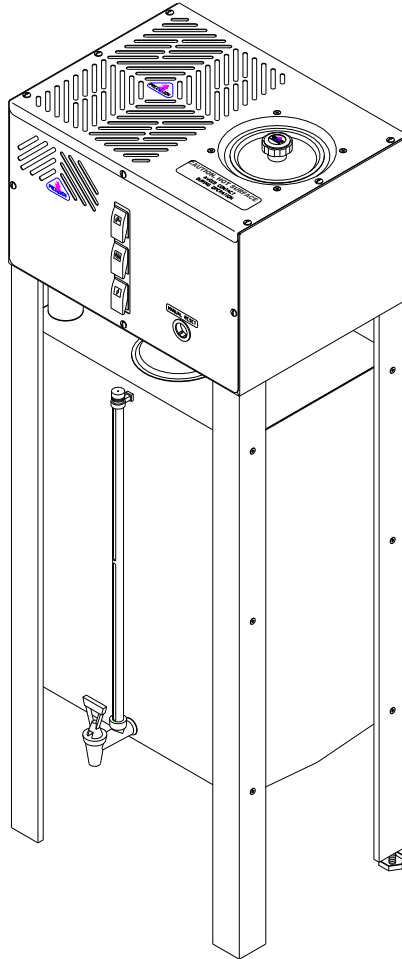




REPLACEMENT PARTS MANUAL

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	0012	0012	0001	0001	0001	0001



MODEL PWS 12-20

PRECISION WATER SYSTEMS WATER DISTILLER

MANUFACTURED BY:
PRECISION DESIGN & MANUFACTURING INC.
10331 - 105th STREET
WESTLOCK, ALBERTA, CANADA, T7P 2H7
e-mail: pdm@telusplanet.net
PHONE (780) 349-4933

01/04/18
S12

PAGE 1

12-20-097063-

FAX (780) 349-4957

TABLE of CONTENTS

	<u>Page</u>
1. 094102 Holding Tank Assembly, 12-20 Automatic	4 & 5
2. 094112 Boiler Assembly, 12GPD Automatic	6 & 7
3. 094101 Distiller Body Assembly, 12GPD Automatic	8 & 9
4. 094099 12GPD Solenoid Valve Assembly	10 & 11
5. 094098 Distiller Head Assembly, 12GPD Automatic	12 & 13
6. 094123 Boiling Tank & Holding Tank Lids Assemblies	14 & 15
7. 094071 Automatic Electric Drain Assembly, AED-1	16 & 17
8. 094094 Automatic Pump Assembly, APK-1	18 & 19
8. 094109 Electrical Terminals	20 & 21
10. 510126 Wiring Schematic	22 & 23

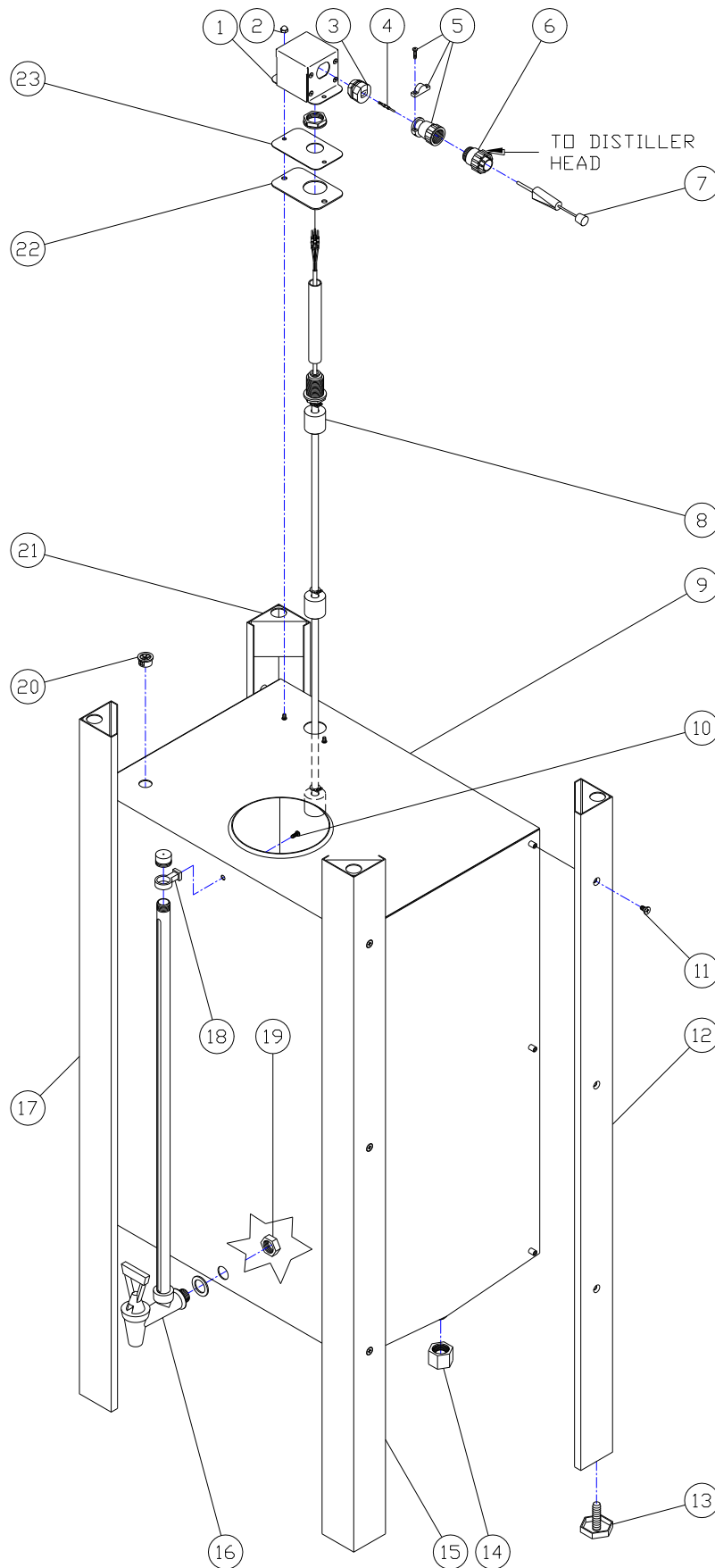
094102, Exploded Parts List

Holding Tank Assembly, 12-20 Automatic

Item #	Part #	Description	Qty
1	500382	Cover, Holding Tank Wires	1
2	028001	Nut, Acorn, Plated, #6-32	2
3	054002	Strain Relief, 7K-2	1
4	060016	Male Pin	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	012013	Screw, Machine, SS, #10-24 X 3/8"	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	080123	Valve, Holding Tank, 23" (includes nut, washer & support)	1
17	510142	Leg, Left Front, 12-20	1
18	080131	Support, Sight Gauge, 3/4, Black	1
19	080132	Nut, Jam, 3/8", Black	1
20	054005	Bushing, Wire, 5/8"	1
21	510140	Leg, Left Rear, 12-20	1
22	500326	Gasket, Level Sensor	1
23	500325	Plate, Level Sensor	1

094102, Exploded Parts List

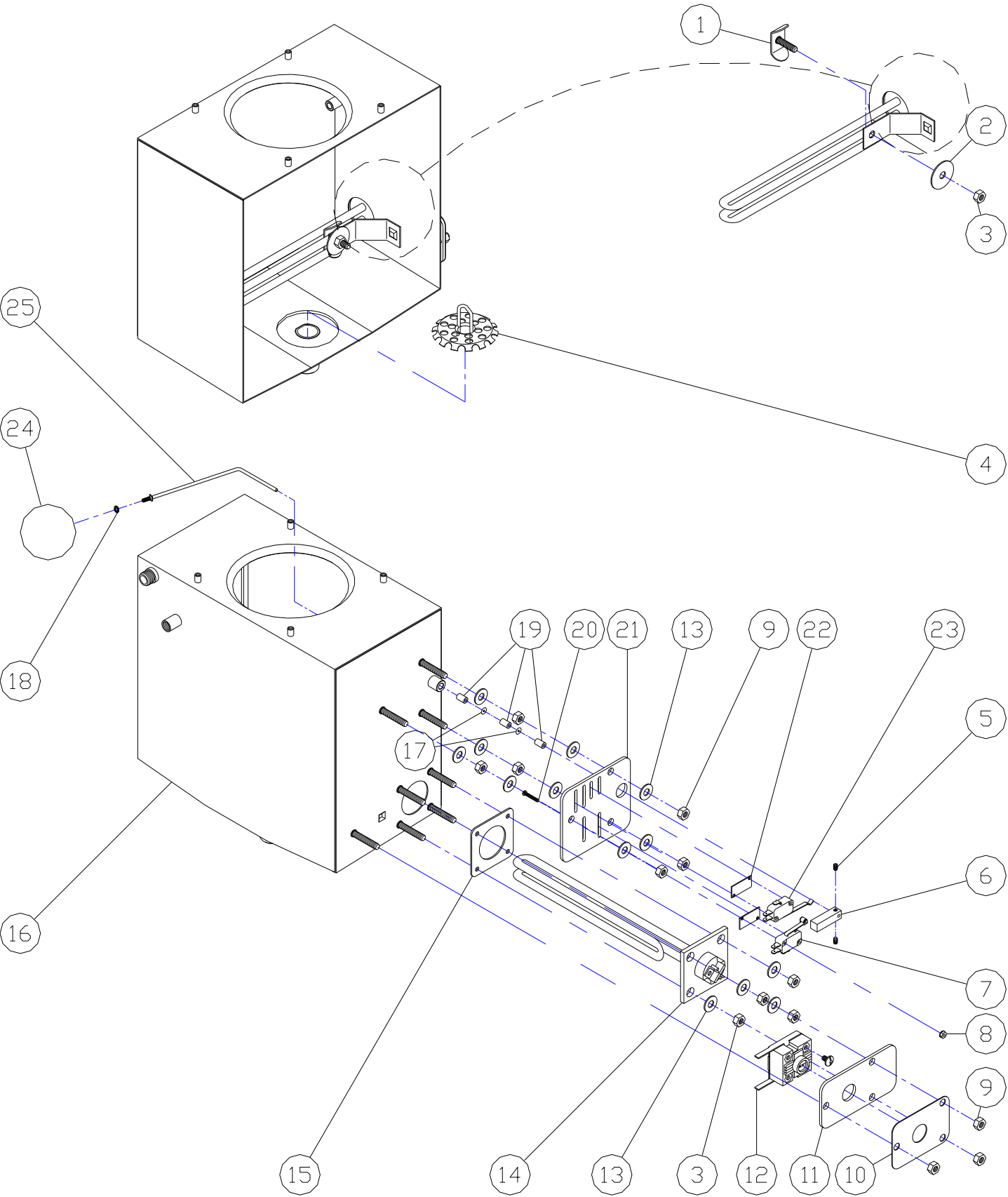
Holding Tank Assembly, 12-20 Automatic



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	016014	Set Screw, Black, #6-32 X .25", Cup Point	2
6	500278	Bar Actuator, Boiler Float	1
7	060058	Microswitch, Short Roller Arm	1
8	026003	Nut, Kep, Plated, #4-40	4
9	025002	Nut, Hex, Plated, 1/4"-20	9
10	500153	Cover, Reset, SS	1
11	400010	Reset Plate, Lexan	1
12	060000	Switch, Thermo-reset	1
13	018004	Washer, 5/16" X 11/16" X 20ga, SS	11
14	060003	Heating Element, 125V, 1500W	1
	060004	Heating Element, 230V, 1500W	1
15	500100	Gasket, Heater	1
16	510146	Boiler WA, 12GPD Auto	1
17	080128	O-Ring, 1/16" X 1/8" X 1/4"	2
18	020002	Washer, Lock, SS, M3.5, External Tooth	1
19	080127	Bushing, Nylon	3
20	012003	Screw, Machine, Plated, #4-40 X 3/4"	4
21	500266	Plate, Microswitch	1
22	500289	Shim, Microswitch	2
23	060059	Microswitch, Long Arm, Formed	1
24	080162	Float Ball, SS, 2-1/4" Round, #6-32	1
25	500398	Rod WA, Boiler Float, Auto	1

094112, Exploded Parts List
Boiler Assembly, 12GPD Automatic

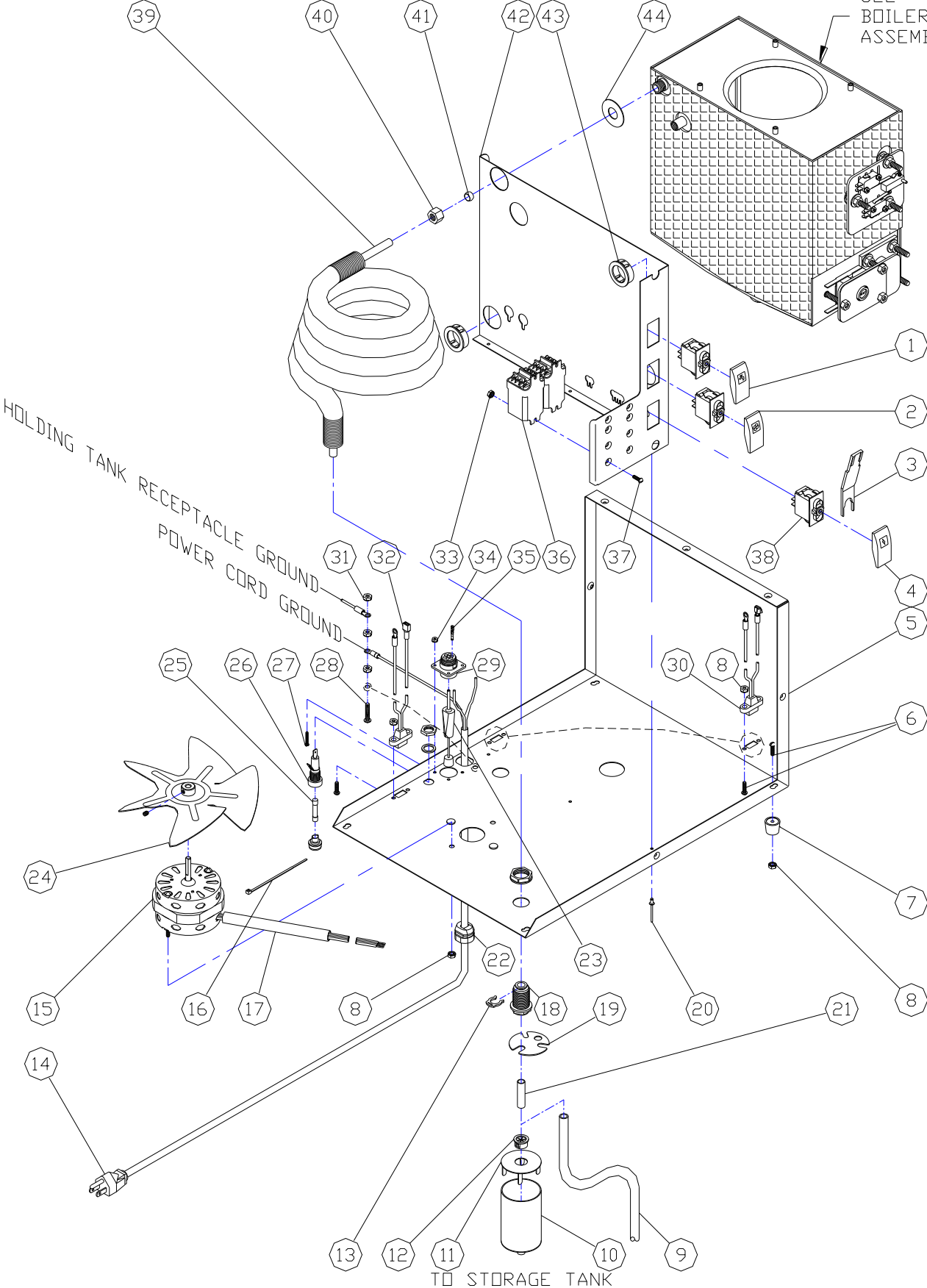


094101, Exploded Parts List Distiller Body Assembly, 12GPD Automatic

Item #	Part #	Description	Qty
1	060031	Actuator, Grey, White-Water	1
2	060030	Actuator, Grey, Amber-Fan	1
3	080134	Tool, Actuator Removal	1
4	060029	Actuator, Grey, Red-Power	1
5	510100	Body, 12GPD Auto	1
6	012012	Screw, Mach, Plated, #8-32 X 5/8"	8
7	054010	Leg, 3/4" OD X 5/8" High	4
8	026001	Nut, Kep, Plated, #8-32	10
9	052002	Tubing, PVC, 5/16" X 7/16"	2'
10	500300	Filter Housing WA, Auto	1
11	500260	Filter Cap WA	1
12	054005	Busing, Wire, Plastic, 5/8" Hole	1
13	034021	Locking Clip, 3/8"JG	1
14	510121	Power Cord Assembly, 14-3 NA, 12 GPD Automatic	1
15	510122	Motor Assembly, 120V, 12GPD, Auto	1
16	054011	Wire Tie, Plastic, 4"	Ref.
17	080108	Sleeve, Fiberglass, 1/2"	0.458'
18	034011	Bulkhead, 3/8"JG	1
19	500282	Plate, JG Removal Tool	1
20	016004	Rivet, Aluminum, 1/8" X 5/16"	4
21	500202	Tube, SS, 3/8" Diameter X 1.5"	1
22	054002	Strain Relief, 7K-2	1
23	080135	Circular Pin Extraction Tool	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	2
28	012000	Screw, Machine, Plated, #10-24 X 1"	1
29	060044	Receptacle, 7 pin Circular	1
30	510124	Drain Receptacle Assembly, 12GPD, Auto	1
31	026000	Nut, Kep, Plated, #10-24	3
32	510123	Pump Receptacle Assembly, 12GPD, Auto	1
33	026002	Nut, Kep, Plated, #6-32	4
34	026003	Nut, Kep, Plated, #4-40	2
35	060017	Female Pin	4
36	060020	Relay, Shrack, DPDT, 120V	2
	060021	Relay, Shrack, DPDT, 240V	2
37	012009	Screw, Machine, Plated, #6-32 X 1/2"	4
38	060028	Switch Base, 120/240V SPST	3
39	510135	Cooling Coil Assembly, 12GPD, Auto	1
40	030013	Nut, Plated, 3/8", Compression	1
41	030012	Ferrule, 3/8"	1
42	510101	Divider, 12GPD Auto	1
43	054004	Bushing, Snap, 1-1/4"	2
44	018023	Washer, Flat, 5/8" X 1-1/2" X 20ga, SS	1

094101, Exploded Parts List **Distiller Body Assembly, 12GPD Automatic**

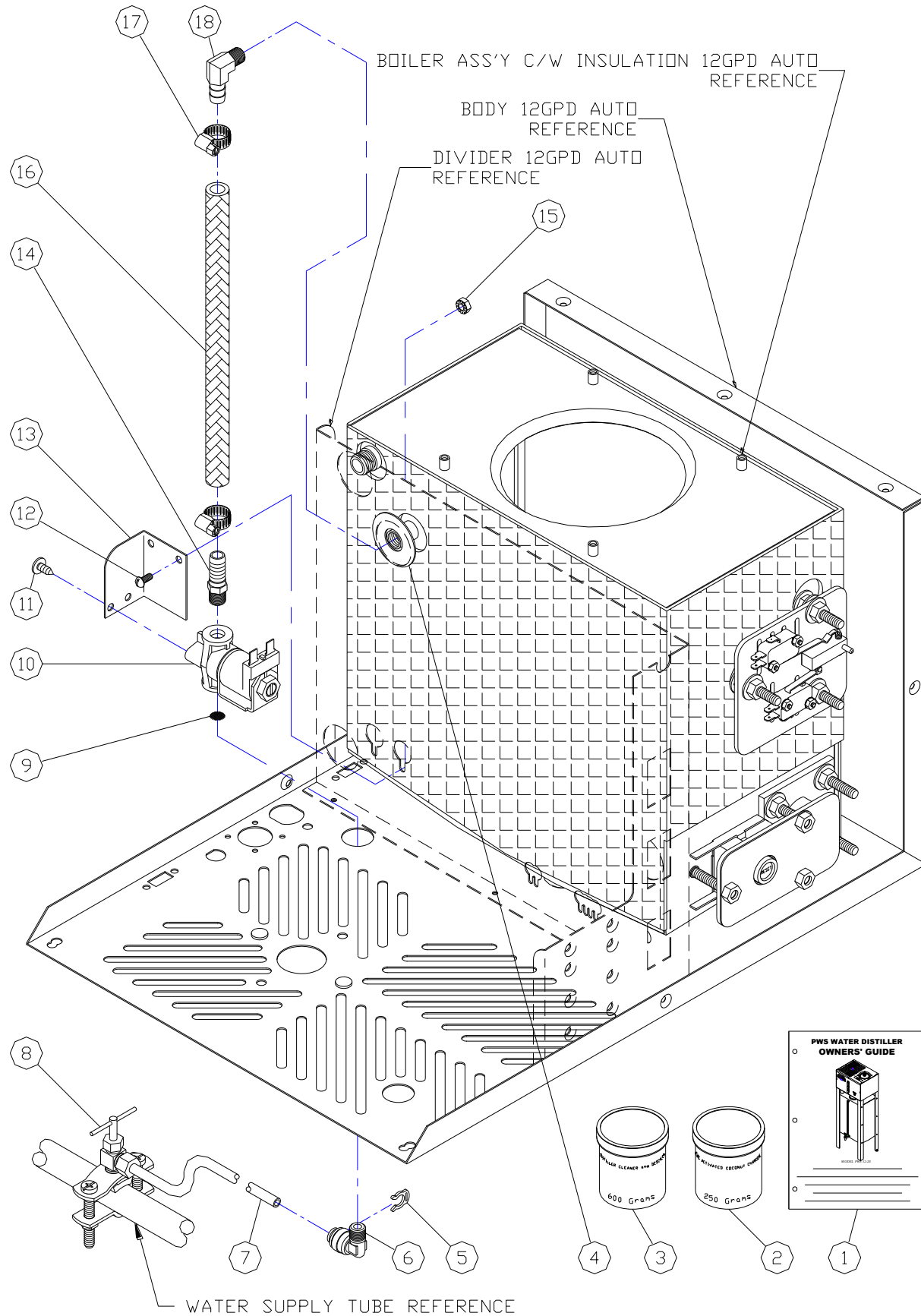
SEE
 BOILER
 ASSEMBLY



094099, Exploded Parts List 12GPD Solenoid Valve Assembly

Item #	Part #	Description	Qty
1	097124	Owners Guide, PWS 12-20	1
2	500106	Charcoal, PWS, 250g Jar Of	1
	500107	Charcoal, PWS, 600g Jar Of	Ref.
3	500102	Descaler, PWS, 600g Jar Of	1
	500103	Descaler, PWS, 1.6Kg Jar Of	Ref.
4	018023	Washer, Flat, 5/8" X 1-1/2" X 20ga, SS	1
5	034009	Locking Clip, 1/4" JG	1
6	034006	Elbow, 90 Degree, 1/8" MPT X 1/4" JG	1
7	052000	Tubing, 1/4" Feed-line	16'
8	036005	Valve, Self Piercing Kit	1
9	080197	Screen, 50 Mesh, Solenoid Valve	1
10	060026	Solenoid Valve, 1/8" FPT, Both Ends, 120V	1
	060027	Solenoid Valve, 1/8" FPT, Both Ends, 240V	1
11	010000	Screw, Sheet Metal, SS, #10-12 X 1/2"	2
12	012012	Screw, Machine, Plated, #8-32 X 5/8"	2
13	500166	Bracket, Solenoid Valve	1
14	034024	Coupler, Nylon, 1/8" MPT X 3/8" HB	1
15	026001	Nut, Kep, Plated, #8-32	2
16	052004	Tubing, 3/8" X 0.6", Braided	0.509'
17	080056	Gear Clamp, SS, 1/4"	2
18	030003	Elbow, 90 Degree, 1/8" MPT X 3/8" HB	1

094099, Exploded Parts List 12GPD Solenoid Valve Assembly

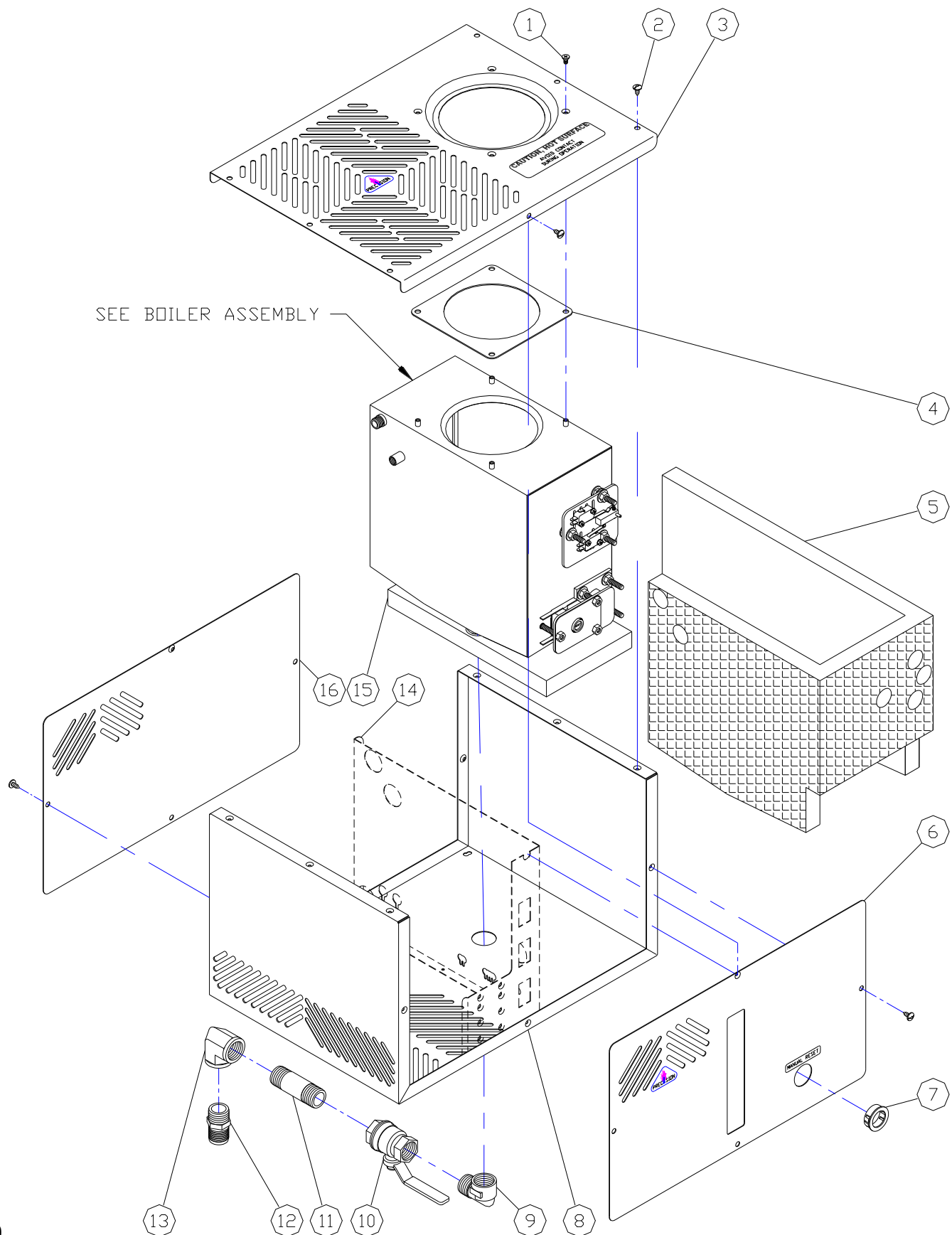


094098, Exploded Parts List

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	500111	Gasket, Lid	1
5	510118	Insulation, 12GPD Boiler Sides	1
6	510103	Cover, Front, 12GPD	1
7	054005	Bushing, Snap, 1.25"	1
8	510100	Body, 12GPD	1
9	030016	Elbow, 90 Degree, 3/4"MPT X 3/4"FPT	1
10	030009	Valve, Ball, 3/4"FPT, Both Ends	1
11	030021	Nipple, 3/4"MPT X 3"	1
12	030015	Coupler, 3/4"MPT X 1"HB	1
13	030018	Elbow, 90 Degree, 3/4"FPT, Both Ends	1
14	510101	Divider, 12GPD	1
15	510119	Insulation, 12GPD Boiler Bottom	1
16	510104	Cover, Rear, 12GPD	1

094098, Exploded Parts List Distiller Head Assembly, 12GPD Automatic

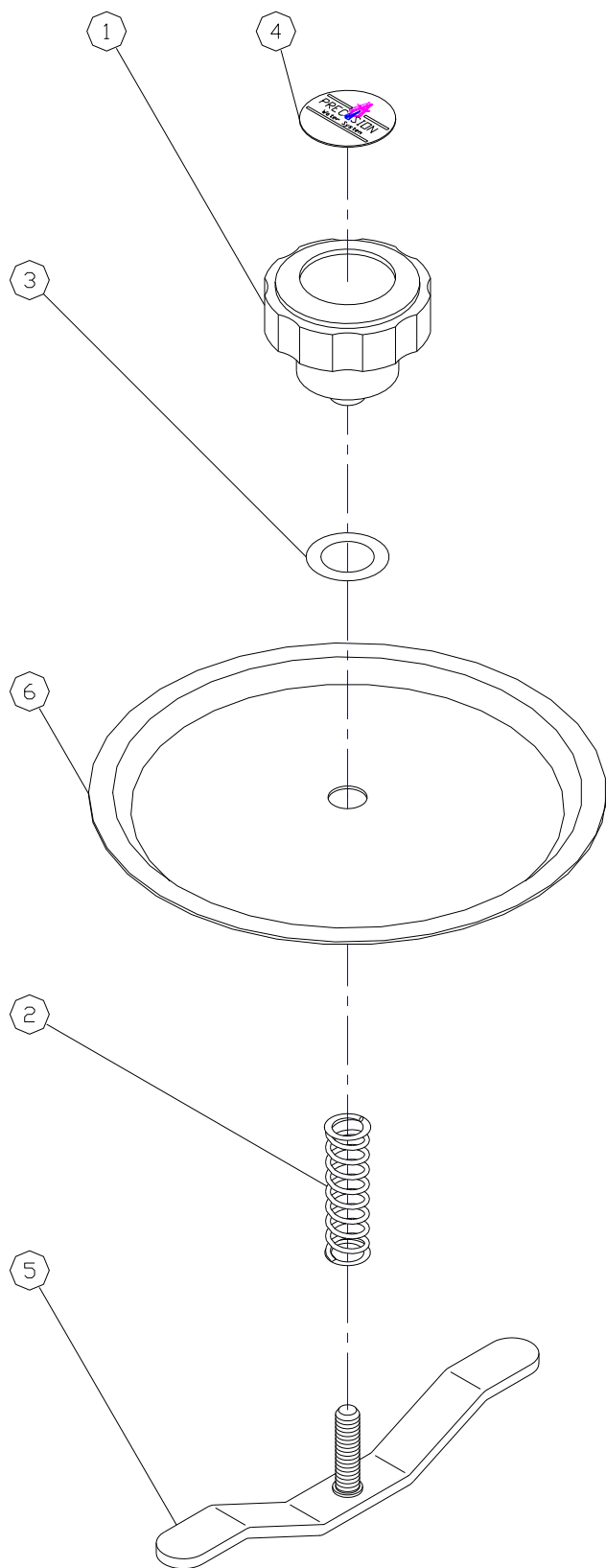


094074, Exploded Parts List

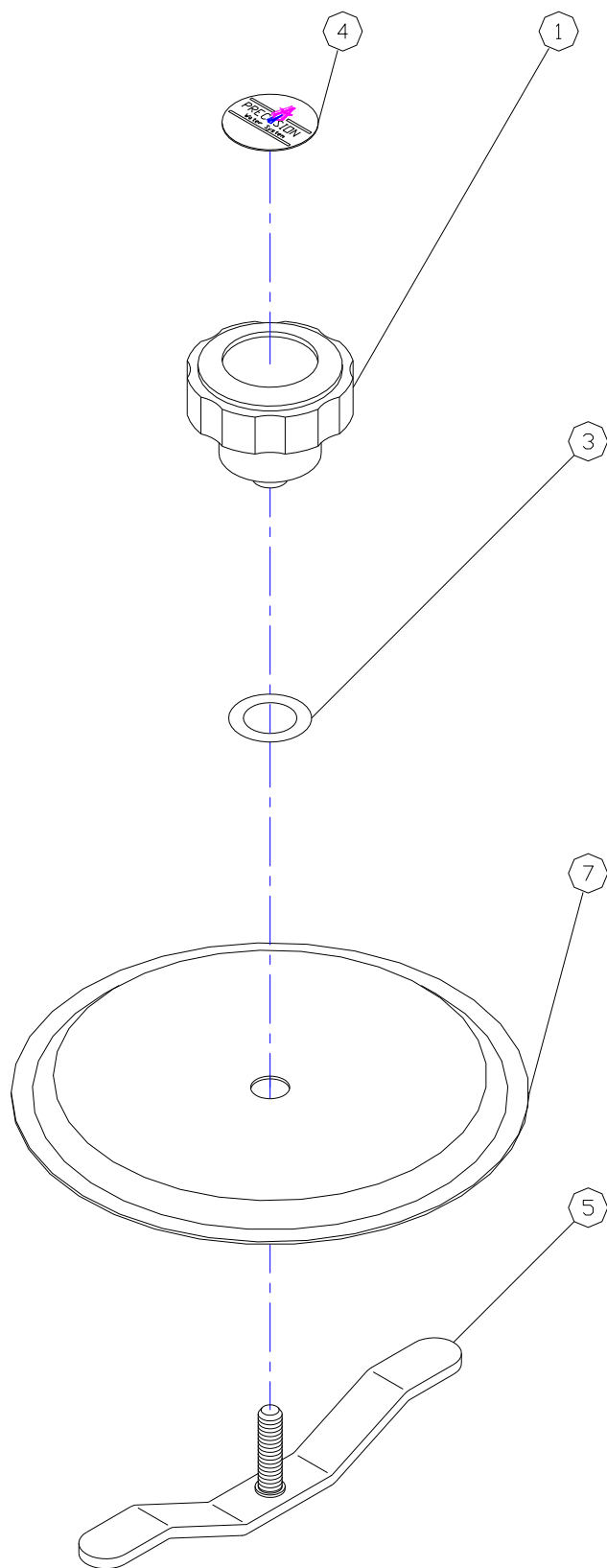
Boiling Tank & Holding Tank Lids Assemblies

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

094074, Exploded Parts List **Boiling & Holding Tank Lids Assemblies, PWS**



BOILING TANK
 LID ASSEMBLY
 (PART # 500184)



HOLDING TANK
 LID ASSEMBLY
 (PART # 500248)

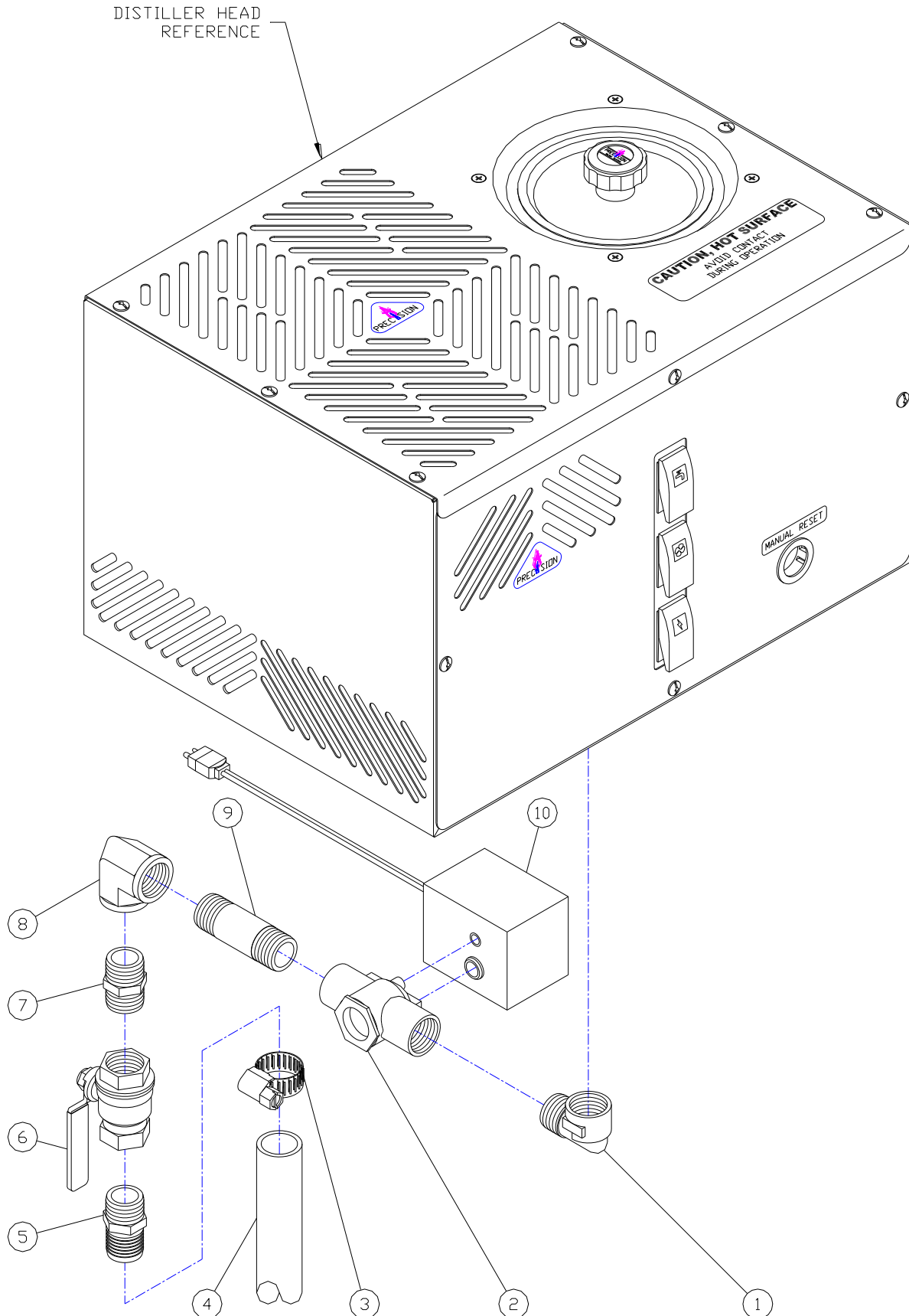
094096, Exploded Parts List

Automatic Electric Drain Assembly, AED-1

Item #	Part #	Description	Qty
1	030016	Elbow, 90 Degree, ¾" FPT X ¾" MPT	1
2	080077	Valve, Drain, ¾" FPT, Normally Open	1
3	080121	Clamp, Gear, 1-1/4"	1
4	052005	Tubing, 1" X 1-1/4"	1
5	030015	Coupler, ¾" MPT X 1" HB	1
6	030009	Valve, Ball, ¾" FPT, Both Ends	1
7	030017	Nipple, Close, ¾" MPT	1
8	030018	Elbow, 90 Degree, ¾" FPT	1
9	030021	Nipple, ¾" MPT X 3"	1
10	500310	PWS AED Motor Assembly, W/Cord, 120V	1
	500311	PWS AED Motor Assembly, W/Cord, 240V	1

094096, Exploded Parts List

Automatic Electric Drain Assembly, AED-1

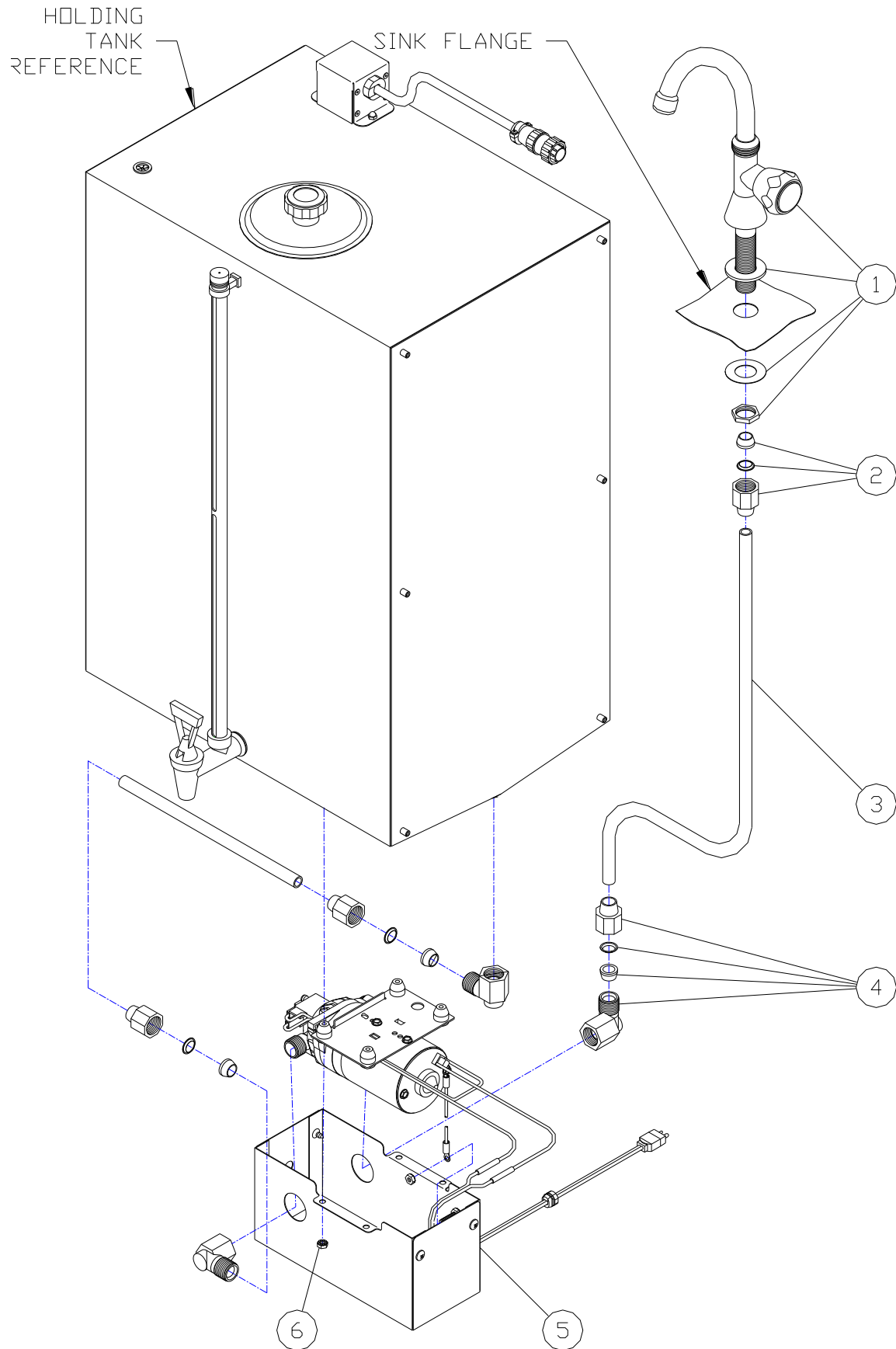


094094, Exploded Parts List

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 Ass'y, W/Cord, 1.4GPM, 120V, 2P	1
6	026000	Nut, Kep, Plated, #10-24	4

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



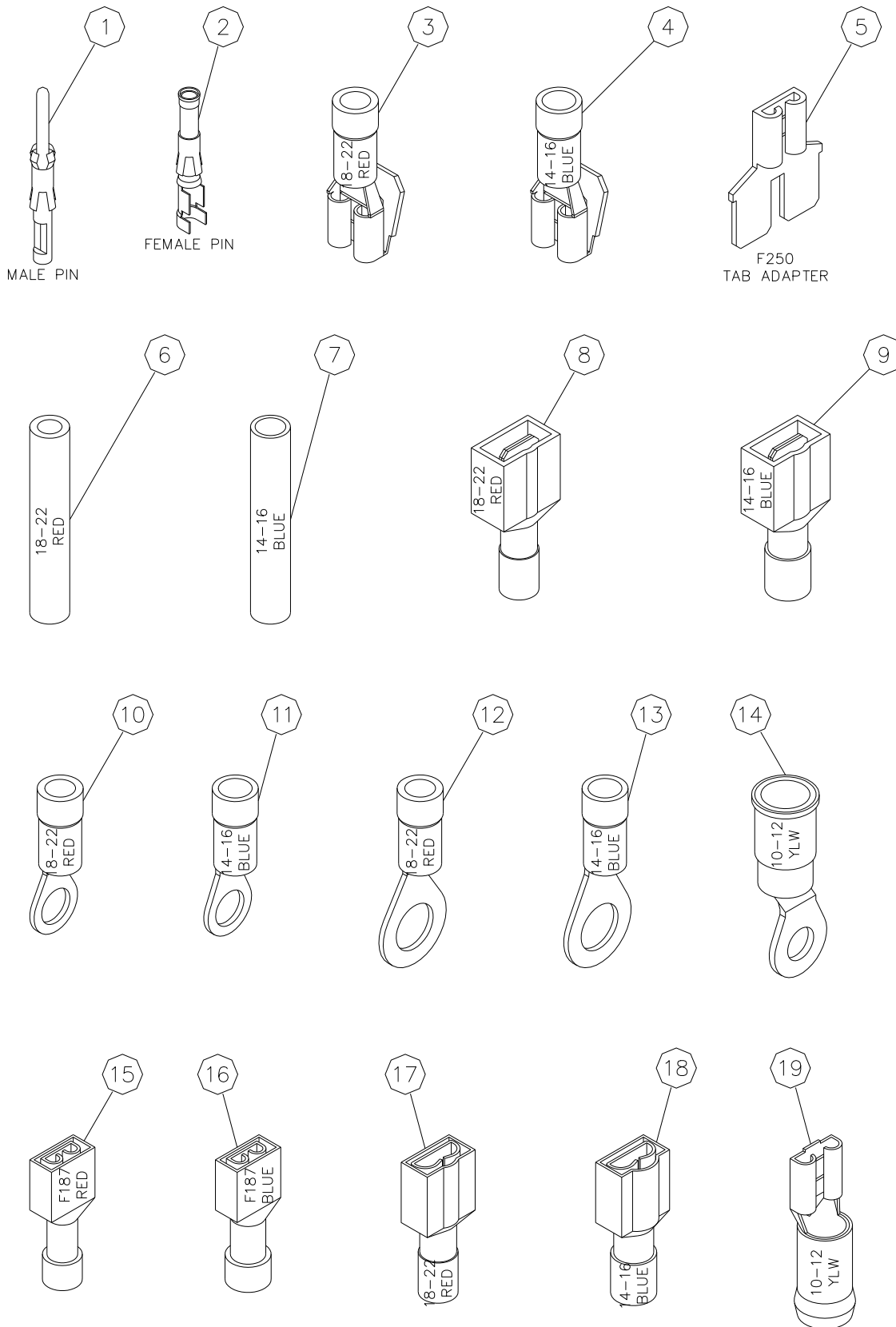
094109, Exploded Parts List

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, 1/4", #18-22 AWG, Red
13	066009	Ring, 1/4", #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 12-20 (12 GPD Auto), PART # 510126

No.	Part#	Color	Ga	Length	From Conn.	To Conn.	From Location	To Location
1	510121	GRN	16	3"	#10RING#14-#16	POWER CORD	GROUND	POWER CORD
2	510121	BLK	16	17.5"	F250 #14-#16	POWER CORD	POWER SWITCH #2	POWER CORD
3	510121	WHT	16	18.5"	#10RING#14-#16	POWER CORD	RESET SWITCH #4	POWER CORD
4	510122	BLKor	18	12"	PIGG#18-#22&F250#18-#22	FAN MOTOR (ORG/BLU)	HEATER RELAY #4	FAN MOTOR
5	510122	BLKor	18	12"	F250 #18-#22&PIGG#18-#22	FAN MOTOR (YLW/WHT)	FAN SWITCH #2	FAN MOTOR
6								
7								
8								
9	095001	BLK	16	7"	#10RING#14-#16	F187 #14-#16	RESET SWITCH #1	Lower Microswitch COM
10	095033	GRN	16	23"	PIGG#14-#16	F250 #14-#16	HEATER RELAY #5	SOLENOID VALVE A
11	095034	BLK	16	26"	F187 #14-#16	F250 #14-#16	Upper Microswitch COM	SOLENOID VALVE B
12	510123	BLK	18	3.5"	F250 #18-#22	PUMP RECEPTACLE	FUSE SIDE	PUMP RECEPTACLE (SMOOTH)
13	510123	BLK	18	24"	#10RING#18-#22	PUMP RECEPTACLE	RESET SWITCH #3	PUMP RECEPTACLE (RIBBED)
14	095035	ORG	16	20"	#10RING#14-#16	FPIN	RESET SWITCH #3	HOLDING TANK RECEPTACLE #1
15	095036	BLU	16	19"	F250 #14-#16	FPIN	HEATER RELAY #3	HOLDING TANK RECEPTACLE #2
16	095004	YLW	16	7"	PIGG#14-#16	FPIN	SOLENOID VALVE A	HOLDING TANK RECEPTACLE #3
17	095037	RED	16	22"	F250 #14-#16	FPIN	PUMP RELAY "B"	HOLDING TANK RECEPTACLE #4
18	095006	RED	16	8"	F250 #14-#16	#10 RING #14-#16	POWER SWITCH #3	RESET SWITCH #2
19	510124	BLK	18	20"	PIGG#18-#22	DRAIN RECEPTACLE	WATER SWITCH #7	DRAIN RECEPTACLE (RIBBED)
20	510124	BLK	18	20"	#10RING#18-#22	DRAIN RECEPTACLE	RESET SWITCH #1	DRAIN RECEPTACLE (SMOOTH)
21	095007	WHT	16	4"	#10RING#14-#16	#10 RING #14-#16	RESET SWITCH #1	HEATING ELEMENT "A"
22	095008	YLW	16	13"	F250 #14-#16	#10 RING #14-#16	HEATER RELAY #4	HEATING ELEMENT "B"
23	095009	BRN	16	7"	F250 #14-#16	PIGG#14-#16	PUMP RELAY "A"	POWER SWITCH #2
24	095010	WHT	16	3"	F250 #14-#16	PIGG#14-#16	PUMP RELAY #6	PUMP RELAY "A"
25	095038	GRN	16	22"	F250 #14-#16	F250 #14-#16	PUMP RELAY #9	FUSE END
26	095010	WHT	16	3"	PIGG#14-#16	F250 #14-#16	HEATER RELAY "B"	HEATER RELAY #9
27	095012	BRN	16	12"	F250 #14-#16	#10 RING #14-#16	HEATER RELAY #7	RESET SWITCH #3
28	095013	ORG	16	9"	F250 #14-#16	#10 RING #14-#16	FAN SWITCH #3	RESET SWITCH #1
29	095014	RED	16	11"	#10RING#14-#16	F250 #14-#16	HEATING ELEMENT "B"	POWER SWITCH #7
30	095010	WHT	16	3"	F250 #14-#16	PIGG#14-#16	FAN SWITCH #6	POWER SWITCH #7
31	095010	WHT	16	3"	F250 #14-#16	PIGG#14-#16	FAN SWITCH #7	FAN SWITCH #2
32	095015	BRN	16	12"	F250 #14-#16	#10 RING #14-#16	FAN SWITCH #8	RESET SWITCH #4
33	095016	BLU	16	11"	F250 #14-#16	#10 RING #14-#16	POWER SWITCH #8	RESET SWITCH #4
34	095010	WHT	16	3"	F250 #14-#16	PIGG#14-#16	POWER SWITCH #6	POWER SWITCH #3
35	095017	BLU	16	10"	F250 #14-#16	F250 #14-#16	HEATER RELAY #9	WATER SWITCH #7
36	095018	GRN	16	14"	F250 #14-#16	#10 RING #14-#16	WATER SWITCH #8	RESET SWITCH #4
37	095039	BRN	16	24"	F250 #14-#16	PIGG#14-#16	WATER SWITCH #6	SOLENOID VALVE B
38	095020	YLW	16	5"	F250 #14-#16	PIGG#14-#16	WATER SWITCH #2	FAN SWITCH #3
39	095021	GRN	16	13"	F187 #14-#16	F250 #14-#16	Lower Microswitch NC	HEATER RELAY "A"
40	095022	ORG	16	14"	F187 #14-#16	F250 #14-#16	Upper Microswitch NC	WATER SWITCH #3

510126, Exploded Parts List
Wiring Diagram, PWS 12GPD Auto

