



HYTORC®

DIVISION UNEX CORPORATION

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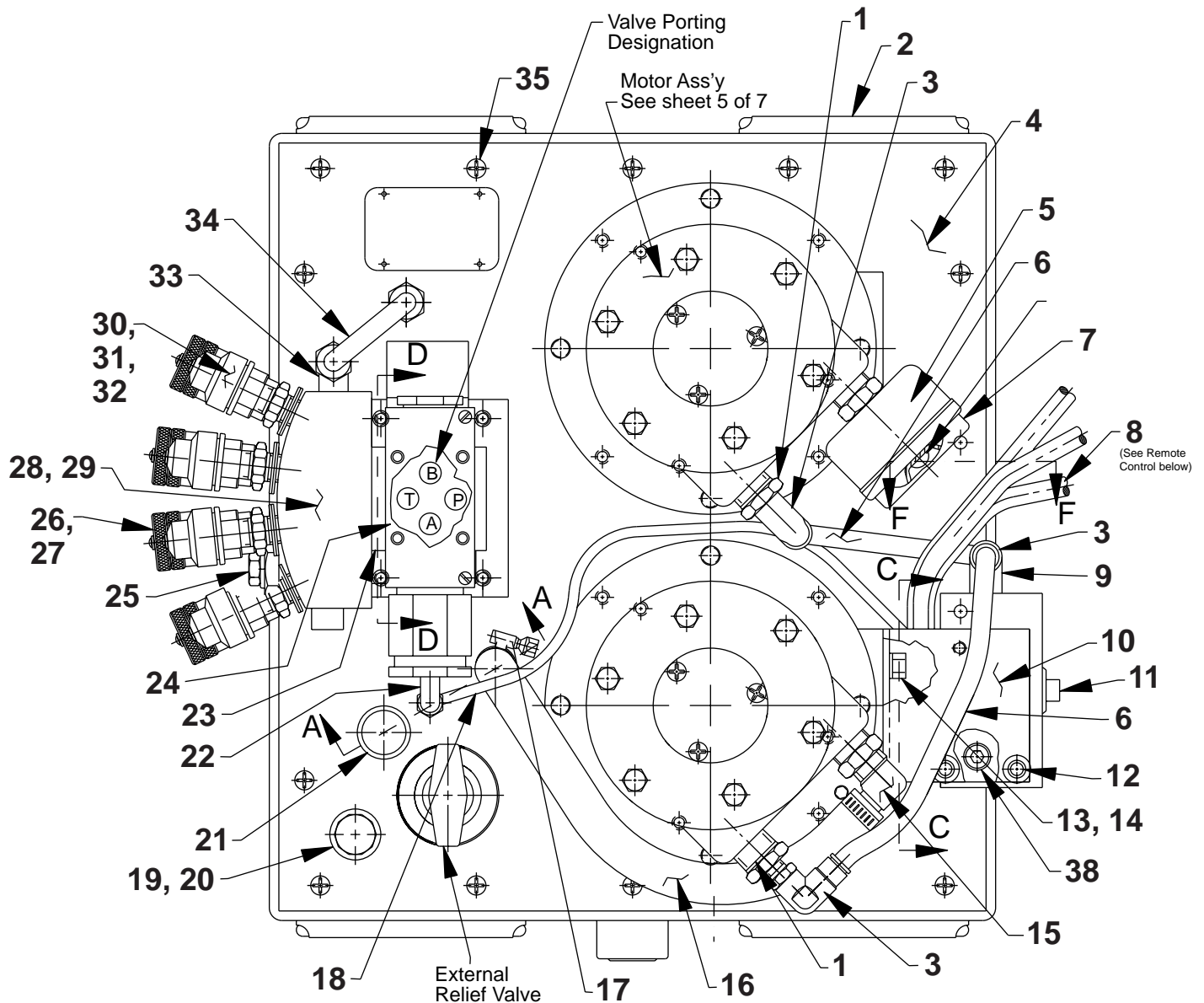
Fax: (201) 512-9615

Parts List for:

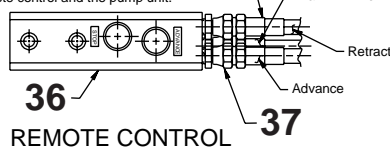
Form No. 108121

RSST-10T

MODEL C
TANDEM AIR HYDRAULIC PUMP
Max. Capacity: 10,000 PSI



NOTE:
Connect hose assembly to remote control
& pump as shown. Color coded or numbered
ends must correspond to numbers on the
remote control and the pump unit.



Sheet No. 1 of 7

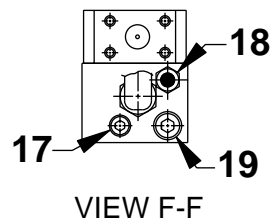
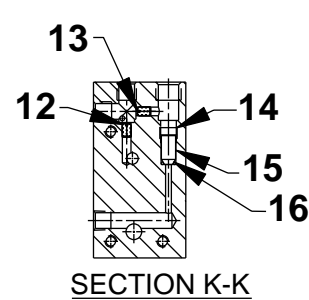
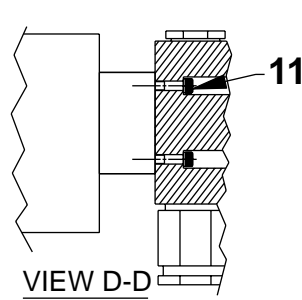
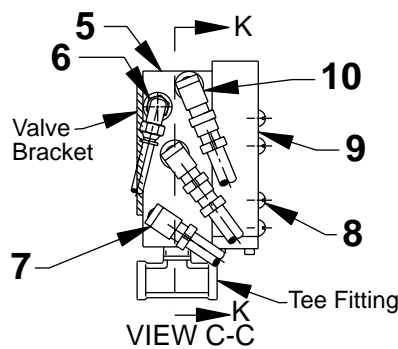
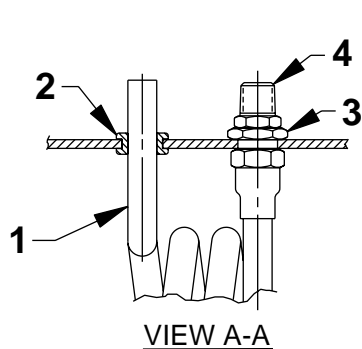
Rev. 2 Date: 8 Dec. 2000

Parts List, Form No. 108121, Back sheet 1 of 7

Item No.	Part No.	No. Req'd	Description
1	250260	2	Straight Fitting
2	64367BK2	1	Reservoir
3	253490	4	90° Elbow Fitting
4	66234BK2	1	Cover Plate
5	13966	1	Muffler
6	252296	1.25'	Nylon Tubing
7	205505	2	Deflector (Includes screw; Note: Point exhaust opening down.)
8	45052	1	Hose Assembly (Three strand; Note: Connect hose assembly to hand control and pump as shown. Color coded or numbered ends must correspond to the numbers on the hand control & pump unit.)
9	214010	1	Tee Fitting
10	422002BK2	1	Valve Bracket
11	11127	1	Plug Fitting
12	251437	3	Screw (1/4-20 x 1/2)
13	10009	2	Cap Screw (1/4-20 x 1)
14	15823	2	Lockwasher (.37 x .26)
15	212897	1	90° Elbow Fitting
16	212898	1.5'	Pressure Hose
17	12367	2	Hose Clamp
18	14726	1.2'	Plastic Tubing (1/4)

Item No.	Part No.	No. Req'd	Description
19	20937	1	Filler Plug
20	200415	1	Filler Plug Gasket
21	212304	1	Plastic Cap
22	250463	1	Elbow Fitting (90 deg. 1/8 NPTF)
23	31057	1	Valve (See sheet 7 of 7)
24	303267	1	Directional Valve (Air)
25	350431	1	Temperature Gauge
26	251797	4	Quick Coupler
27	252068	4	Dust Plug
28	421856	1	Manifold (Plug bottom cross hole with plug [Item#29])
29	10427	1	Plug Fitting (1/8 NPTF)
30	251798	4	Quick Coupler Plug
31	252069	4	Dust Cap
32	10672	4	Straight Fitting (1/4 NPTF)
33	10475	1	90° Elbow Fitting (Assemble into top port)
34	351820	1	Tube
35	16876	18	Mach. Screw (10-24 UNC X 1/2 Lg.)
36	421257	1	Air Operated Hand Control (See back sheet 4 of 7)
37	208218	6	Straight Fitting
38	15499	1	Plug Fitting (1/8 PTF)

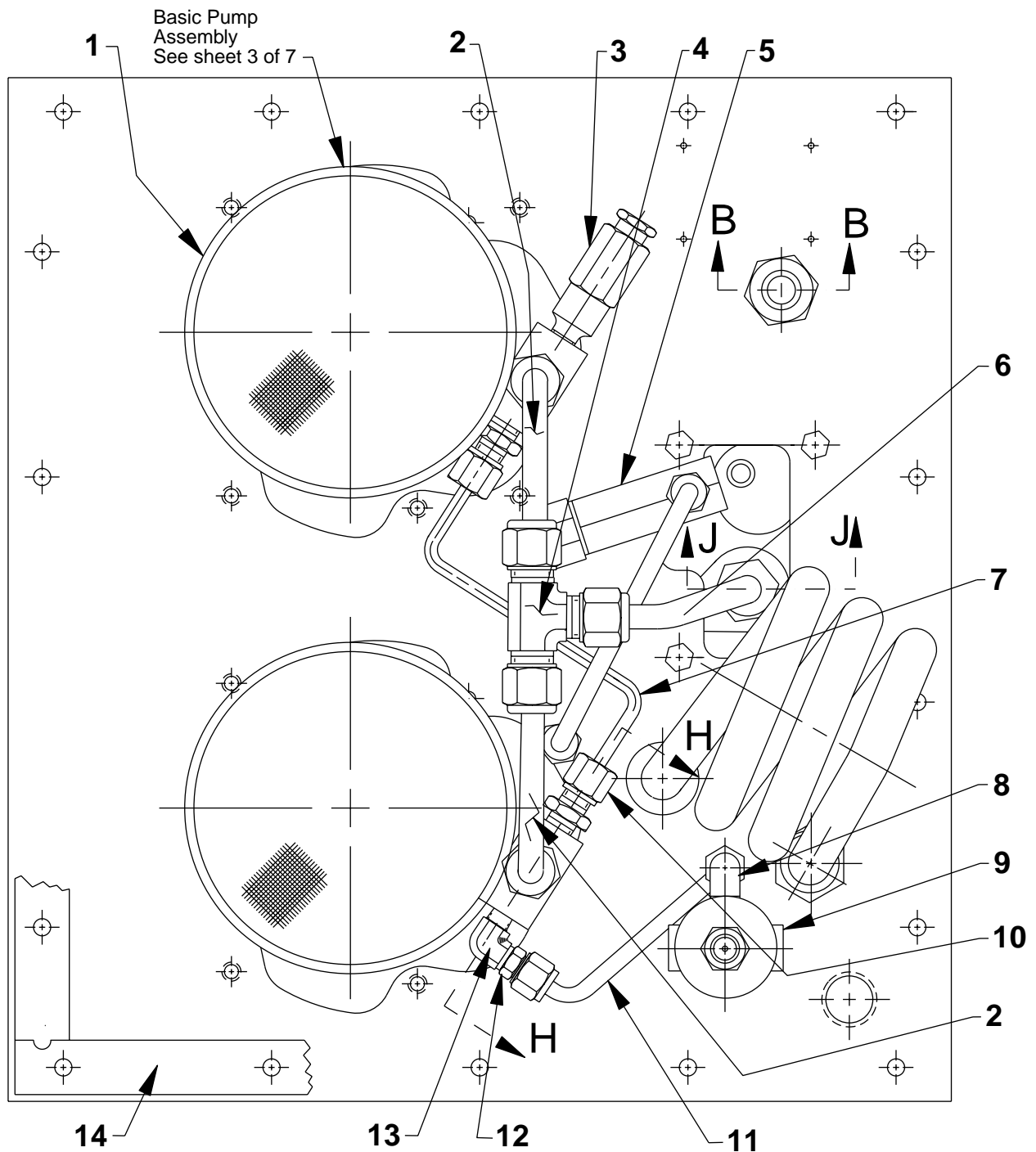
SECTION VIEWS A-A, C-C, D-D, F-F, & K-K



Item No.	Part No.	No. Req'd	Description
1	212896	1	Rubber Grommet
2	46626	1	Heat Exchanger Coil
3	251796	1	Hex Jam Nut (1/2)
4	251795	1	Straight Fitting (1/2 NPSM)
5	58780	1	Manifold Body
6	250463	1	90° Elbow Fitting
7	14680	1	90° Elbow Fitting
8	252175	4	Screw (12-24 x 1-1/4; Torque to 50 in. lbs.)
9	351276	1	Pilot 4-way Air Valve
10	14440	2	90° Elbow Fitting
11	12102	4	Soc. Hd. Cap Screw (10-24 UNC x 3/4 Lg.; Torque to 35/40 in. lbs.)
12	214990	1	Restrictor Screw

Item No.	Part No.	No. Req'd	Description
13	252173	1	Orifice Screw
14	17240	1	Hollow Lock Screw
15	253531	1	Check Screw (3000 PSI)
16	10265	1	O-ring (.31 x .18 Nitrile)
17	10427	1	Plug Fitting (1/8 NPTF)
18	251599	1	Breather Filter Vent
19	10479	1	Plug Fitting (1/4 NPTF)

PUMP BOTTOM VIEW



Item No.	Part No.	No. Req'd	Description
1	21345	2	Filter Assembly (Includes o-ring)
2	304116	2	Tube
3	21278	1	Relief Valve (Set at 10,100/10,700 PSI)
4	10659	1	Tee Fitting
5	22747	1	Accumulator & Piping Assembly (See back sheet 5 of 7)
6	304118	1	Tube
7	304117	1	Tube
8	16177	1	90° Elbow Fitting

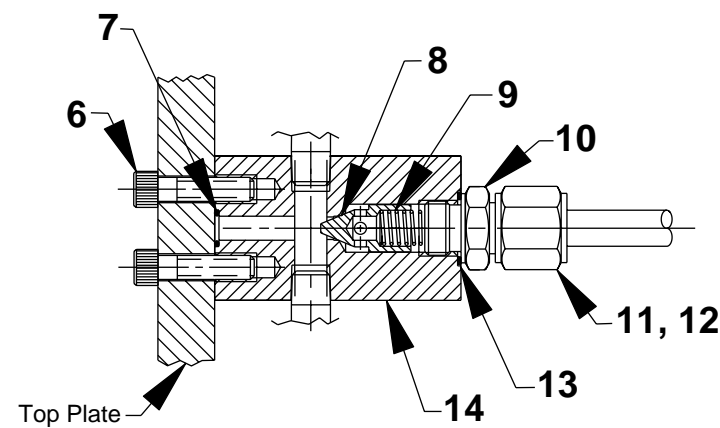
Item No.	Part No.	No. Req'd	Description
9	47647	1	Pressure Regulator Assembly (See sheet 6 of 7)
10	11173	2	Straight Connector
11	201570	1	Pressure Regulator Tube
12	14844	1	Fitting
13	13229	1	Elbow Fitting
14	50712	1	Reservoir Gasket

Sheet No. 2 of 7

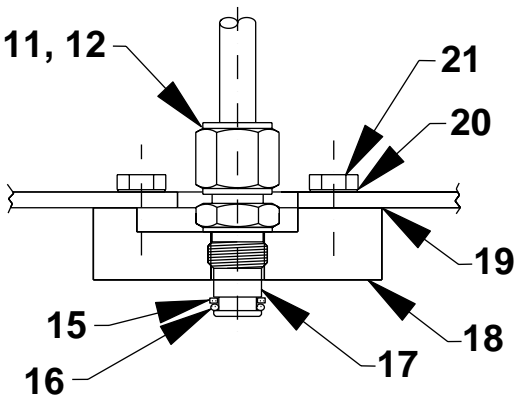
Rev. 2

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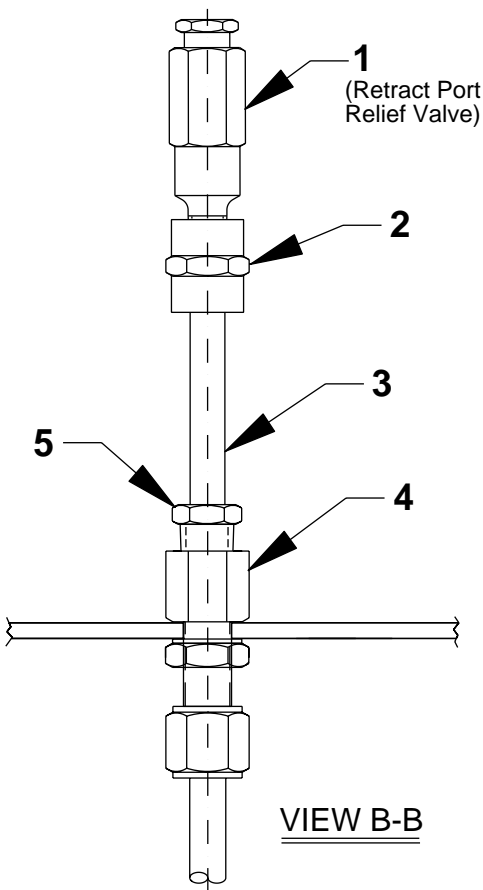
SECTION VIEWS B-B, H-H, & J-J



SECTION H-H
(Outlet Check Section)



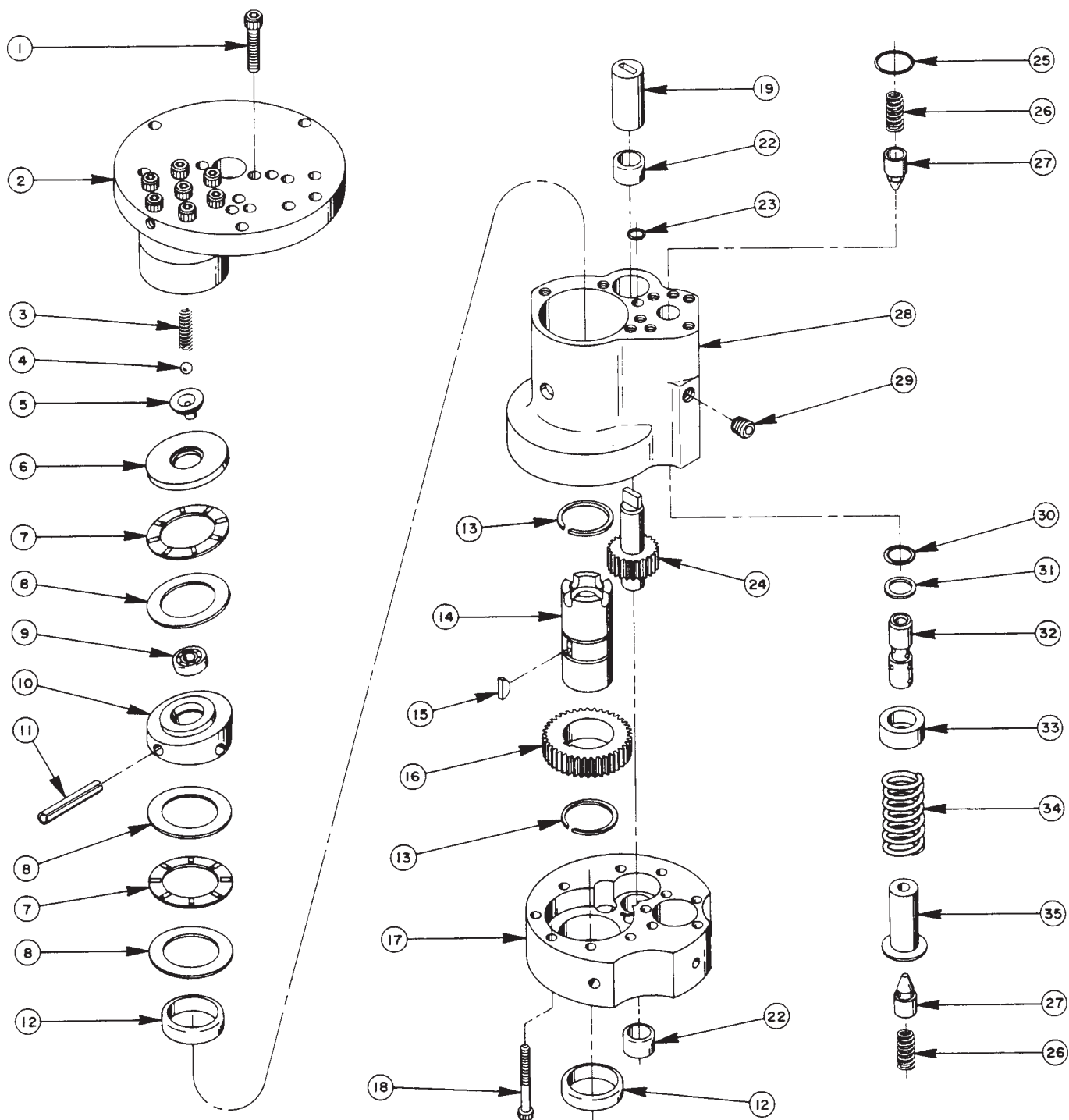
SECTION J-J



VIEW B-B

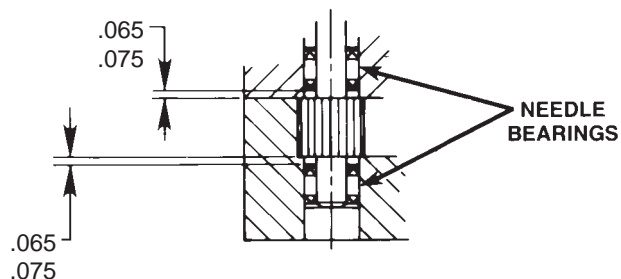
Item No.	Part No.	No. Req'd	Description
1	21278-15	1	Relief Valve (Set at 1,500/1,700 PSI)
2	18841	1	Straight Fitting
3	15456	1	Straight Fitting (Nipple)
4	18345	1	Straight Fitting (Bulkhead)
5	13269	1	Straight Fitting
6	10015	4	Soc. Hd. Cap Screw (1/4-28 UNC x 1" Lg.; Torque to 130/180 in. lbs.)
7	10266	2	O-ring (1/4 x 3/8 x 1/16)
8	20771	2	Poppet
9	10425	2	Compression Spring (3/8 O.D. x 3/4 Lg.)
10	20770	2	Connector (Torque to 40/45 ft. lbs. oiled.)
11	10430	3	Sleeve Fitting (3/8 Tube)
12	10431	3	Nut Fitting (3/8 Tube)
13	10261	2	Soft Copper Washer (3/4 x 19/32 x 1/32)
14	20776	2	Valve Body
15	11863	1	Backup Washer
16	10268	1	O-ring (3/8 x 1/2 x 1/16)
17	20787	1	Valve Connector
18	43110	1	Valve Mounting Block
19	200395	1	Gasket
20	10244	4	Lockwasher
21	10005	4	Hex. Hd. Screw

BASIC PUMP ASSEMBLY



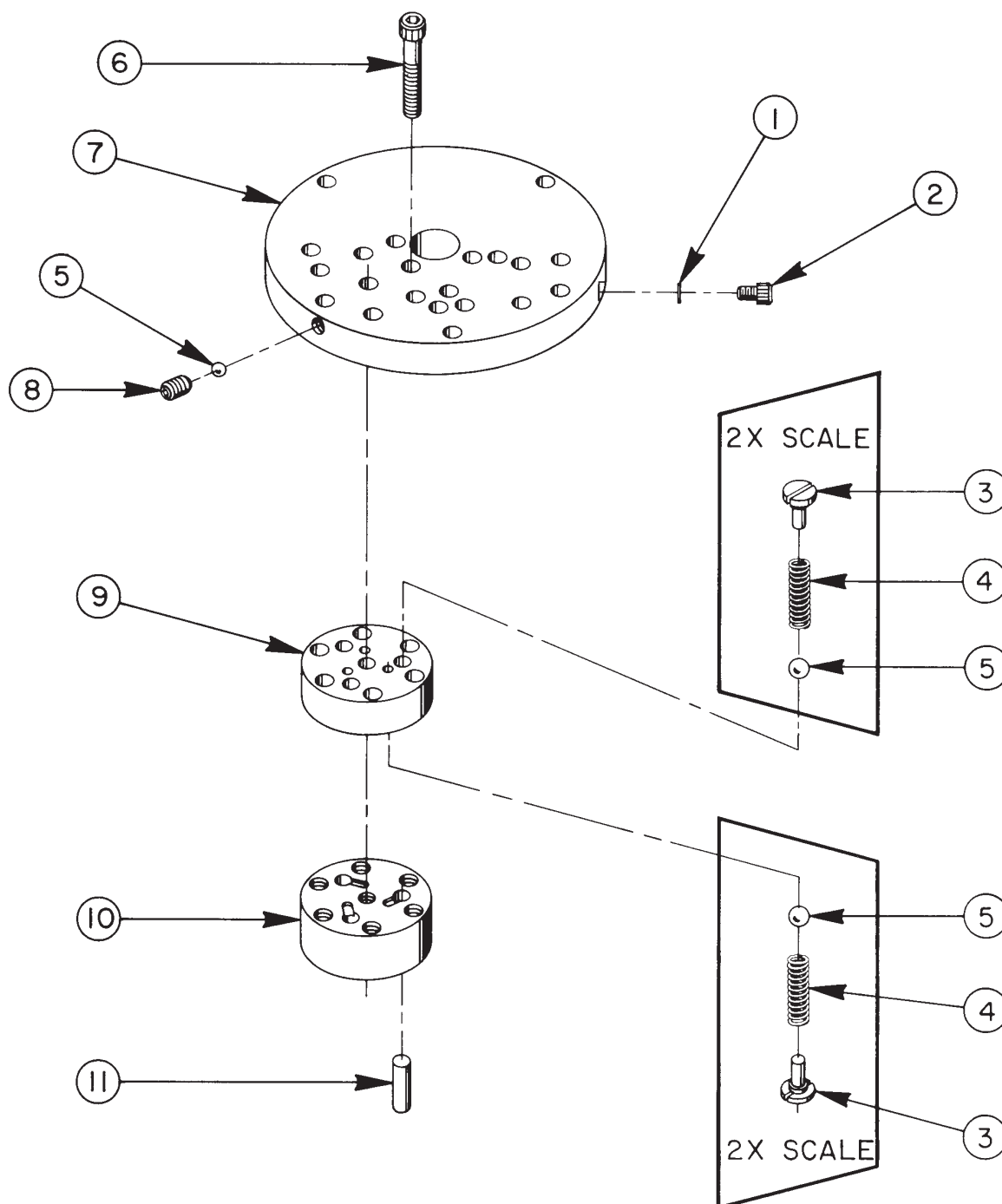
Item No.	Part No.	No. Req'd	Description
1	10020	10	Soc. Hd. Cap Screw (1/4-20 UNC x 1-1/4 Lg.; Torque to 170/180 in. lbs.)
2	33113	1	High Pressure Pump Assembly (See sheet 4 of 7)
3	10361	1	Compression Spring (1/4 O.D. x 1" Lg.)
4	10375	1	Steel Ball (1/4 dia.)
5	23547	1	Bearing Top Plate
6	23548	1	Top 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
12	11064	2	Needle Bearing
13	11261	2	Retaining Ring
14	23556	1	Shaft
15	11821	1	Woodruff Key
16	23557	1	Gear
17	30533	1	Pump End Plate
18	10001	13	Soc. Hd. Cap Screw (#10-32 UNC x 1-3/4 Lg.; Torque to 50 in. lbs.)
19	21091	1	Nylon Coupling
22	11199	2	Needle Thrust Bearing (See note below)
23	10266	1	O-ring (3/8 x 1/4 x 1/16)
24	21272	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	40120	1	Pump Body
29	10427	1	Pipe Plug (1/8 NPTF)
30	10271	1	O-ring (11/16 x 1/2 x 1/16)
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
36	10016	3	Soc. Hd. Cap Screw (1/4-20 UNC X 1" Lg.)

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



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 (3/16 dia.)
6	*10023	7	Soc. Hd. Cap Screw (1/4-28 UNF x 1-1/2 Lg.; Torque to 170/180 in. lbs.; See note on back sheet 4 of 7)

Item No.	Part No.	No. Req'd	Description
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

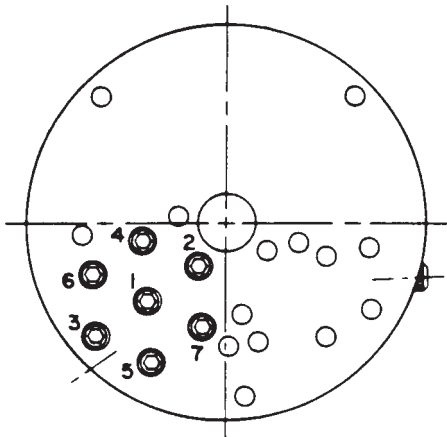
Sheet No. 4 of 7

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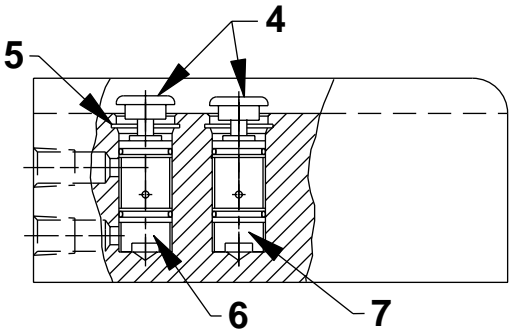
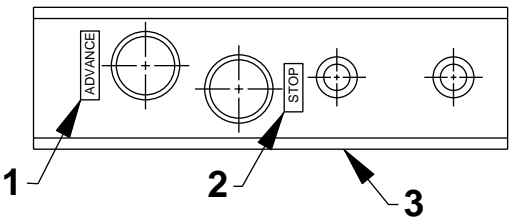
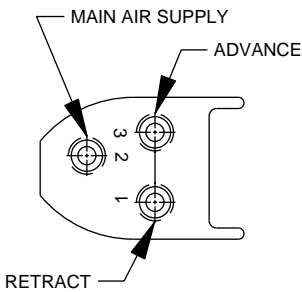
Consult factory when replacing items marked with an asterisk (*).

BOLT TIGHTENING SEQUENCE



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

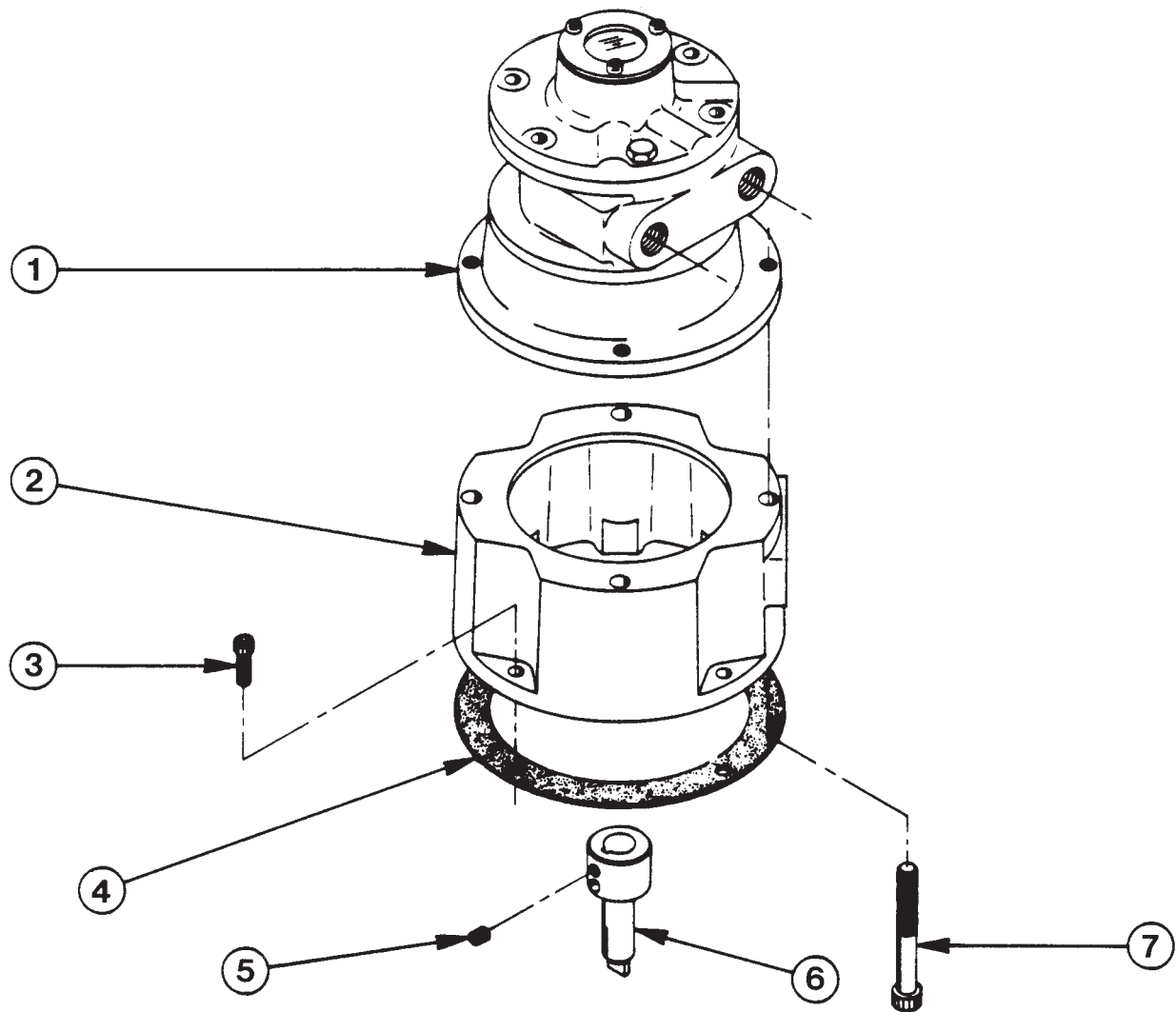
#421257 REMOTE HAND CONTROL ASSEMBLY



Item No.	Part No.	No. Req'd	Description
1	29663	1	Advance Decal
2	203769	1	Stop Decal
3	421256	1	Valve Body
4	206105	2	Push Button w/ Wrench

Item No.	Part No.	No. Req'd	Description
5	11033	2	Internal Retaining Ring (.69 x .035)
6	206104	1	3-way Closed Valve Cartridge
7	252121	1	3-way Poppet Valve Cartridge

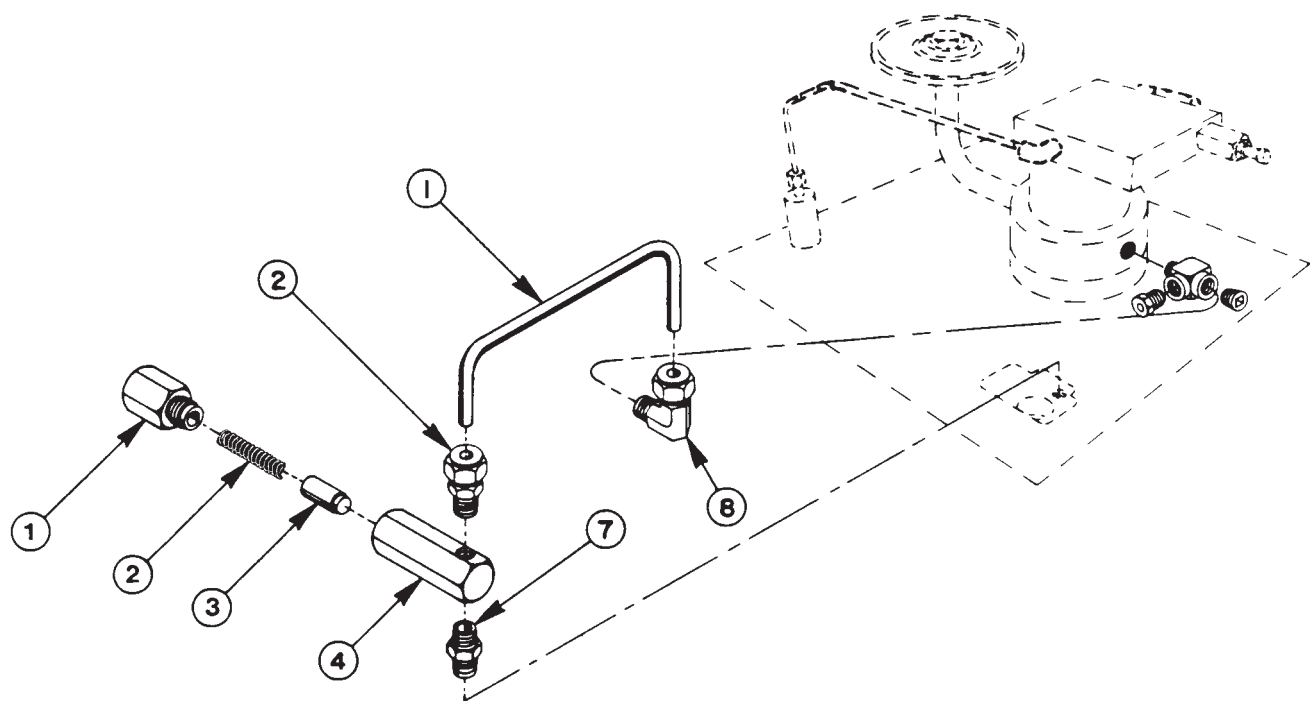
AIR MOTOR



Item No.	Part No.	No. Req'd	Description
7	17816	4	Cap Screw (3/8-16 UNC x 3" Lg.)
6	37842	1	Shaft Extension
5	10556	1	Set Screw (1/4-20 UNC x 1/4 Lg.)
4	30650	1	Gasket
3	10008	4	Cap Screw (1/4-20 UNC x 3/4 Lg.)
2	51158	1	Motor Base
1	*14717	1	Air Motor

*For air motor repair kit, order no. 252100.

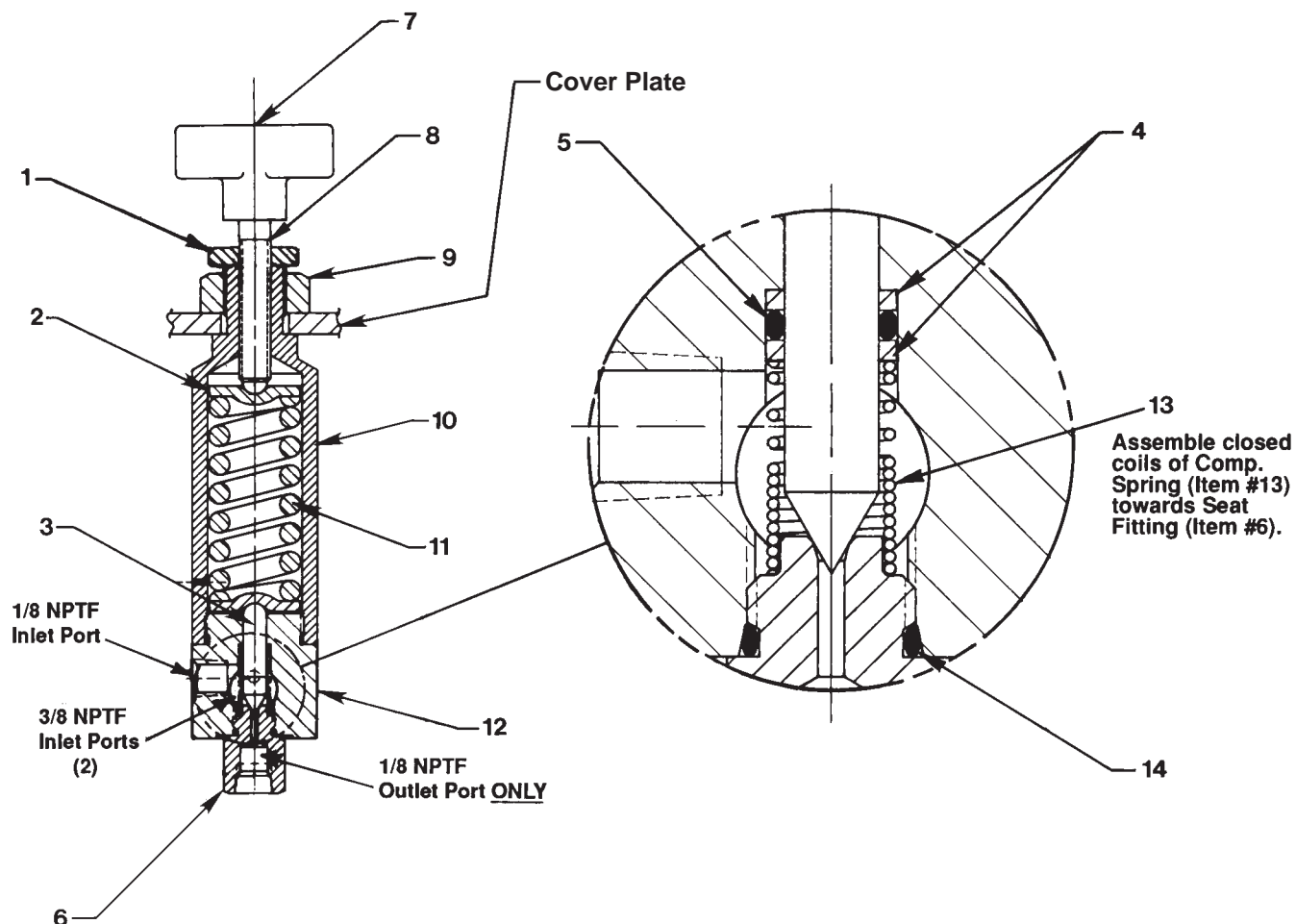
PILOT OIL LINE/ACCUMULATOR ASSEMBLY



Item No.	Part No.	No. Req'd	Description
1	22746	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

Item No.	Part No.	No. Req'd	Description
6	21944	1	Cylinder Body
7	11421	1	Pipe Nipple
8	11278	1	Connector
	21943	1	Accumulator (Consists of Items 3, 4, 5, & 6)

PRESSURE REGULATOR ASSEMBLY



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
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)

PRESSURE REGULATOR OPERATING INSTRUCTIONS



WARNING: To help avoid personal injury,

- Do not touch the pressure regulator during operation. The unit can become very hot (over 180° F.) depending upon the flow and pressure setting used.
- Do not exceed the rated capacity of the pressure regulator (17 cu. in. to 8 GPM).

IMPORTANT: To help prevent equipment damage, return lines must be sized large enough for flow and pressure setting used. Back pressure created by a return system can impair unit operation.'

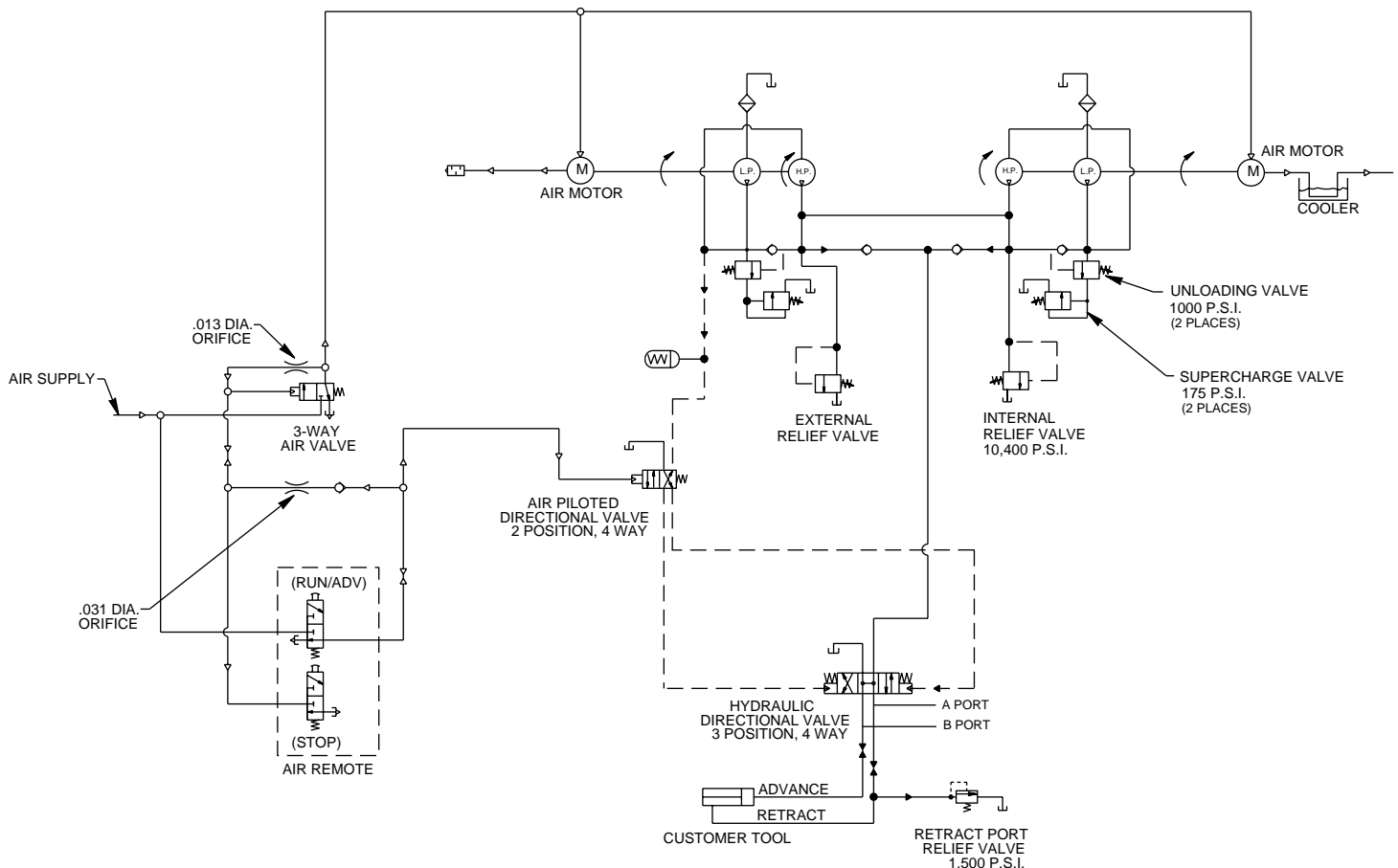
For easy adjustment of the pressure regulator, always adjust the pressure setting by INCREASING to a desired pressure setting. The pressure range for this regulator is from 300 PSI to 10,00 PSI.

1. Loosen the locking nut on the pressure regulator. Turn the adjusting knob a few turns counterclockwise (CCW) to decrease the pressure setting to a lower than desired pressure.
2. Start the pump. Slowly turn the adjusting knob clockwise (CW) to gradually increase the pressure setting. When the desired pressure setting is attained, lock the adjusting screw into position by tightening the locking nut.

MAINTENANCE

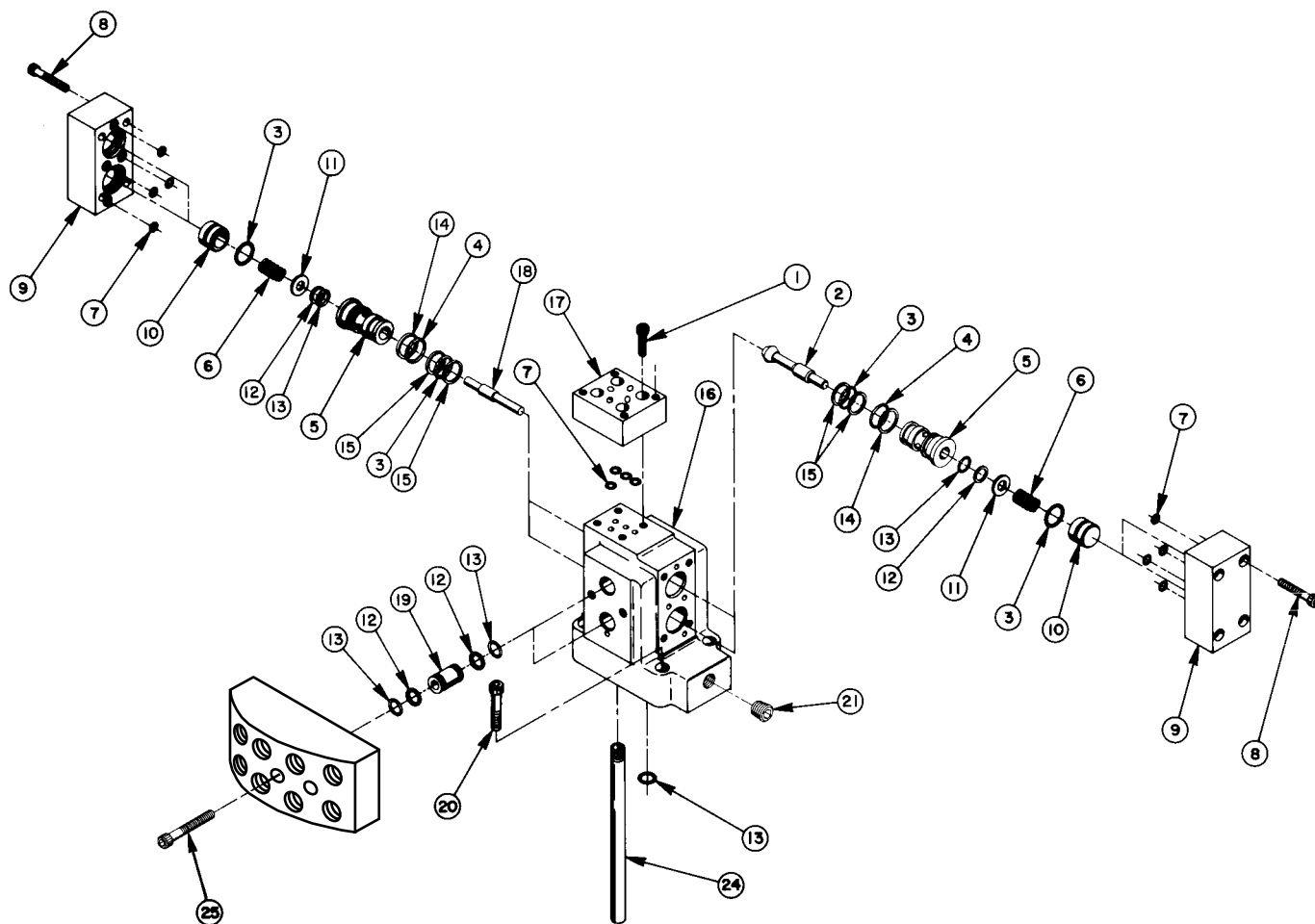
The pressure regulator has an accuracy rating of 3%. To maintain that accuracy level, regularly clean the entire hydraulic system.

HYDRAULIC SCHEMATIC



Note: Changes made to the hydraulic schematic at last revision(s) made to this form.

#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.)	12	*11863	8	Backup Washer (1/2 x 3/8 x 1/16)
2	200542	2	Poppet Half	13	*10268	9	O-ring (1/2 x 3/8 x 1/16)
3	*11284	8	O-ring (11/16 x 9/16 x 1/16)	14	*12392	4	Backup Washer (3/4 x 5/8 x 1/16)
4	*10302	4	O-ring (3/4 x 5/8 x 1/16)	15	*12391	8	Backup Washer (11/16 x 9/16 x .048)
5	22068	4	Bushing	16	50119	1	Body
6	10362	4	Compression Spring (3/8 O.D. x 3/4 Lg.)	17	42934	1	Port Plate
7	*10265	12	O-ring (5/16 x 3/16 x 1/16)	18	200541	1	Poppet Half
8	11151	8	Cap Screw (#10-24 x 1-1/4 Lg.; Torque to 50/70 in. lbs.)	19	21094	2	Bushing
9	31008	2	Cap End	20	10020	4	Cap Screw (1/4-20 x 1-1/4 Lg.)
10	22070	4	Piston	21	10479	1	Pipe Plug (1/4 NPTF)
11	22069	4	Washer	24	20847	1	Drain Line
				25	10854	2	Cap Screw (1/4-20 x 1-3/4 Lg.; Torque to 150/180 in. lbs.)

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

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.

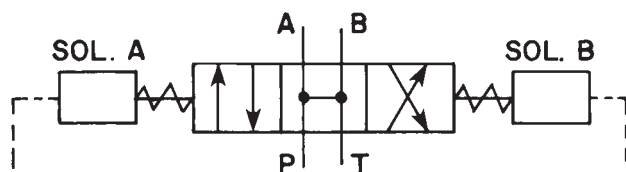
OPERATION

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 SIZED: 3/8" NPTF

MAXIMUM PRESSURE: 10,000 PSI

MAX. RECOMMENDED FLOW: 5 GPM