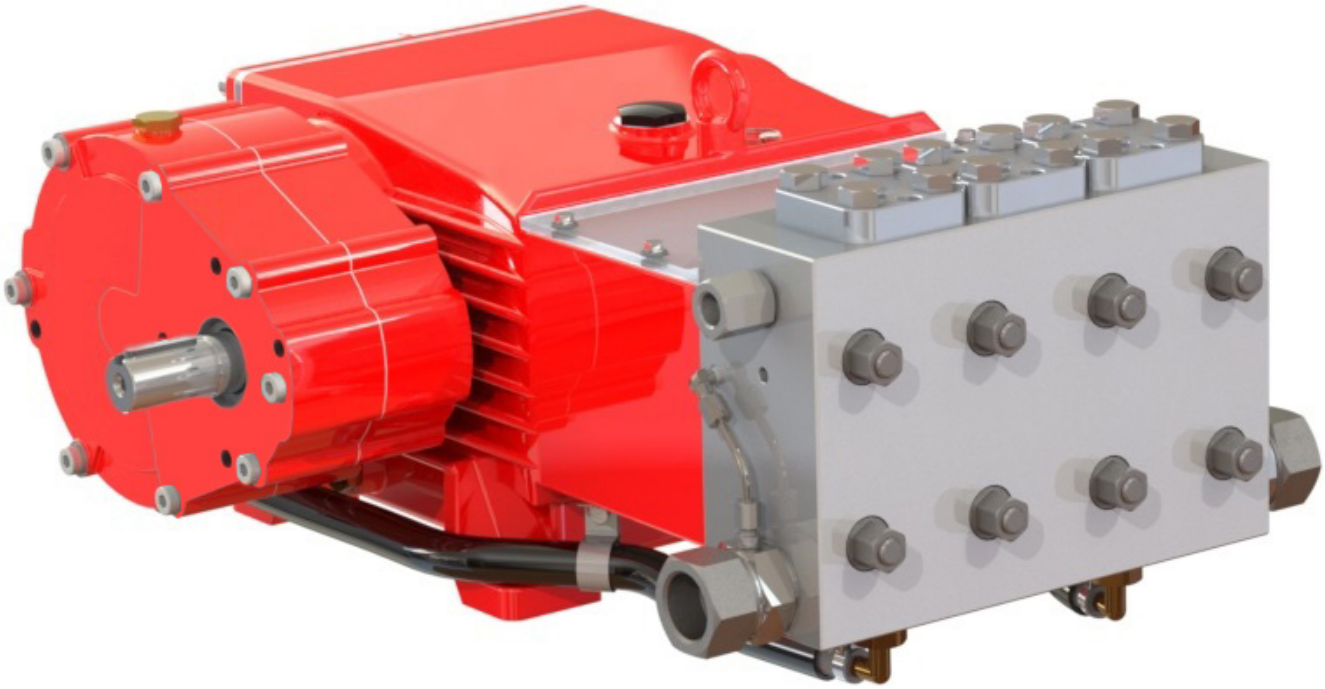
Model GP7622GB

Triplex Ceramic Plunger Pump Operating Instructions/ Repair and Service Manual

Gearbox Versions for Pinion Shaft Drives with gearbox



GIANT
Performance Under Pressure

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Performance

	Power Required	Pressure	Max. Speed	Max. Flow	Max. Temp.	Plunger ø	Plunger Stroke	Weight
Model	**BHP (kW)**	**PSI (bar)**	**RPM**	**GPM (l/min)**	**°F (°C)**	**in (mm)**	**in (mm)**	**lbs. (kg)**
GP7622GB	126.4 (94.3)	15,000 (1000)	800	12.7 (48)	104 (40)	0.87 (22)	2.28 (58)	379 (172)

Performance data for intermittent operation, data for continuous operation on request.
For information on intermittent operation and calculating of the performance data, see the Giant assembly instructions.

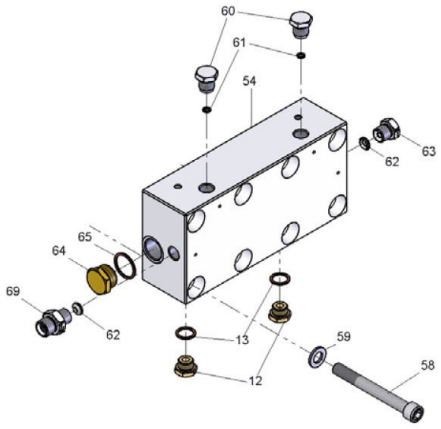
NPSHR / Inlet pressure
Required NPSH refers to water (at 68 °F or 20 °C) at maximum permissible pump speed.
Maximum inlet pressure: 145 PSI (10 bar). **If high pulsations are present, limit inlet pressure to 29 PSI (2 bar).**

Level of noise emission
Emission sound pressure level ≤93 dB(A)

Fields of application
The fields of application of these pump types correspond to the specifications in the assembly instructions of Giant pumps.

Ambient conditions
Ambient temperature: 41°F (5°C)<$T_{Amb.}$<86°F (30 °C)

Oil Filling
- Filling quantity: 1.9 gallons (7.2 L)
- Quality: Industrial gear oil **ISO VG 220** or automotive gear oil **SAE 90 GL4 or Giant's equivalent (p/n 01154)**
- Intervals: first oil change after **50 operating hours** than every **500 operating hours**, but at the latest after **12 months**



Installation/Putting into Operation

Shaft protector
When the pump is in operation, the open shaft end must be covered up by shaft protector (21), the driven shaft side and coupling by a contact-protector.

To cover the exposed crankshaft end, mount the shaft guard (21) together with the holder (21A) onto the bearing cover (14) and secure with bearing cover screws (17).

Direction of pump rotation
Set the direction of rotation of the drive unit according to the direction of rotation arrow on the crankcase.

Suction line filter
Recommended mesh size 50 µm.

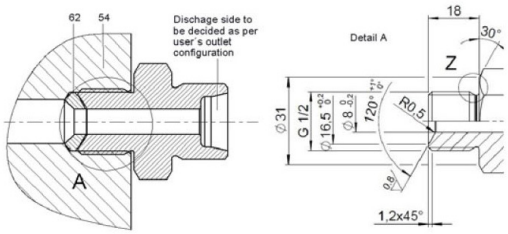
Operation
Maximum operation pressure is attainable at 600 - 800 rpm. If the speed is reduced further, the pump pressure must be reduced in the same proportion to ensure sufficient gearbox lubrication.

Discharge Line
The pump comes with two special lens seals (62) which have to be inserted in to the discharge ports of the pump. One of the two ports is to be closed with the included plug (63).

If a 1/2" BSP is used on the discharge, the hose connection for the discharge line must be constructed as per the below drawing to ensure that together with lens seal (62) the discharge line is completely sealed.

We offer the high-pressure connection (05361) with UNF 9/16'' female threads for high-pressure fittings.

The two 1/2" BSP connections on the top side of the valve casing are closed off with plug (60) and copper seal ring (61). These two connections are for the optional fitting of a pressure gauge and/or safety valve such as our 23140.

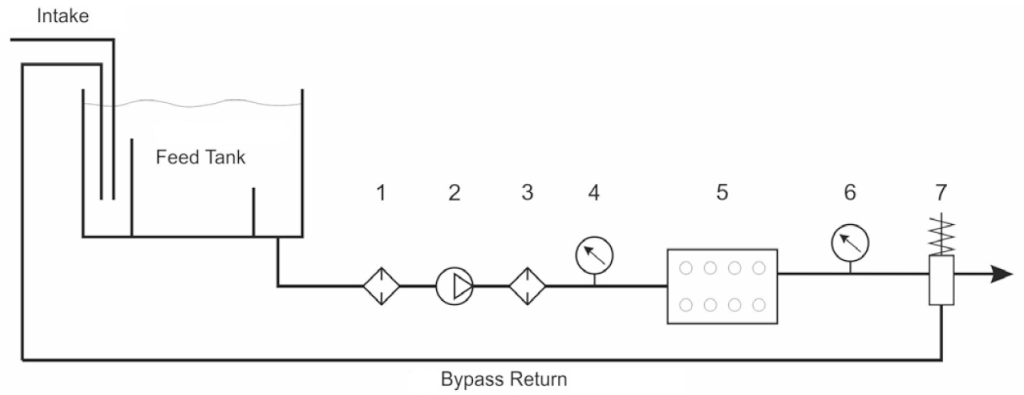


Should a pressure gauge or safety valve be installed, the copper ring (61) must remain in the bore.

Pressure gauges with a 1/2" BSP connection have the appropriate contour so that the copper ring sits properly.

The alignment of the pressure gauge cannot be determined exactly after tightening.
We offer the double nipple (05362) for mounting the 23140 pressure relief valve.

For further information, see assembly instructions of Giant Pumps.



1 = Coarse filter
2 = Booster pump
3 = Fine-particle filter
4 = Gauge to check input pressure
5 = High pressure pump
6 = High pressure gauge
7 = Excess, Safety valves

Maintenance and Servicing
For the type of thread lock used and the required tightening torques, observe the table in the exploded view.

Special tools required
The following special tools are required for assembly:
- Pull-out tool ø24 mm
- Seal extractor tool ø22.4 mm

Suction and Discharge Valves
Remove hexagon screw (58) and remove valve casing (54). Pull seal case (38) out of valve casing (54). Pull valve body (52) and seal case (38) apart.
Using pliers, pull spring guide (55) out of the valve casing. Remove discharge valve plate (57) together with spring (56) from spring guide (55). Check sealing surfaces of the valve body (52) and discharge valve plate (57). Check discharge valve spring (56) and border seal ring (53) and replace where necessary.

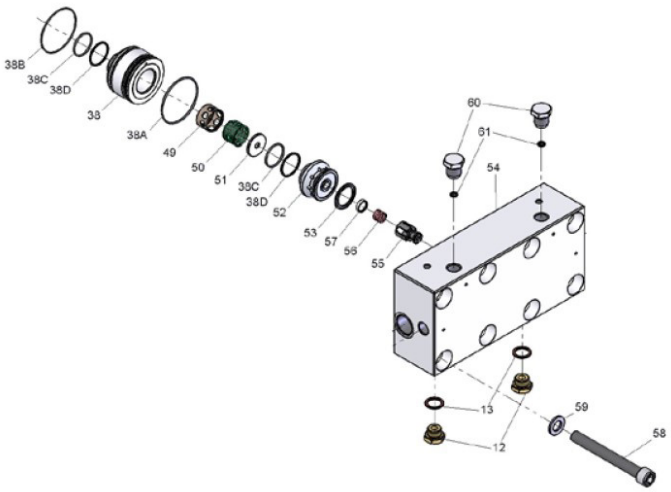
A damaged border seal ring (53) must be replaced before reassembling.

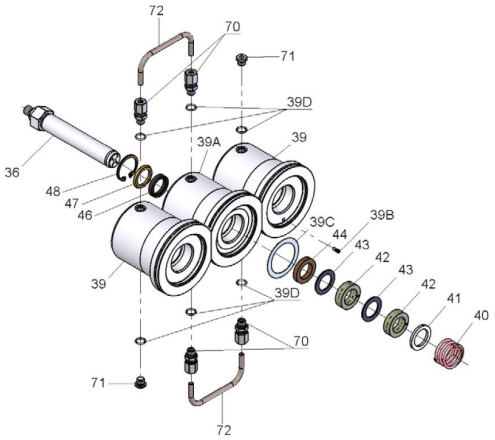
Suction Valves
Remove suction valve spring (50) with valve plate (51) from seal case (38). Check sealing surfaces of the valve plate (51) and valve body (52).
Check O-rings (38/A/B/C) and support ring (38D) before reassembling. Worn parts must be replaced.

To Check Seals and Plungers
Unscrew hexagon screws (58), and take off valve casing (54). Remove the screw-in joints (70) and take off the elbow pipes (72). Pull seal sleeve (39/39A) out of the crankcase.

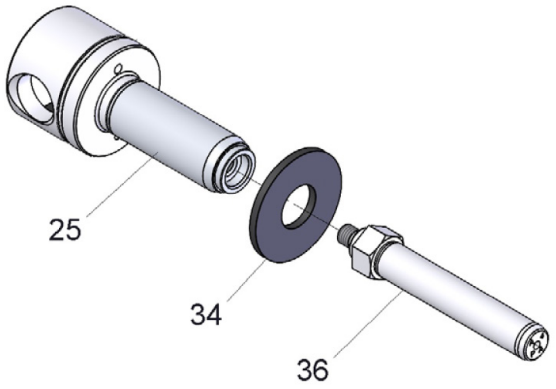
Take the seal tension spring (40) out of seal sleeve (39/39A).
Using a pliers, remove the clip ring (48) situated on the other side of the sleeve; then take out support ring (47) and grooved ring (46) using an extractor tool (ø24).
Using a seal extractor tool (ø22.4), carefully press the seal unit comprising guide ring (44), spiral ring (42) and support ring (41/43) out of the seal sleeve (39/39A) from the side (39/39A) closest to the drive.

Check spiral ring (42),Support ring (43), guide ring (44) and grooved ring (46) and replace where necessary.





Check surface of plunger (36) for damage.
A worn plunger (36) must be removed (27 mm wrench) and replaced. Due to reasons of precision, the ceramic plunger alone cannot be exchanged.
Coat the threads of the plunger lightly with an appropriate bonding agent and tighten plunger to the required torque.

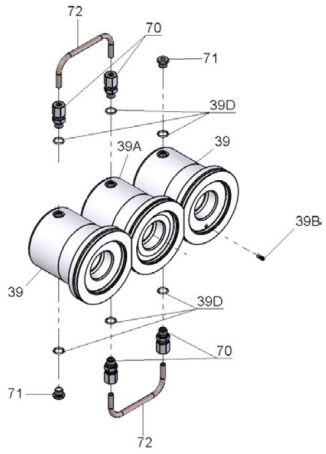


Check the leakage bores ø4mm of the seal sleeves (39/39A) and seal cases (38) for dirt and clean if necessary.

The elbow screw-in joints (70/71) and elbow pipes (72) must also be checked for dirt and cleaned if necessary.

For the right sealing sleeve, the leakage hole ø4 mm must be closed by a nozzle (39B) to improve water circulation from sealing sleeve 1 to sealing sleeve 3.

Fit the drip-return unit (46/47/48), the high-pressure seal unit (41/42/43/44) and tension spring (40) into the seal sleeve.



Then push the assembled seal sleeves (39/39A) carefully on to the plungers and into the drive; thereafter, mount elbow pipes (72) as per the exploded view and tighten the screw-in joints (70/71) carefully.
Push the valve casing (54) with the seal sleeves (38) onto the sealing sleeves (39/39A).
Tighten the screws (58) for fastening the valve housing evenly to the specified torque.
If required, supplementary assembly instructions can be requested from the manufacturer Giant.

Materials Used
Valve Casing: AISI CA-6-NM
Plunger: AISI 329 hard metal coated
Valves: Duplex-Steel / 1.4460 / 1.4462
Seals: Aramid Packing with Teflon
O-Rings: Nitrile

Paint
The pump drive is painted in RAL 3001 as standard.

GP7622GB TORQUE SPECIFICATIONS			
Position	**Thread**	**Lubrication Info**	**Torque Amount**
1		Molycote Cu-Paste	
5		Loctite 5910	
10	M10		33 ft.-lbs. (45 Nm)
12	1/2” BSP		30 ft.-lbs. (40 Nm)
15		Loctite 403	
17	M12		33 ft.-lbs. (45 Nm)
24	M10		22 ft.-lbs. (30 Nm)
32		Loctite 403	
36	27mm		33 ft.-lbs. (45 Nm)
38		Copper Paste/ Crankcase outside	
58	M16		173 ft.-lbs. (235 Nm)
60		Anti Seize 350	
63		Anti Seize 350	
64		Anti Seize 350	
69		Anti Seize 350	

GP7622GB REPAIR KITS

Plunger Packing Kit #09701

Item	Part #	Description	Qty.
38B	06750	Leakage Gasket	3
38C	06667	O-Ring	3
39A	05523	O-Ring	6
42	06754	Spiral Ring (Packing)	6
43	06755	Support Ring	6
44	06756	Guide Ring	3
46	13390	Seal Ring	3

Oil Seal Kit #09221

Item	Part #	Description	Qty.
32	07624	Radial Shaft Seal	3
33A	07627	O-Ring	3

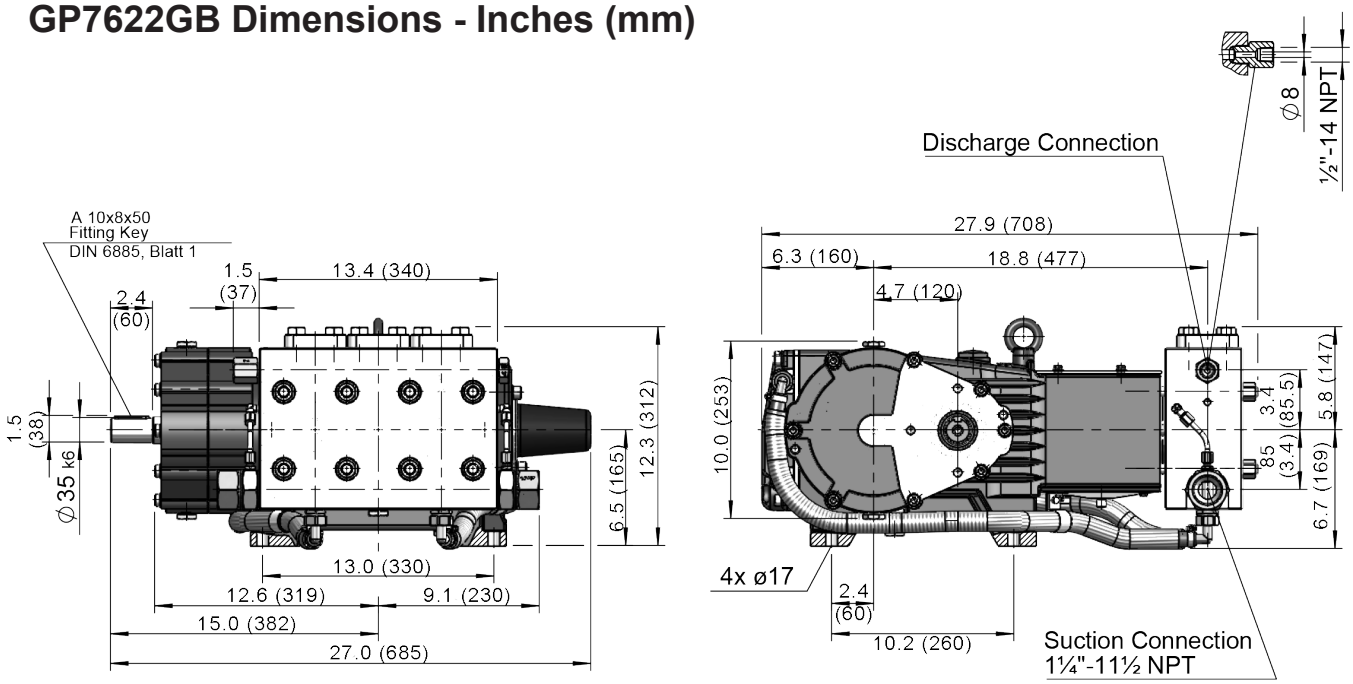
Inlet Valve Assembly Kit #09702

Item	Part #	Description	Qty.
51B	05193	Support Ring	3
51C	05194	Inlet Valve Seat	3
51D	06761	Valve Plate	3
51E	06762	Valve Spring	3
58A	07700	O-Ring	3
58B	07693	Support Ring	3

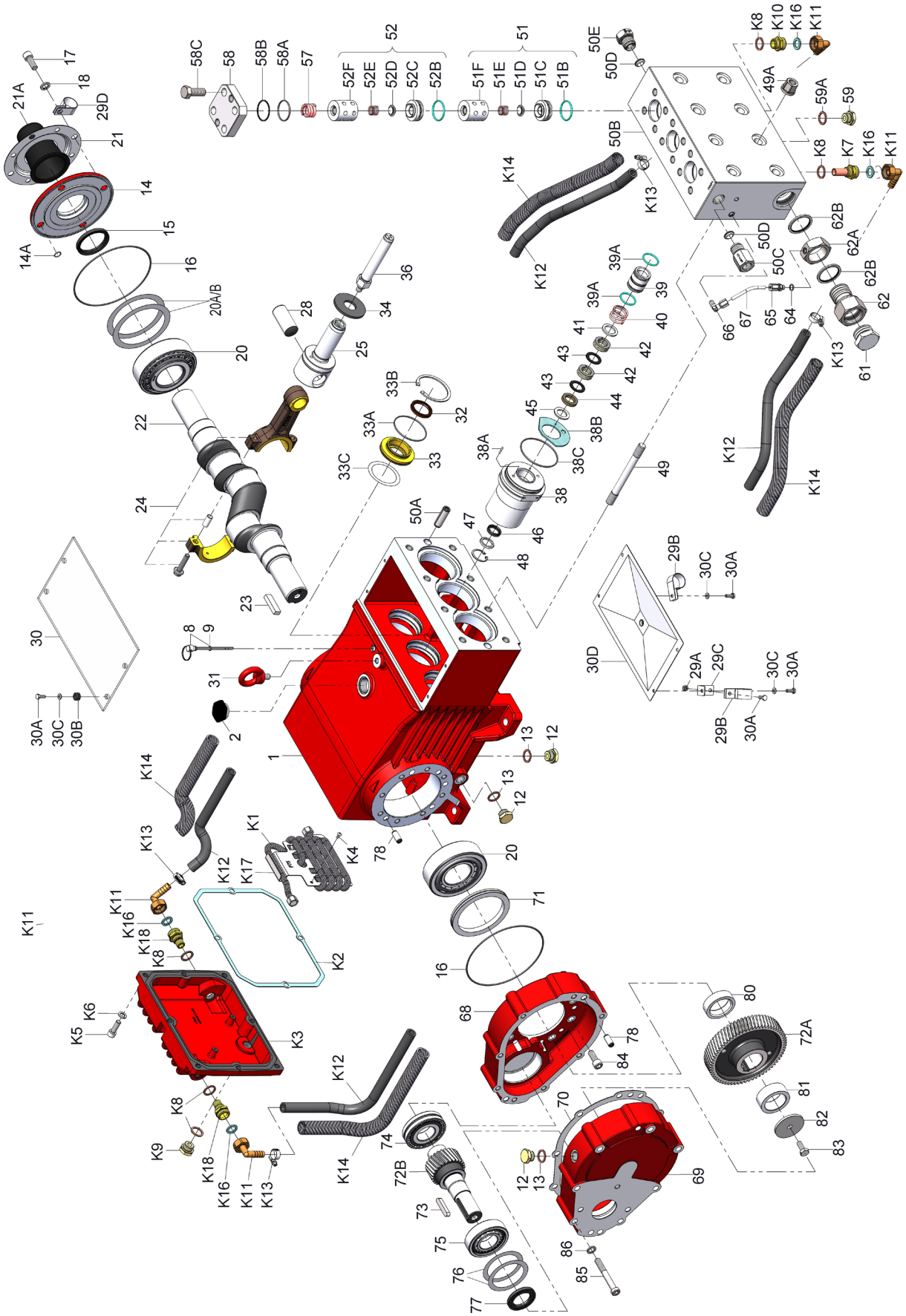
Discharge Valve Assembly Kit #09703

Item	Part #	Description	Qty.
52B	05193	O-Ring	3
52C	05195	Valve Seat	3
52D	06761	Valve Plate	3
52E	06762	Valve Spring	3
58A	07700	O-Ring	3
58B	07693	Support Ring	3

GP7622GB Dimensions - Inches (mm)



Exploded View - GP7622GB



GP7622GB PARTS LIST

ITEM	PART	DESCRIPTION	QTY.
1	05769	Crankcase	1
2	13000	Oil Filler Plug Assembly	1
8	07603	Oil Dip Stick Assembly	1
9	01009	O-Ring, Dip Stick	1
12	07109	Drain Plug	6
13	06272	Copper Seal for 12	6
14	05770	Bearing Cover	1
14A	12204	O-Ring	4
15	05771	Radial Shaft Seal	1
16	05772	O-Ring	2
17	05642	Hexagon Socket Screw	4
18	05039	Spring Washer	4
20	05773	Taper Roller Bearing	2
20A	05774	Fitting Disc (Shim), 0.1 mm	1-5
20B	04570	Fitting Disc (Shim), 0.15mm	1-5
21	05645	Shaft Guard Holder	1
21A	05646	Shaft Guard	1
22	04517A	Crankshaft	1
23	05776	Key	1
24	05777	Connecting Rod Assembly	3
25	05778	Crosshead Assembly	3
28	05779	Crosshead Pin	3
29A	07408	Hexagon Nut	1
29B	05383	Bracket 2 f. Cooling Hose	2
29C	05662	Fixing Bracket	1
29D	05381	Bracket 2 f. Cooling Hose	1
30	07619	Cover Plate	1
30A	07225-0100	Hexagon Screw	9
30B	13136	Grommet	4
30C	05053	Disc	8
30D	13154	Cover	1
31	07623	Eye Bolt	1
32	07624	Radial Shaft Seal	3
33	07626	Seal Retainer	3
33A	07627	O-Ring for Seal Retainer	3
33B	07628	Circlip for 33	3
33C	07249	Fitting Disc	3
34	13137	Oil Scraper (Flinger)	3
36	06748	Plunger	3
38	06749	Seal Sleeve	3
38A	22764	Serrated Pin	3
38B	06750	Leakage Gasket	3
38C	06667	O-Ring	3
39	05522	Seal Case	3
39A	05523	O-Ring	6
40	07338	Tension Spring	3
41	06753	Support Disc	3
42	06754	Spiral Ring (Packing)	6
43	06755	Support Ring	6
44	06756	Guide Ring	3
45	06757	Pressure Ring	3
46	13390	Seal Ring	3
47	06758	Spacer Disc	3
48	5524	Circlip	3
49	13159	Stud Bolt	8
49A	13160	Hexagon Nut	8
50A	13162	Centering Stud	2
50B*	06759-NPT	Valve Casing Assembly (50B-E)	1
50C	03397	Connection Nipple, 1/2” NPT	1
50D	03398	Lens Gasket	2
50E	03399	Plug, 3/4” BSP	1
51	05780	Inlet Valve Assembly (51B-51F)	3
51B	05193	O-Ring	3
51C	05194	Inlet Valve Seat	3
51D	06761	Valve Plate	3
51E	06762	Valve Spring	3
51F	06763	Spacer Pipe	3
52	05781	Discharge Valve Assembly (52B-52F)	3
52B	05193	O-Ring	3
52C	05195	Discharge Valve Seat	3
52D	06761	Valve Plate	3
52E	06762	Valve Spring	3
52F	06763	Spacer Pipe	3
57	06078	Tension Spring	3
58	07699	Plug	3
58A	07700	O-Ring	3
58B	07693	Support Ring	3
58C	07702	Hexagon Screw	12
59	07109	Plug, 1/2” BSP	1
59A	06807	Copper Ring	1
61	13151	Plug 1-1/4” BSP	1
62	03401	Connecting Joint	2
62A	06766	Connection Ring	2
62B	06767	Seal Ring	4
64	07204-0100	Steel Ring	2
65	06588	Screw-In Connector	2
66	06768	Threaded Elbow	2
67	06769	Curved Leakage Pipe	2
68	05782	Bottom Casing for Gear	1
69	05783	Top Casing for Gear	1
70	05784	Gear Seal	1
71	05785	Centering Ring	1
72A/B	04531	Gear Wheel Set, i=1.87	1
72A/B	04519	Gear Wheel Set, i=2.25	1
72A/B	04518	Gear Wheel Set, i=2.73	1
73	13243	Fitting Key	1
74	05787	Self-Aligning Roller Bearing	1
75	05700	Cylinder Roller Bearing	1
76	07117	Fitting Disc, 0.1 mm	1-5
77	05701	Radial Shaft Seal Ring	1
78	05665	Cylindrical Pin	4
80	05790	Spacer Ring 1 for Gear	1
81	05791	Spacer Ring 2 for Gear	1
82	05802	Fixing Plate for Gear	1
83	13358	Hexagon Screw	1
84	05792	Hexagon Socket Screw	7
85	05702	Hexagon Socket Screw	8
86	07159	Washer	8
90	03725	Oil Cooler Assembly	1
K1	03705	Stainless Steel Tubing	1
K2	03708	Gear Cover Seal	1
K3	03709	Gear Cover	1
K4	03710	Clamping Screw	2
K5	22706	Hexagon Socket Screw	8
K6	06725	Spring Washer	8
K7	05755	Connection for Oil Cooler	1
K8	06272	Copper Seal	5
K9	07109	Plug, 1/2” BSP	1
K10	05031	Reducing Nipple	1
K11	05032	U-Joint Connector with Nut	4
K12	05033	Tube for Cooler	1.4m
K13	05402	Hose Clamp	4
K14	05403	Hose Guard	1.3m
K16	05405	Flat Gasket	4
K17	03706	Hose Plate for Cooler	1
K18	03707	Reduction Nipple	2

*If the valve casing (50B) needs to be replaced, items 50C-E will be included

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:

1. Five (5) years from the date of shipment for all pumps used in portable pressure washers with NON-SALINE, clean water applications.
2. Two (2) years from the date of shipment for Giant pumps used in car wash applications.
3. One (1) year from the date of shipment for all other Giant industrial and consumer pumps.
4. Six (6) months from the date of shipment for all rebuilt pumps
5. Ninety (90) days from the date of shipment for all Giant accessories.

This warranty is limited to repair or replacement of pumps and accessories of which the manufacturer's evaluation shows were defective at the time of shipment by the manufacturer. The following items are NOT covered or will void the warranty:

1. Defects caused by negligence or fault of the buyer or third party.
2. Normal wear and tear to standard wear parts.
3. Use of repair parts other than those manufactured or authorized by Giant.
4. Improper use of the product as a component part.
5. Changes or modifications made by the customer or third party.
6. The operation of pumps and or accessories exceeding the specifications set forth in the Operations Manuals provided by Giant Industries, Inc.

Liability under this warranty is on all non-wear parts and limited to the replacement or repair of those products returned freight prepaid to Giant Industries which are deemed to be defective due to workmanship or failure of material. A Returned Goods Authorization (R.G.A.) number and completed warranty evaluation form is required prior to the return to Giant Industries of all products under warranty consideration. Call (419)-531-4600 or fax (419)-531-6836 to obtain an R.G.A. number.

Repair or replacement of defective products as provided is the sole and exclusive remedy provided hereunder and the MANUFACTURER SHALL NOT BE LIABLE FOR FURTHER LOSS, DAMAGES, OR EXPENSES, INCLUDING INCIDENTAL AND CONSEQUENTIAL DAMAGES DIRECTLY OR INDIRECTLY ARISING FROM THE SALE OR USE OF THIS PRODUCT.

THE LIMITED WARRANTY SET FORTH HEREIN IS IN LIEU OF ALL OTHER WARRANTIES OR REPRESENTATION, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND ALL SUCH WARRANTIES ARE HEREBY DISCLAIMED AND EXCLUDED BY THE MANUFACTURER.

WARNING: This product might contain a chemical known to the State of California to cause cancer, and birth defects or other reproductive harm.
For more information go to www.P65Warnings.ca.gov

GIANT
Performance Under Pressure

GIANT INDUSTRIES, INC.
900 N. Westwood Ave., Toledo, Ohio 43607
Phone: (419)-531-4600 FAX (419)-531-6836
www.giantpumps.com
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