

# Tuffy Jr.

## Heated Soil Extractor

### Operations and Safety Manual



#### BEFORE YOU START:

- SAFETY
- OPERATION
- SERVICE
- PARTS
- TROUBLESHOOTING
- RETURN GOODS POLICY



**READ** and **UNDERSTAND** this material before operating or servicing this equipment. Failure to understand how to safely operate this tool could result in an accident causing injury or death.

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### Introduction

This manual is designed to make your job easier. However, there is nothing more important than the safety aids and instructions that are found throughout this document. The Safety Alert Symbol is used to identify topics of primary safety concern wherever they appear. Further, a separate section has been included, "Important Safety Instructions," which deals mainly with accident prevention concepts.

User experience provides the best feedback. We, at DETAIL PLUS, welcome your comments and suggestions.

### Purpose of this Manual

This instruction manual is intended to familiarize operators with safety and maintenance procedures of DETAIL PLUS products.

This manual should be kept available to all operating and maintenance personnel.

## SPECIFICATIONS

200°F Heated Solution Tank (110°F water heats to 200°F in 8 minutes)

Ready to use when dwell time on pre-spray is completed.

1-1/2 Gallon Solution Tank Capacity

2 Gallon Recovery Tank Capacity

Vacuum Lift 102"

Piston Pump delivers 60 PSI

1600 Watt Heating Element

Lights indicate when heating is in process and operating temperature reached.

Automatic thermostat maintains maximum temperature during standby periods.

Power Requirement less than 15 Amps Single Power Cord

10 ft. 1-1/4" ID Flexible Vacuum Hose

10 ft. 3/16" ID Spray Hose

Weight w/o solution: 18 lbs.

Maneuvers easily on 2" Casters

Easily accessible to fill, empty, clean

Dimensions: H-17"L -18" W-13"

Applications include auto detailing, commercial and household carpet and upholstery cleaning



## SAFETY ALERT SYMBOL

The symbol above is used to call your attention to instructions concerning your personal safety. Watch for this symbol. It points out important safety precautions. It means **"ATTENTION! Become alert! Your personal safety is involved!"** Read the message that follows and be alert to the possibility of personal injury or death.



## DANGER

Immediate hazards which, if not avoided, **WILL** result in severe personal injury or death.



## WARNING

Hazards or unsafe practices which, if not avoided, **COULD** result in severe personal injury or death.



## CAUTION

Hazards or unsafe practices which, if not avoided, **COULD** result in severe personal injury or property damage.

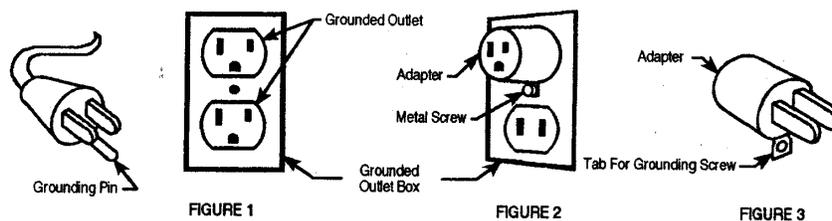
Safety is a critical factor in the design of DETAIL PLUS equipment. The best program starts with a safety conscious operator. The information highlighted in this bulletin describes operating practices for the benefit of the workers who will use our equipment in their daily jobs. Comments from users are appreciated.

## GROUNDING INSTRUCTIONS

This appliance must be grounded. If it should electrically malfunction, 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 plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

### DANGER!

Improper connection of the equipment grounding conductor can result in the 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. This appliance is for use on a nominal 120volt circuit, and has a grounding plug that looks like the plug illustrated in Figure 1 below. A temporary adapter illustrated in Figures 2 and 3 may be used to connect this plug to a 2 pole receptacle as shown in Figure 2 if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet (Figure 1) can be installed by a qualified electrician. The green colored rigid ear, tab, or the like extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adapter is used, it must be held in place by a metal screw. Grounding adapters are not approved for use in Canada. Replace the plug if the grounding pin is damaged or broken. The Green (or Green/Yellow) wire in the cord is the grounding wire. When replacing a plug, this wire must be attached to the grounding pin only. Extension cords connected to this machine should be 12 gauge, three wire cords with three prong plugs and outlets. DO NOT use extension cords more than 50 feet (15 m) long.



## RETURN GOODS POLICY

As a DETAIL PLUS customer, you are aware that the equipment we design and build is both innovative and unique. Since this is true, in order to troubleshoot our equipment, we rely heavily on returned defective or failed parts so that we can examine firsthand the causes of failure. While this may at first be an inconvenience, ultimately you benefit from safer and better designed machine components. Please give us the opportunity to serve you better by following these RMA (Return Materials Authorization) rules.

1. We maintain the serial number, date of shipment or sale, and customer name on each piece of equipment sold. If you were the purchaser, please reference that information on your request for replacement or repair. If you purchased the equipment through a distributor, please contact them first. If you are not satisfied, contact DETAIL PLUS and give us the Distributor name, purchase date, and the serial number of the product.
2. Order the replacement part from DETAIL PLUS by calling 1-800/284-0123 during normal business hours (8:30-5:00 Pacific Time). We will ship warranty parts at your expense.
3. When dealing with DETAIL PLUS, ask for an RMA number when you are ordering the replacement part. Return the failed part to us within 30 days, freight prepaid, exactly as it was at the time of failure. Our inspection and evaluation will attempt to determine the probable cause of failure.
4. If our inspection reveals that the failed part was defective, we will credit your account for the entire amount of the part. When incomplete parts are returned for credit, their condition or will be assessed against the credit claim at the sole discretion of DETAIL PLUS.
5. We also offer to do warranty related repairs free of charge at our facility. Arrangements must be made in advance as outlined above. We will not accept freight collect returns or returns that do not indicate the RMA # on the outside of package.

Your satisfaction in all of your dealings with DETAIL PLUS is extremely important to us. We intend to be reasonable on any matter that is related to our warranty service or other wear-related problems which our customers feel need attention. Please help us to help you. Before assuming that a part is defective, check the repair manual to see if the problem might be something that you or one of your employees might be capable of correcting. If it is not, follow the above policy and depend on us to respond quickly and responsibly.

## IMPORTANT SAFETY INSTRUCTIONS

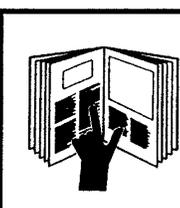
When using an electrical appliance, basic precautions should always be followed, including the following: Read all instructions before using this appliance.

### **WARNING!**

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

- Do not leave the appliance when it is plugged in. Unplug the unit from the outlet when not in use and before servicing. .To avoid electric shock, do not expose to rain. Store indoors.
- Do not allow to be used as a toy. Close attention is necessary when used near children.
- Use only as described in this manual. Use only the manufacturer's recommended attachments.
- Do not use with damaged cord or plug. If the appliance is not working as it should be, has been dropped, damaged, left outdoors or dropped into water, return it to a service center.
- Do not pull or carry by the cord, use the cord as a handle, close a door on the cord, or pull the cord around sharp edges or corners.
- Do not run the appliance over the cord. Keep the cord away from heated surfaces.
- Do not unplug by pulling on the cord. To unplug, grasp the plug, not the cord.
- Do not handle the plug, cord or appliance with wet hands.
- Do not put any object into openings.
- Do not use with any opening blocked, keep free of dust, lint, hair, and anything that may reduce air flow.
- Keep loose clothing, hair, fingers, and all parts of body away from openings and moving parts.
- Do not pick up anything that is burning or smoking, such as cigarettes, matches, or hot ashes, or any health endangering dusts.
- Turn off all controls before unplugging.
- Use extra care when cleaning on stairs.
- Do not use to pick up flammable or combustible liquids such as petrol or use in areas where they may be present. .
- Anyone designated to operate this equipment must, without fail, read and understand these instructions before attempting to operate the equipment.
- Always disconnect electrical cable from outlet before attempting adjustments or repairs.
- Always use a grounded electrical outlet- .Never use outdoors or in the rain!
- Never put flammable or explosive materials in this equipment.
- Never operate equipment in an environment where these materials are present.
- Do not allow the unit to freeze.
- Do not operate in standing water.
- Do not operate if power cords, hoses, etc. are cracked, frayed, leaking or otherwise in need of repairs. .
- Do not operate under any unsafe conditions.

	<b> WARNING</b>
	Disconnect power before working. Electric shock may occur.

	<b> WARNING</b>
	A person who has not read and does not understand all operating instructions is not qualified to operate this tool. Failure to read and understand safety instructions may result in injury or death.

## **SAVE THESE INSTRUCTIONS**

Additional copies of this manual  
are available upon request at:

*DETAIL PLUS Systems*  
*P.O. Box 20755*  
*Portland, OR 97294*

## PREPARING FOR USE AND OPERATING THE MACHINE

### SPOTTING PROCEDURES PRIOR TO OPERATING MACHINE

- 1 Soak up excess liquids with a towel.
- 2 Test cleaner on a small inconspicuous area to make sure it will not damage the carpet fibers.
- 3 Apply appropriate spotter, follow directions on bottle.
- 4 Start at outside edges of stain and work toward the center. Use a dabbing, not a rubbing action.
- 5 Repeat steps 3-4 if needed.

### OPERATING THE MACHINE

#### WARNING!

Use only nonflammable commercial chemicals intended for machine application.

- 1 UNPLUG machine before attempting to fill with water and position switch to the middle "OFF" position.
- 2 Pour 1-1/2 gallons of the warmest water possible to shorten heating time.  
BE SURE TO FILL WATER TO THE LID EDGE! It will not heat unless entirely full.
- 3 Toggle the power switch to "HEAT". The amber light will come on indicating the heating cycle has begun.
- 4 When water temperature reaches operating temperature, the amber light will go out; indicating machine is ready for use.
- 5 Toggle the power switch to "Vacuum".
- 6 Release water from nozzle until hot water transfers through the length of the solution hose. Remember, the remaining water in the hose will be cold.

#### CAUTION

Do not continue to use the machine after the Recovery Tank is FULL. This will damage the vacuum motor and is NOT COVERED UNDER WARRANTY.

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**HOT WATER**



**BE AWARE / WATER TEMPERATURE  
MAY EXCEED 200°F.  
USE CAUTION WHEN USING THIS MACHINE.**

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### AFTER USE MAINTENANCE

At the completion of every use you must perform these simple procedures to ensure proper machine operation and cleaning performance.

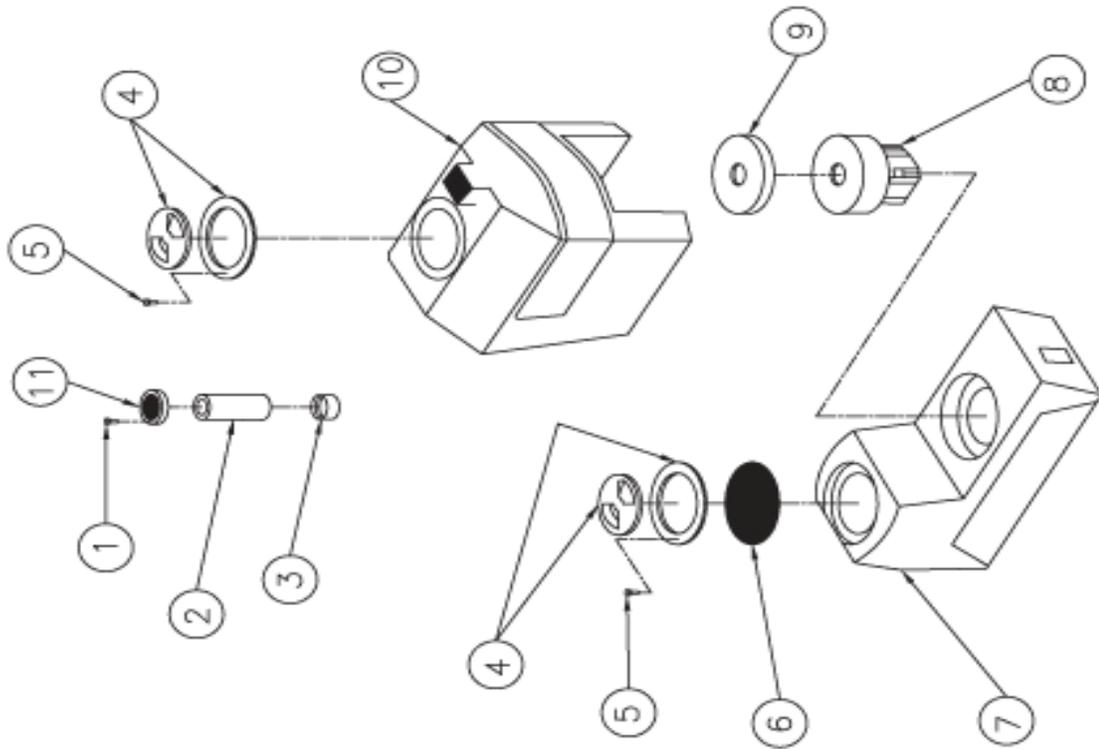
To reduce the risk electric shock or injury, unplug the power cord before servicing.

- 1 Toggle the Power Switch to the "OFF" position to turn both the vacuum motor and the solution pump OFF.
- 2 DISCONNECT THE POWER CORD.
- 3 Tip the Recovery Tank and drain through hose connection port.
- 4 Tip the Solution Tank and drain unused water or solution. Rinse the tank thoroughly of any debris or cleaning chemical residue.
- 5 Unscrew the tank covers and set aside to allow for air-drying and prevention of odor buildup.

- 6 Remove the spray tip (1/4 turn) from the upholstery tool and put in a solution of 25% vinegar & water overnight, to remove any chemical residue.

**Note:** To flush out or clean the solution tank, hose and spray tip, make one-gallon solution of 25% vinegar and warm water, and pour it into the solution tank. Turn on the switch, spray until all of the solution has run through the pump and spray tips to remove any chemical residue. Failure to flush the solution system will result in poor spray patterns and corroded jet spray tips.

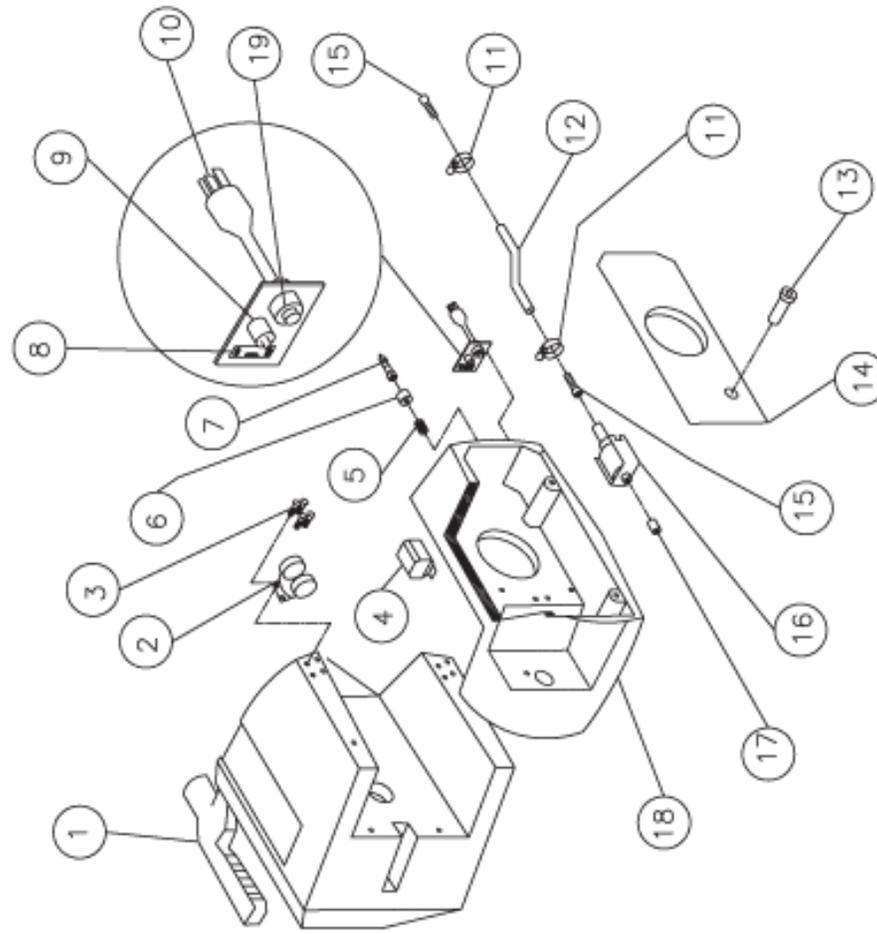
# TANK ASSEMBLY TOP VIEW



## TANK PARTS LIST

PART #	DESCRIPTION	PART #	QTY
1	SCREW	S2-67	2
2	STACK TUBE	S2-02R	1
3	STACK ADAPTER	S2-03R	1
4	4" LID	S2-04	1
5	LID SCREW	S2-07	4
6	MESH GUARD	S2-33	1
7	SOLUTION TANK	S2-01ST-SW	1
		S2-01ST-DD	1
		S2-01ST-BL	1
		S2-01ST	1
8	VACUUM MOTOR	S2-19	1
9	VACUUM MOTOR GASKET	S2-20	1
10	RECOVERY TANK	S2-01R-SW	1
		S2-01R-DD	1
		S2-01R-BL	1
		S2-01R	1
11	STACK FILTER	S2-62	1

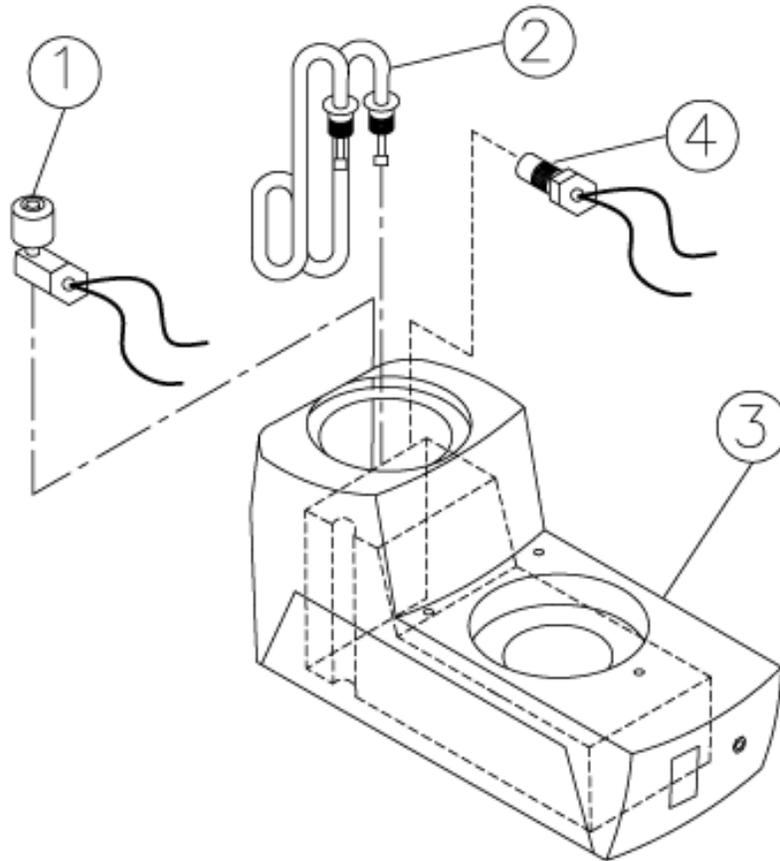
# TANK ASSEMBLY BOTTOM VIEW



## TANK PARTS LIST

PART #	DESCRIPTION	PART #	QTY
1	RECOVERY TANK	S2-01R-SW	1
		S2-01R-DD	1
		S2-01R-BL	1
		S2-01R	1
2	SWIVEL CASTER	S2-10	3
3	SCREW	S2-28	12
4	RELAY	S2H-36	1
5	BRASS NIPPLE	S2-13	1
6	NYLON SPACER	S2-14	1
7	QUICK COUPLING	S2-12	1
8	TOGGLE SWITCH	S2H-35	1
9	AMBER LIGHT	S2H-33	1
10	CORD	S2-86	1
		S2-88-12	1
		S2-26	1
11	HOSE CLAMP	S2-25	1
12	HOSE	S2H-17-20	1
13	CIRCUIT BREAKER	S2-27	1
14	BOTTOM COVER	S2-24	1
15	HOSE BARB	S2-23	1
16	PUMP	S2-75	1
17	NIPPLE	S2-01ST-SW	1
18	SOLUTION TANK	S2-01ST-DD	1
		S2-01ST-BL	1
		S2-01ST	1
19	STRAIN RELIEF FOR 15 FT CORD	S2-37	1
	FOR 50 FT CORD	S2-37A	1

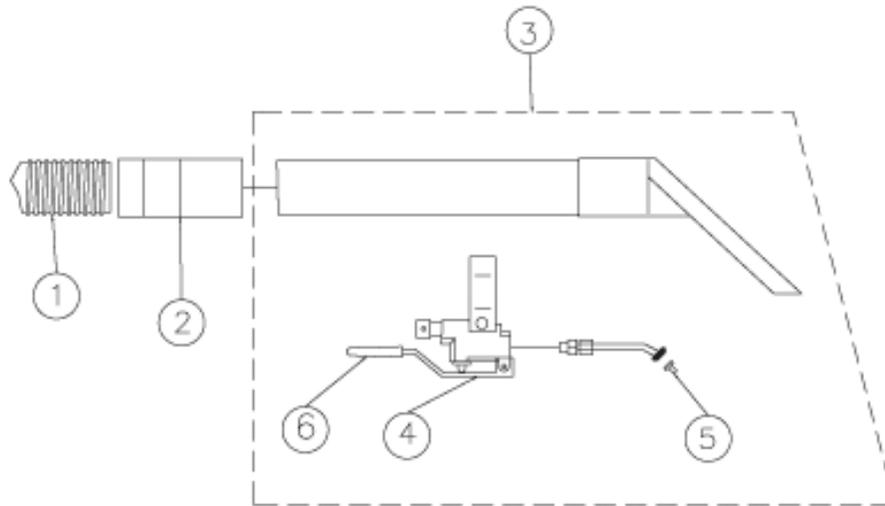
## SOLUTION TANK ASSEMBLY AFTER SERIAL #2534



### SOLUTION TANK PARTS LIST

PART #	DESCRIPTION	PART #	QTY
1	FLOAT SWITCH	S2-21-90	1
2	HEATING ELEMENT	S2H-15-2006	1
3	SOLUTION TANK		
	BLUE	S2-01ST-SW	1
	RED	S2-01ST-DD	1
	BLACK	S2-01ST-BL	1
	GRAY	S2-01ST	1
4	TEMPERATURE PROBE	S2H-20	

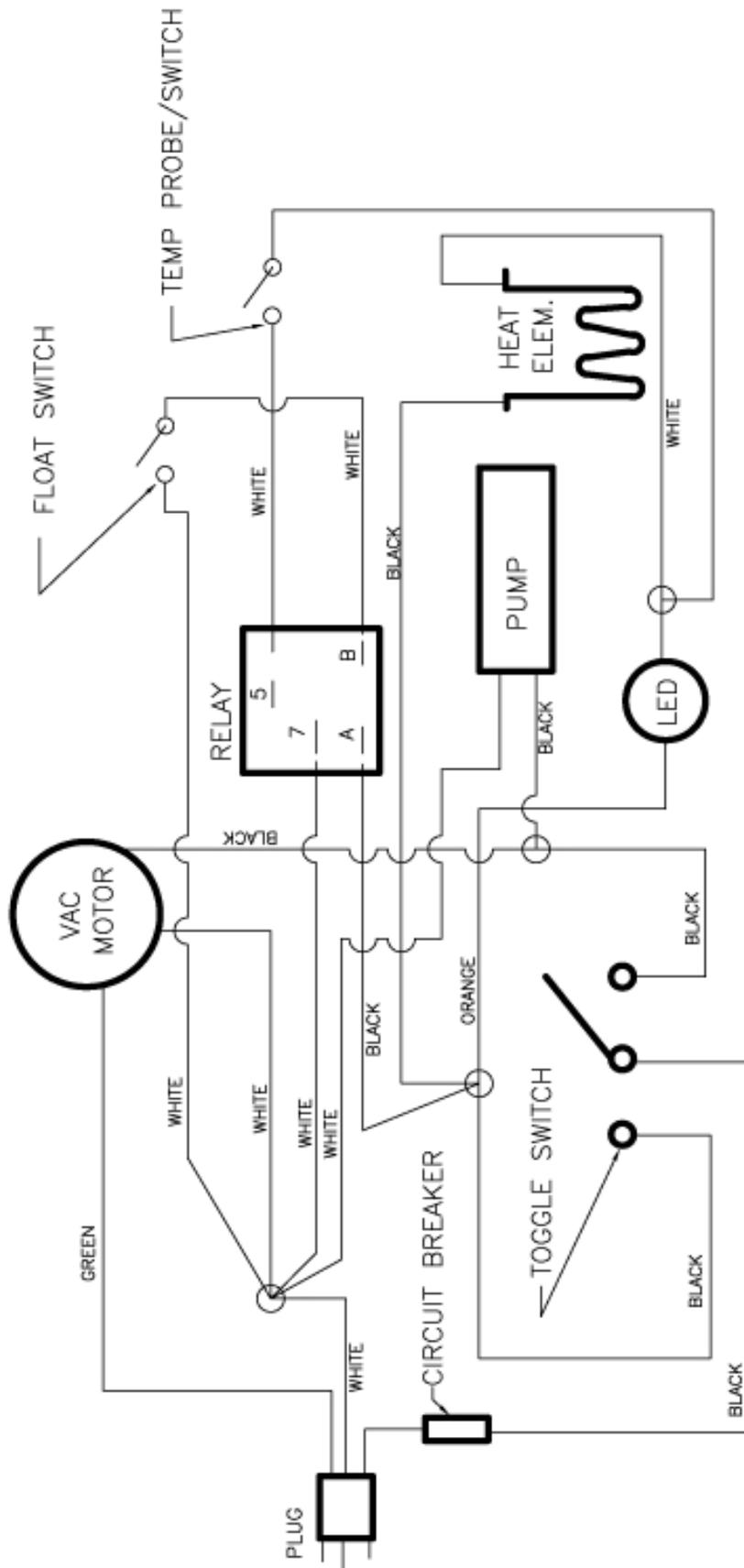
## RECOVERY HOSE ASSEMBLY



### **PARTS LIST FOR RECOVERY HOSE ASSEMBLY**

<b>PART #</b>	<b>DESCRIPTION</b>	<b>PART #</b>	<b>QTY</b>
1	FLEX VACUUM HOSE	S2-47	1
2	HOSE CUFF	S2-47-CUFF	1
3	SPOTTING TOOL (CLEAR)	S2-38	1
	DETAILING TOOL (S STEEL)	S2-38-CD	1
4	ALUMINUM SPRAY VALVE	S2-85	1
5	SPRAY JET	S2-89	1
6	LEVER COVER	S2-44	1

# WIRING DIAGRAM



## PREVENTING HARD WATER CLOGGING OR SCALING

In areas where the local water is moderately or high in mineralization (hard water) it will be necessary to follow certain preventative maintenance procedures to keep units with tank heaters from “scaling” and those with in-line heaters from clogging.

1. Use distilled or reverse osmosis water only or,
2. Run one (1) gallon of water with one (1) cup of white vinegar through the extractor once a week in areas with extremely hard water; twice a month in areas with moderately hard water and in all cases, at least once a month.

Any questions on this procedure call DETAIL PLUS 1-800/284-0123

## TROUBLESHOOTING

<b>PROBLEM</b>	<b>POSSIBLE CAUSE</b>	<b>REMEDY</b>
<i>Will not heat (but vacuum comes on).</i>	<i>Water level too low.</i>	<i>Fill water to top edge of lid ring.</i>
<i>No solution from spray nozzle tip.</i>	<i>Nozzle tip clogged. Check quick-disconnect fitting. Solution tank empty. Pump failed. Kinked solution hose.</i>	<i>Disassemble and clean. Reconnect fitting onto machine. Refill water to top edge of lid ring. Replacement required. Straighten hose.</i>
<i>Poor water pickup.</i>	<i>Vacuum hose cuff is not firmly pushed onto recovery tank fitting. Vacuum motor intake filter is clogged. Vacuum gasket between tanks is worn or damaged. Recovery tank lid not sealing. DEFECTIVE MACHINE! DO NOT ATTEMPT TO REPAIR! Left exposed in freezing conditions. Defective pump seal.</i>	<i>Push hose cuff onto fitting. Check for cracks in hose. Remove and clean filter. Replace gasket. Replace or tighten lid. Unplug immediately and call factory Service Center or the point of purchase. Refer to Service Center. Replace pump.</i>
<i>Overheats and boils water.</i>	<i>Float level switch in solution tank may be damaged. Thermostat failure.</i>	<i>Replace float switch. Replace thermostat.</i>
<i>Plugged into outlet, nothing comes on. circuit.</i>	<i>Overloaded circuit breaker.</i>	<i>Circuit breaker reset. Unplug other electrical items on same</i>

## COMMON STAINS AND TREATMENT METHODS

<b>STAIN TYPE</b>	<b>TREATMENT MATERIAL</b>	<b>STAIN TYPE</b>	<b>TREATMENT MATERIAL</b>
<i>Asphalt .....</i>	<i>Volatile solvent, Detergent</i>	<i>Egg (raw) .....</i>	<i>Liquid detergent</i>
<i>Beer .....</i>	<i>Liquid detergent, White vinegar</i>	<i>Food dye.....</i>	<i>Liquid detergent, Water</i>
<i>Berry stain.....</i>	<i>Liquid detergent, Ammonia 3-6%, Water</i>	<i>Furniture dye polish .....</i>	<i>Paint/Oil/Grease remover, Detergent</i>
<i>Bleach.....</i>	<i>Liquid detergent, Water</i>	<i>Gravy.....</i>	<i>Liquid detergent</i>
<i>Blood (dried).....</i>	<i>Warm detergent, Ammonia 3-6%, Water</i>	<i>Lipstick.....</i>	<i>Paint/Oil/Grease remover</i>
<i>Blood (wet).....</i>	<i>Liquid detergent, Water</i>	<i>Mascara.....</i>	<i>Paint remover, Volatile solvent, Detergent, Water</i>
<i>Butter .....</i>	<i>Volatile solvent</i>	<i>Milk .....</i>	<i>Liquid detergent</i>
<i>Catsup or mustard .....</i>	<i>Liquid detergent</i>	<i>Orange drink.....</i>	<i>Liquid detergent, Water</i>
<i>Chewing gum .....</i>	<i>Volatile solvent</i>	<i>Shoe polish .....</i>	<i>Heated iron into clean towel, Volatile solvent</i>
<i>Chocolate .....</i>	<i>Liquid detergent, Ammonia, Water</i>	<i>Tea.....</i>	<i>Liquid detergent</i>
<i>Coffee.....</i>	<i>Detergent, White vinegar, Volatile solvent</i>	<i>Tomato juice.....</i>	<i>Liquid detergent</i>
<i>Cola drink.....</i>	<i>Liquid detergent</i>	<i>Urine.....</i>	<i>Liquid detergent, Water</i>
<i>Crème de Menthe (green) Liquid detergent</i>		<i>Vomit.....</i>	<i>Warm detergent, Water, White vinegar</i>
		<i>Wine.....</i>	<i>Liquid detergent, Ammonia 3-6%, Water, vinegar</i>

## LIMITED WARRANTY

DETAIL PLUS equipment is manufactured, tested and inspected in accordance with specific engineering requirements and are warranted to be new parts free from defects in workmanship and materials for one year to the original retail purchaser only. Any equipment used in commercial rental agencies is not covered under this warranty. The machine should always be stored upright. Warranty does not include normal wear items such as: hoses, quick disconnects and filters.

### WARRANTY/RETURNS PROCEDURE

It is the responsibility of DETAIL PLUS or authorized service center to repair the Customer's equipment as soon as possible. If an authorized center is not available to repair the equipment it may be shipped back to DETAIL PLUS. Only DETAIL PLUS or its authorized dealers, repair centers and agents may warranty repairs on these products. All others do so at their own risk and expense.

The Distributor must follow DETAIL PLUS standard RMA procedure.

- 1. When a repair falls within the Warranty time period of a piece of equipment the Distributor will issue a RMA/Warranty claim form to fill out and return with item(s). This form will act as a purchase order to replace the damaged parts or as a credit request.**
- 2. All parts and equipment must be returned to DETAIL PLUS with the RMA/claim form for evaluation at the Customer's expense. All warranty claims are subject to an evaluation by DETAIL PLUS to determine if warranty will be approved. No warranty is authorized before the part is evaluated by DETAIL PLUS.**
- 3. The Distributor may request DETAIL PLUS to make the repairs needed for a part that is not covered under warranty. The Distributor will be given a quote for the cost of the needed repair(s). The Distributor will authorize the repairs by faxing a repair authorization to DETAIL PLUS. The cost of the repair will be billed to the Distributor's account.**
- 4. Return items not accompanied by an RMA form will not be warranted.**

This warranty limits DETAIL PLUS liability for defects in workmanship or materials to replacement of defective parts only. DETAIL PLUS will not be liable for incidental or consequential damages arising from the use of any DETAIL PLUS equipment, whether defective or not. This warranty is in lieu of all other expressed or implied warranties and is extended only to the original retail purchaser.