

## Priming a Pump in a Portable Extractor

-by Chris Hill, Esteam Service Department

Having troubles priming the pump or getting water to move through the system is something you can check easily.

The lack of water movement or having a difficult time priming the system could be due to one of two reasons: air is being introduced into the system or there is a restriction/lack of water. Most times, especially when it is hard to prime a system or the pump does not hold steady pressure, it is due to air being introduced between the freshwater tank and the pump. Since air is less resistant than water, the pump will suck (draw) in air over water making it very difficult to prime the pump or move water throughout the system.

When water is restricted going to the pump, it causes a similar effect making it difficult to prime the pump or move water throughout the system because there is little water getting to the pump or little amount of water to move.

To diagnose this, look in the freshwater tank and look for the acorn strainer at the bottom of the tank (See picture below) Check that this acorn strainer is CLEAN and not restricting the water flow to the pump.

(The picture below is of a Ninja 200 freshwater tank with a water return. The water return brass is only on ninja 200 and 500 models with a plunger pump. The model of the unit does not make a difference as acorn strainers are present on ALL ninja models).



(Ninja 200 freshwater tank acorn strainer and bypass return)

Untwist the acorn strainer from the freshwater supply port fitting, clean if necessary and make sure that the port that the freshwater travels through to the pump has no visible blockages (see picture below).



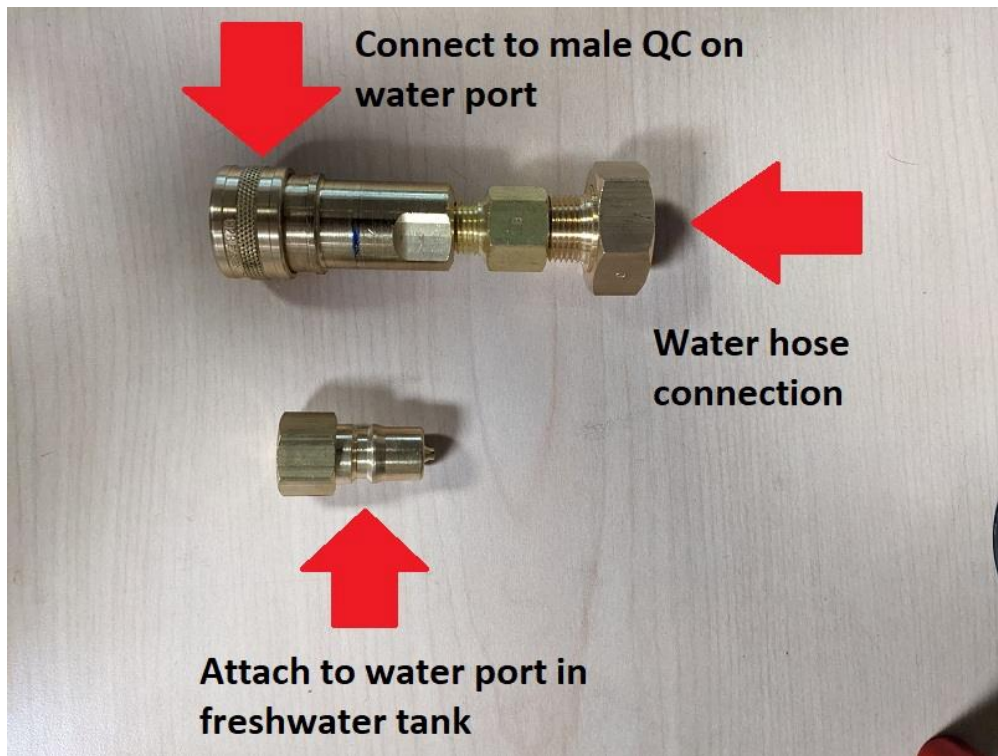
(Ninja 200 freshwater tank acorn strainer removed and bypass return)

Use a flashlight to look at the port to check for any foreign debris that might be lodged in the port or hard water build up that is choking off the water supply.

If everything looks ok, you will want to make an adapter that will be able to accommodate a garden hose attached to one end and a fitting that can screw onto/connect into the freshwater port where the acorn strainer was attached.

An adapter can be made simply if you have the available brass pieces to make one. I have attached a picture below of one that I personally have used in the past.

**(ESTEAM DOES NOT SELL THESE as this is just an example.)**



Once you have the adapter connected to the freshwater supply port, turn on the garden hose and pressurize the system with the garden hose.

(DO NOT hook up any kind of hose to the front of the machine – the female QC) Allow the garden hose to pressurize the system, then open the machine (between freshwater tank and base) and look for leaking water. Any kind of cracked brass, broken hoses, loose clamps, etc. are going to start to leak from this pressure that is coming from the garden hose.

If no leaks are found using this method, then there is a chance that the pumps diaphragms might either be damaged or have something lodged in it causing the pump not to be able to build pressure and move water. Hopefully with the pressure of the garden hose, if there is foreign debris in the pump head, this will push it out and clear that up.

Once you have made sure that you have no leaks, turn on the machine WITH the garden hose still attached using it for water supply and run the machine as you would if you had filled the unit with water instead. (Attach a wand to the unit and check for pressure) If the unit functions correctly under garden hose pressure, turn off the unit, put some water into the freshwater tank and try to run the unit again under its own water supply.