

- Numbers in parenthesis ( ) refer to tools shown on back page
- Refer to individual pump installation manual for complete service instructions

## Seal Protector (5)

When installing new shaft seals, the Seal Protector protects the inside of the seals from nicks and cuts.

1. Place shaft seals onto the tapered end of the seal protector with a liberal amount of grease in between seals (Figure 1).
2. Place Seal Protector completely onto pump shaft.



Figure 1

## Seal Inserter (2)

Used to seat seals on D/G-10 and larger size pumps.

1. Use tapered end of Seal Inserter to push seals off of Seal Protector and into pump housing (Figure 2).
2. Tapping with a rubber mallet may be necessary to fully seat seals flush with pump housing.



Figure 2

## Shaft Rotator (2 or 7)

Used to prime the pump's hydraulic cells.

1. After installing new diaphragms, prime the hydraulic cells by using the shaft rotator to rotate the pump shaft (Figure 3).



Figure 3

## Lever Assembly (3) and Valve Seat Puller (4)

The Lever Assembly and Valve Seat Puller are used to remove valve seats from the valve plate.

**Note: The valve plate can remain on the pump or be removed and held firmly on work surface.**

1. Thread the appropriate Valve Seat Puller onto the Lever Assembly.
2. Squeeze the claw end of the Puller and guide Puller into the valve seat (Figure 4) until all four claws are beneath the valve seat.
3. Position the Lever Assembly on a level area of the valve plate (Figure 5), and firmly depress the handle to draw the valve seat straight out of the valve plate.
4. Repeat process to remove all valve seats.
5. Unscrew Seat Puller from Lever Assembly and slide off all seats (Figure 6).



Figure 4



Figure 5



Figure 6

## Valve Plunger Holder (6)

Use Plunger Holder to firmly hold valve plunger stem while changing diaphragms (Figure 7).

1. Rotate pump shaft to maximum forward stroke of selected diaphragm.
2. Pull up on diaphragm to expose crosswise holes in valve plunger stem.
3. Insert center tine of Plunger Holder tool completely.
4. Release diaphragm while continuing to hold plunger holder.
5. Remove old diaphragm and install new diaphragm with an appropriate screwdriver and according to Installation manual.
6. Lift up on new diaphragm to remove Plunger Holder tool.
7. Rotate pump shaft for the next diaphragm and repeat.



Figure 7

## Plunger Guide Lifter (8 or 9)

For pumps without plungers (all F/G-20 D/G-03 and D/G-04 Series pumps), use the Plunger Guide Lifter (8) to retrieve valve plunger from inside piston.

For pumps with plungers (all D/G-10 Series and larger), use the Plunger Guide Lifter (9) to remove press-fit plungers from valve plunger stem.

### Plunger Removal

1. Thread small end of Plunger Guide Lifter completely into selected valve plunger.
2. Carefully tap hex end of Plunger Guide Lifter to drive valve plunger out the back of the plunger (Figure 8).
3. Unthread Plunger Guide Lifter to remove.



Figure 8

### Plunger Installation

1. Place a new plunger on the screw end of the Plunger Guide Lifter (flat side of plunger toward tool).
2. Screw the Plunger Guide Lifter and plunger into the valve plunger.
3. Hold the hex end of the Plunger Guide Lifter with one wrench while tightening the hex nut (Figure 9).
4. The shield will seat the plunger onto the valve plunger stem.



Figure 9

**Note: Never re-install used plungers.**

## Assembly Studs (10)

Assembly Studs are used to draw pump housing and cylinder housing together for size D/G-10 and larger pumps.

1. With the cylinder housing on wood blocks (pistons pointing up) and cam assembly in place, use Assembly Studs to draw pump housing and cylinder housing together.
2. Frequently rotate the pump shaft (Use Shaft Rotator Item 2) by hand to keep the front bearing centered in the cylinder housing bearing cup.

# Tool Kits Accessories



## Complete Pump Tool Kits

Wanner Tool Kits provide convenient specialty tools helpful for pump repairs and routine servicing. Tool Kits are customized for each pump model. Each pump tool kit is provided in a durable hard plastic case. Contents include: shaft rotator, valve seat remover, plunger guide lifter, plunger holder, protector seal, seal inserter and assembly studs.

Part Number	Description
A03-175-1107	Master Tool Kit for all Pump Models
A03-175-1105	F/G-20
A03-175-1106	D/G-03, D/G-04
A03-175-1101	D/G-10, D/G-10-SD, D/G-12
A03-175-1103	D/G-15/17
A03-175-1102	H/G-25, H/G-25-SD
A03-200-1100	D/G-35, D/G-35-SD



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## Specialty Tools

Individual specialty tools are available for all pumps.

Part Number	Description
① A03-126-1500	Toolbox
② A03-159-1200	Inserter/Rotator (D/G-10)
A03-155-1200	Inserter/Rotator (D/G-15/17)
A03-160-1200	Inserter/Rotator (H/G-25)
A03-185-1200	Inserter/Rotator (D/G-35)
③ A03-124-1200	Lever Assembly
④ A03-117-1000	Seat Puller (D/G-03, D/G-04)
A03-118-1000	Seat Puller (D/G-10, D/G-12)
A03-119-1000	Seat Puller (H/G-25, D/G-35)
⑤ A03-157-1000	Seal Protector (D/G-10, D/G-12)
A03-158-1002	Seal Protector (D/G-15/17)
A03-158-1001	Seal Protector (H/G-25)
⑥ A03-125-1020	Plunger Holder (F/G-20, D/G-03, D/G-04)
A03-125-1010	Plunger Holder (D/G-10, D/G-12, D/G-15/17)
A03-125-1000	Plunger Holder (H/G-25, D/G-35)
⑦ A03-195-1200	Shaft Rotator (F/G-20, D/G-03, D/G-04)
⑧ A03-196-1000	Plunger Guide Lifter (F/G-20, D/G-03, D/G-04)
⑨ A03-162-1200	Plunger Guide Lifter (D/G-10, D/G-12)
A03-162-1010	Plunger Guide Lifter (D/G-15/17)
A03-162-1201	Plunger Guide Lifter (H/G-25, D/G-35)
⑩ A03-156-1200	Assembly Studs (D-10, D-12, D/G-15/17, H/G-25, D/G-35)