

Air Control Valve Removal and Replacement Procedure

Tools required:

#2 Phillips
screwdriver



1/8" slotted
screwdriver



5/16" slotted
Screwdriver



Pliers



6" diagonal
cut pliers



Hack saw



Tape
Measure



Utility
Knife



Materials required:

Sand
Paper
#200



Clean
Rags



PVC
Glue
Rigid to
Flex



PVC
Glue
Rigid to
Rigid




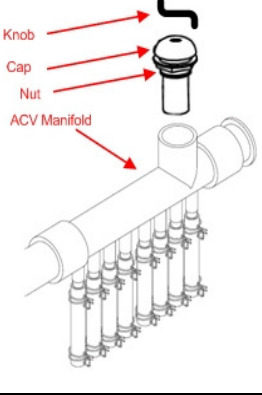


Primer
For Rigid to
Rigid only







This is a general procedure on repairing the air control valve. Most air control valves do not require removal of the valve body but merely replacement of the valve. When replacing the body, also refer to the separate procedure for repairing generic plumbing problems available on the website.

Before you begin, read and understand all steps of the procedure before beginning so as to familiarize yourself with what is required. Use common sense and always work safe.

1	<p>Turn electrical power off to your spa by turning off its GFCI breaker.</p> <p>Note: It is recommended that you lock this GFCI breaker box so that no one can accidentally turn the power back on while you are working.</p>	
2	<p>Behind trim buttons¹ there are eight #2 Phillips screws holding this panel on: 3 on the left trim piece, 3 on the right trim piece, and 2 on the bottom. Remove the trim pieces and then the bottom screws. As you remove the bottom screws, this panel will fall. Lift the panel out of the way and store all parts in a safe place.</p> <p>Caution: This panel weighs at least 10 pounds and will fall down to the ground as the bottom screws are removed. Keep your feet clear of the bottom of the panel and be prepared for this to happen.</p>	
3	<p>Unplug the black spa pack power cord from its receptacle in the grey box.</p>	
4	<p>Locate the defective air control valve. If necessary, remove additional panels to have complete unrestricted access this area. Store hardware in a safe place.</p> <p>Note: Air control valves are located in different places on different spa models but all are replaced in an identical manner.</p>	
5	<p>The two main components in the air control system are the valve and the manifold. Both are changed in a similar manner by first removing the defective component.</p> <ul style="list-style-type: none"> For the valve, pull up on the knob to remove it and then unscrew the cap from the top (the interior parts will stay in place). Remove the valve from inside the pipe. For the manifold, cut the ACV off at the point where it enters the manifold. Unscrew the nut on the underside of the spa and remove the ACV from the top. Leave the air lines connected for now. 	
6	<p>Replace the defective component.</p> <ul style="list-style-type: none"> For the valve, drop the new valve into the pipe in the same orientation as the old one. Screw on the cap and push on the knob. For the manifold, install the new ACV valve through the hole and screw the nut on from the bottom. Glue the new manifold together in the same orientation as the old one. Move the air lines from the defective manifold to the new manifold one at a time. Glue the manifold to the ACV. Do not over glue - surplus glue can drip into holes and plug up lines. 	

¹ Some spas do not use trim buttons to cover the screws.

7	Plug in the spa pack.	 <p>Plug in Spa Pack</p>
8	Turn on the GFCI breaker.	 <p>Turn On GFCI Breaker</p>
9	Turn all pumps on high and check again for leaks.	
10	Replace the silver insulation and all panels. Replace the trim buttons over the screws (if present). <div data-bbox="245 743 1133 814" style="background-color: #90EE90; padding: 5px;"> <p> Tip: It is safest to have two people install these panels: one holding the panel in place while the other puts in the screws.</p> </div>	

References

- *Dare to Repair Plumbing* by Julie Sussman and Stephanie Glakas (2005)
Collins GEM Press
- *Plumbing for Dummies* by Gene and Katie Hamilton (1999)
IDG Books Worldwide, Inc., Foster City, CA 94404
- *Do-It-Yourself Plumbing* by Max Alth (1987)
Sterling Publishing
- *Guide To Solving Common Household Plumbing Problems* (VHS tape)
Ortho Information Services
- *PVC Installation Procedures and Cold Weather Cementing Tips*
T. Christy Enterprises, Anaheim, CA (www.tchristy.com/Redhot.asp)