

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



SAFETY,  
OPERATION &  
MAINTENANCE  
MANUAL  
W/PARTS LIST  
ELECTRIC &  
AIR-OPERATED  
HAZARDOUS  
WASTE  
BACKPACK  
VACUUM

*This unit is intended for commercial use.*

This vacuum 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 their being assembled to produce the finished product. Prior to packaging, your vacuum was again inspected for assurance of flawless assembly.

This vacuum is protectively packed to prevent damage in shipment. We recommend that upon delivery, unpack the unit 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 any claim for damage. You must originate any claim within 5 days of delivery.

This manual is for your protection and information. **PLEASE READ CAREFULLY** since failure to follow precautions could result in discomfort or injury. Remove the vacuum and its attachment from the carton. Read this manual completely before operating this vacuum. It is important to follow instructions in this manual to prevent the possibility of injury or damage to the user and/or vacuum and special filters employed.

PLEASE READ  
CAREFULLY  
BEFORE  
OPERATING

SAVE THESE INSTRUCTIONS

# 41OSSDAF IMPORTANT SAFETY INSTRUCTIONS



## WARNING:

To Reduce the Risk of Fire, Electric Shock or Injury:  
Electric shock could occur if used on wet surfaces.  
DO NOT expose to rain. Store indoors.

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

- 1. DO NOT** leave the vacuum when plugged in. Unplug from the outlet when not in use and before servicing.
- To avoid electric shock, **DO NOT** expose to rain. Store indoors. **DO NOT** use on wet surfaces.
- This is **NOT** a toy. Close attention is necessary when used around or near children.
- Use only as described in this safety manual. Use only manufacturer's recommended attachments and accessories.
- DO NOT** use this 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.
- DO NOT** pull or carry by the cord, use cord as a handle, close a door on cord or pull cord around sharp edges and corners. Keep cord away from heated surfaces.
- DO NOT** unplug the vacuum by pulling on the cord. To unplug, grasp the plug, not the cord.
- DO NOT** handle the plug of the vacuum with wet hands.
- DO NOT** put any objects into openings. **DO NOT** use with any opening blocked; keep free of dust, lint, hair and anything that may reduce air flow.
- Keep hair, loose clothing, 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.
- DO NOT** use without 2-ply disposable paper filter bag, 2-ply intermediate filter and HEPA filter in place.
- DO NOT** use the vacuum to pick up flammable or combustible liquids such as gasoline or use in areas where they may be present.
- Use extra care when cleaning on stairs.
- DO NOT** use where anesthetics or oxygen are used.
- Turn off all controls before unplugging.
- DO NOT** use an extension cord unless absolutely necessary. If an extension cord is used, then wire size must be #14 or larger and should not exceed 50 feet in length. The extension cord must be a three-wire type to insure grounding protection.
- Replace damaged or worn parts immediately with genuine original equipment parts to maintain safety and to protect your limited warranty.

This vacuum must be connected to a properly grounded outlet only. (See grounded instructions)

# MAV41OSSDAF IMPORTANT SAFETY INSTRUCTIONS

- Air supply should not exceed 150 psi.
- Use compressed air line rated for 200 psi or better.
- Water separator must be used on compressed air line.
- When the air vacuum is used to pick-up flammable and/or combustible material or dust, the tank, air line and vacuum hose must be grounded to prevent static sparks.
- When the unit is ON, never allow fingers, hair or loose clothing to come near intake, suction ports or nozzle.
- Air control valve must be OFF before connecting to compressed air line, than open valve slowly making sure not exceed the 150 psi rated pressure.
- DO NOT** use without paper filter bag, intermediate filter and HEPA filter in place.

## SAVE THESE INSTRUCTIONS



**DANGER:**

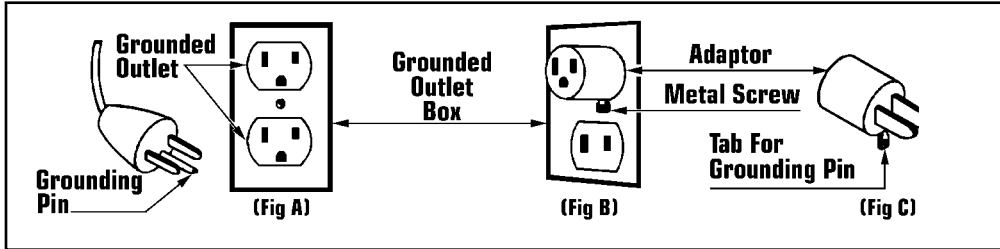
Improper use of the grounding plug can result in a risk of electric shock.

# GROUNDING INSTRUCTIONS

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. The 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.



# GROUNDING METHODS

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 (Fig 3).



**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.

Treat this vacuum as you would any other high grade precision made product. Dropping, unreasonable bumping across

thresholds and other misuses may result in a damaged unit which will not be covered by the warranty.

# CARE OF THIS VACUUM

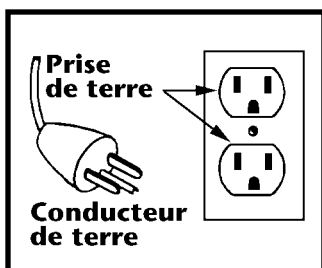
# LIRE TOUTES LES INSTRUCTIONS AVANT DE FAIRE FONCTIONNER (CET APPAREIL)

## AVERTISSEMENT:

Pour réduire 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'écarte des surfaces chaudes.
8. User de prudence lors du nettoyage des escaliers.
9. 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.
10. Maintenir les cheveux, les vêtements amples, les doigts et toutes les parties du corps à l'écart des ouvertures et des pièces mobiles.
11. Ne pas utiliser l'appareil si le sac à poussière ou le filtre n'est pas en place.
12. Mettre toutes les commandes à la position ARRET avant de débrancher l'appareil.
13. Ne pas aspirer de matières en combustion ou qui dégagent de la fumée, comme des cigarettes, des allumettes ou des cendres chaudes.
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 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 cor-

don 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



### WARNING:

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

## INTENDED USE OF THIS VACUUM

This vacuum has been specifically designed to clean up hazardous dust. Special filters reduce the incidence of airborne dust that would be created by other methods of cleaning.

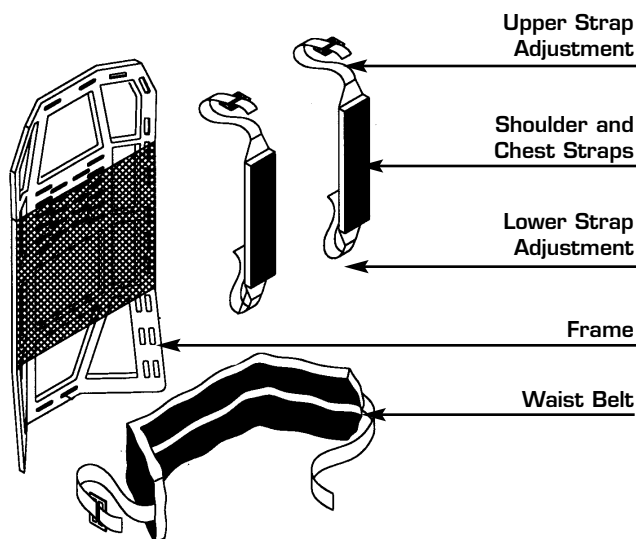
During removal of hazardous dust, **DO NOT** sweep, scoop, shovel or in any manner handle other than by vacuuming.

**DO NOT** at any time attempt to remove, substitute, bypass or by any other means change the filters in the vacuum.

Use only manufacturer's approved vacuum filters and filter bags

Before attempting to use or cleaning, be sure that you fully understand the instructions for setting up or cleaning/changing of filters in this vacuum.

Any health hazards associated with use of this vacuum in conjunction with the pickup of hazardous material has not been investigated by Underwriters Laboratories, Inc.



## HARNESS STRAP ADJUSTMENTS

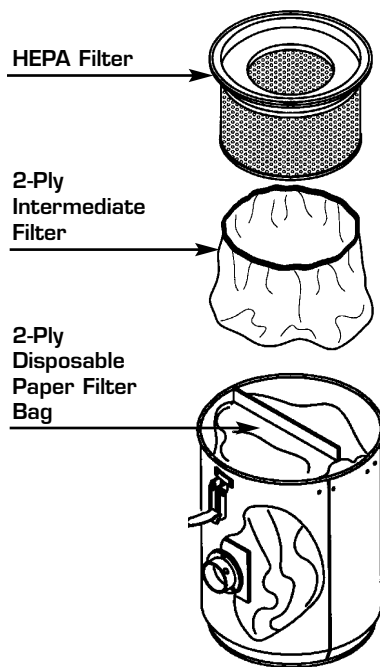
This vacuum is shipped with the frame attached to the tank. the straps must be adjusted to fit the operator as shown.

1. Set vacuum on a table with frame to the table edge.
2. Loosen all straps, top to bottom.
3. Slip arms and shoulder through the shoulder and chest straps
4. Close waist straps and tighten.
5. Tighten the upper and lower adjustments of the shoulder and chest straps so that shoulder pads come over the shoulders but remain above the armpit.
6. Equalize the tension on each strap so the frame is held level.

# FILTER INSTALLATION

This hazardous use vacuum has special filters installed. The 2-ply disposable paper bag filter contains the bulk of all debris and protects the remaining filters

from excess dirt. The 2-ply intermediate filter is a very fine non-woven filter that extends the life of the expensive High-Efficiency Particulate Air (HEPA) filter.



- 1) Remove unit from carton. Disengage clamps that hold the motor head to tank. Carefully set aside.
- 2) Remove HEPA filter and intermediate filter. Set aside.
- 3) Install a disposable 2-ply paper filter bag by taking hold of the free ends of the cardboard attached to the paper bag. Pull cardboard forward over the inlet fitting so that the cardboard is as close to the wall of the tank as possible.
- 4) Place the 2-ply intermediate filter in position on top of the tank. Fold the edge over the outside of the tank overlapping approximately one inch.
- 5) Insert the HEPA filter, being careful not to move the 2-ply intermediate filter. The filter's sealing gasket must sit evenly on the tank rim so an air tight seal will be obtained.
- 6) Replace the motor head on top of the HEPA filter seated in the top of the tank.



## CAUTION:

To insure a snug fit the area around the lid and top edge of the vinyl sealing gasket is free of dirt and other foreign matter. **NEVER** operate the vacuum cleaner without a primary HEPA filter and 2-ply disposable paper bag in place and **NEVER, NEVER** without the intermediate filter in position. Motor damage, loss of operating efficiency and re-circulation of hazardous material into the work area will take place.

# WHEN TO CHANGE FILTERS

## 2-Ply Disposable Paper Filter Bags

When the 2-ply disposable paper filter bag is full, it **MUST** be replaced. Excessive over filling of this bag makes it difficult to remove from the vacuum tank and can result in breakage and spills.

## 2-Ply Intermediate Filter

The 2-ply intermediate filter should be replaced with every fifth change of paper bag and whenever there is damage or a visible collection of debris on the outside of the filter.

## HEPA Filter

Replace the HEPA filter when loss of vacuum continues to occur after you have checked for an obstructions in the hose or wand. Also, install a new 2-ply disposable paper filter bag and 2-ply intermediate filter.



## CAUTION:

Always unplug vacuum from the power source before changing filters.

## CAUTION:

**Hazardous materials must be disposed of properly NEVER throw contaminated debris in your usual trash receptacle. Place debris in a OSHA approved poly bag or container marked with HAZARDOUS MATERIAL warning and dispose in accordance with your local Hazardous Waste Regulations.**





**CAUTION:**

*For the benefit of your health, always wear gloves and an OSHA approved face mask for use with asbestos any time you are operating or cleaning this vacuum cleaner.*

# REMOVING CONTAMINATED FILTERS

## 2-Ply Disposable Paper Filter Bag:

1. Carefully and slowly remove the motor head, HEPA filter and 2-ply intermediate filter. Set aside.
2. Using a damp cloth, wipe down all exposed surfaces inside of tank and set cloth down. **DO NOT** discard the cloth.
3. Lay vacuum tank on its side with inlet on top, carefully and slowly push cardboard off air inlet tube.
4. Remove paper backing from sealing flap located over cardboard collar. Press sealing flap firmly over the opening to prevent spill back of recovered materials.
5. Slowly and very carefully lift the 2-ply disposable paper filter bag out of tank, using care not to puncture the bag with inlet.

7. Wipe off any surface that have not been previously wiped with the damp cloth including the entire inside of tank.

8. Place the 2-ply disposable paper filter bag and damp cloth in a OSHA approved poly bag, dispose of it in accordance with the local Hazardous Waste Regulations.

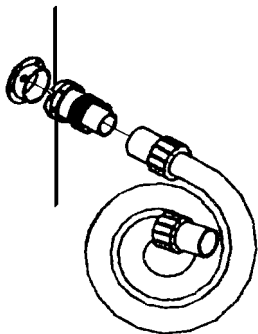
## 2-Ply Intermediate Filter:

1. Remove motor head. Using a damp cloth wipe down all exposed surfaces on underside and carefully set aside. Put wiping cloth down, **DO NOT** discard.
2. Remove HEPA filter cautiously as not to damage or puncture paper media used in the filter. Set aside.
3. Remove 2-ply intermediate filter and dispose of it along with the wiping cloth in a OSHA approved poly bag.

4. Install a new 2-ply intermediate filter, insert HEPA filter, replace motor head and engage clamps.

## Primary HEPA Filter

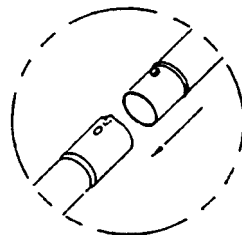
1. Remove motor head. Using a damp cloth wipe down all exposed surfaces on the underside and carefully set aside. Put wiping cloth down, **DO NOT** discard.
2. Remove HEPA filter cautiously and dispose of it along with the 2-ply intermediate filter, 2-ply disposable filter bag and wiping cloth in a OSHA approved poly bag.
3. Install a new 2-ply disposable filter bag, 2-ply intermediate filter and, insert a new HEPA filter, replace motor head and engage holddown clamps.



Hose & Swivel Connector

The hose and swivel connector are pre-assembled at the factory. To attach the swivel connector to intake fitting on vacuum tank:

- 1) Line up the slots in the swivel connector with retaining rivets on the intake.
- 2) Insert swivel connector and twist clockwise until the rivets reset against slot end



Wand Assembly

One or two piece wands are shipped with tool kits. The two piece wand requires assembly.

1) Align the button lock of the upper wand section with the opening for button lock in the lower wand.



Tool Assembly

1) Turn the wand nut counterclock-wise approximately four (4) complete turns.

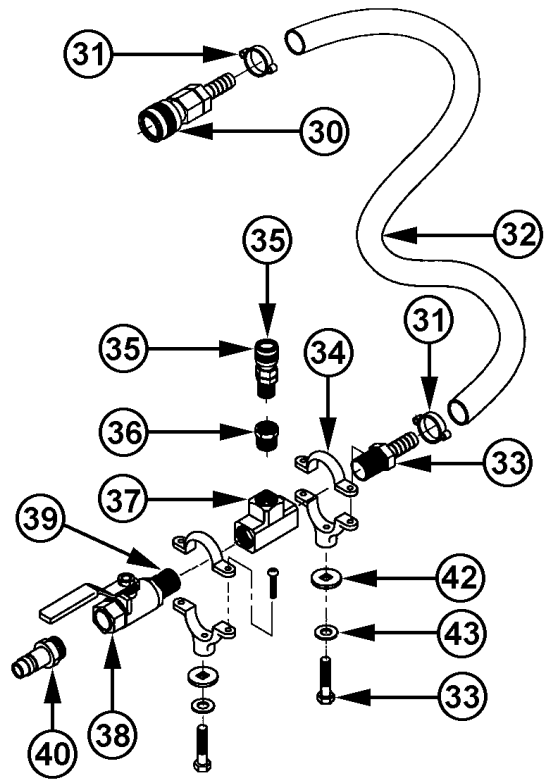
2) Insert tool into wand and coupling.

3) While holding the tool in place, turn nut clockwise until wand nut is fully locked.

# TOOLS, WAND & HOSE INSTALLATION & ASSEMBLY

# AIR-VACUUM VALVE ASSEMBLY REPLACEMENT PARTS LIST

Ref No	Part Description	Qty	Part No
30	Quick Disconnect Female Fitting	1	325422
31	$1\frac{5}{16}$ " Hose Clamp	2	325430
32	$1\frac{1}{2}$ " X 2 Ft Hose	1	325414
33	.37-16 X $1\frac{1}{2}$ " Hex Bolt	2	437336
34	Pipe Hanger	2	437344
35	QDC Female Brass Fitting	1	325546
36	$1\frac{1}{2}$ " Brass Reducer Fitting	1	359947
37	"T" Connector w/ $\frac{3}{8}$ " Socket	1	325473
38	Ball Valve Assembly	1	304468
39	$1\frac{1}{2}$ " Brass Nipple Fitting	1	350478
40	QDC Male Fitting	1	304484
42	Square Hole Flat Washer	2	382426
43	$\frac{3}{8}$ " Flat Washer	2	353221



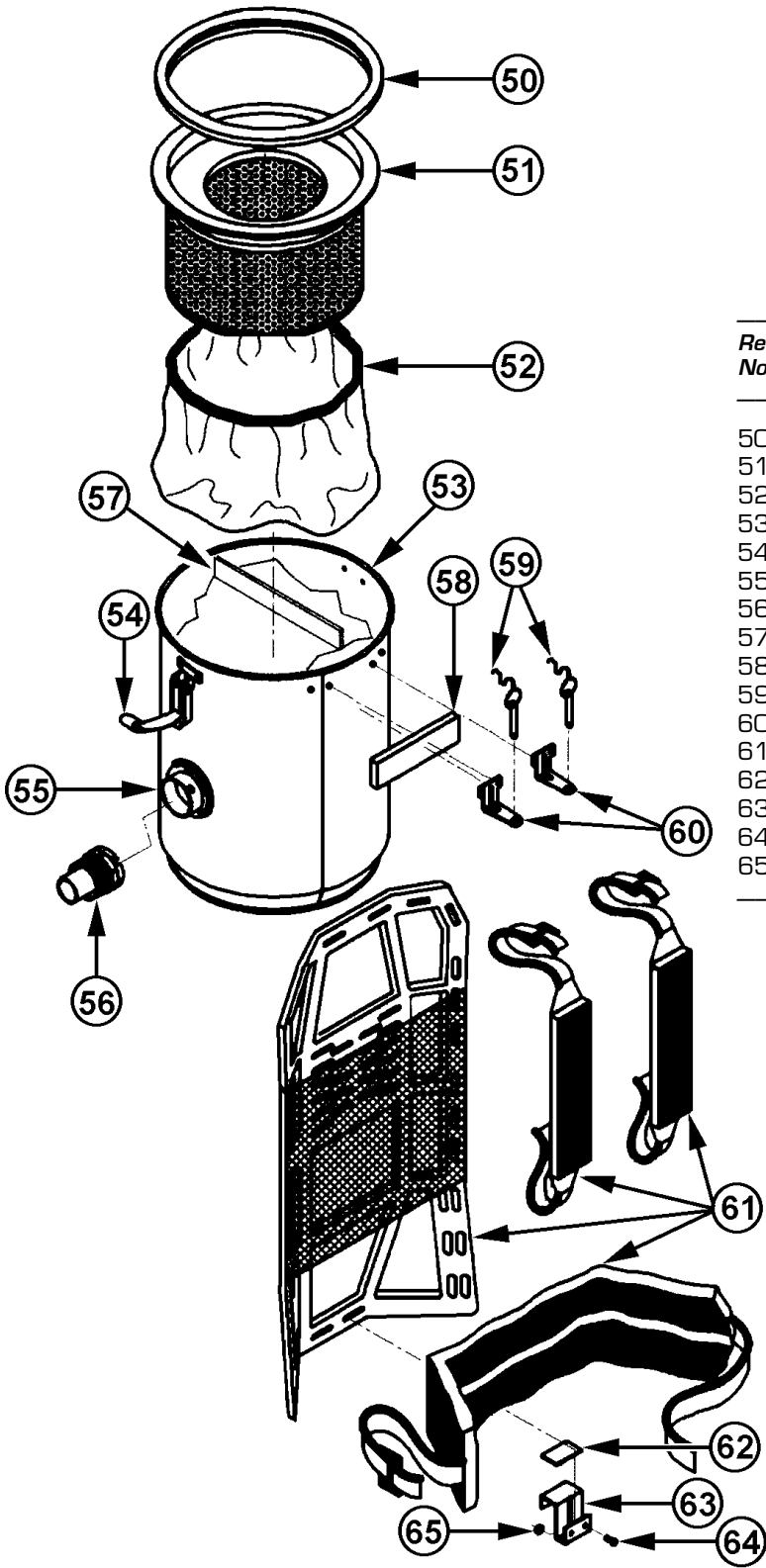
## OPTIONAL $1\frac{1}{2}$ " TOOL KIT



Description	Part No
7 Ft Crushproof Hose	394254
5 Ft Two Piece Steel Wand	353779
14" Floor Brush	395323
14" Carpet Tool	395331
11" Crevice Tool	312444
6" Upholstery Tool w/Brush	374083

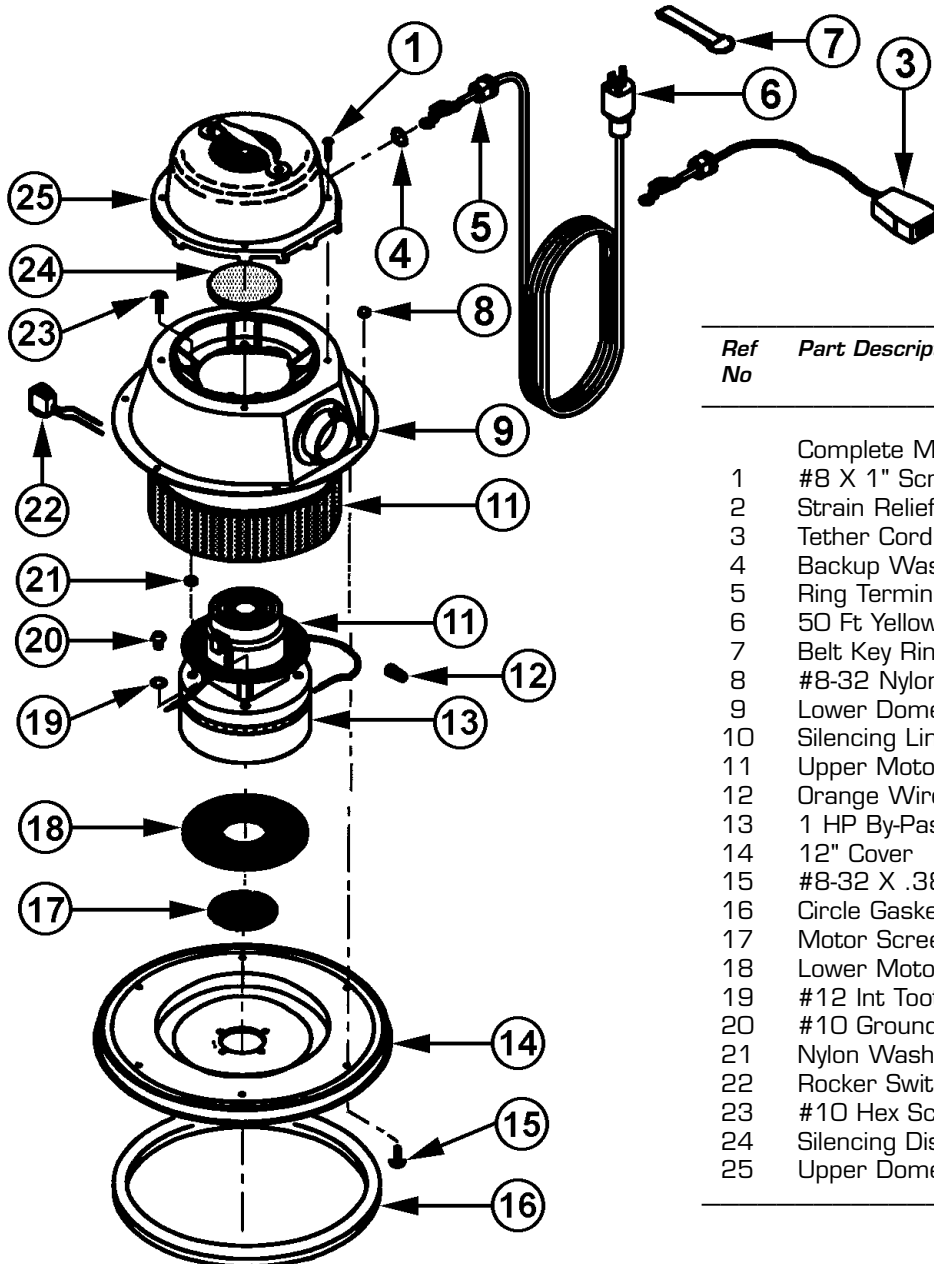


# 410 TANK PARTS DRAWING & REPLACEMENT PARTS LIST



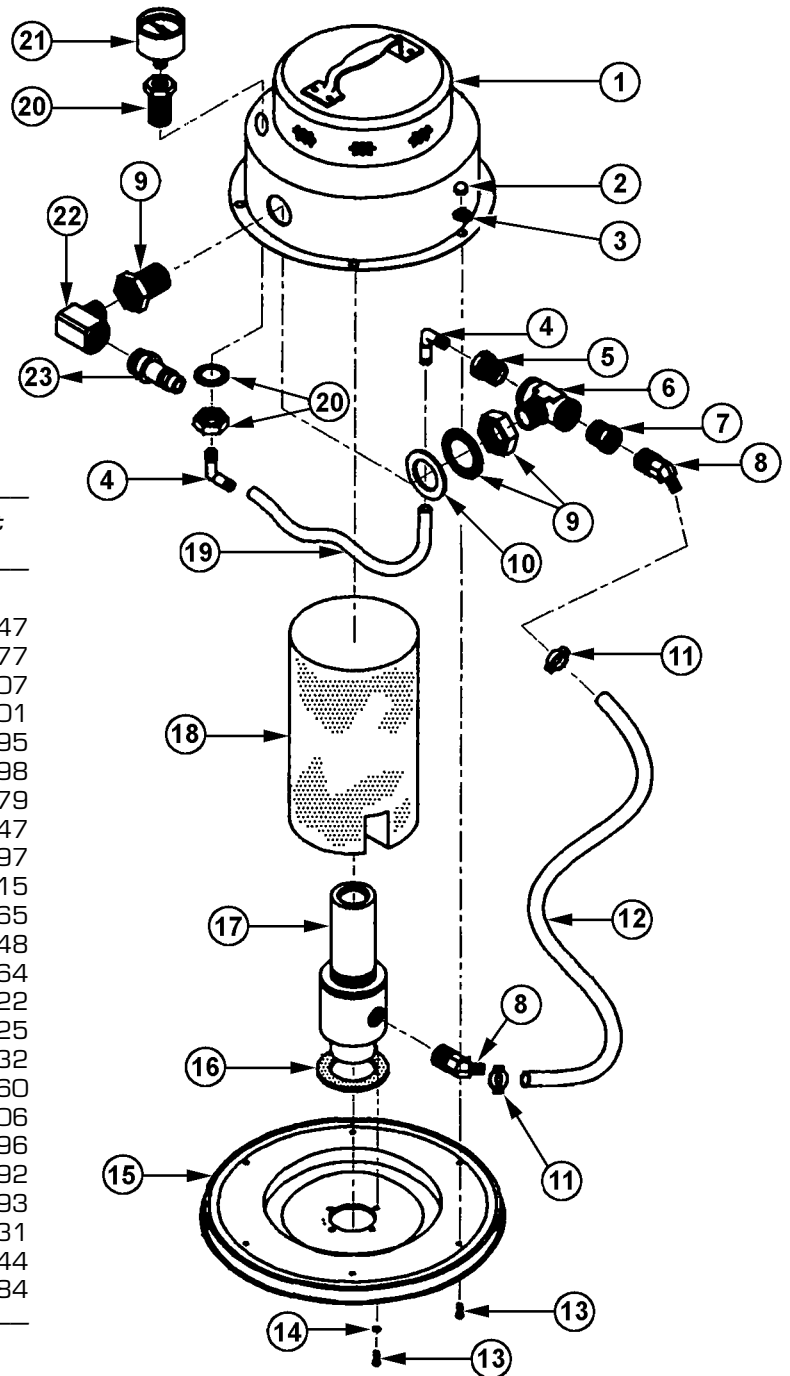
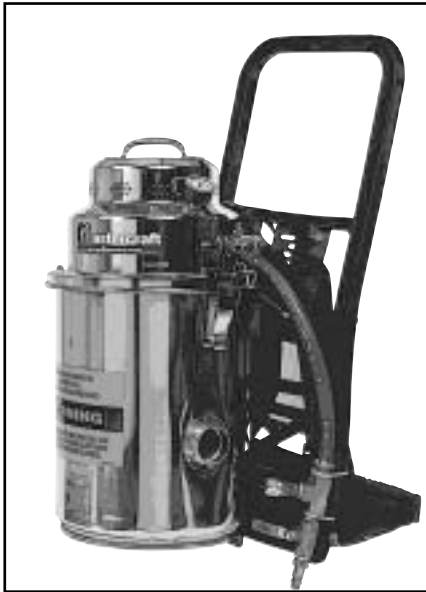
Ref No	Part Description	Qty	Part No
50	HEPA Filter Gasket	1	302392
51	HEPA Filter Assembly	1	302376
52	2 Ply Intermediate Filter (2/Pk)	1	347515
53	Stainless Steel Tank w/Clamps	1	302880
54	Holddown Clamps	2	358312
55	Inlet Assembly	1	325406
56	1 1/2" Swivel Connector	1	349445
57	2-Ply Disposable Filter Bags (5/Pk)	1	395854
58	Flat Gasket	1	303607
59	Speed Pin Assembly	2	385182
60	Tank Frame Clips	2	303631
61	Frame w/Straps & Harness	1	302902
62	Bottom Pad	1	303615
63	Frame Mounting Clip	1	421731
64	#10-24 X 3/4" Screw	2	337315
65	#10-24 Hex Nut	2	331201

# 410SSDAF 1.3 HP MOTOR HEAD REPLACEMENT PARTS LIST



Ref No	Part Description	Qty	Part No
	Complete Motor Head Assy	1	302783
1	#8 X 1" Screw	4	394270
2	Strain Relief	2	443379
3	Tether Cord Assembly	1	332313
4	Backup Washer	2	398187
5	Ring Terminal	1	319724
6	50 Ft Yellow Line Cord	1	387916
7	Belt Key Ring	1	357316
8	#8-32 Nylon Hex Nut	6	385158
9	Lower Dome Assembly	1	394610
10	Silencing Liner	1	302368
11	Upper Motor Gasket	1	378607
12	Orange Wire Nut	4	398985
13	1 HP By-Pass Motor	1	337757
14	12" Cover	1	417432
15	#8-32 X .38 Screw	6	415758
16	Circle Gasket	1	416290
17	Motor Screen	1	394432
18	Lower Motor Gasket	1	394300
19	#12 Int Tooth Lockwasher	1	364037
20	#10 Ground Screw	1	393258
21	Nylon Washer	4	361054
22	Rocker Switch	1	393754
23	#10 Hex Screw	4	368385
24	Silencing Disc	1	396028
25	Upper Dome Assembly	1	394602A

# MAV410SSDAF AIR-OPERATED DRAWING & REPLACEMENT PARTS LIST



Ref No	Part Description	Qty	Part No
	12" Air-Operated Head Assy	1	325147
1	Dome Assembly	1	304077
2	#10-24 Acorn Nut	6	359807
3	#10-24 Hex Nut w/Lockwasher	6	331201
4	1/8" NPT Elbow Fitting	2	304395
5	1/2" to 1/8" Reducer	1	304298
6	1/2" Tee Fitting	1	304379
7	1/2" to 3/8" Reducer	1	359947
8	3/8" Male w/Barber Connector	2	304697
9	1/2" NPT Bulk Head Assembly	1	304115
10	SS Reinforcing Ring	1	374865
11	5/8" Hose Clamp	2	304948
12	3/8" High Pressure Hose	1	304964
13	#10-24 X 1/2" Screw	10	341622
14	#10 Lockwasher	4	380725
15	12" Cover Assembly	1	417432
16	Flat Gasket	1	416460
17	Venturi	2	304506
18	Muffler	1	306096
19	1/4" OD Tubing	1	304492
20	1/8" NPT Bulk Head Assembly	1	304093
21	0-200 Pressure Gauge	1	304131
22	1/2" Brass Elbow Fitting	1	325244
23	1/2" QDC Male Fitting	1	304484

# TROUBLE SHOOTING GUIDE

## PROBLEM: Loss of Vacuum

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### CAUSE:

1. Full paper 2-ply disposable filter bag.
2. Dry filter assembly clogged.
3. Clogged hose or wand.
4. Tank rim dented.
5. Loose or broken fan (electric unit).
6. Motor not working.(electric unit)
7. Gasket worn.

### SOLUTION:

1. Replace 2-ply disposable paper filter bag.
2. Clean cloth filter.
3. Remove obstruction.
4. Replace tank.
5. Contact manufacturer or service center.
6. Contact manufacturer or service center.
7. Replace gasket.

## PROBLEM: Motor is not running

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### CAUSE:

1. Broken switch.
2. Power cord defective.
3. Motor defective (electric unit).
4. Blown fuse or tripped circuit breaker at power source (electric unit).

### 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: Dust blowing from vacuum.

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### CAUSE:

1. Full paper 2-ply disposable filter bag.
2. Paper filter bag not installed properly or off inlet tube.
4. 2-Ply disposable paper filter bag is torn.

### SOLUTION:

1. Replace 2-ply disposable filter bag.
2. Reinstall or replace 2-ply disposable paper filter bag properly.
4. Replace 2-ply disposable filter bag.



#### 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.mastercraftusa.com](http://www.mastercraftusa.com)

#### E-mail:

[sales@mastercraftusa.com](mailto:sales@mastercraftusa.com)