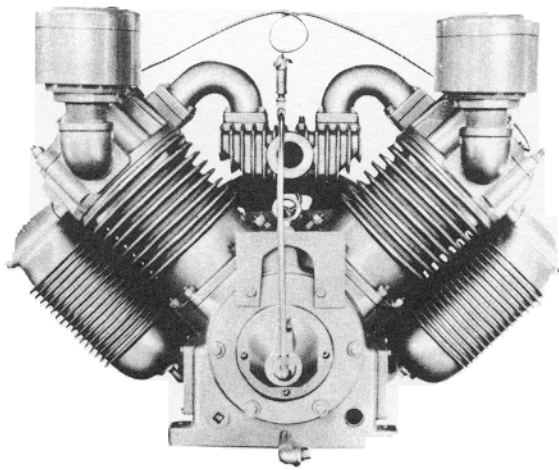


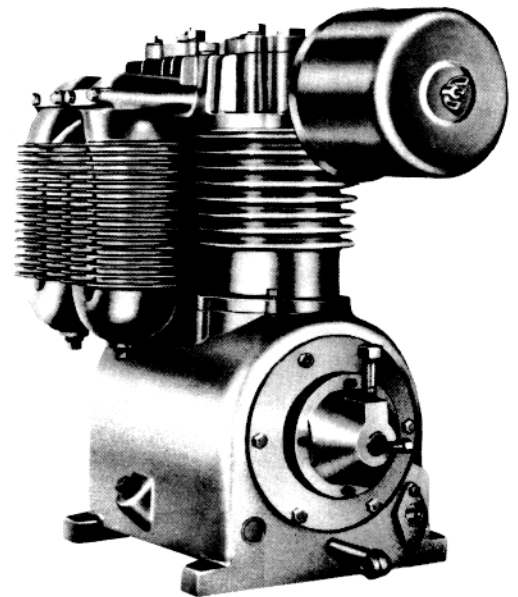
# MODEL 4500 — 9000 PUMPS

SPLASH AND PRESSURE LUBRICATED

## ASSEMBLY OPERATING INSTALLATION INSTRUCTIONS PARTS LIST



TYPE -9000



TYPE -4500

TWO STAGE  
TWO CYLINDER — FOUR CYLINDER

**SAYLOR BEALL MANUFACTURING COMPANY**

P.O. Box 40, 400 KIBBEE STREET, ST. JOHNS, MICHIGAN 48879

*Manufacturers of Air Compressors since 1915*

800-248-9001

989-224-2371

989-224-8788 (FAX)

# INSTALLATION AND OPERATING INSTRUCTIONS

Read all instructions carefully before starting compressor

## UNPACKING INSTRUCTIONS

The two stage compressor was inspected at the factory and packaged to protect against shipping damage. When you unpack your unit, inspect for damage or missing parts. If there is any damage or missing parts, the transportation company's agent should make a notation to the effect on the Bill of Lading. Claims should be settled directly with the transportation company.

## BELTS

Install belts on compressor and motor pulleys. Belt tension should be adjusted to allow 3/8 to 1/2 inch deflection with normal thumb pressure. Also align belts using a straight edge against the face of the flywheel, touching the rim on both sides of the face. The belts should be parallel to this straight edge.

## PIPING

If a pipe line is necessary, use the same size as the tank valve since too small piping restricts the flow of air. If over 100 feet long, use the next larger size.

Bury underground lines below the frost line and avoid pockets where condensation can gather and freeze.

Make certain all pipe joints are free from leaks.

Apply pressure *before* underground lines are covered.

## WARNING

At no time should any of our compressor assemblies or compressor pumps be used in any manner on any type of gas or gaseous installations, on or in gas wells or any type installations.

## WIRING

Have a certified electrician connect the service wires to the magnetic starter. Check the following:

1. The electric box is large enough. Service of adequate ampere rating.
2. The supply line has the same electrical characteristics (voltage, cycles and phase) as the motor.
3. The line wire is the proper size and that no other equipment is operated from the same line. The following chart gives minimum recommended wire sizes for compressor installations. For longer lines use the next larger size wiring.

Various national and local codes and standards have been set up covering electrical apparatus and wiring. These should be consulted and local ordinances observed. Our recommended wire sizes may be larger than the minimum set up by local ordinances. If so, the larger size wire should be used to prevent excessive line voltage drop. The additional wire cost is very small compared with the cost of repairing or replacing a motor electrically "starved" by the use of too small supply wires.

## BELT GUARD

OSHA requires installation of a totally enclosed belt guard covering the flywheel, belts and motor pulley.

## pipe sizes for compressed air lines:

Air c.f.m.	Lenth of Pipe Lines in Feet							
	25	50	75	100	150	200	250	300
1	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
5	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
10	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4
15	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
20	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
25	3/4	3/4	3/4	3/4	3/4	1		
30	3/4	3/4	3/4	3/4	1	1		
35	3/4	3/4	1	1	1	1		
40	3/4	1	1	1	1	1		
50	1	1	1	1	1	1		
60	1	1	1	1	1 1/4	1 1/4	1 1/4	1 1/4
70	1	1	1	1	1 1/4	1 1/4	1 1/4	1 1/4
80	1 1/4	1 1/4	1 1/4	1 1/4	1 1/2	1 1/2	1 1/2	1 1/2
100	1 1/4	1 1/4	1 1/4	1 1/4	1 1/2	1 1/2	1 1/2	1 1/2

## WIRE SIZE (RUBBER COVERED)—B & S GAUGE NO.

Motor H.P.	Max. Length of Line (Ft.)	Single Phase			2 or 3 Phase		
		115	208	230	208	220	440
1/4	150	14	14	14	14	14	14
3/8	100	14	14	14	14	14	14
1/2	70	14	14	14	14	14	14
3/4	50	14	14	14	14	14	14
1	50	12	14	14	14	14	14
1 1/2	50	10	14	14	14	14	14
2	70	8	12	12	14	14	14
3	70	6	10	10	14	14	14
5	100	2	6	6	12	12	14
7 1/2	150	00	4	4	8	8	14
10	150	0000	2	2	6	6	12
15	150	—	—	—	4	4	10
20	150	—	—	—	3	3	8
25	150	—	—	—	2	2	6

Check all piping and fittings regularly to avoid "leaks" in the system.

Wiring hook-up must be made so that flywheel will turn as indicated by arrow on flywheel. CCW Facing Flywheel.

## INSTALLATION AND STARTING

**INSPECTION:** Check for possible damage in transit. All basic pumps are shipped with flywheel unmounted! Do not force flywheel on crankshaft. Use wedge in "slot" provided for easy assembly. Belt alignment and tensions must be checked carefully!

**MOUNTING:** Install in a clean, dry, well ventilated location away from any source of heat such as a boiler or radiator. If unit is to be fastened to a foundation, all four feet must be firmly supported and shimmed to remove all stress from unit. Pump flywheel should be mounted towards wall with minimum clearance of 18" to allow for circulation of air and additional clearance if required for servicing.

**LUBRICATION:** Fill crankcase to level mark on oil gauge with an industrial compressor or hydraulic oil grade ISO 150 or ASTM 700.

**CAUTION: Turn power off before servicing.**

Ambient Temp.	Viscosity at 100° SSU	ISO Viscosity CS+	SAE No.
0° - 40°	250-350	46-68	20
40° - 80°	450-550	100	30
80° - 120°	650-750	150	40
Under 0° Over 120°	Consult Factory		

### CHANGE OIL REGULARLY

Minimum – once every three months.

4500 = 7 Pints

9000 = 7 Pints

## MAINTENANCE, OPERATION AND CARE

**PRESSURE AND SPEED:** Never operate pump at pressures or speeds in excess of those recommended by factory. Every compressor assembly must have a safety valve installed and should be set at either the maximum tank working pressure or 25 P.S.I. over the actual pressure of the pump whichever is less.

**MAXIMUM OPERATING SPEED:** 830 R.P.M. AT 175 P.S.I. MAXIMUM. Intermittent operation, maximum 70% duty cycle.

**\*DAILY:** Check for unusual noise, failure to compress, overheating, oil leaks, and vibration. Correct before serious damage develops. Drain all condensate from receiver and traps.

**\*WEEKLY:** Examine Intake Filter elements and if dirty, remove and clean or replace. Check oil level and add if necessary. Do not fill over level mark on sight glass! Keep compressor clean for efficient operation and appearance.

**\*MONTHLY:** Check and tighten all bolts and nuts as required (refer to torque chart). Check air connections for air leaks – tighten as required. Check belt tension. **NOTE:** This is a standard maintenance procedure which "warranty" does not cover.

**\*QUARTERLY:** Inspect valves, clean if necessary. **NOTE:** This is a standard maintenance procedure which "warranty" does not cover.

### RECOMMENDED TORQUE READINGS

Foot-Pounds

7/16 Head bolts .....	50-55
Valve retainer .....	80-90
5/16 Rod bolts .....	30
3/8 Crankcase bolts .....	30-40
5/16 Side cover bolts .....	30-40
5/16 Front and rear cover bolts .....	30-40
5/16 Manifold bolts .....	30-40
5/8 Flywheel bolts .....	65-75
5/16 Intercooler bolts .....	30-40

## MAINTENANCE – TROUBLE SHOOTING – REPAIRS

### SLOW PUMPING OR INSUFFICIENT PRESSURE

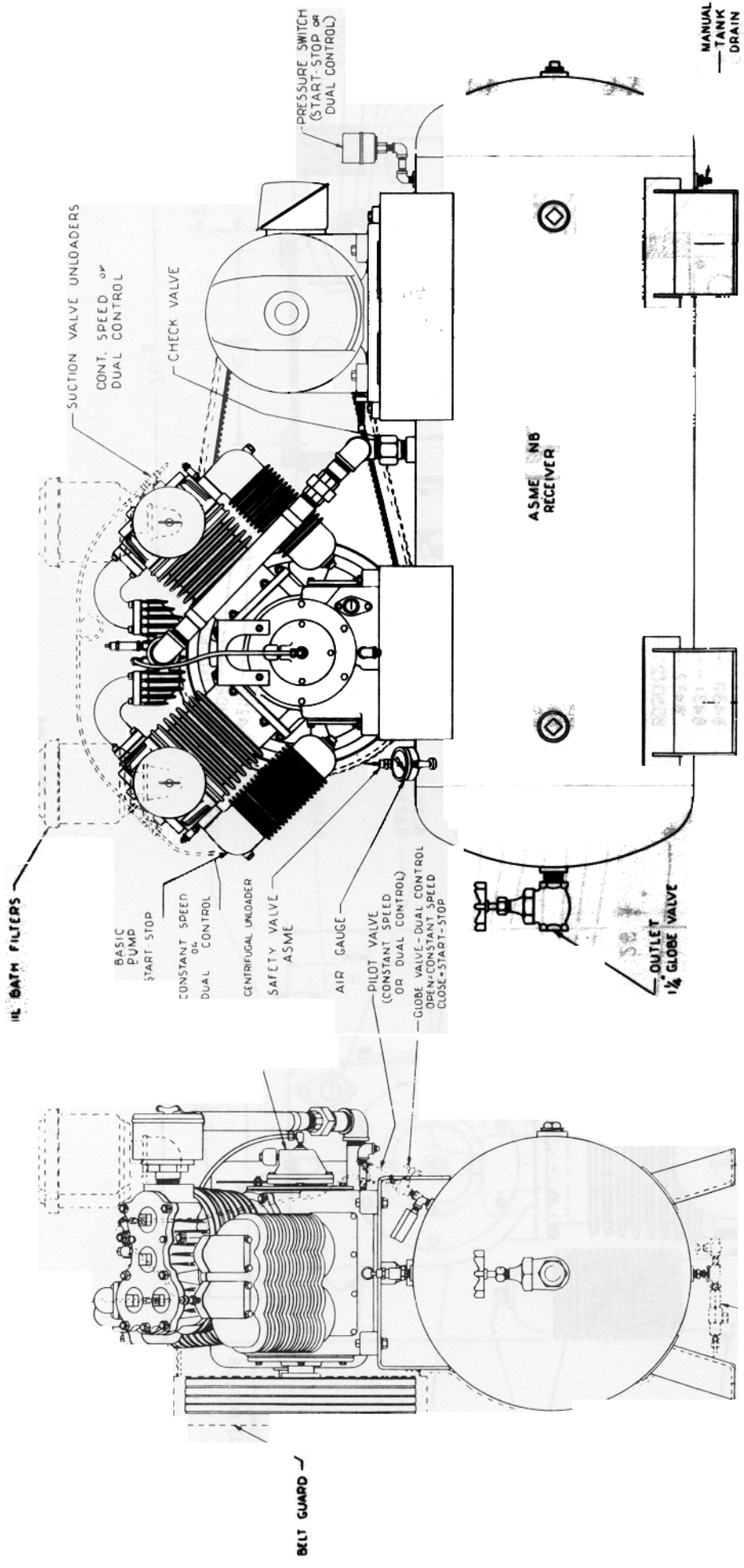
1. Clogged filter element – clean or replace.
2. Leaks in air lines – retighten or replace.
3. Insufficient air capacity – add compressor capacity – consult dealer.
4. Head valves – clean or replace (see figure 5).
5. Slipping belts – adjust or replace.

### EXCESSIVE OIL CONSUMPTION

1. Too much oil – drain out excess to level mark on sight glass.
2. Worn rings – replace rings
3. Clogged air intake filters – clean or replace.
4. Improper oil – consult oil chart.
5. Oil leaks – check and tighten all bolts and nuts. Replace gaskets if necessary. See "monthly" under "operation and care."
6. Duty cycle over 70%.

### OVERHEATING

1. Pump running backwards – reverse rotation, must be CCW facing flywheel.
2. Inadequate ventilation – pipe intakes to outside and install filters to protect against weather and foreign objects.
3. High ambient – same as #2.
4. Restricted air intakes – clean or replace.
5. Loose or restricted valves – retighten, clean or replace.
6. Incorrect installation – allow 18" minimum between wall and flywheel.
7. Insufficient air capacity or excessive duty cycle.



REFERENCE "A"

MOTOR H.P.	PRESSURE SWITCH	AIR GAUGE	SAFETY VALVE	CHECK VALVE	OUTLET VALVE	PILOT VALVE	PUMP REF
15 THRU 30	4876	4179	8198	8478	8212	4842	4500 & 9000

AUTO TANK DRAIN

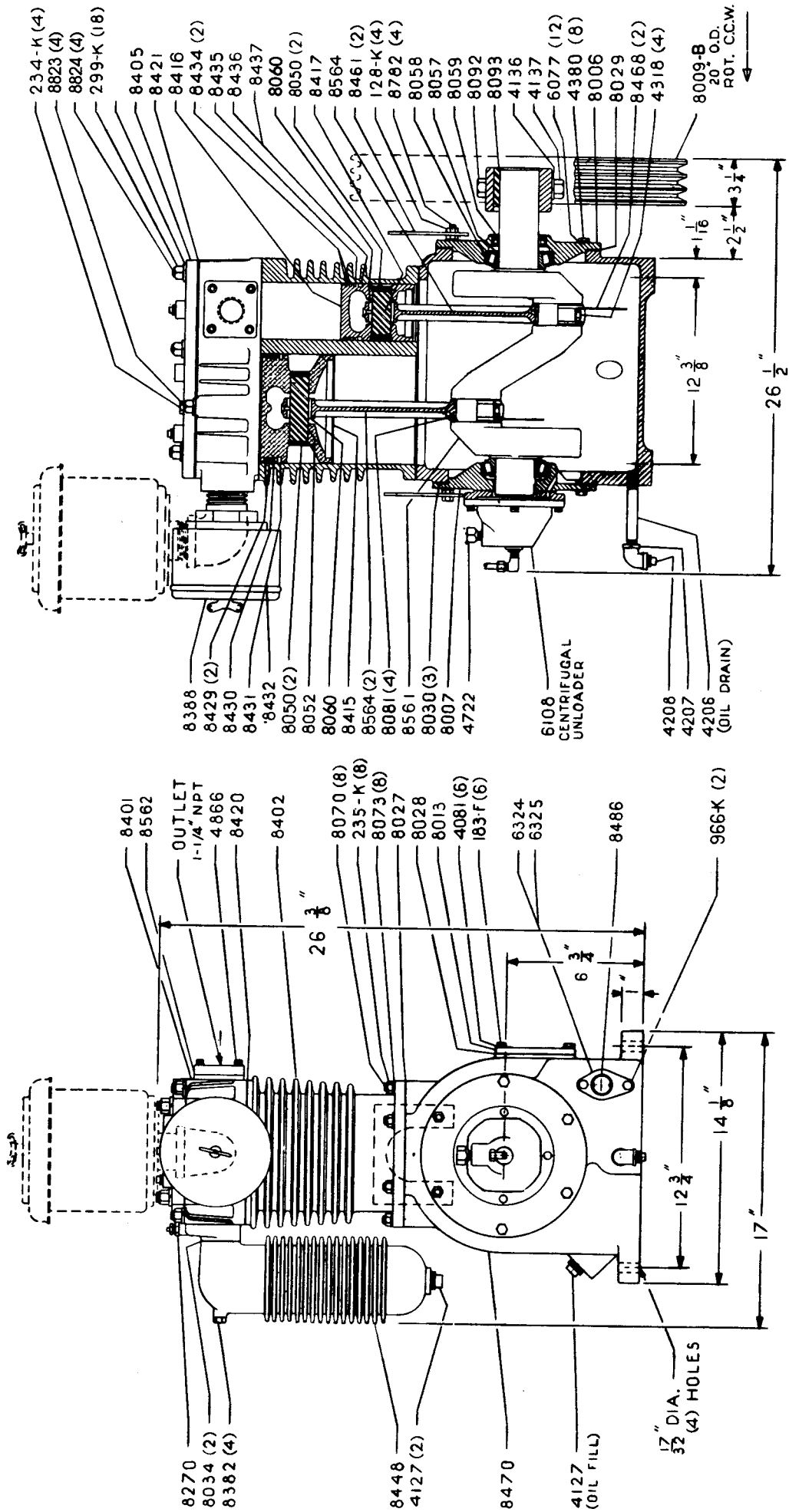


FIG. #1  
4500 PUMP

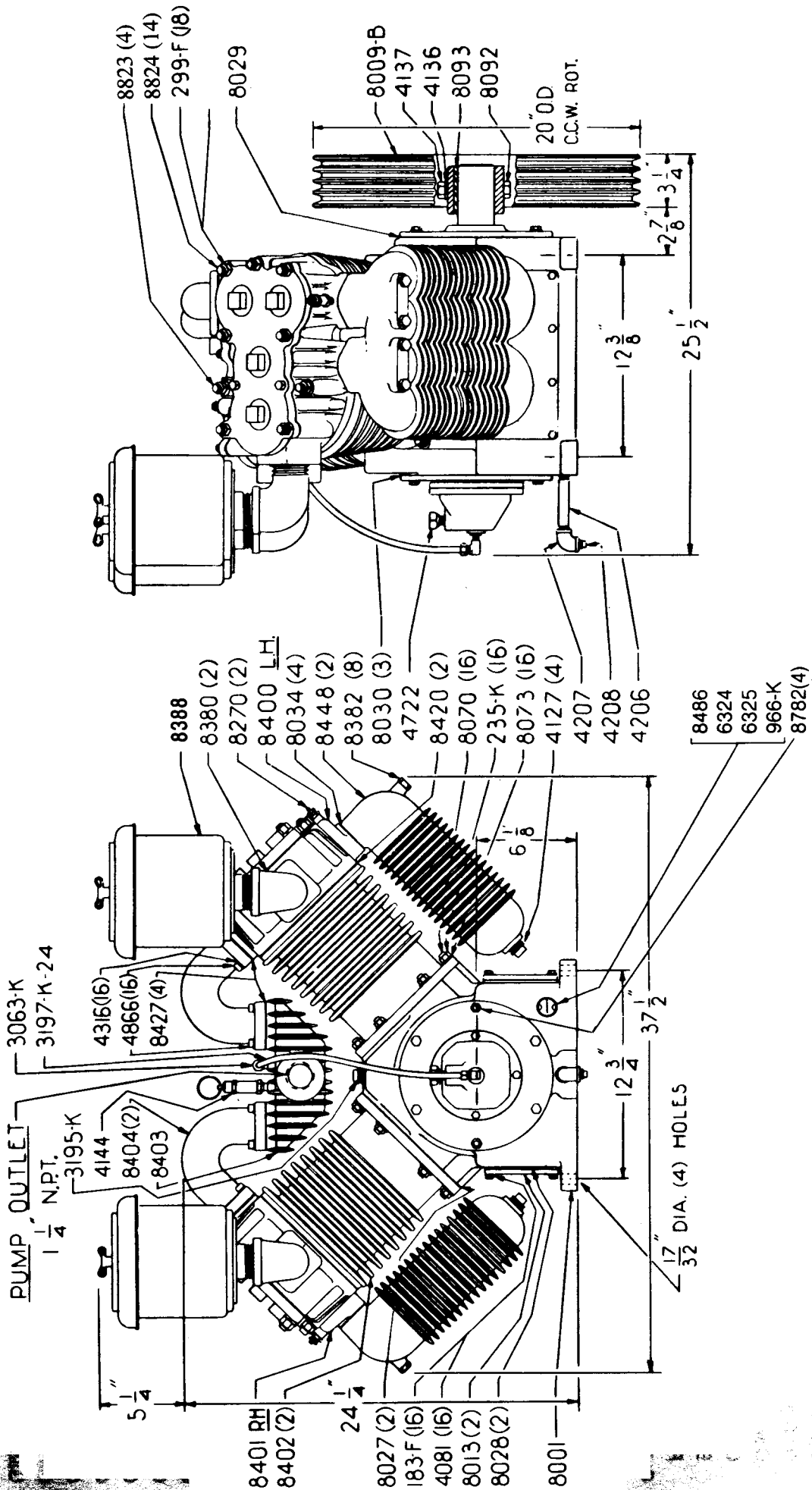


FIG. #2  
MODEL 9000

8001  
 8013  
 8027  
 8028  
 8030  
 8034  
 8070  
 8073  
 8092  
 8093  
 8136  
 8137  
 8270  
 8380  
 8382  
 8400  
 8401  
 8402  
 8403  
 8404  
 8427  
 8448  
 8486  
 8782  
 966-K

**PARTS LIST (Fig. #1 & #2)**

Part Name	†	No.		Part Name	Req'd
		4500	9000		
Crankcase Assembly	8128	—	1	Gasket Set	8569 1
Crankcase Assembly	8581	1	—	Gasket Set	8451 —
Crankcase	8001	—	1	Safety Valve — 250 P.S.I. (1/4") (Exhaust)	4642 —
Crankcase	8470	1	—	Safety Valve — 70 P.S.I. (1/8) (Intercooler)	8270 1
Studs — Cyl. to Crankcase	8070	8	16	Crankcase Breather	4722 1
Oil Sight Glass	8486	1	1	Key — Flywheel	8093 1
Cover Plate — Oil Sight Gauge	6324	1	1	Tube Connector	3063-K —
Gasket — Cover Plate	6325	1	1	Tube — Bleeder (Cent. Uni. to Manifold)	3197-K-24 —
Bolts — Cover Plate	966-K	2	2	Nipple — Oil Drain	4206 1
Pipe Plug — Oil Fill	3195-K	—	1	Elbow — Oil Drain	4207 1
Cylinder Assembly	8458	1	2	Pipe Plug — Oil Drain	4208 1
Cylinder	8402	1	2	* Elbow — 2" Intake Filter	8380 1
Bolts — 1/2 - 13 x 4-1/4	8823	2	4	Nuts — Crankcase Stud	235-K 8
Bolts — 1/2 - 13 x 5	8824	7	14	Lockwasher — Crankcase Stud	8073 8
Exhaust Manifold	8403	—	1	Nuts — Cylinder Head Stud	231-K 9
Elbows — Exhaust Manifold	8404	—	2	Lockwasher — Cyl. Head Stud	299-F 9
Intercooler Assembly	8459	1	2	Screws — Manifold (5/16 - 18 x 1 1/4)	4866 —
Intercooler	8448	1	2	Washer — Manifold (5/16 S.A.E.)	4316 4
Pipe Plug	4127	3	4	Bolts — Intercooler (3/8 - 16 x 5)	8382 4
Side Cover	8013	1	2	Bolts — Side Cover (5/16 - 18 x 3/4)	966-K 8
Flywheel Assembly	8460	1	1	Washer — Lift Bracket (5/16 Copper)	6077 4
Flywheel	8009-B	1	1	Stud — Lift Bracket	8782 4
Bolt — 5/8	8092	1	1	Lift Bracket (not shown)	8461 2
Lockwasher	4136	1	1	Nuts — 3/8 Lift Bracket	128-K 4
Nut — 5/8	4137	1	1	Air Filter — Silencer	8388 1
Cylinder Head-R.H.	8401	1	1	Exhaust Adapter Plate	8562 1
Cylinder Head-L.H.	8400	—	1	Filter Elements (8388)	8389 1
Gasket — Cyl. Head	8420	1	2	Screw — Exh. Adapter Plate	4866 4
Gasket — Cylinder to Crankcase	8027	1	2		
Gasket — Manifold	8427	—	4		
Gasket — Intercooler	8034	2	4		
Gasket — Side Cover	8028	1	2		
Gasket — Front Cover	8029	1	1		
Shlms — Crank End Play Adj. (Rear Cover)	8030	3	3		

\* Vertical mounting required for oil bath filters.

Note: When ordering parts, give Model No. and Serial No. of pump.

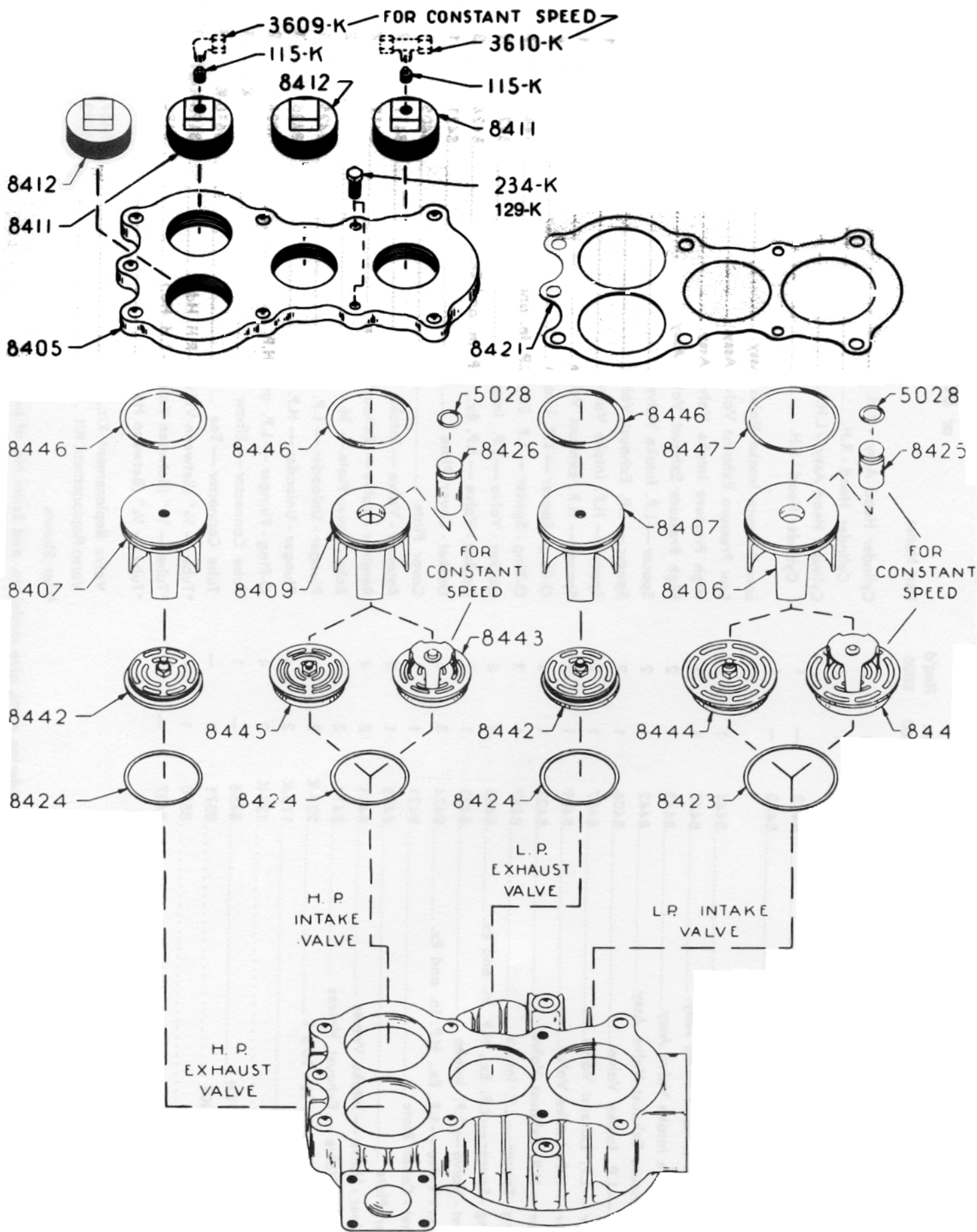


FIG. #3



**PARTS LIST (Fig. #3)**

**CONSTANT SPEED  
or DUAL CONTROL UNITS**

**START-STOP UNITS**

Part Name	Part No.	Req'd 4500	Req'd 9000	Part Name	Part No.	Req'd 4500	Req'd 9000
Cylinder Head Assy. - R.H.	8452	1	1	Cylinder Head Assy. - R.H.	8454	1	1
Cylinder Head - R.H. (See Fig. #1 & #2)	8401	1	1	Cylinder Head - R.H.	8401	1	1
Cylinder Head Assy. - L.H.	8453	—	1	Cylinder Head Assy. - L.H.	8455	—	1
Cylinder Head - L.H. (See Fig. #2)	8400	—	1	Cylinder Head - L.H.	8400	—	1
Low Pressure Intake Valve Assy.	8444	1	2	Low Pressure Intake Valve Assy.	8441	1	2
Low Pressure Exhaust Valve Assy.	8442	1	2	Low Pressure Exhaust Valve Assy.	8442	1	2
High Pressure Intake Valve Assy.	8445	1	2	High Pressure Intake Valve Assy.	8443	1	2
High Pressure Exhaust Valve Assy.	8442	1	2	High Pressure Exhaust Valve Assy.	8442	1	2
Spacer — L.P. Intake Valve	8406	1	2	Spacer — L.P. Intake Valve	8406	1	2
Spacer — L.P. Exhaust Valve	8407	1	2	Spacer — L.P. Exhaust Valve	8407	1	2
Spacer — H.P. Intake Valve	8409	1	2	Spacer — H.P. Intake Valve	8409	1	2
Spacer — H.P. Exhaust Valve	8407	1	2	Spacer — H.P. Exhaust Valve	8407	1	2
O-Ring - Spacer — L.P. Intake	8447	1	2	O-Ring - Spacer — L.P. Intake	8447	1	2
O-Ring - Spacer — L.P. Ex., H.P. In. and Ex.	8446	3	6	O-Ring - Spacer — L.P. Ex., H.P. In. and Ex.	8446	3	6
Gasket - Valve — L.P. Intake	8423	1	2	Gasket - Valve — L.P. Intake	8423	1	2
Gasket - Valve — L.P. Ex., H.P. In. and Ex.	8424	3	6	Gasket - Valve — L.P. Ex., H.P. In. and Ex.	8424	3	6
Gasket - Cover Plate	8421	1	2	Gasket - Cover Plate	8421	1	2
Cover Plate	8405	1	2	Cover Plate	8405	1	2
Retainer - Valve — Intake Valves	8411	2	4	Retainer - Valve — Intake Valves	8411	2	4
Retainer - Valve — Exhaust Valves	8412	2	4	Retainer - Valve — Exhaust Valves	8412	2	4
Bolts — Cover Plate 3/8 - 16 x 1	234-K	2	4	Bolts - Cover Plate — 3/8 - 16 x 1	234-K	2	4
Pipe Plug — 1/8	115-K	2	4	Plunger - Unloader — L.P. Intake	8425	1	2
Lock Washer	129-K	2	4	Plunger - Unloader — H.P. Intake	8426	1	2
Valve Replacement Kit	8456	—	1	O-Ring - Plunger — L.P. and H.P.	5028	2	4
Valve Repair Kit	8571	1	—	Tube Connector — Elbow	3609-K	1	1
Valve Repair Kit	8570	1	—	Tube Connector — Tee	3610-K	1	3
Valve Repair Kit	8487	—	1	*Tube — 1/4" (Between Valves - R.H. Hd.)	3196-K-21	1	1
				*Tube — 1/4" (Between Valves - L.H. Hd.)	3196-K-20	—	1
				*Tube — 1/4" (Between Heads)	3196-K-12	—	1
				Valve Replacement Kit	8457	—	1
				Valve Replacement Kit	8572	1	—

\*Not Shown

Note: When ordering parts, give Model No. and Serial No. of pump

LOW PRESSURE      HIGH PRESSURE

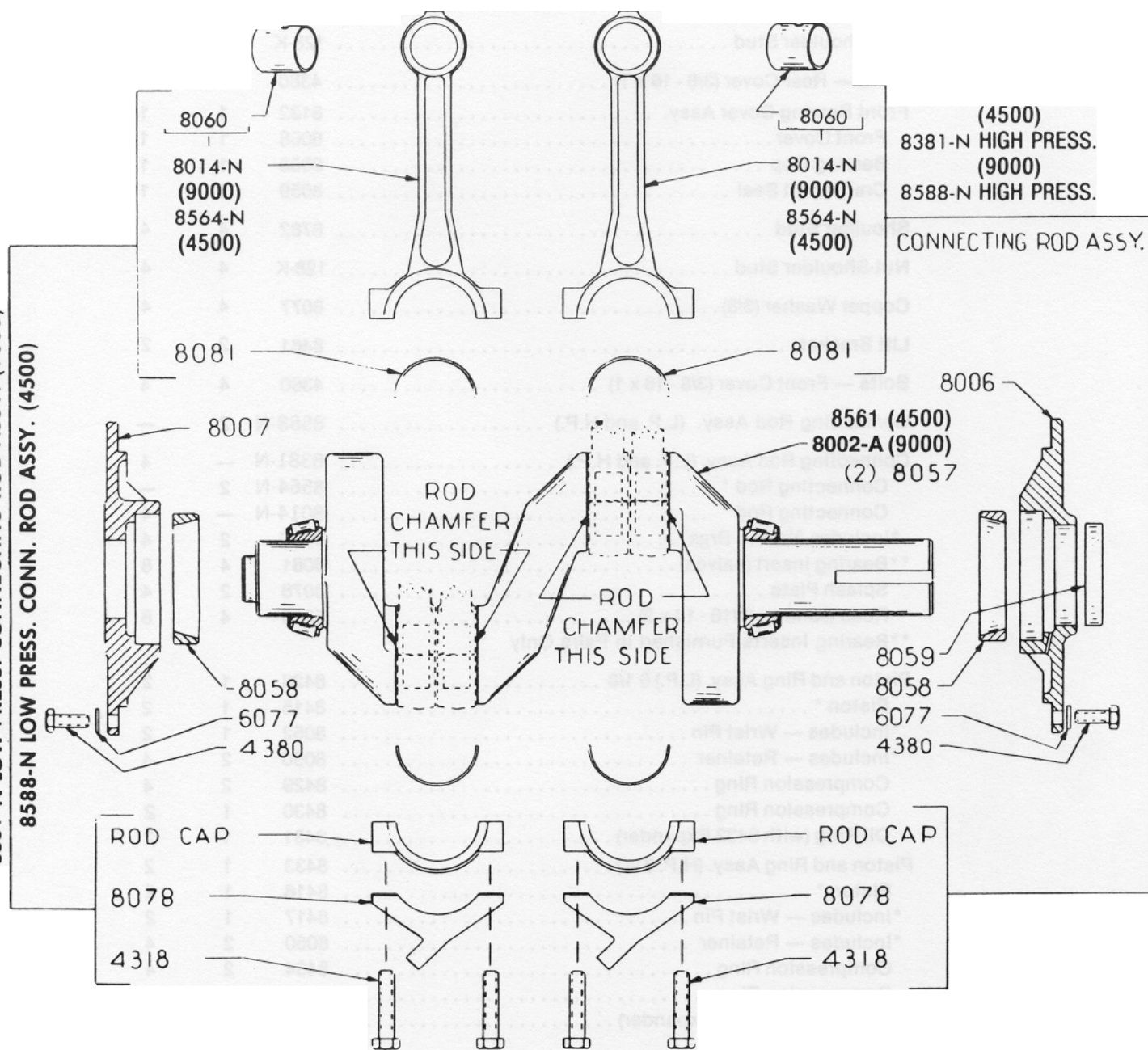
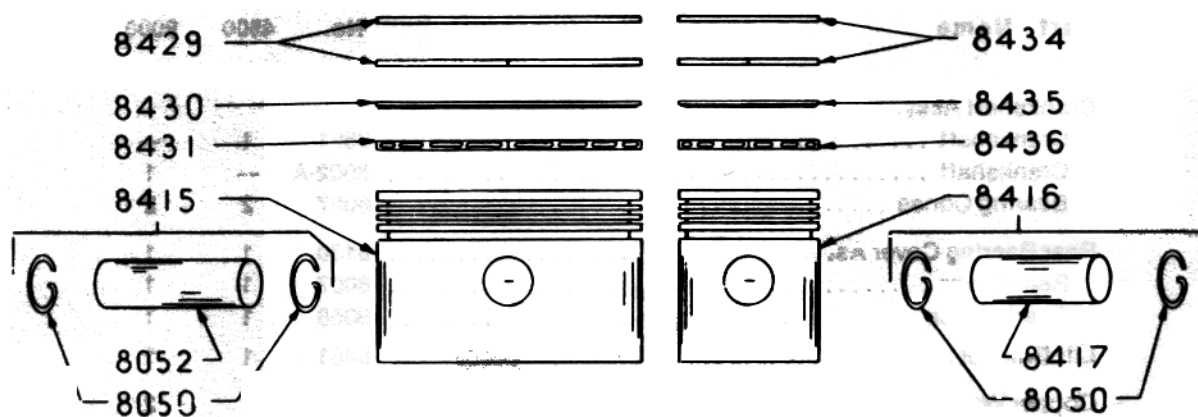


FIG. #4

## PARTS LIST (Fig. #4)

Part Name	Part No.	No. 4500	Req'd 9000
<b>Crankshaft Assy.</b>			
Crankshaft .....	8561	1	—
Crankshaft .....	8002-A	—	1
Bearing Cones .....	8057	2	2
<b>Rear Bearing Cover Assy.</b> .....	8130	1	1
Rear Cover .....	8007	1	1
Bearing Cup .....	8058	1	1
<b>Lift Bracket</b> .....	8461	1	1
<b>Copper Washers (3/8)</b> .....	6077	2	2
<b>Shoulder Stud</b> .....	8782	2	2
<b>Nut-Shoulder Stud</b> .....	128-K	2	2
<b>Bolts — Rear Cover (3/8 - 16 x 1)</b> .....	4380	4	4
<b>Front Bearing Cover Assy.</b> .....	8132	1	1
Front Cover .....	8006	1	1
Bearing Cup .....	8058	1	1
Crankshaft Seal .....	8059	1	1
<b>Shoulder Stud</b> .....	8782	4	4
<b>Nut-Shoulder Stud</b> .....	128-K	4	4
<b>Copper Washer (3/8)</b> .....	6077	4	4
<b>Lift Bracket</b> .....	8461	2	2
<b>Bolts — Front Cover (3/8 - 16 x 1)</b> .....	4380	4	4
<b>Connecting Rod Assy. (L.P. and H.P.)</b> .....	8588-N	2	
<b>Connecting Rod Assy. (L.P. and H.P.)</b> .....	8381-N	—	4
Connecting Rod * .....	8564-N	2	—
Connecting Rod * .....	8014-N	—	4
*Includes Needle Brgs. ....	8060	2	4
**Bearing Insert (halves) .....	8081	4	8
Splash Plate .....	8078	2	4
Rods Bolts — (7/16 - 14 x 2) .....	4318	4	8
**Bearing Inserts Furnished in Pairs Only			
<b>Piston and Ring Assy. (L.P.) 6 1/8</b> .....	8428	1	2
Piston * .....	8415	1	2
*Includes — Wrist Pin .....	8052	1	2
*Includes — Retainer .....	8050	2	4
Compression Ring .....	8429	2	4
Compression Ring .....	8430	1	2
Oil Ring (with 8432 Expander) .....	8431	1	2
<b>Piston and Ring Assy. (H.P. 3 1/4)</b> .....	8433	1	2
Piston * .....	8416	1	2
*Includes — Wrist Pin .....	8417	1	2
*Includes — Retainer .....	8050	2	4
Compression Ring .....	8434	2	4
Compression Ring .....	8435	1	2
Oil Ring (with 8437 Expander) .....	8436	1	2
<b>Piston Ring Set</b> .....	8568	1	
<b>Riston Ring Set</b> .....	8450	—	

Note: When ordering parts, give Model No. and Serial No. of pump.

# 6108 CENTRIFUGAL UNLOADER

Figure 7

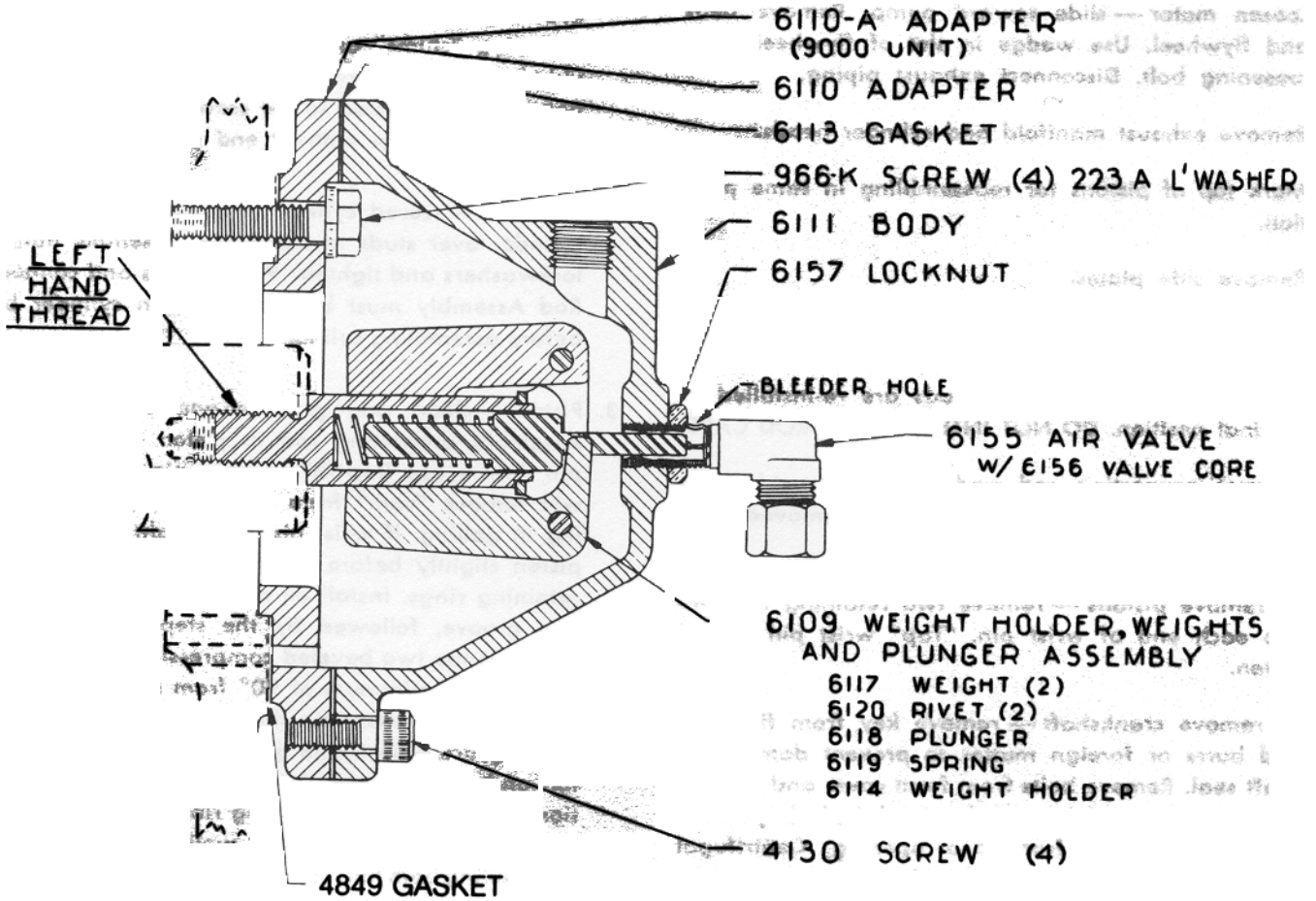


Figure 7

Part Name	Part No.	No. Req.
Adapter Plate	6110	1
Body	6111	1
Weight Holder, Weights and Plunger Assembly	6109	
Weights	6117	2
Rivets	6120	2
Plunger	6118	
Spring	6119	1
Weight Holder	6114	1
Air Valve Assembly	6155	
Valve Core	6156	1
Lock Nut	6157	1
Gasket	6113	1
Gasket	4849	1
Bolt	966-K	4
Bolt	4130	4
Lock Washer	223-A	4

Note: When ordering parts, give Model No. and Serial No. of Pump

## DISASSEMBLY

1. Loosen motor — slide toward pump. Remove belts and flywheel. Use wedge in slot of flywheel after loosening bolt. Disconnect exhaust piping.
  2. Remove exhaust manifold and cylinder heads.
  3. Mark top of pistons for reassembling in same position.
  4. Remove side plates.
  5. To remove connecting rods — remove rod bolts, noting position of the identification marks on one side of each so that connecting rods are re-installed in original position. **DO NOT INTERCHANGE ROD CAPS!**
  6. Remove connecting rod and piston assembly thru bottom of cylinder. Cylinder must be removed from crankcase.
  7. To remove pistons — remove two retaining rings — one each end of wrist pin. "Tap" wrist pin out of piston.
  8. To remove crankshaft — remove key from flywheel and burrs or foreign matter to prevent damage to shaft seal. Remove bolts from front cover and remove cover, being careful not to let crankshaft drop. Slide crankshaft out thru front cover opening. Centrifugal unloader attached to rear end of crankshaft must be removed.
- Weight holder assy. is assembled and disassembled by screwing the entire assembly into the end of the crankshaft. This assembly is provided with a **LEFT HAND THREAD** and must be firmly tightened. **CAUTION:** incorrect rotation of compressor unit will unscrew this assembly! Rotation must be **CCW** facing flywheel end.
9. To remove cylinder head valves — loosen (4) plugs. Remove two bolts and plate, covering valves. Remove spacers from atop each valve. Tapped holes are provided in each exhaust valve spacer for this purpose. Lift out valves. If cylinder heads have not been removed from pump, then nuts on studs must be removed also to release valve cover plate.

Crankshaft Rod Journal Diameter ..... 2.250/2.249  
Wrist Pin Diameter ..... 1.1251/.1249

**Caution:** Wrist pins are a "tap fit" into pistons! **DO NOT USE FORCE!** Forcing will remove "cam" from L.P. Pistons, resulting in "galling" of piston.

**Oversize Bearing Inserts, Piston and Piston Rings NOT AVAILABLE.**

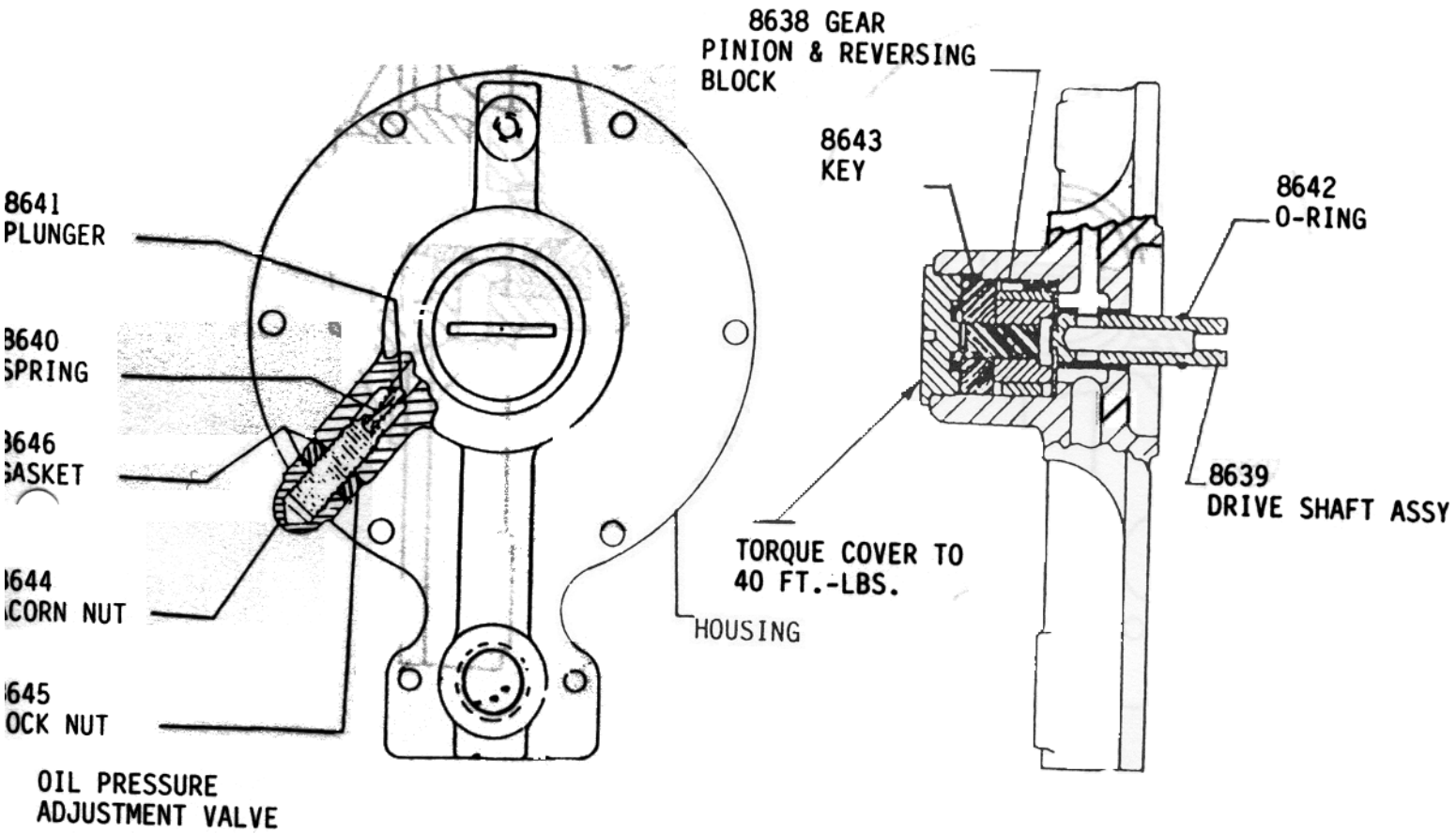
## REASSEMBLY

1. Crankshaft — install crankshaft into crankcase thru front cover hole. Rear cover must be in position.

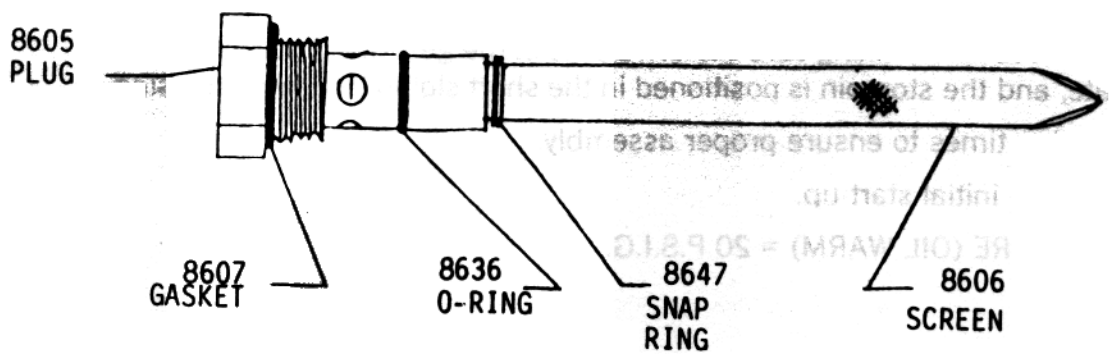
Install front cover over crankshaft being careful not to tear shaft seal. Install bolts and studs and tighten. Crankshaft end play is determined by inserting or removing "shims" under rear cover. Shims are provided in three thicknesses and the proper combination must be selected so the crankshaft can be turned freely in bearings without end play.

2. Cylinder — scored cylinders should be replaced. Set cylinder over studs in crankcase. Assemble nuts and lockwashers and tighten. Piston Rings and connecting Rod Assembly must be assembled in cylinder bores before assembling cylinders.
3. Piston — clean ring grooves and oil return holes. Assemble connecting rod in piston and push wrist pin thru — use "tap fit" on wrist pin — using "force" will remove "cam" from low pressure piston resulting in galling. If wrist piston is slightly tight — heat piston slightly before "tapping" wrist pin in. Install retaining rings. Install oil ring with expander in bottom groove, followed by the stepped scraper ring and then the two beveled compression rings. Stagger ring gaps a minimum of 90° from each other. Install the bearing inserts into the rod and cap, fitting the locating projections into grooves provided. Insert piston and rod assembly into cylinder bore (same position as removed) compressing rings to prevent breaking and scoring of cylinder wall. Assemble rod cap (after oiling both halves of insert bearing) and tighten. Rods are assembled with chamfered side toward outside of journal. Assemble splash plates so that "dipper" portion is on the outer edge of journals, (one in each direction) 9000 pump. Tap rod cap and rod to "seat" bearing inserts. Never file rod cap or use shims to adjust bearing clearance.
4. Cylinder heads — install cylinder head over studs provided in cylinder. Install valves and components (as shown) being careful not to interchange valves. When installing the spacers, position so that the "legs" **ARE NOT** in the inlet or exhaust port holes. Install cover plate, tighten and install plugs. Tighten plugs per chart.
5. Turn pump over by "hand" before starting. It is recommended that the pump be "run in" a few hours.

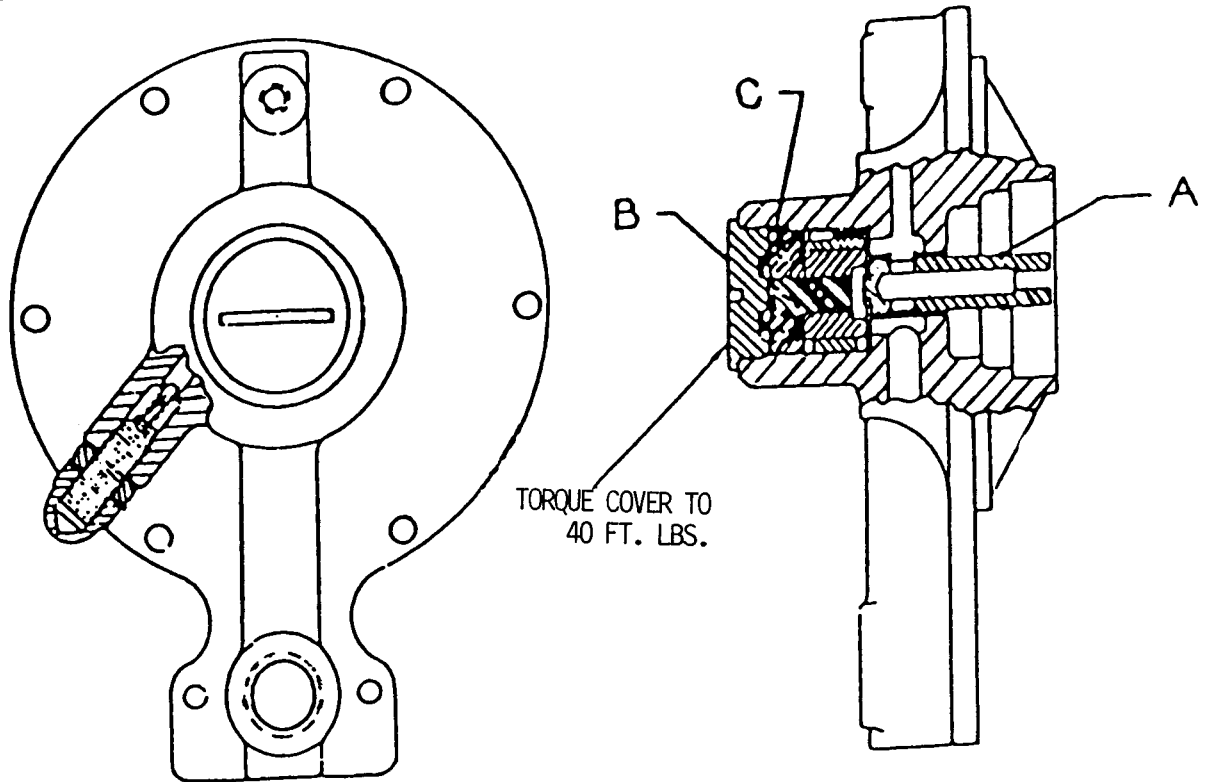
PL-4500 PL-9000  
PRESSURE LUBRICATED  
8612 OIL PUMP ASSY.



OIL PRESSURE (OIL WARM) 20 P.S.I.G.  
8604 OIL SUMP ASSY.



## PUMP DISASSEMBLY AND ASSEMBLY



### PUMP D ASSEMBLY

Remove O-Ring (A) from pump shaft

Remove pump cover (B) by turning counterclockwise.

Remove stop pin (C) with magnet.

By pushing on end of pump shaft the entire assembly can be removed.

### REASSEMBLY

Reverse the above procedure making sure the drive pins in the gear are properly aligned with the drive plate, and the stop pin is positioned in the short slot in the pump housing.

Turn pump shaft a few times to ensure proper assembly.

Prime the pump before initial start-up.

OIL PUMP OIL PRESSURE (OIL WARM) = 20 P.S.I.G.

**MODEL PL4500 & PL9000  
PRESSURE LUBRICATED  
PARTS LIST**

**(OTHERWISE SAME AS SPLASH LUBRICATED)**

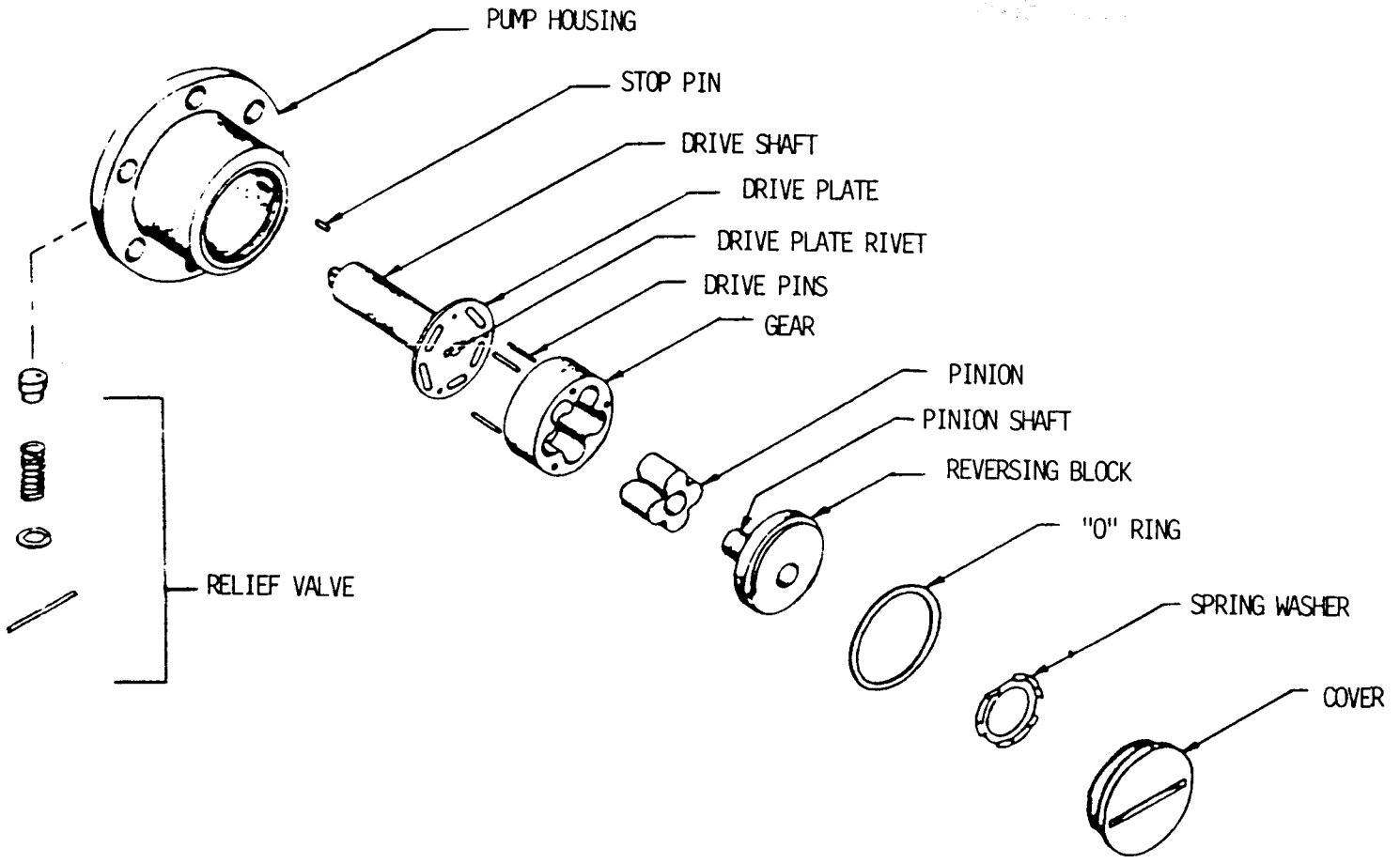
<b>PART NAME</b>	<b>PART NO.</b>	<b>NO. PL4500</b>	<b>REQUIRED PL9000</b>
OIL PUMP ASSEMBLY	8612	1	1
Housing	8611	1	1
Gear, Pinion & Reversing Block	8638	1	1
Drive Shaft Assembly	8639	1	1
O-Ring - Drive Shaft	8642	1	1
Key - Gear	8643	1	1
Spring - Relief Valve	8640	1	1
Plunger - Relief Valve	8641	1	1
Gasket - Relief Valve	8646	2	2
Locknut - Relief Valve	8645	1	1
Acorn Nut - Relief Valve	8644	1	1
OIL SUMP ASSEMBLY	8604	1	1
Plug	8605	1	1
Screen	8606	1	1
Snap Ring	8647	1	1
O-Ring	8636	1	1
Gasket	8607	1	1
SHIMS CRANK END PLAY ADJ.	8030-P	3	3
CRANKSHAFT ASSEMBLY	8002-P	--	1
Bearing Cone	8057	--	2
Drive Pin	8637	--	1
Pipe Plug	6413	--	2
CRANKSHAFT	8561-P	1	
Bearing Cone	8057	2	
Drive Pin	8637	1	
Pipe Plug	6413	1	
CRANKCASE	8001-P		1
CRANKCASE	8470-P	1	
FRONT COVER ASSEMBLY	8006-P	1	1
Bearing Cup	8058	1	1
CONNECTING ROD	8014-P		4
CONNECTING ROD	8564-P	2	
OIL PRESSURE GAUGE	8614	1	1
BOLT-BOTTOM PUMP HOUSING	4130	2	2
NIPPLE — 1/4 x 1-1/4 - CRANKCASE BREATHER	692-K	2	2
ELBOW 1/4" CRANKCASE BREATHER	487-K	1	1
COUPLING 1/4" CRANKCASE BREATHER	3998-K	1	1
BREATHER ASSEMBLY - CRANKCASE (Front Cover)	4722	1	1



MODEL NUMBER  
PRESSURE TOL.  
PART  
OTHERWISE BARE

3344 72

YJ2143



# PLEASE NOTE

## WARRANTY

Saylor-Beall Manufacturing Co. warrants its compressors and parts when properly installed, lubricated and maintained as recommended and in accordance with good industry practice to be free from defects in material and workmanship under normal use and service. The responsibility of the Company under this warranty is limited to repair or replacement, at the Company's factory, any compressor or part thereof, which shall, within one year after date of shipment to the original purchaser, be returned to the company and which, upon examination, shall be found to be defective to the satisfaction of the Company.

This warranty shall not apply to compressors or parts which have been subjected to misapplication, misuse, negligence or accident, to compressors or parts which have been repaired or tampered with outside of the Company's factory when in the judgment of the Company, it appears that the reliability or stability of the compressor or part has been effected. Ordinary maintenance, such as adjustment and cleaning of equipment or components is the responsibility of the owner. All transportation and shipping charges shall be paid by purchaser.

This warranty does not apply to electric motors or gasoline engines. These are covered by the Original Manufacturer's Warranty and should be returned by the purchaser to their authorized station for service.

This warranty is expressly in lieu of all other warranties (except of title) expressed or implied and of any other obligations or liability on the part of the Company. There are not warranties of merchantability or of fitness for a particular purpose.

SAYLOR-BEALL MANUFACTURING COMPANY

QW



**SAYLOR-BEALL MANUFACTURING COMPANY**

**ST. JOHNS, MICHIGAN 48879**

*Manufacturers of Air Compressors since 1915*