

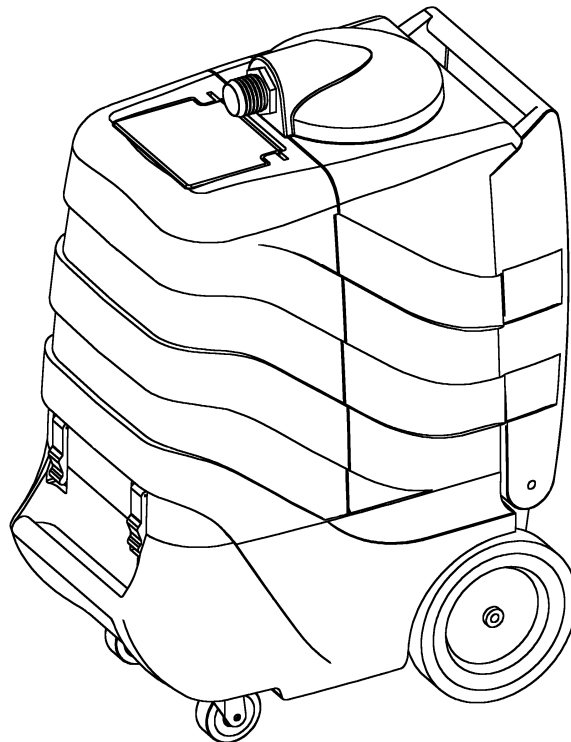
CLEANMASTER®

Raptor 230H

Carpet And Upholstery Cleaner

Model No.:
100-652-230
11 gal Extractor

Operator and Parts Manual



CLEANMASTER
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MNL36456-E3H-CE
Rev. 00 (04-01)

OPERATION

This manual is furnished with each new model. It provides necessary operation and maintenance instructions and an illustrated parts list.

Read this manual completely and understand the machine before operating or servicing it.

Use the illustrated Parts Lists to order parts. Before ordering parts or supplies, be sure to have your machine model number and serial number handy. Parts and supplies may be ordered by phone or mail from any authorized parts and service center, distributor or directly from Cleanmaster.

This machine will provide excellent service. However, the best results will be obtained at minimum costs if:

- The machine is operated with reasonable care.
- The machine is maintained regularly – per the maintenance instructions provided.
- The machine is maintained with manufacturer supplied or equivalent parts.

MACHINE DATA

Please fill out at time of installation for future reference.

Model No.- _____

Install. Date- _____

Serial No.- _____

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OPERATION

SAFETY PRECAUTIONS

This machine is intended for commercial use. It is designed to wet clean carpet and upholstery in a indoor environment and is not constructed for any other use. Use only recommended cleaning solutions and accessory tools.

All operators must read, understand and practice the following safety precautions.

The following safety-alert symbols are used throughout this manual as indicated in their description:

⚠ WARNING: To warn of hazards or unsafe practices which could result in severe personal injury or death.

FOR SAFETY: To identify actions which must be followed for safe operation of equipment.

The following information signals potentially dangerous conditions to the operator or equipment.

FOR SAFETY:

1. **Do not operate machine:**
 - Unless trained and authorized.
 - Unless operator manual is read and understood.
 - In flammable or explosive areas.
 - With damaged cord or plug.
 - If not in proper operating condition.
 - Unless cord is properly grounded.
 - In outdoor areas.
 - In standing water.
 - With the use of an extension cord.
2. **Before operating machine:**
 - Make sure all safety devices are in place and operate properly.
3. **When using machine:**
 - Do not run machine over cord.
 - Do not pull machine by plug or cord.
 - Do not pull cord around sharp edges or corners.
 - Do not unplug by pulling on cord.
 - Do not stretch cord.
 - Do not handle plugs with wet hands.
 - Keep cord away from heated surfaces.
 - Report machine damage or faulty operation immediately.
 - Follow mixing and handling instructions on chemical containers.
 - Connect hoses before turning on pump.
 - Be sure chemicals are safe and non-toxic.

4. **Before leaving or servicing machine:**
 - Turn off machine.
 - Unplug cord from wall outlet.
5. **When servicing machine:**
 - Unplug cord from wall outlet.
 - Avoid moving parts. Do not wear loose jackets, shirts, or sleeves.
 - Use manufacturer supplied or approved replacement parts.

⚠ WARNING: Hazardous Voltage. Shock or electrocution can result. Always unplug machine before servicing.

⚠ WARNING: Flammable materials can cause an explosion or fire. Do not use flammable materials in tank(s).

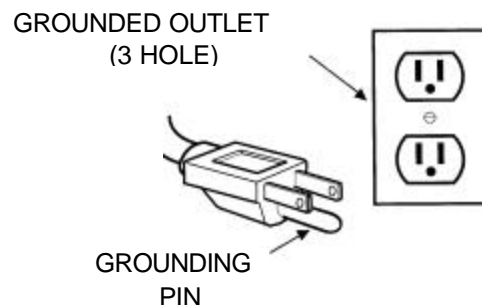
⚠ WARNING: Flammable materials or reactive metals can cause an explosion or fire. Do not pick up.

⚠ WARNING: Hot solutions up to 88° C (190°F). Do not touch with any part of the body. Use thermometer to gauge temperature.

⚠ WARNING: Contents of solution hoses may be under pressure even after pump is off.

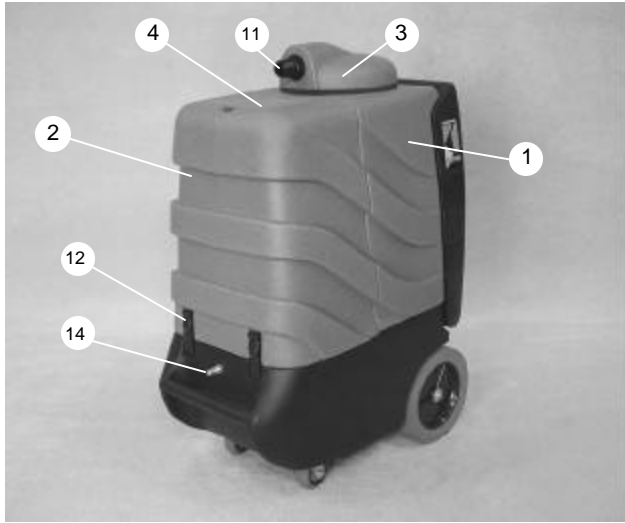
GROUNDING INSTRUCTIONS

Machine must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electrical current to reduce the risk of electrical shock. This machine is equipped with a cord having an equipment-grounding connector and grounding plug. The plug must be plugged into an appropriate outlet that is properly installed in accordance with all local codes and ordinances. Do not remove ground pin; if missing, replace plug before use. International models will have different cord ends.

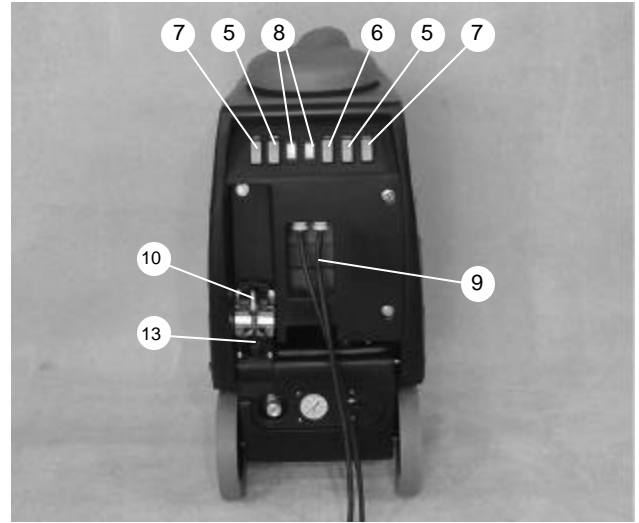


OPERATION

MACHINE COMPONENTS



1. Recovery Tank
2. Solution Tank
3. Recovery Tank Lid
4. Solution Tank Lid
5. Vacuum Switches
6. Pump Switch
7. Inline Heater Switches



8. Circuit Breakers
9. Power Cords
10. Empty-Out Nozzle
11. Vacuum Hose Connector
12. Latches
13. Recovery Tank Drain
14. Solution Hose Connector

MACHINE SETUP

1. Carefully check carton for signs of damage. Report damages at once to carrier. The machine is shipped fully assembled and is ready for use.



Fig. 1

2. Connect hoses and tool to be used (Figure 1).
3. Using a clean bucket or hose, fill solution tank with 41 liters (11 gallons) of hot water, 60° C (140° F) maximum (Figure 2).

⚠ WARNING: Flammable materials can cause an explosion or fire. Do not use flammable materials in tank(s).

4. Add a recommended cleaning chemical.

FOR SAFETY: When using machine, follow mixing and handling instructions on chemical containers.



Fig. 2

OPERATION

ATTENTION: If using powdered cleaning chemicals, mix prior to adding.

NOTE: If desired, water alone achieves excellent cleaning results.

5. Plug machine's power cords into grounded wall outlets on separate circuits (Figure 3). Green circuit indicator light on switch panel illuminated confirms connection to separate circuits.

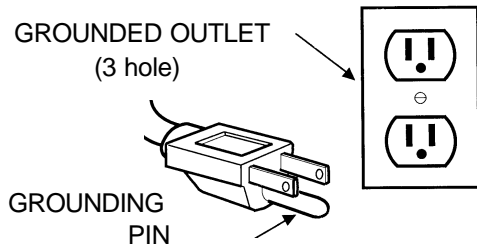


Fig. 3

FOR SAFETY: Do not operate machine unless cord is properly grounded.

FOR SAFETY: Do not operate machine with the use of an extension cord.

6. Secure recovery tank lid in place.

MACHINE OPERATION

FOR SAFETY: Do not operate machine unless operator manual is read and understood.

PRE-OPERATION AND HEATING

1. Vacuum carpet and remove other debris with standard vacuum.
2. Inspect power cord for damage.
3. Turn preheat / clean valve to preheat position and turn on pump and heater (Figure 4). This will preheat the entire contents of the solution tank.



Fig. 4



Fig. 5

CLEANING CARPETS

1. Activate vacuum, pump, and heater switches and turn preheat valve to "clean" position (Figure 5).

2. Take carpet cleaning wand in hand and squeeze valve trigger while moving the tool in short forward and backward strokes. (Figure 6).

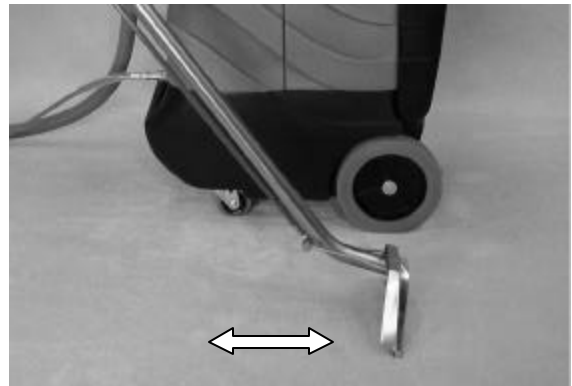


Fig. 6

WHILE OPERATING

1. Overlap each path by 50 mm (2 in).

Warning: Flammable materials or reactive metals can cause an explosion or fire. Do not pick up.

2. Periodically check for excessive foam buildup in recovery tank. Use a recommended foam control solution to prevent vacuum motor damage.

ATTENTION: Excessive foam buildup will not activate the float shut-off screen.

3. To clean heavily soiled areas, repeat cleaning path from a different direction.
4. Empty recovery tank every time water is added to solution tank.

CLEANING WITH ACCESSORY TOOLS

1. Connect accessory tool hoses to the couplers at the end of the hoses already attached to the machine. (Figure 7).

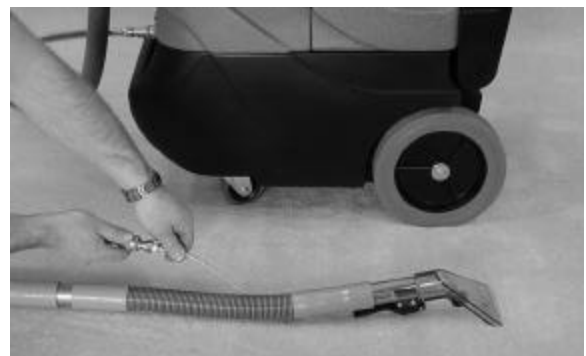


Fig. 7

OPERATION

1. Operate accessory tool as normal (Figure 8).

NOTE: Before cleaning upholstery, always check cleaning instructions sewn in furniture by manufacturer.



Fig. 8

2. After cleaning, relieve water pressure from tool before disconnecting hose. Squeeze trigger for five seconds after turning switches off.

DRAINING TANKS

DRAINING RECOVERY TANK

1. Turn machine off.
2. Insert supplied 45° elbow in drain valve. Place a bucket below it and slowly pull up on the handle (Figure 9).



Fig. 9

3. Rinse tank with clean water at the end of the day.

DRAINING SOLUTION TANK

1. Remove empty-out nozzle from its storage bracket (Figure 10) and attach to end of solution hose.



Fig. 10

2. Place empty-out nozzle over a bucket and turn on pump until all the solution has been pumped from solution tank.
3. Replace empty-out nozzle to its storage location.

FREEZE PROTECTION

1. After draining solution tank as described in steps one and two in the previous section (DRAINING SOLUTION TANK), place empty-out nozzle in end of vacuum hose and seal with hand (Figure 11).



Fig. 11

2. Turn on vacuum and pump for 15 seconds. This will fill the pump and hoses with air and prevent freezing.
3. Replace empty-out nozzle to its storage place.

OPERATION

MACHINE MAINTENANCE

To keep machine in good working condition, simply follow machine's daily, weekly and monthly maintenance procedures.

FOR SAFETY: When servicing machine, unplug cord from wall outlet.

DAILY MAINTENANCE (Every 4 Hours of Operation)

1. Empty and rinse out recovery tank thoroughly.
2. Remove float shut-off screen from recovery tank and clean (Figure 12.)

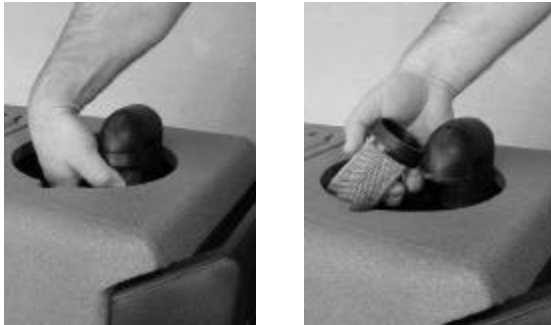


FIG. 12

3. When solution tank is empty, remove and clean solution filter screen located in the bottom of the solution tank.
4. Wipe off power cord and check for damage, replace if necessary. Coil cord neatly after use.
5. Clean machine with an all purpose cleaner and damp cloth.

WEEKLY MAINTENANCE (Every 20 Hours of Operation)

1. Inspect vacuum hoses for holes and loose cuffs.
2. Inspect spray pattern for plugging. If plugged, remove spray tips and soak them in acetic acid solution for up to six hours. Do not use pointed objects to unplug tips, damage will occur.

FOR SAFETY: When using machine, follow mixing and handling instructions on chemical containers.

3. Inspect cord and cord grip for damage. Replace immediately if damaged.
4. Lubricate metal shaft on recovery tank drain with water resistant oil.
5. Lubricate female hose couplers with lightweight oil.

MONTHLY MAINTENANCE (Every 80 Hours of Operation)

1. Lubricate wheels with water resistant oil.
2. Inspect machine for water leaks and loose hardware.

QUARTERLY MAINTENANCE (Every 250 hours of Operation)

Check vacuum motor for carbon brush wear. Replace motor if worn to a length of 10mm (0.38") or less.

STORING MACHINE

1. Before storing machine, be certain to drain and rinse tanks of all water.
2. Store machine in a dry area in the upright position.
3. Open recovery tank lid to promote air circulation.

ATTENTION: Do not expose to rain. Store indoors.

ATTENTION: If storing machine in freezing temperatures, be sure that machine and solution system are completely drained and dry.

RECOMMENDED STOCK ITEMS

Refer to Parts List section for recommended stock items. Stock items are clearly identified with a bullet preceding the parts description. See example below:

PART #	DESCRIPTION	QTY.
J-30	LID, DOME	1
• J-38GRANITE	TOP,SOL TANK, ROTO GRANITE	1
J-39.5GRANITE	HANDLE,WASTE TANK ROTO GRANI	1
J-39GRANITE	WASTE TANK, ROTO GRANITE	1

OPERATION

TROUBLE SHOOTING

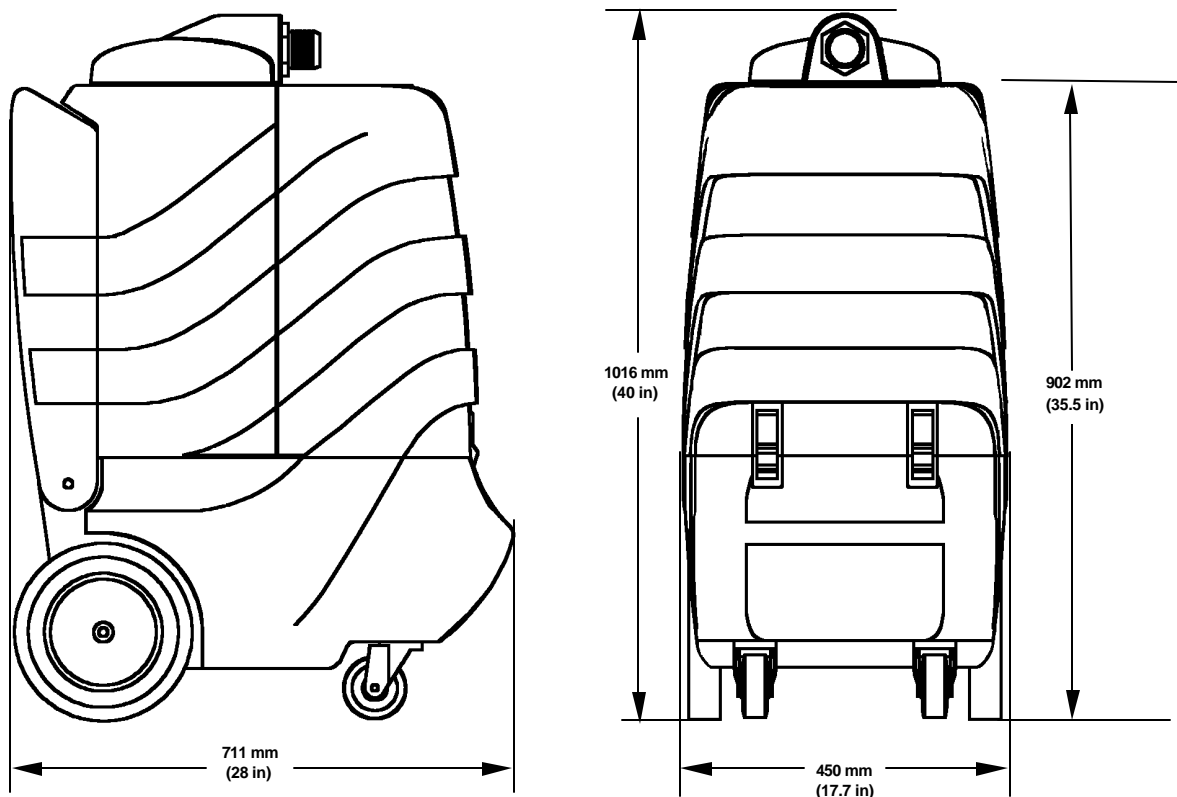
PROBLEM	CAUSE	SOLUTION
Machine does not operate.	Faulty switches or wiring.	Contact Service Center.
	Faulty power cord.	Contact Service Center.
	Building circuit breaker tripped.	Reset Breaker.
Heater does not heat.	Faulty switch or wiring.	Contact service center.
Solution pump does not operate.	Faulty switch or wiring.	Contact Service Center.
	Faulty solution pump motor.	Contact Service Center.
	Faulty pump head.	Contact Service Center.
	Trigger on wand not pulled.	Pull Solution Trigger.
	Quick couplers not fully engaged.	Connect quick couplers.
Vacuum motor does not operate.	Loose or broken wiring.	Contact Service Center.
	Faulty vacuum switch.	Contact Service Center.
	Defective vacuum motor.	Contact Service Center.
	Worn carbon brushes.	Contact Service Center.
Poor solution pick-up.	Recovery tank drain valve open.	Close valve.
	Defective recovery tank lid gasket.	Replace gasket.
	Clogged float shut-off screen.	Remove recovery tank lid and clean screen.
	Loose vacuum hose connections.	Secure cuffs to hose.
	Defective vacuum hose.	Replace hose.
Uneven or no spray.	Plugged spray tips.	Clean or replace tips.
	Improper spray tip size or spray angle.	Replace with proper tips.
	Worn spray tips.	Replace spray tips.
	Solution tank low or empty.	Refill solution tank.
	Faulty solution pump.	Contact Service Center.

OPERATION

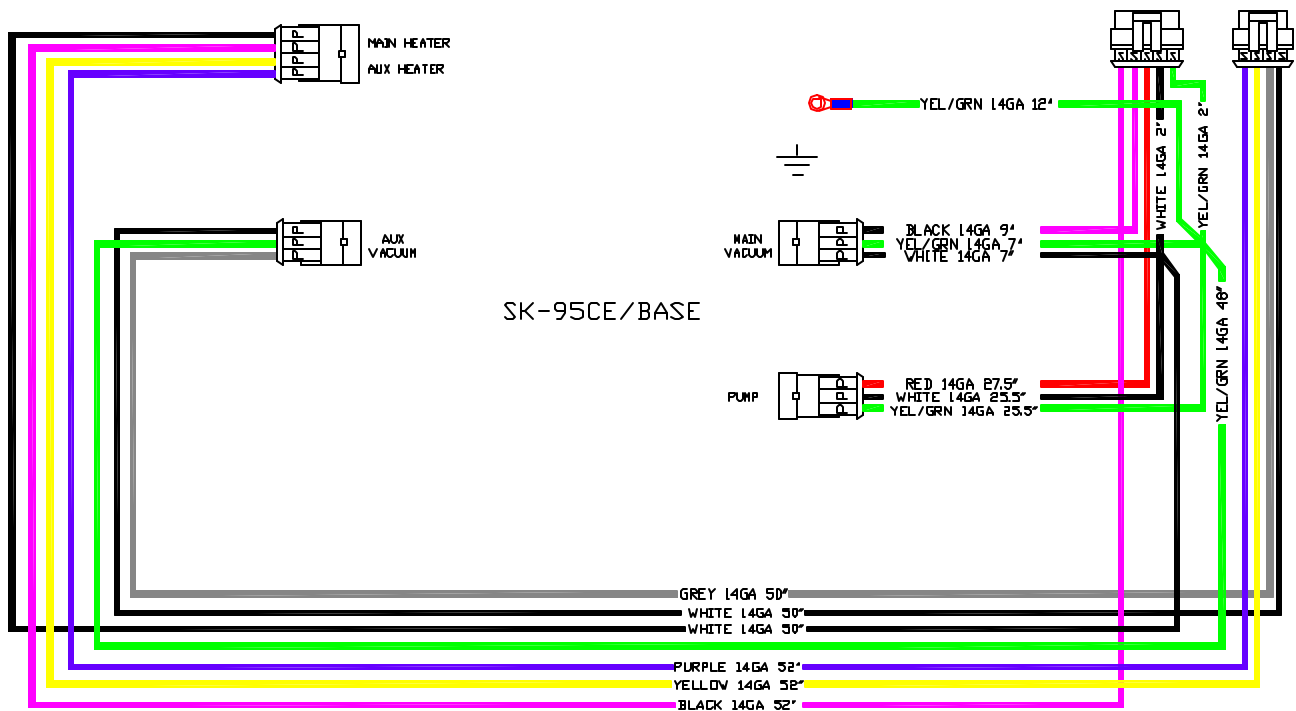
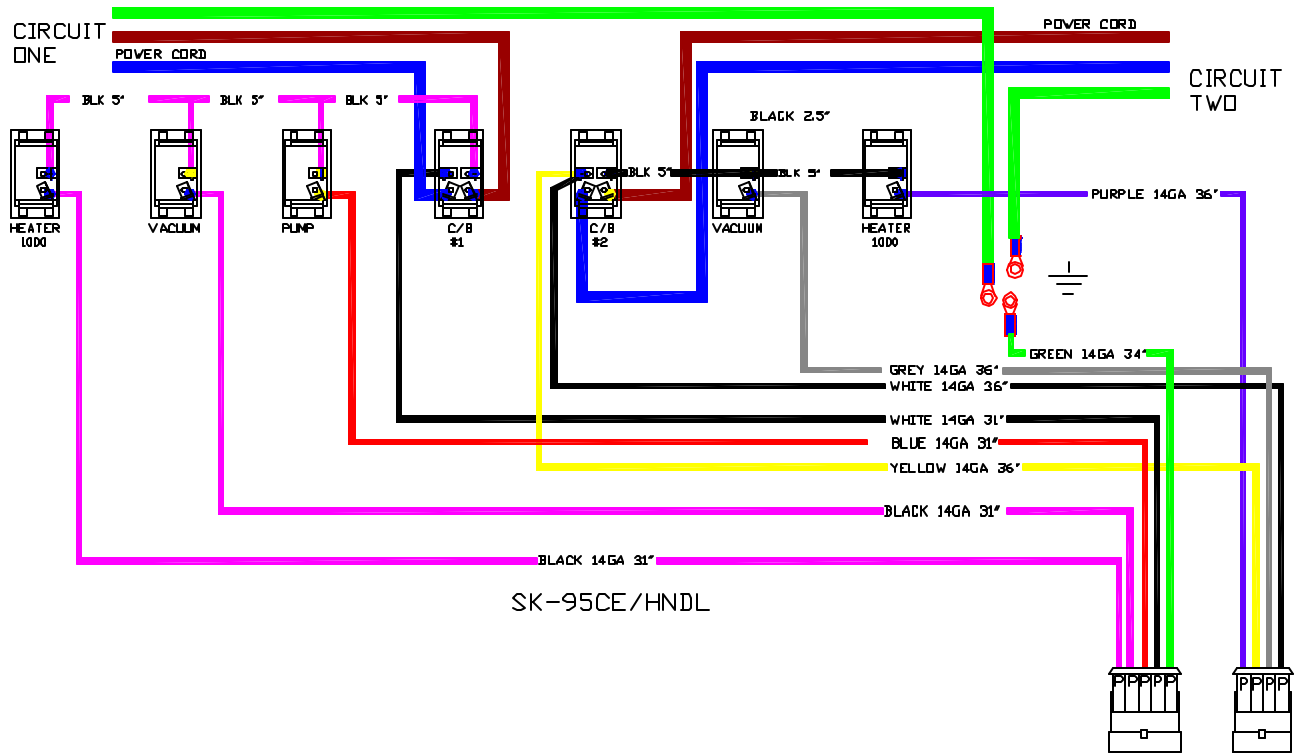
SPECIFICATIONS

Model	230H CE
LENGTH	711 mm (28 in)
WIDTH	450 mm (17.7 in)
HEIGHT	1016 mm (40 in)
WEIGHT	67 Kg (148lbs)
SOLUTION TANK CAPACITY	41 L (11 gal)
RECOVERY TANK CAPACITY	38L (10 gal)
SOLUTION PUMP	240 V, 20.68 bar (300psi), 1.0 A
VACUUM MOTORS 2 – 3 STAGE PARALLEL	2 x 240 V, @4.6 A, 1104 W
INLINE HEATER	2 x 240 V, @4.1 A, 1000 W
SEALED WATER LIFT	3454 mm (136 in) 200CFM (calc)
TOTAL POWER CONSUMPTION CIRCUIT ONE	240V, 9.1A, 2184W
TOTAL POWER CONSUMPTION CIRCUIT TWO	240V, 8.2A, 1968W
POWER CORDS	2 @ 7.6m (25 ft) 3/12
DECIBEL RATING 3 METERS (10 FT) FROM MACHINE ON CARPET	<77 db(A)

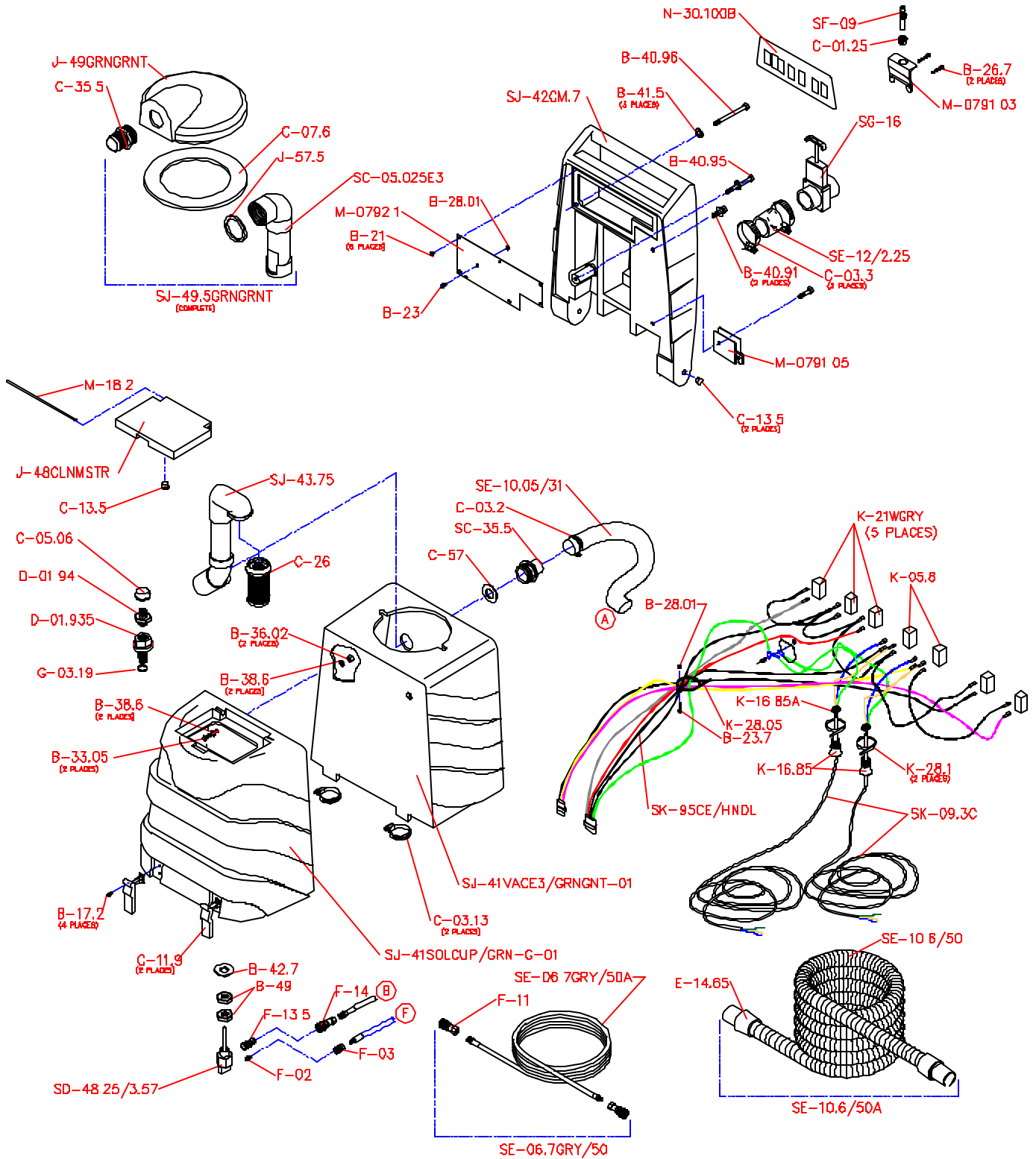
MACHINE DIMENSIONS



120 V WIRING DIAGRAM



TANK GROUP



TANK GROUP

PART #	DESCRIPTION	QTY.
B-17.2	8-32 X 1/2 PHXSS	4
B-21	10-32 X 5/16 PHXSS	6
B-23	10-32 X 1/2 PHXSS	1
B-23.7	10-32 X 5/8 PHXSS	1
B-26.7	10-32 X 1 1/2 PHXZINC	2
B-28.01	NUT 10-32 HEX ZINC	2
B-33.05	1/4-20 X 1 HEX HD SS	2
B-36.02	NUT 1/4-20 NYLOK SS	2
B-38.6	WASHER, 1/4 FLAT SS	4
B-40.91	3/8-16 X 1 1/2 HEX ZINC	2
B-40.95	3/8-16 X 3 1/2 HEX ZINC	1
B-40.96	3/8-16 X 4 HEX ZINC	1
B-41.5	WASHER, 3/8 FLAT ZINC	3
B-42.7	WASHER, 3/4 FLAT BLKHD CP	1
B-49	NUT,BULKHEAD 3/4-16 X.225	2
C-01.25	BUSHING,HOLDER EMPTY-OUT	1
C-03.13	CLAMP, HOSE 1 3/4 #20	2
C-03.2	CLAMP, HOSE 2" #24	1
C-03.3	CLAMP, HOSE 2 1/4 #32	2
• C-05.06	FILTER, 3/8NPT 50 MESH	1
• C-07.6	GASKET,LID FLD WATER RMVL	1
C-11.9	LATCH, SOFT DRAW BLACK	2
C-13.5	PLUG, HOLE NYLON .562	3
C-26	FLOAT,VAC SHUT OFF ROTO	1
C-35.5	HOSE BARB,1 1/2XMPT W/FLA	2
C-57	FLAT WASHER 1.75 ID X 2.75	1
D-01.935	BULKHEAD,3/4FPTx3/8 MPT 2.10"LNG	1
D-01.94	BULKHEAD,ADAPT3/8NPTX1/2N	1
E-14.65	CUFF, 1 1/2 SLIP 1 1/2 HOSE	2
F-02	Q/C 1/8" PLUG SS	1
F-03	Q/C 1/8 SOC BR ST TH	1
• F-11	Q/C 1/4" SOC BR SHUT OFF	2
F-13.5	QC 3/8" PLUG BR ST TH	1
F-14	QC 3/8 SOC BR ST TH	1

PART #	DESCRIPTION	QTY.
G-03.19	O-RING,VITON 2-020 BLKHD	1
J-48CLNMSTR	LID, SOLUTION GRNGRANITE CM	1
J-49GRNGRNT	LID,MEGA/E3 ROTO GREEN GRANITE	1
J-57.5	SPACER,ROTO 3"OD X 2.4"ID	1
• K-05.8	THERMAL CRCT BRKR	2
K-16.85	RELIEF, BELL MOUTH CORD	2
K-16.85A	NUT, NYLON BELL MOUTH	2
• K-21WGRY	SWITCH,SPST WTR RESIS GRY	5
K-28.05	TIE, WIRE NYLON #10 SCREW	1
K-28.1	TIE WRAP,8" LONG NATURAL	2
M-0791.03	BRACKET,SF-09 HOLDER	1
M-0791.05	BRACKET,DUMP VAL MNT	1
M-0792.1	PLATE,HANDLE SW COVR	1
M-18.2	HINDGE, SOLUTION LID 8.125"	1
N-30.100B	PANEL, HVBBPVH MODIFY N-30.100	1
SC-05.025E3	ELBOW,PVC LID ASSM	1
SC-35.5	HOSE BARB, ABS 1 1/2 CUT	1
SD-48.25/3.57	TEE COMP,3/8X3/8X1/8 W/1/4"X3.57TUB	1
SE-06.7GRY/50	HOSE, 1/4"SOL GRY 50' W/QC'S	1
SE-06.7GRY/50A	HOSE, 1/4"SOL GRY 50' 1/4MPTX1/4MPT	1
SE-10.05/31	HOSE, VAC 1.5" FLEX 31"	1
SE-10.6/50	HOSE,VAC 1 1/2X50' NO CUFFS	1
SE-10.6/50A	HOSE,VAC 1 1/2X50' W/ 1.5CUFFS	1
SE-12/2.25	HOSE,2" VINYL X 2.25"	1
SF-09	NOZZEL, EMPTY OUT MALE	1
• SG-16	VALVE,DUMP 1.5 W/PVC EXT	1
SJ-41SOLCUP/GRN-G-01	SOL TANK,E2/3 CUPBOT GRNGRNT DRILD	1
SJ-41VACE3/GRNGNT-01	VAC TANK,E3 GREEN GRANITE DRILLED	1
SJ-42CM.7	HNDL,CM BLK 5 SWT 2BRK RAPTOR	1
SJ-43.75	COMP,VAC FLTR NECK ASSM	1
SJ-49.5GRNGRNT	LID COMPLETE -GREEN GRANITE	1
SK-09.3C	CORD,25' HRZD TERM/BLNK	2
SK-95CE/HNDL	HARNESS,CE HNDL C2HVB C1BPVH	1

- RECOMMENDED STOCK ITEMS

BASE GROUP

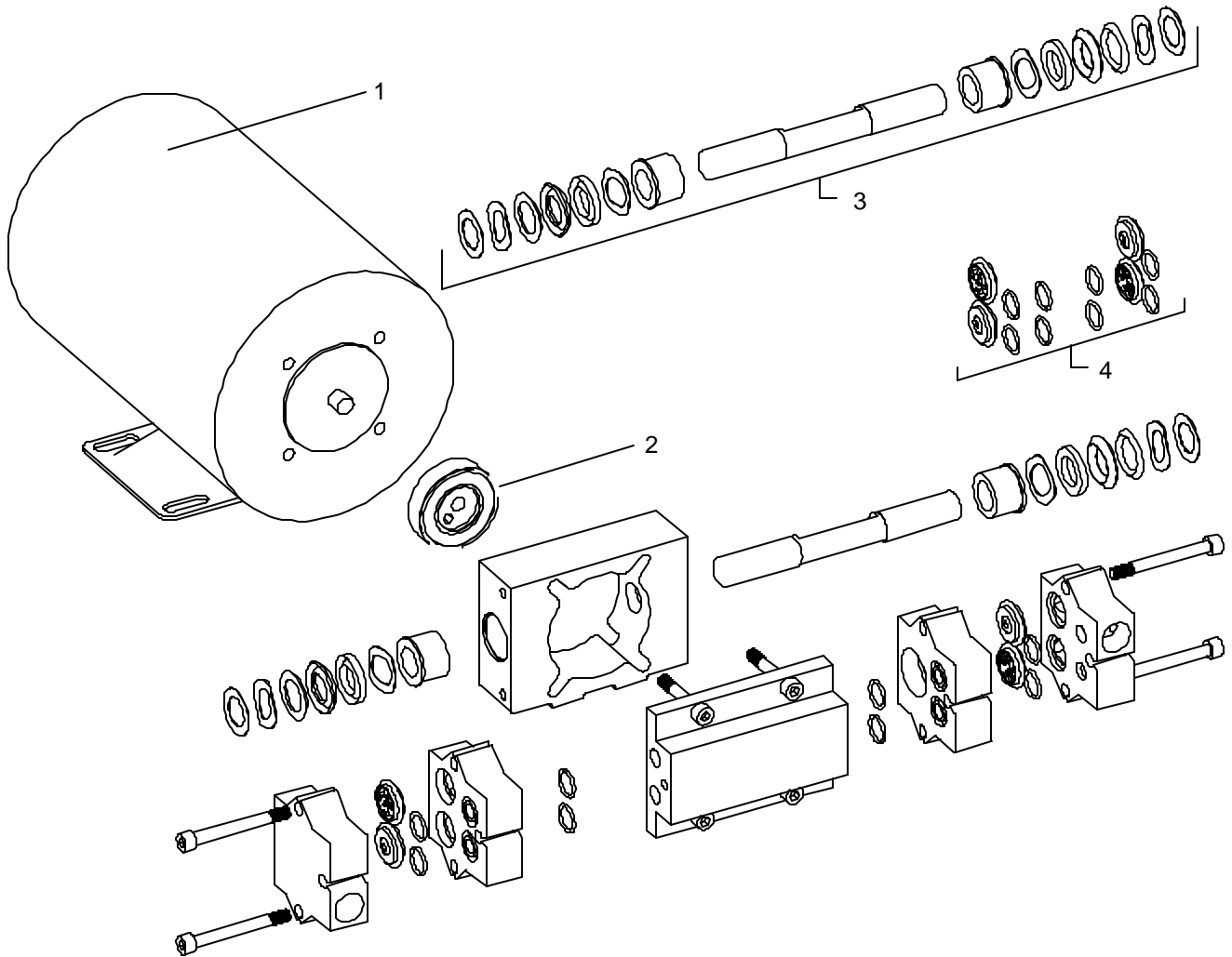
PART #	DESCRIPTION	QTY.
B-01	4-40 X 1/4 PHXSS	2
B-09.1	6-32 X 3/8 PHXSS	4
B-10	6-32 X 1/2 PHXSS	8
B-14	NUT 6-32 HEX SS	8
B-16.2	8-32 X 3/8 PHXSS	4
B-17.6	8-32 X 3/4 PHX ZINC	4
B-18.02	NUT 8-32 NYLOK, ZINC	4
B-21	10-32 X 5/16 PHXSS	11
B-22	10-32 X 7/16 PHXSS	5
B-23	10-32 X 1/2 PHXSS	5
B-23.17	10 X 1/2 SELF TAP HEX	1
B-23.7	10-32 X 5/8 PHXSS	1
B-26.7	10-32 X 1 1/2 PHXZINC	2
B-28.01	NUT 10-32 HEX Z INC	7
B-28.02	NUT, 10-32 SS NYLOCK	4
B-29	WASHER #10 LOCK	6
B-29.1	WASHER,#10 SS	6
B-31.5	1/4-20 X 1/2 HEX CP	4
B-32	1/4-20 X 3/4 HEX HD CP	12
B-33.5	1/4-20 X 4 1/2 HEX CP	6
B-36.01	NUT 1/4-20 NYLOK ZINK	14
B-38.5	WASHER, 1/4 FLAT CP	20
B-42	WASHER 9/16 x 1 1/4 FLAT	6
C-02.3	CASTER 3 1/2"	2
C-03.3	CLAMP, HOSE 2 1/4 #32	4
C-04.1	COTTER, HAIRPIN 7/16-9/16	2
C-06	GASKET, BLOWER/ARLON 1/4"	1
C-07.3	GASKET,VAC SEAL BASE	1
C-23.8	WHEEL 10" - 1/2"BORE	2
C-30.2	GAUGE, PRESSURE 0-600 PSI	1
C-59	PUSHNUT FASTNER, 1/2 CAP	2
C-95	VELCRO, ONE WRAP STRAP 1/2" X 12"	1
D-04	BUSHING 3/8 X 1/4 NPT BR.	2
D-07.02	COUP 1/4 NPT X -6 SAE	1
D-15.2	45 ST ELBOW 1/4 NPT	4
D-17	90 ST ELBOW 1/4" NPT	5
D-18	90 ELBOW 1/4MPT x 1/4 MPT	1
D-20.01	ELBOW 90 1/4NPT X -4 SAE	1
D-20.015	ELBOW 90 1/4NPT X -6 SAE	2
D-43	NIPPLE, 1/4 HEX BRASS	1
D-44.03	NIPPLE, 1/4 X 2.5 BRASS	1
D-45.5	PLUG, 3/8" MPT BRASS	2
D-48.1	TEE, 1/4 NPT BRASS	3
D-48.5	TEE, STREET 1/4 NPT BRASS	1
E-04.6	HOSE, 1/4" PULSE W/SWVL	2
E-14	CUFF, 1 1/2SLIP X 1 1/4HOSE	1
• F-09	Q/C 1/4" PLUG BR SHUT OFF	1
G-25.15	VALVE, BALL 2-WAY 1/4" FPT	1

PART #	DESCRIPTION	QTY.
• G-25.1A	KNOB, 2/3-WAY VALVE G-25.1(5)	1
G-37	VALVE,VAC SHUT OFF DUAL	1
J-45BLK	PMP MNT,DRLD 2 VAC SILNCE BLCK ROTO	1
K-08W	CONN AMP 4 CIR MALE W/RES	1
K-17.4	CLAMP,NYLON CABLE 1/4"	2
K-17.5	CLAMPS, NYLON CABLE 3/8	2
• K-23.23	THERMOSTAT,190 SPST W/LDS	2
M-0255	GUARD,SPL SCR N CMP EDG CE	2
M-0563.8	BRACKET, MTR STARTER CAP	1
M-0790.5	AXIL, ROD 1/2 ECONO	1
M-0791	AXIL, ROD 1/2	1
M-0791.01	BRACKET,PRES RELFVAL	1
M-0791.08	BRACKET, LOCK CE	1
M-0791.3	PIVOT, TUBE 3.400"	2
M-0792.01	PLATE,VAC MNT 2 VAC PARALL - QUIET	1
M-0792.3	PLATE,HTR MNT	1
M-0792.4	PLATE,ASM HTR COVER 4 THERMO	1
M-0792.51	PLATE,FLAPPER VALVE	1
M-0792.6	PLATE, MANIFOLD COVER	1
M-0792.7	BRACKET, MANIFOLD DIV	1
M-0796	WASHER, 2/3 WAY VALVE	1
M-31.175	STAND-OFF 5.7 3.190	6
M-72	SPACER, QUICK CONNECT	1
• SC-51	FOAM, SILENCE MUFFLER	1
SE-06.7/21	HOSE,1/4BLUE 1/4NPTX1/8NP	1
SE-06.7/5A	HOSE,1/4 SOL 1/4NPTX-4SAE 5"	1
SE-06.9/12A	HOSE,SS BRAID -6SAEX-6SAE 12"	1
SE-06.9/8A	HOSE, -6SAE X 1/4NPT 8	1
SE-06.9/9.5	HOSE, 1/4NPT X -6SAE 9.5	1
SE-09.1/14A	HOSE,1/2GPH 14" 3/8NPTX3/8NPT	1
SE-09.1/25	HOSE,1/2"GPH 25" 3/8NPTX3/8NPT	1
SE-09.1/8A	HOSE,1/2GPH 8" 3/8NPTX3/8NPT	1
SE-12.5/5	HOSE,2" FLEX EXH 5"	1
SE-12.5/6	HOSE, 2" FLEX EXH 6"	1
SG-37	VALVE,DUAL FLPR MODI	1
SG-46	VALVE,PRESS RELF 600 TAP	1
SJ-02.3	EXCHG, CASTING COMP	1
SJ-40BLK101205211	BASE,BLK DRLD CEE2/3,PAR,QT,PHT,300PS	1
SJ-45BLKCOV	COVER,HTR	1
SJ-46BLK	MANIFOLD,ASM VAC	1
• SK-12.95	HTR,CAT 1000/1000 240VCMP W/IPX	1
• SK-23.25A	THERMOSTATS, 230 SPST W/LEADS & SOC	2
• SK-34.5	FLTR,COMP EMI BLWR 10AMP	2
SK-95CE/BASE	HARNESS,CE BASE C2HVB C1BPVH	1
• SL-008.5CE	BLOWER,3STG 5.7 230V IPX4	2
• SL-28.400CE	PUMP,300PSI 1/4HPAC CMP W/IPX 220V	1
SM-0277.6	EXCHG,HT EDG240 1000/1000 W/IPX	1
SR-08/6	INSULATION,HTR EDGE	1

• RECOMMENDED STOCK ITEMS

PARTS LIST

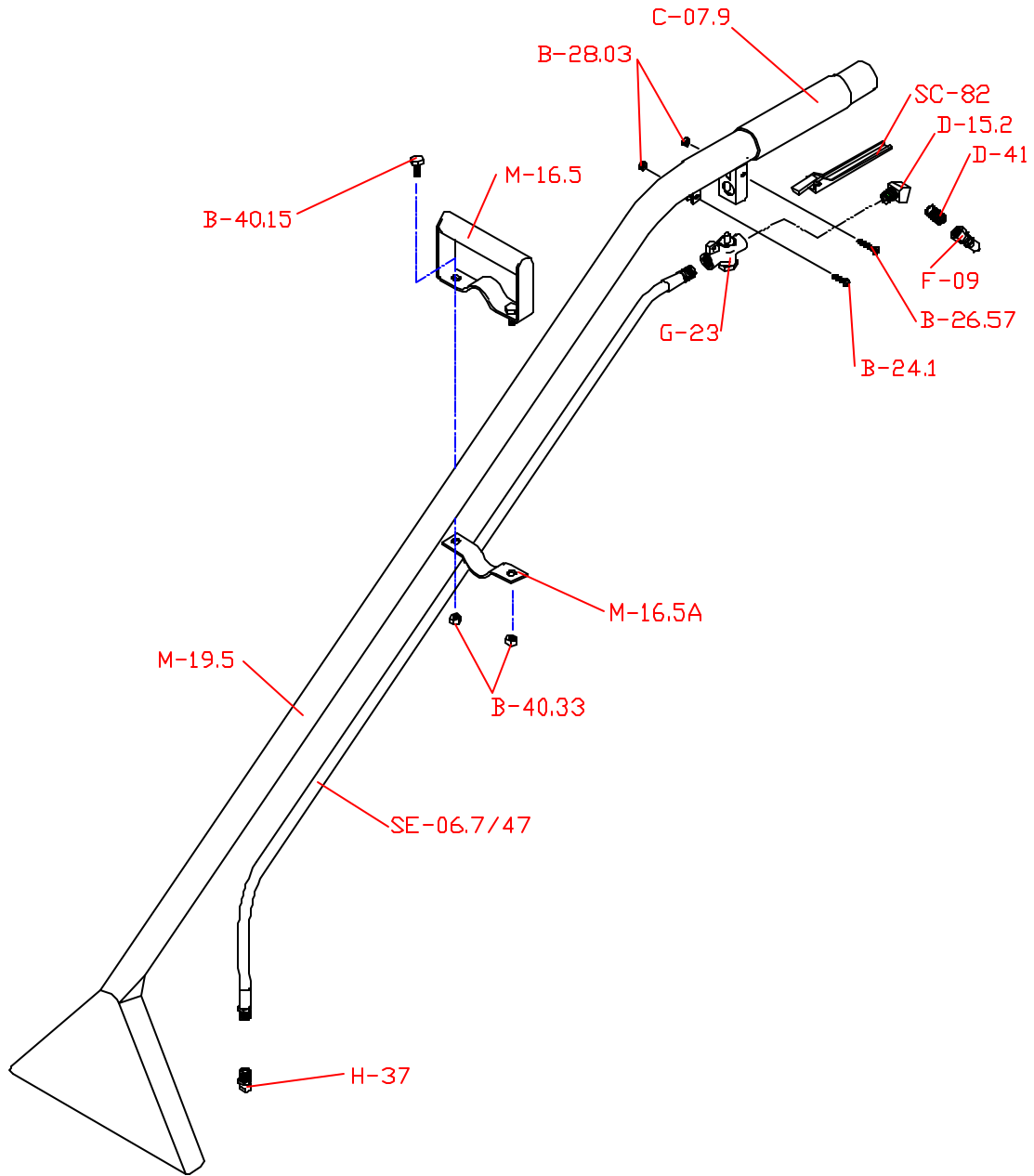
PUMP 300 PSI BREAKDOWN



ITEMS	PART #	DESCRIPTION	VOLTAGE AND HERTZ IN USAGE AREA			
			100V 50/60 HZ	110V 60HZ	220V 50HZ CE	220V 60HZ
1-4	SL-28.400	PUMP,300PSI 1/4HP AC CMP 110V 110 CAM		XXX		
1-4	SL-28.400CE	PUMP,300PSI 1/4HPAC CMP W/IPX 220VCE			XXX	
1-4	SL-28.410	PUMP,300PSI 1/4HP AC CMP 100V116CAM 50/60HZ	XXX			
1-4	SL-28.425	PUMP,300PSI 1/4HP AC CMP 220V110CAM 60HZ				XXX
1,2	SL-28.300A	MOTOR,300PSI AC CMP 110V 110CAM 60HZ		XXX		
1,2	SL-28.410MTR	MOTOR,300PSI AC CMP 100V 116CAM 50/60HZ	XXX			
1,2	SL-28.425MTR	MOTOR,300PSI AC CMP 220V 110CAM 60HZ				XXX
1,2	SL-28.450MTRCE	MOTOR,300PSI AC CMP 220V 125CAM 50HZ			XXX	
• 3	SL-28/KIT-A	PUMPTEC KIT,PLUNGER & SEAL	XXX	XXX	XXX	XXX
• 4	SL-28/KIT-B	PUMPTEC KIT/VALVE & O-RING	XXX	XXX	XXX	XXX
• 2	SL-28/KIT-C	PUMPTEC KIT- 110CAM & BEARING		XXX		XXX
• 2	SL-28/KIT-E	PUMPTEC KIT-116CAM & BEARING	XXX			
• 2	SL-28/KIT-F	PUMPTEC KIT-125CAM & BEARING			XXX	

- RECOMMENDED STOCK ITEMS

FLOOR TOOL

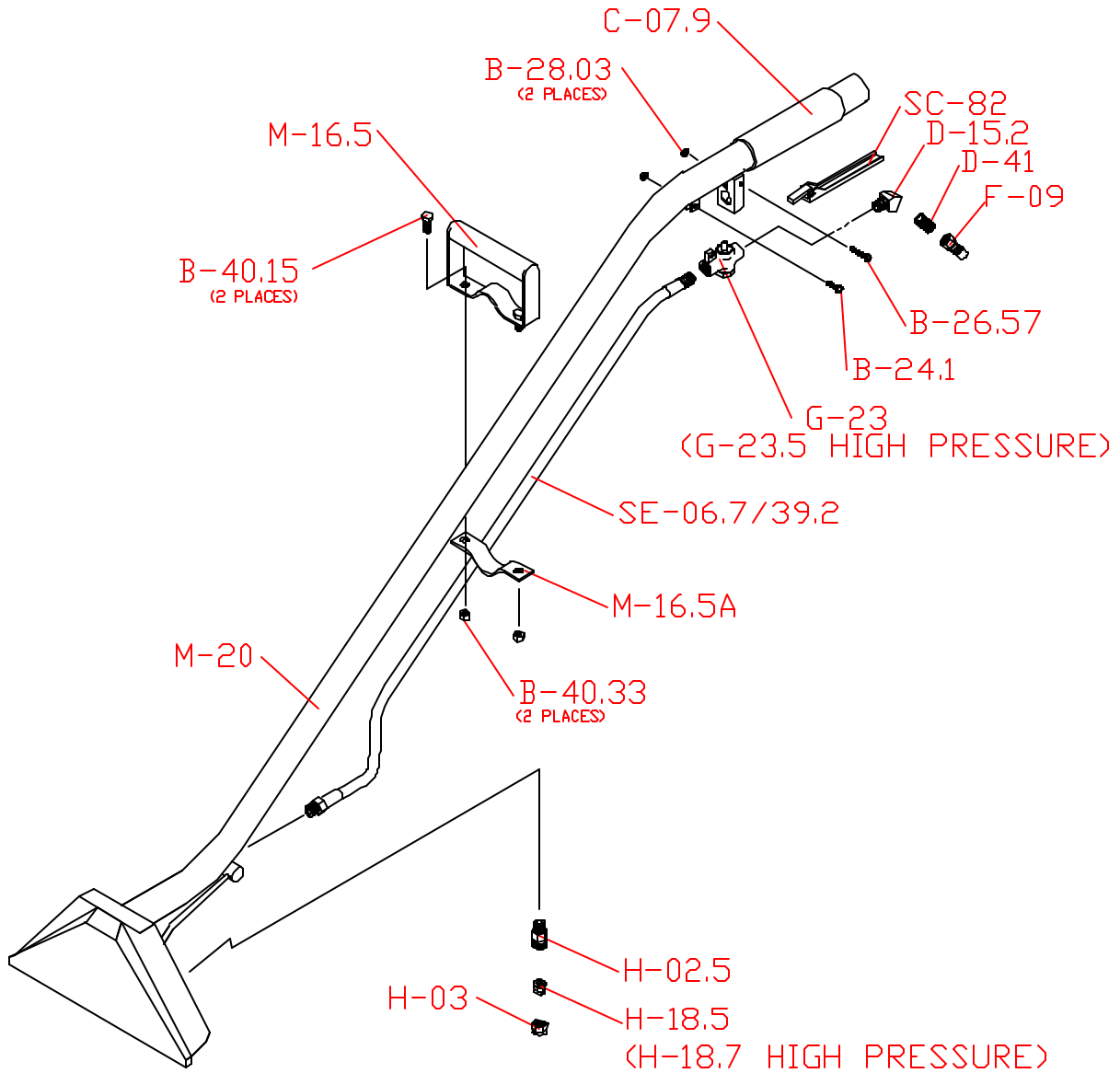


PART #	DESCRIPTION	QTY.
B-24.1	10-32 X 3/4 PHXZINC	1
B-26.57	10-32 X 1 3/8 PHX ZINC	1
B-28.03	NUT, 10-32 NYLOK ZINK	2
B-40.15	5/16-18 X 3/4 HEX CP	2
B-40.33	NUT 5/16-18 NYLOCK, ZINC	2
C-07.9	GRIP, FLRTOOL 1 1/2 X 6	1
D-15.2	45 ST ELBOW 1/4 NPT	1
D-41	NIPPLE, 1/4 NPT CLOSE BR	1

PART #	DESCRIPTION	QTY.
• F-09	Q/C 1/4" PLUG BR SHUT OFF	1
G-23	VALVE, KNGSTN STD S BND	1
• H-37	JET, 11006 E VEE BRASS	1
M-16.5	HOE HANDLE,ECONO FLRTL	1
M-16.5A	"U"CLAMP,SUPP HOE HNDL EC	1
M-19.5	WAND,FLOORTOOL COMP. ECONO	1
SC-82	TRIGGER,COMP KNGSTN VALVE	1
SE-06.7/47	HOSE,1/4 SOL 47"FLRTL ECO	1

•RECOMMENDED STOCK ITEMS

FLOOR TOOL

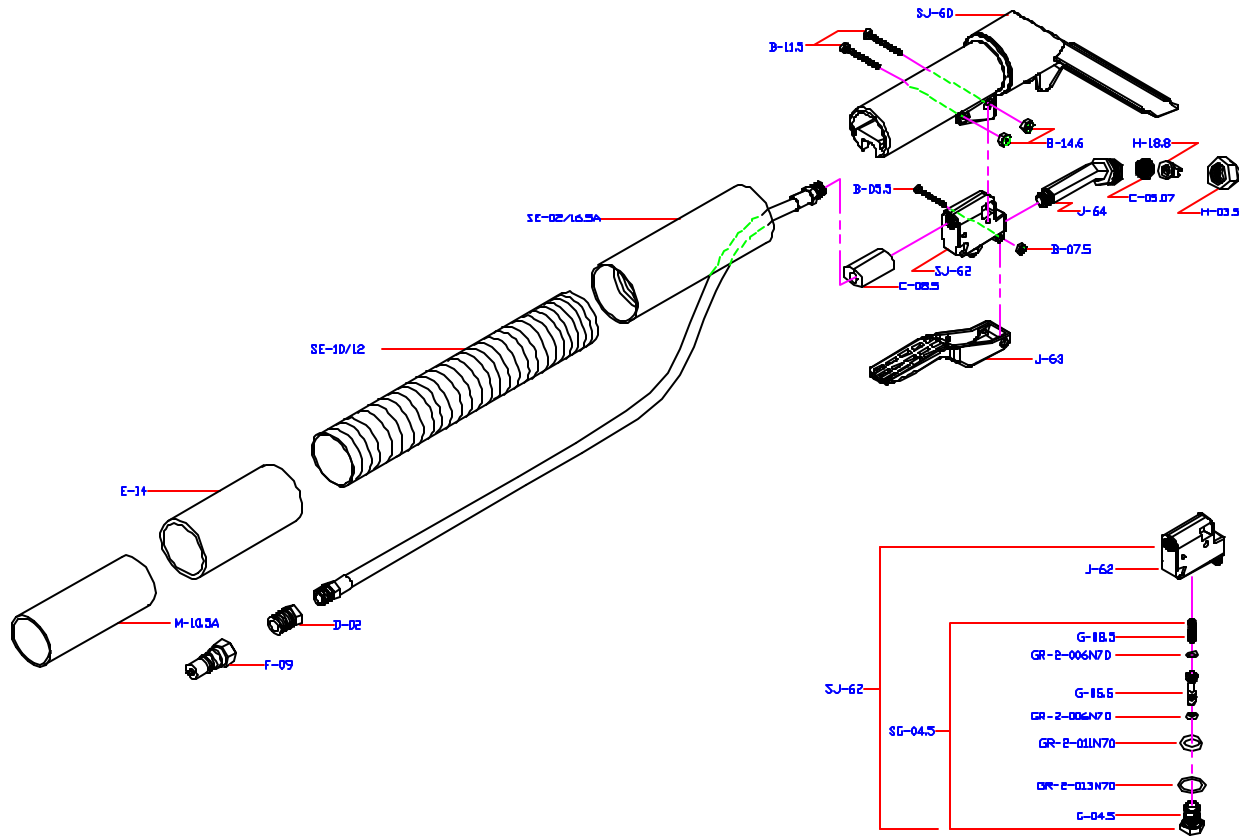


PART #	DESCRIPTION	QTY.
B-24.1	10-32 X 3/4 PHXZINC	1
B-26.57	10-32 X 1 3/8 PHX ZINC	1
B-28.03	NUT, 10-32 NYLOK ZINK	2
B-40.15	5/16-18 X 3/4 HEX CP	2
B-40.33	NUT 5/16-18 NYLOCK, ZINC	2
C-07.9	GRIP, FLRTOOL 1 1/2 X 6	1
D-15.2	45 ST ELBOW 1/4 NPT	1
D-41	NIPPLE, 1/4 NPT CLOSE BR	1
• F-09	Q/C 1/4" PLUG BR SHUT OFF	1
G-23	VALVE,KNGSTN STD "S" BEND	1

PART #	DESCRIPTION	QTY.
G-23.5	VALVE,KNSTN HP "S" BEND	1
H-02.5	BODY, TEE JET 1/4 BRASS	2
H-03	CAP NUT, TEE JET BRASS	2
• H-18.5	JET,11003 TEE BRASS	2
• H-18.7	JET,110015 E TEE BRASS	2
M-16.5	HOE HANDLE,ECONO FLRTL	1
M-16.5A	"U"CLAMP,SUPP HOE HNDL EC	1
M-20	WAND,"S"BND FLTL COM W/HD	1
SC-82	TRIGGER,COMP KNGSTN VALVE	1
SE-06.7/39.2	HOSE,1/4"SOL BLU X39.25DB	1

•RECOMMENDED STOCK ITEMS

HAND TOOL



PART #	Description	QTY.
B-05.5	4-40 X 7/8 PHXZINC	1
B-07.5	NUT, 4-40 HEX ZINC NYLOK	1
B-11.5	6-32 X 1 PHXZINC	2
B-14.6	NUT, 6-32 HEX ZINC NYLOK	2
B-16.2	8-32 X 3/8 PHXSS	1
B-18.01	NUT 8-32 NYLOK, SS	1
C-05.07	FILTER, 4" DETAIL TOOL 50 MESH	1
C-08.5	GROMMET, CLEAR DETAIL TOOL	1
D-02	BUSHING 1/4 X 1/8 NPT BR	1
E-13.5	CUFF,EXTRN HOSE 1 1/2SLPX1 1/4HOSE	1
E-14	CUFF, 1 1/2SLIP X 1 1/4HOSE	1
F-09	Q/C 1/4" PLUG BR SHUT OFF	1
G-04.5	GUIDE, VALVE STEM HEX BRASS	1
G-05.5	STEM, VALVE SS 4" DETAIL TOOL	1
G-08.5	SPRING, VALVE 4" UPH TOOL	1

PART #	Description	QTY.
GR-2-006N70	O-RING,2-006 BUNA 70DR	2
GR-2-011N70	O-RING,2-011 BUNA 70DR	1
GR-2-013N70	O-RING,2-013 BUNA 70DR	1
H-03.5	CAP NUT,TEE JET POLYPRO	1
H-18.8	JET, 110015 STD FLAT SPRYTIP PLSTIC	1
J-62	VALVE, 4" DETAIL TOOL AS MOLDED	1
J-63	TRIGGER, 4" DETAIL TOOL	1
J-64	ELBOW, 4" DETAIL TOOL	1
M10.5A	COUPLER, 1.5" VAC HOSE ALUM	1
SE-02/16.5A	HOSE, 1/8 BLK 16.5" ASM W/EXTRN CUFF	1
SE-10/12	HOSE, VAC 1 1/4 GREY/BLACK 12" LONG	1
SG-04.5	STEM ASM 4"TOOL BUNA W/BRASS CAP	1
SJ-60	HANDLE ASM, 4" DETAIL TOOL	1
SJ-62	VALVE,NYLON COMPLETE STD 4"DETAIL	1

WARRANTY POLICY

PARTS ONLY – STANDARD REPLACEMENT POLICY

For the first 12 months from the date of original purchase, in the event that a part believed to be under warranty fails, simply call Cleanmaster to obtain a Return Authorization, ship the part freight prepaid to Cleanmaster and, Cleanmaster will either repair or replace the part at no charge if it is determined that failure was a manufacturing defect. Cleanmaster will then ship the repaired or replaced part back to you freight collect. Our service department can usually talk a person through any part replacement procedure in a matter of minutes.

HOW TO OBTAIN A RETURN AUTHORIZATION

Prior to shipping any part, assembly or machine to Cleanmaster a Return Authorization Number must be requested from Cleanmaster and displayed prominently on the outside of all packages containing parts or machines for warranty consideration to be processed and in effect. A Return Authorization can be obtained by calling Cleanmaster Service Department at 1-425-775-7276. The machine and/or part serial number must be communicated to Cleanmaster Customer Service to receive a Return Authorization Number. Any machine, part or assembly must be returned with its original serial number as affixed by Cleanmaster for warranty consideration to be in effect. All returns will be sent to Cleanmaster at 11015 47th Avenue West, Mukilteo Wa. 98275. Fax communications can be sent to 1-800-426-4225 and emails sent to cleanmail@cleanmaster.com.

WARRANTY

Cleanmaster Inc. warrants the Raptor Cleaning Machine against defects in material and workmanship under normal use and service. Cleanmaster, hereby, extends a limited three-year warranty on the polyethylene machine housing of the Raptor against cracking or leaking and a one-year warranty on the rest of the machine against manufacturing defect or workmanship subject to the terms and conditions that follow.

TERMS AND CONDITIONS

The warranty obligation extends only to the repair or replacement of parts, assemblies or machine housing found upon examination by Cleanmaster to be defective in manufacturing or workmanship, and Cleanmaster reserves the right to make that determination. Any adjustment or replacement of defective parts made under this warranty does not void the warranty; neither does it extend the original warranty beyond its term.

Repair or replacements of any machine component(s) with any part(s) other than genuine Cleanmaster parts will immediately void this and all warranties.

Filters, brass fittings, seals, o-rings and quick disconnects are considered expendable in normal use and are not covered by this warranty.

Dry cleaning solvents cannot be used in the Raptor.


This warranty shall not cover any Raptor machine housing, part or assembly if there is evidence of misuse, alteration, owner neglect, lack of proper maintenance, improper chemical use, improper voltage, abuse, accident, freezing, flood, fire, etc. and any and all circumstances beyond Cleanmaster's control.

In no event shall Cleanmaster be liable for loss of use, incidental or consequential damages or any damages to persons or property.

CLEANMASTER 11015 47th AVENUE WEST, MUKILTEO WA 98275 USA
Phone 800-426-8972, 425-775-7272; Fax 800-426-4225;
Email cleanmail@cleanmaster.com

PLEASE RETURN REGISTRATION WITHIN 10 DAYS OF RECEIVING YOUR RAPTOR CLEANING MACHINE.

KEEP THIS COPY FOR YOUR RECORDS

WARRANTY REGISTRATION 	Date Received
	Registered Owner(s)
	Address
	Phone Number
	Fax Number
	Email Address
	Machine Serial Number
	Purchased From (Distributor)

WARRANTY

Cleanmaster Inc. warrants the Raptor Cleaning Machine against defects in material and workmanship under normal use and service. Cleanmaster, hereby, extends a limited three-year warranty on the polyethylene machine housing of the Raptor against cracking or leaking and a one-year warranty on the rest of the machine against manufacturing defect or workmanship subject to the terms and conditions that follow.

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CLEANMASTER 11015 47th AVENUE WEST, MUKILTEO WA 98275 USA
Phone 800-426-8972, 425-775-7272; Fax 800-426-4225;
Email cleanmail@cleanmaster.com

PLEASE RETURN REGISTRATION WITHIN 10 DAYS OF RECEIVING YOUR RAPTOR CLEANING MACHINE.

RETURN THIS COPY

WARRANTY REGISTRATION 	Date Received
	Registered Owner(s)
	Address
	Phone Number
	Fax Number
	Email Address
	Machine Serial Number
	Purchased From (Distributor)