

# REPAIR INSTRUCTIONS - P400-5100 Series

## 8. Maintenance and Servicing

For the type of threadlocker used and the required tightening torques, see table on page 7.

### 8.1 Special tools required

The following special tools are required for assembly:

- Fitting Sleeve - Tool-13 (22 mm), Tool-14 (25mm)
- Pull-out tool size 2 (Ø20mm)

### 8.2 Suction and Discharge Valves

Remove plugs (32) with a 12-point socket wrench. Check suction and discharge valves that are under the plugs by taking out the valves with a pair of flat tongs and then taking them apart. Examine valve plate (28) and valve seat (27). Check O-rings (31/33) and replace if necessary. Wet O-rings thinly with silicone grease or mineral oil and insert carefully. Tighten the plugs to the required torque. Take care to reassemble in correct sequence.

### 8.3 Seals and Plunger pipe

Loosen screws (34) and remove valve casing (26) by pulling it off over the plungers. Remove seal adaptors (20) out of the valve casing (26). Remove drip-return ring (25), support ring (24), v-sleeve (23) and spacer disc (23A – P422/P423) out valve casing (26). Remove v-sleeve (23B) together with support ring (24 – P420/P425) out of seal adaptor (20). Wet new seals and O-rings thinly with silicone grease or mineral oil and insert carefully. Pay attention to the installation position of the seals. Check O-rings (21) and replace if necessary.



The grooved seal (23) or respectively grooved seal pack (23) on the high-pressure side is to be fitted carefully into the valve casing (26) using a special tool - Tool-13 (22 mm) or Tool-14 (25mm).

Alternatively, the seal can also be carefully fitted into the valve casing using a screwdriver. Under no circumstances must the seal surface in the valve casing or the seal lip be damaged.

Check plunger surfaces (16). Damaged surfaces cause hard wear on seals. Lime deposits or similar on the plunger must be removed.



Plunger surface must not be damaged in the process. In the case of lime deposits in the pump, care must be taken that the drip-return bores in parts (25) and (26) ensure trouble-free drip-return.

If the plunger pipe (16B) is worn out, loosen tension screw (16D) and remove together with plunger pipe. Check and clean contact surface on plunger (16A), check oil scraper(16H), fit new plunger pipe. Cover thread of tension screw (16D) with a thin coat of thread locker and tighten carefully to the required torque.



Under no circumstances should thread-locker get between the plunger pipe (16B) and the centring neck on the plunger (16A). Tensioning of the plunger pipe due to eccentric tightening of the tensioning screw or due to dirt or damage to the contact surface can lead to breakage of the plunger pipe.

When assembling, tighten the screws (34) to the required torque.

**If required, supplementary assembly instructions can be requested from the manufacturer Giant Industries, Inc.**