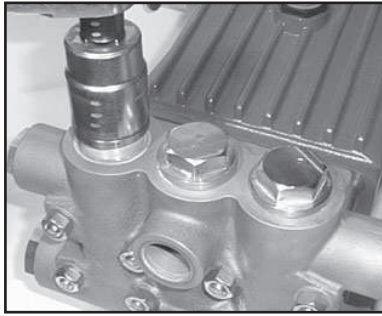
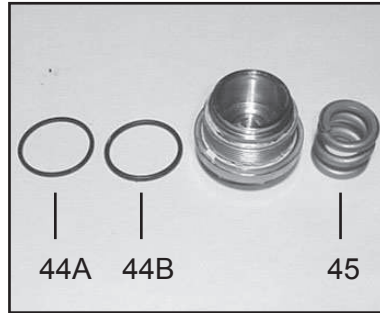


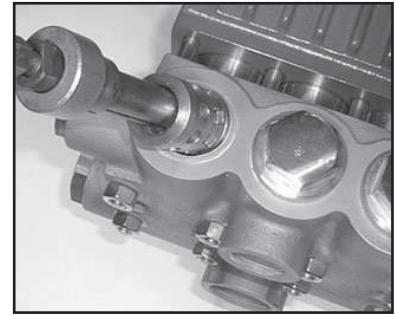
LP121A-5100, LP200-5100, and LP250-5100 - Repair Instructions



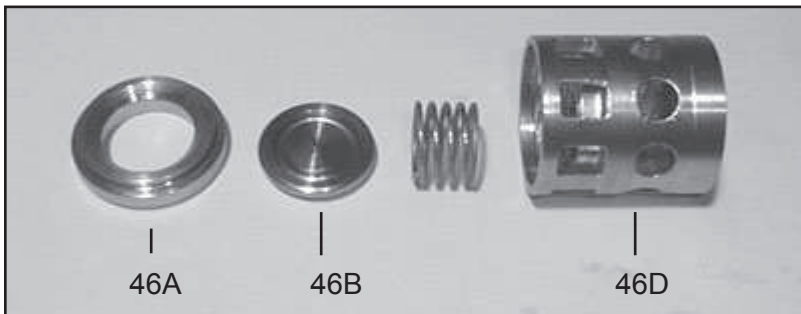
1. With a 30mm wrench, remove the 3 plugs (48).



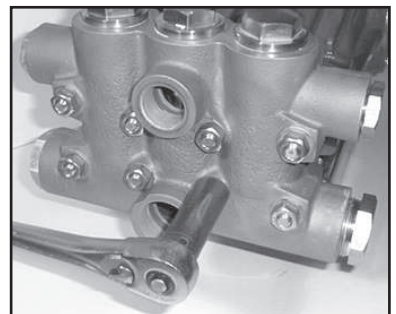
2. Remove the compression spring (45), O-rings and support rings (44A & 44B).



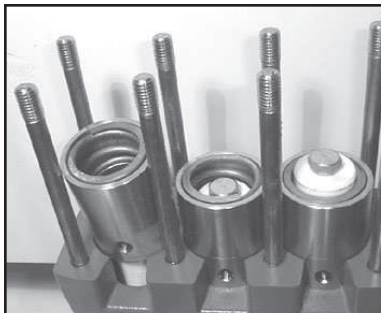
3. Remove the complete valve assembly (46A-46D) with valve pullers.



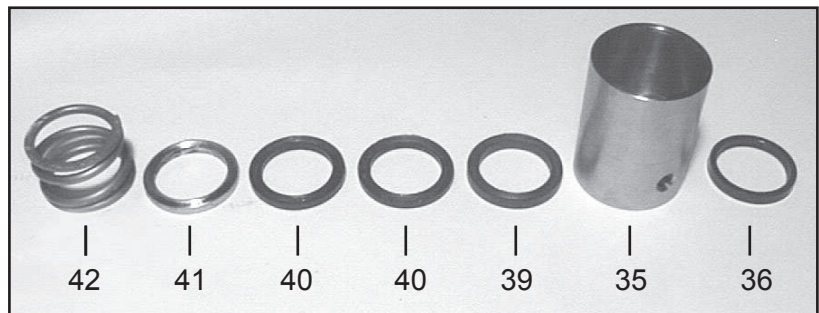
4. Loosen valve seats (46A) from spacer pipe (46D) by lightly hitting the valve plate (46B) with a plastic stick. Check sealing surface and replace worn parts. Reassemble with new O-rings (44A) and oil them before installing. Tighten up tension plugs (48) to 107 ft.-lbs. (145 NM).



5. Loosen the 8 nuts (49A) with a 19mm wrench. Tap the back of the manifold (43) with a rubber mallet to dislodge and slide off the studs (49).

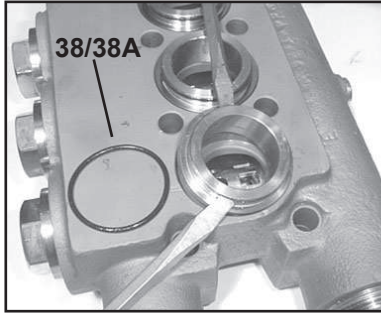


6. Pull seal sleeves (35) out of guides in crankcase (1).

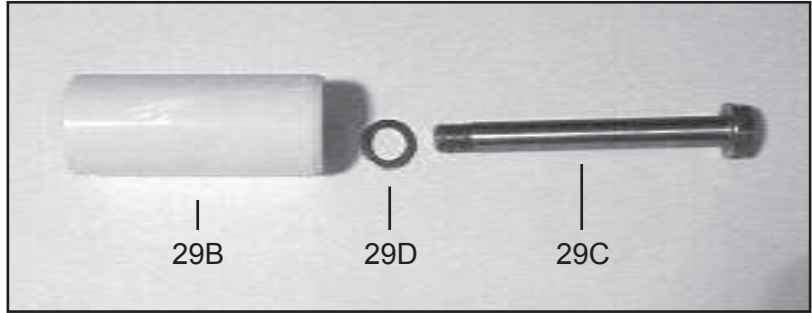


7. Remove the tension spring (42), support ring (41), v-sleeves (40), pressure ring (39), from the seal sleeve (35). Examine seals (36) carefully and replace if worn. Clean all parts.

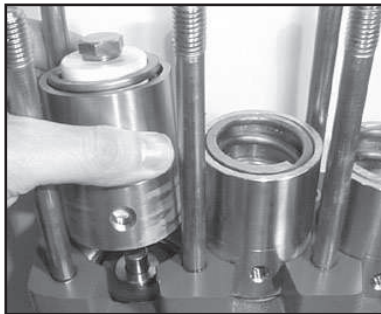
LP121A-5100, LP200-5100, and LP250-5100 - Repair Instructions



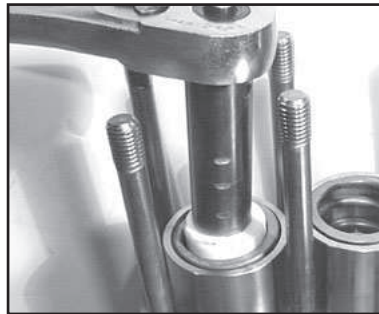
8. Remove seal case (37) from valve casing (43) and inspect O-rings (38/38A).



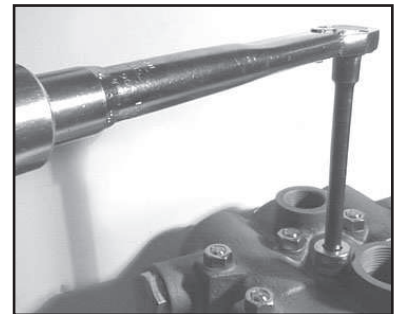
9. Check plunger surface (29B). If plunger pipe is worn, loosen tension screws (29C) and pull off plunger pipe to the front. Clean front surface of plunger (25) thoroughly. Apply a thin coat of Loctite to the tension screw threads (29C). **Note: Care must be taken that no glue gets between the plunger pipe (29B) and the centering sleeve (29A).** Add new copper ring (29D).



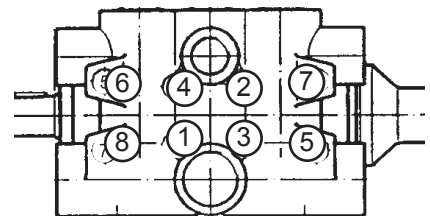
10. Place new plunger pipe (29B) carefully through the oiled seals and push seal sleeve (35) with plunger pipe into the crankcase guide. **Note: Make sure weep hole is facing down.**



11. Tighten the tension screws (29C) to 310 in.-lbs. (35NM). The plunger pipe (29B) should not be strained by over tightening of the tension screw (29C) or through damage to the front surface of the plunger; otherwise, it will probably break.



12. Place valve vasing (43) over studs and push firmly until seated against the crankcase (1). Tighten the hexagon nuts (49A) in a crosswise pattern (shown below) to 59 ft.-lbs. (80 NM)



LP121A-5100, LP200-5100, and LP250-5100 - Repair Instructions

To Dismantle Gear End

After removing valve casing (43) and plunger pipe (29B), drain oil. Remove crankcase cover (4) and bearing cover (14). Loosen connecting rod screws (24A) and push the front of the connecting rod (24) forward as far as possible into the crosshead guide.

IMPORTANT! Connecting rods (24) 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 (22) slightly, hit it out carefully to the side with a rubber hammer.

IMPORTANT! Do not bend the connecting rod (24) shanks. Check crankshaft (22) and connecting rod (24) surfaces, radial shaft seals (15) and taper roller bearings (20).

To Reassemble

Using a soft tool, press in the outer bearing ring until the outer edge lines up with the outer edge of the bearing hole. Remove bearing cover (14) together with radial shaft seal (15) and o-ring (16). Fit crankshaft (22) through bearing hole on the opposite side. Press in outer bearing and tighten it inwards with the bearing cover, keeping the crankshaft 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 and 20B) under the bearing cover.

IMPORTANT! After assembly has been completed, the crankshaft should turn easily with very little clearance. Tighten connecting rod screws (24A) to 22 ft.-lbs. (30 NM).

LP121A-5100, LP200-5100, and LP250-5100 Torque Specifications

Pos.	Item #	Description	Lubrication Info	Torque Amount
1	07759	Crankcase	Molycote Cu-Paste	
6	05943	Oil Sight Glass Assembly	Loctite 572	29 ft.-lbs. (40 Nm)
10	01010-0100	Cylinder Screw		221 in.-lbs. (25 Nm)
12	07109-0400	Plug		29 ft.-lbs. (40 Nm)
17	07114-0100	Hexagon Screw		221 in.-lbs. (25 Nm)
24A	13227	Hex Screw		22 ft.-lbs. (30 Nm)
29C	07131-0100	Tension Screw	Loctite 243	26 ft.-lbs. (35 Nm)
29D	07161A-0100	Steel Ring	Loctite 577	
31	07133	Radial Shaft Seal	Loctite 403	
48	06077-0100	Plug	Pro Pack 550	107 ft.-lbs. (145 Nm)
49A	07158	Hexagon Nut		59 ft.-lbs. (80 Nm)

Pump Mounting Selection Guide

Bushings 06496 - 35mm H Bushing
Pulley & Sheaves 07165 - 12.75" Cast Iron - 4 gr. - AB Section
Rails 07357 - Plated Steel Channel Rails (L=11.75" x W=1.88" x H=3.00")