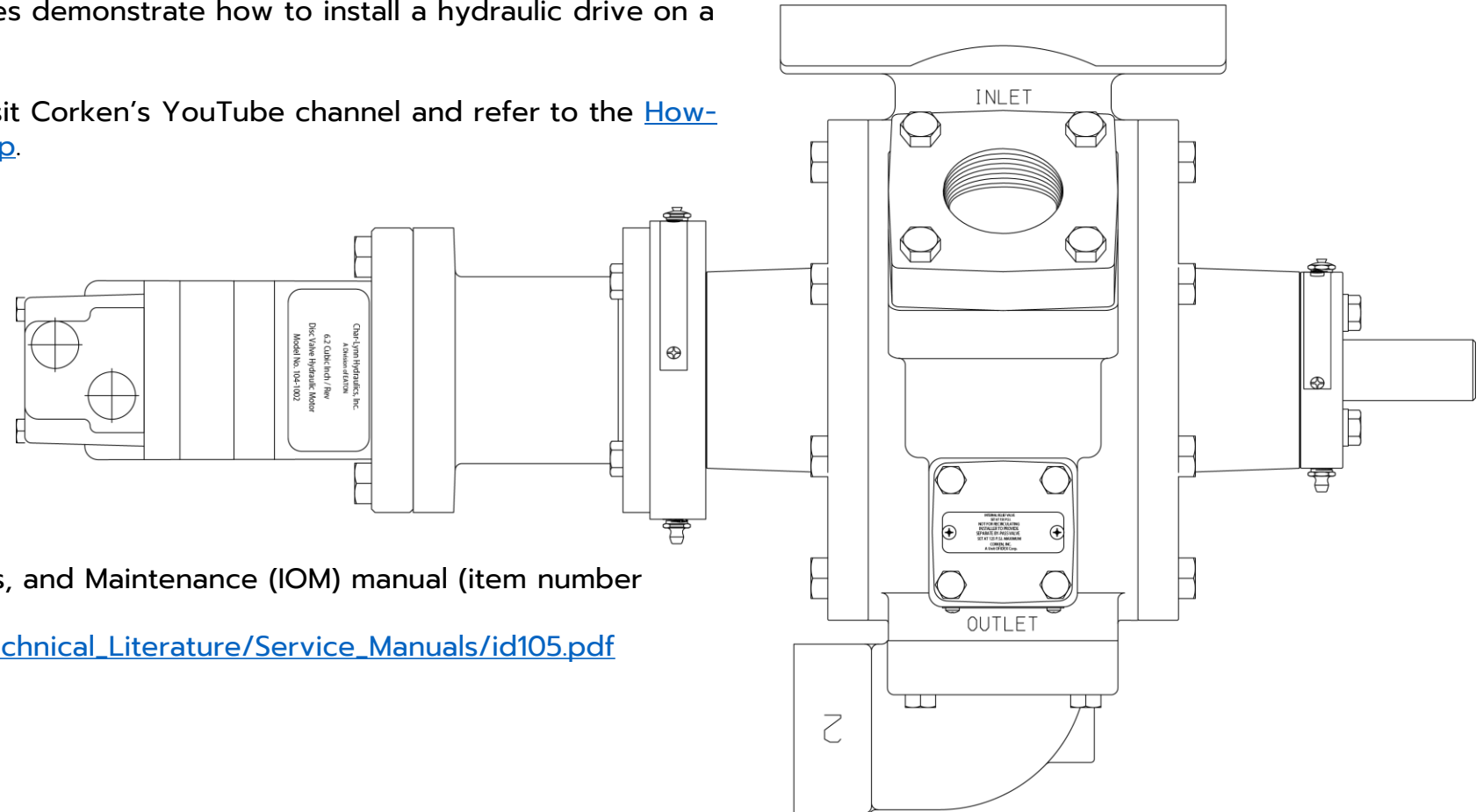


How To Install a Hydraulic Drive On a Z-Series Pump

- The instructions on the following pages demonstrate how to install a hydraulic drive on a Z-Series sliding vane pump.
- For detailed shimming instructions, visit Corken's YouTube channel and refer to the [How-To video on shimming a Z-Series pump](#).



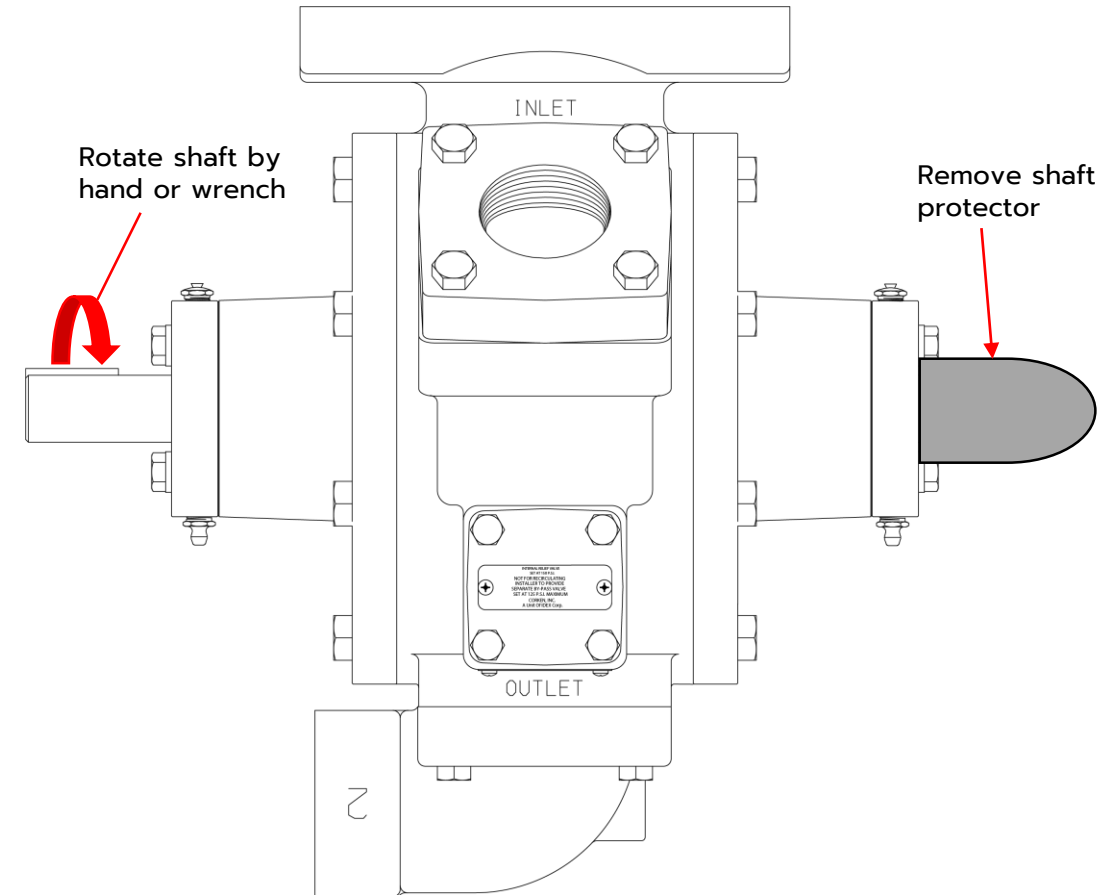
- Or, consult the Installation, Operations, and Maintenance (IOM) manual (item number ID105) on Corken's website:
https://www.corken.com/CMS_Files/Technical_Literature/Service_Manuals/id105.pdf

Step One: Select a Side for the Hydraulic Drive

- Determine which side of the pump is best suited for the new hydraulic drive and temporarily remove the plastic shaft protector.
- The shaft protector will be re-installed after installation of the hydraulic drive is complete.

Step Two: Rotate Shaft, Determine Resistance

- Rotate the pump shaft by hand or with a wrench and determine the resistance needed to rotate the pump. A similar amount of resistance is required with the new hydraulic bearing cap.



Step Three: Remove Std. Bearing Cap.

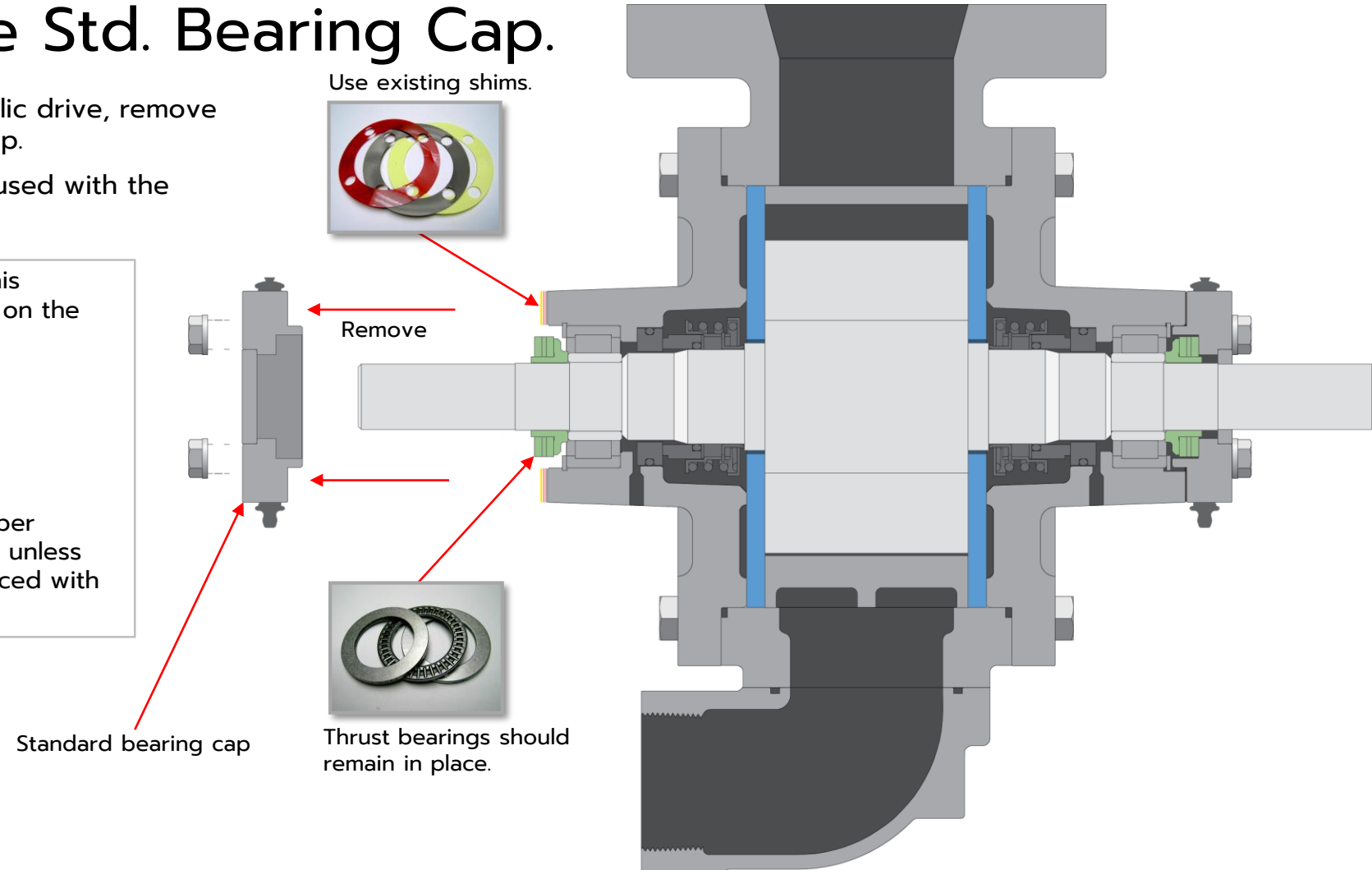
- After selecting a side to mount the hydraulic drive, remove the four bolts and the standard bearing cap.
- All existing shims and thrust bearings are used with the new hydraulic drive.

NOTE: Even though three shims are shown in this example, the quantity of shims can vary based on the stacking order of each pump.

Shim Thickness:

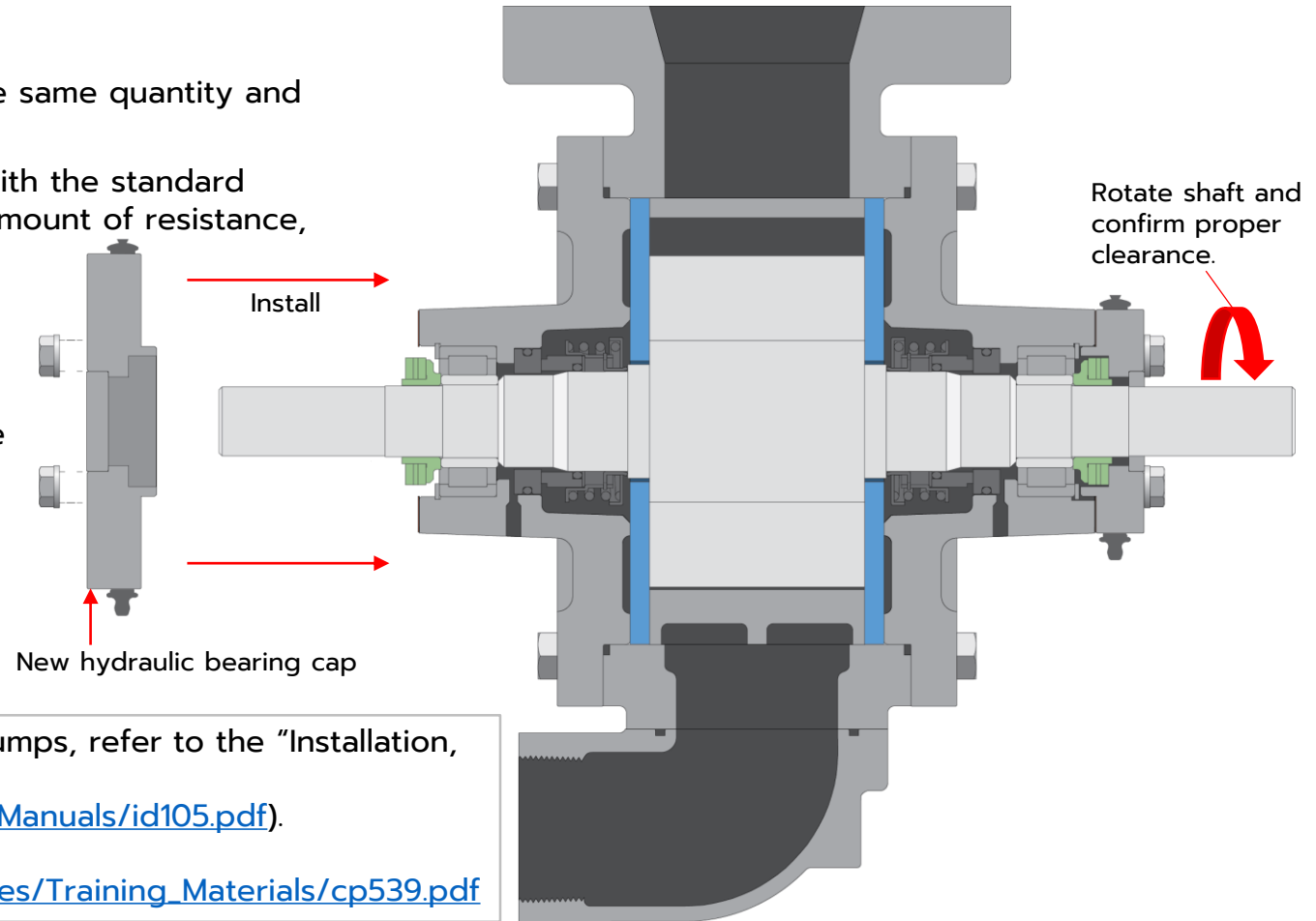
- Red = 0.002"
- Brown = 0.010"
- Yellow = 0.020"

Typically, using the same shims will set the proper clearance between the bearings and sideplates unless the case, head, or rotor shaft assembly is replaced with a new one.



Step Four: Install New Hydraulic Bearing Cap and Confirm Proper Shim Clearance.

- Bolt the new hydraulic bearing cap to the pump head using the same quantity and color of shims as before and tighten the four bolts.
- Rotate the shaft and compare the amount of resistance used with the standard bearing cap. If the shaft rotates with approximately the same amount of resistance, no additional shims are required.
- If the shaft is more difficult to rotate than before, remove the hydraulic bearing cap and add one red shim (0.002" thickness). This typically sets the proper clearance.
- Re-tighten the hydraulic bearing cap and rotate the shaft. If the resistance is close to the resistance with the standard bearing cap, proper clearance has been achieved.
- If the shaft is still difficult to rotate, add a second red shim. Re-install the hydraulic bearing cap and compare the resistance. If it is close to the resistance of the standard bearing cap, no additional shims are required.

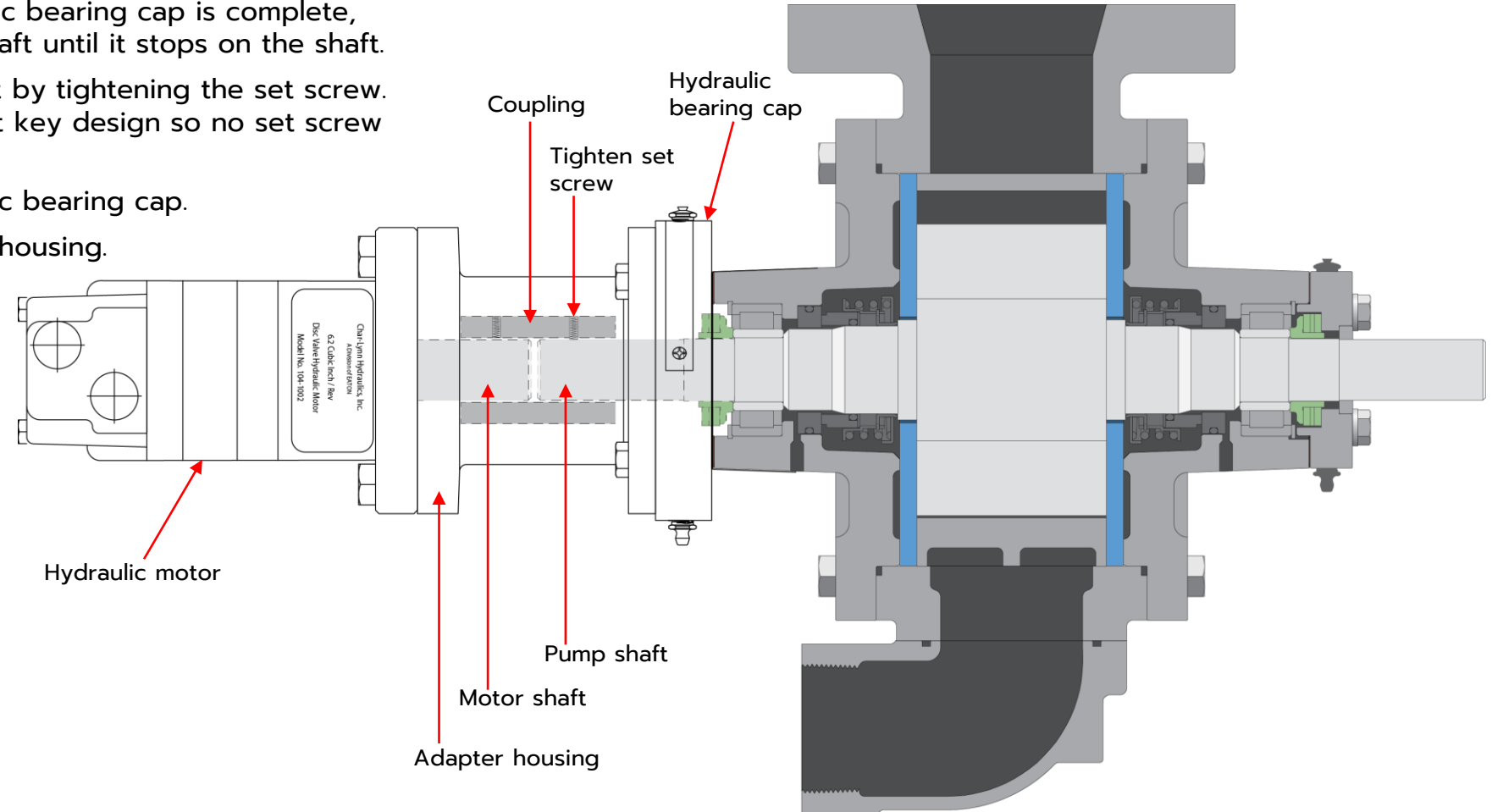


NOTE: For a complete set of shimming instructions for Z-Series pumps, refer to the "Installation, Operation & Maintenance (IOM) manual (https://www.corken.com/CMS_Files/Technical_Literature/Service_Manuals/id105.pdf).

For additional training materials, https://www.corken.com/CMS_Files/Training_Materials/cp539.pdf

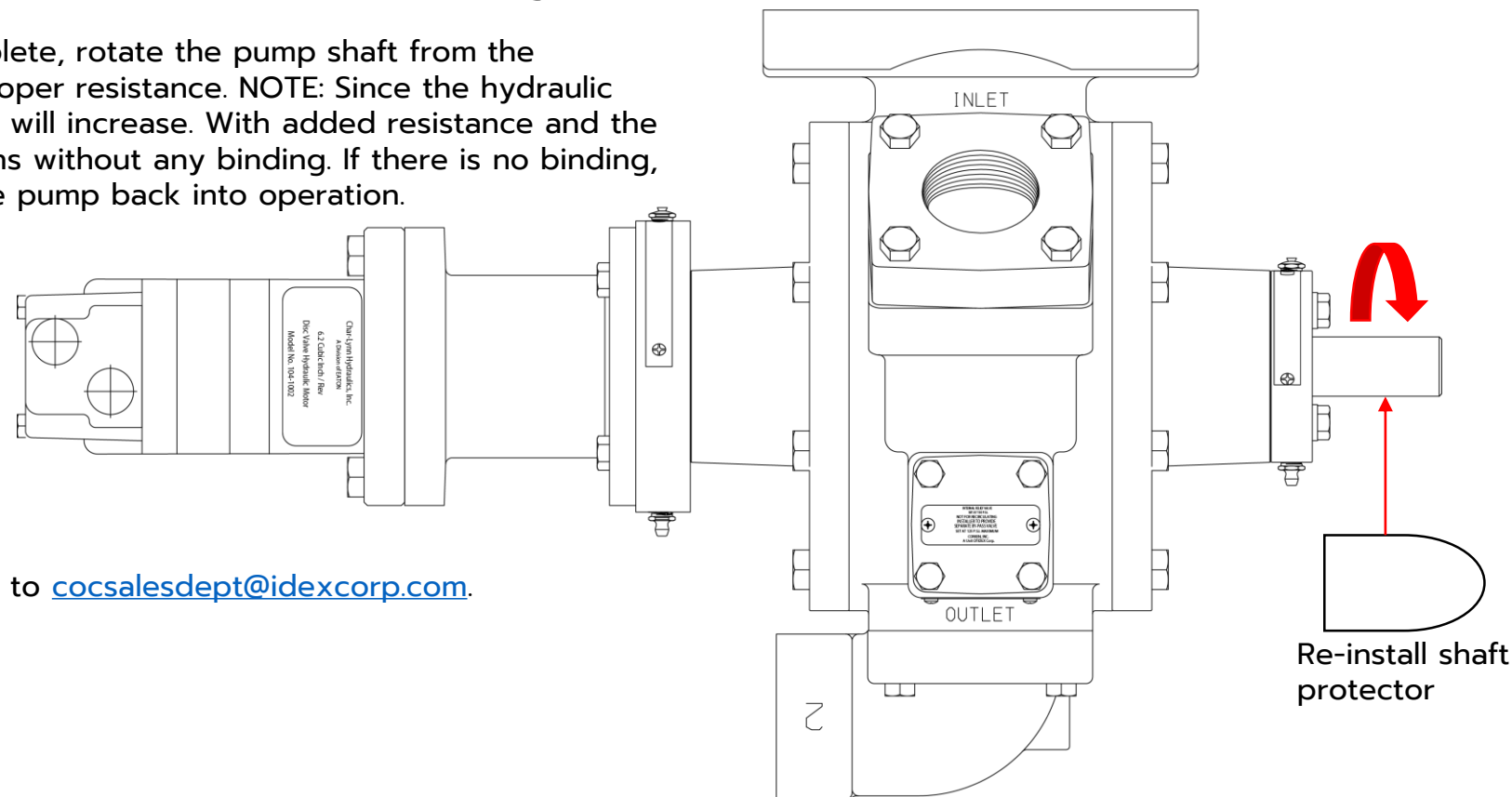
Step Five: Install the Coupling, Adaptor Housing, and Hyd. Motor.

- After installation of the new hydraulic bearing cap is complete, slide the coupling over the pump shaft until it stops on the shaft.
- Lock the coupling to the pump shaft by tightening the set screw.
Note: The motor shaft utilizes a shaft key design so no set screw is required.
- Bolt adapter housing to the hydraulic bearing cap.
- Bolt hydraulic motor to the adaptor housing.



Step Six: Confirm Shaft Rotates Freely One Last Time

- After installation of the hydraulic drive is complete, rotate the pump shaft from the opposite side one last time and confirm the proper resistance. NOTE: Since the hydraulic motor is also turning, the amount of resistance will increase. With added resistance and the help of a wrench or tool, confirm the shaft turns without any binding. If there is no binding, re-install the shaft protector before placing the pump back into operation.



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