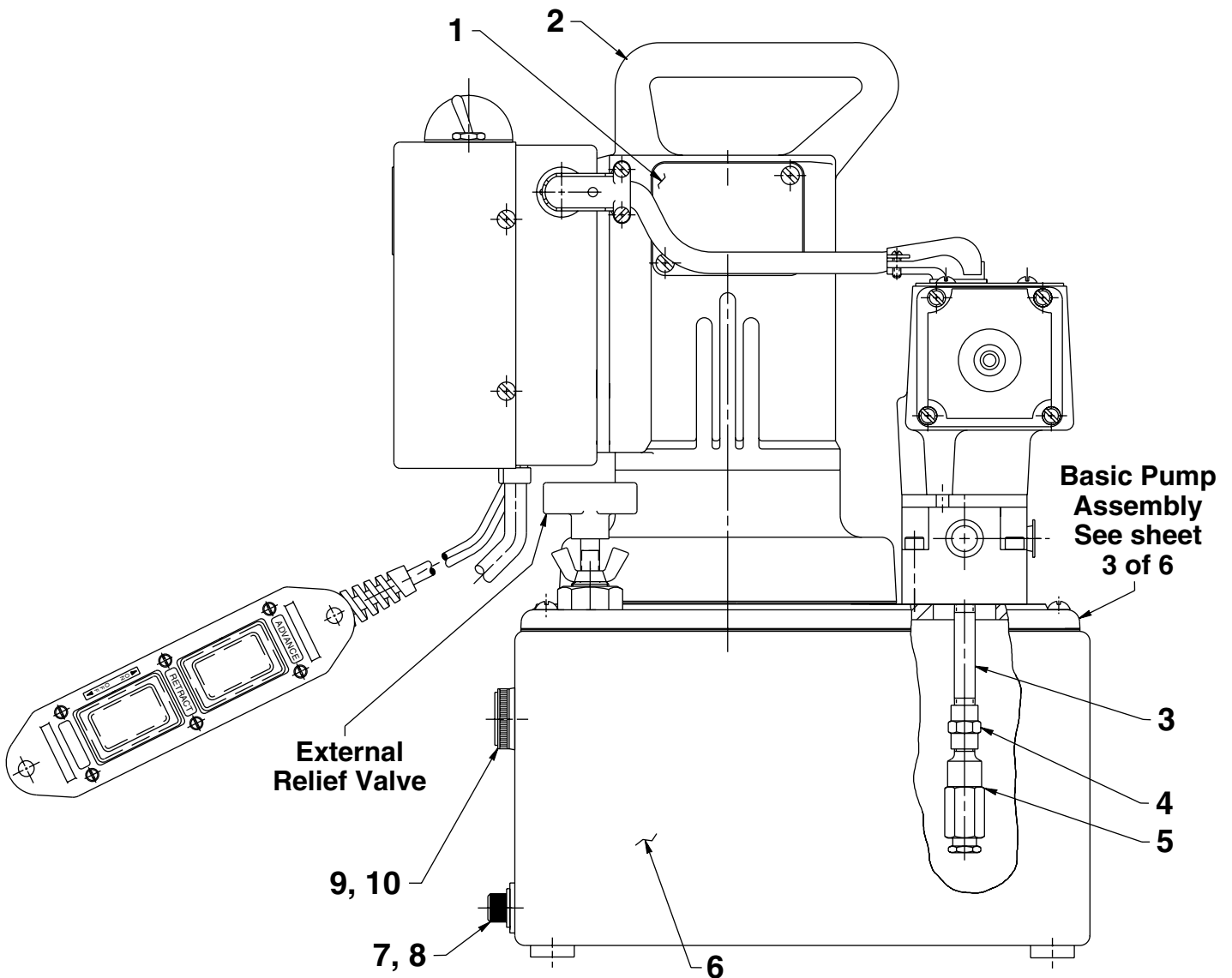


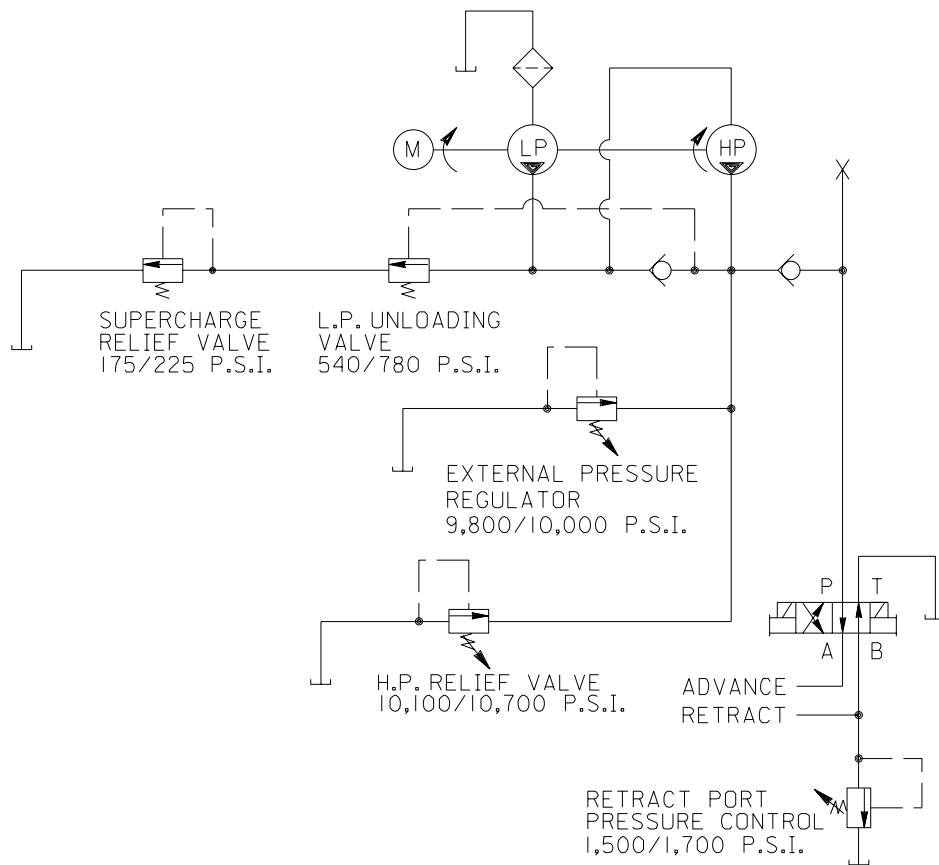
### MODEL B ELECTRIC HYDRAULIC PUMP SIDE VIEW



Item No.	Part No.	No. Req'd	Description
1	21008	2	Cover
2	53338	1	Electric Motor Assembly (115 V., 60 Hz.; See back sheet 2 of 6)
	53337	1	Electric Motor Assembly (230 V. 60 Hz.; See back sheet 2 of 6)
3	15456	1	Nipple Fitting (1/8 NPTF)
4	18841	1	Straight Fitting
5	21278-15	1	Relief Valve (Set at 1,500/1,700 PSI)
6	*420327	1	Reservoir
7	10412	1	Soc. Hd. Cap Screw (3/8-16 UNC x 1/2 Lg.)
8	19779	1	Seal Washer
9	17586	1	Sight Gauge
10	253300	1	Seal Washer

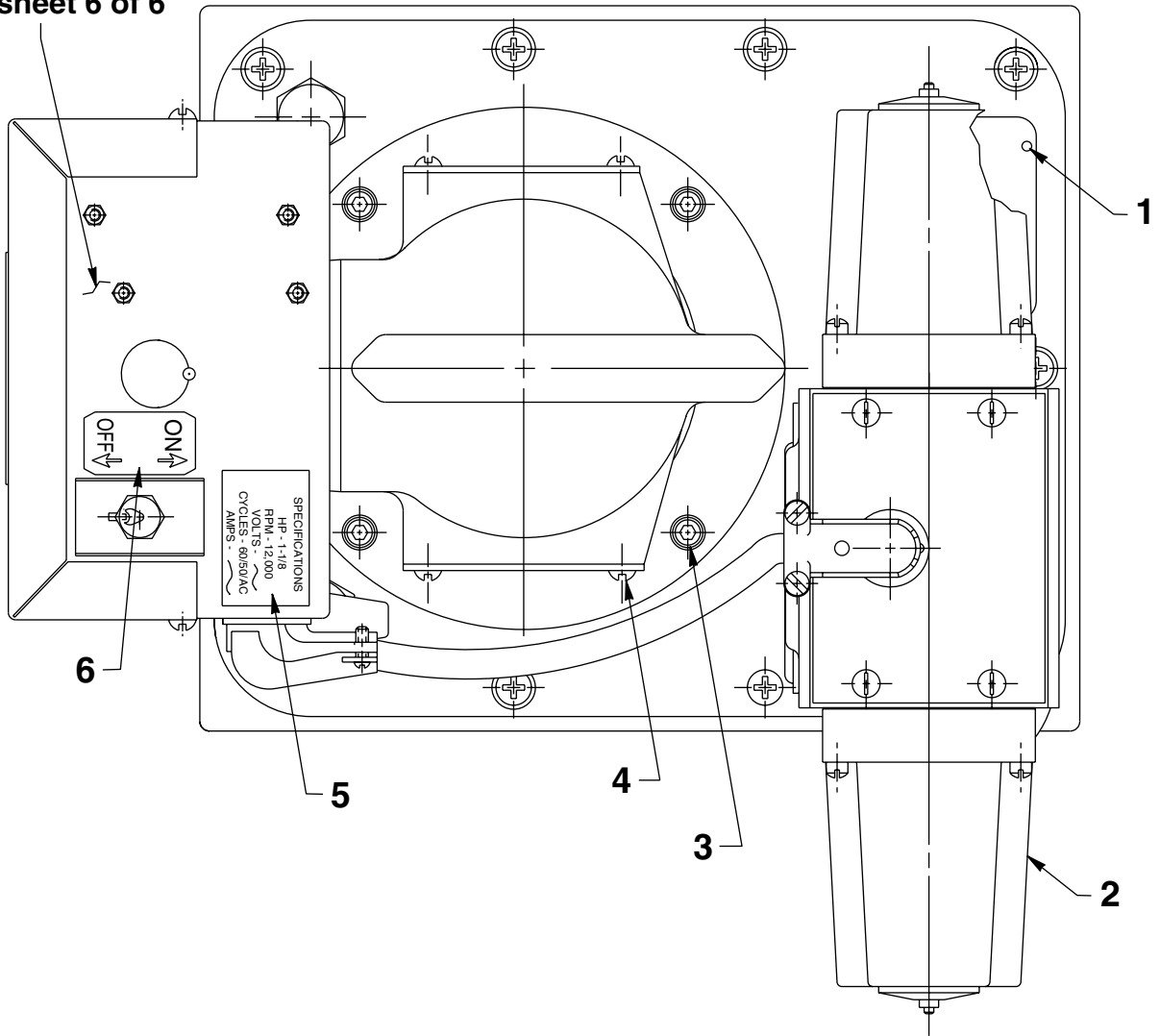
\*For a replacement reservoir, order no. 251118.

### HYDRAULIC SCHEMATIC



TOP VIEW

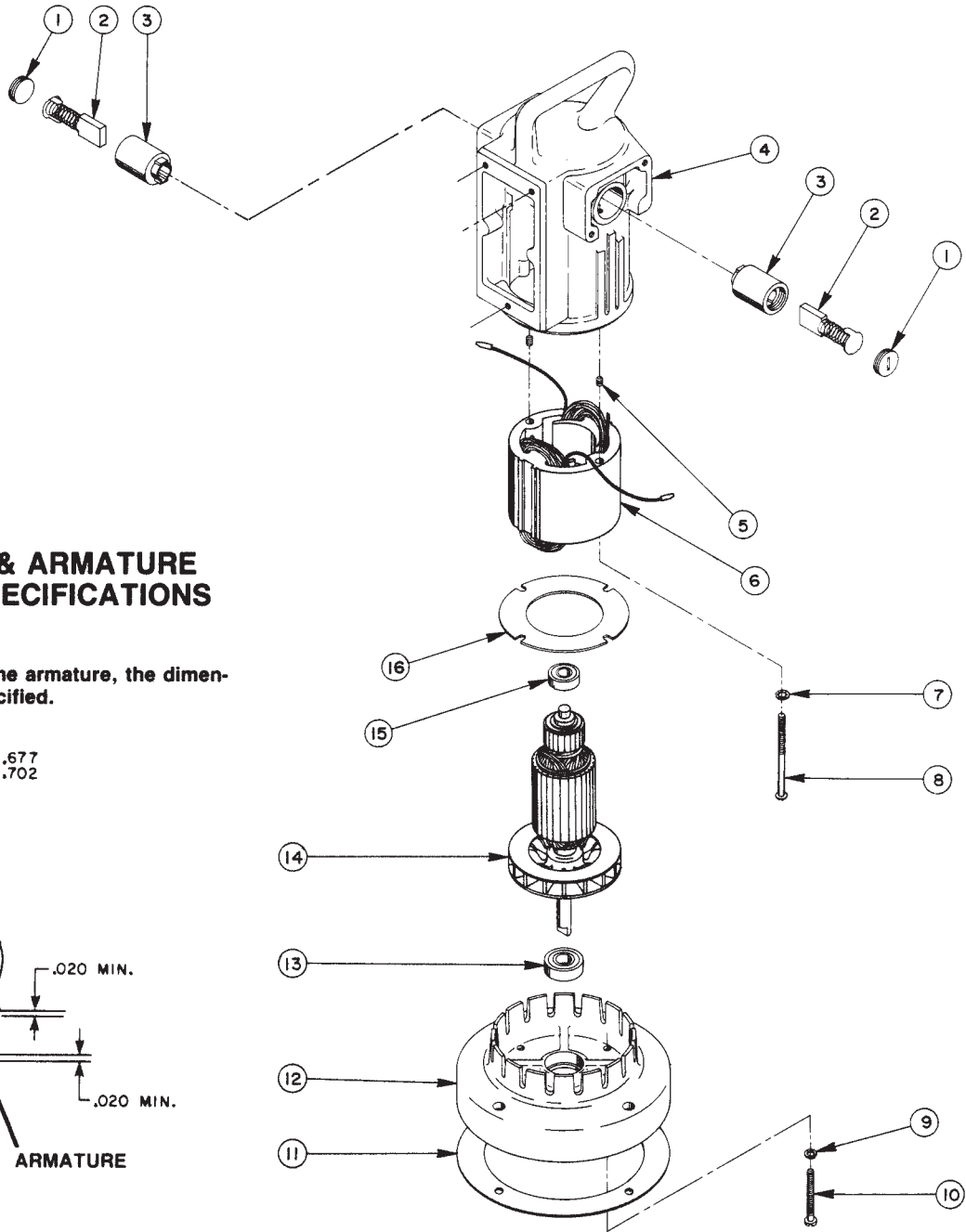
Motor Control Assembly  
See sheet 6 of 6



Item No.	Part No.	No. Req'd	Description
1	10575	4	Drive Screw
2	9592	1	Solenoid Valve (For X1E1, Two position, 4-way; See Form No. 108066)
	9552	1	Solenoid Valve (For X1E2, Two position, 4-way; See Form No. 108066)
	66205-200	1	Solenoid Valve (For X1E2J, Two position, 4-way; See Form No. 108066)
3	10022	4	Soc. Hd. Cap Screw (1/4-20 x 1-1/2 Lg.)
4	10164	4	Sl. Rd. Machine Screw (#10-24 x 3/8 Lg.)
5	215164	1	Specifications Decal (For X1E1)
	215163	1	Specifications Decal (For X1E2 & X1E2J)
6	205409	1	ON/OFF Label Decal

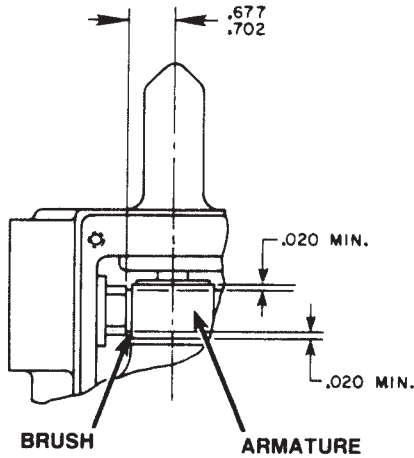
Note: Shaded areas reflect last revision(s) made to this form.

## ELECTRIC MOTOR ASSEMBLY



### BRUSH HOLDER & ARMATURE INSTALLATION SPECIFICATIONS

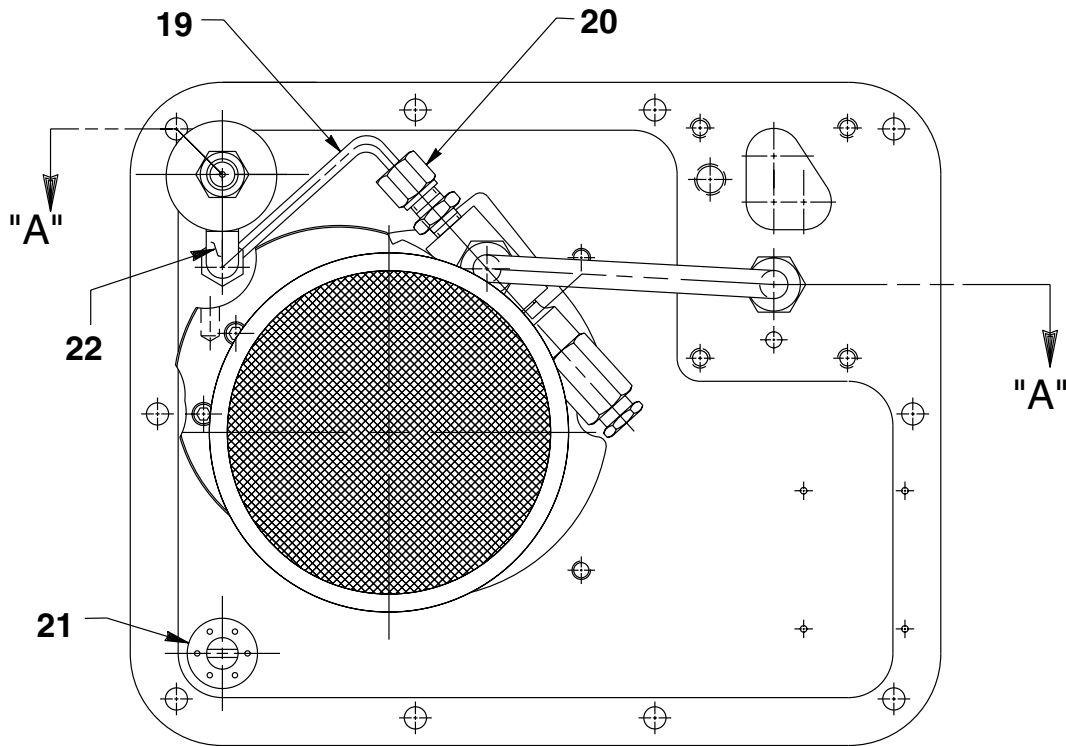
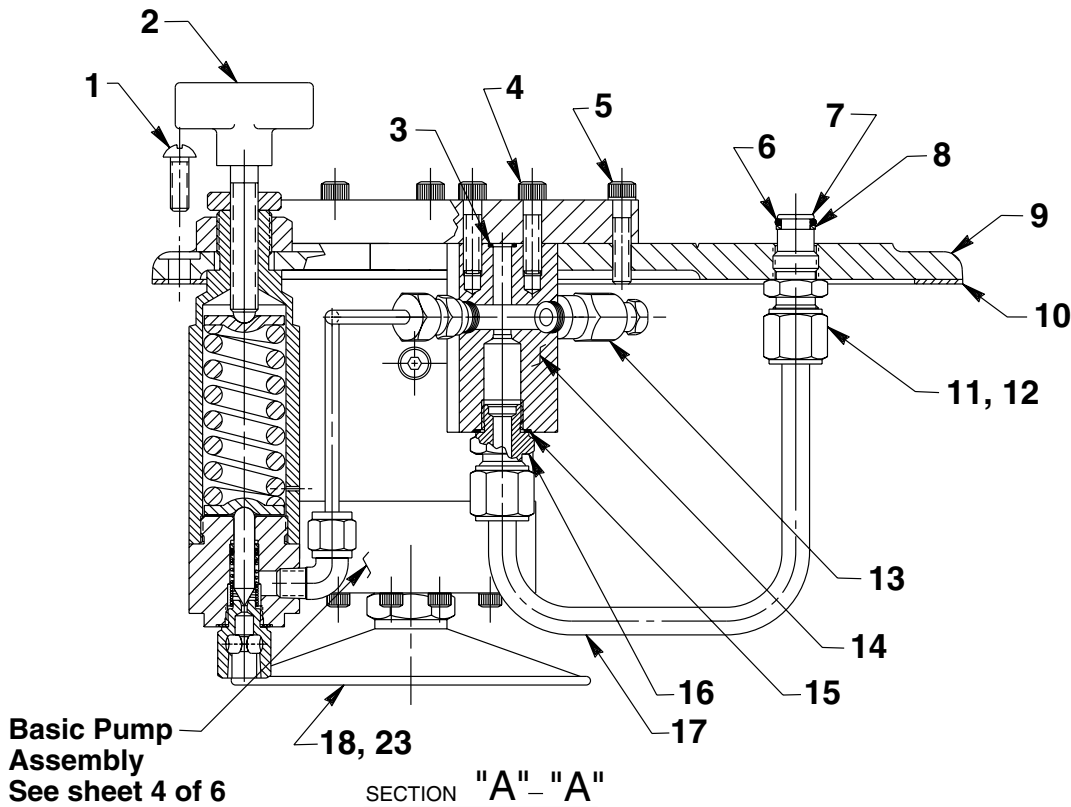
When replacing brushes or the armature, the dimensions shown must be as specified.



Item No.	Part No.	No. Req'd	Description
1	10806	2	Brush Holder Cap
2	10804	2	Brush Assembly
3	10805	2	Brush Holder (See detail above)
4	61901WH2	1	Motor Shell
5	10133	2	Set Screw
6	10802	1	Field (For 115 volt)
	10803	1	Field (For 230 volt)
7	12356	2	Lockwasher
8	10170	2	Machine Screw
9	10241	4	Lockwasher

Item No.	Part No.	No. Req'd	Description
10	10169	4	Machine Screw (#10-24 x 2" Lg.; Torque to 20/25 in. lbs.)
11	30650	1	Gasket
12	40059WH2	1	Motor Base
13	10439	1	Ball Bearing
14	10800	1	Armature (For 115 volt; See detail above)
	10801	1	Armature (For 230 volt; See detail above)
15	10438	1	Ball Bearing
16	20786	1	Baffle Plate

### GENERAL PUMP ASSEMBLY



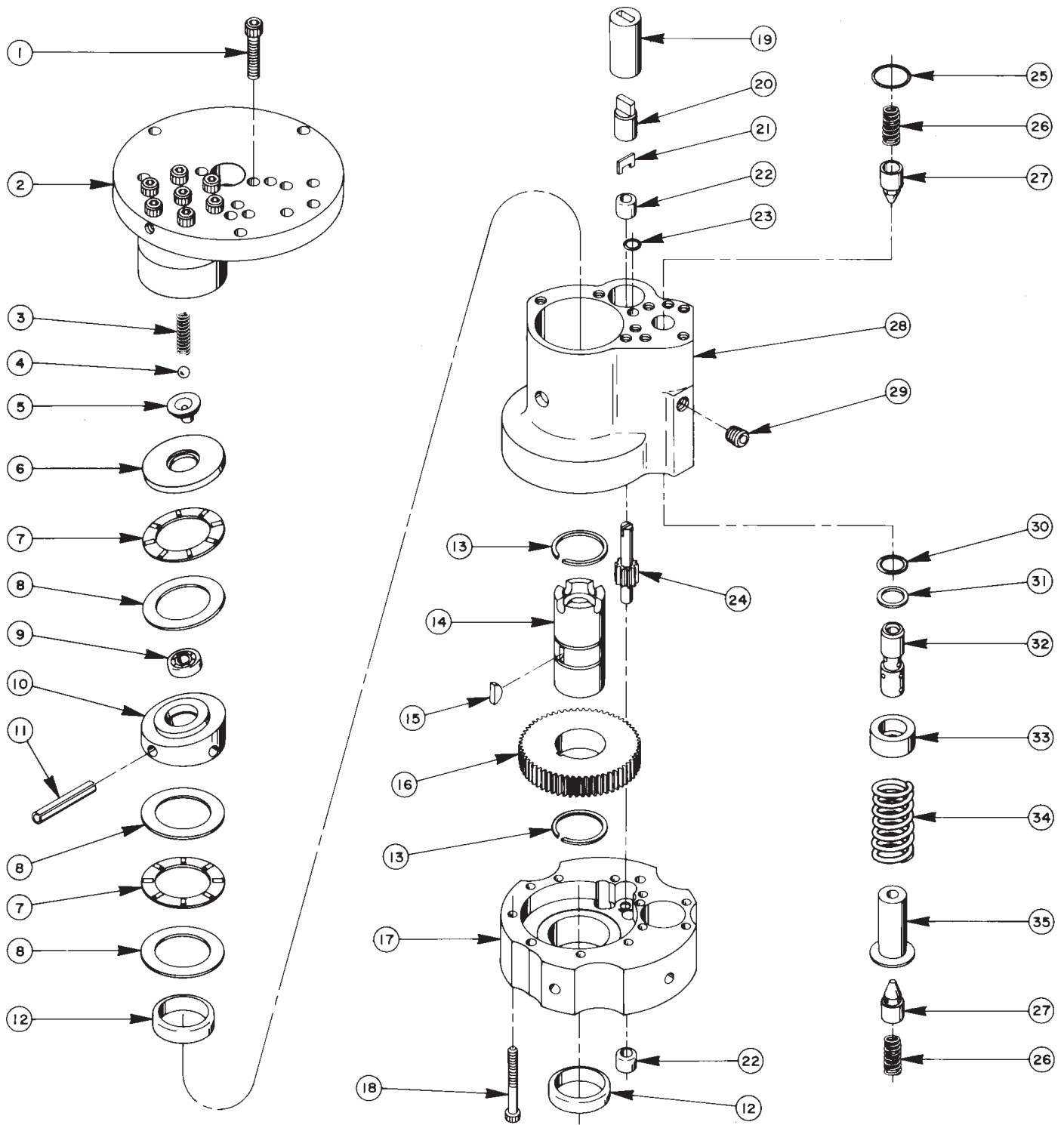
# Parts List, Form No. 101721, Back sheet 3 of 6

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<b>Item No.</b>	<b>Part No.</b>	<b>No. Req'd</b>	<b>Description</b>
1	10177	10	Machine Screw (1/4-20 x 3/4 Lg.)
2	421280	1	Pressure Regulator Assembly (See Form No. 101697)
3	10266	1	O-ring (1/4 x 3/8 x 1/16)
4	10015	2	Cap Screw (1/4-28 x 1" Lg.; Torque to 180 in. lbs.)
5	10016	3	Cap Screw (1/4-20 UNC X 1" Lg.)
6	10268	1	O-ring (3/8 x 1/2 x 1/16)
7	20787	1	Valve Connector
8	11863	1	Teflon Backup Washer
9	40064WH2	1	Cover
10	40164	1	Gasket
11	10430	2	Tube Sleeve (3/8)
12	10431	2	Tube Nut
13	21278	1	Relief Valve Assembly (Set at 10,100-10,700 PSI)
14	20776	1	Valve Body
15	10261	1	Copper Washer
16	20770	1	Connector
17	21045	1	Oil Line
18	21344	1	Filter Assembly (Includes Item No. 23)
19	201570	1	Pressure Control Valve Oil Line
20	14844	1	Male Connector
21	20937	1	Filler Plug
22	16177	1	90° Elbow Fitting
23	10300	1	O-ring (.62 x .46 Nitrile)

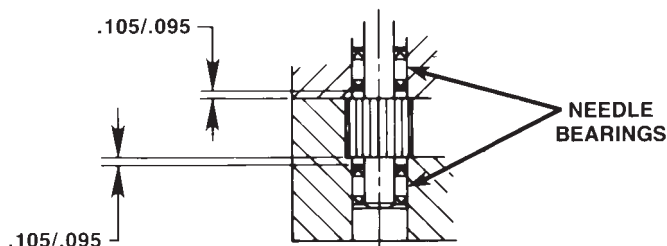
**NOTE: All items on sheet 4 of 6 and items 3, 12, 13, 14, 15, & 17 on this sheet make up  
Basic Pump Assembly Replacement #27207.**

### BASIC PUMP ASSEMBLY



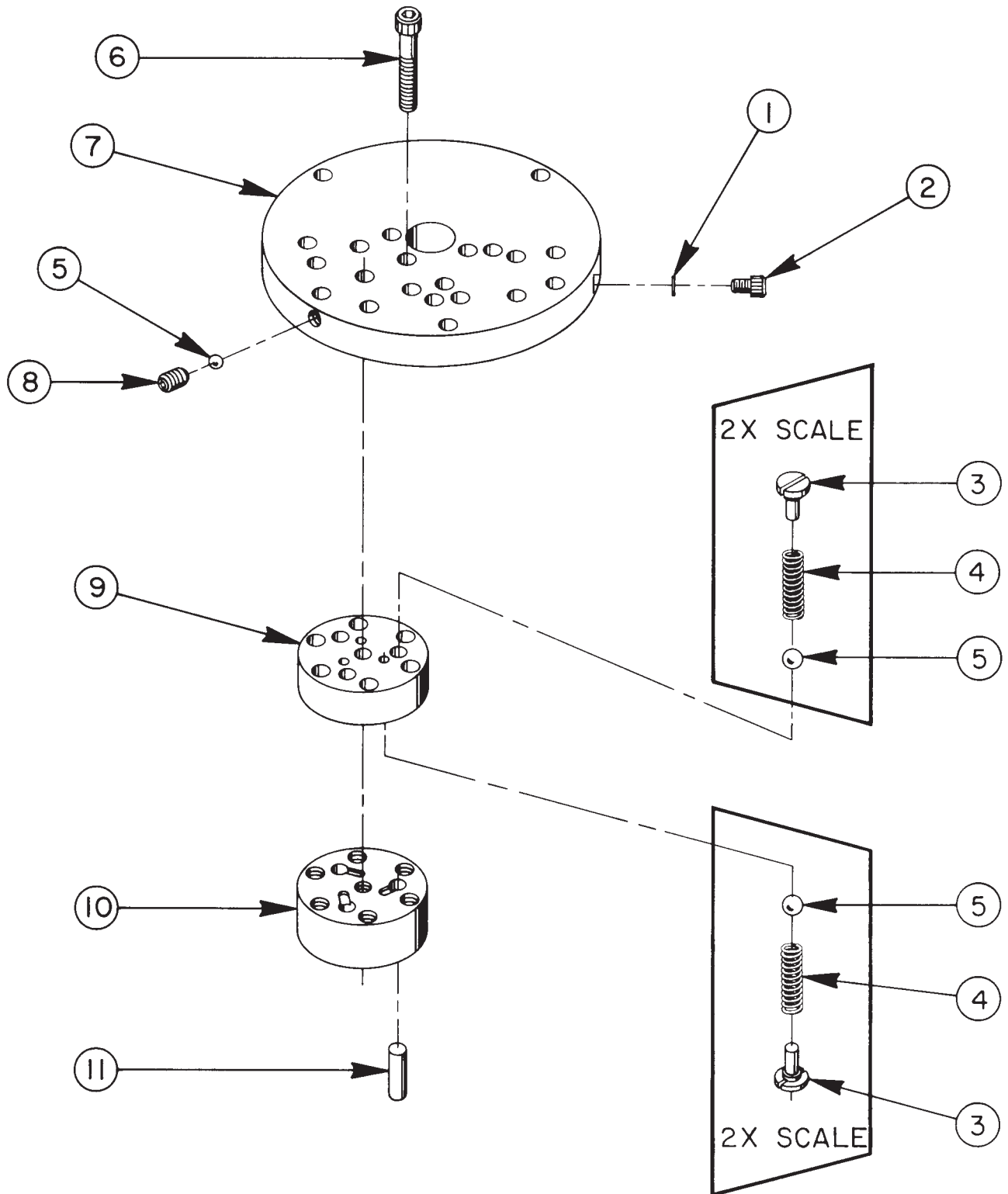
Item No.	Part No.	No. Req'd	Description
1	10020	9	Soc. Hd. Cap Screw (1/4-20 UNC X 1-1/4 Lg.: Torque to 170-180 in. lbs.)
2	33113	1	High Pressure Pump Ass'y (See sheet 5 of 6)
3	10361	1	Compression spring (1/4 O.D. X 1" Lg.)
4	10375	1	Steel Ball (1/4 dia.)
5	23547	1	Bearing Top Plate
6	23548	1	Top Plate
7	11228	2	Thrust Bearing
8	11813	3	Bearing Race
9	11814	1	Ball Bearing
10	23549	1	Angle Plate
11	11955	1	Roll Pin (1/4 dia. X 1-3/4 Lg.)
12	11064	2	Needle Bearing
13	11261	2	Retaining Ring
14	23556	1	Shaft
15	11821	1	Woodruff Key
16	23574	1	Gear
17	40072	1	Pump End Plate
18	10001	13	Soc. Hd. Cap Screw (#10-32 UNF X 1-3/4 Lg.; Torque to 50 in. lbs.)
19	21091	1	Nylon Coupling
20	21092	1	Adapter
21	21093	1	Key
22	11198	2	Needle Thrust Bearing (See Note below)
23	10266	1	O-ring (3/8 X 1/4 X 1/16)
24	20774	1	Drive Gear
25	10303	1	O-ring (7/8 X 3/4 X 1/16)
26	10425	2	Compression Spring (3/8 O.D. X 3/4 Lg.)
27	20771	2	Poppet
28	40071	1	Pump Body
29	10427	1	Pipe Plug (1/8" NPTF)
30	10271	1	O-ring (11/16 X 1/2 X 3/32)
31	12389	1	Teflon Backup Washer (11/16 X 1/2 X 1/16)
32	20849	1	Spool
33	23255	1	Spring Guide
34	10426	1	Compression Spring (1" O.D. X 1-13/16 Lg.)
35	23256	1	Spring Guide

## NEEDLE BEARING INSTALLATION SPECIFICATIONS



When replacing the needle bearings on the drive gear of the basic pumps, the dimensions shown must be as specified.

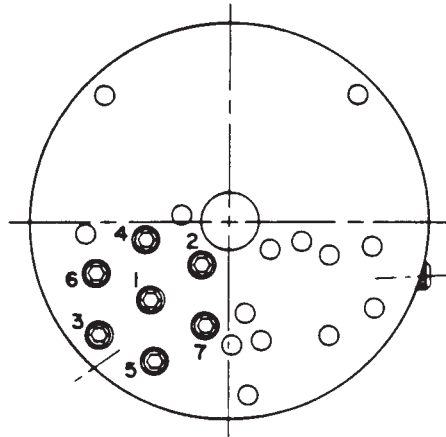
### HIGH PRESSURE PUMP ASSEMBLY



**33113 PUMP ASSEMBLY**  
**3 PISTON - 9/32 DIA.**

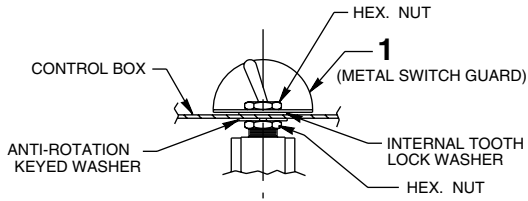
Item No.	Part No.	No. Req'd	Description
1	10442	1	Copper Washer (3/8 X 1/4 X 1/32)
2	10002	1	Soc. Hd. Cap Screw (1/4-20 UNC X 3/8 Lg.; Torque to 140/160 in. lbs.)
3	24549	6	Valve Guide
4	10445	6	Compression Spring (5/32 O.D. X 3/4 Lg.)
5	12223	7	Steel Ball
6	10023	7	Soc. Hd. Cap Screw (1/4-20 UNF X 1-1/2 Lg.; Torque to 170/180 in. lbs.; See note below)
7	50411	1	Top Plate
8	10519	1	Soc. Set Screw (1/4-20 UNC X 3/8 Lg.; Torque to 65/70 in. lbs.)
9	40630	1	Valve Head
10	41062	1	Pump Barrel
11	21628	3	Piston

**BOLT TIGHTENING SEQUENCE**

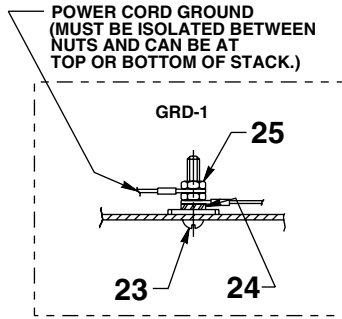


**NOTE: Assemble in sequence shown.**  
**Lubricate under head and on threads.**  
**Torque to 180 in. lbs.**

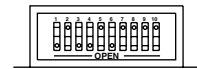
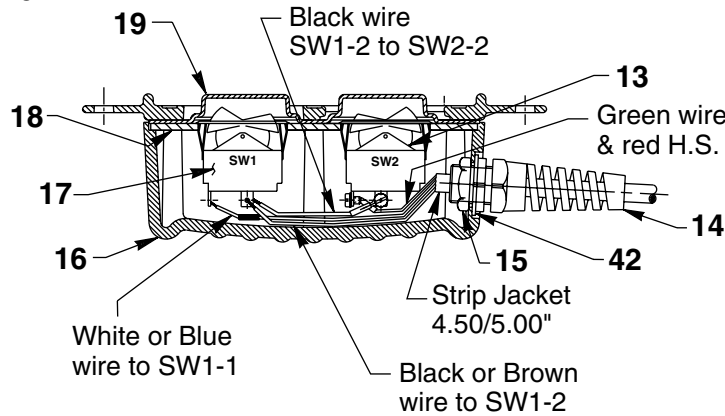
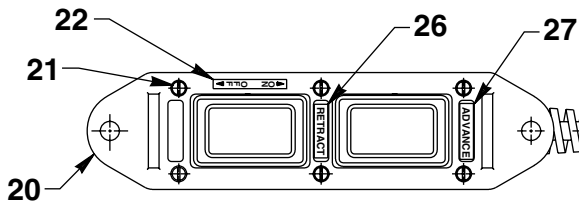
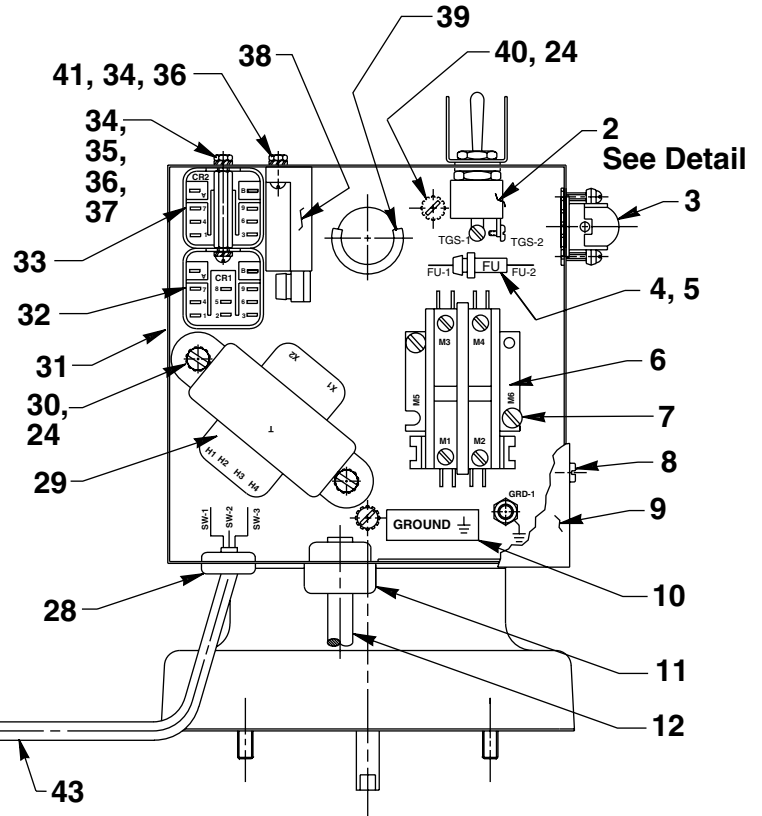
# MOTOR CONTROL ASSEMBLY



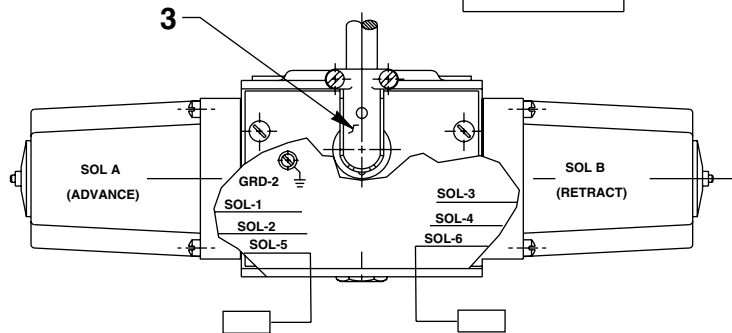
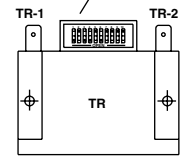
**SWITCH DETAIL**



**NOTE: SERRATED LOCK WASHER MUST BE ADJACENT TO METAL BOX. MORE WASHERS CAN BE USED IF DESIRED.**



**NOTE: TURN ON SWITCHES 1,3,4, & 6. SET ALL OTHER SWITCHES AWAY FROM OPEN POSITION.**



# Parts List, Form No. 101721, Back sheet 6 of 6

Item No.	Part No.	No. Req'd	Description	Item No.	Part No.	No. Req'd	Description
1	352061	1	Metal Switch Guard	23	11856	1	Screw (#10-24 x 1" Lg.)
2	12301	1	Switch	24	11108	3	Lockwasher (#10 External Tooth)
3	11144	2	90° Elbow Fitting	25	10197	2	Hex Nut (#10-24)
4	16887	1	Fuseholder	26	29664	1	Decal (Retract)
5	206962	1	Fuse (3 amp)	27	29663	1	Decal (Advance)
6	420718-4	1	Contact	28	15993	1	Strain Relief Bushing
7	10166	2	Machine Screw (#10-24 UNC X 1/2 Lg.)	29	11852	1	Transformer (For X1E1 & X1E2)
8	14812	4	Self-tapping Screw	30	350380	1	Transformer (For X1E2J)
9	43126WH2	1	Control Box Cover	31	11539	2	Sl. Rd. Hd. Machine Screw (#10-24 x 1/4 Lg.)
10	205189	1	Ground Decal	32	51218WH2	1	Electrical Control Box
11	210112	1	Strain Relief Bushing	33	305602	1	Relay
12	307440	1	Cord Set (For X1E1)	34	39092	1	Relay
	308752	1 ft.	Electrical Cable (14/3 SJTO; For X1E2)	35	15906	2	Washer (#6 Shakeproof)
13	16772	1	Rocker Switch	36	17563	2	Mach. Screw (6-32 UNC X 1/4 Lg.)
14	251818	1	Strain Relief Connector	37	10195	2	Machine Screw Nut (#6-32)
15	251802	1	Locknut	38	215376	2	Stand Off
16	420050-4	1	Switch Housing	39	251467	1	Timer
17	46131	1	Rocker Switch	40	15497	1	Rubber Grommet (Trim off upper 1/3 as shown)
18	420050-3	1	Switch Mounting Plate	41	10164	3	Sl. Rd. Hd. Machine Screw (#10-24 x 3/8 Lg.)
19	420050-2	1	Gasket	42	11426	2	Round Head Screw (#6-32 UNC x 1/2 Lg.)
20	251044	1	Cover	43	253607	1	Rubber Gasket
21	250248	6	Sl. Pan Hd. Tapping Screw (#4-24 x 3/4 Lg.)		12908	21'	Electrical Cable (18/3)
22	250538	1	Decal (On-Off)				

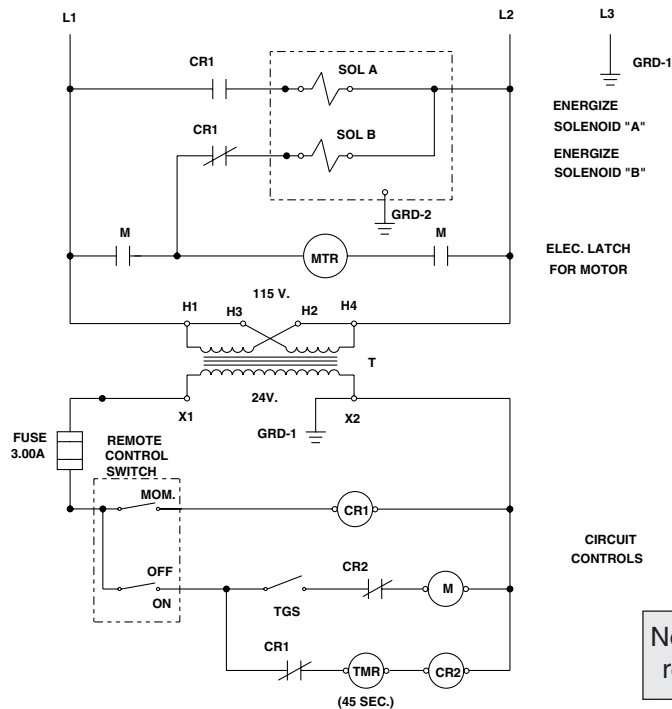
## ELECTRICAL SCHEMATIC



**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



Transformer connections as shown are for 115 V., 60 Hz.

For 220V., 50 Hz. and 200 V., 50/60 Hz. make transformer connections as follows:

- L1 to H1
- H3 to H2
- H4 to L2

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