Does the hose have a switch on the handle?

- Yes: Arc across the contact points in the inlet valve neck. Does the power unit start?
  - Yes: SEE #6
  - No: SEE #14
- No: Properly plug-in hose to inlet. Activate the switch on hose handle. Does power unit start?
  - Yes: SEE #2
  - No: SEE #3

Does the system have a electric brush?

- Yes: SEE #4
- No: Does the electric brush turn on when activated by the switch?
  - Yes: SEE #1
  - No: SEE #7

Does it have good suction at the unit with the hose?

- Yes: SEE #10
- No: SEE #9

Does it have suction at the unit without the hose?

- Yes: See #11
- No: See #12

Is it always running?

- Yes: See #13
- No: Does it still run continuously?
  - Yes: See #12
  - No: See #13

When you turn it on at the unit do you hear a click?

- Yes: SEE #11
- No: Try another appliance in the outlet. Does it work?
  - Yes: SEE #13
  - No: Does the hose have a switch on the handle?

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**#1 Electrical failure.**
A. If the inlets are Supervalves, plug the power brush directly into the valve. If the power brush works, the problem is in the high voltage lines in the hose – likely a blown fuse in the hose, but also look at #14.
B. Check brush for bad neck tilt switch or reset button.
C. Put power directly to brush motor to see if the motor is bad.
D. Check cord connections from hose to brush.
E. Check to see that Supervalves/Electravales have 110 volts.

**#2 Clog somewhere else in the system.**
A. Check power brush.
B. Check wands.

**#3 Clog in vacuum tubing.**
A. Check fitting just inside inlet and just inside of power unit for debris.
B. Isolate exactly where clog is — by running 1 styrofoam ball (each numbered) thru each inlet. Find which balls made it to the power unit in area where accessible to house. Should be (1 back, 1 red, 1 from house) and (1 black, 1 yellow or red, 1 from house).
C. Shove garden hose thru vac hose (don't turn water on!).
D. Run electrician's fish-tape thru and try to hook object.
E. Plug into inlet, put hand over hose end to build pressure, then suddenly release. Try this multiple times from various inlets.
F. Run paper towel thru as a "pigs" towards motor unit, then reverse suck with a portable to jar it.
G. Run paper towel thru from motor unit toward portable at nonfunctioning inlet.
   * Very important: Now run paper towel thru all inlets and make sure they all arrive in power unit. If they don't, repeat steps A thru F.
   * If these solutions will still not free up the line - approximate where clog is and locate if accessible. (attic, crawlspace, closet...)
H. Cut pipe and feel suction & visually inspect.
I. Run paper towel through and listen for humming or vibration - possible nail in pipe or picture hung with toggle into pipe.
J. Run small string thru from motor unit to inlet w/ portable then tie heavier string – attach large object to heavier string. (Always tie a safety line to large object to pull it back if needed).
K. Locate exact location by creating noise w/ ping-pong ball. Insert in inlet & turn on unit (remove inlet to get ball in). (Find least obvious way of lifting flooring or cutting into back of cupboard or ceiling to access clogged spot. Cut pipe, remove clog, patch back access.)
L. Pipes that run underground can sometimes coagulate with debris from moisture.
   i. Route out with long blunt object.
   ii. Run 10 pounds of rice thru system into unit, repeat.
   iii. Trench old lines and replace.
   iv. If lines run under concrete driveway, relocate power unit in area where accessible to house.
M. Re-route pipes from section that does work to section that does not work. Abandon any unnecessary lines.
N. Check for "wrong way" Y's or T's.
O. Any recent construction or workers who might have driven nail into pipes (esp. closet organizers, phones, or alarms)?

**#4 Bad inlet - replace inlet & plug hose in again.**
A. Check to see if old inlet is same type w/ contact points. If not; it may have a push button that requires a latching relay.
B. When replacing inlet look to see if old one had tape on inlet neck, if so: put tape in approximate same location on new inlet. When re-installing vacuum, test for air leak. If slight hissing coming from inlet; additional tape is required on inlet neck.

**#5 Low voltage wire cut.**
A. Recent construction done?
B. Rats?
C. Detached garage with unit located in garage? Recent digging?
D. Re-splice broken wire (coppers together and tins together).
E. Wires disconnected at unit. (On M.D. units only: 4 coming from unit plus at least 2 coming from house. Should be (1 back, 1 red, 1 from house) and (1 black, 1 yellow or red, 1 from house). If the inlets are Supervalves, plug the power brush directly into the valve. If the power brush works, the problem is in the high voltage lines in the hose – likely a blown fuse in the hose, but also look at #14.
F. Re-route wire from any working inlet or power unit to any section of wire of the inlet that does not work. (Run under carpet, behind baseboards, stapled in corners or closets or down inside of walls. Try to tie it to existing bad wire and pull it through).

**#6 Clog in hose.**
A. Reverse the hose at inlet on power unit. Suck it out.
B. Drop kitchen knife or heavy object thru hose - sling it or squeeze hose & twist to get through.
C. Shove garden hose thru vac hose (don't turn water on!).

**#7 - Unit is good, pipes have leaks.**
A. Recent work done on house?
B. Recent wallpapering or paneling? Inlet removed or re-installed wrong?
C. Inlet lid broken?
D. Hidden or forgotten inlet?
E. Inlets installed in floor; pipe fell down or loose.
F. Turn unit on and walk around house listening for leak.
G. Inlet roughed in but not found on finish?
H. Pipe running underground has break in it.
I. Recent gardening or tree has strangled it.
J. Locate exact location by creating noise w/ ping-pong ball. Insert in inlet & turn on unit (remove inlet to get ball in). (Find least obvious way of lifting flooring or cutting into back of cupboard or ceiling to access clogged spot. Cut pipe, remove clog, patch back access.)
K. Again run paper towel thru each inlet.
L. If only one inlet is clogged and cannot be fixed, relocate new pipe via existing installation method.
M. Pipes that run underground can sometimes coagulate with debris from moisture.
   i. Route out with long blunt object.
   ii. Run 10 pounds of rice thru system into unit, repeat.
   iii. Trench old lines and replace.
   iv. If lines run under concrete driveway, relocate power unit in area where accessible to house.
N. Check for "wrong way" Y's or T's.
O. Any recent construction or workers who might have driven nail into pipes (esp. closet organizers, phones, or alarms)?

**#8 The Power unit has bad suckation.**
A. If multi-motored unit: are both working?
B. Check power unit gaskets & cracks in housing.
C. Improper voltage into power unit.
D. Loose wires.
E. Mini-breaker has malfunctioned.
F. On cyclonic unit: 1) Unit & debris in motor fan blades; 2) Lint & debris on screen on intake; 3) Too much back pressure from exhaust run being far. Something is blocking exhaust line.
G. On bag type unit: Excessive amount of very fine plastic dust clogging primary or secondary filter.
H. Motor loose.

**#9 Short in power unit.**
A. Directly isolate low voltage leads alone (disconnect all auxiliary switches).
B. Short in relay (very rare).

**#10 Short in low voltage system.**
A. Recent attic work or someone in crawlspace?
B. Rats chewed through wire?
C. Disconnect any splices you can find and check continuity of short.
D. Worst case: re-route wire from any other working inlet or wire. (Possibly running wire behind baseboards, under carpet, in closets, or in air ducts.)

**#11 Relay getting power but not starting unit.**
A. Most likely motor brushes.
B. Isolate motor & see if it works.
C. Check wiring from relay to motor: Does it go thru mini-breaker?
D. After replacing brushes: if it won't take them; replace motor.

**#12 The power unit is not getting electricity.**
A. Check house circuit breaker.
B. Try vacuum in another outlet.
C. Is the circuit breaker the right size for the power unit?
D. See what is on the circuit - is it overloaded?
E. Continually recheck the system after you get power to see if it was the vac that had tripped the circuit.
F. If necessary, have an electrician look at it.

**#13 Transformer and motor not getting power.**
A. Bad cord?
B. Bad transformer, check for spark between 2 low voltage wires out of transformer.
C. Bad relay, check points, arc across to see if it solves it.

**#14 Low voltage in hose is not working.**
A. If switch feels "mushy" then it needs to be replaced.
B. Remove hose from wall and take apart the handle end. Look for lint or other debris in contact points.
C. Make sure hose is being fully inserted into inlet.
D. Hose may need to be replaced.