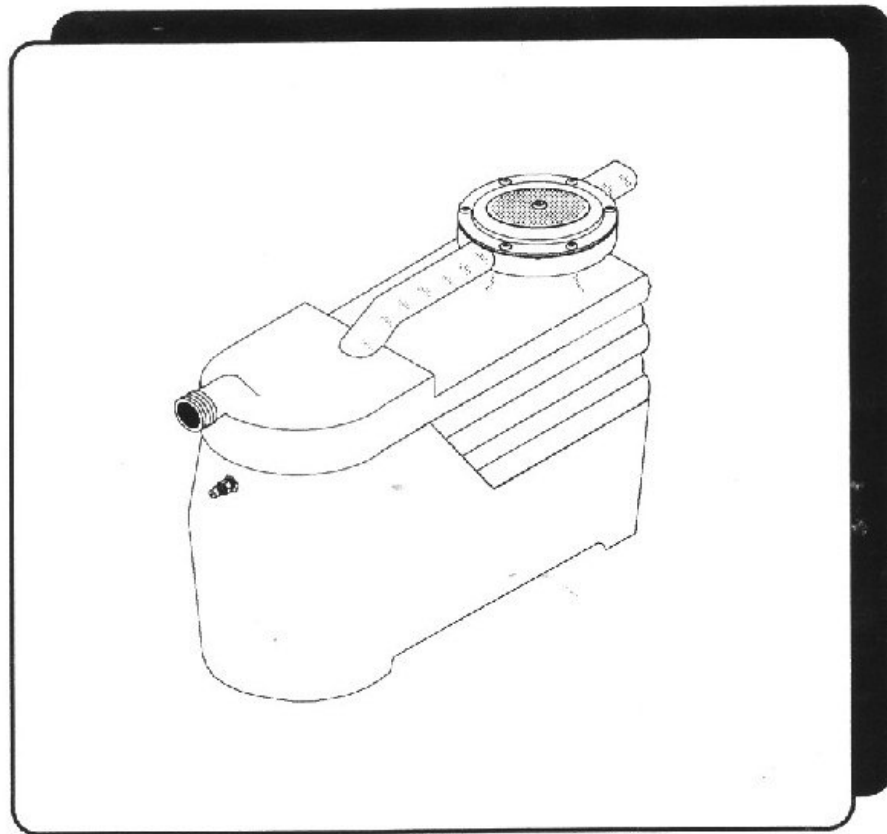


HYDRO-FORCE



POWER-SPOT OPERATION AND SERVICE MANUAL

Welcome...and congratulations on your purchase of the **Power-Spot Portable Cleaning Unit**. This instruction manual is a guide for operating and servicing your **POWER-SPOT** unit.

Read this manual completely before operating this unit.

Proper operation and service are essential to the efficient functioning of this unit. When maintained correctly, this unit will have a long, trouble-free life.

The service methods described in this manual are explained in such a manner that servicing may be performed accurately and safely. Proper service varies with the choice of procedure, the skill of the mechanic, and the tools or parts available. Before attempting any repair, make certain that you are thoroughly familiar with this equipment and equipped with the proper tools. Any questions pertaining to operating or servicing this unit should be directed to your nearest **HYDRO-FORCE** distributor.

The headings: **CAUTION** or **WARNING** are used to warn you that steps must be taken to prevent damage to the unit and/or personal injury.

MAKE CERTAIN THAT THE WARRANTY CARD IS FILLED OUT AND RETURNED TO HYDRO-FORCE

Please record your unit serial number in the box below for future reference.

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This operation manual is written specifically for the **HYDRO-FORCE POWER-SPOT PORTABLE CLEANING UNIT** which is manufactured by:

HYDRO-FORCE
542 W. CONFLUENCE
SALT LAKE CITY UT. 84123

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Published by **Hydro-Force**.

First printing: February 1998
Printed in USA

POWER-SPOT MANUAL
67-945537

LIMITED WARRANTY

HYDRO-FORCE warrants your machine to be free of defects in material and workmanship. This warranty shall extend to the designated parts for the specific time period listed from the date of delivery to the user. If HYDRO-FORCE receives notice of such defects during the warranty period, HYDRO-FORCE will either, at its option, repair or replace products which prove to be defective. Any local or distant transportation, related service labor and diagnostic calls are not included.

Molded Components	5 year (pro-rated)
Vacuum	1 year
Pump	1 year
Rocker Switch	1 year

Fittings, hoses, o-rings, and other maintenance items are not covered under warranty.

This warranty shall not apply to defects resulting from improper operation, inadequate maintenance by the customer, unauthorized modification, misuse, a unit that is improperly repaired, or exposure to freezing temperature conditions.

To obtain warranty service, products must be returned to a service facility designated by HYDRO-FORCE. Customer shall prepay shipping charges for products returned to HYDRO-FORCE for warranty service and HYDRO-FORCE shall pay for return of the products to customer.

HYDRO-FORCE makes no other warranty, either expressed or implied, with respect to this product. HYDRO-FORCE disclaims the implied warranties of merchantability and fitness for a particular purpose. Any implied warranty of merchantability or fitness is limited to the specific duration of this limited warranty.

This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state, or province to province.

The remedies provided herein are the customer's sole and exclusive remedies. In no event shall HYDRO-FORCE be liable for any direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any other legal theory.

Your HYDRO-FORCE unit is designed to give you years of reliable service. However, if a problem should arise after the warranty period, follow the troubleshooting procedures in the Operation and Service Manual. If you are still unable to determine the cause and solution to the problem, contact your nearest distributor, factory representative, or HYDRO-FORCE for details of the services available.

Components provided by HYDRO-FORCE, but supplied by other manufacturers, will only be warranted to the extent that they shall be warranted to HYDRO-FORCE.



WARNINGS

1. **DO NOT** remove the ground prong from your power cord. This could result in serious injury or fatality.
2. **DO NOT** use an extension cord with this unit.
3. **DO NOT** operate this unit if the power cord is damaged in any manner. This could result in serious injury or fatality.
4. **ALWAYS** use grounded electrical outlets when operating this unit.
5. **DO NOT** operate this unit in standing water. This may result in electrical shock which could cause severe personal injury or fatality.
6. **DO NOT** use volatile substances in or near this equipment.
7. **NEVER** operate this unit unless it is completely assembled.
8. **DO NOT** service this unit while it is running.
9. **DO NOT** touch electrical wires or components while this unit is running or connected to an electrical outlet. They can be sources of electrical shock.
10. **DO NOT** modify this unit in any manner. Improper modification can cause severe personal injury or could be fatal.
11. **DO NOT** use heated solutions (above 130°) with this unit. This may damage or weaken your pump and plastic solution tank.
12. **DO NOT** expose this unit to freezing weather. If freezing occurs, thaw completely.
13. **USE** standard cleaning chemicals with this equipment. **NEVER USE SOLVENTS!**
14. **DO NOT** use this unit as a dry vacuum. This unit is not equipped with a dust filtration system. The dust may damage the vacuum motor.
15. **DO NOT** attempt repairs. Unauthorized or improper maintenance will void the warranty. (Repairs should only be done by an authorized service center)
16. **ALWAYS** use defoamer if foaming occurs. Foam will suspend large particles which may damage vacuum, as well as allow liquid into the vacuum motor without activating the float shutoff.
17. **ALWAYS** protect your portable cleaning unit from freezing. Freezing will void the warranty.

Requirements

Chemical Requirements

The Power-Spot can be used with a variety of water-diluted chemical compounds (either acid or alkaline), depending on the job to be done. Use only brand name cleaners and follow the package directions when mixing.

For best results we recommend the use of our wide variety of chemical cleaning products here at Hydro-Force.

Electrical Requirements

The Power-Spot requires one 3 prong, 110-220 volt electrical outlet on a 15 amp circuit.

Serial Number:

Record your unit's serial number. The serial number can be located on the inside of the unit base next to the switch plate. Record the distributor from whom you purchased this unit as well as the date of purchase. Fill out your warranty registration form immediately and return to the addressee:

Warranty Registration Centers
HYDRO-FORCE
542 W. CONFLUENCE
SALT LAKE CITY UT. 84123

Acceptance Of Shipment

Every part of your Hydro-Force Power-Spot cleaning unit was carefully checked, tested, and inspected before it left our manufacturing plant. Upon receiving your unit, make the following acceptance check:

1. The unit should not show any outward signs of damage. If damaged, notify the common carrier IMMEDIATELY.
2. Check your equipment and packing list. The standard Hydro-Force Power-Spot cleaning unit should arrive equipped with the following items (unless otherwise specified) and any optional accessories that were ordered:

- A. Power-Spot Unit
- B. Solution Hose
- C. Vacuum Hose
- D. Hand Tool

Preparation

1. Check:

Check all fittings and connectors for proper assembly.

Check all hoses for leaks. Repair or replace any damaged hoses.

Check power cord for any damage. If damaged, replace.

2. Filling:

Fill the solution tank with clean hot or cold water.

Hot water temperature must not exceed 130°F.

Use only brand name cleaner and mix the cleaner per package instructions.

3. Electrical Connection:

The Power-Spot is equipped with a 3 prong grounded electrical cord.

Plug the power cord into 110 volt grounded electrical outlet.



WARNING:

DO NOT remove the ground prong from your power cord. This could result in serious injury or fatality. **DO NOT** use an extension cord with this power cord. **DO NOT** operate this unit if the power cord is damaged in any manner. This could result in serious injury or fatality.

4. Water Pump / Vacuum

(see illustration on page 6)

Be sure portal is on vacuum tank.

Make sure the solution tank screen is free of any debris, clean and re-install if needed.

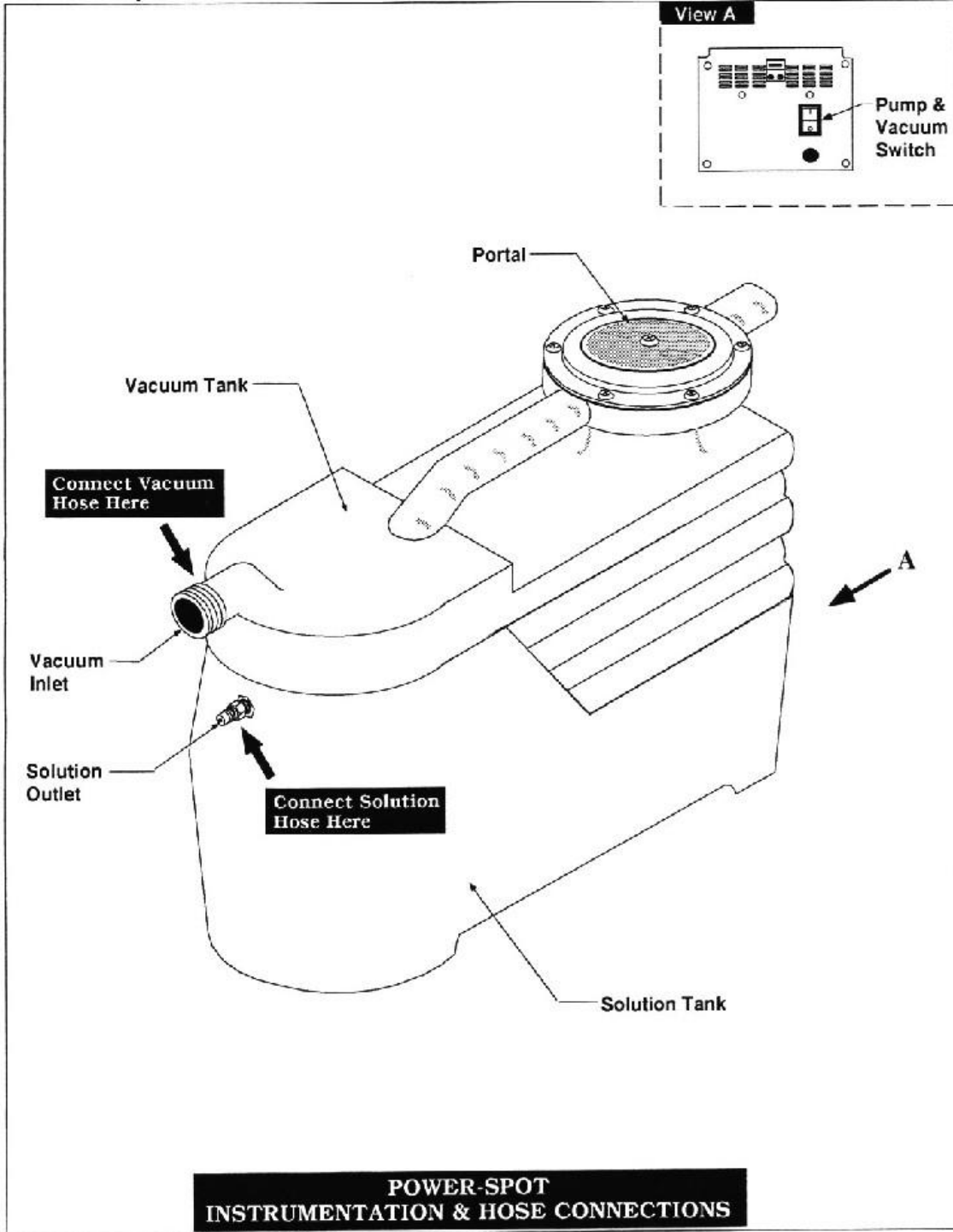
Make sure the latch connecting the vacuum tank and the solution tank is secure.

Turn switch ON.: This switch operates both the vacuum motor and the water pump. The pump is a bypass pump and operates continuously.

5. Hose Connection:

(see illustration on page 6)

The Power-Spot is equipped with a 1/8" male quick connect for solution hose attachment. The vacuum hose hookup is for 1" I.D. vacuum hose. Attach your vacuum and high pressure hoses to the tool and your unit.



7. Cleaning

Once you have completed steps 1 through 6, you are now ready to begin cleaning.

Observe the following guidelines, while cleaning:



WARNING

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

A. Before proceeding, make certain that the nozzle is functioning properly.

a. To check, hold the hand tool about one foot above the surface to be cleaned and open the hand tool valve. A full spray should be observed from the cleaning nozzle.

b. If the nozzle is not showing a full spray pattern, adjust nozzle for proper pattern, clean, or replace nozzle.

B. Normally, chemical is applied on the *push* stroke of the hand tool when cleaning. Vacuuming is done on the *pull* stroke. For heavily soiled carpets the hand tool may be used in a scrubbing manner, applying chemical in both push and pull strokes. Always finish up an area with a vacuum pull stroke.

C. When cleaning, keep the hand tool mouth flat on the surface being cleaned. Keep the hand tool moving when the valve is open.

D. The shutoff float inside the vacuum tank will impede the vacuum flow when the vacuum tank is full.

When this occurs empty the vacuum tank by removing the vacuum hose from the vacuum tank. Then detach the vacuum tank from the base. Pour contents out through the vacuum inlet into a five gallon pail or toilet. Dispose of the waste in a proper manner.



WARNING:

DO NOT dispose of waste in any manner which, in so doing, would violate any Local, State, or Federal law.

Once the vacuum tank has been emptied, you may reattach the vacuum tank to the base, reattach the vacuum hose and proceed with cleaning.

8. Shut Down & Daily Maintenance

A. Turn OFF PUMP and VACUUM switch.

B. Empty the vacuum tank by removing the vacuum hose from the vacuum tank. Then detach the vacuum tank from the base. Pour contents out through the vacuum inlet into a five gallon pail or toilet. Dispose of the waste in a proper manner.

We recommend removing as much moisture from your vacuum hose as is reasonable. This will prevent spillage of solution in your vehicle when placing the hose in your vehicle.

C. Remove portal & thoroughly rinse out vacuum tank removing any debris or sediment which may have accumulated inside the vacuum tank.

D. Clean the screen filter that's located inside the white cap attached to the portal.
(see item 15 on page A-2)

E. Place the portal back on the vacuum tank.

F. Disconnect solution tank hose. Pour out any remaining solution and thoroughly rinse tank.

G. Remove screen from inside the solution tank, clean and re-install.
(see item 11 on page A-3)



WARNING:
DO NOT dispose of waste in any manner which, in so doing, would violate any Local, State, or Federal law.

This unit, if properly maintained, will have a long and trouble-free life. We recommend that you make maintenance a part of your daily work schedule.



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

1. Inspect the power cord **daily** for any sign of damage. If damage is found, replace the cord.
2. Inspect the solution hose **daily** for any damage. If the hose shows any signs of damage or impending rupture, **replace the hose.**



CAUTION:
DO NOT attempt to repair hoses!
Repairing high pressure hoses may result in severe burns and serious injury!

3. Inspect the vacuum hose **daily** for any damage, breaks, or tears. Repair or replace the hose, if necessary.
4. Check spray tips **daily**. Clean spray tips, if plugged.
5. **Monthly** or as often as necessary, clean out any debris which may be in the vacuum tubing and hose.

Troubleshooting

Troubleshooting is an organized study of the problem and a planned method or procedure for investigation and correction of the difficulty. The following troubleshooting guide includes some of the problems that you may encounter during the service life of the machine.

The troubleshooting guide does not give all the answers for correction of problems listed, but is meant to stimulate a train of thought and indicate a work procedure directed toward the source of the trouble.

1. Think Before Acting

Study the problem thoroughly and ask yourself these questions:

1. What are the warning signs preceding the trouble?
2. What previous repair and maintenance work has been done?
3. Has a similar problem occurred before?
4. If the machine still runs, is it safe to continue operation to make further checks?

2. Do The Easiest Things First

Most problems are simple and easily corrected.

Always check the easiest and obvious things first. Following this simple rule will save time and trouble.

3. Find And Correct Basic Cause Of Trouble

AFTER A MECHANICAL FAILURE HAS BEEN CORRECTED, BE SURE TO LOCATE AND CORRECT THE CAUSE OF THE PROBLEM SO THAT THE SAME FAILURE WILL NOT BE REPEATED.

The following guide will list some of the problems and probable causes the operator can study to become aware of what might cause the problem should it arise.

If the hints in this manual do not correct a problem, contact a dealer or authorized service representative. **DO NOT** attempt repairs you do not understand.

TROUBLESHOOTING REMEDY GUIDE

Electrical System

Problem

Possible Cause

No electrical power.

1. Defective power cord.
2. House or building circuit breaker tripped.

Switch is turned on. Power is intermittent to all motor(s).

1. Faulty electrical cable.
 2. Defective switch.
 3. Loose terminal or discolored terminal connections.
-

Vacuum System

Problem

Possible Cause

No vacuum.

1. Loose vacuum hose, or loose vacuum connection.

Low vacuum.

1. Defective vacuum hose.
 2. Loose connection in the vacuum motor.
-

Solution System

Problem

Possible Cause

Pump motor on, no spray thru accessory tool(s).

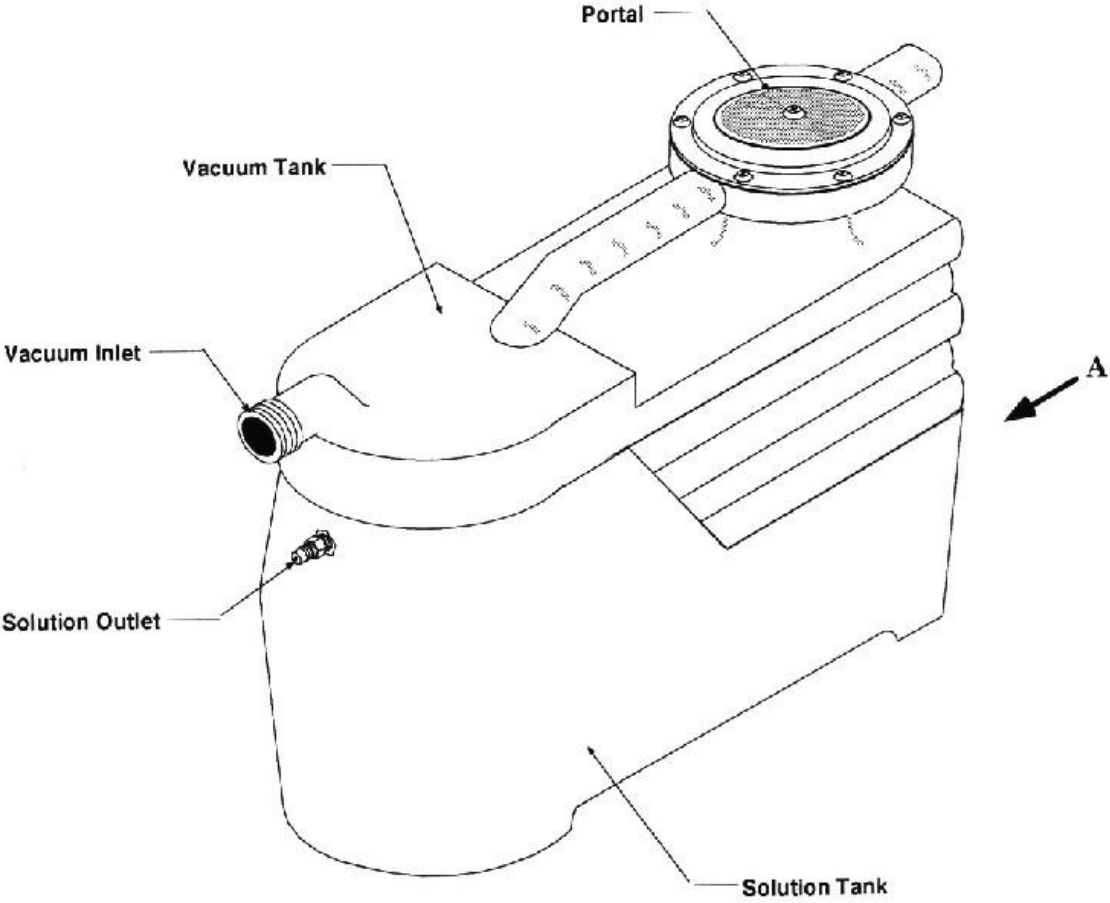
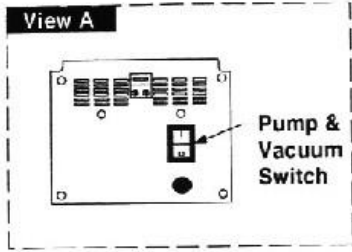
1. Clogged spray tips.
2. Clogged female quick disconnect coupler.
3. Punctured pump diaphragm.
4. Defective pump check valve.
5. Crack in pump housing.
6. Debris in pump check valve.
7. Clogged solution intake screen.

TROUBLESHOOTING REMEDY GUIDE cont.

Solution System cont.

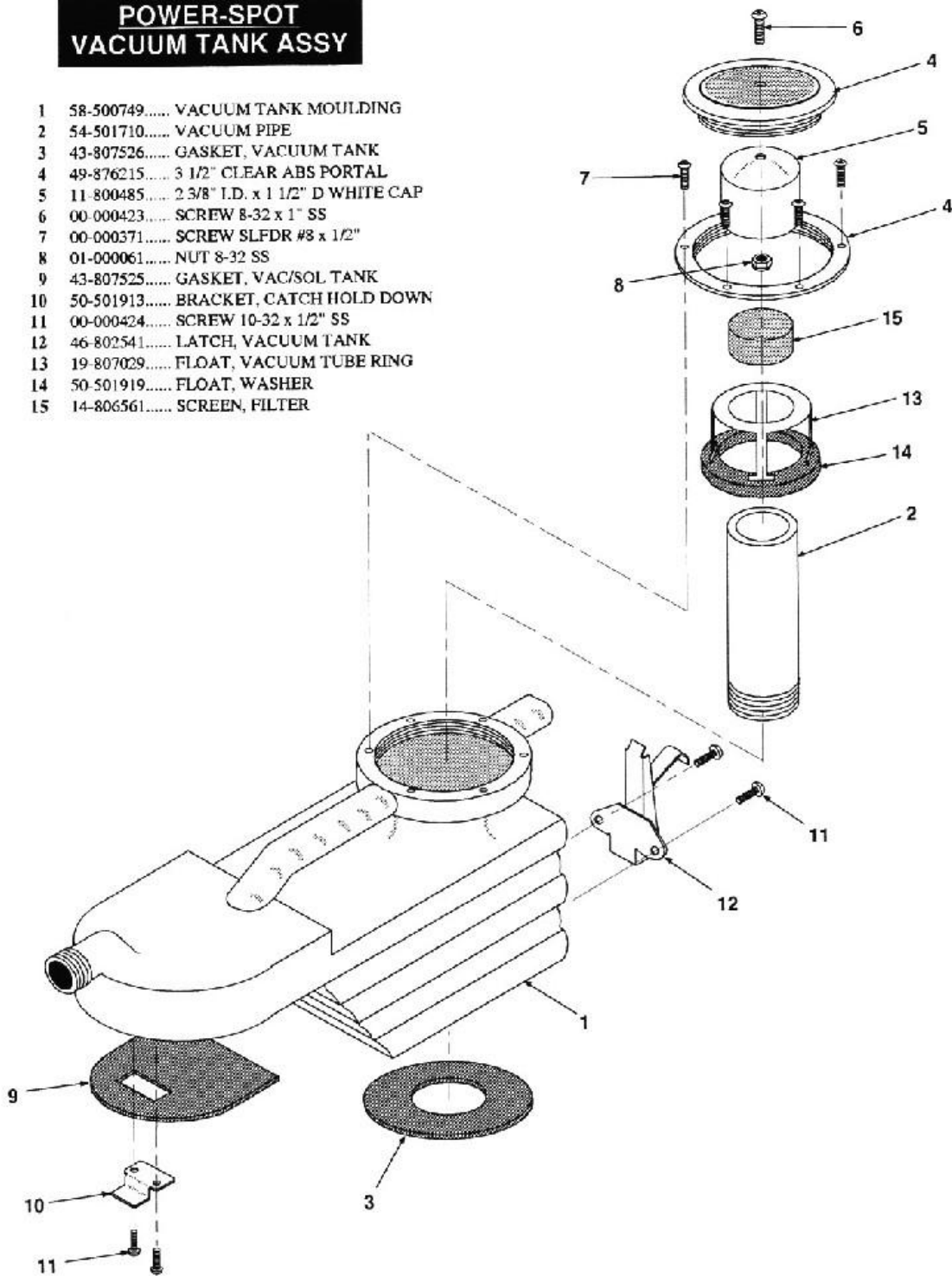
<u>Problem</u>	<u>Possible Cause</u>
Uneven or weak spray from tips.	<ol style="list-style-type: none"> 1. Clogged or dirty spray tips. 2. Accumulation of debris inside pump and plumbing. 3. Worn pump bearings (excessive noise). 4. Punctured pump diaphragm. 5. Defective motor. 6. Accumulated dirt on solution intake screen.
Carpet spray is turned off, solution still drips from spray tips.	<ol style="list-style-type: none"> 1. Debris in the hand tool valve caught between the solenoid parts and the plunger.
Vacuum motor working, pump motor fails to turn on.	<ol style="list-style-type: none"> 1. Loose plug connector. Loose wiring connection. 2. Defective pump motor.

**POWER-SPOT
EXTERIOR DETAIL**

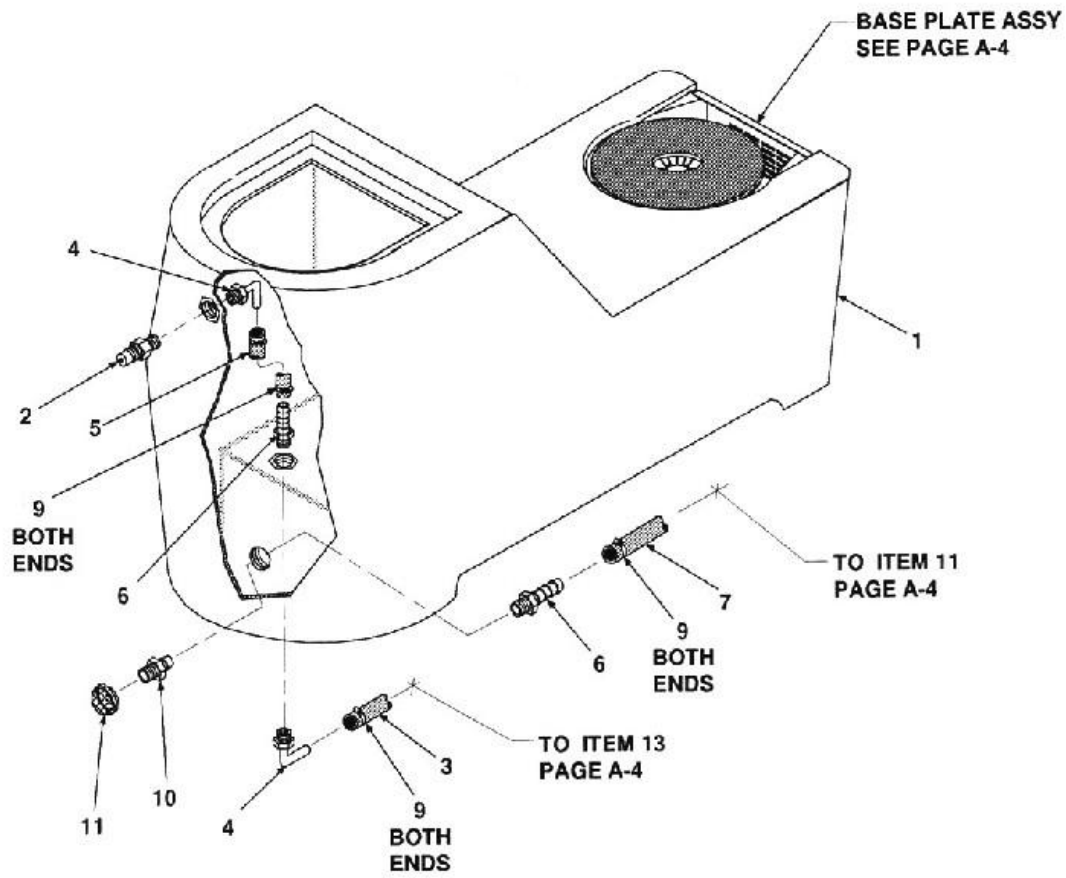


POWER-SPOT VACUUM TANK ASSY

- 1 58-500749..... VACUUM TANK MOULDING
- 2 54-501710..... VACUUM PIPE
- 3 43-807526..... GASKET, VACUUM TANK
- 4 49-876215..... 3 1/2" CLEAR ABS PORTAL
- 5 11-800485..... 2 3/8" I.D. x 1 1/2" D WHITE CAP
- 6 00-000423..... SCREW 8-32 x 1" SS
- 7 00-000371..... SCREW SLFDR #8 x 1/2"
- 8 01-000061..... NUT 8-32 SS
- 9 43-807525..... GASKET, VAC/SOL TANK
- 10 50-501913..... BRACKET, CATCH HOLD DOWN
- 11 00-000424..... SCREW 10-32 x 1/2" SS
- 12 46-802541..... LATCH, VACUUM TANK
- 13 19-807029..... FLOAT, VACUUM TUBE RING
- 14 50-501919..... FLOAT, WASHER
- 15 14-806561..... SCREEN, FILTER

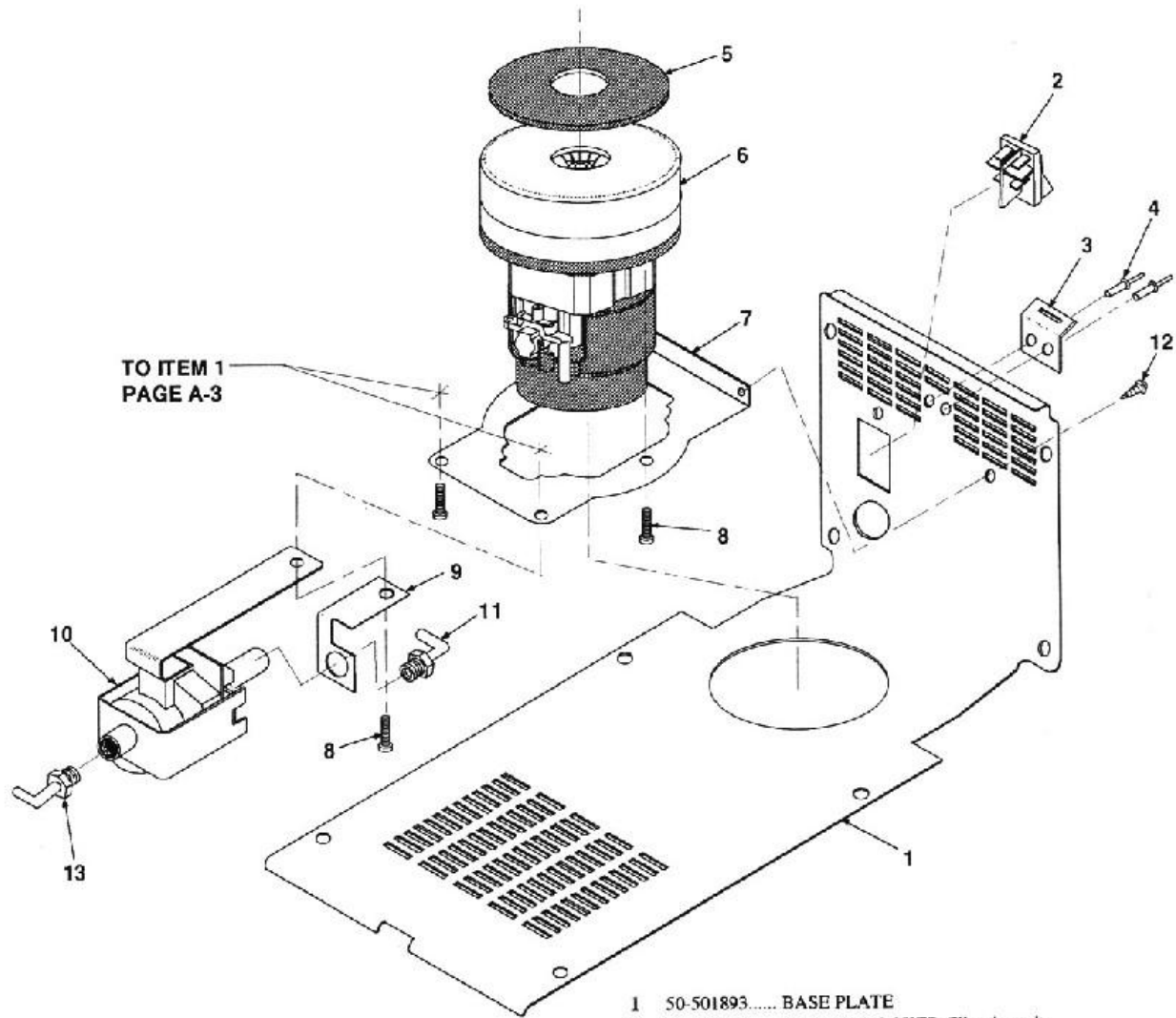


POWER-SPOT SOLUTION TANK ASSY



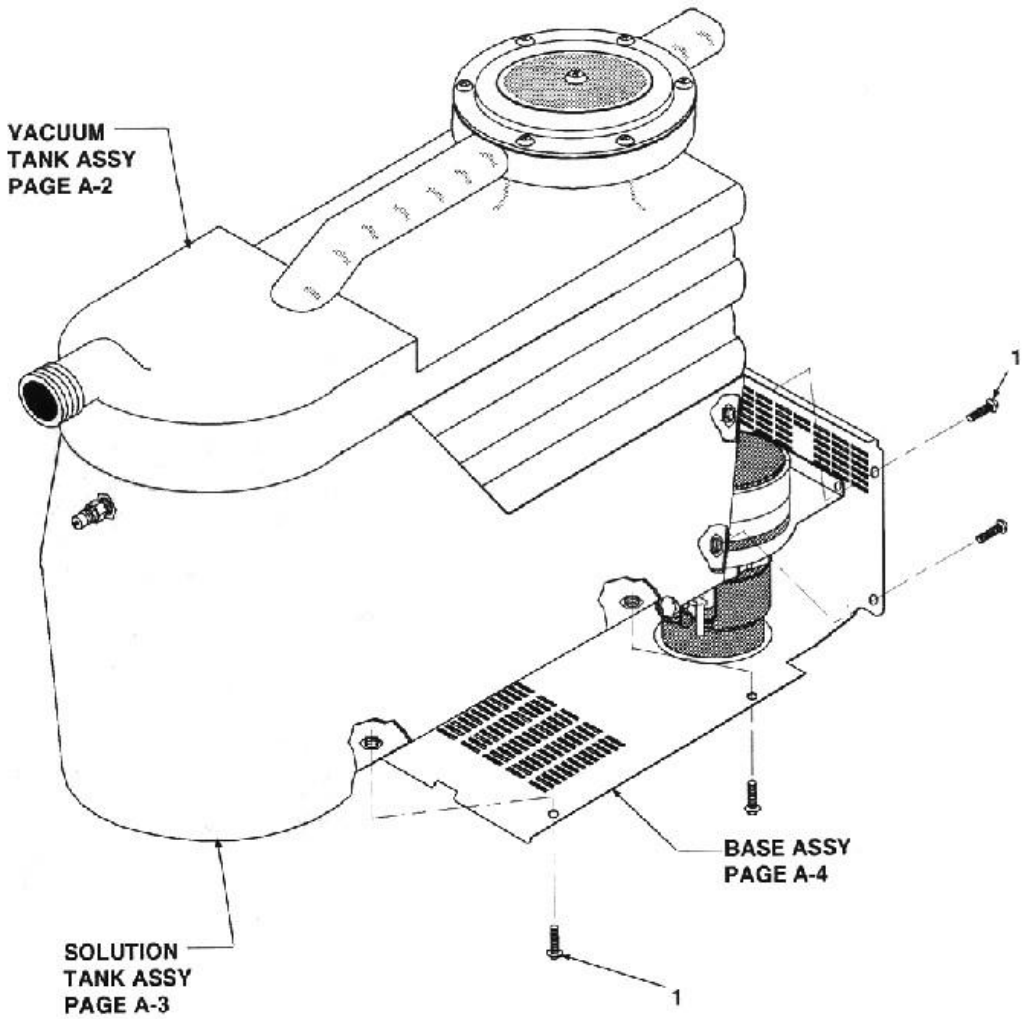
- 1 58-500750..... SOLUTION TANK MOULDING
- 2 13-806032..... DISCONNECT 1/8 M x 1/8 FPBR
- 3 09-805490..... HOSE 1/4" x 7"
- 4 11-800481..... ELL 1/8 P x 1/4 H.B.
- 5 09-805459..... HOSE 1/4" x 6 1/2"
- 6 12-800396..... BARB 1/8 P x 1/4 H.B.
- 7 09-805489..... HOSE 1/4" x 6 1/2"
- 8 11-800105..... NIP 1/8 x CLBR
- 9 03-000065..... CLAMP, HOSE #4
- 10 12-800396..... BARB 1/8 P x 1/4 H.B. (Modified)
- 11 14-806506..... SCREEN 1/8 FP

**POWER-SPOT
BASE PLATE ASSY**



- 1 50-501893..... BASE PLATE
- 2 32-900195..... SWITCH, ROCKER (Illuminated)
- 3 46-802542..... CATCH, BASE PLATE
- 4 00-000360..... RIVET
- 5 43-807526..... GASKET, VACUUM MOTOR
- 6 41-905032..... VACUUM MOTOR 2 STAGE 120v
- 7 50-501894..... BRACKET, VAC MOTOR
- 8 00-000378..... SCREW 10-32 x 1/2" ALLENHEAD
- 9 50-501914..... BRACKET, PUMP
- 10 41-905029..... 110/120 60 Hz (Flojet)
- 11 11-800481..... ELBOW 90° (Plastic)
- 12 00-000424..... SCREW, MACH 10/32 x 1/2" SS PHIL HD
- 13 11-800481..... ELBOW 90° (Plastic)

**POWER-SPOT
UNIT ASSY**



1 00-000378..... SCREW 10-32 x 1/2" ALLENHEAD

POWER-SPOT WIRING DIAGRAM

