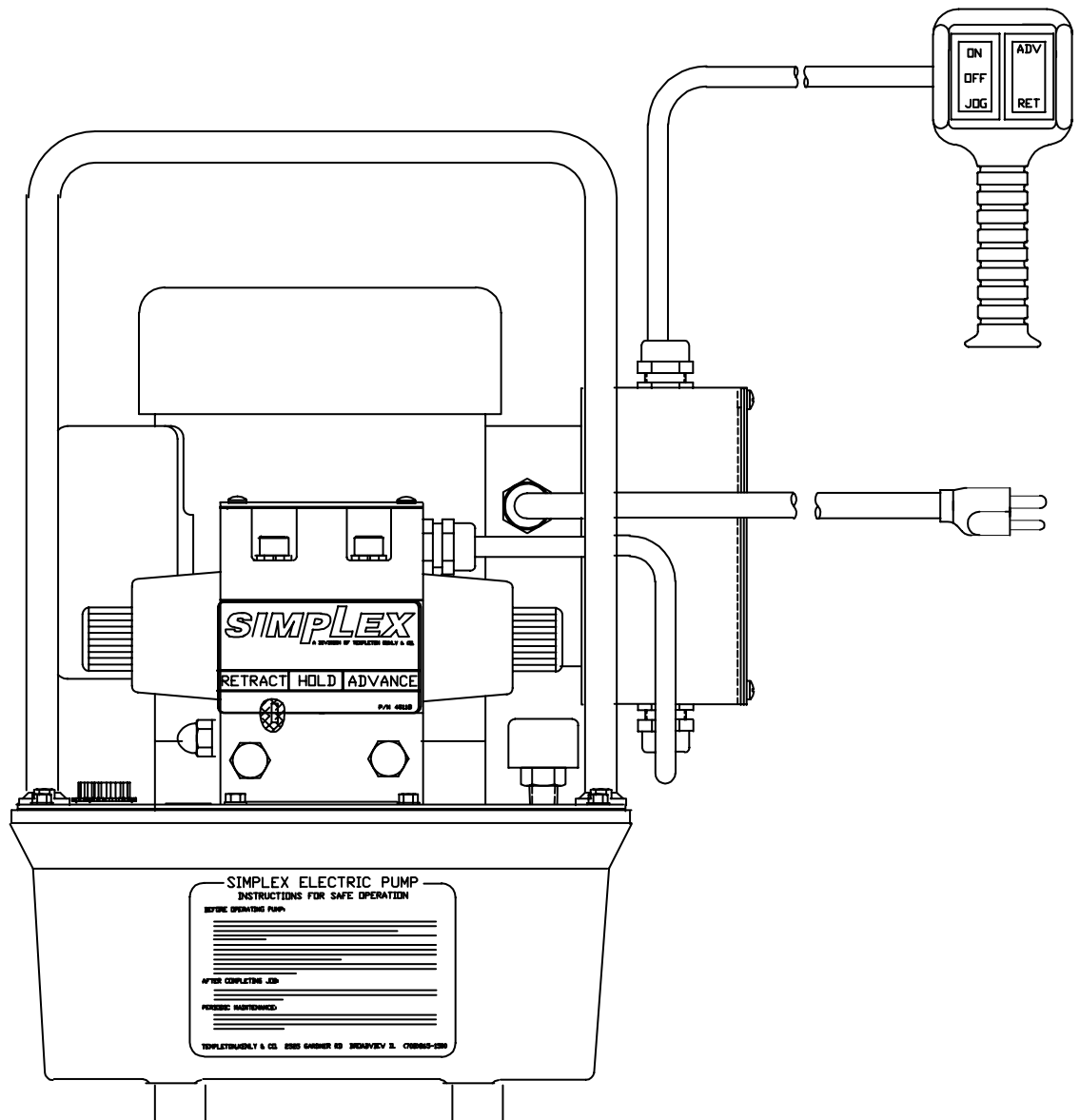


# SIMPLEX®

A Division Of Templeton, Kenly & Co., Inc.

## PE 40 SERIES ELECTRIC POWER PUMPS

Part Identification Manual  
For 1-1/2 hp, 115 Volt and 230 Volt  
PEM, PPM, PES and PPS Models  
Revision B  
07/2006



2525 Gardner Road \* Broadview, Il. 60155 \* (800)323-9114 \* [www.tksimplex.com](http://www.tksimplex.com)

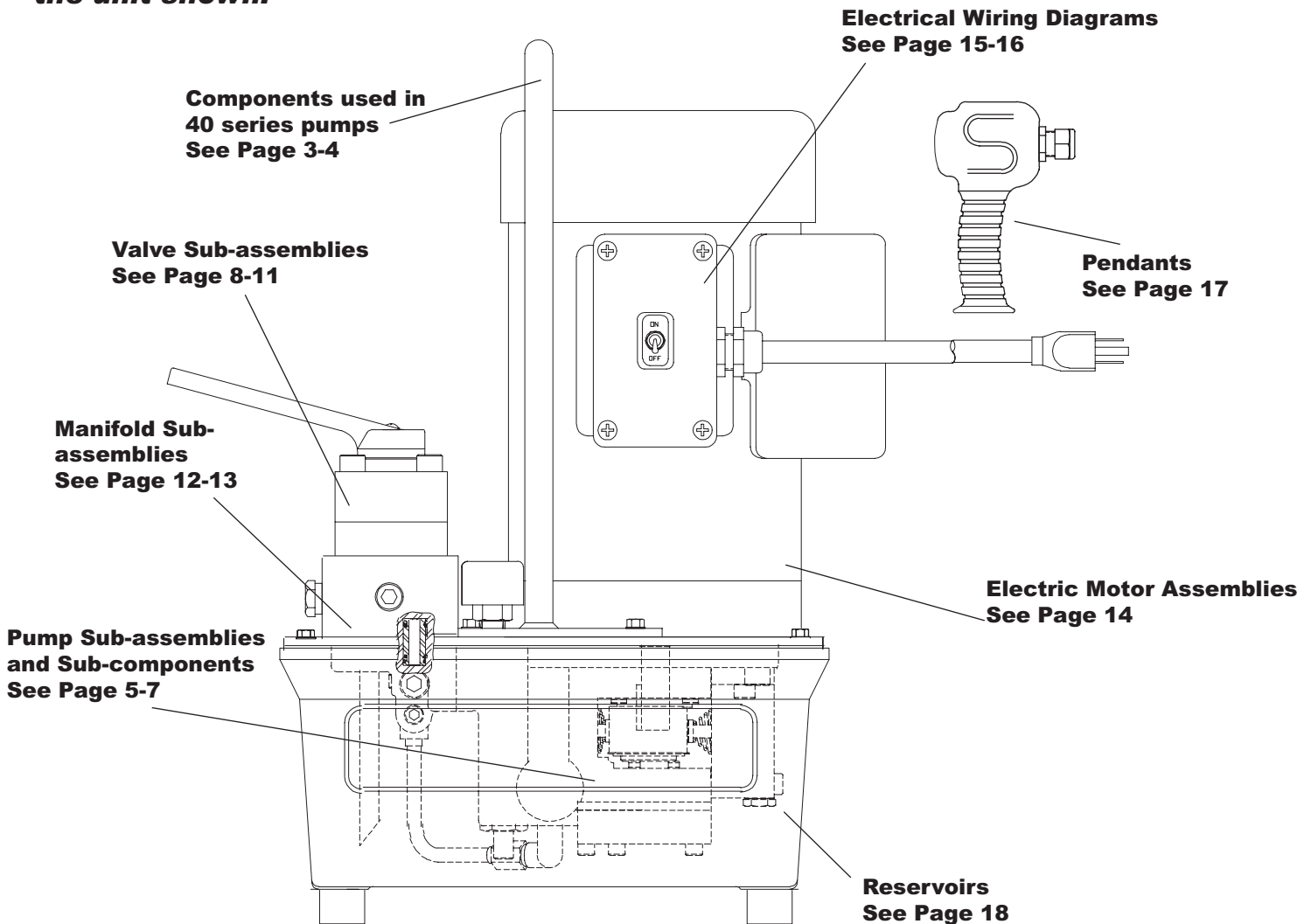
# 40 Series Electric Power Pump

# How to Identify Parts for Your Model.

Understanding our model number configurations

Sample Model #	P	E	M	4	0	0	2	
Description	Power Pump Type	Motor Type / Controls	Valve Style	Pump Series	Options	Valve type	Reservoir Size	Motor Voltage
		E = Electric / no pendant P = Electric w/ pendant F = Electric w/ foot control	M = Manual Valve S = Solenoid Valve	4 = 20 Series	0 = no options 1 = roll bars 2 = heat exchanger & filter 3 = roll bar, heat exchanger, filter 4 = oil filter 5 = roll bars & oil filter	2 = 2 way 2 position 3 = 3 way 3 position 4 = 4 way 3 position 5 = 3 way locking 6 = 4 way locking	1 = 1 gallon 2 - 2 gallon 5 = 5 gallon 6 = 10 gallon 7 = 10 gallon	Blank = 115V A = 230V

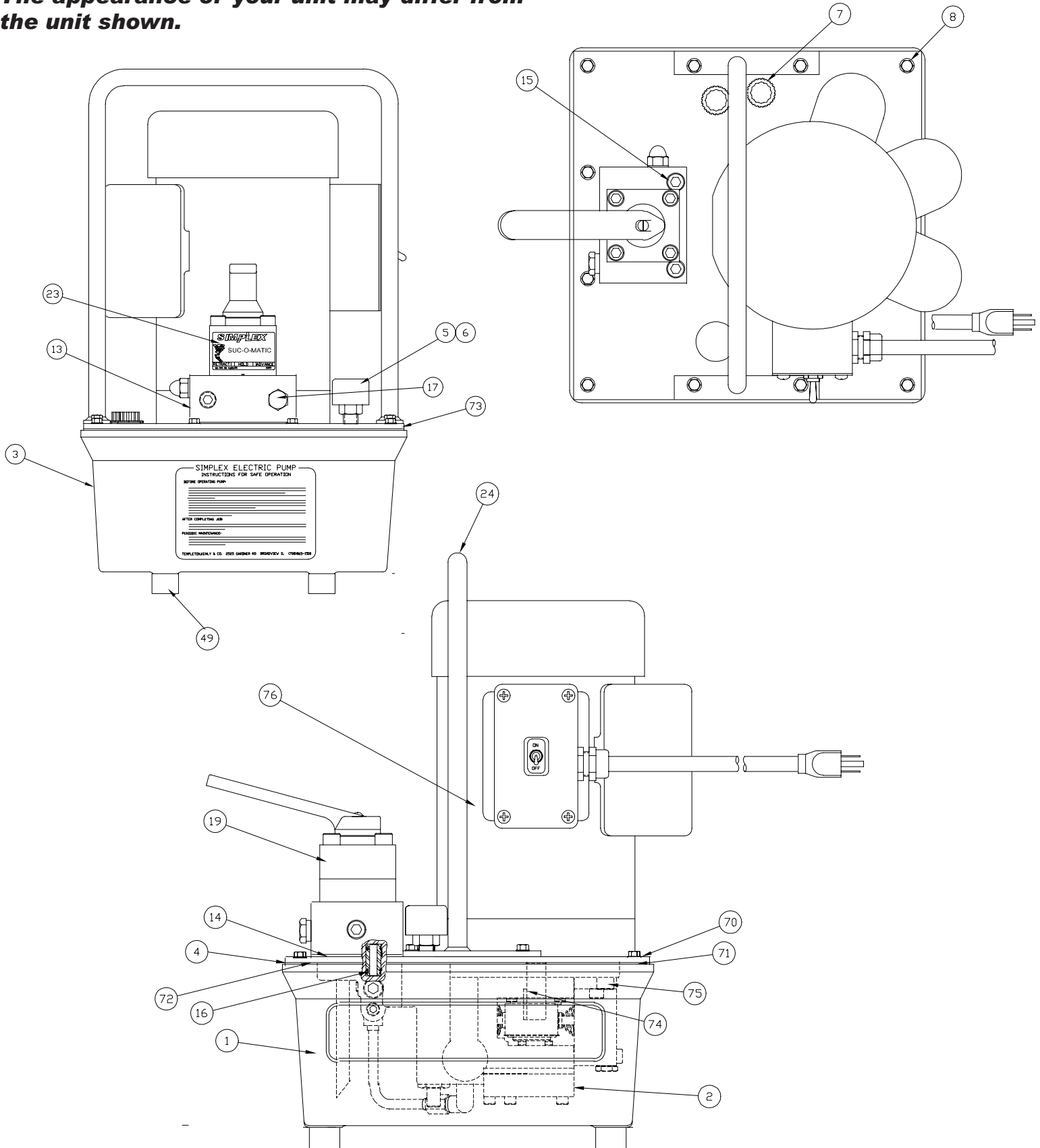
**Note: This illustration is for reference only. The appearance of your unit may differ from the unit shown.**



# 40 Series Electric Power Pump

# Common components used in pumps

**Note: This illustration is for reference only. The appearance of your unit may differ from the unit shown.**



# 40 Series Electric Power Pump

# Common Components Part List

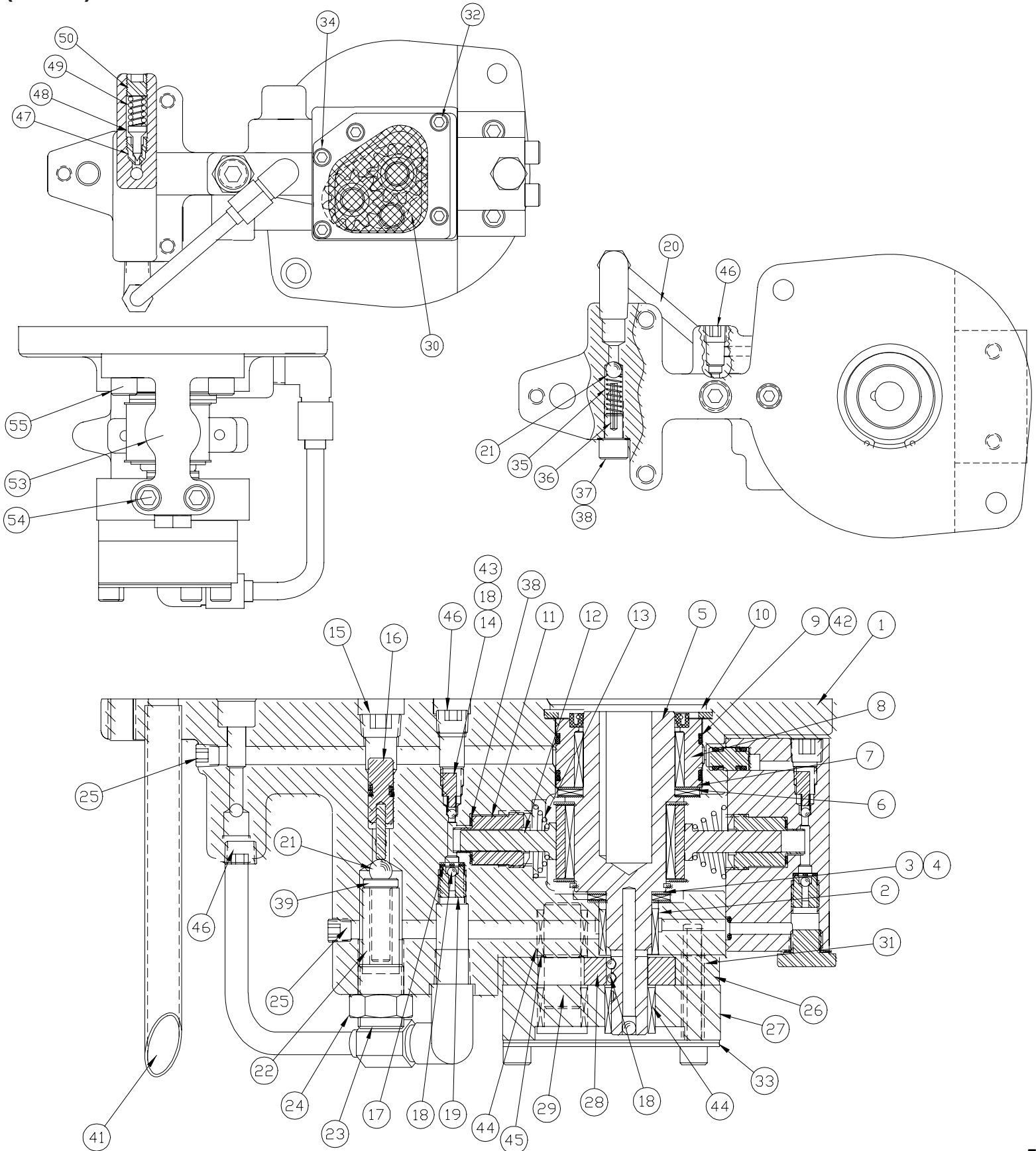
ITEM #	DESCRIPTION	PART #		QTY.
		115 V	230 V	
02	PUMP ASM 2P 1-1/2HP	18853	18853	1.00
03	RESERVOIR	See Page 18		1.00
04	GASKET RES	See Page 18		1.00
05	BREATHER VENT	68000	68000	1.00
06	HEX STL PIPE PLUG	87492	87492	1.00
07	FILLER PLUG	68571	68571	2.00
08	SCREW	86095	86095	12.00
13	MANIFOLD ASM	See Page 12-13		1.00
14	VALVE GASKET	69242	69242	1.00
15	SHCS 3/8-16 X 2 1/2	93599	93599	3.00
16	ADAPTER ASSY.	68963	68963	1.00
17	HEX ST. PIPE PLUG	87145	87145	1.00
19	VALVE ASM	See Page 8-11		1.00
24	HANDLE	66238	66238	1.00
49	RUBBER FOOT	69479	69479	4.00
70	GASKET-MOTOR	66012	66012	1.00
71	GASKET-PUMP @ MOTOR	68231	68231	1.00
72	GASKET-PUMP @ VALVE	68551	68551	1.00
73	COVER PLATE 2, 5, 10, 20 GAL.	68682P	68682P	1.00
	COVER PLATE 1 GAL	68607P	68607P	1.00
74	PIN,DOWEL .	69026	69026	1.00
75	SHCS 3/8-16X1-1/4	93596	93596	2.00
76	MOTOR ASM	See Page 14		1.00

*NOTE: COMMON COMPONENTS ARE LISTED FOR ALL MODEL CONFIGURATIONS. UNIQUE ITEMS WILL BE REFERENCED TO ANOTHER PAGE.*

# 40 Series Electric Power Pump

# Sub Pump Assembly

## (18853) SUB PUMP ASSEMBLY



# 40 Series Electric Power Pump

# Sub Pump Assembly

## (18853) PART LIST

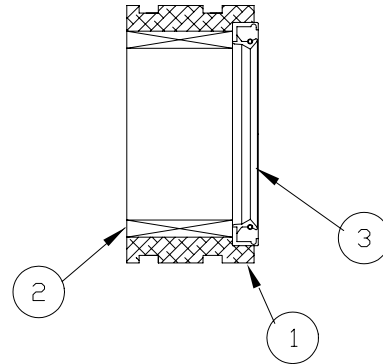
ITEM #	DESCRIPTION	PART #	QTY.
		PUMP ASM	
01	PUMP BODY	43769	1.00
02	BEARING,	68360	1.00
03	THRUST BEARING	66033	1.00
04	THRUST WASHER	66474	2.00
05	ECCENTRIC SHAFT ASM	See Page 7	1.00
06	THRUST BEARING	66106	1.00
07	THRUST WASHER	66108	2.00
08	ADAPTER-SHAFT ASM	See Page 7	1.00
09	O-RING	56020322	1.00
10	RETAINING RING	68978	1.00
11	ADAPTOR	68820	1.00
12	PISTON .	68819	1.00
13	SPRING, PISTON	68340	1.00
14	BALL STOP	68810	1.00
15	PLUG	93950	1.00
16	UNLOADING PISTON ASM	See Page 7	1.00
17	BALL RETAINER	66043	1.00
18	BALL	90906	5.00
19	INTAKE SEAT	66046	1.00
20	TUBE ASM	68851	1.00
21	BALL	91701	2.00
22	UNLOADING SPRING	43671	1.00
23	SET SCREW UNLOADING VALVE	43674	1.00
24	HEX NUT UNLOADING VALVE	43675	1.00
25	PLUG	97641	2.00
26	PLATE-CENTER	68855	1.00
27	PLATE-BOTTOM	68849	1.00
28	GEAR-PUMP	68896	2.00
29	SHAFT-IDLER	68850	1.00
30	SCREEN	68921	1.00
31	TUBE	68922	2.00
32	SHCS	68255	4.00
33	PLATE-SCREEN MTG.	68927	1.00
34	SHCS	89148	1.00
35	SPRING	68225	1.00
36	ROLL PIN	81332	1.00
37	SCREW, BALL STOP	68226	1.00
38	GASKET	85726	2.00
39	SPRING CAP UNLOADING VALVE	43673	1.00
41	TUBE RETURN	68569	1.00
42	SHAFT ADP BACKUP WAS	69513	1.00
43	SPRING	66042	1.00
44	BEARING	68891	3.00
45	RING-RETAINING	68892	1.00
46	PIPE PLUG	81093	3.00
47	SEAT - EXT RELIEF	68004	1.00
48	CONE - EXT RELIEF	68003	1.00
49	SPRING - RELIEF VALVE	66085	1.00
50	RELIEF VALVE ADJUSTING SCREW	66083	1.00
53	PISTON BLK .	See Page 8	1.00
54	SHCS 5/16-24 X 1.75	69392	2.00
55	SHCS 5/16-24 X 5/8	82687	2.00

# 40 Series Electric Power Pump

# Sub Component Assemblies

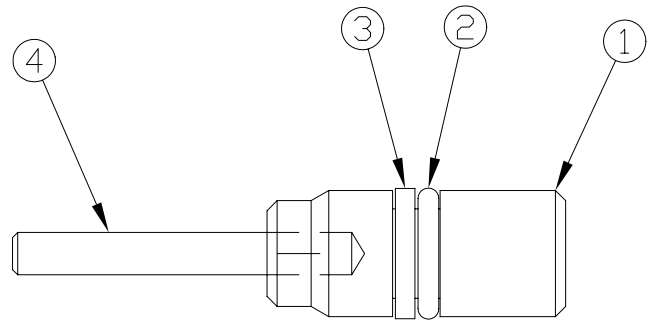
## (68829) ADAPT-SHAFT ASM.

ITEM #	DESCRIPTION	PART #	QTY.
1	ADAPTER-SHAFT	68912	1.00
2	BEARING	66030	1.00
3	SEAL	68901	1.00



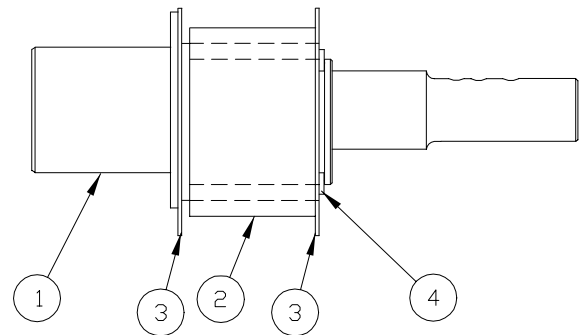
## (43766) UNLOAD. PISTON ASM.

ITEM #	DESCRIPTION	PART #	QTY.
01	UNLOAD PISTON	43765	1.00
02	O RING	5602009	1.00
03	BACK-UP WASHER	43768	1.00
04	ROLL PIN	43686	1.00



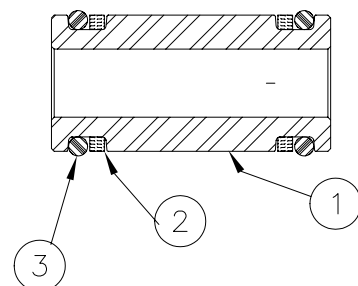
## (69082) ECCENTRIC SHAFT ASM.

ITEM #	DESCRIPTION	PART #	QTY.
01	ECCENTRIC SHAFT	68859	1.00
02	BEARING	69081	1.00
03	BEARING WASHER	69475	2.00
04	RET. RING	67863	1.00
05	BALL	90548	1.00



## (68963) ADAPTER ASM.

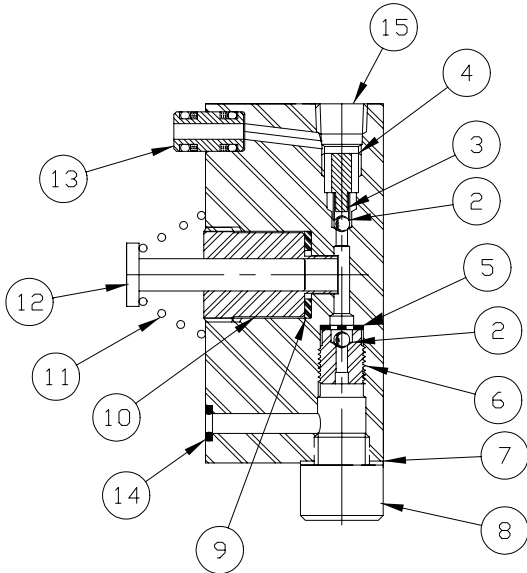
ITEM #	DESCRIPTION	PART #	QTY.
1	VALVE ADAPTER	88073	1.00
2	B-U RING	65881	2.00
3	O-RING 3/8X1/2	5602012	2.00



# 40 Series Electric Power Pump

# Sub Component Assemblies

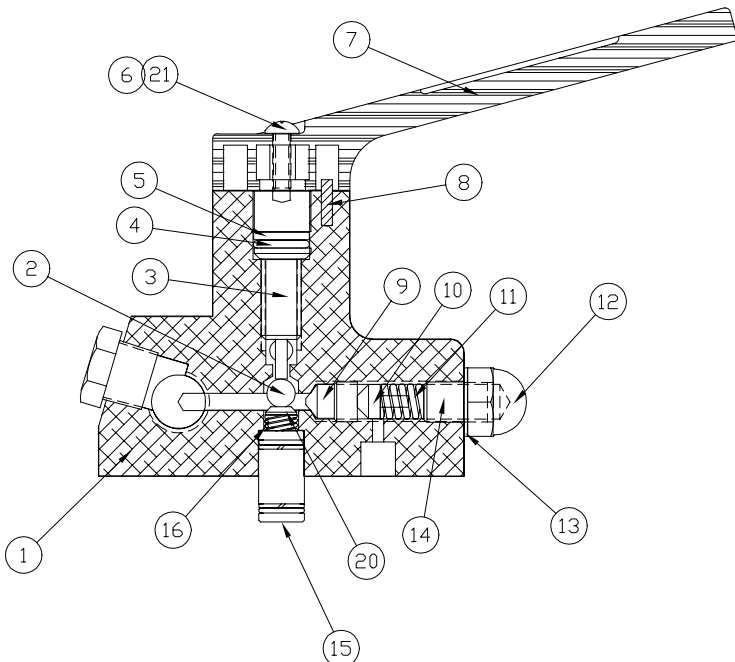
## (68899) PISTON BLK.



ITEM #	DESCRIPTION	PART #	QTY.
02	BALL 1/8"	90906	2.00
03	SPRING	66042	1.00
04	BALL STOP	68810	1.00
05	BALL RETAINER	66043	1.00
06	INTAKE SEAT	66046	1.00
07	GASKET 29/64 X 5/8	86269	1.00
08	SCREW	68825	1.00
09	GASKET 25/64X19/32	85726	1.00
10	ADAPTER .225 PISTON	68820	1.00
11	SPRING, PISTON	68340	1.00
12	PISTON .225 DIA.	68819	1.00
13	ADAPTER ASSY.	68970	1.00
14	O-RING 3/16X5/16	5602008	1.00
15	PIPE PLUG 1/8" FLUSH	81093	1.00

## Valve Sub Assemblies

### (69094) 2 WAY MANUAL



ITEM #	DESCRIPTION	PART#	
		2 WAY VAL.	QTY.
01	2 WAY VALVE	69092	1.00
02	BALL	91701	1.00
03	VALVE STEM	69095	1.00
04	O-RING	5602111	1.00
05	BACKUP WASHER	5608111	1.00
06	SCREW	44595	1.00
07	VALVE HANDLE	69091	1.00
08	ROLL PIN	93835	2.00
09	SEAT - EXT RELIEF	68004	1.00
10	CONE - EXT RELIEF	68003	1.00
11	SPRING - RELIEF VALVE	66085	1.00
12	ACORN NUT	69105	1.00
13	WASHER	69124	1.00
14	ADJUSTING SCREW	69104	1.00
15	ADAPTER ASSY.	68963	1.00
16	SPRING	68384	1.00
NS	PIPE PLUG	84084	1.00
18	1/4 SOC PIPE PLUG	93950	1.00
NS	HEX ST. PIPE PLUG	87145	1.00
20	SPRING CAP	69634	1.00
21	LOCKWASHER	Y0010765	1.00

NS = NOT SHOWN

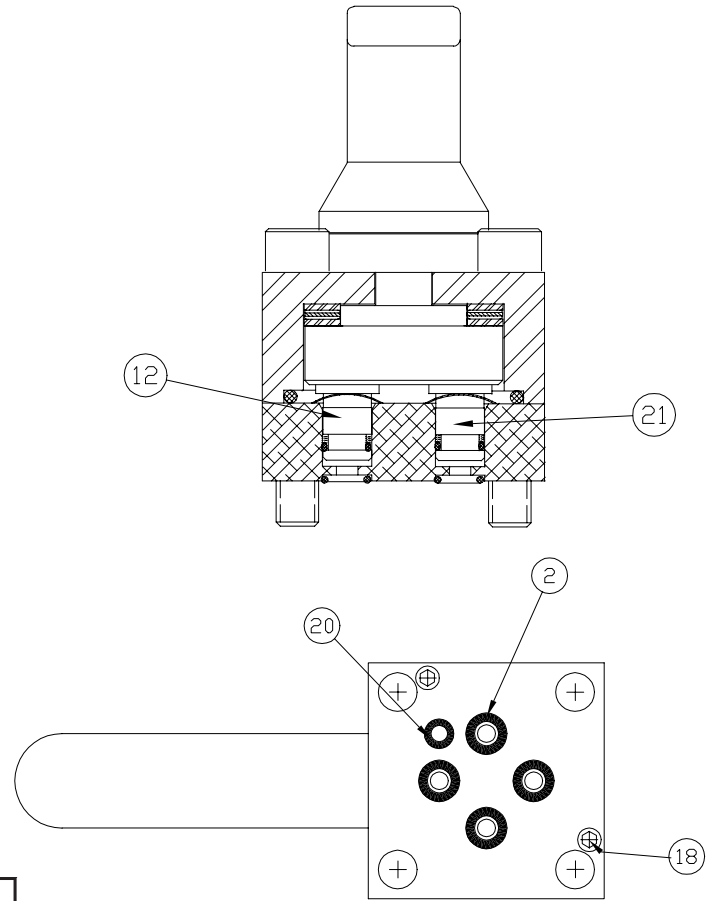
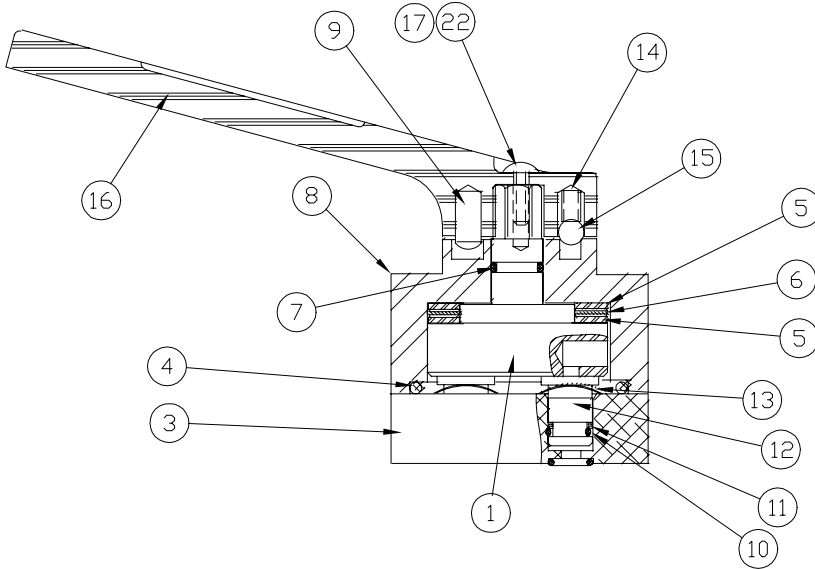


# 40 Series Electric Power Pump

# Valve Sub Assemblies

(69691) 3 WAY MANUAL

(69101) 4 WAY MANUAL



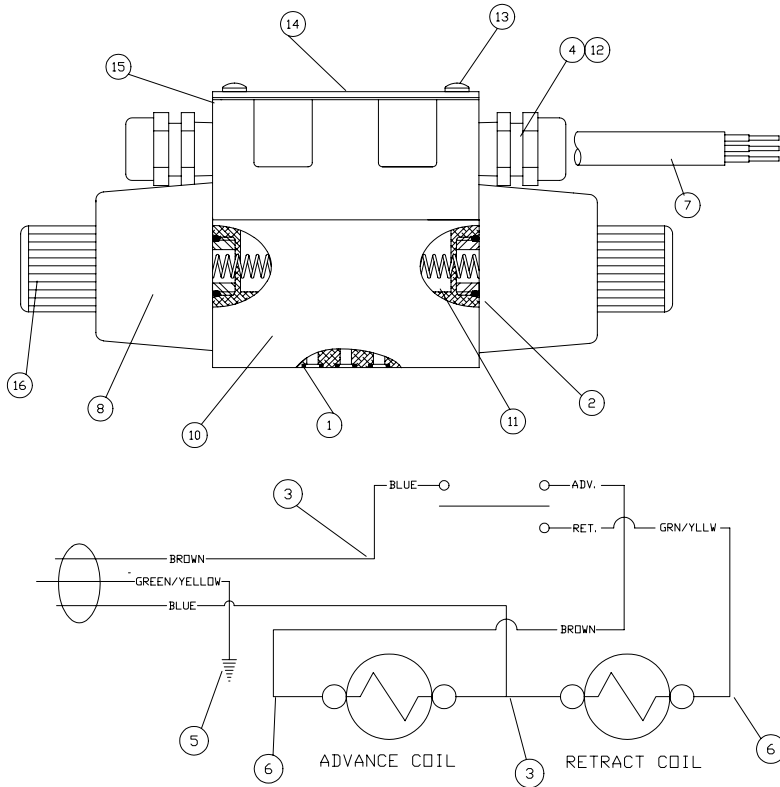
ITEM #	DESCRIPTION	-69691		-69101	
		3 WAY VAL	QTY.	4 WAY VAL	QTY.
01	VALVE ROTOR	43762	1.00	43762	1.00
2	O-RING	56020112	2.00	56020112	4.00
03	SUBPLATE- VALVE	68180	1.00	68180	1.00
04	O-RING	5602225	1.00	5602225	1.00
05	THRUST WASHER	68026	2.00	68026	2.00
06	THRUST BEARING	68155	1.00	68155	1.00
07	O-RING	5602012	1.00	5602012	1.00
08	UPPER VALVE BLOCK	69135	1.00	69135	1.00
09	DRIVE LOK PIN	93804	1.00	93804	1.00
10	O-RING	5602011	6.00	5602011	3.00
11	WASHER	65882	4.00	65882	3.00
12	SHEAR SEAL	68029	3.00	68029	1.00
13	SPRING WASHER	68028	4.00	68028	3.00
14	DETENT SPRING	68025	1.00	68025	1.00
15	BALL	92549	1.00	92549	1.00
16	VALVE HANDLE	69091	1.00	69091	1.00
17	SCREW	44595	1.00	44595	1.00
18	SCREW	85317	2.00	85317	2.00
NS	SCREW	93598	4.00	93598	4.00
20	O-RING	5602008	1.00	5602008	1.00
21	SHEAR SEAL	68181	1.00	68181	2.00
22	LOCKWASHER	Y0010765	1.00	Y0010765	1.00

NS= NOT SHOWN

# 40 Series Electric Power Pump

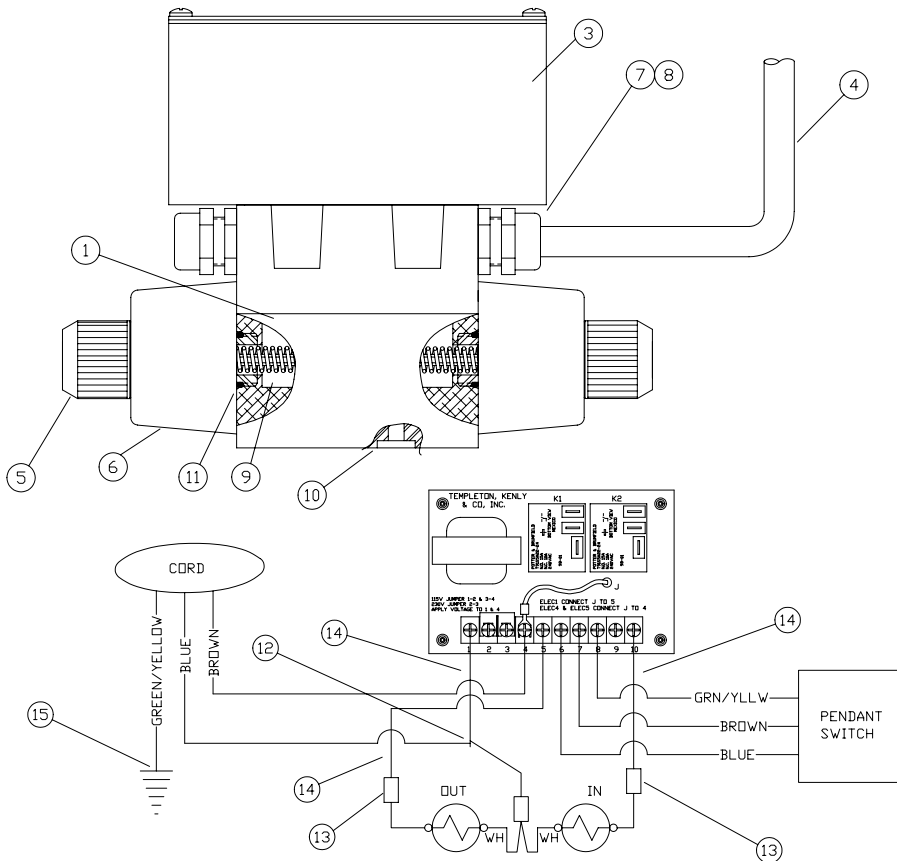
# Valve Sub Assemblies

## (18854) 3 & 4 WAY SOLENOID VALVE 115V.



ITEM #	DESCRIPTION	PART #	QTY.
01	O-RING	56020112	4.00
02	O-RING	5603910	2.00
03	BUTT CONNECTOR	66132	2.00
04	FITTING,CORD L-TIGHT	68375	2.00
05	SPADE, TERMINAL	65887	1.00
06	WIRE NUT	68093	2.00
07	CORD	68690	1.00
08	COIL 115VAC	68730	2.00
09	VALVE PENDANT	69382	1.00
10	VALVE ASSEMBLY TC	68710	1.00
11	SPRING	68711	2.00
12	LOCKNUT 1/2 INCH	85510	2.00
13	SCREW, FILL HD MACH	98250	4.00
14	COVER, VALVE	68388	1.00
15	GASKET CVR	68389	1.00
16	PUSHER-SOLENOID	68729	2.00

## (18666) 3 & 4 WAY SOLENOID VALVE 230V.



ITEM #	DESCRIPTION	PART #	QTY.
01	VALVE ASSEMBLY TC	68710	1.00
03	BOX ASM 115 V	See Pg.17	1.00
04	CORD	68690	1.00
05	PUSHER-SOLENOID	68729	2.00
06	SOL. COIL 220V	68731	2.00
07	FITTING,CORD L-TIGHT	68375	2.00
08	LOCKNUT	85510	2.00
09	SPRING	68711	2.00
10	O-RING	56020112	4.00
11	O-RING	5603910	2.00
12	WIRE NUT ORANGE	68657	1.00
13	BUTT CONNECTOR	66132	3.00
14	WIRE	68262	4.00
15	SPADE, TERMINAL	65887	1.00

# 40 Series Electric Power Pump

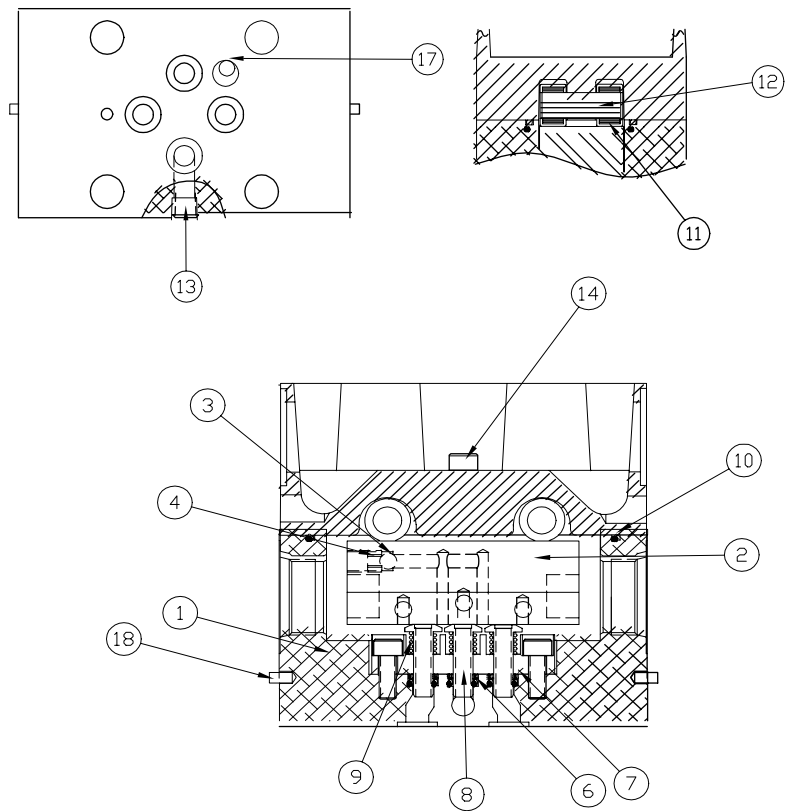
# Valve Sub Assemblies

## (68710) 3 & 4 WAY VALVE TC

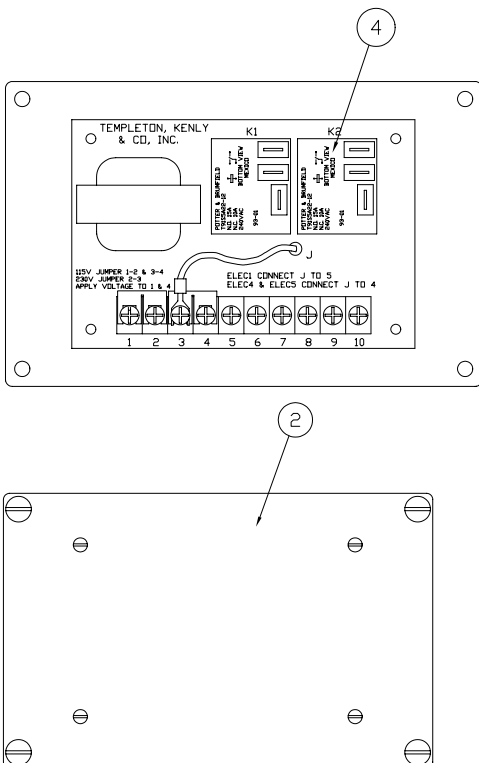
ITEM#	DESCRIPTION	PART#	
		3&4 SOL.	QTY.
01	BODY-VALVE	68708	1.00
02	SLIDER	68709	1.00
03	BALL	90548	1.00
04	SCREW	40254	1.00
06	O-RING	5602009	3.00
07	BACK UP WASHER	68391	3.00
08	SHEAR SEAL	68383	3.00
09	SPRING	68384	3.00
10	O-RING	5602038	1.00
11	BEARING,ROLLER	68385	4.00
12	PIN BEARING	68390	2.00
13	1/16 PIPE PLUG-FLUSH	40049	1.00
14	SCREW	68264	2.00
NS	PLATE-TOP	68381	1.00
17	O-RING	5602008	1.00
18	ROLL PIN	69636	2.00

NS= NOT SHOWN

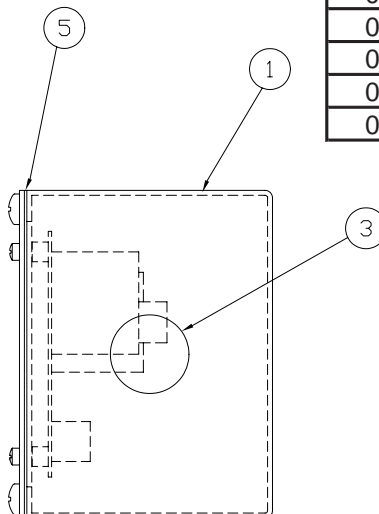
NOTE: 68710 VALVE ASM. USED IN BOTH 3 & 4 WAY SOLENOID ASM.



## (68703) BOX ASSEMBLY



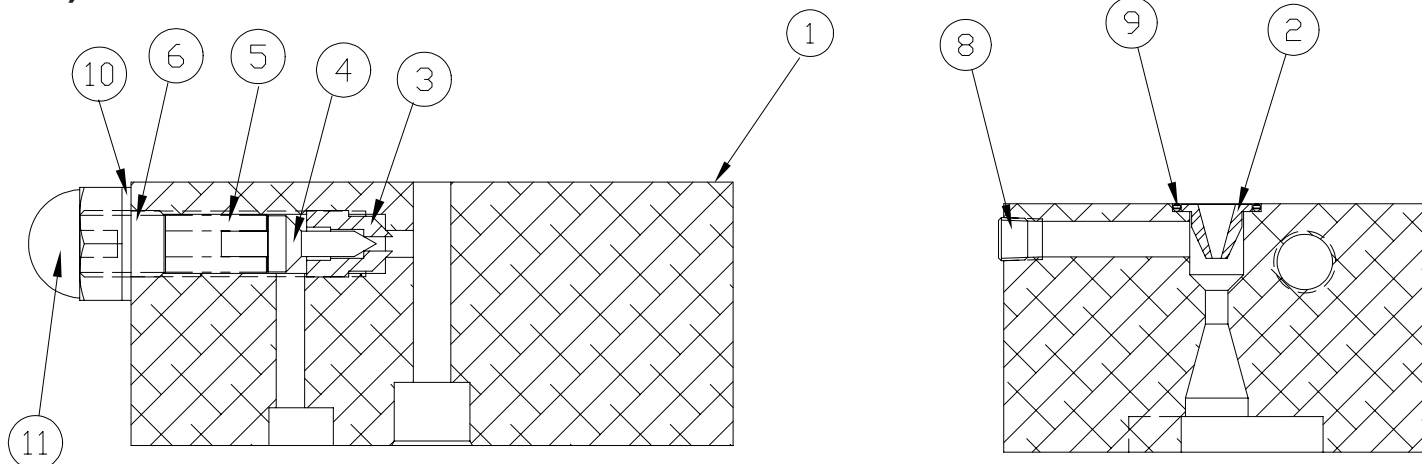
ITEM #	DESCRIPTION	PART #	QTY.
01	ELEC. BOX W/COVER	69322P	1.00
02	ELEC. BOX COVER	69303P	1.00
03	HOLE PLUG 7/8 THIN	44680	2.00
04	CIRCUIT BOARD ASM DC	44444	1.00
05	GASKET (ELEC. BOX.)	69304	1.00



# 40 Series Electric Power Pump

# Manifold Sub Assemblies

## (69570) 3 WAY STANDARD

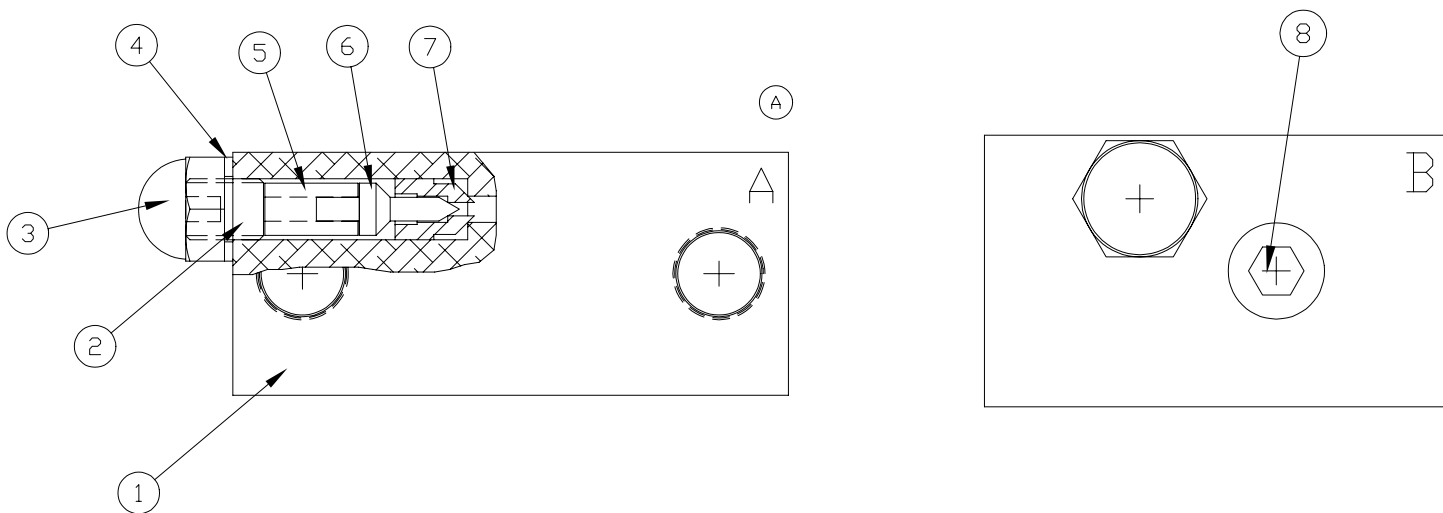


ITEM#	DESCRIPTION	PART#	
		3 WAY MAN. ASM	QTY.
01	RET. VALVE MANIFOLD	69569	1.00
02	NOZZLE-VALVE	68197	1.00
03	SEAT - EXT RELIEF	68004	1.00
04	CONE - EXT RELIEF	68003	1.00
05	SPRING - RELIEF VALVE	66085	1.00
6	ADJUSTING SCREW	69104	1.00

ITEM#	DESCRIPTION	PART#	
		3 WAY MAN. ASM	QTY.
NS	PIPE PLUG	84084	3.00
NS	PIPE PLUG-FLUSH	40049	2.00
09	O-RING	5602014	1.00
10	WASHER	69124	1.00
11	ACORN NUT	69105	1.00

NS = NOT SHOWN

## (69100) 4 WAY STANDARD



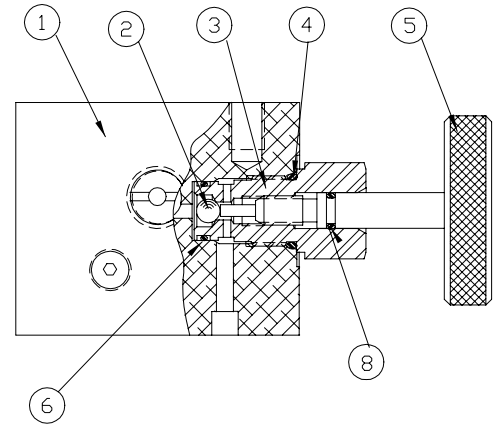
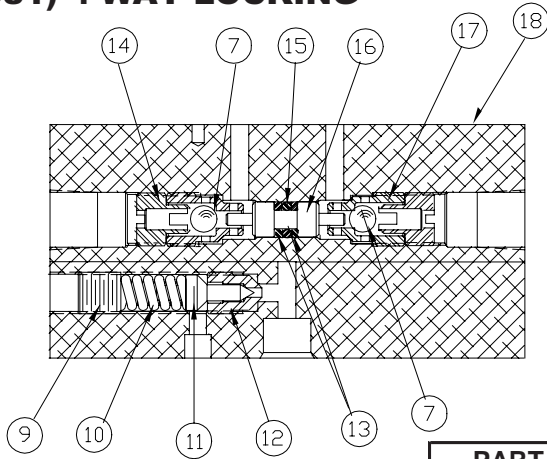
ITEM#	DESCRIPTION	PART#	
		4 WAY MAN. ASM	QTY.
01	VALVE MANIFOLD	69099	1.00
02	ADJUSTING SCREW	69104	1.00
03	ACORN NUT	69105	1.00
4	WASHER	69124	1.00

ITEM#	DESCRIPTION	PART#	
		4 WAY MAN. ASM	QTY.
05	SPRING - RELIEF VALVE	66085	1.00
06	CONE - EXT RELIEF	68003	1.00
07	SEAT - EXT RELIEF	68004	1.00
08	PIPE PLUG	84084	2.00

# 40 Series Electric Power Pump

# Manifold Sub Assemblies

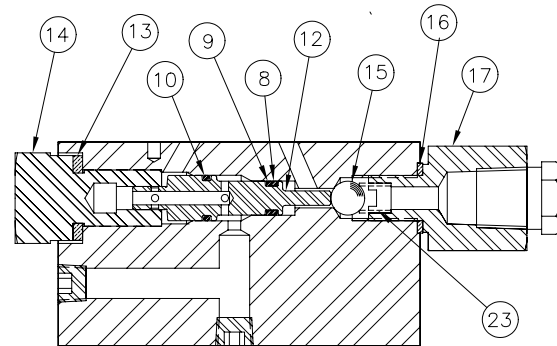
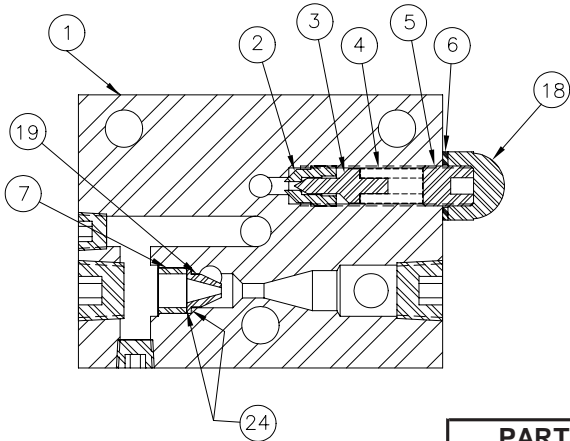
## (68581) 4 WAY LOCKING



ITEM #	DESCRIPTION	PART #	
		3 WAY LOCK	QTY.
01	VALVE BODY LOCK VAL	68591	1.00
02	BALL	92549	1.00
03	RELEASE GLAND	68637	1.00
04	O-RING	5603908	1.00
05	RELEASE SCREW ASM	89435	1.00
06	O-RING	56021115	1.00
07	BALL	92526	2.00
08	O RING	5602010	1.00
09	RELIEF VALVE ADJ SCREW	66083	1.00

ITEM #	DESCRIPTION	PART #	
		4 WAY LOCK	QTY.
10	SPRING - RELIEF VALVE	66085	1.00
11	CONE - EXT RELIEF	68003	1.00
12	SEAT - EXT RELIEF	68004	1.00
13	BU-WASHER	5608106	2.00
14	BALL RETAINER	68589	2.00
15	O-RING	5602106	1.00
16	SPOOL-LOCK VALVE	68636	1.00
17	SEAT	68590	2.00
18	PIPE PLUG	82552	1.00

## (69621) 3 WAY LOCKING



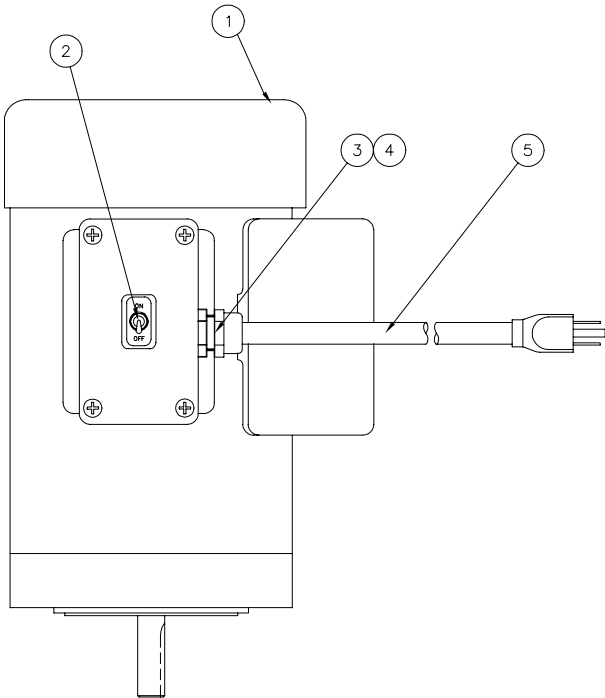
ITEM#	DESCRIPTION	PART#	
		3 WAY LOCK	QTY.
01	VLV BODY LOCKING	69573	1.00
02	SEAT - EXT RELIEF	68004	1.00
03	CONE - EXT RELIEF	68003	1.00
04	SPRING - RELIEF VALVE	66085	1.00
05	SCREW	69104	1.00
06	WASHER	69124	1.00
07	RETAINING SLEEVE	69620	1.00
08	O RING	5602010	1.00
09	BACK-UP WASHER	68145	1.00
10	O-RING	56020125	1.00
NS	HEX ST. PIPE PLUG	87145	1.00
12	SPOOL	69574	1.00

ITEM#	DESCRIPTION	PART#	
		4 WAY LOCK	QTY.
13	GASKET-PLUG	68183	1.00
14	PLUG-SPOOL	68184	1.00
15	BALL	92550	1.00
16	GASKET WASHER	68080	1.00
17	PORT ADAPTER	68187	1.00
18	ACORN NUT	69105	1.00
19	NOZZLE-VALVE	68197	1.00
NS	PIPE PLUG 3/8"	84084	2.00
NS	PIPE PLUG 1/8"	81093	3.00
NS	1/16 PIPE PLUG-	40049	2.00
23	COMPRESSION SPRING	68188	1.00
24	LOCTITE	41828	0.10

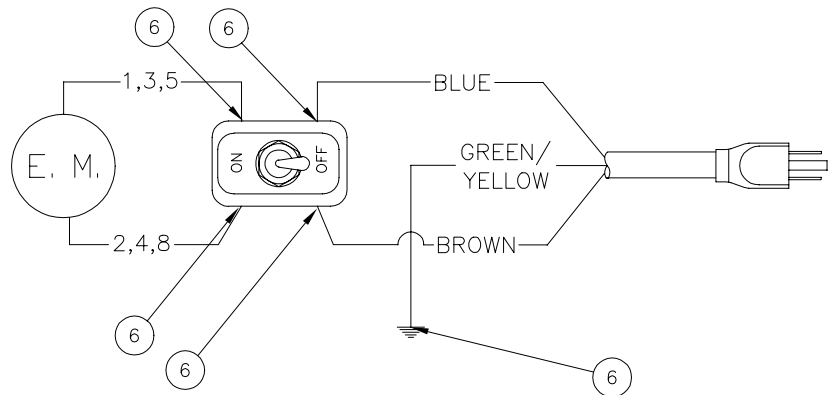
# 40 Series Electric Power Pump

# Motor Assemblies

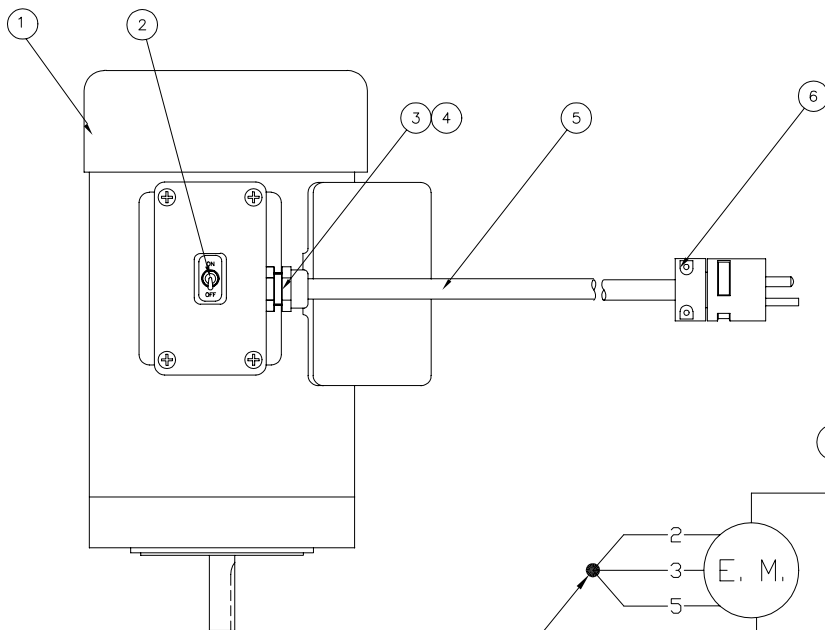
## 115V MOTOR ASSEMBLY



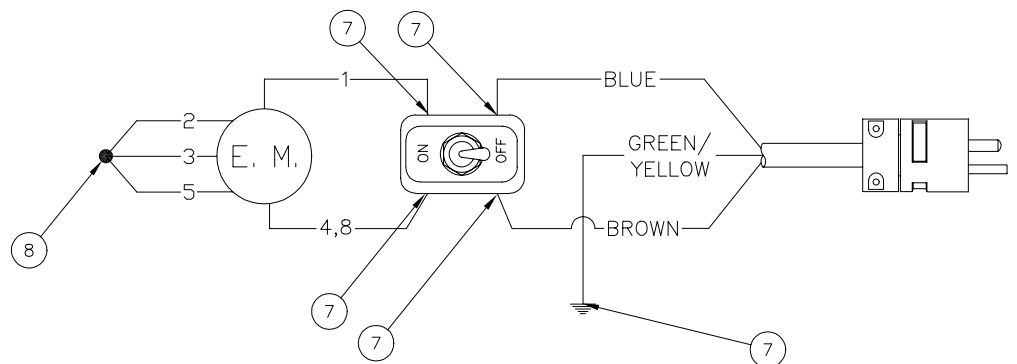
ITEM #	DESCRIPTION	PART #	QTY.
01	1 1/2HP ELEC MOTOR	69702	1.00
02	SWITCH ON-OFF	66044	1.00
03	FITTING,CORD L-TIGHT	68375	1.00
04	LOCKNUT 1/2 INCH	85510	1.00
05	PLUG AND CORD ASSY	68595	1.00
06	SPADE, TERMINAL	65887	5.00



## 230V MOTOR ASSEMBLY



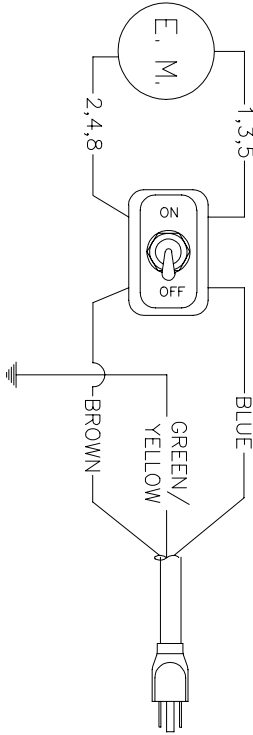
ITEM #	DESCRIPTION	PART #	QTY.
01	1 1/2HP ELEC MOTOR	69702	1.00
02	SWITCH ON-OFF	66044	1.00
03	FITTING,CORD L-TIGHT	68375	1.00
04	LOCKNUT 1/2 INCH	85510	1.00
05	CORD	68527	1.00
06	PLUG	87093	1.00
07	SPADE, TERMINAL	65887	5.00
08	WIRE	68657	1.00



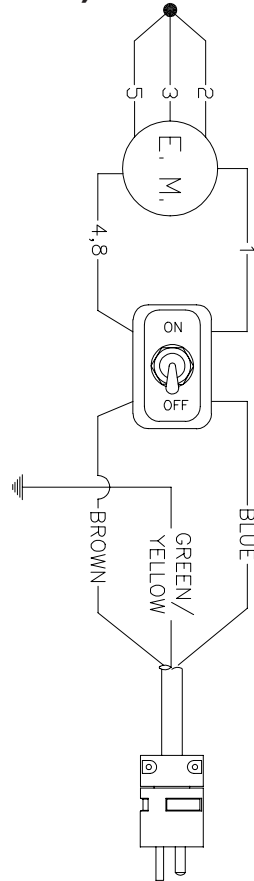
# 40 Series Electric Power Pump

# Wire Configurations

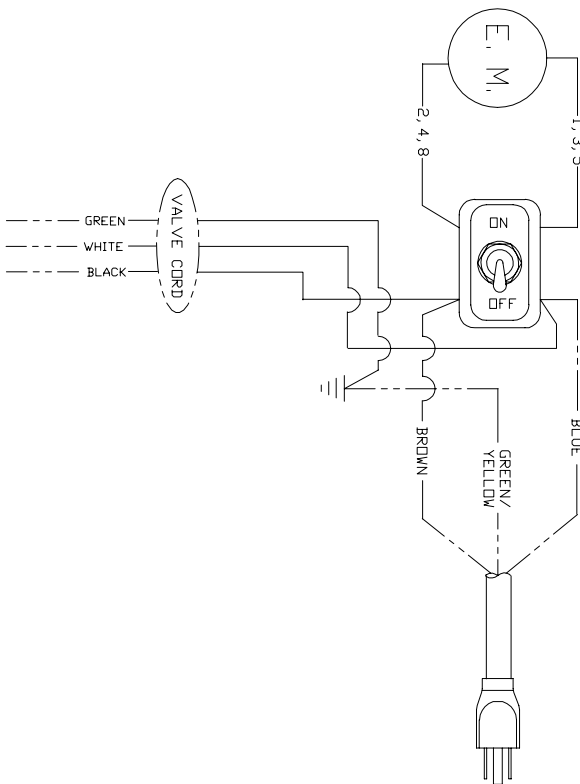
**(PEM MODEL) WIRING DIAGRAM 115V.**



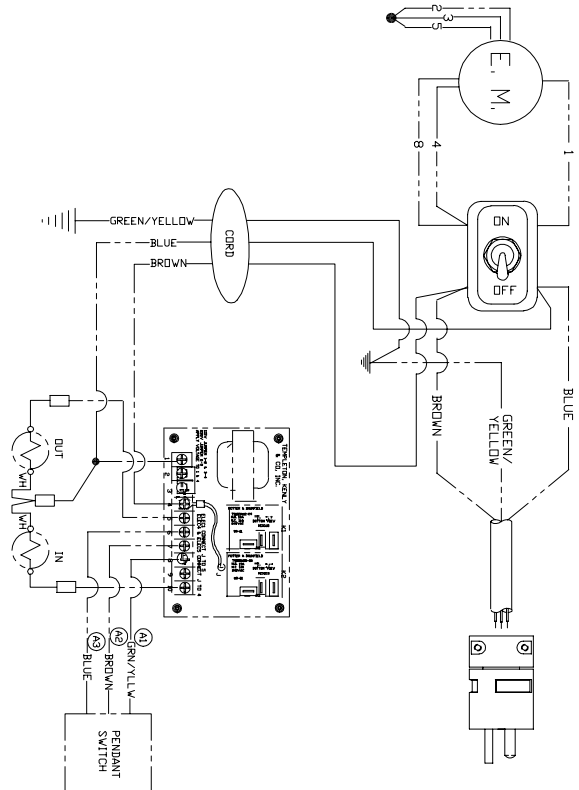
**(PEM MODEL) WIRING DIAGRAM 230V.**



**(PES MODEL) WIRING DIAGRAM 115V.**



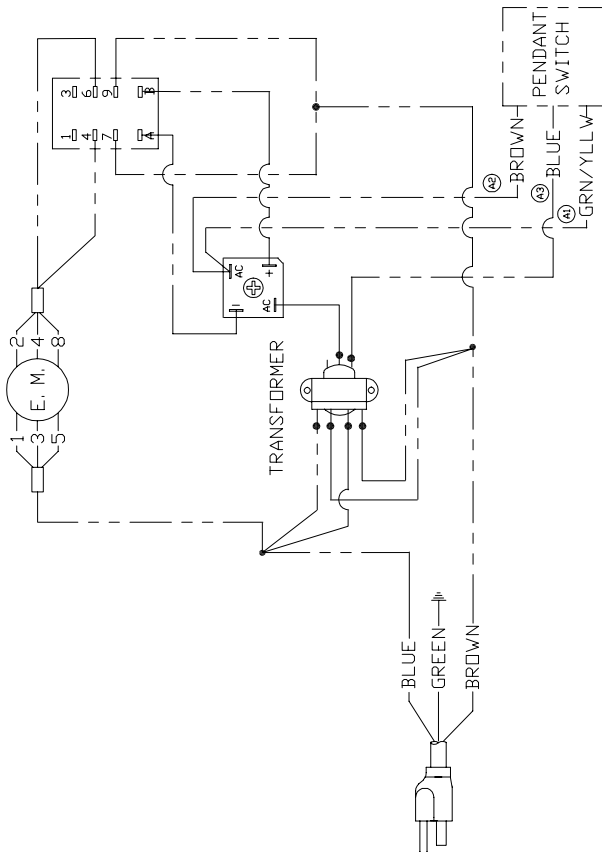
**(PES MODEL) WIRING DIAGRAM 230V.**



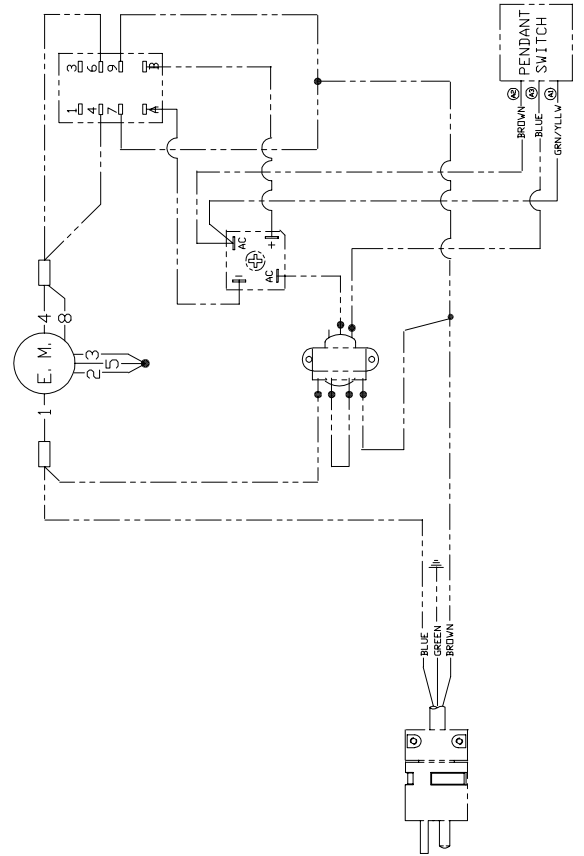
# 40 Series Electric Power Pump

# Wire Configurations

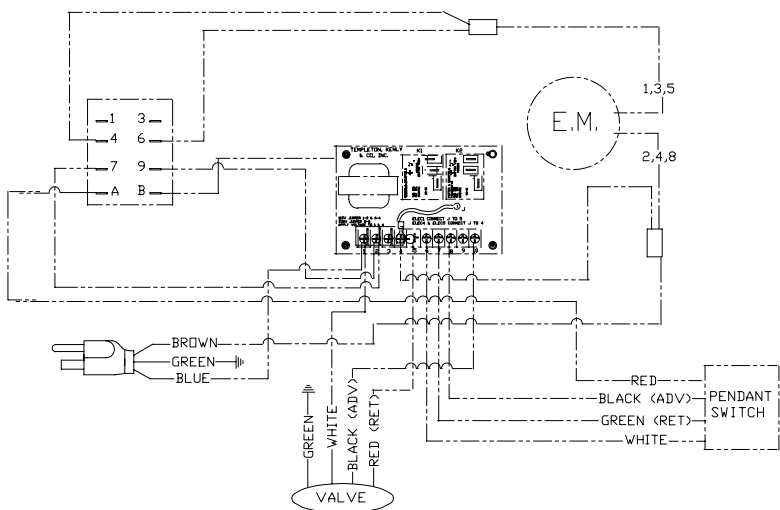
**(PPM MODEL) WIRING DIAGRAM 115V.**



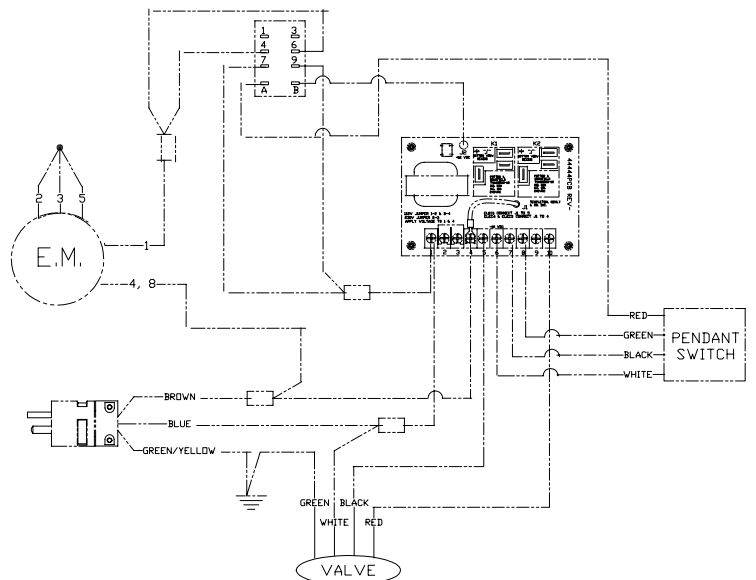
**(PPM MODEL) WIRING DIAGRAM 230V.**



**(PPS MODEL) WIRING DIAGRAM 115V.**



**(PPS MODEL) WIRING DIAGRAM 230V.**



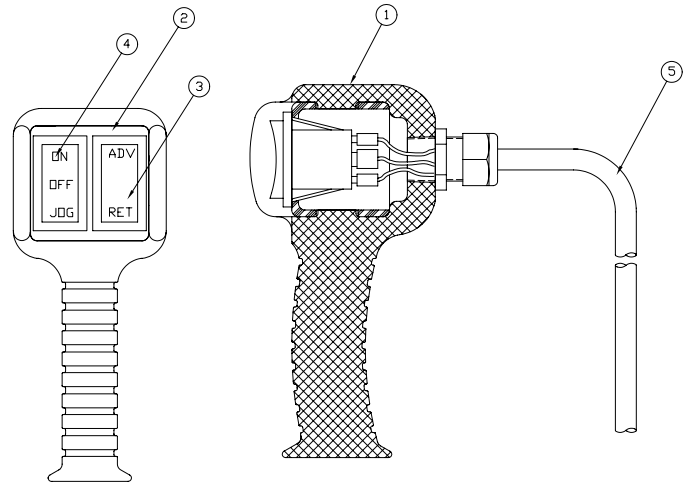
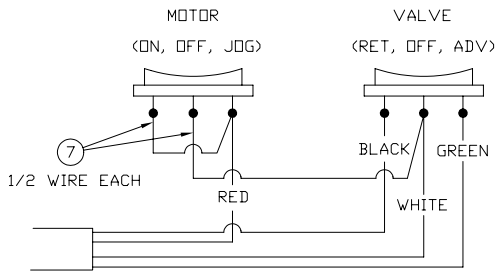


# 40 Series Electric Power Pump

# Pendant Control Devices

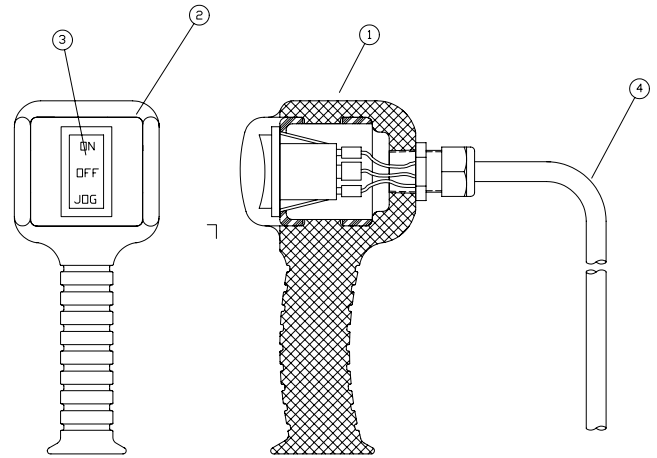
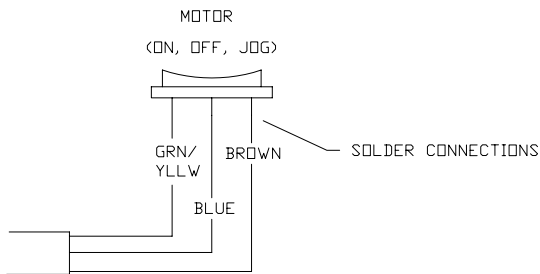
## (69379) PPS. PENDANT

ITEM#	DESCRIPTION	PART#	QTY.
01	PENDANT BODY& RELIEF	69083	1.00
02	JUNCTION BOX 2SWITCH	69151	1.00
03	SWITCH ADV-RET	69160	1.00
04	SWITCH 8961K385	69159	1.00
05	PENDANT CORD	69370	1.00
07	WIRE WHITE	68262	1.00



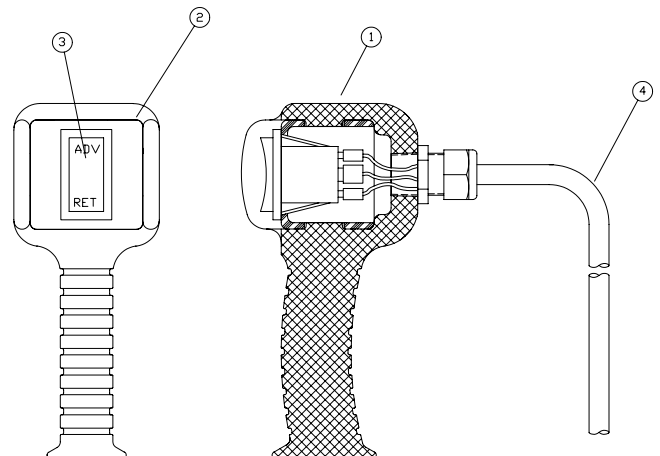
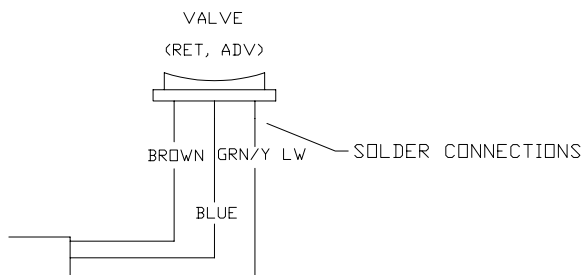
## (69380) PPM. PENDANT

ITEM#	DESCRIPTION	PART#	QTY.
01	PENDANT BODY& RELIEF	69083	1.00
02	JUNCTION BOX 1SWITCH	69150	1.00
03	SWITCH 8961K385	69159	1.00
04	PENDANT CORD 20' LG	69381	1.00



## (69382) PES. PENDANT

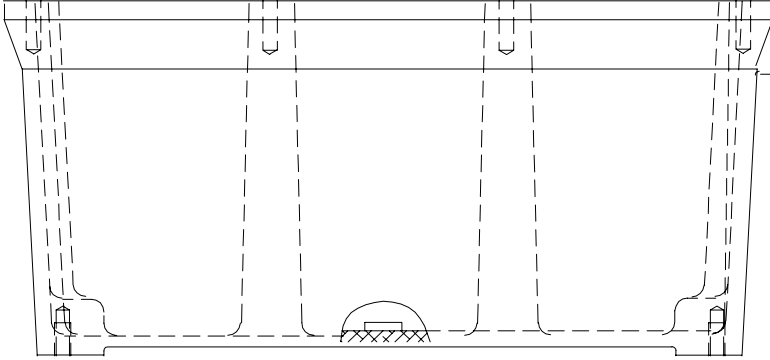
ITEM#	DESCRIPTION	PART#	QTY.
01	PENDANT BODY& RELIEF	69083	1.00
02	JUNCTION BOX 1SWITCH	69150	1.00
03	SWITCH ADV-RET	69160	1.00
04	PENDANT CORD 20' LG	69381	1.00



# 40 Series Electric Power Pump

# Reservoirs

**(68511G) 1 GALLON RESERVOIR**  
**(69090G) 2 GALLON RESERVOIR**

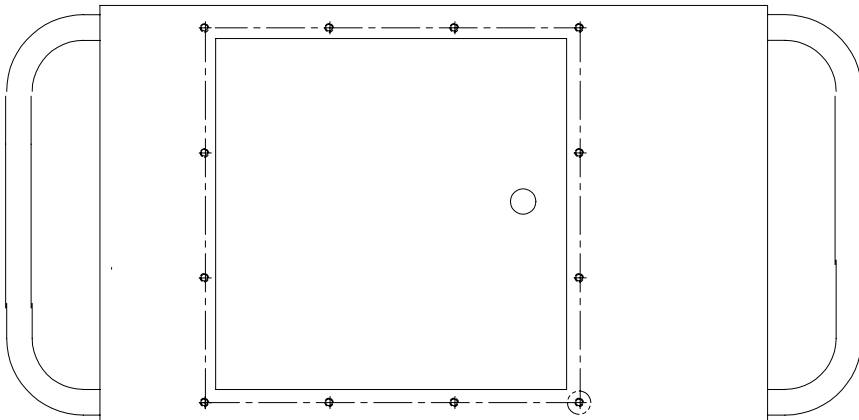


RES SIZE	LENGTH   WIDTH   HEIGHT		
	A	B	C
1 GAL.	11 5/16	7 7/8	5 3/16
2 GAL.	12 1/4	12 1/4	6

DESCRIPTION	PART#	QTY.
GASKET 1 GAL.	68608	1
GASKET 2 GAL.	66014	1
SCREW	86095	12

**NOTE:** BOTH 1 & 2 GAL. RESERVOIR  
 USE SAME MOUNTING HARDWARE

**(69989G) 5 GALLON RESERVOIR**  
**(69987G) 10 GALLON RESERVOIR**



RES SIZE	LENGTH   WIDTH   HEIGHT		
	A	B	C
5 GAL.	25 3/32	12 1/4	8
10 GAL.	19 5/8	23 1/2	12 1/2

DESCRIPTION	PART#	QTY.
GASKET 5 & 10 GAL.	66014	1
SEALING WASHER	65892	12
SCREW	65891	12

**NOTE:** BOTH 5 & 10 GAL. RESERVOIR  
 USE SAME MOUNTING HARDWARE