Repair & Maintenance

Pump Seal Replacement

L-400 HydroMassage Lounge
L-300 HydroMassage Bed

Kit No: RSB-1150

Revision 1.0 January 2017

HYDROMASSAGE
INNOVATION IN RELAXATION

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HydroMassage Bed & Lounge
Pump Seal Replacement
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For purposes of this instructional document we use a lounge pump in the pictorials, but the process for changing the pump seal is the same for both models.

Tools Needed

optional

Penetrating Oil

Strap Wrench

Small standard screwdriver

9⁄16” Wrench

Rubber Mallet

8mm Socket

7⁄16” Socket

1100 Fast Set Silicone or 100% pure silicone

Razor knife

Identifying Seals in Kit

Pump Back Housing Seal

Impeller Seal

Replacing Pump Seal

Dripping or spraying some penetrating oil on all of the nuts on the back of the impeller housing will not only make the unbolting process easier, but it will reduce the chance of breaking the bolts or damaging the plastic volute housing, as the bolts are under torque pressure.

Using a 7⁄16” socket, work around the volute removing the eight bolts.

Remove the volute cover and set aside.

Use a small blade standard screwdriver to pop off the drive shaft cover from the rear of the pump motor.

Secure the drive shaft from rotating using a 9/16” wrench on the drive shaft nut.

With the shaft nut secured from rotation, untwist the impeller counter-clockwise.

PROTIP!

You can get enough leverage to break the tension with a screwdriver inserted into the impeller fins, but a strap wrench is less stressful on the integrity of the parts.

Remove (unscrew) the impeller.

Pry the impeller seal out of the back of the impeller with a thin-tipped standard screwdriver.

Examine the inside of the inside of the impeller cup where the seal was. The inner wall should be smooth and clean.

If the inner wall is grooved, cavitated, or gouged, call Technical Support to order a new impeller.

Use an 8mm socket on the bolt heads found on the rear of the pump. Loosen the bolts until you can remove the base of the pump back housing from the front of the pump.

Do not pull the bolts out. This may damage the motor windings.

Lay the pump back housing flat and tap out the old seal from the housing.

Use a razor or razor knife to clean away the bulk of the old sealant residue.

Be careful not to scratch the plastic housing.

Once the bulk of the old silicone has been removed, use some denatured alcohol to clean up the remaining silicone residue.

Pry out the O-ring from the pump back housing back and discard the O-ring.

Clean the O-ring groove with denatured alcohol.

Take a small amount of 1100 Fast Set[1] silicone...

[**NOTE:** [1]For steps 15 thru 18 you may substitute 100% silicone instead of Fast Set, but you must adjust the drying time alloted to the manufacturers specifications for whichever medium you use.]

...and evenly coat the inside ring of the pump back housing back where the bearing seal assembly will fit.

Put a second coat of silicone around the replacement seal from the kit.

Hold the seal by the edges and avoid touching ceramic surfaces.

Smooth the silicone to an even, consistent coating all the way around the new seal.

Place the seal on the pump back housing

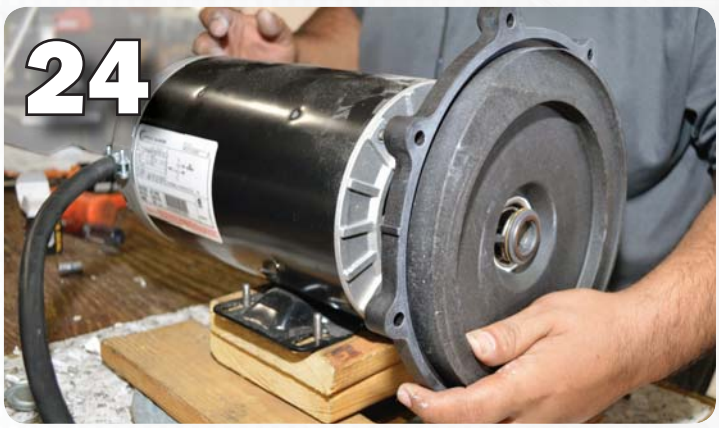
Use the PVC pipe included with your repair kit to apply equal force to the surface of the seal as you tap it into place.

Seat the seal into the pump back housing completely by tapping with a rubber mallet.

Ensure the pump back housing seal is seated completely from the front...

...and the back.

Slide the pump back housing onto the pump.



Hand-tighten the four pass-thru bolts on the back of the pump that secure the back half of the pump back housing in place.

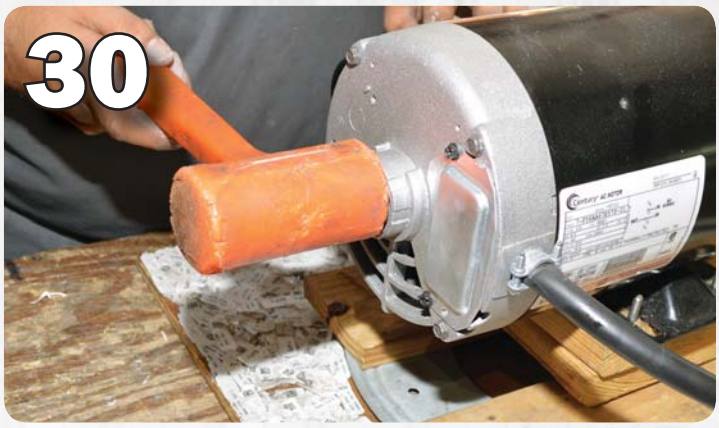
With the pump sitting flat on its mounting bracket, ensure the top two plastic posts (where the pass-thru bolts connect the housing) are level.

Tightening the pass-thru bolts on the back of the pump to snug using an 8 mm socket. Do not overtighten.

Use a torque wrench set to 100 foot pounds to finish tightening the pass-thru bolts.

Replace the drive shaft cap on the back of the pump.

Tap the drive shaft cap firmly into place.



Coat the rubber outside edge of the impeller seal with water.

Seat the seal in the impeller.

Use a flat, **clean** surface to push the seal all the way into the impeller.

Open the alcohol prep pad included in your kit.

Any dust or debris left on the seal will result in early component failure.

Clean the surface of the impeller seal.

Any dust or debris left on the drive shaft seal surface will result in early component failure.

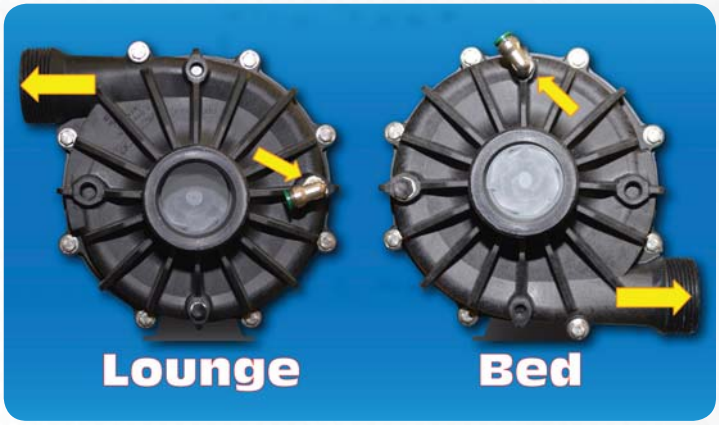
Clean the matching surface on the pump back housing seal surface.

Screw the impeller onto the drive shaft threads.

Seat the new O-ring in the pump back housing.

Return the volute.

Orientation of the volute varies depending on whether the pump serves a **lounge** (outflow at top left and the radiator elbow at 3 o'clock) or a **bed** (outflow at bottom right and the radiator elbow at 12 o'clock).



Tighten the bolts with a 7⁄16" socket just until they are snug.

Finish tightening the bolts with a torque wrench set to 100 foot pounds.

Related Documentation

This document details a procedure that can only be performed after removing the pump from a HydroMassage.

For a detailed step-by-step procedure on how to remove the pump from your HydroMassage product, ask HydroMassage Technical Support (727.536.5566) for the appropriate pump removal document.