



PLUNGER PUMP SERVICE GUIDE

REPLACING PUMP VALVES

1. All inlet and discharge valves can be serviced without disrupting the inlet or discharge plumbing
2. To service the valves, remove valve caps.
3. Remove the valve assembly from the valve cavity.
4. Remove o-ring from valve cavity.
5. Only one valve kit is necessary to replace all the valves in the pump. The kit includes new o-rings and valve assemblies.
6. Install o-ring into cavity.
7. Insert valve assembly into valve cavity.
8. Install valve cap and torque to specifications. **NOTE:** Use blue thread locker or equivalent on all valve caps.

REMOVING PUMP HEAD

1. Remove the bolts from the pump head.
 2. Separate the head from the crankcase. **NOTE:** It may be necessary to tap head lightly with a plastic or rubber mallet to loosen.
- CAUTION:** Do not damage plungers when removing the head.
3. The packing assemblies typically come off with the head. At this point, inspect ceramic plungers. Plunger surfaces should be smooth and free from scoring and cracks. **IF NOT,** replace plunger.

REPLACING CERAMIC PLUNGERS

1. Remove plunger nut or bolt, then remove plunger from piston rod.
2. If slinger washer comes off with the plunger, be certain this is reinstalled or replaced before a new plunger is installed.
3. Separate plunger bolt from plunger.
4. Install new o-ring, teflon back-up ring and washer on plunger bolt or stem. **NOTE:** A film of grease on the outside of the o-rings ensures a better installation.
5. Carefully insert plunger bolt into plunger. **NOTE:** Use red thread locker or equivalent on all plunger nuts or bolts.
6. Slide new plunger over the piston guide and torque to specifications.

REPLACING SEAL KIT

1. Insert proper seal stack extractor tool or reversible pliers through sealretainer. Extract retainers, packings and spreader rings.
2. Place proper insertion sleeve into cylinder and install plastic spreader ring into bottom of the cylinder. Insert high pressure seal into insertion sleeve and tap firmly into place. Remove insertion sleeve.
3. Install long life ring on top of the high pressure seal and insert middle brass ring.
4. Install the low pressure seal into upper brass ring, lightly grease the outer o-ring and insert into cylinder
5. Coat each plunger and seal stack with grease and carefully reinstall the pump head. **NOTE:** It may be necessary to tap pump head lightly with a plastic or rubber mallet. Install head bolts and torque to specifications.

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