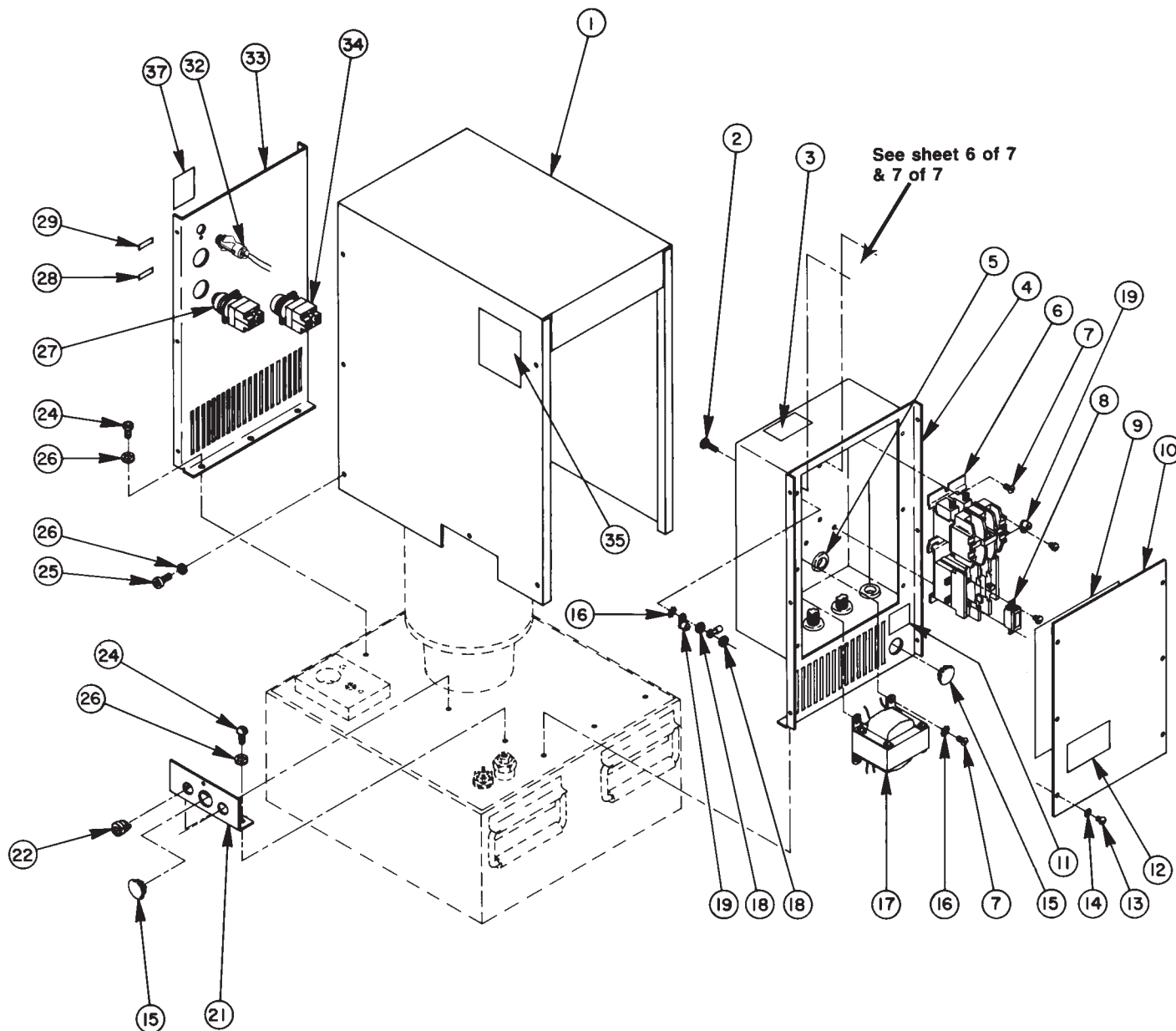


MODEL C
ELECTRIC TWO-STAGE HYDRAULIC PUMP
CONTROL BOX & COVER ASSEMBLY



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

Sheet No. 1 of 7

Rev. 4

Date: 28 Jan. 2000

Parts List, Form No. 100700, Back sheet 1 of 7

Item No.	Part No.	No. Req'd	Description
1	50946WH2	1	Shroud Cover
2	104484	1	Hex Hd. Mach. Screw (#10-24 x 3/4 Lg.)
3	202504	1	Rotation Decal
4	60235PU2	1	End Panel & Electrical Box
5	15497	AR	Rubber Grommet
6	17861-4	1	Magnetic Starter (for 100199 & 100199-230; on 100198 & 100198-230, see sheet 7 of 7)
7	10164	AR	Rd. Hd. Mach. Screw (#10-24 UNC x 3/8 Lg.)
8	16641-39	3	Starter Heater (for 100199)
	16641-50	3	Starter Heater (for 100199-230)
9	308374	1	Electrical Schematic Decal
10	42457PU2	1	Cover Plate
11	204607	1	Specification Decal (for 100198 & 100198-230)
	205305	1	Specification Decal (for 100199 & 100199-230)
12	200188	1	Warning Decal
13	10975	6	Pan Hd. Mach. Screw (#8-32 x 5/16 Lg.)
14	11107	6	Serrated Washer (#8 Internal Tooth)
15	15327	AR	Snap Plug (for 7/8" hole)
16	11108	AR	Serrated Washer (#10 hole)
17	39693	1	Transformer (for 100199 & 100199-230)
	39692	1	Transformer (for 100198 & 100198-230)
18	10197	2	Hex Nut (#10-24 UNC)
19	205420	4	Lug Connector (for 100199 & 100199-230)
21	36746WH2	1	Angle Plate
22	15993	1	Strain Relief Bushing
24	16613	AR	Pan Hd. Mach. Screw (#10-24 x 5/16 Lg.)
25	14394	14	Self-Tapping Screw (#10 x 3/8Lg.)
26	12356	AR	Serrated Washer (#10 Internal Tooth)
27	39283	1	Pushbutton Switch (Red)
28	203769	1	Stop Decal
29	203808	1	Start Decal
32	15932	1	Indicator Lamp
33	51124PU2	1	End Panel
34	39282	1	Pushbutton Switch (Green)
35	309233	2	Trade Name Decal
37	204015	1	Instruction Decal

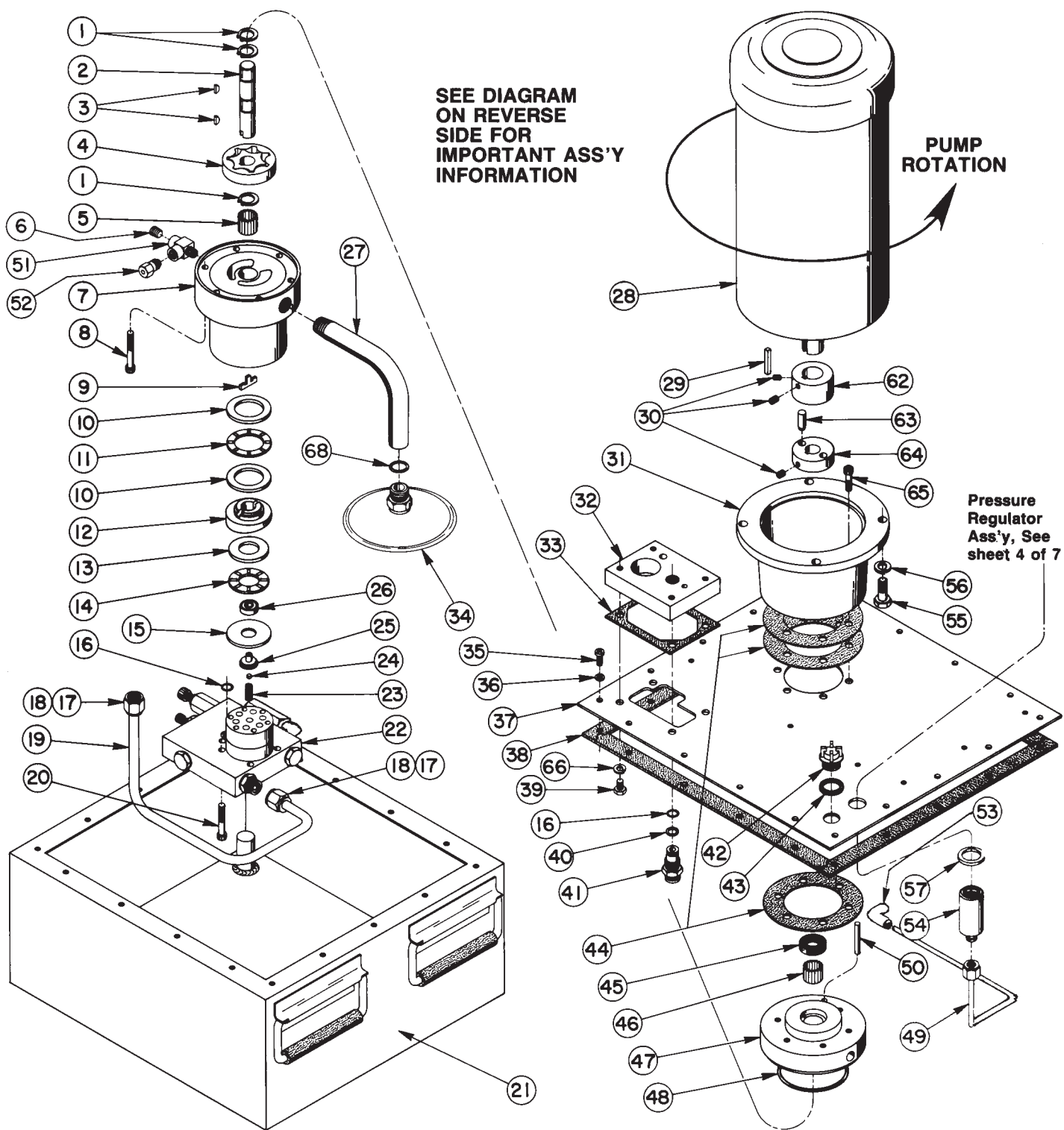
AR: As Required

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.

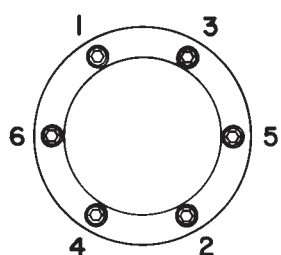
BASIC PUMP ASSEMBLY



Parts List, Form No. 100700, Back sheet 2 of 7

Item No.	Part No.	No. Req'd	Description	Item No.	Part No.	No. Req'd	Description
1	12178	3	Retaining Ring (for 5/8" shaft)	33	200395	1	Gasket
2	303009	1	Pump Shaft	34	21345	1	Filter Assembly
3	12179	2	Woodruff Key	35	16876	18	Mach. Screw (#10-24 x 1/2 Lg.)
4	15428	1	Gerotor Set	36	12356	AR	Serrated Washer (#10 Internal Tooth)
5	15461	1	Needle Bearing	37	60922	1	Cover Plate
6	10427	1	Pipe Plug (1/8 NPTF)	38	50712	1	Cover Gasket
7	50705	1	Pump Housing	39	10005	4	Cap Screw (1/4-20 UNC x 1/2 Lg.)
8	10854	6	Soc. Hd. Cap Screw (see NOTE below; 1/4-20 x 1-3/4 Lg.)	40	11863	1	Backup Washer (1/2 x 3/8 x 1/16)
9	200397	1	Key	41	20787	1	Connector
10	11227	2	Needle Thrust Race	42	20937	1	Filler Plug
11	11228	1	Needle Thrust Bearing	43	200415	1	Washer
12	35271	1	Angle Plate	44	35266	3	Gasket
13	15432	1	Needle Thrust Race	45	12194	1	Seal
14	15431	1	Needle Thrust Bearing	46	15430	1	Needle Bearing
15	23548	1	Top Plate	47	50706	1	Gerotor Pump Housing
16	10268	2	O-ring (1/2 x 3/8 x 1/16)	48	12504	1	O-ring (3" x 2-13/16 x 3/32)
17	10430	2	Tube Sleeve	49	250790	1	Oil Line Ass'y with Fittings (3/16" Dia.)
18	10431	2	Tube Nut	50	13152	1	Dowel Pin (3/16 x 1-1/2 Lg.)
19	35281	1	Oil Line (3/8" Dia.)	51	18969	1	Tee Fitting
20	10022	5	Soc. Hd. Cap Screw (1/4-20 UNC x 1-1/2 Lg.; Torque to 110/120 in. lbs.)	52	306957	1	Air Bleed Valve
21	60234PU2	1	Reservoir	53	16177	1	90° Elbow Fitting
22	41833	1	High Pressure Pump Ass'y (see sheet 3 of 7)	54	22361	1	Body
23	10361	1	Compression Spring (1/4 O.D. x 1" Lg.)	55	10049	4	Cap Screw (3/8-16 UNC x 1" Lg.)
24	10375	1	Steel Ball (1/4" Dia.)	56	10247	4	Lockwasher (for 3/8" bolt)
25	23547	1	Top Bearing Plate	57	17065	1	Flat Washer (.125 Thk.)
26	11814	1	Ball Bearing	62	207440	1	Coupling
27	204242	1	Tube Extension	63	27003	2	Nylon Pin
28	15435	1	Motor (for 100198 & 100198-230; 2 H.P., 115/230 V, 60 Hz)	64	27001	1	Coupling
	15436	1	Motor (for 100199 & 100199-230; 2 H.P., 230/460 V, 60 Hz)	65	10012	6	Cap Screw (1/4-20 x 7/8 Lg.)
29	27778	1	Square Key	66	10244	4	Lockwasher (for 1/4" bolt)
30	10133	3	Soc. Hd. Set Screw (#10-24 x 1/4 Lg.)	68	10527	1	O-ring (13/16 x .644 x .087)
31	41838	1	Motor Mount	PARTS INCLUDED BUT NOT SHOWN			
32	43110	1	Valve Mounting Block				13229 1 90° Elbow Fitting

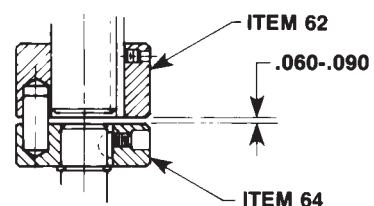
AR: As Required



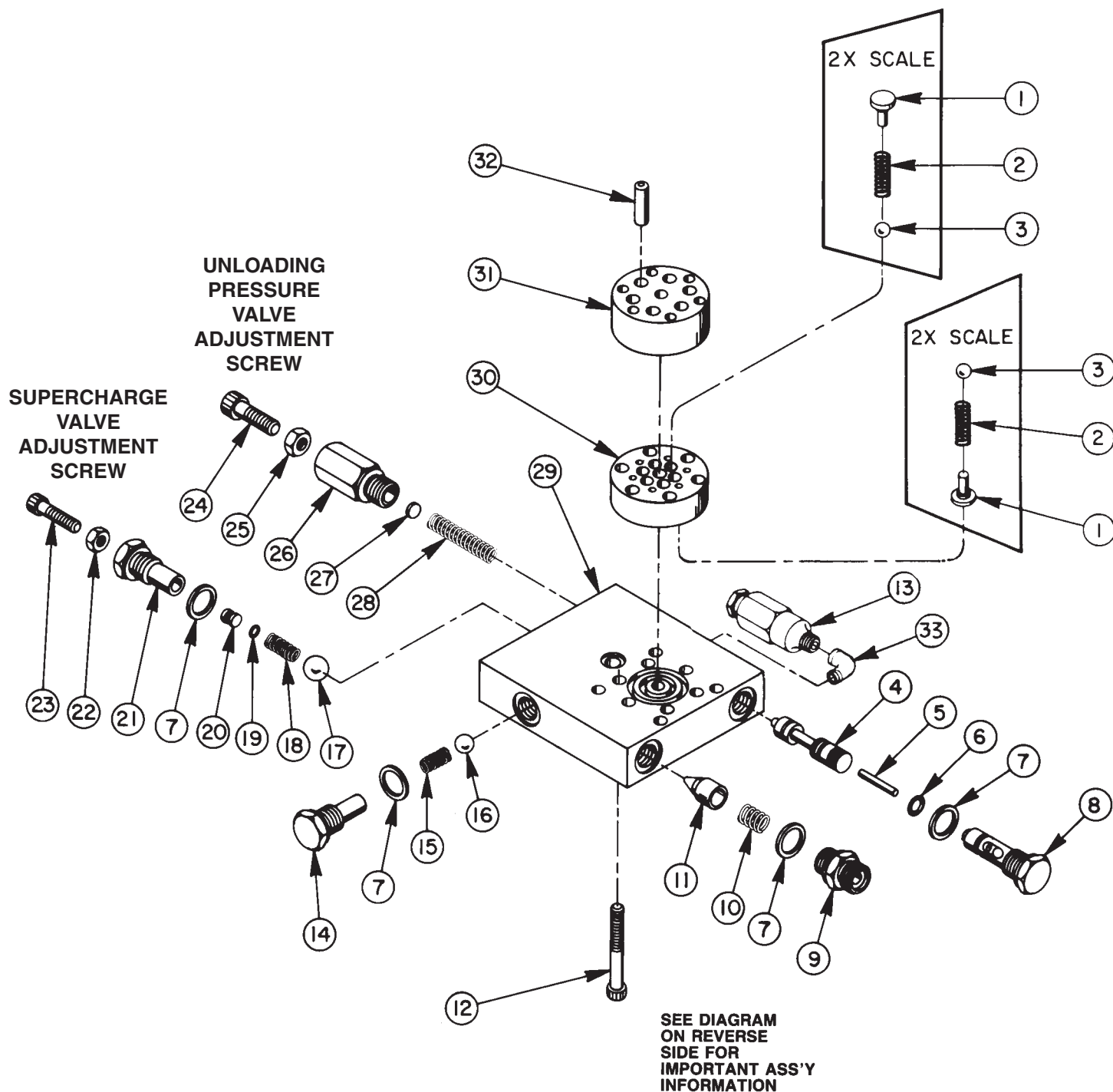
BOLT TIGHTENING SEQUENCE

NOTE: All bolts must be torqued in sequence shown. Torque to 110/120 in. lbs. in increments of 50/60 in. lbs.

COUPLING CLEARANCE



#41833 HIGH PRESSURE PUMP ASSEMBLY



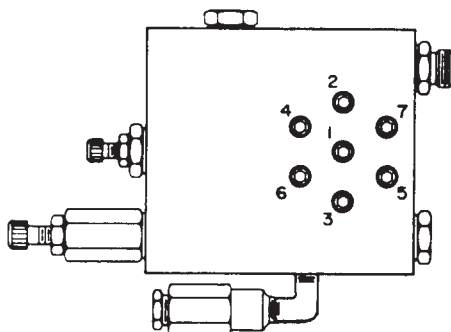
Note: Supercharge Valve and Unloading Pressure Valve of the high pressure pump assembly are NOT factory set! They require adjustment at final pump assembly. Refer to the pump's hydraulic schematic for specifications.

#41833 HIGH PRESSURE PUMP ASSEMBLY

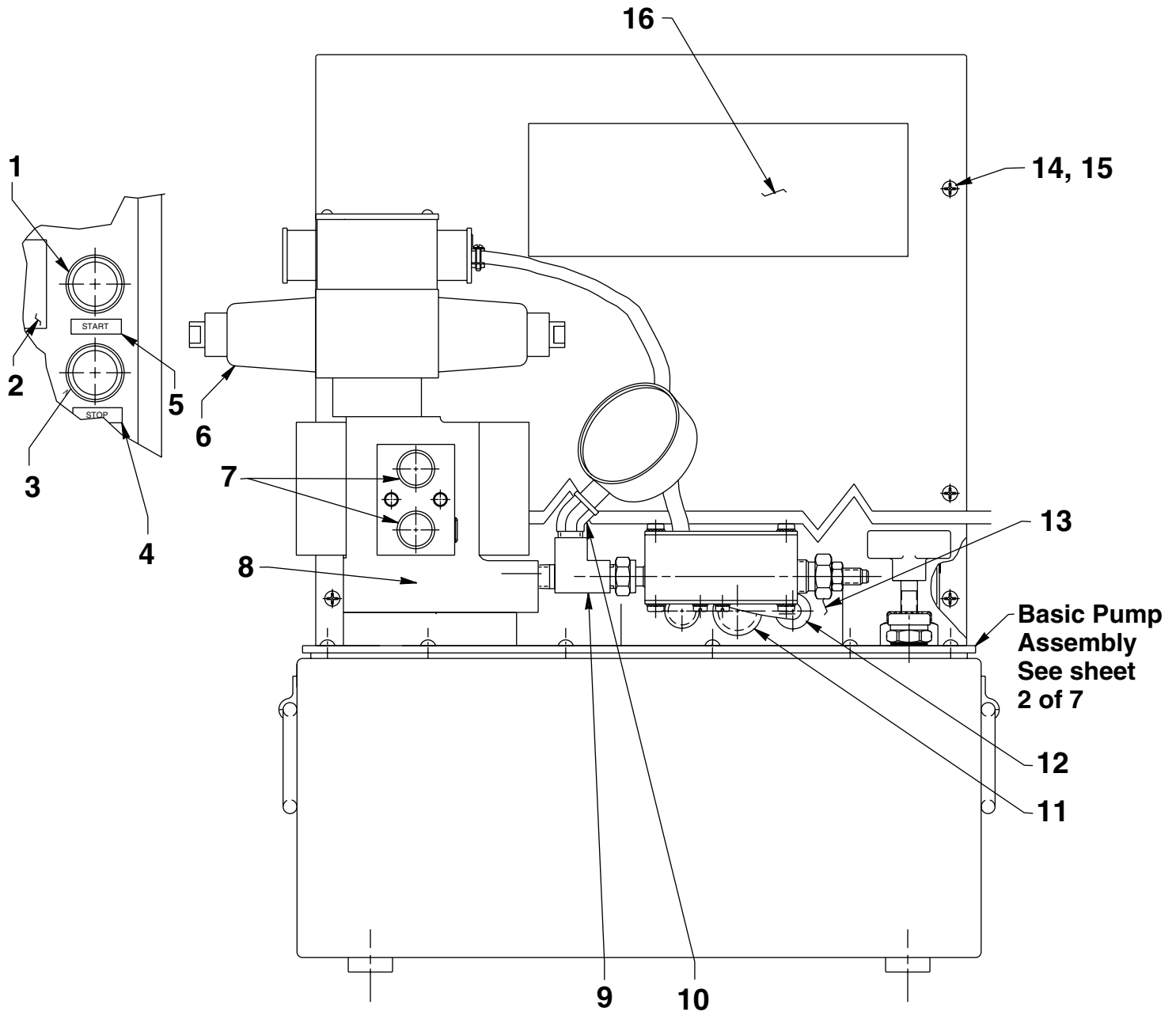
Item No.	Part No.	No. Req'd	Description	Item No.	Part No.	No. Req'd	Description
1	•24549	12	Valve Guide	16	10378	1	Steel Ball (3/8" Dia.)
2	*10445	12	Compression Spring (5/32 O.D. x 3/4 Lg.)	17	10379	1	Steel Ball (1/2" Dia.)
3	*12223	12	Steel Ball (3/16" Dia.)	18	15319	1	Compression Spring (1/4 O.D.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

BOLT TIGHTENING SEQUENCE



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

PUMP ASSEMBLY --- SIDE VIEW

Note: Graphics changed at last revision(s) made to this form.

Parts List, Form No. 100700, Back sheet 4 of 7

Item No.	Part No.	No. Req'd	Description
1	39282	1	Push Button Switch (Green)
2	204015	1	Start-up Decal (Power Failure)
3	39283	1	Push Button Switch (Red)
4	203769	1	Stop Decal
5	203808	1	Start Decal
6	15643-4	1	Solenoid Valve (24 V, 50/60 Hz)
7	11127	2	Plug (3/8 NPTF)
8	31057	1	Valve Assembly (see Form #100562)
9	10618	1	Tee Fitting
10	10645	1	45° Elbow Fitting
11	15327	1	Snap Plug (7/8" hole; for 100198)
	15327	2	Snap Plug (7/8" hole; for 100199)

Item No.	Part No.	No. Req'd	Description
12	215857	1	Strain Relief Bushing
13	36746WH2	1	Angle Plate
14	14394	14	Self-Tapping Screw (#10 x 3/8 Lg.)
15	12356	AR	Lockwasher (#10)
16	309233	2	Trade Name Decal

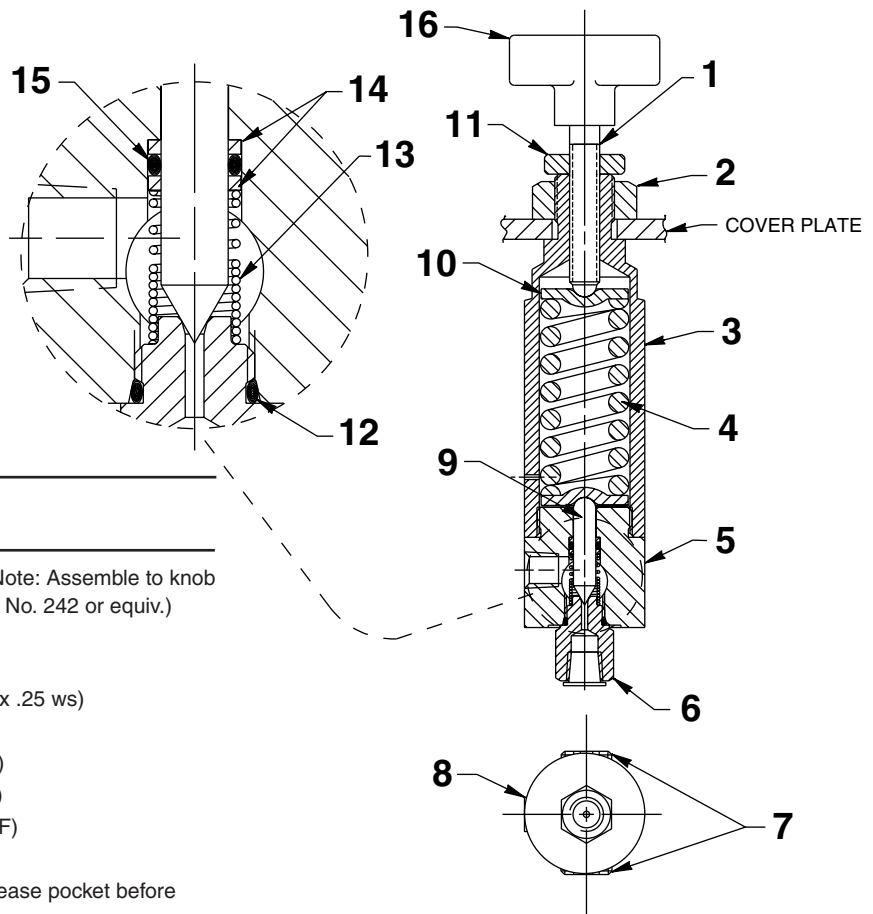
PARTS INCLUDED BUT NOT SHOWN

205305	1	Specifications Decal (For 100199)
200609	1	Drain Line (for 100199)

AR: As Required

Note: List above changed at last revision(s) made to this form.

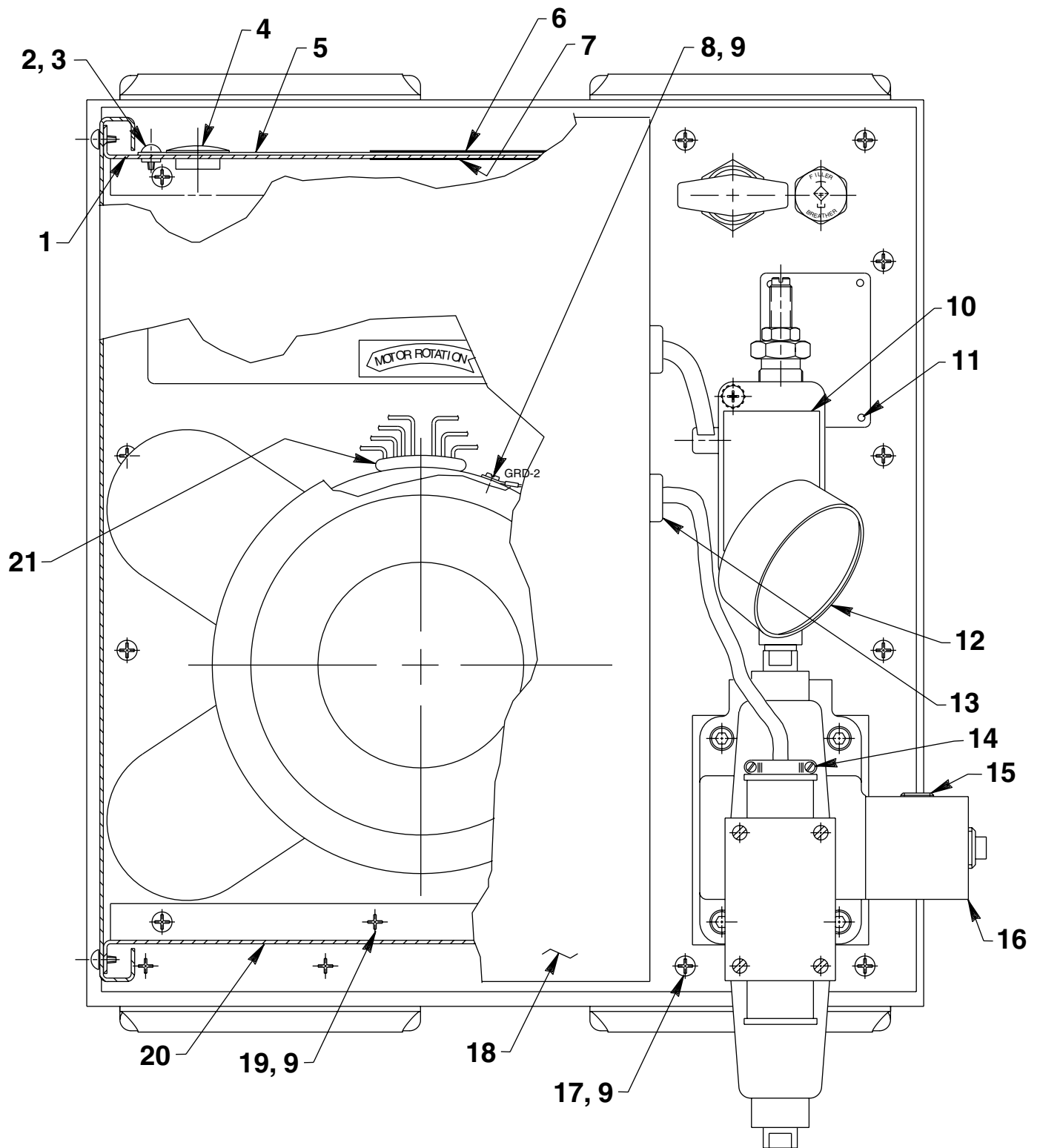
PRESSURE REGULATOR ASSEMBLY



Item No.	Part No.	No. Req'd	Description
1	215721	1	Adjustment Stem (Note: Assemble to knob [Item #16] with Loctite No. 242 or equiv.)
2	10396	1	Jam Nut (3/4-16)
3	309077	1	Regulator Housing
4	15656	1	Spring (1.1 O.D. x 2.5 x .25 ws)
5	47648	1	Body
6	309078	1	Seat Fitting (1/8 PTF)
7	16232	2	Plug Fitting (3/8 PTF)
8	10427	1	Plug Fitting (1/8 NPTF)
9	309079	1	Poppet
10	215428	2	Spring Retainer (Grease pocket before assembling [both ends].)
11	215683	1	Locknut (3/8-24)
12	13755	1	O-ring (.55 x .41 Nitrile)
13	215431	1	Spring (.39 O.D. x .66 x .28 ws; Assemble closed coils of spring form towards seat fitting [Item #6].)
14	215430	2	Backup Washer (.39 x .28)
15	10266	1	O-ring (.37 x .25 Nitrile)
16	215693	1	Knob

Note: Graphics and list for regulator changed at last revision(s) made to this form.

PUMP ASSEMBLY --- TOP VIEW



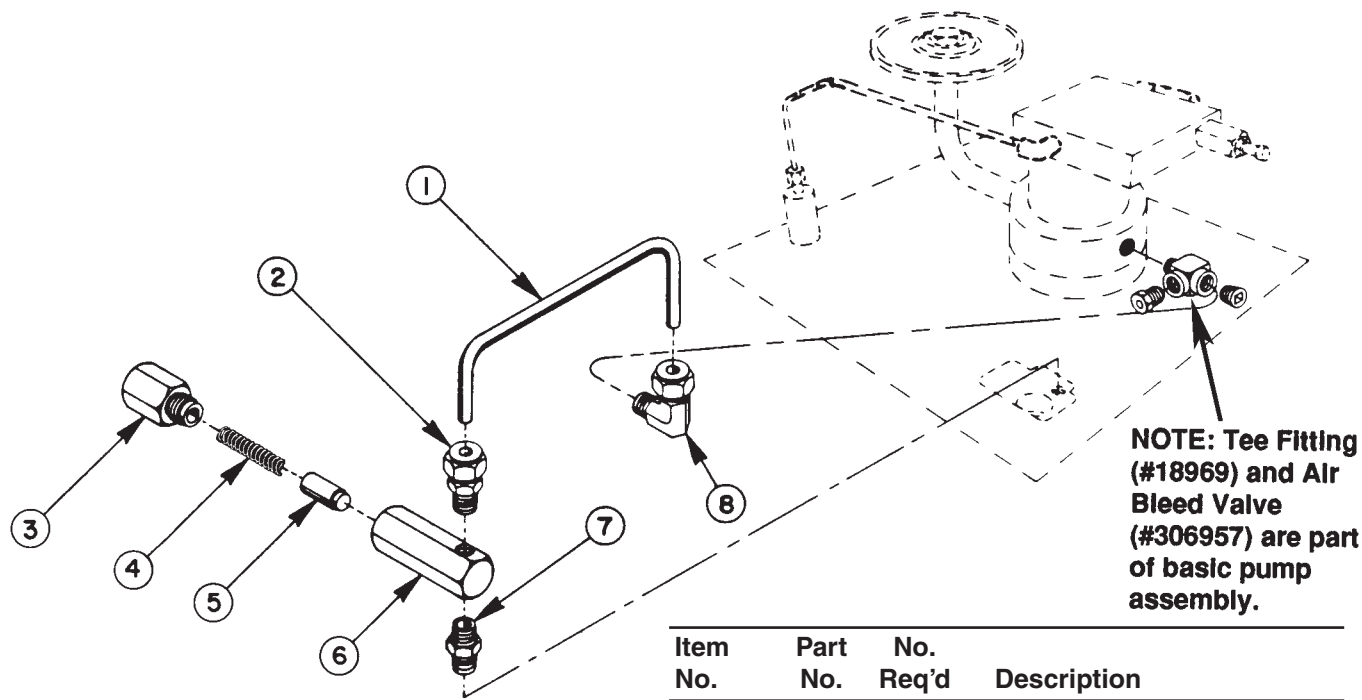
Note: Graphics changed at last revision(s) made to this form.

Item No.	Part No.	No. Req'd	Description	Item No.	Part No.	No. Req'd	Description
1	60235PU2	1	End Panel/Elect. Box Ass'y	11	10575	4	Drive Screw
2	10975	AR	Mach. Screw (#8-32 x 5/16 Lg.)	12	17946	1	Gauge
3	11107	AR	Lockwasher (#8)	13	15993	1	Strain Relief Bushing
4	15327	1	Snap Plug	14	11203	1	Clamp
5	42457PU2	1	Electrical Cover Assembly	15	14972	1	Plug (1/4 NPTF)
6	200188	1	Electrical Warning Decal	16	31039	1	Manifold
7	308374	1	Electrical Schematic Decal	17	16876	AR	Pan Hd. Screw (#10-24 x 1/2 Lg.)
8	14394	1	Self-Tapping Screw (#10 x 3/8 Lg.)	18	50946WH2	1	Cover Shroud
9	12356	AR	Lockwasher (#10)	19	16613	AR	Pan Hd. Screw (10-24 x 5/16)
10	9625	1	Pressure Switch Assembly (set at 3,400/3,500 PSI; see Form #100589)	20	51124PU2	1	Front Panel
				21	15497	1	Rubber Grommet

AR: As Required

Note: List above changed at last revision(s) made to this form.

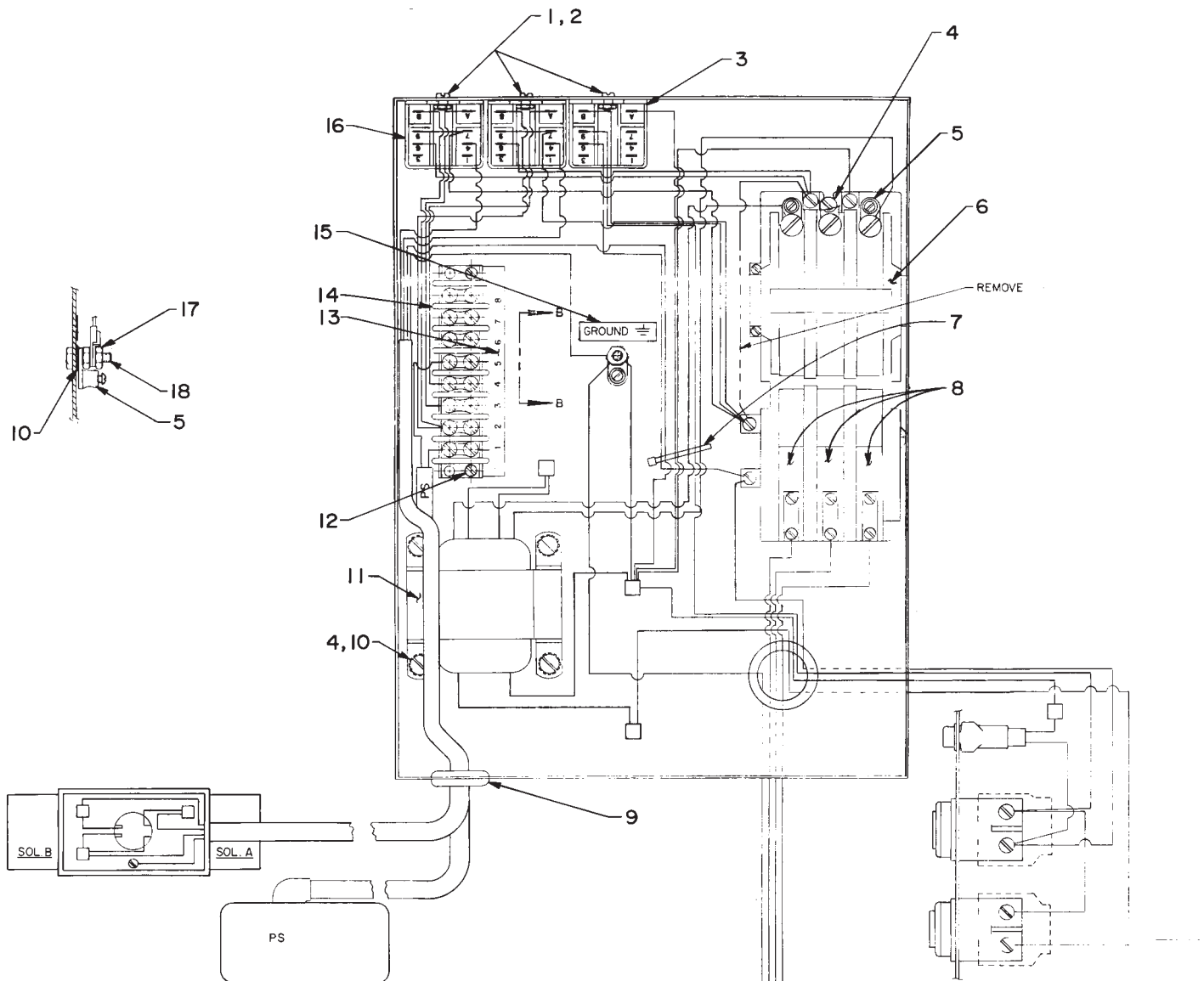
PILOT OIL LINE/ACCUMULATOR ASSEMBLY



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 (1/4 O.D. x 2-3/16 Lg.)
5	21945	1	Plunger
6	21944	1	Cylinder Body
7	11421	1	Pipe Nipple
8	22178	1	Connector
	21943	1	Accumulator Assembly (consists of Items 3, 4, 5, & 6)

ELECTRICAL ASSEMBLY

for #100199 (460 Volt) & #100199-230 (230 Volt)



Item No.	Part No.	No. Req'd	Description
1	17563	6	Mach. Screw (#6-32 x 1/4 Lg.)
2	10195	6	Nut (#6-32)
3	39092	1	Relay
4	10164	6	Mach. Screw (#10-24 x 3/8 Lg.)
5	205420	4	Screw Connector
6	17861-4	1	Starter
7	12313	AR	Cable Tie
8	16641-39	3	Heater Element (For 100199)
	16641-50	3	Heater Element (For 100199-230)
9	15497	2	Rubber Grommet

Item No.	Part No.	No. Req'd	Description
10	11108	5	Lockwasher
11	39693	1	Transformer
12	11426	2	Rd. Hd. Screw (#6-32 x 1/2 Lg.)
13	19979	1	Terminal Strip
14	19978	1	Terminal Block
15	205189	1	Ground Decal
16	308340	2	Relay
17	10197	2	Nut (#10-24)
18	104484	1	Cap Screw (#10-24)

PARTS INCLUDED BUT NOT SHOWN

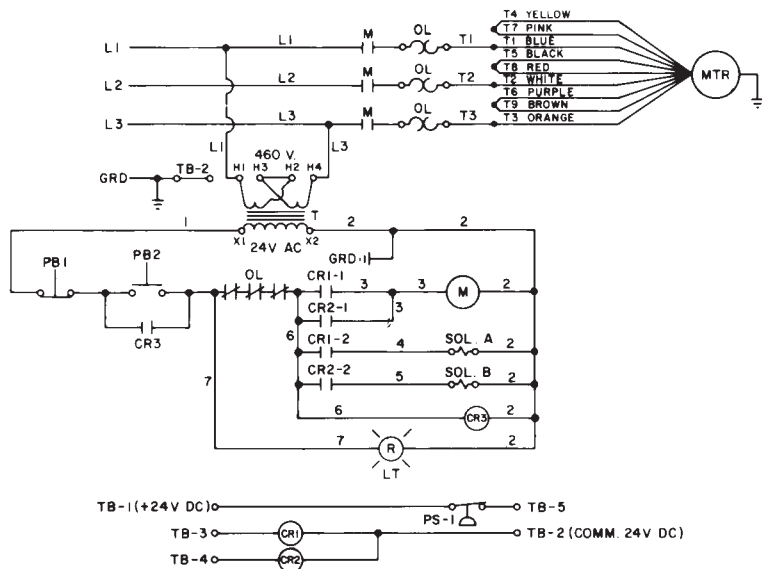
205305 1 Specifications Decal

AR: As Required

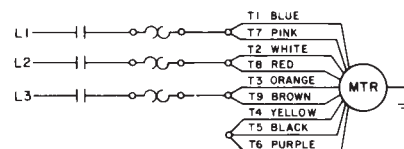
Sheet No. 6 of 7

Rev. 4 Date: 28 Jan. 2000

ELECTRICAL SCHEMATIC for 230/460 Volt

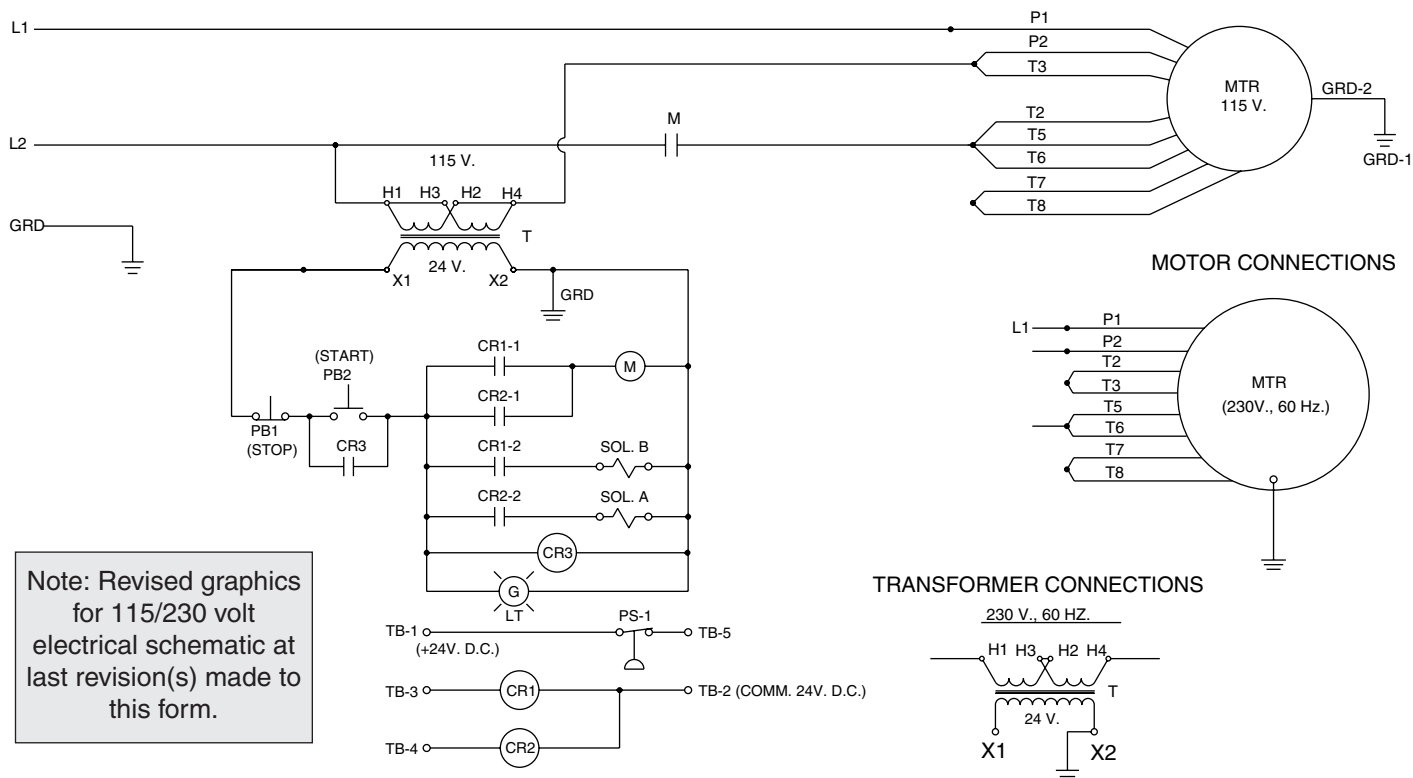


For 230V, 60 Hz System,



Transformer Connections are:
H1 & H3 to L1
H2 & H4 to L3

ELECTRICAL SCHEMATIC for 115/230 Volt



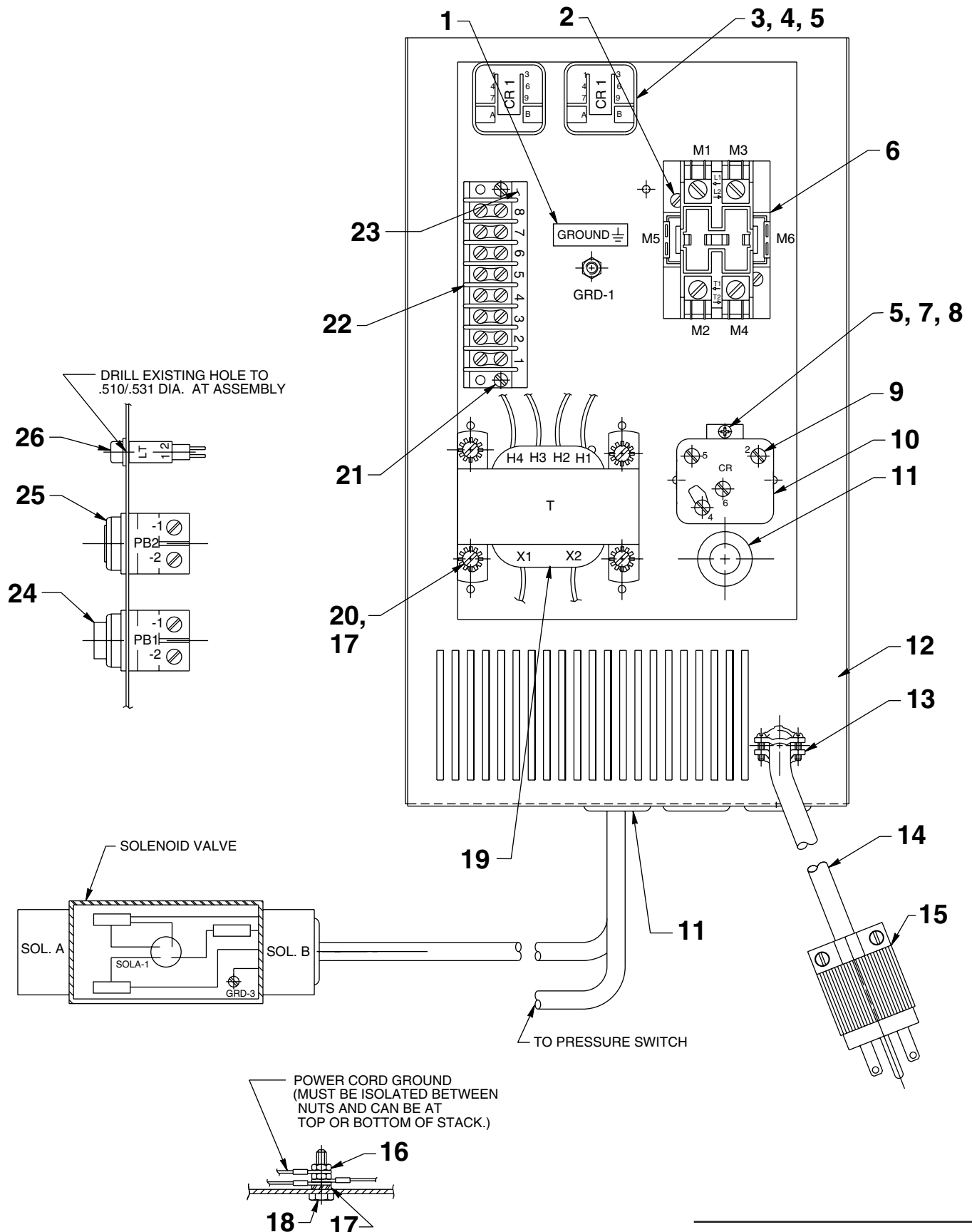
WARNING

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

ELECTRICAL ASSEMBLY for 100198 (115 Volt) & 100198-230 (230 Volt)



Note: Changed graphics at last revision(s) made to this form.

Item No.	Part No.	No. Req'd	Description
1	205189	1	Ground Decal
2	11539	2	Rnd. Hd. Screw (10-24 x 1/4)
3	308340	2	Relay
4	17563	4	Machine Screw (#6-32 x 1/4 Lg.)
5	10195	5	Nut (#6-32)
6	420718-4	1	Contactor
7	15906	1	Lockwasher (#6 External)
8	17898	1	Screw (#6-32 x 3/8 Lg.)
9	14667	1	Starter Relay
10	10975	AR	Machine Screw (#8-32 x 5/16 Lg.)
11	15497	4	Rubber Grommet
12	204607	1	Specifications Decal
13	11203	1	Clamp
14	307439	8 Ft.	Electrical Cable (12/3 SJTO)

Item No.	Part No.	No. Req'd	Description
15	11209	1	Electrical Plug (For 100198-230)
	16896	1	Electrical Plug (For 100198)
16	10197	2	Nut (#10-24)
17	11108	AR	Lockwasher (#10 External)
18	104484	1	Cap Screw (#10-24)
19	39692	1	Transformer
20	10164	2	Machine Screw (#10-24 x 3/8 Lg.)
21	11426	2	Rd. Hd. Screw (#6-32 x 1/2 Lg.)
22	19978	1	Terminal Block
23	19979	1	Terminal Strip
24	39283	1	Red Switch
25	39282	1	Green Switch
26	15932	1	Red Indicator Lamp

PARTS INCLUDED BUT NOT SHOWN

203972	1	Decal (CSA approved)
200188	1	Warning Important Decal
308374	1	Electrical Schematic Decal

AR: As Required

Note: List above completely revised at last revision(s) made to this form.

HYDRAULIC SCHEMATIC

