6DX Pumps
Service Sheet: Seal Repair

This sheet covers replacing the seals on a 6DX pump. Most of the information here was taken from the CAT Pumps Service Manual for this pump. We have included some helpful hints where we thought it would be appropriate.

Notes before beginning:

1.) This repair sheet assumes that the pump has been removed from the pressure washer.
2.) This should go without saying, but make sure everything is turned off on your pressure washer before working on it. Turn off the gas engine or unplug the electricity. Turn off the water supply. Disconnect both the garden hose and the high pressure hose.
3.) We highly suggest that you replace all the seals at the same time. These are wear parts that are under a lot of stress while the pump is running; if one part has gone bad, the rest are probably on their way out as well.

Figure 1 – Pump head and seals

Figure 2 – Seal Kit IPF CT34262

SERVICING THE SEALS

Disassembly

1. Using a M6 allen wrench, remove the eight Hex Socket Head (HSH) screws from the face of the Manifold Head.
2. Insert flat head screwdrivers on each side between the Crankcase and Manifold Head. Gently apply pressure to the head to begin separation.

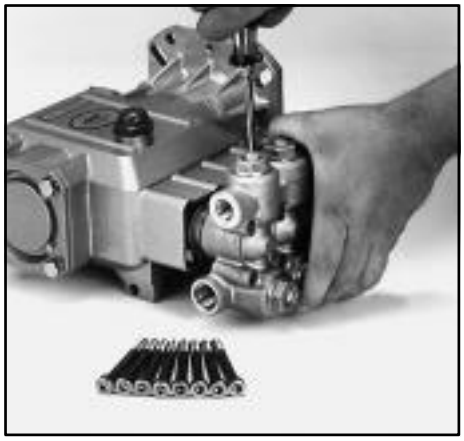

Figure 3: Removal of Seal Case and Lo-Pressure Seal

3. Support the Manifold Head from the underside and pull the Manifold Head *straight* away from the crankcase.

CAUTION: Keep the Manifold Head properly aligned with the Ceramic Plungers when removing to avoid damage to the plungers.

NOTE: The Seal Case may stay in the manifold or on the plungers.

4. Place Manifold Head on work surface **with crankcase side up**.
5. Use a screwdriver to pry out the Lo-Pressure Seal from each Seal Case.

CAUTION: Screwdriver will damage seal during removal.

6. Use reverse pliers to remove Seal Case from each seal chamber.

NOTE: Insert the reverse pliers into the second lip to avoid damage to the Seal Case.

Figure 4: Removal of Seal Case and Lo-Pressure Seal

7. Carefully insert a small screwdriver under the O-Ring and roll the O-Ring off each Seal Case.

CAUTION: Exercise caution as the screwdriver may score O-Ring sealing surface.

8. Remove V-Packing and Male Adapter from each seal chamber by hand or with reverse pliers.

Reassembly

NOTE: If you are replacing the seals, go to step 6. If you are examining for wear, follow steps as outlined below.

1. Examine the manifold chamber walls for scale buildup or damage.
2. Examine V-Packings for frayed edges or uneven wear and replace as needed.
3. Examine Seal Case O-Rings for cuts or deterioration and replace as needed.
4. Examine Lo-Pressure Seals for wear to the internal ridges and outer surfaces or for broken springs and replace as needed.
5. Examine Seal Retainers for deformation and replace as needed.
6. Lubricate and install Male Adapter with notch side down. Lubricate and install new V-Packing by hand into seal chamber with grooved side down.

Figure 5: Reassembly of V-Packings

7. Lubricate and install O-Ring on each Seal Case. Press small end of Seal Case into each seal chamber.
8. Lubricate and press new Lo-Pressure Seal into each Seal Case with the garter spring down.
9. Examine Ceramic Plungers for scoring, scale buildup, chips or cracks and replace as needed.
10. Slide Seal Retainer over each Ceramic Plunger with the openings to the top and bottom. Press into the Crankcase.
11. Rotate crankshaft by hand so the two outside plungers are extended equally.
12. Lightly lubricate Ceramic Plungers, then carefully slide the Manifold Head over the Ceramic Plungers, supporting it from the underside to avoid damage to the plungers or seals. Press the Manifold Head flush with the Crankcase.
13. Thread HSH screws in hand tight. Torque in sequence to specifications in torque chart (11 ft. lbs.).