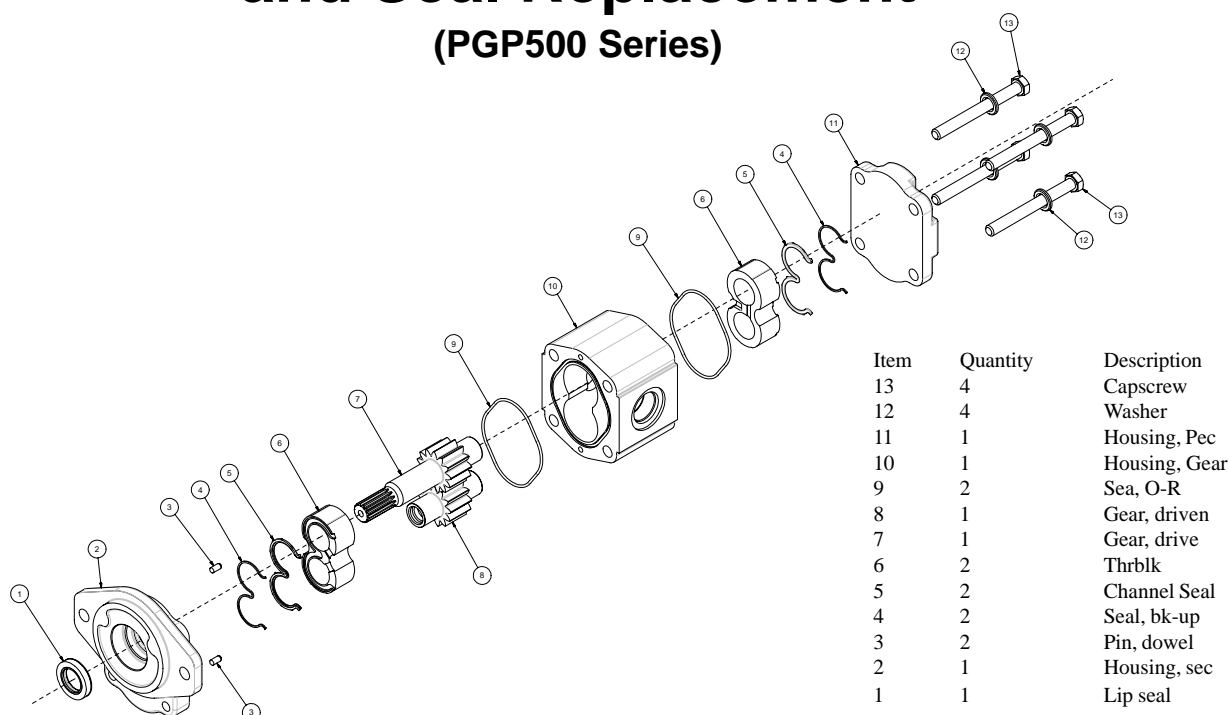


Instructions: Change of Rotation and Seal Replacement (PGP500 Series)



Note: Before disassembling ensure that the unit, bench and tools are thoroughly clean.

Disassembly Instructions:

1. Where applicable, remove the drive coupling from the drive shaft using a suitable puller. The coupling must not be levered or hammered as this may cause internal pump damage.
2. If the pump has a keyed shaft, remove the key from the shaft. Lightly stone any burrs that may be on the shaft to prevent any damage to the seal during disassembly.
3. Clamp the pump in a vise using the mounting flange (2), with the drive shaft pointing down. Do not clamp on the machined pilot ring.
4. Scribe a line across the shaft end cover (2), gear housing (10) and port end cover (11). This will ensure proper alignment during reassembly.
5. Remove all the mounting bolts (13) and washers (12) from the assembly.
6. Remove the rear port end cover (11).
7. Lift the gear housing (10) off of the shaft end cover (2), tapping the housing with a soft mallet, if necessary.
8. Remove the rear bushing block (6) noting the orientation of the channel seal (5).
9. Carefully remove the gears by pushing up on the drive shaft (7). Remove the front bushing block (6) noting its orientation.

Change of Rotation Instructions:

These instructions are intended for use in changing the rotation of a single section PGP500 series gear pump.

Reassembly Instructions:

1. Rotate front bushing block (6) 180° from original position and place on shaft end cover (2). Make sure the backup seals (4) and channel seals (5) are seated properly.



Parker Hannifin Corporation
Gear Pump Division
1775 Logan Avenue
Youngstown, Ohio 44501
Tel: (330) 746-8011 Fax: (330) 746-1148
<http://www.parker.com/gearpump>

2. Seat O-rings (9) in the machined groove and rotate housing (10) 180° around the shaft axis and place onto shaft end cover (2). Readjust location of dowel pins (3) if pulled out at disassembly. Note from Disassembly Step 4 that the line on the housing (10) and cover (2) should now be on opposite sides.
3. Slide the drive shaft gear (7) through the gear housing, bushing, and shaft seal. Be careful not to damage the shaft seal. Slide the driven gear (8) through the gear housing and into the bushing.
4. Rotate rear bushing block (6) 180° from original position and place on gears. Make sure the backup seals (4) and channel seals (5) are seated properly.
5. From its original position, rotate the port end cover (11) 180° around the shaft axis and position it over the gear housing.
6. Replace the washers and bolts into the unit. Torque bolts in a diagonal pattern. Dry assembly torques are given in Table 1. Do not over torque.
7. Rotate drive shaft with a small wrench to check for any binding.

Table 1: PGP/PGM500 series assembly torques

SERIES	PGP/PGM505	PGP/PGM511	PGP/PGM517
ASSEMBLY TORQUE	300 in-lbs(25 ft-lbs)	420 in-lbs (35 ft-lbs)	1000 in-lbs (83 ft-lbs)

Seal Replacement Instructions:

These instructions are intended for use in changing the seals of a single PGP/PGM500 series gear pump or motor. Note the shape and orientation of all seals before and during removal.

1. If shaft end cover has a snap ring and outboard bearing, carefully remove. Insert a small diameter punch or screwdriver from inside the cover into the shaft seal opening. Gently tap to drive out the shaft seal.
2. Press the replacement shaft seal (1) squarely into the seal recess in the shaft end cover until it bottoms out. Lip seal garter spring faces in toward unit. Reinstall snap ring and bearing if applicable. Remount cover (2) in the vise.
3. Remove old plastic and rubber seals from the thrust blocks (6) and replace with new seals (4 & 5). Note seal orientation. Grease will help hold the seals in place.
4. Remove section seals (9) from housing (10) and replace with new o-rings. Light grease will help hold the seals in place.
5. Replace the front thrust block (6) on the shaft end cover (2) with seals facing down. For pumps, orient so middle of seal points to low pressure (inlet) side.
6. Position housing (10) on the cover (2) making sure the lines from Disassembly Step 4 match up (unless changing rotation). Tap in place with a soft mallet.
7. Replace the drive gear (7) and driven gear (8). If included in the seal kit, put the protective sleeve over the drive shaft before pushing through the shaft seal.
8. Replace the rear thrust block (6), seals facing up, with the middle of the seal pointing to the low pressure side.
9. Reinstall the port end cover (11) aligning the markings with the housing and shaft end cover.
10. Replace the four bolts and washers. Torque in a diagonal pattern according to the values in Table 1.