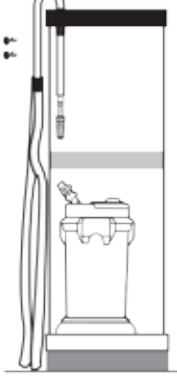
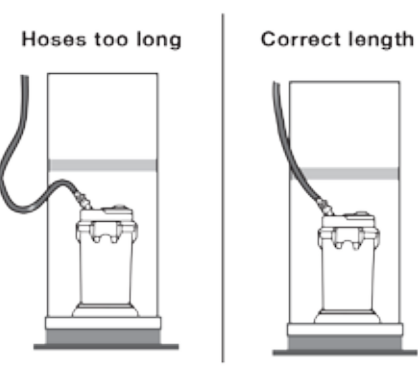


10 Attach exhaust tube assembly to remaining hose (see diagram 8 for hose attachment).



Secure to aquarium using suction cups as needed.

11 Trim hoses
Carefully estimate the correct hose length to avoid unnecessary bends. Trim hoses with scissors.



Hoses too long | Correct length

12 Attach hoses

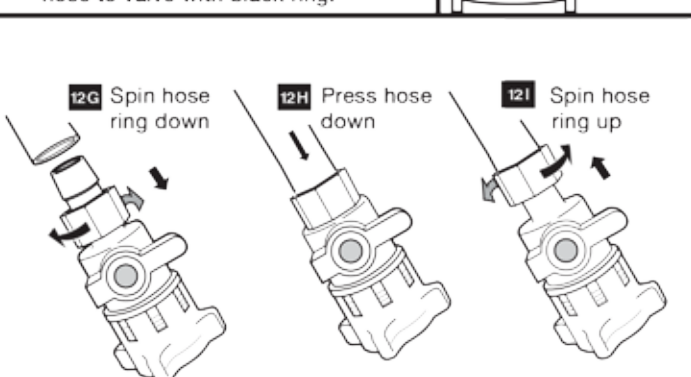
12C Exhaust → **12D** Intake ←

12A Important

12B Attach intake hose to valve with blue ring and exhaust hose to valve with black ring.

12E Black **12F** Blue

12G Spin hose ring down **12H** Press hose down **12I** Spin hose ring up



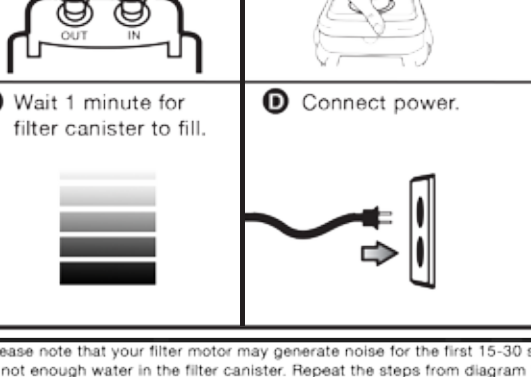
13

A Turn both flow control levels to full open position.

B Prime the filter rapidly until water starts to flow into the filter canister.

C Wait 1 minute for filter canister to fill.

D Connect power.



A Disconnect the hoses from the motor unit.

B Remove the motor from the canister.

C Fill the canister 3/4 of the way with water from your aquarium.

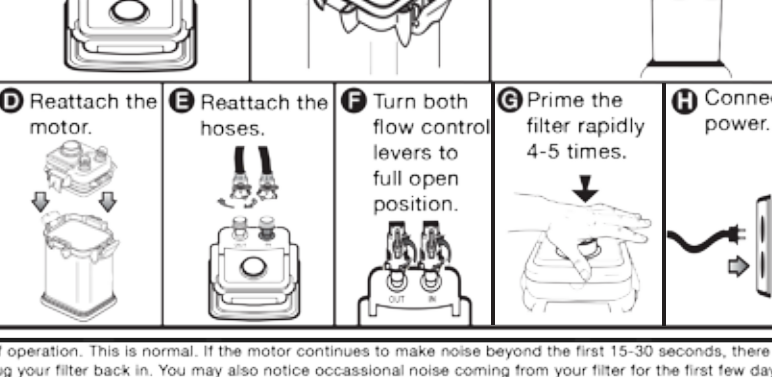
D Reattach the motor.

E Reattach the hoses.

F Turn both flow control levers to full open position.

G Prime the filter rapidly 4-5 times.

H Connect power.

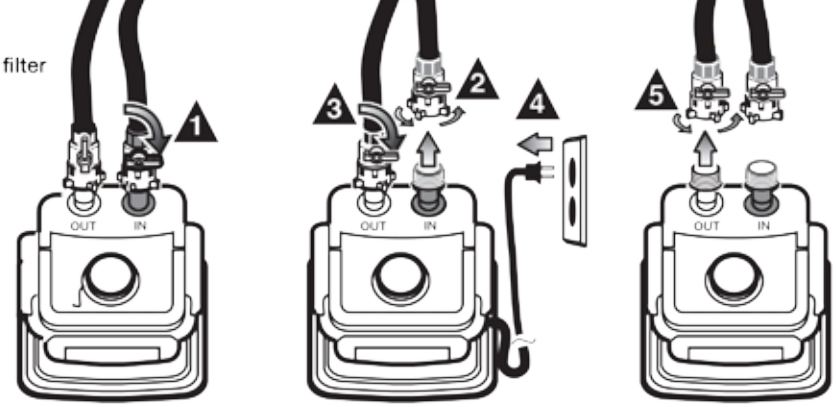


Please note that your filter motor may generate noise for the first 15-30 seconds of operation. This is normal. If the motor continues to make noise beyond the first 15-30 seconds, there is not enough water in the filter canister. Repeat the steps from diagram 13 and plug your filter back in. You may also notice occasional noise coming from your filter for the first few days of operation. That noise is caused when air pockets that are trapped in your filter are released through the output hoses. To eliminate air pockets inside your filter, gently tilt the entire filter from side to side and rock the filter back and forth. Be careful not to put any additional stress on the hoses or connections of the filter.

MAINTENANCE
Periodically change the filter media, clean hoses and impeller. Your tank conditions will determine how often this should be done.

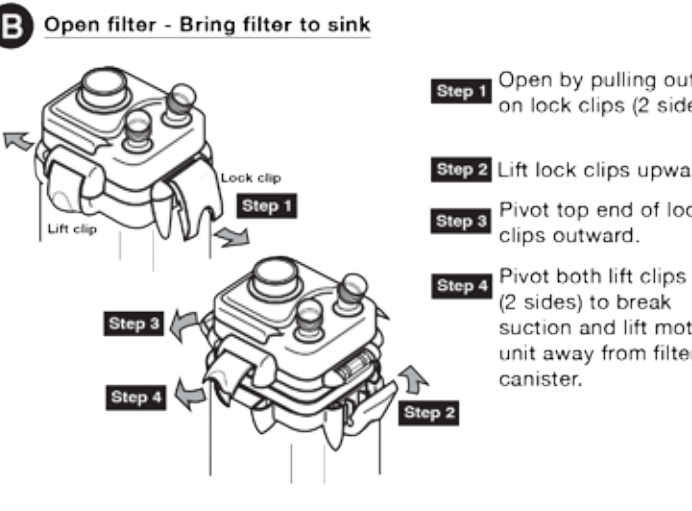
A IMPORTANT
-You can leave the hoses at the aquarium when servicing filter
- DISCONNECT IN THE FOLLOWING SEQUENCE

- 1 Close flow control lever on blue intake valve. DO NOT close lever on black exhaust valve.
- 2 With power ON, unscrew lock ring on blue intake valve and disconnect.
- 3 Close flow control lever on black exhaust valve
- 4 Disconnect power cord
- 5 Unscrew lock ring and disconnect black exhaust valve



B Open filter - Bring filter to sink

- 1 Open by pulling out on lock clips (2 sides).
- 2 Lift lock clips upward.
- 3 Pivot top end of lock clips outward.
- 4 Pivot both lift clips (2 sides) to break suction and lift motor unit away from filter canister.



IMPORTANT SAFETY INSTRUCTIONS

WARNING - To guard against injury, basic safety precautions should be observed, including the following:

A) READ AND FOLLOW ALL SAFETY INSTRUCTIONS

B) DANGER. To avoid possible electric shock, special care should be taken since water is employed in the use of aquarium equipment. For each of the following situations, do not attempt repairs by yourself. Return the appliance to an authorized service facility for service or discard the appliance.

- 1) If the appliance falls into the water, DO NOT reach for it. First, unplug it and then retrieve it. If electrical components of the appliance get wet, unplug the appliance immediately. (Non-immersible equipment only).
- 2) If the appliance shows any signs of abnormal water leakage, immediately unplug it from the power source. (Immersible equipment only).
- 3) Carefully examine the appliance after installation. It should not be plugged in if there is water on parts not intended to be wet.
- 4) Do not operate any appliance if it has a damaged cord or plug, or if it is malfunctioning or has been dropped or damaged in any manner.
- 5) To avoid the possibility of the appliance plug or receptacle getting wet, position aquarium stand and tank to one side of a wall-mounted receptacle to prevent water from dripping onto the receptacle or plug. A "drip loop," shown in the figure at right should be arranged by the user for each cord connecting an aquarium appliance to a receptacle. The "drip loop" is that part of a cord below the level of the receptacle, or the connector if an extension cord is used to prevent water traveling along the cord and coming in contact with the receptacle. If the plug or receptacle does get wet, DO NOT unplug the cord. Disconnect the fuse or circuit breaker that supplies power to the appliance. Then, unplug and examine for the presence of water in the receptacle.

C) Close supervision is necessary when any appliance is being used by or near children, lamp bulbs, and the like.

E) Always unplug an appliance from an outlet when not in use before putting on or taking off parts and before cleaning. Never yank cord to pull plug from outlet. Grasp the cord and pull to disconnect.

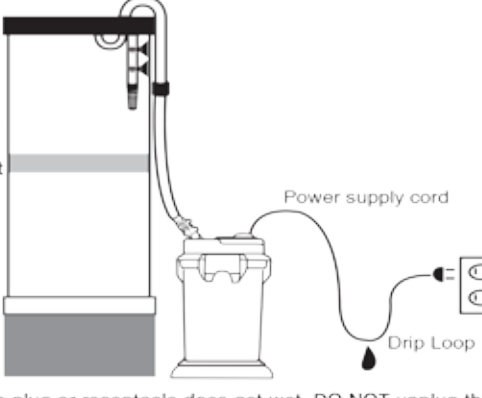
F) Do not use an appliance for other than the intended use. The use of attachments not recommended or sold by the appliance manufacturer may cause an unsafe condition.

G) Do not install or store the appliance where it will be exposed to the weather or temperatures below freezing.

H) Make sure an appliance mounted on a tank is securely installed before operating it.

I) Read and observe all the important notices on the appliance.

J) If an extension cord is necessary, a cord with proper rating should be used. A cord rated for less amperes or watts than the appliance rating may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.



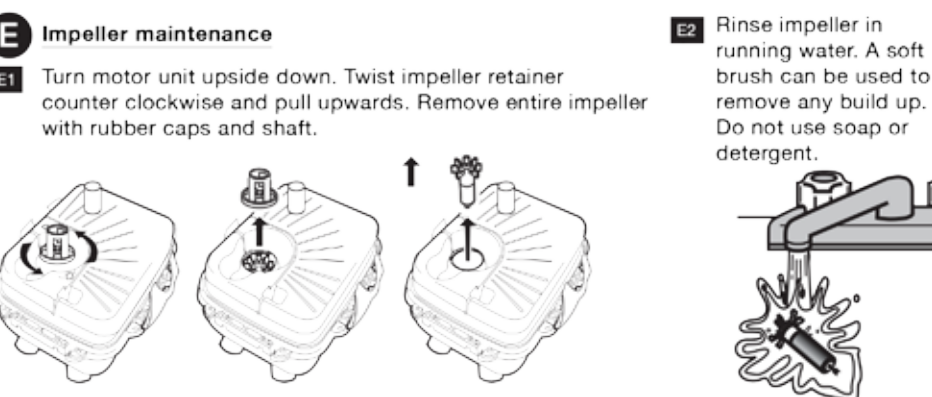
C Replace
Replace expendable media such as carbon, zeolite and filter resins. Rinse or replace floss pads and coarse sponge. Note that coarse sponge may contain valuable colonies of helpful bacteria that you may wish to maintain. Gently rinse and squeeze the coarse sponge in some aquarium water that you took from the aquarium. This will reduce clogging, but not kill off the entire bacteria colony. Tap water, with chlorine should not be used on the filter sponge as it can kill bacteria.

D Reload
When reloading media baskets into canister, make certain that through holes align with each other and with the small opening on the motor unit. See steps 4 and 5 on page 1.

E Impeller maintenance

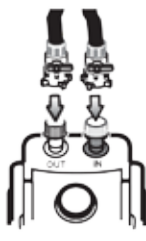
E1 Turn motor unit upside down. Twist impeller retainer counter clockwise and pull upwards. Remove entire impeller with rubber caps and shaft.

E2 Rinse impeller in running water. A soft brush can be used to remove any build up. Do not use soap or detergent.



F Hoses
Periodically remove hoses and tubes from aquarium. Clean with filter brush and flush thoroughly.

G Note
For re-assembly keep both valve levers closed until both valves are completely connected to the motor. Then open as described in step 13.



3 YEAR WARRANTY

A. Read these terms carefully.

B. Retain these instructions as well as your sales receipt.

C. Please DO NOT return this product to the retailer it was purchased from.

D. If service or replacement is necessary, please visit www.penn-plax.com/warranty-service for further instructions on how to obtain warranty repair or replacement for your Cascade filter.

1. This product is warranted under normal usage against defective material and workmanship for a period of 3 years from date of purchase. Repairs and replacements will be made at our discretion, free of any charge for parts or labor.
2. For repair or replacement, visit www.penn-plax.com/warranty-service. Alternatively, you may contact customer service at cs@pennplax.com or at 631-273-3787 ext. 333
3. This warranty will not apply to any product which has been subject to misuse or negligence.
4. Penn-Plax assumes no liability with respect to loss or damage to livestock or personal property, irrespective of the cause thereof. The warranty is in lieu of all warranties, expressed or implied, including the implied warranty of merchantability. Neither the seller nor manufacturer shall be liable for any loss or damage, consequential or direct, arising from the use or inability to use this product. Defects resulting from misuse, abuse or accident are expressly excluded from coverage under this warranty. Some states do not allow limitation on how long an implied warranty lasts or do not allow any exclusion or limitation of incidental or consequential damages, so these limitations may not apply to you.

Warranty S&H Costs

Complete filter replacement	- \$35
Replacement motor	- \$15
All other replacement parts	- \$10

SAVE THESE INSTRUCTIONS