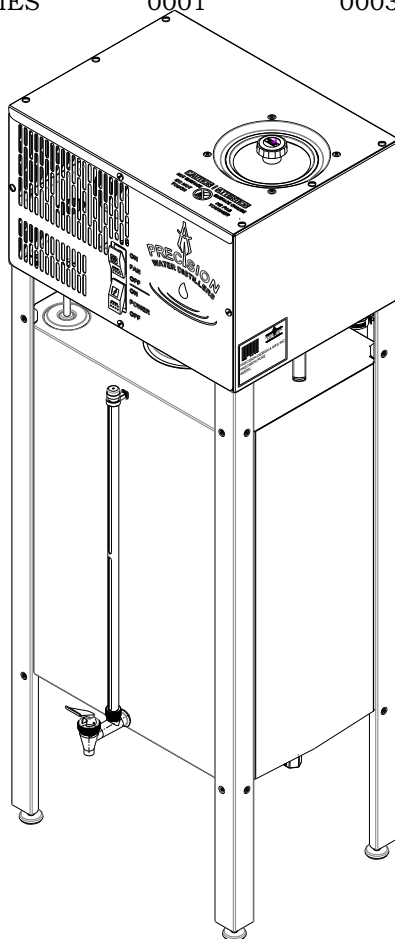




REPLACEMENT PARTS MANUAL

FOR MODEL: PWS SEA (120VAC), AED-1(120VAC), APK-11(120VAC)

PART #	510005	500006	500004
SERIES	0001	0003	0001



PRECISION WATER SYSTEMS

SEA WATER DISTILLER

MANUFACTURED BY:

PRECISION DESIGN & MANUFACTURING INC.

9024-100 Street

WESTLOCK, ALBERTA, CANADA, T7P 2L4

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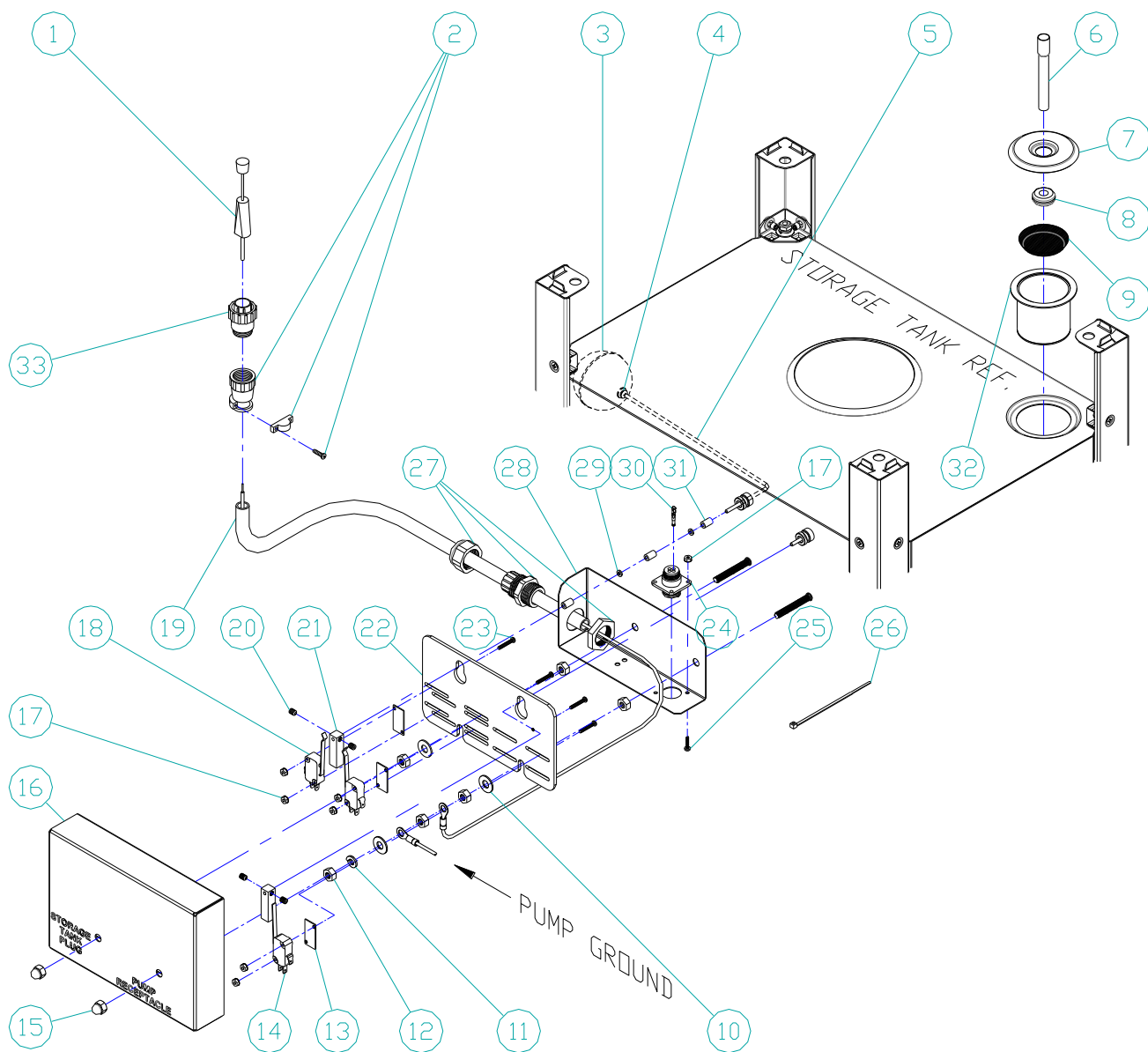
094829, Exploded Parts List

Storage Tank Micro Switches Ass'y, Sea 20 Gallon

Item #	Part #	Description	Qty
1	080135	Circular Pin Extraction Tool	Opt.
2	060045	Strain Relief, 7 Pin, Circular	1
3	080162	Float Ball, SS, 2-1/4" Round, #6-32UNC	1
4	020002	Washer Lock, SS, M3.5, External Tooth	1
5	510203	Float Rod WA, Storage Tank, Sea & Gulf	1
6	510231	Drip Tube, 3/8"ODX3-1/4" Drop-In Canister Filter	1
7	510255	Canister Top Cap, Drop-In Charcoal Filter	1
8	080875	Grommet W/SS Washer, 11/32" IDX5/8" HoleX1/16" GROOVE	1
9	530349	Charcoal, Drop-In Filter, Screen	2
10	018004	Washer, Flat, 5/16"ID x 11/16"OD, 20ga. SS	3
11	024000	Washer, Lock, SS, Heli Coil, 1/4"	1
12	025000	Nut, Hex, SS, 1/4"-20UNC	6
13	500289	Shim, Micro Switch	3
14	400008	Microswitch, PB, Holding Tank	1
15	028000	Nut, Acorn, SS, 1/4"	2
16	510216	Cover, Wire Box, Storage Tank Float	1
17	026007	Nut, Kep, #18-8 SS, #4-40UNC	8
18	060059	Micro Switch, Long Arm, Formed	2
19	510226	Harness, Wire Box, Storage Tank	1
20	016035	Set Screw, SS, #10-32 X .25", Cup Point	4
21	530333	Bar, Actuator, Boiler Float	2
22	530339	Plate, Dual Micro Switch	1
23	012003	Screw, Machine, SS, #4-40UNCX3/4", Round Socket	7
24	060130	Receptacle, 4 Pin, Circular	1
25	012019	Screw, Machine, SS, #4-40UNC X 1/2" Round/Socket	2
26	054011	Wire Tie, Plastic, 4"	Ref.
27	054022	Strain Relief, LT Fitting, 1/2" Black	1
28	510215	Wire Box, Storage Tank Float	1
29	080128	O-Ring, Viton, 1/16" X 1/8" X 1/4"	2
30	060017	Female Pin	Ref.
31	080127	Bushing, Teflon, 1/4" X +1/8"	3
32	530345	Charcoal Drop-In Filter WA	1
33	060043	Plug, 7 Pin, Circular	1

094829, Exploded Parts List

Storage Tank Micro Switches Assembly, Sea 20 Gallon



REAR RIGHT SIDE VIEW OF THE STORAGE TANK

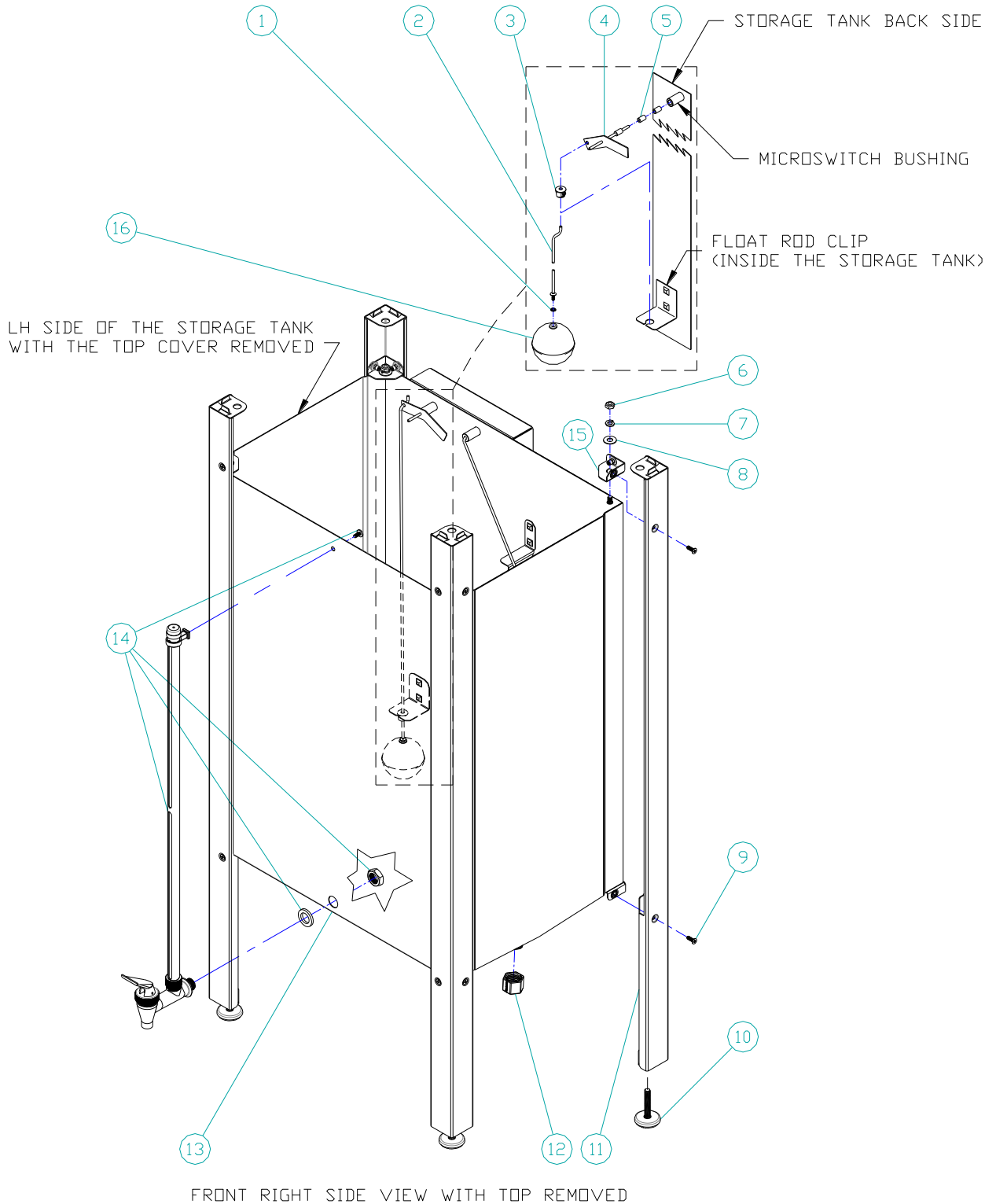
094295, Exploded Parts List

Storage Tank Assembly, Sea 20 Gallon

Item #	Part #	Description	Qty
1	20002	Washer Lock, SS, M3.5, External Tooth	1
2	510222	Pump Shut-Off Rod WA, Sea 20 Gallon Storage Tank	1
3	530247	Black Cap, Drilled, Float Rod	1
4	530251	Pivot Rod WA, Pump Shutoff, Holding Tank	1
5	080127	Bushing, Teflon, ¼" X 1/8"	3
6	025000	Nut, Hex, SS, ¼"-20UNC	8
7	024000	Washer, Lock, SS, Helicoil, ¼"	8
8	018004	Washer, Flat, 5/16"ID X 11/16" OD, 20 Gauge SS	8
9	012031	Screw, Mach, SS, #8 X ½", Oval Head/Ph Dr	16
10	510213	Distiller Storage Tank Foot Assembly	4
11	510225	Storage Tank Leg, Clinch Nut, Sea 20 Gallon Tank	4
12	036041	Cap, SS, ½"-14FNPT	1
13	510220	Storage Tank, Studded, Sea 20 Gallon Tank	1
14	500536	SS Sight Ga Drain Valve 23"W/New Lower Washer&Red Float Ball	1
15	510196	Corner Mount Bracket, Clinch Nut, Storage Tank Leg	8
16	080162	Float Ball, SS, 2-1/4" Round, #6-32UNC	1

094295, Exploded Parts List

Storage Tank Assembly, Sea 20 Gallon

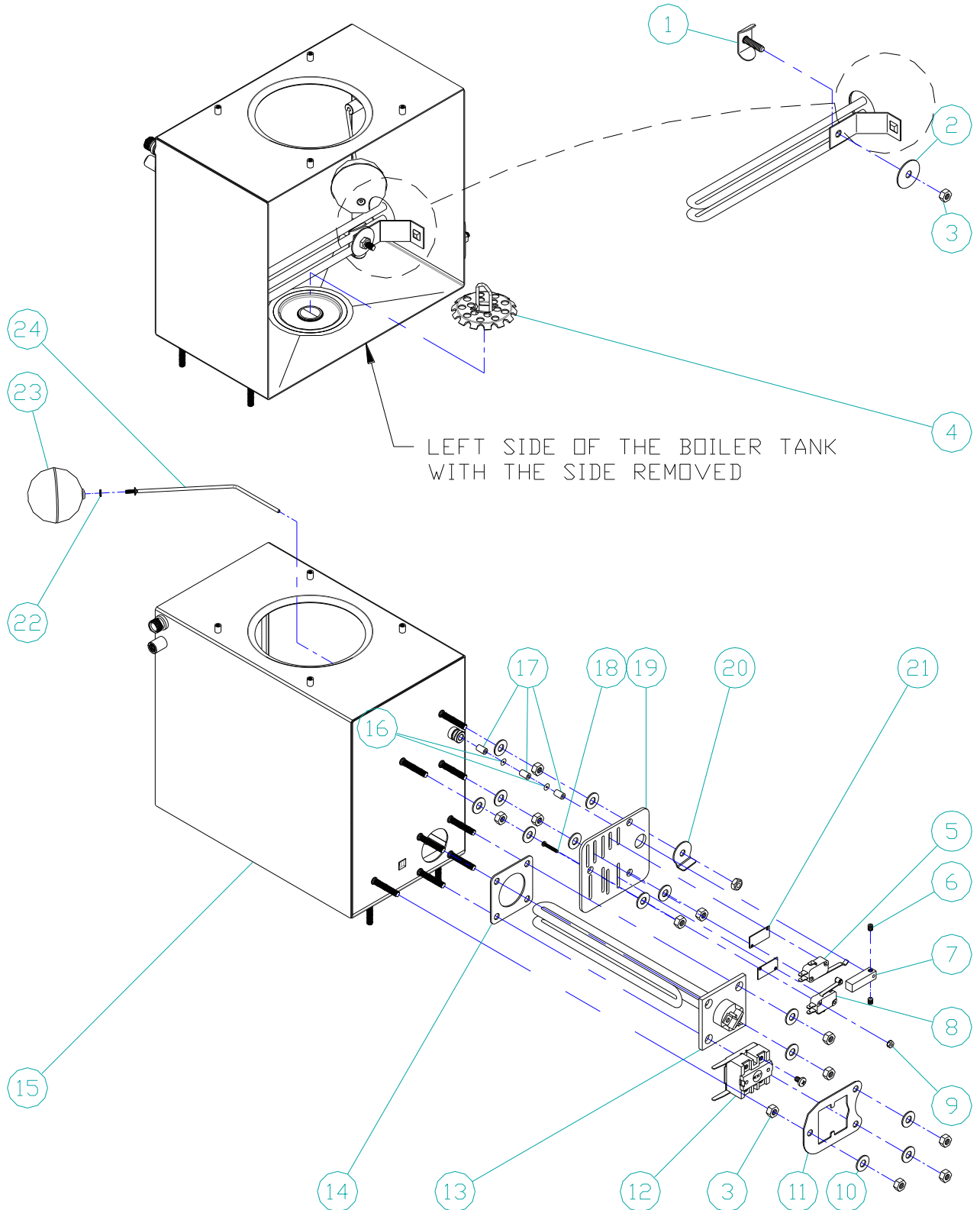


094112, Exploded Parts List

Boiler Assembly, 12 GPD, Gulf & Sea

Item #	Part #	Description	Qty
1	500182	Clip, Heater, Studded	1
2	018009	Washer, Flat, 5/16" X 1-1/4" X 18ga, SS	1
3	025000	Nut, Hex, SS, 1/4"-20	13
4	500208	Drain Strainer WA	1
5	060059	Micro Switch, 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	Micro Switch, Short Roller Arm	1
9	026007	Nut, Kep, 18-8 SS, #4-40UNC	4
10	018004	Washer, Flat, 5/16" X 11/16" X 20ga, SS	13
11	510247	Mount Plate, Reset Switch	1
12	060104	Switch, Therm, Manual Reset, DPST, RT	1
13	060003	Heating Element, 125V, 1500W	1
14	500100	Gasket, Heater	1
15	510243	Boiler, Studded, 12 GPD, G2	1
16	080128	O-Ring, 1/16" X 1/8" X 1/4"	2
17	080127	Bushing, Teflon, 1/4" X 1/8"	3
18	012003	Screw, Machine, Plated, #4-40 X 3/4"	4
19	500266	Plate, Micro Switch	1
20	510251	Washer, "L", 0.281" ID X 1" OD, 18 Gauge SS	1
21	500289	Shim, Micro Switch	2
22	020002	Washer, Lock, SS, M3.5, External Tooth	1
23	080162	Float Ball, SS, 2-1/4" Round, #6-32	1
24	500487	Rod WA, Boiler Float, Auto	1

094112, Exploded Parts List Boiler Assembly, 12 GPD, Gulf & Sea



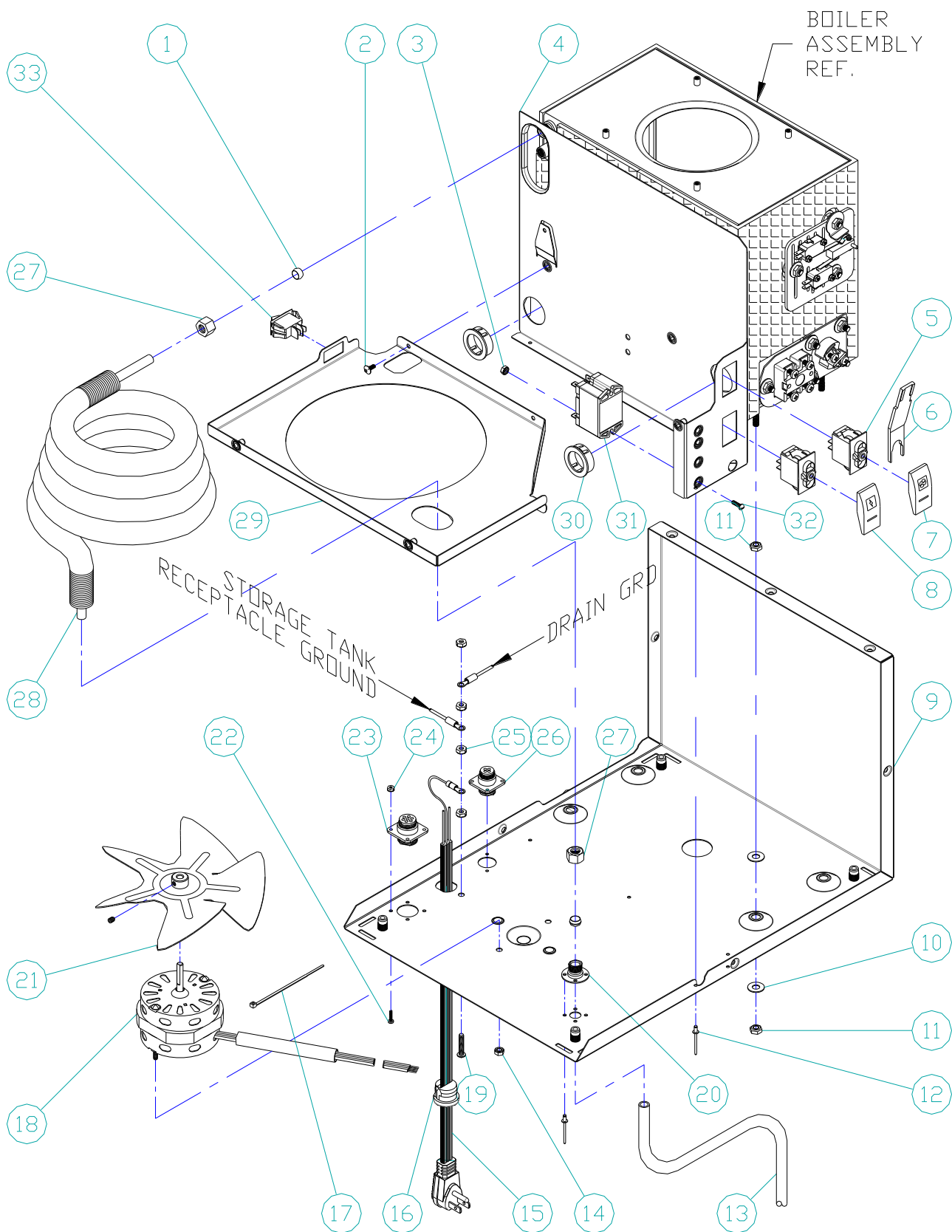
094101, Exploded Parts List

Distiller Body Assembly, 12 GPD, Gulf & Sea

Item #	Part #	Description	Qty
1	030012	Ferrule, 3/8"	2
2	012017	Screw, Machine, SS, #8-32UNC X 3/8", TRS HD/SK	5
3	026006	Nut, Kep, 18-8 SS, #6-32UNC	2
4	510187	Divider, Clinch Nut, 12 GPD Distiller, Gulf & Sea	1
5	060028	Switch Base, 120/240V SPST	2
6	080134	Tool, Actuator Removal	REF.
7	060030	Actuator, Grey, Amber-Fan	1
8	060029	Actuator, Grey, Red-Power	1
9	510185	Body, Clinch Nut, 12 GPD Distiller, Gulf & Sea	1
10	018004	Washer, Flat, 5/16"ID X 11/16" OD, 20 Gauge SS	8
11	025000	Nut, Hex, SS, 1/4"-20UNC	8
12	016004	Rivet, Aluminum, 1/8" X 5/16"	9
13	052002	Tubing, PVC, 5/16" X 7/16"	2'
14	026005	Nut, Kep, 18-8 SS, #8-32UNC	2
15	510229	Power Cord Ass'y, 14-3 NA, 12 GPD, Distiller, G & S	1
16	054094	Strain Relief, 14 & 12 Gauge, Flat Cable	1
17	054011	Wire Tie, Plastic, 4"	Ref.
18	510122	Motor Assembly, 115V, 12 GPD, Auto	1
19	012000	Screw, Machine, Plated, #10-24 X 1"	1
20	530344	Mount, WA, CC Compression	1
21	080046	Fan Blade, 8"	1
22	012019	Screw, Machine, SS, #4-40 X 1/2", Round/Socket	4
23	060044	Receptacle, 7 pin Circular	1
24	026007	Nut, Kep, 18-8 SS, #4-40UNC	4
25	026004	Nut, Kep, 18-8 SS, #10-24UNC	4
26	060130	Receptacle, 4 Pin, Circular	1
27	030013	Nut, Brass, 3/8" Compression	2
28	510246	Cooling Coil Assembly, 12 GPD Distiller, Gulf & Sea	1
29	510194	Air Divider, 12 GPD Distiller Head, Gulf & Sea	1
30	054004	Bushing, Snap, 1-1/4"	2
31	060018	Relay, Aromat, Black, 120V	1
32	012009	Screw, Machine, Plated, #6-32 X 1/2"	2
33	060057	Switch, Visi, SPST, Black, RA911	1

094101, Exploded Parts List

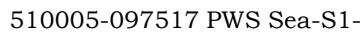
Distiller Body Assembly, 12GPD, Gulf & Sea



094099, Exploded Parts List

12 GPD Solenoid Valve Assembly, Gulf & Sea

Item #	Part #	Description	Qty
1	052000	Tubing, 1/4" Feed-line	16'
2	036005	Valve, Self-Piercing Kit	1
3	080056	Gear Clamp, SS, 1/4"	2
4	052004	Tubing, Braided PVC, 3/8" X 0.6	0.25'
5	030003	Elbow, 90 Degree, 1/8" MPT X 3/8" HB	1
6	510192	Lock Clip, Clinch Nut, Brass Solenoid Valve	1
7	510187	Divider, Clinch Nut, 12 GPD Distiller, Gulf & Sea	1
8	510185	Body, Clinch Nut, 12 GPD Distiller, Gulf & Sea	1
9	097504	Owners Guide, PWS Gulf Distiller	1
10	080116	Charcoal, Sample, 100 Gram Jar	1
11	510194	Air Divider, Clinch Nut, 12 GPD Distiller, Gulf & Sea	1
12	012017	Screw, Machine, SS, #8-32UNC X 3/8", TRS HD/SK	6
13	030001	Coupler, SS, 1/8" MPT X 3/8" HB	1
14	034057	Gray Acetal Plug in Elbow, 1/4 Stem - 1/4Tube, JG	1
15	034009	Locking Clip, 1/4" JG	2
16	034054	Gray Acetal Male Connector 1/4 X 1/8 NPTF, JG	1
17	060026	Solenoid Valve, 1/8" FPT BE, 120V	1
18	080054	Filter, Sediment, CL6-RO, Red	1
19	010008	Screw, SM, Plated, #10-12 X 1", Pan Socket	1
20	054073	Nylon Mounting Clip, Single, 2" Diameter	1
21	510190	Rear Cover, 12 GPD Distiller, Gulf & Sea	1



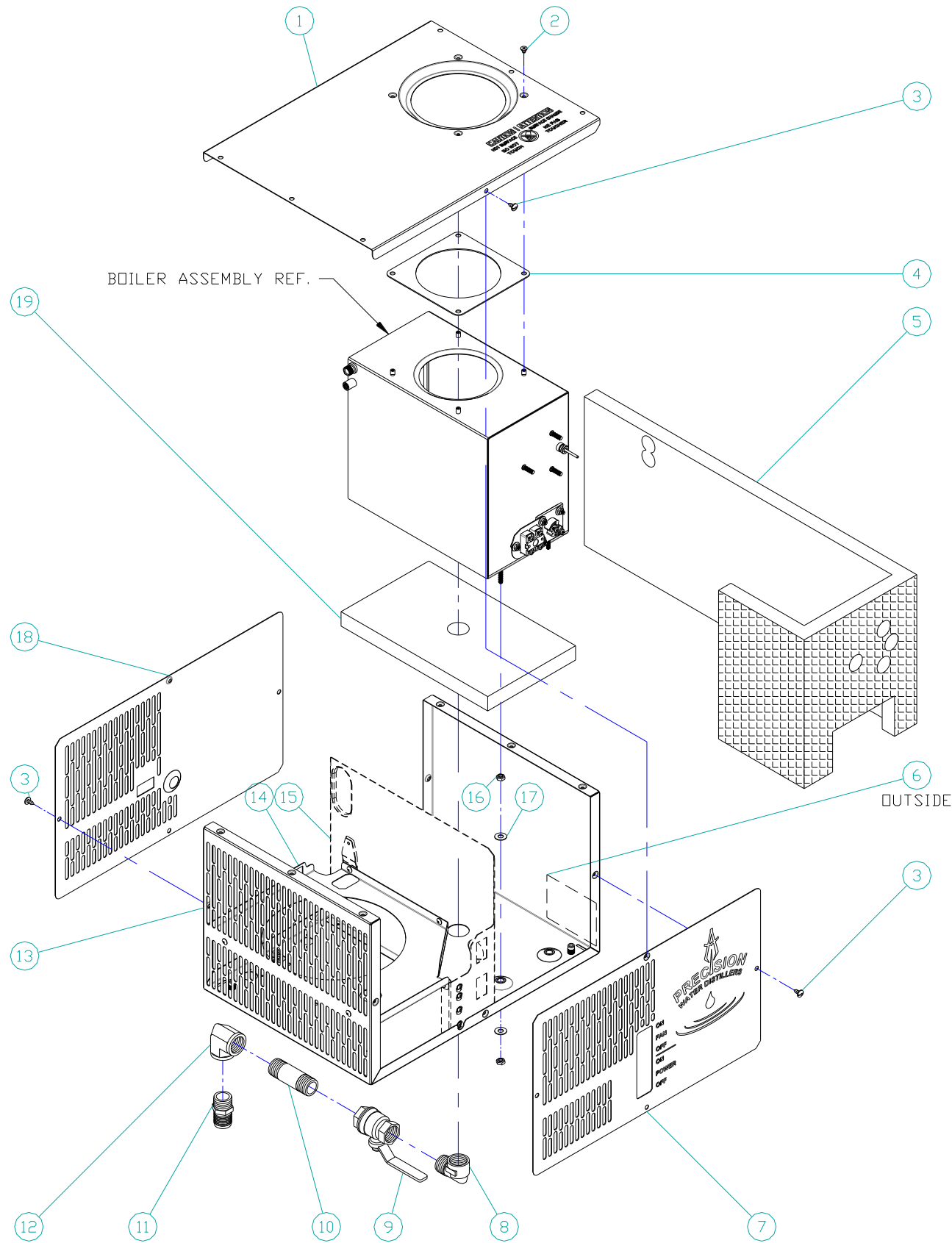
094098, Exploded Parts List

Distiller Head Assembly, 12 GPD, Gulf & Sea

Item #	Part #	Description	Qty
1	510188	Top Cover, 12 GPD, Gulf & Sea	1
2	012018	Screw, Machine, SS, #10-24 X 1/4", Oval Head	4
3	010000	Screw, Sheet Metal, SS, #10-12 X 1/2"	14
4	500111	Gasket, Lid	1
5	510244	Insulation, 12 GPD Boiler Sides, Gulf & Sea	1
6	080119	Sheet, Imprintable Poly, Silver 8.5 x 11	1
7	510189	Front Cover, 12 GPD, Gulf & Sea	1
8	030016	Elbow, 90 Degree, 3/4" MPT X 3/4" FPT	1
9	030009	Valve, Ball, 3/4" FPT, Both Ends	1
10	030021	Nipple, 3/4" MPT X 3"	1
11	030015	Coupler, 3/4" MPT X 1" HB	1
12	030018	Elbow, 90 Degree, 3/4" FPT, Both Ends	1
13	510185	Body, Clinch Nut, 12 GPD, Gulf & Sea	1
14	510194	Air Baffle, Clinch Nut, 12 GPD, Gulf & Sea	1
15	510187	Divider, Clinch Nut, 12 GPD, Gulf & Sea	1
16	025000	Nut, Hex, SS, 1/4"-20UNC	8
17	018004	Washer, Flat, 5/16"ID X 11/16" OD, 20 Gauge SS	8
18	510190	Rear Cover, 12 GPD, Gulf & Sea	1
19	510245	Insulation, 12 GPD Boiler Bottom, Gulf & Sea	1

094098, Exploded Parts List

Distiller Head Assembly, 12 GPD, Gulf & Sea



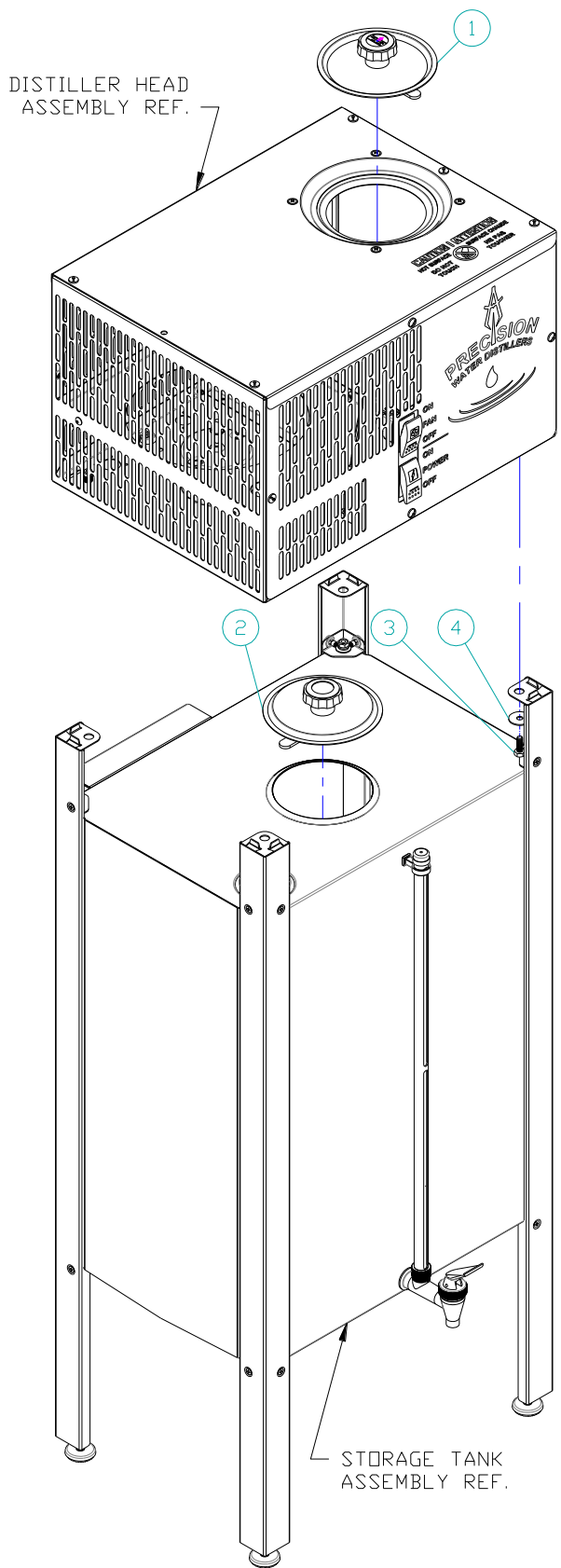
096101, Exploded Parts List

Distiller Head & Storage Tank Assembly

Item #	Part #	Description	Qty
1	500184	Lid Assembly, Boiler Tank	1
2	500248	Lid Assembly, Storage Tank	1
3	014034	Capscrew, SS, ¼"-20UNC X ¾", Hex Head	4
4	018028	Washer, Flat, 0.281"ID X 1"OD, 18 Gauge, SS	4

096101, Exploded Parts List

Distiller Head & Storage Tank Assembly



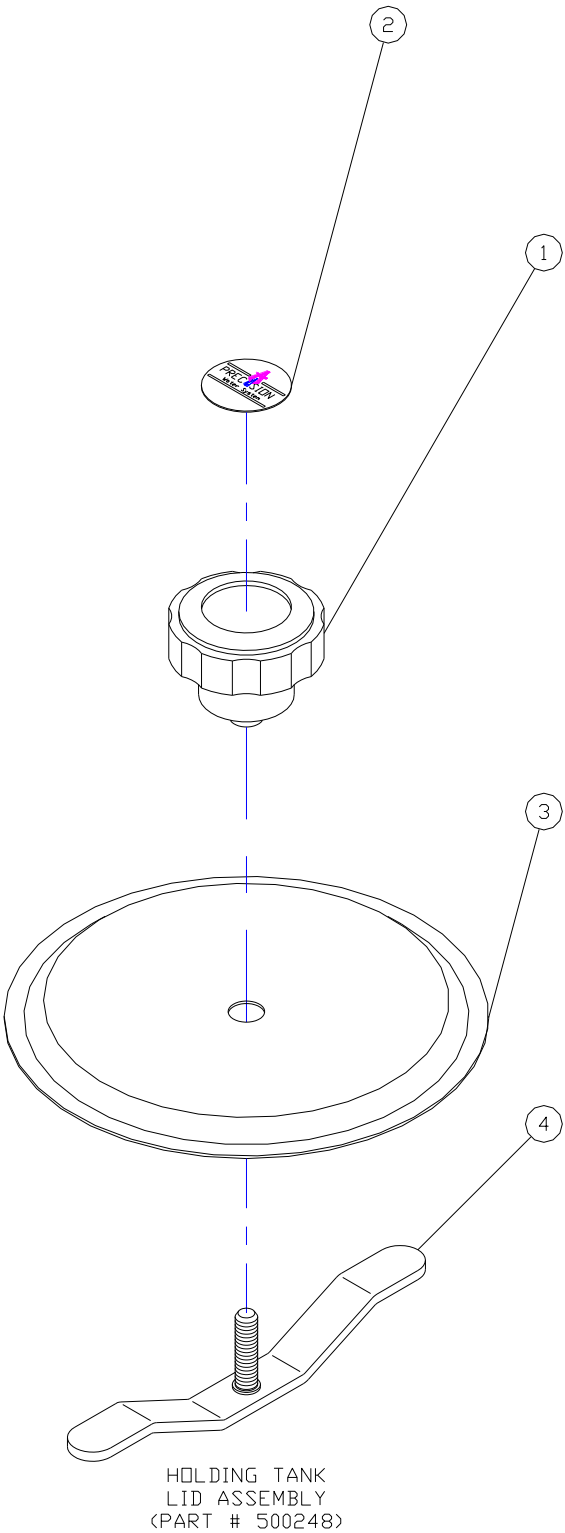
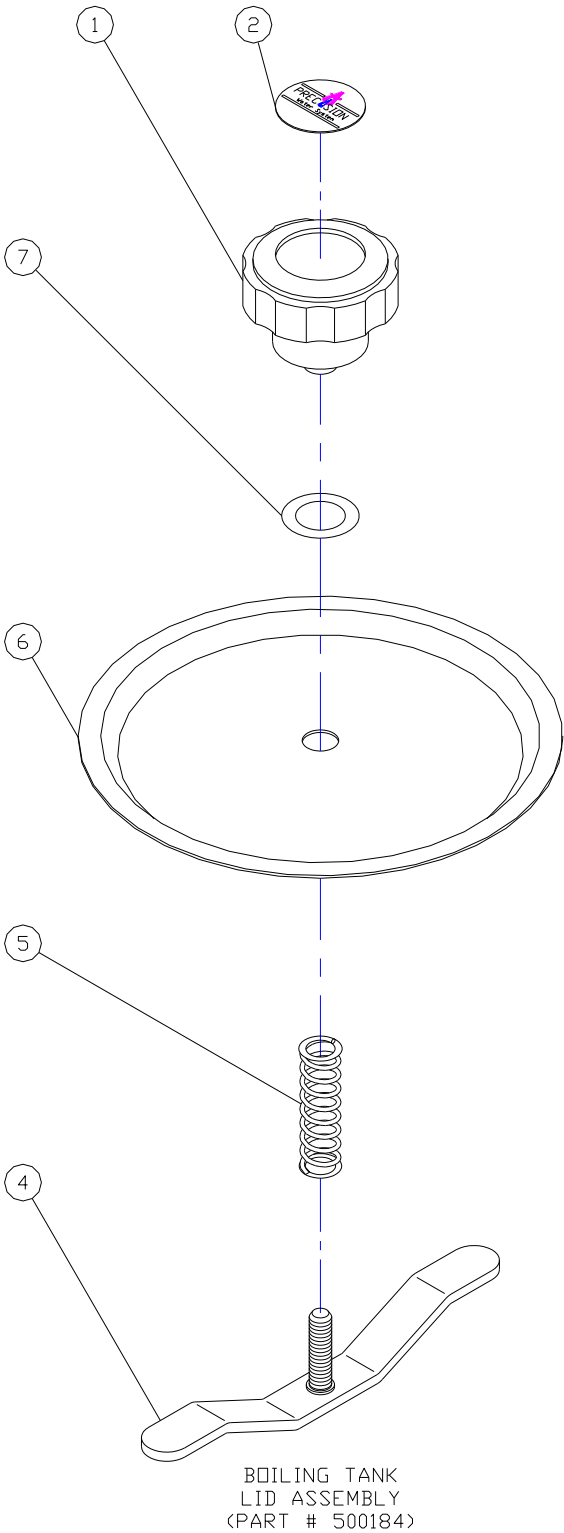
094074, Exploded Parts List

Boiling Tank & Holding Tank Lids Assemblies

Item #	Part #	Description	Qty
1	080053	Knob, Black Phenolic, 1/4"-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



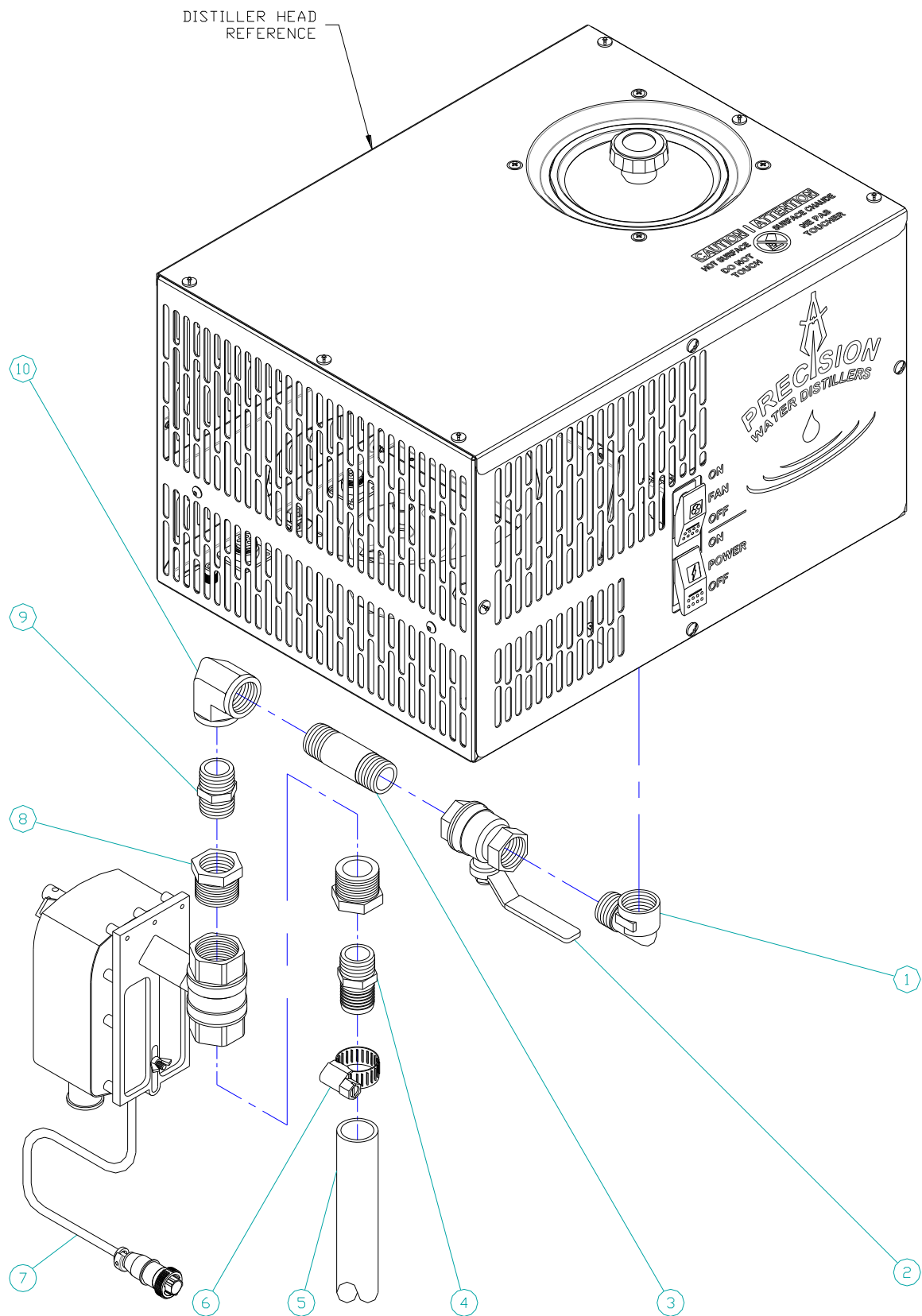
094096, Exploded Parts List

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
8	030031	Reducer, 1"MPT X ¾"FPT	2
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



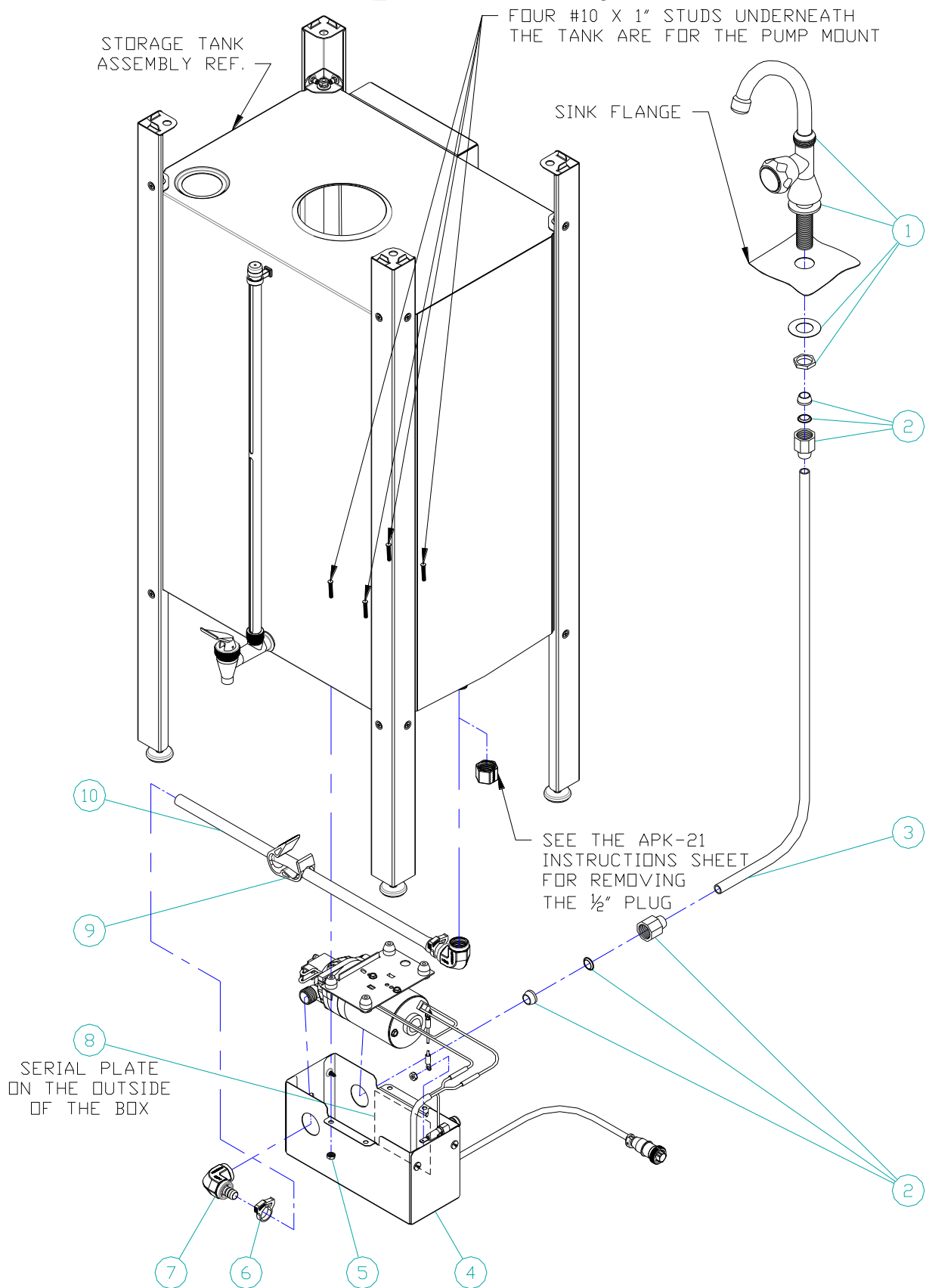
094094, Exploded Parts List

Automatic Pump Assembly, APK-11

Item #	Part #	Description	Qty
1	080052	Faucet, Chrome	1
2	034003	Nut/Cone/Ring Set, ½" OD	2
3	052001	Tubing, LDPE, 3/8" X ½"	25'
4	510233	Pump Assembly, W/Cord & Fuse, 1.4GPM, 120V, 4 Pin CP	1
5	026004	Nut, Kep, #18-8 SS, #10-24UNC	4
6	054093	Hose Clamp, Nylon, Diameter Range 0.616"-0.707" X 0.234" Thick	2
7	036047	Elbow, SS, ½"-14FNPT X 3/8" Hose Barb	2
8	080119	Sheet Imprintable Poly, Sliver 8.5" X 11"	0.167 Sheet
9	054092	Plastic Hose Clamp, ½", Extra Large	1
10	052032	Silicone Tubing, Size #36 9.6mmID X 14.6mmOD	10"

094094, Exploded Parts List

Automatic Pump Assembly, APK-11



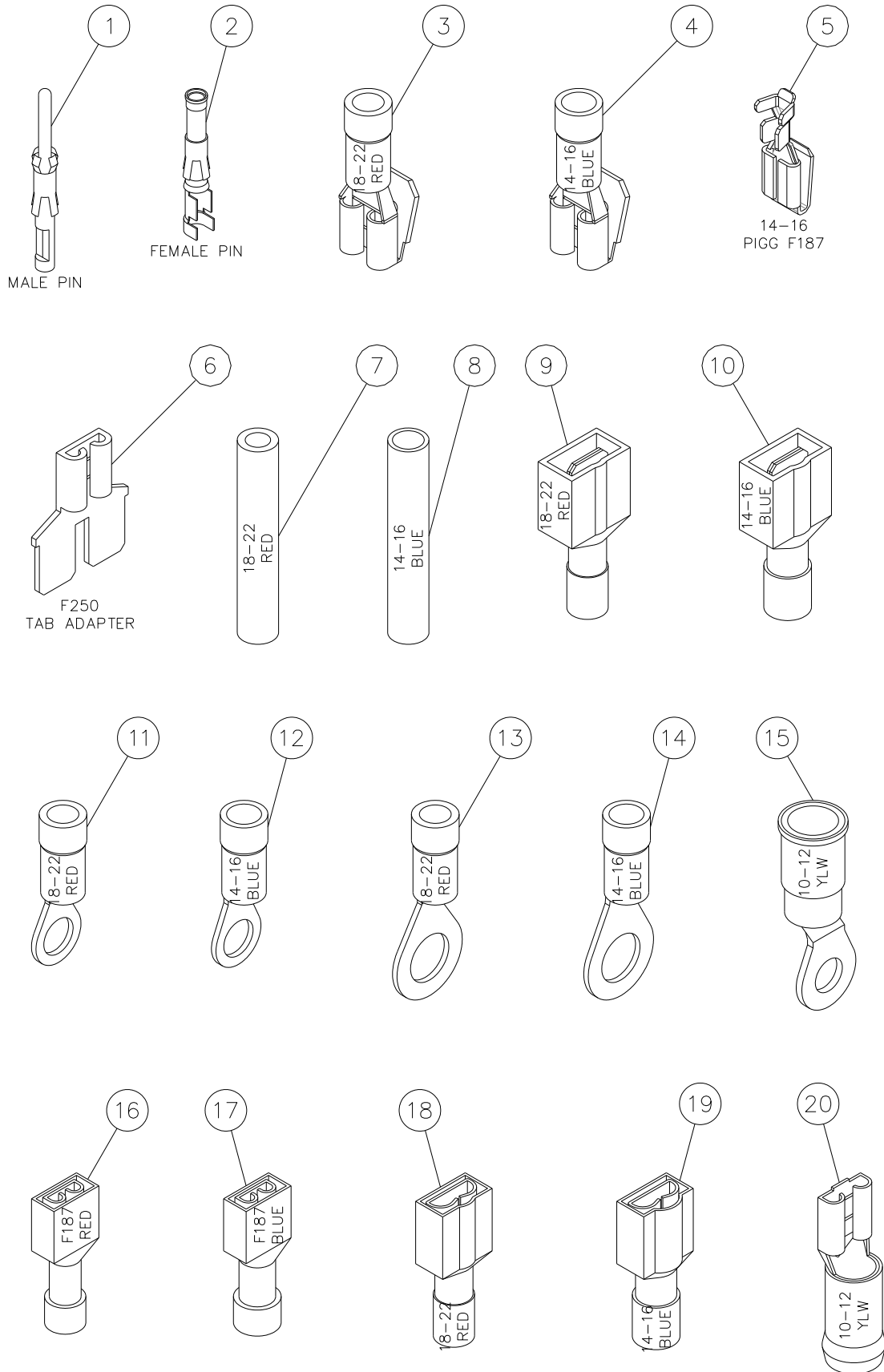
094109, Exploded Parts List

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	066020	Receptacle, Pigg, F187, #14-16 AWG
6	066013	Tab Adapter, F250
7	066006	Butt Splice, #18-22 AWG, Red
8	066005	Butt Splice, #14-16 AWG, Blue
9	066012	Tab, 250, #18-22 AWG, Red
10	066011	Tab, 250, #14-16 AWG, Blue
11	066008	Ring, #10, #18-22 AWG, Red
12	066007	Ring, #10, #14-16 AWG, Blue
13	066010	Ring, ¼", #18-22 AWG, Red
14	066009	Ring, ¼", #14-16 AWG, Blue
15	066016	Ring, #10, #10-12 AWG, Yellow
16	066003	Receptacle, F187, #18-22 AWG, Red
17	066001	Receptacle, F187, #14-16 AWG, Blue
18	066002	Receptacle, F250, #18-22 AWG, Red
19	066000	Receptacle, F250, #14-16 AWG, Blue
20	066015	Receptacle, F250, #10-12 AWG, Yellow

094109, Exploded Parts List

Electrical Terminals



Wiring List - Gulf Distiller - 125V PART # 510227C

No.	Part#	Color	Ga	Length	From Conn.	SERIES 1	From Location	To Location
						ToConn.		
1	510229	MIDDLE	14	3"	#10RING #14-#16	POWER CORD MIDDLE WIRE	GROUND	POWER CORD MIDDLE WIRE
2	510229	SMOOTH	14	23"	F250 #14-#16	POWER CORD SMOOTH WIRE	POWER SWITCH #2	POWER CORD SMOOTH WIRE
3	510229	RIBBED	14	24"	#10RING #14-#16	POWER CORD RIBBED WIRE	RESET SWITCH #4	POWER CORD RIBBED WIRE
4	510122	BLK	18	12"	PIGG #18-#22	FAN MOTOR	HEATER RELAY #1	FAN MOTOR
5	510122	BLK	18	13"	F250 #18-#22	FAN MOTOR	FAN SWITCH #2	FAN MOTOR
6	095251	BLK	14	22"	F250 #14-#16	PIGG #14-#16	WATER SWITCH #2	FAN SWITCH #3
7	095252	YLW	14	13"	F187 #14-#16	F250 #14-#16	LOWER BOILER MICRO NC	HEATER RELAY #6
8	095253	ORG	14	24"	F187 #14-#16	F250 #14-#16	UPPER BOILER MICRO NC	WATER SWITCH #1
9	095254	BLK	14	5"	#10RING #14-#16	F187 #14-#16	RESET SWITCH #1	LOWER BOILER MICRO COM
10	095255	BLU	14	22"	PIGG #14-#16	F250 #14-#16	HEATER RELAY "B"	SOLENOID VALVE A
11	095256	BLK	14	24"	F187 #14-#16	F250 #14-#16	UPPER BOILER MICRO COM	SOLENOID VALVE B
12	095257	BLK	16	24"	PIGG #14-#16	FPIN	POWER SWITCH #2	STORAGE TANK RECEPTACLE #4
13	095258	ORG	16	24"	F250 #14-#16	FPIN	POWER SWITCH #8	STORAGE TANK RECEPTACLE #1
14	095259	BLU	16	24"	F250 #14-#16	FPIN	HEATER RELAY #3	STORAGE TANK RECEPTACLE #2
15	095260	YLW	16	12"	PIGG #14-#16	FPIN	SOLENOID VALVE A	STORAGE TANK RECEPTACLE #3
16	095261	RED	14	10"	F250 #14-#16	#10RING #14-#16	POWER SWITCH #3	RESET SWITCH #2
17	095113	WHT	16	19"	F250 #14-#16	FPIN	HEATER RELAY #4	DRAIN RECEPTACLE #3
18	095188	BLK	16	21"	PIGG #14-#16	FPIN	FAN SWITCH #3	DRAIN RECEPTACLE #2
19	095204	WHT	14	4"	#10RING #14-#16	#10RING #14-#16	RESET SWITCH #1	HEATING ELEMENT "A"
20	095205	YLW	14	13"	F250 #14-#16	#10RING #14-#16	HEATER RELAY #1	HEATING ELEMENT "B"
21	095063	GRN	16	4"	#10RING #14-#16	FPIN	GROUND	STORAGE TANK RECEPTACLE #7
22	095063	GRN	16	4"	#10RING #14-#16	FPIN	GROUND	DRAIN RECEPTACLE #4
23	095207	WHT	14	3"	PIGG #14-#16	F250 #14-#16	HEATER RELAY #4	HEATER RELAY #5
24	095209	BRN	14	13"	F250 #14-#16	#10RING #14-#16	HEATER RELAY #2	RESET SWITCH #3
25	095262	ORG	14	11"	F250 #14-#16	#10RING #14-#16	FAN SWITCH #3	HEATING ELEMENT "A"
26	095211	RED	14	12"	#10RING #14-#16	F250 #14-#16	HEATING ELEMENT "B"	POWER SWITCH #7
27	095207	WHT	14	3"	F250 #14-#16	PIGG #14-#16	FAN SWITCH #6	POWER SWITCH #7
28	095207	WHT	14	3"	F250 #14-#16	PIGG #14-#16	FAN SWITCH #7	FAN SWITCH #2
29	095263	WHT	14	8"	PIGG #14-#16	PIGG #14-#16	FAN SWITCH #8	HEATER RELAY #2
30	095264	WHT	14	5"	F250 #14-#16	PIGG #14-#16	POWER SWITCH #8	FAN SWITCH #8
31	095207	WHT	14	3"	F250 #14-#16	PIGG #14-#16	POWER SWITCH #6	POWER SWITCH #3

STORAGE TANK

32	510226	RED	16	7"	PIGG F187 #14-#16	MPIN	UPPER LEVEL SHUTOFF MICRO COM	HOLDING TANK PLUG #1
33	095250	ORG	16	5"	F187 #14-#16	F187 #14-#16	LOW LEVEL START MICRO COM	LOW LEVEL PUMP MICRO COM
34	095249	BLK	16	5"	PIGG F187 #14-#16	F187 #14-#16	LOW LEVEL START MICRO COM	UPPER LEVEL SHUTOFF MICRO COM
35	510226	WHT	16	7"	FPIN	MPIN	STORAGE TANK PLUG #4	PUMP RECEPTACLE #2
36	095248	RED	16	5"	F187 #14-#16	FPIN	LOW LEVEL PUMP MICRO NO	PUMP RECEPTACLE #3
37	510226	BRN	16	7"	F187 #14-#16	MPIN	LOW LEVEL START MICRO NO	STORAGE TANK PLUG #3
38	510226	BLK	16	7"	F187 #14-#16	MPIN	UPPER LEVEL SHUTOFF MICRO NC	STORAGE TANK PLUG #2
39	095247	GRN	16	5"	FPIN	1/4"RING #14-#16	PUMP RECEPTACLE #4	GROUND
40	510226	GRN	16	7"	MPIN	1/4"RING #14-#16	STORAGE TANK PLUG #7	GROUND

510227, Exploded Parts List

Wiring Diagram, 12 GPD Distiller

