

Repair Instructions - P470A/P490A

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:

- Pull-out tool size 1
- Mounting tool (TOOL-15)

Suction and Discharge Valves

Remove plugs (32) with a socket wrench (size 32). Using a pair of flat pliers, remove the exposed discharge valve (27A) and dismantle to examine it. Remove hexagon socket screws (34) and remove valve casing (26) by pulling it off to the front.



If the seal casing (21) does not separate from the valve casing (26), press both casings apart by placing two flat screwdrivers in the side notches on the seal casing.
Be careful not to damage casing surfaces.

Remove suction valve (27A) with a flat pliers and dismantle.

Examine spring tension caps (30), valve spring (29), valve plate (28), valve seat (27) and O-rings (31, 33). Replace worn parts.

Take care to reassemble in correct sequence. Tighten the plug (32) to 125 ft.-lbs (170 Nm).

Seals and Plunger pipe

Remove the seal cases (25) out of the seal casing (21) or lever them out using two screwdrivers.

Examine O-rings (25A) and support rings (25B). Remove seal adaptor (20) from the seal casing. Check O-rings (20A), grooved rings (18) and grooved seal pack (23) with the guide rings (24) for damage.

Lubricate new seals and O-rings thinly with silicone grease or mineral oil and insert carefully.



Mounting tool (TOOL-15) is available for fitting the seals into the seal casing and seal adaptors.
If mounting tools are not available carefully insert the grooved seal pack (23) little by little into the bore of the valve casing by using the flat side of a screwdriver. Making sure that the seal lip faces into the seal casing (21).

Press grooved seal (18) flat side first into the seal retainer (20).

Under no circumstances must the seal surface in the valve casing or the seal lip of the grooved seal be damaged.

Check surfaces of plunger (16B).

Damaged surfaces cause accelerated seal wear. Deposits of all kinds must be removed from the plungers.

Plunger surfaces are not to be damaged during this procedure.

If there are lime deposits in the pump, care must be taken that the drip-return bores in parts (21) and (26) ensure trouble-free drip-return.

If the plunger pipe (16B) is worn, screw out tension screw (16D) and remove together with plunger pipe. Check and clean plunger surface (16A), check oil scraper (16H) and mount new plunger pipe.

Cover thread of tension screw (16D) with a thin film 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 remounting the valve casing, tighten the screws (34) to 30 ft.-lbs. (40 Nm).

If required, supplementary Assembly Instructions can be requested from Giant Industries, Inc.

Malfunctions / Remedy

For informations, see Assembly Instructions Giant Industries.

Materials Used

Valve Casing:	AISI CA 9-NM
Plunger:	Solid Ceramic
Valves:	High-Grade Stainless Steel
Seals:	Nitrile with fabric reinforcing
O-Rings:	Nitrile

Paint

The pump drive is painted RAL 7004 as standard.