



MAINTENANCE OF THE HAND-OPERATED SIMPLE PUMP

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If you are a homeowner, you must have a helper for uninstalling or installing any pump.

READ EACH SECTION CAREFULLY BEFORE PROCEEDING.
FOLLOW INSTRUCTIONS STEP BY STEP.

Pay particular attention to anything marked ***.

(The following instructions should tell you everything you need to know. If you have questions, please phone 775-267-1093.)



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SEAL KIT REPLACEMENT

The length of time between seal replacement can vary greatly with amount of use and water quality. Most clients have done maintenance at somewhere between three and ten years. Signs they need replacing are:

- ▶ For piston seals: when output drops appreciably.
- ▶ For pump heads seals: when water leaks between the pump rod and the rod gland in the pump head.

SEAL KIT DESCRIPTIONS

Model 100: The SK100BU seal kit for a model 100CA pump cylinder assembly and pump head is comprised of five (5), 90 durometer u-cup seals. Three (3) u-cup seals are provided for the piston in the pump cylinder. Two urethane (with red ID marks) and one buna (with no ID marks), and two (2) buna u-cup seals are provided for the rod gland in the pump head.

Model 125: The SK125BU seal kit for a model 125CA pump cylinder assembly and pump head is comprised of four (4), 90 durometer u-cup seals. Two (2) urethane u-cup seals (with red ID marks) are provided for the piston in the pump cylinder. Two (2) buna u-cup seals are provided for the rod gland in the pump head.

The piston seals ride on the inside wall of the stainless pump cylinder sealing between the piston OD and the cylinder ID while the rod gland seals ride on the 3/4" OD stainless steel rod in the pump head.

Model 125-82515: The SK125-82515 seal kit for a model 125CA-82515 pump cylinder assembly and pump head is comprised of four (4), 90 durometer u-cup seals. Two (2) urethane u-cup seals (with red ID marks) and (2) buna u-cup seals are provided for the piston in the pump cylinder, and two (2) buna u-cup seals are provided for the rod gland in the pump head. The position of the seals on the piston body are urethane, buna, buna, urethane.

The piston seals ride on the inside wall of the stainless pump cylinder sealing between the piston OD and the cylinder ID while the rod gland seals ride on the 3/4" OD stainless steel rod that runs up and down in the pump head.

Note that rod gland gland replacement is also explained, but the need for it is rare.

CHANGING THE PUMP HEAD SEALS

1. Using the 3/16" Allen wrench, remove the (4) 1/4-20 x 1/2 shcs (socket head cap screws) that affix the lever bracket to the pump head.



*** 2. Hold the 3/4" stainless rod while using the lever arm to **rotate the clevis CLOCKWISE** to remove clevis from the 3/4" stainless rod.



IF YOU HAVE A SHORT ROD GLAND

Unscrew the rod gland from the pump head.

The 2 u-cup seals in the pump head are located at the top end of the rod gland, in two machined grooves.

*** The buna rod gland u-cup seals must be installed with open end of "U" facing down.



IF YOU HAVE A LONG ROD GLAND

Remove the pump head by unscrewing it. Rotate it in a counterclockwise motion. A good number of rotations are required before it detaches from the riser tube. You may need to first loosen it with a channel lock.

The 2 u-cup seals in the pump head are located at the top end of the rod gland, in two machined grooves.

Once the pump head has been removed, the u-cup seals can be easily accessed for replacement.

CHANGING THE PISTON SEALS

In order to replace u-cup seals on the piston, the pump system must be pulled from the well as the piston is at the bottom.

*** Piston U-cup seals MUST be installed with open end of "U" facing UPWARD (see below).



Install seals in the order shown in the diagrams following.
(Diagrams show each of our different pistons.)



REINSTALL PUMP SYSTEM

As described in the installation instructions. They contain many detailed points you must pay attention to when installing.

If you don't have those instructions, you can

Read online: simplepump.com/support/documents/simplepump-hand-pump-install1/

Or download a PDF: simplepump.com/wp-content/uploads/2018/02/SIMPLEPUMP-HandPump-Install.pdf

SPECIAL NOTES:

*** For systems that have been installed more than three times... The use of **Loctite non-permanent** thread bonder is recommended on the sucker rod connections.

*** For drop pipes: Use Teflon tape on connections, but never more than three layers. And never use a liquid sealant/pipe dope.

REPLACING THE ROD GLAND

IF YOU HAVE THE SHORT ROD GLAND

Remove the handle assembly as described under "Changing the Pump Head Seals", two pages back.

Remove the rod gland from the stainless pump head using the channel locks (counter-clockwise to loosen). Leave the o-ring in place beneath rod gland in pump head.

Thread in the new rod gland.

Install clevis onto 3/4" stainless rod (COUNTER-CLOCKWISE to tighten).

Install the (4) 1/4-20 x 1/2 shcs that affix the lever bracket to the pump head.

IF YOU HAVE THE LONG ROD GLAND

It will be replaced by the short rod gland and guide.

REMOVE LONG ROD GLAND

Remove the handle assembly and pump head as described under "Changing the Pump Head Seals", two pages back.

The long rod gland runs the length of the assembly at length (middle arrow).

Remove the spider (lowest arrow) by unscrewing COUNTER-CLOCKWISE to loosen.

Remove the rod gland from the stainless pump head using the channel locks. Again, COUNTER-CLOCKWISE to loosen. Leave the o-ring in place beneath rod gland in pump head.



INSTALL PRESS-FIT GUIDE

Install the guide as shown in the four photos below.

Place guide in opening of riser tube.

A mark is made on some PVC tubing at the 6.5" mark.

The guide can then be pushed the correct distance into the riser tube.



INSTALL SHORT ROD GLAND

Thread the short rod gland into the top of the pump head.

REINSTALL PUMP HEAD AND HANDLE

Install pump head onto riser (COUNTER-CLOCKWISE to tighten).

Install clevis onto 3/4" stainless rod (COUNTER-CLOCKWISE to tighten).

Install the (4) 1/4-20 x 1/2 shcs that fasten the lever bracket to the pump head.