

# ROTOVAC®



***Ranger***  
***HIGH CAPACITY EXTRACTOR***  
***Owner's Manual***

RANGER 08/18/11

# IMPORTANT!

BEFORE USING YOUR ROTOVAC,  
**PLEASE**

- Read Your Owner's Manual
- Watch Your Training Video
- Call For Important Instructions

*TOLL FREE – U.S. and CANADA*

1-888-768-6822

**OUTSIDE NORTH AMERICA**

1-425-883-6746

*Hours: 8:00 am to 5:00 pm Pacific Time*

## **CALL BEFORE USING FOR THE FIRST TIME**

Before using the **Power Wand** for the first time, read the owners manual, watch the training video, write down any questions that you may have and then call Rotovac toll-free for valuable tips and pointers.

**1-888-768-6822. (8:00 a.m. to 5:00 p.m. Monday - Friday P.S.T.)**

Training video is available on line at: [www.rotovac.com](http://www.rotovac.com)

## **\*FREEZING WARNING\***

**\* Allowing your equipment to freeze will void your warranty \***  
Thoroughly remove as much moisture from all lines and tanks in the equipment and flush with an antifreeze.

Equipment should never be stored where it can freeze.

Excess water can freeze during storage and crack the internal components of powered equipment and accessories, damaging them and voiding the warranty.

**An unheated vehicle will not protect your equipment.**

## **Rotovac Corporation Standard Return Policy**

Rotovac Corporation guarantees, as a courtesy, an unconditional full purchase price refund for the return of an undamaged Power Head within the seven (7) days following receipt of equipment purchased.

**A 25% restocking fee will be assessed to the return of any equipment where the operator has not completed required telephone training** associated with the proper use of the Rotovac. Replacement boxes for returns, if needed, will be provided for a \$50.00 charge.

Under exceptional circumstances, equipment may be returned after the seven (7) day period, only with prior approval by Rotovac Corporation and will be subject to a 25% restocking fee. Issues of defect should be addressed within the warranty process.

Rotovac Corporation also extends a full purchase price refund on the return of undamaged "Business Start Up Packages" returned within thirty (30) days following receipt of equipment purchased. This refund does not apply to special order items or equipment not normally stocked by Rotovac Corporation.

Rotovac Corporation does not accept returns on chemicals, or equipment manufactured by other companies that is not purchased as part of standard equipment included in the "Business Start Up Package".

**The purchaser is responsible for the cost of all freight charges.**

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## Overview

The *Ranger* is a modular high capacity extractor that allows cleaning with or without on site water. This is achieved by the *Ranger's* 27 gallon holding tank paired with the *Ranger's Power Pod*. The *Ranger's Power Pod* is a super compact extractor that is much smaller than a traditional extractor. It can be easily transported in a small car or fit into a crowded van. The **Power Pod** utilizes a solution hose with a faucet adapter set that attaches to almost any faucet or water source for an unlimited supply of clean water and automatically pumps out the recovered waste water to any toilet or drain. The **Power Pod** allows you to clean non stop and eliminate the task of filling and emptying with buckets, so you can “Say goodbye to the bucket brigade!”.

## Operator's responsibility

Proper operation and maintenance are vital in the performance of the *Ranger* and its **Power Pod**. It is therefore extremely important that the *Ranger* training video is watched and this operations manual is read and completely understood before operating. The training video is also available online at [www.rotovac.com](http://www.rotovac.com).

## Learning Curve

Your first job using the **Power Pod** will take longer than normal because of the “**learning curve**” involved. Once you have mastered the procedures of hooking up to the faucet, pre-spraying technique, hose-cord management and machine positioning, you will find that the **Power Pod** is much easier and faster to use than a traditional portable extractor.

## Understand the System

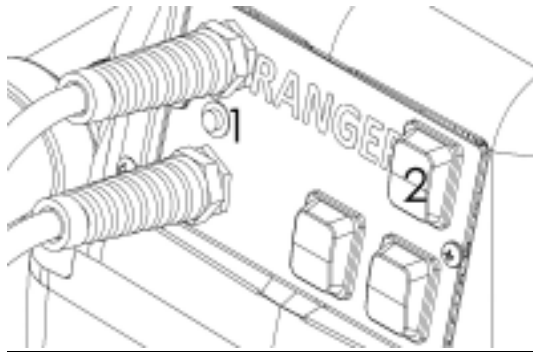
Understanding exactly how the **Power Pod** works is extremely important for trouble free operation. The empty pump is activated by a float switch located at the base of the float switch tube. As water starts to fill the recovery tank the float switch rises up and turns on the empty pump. As the water is pumped out the float switch slides down and turns off the empty pump. **The float switch must be free to slide up and down or the pump may be stuck in the on or off mode.** Remove the float switch cover to inspect and keep float switch clean and free of debris.

The empty pump hose screen filter should be kept clean and must rest on the **very bottom** of the recovery tank for proper operation.

**Watch the training video before using.**

Training video is available on line at [www.rotovac.com](http://www.rotovac.com)

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1. PUMP OUT BUTTON      RV-645

2. PUMP OUT SWITCH      RV-501

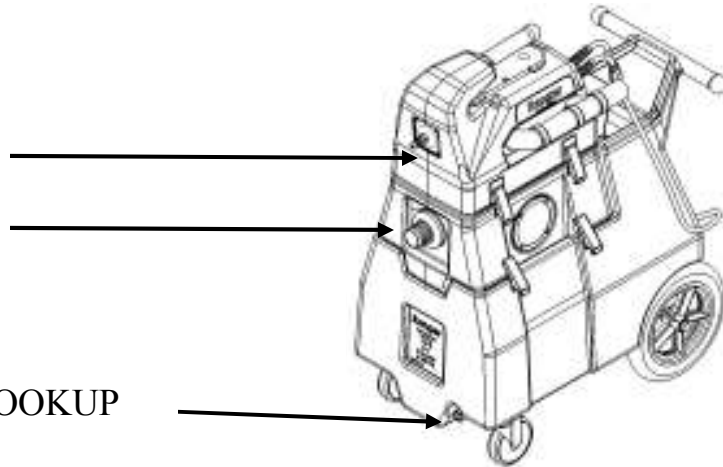
## Operation

1) Attach solution hose to the *Ranger* or a faucet:

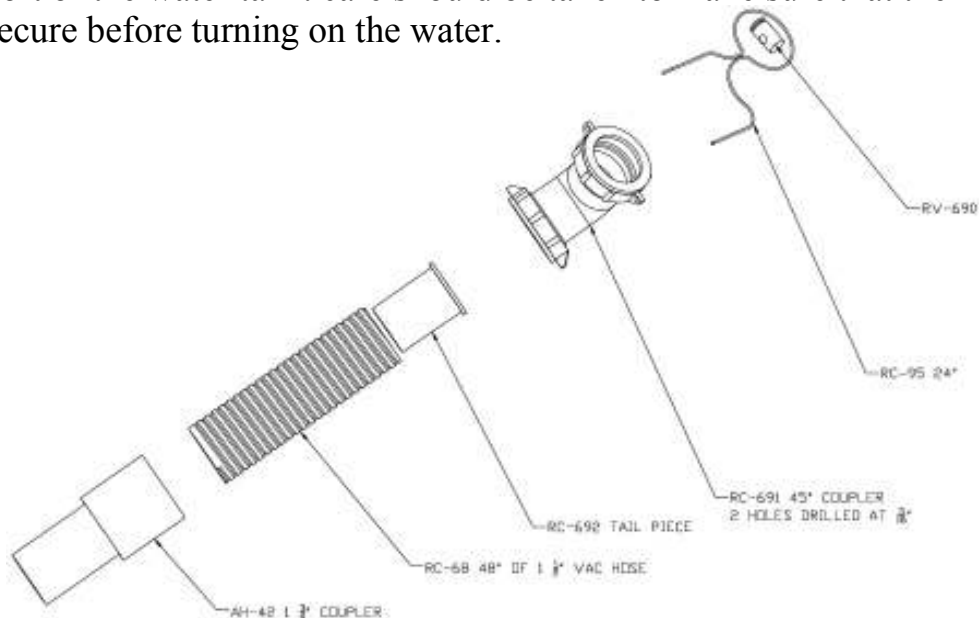
PUMP PRIMER

VACUUM INLET

SOLUTION LINE HOOKUP



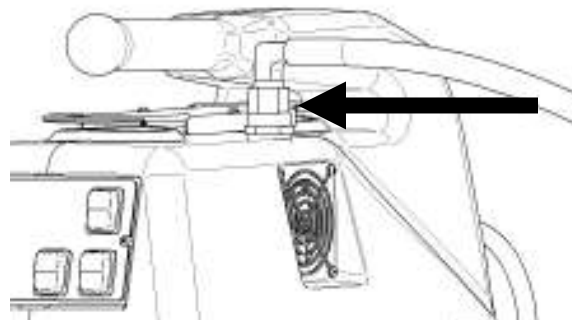
1. The Ranger fill hose can be attached any faucet that is higher than the fill port of the water tank. Care should be taken to make sure that the fill hose is secure before turning on the water.



- The faucet adaptor set will attach to 95% of all standard kitchen or bathroom faucets. Use a small pair of pliers to unscrew the aerator along with a small towel to prevent scratching. If sink faucets are not an option, there is also an adaptor to hook up to any shower head or garden faucet. (Shower heads are all the same thread size) After you have attached your clean water solution hose to a water source, turn on the water and check for any leaks. A small leak at the connection may be stopped by adding an extra rubber washer or just drape a cloth over the leak to contain it into the drain. Also check **under the sink** to make sure there are no leaks.



- Attach 50' clear empty hose to *Ranger's* Power Pod:



Secure the discharge end to sink or toilet making sure it will not fall out and flood the area with dirty water. **SUPER IMPORTANT:** Make sure to **secure your clear empty hose** into a toilet or drain so that it will not accidentally fall out.

#### 4. **Prime the Empty Pump:**

Plug in Power pod and turn on the empty pump only. Attach clean water solution hose **female quick connect end** to the **male quick connect** on the top front of the ***Ranger's Power Pod***.

The recovery tank should now start to fill with water. Before the water reaches the bottom of the porthole window, the empty pump should turn on and then off, indicating proper operation of the float switch and the pump.

#### 5. **Pre Spray Carpet:**

Using a garden style **pump-up sprayer** or an **in line sprayer**, pre-spray the carpet to be cleaned with a **non foaming** “extraction” style cleaning detergent. Do not use a foaming “shampoo” style detergent as this could cause over foaming in the recovery tank. **Apply extra to heavily soiled areas** and less on the lightly soiled areas. Pre-spray approximately 200 sq feet at a time to allow for some “dwell time” for the cleaning detergent to loosen the soil.

#### 6. **Start Cleaning:**

After confirming the empty pump is functioning properly, disconnect the clean water solution hose quick connect from the front of the ***Ranger's Power Pod*** and attach to your cleaning tool. **Leave the empty pump switch on**, turn on **both vacuum motors** and start cleaning. The empty pump should now continually turn on and off as the dirty water enters and exits the recovery tank. As you are cleaning, periodically check to make sure the empty pump is working and the ***Ranger's Power Pod*** is functioning properly.

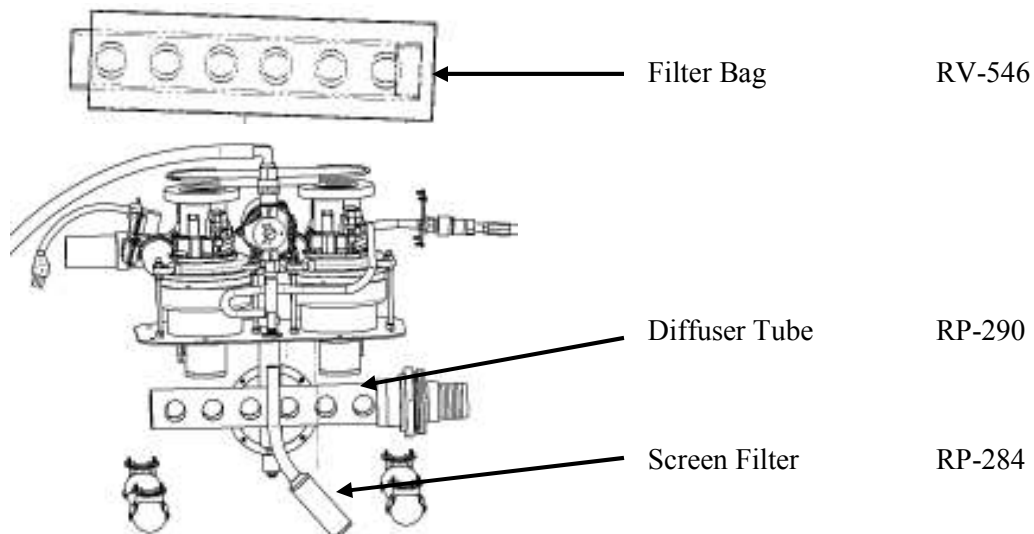
#### 7. **End of Job Procedure:**

When you are finished cleaning, empty any residual dirty water from the recovery tank by pressing the black empty button switch located on the left side of the control panel. Unscrew empty hose at machine and coil up as you walk towards drain to empty the hose. Allow Vacuum Motors to run for a minute to dry out their fan chambers.

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## Daily Maintenance

- Keep recovery tank clean so that debris does not build up and cause empty pump float switch to get stuck.
- Always make sure that the screen filter on the end of the empty pump hose is clean and resting at the **very bottom** of the recovery tank to prevent it from pumping air instead of water.
- Remove filter bag to clean out debris. Unscrew and clean out the diffuser tube in the recovery tank as needed. When replacing the diffuser tube make sure the 6 outlet holes are facing to the **sides of the recovery tank**.
- Make sure float switch is clean and free to move up and down.
- When replacing upper housing onto the lower recovery tank, make sure the empty pump hose feeds down to the **very bottom of the tank** so that the screen pick up filter is resting on the **very bottom** of the recovery tank. Switches face to the back of the CFX and the vacuum hose barb faces to the front.

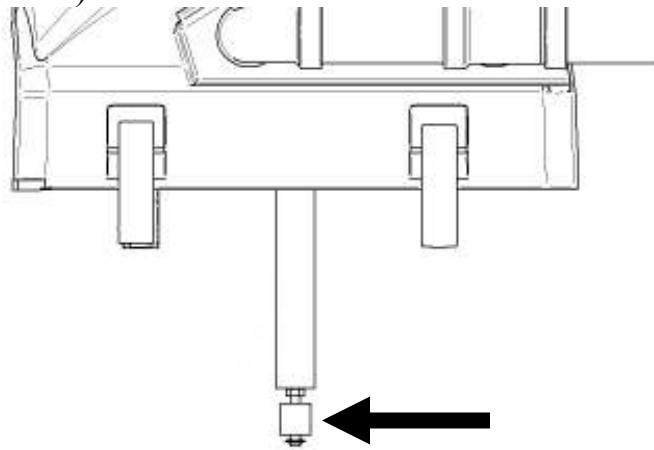




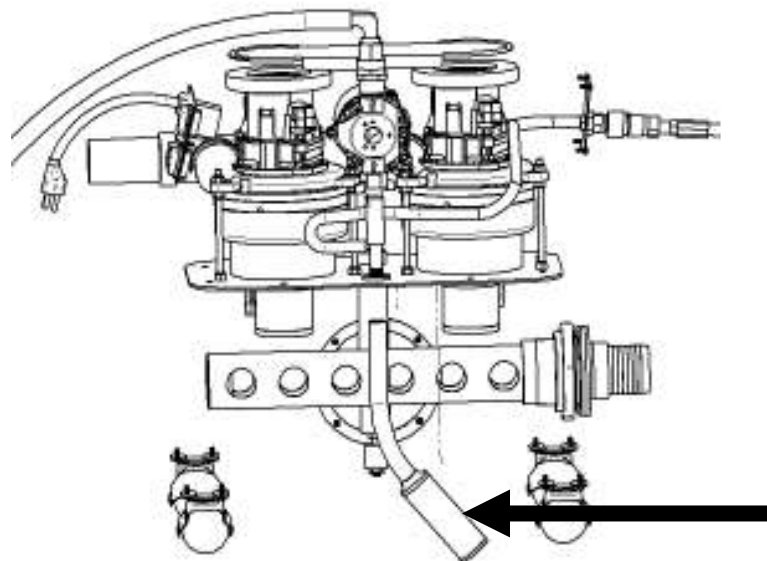
**SUPER IMPORTANT** Always make sure the end of the dirty water empty hose does not fall out of the drain or toilet by running hose under toilet seat or securing to faucet. Also check to make sure your clean water hose connection at the faucet is not leaking **above or below the sink**. An extra rubber washer or draping a small towel over the faucet will help contain any small leak you may encounter.

## Precautions

- Make sure the float switch is free to move up and down to activate the empty pump (shown below)

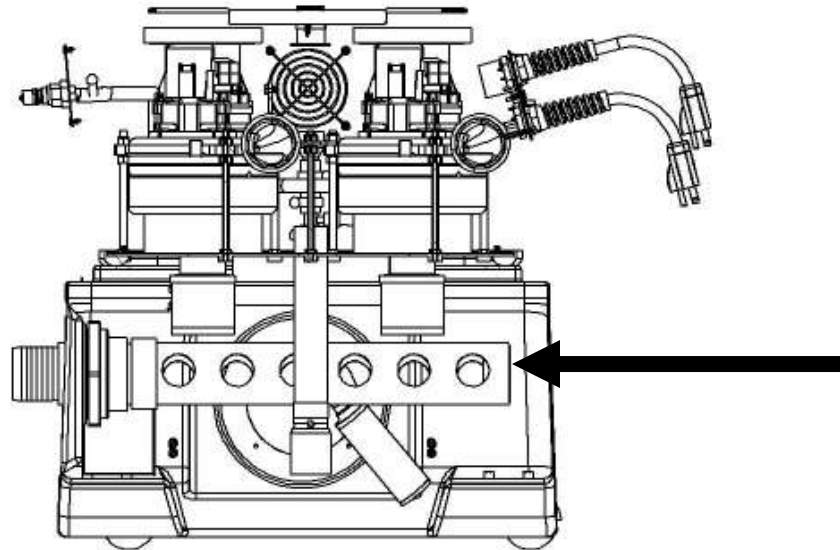


- Make sure the empty pump screen filter on the end of the hose is resting on the **very bottom** of the recovery tank (shown below)

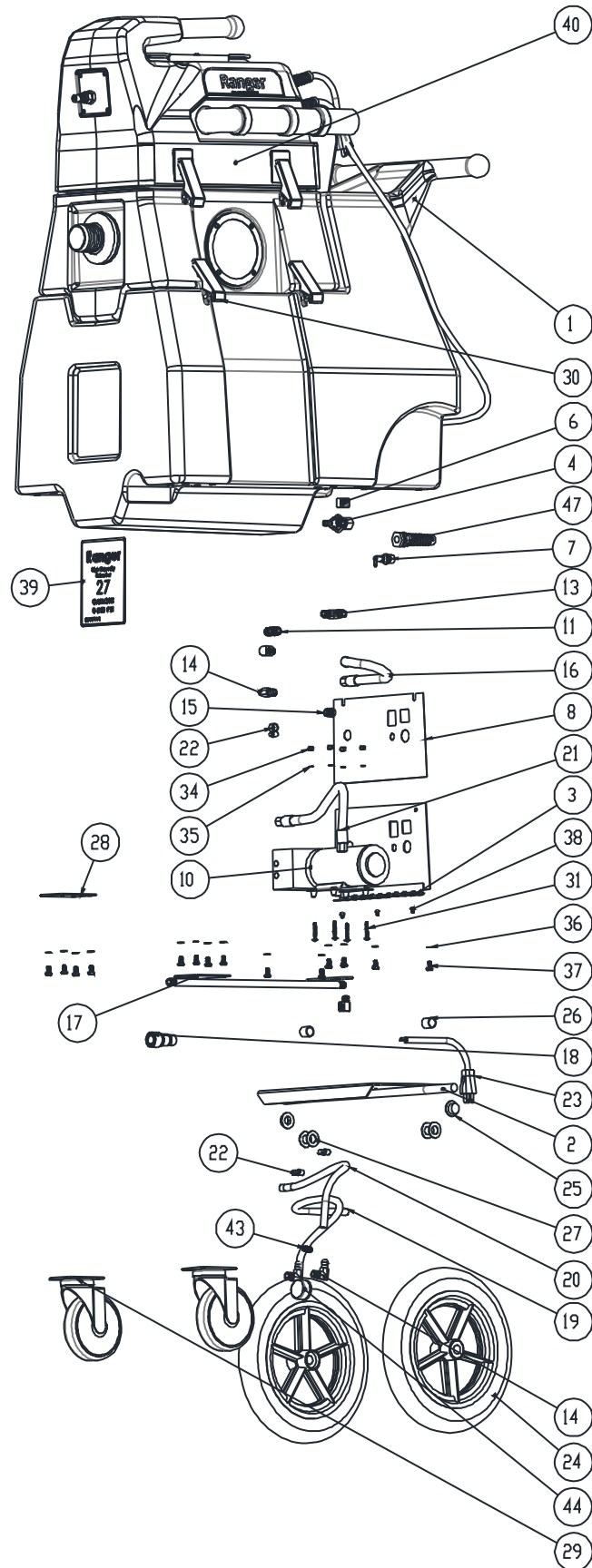


## Precautions

Make sure your diffuser tube in the recovery tank is screwed in with the 6 holes **facing the sides** for proper separation of air and water and filter bag is clean. If the diffuser tube is not properly aligned, water may get sucked up into the vacuum motors and shoot out the side exhausts. Clean out the diffuser tube and recovery tank periodically as needed.



- When water or foam gets sucked up into vacuum motors, run the vacuum motors dry for about two minutes before storing.
  - Keep all vacuum and pump screen filters clean for maximum performance.
  - When doing various tasks such as flood extraction, be careful not to suck up more water than the empty pump can keep up with or the vacuum motors will suck up water and shoot it out the side exhausts. Pumps up to 2.6 gpm.
  - Always use a grounded 3 prong electrical outlet and wear rubber soled shoes when operating.
  - Store in a dry place, do not allow electrical components to get wet.
  - Only trained personnel who have read this manual and understand completely the information herein should operate the ***Power Pod.***
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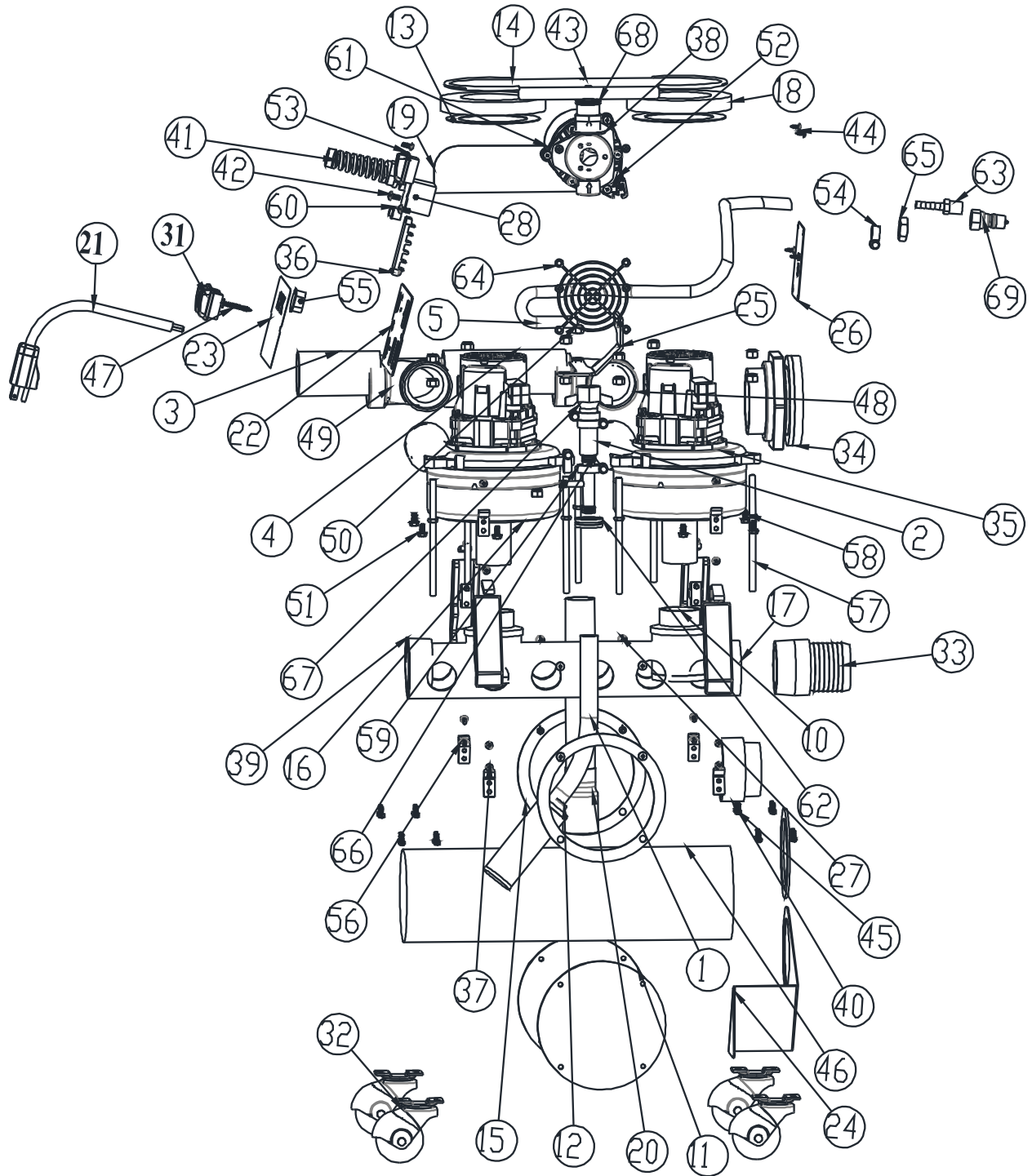


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	RP-318	RANGER DOCKING TANK	1
2	RP-325	RANGER AXEL PUMP MOUNT PLATE	1
3	RP-326-1	RANGER CONTROL PLATE	1
4	RV-581	PRESSURE REGULATOR	1
5	RV-501	GREEN LIGHT DOUBLE POLE ROCKER SWITCH	1
6	V-054	1/4" NPTF TO 1/4"NPTM 45	1
7	RV-513	FUSE HOLDER	1
8	RP-337	RANGER CONTROL DECAL	1
9	RV-597	115 VOLT FEMALE RECEPTACLE	1
10	RV-580	115 VOLT 250PSI PUMP	1
11	V-053	1/4" NPTM TO 1/4" NPTM HEX NIPPLE	1
12	RV-413	1/4" NPT 90 STREET ELBOW	2
13	RV-588	1/4" NPTM TO 1/4" NPTM 90	1
14	RV-586	3/8" BARBED TO 1/4" NPTM 90	3
15	RV-587	1/4" NPT M HEX PLUG	1
16	RP-339	17 1/2" 3/8" PRESSURE LINE W/FITTINGS	1
17	RP-327	RANGER PIPE FAB	1
18	V-059	1/4" NPTF FEMALE H HYDROLIC COUPLER	1
19	RC-81 22 INCH	3/8" ID CLEAR BRAIDED	1
20	RC-81 8.5INCH	3/8" ID CLEAR BRAIDED	1
21	RP-340	10 1/2" 3/8" PRESSURE LINE W/FITTINGS	1
22	RV-584	1/2" HOSE CLAMP FOR 1/4" ID	4
23	RP-292	7" PIG TAIL	1
24	RV-589	12" WHEEL	2
25	RV-599	5/8" CAP NUT	2
26	RP-328	3/4" 5/8" ID 3/4" OD SPACER	2
27	RV-600	5/8" ID .1.19 OD WASHER	4
28	RP-329	RANGER CASTER SHIM PLATE	1
29	RV-579	5" SWIVEL CASTER	2
30	RV-499	DRAW LATCH	4
31	RV-469	1 1/4" 10 24 TRUSS #2	4

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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
32	RV-517	1/4" 8/32" ROUND #2	8
33	RV-524	3/8" 10 24 PAN#2	2
34	RV-591	10 24 NYLOC HEX 15/64"	4
35	RV-590	#10 ID 13/32" OD WASHER	4
36	RV-593	1/4" ID 1/2" OD WASHER	14
37	RV-592	1/2" 1/4" 20 HEX	14
38	RV-595	1/4" 1024 PAN #2	3
39	RP-336	RANGER TANK DECAL	1
40	RA-223	RANGER POWER POD 3STG 115V AC	1
41	RP-330.1	RANGER FILL COVER	1
42	RV-598	3/8" #8 TRUSS #2	4
43	RV-596	1/8" 3/4" NPT CLOSE NIPPLE	1
44	RV-594	#20 MESH 1/4" FEMALE MUSHROOM	1
45	RC-85 4 INCH	RANGER FOAM TAPE	1
46	RP-292.2	28" PIGTAIL	1
47	RV-523	1/2" STRAIN RELIEF	1

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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	RC-69 16INCH	1/2" clear vinyl hose	1
2	RC-69 2INCH	1/2" clear vinyl hose	1
3	RC-76 3.5INCH	1 1/2" ABS pipe	1
4	RC-76 5.25INCH	1 1/2" ABS pipe	1
5	RC-94 24INCH	1/4" clear vinyl hose	1
6	RP-258	Deck plate	1
7	RP-273	Deck Plate Seal	1
8	RP-274	Ranger Power Pod Recovery Tank	1
9	RP-276	Ranger Power Pod Upper Housing with Handle	1
10	RP-277	Vacuum intake filter screen	2
11	RP-281	Sight window	2
12	RP-284	Suction line filter screen	1
13	RP-285	Vacuum motor vent seal backer plate	2
14	RP-287	Vacuum motor vent cover plate	1
15	RP-288	Sight window seal	2
16	RP-289	Vacuum motor gasket to deck plate	2
17	RP-290	2" ABS Diffuser Tube	1
18	RP-293	Vacuum Vent gasket	2
19	RP-406	Ranger Power Pod Main Decal	1
20	RP-309	Float switch guard	1
21	RP-338	36" Pig tale power cord	1
22	RP-405	Ranger Power Pod Control Plate	1
23	RP-404	Ranger Power Pod Control Plate Decal	1
24	RP-371	Suction line baffle	1
25	RP-392	Pump bracket	1
26	RP-395	CFX Primer plate	1
27	RV-422	1/2" 10 24 pan head Phillips screw	8
28	RV-495	Picker Relay	1
29	RV-499	Draw latch	4
30	RV-500	Float switch	1
31	RV-501	Green light double pole rocker Switch	3
32	RV-506	Ball Wheel Caster	4
33	RV-507	1 1/2" Barbed Pipe hose adapter	1
34	RV-508	Bulk Head fitting	1

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
35	RV-509	3 stage Vacuum motor	2
36	RV-515	Magnum Terminal Block TB100-05	1
37	RV-518	3/8" 8 32 pan head Phillips Screw	26
38	RV-519	5/8" 1 1/2" 1/4" Pump out gasket washer	1
39	RV-520	2" Diffuser tube plug	1
40	RV-521	2" M PVC pipe adapter	1
41	RV-523	1/2" Strain Relief	1
42	RV-524	3/8" 10 24 pan head Phillips control mounting screw	2
43	RV-530	1" #8 pan head Phillips vacuum cover screw	2
44	RV-531	3/8" #8 pan head Phillips primer/vent screw	8
45	RV-532	5/16" 8 32 Fillister head Phillips	18
46	RV-546	Filter Bag 8x17"	1
47	RV-560	1 1/4" #10 Round head Phillips manifold screw	1
48	RV-561	1 1/2" ABS 90 F to F	1
49	RV-562	1 1/2" ABS Y F to F	1
50	RV-565	10 24 nylock nut	15
51	RV-567	3/8" 10 24 slotted hex head w/washer deck plate screw	8
52	RV-575	3/8" 10 24 Pump mount screws	2
53	RV-578	3/16" 8 32 pan head Phillips relay screw	2
54	RV-584	1/2" hose clamp for 1/4" id hose	2
55	RV-615	Pig tail plug	1
56	RV-617	Draw latch keeper	8
57	RV-628	5" 10 24 all thread	7
58	RV-629	Deck plate jam nut	7
59	RV-643	3/4" hose clamp for 1/2" id hose	3
60	RV-645	Manual pump out button	1
61	RV-658	Diaphragm pump	1
62	RV-660	Deck plate grommet for suction hose	1
63	RV-667	1/4" NPTM to 1/4" barbed	1
64	RV-670	4" fan vent cover	1
65	RV-671	1/2" 13 Jam nut primer	1
66	RV-683	1/2" to 1/2" to 1/4" barbed Tee	1
67	RV-684	1/2" barbed fitting screw on	1
68	RV-685	Pump to garden hose fitting	1
69	V-055	1/4" NPTF Male H series hydraulic Coupler	1



## **POWER POD TROUBLE SHOOTING GUIDE**

### **1. Empty Pump not working:**

**Always prime the empty pump before cleaning.**

**Instructions to prime the empty pump;**

- Attach the clean water solution hose female quick connect to male quick connect on top front of **Power Pod**. (*This will start filling the recovery tank with clean water.*) When water level reaches about 2 inches, the empty pump should turn on for a few seconds and then turn off as the water level goes down to 1 inch.
- Check to make sure float switch is working and is not impaired by any debris and get stuck.
- Look in through the side porthole to make sure the empty pump hose screen filter is resting on the **very bottom** of the recovery tank and that the filter screen is clean.
- Check to make sure the float switch moves freely up and down.

### **2 Water Shooting Out Exhaust**

- This is usually caused by using too much foaming cleaning detergent or the carpet has too much foaming residue in it from past cleanings. Soaking a small sponge with liquid defoamer and sucking it into the front of the Power Pod will cause the sponge to be lodged in the diffuser tube to reduce the foam as it enters the tank.
- Make sure empty pump is working properly. Check the empty pump screen that it is clean and resting on **very bottom** of recovery tank. Check that the empty pump float switch that it is free to move up and down and is working properly.
- Check to make sure there is nothing clogging the empty hose either before or after the pump head.
- Make sure diffuser tube is clean and holes are pointing towards the sides of the tank.

### **3 Motors not working**

- Check the switches for loose or disconnected wires.
- Check electrical outlet.
- Check the fuse and circuit breaker.

### **4 Other problems:**

Call our service department toll free at (888)768-6822 between the hours of 8:00am and 5:00pm (**pst**) Monday-Friday

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## WARRANTY

Rotovac Corporation products are warranted to be free of defects in material for 1 year as noted below:

During this warranty period, we will repair or replace, at our sole option, free of charge, any parts shown to be defective in either material or workmanship. Said parts must be returned with postage or freight pre-paid. Specific parts, such as switches, vacuum motors, pumps, fittings, etc., are also warranted for a period of 1 year from date of original purchase.

This warranty is for replacement of defective parts or workmanship only. **IT DOES NOT PROVIDE FOR REPLACEMENT OF COMPLETE UNITS DUE TO DEFECTIVE PARTS.** It does NOT cover normal wear items such as hoses, power cords, bumpers, carbon brushes, gaskets, etc., which require replacement as a result of ordinary usage. Also, failures caused by abuse, neglect, alterations or operation contrary to manufacturer's recommendations are not warranted.

Replacement parts are warranted only for the remainder of the original warranty period.

This warranty does not cover labor or other charges in connection with replacement parts. **NO LOCAL SERVICE OR REPAIR CHARGES ARE ALLOWED UNLESS PRIOR AUTHORIZATION IS OBTAINED.**

There are no other warranties, expressed or implied, made with respect to this equipment. The manufacturer assumes no responsibility for damages resulting from the use or misuse of this equipment. **NOTE: This warranty is not transferable.**

## Rotovac Corporation

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