



Turbogenerator Construction

Oil Seals & Fittings

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Next, looking at Figure 1, we see how the oil seal assembly bolts to the lower hot rotor plate.

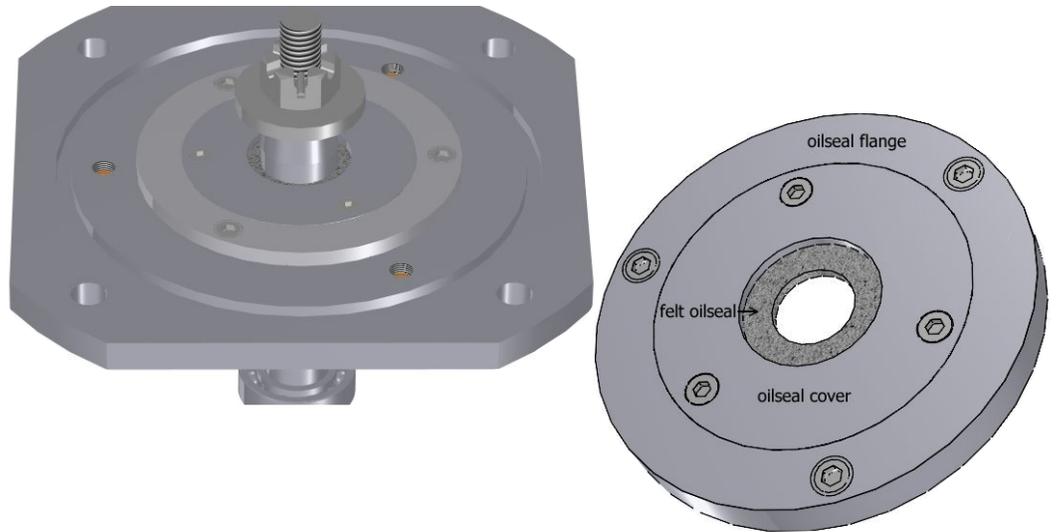
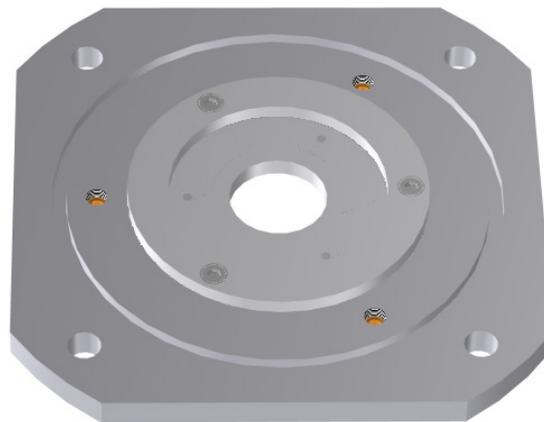


Figure 1 Upper oil seal assembly



We start by applying silicone sealer to either the oil seal flange or the hot rotor plate - where the two pieces fit together.

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Materials you will need:

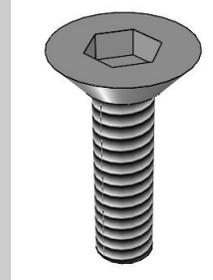
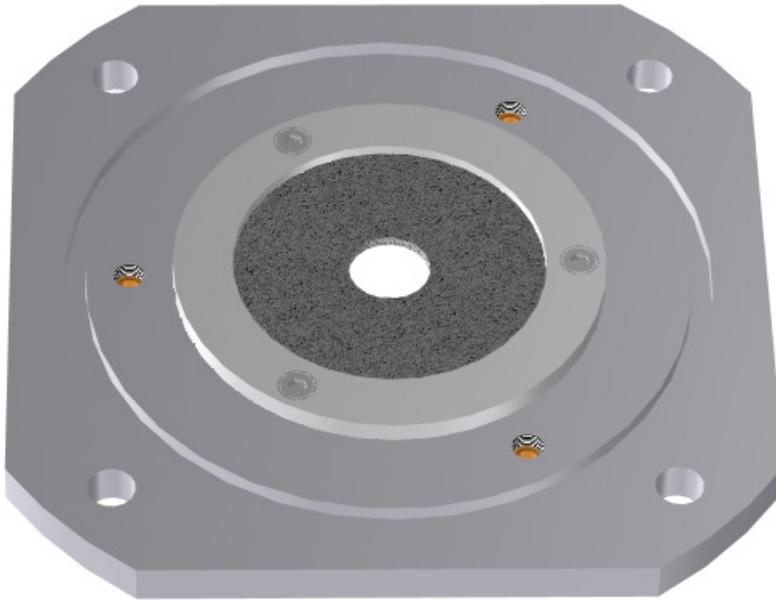
Lower hot rotor plate	Oilseal flange
Felt oil seal	Oilseal cover
Oilseal flange screws	Oilseal cover screws
(3) 1/8" NPT hose barbs	Or (3) 1/8" NPT plugs
Loc-tite	Silicone sealer

Step-by-step:

- Bolting the oilseal assembly to the hot rotor plate
- Installing hose barbs/plugs on bottom of hot rotor plate
- Installing oil fitting hose barbs on hot rotor plate & bearing case

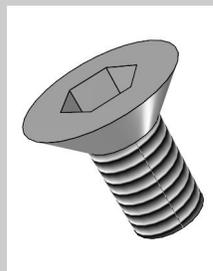
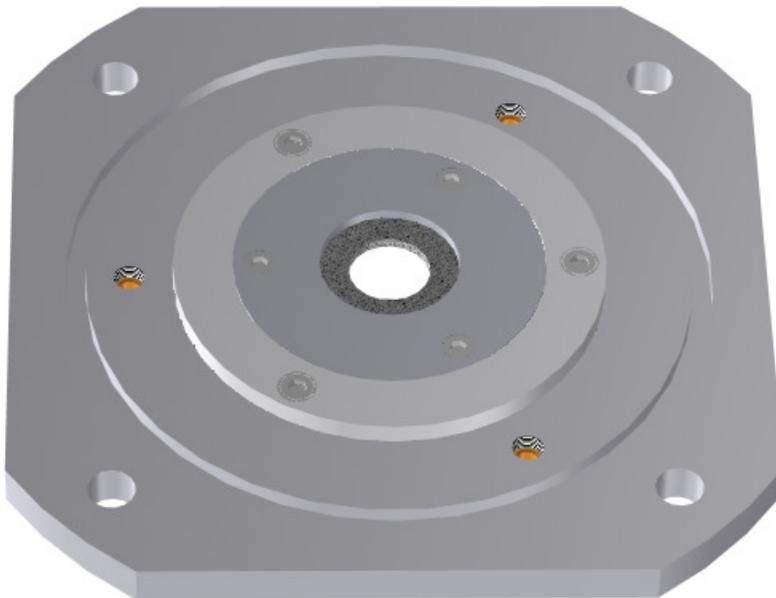
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Secure the flange to the hot rotor plate with the (3) oil seal flange screws.



Oilseal flange screw

Next, drop in the felt oil seal and secure it in place with the oil seal cover and oil seal cover screws. (See the Oiling system assembly to see how these parts fit together.)



Oilseal cover screw

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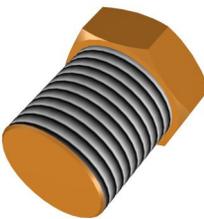
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NPT hose barb

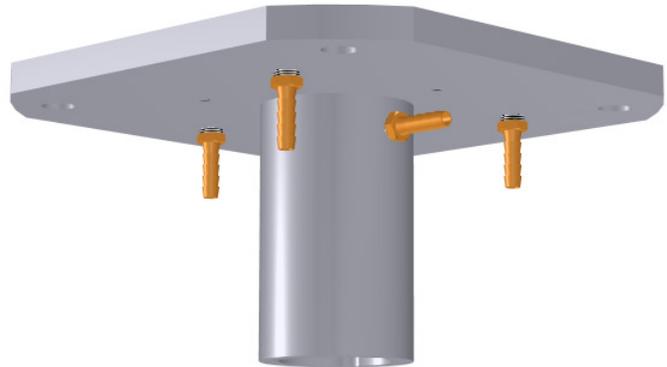
Finish the lower hot rotor plate assembly by installing either the (3) 1/8" NPT hose barbs or the (3) 1/8" NPT plugs on the bottom side of the plate with Loc-tite.

Use hose barbs if your turbo-generator is to be powered by steam. Otherwise, use the pipe plugs for ORC applications.



NPT pipe plug

The oiling system is completed by installing oil fitting hose barbs (drawing #53) on the 90 deg. oil fitting (on the outside of the bottom plate), and on the bearing case.



NOTE:

If you plan on using high pressure ORC, use 1/8" NPT x 1/4" copper tubing flare fittings for the oil connections between the bottom plate and the bearing case.

NEW TURBINE WORKSHOP

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Questions?

Discuss this class on the NTW Forum!

Ken Rieli, expert disc turbine designer/builder & multi-physicist, has developed a hands-on approach to learning about 21st century turbomachinery & how to harness eternal energy sources—Sun, Wind & Biofuels.

Building your own closed-loop solar turbogenerator system is more than a valuable independent study course. Students at the New Turbine Workshop learn about the scientific process as they develop the power of self-determination through Liberation technologies.