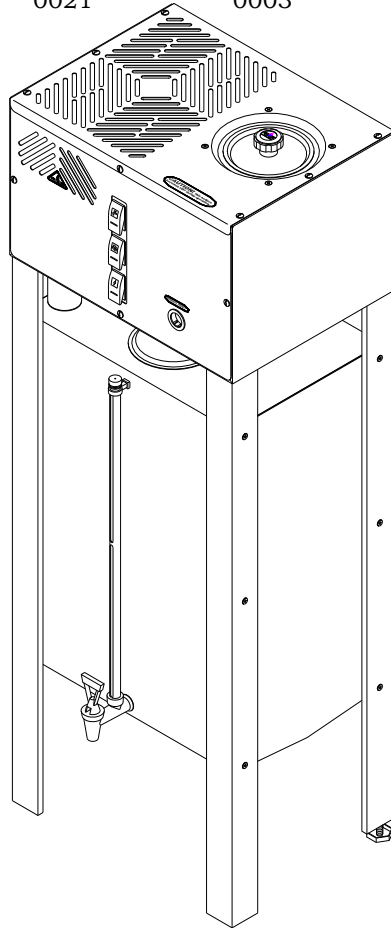




REPLACEMENT PARTS MANUAL

FOR MODEL: PWS 12-20(120VAC), PWS 12-20(240VAC), AED-1(120VAC), AED-1(240VAC), APK-1(120VAC) & APK-1(240VAC)

PART #	510001	510003	500006	500015	500007	500016
SERIES	0021	0021	0003	0003	0002	0002



MODEL PWS 12-20

PRECISION WATER SYSTEMS

WATER DISTILLER

MANUFACTURED BY:

PRECISION DESIGN & MANUFACTURING INC.

9024-1000 STREET

WESTLOCK, ALBERTA, CANADA, T7P 2L4

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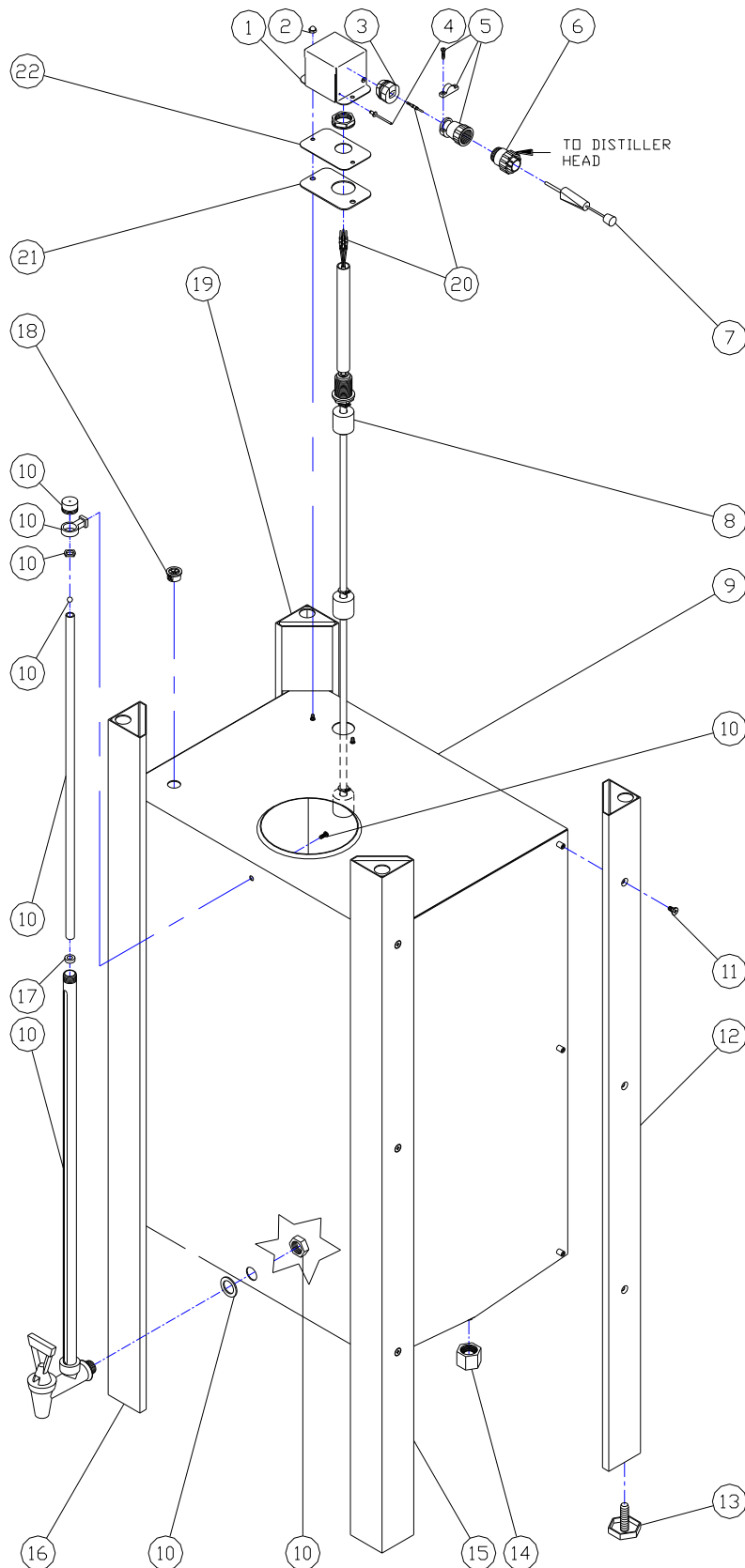
094102, Exploded Parts List

Holding Tank Assembly, 12-20 Automatic

Item #	Part #	Description	Qty
1	500133	Cover, Holding Tank Wires	1
2	028001	Nut, Acorn, Plated, #6-32	2
3	054002	Strain Relief, 7K-2	1
4	016004	Rivet, Alum, 1/8" x 5/16"	4
5	060045	Strain Relief, 7 pin, Circular	1
6	060043	Plug, 7 pin, Circular	1
7	080134	Circular Pin Extraction Tool	1
8	500356	HT, 25", MLS Assembly, SS Stem	1
9	510163	Holding Tank WA, 20 Gallon	1
10	500518	Distiller Water Drain Valve, W/Sight Gauge, 23", SS	1
11	012008	Screw, Machine, #10-24 X 3/8", Oval Head	12
12	510141	Leg, Right Rear, 12-20	1
13	080126	Appliance Foot, 5/16 X 1-1/2"	2
14	034023	Cap, Gray, 1/2"FPT	1
15	510143	Leg, Right Front, 12-20	1
16	510142	Leg, Left Front, 12-20	1
17	080488	Washer, Valve 23", Holding Tank, Shield Upper	1
18	054005	Bushing, Wire, 5/8"	1
19	510140	Leg, Left Rear, 12-20	1
20	060016	Male Pin	4
21	500326	Gasket, Level Sensor	1
22	500325	Plate, Level Sensor	1

094102, Exploded Parts List

Holding Tank Assembly, 12-20 Automatic

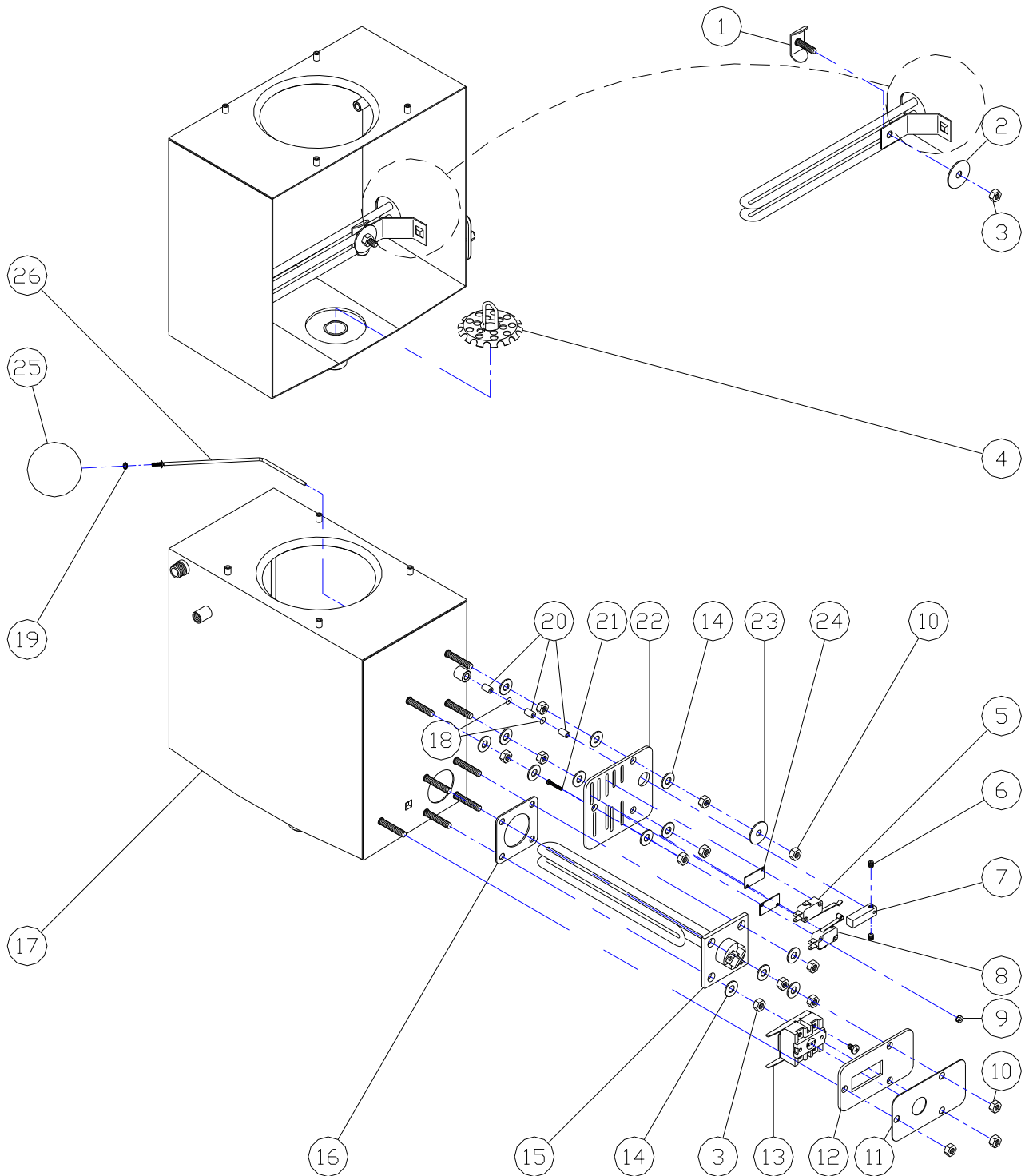


094112, Exploded Parts List Boiler Assembly, 12GPD Automatic

Item #	Part #	Description	Qty
1	500182	Clip, Heater, Studded	1
2	018009	Washer, 5/16" X 1-1/4" X 18ga, SS	1
3	025000	Nut, Hex, SS, 1/4"-20	5
4	500208	Drain Strainer WA	1
5	060059	Microswitch, Long Arm, Formed	1
6	016035	Set Screw, SS, #10-32 X .25", Cup Point	2
7	530333	Bar Actuator, Boiler Float	1
8	060058	Microswitch, Short Roller Arm	1
9	026003	Nut, Kep, Plated, #4-40	4
10	025002	Nut, Hex, Plated, 1/4"-20	10
11	500153	Cover, Reset, SS	1
12	500408	Plate, Reset Switch, 66TM, Lexan	1
13	060104	Switch, Thermo, Manual Reset, DPST, RT	1
14	018004	Washer, 5/16" X 11/16" X 20ga, SS	13
15	060003	Heating Element, 125V, 1500W	1
	060004	Heating Element, 230V, 1500W	1
16	500100	Gasket, Heater	1
17	510146	Boiler WA, 12GPD Auto	1
18	080128	O-Ring, 1/16" X 1/8" X 1/4"	2
19	020002	Washer, Lock, SS, M3.5, External Tooth	1
20	080127	Bushing, Teflon, 1/4" X 1/8"	3
21	012003	Screw, Machine, Plated, #4-40 X 3/4"	4
22	500266	Plate, Microswitch	1
23	018028	Washer, Flat, SS, 0.281"ID X 1"OD X 18ga.	1
24	500289	Shim, Microswitch	2
25	080162	Float Ball, SS, 2-1/4" Round, #6-32	1
26	500487	Rod WA, Boiler Float, Auto	1

094112, Exploded Parts List

Boiler Assembly, 12GPD Automatic



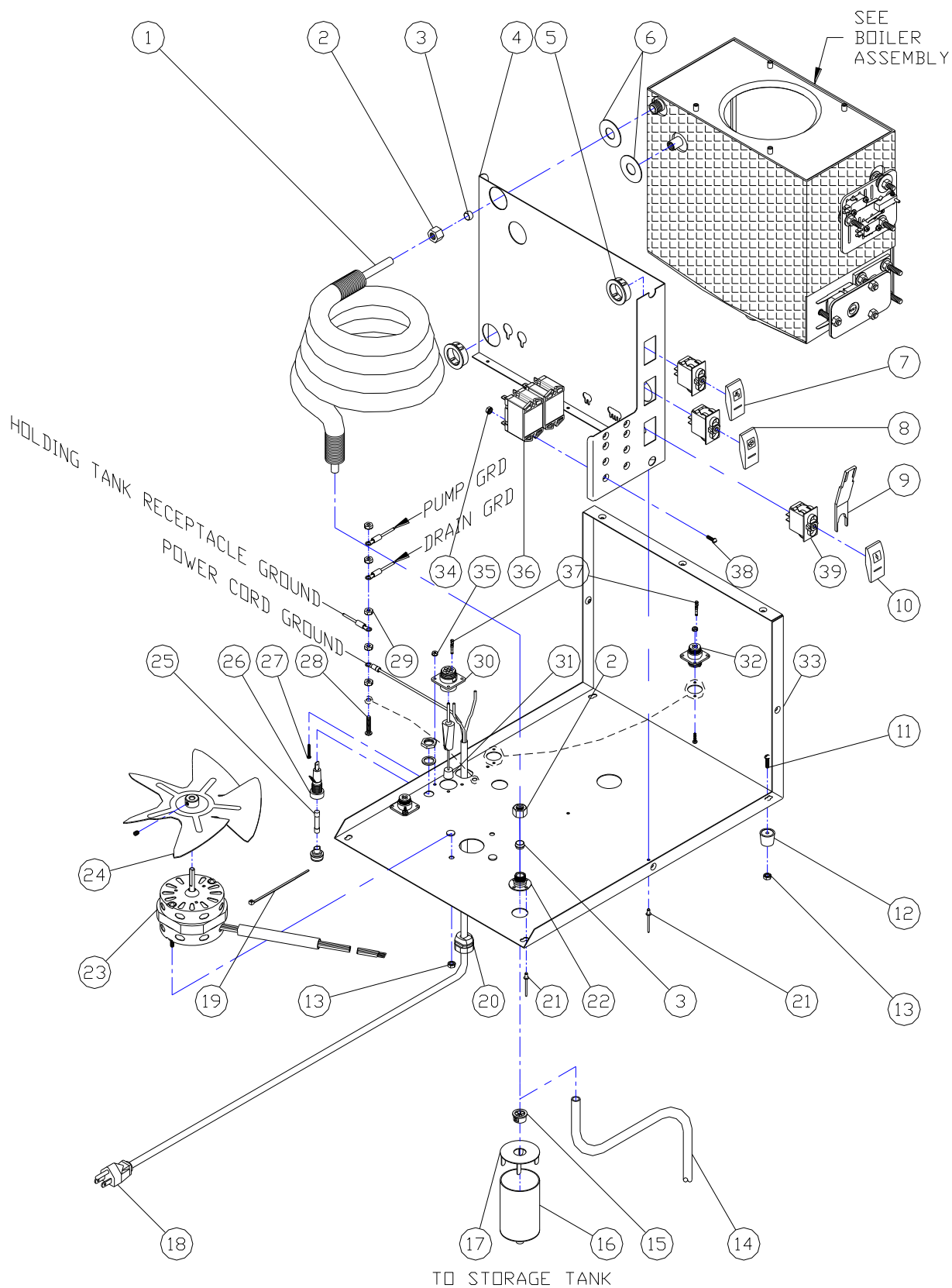
094101, Exploded Parts List

Distiller Body Assembly, 12GPD Automatic

Item #	Part #	Description	Qty
1	510135	Cooling Coil Assembly, 12GPD, Auto	1
2	030013	Nut, Plated, 3/8", Compression	2
3	030012	Ferrule, 3/8"	2
4	510101	Divider, 12GPD Auto	1
5	054004	Bushing, Snap, 1-1/4"	2
6	018023	Washer, Flat, 5/8" X 1-1/2" X 20ga, SS	2
7	060031	Actuator, Grey, White-Water	1
8	060030	Actuator, Grey, Amber-Fan	1
9	080134	Tool, Actuator Removal	1
10	060029	Actuator, Grey, Red-Power	1
11	012012	Screw, Mach, Plated, #8-32 X 5/8"	4
12	054010	Leg, 3/4" OD X 5/8" High	4
13	026001	Nut, Kep, Plated, #8-32	6
14	052002	Tubing, PVC, 5/16" X 7/16"	2'
15	054005	Busing, Wire, Plastic, 5/8" Hole	1
16	500300	Filter Housing WA, Auto	1
17	500260	Filter Cap WA	1
18	510121	Power Cord Assembly, 14-3 NA, 12 GPD Automatic	1
19	054011	Wire Tie, Plastic, 4"	Ref.
20	054002	Strain Relief, 7K-2	1
21	016004	Rivet, Aluminum, 1/8" X 5/16	8
22	530344	MOUNT, WA, CC COMPRESSION	1
23	510122	Motor Assembly, 120V, 12GPD, Auto	1
24	080046	Fan Blade, 8"	1
25	060022	Fuse, 1 Amp, Slow Blow	1
26	060036	Fuse Holder, Chassis, 15Amp (includes nut & gasket)	1
27	012003	Screw, Machine, Plated, #4-40 X 3/4", Round/Socket	6
28	012000	Screw, Machine, Plated, #10-24 X 1"	1
29	026000	Nut, Kep, Plated, #10-24	5
30	060044	Receptacle, 7 pin Circular	1
31	080135	Circular Pin Extraction Tool	1
32	060130	Receptacle, 4 Pin, Circular	2
33	510100	Body, 12GPD Auto	1
34	026002	Nut, Kep, Plated, #6-32	4
35	026003	Nut, Kep, Plated, #4-40	6
36	060018	Relay, Aromat, Black, 120V	2
	060019	Relay, Aromat, Black, 240V	2
37	060017	Female Pin	10
38	012009	Screw, Machine, Plated, #6-32 X 1/2"	4
39	060028	Switch Base, 120/240V SPST	3

094101, Exploded Parts List

Distiller Body Assembly, 12GPD Automatic

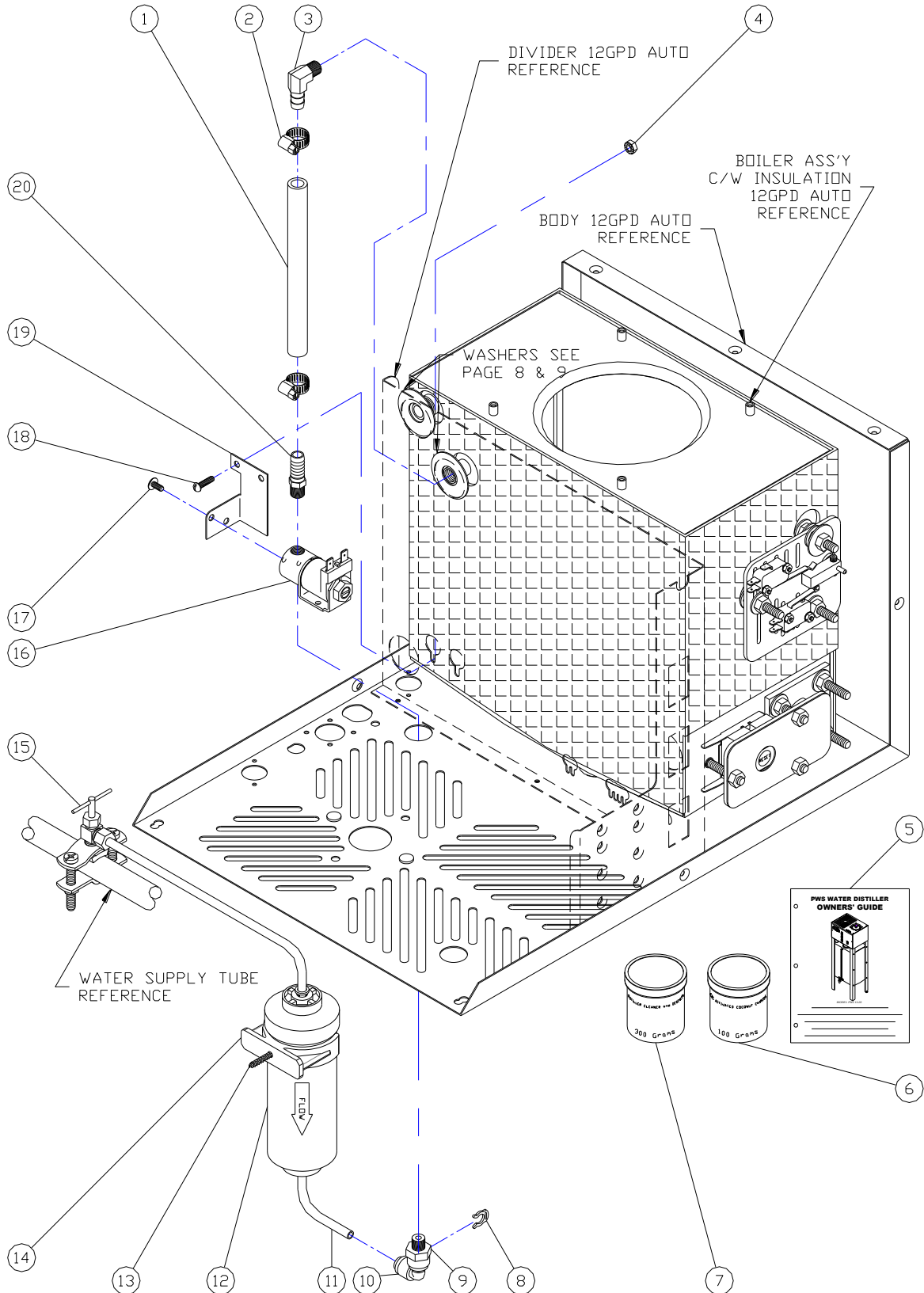


094099, Exploded Parts List

12GPD Solenoid Valve Assembly

Item #	Part #	Description	Qty
1	052032	Peristaltic Tubing, 9.6mmID X 14.6mmOD	0.563'
2	080056	Gear Clamp, SS, 1/4"	2
3	030003	Elbow, 90 Degree, 1/8"MPT X 3/8"HB	1
4	026001	Nut, Kep, Plated, #8-32UNC	2
5	097124	Owners Guide, PWS 12-20	1
6	080116	Charcoal, Sample, 100Grams Jar	1
7	080115	Descaler, Sample, 300Grams Jar	1
8	034009	Locking Clip, 1/4"JG	1
9	034054	Gray Acetal Male Connector 1/4" x 1/8" NPTF, JG	1
10	034057	Gray Acetal Plug in Elbow, 1/4" Stem - 1/4" Tube, JG	1
11	052000	Tubing, 1/4" Feed-line	16'
12	080054	Filter, Sediment, CL6-RO, Red	1
13	010008	Screw, SM, Plated, #10-12 X 1", Pan Socket	1
14	054073	Nylon Mounting Clip, Single, 2" Diameter	1
15	036005	Valve, Self Piercing Kit	1
16	060026	Solenoid Valve, 1/8"FPT, Both Ends, 120V	1
	060027	Solenoid Valve, 1/8"FPT, Both Ends, 240V	1
17	012017	Screw, Machine, SS, #8-32UNC X 3/8"	2
18	012012	Screw, Machine, Plated, #8-32 X 5/8"	2
19	500469	Bracket, Brass Solenoid Valve	1
20	34024	Coupler, Nylon, 1/8"MPT X 3/8"HB	1

094099, Exploded Parts List 12GPD Solenoid Valve Assembly



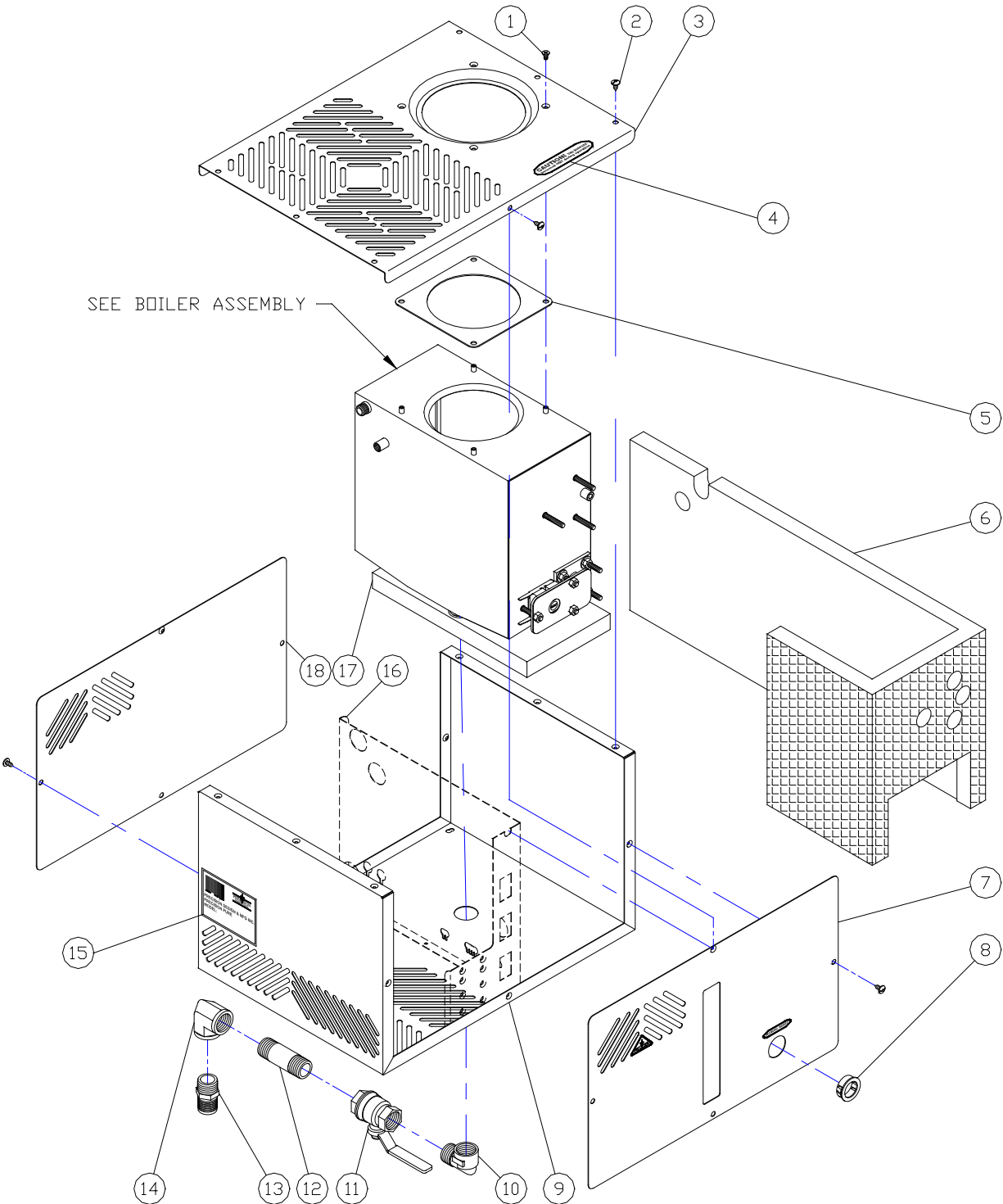
094098, Exploded Parts List

Distiller Head Assembly, 12GPD Automatic

Item #	Part #	Description	Qty
1	012008	Screw, Machine, #10-24 X 3/8", Oval Head	4
2	010000	Screw, Sheet Metal, SS, #10-12 X 1/2"	14
3	510102	Cover, Top, 12GPD, Auto	1
4	080119	Sheet,Imprintable Poly,Silver 8.5 x 11	0.25
5	500111	Gasket, Lid	1
6	510118	Insulation, 12GPD Boiler Sides	1
7	510103	Cover, Front, 12GPD	1
8	054004	Bushing, Snap, 1.25"	1
9	510100	Body, 12GPD	1
10	030016	Elbow, 90 Degree, 3/4"MPT X 3/4"FPT	1
11	030009	Valve, Ball, 3/4"FPT, Both Ends	1
12	030021	Nipple, 3/4"MPT X 3"	1
13	030015	Coupler, 3/4"MPT X 1"HB	1
14	030018	Elbow, 90 Degree, 3/4"FPT, Both Ends	1
15	080120	Decal, Sht, PWS, Distillers	0.25
16	510101	Divider, 12GPD	1
17	510119	Insulation, 12GPD Boiler Bottom	1
18	510104	Cover, Rear, 12GPD	1

094098, Exploded Parts List

Distiller Head Assembly, 12GPD Automatic



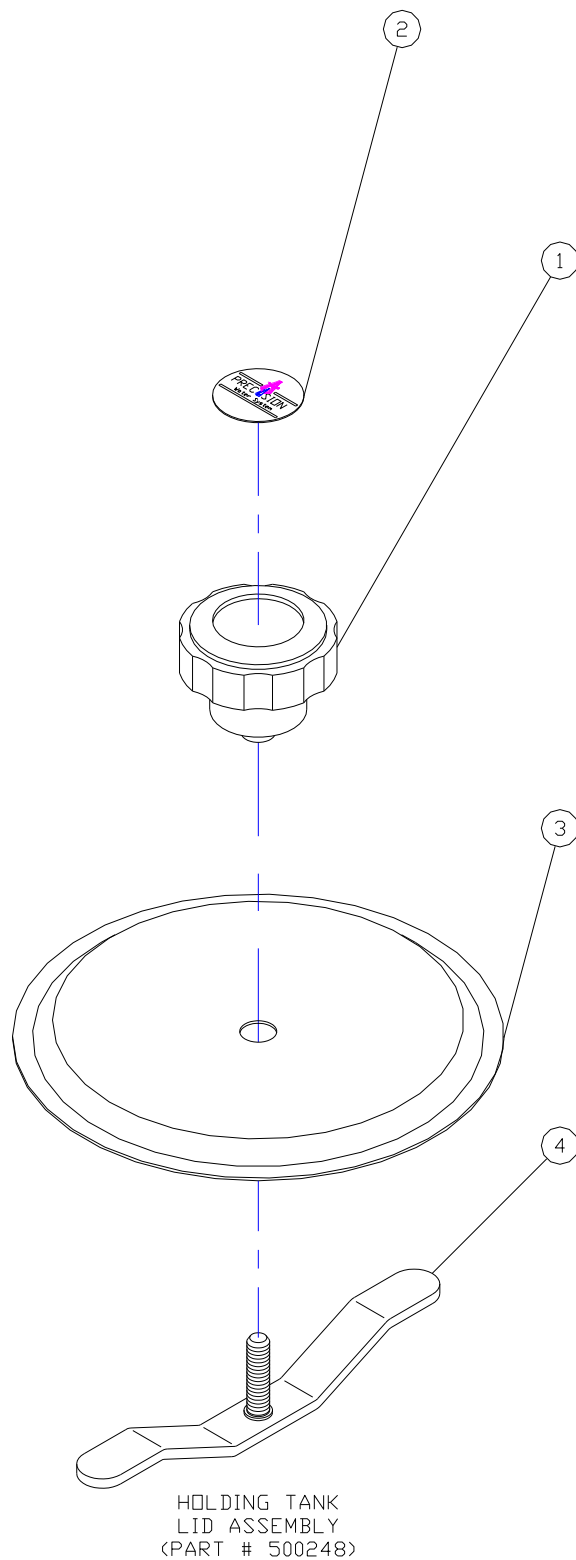
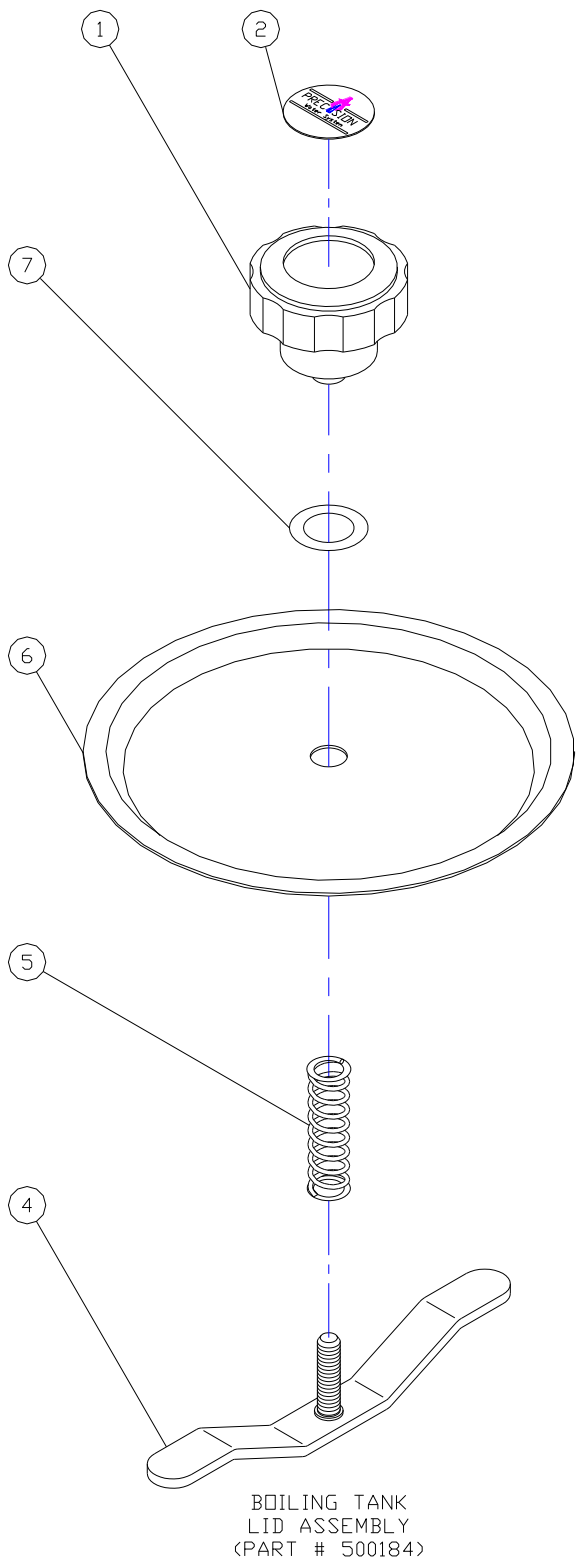
094074, Exploded Parts List

Boiling Tank & Holding Tank Lids Assemblies

Item #	Part #	Description	Qty
1	080053	Knob, Black Phenolic, ¼"-20	2
2	080106	Inlay, Knob, PWS	2
3	500119	Lid, Holding Tank, Disc, SS, 5.5"	1
4	500115	Tee Bar, Studded, 5.5"	2
5	080058	Spring, Boiling Tank, Lid, SS	1
6	500118	Lid, Boiling Tank, Disc, SS, 5.5"	1
7	080064	O-Ring, Lid Knob, Buna 112	1

094074, Exploded Parts List

Boiling & Holding Tank Lids Assemblies, PWS



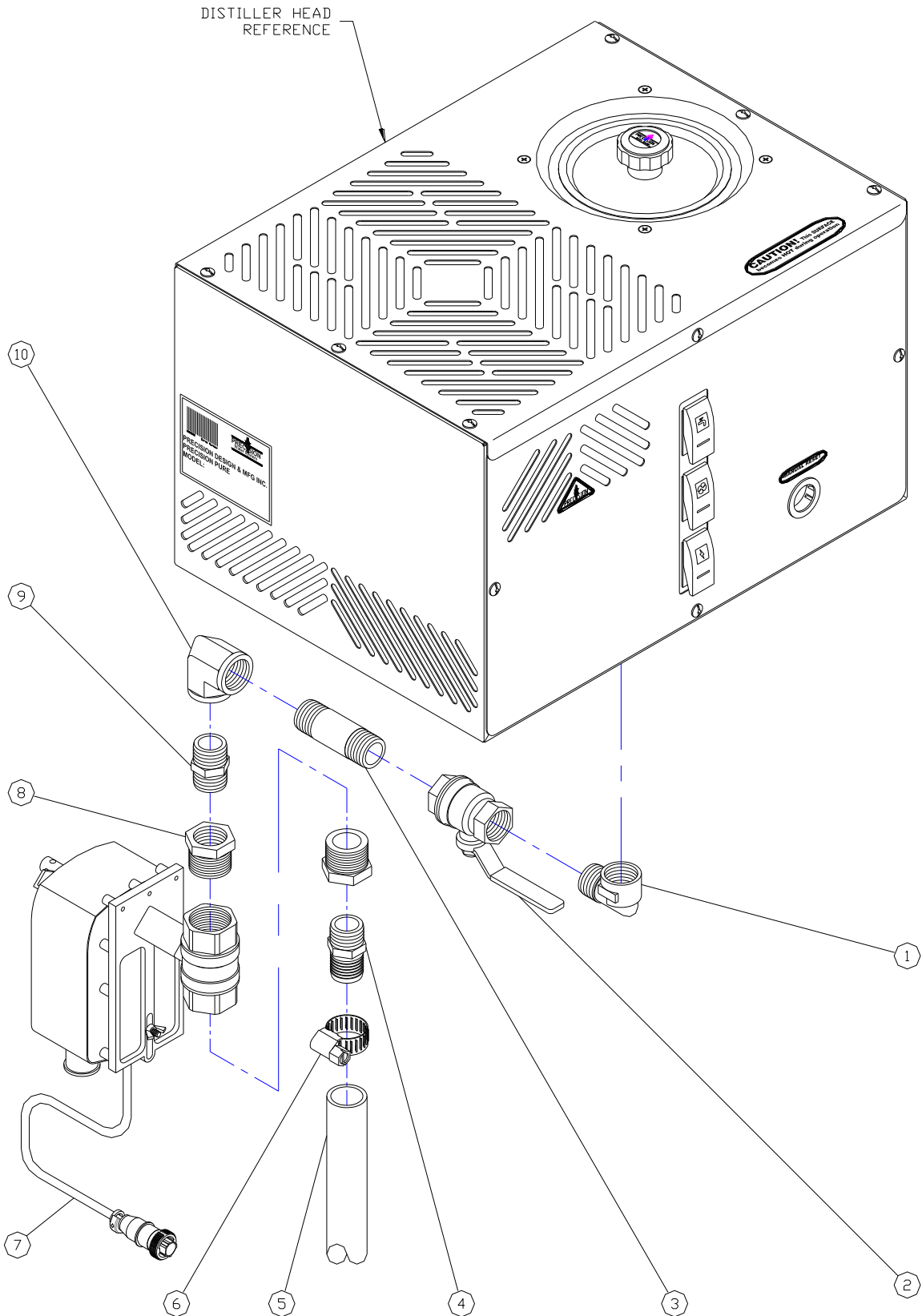
094096, Exploded Parts List

Automatic Electric Drain Assembly, AED-1

Item #	Part #	Description	Qty
1	030016	Elbow, 90 Degree, ¾ "FPT X ¾"MPT	1
2	030009	Valve, Ball, ¾"FPT, Both Ends	1
3	030021	Nipple, ¾"MPT X 3"	1
4	030015	Coupler, ¾"MPT X 1"HB	1
5	052005	Tubing, 1" X 1-1/4"	4'
6	080121	Clamp, Gear, 1-1/4"	1
7	500448	Motorized Ball Valve, w/Cord, 115V	1
	500452	Motorized Ball Valve, w/Cord, 230V	1
8	030031	Reducer, 1"MPT X ¾"FPT	1
9	030017	Nipple, Close, ¾"MPT	1
10	030018	Elbow, 90 Degree, ¾"FPT	1

094096, Exploded Parts List

Automatic Electric Drain Assembly, AED-1

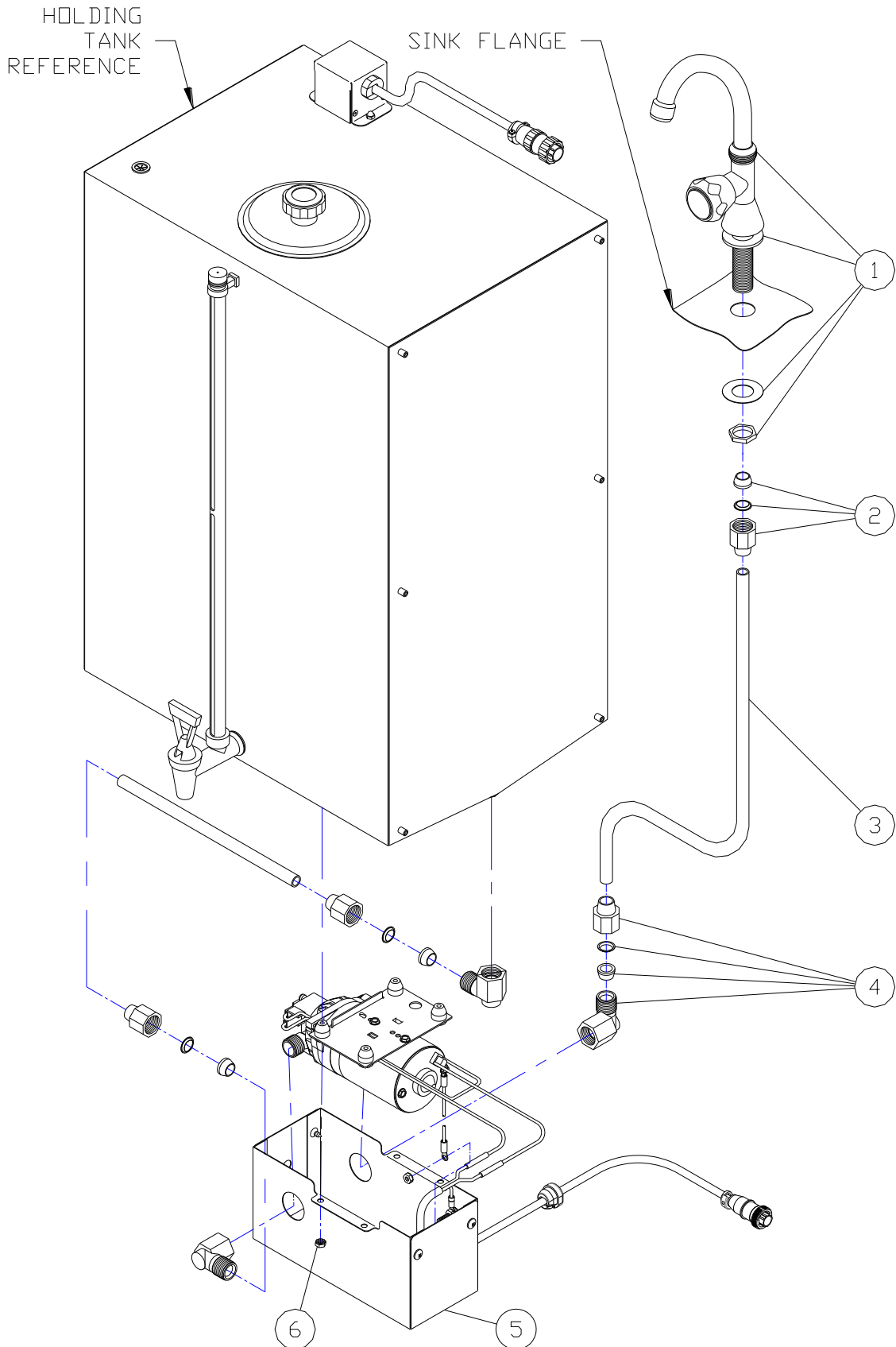


094094, Exploded Parts List Automatic Pump Assembly, APK-1

Item #	Part #	Description	Qty
1	080052	Faucet, Chrome	1
2	034003	Nut/Cone/Ring Set, ½" OD	1
3	052001	Tubing, LDPE, 3/8" X ½"	25'
4	034002	Elbow, 90 Degree, ½"FPT X ½"OD Tube	3
5	500358	Pump Assembly, W/Cord, 1.4GPM, 120V, CP	1
	510182	Pump Assembly, W/Cord, 1.2GPM, 240V, CP	1
6	026000	Nut, Kep, Plated, #10-24	4

094094, Exploded Parts List

Automatic Pump Assembly, APK-1



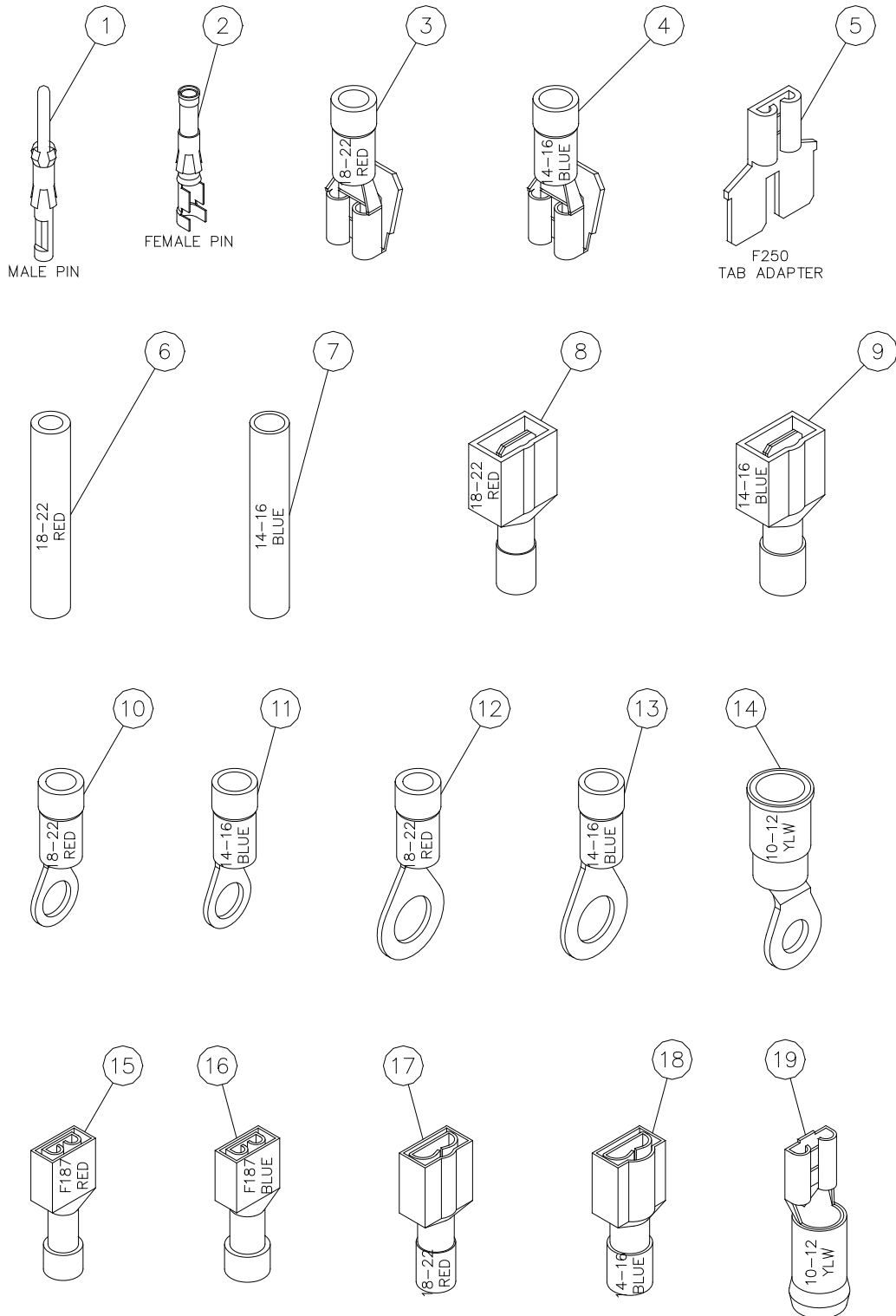
094109, Exploded Parts List

Electrical Terminals

Item #	Part #	Description
1	060016	Pin, Male, Circular
2	060017	Pin, Female, Circular
3	066014	Receptacle, Pigg, F250, #18-22 AWG, Red
4	066004	Receptacle, Pigg, F250, #14-16 AWG, Blue
5	066013	Tab Adapter, F250
6	066006	Butt Splice, #18-22 AWG, Red
7	066005	Butt Splice, #14-16 AWG, Blue
8	066012	Tab, 250, #18-22 AWG, Red
9	066011	Tab, 250, #14-16 AWG, Blue
10	066008	Ring, #10, #18-22 AWG, Red
11	066007	Ring, #10, #14-16 AWG, Blue
12	066010	Ring, ¼", #18-22 AWG, Red
13	066009	Ring, ¼", #14-16 AWG, Blue
14	066016	Ring, #10, #10-12 AWG, Yellow
15	066003	Receptacle, F187, #18-22 AWG, Red
16	066001	Receptacle, F187, #14-16 AWG, Blue
17	066002	Receptacle, F250, #18-22 AWG, Red
18	066000	Receptacle, F250, #14-16 AWG, Blue
19	066015	Receptacle, F250, #10-12 AWG, Yellow

094109, Exploded Parts List

Electrical Terminals



Wiring List - PRECISION PURE 12-12/12-20 (12GPD AUTO) PART # 510126-S19B

					SERIES 19		
No.	Part#	Color	Ga.	Length	From Conn.	To Conn.	To Location
1	510121	GRN	14	3"	#10RING #14-#16	POWER CORD	GROUND
2	510121	BLK	14	17.5"	F250 #14-#16	POWER CORD	POWER SWITCH #2
3	510121	WHT	14	18.5"	#10RING #14-#16	POWER CORD	RESET SWITCH #4
4	510122	BLK	18	12"	PIGG#18-#22	FAN MOTOR	HEATER RELAY #1
5	510122	BLK	18	13"	F250 #18-#22	FAN MOTOR	FAN SWITCH #2
6	095182	GRN	16	6"	FPIN	#10RING #14-#16	4 PIN RECEPTACLE #4 PUMP
7	095182	GRN	16	6"	FPIN	#10RING #14-#16	4 PIN RECEPTACLE #4 AUTO DRAIN
8							
9	095192	BLK	14	7"	#10RING #14-#16	F187 #14-#16	RESET SWITCH #1
10	095193	GRN	14	23"	PIGG #14-#16	F250 #14-#16	HEATER RELAY #5
11	095194	BLK	14	28"	F187 #14-#16	F250 #14-#16	Upper Microswitch COM
12	095183	BLK	16	4.5"	FPIN	F250 #14-#16	4 PIN RECEPTACLE #2 PUMP
13	095187	WHT	16	25"	FPIN	#10RING #14-#16	4 PIN RECEPTACLE #3 PUMP
14	095035	ORG	16	20"	#10RING #14-#16	FPIN	RESET SWITCH #3
15	095036	BLU	16	19"	F250 #14-#16	FPIN	HEATER RELAY #3
16	095004	YLW	16	7"	PIGG #14-#16	FPIN	SOLENOID VALVE A
17	095037	RED	16	22"	F250 #14-#16	FPIN	PUMP RELAY #5
18	095201	RED	14	8"	F250 #14-#16	#10RING #14-#16	POWER SWITCH #3
19	095188	BLK	16	21"	FPIN	PIGG #14-#16	4 PIN RECEPTACLE #2 AUTO DRAIN
20	095184	WHT	16	21"	FPIN	#10RING #14-#16	4 PIN RECEPTACLE #3 AUTO DRAIN
21	095204	WHT	14	4"	#10RING #14-#16	#10RING #14-#16	RESET SWITCH #1
22	095205	YLW	14	13"	F250 #14-#16	#10RING #14-#16	HEATER RELAY #1
23	095206	BRN	14	7"	F250 #14-#16	PIGG#14-#16	PUMP RELAY #6
24	095207	WHT	14	3"	F250 #14-#16	PIGG#14-#16	PUMP RELAY #3
25	095208	GRN	14	22"	F250 #14-#16	F250 #14-#16	PUMP RELAY #4
26	095207	WHT	14	3"	PIGG #14-#16	F250 #14-#16	HEATER RELAY #4
27	095209	BRN	14	13"	F250 #14-#16	#10RING #14-#16	HEATER RELAY #2
28	095210	ORG	14	9"	F250 #14-#16	#10RING #14-#16	FAN SWITCH #3
29	095211	RED	14	12"	#10RING #14-#16	F250 #14-#16	HEATING ELEMENT "B"
30	095207	WHT	14	3"	F250 #14-#16	PIGG #14-#16	FAN SWITCH #6
31	095207	WHT	14	3"	F250 #14-#16	PIGG #14-#16	FAN SWITCH #7
32	095212	BRN	14	12"	F250 #14-#16	#10RING #14-#16	FAN SWITCH #8
33	095213	BLU	14	11"	F250 #14-#16	#10RING #14-#16	POWER SWITCH #8
34	095207	WHT	14	3"	F250 #14-#16	PIGG#14-#16	POWER SWITCH #6
35	095214	BLU	14	10"	F250 #14-#16	F250 #14-#16	HEATER RELAY #4
36	095215	GRN	14	14"	F250 #14-#16	#10RING #14-#16	WATER SWITCH #8
37	095216	BRN	14	24"	F250 #14-#16	PIGG #14-#16	WATER SWITCH #6
38	095217	YLW	14	5"	F250 #14-#16	PIGG #14-#16	WATER SWITCH #2
39	095218	GRN	14	13"	F187 #14-#16	F250 #14-#16	Lower Microswitch NC
40	095219	ORG	14	14"	F187 #14-#16	F250 #14-#16	Upper Microswitch NC

240V CORD WIRING DIAGRAM

The diagram illustrates the electrical wiring for a water heater system. Key components and their connections include:

- POWER CORD:** Ground (1), GRN (2), WHI (3).
- LOWER BOILER TANK MICROSWITCH (NC POSITION):** NC (4), COM (5), GRN (6).
- HEATING ELEMENT (125V or 250V):** 20 (WHI), 21 (WHI), 22 (YLW), 23 (GRN), 24 (WHI), 25 (GRN), 26 (WHI), 27 (BRN), 28 (GRN), 29 (WHI), 30 (WHI).
- RESET SWITCH:** 18 (RED), 19 (BLK), 20 (WHI), 21 (WHI), 22 (YLW), 23 (GRN), 24 (WHI), 25 (GRN), 26 (WHI), 27 (BRN), 28 (GRN), 29 (WHI), 30 (WHI).
- BOTTOM SWITCH (LOWER):** 33 (BLU), 34 (WHI), 35 (BLK), 36 (GRN), 37 (BRN), 38 (YLW), 39 (WHI), 40 (GRN).
- TOP SWITCH (WATER):** 19 (BLK), 20 (WHI), 21 (WHI), 22 (YLW), 23 (GRN), 24 (WHI), 25 (GRN), 26 (WHI), 27 (BRN), 28 (GRN), 29 (WHI), 30 (WHI).
- FILL SOLENOID VALVE:** 11 (BLK), 12 (WHI), 13 (GRN), 14 (WHI), 15 (BLU), 16 (YLW), 17 (GRN), 18 (RED), 19 (BLK), 20 (WHI), 21 (WHI), 22 (YLW), 23 (GRN), 24 (WHI), 25 (GRN), 26 (WHI), 27 (BRN), 28 (GRN), 29 (WHI), 30 (WHI).
- UPPER BOILER TANK MICROSWITCH (NC POSITION):** NC (11), COM (12), GRN (13).
- HEATER RELAY:** 27 (BRN), 28 (GRN), 29 (WHI), 30 (WHI).
- PUMP RELAY:** 24 (WHI), 25 (GRN), 26 (WHI), 27 (BRN), 28 (GRN), 29 (WHI), 30 (WHI).
- FAN:** 4 (BLK), 5 (BLK), 6 (BLK), 7 (WHI), 8 (WHI), 9 (WHI), 10 (WHI), 11 (BLK), 12 (WHI), 13 (GRN), 14 (WHI), 15 (BLU), 16 (YLW), 17 (GRN), 18 (RED), 19 (BLK), 20 (WHI), 21 (WHI), 22 (YLW), 23 (GRN), 24 (WHI), 25 (GRN), 26 (WHI), 27 (BRN), 28 (GRN), 29 (WHI), 30 (WHI).
- MIDDLE SWITCH (FAN):** 31 (WHI), 32 (BRN), 33 (BLU), 34 (WHI), 35 (BLK), 36 (GRN), 37 (BRN), 38 (YLW), 39 (WHI), 40 (GRN).
- SINGLE VOLTAGE MOTOR:** 4 (BLK), 5 (BLK), 6 (BLK), 7 (WHI), 8 (WHI), 9 (WHI), 10 (WHI), 11 (BLK), 12 (WHI), 13 (GRN), 14 (WHI), 15 (BLU), 16 (YLW), 17 (GRN), 18 (RED), 19 (BLK), 20 (WHI), 21 (WHI), 22 (YLW), 23 (GRN), 24 (WHI), 25 (GRN), 26 (WHI), 27 (BRN), 28 (GRN), 29 (WHI), 30 (WHI).
- GROUNDING:** 1 (GROUND), 2 (GRN), 3 (WHI), 4 (NC), 5 (COM), 6 (GRN), 13 (WHI), 14 (WHI), 15 (BLU), 16 (YLW), 17 (GRN), 18 (RED), 19 (BLK), 20 (WHI), 21 (WHI), 22 (YLW), 23 (GRN), 24 (WHI), 25 (GRN), 26 (WHI), 27 (BRN), 28 (GRN), 29 (WHI), 30 (WHI).