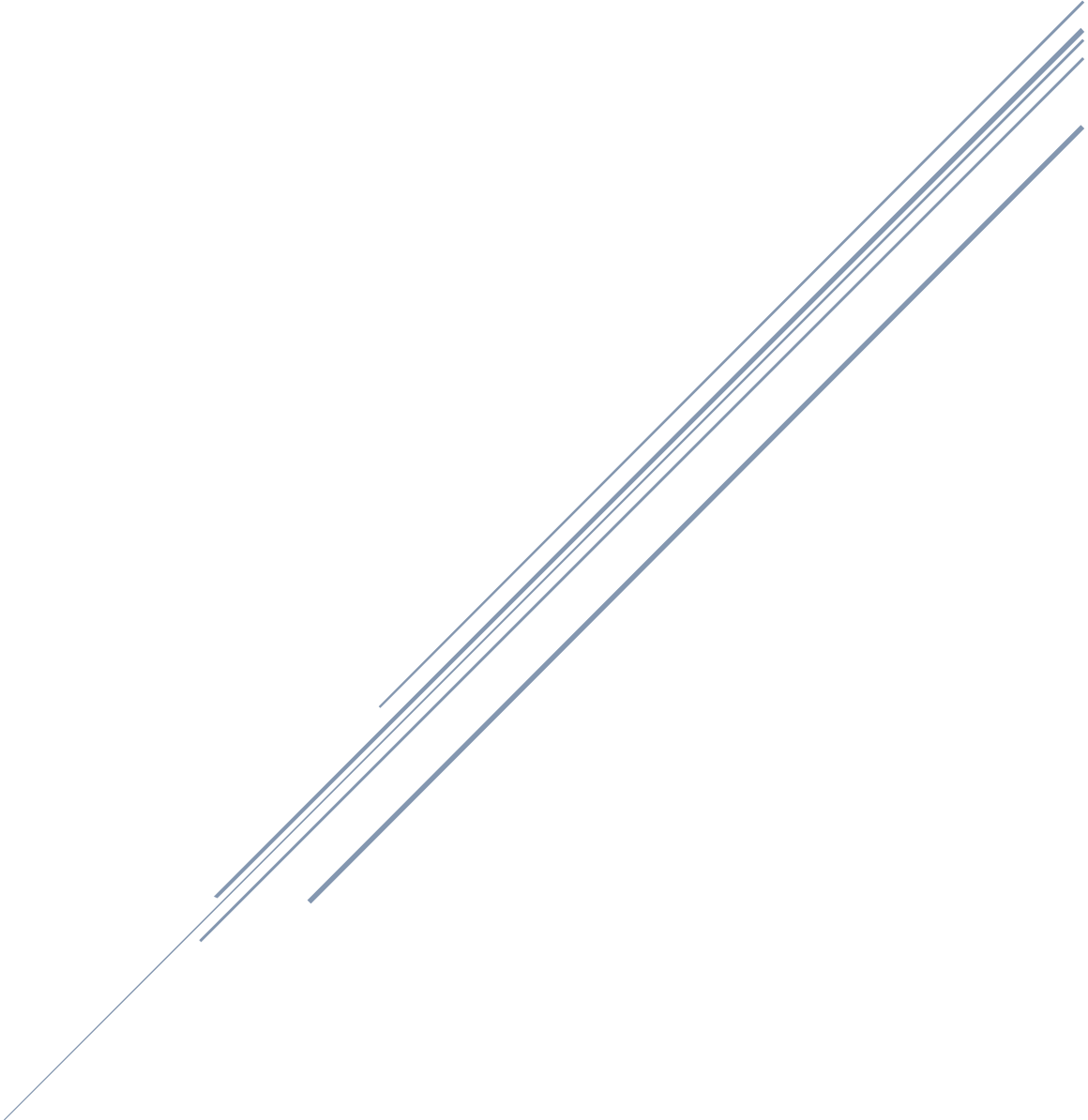
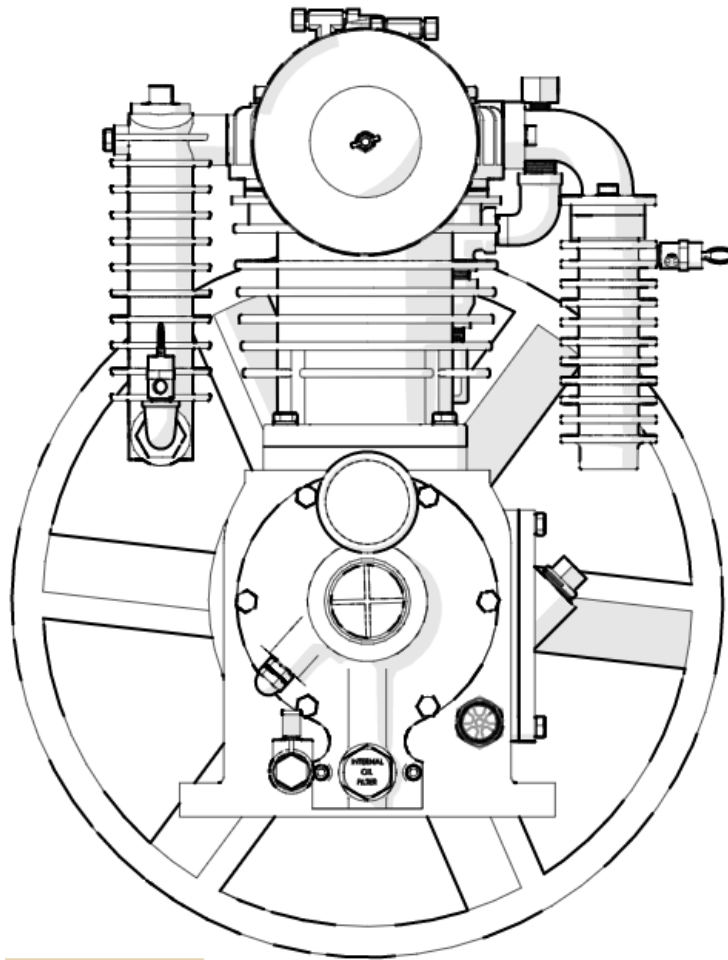


5HP INLINE PUMP MANUAL

REV030921





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SAFTEY INFORMATION

This manual contains very important information to know and understand. This is to provide for SAFTEY and to PREVENT EQUIPMENT PROBLEMS. To help understand this information, observe the following:

- DANGER:** Danger indicates and imminently hazardous situation which, if not avoided, will result in death or serious injury.
- WARNING:** Warning indicates a potentially hazardous situation which if not avoided, could result in death or serious injury.
- CAUTION:** Caution indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
- NOTICE:** Notice indicates important information, that if not followed, may cause damage to equipment.

CALIFORNIA PROPOSITION 65

- WARNING:** This product or its power cord may contain chemicals known to the state of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.
1. Allow only trained, authorized persons who have read and understood these operating instructions to use this equipment. Failure to follow the instructions, procedures and safety precautions in this manual can result in accidents and injuries.
 2. NEVER start or operate the pump under unsafe conditions. Tag the compressor, disconnect, and lock out all power to it to prevent accidental start-up until the condition is corrected.
 3. Install, use, and operate the pump only in full compliance with all pertinent OSHA regulations and all applicable Federal, State & Local codes, standards, and regulations.
 4. Keep a first aid kit in a convenient place. Seek medical assistance promptly in case of injury. Avoid infection by caring for any small cuts and burns promptly.

BREATHABLE AIR

1. **NEVER** use air from this pump for breathable air except in full compliance with OSHA Standards 29 CFR 1910 and any other Federal, State or Local codes or regulations.
2. **DO NOT** use airline anti-icer systems in air lines supplying respirators or other equipment used to produce breathable air. **DO NOT** discharge air from these systems in unventilated or other confined areas.



DANGER: Death or serious injury can result from inhaling compressed air without using proper safety equipment. See OSHA standards on safety.

3. **DO NOT** use airline anti-icer systems in airlines supplying respirators or other equipment used to produce breathable air. **DO NOT** discharge air from these systems in unventilated or confined areas.

Personal Protective Equipment

Be sure all operators and others around the pump and its controls comply with all applicable OSHA, Federal, State and Local regulations, codes, and standards relating to personal protective equipment. This includes respiratory protective equipment, protection for the extremities, protective clothing, protective shields and barriers, electrical protective equipment, and personal hearing protective equipment.



Read all manuals and information supplied for this unit carefully. Be thoroughly familiar with all inspection and operation guidelines. Only persons that have read and understand this manual should operate this pump.

Warning: Be sure to install belt guard after pump installation. Failure to do so can lead to serious injury.

Area

1. Install compressor pump in a clean, dry, and well-lit area. Be sure installation area can maintain a temperature range between 35 degrees Fahrenheit (1.6 degrees Celsius) and 110 degrees Fahrenheit (43.3 degrees Celsius).
2. Insulate cold water or other low temperature pipes that pass overhead to avoid condensation dripping on pump which could cause rust or moisture build up.
3. If acid is used in operating environment or air is dust laden, you **MUST** pipe intake air from outside. Increase pipe by one size for every 20 feet of run length. Be sure to install a protective hood around intake filter(s).
4. Allow sufficient space around pump for maintenance access. Mount with pulley towards wall and leave a minimum of 15 inches of clearance.
5. Ensure location where pump is mounted is level. Uneven locations can damage the pump and void pump warranty.



DANGER: DO NOT install pump in boiler room, paint spray room, or area where sandblasting occurs. Make sure inlet air is away from exhaust fumes or other toxic, noxious, or corrosive fumes or substances.

Piping

1. Install appropriate flow-limiting valves as necessary according to pipe size and run length. This will reduce pressure in case of hose failure per OSHA Standard 29 CFR 1926.302(b)(7).
2. Flow-limiting valves are listed by pipe size and rated CFM. Select appropriate valves accordingly in accordance with manufacturers recommendations.
3. Air systems should be checked daily for leaks. This helps to prevent unnecessary load/wear on the pump.
4. Ensure any tube, pipe, fitting, or hose connected to the pump can withstand operating temperatures and retain pressure.



WARNING: Never use plastic (PVC) pipe for compressed air. Serious injury or death could result. Piping MUST have a pressure rating of 200 PSI or greater.

5. Never use reducers in discharge piping. Keep all piping and fittings the same size I the piping system.
6. Minimum pipe size for compressed air lines: (Pipe sizes are shown in inches)

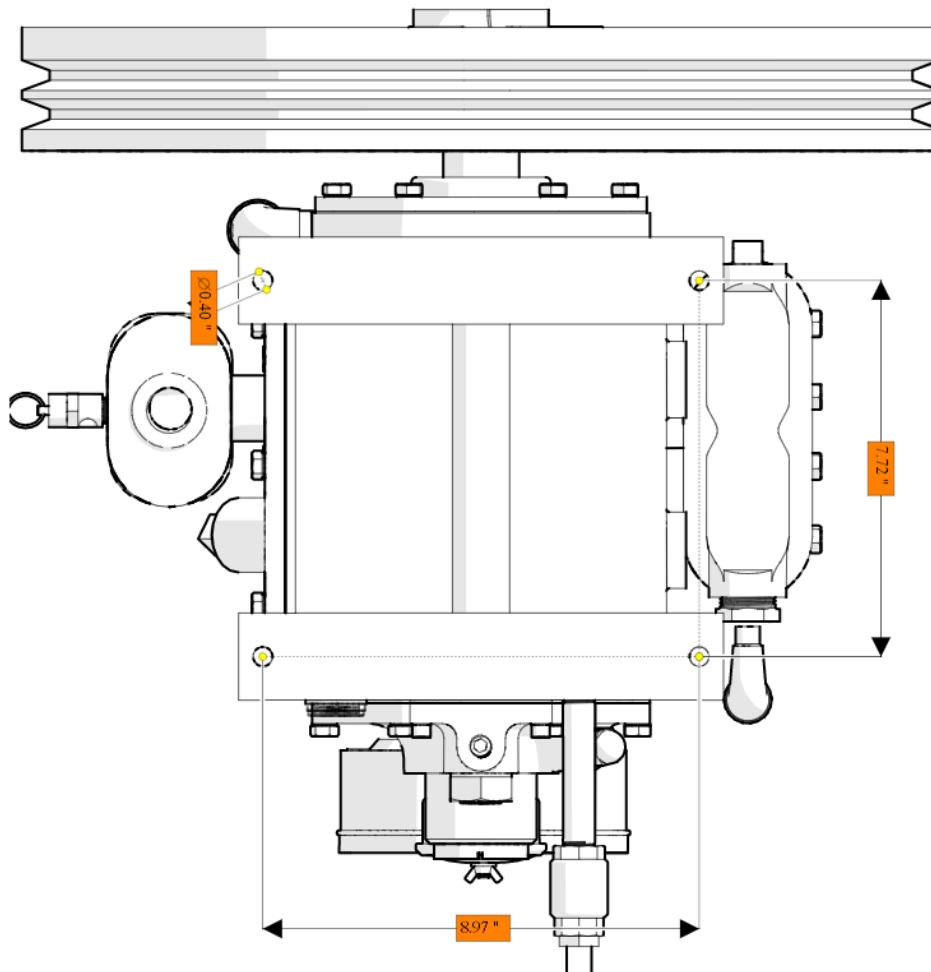
CFM	25ft	50ft	100ft	250ft
20	¾	¾	¾	1
40	¾	¾	1	1
60	¾	1	1	1
100	1	1	1	1 – ¼
125	1 – ¼	1 25	1 – ¼	1 – ½



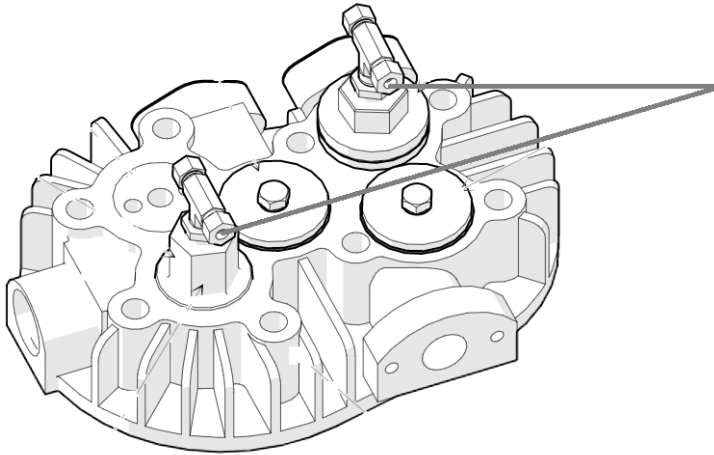
DANGER: NEVER install a shut off valve such as a glove or gate valve between the pump discharge and the air tank unless an ASME rated safety valve rated for the correct pressure is installed in the line between the valve and the compressor pump.

Installation

1. Mount pump to flat, level surface. Out of level or uneven surfaces can lead to pump damage and will void your warranty. This pump has the following bolt pattern:



2. Connect main feed line to check valve. Pump **MUST** have a check valve installed inline to tank. This helps to prevent the pump from starting underload. This also prevents air loss and premature pump wear. Minimum line ID size for main line is 5/8". This can be flexible or solid. **DO NOT** install the unit with a shut off valve anywhere in the main feed line. This could lead to serious injury or death. Output threads are 3/4" FNPT.
3. Pressure lubed pumps **DO NOT** have built in unloaders and require a separate relief valve. This will relieve head pressure once the pump stops and provide no-load restarting.
4. Cylinder heads are equipped with continuous run lines. If the lines are not to be used, please cap input side. Lines on the head are for input from a manufacturer approved pilot valve only. **DO NOT** run lines from relief valve or unregulated lines from the tank to this system.



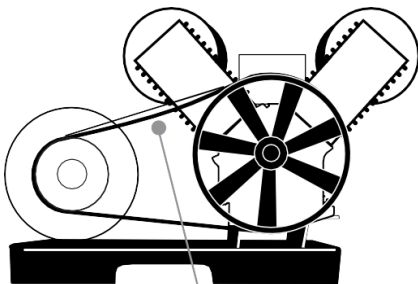
Input lines for continuous run set up only. **DO NOT** run lines from other sources to these locations. Use only a manufacturer approved pilot valve for continuous run use.

5. Use proper pulley for motor size and RPM. **DO NOT** exceed pump maximum recommended RPM. Exceeding pump RPM will cause premature wear/damage to the pump and will void pump warranty.
6. Pulley calculation worksheet:

Pump	Flywheel OD	Pump RPM min	Pump RPM max	Motor RPM	Suggested Size*
APP210543TP	16.75	450	800	Per Application	Flywheel x Pump RPM / Motor RPM = Pulley OD

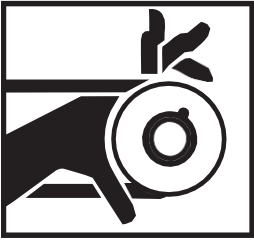
***EXAMPLE: 16.75" x 800 (pump RPM) / 1750 (example) motor RPM = suggested pulley size of 7.7"**

7. This model of pump requires the use of two, 'B' groove belts.
8. Rotation of the pump should be clockwise when facing the pressure gauge, or counterclockwise from the flywheel side.
9. Use care when aligning pump flywheel and motor pulley. Ensure center ridge on pump and pulley are in line. Any direction out of line will cause premature belt wear.
10. When tightening belts check for belt deflection. Deflection should be no more than 1/2 inch.



1/2" Deflection

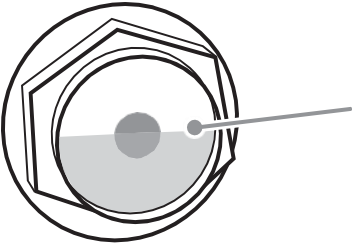
Proper belt tension is determined by pressing midway between the motor pulley and the pump flywheel.



WARNING: Always make sure main power is off prior to touching belts or other moving parts of the pump.

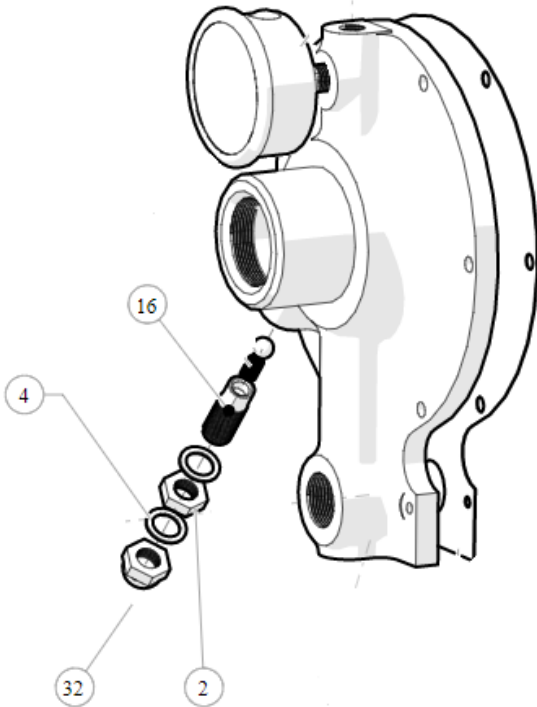
Operation

1. The unit is shipped with pump break-in oil and should be ready to operate. Be sure to check for proper oil level before running. Break in oil should be change after 100 Hours of operation (active pumping time). See maintenance section for more information on oil changes and frequency.



Oil level should be to the center of the red circle in the sight glass. Oil level WILL drop once the unit turns on and oil begins to circulate.

2. Oil pressure on startup will vary due to ambient temperatures but should not exceed 100 PSI. Once the unit is allowed to run a few cycles and come to optimal operating temperature, oil pressure should stabilize at 20-35 PSI. If the oil pressure remains high or drops too low, it can be adjusted as follows:



When facing the oil pressure gauge. Look to the 7 o'clock position. You will see an acorn nut (#32). Remove the acorn nut and be careful to not lose the rubber seal (#4) sitting behind it. Loosen but do not remove the set nut (#2). You will see a flat head screwdriver slot in the end of the adjustor (#16). To increase pressure, turn the adjustor clockwise; to decrease pressure turn then adjustor counterclockwise. Turn no more than $\frac{1}{2}$ turn at a time. Then allow the unit to cycle to measure the adjustment.

TAKE CARE when lowering pressure not to back the adjustor out completely.

Once oil pressure is set, hold the adjustor (#16) in position and retighten set nut (#2). Replace rubber seal (#4) and reinstall acorn nut (#32).

FAILURE to reinstall acorn nut, seals, or set nuts can result in oil leaks.

3. This pump is designed to operate with 1.85 Pints, or roughly 1 quart of oil.
4. It is strongly advised to use only Airbase Industries piston compressor oil. Check with your warranty/extended warranty guidelines to verify oil selection and use. Oil used in the pump must fall under the following criteria: synthetic, SAE grade 30, non-detergent, piston compressor oil. Failure to use the correct oil will void your warranty.

Maintenance

1. Make sure repairs and service are done in a clean, dry, well-lit, and well-ventilated area.
2. When cleaning/blowing off, **DO NOT** exceed 30 PSI (2.1 bar) of pressure. **NEVER** use solvents for cleaning purposes. Also use effective chip guarding and personal protective equipment per OSHA Standard 29 CFR 190.242(b).



WARNING: Disconnect, tag, and lock out power source the release all pressure from the system prior to install, service, or relocation.

3. Relieve all internal pressure prior to opening any line, fitting, hose, valve, drain plug, connection or any other such component before refilling airline anti-icer systems with antifreeze compound.

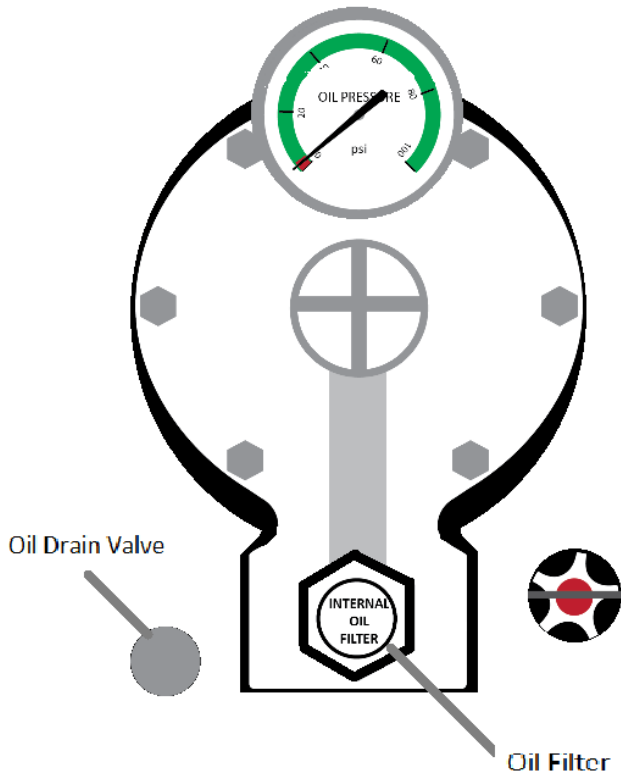


WARNING: Disconnect, tag, and lock out power source the release all pressure from the system prior to install, service, or relocation.

4. Maintenance Schedule.

Item	Frequency	Comment
Cleanliness	Daily	Keep the pump and the surrounding area clean. Wipe off oil, spills, and dirt/dust.
Oil Level	Daily	Check oil level while the power is OFF . If oil is low add to fill point. If level is high, drain off oil.
Belt	Monthly	Verify belt tension. Replace if excessively loose or damaged.
Environment	Quarterly (four times per year)	Air temperature should not exceed recommended levels. Humidity where pump is stored should not exceed 70%. Consider relocating pump if these conditions cannot be met.
Entire Pump	Yearly	Lock unit out and detail clean.
Air Filter(s)	See Comments	Air filters should be changed after the first 100-hour break in period and every 90 days after that. The frequency will increase in environments with air contaminants such as dust, paint, dirt, etc.
Oil	See Comments	Oil should be changed after the first 100-hour break in period and every 90 days after that. This will increase in frequency depending on actual pump use and hours unit is running.
Oil Filter	See Comments	The oil filter on the unit should be pulled and cleaned with every oil change.

5. How to change pump oil:



To drain oil:

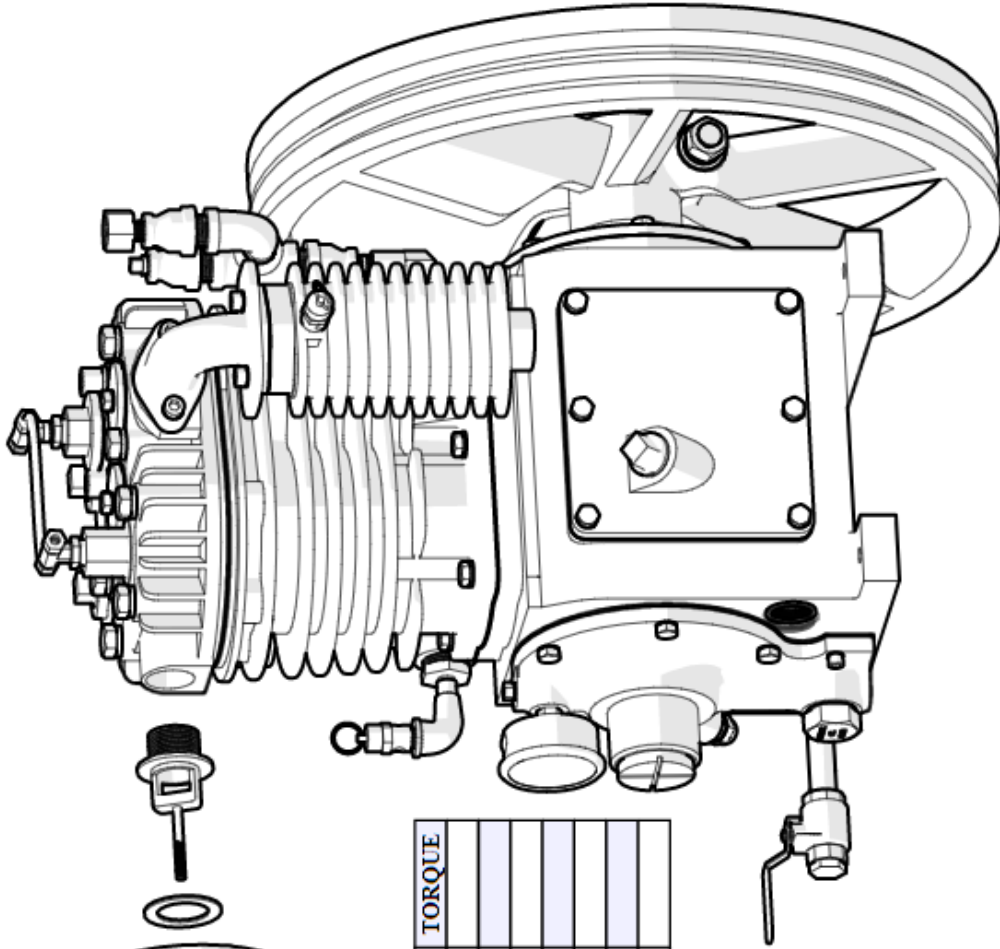
1. Remove the oil fill cap.
2. Open Oil drain valve and allow oil to drain naturally from pump.
3. Remove oil filter and clean with a mild solvent.
4. When reinstalling oil filter ensure gasket alignment to prevent oil leaks.

6. Oil fill is located on the 'Y' shaped breather stem coming from the crank case. The fill is the center $\frac{3}{4}$ " plug located at the intersection of the 'Y'. Pour oil slowly to avoid back fill into the breather and to allow oil a chance to settle in the crank.

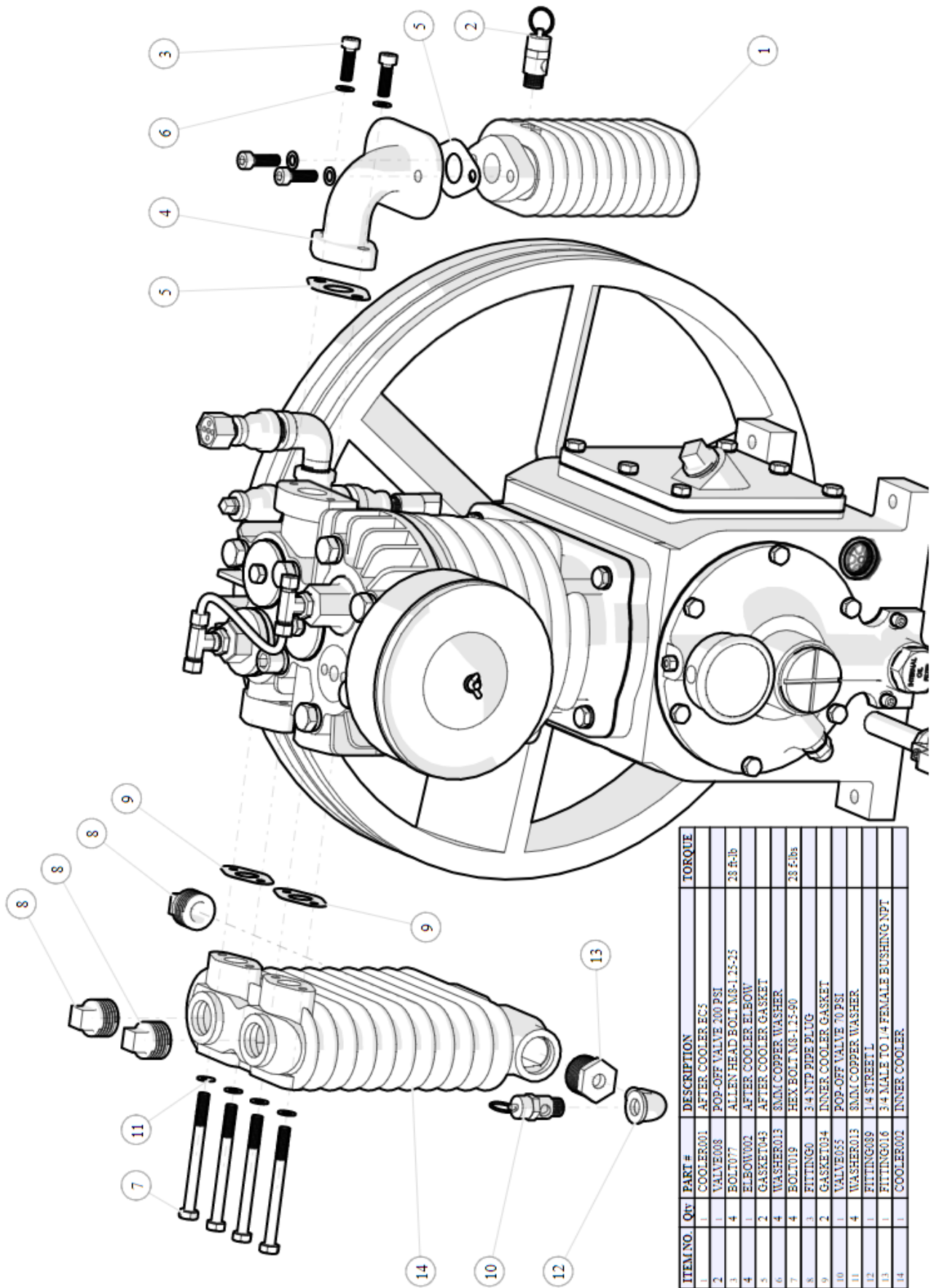
Oil Disposal

Compressor oil is not trash and **MUST NOT** be disposed of in regular trash or discarded into the environment. You **MUST** dispose of waste oil from your unit per all applicable federal, state, and/or local codes. Failure to do so may damage the environment and subject yourself and/or your business to fines and legal issues.

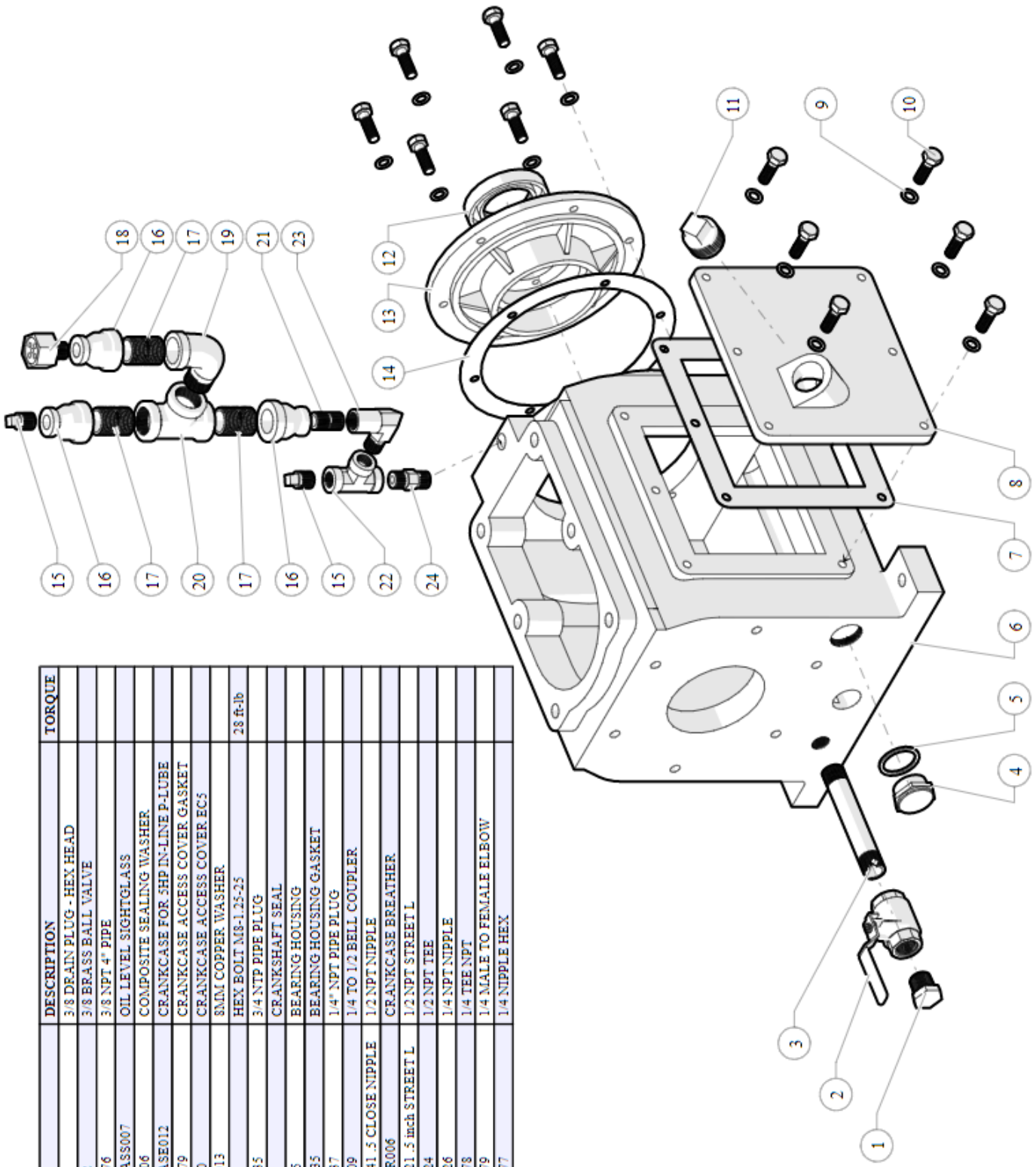
Pump Explosion/Parts List



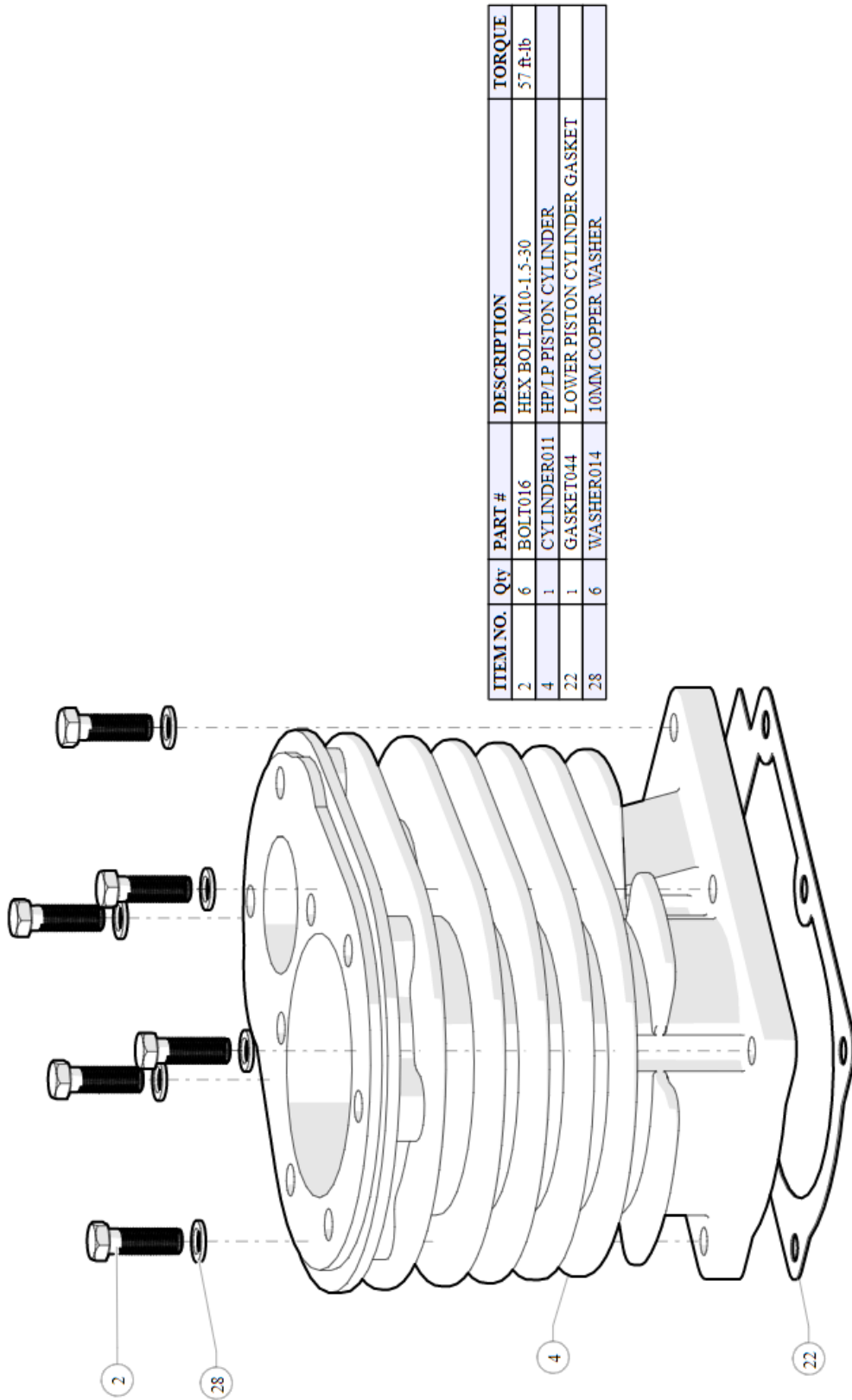
ITEM NO.	Qty	PART #	DESCRIPTION	TORQUE
1	1	NUTS015	M6-1.0 WING NUT	
2	1	WASHER016	6MM FLAT WASHER	
3	1	COVER009	FILTER HOUSING COVER	
4	1	FILTER057	AIR FILTER	
5	1	HOUSING027	FILTER HOUSING	
6	1	GASKET086	RETAINER SEAL	
7	1	RETAINER007	FILTER HOUSING RETAINER	



ITEM NO.	QTY	PART #	DESCRIPTION	TORQUE
1	1	COOLER001	AFTER COOLER ECS	
2	1	VALVE008	POP-OFF VALVE 100 PSI	
3	4	BOLT007	ALI EN HEAD BOLT M8-1.25-25	28 Ft-lb
4	1	ELBOW002	AFTER COOLER ELBOW	
5	2	GASKET043	AFTER COOLER GASKET	
6	4	WASHER013	3MM COPPER WASHER	28 Ft-lbs
7	4	BOLT019	HEX BOLT M8-1.25-90	28 Ft-lbs
8	3	FITING0	3/4 NTP PIPE PLUG	
9	2	GASKET034	INNER COOLER GASKET	
10	1	VALVE055	POP-OFF VALVE 70 PSI	
11	4	WASHER013	3MM COPPER WASHER	
12	1	FITING059	1/4 STREET L	
13	1	FITING016	3/4 MALE TO 1/4 FEMALE BUSHING NPT	
14	1	COOLER002	INNER COOLER	

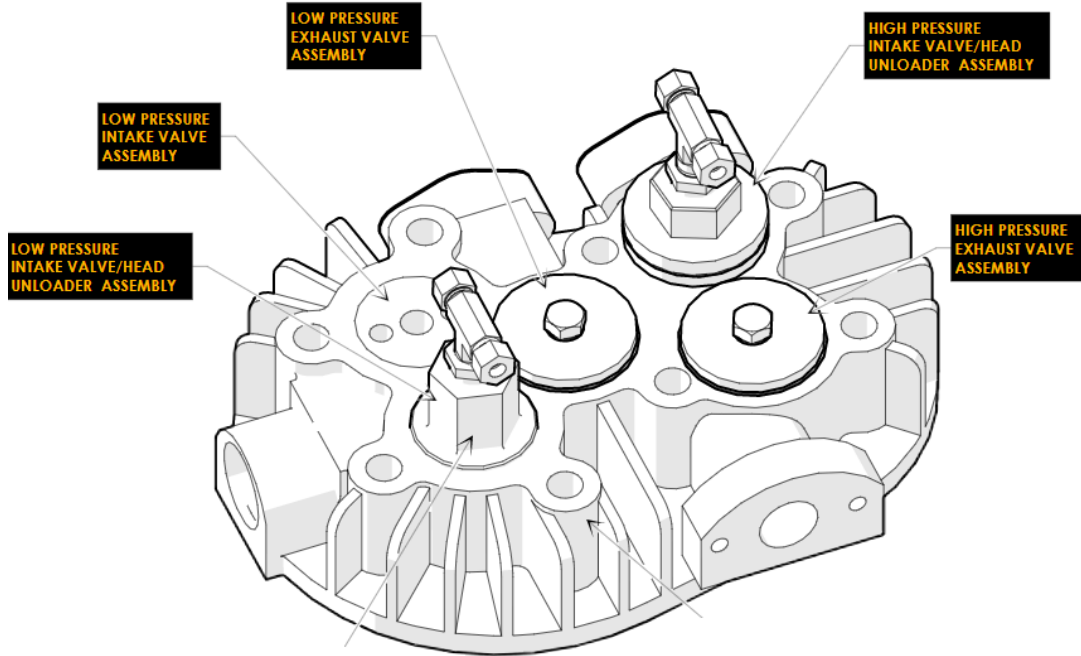


ITEM NO.	Qty	PART #	DESCRIPTION	TORQUE
1	1	PLUG010	3/8 DRAIN PLUG - HEX HEAD	
2	1	VALVE002	3/8 BRASS BALL VALVE	
3	1	FITTING076	3/8 NPT 4" PIPE	
4	1	SIGHTGLASS007	OIL LEVEL SIGHTGLASS	
5	1	GASKET106	COMPOSITE SEALING WASHER	
6	1	CRANKCASE012	CRANKCASE FOR 5HP IN-LINE P-LUBE	
7	1	GASKET079	CRANKCASE ACCESS COVER GASKET	
8	1	COVER010	CRANKCASE ACCESS COVER ECS	
9	12	WASHER013	8MM COPPER WASHER	
10	12	BOLT076	HEX BOLT M8-1.25-25	28 ft-lb
11	1	FITTING035	3/4 NTP PIPE PLUG	
12	1	SEAL010	CRANKSHAFT SEAL	
13	1	COVER005	BEARING HOUSING	
14	1	GASKET035	BEARING HOUSING GASKET	
15	2	FITTING037	1/4" NPT PIPE PLUG	
16	3	FITTING009	1/4 TO 1/2 BELL COUPLER	
17	3	FITTING041.5	1/2 NPT NIPPLE	
18	1	BREATHER006	CRANKCASE BREATHER	
19	1	FITTING121.5	1/2 NPT STREET L	
20	1	FITTING124	1/2 NPT TEE	
21	1	FITTING026	1/4 NPT NIPPLE	
22	1	FITTING178	1/4 TEE NPT	
23	1	FITTING179	1/4 MALE TO FEMALE ELBOW	
24	1	FITTING177	1/4 NIPPLE HEX	

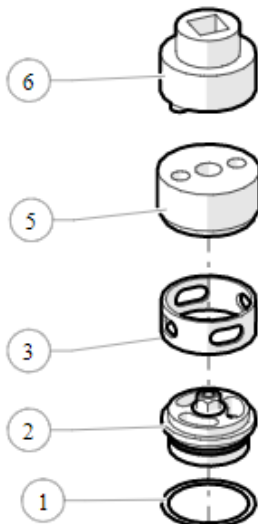


ITEM NO.	Qty	PART #	DESCRIPTION	TORQUE
2	6	BOLT016	HEX BOLT M10-1.5-30	57 ft.-lb
4	1	CYLINDER011	HP/LP PISTON CYLINDER	
22	1	GASKET044	LOWER PISTON CYLINDER GASKET	
28	6	WASHER014	10MM COPPER WASHER	

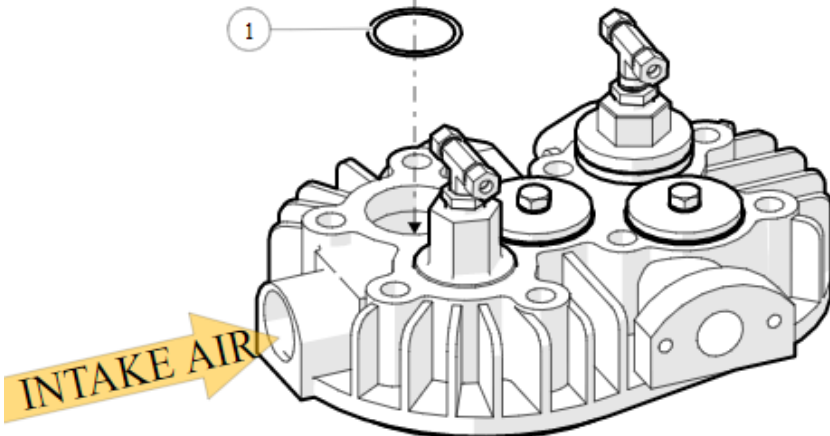
VALVE ORIENTATION

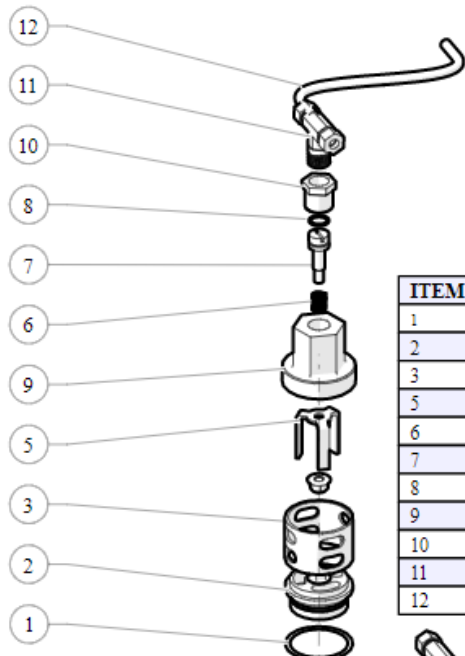


LOW PRESSURE INTAKE VALVE



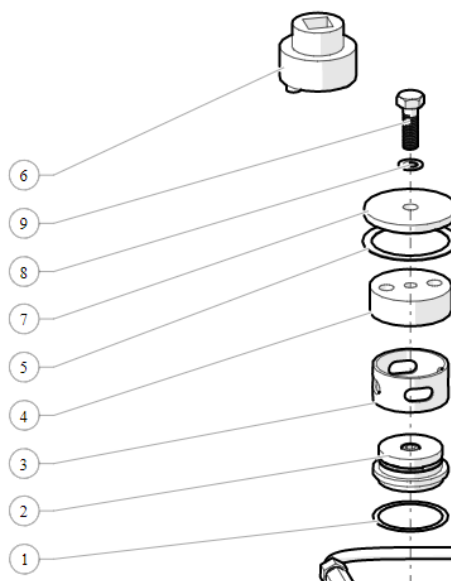
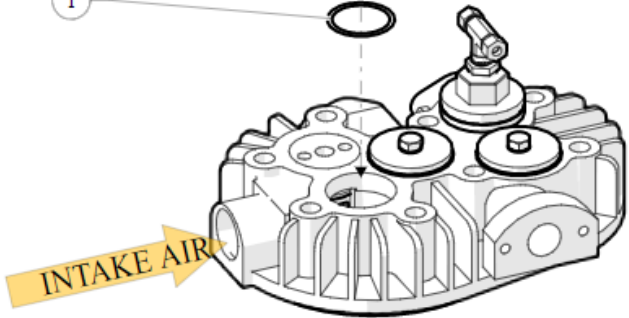
ITEM NO.	Qty	PART #	DESCRIPTION	TORQUE
1	1	GASKET040	COPPER VALVE GASKET	
2	1	VALVE040	HP/LP INTAKE VALVE ASSEMBLY	
3	1	RETAINER005	VALVE RETAINER (SHORT .600)	
5	1	STOPPER001	INTAKE VALVE STOPPER	
6	1	WRENCH002	SPANNER WRENCH	





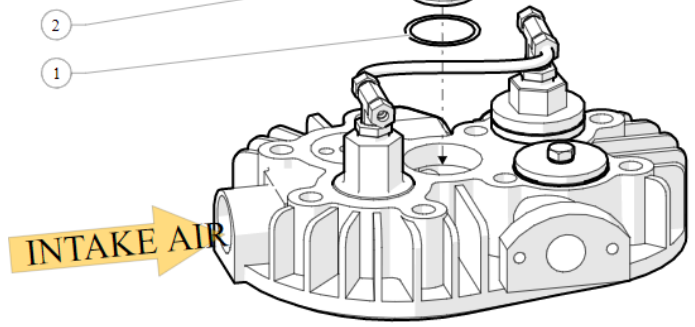
LOW PRESSURE INTAKE VALVE ASSEMBLY WITH HEAD UNLOADER

ITEM NO.	Qty	PART #	DESCRIPTION	TORQUE
1	1	GASKET040	COPPER VALVE GASKET	
2	1	VALVE040	HP/LP INTAKE VALVE ASSEMBLY	
3	1	RETAINER004	INTAKE VALVE RETAINER 1.100 TALL	
5	1	UNLOADER002	UNLOADER FORK	
6	1	SPRING001	UNLOADER SPRING	
7	1	BOLT017	UNLOADER PISTON	
8	1	ORING013	UNLOADER PISTON ORING	
9	1	RETAINER006	CONTINUOUS RUN VALVE STOPPER	
10	1	BUSHING057	BUSHING 3/8 MALE TO 1/4 FEMALE	
11	1	TEE001	1/4 NPT TO 1/4 COMPRESSION TEE	
12	1	LINE106		

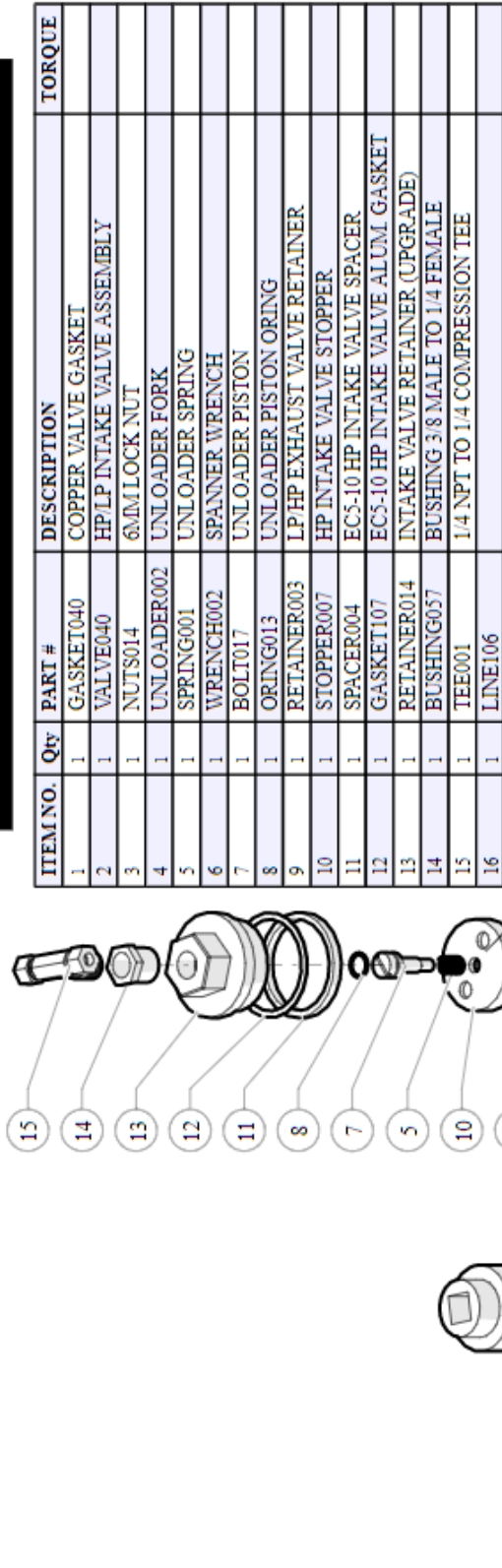


LOW PRESSURE EXHAUST VALVE ASSEMBLY

ITEM NO.	Qty	PART #	DESCRIPTION	TORQUE
1	1	GASKET040	COPPER VALVE GASKET	
2	1	VALVE041	LP/HP EXHAUST VALVE	
3	1	RETAINER003	LP/HP EXHAUST VALVE RETAINER	
4	1	STOPPER002	LP/HP EXHAUST VALVE STOPPER	
5	1	GASKET041	LP/HP EXHAUST VALVE COVER GASKET	
6	1	WRENCH002	SPANNER WRENCH	
7	1	COVER008	LP/HP EXHAUST VALVE COVER	
8	1	WASHER013	8MM COPPER WASHER	
9	1	BOLT076	HEX BOLT M8-1.25-25	28 ft-lb

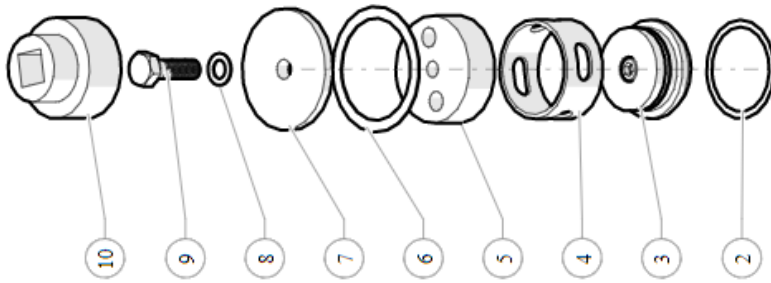


HIGH PRESSURE INTAKE VALVE ASSEMBLY WITH HEAD UNLOADER

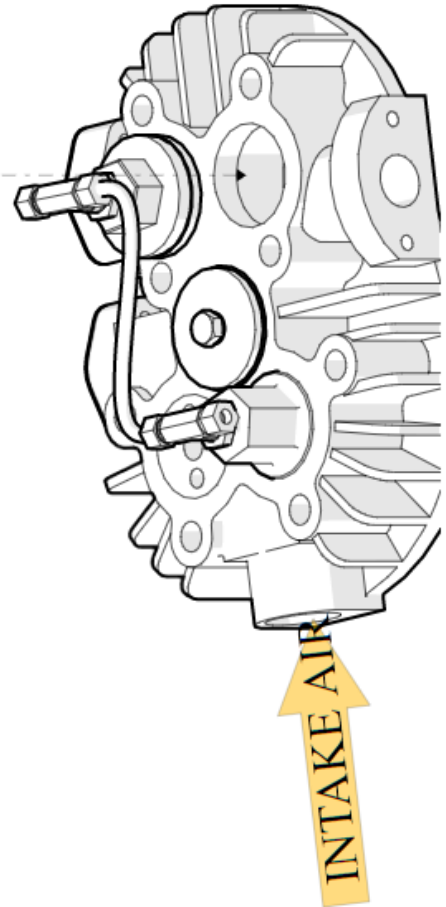


ITEM NO.	Qty	PART #	DESCRIPTION	TORQUE
1	1	GASKET040	COPPER VALVE GASKET	
2	1	VALVE040	HP/LP INTAKE VALVE ASSEMBLY	
3	1	NUTS014	6MM LOCK NUT	
4	1	UNLOADER002	UNLOADER FORK	
5	1	SPRING001	UNLOADER SPRING	
6	1	WRENCH002	SPANNER WRENCH	
7	1	BOLT017	UNLOADER PISTON	
8	1	ORING013	UNLOADER PISTON ORING	
9	1	RETAINER003	LP/HP EXHAUST VALVE RETAINER	
10	1	STOPPER007	HP INTAKE VALVE STOPPER	
11	1	SPACER004	EC5-10 HP INTAKE VALVE SPACER	
12	1	GASKET107	EC5-10 HP INTAKE VALVE ALUM GASKET	
13	1	RETAINER014	INTAKE VALVE RETAINER (UPGRADE)	
14	1	BUSHING057	BUSHING 3/8 MALE TO 1/4 FEMALE	
15	1	TEE001	1/4 NPT TO 1/4 COMPRESSION TEE	
16	1	LINE106		

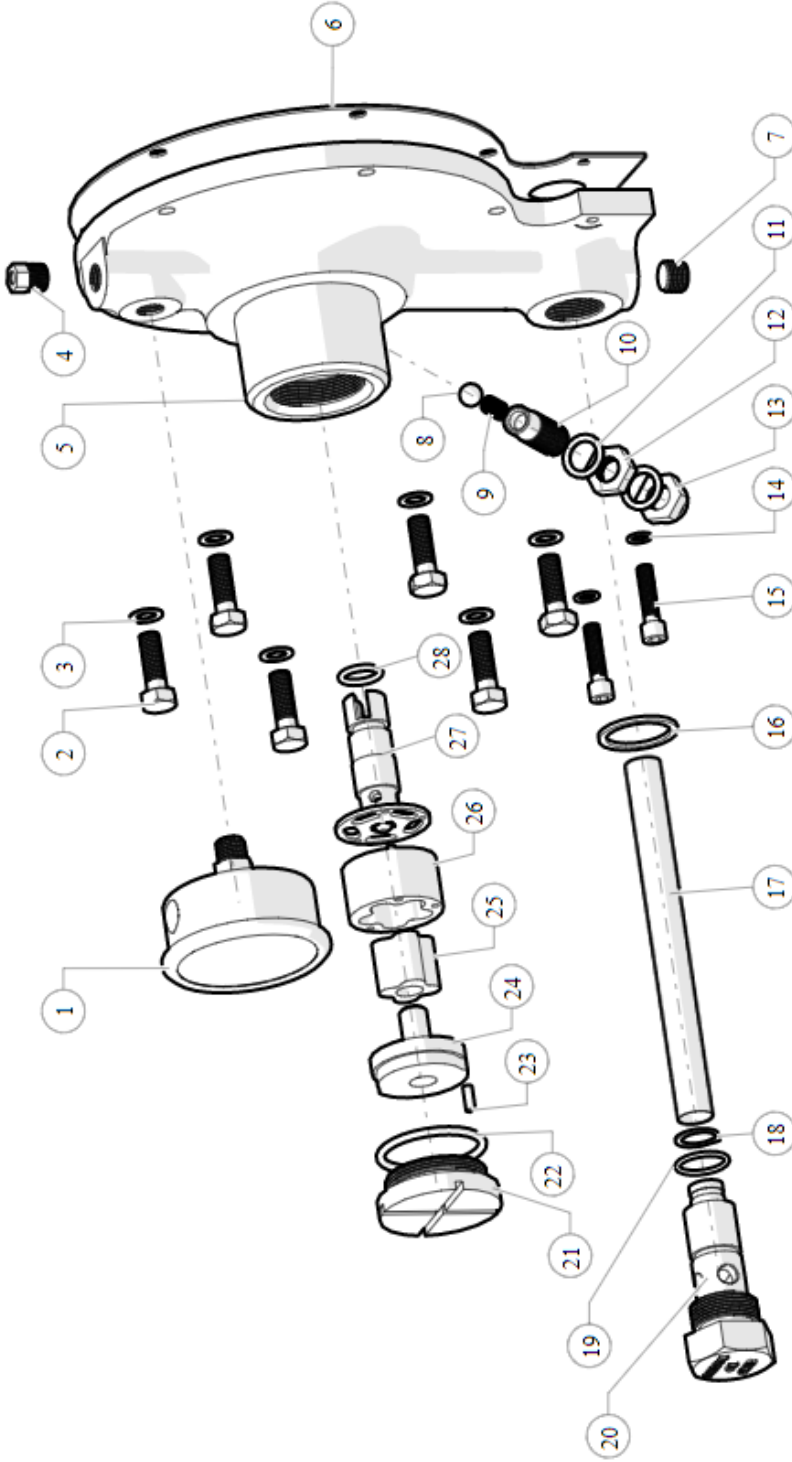
HIGH PRESSURE EXHAUST VALVE ASSEMBLY



ITEM NO.	Qty	PART #	DESCRIPTION	TORQUE
2	1	GASKET040	COPPER VALVE GASKET	
3	1	VALVE041	LP/HP EXHAUST VALVE	
4	1	RETAINER003	LP/HP EXHAUST VALVE RETAINER	
5	1	STOPPER002	LP/HP EXHAUST VALVE STOPPER	
6	1	GASKET041	LP/HP EXHAUST VALVE COVER GASKET	
7	1	COVER008	LP/HP EXHAUST VALVE COVER	
8	1	WASHER013	SMM COPPER WASHER	
9	1	BOLT076	HEX BOLT M8-1.25-25	28 ft.-lb
10	1	WRENCH002	SPANNER WRENCH	



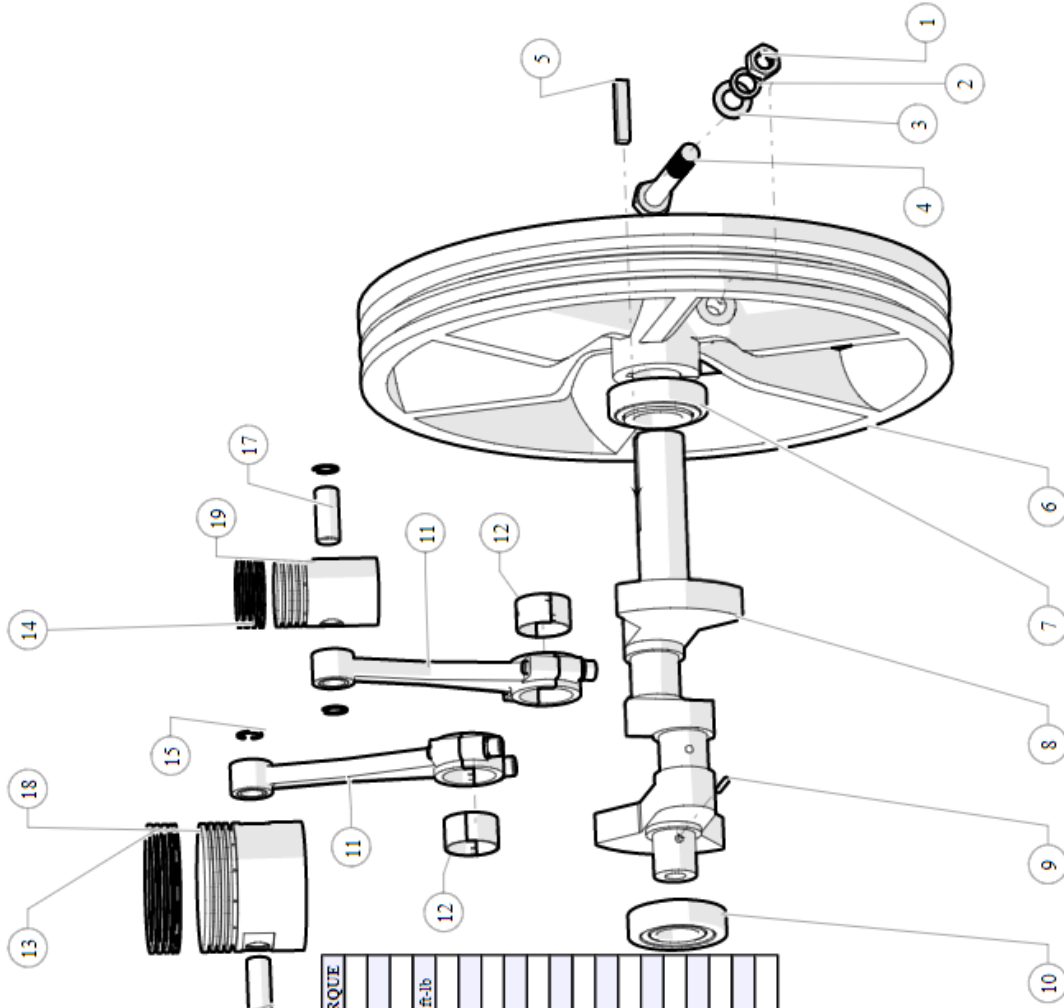
OIL PUMP EXPLODED ASSEMBLY



ITEM NO.	QTY	PART #	DESCRIPTION	TORQUE
16	1	GASKET106	COMPOSITE SEALING WASHER	
17	1	FILTER125	OIL FILTER	
18	1	RING0025	OD SNAP RING	
19	1	ORING0037	OIL FILTER REAR ORING	
20	1	HOUSING0041	PRESSURE LUBE OIL FILTER HOUSING	
21	1	RETAINER015	GEROTOR PUMP RETAINER	
22	1	ORING0035	ORING, P-LUBE OIL PUMP RETAINER	
23	1	PIN013	ANTI-ROTATION PIN	
24	1	GEROTOR001C	ECCENTRIC GEAR POSITIONER	
25	1	GEROTOR001A	OIL PUMP GEAR	
26	1	GEROTOR001B	OIL PUMP GEAR HOUSING	
27	1	GEROTOR001E	OIL PUMP DRIVE SHAFT	
28	1	ORING0036	OIL PUMP SHAFT ORING	

ITEM NO.	QTY	PART #	DESCRIPTION	TORQUE
1	1	GAUGE013	100 PSI BACK MOUNT OIL GAGE	
2	6	BOLT076	HEX BOLT M8-1.25-25	28 ft-lb
3	6	WASHER013	8MM COPPER WASHER	
4	1	FITTING176	1/8 NPT HEX DRIVER PLUG	
5	1	HOUSING0040	OIL PUMP HOUSING P-LUBE	
6	1	GASKET108	OIL PUMP HOUSING GASKET	
7	1	PLUG017	STEEL PLUG, HEX DRIVE, 1/4 NPT	
8	1	BALL002	OIL BYPASS BALL FOR PRESSURE LUBE	
9	1	SPRING008	OIL BYPASS SPRING P-LUBE	
10	1	ADJUSTER001	OIL PRESSURE ADJUSTER - PRESSURE LUBE	
11	2	WASHER052	12MM COPPER SEALING WASHER	
12	1	NUTS039	12MM X 1.25 CAP NUT	
13	1	NUTS040	12MM X 1.25 CAP NUT	
14	2	WASHER051	6M COPPER SEALING WASHER	
15	2	BOLT014	ALLEN HEAD BOLT M6-1.0-25	11 ft-lb

PISTONS, RINGS AND RODS



ITEM NO.	Qty	PART #	DESCRIPTION	TORQUE
1	1	NUTS013	16MM*2.0 HEX.NUT	
2	1	WASHER012	16MM LOCK WASHER	
3	1	WASHER022	16MM FLAT WASHER	
4	1	BOLT011	HEX BOLT M16-2.0-125	220 R-1b
5	1	KEY002	FLYWHEEL KEY	
6	1	FLYWHEEL007	FLYWHEEL EC5	
7	1	BEARING006	CRANK BEARING REAR	
8	1	CRANK012	PRESSURE LUBE CRANKSHAFT EC5	
9	1	PIN014	OIL PUMP DRIVE PIN	
10	1	BEARING012	CRANK BEARING FRONT	
11	2	ROD014	CONNECTING ROD LP/HP P-LUBE	
12	2	BEARING005	BEARING SET (2 HALVES = 1 BEARING SET)	
13	1	RING012	LP RING SET FOR EC5 AND EC10	
14	1	RING011	HP PISTON RING SET EC5/EC10	
15	4	RING019	LP HP WRIST PIN RETAINING SNAP RING	
16	1	PIN008	LOW PRESSURE PISTON WRIST PIN	
17	1	PIN010	HIGH PRESSURE PISTON WRIST PIN	
18	1	PISTON007	LOW PRESSURE PISTON	
19	1	PISTON008	HIGH PRESSURE PISTON	

Troubleshooting

Some pump issues can be fixed simply by verifying the following guide. It is advised to go through the guide prior to calling technical support to help expedite the assistance process.

Issue	Action
Pump does not run	Check unit power supply.
Pump cycles frequently	Check for leaks in facility/shop air lines or air system. Check for stuck tools or machine leaks. Check pressure settings and PSI cycle settings on switch.
Pump will not reach pressure	Check CFM consumption of machines to ensure they do not exceed pump capability. Ensure pump cycles within its duty cycle, 60% run. 40% rest. Check tools for CONSTANT CFM rating, not average. Average ratings do not reflect consumption and are often 66% lower than actual CFM consumption. Check for leaks in air lines.
Oil level low	Verify oil level while unit is off and cool. Top oil off and monitor oil level. If it drops again check for oil leaks and check correct oil is being used
Pump is running loud	Ensure bolts holding pump to mounting surface are snug. Check oil pressure if there is no oil pressure shut unit down and contact customer support.
Black dust is all over my pump area	Check belt alignment and tension. The black dust is rubber from belt wear. If needed replace belts.
Pop off valve flutters	Identify if it is the high-pressure side or the low-pressure side. This can be verified by the size of the pop off. The 75 PSI is your low pressure. The 200 PSI is the high pressure. Check your high-pressure intake valve and high-pressure exhaust valve for blockages or debris. Contact customer support for replacement parts.
Oil leaks from breather	Remove and re-thread tape fittings in breather, clean fittings of excess oil. Reinstall fittings and restart operation. Some oil blow by is expected during normal break in period.
Air leaks from breather/filters when pump is not in motion	Verify pump is plumbed to a check valve, air can be back feeding from tank if no check valve is present. Pull check valve and check for debris. Blockages in check valve allow air to slowly leak back towards the pump. Replace check valve if needed.
Getting oil blow by	Verify pump has passed the break in time: 150-200 hours of active run time. Ensure unit is not running in continuous mode prior to break in period being completed (this can cause increase blow by during break in). For cases after break in period contact customer support.

Warranty Statement

- **Standard Warranty:** That each compressor bare pump is free from defects in material, workmanship, and parts for *1 year from the date of delivery. Manufacturer is not responsible for downtime during warranty service. If downtime is necessary, it is at the owner's discretion, obligation, and expense, to have a redundant compressor. After one year, purchaser is required to return pump to manufacturer to avoid core charge. Parts shipped for warranty repairs shall only include ground freight charges for the first 90 days of the warranty period, thereafter owner is responsible for all freight charges of parts and/or total pump replacement if necessary being shipped for warranty fulfillment. Any and all express shipping charges of warranty parts would be at the owner's expense. Standard technical assistance is provided at no charge during and after the standard warranty period.

****Standard warranty has no obligation to maintain warranty status, warranty will expire one year from date of delivery. Please see available options below to extend your warranty.***

- **5 Year Extended Warranty:** Manufacturer will extend your standard 1-year warranty to full 5 years when you opt to register for the extended warranty plan that includes using our **SMART OIL™** and following all routine maintenance set forth. Parts shipped for warranty repairs shall only include ground freight charges for the first 90 days of the warranty period, thereafter owner is responsible for all freight charges of parts and/or total pump replacement if necessary being shipped for warranty fulfillment. Any and all express shipping charges of warranty parts would be at the owner's expense. This plan includes our advanced technical air support. Smart Tech Support provides you with the highest level of technical support.

Required maintenance schedule to maintain warranty status.

- All pumps are shipped with break-in oil and must be changed no less than 70 hours to insure gasket seating.
- After the 100 hours of break-in, you must change the oil.
- Thereafter Oil Should be changed every 6 months or 1000 hours whichever occurs first.
- Always maintain proper oil level in unit. If the unit runs out of oil due to neglect the warranty will be void.
- Use only Eaton approved oils in your pump, or your warranty is void.
- All stock orders by vendor/purchaser are required to buy two service kits at the time of purchase.
- All stocking orders will have a 6-month grace period for warranty registration. After that time, the unit must be registered, or warranty may be void.

Warranty shall not apply, and manufacturer shall not be responsible nor liable for:

- Routine service such as oil changes, filter replacements, gasket tightening to correct oil seepage or drive belt tightening and valve cleaning and are not covered under warranty.
- Consequential damages such as but not limited to cost of loss of business, product damage, or down time.
- Acts of nature, over abuse, malicious destruction, improper maintenance, undersized equipment
- Deviation from operating instructions or specifications
- Exceeding 70% duty cycle resulting in overheating and excessive wear and tear
- Any malfunction of reciprocating pump caused by failure or improper use and/or maintenance of other compressor components manufactured by others.
- Normal wear and tear parts included but not limited to valves (intake/suction, check, blowdown, thermo, pop off, unloader), and ball valves. Belts, shaft seals, load/unloader solenoids, sensors (temperature or pressure), Electrical contractors and relays, and any parts with a routine maintenance schedule

Warranty shall be voided under the following conditions: Exposing electrical components to rain or water OR installing the unit in a hostile environment such as acid vapors or any caustic or abrasive matter that may be ingested into the pump or installing the unit in an enclosed area where lack of cooling ventilation is present, such as in boiler or equipment rooms where the ambient air exceeds 110F.

Further exclusions include failure to fully and completely follow the guidelines set forth in the manual. Of specific note is

environments where fine dust is common, such as granite, marble or concrete plants, the pump **MUST** be installed in a separate area with its own dedicated ventilation. **FAILURE TO PROVIDE THIS DUST FREE OPERATING AREA VOIDS THE WARRANTY.**

Parts used for warranty purposes must be supplied by manufacturer. Warranty work should be performed by a manufacturer approved technician. If any maintenance (other than routine maintenance) is performed by a non-approved technician, written pre-approval must be obtained from manufacturer, to prevent voiding this warranty. Failure to fully comply with this warranty and fully comply with the manual instructions will void this warranty.

The oil purchase and maintenance program are effective as of Jan.2020.