

GP7145-5000 and GP7255A-5000 Repair Instructions

To Check Valves

Unscrew hexagon screws (58), remove pressure casing (50B). Take out tension spring (57), remove the complete valve (51) with either a valve tool or an M16 hexagon screw. Remove valve adaptor (56) and tension spring (57) with pull-out tool size 5. There is an o-ring (51H) under both the suction and discharge valves, each of which can be removed with a bent piece of wire.

To dismantle valves: screw valve seat (51) out of spring tension cap (51A). Check sealing surfaces and replace worn parts. Check o-rings and support rings.

Tighten hexagon screw (58) at 103 ft.-lbs. (140 Nm).

To Check Seals and Plunger Pipe

Loosen nuts (49A) and remove pump head. Separate plunger connection (36A) from crosshead (25) by means of an open-end wrench (size 36).

Pull seal sleeves (39) out of their fittings in the crankcase. Take seal case (38) out of seal sleeve (39).

Examine plunger parts (36A-36D), seals (42,39A) and o-rings.

When replacing plunger pipe (368), lighten tension screws (36C) to 29.5 ft.-lbs. (40 Nm).

Replace worn parts; grease seals with Silicone before installing.

!Important! Don't loosen the 3 plungers connections (36A) before the valve casing has been removed otherwise the tension screw (36C) could hit against the spacer pipe (51E) when the pump is being turned.

Seal life can be increased if the pretensioning allows for a little leakage. This assists lubrication and keeps the seals cool. It is therefore not necessary to replace seals before the leakage becomes too heavy and causes output and operating pressure to drop. When reassembling, lighten plunger screws (36A) to 33 ft.-lbs. (45 Nm).

Mounting Valve Casing

Check o-rings on seal case (38). Clean surfaces of seal sleeves in gear box and sealing surfaces of valve casing.

Push valve casing carefully onto o-rings of seal case and centring studs (50A). Tighten nuts (49A) to 103 ft.-lbs. (140 Nm).

To Dismantle Gear

Take out plunger and seal sleeves as described above. Drain oil.

After removing the circlip ring (33B), lever out seal retainer (33) with a screw driver. Check seals (32,32A,33A) and surfaces of crosshead.

Remove crankcase cover (4).

Loosen screws on the connecting rods (24).

!Important! Connecting rods are marked for identification. Do not twist con rod halves. Connecting rod is to be reinstalled in the same position on shaft journals.

Push connecting rod halves together with the crosshead as far as possible in to the crosshead guide.

Take out bearing cover to one side and push out crankshaft taking particular care that the connecting rod doesn't get bent.

Check surfaces of connecting rod and crankshaft (22).

Reassemble in reverse order: Regulate axial play of the crankshaft clearance to minimum 0.1mm, maximum 0.15mm - by means of fitting disc (20A). Shaft should turn easily with little clearance.

Tighten screws (24) to 29.5 ft.-lbs. (40 Nm).

!Important! Connecting rod has to be able to be slightly moved sidewise at the stroke journals.

!Important! Seal (32A) must always be installed so that the seal-lip on the inside diameter faces the oil. Possible axial float of the seal adaptor (33) to be compensated with shims (33C).