

# Hydraulic Pump

M5775-00



Tube & Pipe Cleaners ◦ Tube Testers ◦ Tube Plugs ◦ Tube Removal ◦ Tube Installation



## Operating and Maintenance Instructions



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# **INTRODUCTION**

Thank you for purchasing this Elliott product. More than 100 years of experience have been employed in the design and manufacture of this control, representing the highest standard of quality, value and durability. Elliott tools have proven themselves in thousands of hours of trouble-free field operation.

If this is your first Elliott purchase, welcome to our company; our products are our ambassadors. If this is a repeat purchase, you can rest assured that the same value you have received in the past will continue with all of your purchases, now and in the future.

If you have any questions regarding this product, manual or operating instructions, please call Elliott at +1 800 332 0447 toll free (USA only) or +1 937 253 6133, or fax us at +1 937 253 9189 for immediate service.

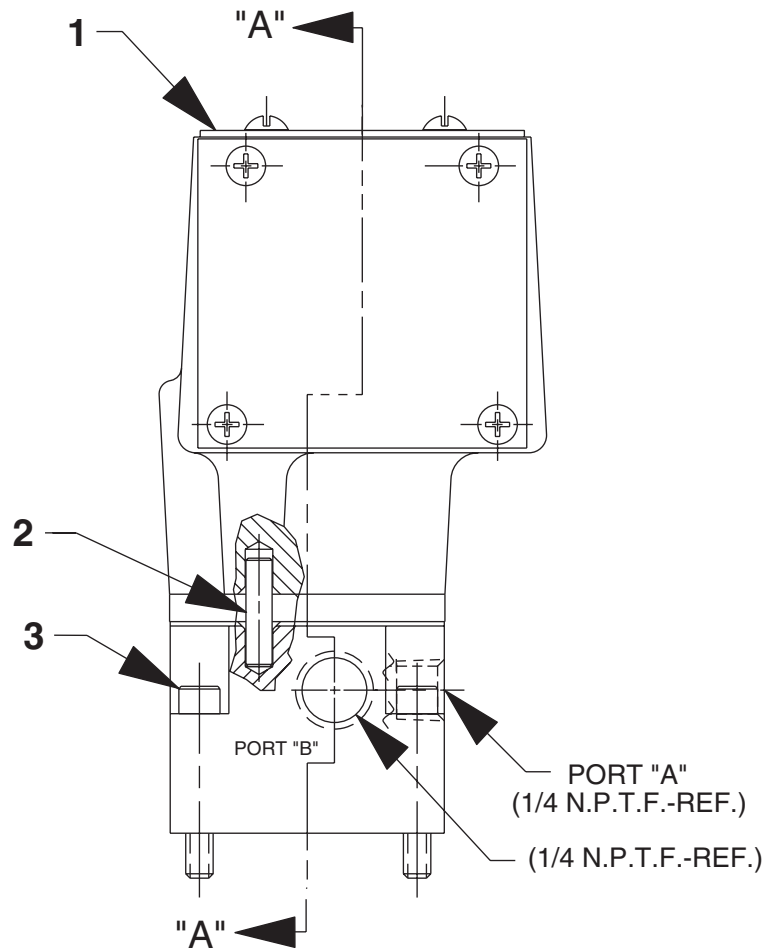
# **SAFETY GUIDELINES**

Read and save all instructions. Before use, be sure everyone using this machine reads and understands this manual, as well as any labels packaged with or attached to the machine.

- **Know Your Elliott Tool.** Read this manual carefully to learn your tool's application and limitations as well as the potential hazards specific to this tool.
- **Avoid Dangerous Environments.** Do not use power tools in damp or wet locations
- **Keep Work Area Clean and Well Lit.** Cluttered, dark work areas invite accidents.
- **Use Safety Equipment.** Everyone in the work area should wear safety goggles or glasses with side shields complying with current safety standards.
- **Use The Right Tools.** Do not force a tool or attachment to do a job or operate at a speed it was not designed for.
- **Use Proper Accessories.** Use Elliott accessories only. Be sure accessories are properly installed and maintained.
- **Check for Damaged Parts.** Inspect guards and other parts before use. Check for misalignment, binding of moving parts, improper mounting, broken parts or any other conditions that may affect operation. If abnormal noise or vibration occurs, turn the tool off immediately and have the problem corrected before further use. Do not use a damaged tool. Tag damaged tools "Do Not Use" until repaired. A damaged part should be properly repaired or replaced by an Elliott service facility.
- **Unplug Tool.** Unplug tool when it is not in use, before changing accessories or performing recommended maintenance.
- **Maintain Labels and Nameplates.** These carry important information and will assist you in ordering spare and replacement parts. If unreadable or missing, contact an Elliott service facility for a replacement.

# PARTS LIST & DIAGRAMS

## Valve Assembly

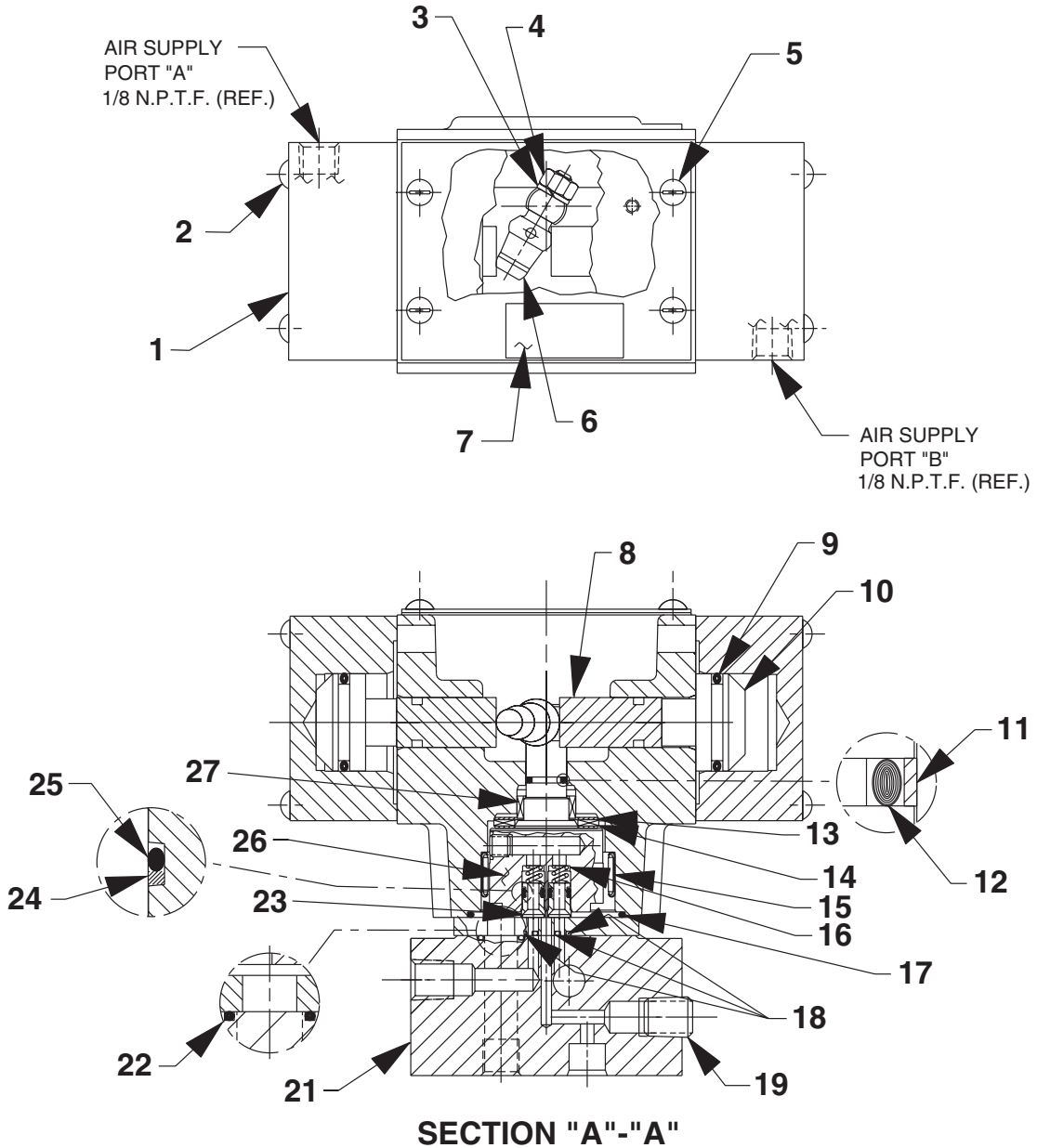


Item No.	Part No.	No. Req'd	Description
1	303976	1	Cover
2	252309	1	Pin, Spring Coiled (.25 x 1.00)
3	10022	4	Screw, Soc. Hd. (1/4-20 x 1-1/2)

# PARTS LIST & DIAGRAMS

## Valve Assembly

### TOP, BOTTOM & SECTION A-A VIEWS

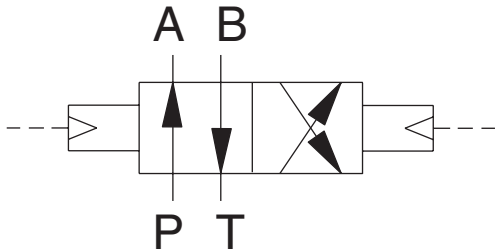


# PARTS LIST & DIAGRAMS

Item No.	Part No.	No. Req'd	Description	Item No.	Part No.	No. Req'd	Description
1	45593	2	Air Cap	14	12188	1	Bearing, Needle
2	11871	8	Screw, Rd. Hd. (8-32 x 1-3/4; Torque to 12/14 in. lbs.)	15	17505	1	Bearing, Needle Roller
3	10245	1	Washer, Lock (.49 x .26)	16	15095	2	Spring (.24 OD x .47 x .04 ws)
4	15504	1	Nut, Hex Lock (1/4-28)	17	*214699	1	O-ring (2.18 x 2.00 Urethane)
5	10164	4	Screw, Rd. Hd. (10-24 x 3/8)	18	*15023	3	O-ring (.31 x .18 Urethane)
6	304030	1	Lever, Cam (Lubricate with oil to assemble)	19	10479	1	Fitting, Plug (1/4 NPTF)
7	209383	1	Decal, Patent	20	252308	2	Screw, Soc. Hd. (5/16-18 x 2-1/4; Torque to 170/180 in. lbs.)
8	208673	2	Plunger, Cam (Lubricate with oil to assemble)	21	253600	1	Body, Valve
9	*10280	2	O-ring (1.37 x 1.12 Nitrile)	22	*16164	1	O-ring (.63 x .50 Urethane)
10	304882	2	Piston	23	303935	2	Seal, Shear
11	*208672	1	Ring, Glyd (0.562 OD Teflon)	24	*15174	2	Washer, Backup (.31 x .19)
12	*10268	1	O-ring (.50 x .37 Nitrile)	25	*10265	2	O-ring (.31 x .18 Nitrile)
13	15935	2	Washer, Thrust (1.42 x .88)	26	52064	1	Rotor
				27	208671	1	Bearing, Needle Roller

Part numbers marked with an asterisk (\*) are contained in Standard Repair Kit No. 300332.

## SPECIFICATIONS



### HYDRAULIC SCHEMATIC

2-POSITION, 4-WAY  
 AIR OPERATED (30 P.S.I. MIN. / 150 P.S.I. MAX.)  
 PUMP MOUNTED  
 RATED PRESSURE = 10,000 P.S.I.  
 RATED CASE PRESSURE = 1,000 P.S.I.  
 RATED FLOW = 5 G.P.M.

#### FUNCTION:

"A" POSITION: (AIR PORT "A")  
 HYD. PRESSURE TO "A" PORT,  
 "B" PORT TO TANK.

"B" POSITION: (AIR PORT "B")  
 HYD. PRESSURE TO "B" PORT,  
 "A" PORT TO TANK.

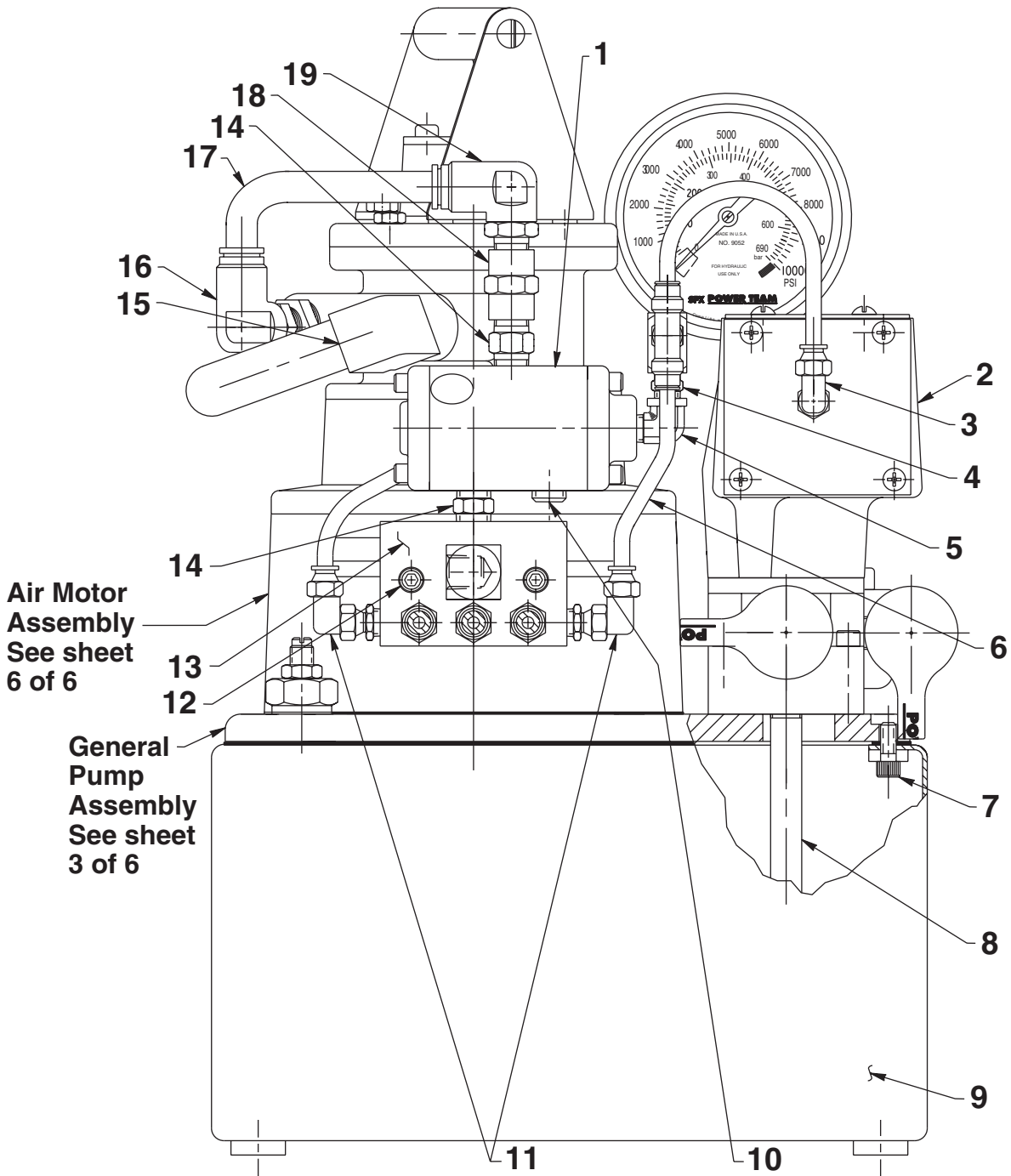
#### NOTE:

ALL PORTS OPEN TO TANK DURING  
 TRANSITION BETWEEN VALVE POSITIONS.



# PARTS LIST & DIAGRAMS

## AIR/HYDRAULIC PUMP SIDE VIEW

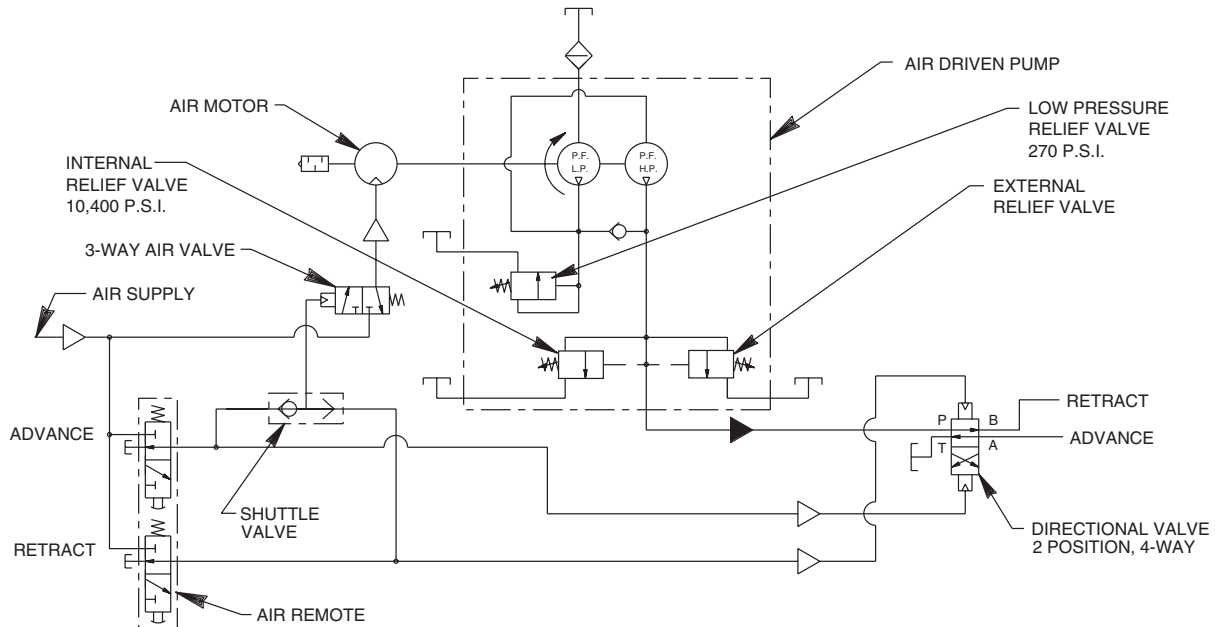


# PARTS LIST & DIAGRAMS

Item No.	Part No.	No. Req'd	Description
1	212404	1	Air Operated 3-way Valve
2	66209	1	4-way Air Valve (See Form No. 108100)
3	15457	1	90° Elbow Fitting
4	11421	1	Straight Fitting
5	13229	1	90° Elbow Fitting
6	15883	AR	Polyethylene Tubing
7	10006	1	Soc. Hd. Screw (1/4-20 x 5/8)
8	200609	1	Drain Tube
9	40063BK2	1	Reservoir (2 gallon)
10	10479	1	Plug Fitting (1/4 NPTF)
11	250463	2	90° Elbow Fitting
12	10020	2	Soc. Hd. Screw (1/4-20 x 1-1/4)
13	350244	1	Manifold
14	10672	2	Straight Fitting
15	212897	1	90° Elbow Fitting
16	253490	1	90° Elbow Fitting
17	252296	.65'	Nylon Tubing
18	12740	1	Straight Fitting
19	252297	1	90° Elbow Fitting

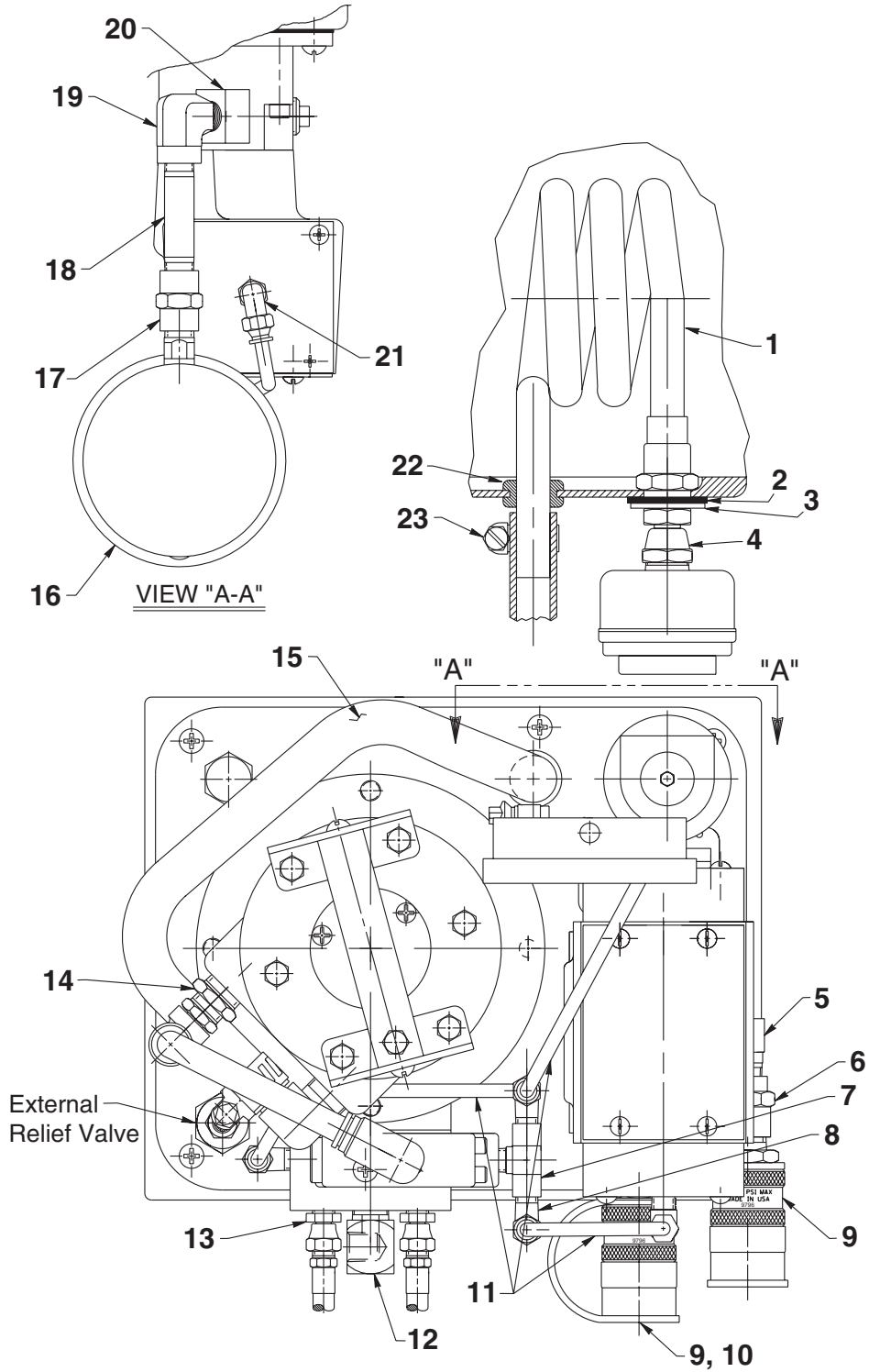
AR = As Required

## HYDRAULIC SCHEMATIC



# PARTS LIST & DIAGRAMS

## TOP VIEW & VIEW A-A

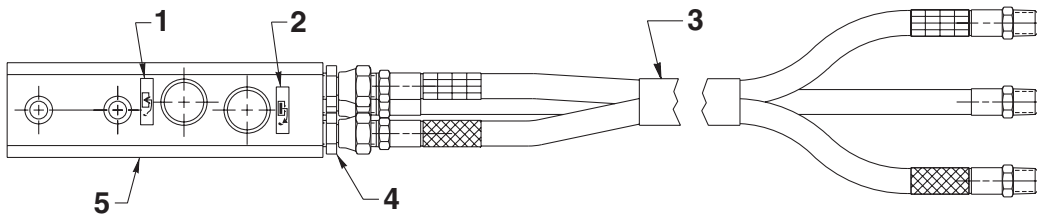


# PARTS LIST & DIAGRAMS

Item No.	Part No.	No. Req'd	Description
1	46626	1	Heat Exchanger Coil
2	252041	1	Seal Washer (1.50 x 1.05)
3	18286	1	Special Washer (1.38 x .89)
4	252355	1	Straight Fitting (Torque to 80/100 in. lbs.)
5	250381	1	90° Elbow Fitting
6	13831	1	Straight Fitting
7	212405	1	Check Valve (1000 PSI)
8	15378	2	Tee Fitting
9	9796	2	Cylinder Half Coupler w/ Dust Cap
10	9689	1	Reducer Connector
11	15883	AR	Polyethylene Tubing
12	10621	1	90° Elbow Fitting
13	208218	6	Straight Fitting
14	250260	1	Straight Fitting
15	212890	1.5'	Pressure Hose
16	9052	1	Gauge (10,000 PSI; 4" dia.)
17	12740	1	Straight Fitting
18	250026	1	Straight Fitting
19	10617	1	90° Elbow Fitting
20	9678	1	45° Fitting
21	15457	1	90° Elbow Fitting
22	212896	1	Rubber Grommet
23	12367	2	Hose Clamp

AR = As Required

## REMOTE HAND CONTROL ASSEMBLY

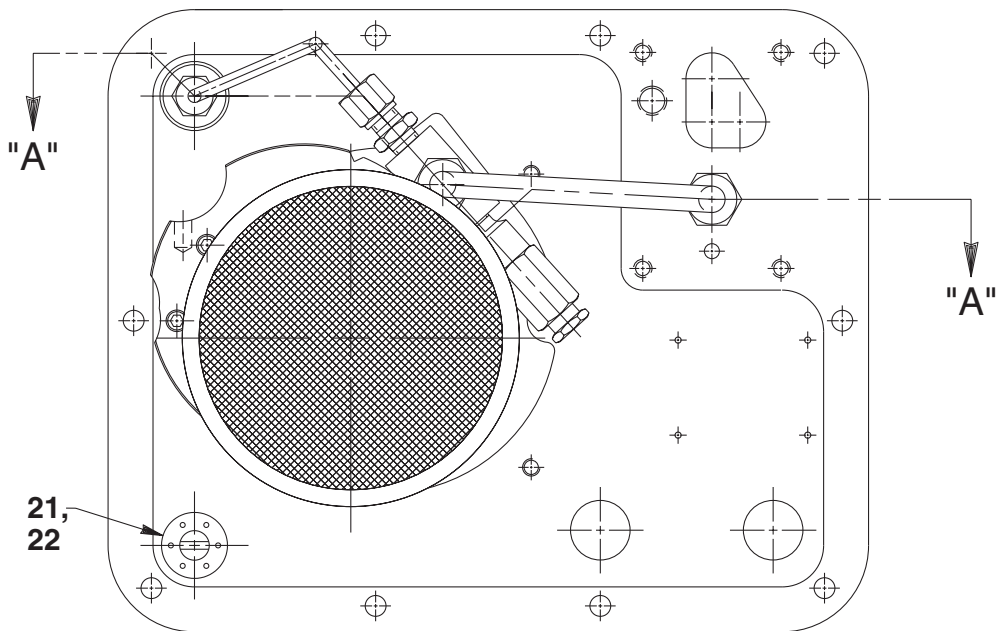
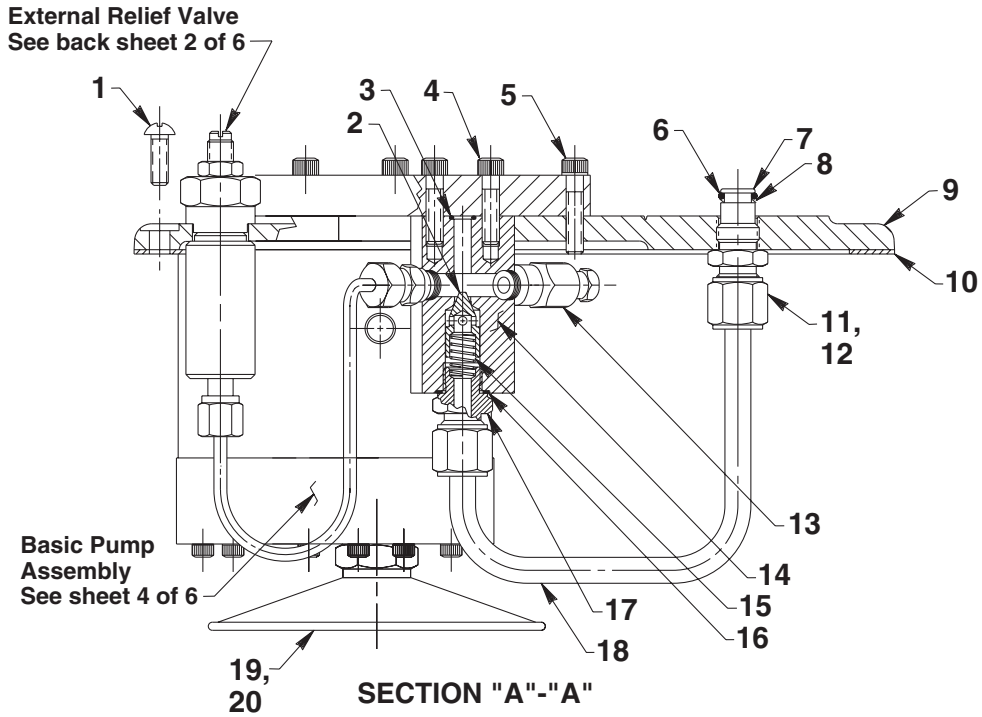


Item No.	Part No.	No. Req'd	Description
1	251760	2	Decal (Release)
2	251759	1	Decal (Pump)
3	45052	1	Hose (Three strand 12")
4	208218	6	Straight Fitting
5	421265	1	Air Operated Hand Control (See Form No. 100426)

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

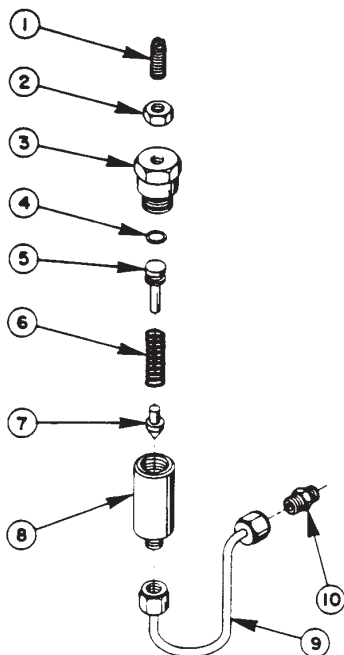
# PARTS LIST & DIAGRAMS

## General Pump Assembly



# PARTS LIST & DIAGRAMS

Item No.	Part No.	No. Req'd	Description
1	10177	9	Rnd. Hd. Screw (1/4-20 x 3/4)
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 140/160 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	46627BK2	1	Cover Plate
10	40164	1	Reservoir Gasket
11	10430	2	Tube Sleeve
12	10431	2	Tube Nut Fitting
13	21278	1	Relief Valve Assembly (Set at 10,100/10,700 PSI)
14	20776	1	Valve Body
15	10425	2	Spring (.37 OD x .75 x .03 ws)
16	10261	1	Copper Washer (.75 x .60)
17	20770	1	Connector Fitting (Torque to 40/50 ft. lbs.)
18	21045	1	Oil Line Tube
19	21345	1	Filter Assembly (Includes o-ring [Item #20])
20	10527	1	O-ring (13/16 x .644 x .087)
21	20937	1	Vent Cap
22	200415	1	O-ring (13/16 x 5/8 x 3/32)

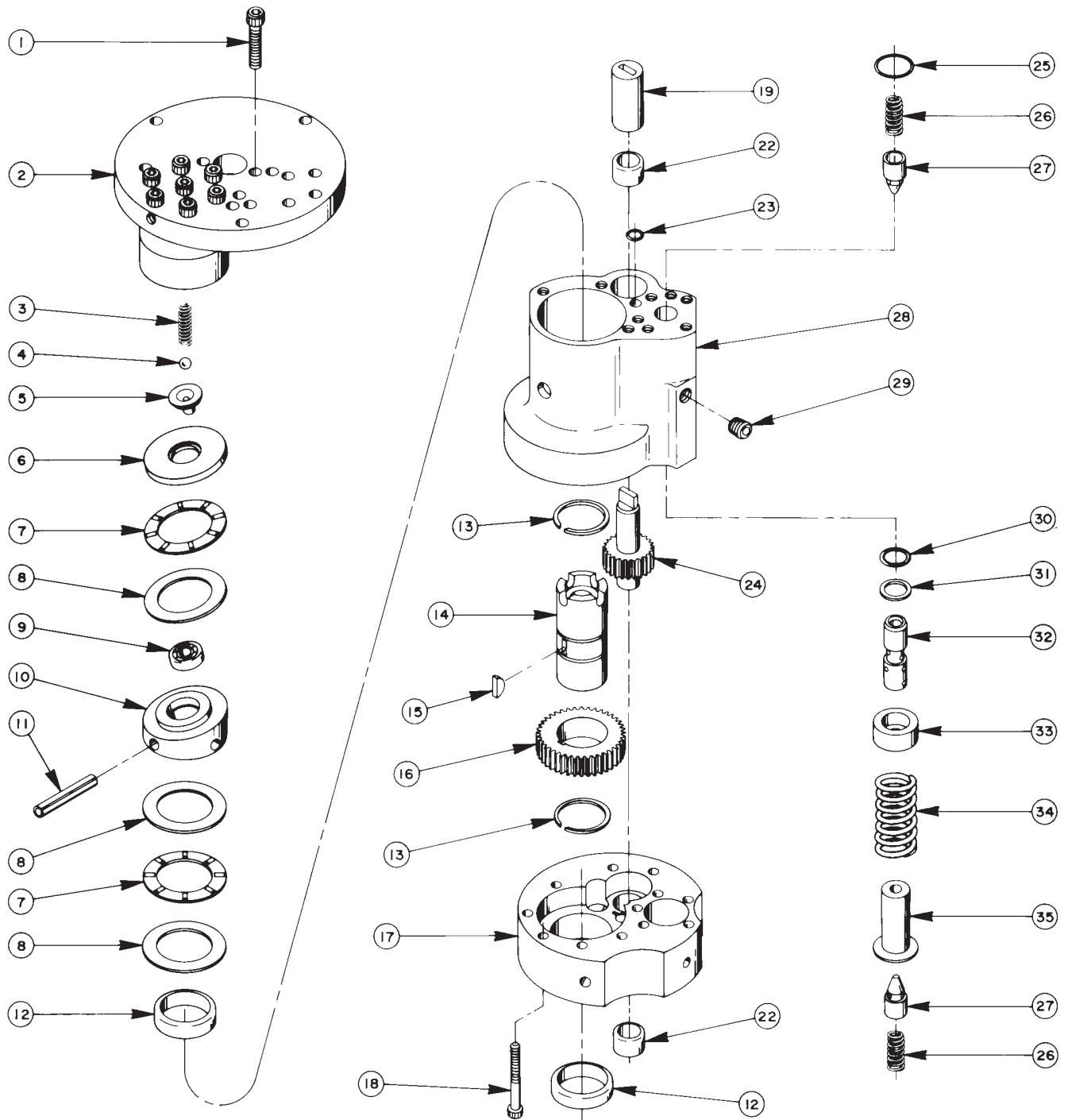


## #22360 PRESSURE REGULATOR ASSEMBLY

Item No.	Part No.	No. Req'd	Description
1	22362	1	Adjusting Screw
2	10386	1	Hex Jam Nut
3	21305	1	Valve Cap
4	10268	1	O-ring (1/2 X 3/8 X 1/16)
5	21306	1	Spring Guide
6	10495	1	Compression Spring (1/2 O.D. X 1-5/8 Lg.)
7	21046	1	Valve Stem
8	22361	1	Body
9	29267	1	Oil Line Ass'y (With nuts)
10	14844	1	Connector Fitting

# PARTS LIST & DIAGRAMS

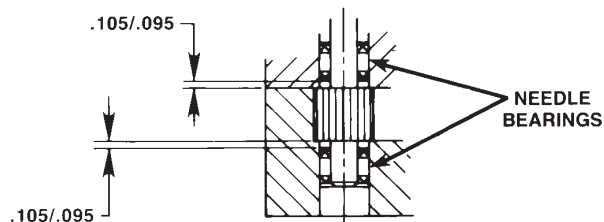
## Basic Pump Assembly



# PARTS LIST & DIAGRAMS

Item No.	Part No.	No. Req'd	Description
1	10020	9	Soc. Hd. Cap Screw (1/4-20 X 1-1/4 Lg.; Torque to 170-180 in. lbs.)
2	33113	1	High Pressure Pump Assembly (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 3/4 Lg.)
12	11064	2	Needle Bearing
13	11261	2	Retaining Ring (1-1/8 Shaft)
14	23556	1	Shaft
15	11821	1	Woodruff Key
16	23557	1	Gear
17	30533	1	Pump End Plate
18	10001	12	Soc. Hd. Cap Screw (10-32 X 1-3/4 Lg.; Torque to 50 in. lbs.)
19	251206	1	Coupling
20	11199	2	Needle Thrust Bearing (See diagram below)
23	10266	1	O-ring (1/4 X 3/8 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 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



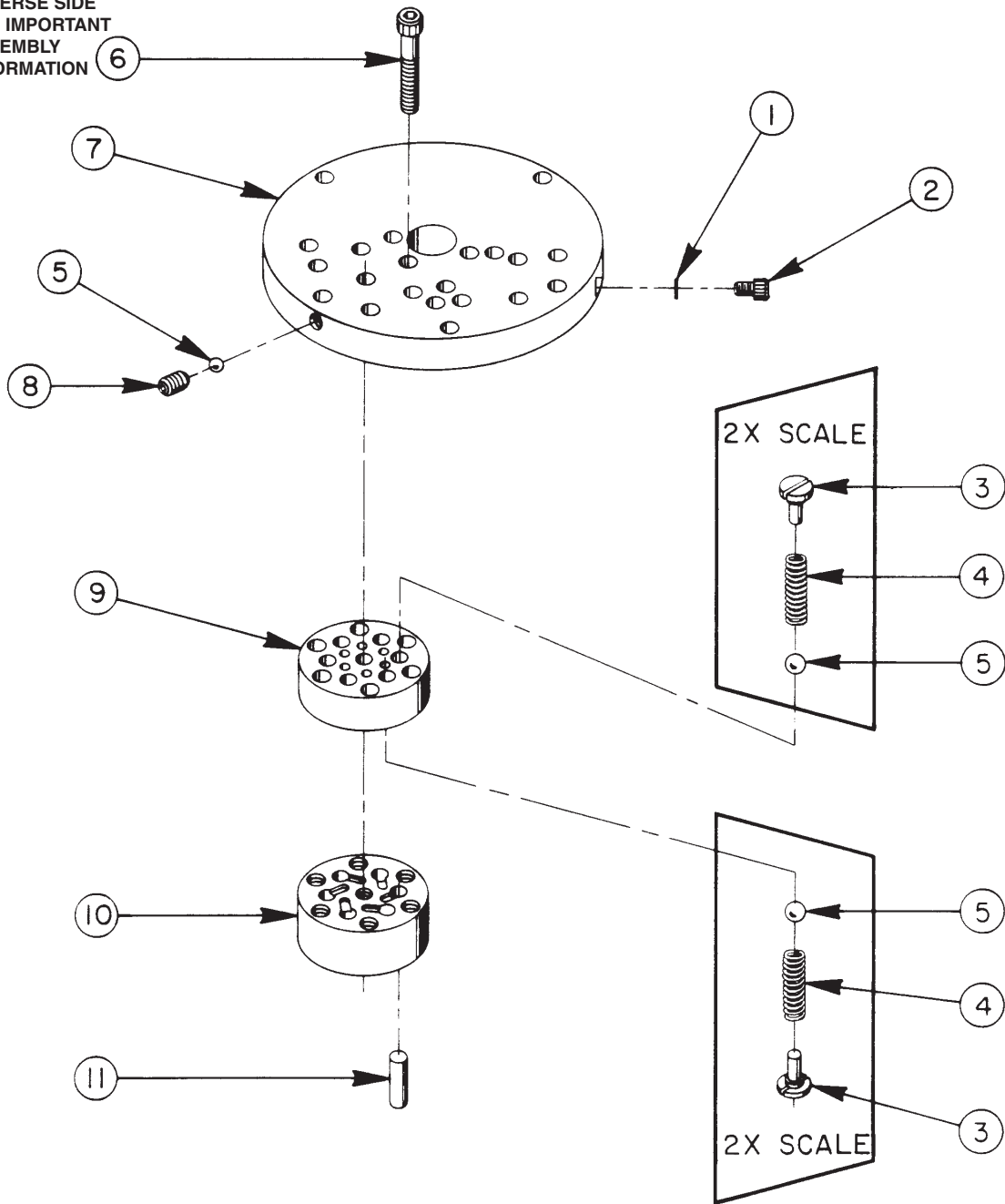
When replacing the needle bearings on the drive gear of the basic pumps, the dimensions shown must be as specified.



# PARTS LIST & DIAGRAMS

## High Pressure Pump Assembly

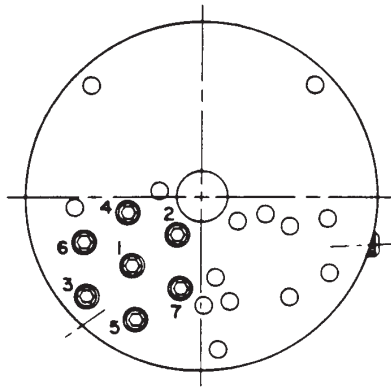
SEE DIAGRAM ON  
REVERSE SIDE  
FOR IMPORTANT  
ASSEMBLY  
INFORMATION



# PARTS LIST & DIAGRAMS

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

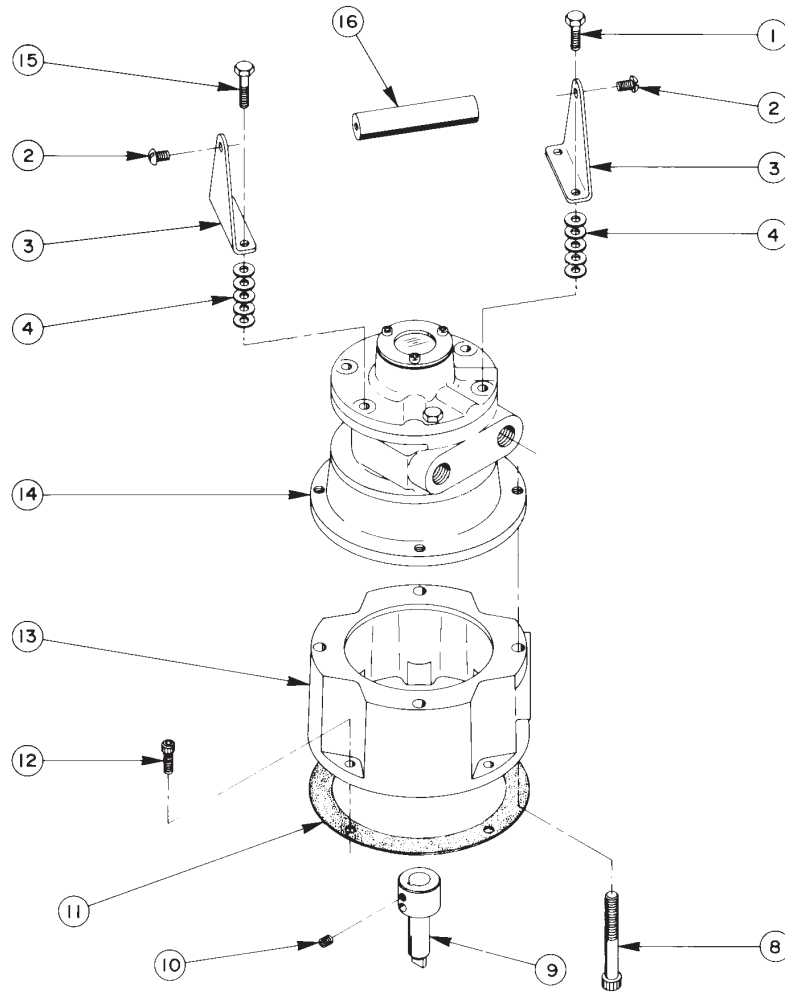
## BOLT TIGHTENING SEQUENCE



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

# PARTS LIST & DIAGRAMS

## Air Motor Assembly

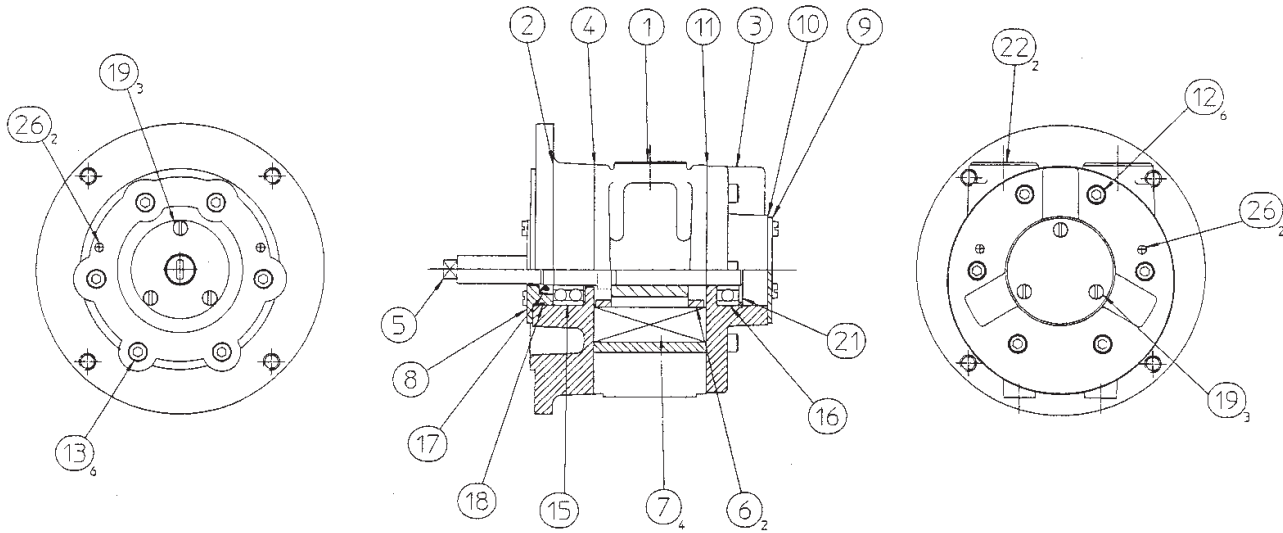


Item No.	Part No.	No. Req'd	Description
1	10014	1	Cap Screw (1/4-28 X 1" Lg.)
2	10174	2	Machine Screw (1/4-20 X 1/2 Lg.)
3	33808	2	Handle Bracket
4	12719	20	Washer
7	14056	1	Reducing Nipple
8	17816	4	Cap Screw (3/8-16 X 3" Lg.)
9	37842	1	Shaft Extension
10	10556	1	Set Screw (1/4-20 UNC X 1/4 Lg.)

Item No.	Part No.	No. Req'd	Description
11	30650	1	Gasket
12	10008	4	Cap Screw (1/4-20 X 3/4 Lg.)
13	51158WH2	1	Motor Base
14	421502BK2	1	Air Motor
15	10018	3	Cap Screw (1/4-28 X 1-1/4 Lg.)
16	28158	1	Handle
	51159	1	Complete Air Motor Ass'y (Includes Items 1 through 16)

# PARTS LIST & DIAGRAMS

## 4.0 H.P. VA6C VANE MOTOR



ITEM	PART NO.	DESCRIPTION	QTY.
001	760-110	BODY - 1/2" NPT PORTS	1
002	760-018	FRONT PLATE (NEMA 56C)	1
003	760-002	END PLATE	1
<b>004</b>	<b>740-062A</b>	<b>BODY GASKET, DARK BLUE (0.050mm) PLASTIC</b>	<b>2</b>
005	760-953	SHAFT-ROTOR - TANG OUTPUT	1
006	760-006	EJECTION RING	2
<b>007</b>	<b>760-005</b>	<b>ROTOR BLADE</b>	<b>4</b>
008	760-007	SEAL HOUSING	1
009	760-008	COVER PLATE	1
<b>010</b>	<b>760-009</b>	<b>COVER PLATE GASKET</b>	<b>1</b>
<b>011</b>	<b>760-062</b>	<b>GASKET-MAY BE 760-062A, B, C, OR F</b>	
012	809-009	HEX.SKT.CAPSCREW M6 x 20	6
013	809-007	HEX.SKT.CAPSCREW M6 x 16	6
015	807-028	BALL BEARING	1
016	807-025	BALL BEARING	1
<b>017</b>	<b>808-052</b>	<b>OIL SEAL, 17 x 28 x 6 R21</b>	<b>1</b>
<b>018</b>	<b>808-031</b>	<b>O-RING</b>	<b>1</b>
019	805-006	CHEESE HEAD SCREW M5 x 10	6
<b>021</b>	<b>804-052</b>	<b>CIRCLIP 40mm INTERNAL</b>	<b>1</b>
022	812-051	SNAP FIT PLUG	2
026	806-024	DOWEL 5 DIA. X 16 LONG	4

# PARTS LIST & DIAGRAMS

Normal servicing requires only replacement of items shown in **Bold \*\*** on list. These are included in spares kit 769-910 (see below). Other major spares are not normally cost-effective in comparison with the cost of a replacement motor.

## BOLT TORQUES:

Item 012	10 lb ft	13.5 Nm
Item 013	10 lb ft	13.5 Nm

## SPARES KIT AVAILABLE : 769-910

THIS CONSISTS OF:

<b>PART No.</b>	<b>DESCRIPTION.</b>	<b>QTY.</b>
760-062A	BODY GASKET, DARK BLUE. (0.050mm/0.002")	2
760-062B	BODY GASKET, GREEN. (0.075mm/0.003")	2
760-062C	BODY GASKET, AMBER. (0.100mm/0.004")	2
760-062F	BODY GASKET, PURPLE. (0.025mm/001")	2
760-009	COVER PLATE GASKET	1
760-005	ROTOR BLADE	4
808-030	O-RING	NU
808-031	O-RING	1
804-052	CIRCLIP 40mm INTERNAL	1
808-052	OILSEAL 17 x 28 x 6	1
808-057	OILSEAL 25 x 35x 7	NU

NU = not used on this unit

# WARRANTY

Should any part, of Seller's own manufacture, prove to have been defective in material or workmanship when shipped (as determined by Seller), Seller warrants that it will, at its sole option, repair or replace said part f.o.b., point of manufacture, provided that Buyer notifies, in writing, of such defect within twelve (12) months from date of shipment from the manufacturing plant.

On request of Seller, the part claimed to be defective will be returned, transportation, insurance, taxes and duties prepaid, to the factory where made, for inspection. Any item, which has been purchased by Seller, is warranted only to the extent of the original manufacturer's warranty to Seller. Seller shall not be liable for any damages or delays caused by defective material or workmanship.

No allowance will be made for repairs or alterations made by others without Seller's written consent or approval. If repairs or alterations are attempted without Seller's consent, Seller's warranty is void.

THE WARRANTIES PROVIDED IN THE OBLIGATIONS AND LIABILITIES OF SELLER HEREUNDER, AND THE RIGHTS AND REMEDIES OF BUYER HEREUNDER ARE EXCLUSIVE AND IN SUBSTITUTION FOR, AND BUYER HEREBY WAIVES ALL OTHER WARRANTIES, GUARANTEES, OBLIGATIONS, CLAIMS FOR LIABILITIES, RIGHTS AND REMEDIES, EXPRESS OR IMPLIED, ARISING BY LAW OR OTHERWISE, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTY FOR MERCHANTABILITY AND FITNESS FOR PURPOSE.

Seller's total liability is limited to the lower of the cost of repair or replacement.





## Contact Us

Elliott Tool offers a complete line of precision tube tools to meet your needs. Contact us or your local support.

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