

Replacing the J/40 Cockpit aft-bulkhead mounted Manual bilge-pump

Revision 08/30/2013 – **READ THIS ENTIRELY BEFORE STARTING.**

On Lark (#4), the installed pump was a Henderson 17.5 gal/pm handle operated manual bilge-pump. It no longer pumped bilge water and appeared to be original to the boat. The trim ring on the outside of the bulk-head facing forward into the cockpit had been well weathered and was in need of replacement too.



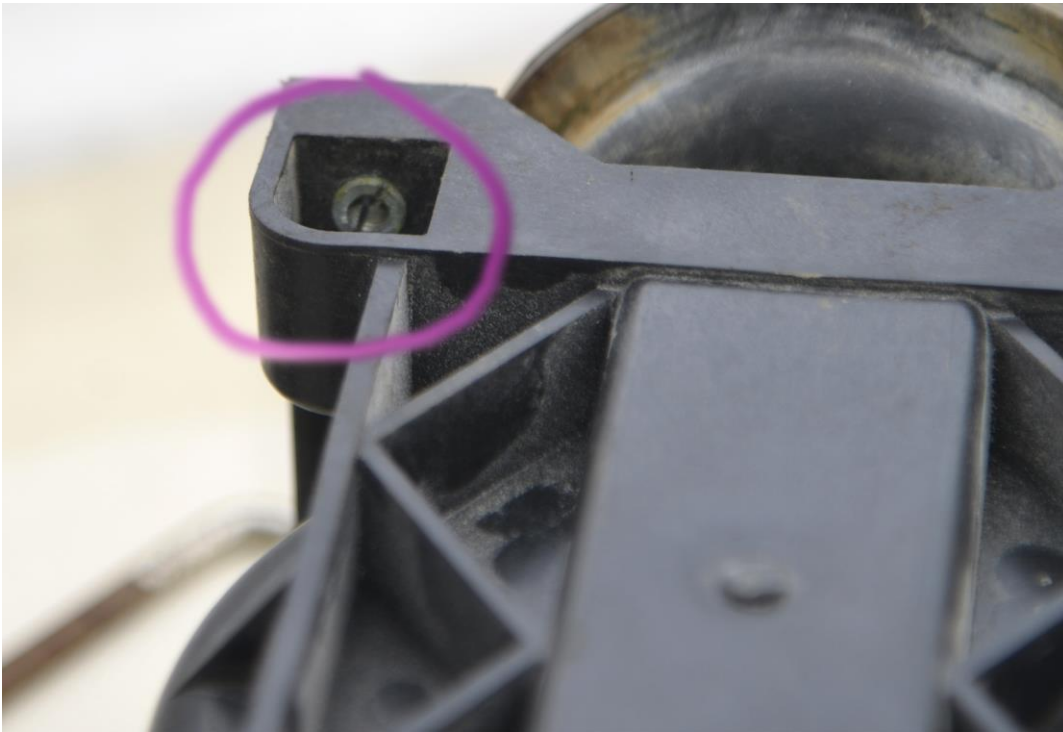
The good news is as of August 2013 the identical pump is still being made. Henderson was purchased by Whale and the pump is being sold as the Mk5 Universal. It has 3 mounting options which makes it a flexible product and hopefully a long-lived one. It comes with handle and keeper lanyard. A trim plate and large rubber seal are an option shown by the packaging to the left above.

There are a couple of important things to note:

1. The trim ring has gone from 8 holes to 6 holes. There are 4 non-tapping machine screws that go into the pump through the bulkhead. With the 8-hole design, 4 of the holes lined up with the 4 holes in the pump. With the 6-hole trim ring, only 2 line up. That means that the installation requires 2 of the screws to go under the trim ring and 2 go through it. This is a pretty cheesy way to save sending 2 bolts, and they send (2) self-threading screws instead. This is really poor.



2. They failed to include the friction back nuts for the pump side. This is pretty critical to the installation and I have not seen these parts available elsewhere. **DO NOT chuck your old pump before removing these.** Poke a screw-driver through the forward side to pop them out. Install them in the new pump prior to positioning the pump for installation.



DO NOT THROW OUT THE OLD PUMP WITHOUT REMOVING & SAVING THESE!!

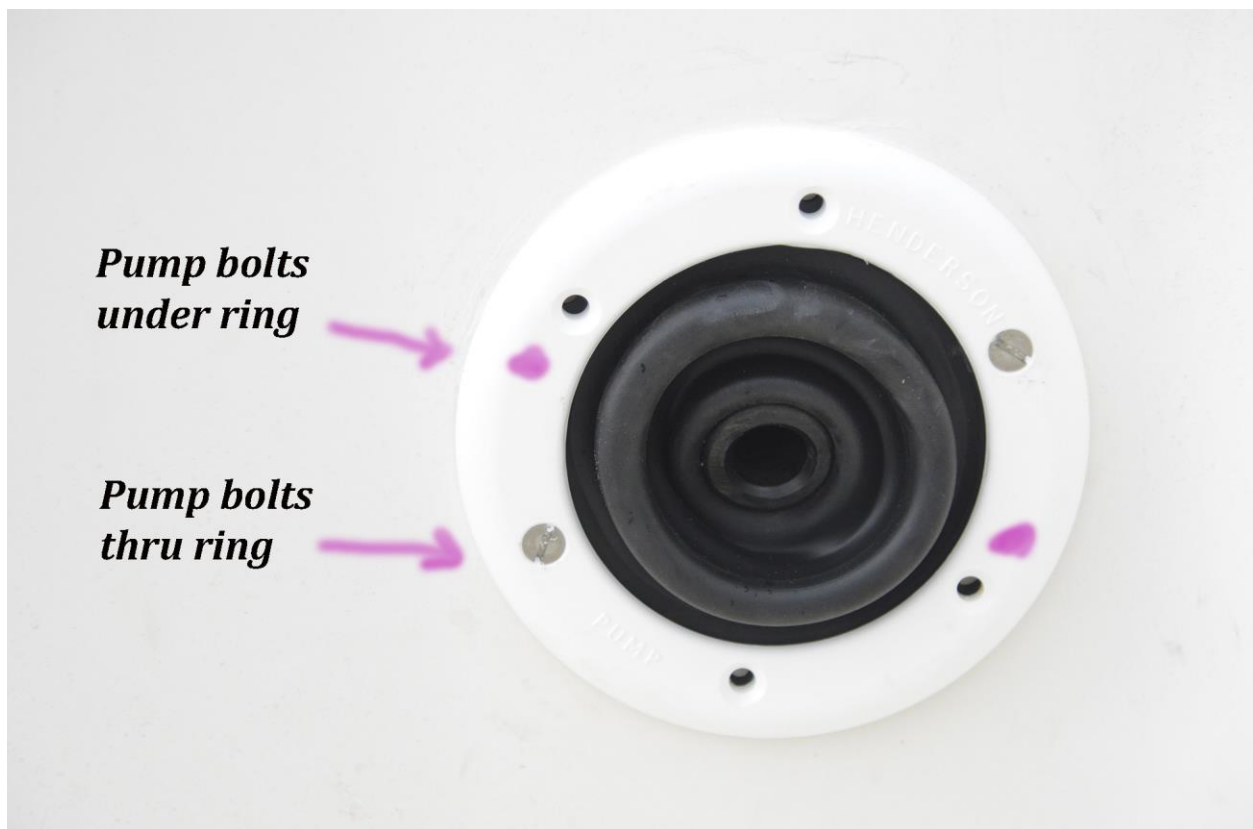
Remove the old pump and trim ring and rubber seal. MAKE SURE you remove the cylindrical friction nuts from the old pump and set them aside. My new pump did not come with them. Also note which hose goes to the pump intake and which one goes to the outlet side of the pump. It is quite easy to put the new one in backwards as the old holes in the bulkhead will line up either way.



So here is where things start getting screwy... If you have a 2nd person to work in the cockpit which someone is in the lazarette that is easier, but if you can find a long screw of the same thread as the final one, you can put it through the hole in the bulkhead, then get in the lazarette and then hand thread it into the pump. Then get back up into the cockpit, pull the long screw through and you can easily line up the rest of the screws.

With the 6 hole trim ring you have to do some backflips. First, put in the first two screws that line up with the pump face – of the four, there will be one pair that are catty-corner from each other, or 180 degrees opposed. Put some life-caulk of equivalent on the threads near the screw-head. Also fill in the old holes EXCEPT the two remaining ones that line up with the pump face. To be safe, put in the other two through the rubber seal, just to make sure they line up. Pull that 2nd pair back out, so that you only have the first pair in, and then tighten that first pair down to final. You won't be able to get to them again with un-installing the pump.

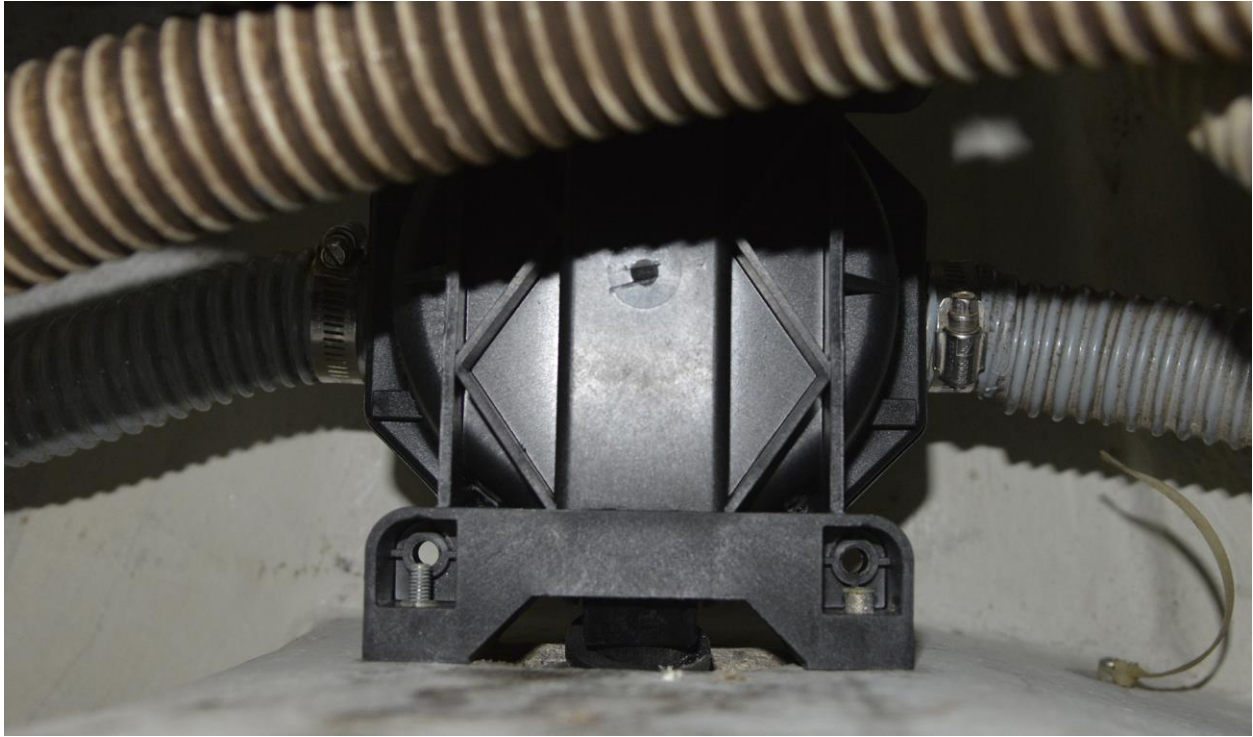
Next put a bead of caulk around the inside of the rubber seal in contact with the bulkhead. NOW put the trim ring on and line up the final pair of screws with the pump and put them in, don't need to final tighten yet.



The remaining 4 holes in the trim ring will require new holes in the bulkhead. The screws are supplied and are self-threading. Drill the appropriate side hole, just smaller than the screw. Add a dab of caulk to the tip and screw them in.

Gently pull the rubber seal around the handle socket. I carefully used a couple of flat-head screw drivers to spread the seal opening to get this done. Take your time and do it right.

If you are considering replacing the hoses, 1.5" inside diameter, no-collapsible on vacuum side and measure, measure, measure. There are check valves in the pump but the run to the bilge is long and there should be a check valve at the bilge end as well as a strainer.



This is what it looks like installed from the under-side. Lots of stuff back in the transom, especially if you have a piston driven autopilot. Some estimated 2013 costs:

\$150 – replacement pump

\$40 – trim ring and rubber seal

\$35 – spare handle

\$30 – Pump Service Kit