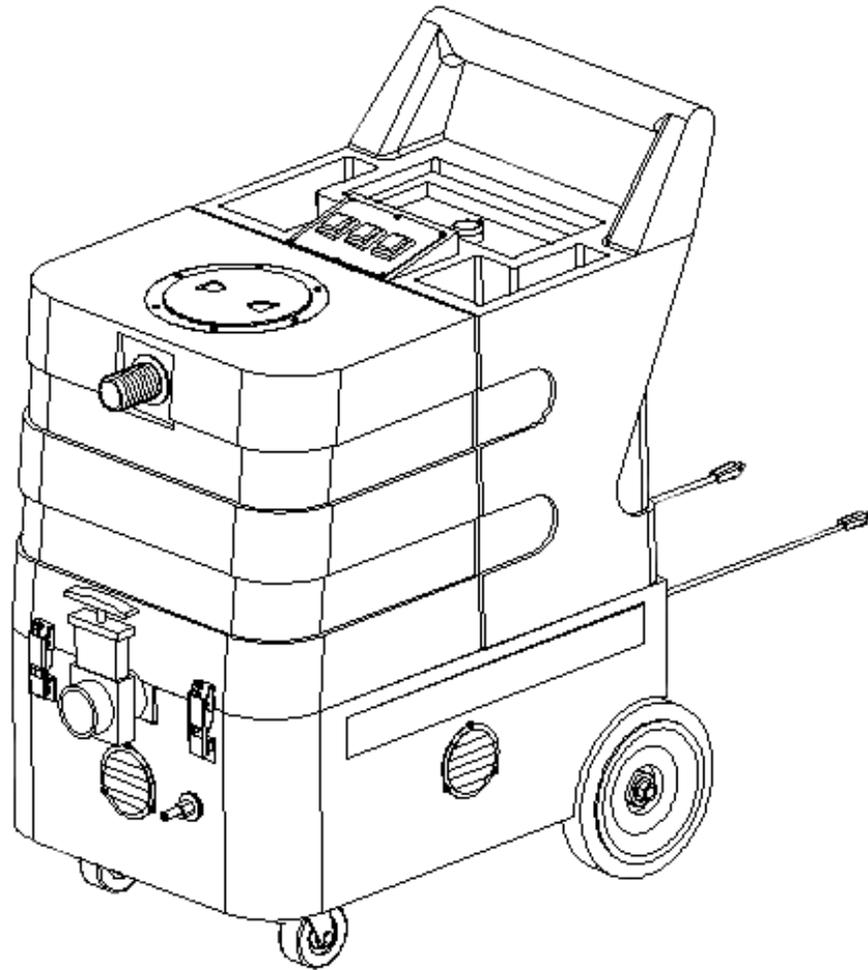


# COBRA-H-DLC

## OPERATOR'S MANUAL



 **DIAMOND LUSTRE**  
INT, LTD.

## INTRODUCTION

This manual will help you get the most from your **Cobra-H-DLC**. Read these instructions thoroughly before operating the machine.

This product is intended for commercial use only.

## UNCRATING

When the machine is delivered, carefully inspect the shipping carton and the machine for damage. If damage is evident, save the shipping carton so that it can be inspected. Contact Diamond Lustre Customer Service immediately for instructions on how to file a freight damage claim.

## SERIAL NUMBER PLATE

The Serial Number of your machine is shown on the plate that is mounted on the floor of the base compartment. This serial number and model are needed when ordering replacement parts for the machine. Use the space below to note the Model and Serial Number of your machine for future reference.

MODEL : COBRA-H-DLC

SERIAL NUMBER : \_\_\_\_\_

Be sure to fill out and return your warranty card.

## PARTS AND SERVICE

Repairs, when required, should be performed by your authorized Diamond Lustre dealer who maintains an inventory of original replacement parts and accessories.

Call the Diamond Lustre distributor from whom you purchased your machine when you need parts or service. Please specify the Model and Serial Number when discussing your machine.

### **DO NOT OPERATE THE MACHINE UNTIL YOU HAVE READ THIS SECTION. IMPROPER USE WILL VOID THE WARRANTY.**

- Always use a defoamer when foaming occurs to prevent vacuum motor damage.
- Never use water above 130° F (54°C).
- Do not use outdoors or where temperature is below freezing. Protect your machine from any extremes in temperatures.
- Do not let the pump run dry. Turn the pump off and refill the tank when cleaning solution gets low.
- Flush the machine with an acid de-scaler regularly (monthly or more often) to prevent a build-up of minerals or chemicals in the pump and heat systems. Follow the flush with a clear water rinse to remove any particles and to rinse the acid from the machine.
- Use approved chemicals only. All chemicals should be mixed thoroughly. Liquid chemicals are recommended to prevent powder buildups. A pH between 6 and 9 is recommended. The use of high alkaline detergents or strong acids will accelerate the wear of the pump and seals, and will void the warranty.
- All extension cords must have a rating of at least 12/3 (#12 cord). Extension cords should be no longer than 50 feet. Replace the plug immediately if the ground prong becomes damaged or is broken off.

# 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.
- 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.
- Do not unplug by pulling on the cord. To unplug, grasp the plug, not the cord.
- Do not handle the plug, the cord or the machine with wet hands.
- 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, or hot ashes, or any health endangering dusts.
- Turn off all controls before unplugging.
- Use extra care when cleaning on stairs.
- Do not use to pick up flammable or combustible liquids such as gasoline or use in areas where they may be present.
- Connect to a properly grounded outlet only. See Grounding Instructions.
- Liquid ejected at the spray nozzle could be dangerous as a result of its temperature, pressure or chemical content.

## 120VAC GROUNDING INSTRUCTIONS

This machine must be grounded. If it should electrically malfunction, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This appliance is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

### DANGER!

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the appliance. If it will not fit the outlet, have a proper outlet installed by a qualified electrician.

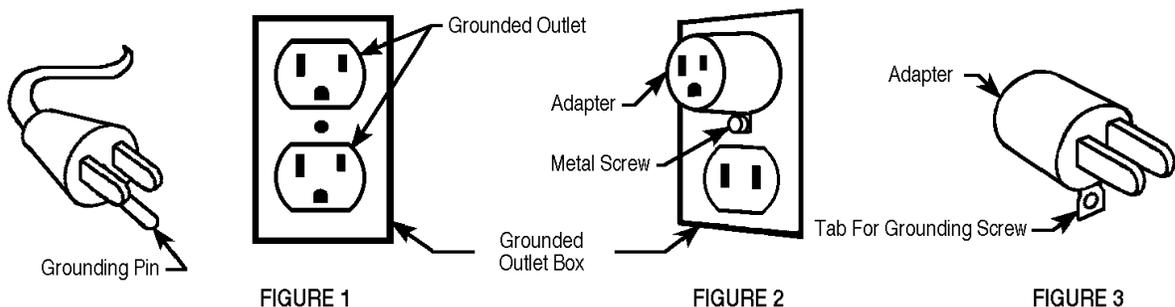
This appliance is for use on a nominal 120-volt circuit, and has a grounding plug that looks like the plug illustrated in Figure 1 below. A temporary adapter illustrated in Figures 2 and 3 may be used to connect this plug to a 2-pole receptacle as shown in Figure 2 if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet (Figure 1) can be installed by a qualified electrician. The green-colored rigid ear, tab, or the like extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adapter is used, it must be held in place by a metal screw. Grounding adapters are not approved for use in Canada.

Replace the plug if the grounding pin is damaged or broken.

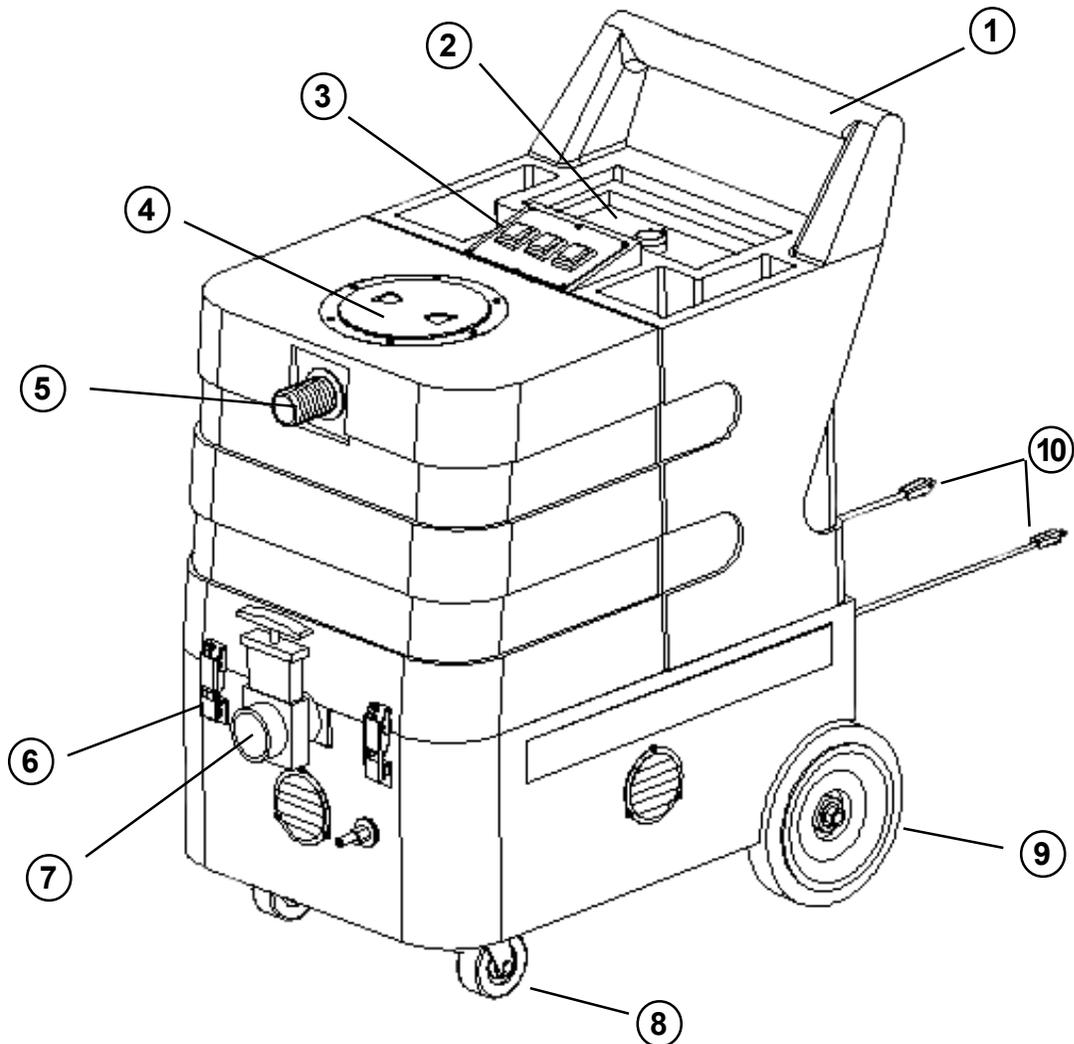
The Green (or Green/Yellow) wire in the cord is the grounding wire. When replacing a plug, this wire must be attached to the grounding pin only.

Extension cords connected to this machine should be 12 gauge, three-wire cords with three-prong plugs and outlets. DO NOT use extension cords more than 50 feet (15 m) long.

#### PLEASE NOTE: FOR NORTH AMERICA ONLY



## BECOME FAMILAR WITH YOUR NEW EXTRACTOR



### MACHINE DESCRIPTIONS

**Operator Handle (1)** - Operator holds this to move the machine from one location to another.

**Solution Tank Lid (2)** - Fill Solution Tank here with warm water and chemicals.

**Switch Plate (3)** - This is where the switches are located that operate the pump, vacuum and heater.

**Recovery Tank Lid (4)** - The Recovery Tank can be flushed out by running clean water into this opening with the Drain Gate (7) open. The vacuum float Shut-OFF can also be accessed through this opening for maintenance.

**Vacuum Inlet (5)** - This is where the vacuum hose attaches to the machine.

**Latch (6)** - Open the latches to access the base compartment, which contains the motors and heater.

**Drain Gate (7)** - Open this gate to drain the recovered solution out of the machine. Be sure to keep this gate clean.

**Castor (8)** - The castor swivels for easy maneuvering in tight spots.

**Wheel (9)** - Large, non-marking wheels for ease of transport.

**Power Cords (10)** - Two, 25 foot cords, rated 12 gauge, 3 wire. Do not use if either cord is damaged. The cord with the red sleeve operates the vacuum and the pump. The other cord operates the heat exchanger.

## OPERATION

- 1 Inspect the machine, hoses, and cleaning tools for cleanliness and completeness.
- 2 Fill the Solution Tank with warm 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. Add liquid cleaning solution with a pH value of between 6 and 9. High pH detergents and/or acid rinses will accelerate the wear of the seals and will void the warranty.
- 3 Plug in the power cords. Do not connect both cords to the same outlet. If you are certain the cords are on separate circuits, turn the Heat switch on. **CAUTION:** using the Heat switch when the cords are on the same circuit may cause the circuit breaker in the wall to trip. **NOTE:** the cord with no red sleeve powers the Heat Exchanger. The cord with the red sleeve powers the vacuums and pump.
- 4 Attach the spray hose to the solution quick disconnect on the front of the machine and attach the vacuum hose to the hose barb on the recovery tank. Attach the other ends of the hoses to the cleaning tool.
- 5 Allow the heat exchanger two minutes to reach operating temperature.
- 6 Turn the pump on. Turn the vacuum on. **NOTE:** the pump has a built in pressure switch; the pump runs only when you are spraying.
- 7 Begin cleaning using the correct hoses and tool.
- 8 Use defoamer in the recovery tank any time foaming occurs.
- 9 Monitor the water level in the solution tank. Do not let the pump run dry.
- 10 When the solution tank gets low, turn off the pump, fill the solution tank, empty and clean the recovery tank.
- 11 When finished with the job, remove any unused solution from the solution tank, and run a few gallons of clean water through the system to rinse out any detergent.

## BALL FLOAT VACUUM SHUT-OFF

Prior to using the machine, always check that the float filter is clean and the ball can travel freely. When the recovery tank is full, the ball float will rise and will shut off the vacuum flow to prevent any more water from entering the tank. Turn off the vacuum, and empty the recovery tank. **NOTE:** if foam is present or if the ball float is prevented from rising, the float will not be able to stop the air flow, and the tank may over fill.

### **CAUTION!**

To avoid vacuum motor damage, always make sure the float filter is clean and the ball can travel freely prior to using the machine. And always use a defoamer when foaming occurs.

## MAINTENANCE

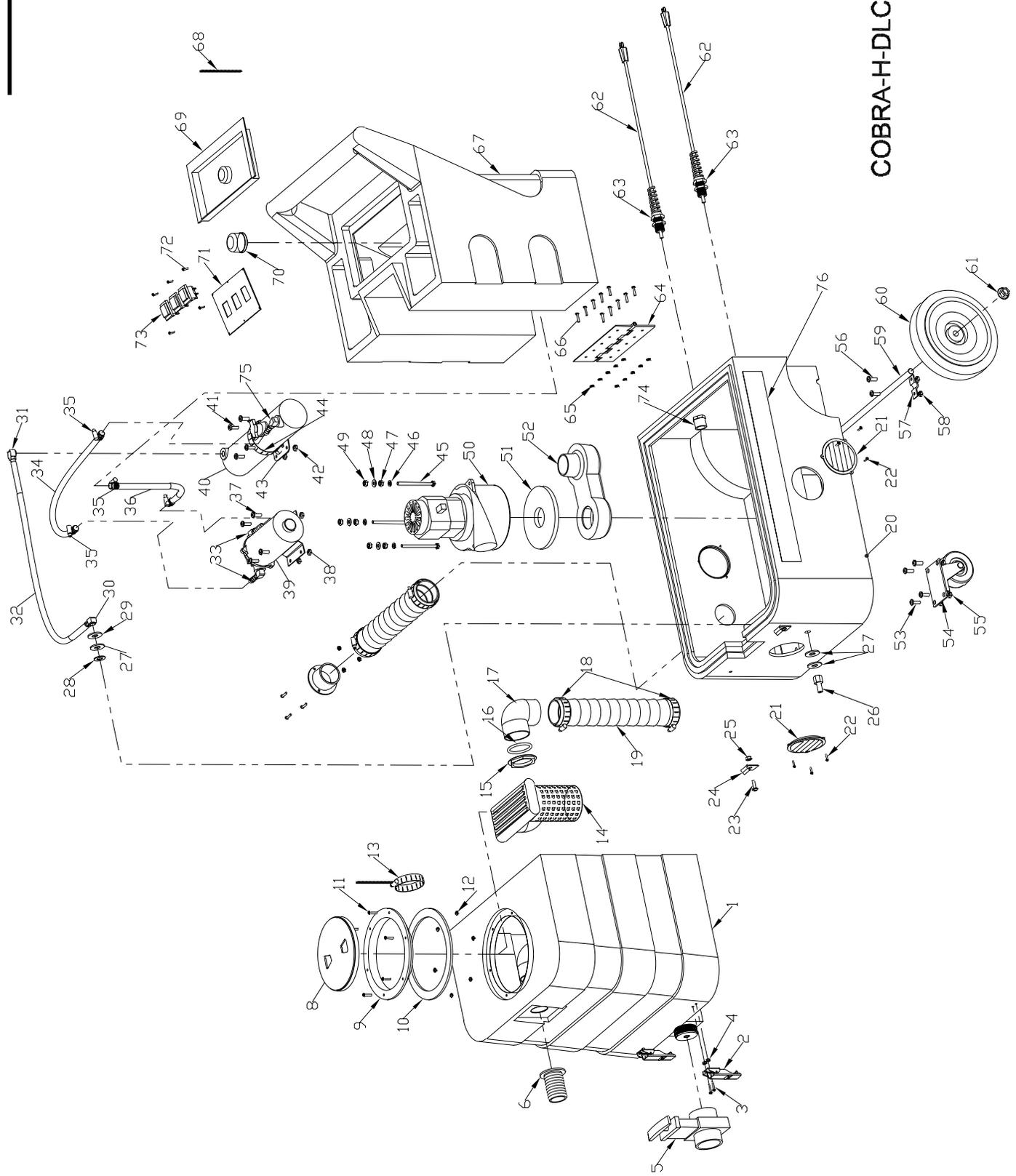
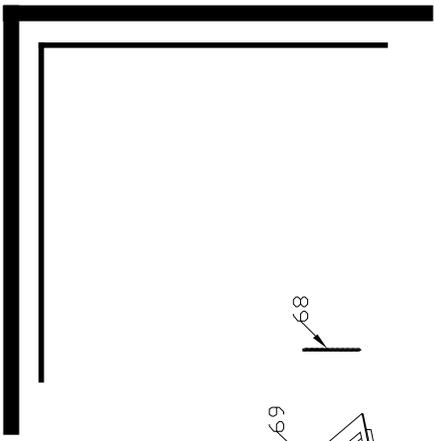
	Daily	Monthly	Yearly
FLUSH LINES & PUMP	X		
CLEAN VACUUM FLOAT FILTER	X		
CLEAN SOLUTION FILTER	X		
CHECK INLET AIRWAYS	X		
DESCALE MACHINE		X	
CHECK VACUUM MOTOR BRUSHES			X

## TROUBLESHOOTING

### IF PROBLEM OCCURS      CHECK THIS

NO SPRAY	Solution tank is empty Clogged spray tip Pump not running Valve on tool not operating
PUMP DOESN'T RUN	Solution path is clogged. Pump only runs when spraying occurs Solution tank may be empty, or nearly empty No power to pump. Test the switch. Test the pump motor.
PUMP PULSATES	Partially clogged solution path (hose, heater, tool) Worn pressure switch in pump. Adjust pressure sensor in pump head.
LOW SUCTION	Debris plugging cleaning tool or vacuum hose Drain gate is not completely closed, or seals are damaged Internal vacuum hose is cracked Recovery tank lid is not closed, is cracked or gasket is damaged Recovery tank is warped or cracked Debris impeding air movement on vac motor impellers
NO SUCTION	No power to motor. Test the switch. Test the vacuum motor.
LOW HEAT	Trying to spray too long. Try spraying for 12 -15 seconds per cycle 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 switch is off No power in the wall outlet — check to see if breaker has tripped No power to heat switch — check power cord for 'opens' No power out of heat switch. Check power at Bi-metallic switch Follow troubleshooting steps to isolate the problem. Call your distributor.

***If you are unable to diagnose the problem, contact the company from which you purchased your Cobra-H-DLC***



**COBRA-H-DLC**

# COBRA-H-DLC 120V PART LIST

ITEM #	PART #	DESCRIPTION	ITEM #	PART #	DESCRIPTION
#1	VT-5	Recovery Tank	#51	2013	Gasket, vacuum motor
#2	908A	Latch	#52	MA-2	Manifold
#3	21C	Screw, 8-32 X 5/8"	#54	2002	Castor, 3"
#4	325	Locknut, 8-21	#57	180	Bracket, axle mount
#5	903D	Drain Gate, female threads	#59	910	Axle
#6	907	Vacuum Inlet Hose Barb, 1-1/2"	#60	2003	Wheel, 8"
#8	2086	Lid, with ring	#61	27A	Axle Cap, wheel retaining
#9	N/A	Ring, part of lid	#62	495	Power cord, 12/3, 25 ft
#10	1074	Gasket	#63	184	Cord Retainer
#11	382C	Screw, 8-32 X 1"	#64	917	Hinge
#14	FP193	Ball Float, with manifold	#65	17	Locknut, 10-32
#15	185	Nut, aluminum, 1-1/2"	#66	21	Bolt, 10-32 X 5/8"
#16	187	O-ring	#67	HT-5	Holding Tank
#17	922	PVC Elbow	#69	901	Lid, solution tank cover
#18	156	Hose Clamp	#70	207A	Filter, pump inlet
#19	FP171	Hose, 2" X 21", ribbed	#71	2006B	Switch plate
#19A	430	Hose, ribbed, 22" long	#72	28	Screw, #4 X 3/8"
#20	BS-6	Base compartment, black	#73	FP311	Switch, SPDT, with cover
#21	928	Louver, includes 3 screws	#74	937	Reducer, PVC
#22	FP228	Gasket	#75	208	Hose barb
#23	21C	Bolt, 8032 X 5/8"	#76	2001D	Label
#24	909A	Latch strike	#77	399A	Heat switch
#26	45	Quick Disconnect, 1/4 n.p.t.	#78	440	Flange, exhaust
#27	92A	Nipple, 1/4 n.p.t.	#79	22	Bolt, 10-32 X 5/8"
#28	116	Bushing, fiber			
#29	31	Washer, brass			
#29A	115	Washer, fiber			
#30	91	Elbow, brass, 1/4 n.p.t.			
#31	103	Elbow, brass, 1/8 n.p.t.			
#32	2012	Hose, 26"			
#33	108	Elbow / Hose barb			
#34	2012	Hose, pump to heater, 26"			
#35	166	Hose Clamp			
#36	925	Hose, pump inlet, 3/8" I.D.			
#37	138	Bolt, 1/4-20 X 1-1/4"			
#38	8	Locknut, 1/4			
#39	2007	Pump, 100 psi			
#40	FP	Heat Exchanger, complete			
#41	5	Bolt, 1/4-20 X 3/4"			
#42	8	Lock nut, 1/4 -20			
#43	455	Bracket, heater mount			
#44	76	Hose Clamp			
#45	270	Bolt, 1/4-20 X 5"			
#46	137	Washer, split lock			
#47	136	Nut, finish, 1/4			
#48	14	Washer, flat			
#49	17	Locknut, 10-32			
#50	408B	Vacuum motor			

### MISCELLANEOUS PARTS / KITS

FP256B Heat repair kit, includes heat/temp. switch and cutout.

**TECHNICAL SPECIFICATIONS: COBRA-H-DLC**

Vacuum Motor:	One, 3-Stage
Water lift:	137 Inches
Amp Draw:	16 amps, each cord
Tank Construction:	Rotationally molded polyethylene
Solution Tank Capacity:	10 Gal. (38 L)
Recovery Tank Capacity:	10 Gal.(38 L)
Application Flow:	100 psi
Solution Hose Length:	15 Ft. (4.5 m)
Recovery Hose Length:	15 Ft. (4.5 m)
Power Cord:	Two 25 ft. (7.6 m), 12 Gauge, 3-wire
Rear Wheels:	8 In. (20.3 cm)
Front Castors:	3 In. (7.6 cm)
Heat Exchanger:	2000 Watt
Height:	34 In.(86.4 cm)
Length:	31 In (78.8 cm)
Width:	17.75 In (45 cm)
Machine weight:	76 Lb (34 kg)



Lancaster, PA • 1-800-899-2833 • Fax: 717-464-5159

[www.diamondlustre.com](http://www.diamondlustre.com)