Azimuth Hydrostatic Oil Bearing

June 14, 2021, P. Gabor et al.

Location: Basement

> **USE HEARING PROTECTION PROVIDED IF STAYING TO OBSERVE OPERATION OF PUMPS (muffs are by light switch)**

- 😃 The oil must be kept close to optimal viscosity. This is done by heaters and chillers. The chillers are either on or off; the control loop cannot influence their cooling power. The control loop acts on the heaters.
- 😃 The automated system is programmed to run only a single chiller even if that is insufficient to keep the oil close to its optimal temperature of 61°F.
- 😎 Check the oil temperature actual. If it is already higher than 65°F, you will need to start the other chiller manually (see below).
- STEP ONE (labeled as such): Pull out red switch, upper left corner of control box
- After recirculation pump starts, check flow meter by oil tank
- Check that one chiller is "ON" (green indicator) (alternates between chillers #1 & #2, each on/off cycle)
- When needed (see above), start the **other** chiller manually (the *other* chiller = the chiller not started by the automated system in STEP ONE): go to the tanks by the south wall, and flip the Auto/Manual switch on the *other* chiller, and push its "ON" button
- Check oil temp set point (61°F)
- Check oil temp actual (should rise immediately after recirculation pump starts, then settle at or very slightly above set point)
- Check oil level light "OK" (if it's going to go out because of low oil level, it will do so after recirculation pump and/or pressure pumps have been started. May come back on after more running, as oil returns from azimuth bearing)
- STEP TWO (labeled as such): Rotate pumps switch clockwise to "ON"
- Check low side (feed pump) pressure rising
- WAIT FOR HIGH PRESSURE PUMP TO START
- Check high pressure side: pressure and flow "OK" after running awhile
- *Hydrostatic-bearing oil system is now active*

- Turning off the *other* chiller: If both chillers were running, at the end of the night (or at any time if useful or necessary), turn off the *other* chiller with its "OFF" push button, and revert its Auto/Manual switch to "AUTO".