



Installation and Operation Manual

HydraCHEM<sub>M</sub>

Models: HydraCHEM HydraCHEM with Auxiliary

> PRGMAN-02 Version B April, 2025

## **Congratulations** on your new Paragon purchase

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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 preforming 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 risk 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 manufacturers manuals before installation or operation of any equipment installed in the HydraCHEM
- Follow all safety rules and regulations as it applies 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





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











# 

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

## NOTICE

- Safety instruction tags and labels were attached to your unit prior to shipment. <u>DO NOT</u> remove, obscure, or cover in any manner
- Failure to heed these warnings could result in serious bodily injury to personnel operating or maintaining this equipment.

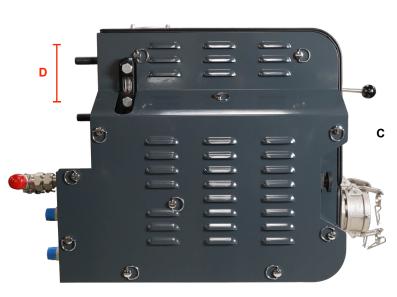
CAUTION: It is the installer's responsibility to ensure that the HydraCHEM is mounted in a location providing proper clearance from any heat source(s). Paragon recommends 12" from any exhaust opening, 6" from any other heat source(s). Verify no signs of damage to any equipment prior to installation Verify correct Power Take-Off matches paperwork. Verify correct Hydraulic Pump matches paperwork Shell Tellus S2 V 32 Non-Foaming Oil. (volume is dependent on installation location, typically 4~5 gallons) Pre-plan hydraulic hose routing prior to installation to prevent complications during the installation process. HydraCHEM Unit - Check orientation and frame rail space prior to installation (Fig. 1 & Fig. 5)

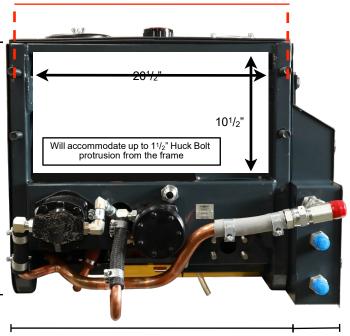
- Standoff mounting brackets are available for additional clearances.

- The HydraCHEM will accommodate up to 1-1/2" Huck bolt protrusion between the mounting areas.

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Г				

Model	Α	В	С	D
HydraCHEM	221/2"	25½"	22¾"	5¼"
HydraCHEM w/ Auxiliary	221⁄2"	28¼"	22¾"	5¼"





Α

(Fig. 1)

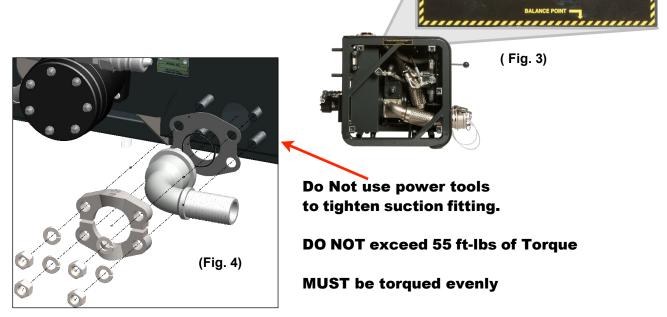
## Power Take Off & Hydraulic Pump

- Mount Power Take-Off, and brace hydraulic pump per manufacturer's instructions.
- Mount hydraulic pump to Power Take-Off unit using the fasteners supplied by manufacturer.
- See PTO owner's manual for additional items.

## Mounting the HydraCHEM

## Note: Position in a location where all panels can be removed for service.

- Drill <sup>13</sup>/<sub>16</sub>" (+ <sup>1</sup>/<sub>16</sub>" / -0) diameter holes.
  the template located on shipping carton. (Fig. 2)
- 2. Lift only by indicated balance points. (Fig. 3)
- Use the (4) <sup>3</sup>/<sub>4</sub>" flat washers and (4) <sup>3</sup>/<sub>4</sub>" x 10 Nylock
   nuts supplied to mount the HydraCHEM. Torque to 120 ft-lbs
- 4. Use Code 61 Gasket (P/N: 526-003) in combination with suction connection fitting and hardware provided. (Fig. 4)





(Fig. 2)

ING: DO NOT OPERATE UNIT WITHOUT COVER PANELS

## **Hydraulic Hoses & Fittings**

- DO NOT use thread tape or pipe dope on hydraulic NPT connections; this will contaminate the hydraulic system. Use a hydraulic sealant for all NPT connections (Loctite number 545 or similar).
- 2. High Pressure and Suction hoses are customer supplied, and will need to be measured to fit according to system drawings and installation locations
- 3. High pressure hoses must have a pressure rating equal or higher than the hydraulic system relief valve setting of 2500 psi (3000 psi for Auxiliary units)
- 4. The suction hose must be capable of operating in 28" Hg vacuum service and routed below the hydraulic motors (Fig. 5)
- 5. Ensure Code 61 Gasket (P/N: 526-003, Fig. 4) is installed in combination with suction connection fitting and hardware provided before installing the Suction Hose.

Note: Always double check Power Take-Off / Hydraulic Pump manuals for rotation to determine suction and pressure port location.

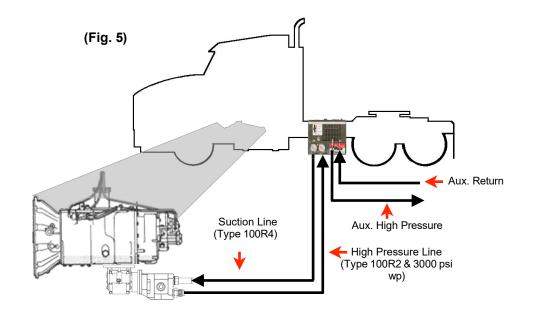
## Orientation

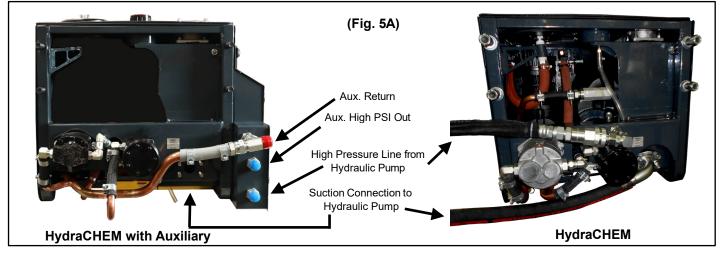
- The Suction line can be rotated as needed and should run <u>below</u> the hydraulic motors in either Driver Side or Passenger Side orientation. (Fig. 5A)
- Ensure all hoses are supported and the suction line is routed below the hydraulic motors.
- Do not allow the hoses to pull on the HydraCHEM, they must be properly supported and not allowed to hang on the unit.

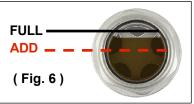
## **CAUTION:** *DO NOT* Allow hydraulic hoses to rest on the hydraulic motors as this can cause damage to hoses over time

## **Pre-Initial Start Up**

Check the P40 Oil level after installation and before bleeding the hydraulic system. (Fig. 6) Ensure the Air lever is in the "Vent" position. FULL · Ensure all grommets are in place. ADD Ensure all covers are in place prior to operation. (Fig. 6) Ensure all panel fasteners are in place. Ensure the hydraulic control handle is in the neutral position. Ensure all dust caps/plugs are in place. Double check all filter caps and fill caps to ensure they are tight. Ensure Auxiliary pressure and return connections are connected.







## **Bleeding the Hydraulic System**

#### (For locations reference Figure 7 for HydraChem and Figure 8 for HydraChem Auxiliary)

- 1. If the unit is equipped with Auxiliary, ensure the selector knob is in HydraCHEM mode (out). (See Fig. 8)
- 2. Remove red hydraulic fill cap. (See Fig. 7)
- 3. Use Shell Tellus S2 V 32 (or equivalent ISO) non-foaming hydraulic oil.
- 4. Fill HydraCHEM with hydraulic fluid until sight glass reaches half way.

## It is recommended that the oil be filtered while being added. (a clean paint filter will suffice)

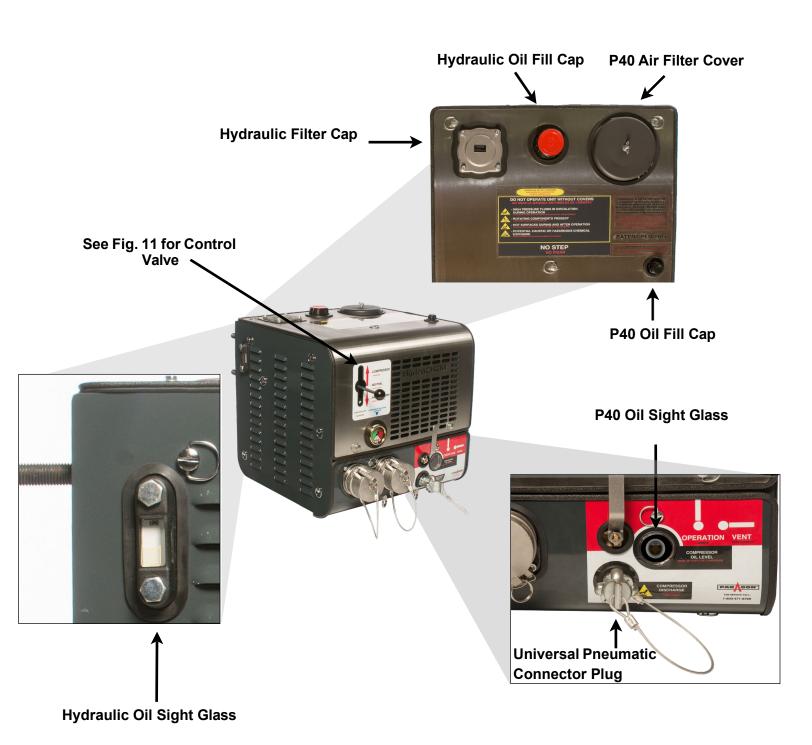
- 5. Replace fill cap.
- 6. Ensure HydraCHEM operation handle is in neutral.
- 7. Check all hoses and connections for leaks, installation must be free from leaks before continuing
- 8. Start the truck engine and engage the PTO. (See PTO Owner's Manual)
- 9. Run for 2 3 seconds to eliminate air from the system.
- 10. Remove Dust Caps from the chemical pump and slowly engage the chemical pump to remove air from this circuit, do not run for longer than 15 seconds dry.
- 11. Remove Universal Pneumatic Connector (Chicago Fitting) Plug and slowly engage the compressor to remove air from this circuit.
- 12. Disengage PTO. (See PTO Owner's Manual)
- 13. Auxiliary Only Check hydraulic fluid level, fill back to 1/2 way on sight glass, and repeat steps 9-13 as needed.
- 14. Auxiliary Only Ensure the Auxiliary circuit is an open center loop.
- 15. Auxiliary Only Push the selector switch "in" to engage the auxiliary circuit. (See Fig. 8)
- 16. Auxiliary Only Engage the PTO. (See PTO owner's manual)
- 17. Auxiliary Only Run for 5-10 seconds to eliminate air from the system.

### Note: Operate all auxiliary circuits to ensure all hydraulic lines are completely filled.

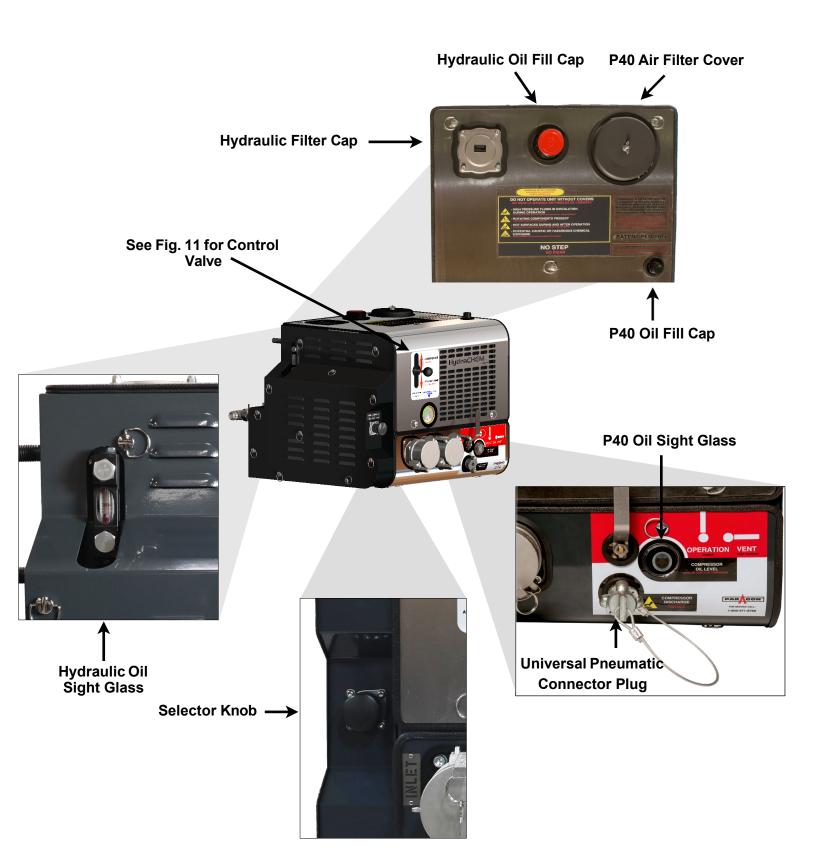
- 18. Auxiliary Only Disengage PTO.
- 19. Check hydraulic fluid level; fill back to 1/2 way on the sight glass (repeat steps 17-19 as needed).

## Note: Operate any auxiliary circuit to ensure all hydraulic lines are completely filled.

- 20. Perform a final heck for any signs of leakage, remove side panels and check for internal leaks.
- 21. Re-check oil level, fill as needed.
- 22. Ensure all cover panels are installed and put into operation.
- 23. Unit is ready for service.



(Fig. 7)



(Fig. 8)

## **Setting the Chemical Pump Relief Valve**

Product Pump	Factory Relief Valve Setting
VP150	80 PSI
G125	80 PSI
SVP150	80 PSI

The Factory Setting for the Chemical Pump Relief Valve is as follows:

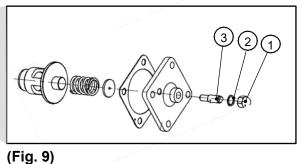
If the above pressures are incorrect for your application, follow the directions below to alter the delivery Relief Valve pressure.

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

## SVP150 / VP150 Pump Relief Valve (Fig. 9)

- 1. Remove Valve Cap (item 1).
- 2. Loosen locknut (item 2).
  - To increase the pressure setting turn Adjusting Screw (item 3) clockwise.
  - To decrease the pressure setting turn Adjusting Screw (item 3) counterclockwise.
- 3. Re-tighten locknut (item 2).
- 4. Replace Cap (item 1).

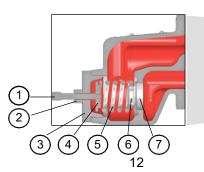




G125 Pump Adjustable Relief Valve Only (Fig. 10)

- 1. Loosen locknut (item 2).
  - 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. (2)





## Before operation:

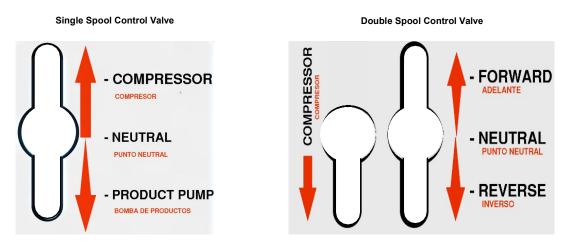
- Ensure all controls are in NEUTRAL position.
- If equipped, the Auxiliary selector knob should be in "HydraCHEM" operation mode.
- Compressor valve is in "VENT" position.
- Ensure the truck is running.
- 1. Engage the PTO according to the manufacturer's directions.
- 2. Set the engine speed for the desired application.
- 3. Connect all chemical hoses, air lines, and hydraulic trailer lines per your company's procedures.
  - To operate the HydraCHEM Chemical Pump:
    - Slowly move the handle to the correct position desired, the controls are variable speed.

Note: Single Spool versions only have a forward pump operation, Double Spool units will have a forward and reverse pump operation. (See Fig. 11 for reference)

• To operate the HydraCHEM Air Compressor:

- Slowly move the proper control handle to the fully open position until it reaches its travel stop. Note: Do not force the handle beyond its limitations - throttle stop is preset at the factory (travel distance may vary).

- Slowly close the Air Control valve to operate until desired pressure is reached.
- To operate additional equipment (HydraCHEM Auxiliary only):
  - Move the selector knob to "Auxiliary" mode
- 4. When desired function is complete:
  - Return all controls to NEUTRAL positions
  - Return the selector knob to "HydraCHEM" mode. (HydraCHEM Auxiliary Only)
  - Return the Air Control Valve to the "VENT" position.
- 5. Select new function or continue to shut down the hydraulic system.
- 6. Disconnect and store chemical hoses, air lines and hydraulic trailer lines per company handling procedures.
- 7. Disengage the PTO according to the manufacturer's directions.



(Fig. 11)



### After use cleaning and lubrication is required to prevent pump components from seizing.

To lubricate the product pump, remove both inlet and outlet dust covers, spray an aerosol lubricant into the pump inlet while in operation, and watch for vapors on the outlet side of the pump.

#### NOTE: Always check chemical compatibility before introducing the lubricant

Continue for 30 seconds or until vapors are seen exiting the outlet.

#### Annual service interval kit 621-032 available - check with your local dealer for pricing 621-032 contains: Hyd. Filter, Air Filter, and Compressor oil

Interval	Item
Daily	P40 Air Compressor
	Check Oil level before operating the compressor (see Fig. 6)
	Hydraulic System
	Check Oil level before operation. ** Correct level is to the center of the sight glass when hydraulic system is cold, and not in operation.
Weekly	Product Pump
	Must be operated for 15 seconds and lubricated
	Product Pump
	Visually inspect the system.
	(High pressure and suction hose, fittings, and mounting bolts)
3 Months	General
	Inspect hydraulic motor couplings for damage, replace as needed
	Hydraulic System
	Change Hydraulic Oil Filter
	** An oil analysis is recommended to determine the lifetime of the oil remaining
	Chemical Pump Maintenance
	Lubricate ball bearings. Recommended grease: Mobile Grease XHP 222
	Recommended grease. Mobile Grease XHF 222
6 Months	P40 Air Compressor
	Change Oil
	Change Air Filter Element
	Hydraulic System
	Change Hydraulic Oil
	** An oil analysis is recommended to determine the lifetime of the oil remaining
	Power Take-Off Unit
	Grease the Power Take-Off / Hydraulic Pump Splines
Yearly	General
	Inspect Chemical Pump for wear (replace components as needed).
	Inspect Hydraulic Pump splines for wear P40 Air Compressor
	Change Relief Valve

## 

#### **HydraCHEM**

#### Piston Compressor Type

- Oil Single Spool 0
- х Oil - Dual Spool
- Oil Single Spool Auxiliary Α
- С Oil - Dual Spool - Auxiliary

#### Product Pump

- G
- SVP150 (150 GPM) Stainless Steel S
- Т VP150 (150 GPM) Cast Iron
- J G Series Pump with HD Coupler

#### **Product Pump Options & Seals**

- Mechanical Buna (S & V Pump Only) в
- Mechanical PTFE Encap. Chemraz® (S Pump Only) κ
- v Mechanical - Viton (S & V Pump Only)
- Triple Lip Seal/Carbon/Steel (G or J Pump Only) L
- Triple Lip Seal/Bronze/Steel (G or J Pump Only) Ν
- т Triple Lip Seal/Carbon/Stainless Steel (G or J Pump Only)
- z Triple Lip Seal/Bronze/Stainless Steel (G or J Pump Only)

#### **Inlet Product Pump Connections**

- х None
- Α 2" Aluminum Female Camlock
- в 2" Aluminum Male Camlock
- 2" Stainless Steel Female Camlock С
- 2" Stainless Steel Male Camlock D
- 3" Aluminum Female Camlock Е
- F 3" Aluminum Male Camlock
- G 3" Stainless Steel Female Auto-Lock Camlock
- н 3" Stainless Steel Male Camlock
- .1 3" Stainless Steel Female Camlock

#### Special Option Code

- 00 Suction: 1-1/4" 90° Elbow Code 61 Barb(Std)
- 01 Suction: 1-1/4" 45° Elbow Code 61 Barb
- 02 Suction: 1-1/2" 90° Elbow Code 61 Barb ( w/ Aux Unit only )
- 03 Suction: 1-1/2" 45° Elbow Code 61 Barb ( w/ Aux Unit only )

#### PTO & Hydraulic Pump

- K SAE B Hydraulic Pump
- D DIN 5462 Hydraulic Pump
- PTO & SAE B Hydraulic Pump т

#### **Outlet Dust Cap/Plug**

None х

Α

- 2" Nylon Plug
- B 2" Nylon Cap
- C 2" Stainless Steel Plug
- D 2" Stainless Steel Cap
- E 3" Nylon Plug
- F 3" Nylon Cap
- G 3" Stainless Steel Plug
- н 3" Stainless Steel Cap

#### Inlet Dust Cap/Plug

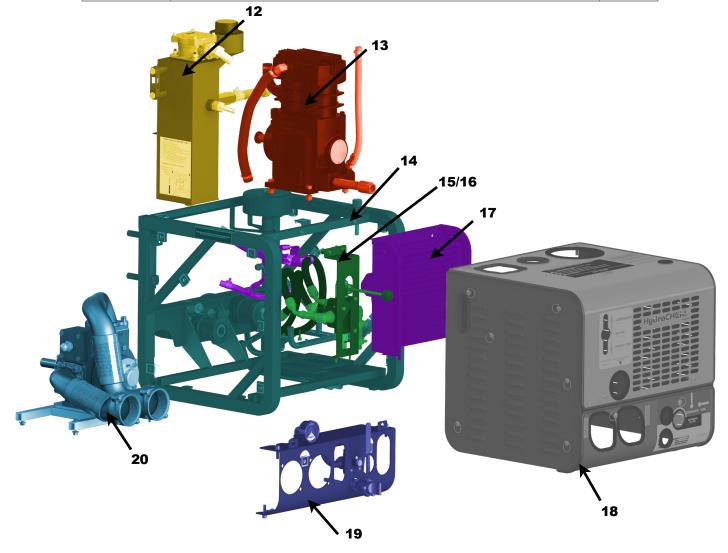
- Х None
- 2" Nylon Plug Α
- 2" Nylon Cap R
- 2" Stainless Steel Plug С
- 2" Stainless Steel Cap п
- 3" Nylon Plug Е
- F 3" Nylon Cap
- 3" Stainless Steel Plug G
- 3" Stainless Steel Cap н

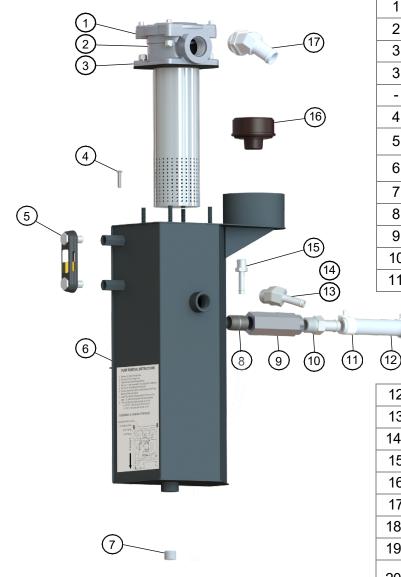
#### **Outlet Product Pump Connections**

- х None
- 2" Aluminum Female Camlock Δ
- в 2" Aluminum Male Camlock
- С 2" Stainless Steel Female Camlock
- 2" Stainless Steel Male Camlock D
- 3" Aluminum Female Camlock Е
- 3" Aluminum Male Camlock F
- G 3" Stainless Steel Female Auto-Lock Camlock
- н 3" Stainless steel Male Camlock
- 3" Stainless Steel Female Camlock

G Gear Pump (125 GPM)

Figure	Description	Page
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18	Cover Panel Assembly	23
19	Lower Front Mount Assembly	24
20	Pump and Pipe Work Assembly (SVP150/VP150)	25
	Pump and Pipe Work Assembly (G125)	26



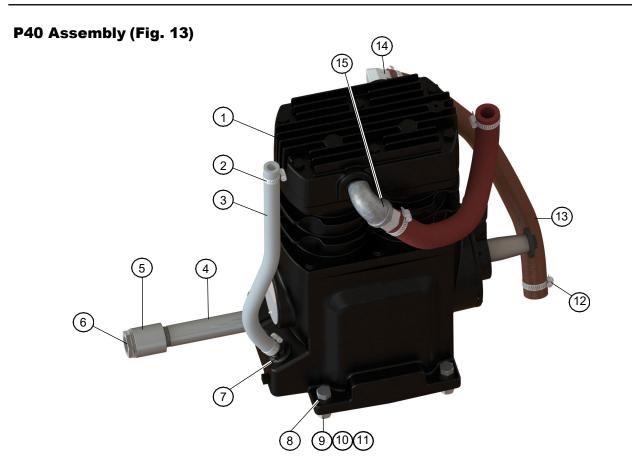


Item	Part #	Description	Qty
1	284-026	Nut Hex 5/16 Nyloc	4
2	296-004	Washer Flat 5/16"	4
3	352-003	Filter/diffuser	1
3	352-008	Filter/diffuser w/ lip	1
-	350-001	Filter Element	1
4	214-004	Allen Screw 1/4-20 x 3/4"	2
5	355-007	Sight Gauge	1
6	500-024	Oil Tank body	1
7	90094-050	Plug Pipe 1/2"	1
8	535-004	Pipe Nipple, - 3/4"	1
9	335-002	Radiator Check Valve	1
10	85227	Hose Barb -12	1
11	313-018	"T" Clamp Heavy Duty 3/4"	2

12	362-012	Hose - 3/4" Return	**
13	329-001	Hose Barb -8, 45 deg	1
14*	321-047	Adp -12 NPTM x -8 NPTF	1
15	327-015	Hose Barb Straight -6 x -4	1
16	359-002	Breather Cap	1
17	328-001	Hose Barb -16, 45 deg	1
18*	587-012	3/8" Drain Tubing	**
19*	291-000	Hose Clamp Worm S/S	1
20*	85261	90° 1-1/4" Barb Elbow x -24 Cd 61	
20*	329-000	45° 1-1/4" Hose Barb Elbow x -24 Cd 61	1
20*+	328-008	90° 1-1/2" Hose Barb Elbow x -24 Cd 61	I
20*+	329-005	45° 1-1/2" Hose Barb Elbow x -24 Cd 61	
21*	526-003	1-1/2" Gasket - Cd 61	1
22*	85213	Flange Split Half 24 Cd 61	2
23*	85232	O-Ring -24 Cd 61	1

\* Items not shown on breakdown + Auxiliary units only

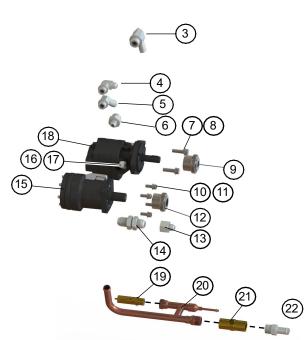
Hydraulic Tank Assembly (Fig. 12)

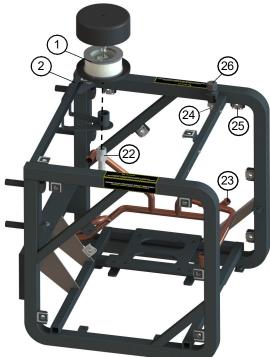


Item	Part #	Description	Qty
1	600-013	Compressor P40	1
2	313-017	"T" Clamp -8 hose	2
3	360-016	Hyd. Return Hose (Oil Fill)	-
4	535-000	Pipe Nipple, 3/4" x 5"	1
5	530-006	Coupler - 3/4"	1
6	93334-075	Sight Glass	1
7	634-142	Hyd Filler Plug P40	1
8	228-066	Capscrew 7/16" x 1-1/2"	4
9	284-005	Nut 7/16	4
10*	294-012	Lockwasher 7/16"	4
11*	296-009	Flat washer 7/16"	4
12	85245	Hose clamp 3/4"	4
13	587-006	Hot Air Hose 3/4"	-
14	328-009	Hose Barb -8, 90 deg.	1
15	328-003	Hose Barb -12, 90 deg.	1
16*	562-025	Coupler Hub, P40	1
17*	822-004	Pressure gauge 0-60psi	1

\* Items not shown on breakdown

## Frame Assembly (Fig. 14)



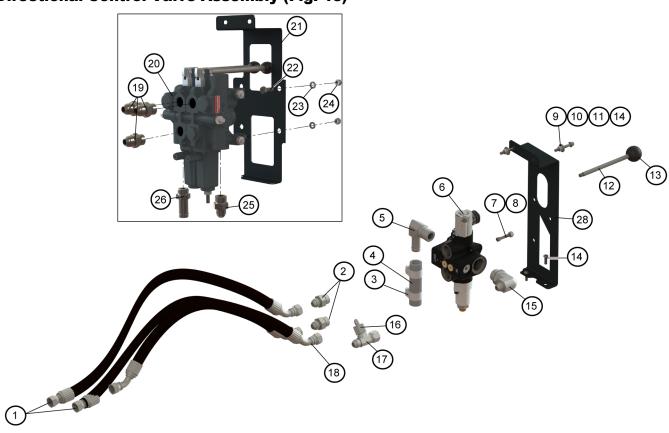


Item	Part #	Description	Qty
1	575-001	Filter Element	1
2	500-023	Main Frame	1
2	500-038	Main Housing - Aux. Mount	1
3	328-006	Hose Barb Elbow -12 sae	1
4	322-008	Elbow -10 sae	1
5	329-002	-12 Hose Barb x -10SAE 45 Deg	1
6	321-020	Adp -12 sae x -8 jicm	1
7	294-012	Lockwasher 7/16"	2
8	228-061	Capscrew 7/16" x 1-1/4"	2
9	562-026	Coupler Hub, P40 Motor	1
10	224-006	Capscrew, 3/8"	4
11	294-009	Lockwasher 3/8"	4
12	562-027	Coupler Hub, Pump Motor	1
13	321-015	Adp -12 jicf x -8 jicm	1
14	321-068	Bulkhead w/ nut	1
15	302-008	Pump Motor - VP150	1

ltem	Part #	Description	Qty
16	284-005	Nut 7/16	2
17	296-004	Flatwasher 5/16"	4
18	300-011	Motor - P40	1
18	300-010	Motor (Aluminum) - P40	1
19	610-007	Relief Valve - P40	1
20	828-100	Tubing	1
21	612-014	Check Valve - P40	1
22	85227	Hose Barb -12 x -12 NPTM	2
23	362-004	Manifold	1
24	327-007	Hose Barb Straight -8	1
25	582-013	1/4-turn fastener	15
26	522-008	Cap 30mm, 1/2 NPT, no relief	1
27*	562-029	Coupler Sleeve	2
28**	363-004	-12 5600 Male QRC	1
29**	322-032	Elbow, -12JICM x -12JICF	1
30**	321-033	Adp, -12 JICM x -12 JICF	1
31*	625-004	Air Filter Assy.	1

## \* Items not shown on breakdown

## \*\* Items used for Quick Coupler inlet adapter



## **Directional Control Valve Assembly (Fig. 15)**

Item	Part #	Description	Qty
1	361-022	Hose Assy	2(3)
2	321-018	Adp -10 SAE x -8 JICM	2
3	313-018	"T" Clamp -12	2
4	85243-1	Hose - Low Pressure	-
5	328-006	Hose Barb -12 - 90 deg.	1
6	334-008	Single Spool Control Valve	1
7	224-001	Capscrew 1/4-28	3
8	284-003	Nut 1/4"	3
9	284-024	Nut 1/4"	2
10	296-002	Flatwasher 1/4"	2
11	294-003	Lockwasher 1/4"	7
12	527-010	Handle - Straight	1(0)
13	527-016	Phenolic Ball	1(0)
14	214-004	Allen Screw 1/4-20	4

Item	Part #	Description	Qty
15**	322-017	Elbow -12	1
16**	321-074	Adp -8 JICM x -8 JICF	1
17**	320-011	Tee -8	1
18**	361-023	Hose Assy HP	1
19	321-031	Adp -8 SAE x -8 JICM	3
20	334-018	Dbl Spool Control Valve (w/ handles)	0 (1)
21	508-047	Dbl Spool DCV Bracket	0 (1)
22	228-010	Capscrew 5/16"	4
23	294-008	Lockwasher 5/16"	4
24	85234	Hex Nut 5/16"	4
25	321-018	Adp -10SAE x -8 JICM	1
26	327-018	Hose Barb -12 x -10SAE	1
27*	322-033	Elbow -8JICM x -8 JICF	1
28	508-046	Single Spool DCV Bracket	1 (0)

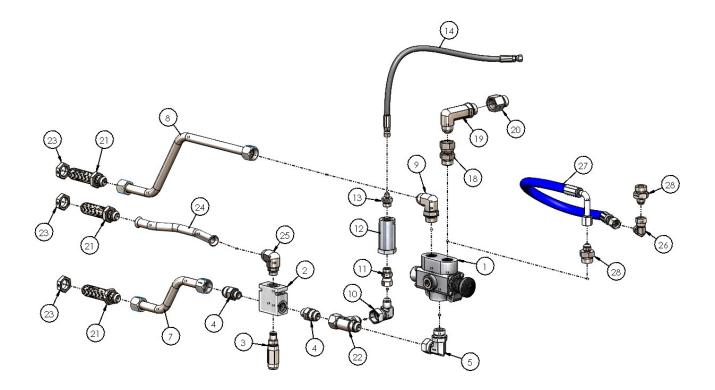
Note:

() contains qty's needed for a double spool version (where different)

\* Not shown

\*\* Non-Auxiliary units - Single Spool

## HydraCHEM Auxiliary Plumbing (Fig. 16)



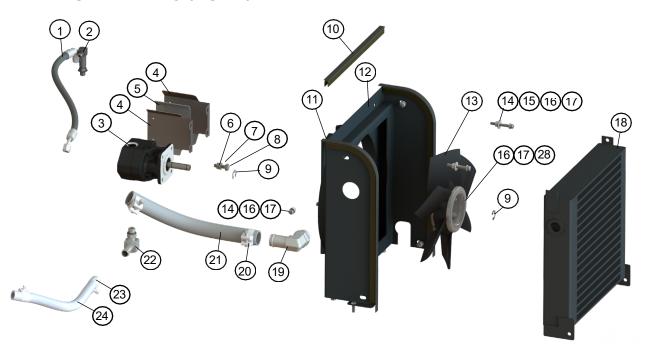
ltem	Part #	Description	Qty
1	334-004	Selector Valve HC AUX	1
2	362-009	Relief Housing (Auxiliary)	1
3	85304	Relief Valve - 3000psi	1
4	321-032	Adaptor	2
5	322-032	Elbow	1
6	323-013	Plug	1
7	377-000	Tubing - Steel	1
8	377-001	Tubing - Steel (Auxiliary)	1
9	322-011	Elbow	1
10	322-044	Elbow	1
11	321-076	Adaptor	1
12	352-006	Fan Motor Orifice Filter	1
13	321-078	Adaptor	1
14	361-046	Hose Assembly	1

Item	Part #	Description	Qty
15	524-007	Rubber Boot Guard	1
16	294-003	Lock Washer	4
17	214-001	Capscrew	4
18	321-054	Adaptor (Single Spool)	1 (0)
19	322-013	Elbow (Single Spool)	1 (0)
20	321-080	Adaptor (Single Spool)	1 (0)
21	321-085	Adaptor - HA	3
22	320-014	Тее	1
23	325-000	Bulkhead Nut	3
24	377-002	Tubing - Steel - Relief Out	1
25	322-009	Elbow	1
26	322-033	Elbow (Dual Spool)	0 (1)
27	361-047	Hose Assy. Dual Spool (Auxiliary)	1
28	321-020	Adaptor (Dual Spool)	0 (2)

Note:

() contains qty's needed for a double spool version (where different)

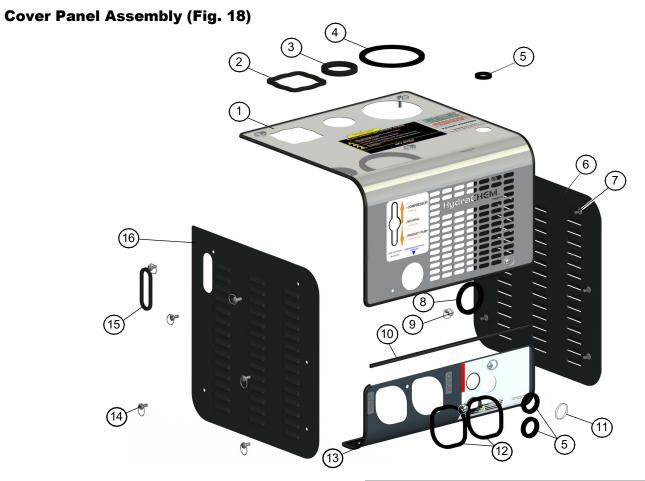
## Heat Exchanger Assembly (Fig. 17)

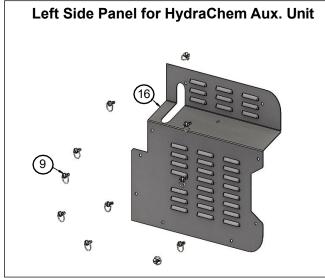


Item	Part #	Description	Qty
1	361-000	Hose Assy SCV to DCV	1
2	322-027	Fan Flow control	1
3	300-007	Fan Motor	1
4	508-064	Bracket - heat shield	1
5	572-000	Fiberglass Heat Shield	1
5	572-003	Aluminum Heat Shield	1
6	85234	Nut 5/16"	4
7	294-008	Lockwasher 5/16"	4
8	228-010	Capscrew 5/16"	4
9	85258	Retaining ring	2
10	570-000	Trim	-
11	508-081	Bracket - Fan Mounting	1
12	508-049	Radiator Shroud Bracket	1
13	507-001	Fan	1

Item	Part #	Description	Qty
14	284-024	Nut 1/4"	6
15	296-002	Flatwasher 1/4"	2
16	294-003	Lockwasher 1/4"	9
17	214-004	Allen screw 1/4-20	7
18	370-003	Heat Exchanger	1
19	328-005	Hose Barb -16, 90 deg.	1
20	313-021	"T" Clamp -16 hose	2
21	85244	Hose Filter/Radiator	-
22	85218	Hose Barb -8, 90 deg.	1
23	313-017	"T" Clamp -8 hose	2
24	85236	Fan Motor Return Hose	-
25*	352-006	Fan Motor in-line filter	1
26*	322-001	Elb8 SAEM x -8 JICF	1
27*	321-075	Adp8 SAEM x -4 SAEF	1
28*	224-009	Capscrew 1-3/4"	2

\* Items not shown on breakdown

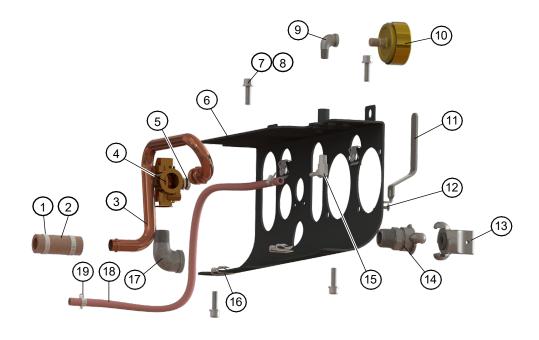




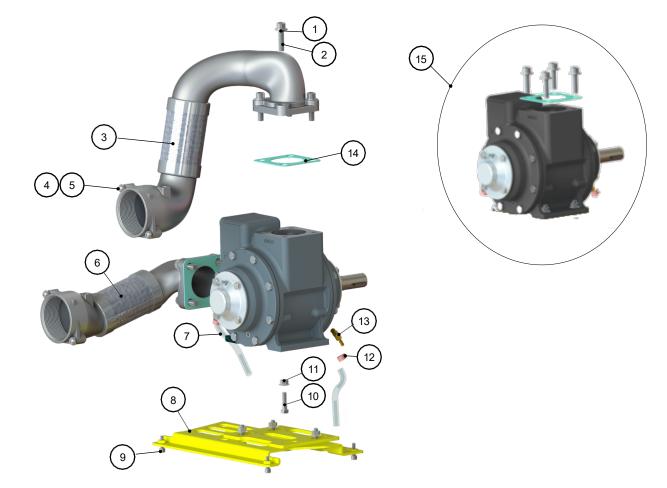
Item	Part #	Description	Qty
1	634-160	Top panel assy,single spool	1 (0)
	634-161	Top panel assy,dbl spool	0 (1)
2	521-804	Filter grommet	1
3	521-803	Filler grommet	1
4	521-808	Grommet, P40 air filter	1
5	521-809	Grommet, P40 outlet	3
6	634-163	Right panel assy	1
7	582-014	1/4-turn retainer ring	21
8	521-806	Grommet, 2.5"	1
9	199-001	1/4-turn fastener (19mm)	9
10	570-001	Edge trim	-
11	558-001	Plug	1
12	521-807	Grommet, pipework	2
13	523-005	Bottom cover	1
	199-000	1/4-turn retainer (13mm)	12
14	199-000	1/4-turn retainer (13mm) (Auxiliary)	17
15	521-805	Grommet, sight glass	1
16	634-162	Left panel assy	1
Note:	634-165	Auxiliary Left Panel Assy	1

() contains qty's needed for a double spool version (where different)

## Lower Front Mount Assembly (Fig. 19)



Item	Part #	Description	Qty
1	85245	Clamp 3/4"	2
2	587-006	Hot air hose - P40	-
3	828-101	Tubing assembly	1
4	816-005	Ball valve	1
5	284-011	Nut Hex Jam- 7/16-20 - S/S	1
6	508-065	Bracket - VP Pipework	1
7	294-009	Lockwasher 3/8"	4
8	224-008	Capscrew 3/8"	4
9	533-000	Elbow, 1/4"	1
10	822-004	Pressure gauge 0-60psi	1
11	527-011	Handle	1
12	299-000	Screw 10-32	2
13	534-002	Univ. Pneu. Con. fitting plug	1
14	534-003	Univ. Pneu. Con. fitting 3/4"	1
15	328-007	Hose Barb -4 90 degree	1
16	582-013	1/4-turn retainer clip (9mm)	6
17	533-026	Elbow, 3/4"	1
18	587-011	Hose, Air 1/4"	-
19	291-000	Hose Clamp	2



## SVP150 / VP150 Pump and Pipe Work Assembly (Fig. 20)

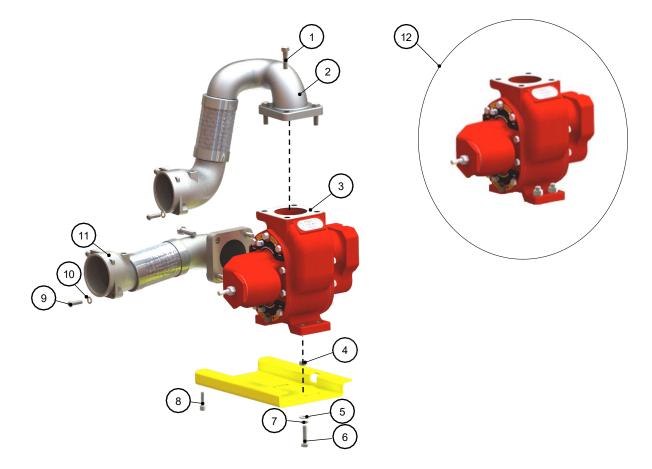
ltem	Part #	Description	Qty
1	196-008	Flat Washer	8
2	124-012	Skd Hd Capscrew	8
3	622-006	Discharge Pipework	1
4	294-009	Lock Washer	4
5	224-008	Skt Hd Capscrew	4
6	622-007	Suction Pipework	1
7**	587-012	Hose	-
8	508-048	Bracket	1
9	224-004	Skt Hd Capscrew	4
10	224-008	Hex Hd Capscrew	4
11	284-038	Hex Nut	4
12	291-000	Hose Clamp	2

ltem	Part #	Description	Qty
13	329-003	Hose Barb -6 45 deg.	2
14	526-005	Gasket	2
15	634-131	VP150 Buna	1
15	634-132	VP150 Viton	1
15	634-133	SVP150 Buna	1
15	634-134	SVP150 Buna	1
15	634-139	SVP150 PTFE / Chemraz	1
16*	562-028	VP Series Coupler Hub	1
17*	562-029	Coupler Sleeve Assembly	1

Items not shown on breakdown \*

Sold Per Foot \*\*

G125 Pump and Pipe Work Assembly (Fig. 20)



Item	Part #	Description	Qty
1	228-070	Hex Hd Capscrew	8
2	622-014	Discharge Pipework Assy	1
3	526-027	Gasket	2
4	284-000	Hex Nut	4
5	296-010	Flat Washer	4
6	228-074	Hex Hd Capscrew	4
7	294-010	Lock Washer	4
8	224-004	Skt Hd Capscrew	4
9	224-008	Skt Hd Capscrew	4
10	294-009	Lock Washer	4
11	622-015	Inlet Pipework Assy	1

ltem	Part #	Description	Qty
12	634-136	G125,Steel, C - Bush. Assy	1
12	634-135	G125,Steel, B - Bush. Assy	1
12	634-138	G125,S/S, C - Bush. Assy	1
12	634-137	G125,S/S, B - Bush. Assy	1
13*	327-016	Hose Barb -6 x NPT	1
14*	291-000	Hose Clamp	1
15*	587-012	Hose	-
16*	562-030	G125 Series Coupler Hub	1
16*	562-049	HD G125 Ser. Coupler Hub	2
17*	562-029	Coupler Sleeve Assembly	1
17*	562-050	HD Coupler Sleeve	1

\* Items not shown on breakdown

\*\* Sold Per Foot

## Warranty Statement

### **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.



### **Paragon Tank Truck Equipment**

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