



Owners Manual

Avenger Upright Spotting Extractor

Model: AV 4X

NOTE: As with all electrical equipment, care and attention must be exercised at all times during its use, in addition to ensuring that routine and preventative maintenance is carried out periodically in order to ensure its safe operation. In particular the electrical supply cable should be regularly inspected by a competent person and immediate action taken to rectify any faults found. Failure to carry out maintenance as necessary, including replacement of parts to the correct standard, could render the equipment unsafe and the manufacturer can accept no responsibility in this respect. See the enclosed exploded drawings for correct replacement parts.

Before using your machine, you must familiarize yourself with all its components.

MACHINE COMPONENTS

Vacuum Dome

The vacuum dome is located on top of the recovery tank. It is held in place by 2 moulded clips under the rim. On the left side (from behind the machine) there is a debris screen to prevent debris from entering the vacuum hose leading to the vacuum motor. The ports which accept the hose cuffs from the vacuum shoe and the vacuum motor are different sizes so they cannot be attached incorrectly.

Handle

The handle of the machine is adjustable to suit different operators. To increase or decrease the handle height, loosen the knurled knob at the rear of the handle and slide up or down as required. Re-tighten the knob when the desired height is reached. The hand grip rotates in a counterclockwise direction. This action depresses a microswitch that starts the solution pump (when the solution switch is in the lower "I" position). Solution stops flowing when the grip is released or when it is rotated in a clockwise direction.

Recovery Tank

The recovery tank is located on the top of the machine. It is attached to the solution tank (lower) by two latches. It is easy to remove the recovery tank from the solution tank for emptying and clean-out.

Solution Tank

The solution tank is the lower unit. It can be filled with water via the rear fill hole that is covered with a round black cap using a clean bucket or with a hose direct from the faucet. The cap has a retaining strap so that it does not become misplaced. Inside the solution tank, the water pick-up hose has with an inlet filter and weight. The weight must be at the inlet filter end of the hose to keep it submerged.

At the rear of the machine beneath the handle is a panel that encloses the pump. Exiting from this panel is a quick coupler. For normal use, the short water hose running underneath the machine should be connected to the quick coupler.

If accessory cleaning attachments are used, disconnect the solution line at the rear of the machine and replace it with the accessory solution hose.

The rear panel also incorporated the electrical switches. On the right side is the vacuum switch. On the left is the 3 position pump switch. In the middle position, the pump is off. In the lower position the pump will only activate when the hand grip on the handle is twisted. In the upper position, the pump operates continuously. Use this position when using accessory cleaning attachments.

NOTE: Never fill the unit using a dirty bucket. This may cause damage to the pump system.

Vacuum Shoe

The vacuum shoe is fitted with a hard floor wet pick-up squeegee. When using the machine on hard surfaces rotate the black lever on the front of the squeegee assembly counterclockwise to lower it. When using the machine on carpeted surfaces rotate the lever fully clockwise.

Fitted at the back of the vacuum shoe is a black spraybar with a twist-off spray tip. If the spray pattern becomes erratic or there is poor water flow to the floor, remove and clean the spray tip.

Transport Wheels

In normal operation, the transport wheels must be in their rearmost position. To set the wheels, lift the handle of the machine to take all the weight off the rear wheels and using your foot, swing the wheel axle rearward. For transport or storage, lift the handle vertically and the wheels will swing to the forward position.

OPERATION

To operate the machine as a self-contained extractor, follow the instructions below:

Fill: Fill the machine with hot clean water using a clean bucket or hose direct from the faucet. Then, pour into the solution tank an appropriate quantity of a good quality extraction chemical.
Note: This agent should be low foaming to avoid vacuum motor damage.

Plug In: Plug the machine into the wall outlet.

Vacuum: Locate the vacuum motor switch at the rear panel.

Solution: Set the pump switch in the lower on position (marked with "I"). **Note:** the solution will not flow unless the hand grip is rotated.

Note: In some instances it is useful to have continuous water flow without having to rotate the hand grip. To do this, simply set the pump switch to the upper on position (marked with "II"). This will give continuous water flow until the solution switch is turned off.

Cleaning: Once you are prepared to clean, set the transport wheels in the operating position, turn the vacuum on and rotate the hand grip. Pull the machine backwards to clean.

NOTE: Do to the powerful vacuum motors, it should not be necessary to lift up on the handle to apply additional pressure to the vacuum shoe

To operate the machine with cleaning accessories, follow the instructions below.

Note: This feature requires the purchase of optional accessory tools.

Fill the machine and plug in as above, remove the vacuum hose from the right hand side of the recovery dome and insert the accessory hose. Disconnect the solution line at the quick coupler on the rear panel and insert the male end of the accessory hose solution line.

Attach to the other ends of the accessory hose to your choice of accessory tool. Turn the vacuum motor on with the "Vacuum" switch and turn on the solution pump by setting the switch in the upper position marked with "II". Water will flow when the valve on your accessory tool is depressed.

IMPORTANT: Watch the recovery dome for signs of excess foaming. If excess foam develops, turn the machine off immediately and empty the recovery tank. Use a defoamer to cut down on foam generation in the recovery tank.

MAINTENANCE

After Every Use

- 1) Pour out any excess solution from the solution tank
- 2) Put some fresh water in the solution tank and pump this through the system. This will help keep the pump system clean.
- 3) Clean the recovery dome and gasket.
- 4) Clean any lint or debris from the vacuum inlet screen inside the recovery dome.
- 5) Thoroughly rinse and drain the recovery tank to prevent odours from developing.
- 6) Run the vacuum motor for 1 to 2 minutes. This will help remove any moisture from the motor fans and fan casing.
- 7) Clean the bottom of the vacuum shoe, removing any lint or debris.

Periodically

- 1) Inspect power cord and plug for damage.
- 2) Flush the pump system with an acidic de-calcifying solution to remove deposits.
- 3) Check the spray jet water dispersion pattern. Clean or replace jets if pattern is erratic.
- 4) Check & clean the water inlet filter in the solution tank.

TECHNICAL SPECIFICATIONS

Power	115V, 50/60Hz	Vacuum Motor	2 stage, bypass 1,000W, 1.3 Hp
Consumption	9 amps	Airflow	106 cfm (max.)
Solution Capacity	4 gallons	Waterlift	100 inches (max.)
Recovery Capacity	4 gallons	Power Cord	33'
Pump Pressure	60 psi (max.)	Weight	29 lbs.
Pump Type	solenoid, with bypass		
Water Volume	0 – 0.4 gpm (max.)		
Cleaning Width	10 1/2 inches		

WARNINGS

Do not use for any potentially hazardous or health endangering material recovery.
Do not use the machine in corrosive or flammable environments.

Servicing

Only qualified personnel should perform service on this product. This machine is fitted with a grounded power cord. Only use with a properly grounded electrical outlet. Always use the appropriate parts when making any repairs. Failure to do so may compromise the safety of the product.

Always use genuine NORTH AMERICAN parts for any repairs required.

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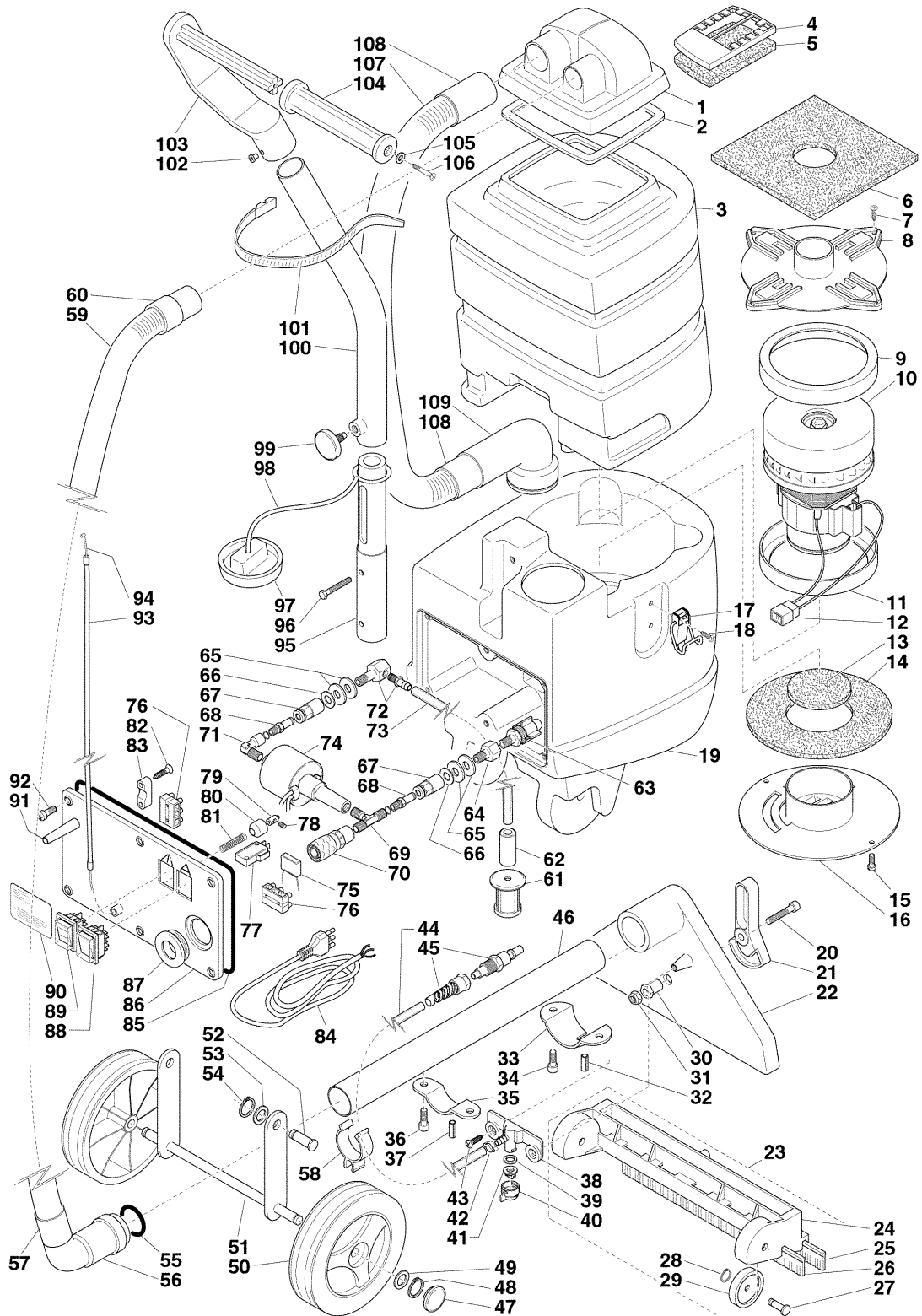
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Schematic Drawing





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Item #.	Part #	DESCRIPTION
1	SP-151331	RECOVERY DOME
	SP-151331C	RECOVERY DOME WITH GASKET
2	SP-151341	GASKET
3	SP-151050A	BLUE UPPER TANK
4	SP-151332	FILTER SUPPORT
5	SP-151333	FILTER FOR UPPER COVER
6	SP-152021	SOUNDPROOFING
7	SP-15536	SCREW 4x10
8	SP-151361	MOTOR FLANGE
9	SP-15811	MOTOR GASKET 5 mm
10	SP-15820	MOTOR – 1000W 120V 50-60 Hz
11	SP-15812	MOTOR GASKET 10mm
12	SP-15234	CONNECTOR
	SP-15250	MALE ELECTRICAL TERMINAL
13	SP-152022	SOUNDPROOFING DISC
14	SP-152023	SOUNDPROOFING RING
15	SP-15536	SCREW TC+ 4x10
16	SP-15141	LOWER FLANGE
17	SP-15142	TOGGLE
18	SP-15538	SCREW TC+3,9x13
19	SP-151051A	BLUE LOWER TANK
20	SP-155092	BOLT – DIAM. 8
21	SP-153083	LEVER
22	SP-153081	ALUMINUM VACUUM HEAD
23	SP-153084C	COMPLETE SLIDE
24	SP-153084	SLIDE PLASTIC BODY
25	SP-153221	RUBBER STRIP
26	SP-153221	RUBBER STRIP
27	SP-153085	STUD
28	SP-1557808	SEEGER D.8
29	SP-153086	WHEEL FOR SLIDE
30	SP-153082	BUSH
31	SP-15568	LOCKING NUT
32	SP-15519	RIVET 3.8x12
33	SP-155001	LOCK FOR VACUUM HEAD
34	SP-15574	SCREW TC 6x14
35	SP-155002	LOCK FOR VACUUM TUBE
36	SP-15574	SCREW TC 6x14
37	SP-15519	RIVET 3.8x12
38	SP-157231	NOZZLE SUPPORT
39	SP-153209	O-RING FOR NOZZLE
40	SP-157180	NUT FOR NOZZLE
41	SP-15705	NOZZLE 03/110
42	SP-15543	LOCK BAND
43	SP-15542	SCREW TC+ 4,2x16



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44	SP-157012	SOLUTION PIPE
45	SP-15709	METAL QUICK DISCONNECT MALE
46	SP-153501	STRAIGHT PIPE – DIAM.36
47	SP-15119	COVER FOR WHEEL
48	SP-1557810	SEEGER D.10
49	SP-15510	WASHER DIAM. 10x20
50	SP-15118	WHEEL
51	SP-155004	METAL WHEEL SUPPORT
52	SP-155003	STUD – DIAM.12
53	SP-15520	WASHER DIAM. 12x24
54	SP-1557812	SEEGER D.12
55	SP-151832	O-RING
56	SP-151831	ELBOW
57	SP-153321	CUFF DIAM.32/38
58	SP-15318	CLIP
59	SP-153452	VACUUM HOSE D.32 L=65cm
60	SP-15332	CUFF DIAM.32
61	SP-15608	WATER FILTER
62	SP-15747	BALLAST
63	SP-15640	COMPLETE BY-PASS
64	SP-15724	CONNECTOR
65	SP-15147	NEOPRENE WASHER
66	SP-15540	METAL WASHER
67	SP-15714	QUICK DISCONNECT FEMALE
68	SP-15698	QUICK DISCONNECT MALE
69	SP-15722	CONNECTING PART
70	SP-15687	METAL QUICK DISCONNECT FEMALE
	SP-15700N	EXTENSION FOR METAL QUICK DISCONNECT
71	SP-15626	ELBOW
72	SP-15702	COMPLETE CONNECTING PART
73	SP-157011	SOLUTION PIPE L=50cm
74	SP-15729	PUMP 100-120V 50-60 HZ
	SP-15729C	PUMP 100-120V WITH FITTINGS
75	SP-15235	RADIO INTERFERENCE SUPPRESSOR
76	SP-15236	CONNECTING TERMINAL
77	SP-15277	MICROSWITCH
78	SP-1557304	STOP DOWEL 4x4
79	SP-155011	ROPE LOCK
80	SP-155010	CONICAL STUD
81	SP-15607	SPRING
82	SP-15537	SCREW TC+2.9x19
83	SP-15238	CABLE LOCK
84	SP-152151	33' POWER CORD, 3x16AWG
85	SP-151861	PANEL GASKET
86	SP-151381	CONTROL PANEL



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87	SP-15163	BUSH
88	SP-15217	2-POSITIONS SWITCH (FOR VACUUM MOTOR)
89	SP-15220	3-POSITIONS SWITCH (FOR PUMP)
90	SP-151391	PANEL LABEL
91	SP-15237	FAIRLEAD
92	SP-15536	STAINLESS STEEL SCREW TC+ 4x10
93	SP-155012	SHEATH
94	SP-155013	CABLE
95	SP-153710	TUBE
96	SP-1558245	SCREW TE 6x45
97	SP-151200	SOLUTION TANK CAP
98	SP-151201	TIE FOR CAP
99	SP-153711	LOCKING KNOB
100	SP-153712	ADJUSTABLE-HEIGHT TUBE
101	SP-15541	TIE
102	SP-15519	RIVET 3.8x12
103	SP-155006	HANDLE
104	SP-155007	HAND GRIP
105	SP-15517	STAINLESS STEEL WASHER 5x15
106	SP-15544	SCREW TC+ 4.2x22
107	SP-153451	VACUUM HOSE D.32 L=57cm
108	SP-153321	CUFF DIAM.32/38
109	SP-151530	ELBOW