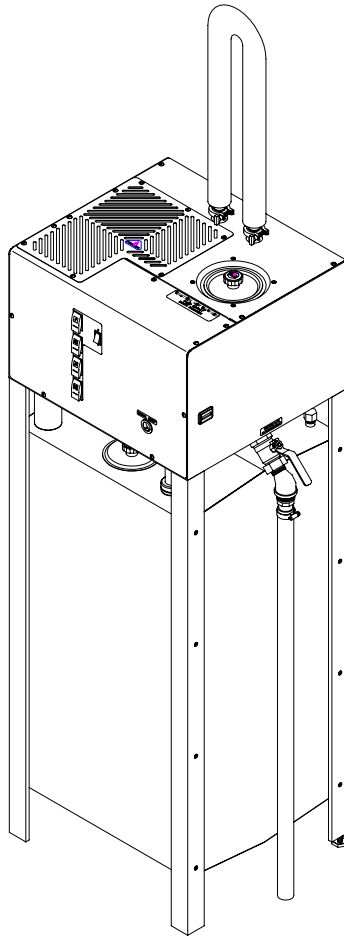




REPLACEMENT PARTS MANUAL

FOR MODEL: PWS 45-75, AED-2 & APK-4
SERIES 0004 0002 0001



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
FAX (780) 349-4957

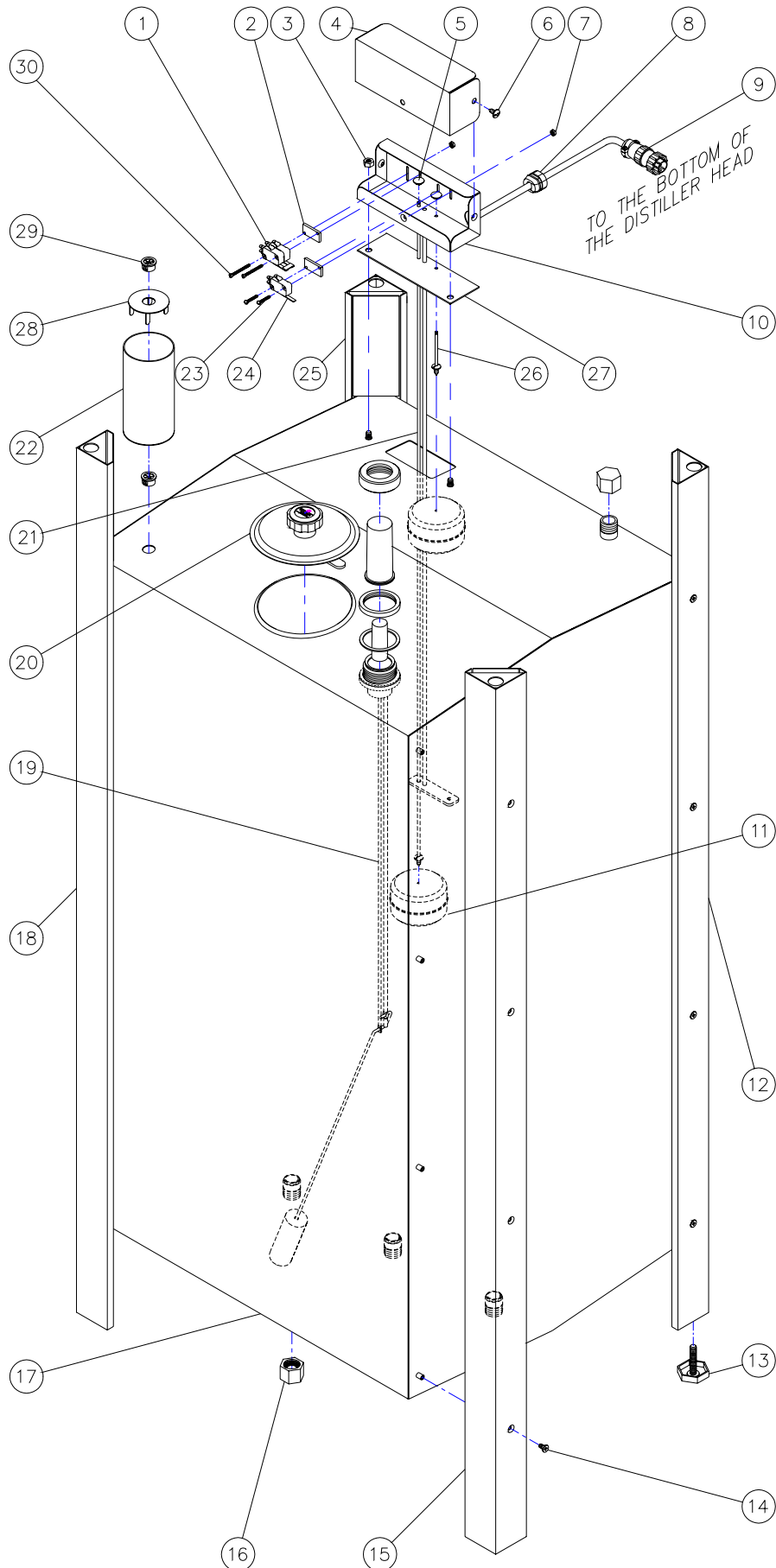
TABLE OF CONTENTS

	<u>Page</u>
1. 094150 Holding Tank Assembly, 45-75	4 & 5
2. 094151 Boiling Tank Assembly, 45GPD	6 & 7
3. 094155 Electrical Panel Assembly, 45GPD	8 & 9
4. 094156 Cooling Coils Assemblies, 45GPD	10 & 11
5. 094152 Distiller Body Assembly, 45GPD	12 & 13
6. 094153 45GPD Solenoid Valve Assembly	14 & 15
7. 094154 Distiller Head Assembly, 45GPD	16 & 17
8. 094123 Boiling Tank & Holding Tank Lids Assemblies, PWS	18 & 19
9. 094157 Automatic Electric Drain Assembly, 45GPD	20 & 21
10. 094158 Automatic Pump Assembly, 45GPD	22 & 23
11. 094109 Electrical Terminals	24 & 25
12. 520129 Wiring Schematic	26 & 27

094150, Exploded Parts List Holding Tank Assembly, 45-75

Item #	Part #	Description	Qty
1	520149	Dual Micro Switches WA, Short Arm	1
2	520147	Shim, Micro Switch, Lexan	2
3	025000	Nut, Hex, SS, 1/4"-20	2
4	520146	Cover, Level Sensor, CD	1
5	520159	Cap Nut WA, #6-32	2
6	010000	Screw, Sheet Metal, SS, #10-12 X 1/2"	3
7	026003	Nut, Kep, Plated, #4-40	4
8	054002	Stain Relief, 7K-2	1
9	520174	Harness, Circular Plug, Level Sensor, CD	1
10	520160	Level Sensor Box WA, CD	1
11	080187	Float	2
12	520115	Leg WA, Rear Right, CD	1
13	080126	Appliance Foot, 5/16" X 1-1/2"	2
14	012008	Screw, Machine, SS, #10-24 X 3/8" Oval	16
15	520117	Leg WA, Front Right, CD	1
16	034023	Cap, Grey, 1/2FPT	4
17	520112	Holding Tank WA, 45-75	1
18	520116	Leg WA, Front Left, CD	1
19	080174	Sight, Gauge Assembly, 40"	1
20	520248	Lid Assembly, Holding Tank	1
21	520157	Rod WA, 1/8" X 39-1/4"	1
22	520176	Filter Housing WA, 2-1/2", CD	1
23	012003	Screw, Machine, Plated, #4-40 X 3/4"	2
24	400006	Micro Switch, Short Arm	1
25	520114	Leg WA, Rear Left, CD	1
26	520168	Rod WA, 1/8" X 2"	1
27	520144	Gasket, Level Sensor Box, CD	1
28	520178	Filter Cap WA, 2-1/2"	1
29	054005	Bushing, Wire Plastic, 5/8" Hole	2
30	016017	Screw, Nylon, #4-40 X 1.25", Fil Hd	2

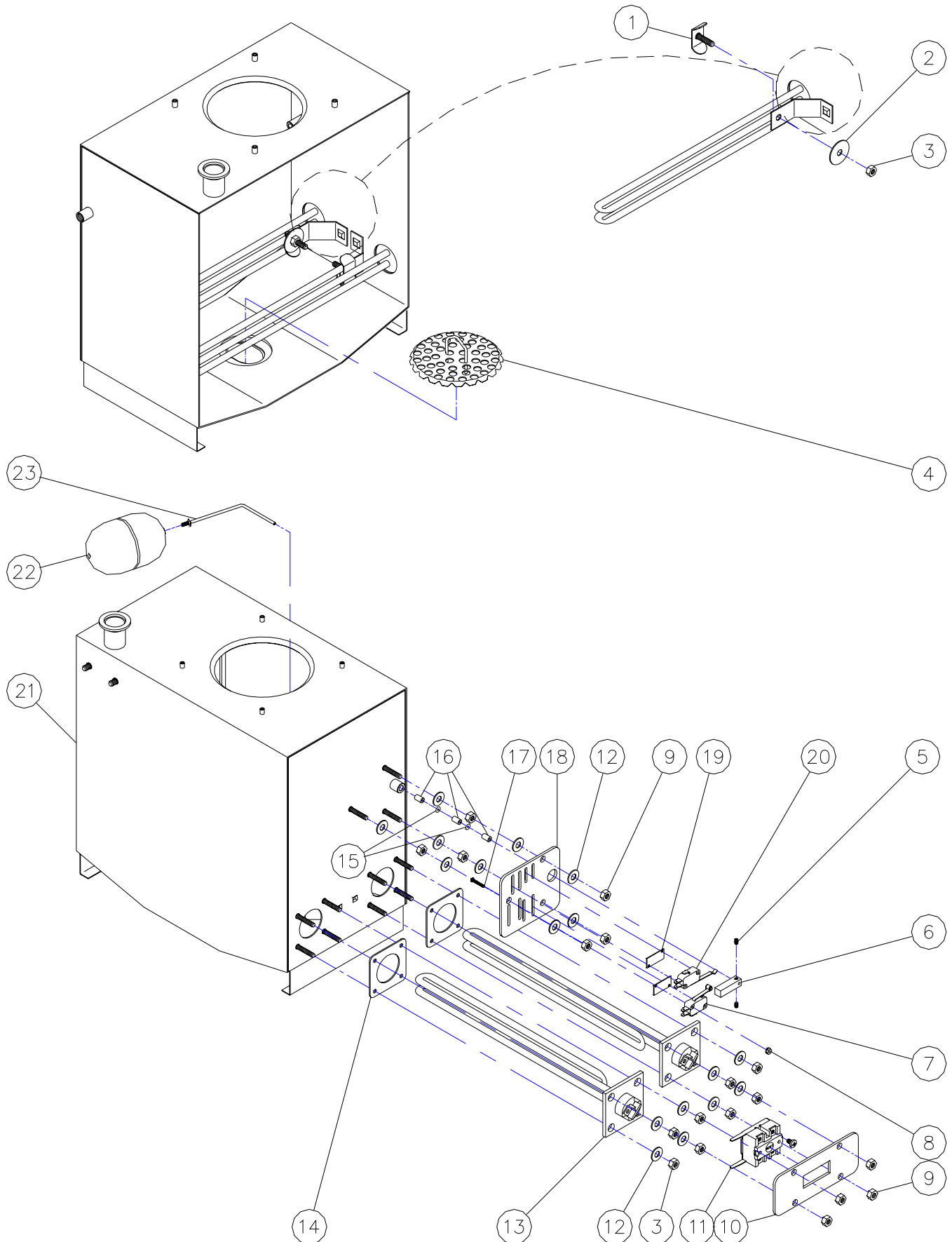
094150, Exploded Parts List Holding Tank Assembly, 45-75



094151, Exploded Parts List Boiling Tank Assembly, 45-75

Item #	Part #	Description	Qty
1	500182	Clip, Heater Studded	2
2	018009	Washer, Flat, 5/16" X 1-1/4" X 18ga, SS	2
3	025000	Nut, Hex, SS, 1/4"-20	10
4	520108	Strainer WA, CD	1
5	016014	Set Screw, Black, #8-32 X 1/4", Cup Point	4
6	500278	Bar, Actuator, Boiler Float	1
7	060058	Micro Switch, Short Roller Arm	1
8	026003	Nut, Kep, #4-40	4
9	025002	Nut, Hex, Plated, 1/4"-20	10
10	520218	Plate, Reset Switch, 66TM, Lexan, CD	1
11	060104	Switch, Thermo, Manual Reset, DPST, RT	1
12	018004	Washer, Flat, 20ga, SS, 5/16" X 11/16"	17
13	060005	Heating Element, 208V, 2500W	2
	060006	Heating Element, 220V, 2500W	2
	060007	Heating Element, 240V, 2500W	2
14	500100	Gasket, Heater	2
15	080128	O-Ring, Viton, 1/16" X 1/8" X 1/4"	2
16	080127	Bushing, Teflon, 1/4" X 1/8"	3
17	012003	Screw, Machine, Plated, #4-40 X 3/4"	4
18	500266	Plate, Micro Switch, Lexan	1
19	500289	Shim, Micro Switch, 20ga, SS	2
20	060059	Micro Switch, Long Arm, Formed	1
21	520105	Boiler Tank WA, CD	1
22	080044	Float Ball, SS, 2.5" X 4", #8-32	1
23	520173	Rod WA, Boiler Float, CD	1

094151, Exploded Parts List Boiling Tank Assembly, 45-75

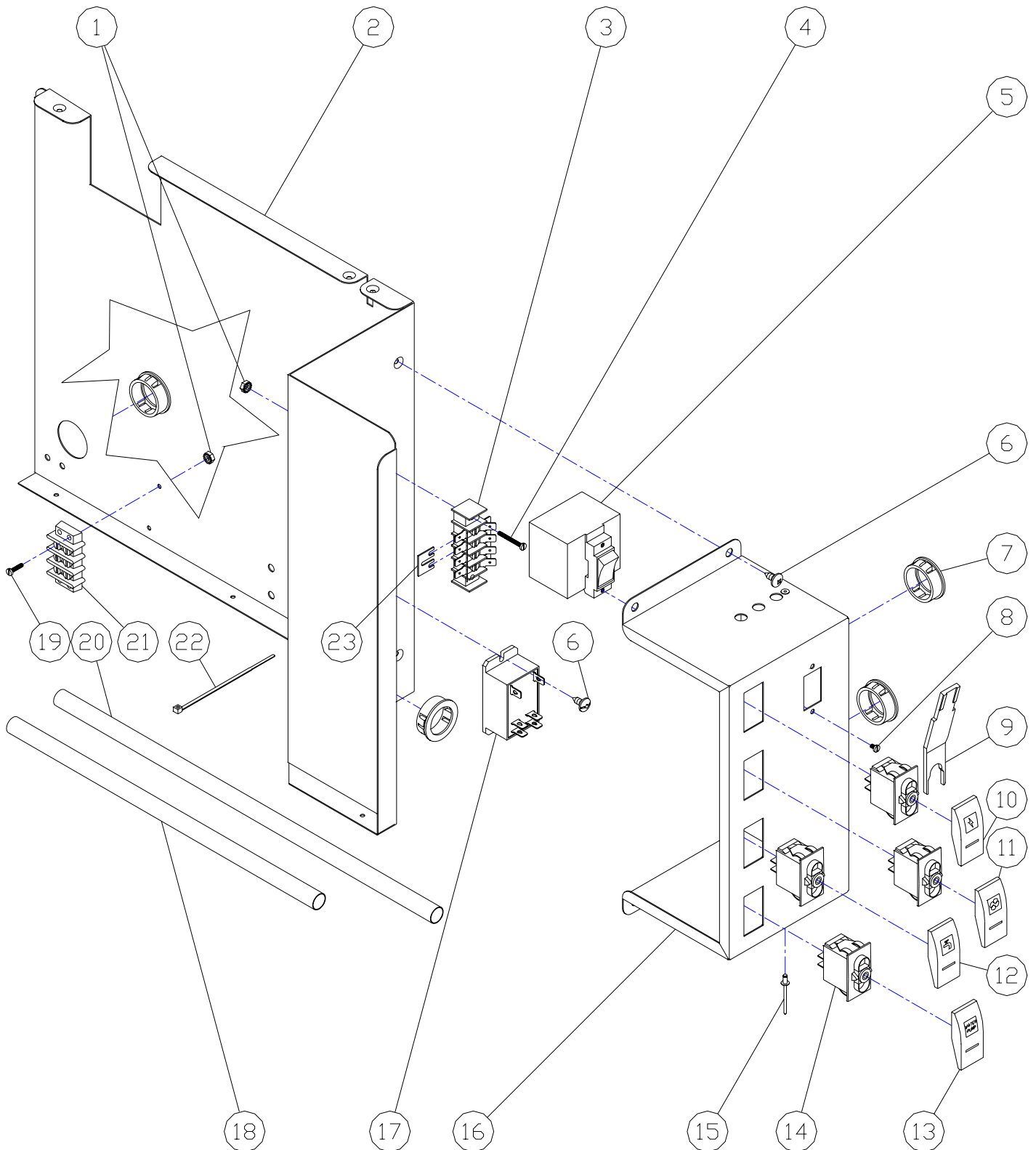


094155, Exploded Parts List

ELECTRICAL PANEL ASSEMBLY, 45GPD

Item #	Part #	Description	Qty
1	026002	Nut, Kep, Plated, #6-32	4
2	520123	Divider, Commercial Distiller	1
3	060072	Terminal Block, 4" X 4" F250 Double Tab	1
4	012002	Screw, Machine, Plated, #6-32 X 1", Round	2
5	060066	Rocker, 30A Breaker Double Pole	1
6	010002	Screw, Sheet Metal, Plated, #10-12 X ½"	6
7	054004	Bushing, Snap, 1.25" Hole	4
8	012020	Screw, Machine, Plated, #6-32 X 3/16"	2
9	080134	Tool, Removal, Actuator	1
10	060029	Actuator, Grey, Red-Power	1
11	060030	Actuator, Grey, Amber-Fan	1
12	060031	Actuator, Grey, White-Water	1
13	060065	Actuator, Grey, White-Water Pump	1
14	060028	Switch Base, 120/240V, Dual Light	4
15	016004	Rivet, Aluminum, 1/8" X 5/16"	2
16	520128	Panel, Electrical, Commercial Distiller	1
17	060067	Relay, T92, DPST, 30A, 240V	1
18	520152	Sleeve, Fiberglass, ½" X 13"	1
19	012009	Screw, Machine, Plated, #6-32 X ½"	2
20	520151	Sleeve, Fiberglass, ½" X 16"	1
21	060068	Terminal Block, 30A, 2" X 3", Screw	1
22	054011	Wire Tie, Plastic, 4"	20
23	520166	Jumper, 2 Poles	2

094155, Exploded Parts List Electrical Panel Assembly, 45GPD

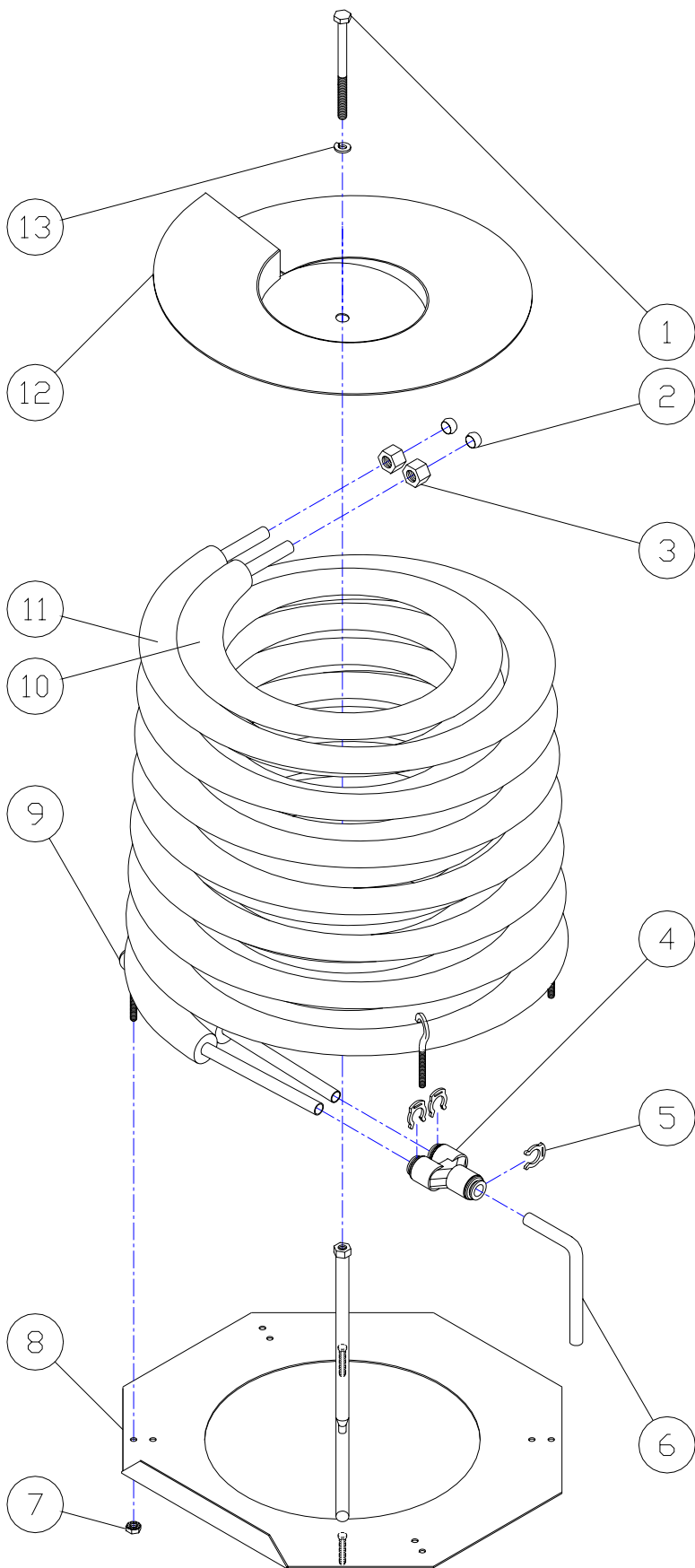


094156, Exploded Parts List Cooling Coils Assemblies, 45GPD

Item #	Part #	Description	Qty
1	014009	Capscrew, SS, 1/4"-20 X 3-1/2"	1
2	030012	Ferrule, Brass, 3/8" Compression	2
3	030013	Nut, Plated, 3/8" Compression	2
4	034017	Divider, 3/8", JG	1
5	034021	Locking Clip, 3/8", JG	3
6	520169	Tube, Adapter, Coil, CD	1
7	026000	Nut, Kep, Plated, #10-24	4
8	520189	Coil Support WA, CD	1
9	XXXXXX	Eye Bolt, Modified	4
10	520171	Coil WA, Inner, CD	1
11	520170	Coil WA, Outer, CD	1
12	520188	Plate WA, Coil Top, CD	1
13	024000	Washer, Lock, SS, Helicoil, 1/4"	1

094156, Exploded Parts List

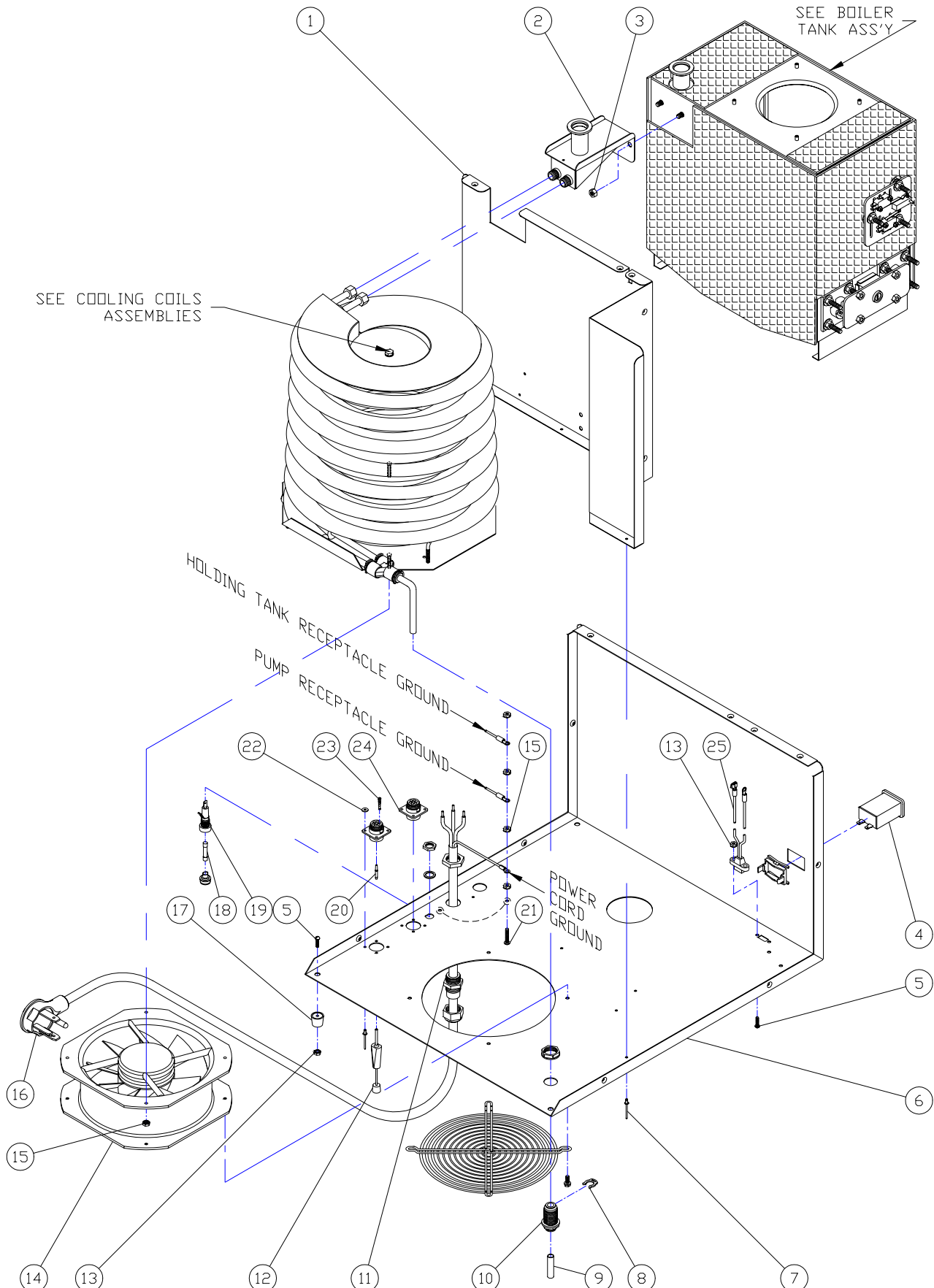
Cooling Coils Assemblies, 45GPD



094152, Exploded Parts List Distiller Body Assembly, 45GPD

Item #	Part #	Description	Qty
1	520123	Divider, CD	1
2	520120	Manifold WA, CD	1
3	025000	Nut, Hex, SS, 1/4"-20	2
4	060070	Hour Meter, 5 Digit, 240V	1
5	012012	Screw, Machine, Plated, #8-32 X 5/8"	6
6	520109	Body, Commercial Distiller	1
7	016004	Rivet, Aluminum, 1/8" X 5/16"	5
8	034021	Locking Clip, 3/8", JG	1
9	500202	Tube, SS, 3/8" Diameter X 1-1/2"	1
10	034011	Bulk Head, 3/8", JG	1
11	054022	Strain Relief, LT Fitting, 1/2" Black	1
12	080135	Tool, Extraction, Circular Pin	1
13	026001	Nut, Kep, Plated, #8-32	6
14	060069	Fan, Tubeaxial, 600CFM, 240V, W/Shield	1
15	026000	Nut, Kep, Plated, #10-24	6
16	520118	Power Cord Assembly, #10-4, CD	1
17	054010	Leg, Plastic, 3/4" OD X 5/8" High	4
18	060022	Fuse, 1 Amp, Slow Blow	1
19	060036	Fuse Holder, Chassis, 15 Amp	1
20	060084	Keying Plug, Circular	1
21	012000	Screw, Machine, Plated, #10-24 X 1", Round	1
22	018001	Washer, Flat, SS, 3/8" X 1/8"	4
23	060017	Pin, Female, Circular	10
24	060044	Receptacle, 7 Pin, Circular	2
25	520150	Drain Receptacle Assembly, 45GPD Auto	1

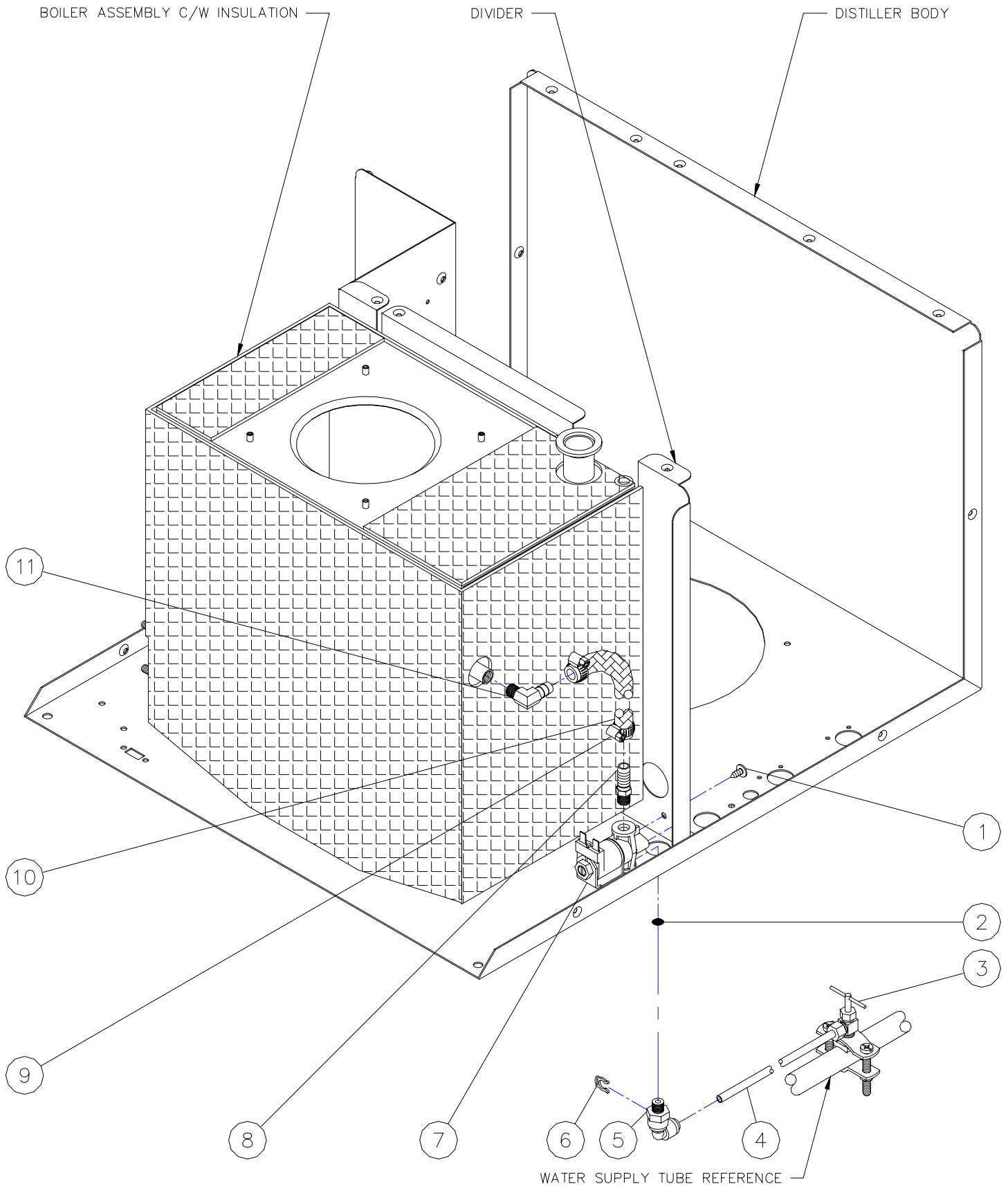
094152, Exploded Parts List Distiller Body Assembly, 45GPD



094153, Exploded Parts List 45GPD Solenoid Valve Assembly

Item #	Part #	Description	Qty
1	010000	Screw, Sheet Metal, SS, #10-12 X 1/2"	2
2	080197	Screen, 50 Mesh, Solenoid Valve	1
3	036005	Valve, Self Piercing Kit	1
4	052000	Tubing, LDPE, 1/4" X 0.170", PER FT	25'
5	034054	Elbow, 90 Degree, 1/8"MPT X 1/4" QC Swivel	1
6	034009	Locking Clip, 1/4", JG	1
7	060027	Valve, Solenoid, Black, 1/8"FPT BE 240V	1
8	034024	Coupler, Nylon, 1/8"MPT X 3/8"HB	1
9	080056	Clamp, Gear, 1/4" SS	2
10	052004	Tubing, Braided PVC, 3/8" X 0.6", PER FT	1'
11	030003	Elbow, 90 Degree, 1/8"MPT X 3/8"HB	1

094153, Exploded Parts List 45GPD Solenoid Valve Assembly

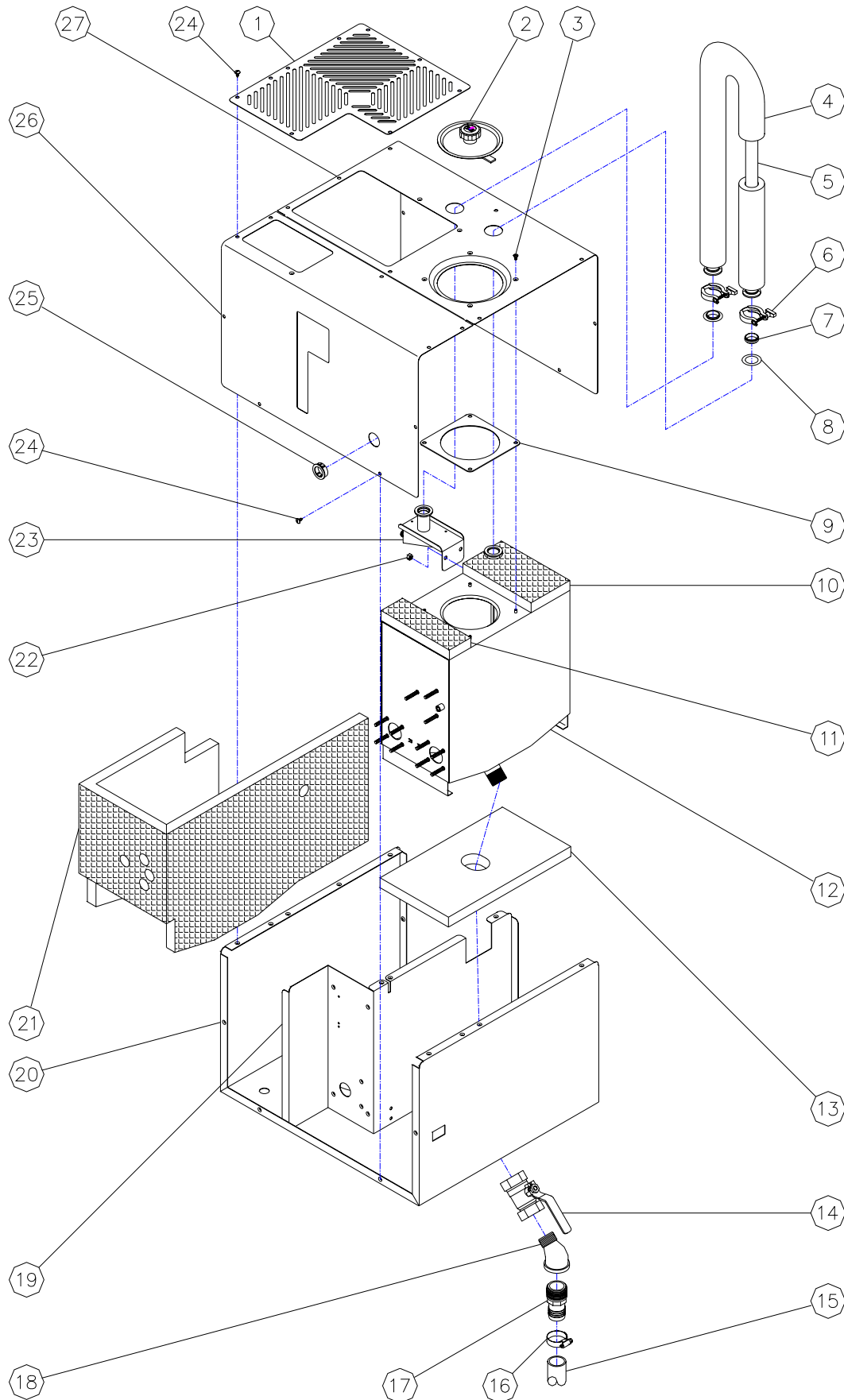


094154, Exploded Parts List

Distiller Head Assembly, 45GPD

Item #	Part #	Description	Qty
1	520126	Grate, Vent, CD	1
2	500184	Lid Assembly, Boiling Tank	1
3	012008	Screw, Machine, SS, #10-24 X 3/8", Oval	4
4	080180	Insulation, Tube, 1-1/8" X 2-1/8"	4'
5	400123	Regular Tower WA, 200-L	1
6	080177	Clamp, Flange, W/Bolt & Knob	2
7	080175	Ring, Centering, 1" Round	2
8	080176	O-Ring, Flange	2
9	500111	Gasket, Lid, PWS	1
10	520139	Insulation, CD, Boiler Top Rear	1
11	520140	Insulation, CD, Boiler Top Front	1
12	520105	Boiler Tank WA, CD	1
13	520137	Insulation, CD, Boiler Bottom	1
14	030024	Valve, 1-1/4" Ball, Brass, Full Flow	1
15	052008	Tubing, PVC, 1-1/4" X 1-1/2"	6'
16	080121	Clamp, Gear, 1-1/4", SS	1
17	034032	Coupler, 1-1/4"MPT X 1-1/4"HB	1
18	030025	Elbow, 45 Degree, 1-1/4"MPT X 1-1/4"FPT	1
19	520123	Divider, CD	1
20	520109	Body, CD	1
21	520138	Insulation, CD, Boiler Sides	1
22	025000	Nut, Hex, SS, 1/4"-20	2
23	520120	Manifold WA, CD	1
24	010000	Screw, Sheet Metal, SS, #10-12 X 1/2"	24
25	054004	Bushing, Snap, 1.25" Hole	1
26	520124	Front Cover, CD	1
27	520125	Rear Cover, CD	1

094154, Exploded Parts List Distiller Head Assembly, 45GPD



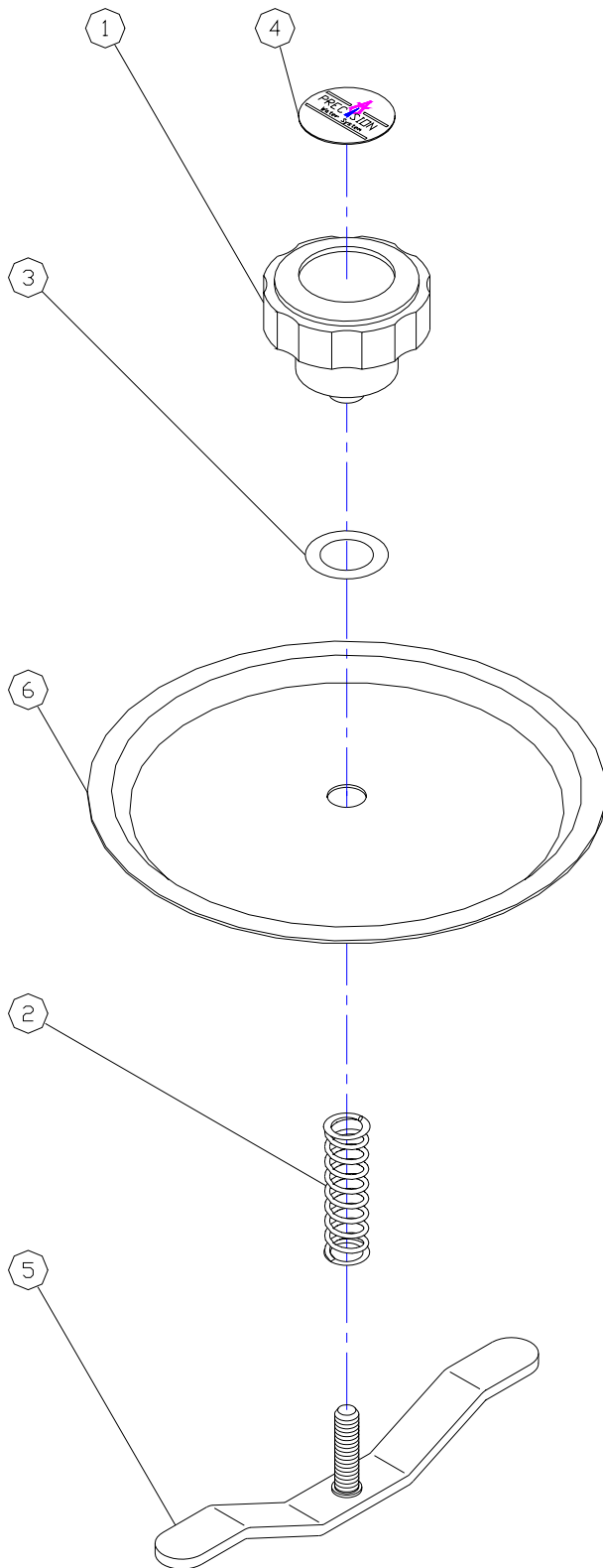
094074, Exploded Parts List

Boiling & Holding Tank Lids Assemblies, PWS

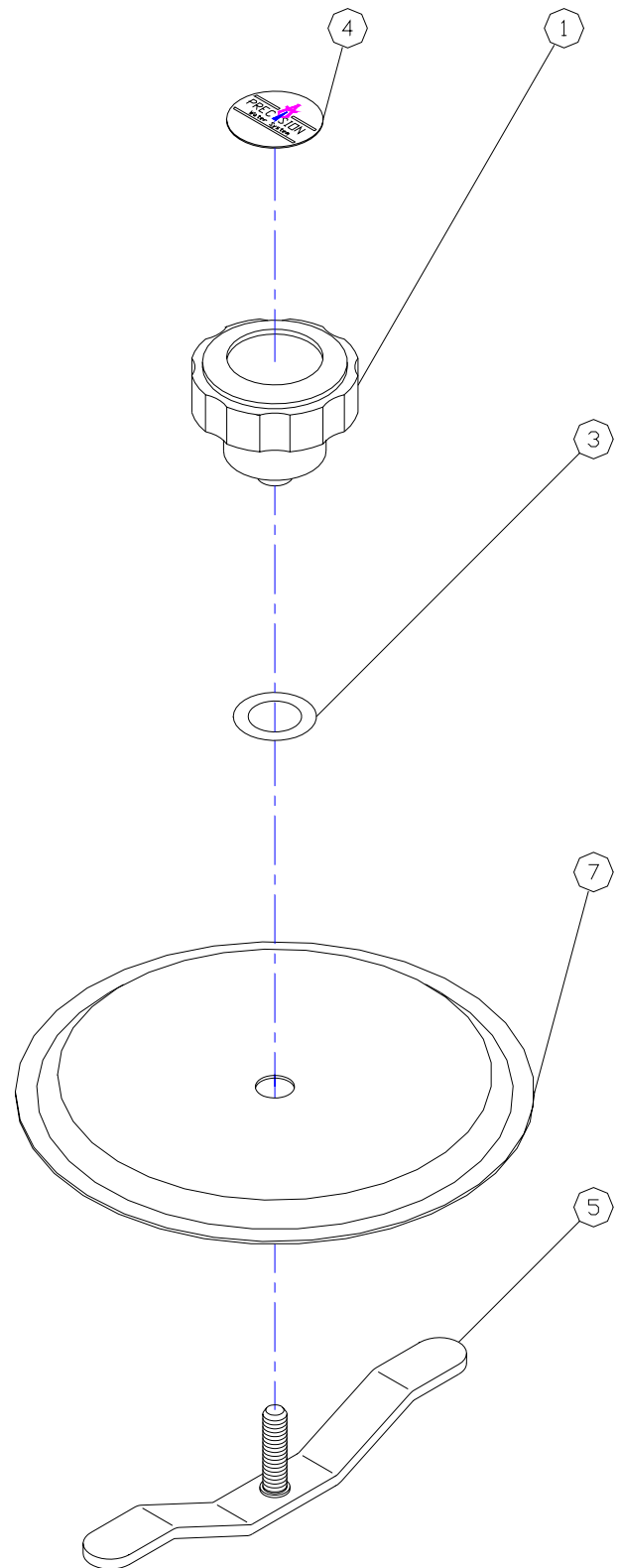
Item #	Part #	Description	Qty
1	080053	Knob, Black Phenolic, 1/4"-20	1
2	080058	Spring, BT, Lid, SS	1
3	080064	O-Ring, Lid Knob, Buna 112	1
4	080106	Inlay, Knob, PWS	1
5	500115	Tee Bar, Studded, 5.5"	1
6	500118	Lid, B/T, Disc, SS, 5.5"	1
7	500119	Lid, H/T, Disc, SS, 5.5"	1

094074, Exploded Parts List

Boiling & Holding Tank Lids Assemblies, PWS



BOILING TANK
LID ASSEMBLY
(PART # 500184)



HOLDING TANK
LID ASSEMBLY
(PART # 500248)

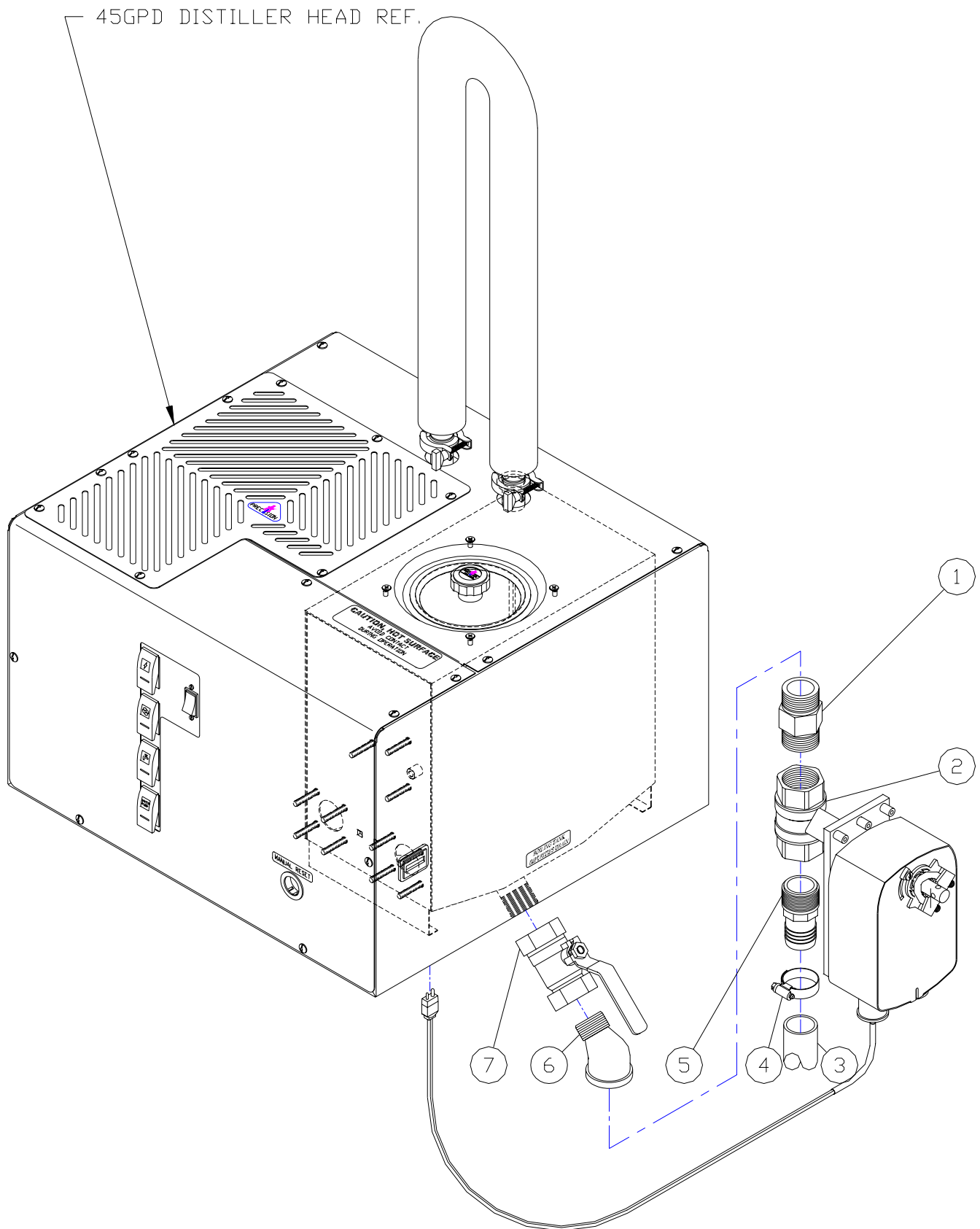
094157, Exploded Parts List

Automatic Electric Drain Assembly, AED-2

Item #	Part #	Description	Qty
1	030041	Nipple, Hex, 1-1/4"MPT Both Ends	1
2	520219	Motorized Ball Valve Ass'y, AED-2, S2, 230V	1
3	052008	Tubing, PVC, 1-1/4" X 1-1/2"	6'
4	080121	Clamp, Gear, 1-1/4", SS	1
5	030032	Coupler, 1-1/4"MPT X 1-1/4"HB	1
6	030025	Elbow, 45 Degree, 1-1/4"MPT X 1-1/4"FPT	1
7	030024	Valve, 1-1/4" Ball, Brass, Full Flow	1

094157, Exploded Parts List

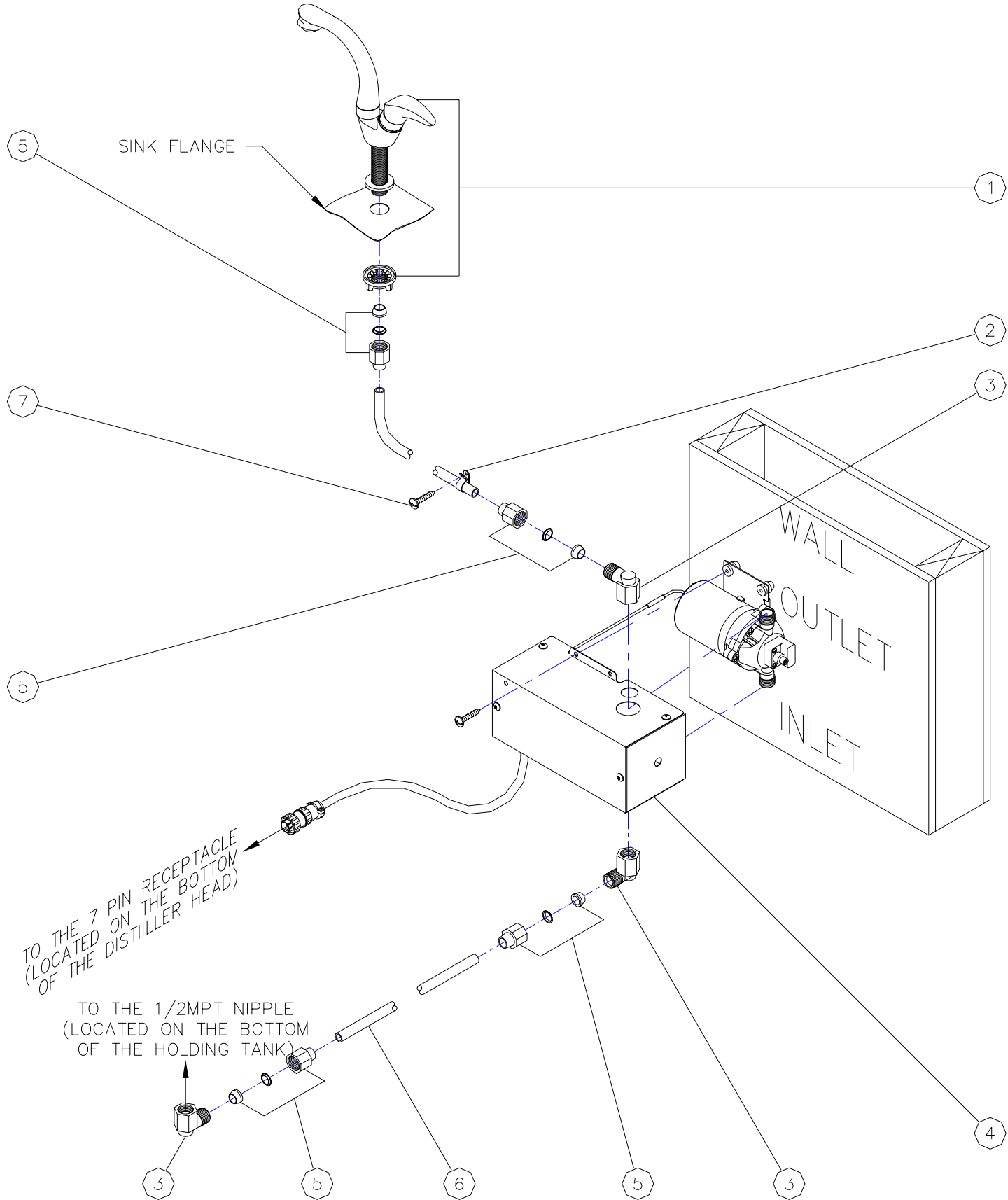
Automatic Electric Drain Assembly, AED-2



094158, Exploded Parts List Automatic Pump Assembly, APK-4

Item #	Part #	Description	Qty
1	080052	Faucet, Chrome	1
2	054006	Clamp, Cable, Nylon, 1/2"	8
3	034002	Elbow, 90 Degree, 1/2"FPT X 1/2" O.D. Tube	3
4	520143	Pump Assembly, APK-4, 220V, 3GPM	1
5	034003	Nut/Cone/Ring Set, 1/2" OD	4
6	052001	Tubing, LDPE, 3/8" ID X 1/2" OD	25'
7	010008	Screw, Sheet Metal, Plated, #10-12 X 1"	12

094158, Exploded Parts List Automatic Pump Assembly, APK-4



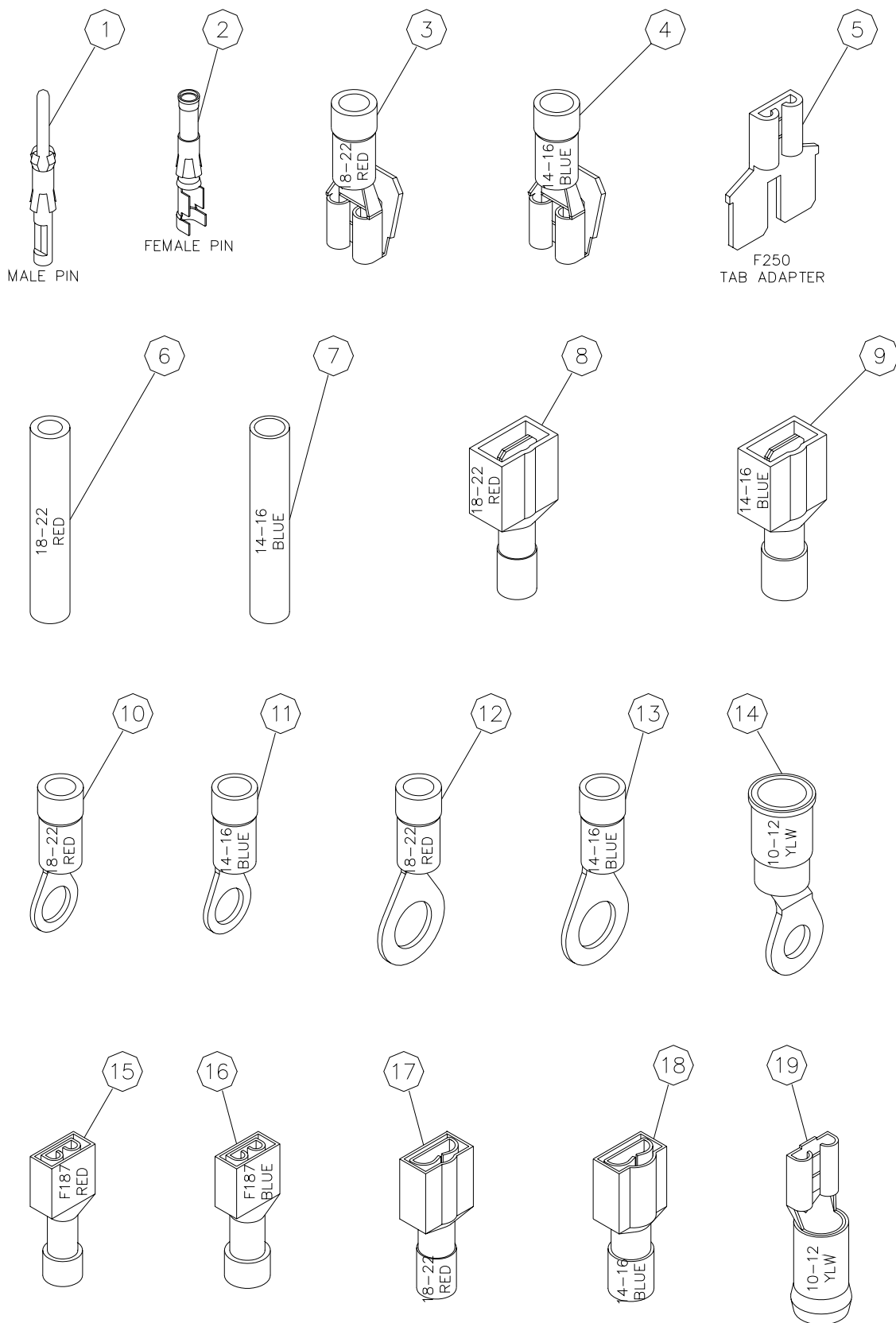
094109, Exploded Parts List

Electrical Terminals

<u>Item #</u>	<u>Part #</u>	<u>Description</u>
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, 45-75, Part # 520129

No.	Part#	Color	Ga	Length	From Conn.	ToConn.	From Location	To Location
1	520118	GRN	10	6"	#10RING#10-#12	POWER CORD	GROUND	POWER CORD
2	520118	BLK	10	6"	#10RING#10-#12	POWER CORD	TERMINAL BLOCK #3	POWER CORD
3	520118	WHT	10	6"	#10RING#10-#12	POWER CORD	TERMINAL BLOCK #2	POWER CORD
4	520118	RED	10	6"	#10RING#10-#12	POWER CORD	TERMINAL BLOCK #1	POWER CORD
5	095077	BLK	10	28"	#10RING#10-#12	#10RING#10-#12	BREAKER SWITCH 30A	TERMINAL BLOCK
6	095078	RED	10	28"	#10RING#10-#12	#10RING#10-#12	BREAKER SWITCH 30A	TERMINAL BLOCK
7	095079	BLK	10	10"	F250#10-#12	#10RING#10-#12	RELAY #4	BREAKER SWITCH 30A
8	095080	RED	10	10"	F250#10-#12	#10RING#10-#12	RELAY #8	BREAKER SWITCH 30A
9	095081	BLK	10	12"	F250#10-#12	#10RING#10-#12	RESET SWITCH #1	RELAY #2
10	095082	WHT	10	5"	#10RING#10-#12	#10RING#10-#12	HEATING ELEMENT 1 A	RESET SWITCH #2
11	095083	RED	10	11"	#10RING#10-#12	F250#10-#12	HEATING ELEMENT 1 B	RELAY #6
12	095084	WHT	10	6"	#10RING#10-#12	#10RING#10-#12	HEATING ELEMENT 2 A	HEATING ELEMENT 1 A
13	095085	BLK	10	7"	#10RING#10-#12	#10RING#10-#12	HEATING ELEMENT 2 B	HEATING ELEMENT 1 B
14	095041	ORG	16	5"	F250#14-#16	#10RING#14-#16	HOURLMETER	HEATING ELEMENT 2 B
15	095042	BRN	16	5"	F250#14-#16	#10RING#14-#16	HOURLMETER	HEATING ELEMENT 2 A
16	095043	BRN	16	12"	#10RING#14-#16	#10RING#14-#16	RESET SWITCH #3	BREAKER SWITCH 30A
17	095044	BLK	16	19"	F250#14-#16	#10RING#14-#16	TERMINAL BLOCK #3 BLK	RESET SWITCH #4
18	095045	RED	16	13"	F250#14-#16	#10RING#14-#16	TERMINAL BLOCK #9 RED	BREAKER SWITCH 30A
19	095046	BRN	16	12"	F187#14-#16	F250#14-#16	LOWER MICROSWITCH NC	RELAY #0
20	095047	ORG	16	13"	BARE	PIGG	FAN MOTOR-N	RELAY #6
21	095048	GRN	16	27"	PIGG	PIGG	SOLENOID VALVE A	RELAY #1
22	095049	WHT	16	10"	FPIN	F250#14-#16	HOLDING TANK RECEPTACLE #2	SOLENOID VALVE A
23	095050	BRN	16	33"	F250#14-#16	F250#14-#16	WATER SWITCH #6	SOLENOID VALVE B
24	095051	BLU	16	20"	F250#14-#16	BARE	FAN SWITCH #3	FAN MOTOR-L
25	095052	GRN	16	17"	F250#14-#16	F250#14-#16	HEATER SWITCH #2	TERMINAL BLOCK #1 BLK
26	095053	BLK	16	14"	F250#14-#16	F250#14-#16	WATER SWITCH #2	TERMINAL BLOCK #2 BLK
27	095054	BRN	16	13"	F250#14-#16	F250#14-#16	PUMP SWITCH #2	TERMINAL BLOCK #4 BLK
28	095055	ORG	16	30"	FPIN	F250#14-#16	HOLDING TANK RECEPTACLE #1	TERMINAL BLOCK #11 RED
29	095056	ORG	16	14"	F250#14-#16	F187#14-#16	HEATER SWITCH #3	LOWER MICROSWITCH COM
30	095040	BLK	16	5"	F250#14-#16	PIGG	FAN SWITCH #2	HEATER SWITCH #3
31	095057	YLW	16	16"	F250#14-#16	F187#14-#16	WATER SWITCH #3	UPPER MICROSWITCH COM
32	095040	BLK	16	5"	F250#14-#16	PIGG	HEATER SWITCH #7	FAN SWITCH #7
33	095058	BLK	16	29"	FPIN	F250#14-#16	HOLDING TANK RECEPTACLE #4	PUMP SWITCH #3
34	095059	YLW	16	10"	F250#14-#16	PIGG	FAN SWITCH #7	RELAY #6
35	095060	BLK	16	7"	PIGG	FPIN	FUSE SIDE	PUMP RECEPTACLE #2
36	095061	YLW	16	5"	FPIN	F250#14-#16	HOLDING TANK RECEPTACLE #5	FUSE END
37	095062	BLU	16	29"	F250#14-#16	FPIN	TERMINAL BLOCK #11 RED	HOLDING TANK RECEPTACLE #3
38	095063	GRN	16	4"	FPIN	#10RING#14-#16	HOLDING TANK RECEPTACLE #7	GROUND DISTILLER BODY
39	095064	GRN	16	7"	FPIN	#10RING#14-#16	PUMP RECEPTACLE #7	GROUND HOLDING TANK BODY
40	095065	GRN	16	7"	MPIN	#10RING#14-#16	PUMP PLUG #7	GROUND PUMP BOX
41	095066	YLW	16	14"	F250#14-#16	F250#14-#16	HEATER SWITCH #8	TERMINAL BLOCK #10 RED
42	095010	WHT	16	3"	PIGG	F250#14-#16	HEATER SWITCH #3	HEATER SWITCH #6
43	095010	WHT	16	3"	PIGG	F250#14-#16	FAN SWITCH #3	FAN SWITCH #6
44	095086	BLU	16	7"	F250#14-#16	F250#14-#16	WATER SWITCH #7	RELAY #1
45	095067	RED	16	14"	PIGG	F187#14-#16	WATER SWITCH #6	UPPER MICROSWITCH NC
46	520174	GRN	18	10"	MPIN	#1/4RING#18-#22	HOLDING TANK PLUG #7	GROUND HOLDING TANK BODY
47	095069	WHT	16	14"	F250#14-#16	F250#14-#16	TERMINAL BLOCK #12 RED	PUMP SWITCH #6
48	095070	BLU	16	30"	F250#14-#16	F250#14-#16	FUSE SIDE	PUMP SWITCH #7
49	095040	BLK	16	5"	F250#14-#16	PIGG	FAN SWITCH #8	HEATER SWITCH #8
50	095040	BLK	16	5"	F250#14-#16	PIGG	WATER SWITCH #8	FAN SWITCH #8
51	095040	BLK	16	5"	F250#14-#16	PIGG	PUMP SWITCH #8	WATER SWITCH #8
52	520174	ORG	18	10"	F187#18-#22	MPIN	HT MICROSWITCH NC	HOLDING TANK PLUG #1
53	520174	WHT	18	10"	F187#18-#22	MPIN	HT MICROSWITCH COM	HOLDING TANK PLUG #2
54	520174	BLK	18	10"	F187#18-#22	MPIN	PUMP #1 MICROSWITCH NO	HOLDING TANK PLUG #4
55	520174	YLW	18	10"	F187#18-#22	MPIN	PUMP #1 MICROSWITCH COM	HOLDING TANK PLUG #5
56	520174	BLU	18	10"	F187#18-#22	MPIN	PUMP #2 MICROSWITCH COM	HOLDING TANK PLUG #3
57	520174	RED	18	10"	F187#18-#22	MPIN	PUMP #2 MICROSWITCH NO	HOLDING TANK PLUG #6
58	095087	RED	16	6"	FPIN	FPIN	PUMP RECEPTACLE #6	HOLDING TANK RECEPTACLE #6
59	520150	BLK	18	26"	#10RING#18-#22	DRAIN RECEPTACLE	BREAKER SWITCH 30A	DRAIN RECEPTACLE (SMOOTH)
60	520150	BLK	18	19"	PIGG	DRAIN RECEPTACLE	RELAY #1	DRAIN RECEPTACLE (RIBBED)

520129, Exploded Parts List

Wiring Diagram—Precision Pure, 45–75

