

### Purpose of the kit

The Membrane Replacement Kit contains parts required to replace one membrane element on a PowerSurvivor-80E or the membrane for the Survivor 35 or the PowerSurvivor 40E. It also includes seals and O-rings which may need to be replaced at the same time.

### Contents of the kit

- Membrane Element (1)
- Quad Seal (1)
- Sleeve O-rings (2)
- Spacer O-rings (2)
- Silicone Lubricant

### Tools and Supplies required

- 11/16-in. open-end wrench
- Flat-blade screwdriver
- Channel Lock Pliers (optional)

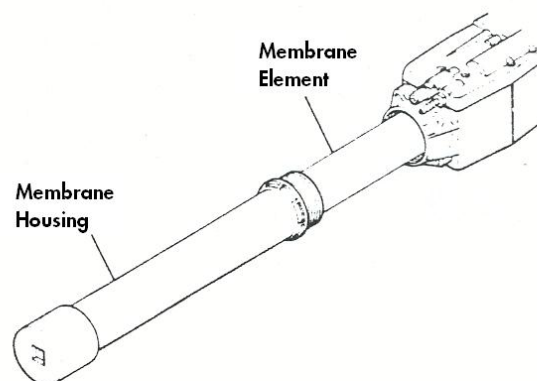
### Installation Instructions

#### Model Survivor 35

1. Grasp the membrane housing with both hands and turn counterclockwise until it can be removed.
2. Remove the membrane element with a pulling-and-twisting motion. The reject tube will come out with the membrane.
3. Lubricate all O-rings and seals on the new membrane element and reject tube with a light coating of silicone lubricant.
4. Insert the membrane element into the pump body.

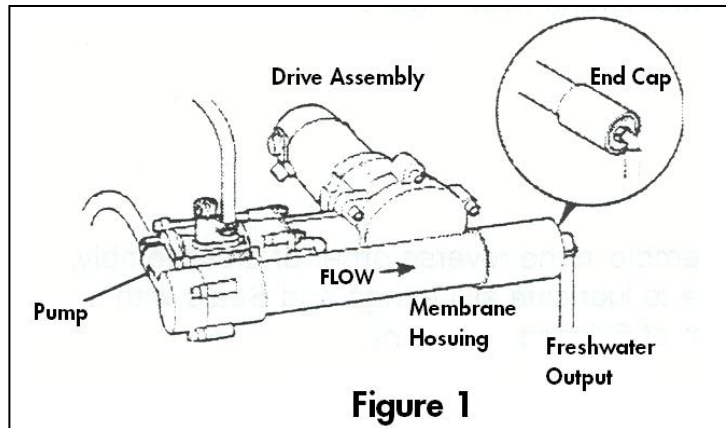
**NOTE:** The brine seal should be on the same end of the membrane as the spacer O-rings. No brine seal should be on the opposite end of the membrane.

5. Insert the reject tube through the membrane element.
6. Slide the membrane housing over the membrane. Screw the housing all the way into the pump collar by hand, but do not overtighten.

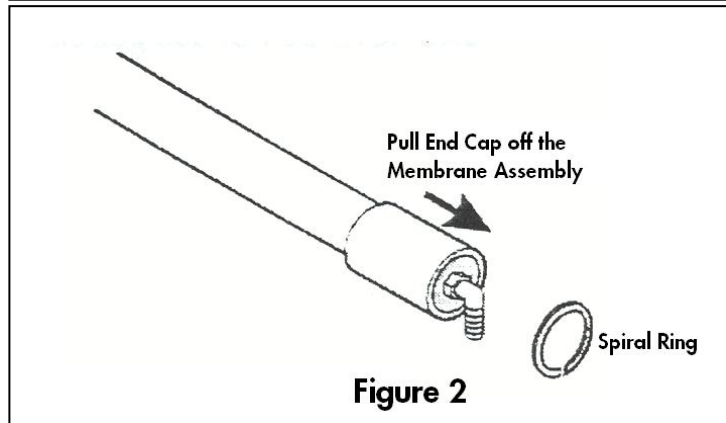


## Model PowerSurvivor 40E

1. If the End Cap has Fresh Water Product Hose attached, remove the Hose (see Figure 1).

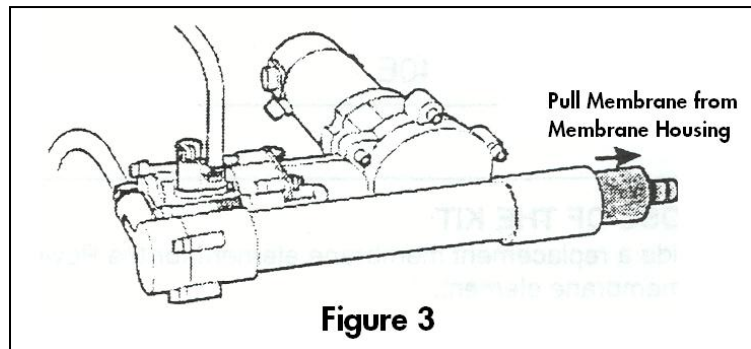


2. Use the flat-head screwdriver to lift the end of the Spiral Ring on the End Cap. Pull the Spiral Ring off (see Figure 2).
3. Remove the End Cap by pulling gently on the Hose Barb and End Cap taking care not to destroy the Hose Barb.



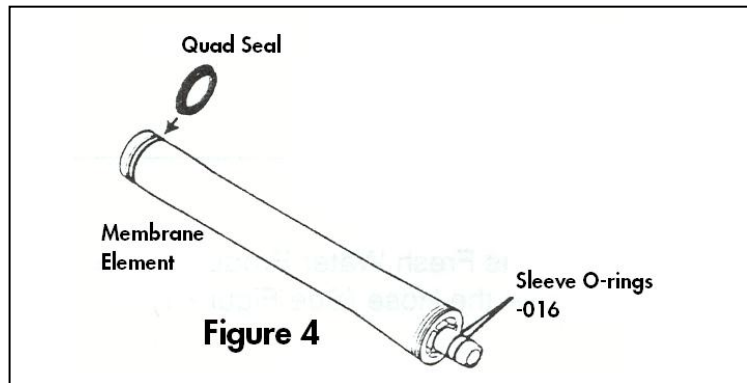
**NOTE:** End Caps may not come off easily. Grasp the Hose Barb gently and pull the End Cap off. It may be necessary to wrap a piece of cloth around the Hose Barb (to protect it), then grasp the base of the barb with the channel lock pliers and leverage the End Cap up and away.

4. With the End Cap removed, gently pull the Membrane Element out the open end of the Membrane Assembly (see Figure 3).



5. **NOTE:** Normally the quad seal is installed on the male end of the membrane element. Remove this quad seal from the male end.
6. **Install the Quad Seal on the end of the Membrane Element farthest from the Fresh Water Product output** (the end where the seawater enters the Membrane) (see Figure 4).

**NOTE:** Only one end of the Membrane Element gets a new Quad Seal.



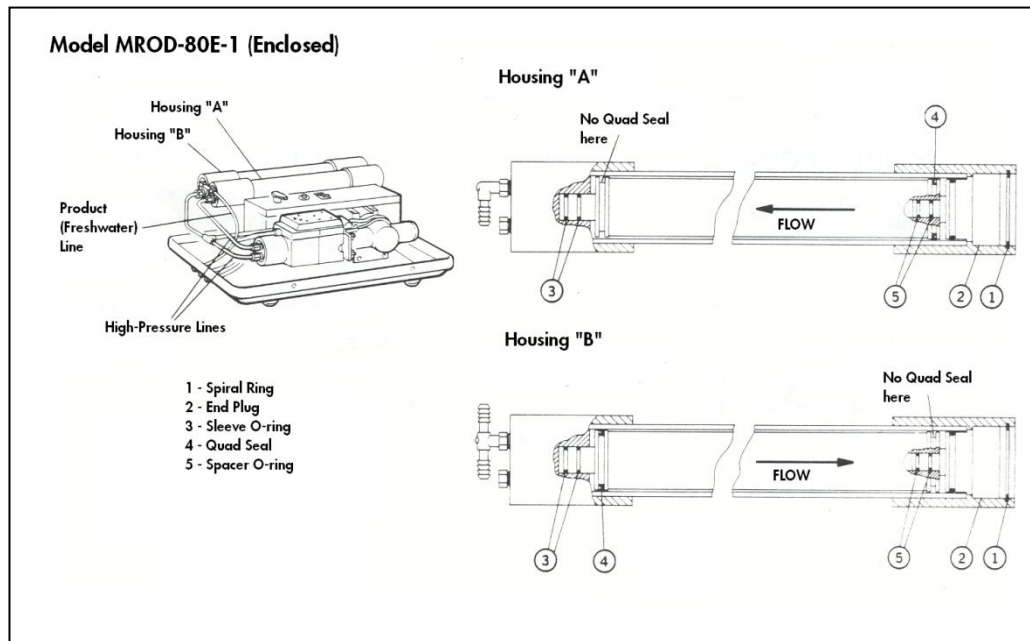
7. Install two new O-rings -016 on the male end of the Membrane (see Figure 4).
8. Reassemble in the reverse order of disassembly. Be sure to lubricate all O-rings and Seals with a thin film of Silicone Lubricant.

**CAUTION:** Do not use petroleum-based lubricants on the O-ring.

## Model PowerSurvivor 80E (Enclosed)

**NOTE:** The membrane elements can be removed from the modules without taking the modules out of the frame. However, if seals in both ends of the module are to be replaced, it will be easier to remove the entire module.

1. With an 11/16-in. wrench, disconnect the high pressure lines from both membrane housings. Remove the product (freshwater) tubing from the fittings on the housing ends.
2. To remove the end cap and product hose connection, use a screwdriver to remove the spiral ring (#1) from the groove in the end cap.



3. Remove the end plug (#2) by pulling carefully on the fittings.
4. If the membrane element stays in the housing, grasp its product tube (3/4 in. diameter white tube with two O-rings) and pull the element out.
5. Install new Quad seals (#4) as shown, on the indicated end of each membrane element. The elements are shipped with new sleeve O-rings (#5) already installed.
6. Reassemble the modules in the reverse order of disassembly.

**NOTE:** Lubricate all O-rings and seals with a thin film of silicone lubricant when the components are reassembled. **DO NOT use** any petroleum-based grease or oil (including petroleum jelly). As they will degrade the membrane.

## Model PowerSurvivor 80E (Modular)

7. With an 11/16 in. wrench, disconnect the high pressure lines from the ends of the membrane housing. Also remove the product (freshwater) tubing from the fittings on the housing end.
8. Use a screwdriver to remove the spiral ring (#1) from the groove in each end cap. Remove both end caps (#2) by pulling on the hose connectors.
9. If the membrane elements stay in the housing, they can be pushed out from either end.
10. The two elements are joined by a connector (#3), which can be removed for replacing its O-rings (#4).
11. Install new Quad seals (#5) as shown, on the indicated end of each membrane element. The elements are shipped with new sleeve O-rings (#6) already installed.
12. Reassemble in reverse order of disassembly.

**NOTE:** Lubricate all O-rings and seals with a thin film of silicone lubricant when the components are reassembled. **DO NOT use** any petroleum-based grease or oil (including petroleum jelly). As they will degrade the membrane.

