

REPAIR INSTRUCTIONS - Model LP750

VALVE REPLACEMENT

- 1) **Discharge Valves:** Screw out tension plugs (50). take the spring tension cap (44A) out of the exposed discharge valve with flat nose pliers. Remove the valve seat (44D), if necessary with an M12 screw (screwing it into the M12 thread).
- 2) If the valve is extracted as a complete unit, position a screwdriver through the recess in the spring tension cap and press down on the valve plate to gently lever the valve apart.
- 3) Check parts and replace if worn. Tighten plugs (50) at 107 ft.-lbs. (145 Nm).
- 4) **Suction Valves:** Unscrew 8 nuts (47), remove valve casing (45) from seal sleeves (35). Using two screwdrivers, pry out seal case (42) from valve casing. Remove spring tension cap (44A) with flat nose pliers. Remove the valve seat (44D), if necessary with an M12 screw (screwing it into the M12 thread). Check parts, and replace if worn.

NOTE: the leakage seal (39) with its 3mm bores must be positioned on to the notched pins (35A) situated on the seal sleeve. Make sure the cutouts in the leakage seal are placed exactly over the bores of the seal sleeve (35) and that the drip return bores in the valve casing are also free, to ensure trouble-free drip return.

- 6) Secure valve casing by tightening nuts (47) evenly to 59 ft.-lbs. (80 Nm).

SEAL AND PLUNGER REPLACEMENT

- 1) Unscrew the 8 x nut (47), remove valve casing by pulling it out to the front. Remove seal sleeve (35). Remove tension spring (38A) and seal parts (36-38) from seal sleeve. Check plunger surface (29) and seals (37). Replace worn parts.
- 2) After removing clipring (32) and support ring (33), check weep seal (33A) and replace if necessary.
- 3) If the surface of the plunger is worn, screw out the plunger (29) with a 13mm wrench. Clean centring and front surface of crosshead with plunger base (25).
- 4) Thread new plunger (29) carefully through oiled seals in seal sleeve (35). Coat thread of new plunger lightly with suitable bonding agent (locktite).
- 5) Then insert seal sleeve (35) with plunger (29) into crankcase guide. Turn crankshaft until plunger with crosshead (25) pushes against plunger (29). Tighten plunger (29) to 22 ft.-lbs. (30 Nm) using a 13mm torque wrench.

NOTE: The leakage seal (39) has to be installed so that its cut-outs cover the 3 mm dia. bores of the seal sleeves (35) as well as the 3 mm dia. drip-return bores of the valve casing (45).

DISASSEMBLY OF CRANKCASE

- 1) Remove valve casing (#43) and plunger pipe (#28B), drain oil.
- 2) Screw off gear cover (#4) and bearing cover (#14).
- 3) Remove connecting rod screws (#24) and push the front of connecting rod forward as far as possible. Remove back halves of connecting rods, note which position from which they came from.
- 4) Turning the crankshaft slightly, carefully hit on side of crankshaft (#22) with a rubber mallet until crankshaft is loose.
- 5) Check crankshaft and bearing for damage, replace if needed.

REASSEMBLY

- 6) Using a soft tool, press in the outer bearing ring until the outer edge lines up with the outer edge of crankcase (#1). Attach bearing cover (#14) with shaft seal and o-ring (#16) in place. Fit crankshaft through bearing hole on the opposite side. Press in bearing with bearing cover, keeping the shaft in a horizontal position and turning it slowly so that taper rollers touch the edge of outer bearing ring.
- 7) Adjust axial bearing clearance to at least .004" (0.1mm) and maximum at .006" (0.15mm) by placing fitting discs (20A & 20B) under the bearing cover.
- 8) After assembly, the shaft should turn easily with very little clearance.
- 9) Bolt connecting rod halves together making sure they are replaced in the same position from which they came from. Tighten connecting rod screws to 22 ft.-lbs. (30 Nm).