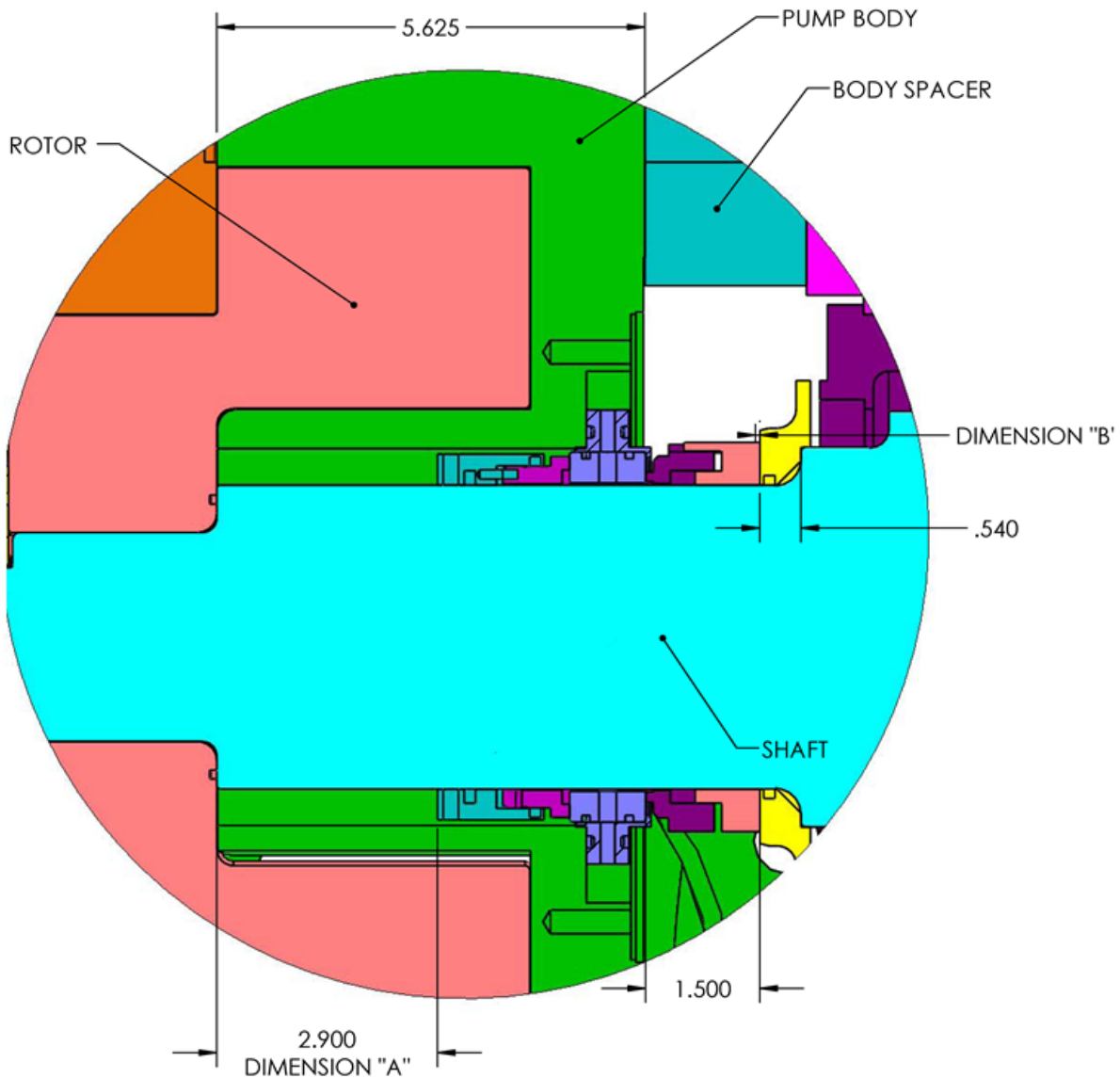


## Determining W420/423 Double Seal Setting

- 1) Measure body thickness from body face to gearbox mounting. Your dimension should be 5.625" or less.



- 2) See table below to determine proper seal setting for inner and outer seal. Due to the seal setting flexibility, the seal setting is calculated in .015" increments.




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## ZM TECHNOLOGIES

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### W420 Relaxed Seal Setting Table - OEM Retainers

New Body Length	Up to Actual Measurement	Difference	Std Shaft Step to Back Inner Seal	Dimension "A"	Dimension "B"
5.625	5.595	0.030	2.900	No Change	No Change
5.625	5.580	0.045	2.900	2.855	0.045
5.625	5.565	0.060	2.900	2.840	0.060
5.625	5.550	0.075	2.900	2.825	0.075
5.625	5.535	0.090	2.900	2.810	0.090
5.625	5.520	0.105	2.900	2.795	0.105

### W420 Relaxed Seal Setting Table - HD Retainers

New Body Length	Up to Actual Measurement	Difference	Std Shaft Step to Back Inner Seal	Dimension "A"	Dimension "B"
5.625	5.595	0.030	2.775	No Change	No Change
5.625	5.580	0.045	2.775	2.730	0.045
5.625	5.565	0.060	2.775	2.715	0.060
5.625	5.550	0.075	2.775	2.700	0.075
5.625	5.535	0.090	2.775	2.685	0.090
5.625	5.520	0.105	2.775	2.670	0.105

- 3) Lubricate shaft o-ring and slide outer seal onto shaft. Use feeler gauges to set outer seal off of pump seal slinger (slinger length, on shaft step, only is .540), Dimension "B".
- 4) Carefully slide stationary seat with outer gasket onto shaft until outer seal face is touching the stationary seat face. A little silicone lubricant on gasket will help hold the gasket in place.  
**NOTE:** Take care not to drag and touch shaft during installation as this might result in damaging the seat.
- 5) Lubricate shaft o-ring and slide inner seal onto shaft. Use seal setting distance from table to determine proper inner seal location, Dimension "A". **NOTE:** Seal setting tool will need to be relaxed by dimension indicated in table. Use calipers or a dial indicator to measure when relaxing seal setting tool after seal is fully compressed.



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- 6) Tighten all set screws on the inner and outer seals. **NOTE:** *Tighten set screws in a circular pattern. Tighten first set screw completely tight, then tighten set screw next the first completely tight. Direction for next screw does not matter. Repeat twice until all set screws are tightened. DO NOT over tighten set screws.*
- 7) Center stationary seat in relationship to the inner seal face. **NOTE:** *Not centering seat will result in damage to seat upon pump body installation.*
- 8) Measure distance from seal retainer back face to shaft step, Dimension "A", to double check the inner seal proper location.
- 9) Place inner gasket upon stationary seat. A little silicone lubricant on gasket will help hold the gasket in place.
- 10) Carefully slide body on to studs and push into position. **NOTE:** *Take care not to damage stationary seat and the position of the inner and outer gaskets.*
- 11) Tighten the four hex cap screws until body is tight against the gearbox.
- 12) Position the outer gasket to align flush and bolt holes. Align the seal gland with the bolt holes and tighten the 12x 3/8" bolts (6x per gland). Follow normal star pattern tightening process. Bolts should be fully tighten after three rounds through the tightening process. **DO NOT** over tighten. **DO NOT** tighten completely on one pass.

Your seal installation is now completed.