

Installation and Operation Manual

P40 Piston Compressor



Congratulations
on your new Paragon purchase

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Safety Notice

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.

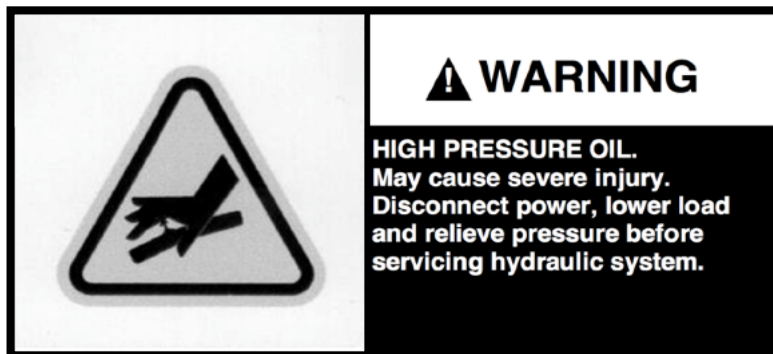
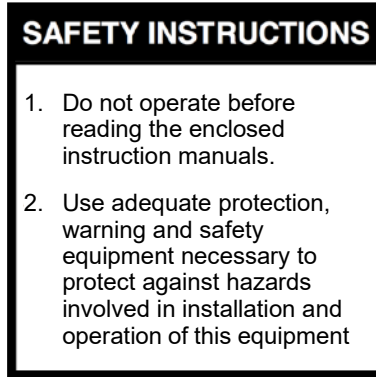
DO NOT....

- 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 the original equipment manufacturers manuals before installation or operation of any equipment installed in the Stainless Vane Pump
- 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

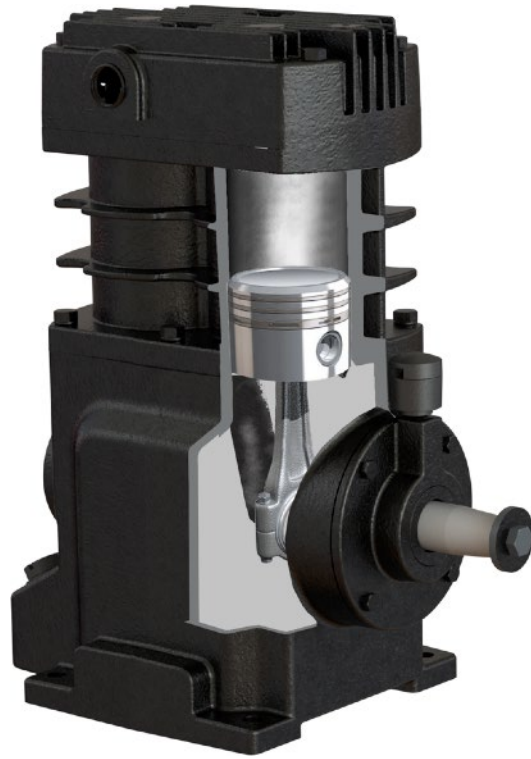


NOTICE

- 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.

Performance

P40 Compressor



Performance Data

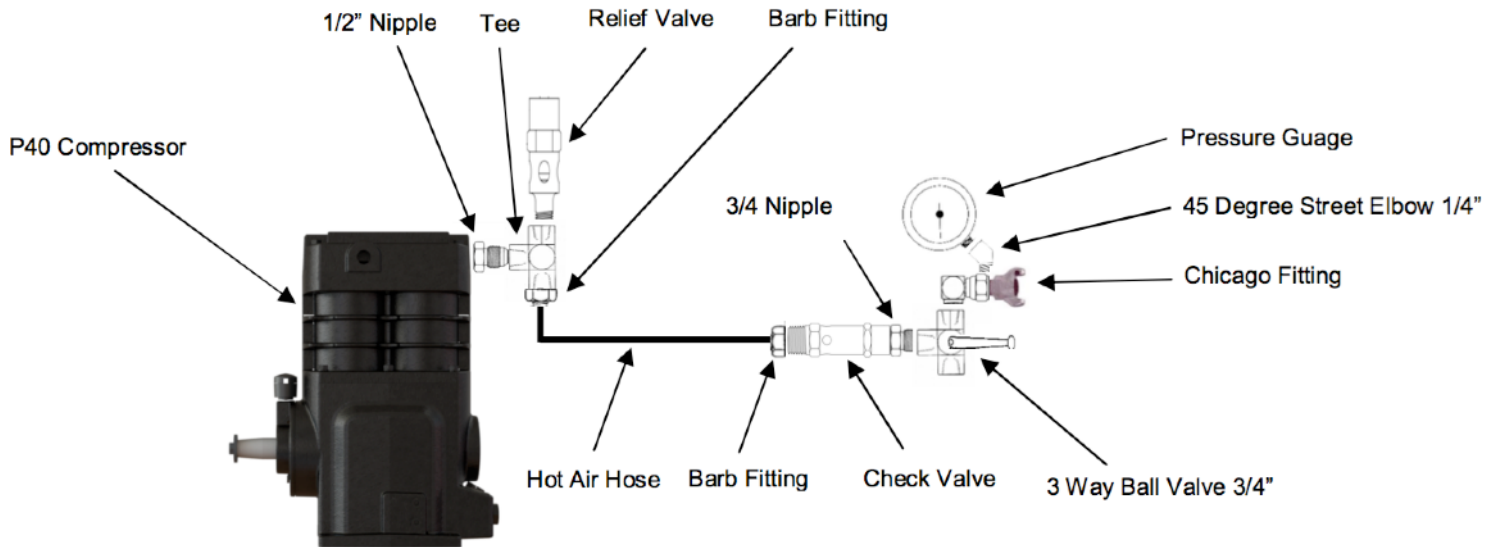
Recommended Performance				
PSI	Rated Speed (RPM)	Potential Liquid Flow (GPM)	HP	CFM
25	1350RPM	105	4.9	35
36	1350RPM	67	4.8	29

Note: It is recommended that the P40 be operated at 1350 rpm.

Maximum Operating Limits

Speed	25 PSI			30 PSI			36 PSI			40 PSI (MAX)		
	CFM	HP	Potential Liquid Flow (GPM)	CFM	HP	Potential Liquid Flow (GPM)	CFM	HP	Potential Liquid Flow (GPM)	CFM	HP	Potential Liquid Flow (GPM)
500 RPM	11.9	1.4	38	11.7	1.5	32	11.5	1.6	25	11.3	1.6	18
800 RPM	18.6	2.6	61	18.3	2.6	55	18.0	2.7	40	17.8	2.8	33
1000 RPM	22.9	3.3	79	22.6	3.4	73	22.2	3.5	50	22.0	3.6	43
1200 RPM	27.4	4.1	95	27.0	4.2	89	26.6	4.3	59	26.3	4.4	52
1350 RPM	30.6	4.6	105	30.3	4.7	99	29.8	4.9	67	29.5	5.0	60
1500 RPM	34.8	5.2	125	33.5	5.3	119	33.3	5.5	75	32.7	5.6	68

Typical Circuit



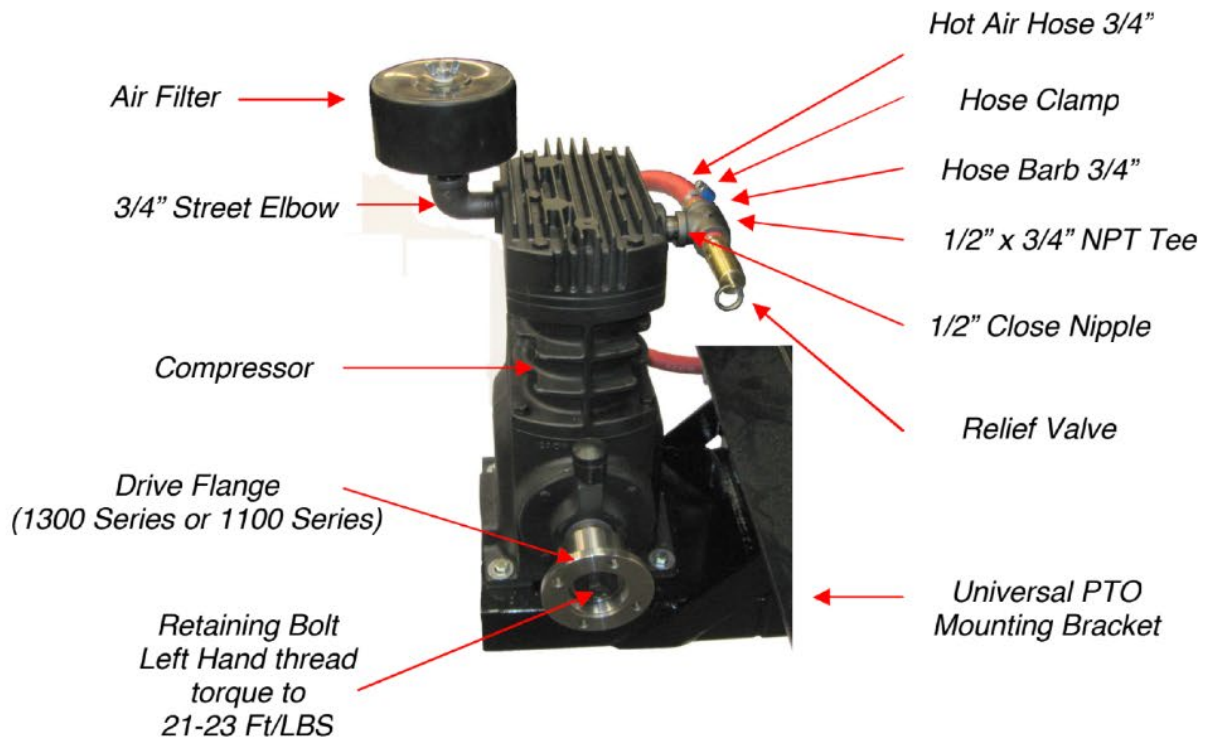
P40 Compressor

Relief Valve: Sized to protect compressor. A suitable trailer relief should be provided to protect the trailer.

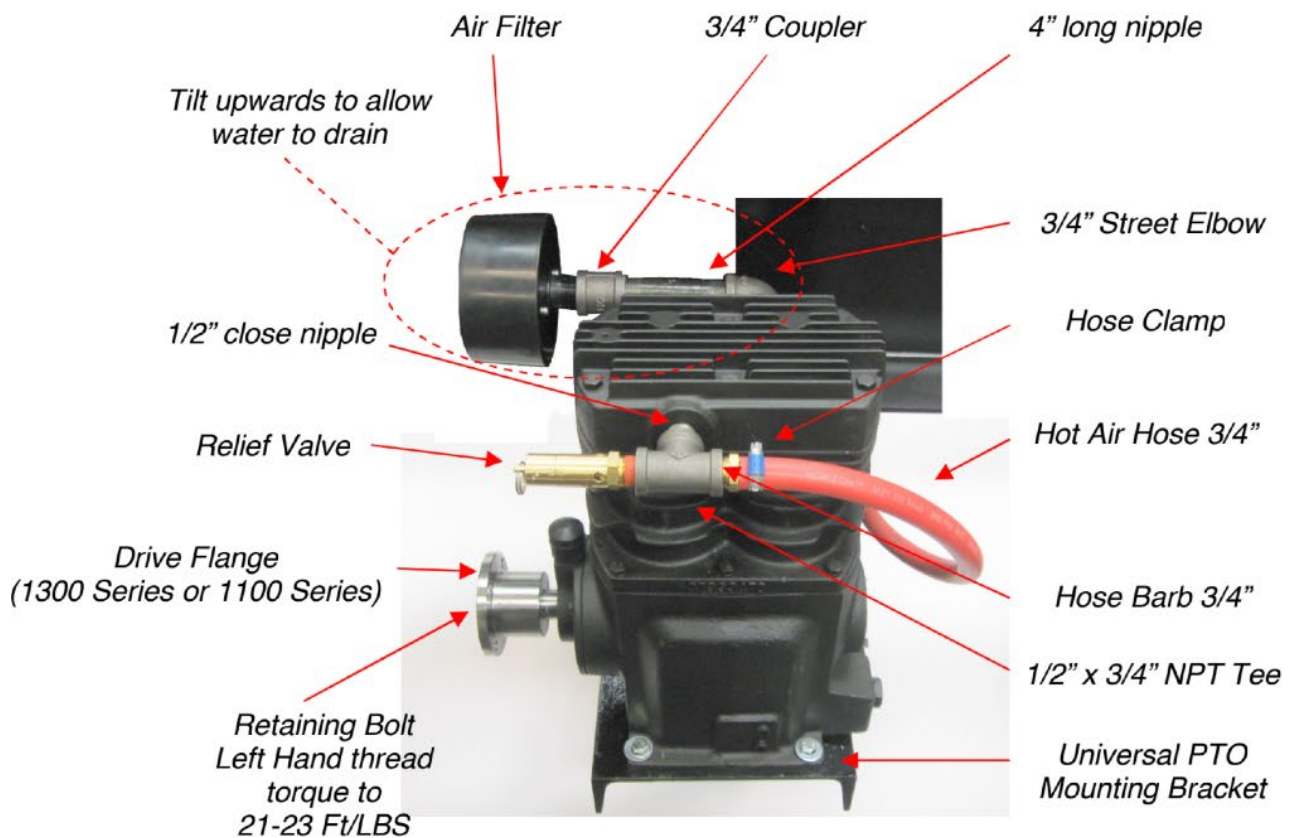
Check Valve: Prevents backflow into the compressor.

3 Way Ball Valve: Used to either supply air to the trailer or vent compressor delivery air. Never install a two way ball valve in the line as this will dead head the compressor causing damage.

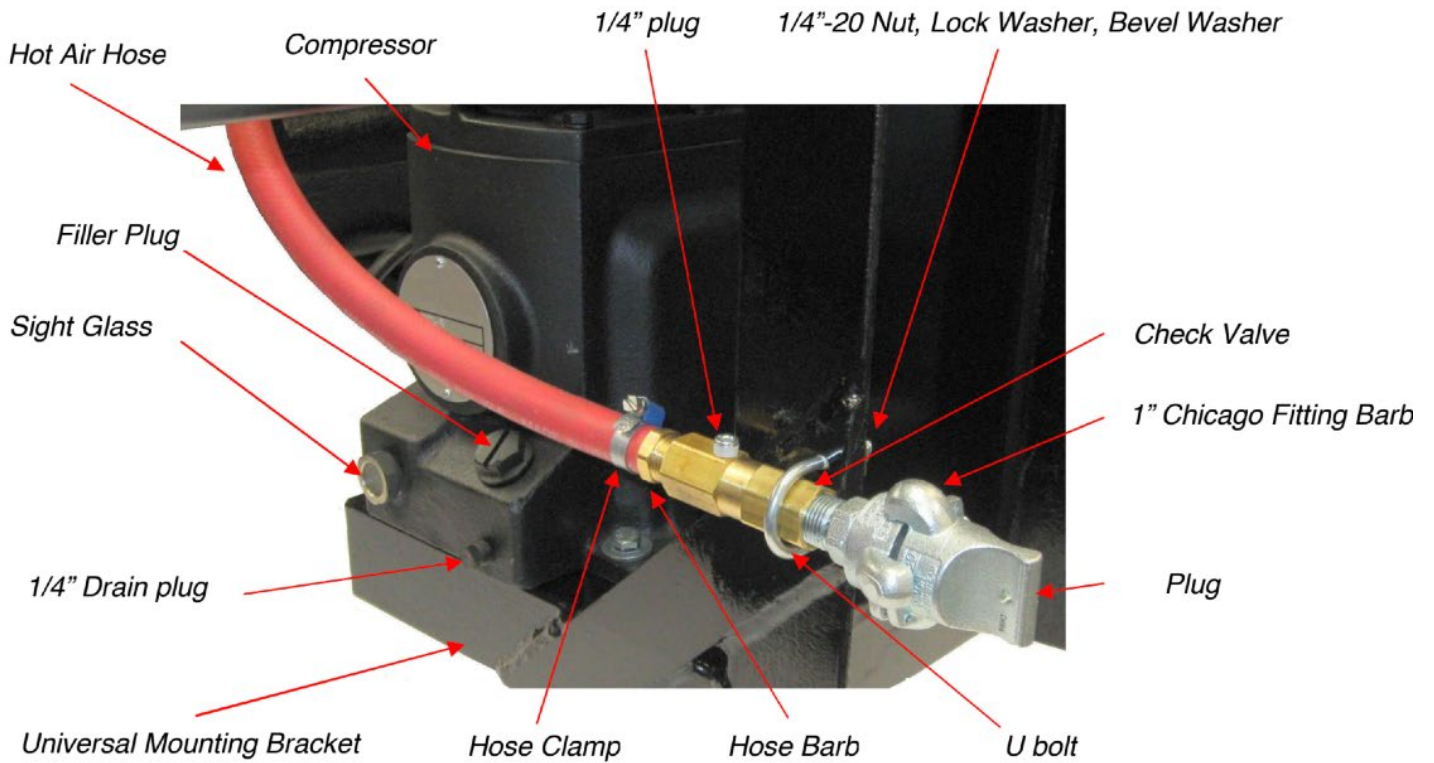
Mounting Configuration - Drivers Side - PTO Drive



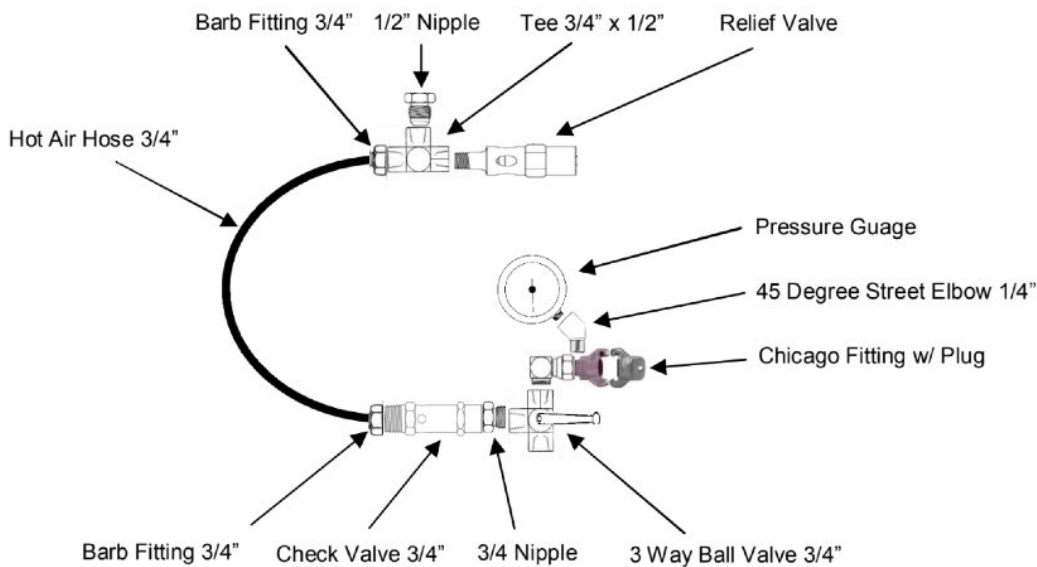
Mounting Configuration Passenger Side - PTO Drive



Delivery Pipework (no gauge)



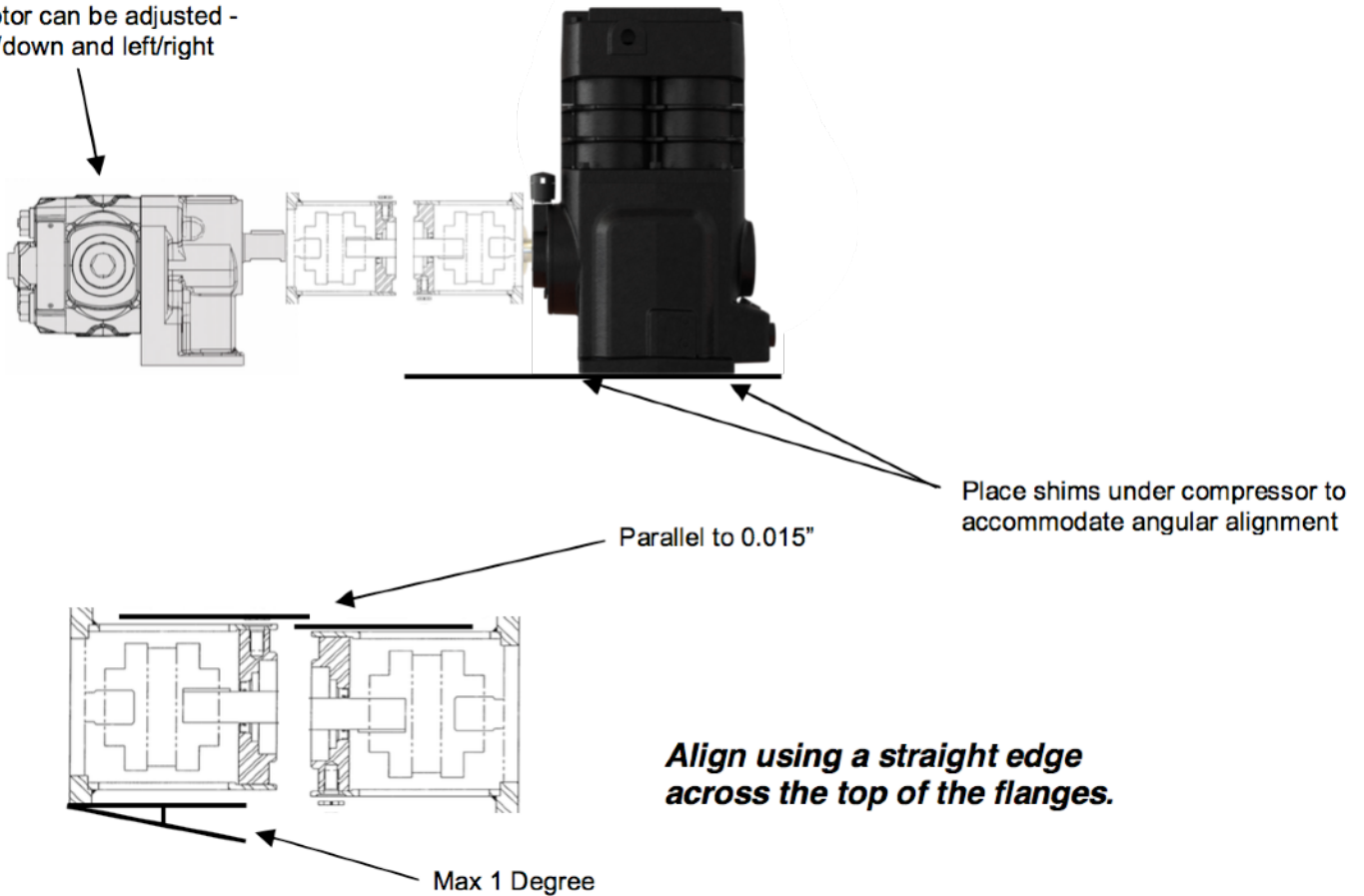
Delivery Pipework with Gauge and 3 Way Ball Valve



Initial Installation

Hydraulic Motor Alignment

Motor can be adjusted -
up/down and left/right



Oil Fill Procedure

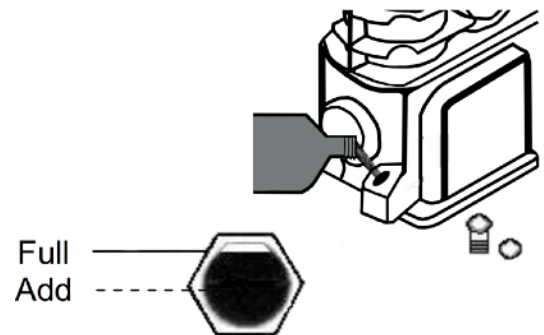
▲ CAUTION

Do not operate without lubricant or with inadequate lubricant.

1. Unscrew and remove the oil fill plug.
2. Slowly fill the crankcase until the lubricant reaches the top thread of the oil fill opening and the top of the sight glass.
3. Replace the oil fill plug **HAND TIGHT ONLY**
Note : Crankcase Capacity is 1 liter (34 fl ounces)

Recommended Lubricants

- Paragon 1 Liter synthetic lubricant - Part# 409-003



If you use a petroleum-based compressor lubricant at start-up and decide to convert to Ingersoll Rand synthetic compressor lubricant, the compressor valves must be decarbonized and the crankcase flushed before conversion.

Initial Installation/ Continued

Mounting

To ensure correct mounting follow the recommendations below :

Power Take Off

- Horsepower and torque should be adequate for compressor rpm and pressure.
- Select a ratio that will provide desired compressor speed and engine rpm.
- Choose either 6 or 8-bolt side of transmission to provide adequate space for installation.

Constant Engine Speed

- To protect compressor against over speed and to provide an efficient offload the selected engine speed must remain constant through the compressor discharge cycle.

Relief Valve

- If not using the Paragon mounting kit, size the relief valve for correct CFM and pressure.
- Install at the compressor prior to the check valve.

Check Valve

- Must be suitable for reciprocating compressors and sized for maximum CFM of machine (see chart).
- The Paragon check valve has a 1/4" port that can be used for a pressure gauge. Ensure the plug is tight if not using a pressure gauge.

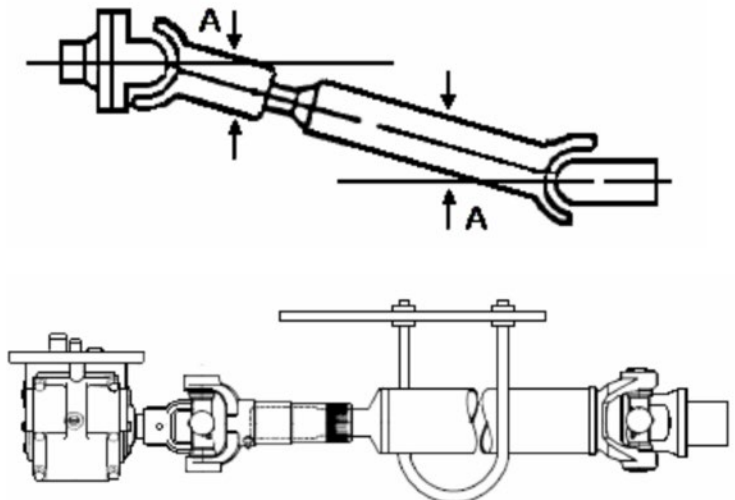
Driveshaft

- The P40 is supplied with a 1310 series or 1100 series drive flange.
- The compressor drive flange should be tapped lightly onto the shaft and then secured using the bolt supplied.
- The drive flange securing bolt is a LEFT HAND THREAD and should be torqued to 21-23 ft/ lbs.

- The Maximum compound driveline angle is 11 degrees.

- The compressor driveshaft and the PTO driveshaft should be parallel within 2 degrees (A)

- The drive shaft should have a "U" bolt hanger installed for safety.



Maintenance & Overall Dimensions

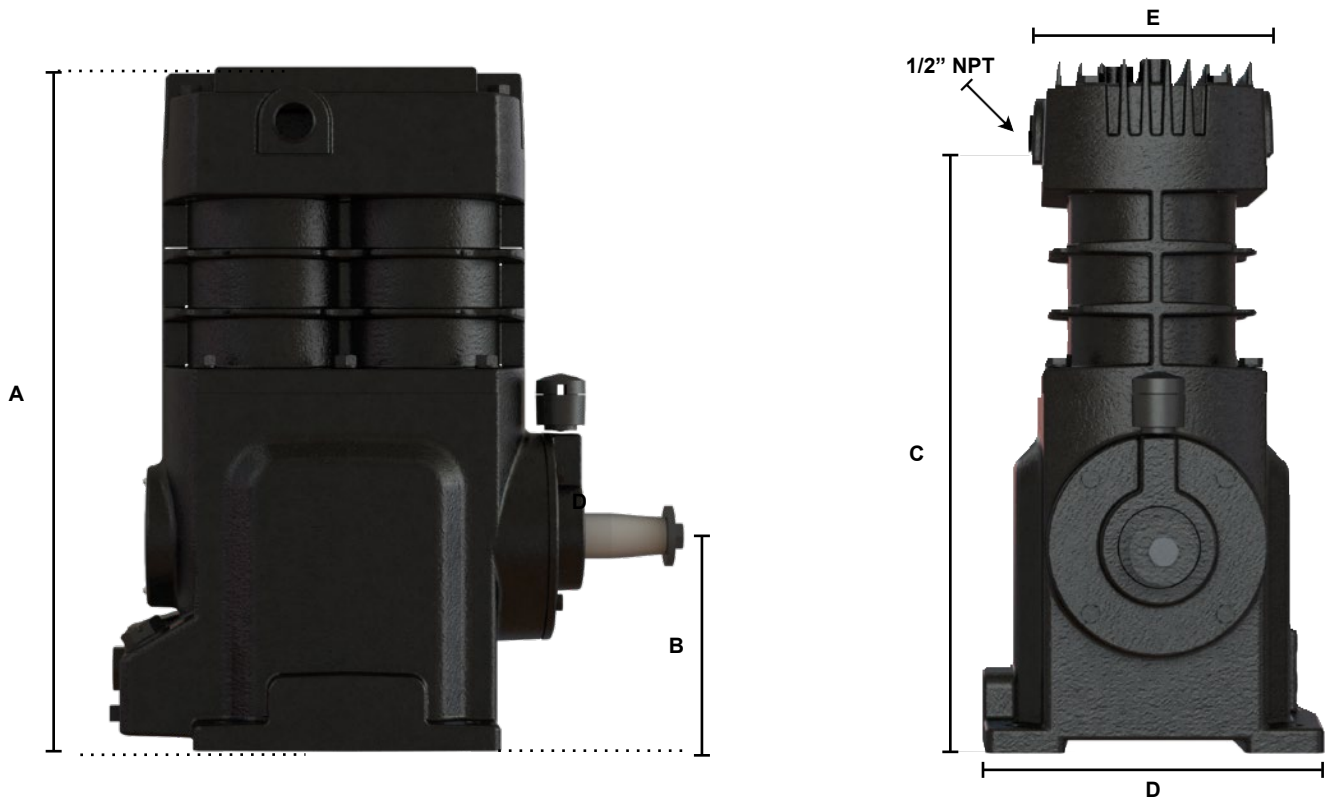
Mounting

Note :

- If the unit has a high duty cycle an oil analysis program is recommended

Daily	Check oil level before operating the compressor. Correct level is to the top of the sight glass when not operating
Weekly	Visually inspect the system each week. Check hoses, fittings and mounting.
6 Months	Change oil and air filter element every 6 months.
18 Months	Replace relief valve

Overall Dimensions



Model		A	B	C	D	E	Port Size	Approx. Weight (No Flanges, Steel Shaft or Filter)
P40 Compressor	in.	17.46	4.93	14.96	8.22	6.60	3/4"	76 Lbs (Dry Weight)
	mm	443.49	125.23	379.98	208.79	167.64	19.05	34.47 Kg (Dry Weight)

Parts List

P40 Compressor

Item	Part Number	Qty	Description
2	600-000	1	P40 Compressor
2	625-004	1	Air Filer (Complete)
3	575-001	1	Air Filter Element
5	409-003	1	Paragon Petroleum Based Oil (quart)
5	587-006	ft	Hose - Hot Air 3/4" (per foot)
6	587-004	ft	Hose - Hot Air 1/2" (per foot)
7	299-009	2	U Bolt 1/4"
8	92354-0253	2	1/4" lock washers
9	293-000	2	1/4" Bevel washers
10	85228	2	1/4" Nut
11	327-004	1	Hyd Hose Barb 1/2" Straight -8 x -8 NPTM - Brass
12	328-003	1	Hyd Hose Barb 3/4" 90 degree elbow -12 x -12 NPTM
13	612-014	1	Check Valve 3/4" NPT
14	534-000	1	Chicago fitting 1/2" MNPT (no gauge port)
15	534-001	1	Chicago Fitting 3/4" MNPT (gauge port)
16	534-002	1	Dust plug
17	532-000	1	Tee-1/2"x1/2"x1/2"
18	532-002	1	Tee-1/2"x1/2"x3/4"
19	535-020	1	Close nipple 1/2"
20	535-021	1	Nipple 3/4" x 4" long (passenger mount)
21	530-005	1	Coupler 3/4"
22	533-026	2	Elbow - 3/4" street galvanized pipe
23	610-007	1	Relief Valve
24	85237	2	Clamp, Hose 1/2" Heavy Duty
25	508-002	1	Mounting Bracket - PTO Drive
26	228-062	4	Setscrew 7/16" x 1-3/4"
27	294-012	4	Lock washer 7/16"
28	284-007	4	Nylock Nut 7/16"
29	562-022	1	Hydraulic Coupler, L110 Taper - Compressor end
30	562-024	1	Hydraulic Coupler Spider L110 Buna
31	562-021	1	Hydraulic Coupler Flange L110 7/8" w/ 1/4"key
32	535-004	1	Nipple - 3/4" NPT close black pipe
33	825-400	1	Elbow 1/4" fnpt x 1/4" mnpt 45 deg - street
34	816-004	1	Ball Valve - 3/4" FNPT Brass 3 way
35	85233	1	Clamp, Hose 3/4" Heavy Duty
36	508-033	1	Hydraulic Mounting Bracket (90 deg)

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 manufacture, 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 varied conditions of installation and operation, all performance 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 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 equipment shall void 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.
Repair	12 months from date of shipment, or remaining warranty period, whichever occurs first.

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 commence within one year after the cause of action has occurred.

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