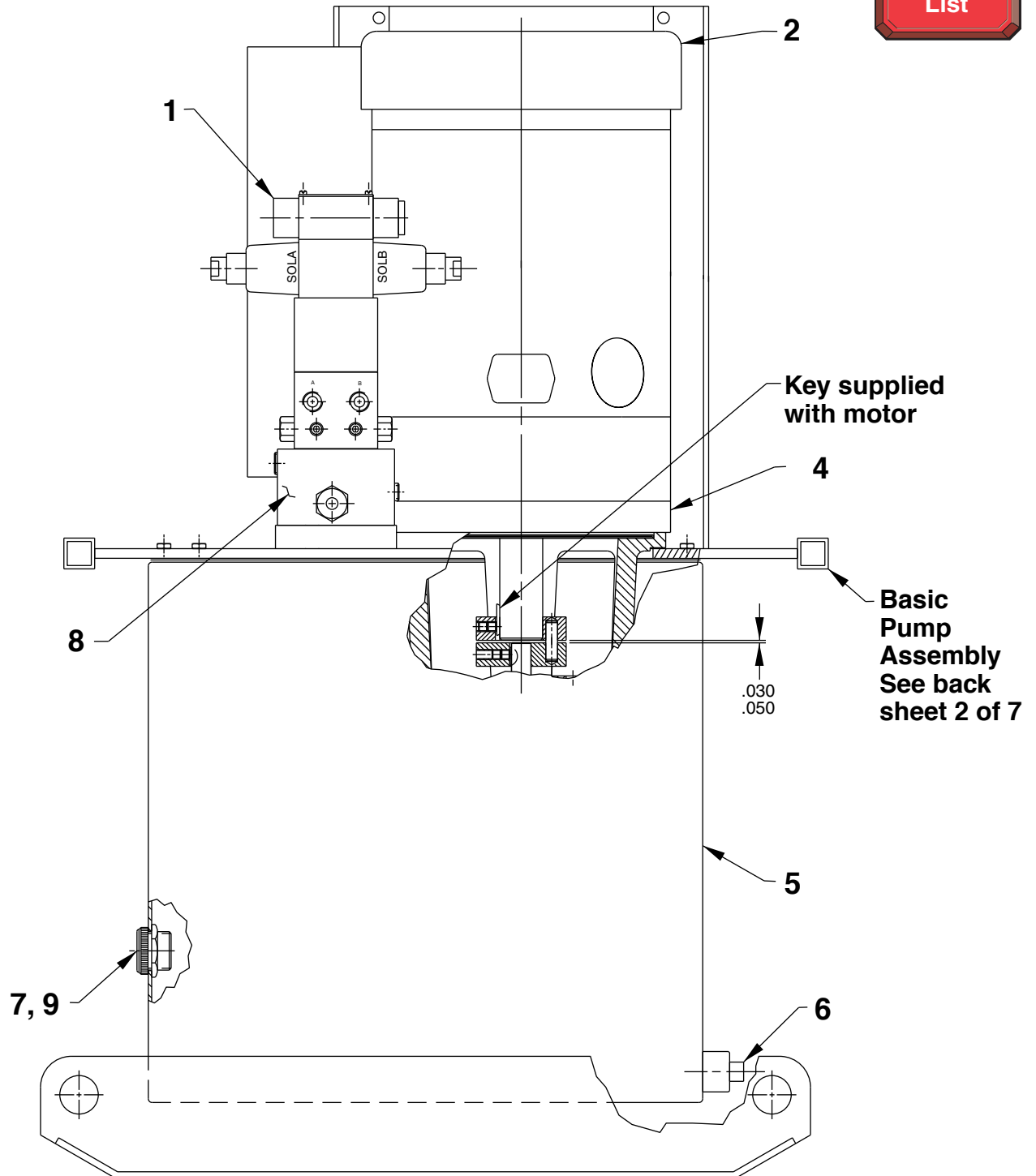


MODEL A ELECTRIC HYDRAULIC PUMP



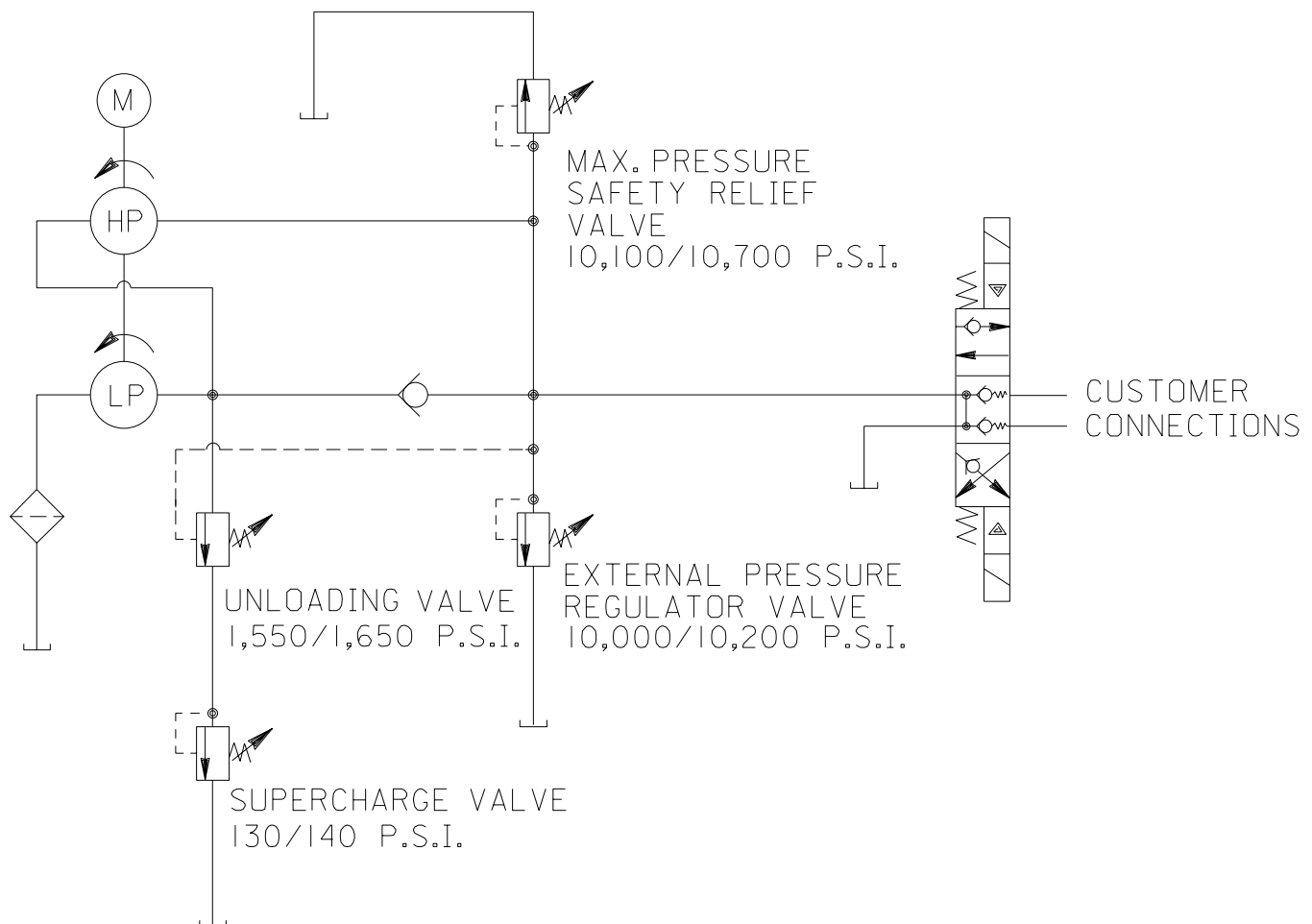
Item No.	Part No.	No. Req'd	Description
1	16664-1	1	Solenoid Valve
2	58719	1	Electric Motor (230 V., 60 Hz.)
4	58707	1	Motor Base
5	60430BL2	1	Reservoir
6	11049	1	Drain Plug (3/4 NPTF)
7	17586	1	Sight Gauge
8	64627	1	Valve (3 pos., 4-way Solenoid; See sheet 6 of 7)
9	253300	1	Seal Washer
10	16664-1	1	Solenoid Valve (110/120 V.)

PARTS INCLUDED BUT NOT SHOWN

10027	16	Screw, HX HD Cap (5/16-18 x 5/8)
13116	16	Nut, Hex Lock (5/16-18)
214486	4	Caster, Swivel (4")

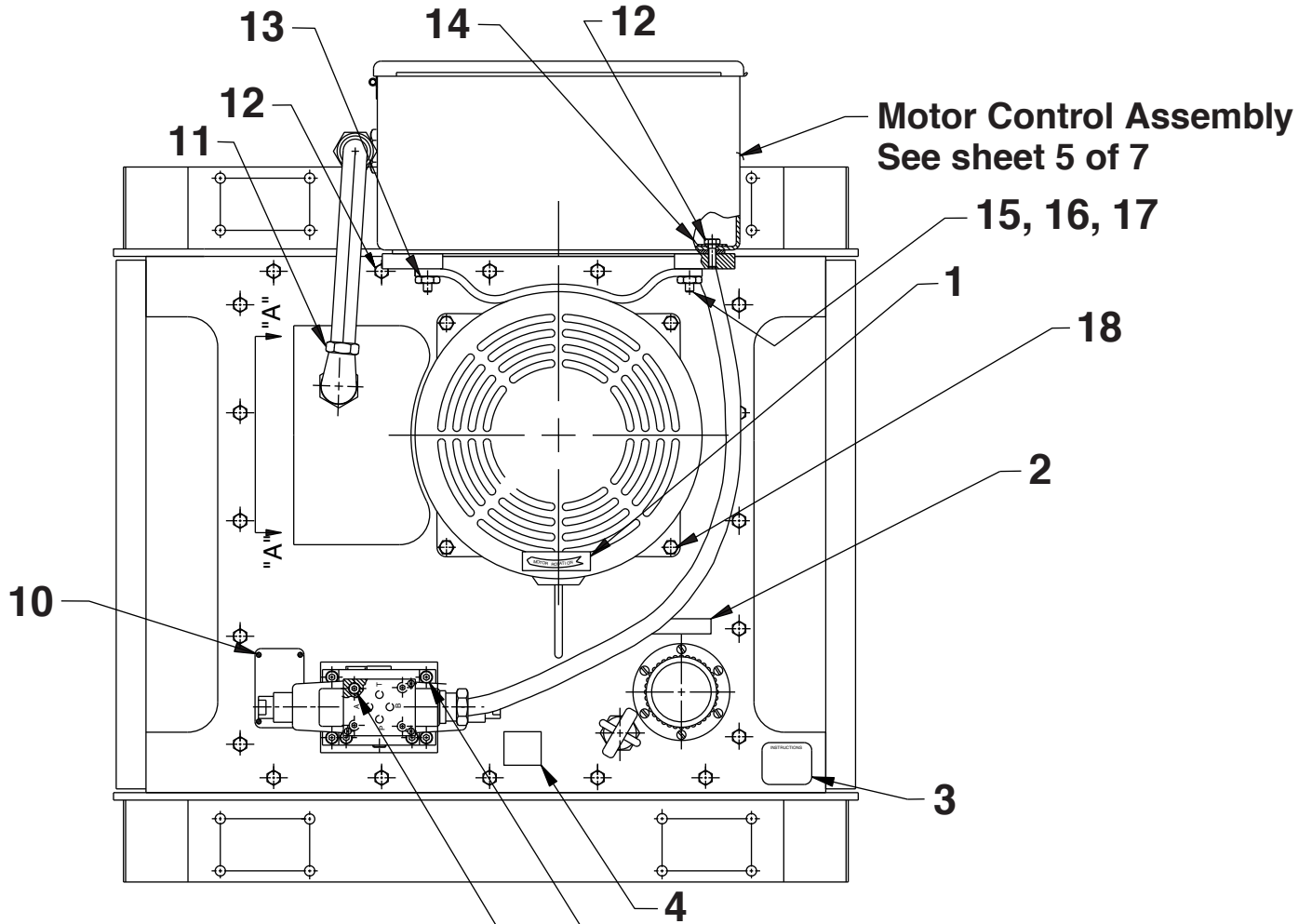


HYDRAULIC SCHEMATIC



Note: Shaded areas reflect last revision(s) made to this form.

PUMP TOP VIEW



VALVE MOUNTING SCREWS
(TORQUE TO 35/40 IN. LBS.)

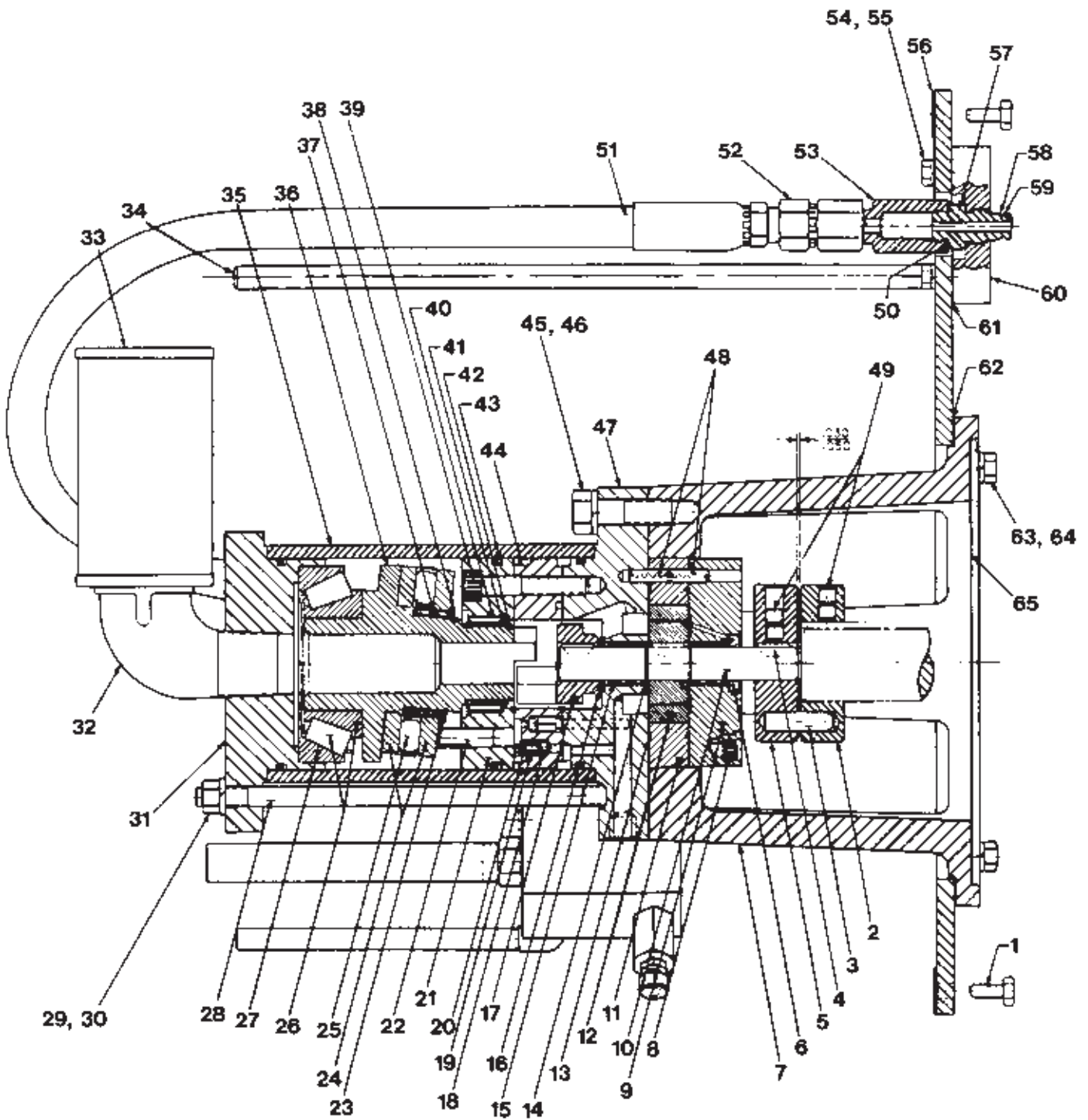
1/4-20 MOUNTING SCREWS
(TORQUE TO 70/80 IN. LBS.)

Item No.	Part No.	No. Req'd	Description
1	27556	1	Rotation Decal
2	251874	1	Information Decal
3	203755	1	Instructional Decal
4	205112	1	Patent Number
10	10575	4	Drive Screw (#2 x 3/16 Lg.)
11	13343	1	Conduit Connector
12	10009	4	Hex HD Cap Screw (1/4-20 x 3/4)

Item No.	Part No.	No. Req'd	Description
13	421172	2	Bracket
14	10245	4	Lock Washer (.49 x .26)
15	251553	4	Flat HD Screw (3/8-16 x 1-3/4)
16	10204	4	Hex Nut (3/8-16)
17	10247	4	Lock Washer (.68 x .39)
18	10083	4	HH Cap Screw (1/2-13 x 1-1/2)

Note: Removed Items #5 thru 9 at last revision(s) made to this form.

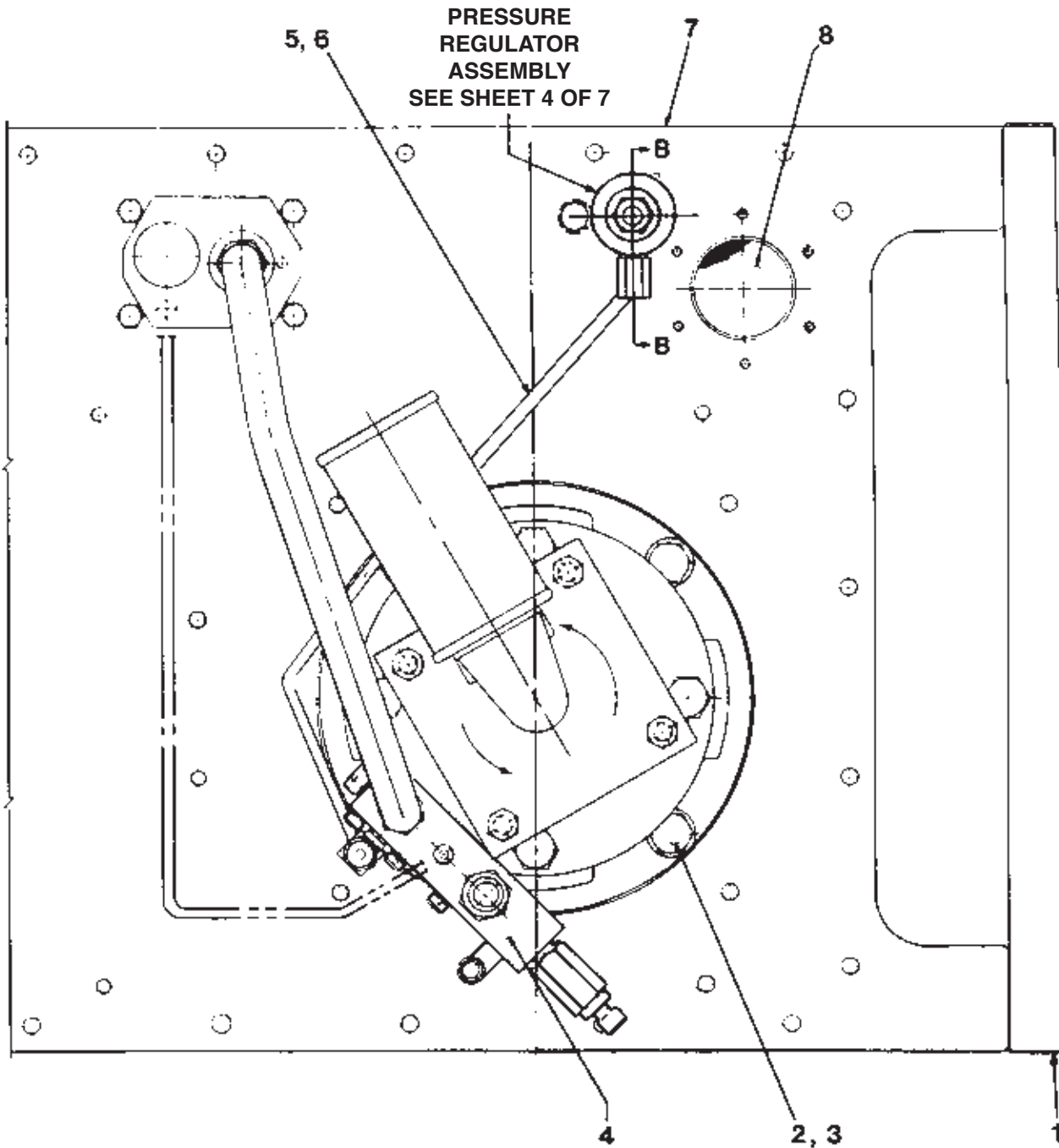
BASIC PUMP ASSEMBLY SIDE VIEW



Item No.	Part No.	No. Req'd	Description	Item No.	Part No.	No. Req'd	Description
1	10009	20	Hex Hd. Cap Screw (1/4-20 x 3/4 Lg.)	35	37384	1	Pump Housing
2	37387	1	Coupling	36	51059	1	Angle Plate
3	203485	2	Nylon Pin	37	203476	1	Bushing
4	204537	3	Woodruff Key (1/8 x 5/8)	38	17566	1	Special Washer (Steel; 2-1/4 x 1.765 x 1/16 thk.)
5	37386	1	Coupling	39	11531	8	Soc. Hd. Cap Screw (3/8-16 x 2" Lg.; Cross torque in increments of 100 in. lbs. to 340/360 in. lbs. Note: Used on pumps built before 2-21-97.)
6	12194	1	Oil Seal Packing (1-1/8 x 5/8)		12866	8	Soc. Hd. Cap Screw (3/8-16 UNC x 2-1/4" Lg.; Cross torque in increments of 100 in. lbs. to 460/480 in. lbs. Note: Used on pumps built after 2-21-97.)
7	51089	1	Mounting Bracket				
8	10854	6	Soc. Hd. Cap Screw (1/4-20 x 1-3/4 Lg.; Cross torque to 80/100 in. lbs.)	40	17505	1	Needle Bearing
9	51064	1	Front End Plate	41	17504	1	Race Bearing
10	37376	1	Pump Shaft	42	17312	1	Retainer Ring (External; 1-3/8 Lg.)
11	42782	1	Eccentric (Ring)	43	11931	3	O-ring (4" x 3-3/4 x 1/8)
12	17313	1	Gerotor Set	44	42732	1	Valve Head
13	17315	2	O-ring (2-7/8 x 2-3/4 x 1/16)	45	10083	4	Hex Hd. Cap Screw (1/2-13 x 1-1/2 Lg.; Torque to 80/100 in. lbs.)
14	12178	2	Retainer Ring (External; 5/8 shaft)	46	10249	4	Spring Lockwasher (1/2)
15	15430	2	Needle Bearing (5/8 x 13/16 x 5/8 w.)	47	60415	1	Pump End Plate
16	17435	1	Thrust Washer (1" x 5/8 x 1/8)	48	17567	4	Spring Pin (1/4 x 3/4 Lg.)
17	37378	1	Drive Coupling	49	10141	4	Set Screw (5/16-18 x 5/16 Lg.)
18	10374	16	Steel Ball (7/32 dia.)	50	10261	1	Soft Copper Washer
19	203477	16	Ball Guide	51	303838	1	Hydraulic Hose (3/8 I.D. x 27" Lg.)
20	17319	16	Compression Spring (1/8 O.D. x 1/2 Lg.)	52	17582	1	Swivel Fitting
21	43313	1	Pump Barrel	53	21566	1	Valve Body
22	204578	8	Piston (.399 dia.; NOTE: Install piston with 6° angle toward angle plate.)	54	10009	4	Hex. Hd. Cap Screw (1/4-20 x 3/4 Lg.)
23	14368	1	Retainer Ring (External; 1-3/4 shaft)	55	10245	4	Spring Lockwasher (1/4)
24	17316	2	Race Bearing	56	42779	1	Reservoir Gasket
25	17317	1	Thrust Bearing	57	201817	1	Valve Connector
26	17311	1	Cone Bearing	58	11863	1	Backup Washer (PTFE)
27	17318	1	Race Bearing (Cup)	59	10268	1	O-ring (1/2 x 3/8 x 1/16)
28	203542	4	Tie Rod	60	43110	1	Valve Mounting Block
29	10204	4	Steel Nut (3/8-16; Cross torque in increments of 50 in. lbs. to 170/180 in. lbs.)	61	200395	1	Gasket
30	10247	4	Spring Lockwasher (3/8)	62	42796	1	Gasket (Mounting Bracket)
31	42737	1	End Cap	63	10032	4	Hex. Hd. Cap Screw (5/16-18 x 1" Lg.)
32	10706	1	90° Pipe Elbow	64	10246	4	Spring Lockwasher (5/16)
33	17491	1	Filter	65	42757	1	Gasket (Electric Motor)
34	204265	1	Drain Tube				

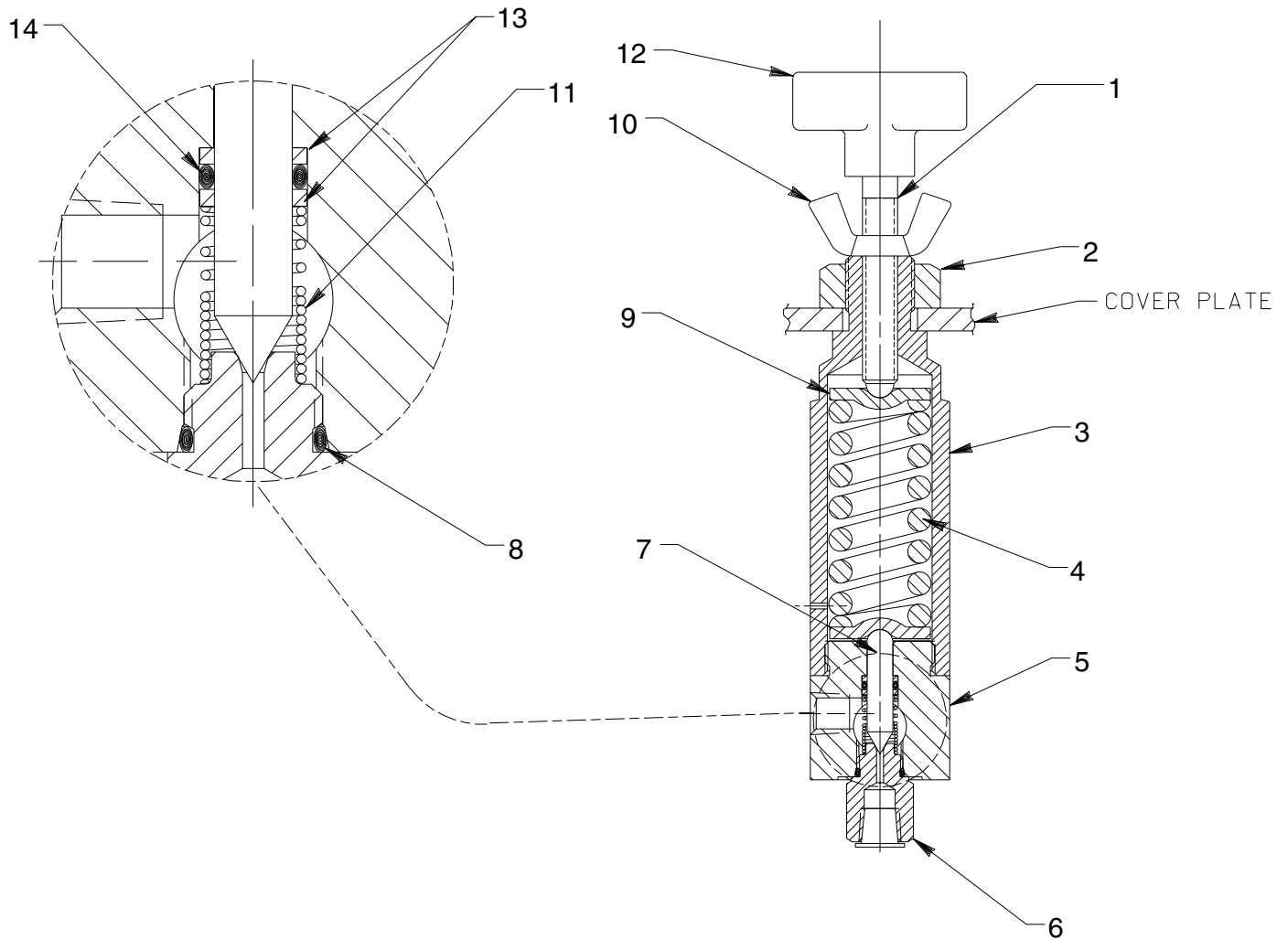


BASIC PUMP ASSEMBLY BOTTOM VIEW



Item No.	Part No.	No. Req'd	Description
1	12126	4	Square Insert
2	11623	4	Hex. Hd. Cap Screw (1/2-13 x 1-1/4 Lg.)
3	10249	4	Spring Lockwasher (1/2)
4	42795	1	Unloading Valve Assembly (See back sheet 4 of 7)
5	43647	1	Oil Line (Pressure Regulator)
6	12696	1	Straight Connector
7	51098WH2	1	Cover Plate Weldment
8	13167	1	Filter/Breather Assembly

PRESSURE REGULATOR ASSEMBLY



Item No.	Part No.	No. Req'd	Description
1	215721	1	Stem (NOTE: Assemble to Tee Knob [Item #12] with Loctite No. 242 or equivalent.)
2	10396	1	Jam Nut (3/4-16)
3	309077	1	Spring Housing
4	215429	1	Compression Spring (1.100 O.D. x 2-1/2 Lg.)
5	47648	1	Regulator Body
6	309078	1	Seat Fitting
7	309079	1	Poppet
8	13755	1	O-ring (9/16 x 13/32 x 5/64)
9	215428	2	Spring Retainer (Grease pocket before assembling. [Both sides])
10	215683	1	Wing Nut
11	215431	1	Compression Spring (NOTE: Assemble closed coils of spring form towards seat fitting [Item #6].)
12	215693	1	Tee Knob
13	215430	2	Backup Washer (3/8 x 9/32 x 3/64)
14	10266	1	O-ring (3/8 x 1/4 x 1/16)

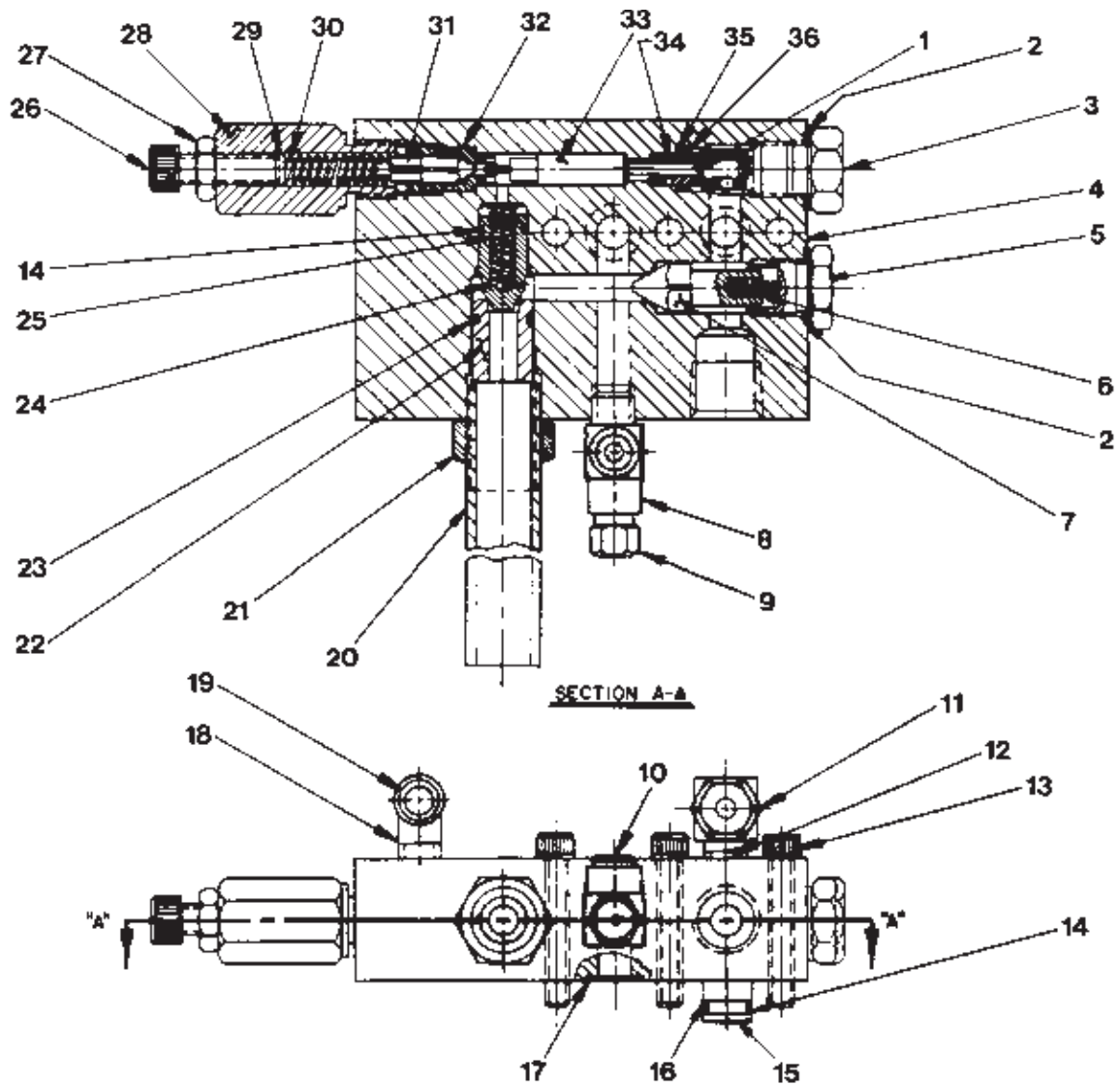
PARTS INCLUDED BUT NOT SHOWN

11127	2	Plug (3/8 NPTF Male)
10427	1	Plug (1/8 NPTF Male Hex)
10475	1	90° Tube Elbow
14463	1	Pipe Nipple (5-1/2 Lg.)

Sheet No. 4 of 7

Rev. 5 Date: 25 May 2012

UNLOADING VALVE ASSEMBLY

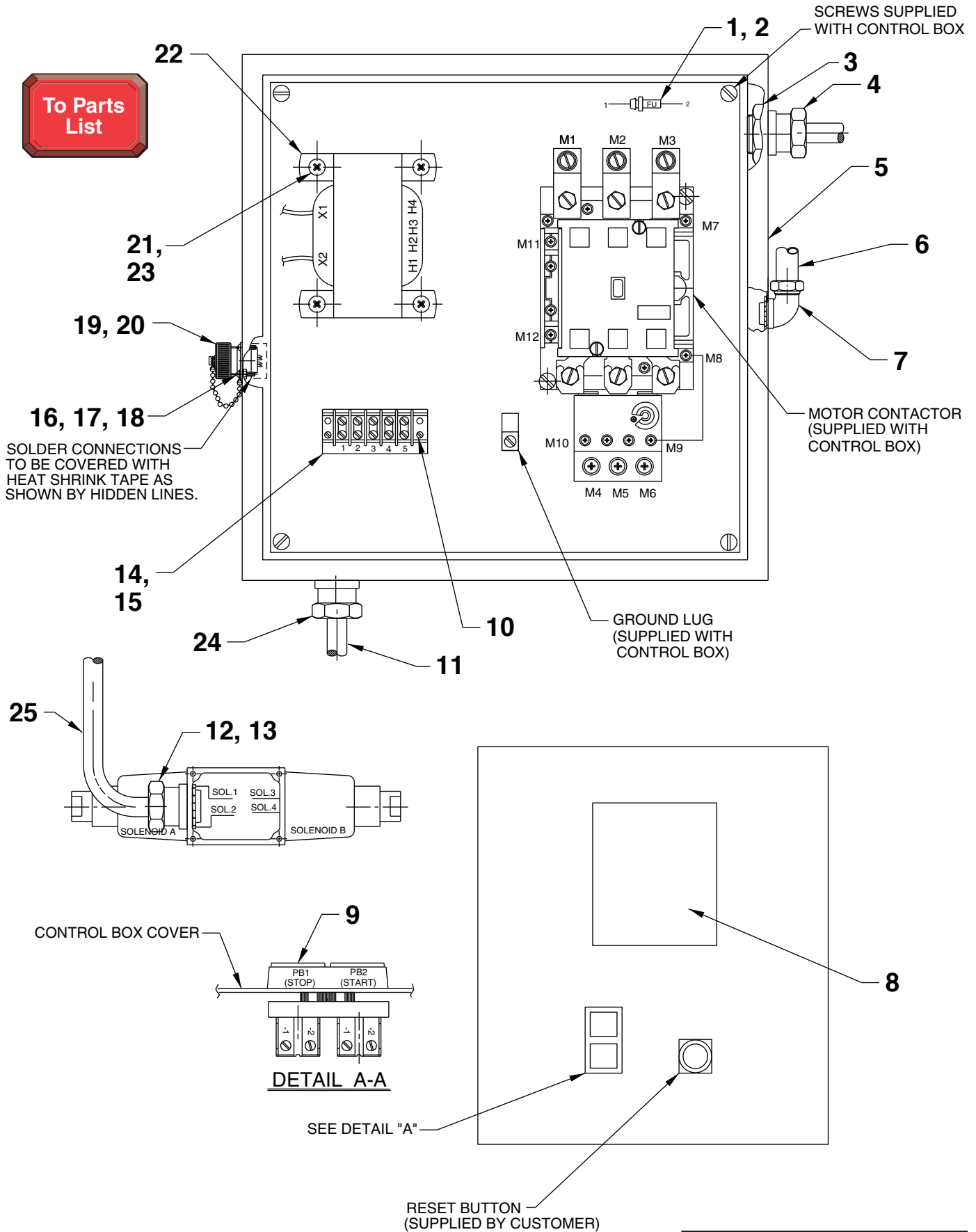


Item No.	Part No.	No. Req'd	Description
1	12149	1	Dowel Pin (1/8 dia. x 3/4 Lg.)
2	10261	2	Copper Washer (19/32 x 3/4 x 1/32)
3	37430	1	Adapter (Torque to 35/40 ft. lbs.)
4	60414	1	Valve Body
5	205394	1	Valve Plug (Torque to 35/40 ft. lbs.)
6	15141	1	Compression Spring (.180 O.D. x 5/8 Lg.)
7	205393	1	Poppet (Seat at assembly)
8	18969	1	Tee Fitting
9	306957	1	Air Bleed Valve
10	10427	1	Pipe Plug (1/8 NPTF)
11	21278	1	Relief Valve Assembly (Set at 10,100/10,700 PSI)
12	24702	1	Tee
13	10022	3	Soc. Hd. Cap Screw (1/4-20 x 1-1/2 Lg.)
14	10268	3	O-ring (1/2 x 3/8 x 1/16)
15	21094	1	Bushing
16	11863	2	PTFE Backup Washer
17	12098	1	O-ring (9/16 x 7/16 x 1/16)
18	13229	1	90° Elbow

Item No.	Part No.	No. Req'd	Description
19	14463	1	Drain Tube
20	203620	1	Drain Tube
21	10396	1	Jam Nut (3/4-16)
22	203621	1	Bushing
23	10301	1	O-ring (5/8 x 1/2 x 1/16)
24	37423	1	Poppet (Seat at assembly)
25	11221	1	Compression Spring (.240 O.D. x 1" Lg.)
26	11013	1	Soc. Hd. Cap Screw (5/16-18 x 1" Lg.)
27	10385	1	Jam Nut (5/16-18)
28	36545	1	Fitting (Torque to 25/30 ft. lbs.)
29	16528	1	Spacer
30	17413	1	Compression Spring
31	203541	1	Poppet (Seat at assembly)
32	37427	1	Guide
33	203540	1	Plunger Assembly
34	17414	1	Bushing (1/16 x 1/8 x 1/2 Lg.)
35	15085	1	PTFE Backup Washer (7/16 x 5/16 x 1/16)
36	10267	1	O-ring (7/16 x 5/16 x 1/16)

MOTOR CONTROL ASSEMBLY

To Parts List

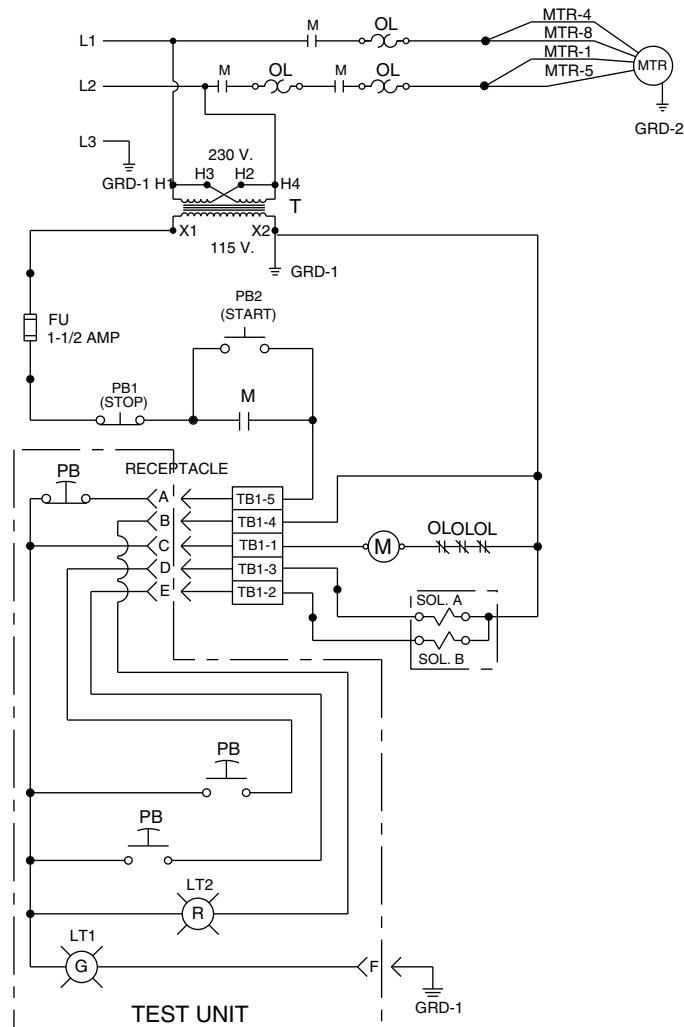


Item No.	Part No.	No. Req'd	Description
1	214110	1	Fuse (1.5 AMP, 250 V.)
2	16887	1	Fuse Holder
3	252107	1	Conduit Locknut
4	252106	1	Strain Relief Bushing
5	251907	1	Control Box
6	13340	.75 ft.	Electrical Conduit
7	13343	1	Conduit Connector
8	200188	1	Warning/Important Decal
9	309019	1	Push Button Switch
10	11426	2	Screw (6-32 UNC x 1/2 Lg.)
11	251942	25 ft.	Electrical Cable (8/3 SJTO)
12	252083	1	Conduit Connector
13	11362	1	Conduit Locknut

Item No.	Part No.	No. Req'd	Description
14	17841	1	Terminal Block
15	17842	1	Marker Imprinted Strip
16	11835	4	Screw (4-40 UNC x 1/2 Lg.)
17	15907	4	Lockwasher (#4 External Tooth)
18	10194	4	Hex Nut (#4-40 UNC)
19	350269	1	Receptacle
20	250438	1	Protective Cap
21	14812	4	Screw (#8-18 X 3/8 Lg.)
22	38962	1	Transformer
23	11108	4	Ext. Tooth Washer (.40 x .20)
24	17840	1	Conduit Connector
25	15424	2.5'	Flex Steel Conduit

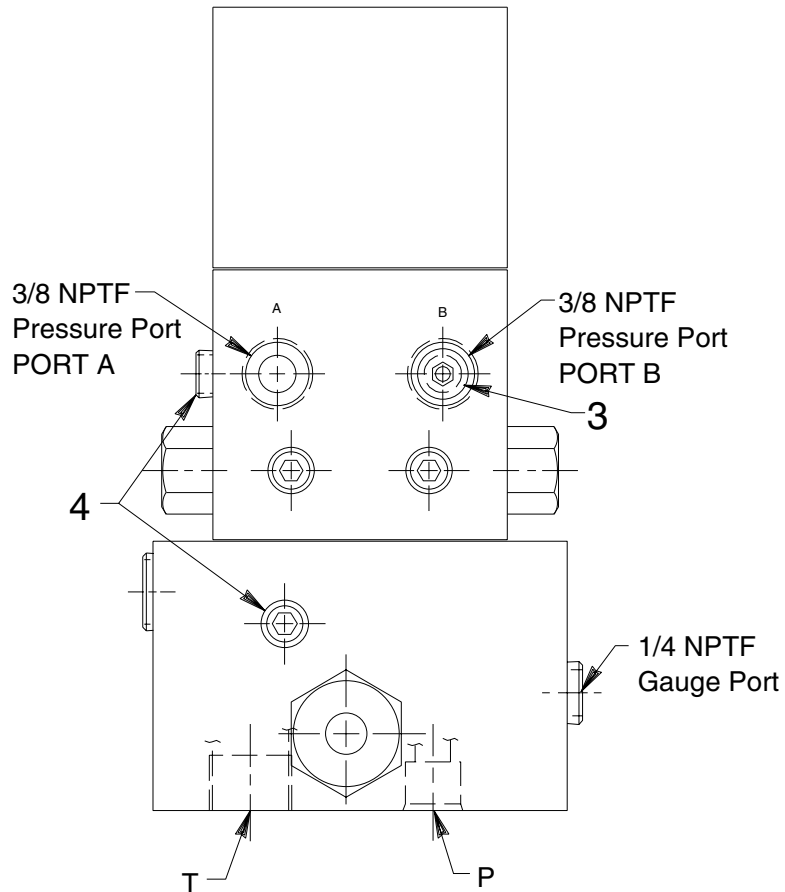
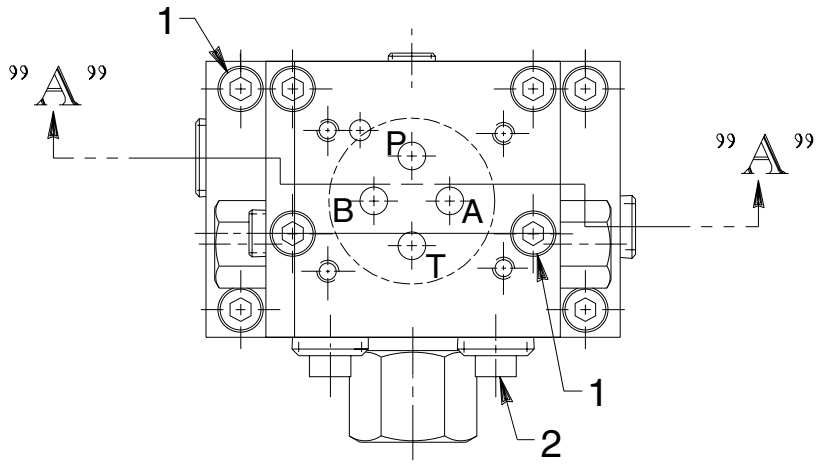


ELECTRICAL SCHEMATIC



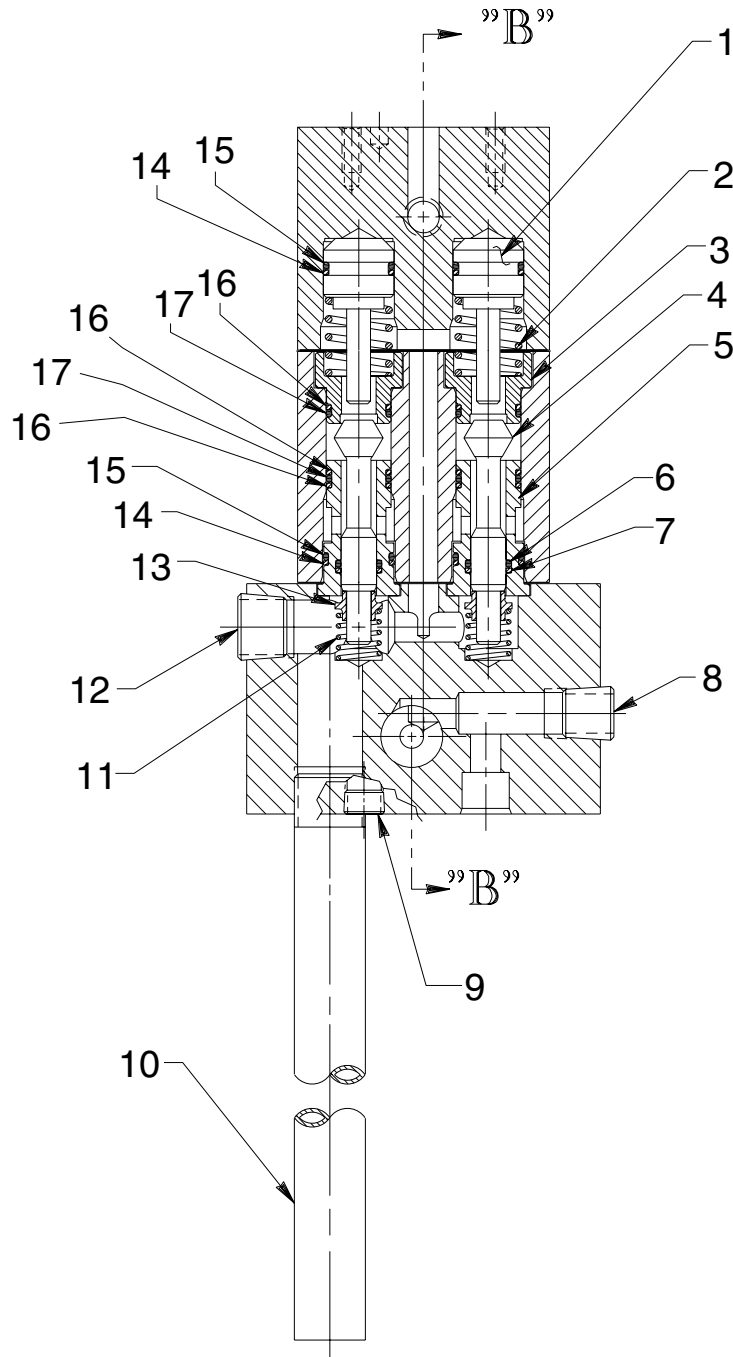
Note: Shaded areas reflect last revision(s) made to this form. Also, electrical schematic changed.

PILOT OPERATED, 4-WAY VALVE ASSEMBLY



Item No.	Part No.	No. Req'd	Description
1	10856	8	Cap Screw (1/4-20 x 2-1/2 Lg.; Torque to 200/230 in. lbs.)
2	11127	2	Plug (3/8 NPTF)
3	251208	1	Orifice Plug
4	10427	2	Pressure Plug (1/8 NPTF)

SECTION A-A



Item No.	Part No.	No. Req'd	Description
1	307090	2	Pilot Piston
2	213880	2	Compression Spring (11/16 O.D. x 1" Lg.)
3	307089	2	Valve Seat
4	200542	2	Poppet
5	22068	2	Bushing
6	*10268	2	O-ring (1/2 x 3/8 x 1/16)
7	*11863	2	Backup Washer (1/2 x 3/8 x 3/64)
8	10479	1	Pipe Plug (1/4 NPTF)
9	15499	1	Pipe Plug (1/8 NPTF)

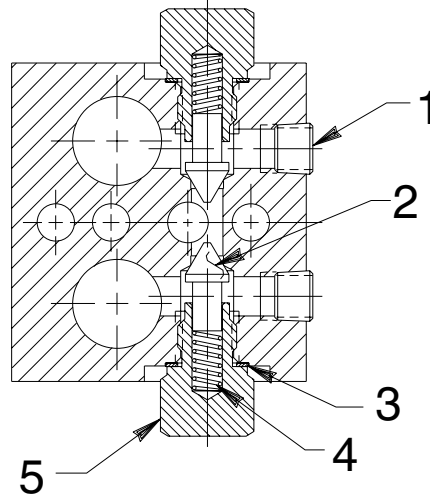
Item No.	Part No.	No. Req'd	Description
10	251570	1	Drain Tube
11	11195	2	Compression Spring (1/2)/D/ x 3/4 Lg.)
12	10909	1	Plug (3/8 NPTF)
13	202479	2	Check Valve Spring Guide
14	*12392	4	Backup Washer (3/4 x 5/8 x 3/64)
15	*10302	4	O-ring (3/4 x 5/8 x 1/16)
16	*12391	6	Backup Washer (11/16 x 9/16 x 3/64)
17	*11284	4	O-ring (11/16 x 9/16 x 1/16)

Part numbers marked with an asterisk (*) are contained in Repair Kit No. 300495.

SECTIONS B-B & C-C

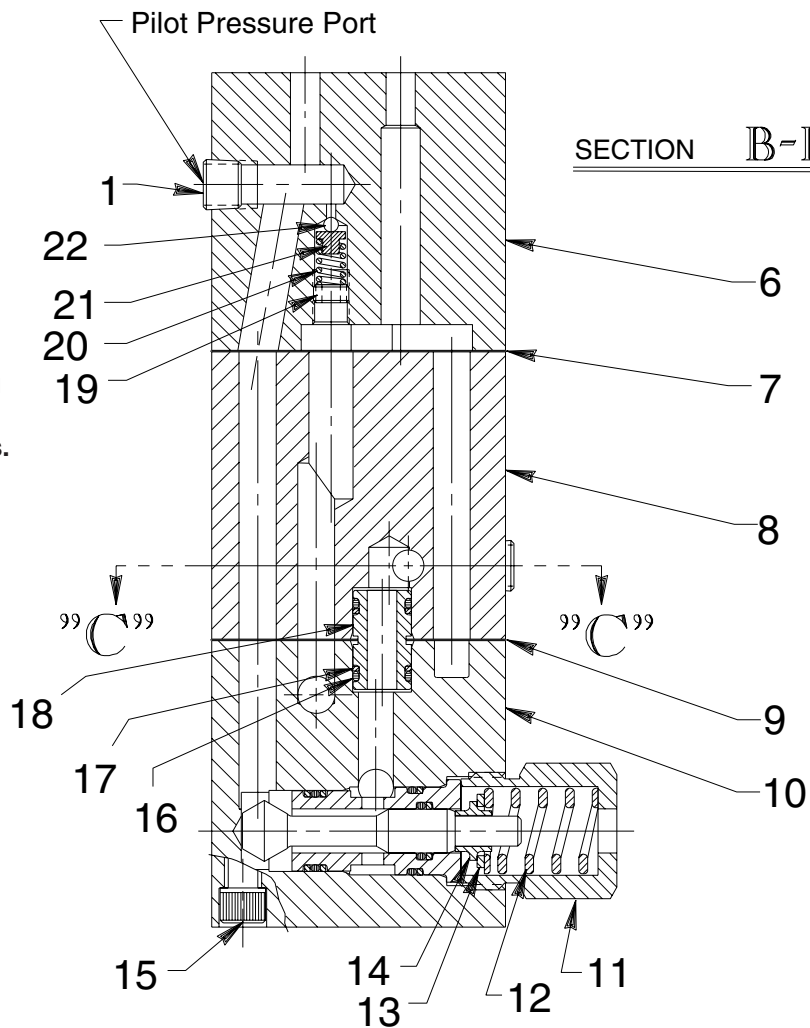


SECTION C-C



Note: This pilot valve is pre-set at the factory at 2500/3000 PSI. Do not attempt to adjust or repair without contacting Power Team Technical Services.

SECTION B-B



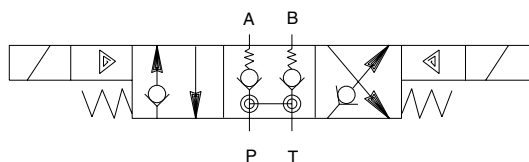
Item No.	Part No.	No. Req'd	Description
1	10427	3	Pipe Plug (1/8 NPTF)
2	213096	2	Poppet
3	*14874	2	Copper Washer (11/16 x 1/2 x 1/32)
4	15691	2	Compression Spring (1/4 O.D. x 5/8 Lg.)
5	307136	2	Valve Screw (Torque to 35/40 ft. lbs.)
6	61530	1	Valve Body (Top)
7	*307282	1	Gasket (Top/Center)
8	64430	1	Valve Body (Center)
9	*307579	1	Gasket (Center/Lower)
10	64429	1	Valve Body (Lower)
11	202494	1	Spring Retainer (Torque to 100/125 ft. lbs.)
12	14979	1	Compression Spring (3/4 O.D. x 1" Lg.)

Item No.	Part No.	No. Req'D	Description
13	16668	1	Washer (5/8 x 3/8 x 1/16)
14	202479	1	Check Valve Spring Guide
15	10856	4	Cap Screw (1/4-20 x 2-1/2 L.g.; Torque to 200/230 in. lbs.)
16	*10268	3	O-ring (1/2 x 3/8 x 1/16)
17	*11863	3	Backup Washer (1/2 x 3/8 x 3/64)
18	21094	1	Bushing
19	16704	1	Soc. Hd. Jam Screw (5/16-24 UNF x 5/32 Lg.)
20	16665	1	Compression Spring (5/32 I.D. x 1/2 Lg.)
21	202499	1	Spring Guide
22	10418	1	Steel Ball (1/8 dia.)

Part numbers marked with an asterisk (*) are contained in Repair Kit No. 300495.



VALVE SPECIFICATIONS



SIMPLIFIED SYMBOL

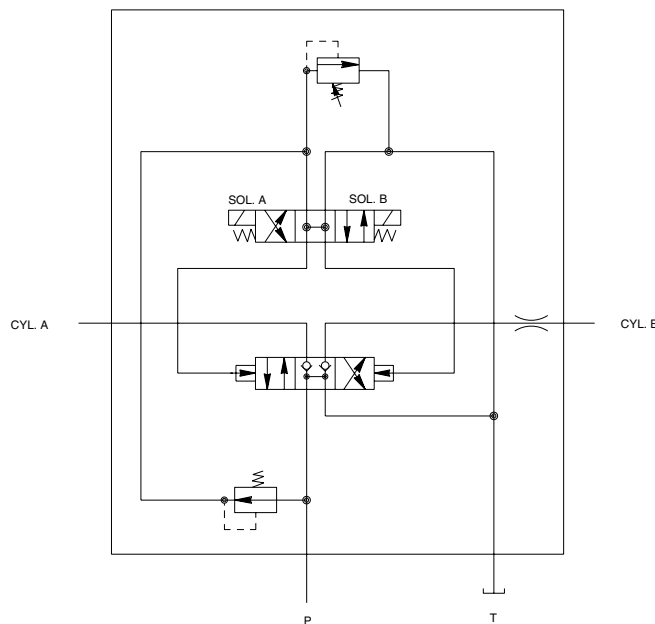
OPERATION

Neutral (Hold): When both solenoids are de-energized, oil from pump circulates at free flow from the pressure port "P" to tank "T". Both cylinder ports are blocked.

Solenoid "A" Energized: Pressure to cylinder port "A". Cylinder port "B" to tank.

Solenoid "B" Energized: Pressure to cylinder "B". Cylinder port "A" to tank.

NOTE: Pressure holds without loss when shifted from cylinder port to the neutral (Hold) position.



HYDRAULIC SCHEMATIC

Refer to any operating instructions included with this product for detailed information about operation, testing, disassembly, reassembly, and preventive maintenance.

Items found in this parts list have been carefully tested and selected. **Therefore: Use only genuine Power Team replacement parts!**

Additional questions can be directed to our Technical Services Department.