



Electronic Service Manuals

This electronic document is provided as a service to our customers. We do not create the contents of the information contained in this document. Should you have detailed questions pertaining to the information contained in this document, you may contact Michco, or the manufacturer which provided the original information in this electronic deliverable. Michco's only part in this electronic deliverable was the electronic assembly process. By providing this manual on line we are not guaranteeing parts availability.

You may contact Michco through the following methods:

Phone (517) 484-9312 or (800) 331-3339

2011 N. High St. -- Lansing, Michigan -- 48906

Fax: (517) 484-9836

Email: CustServe@Michco.com

Web site: www.Michco.Com

Parts Web site: www.FloorMachineParts.Com

Order Parts on Line at:

www.FloorMachineParts.Com

Directly to Parts & Service:

By Email: **Shop@Michco.com**

By Fax: (517) 702-2041

By Voice: Use numbers above.

Serving the Cleaning Industry Since 1922

Notice: All copyrighted material remains property of original owners, all trademarks are property of respective owners. Manuals are subject to Manufacturer's reproduction limitations. Originals or reproductions were provided by manufacturers through a request. We make no warranty as to the correctness of information provided in this document and you assume all risk. By placing these manuals on line we are not declaring our corporation to be an manufacturer authorized dealer or provider, please check our web site for authorized manufacturers we represent.

RUSTLER 17T - CARPET EXTRACTOR

IMPORTANT SAFETY INSTRUCTIONS

**** SAVE THESE INSTRUCTIONS ****

**READ AND UNDERSTAND ALL INSTRUCTIONS
BEFORE OPERATING OR SERVICING MACHINE.**



THIS MACHINE IS INTENDED FOR COMMERCIAL USE ONLY



DANGER!

**Failure To Observe These Instructions Can Cause Electrical Burn,
Shock or Electrocution To Machine Operator or Bystanders.**

- **NEVER** attempt to service or perform maintenance functions while machine is plugged into electrical outlet.
- **NEVER** attempt to operate machine unless you have been trained in its operation.
- **NEVER** operate in standing water. **NEVER** expose to rain. **ALWAYS** store indoors.
- **NEVER** overfill recovery tank or allow water to enter vacuum. This will cause damage to the vacuum motor and possible electrocution.
- **NEVER** operate machine with a cut, abraded or taped cord.
- **NEVER** operate machine with a broken grounding blade on the plug.
- **ALWAYS** replace entire cord when cord or plug is damaged in any manner. See page 7 for Wiring Diagram.
- **NEVER** handle machine, cord or plug with wet hands.
- **NEVER** drop or insert any object into any machine opening.
- **ALWAYS** keep face, fingers, hair or any body part, or loose clothing away from any machine opening or moving part.
- **NEVER** attempt to service or perform maintenance functions while machine is plugged into electrical outlet.
- **NEVER** leave machine unattended when plugged in. Unplug machine from electrical outlet when not in use.
- **ALWAYS** turn machine off before unplugging from electrical outlet.
- **NEVER** operate machine in the presence of flammable or combustible liquid or fumes.
- **NEVER** disconnect solution hose while pump is running.
- **NEVER** use boiling water. Use hot tap water. Pump's seals and pressure hoses could be softened resulting in pump failure or exploding hoses.

WARNING!

**Failure To Observe These Instructions Can Cause Machine Damage and
Possible Injury to Machine Operator or Bystanders.**

When any electrical motor, switch, cord or plug service is required, maintenance should only be done by an authorized service station, an electrician or other qualified persons.

Never operate machine if it is not working properly, if it has been dropped, damaged, exposed to weather, or dropped into water. Return machine to service center for examination and repair.

Never operate machine with any air opening blocked. Keep all air openings free of dust, lint, hair and the like.

Always store machine indoors. Protect from rain or snow. Never spray top of machine with liquids.

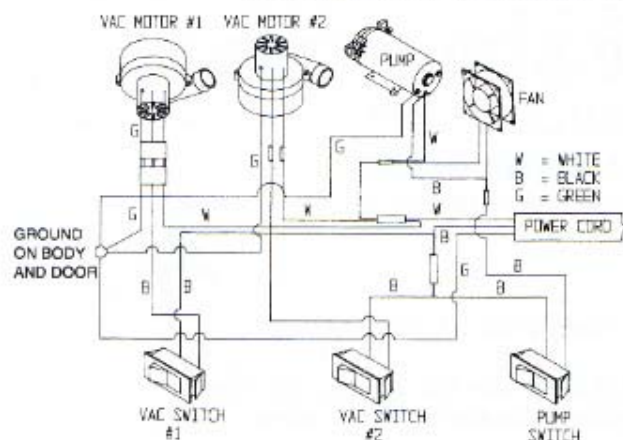
Do not pull or carry machine by electrical supply cord, use cord as a handle, close door on cord, pull cord around sharp edges or corners or expose to heated surfaces.

Never disconnect plug by pulling on cord. To disconnect from outlet grasp the plug, not the cord.

Always use a defoamer which will prevent a buildup of foam in the recovery tank. If a defoamer is not used, motor can be damaged from shampoo being pulled into the vacuum motor.



WARNING: DO NOT ATTEMPT MAINTENANCE OR REPAIRS BEFORE DISCONNECTING CORD FROM ELECTRICAL POWER SOURCE. READ ALL INSTRUCTIONS AND FOLLOW ALL ILLUSTRATIONS CAREFULLY.



GREEN ground wire must be attached to the motor ground and to the body to properly ground the entire machine.

FAILURE TO DO SO MAY CAUSE ELECTROCUTION due to improper connection of ground.

Replacement cords must be UL listed / CSA approved and be of the identical electrical specifications as the original equipment cord.

Check nameplate on machine to be sure voltage and cycle stated on nameplate is the same as voltage and cycle of electrical outlet. **DO NOT** attempt to plug a 115 volt machine into a 230 volt outlet or a 230 volt machine into a 115 volt outlet.

The grounding blade on the plug must remain **intact** if the machine is to be properly grounded when plugged in and operated. An ungrounded machine can cause **shock** to the operator. See Figure A.

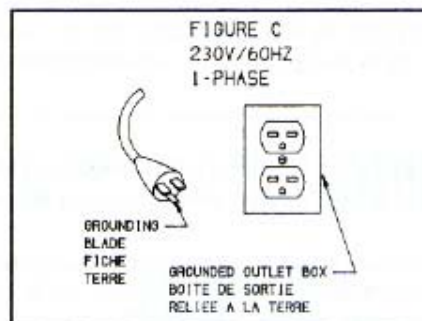
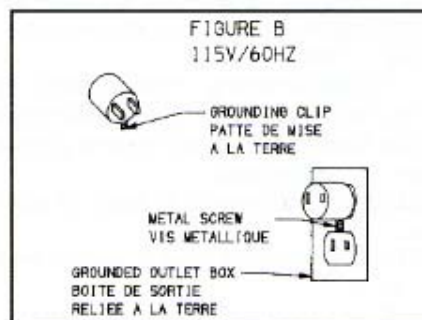
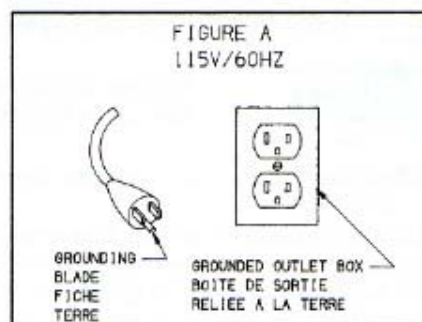
If connecting to an outlet that accepts only two blades use an adapter as in Figure B. **NEVER REMOVE THE GROUNDING BLADE.**

When grounding blade on plug is broken, it is preferable to replace the whole cord.

If you choose to replace 3-wire plug for 115V, use only U.L. Listed/CSA approved plug with rating of 125V, 15 amps (for 230V, use a 3-wire plug with a rating consistent with voltage and amps required.) Be sure that the green wire of the cord is connected to the green screw, and the black wire to gold screw of the replacement plug.

ALWAYS remember when replacing plug, that if the **grounding wire (green)** is connected to a **live terminal** at the **machine or plug**, the machine will become electrically charged and will result in electrical shock or electrocution.

If it is necessary to use the adapter shown in Figure B, the machine is only properly grounded if the adapter's green-colored clip is tied under screw that holds electrical outlet cover to the wall. A metal screw must be used.



NOTE: IN CANADA, THE USE OF A TEMPORARY ADAPTOR IS NOT PERMITTED BY CANADIAN ELECTRICAL CODE

NOTE. Au Canada, l'utilisation d'un adaptateur temporaire n'est pas autorisée par le Code canadien de l'électricité.

Always use a properly grounded 3-wire extension cord which has male and female plugs. Use only 14-3 ST or SO type extension cords for a total cord length up to 100 feet.

ASSEMBLY, OPERATION & MAINTENANCE INSTRUCTIONS

I. ASSEMBLY

The Rustler 17T comes assembled with the exception of the vacuum and solution hose to the extraction wand. The vacuum and solution hose should be removed from the carton.

The extraction wand is packed in a separate carton.

READ ALL INSTRUCTIONS AND WARNINGS CAREFULLY PRIOR TO OPERATION!

II. OPERATION (READ FRONT PAGE FOR WARNINGS PRIOR TO OPERATION!)

CAUTION: THIS MACHINE IS TO BE USED ONLY BY EXPERIENCED OPERATORS OR UNDER THE GUIDANCE OF AN EXPERIENCED OPERATOR.

1. Plug the power cord into wall outlet. Make sure outlet is same voltage as the machine, and that it is properly grounded.
2. Premix recommended liquid carpet steam cleaner with hot tap water in concentration ratio as noted on steam cleaner container. Fill clean water supply tank. Insert one end of the solution hose into the quick connect-female on the wand, and the other end into the quick connect-female on the Rustler 17T. The vacuum hose fits on the 1-1/2" opening of the wand, and the other fits on the intake of the Rustler 17T. For ease in connecting hoses, dip male solution hose fittings and vac hose cuff in solution to lubricate. Push back female collar on wand and machine to insert male connector on solution hose. Connect vacuum hose to machine. Put 3-4 ounces of quality defoamer into the recovery tank by vacuuming through vacuum hose. (See "Using a Defoamer" below.) Attach hose to wand.
3. Turn on pump and vacuum switches.
Squeeze lever on wand to test machine. If the pump fails to run or runs for a second or two and stops, it means that the line pressure must be released before pump motor will turn on. Engage wand lever for 30 seconds. This discharges the pressure in the line and the pump will operate. An alternate method would be to 1) turn pump switch off 2) disconnect solution hose at wand leaving hose connected at unit 3) turn pump switch on 4) placing hose inside solution tank, press end of quick connect-male against wall of tank to discharge air. If pump still does not operate, pressure must be released at quick connect-female on machine. Turn on pump with liquid in solution tank. Insert screwdriver into female quick connect pushing pin in center of connector to bleed air and water from pump.
4. To operate, squeeze lever on wand so spray comes out of jets. Place wand on carpet and pull towards you while spraying so water is vacuumed immediately after introduction to carpet. To remove maximum moisture, pass vacuum head over cleaned area several times without spraying solution.
5. When cleaning operation has been completed, turn off pump and vacuum switches. Drain recovery tank into bucket or slop sink. Turn on vacuum switch. Disconnect hose from wand and insert it into clean water tank to remove remaining solution. Drain recovery tank completely again.

USING A DEFOAMER

Before attempting extraction of foaming shampoo, it is necessary to put quality defoamer into recovery tank of Rustler 8T. This is done by 1) vacuuming 3-4 ounces defoamer through vacuum hose, or 2) lifting hose and pouring 3-4 ounces defoamer through hose and into the recovery tank. Coating the hose with defoamer will liquify the recovered shampoo that you have extracted before it reaches the container.

While the Rustler 17T head has a light-weight float - it will not activate on foam. Therefore, it is important to use defoamer which will act on various types of foaming shampoos. If a defoamer is not used there will be damage to the vacuum motor from shampoo being pulled into the fans.

III. MAINTENANCE

1. Rinse water container after emptying to remove accumulated residue. After every use, run a solution of 4 oz. of vinegar or other neutralizing agent to a gallon of water through pump and wand to remove deposits left by chemicals. RINSE THOROUGHLY. Neutralizing build up will help prevent plugged jets on wands.
2. Release pressure on wands after each use.
3. Wipe all surfaces with damp cloth.
4. Never expose your Rustler 17T or wands to freezing temperature.
5. Check cord for breaks. Replace if frayed or broken. **SEE WARNINGS ON PAGES 1 & 2.**
6. For best vacuum pick up, always check for plugged vac hose and attachments.
7. Keep the screens clean in the wand spray tips. The screens must be kept clean for proper operation.
8. Check vacuum motor brushes after 500 hours of use. Replace if worn to 3/8" or less, 2 required.
9. Vacuum solution tank after each use, pay special attention to cleaning screen on bottom of tank.
10. Keep a lubricant in the balls of the quick connectors-female.

Pump

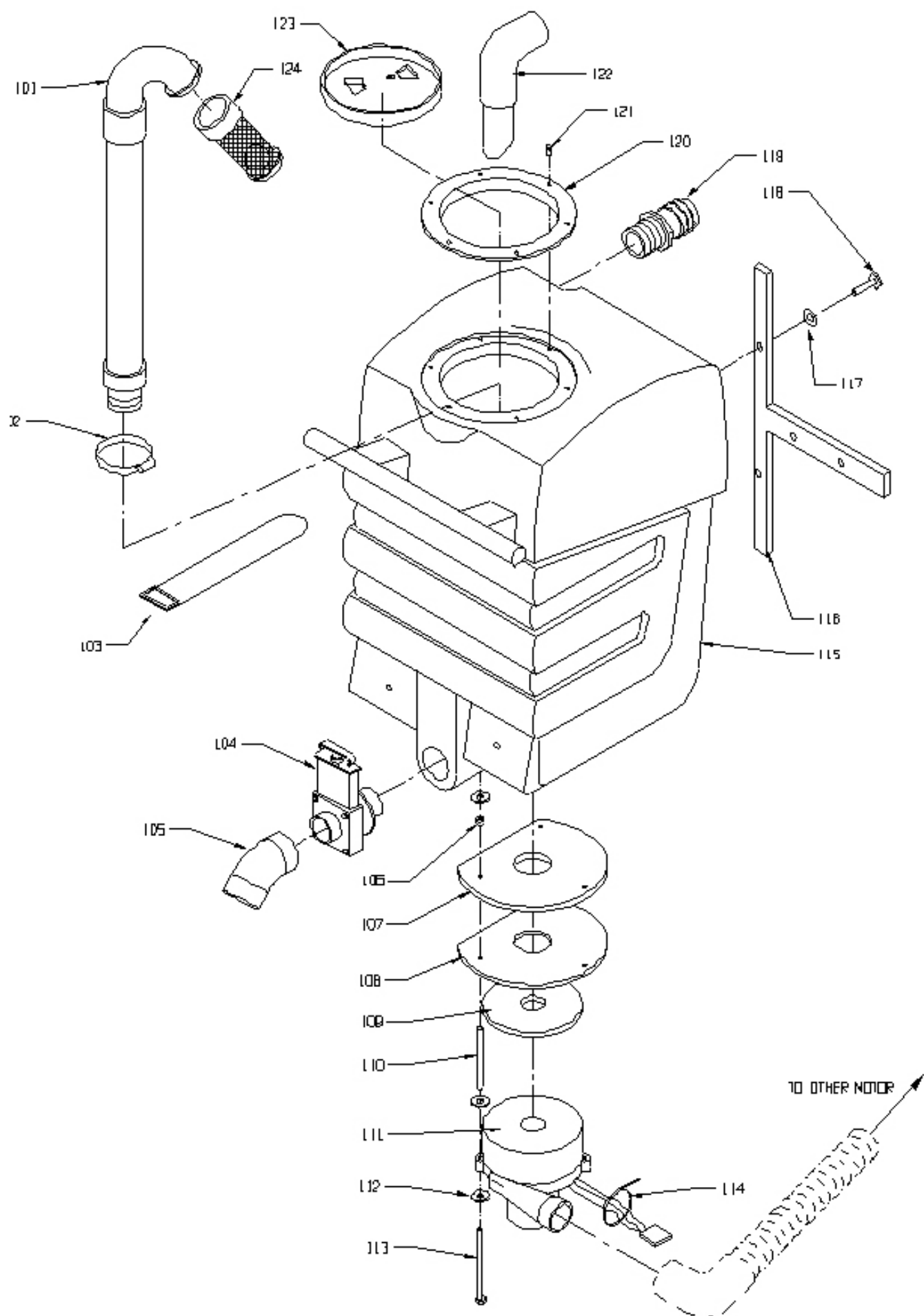
11. Freeze-ups: To prevent pump freeze up, place a 50/50 mixture of anti-freeze in the system. Be sure to pump out anti-freeze before using on carpet.

IV. REPAIRS AND PARTS

When repairs or new parts are necessary, contact your NSS distributor. When ordering machine parts, always give Model and Serial number of machine. This will assure your receiving correct parts. Use part number and description shown on this parts list when ordering. DO NOT ORDER BY REFERENCE NUMBER ONLY.

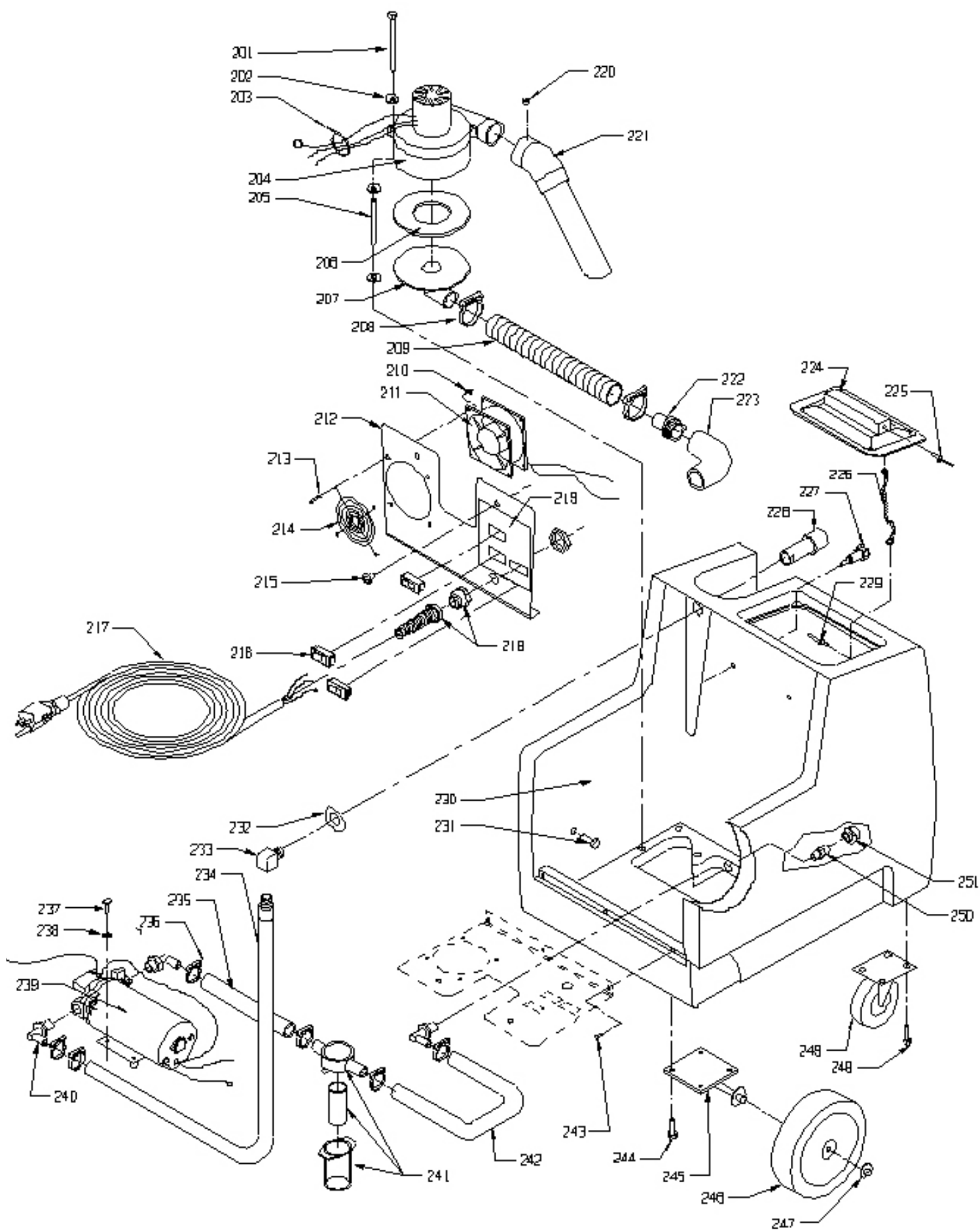
RECOVERY TANK ASSEMBLY

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
101	48-9-700-1	FLOAT TUBE ASSEMBLY	1
102	44-9-544-1	HOSE CLAMP, 1-9/16" - 2-1/2" DIA	1
103	48-9-701-1	POWER CORD STRAP	1
104	48-9-702-1	DUMP VALVE, 1-1/2 MT	1
105	48-9-703-1	DUMP VALVE ELBOW	1
106	48-9-704-1	ANTI-COMPRESSION SPACER	3
107	48-9-705-1	MOTOR PLATE GASKET	1
108	48-9-706-1	MOTOR PLATE	1
109	46-9-010-1	MOTOR SEAL	1
110	48-9-707-1	MOTOR MOUNTING SPACER 2"	3
111	23-9-107-1	VACUUM MOTOR, 120 VOLT	1
	23-9-109-1	VACUUM MOTOR, 240 VOLT	1
	48-9-741-1	MOTOR CONNECTORS, M-F SET	1
112	-----	WASHER, 1/4 FLAT	9
113	-----	BOLT, 1/4-20 X 3-1/2 HEX HD	3
114	27-9-267-1	WIRE TIE, 5-1/2" LONG	1
115	48-9-708-1	RECOVERY TANK BODY	1
116	48-9-709-1	SOLUTION HOSE GUIDE	1
117	-----	WASHER, 1/4 FLAT	4
118	-----	BOLT, 1/4-20 X 1/2 HEX HD	4
119	48-9-710-1	PVC HOSE BARB 1-1/2 MT	1
120	26-9-092-1	LID MOUNTING RING	1
	26-9-088-1	RECOVERY TANK LID ASSM.	1
	-----	(INCLUDES ITEMS 120 & 123)	
121	-----	SCREW, #8 SELF TAP PHIL	6
122	48-9-711-1	PVC ELBOW 90 DEG 1-1/2 W/TUBE	1
123	26-9-091-1	CLEAR TANK LID	1
124	48-9-713-1	FLOAT ASSEMBLY	1



SOLUTION TANK ASSEMBLY

ITEM NO.	PART NO.	DESCRIPTION	QTY
201	-----	BOLT, 1/4-20 X 3-1/2 HEX HD	3
202	-----	WASHER, 1/4 FLAT	9
203	27-9-267-1	WIRE TIE, 5-1/2" LONG	9
204	23-9-107-1	VACUUM MOTOR, 120 VOLT	1
	23-9-109-1	VACUUM MOTOR, 240 VOLT	1
205	48-9-707-1	MOTOR MOUNTING SPACER 2"	3
206	46-9-010-1	MOTOR SEAL	1
207	48-9-714-1	VACUUM PLATE ADAPTOR	1
208	48-9-721-1	PLASTIC HOSE CLAMP	2
209	48-9-722-1	VAC HOSE	1
210	-----	WASHER, 1/4 FLAT	4
211	48-9-716-1	FAN 105 CFM 120 VOLT	1
	48-9-742-1	FAN 105 CFM 240 VOLT	1
212	48-9-716-1	ACCESS SWITCH PLATE	1
213	-----	POP RIVET	4
214	48-9-717-1	FAN FINGER GUARD	1
215	-----	SCREW, 1/4-20 X 1/2 TRUSS HD PHIL	2
216	48-9-719-1	ROCKER SWITCH	3
217	48-9-723-1	CORD 120 VOLT 15' 14-3SJT	1
	02-9-439-1	CORD 240 VOLT 15' SHUKO	1
218	48-9-083-1	STRAIN RELIEF, #3213 HEYCO	1
219	48-9-720-1	SWITCH DECAL	1
220	-----	SCREW, #6 X 1/2 SELF TAP PHIL	2
221	48-9-724-1	EXHAUST ASSEMBLY	1
222	48-9-710-1	PVC HOSE BARB 1-1/2 MT	1
223	48-9-725-1	PVC ELBOW 90 DEG 1-1/2	1
224	48-9-726-1	SOLUTION TANK COVER	1
225	-----	POP RIVET 3/16 X .45	1
226	48-9-727-1	COVER CHAIN	1
227	48-9-728-1	SOLUTION TANK KNOB	2
228	35-9-051-1	FEMALE CONNECTOR	1
229	-----	POP RIVET 3/16 X .50	1
230	48-9-729-1	SOLUTION TANK	1
231	-----	BOLT, 1/4-20 X 1/2 HEX HD, GROUND	1
232	48-9-730-1	WASHER, 1/2 MODIFIED	1
233	48-9-731-1	ELBOW, 90 DEG 1/4 STREET	1
234	48-9-732-1	3/8 SOLUTION HOSE 4'	1
235	48-9-733-1	3/8 SOLUTION HOSE 1'	1
236	48-9-734-1	PLASTIC HOSE CLAMP	6
237	-----	BOLT, 1/4-20 X 1 HEX HD	2
238	-----	WASHER, 1/4 FLAT	2
239	48-9-459-1	SOLUTION PUMP 120 VOLT	1
	48-9-488-1	SOLUTION PUMP 240 VOLT	1
240	48-9-735-1	PUMP ADAPTOR 90 DEG, 3/8 MT X 3/8 BARB	2
241	48-9-736-1	IN-LINE FILTER 3/8 BARB X 3/8 BARB	1
242	48-9-733-1	3/8 SOLUTION HOSE 1'	1
243	-----	SCREW, 10-32 X 3/8 FLAT HD SELF TAP	3
244	-----	BOLT, 1/4-20 X 1/2 HEX HD	8
245	48-9-737-1	LEFT AXLE	1
	48-9-738-1	RIGHT AXLE	1
246	48-9-739-1	WHEEL, GREY ROBBER, 8"	2
247	48-9-743-1	AXLE CAPS	2
248	-----	BOLT, 1/4-20 X 1/2 HEX HD	8
249	48-9-740-1	CASTER, SWIVEL 4"	2



TROUBLESHOOTING

Problem	Probable Cause	Solution
1. Spray is uneven out of jets	• Dirt in spray tips or tip screens	Remove & clean
2. Wand flow control valve leaks	• Valve is worn inside	Replace valves
3. Loss of vacuum	• Drain valve open • Lint on float assembly screen	Close Remove lint tank lid and clean screen
4. Drain valve leaks	• Worn • Lint or dirt in between interior seals	Replace valve Clean out
5. Pump will not run or runs a short time	• Fuse blown or circuit breaker popped at wall (There are no fuses or circuit breakers within the unit) • Air in line	Replace fuse Reset circuit breaker
	• Faulty Switch • Faulty Pump	Disconnect hoses; press end of quick connect-male on tank wall to discharge air Replace switch Replace pump
6. Pump runs but no solution comes out of spray nozzles	• Spray nozzles plugged • Filter in bottom of solution tank plugged	Remove & clean Remove & clean or replace
7. Pump leaks	• Faulty pump • Faulty seals in pump	Replace Replace



THE NATIONAL SUPER SERVICE COMPANY

3115 FRENCHMENS ROAD, TOLEDO, OHIO 43607-2958

PHONE (419) 531-2121 • FAX (419) 531-3761