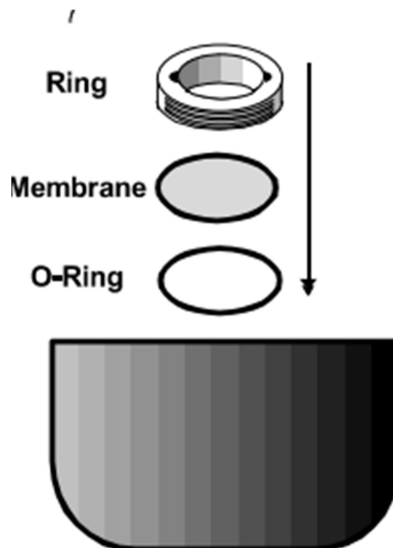


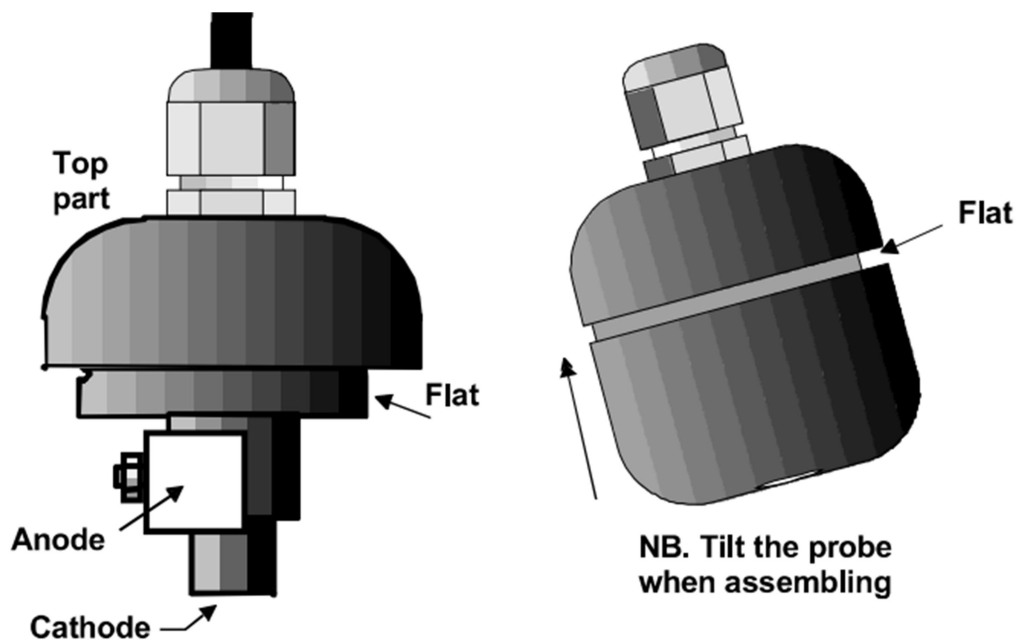
Dissolved Oxygen Renovation and Membrane Replacement Guide

Please follow the steps below to renovate and replace the semi-permeable membrane of the dissolved oxygen probe. Neptune Systems recommends replacing this membrane every 3-6 months, but largely depends on the turbidity of the solution the probe is monitoring. Disconnect the probe from the PM3 Module

1. Rinse the probe, then unscrew the cap. *Note: if the cap sticks, lightly tap the side of the probe gently with a hammer, then try again*
2. Discard the electrolyte solution inside the probe.
3. Clean the inside of the cap and top part of the probe. Clean any brown/black oxide deposits.
4. In heavily used probes the anode and cathode could have oxide deposits as well. If there is significant corrosion use grade 600 sand paper. Do not polish. Rinse and dry if sanding was required.
5. Membrane replacement is completed on that DO probe cap. See the image below and follow these easy steps:
 - a. Unscrew ring and discard old membrane and o-ring
 - b. Thoroughly clean and dry ring and cap
 - c. Place new o-ring and membrane in cap. Make sure that they are concentric in the bottom of the recess and completely flat.
 - d. Screw the ring back into place.



6. To put the probe back together follow these easy steps and use the image below:
 - a. Fill the cap to the brim with electrolyte.
 - b. Locate the flat machine thread on the upper part of the probe
 - c. Lower the upper part into the cap
 - d. Turn the cap half a turn to engage the thread
 - e. Tilt the probe 15° and screw the cap onto the top part of the probe. *Note: Excess electrolyte and air should dribble out the probe.*
 - f. After the cap is secured to the upper part of the probe shake the probe close to your ear. If you can hear the electrolyte splashing around inside the probe, then re-open it, re-fill it and try again.
 - g. When you are certain the probe is filled completely tighten the cap **HARD**.



7. Hang the probe in the air to stabilize for at least an hour before calibration (See the PM3 manual).
8. If possible calibrate it again after a day or two.