Form No. 19262

Parts List for:

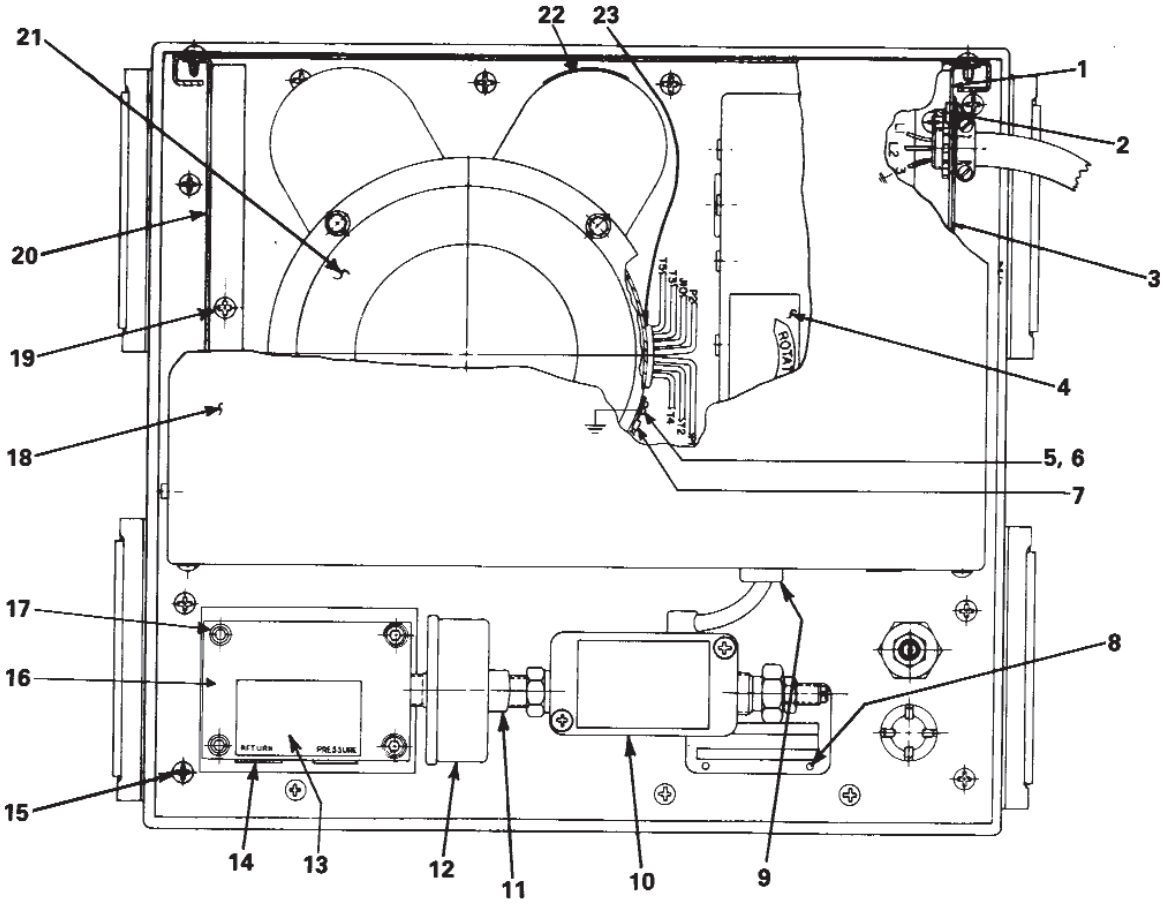
100211
100211-230
100216

MODEL C

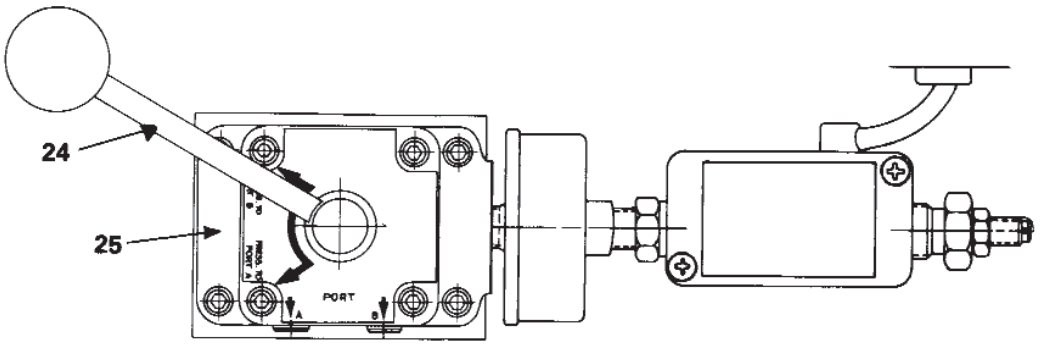
SUPER ELECTRIC TWO-STAGE HYDRAULIC PUMP

WITH MANIFOLD OR 3-WAY/4-WAY VALVE

TOP VIEW



100211 & 100211-230



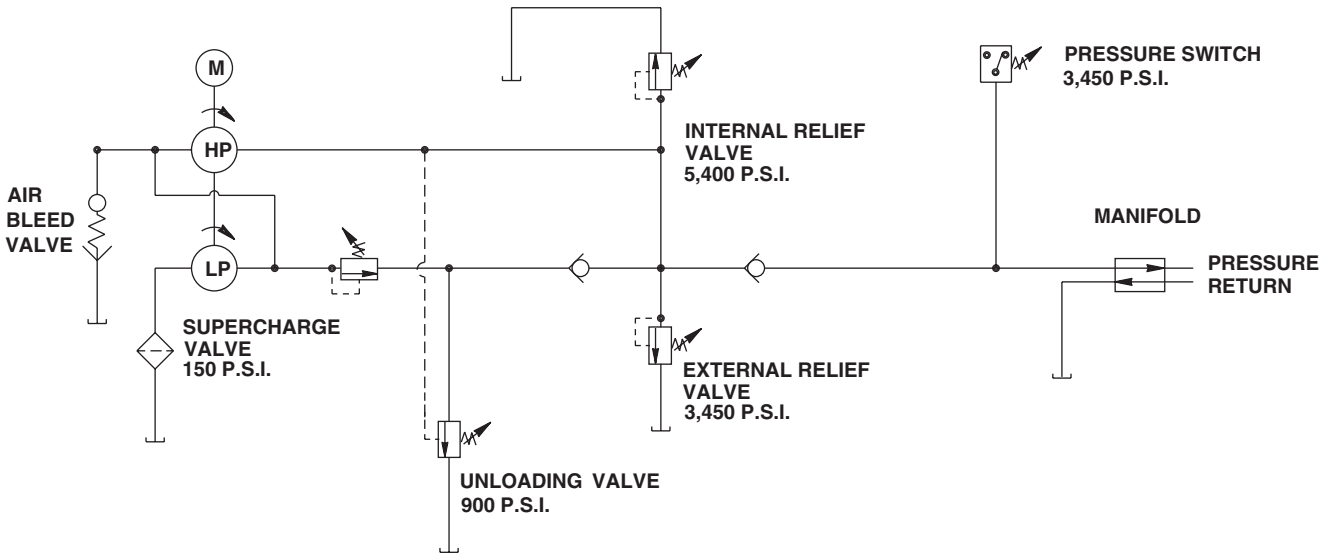
100216

Sheet No.	1 of 7
Rev. 2	Date: 9 Feb. 2001

Litho in USA

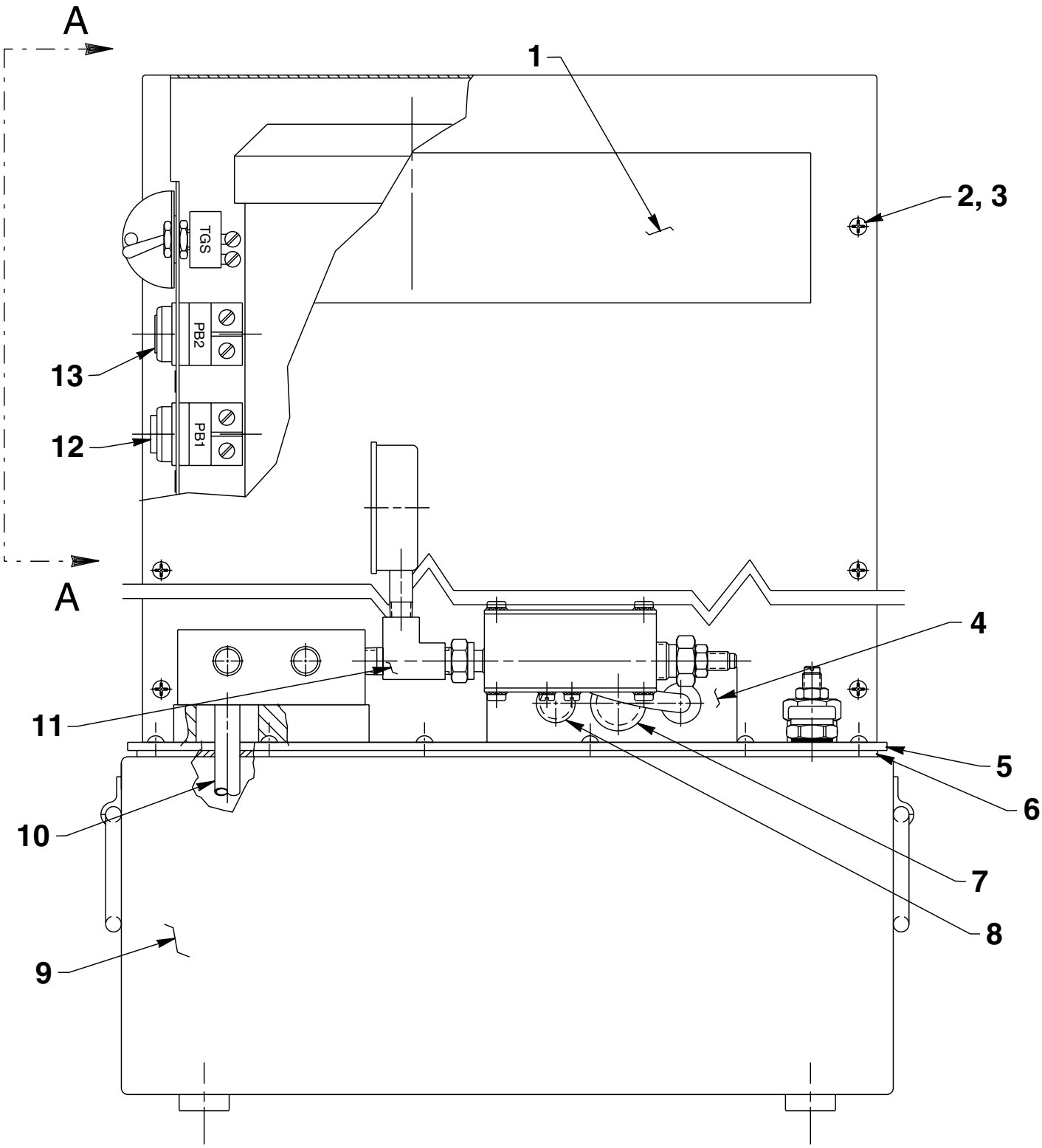
Item No.	Part No.	No. Req'd	Description
1	**60235PU2**	1	End Panel & Electric Box Assembly
2	**10975**	10	Machine Screw (#8-32 X 5/16 Lg.)
3	**11107**	10	Internal Tooth Washer
4	**42457PU2**	1	Rotation Decal
5	**200188**	1	Warning Decal
6	**14394**	1	Self-Tapping Screw (#10 X 3/8 Lg.)
7	**11108**	10	Washer (10 Shakeproof)
8	**203972**	1	CSA Logo Decal
9	**10575**	4	Drive Screw (#2-32 X 5/16 Lg.)
10	**52203**	1	Pressure Switch Assembly (See sheet 7 of 7)
11	**17946**	1	Gauge
12	**210995**	1	Decal (Valve)
13	**45837**	1	Manifold Assembly (Includes Items 12, 15, and 17)
14	**10020**	4	Soc. Hd. Cap Screw (1/4-20 X 1-1/4 Lg.)
15	**16876**	18	Machine Screw (#10-24 X 1/2 Lg.)
16	**12356**	17	Internal Tooth Washer
17	**50946PU2**	1	Cover Shroud
18	**16613**	9	Machine Screw (#10-24 X 5/16 Lg.)
19	**51124PU2**	1	Front Panel
20	**15435**	1	Motor (2 H.P. 60 Hz)
22	**15497**	1	Rubber Grommet
23	**202504**	1	Rotation Decal
24	**25768**	1	Special Valve Handle
25	**100235**	1	Directional Valve (See Form No. 100374 for parts list on valve)

HYDRAULIC SCHEMATIC

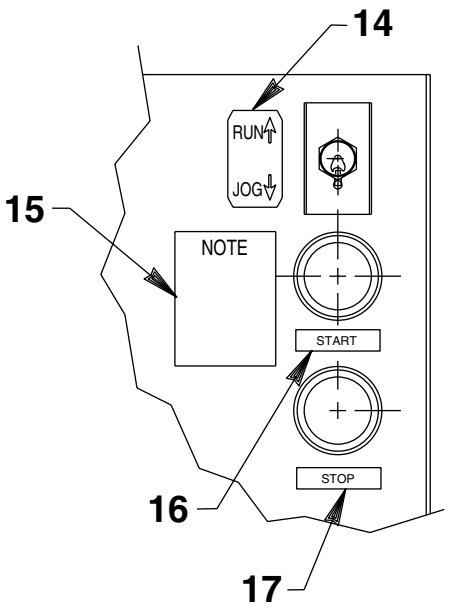


Note: Removed motor leads decal (Item #21) at last revision(s) made to this form.

SIDE VIEW



VIEW A-A

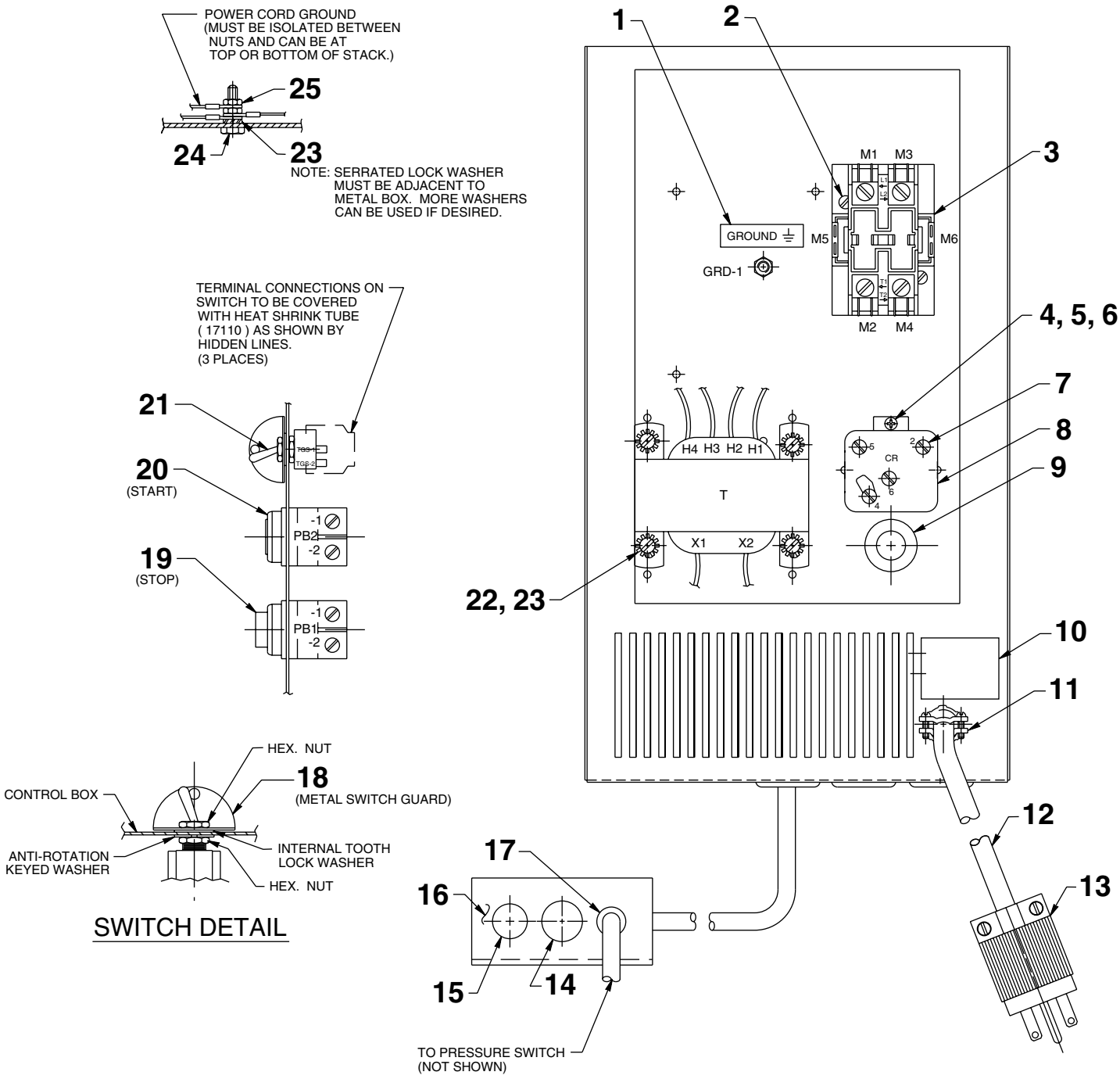


Item No.	Part No.	No. Req'd	Description
1	**309386**	2	Decal
2	**14394**	14	Self-Tapping Screw (#10 X 3/8 Lg.)
3	**12356**	14	Internal Tooth Washer
4	**36746WH2**	1	Angle Plate
5	**64620**	1	Basic Pump Assembly (6 Piston - See sheet 5 of 7)
6	**50712**	1	Reservoir Gasket
7	**15327**	1	Snap Plug
8	**16412**	2	Snap Plug (5/8 hole)
9	**60234PU2**	1	Reservoir
10	**200609**	1	Drain Tube
11	**10618**	1	Service Tee
12	**39283**	1	Pushbutton Switch (Red Button)
13	**39282**	1	Pushbutton Switch (Green Button)
14	**352081**	1	Run-Jog Decal
15	**204015**	1	Note Decal
16	**203808**	1	Decal (Start)
17	**203769**	1	Decal (Stop)

PARTS INCLUDED BUT NOT SHOWN

10494	4	Swivel Caster (2" dia.)

ELECTRICAL ASSEMBLY



Item No.	Part No.	No. Req'd	Description
1	**205189**	1	Ground Decal
2	**11539**	2	Machine Screw (10-24 x 1/4)
3	**11379-4**	1	Relay Contactor (24 volt)
	****420718-4**	1	Relay Contactor (24 volt)
4	**10195**	1	Nut (#6-32)
5	**15906**	1	Washer (#6 Shakeproof)
6	**17898**	1	Screw
7	**10975**	4	Machine Screw (#8-32 X 5/16 Lg.)
8	**14667**	1	Relay Starter (24 volt)
9	**15497**	4	Rubber Grommet
10	**204607**	1	Decal (Specifications)
11	**11203**	1	Strain Relief
12	**307439**	8'	Electrical Cable (12/3 SJTO)
13	**11209**	1	Electrical Connector (For 100211-230)
'	**16896**	1	Electrical Connector (For 100211)
14	**15327**	1	Snap Plug
15	**16412**	2	Snap Plug (5/8 hole)
16	**36746WH2**	1	Angle Plate
17	**215857**	1	Strain Relief Bushing
18	**352061**	1	Switch Guard
19	**39283**	1	Pushbutton Switch (Red Button)
	39282	1	Pushbutton Switch (Green Button)
21	**12301**	1	Toggle Switch
22	**10164**	4	Rd. Hd. Std. Machine Screw (#10-24 X 3/8 Lg.)
23	**11108**	1	Washer (#10 Shakeproof)
24	**104484**	1	Machine Screw (10-24 UNC X 3/4 Lg.)
25	**10197**	2	Hex Nut (#10-24 UNC)
26	**39692**	1	Transformer (115/230/24)

PARTS INCLUDED BUT NOT SHOWN

38422	1	Decal (Electrical Schematic - See sheet 4 of 7)

**For units built after March 1983.

WARNING:
To help avoid personal injury, all electrical work should be done by a qualified electrician. Refer to Form No. 19261, sheet 1 of 2, for electrical hook-up and operating instructions.

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 Hytec replacement parts!**

Additional questions can be directed to our Technical Services Department.

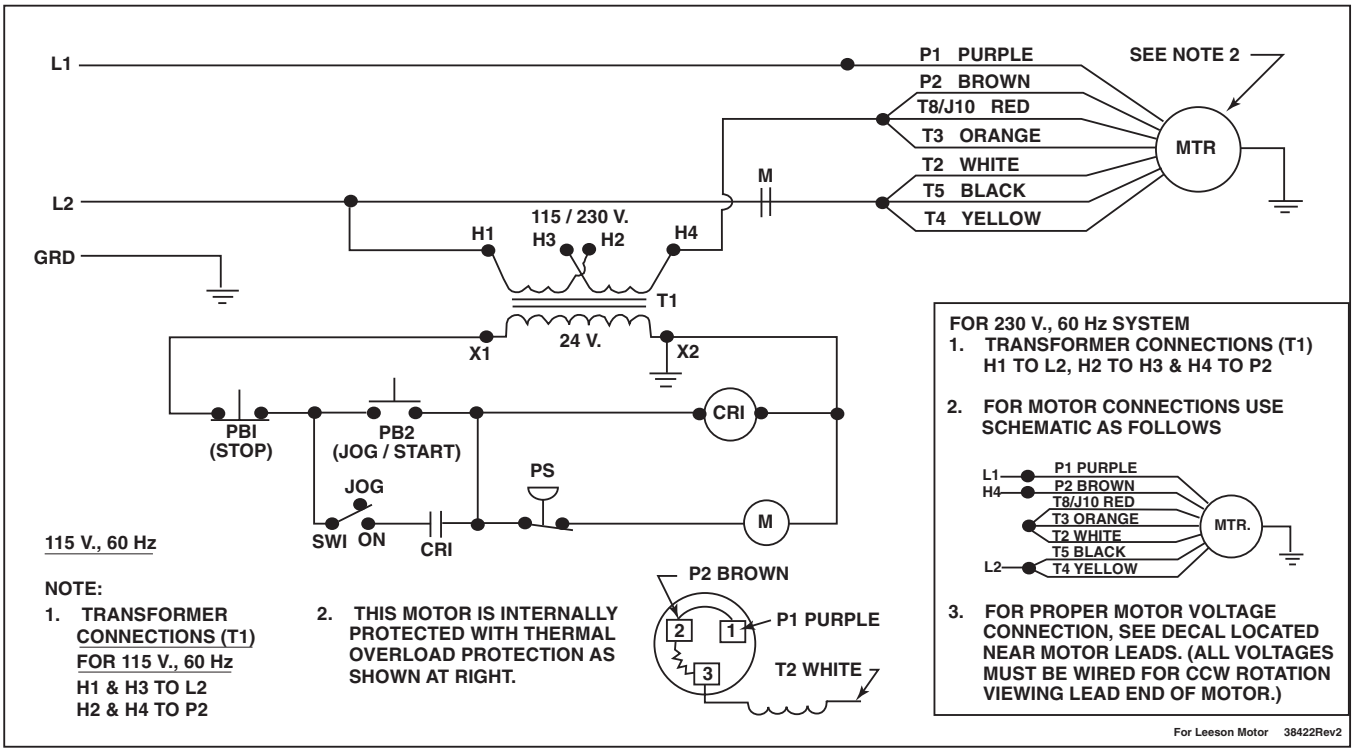
ELECTRICAL SCHEMATIC

⚠ WARNING

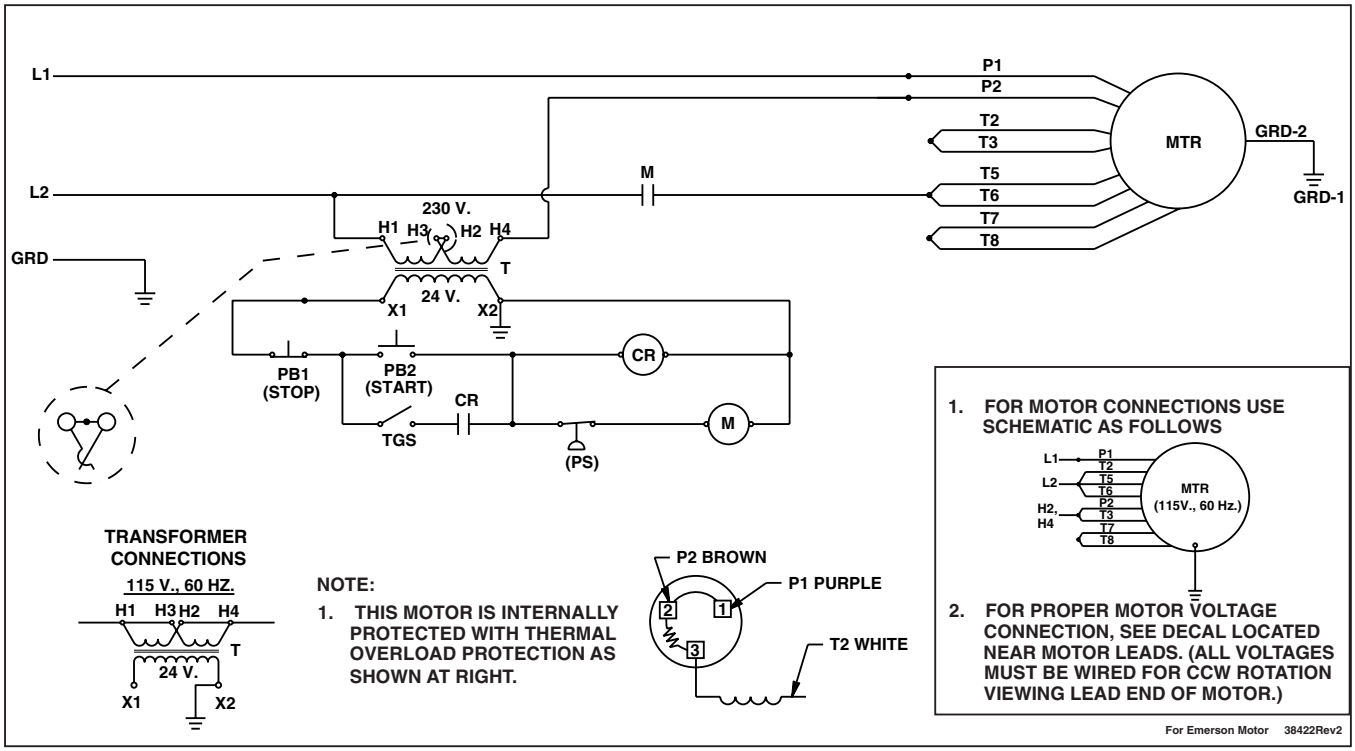
To help avoid personal injury, all electrical work must be done by a qualified electrician.

North American & International Color Codes

Conductors	North American	International
Line	Black	Brown
Neutral	White	Blue
Ground	Green	Green/Yellow

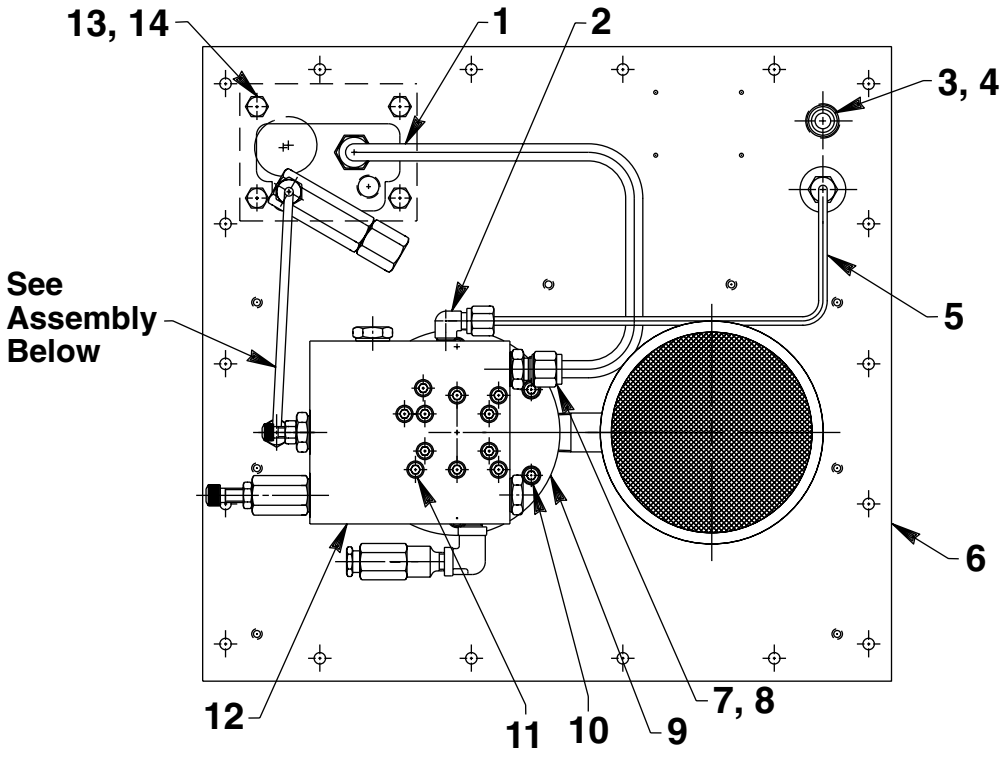


For Leeson Motor 38422Rev2



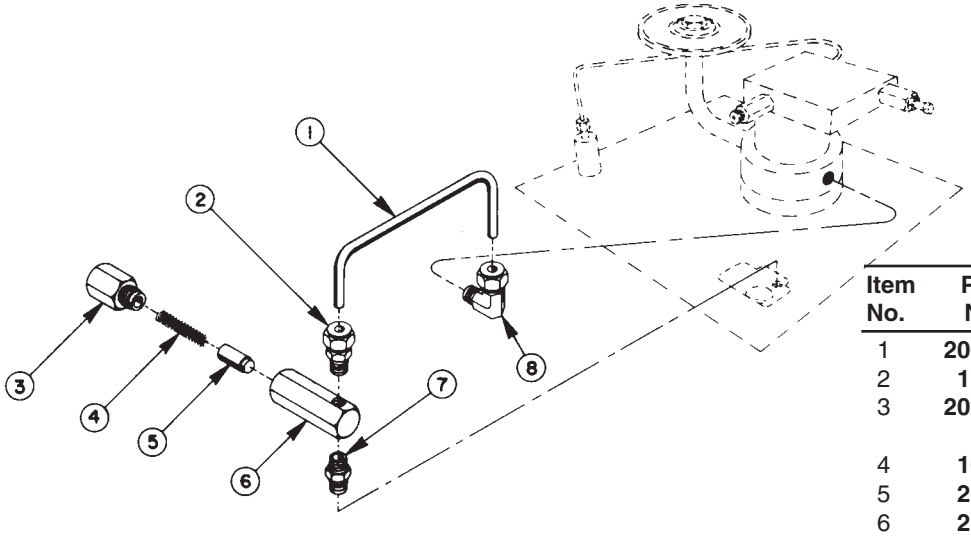
For Emerson Motor 38422Rev2

BASIC PUMP ASSEMBLY



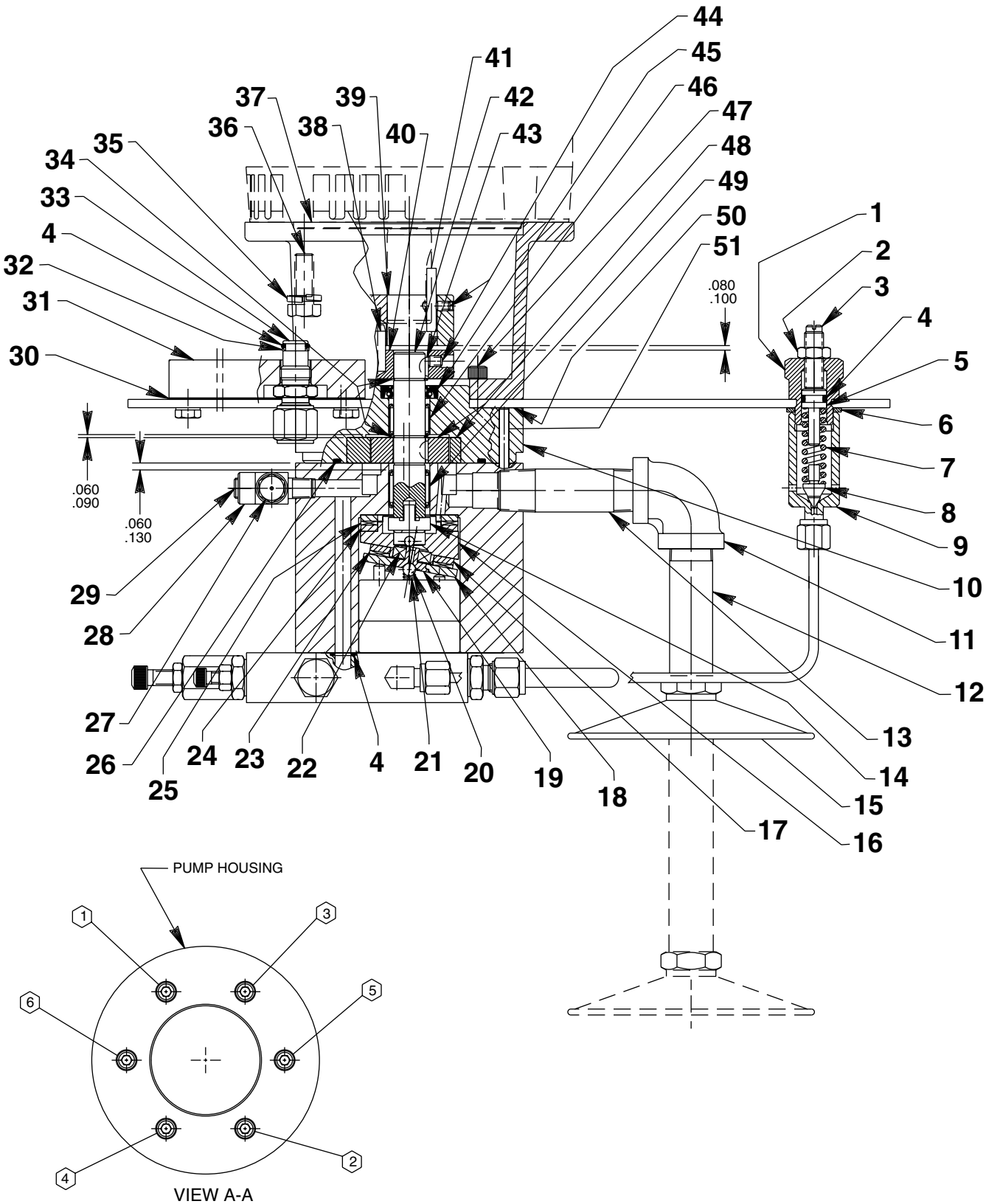
Item No.	Part No.	No. Req'd	Description
1	**35281**	1	Oil Line (3/8)
2	**16177**	1	90° Elbow Fitting
3	**20937**	1	Filler Plug
4	**200415**	1	Washer (Rubber)
5	**350524**	1	Oil Line
6	**60922**	1	Cover
7	**10430**	2	Tube Sleeve (For 3/8 tube)
8	**10431**	2	Tube Nut (5/8-18 UNF)
9	**50705**	1	Pump Housing
10	**10854**	6	Soc. Hd. Cap Screw (1/4-20 x 1-3/4 Lg.)
11	**10022**	5	Soc. Hd. Cap Screw (1/4-20 UNC x 1-1/2 Lg.; Torque to 110/120 in. lbs.)
12	**420882**	1	High Pressure Pump (6 pistons - See sheet 6 of 7)
13	**10005**	4	Hex. Hd. Cap Screw (1/4-20 x 1/2 Lg.)
14	**10244**	4	Lockwasher

PILOT OIL LINE/ACCUMULATOR ASSEMBLY



Item No.	Part No.	No. Req'd	Description
1	**200405**	1	Oil Line
2	**11173**	1	Connector
3	**202121**	1	Spring Retainer (Torque to 50/70 in. lbs.)
4	**16499**	1	Compression Spring
5	**21945**	1	Plunger
6	**21944**	1	Cylinder Body
7	**11421**	1	Pipe Nipple
8	**11278**	1	Connector
	21943	1	Accumulator Ass'y (Consists of items 3, 4, 5, & 6)

BASIC PUMP ASSEMBLY



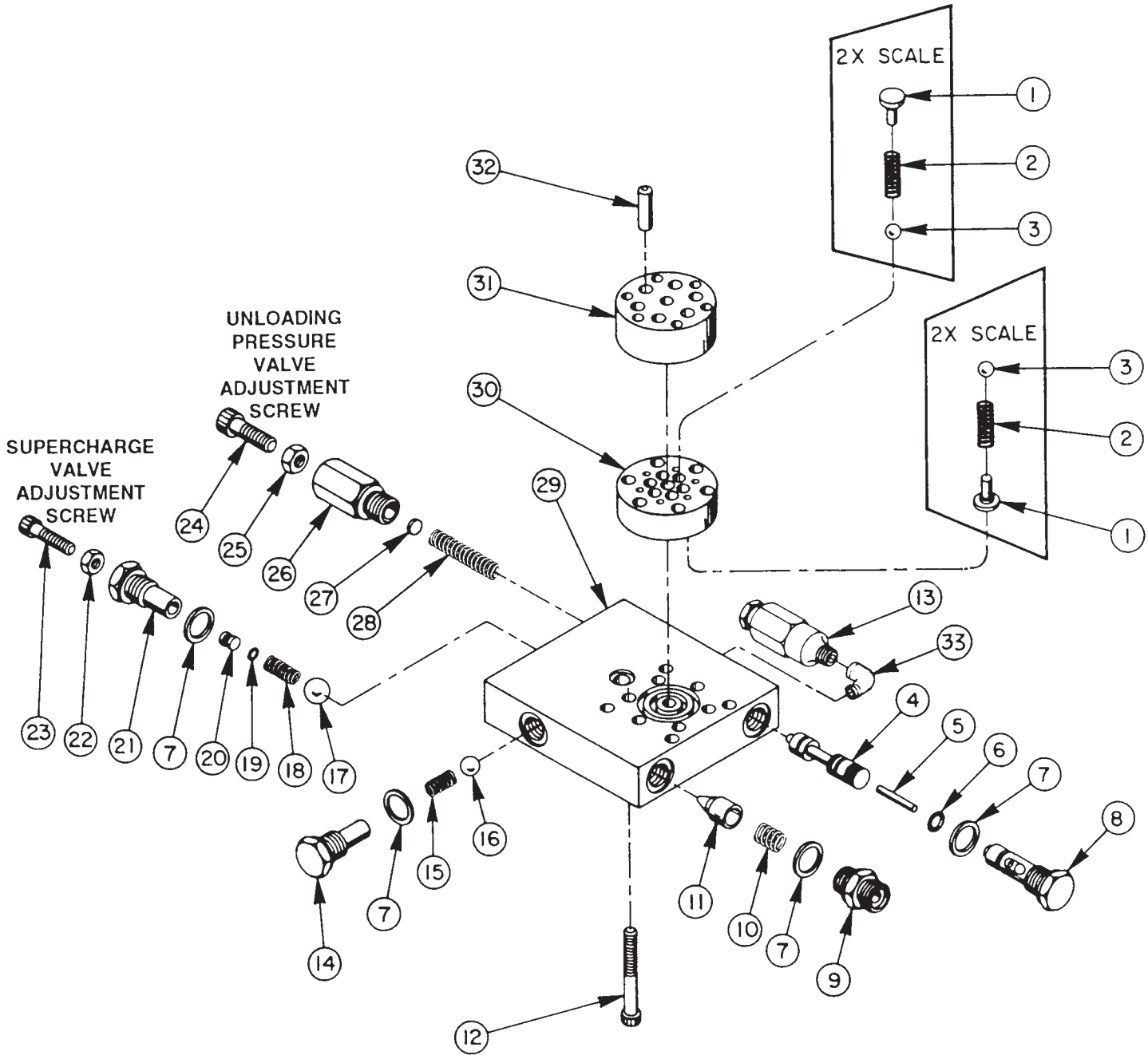
VIEW A-A

BOLT TIGHTENING SEQUENCE

1. ALL BOLTS MUST BE INITIALLY TIGHTENED IN SEQUENCE SHOWN (DO NOT EXCEED 10 IN.LBS.).
2. ALL BOLTS MUST BE TORQUED IN SEQUENCE SHOWN. (TORQUE TO 115 IN.LBS. IN INCREMENTS OF 55 IN.LBS.)

Item No.	Part No.	No. Req'd	Description
1	**21305**	1	Valve Cap
2	**10386**	1	Nut (3/8-24 UNF)
3	**22362**	1	Valve Adjusting Screw
4	**10268**	3	O-ring (1/2 X 3/8 X 1/16)
5	**21306**	1	Spring Guide
6	**14857**	1	Flat Washer
7	**10495**	1	Spring (1/2 O.D. X 1-5/8 Lg.)
8	**21046**	1	Valve Stem
9	**22361**	1	Body
10	**50706**	1	Gerotor Pump Housing
11	**260023**	1	90° Elbow Fitting
12	**260021**	1	Tube Extension
13	**260022**	1	Straight Fitting (1/2 NPT)
14	**200397**	1	Key
15	**21345**	1	Filter
16	**35271**	1	Angle Plate
17	**15432**	1	Needle Thrust Race
18	**23548**	1	Top Plate
19	**23547**	1	Top Bearing Plate
20	**10375**	1	Steel Ball (1/4 dia.)
21	**10361**	1	Spring (1/4 O.D. X 1" Lg.)
22	**11814**	1	Ball Bearing
23	**15431**	1	Needle Thrust Bearing
24	**11227**	2	Needle Thrust Race
25	**11228**	1	Needle Thrust Bearing
26	**12504**	1	O-ring (3" X 2-13/16 X 3/32)
27	**306957**	1	Air Bleed Valve
28	**18969**	1	Pipe Tee
29	**10427**	1	Pressure Plug (1/8 NPTF)
30	**200395**	1	Gasket
31	**43110**	1	Valve Mounting Block
32	**11863**	1	Backup Washer (1/2 X 3/8 X 1/16)
33	**20787**	1	Connector
34	**12178**	2	Retaining Ring (For 5/8 shaft)
35	**10247**	4	Lockwasher (3/8)
36	**10049**	4	Hex. Hd. Cap Screw (3/8-16 X 1" Lg.)
37	**41838**	1	Motor Mount
38	**27003**	2	Nylon Pin
39	**207440**	1	Coupling
40	**27001**	1	Coupling
41	**27778**	1	Square Key
42	**303009**	1	Pump Shaft
43	**12179**	2	Woodruff Key
44	**10133**	2	Soc. Hd. Set Screw (#10-24 UNC X 1/4 Lg.)
45	**12194**	1	Oil Seal (1-1/8 X 5/8 X 1/4 Thk.)
46	**15430**	1	Needle Bearing (13/16 O.D. X 5/8 I.D. X 5/8 Lg.)
47	**10012**	6	Soc. Hd. Cap Screw (1/4-20-UNC X 7/8 Lg.; Torque to 110/120 in. lbs.)
48	**15428**	1	Gerotor Set
49	**15461**	1	Needle Bearing (13/16 O.D. X 5/8 I.D. X 3/4 Lg.)
50	**35266**	1	Gasket
51	**13152**	1	Dowel Pin (3/16 X 1-1/2 Lg.)

HIGH PRESSURE PUMP ASSEMBLY
(6 Piston)

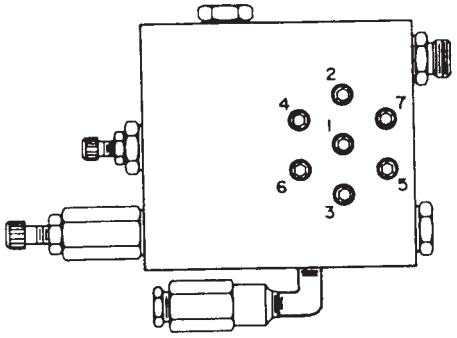


Note: Supercharge Valve and Unloading Pressure Valve of the high pressure pump assemby are NOT factory set! They require adjustment at final pump assembly. Refer to the pump's hydraulic schematic for specifications.

Item No.	Part No.	No. Req'd	Description
1	***24549**	12	Valve Guide
2	***10445**	12	Compression Spring (5/32 O.D. X 3/4 Lg.)
3	***12223**	12	Steel Ball (3/16 Dia.)
4	**200273**	1	Spool
5	**16471**	1	Dowel Pin (1/8 Dia. X 1" Lg.)
6	**14763**	1	O-ring (7/16 X 5/16 X 1/16)
7	**10261**	4	Copper Washer (3/4 X 19/32 X 1/32)
8	**202561**	1	Actuating Pin Adapter (Torque to 30/35 ft. lbs.)
9	**20770**	1	Connector (Torque to 40/45 ft. lbs.)
10	**10425**	1	Compression Spring (3/8 O.D. X 3/4 Lg.)
11	**20771**	1	Poppet
12	***15318**	7	Soc. Hd. Cap Screw (1/4-28 X 2" Lg.; See Diagram Below)
13	**21278-50**	1	Relief Valve Assembly (Set at 5,100/5,700 PSI)
14	**200269**	1	Adapter Plug (Torque to 30/35 ft. lbs.)
15	**11451**	1	Compression Spring (1/4 O.D. X 5/8 Lg.)
16	**10378**	1	Steel Ball (3/8 Dia.)
17	**10379**	1	Steel Ball (1/2 Dia.)
18	**15319**	1	Compression spring (1/4 O.D. X 3/4 Lg.)
19	**12099**	1	O-ring (9/32 X 5/32 X 1/16)
20	**200271**	1	Adapter
21	**200270**	1	Super Charge Fitting (Torque to 30/35 ft. lbs.)
22	**10383**	1	Finished Jam Nut (1/4-20)
23	**10016**	1	Soc. Hd. Cap Screw (1/4-20 X 1" Lg.)
24	**10809**	1	Soc. Hd. Cap Screw (5/16-18 X 1-1/4 Lg.)
25	**10385**	1	Finished Jam Nut (5/16-18)
26	**36545**	1	Unloading Fitting (Torque to 30/35 ft. lbs.)
27	**16528**	1	Disc
28	**203031**	1	Compression Spring (.300 O.D. X 1-3/4" Lg.)
29	***50691**	1	Valve Body
30	***41048**	1	Valve Head
31	***41063**	1	Pump Barrel
32	***21628**	6	Piston (9/32 Dia.)
33	**13229**	1	90° Elbow Fitting

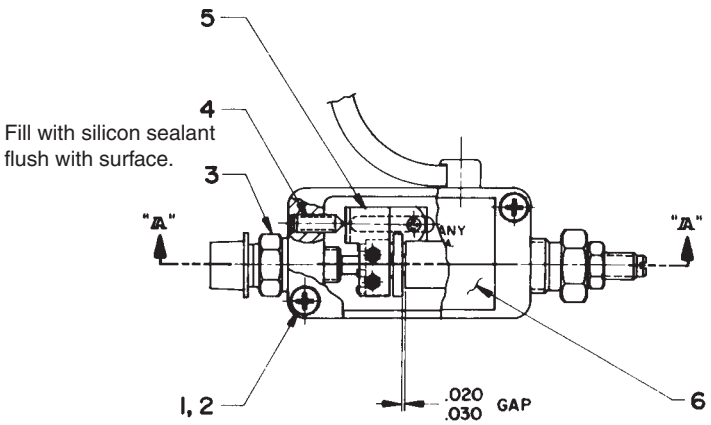
When replacing items marked with an asterisk (*), consult Hytec Technical Services Department.

HIGH PRESSURE PUMP
BOLT TIGHTENING SEQUENCE

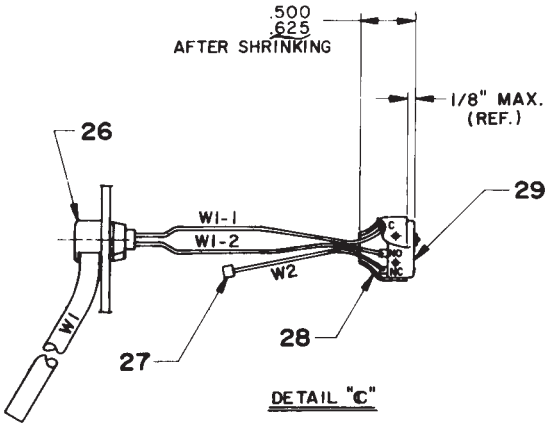


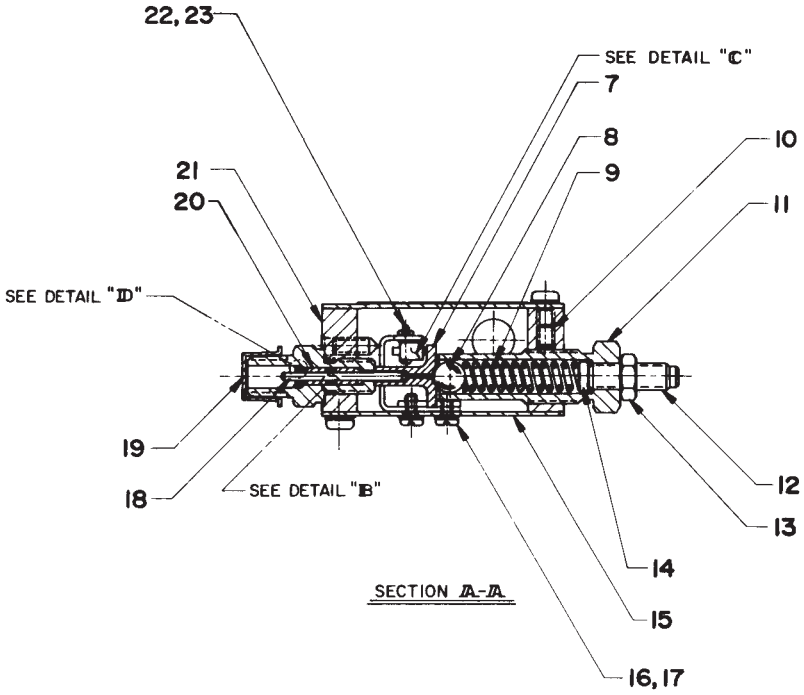
NOTE: Assemble in sequence shown. Lubricate under head and on threads. Torque to 180 in. lbs.

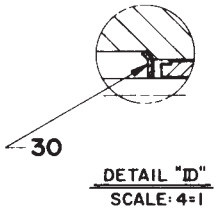
PRESSURE SWITCH
#52203











Sheet No.	**7 of 7**
Rev. 2	**Date: 9 Feb. 2001**

Item No.	Part No.	No. Req'd	Description
1	**16613**	4	Pan Hd. Machine Screw (#10-24 X 5/16 Lg.)
2	**11108**	4	Lockwasher (#10)
3	**304949**	1	Cartridge (Torque to 80/120 in. lbs.)
4	**210270**	1	Set Screw (1/4-20 X 3/4 Lg.)
5	**45637**	1	Switch Bracket
6	**304960**	1	Decal
7	**210198**	1	Platen
8	**16920**	1	Ball (7/16 dia.)
9	**10495**	1	Compression Spring
10	**16028**	1	Set Screw (1/4-20 X 5/16 Lg. w/brass insert; Torque to 70/78 in. lbs.)
11	**304951**	1	Spring Retainer
12	**22362**	1	Adjusting Screw
13	**10386**	1	Hex Jam Nut (3/8-24)
14	**210201**	1	Spring Disc
15	**304950**	2	Cover Plate
16	**10975**	2	Pan Hd. Machine Screw (#8-32 X 5/16 Lg.)
17	**11388**	2	Lockwasher (#8)
18	**23062**	1	Dowel Pin (Note: Pin must bottom out in platen [Item #7] bore.)
19	**12545**	1	Cap Plug
20	**210197**	2	Bushing (NOTE: Insert with flat surface against o-ring and backup ring)
21	**52201**	1	Switch Body
22	**10157**	2	Rd. Hd. Machine Screw (#2-56 X 1/2 Lg.)
23	**10193**	2	Hex Nut (#2-56)
24	**10264**	1	O-ring (1/4 X 1/8 X 1/16)
25	**214992**	1	O-ring Backup Washer
26	**12176**	1	Strain Relief Bushing
27	**15525**	1	Splice Cap
28	**19441**	.10 ft.	Heat Shrink Tubing (Black)
29	**10489**	1	Limit Switch
30	**12041**	1	Retaining Ring (Internal)

PARTS INCLUDED BUT NOT SHOWN

11423	2.5 ft.	Electric Cord (18/2 SJTO)

PRESSURE SWITCH ADJUSTMENT PROCEDURE

1. Place a .025 thick shim between spring retainer (Item #11) and platen (Item #7). Tighten spring retainer until it contacts shim. Lock in place with set screw (Item #10).

2. Slide switch mounting bracket (Item #5) towards platen until switch button is close to platen surface and secure in place by tightening screws (Item #16).

3. Connect volt/ohm meter to electrical cord. Tighten set screw (Item #4) against switch mounting bracket until switch button contacts platen and actuates. Continue tightening set screw approximately 1/8 turn after switch button actuates.
   Note: Verify that .020/.030 is maintained between spring retainer and platen.

4. Verify operation (ON/OFF) by depressing pin with spring tension applied to platen.