

## Replacing Inoxpa Pump Seals



Premier Stainless Systems, LLC

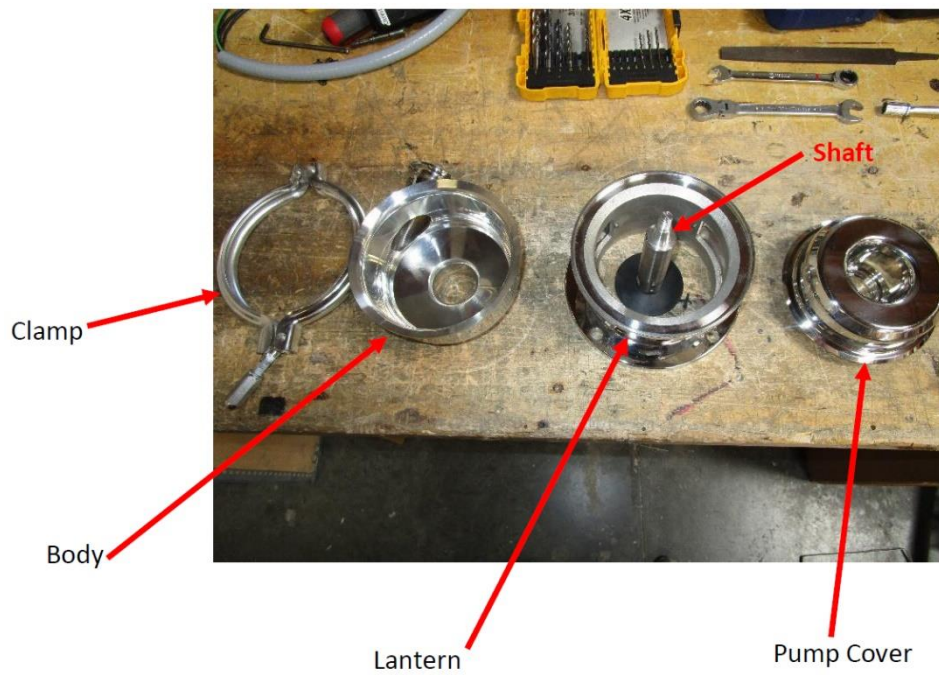
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#### Tools required:

10, 14, and 16mm Sockets and wrench

3mm allen wrench

Seal kit – Head o-ring, mechanical seal, carbon back with rubber seal, cap nut seal.



1. Using the 14mm Socket, loosen the clamp until it is removed from the pump housing.
2. Using the 10mm socket, take off both screws securing the plastic cover off of the lantern.
3. Using the 3mm allen wrench, loosen both lock nuts on the shaft, releasing the shaft assembly from the pump body.



4. Using the 16mm socket, take off the cap nut from the shaft.
5. The impeller blades should come off fairly easy. If they do not want to release from the shaft, put the shaft assembly inside of a 2 inch pipe, with the impeller blades hanging off the side, and lightly use a rubber mallet on the cap nut threaded piece to break the two pieces free.



6. Once both pieces are free, you may take off the old mechanical seal (the gasket with spring) and replace it with the new one. Be sure to face the carbon side DOWN and the large rubber side UP! (see right)
7. You will then want to try and match the top gasket with the ridge on the shaft, the goal is to have the gasket seal against the underside of the impeller once installed.



8. With the Carbon seal and gasket (lower mechanical seal) place it at the bottom of the groove inside of the pump cover, gasket side down. It is important to have the carbon side facing UP!



9. Using a pipe, such as PVC, push down on the lower mechanical seal to get an even distribution of pressure to fit inside of the lower groove. Be sure to not to press too hard or hit with a hammer or mallet as the carbon can crack or break if too much pressure is applied.



10. Ensure there is a good and even seal between the stainless steel and the lower mechanical seal (as seen on right)



11. Push the pump cover back into place, then slide the impeller shaft over the motor shaft, lining up the lock nuts grooves.
12. Install the impeller blades onto the impeller shaft.
13. Hand tighten the cap nut, vaguely securing the impeller blades to the shaft.
14. Before tightening, put a standard business card (or feeler gauges between 0.3- 0.5mm) under the impeller fins, one card under each of the three fins to get an even spacing.
15. Push against the cap nut to maintain the spacing consistently.



16. While pushing against the cap nut to maintain proper spacing, tighten down the two lock nut screws on the impeller shaft. You may want to add blue Loctite to the screws before placing them to lower the likelihood of loosening

Replacement lock nut screws:

<https://www.mcmaster.com/92775a214>



17. Once the set screws are tightened down the impeller blades should be mostly set in place. Tighten down the cap nut with the 16mm socket, securing the placement of the impeller blades, while having a wrench on the shaft to hold the shaft in place.
18. Take out the business cards from behind the impeller blades.





19. If you would like to, you can confirm your spacing is correct with a caliper. The proper spacing should be between 0.3-0.5mm between the back of the impeller to the pump cover.



20. Once the spacing is confirmed correctly, put the body back in place and install the clamp collar around the pump. Using the 14mm socket, start to tighten the clamp nut. DO NOT OVER TIGHTEN! The nut only needs to be tightened until the pump is sealed, not until the nut won't tighten anymore.

\*If you receive an error on your VFD such as E05.4 or OL, most likely the impeller spacing is wrong or the main clamp has been tightened down too much. Loosen the main clamp first a little bit at a time to see if that is the problem first and if the problem continues, check impeller spacing.

