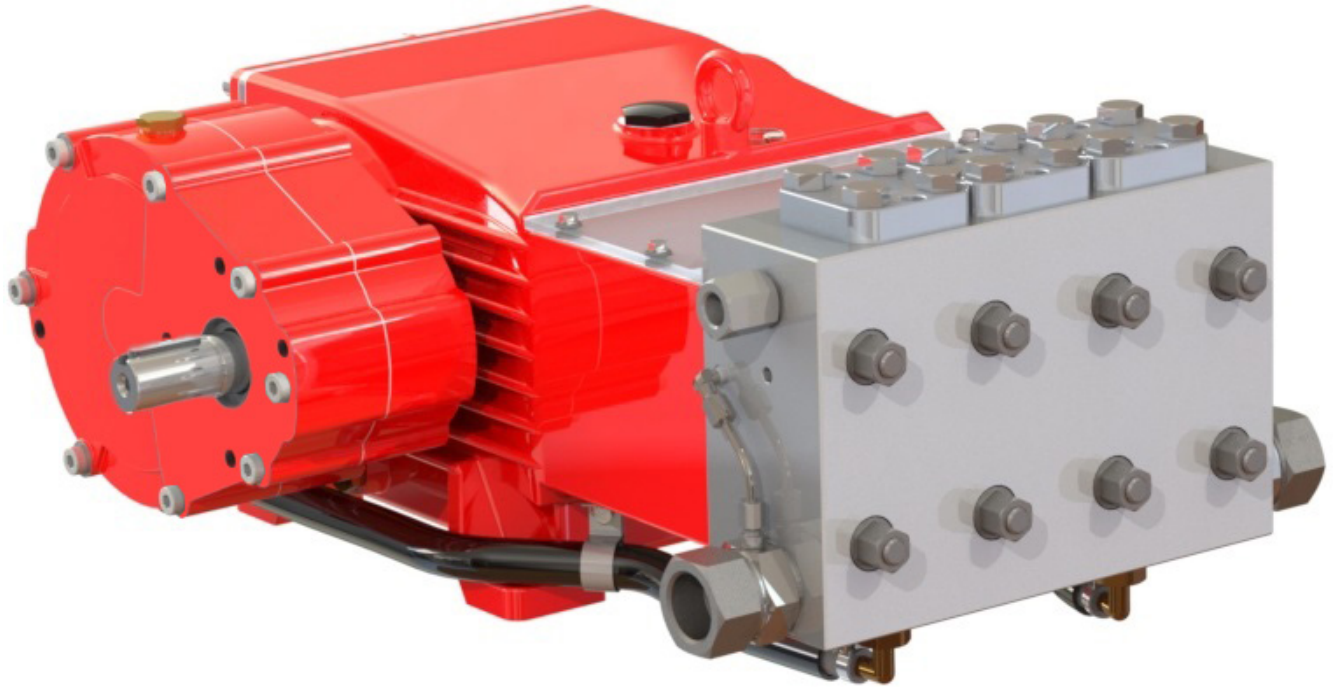


Model GP7522GB

Triplex Ceramic
Plunger Pump
Operating Instructions/
Repair and Service Manual

Gearbox Versions for Pinion Shaft Drives with gearbox



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Updated 01/25

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)
GP7522GB	69.3 (51.7)	10,150 (700)	750	9.9 (37.5)	140 (60)	0.87 (22)	1.89 (48)	408 (185)

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

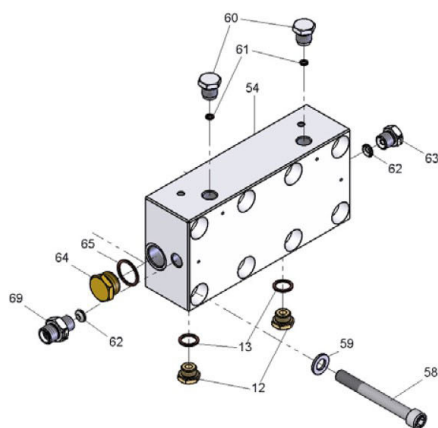
Ambient temperature: 41°F (5°C) < T_{Amb.} < 86°F (30 °C)

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.

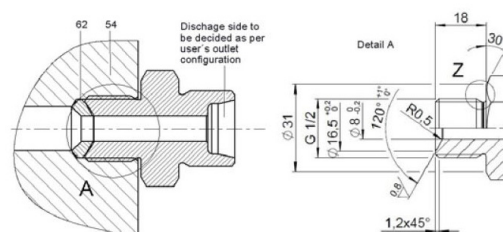
Discharge Line

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.



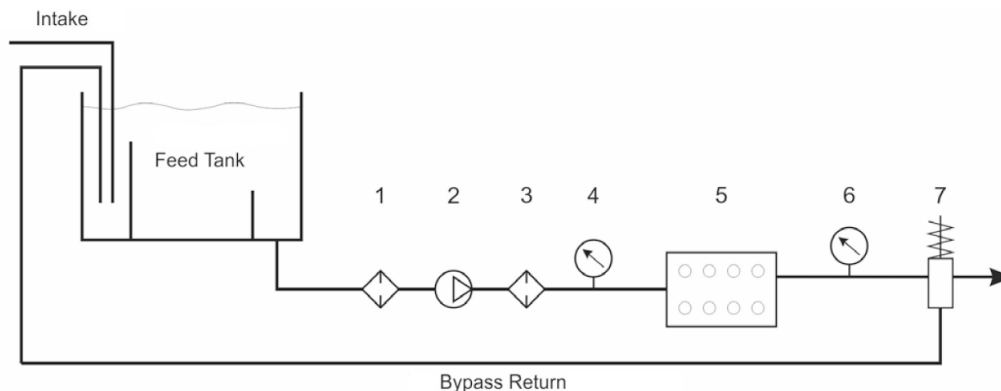
Should a pressure gauge or safety valve be installed, the copper ring (61) must remain in the bore.

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 $\varnothing 24$ mm
- Seal extractor tool $\varnothing 22.4$ 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

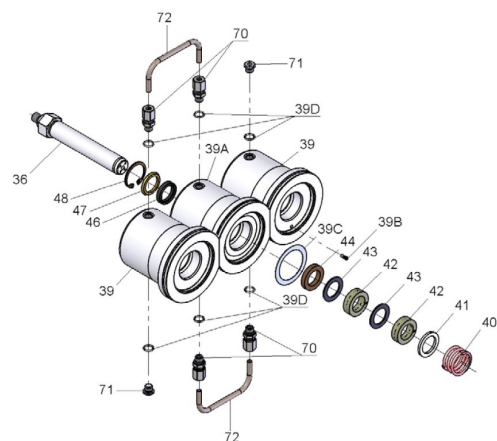
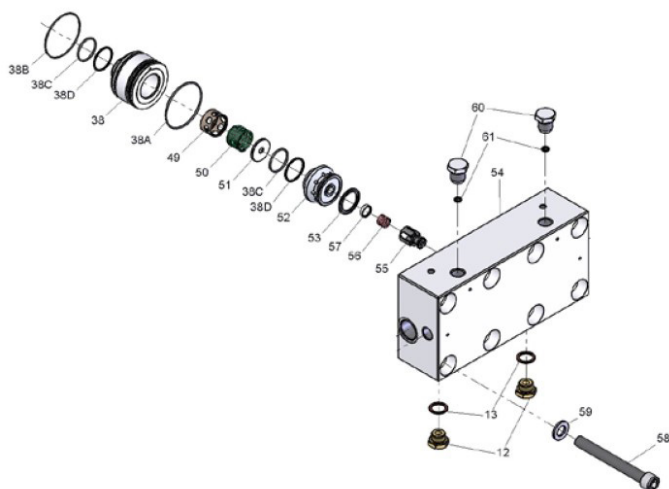
Unscrew hexagon screws (58), and take off valve casing (54). Remove the screw-in joints (70) and take off the elbow pipes (72). Pull seal sleeve (39/39A) out of the crankcase.

Take the seal tension spring (40) out of seal sleeve (39/39A).

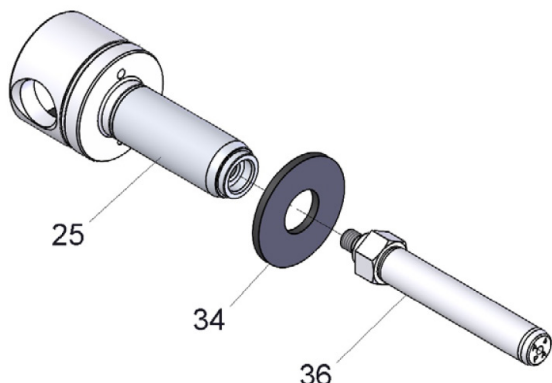
Using a pliers, remove the clip ring (48) situated on the other side of the sleeve; then take out support ring (47) and grooved ring (46) using an extractor tool ($\varnothing 24$).

Using a seal extractor tool ($\varnothing 22.4$), 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.



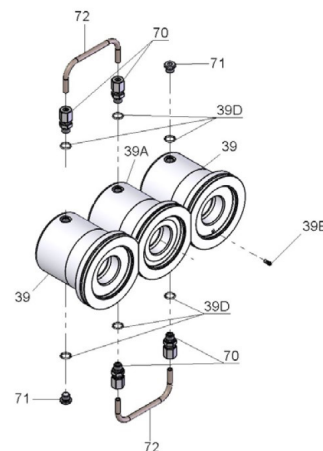
Check the leakage bores $\varnothing 4$ mm of the seal sleeves (39/39A) and seal cases (38) for dirt and clean if necessary.

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 $\varnothing 4$ 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.

GP7522GB 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	

GP7522GB 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

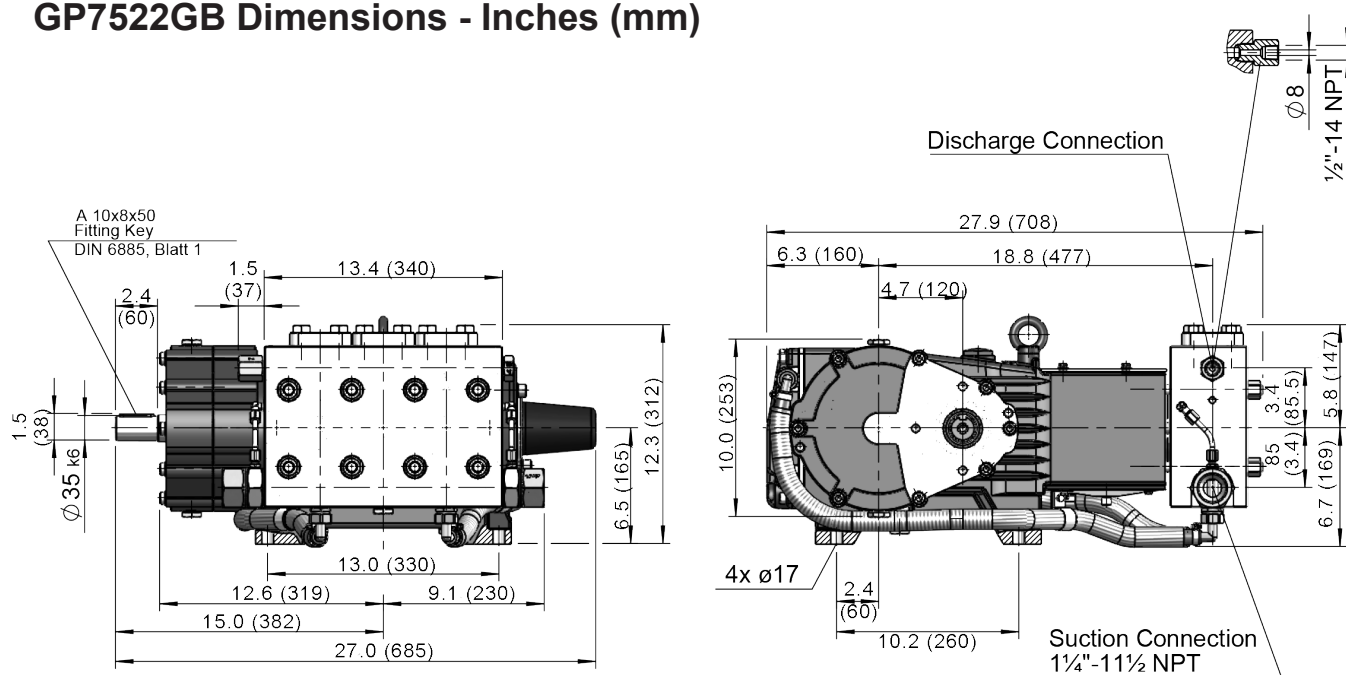
Inlet Valve Assembly Kit #09702

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

GP7522GB Dimensions - Inches (mm)



This exploded view diagram illustrates the assembly of a 3-cylinder diesel engine. The central component is the red engine block (1), which features three cylinders. The diagram shows the following main sections and components:

- Top Section:** Includes the cylinder head (2) with valves (3, 4), intake manifold (5), and various fasteners (6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100).
- Bottom Section:** Includes the crankshaft (101) with connecting rods (102, 103, 104) and pistons (105, 106, 107). It also shows the oil pan (108) and various fasteners (109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150).
- Accessories:** Includes the alternator (151), water pump (152), and various hoses (153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200).

The diagram uses a color-coded system to identify different parts: red for the main engine block and cylinder head, blue for the crankshaft and connecting rods, green for the pistons, yellow for the oil pan, and various colors for the accessories and fasteners. The exploded view shows the relative positions and assembly sequence of the components.

GP7522GB PARTS LIST

ITEM	PART	DESCRIPTION	QTY.	ITEM	PART	DESCRIPTION	QTY.
1	05769	Crankcase	1	51B	05193	O-Ring	3
2	13000	Oil Filler Plug Assembly	1	51C	05194	Inlet Valve Seat	3
8	07603	Oil Dip Stick Assembly	1	51D	06761	Valve Plate	3
9	01009	O-Ring, Dip Stick	1	51E	06762	Valve Spring	3
12	07109	Drain Plug	6	51F	06763	Spacer Pipe	3
13	06272	Copper Seal for 12	6	52	05781	Discharge Valve Assembly (52B-52F)	3
14	05770	Bearing Cover	1	52B	05193	O-Ring	3
14A	12204	O-Ring	4	52C	05195	Discharge Valve Seat	3
15	05771	Radial Shaft Seal	1	52D	06761	Valve Plate	3
16	05772	O-Ring	2	52E	06762	Valve Spring	3
17	05642	Hexagon Socket Screw	4	52F	06763	Spacer Pipe	3
18	05039	Spring Washer	4	57	06078	Tension Spring	3
20	05773	Taper Roller Bearing	2	58	07699	Plug	3
20A	05774	Fitting Disc (Shim), 0.1 mm	1-5	58A	07700	O-Ring	3
20B	04570	Fitting Disc (Shim), 0.15mm	1-5	58B	07693	Support Ring	3
21	05645	Shaft Guard Holder	1	58C	07702	Hexagon Screw	12
21A	05646	Shaft Guard	1	59	07109	Plug, 1/2" BSP	1
22	05775	Crankshaft	1	59A	06807	Copper Ring	1
23	05776	Key	1	61	13151	Plug 1-1/4" BSP	1
24	05777	Connecting Rod Assembly	3	62	03401	Connecting Joint	2
25	05778	Crosshead Assembly	3	62A	06766	Connection Ring	2
28	05779	Crosshead Pin	3	62B	06767	Seal Ring	4
29A	07408	Hexagon Nut	1	64	07204-0100	Steel Ring	2
29B	05383	Bracket 2 f. Cooling Hose	2	65	06588	Screw-In Connector	2
29C	05662	Fixing Bracket	1	66	06768	Threaded Elbow	2
29D	05381	Bracket 2 f. Cooling Hose	1	67	06769	Curved Leakage Pipe	2
30	07619	Cover Plate	1	68	05782	Bottom Casing for Gear	1
30A	07225-0100	Hexagon Screw	9	69	05783	Top Casing for Gear	1
30B	13136	Grommet	4	70	05784	Gear Seal	1
30C	05053	Disc	8	71	05785	Centering Ring	1
30D	13154	Cover	1	72A/B	04531	Gear Wheel Set, i=1.87	1
31	07623	Eye Bolt	1	72A/B	04519	Gear Wheel Set, i=2.25	1
32	07624	Radial Shaft Seal	3	72A/B	04518	Gear Wheel Set, i=2.73	1
33	07626	Seal Retainer	3	73	13243	Fitting Key	1
33A	07627	O-Ring for Seal Retainer	3	74	05787	Self-Aligning Roller Bearing	1
33B	07628	Circlip for 33	3	75	05700	Cylinder Roller Bearing	1
33C	07249	Fitting Disc	3	76	07117	Fitting Disc, 0.1 mm	1-5
34	13137	Oil Scraper (Flinger)	3	77	05701	Radial Shaft Seal Ring	1
36	06748	Plunger	3	78	05665	Cylindrical Pin	4
38	06749	Seal Sleeve	3	80	05790	Spacer Ring 1 for Gear	1
38A	22764	Serrated Pin	3	81	05791	Spacer Ring 2 for Gear	1
38B	06750	Leakage Gasket	3	82	05802	Fixing Plate for Gear	1
38C	06667	O-Ring	3	83	13358	Hexagon Screw	1
39	05522	Seal Case	3	84	05792	Hexagon Socket Screw	7
39A	05523	O-Ring	6	85	05702	Hexagon Socket Screw	8
40	07338	Tension Spring	3	86	07159	Washer	8
41	06753	Support Disc	3	90	03725	Oil Cooler Assembly	1
42	06754	Spiral Ring (Packing)	6	K1	03705	Stainless Steel Tubing	1
43	06755	Support Ring	6	K2	03708	Gear Cover Seal	1
44	06756	Guide Ring	3	K3	03709	Gear Cover	1
45	06757	Pressure Ring	3	K4	03710	Clamping Screw	2
46	13390	Seal Ring	3	K5	22706	Hexagon Socket Screw	8
47	06758	Spacer Disc	3	K6	06725	Spring Washer	8
48	5524	Circlip	3	K7	05755	Connection for Oil Cooler	1
49	13159	Stud Bolt	8	K8	06272	Copper Seal	5
49A	13160	Hexagon Nut	8	K9	07109	Plug, 1/2" BSP	1
50A	13162	Centering Stud	2	K10	05031	Reducing Nipple	1
50B*	06759-NPT	Valve Casing Assembly (50B-E)	1	K11	05032	U-Joint Connector with Nut	4
50C	03397	Connection Nipple, 1/2" NPT	1	K12	05033	Tube for Cooler	1.4m
50D	03398	Lens Gasket	2	K13	05402	Hose Clamp	4
50E	03399	Plug, 3/4" BSP	1	K14	05403	Hose Guard	1.3m
51	05780	Inlet Valve Assembly (51B-51F)	3	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



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