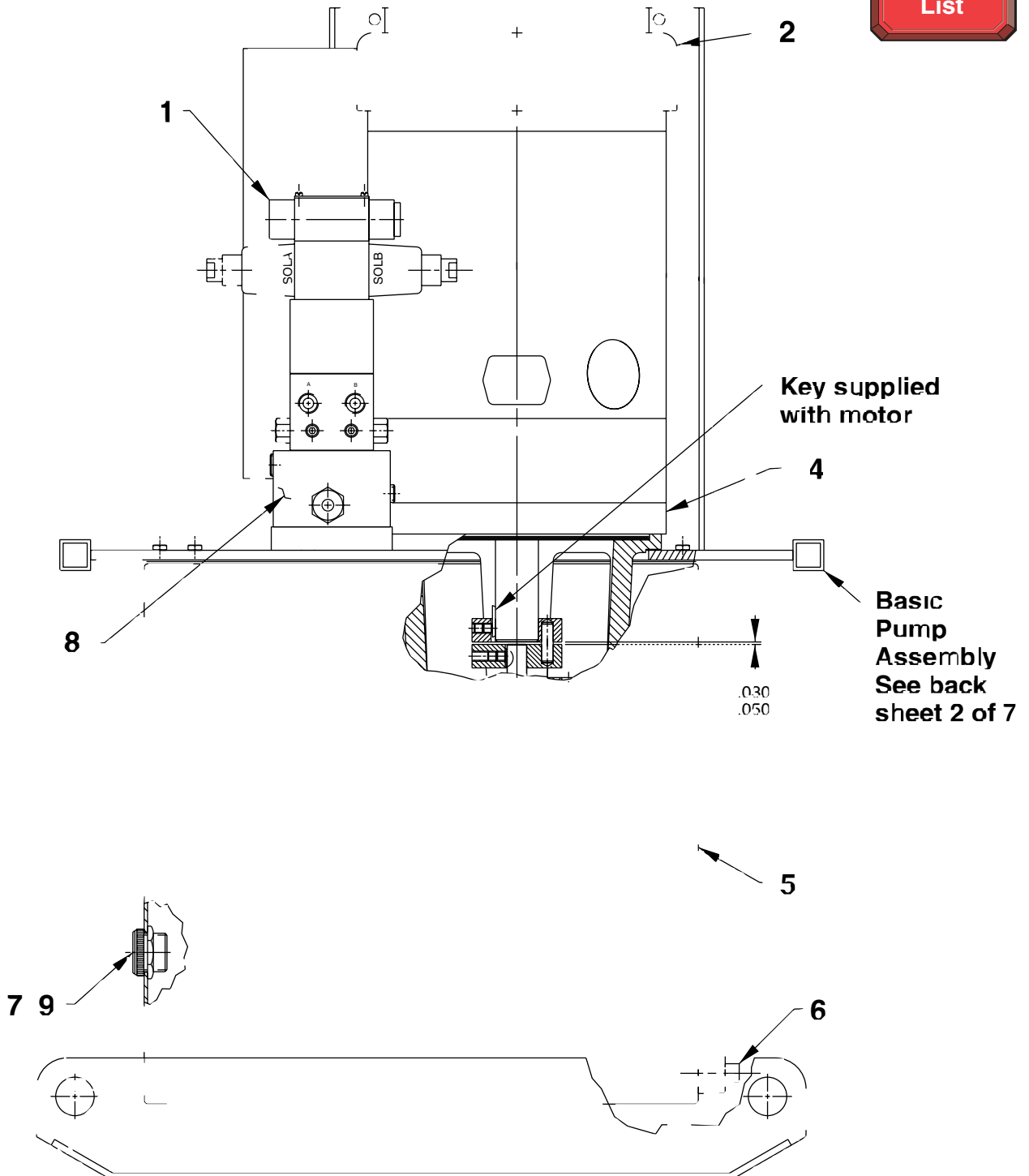


**MODEL A**  
**ELECTRIC HYDRAULIC PUMP**



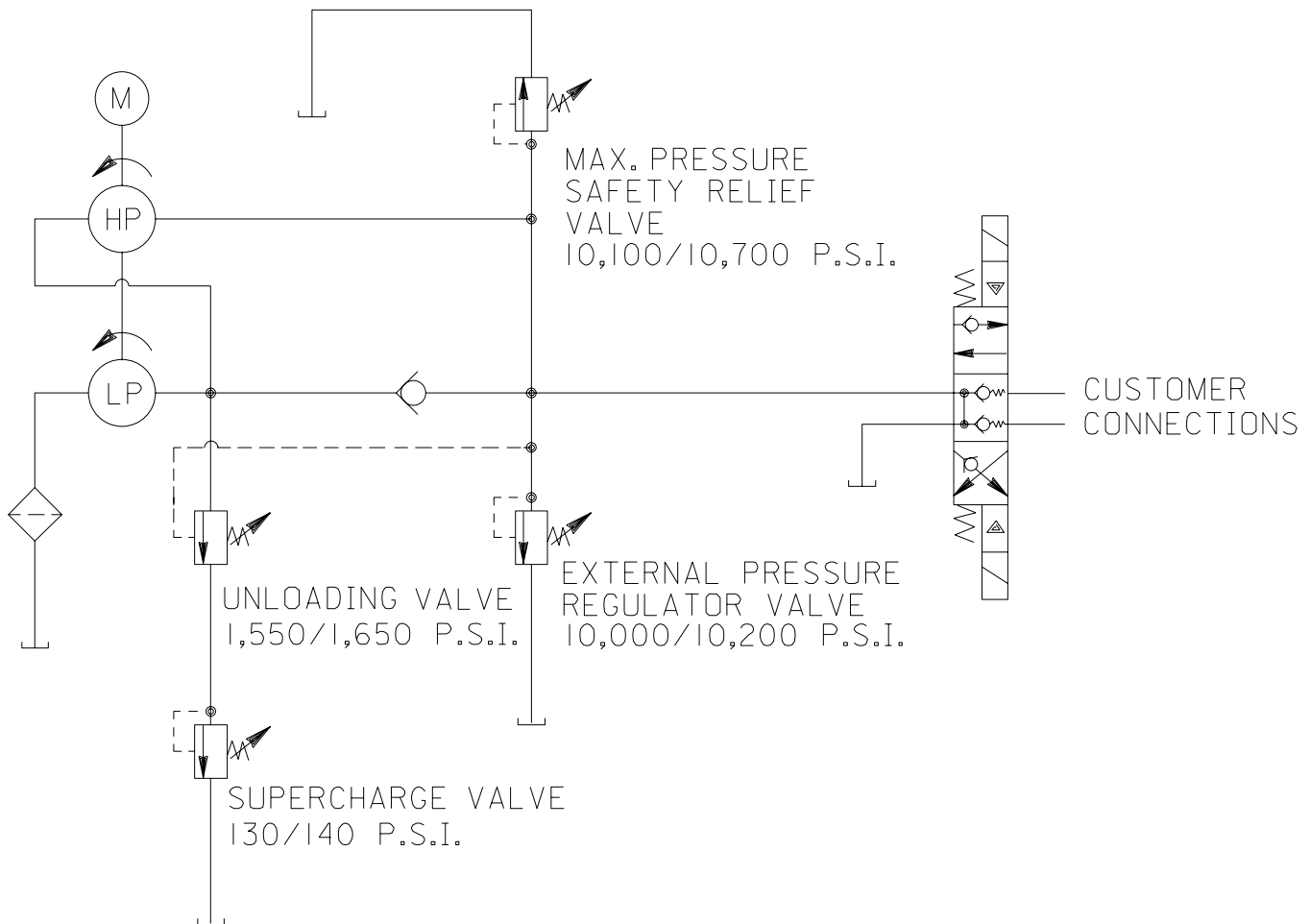
Item No.	Part No.	No. Req'd	Description
1	16664-1	1	Solenoid Valve
2	58719	1	Electric Motor (230 V., 60 Hz.)
4	58707	1	Motor Base
5	60430BL2	1	Reservoir
6	11049	1	Drain Plug (3/4 NPTF)
7	17586	1	Sight Gauge
8	64627	1	Valve (3 pos., 4-way Solenoid; See sheet 6 of 7)
9	253300	1	Seal Washer
10	16664-1	1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

**PARTS INCLUDED BUT NOT SHOWN**

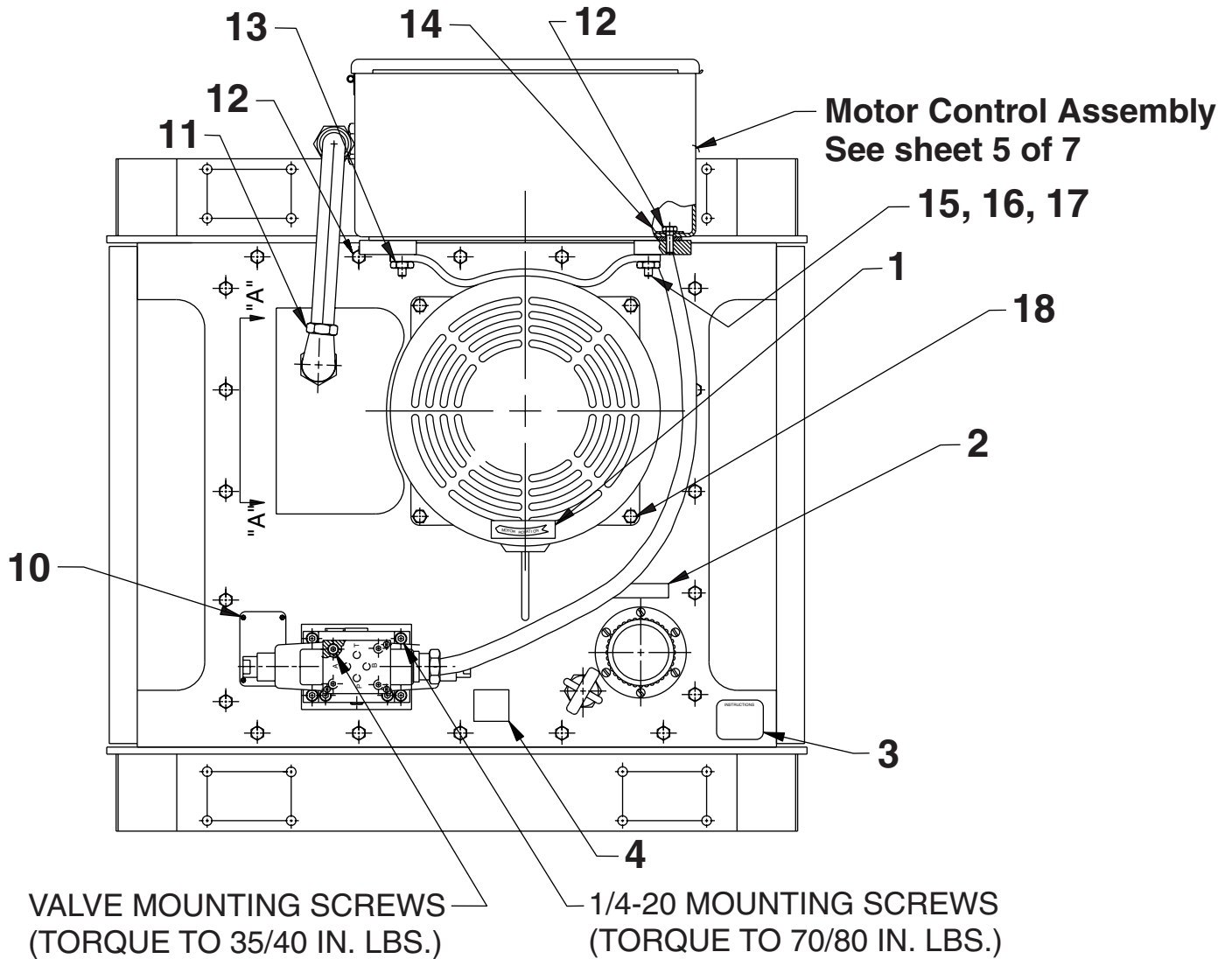
10027	16	Screw, HX HD Cap (5/16-18 x 5/8)
13116	16	Nut, Hex Lock (5/16-18)
214486	4	Caster, Swivel (4")



**HYDRAULIC SCHEMATIC**



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



**PUMP TOP VIEW**

Item No.	Part No.	No. Req'd	Description	Item No.	Part No.	No. Req'd	Description
1	27556	1	Rotation Decal	13	421172	2	Bracket
2	251874	1	Information Decal	14	10245	4	Lock Washer (.49 x .26)
3	203755	1	Instructional Decal	15	251553	4	Flat HD Screw (3/8-16 x 1-3/4)
4	205112	1	Patent Number	16	10204	4	Hex Nut (3/8-16)
10	10575	4	Drive Screw (#2 x 3/16 Lg.)	17	10247	4	Lock Washer (.68 x .39)
11	13343	1	Conduit Connector	18	10083	4	HH Cap Screw (1/2-13 x 1-1/2)
12	10009	4	Hex HD Cap Screw (1/4-20 x 3/4)				

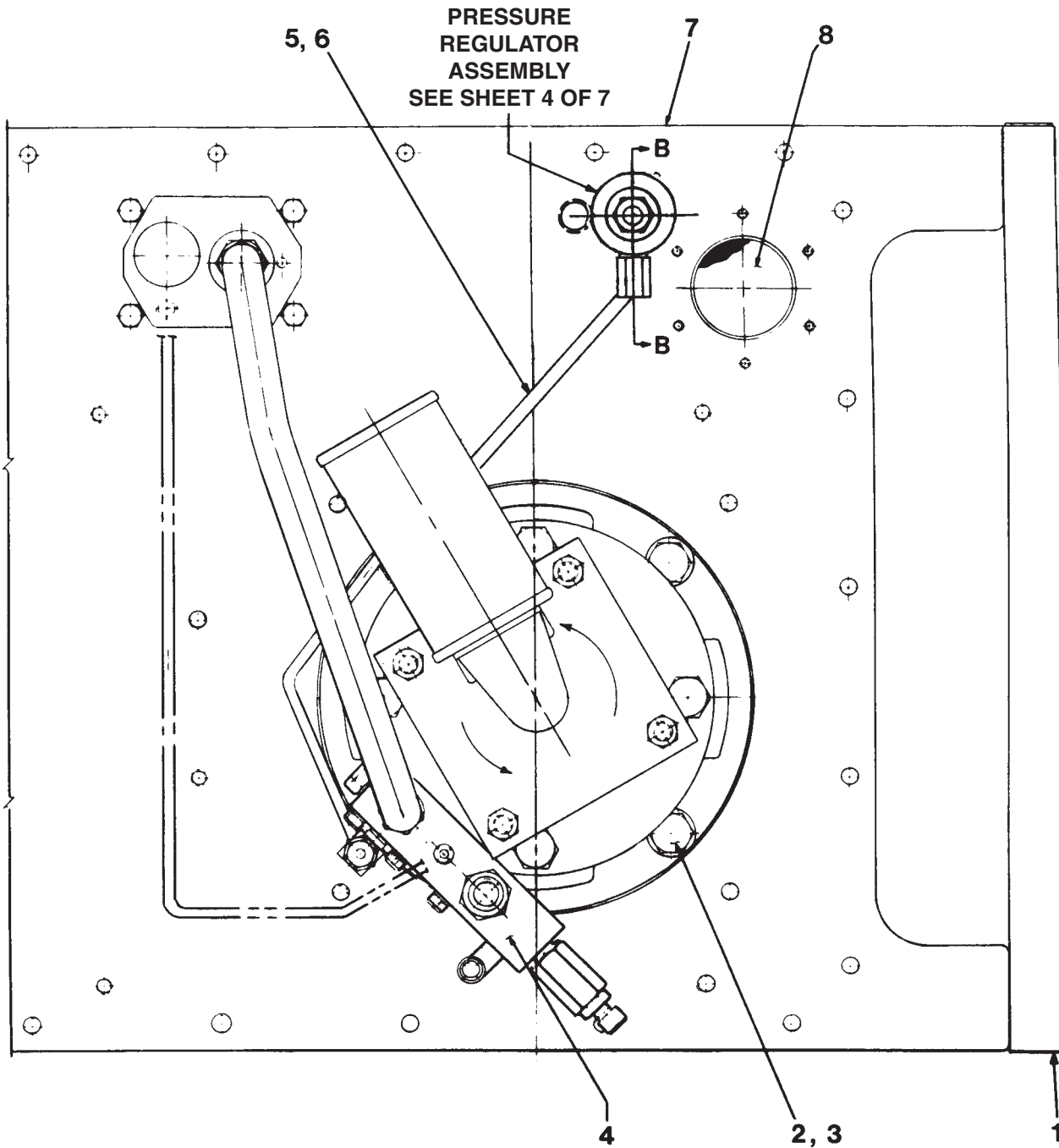
Note: Removed Items #5 thru 9 at last revision(s) made to this form.



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.)				
9	51064	1	Front End Plate				
10	37376	1	Pump Shaft	40	17505	1	Needle Bearing
11	42782	1	Eccentric (Ring)	41	17504	1	Race Bearing
12	17313	1	Gerotor Set	42	17312	1	Retainer Ring (External; 1-3/8 Lg.)
13	17315	2	O-ring (2-7/8 x 2-3/4 x 1/16)	43	11931	3	O-ring (4" x 3-3/4 x 1/8)
14	12178	2	Retainer Ring (External; 5/8 shaft)	44	42732	1	Valve Head
15	15430	2	Needle Bearing (5/8 x 13/16 x 5/8 w.)	45	10083	4	Hex Hd. Cap Screw (1/2-13 x 1-1/2 Lg.; Torque to 80/100 in. lbs.)
16	17435	1	Thrust Washer (1" x 5/8 x 1/8)	46	10249	4	Spring Lockwasher (1/2)
17	37378	1	Drive Coupling	47	60415	1	Pump End Plate
18	10374	16	Steel Ball (7/32 dia.)	48	17567	4	Spring Pin (1/4 x 3/4 Lg.)
19	203477	16	Ball Guide	49	10141	4	Set Screw (5/16-18 x 5/16 Lg.)
20	17319	16	Compression Spring (1/8 O.D. x 1/2 Lg.)	50	10261	1	Soft Copper Washer
21	43313	1	Pump Barrel	51	303838	1	Hydraulic Hose (3/8 I.D. x 27" Lg.)
22	204578	8	Piston (.399 dia.; NOTE: Install piston with 6° angle toward angle plate.)	52	17582	1	Swivel Fitting
23	14368	1	Retainer Ring (External; 1-3/4 shaft)	53	21566	1	Valve Body
24	17316	2	Race Bearing	54	10009	4	Hex. Hd. Cap Screw (1/4-20 x 3/4 Lg.)
25	17317	1	Thrust Bearing	55	10245	4	Spring Lockwasher (1/4)
26	17311	1	Cone Bearing	56	42779	1	Reservoir Gasket
27	17318	1	Race Bearing (Cup)	57	201817	1	Valve Connector
28	203542	4	Tie Rod	58	11863	1	Backup Washer (Teflon)
29	10204	4	Steel Nut (3/8-16; Cross torque in increments of 50 in. lbs. to 170/180 in. lbs.)	59	10268	1	O-ring (1/2 x 3/8 x 1/16)
30	10247	4	Spring Lockwasher (3/8)	60	43110	1	Valve Mounting Block
31	42737	1	End Cap	61	200395	1	Gasket
32	10706	1	90° Pipe Elbow	62	42796	1	Gasket (Mounting Bracket)
33	17491	1	Filter	63	10032	4	Hex. Hd. Cap Screw (5/16-18 x 1" Lg.)
34	204265	1	Drain Tube	64	10246	4	Spring Lockwasher (5/16)
				65	42757	1	Gasket (Electric Motor)

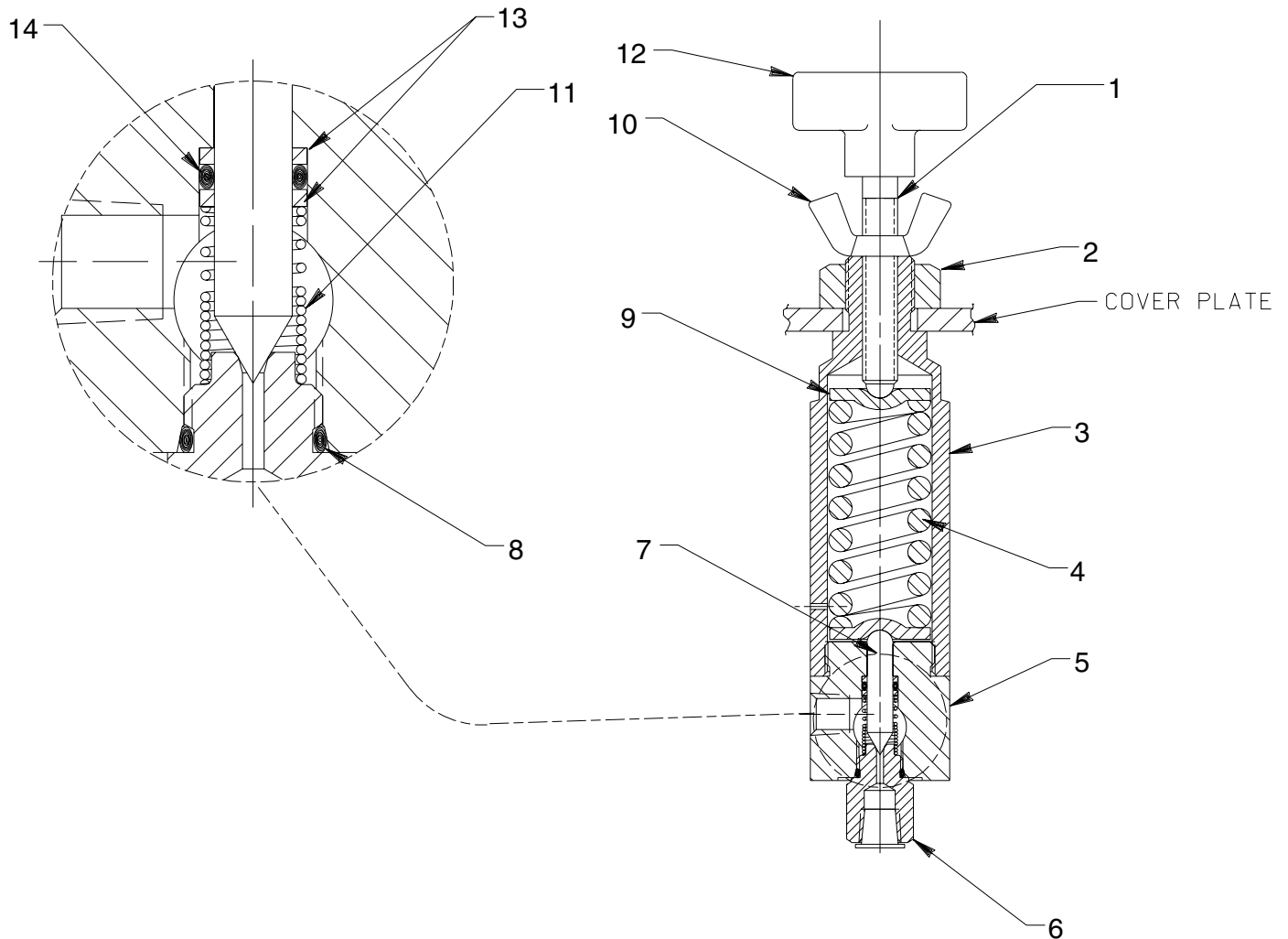


### BASIC PUMP ASSEMBLY BOTTOM VIEW



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)

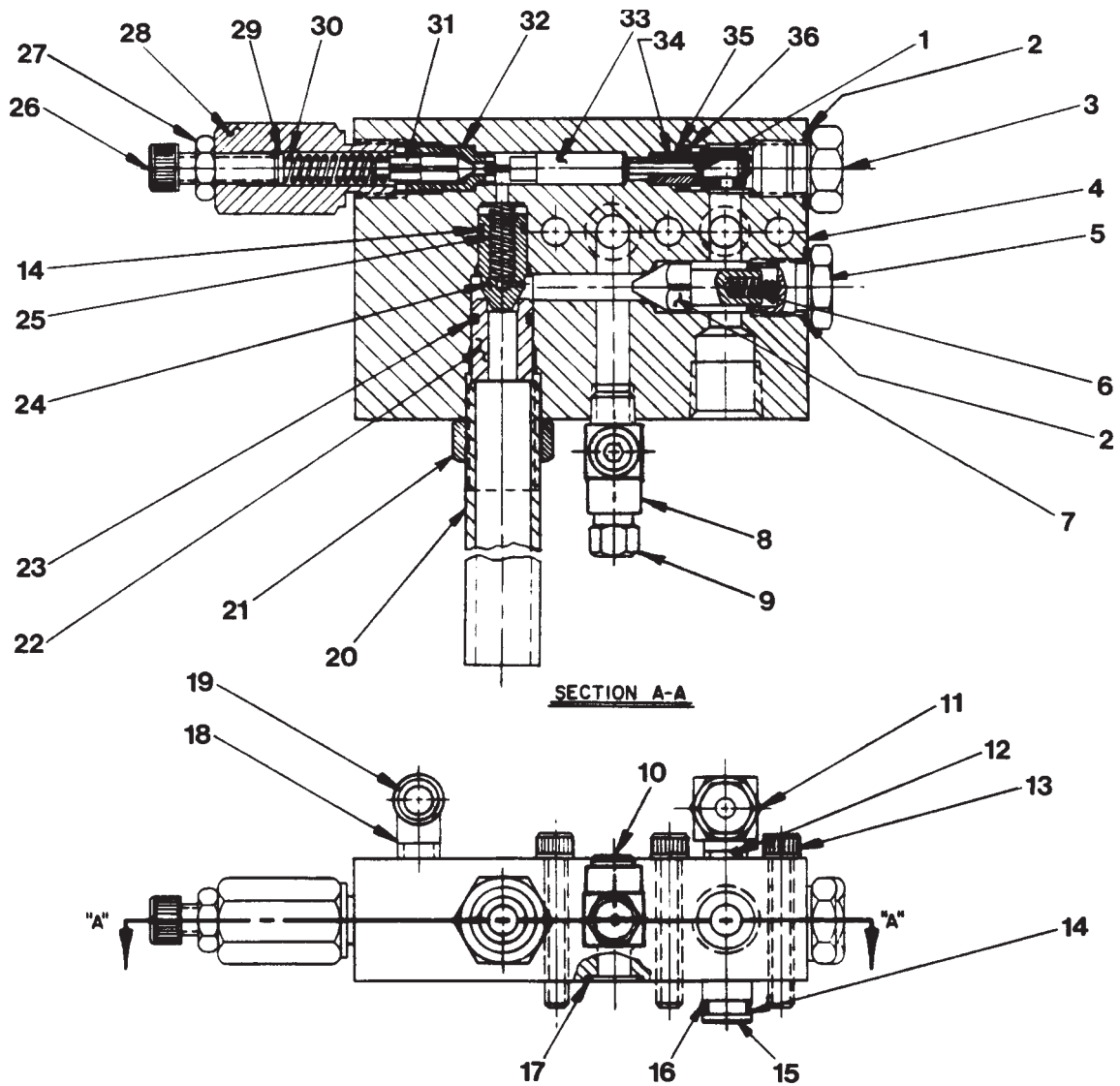
**PARTS INCLUDED BUT NOT SHOWN**

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. 4 Date: 3 April 2000

## UNLOADING VALVE ASSEMBLY

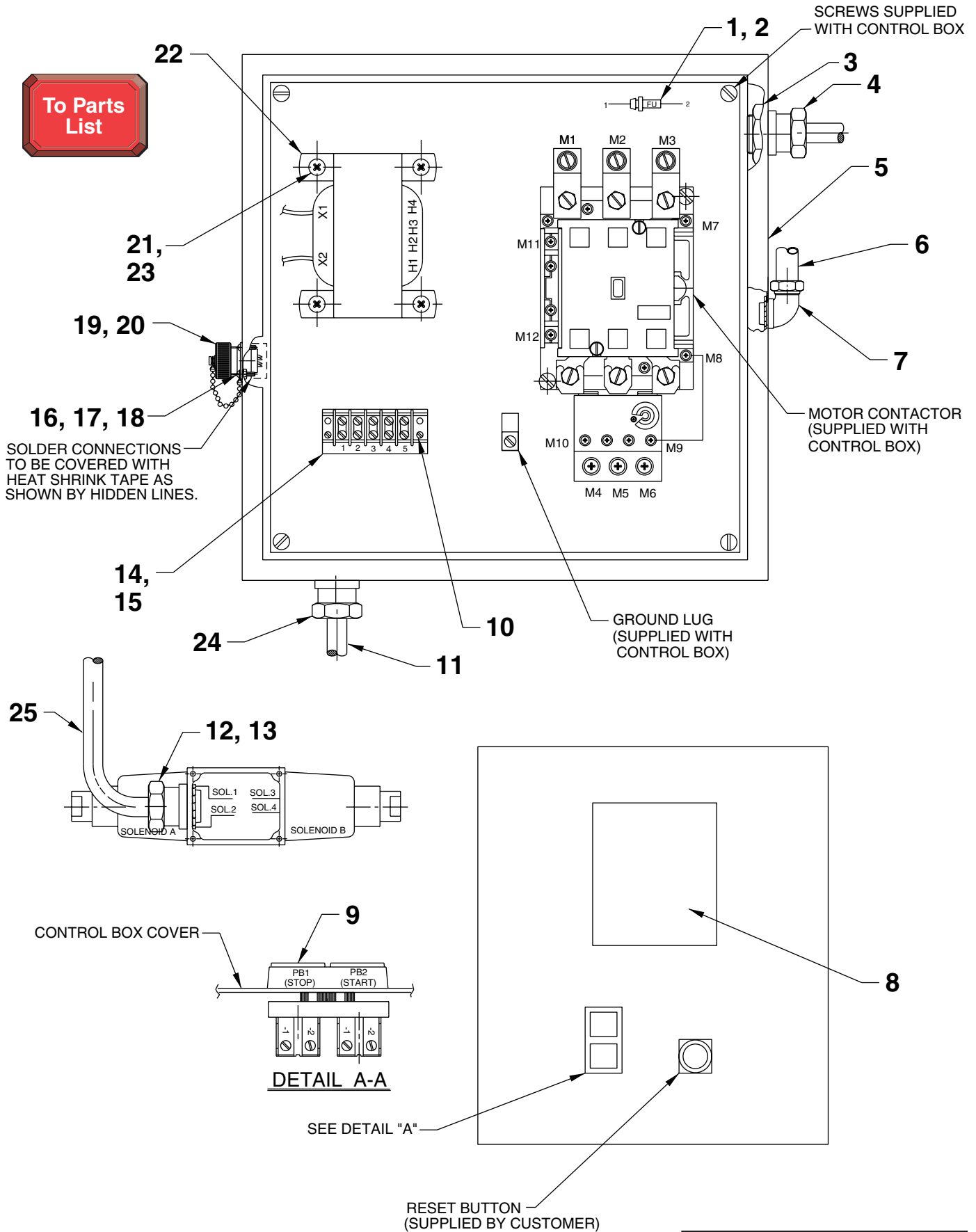


Item No.	Part No.	No. Req'd	Description
1	12149	1	Dowel Pin (1/8 dia. x 3/4 Lg.)
2	10261	2	Copper Washer (19/32 x 3/4 x 1/32)
3	37430	1	Adapter (Torque to 35/40 ft. lbs.)
4	60414	1	Valve Body
5	205394	1	Valve Plug (Torque to 35/40 ft. lbs.)
6	15141	1	Compression Spring (.180 O.D. x 5/8 Lg.)
7	205393	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	Teflon 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	Teflon 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

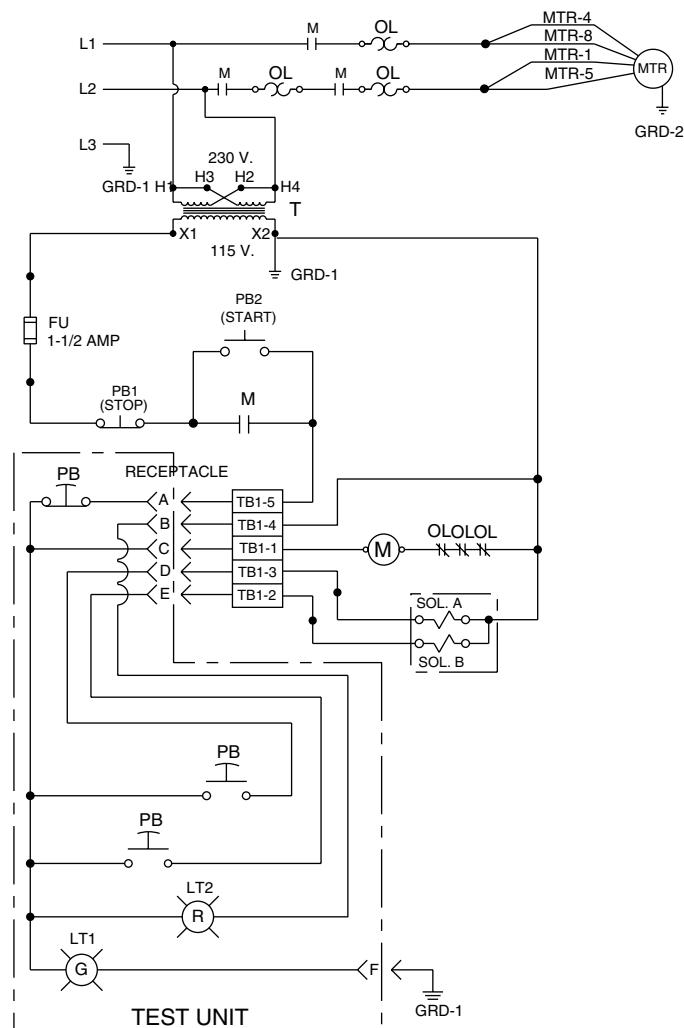
To Parts List



# Parts List, Form No. 101692, Back sheet 5 of 7

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

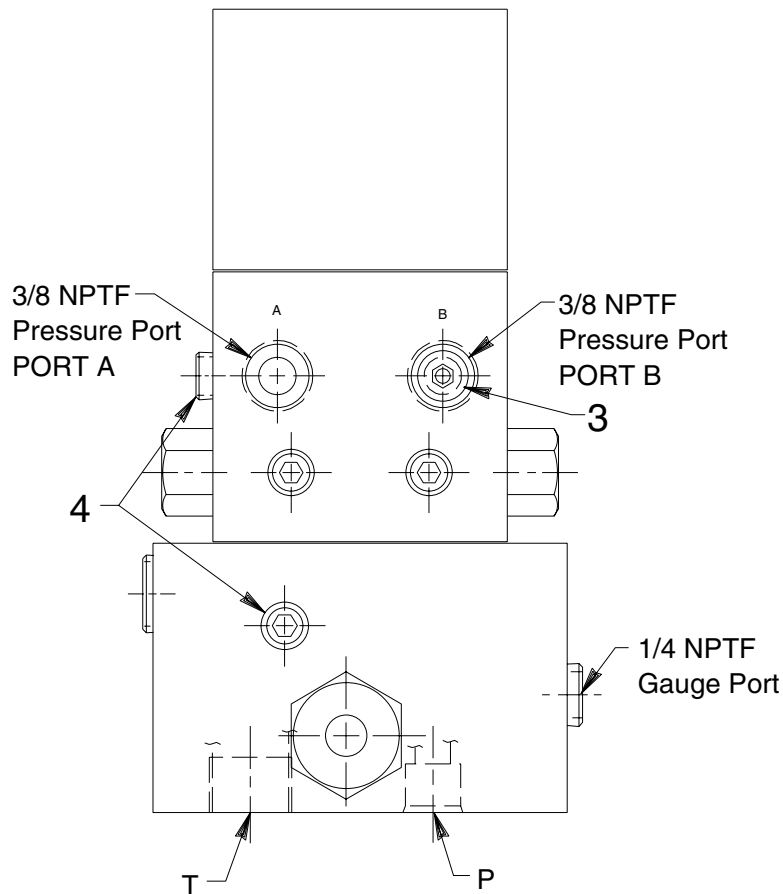
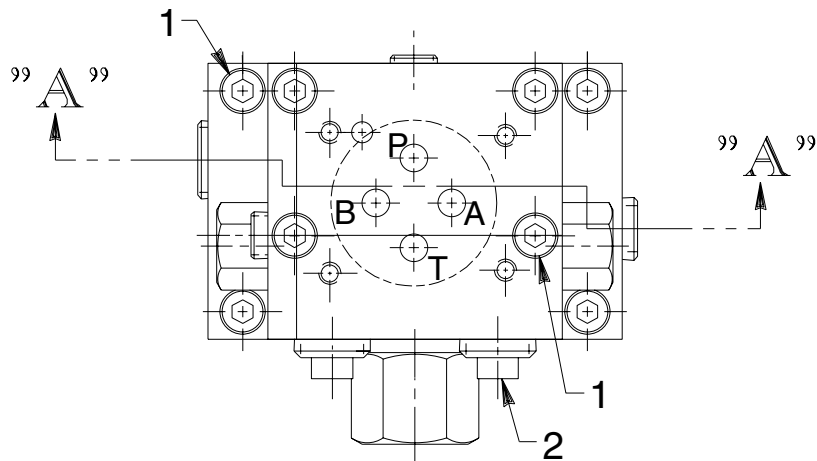
Item No.	Part No.	No. Req'd	Description
14	17841	1	Terminal Block
15	17842	1	Marker Imprinted Strip
16	11835	4	Screw (4-40 UNC x 1/2 Lg.)
17	15907	4	Lockwasher (#4 External Tooth)
18	10194	4	Hex Nut (#4-40 UNC)
19	350269	1	Receptacle
20	250438	1	Protective Cap
21	14812	4	Screw (#8-18 X 3/8 Lg.)
22	38962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



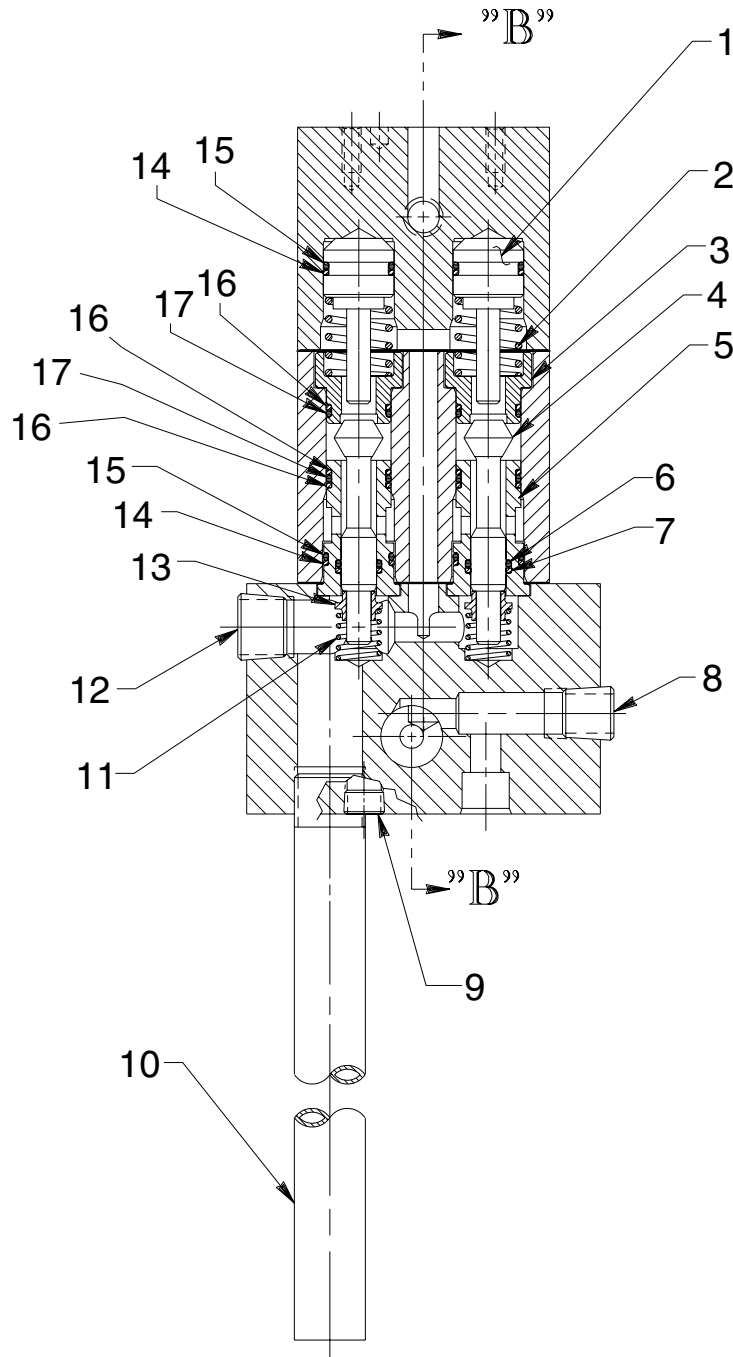
## ELECTRICAL SCHEMATIC

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)



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)

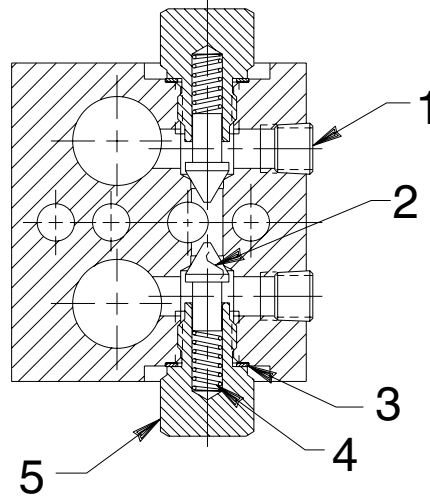
Item No.	Part No.	No. Req'd	Description
10	251570	1	Drain Tube
11	11195	2	Compression Spring (1/2 )/D/ x 3/4 Lg.)
12	10909	1	Plug (3/8 NPTF)
13	202479	2	Check Valve Spring Guide
14	*12392	4	Backup Washer (3/4 x 5/8 x 3/64)
15	*10302	4	O-ring (3/4 x 5/8 x 1/16)
16	*12391	6	Backup Washer (11/16 x 9/16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

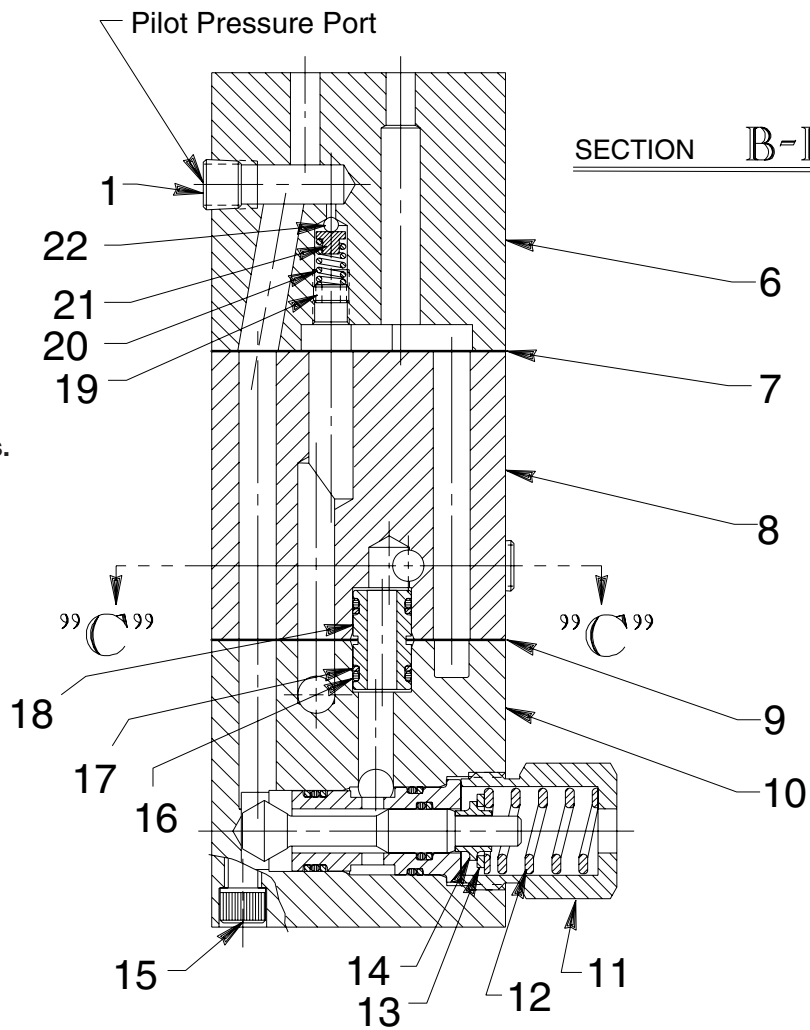
To Parts List

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



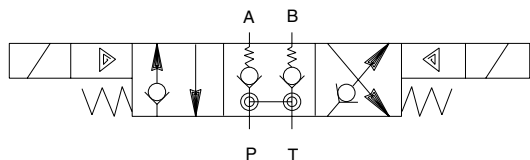
Item No.	Part No.	No. Req'd	Description
1	10427	3	Pipe Plug (1/8 NPTF)
2	213096	2	Poppet
3	*14874	2	Copper Washer (11/16 x 1/2 x 1/32)
4	15691	2	Compression Spring (1/4 O.D. x 5/8 Lg.)
5	307136	2	Valve Screw (Torque to 35/40 ft. lbs.)
6	61530	1	Valve Body (Top)
7	*307282	1	Gasket (Top/Center)
8	64430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

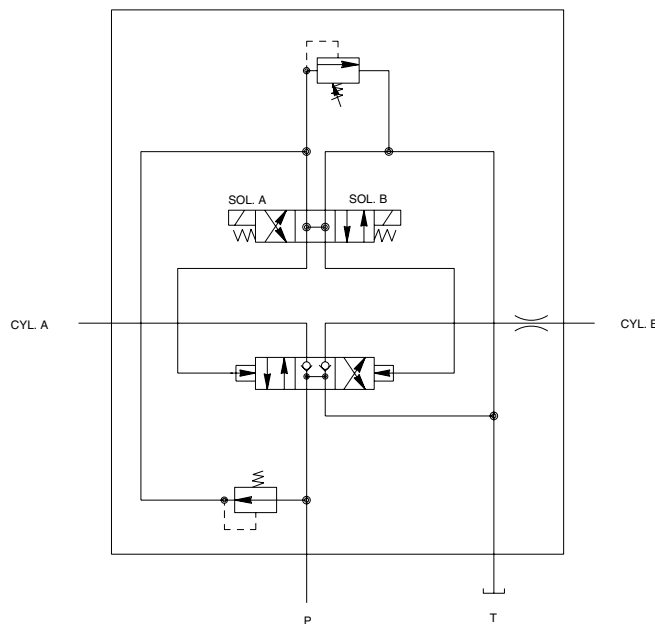
#### OPERATION

**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.