	1
4	1139021	Gasket	1
5	3309621	Water Filter	1
6	3310030	Nut	1
7	3307106	Gasket	1
8	3310032	Hose	1
9	3310033	Floater	1
10	3309732	Hose	1
11	3311080	Hose	1
12	3310108	Clamp	1
13	3311080	Hose	1
14	3309131	Hose Clamp	1
15	3310034	Hose	1
16	3310035	Nipple	1
17	3309731	Connection Piece	1
18	3310109	Pump	1
19	3310110	Motor	1
20	3309415	Nut	1
21	3309416	Nut	1
22	3309417	Hand Wheel	1
24	3310111	Cap	1
25	3309220	Gauge	1
26	3300156	Reducing Piece	1
27	3310040	Hose Nipple	1
28	1138724	Hose	1
29	3310041	Clamp	2
30	3309135	Body	1
31	3309266	O-Ring	1
32	3309136	O-Ring	1
33	3309137	Adjuster	1
34	3309138	Gasket	1
35	3309718	Spring	1
36	3310043	T-Bar	1
37	3310044	Hose	1
38	3310112	Overload Valve	1
39	3310046	Connector	1
40	3310047	Nut	1
41	3310048	Block	1
42	3309634	Nipple	1
43	3308193	Dipping Pipe	1
44	3308192	Spring	1
52	3310031	Nut	1
54	3309140	Cap	1

Drawing 2

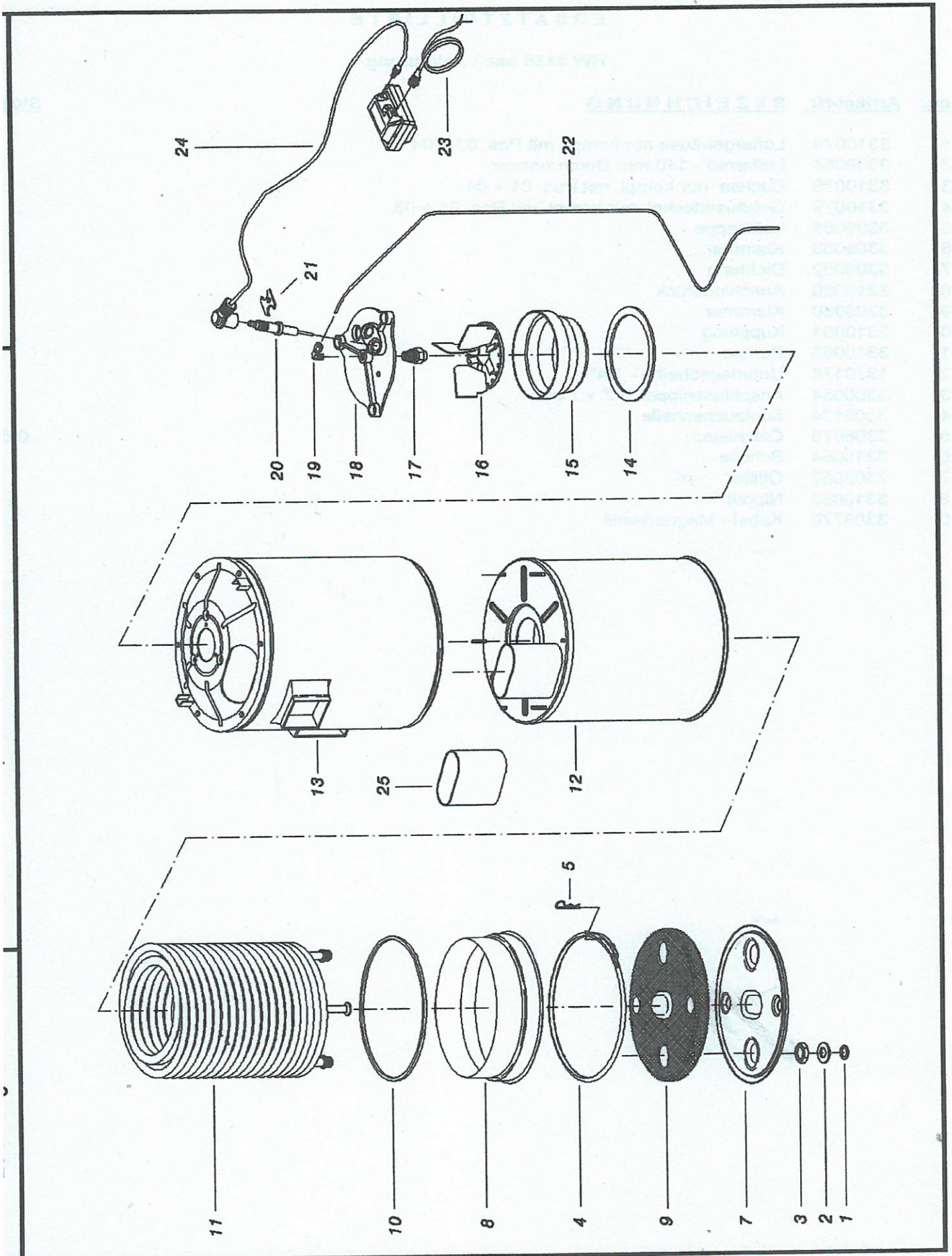


SPARE PARTS LIST

HW 9155 according to drawing 3

<u>Pos.</u>	<u>Order-No.</u>	<u>DESCRIPTION</u>	<u>Qty.</u>
1	3309079	O-Ring	2
2	3309072	Support-Ring	2
3	3309071	Nut	2
4	3309070	Clamp	1
5	5914199	Split Pin	1
7	3309148	Boiler Cover – bottom	1
8	3309146	Boiler Bottom	1
9	3310051	Bottom	1
10	3309147	Insulation	1
11	3310052	Coil	1
12	3309643	Combustion Chamber Housing	1
13	3310078	Outer Housing	1
14	3309645	Gasket	1
15	3309065	Burner Cone	1
16	3309420	Baffle Plate	1
17	3309640	Nozzle	1
18	3310053	Electrode Holder	1
19	3308039	Elbow	1
20	3309060	Electrode	2
21	3309061	Electrode Holder	1
22	3310116	Fuel Line	1
23	3309144	Cable	1
24	3309142	Ignition Cable	2
25	3310055	Chimney Connection	1

Drawing 3

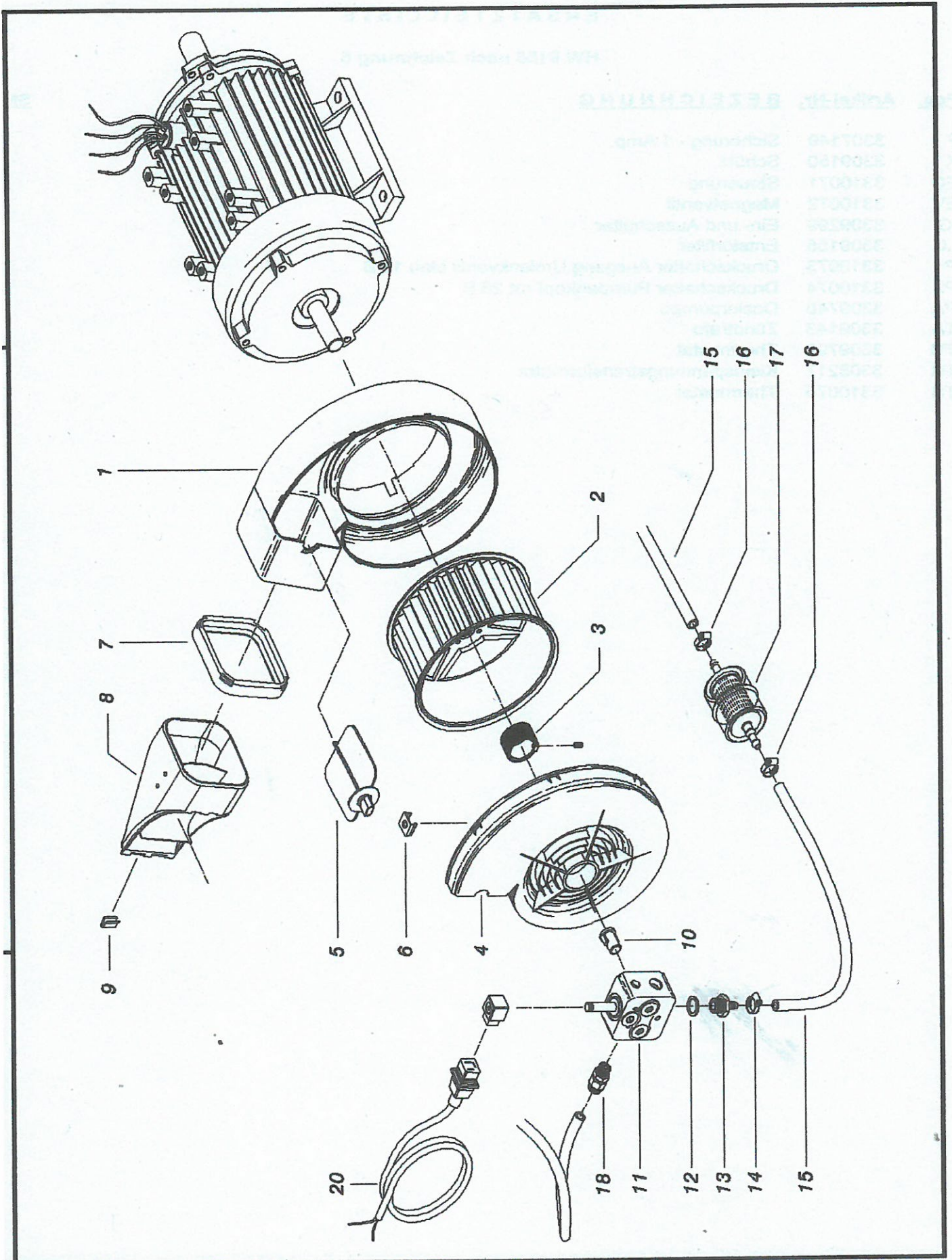


SPARE PARTS LIST

HW 9155 according to drawing 4

<u>Pos.</u>	<u>Order-No.</u>	<u>DESCRIPTION</u>	<u>Qty.</u>
1	3310079	Blower Housing only complete with item 03 + 04	1
2	3309084	Blower Wheel – 140 mm diameter	1
3	3310079	Bushing only complete with item 01 + 04	1
4	3310079	Housing Lid only complete with item 01 + 03	1
5	3309085	Air Flap	1
6	3309088	Clamp	1
7	3309082	Gasket	1
8	3310060	Connecting Piece	1
9	3309080	Clamp	2
10	3310061	Coupling	1
11	3310063	Pump	1
12	1370176	Washer – 1/4"	1
13	3300064	Connecting Nipple – 1/4" x 7 mm	1
14	3309134	Hose Clamp	2
15	3308075	Fuel Hose	1
16	3310064	Clamp	2
17	3308082	Fuel Filter	1
18	3310065	Nipple	1
20	3309770	Cable – Solenoid Valve	1

Drawing 4

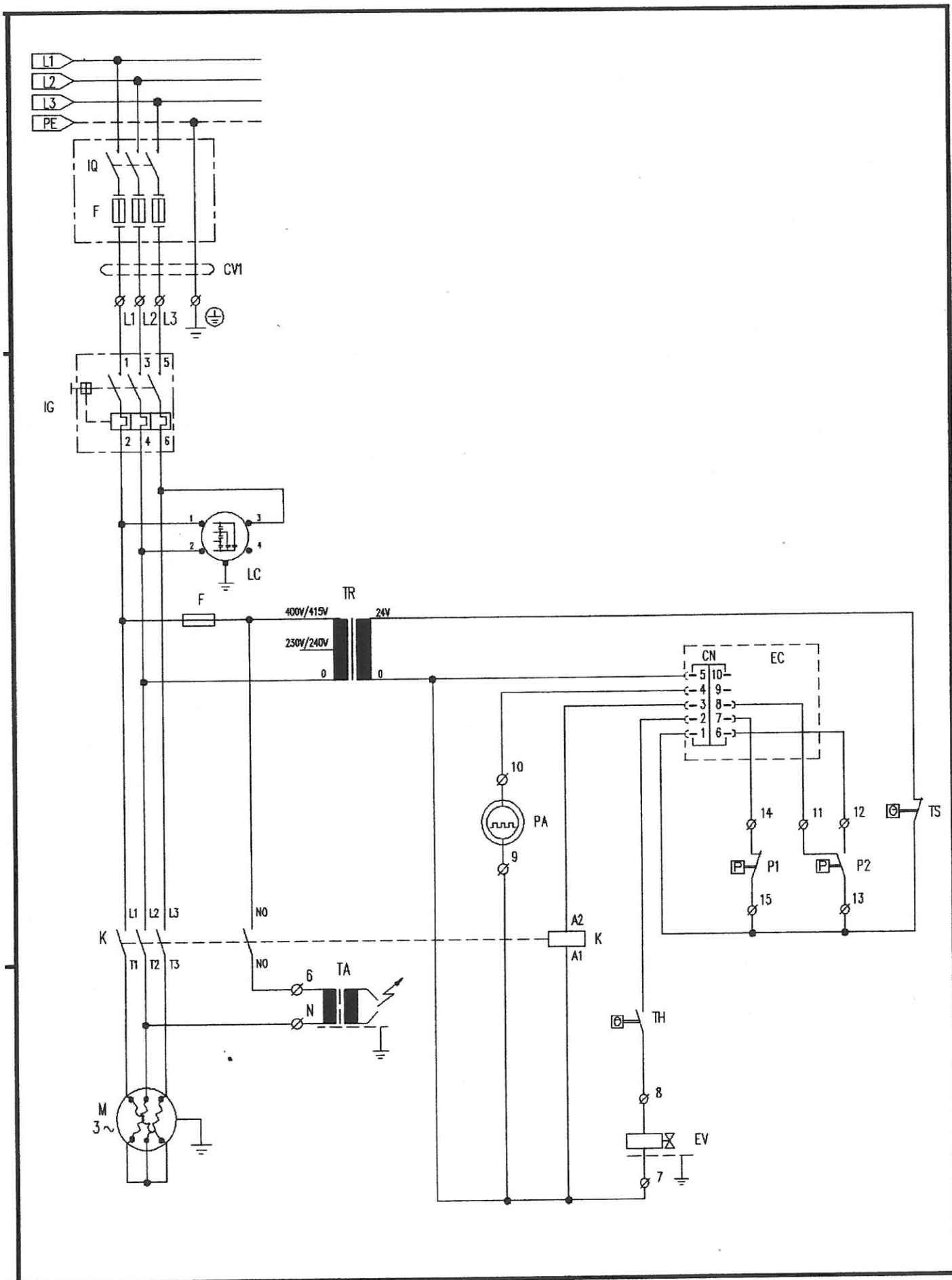


SPARE PARTS LIST

HW 9155 according to drawing 5

<u>Pos.</u>	<u>Order-No.</u>	<u>DESCRIPTION</u>	<u>Qty.</u>
F	3307149	Fuse – 1 Amp.	1
K	3309150	Relais	1
EC	3310071	Control	1
EV	3310072	Solenoid Valve	1
IG	3309299	ON/OFF-Switch	1
LC	3309155	Radio Shielding Filter	1
P1	3310073	Pressure Switch Outlet Bypass Valve blue 15 B	1
P2	3310074	Pressure Switch Pump Head red 25 B	1
PA	3309748	Proportioning Pump	1
TA	3309143	Ignition Transformer	1
TH	3309799	Thermostat	1
TR	3308217	Low Voltage Transformer	1
TS	3310075	Thermostat	1

Drawing 5

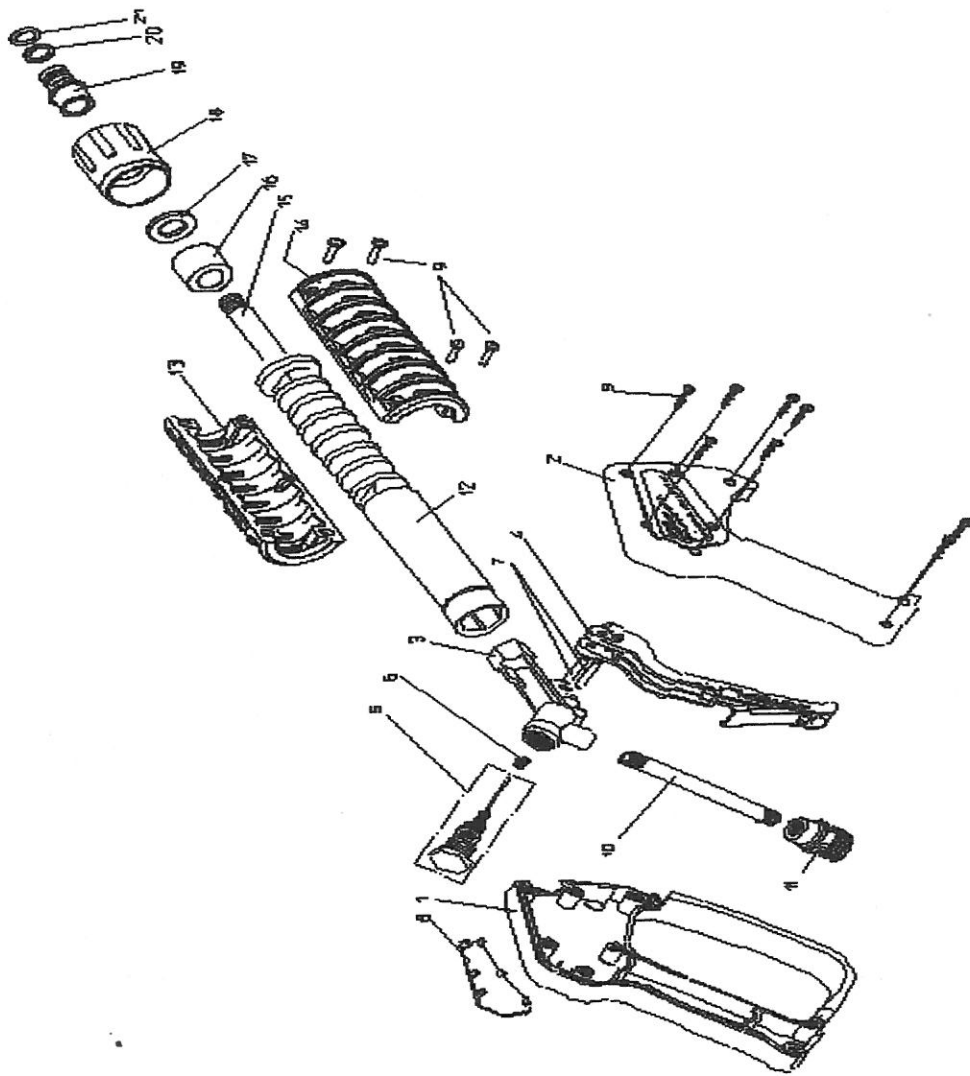


SPARE PARTS LIST

HW 9155 according to drawing handle

<u>Pos.</u>	<u>Order-No.</u>	<u>DESCRIPTION</u>	<u>Qty.</u>
1	3310120	Cup left	1
2	3310121	Cup right	1
3	3310122	Housing	1
4	3310123	Trigger	1
5	3310124	Piston	1
6	3310125	Piston Guide	1
7	3310126	Pin	2
8	3310127	Plate	1
9	1138704	Screw	11
10	3310128	Pipe	1
11	3310129	Connecting Nipple	1
12	3310130	Insulation	1
13	3310131	Heat Protection left	1
14	3310099	Heat Protection right	1
15	3310132	Lance	1
16	3310133	Spacer	1
17	1370176	Washer	1
18	3310134	Screwing	1
19	3310135	Nipple	1
20	3310136	Ring	1
21	3310137	O-Ring 9,3 x 2,4	1

Drawing Handle



SPARE PARTS LIST

HW 9155 according to drawing pump

<u>Pos.</u>	<u>Order-No.</u>	<u>DESCRIPTION</u>	<u>Qty.</u>
1	1138571	Pump Housing	1
2	1133256	Locking Screw 3/8 x 13	2
3	1133190	O-Ring	1
4	1138577	Protection Cap	1
5	1138123	Slot Ring Collar 15 x 24 x 5 mm	3
6	1133243	Locking Screw 1/4 x 9	1
7	1138350	Pump Head	1
8	1133334	Washer	12
9	1138119	Screw M 6 x 40	8
15	1133208	O-Ring	7
16	1138111	Locking Screw	6
17	1138742	Valve complete	6
18	1133275	Ring – 15 mm Diameter	3
19	1133273	Collar 15 mm	3
20	1138109	Ring	3
21	1138110	O-Ring	3
22	3300118	Gasket	3
23	1133227	Oil Inspection Glas	1
24	1138050	Ball Bearing complete	1
25	1133323	Oil Level	1
26	1138052	Nut M 8	3
27	1138053	Washer 8 mm	3
28	1138054	Piston	3
29	3300108	O-Ring	3
30	1138055	Protection Ring	3
31	1138056	Washer 9 mm	3
32	1138062	Wrist Pin 8 x 24,5	3
33	1138058	Lid for Housing	1
34	1138060	Screw M 8 x 18	4
35	3311081	Lid Gasket	1
36	1133291	Connecting Rod	3
37	1138057	Piston Lead	3
38	1133350	Spacer	1
39	1133320	O-Ring	1
40	1133351	Slot Ring Collar	1
41	1138074	Spring Ring	1
42	1138073	Ball Bearing	1
43	1133293	Crank Shaft	1
45	1138052	Nut M 8	1
46	1138351	Screw	1
47	3300122	O-Ring	1
48	1138352	Adjusting Screw	1
49	1138353	Spring Plate	1
50	1138354	Spring	1
51	1138355	Bushing Lead	1
53	1138356	Lead	1
54	1138357	Spring	1
55	1138358	O-Ring	3
56	1138359	Ball	1
57	1138360	Port Ring	2
58	1138177	O-Ring	2
59	1138361	Control Piston	1
60	1138362	Protection Ring	2
61	1138363	Valve Lead	2
62	1138364	O-Ring	1

SPARE PARTS LIST

HW 9155 according to drawing pump

<u>Pos.</u>	<u>Order-No.</u>	<u>DESCRIPTION</u>	<u>Qty.</u>
63	1138365	Support Ring	1
64	1138366	Valve	1
65	1138367	Screw	1
66	1138368	Valve Seat	1
	1133294	Kit 83 consisting of item 5	
	1133295	Kit 15-86 consisting of item 20/21/22	
	1138370	Kit 102 consisting of item 15/51/53/54/55/56/57/58/59/60/61/62/63/64/65/66	
	1133296	Kit 96 consisting of item 18/19/20/21/22	
	1133297	Kit 97 consisting of item 18/19/21/22	
	1138944	Kit 15-123 consisting of item 17	

Drawing Pump

