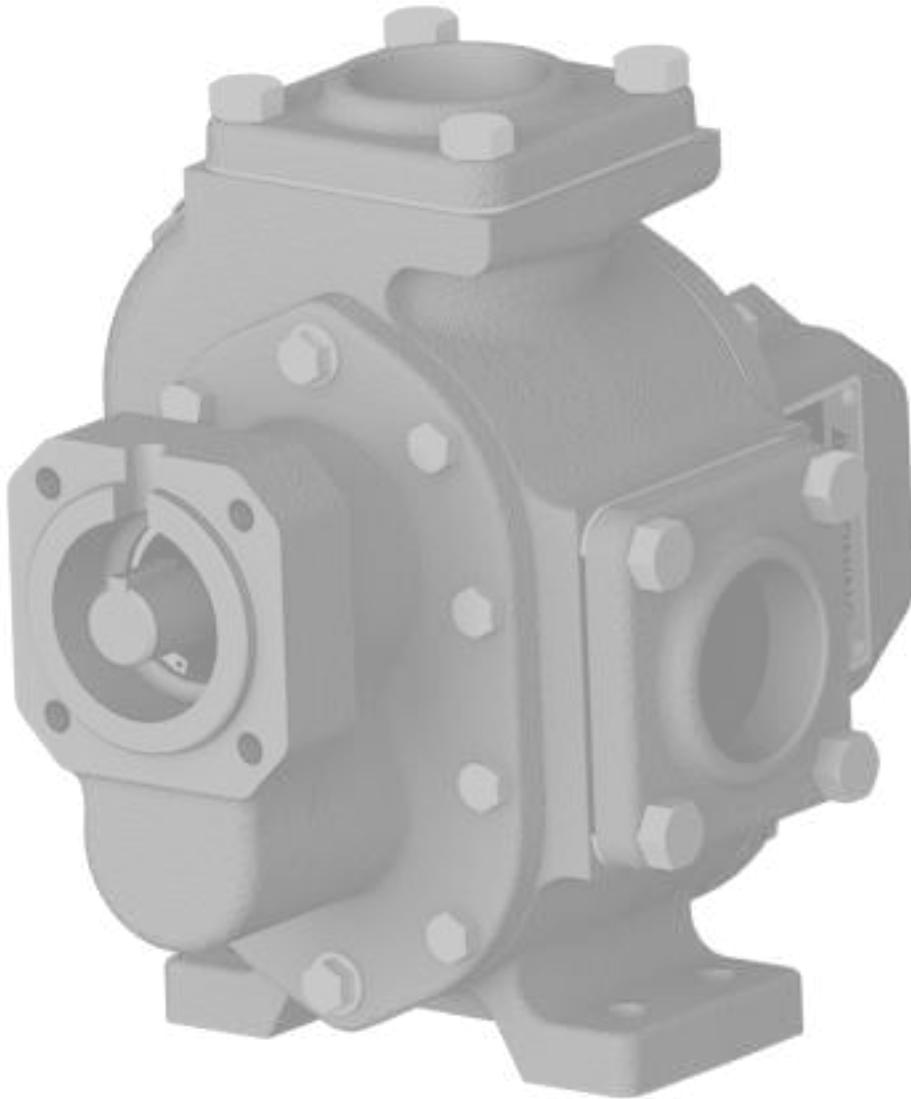


# Installation and Operation Manual



## **G-Series** Gear Pump

Models:  
G125



PRGMAN-04  
Version: B  
April, 2025

**Congratulations**  
on your new Paragon purchase

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# Safety Notice

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**This manual is designed to be read to its entirety prior to installation or operation of this product.**

**Do NOT install or operate prior to reading this manual completely - injury or property damage can occur.**

**Use adequate protection and safety equipment while performing the steps indicated in this manual.**

**Protect against hazards involved during the installation and operation of this equipment.**

**Failure to read this manual completely or heed these warnings could result in serious bodily injury or loss of life.**

**For equipment covered specifically or indirectly in this operation manual, it is important that all personnel observe the appropriate safety precautions to minimize the chances of injury.**

## **DO NOT....**

- Attempt to install equipment with the truck engine running
- Allow the truck engine to be started while personnel are under the vehicle or working on any equipment
- Place any body part over any pneumatic (or hydraulic) leak or outlet while the equipment is in operation
- Engage or disengage driven equipment by hand from under the vehicle while the engine is running
- Use tools or equipment that are in poor or non-working condition
- Remove, obscure, cover, or paint over any warning labels

## **DO....**

- Read and Understand all original equipment manufacturer's manuals prior to installation or operation of any equipment
- Follow all safety rules and regulations as they apply to the equipment provided
- Immobilize truck wheels with suitable chocks before working under the truck
- Block any raised equipment before working on or under the equipment
- Obtain proper training on tools and equipment that are required
- Ensure all tools and components are in good working condition
- Use all tools and equipment for its intended purpose only
- Repair any leaks promptly
- Remain a safe distance away from any moving components during operation

# Warnings

 **DANGER**

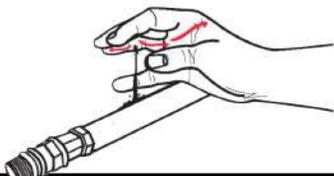


Keep body and clothing away from drive shaft

**SAFETY INSTRUCTIONS**

1. Do not operate before reading the enclosed instruction manual.
2. Use adequate protection, wearing any safety equipment necessary to protect against the hazards involved in installation and operation of this equipment

 **WARNING**



**HIGH PRESSURE OIL.** May cause severe injury. disconnect power, lower load, and relieve pressure before servicing hydraulic system.

 **WARNING**



**Do not touch hot surfaces**

 **WARNING**



Keep body and clothing away from machine openings

 **WARNING**



Hearing and Eye Protection Required

## NOTICE

 **WARNING:** Warning Instructions listed on this page must be reviewed by **ALL** operators.

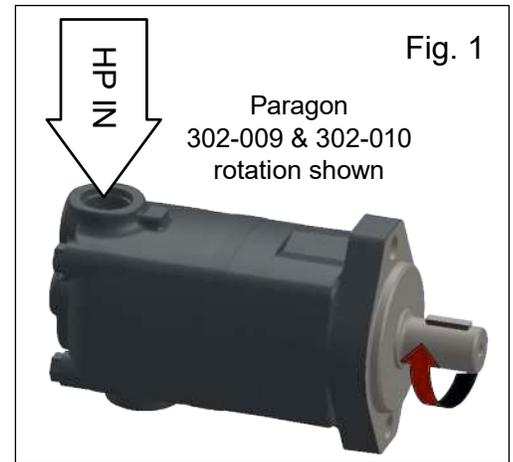
Safety instruction tags were attached to your unit prior to shipment. **DO NOT** remove, paint over or obscure in any manner. Failure to heed these warnings could result in serious bodily injury to the personnel operating and maintaining this equipment.

# Initial Installation Considerations

**Note:** These are general guidelines and do not cover all possible situations. It is the responsibility of the system integrator to apply this product properly.

## Hydraulic Motor Orientation Considerations

- The G125 is a hydraulic driven gear pump and is not intended for use with a driveline. (See pg 11 for hydraulic trunk specifications)
- Hydraulic motor orientation must be checked prior to operation to ensure the correct pump rotation for the internal relief valve. (Fig. 1 & Fig. 3)
- Refer to Manufacturer's owners manual for specifications regarding the hydraulic motors. Ensure the hydraulic relief valve setting does not exceed the hydraulic motor limitations.



## Hydraulic Hoses & Fitting Considerations

- **DO NOT** use thread tape or pipe dope on threaded connections, this will contaminate the hydraulic system. Use a hydraulic sealant (Loctite number 545 or similar) as required.
- Hydraulic hoses are customer supplied, and will need to be measured to fit per application. Pre-plan hydraulic hose routing to minimize sharp bend radii, avoid surface contact, and to allow for flex during operation.
- High pressure hoses must have a pressure rating equal or higher than the hydraulic system relief valve setting.
- Hydraulic Hoses must be supported and not allowed to hang or pull on equipment

## Piping Considerations

- Inlet pipe should be as large in diameter, short in length, and straight as possible to minimize suction pressure losses. Excessive restrictions at the inlet can cause cavitation, resulting in poor performance, noise, vibration, or pump damage.
- Slope the inlet plumbing appropriately to avoid air pockets.
- Plumbing weight, misalignment with the ports, or thermal expansion can exert excessive force on the pump. Plumbing must be properly supported and aligned with expansion joints, if required, to minimize these forces.
- To prevent over pressure situations, install a relief valve as close to the pump outlet as possible. Install the relief valve before any shut-off valves.

# Initial Installation Considerations / Continued

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## Mounting Considerations

- Mount the unit on a rigid, heavy base to provide support and absorb shock. The base should be designed for rigidity across a flat even surface.
- Mounting kits are available with directional control valve mounting and ball valve mounting. (Fig. 2)
- Positioning the product pump lower to the ground will assist with suction conditions and decrease the risk of cavitation.

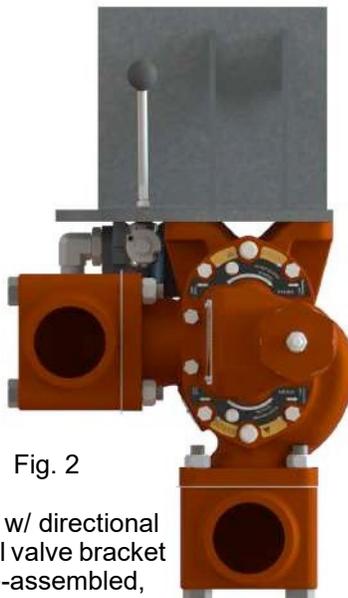
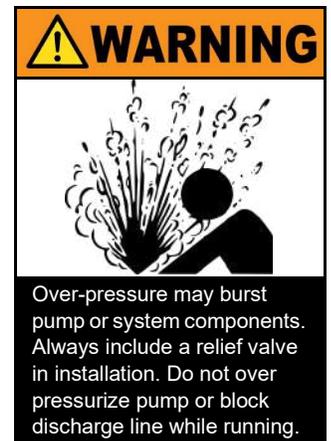


Fig. 2

G125 w/ directional control valve bracket ( pre-assembled, RH rotation )



## Maximum Pump Ratings

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### Pressure

125 psi [8.5 bar] ( STD 80 psi )

### Speed

750 rpm (MAX)

### Temperature

250°F [121°C] (MAX)

### Flow Rate

125 gpm ( 1,000 SSU @ 750 rpm ) [473.2 lpm] (MAX)

### Viscosity Capabilities

250,000 SSU [56,000 cP] (MAX)

### Power Input Requirements

11.5 BHP [8.58 KW]

# Pre-Operation Checks

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- Ensure hydraulic motor mating surfaces are clean and free from debris
- Check hydraulic motor rotation.(Fig. 1)
- All hydraulic hoses are installed according to manufacturer specifications and supported properly.
- G125 Pump mounting feet are flat against the mounting surface.
- Ensure the Relief Valve is closest to the discharge port for protected operation.  
**NOTE: While in reverse operation, the discharge circuit will be unprotected, possible over-pressurization can occur.**
- G125 relief valve is adjusted appropriately (100 psi from factory, +/- ~5 psi per full turn).
- All piping is securely mounted and supported.
- Check to ensure the pump will turn.  
**NOTE: The G125 pump must be rotated at least once a week for 3 seconds, use of a lubricating oil (WD-40) is recommended if the pump is not going to be put in use.**

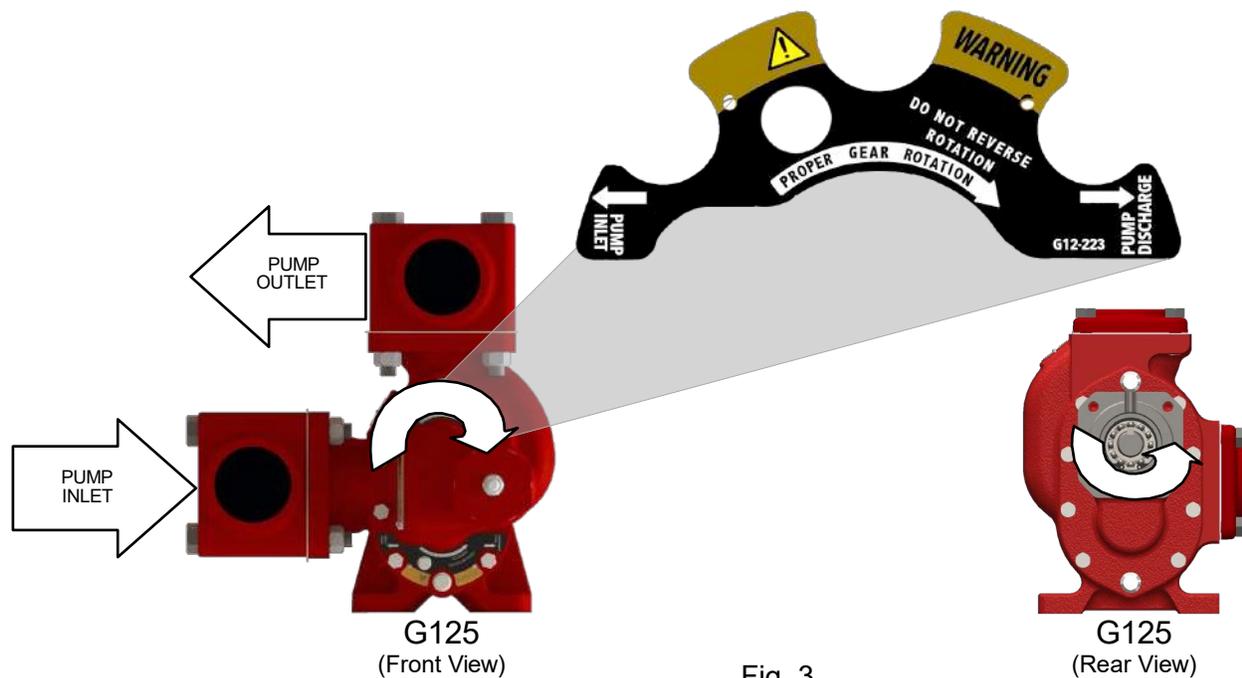


Fig. 3  
(LH Rotation shown above)

# Relief Valve Adjustment

## Factory Relief Valve Settings for the G125

The Factory Setting for the Chemical Pump Relief valve is as follows

Product Pump	Factory Relief Valve Setting
G125-1A	80 PSI
G125-1B	100 PSI

## Determine Pressure limits for G125

Identify Spec # located on the ID Plate of G125 at the bottom left corner, the last 2 digits identify the pressure limits of the Relief Valve Spring 1A or 1B as shown in picture below.

**Spring Limits:**  
1A = 20-80 PSI  
1B = 81-125 PSI



**Note:** Pressure should NOT be set below or above the limits of the spring shown.

**CAUTION:** DO NOT adjust the pressure rating or tamper with the chemical pump while it is in operation.

## Setting the G125 Pump Relief Valve (Fig. 4)

1. Loosen locknut (item 2).

Note: Each full turn on the adjustment screw is approximately a 5 psi change in relief pressure.

- To increase the pressure setting - turn Adjusting Screw (item 1) clockwise.
- To decrease the pressure setting - turn Adjusting Screw (item 1) counterclockwise.

2. Re-tighten locknut. (item 2)

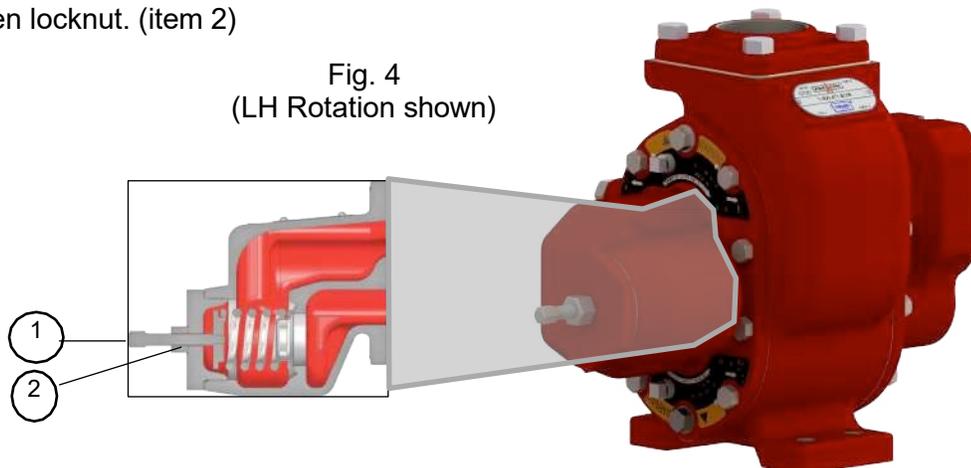


Fig. 4  
(LH Rotation shown)

# Model Number Construction



**G125 X X L L X - XX**

**Product Pump Type**

G125 Gear, 125 PSI & Trunk

**Inlet**

- X - None
- B - Elbow 2" NPT
- F - Elbow 3" Port CI
- G - 2" Flange

**Outlet**

- X - None
- B - Elbow 2" NPT
- F - Elbow 3" Port CI
- G - 2" Flange

**Seals/Bushings/Shafts**

- L - Triple Lip Seal/Carbon/Steel
- N - Triple Lip Seal/Bronze/Steel
- T - Triple Lip Seal/Carbon/SS
- Z - Triple Lip Seal/Bronze/SS

**Hydraulic Motor**

- X - No Hydraulic Motor
- 01 - 4.9 cu"
- 02 - 6.2 cu"

**Mounting Bracket**

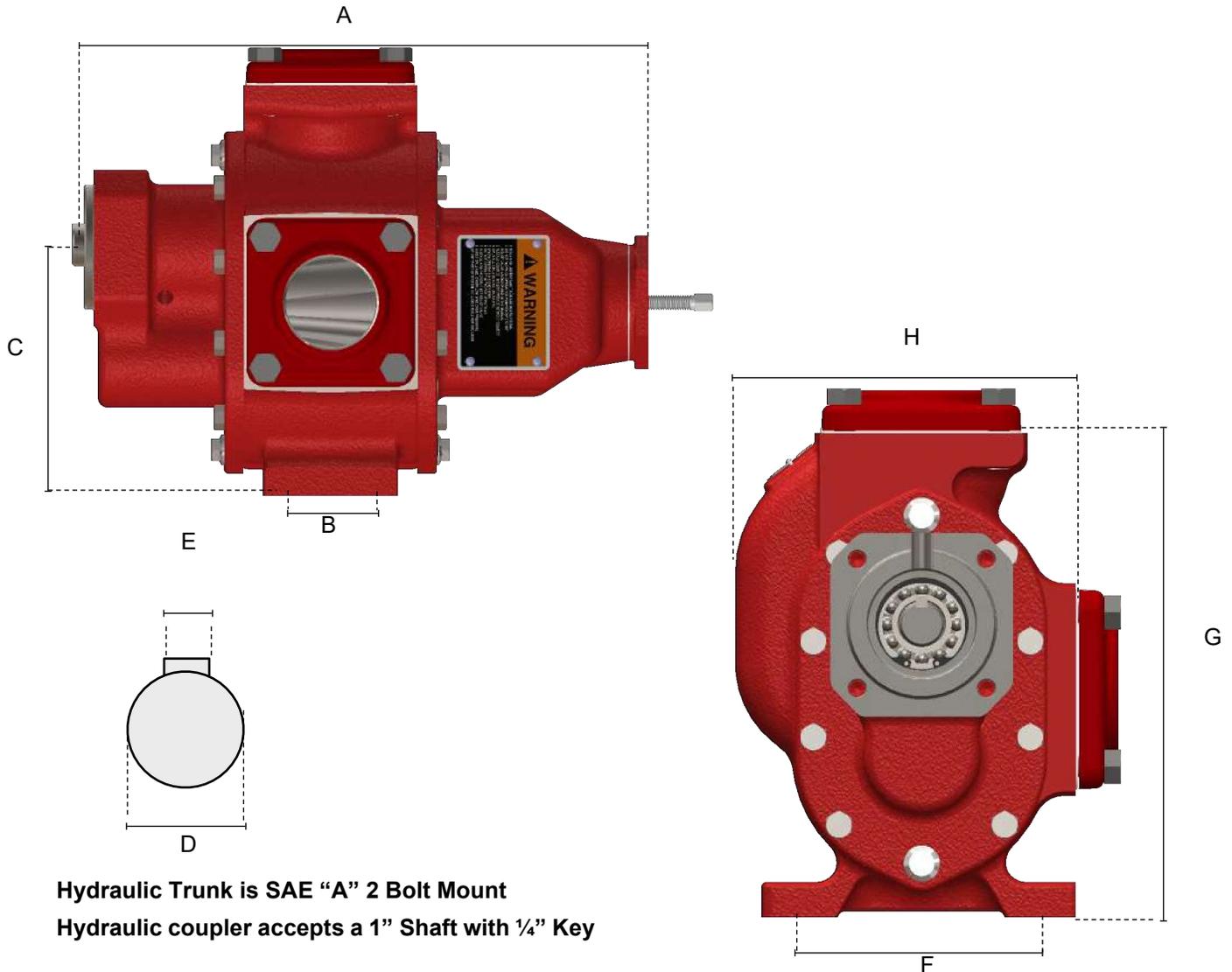
- X - None
- 2 - Standard Bracket
- 3 - Bracket w/ SCV/DCV/Single Port
- 4 - Bracket w/ SCV/DCV/Two Port
- 5 - Dual Spool, One AUX
- 6 - Dual Spool, Two AUX

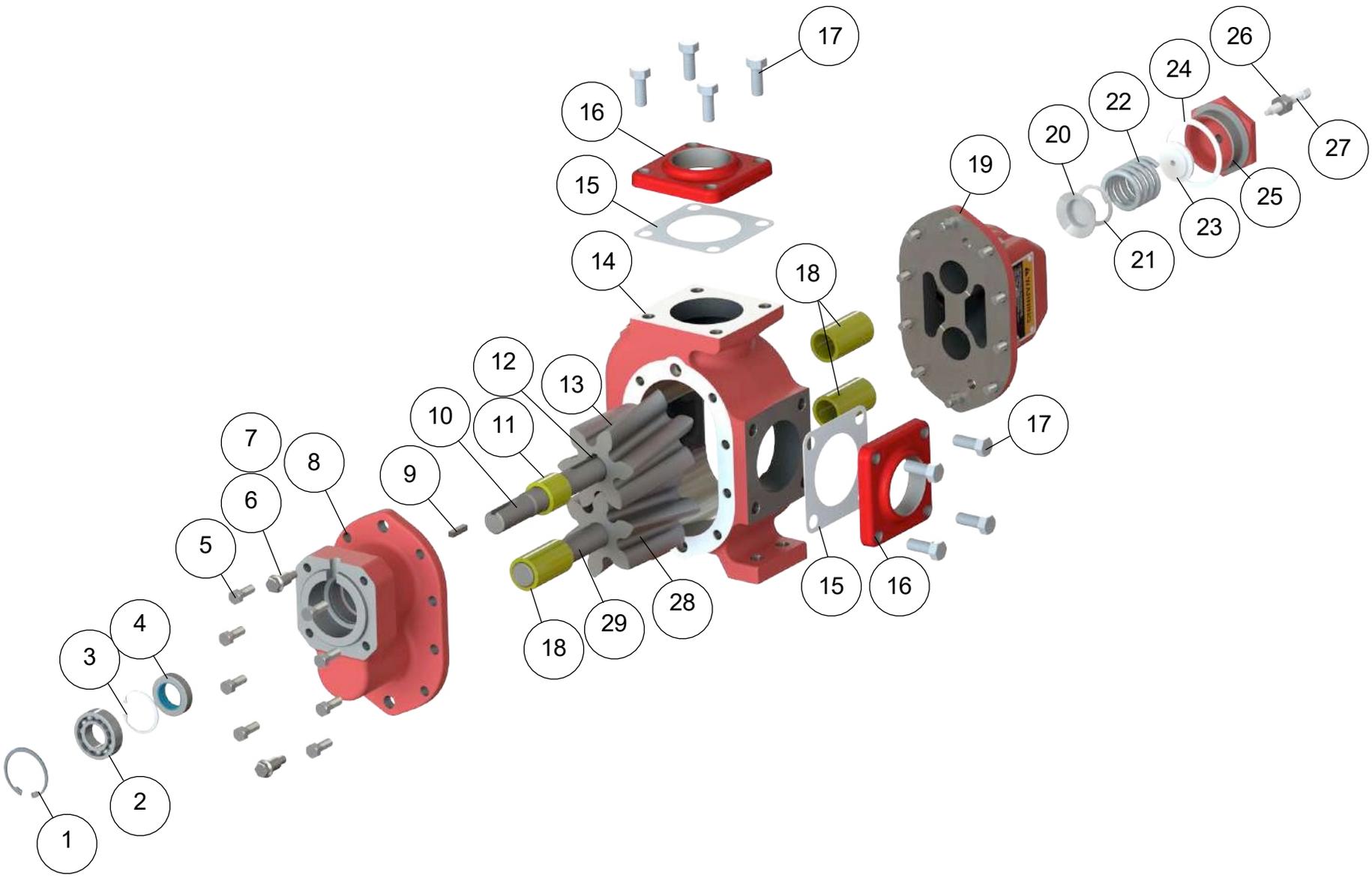
**Rotation**

- L - Left Hand
- R - Right Hand

# Dimensions

Model		A	B	C	D	E	F	G	H	Port Size	Approx. Weight (No Flanges, Steel Shaft)
G 125	in.	14 <sup>15</sup> / <sub>16</sub> " (17 <sup>5</sup> / <sub>8</sub> " w/ Trunk)	1 1/2"	6 <sup>7</sup> / <sub>16</sub> "	1"	1/4"	5 1/2"	10 <sup>5</sup> / <sub>8</sub> "	7 <sup>11</sup> / <sub>16</sub> "	3" w/o Flange	90 lbs
	mm	379 (447.30 w/ Trunk)	38.1	163.58	25.4	6.35	139.7	269.75	194.82	76.2 w/o Flange	40.82 Kg





Component Breakdown

## Component Breakdown/Continued

Item	Part #	Description	Qty
1	297-001	Outer Bearing Retainer	1
2	510-005	Ball Bearing	1
3	297-000	Inner Bearing Retainer	1
4	555-005	Triple Lip Shaft Seal	1
5	192-003	Hex Head Cap Screw	16
6	228-031	Washer Head Cap Screw	4
7	274-001	Hollow Dowel Pin	4
8	501-008	Back Plate	1
9	298-003	Outer Shaft Key	1
10	503-002	Drive Shaft (Steel)	1
10	503-003	Drive Shaft (Stainless Steel)	1
11	536-003	Short Bushing (Bronze)	1
11	536-004	Short Bushing (Carbon)	1
12	298-002	Inner Shaft Key	1
13	529-002	Drive Gear	1
14	500-031	Pump Body	1
15	526-027	Flange Gasket	2
16	509-020	2" NPT Port Flange	2
17	228-070	Hex Head Cap Screw	8
18	536-005	Long Bushing (Bronze)	3
18	536-006	Long Bushing (Carbon)	3
19	501-009	Face Plate	1
20	581-019	Relief Valve Poppet	1
21	581-020	Relief Valve Adapter	1
22	580-012	Relief Valve Spring (80-125 psi, STD)	1
22	580-013	Relief Valve Spring (20-80 psi)	1
23	581-021	Relief Valve Spring Guide	1
24	581-022	Relief Valve Cap Gasket	1
25	581-023	Relief Valve Cap	1
26	581-024	RV Locknut and Seal	1
27	581-018	Adjusting Screw	1
28	529-001	Idler Gear	1
29	503-001	Idler Shaft (Stainless Steel)	1
29	503-004	Idler Shaft (Steel)	1
*30	526-026	Body Gasket	2
*31	509-023	3" NPT Elbow	2
*32	228-070	Short Elbow Hex Cap Screw	4
*33	228-084	Long Elbow Hex Cap Screw	4
*34	323-007	Case Drain Pipe Plug	2
*35	302-009	4.9cu" Hydraulic Motor	1
*35	302-010	6.2cu" Hydraulic Motor	1
*36	505-005	Hydraulic Trunk and Rigid Coupling	1

\*Items not shown on breakdown

Repair Kit	Pump #	Description
621-044	606-054	Carbon Bushings / Stainless Steel Shafts / Triple Lip Seal
621-046	606-055	Bronze Bushings / Stainless Steel Shafts / Triple Lip Seal
621-045	606-056	Carbon Bushings / Steel Shafts / Triple Lip Seal
621-047	606-057	Bronze Bushings / Steel Shafts / Triple Lip Seal

# Replacement Parts

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## Back Plate Assemblies

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**Includes: (1) Back Plate, (1) Short Bushing, (1) Long Bushing**

Part#	Description
501-006	Back Plate Assembly w/ Bronze Bushings
501-007	Back Plate Assembly w/ Carbon Bushings

## Face Plate Assemblies w/ Relief Valve

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**Includes the following: (1) Face Plate, (2) Long Bushings, complete relief valve assembly**

Part#	Description
581-014	Face Plate Assembly w/ Bronze Bushings, 80-125 psi RV
581-015	Face Plate Assembly w/ Bronze Bushings, 20-80 psi RV
581-016	Face Plate Assembly w/ Carbon Bushings, 80-125 psi RV
581-017	Face Plate Assembly w/ Carbon Bushings, 20-80 psi RV

## Replacement Pumps

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**Standard pumps ( all LH Rotation, 125 psi R/V, no flanges)**

Part#	Description
G125GGTLX-XX	Stainless Steel Shafts, Carbon Bushings, 2" port
G125GGZLX-XX	Stainless Steel Shafts, Bronze Bushings, 2" port
G125GGLLX-XX	Steel Shafts, Carbon Bushings, 2" port
G125GGNLX-XX	Steel Shafts, Bronze Bushings, 2" port
G125FFTLX-XX	Stainless Steel Shafts, Carbon Bushings, 3" port
G125FFZLX-XX	Stainless Steel Shafts, Bronze Bushings, 3" port
G125FFLLX-XX	Steel Shafts, Carbon Bushings, 3" port
G125FFNLX-XX	Steel Shafts, Bronze Bushings, 3" port

# Warranty Statement

PGWAR-1-100

Date Issued: 05/01/2025

## GENERAL PROVISIONS AND LIMITATIONS

Paragon Tank Truck Equipment LLC (the "Company") warrants to each original retail purchaser ("Purchaser") of its products from the Company or its authorized distributor that such products are, at the time of delivery to the Purchaser, made with good material and workmanship. No warranty is made with respect to:

1. Any product which has been repaired or altered in such a way, in the Company's judgment, as to affect the product adversely.
2. Any product which has, in the Company's judgment, been subject to negligence, accident, improper storage, or improper installation or application.
3. Any product which has not been operated or maintained in accordance with the recommendations of the Company.
4. Components or accessories manufactured, warranted and serviced by others.
5. Any reconditioned or prior owned product.

*Claims for items described in (4) above should be submitted directly to the manufacturer.*

## WARRANTY PERIOD

The Company's obligation under this warranty is limited to repairing or, at its option, replacing, during normal business hours at an authorized service facility of the Company, any part which in its judgment proved not to be as warranted within the applicable Warranty Period as follows.

Product Type	Warranty Duration
New	18 months from date of shipment, or 12 months after initial startup date, whichever occurs first.
Remanufactured	12 months from date of shipment, or 12 months after initial startup date, whichever occurs first.
Repair	12 months from date of shipment, or remaining warranty period, whichever is greater.

All product furnished by seller but manufactured by others bear only that manufacturer's standard warranty. Replacement parts not specifically called out in an above table are warranted for 90 days from shipment. Any disassembly or partial disassembly of any of the package components, or failure to return these "unopened" per Company instructions, will be cause for denial of warranty.

The Company reserves the right to withdraw the Warranty where evidence indicates application outside the stated performance area, or where there is evidence of abuse.

## LABOR TRANSPORTATION AND INSPECTION

The Company will provide labor, by Company representative or authorized service personnel, for repair or replacement of any product or part thereof which in the Company's judgment is proved not to be as warranted. Labor shall be limited to the amount specified in the Company's labor rate schedule and would expressly exclude labor for the removal and reinstallation of the Paragon product from the customer's equipment.

Labor costs in excess of the Company rate schedules caused by, but not limited to, location or inaccessibility of equipment, or labor provided by unauthorized service personnel is not provided by this warranty.

All costs of transportation of product, labor or parts claimed not to be as warranted and, of repaired or replacement parts to or from such service facilities shall be borne by the Purchaser. The Company may require the return of any part claimed not to be as warranted to one of its facilities as designated by the Company, transportation prepaid by Purchaser, to establish a claim under this warranty.

If a warrantable complaint occurs within 90 days from shipment:

1. Freight will be reimbursed for both the replacement item and the returned suspect part (if Requested by Paragon). This allowance will cover only transportation via Paragon selected most economical method within the continental United States, Canada and Mexico. Premium transportation and/or handling charges will not be covered or pro-rated.
2. Concerning distributors in Canada & Mexico, reimbursement for duty and brokerage fees at actual cost that cannot be recovered from Customs Officials, but not to exceed 20% of the distributor net price, will be allowed for warrantable complaints within 90 days.
3. Copies of relative invoices must be provided with the submission of the claim to be considered.

Replacement materials provided under the terms of the warranty are warranted for the remainder of the Warranty Period of the product upon which installed to the same extent as if such parts were original components.

#### **DISCLAIMER**

THE FOREGOING WARRANTY IS EXCLUSIVE AND IT IS EXPRESSLY AGREED THAT, EXCEPT AS TO TITLE, THE COMPANY MAKES NO OTHER WARRANTIES, EXPRESSED, IMPLIED OR STATUTORY, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY.

THE REMEDY PROVIDED UNDER THIS WARRANTY SHALL BE THE SOLE, EXCLUSIVE AND ONLY REMEDY AVAILABLE TO THE PURCHASER AND IN NO CASE SHALL THE COMPANY BE SUBJECT TO ANY OTHER OBLIGATIONS OR LIABILITIES. UNDER NO CIRCUMSTANCES SHALL THE COMPANY BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, EXPENSES, LOSSES OR DELAYS HOWSOEVER CAUSED.

No statement, representation, agreement, or understanding, oral or written, made by any agent, distributor, representative, or employee of the Company which is not contained in this Warranty will be binding upon the Company unless made in writing and executed by an officer of the Company.

This warranty shall not be effective as to any claim which is not presented within 30 days after the date upon which the product is claimed not to have been as warranted. Any action for breach of this warranty must be commenced within one year after the date upon which the cause of the action occurred.

Any adjustment made pursuant to this warranty shall not be construed as an admission by the Company that any product was not as warranted.

## Additional Notes

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## Additional Notes

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