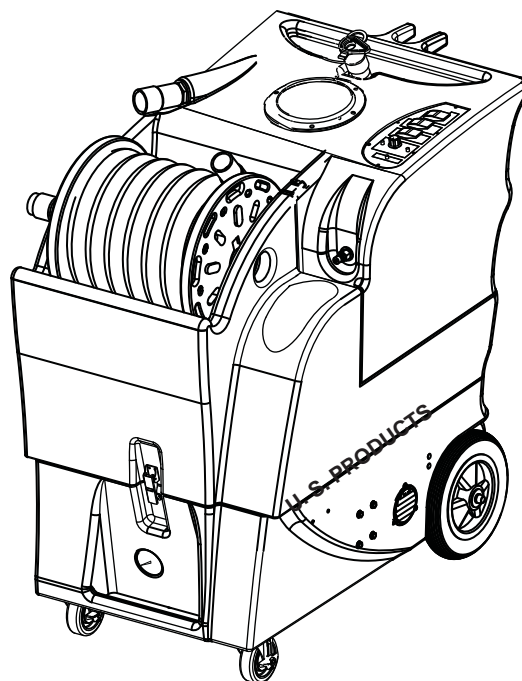




KING COBRA® 310 120V

INFORMATION & OPERATING INSTRUCTIONS



**CAUTION: DO NOT OPERATE MACHINE UNTIL YOU HAVE READ
ALL SECTIONS OF THIS INSTRUCTION MANUAL**



IMPROPER USE OF THE MACHINE WILL VOID THE WARRANTY

1. Always use a defoamer when foaming occurs to prevent vacuum motor damage.
2. Before each use, remove the spray tool from the hose, and check to make sure the spray nozzles are securely tightened to the spray tool. A loose nozzle could fly off during use.
3. Keep machine from rain and snow, extremes in temperatures, and store in a heated location. Use the machine indoors. Do not use outdoors.
4. Never allow the spray to remain fixed in one spot.
5. Use approved chemicals only. NO SOLVENTS.
6. Wear gloves or use rags when removing quick disconnects to prevent burns.
7. Never use water above 130° F/54° C in the solution tank.
8. Never use the machine without the pre-filter bag installed.

IMPORTANT SAFETY INSTRUCTIONS

This machine is only suitable for commercial use, for example in hotels, schools, hospitals, factories, shops, and offices other than normal residential housekeeping purposes.

When using any electrical appliance, basic precautions should always be followed, including the following:

NOTE: Read all instructions before using this machine.



WARNING!

To reduce the risk of fire, electric shock, or injury:

- Do not leave the machine unattended when it is plugged in. Unplug the unit from the outlet when not in use and before servicing.
- To avoid electric shock, do not expose to rain or snow. Store, and use, indoors.
- Do not allow to be used as a toy. Close attention is necessary when used near children.
- Use only as described in this manual. Use only the manufacturer's recommended attachments.
- Never add water over 130° F / 54° C to the solution tank.
- Do not use with damaged cord or plug. If the machine is not working as it should, has been dropped, damaged, left outdoors or dropped into water, return it to a service center.
- Do not pull by the cord, use the cord as a handle, close a door on the cord, or pull the cord around sharp edges or corners. Do not run the machine over the cord. Keep the cord away from heated surfaces. To unplug, grasp the plug, not the cord.
- Do not handle the plug, the cord, or the machine with wet hands.
- Extension cords must be 12/3 and no longer than 50 feet. Replace the cord or unplug immediately if the ground prong becomes damaged.
- Do not put any object into openings. Do not use with any opening blocked; keep free of dust, lint, hair, and anything that may reduce air flow.
- Keep loose clothing, hair, fingers, and all parts of body away from openings and moving parts.
- Do not pick up anything that is burning or smoking, such as cigarettes, matches, hot ashes, or any health endangering dusts. Do not use to pick up flammable or combustible liquids such as gasoline or use in areas where they may be present.
- Turn off all controls before unplugging.
- Use extra care when cleaning on stairs.
- Connect to a properly grounded outlet only.
- Liquid ejected at the spray nozzle could be dangerous as a result of its temperature, pressure, or chemical content.

INSPECTION:

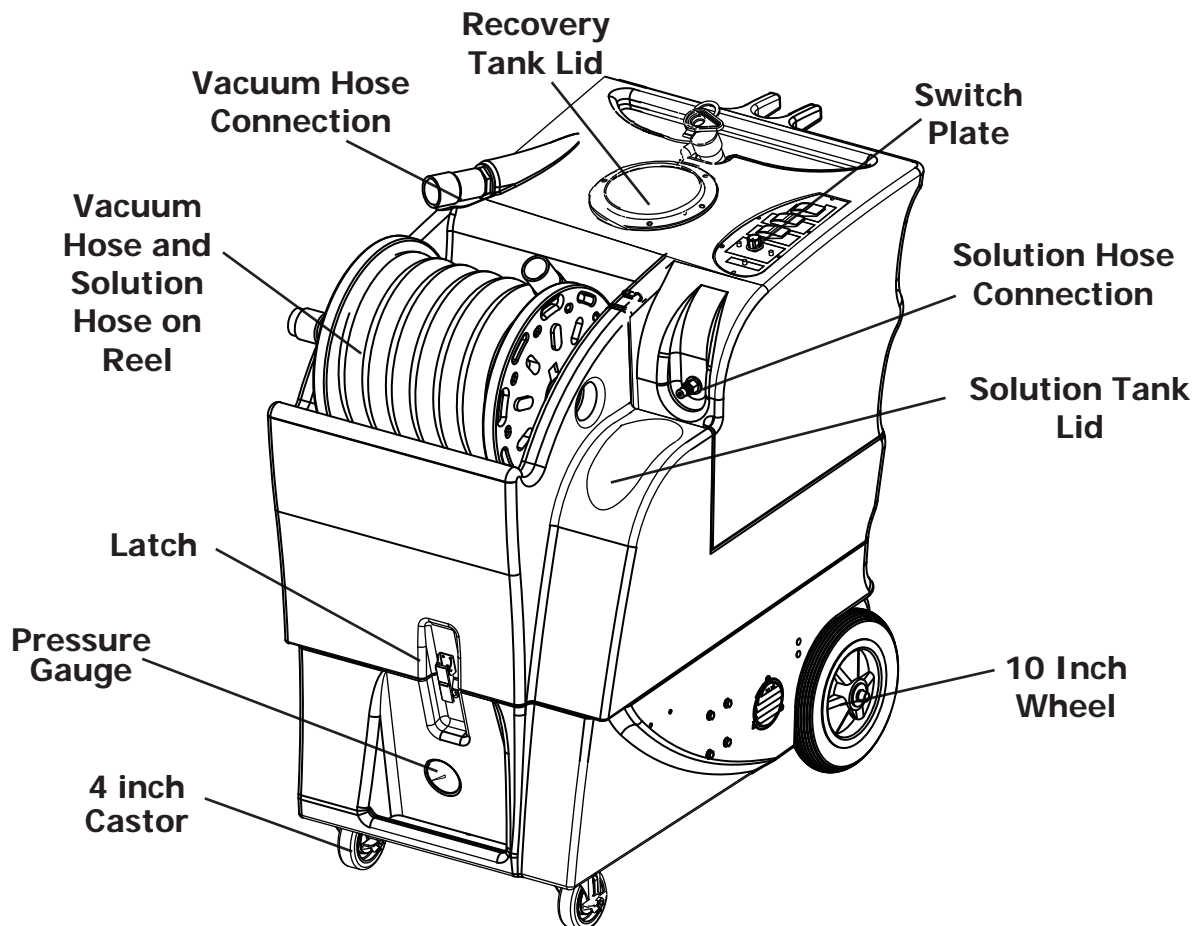
Carefully unpack and inspect your KING COBRA-310 for shipping damage. Each machine is tested and inspected before shipping. Any shipping damage incurred is the responsibility of the carrier. You should notify the carrier immediately if you notice damage to the box or to the machine or parts.

CLEANING SOLUTIONS:

We recommend liquid cleaning chemicals. Powder chemicals may be used, but unless mixed very thoroughly they could cause a build-up in the pump, lines, heat exchanger, and/or quick disconnects. Any problem caused by a chemical build-up is not covered by warranty. Use a neutral cleaner with a pH between 5 and 10 to avoid premature wear of the pump, seals, and/or other components.

MAINTENANCE:

For optimum performance flush the machine with clear water at the end of each working day. Once a month, minimum, run a flushing compound through the machine to break up any mineral or chemical build-up that may have formed. The vacuum motor and the pump do not require any scheduled maintenance; however, the motor may require replacement brushes after 1000 - 1500 hours. Clean the body with an all-purpose detergent, and protect it with an automobile interior polish. Lubricate the wheels, castors, and quick disconnects with an all purpose silicone spray.



NOTE: This machine is only suitable for commercial use, for example in hotels, schools, hospitals, factories, shops, and offices other than normal residential housekeeping purposes.

Record the serial number and model of your new extractor here:

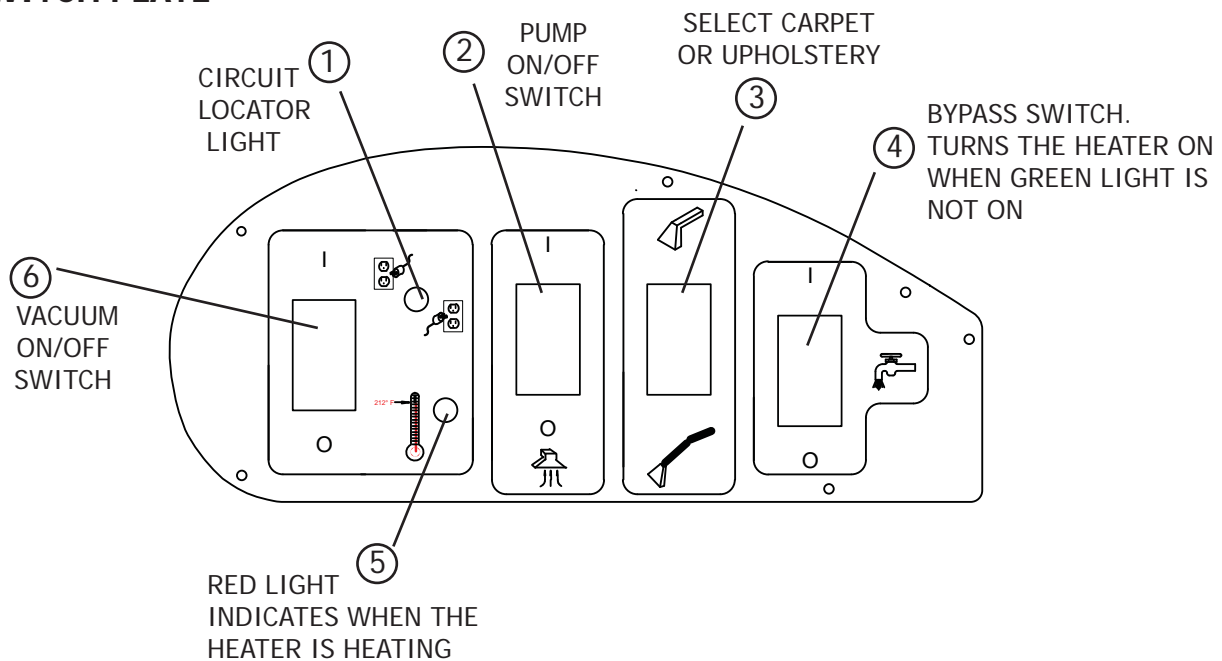
(and be sure to register your purchase to activate your warranty)

Serial Number: _____ **Model:** **KING COBRA-310**

Purchase Date: _____

Write the name and phone number of your distributor: _____

SWITCH PLATE



SET-UP and OPERATION

- 1 Inspect the machine, hoses, and cleaning tools for cleanliness and completeness.
- 2 Fill the solution tank with water. Using warm water may be a benefit in cleaning effectiveness, but do not use hot water (above 130° F / 54°C) in the tank.
- 3 Plug in the power cords. Do not connect both cords to the same outlet; the green circuit locator light (1) on the switch plate should light up. If the locator light does not come on, try different outlets until it does. If you are certain the cords are on separate circuits, turn on the bypass switch (4).

CAUTION: using the bypass switch (4) when the cords are on the same circuit may cause the breaker in the wall to trip. **NOTE:** the red light (5) will turn on only when the heat exchanger is actively heating.

REFER TO THE DIAGRAMS ON THE PREVIOUS PAGE

- 4 Connect the priming hose to the machine, turn on the pump (2) and prime the air out of the pump. When the water is clear (no air in it) turn the off pump and remove the priming hose. **NOTE:** if priming is difficult, place the open end of the priming hose into the vacuum inlet hose barb and turn the vacuum on (6). Use you hand to block the open area around the hose in the hose barb. This will allow the pump and the vacuum to work together to get the water moving. Priming may take 20-60 seconds, and the solution tank should be full. Once the pump is primed, turn off the pump and the vacuum. Remove the priming hose.
- 5 Add liquid cleaning chemical, with a pH between 5 and 10, to the solution tank, or pre-spray the area.
- 6 Attach the spray hose to the solution quick disconnect on the front of the machine below the switch plate and the vacuum hose to the hose barb on the recovery tank. Pull the hoses out of the reel. Attach the other ends of the hoses to the cleaning tool.
- 6 Allow the heat exchanger two minutes to reach operating temperature. The red light (5) will go out when the heater has reached operating temperature. **NOTE:** the red light will be on nearly all the time as you clean.
- 7 Turn on the pump and set the pressure selection switch (3) to the desired spraying pressure (carpet or upholstery). Turn on the vacuum (6).
- 8 Begin cleaning using the correct hoses and tool.
- 9 Use defoamer in the recovery tank any time foaming occurs.
- 10 Monitor the water level in the solution tank. Do not let the pump run dry.
- 11 When the solution tank gets low, turn off the pump and the vacuum, fill the solution tank, empty and clean the recovery tank.
- 12 When finished with the job remove any unused solution from the solution tank, and run a few gallons of clean water through the system. Drain the recovery tank by placing the dump hose over a drain, or into a bucket, and removing the hose cap. Disconnect the hoses from the cleaning tool, and reel the hoses up onto the hose spool.

NOTE: to remove the reel, with the hoses, from the machine, pull the vacuum hose loose from the hose barb on the front of the tank. Disconnect the solution hose quick coupling. Push the vacuum hose into the center of the spool. Grasp the spool on both sides, and lift it off the machine. **NOTE:** before servicing any component in the base cabinet, the hoses and spool must be removed from the machine before the tanks can be lifted open.

ELECTRIC CIRCUIT LOCATOR

This unique, patented system is operated by a solid state circuit. It will inform the operator when the two cords are plugged into separate circuits by turning on the circuit locator light. This helps to prevent tripping circuit breakers. **NOTE:** if the green, circuit locator light does not illuminate when both cords are plugged in, then both cords are on the same circuit. Try other outlets with one of the cords until you

BALL FLOAT SHUT-OFF

When the recovery tank is full, the ball float will disable the vacuum suction. This will prevent water from entering the vacuum motor. The float may not work properly if the vacuum inlet float filter is dirty or if there is heavy foam in the tank.



CAUTION: Use care when handling hazardous chemicals.

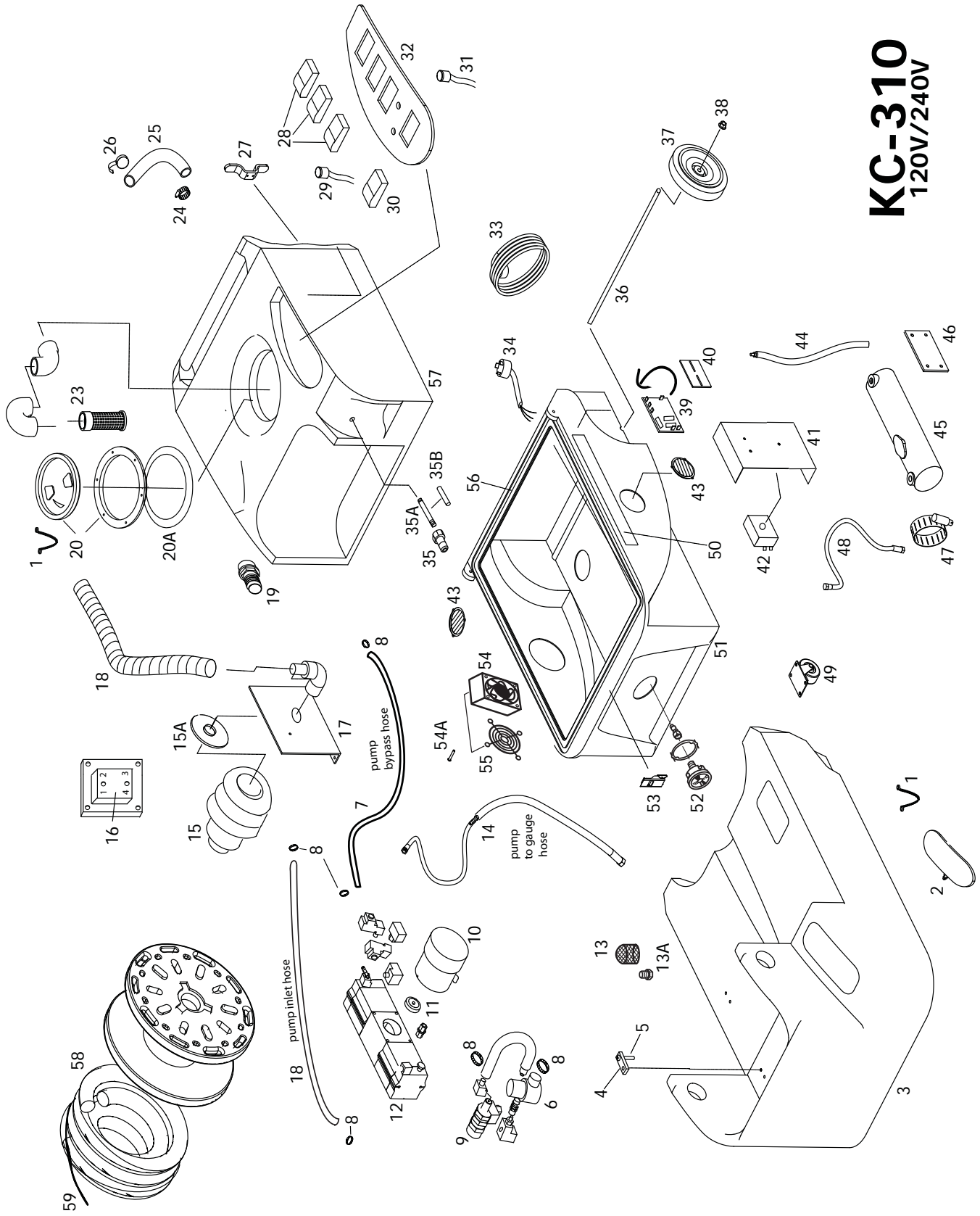
CAUTION: Never leave the machine running when you are not actively using it.

CAUTION: Always use a defoamer when foaming occurs to prevent vacuum motor damage.

DANGER: Do NOT use solvents, or any chemicals that may be flammable, explosive or combustible.

KC-310

120V/240V



KING COBRA-310 EXTRACTOR

120V PART LIST 240V

<u>ITEM</u>	<u>PART No.</u>	<u>DESCRIPTION</u>
1	FP436	Chain assembly for lid, 8"
2	901B	Lid, solution tank
3	HKCR1	Holding tank, white
4	1088	Glide, teflon
5	331	Screw, 6-32 X 1/4"
6	2062	Solenoid valve, 120V
	2063	Solenoid valve, 240V
7	925	Hose, 3/8" X 20-1/2"
8	166	Hose clamp
9	945	Valve, pump, bypass
10	2060	Motor, pump, 120V
	2064	Motor, pump, 240V
11	950A	Cam/bearing assembly
12	FP363	Pump complete, no mtr or soleniod
13	207A	Filter, pump inlet, 40 mesh
13A	92B	Nipple, plastic
14	FP356	Hose assembly, pump to gauge
15	913	Vacuum motor, 3-stage, 120V
	913A	Vacuum motor, 3-stage, 240V
15A	959	Gasket, vacuum motor
16	4405A	Relay, 120V/240V, vacuum
17	926	Manifold, vacuum motor mount
18	946	Hose, vacuum inlet, 1/2" X 22"
19	907	Hose barb, for vacuum hose
20	2086A	Lid, vacuum with ring
20A	1074	Gasket, lid
23	FP364	Ball float Assembly
24	1518	Hose clamp
25	1060B	Hose, drain, 1-1/2" x 24"
26	1060C	Plug, drain hose
27	FP388	Cord wrap, Black
28	FP345	Switch and acuator, motors
29	78	Light, green, 120V
30	FP346	Switch and actuator, heat / bypass
31	78B	Light, red, 120V
	228	Light, red, 240V
32	2065C	Switch plate, 120V
	2065D	Switch plate, 240V
33	1057B	Cord, power, 25 ft, yellow
	2019	Cord, power, 240V
34	1062	Receptacle, power cord, 120V only
35	45	Quick disconnect, male, 1/4 p.t.
35A	1146	Nipple, S/S
35B	1144A	Tubing, 4-3/4"
36	910-21.00	Axle, cut to length, 21"
36A	810B	Hinge pin
37	2084	Wheel, 10"
38	27A	Axle cap
39	923B*	Dual circuit sensor PCB. 120V only
40	FP336	PCB mount, snap track, 120V only
41	918	Heat sink plate

<u>ITEM</u>	<u>PART No.</u>	<u>DESCRIPTION</u>
42	-----	See miscellaneous
43	928	Louver, 3", includes screws
44	FP356A	Hose, pump to heater
45	FP357	Heat exchanger, complete, 120V
	FP359	Heat exchanger, complete, 240V
46	455	Mount, heat exchanger
47	198	Hose clamp
48	FP348A	Hose, heater to outlet
49	905	Castor, 4"
50	966A	Label, KC-310
51	BKCR-BLK	Base, black
52	2164	Pressure gauge
53	908A	Latch, rubber
54	2014	Fan, 100 CFM, cooling, 120V
	2018	Fan, 100CFM, cooling, 240V
54A	2B1	Screw, 6-32 X 2-1/4"
55	2015	Guard, cooling fan
56	FP351	Gasket, 84"
57	VKCR-1	Vacuum tank, white
58	FP350A	Vacuum hose, complete
59	FP350B	Pressure line, complete

MISCELLANEOUS PARTS AND KITS

FP194E	Thermistor control, w/probe, pot, tape & cutout, 120V & 240V
FP352	Pump & motor complete, 120V
FP353	Pump & motor complete, 240V
FP354	Pump with solenoid (no mtr), 120V
FP355	Pump with solenoid, (no mtr) 240V
FP350	Hose reel assembly, complete
FP350C	Vacuum hose and pressure line, complete, no reel
FP469	Hose Assy, swivel w/bulkhead, 16-1/2"

(parts in kits are not sold separately)

MAINTENANCE SCHEDULE

	DAILY	WEEKLY	MONTHLY	YEARLY	OTHER
CLEAN ALL FILTERS	X				
CHECK POWER CORD	X				
FLUSH OUT with DESCALER			X		
REPLACE VAC MOTOR BRUSHES					Around 1500 hours
REPLACE PRESSURE REGULATOR				X	Or as needed

TROUBLE SHOOTING:

IF THIS OCCURS CHECK THIS

NO SPRAY	Solution tank is empty. Clogged spray tip. Pump not running or not primed. Valve on wand not operating.
LOW SUCTION	Debris is plugging cleaning tool or vacuum hose. Drain hose is not completely closed. Vacuum tank lid is not closed or seal is damaged.
NO SUCTION	No power to motor. Test the switch. Test the vacuum motor.
LOW HEAT	Spraying too long. Try spraying for 6 - 9 seconds, or about three strokes. Heat exchanger needs to be flushed. Wrong tool being used. Too much water passing through. Longer hose or larger diameter hose, than standard.
NO HEAT	Heat is not turned on. No power in the wall outlet - check to see if the breaker has tripped. No power to the bypass - check wiring for 'opens.' No power out of bypass switch; follow troubleshooting steps to isolate the problem. Call your distributor for additional help.



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