

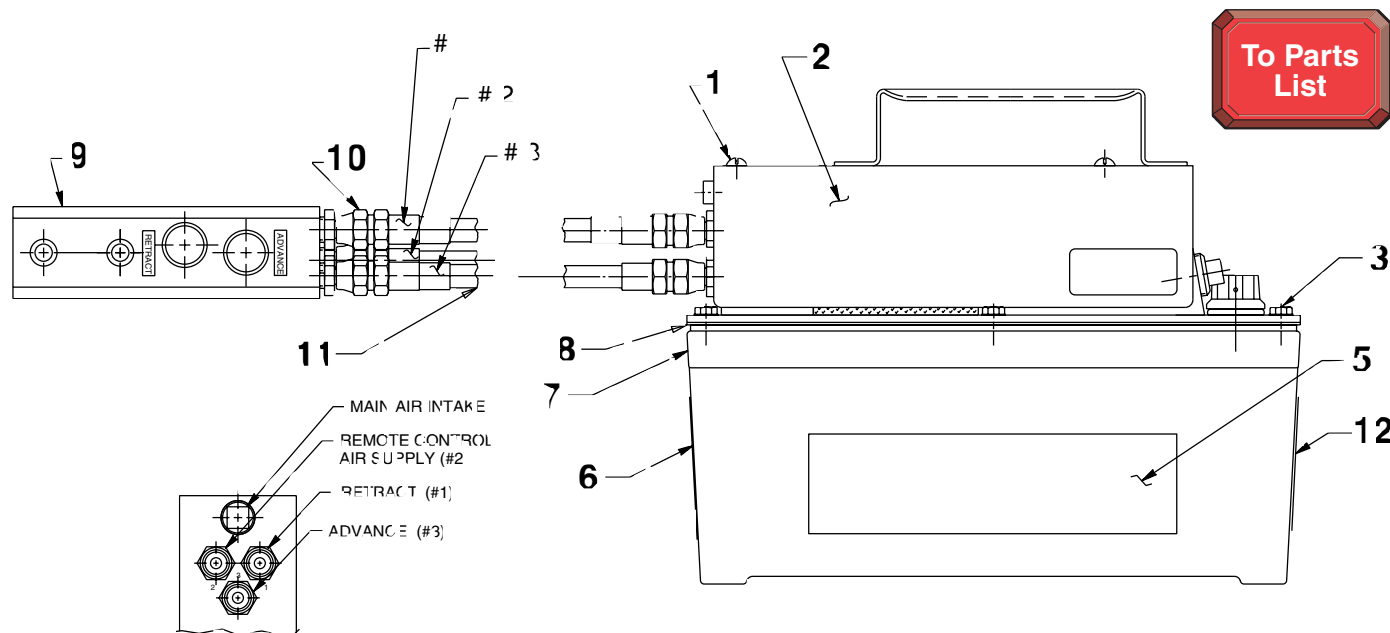
MODEL F AIR/HYDRAULIC PUMP

This view is used for these following models:

PA4-PPC	PA4R-STAND	PA4RM-STACO	PA4R2N
PA4R	PA4RE	PA4RN	PA4R2V
PA4R-LGC	PA4RM	PA4RV	Y13-REM-PF
PA4R-PF	PA4RM-DE-STA-CO	PA4R2E	52431

- More models are listed further in this parts list.-

Note: The view below may not be an exact representation of your pump due to the variation of pumps listed, but all parts have been accounted for and are in this parts list.



FOR REFERENCE ONLY

REMOTE CONTROL CONNECTIONS

CONNECT REMOTE CONTROL HOSE
ASSEMBLY TO CORRESPONDING
NUMBERS ON INTAKE BLOCK

Item No.	Part No.	No. Req'd	Description
1	10164	4	Screw (10-24 X 3/8)
2	41605BK2	1	Shroud
3	211060	6	Screw (9-15 X 1; For plastic reservoir; Torque to 25/35 in. lbs.)
	215952	6	Screw (10-24 X 5/8; For metal reservoir)
5	305496	1	Trade Name Decal (For PA4RM-DE-STA-CO, PA4R-STAND & PA4RM-STACO)
	305496CE	1	Trade Name Decal (For PA4R, PA4R-LGC, PA4RM, & 52431)
6	*305494	1	Instruction Decal (For PA4-PPC, PA4R-PF, PA4R2E, PA4R2N, PA4R2V & Y13-REM-PF)
7	61243	1	Reservoir (plastic)
	41300WH2	1	Reservoir (metal)
8	*33853	1	Reservoir Gasket (For all except PA4R2E, PA4R2N & PA4R2V)
	*47409	1	Reservoir Gasket (For PA4R2E, PA4R2N & PA4R2V)
9	44025	1	Remote Hand Switch Assembly (For PA4R, PA4RM & PA4RM-DE-STA-CO; See form #100426)
10	208218	6	Straight Fitting (1/8 NPTF; For PA4R, PA4RM, PA4RM-DE-STA-CO & PA4R-STAND)
11	45052	12'	Three-Strand Hose (For PA4R, PA4RM, PA4RM-DE-STA-CO & PA4R-STAND; Note: Connect hose ass'y to hand control and pump as shown. Color coded or numbered ends must correspond to numbers on the hand control and pump unit.)
12	251762	1	Warning Decal (For PA4R, PA4R-LGC, PA4RM, PA4RM-DE-STA-CO, PA4R2E, PA4R2N, PA4R2V, 52431 & PA4R-STAND)
	251762-CE	1	Warning Decal (For PA4RM-STACO)

PARTS INCLUDED BUT NOT SHOWN

211060	4	Screw (For PA4-PPC, PA4R, PA4R-LGC, 52431 & PA4R-STAND; For pump mounting purposes only.)
11084	1	Plug Fitting (1/16 NPTF; For PA4R-PF)



Part numbers marked with an asterisk (*) are contained in a repair kit.
See back sheet 9 of 10 for individual repair kit information.

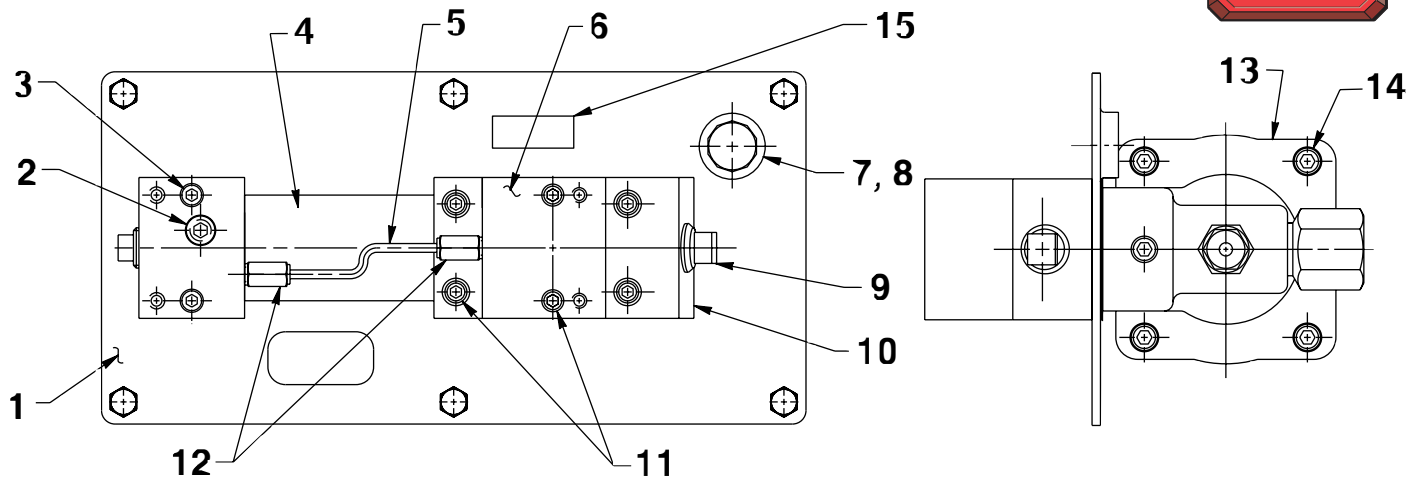
TOP & END VIEWS

These views are used for these following models:

PA4-PPC	PA4R-STAND	PA4RM-STACO	PA4R2N
PA4R	PA4RE	PA4RN	PA4R2V
PA4R-LGC	PA4RM	PA4RV	Y13-REM-PF
PA4R-PF	PA4RM-DE-STA-CO	PA4R2E	52431

- More models are listed further in this parts list.-

Note: The view below may not be an exact representation of your pump due to the variation of pumps listed, but all parts have been accounted for and are in this parts list.



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.

Item No.	Part No.	No. Req'd	Description
1	420965BK2	1	Cover Plate (For all except PA4R2E, PA4R2N & PA4R2V)
	58706BK2	1	Cover Plate (For PA4R2E, PA4R2N & PA4R2V)
2	15499	1	Plug Fitting (1/8 PTF; For all except PA4R-PF & 58540)
3	14423	2	Screw (10-24 X 2)
4	*29992	1	Foam Tube
5	14281	.3 ft	Nylon Tubing (For all except PA4R-PF)
6	34759	1	Piston Relief Valve Body
7	251689	1	Filler/Breather Cap
8	*10273	1	O-ring (.81 X .62; For all except PA4RE, PA4RV, PA4R2E & PA4R2V)
	18999	1	O-ring (.81 X .62; For PA4RV & PA4R2V)
	250157	1	O-ring (.81 X .62; For PA4RE & PA4R2E)
9	11127	1	Plug Fitting (3/8 NPTF)
	13272	1	Plug Fitting (1/4 NPTF; For all except PA4R-PF)
10	58682	1	Release Valve Body (For all except PA4R-STAND)
	59015	1	Release Valve Body (For PA4R-STAND)
11	11151	6	Screw (10-24 X 1-1/4"; Torque to 50/60 in. lbs.)
12	250725	2	Straight Fitting (1/16 NPTF; For all except PA4R-PF)
13	64767	1	Pump Body
14	17428	4	Screw (1/4-20 X 3-1/2"; Torque to 85/95 in. lbs. oiled; Note: Cross torque in increments of 30 in. lbs.)
15	205724	1	Attention Decal (For PA4RV & PA4R2V)
	250328	1	Attention Decal (For PA4RE & PA4R2E)

PARTS INCLUDED BUT NOT SHOWN

11434	2	Screw (10-24 X 1/2; For PA4R-PF)
251759	1	Pump Instruction Decal (For PA4R, PA4RM, PA4RM-DE-STA-CO & PA4R-STAND)
251760	1	Release Instruction Decal (For PA4R, PA4RM, PA4RM-DE-STA-CO & PA4R-STAND)

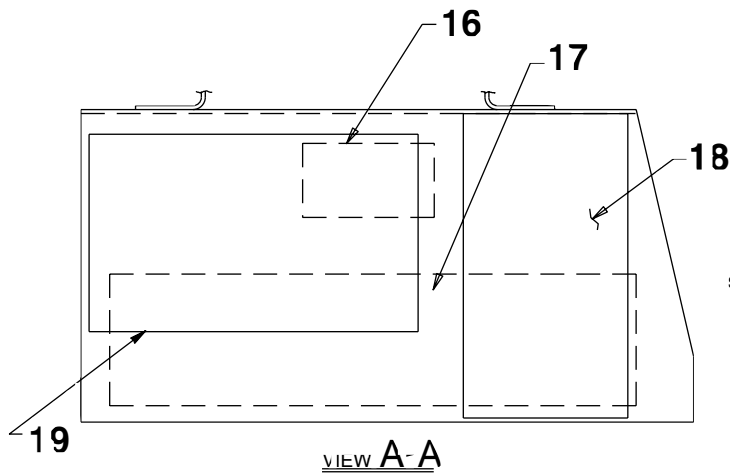
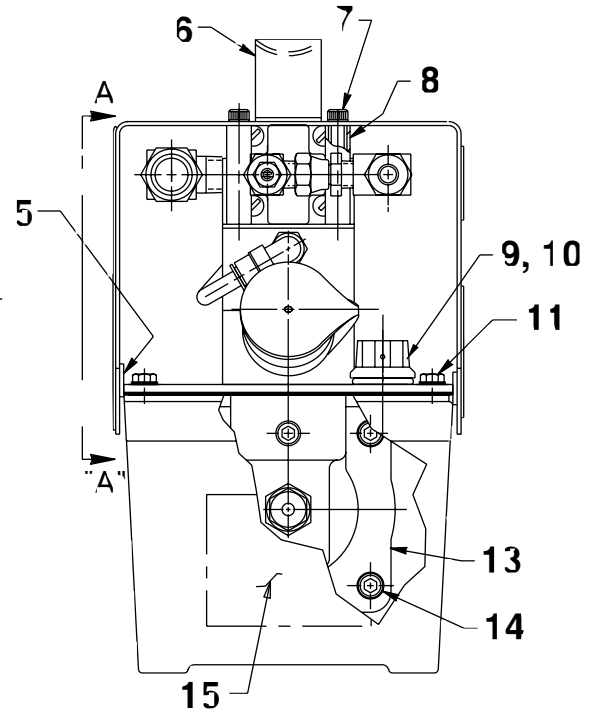
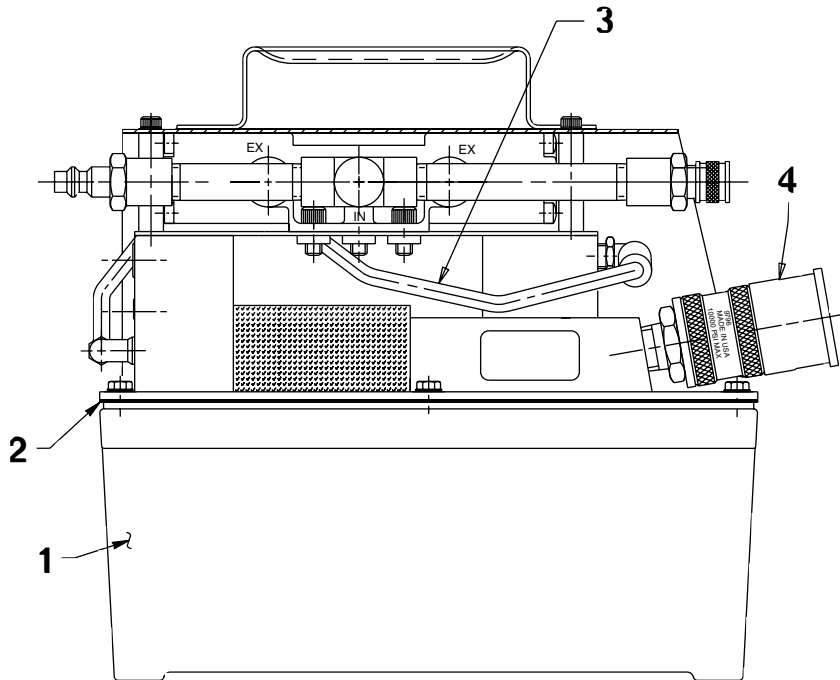


Part numbers marked with an asterisk (*) are contained in a repair kit.
See back sheet 9 of 10 for individual repair kit information.

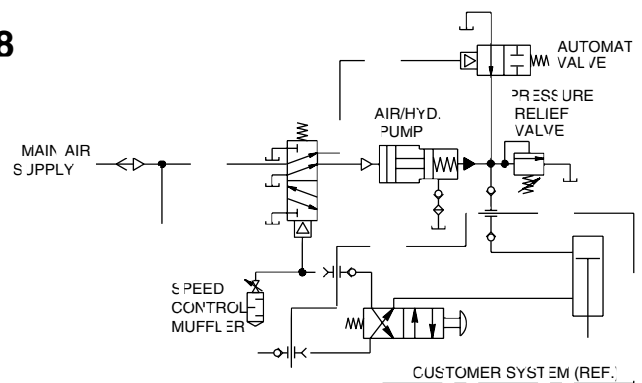
SIDE AND END VIEWS

These views are model FT20A only:

To Parts
List



A R/HYDRAULIC SCHEMATIC



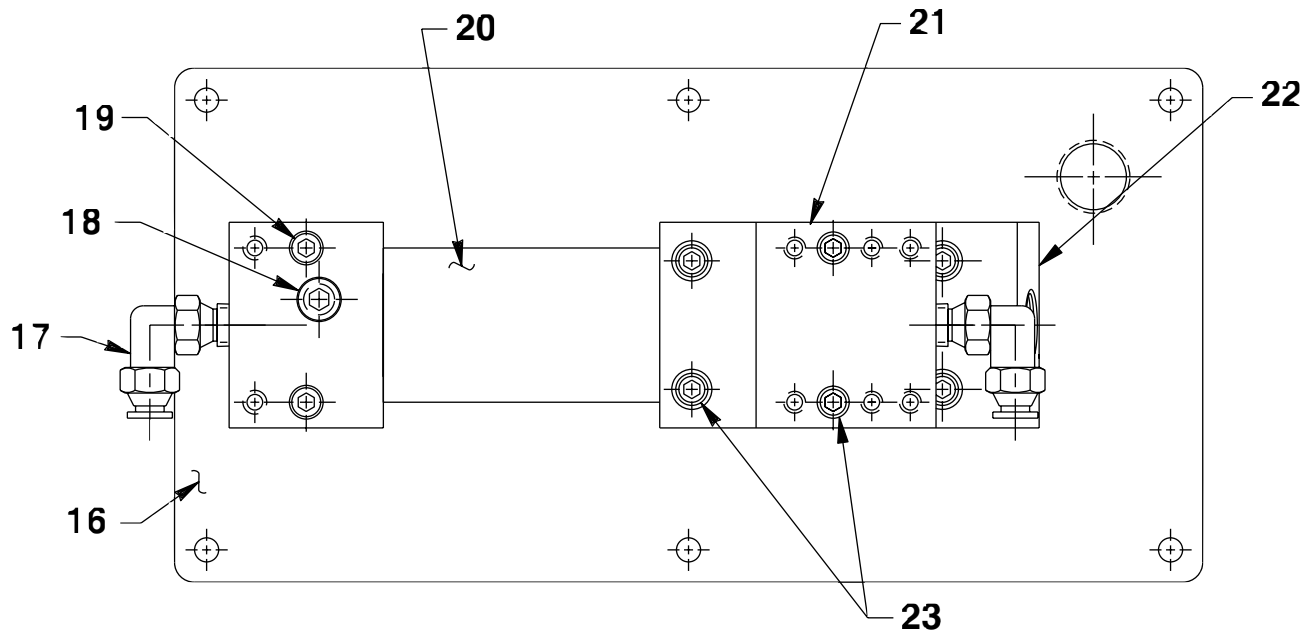
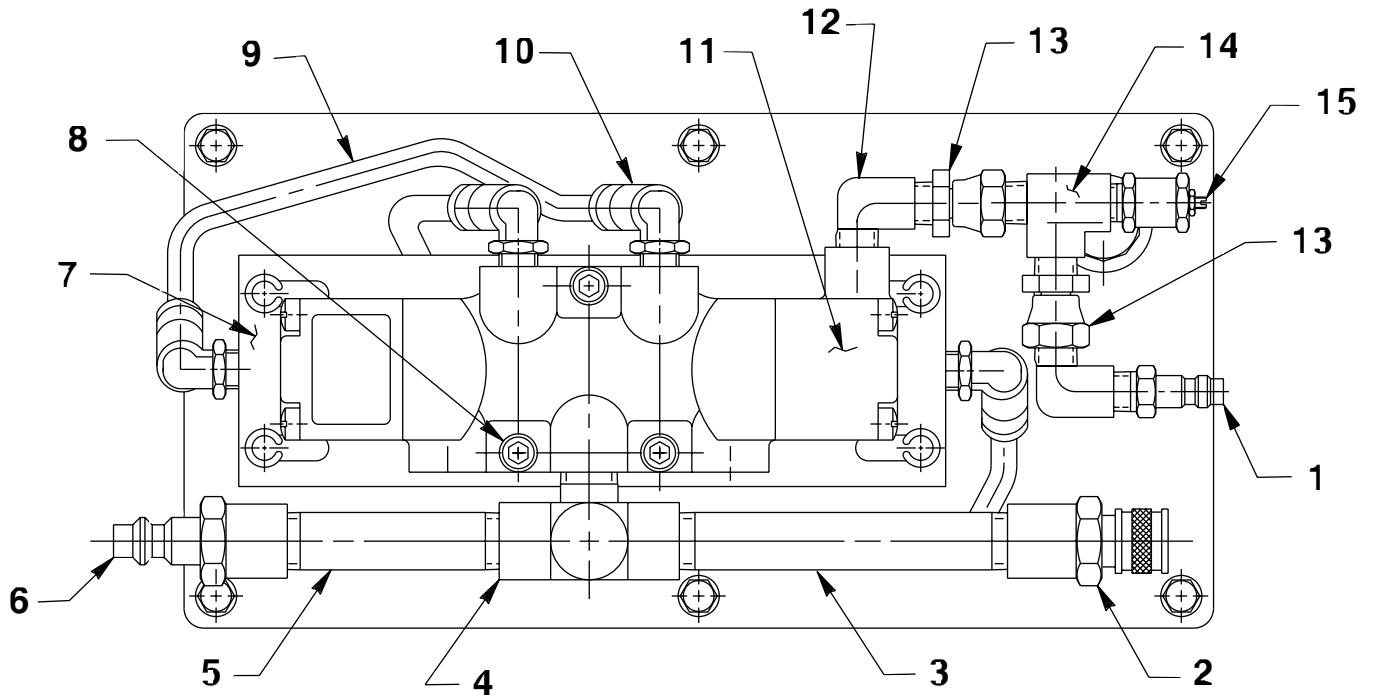
Item No.	Part No.	No. Req'd	Description
1	61243	1	Reservoir
2	*33853	1	Reservoir Gasket
3	14726	-	Nylon Tubing (Approx. 11 in.)
4	9796	1	Half Coupler w/Dust Cap
5	209034	1.5 ft	Foam Tape (Note: Apply foam tape between shroud and cover plate.)
6	53092GY8	1	Shroud
7	14423	4	Screw (10-24 X 2)
8	10611	4	Roll Pin (.38 X 1.50; Note: Orient slot of spring pin toward inside as shown.)
9	251689	1	Filler/Breather Cap
10	*10273	1	O-ring (.81 X .62)
11	211060	6	Screw (9-15 X 1; Torque to 25/35 in. lbs.)
13	64767	1	Pump Body
14	17428	4	Screw (1/4-20 X 3-1/2")
15	*305494	1	Instruction Decal (Oil lub.)
16	214763	1	Power Pak Decal
17	308423	1	Trade Name Decal
18	308421	1	Trade Name Decal
19	308422	1	Instruction Decal

Part numbers marked with an asterisk (*) are contained in a repair kit.
See back sheet 9 of 10 for individual repair kit information.



TOP VIEWS

These views are for model FT20A only:

**To Parts
List**

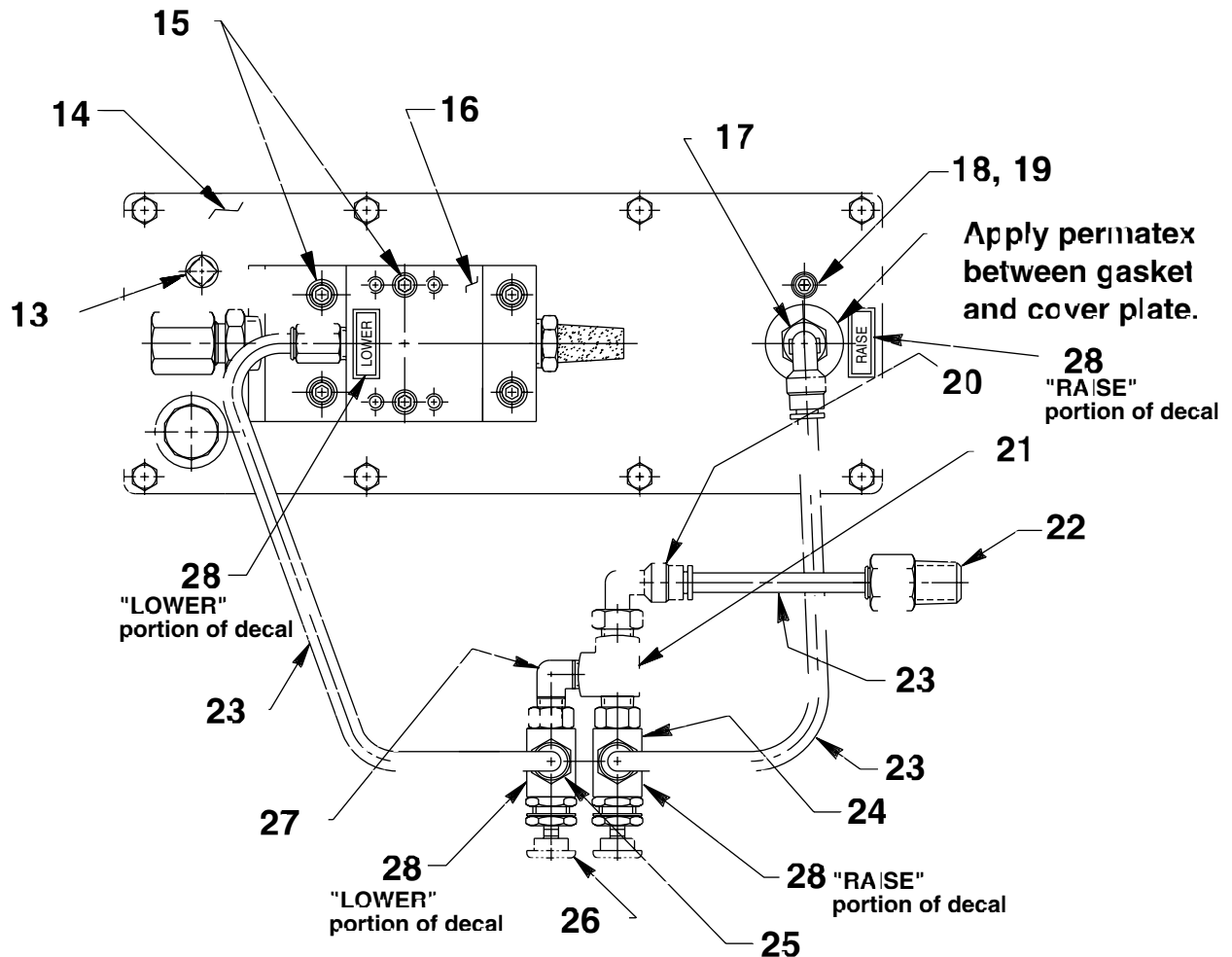
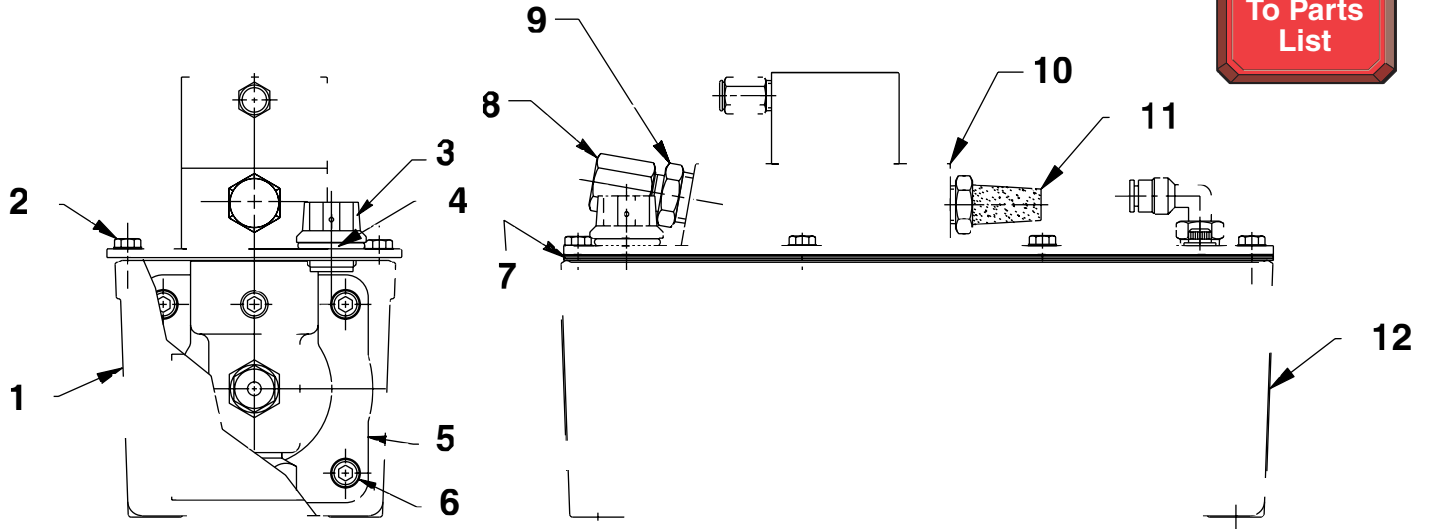
Item No.	Part No.	No. Req'd	Description
1	213343	1	Coupler Plug
2	250024	1	Female Quick Half Coupler
3	15426	1	Straight Fitting (1/4 NPTF)
4	208699	1	Tee Fitting (1/4 NPTF)
5	250026	1	Straight Fitting (1/4 NPTF)
6	250025	1	Coupler Plug
7	351096BK2	1	Valve Mounting Plate
8	10807	3	Screw (1/4-20 X 1/2)
9	14726	-	Nylon Tubing (Approx. 7 in.)
10	15457	2	90° Elbow Fitting
11	351086	1	Pressure Actuated Valve
12	14680	2	90° Elbow Fitting (1/8 NPTF)
13	208218	2	Straight Fitting (1/8 NPTF)
14	19463	1	Tee Fitting (1/8 NPTF)
15	213346	1	Speed Control Muffler
16	420965BK2	1	Cover Plate
17	250463	2	90° Elbow Fitting (1/8 NPTF)
18	15499	3	Plug Fitting (1/8 PTF)
19	14423	2	Screw (10-24 x 2)
20	*29992	1	Foam Tube
21	420293	1	Piston Release Valve Body
22	58682	1	Release Valve Body
23	11151	6	Screw (10-24 X 1-1/4")

Part numbers marked with an asterisk (*) are contained in a repair kit.
See back sheet 9 of 10 for individual repair kit information.



END, SIDE & TOP VIEWS For PA4-WHEEL only:

To Parts
List



Item No.	Part No.	No. Req'd	Description
1	62007BK2	1	Reservoir
2	215952	8	Screw (10-24 X 5/8)
3	251689	1	Filler/Breather Cap
4	*10273	1	O-ring (.81 X .62)
5	64767	1	Pump Body
6	17428	4	Screw (1/4-20 X 3-1/2"; Torque to 85/95 in. lbs. oiled. Note: Cross torque in increments of 30 in. lbs.)
7	*47675	1	Reservoir Gasket
8	251651	1	Cap Fitting (3/8 tube)
9	11628	1	Straight Fitting (3/8 NPTF)
10	58685	1	Release Valve Body
11	15459	1	Exhaust Muffler
12	*305494	1	Instruction Decal (Oil lub.)
13	11048	1	Plug Fitting (1/8 NPTF)
14	421199BK2	1	Cover Plate
15	11151	6	Screw (10-24 X 1-1/4"; Torque to 50/60 in. lbs.)
16	420293	1	Piston Release Valve Body
17	15457	1	90° Elbow Fitting (1/4 NPTF)
18	11434	2	Screw (10-24 X 1/2)
19	11089	3	Washer (.51 X .22)
20	250463	1	90° Elbow Fitting (1/8 NPTF; Assemble with thread sealant.)
21	19463	1	Tee Fitting (1/8 NPTF)
22	251054	1	Straight Fitting (1/4 NPT)
23	15883	2.36 ft	Polyethylene Tubing
24	350195	2	3-Way Control Valve
25	250464	3	Straight Fitting (1/8 NPTF)
26	206105	2	Push Button w/Wrench
27	251652	1	90° Elbow Fitting (1/8 NPTF)
28	253293	2	Raise & Lower Decal

PARTS INCLUDED BUT NOT SHOWN

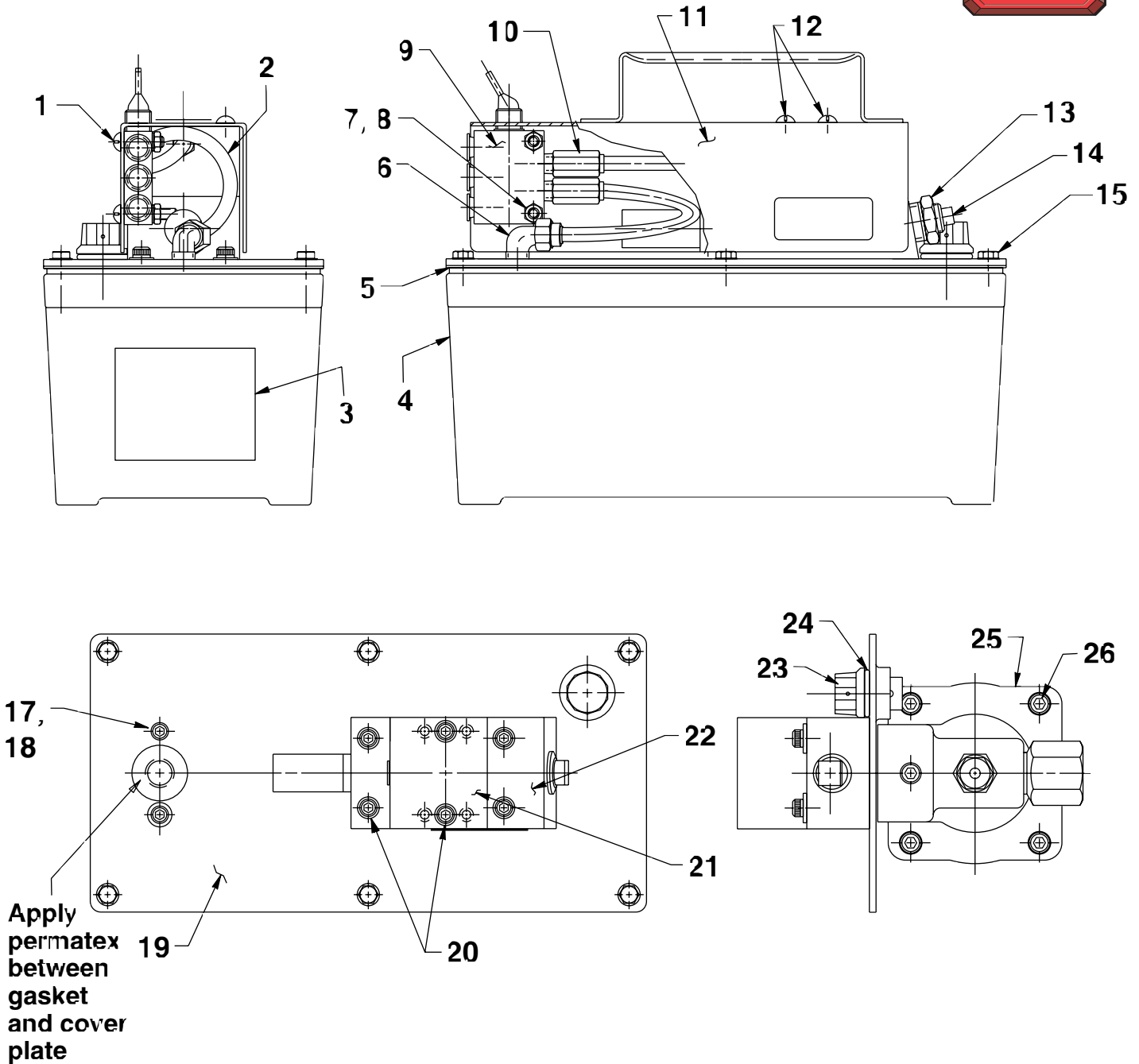
215951 2 Screws (1/4-20 X 3/4; For pump mounting purposes only.)



Part numbers marked with an asterisk (*) are contained in a repair kit.
See back sheet 9 of 10 for individual repair kit information.

END, SIDE & TOP VIEWS
For 58540 only:

To Parts
List



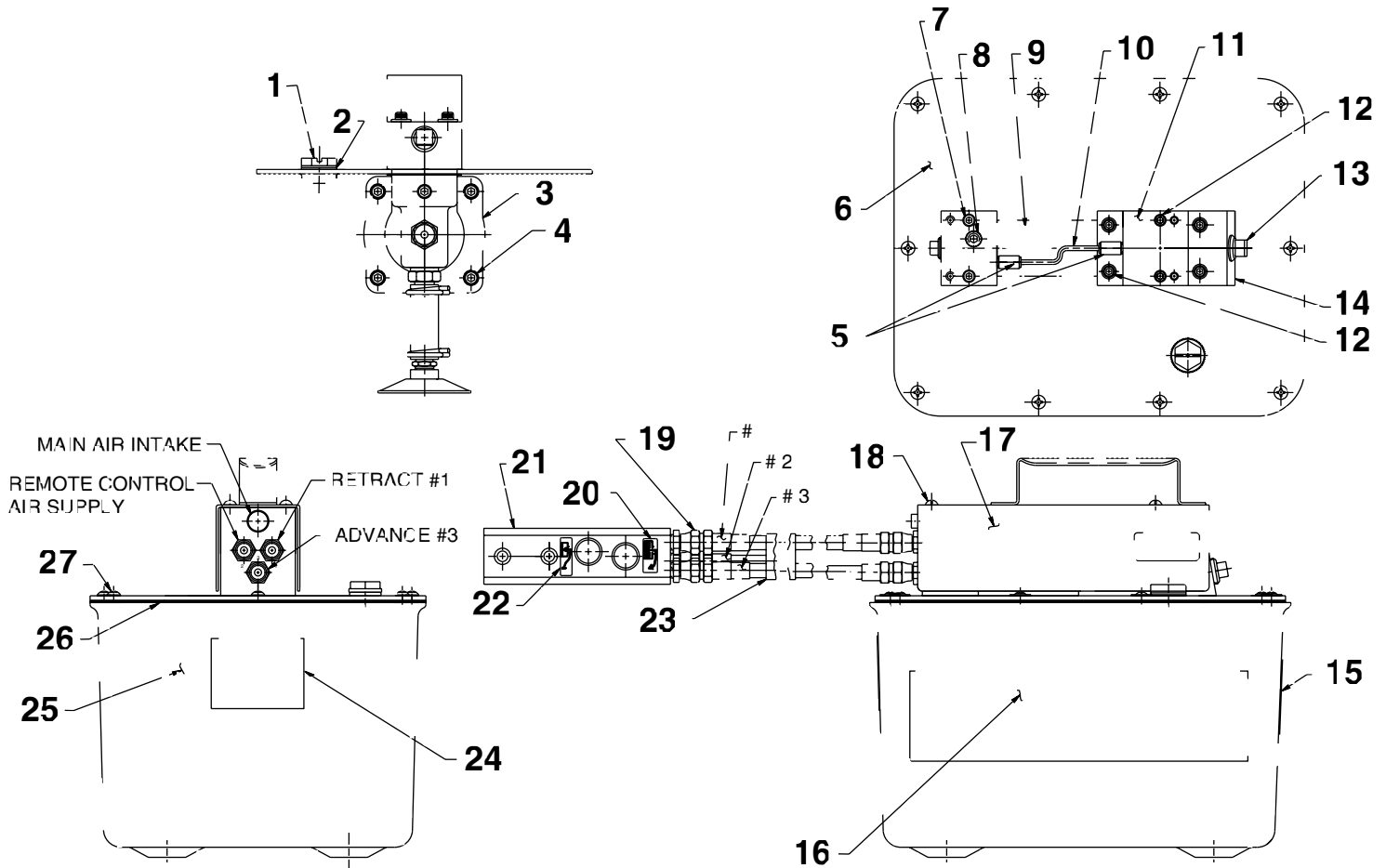
Item No.	Part No.	No. Req'd	Description
1	11856	2	Screw (10-24 X 1)
2	14726	.8 ft	Nylon Tubing
3	*305494	1	Instruction Decal (Oil lub.)
4	61243	1	Reservoir (Plastic)
5	*33853	1	Reservoir Gasket
6	15457	1	90° Elbow Fitting (1/4 NPTF)
7	10197	2	Hex Nut (10-24)
8	11108	2	External Tooth Washer (.40 X .20)
9	350329	1	Air Operated 4-Way Valve
10	250464	3	Straight Fitting (1/8 NPTF)
11	420384BK2	1	Shroud
12	10164	4	Screw (10-24 X 3/8)
13	10676	1	Straight Fitting (3/8 NPTF)
14	13272	1	Plug Fitting (1/4 NPTF)
15	211060	6	Screw (9-15 X 1; Torque to 25/35 in. lbs.)
17	11434	2	Screw (10-24 X 1/2)
18	11089	2	Flat Washer (.51 X .22)
19	420965BK2	1	Cover Plate
20	11151	6	Screw (10-24 X 1-1/4"; Torque to 50/60 in. lbs.)
21	420293	1	Piston Release Valve Body
22	58685	1	Release Valve Body
23	251689	1	Filler Breather Cap
24	*10273	1	O-Ring (.81 X .62)
25	64767	1	Pump Body
26	17428	4	Screw (1/4-20 X 3-1/2; Torque to 85/95 in. lbs. oiled; Note: Cross torque in increments of 30 in. lbs.)

PARTS INCLUDED BUT NOT SHOWN

211060	4	Screw (9-15 X 1; Torque to 25/30 in. lbs.; For pump mounting purposes only.)
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Part numbers marked with an asterisk (*) are contained in a repair kit.
See back sheet 9 of 10 for individual repair kit information.

**END, SIDE & TOP VIEWS
For PA4RM-CODHE only:****To Parts
List**

Item No.	Part No.	No. Req'd	Description
1	251689	1	Filler Breather Cap
2	*10273	1	O-ring (.81 x .62 Nitrile)
3	64767	1	Pump Body
4	17428	4	Soc. Hd. Screw (1/4-20 x 3-1/2; Torque to 85/95 in. lbs. oiled; NOTE: Cross torque in increments of 30 in. lbs.)
5	250725	2	Straight Fitting
6	58706BK2	1	Cover Plate
7	14423	2	Soc. Hd. Screw (10-24 x 2)
8	15499	1	Plug Fitting (1/8 PTF)
9	*29992	1	Foam Tube
10	14281	.3'	Nylon Tubing
11	34759	1	Piston Release Valve Body
12	11151	6	Soc. Hd. Screw (10-24 x 1-1/4; Torque to 50/60 in. lbs.)
13	11127	1	Plug Fitting (3/8 NPTF)
14	58682	1	Release Valve Body
15	251762	1	Warning Decal
16	309219CE	2	Trade Name Decal
17	41605BK2	1	Shroud
18	10164	4	Rnd. Hd. Screw (10-24 x 3/8)
19	208218	6	Straight Fitting (1/8 NPTF)
20	251759	1	Instruction Decal (PUMP)
21	421265	1	Air Operated Hand Control
22	251760	1	Instruction Decal (RELEASE)
23	421610	1	Three Strand 15' Hose (NOTE: Connect hose assembly to hand control and pump as shown. Color coded or numbered ends must correspond to numbers on the hand control and pump unit.)
24	*305494	1	Instruction Decal (Oil Lube)
25	61165	1	Reservoir
26	*47409	1	Reservoir Gasket
27	252168	10	Pan Hd. Screw (1/4-10 x 1)

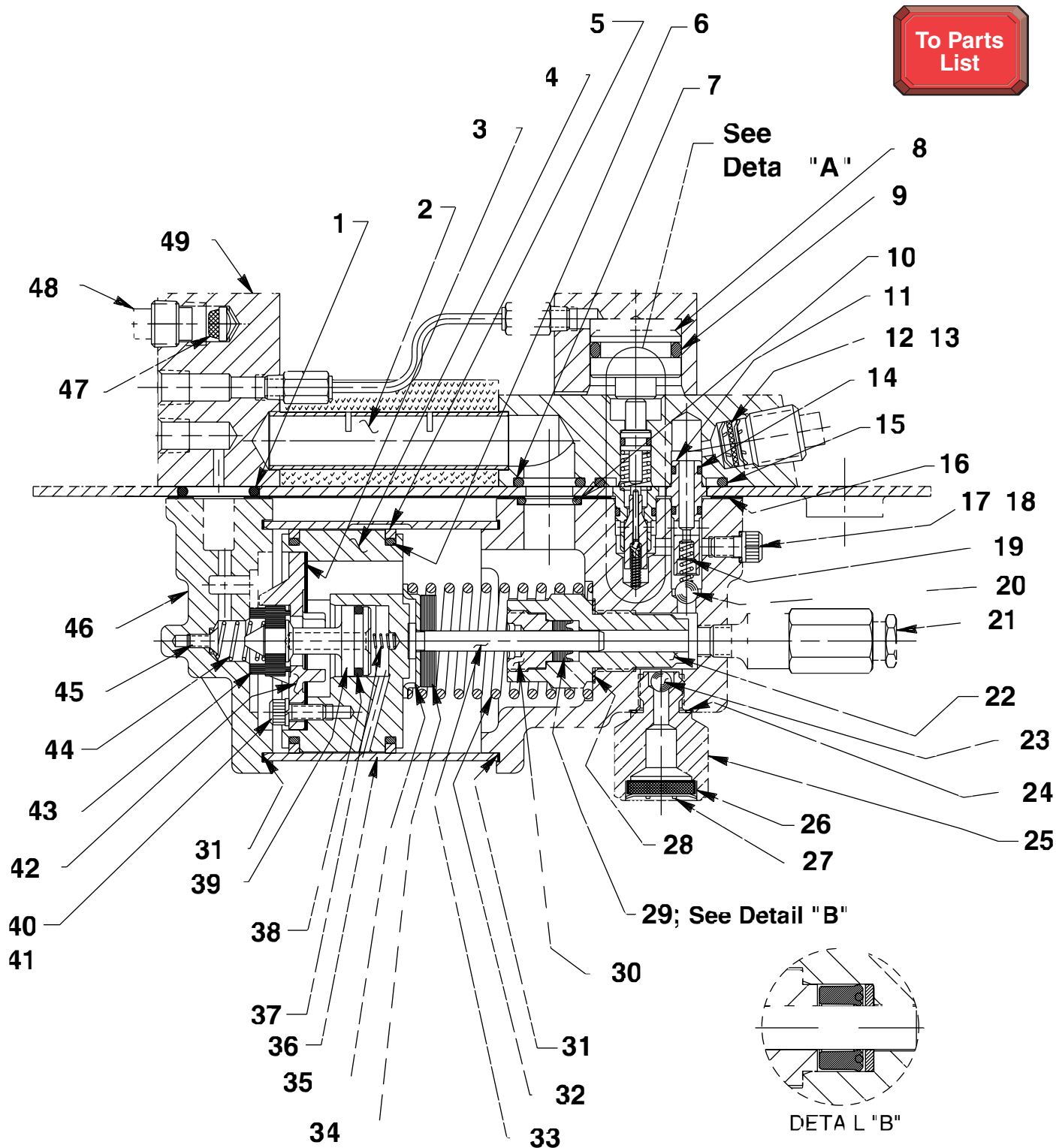


Part numbers marked with an asterisk (*) are contained in a repair kit.
See back sheet 9 of 10 for individual repair kit information.

BASIC PUMP ASSEMBLY

This view is for all models in this parts list.

Note: The view below may not be an exact representation of your pump due to the variation of pumps listed, but all parts have been accounted for and are in this parts list.



Parts List, Form No. 101732, Back sheet 8 of 10

Item No.	Part No.	No. Req'd	Description	Item No.	Part No.	No. Req'd	Description
1	*251717	1	O-ring (1.0 X .62; For all except PA4-WHEE, PA4RE, PA4RV, PA4R2E, PA4R2V & 58540)	15	*11841	1	O-ring (1.62 X 1.37; For all except PA4RV, PA4RE, PA4R2V & PA4R2E)
	251718	1	O-ring (1.0 X .62; For PA4RV & PA4R2V)		19035	1	O-ring (1.62 X 1.37; For PA4RV & PA4R2V)
	251719	1	O-ring (1.0 X .62; For PA4RE & PA4R2E)		251695	1	O-ring (1.63 X 1.38; For PA4RE & PA4R2E)
2	28387	1	Muffler (For all except PA4-WHEE & 58540)	16	*351021	1	Cover Plate Gasket
3	*28239	1	Gasket	17	*10442	1	Copper Washer (.37 X .25)
4	52390	1	Piston Body	18	10002	1	Screw (1/4-20 X 3/8; Torque to 90/110 in. lbs.)
5	*14265	2	Piston Ring	19	*10445	1	Spring (.16 O.D. X .72)
6	*251835	2	O-ring (2-1/2" X 2-5/16" X 3/32 Nitrile; For all except PA4RE, PA4RV, PA4R2E & PA4R2V)	20	*10423	1	Ball (9/32" dia.)
	251865	2	O-ring (2.31 X 2.12; For PA4RV & PA4R2V)	21	-----	-	Relief Valve (When ordering a replacement relief valve refer to stamped number on the outside of the relief valve. See note below. Apply loctite 592 [Power Team #905516] or equiv. & torque to 150/170 in. lbs.)
	251866	2	O-ring (2.31 X 2.12; For PA4RE & PA4R2E)	22	45278	1	Piston Cylinder (Torque to 90/100 ft. lbs. oiled)
7	*10276	1	O-ring (1.0 X .75; For all except PA4RE, PA4RV, PA4R2E & PA4R2V)	23	*10375	1	Ball (1/4"; For all except PA4R2E, PA4R2N, PA4R2V & PA4RM-CODHE)
	19026	1	O-ring (1.0 X .75; For PA4RV & PA4R2V)		*10423	1	Ball (9/32" dia. For PA4R2E, PA4R2N, PA4R2V & PA4RM-CODHE)
	250188	1	O-ring (1.0 X .75; For PA4RE & PA4R2E)		*10261	1	Washer (.75 X .60)
8	34757	1	Piston Release	24	308893	1	Filter Adapter (For all except PA4-WHEE, PA4R2E, PA4R2N, PA4R2V & PA4RM-CODHE; See back sheet 9 of 10 for pumps with 2 gal. reservoirs; Torque to 40/50 ft. lbs. oiled)
9	*208144	1	O-ring (1.12 X .87; For all except PA4RE, PA4RV, PA4R2E & PA4R2V; Apply lubricant)	25	308366	1	Filter Adapter (For PA4-WHEE; Torque 40/50 ft. lbs. oiled)
	19028	1	O-ring (1.12 X .87; For PA4RV & PA4R2V; Apply lubricant)	26	214578	1	Filter (For all reservoir sizes except 2 gal. reservoirs built after June 1, 1998)
	19386	1	O-ring (1.12 X .87; For PA4RE & PA4R2E; Apply lubricant)	27	214586	1	Internal Retaining Ring (For all reservoir sizes except 2 gal. reservoirs built after June 1, 1998; .63 X .015)
10	*10272	1	O-ring (.75 X .56; For all except PA4RV, PA4RE, PA4R2E & PA4R2V)	28	*10263	1	Special Washer
	18998	1	O-ring (.75 X .56; For PA4RV & PA4R2V)	29	*13934	1	U-Cup & Backup
	250194	1	O-ring (.75 X .56; For PA4RE & PA4R2E)	30	*304295	1	Retainer (Note: See "INSTRUCTIONS FOR RETAINER REPLACEMENT" on sheet 10 of 10.)
11	34378	1	Check Valve Body	31	*17429	2	Backup Washer (2.94 X 2.75)
12	*250638	1	Oil Filter Disc	32	*13938	1	Spring (1.45 O.D. X 4.4)
13	*11088	2	Internal Retaining Ring (.31 X .010)	33	28226	1	Piston (1/4")
14	211053	2	O-ring (.37 X .25; For all except PA4RV, PA4RE, PA4R2V, PA4R2E & 58540)	34	203143	1	Bumper
	11438	2	O-ring (.37 X .25; For PA4RV & PA4R2V)	35	210994	1	Spring Guide
	17715	2	O-ring (.37 X .25; For PA4RE & PA4R2E)				
	*12522	2	O-ring (.37 X .25; For 58540)				

-CONTINUED-

Part numbers marked with an asterisk (*) are contained in a repair kit.
See back sheet 9 of 10 for individual repair kit information.



NOTE:

Standard relief valves are set at 10,100/10,700 PSI.
Relief valves pre-set at special settings are available.
Refer to your pump model number or contact Power Team Technical Services.

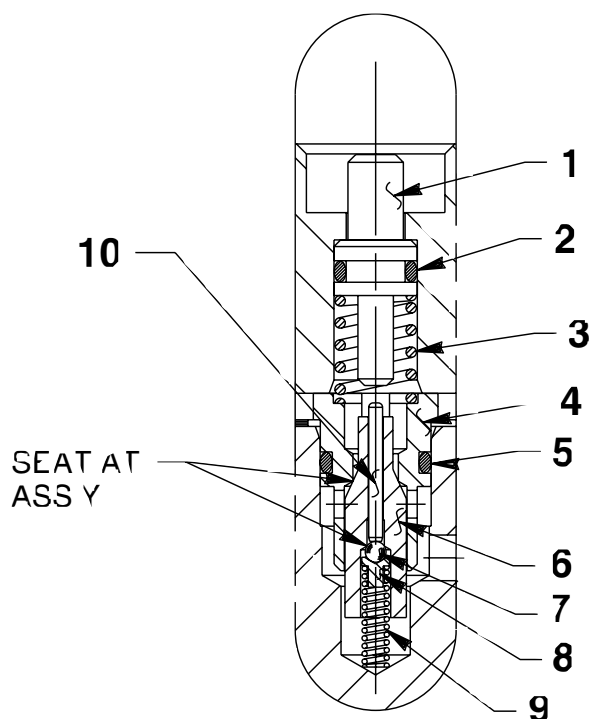
Item No.	Part No.	No. Req'd	Description	Item No.	Part No.	No. Req'd	Description
36	37434	1	Air Cylinder (Note: Locate groove on upper half (top) of pump with chamfered tube end towards rear head as shown.)	44	*205679	1	Spring (.49 O.D. X .92)
37	*12692	1	Spring (.18 O.D. X 1.70)	45	*205674	1	Screw (8-32 X 3/8; Torque to 12/18 in. lbs.)
38	*211052	1	O-ring (.90 X .70; For all except PA4RE, PA4RV, PA4R2E & PA4R2V)	46	51480	1	Rear Head (For all except PA4-WHEEL & 58540)
	250192	1	O-ring (.90 X .70; For PA4RV & PA4R2V)		37468	1	Rear Head (For PA4-WHEEL & 58540)
	250193	1	O-ring (.90 X .70; For PA4RE & PA4R2E)	47	*216296	1	Filter (For all except PA4R-PF)
39	305475	1	Exhaust Valve Stem	48	13272	1	Plug Fitting (1/4NPT; For all except FT20A, PA4R-PF & PA4-WHEEL & 58540)
40	*10241	3	Lockwasher (.33 X .20)		14972	1	Plug Fitting (1/4 PTF; For FT20A)
41	211054	3	Screw (10-24 X 1/2; Torque to 50/55 in. lbs.)	49	41601	1	Manifold (For all except PA4-WHEEL, PA4R-PF & 58540)
42	33822	1	Piston End Plate Casting	PARTS INCLUDED BUT NOT SHOWN			
43	*28183	1	Piston Poppet	250461	1	Air Pump Muffler (For 58540)	

Part numbers marked with an asterisk (*) are contained in a repair kit.
See back sheet 9 of 10 for individual repair kit information.



DETAIL "A"

This view is for all models in this parts list.



Item No.	Part No.	No. Req'd	Description
1	28227	1	Release Valve Button
2	*10266	1	O-ring (.37 X .25; For all except PA4RE, PA4RV, PA4R2E, PA4R2V & 58540)
	11438	1	O-ring (.37 X .25; For PA4RV & PA4R2V)
	17715	1	O-ring (.37 X .25; For PA4RE & PA4R2E)
	12522	1	O-ring (.37 X .25; For 58540)
3	*13944	1	Spring (.36 O.D. X .50)
4	34377	1	Poppet Retainer
5	*15279	1	O-ring (.50 X .37; For all except PA4-WHEEL, PA4RE, PA4RV, PA4R2E, PA4R2V & 58540)
	19775	1	O-ring (.50 X .37; For PA4RV & PA4R2V)
	17716	1	O-ring (.50 X .37; For PA4RE & PA4R2E)
	*13943	1	O-ring (.50 X .37; For PA4-WHEEL & 58540)
6	29037	1	Release Valve Poppet
7	*14443	1	Ball (3/32")
8	209736	1	Ball Retainer
9	*13959	1	Spring (.12 O.D. X .50)
10	13937	1	Dowel Pin (.06 X .63; Note: Place tapered end toward ball.)

Part numbers marked with an asterisk (*) are contained in a repair kit.
See back sheet 9 of 10 for individual repair kit information.

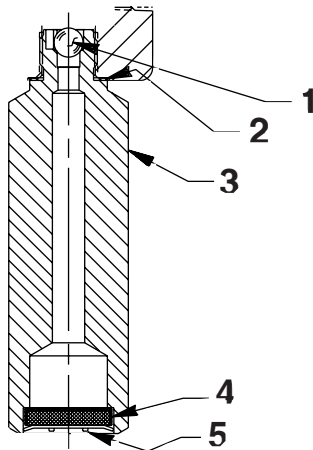
Note: Shaded areas reflect last revision(s) made to this form.

Sheet No. 9 of 10

Rev. 20 Date: 2 April 2001

FILTER ADAPTER ASSEMBLY BEFORE 6/1/98

For 2 Gallon Reservoirs Only

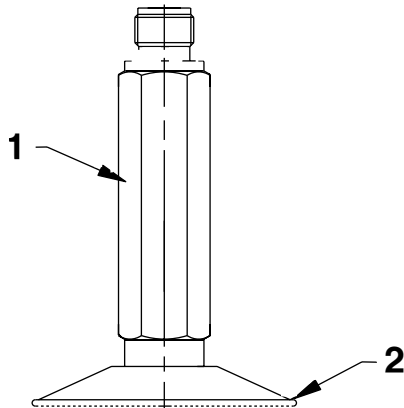


Item No.	Part No.	No. Req'd	Description
1	*10423	1	Ball (9/32 Dia.)
2	*10261	1	Special Washer (3/4 x 19/32 x 1/32)
3	48007	1	Filter Adapter (Torque to 40/50 ft. lbs. oiled.; For PA4R2E, PA4R2N & PA4R2V)
4	214578	1	Filter
5	214586	1	Retaining Ring (.63 x .015)

Part numbers marked with an asterisk (*) are contained in a Repair Kit. See below for individual repair kit information.

FILTER ADAPTER ASSEMBLY AFTER 6/1/98

For 2 Gallon Reservoirs Only
(Reference Part Number 48007)



Item No.	Part No.	No. Req'd	Description
1	422016	1	Filter Adapter
2	29682	1	Filter

REPAIR KITS

No. 300852

PA4R
PA4R-LGC
PA4R-STAND
PA4RM
PA4RM-DE-STA-CO
PA4RM-STACO
PA4RN
PA4R2N
52431
PA4RM-CODHE

No. 300854

FT20A
PA4-PPC
PA4R-PF
Y13-REM-PF

No. 300855

58540

No. 300843

PA4-WHEE

INSTRUCTIONS FOR RETAINER REPLACEMENT

Your pump's retainer is locked into place by one of the two following methods. Determine which method was used on your pump's retainer, then follow the appropriate steps to remove the old and install and stake the new.

Method 1 - Retainer shows no sign of stake marks

1. This retainer has been locked in place with a Loctite product. To replace it, a moderate amount of heat needs to be applied to the cylinder nut (in the area of the retainer) to soften the existing Loctite allowing it to be removed.
2. Install the new retainer into the cylinder nut and torque to 80/100 in. lbs. **Note: Do not use a Loctite product this time but stake the new retainer in place according to instructions in Step 3.**
3. To lock retainer into place, use a center punch positioned in the seam between the retainer and the cylinder nut and stake the new retainer in two places approximately 180° apart.

Method 2 - Retainer has two stake marks in the seam between the retainer and the cylinder nut

1. For replacement of this retainer, the stake marks must be removed. Using a 1/8" or larger diameter drill bit, remove the existing stakes by drilling a short distance into the stake marks. Remove the retainer.
2. Install the new retainer into the cylinder nut and torque to 80/100 in. lbs.
3. To lock retainer into place, use a center punch positioned in the seam between the retainer and the cylinder nut and stake the new retainer in two places approximately 180° apart.

NOTE: Do not stake in the old stake marks.

