

# How to service a CAT310 Pump

## Tools required: Socket Seal Case Tool (Part # DH88596)

- > Reverse Pliers
- > M8 Allen Key
- > Regular Screwdrivers
- > Socket Set & Long Nose Pliers



Steps 1 – 9 are best done with the pump secured in a vice.



Remove the hex Valve Plugs (top discharge, bottom inlet)



Examine the O-Ring under the Valve Plug for cuts or distortion and replace if worn. Do not lubricate this O-Ring when re-installing



Grasp Spring Retainer by tab at the top with pliers and remove from valve chamber. Check internals of valve for any damage to floating disc or Valve Seat. Replace if necessary



Examine the Valve O-Ring for cuts or distortion and replace if worn. Lubricate the new O-Rings before installing on the manifold



Remove the Allen key bolts on each side of the manifold



Separate Manifold Head from crankcase by turning the shaft, insert 2 screwdrivers in gap and pry Manifold Head forward until it comes off



Remove pump from vice and place manifold head in vice. Remove Lo- Pressure Seal from manifold head and discard.



Remove Seal Case from each seal chamber. Remove O-Ring from outside diameter of Seal Case and discard. Be careful not to damage the brass case.



Remove Hi-Pressure Seal from manifold head and discard



## Correct Seal arrangement

- > Lo-Pressure Seal
- > Brass Seal Case
- > High Pressure Seal

## Spare Parts Required

- |         |                                   |
|---------|-----------------------------------|
| DH88422 | CAT 310 Seal Kit                  |
| DH88472 | CAT 310 Valve Kit (need x 2 sets) |
| DH88597 | CAT 310 Seal Case Brass           |
| DH88609 | CAT Piston Back Up Ring           |
| DH88612 | Cat Seal& Adaptor Retainer Set    |

## How to service a CAT310 Pump (continued)



11  
Carefully square Hi-Pressure Seal into position by hand with the **grooved side down**



12  
Install new Seal Case O-Ring and lubricate before installing



13  
Lo-Pressure Seal must be installed with **Garter Spring side down**. The down direction is facing the front of the manifold



14  
Install Lo-Pressure Seal into each seal case with **Garter Spring down**



15  
Remove oil pan and seal retainer with wick



16  
Using an M12 socket, loosen the plunger retainer and remove for inspection. Be careful not to loosen conrod.



17  
Inspect O-Ring and Back-Up Ring for wear and replace if needed. Examine Ceramic Plunger for scoring, scale build up, chips or cracks and replace if needed



18  
Install new Gasket, then O-Ring, then Back-Up onto each Plunger Retainer and tighten to the recommended torque



19  
Install the Seal Retainer with new Wick onto each plunger rod **with tab down and wick out**.



20  
Rotate Crankshaft by hand so the two outside plungers are extended equally



21  
Lightly lubricate the Ceramic Plungers, then carefully slide the Manifold Head over the Ceramic Plunger supporting it from the underside to avoid damage to the Ceramic Plungers or Seals. Install the 2 Allen key bolts and tighten to recommended torque.