8. Maintenance and Servicing

Based on the thread type and the required tightening torques, observe the table on page 6.

8.1 Special tools required

The following special tools are required for assembly:
- Extraction tool (part number 07662)
- Pull-out tool size 2
- Snap-ring tongs

8.2 Suction and Discharge Valves

Loosen screws (58C).
Take plugs (58) out of valve casing with two screws.
Take out tension spring (57) and complete valve (51, 52) using either tool (07662) or stud bolt (size M16).
Valve seats (51C and 52C) are pressed out of spacer pipe (51F, 52F) by hitting the valve plate (51D, 52D) with a bolt.
Check surfaces of valve plate, valve seat, O-rings (51B, 58A) and support ring (58B) for damage.
Replace worn parts.

When reassembling, the suction valve seat (51C) is 1 mm smaller in diameter than the discharge valve seat (52C). Suction valve seats are marked “S” and always have to be installed first.
Discharge valve seats are marked “P” and are always to be installed on top of suction valve.
Plugs (58) are to be tensioned down evenly with screws (58C) and crosswise to the required torque.

8.3 Seals and Plunger

Remove nuts (49A) and pull off pump head.
Take off cover plate (30).
Using a size 27 open-end wrench, separate plunger (36) from crosshead (25).

Don’t loosen the 3 plungers (36) before the valve casing has been removed.
Otherwise the plunger (36) could hit against the spacer pipe (51F) when the pump is being turned.

Remove seal sleeve (38) together with the plunger (36) from the crankcase guides (use ring groove as an aid).
Take seal case (39) out of seal sleeve (38).
Remove plunger (36) from seal sleeve.

Take pressure spring (40), support disc (41), seal unit (42/43/44) and pressure ring (45) out of the seal sleeve.
Remove leakage gasket (38B) from serrated pin (38A) on the seal sleeve (38).

Take-off circlip (48) using a clipring pliers, pull out spacer disc (47).
Lever grooved seal (46) out of the seal sleeve (38).

Check plunger surface (36), seal unit (42/43/44), leakage gasket (38B) and seal ring (46).
Check O-rings (38C/39A) on the seal case (39)/ seal sleeve (38).
Replace worn seals.

The Ø3.2mm bore of the leakage gasket (38B) must be inserted directly on to the serrated pin (38A) of the seal sleeve (38A).
The leakage gasket (38B) must be fitted to the seal sleeve (38) so that the bevelled surface of the gasket (38B) faces outwards.

When exchanging worn plunger, attention must be paid that the centre bore and front surface of the crosshead (25) are free of dirt and damage.
Thread new plunger carefully through oiled seals in seal sleeve.
Coat thread of new plunger lightly with suitable bonding agent.
Then insert seal sleeve with plunger into crankcase guide. Drive Crankshaft until plunger with crosshead (25) pushes against plunger (36).
Tighten plunger (36) to the required torque using a size 27 torque wrench.

Mounting Valve Casing:
Clean surfaces of seal sleeves (38) 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 the required torque.

If required, supplementary assembly instructions can be requested from Giant Industries.