

HOW TO FIX AN AIRLOCK

“Airlock” refers to a pocket of air, or bubble, that gets trapped in the plumbing system of a spa, often times at the **wet-end** (black plastic part of the pump that connects to white plumbing lines. **See Fig. 1.**) This pocket of air can prevent the spa pump from priming with water.

Airlocks usually occur on the initial fill of a new spa, or possibly when a drain & refill is performed.

An airlock may exist when:

1. Spa is full of water and topside display is lit. (This confirms power to the spa.)
2. Turning on the pump(s) does not flow water out of the jets. (**NOTE:** Ensure jets are in the open position by rotating the outer jet face counter clockwise. **See Fig. 2.**)
3. You can hear the pump(s) trying to turn on inside the cabinet but there is no pressure coming out of the jets.

METHODS TO RESOLVE AN AIRLOCK

Depending on the severity of the airlock, here are some methods you can try. You may have to try several different methods to overcome a bad airlock. Before you begin, confirm that all jets are open, filter(s) have been removed (See Fig. 3), and you have appropriate power to the spa.

Figure 1:



Figure 2:

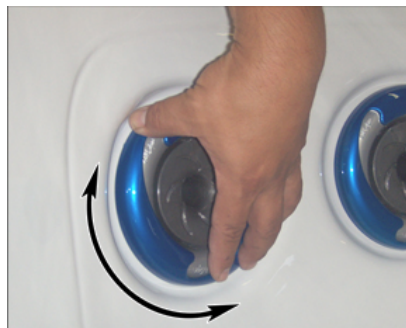


Figure 3:



- **Purge the pump:** On topside display controls, determine which jet/pump button corresponds to the jets in the spa that are not flowing water. (NOTE: On single pump spas, there is only one button that turns the jets on.) Push the jet button repeatedly to alternate between high and low speed. This will help to push the air bubble through the wet end using the power of the pump. **IMPORTANT: ONLY DO THIS FOR 2 MIN AT A TIME, THEN WAIT 2 MIN. RUNNING A PUMP “DRY” CAN CAUSE EXCESSIVE HEAT IF LEFT RUNNING WITHOUT WATER.**

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- **Bleed air from the pump:** Before you do this, you will need to remove the front panel (door) by unscrewing the cabinet screws. Once you have access to the equipment compartment, identify the pump(s) that have the airlock. Locate the pump bleeder plug ($\frac{1}{2}$ " black wing nut located on the flat end of the pump. **See Fig. 1.**) At this point, ensure that the pumps are off, then loosen the pump drain plug half way. Turn the pump on low speed and take the wing nut all the way off. **(NOTE: There will be a few gallons of water spraying out, this is normal. Just make sure water is spraying away from electronic control box.)** Once you see and hear the air bubble pass through the wet-end, you should see water begin to flow through the jets inside the spa. Turn pump off and screw the wing nut back in until hand tight. **NOTE: When loosening and tightening the wing nut it's best to attempt by hand. If you must use pliers, DO NOT SNAP OFF THE WING NUT, OTHERWISE YOU MAY HAVE TO QUICKLY DRAIN SPA.**
- **Using a shop vac: (This technique may vary depending on the spa make and model.)** Locate the filter housing on the spa and ensure the filter(s) have been removed. Take the vac hose and put it in the filter housing as far as it will go. Ensure that the vac is on suck mode and turn on. The purpose of this to create suction to get the air bubble to move out of the pump area. On BF spas, you can use the shop vac technique at the bottom of the jet pack, (refer to video.) You can also reverse the vac and blow the air bubble out.
- **Loosening the pump union:** Once you have access to the equipment compartment, locate the pump that is not flowing water. There will be 2 threaded unions (big white or black plastic rings approx. 2" in diameter. **See Fig. 1.**) These unions connect the plumbing lines to the pump. Loosen the vertical (or higher) connection. If possible, try to loosen by hand. If you need to use large plumber's pliers or a pipe wrench, be careful you do not crack the plastic fittings. Once you loosen the union, you may hear the air hissing out. Tighten union and turn the pump on high speed. **(IMPORTANT- When tightening unions make sure that there is a black O-ring or gasket properly positioned in the union. Do not cross-thread or over tighten.)**

HOW TO AVOID AN AIRLOCK IN THE FUTURE

1. Remove filter(s) prior to filling (or refilling) spa with water.
2. Ensure all jets are in open position by rotating jets counter clockwise. (NOTE: IF YOU OWN A BULLFROG SPA, YOU CAN EASILY LIFT THE JETPAK SLIGHTLY AND LET IT REST IN THE JETPAK HOUSING AREA OR PLACE IT OUTSIDE THE SPA.)
3. Place your garden hose down the hole where the filter resides. This will help prime the pump(s) and avoid an airlock.
4. Turn on power to spa and immediately press jet or pump button to high speed. You may see some air burping out of jets, but you should water flowing within a few seconds.

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