



HYTORC[®]

DIVISION UNEX CORPORATION

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Form No. 107275

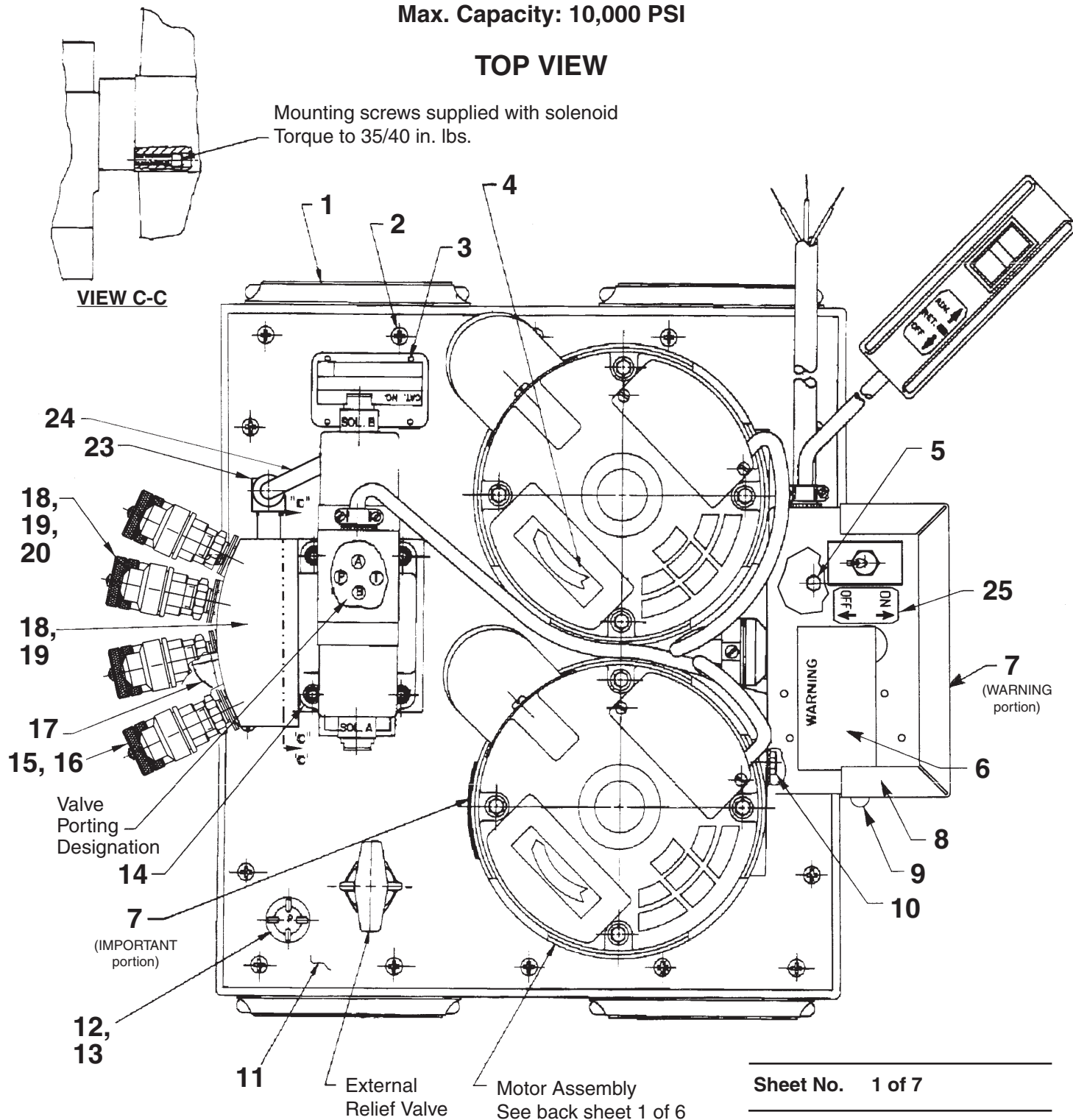
Parts List for:

SST-230TQ

MODEL B TANDEM HYDRAULIC PUMP

Max. Capacity: 10,000 PSI

TOP VIEW



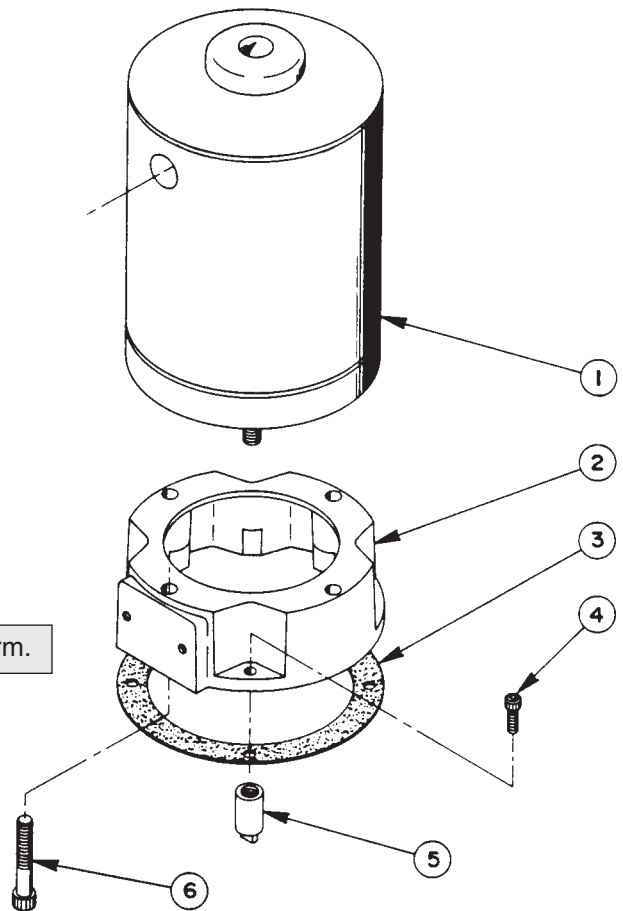
Sheet No. 1 of 7

Rev 5 Date: 30 Aug 2004

Item No.	Part No.	No. Req'd	Description
1	64367BK2	1	Five Gallon Reservoir
2	16876	16	Screw (10-24 UNC X 1/2 Lg.)
3	10575	4	Drive Screw (#2 X 3/16 Lg.)
4	27556	2	Decal (Motor Rotation)
5	104484	2	Screw (10-24 UNC X 3/4 Lg.)
6	250447	1	Decal
7	200188	1	Decal
8	43126BK2	1	Control Box Cover
9	14812	4	Tap Screw (#8-18 X 3/8 Lg.)
10	10005	4	Cap Screw (1/4-20 UNC X 1/2 Lg.)
11	61090BK2	1	Cover Plate
12	20937	1	Vent Cap
13	200415	1	Rubber Gasket
14	31057	1	4-way Valve (See sheet 7 of 7)
15	251410	4	Quick Coupler
16	252364	4	Dust Plug
17	350431	1	Oil Level Gauge W/Thermometer
18	421856BK	1	Manifold (Plug top cross hole with plug [Item#19])
19	10427	1	Plug Fitting (1/8 NPTF)
20	251411	4	Quick Coupler Plug
21	252365	4	Dust Cap
22	10672	4	Straight Fitting (1/4 NPTF)
23	10475	1	90° Elbow Fitting (Assemble into bottom port)
24	351784	1	Tube
25	205409	1	ON-OFF Label Decal

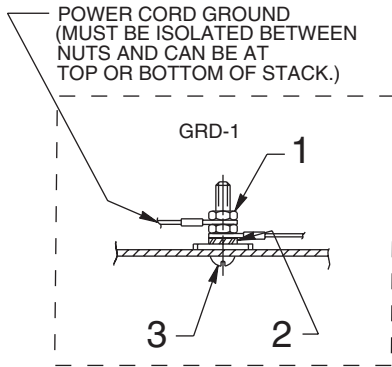
ELECTRIC MOTOR ASSEMBLY

Item No.	Part No.	No. Req'd	Description
1	10865	2	Electric Motor
2	40118BK2	2	Motor Base
3	30650	2	Gasket
4	10008	8	Cap Screw (1/4-20 UNC x 3/4 Lg.)
5	21274	2	Adapter
6	12866	8	Cap Screw (3/8-16 UNC x 2-1/4 Lg.)

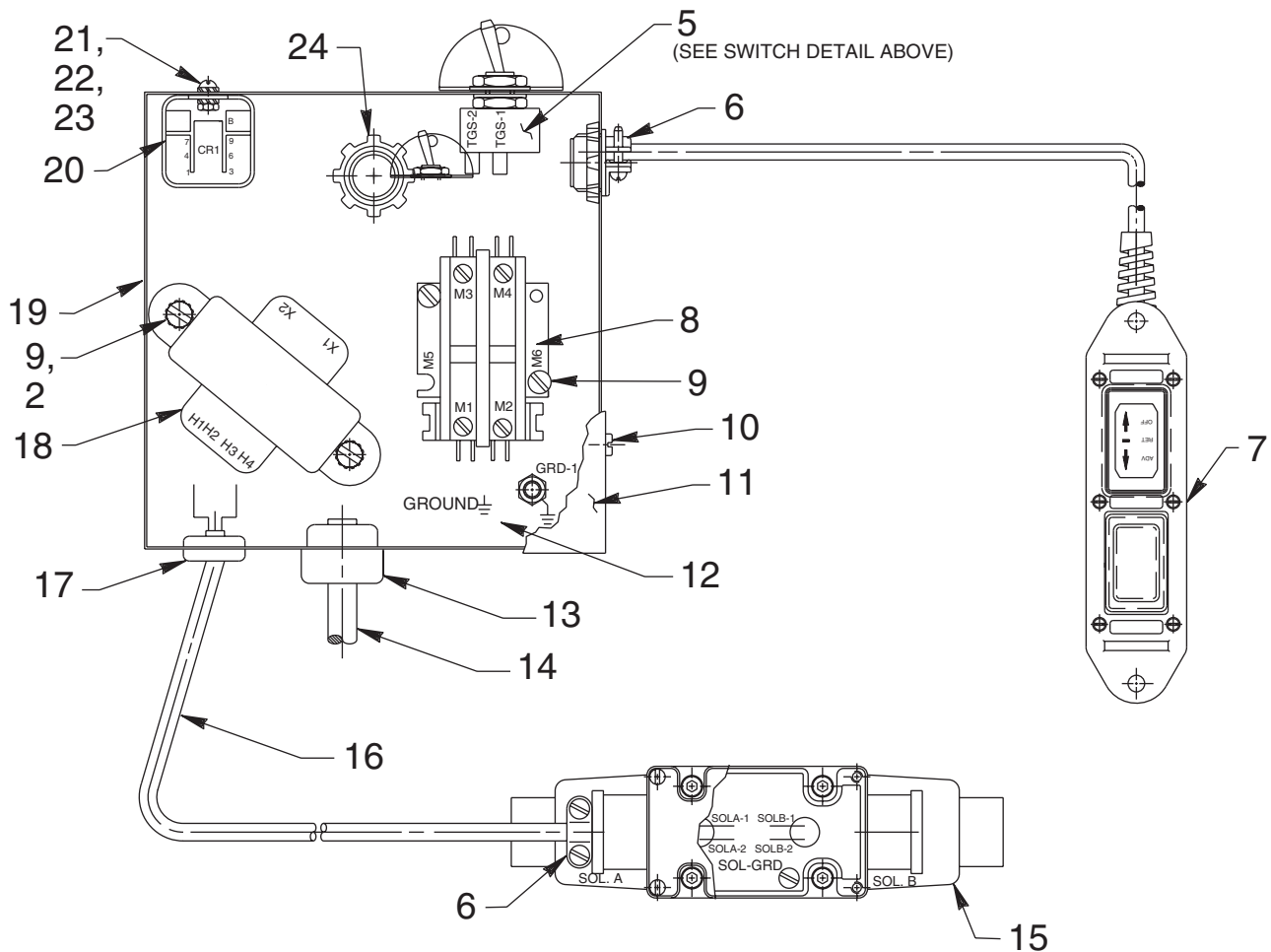
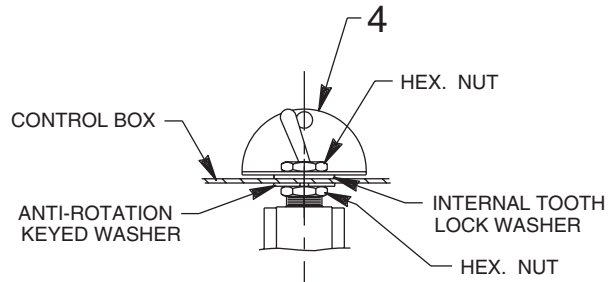


Note: Shaded areas reflect last revision(s) made to this form.

MOTOR CONTROL ASSEMBLY



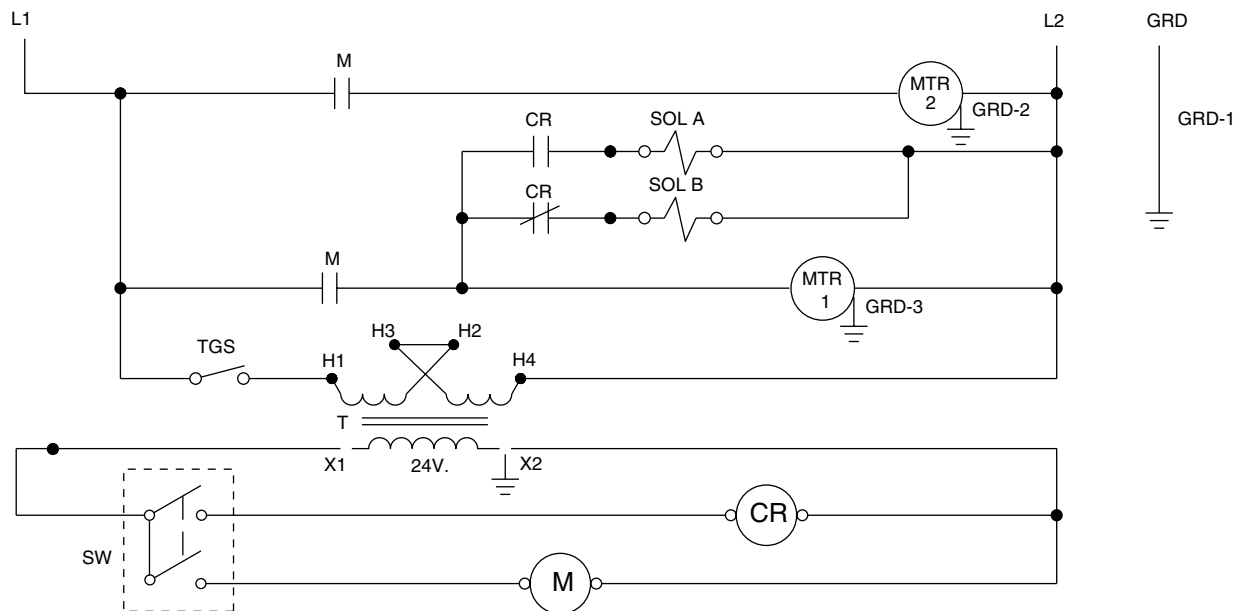
NOTE: SERRATED LOCK WASHER
MUST BE ADJACENT TO
METAL BOX. MORE WASHERS
CAN BE USED IF DESIRED.



MOTOR CONNECTIONS					
MOTOR NO. 1			MOTOR NO. 2		
MOTOR WIRE	MOTOR TERMINAL	LINE	MOTOR WIRE	MOTOR TERMINAL	LINE
	1	M4		1	M3
	2			2	
BLACK, WHITE	3		BLACK, WHITE	3	
	4	PGT-1		4	PGT-1
BROWN	6		BROWN	6	
	7			7	

Item No.	Part No.	No. Req'd	Description
1	10197	2	Nut (#10-24 UNC)
2	11108	1	Washer
3	11856	1	Screw (#10-24 X 1" Lg.)
4	352061	1	Metal Switch Guard
5	12301	1	Toggle Switch
6	11203	2	Conduit Connector
7	250023	1	Remote Hand Switch Ass'y (See back of sheet 6 of 7)
8	420718-4	1	Contactors
9	11539	4	Screw (10-24 x 1/4 Lg.)
10	14812	4	Tap Screw (8-18 x 3/8 Lg.)
11	43126BK2	1	Control Box Cover
12	205189	1	Ground Decal
13	210112	1	Strain Relief Bushing
14	307439	8 ft.	Cable
15	16664-2	1	Directional Valve
16	12293	3.25 ft.	Cable (16/3 SJO)
17	15993	1	Strain Relief Bushing
18	11852	1	Transformer
19	51218BK2	1	Electrical Control Box
20	39092	1	Relay
21	10159	2	Machine Screw (#6-32 UNC X 5/16 Lg.)
22	15906	2	Lockwasher (#6 External Tooth)
23	10195	2	Nut (#6-32 UNC)
24	17866	1	Connector

ELECTRICAL SCHEMATIC

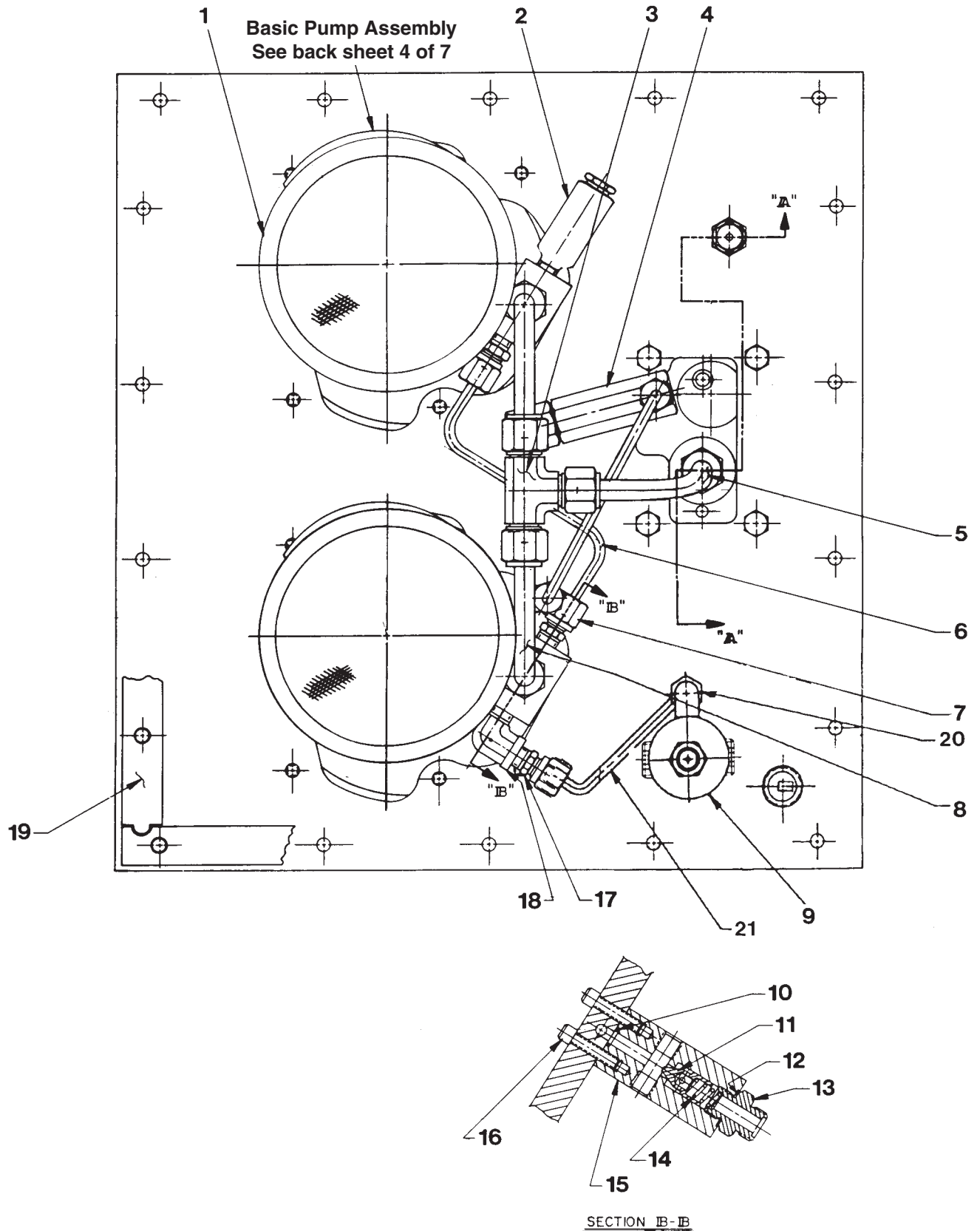


NOTE

PROGRESSIVE REMOTE CONTROL SWITCH.
 POSITION 1 (OFF) : MOTOR OFF, SOLENOID OFF.
 POSITION 2 (RET.) : MOTOR ON, SOLENOID "B" ON.
 POSITION 3 (ADV.) : MOTOR ON, SOLENIOD "A" ON. (MOMENTARY)
 MOTOR STAYS ON BETWEEN POSITIONS 1 AND 2.

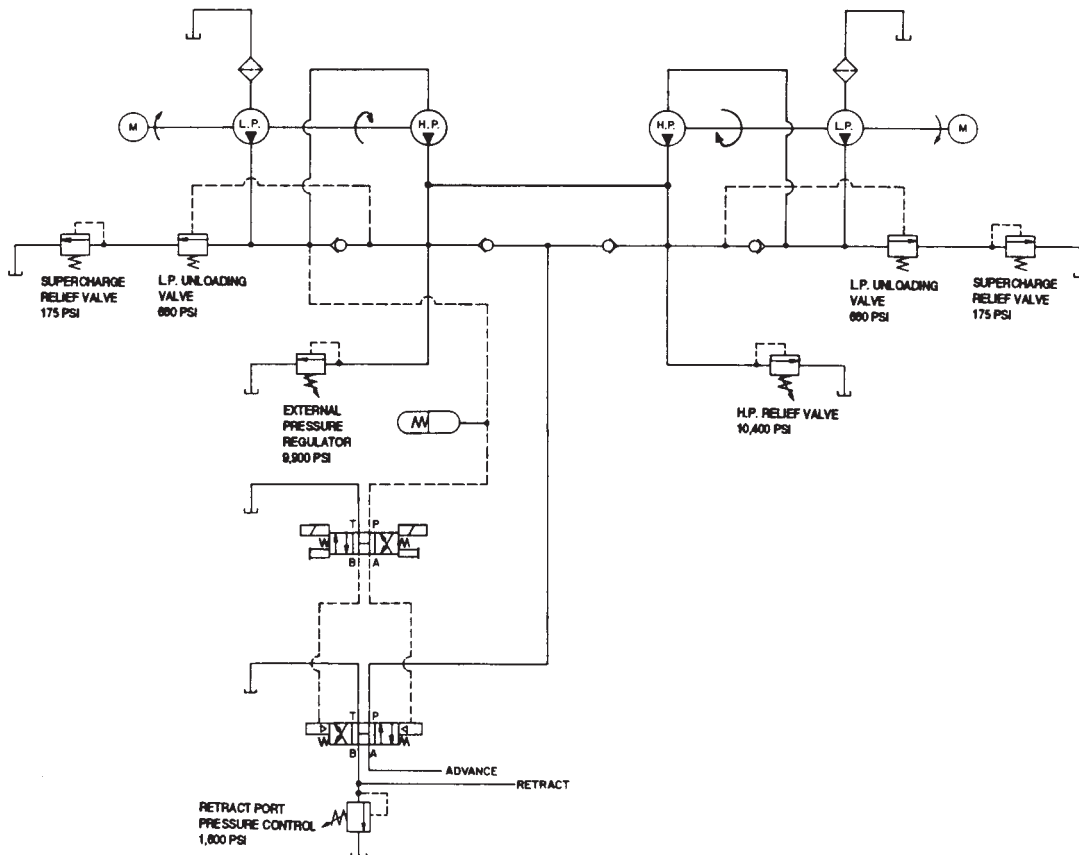
Note: Shaded areas reflect last revision(s) made to this form.

BOTTOM VIEW & SECTION B-B

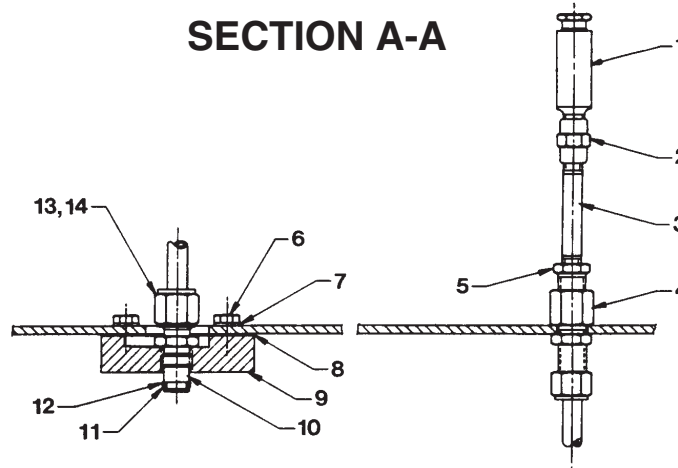


Item No.	Part No.	No. Req'd	Description
1	21345	2	Filter Assembly (Includes o-ring)
2	21278	1	Relief Valve Assembly (Set at 10,100/10,700 PSI)
3	10659	1	Tee Fitting
4	22747	1	Accumulator
5	304118	1	Tube
6	304117	1	Tube
7	11173	2	Connector
8	304116	2	Tube
9	47647	1	Pressure Regulator Assembly (See sheet 4 of 7)
10	10266	2	O-ring (3/8 X 1/4 X 1/16)
11	20771	2	Poppet
12	10261	2	Copper Washer (3/4 X 19/32 X 1/32)
13	20770	2	Connector
14	10425	2	Compression Spring (3/8 O.D. X 3/4 Lg.)
15	20776	2	Valve Body
16	10015	4	Cap Screw (1/4-28 UNF X 1" Lg.; Torque to 130/180 in. lbs.)
17	14844	1	Connector
18	13229	1	Street Elbow
19	50712	1	Gasket
20	16177	1	90° Elbow Fitting
21	201570	1	Pressure Regulator Tube

HYDRAULIC SCHEMATIC



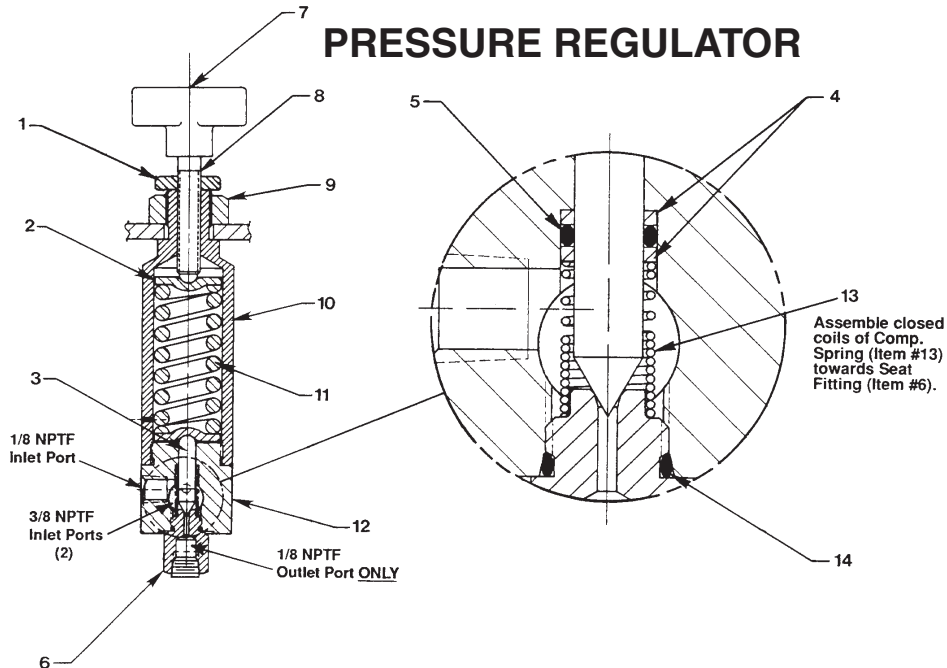
SECTION A-A



Item No.	Part No.	No. Req'd	Description
1	21278-15	1	Relief Valve Assembly (Set at 1,500/1,700 PSI)
2	18841	1	Pipe Connector
3	15456	1	Straight Fitting
4	18345	1	Connector
5	13269	1	Reducer Bushing
6	10005	2	Cap Screw (1/4-20 UNC X 1/2 Lg.)
7	10244	2	Lockwasher (For 1/4 bolt)

Item No.	Part No.	No. Req'd	Description
8	200395	1	Gasket
9	43110	1	Mounting Block
10	20787	1	Valve Connector
11	10268	1	O-ring (1/2 X 3/8 X 1/16)
12	11863	2	Backup Washer (1/2 X 3/8 X 1/16)
13	10430	3	Tube Sleeve
14	10431	3	Tube Nut

PRESSURE REGULATOR



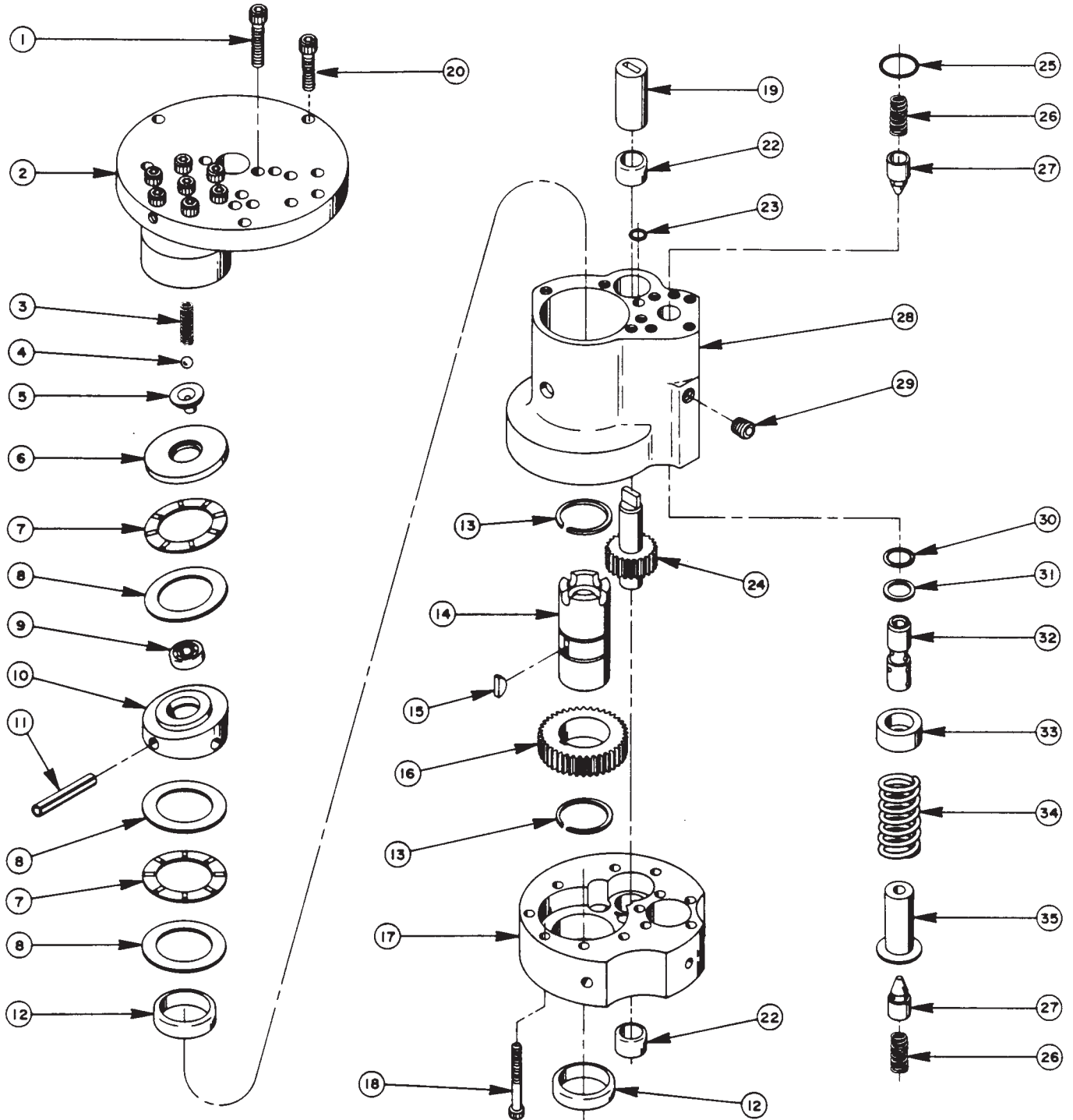
Item No.	Part No.	No. Req'd	Description
1	215683	1	Regulator Locking Nut
2	215428	2	Spring Retainer
3	309079	1	Poppet
4	215430	2	Backup Washer (3/8 x 9/32 x 3/64)
5	10266	1	O-ring (3/8 x 1/4 x 1/16)
6	309078	1	Seat Fitting
7	215693	1	Tee Knob
8	215721	1	Stem
9	10396	1	Jam Nut (3/4-16)
10	309077	1	Spring Housing

Item No.	Part No.	No. Req'd	Description
11	215429	1	Compression Spring (1.100 O.D. x 2-1/2 Lg.)
12	47648	1	Regulator Body
13	215431	1	Compression Spring
14	13755	1	O-ring (9/16 x 13/32 x 5/64)

Sheet No. 4 of 7

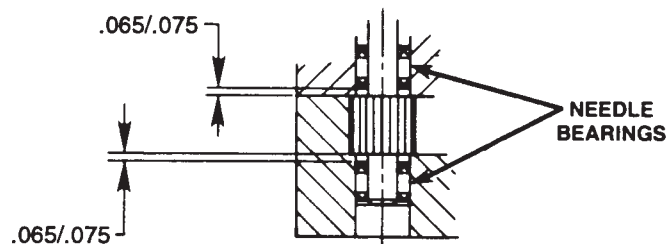
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BASIC PUMP ASSEMBLY



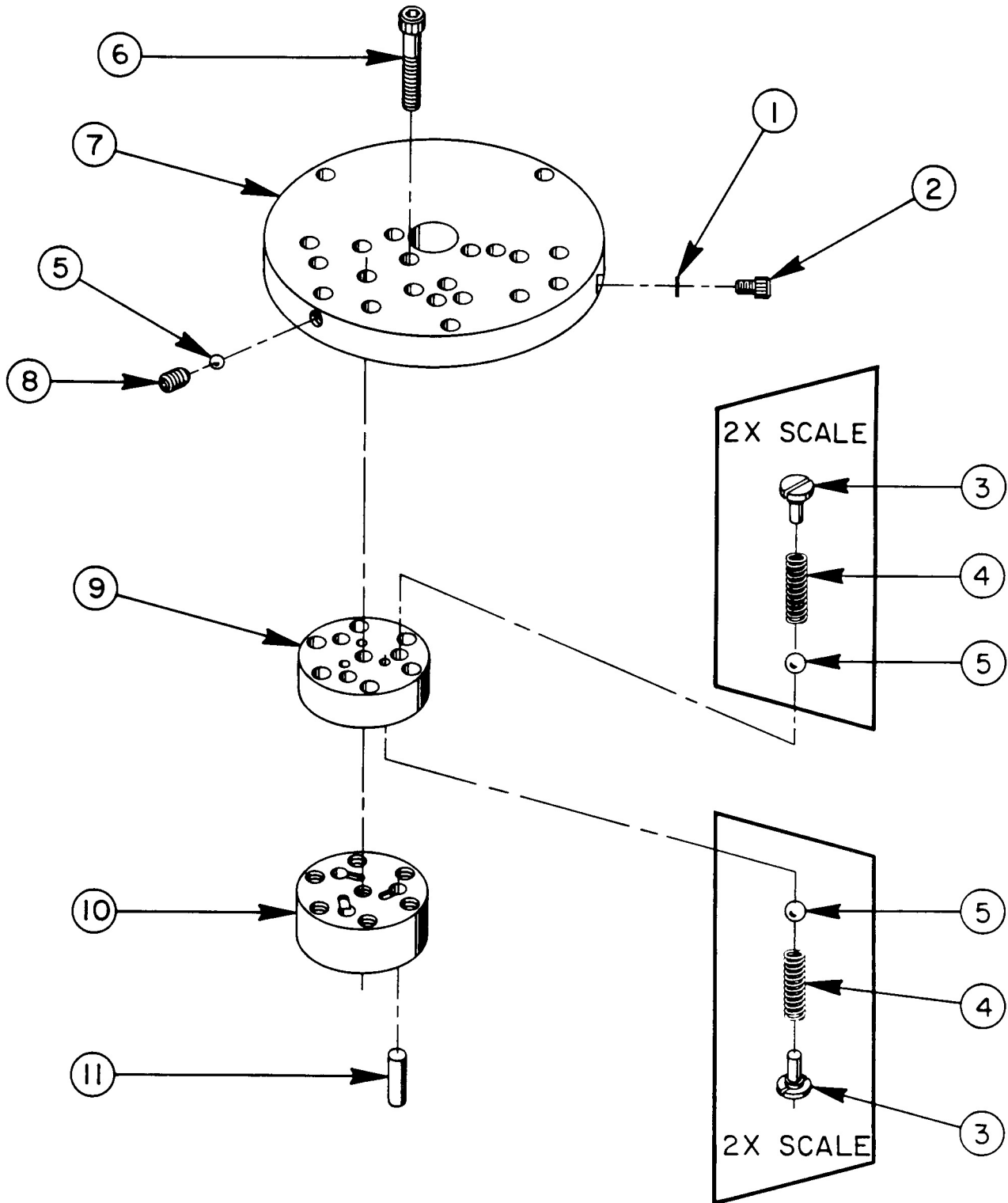
Item No.	Part No.	No. Req'd	Description
1	10020	18	Soc. Hd. Cap Screw (1/4-20 UNC x 1-1/4 Lg.; Torque to 170/180 in. lbs.)
2	33113	2	High Pressure Pump Assembly (See back sheet 5 of 7)
3	10361	2	Compression Spring (1/4 O.D. x 1" Lg.)
4	10375	2	Steel Ball (1/4 dia.)
5	23547	2	Bearing Top Plate
6	23548	2	Top Plate
7	11228	4	Thrust Bearing
8	11813	6	Bearing Race
9	11814	2	Ball Bearing
10	23549	2	Angle Plate
11	11955	2	Roll Pin
12	11064	4	Needle Bearing
13	11261	4	Retaining Ring
14	23556	2	Shaft
15	11821	2	Woodruff Key
16	23557	2	Gear
17	30533	2	Pump End Plate
18	10001	24	Soc. Hd. Cap Screw (#10-32 UNF x 1-3/4 Lg.; Torque to 50 in. lbs.)
19	21091	2	Zinc Coupling
20	10016	6	Soc. Hd. Cap Screw (1/4-20 UNC x 1" Lg.)
22	11199	4	Needle Thrust Bearing (See note below)
23	10266	2	O-ring (3/8 x 1/4 x 1/16)
24	21272	2	Drive Gear
25	10303	2	O-ring (7/8 x 3/4 x 1/16)
26	10425	4	Compression Spring (3/8 O.D. x 3/4 Lg.)
27	20771	4	Poppet
28	40120	2	Pump Body
29	10427	1	Pipe Plug (1/8 NPTF)
30	10271	2	O-ring (11/16 x 1/2 x 3/32)
31	12389	2	Teflon Backup Washer (11/16 x 1/2 x 1/16)
32	20849	2	Spool
33	23255	2	Spring Guide
34	10426	2	Compression Spring (1" O.D. x 1-13/16 Lg.)
35	23256	2	Spring Guide

NEEDLE BEARING INSTALLATION SPECIFICATIONS



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

HIGH PRESSURE PUMP ASSEMBLY

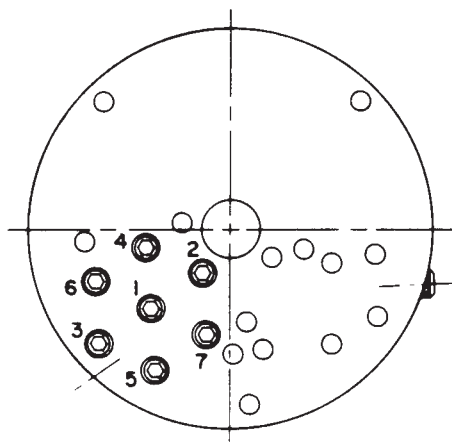


33113 PUMP ASSEMBLY

3 Pistons - 9/32 Dia.

Item No.	Part No.	No. Req'd	Description
1	10442	2	Copper Washer (3/8 x 1/4 x 1/32)
2	10002	2	Soc. Hd. Cap Screw (1/4-20 UNC x 3/8 Lg.; Torque to 140/160 in. lbs.)
3	24549	12	Valve Guide
4	10445	12	Compression Spring (5/32 O.D. x 3/4 Lg.)
5	12223	14	Steel Ball (3/16 dia.)
6	10023	14	Soc. Hd. Cap Screw (1/4-28 UNF x 1-1/2 Lg.; Torque to 170/180 in. lbs.; See note below)
7	50411	2	Top Plate
8	10519	2	Soc. Set Screw (1/4-20 UNC x 3/8 Lg.; Torque to 65/70 in. lbs.)
9	40630	2	Valve Head
10	41062	2	Pump Barrel
11	21628	6	Piston

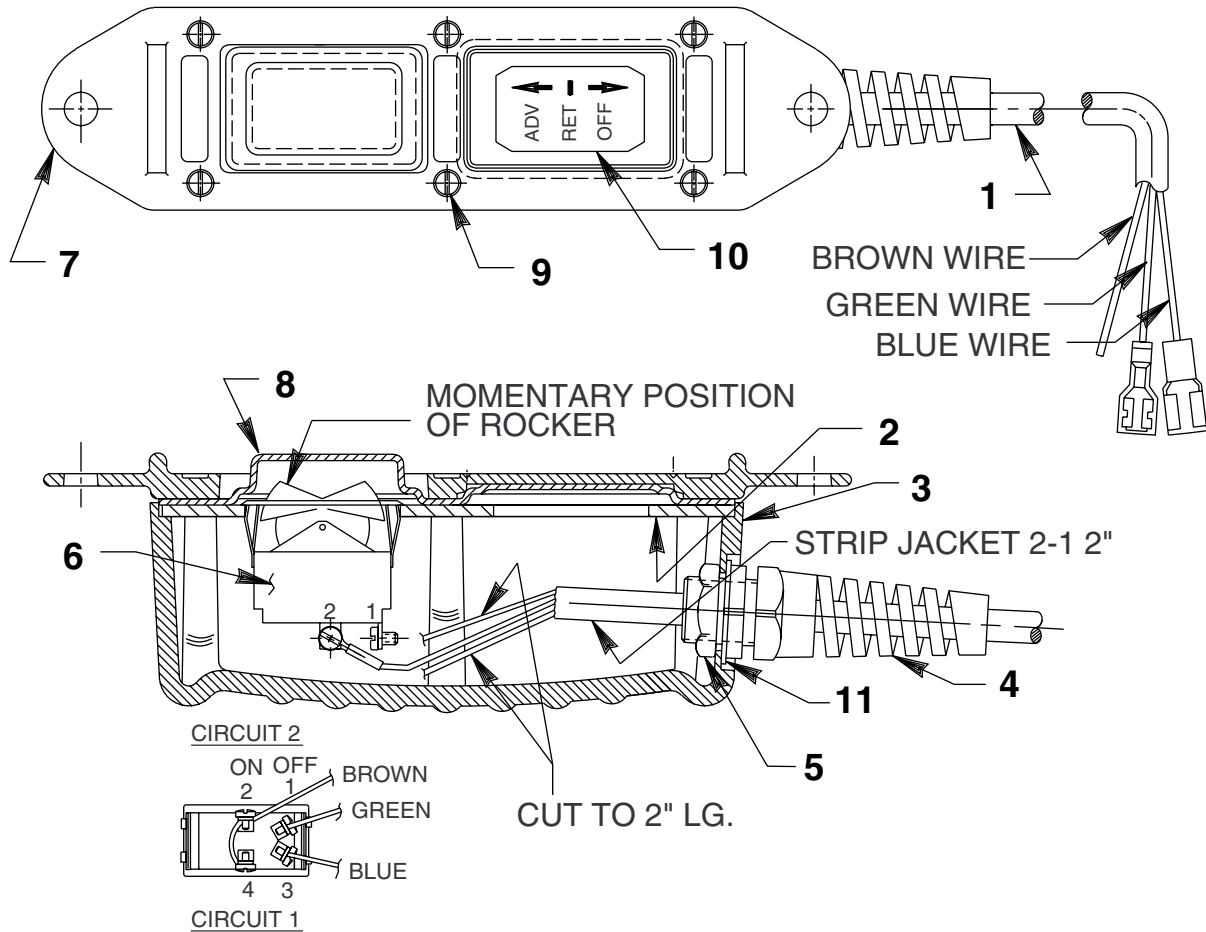
BOLT TIGHTENING SEQUENCE



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

REMOTE HAND SWITCH ASSEMBLY

No. 250023



Item No.	Part No.	No. Req'd	Description
1	12908	21 ft.	Cable (18/3 SJTO)
2	420050-3	1	Switch Mounting Plate
3	420050-4	1	Switch Mounting
4	251818	1	Strain Relief Connector
5	251802	1	Locknut (Torque to 30/35 in. lbs.)
6	420017	1	Rocker Switch

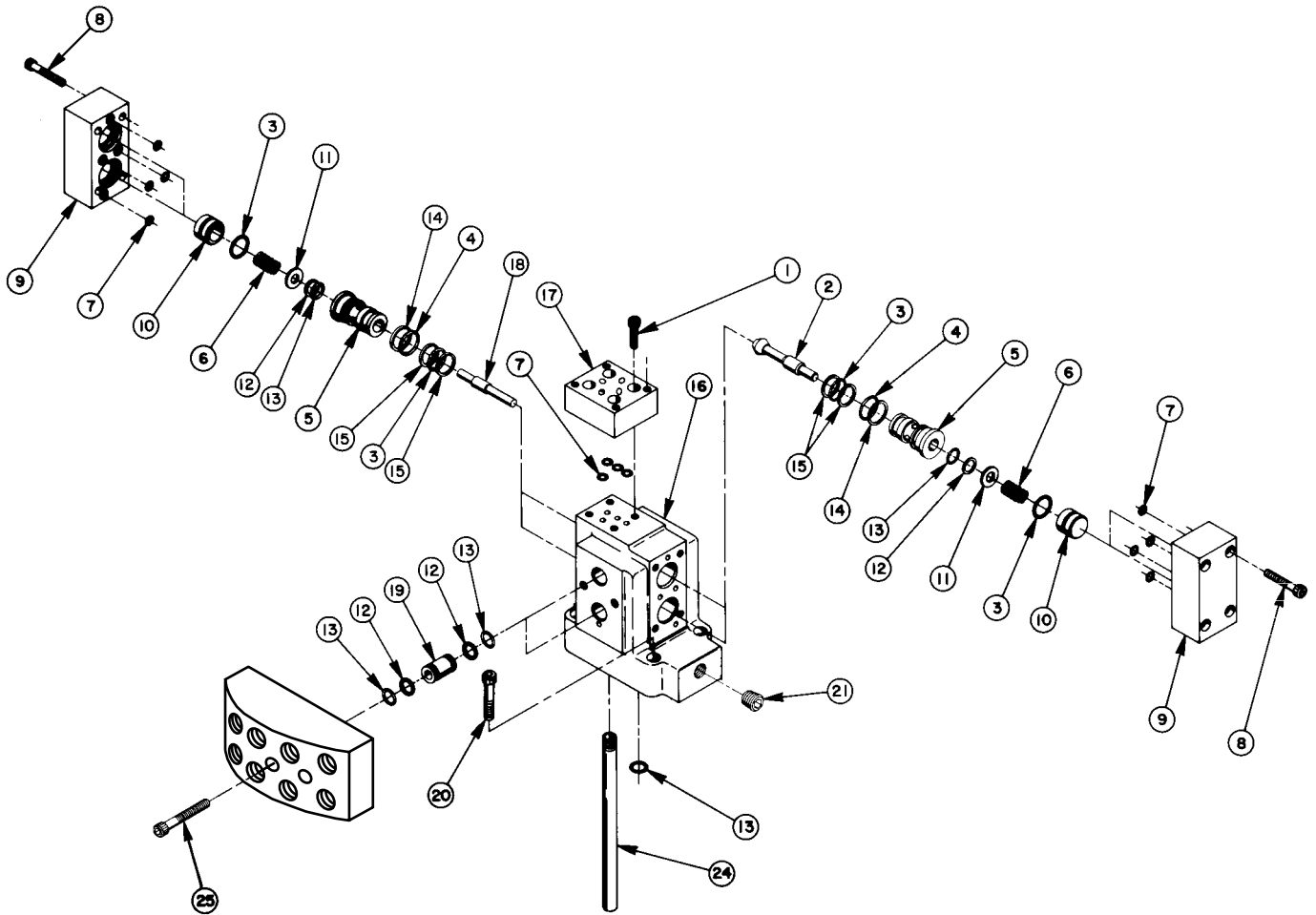
Item No.	Part No.	No. Req'd	Description
7	420050-1	1	Cover
8	420050-2	1	Gasket
9	250248	6	Screw (4-24 x 3/4 Lg.)
10	203086	1	Decal
11	253607	1	Gasket

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 Power Team replacement parts!**

Additional questions can be directed to our Technical Services Department.

#31057 DIRECTIONAL VALVE ASSEMBLY



Item No.	Part No.	No. Req'd	Description	Item No.	Part No.	No. Req'd	Description
1	12102	4	Cap Screw (#10-24 X 3/4 Lg.; Torque to 80/100 in. lbs.)	13	*10268	9	O-ring (1/2 X 3/8 X 1/16)
2	200542	2	Poppet Half	14	*12392	4	Backup Washer (3/4 X 5/8 X 1/16)
3	*11284	8	O-ring (11/16 X 9/16 X 1/16)	15	*12391	8	Backup Washer (11/16 X 9/16 X .048)
4	*10302	4	O-ring (3/4 X 5/8 X 1/16)	16	50119	1	Body
5	22068	4	Bushing	17	42934	1	Port Plate
6	10362	4	Compression Spring (3/8 O.D. X 3/4 Lg.)	18	200541	1	Poppet Half
7	*10265	12	O-ring (5/16 X 3/16 X 1/16)	19	21094	2	Bushing
8	11151	8	Cap Screw (#10-24 X 1-1/4 Lg.; Torque to 50/70 in. lbs.)	20	10020	4	Cap Screw (1/4-20 X 1-1/4 Lg.)
9	31008	2	Cap End	21	10479	1	Pipe Plug (1/4 NPTF)
10	22070	4	Piston	24	20847	1	Drain Line
11	22069	4	Washer	25	10854	2	Cap Screw (1/4-20 x 1-3/4 Lg.; Torque to 150/180 in. lbs.)
12	*11863	8	Backup Washer (1/2 X 3/8 X 1/16)				

Part numbers marked with an asterisk (*) are contained in Repair Kit No. 300357.

Note: This page added at last revision(s) made to this form.

VALVE SPECIFICATIONS

This is a sub-plate mounted, solenoid-controlled, pilot-operated, 3-position, 4-way valve for use on hydraulic power units. This valve is intended for use with double-acting cylinders and provides the possibility of remote operation. A connection is provided on the valve body for a pressure switch and/or gauge.

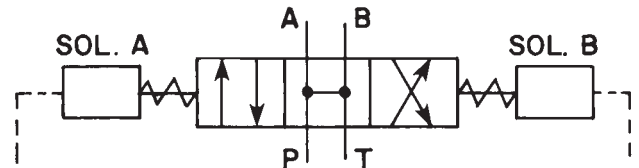
OPERATION

Solenoid "A" Energized: When solenoid "Sol. A" is energized, oil is directed through port "A" to one end of a double-acting cylinder. Oil from the other end of the double-acting cylinder returns through port "B" to the reservoir.

Solenoid "B" Energized: When solenoid "Sol. B" is energized, oil is directed through port "B" to one end of a double-acting cylinder and oil returns through port "A" to the reservoir from the other end of the double-acting cylinder.

Neutral (Hold): When both solenoids are de-energized, the valve is in the neutral position and all ports are connected, thereby giving a true "open-center" condition.

HYDRAULIC SCHEMATIC



PORT SIZES: 3/8" NPTF
MAXIMUM PRESSURE: 10,000 PSI
MAX. RECOMMENDED FLOW: 5 GPM

Note: This page added at last revision(s) made to this form.