



HEPA CARPET EXTRACTOR

SAFETY, OPERATION & MAINTENANCE MANUAL

w/PARTS LIST

This unit is intended for commercial use.

**READ AND FOLLOW
ALL INSTRUCTIONS,
WARNINGS & CAUTIONS
BEFORE USING THIS VACUUM**

This vacuum cleaner will afford you many years of trouble-free operating satisfaction, provided it is given proper care. All parts have passed rigid quality control standards prior to being assembled to produce the finished product.

Prior to packaging, the vacuum was again inspected for assurance of flawless assembly. Your vacuum is protectively packed to prevent damage in shipment. We recommend that upon delivery, unpack the vacuum and inspect it for any possible damage. Only a visual examination will reveal damage that may have occurred.

If damage is discovered, immediately notify the transportation company that

delivered your vacuum. As a shipper, we are unable to report claims for concealed damage. You must originate any claims within 5 days of delivery.

Check carton contents to ensure all accessories are included which are listed as follows:

- 1) 16" HEPA Adaptor Kit**
- 2) 1.5" x 62" Stainless Steel Wand
with 2 Internal Jets & Handle Assy.**

This manual is for your protection and information. **PLEASE READ CAREFULLY** since failure to follow precautions could result in discomfort or injury.

**READ ALL
INSTRUCTIONS
BEFORE USING**

SAVE THESE INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS

WARNING

To Reduce the Risk of Fire, Electric Shock or Injury:

**DO NOT expose to rain - Store Indoors
Electric shock could occur if power nozzle is
used on wet surfaces.**

When using this electric vacuum, basic precautions should always be followed, including the following:

- 1] DO NOT** leave the vacuum when plugged in. Unplug it from the outlet when not in use and before servicing.
- 2] This is NOT** a toy. Close attention is necessary when used around or near children.
- 3] Use only** as described in this safety manual. Use only manufacturer's recommended attachments and accessories.
- 4] DO NOT** use the vacuum with damaged cord or plug. If the vacuum is not working as it should, because it has been dropped, damaged, left outdoors or dropped into water, contact an authorized service center or factory.
- 5] DO NOT** pull the vacuum by the cord, use cord as a handle, close a door on the cord or pull cord around sharp edges and corners. **DO NOT** run vacuum over the cord. Keep the cord away from heated surfaces.
- 6] DO NOT** unplug the vacuum by pulling on the cord. To unplug, grasp the plug, not the cord.
- 7] DO NOT** handle the vacuum plug or vacuum with wet hands.
- 8] DO NOT** put any objects into openings. **DO NOT** use with any openings blocked; keep free of dust, lint, hair, and anything that may reduce air flow.
- 9] Keep hair, loose clothing, fingers, and all parts of body away from openings and moving parts.**
- 10] DO NOT** pick up anything that is smoking or burning such as cigarettes, matches, or hot ashes.
- 11] DO NOT** use without wet adaptor in place
- 12] Turn OFF** all controls before unplugging.
- 13] Use extra care** when cleaning on stairs.
- 14] DO NOT** use this vacuum to pick up flammable or combustible liquids such as gasoline or use in areas where they may be present.
- 15] DO NOT** use where anesthetics or oxygen are used.
- 16] Replace damaged or worn parts** immediately with genuine original equipment parts to maintain safety and protect your limited warranty.
- 17] DO NOT** use an extension cord unless absolutely necessary. If an extension cord is used, then wire size must be #14 gauge or larger and should not exceed 50 feet in length. The extension cord must be three-wire type to insure **GROUNDING** protection.

This vacuum must be connected to a properly grounded outlet only. See grounding instructions (Page 3). This vacuum has an outlet for the ring tank pump, always turn **OFF** the vacuum before connecting or disconnecting the pump.

OPERATING INSTRUCTIONS

- 1] Position** the machine in the area where you are doing the restoration.
 - 2] After** you finish (4) passes or (2) cycles, turn on the ring tank pump and vacuum.
 - 3] Start** cleaning by squeezing the floor tool trigger while slowly pulling the floor tool towards you, spraying solution and recovering slurry in the same operations.
 - 4] Before** completing each path, shut off solution supply and vacuum up the last of the liquid.
 - 5] Repeat** if necessary, making sure all the slurry is removed and the surface is clean.
- CAUTION: DO NOT** run the pump without solution, this can damage the pump.

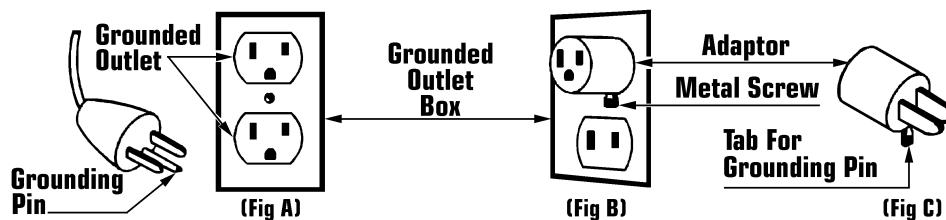
DANGER

Improper use of the grounding plug can result in a risk of electric shock.

Electrical equipment must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electrical current to reduce the risk of electric shock. This vacuum is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be inserted into an appropriate outlet that is properly

installed and grounded in accordance with all local codes and ordinances.

If repair or replacement of the cord or plug is necessary, **DO NOT** connect the grounded wire to either flat blade terminal. The wire with insulation having an outer surface that is green with or without yellow stripes is the grounding wire.



This electric equipment is for use on a nominal 120 volt circuit, and has a grounded plug that looks like the plug illustrated in (Fig A). A temporary adaptor that looks like the adaptor illustrated in (Fig B & C) may be used to connect this plug to a 2-pole receptacle as shown in (Fig B) if a properly grounded outlet is not available.

The temporary adaptor should be used only until a properly grounded outlet (Fig A) can be installed by a qualified electrician. The green color rigid ear, lug or the like extending from the adaptor must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adaptor is used, it must be held in place by a metal screw (Fig3).

WARNING:

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 equipment. If it will not fit the outlet, have a proper outlet installed by a qualified electrician.

Note: In Canada, the use of a temporary adaptor is not permitted by the Canadian Electrical Code.

If it becomes necessary to store or transport the unit where temperatures could drop below 40°F, the pump, solution hose and valve on the tools must be protected from freezing with automotive radiator antifreeze or straight windshield washer fluid.

1] Mix 1/2 gallon of water and 1/2 gallon of antifreeze, or use straight windshield washer fluid.

2] Fill solution tank with hot tap water (not to exceed 140°F), then pour cleaning solution in tank.

3] Vacuum excess mixture out of solution tank into the recovery tank and dispose the anti-freeze mixture or windshield washer fluid.

The anti-freeze or windshield washer fluid **MUST** be flushed out of the pump and vacuum system thoroughly with clean water before use, otherwise the carpet may be damaged.

3] To prevent damage, allow extractor to reach room temperature before use.

GROUNDING INSTRUCTIONS

GROUNDING INSTRUCTIONS

FREEZING TEMPERATURE PRE-CAUTIONS

ASSEMBLY INSTRUCTIONS

WARNING

**Electric shock could occur if used on wet surfaces
DO NOT expose to rain - Store Indoors**

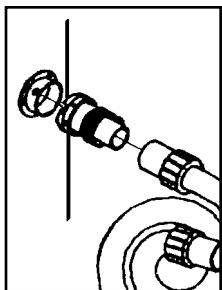
The extractor is equipped with a bypass motor and designed for wet pickup. To use the unit:

1] Disengage the three (3) clamps that hold the motor head on the tank and set aside.

2] Remove wet adaptor, blue hose-in-hose, squeegee/spray nozzle and white vacuum hose packed inside the tank. Unpack the wand in separate carton.

3] Set wet adaptor on the tank, replace motor head and snap down clamps.

4] Install blue hose-in-hose vacuum hose to the intake fitting on vacuum tank and wand.



A] Line up slots in the swivel connector with retaining rivets on the intake.

B] Insert swivel connector and twist until rivets reset against slot end.

C. Push free end of hose onto grooved end of upper wand.

5] Connect wand to squeegee tool by turning wand nut counterclockwise approximately (4) turns. Insert the tool into wand coupling, hold tool in place and turn nut clockwise until fully locked.

6] Connect one end of hose-in-hose solution hose to quick disconnect coupling on the trigger and other end on the disconnect coupling on the squeegee/spray attachment.

7] Check to make sure the ring tank pump is plugged into the convenience outlet on the motor head.

8] Connect power cord from pump to convenience outlet on the vacuum motor head.

9] Turn **ON** pump.

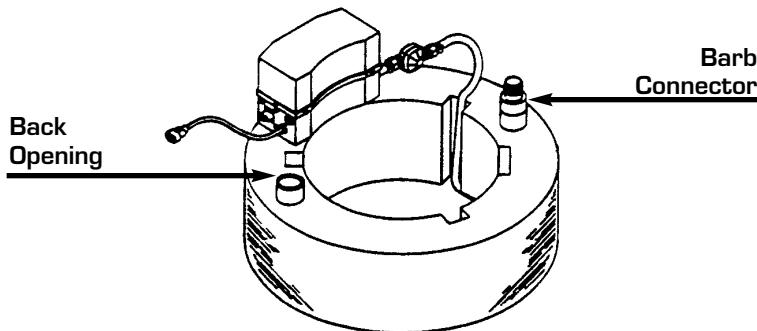
FILLING & REMOVAL OF LIQUID FROM TANKS

To Fill Ring Tank

1] Fill bucket with clean water.

2] Disconnect the blue hose-in-hose from the wand. Slide the hose end into the opening on back of the ring tank.

3] Using the white vacuum hose, put one end into a bucket of water and place other end on the barb connector in front of ring tank. Turn **ON** vacuum. The vacuum suction will fill the tank.



To Empty Ring Tank

1] Disconnect the blue hose-in-hose from the wand and hold hose end on barb connector on the front of the ring tank.

2] Turn on the vacuum and let the suction drain the tank into the blue vacuum tank.

To Drain Vacuum Tank

1] Center the drain valve over a drain in the floor.

2] Pull up on the gate valve handle to empty the tank.

3] After the tank is drained, and before closing the drain valve make sure that there are no obstructions that will prevent the valve from closing.

Note: The white vacuum hose can also be installed on the drain valve connector when draining the tank. This will enable you to control splashing and flow of liquid.

POLY TANK WET VACUUM OPERATION INSTRUCTIONS

- 1]** Carefully remove the motor head, HEPA filter, 2-ply intermediate filter, and HEPA adaptor then set aside.
- 2]** Set wet pickup adaptor on the rim of the tank.
- 3]** Set the HEPA adaptor on top of the wet pickup adaptor and snap down hold-down clamps.
- 4]** Place the 2-ply intermediate filter in position on the HEPA adaptor and fold edge over the outside, overlapping it approximately one inch.
- 5]** Insert the HEPA filter. The HEPA filter sealing gasket must sit evenly on the HEPA adaptor's rim so that an airtight seal will be obtained.
- 6]** Replace the motor head assembly on top of the HEPA filter so it is seated on top of the HEPA adaptor, and then resnap hold-down clamps.

Due to the design, construction and quality of materials, this vacuum system requires a minimum of maintenance. The following instructions are provided to increase the service life of the unit

NOTE: Disconnect the power cord from the outlet before doing any work on the extractor.

After Repeated Use:

Spray Nozzles: Remove and clean the spray nozzles of any debris or build-up. Replace when necessary.

Solution Lines and Fittings: Flush extractor at least once a month with a solution of $\frac{1}{4}$ water and $\frac{3}{4}$ white vinegar in order to neutralize the alkaline residue left by the cleaning solution.

Lubricate all quick disconnect fittings with WD-40 or similar lubricant.

Vacuum Motor: Carbon brushes should be replaced after operating 750 hours or when the carbon brushes are worn down to $\frac{3}{8}$ " in length. Replace both carbon brushes at the same time

After Each Use:

- 1]** Drain the ring tank after each use.
- 2]**. Drain the vacuum tank and rinse with clean water.
- 3]** Clean squeegee/spray nozzle.

CAUTION: DO NOT leave water in tanks over night or store water in tanks.

MAINTENANCE INSTRUCTIONS

1] Remove furniture from the area. Large pieces can be moved to opposite end of the room from where you start cleaning.

2] Thoroughly vacuum carpet and make sure all dirt and loose debris is removed.

3] Before plugging power cord into grounded outlet all switches must be in the **OFF** position.

4) Add the cleaning chemicals and clean water to the solution tank, following the chemical manufacturers directions. When using a bucket to fill the tank, always use a clean bucket.

5) Monitor the foam level and add defoamer to recovery side if necessary.

6) Connect the solution hose to the quick disconnect coupling and insert vacuum hose in to the plug-in sleeve. Push other end of the vacuum hose onto wand and connect other end of the solution hose to quick disconnect on wand.

NOTE: Carpets that have been previously shampooed may have a heavy build-up old shampoo residue which may cause excessive foaming in recovery tank. Monitor the recovery tank for foam buildup. If this occurs add a defoamer chemical to the recovery tank to protect the vacuum motor from damage.

IMPORTANT PROCEDURES BEFORE CLEANING

LIRE TOUTES LES INSTRUCTIONS AVANT DE FAIRE FONCTIONNER (CET APPAREIL)

AVERTISSEMENT:

Pour reduire les risques d'incendie, de choc électrique ou de blessure:

POUR APPAREIL SEC

Pour réduire les risques de choc électrique, ne pas aspirer de matières humides, ne pas exposer à la pluie et garder l'aspirateur à l'intérieur.

POUR APPAREIL HUMIDE

Pour réduire les risques de choc électrique, ne pas exposer à la pluie et garder l'aspirateur à l'intérieur.

L'utilisation d'un appareil électrique demande certaines précautions:

1] Ne pas laisser l'appareil sans surveillance lorsqu'il est branché. Débrancher lorsque l'appareil n'est pas utilisé et avant l'entretien.

2] Ne pas permettre aux enfants de jouer avec l'appareil. Une attention particulière est nécessaire lorsque l'appareil est utilisé par des enfants ou à proximité de ces derniers.

3] N'utiliser que conformément à cette notice avec les accessoires recommandés par le fabricant.

4] Ne pas utiliser si le cordon ou la fiche est endommagé. Retourner l'appareil à un atelier de réparation s'il ne fonctionne pas bien, s'il est tombé ou s'il a été endommagé, oublié à l'extérieur ou immergé.

5] Ne pas débrancher en tirant sur le cordon. Tirer plutôt la fiche.

6] Ne pas toucher la fiche ou l'appareil lorsque vos mains sont humides.

7] Ne pas tirer, soulever ou traîner l'appareil par le cordon. Ne pas utiliser le cordon comme une poignée, le coincer dans l'embrasure d'une porte ou l'appuyer contre des arêtes vives ou des coins. Ne pas faire rouler l'appareil sur le cordon. Garder le cordon à l'écart des surfaces chaudes.

8] N'insérer aucun objet dans les ouvertures. Ne pas utiliser l'appareil lorsqu'une ouverture est bloquée. S'assurer que de la poussière, de la peluche, des cheveux ou d'autres matières ne réduisent pas le débit d'air.

9] Maintenir les cheveux, les vêtements amples, les doigts et toutes les parties du corps à l'écart des ouvertures et des pièces mobiles.

10] Ne pas utiliser l'appareil si le sac à poussière ou le filtre n'est pas en place.

11] Ne pas aspirer de matières en combustion ou qui dégagent de la fumée, comme des cigarettes, des allumettes ou des cendres chaudes.

12] Mettre toutes les commandes à la position **ARRET** avant de débrancher l'appareil.

13] User de prudence lors du nettoyage des escaliers.

14. Ne pas aspirer des liquides inflammables ou combustibles, comme de l'essence, et ne pas faire fonctionner dans des endroits où peuvent se trouver de tels liquides.

15. Toujours mettre l'interrupteur de l'appareil à la position ARRET avant de brancher ou de débrancher la brosse à moteur.

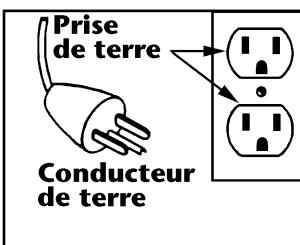
16. Ne brancher qu'à une prise de courant avec mise à la terre. Voir les instructions visant la mise à la terre.

INSTRUCTIONS VISANT LA À MISE À LA TERRE

Cet appareil doit être mis à la terre. En cas de défaillance ou de panne éventuelles, la mise à la terre fournit au courant un chemin de moindre résistance qui réduit le risque de choc électrique. Cet appareil est pourvu d'un cordon muni d'un conducteur de terre et d'une fiche avec broche de terre. La fiche doit être branchée dans une prise appropriée correctement installée et mise à la terre conformément aux règlements et ordonnances municipaux.

Cet appareil est destiné à un circuit de 120V et est muni d'une fiche de mise à la terre semblable à celle illustrée par le croquis A de la figure "A". S'assurer que

l'appareil est branché à une prise de courant ayant la même configuration que la fiche. Aucun adaptateur ne devrait être utilisé avec cet appareil.



AVERTISSEMENT

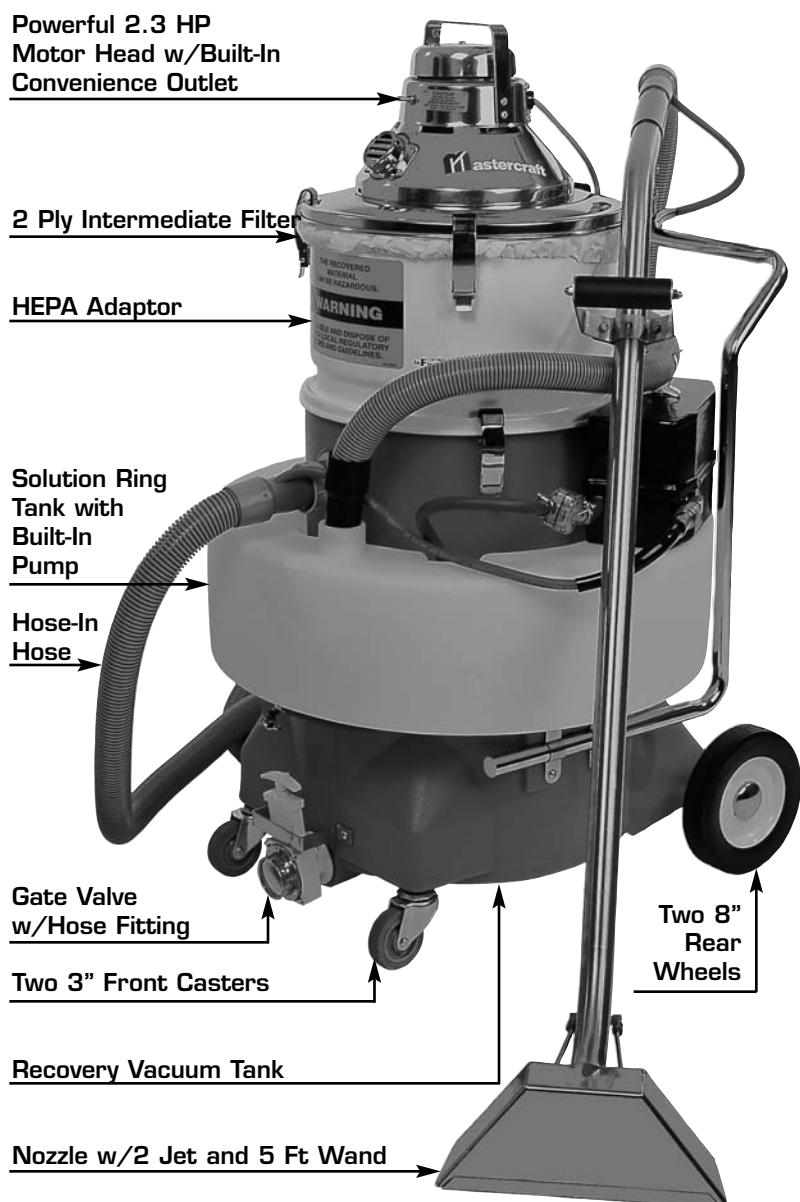
Un conducteur de terre mal raccordé peut entraîner un risque de choc électrique. Consulter un électricien ou un technicien d'entretien qualifié si vous n'êtes pas certain que la prise soit correctement mise à la terre. Ne pas modifier la fiche fournie avec l'appareil si elle ne peut être insérée dans la prise, faire installer une prise adéquate par un électricien qualifié.

CONSERVER CES INSTRUCTIONS

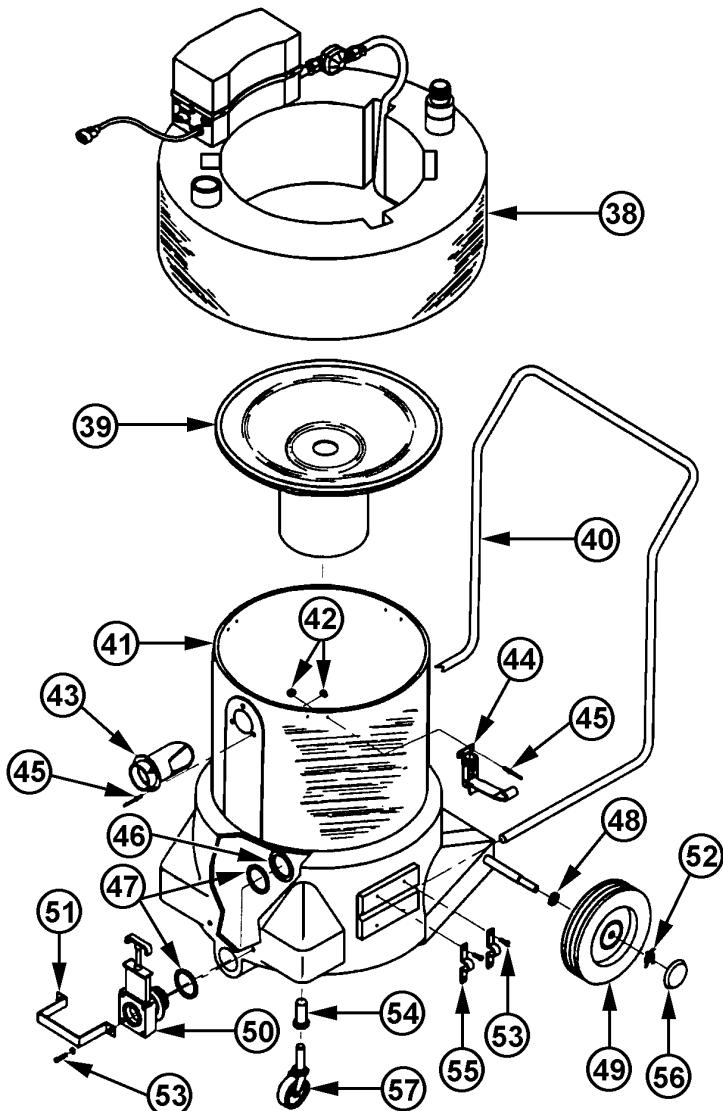
HEPA CARPET EXTRACTOR VACUUM SYSTEM FEATURES

Features:

- ◆ **Motor Head**
120V, 2.3 HP - 2 Stage, By-pass Motor;
110" waterlift, 115 CFM
w/cast aluminum dome.
- ◆ **HEPA Adaptor**
Holds the HEPA filter and 2 ply intermediate filter.
- ◆ **Automatic Water Shut-Off**
Prevents overflowing of liquids and protects motor from water damage.
- ◆ **Poly Vacuum Tank**
20 gallon recovery, rotationally molded of 1/4" thick high-impact plastic. Won't rust or dent and resists chemical attack.
- ◆ **Two - 8" Heavy-Duty Rear Wheels**
Mounted on 1/2" dia. solid steel axle.
- ◆ **Two - 3" Front Casters**
Ball bearing 360° swivel for excellent mobility.
- ◆ **Gate Valve with Hose Fitting**
Designed for quick evacuation of liquids directly from tank or using a vacuum hose
- ◆ **Solution Ring Tank w/Built-In Pump**
10 gallon, rotationally molded of high impact plastic w/100 PSI pump for continuous rinsing of the floor, while picking up slurry.
- ◆ **Hose-In-Hose, Nozzle and Wand**
Includes 15 ft solution and recovery hose, 5 ft stainless steel wand, and nozzle w/2 jets. Solution is sprayed on surfaces, contained and vacuumed up in one pass.

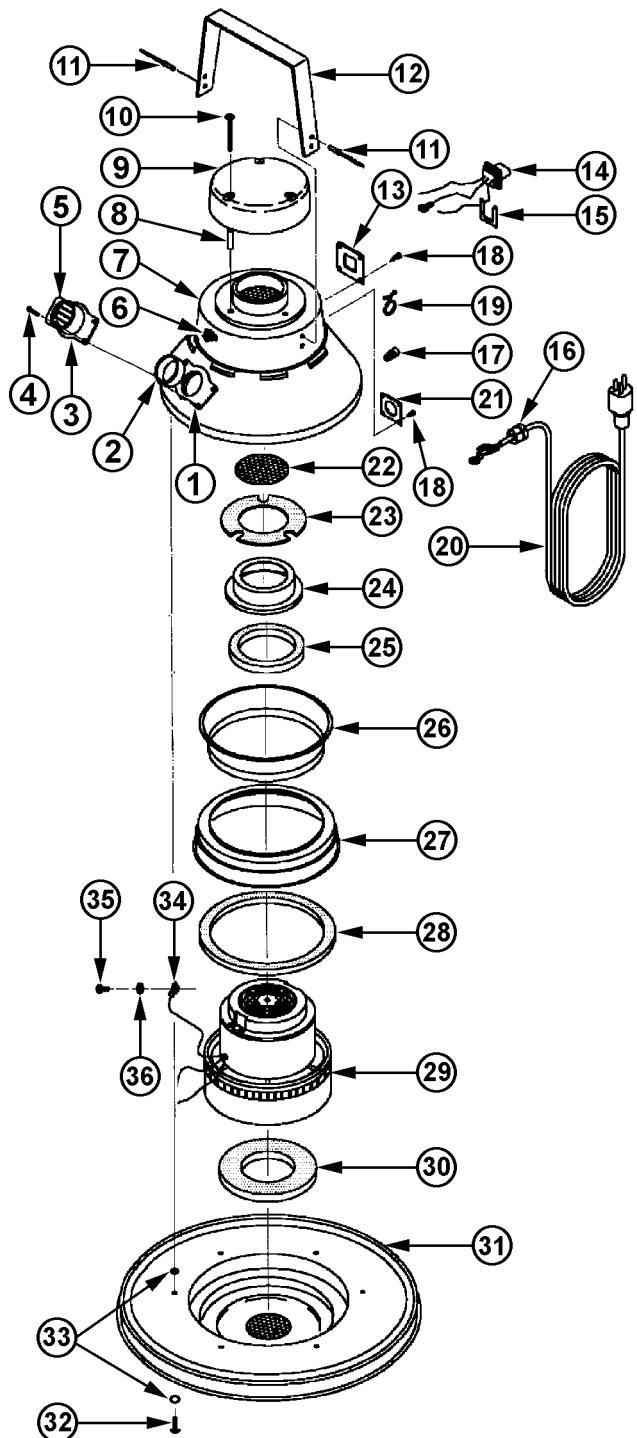


20 GALLON RECOVERY TANK w/RING TANK



Ref No	Part Description	Qty	Part No
38	Ring Tank Assembly	1	337463
39	Float Pan	1	371726
40	Chrome Push Handle	1	315524
41	Poly Tank Assembly	1	326305
42	Steel Washer	3	303909
43	Inlet Fitting	1	318809
44	Holdown Clamps	3	358312
45	Pop Rivet	9	374733
46	Large Nut	1	306789
47	Gate Valve Gasket	2	307602
48	Spring Washer	2	374059
49	8" Wheel	2	369004
50	Gate Valve w/Hose Connector	1	318442
51	Valve Guard Bracket	1	328138
52	"X" Washer	2	368997
53	1/4 - 20 X 1/2" Round Screw	10	360848
54	Plastic Caster Sockets	2	371750
55	Handle Clamps	4	328111
56	Hub Cap	2	319317
57	3" Swivel Caster	2	314056

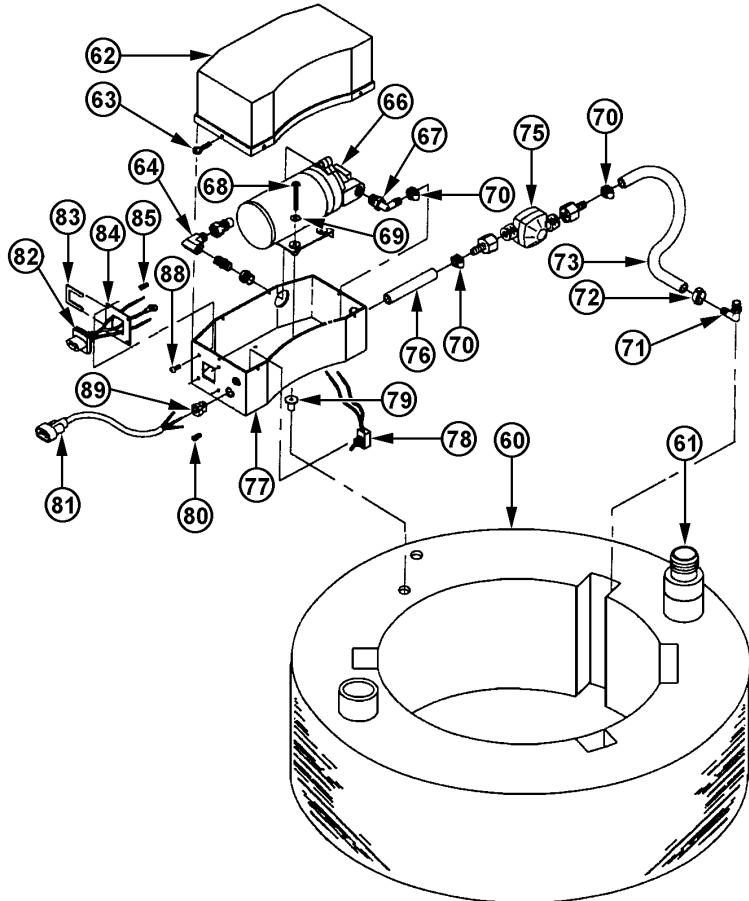
2 1/4 HP BY-PASS MOTOR HEAD



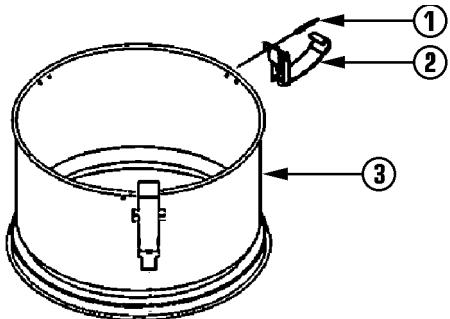
<i>Ref No</i>	<i>Part Description</i>	<i>Qty</i>	<i>Part No</i>
	16" Motor Head Assembly	1	369543
1	Exhaust Connector Gasket	1	364606
2	Flat Gasket	1	368008
3	Air Deflector Exhaust	1	367958
4	Tubular Rivets	4	348511
5	Exhaust Connector w/Pins	1	364665
6	Switch	1	324140
7	Dome Assembly	1	367818
8	Steel Spacer	3	367842
9	Dome Cover	1	367850
10	#10-24 X 1 3/4" Screw	3	366676
11	Handle Pop Rivets	4	318906
12	Carrying Handle	1	367834
13	Receptacle Mounting Plate	1	367990
14	115 Volt Convenience Outlet	1	341746
15	Retainer Clip	1	341932
16	Strain Relief	1	434299
17	Yellow Wire Connector	4	350648
18	#6-32 X 1/4" Screw	8	349402
19	Large Purse Lock	2	365483
20	30 Ft, 14/3 Line Cord	1	312789
21	Strain Relief Mounting Plate	1	367982
22	Disc Screen	1	367893
23	Pyrell Gasket	1	367885
24	Air Conductor Spinning	1	367974
25	Top Motor Gasket	1	317446
26	Motor Holdown Spinning	1	367915
27	Air Collector Assembly	1	367931
28	Flat Gasket	1	379158
29	115 Volt, 2 1/4 HP Motor	1	304301
30	Motor Gasket	1	378607
31	16" Cover Assembly	1	373184
32	#10-24 X 1/2" Screw	6	372633
34	Electrical Terminal	1	319724
35	#10-24 X 3/4" Screw	1	337315
36	#10-24 Hex Nut w/Lockwasher	3	331201

RING TANK W/PUMP

Ref No	Part Description	Qty	Part No
60	Ring Tank	1	337471
61	Plastic Tube	1	419613
62	Top Pump Housing	1	337323A
63	#10-24 X 1/2" Screw	4	385379
64	Elbow Assembly	1	415510
66	115V -100 PSI Pump	1	446785
67	Brass Fitting Assembly	1	415529
68	#10-32 X 3/4" Screw	2	337439
69	3/16 Burr Washer	2	322164
70	SS Hose Clamp	3	308536
71	Drain Assembly	1	415545
72	Hose Clamp	1	304948
73	2 1/2 Ft Pressure Hose	1	308544
75	Filter Assembly	1	415537
76	3" Pressure Hose	1	308552
77	Bottom Pump Housing	1	337307A
78	Toggle Switch	1	324140
79	#10-24 Wellnut	2	337420
80	Orange Wire Nut	2	398985
81	18/3, 4 Ft White Line Cord	1	415871
82	Receptacle	1	341746
83	Receptacle Retaining Clip	1	341932
84	Receptacle Plate	1	367990
85	Yellow Wire Nut	3	350648
88	#6 X 3/8" Screw	6	372773
89	Strain Relief	1	443379

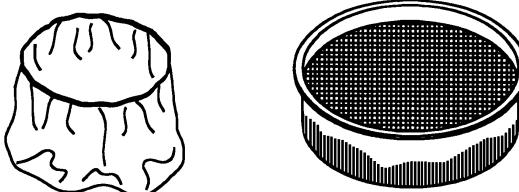


HEPA ADAPTOR



Ref No	Part Description	Qty	Part No
	16" HEPA Adaptor Assy.	1	371734
1	.18" x .43" Pop Rivet	6	318892
2	Hold Down Clamp	3	358312
3	16" HEPA Adaptor	1	393215

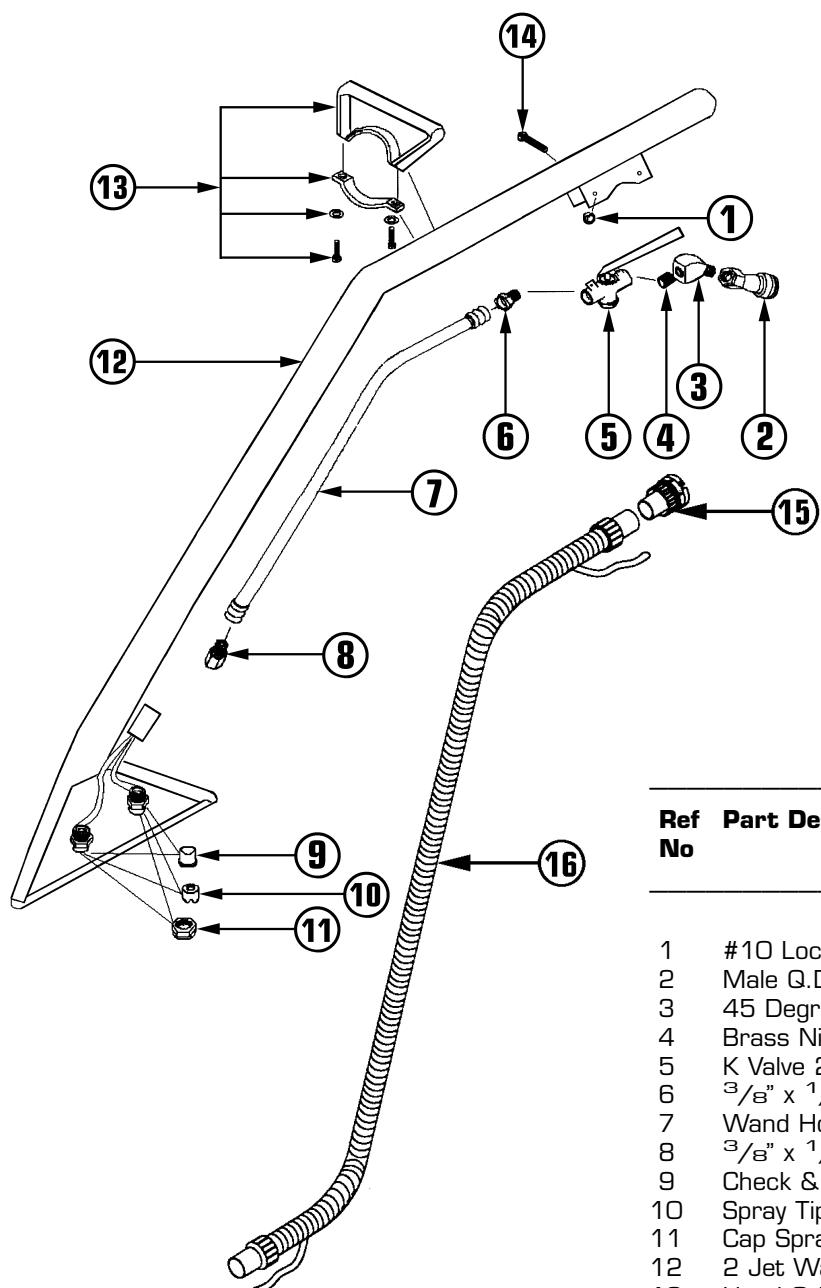
HEPA FILTER ASSEMBLY



2 Ply Intermediate Filter HEPA Filter Assembly

PN 363375 PN 382515

CLEANING TOOL, WAND & HOSE ASSEMBLY



Ref No	Part Description	Qty	Part No
1	#10 Lock Nut	2	447870
2	Male Q.D.	1	110-B2K16
3	45 Degree Street	1	202320
4	Brass Nipple	1	445335
5	K Valve 251 30 Degree	1	446912
6	3/8" x 1/4" Barb Male	1	447935
7	Wand Hose	1	447293
8	3/8" x 1/4" Barb Female	1	447099
9	Check & Strainer	2	447374
10	Spray Tip	2	447463
11	Cap Spray Tip	2	447676
12	2 Jet Wand Plane	1	236675
13	Hand Grip Clamp On	1	449288
14	#10 X 1 S.S. Screw	2	447730
15	1 1/2" Swivel Hose Connector	1	349445
16	15 Ft 1 1/2" Hose-In-Hose	1	313955

TROUBLE SHOOTING GUIDE



Mastercraft

Address:

777 South Street
P. O. Box 2310
Newburgh, NY 12550-0606

TEL:

(800) 835-7812
(845) 565-8850

FAX:

(800) 752-6883
(845) 565-9392

URL:

www.floorcare.com

E-mail:

mastercraft@floorcare.com

PROBLEM: Loss of Vacuum.

CAUSE:

- 1] Clogged hose or wand.
- 2] Tank rim damaged.
- 3] Loose or broken fan.
- 4] Motor not working.
- 5] Float not functioning.
- 7] Vacuum tank is full.
- 6] Motor head cover gasket worn.

SOLUTION:

- 1] Remove obstruction.
- 2] Replace tank.
- 3] Contact manufacturer or service center.
- 4] Contact manufacturer or service center.
- 5] Check to see if ball moves freely.
- 6] Drain dirty water out of tank.
- 8] Replace gasket.

PROBLEM: Motors is not running.

CAUSE:

- 1] Broken switch.
- 2] Power cord defective.
- 3] Motor defective.
- 4] Blown fuse or tripped circuit breaker at power source.

SOLUTION:

- 1] Contact manufacturer or service center
- 2] Contact manufacturer or service center.
- 3] Contact manufacturer or service center.
- 4] Replace fuse or reset circuit breaker.

PROBLEM: Water blowing from vac when running.

CAUSE:

- 1] Tank is full of liquid.
- 2] Foamy liquid is being picked up.
- 3] Float is stuck.

SOLUTION:

- 1] Empty tank.
- 2] Add defoamer to tank.
- 3] Check float.

PROBLEM: Streaking, uneven spray, or no spray.

CAUSE:

- 1] Spray jets clogged.
- 2] Dirty or plugged spray jets.
- 3] Worn spray jets.
- 4] Pressure hose filter plugged.
- 5] Faulty pump.
- 6] Ring tank empty.
- 8] Kink in hose.
- 9] Hose filter clogged.

SOLUTION:

- 1] Unclog jets.
- 2] Clean or replace spray jets.
- 3] Replace spray jets.
- 4] Clean or replace pressure hose filter.
- 5] Rebuild or replace pump.
- 6] Flush out and refill.
- 7] Straighten hose.
- 8] Clean filter.

WARNING:

**Always disconnect power cable from electrical outlet
when fixing on this vacuum.**