



If higher medium temperatures or liquids other than water are involved or aggressive media such as seawater, demineralised water etc the integrated gear oil cooling system must be decoupled and a separate cooling circuit set up.

The separate cooler must have a cooling efficiency of 1500 watt.

If there is a danger of frost, an appropriate amount of antifreeze must be mixed into the cooling circuit.

Operation



The pump and cooling system must be emptied if there is a danger of frost. Note that travel wind, for example, can cause water in pumps fitted on open vehicles to freeze even if the outside temperature is above freezing point.

Empty the pump through the second unused suction and discharge connection using compressed air, for example. Bottom plugs (12) on the suction channel can be opened as well.

The pump can also be run "dry" for 1-2 minutes to aid emptying.

Empty the cooling system by removing screw joints (K11) on the pump head and by blowing the hoses with compressed air on the (K11/K7) side.

Anti-freeze is recommended to guard against frost where a separate cooling circuit is used.

Maintenance and Servicing

For the type of threadlocker used and the required tightening torques, observe the table in the exploded view.

Special tools required

The following special tools are required for assembly:

- Extraction tool (p/n 07662)
- Pull-out tool size 5
- Snap-ring tongs

Suction and Discharge Valves

Screw off plugs (58).

Take out tension spring (57).

Remove the complete valve (51, 52) and valve holder (55) using either a valve tool or an M16 hexagon screw.

To dismantle valves:

Screw valve seat (51E, 52E) out of spring tension cap (51A, 52A).

Check sealing surfaces and replace worn parts.

Check O-rings and support rings.

Tighten plugs (58) to the required torque.



If worn, the discharge valve seat (52E) can be turned 180° round and refitted.

Seals and Plunger

Loosen nuts (49A) and remove pump head.

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.

Take seal case (38) out of seal sleeve (39) and remove tension spring (45) (GP7645/GP7650).

Take seal unit (40,41,42,43 – P76/320) or (41,42,43 – GP7645/GP7650) out of the seal sleeve.

Examine plunger pipe (36B) and seals (39A, 42) and O-rings (38A, 38B) or (41 – P76/320).

Worn parts to be replaced.

When replacing plunger pipe (36B), tighten tension screws (36C) to the required torque.

Replace worn parts; grease seals with Silicone before installing.



Always remove the valve casing first before taking the 3 plungers (36) off the crossheads (25).

Otherwise the plunger (36) could hit against the spring tension cap (51A) and valve holder (55) when turning the pump

The service life of the seals is maximized if a minimal amount of leakage is present.

A few drops of water can drip from each plunger every minute.

Leakage has to be examined every day; the plunger seals must be changed should leakage become excessive (=constant dripping).

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 the required torque.

Mounting Valve Casing:

Examine the O-rings (38A, 38B) on seal cases (38).

Clean the seal sleeve contact surfaces in the crankcase and the sealing surfaces in the valve casing.

Carefully push the valve casing onto the seal case O-rings and centring studs (50A).

Tighten nuts (49A) to the required torque.

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