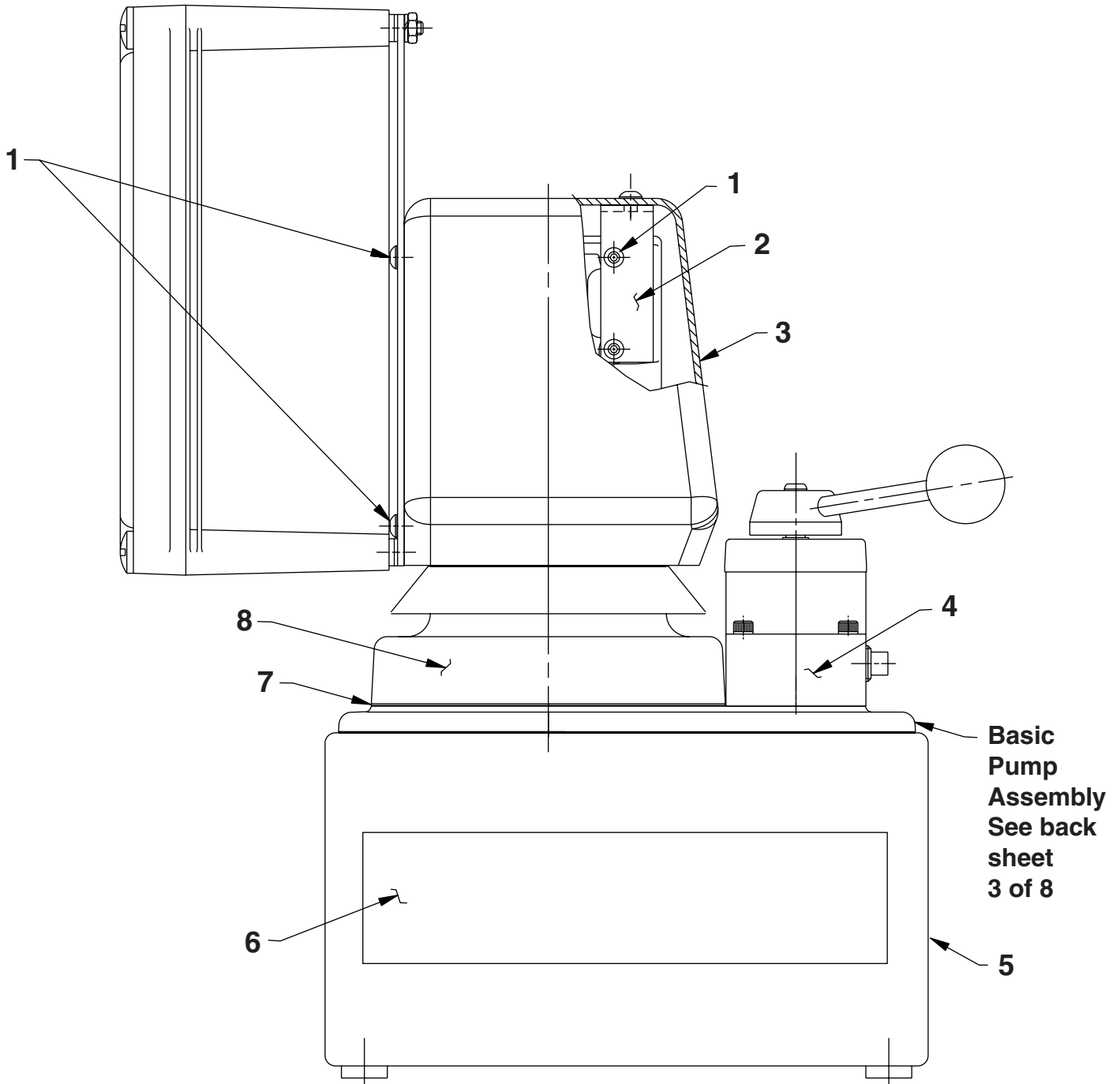
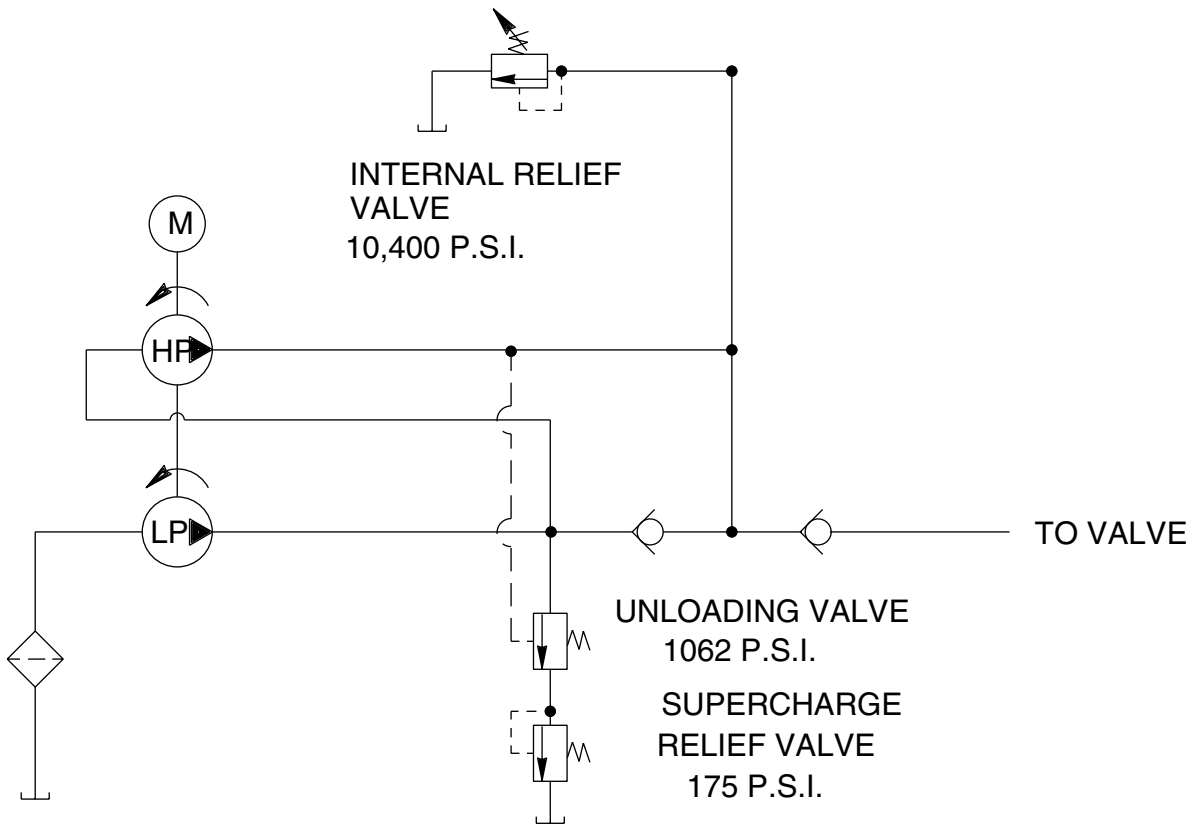


MODEL B HYDRAULIC PUMP

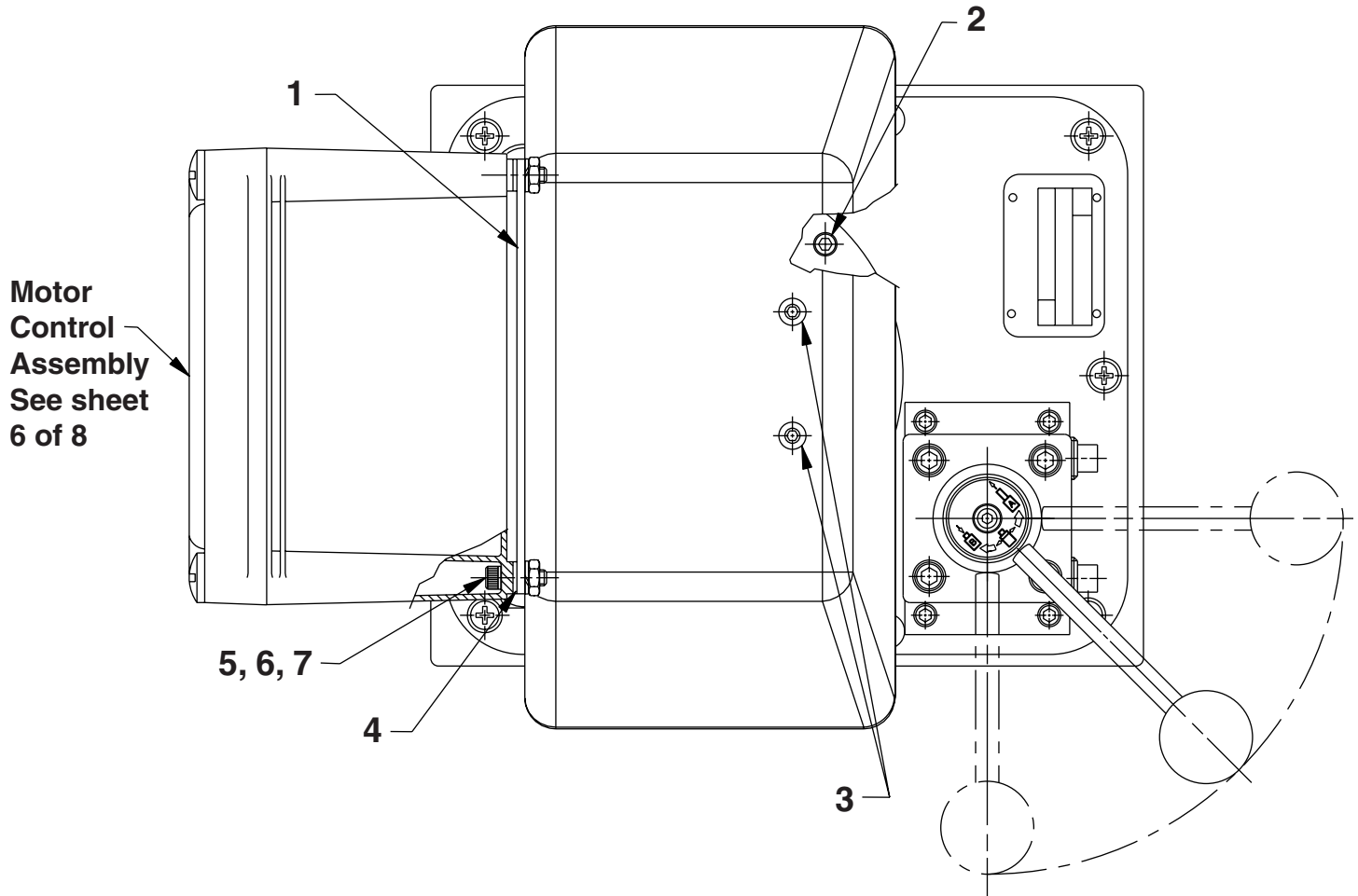


Item No.	Part No.	No. Req'd	Description
1	251486	7	Screw (#10-24 UNC-2B x 1/2 Lg.)
2	421212	1	Bracket
3	65053	1	Cover
4	59323	1	Manual Valve (4-way tandem center; See back sheet 7 of 8)
5	40063OR9	1	Reservoir (2 gal.)
6	309219	2	Trade Name Decal
7	30650	1	Motor Base Gasket
8	65065	1	Basic Motor (230 V.; See back sheet 2 of 8)

HYDRAULIC SCHEMATIC

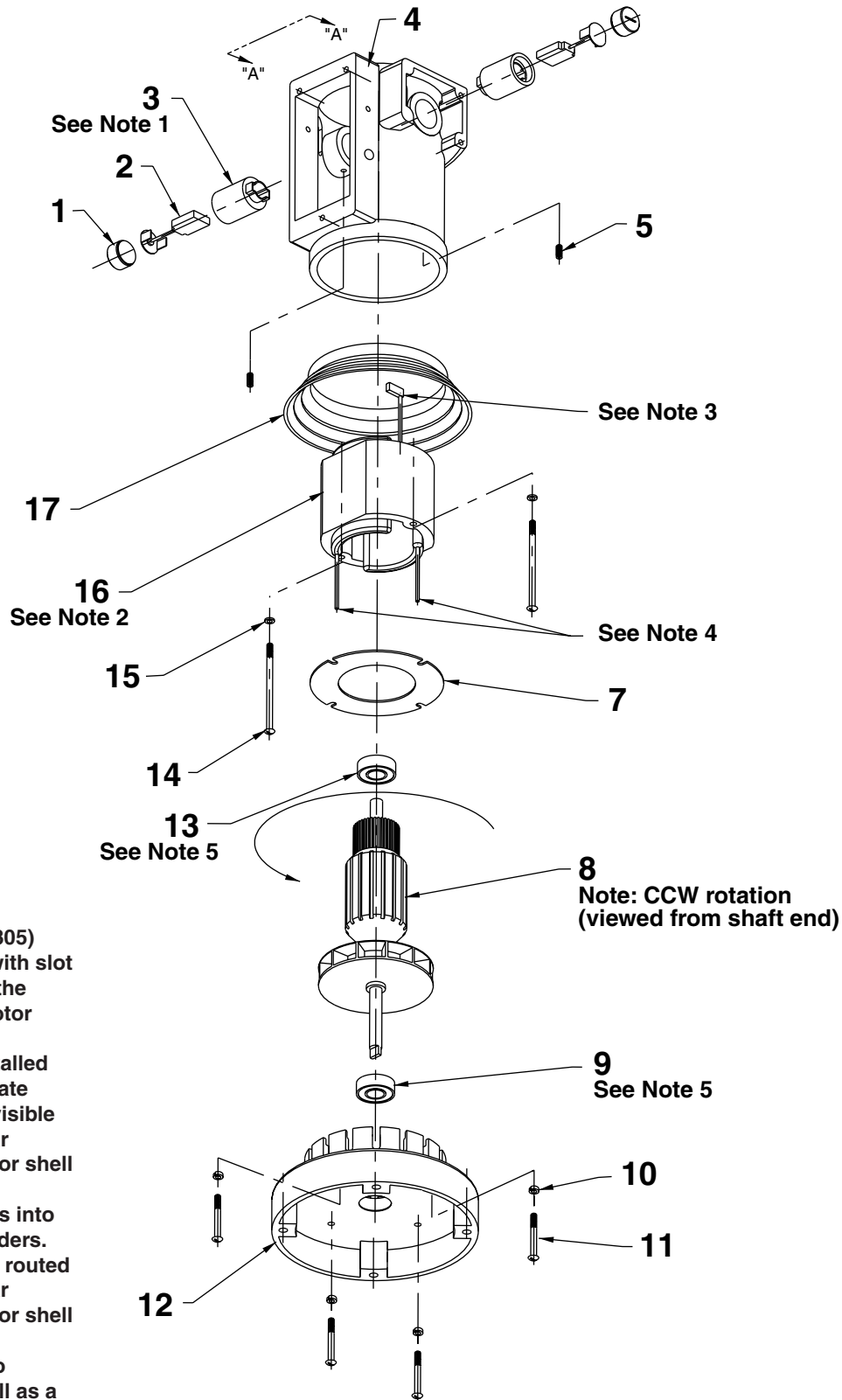


TOP VIEW



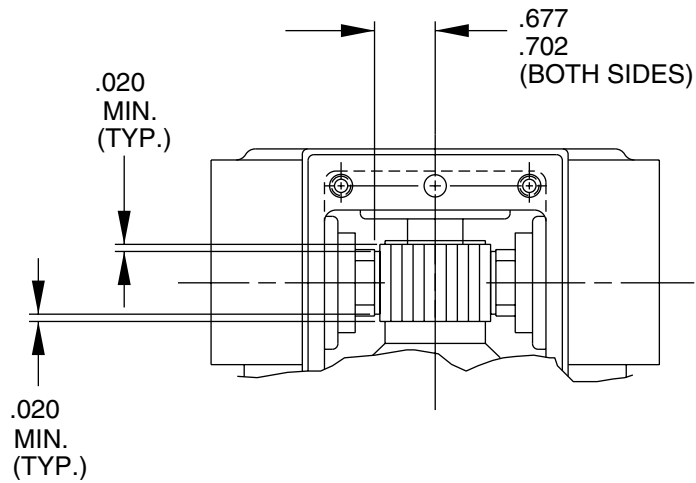
Item No.	Part No.	No. Req'd	Description
1	58741BK2	1	Mounting Bracket
2	10022	4	Screw (1/4-20 UNC X 1-1/2 Lg.)
3	251437	2	Button Hd. Screw (1/4-20 x 1/2)
4	12719	4	Washer (For 1/4 bolt)
5	10008	4	Screw (1/4-20 UNC X 3/4 Lg.)
6	10245	4	Lockwasher (For 1/4 bolt)
7	10199	4	Nut (1/4-20 UNC)

UNIVERSAL MOTOR 12,000 RPM, 230 Volt



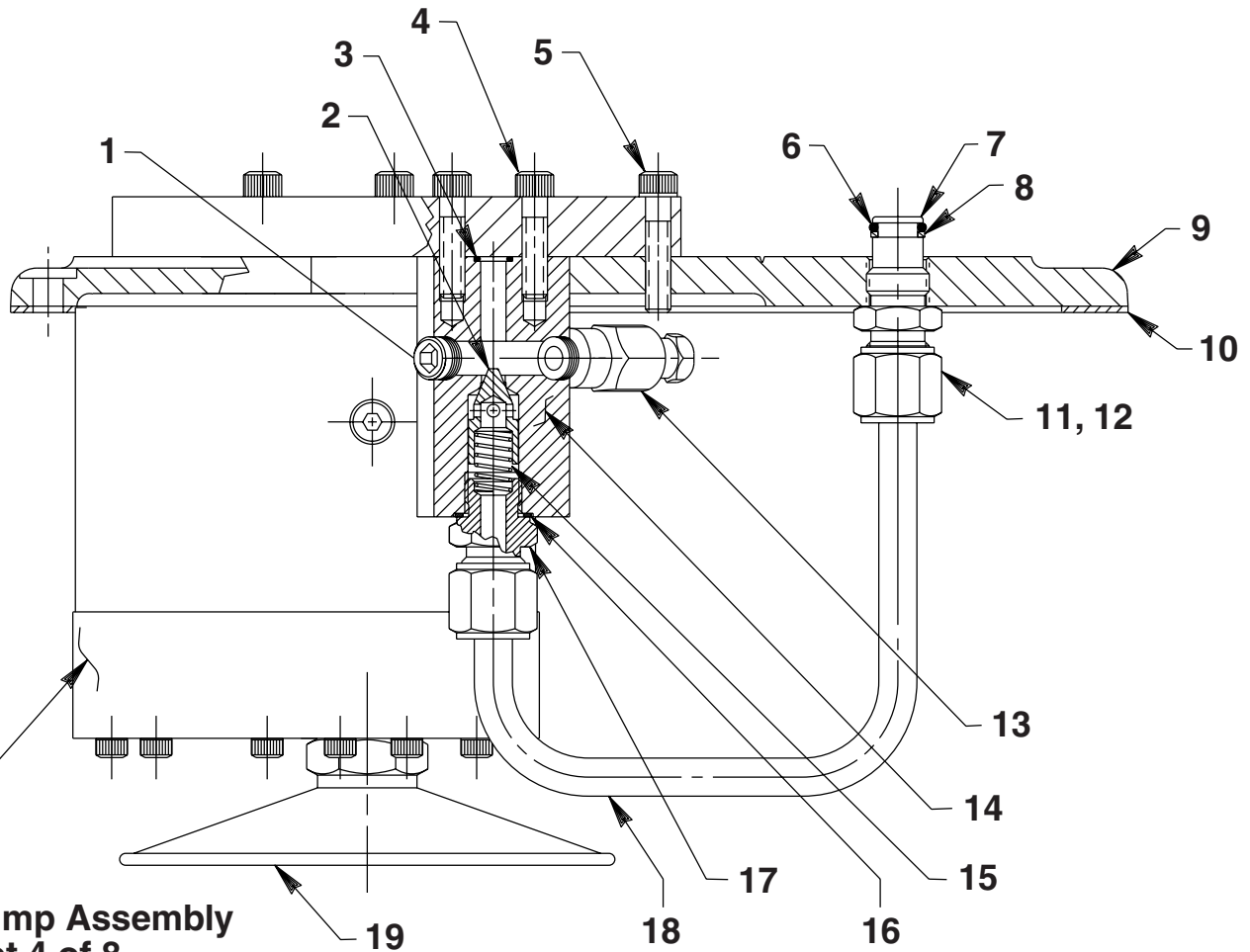
Item No.	Part No.	No. Req'd	Description
1	10806	2	Brush Holder Cap
2	10804	2	Brush
3	10805	2	Brush Holder
4	65064	1	Motor Shell
5	10133	2	Set Screw (#10-24 UNC X 1/4 Lg.)
7	20786	1	Baffle Plate
8	58841A	1	Armature (230 volt)
9	10439	1	Ball Bearing
10	10241	4	Lockwasher (For #10 bolt)
11	10169	2	Screw (#10-24 UNC X 2" Lg.; Torque to 20/25 in. lbs.)
12	40059WH2	1	Motor Base
13	10438	1	Ball Bearing
14	10170	2	Screw (#10-24 UNC X 3-1/4 Lg.)
15	12356	2	Washer (#10 Internal Tooth)
16	58841F	1	Field (230 volt)
17	421204	1	Plastic Cover

BRUSH HOLDER & ARMATURE INSTALLATION SPECIFICATIONS



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

BASIC PUMP SUBASSEMBLY



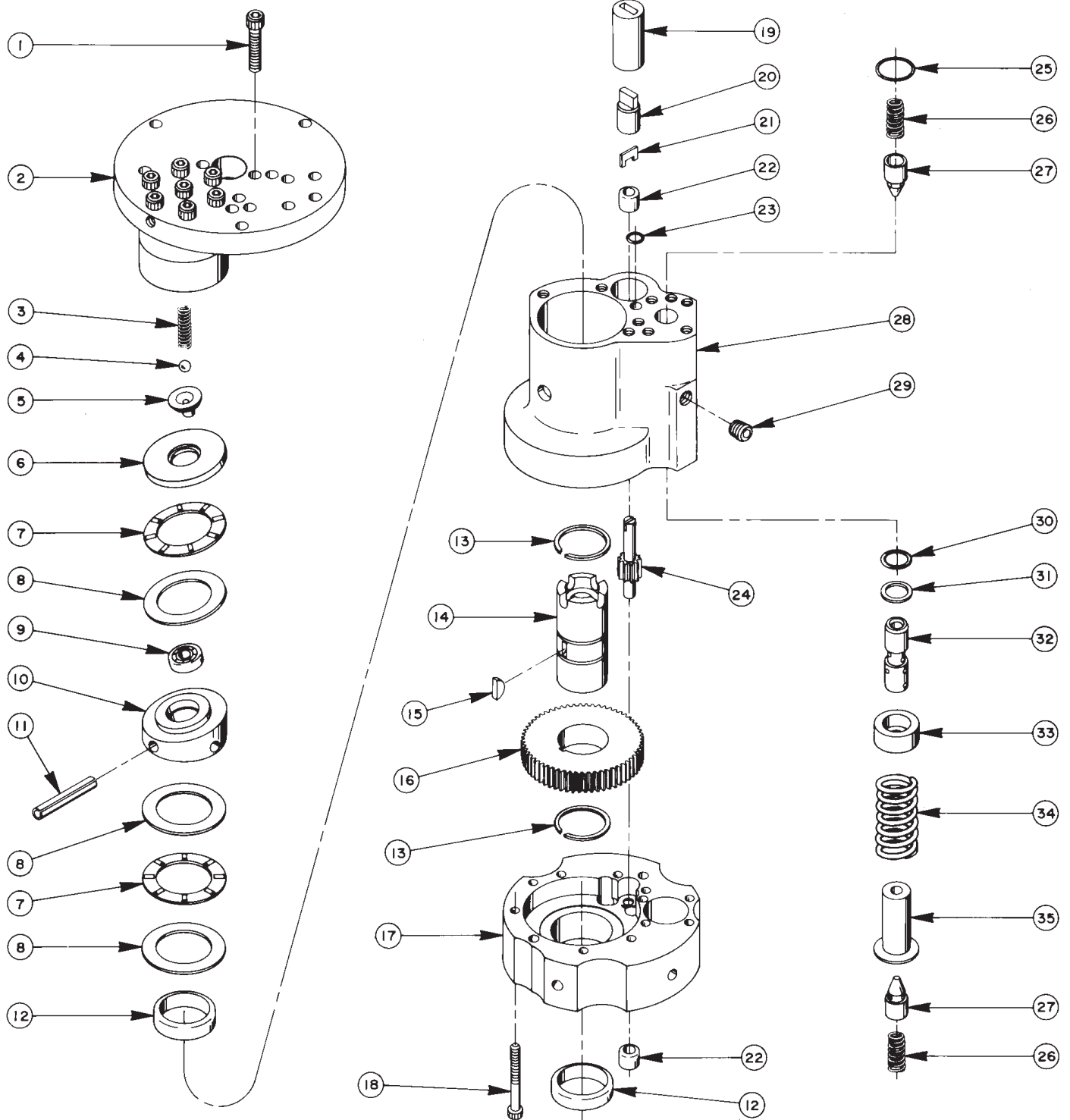
Basic Pump Assembly
See sheet 4 of 8

Item No.	Part No.	No. Req'd	Description
1	10427	1	Plug Fitting (1/8 NPTF)
2	20771	1	Poppet
3	10266	1	O-ring (.37 x .25 Nitrile)
4	10015	2	Soc. Hd. Screw (1/4-28 x 1; Torque to 130/180 in. lbs.)
5	10016	3	Soc. Hd. Screw (1/4-20 x 1)
6	10268	1	O-ring (.50 x .37 Nitrile)
7	20787	1	Valve Connector
8	11863	1	Backup Washer (.50 x .38)
9	64856WH2	1	Cover Plate
10	40164	1	Reservoir Gasket
11	10430	2	Tube Sleeve (3/8 dia.)
12	10431	2	Tube Nut Fitting (3/8 tube)
13	21278-57	1	Relief Valve Assembly (Set at 5,800/6,400 PSI)
14	20776	1	Valve Body
15	10425	1	Spring (.37 OD x .75 x .03 WS)
16	10261	1	Copper Washer (.75 x .60)
17	20770	1	Connector Fitting (9/16 x 5/8; Torque to 40/50 ft. lbs.)
18	21045	1	Oil Line Tube
19	21344	1	Filter Screen (Includes o-ring [Item #20])
20	10300	1	O-ring

PARTS INCLUDED BUT NOT SHOWN

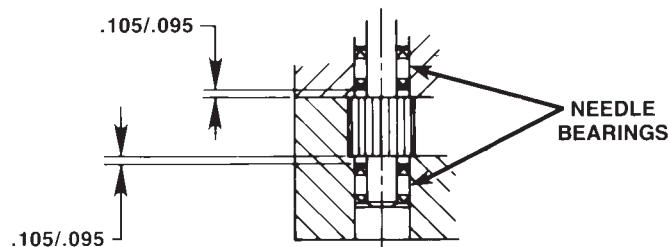
10177	10	Rnd. Hd. Screw (1/4-20 x 3/4; Mounts cover plate to reservoir)
20937	1	Vent Cap

BASIC PUMP ASSEMBLY



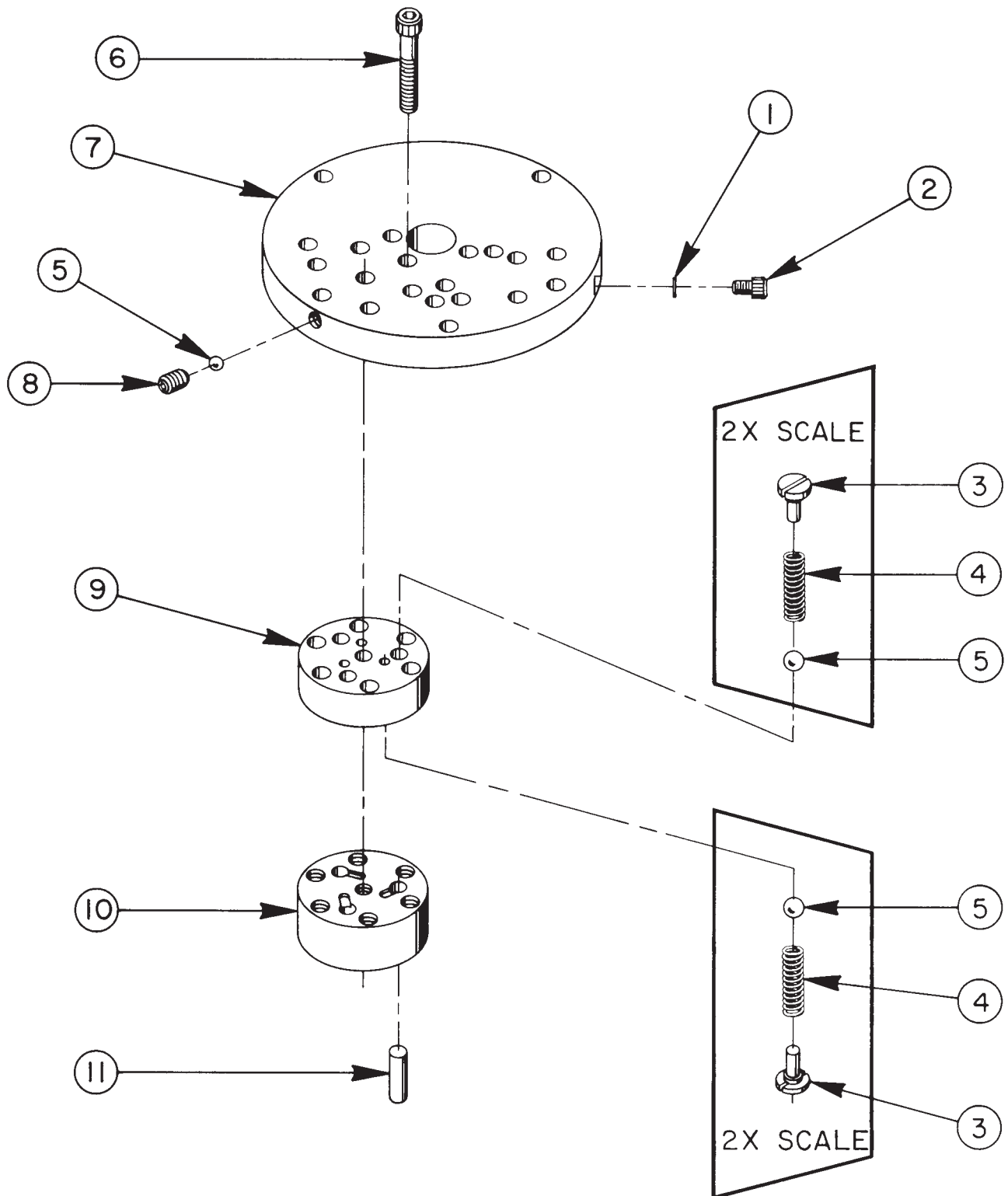
Item No.	Part No.	No. Req'd	Description
1	10020	9	Soc. Hd. Cap Screw (1/4-20 UNC X 1-1/4 Lg.: Torque to 170-180 in. lbs.)
2	33113	1	High Pressure Pump Ass'y (See sheet 5 of 8)
3	10361	1	Compression Spring (1/4 O.D. X 1" Lg.)
4	10375	1	Steel Ball (1/4" dia.)
5	23547	1	Bearing Top Plate
6	23548	1	Top Plate
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	Zinc 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

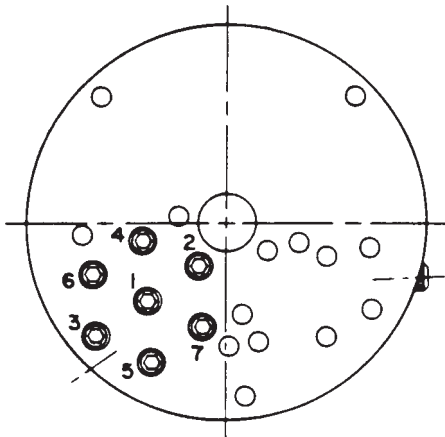


33113 PUMP ASS'Y

3 Pistons -- 9/32 Dia.

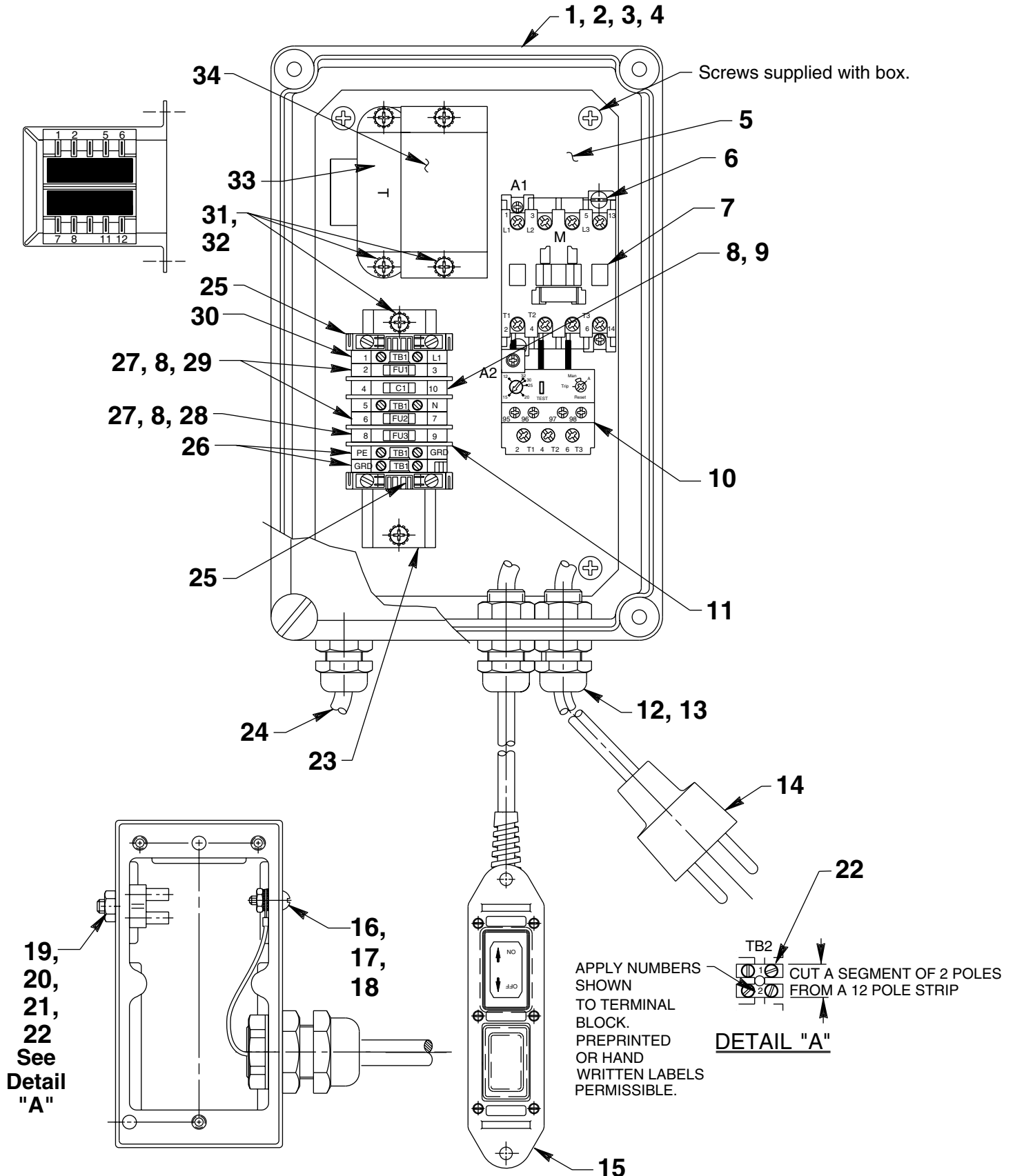
Item No.	Part No.	No. Req'd	Description
1	10442	1	Copper Washer (3/8 X 1/4 X 1/32)
2	10002	1	Soc. Hd. Cap Screw (1/4-20 UNC X 3/8" Lg.; Torque to 140/160 in. lbs.)
3	24549	6	Valve Guide
4	10445	6	Compression Spring (5/32" O.D. X 3/4" Lg.)
5	12223	7	Steel Ball
6	10023	7	Soc. Hd. Cap Screw (1/4-20 UNF 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



Item No.	Part No.	No. Req'd	Description
1	251875	1	Control Box
2	251762	1	Warning Decal
3	251898	1	Warning Decal (CE Electrical)
4	350988	1	CE Decal
5	421153	1	Mounting Plate
6	12409	2	Screw (#8-32 UNC x 5/8 Lg.)
7	422011	1	Contactor
8	251848	4	Terminal Fuse Block
9	252196	1	Capacitor
10	351125	1	Overload Relay (Note: Set at 14 AMPS)
11	251847	4	Partition Plate
12	216666	4	Strain Relief Bushing
13	216680	4	Conduit Locknut
14	253369	1	Electrical Plug
15	251879	2.25 ft.	Electrical Cable (1.5 mm/3)
15	253641	1	Remote Hand Switch Assembly (See sheet 7 of 8)
16	12354	1	Screw (10-24 UNC X 5/8 Lg.)

Item No.	Part No.	No. Req'd	Description
17	11108	2	Washer (#10 External Tooth)
18	10197	1	Nut (#10-24 UNC)
19	16099	1	Screw (6-32 UNC x 3/4 Lg.)
20	15906	1	Washer (#6 External Tooth)
21	10195	1	Nut (#6-32 UNC)
22	351130	.17	Terminal Block
23	253688	1	DIN Mounting Rail
24	251879	2.25 ft.	Electrical Cable (1.5 mm/3)
25	251843	2	End Anchor
26	251841	2	Grounding Terminal Block
27	251849	3	Fuse Block
28	251857	1	Fuse (3.15 AMP)
29	251855	2	Fuse (315 MAMP)
30	251840	4	Terminal Block
31	13158	6	Screw (#8-32 UNC x 1/4 Lg.)
32	11388	6	Washer (#8 External Tooth)
33	351119	1	Transformer
34	421146	1	Transformer Cover

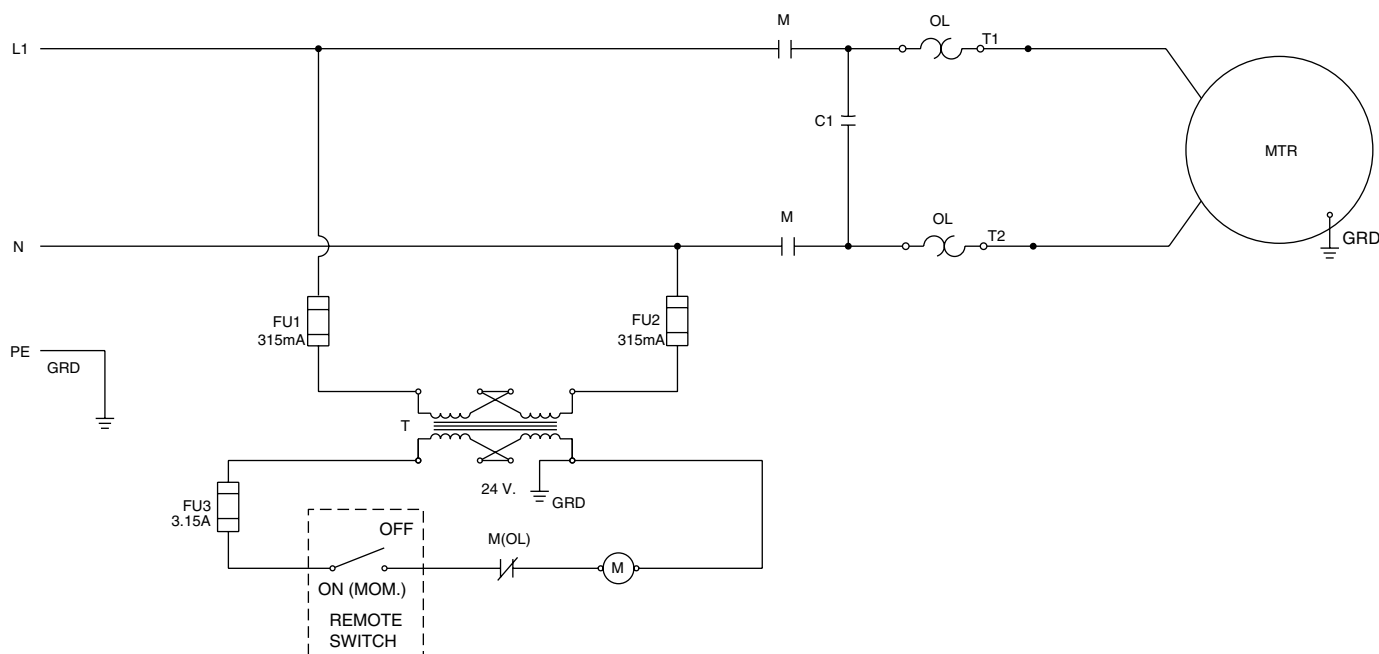
Note: Shaded areas reflect last revision(s) made to this form.

ELECTRICAL SCHEMATIC

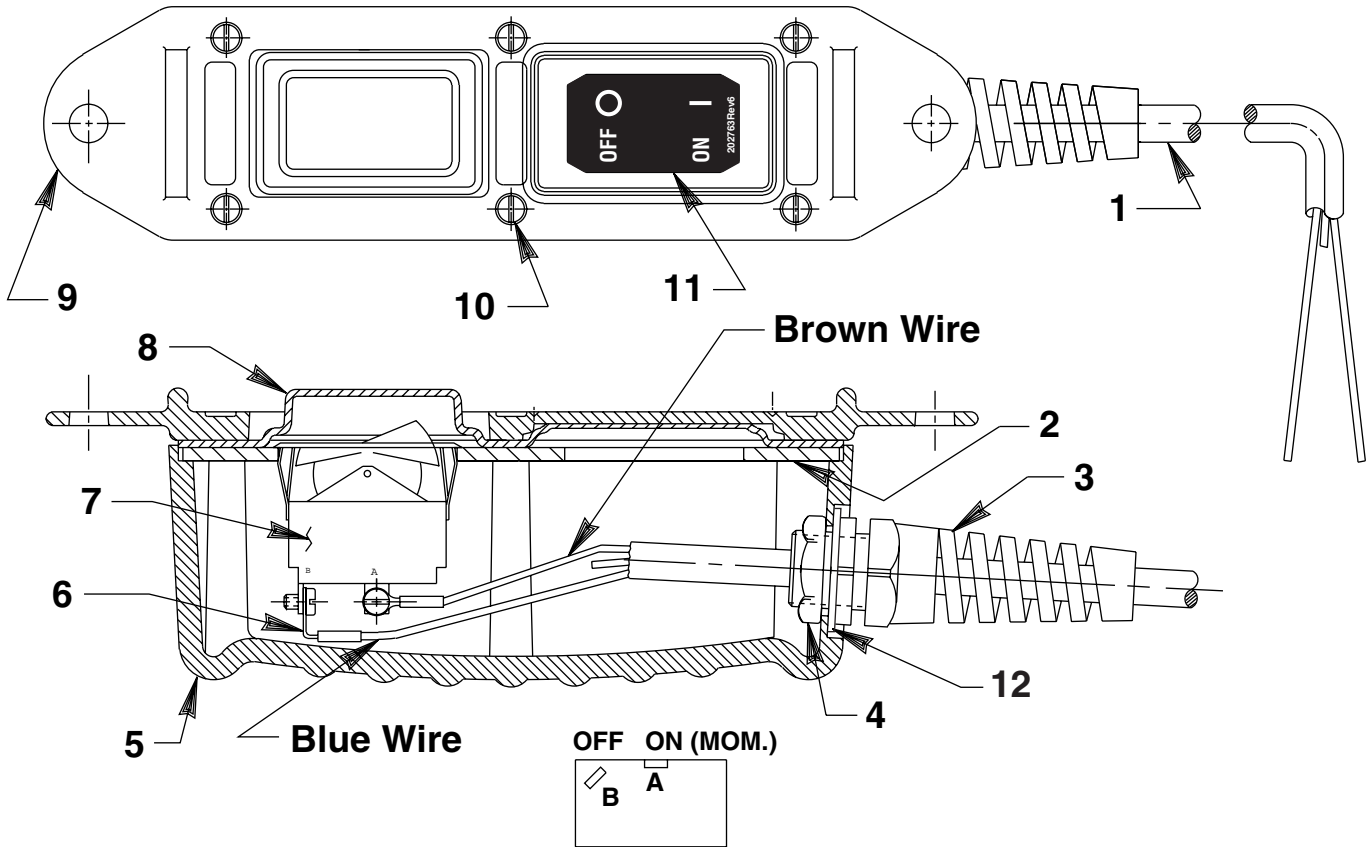
220 V., 50 Hz., Single Phase



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

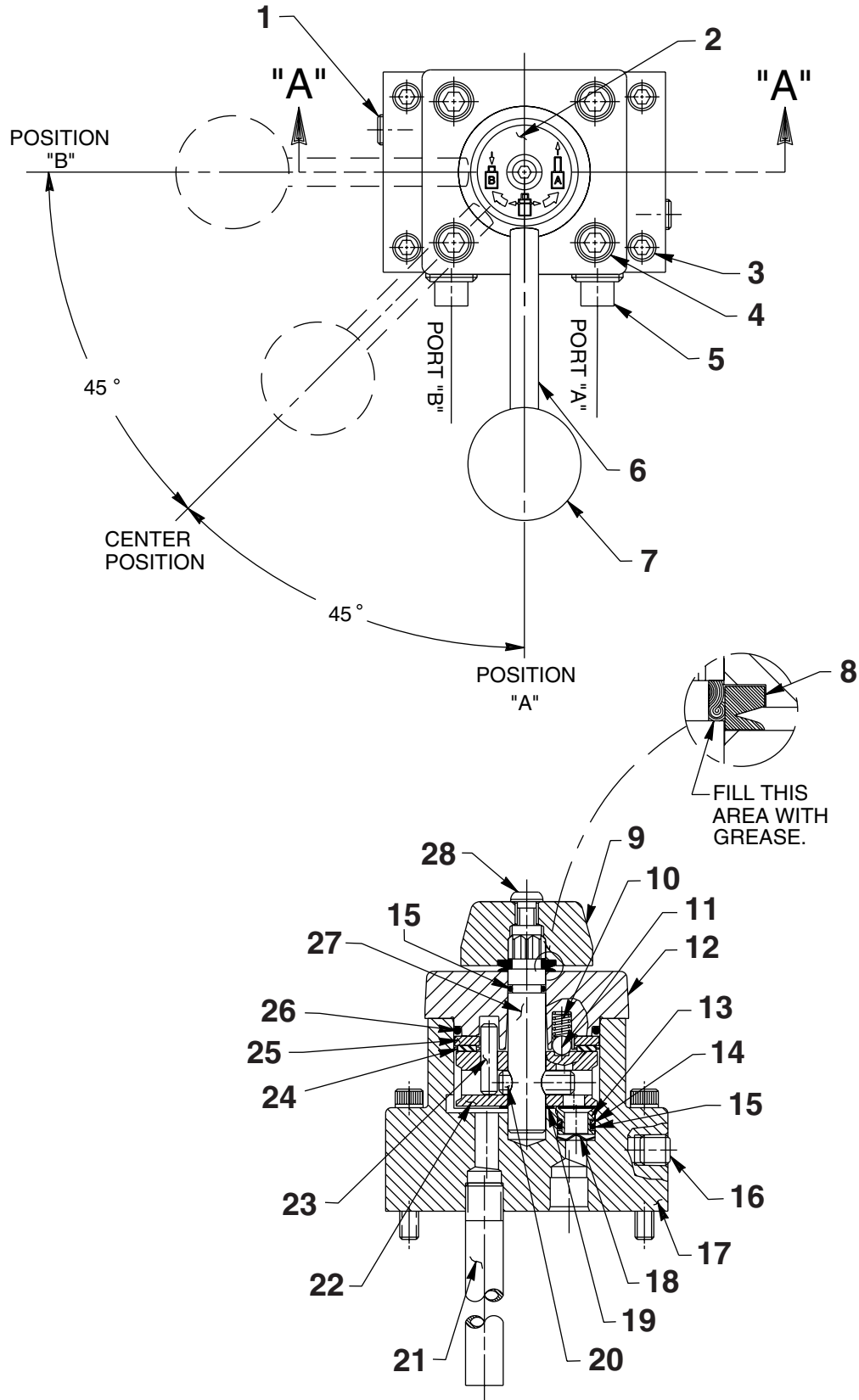


REMOTE CONTROL HAND SWITCH ASSEMBLY NO. 253461



Item No.	Part No.	No. Req'd	Description
1	251879	10 ft.	Electrical Cable (14/3)
2	420050-3	1	Switch Mounting Plate
3	251818	1	Strain Relief Connector
4	251802	1	Locknut (3/4-16 UNF)
5	420050-4	1	Switch Housing
6	10525	2	Ring Terminal
7	16772	1	Rocker Switch
8	420050-2	1	Gasket
9	420050-1	1	Cover
10	250248	6	Screw (4-24 x 3/4 Lg.)
11	202763	1	Decal
12	253607	1	Rubber Gasket

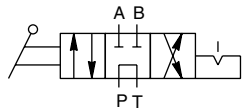
MANUAL VALVE ASSEMBLY



SECTION A-A

Item No.	Part No.	No. Req'd	Description	Item No.	Part No.	No. Req'd	Description
1	15130	2	Plug Fitting (1/16 NPTF)	16	14972	1	Plug Fitting (1/4 PTF)
2	253284	1	Label Controls Decal	17	61288	1	Valve Body
3	10854	4	Soc. Hd. Screw (1/4-20 x 1-3/4)	18	21975	3	Spring Washer (.49 x .51)
4	11013	4	Soc. Hd. Screw (5/16-18 x 1; Torque to 300/320 in. lbs.)	19	214801	1	Spacer Washer (.73 x .51)
5	11127	2	Plug Fitting (3/8 NPTF)	20	10496	1	Slotted Spring Pin (.31 x 1.00)
6	21639	1	Stud	21	200609	1	Drain Tube
7	211911	1	Ball Knob	22	421472	1	Rotor
8	213674	1	V-ring (.79 x .55 x .22 L)	23	250056	1	Slotted Spring Pin (.22 x .94)
9	46057	1	End Stem	24	11228	1	Needle Bearing
10	15691	1	Spring (.24 OD x .63 x .04 ws)	25	11227-1	1	Bearing Race
11	10375	1	Ball (1/4 dia. steel)	26	15892	1	O-ring (1.95 x 1.72 Nitrile)
12	61343	1	Valve Cap	27	46048	1	Stem
13	252460	3	Seal	28	15911	1	Button Hd. Screw (1/4-20 x 5/8; Torque to 60/80 in. lbs.;
14	11863	3	Backup Washer (.50 x .38)				Note: Apply Loctite No. 222 or equiv. at assembly.)
15	10268	4	O-ring (.50 x .37 Nitrile)				

SPECIFICATIONS



HYD. SCHEMATIC

VALVE, PUMP MOUNTED MANUAL DETENTED
 3-POSITION, 4-WAY TANDEM CENTER
 RATED PRESSURE: 10,000 P.S.I.
 CASE PRESSURE: 500 P.S.I. MAX.
 RATED FLOW: 5 GPM

NOTE: FOR PRESSURE DROP INFORMATION,
 SEE BACK SHEET 8 OF 8.

FUNCTION:

CENTER POSITION:

"A" AND "B" PORTS BLOCKED
 "PRESSURE" PORT TO TANK

"A" POSITION:

PRESSURE TO "A" PORT
 "B" PORT TO TANK

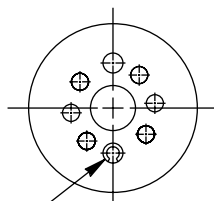
"B" POSITION:

PRESSURE TO "B" PORT
 "A" PORT TO TANK

NOTE: ALL PORTS OPEN TO TANK DURING
 TRANSITION BETWEEN VALVE POSITIONS.

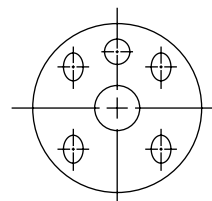


END CAP
 BOTTOM VIEW

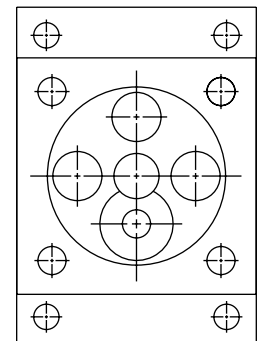


ROTOR
 TOP VIEW

ROLL PIN LOCATION
 (POSITION OPENING AS SHOWN)



ROTOR
 BOTTOM VIEW



VALVE BODY
 TOP VIEW

INTERNAL ASSEMBLY ORIENTATION OF PARTS

PRESSURE DROP & FLOW CHARACTERISTICS GRAPH

