Steamin Demon™

Operation & Maintenance Procedure Manual

John Downey Company™
HIGH-FLOW EXTRACTION

For Assistance Call Toll-Free
1-888-413-6748

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SECTION ONE: MACHINE SETUP & OPERATIONS

I. Setting Dilution Ratio on Chemical Injector

Before operating machine, you must determine the recommended dilution ratio for the traffic lane prespray detergent you'll be using. The machine's prespray system comes preset for High-Flow Prespray. If the dilution ratio of your prespray detergent is different, you must reset your chemical injector (figure 1).

Each machine comes with 14 color-coded injector tips (figure 2). These tips screw into the top of the injector and determine the dilution ratio of your prespray.

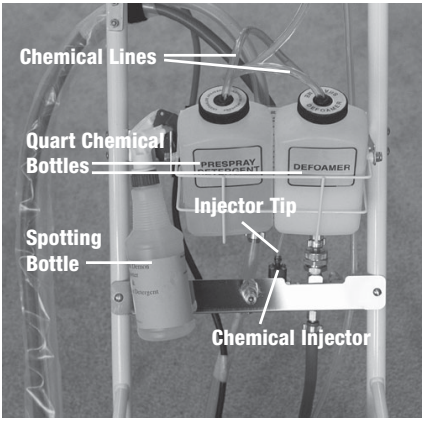

Figure 1: Chemical Injection System

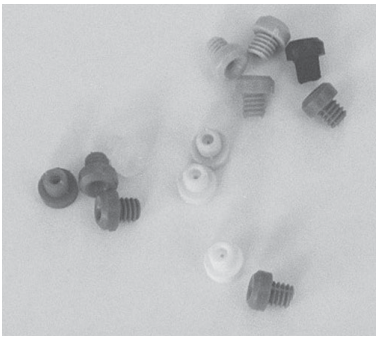

Figure 2: Injector Tips

A. Removing and Replacing Injector Tip

1. Carefully remove chemical line from top of injector (figure 1).
2. Unscrew color-coded injector tip from top of injector.
3. Use the dilution ratio chart (figure 3) to determine the injector tip for your prespray.
4. Screw in new injector tip.
5. Reattach chemical line.

II. Pre-Extraction

A. Chemicals:

- Defoamer: Fill defoamer bottle (figure 1) with a dilute liquid defoamer.
- Traffic Lane Prespray Detergent: Fill prespray bottle (figure 1) with traffic lane prespray.
- Spotting Bottle (figure 1): Mix 1/4 traffic lane prespray detergent and 3/4 water. Shake well.

DEMA ENGINEERING

Tip Color	Ratio	Ounces/Gallon
Tan	102:1	1.25
Orange	75:1	1.70
Turquoise	60:1	2.15
Pink	43:1	3.00
Clear	33:1	3.90
Brown	28:1	4.55
Red	22:1	5.80
White	18:1	7.00
Green	16:1	7.90
Blue	13:1	9.80
Yellow	9:1	14.80
Black	6:1	20.15
Purple	5:1	27.80
Gray	4:1	31.60
None	3.6:1	35.00

Figure 3: Dilution Ration Chart

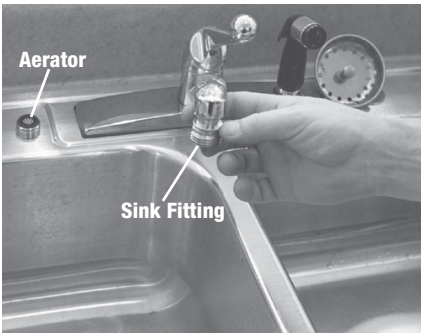

Figure 4: Attaching Sink Fitting to Faucet

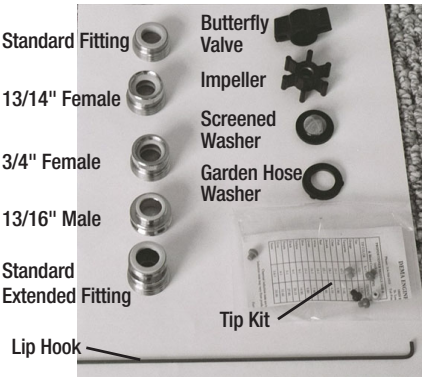

Figure 5: Sink Fittings & Adapter Tray Contents

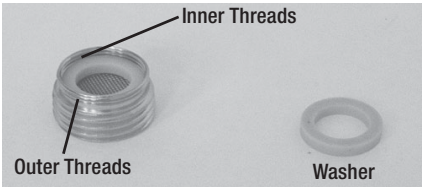

Figure 6: Inner and outer threads of Standard Fitting

Figure 7: Unrolling Hoses

B. Sink Fittings:

Each machine comes with 5 sink fittings (figure 5). These fittings convert the aerator threads on your faucet to garden hose threads.

- To install sink fitting, use your hand or a pair of pliers to remove aerator from faucet. Avoid using plastic faucets or spickets. Then install corresponding sink fitting on faucet (figure 4).
- The Standard Fitting (figure 6) has both inner and outer threads. It will fit about 90 percent of the faucets.
- The Standard Extended Fitting has the same male threads as the standard fitting. These threads are extended slightly above the fitting. This fitting is used on recessed faucets commonly found in bathrooms.
- The 13/16 male fitting is the third most common fitting.
- The 13/16 female and 3/4 female fittings are rarely used but nice to have. These fittings will fit some of the old-style gooseneck faucets.

For garden hose-type spigots, sink fittings aren't necessary. The garden hose swivel nut on the end of the red pressure hose connects directly to garden hose spigots.

C. Unrolling Hoses:

Place machine 30-40 feet from sink. To avoid knocking machine over when unrolling hoses, point it toward the sink. Place one arm through the middle opening of hoses (figure 7) and feed the hose out as you walk away from the machine and towards the sink.

HINT: New hoses take about a week to break in. If you roll and unroll the hoses the same way each time, they break in faster and are easier to use.

D. Hooking Machine to Sink:

1. Tighten garden hose swivel nut (figure 8) to the sink fitting. Turn hot water valve all the way open and open your pressure valve (figure 9).
2. Open drain valve (figure 9) and insert in sink, toilet or other drain.
3. Plug electric cord in grounded 3-pin outlet.

IMPORTANT: The most common mistake made with this machine is forgetting to open the valves. Remember there are valves at both ends of each hose (pressure and drain). If any of these valves are closed, the machine will not work.

E. Prespraying and Spotting Carpet:

1. Snap prespray hose quick connect into the prespray plug (figure 10).
2. Prespray carpet with prespray wand (figure 11). Concentrate prespray on the main traffic areas and spots. Prespray spots heavily and work in by rubbing your foot over the treated spot. Rinse spots thoroughly (3-4 cleaning passes) and make a final dry pass.
3. With stubborn stains you may need to boost your detergent. You can do this with your spotting bottle (figure 13). Simply spray stain with your spotting bottle, work in, and rinse thoroughly (3-4 cleaning passes followed by a final slow dry pass).

III. Extraction Procedure

A. Before You Begin

Before starting your machine, familiarize yourself with the control panel (figure 14). This panel has 4 switches and an indicator light.

- **Vacuum Switch**: This toggle switch turns your vacuum motor on and off.

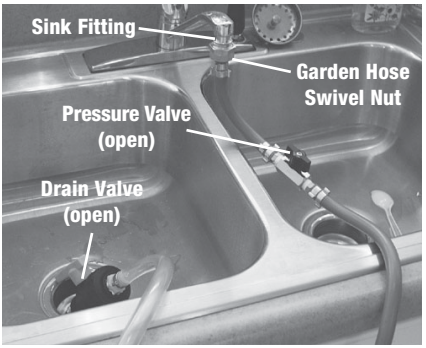

Figure 8: Hoses Hooked to Sink

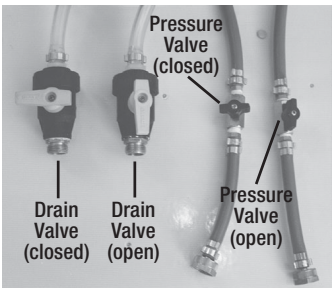

Figure 9: Ball Valves (open and closed)

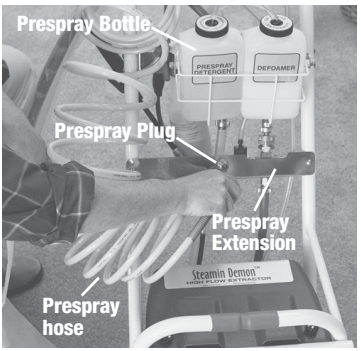

Figure 10: Attaching Prespray Hose

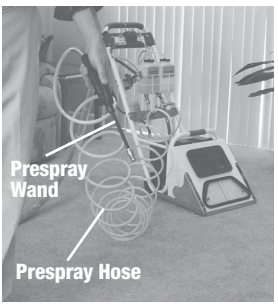

Figure 11: Prespraying Carpet

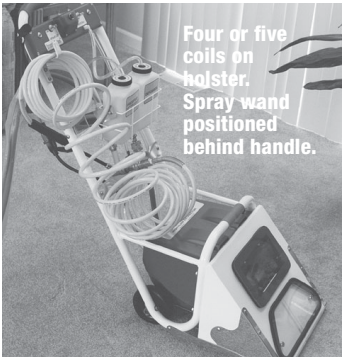

Figure 12: Properly Hung Prespray Hose

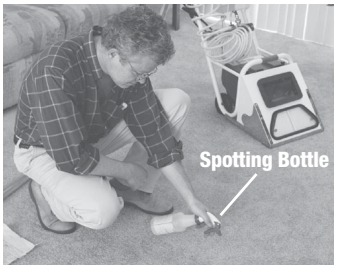

Figure 13: Spotting Carpet

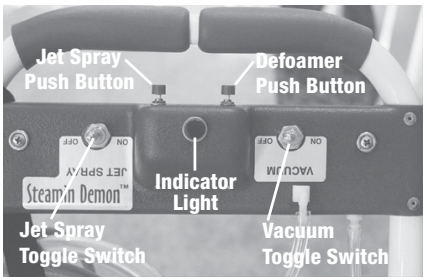

Figure 14: Control Panel

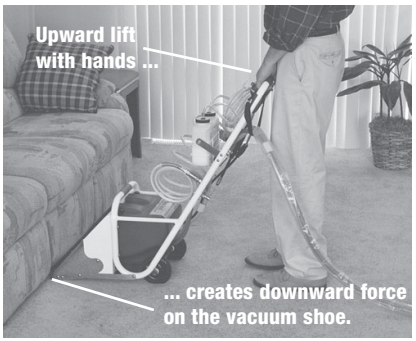

Figure 15: Positioning Machine for Cleaning Pass

It remains ON during the entire extraction process.

- **Defoamer Push Button Switch**: This switch will be used on an "as needed" basis during the extraction process.
- **Jet Spray Switches**: For your convenience, there are two jet spray switches. One is a toggle switch and the other is a push button. Use the one that is most comfortable for you. The indicator light will light up whenever either one of these switches are activated. These switches control the water flow to the carpet.

B. Cleaning Carpet

1. Turn vacuum switch ON.
2. Position machine for a cleaning pass (figure 15).
3. Make a cleaning pass (figure 16). Turn jet spray switch ON and walk machine backwards. Apply enough upward lift on the handle to keep the nose of the machine firmly on the carpet.
4. At the end of your cleaning pass, turn jet spray switch OFF and continue walking machine backwards a few inches. This allows the machine to pick up any excess moisture.
5. Reposition machine for your next cleaning pass (overlap approximately 2-3 inches) and repeat steps 3 and 4.
6. During your cleaning pass, if you notice a lot of soap residue in your view windows, push the defoamer button for one second. If you ever hear the RPM's of your vacuum motor decrease, immediately push the defoamer button.

IMPORTANT: Many carpets have tremendous amounts of soap residues in them. This machine is very efficient at

removing these residues. To protect your vacuum motor from the soap suds that can build up in your recovery tank, periodically push the defoamer button. This allows defoamer to be drawn into the recovery tank and kill the soap suds.

IMPORTANT: When using extra hoses or really hot water, your discharge pump may run hot and automatically shut off. A protective heat sensor within the pump is responsible for this. If this should occur, simply remove the thumb knobs (figure 17) and push the top of the engine compartment cover back a couple of inches. You can safely operate this way.

IMPORTANT: For flood restoration or work that requires more than 250 feet of hose, an optional **dual discharge pump** is available. This externally mounted discharge pump will increase your pump's discharge capability about 50 – 80 percent. ***Do not operate the Steamin Demon in standing water, electrical shock will occur.***

C. Hose Techniques

The hoses on your machine provide it with high volume water supply and discharge capabilities. They can also get in your way. Here are some tried-and-true techniques that will be helpful to you.

1. Always try to work away from your hoses.
2. The hose strap (figure 18) on the handle allows you to switch the hoses from one side of the machine to the other.
3. During extraction, keep both your hands on the handle and work the hoses with your feet (figure 16).

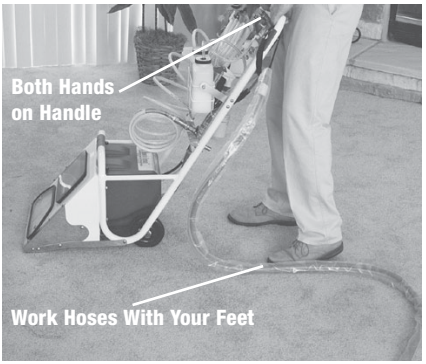

Figure 16: Cleaning Pass

Figure 17: Hot Pump

Figure 18: Shifting Hose Hanger From One Side of the Handle to the Other

Figure 19: Manually Activating Discharge Pump By Tilting Machine to the Right

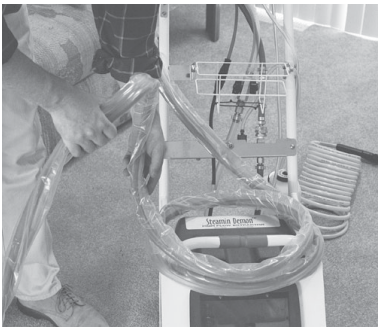

Figure 20: Rolling Hoses

Figure 21: Hoses Secured With Bungee Straps

IV. Maintenance of Critical Components

A. Keep Float Switch (fig. 24) Clean

The float switch in your recovery tank floats up and down with the water level. When the water level reaches about 3 inches, the float switch activates the discharge pump. Once the dirty water has been pumped from the recovery tank, the float switch deactivates the discharge pump. Any debris that prevents the float switch from freely rising up and down with the water level will prevent the float switch from activating the discharge pump. When this happens, the machine will not work properly. Keep the float switch clean. (Instructions for cleaning the float switch are found in Section VI).

B. Keep Air Filter (fig. 22 & 23) Clean

If the air filter is allowed to become filthy, it will affect the machine's ability to recover water. This will result in poor drying times. Wipe this filter off every couple of hours of operation. Remove and clean this filter once or twice a month. (Instructions for cleaning the air filter are found in Section VI).

C. Keep Vacuum Shoe (fig. 26) Clean

If you notice streaking in the carpet, you may have a clogged vacuum shoe. Clean vacuum shoe with the shoe hook and reclean the carpet. When cleaning the vacuum shoe, also clean the side vacuum slots. (Instructions for cleaning the vacuum shoe are found in Section VI).

Another cause of carpet streaking is moving the machine too slowly during a cleaning pass. This allows water to form outside both corners of the nose of the machine. If this happens, simply increase the speed of your cleaning pass.

V. Unhooking Machine

1. Tilt machine to the right (figure 19) to manually activate the discharge pump to drain your recovery tank. Do not try to pump your drain hose dry; this may damage the impeller inside your discharge pump.
2. Turn off hot water.
3. Close drain and pressure valves (figure 9).
4. Unscrew pressure hose from sink fitting. Open pressure valve to release any pressure, then shut it.
5. Unplug machine.
6. Remove sink fitting from faucet and replace aerator.
7. Walk hose ends back towards machine.
8. Unsnap prespray hose and hang on holster.
9. Roll hoses (figure 20). Always roll your hoses in the same direction, either clockwise or counter clockwise. If you do this, they will break in nicely for you.
10. Secure hoses with bungee straps (figure 21)

VI. Cleaning Machine

The complete cleaning of this machine's filters, float switch recovery tank, etc. becomes necessary after about 8–12 hours of hard use. The following procedure is recommended. It takes about 10–15 minutes.

1. Manually drain recovery tank by tilting machine to the right (figure 19).
2. Unplug electric cord.
3. Remove water filter by unscrewing its garden hose swivel nut (figure 8, page 3). Lift up lint filter and rinse off both the lint and primary filters (figure 22).

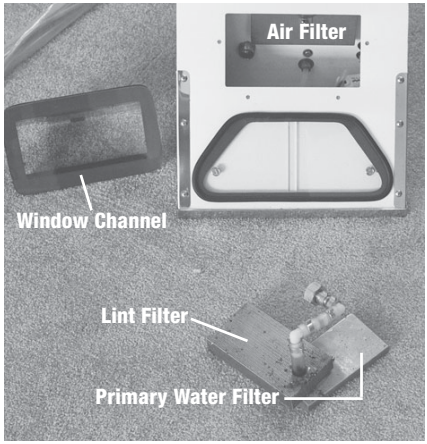

Figure 22: Water filters removed and separated

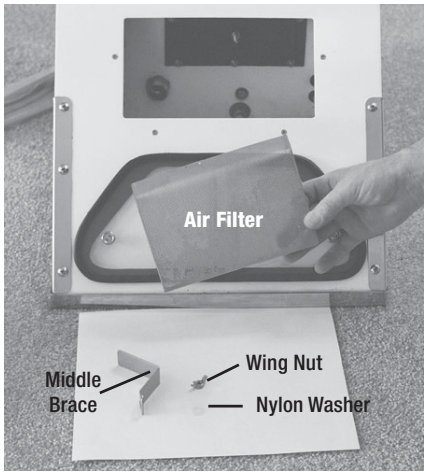

Figure 23: Air Filter Removed

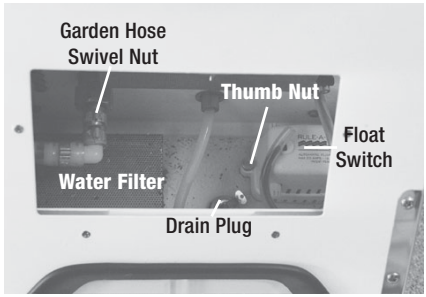

Figure 24: View of inside of recovery tank

4. Clean Air Filter (figure 23). At least once or twice a month the air filter should be removed and cleaned. Begin by removing the wingnut, nylon washer and the middle brace, then pull out the air filter (figure 23). Thoroughly clean the air filter. When replacing the air filter, make sure it is positioned properly around the black plastic baffle. Then as you are retightening the wingnut, push up on the middle brace to make sure it seats flat against the inside of the recovery tank. **Do not operate the machine without the air filter.** Doing so will dramatically reduce the life and performance of your vacuum motor.

5. Clean Float Switch (figure 25). Unscrew brass thumbnut (figure 24) and lift up the float switch. Use your spray wand to spray out any debris that may have collected inside the plastic housing.

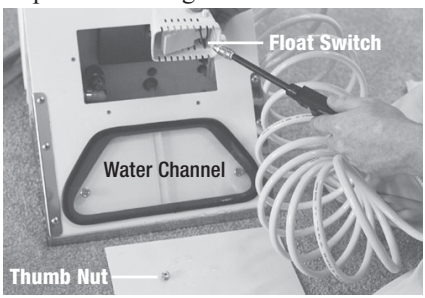

Figure 25: Cleaning the Float Switch

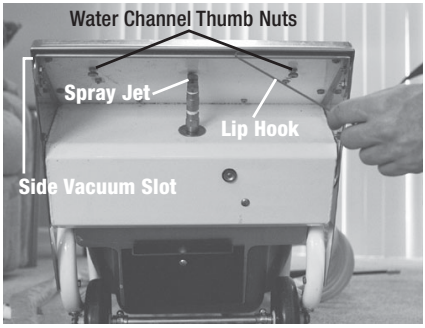

Figure 26: Cleaning Vacuum Shoe

6. Remove drain plug and spray out bottom of recovery tank with prespray wand.
7. Remove and clean water channel by removing thumbnuts from underside of machine (figures 25 and 26).
8. Clean vacuum shoe with shoe hook (figure 26).
9. Replace drain plug, float switch, water channel and water filter. (Make sure the water filter sits flat on the bottom of the recovery tank before tightening its garden hose swivel nut).
10. Watch for any hair and lint build up between axle and wheel bearings.
11. Clean machine exterior with a damp cloth and window cleaner.

IMPORTANT: A powder coating covers the marine-grade aluminum shell of the machine. Over time, this coating will chip or flake off, especially in areas such as the inside of the recovery tank. A spray paint such as Rustoleum may be used to touch up the finish.

12. Plug machine back in and start vacuum motor to remove any moisture that may have entered it during the cleaning process. Leave vacuum motor on for about a minute; then unhook machine.

VII. Hoses

A. To remove regular 50 foot hose assembly from machine:

1. Unscrew machine's drain valve assembly from the drain line hose whip swivel fitting (figure 27).
2. Unplug electrical connection.
3. Unscrew the pressure line's garden hose swivel nut from the prespray assembly.

IMPORTANT: a garden hose screen washer is located within this swivel nut.

This screened washer protects the machine's prespray system from being clogged with debris. Do not operate this machine without this filter. An extra screen washer is supplied with each machine.

B. Attaching Extra Hoses:

Extra hoses come in 50 foot sections with valves on all the ends. To attach just align the pressure hose and drain hose and tighten the corresponding garden hose fittings. Make sure all valves are open before operating.

VIII. Hand Tool Attachments

This attachment may be purchased with your machine. It consists of 25 feet of vacuum and pressure hoses. Separate heads are available for stair and furniture cleaning. A wand attachment is also available. To connect the hand tool attachment to machine:

A. Remove window channel and replace with hand tool channel (figure 28).

B. Push down on hand tool channel to seal its front gasket and turn vacuum switch on.

C. Snap the red pressure hose into the back plug (figure 28).

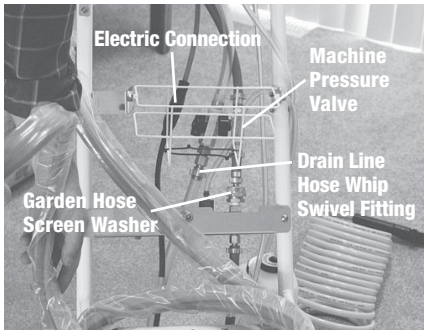

Figure 27: Hose Assembly Connections

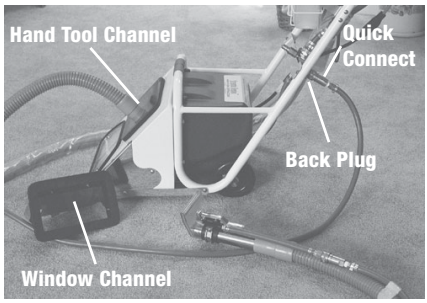

Figure 28: Hand Tool Attachment

SECTION TWO: WARRANTY

John Downey Company conditionally warrants all major structural parts (recovery tank, filters, axle, handle, internal braces, stainless steel lips) and all nonstructural, plastic and electrical parts for a period of one year from date of purchase. In addition, if John Downey Company's High-Flow Prespray and High-Flow Defoamer only are used in the chemical injection and defoamer injection systems, those systems will be warranted for the life of the machine. This warranty includes the cost of shipping warranty-replacement parts or machines to the distributor or end-user, but does not include the cost of shipping parts or machines to the factory for inspection or repair. The warranty is subject to the conditions listed below:

• This warranty is made only to the original purchaser and will only be honored when the machine is used in accordance with the directions and instructions described in the Operation and Maintenance Procedure Manual.

• This warranty does not include any product showing signs of abuse, misuse, improper voltage, shipping damage, lack of proper maintenance, alterations, use of nonapproved chemicals (call us), gaskets, finishes, polycarbonate, fire, flood, normal wear or other causes beyond John Downey Company's control.

SECTION THREE: TROUBLE-SHOOTING

Problem	Cause	Solution
Recovery tank will not drain	1. Closed drain valve(s) 2. Dirty float switch 3. Hot pump 4. Kinked drain hose 5. Pump not priming 6. Clogged water filters 7. Bad pump or float switch	1. Open all drain valves 2. Clean float switch 3. Remove thumb knobs and push engine compartment cover back a few inches 4. Unkink hose 5. Tighten pump's garden hose swivel fitting or replace impeller 6. Clean filters 7. Replace
No water supply	1. Water not turned on 2. Closed valve(s) 3. Kinked hose 4. Clogged garden hose screen washer (see figure 27)	1. Turn water on 2. Open all valves 3. Unkink hose 4. Clean or replace
RPM's of vacuum motor going dramatically down	1. Recovery tank full of water 2. Excess soap residue in carpet	1. See above section "Recovery tank will not drain" 2. Increase defoamer injection
Vacuum motor will not turn on	1. Check wall plug and plug on back of machine 2. Check circuit breaker 3. Bad switch, loose wire or bad motor	1. Plug in 2. Reset circuit breaker 3. Call us
No chemical injection with prespray	1. Clogged injector or injector tip 2. Chemical residue in system 3. Worn or pitted injector (check chemical being used) 4. Clogged chemical line filter	1. Remove and clean 2. Remove spray jet from prespray wand and run vinegar or acid rinse through system 3. Replace injector 4. Clean filter
Back filling of prespray bottle	1. Worn Orings in chemical injector	1. Replace injector or O rings
Water going to machine but not to prespray system	1. Quick connect not seated properly 2. Clogged injector	1. Reseat quick connect 2. Remove and clean
Hazing of view windows	1. Use of strong solvents	1. Quit using them
Slow drying times	1. Obstructed air filter 2. Obstructed vacuum shoe 3. Worn gaskets (you should hear sucking noises)	1. Clean air filter 2. Clean vacuum shoe 3. Replace worn gasket(s)
Machine shocks you	1. Short or improper ground in either machine or outlet	1. Immediately stop operating and call us
Defoamer not injecting	1. Clogged defoamer inlet tube 2. Clogged defoamer solenoid plunger 3. Broken push button 4. Broken solenoid	1. Clean tube 2. Clean plunger (see Repair Manual) 3. Replace push button 4. Replace solenoid