

GP7142-5100 REPAIR INSTRUCTIONS

To Check Valves

Unscrew hexagon screws (58), remove discharge casing (50B).

Take out tension spring (57), remove the complete valve assembly (51) with either a valve tool (07662) or an M16 hexagon screw. Remove valve adaptor (56) with pull-out tool size 5.

To dismantle valve assembly: unscrew valve seat (51D) out of spring tension cap (51A). Check sealing surfaces and replace worn parts. Check O-rings and support rings.

Tighten hexagon screw (58) at 107 ft.-lbs. (145 Nm).

To Check Seals and Plunger Pipe

Remove push-in fitting (68) on the valve casing (50). Remove hoses (72-73) from the seal sleeves (39).

Unscrew nuts (49A) and remove pump head assembly (50/50B).

Remove cover plate (30).

Separate plunger connection (36A) from crosshead (25) by means of an open-end wrench (size 36 mm).

Pull seal sleeves (39) out of their fittings in the crankcase (1).

Take seal case (38) out of seal sleeve (39). Examine plunger parts (36A-36F), seals (42, 39A) and o-rings (38A, 38B). Replace worn parts.

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

Before installing, grease seals with silicon.

IMPORTANT! Don't loosen the 3 plungers connections (36A) before the valve casing (50) has been removed otherwise the tension screw (36C) could hit against the spring tension cap (51A) when the pump is being turned.

GP7142-5100 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, tighten plunger screws (36A) to 33 ft.-lbs. (45 Nm).

Mounting Valve Casing

Check o-rings on seal case (38).

Clean surfaces of seal sleeves (39) in gear box (1) and sealing surfaces of valve casing (50).

Push valve casing carefully onto o-rings of seal case and centring studs (50A). Tighten nuts (49A) to 133 ft.-lbs. (180 Nm).

To Dismantle Gear

Take out plunger (36) and seal sleeves (39) as described above.

Drain oil.

After removing the circlip ring (33B), remove seal retainer (33) with a screw driver. Check seals (32,33A) and surfaces of crosshead. 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 and orientation on crankshaft (22) journals.

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

Take out bearing cover (14) to one side and push out crankshaft taking particular care that the connecting rod doesn't bend.

Check surfaces of connecting rod and crankshaft.

Reassemble in reverse order: Mount seal (5) with Loctite 5910. Regulate axial play of the crankshaft clearance to minimum 0.1mm, maximum 0.15mm - by means of fitting disc (20A, 20B & 20C). Shaft should turn easily with little clearance.

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

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