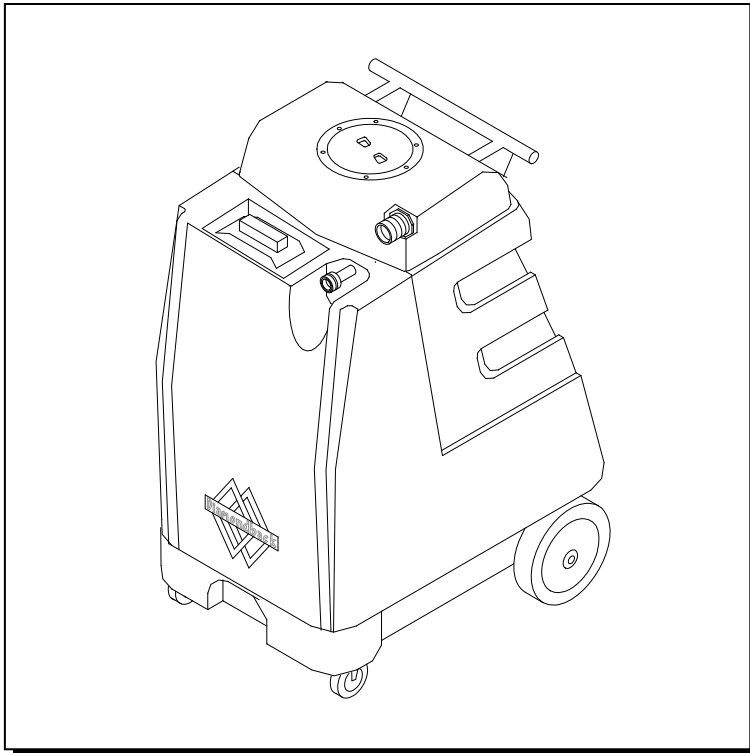


# Stormchaser™



## PORTABLE EXTRACTOR



Operating Instructions

**MODELS:** 900-03  
10070490  
900-05  
10070510

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*Read these instructions before using the machine*



86038750 04/24/09

PRV NO. 98892

## **MACHINE DATA LOG/OVERVIEW**

MODEL	_____
DATE OF PURCHASE	_____
SERIAL NUMBER	_____
SALES REPRESENTATIVE #	_____
DEALER NAME	_____
OPERATIONS GUIDE NUMBER	_____
PUBLISHED	_____

<b>YOUR DEALER</b>	
Name:	_____
Address:	_____
Phone Number:	_____

### **OVERVIEW**

The Stormchaser is an electric powered carpet extractor intended for commercial use. This appliance applies a cleaning solution to the carpet and then vacuums the soiled water back into the recovery tank.

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# HOW TO USE THIS MANUAL

This manual contains the following sections:

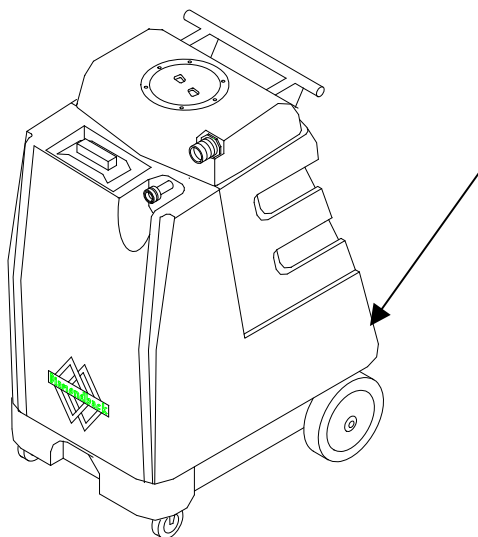
- HOW TO USE THIS MANUAL
- SAFETY
- OPERATIONS
- MAINTENANCE
- PARTS LIST

The HOW TO USE THIS MANUAL section will tell you how to find important information for ordering correct repair parts.

Parts may be ordered from authorized dealers. When placing an order for parts, the machine model and machine serial number are important. Refer to the MACHINE DATA box which is filled out during the installation of your machine. The MACHINE DATA box is located on the inside of the front cover of this manual.

MODEL _____
DATE OF PURCHASE _____
SERIAL NUMBER _____
SALES REPRESENTATIVE # _____
DEALER NAME _____
OPERATIONS GUIDE NUMBER _____
PUBLISHED _____

The model and serial number of your machine is on the inside of the control panel.



The SAFETY section contains important information regarding hazard or unsafe practices of the machine. Levels of hazards is identified that could result in product or personal injury, or severe injury resulting in death.

The OPERATIONS section is to familiarize the operator with the operation and function of the machine.

The MAINTENANCE section contains preventive maintenance to keep the machine and its components in good working condition. They are listed in this general order:

- Service Schedule
- Lubrication
- Storage
- Vacuum Motor Replacement
- Solution Pump Replacement
- Pump Kits
- Pressure Regulator (200PSI model only)
- Troubleshooting

The PARTS LIST section contains assembled parts illustrations and corresponding parts list. The parts lists include a number of columns of information:

- **REF** – column refers to the reference number on the parts illustration.
- **PART NO.** – column lists the part number for the part.
- **PRV NO.** – reference number.
- **QTY** – column lists the quantity of the part used in that area of the machine.
- **DESCRIPTION** – column is a brief description of the part.
- **SERIAL NO. FROM** – column indicates the first machine the part number is applicable to. When the machine design has changed, this column will indicate serial number of applicable machine. The main illustration shows the most current design of the machine. The boxed illustrations show older designs. If column has an asterisk (\*), call manufacturer for serial number.
- **NOTES** – column for information not noted by the other columns.

*NOTE: If a service or option kit is installed on your machine, be sure to keep the KIT INSTRUCTIONS which came with the kit. It contains replacement parts numbers needed for ordering future parts.*

## IMPORTANT SAFETY INSTRUCTIONS

**When using an electrical appliance, basic precaution must always be followed, including the following:**

**READ ALL INSTRUCTIONS BEFORE USING THIS MACHINE.**

**This machine is for commercial use.**



### **WARNING:**

**To reduce the risk of fire, electric shock, or injury:**

Connect to a **properly grounded outlet**. See Grounding Instructions.

**Do not** leave the machine unattended. Unplug machine from outlet when not in use and before maintenance or service.

**Use only** indoors. Do not use outdoors or expose to rain.

**Do not** allow machine to be used as a toy. **Close attention** is necessary when used by or near children.

**Use only** as described in this manual. Use only manufacturer's recommended components and attachments.

**Do not** use damaged electrical cord or plug. Follow all instructions in this manual concerning grounding the machine. If the machine is **not working properly**, has been dropped, damaged, left outdoors, or dropped into water, return it to an authorized service center.

**Do not** pull or carry machine by electrical cord, use as a handle, close a door on cord, or pull cord around sharp edges or corners.

**Do not** run machine over cord. **Keep** cord away from heated surfaces.

**Do not** unplug machine by pulling on cord. To unplug, grasp the electrical plug, not the electrical cord.

**Do not** handle the electrical plug or machine with wet hands.

**Do not** operate the machine with any openings blocked. Keep openings free of debris that may reduce airflow.

This machine is intended for cleaning carpet only.

**Do not** vacuum anything that is burning or smoking, such as cigarettes, matches, or hot ashes.

This machine is not suitable for picking up health endangering dust.

Turn off all controls before unplugging.

**Machine can cause a fire** when operating near flammable vapors or materials. Do not operate this machine near flammable fluids, dust or vapors.

**This machine is suitable for commercial use, for example in hotels, schools, hospitals, factories, shops and offices for more than normal housekeeping purposes.**

Maintenance and repairs must be done by qualified personnel.

If foam or liquid comes out of machine, switch off immediately.

## SAVE THESE INSTRUCTIONS

## **HAZARD INTENSITY LEVEL**

The following symbols are used throughout this guide as indicated in their descriptions:

### **HAZARD INTENSITY LEVEL**

There are three levels of hazard intensity identified by signal words -**WARNING** and **CAUTION** and **FOR SAFETY**. The level of hazard intensity is determined by the following definitions:

#### **WARNING**

**WARNING** - Hazards or unsafe practices which COULD result in severe personal injury or death.

#### **CAUTION**

**CAUTION** - Hazards or unsafe practices which could result in minor personal injury or product or property damage.

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

Report machine damage or faulty operation immediately. Do not use the machine if it is not in proper operating condition. Following is information that signals some potentially dangerous conditions to the operator or the equipment. Read this information carefully. Know when these conditions can exist. Locate all safety devices on the machine. Please take the necessary steps to train the machine operating personnel.

#### ***FOR SAFETY:***

**DO NOT OPERATE MACHINE:**

Unless Trained and Authorized.

Unless Operation Guide is Read and understood.

In Flammable or Explosive areas.

In areas with possible falling objects.

#### ***WHEN SERVICING MACHINE:***

**Avoid moving parts. Do not wear loose clothing; jackets, shirts, or sleeves when working on the machine.**

# SAFETY LABEL LOCATION

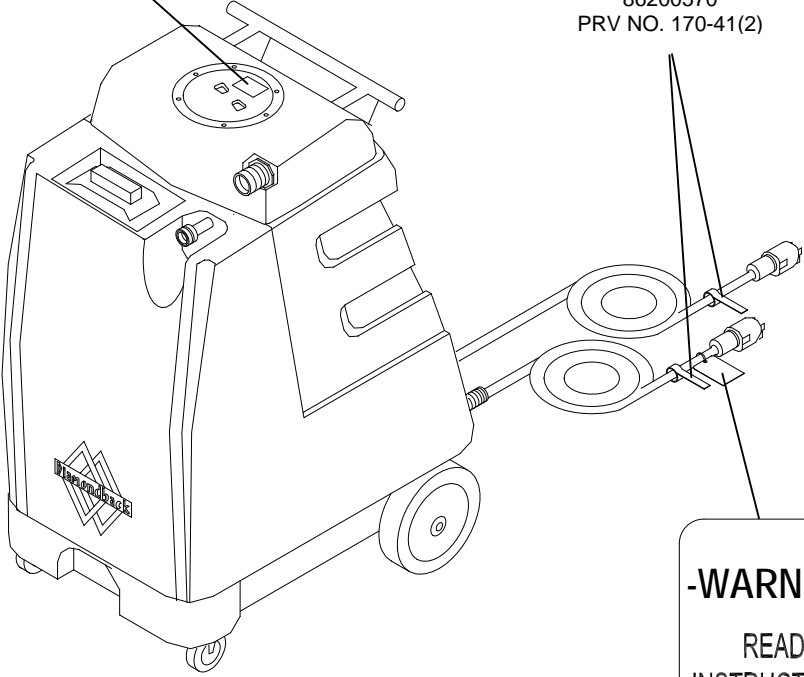
NOTE: These drawings indicate the location of safety labels on the machine. If at any time the labels become illegible, promptly replace them.



LABEL WARNING  
86242230  
PRV NO. 500009



LABEL CIRCUIT INTERRUPTER  
86200570  
PRV NO. 170-41(2)



LABEL HEATER MATE WARNING TAG  
86200000  
PRV NO. 170-31

## GROUNDING INSTRUCTIONS

**THIS PRODUCT IS FOR COMMERCIAL USE ONLY.**

### ELECTRICAL:

In the USA this machine operates on a standard 15 amp 115V, 60 hz, A.C. power circuit. The amp, hertz, and voltage are listed on the data label found on each machine. Using voltages above or below those indicated on the data label will cause serious damage to the motors.

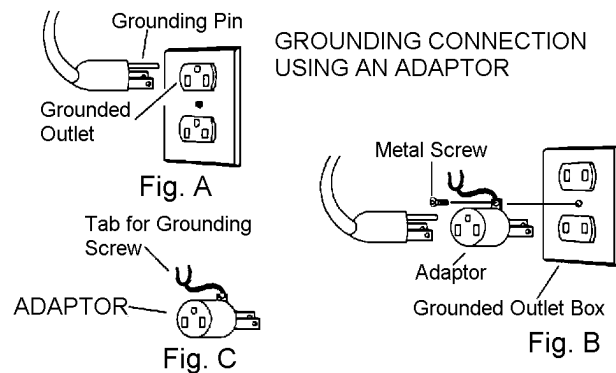
### EXTENSION CORDS:

If an extension cord is used, the wire size must be at least one size larger than the power cord on the machine, and must be limited to 50 feet (15.5m) in length.

### GROUNDING INSTRUCTIONS:

This appliance must be grounded. If it should malfunction or break down, 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.

This appliance is for use on a nominal 120-volt circuit, and has a grounded plug that looks like the plug in "Fig. A". A temporary adaptor that looks like the adaptor in "Fig. 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 colored rigid ear, lug, or wire 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.



Note: Adaptors are not allowed in Canada.

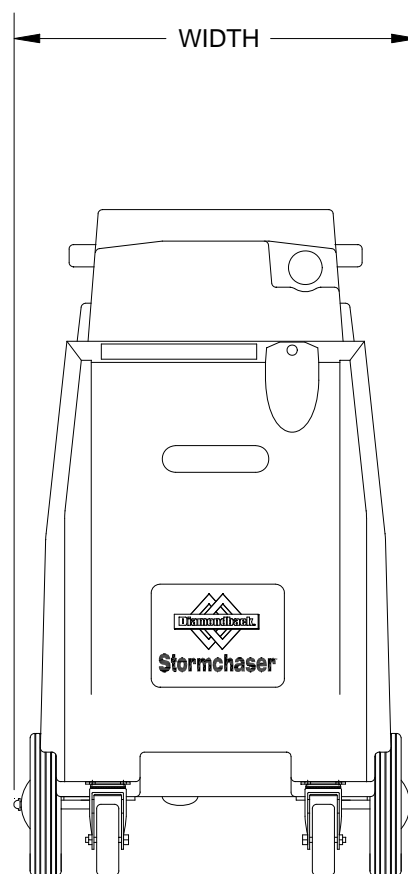
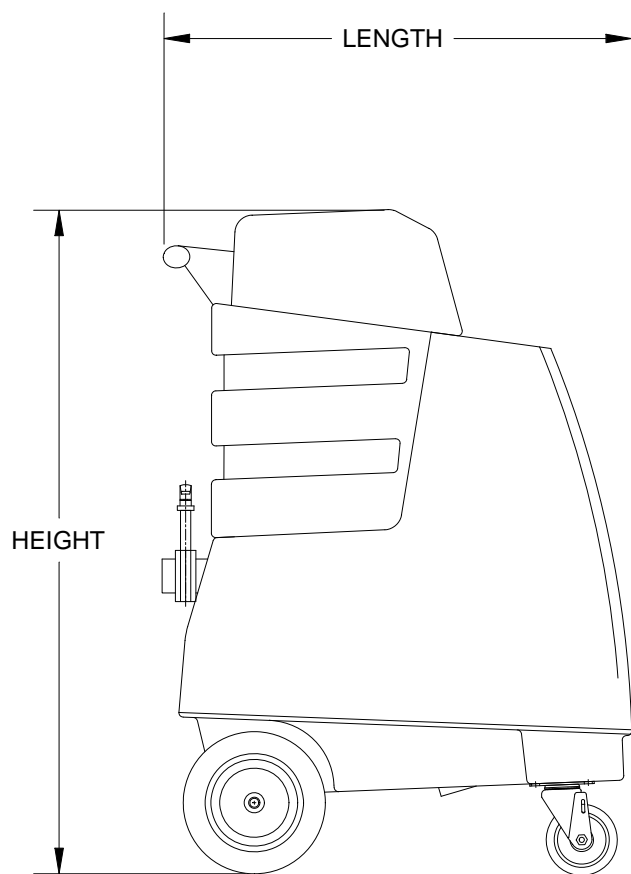
**Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the appliance - if it will not fit the outlet, have a proper outlet installed by a qualified electrician.**

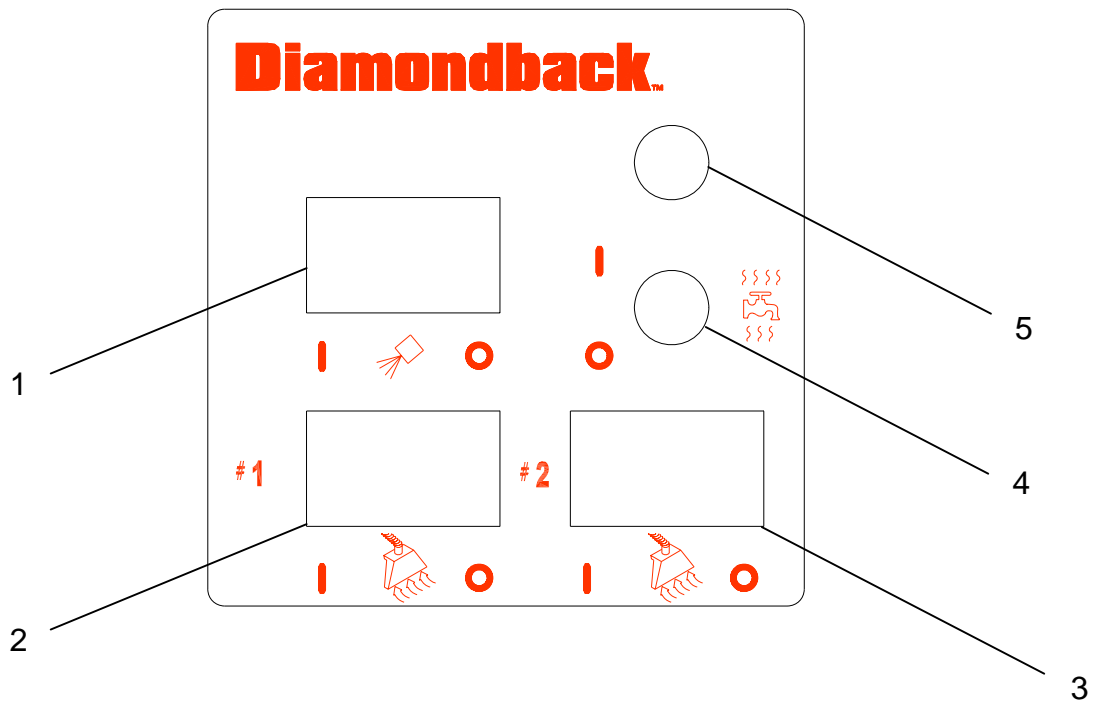


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## TECHNICAL SPECIFICATIONS

ITEM	MEASURE
ELECTRICAL	115 Volt, 60 hz
Vacuum Motor	Dual 2 stage
Solution Pump	100 psi
	200 psi
Solution Capacity	16 gal (60 L)
Recovery Capacity	14 gal (53 L)
Weight- Empty	95 lbs (43.1 kg)
Weight-Full Solution	230 lbs (104.3 kg)
Height	37 inches (93.98 cm)
Length	27 inches (68.58 cm)
Width	20 inches (50.80 cm)
Power cord	22 feet (6.71 m)





1. Pump Switch
2. Vacuum #1 Switch
3. Vacuum #2 Switch
4. Heater Toggle Switch
5. Heat Indicator Light

# MACHINE OPERATION

## PRE-RUN INSPECTION

1. Check all fittings and connectors for proper assembly.
2. Check all hoses for leaks. Repair or replace any damaged hoses.
3. Check power cord(s) for any damage. If damaged, replace.

## EQUIPMENT SET-UP

1. Plug power cord from machine into properly grounded wall outlet.
2. Turn vacuum motor switch on and off to make sure there is electrical power at machine.
3. Connect vac hose to machine. Slide the swivel cuff over the outlet on the tank.
4. Connect the hose to your machine and wand. Pull back the knurled collar on the quick disconnect coupler and push onto the connection on the chassis. To avoid leaks, check to be that a positive connection was made.
5. Pour clean, hot water into the solution tank.  
**To avoid possible tank distortion, water temperature must not exceed 140 F (60C).**
6. Add a non-foaming cleaning solution concentrate, for use in hot water extractors at the proportions noted on the container (See list below), into solution tank. **NOTE: When using powder cleaner, pre-mix with hot water in a clean container before adding to the solution tank.**
7. Turn pump and vacuum switch(s) to the on position. **NOTE: Pump may have to be primed for solution flow.** (See Priming the Pump)
8. Start cleaning.

### **WARNING:**

**To prevent possible disease hazard, before attempting to clean bodily fluids spills, you must kill any viruses, germs or bacteria present in the bodily fluid.**

#### **SUITABLE CHEMICALS**


Alkalis  
Clorox II Bleach\*  
Defoaming Agents  
Detergents  
Hydroxides  
Oxygen Bleaches  
Soaps  
**Sta-Puf Fabric**  
Softener\*  
Vinegar

#### **INCOMPATIBLE CHEMICALS**

Aldehydes  
Aromatic Hydrocarbons  
Butyls  
Carbon Tetrachloride  
Clorox\*  
Chlorinated Bleaches  
Chlorinated Hydrocarbons  
D-Limonene  
Lysol\*  
Methyls (MEK)  
Perchloroethylene (perc)  
Phenols  
Trichloroethylene

\*Registered Trademark

## HEATER OPERATION

 **WARNING:** The disconnect fittings on the heater will become extremely hot during operation. Allow sufficient time to cool, or run solution through the machine with the heater turned off before disconnecting the or performing any maintenance on the heater.

Before disconnecting the heater, open wand valve to relieve the system of all pressure by depressing the valve trigger.

**DO NOT** spray water directly on to the heater. To clean, unplug the unit and wipe with a damp cloth.

 **WARNING:** Make certain that the solution tank is filled adequately before plugging in the machine and heater.

1. Plug the machine and heater into separate grounded circuits. The heater draws 15 amps of current.
2. Turn the solution pump **ON**. Turn the heater switch **ON**. The solution pump must be turned on **BEFORE** the heater is turned on.

On initial start-up the 1850 watt heater will take a few minutes to reach operating temperature.

3. When turning the machine and heater **OFF**, make certain that you turn the heater off **FIRST**.

## PRIMING THE PUMP

1. Connect priming hose to solution output on machine.
2. Run open end of priming hose to vacuum intake.
3. Turn pump and both vacuums on and seal off hose going into vacuum in take.
4. Do this for 30 seconds or until pump is putting out a steady flow of water.

### EMPTYING AND CLEANING

**⚠ WARNING:** Always use defoamer if foaming occurs. Foam will suspend large particles that may damage vacuum(s) as well as allow liquid into the vacuum motor(s) without activating the float shutoff.

1. Before proceeding, make certain that the nozzle is functioning properly.
  - a. To check, hold the wand about one foot above the surface to be cleaned and open the wand valve. A full spray should be observed from the nozzle.
  - b. If the nozzle is not showing a full spray pattern, adjust nozzle for proper pattern, clean, or replace nozzle.
2. Normally, chemical is applied on the **push** stroke while vacuuming is done on the **pull** stroke. For heavily soiled carpets the hand tool may be used in the scrubbing manner, applying chemical in both the push and pull stroke. **ALWAYS FINISH UP AN AREA WITH A VACUUM PULL STROKE.**
3. When cleaning, keep the working opening (wand mouth) flat on the surface being cleaned. Keep the wand moving when the valve is open.
4. The shutoff float inside the recovery tank will impede the vacuum flow when the tank is full. When this occurs, empty the recovery tank. Do this by opening the dump valve located at the back of the machine. **NOTE:** *Dispose of waste in a proper manner which would not violate any Local, State or Federal law.*
5. Once the recovery tank has been emptied, you may once again proceed with cleaning.

**⚠ CAUTION** Operating Vacuum after shutoff has activated could draw water directly into the vac motor. This will cause damage to the motor, therefore voiding your warranty.

**⚠ CAUTION** **ALWAYS TEST CARPET FOR COLOR FASTNESS IN AN INCONSPICUOUS PLACE.** Also, to avoid prolonged drying times, do not spray too much solution in any one area.

### SHUT DOWN AND STORAGE

1. Turn Switch OFF. Empty recovery tank completely and rinse several times to remove any dirt or debris that may be left behind.
2. Drain any unused cleaning solution from solution tank and rinse with clean water to remove any suds left behind by the cleaning chemicals. **NOTE:** *Dispose of waste in a proper manner which would not violate any Local, State or Federal law*
3. Run a small amount of clean water through pump if chemicals were used. This will help insure the life of your pump.
4. Check the spray jet on the cleaning tool for full spray pattern and inspect vac head for any obstructions.
5. Remove as much moisture from system before storing in cold climates. Excess water may freeze during storage and crack internal components, causing damage to the unit.

**⚠ WARNING** Before making any adjustments or performing any maintenance to your machine, disconnect the power cord from the electrical source.

# MAINTENANCE

## DAILY MAINTENANCE



**Unplug power cord(s) before servicing or making any repairs.**

1. Flush the entire system, including floor tool, hand tool, etc., with 1 to 3 gallons of clean, hot water.
2. Vacuum out the solution tank.
3. Rinse tank with fresh water. Periodically inspect the recovery tank and decontaminate if necessary, using a Hospital Grade Virucide or a 1-10 bleach to water solution. Wastewater should be disposed of properly.
4. Occasionally check filter screen at the bottom of the solution tank and rinse clean with hot water if necessary.
5. Inspect hoses for wear. Frayed or cracked hoses should be replaced to avoid vacuum or solution pressure loss.
6. Inspect power cord for wear or damage. This cable will lie on wet carpet. To prevent electrical shock replace cords that are frayed or have cracked insulation immediately.
7. Clean all dirt and obstructions from drain valve and gaskets to prevent possible leakage and premature wear.
8. Run clean water through solution pump when work is complete.
9. Empty both tanks and rinse, run vacuum (s) for at least one minute to dry motor(s).
10. Store with access covers removed to allow tanks to dry.

## PERIODIC MAINTENANCE

1. Twice a month, flush a white vinegar solution (one quart vinegar to two gallons water) or anti-browning solution (mixed as directed) through the extractor. This will prevent build-up of alkaline residue in the system.
2. If spray jet becomes clogged, remove the spray tip, wash it thoroughly, and blow dry. **NOTE: Do NOT USE PINS, WIRE, ETC. TO CLEAN NOZZLE AS THIS COULD DESTROY THE SPRAY PATTERN.**
3. Apply silicone lubricant to solution nipple.
4. Periodically inspect all hoses, electrical cable and connections on your machine. Frayed or cracked hoses should be repaired or replaced to eliminate vacuum or solution pressure loss. If the cable insulation on the power cord is broken or frayed, repair or replace immediately. Don't take chances with electrical fire or shock.
5. Clean outside of all tanks and check for damage.

## MONTHLY MAINTENANCE

1. Check all bearings for noise and wear.
2. Check all gaskets for wear and leakage.
3. Check pump pressure; observe spray pattern and check gauge if necessary.
4. Check overall performance of machine.

## SEMI-ANNUALLY

1. Check vacuum motor brushes.

## LUBRICATION

For hose fitting lubrication, use a light silicone lubricant which will not damage o-rings.

## STORAGE

Thoroughly clean machine if it is to be stored. Protect this machine from freezing while in storage.

## HEATER MODEL STORAGE

Be sure to thoroughly drain water out of heater lines prior to storage in colder climates. This heater will freeze and possibly crack, voiding your warranty.

**⚠ WARNING:**

*Only qualified maintenance personnel are to perform the following repairs.*

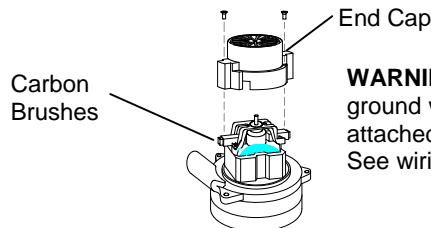
**SOLUTION PUMP REPLACEMENT**

1. Turn off all switches and unplug the machine.
2. Remove knobs holding recovery tank to solution tank.
3. Remove recovery tank to gain access to the pump in base of solution tank.
4. Remove solution hoses from fittings on pump. Disconnect wires.
5. Remove the screws that fasten the pump to the solution tank.
6. Reverse process to install new replacement pump.

**VACUUM MOTOR REPLACEMENT**

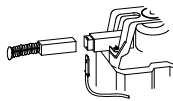
1. Turn off all switches and unplug machine.
2. Remove knobs holding recovery tank to solution tank.
3. Tip recovery tank to expose one vacuum while other is located in base of solution tank.
4. Locate the proper vacuum motor wires and disconnect.
5. Unfasten screws holding vacuum to plate.
6. Remove the vacuum motor.
7. Reverse process to install vacuum motor replacement.

**Vacuum Motor Carbon Brushes Replacement (Windsor)**

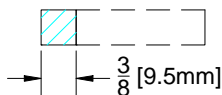


**WARNING:** The green ground wire must be attached for safe operation. See wiring diagram.

If armature commutator is grooved, extremely pitted or not concentric, the motor will need to be replaced or sent to a qualified service center.

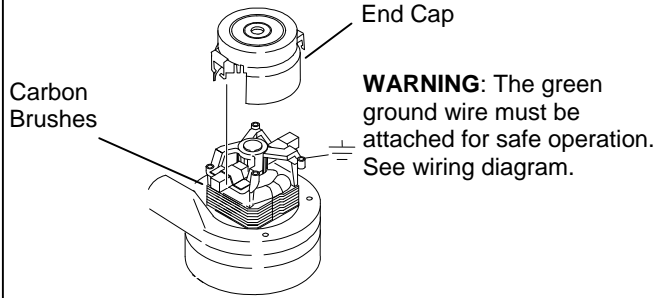


**Important:**  
*These brushes wear quicker as the length shortens due to increased heat. Spring inside brush housing will damage motor if brushes are allowed to wear away completely.*



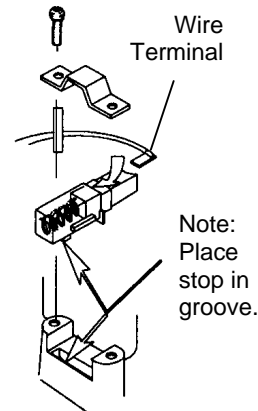
Periodically check the length of the carbon brushes. Replace both carbon brushes when either is less than 3/8" (9.5mm) long.

**Vacuum Motor Carbon Brushes Replacement (Ametek)**



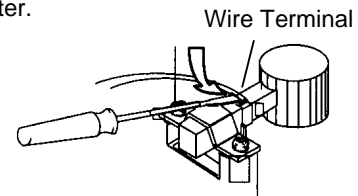
**WARNING:** The green ground wire must be attached for safe operation. See wiring diagram.

Note: When replacing carbon brushes loosen wire terminal BEFORE removing screws on bracket.

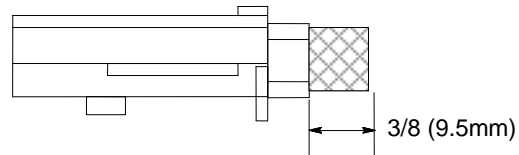


Note: Place stop in groove.

If armature commutator is grooved, extremely pitted or not concentric, the motor will need to be replaced or sent to a qualified service center.



**Important:**  
*These brushes wear quicker as the length shortens due to increased heat. Spring inside brush housing will damage motor if brushes are allowed to wear away completely.*

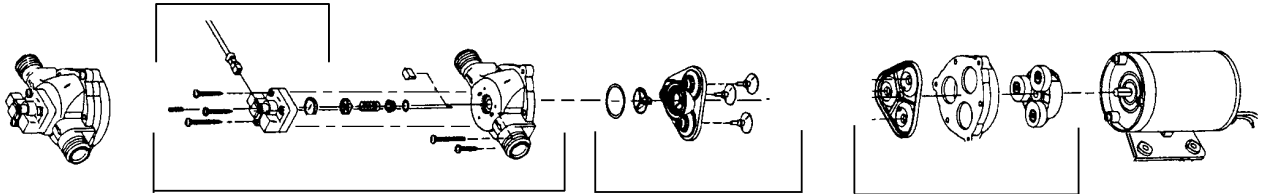


Periodically check the length of the carbon brushes. Replace both carbon brushes when either is less than 3/8" (9.5mm) long.

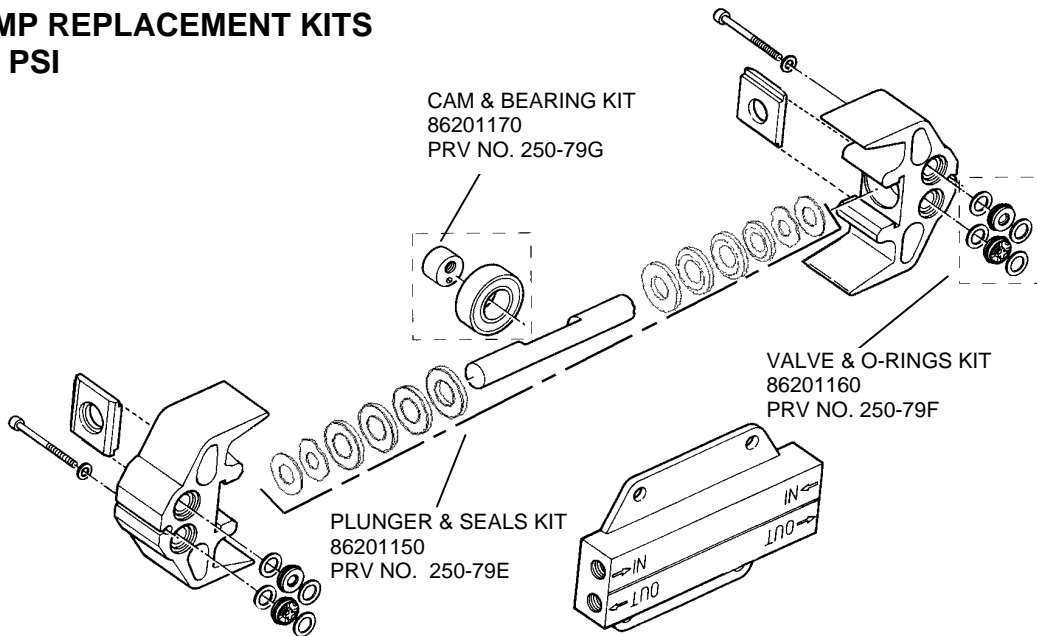
# MAINTENANCE

## PUMP REPLACEMENT KITS 100 PSI

86161980  
PRV NO. 42-809332  
WAS 250-67  
Switch Asm



## PUMP REPLACEMENT KITS 200 PSI





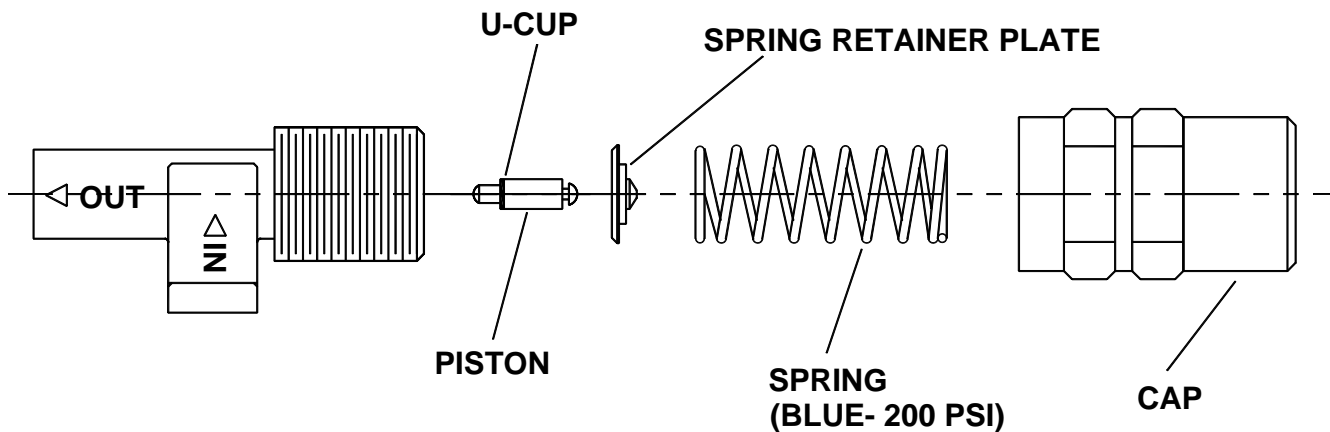
## PRESSURE REGULATOR (200PSI MODEL ONLY)

For best results with the pressure regulator, we recommend that you clean and lubricate the piston and u-cup with Superlube lubricant monthly or when pressure drop seems excessive.

1. Turn unit off before lubricating.
2. Remove cap, spring and spring retainer plate.
3. With fingertips remove piston and u-cup.
4. Wipe piston and u-cup clean of any film or scale.
5. Lubricate the piston and u-cup with Superlube.
6. Reassemble regulator.
7. With pump ON, re-adjust pressure regulator for normal operation.

---

## LUBRICATE U-CUP WITH SUPERLUBE MONTHLY.



## TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Loss of Power	Dead electrical circuit	Check building circuit breaker or fuse box.
	Faulty power cord	Replace
Electrical shock	Equipment not grounding	Follow grounding instructions exactly
	Receptacle not grounded	Contact an electrician to check building's wiring
	Internal wiring problem	Have a trained service technician check machine's wiring
Vac motor speed varies or doesn't run	Worn motor brushes	Replace
	Motor worn out	Replace
	Faulty switch	Replace
Loss of vacuum	Loose vacuum dome	Center and seal dome over tank
	Crack in dome of poor joint	Replace or repair using acrylic plastic cement only
	Lint or dirt clogging vacuum screen	With power off clean screen
	Loose cuffs on vacuum hose	Tighten cuffs turning counterclockwise
	Vac motor seals leaking	Replace
	Floor tool vac chamber clogged	Wash out with hose. Pick lint out with a wire
	Vac motor, hose, or dome gasket	Replace
Pump runs no solution	Pump inlet screen plugged	Clean inlet screen
	Pump air locked	Press trigger to open valve on cleaning wand to relieve air
	Internal or external solution line damaged and leaking	Replace
	Pump not primed	Prime the pump with provided hose (pg 3-3)
Pump runs, loss of pressure	Internal pump components wearing out	Replace, see pump kit components (pg 4-3)
	Check valves in pump head for particles or cuts in seals	Take piston from BPR and lubricate with Superlube. If problem still exists change BPR kit
Pump will not run	Unit not plugged in	Connect unit to 3 prong grounded outlet
	Loose wiring	See dealer
Solution hose fitting hard to connect	Corrosion on fittings.	Clean with steel wool. Soak in acetic acid (white vinegar). Lubricate lightly with silicone base lubricant.
Carpet not getting clean	Severe soil conditions	Make several passes at right angles to each other. Use a pre-spray.
Carpet too wet	Over saturation	Adjust solution pressure to lower settings. Make several passes without spray
Carpet browning	Leaving carpet too wet	Check for loss of vac pressure
	Too much chemical	Check label for correct solution concentration
	Light carpet with no brown prevention	Go over carpet with browning prevent only
Solution not flowing properly	Solution hose connection	Check for positive connection
	Faulty pump	Repair or replace
	Faulty floor tool valve	Repair or replace
	Faulty pump switch	Repair

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