



# Repair Parts Sheet

PE-30 Series  
Including PE34R &  
PE34J  
Titan Pumps

For date codes beginning with the letter "O".

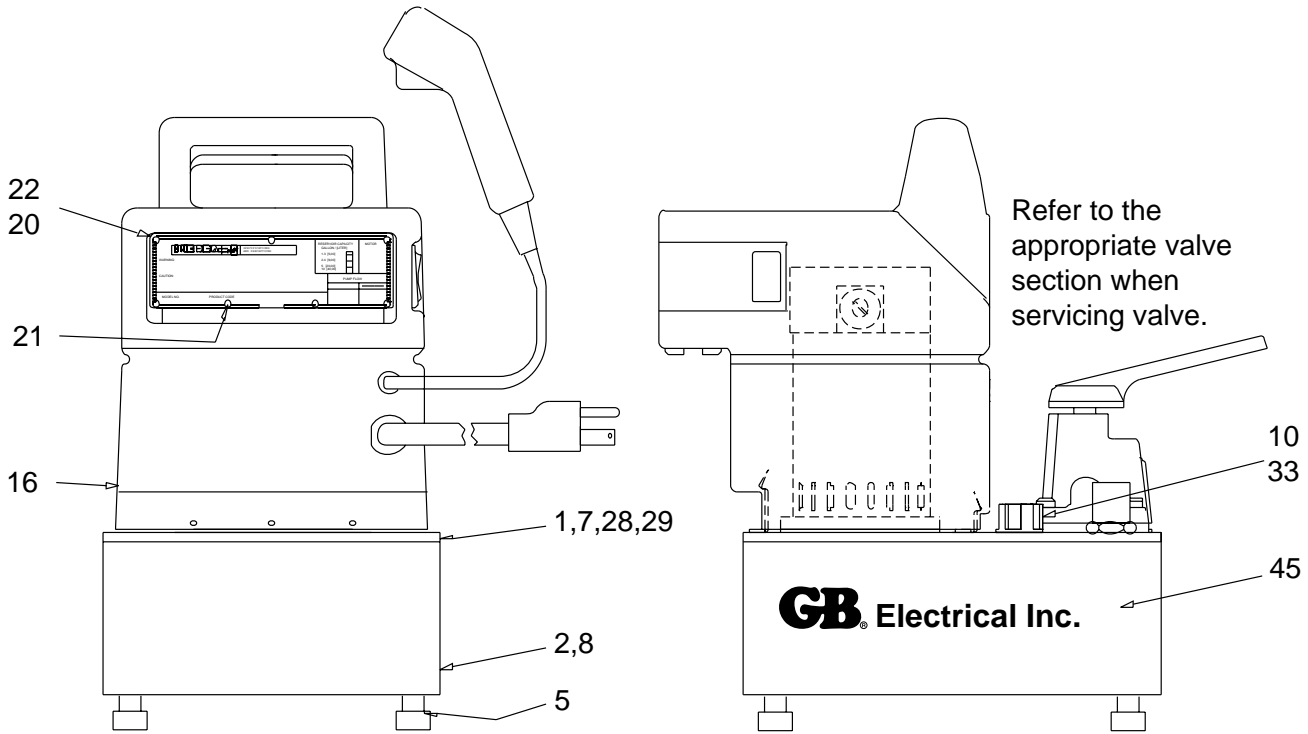
Install all kit components to insure optimum performance of the repaired pump.



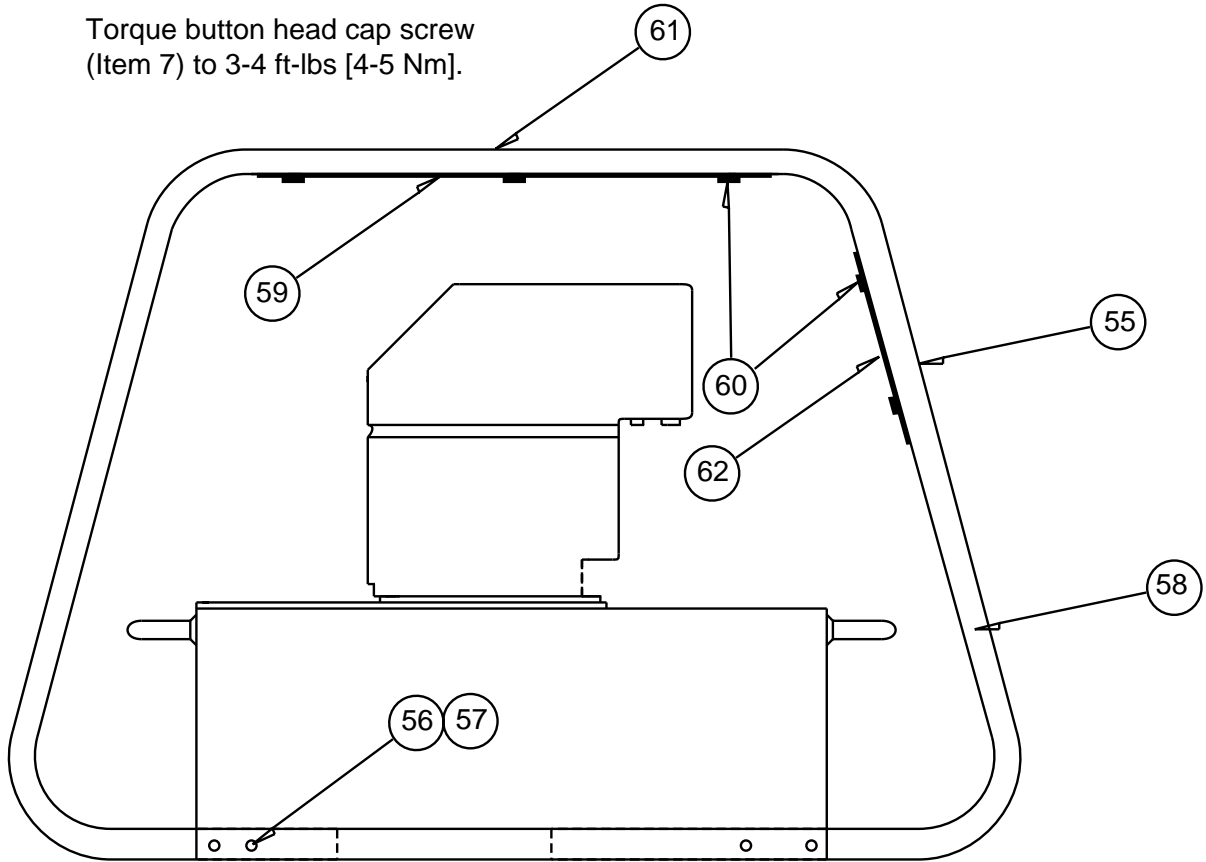
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**Figure 1 - Basic Pump Assembly**



Torque button head cap screw (Item 7) to 3-4 ft-lbs [4-5 Nm].



20 Liter Reservoir  
Shown with Roll Bar Option

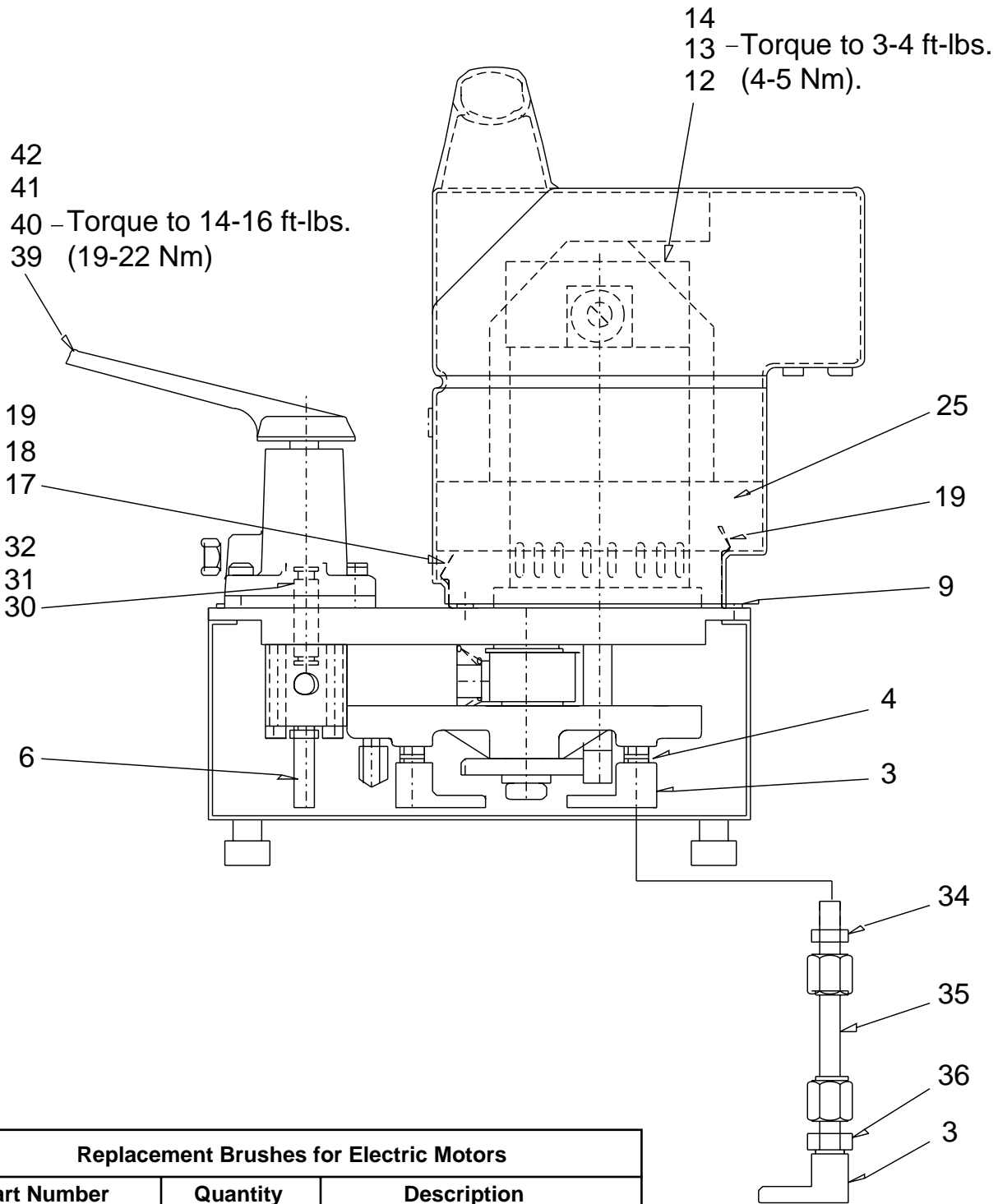
### Repair Parts List for Figure 1

Item	Part Number			Item	Part Number	Quantity	
1	Complete Pump Assembly (not sold as a service part)			16	F	models with manual valves (115V)	
2	DA7264025	1	5 Liter Reservoir	Shroud Assembly Model Code for Pumps with 20 & 40 Liter Reservoirs	P	models with manual valves (230V)	
	DA7048025	1	9 Liter Reservoir		G	models with foot or remote (115V)	
	DA7348025	1	20 Liter Reservoir		Q	models with foot or remote (230V)	
	DA7349025	1	40 Liter Reservoir		H	models with jog (115V)	
5	DA7321808	4	Isolator (5 & 9 Liter Reservoirs Only)		R	models with jog (230V)	
7	CBA519028-1E	8	BHC Screw		I	models with dump (115V)	
8	C187018	1	Magnet		S	models with dump (230V)	
10	DA7144223	1	Level Gauge (5L)		J	models with dump & hold (115V)	
	DA7454223	1	Level Gauge (9 & 20L)		T	models with dump & hold (230V)	
	DA7455223	1	Level Gauge (40L)		20	DA7147026	1
11	CAB0819028-2A	4	Socket Head Cap Screw (5 & 9L only)	21	DA714186	2	Stand Off
Shroud Assembly Model Code for Pumps with 20 & 40 Liter Reservoirs		A	models with manual valves (115V)	22	CU971003	5	Plastic Rivet
		K	models with manual valves (230V)	28	*DA7083037	1	Gasket
		B	models with foot or remote (115V)		*DA8392037	1	Gasket for Pumps with EPR Seals
		L	models with foot or remote (230V)	29	*DA7108503	10	O-ring
		C	models with jog (115V)		*DA7582303	10	O-ring for Pumps with EPR Seals
		M	models with jog (230V)	33	B1912303	1	O-ring for Pumps with EPR Seals
		D	models with dump (115V)	45	DA8389026	2	GB Decal
		N	models with dump (230V)	55	PRC5 (Made of Items 56-62)		Complete Roll Bar Assembly for Pumps with 20 Liter Reservoirs
		E	models with dump & hold (115V)	56	CBB627046-1A	8	Screw
		O	models with dump & hold (230V)	57	BSS5632D	8	Lock Nut
		58		DA4254201	2	Roll Bar	
		59		DA4341098	1	Coverplate	
		60		CB558028	10	Self Tapping Screw	
		61		CL544026	1	Decal	
		62		DA4517098	1	Plate	

\* Items included in and available only as part of Repair Kit. See page 5 for Repair Kit information.

**NOTE:** Item 16 is not available as a service part at this level. See pages 10 and 11 for shroud parts breakdown.

Figure 2 - Reservoir Assembly



Replacement Brushes for Electric Motors		
Part Number	Quantity	Description
DA9584380SR	1	Brush Set for 115V Models
DA9585380SR	1	Brush Set for 230V Models

**Repair Parts List for Figure 2**

Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
3	DA7867900SR	3	Filter Assembly (5, 9, 20 liter reservoirs)	32	*BSS0368D	2	Back-up Washer
	CV838950SR	3	Filter Assembly (40 liter reservoir)		*B1012564	2	Back-up Washer (Viton or EPR Seals)
4	DA10667431	3	Pipe Nipple (5 liter reservoir)	34	F100094-28	3	Male Connector (40 liter reservoir only)
	DA8437431	3	Pipe Nipple (9 & 20 liter reservoir)	35	DA8977268	3	Tube Assembly (40 liter reservoir only)
6	CM673268	—	Tubing (not on 5 liter)	36	F100094-78	3	Male Connector (40 liter reservoir only)
9	* DA9355167	4	Gasket	38	DA9158949SR	Dump & Hold	
12	DA6729259	1	115V Motor	Valve Assemblies	DA9022949SR	Dump	
	DA7265259	1	230V Motor		VM2	3-way, 2 Position (Jog or Manual)	
13	CBA0421028-1A	4	Socket Head Cap Screw		VM3	3-way, 3 Position (Jog or Manual)	
14	E1001183	3	Female Connector		VM4	4-way, 3 Position (Jog or Manual)	
17	DA7023017	1	Bracket		VS424	4-way, 3 Position (Remote Pendant or Foot Switch)	
18	CBA0515028-1E	2	Button Head Cap Screw		VM3L	3-W, 3 Pos., Locking (Jog or Manual)	
19	DA7567028	6	Screw		VM4L	4-W, 3 Pos., Locking (Jog or Manual)	
25	DA7121298	1	Baffle		DA8535900SR	4-way, 3 Position (Jog or Manual with EPR Seals)	
26	DA8021017	1	Bracket		DA8536900SR	4-way, 3 Position (Remote or Foot with EPR Seals)	
30	DA7105096	1	Connector		39	*F786167	1
	DA9144096	1	Connector (Dump & Hold Models)	40	CCA0825028-1A	6	Socket Head Cap Screw
31	* B1012203	2	O-ring	41	CCA0839028-1A	2	Socket Head Cap Screw (Jog and Manual models only)
				42	*C846037	6	Gasket (Jog & Manual models only)

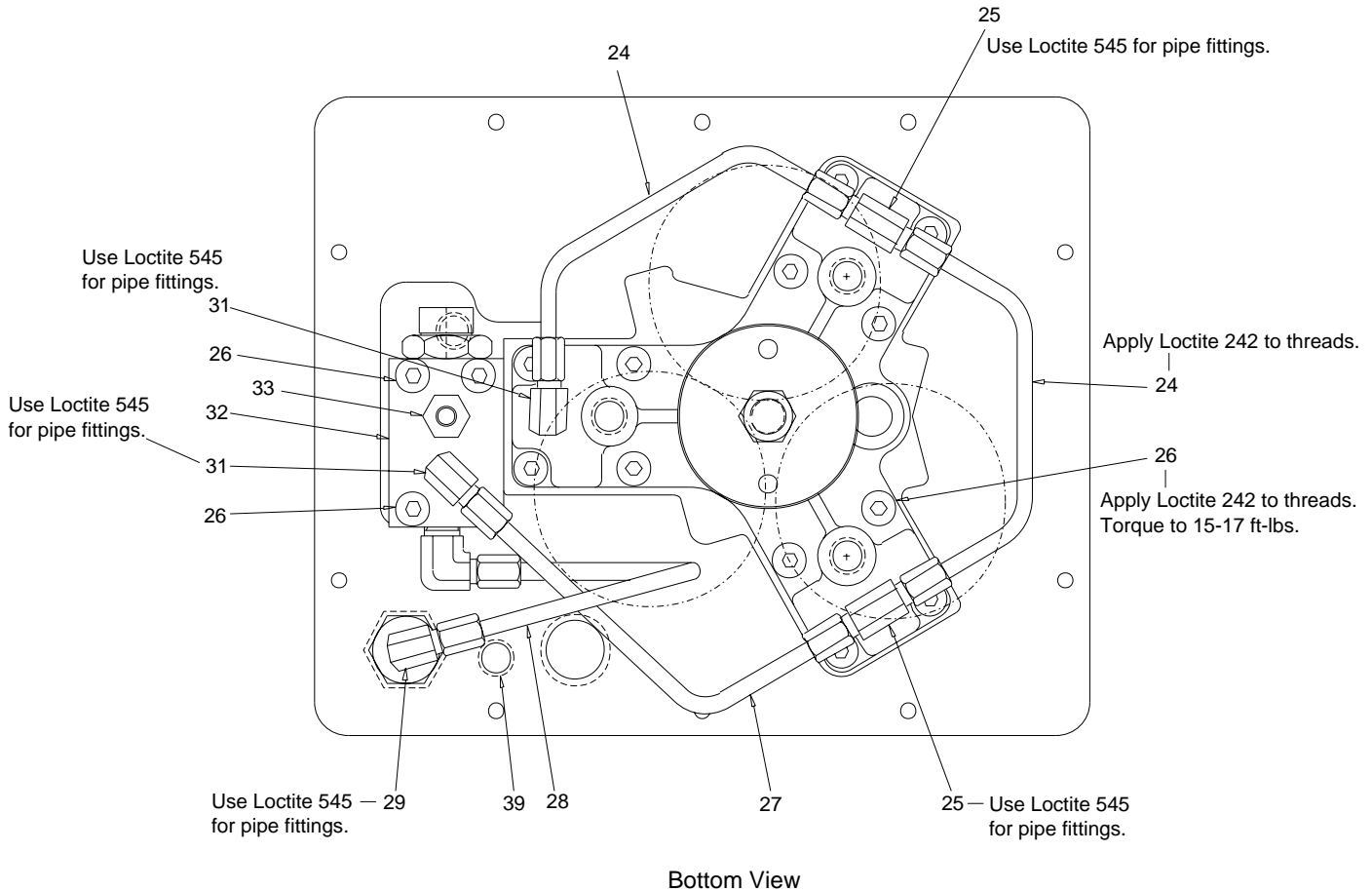
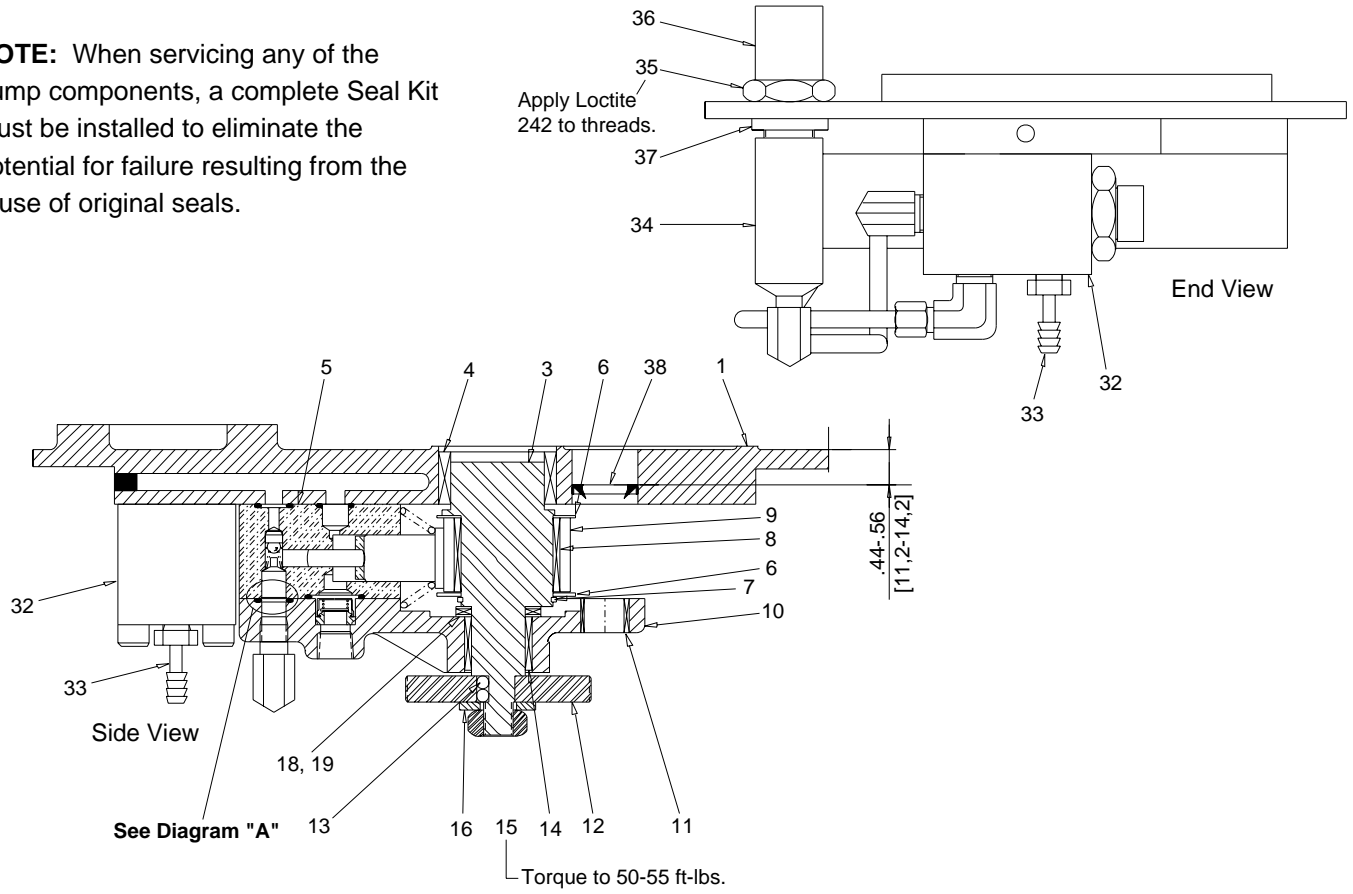
\* **Seal Kits** - Used whenever pump unit is disassembled for service. Contains seals only.  
 \*\* **Overhaul Kits** — Used for complete rebuild of pump. The Overhaul Kit includes a complete Seal Kit.

Seal Kits	Overhaul Kits
PU30000K for Standard Seals	PU30000KM for Pump with Standard Seals
PU30000KV for Viton Seals	PU30000KMV for Pump with Standard Seals
PU30000KV for Viton Seals	PU30000KMV for Pump with Viton Seals
PU30000KE for EPR Seals	PU30000KME for Pump with EPR Seals

Seal and Overhaul Kits DO NOT include control valve parts. Order the Valve Repair Kit in addition to the Pump Kit.  
**NOTE:** EPR seals for valves are special order. Dump and Dump & Hold Valves are not available with EPR seals.

**Figure 3 - Pumping Assembly**

**NOTE:** When servicing any of the pump components, a complete Seal Kit must be installed to eliminate the potential for failure resulting from the reuse of original seals.





# CAUTION

Parts have machined surfaces.  
Handle with care to avoid damaging parts.

## Repair Parts List for Figure 3

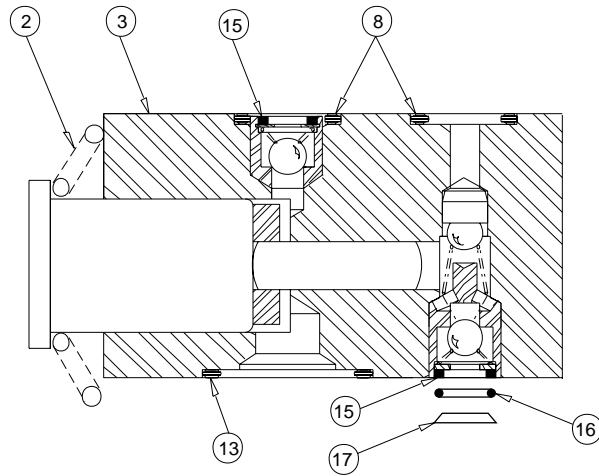
Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
1	DA6955098	1	Top Plate	25	Y530096	2	Male Branch Tee
3	DA6731537SR	1	Eccentric Shaft & Nut	26	CCA0839028-1A	16	Mounting Bolt (M8 x 65)
4	**DA7060155	1	Top Bearing	27	DA7001268	1	Tube Assembly
5	DA7127950SR	3	Piston Block Ass'y. (see Fig. 4)	28	DA7102268	1	Tube Assembly
				29	Y666096	1	Female Elbow
6	**BSS4725D	2	Ring	30	DA9550094	1	Male Elbow
7	**CCA1035044-1A	1	Retaining Ring	31	DA9579094	1	Male Elbow
8	**DA7063155	1	Cam Bearing	32	DA7126950SR	1	Std. Bypass Valve Ass'y.
9	DA6819350SR	1	Hex Cam	see Fig. 5	DA7583950SR	1	Viton Bypass Valve Ass'y.
10	DA6940101SR	1	Bottom Plate		DA7584950SR	1	EPR Bypass Valve Ass'y.
11	**DA7061155	1	Motor Bearing	33	DA7266095	1	Hose Fitting
12	DA6728228	1	Gear	34  see Fig. 6	DA7125950SR	1	Std. and Viton Relief Valve Assembly
13	**B1005016	2	3/16" Ball		DA7581950SR	1	EPR Relief Valve Ass'y.
14	**DA6821155	1	Bottom Bearing	35	DA6884123	1	Jam Nut
15	CBB1120120-1D	1	Nut (M12 x 15)	36	DA6881020	1	Cap
16	DA7079108	1	Washer	37	*B1226503	1	Standard O-ring
17	* B1013803	3	Standard O-ring		*B1020203	1	Viton O-ring
	* B1013203	3	Viton O-ring		*B1210303	1	EPR O-ring
	* B1013303	3	EPR O-ring	38	*DA7107776	1	Std. Motor Shaft Seal
18	**DA7064155	1	Thrust Bearing		*DA7478776	1	Viton Motor Shaft Seal
19	**DA7065155	2	Standard & Viton Thrust Race		*DA7477776	1	EPR Motor Shaft Seal
	**DA7066155	2	EPR Thrust Race	39	A1008245	1	Hex Plug
24	DA7000268	2	Tube Assembly				

\* Seal Kits — Used whenever pump unit is disassembled for service. Contains seals only.

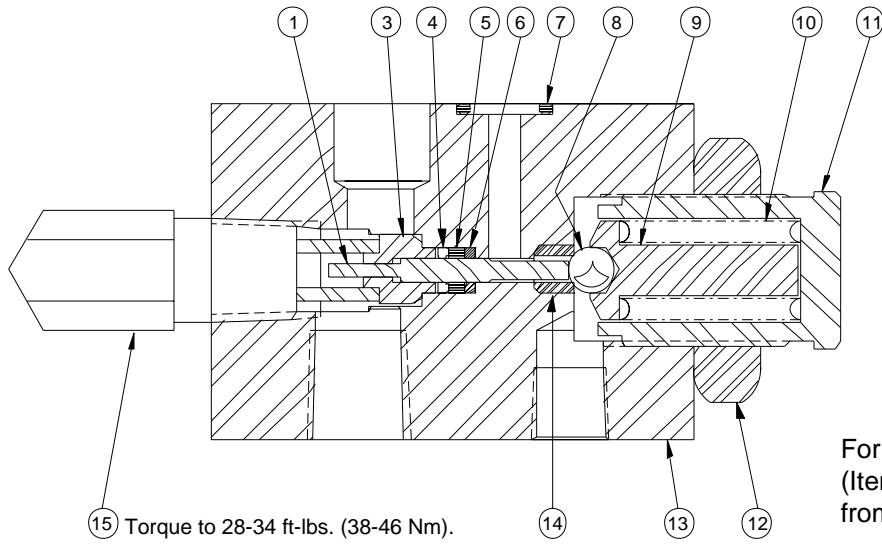
\*\* Overhaul Kits — Used for complete rebuild of pump. The Overhaul Kit includes a complete Seal Kit.

See page 5 for Repair Kit information

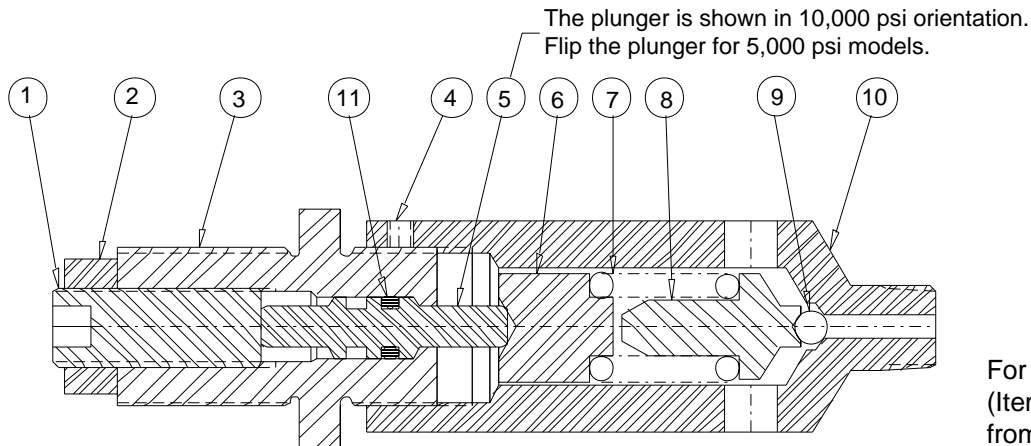
**Figure 4 - Piston Block Assembly**



**Figure 5 - By-pass Valve Assembly**



**Figure 6 - Relief Valve Assembly**



For relief valve assembly (Item 10) use part number from page 7, item 34.



### Repair Parts List for Figure 4

Item	Part Number	Quantity	Description	Item	Part Number	Quantity	Description
2	**DA6771110	1	Conical Spring	13	* B1224503	1	Standard O-ring
3	See p. 7, Item 5	1	Piston Block Assembly		* B1019203	1	Viton O-ring
8	* B1219503	2	Standard O-ring		* B1018303	1	EPR O-ring
	* B1013203	2	Viton O-ring	15	* DA10473108	2	Washer
	* B1013303	2	EPR O-ring	16	* B1013803	1	O-ring
				17	*DA10723108	1	Washer

\* **Seal Kits** — Used whenever pump unit is disassembled for service. Contains seals only.

\*\* **Overhaul Kits** — Used for complete rebuild of pump. The Overhaul Kit includes a complete Seal Kit.

See page 5 for Repair Kit information.

### Repair Parts List for Figure 5

1	DA6897061	1	Push Pin	8	* B1005016	1	3/16" Ball
3	DA10474013	1	Spring Guide	9	DA6898013	1	Ball Guide
4	* B1006803	1	Standard O-ring	10	**DA7039110	1	Spring
	* B1006203	1	Viton O-ring	11	DA6899020	1	Spring Cap
	* B1006303	1	EPR O-ring	12	DA6884123	1	Jam Nut
5	* B1006564	1	Back-up Washer	13	See p. 7, Item 32	1	By-pass Valve Ass'y.
6	DA6900108	1	Washer	14	**DA6936290	1	Seat
7	* B1219503	1	Standard O-ring	15	DA10912950	1	Elbow Assembly
	* B1013203	1	Viton O-ring				
	* B1013303	1	EPR O-ring				

\* **Seal Kits** — Used whenever pump unit is disassembled for service. Contains seals only.

\*\* **Overhaul Kits** — Used for complete rebuild of pump. The Overhaul Kit includes a complete Seal Kit.

See page 5 for Repair Kit information.

### Repair Parts List for Figure 6

1	CCA1023028-5A	1	Set Screw	7	** DA3282110	1	Compression Spring
2	DA7033123	1	Nut	8	A8020013	1	Ball Guide
3	DA7322190	1	Threaded Body	9	* B1004016	1	Ball
4	CCA0307028-5C	1	Set Screw	10	See p. 7, Item 34	1	Relief Valve Ass'y.
5	DA7312040	1	Plunger	11	* B1007203	1	Std. & Viton O-ring
6	DA5772013	1	Spring Guide		H B1008303	1	EPR O-ring

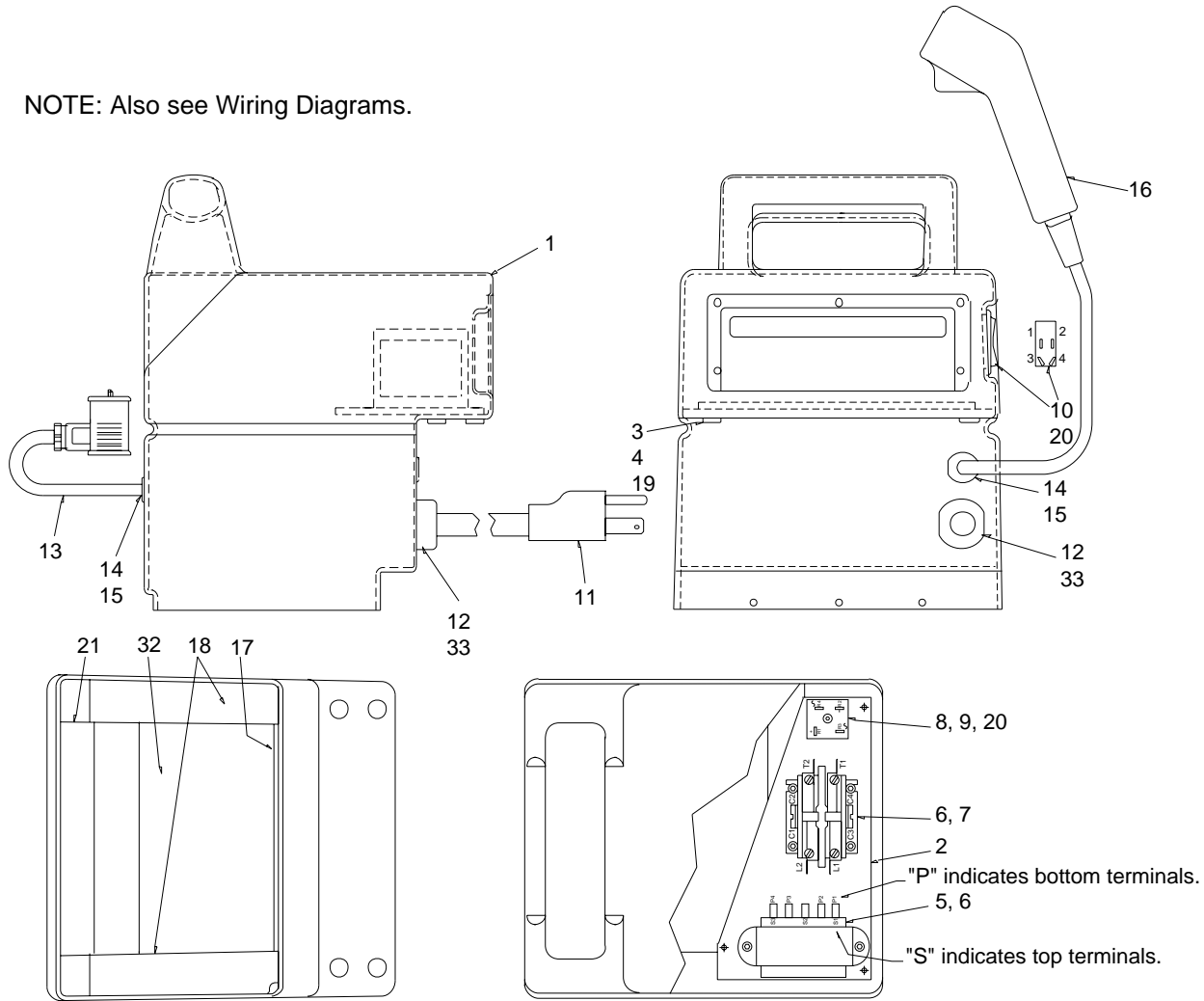
\* **Seal Kits** — Used whenever pump unit is disassembled for service. Contains seals only.

\*\* **Overhaul Kits** — Used for complete rebuild of pump. The Overhaul Kit includes a complete Seal Kit.

See page 5 for Repair Kit information.

# Figure 7 - Shroud Assembly

NOTE: Also see Wiring Diagrams.



**Use the Model Identification Chart to find the Model Code for your pump.  
You will need the Model Code to use the shroud assembly chart on page 11.**

### Model Identification Chart

115 VAC Models			230 VAC Models		
Reservoir Capacity	Valve Type	Model Code	Reservoir Capacity	Valve Type	Model Code
5 and 9 liter (1.3 & 2.4 gallon)	Manual Valve	A	5 and 9 liter (1.3 & 2.4 gallon)	Manual Valve	K
	Remote Pendant or Foot Switch	B		Remote Pendant or Foot Switch	L
	Jog	C		Jog	M
	Dump (without hold)	D		Dump (without hold)	N
	Dump & Hold	E		Dump & Hold	O
20 and 40 liter (5.2 & 10.4 gallon)	Manual Valve	F	20 and 40 liter (5.2 & 10.4 gallon)	Manual Valve	P
	Remote Pendant or Foot Switch	G		Remote Pendant or Foot Switch	Q
	Jog	H		Jog	R
	Dump (without hold)	I		Dump (without hold)	S
	Dump & Hold	J		Dump & Hold	T

### Repair Parts List for Figure 7

Item No.	Part Number	Description	Quantity Listed Below Model Code																			
			A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	DA7857900SR	Shroud with Baffle	1	1	1	1	1															
1	DA8407900SR	Shroud with Baffle						1	1	1	1	1										
1	DA9505900SR	Shroud with Baffle											1	1	1	1	1					
1	DA9506900SR	Shroud with Baffle																1	1	1	1	1
2	DA7137101	Mounting Plate		1	1	1	1		1	1	1	1		1	1	1	1		1	1	1	1
3	CAE0205028-3A	Screw		4	4	4	4		4	4	4	4		4	4	4	4		4	4	4	4
4	DA5974098	Screw Cover		4	4	4	4		4	4	4	4		4	4	4	4		4	4	4	4
5	DA3567380	Transformer		1		1	1		1		1	1		1		1	1		1		1	1
5	DA7106380	Transformer			1					1					1					1		
6	CAE0404028-3A	Screw		2	6	6	6		2	2	6	6		2	6	6	6		2	6	6	6
7	DA3568980	Relay			1	1	1			1	1	1			1	1	1			1	1	1
8	DA3578380	Rectifier		1		1	1		1		1	1		1		1	1		1		1	1
9	CAE0408028-3A	Screw		1	1	1	1		1	1	1	1		1	1	1	1		1	1	1	1
10	DA7118372	Switch	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	DA7283450	Power Cord	1	1	1	1	1	1	1	1	1	1										
11	DA9444450	Power Cord												1	1	1	1	1	1	1	1	1
12	DA9449007	Cord Restraint												1	1	1	1	1	1	1	1	1
12	F869007	Relief Bushing	1	1	1	1	1	1	1	1	1	1										
13	CU943900	Valve Cable		1		1	1		1		1	1		1		1	1		1		1	1
14	CR759291	Cord Bushing		1	1	2	2		1	1	2	2		1	1	2	2		1	1	2	2
15	DA3731009 Hole	Plug	3	2	2	1	1	3	2	2	1	1	3	2	2	1	1	3	2	2	1	1
16	DA7875900SR	Pendant Assembly			1	1				1	1				1	1				1	1	
16	DA9180900SR	Pendant Assembly					1				1					1						1
17	DA7879398	Baffle	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	DA7880398	Baffle	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
19	CU971003	Pop Rivet	4					4						4					4			
20	DA4842380	Terminal Adaptor		4					4					4					4			
21	DA7881398	Baffle	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
22	DA7872900	Wire	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
23	DA7873900	Wire	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
24	DA3929900	Wire		2	3	3	3		2	3	3	3		2	2	2	2		2	2	3	2
25	DA3930900	Wire			2	2	2			2	2	2			1	1	1			1	2	1
26	DA3931900	Wire												1	1	1	1		1	1	1	1
27	DA3936900	Wire				2	1				2	1				2	1				2	1
28	DA7279900	Wire	1						1					1					1			
29	DA7280900	Wire	1						1					1					1			
30	DA7281900	Wire			1	1	1			1	1	1				1	1	1		1	1	1
31	DA7282900	Wire			1	1	1			1	1	1			1	1	1			1	1	1
32	DA9328398	Baffle	1	1	1	1		1	1	1	1		1	1	1	1	1	1	1	1	1	1
33	DA9452021	Nut												1	1	1	1	1	1	1	1	1

### Manual Pump Wiring Code Chart

Item	Description	Color	From		To	
			Item	Terminal	Item	Terminal
22	Wire	White			10	4
23	Wire	Black			10	3
11	Power Cord	White			10	2
		Black			10	1

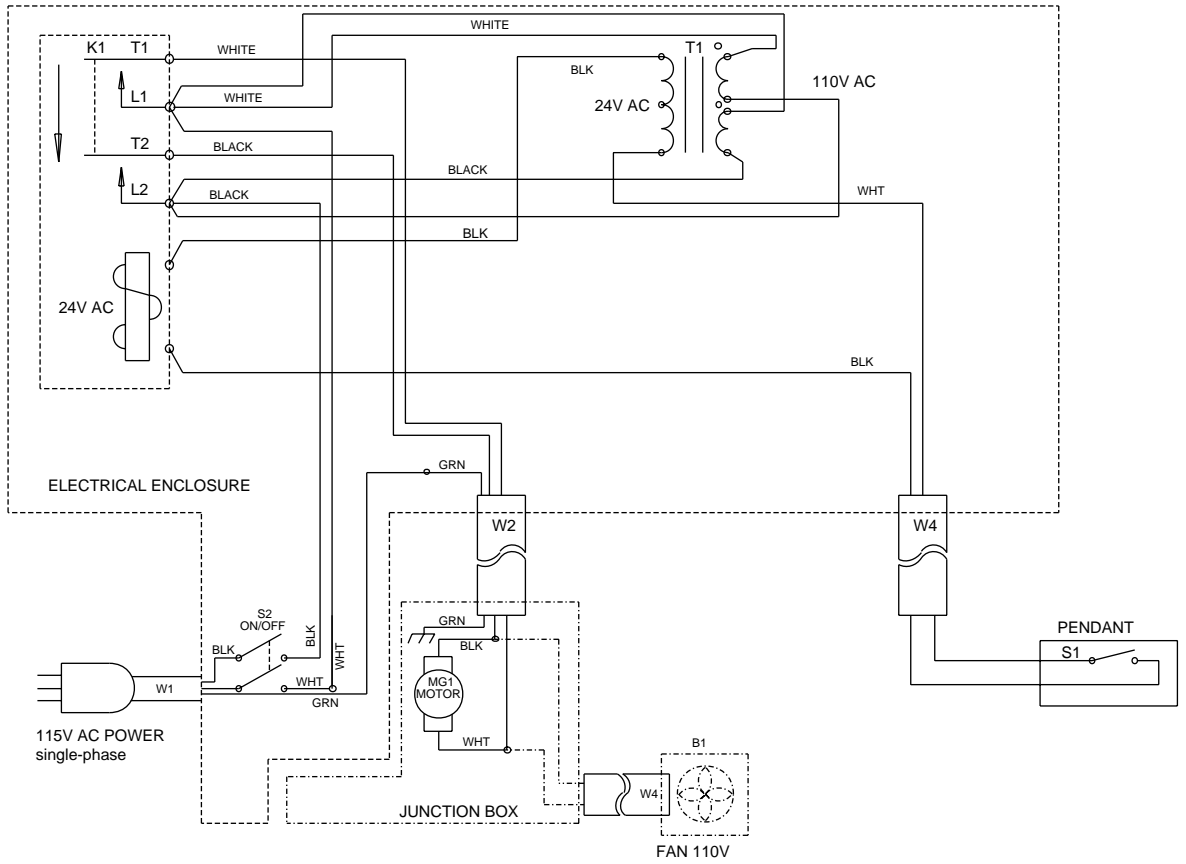
### Dump Pump Wiring Code Chart

Item	Description	Color	From		To	
			Item	Terminal	Item	Terminal
22	Wire	White			7	T1
23	Wire	Black			7	T2
12	Power Cord	White			10	2
		Black			10	1
15	Valve Cord	White			8	R1
		Black			8	R2
24	Wire	Black	5	S1	7	C4
24	Wire	Black	5	P4	7	L2
24	Wire*	Black	5	P2	7	L2
27	Wire	Black	5	R3	7	C2
27	Wire	Black	5	R4	7	C3
25	Wire	White	5	P1	7	L1
25	Wire*	White	5	P3	7	L1
26	Wire**	Black	5	P3	5	P2
16	Pendant Assembly	White	5		5	S3
		Black			7	C1
30	Wire	White	10	4	7	L1
31	Wire	Black	10	3	7	L2

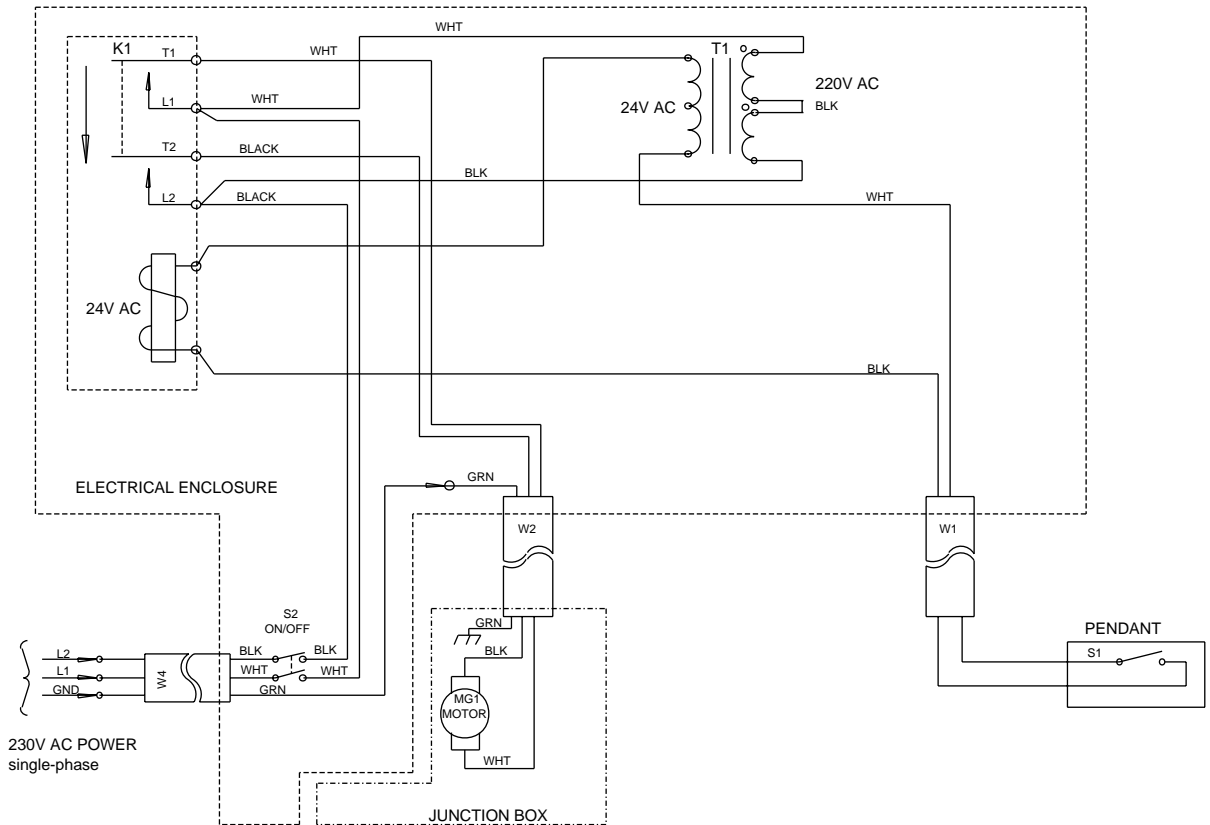
\* 110V only

\*\* 220V only

## 115V Dump Pump Schematic



## 230V Dump Pump Schematic



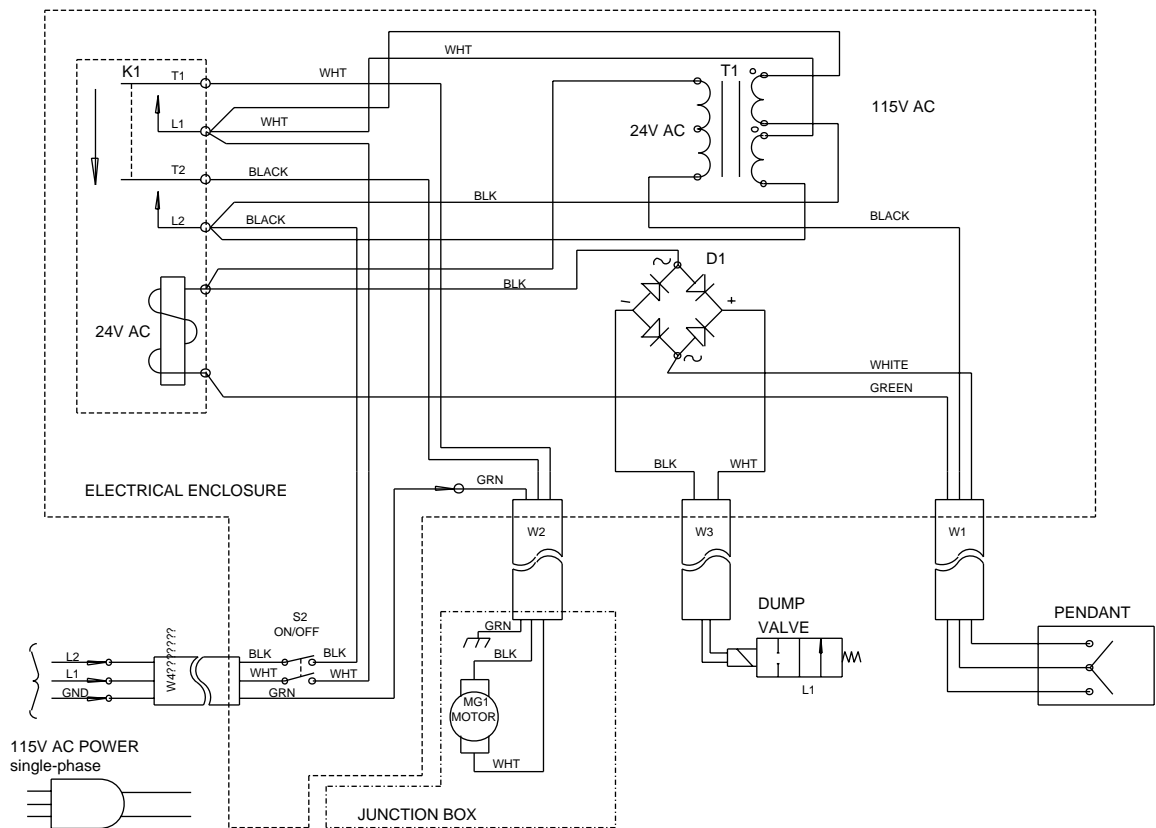
### Dump & Hold Pump Wiring Code Chart

Item	Description	Color	From		To	
			Item	Terminal	Item	Terminal
22	Wire	White			7	T1
23	Wire	Black			7	T2
11	Power Cord	White			10	2
		Black			10	1
13	Valve Cord	White			8	R1
		Black			8	R2
24	Wire	Black	5	S1	7	C4
24	Wire	Black	5	P4	7	L2
24	Wire*	Black	5	P2	7	L2
27	Wire	Black	8	R4	7	C3
25	Wire	White	5	P1	7	L1
25	Wire*	White	5	P3	7	L1
26	Wire**	Black	5	P3	5	P2
16	Pendant Assembly	Black			5	S3
		Green			7	C1
		White			8	R3
30	Wire	White	10	4	7	L1
31	Wire	Black	10	3	7	L2

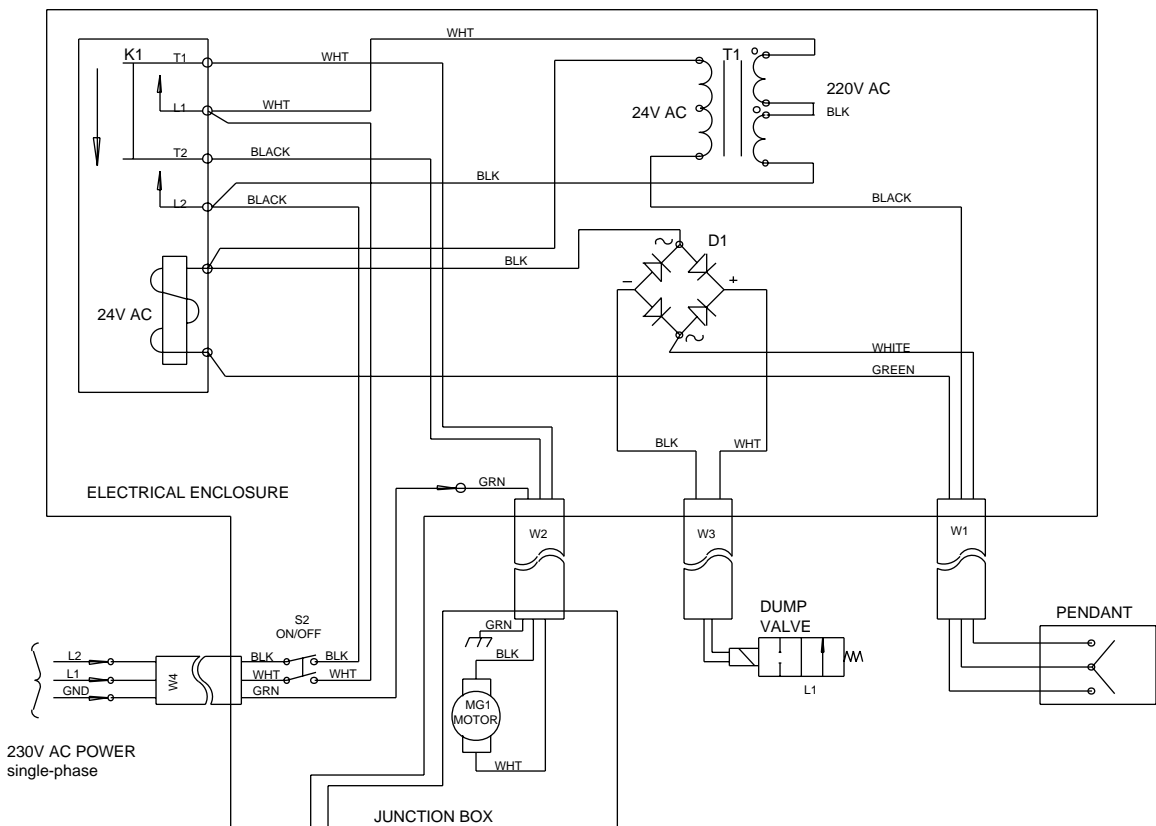
\* 110V only

\*\* 220V only

## 115V Dump & Hold Pump Schematic



## 230V Dump & Hold Pump Schematic



### Jog Pump Wiring Code Chart

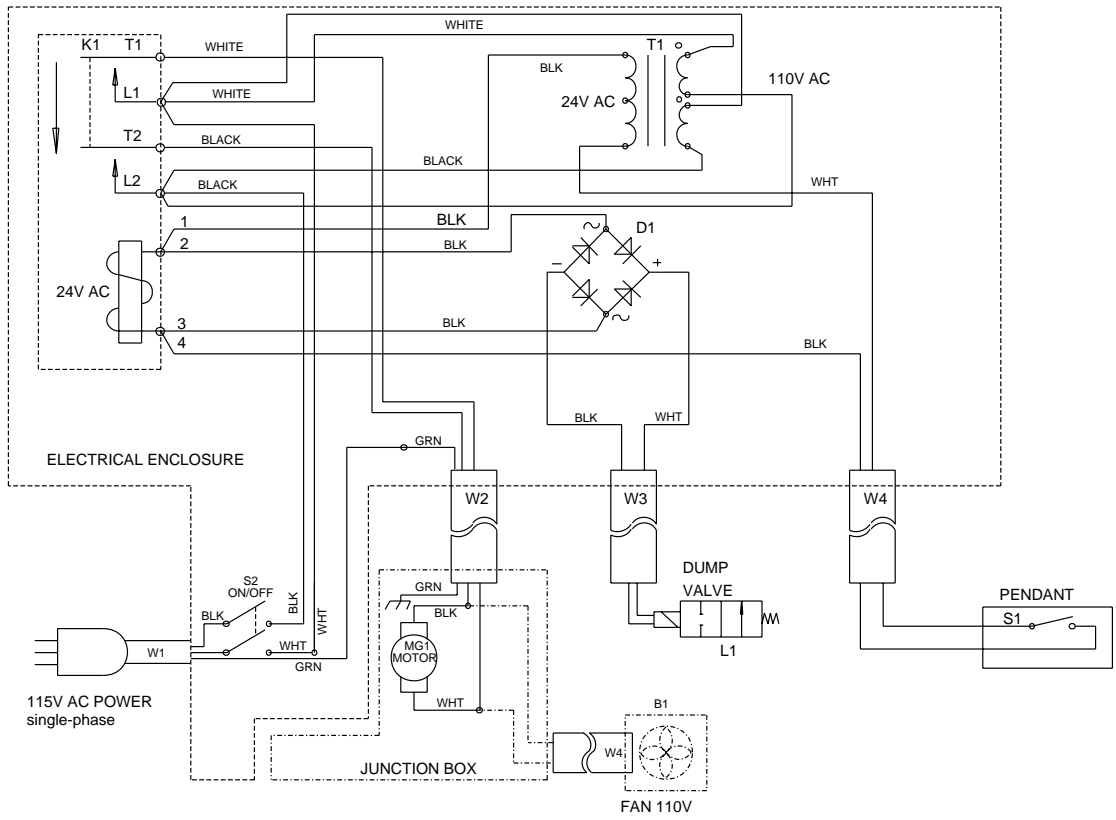
Item	Description	Color	From		To	
			Item	Terminal	Item	Terminal
22	Wire	White			7	T1
23	Wire	Black			7	T2
11	Power Cord	White			10	2
		Black			10	1
24	Wire	Black	5	S1	7	C4
24	Wire	Black	5	P4	7	L2
24	Wire*	Black	5	P2	7	L2
25	Wire	White	5	P1	7	L1
25	Wire*	White	5	P3	7	L1
26	Wire**	Black	5	P3	5	P2
16	Pendant Assembly	White	5	S3		
		Black	7	C1		
30	Wire	White	10	4	7	L1
31	Wire	Black	10	3	7	L2

\* 110V only

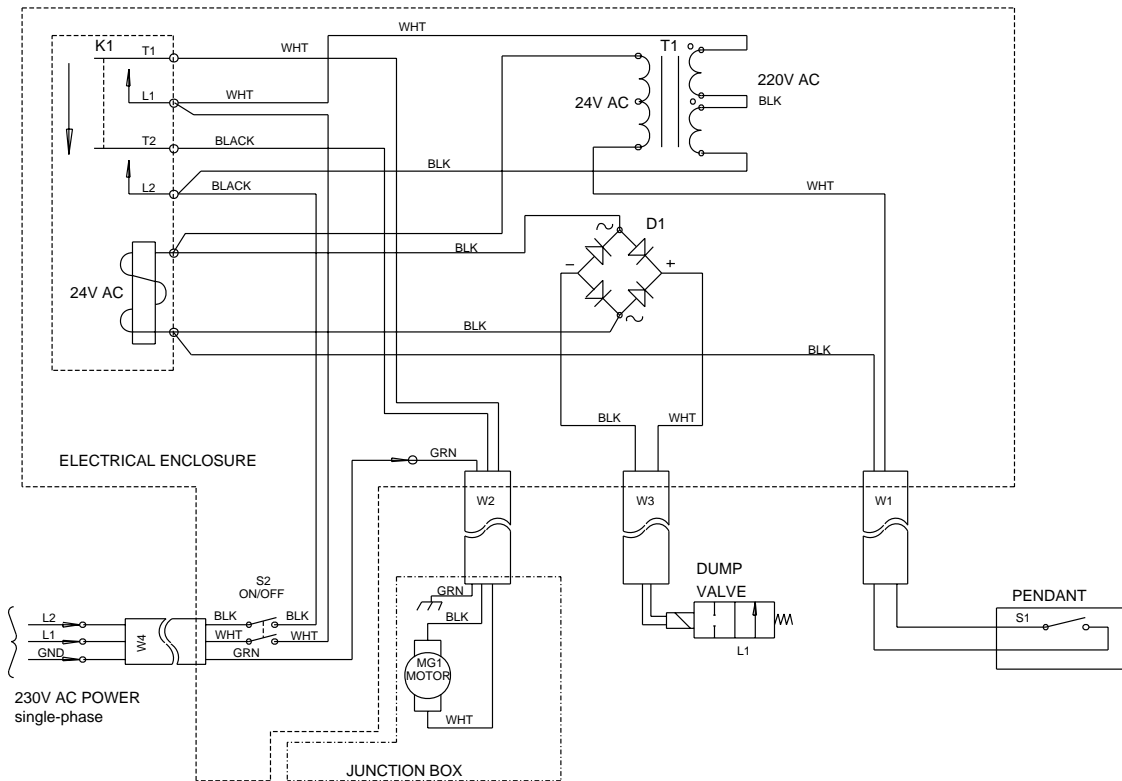
\*\* 220V only



# 115V Jog Pump Schematic



# 230V Jog Pump Schematic



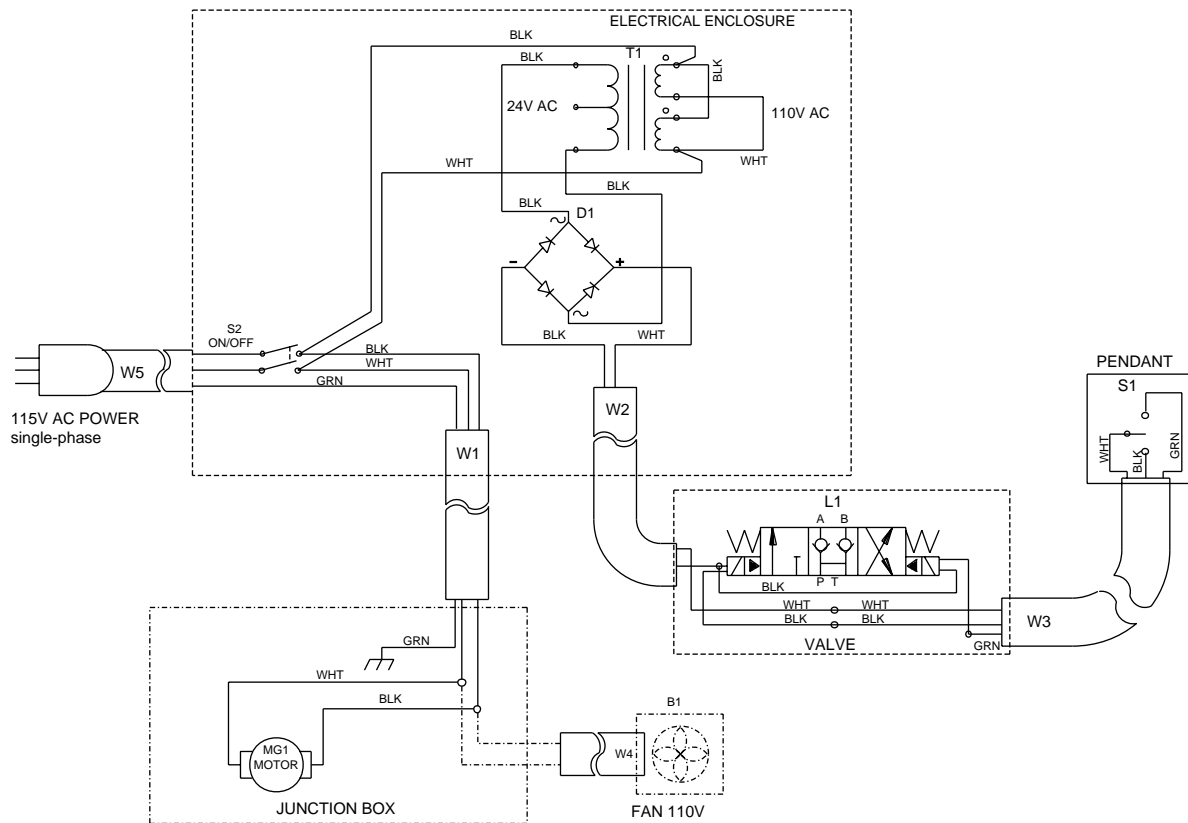
### Electric Valve (VS424) Pump Wiring Code Chart

Item	Description	Color	From		To	
			Item	Terminal	Item	Terminal
22	Wire	White	10	4		
23	Wire	Black	10	3		
11	Power Cord	White	10	2		
		Black	10	1		
13	Valve Cord	White	8	R1		
		Black	8	R2		
24	Wire	Black	5	S1	8	R3
24	Wire	Black	5	S3	8	R4
26	Wire**	Black	5	P2	5	P3
28	Wire*	White	10	4	5	P2, P4
29	Wire*	Black	10	3	5	P1, P3
28	Wire**	White	10	4	5	P4
29	Wire**	Black	10	3	5	P1

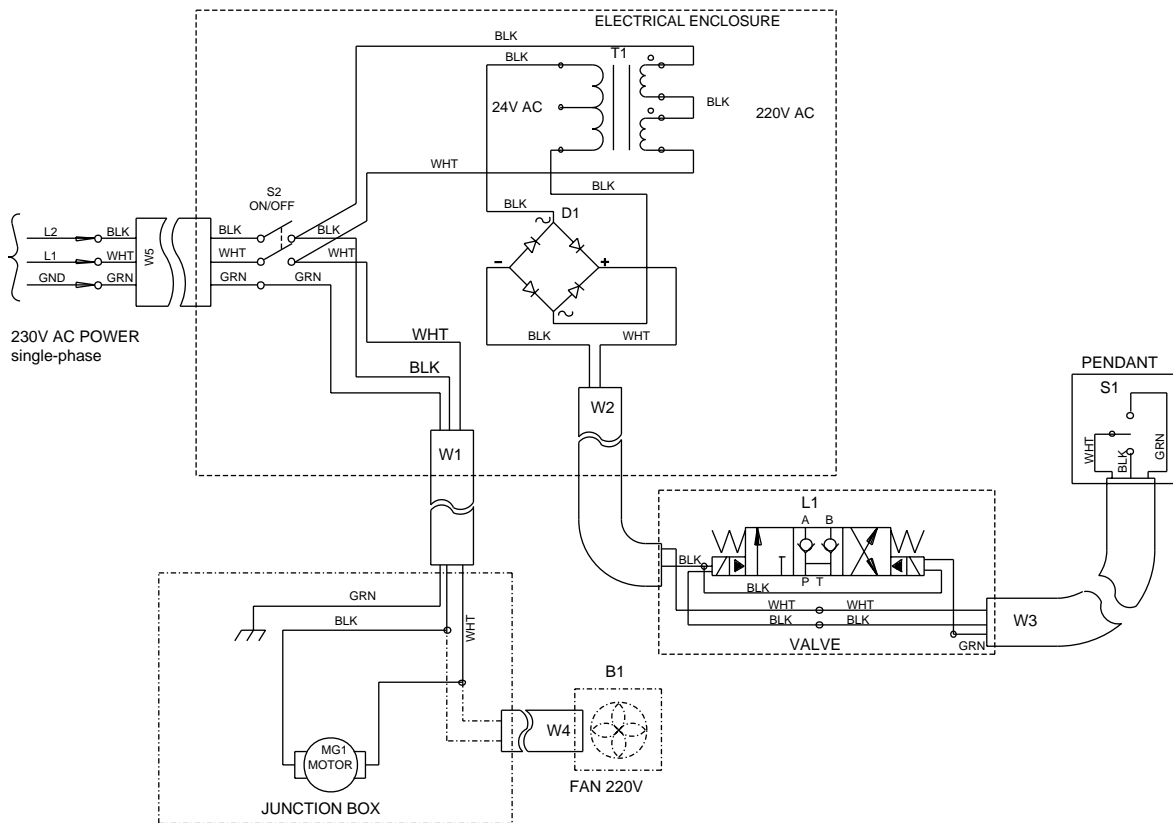
\* 110V only

\*\* 220V only

## 115V Pump with Solenoid Valve Schematic



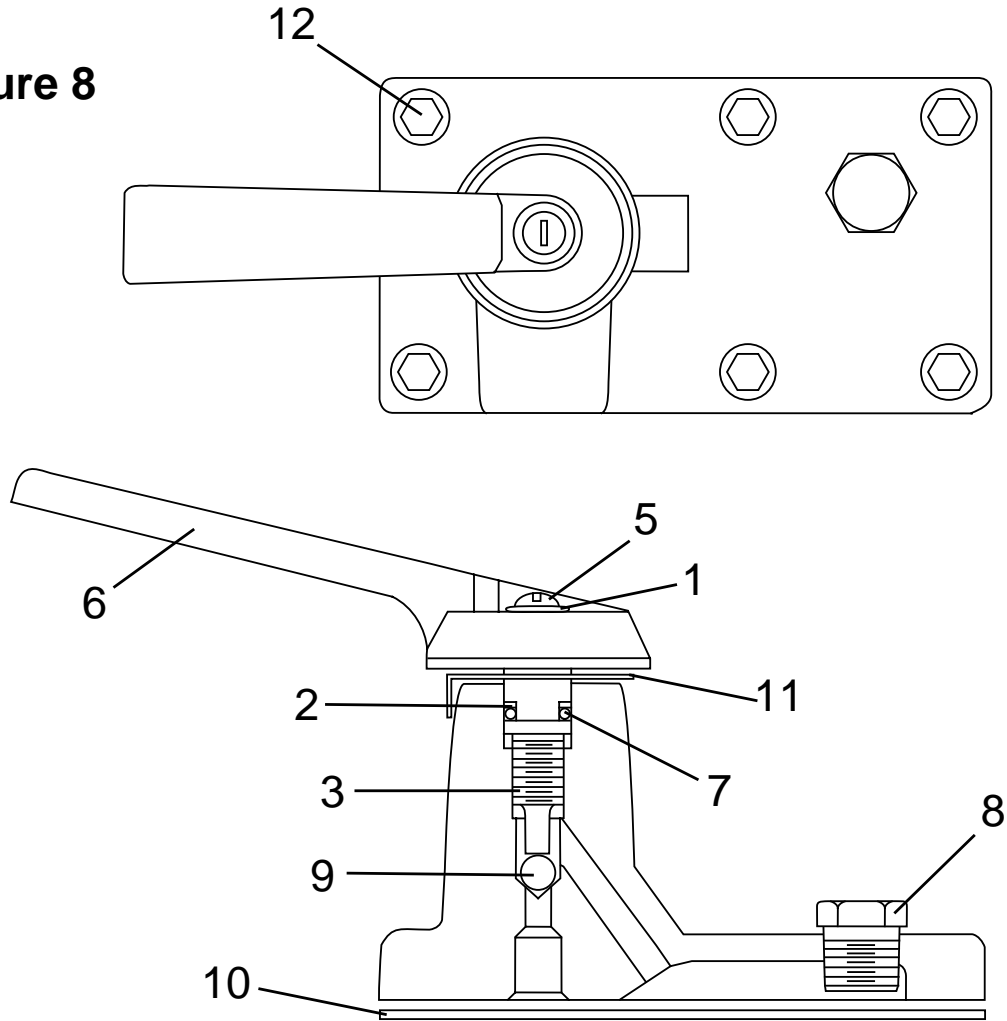
## 230V Pump with Solenoid Valve Schematic



# Valve Section

# Two-way Manual Valve

**Figure 8**



## Repair Parts List for Figure 8

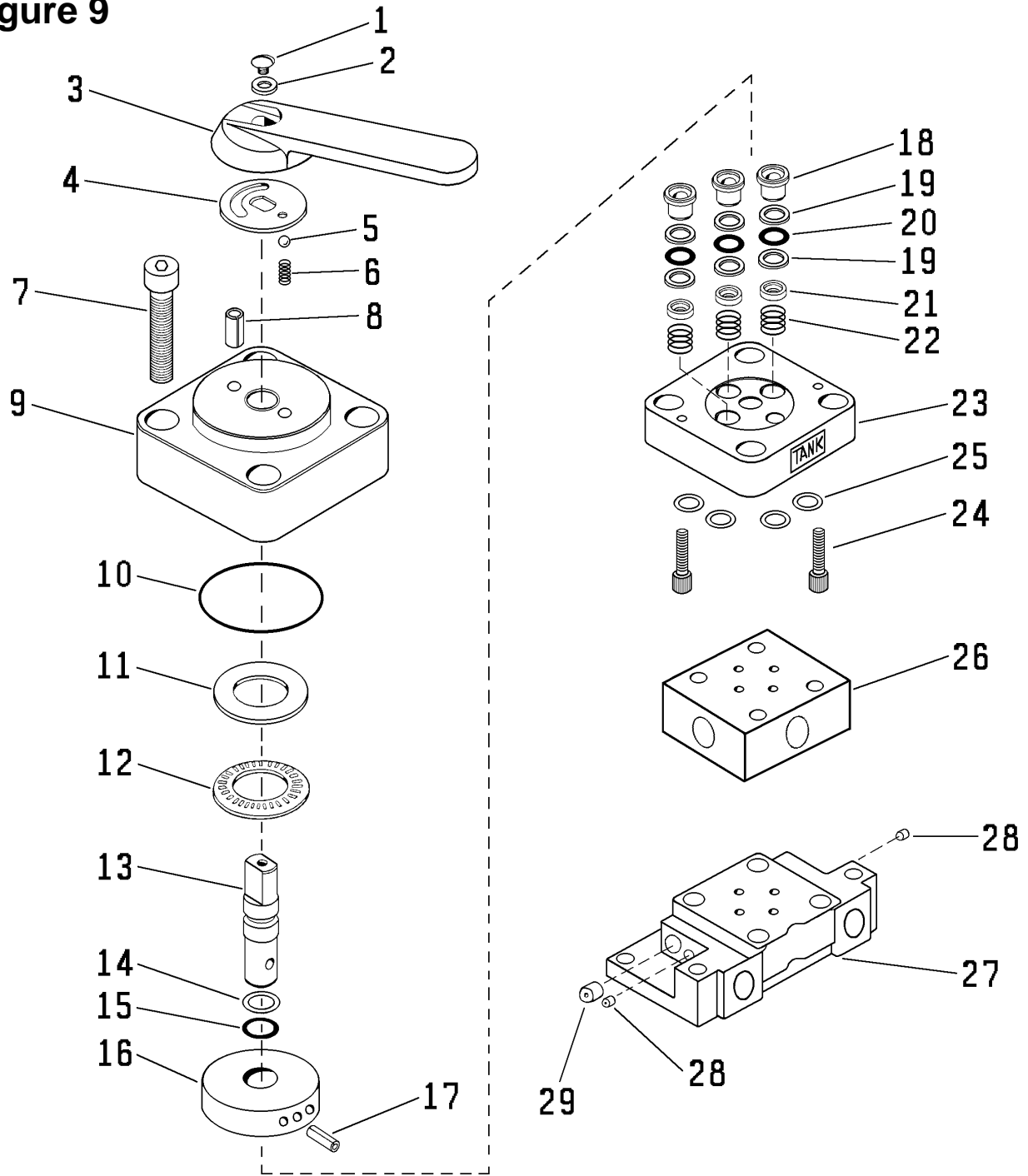
Item	Part Number	Quantity	Description	Item	Part Number	Quantity	Description
	VM2	1	Complete Valve Assembly	7	*B1111203	1	Viton O-ring
1	B1086108	1	Washer	8	R515245-2	1	Pipe Plug
2	*B1111564	1	Back-up Washer	9	*B1009016	1	Ball
3	C790010	1	Valve Stem	10	*F786167	1	Gasket
5	C302128	1	Screw	11	C756160	1	Retainer
6	Y402070	1	Valve Handle	12	B1351028	6	Screw

\*Available only as part of Repair Kit VM2K1(for EPR seals order Repair Kit VM2K1E).

**NOTE:** The standard VM2 and VM2K1 are manufactured using Viton seal material.

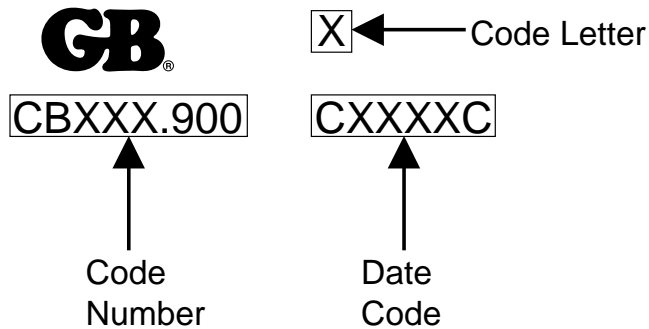
# Manual Valves

Figure 9



# Manual Valve Identification

Manual valves are stamped at the time of manufacture with a valve code letter and valve code number. The letter and number are used to identify the valve model.



VALVE CODE STAMPING		
Code Letter	Code Number	Model Number
A	CB317900	VM4
C	CB317900	VM4L
E	CB317900	VM3L
G	CB318900	VM3

Figure 9 - Manual Valves

Item No.	Part Number	Quantity	Description	Item No.	Part Number	Quantity	Description
1	* A8076048	1	Screw	16	CH542950SR	1	Disc Assembly - Code Letter A, C, E
2	* B1086108	1	Washer	16	CH538950SR	1	Disc Assembly - Code Letter G
3	Y325070	1	Handle	17	* B1109057	1	Roll Pin
4	A8005071	1	Disc	18	DA9560041	3	Shear Seal
5	* B1006016	1	7/32" Ball	19	* CF224041	6	Back-up Washer
6	* A8039110	1	Spring	20	* B1006503	3	O-ring
7	B1389028	4	Bolt - Code Letter A, G	21	CB27013	3	Spring Guide
7	B1401028	4	Bolt - Code Letter C, E	22	* CB28110	3	Spring
8	* B1126057	1	Roll Pin	23	CH539190	1	Body
9	CB324001	1	Valve Cap	24	B1326028	2	Bolt
10	* B1269503	1	O-ring	25	* B1111803	4	O-ring Code Letter A, G
11	CB327101	1	Bearing Plate	25	* B1111803	8	O-ring Code Letter C, E
12	CB328281	1	Bearing	27	CB303038	1	Base -Code Letter A, C, E, G
13	CH536104	1	Shaft	28	A1006245	2	Pipe Plug
14	* B1012564	1	Back-up Washer	29	A1007245	1	Pipe Plug
15	* B1007503	1	O-ring				

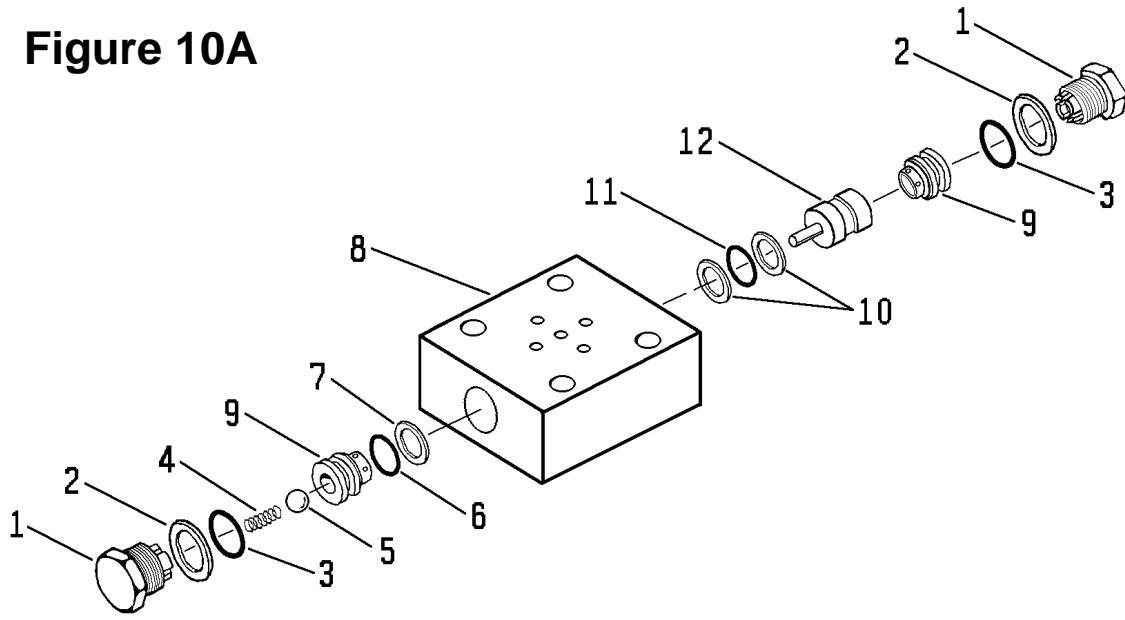
\* Available only as part of Repair Kit VM4K3.

For Viton Seals, order Repair Kit VM4K3V. For EPR Seals, order Repair Kit VM4KE.

**NOTE:** EPR Seals are not available for the 3-way and 4-way locking valve sections.

# Three-way Locking Valve (Valve Code Letter E)

Figure 10A



Repair Parts List for Figure 10A

Item No.	Part Number	Quantity	Description	Item No.	Part Number	Quantity	Description
1	CR356013	2	Spring Guide	7	* B1113564	1	Washer
2	* CR355167	2	Gasket	8	Block Not Available Separately		Order Assembly Y383900SR
3	* B1116803	2	O-ring	9	Y126290	2	Seat
4	* CJ656110	1	Spring	10	* B1111564	2	Back-up Washer
5	* B1008016	1	9/32" Ball	11	* B1009503	1	O-ring
6	* B1011503	1	O-ring	12	CK598900	1	Piston

\* Items included in and available only as part of Repair Kit VM4K3.

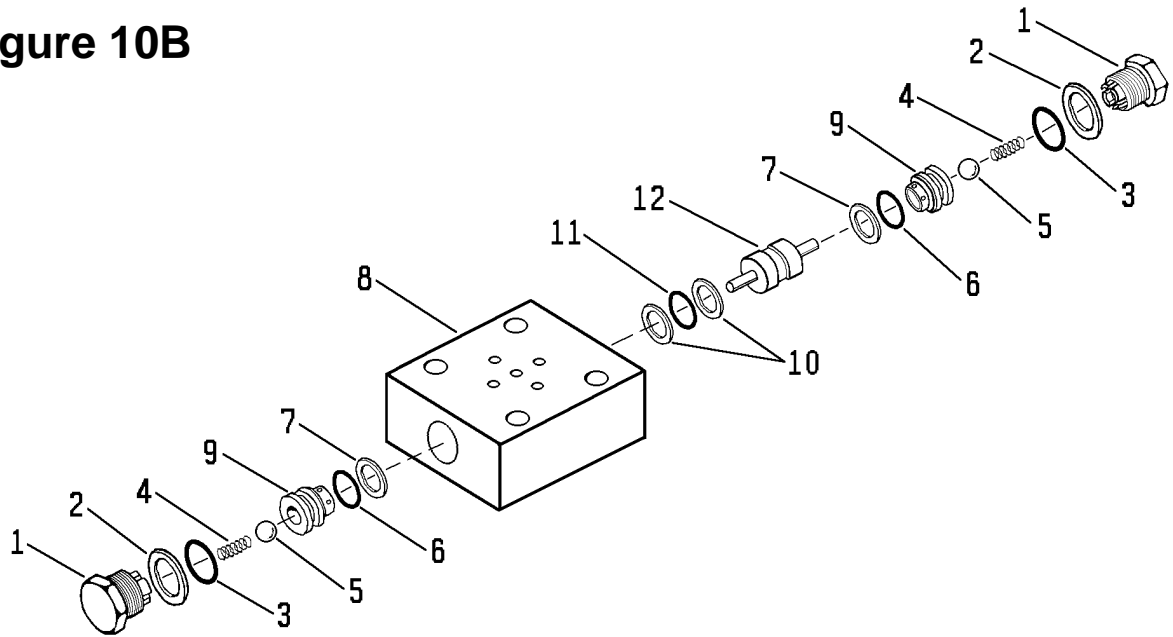
For Viton Seals, order Repair Kit VM4K3V.

**NOTE:** EPR Seals are not available for the 3-way and 4-way locking valve sections.



# Four-way Locking Valve (Valve Code Letter C)

Figure 10B



Repair Parts List for Figure 10B

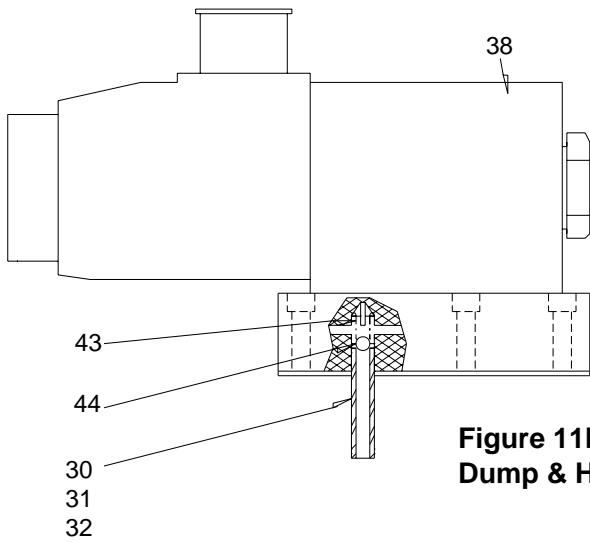
Item No.	Part Number	Quantity	Description	Item No.	Part Number	Quantity	Description
1	CR356013	2	Spring Guide	7	* B1113564	2	Washer
2	* CR355167	2	Gasket	8	Block Not Available Separately		Order Assembly Y123900SR
3	* B1116803	2	O-ring	9	Y126290	2	Seat
4	* CJ656110	2	Spring	10	* B1111564	2	Back-up Washer
5	* B1008016	2	9/32" Ball	11	* B1009503	1	O-ring
6	* B1011503	2	O-ring	12	CK598900	1	Piston

\* Available only as part of Repair Kit VM4K3.

For Viton Seals, order Repair Kit VM4K3V.

**NOTE:** EPR Seals are not available for the 3-way and 4-way locking valve sections.

# Figure 11 - Dump and Dump & Hold Valves

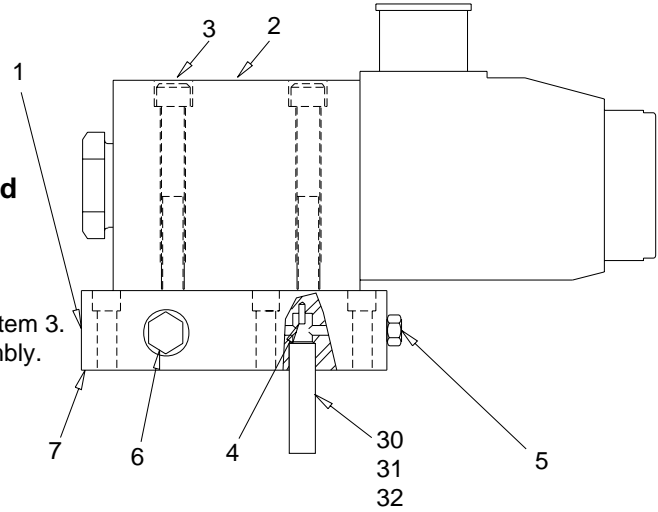


**Figure 11A - Dump and Dump & Hold Valves**

**NOTE:** Items 43 and 44 are used only in the Dump & Hold version pumps.

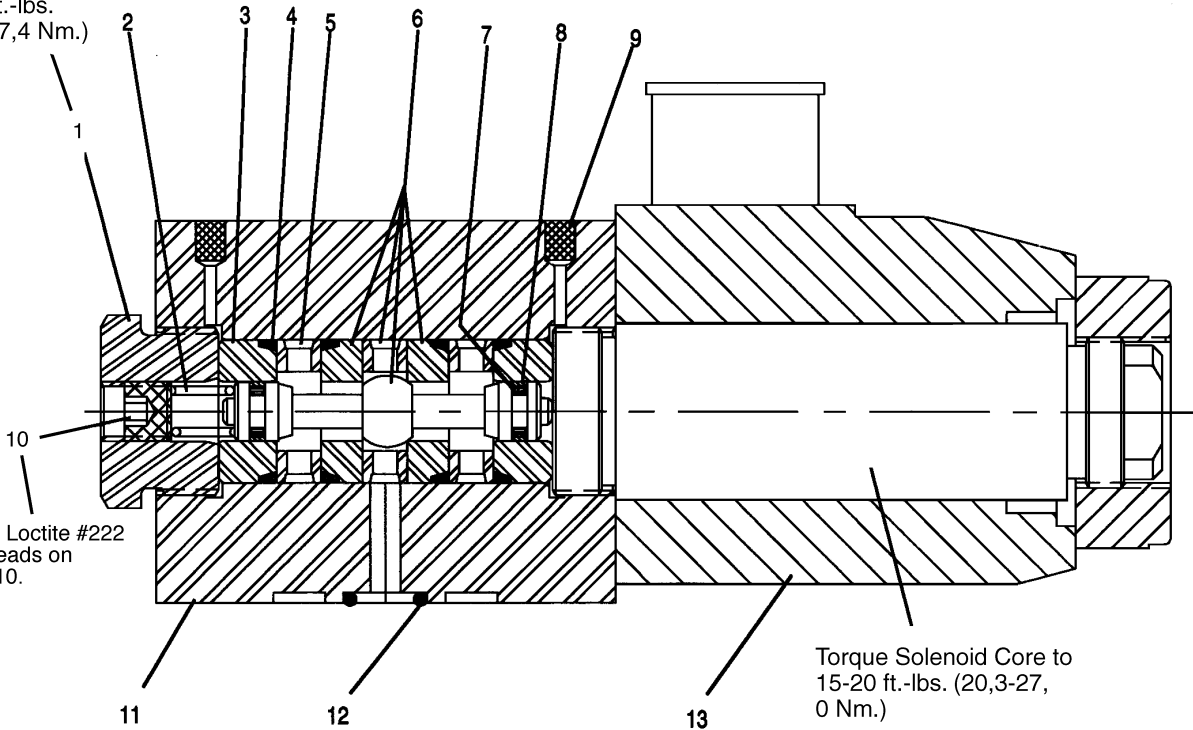
**Figure 11B - Dump and Dump & Hold Valves**

Apply Loctite 222 to threads on Item 3. Lubricate all seals prior to assembly.



**Figure 11C - Poppet Valve**

Torque Item 1 to 32-35 ft.-lbs. (43,3-47,4 Nm.)

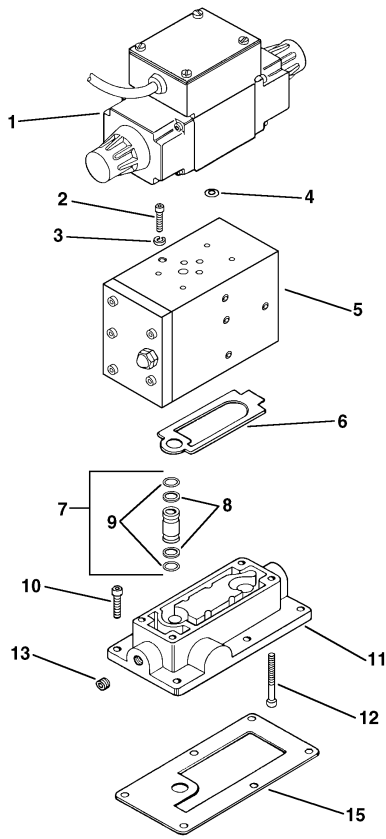


Apply Loctite #222 to threads on Item 10.

Torque Solenoid Core to 15-20 ft.-lbs. (20,3-27,0 Nm.)

<b>Repair Parts List for Figure 11A</b>			
<b>Item</b>	<b>Part Number</b>	<b>Quantity</b>	<b>Description</b>
30	DA7105096	1	Connector (Dump Valve Only)
	DA9144096	1	Connector (Dump & Hold Valve Only)
31	B1012203	2	O-ring
32	BSS0368D	2	Back-up
38	DA9158949SR	1	Dump & Hold Valve Assembly
	DA9022949SR	1	Dump Valve Assembly
40	CCA0829028-1A	6	Socket Head Cap Screw
43	DA9347110	1	Spring (Dump & Hold Valve Only)
44	B1009016	1	Steel Ball (Dump & Hold Valve Only)
<b>Repair Parts List for Figure 11B</b>			
<b>Item</b>	<b>Part Number</b>	<b>Quantity</b>	<b>Description</b>
1	A1071006	1	Plug
2	VSG1410P	1	Poppet Valve Assembly
3	B1020028	4	Cap Screw
4	B1050057	1	Spring Pin
5	CN815006	1	Pipe Plug
6	DA9172006	1	Pipe Plug
7	DA9123690	1	Adapter Body
<b>Repair Parts List for Figure 11C</b>			
<b>Item</b>	<b>Part Number</b>	<b>Quantity</b>	<b>Description</b>
1	DA5421009	1	Valve Plug
2	* DA5422110	1	Compression Spring
3	DA3697039	2	Bushing
4	* B1016803	4	O-ring
5	DA3698290	3	Seat Spacer
6	DA5792949SR	1	Internal Stack
<b>NOTE:</b> The internal stack includes items supplied in the valve repair kit DA5792949K.			
7	* B1002503	2	O-ring
8	* CM279044	2	Glyd Ring
9	* DA4390118	2	Filter
10	PA1417027	1	Set Screw
11	DA4393190	1	Valve Block
12	* B1011803	3	O-ring
13	DA4404900	1	24V Solenoid Assembly
* Available only as part of Repair Kit DA5792949K.			
<b>NOTE: EPR and Viton seals are not available for the dump and the dump &amp; hold valves.</b>			

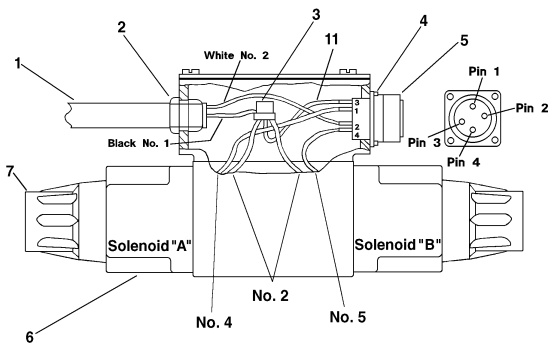
**Figure 12A - VS424 Valve Assembly**



Repair Parts List for Figure 12A			
Item	Part Number	Quantity	Description
1	DA3791900SR	1	Solenoid Assembly
	DA4993900SR	1	EPR Solenoid Ass'y.
2	B1338018	4	Cap Screw
3	M231108	4	Lock Washer
4	*B1904203	4	O-ring
5	CL99950W	1	Valve Block Ass'y.
	DA5036900SR	1	EPR Valve Block Ass'y.
6	*CM56167	1	Gasket
7	DA973950	1	Viton Connector Ass'y.
	DA5257900	1	EPR Connector Ass'y.
8	*B1012564	2	Back-up Washer
9	*B1012203	2	O-ring
	B1012303	2	EPR O-ring
10	B1351028	6	Cap Screw
11	F132038	1	Adapter
12	B1017028	4	Cap Screw
13	A1007245	1	Plug
15	*F786167	1	Gasket
19	C162096	1	Connector

\* Available only as part of Repair Kit VS424K1. For EPR seals, order Repair Kit VS424K1E.

**Figure 12B - Solenoid Assembly**



Repair Parts List for Figure 12B			
Item	Part Number	Quantity	Description
1	DA3740450SR	1	Electric Cord
2	DA1522095	1	Fitting
3	BL20187	1	Connector
4	DA4041028	4	Self Tapping Screw
5	F1980-4SR	1	Receptacle
6	DA6372720	2	24V Coil
7	DA6373021	2	Coil Nut
11	F631450	1	Wire Roll

Connect	To	Connect	To
Black No. 1	Connector (Item 3)	White No. 2	Receptacle (Item 5) Pin 2
No. 2 from Solenoid A	Connector (Item 3)	No. 4 from Solenoid A	Receptacle (Item 5) Pin 1
No. 2 from Solenoid B	Connector (Item 3)	No. 5 from Solenoid B	Receptacle (Item 5) Pin 4
No. 11 from Receptacle (Item 5) Pin 3	Connector (Item 3)		

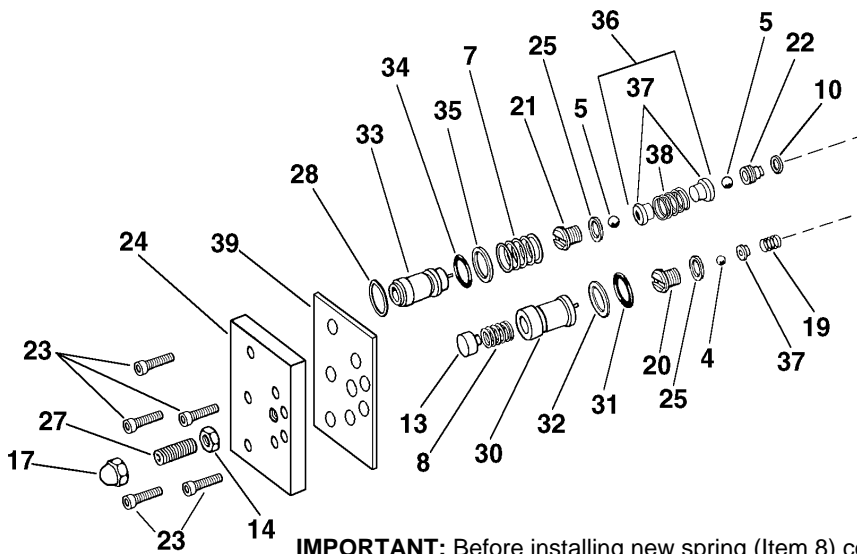
## Figure 12C - Valve Block Assembly

**Torque Specs:**

Upper Seats (Items 20 & 21) to 37 ft-lbs.

Lower Seat (Item 22) to 25 ft-lbs.

Cap Screw (Item 23) to 10 - 12 ft-lbs.



**IMPORTANT:** Before installing new spring (Item 8) compress it to 750 psi or 1680 lbs of force using a 10 ton GB Press.

**Pressure Settings:**

Pilot Adjusting Screw (Item 27) to 850-900 psi.

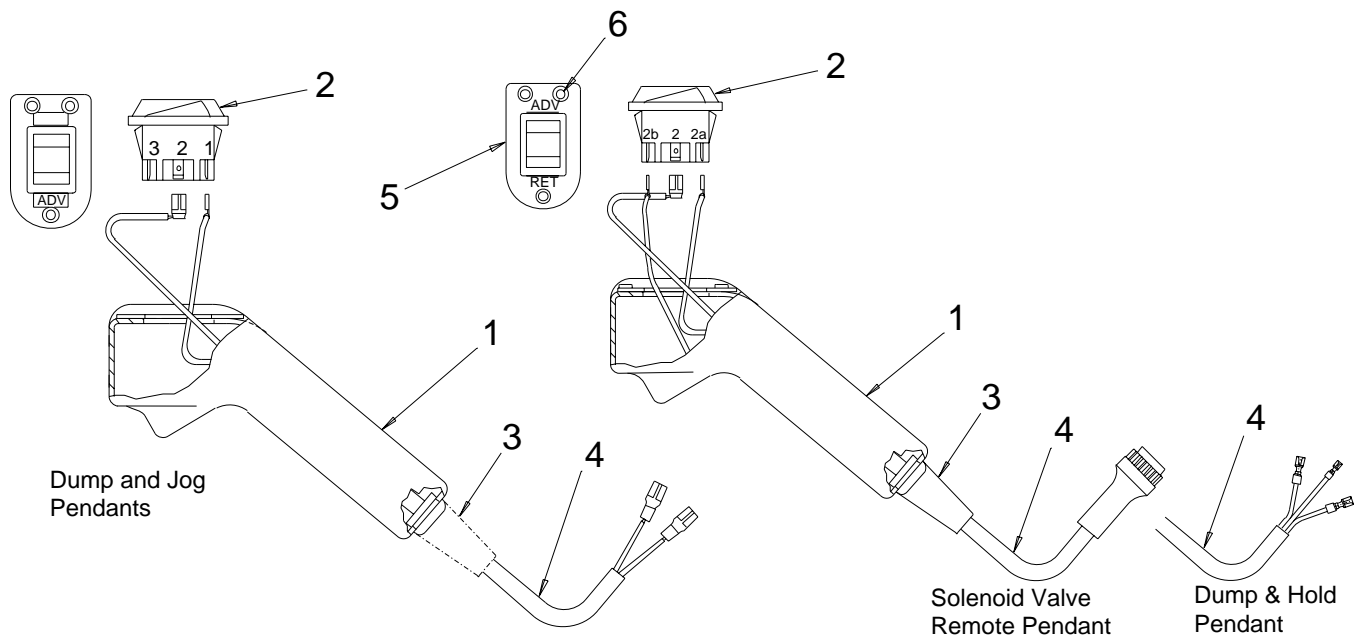
Pilot Relief Adjusting Screw (Item 29) to 1150-1200 psi.

High Pressure Relief Valve (Item 16) to 11,000-11,500 psi.

Repair Parts List for Figure 12C							
Item	Part Number	Quantity	Description	Item	Part Number	Quantity	Description
1	* A1006245	5	1/16"-27NPTF Plug	24	M502098	1	Cover
2	CL938950W	1	Valve Block Ass'y.	25	* P182167	3	Gasket
3	* B1003016	3	1/8" Ball	26	* Y75110	1	Spring
4	* B1007016	1	1/4" Ball	27	Y158028	1	Adjusting Screw
5	* B1010016	4	1 1/32" Ball	28	* B1216518	2	Square Ring
6	B1342028	3	Screw		DA5035267	2	EPR Square Ring
7	* BL10952	2	Spring	29	Y948028	1	Adjusting Screw
8	* BL10967	1	Spring	30	DA983950SR	1	Piston Assembly
9	* BL10968	2	Spring		DA5033900	1	EPR Piston Assembly
10	* BL30156	2	Gasket	31	* B1214203	1	O-ring
11	* C846037	3	Gasket		* B1214303	1	EPR O-ring
13	CH43950W	1	Spacer	32	B1214564	1	Back-up Washer
14	F378123	1	Nut	33	DA982950SR	2	Piston Assembly
15	* K1013	2	Ball Guide		DA5034900	2	EPR Piston Assembly
16	K877028	2	Adjusting Screw	34	* B1214203	2	O-ring
17	L342055	1	Acorn Nut		* B1214303	2	EPR O-ring
18	* L429013	1	Ball Guide	35	B1214564	2	Back-up Washer
19	* L848110	1	Spring	36	CL104950W	2	Spring & Spacer Ass'y.
20	* M31290	1	Seat	37	L843186	5	Spacer
21	* CW181290	2	Seat - Top	38	* CW98110	2	Spring
22	* CW182290	2	Seat - Bottom	39	* CM172167	1	Gasket
23	B1009028	7	Cap Screw	40	CF634006	2	Slug

\* Available only as part of Repair Kit VS424K1. For EPR seals, order Repair Kit VS424K1E.

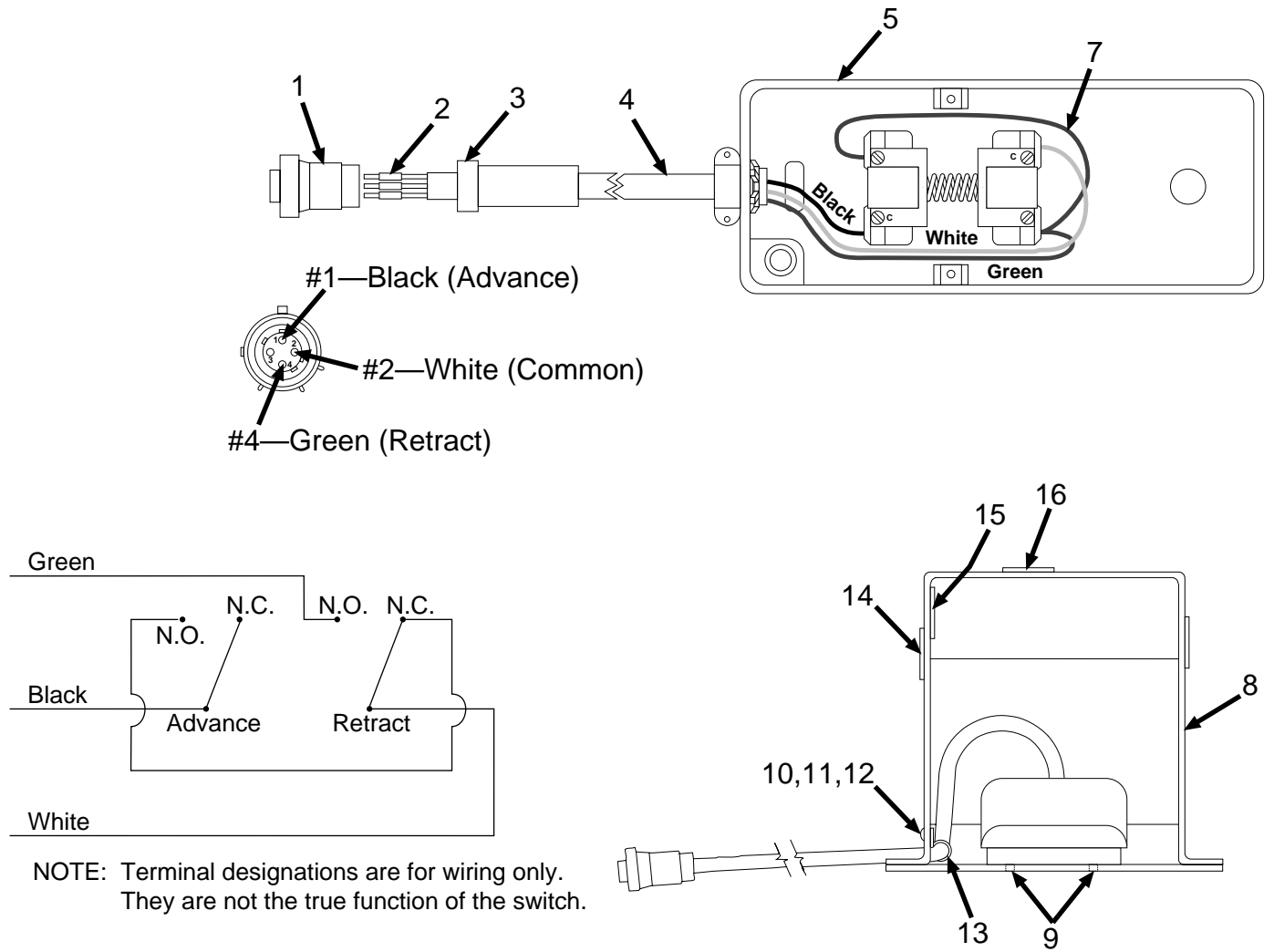
**Figure 13 - Pendant Switches**



Rocker Switch Wiring	
Dump and Jog Pendants	Dump & Hold and Remote Pendants
white to terminal 1	white to terminal 2b
black to terminal 2	black to terminal 2
	green to terminal 2a

Repair Parts List for Figure 8					
Item	Quantity	Description	Dump and Jog Pendants	Dump & Hold Pendant	Solenoid Valve Remote Pendant
—	1	Pendant Assembly	DA7875900SR	DA9180900SR	DA3789900SR
1	1	Pendant Body	CU598190	DA1323190	DA1323190
2	1	Rocker Switch	CU911372	E1500003	E1500001
3	1	Strain Relief	DA1568007	DA1568007	DA1568007
4	1	Wire Assembly	DA7874900SR	DA9397900SR	DA3788900KSR
5	1	Mounting Plate	—	DA3786101	DA3786101
6	3	Pop Rivet	—	CU971003	CU971003

Figure 14 - Foot Switches



Repair Parts List for Figure 9

Item	Part Number	Quantity	Description	Item	Part Number	Quantity	Description
1	F1980-6	1	Plug	9	M922028	2	Cap Screw
2	F1980-5	3	Pin	10	B2506028	1	Button Head Cap Screw
3	EJC1601111	1	Cable Clamp	11	B1018121	1	Nut
4	DA4701450SR	1	128" Electrical Cord	12	B1064066	1	Lock Washer
5	PFS34	1	Foot Switch Assembly	13	F100299-26	1	Loop Clamp
6	—	—	—	14	G424026	2	Decal
7	B1006453	1	6" Wire	15	DA5255026	1	Model No. Decal
8	CA683900	1	Guard Assembly	16	CH272026	1	Caution Decal

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**REPAIR AND SERVICE INSTRUCTIONS: For repair service and parts, contact your nearest GB ELECTRICAL Service Center. The GB ELECTRICAL Service Center will provide complete and prompt service on all GB ELECTRICAL products.**

**PARTS AND SERVICE:** For quality workmanship and genuine GB ELECTRICAL parts, select an Authorized GB Service Center for your repair needs. Only repairs performed by an Authorized Service Center displaying the official GB Authorized sign are backed with full factory warranty. Contact GB Electrical (414) 352-4160 for the name of the nearest GB Authorized Service Center.

**WARRANTY:** GB ELECTRICAL, INC. warrants its product against defects in workmanship and materials for 1 year from date of delivery to user. Chain is not warranted. Warranty does not cover ordinary wear and tear, abuse, misuse, overloading, altered products or use of improper fluid.

**WARRANTY RETURN PROCEDURE:** When question of warranty claim arises, send the unit to the nearest GB Authorized Service Center for inspection, transportation prepaid. Furnish evidence of purchase date. If the claim comes under the terms of our warranty the Authorized Service Center will REPAIR OR REPLACE PARTS AFFECTED and return the unit prepaid.



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