

Operations Manual

P5-5000-00

P5-5000-02

P5-5000-03

4.0 Ratio Pneumatic Intensifier

Vekttek, Inc.
1334 East Sixth Avenue
Emporia, Kansas 66801
1-800-992-0236

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Notice: Do not apply less than 60-psi air pressure to the intensifier. Air pressure less than 60-psi air pressure may not be sufficient to cycle the intensifier pump.

1.0 INSTALLATION

1.1 Mounting

The intensifier is supplied with mounting brackets at each end of the intensifier (for $\frac{1}{2}$ inch screws).

The intensifier may be mounted vertically or horizontally.

CAUTION Before installing, verify that all devices to be used in the clamping circuit are rated for the required (250 max) clamp circuit pressure.

1.2 Connections:

Connect clean, filtered shop air (60 PSI minimum) to the AIR IN port on the intensifier. No external air pressure regulator or lubricator is required.

Connect the circuit to be intensified to the CLAMP port.

Note- All valves used on the intensifier must have a working pressure rating of at least 250 psig.

1.3 Startup:

Rotate the air pressure regulator knob counterclockwise to its minimum pressure position.

Turn on the air supply to the intensifier by actuating the air valve to the clamp position.

Rotate the regulator knob clockwise. Air will start to flow through the intensifier. The intensifier pump will start to cycle when the clamping circuit pressure reaches the crossover point. Using a pressure gauge installed in the clamping circuit to monitor output pressure; continue rotating the pressure regulator knob until the desired output pressure is reached-**Not to exceed 250 psig**. As a reference, the gage mounted on the input side of the intensifier will read a pressure level approximately one fourth (1/4) of the clamp circuit pressure.

The intensifier pump will stall when circuit pressure reaches four times the regulated pump pressure. If the clamping circuit develops a leak, the intensifier will automatically cycle to maintain pressure. It is recommended at this time, that the circuit be inspected for leaks and repaired.

CAUTION: This unit has a 4.0 intensification factor. Do not increase the regulated input pressure beyond 62 psi. This will result in an output pressure greater than 250 psi, which will effect product warranties and may create a hazardous work environment.

2.0 Maintenance

2.1 Scheduled Maintenance:

The main air spool and its seals are to be lubricated with pneumatic grade grease every six months, or sooner depending on the usage of the intensifier.

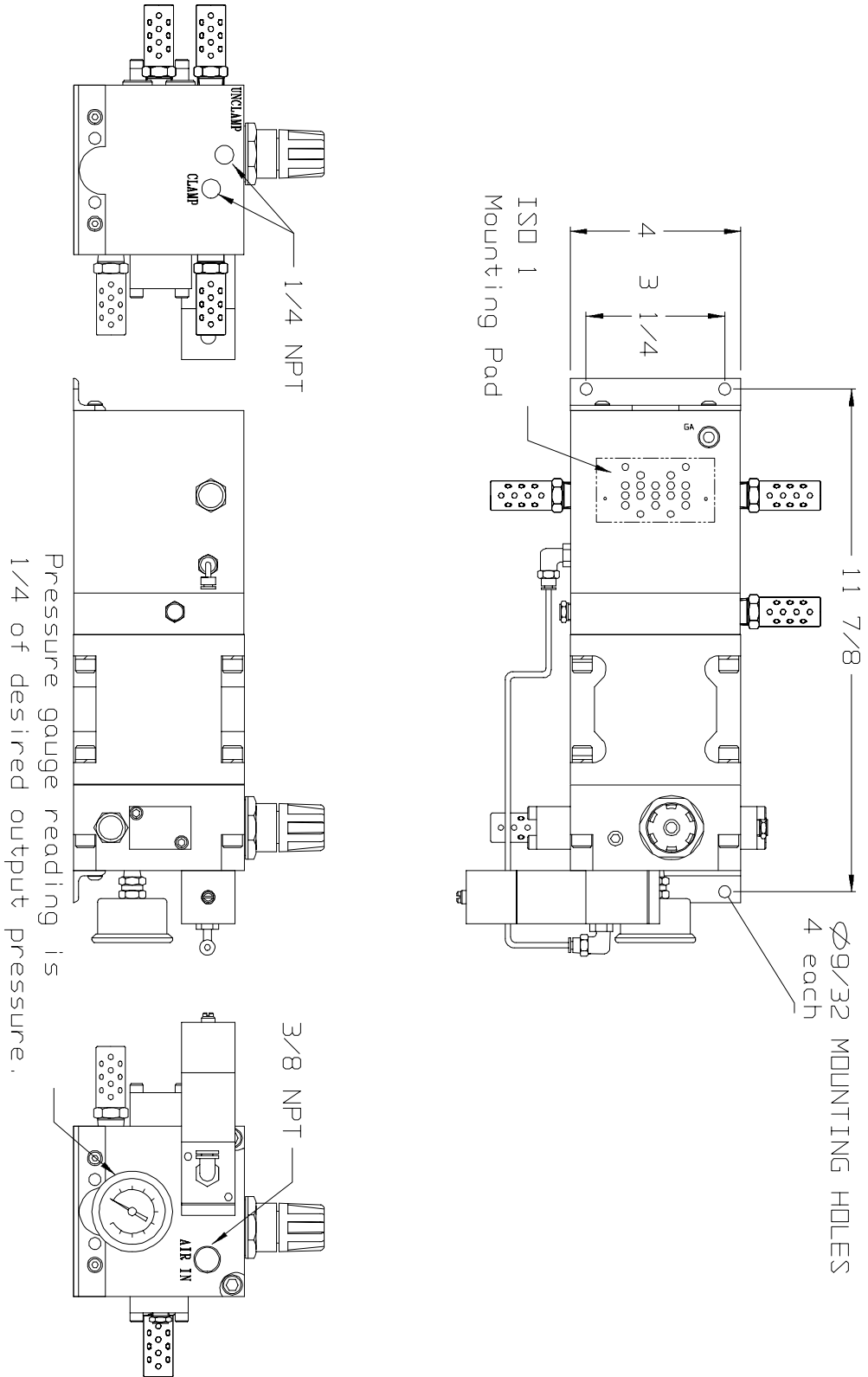
2.2 Troubleshooting Guide

Symptom	Probable Cause	Remedy
The intensifier will not cycle.	No air supply to the intensifier inlet port. The inlet air pressure is too low for the pump to cycle.	Locate and fix. Increase the inlet air pressure.
Pump <u>still</u> will not cycle.	The four-way air reciprocating valve spool is stuck at its mid position After trying the remedy above, the spool still sticks:	Disconnect and reconnect the air supply, which resets the air spool to the start position. Remove the breather from the spool cap. With an appropriately sized probe, push the spool to the far end of its stroke. If it is stuck or requires excessive force, disassemble the air valve assembly and inspect for contamination or mechanical binding. Repair or replace the spool, lubricate the seals with pneumatic grade grease and reassemble.
The pump makes one cycle and then stops.	The 2-way air valve is leaking, broken or dirty	Repair or replace
The pump cycles continuously without pressurizing the system.	External leak at pump or downstream in the high-pressure circuit. The check valve cartridge is stuck open or contaminated (2 places) There is an internal leak in the pump	Locate and correct. Clean or replace. Examine all dynamic and static seals and gaskets. Replace as necessary.

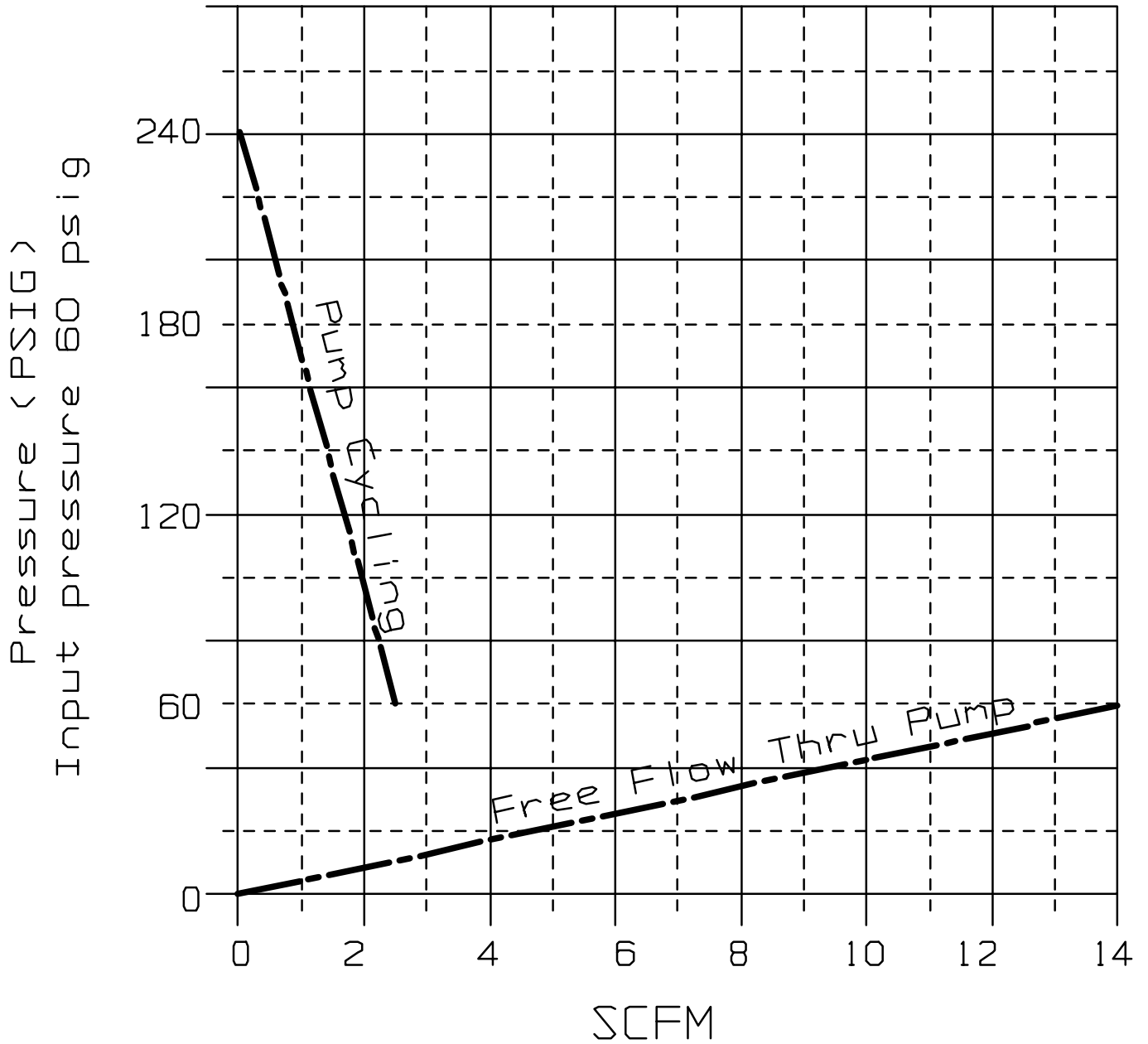
For maintenance or repairs beyond the scope of this manual, contact Vekttek, Inc. at 1-800-992-0236

3.0 Drawings

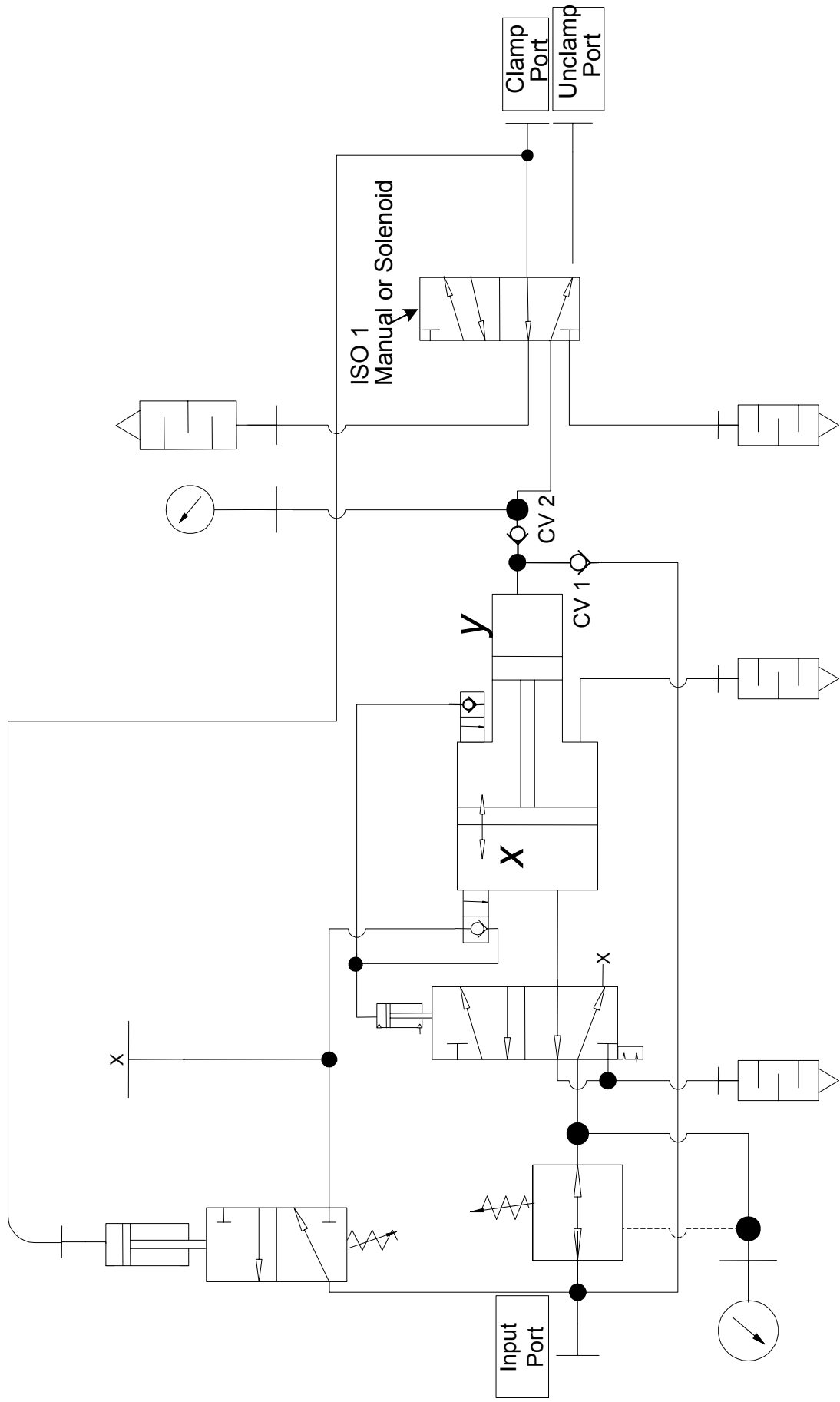
3.1 General View



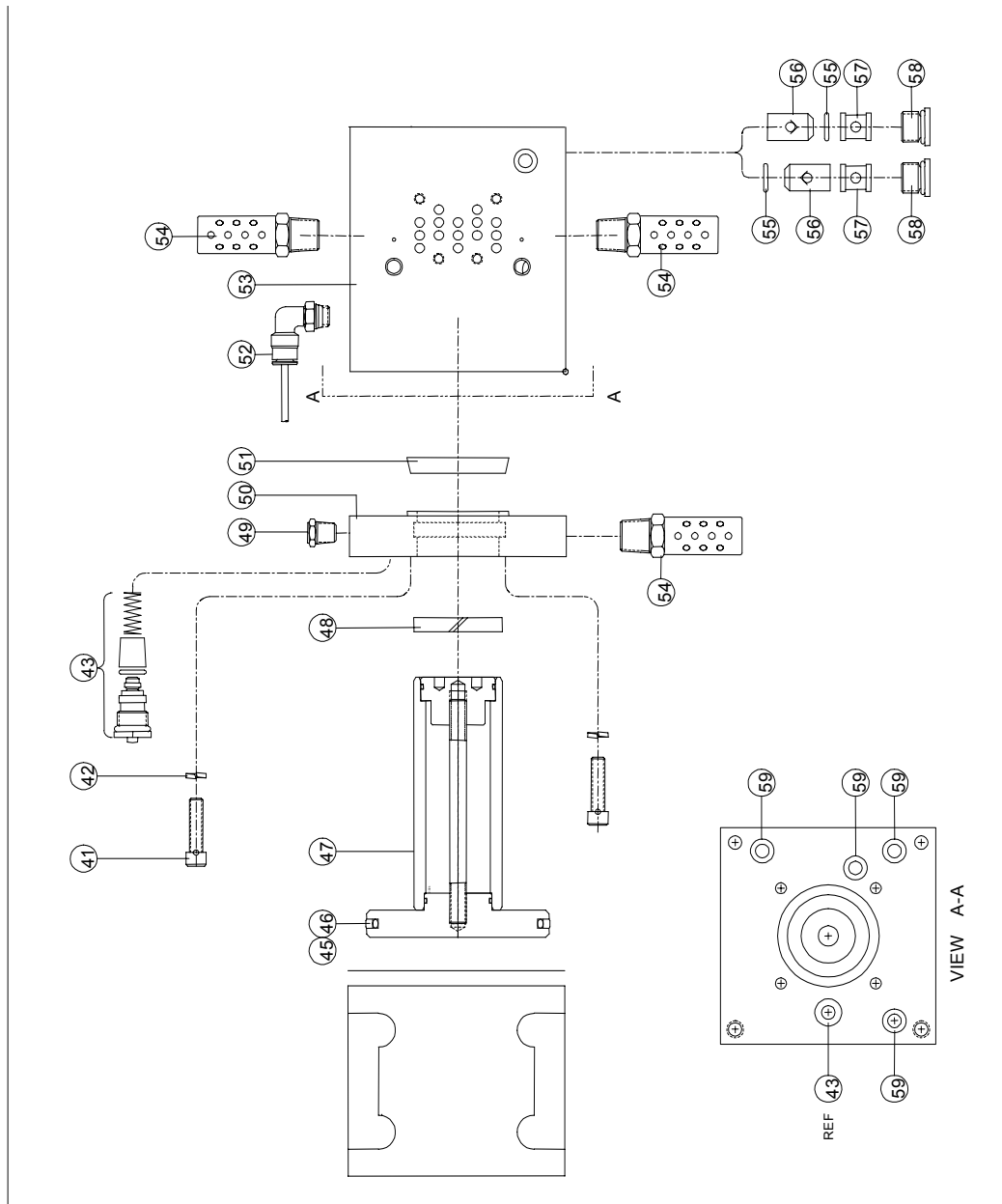
3.2 Pneumatic Flow Chart



3.3 Pneumatic Schematic



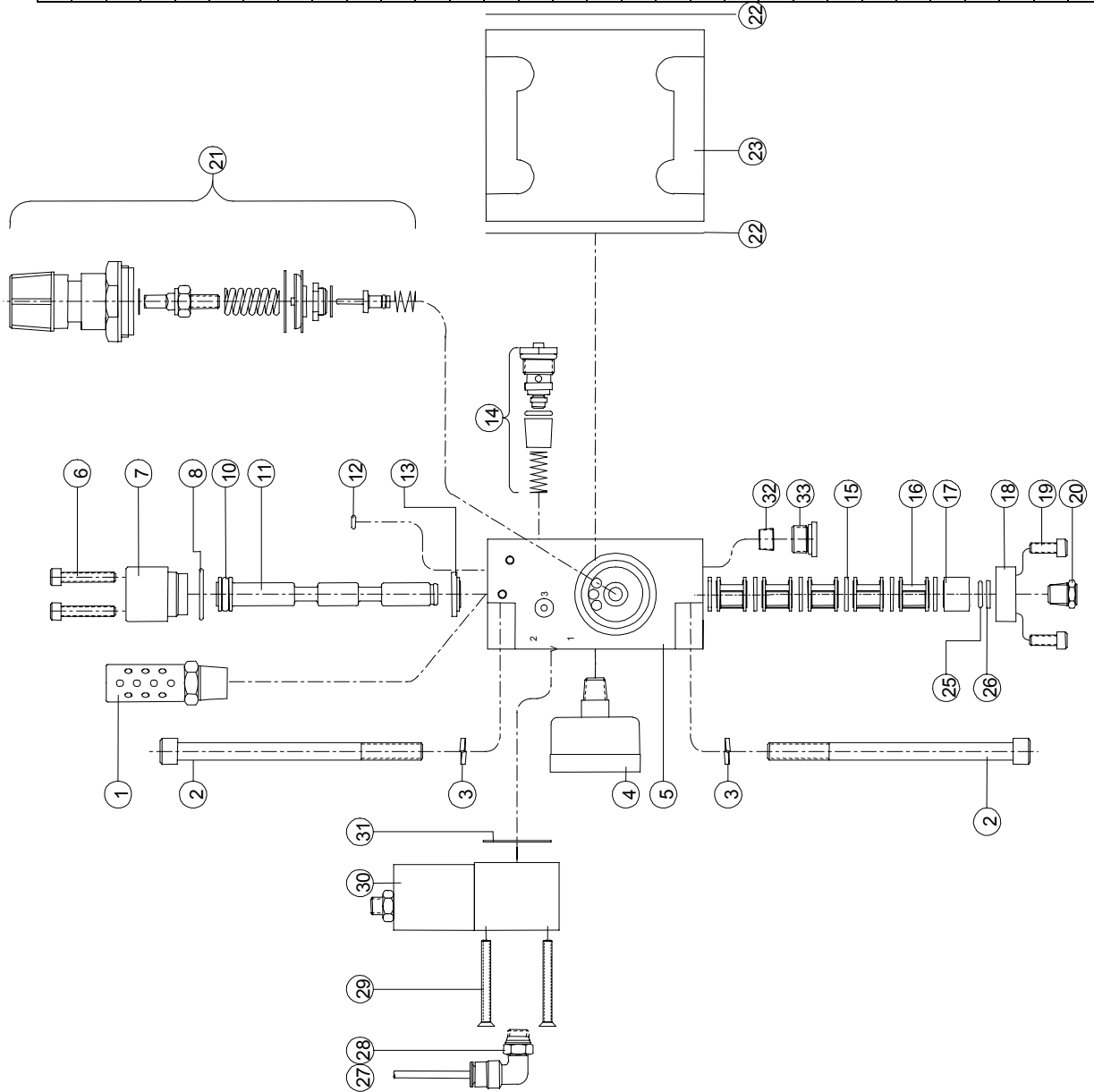
3.4 Pump Section Parts List



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Item	Qty	Part Number	Description
58	2	30-6011-66	SAE 6 Plug
57	2	10605 P00-5603	Check Valve Retainer
56	2	2203-B	Check Valve
55	2	39-0020-09	O-ring
54	3	55-2500-34	3/8 NPT Muffler
53	1	10106 P31-5605	Air Booster Body
52	1	P3-0111-00	Elbow, Male, 1/8 Tube
51	1	W10MSR325ZZ1103	Variseal
50	1	11084	Ratio Plate
49	1	55-2500-35	1/8 NPT Breather
48	1	GROA-01500-T24	Slyd Ring
47	1	11471 P31-1502	Piston Assembly
46	1	36G03375-29	Glyd Ring
45	1	SO-233B7	O-ring
43	1	10017 V04-10051	Air Valve Assy, 2-Way
42	4	21-4300-29	Lock Washer, °
41	4	° -20 x 1	Socket Head Cap Screw

3.5 Valve Section Parts List



Item	Qty	Part Number	Description
33	1	5HPON	Plug, SAE 5
32	1	50-6010-00	Pipe Plug, 1/8
31	1	10333 V04-5001	Gasket
30	1	11423 V04-1006	Valve, Sequence
29	2	M4 x 40	Cap Screw, Flat Hd
28	1	P3-0111-00	Male Elbow
27	1	P3001500	Tubing, Tubing
26	1	39-0540-10	Back-up ring
25	1	SO-012 6865	O-ring
23	1	10112 P10-5203	Body, Air Cylinder
22	2	10334 P00-5205	Gasket, Air Body
21	1	10016 P10-1202	Air Regulator Assy
20	1	10264	Breather, 1/8 NPT
19	2	10-24 x .62	Screw, Soc Hd Cap
18	1	10299 P00-5208	Cap, Spool
17	1	10269 P00-5210	Bushing, Long
16	5	10273 P00-5209	Cage
15	6	10629	Tee Seal
14	1	10017 V04-1005	Air Valve Assy, 2-way
13	1	10271 P00-5212	Bushing, Short
12	1	55-2500-41	O-ring
11	1	10942 P33-5201	Spool, Air Valve (Solid)
9	1	SO-111CN7	O-ring
8	1	39-0500-58	O-ring
7	1	10298 P00-5207	Cap, Pilot
6	2	21-4110-18	10-24 x 1 SHCS
5	1	11446 P31-5203	Housing, Air Cap
4	1	50-2010-00	Gauge, Air (0-160 psi)
3	4	21-4300-28	Lock washer, 5/16
2	4	5/16-18 x 4.5	Screw, Soc, Hd, Cap
1	1	55-2500-34	Muffler, 3/8 NPT