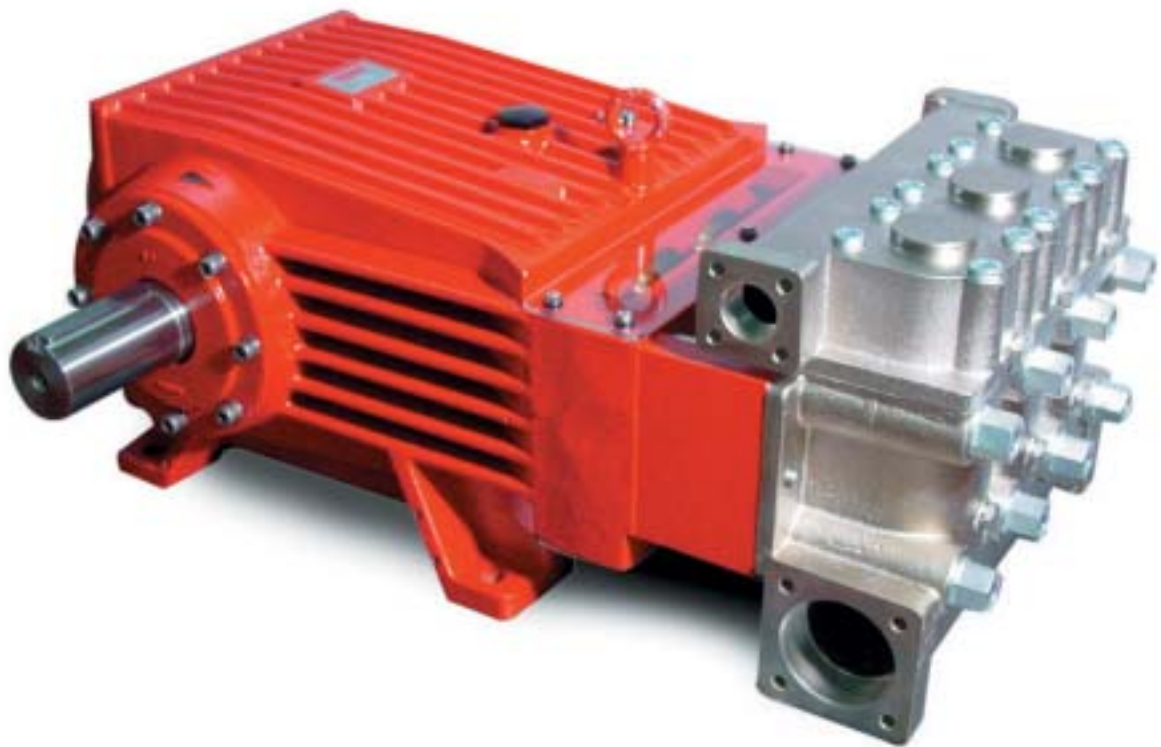


Models

Triplex Ceramic
Plunger Pump
Models Manual

GP8055, GP8060, GP8065



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Updated 7/08

INSTALLATION INSTRUCTIONS

Installation of the Giant Industries, Inc., pump is not a complicated procedure, but there are some basic steps common to all pumps. The following information is to be considered as a general outline for installation. If you have unique requirements, please contact Giant Industries, Inc. or your local distributor for assistance.

1. The pump should be installed flat on a base to a maximum of a 15 degree angle of inclination to ensure optimum lubrication.
2. The inlet to the pump should be sized for the flow rate of the pump with no unnecessary restrictions that can cause cavitation. Teflon tape should be used to seal all joints. If pumps are to be operated at temperatures in excess of 140° F, it is important to insure a positive head to the pump to prevent cavitation.
3. The discharge plumbing from the pump should be properly sized to the flow rate to prevent line pressure loss to the work area. It is essential to provide a safety bypass valve between the pump and the work area to protect the pump from pressure spikes in the event of a blockage or the use of a shut-off gun.
4. Use of a dampener is necessary to minimize pulsation at drive elements, plumbing, connections, and other system areas. The use of a dampener with Giant Industries, Inc. pumps is optional, although recommended by Giant Industries, Inc. to further reduce system pulsation. Dampeners can also reduce the severity of pressure spikes that occur in systems using a shut-off gun. A dampener must be positioned downstream from the unloader.

IMPORTANT OPERATING CONDITIONS
Failure to comply with any of these conditions invalidates the warranty

1. Prior to initial operation, add oil to crankcase so that oil level is between the two lines on the oil dipstick. DO NOT OVERFILL. Use Industrial synthetic gear lube oil (ISO VG 220), such as Mobil Gear 630, Shell Omala oil 220 or Texaco Meropa 220. Crankcase oil should be changed after the first 50 hours of operation, then at regular intervals of 500 hours or less depending on operating conditions.
2. Pump operation must not exceed rated pressure, volume, or RPM. A pressure relief device must be installed in the discharge of the system.
3. Acids, alkalines, or abrasive fluids cannot be pumped unless approval in writing is obtained before operation from Giant Industries, Inc. Pump fluid should be filtered to 300 micron.

5. Crankshaft rotation on Giant Industries, Inc. pumps should be made in the direction designated by the arrows on the pump crankcase. Reverse rotation may be safely achieved by following a few guidelines available upon request from Giant Industries, Inc. Required horsepower for system operation can be obtained from the charts on pages 3- 6.

6. Before beginning operation of your pumping system, remember: Check that the crankcase and seal areas have been properly lubricated per recommended schedules. Do not run the pump dry for extended periods of time. Cavitation will result in severe damage. Always remember to check that all plumbing valves are open and that pumped media can flow freely to the inlet of the pump.

Important! The service life of the seals is maximized if a minimal amount of leakage is present. A few drops of water can drip from each plunger every minute. Leakage has to be examined every day; the plunger seals must be changed should leakage become excessive (=constant dripping).

Finally, remember that high pressure operation in a pump system has many advantages. But, if it is used carelessly and without regard to its potential hazard, it can cause serious injury.

4. Run the pump dry approximately 10 seconds to drain the water before exposure to freezing temperatures.

5. **Important!** The pump and cooling system must be emptied if there is a danger of frost. Note that travel wind, for example, can cause water in pumps fitted on open vehicles to freeze even if the outside temperature is above freezing point.

To empty the cooling circuit, remove the L-joints (K11) on the pump head (50). Blow out the circuit liquid at the joint connection (K11/K7) using compressed air.

The torque tension on the valve casing nuts (49A) should be checked after approximately 200 operating hours. Please see page 8 for torque values.

Specifications

Model GP8055

| | U.S. | (Metric) |
|------------------------------------|------------------------------------|---------------|
| Volume | Up to 75.5 GPM | (285 LPM) |
| Discharge Pressure | Up to 3000 PSI | (200 bar) |
| Speed | Up to 580 RPM | 580 RPM |
| Inlet Pressure | Up to 29 PSI | (2.0 bar) |
| Plunger Diameter | 2.17" | 55mm |
| Plunger Stroke | 2.83" | 72mm |
| Crankshaft Diameter | 2.76" | 70mm |
| Key Width | 0.55" | 14mm |
| Crankshaft Mounting | Either side | |
| Shaft Rotation | Top of pulley towards manifold | |
| Temperature of Pumped Fluids | Up to 140 °F | (60 °C) |
| Inlet Ports | (2) 3" BSPP | |
| Discharge Ports | (2) 1-1/4" BSPP | |
| Weight | 705 lbs. | (320kg) |
| Crankcase Oil Capacity | 3.3 Gal. | (12.5 liters) |
| Fluid End Material | Nickle plated Spheroidal Cast Iron | |

Consult the factory for special requirements that must be met if the pump is to operate beyond one or more of the limits specified above.

| GP8055 HORSEPOWER REQUIREMENTS | | | | | |
|---------------------------------------|------|---------|----------|----------|----------|
| RPM | GPM | 500 PSI | 1000 PSI | 2000 PSI | 3000 PSI |
| 300 | 39 | 13.9 | 27.9 | 55.7 | 83.6 |
| 400 | 52 | 18.6 | 37.1 | 74.3 | 111.4 |
| 500 | 65 | 23.2 | 46.4 | 92.9 | 139.3 |
| 580 | 75.5 | 27.0 | 53.9 | 107.9 | 161.8 |

HORSEPOWER RATINGS:

The rating shown are the power requirements for the pump. Gas engine power outputs must be approximately twice the pump power requirements shown above.

We recommend a 1.1 service factor be specified when selecting an electric motor as the power source. To compute specific pump horse power requirements, use the following formula:

$$\frac{\text{GPM} \times \text{PSI}}{1400} = \text{HP}$$

SPECIAL NOTE:

The theoretical gallons per revolution (gal/rev) is 0.130.
 To find specific outputs at various RPM, use the formula:

$$\text{GPM} = 0.130 \times \text{RPM}$$

Specifications

Model GP8060

| | U.S. | (Metric) |
|------------------------------------|------------------------------------|---------------|
| Volume | Up to 90 GPM | (341 LPM) |
| Discharge Pressure | Up to 2500 PSI | (172 bar) |
| Speed | Up to 580 RPM | 580 RPM |
| Inlet Pressure | Up to 29 PSI | (2.0 bar) |
| Plunger Diameter | 2.36" | 60mm |
| Plunger Stroke | 2.83" | 72mm |
| Crankshaft Diameter | 2.76" | 70mm |
| Key Width | 0.55" | 14mm |
| Crankshaft Mounting | Either side | |
| Shaft Rotation | Top of pulley towards manifold | |
| Temperature of Pumped Fluids | Up to 140 °F | (60 °C) |
| Inlet Ports | (2) 3" BSPP | |
| Discharge Ports | (2) 1-1/4" BSPP | |
| Weight | 705 lbs./ | (320kg) |
| Crankcase Oil Capacity | 3.3 Gal. | (12.5 liters) |
| Fluid End Material | Nickle plated Spheroidal Cast Iron | |

Consult the factory for special requirements that must be met if the pump is to operate beyond one or more of the limits specified above.

| GP8060 HORSEPOWER REQUIREMENTS | | | | | |
|---------------------------------------|-----|---------|----------|----------|----------|
| RPM | GPM | 500 PSI | 1000 PSI | 2000 PSI | 2500 PSI |
| 300 | 47 | 16.8 | 33.6 | 67.1 | 83.9 |
| 400 | 62 | 22.1 | 44.3 | 88.6 | 110.7 |
| 500 | 78 | 27.9 | 55.7 | 111.4 | 139.3 |
| 580 | 90 | 32.1 | 64.3 | 128.6 | 160.7 |

HORSEPOWER RATINGS:
 The rating shown are the power requirements for the pump. Gas engine power outputs must be approximately twice the pump power requirements shown above.

We recommend a 1.1 service factor be specified when selecting an electric motor as the power source. To compute specific pump horse power requirements, use the following formula:

$$\frac{\text{GPM} \times \text{PSI}}{1400} = \text{HP}$$

SPECIAL NOTE:

The theoretical gallons per revolution (gal/rev) is 0.155.
 To find specific outputs at various RPM, use the formula:

$$\text{GPM} = 0.155 \times \text{RPM}$$

Specifications

Model GP8065

| | U.S. | (Metric) |
|------------------------------------|----------------------|------------------------------------|
| Volume | Up to 105 GPM | (400 LPM) |
| Discharge Pressure | Up to 2000 PSI | (140 bar) |
| Speed | Up to 580 RPM | 580 RPM |
| Inlet Pressure | Up to 29 PSI | (2.0 bar) |
| Plunger Diameter | 2.55" | 65mm |
| Plunger Stroke | 2.83" | 72mm |
| Crankshaft Diameter | 2.76" | 70mm |
| Key Width | 0.55" | 14mm |
| Crankshaft Mounting | | Either side |
| Shaft Rotation | | Top of pulley towards manifold |
| Temperature of Pumped Fluids | Up to 140 °F | (60 °C) |
| Inlet Ports | | (2) 3" BSPP |
| Discharge Ports | | (2) 1-1/4" BSPP |
| Weight | 705 lbs. | (320kg) |
| Crankcase Oil Capacity | 3.3 Gal. | (12.5 liters) |
| Fluid End Material | | Nickle plated Spheroidal Cast Iron |

Consult the factory for special requirements that must be met if the pump is to operate beyond one or more of the limits specified above.

| GP8065 HORSEPOWER REQUIREMENTS | | | | | |
|---------------------------------------|-----|---------|---------|----------|----------|
| RPM | GPM | 500 PSI | 750 PSI | 1000 PSI | 2000 PSI |
| 300 | 54 | 19.3 | 28.9 | 38.6 | 77.1 |
| 400 | 72 | 25.7 | 38.6 | 51.4 | 102.9 |
| 500 | 91 | 32.5 | 48.8 | 65.0 | 130.0 |
| 580 | 105 | 37.5 | 56.3 | 75.0 | 150.0 |

HORSEPOWER RATINGS:

The rating shown are the power requirements for the pump. Gas engine power outputs must be approximately twice the pump power requirements shown above.

We recommend a 1.1 service factor be specified when selecting an electric motor as the power source. To compute specific pump horse power requirements, use the following formula:

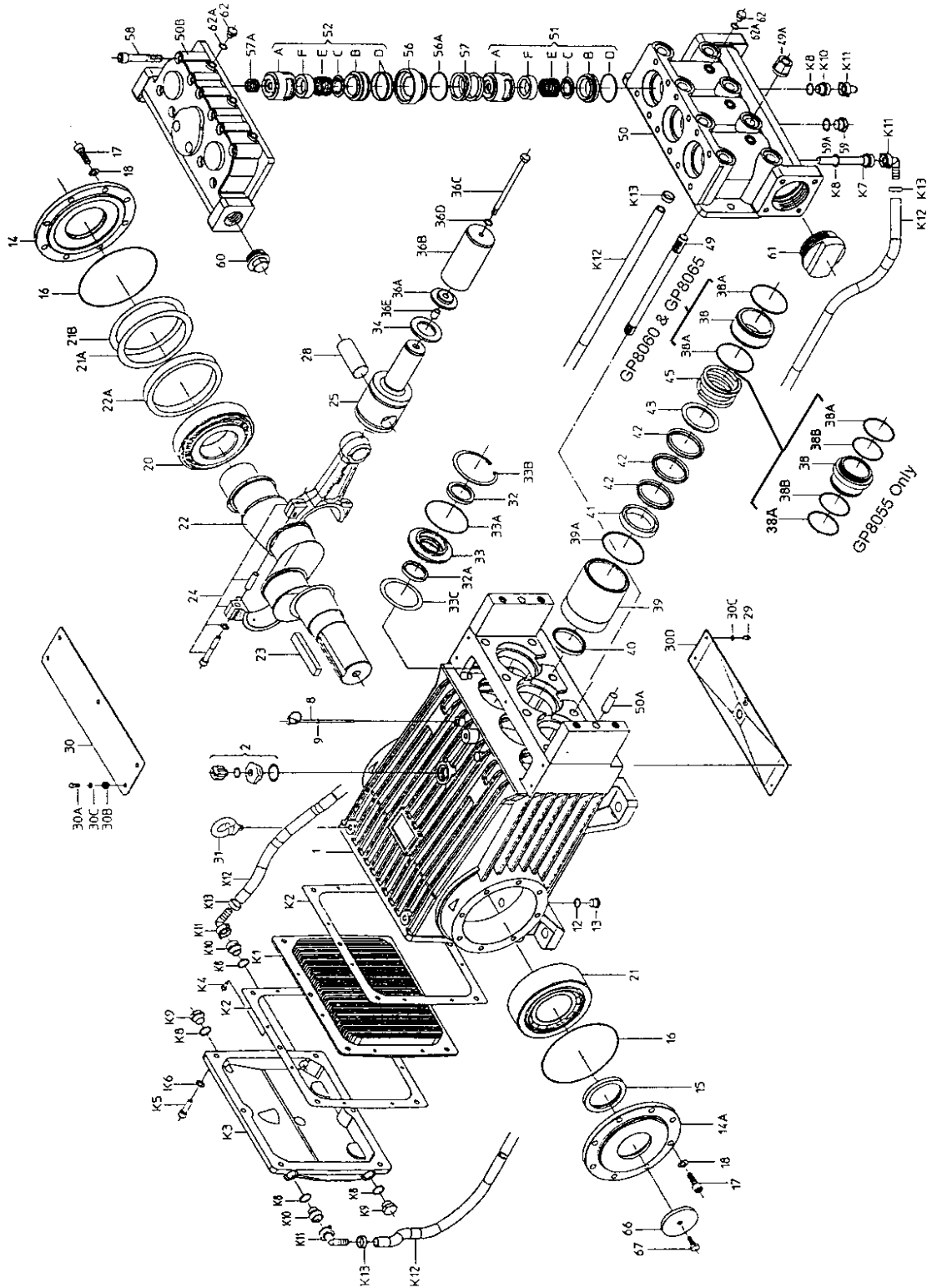
$$\frac{\text{GPM} \times \text{PSI}}{1400} = \text{HP}$$

SPECIAL NOTE:

The theoretical gallons per revolution (gal/rev) is 0.181.
To find specific outputs at various RPM, use the formula:

$$\text{GPM} = 0.181 \times \text{RPM}$$

Exploded View - GP8055, GP8060, GP8065



Part List - GP8055, GP8060, GP8065

| Item | Part | Description | Qty | Item | Part | Description | Qty |
|------|------------|---|-----|------|-------|-----------------------------------|-----|
| 1 | 05024 | Crankcase | 1 | 41 | 05117 | Pressure Ring (GP8065) | 3 |
| 2 | 06912 | Oil Filler Plug Assy with Vert | 1 | 41 | 05068 | Pressure Ring (GP8060) | 3 |
| 8 | 05035 | Oil Dipstick Assy | 1 | 41 | 05276 | Pressure Ring (GP8055) | 3 |
| 9 | 06225 | O-Ring | 1 | 42 | 06997 | V Sleeve (GP8065) | 9 |
| 12 | 07109 | Plug G1/2 | 2 | 42 | 05069 | V Sleeve (GP8060) | 9 |
| 13 | 07182 | Seal | 2 | 42 | 05277 | V Sleeve (GP8055) | 9 |
| 14 | 05036 | Bearing Cover Closed | 1 | 43 | 05118 | Sleeve Support Ring (GP8065) | 3 |
| 14A | 05111 | Bearing Cover Open | 1 | 43 | 05070 | Sleeve Support Ring (GP8060) | 3 |
| 15 | 05112 | Radial Shaft Seal | 1 | 43 | 05278 | Sleeve Support Ring (GP8055) | 3 |
| 16 | 05037 | O-Ring | 2 | 45 | 05119 | Seal Tension Spring (GP8065) | 3 |
| 17 | 05038 | Hexagon Socket Screw | 16 | 45 | 05071 | Seal Tension Spring (GP8060) | 3 |
| 18 | 05039 | Spring Ring | 16 | 45 | 05279 | Seal Tension Spring (GP8055) | 3 |
| 19 | 05040 | Clip Ring | 1 | 49 | 05072 | Stud Bolt | 8 |
| 20 | 05041 | Tapered Roller Bearing | 1 | 49A | 05073 | Hexagon Nut | 8 |
| 21 | 05044 | Tapered Roller Bearing | 1 | 50 | 05074 | Valve Casing | 1 |
| 21A | 05042 | Fitting Disc | 5 | 50A | 13162 | Centering Stud | 2 |
| 21B | 05043 | Fitting Disc | 5 | 50B | 05075 | Discharge Casing | 1 |
| 21C | 05113 | Fitting Disc | 5 | 51 | 05076 | Suction Valve Assy. | 3 |
| 22 | 05045 | Crankshaft (For Gearbox Pumps) | 1 | 51A | 05077 | Spring Tension Cap | 3 |
| 22 | 05114 | Crankshaft | 1 | 51B | 05078 | Suction Valve Seat | 3 |
| 22A | 05046 | Spacer Ring | 1 | 51C | 05079 | Valve Plate | 3 |
| 23 | 05104 | Fitting Key | 1 | 51D | 07658 | O-Ring | 3 |
| 24 | 05047 | Conn-rod Assy | 3 | 51E | 05080 | Valve Spring | 3 |
| 25 | 05048 | Crosshead c/w Plunger | 3 | 51F | 05081 | Valve Spring Guide | 3 |
| 28 | 05049 | Crosshead Pin | 3 | 52 | 05082 | Discharge Valve Assy | 3 |
| 29 | 05057 | Hexagon Screw | 5 | 52A | 05077 | Spring Tension Cap | 3 |
| 30 | 05052 | Cover Plate | 1 | 52B | 05084 | Discharge Valve Seat | 3 |
| 30A | 07225-0100 | Hexagon Screw | 5 | 52C | 05079 | Valve Plate | 3 |
| 30B | 13136 | Grommet | 5 | 52D | 06258 | O-Ring | 6 |
| 30C | 05053 | Washer | 10 | 52E | 05080 | Valve Spring | 3 |
| 30D | 05050 | Splash Cover | 1 | 52F | 05081 | Valve Spring Guide | 3 |
| 31 | 07623 | Eye Bolt | 3 | 56 | 05085 | Discharge Valve Adaptor | 3 |
| 32 | 05058 | Radial Shaft Seal | 3 | 56A | 06258 | O-Ring | 3 |
| 32A | 05057 | Compact Ring | 3 | 57 | 05086 | Pressure Spring | 3 |
| 33 | 05055 | Seal Retainer | 3 | 57A | 06078 | Pressure Spring | 3 |
| 33A | 05056 | O-Ring | 3 | 58 | 05087 | Hexagon Socket Screw | 12 |
| 33B | 05054 | Clip Ring | 3 | 59 | 07109 | Plug G1/2 | 1 |
| 33C | 05059 | Fitting Disc | 3 | 59A | 07661 | Copper Seal | 1 |
| 34 | 05060 | Oil Shield | 3 | 60 | 06909 | Plug G1 1/4 | 1 |
| 36A | 05063 | Cover for Plunger Pipe (GP8060/GP8065) | 3 | 61 | 05088 | Plug G3 | 1 |
| 36B | 05115 | Plunger Pipe (GP8065) | 3 | 62 | 06090 | Plug G1/4 | 6 |
| 36B | 05061 | Plunger Pipe (GP8060) | 3 | 62A | 06934 | Copper Gasket | 6 |
| 36B | 05280 | Plunger Pipe (GP8055) | 3 | 66 | 05122 | Disc for Crankshaft | 1 |
| 36C | 05062 | Tension Screw | 3 | 67 | 13358 | Hexagon Screw | 1 |
| 36D | 07665 | Copper Washer | 3 | K1 | 05026 | Cooling Vane Plate | 1 |
| 36E | 06900 | Centering Sleeve | 3 | K2 | 05027 | Seal for Gear Cover | 2 |
| 38 | 05064 | Seal Case (GP8060/GP8065) | 3 | K3 | 05028 | Gear Cover | 1 |
| 38 | 05283 | Seal Case (GP8055) | 3 | K4 | 05029 | Hexagon Head Countersunk Screw | 8 |
| 38A | 06667 | O-Ring (GP8060/GP8065) | 6 | K5 | 07381 | Hexagon Socket Screw | 6 |
| 38A | 13286 | O-Ring (GP8055) | 6 | K6 | 08041 | Washer | 6 |
| 38B | 05281 | Support Ring (GP8055 Only) | 6 | K7 | 05030 | Connection for Oil Cooler | 1 |
| 39 | 05116 | Seal Sleeve (GP8065) | 3 | K8 | 07661 | Copper Seal | 6 |
| 39 | 05065 | Seal Sleeve (GP8060) | 3 | K9 | 07109 | Plug G1/2 | 2 |
| 39 | 05275 | Seal Sleeve (GP8055) | 3 | K10 | 05031 | Connecting Branch | 3 |
| 39A | 05066 | O-Ring | 3 | K11 | 05032 | Hose Adaptor | 4 |
| 40 | 06996 | Seal Ring (GP8065) | 3 | K12 | 05033 | Tube for Cooler | 2 |
| 40 | 05067 | Seal Ring (GP8060) | 3 | K13 | 05034 | Hose Clamp | 4 |
| 40 | 07723 | Seal Ring (GP8055) | 3 | | | | |

GP8055/GP8060/GP8065 PUMP REPAIR KITS

Plunger Packing Kits

GP8055 - #09616

| Item | Part # | Description | Qty. |
|------|--------|--------------|------|
| 38A | 13286 | O-Ring | 6 |
| 38B | 05281 | Support Ring | 6 |
| 39A | 05066 | O-Ring | 6 |
| 40 | 07723 | Seal Ring | 3 |
| 42 | 05277 | V-Sleeve | 9 |

GP8060 - #09617

| Item | Part # | Description | Qty. |
|------|--------|-------------|------|
| 38A | 06667 | O-Ring | 6 |
| 39A | 05066 | O-Ring | 6 |
| 40 | 05067 | Seal Ring | 3 |
| 42 | 05069 | V-Sleeve | 9 |

GP8065 - #09586

| Item | Part # | Description | Qty. |
|------|--------|-------------|------|
| 38A | 06667 | O-Ring | 6 |
| 39A | 05066 | O-Ring | 6 |
| 40 | 06996 | Seal Ring | 3 |
| 42 | 06997 | V-Sleeve | 9 |

Oil Seal Kit - #09584

| Item | Part # | Description | Qty. |
|------|--------|-------------------|------|
| 32 | 05058 | Radial Shaft Seal | 3 |
| 33A | 05056 | O-Ring | 3 |

Inlet Valve Kit - #09587

| Item | Part # | Description | Qty. |
|------|--------|--------------------|------|
| 51B | 05078 | Inlet Valve Seat | 1 |
| 51C | 05079 | Valve Plate | 1 |
| 51D | 07658 | O-Ring | 1 |
| 51E | 05080 | Valve Spring | 1 |
| 51F | 05081 | Valve Spring Guide | 1 |

Discharge Valve Kit - #09588

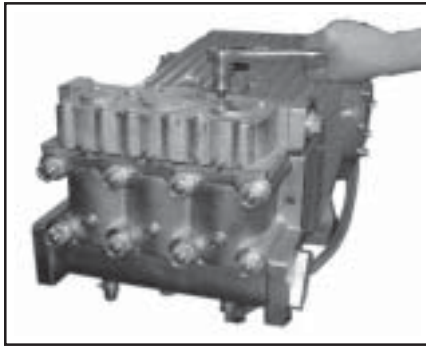
| Item | Part # | Description | Qty. |
|------|--------|----------------------|------|
| 52B | 05084 | Discharge Valve Seat | 1 |
| 52C | 05079 | Valve Plate | 1 |
| 52D | 06258 | O-Ring | 1 |
| 52E | 05080 | Valve Spring | 1 |
| 52F | 05081 | Valve Spring Guide | 1 |

| GP8055/GP8060/GP8065 TOOL LIST AND TORQUE SPECIFICATIONS | | | | |
|--|-------------|-------------------------------------|--------------------|---|
| ITEM | PART # | DESCRIPTION | TORQUE Ft-lbs (NM) | TOOL NEEDED |
| 17 | 05038 | Hexagon Socket Screw | 64 (87) | 10mm allen wrench |
| 24 | 05047 | Connecting Rod Hexagon Socket Screw | 37 (50) | 8mm allen wrench |
| 33B | 05054 | Clip Ring | n/a | Industrial Snap ring pliers |
| 36C | 05062 | Tension Screw | 30 (40) | 16mm socket |
| 49A | 05073 | Hexagon Nut (manifold) | 265 (360) | 30mm socket |
| 51/52 | 05084/05076 | Valve Assemblies | n/a | Valve puller (p/n 07662) - included with pump |
| 58 | 05087 | Hexagon Socket Screw | 132 (180) | 12mm allen wrench |
| K5 | 07381 | Hexagon Socket Screw | n/a | 8mm allen wrench |

| GP8000 Trouble Shooting | | |
|--|---|---|
| Problem | Cause | Solution |
| Pressure drops, water leaks | V-sleeves leak | Replace V-sleeves, examine surface of plunger |
| Pressure drops, pump becomes loud | Discharge or suction valve leaks | Replace valve |
| | Steam formation (cavitation) | Reduce suction height, reduce flow resistance in inlet line, clean inlet filter, lower water temperature |
| Irregular pressure | Worn valves | Examine valves |
| | O-ring on the valves or inlet valve adapter leaks | Examine O-ring, examine valve casing for unevenness on the sealing surfaces |
| Oil leaks at visible part of plunger | Gear sealing is leaky | Examine seals and running surface of plunger |
| Dirtymile-colored frothy oil | Oil has mixed with water | Replace oil immediately, find and fix the cause |
| Oil leakage on the crankshaft | Shaft sealing ring leaks | Check seal and shaft |
| Noise increases without loss of pressure | Worn bearing | Disassemble gear, examine all parts, replace worn parts, check oil level. If service life was too short, check for excess strain or whether lubrication intervals were too long. Only specified lubricants are to be used |

GP8055/GP8060/GP8065 PUMP REPAIR INSTRUCTIONS

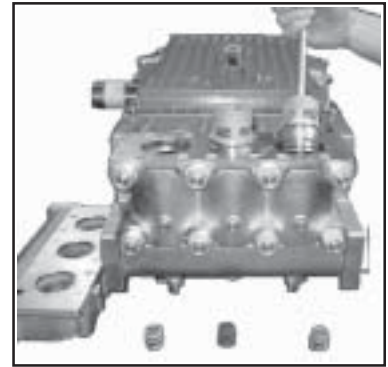
Valve Inspection and Repair



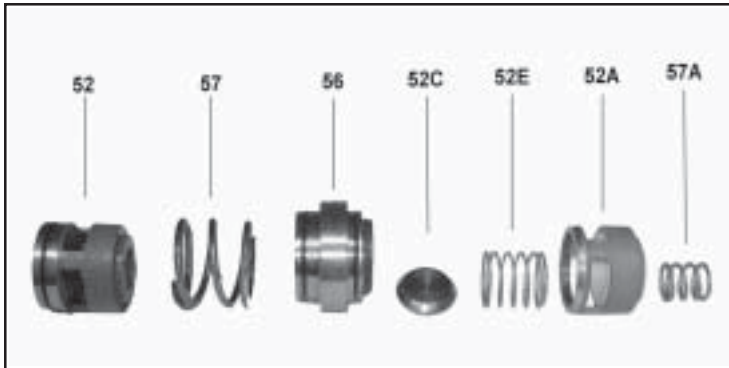
1) Remove bolts (58).



2) Remove discharge casing (50B) up and away.

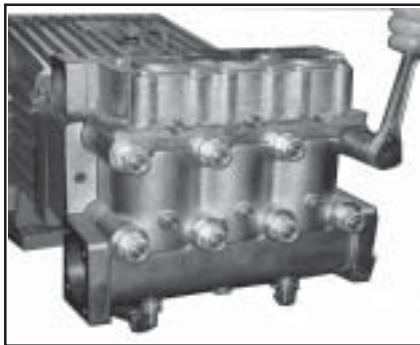


3) Take out pressure springs (57A). Pull out assembled valves (51 & 52) with fitting tool.



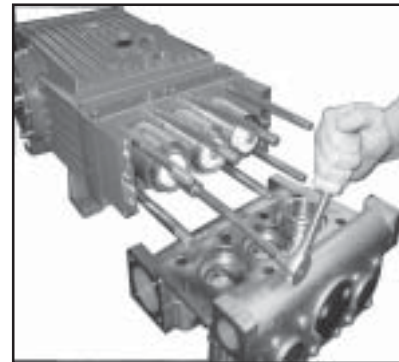
4) The spring tension cap (51A, 52A) is screwed together with the valve seat (51B or 52B). Screw off spring tension cap. Takeout springs (51E, 52E) and valve plate (51C, 52C). Check sealing surfaces and O-rings (51D, 52D). Replace worn parts. Coat threads of valve seat with silicon grease or molycote anti-seize Cu-7439 when reassembling. Before refitting the valves, clean the sealing surfaces in the casing and check for any damage. Tighten caps (58) at 133 Ft-lbs; check torque tension after 8-10 operating hours.

To Check Seals and Plunger Pipe



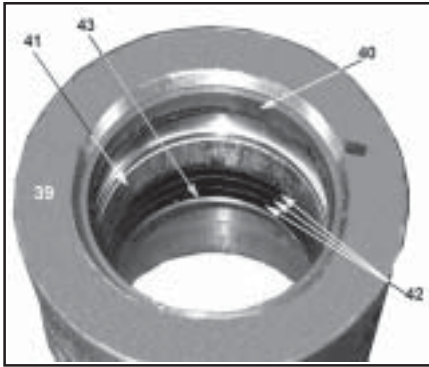
5) Remove hexagon nuts (49A) and valve casing together with seal case (38) from crankcase (1). If necessary, carefully tap the valve casing (50) past the centering stud (50A) using a rubber hammer.

IMPORTANT! If necessary, support the valve casing by resting it on wooden blocks or by using a pulley.

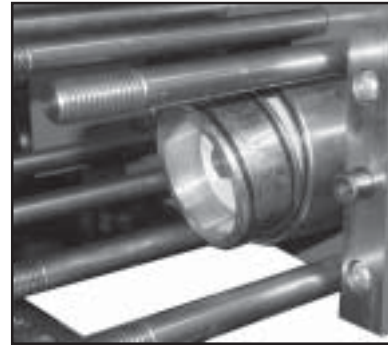


6) Remove tension screw (36C) and take seal sleeve (39) together with all mounted parts out of the drive. Pull plunger pipe out of the seal assembly and check for any damage. Carefully, remove seal rings (40) and sleeves (42) with a screw driver.

GP8055/GP8060/GP8065 PUMP REPAIR INSTRUCTIONS

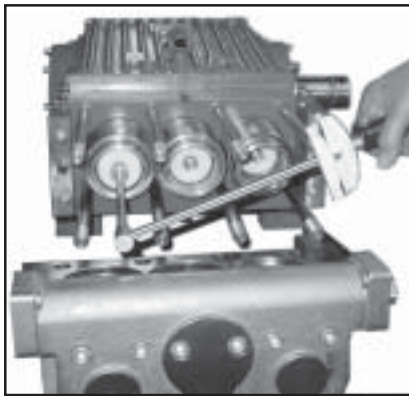


7) **Important!** Be careful not to damage the seal sleeve (39) and pressure ring (41). Check the inner diameter of the pressure ring for wear and if necessary replace together with seals (40) and (42). Clean all parts. New parts should be lightly coated with silicon grease before installation. Inert the seal unit (40, 41, 42 43) into the sleeve. Push the ceramic plunger carefully through the seals from the crankcase side. If necessary, the seals can be held tightly using a suitable pipe support held on the other side of the seal sleeve.



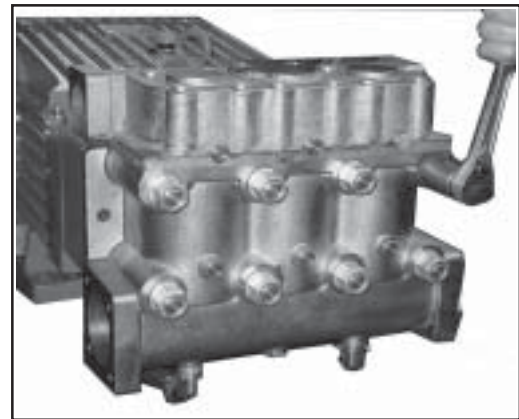
8) Take out the seal case (38) from the valve (if necessary secure 2 screwdrivers in the front O-ring groove to extract seal casing from valve casing). Coat seals with silicon grease before installing.

Important! Mounting surfaces of the crankcase and the valve casing must be clean and free of damage. The components must lie exactly and evenly on one another. The same exactness applies for all centering positions in the crankcase, pressure and valve casing.



8) Coat the seal sleeve lightly with anti-corrosive grease (e.g. molycote no. Cu-7439) in its fitted area towards the crankcase. Insert the seal sleeves in to their crankcase fittings. Coat the threads of the tension screw (36C) lightly with thread glue and insert it together with a new copper ring (36D) through the ceramic pipe. Turn the pump per hand until the plunger (25) rests against the plunger pipe. Tighten the tension screw at 30 Ft.-lbs.

Important! Thread glue must never come between the plunger pipe (36B) and centering sleeve (36E). Overtensioning of the plunger pipe by excessive tightening of the tension screw and/or dirt or damage on the mounting surfaces can lead to plunger pipe breakage. Insert the seal tension spring (45) and O-ring (39A) in to the seal sleeve (39).



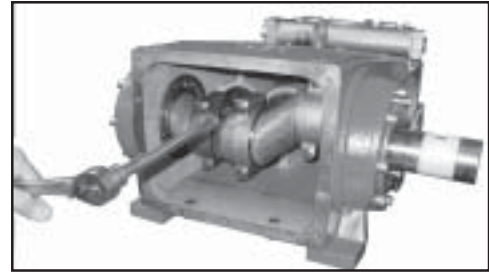
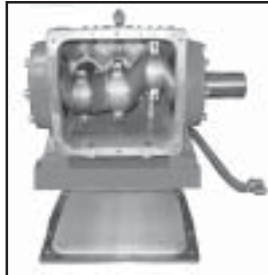
Replacing Valve Casing:

9) Put seal cases (38) in the centering holes of the valve casing, then push valve casing carefully on to centering studs (50A). Tighten hexagon screws (49A) evenly and crosswise at 266 Ft.-lbs.

Important! The torque tension on the screws (49A) must be checked after 8-10 operating hours; the pump must be at zero pressure. Thereafter, the tension is to be checked every 200 operating hours.

GP8055/GP8060/GP8065 PUMP REPAIR INSTRUCTIONS

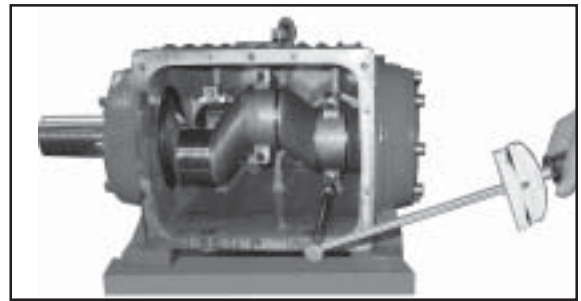
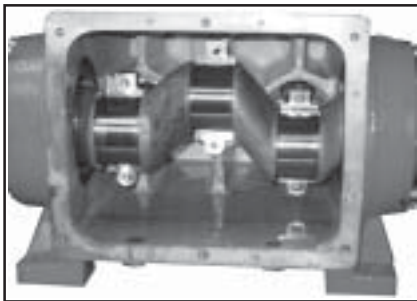
To Dismantle Crankcase Gear



10) Take out plungers and seal sleeves as described above. Drain the oil by taking off the plug (12). After removing the clip ring (33B), lever out the seal retainer (33) with a screwdriver. Open hose adaptor (K11) and remove gear cover (K3). Remove the cooling vane plate (K1) by removing the screws (K4)

11) Remove the connecting rod screws (24).

Important!! Connecting rods are marked 1 to 3 for identification. Do not twist connecting rod halves or interchange them. When reassembling, the connecting rod must be fitted in their exact original position on the crankshaft journals.



12) Push connecting rod halves together with the crosshead as far as possible into the crosshead guide. Take out bearing cover (14/14A) and push out crankshaft taking particular care that the con rod doesn't get bent. Check surfaces on the connecting rods (24), crankshaft (22) and crossheads (25). Check the surfaces of the crosshead guides in the crankcase for any unevenness.

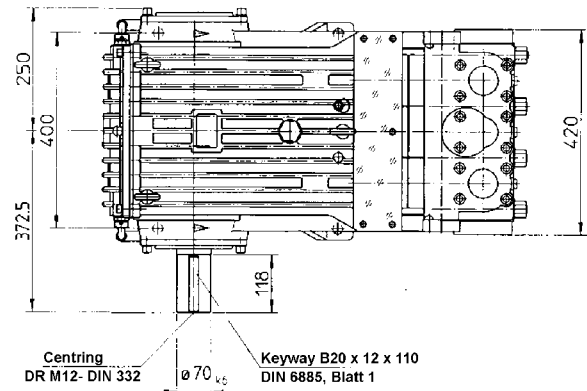
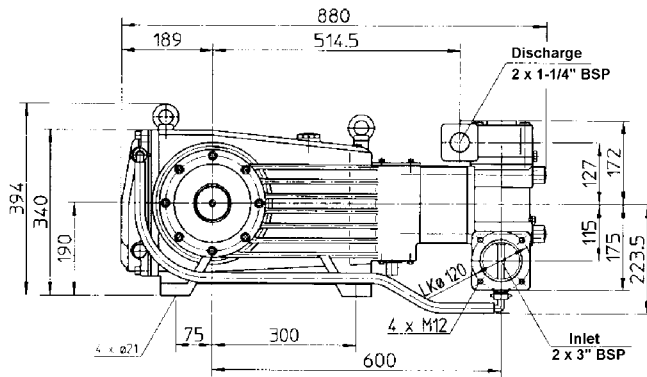
13) Reassemble in reverse order. Thread the long end of the crankshaft together with the inner bearing rings into the crankcase; then mount outer bearing ring (20) and spacer ring (22A). Mount connecting rod halves in their exact original position and tighten at 37 Ft-lbs.

Important!! Connecting rods must be able to move slightly sideways on the stroke journals.

14) Mount bearing cover (14A) and tighten screws (17) to 64 Ft-lbs. Adjust axial play (clearance) on the crankshaft to minimum 0.1 mm / max. 0.15 mm using shims (21A/21B). The shaft should turn easily with little clearance. Connecting rod must sit exactly in the middle of each crank pin. Fit the bearing cover (14) and tighten the screws (17) at 64 Ft-lbs. Seal (32A) must always be installed so that the seal lip on the inside diameter faces the oil. Possible axial float of the seal adaptor (33) to be compensated with shims (33C).

Mount cooling plate (K1) and gear cover (K3) with their respective seals (K2). When assembling the cooling circuit line, make sure that the oil cooler connection (K7) is always joined to the upper connection (K3) of the gear cover.

GP8055, GP8060, GP8065 SERIES DIMENSIONS - (mm)



GIANT INDUSTRIES LIMITED WARRANTY

Giant Industries, Inc. pumps and accessories are warranted by the manufacturer to be free from defects in workmanship and material as follows:

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4. Ninety (90) days from the date of shipment for all Giant accessories.

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2. Normal wear and tear to standard wear parts.
3. Use of repair parts other than those manufactured or authorized by Giant.
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