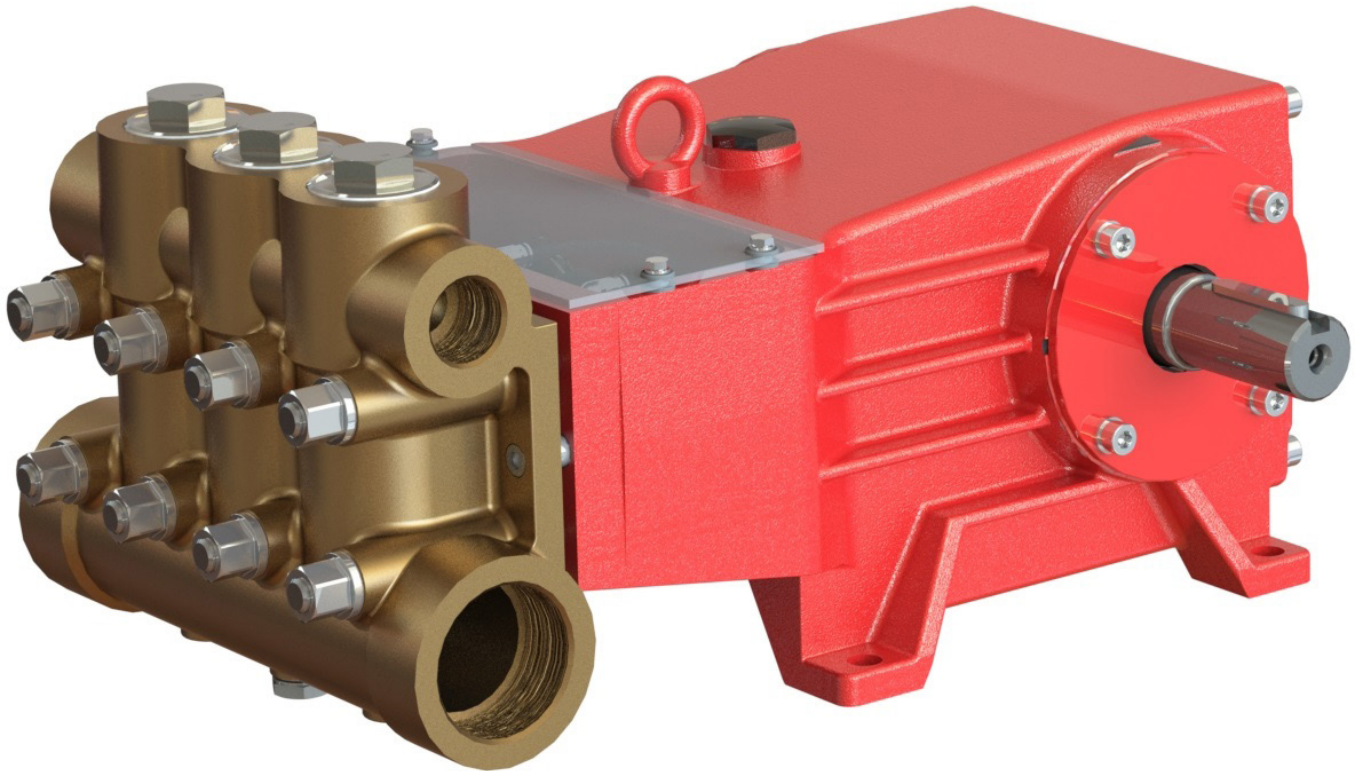


Model GP6145-3100

Triplex Ceramic
Plunger Pump
Operating Instructions/
Manual



GIANT
Performance Under Pressure

Updated 06/24

SPECIFICATIONS

U.S. Measurements

	Power Required	Pressure	Max. Speed	Max. Flow	Max. Temp.	Plunger ø	Plunger Stroke	Weight	NPSHR
Model	BHP	PSI	RPM	GPM	°F	in	in	lbs.	ft. of head
GP6145-3100	55.8	1740	800	46.5	86*	1.77	1.89	309	29.5

Metric Measurements

	Power Required	Pressure	Max. Speed	Max. Flow	Max. Temp.	Plunger ø	Plunger Stroke	Weight	NPSHR
Model	kW	bar	RPM	l/min	°C	mm	mm	kg	mWs
GP6145-3100	41.6	120	800	175.9	30*	45	48	140	9.0

INSTALLATION INSTRUCTIONS

* 86 °F (30 °C) is limited only when pumping seawater for reason of corrosion. For other media 140 °F (60 °C).

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 Industries assembly instructions.

NPSHR / Inlet pressure

Required NPSH refers to water (at 68 °F [20°C]) at maximum permissible pump speed.

The inlet pressure on the suction side must not exceed 29 PSI (2 bar).

Make sure that suction pulsation is sufficiently dampened – water column resonance must be avoided.

Fields of application

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

Ambient conditions

Ambient temperature: $41\text{ °F} < T_{\text{Amb.}} < 86\text{ °F}$

Ambient temperature: $5\text{ °C} < T_{\text{Amb.}} < 30\text{ °C}$

Oil filling

- Filling quantity: **1.1 gal (4.2 l)**
- Quality: Industrial gear oil **ISO VG 220** or automotive gear oil **SAE 90 GL4 (Giant's p/n 01154)**
- Intervals: first oil change after **50 operating hours**, then every **1000 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 (21A), the driven shaft side and coupling by a contact-protector and the plunger room by cover (30).

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 150 µm.

Operation

For informations, see assembly instructions Giant Industries, Inc.

GP6145-3100 REPAIR INSTRUCTIONS

Maintenance and Servicing

For the type of threadlocker 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 size 5
- Clip ring pliers

Suction and Discharge Valves

Loosen plugs (56).

Take out complete valve (51) with pull- out tool size 5.

The O-rings (52) between the suction and discharge valve and under the suction valve, can be taken out with a bent piece of wire.

Dismantle valves:

The valve seat (A) is pushed out of the spacer pipe (D) by hitting the valve plate (B) carefully with a bolt. Check sealing surfaces and replace worn parts.

Check O-rings.

When reinstalling the valve, particular care must be taken that the O-rings sit properly in their fittings in the valve casing.

Tighten plugs (56) to the required torque.

Seals and Plunger

Loosen nuts (49A) and remove pump head.

Separate plunger connection (36) from crosshead assembly (25) by means of an open-end wrenches (size 27).

Pull seal sleeves (40) out of their fittings in the crankcase.

Take seal case (41) out of seal sleeve (40).

Remove tension spring (42).

Remove the clip ring (48) from the seal sleeve (40) using clip ring pliers.

Examine plunger parts (36-39), seals (44,46) and O-rings. Replace worn parts.

When replacing plunger pipe (37), tighten tension screw (38) to the required torque.

Grease seals with Silicone before installing.



Don't loosen the 3 plunger screws (36) before the valve casing has been removed.

Otherwise the tension screw (38) could hit against the spacer pipe (51D) when the pump is being turned.

Seal unit (43, 44, 44A) is pretensioned by spring (42). Seal life can be increased if the pretensioning allows for a little leakage.

This assists lubrication and keeps the seals cool.

It is therefore not necessary to replace seals before the leakage becomes too heavy and causes output and operating pressure to drop.

When reassembling, tighten plunger screws (36) to the required torque.

Mounting Valve Casing:

Check O-rings on seal case (41).

Clean surfaces of seal sleeves in gear box and sealing surfaces of valve casing.

Push valve casing carefully onto O-rings of seal case and centring studs (49C).

Tighten nuts (49A) to the required torque.

If required, supplementary assembly instructions can be requested from the manufacturer Giant Industries, Inc.

Spare Parts

When **ordering spare parts**, please specify **pump type, pump number, year of manufacture, and parts order number**.

This data can be found on the nameplate and in the spare parts list.

Malfunctions / Remedy

For informations, see assembly instructions Giant Industries, Inc.

Materials Used

Valve Casing: Cast Bronze

Plunger: Solid ceramic

Valves: High-Grade Stainless Steel

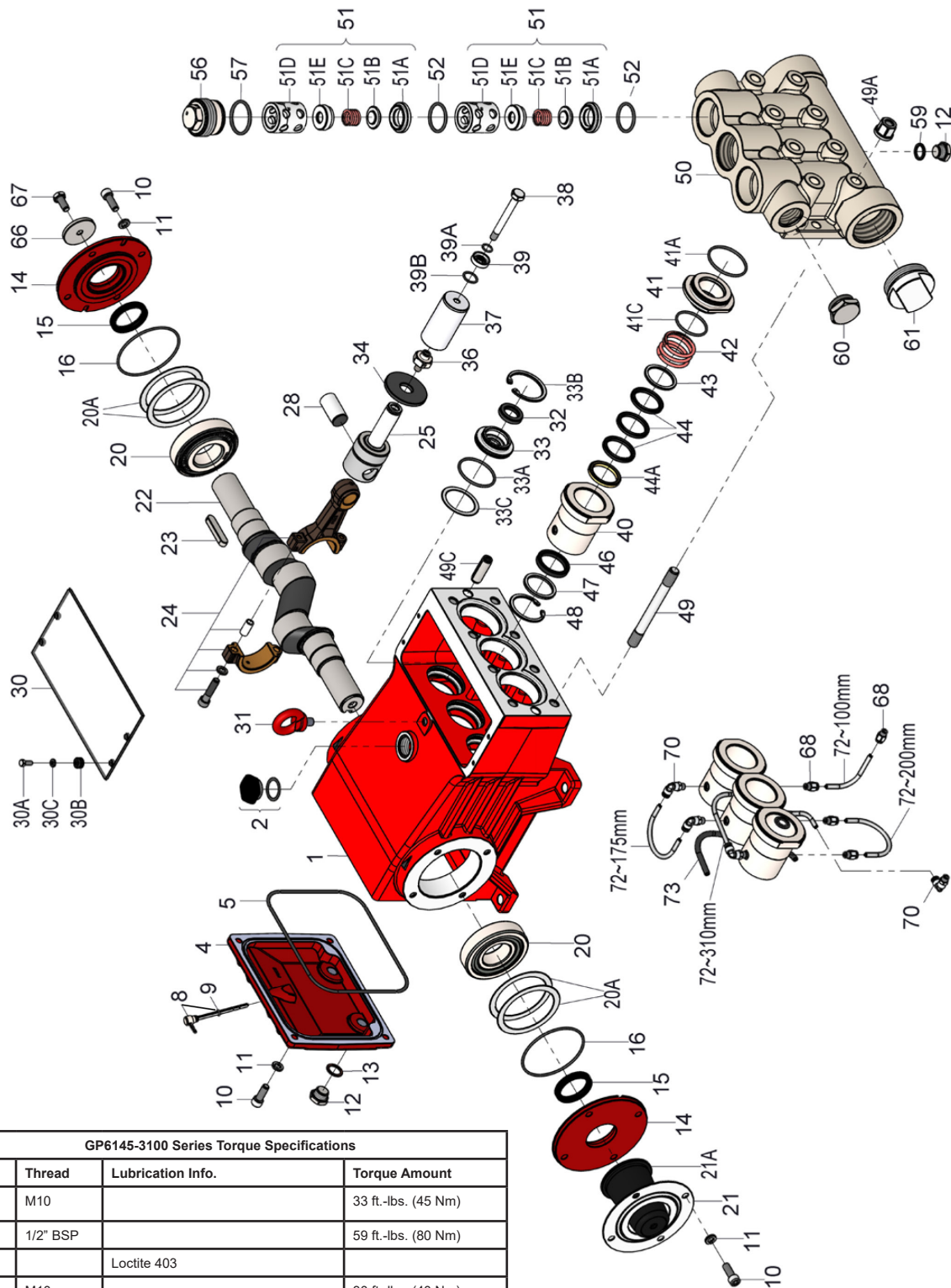
Seals: Nitrile with fabric reinforcing

O-Rings: Viton

Paint

The pump drive is painted in RAL 3001 as standard.

Exploded View - GP6145-3100



GP6145-3100 Series Torque Specifications			
Position	Thread	Lubrication Info.	Torque Amount
10	M10		33 ft.-lbs. (45 Nm)
12	1/2" BSP		59 ft.-lbs. (80 Nm)
15		Loctite 403	
24	M10		30 ft.-lbs. (40 Nm)
32		Loctite 403	
36			33 ft.-lbs. (45 Nm)
38	M10	Loctite 243	30 ft.-lbs (40 Nm)
40		Copper Paste - Crankcase Side	
49		Loctite 648 - Crankcase Side	
49A			133 ft.-lbs. (180 Nm)
51A	M16	Hylomar	
56	M60x1.5	Anti-Seize 350	162 ft.-lbs. (220 Nm)

GP6145-3100 PARTS LIST

ITEM	PART	DESCRIPTION	QTY.	ITEM	PART	DESCRIPTION	QTY.
1	13200	Crankcase	1	39	03435	Steel Ring	3
2	13000	Oil Filler Plug Assembly	1	39A	05871-0001	O-Ring	3
4	13201	Crankcase Cover	1	39B	06015-0001	O-Ring	3
5	13202	O-Ring for 4	1	40	05159-0100	Seal Sleeve	3
8	06894	Oil Dipstick Assembly	1	41	05160-0100	Seal Case	3
9	01009	O-Ring for Dipstick	1	41A	07721-0001	O-Ring for 41, Viton	3
10	22706	Hexagon Screw	12	41C	13141-0001	O-Ring for 41, Viton	3
11	06725	Spring Washer	12	42	13297	Tension Spring, Red	3
12	07109-0400	Drain Plug	3	43	13395	Sleeve Support Ring	3
13	06272	Gasket	2	44	13294	Sleeve	9
14	12549	Bearing Cover	2	44A	13293	Pressure Ring	3
15	07877	Radial Shaft Seal	2	46	05057	Compact Ring	3
16	08055	O-Ring for 14	2	47	05161-0100	Support Ring	3
20	13206	Taper Roller Bearing	2	48	05474	Clipring	3
20A	13207	Fitting Disc	1-5	49	13159	Stud Bolt	8
21	05881	Shaft Guard Mound	1	49A	06958	Hexagon Nut	8
21A	05646	Shaft Protector	1	49C	13162	Centering Stud	2
22	06895	Crankshaft	1	50	12563-3000	Valve Casing	1
23	08213	Fitting Key	1	51	03691	Valve Assembly (51A-E)	6
24	06896	Connecting Rod Assembly	3	51A	12564-0100	Valve Seat	6
25	06897	Crosshead Assembly	3	51B	03690	Valve Plate	6
28	06898	Crosshead Pin	3	51C	12566	Valve Spring	6
30	13214	Cover Plate	1	51D	12567-0100	Spacer Pipe	6
30A	07225-0100	Hexagon Screw	4	51E	03675	Valve Spring Guide	6
30B	13136	Grommet	4	52	05166-0001	O-Ring for 51, Viton	6
30C	08280	Disc	4	56	05171-0100	Tension Plug	3
31	07623	Eye Bolt	1	57	05167-0001	O-Ring for 56, Viton	3
32	06118	Radial Shaft Seal	3	59	06807	Steel Seal for 12	1
33	13216-0100	Seal Retainer	3	60	13151-0100	Plug, 1-1/4" BSP	1
33A	07721	O-Ring for 33	3	61	12568	Plug, 2-1/2" BSP	1
33B	13217-0100	Clipring for 33	3	66	13362	Disc for Crankshaft	1
33C	12551	Fitting Disc	3	67	13358	Hexagon Screw	1
34	13218	Oil Scraper	3	68	04785	Push-in Pipe Connection	4
36	05156-0100	Plunger Connection	3	70	03440	Elbow for Drip Return	4
37	05157	Plunger Pipe	3	72	03441	Hose, Teflon	1
38	05158-0100	Tensioning Screw	3	73	03442	Spiral Hose	1

GP6145-3100 REPAIR KITS

Plunger Packing Kits - #09876

Item	Part #	Description	Qty.
41A	07721-0001	O-Ring	3
41C	13141-0001	O-Ring	3
44	13294	Sleeve	9
46	05057	Compact Ring	3
48	05474	Clipring	3

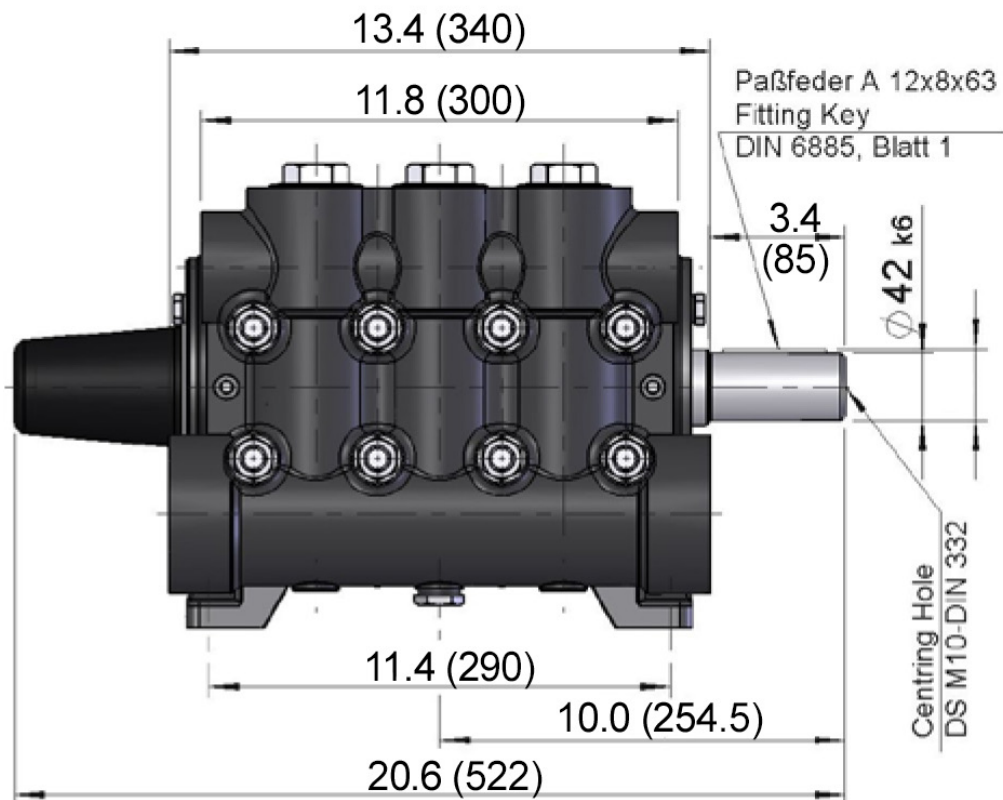
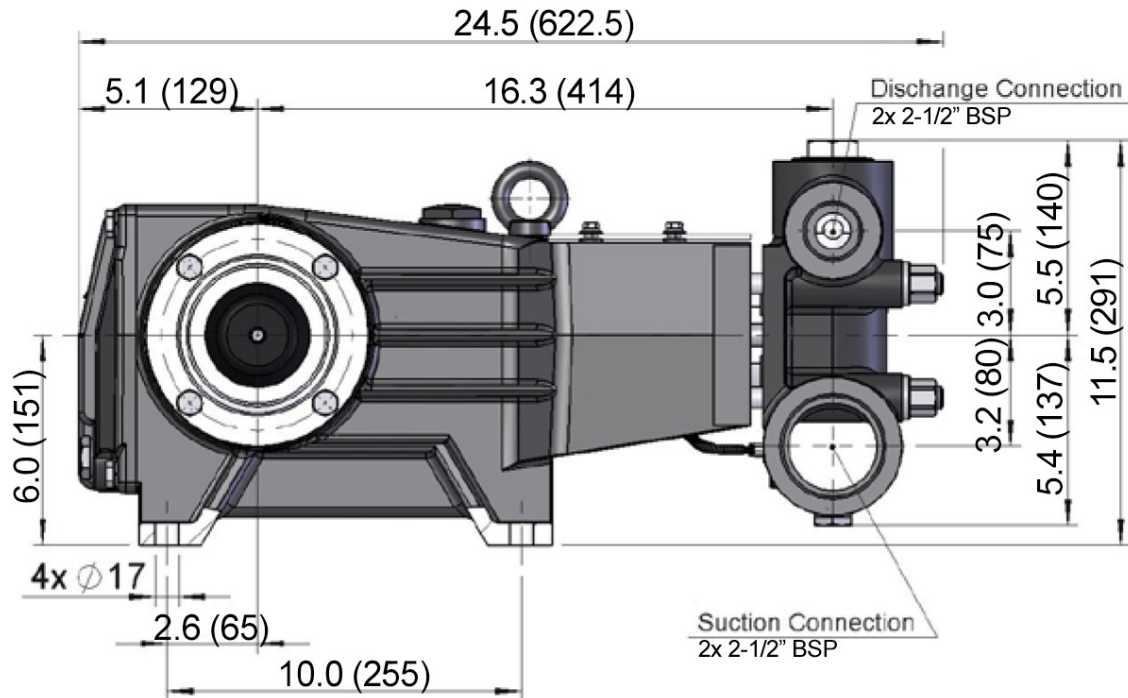
Oil Seal Kit - #09878

Item	Part #	Description	Qty.
32	06118	Radial Shaft Seal	3
33A	07721	O-Ring	3
33B	13217-0100	Clipring	3

Valve Assembly Kit - #09877

Item	Part #	Description	Qty.
51A	12564-0100	Valve Seat	6
51B	03690	Valve Plate	6
51C	12566	Valve Spring	6
51E	03675	Valve Spring Guide	6
52	05166-0001	O-Ring	6
57	05167-0001	O-Ring	3

GP6145-3100 DIMENSIONS - Inches (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:

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