

# GP8176 PUMP REPAIR INSTRUCTIONS

## 7. Maintenance and Servicing

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

### 7.1 Special tools required

The following special tools are required for assembly:  
- Assembling tool (p/n 07662)

### 7.2 Suction and Discharge Valves

Loosen screws (58), lift discharge valve casing (50B) up and away.

Take out pressure springs (57).

Pull out assembled valves (51) using an assembly tool (p/n 07662).

#### To dismantle valves:

The spring tension cap (51A) is screwed together with the valve seat (51B).

Remove spring tension cap, take out springs (51E) and valve plate (51C).

Check sealing surfaces and O-rings (51D, 51F).  
Replace worn parts.

Coat threads of valve seat with silicon grease or molycote anti-seize Cu-7439 when reassembling.

Before re-fitting the valves, clean the sealing surfaces in the casing and check for any damage.

Tighten screws (58) to the required torque.

Check torque tension after 8-10 operating hours.

### 8.3 Seals and Plunger

Remove hexagon nuts (49A) and hose coupling (K11 and K15), remove pump head together with seal case (38) from crankcase (1).

If necessary, carefully tap the valve casing (50) past the centring stud (50A) using a rubber hammer.



If necessary, support the pump head by resting it on wooden blocks or by using a pulley.

Remove tension screw (36C) and take seal sleeve (39) together with all mounted parts out of the drive.

Pull plunger pipe out of seal assembly and check for any damage.

Pull out spiral rings (40) and sleeves (42) out of the seal sleeve with a screwdriver.



Be careful not to damage seal sleeve (39) and guide ring (41).

Check the inner diameter of the guide ring for wear and if necessary replace together with seals (40) and (42).

Clean all parts.

New parts should be lightly coated with silicon grease before installation.

Insert the seal unit (40, 41, 42, 43) into the sleeve.

Carefully push the ceramic plunger through the seals from the crankcase side. If necessary, the seals can be held tightly using a suitable pipe support held on the other side of the seal sleeve.

Take out the seal case (38) from the valve casing (50) and check O-rings (38A). If necessary, secure 2 screwdrivers in the front O-ring groove to extract seal casing from valve casing.

Coat seals with silicon grease before installing.



Mounting surfaces of the crankcase, seal sleeves, intermediate casing and valve casing must be clean and free of damage.

The components must lie exactly and evenly on one another.

The same exactness applies for all centring positions in the crankcase, discharge (50B) and valve casing (50).

Coat the seal sleeve lightly with anti-corrosive grease (e.g. molycote no. Cu-7439) in its fitted area towards the crankcase. Lightly coat the step of the plunger pipe cover (36A) with silicon grease and press it onto the back end of the plunger pipe.

Insert seal sleeves into their crankcase fittings.

Coat the threads of the tension screw (36C) lightly with thread glue and insert it together with a new copper ring (36D) through the ceramic pipe.

Turn the pump by hand until the plunger (25) rests against the plunger pipe.

Tighten tension screw to the required torque.



Thread glue must never come between the plunger pipe (36B) and plunger cover (36A).

Overtensioning of the plunger pipe by excessive tightening of the tension screw and/or dirt or damage on the mounting surfaces can lead to plunger pipe breakage.

Insert the seal tension spring (45) into the seal sleeve (39) and the O-rings (38A, 39A) in to the seal case (38).

#### Mounting Valve Casing:

Put seal cases (38) in the centring holes of the valve casing, then push valve casing carefully onto centring studs (50A).

Tighten hexagon nuts (49A) evenly and crosswise to the required torque.



The torque tension on the screws (49A) must be checked after 8-10 operating hours; the pump must be at zero pressure.

Thereafter the tension is to be checked every 200 operating hours.

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