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Operations & Maintenance Manual
For Commercial Use Only



3 GALLON Self Contained Extractor MODEL NO. 98103

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Save These Instructions

NOTES



PROTECT THE ENVIROMENT
Please dispose of packaging materials in an enviromentally safe way according to local waste disposal regulations.



Always remember to recycle.

Within 30 days, to activate the warranty, go to;
<https://tornadovac.com/services/warranty-registration-form.aspx>

For warranty information go to www.tornadovac.com

SAFETY INSTRUCTIONS & WARNINGS

IMPORTANT SAFETY INSTRUCTIONS

READ AND UNDERSTAND ALL INSTRUCTIONS BEFORE USING THIS UNIT

Read and understand this owner's manual and all labels on the unit before operating. Safety is a combination of common sense, staying alert and knowing how your unit works. Use this unit only as described in this manual. To reduce the risk of personal injury or damage to your unit use only the recommended accessories

For Commercial use,

SAVE THIS MANUAL FOR FUTURE REFERENCE

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

WARNING: TO REDUCE THE RISK OF FIRE, ELECTRICAL SHOCK OR INJURY:

- Do not run the unit unattended
- Do not use this unit near flammable liquids, gases, or explosive vapors like gasoline or other fuels, lighter fluids, cleaners, oil-based paints, natural gas, hydrogen, or explosive dusts like coal dust, magnesium dust, grain dust, or gun powder. Sparks inside the motor can ignite flammable vapors or dust.
- Keep the cord away from heated surfaces.
- Do not expose to rain. Store indoors.
- Do not unplug by pulling on cord. To unplug, grasp the plug
- Do not use with damaged cord, plug, or other parts.
- If the unit 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 or carry by the cord, use the cord as a handle, close a door on a cord, or pull cord around sharp edges or corners.
- Do not run the unit over the cord.
- Do not handle the plug or the unit with wet hands.
- To reduce the risk of health hazards from vapors or dusts, do not vacuum toxic materials.
- Do not store near hazardous materials.
- Do not use the unit with a torn filter or without the filter installed.
- Do not allow it be used as a toy. Close attention is necessary when used by or near children.
- To reduce the risk of injury from accidental starting, unplug power cord before changing or cleaning filter.
- Do not leave the unit unattended when plugged in. Unplug from wall outlet when not in use and before servicing.
- Turn off the unit before unplugging.
- Do not put any object into ventilation openings. Do not operate with any ventilation openings blocked; keep free of dust, lint, hair or anything that may reduce air flow.
- Keep hair, loose clothing, fingers and all parts of the body way from openings and moving parts.
- To reduce the risk of falls, use extra care when using the unit on stairs.
- Do not pick up hot ashes, coals, toxic, flammable or other hazardous materials.
- If the machine tips over during use, shut it off immediately and set it upright and wait for the motor to stop completely.

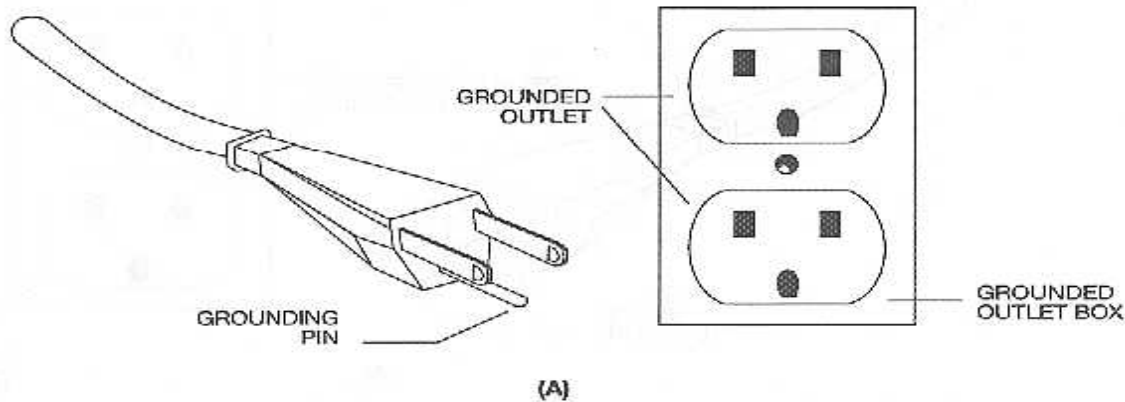
Warning: Turn unit off immediately if foam or liquid come from machine exhaust. Empty & clean out recovery (dirty) tank and use defoamer to correct the problem.

GROUNDING INSTRUCTIONS

This appliance must be grounded. If it should malfunction or breakdown, 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 inserted into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

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 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 115-volt circuit and has a grounding attachment plug that looks like the plug illustrated in sketch (A). Make sure that the appliance is connected to an outlet having the same configuration as the plug. No adaptor should be used with this appliance.



EXTENSION CORDS

When using an extension cord with your unit, refer to the following table to determine the required A.W.G. wire size. Before using the cleaner make sure the power cord and extension cord are in good working condition. Make repairs or replacements before using the vacuum cleaner. Only use extension cords that are rated for outdoor use.

Length of Extension Cord				
	25 Feet	50 Feet	100 Feet	150 Feet
110V-120V	7.5 Meter	15.25 Meter	30.5 Meter	45.7 Meter
Amps	A.W.G. Wire Size			
0-6	18	16	16	14
7-10	18	16	14	12
11-12	16	16	14	12
13-16	14	12	Not recommended	

TECHNICAL SPECIFICATIONS

Voltage/Frequency	ACV/Hz	120/60
Pump Pressure	psi	20
Input Power	W/A	950/8.5
Cleaning Width	in	10
Solution Tank	gallon	3.7
Recovery Tank	gallon	3
Dimensions (L x W x H)	in	21 x 14 x 34
Weight (Empty)	lbs.	49
Power Cable Length	ft	30
Sound level	dB (A)	73

COMMON REPAIR PARTS

Part Number	Description
SC339	Wheel Assembly
SC309	Brush drive Belt
SC31	Spray Nozzle
SC312	Vacuum Hose
SC317	Recovery Tank Lid
SC323	Recovery Tank Lid Gasket
SC324	Handle
SC325	Brush Motor
04-3256-0000	Vacuum Motor
FJ5082	Pump Motor
M1369AS	Power Cable
PFX3S-KNS	Upholstery Kit (OPTIONAL)

KEY FEATURES



FIG. 1

PRE-OPERATION INSTRUCTIONS

NOTE - FOR COLOR FASTNESS: Before using carpet cleaning chemicals, test on an inconspicuous part of the carpet for color fastness. Place the solution on a small piece of clean white cloth or tissue. Rub the carpet area vigorously with the cleaning chemical. Excessive amounts of dye showing on the material would indicate that the colors are not colorfast, and should not be wet cleaned.

1. Prepare room for cleaning, moving furniture as need to provide a clear working area. Cover bottoms of furniture legs where possible. (Aluminum foil or foam blocks are ideal for this purpose.) Pin up curtains and drapes.
2. Gather cleaning supplies: a clean, suitable sized bucket, carpet cleaning solution, and pretreat solutions for heavily soiled traffic areas.
3. Disconnect vacuum hose from recovery tank and lift the RECOVERY TANK off of the SOLUTION TANK.
4. Measure carpet cleaning solution, per manufacturers recommended ratio, into the SOLUTION TANK and fill with hot water. DO NOT use the RECOVERY TANK to fill the SOLUTION TANK. Debris remaining in the tank could damage the pump or block the jet. WARNING: DO NOT exceed water temperature of 150° F (65° C).
5. Replace RECOVERY TANK on machine. Add defoamer solution, per manufacturer's instructions as needed, in RECOVERY TANK.
6. Replace the transparent cover on the RECOVERY TANK and connect the vacuum hose to the front of the RECOVERY TANK.
7. Pre-treat heavily soiled carpet areas as required.

OPERATION INSTRUCTIONS

1. Plug the power cord into an outlet. WARNING: This machine must be properly grounded. See Grounding Instructions on page 4 for additional information.
2. Press the VACUUM and BRUSH switches "on". The solution switch has 3 positions (ON-OFF-ON) | = Spray is actuated by the single push button on the handle, O = Spray is OFF, || = Spray ON. See FIG. 2 for a diagram of operational switches.
3. To clean the carpet, press and hold the SOLUTION SPRAY PUSH BUTTOM (FIG. 1) to apply the cleaning solution, pulling the machine backwards at the same time. Stop spraying the solution approximately 12 inches (30 cm) before the end of your pass, so that the extractor will vacuum up all of the solution. Slightly overlap the next cleaning pass to prevent streaking. To avoid overwetting, it is recommended that a maximum of only two wet passes (spraying solution) be done. One dry pass without spraying solution will also aid in drying time. After a few passes, check the RECOVERY TANK to verify that no foam is present. Add extra defoamer if necessary.
4. Empty the RECOVERY TANK when it is approximately 3/4 full. Do not refill the SOLUTION TANK without emptying all of the contents of the RECOVERY TANK first.

GENERAL INSTRUCTIONS

OPERATION INSTRUCTIONS

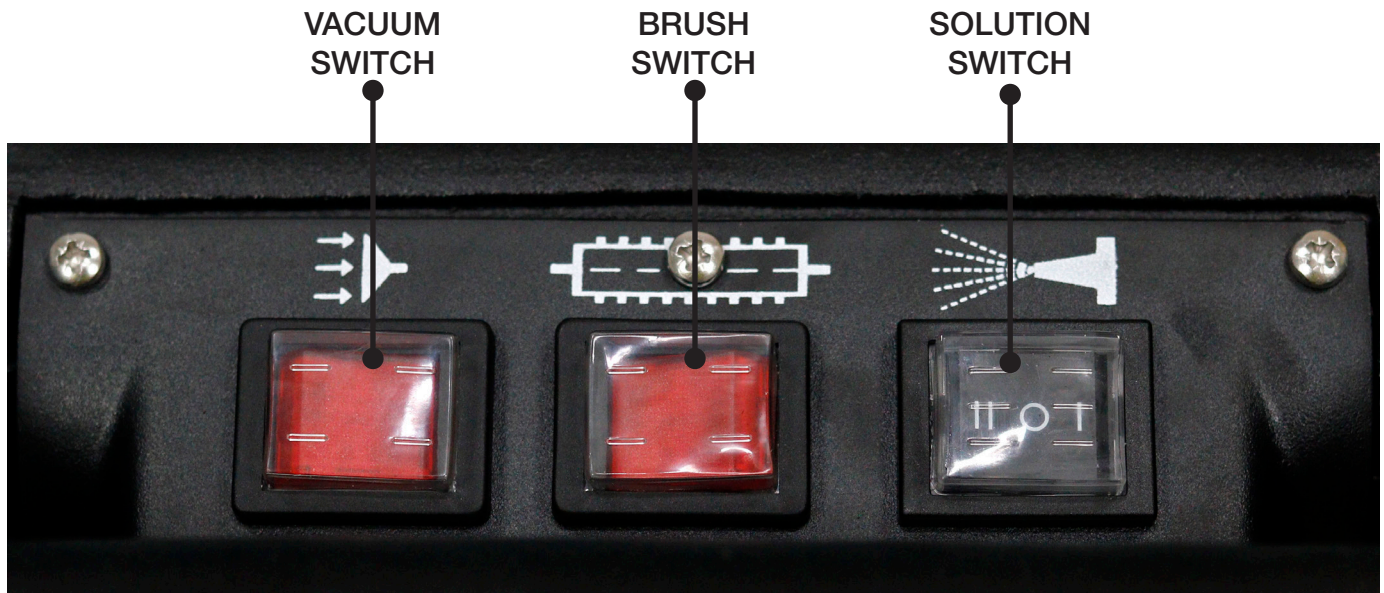


FIG. 2

STORAGE

WHEN CLEANING IS FINISHED:

1. Disconnect the SOLUTION HOSE on the front of the machine by pushing in on the ring of the solution fitting.
2. Connect the drain hose (clipped to the back) to the SOLUTION HOSE fitting and place the other end into the RECOVERY TANK (FIG. 3). Press the SOLUTION switch to the "on" position. This will activate the motor to pump any remaining solution into the RECOVERY TANK for easy drainage.
3. When all of the solution is pumped from the SOLUTION TANK, turn the SOLUTION switch off, remove the power plug from the outlet and empty the RECOVERY TANK. Leave the RECOVERY TANK open when storing.
4. Disconnect the DRAIN HOSE by pushing in on the ring of the SOLUTION HOSE fitting. Replace the DRAIN HOSE in the clip on the back of the machine, and re-connect the SOLUTION HOSE.



FIG. 3

ROUTINE MAINTENANCE INSTRUCTIONS

DAILY

1. The filter in the solution tank (FIG. 4) should be kept clean. It can be removed if necessary. A damaged filter should be replaced, otherwise blockages and/or damage to the pump head and spray jet can occur.
2. Check the spray jet (FIG. 5) for blockage and a uniform spray pattern. Remove jet and blow through to clean. Do not use a pin or other sharp objects as this may cause damage to the jet.
3. Check and remove any debris or lint build-up from the vacuum head, brush, and brush housing.
4. Always wash out the tanks with clean water after use. To do this, pour clean water into the solution tank and spray through spray tip to clear chemical residue from the pump, lines, and spray tip. Allow the vacuum to run for a few minutes after use to aid the machine in drying out and to help prevent bacteria and odors.
5. Wash out mesh filter in RECOVERY TANK of dirt and carpet fibers after dumping waste from recovery tank. Failure to clean filter may cause damage to vacuum motor.



FIG. 4

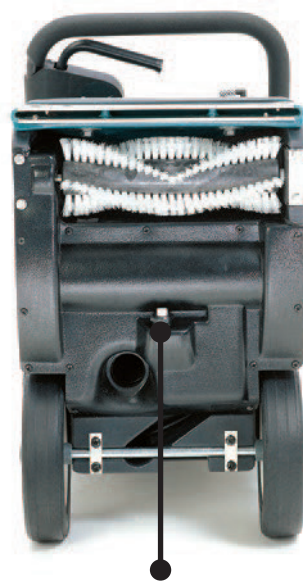


FIG. 5

WEEKLY

1. Inspect hoses (unseen blockages sometimes occur), hose cuffs, and the rubber seal on the recovery tank lid. The main cable, plug, and switches should also be examined for damage.

NOTE: It is advisable to store the unit with the recovery tank lid removed.

CAUTION: THIS UNIT MUST BE PROTECTED FROM FREEZING. Damage from freezing could cause machine to malfunction.

TROUBLESHOOTING

MOTORS NOT RUNNING

CAUSE	SOLUTION
1) Power not reaching main switch.	1) Check power supply. Check fuses/circuit breaker. Contact service center.
2) Defective power cord.	2) Contact manufacturer or service center.
3) Faulty switches or wiring.	3) Contact manufacturer or service center.
4) Blown fuse or tripped circuit breaker.	4) Reset circuit breaker according to operating instructions or replace fuse if qualified.
5) Problem with brushes, field windings, or armatures. (vacuum or brush motor)	5) Repair or replace defective part.
6) Reset switch on back.	6) Push reset switch.

LOSS OF VACUUM SUCTION

CAUSE	SOLUTION
1) Vacuum head blocked.	1) Visually inspect and clear blockage.
2) Hose blocked.	2) Visually inspect and clear blockage.
3) Recovery tank not sealed properly.	3) Check tank for damage or adjust for proper fit.

BRUSH NOT FUNCTIONING PROPERLY

CAUSE	SOLUTION
1) Belt broken.	1) Replace belt.
2) Brush jammed.	2) Visually inspect and clear blockage.
3) Brush pulley broken.	3) Replace pulley.

SPRAY JET NOT FUNCTIONING PROPERLY

CAUSE	SOLUTION
1) Jet blocked.	1) Visually inspect and clean according to operating instructions.
2) Solution filter blocked.	2) Visually inspect and clean according to operating instructions.

