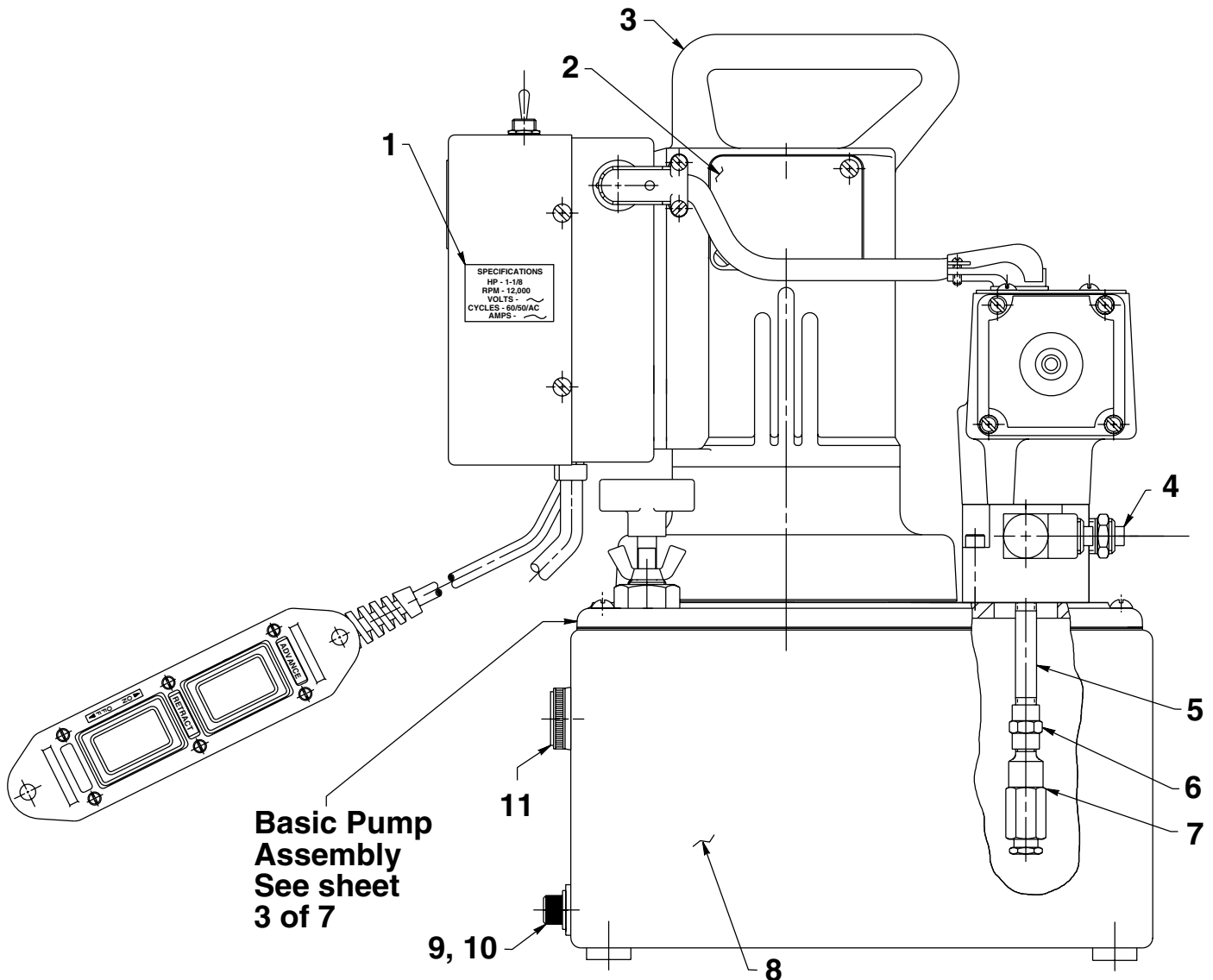


ELECTRIC HYDRAULIC PUMP SIDE VIEW

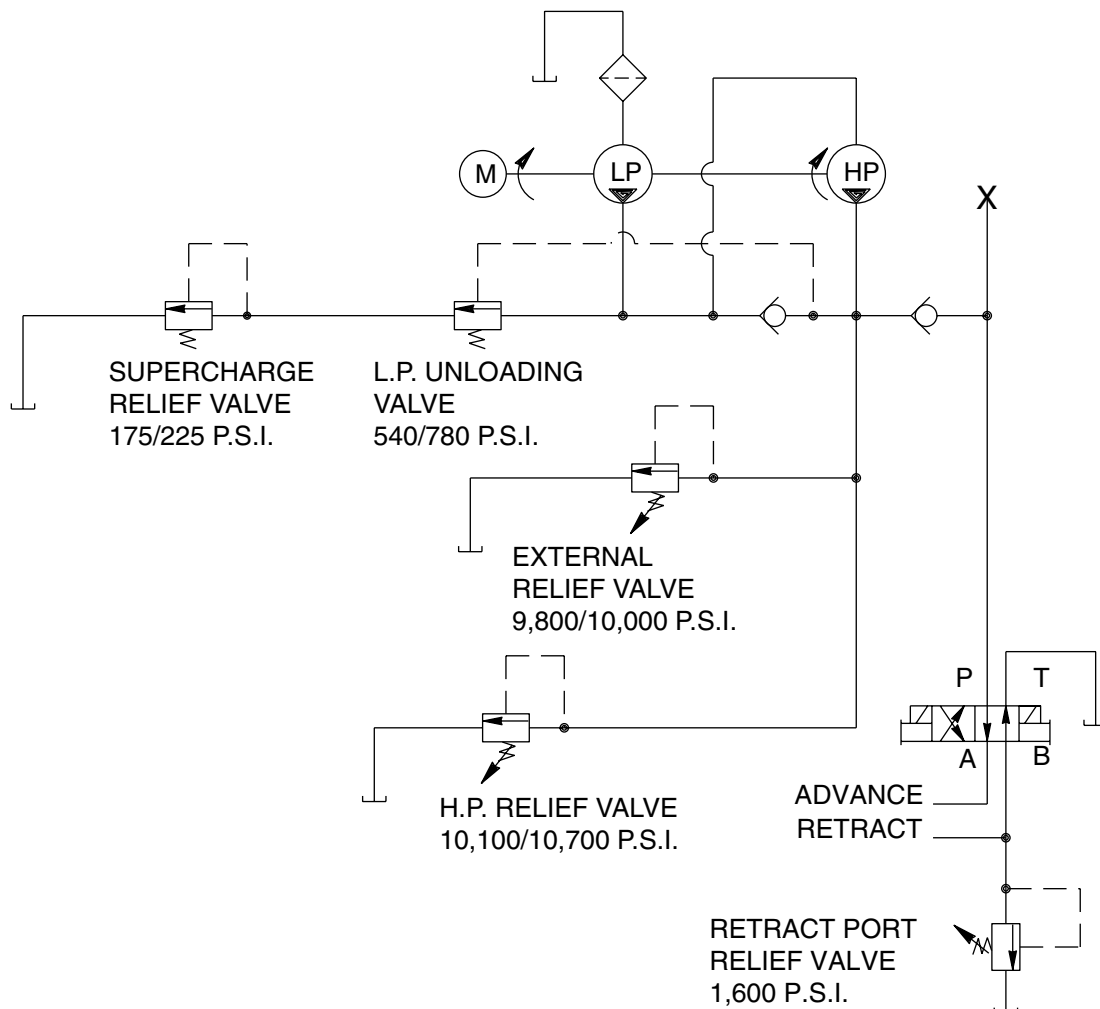


Basic Pump
Assembly
See sheet
3 of 7

Item No.	Part No.	No. Req'd	Description
1	215164	1	Specifications Decal (For X1E1 & X1E1-TDS)
	215163	1	Specifications Decal (For X1E2)
2	21008	2	Cover
3	53338	1	Electric Motor Assembly (115 V., 60 Hz.;
			See back sheet 2 of 7)
	53337	1	Electric Motor Assembly (230 V. 60 Hz.;
			See back sheet 2 of 7)
4	11127	2	Pipe Plug (3/8 NPTF)
5	15456	1	Nipple Fitting (1/8 NPTF)
6	18841	1	Straight Fitting
7	21278-15	1	Relief Valve (Set at 1,500/1,700 PSI)
8	*420327	1	Reservoir
9	10412	1	Soc. Hd. Cap Screw (3/8-16 UNC x 1/2 Lg.)
10	19779	1	Seal Washer
11	17586	1	Sight Gauge

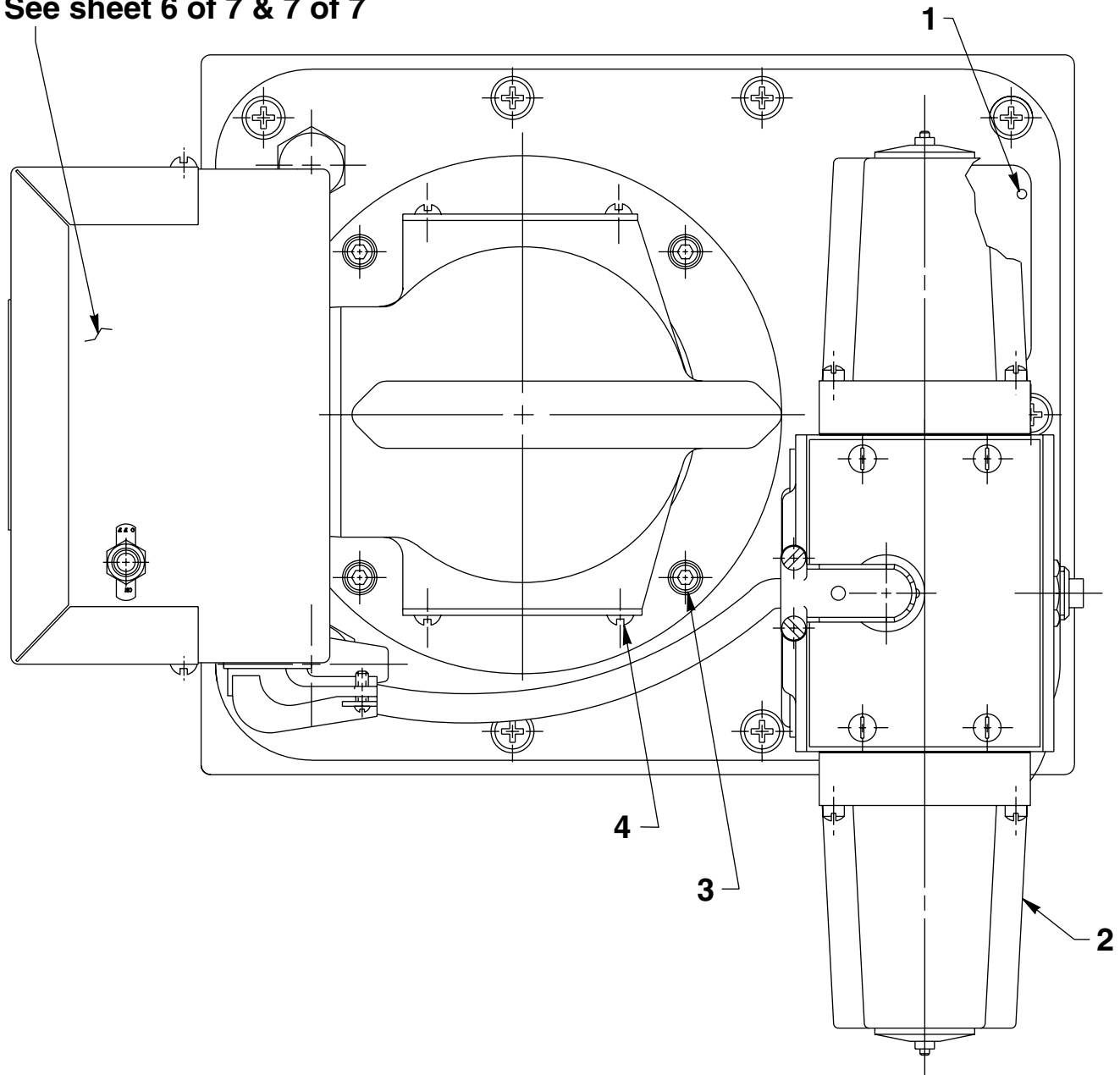
*For a replacement reservoir, order no. 251118.

HYDRAULIC SCHEMATIC



TOP VIEW

Motor Control Assembly
See sheet 6 of 7 & 7 of 7

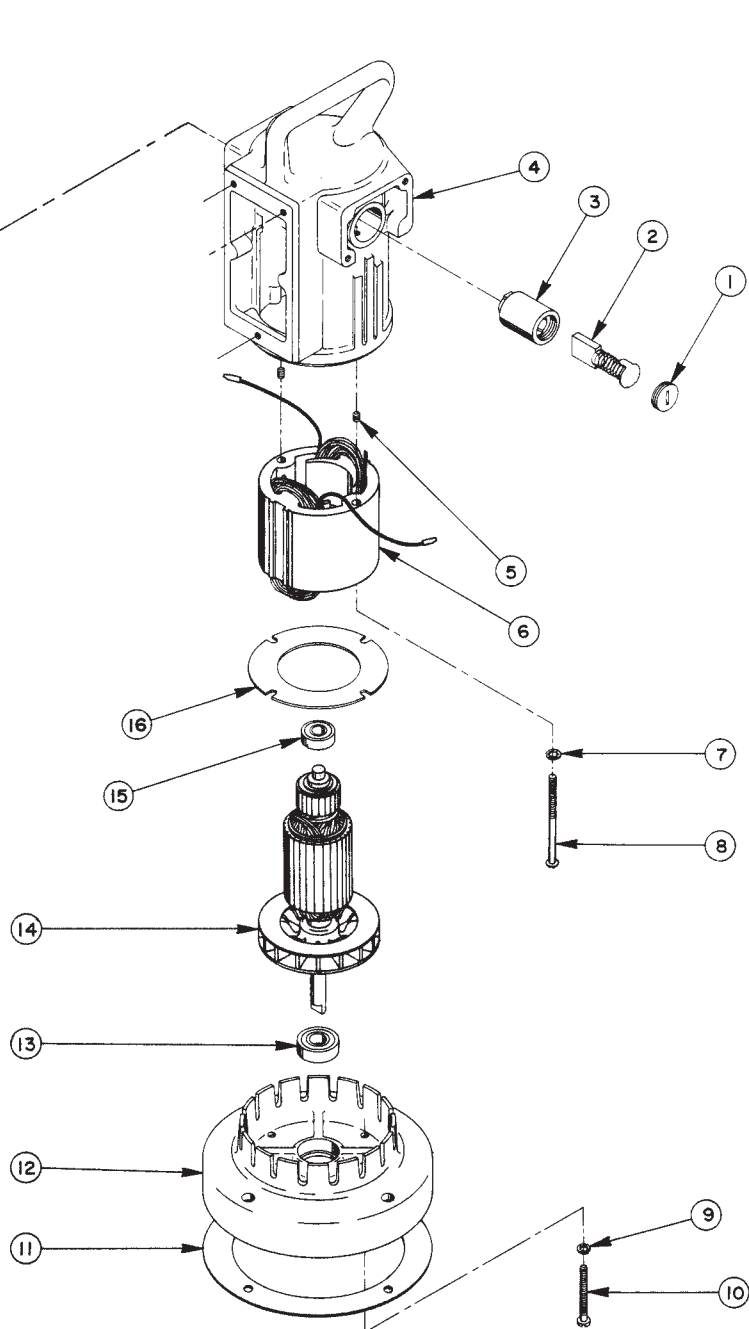
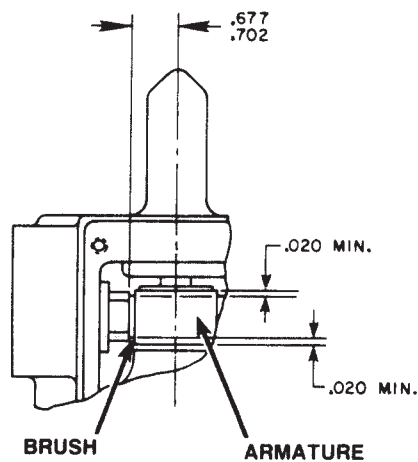


Item No.	Part No.	No. Req'd	Description
1	10575	4	Drive Screw
2	9592	1	Solenoid Valve (Two position, 4-way; For X1E1 & X1E1-TDS)
	9552	1	Solenoid Valve (Two position, 4-way; For X1E2)
3	10022	4	Soc. Hd. Cap Screw (1/4-20 x 1-1/2 Lg.)
4	10164	4	Sl. Rd. Machine Screw (#10-24 x 3/8 Lg.)

ELECTRIC MOTOR ASSEMBLY

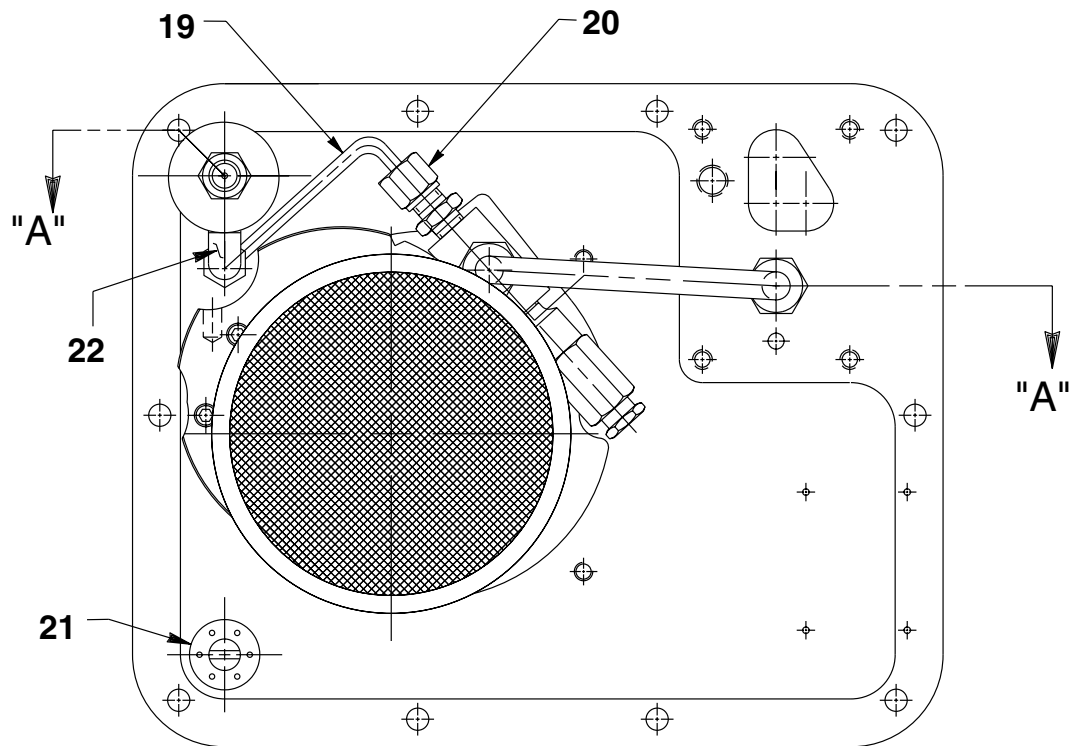
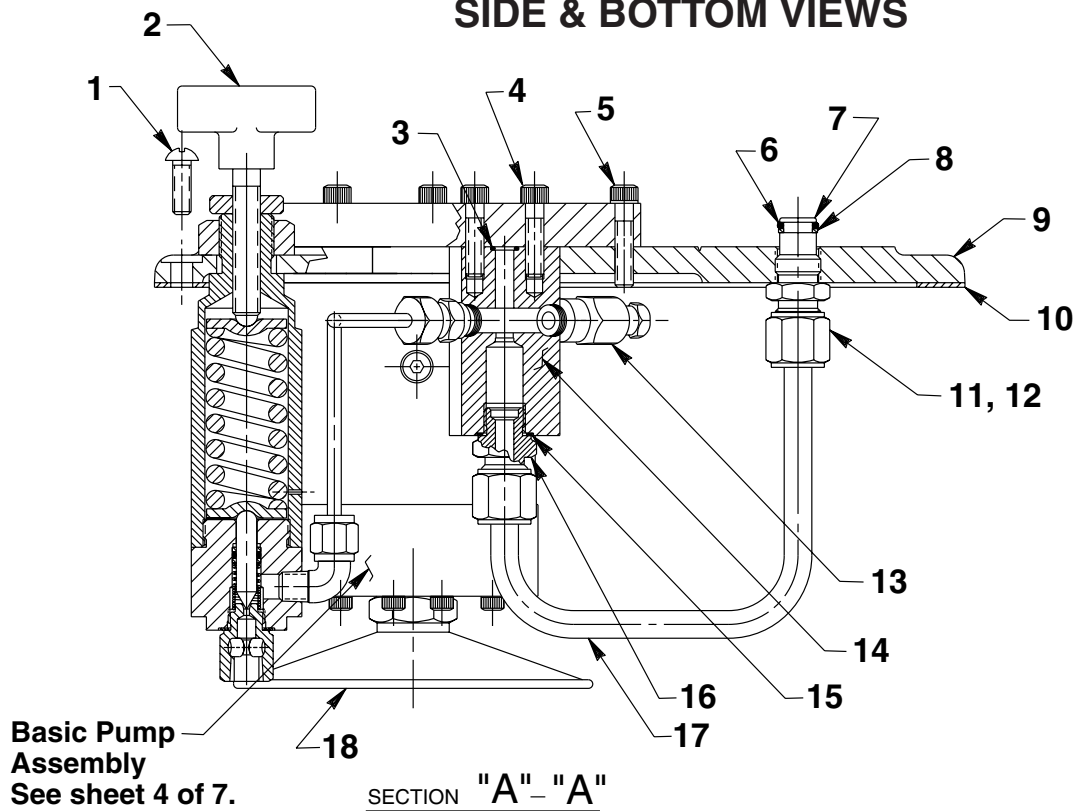
BRUSH HOLDER & ARMATURE
INSTALLATION SPECIFICATIONS

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

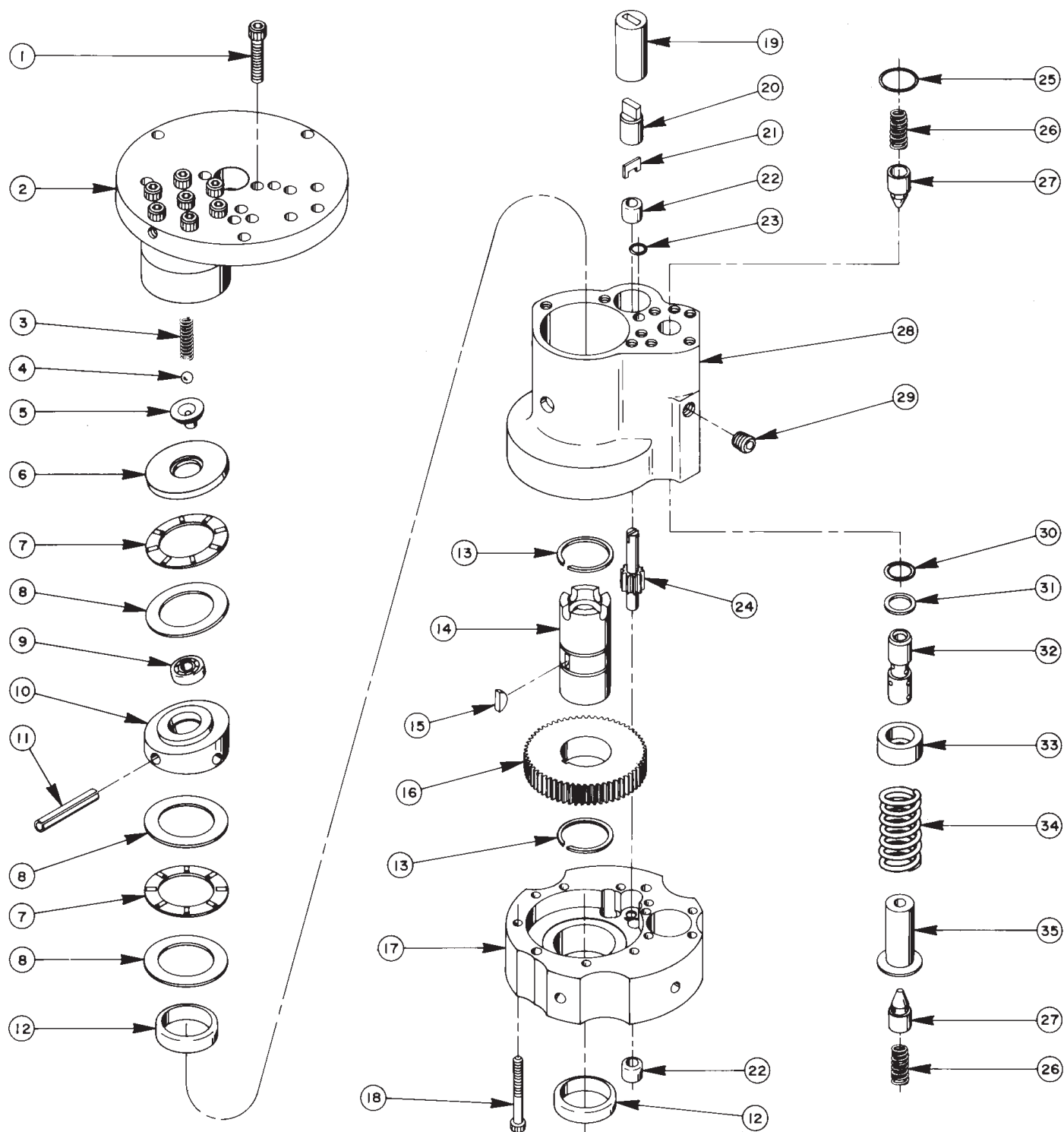
Item No.	Part No.	No. Req'd	Description
10	10169	4	Machine Screw (#10-24 x 2" Lg.; Torque to 20/25 in. lbs.)
11	30650	1	Gasket
12	40059WH2	1	Motor Base
13	10439	1	Ball Bearing
14	10800	1	Armature (For 115 volt; See detail above)
	10801	1	Armature (For 230 volt; See detail above)
15	10438	1	Ball Bearing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

**BASIC PUMP ASSEMBLY
SIDE & BOTTOM VIEWS**

Item No.	Part No.	No. Req'd	Description
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. 21)
19	201570	1	Pressure Control Valve Oil Line
20	14844	1	Male Connector
21	16177	1	90° Elbow Fitting
22	20937	1	Filler Plug

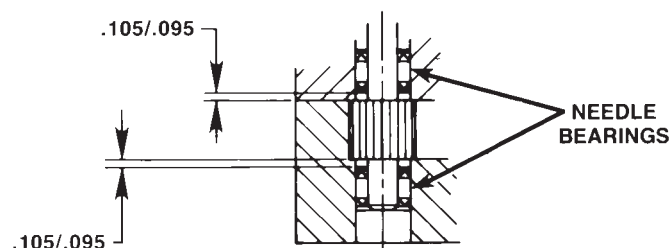
**NOTE: All items on sheet 4 of 7 and items 3, 12, 13, 14, 15, & 17 on this sheet make up
Basic Pump Assembly Replacement #27207.**

BASIC PUMP ASSEMBLY



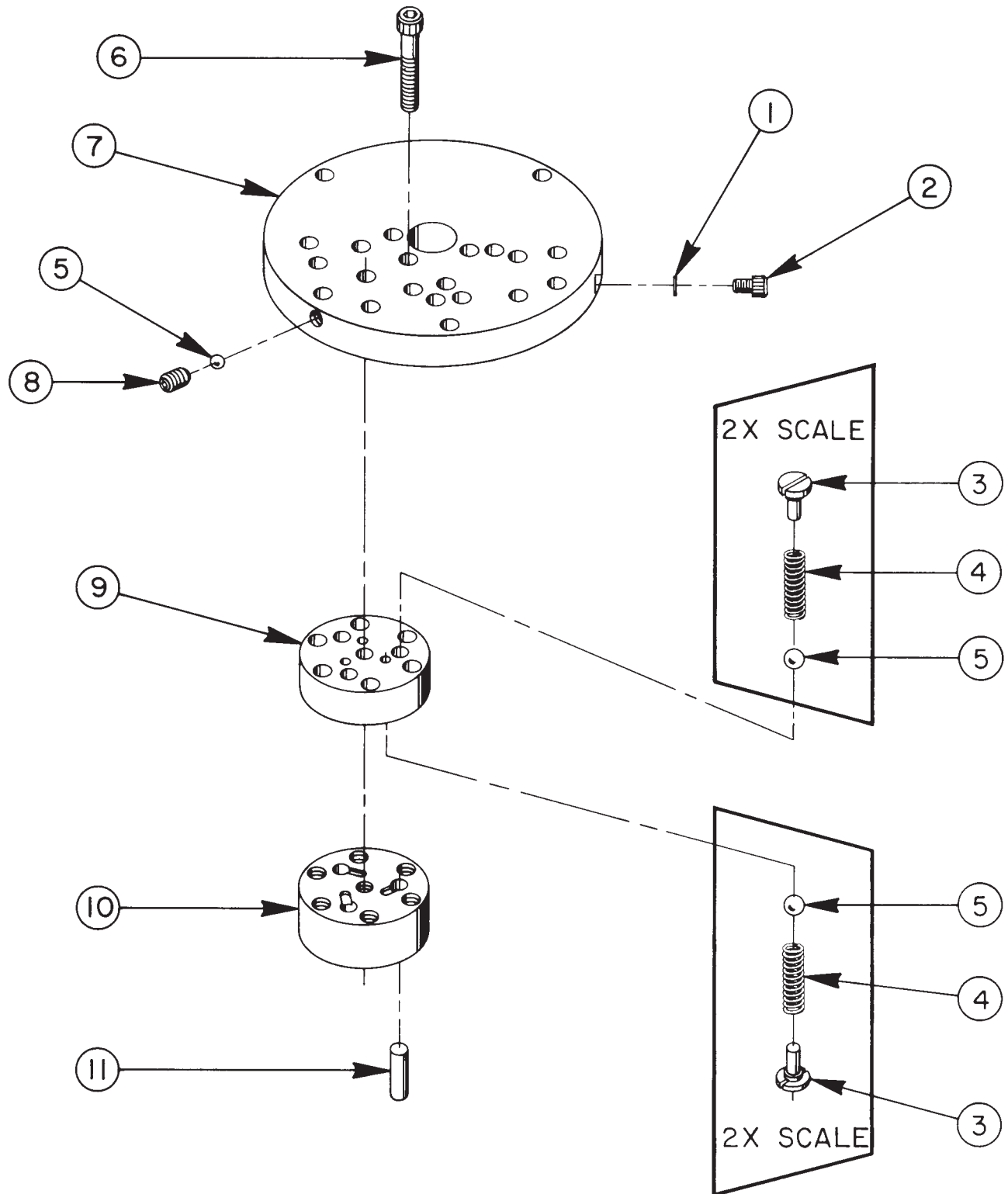
Item No.	Part No.	No. Req'd	Description
1	10020	9	Soc. Hd. Cap Screw (1/4-20 UNC X 1-1/4 Lg.: Torque to 170-180 in. lbs.)
2	33113	1	High Pressure Pump Ass'y (See sheet 5 of 7)
3	10361	1	Compression spring (1/4 O.D. X 1" Lg.)
4	10375	1	Steel Ball (1/4 dia.)
5	23547	1	Bearing Top Plate
6	23548	1	Top Plate
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.

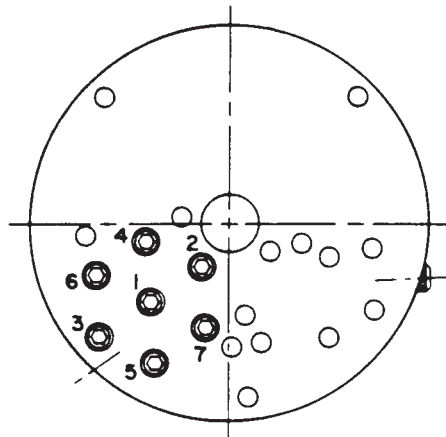
HIGH PRESSURE PUMP ASSEMBLY



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.

Diagram illustrating the assembly components for the control box:

- CONTROL BOX
- HEX. NUT
- METAL SWITCH INDICATOR PLATE
- INTERNAL TOOTH LOCK WASHER
- ANTI-ROTATION KEYED WASHER
- HEX. NUT

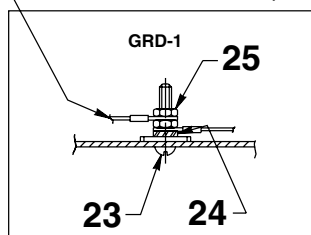
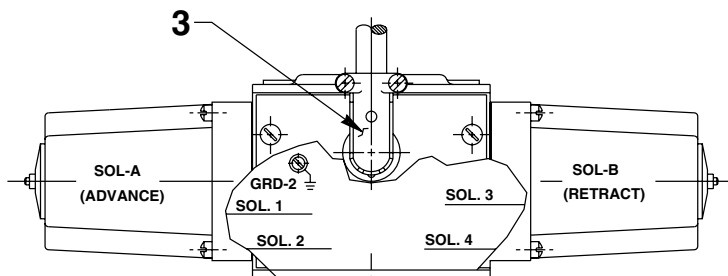
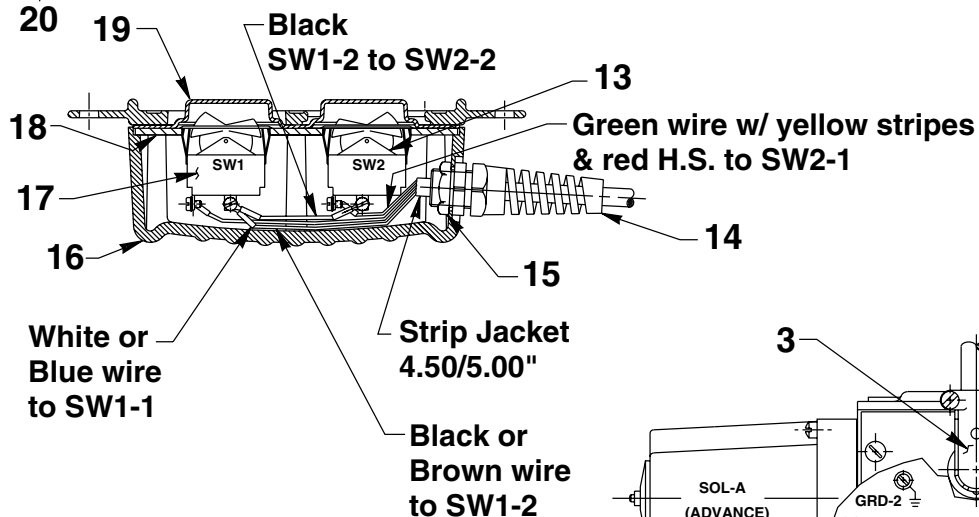
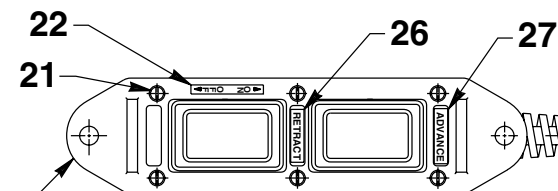
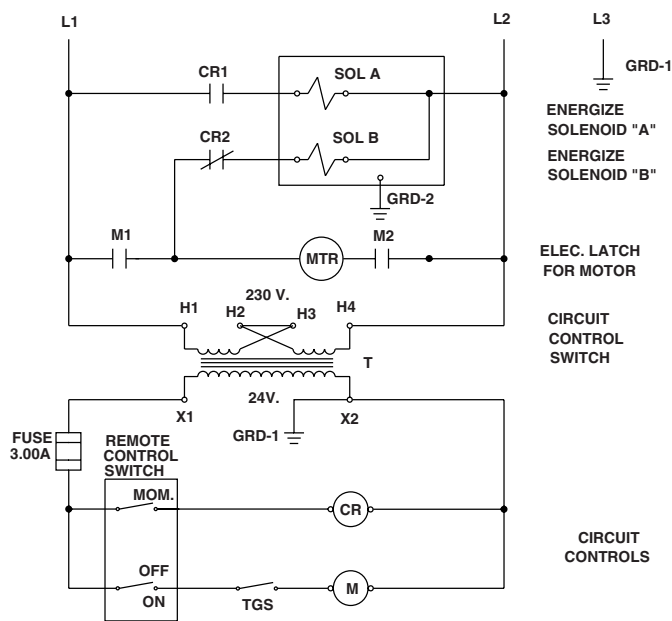
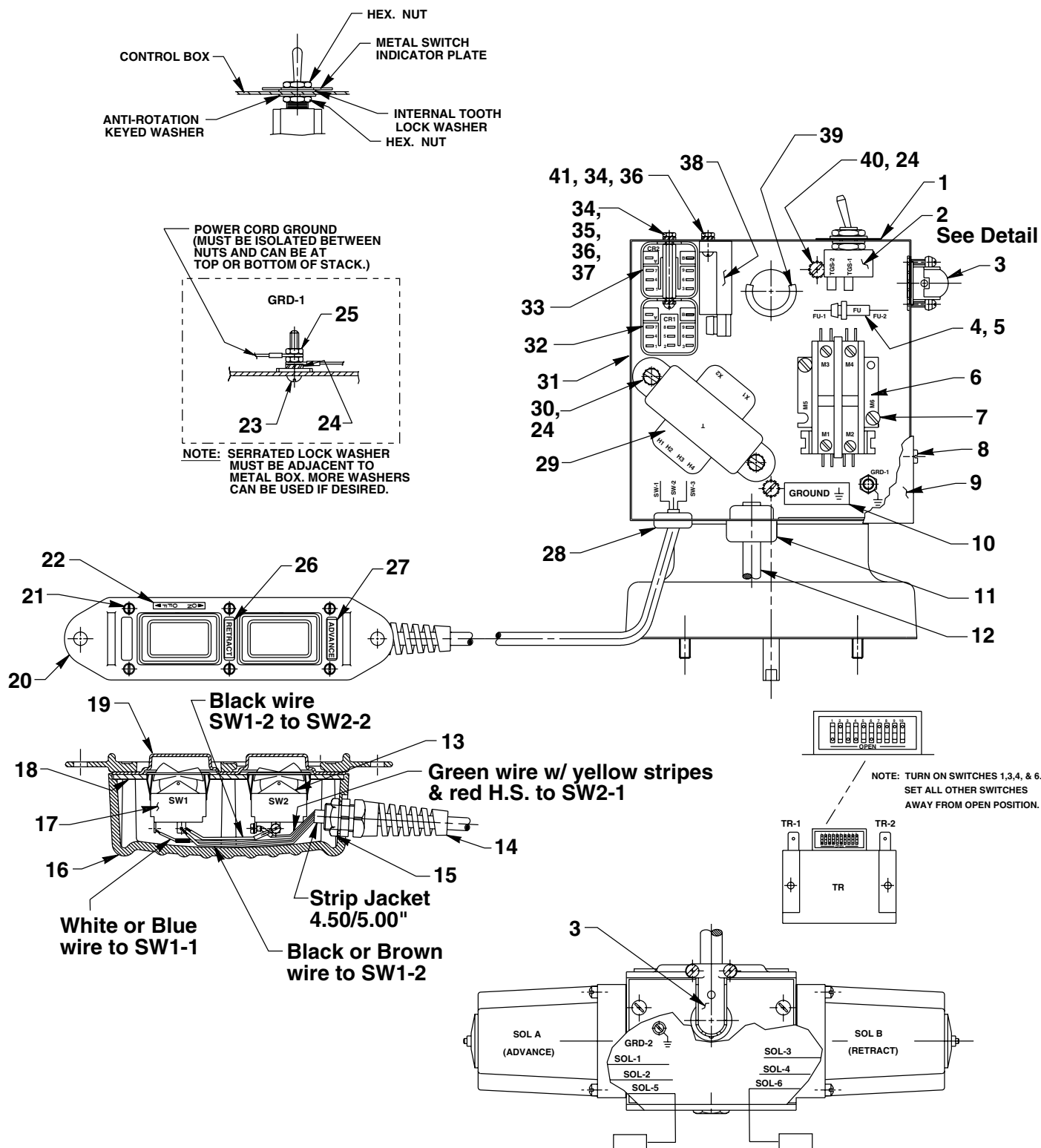


Figure 1 is a detailed schematic diagram of a power distribution unit (PDU) assembly. The diagram shows a front panel (1) with a handle (2) and a locking mechanism (3). Inside the panel, there are two rows of outlets. The top row includes a 20A/250V outlet (32) and a 15A/250V outlet (33, 34, 35). The bottom row includes a 15A/250V outlet (36, 37) and a 15A/250V outlet (38). A circuit breaker (CB) is located in the center. To the right of the CB are two fuses (FU-1, FU-2) and a ground terminal (GRD-1). The unit is mounted on a base (11) with a mounting bracket (12). The diagram is labeled with various components and their corresponding numbers.





MOTOR CONTROL ASSEMBLY FOR X1E1-TDS



Parts List, Forn No. 101236, Back sheet 7 of 7

Item No.	Part No.	No. Req'd	Description	Item No.	Part No.	No. Req'd	Description
1	13890	1	Indicator Plate	24	11108	3	Lockwasher (#10 External Tooth)
2	12301	1	Switch	25	10197	2	Hex Nut (#10-24)
3	11144	2	90° Elbow Fitting	26	29664	1	Decal (Retract)
4	16887	1	Fuseholder	27	29663	1	Decal (Advance)
5	206962	1	Fuse (3 amp)	28	15993	1	Strain Relief Bushing
6	420718-4	1	Contactor	29	11852	1	Transformer
7	10166	2	Machine Screw	30	11539	2	Sl. Rd. Hd. Machine Screw
			(#10-24 UNC X 1/2 Lg.)				(#10-24 x 1/4 Lg.)
8	14812	4	Self-tapping Screw	31	51218WH2	1	Electrical Control Box
9	43126WH2	1	Control Box Cover	32	305602	1	Relay
10	205189	1	Ground Decal	33	39092	1	Relay
11	210112	1	Strain Relief Bushing	34	15906	2	Washer (#6 Shakeproof)
12	307440	1	Cord Set	35	17563	2	Mach. Screw (6-32 UNC X 1/4 Lg.)
13	16772	1	Rocker Switch	36	10195	2	Machine Screw Nut (#6-32)
14	251818	1	Strain Relief Connector	37	215376	2	Stand Off
15	251802	1	Locknut	38	251467	1	Timer
16	420050-4	1	Switch Housing	39	15497	1	Rubber Grommet
17	46131	1	Rocker Switch				(Trim off upper 1/3 as shown)
18	420050-3	1	Switch Mounting Plate	40	10164	3	Sl. Rd. Hd. Machine Screw
19	420050-2	1	Gasket				(#10-24 x 3/8 Lg.)
20	251044	1	Cover	41	11426	2	Round Head Screw
21	250248	6	Sl. Pan Hd. Tapping Screw				(#6-32 UNC X 1/2 Lg.)
			(#4-24 x 3/4 Lg.)				
22	250538	1	Decal (On-Off)				
23	11856	1	Screw (#10-24 x 1" Lg.)				

PARTS INCLUDED BUT NOT SHOWN

200188 1 Warning Decal

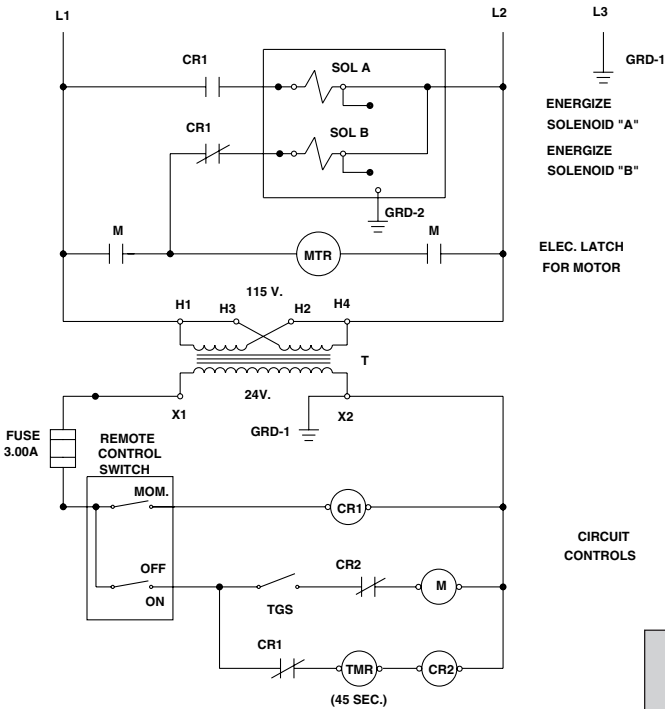
ELECTRICAL SCHEMATIC FOR X1E1-TDS



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



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