

# GP7155HTC and GP7255HTC Repair Instructions

## MAINTENANCE

### To Check Valves

Remove plugs (58), take out tension spring (57). Remove the complete valve (51) with either a valve tool (07662) or an M16 hexagon screw. Remove valve adaptor (56) and tension spring (57) with pull-out tool size 5. To dismantle valves: remove valve seat (51D) out of spacer pipe (51A). Check sealing surfaces and replace worn parts. Check o-rings (51E) and support rings (51F). Tighten plugs (58) at 107 ft.-lbs. (145 Nm).

### To Check Seals and Plunger Pipe

Remove U-pipes (73), take screw-in joints (68) out of seal sleeves (39). Remove nuts (49A) and remove pump head (50). 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. Seal case (38) should remain in the valve casing (50); examine O-rings (38B). Take seals (42) out of seal sleeves (39) and examine them. Check plunger unit (36A-36D). Using a suitable pliers, take clip ring (39D) out of seal sleeve (39); remove and examine seal (39B). Replace worn parts. Be careful to note sequence of installation.

**IMPORTANT!** Do **not** use grease when replacing high pressure plunger seals (42).

Hot water causes grease to wash off the seal which in turn can jam valves.

The new seals and O-rings should only be lightly oiled before installation.

When replacing plunger pipe (36B), tighten tension screws (36C) at 30 ft.-lbs. (40 Nm).

When reassembling, tighten plunger screws (36A) at 33 ft.-lbs. (45 Nm).

**IMPORTANT!** The 3 plungers connections (36A) must not be removed as long as the valve casing (50) is mounted; otherwise, the tension screw (36C) could hit against the spacer pipe (51E) (when the pump is being turned).

### Mounting Valve Casing:

Check O-rings on seal case (38).

Clean the mounting surfaces of seal sleeves (39) in the drive and sealing surfaces of valve casing (50).

Push valve casing carefully onto the seal case (38), o-rings (38A/38B) and centring studs (50A). Tighten nuts (49A) at 133 ft.-lbs. (180 Nm).

### To Dismantle Gear

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

After removing the circlip ring (33B), remove out seal retainer (33) with a screwdriver. Check seals (32, 33A) and surfaces of crosshead (25).

Possible axial float of the seal adaptor (33) to be compensated with shims (33C).

Remove crankcase cover (4). Loosen screws on the connecting rods (24).

**IMPORTANT!** Connecting rods are marked for identification. Do not twist connecting rod halves. Connecting rods are 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 (14) on one side and push out crankshaft (22) taking particular care not to bend the connecting rods (24).

Check surfaces of connecting rods (24) and crankshaft (22).

Reassemble in reverse order. Adjust axial play (clearance) on the crankshaft to minimum 0.1mm / maximum 0.15mm by means of shims (20A). Shaft should turn easily with little clearance.

Tighten screws (24) at 30 ft.-lbs. (40 Nm).

**IMPORTANT!** Connecting rods must be able to be slightly moved sidewise at the stroke journals.