Repair Instructions - LP601

To Check Valves

Lossen and remove tension plugs (48) with a 36 mm socket wrench. Check o-ring (44A) and support ring (448). Take out spring (45).
Take out discharge valves (46), pulling them upwards out of the valve casing with snap-ring tongs or any other pull-off device. Then remove suction valves in the same way. Check sealing surface and replace worn valve assemblies.
Reassemble with new o-rings if possible and oil them before installing. Tighten tension plugs (48) at 107 ft.-lbs. (145NM).

To Check Seals and Plunger Pipe

Unscrew the a nuts (49A) and pull off valve casing to the front. Pull seal sleeves (35) out of guides in crankcase. With the help of 2 screwdrivers, pry out seal case (37) from seal sleeve (35).
Check plunger surfaces (29B) and seals (36/40).
Replace worn seals.
If plunger pipe is worn out, remove tension screw (29C) and pull out of plunger pipe to the front. Clean front surface of plunger (25) carefully. Then place new plunger pipe carefully through the oiled seals and push seal sleeve with plunger prpe into the crankcase guide. Tum gear until the plunger (25) comes up against the plunger pipe. Put a new copper gasket (29D) onto tension screw (29C). Apply a thin coat of bonding agent (Loctite) to the thread of the tension screw and to the gasket. Tighten screw to 265 in.-lbs. (30NM).

Important! Care must be taken that no glue gets between the plunger pipe (29B) and the centring sleeve (29A). The plunger pipe should not be strained by excessive tightening of the tension screw or through damage to front surface of plunger, otherwise it will probably break. Tighten the fixing nuts (49A) for the valve casing evenly at 59 ft.-lbs. (80NM).

To Dismantle Gear

Remove the a nuts (49A) and pull off valve casing to the front. Pull seal sleeves (35) out of guides in crankcase. Remove plunger pipe (298). Unscrew plug (12) and drain oil. Remove gear cover (4) and bearing cover (14). Remove connecting rod screws (24) and push the front of the connecting rod forward as far as possible into the crosshead guide.

Important! Connecting rods are marked for identification. Do not twist connecting rod halves. Connecting rod is to be reinstalled in the same position on shaft journals. Turning the crankshaft slightly, hit it out carefully to the side with a rubber hammer.

Important! Do not bend the connecting rod shanks. Check shaft and connecting rod surfaces, shaft seals and taper roller bearings.

To Reassemble

Using a soft tool, press in the outer bearing ring till the outer edge lines up with the outer edge of the bearing hole. Screw on bearing cover together with shaft seal and o-ring. Fit shaft through bearing hole on the opposite side. Press in outer bearing ring and tension it inwards with the bearing cover, keeping the shaft in vertical position and turning slowly so that the taper rollers of the bearings touch the edge of the outer bearing ring.
Adjust axial bearing clearance to at least 0.1mm and maximum 0.15mm by placing fitting discs (20A/B/C) under the bearing cover.

Important! After assembly has been completed, the shaft should turn easily with very little clearance. Tighten connecting rod screws at 25.8 ft.-lbs. (35NM)