

Installation and Operation Manual



HydraCHEM™

Models:
HydraCHEM
HydraCHEM with Auxiliary



PRGMAN-02
Version A
January 24, 2024

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 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 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



NOTICE

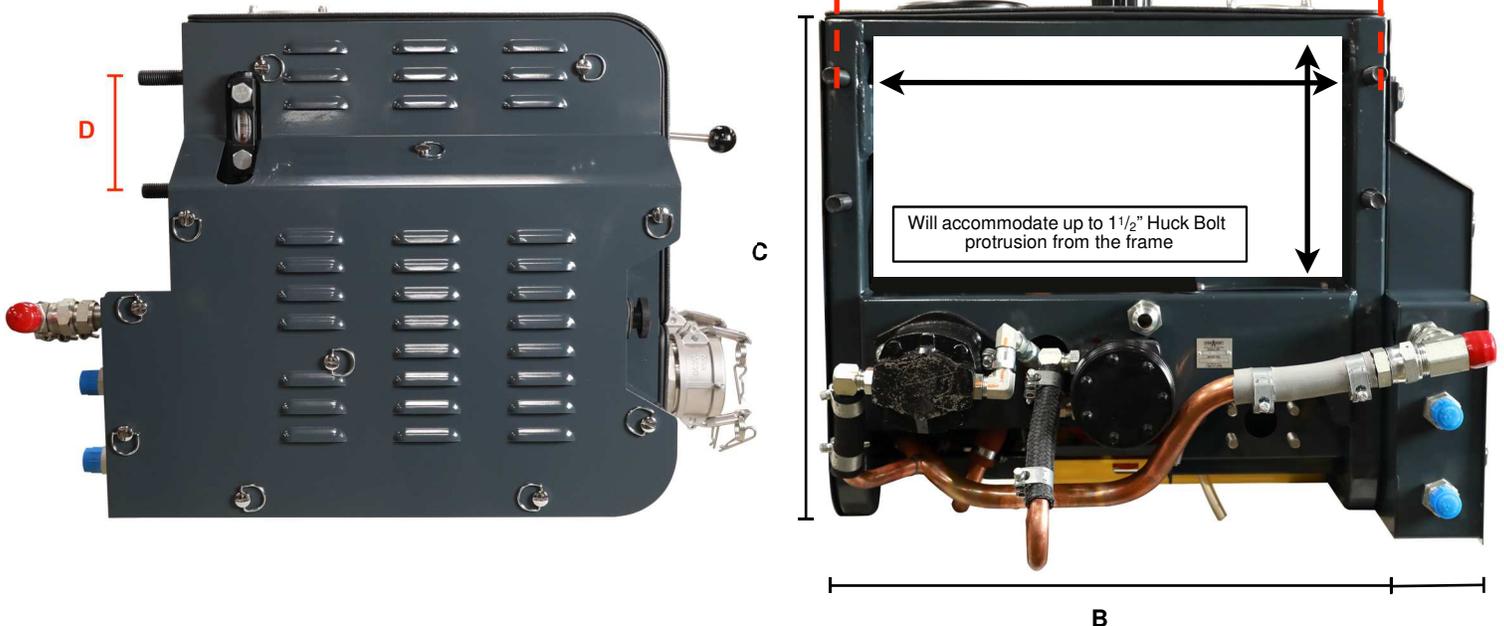
- Safety instruction tags and labels were attached to your unit prior to shipment. **DO NOT** remove, obscure, or cover in any manner
- Failure to heed these warnings could result in serious bodily injury to personnel operating or maintaining this equipment.

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)
 - Stand off mounting brackets are available for additional clearances.
 - The HydraCHEM will accommodate up to 1-1/2” Huck bolt protrusion between the mounting areas.

Dimensions

Model	A	B	C	D
HydraCHEM	22½”	25½”	22¾”	5¼”
HydraCHEM w/ Auxiliary	22½”	28¼”	22¾”	5¼”



(Fig. 1)

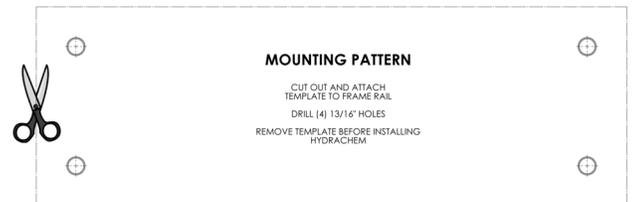
Power Take Off & Hydraulic Pump

- Mount Power Take-Off, and brace hydraulic pump per manufacturers 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.

1. Drill $1\frac{3}{16}$ " (+ $\frac{1}{16}$ " / -0) diameter holes.
the template located on shipping carton. (Fig. 2)

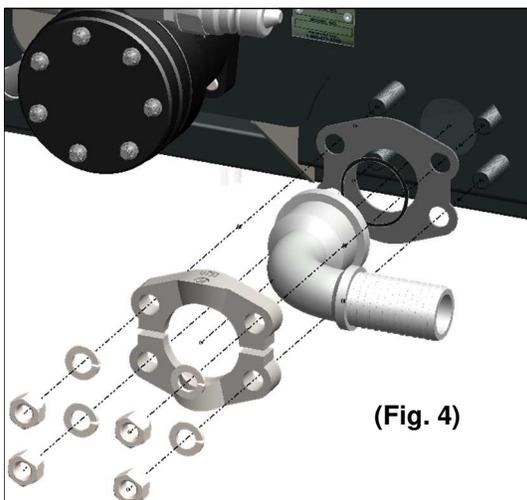


2. Lift only by indicated balance points. (Fig. 3)

3. Use the (4) $\frac{3}{4}$ " flat washers and (4) $\frac{3}{4}$ " x 10 Nylock nuts supplied to mount the HydraCHEM. Torque to 120 ft-lbs

(Fig. 2)

4. Use Code 61 Gasket (P/N: 526-003) in combination with suction connection fitting and hardware provided. (Fig. 4)



(Fig. 4)



(Fig. 3)

Do Not use power tools to tighten suction fitting.

DO NOT exceed 55 ft-lbs of Torque

MUST be torqued evenly

Hydraulic Hoses & Fittings

1. 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.

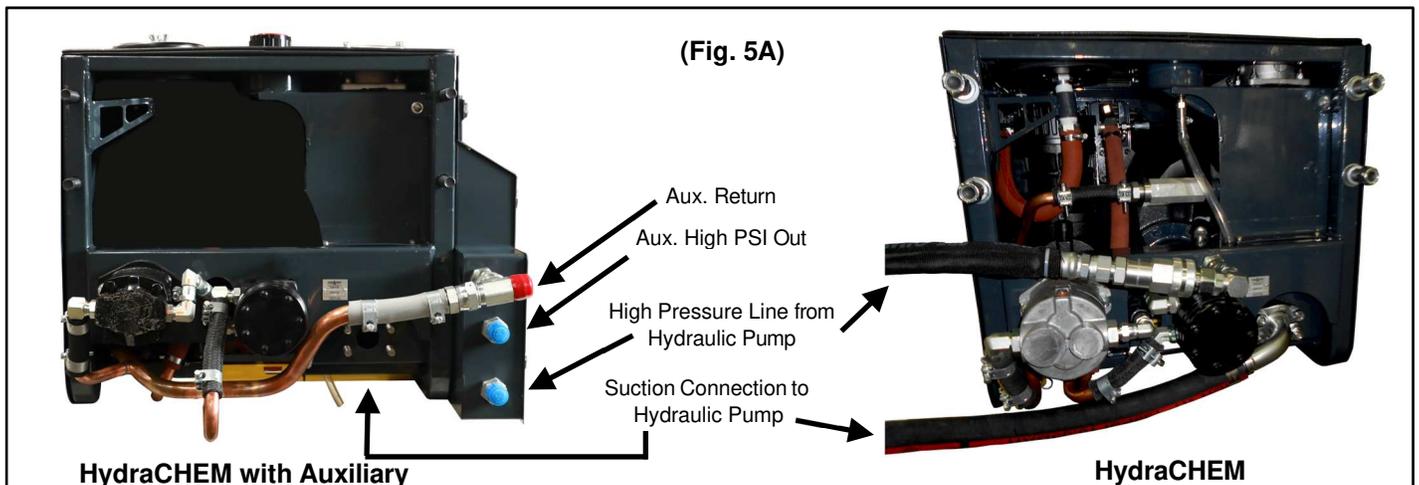
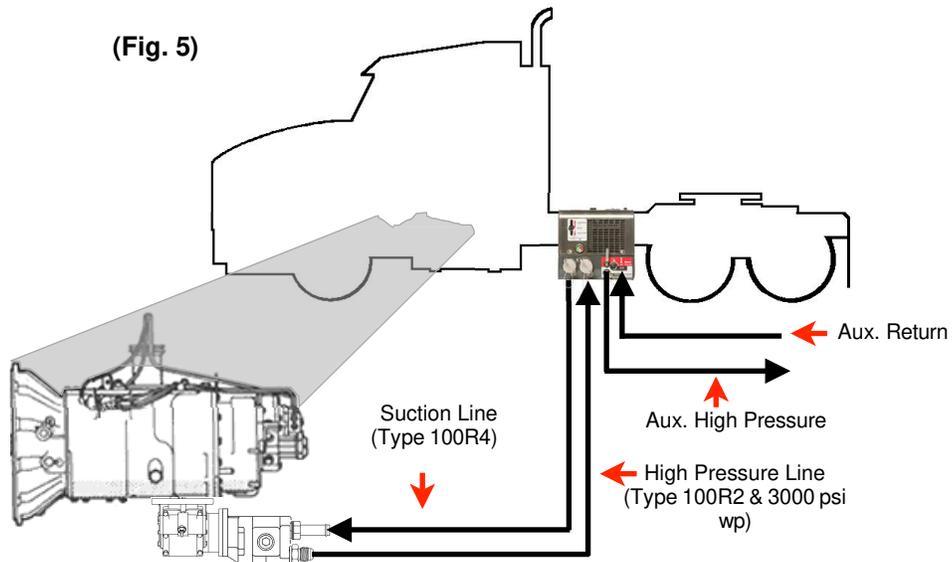
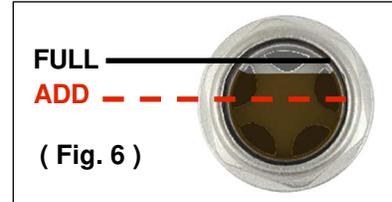
Orientation

- The Suction line can be rotated as needed and should run **below** 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.
- Ensure all grommets are in place.
- Ensure all covers are in place prior to operation.
- 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.

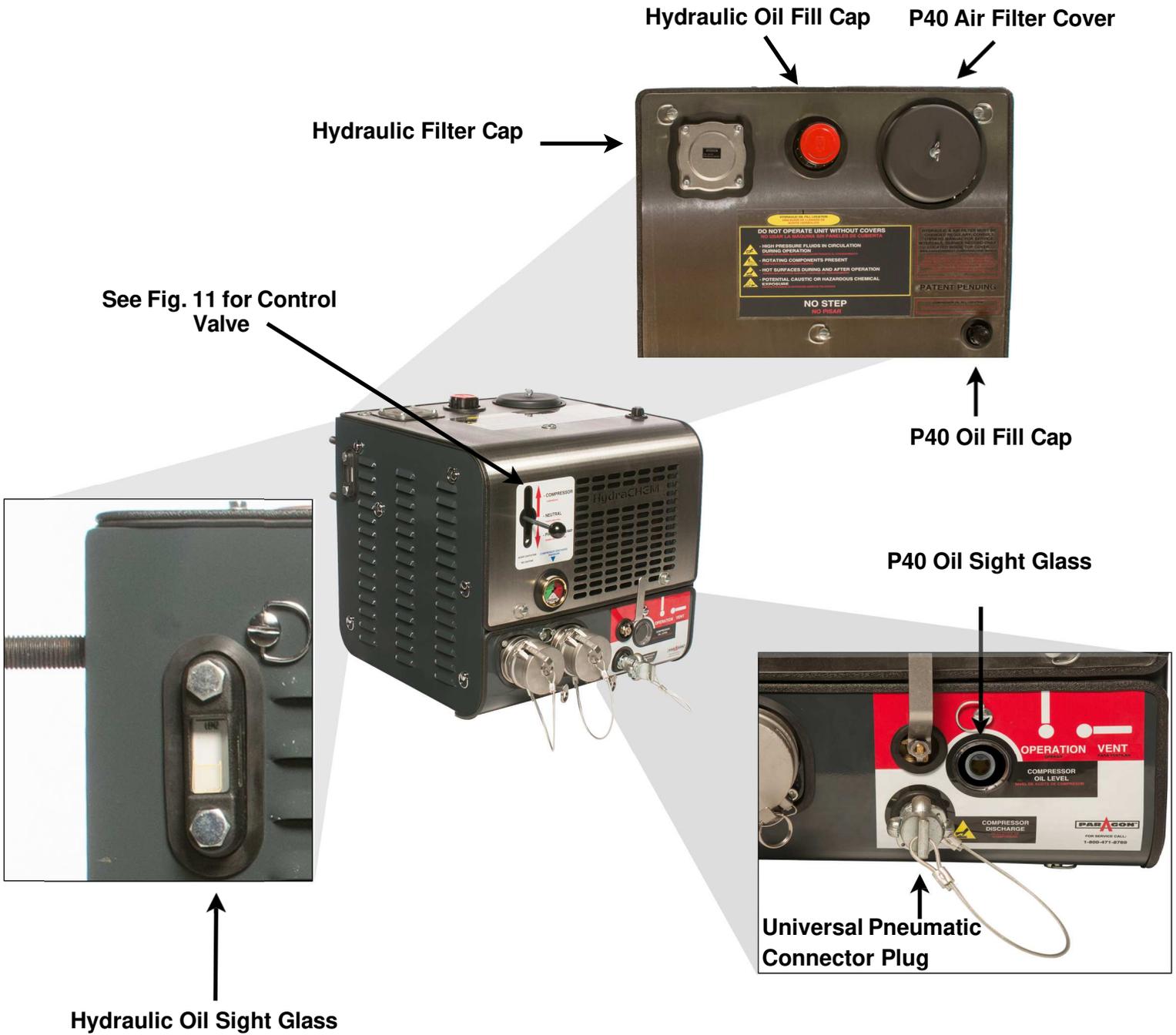
Note: Operate all auxiliary circuits to ensure all hydraulic lines are completely filled.

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).

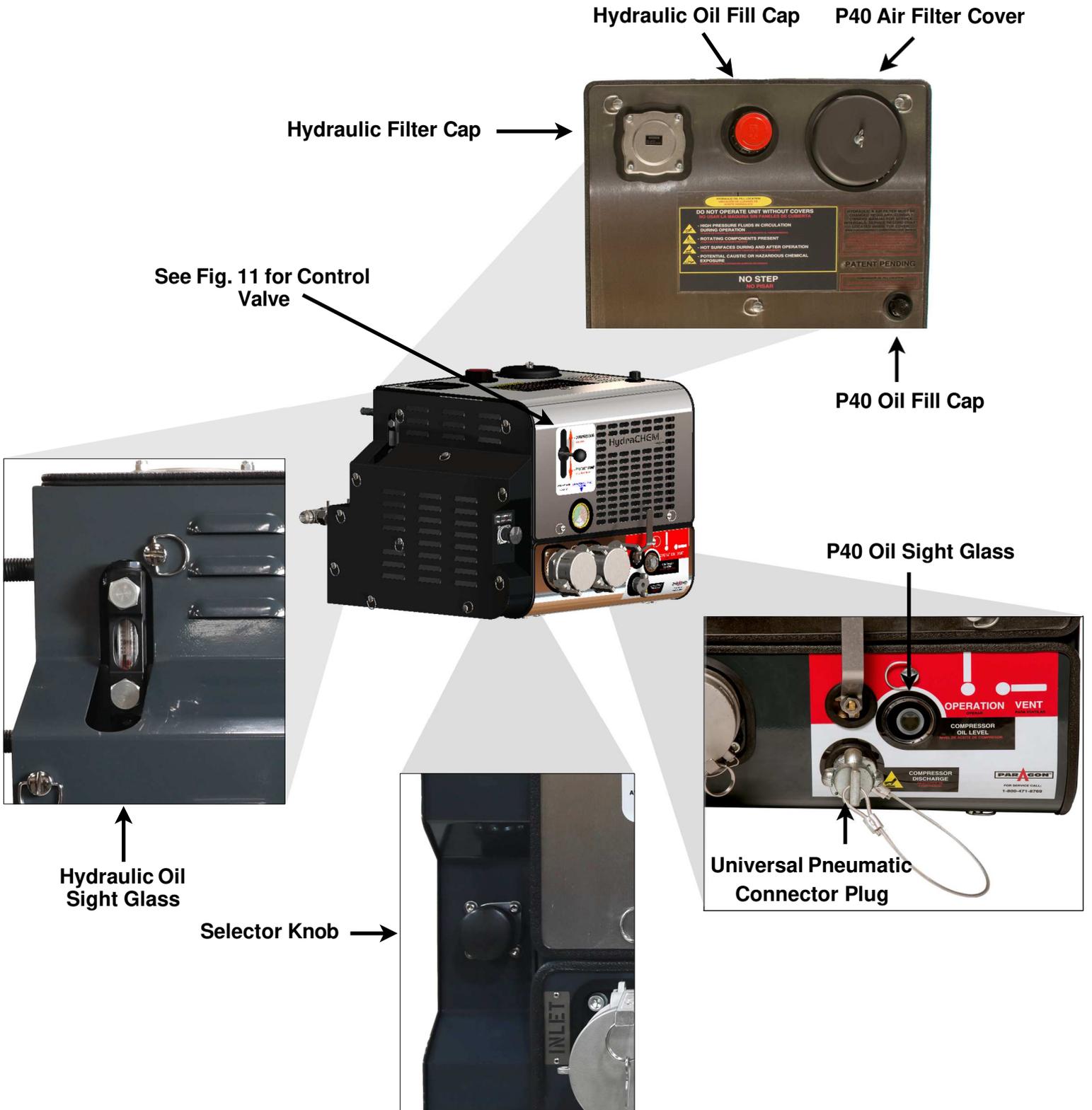
Note: Operate any auxiliary circuit to ensure all hydraulic lines are completely filled.

20. Perform a final check 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

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

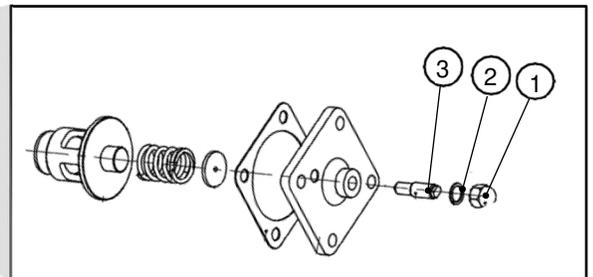
Product Pump	Factory Relief Valve Setting
VP150	80 PSI
G125	80 PSI
SVP150	80 PSI

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)

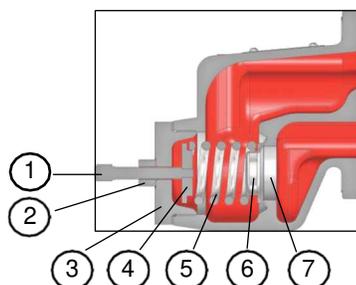
1. Remove Valve Cap (item 1).
2. Loosen locknut (item 2).
 - To increase the pressure setting - turn Adjusting Screw (item 3) clockwise.
 - To decrease the pressure setting - turn Adjusting Screw (item 3) counterclockwise.
3. Re-tighten locknut (item 2).
4. Replace Cap (item 1).



(Fig. 9)

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)



(Fig. 10)

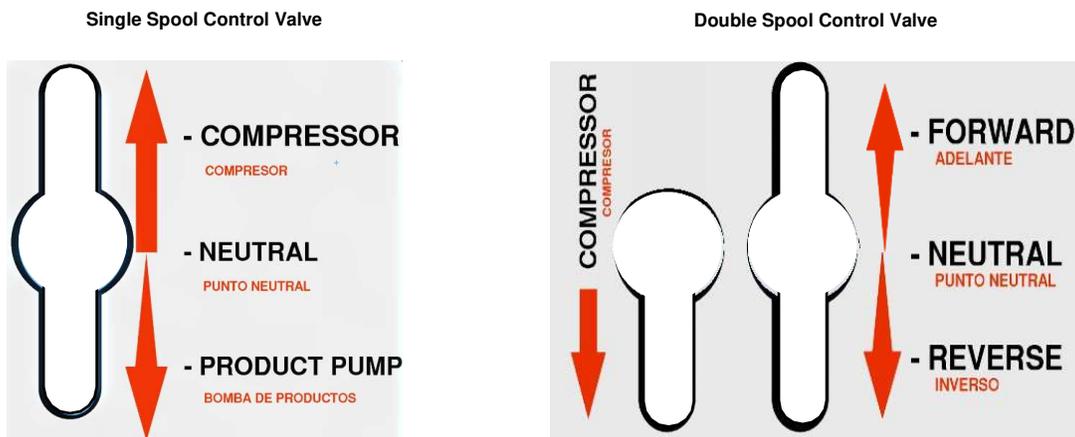


Before operation:

- **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 operations, 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	<p>P40 Air Compressor Check Oil level before operating the compressor (see Fig. 6)</p> <p>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.</p>
Weekly	<p>Product Pump Must be operated for 15 seconds and lubricated</p> <p>Product Pump Visually inspect the system. (High pressure and suction hose, fittings, and mounting bolts)</p>
3 Months	<p>General Inspect hydraulic motor couplings for damage, replace as needed</p> <p>Hydraulic System Change Hydraulic Oil Filter ** An oil analysis is recommended to determine the lifetime of the oil remaining</p> <p>Chemical Pump Maintenance Lubricate ball bearings. Recommended grease: Mobile Grease XHP 222</p>
6 Months	<p>P40 Air Compressor Change Oil Change Air Filter Element</p> <p>Hydraulic System Change Hydraulic Oil ** An oil analysis is recommended to determine the lifetime of the oil remaining</p> <p>Power Take-Off Unit Grease the Power Take-Off / Hydraulic Pump Splines</p>
Yearly	<p>General Inspect Chemical Pump for wear (replace components as needed) Inspect Hydraulic Pump splines for wear</p> <p>P40 Air Compressor Change Relief Valve</p>

HC O V B G H GHT - 00

HydraCHEM

Piston Compressor Type

- O** Oil - Single Spool
- X** Oil - Dual Spool
- A** Oil - Single Spool - Auxiliary
- C** Oil - Dual Spool - Auxiliary

Product Pump

- G** G Gear Pump (125 GPM)
- S** SVP150 (150 GPM) Stainless Steel
- I** VP150 (150 GPM) Cast Iron
- J** G Series Pump with HD Coupler

Product Pump Options & Seals

- B** Mechanical - Buna (S & V Pump Only)
- K** Mechanical - PTFE Encap. Chemraz® (S Pump Only)
- V** Mechanical - Viton (S & V Pump Only)
- L** Triple Lip Seal/Carbon/Steel (G or J Pump Only)
- N** Triple Lip Seal/Bronze/Steel (G or J Pump Only)
- T** 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

- X** None
- A** 2" Aluminum Female Camlock
- B** 2" Aluminum Male Camlock
- C** 2" Stainless Steel Female Camlock
- D** 2" Stainless Steel Male Camlock
- E** 3" Aluminum Female Camlock
- F** 3" Aluminum Male Camlock
- G** 3" Stainless Steel Female Auto-Lock Camlock
- H** 3" Stainless Steel Male Camlock
- J** 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
- T** PTO & SAE B Hydraulic Pump

Outlet Dust Cap/Plug

- X** None
- A** 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
- H** 3" Stainless Steel Cap

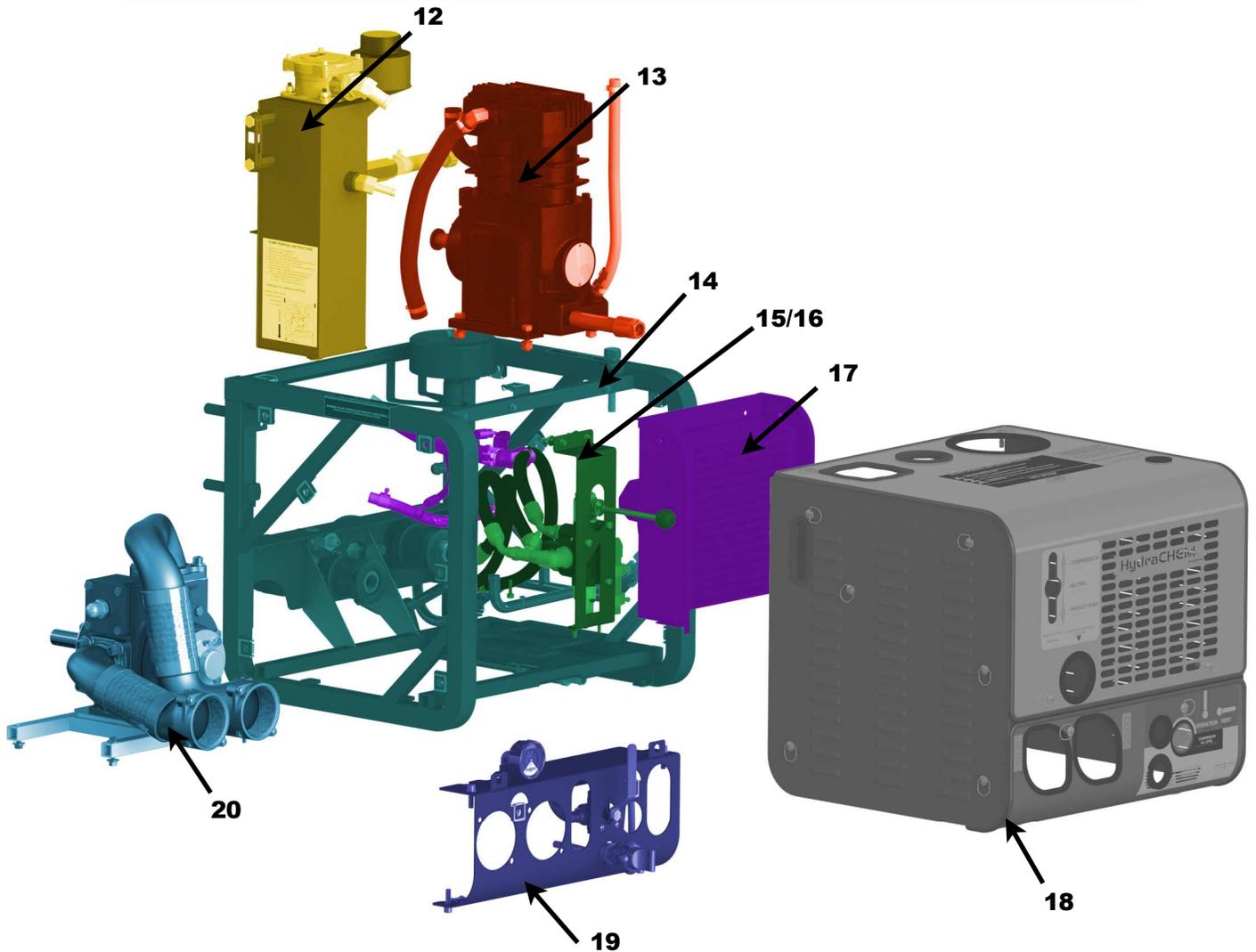
Inlet Dust Cap/Plug

- X** None
- A** 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
- H** 3" Stainless Steel Cap

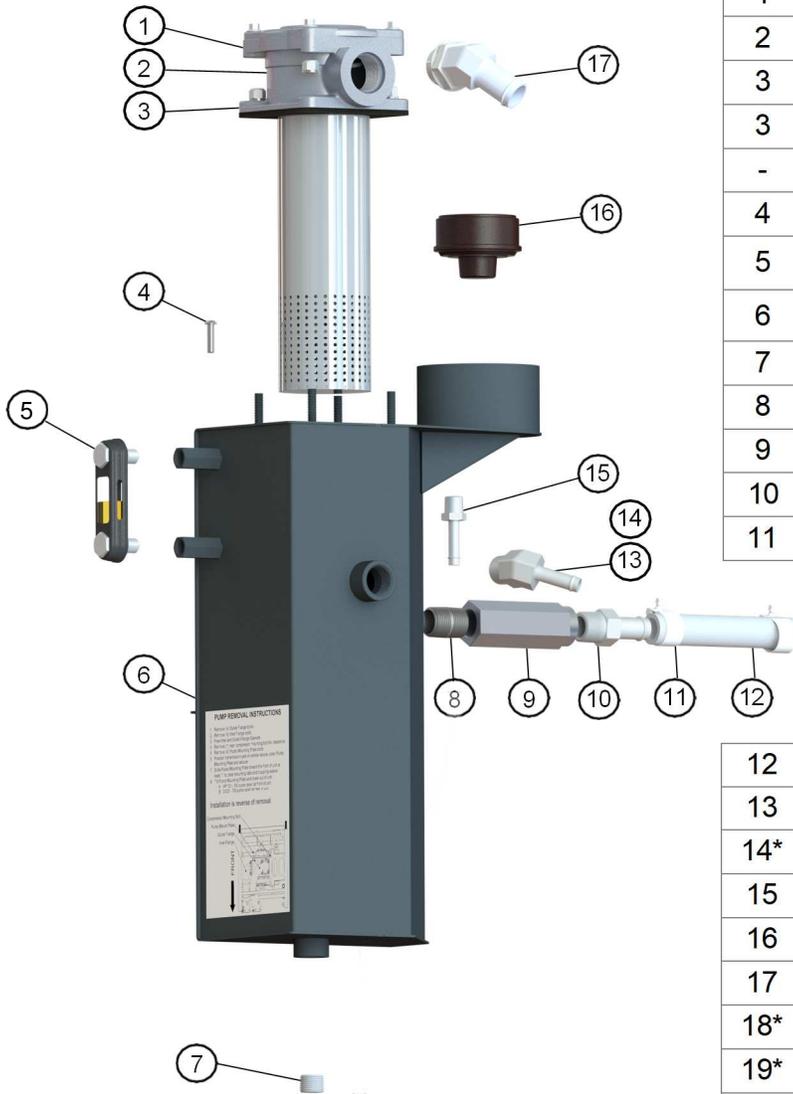
Outlet Product Pump Connections

- X** None
- A** 2" Aluminum Female Camlock
- B** 2" Aluminum Male Camlock
- C** 2" Stainless Steel Female Camlock
- D** 2" Stainless Steel Male Camlock
- E** 3" Aluminum Female Camlock
- F** 3" Aluminum Male Camlock
- G** 3" Stainless Steel Female Auto-Lock Camlock
- H** 3" Stainless steel Male Camlock
- J** 3" Stainless Steel Female Camlock

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20	Pump and Pipe Work Assembly (SVP150/VP150)	25
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Hydraulic Tank Assembly (Fig. 12)

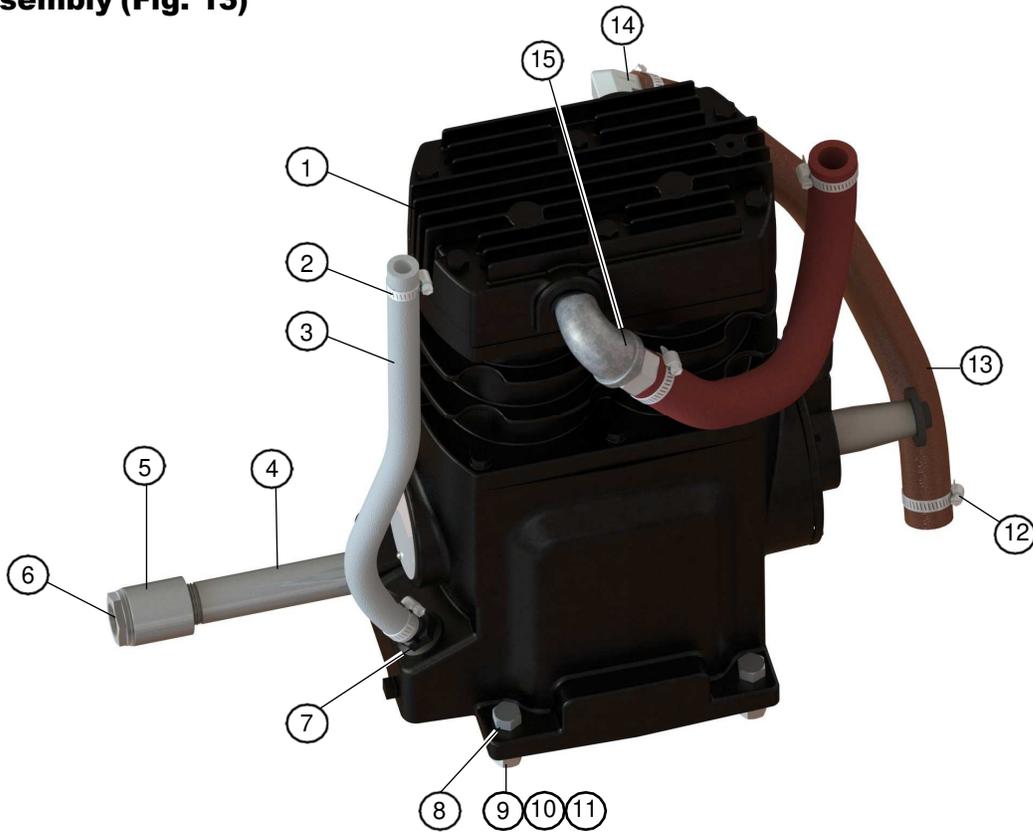


Item	Part #	Description	Qty
1	284-026	Nut Hex 5/16 Nyloc	4
2	296-004	Washer Flat 5/16"	4
3	352-003	Filter/diffuser	1
3	352-008	Filter/diffuser w/ lip	1
-	350-001	Filter Element	1
4	214-004	Allen Screw 1/4-20 x 3/4"	2
5	355-007	Sight Gauge	1
6	500-024	Oil Tank body	1
7	90094-050	Plug Pipe 1/2"	1
8	535-004	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	1
20*	329-000	45° 1-1/4" Hose Barb Elbow x -24 Cd 61	
20*+	328-008	90° 1-1/2" Hose Barb Elbow x -24 Cd 61	
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

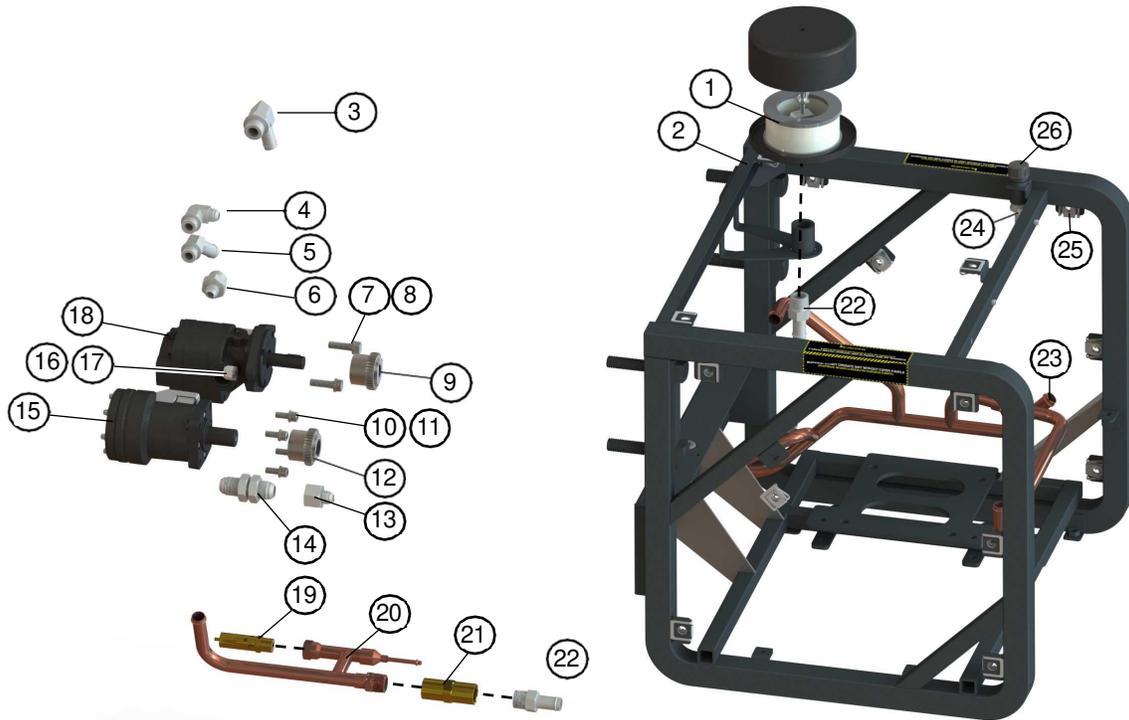
P40 Assembly (Fig. 13)



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)



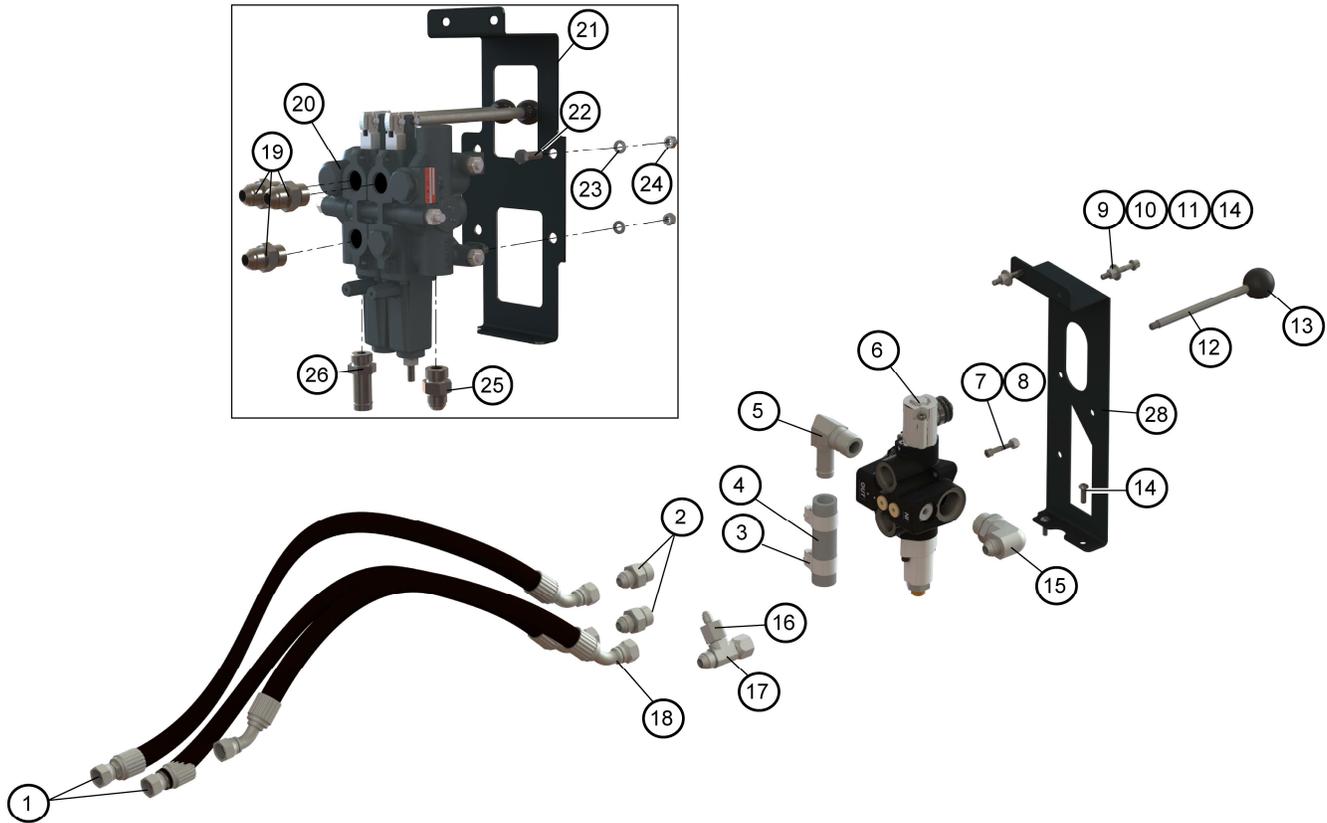
Item	Part #	Description	Qty
1	575-001	Filter Element	1
2	500-023	Main Frame	1
2	500-038	Main Housing - Aux. Mount	1
3	328-006	Hose Barb Elbow -12 sae	1
4	322-008	Elbow -10 sae	1
5	329-002	-12 Hose Barb x -10SAE 45 Deg	1
6	321-020	Adp -12 sae x -8 jicm	1
7	294-012	Lockwasher 7/16"	2
8	228-061	Capscrew 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

* Items not shown on breakdown

Item	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 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)

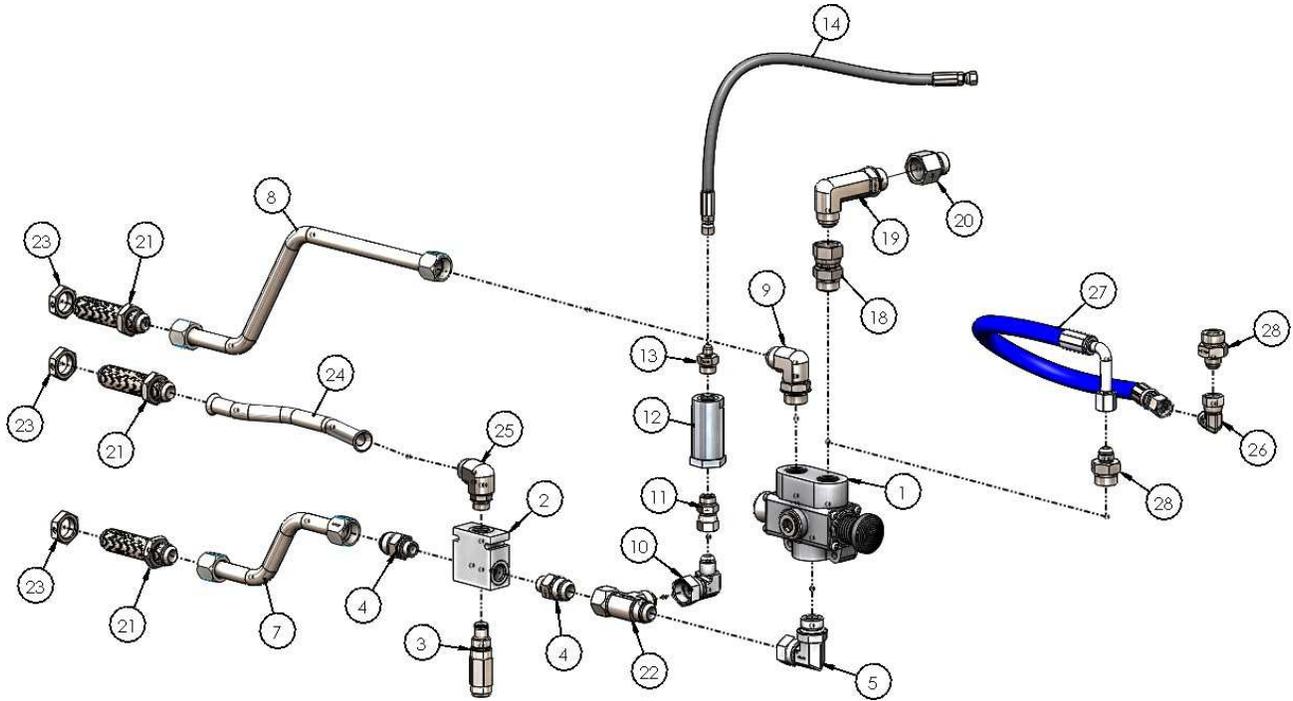
Note:

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

* Not shown

** Non-Auxiliary units - Single Spool

HydraCHEM Auxiliary Plumbing (Fig. 16)



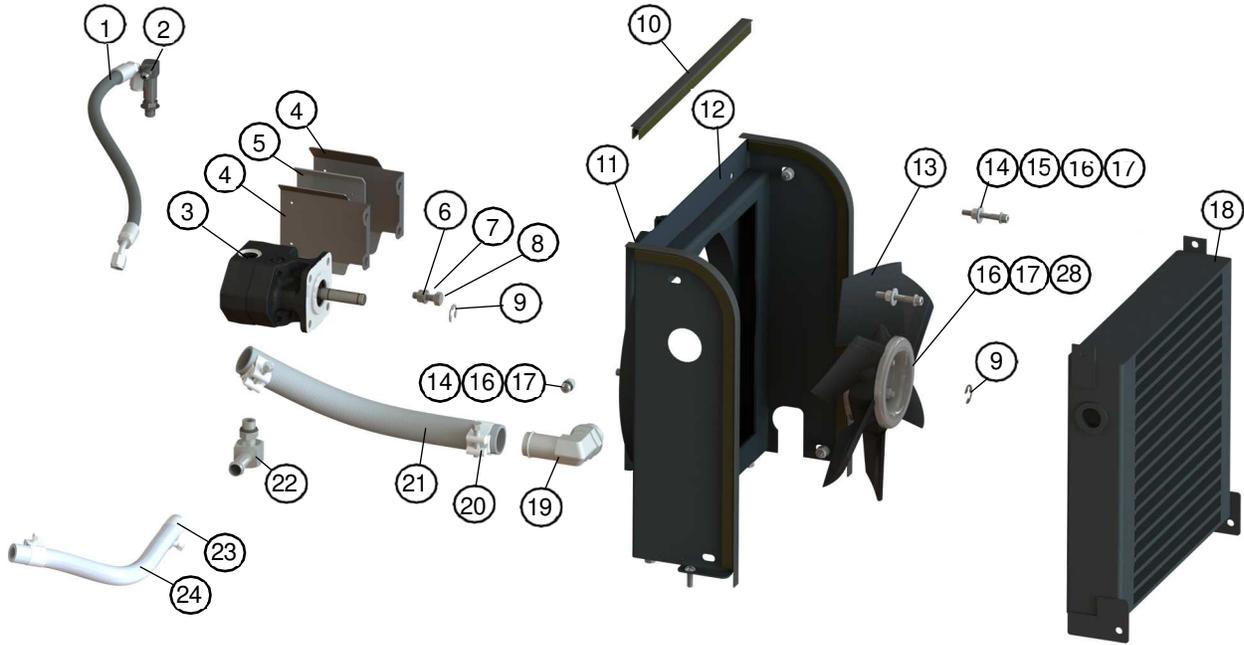
Item	Part #	Description	Qty
1	334-004	Selector Valve HC AUX	1
2	362-009	Relief Housing (Auxiliary)	1
3	85304	Relief Valve - 3000psi	1
4	321-032	Adaptor	2
5	322-032	Elbow	1
6	323-013	Plug	1
7	377-000	Tubing - Steel	1
8	377-001	Tubing - Steel (Auxiliary)	1
9	322-011	Elbow	1
10	322-044	Elbow	1
11	321-076	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	Tee	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)

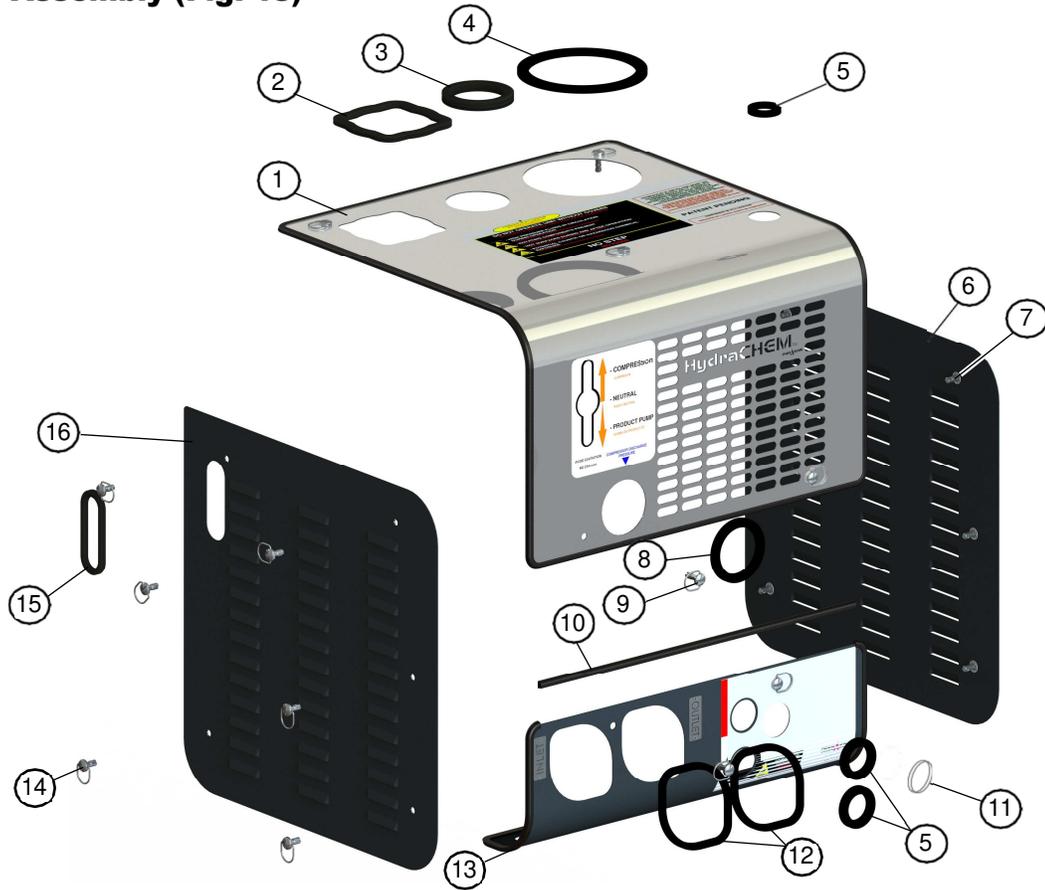


Item	Part #	Description	Qty
1	361-000	Hose Assy SCV to DCV	1
2	322-027	Fan Flow control	1
3	300-007	Fan Motor	1
4	508-064	Bracket - heat shield	1
5	572-000	Fiberglass Heat Shield	1
5	572-003	Aluminum Heat Shield	1
6	85234	Nut 5/16"	4
7	294-008	Lockwasher 5/16"	4
8	228-010	Capscrew 5/16"	4
9	85258	Retaining 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

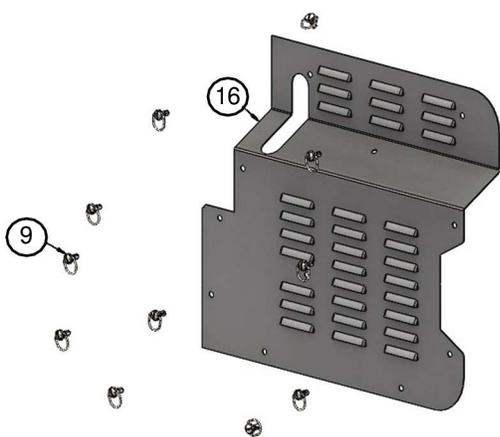
Item	Part #	Description	Qty
14	284-024	Nut 1/4"	6
15	296-002	Flatwasher 1/4"	2
16	294-003	Lockwasher 1/4"	9
17	214-004	Allen screw 1/4-20	7
18	370-003	Heat Exchanger	1
19	328-005	Hose Barb -16, 90 deg.	1
20	313-021	"T" Clamp -16 hose	2
21	85244	Hose Filter/Radiator	-
22	85218	Hose Barb -8, 90 deg.	1
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	Elb. -8 SAEM x -8 JICF	1
27*	321-075	Adp. -8 SAEM x -4 SAEF	1
28*	224-009	Capscrew 1-3/4"	2

* Items not shown on breakdown

Cover Panel Assembly (Fig. 18)



Left Side Panel for HydraChem Aux. Unit

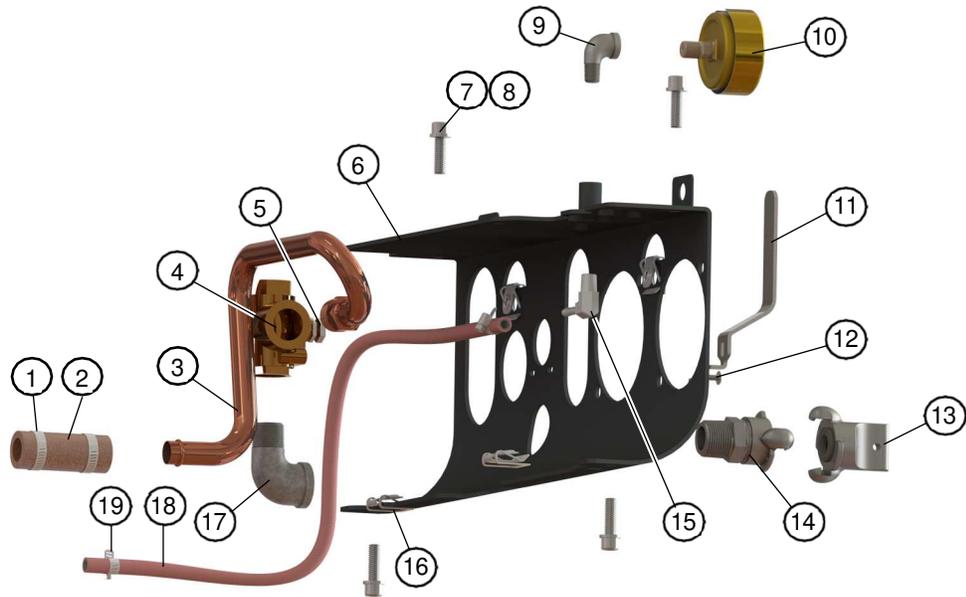


Item	Part #	Description	Qty
1	634-160	Top panel assy, single spool	1 (0)
	634-161	Top panel assy, dbl spool	0 (1)
2	521-804	Filter grommet	1
3	521-803	Filler grommet	1
4	521-808	Grommet, P40 air filter	1
5	521-809	Grommet, P40 outlet	3
6	634-163	Right panel assy	1
7	582-014	1/4-turn retainer ring	21
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
14	199-000	1/4-turn retainer (13mm)	12
	199-000	1/4-turn retainer (13mm) (Auxiliary)	17
15	521-805	Grommet, sight glass	1
16	634-162	Left panel assy	1
	634-165	Auxiliary Left Panel Assy	1

Note:

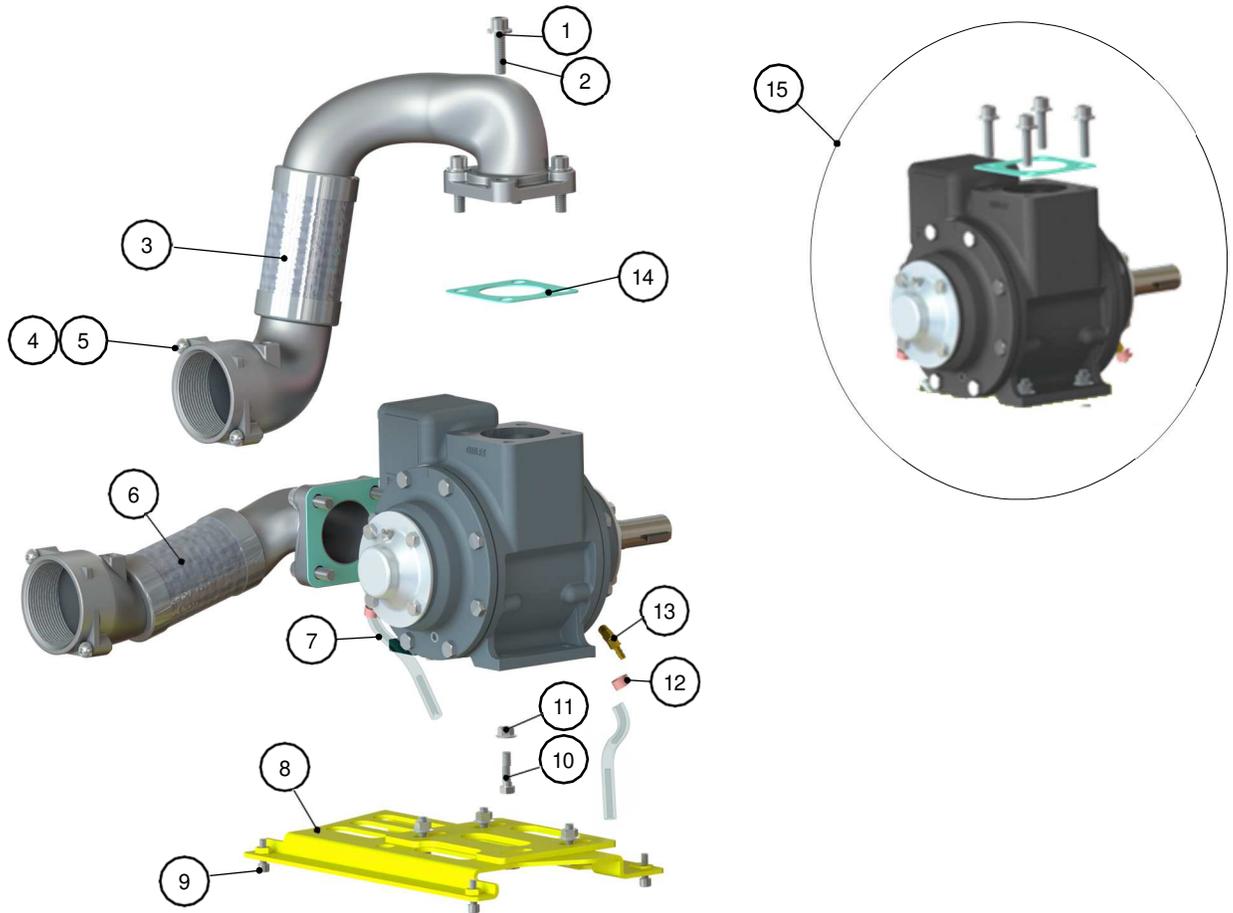
() contains qty's needed for a double spool version (where different)

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)



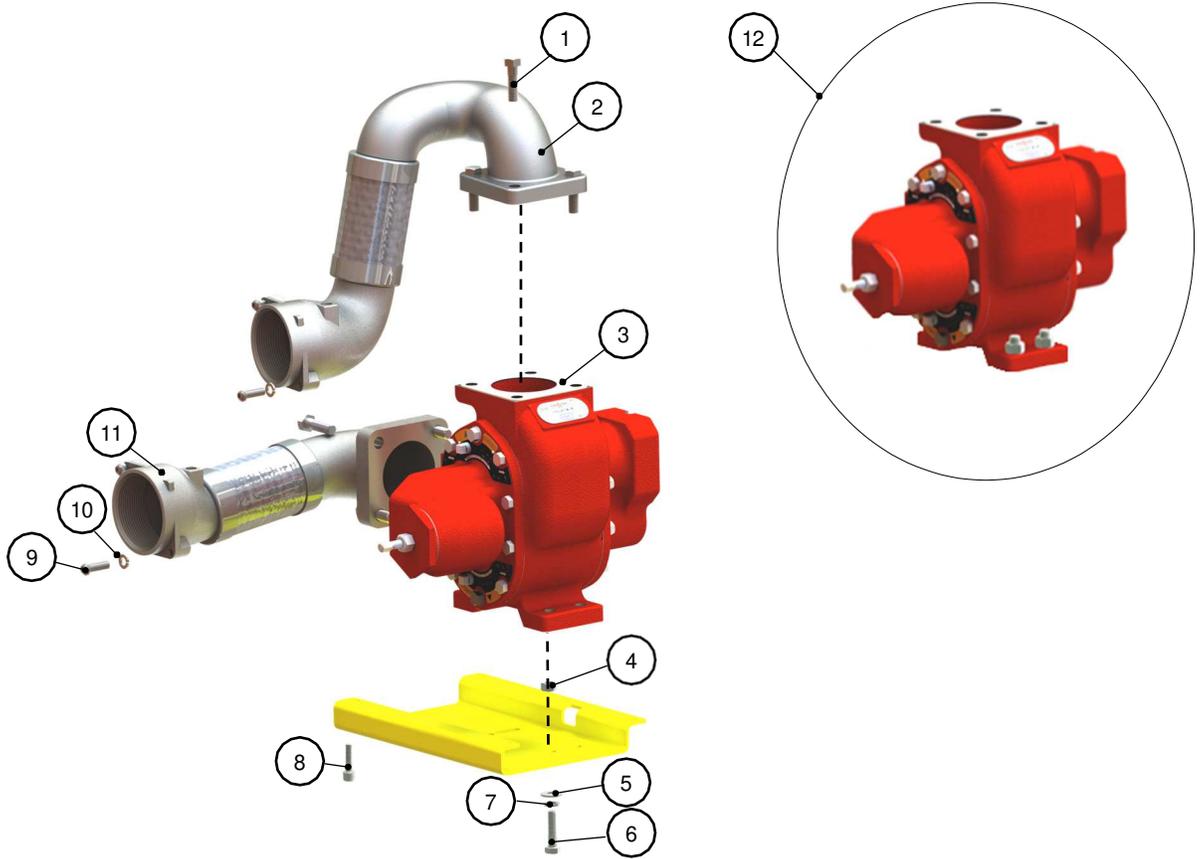
Item	Part #	Description	Qty
1	196-008	Flat Washer	8
2	124-012	Skd Hd Capscrew	8
3	622-006	Discharge Pipework	1
4	294-009	Lock Washer	4
5	224-008	Skt Hd Capscrew	4
6	622-007	Suction Pipework	1
7**	587-012	Hose	-
8	508-048	Bracket	1
9	224-004	Skt Hd Capscrew	4
10	224-008	Hex Hd Capscrew	4
11	284-038	Hex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

* Items not shown on breakdown

** Sold Per Foot

Item	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

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

Item	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

Subject to the terms and conditions hereinafter set forth in General Terms of Sale, Paragon Tank Truck Equipment LLC (the Seller) warrants products and parts of its manufacturer, when shipped and its work (including installation and start-up) when performed, will be of good quality and will be free from defects in material and workmanship. This warranty applies only to Seller's equipment, under use and service of products, for a period as stated in the table below. Due to the varying condition of installation and operation, all performances claims are subject to a plus or minus 5% variation. (Non-standard materials are subject to a plus or minus 10% variation)

THIS WARRANTY EXTENDS ONLY TO BUYER AND/OR ORIGINAL END USER, AND IN NO EVENT SHALL THE SELLER BE LIABLE FOR THE PROPERTY DAMAGE SUSTAINED BY A PERSON DESIGNED BY THE LAW OF ANY JURISDICTION AS A THIRD PARTY BENEFICIARY OF THIS WARRANTY OR ANY OTHER WARRANTY HELD TO SURVIVE SELLER'S DISCLAIMER.

All accessories furnished by seller but manufactured by others bear only that manufacturer's standard warranty.

All claims for defective products, parts, or work under this warranty must be made in writing immediately upon discovery and, in any event within one year from the date of the shipment of the applicable item and all claims for defective work must be made in writing immediately upon discovery and in any event within one year from date of completion thereof by Seller. Unless done with prior written consent of Seller, any repairs, alterations, or disassembly of Seller's inspection and warranty. Installation and transportation costs are not included and defective items must be held for Seller's inspection and returned to Seller's Ex-works upon request.

THERE ARE NO WARRANTIES, EXPRESSED, IMPLIED, OR STATUTORY WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF, INCLUDING WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS OF PURPOSE.

After Buyer's submission of claim as provided above and its approval, Seller shall either repair or replace its product, part, or work at the original Ex-works point of shipment, or refund an equitable portion of the purchase price.

The products and parts sold hereunder are not warranted for operation with erosive or corrosive materials or those which may lead to build up of materials within the product supplied, nor those which are incompatible with the materials of construction. The Buyer shall have no claim whatsoever and no product or part shall be deemed to be defective by reason of failure to resist erosive or corrosive action nor for problems resulting from build-up of material within the unit nor for problems due to incompatibility with the materials of construction.

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 month from date of shipment, or remaining warranty period, whichever is greater.

Any improper use, operation beyond capacity, substitute of parts not approved by Seller, or any alteration or repair by others in such manner as in Seller's judgement affects the product materially and adversely shall void this warranty.

No employee or representative of Seller other than an Officer of the Company is authorized to change this warranty in any way or grant other warranty. Any such change by an Officer of the Company must be in writing.

The foregoing is Seller's only obligation and buyer's only remedy for breach of warranty, and except for gross negligence, willful misconduct and remedies permitted under the General Terms of Sale in the sections on **CONTRACT PERFORMANCE, INSPECTION AND ACCEPTANCE**, and the **PATENTS CLAUSE** hereof, the forgoing is **BUYER'S ONLY REMEDY HEREUNDER BY WAY OF BREACH OF CONTRACT TORT OR OTHERWISE, WITHOUT REGARD TO WORK WHETHER ANY DEFECT WAS DISCOVERED OR LATENT AT THE TIME OF DELIVERY OF THE PRODUCT OR WORK**. In no event shall Buyer be entitled to incidental or consequential damages. Any action for breach of this agreement must commerce within one year after the cause of action has occurred.

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