

Replacement Pump Procedure

Purpose: How to remove and replace the pump of the Plant Producer Educational Hydroponics Systems

Concern: The pump of the Plant Producer Educational Hydroponics Systems is not pumping water to the top tray of the system, requiring a pump replacement.

Materials Needed:

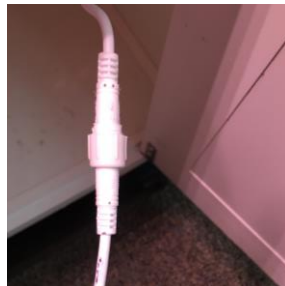
- 1 Plant Producer Educational Hydroponics System replacement pump

Remove used pump:

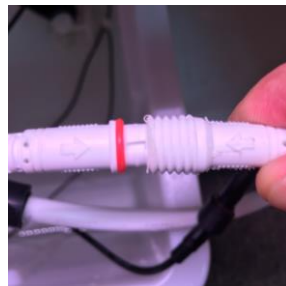
1. Turn the power off by pressing the switch down to the “O” position (the switch is located at the top-left rear of the unit).
2. Open the bottom doors to locate the pump in the reservoir tank (Picture A). Follow the wire from the reservoir to a round connector (Picture B). Unscrew the round connector to pull the pump wire connector (Picture C). **Note:** A nylon tie strap (2) may need to be cut to replace the pump.



Picture A



Picture B



Picture C

3. Disconnect the black tube from the pump by grasping on the black rubber adapter and pulling up and away from the used pump.



4. Remove the used pump from the system.



Install the replacement pump:

1. Inspect the pump damper of the pump replacement to ensure it is in the open position.



Fully open damper



Fully closed damper

2. Reconnect the black rubber tubing to the new pump by pushing the tubing to secure it onto the barbed fitting of the pump.



3. The new pump should be placed into the bottom of the reservoir and secured with suction cups.



4. Reconnect the pump wire harness (Picture A). Align the arrows, push on tightly to push connector together then tighten nut (Picture B).



Picture A



Picture B

Test the replacement pump

1. Turn power back on to the unit. The power switch is located on the back-top panel of the unit. The | should be pressed in the down position.



2. Ensure that the water flow indicator is spinning on the front electrical panel (Picture A). If the water flow indicator is not spinning, either wait or change the clock timing (Picture B). **Note:** The pump is on for 20 minutes and then off for 30 minutes from the moment the system is first powered on.



Picture A



Picture B

3. Once the water flow indicator is successfully spinning, lift the top tray and check to see that water is flowing properly. **Note:** If the water appears to be flowing too much, the damper on the pump may need to be closed a bit to slow the flow and prevent backflow.



4. Close the bottom doors. Place trays back in the proper positions.

This completes the pump replacement.

Additional care tips:

1. Ensure the reservoir is filled with water/nutrients, check level daily if possible.
2. Add water regularly to prevent water levels from dropping too low, allow water to sit 24 hours before being added to allow chlorine to leach out.
3. Unit will beep once every 50 minutes when the water level drops too low.
4. Unit will consume more water as the plants get larger.
5. Check the nutrient levels periodically and the plants themselves systematically by keeping records or journaling to obtain optimal growth (suggest 2-4 times a week).

For additional assistance and video tutorials visit our website: <http://www.realityworks.com/knowledge-base/>