

Condition	Description	Fix
Low Flow Rate	Unit is doing less than the advertised flow rate	<p>1. Keep in mind that our flow rates are based on sap at 40f and going up to a concentration of 4%. As temperature decreases and concentrate % goes up, speed decreases exponentially. As membranes age they also decrease in permeate production (5-10% per season).</p> <p>2. Make sure you do not have any suction leaks. Remove any inlet strainers or hose unions you might be using. Run a straight piece of hose no longer than 5' directly from your sap barrel to the inlet of your pump (or bucket bulkhead connector). Make sure the hose does not suction itself to the sap tank.</p> <p>3. Remove your pumps inlet elbow connector. If it is black consider replacing it with the updated white push connector. Wrap threads with 15 turns of Teflon tape and reinstall so that it is TIGHT (not just snug, but tight). Make sure suction hose is fully inserted into the connector a full ¾" (measure and mark it).</p> <p>4. Over time the pressure regulator in the pump can come out of adjustment. In the pump head there is a small 2mm allen screw. Turn that in 1/2 turn (or until it is nearly flush with the pump head).</p> <p>Low flow rates are caused by three things Bad membranes, restrictions or air in the suction fittings/hoses, or low pressure from misadjusted pumps. Outside of those variables sap minerals, sugar concentration and temperature are the major things that affect flow rates.</p>
No suction	Unit will not draw sap from a bucket	<p>1. Make sure the intake hose is fully inserted into the bulkhead (bucket) or pump (kit) fitting. Using a marker, measure and mark a line ¾" from the end of the intake hose. The line should barely be visible when properly inserted into the push connect fitting.</p> <p>2. Try priming the intake hose with water. Hold it up to a faucet or garden hose to force water into the pump. (this will only need to be done once).</p> <p>3. Apply slight pressure to the intake suction hose by holding it up to faucet or garden hose. This will allow you to check for leaks on the suction side of the pump. No water should be dripping out of the pump or intake fittings.</p> <p>4. Do not use an intake suction hose longer than 5' if drawing out of a container. Do not use an intake suction hose longer than 15' if drawing from a valve on the bottom of a tank.</p>
Flowing sap from the permeate outlet only (no concentrate flow).	When drawing sap from a container, sap is only flowing out of the permeate (blue water hose).	<p>1. Remove the needle valve entirely from the concentrate hose to verify that it is not restricted. After sap is still flowing from the blue permeate hose, continue to step 2.</p> <p>2. Check your plumbing. The majority of our membranes have the concentrate ports on the <b>left</b> when fittings are facing you. Verify that the <b>left</b> ports are plumbed to the top of the next membrane, and that the terminal <b>left</b> port contains the needle valve. The center ports are the permeate outlets and should be connected to the blue permeate discharge hose.</p> <p><b>Note:</b> some of our earlier membrane housings had the ports reversed. If you aren't sure, send a picture to <a href="mailto:sales@therobucket.com">sales@therobucket.com</a> for verification.</p>

<p>No permeate production (sap only flowing from concentrate hose)</p>	<p>Sap will only flow out of the concentrate discharge hose. Unit will not produce permeate regardless of needle valve position.</p>	<ol style="list-style-type: none"> <li>1. Confirm that the needle valve is installed in the correct direction (the arrow on the side of the valve should be pointing away from the unit, towards the open end of the concentrate hose).</li> <li>2. Allow unit to flow sap for 30 seconds and try to <b>stop</b> the flow of sap with the needle valve. If you can stop the flow of sap with the needle valve, continue to step 4. If you can not stop the flow of sap with the needle valve, go to step 3.</li> <li>3. Ensure the valve is installed properly according to Step 1. Ensure the backing nut on the valve is not hindering the operation of the needle valve (back it off so that it is all the way to the top of the valve). If you still can not stop the flow of concentrate, contact us at <a href="mailto:sales@therobucket.com">sales@therobucket.com</a>.</li> <li>4. Flush the unit with 5 gallons of water. Using plain water, restrict the needle valve slowly (decrease flow by 50%), and wait a couple of minutes for permeate to be produced. Once you get permeate flowing, you can switch over and start processing sap.</li> <li>5. In some cases, an air leak on the suction side of the system can cause the unit to not reach optimal pressure, causing little to no permeate production. Verify that you can get ~120psi with a pressure gauge (if available), or if you purchased a "kit", wrap the intake fitting with 20 wraps of Teflon tape and check that it is properly inserted (see Condition: No suction).</li> </ol>
<p>Pump will not turn on</p>	<p>The pump will not run when plugged into the transformer.</p>	<p>Troubleshooting this condition requires the use of a voltmeter.</p> <ol style="list-style-type: none"> <li>1. Check for 24V DC out of the transformer. If you are not getting power out of the transformer, check that your power source is receiving 110V.</li> <li>2. Check for 24V DC by probing the pump wires (while it is plugged into the transformer). If you are getting 24v DC to the pump, the pump is probably faulty. This is generally due to the bearing in the pump head seizing up from getting wet. You can remove the pump head to verify.</li> </ol> <p>The pump can also be tested by momentarily hooking it up to a 12v car battery. If the pump will run on 12v DC, then the transformer is faulty. If it does not, the pump is faulty (and possibly the transformer as well).</p>