

Operating Manual



STAR - JET

HW 9140



Perfection is our aim.

Wilms

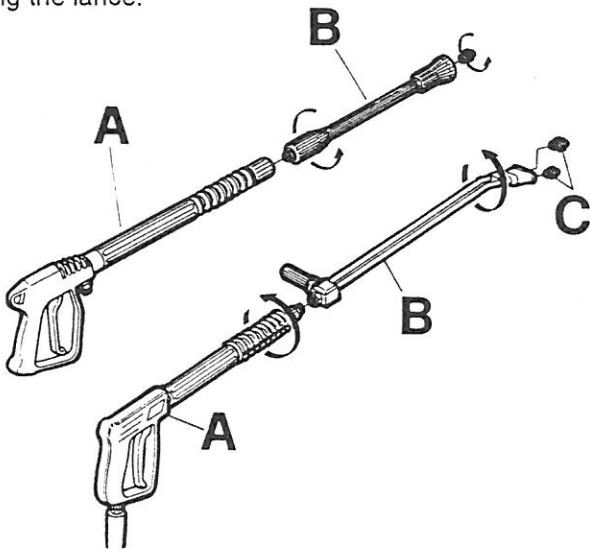
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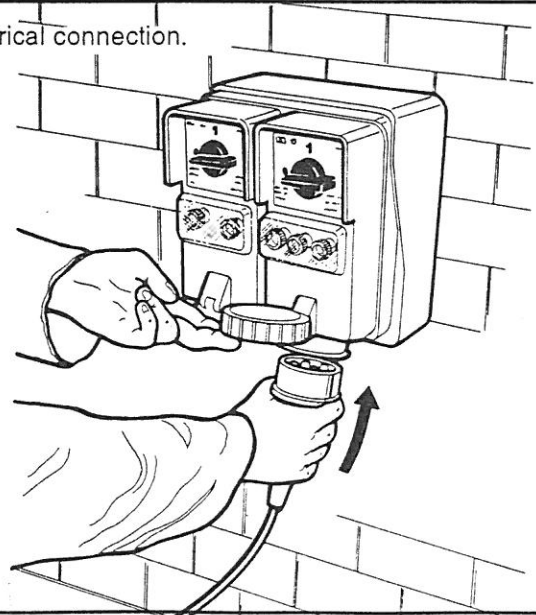
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PREPARING THE CLEANER

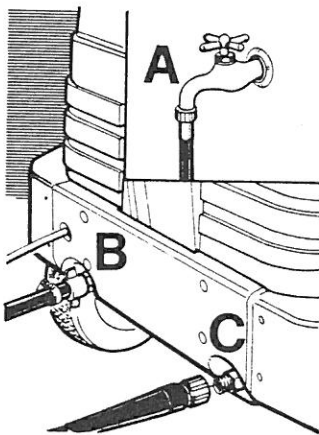
Fitting the lance.



Electrical connection.

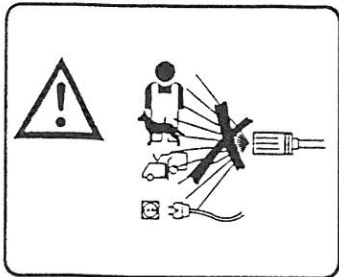


Water circuit connection.

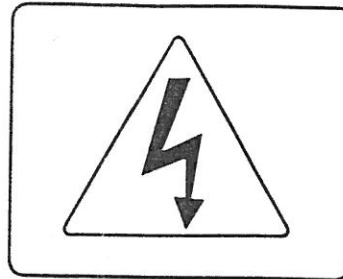


Continue reading this manual without connecting the cleaner to the power mains and the water supply.

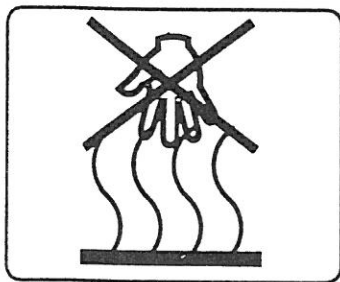
ATTENTION



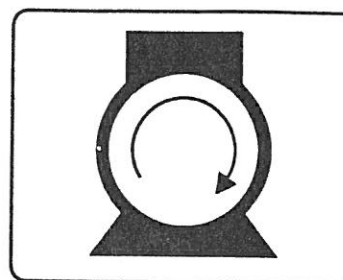
Do not direct the jet against people, animals, power sockets or the machine itself



Attention:
Risk of electric shock.



Attention: Risk of burns.



Switching of the pump motor.

IMPORTANT

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 CONSULTING.

IMPORTANT

The person using the cleaner must be aware of this manual and its content.

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).

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.

The 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 or 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 EN 60 335-1 (General standard) and EN 600335 2 79 (Specific standard).

FITTING THE SEPARATE PARTS OF THE MACHINES

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.

IMPORTANT !

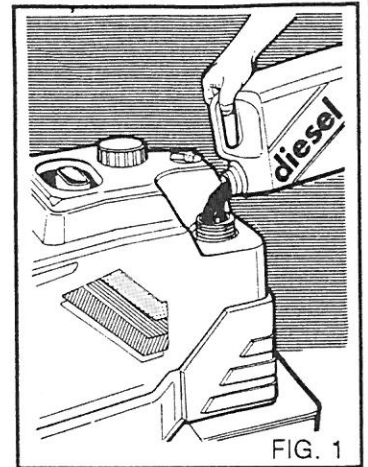
When buying your cleaner, ensure that it has an identification plate. If there is no plate, inform the manufacturer and/or the dealer immediately. Machines without a plate must not be used and the manufacturer declines all responsibility for them. Products without a plate must be considered anonymous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

TECHNICAL DATA

Type	HW 9140
Max. water volume	10 l/m
Max. pressure	160 bar
Operating pressure	140 bar
Operating temperature	30 - 120 °C
Voltage-Frequency	230 / 400 V - 50 Hz
Current	7 A
Fuse	16 A
Water pump	3-piston plunger pump with sump lubrication
Motor with overheat protection	230 / 400 V - 50 Hz - 2,5 kW
Fuel burner	32 kW Robust, largely servicefree
Burner nozzle	0,85 GpH - 60 °B
High pressure hose	8 m
Water nozzle	1/4 " 2504
Dimensions L x W x H	830 x 650 x 770
Weight	90 kg

FILLING THE FUEL TANK

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



IMPORTANT !

Do not use different fuel from that indicated on the identification plate.

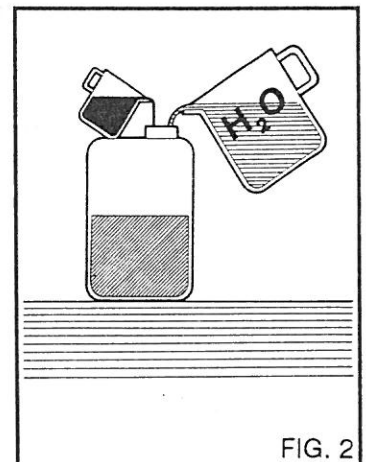
Check the fuel level from time to time while the cleaner is operating.

Attempting to use the cleaner without fuel may cause damage to the fuel pump.

FILLING THE DETERGENT TANK

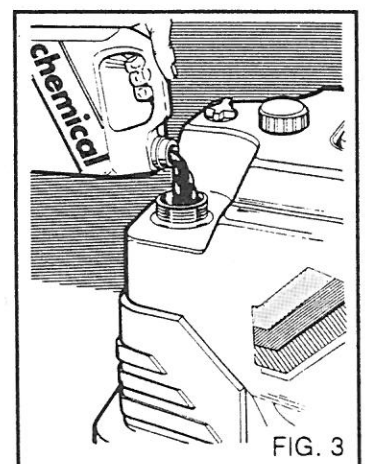
From the range of recommended products, choose the one most suited to the washing job to be done (fig.2) and dilute it with water according to the instructions on the pack.

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 a detergent, the detergent intake circuit must be flushed out with clean water.



COMMAND AND CONTROL DEVICES

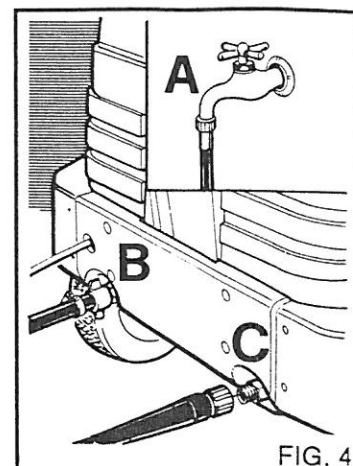
Before connecting the machine to the water supply and to the power mains, it is essential to know the function of the cleaner's command and control devices.

WATER CIRCUIT CONNECTION

Connect the feed hose to the mains (fig. 4A) and to the hoesetail on the cleaners (fig. 4B).

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 (29 to 116 PSI).

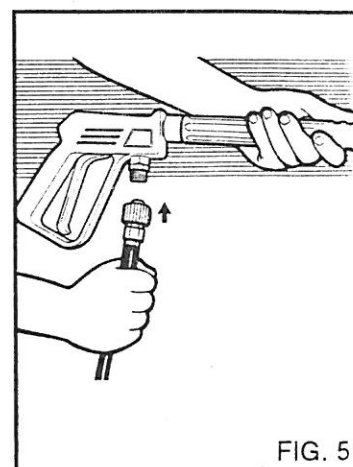
Maximum temperature of feeding water 60 °C (140 °F).



Connect the high pressure hose to the cleaner (fig.4C) and to the lance (fig. 5).

IMPORTANT !

The cleaner must operate with clean water. Dirty or sandy water, corrosive chemicals and solvents can cause severe damage to the cleaner.



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. 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.

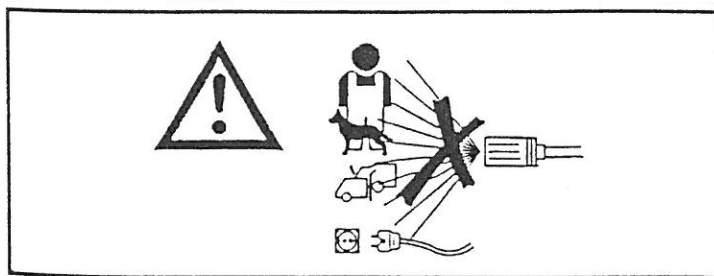
IMPORTANT !

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

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 flexible hose connecting the lance to the H.P. cleaner must not be damaged. In the 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.

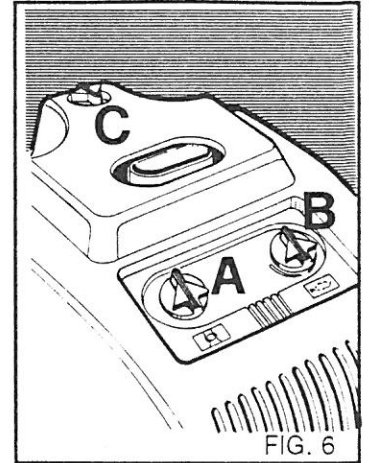
- Do not direct water jets at your own or other people's body in order to clean clothes or shoes.
- While working it is forbidden, to stop the trigger (lever) of the lance in delivery position.
- In the hot water H.P. cleaners a Diesel fuel burner is used for water heating. The use of other fuels is 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.
- The hot water cleaner must be supervised while it is working.
- Do not clog the openings or the ventilation grilles and the heat smoke extraction systems in the hot water cleaners.
- 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.
The supply cable of this appliance must not be replaced by the user.
- In case of damage or malfunction, switch off the appliance (disconnecting it from the electric and water supply networks) without tampering with it.

Apply to one of our technical service centres.

USING THE CLEANER

CONTROL PANEL

- A - On/off switch
- B - Temperature regulator
- C - Detergent control tap (if available)
- D - Light indicating connection to the mains/microleakages (if available)



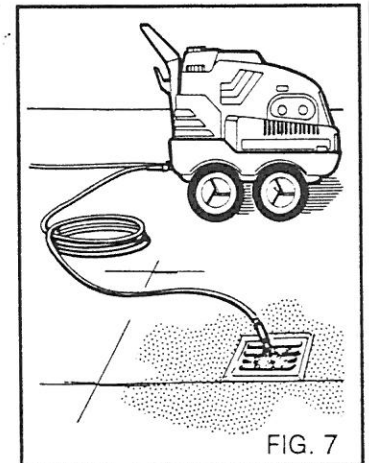
STARTING THE CLEANER

- 1) Turn on the water supply tap (fig.3A)
- 2) Turn on the power to the cleaner by switching on the omnipolar switch to which it is connected.
- 3) Start the cleaner by turning the selector switch to pos. 1 (fig. 6A).
- 4) Press the trigger on the gun and begin washing.
- 5) To use the cleaner with hot water, turn the temperature regulator (fig. 6B) to the recommended washing values.
For some models turn the ignition switch (fig. 6A) onto the hot water position before effecting the operations described in this point.

IMPORTANT !

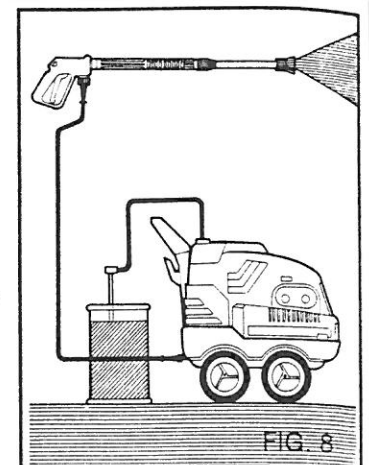
To eliminate any impurities of air bubbles from the water circuit we advise starting the cleaner for the first time without the lance and letting the water run out for a few seconds.

Impurities could block the nozzle and cause malfunction (fig. 7).



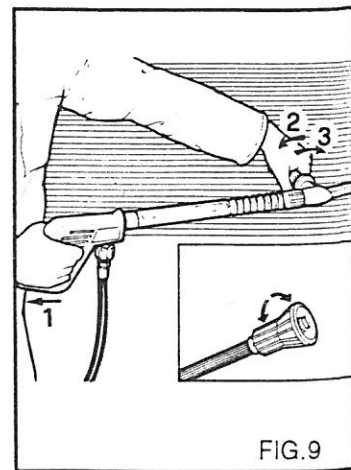
STOPPING THE CLEANER

- 1) Switch off the burner by turning the pressure regulator to pos. "0" (fig. 6B).
- 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. 8) 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 selector switch to pos. "0" (fig. 6A).
- 5) Discharge the pressure from the H.P.hose by pressing the trigger on the gun (fig. 5A).
- 6) Disconnect the power supply to the cleaner by switching off the omnipolar switch to which it is connected.
- 7) Turn of the watersupply tap (fig. 3A).



USE OF THE DOUBLE LANCE OR ADJUSTABLE HEAD (fig. 9)

The double lance or adjustable head allows the operator to select a low or high pressure jet. The pressure is selected with the gun in pos. 1. High pressure: pos. 2. Low pressure and detergent. Intake: pos. 3.



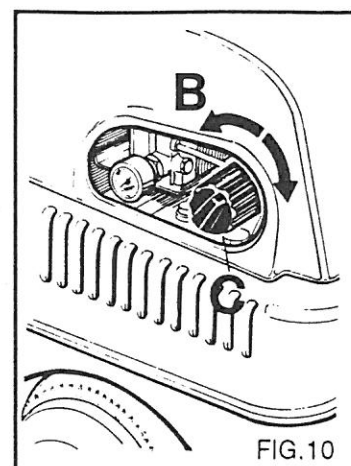
REGULATING PRESSURE AND USING STEAM

This chapter concerns only those models provided with the "pressure regulating" device. The pressure regulator, fig 10, allows the operator to adjust the working pressure. When knob C is turned in an anti-clockwise direction (B) (minimum), the flow pressure is reduced.

Turn the thermostat knob "B" (fig. 6 on page 8) to steam position to obtain an increase in the temperature of the water at delivery.

At work temperatures higher than 95°C (203°F), the work pressure must be $\leq$ 32 bar (460 PSI).

Use the steam nozzle (supplied as an accessory).



IMPORTANT !

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. 6 on page 9) 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) To protect the environment, 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 washing 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 your dealer for the detergents 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 (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.
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 using with detergent, flush out the intake circuit; place the detergent suction hose (fig. 8) in a tank of clean water and let the pump run for 1 min. with the dosing tap fully on and the lance in detergent delivery condition.

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 and all parts with a safety function, you must apply to our Technical service centre.
- Disconnect the machine from the power and water supply 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.

OPERATIONS FOR USING ANTIFREEZE (fig.11)

- 1) Turn off the water supply (tap), disconnect the hose and run the cleaner until it is completely empty.
- 2) Disconnect the electric power to the cleaner by switching off the omnipolar switch.
- 3) Prepare a container with the solution of antifreeze.
- 4) Switch on the omnipolar switch and restore power to the cleaner.
- 5) Start the cleaner and let it run until antifreeze comes out through the lance.

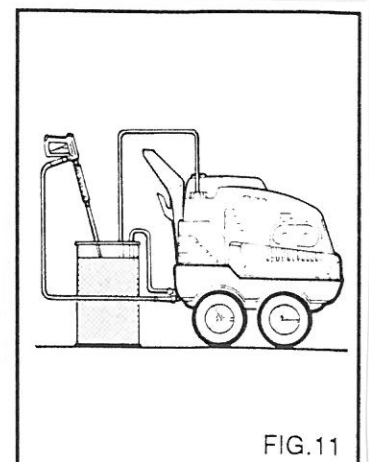


FIG.11

- 6) Suck up antifreeze with the detergent intake system too.
- 7) Switch off the cleaner and disconnect the electric power by switching off the omnipolar switch.
- 8) 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.

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. 12A) or the dipstick (fig. 12B).

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 200 hours or once a year.

Proceed as follows:

- 1) Unscrew the drain cap situated under the pump (fig. 12C).
- 2) Unscrew the cap with the dipstick (fig. 12).
- 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. 13A) until it reaches the level indicated on the sight glass (fig. 13B).

Use only SAE 20 W/30 oil.

CLEANING THE FUEL FILTER AND TANK

Remove and replace the inline fuel (fig. 14). Change it from time to time.

Empty the fuel tank.

Open the drain cap (fig. 15) (if available) and let any impurities drain out into a container. Flush out the tank with clean fuel and close the drain cap.

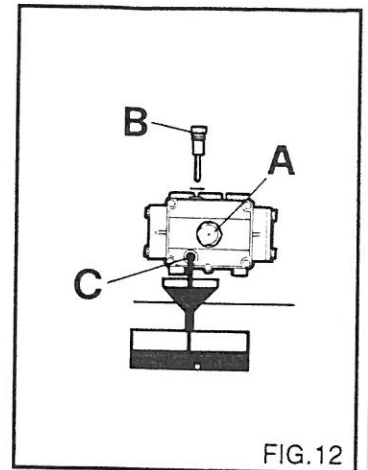


FIG.12

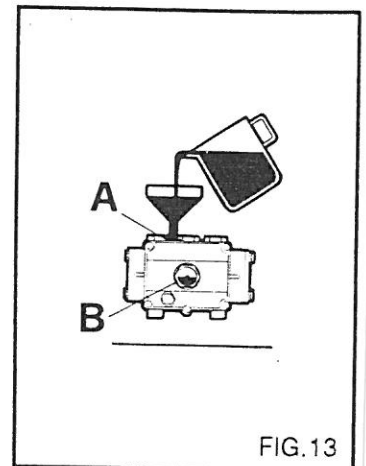


FIG.13

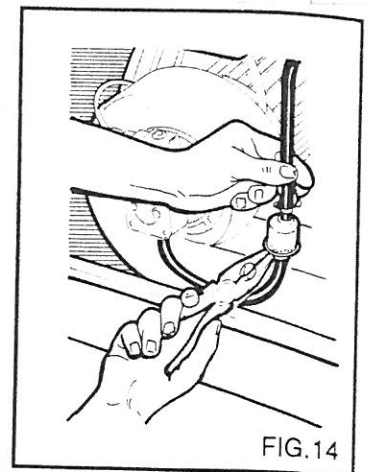


FIG.14

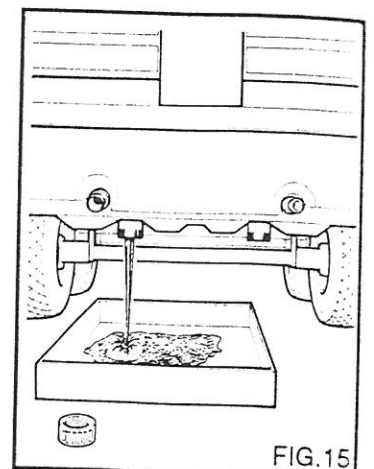
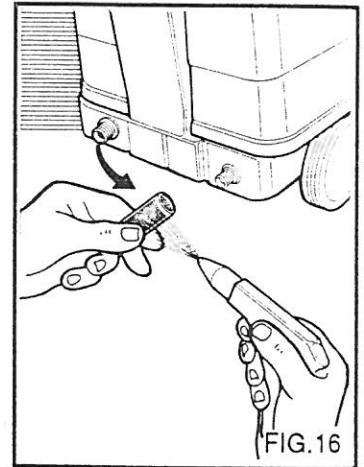


FIG.15

CLEANING THE WATER FILTER

Clean the water intake filter regularly and free it from any impurities (fig. 16).



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 cleaner. To replace it, consult your supplier and/or dealer for instructions.

DESCALING

Descaling must be carried out from time to time because the scale present in the water partially deposits 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.

TABLE OF ROUTINE MAINTENANCE TO BE PERFORMED BY THE USER

Description of operations:

Check power cable - pipes - high pressure connectors	Each use
1st 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 ROUTINE MAINTENANCE TO BE PERFORMED BY THE TECHNICAL SERVICE CENTRE

Descriptions 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

I M P O R T A N T

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 frees the manufacturer from all responsibility.

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.

TROUBLE - SHOOTING

IMPORTANT: Before carrying out any operations, disconnect the cleaner from the power and water supply.

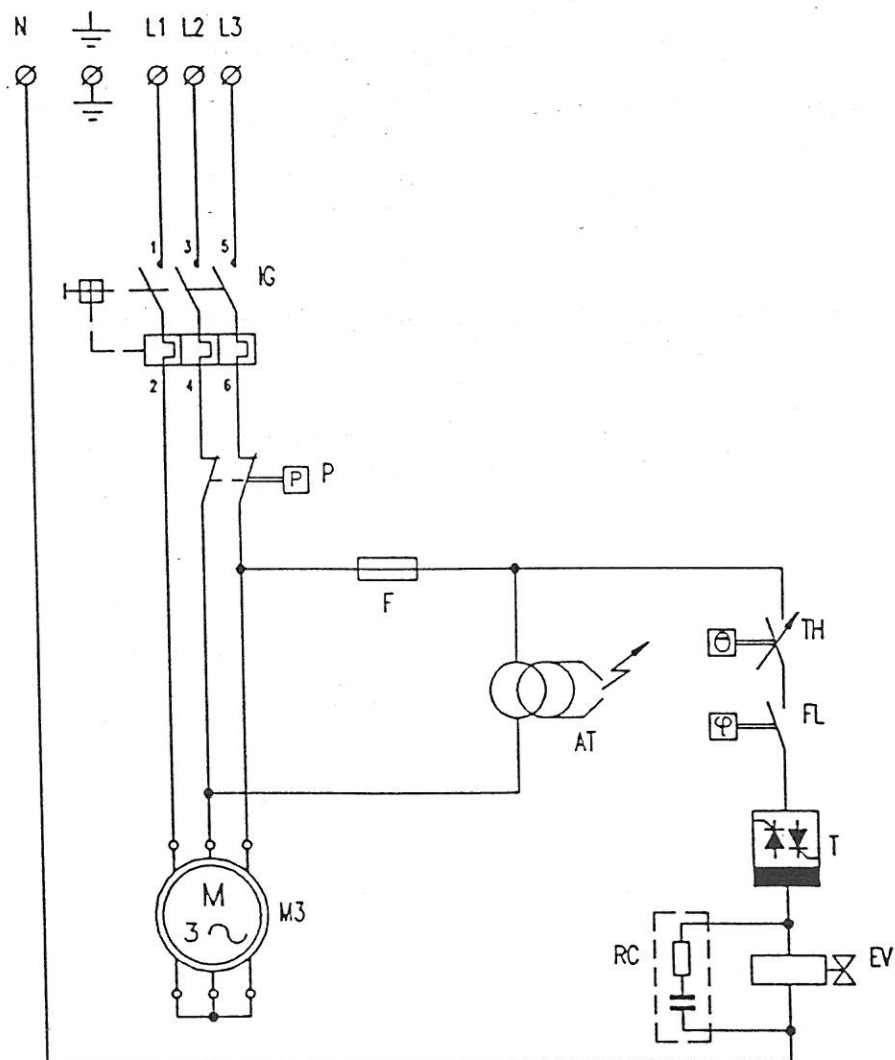
FAULTS	CAUSES	REMEDIES
When the switch is turned the cleaner does not start.	Faulty electric connection. Thermal protection has tripped.	Check the mains voltage. Reset (if it trips again, apply to the technical service centre).
No jet delivered.	Faulty water circuit connection water filter. Mains tap turned off. Detergent tap turned on.	Check it. Clean it. Turn it on. Turn it off.
The pump turns but does not reach the the rated pressure.	Water intake filter blocked.	Clean it.
	Faulty water circuit connection.	Check it.
	Pressure regulation valve is set at minimum.	Regulate it.
	Lance nozzle is worn.	Apply to our technical service centre.
	Detergent intake device on the lance is turned on.	Turn it off.
When the lance is turned on the pressure falls and rises.	The nozzle is clogged or deformed.	Clean or consult our technical service centre.
	Insufficient supply.	Check it.
When the thermostat reaches the chosen temperature the boiler does not light.	No fuel.	Check the 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.
	Inverse rotation on three-phase models.	Apply to our technical service centre.
Water not hot enough.	Thermostat setting.	Checking it.
	Clogged filters.	Clean the fuel filters.
	Boiler coil clogged with scale.	Apply to our technical service centre.
Too much smoke from the flue.	No fuel.	Fill the fuel tank.
	Incorrect combustion.	Clean the various fuel filter.
	Impurities or water in the fuel.	Empty the tank and clean it carefully.
		Clean the various fuel filters too.

FAULTS	CAUSES	REMEDIES
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 of pipe clogged.	Apply to our technical service centre.

IMPORTANT:

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 frees the manufacturer from all responsibility.

Wiring diagram HW 9140



- IG = On-Off-Switch
- TH = Thermostat
- AT = Ignition transformer
- EV = Magnetic valve
- FL = Float switch
- M3 = Pump motor
- T = Relais
- RC = Capacitor
- P = Pressure switch

SPARE PARTS LIST

HW 9140

(exploded view no. 07 01253 000)

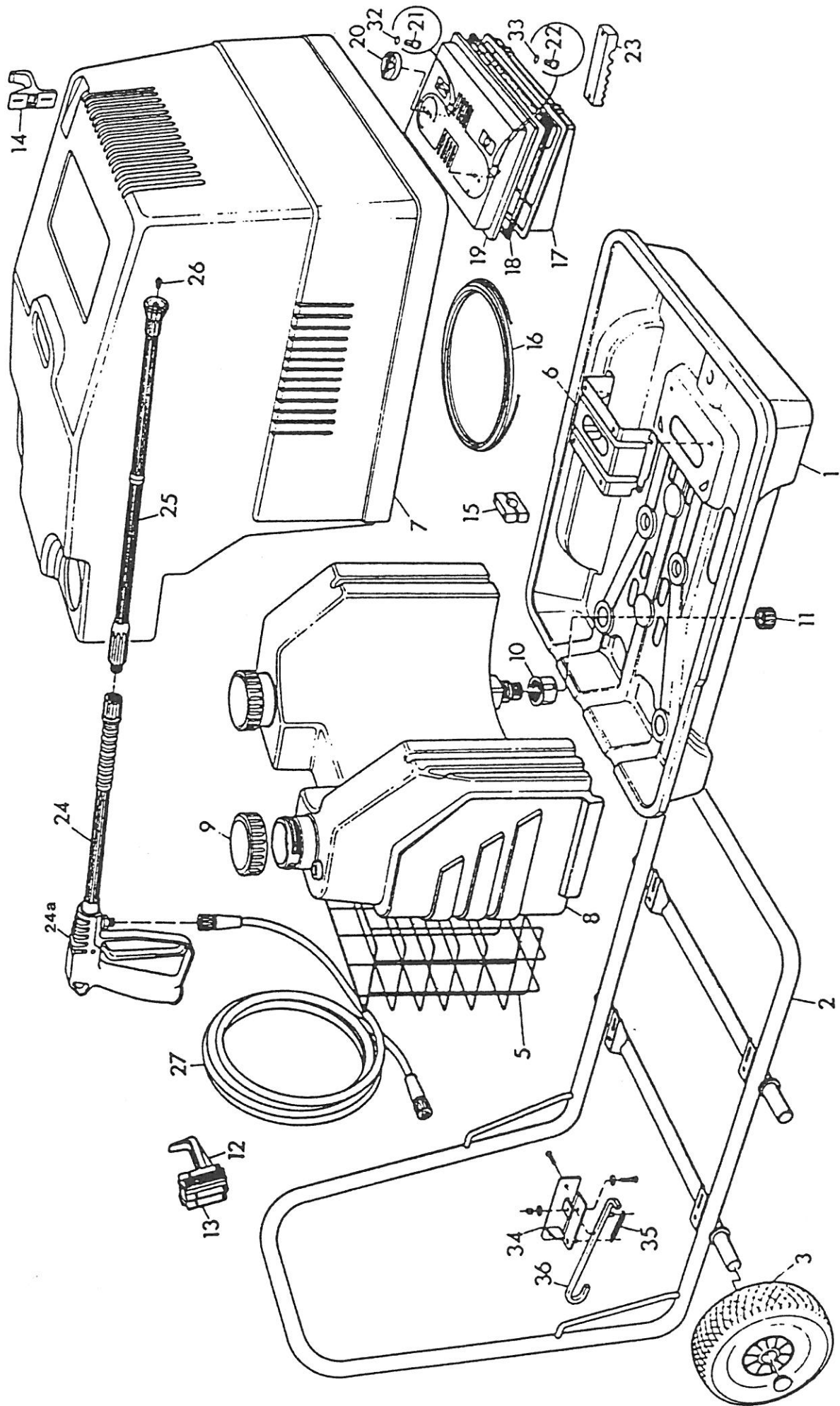
Ref.	Code. No.	Description	Qty.
1	3309000	Chassis	1
2	3309200	Trolley	1
3	3309201	Wheel	4
4	3300021	Wheel cap	4
5	3309202	Basket	1
6	3309005	Motor base plate	1
7	3309203	Cover	1
8	3309007	Tank	1
9	3309008	Tank cap	2
10	3309009	Nut M 39 x 3	2
11	3308113	Discharge cap	2
12	1138612	Support	1
13	1138611	Support	1
14	3308034	Support	1
15	3309013	Cable connection	1
16	3309204	Cable	1
17	3309014	Control box bottom	1
18	1138589	Gasket	1
19	3309205	Control box cover	1
20	3309016	Knob	2
21	3309206	Switch tang	1
22	1138603	Switch tang	1
23	3309018	Cable clamp	1
24	3308245	Lance rear part without gun	1
24a	6550201	Gun	1
25	3309019	Lance front part	1
26	1370186	Nozzle 2504 1/4"	1
27	3309207	High-pressure hose	1
32	3309208	O-ring 14 x 3	1
33	3309209	Gasket	1

The below mentioned parts are not shown in the drawing. You can find them in the wiring diagram.

Pos.	Code No.	Description	Qty.
34	3309297	TH Thermostat	1
35	3309298	AT Ignition transformer	1
36	3307149	F Fuse 1 A	1
37	3309299	IG On-Off switch	1
38	3309023	RC Condensor	1
39	3309300	T Contactor	1

Exploded view HW 9140

07 01253 000

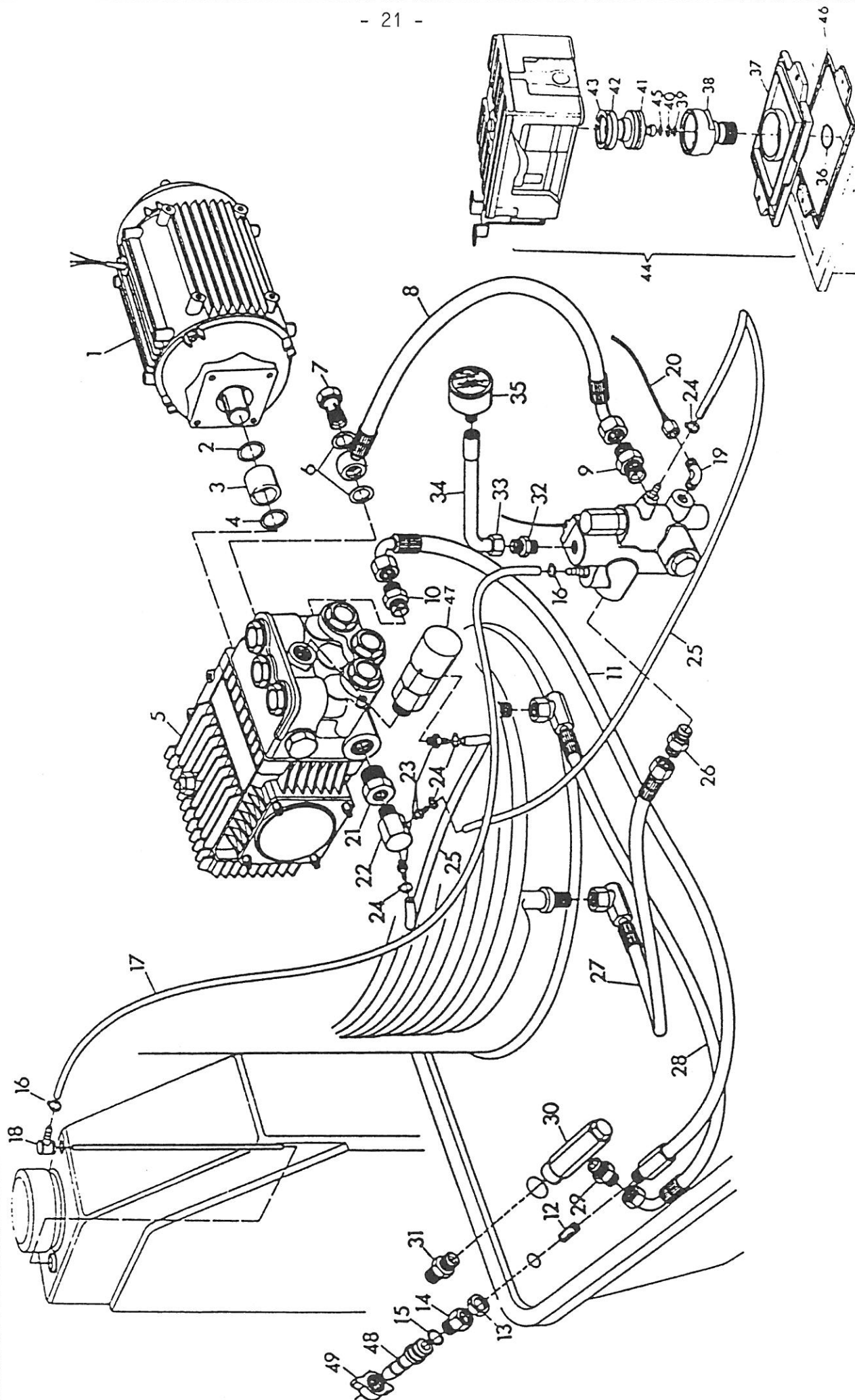


SPARE PARTS LIST

HW 9140

(exploded view no. 07 01254 000)

Ref.	Code No.	Description	Qty.
1	3309210	Motor	1
2	1133182	O-ring	1
3	3309211	Bushing	1
4	3309212	O-ring 36,14 x 2,62	1
5	3309213	Pump	1
6	1370170	Gasket	2
7	1370175	Screw	1
8	3309214	High-pressure hose	1
9	3309033	Valve body	1
10	1138324	Nipple	1
11	3309034	Hose	1
12	1138172	Water inlet filter	1
13	3309035	Ring nut	1
14	3309296	Gasket	1
15	1138325	Hose connection	1
16	1130046	Clamp	2
17	6557575	Suction hose	1
18	3309038	Suction elbow	1
19	3309215	Elbow	1
20	3309216	Pressure hose	1
21	3309217	Reduction piece 1/2" x 3/8"	2
22	3309218	Connecting piece	1
23	3309219	Connector	3
24	1130046	Clamp	4
25	3308075	Hose	1
26	3309044	Nipple 3/8" x M 22	1
27	3309045	High-pressure hose L 305 mm	1
28	3309046	High-pressure hose L 345 mm	1
29	3309047	Nipple 3/8" x M 14 x 1,5	1
30	3309048	Connecting piece	1
31	6557007	Mail coupling	1
32	3309041	Nipple M 14 x 1 x M 17 x 1,5	1
33	3309042	Nut M 17 x 1,5	1
34	3309043	Pressure gauge connector	1
35	3309220	Pressure gauge	1
36	3309221	Spring ring	1
37	3309222	Carriage	1
38	3309223	Piston support	1
39	3309224	O-ring 3,69 x 1,78	1
40	3309225	Support ring	1
41	3309226	Piston	1
42	3309227	O-ring 18,72 x 2,62	1
43	3309228	Spring ring	1
44	3309229	Pressure switch compl.	1
45	3309230	Pressure control valve	1



SPARE PARTS LIST

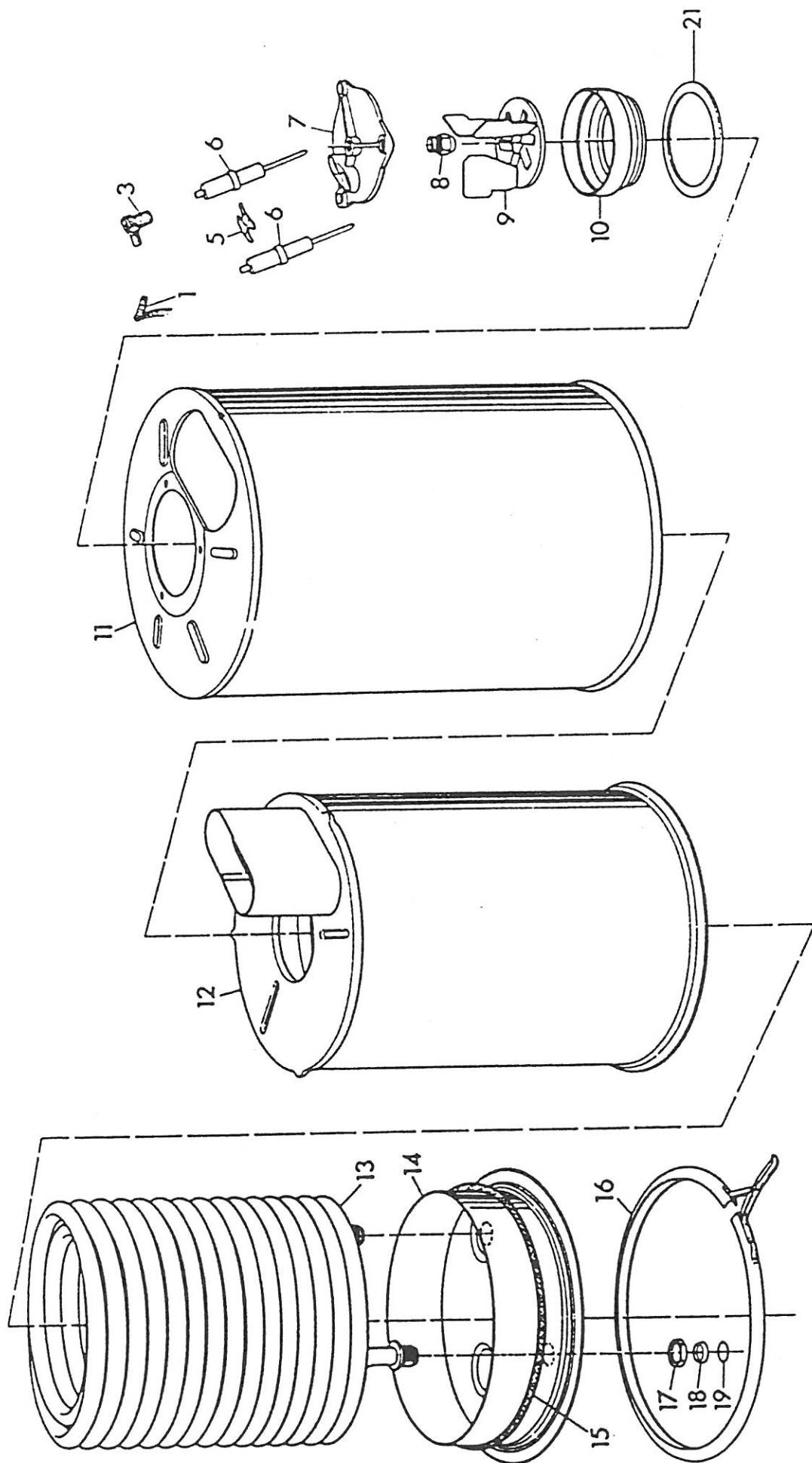
HW 9140

(exploded view no. 07 01162 000)

Ref.	Code No.	Description	Qty.
1	3307068	Cable	2
2	3308035	Rubber seal	2
3	3307067	Pipette	2
4	3309231	Rubber seal	2
5	3309061	Electrode holder	1
6	3309060	Electrode	2
7	3309062	Flange	1
8	3309063	Nozzle 0,85 - 60 °B	1
9	3309064	Baffle	1
10	3309065	Nosepiece	1
11	3309066	External cylinder	1
12	3309067	Internal cylinder	1
13	3309068	Coil	1
14	3309069	Boiler bottom	1
15	3309074	Fib. glass cord	1
16	3309070	Ring	1
17	3309071	Ring nut M 26 x 1,5	2
18	3309072	Support ring	2
19	3309073	O-ring 15,54 x 2,62	2

Exploded view HW 9140

07 01162 000



SPARE PARTS LIST

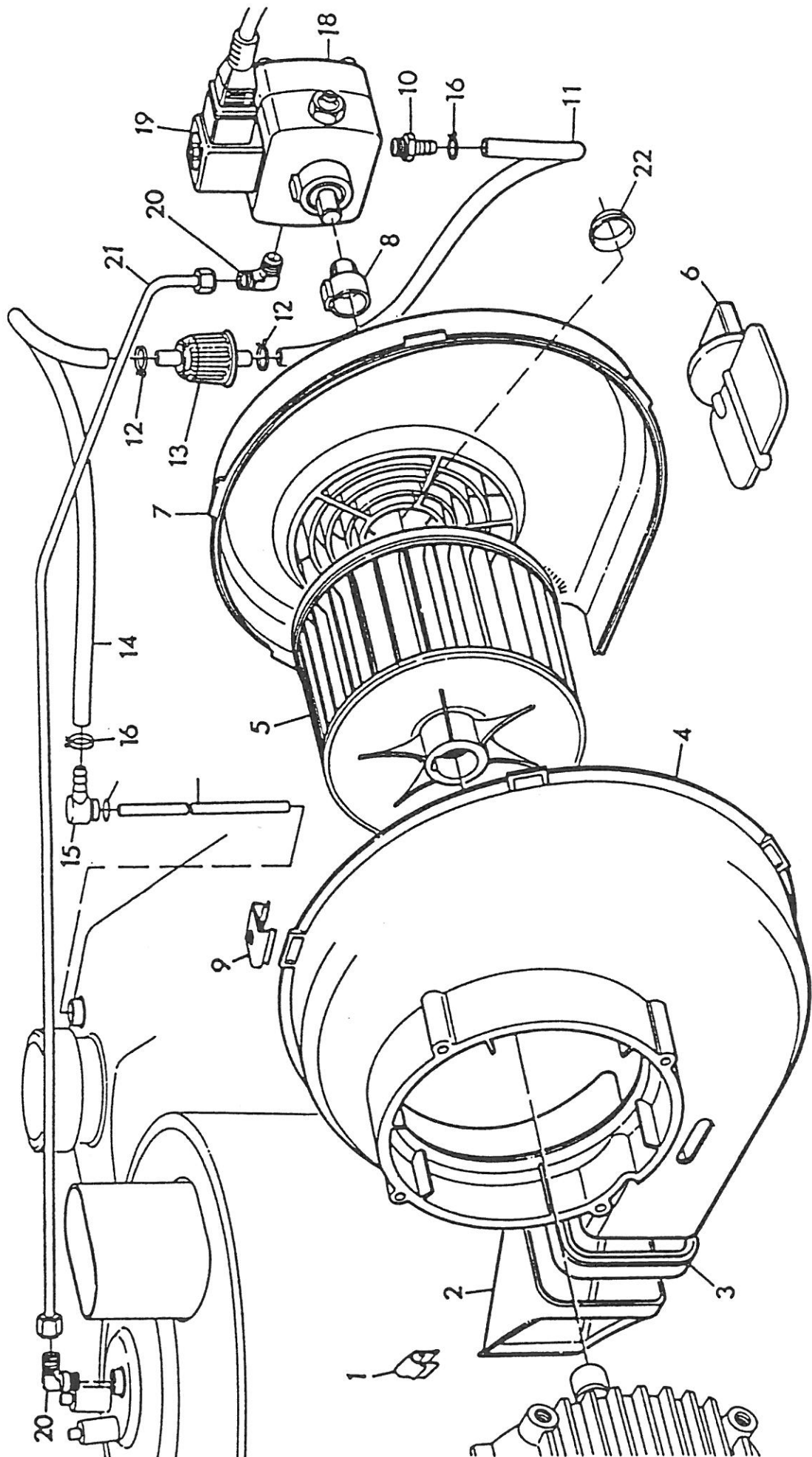
HW 9140

(exploded view no. 07 01163 000)

Ref.	Code No.	Description	Qty.
1	3309080	Clip	2
2	3309081	Conveyor	1
3	3309082	Gasket	1
4	3309083	Scroll body	1
5	3309084	Impeller Ø 140 mm	1
6	3309085	Throttle	1
7	3309086	Fan cover	1
8	3309087	Joint fuel-pump	1
9	3309088	Clip	6
10	6580001	Hose socket 1/4" x 6 mm	1
11	3308075	Suction hose	m
12	1130046	Clamp	4
13	3308082	Filter	1
14	3308075	Suction hose	m
15	3309038	Suction elbow	1
16	1130046	Clamp	2
18	3309090	Fuel pump	1
19	3308074	Magnetic valve	1
20	3300153	Elbow 1/8" x 4	2
21	3309091	Fuel hose	1
22	3309092	Bushing	1

Exploded view HW 9140

07 01163 000



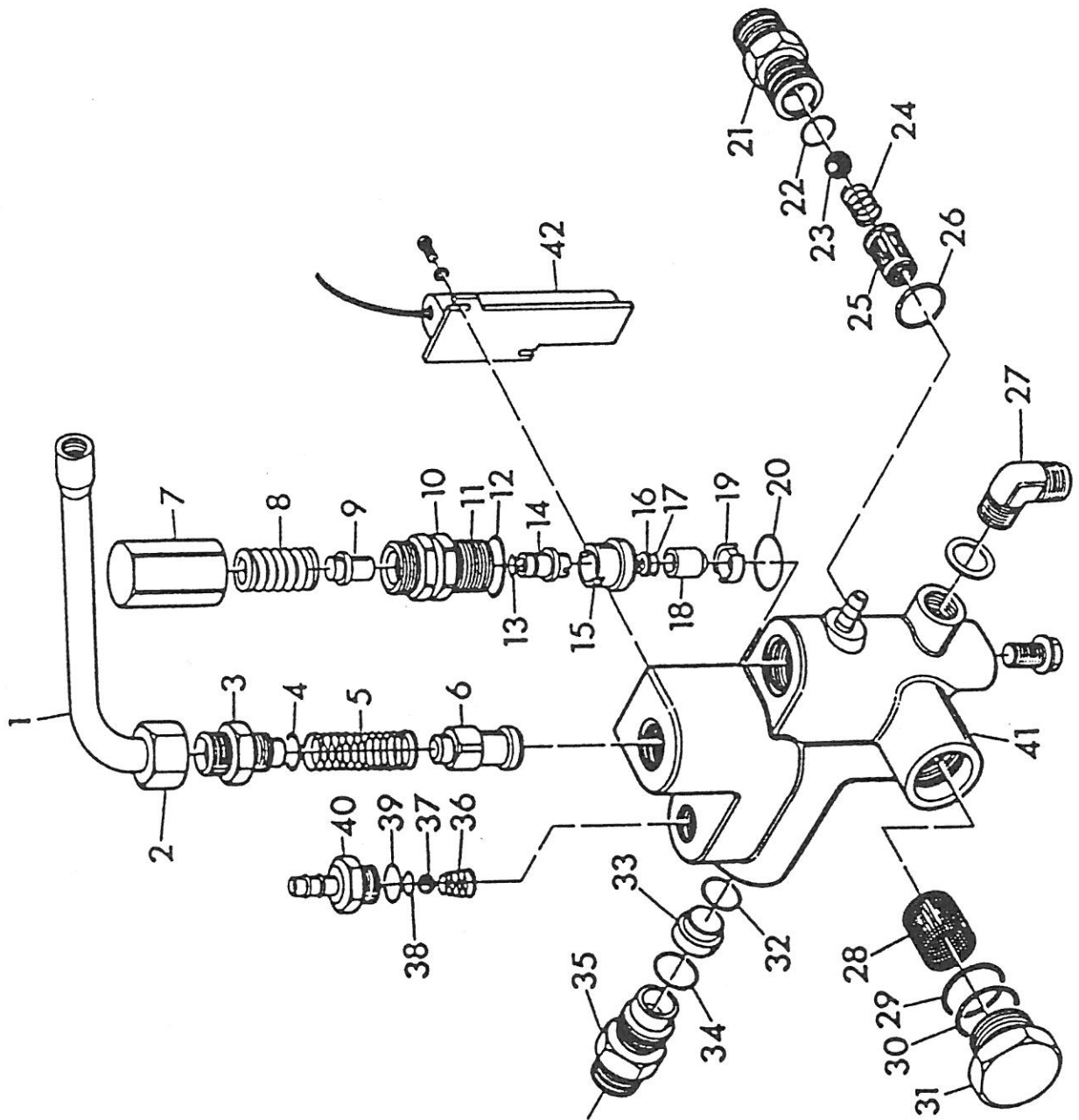
SPARE PARTS LIST

HW 9140

(exploded view no. 07 01175 000)

Ref.	Code No.	Description	Qty.
1	3309043	Pressure gauge fitting	1
2	3309042	Nut M 17 x 1,5	1
3	3309041	Nipple M 14 x 1 - M 17 x 1,5	1
4	3308079	O-ring 11,11 x 1,78	1
5	3309100	Spring	1
6	3309101	Piston	1
7	3309232	Cap	1
8	3309233	Spring	1
9	3309234	Spring guide	1
10	3309235	Nut	1
11	3309236	Piston guide	1
12	1138145	O-ring 18,77 x 1,78	1
13	3309237	O-ring 6,75 x 1,78	1
14	3309238	Piston	1
15	3309239	Guide	1
16	3309240	Support ring	1
17	3308077	O-ring 9,25 x 1,78	1
18	3309241	Seat	1
19	3309242	Valve seat	1
20	3309243	O-ring 17,17 x 1,78	1
21	3309033	Valve	1
22	3309244	O-ring	1
23	3309245	Ball	1
24	3309246	Spring	1
25	3309247	Valve seat	1
26	1138346	O-ring 12,42 x 1,78	1
27	3309215	Elbow 90 °C	1
28	3309108	Water filter	1
29	3309109	O-ring 17,86 x 2,62	1
30	3309110	Gasket	1
31	3309111	Cap	1
32	1138177	O-ring 9,92 x 2,62	1
33	1138176	Injector nozzle	1
34	3300116	O-ring 13,95 x 2,62	1
35	3309044	Nipple 3/8" x M 22	1
36	3309112	Spring 8 x 5,3	1
37	1138159	Ball 7/32"	1
38	3300108	O-ring 5,28 x 1,78	1
39	1133236	O-ring 10,82 x 1,78	1
40	3309037	Nipple	1
41	3309113	Safety block	1
42	3309114	Reed switch	1

Exploded view HW 9140



07 01175 000

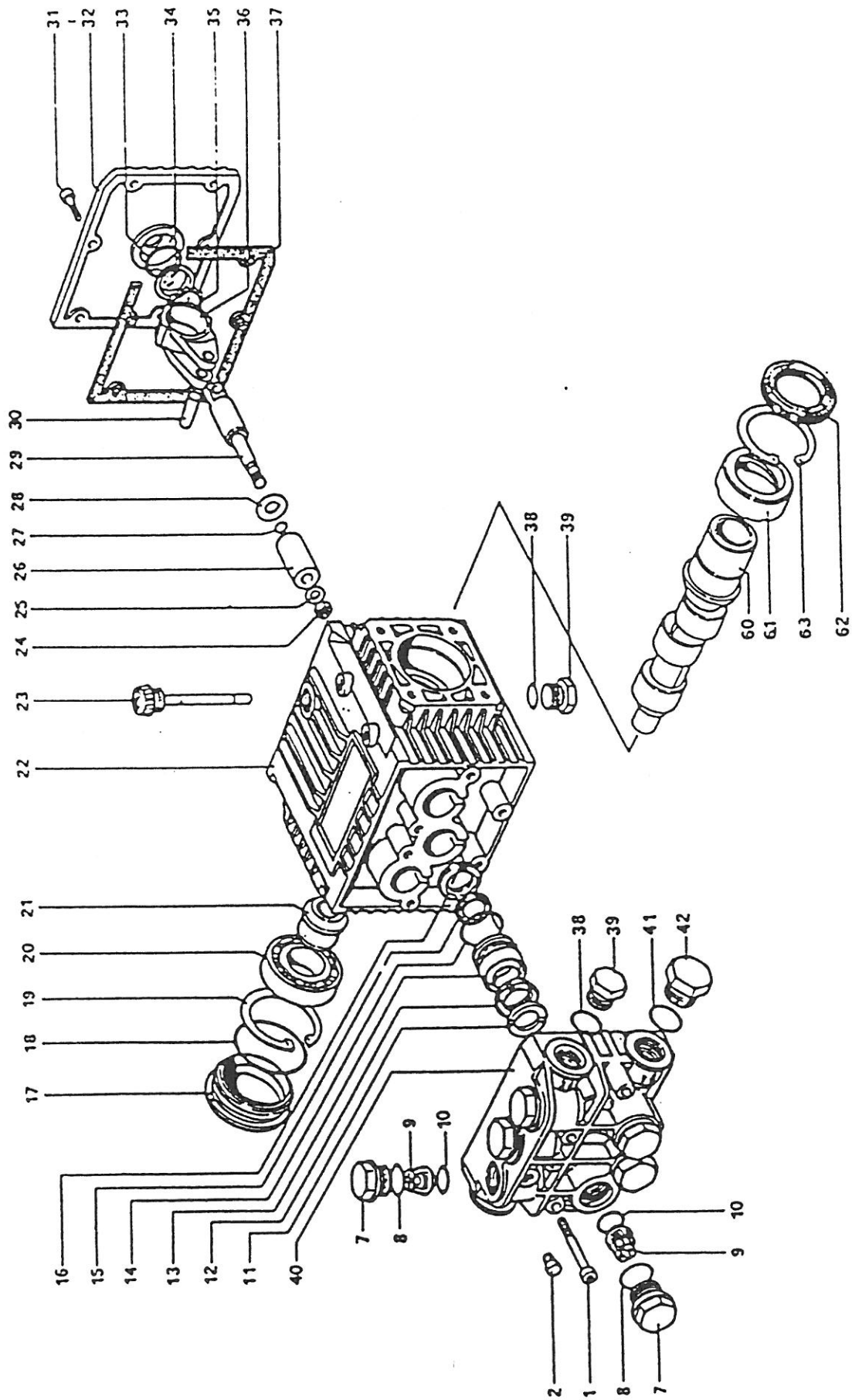
SPARE PARTS LIST

HW 9140

(exploded view no. 07 01188 000)

Ref.	Code No.	Description	Qty.
1	3309248	Screw M 6 x 60	6
2	3309249	Plug	1
7	3309250	Cap	6
8	3309109	O-ring 17,86 x 2,62	6
9	3309251	Valve compl.	6
10	3309073	O-ring 15,54 x 2,62	6
11	3309252	Support ring	3
12	3309253	Collar	3
13	3309254	Piston guide	3
14	3309255	O-ring 26,7 x 1,78	3
15	3309256	Collar	3
16	1138123	Oil seal 15 x 24 x 5 mm	3
17	3309257	Cap	1
18	3309258	O-ring 47,35 x 1,78	1
19	3309259	Spring ring	1
20	3309260	Bearing	1
21	3309261	Bushing	1
22	3309262	Pump crankcase	1
23	3309263	Dipstick	1
24	1138052	Nut	3
25	3309264	Washer	3
26	3309265	Piston	3
27	3309266	O-ring 4,48 x 1,78	3
28	3309267	Washer	3
29	3309268	Piston guide	3
30	3309269	Piston pin	3
31	3309270	Screw M 5 x 20	6
32	3309271	Cover	1
33	1133309	O-ring 20,24 x 2,62	1
34	3309272	Inspection glass	1
35	3309273	Spring ring	1
36	3309274	Connecting rod	3
37	3309275	Gasket	1
38	1138174	O-ring 14 x 1,78	2
39	3309276	Plug 3/8"	2
40	3309277	Pump head	1
41	3309278	O-ring 17,5 x 2	1
42	3309279	Plug 1/2"	1
60	3309280	Crankshaft	1
61	3309281	Ball bearing	1
62	3309282	Gasket	1
63	3309283	Spring ring	1

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SPARE PARTS LIST

HW 9140

(exploded view no. 07 01255 000)

Ref.	Code No.	Description	Qty.
1	3309284	Connecting piece	1
2	3309285	O-ring 6,07 x 1,78	1
3	3309286	Support ring 6,2 x 9	1
4	3309287	Valve body	1
5	3309288	Hose fitting	1
6	3309289	O-ring 18,72 x 2,62	1
7	3309290	Nozzle	1
8	3309291	Spring	1
9	3309292	Piston	1
10	3309293	Support ring	1
11	3308079	O-ring 11,11 x 1,78	1
12	3309294	Pin 3 x 20	1
13	3309295	Knob	1

07 01255 000

Exploded view HW 9140

