

Section 1: Parts List

Motor Replacement Kit (supplied by EPI)

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|--------------------------|---|
| (1) New hydraulic motor | (2) White Plastic Guard Strips |
| (2) Motor Fitting Caps | (4) Stainless Steel Bolts, Lock Washers, and Flat Washers |
| (4) Hydraulic Hose Plugs | |
| (1) Teflon Paste | |

Tools Required (supplied by others)

Small strip of duct tape
 Phillips head screwdriver
 Paper towels
 File
 Plastic bags
 Adjustable wrench

Section 2: Additional Considerations



WARNING

Use extreme caution when working in and around the front housing. The edges, especially around the propeller cylinder, can be very sharp. Wear protective gloves when removing the motor.



CAUTION

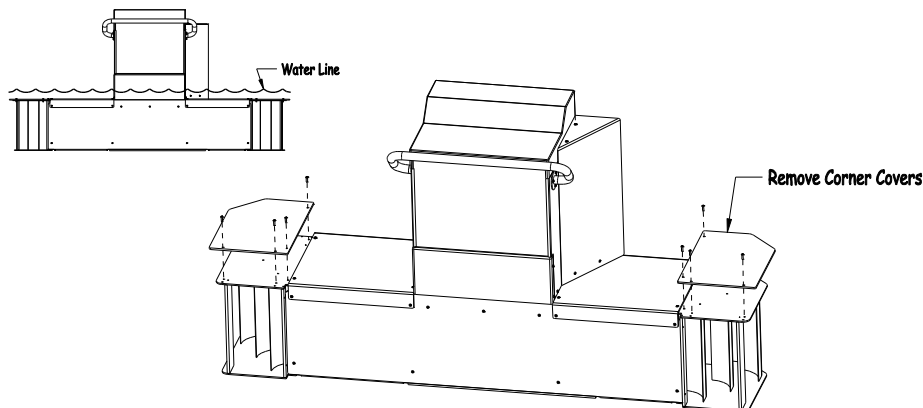
Be sure to disconnect electrical service to the hydraulic pump unit and water quality system (WQS). Accidental activation of the hydraulic pump during servicing would result in the loss of hydraulic fluid requiring extensive clean up and could also promote a chance for bodily harm. Accidental activation of the WQS without adequate water in the pool can cause the pump motor to burn out.

NOTICE

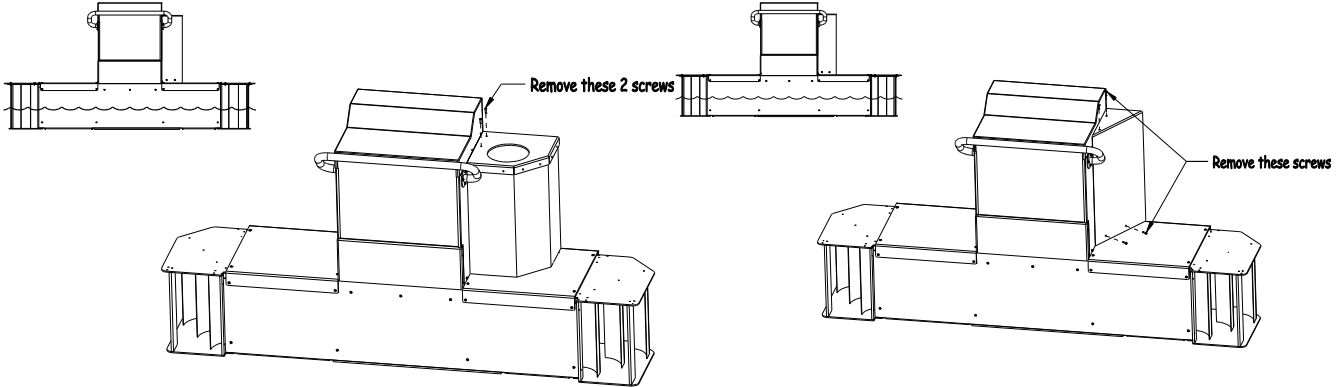
If your power unit is at a higher elevation than the propulsion housing, disconnect both hydraulic hoses at the power unit. Use the red threaded plugs to cap the end of each hose, making sure to mark each hose so you know to which fitting it needs to be re-connected.

Section 3: Motor Replacement Instructions

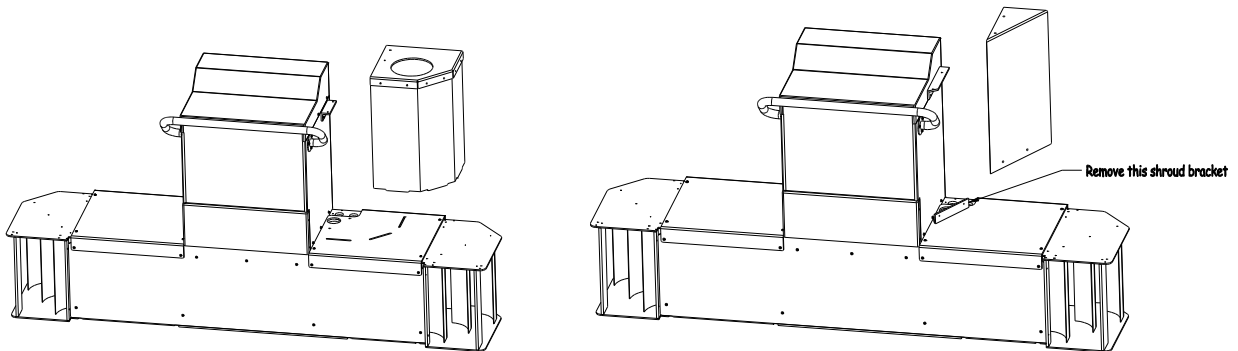
- Lower the water level to just above the return channels. Remove the four corner covers with a screwdriver. These are removed to prevent the liner from being compromised when the pool is drained and the liner temporarily loses its tight fit. Any corner step or entry stair will have to be removed as well.



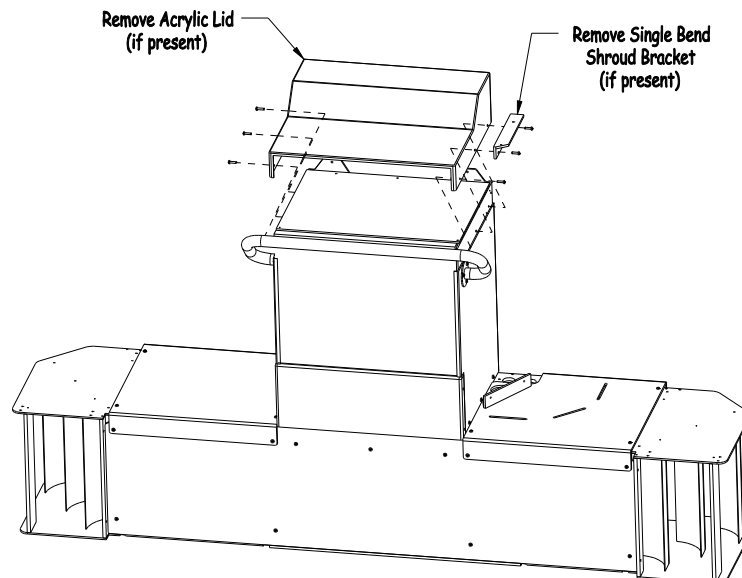
2. Drain the pool so that no less than 6" of water remains in the pool; which is half way down the water return channel (NOTE: if the pool has a deep center pit, leave the pit entirely full of water).
3. The next step is to remove the shroud. If the swim current does not have a shroud, then skip this step. There are two potential shroud styles. Remove the screws that attach the shroud to the front base. Use the diagrams below to determine which screws to remove.



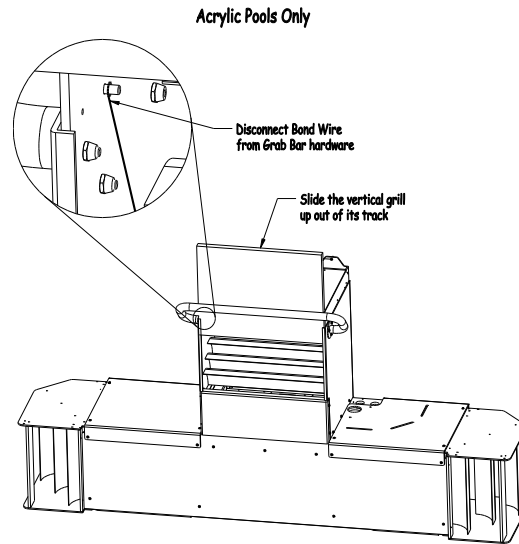
4. Pull the shroud away from the front base. If working on a triangular single-bend shroud, then remove the PVC bracket that is attached to the base.



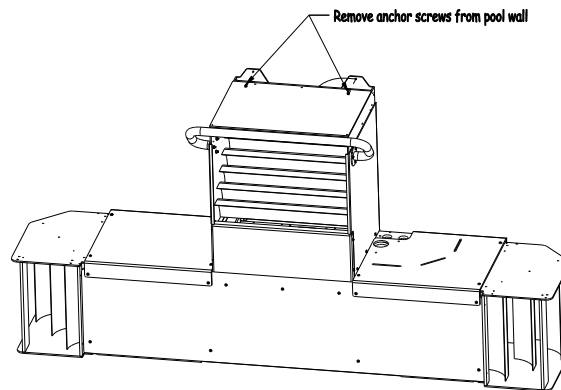
5. If working on a Stainless Steel Swim Current System then skip to step 7. If working on an Acrylic Swim Current System, then remove the housing lid as shown. If there is a PVC bracket attached to the housing (for a triangular single-bend shroud) then remove that as well.



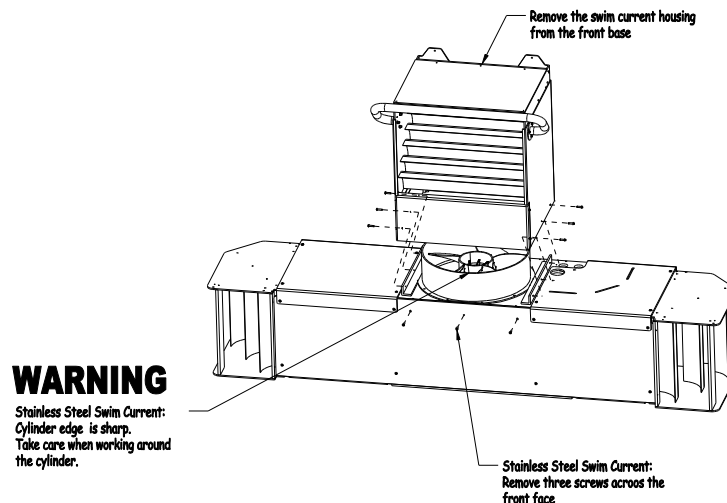
- Pull the front water-conditioning grill up and out of its track. Disconnect the bond wire that is attached to the grab bar mounting hardware (on the left side of the housing).



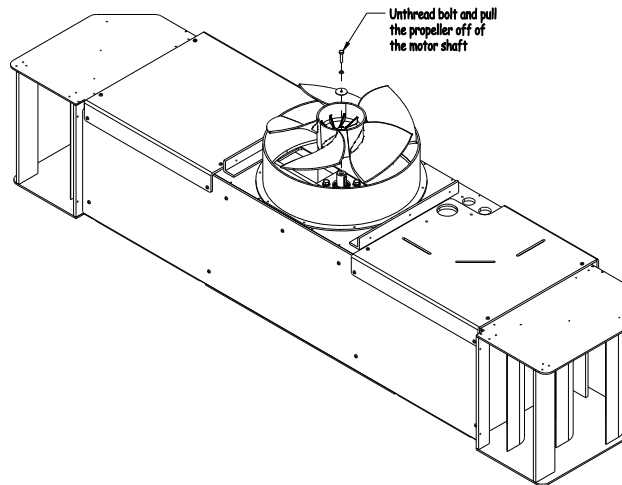
- Remove the two screws that secure the propulsion housing to the pool wall.



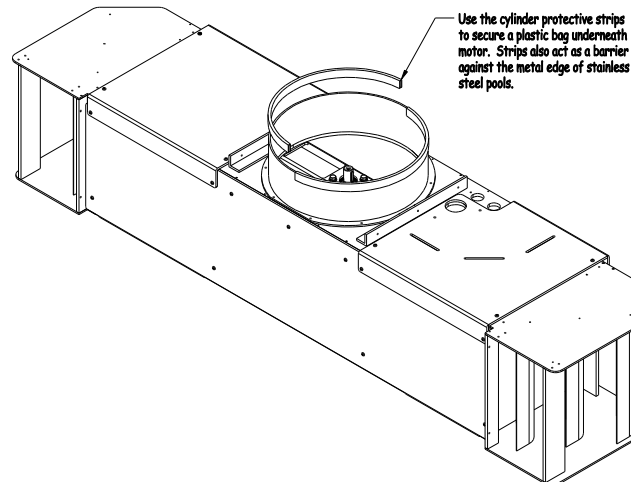
- Remove the 6 screws that hold the bottom of the propulsion housing to the front base. There are 3 screws on each side of the propulsion housing. If working on a Stainless Steel Swim Current Assembly then remove the three screws across the front base immediately under the housing. Carefully lift the housing off of the base and set it aside.



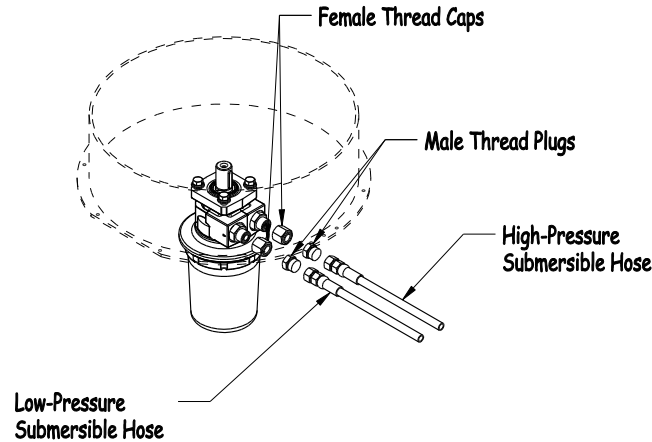
9. **WARNING-** Take care when working around the front base cylinder as its edge can be sharp. Unthread the bolt that secures the propeller to the motor shaft. Pull the propeller up off of the motor shaft.



10. Place a plastic bag underneath of the motor and then drape it over the top of the cylinder. Place the protective strips onto the cylinder securing the plastic bag to the cylinder. The protective strips also act as a barrier against the cylinder's sharp edge. Place a few paper towels into the bottom of the bag. This will absorb any fluid that escapes during the motor change.

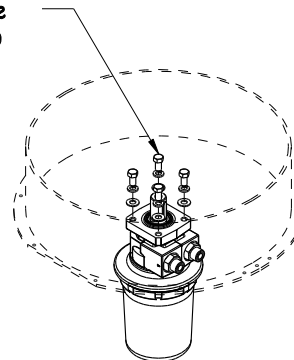


- Hold a paper towel around the hydraulic hose when loosening the hydraulic hose fitting. Once removed, plug hoses immediately with the red plugs provided. Cap the motor fittings with the steel caps provided (which are shipped on the replacement motor). Wipe away any excess hydraulic fluid that may have oozed onto the hose and mark one of the hoses with a small piece of duct tape to ensure that the same lines are reattached to the same fittings on the new motor.

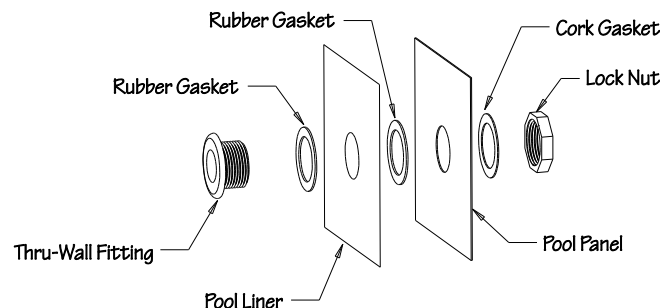


- Unthread the bolts that secure the motor to the front base. Make sure that the motor does not drop into base when loosening these bolts.

Unthread the motor mounting hardware from the motor. Take care not to drop the motor when it releases.



- Remove any debris from the motor mounting bracket. Mount the new motor in the same manner on the motor mounting bracket using the **new** stainless steel bolts and washers. Place Teflon paste on all four motor bolt threads before inserting into the threaded holes in the motor. Also, place Teflon paste on both sides of the mounting bracket around the mounting holes and coat the mating surfaces of the washers. Sufficient Teflon paste must be applied so that it will ooze from all gaps around the bolts. Attach the bolts loosely before tightening all the way. Center the motor on the bracket.
- If replacing the hydraulic motor and submersible hose kit has been purchased, then the hoses should be replaced at this time. Remove the existing hoses and install the new hoses. Use the diagram below for the exact placement of the gaskets on the hose thru-wall fittings.



15. Prior to connecting the hydraulic hoses, determine if the motor being installed looks like the motor being replaced. There are two possible motors that are being replaced; a motor encased in a blue protective coating and a motor with a stainless steel top sitting on top of white can.
 - a. **If the replacement motor looks the same as the original:** Make sure that both O-rings are on the motor fittings, and that all dirt and grit has been removed between the threads before securing in place. These are mechanical O-ring seals so no Teflon tape or sealant should be used. Reattach the hydraulic hoses, again wrapping a paper towel around the hose to absorb any residual hydraulic fluid. Tighten the fittings with a wrench until they are just tight-then tighten an additional 30-45degrees (1/2-3/4 flats past wrench resistance).
 - b. **If the replacement motor looks different from the original:** The hose position needs to be reversed.

Pools with a Shroud-Loosen the retaining nut on the black gland that seals the low-pressure submersible hose on the thru wall fitting (this should be in the second hole down on the panel and also be the hose that goes through the bench closer to the center of the pool). Loosen the retaining nut on the black gland of the low-pressure submersible hose at the bench level.

Pools without a Shroud-Loosen the retaining nut (on the black gland) that seals the low-pressure submersible hose attached to the thru-wall fitting. This fitting will be closest to the center of the pool under the bench.

Pull an additional 4 to 5 inches of the low-pressure submersible hose into the pool and push it down through the bench. Make sure that both O-rings are on the motor fittings, and that all dirt and grit has been removed between the threads. These are mechanical O-ring seals so no Teflon tape or sealant should be used. Reattach the low- pressure submersible hose to the motor fitting closest to the swimming area of the pool. Reattach the high-pressure hose to the motor fitting closest to the panel of the pool. Wrap a paper towel around the hose to absorb any residual hydraulic fluid. Tighten the fittings with a wrench until they are just tight-then tighten an additional 30-45 degrees (1/2-3/4 flats past wrench resistance). Hand-tighten the retaining nuts on the black glands of the low- pressure submersible hose at the bench and at the pool panel.
16. Remove the duct tape used to mark the hoses. Remove the white plastic strips and carefully remove the plastic bag and paper towels taking care to keep oil away from water.
17. Visually inspect the propeller and grills for any signs of wear. Endless Pools recommends replacing these components when doing a hydraulic motor replacement.
18. Attach the propeller to the motor. Be sure that the edge of the key on the motor shaft is aligned vertically so that it will fit into the key way on the propeller. Tap into alignment gently with a mallet if necessary. **Note:** The motor was shipped with a band on the shaft. This is only to keep the key on the motor shaft in shipment. Remove this band before attaching propeller, while being sure the motor key is in place.
19. Reinstall the propulsion housing to the front base by following steps 8 through 3 in reverse order. Do not over tighten the screws as the heads are easily stripped. Make sure that all the screws are in place before tightening.
20. If the black gland (outside the pool) of the low-pressure hose had to be loosened, double check the hose for leaks once the pool has been filled.
21. Reinstall the return channel corner covers only after the pool is at least two-thirds filled with water.

Call Endless Pools Customer Service with any questions: 800-910-2714 US and 0800-520-0196 UK