

# **Power-Flite®**

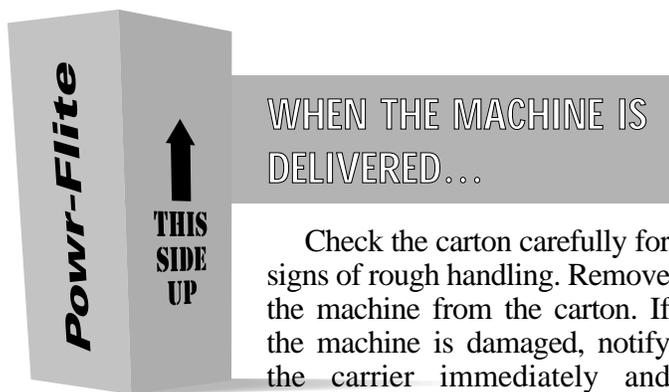
**COMMERCIAL FLOOR CARE EQUIPMENT**

## Commercial Carpet Extractors



## OPERATOR'S MANUAL

# COMMERCIAL CARPET EXTRACTORS



## WHEN THE MACHINE IS DELIVERED...

Check the carton carefully for signs of rough handling. Remove the machine from the carton. If the machine is damaged, notify the carrier immediately and request an inspection. Be sure to

keep the carton, packing inserts, packing lists and carrier receipt until the inspector has verified your claim.

Southwest<sup>®</sup> Manufacturers' liability ceases when the shipment is picked up by the carrier, but our customer service staff will be glad to furnish any information needed in connection with the claim and will expedite the repair of the machine.



## BEFORE OPERATING THE MACHINE

Read the manual carefully and completely before attempting to operate the unit. This manual has important information for the use and safe operation of this machine. Keep this manual handy at all times. The Carpet Extractor will assure years of satisfactory service if operated and maintained according to recommendations in the manual.



## WARRANTY

To protect your investment, promptly fill in the required information on the warranty card included with the unit. Then mail the card back.



## GENERAL PRECAUTIONS

*Follow these guidelines to ensure operator safety and to maintain equipment in running order.*

- Make sure the machine is plugged into an electrical outlet with the same voltage rating as shown on the nameplate of the machine.

*Do not attempt to plug a 115 volt machine into a 230 volt outlet or a 230 volt machine into a 115 volt outlet.*

- Disconnect the power cord from the outlet before attempting maintenance or repair work. Do not leave machine connected to an electrical outlet when unattended.
- Do not abuse the cord. Never pull the machine by the cord or yank the cord from the receptacle. Replace a damaged cord immediately.
- If an extension cord is necessary, use a three conductor grounding cord – 12 gauge wire or heavier to prevent motor burnout and over-heating of wires.
- To avoid electric shock, do not expose to rain. Store indoors.
- To avoid fire, do not use machine in environments where combustible liquids, vapors or dust concentrations are present.



## WARNING

- Do not expose the machine to freezing temperatures.
- Do not use the machine for totally dry vacuuming. This machine is not fitted with a fine dust filter.
- **Do not use citrus-based cleaners in this machine.**
- Do not use cleaning chemicals in this machine except those recommended for steam-type extraction equipment. **The use of any chemical with abrasive additives voids the warranty.**
- Do not break off or pull out the ground prong on the plug
- Do not attempt repair on a warranted machine unless instructions to perform it by an authorized shop are obtained from the factory.
- Do not use any replacement parts except those specified on the parts list. Proper performance of the machine could be affected if substitutions are made.
- Use defoamer at all times to prevent damaging the vacuum motor.
- Do not use water in excess of 140° F (62° C). It could damage the seals and polypropylene casing of the diaphragm pump.
- Follow maintenance schedule strictly.

*Failure to comply with the above warning instructions will void the warranty.*



## PERIODIC MAINTENANCE

All *Powr-Flite* machines are engineered and built to require a minimum of maintenance. But like any machine, it does require some care to keep it in optimum working condition. Careful attention to these maintenance instructions will give you maximum operating performance and will increase the operating life of your machine.

- **Solution Lines and Fittings**

Flush the machine at least once a month with a solution of 1 part water to 3 parts white vinegar in order to neutralize the alkaline residue left by the cleaning solution.

- **Spray Nozzle**

Inspect the spray nozzle for a worn jet. Replace the jet if necessary. When cleaning the jet, remove and clean from inside.

- **Solution Tank Strainer**

Inspect for blockage or holes. Clean or replace if necessary.

- **Float Cage Assembly**

Remove from recovery tank. Inspect for blockage and soap residue. Clean thoroughly before re-installing.

- **Quick Connect Coupler**

Spray with silicone lubricant to prevent coupler from sticking.

- **Drain Valve**

Apply light oil on gate seals. If machine has to be stored for a week, leave the gate valve open.

- **Diaphragm Pump**

The same procedures used on solution line and fittings applies to the pump. If replacement parts kits are required in order to service the pump, consult the factory or contact your local authorized distributor (See Troubleshooting Chart).

- **Vacuum Motor**

Be sure power cord gets disconnected from the outlet before doing any work on the machine. Brush mechanisms (carbon brush, spring and holder) should be replaced after 750 operating hours or when the carbon brushes are worn down to  $\frac{3}{8}$ " in length. Both brushes should be replaced at the same time. On models which are equipped with two vacuum motors in series, replace all four (4) brush mechanisms at the same time.

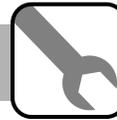
**NOTE: On models with two vacuum motors, check the conditions of the 2" wire reinforced vacuum hose that connects the first vacuum motor exhaust port to the second vacuum motor intake for leaks. Replace if necessary.**



## DAILY MAINTENANCE

*Always keep the machine clean, inside and out.*

1. Pour two (2) gallons of clean, hot water in the solution tank. Turn the pump on and flush the entire system (up to the wand nozzles) for about a minute to prevent alkaline buildup.
2. Vacuum out the remaining water. Rinse out the recovery (waste) tank with the drain valve open.
3. Check the filter screen on the recovery tank. Remove by twisting off the ball type water shutoff. Lint should be cleaned off so that air flow is not impeded.
4. Check the line strainer in the solution tank. If dirt has accumulated on the screen, remove and rinse it in clear running water.



## TROUBLESHOOTING

ELECTRICAL SYSTEM		
PROBLEM	POSSIBLE CAUSE	SOLUTION
No electrical power.	1. Defective power cord. 2. Circuit breaker off or fuse blown.	1. Replace 2. Turn circuit breaker on or replace fuse. Unplug any equipment using the same circuit.
Switch is turned on. Intermittent power to motor(s).	1. Faulty electrical cable. 2. Defective switches. 3. Loose terminal or discolored terminal connections.	1. Repair or replace. 2. Replace. 3. Replace.
Electrical Shock	1. Equipment not grounded.	1. Locate grounded outlet.

VACUUM SYSTEM		
PROBLEM	POSSIBLE CAUSE	SOLUTION
Vacuum motor on Little or no vacuum on wand head.	1. Drain valve open. 2. Defective vacuum	1. Close drain valve. Recovery tank lid must be closed. 2. Repair or replace hose. Kinks in vacuum hose.
Not enough vacuum power at the machine.	1. Damaged recovery tank lid gasket. 2. Lint clogging ball-type shutoff screen. 3. Vacuum hose connection between stand pipe and vacuum motor (on models with 2 vac motors, the vacuum hose connection in between). 4. Vacuum motor exhaust blocked.	1. Replace 2. Remove screen. Clean out fibers and accumulated dirt. 3. Check for leaks around clamps (tighten). Replace damaged hose(s). 4. Check air flow by removing hose from machine and feel the exhaust under the machine. Remove obstruction.

TROUBLESHOOTING - VACUUM SYSTEM (continued from page 3)

PROBLEM	POSSIBLE CAUSE	SOLUTION
Motor running and no vacuum at all.	1. Faulty vacuum motor.	1. Replace.
No exhaust from the blowport.	2. Water shutoff closed.	2. Clean water shutoff screen.
Premature closing of ball type shutoff.	1. Dirty or clogged shut-off filter screen.	1. Remove and clean screen.
Ball type shutoff failing to release after recovery tank is drained.	2. Ball coated with detergent or other foreign material. 2. Screen slightly out of round.	2. Remove and rinse ball with clean water. 3. Bend screen by squeezing slightly by hand until there is an obvious space between ball and inside of screen.
Foam/dirty solution coming out of vacuum exhaust port.	1. Foam from carpet bypassing water shutoff. 2. Elbow in vacuum tank is not positioned correctly.	1. Use additional defoamer. 2. The elbow should be pointed directly at the side wall of the tank away from the ball type shutoff.

SOLUTION SYSTEM		
SOLUTION	PROBLEM	POSSIBLE CAUSE
Pump motor on – no spray through jets.	1. Clogged or faulty solution control valve.  2. Clogged or faulty quick disconnect on housing.  3. Punctured pump diaphragm.	1. Check intake on valve and remove lint or other foreign material. 2. Depress plunger on solution hose against inside wall of solution tank. If solution is flowing at this point, the system is O.K. If no solution flows, check the quick disconnect for lint and other foreign matter. 3. Replace with diaphragm repair kit.

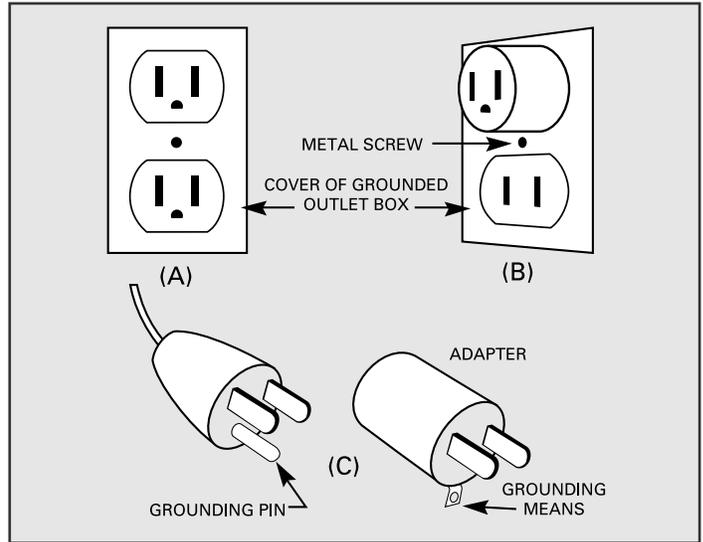
SOLUTION	PROBLEM	POSSIBLE CAUSE
Uneven spray from jet. Spray weak or uneven.	1. Clogged strainer in solution tank.  2. Clogged jet.	1. Unscrew strainer and remove lint and any other foreign material from screen. 2. Remove and clean.

SOLUTION	PROBLEM	POSSIBLE CAUSE
Leaking or stuck solution valve.	1. Foreign material in valve.  2. Loose brass hex nut. 3. Valve worn or seals worn.	1. Remove brass hex plug, clean valve and replace. 2. Reseal hex and plug. 3. Replace worn parts with solution valve repair kit.

SOLUTION	PROBLEM	POSSIBLE CAUSE
Vacuum motor working.	1. Defective pump pressure switch.	1. Replace with new pressure switch assy.
Pump motor fails to turn on.	2. Defective rectifier or motor.	2. Replace.

SOLUTION	PROBLEM	POSSIBLE CAUSE
Pump pressure low	1. Clogged screens on strainer in solution tank.  2. Punctured pump diaphragm. 3. Defective rectifier or motor.	1. Unscrew strainer remove lint and any other foreign material from screen. 2. Replace with diaphragm repair kit. 3. Replace.

SOLUTION	PROBLEM	POSSIBLE CAUSE
Pump pressure varies.	1. Worn carbon brushes. 2. Defective pump pressure control switch.	1. Replace brushes. 2. Replace.



## SAFETY INSTRUCTIONS

This Carpet Extractor should be grounded while in use to protect the operator from electric shock. This machine is equipped with a 3-conductor cord and a 3-prong grounded type attachment cap plug to fit the proper grounding type receptacle. The green (or green and yellow) conductor in the cord is the grounding wire. Never connect this wire to anything other than the grounding blade.

The Carpet Extractor is provided with an attachment cap plug, as shown in Sketch A, and is intended for use on a nominal 120 volt circuit. If a properly grounded receptacle, as shown in Sketch A, is unavailable, an adaptor, as shown in Sketch C, is available and should be installed, as shown in Sketch B, if the outlet box that houses the receptacle is grounded. Be sure to fasten the grounding tap to the faceplate screw.

## ONE LAST REMINDER !

READ ALL INSTRUCTIONS, WARNINGS  
AND CAUTIONS BEFORE USING

These guidelines are presented for your protection and convenience. Please read them carefully, since a failure to heed these precautions could result in discomfort or injury. When using an electrical appliance, basic safety precautions should always be followed.

# WARNING

**TO AVOID FIRE, DO NOT USE WITH A  
FLAMMABLE OR COMBUSTIBLE LIQUID  
TO CLEAN FLOOR.**



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