

SteamVac™ With Attached Tools And Automatic Tool Conversion

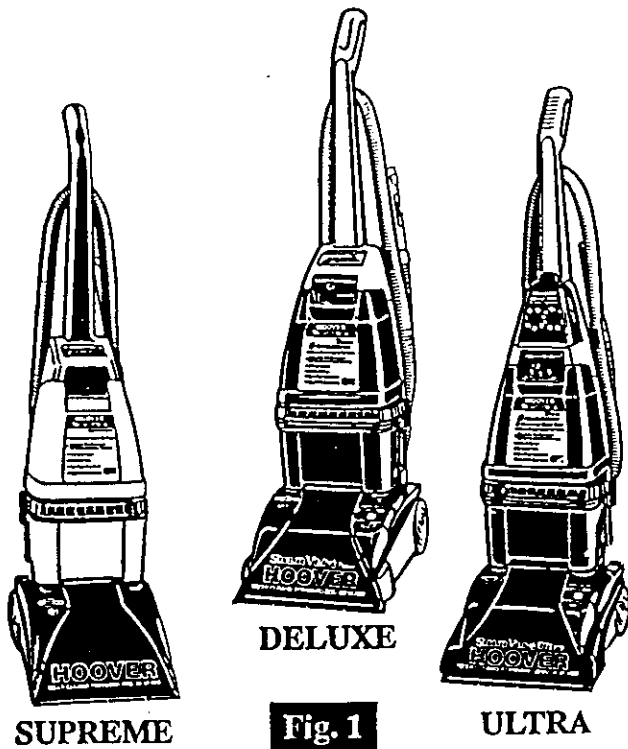


Fig. 1

SteamVacs with the automatic tool conversion feature were first introduced in mid-1997. Fig. 1

Characteristics of the three types:

Supreme: No rotating brushes

Deluxe: Five rotating brushes (for carpet only).

Ultra: Five rotating brushes for carpet and a powered hand nozzle for upholstery.

These are the third generation of Steam Vacs made by Hoover for the domestic market.

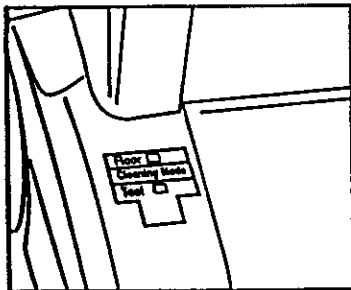


Fig. 2

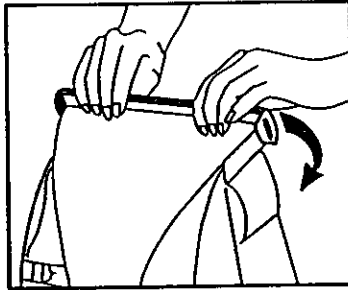


Fig. 3

All models have:

- 1 gallon tanks, solution and recovery
- 8 foot hoses
- Quick cord release (back of handle)
- Tool/floor mode indicator Fig. 2
- Automatic tool conversion
- 16 oz. pre-cleaner-spray bottle
- 16 oz. carpet/upholstery detergent
- Bare floor cleaning tool, fits front of nozzle. Fig. 3
- Upholstery nozzle
- 1 Speed motor
- Measuring cup/cap on solution tank. Fig. 4
- Over flow float in recovery tank
- Foot operated on and off switch
- One handed recovery tank removal. Fig. 5

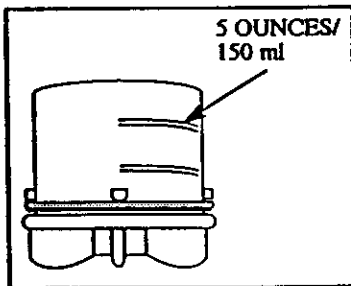


Fig. 4

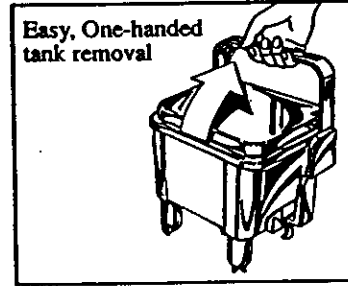


Fig. 5

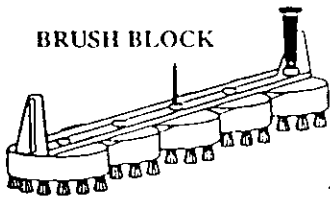


Fig. 6

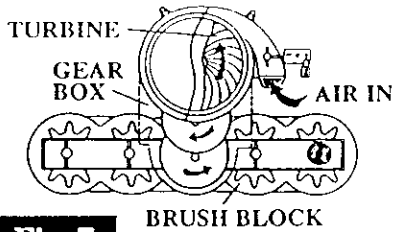


Fig. 7

Deluxe and Ultra models have 5 interlocking rotating brushes. Fig. 6

The brushes are driven by an air powered turbine. Fig. 7

Rotation of the brush can be viewed through a clear cover on the hood. The Speed of the brush depends on air flow and is adjustable for Lo or Hi rotation or can be turned off completely as might be desired when cleaning bare floors. Fig. 8

There are 3 major systems in Steam Vacs:

1. Electrical
2. Distribution
3. Recovery

The Electrical System – Fig. 9 consists of the power supply cord, motor and on/off switch. Close the switch, the motor runs and provides suction for recovery at the floor or the upholstery tool. It also generates air flow to drive the turbine to rotate the brushes at the floor and in the powered wand plus drive the pump to force solution to the upholstery tool.

The Distribution System – Fig. 10 When the solution tank is placed on the unit, a valve in the tank opens and fills the reservoir and the tube leading to the pump. With the unit turned on and the handle in the upright position, the pump runs and sends water to the wand for above the floor cleaning Fig. 10A

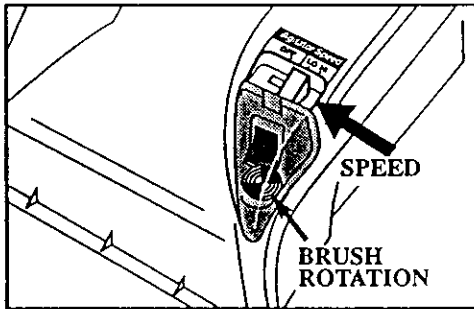


Fig. 8

ELECTRICAL SYSTEM

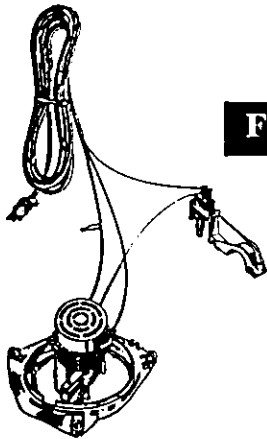


Fig. 9

DISTRIBUTION SYSTEM

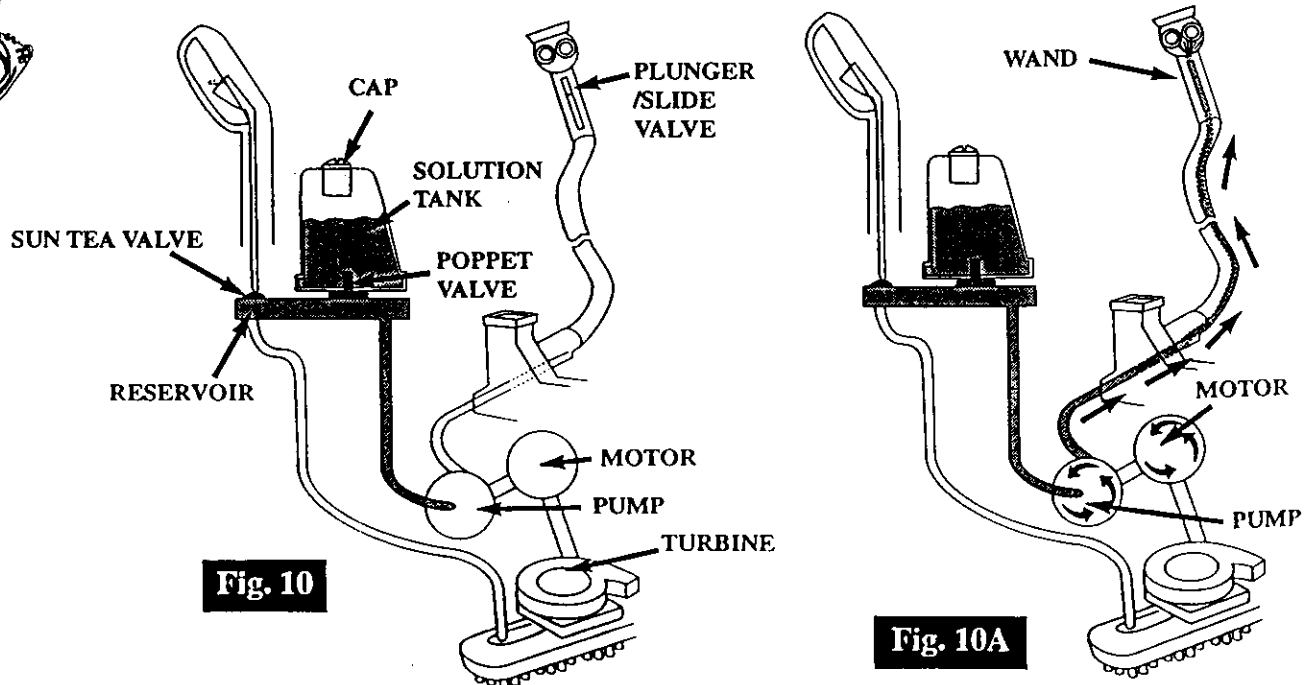
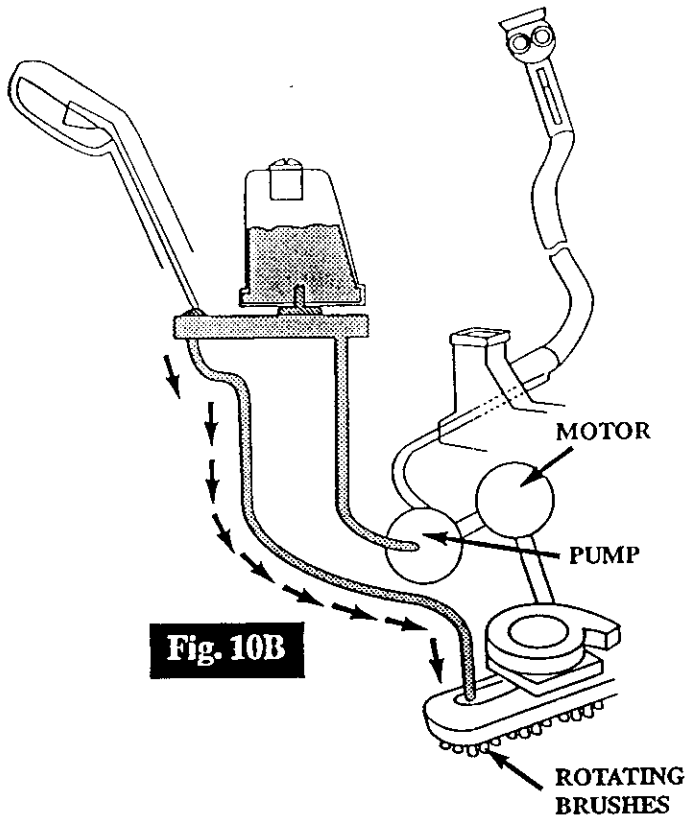


Fig. 10

Fig. 10A



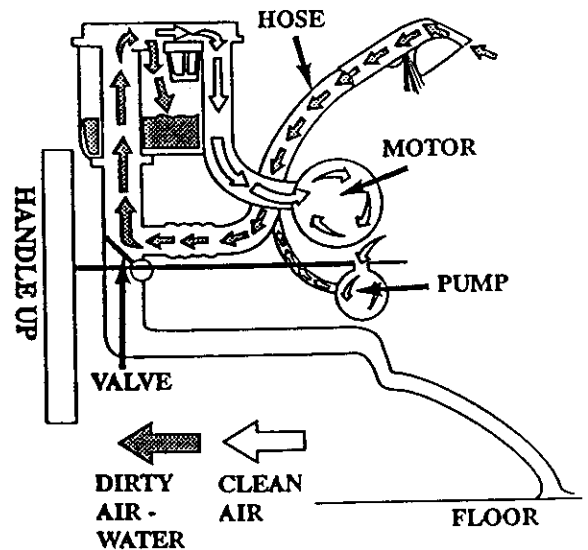
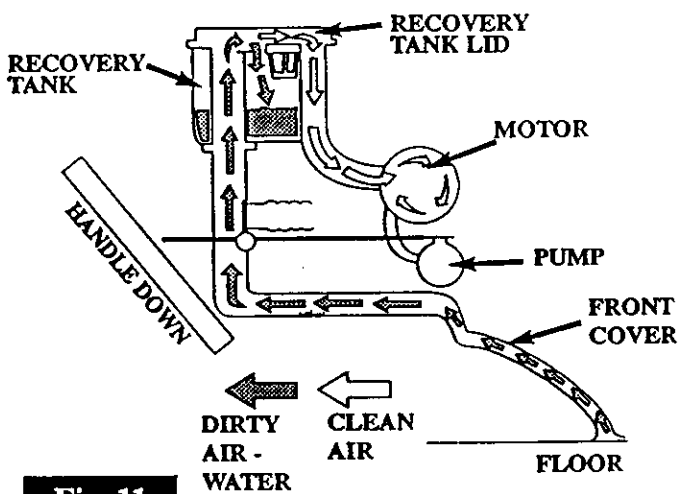
When the handle is lowered to the operating position, the pump shuts off and the floor brushes (5) start to rotate (unless turned off manually) Fig. 10B. When the trigger on the handle is depressed, a solution valve in the reservoir is opened and water flows to the rotating brushes.

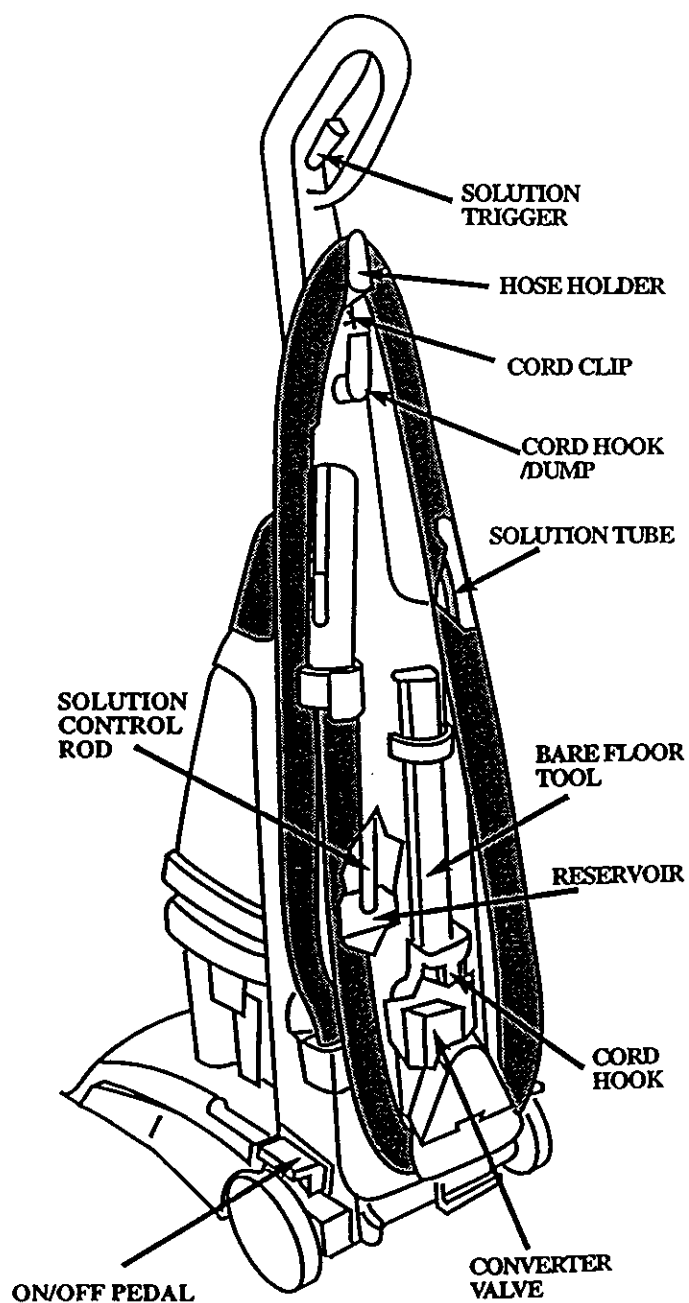
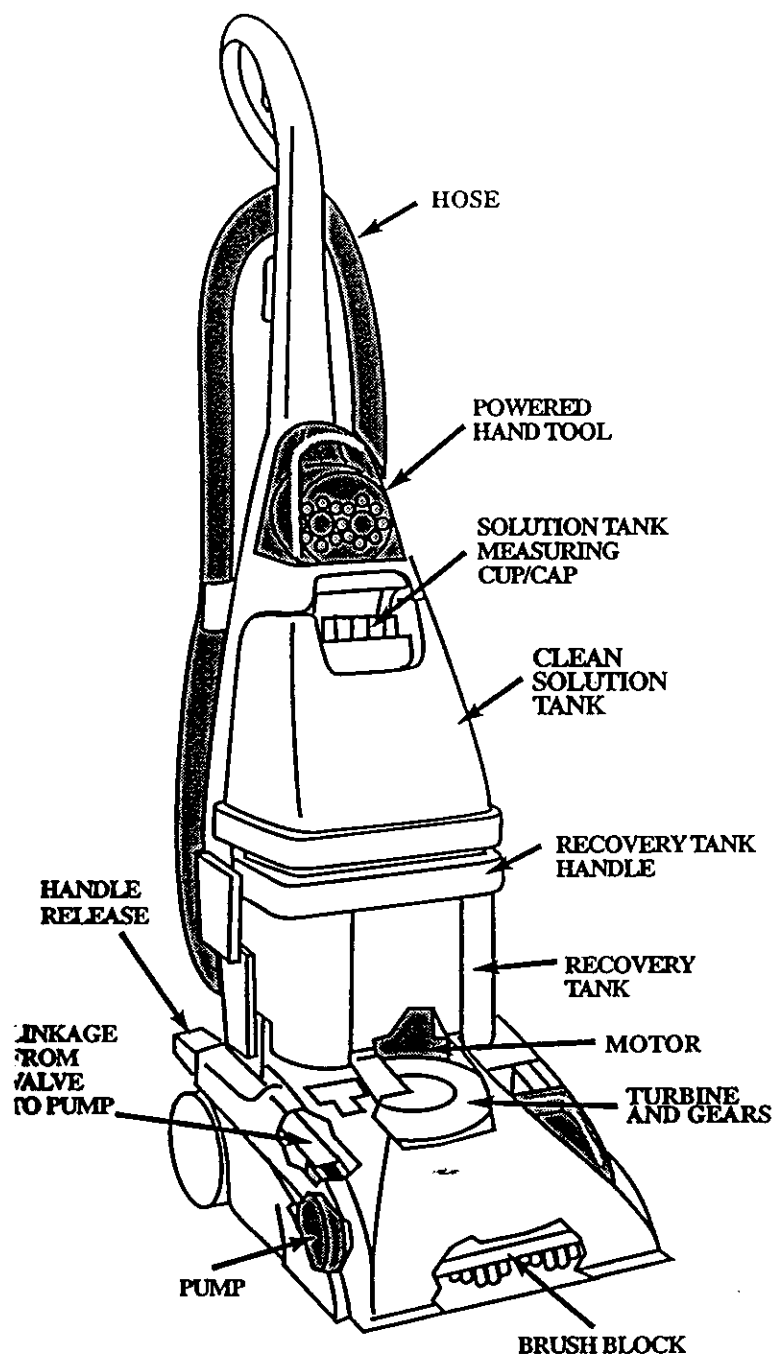
The Recovery System. Recovery from the floor is shown in Fig. 11. With the handle in the operating position, the pump is off and the valve to the tools is closed. All suction is at the floor nozzle.

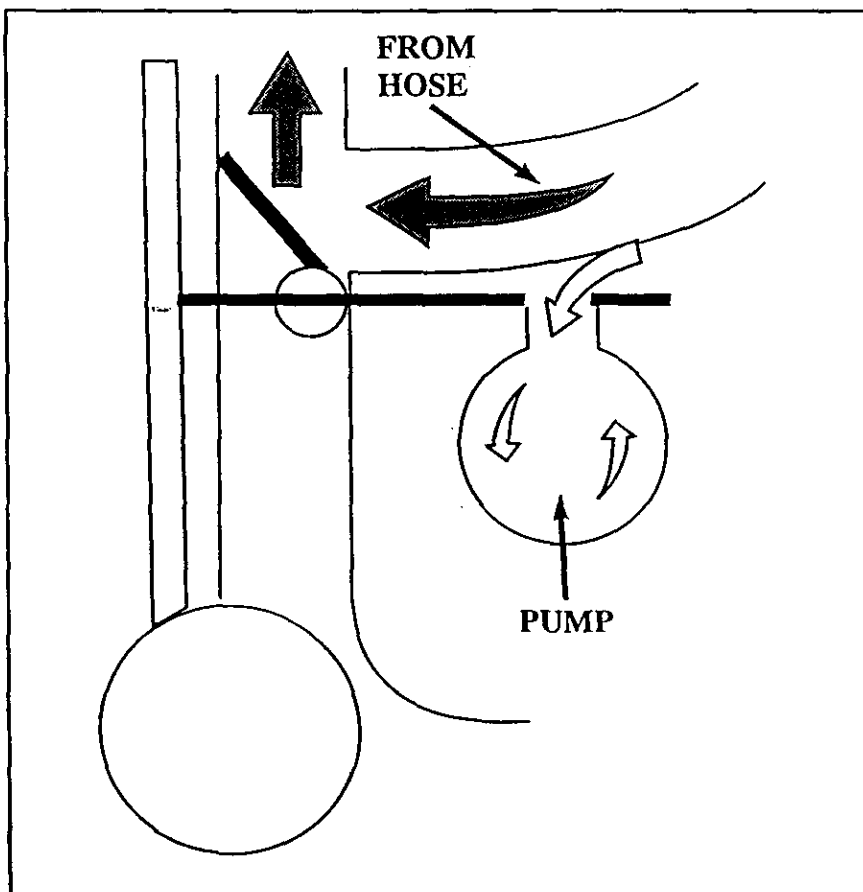
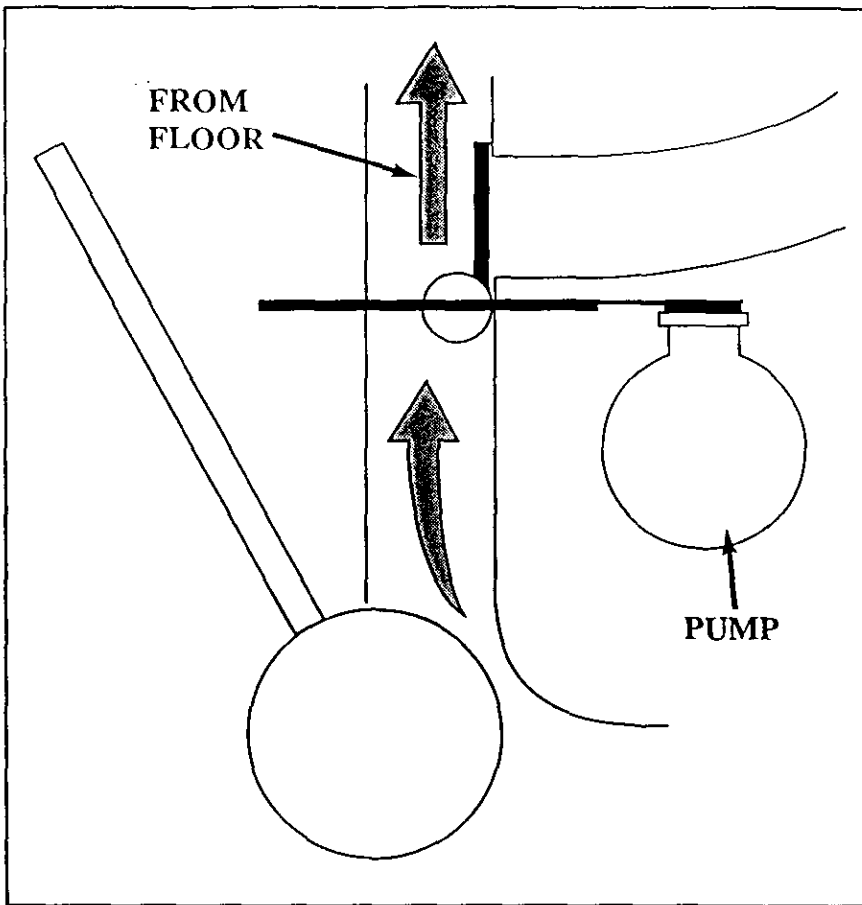
Recovery at the upholstery tool is shown in Fig. 12. With the handle in the storage position the pump runs, and the valve to the floor is closed diverting all suction to the upholstery tool.

Key components of the SteamVac Ultra are shown in the cut away views on the next page.

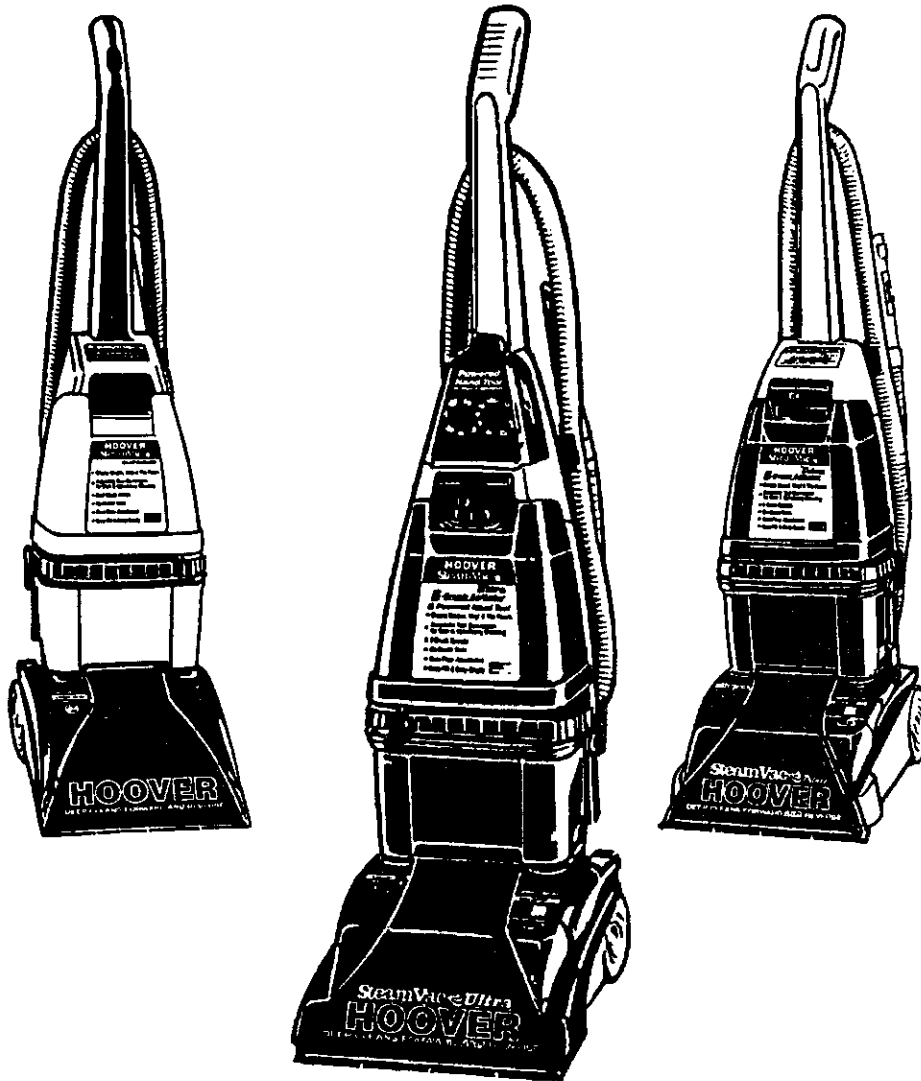
Refer to the Hoover Service Manual for repair procedures and the Microfiche Parts Catalog, purple header for spare parts.

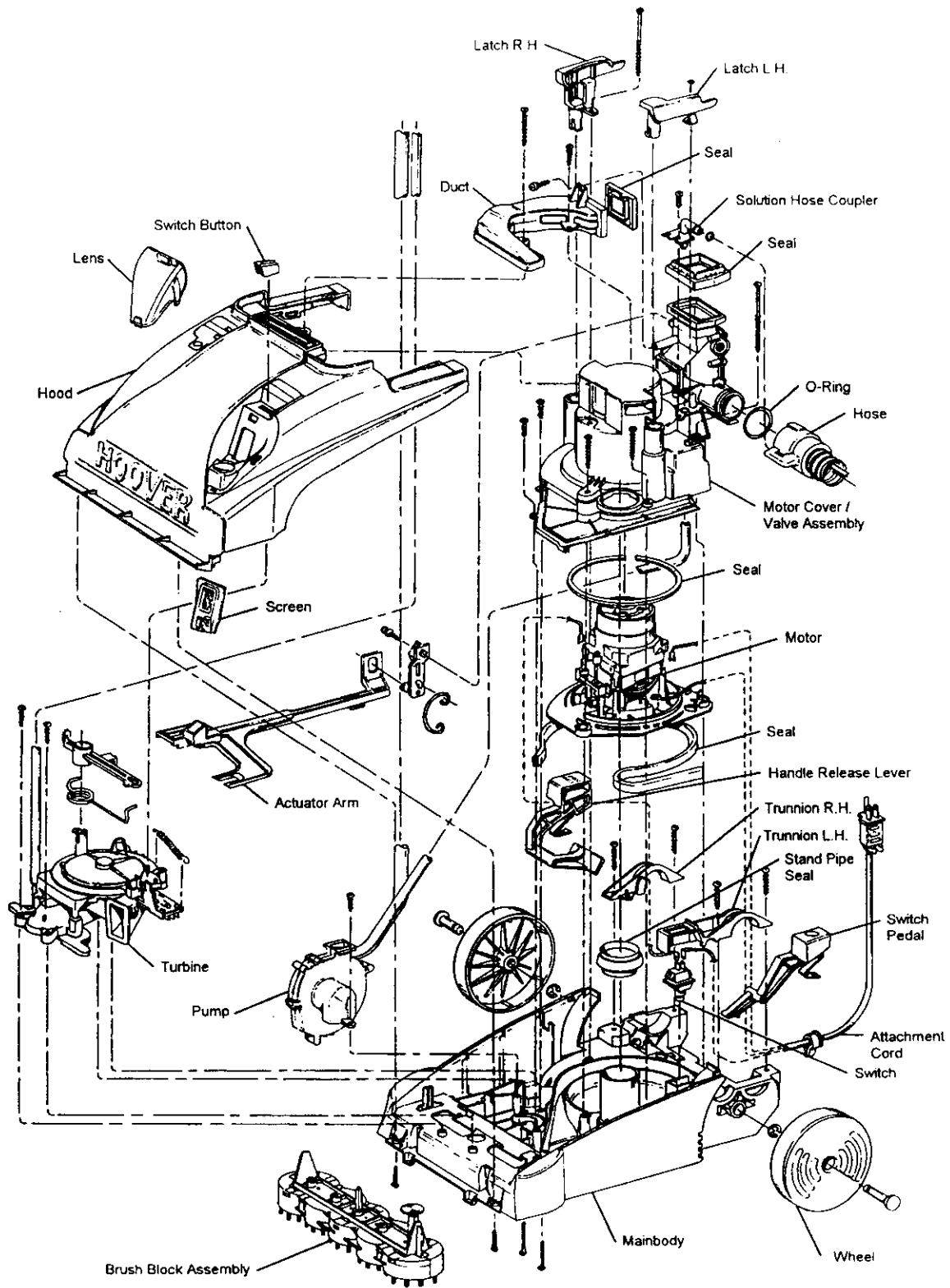


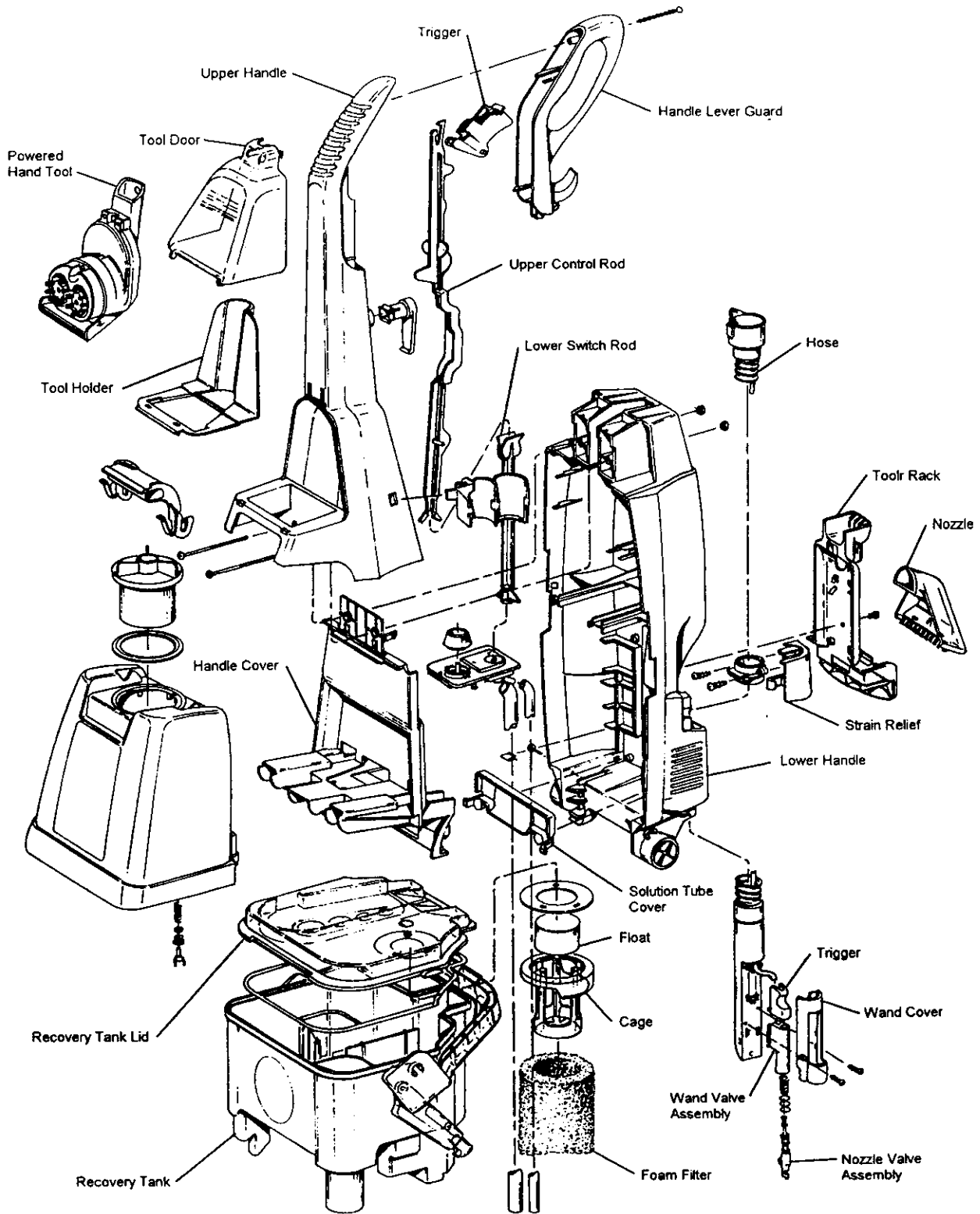




SERVICE INSTRUCTIONS
CARPET CLEANING MACHINE
STEAMVAC







I. General

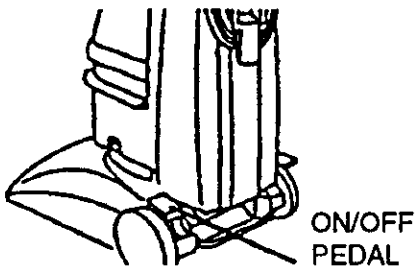
The SteamVac™ with Automated Tool Conversion is a self contained extractor designed for deep cleaning of carpet and rugs.

These models feature the Automated Tool Conversion actuated by the handle movement. Mid line models include 5 rotating brushes for carpet and bare floor agitation. While top end models also include an air driven hand nozzle.

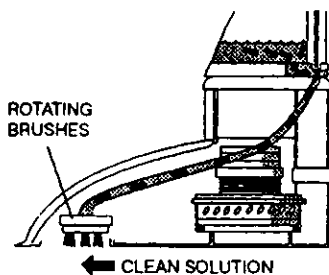
This instruction deals with top of the line models. Instructions that pertain to low end models will be noted.

II. Operation

The units are controlled by the on/off pedal located on the L.H. side.



Solution is gravity fed to the floor from the solution tank through the reservoir assembly to the distributor/brushes.



The reservoir is opened by actuating the trigger in the handle.

Suction is directed to the floor through the smoke colored nozzle and air duct. The suction air is

then drawn up through the valve and into the recovery tank where the air and water are separated. A float and foam filter prevent the recovery tank from being overfilled.

The pump operates on the suction from the motor. Suction is directed to the pump through the pump duct (an integral part of the mainbody), and is completed at the valve which is actuated by raising the handle into the upright position.

The pump has a constant flow of solution from the solution tank through the reservoir assembly.

The five rotating brushes are driven by a turbine, which operates on the suction from the motor.

The recovery tank can be unlatched by rotating the handle 90° and lifting out of position. To empty tank continue rotating handle an additional 90° and lift lid from tank.

The Automatic Tool Conversion uses a valve which diverts the suction from the nozzle to the hose when the handle is placed in the upright position.

III. Disassembly

A. Solution Tank

To remove, unlatch and pull tank assembly out of position as illustrated (Fig. 1).

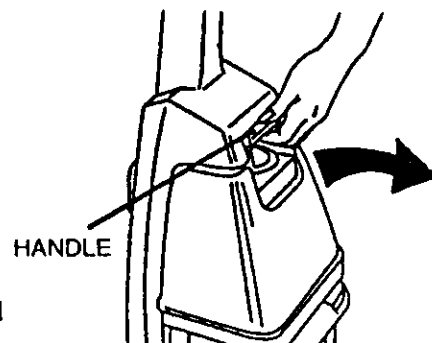


Fig. 1

Replaceable components of the tank assembly, cap gasket and poppet valve.

B. Cap Assembly

1. Twist off to remove (Fig. 2)

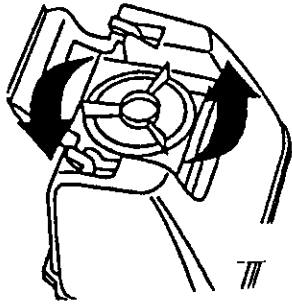


Fig. 2

2. Slide gasket off to replace (Rib on gasket faces toward cap).

C. Poppet Valve

1. Insert screwdriver through tank opening and push valve until it snaps out of seat. (Fig. 3)

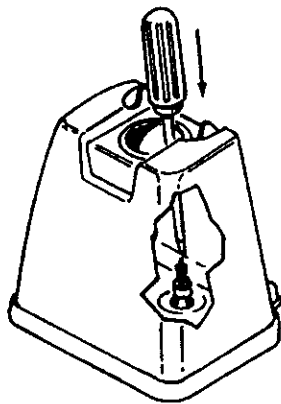


Fig. 3

2. Work valve stem out of tank from underneath.
3. The spring, brass washer and valve seal will stay trapped in the valve seat. Remove through tank opening.

Note position in Fig 3A.

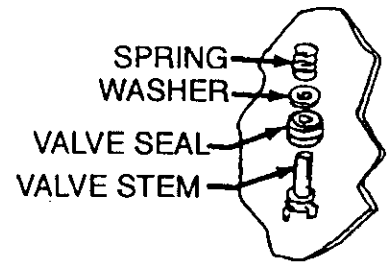


Fig. 3A

The cupped end of the valve seal faces downward upon reassembly.

To reassemble valve:

1. Slide valve assembly into valve seat through opening in bottom of tank (Fig. 4). Use a small amount of soap on seal to ease assembly.

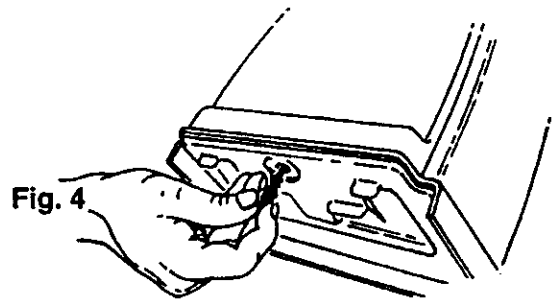


Fig. 4

2. With small screwdriver, work rubber washer into housing (Fig. 5).

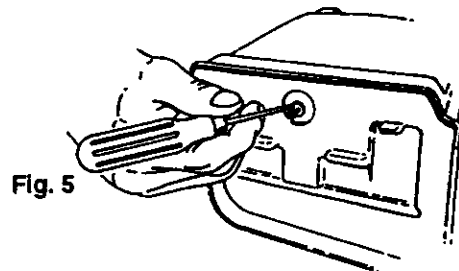


Fig. 5

3. Continue to slide shaft in until it stops.
4. Valve should spring open and closed when fully seated.

D. Upper Handle Assembly

1. Remove two bolts and slide handle off (Fig. 6)

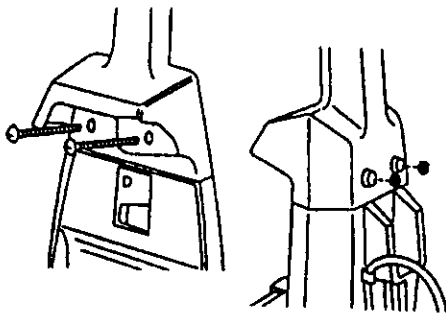


Fig. 6

The upper handle is replaced as an assembly.

To replace upper handle rod:

Ultra Models

1. Remove Powered Hand Tool. (Note: Powered Hand Tool door can be removed by opening until door snaps off of hinges).
2. Remove tool holder Fig. 7 by snapping out of position.

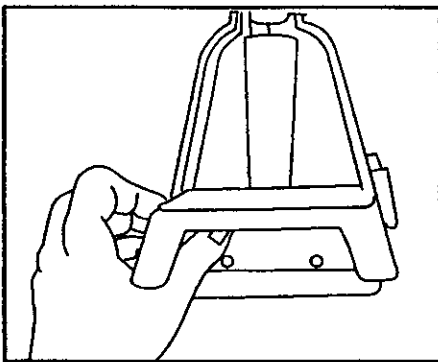


Fig. 7

3. Upper handle rod may then be removed by twisting "jiggling" out of position.

Note: To reposition rod slide up and into handle with fin labeled "Front" facing the front of the cleaner. Rod will latch into position.

For models other than those with the Powered Hand Tool, steps 1 and 2 are omitted.

E. Recovery Tank

1. Release handle to lowest position. (R.H. Pedal).
2. Rotate tank handle 90° upward and lift out of position (Fig. 8).

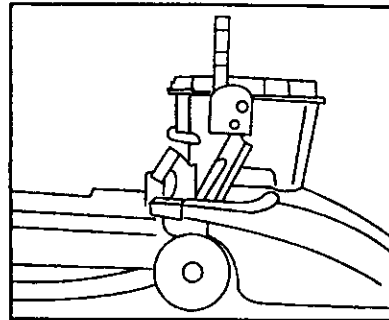


Fig. 8

3. To remove lid assem. rotate handle an additional 90° and lift lid from tank.

The lid is carried in service as an assembly that includes the lid, float retainer, float, and tank filter.

F. Recovery Tank Duct

1. Remove (3) screws (Fig. 9) and lift out of position.

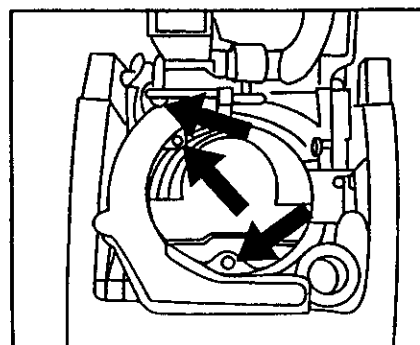


Fig. 9

G. Hood

1. Remove agitator speed actuator button.
2. Remove (2) screws (Fig. 10).

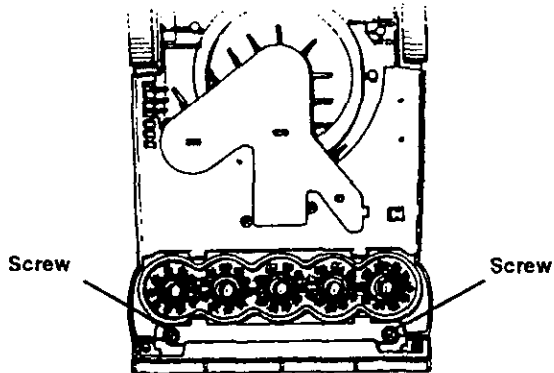


Fig. 10

3. Carefully pry inward on rear panels of hood to release (Fig. 11).

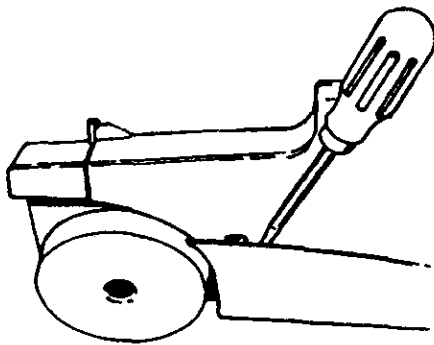


Fig. 11

Note: On Ultra Models or models with outer flaps on hood, flex hood to clear tab on inside of main body. **Hint:** Start on same side as standpipe.

4. Pivot hood forward out of position.

H. Hose

1. Hose Connection

- a. Flex tab (Fig. 12) to free hose connection to valve.

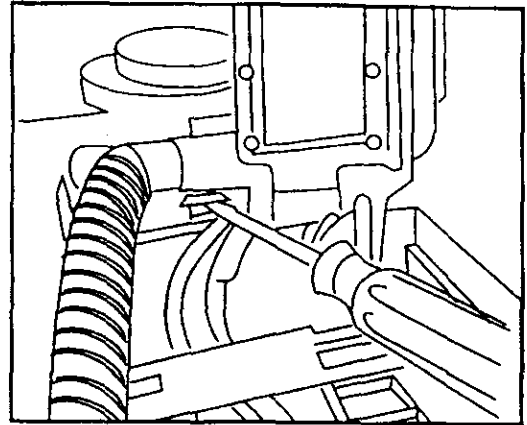


Fig. 12

2. Hose Strain Relief

- a. Release tab by pushing up and in on lower tab and then release upper tab to slip hose clear from handle (Fig. 13).

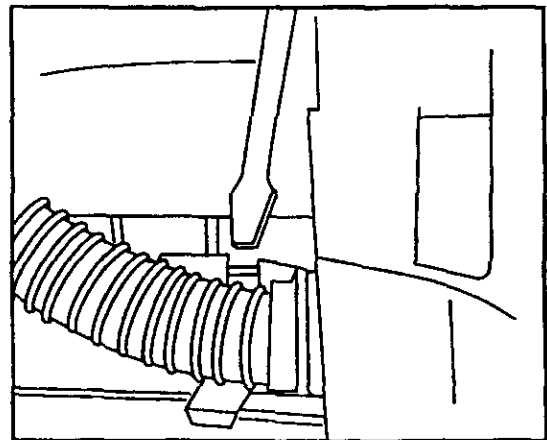


Fig. 13

I. Hose Service

The hose is replaced as an assembly. To service grip end:

1. Remove the two screws in the hand grip and remove cover.
2. Depress the nozzle /valve assembly and unlatch the trigger. The nozzle/valve assembly is spring loaded. (Fig. 14)

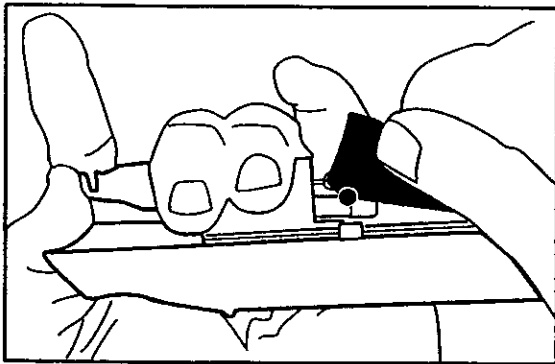


Fig. 14

J. Valve Lever

1. Remove screw while holding spring in position. Note position of spring before removing (Fig. 15)

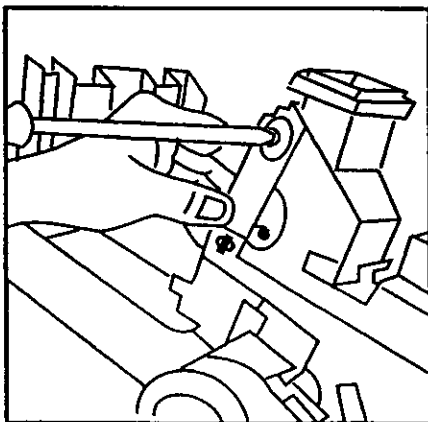


Fig. 15

2. Slide control arm off of valve and release from lever and spring.

3. Remove turbine control arm and spring assem. by depressing tab on turbine (Fig. 16).

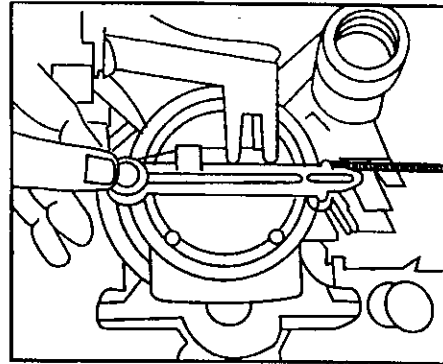


Fig. 16

4. Lift lever slightly and slide forward until lever is free from unit.

5. Slide actuator arm forward off of pump.

K. Turbine (Deluxe and Ultra Models Only)

The turbine will be replaced as a turbine assembly complete.

1. Remove (2) screws from bottom (Fig. 17).

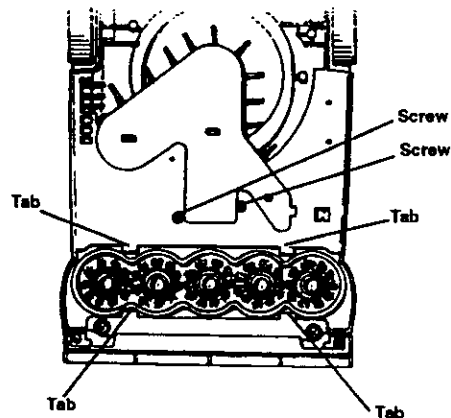


Fig. 17

2. Remove (2) screws located at front of turbine.
3. Disconnect hose from turbine and lift out of position.

K. Pump

1. Remove (1) screw located on pump doghouse.
2. Release tab with flat blade screwdriver from bottom of unit (Fig. 18).

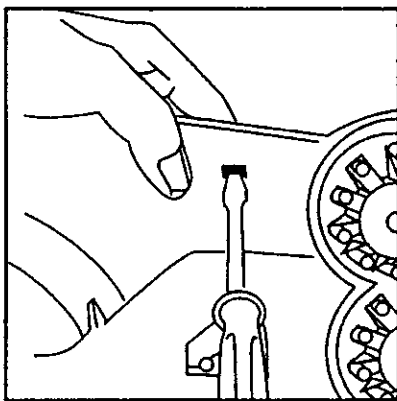


Fig. 18

3. Disconnect hoses from pump.

L. Motor Cover/Valve Assembly

1. Remove standpipe seal.
2. Remove (6) screws (Fig. 19)

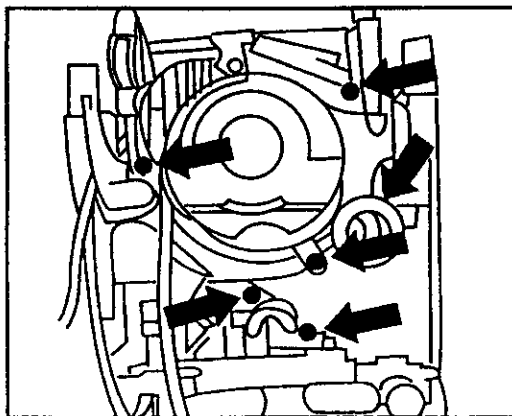


Fig. 19

3. To lift out of position flex outer walls of main body to clear tabs.
4. Feed tubes through motor cover and remove.

M. Motor

1. Remove hood.
2. Remove recovery tank duct.
3. Remove hose connection at valve.
4. Remove valve lever.
5. Remove turbine assembly.
6. Remove motor cover/valve assembly.
7. Disconnect all lead wires.
8. Lift motor out of position.

Note: Motor is replaced as an assembly only.

N. Attachment Cord

1. Disconnect all lead wires.
2. Remove strain relief from underneath unit by squeezing tabs and pushing through housing.

Note: Upon reassembly, route cord as shown in Fig. 20. Also, it is very important to reconnect the ground lead.

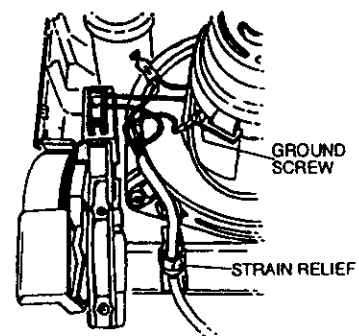


Fig. 20

O. Brush Block Assembly (Deluxe/Ultra Models)

To remove brush block assembly simply squeeze block at tabs shown in Fig. 18 and slip brush block assembly out of position. To reinstall brush block assembly align slides on sides of block with slots in main body and snap brush block assembly back into position.

P. Handle Release Lever

The RH trunnion traps the handle release lever.

Slide lever inward then up to remove. (Fig. 21)

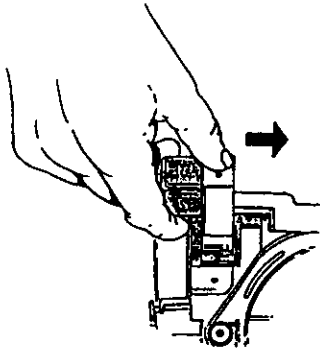


Fig. 21

Q. Switch/Switch Pedal

1. The L.H. trunnion houses the on/off switch and traps the switch lever. (Fig. 22)

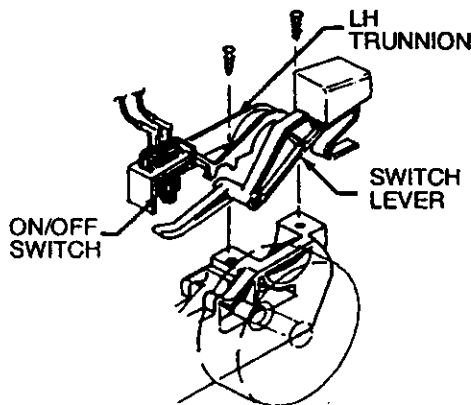


Fig. 22

2. Disconnect leads and snap switch out of position.

3. The switch pedal can be removed once the trunnion is lifted.

R. Handle Cover

1. Remove upper handle.

2. Release two tabs and lift cover off. (Fig. 23)

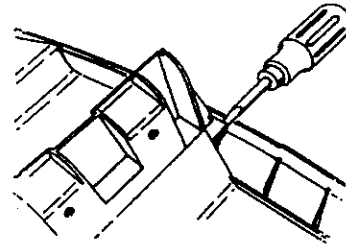


Fig. 23

S. Lower Rod

1. Trapped in place by handle cover. Lift out to remove. (Fig. 24)

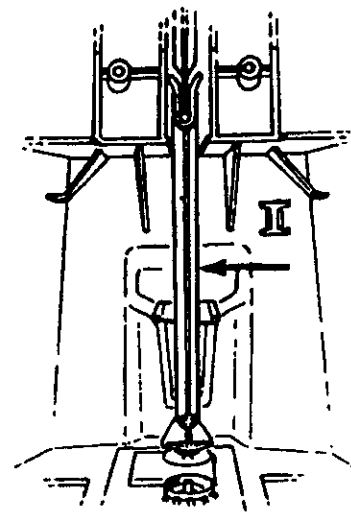


Fig. 24

T. Reservoir Assembly

1. Release two clips and remove from cradle in lower handle (Fig. 25)

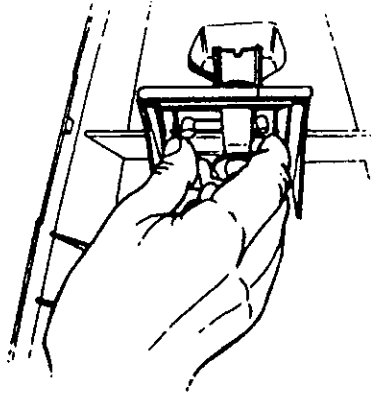


Fig. 25

The reservoir is replaced as an assembly which does not include tubing.

The reservoir assembly can be inspected by removing the diaphragm valve and checking the chamber valve (Fig. 26).

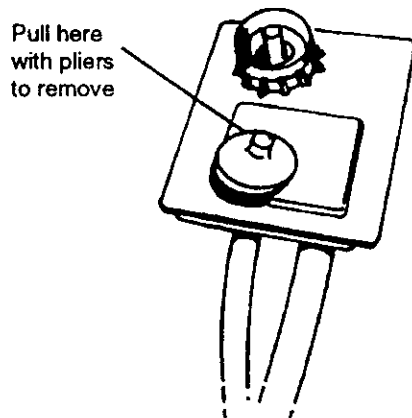


Fig. 26

Note: Tubing is available in service. Pump tubing is 3/8" ID. All other is 1/4" ID.

Note tubing routing through motor cover for reassembly.

U. Motor Seal

The motor seal is positioned below the motor as shown. (Fig. 27)

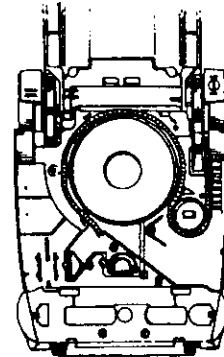


Fig. 27

V. Standpipe Seal

1. Press fit to standpipe (Fig. 28).

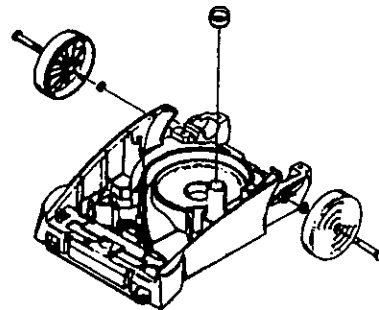


Fig. 28

W. Rear Wheel

1. Remove "E" clip and slide wheel shaft out of housing. (Fig. 29)

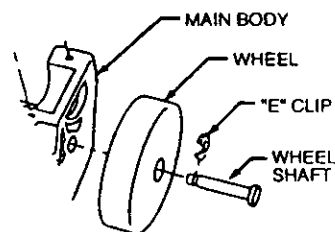


Fig. 29

IV. Troubleshooting check list - Steam Vac™ w/Automated tool conversion

The following is a guide to aid in determining the origin of a problem for which these models could conceivably be brought in for service.

Problem	Possible Cause	Possible Solution
A. Motor won't run	1. Unit not firmly plugged in.	1. Check cord for proper connections.
	2. No voltage at wall outlet.	2. Plug into a known good source.
	3. Open in attachment cord.	3. Check and replace cord.
	4. Switch failed.	4. Replace switch.
	5. Switch lever failed or out of position.	5. Replace or reposition lever.
	6. Crimp connection.	6. Check connections.
	7. Open circuit in motor.	7. Replace motor.
	8. Motor brushes stuck or worn.	8. Work brushes in holder to assure free movement. If brushes are worn or "pitted" from arcing., replace motor.
	9. R.H. trunnion cracked/loose.	9. Replace or tighten trunnion.
B. Unit won't distribute water to floor	1. Solution tank empty.	1. Refill and check operation.
	2. Poppet valve malfunctioning.	2. Check and replace - located in bottom of solution tank.
	3. Solution tank opening clogged.	3. Clean and check operation.
	4. Valve in reservoir assembly failed.	4. Check for obstruction - if clear - replace reservoir.
	5. Tubing to distributor kinked/pinched from improper assembly.	5. Trace tubing and check for kinks.
	6. Distributor clogged.	6. Clean or replace if necessary.
	7. Trigger in handle malfunctioning.	7. Check and replace if necessary.
	8. Upper control rod malfunctioning.	8. Check to insure rod is connected to trigger and is not broken.
	9. Lower control rod damaged or missing	9. Check and replace or reposition.
C. Unit won't extract water at floor nozzle	1. Obstruction in nozzle, duct or valve	1. Remove recovery tank and sight into valve. Also check duct from valve to nozzle.
	2. Recovery tank full.	2. Empty tank and recheck operation.
	3. Standpipe seal missing or damaged.	3. Replace seal.
	4. Recovery tank lid seal damaged.	4. Replace lid assembly.
	5. Duct seal missing or damaged.	5. Replace seal.
	6. Seal at junction of valve to recovery tank missing or damaged	6. Replace seal.
	7. Motor seals missing or damaged.	7. Replace seals.
	8. Handle locked in upright position.	8. Handle must be in operators position to divert suction to the floor.
	9. Motor fan damaged.	9. Replace motor.
	10. Motor failed or mounting loose.	10. Check, replace motor if necessary.
	11. Valve malfunctioning.	11. Check. With handle in operators position, valve should be positioned to shut off suction to the hose. Replace motor cover / valve assembly if necessary.
	12. Pin on lower handle missing.	12. Pin is positioned to catch on actuator arm and snap valve into position when handle is lowered. Check for pin located in lower handle directly above R.H. trunnion. Replace if missing.

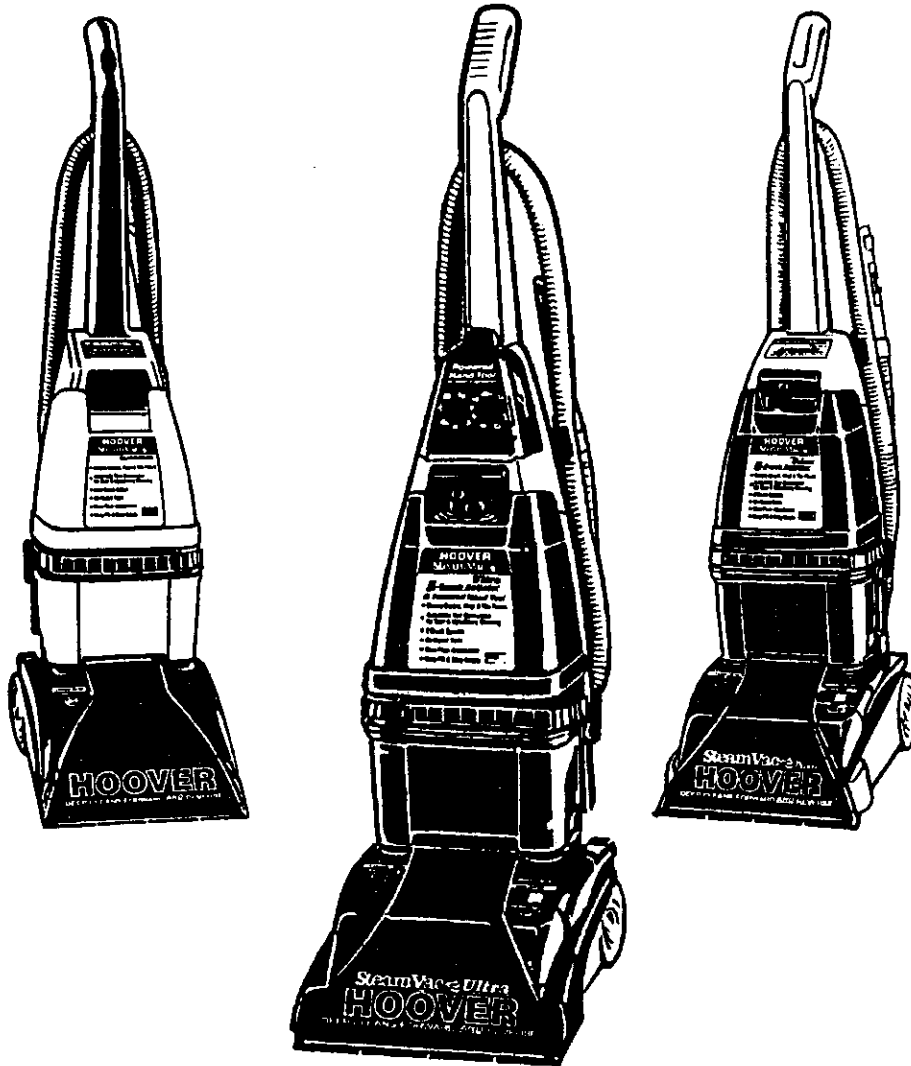
IV. Troubleshooting check list - Steam Vac™ w/Automated tool conversion

The following is a guide to aid in determining the origin of a problem for which these models could conceivably be brought in for service.

Problem	Possible Cause	Possible Solution
D. Unit won't pump. (no spray from hose)	<ol style="list-style-type: none">1. Solution tank empty.2. Poppet valve malfunctioning.3. Solution tank opening clogged.4. Handle not locked into upright position.5. Reservoir assembly clogged.6. Tubing to pump or from pump to solution hose coupler kinked.7. Pump air intake duct clogged.8. Pump failed. 9. Actuator Arm malfunctioning. 10. Solution hose to wand clogged.11. Solution hose to wand damaged.12. Valve in hose grip failed.	<ol style="list-style-type: none">1. Refill and check operation.2. Check and replace - located in bottom of solution tank.3. Clean and check operation.4. Raise handle and check operation.5. Check and clean or replace.6. Trace tubing and check for kinks - 7. Clean and check operation.8. Check to insure pump is securely mounted and that suction air is present at mounting point. Replace pump if failed.9. The actuator arm connects to the valve crank arm and is forced forward when the handle is raised to the upright position. This exposes the pump inlet.10. Solution hose is routed inside of the suction hose. Attempt to flush hose if clogged.11. Replace hose assembly.12. Replace wand / valve assembly
E. Brushes will not run.	<ol style="list-style-type: none">1. Turbine switch in off position.2. Brush block jammed.3. Drive pin on center brush broken.4. Spring on turbine arm broken or missing.5. Actuator arm on turbine broken.6. Air flow to or from turbine clogged.7. Cleaning indicator not showing "floor cleaning" 8. Turbine failed.	<ol style="list-style-type: none">1. Turn on turbine.2. Remove object causing jam.3. Replace brush block assembly.4. Replace spring. 5. Replace turbine.6. Remove clog. Check screen in hood assembly7. Check to insure handle is in operators position. Turbine will not run with handle locked upright.8. Replace turbine - check items 1-9 prior to replacing turbine.
F. Brushes on Hand tool will not run	<ol style="list-style-type: none">1. Handle not in upright position.2. Air vents clogged on hand tool.3. Brushes jammed.4. Turbine in hand tool failed.5. Cleaning indicator not showing "tool cleaning".6. Hose connection loose.	<ol style="list-style-type: none">1. Lift handle until it locks into upright position.2. Clean vents.3. Remove object causing jam.4. Replace hand tool.5. Check valve and lever for proper assembly.6. Check hose connection at valve. Also check strain relief for proper assembly.

Troubleshooting Guide

SteamVac w/Automated Tool Conversion



The following is a guide to aid in determining the origin of a problem for which these models could conceivably be brought in for service.

Problem	Possible Cause	Possible Solution
A. Motor won't run	1. Unit not firmly plugged in.	1. Check cord for proper connections.
	2. No voltage at wall outlet.	2. Plug into a known good source.
	3. Open in attachment cord.	3. Check and replace cord.
	4. Switch failed.	4. Replace switch.
	5. Switch lever failed or out of position.	5. Replace or reposition lever.
	6. Crimp connection.	6. Check connections.
	7. Open circuit in motor.	7. Replace motor.
	8. Motor brushes stuck or worn.	8. Work brushes in holder to assure free movement. If brushes are worn or "pitted" from arcing., replace motor.
	9. L.H. trunnion cracked/loose.	9. Replace or tighten trunnion.
B. Unit won't distribute water to floor	1. Solution tank empty.	1. Refill and check operation.
	2. Poppet valve malfunctioning.	2. Check and replace - located in bottom of solution tank.
	3. Solution tank opening clogged.	3. Clean and check operation.
	4. Valve in reservoir assembly failed.	4. Check for obstruction - if clear - replace reservoir.
	5. Tubing to distributor kinked/pinched from improper assembly.	5. Trace tubing and check for kinks.
	6. Distributor clogged.	6. Clean or replace if necessary.
	7. Trigger in handle malfunctioning.	7. Check and replace if necessary.
	8. Upper control rod malfunctioning.	8. Check to insure rod is connected to trigger and is not broken.
	9. Lower control rod damaged or missing	9. Check and replace or reposition.
C. Unit won't extract water at floor nozzle	1. Obstruction in nozzle, duct or valve	1. Remove recovery tank and sight into valve. Also check duct from valve to nozzle.
	2. Recovery tank full.	2. Empty tank and recheck operation.
	3. Standpipe seal missing or damaged.	3. Replace seal.
	4. Recovery tank lid seal damaged.	4. Replace lid assembly.
	5. Duct seal missing or damaged.	5. Replace seal.
	6. Seal at junction of valve to recovery tank missing or damaged	6. Replace seal.
	7. Motor seals missing or damaged.	7. Replace seals.
	8. Handle locked in upright position.	8. Handle must be in operators position to divert suction to the floor.
	9. Motor fan damaged.	9. Replace motor.
	10. Motor failed or mounting loose.	10. Check, replace motor if necessary.
	11. Valve malfunctioning.	11. Check. With handle in operators position, valve should be positioned to shut off suction to the hose. Replace motor cover / valve assembly if necessary.
	12. Pin on lower handle missing.	12. Pin is positioned to catch on actuator arm and snap valve into position when handle is lowered. Check for pin located in lower handle directly above R.H. trunnion. Replace if missing.

D. Unit won't pump. (no spray from hose)	<ol style="list-style-type: none"> 1. Solution tank empty. 2. Poppet valve malfunctioning. 3. Solution tank opening clogged. 4. Handle not locked into upright position. 5. Reservoir assembly clogged. 6. Tubing to pump or from pump to solution hose coupler kinked. 7. Pump air intake duct clogged. 8. Pump failed. 9. Actuator Arm malfunctioning. 10. Solution hose to wand clogged. 11. Solution hose to wand damaged. 12. Valve in hose grip failed. 	<ol style="list-style-type: none"> 1. Refill and check operation. 2. Check and replace - located in bottom of solution tank. 3. Clean and check operation. 4. Raise handle and check operation. 5. Check and clean or replace. 6. Trace tubing and check for kinks - 7. Clean and check operation. 8. Check to insure pump is securely mounted and that suction air is present at mounting point. Replace pump if failed. 9. The actuator arm connects to the valve crank arm and is forced forward when the handle is raised to the upright position. This exposes the pump inlet. 10. Solution hose is routed inside of the suction hose. Attempt to flush hose if clogged. 11. Replace hose assembly. 12. Replace wand / valve assembly
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F. Brushes on Hand tool will not run	<ol style="list-style-type: none"> 1. Handle not in upright position. 2. Air vents clogged on hand tool. 3. Brushes jammed. 4. Turbine in hand tool failed. 5. Cleaning indicator not showing " tool cleaning". 6. Hose connection loose. 	<ol style="list-style-type: none"> 1. Lift handle until it locks into upright position. 2. Clean vents. 3. Remove object causing jam. 4. Replace hand tool. 5. Check valve and lever for proper assembly. 6. Check hose connection at valve. Also check strain relief for proper assembly.