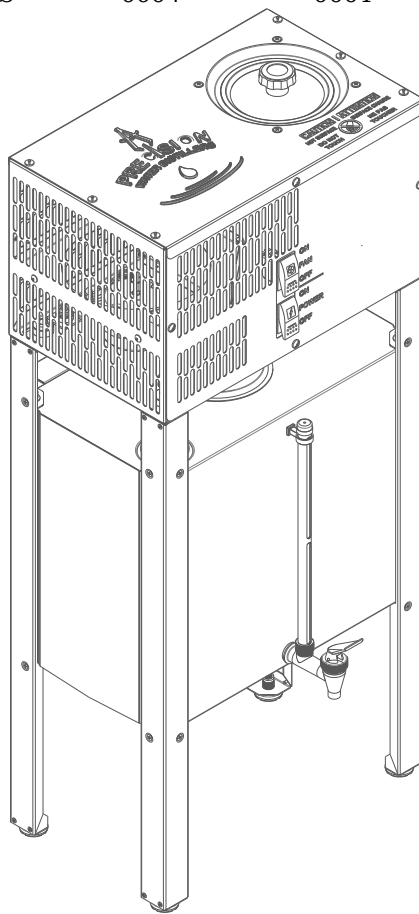




REPLACEMENT PARTS MANUAL

FOR MODEL: PWS LAKE (120VAC), RETROFIT AED(120VAC), APK-11(120VAC)

PART #	500059	500642	500004
SERIES	0004	0001	0001



PRECISION WATER SYSTEMS LAKE WATER DISTILLER

MANUFACTURED BY:

PRECISION DESIGN & MANUFACTURING INC.

9024-100 Street

WESTLOCK, ALBERTA, CANADA, T7P 2L4

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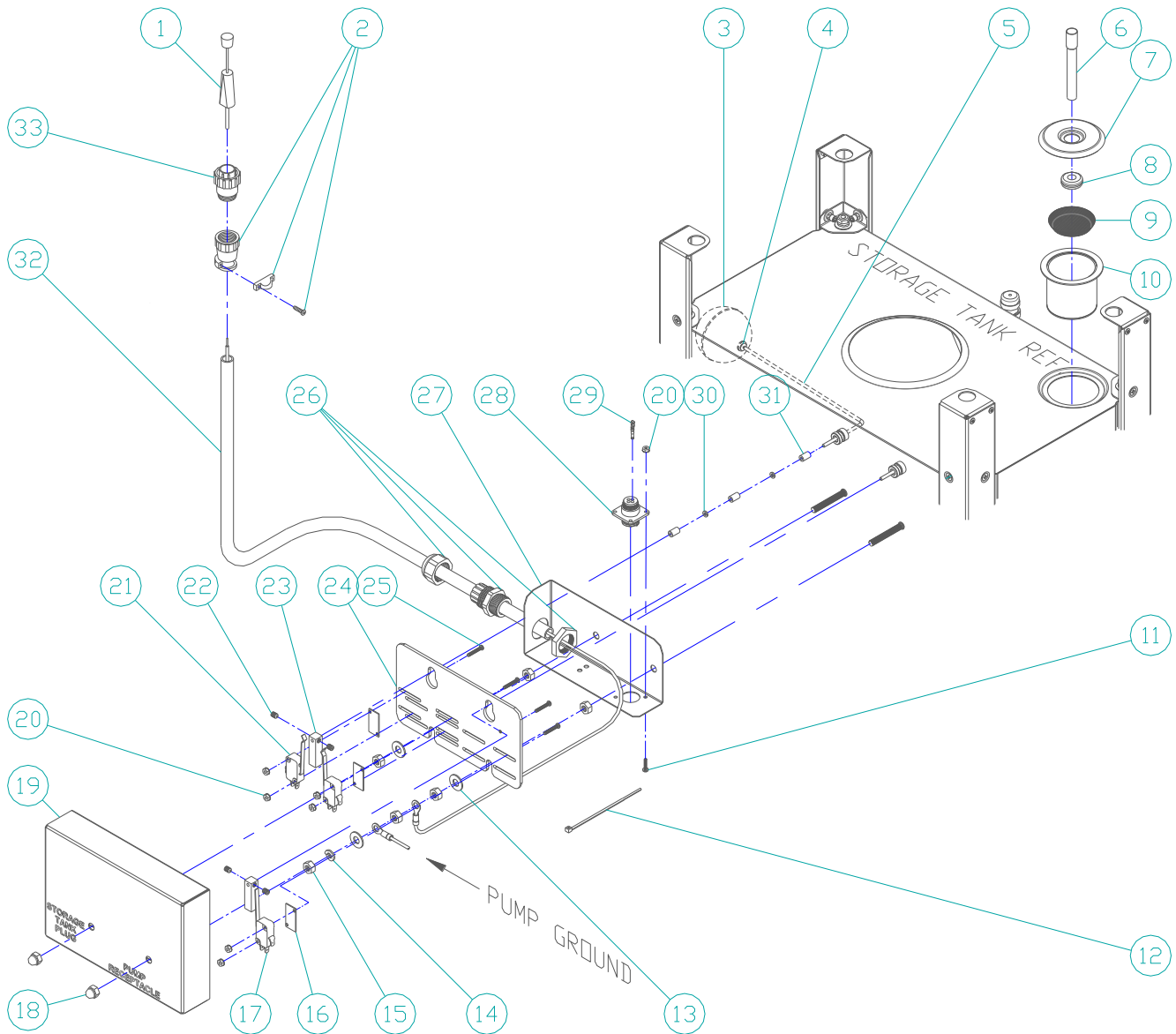
094829, Exploded Parts List

Storage Tank Micro Switches Ass'y, Lake 8 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	500546	Float Rod WA, River & Lake Storage Tank	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	530345	Charcoal Drop-In Filter WA	1
11	012019	Screw, Machine, SS, #4-40UNC X 1/2" Round/Socket	2
12	054011	Wire Tie, Plastic, 4"	Ref.
13	018004	Washer, Flat, 5/16"ID x 11/16"OD, 20ga. SS	3
14	024000	Washer, Lock, SS, Heli Coil, 1/4"	1
15	025000	Nut, Hex, SS, 1/4"-20UNC	6
16	500289	Shim, Micro Switch	3
17	400008	Microswitch, PB, Holding Tank	1
18	028000	Nut, Acorn, SS, 1/4"	2
19	510216	Cover, Wire Box, Storage Tank Float	1
20	026007	Nut, Kep, #18-8 SS, #4-40UNC	8
21	060059	Micro Switch, Long Arm, Formed	2
22	016035	Set Screw, SS, #10-32 X .25", Cup Point	4
23	530333	Bar, Actuator, Boiler Float	2
24	530339	Plate, Dual Micro Switch	1
25	012003	Screw, Machine, SS, #4-40UNCX3/4", Round Socket	7
26	054022	Strain Relief, LT Fitting, 1/2" Black	1
27	510215	Wire Box, Storage Tank Float	1
28	060130	Receptacle, 4 Pin, Circular	1
29	060017	Female Pin	Ref.
30	080128	O-Ring, Viton, 1/16" X 1/8" X 1/4"	2
31	080127	Bushing, Teflon, 1/4" X +1/8"	3
32	510226	Harness, Wire Box, Storage Tank	1
33	060043	Plug, 7 Pin, Circular	1

094829, Exploded Parts List

Storage Tank Microswitches Assembly, Lake 8 Gallon



REAR RIGHT SIDE VIEW OF THE STORAGE TANK

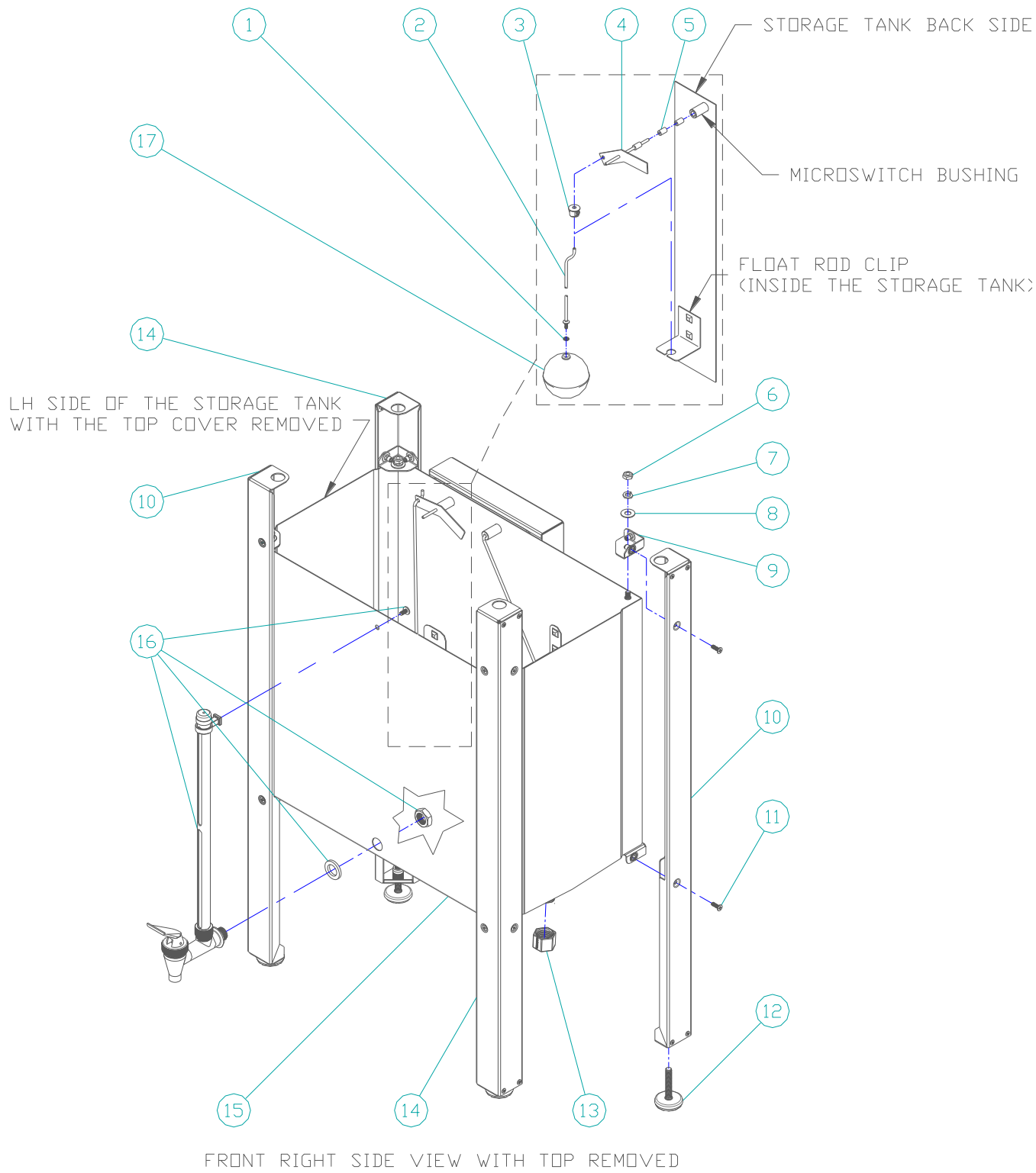
094295, Exploded Parts List

Storage Tank Assembly, Lake 8 Gallon

Item #	Part #	Description	Qty
1	020002	Washer Lock, SS, M3.5, External Tooth	1
2	510205	Rod WA, Pump Shutoff Float, Gulf & Lake 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, 1/4" X 1/8"	3
6	025000	Nut, Hex, SS, 1/4"-20UNC	8
7	024000	Washer, Lock, SS, Helicoil, 1/4"	8
8	018004	Washer, Flat, 5/16"ID X 11/16" OD, 20 Gauge SS	8
9	510196	Corner Mount Bracket, Clinch Nut, Storage Tank Leg	8
10	510210	LH Leg, Clinch Nut, Lake & Gulf Distiller, 8 & 12 Gallon Storage Tank	2
11	012031	Screw, Mach, SS, #8 X 1/2", Oval Head/Ph Dr	16
12	510213	Storage Tank Foot Assembly	4
13	034041	Cap, SS, 1/2"-14FPT	1
14	510286	RH Leg, Clinch Nut, Lake & Gulf Distiller, 8 & 12 Gallon Storage Tank	2
15	500555	Storage Tank, Studded, Lake Distiller, 8 Gallon Storage Tank	1
16	500535	SS Sight Ga Drain Valve, 13" W/New Lower Washer & Red Float Ball	1
17	080162	Float Ball, SS, 2-1/4" Round, #6-32UNC	1

094295, Exploded Parts List

Storage Tank Assembly, Lake 8 Gallon

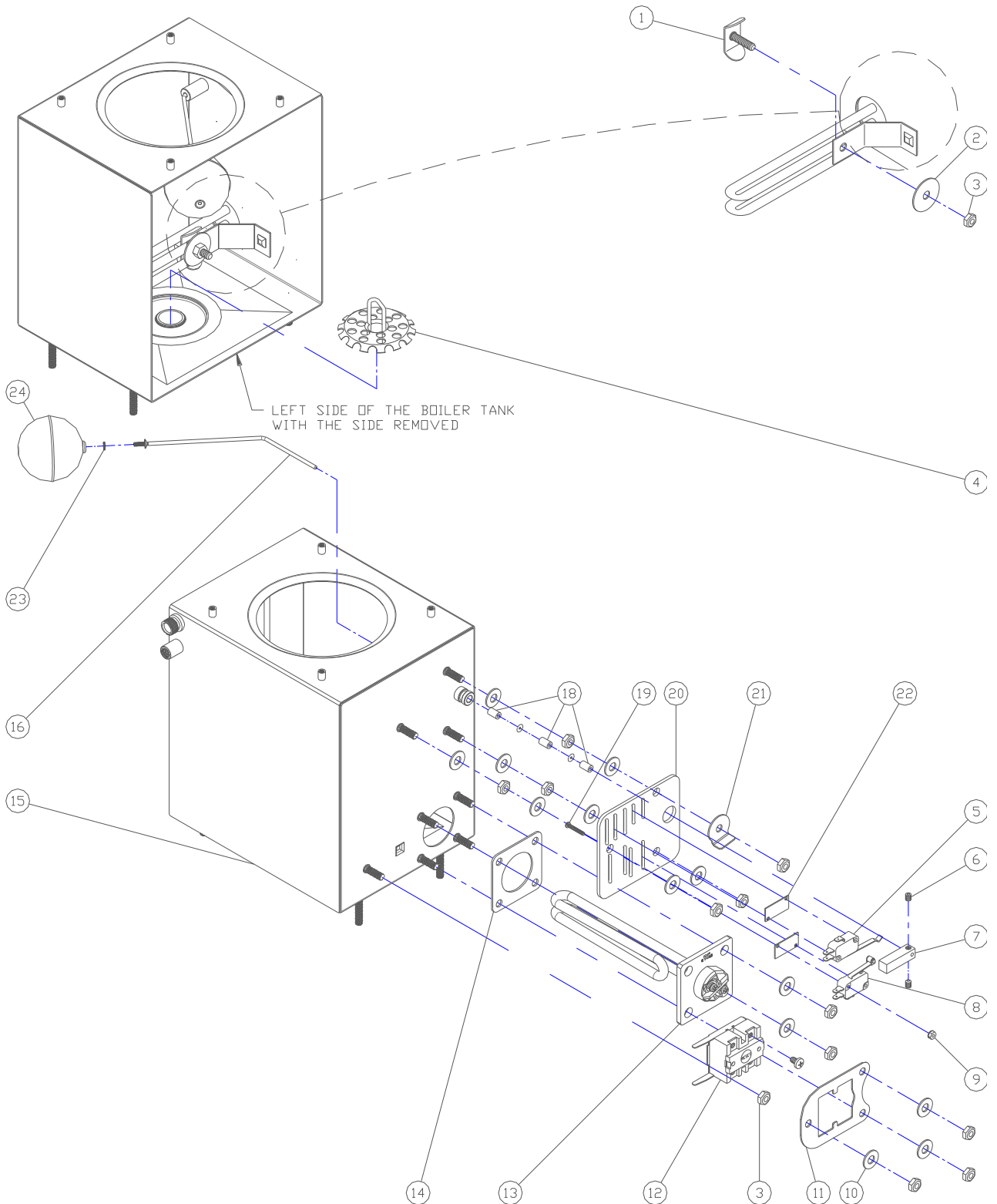


094112, Exploded Parts List

Boiler Assembly, 8 GPD, River & Lake

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	060232	Heating Element, 125V, 1100W	1
14	500100	Gasket, Heater	1
15	500571	Boiler, Studded, 8 GPD, River & Lake	1
16	500487	Rod WA, Boiler Float, Auto	1
17	080128	O-Ring, 1/16" X 1/8" X 1/4"	2
18	080127	Bushing, Teflon, 1/4" X 1/8"	3
19	012003	Screw, Machine, Plated, #4-40 X 3/4"	4
20	500266	Plate, Micro Switch	1
21	510251	Washer, "L", 0.281" ID X 1" OD, 18 Gauge SS	1
22	500289	Shim, Micro Switch	2
23	020002	Washer, Lock, SS, M3.5, External Tooth	1
24	080162	Float Ball, SS, 2-1/4" Round, #6-32	1

094112, Exploded Parts List Boiler Assembly, 8 GPD, River & Lake



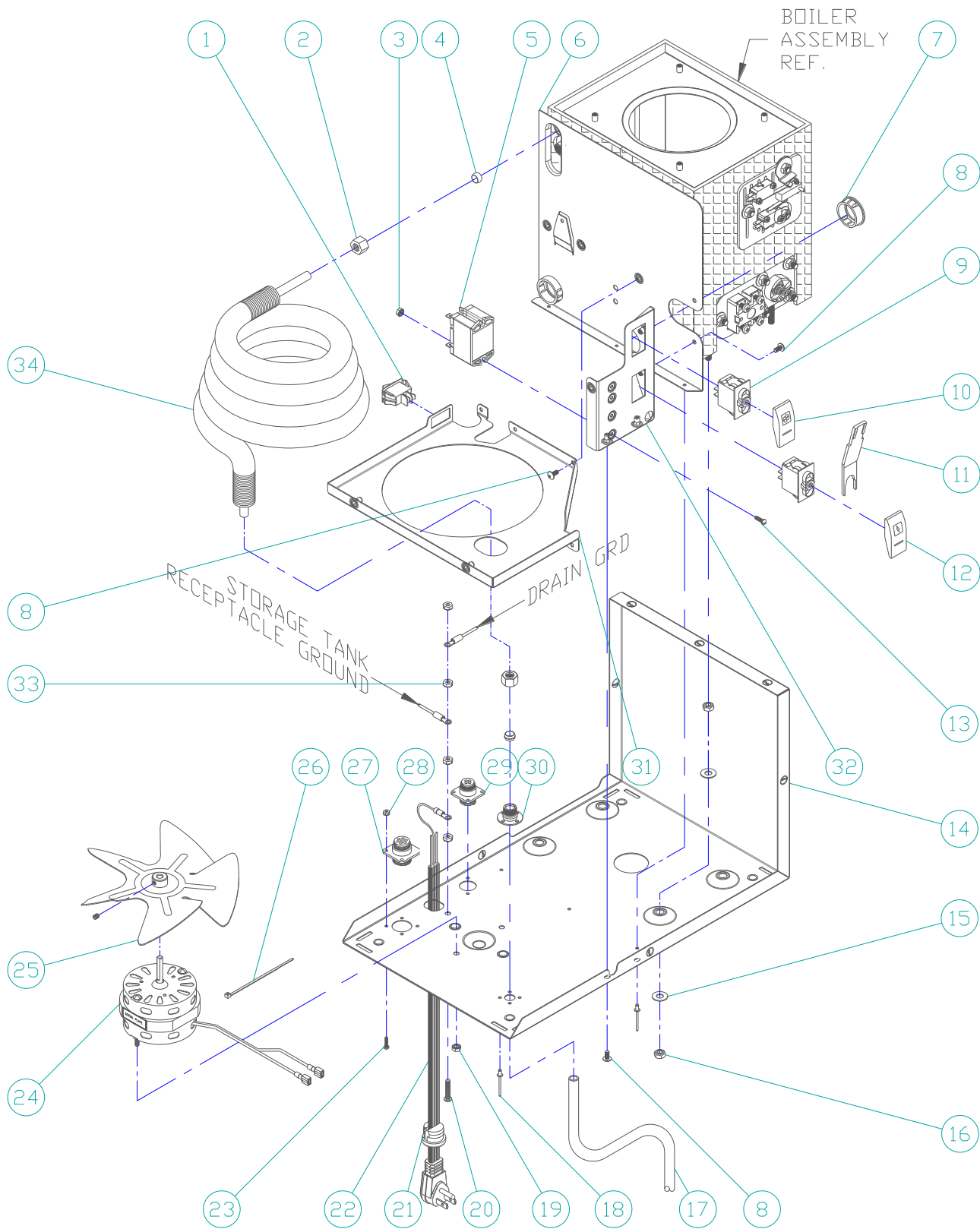
094101, Exploded Parts List

Distiller Body Assembly, 8 GPD, River & Lake

Item #	Part #	Description	Qty
1	060057	Switch, Visi, SPST, Black, RA911	1
2	030013	Nut, Brass, 3/8" Compression	2
3	026006	Nut, Kep, 18-8 SS, #6-32UNC	2
4	030012	Ferrule, 3/8"	2
5	060018	Relay, Aromat, Black, 120V	1
6	500614	Aluminum Divider, Clinch Nut, River & Lake Distiller	1
7	054004	Bushing, Snap, 1-1/4"	2
8	012017	Screw, Machine, SS, #8-32UNC X 3/8", TRS HD/SK	10
9	060028	Switch Base, 120/240V SPST	2
10	060030	Actuator, Grey, Amber-Fan	1
11	080134	Tool, Actuator Removal	REF.
12	060029	Actuator, Grey, Red-Power	1
13	012009	Screw, Machine, Plated, #6-32 X 1/2"	2
14	500610	Body, W/Alu Divider, Clinch Nut, River/Lake Distiller	1
15	018004	Washer, Flat, 5/16"ID X 11/16" OD, 20 Gauge SS	8
16	025000	Nut, Hex, SS, 1/4"-20UNC	8
17	052002	Tubing, PVC, 5/16" X 7/16"	2'
18	016004	Rivet, Aluminum, 1/8" X 5/16"	7
19	026005	Nut, Kep, 18-8 SS, #8-32UNC	2
20	012000	Screw, Machine, Plated, #10-24 X 1"	1
21	054094	Strain Relief, 14 & 12 Gauge, Flat Cable	1
22	500550	Power Cord Ass'y, 14-3 NA, 8 GPD Distiller, R & L	1
23	012019	Screw, Machine, SS, #4-40 X 1/2", Round/Socket	4
24	510283	Common Distiller Motor Assembly, 115V	1
25	080046	Fan Blade, 8"	1
26	054011	Wire Tie, Plastic, 4"	Ref.
27	060044	Receptacle, 7 pin Circular	1
28	026007	Nut, Kep, 18-8 SS, #4-40UNC	4
29	060130	Receptacle, 4 Pin, Circular	1
30	530344	Mount, WA, CC Compression	1
31	500612	Aluminum Fan Shroud, Clinch Nut, River & Lake Distiller	1
32	500616	Switch Mount Plate, Clinch Nut, River & Lake Distiller	1
33	026004	Nut, Kep, 18-8 SS, #10-24UNC	4
34	500574	Cooling Coil Assembly, 12 GPD Distiller, Gulf & Sea	1

094101, Exploded Parts List

Distiller Body Assembly, 8 GPD, River & Lake



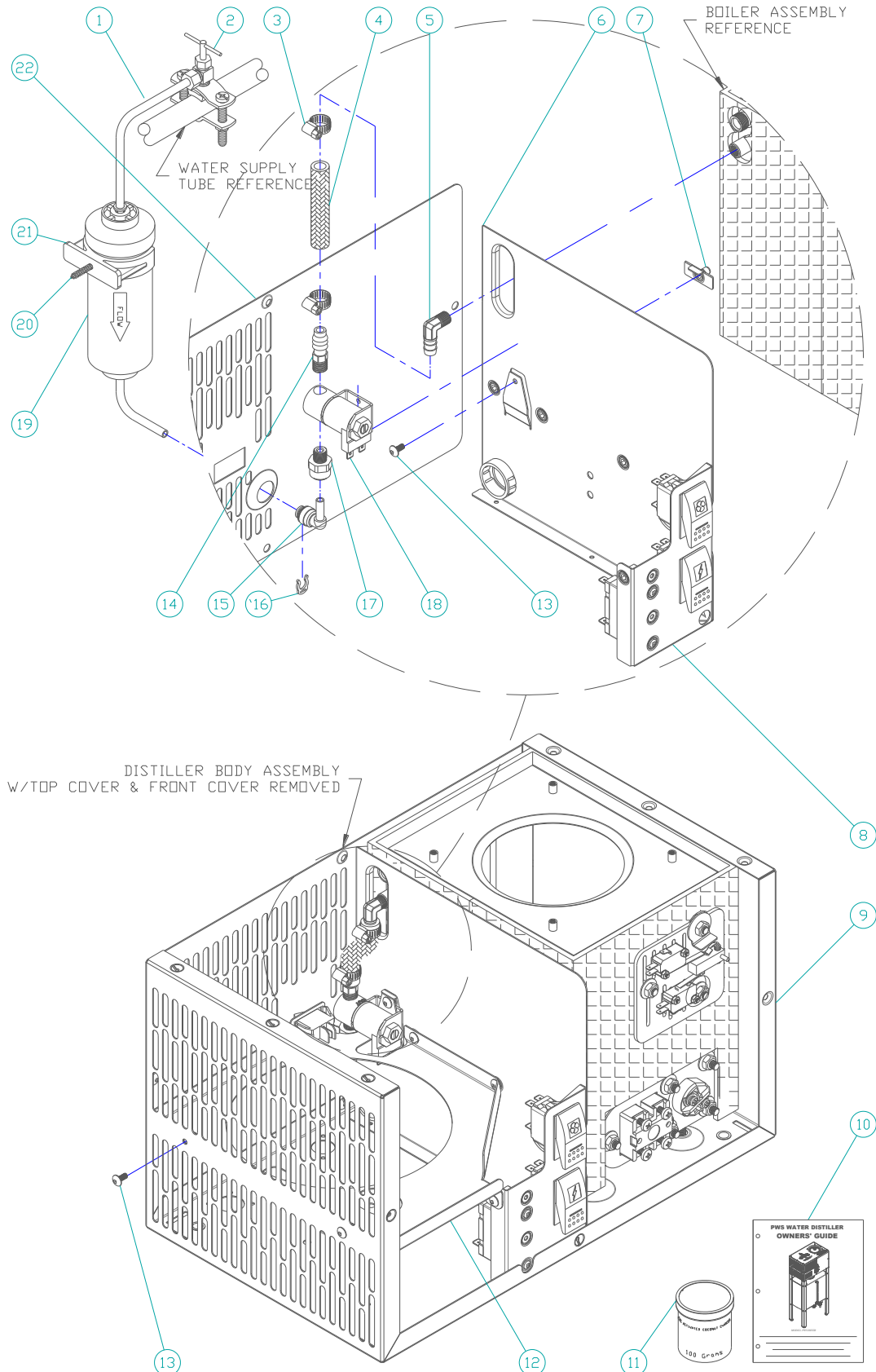
094099, Exploded Parts List

8 GPD Solenoid Valve Assembly, River & Lake

Item #	Part #	Description	Qty
1	052000	Tubing, ¼" Feed-line	16'
2	036005	Valve, Self-Piercing Kit	1
3	080056	Gear Clamp, SS, ¼"	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	500558	Aluminum Divider, Clinch Nut, 8 GPD Distiller, River & Lake	1
7	510192	Lock Clip, Clinch Nut, Brass Solenoid Valve	1
8	500616	Switch Mount Plate, Clinch Nut, River & Lake Distiller	1
9	500610	Body W/Alu Divider, Clinch Nut, River & Lake Distiller	1
10	097510	Owners Guide, PWS Lake Distiller	1
11	080116	Charcoal, Sample, 100 Gram Jar	1
12	500612	Aluminum Fan Shroud, Clinch Nut, River & Lake Distiller	1
13	012017	Screw, Machine, SS, #8-32UNC X 3/8", TRS HD/SK	10
14	030001	Coupler, SS, 1/8" MPT X 3/8" HB	1
15	034057	Gray Acetal Plug in Elbow, 1/4 Stem - 1/4Tube, JG	1
16	034009	Locking Clip, ¼" JG	2
17	034054	Gray Acetal Male Connector 1/4 X 1/8 NPTF, JG	1
18	060026	Solenoid Valve, 1/8" FPT BE, 120V	1
19	080054	Filter, Sediment, CL6-RO, Red	1
20	010008	Screw, SM, Plated, #10-12 X 1", Pan Socket	1
21	054073	Nylon Mounting Clip, Single, 2" Diameter	1
22	500563	Rear Cover, 8 GPD Distiller, River & Lake	1

094099, Exploded Parts List

8 GPD Distiller Solenoid Valve Assembly



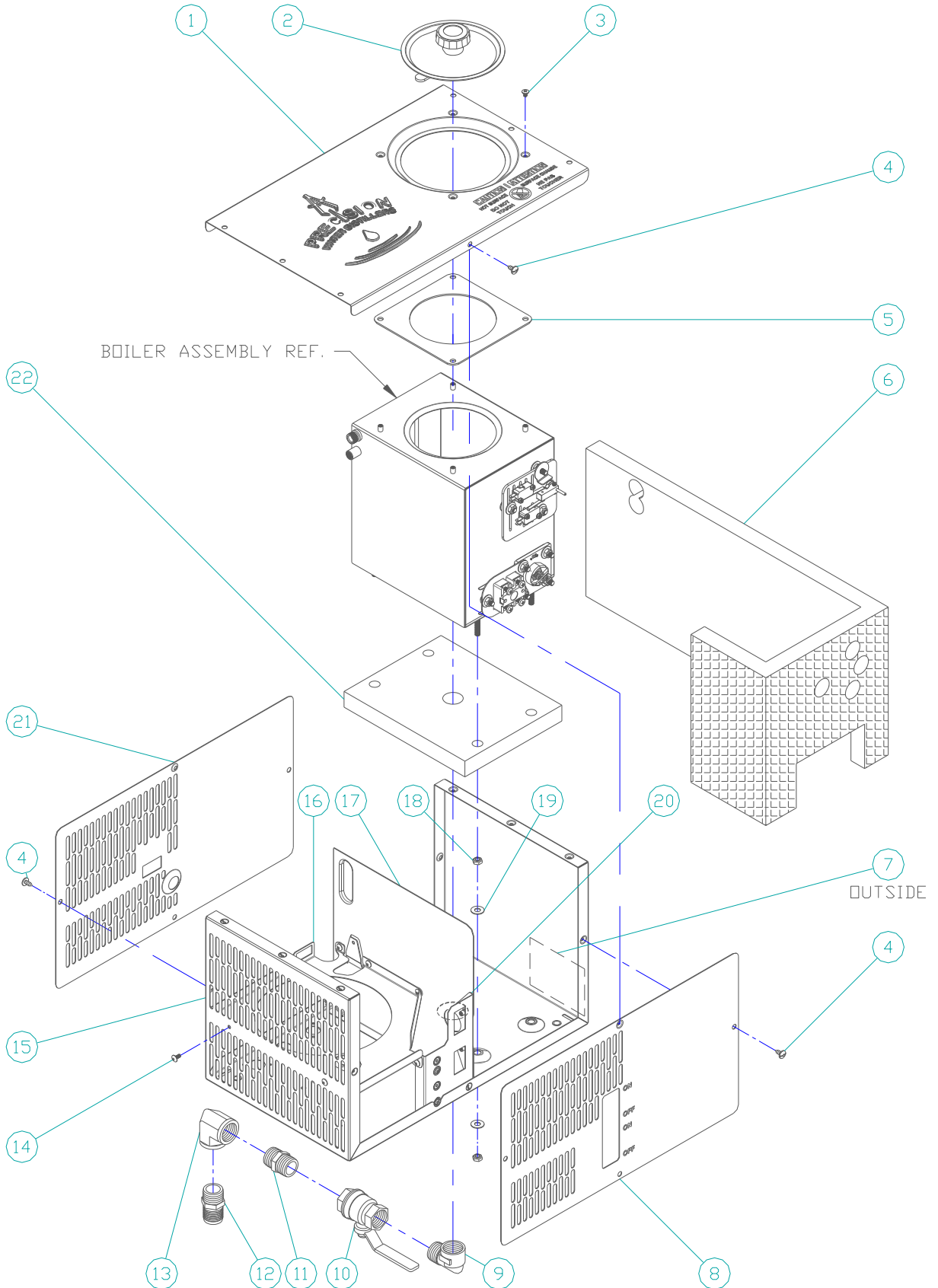
094098, Exploded Parts List

Distiller Head Assembly, 8 GPD, River & Lake

Item #	Part #	Description	Qty
1	500561	Top Cover, 8 GPD, River & Lake	1
2	500184	Boiler Tank Lid Assembly	1
3	012018	Screw, Machine, SS, #10-24UNC X 1/4", Oval Head	4
4	010000	Screw, Sheet Metal, SS, #10-12 X 1/2"	14
5	500111	Gasket, Lid	1
6	500572	Insulation, Boiler Sides, 8 GPD, River & Lake	1
7	080119	Sheet, Imprintable Poly, Silver 8.5" X 11"	0.1667 SHT
8	500562	Front Cover, 8 GPD, River & Lake	1
9	030016	Elbow, 90 Degree, 3/4"-14MNPT X 3/4"-14FNPT	1
10	030009	Valve, Ball, 3/4"-14FNPT, Both Ends	1
11	030017	Nipple, Close, 3/4"-14MNPT	1
12	030015	Coupler, 3/4"-14MNPT X 1" HB	1
13	030018	Elbow, 90 Degree, 3/4"-14FNPT, Both Ends	1
14	012017	Screw, Machine, SS, #8-32UNC X 3/8", Truss HD/SK	10
15	500610	Body W/Alu Divider, Clinch Nut, River & Lake Distiller	1
16	500612	Alu Fan Shroud, Clinch Nut, River & Lake Distiller	1
17	500614	Aluminum Divider, Clinch Nut, River & Lake Distiller	1
18	025000	Nut, Hex, SS, 1/4"-20UNC	8
19	018004	Washer, Flat, 5/16"ID X 11/16" OD, 20 Gauge SS	8
20	500616	Switch Mount Plate, Clinch Nut, River & Lake Distiller	1
21	500563	Rear Cover, 8 GPD, River & Lake	1
22	500573	Insulation, Boiler Bottom, 8 GPD, River & Lake	1

094098, Exploded Parts List

Distiller Head Assembly, 8 GPD, River & Lake



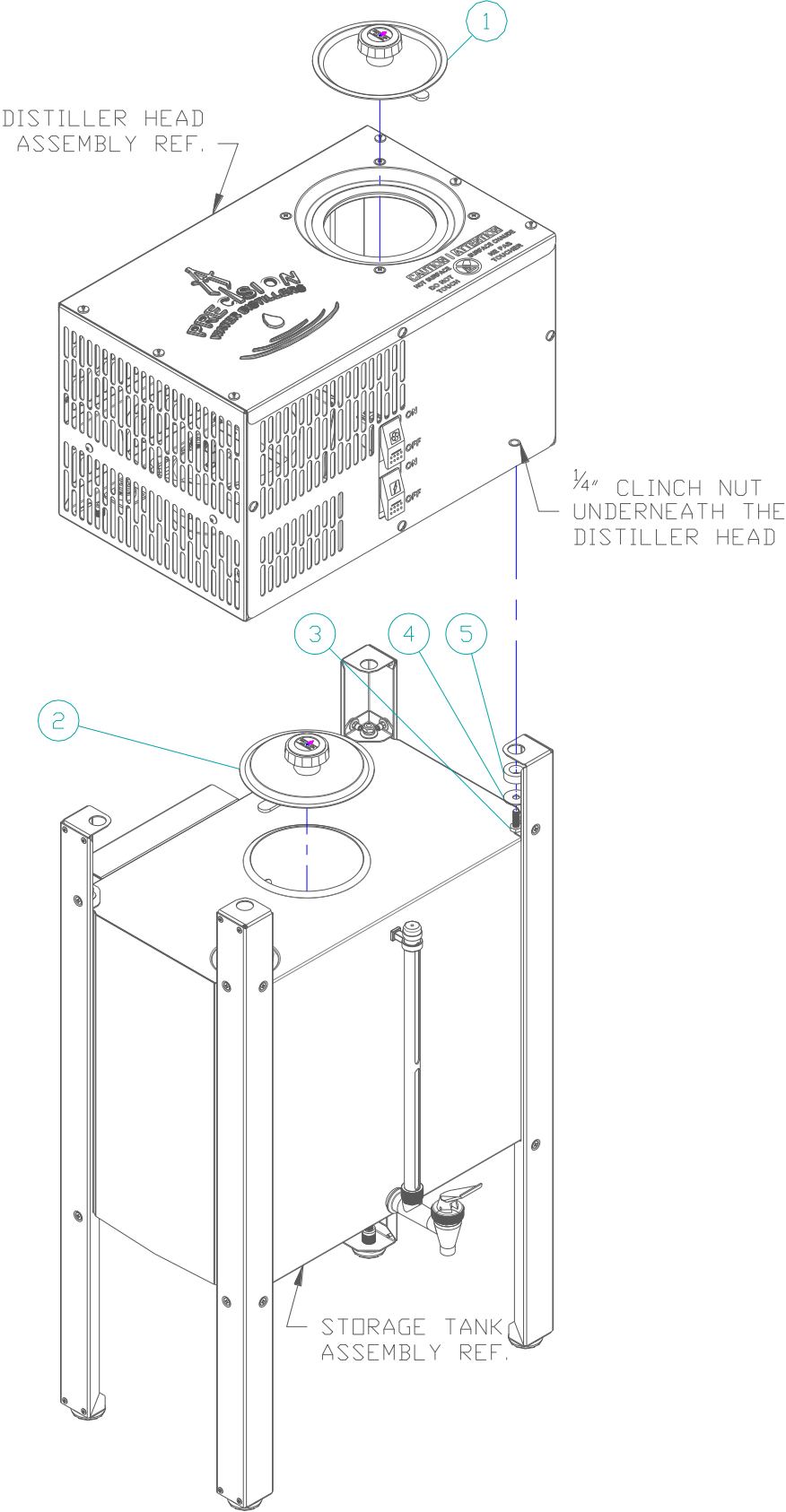
096101, Exploded Parts List

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	018068	Washer, Flat, SS, 0.281" ID X 1" OD, 18 Gauge	4
5	054102	Washer, HDPE, Black, 9/16" ID X 1" OD, 0.354" Thick	4

096101, Exploded Parts List

Distiller Head & Storage Tank Assembly



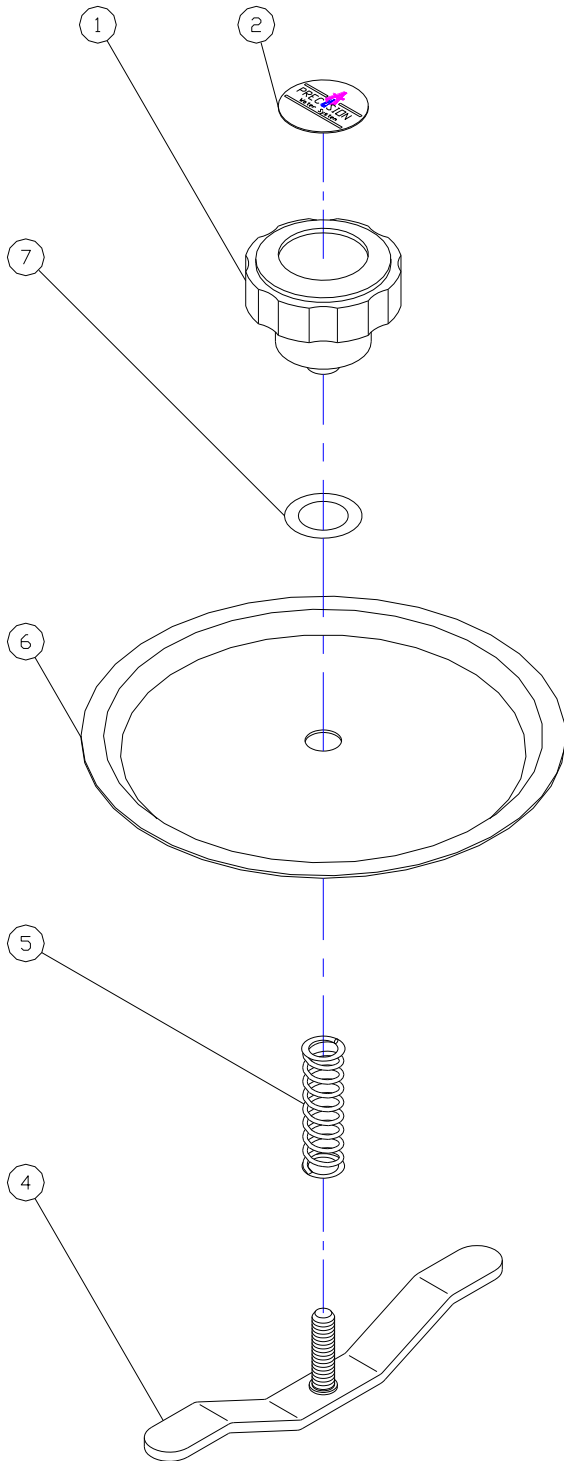
094074, Exploded Parts List

Boiling Tank & Holding Tank Lids Assemblies

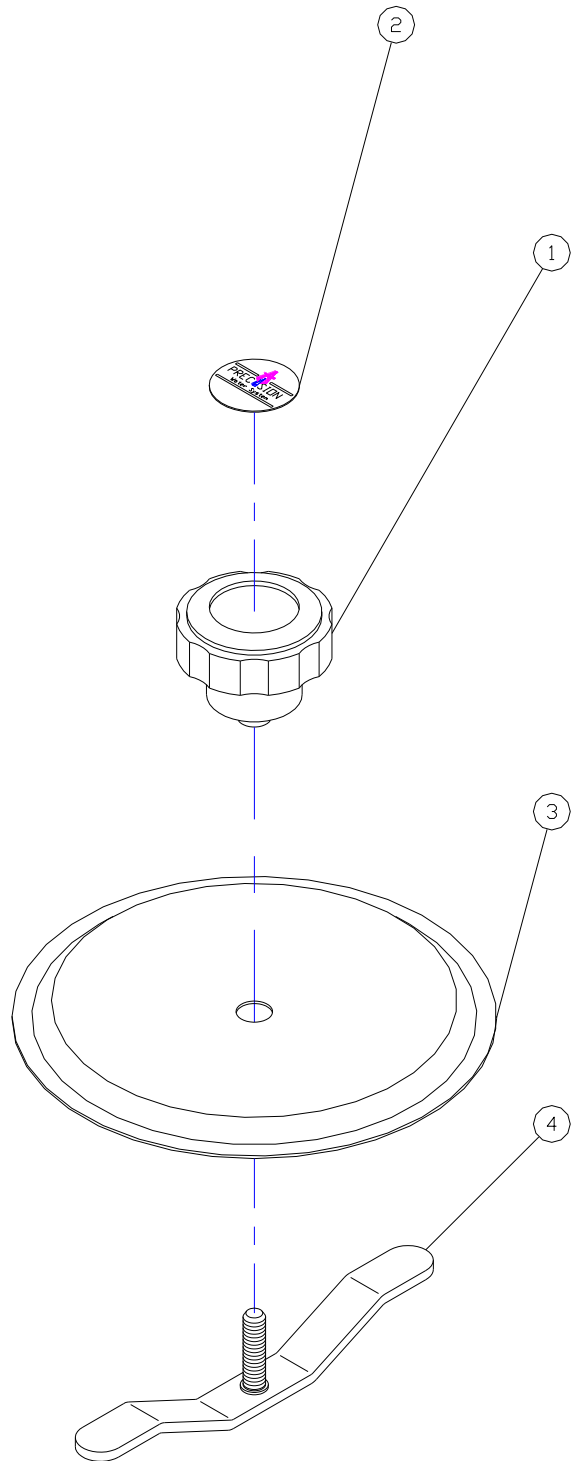
Item #	Part #	Description	Qty
1	080053	Knob, Black Phenolic, ¼"-20	2
2	080106	Inlay, Knob, PWS	2
3	500119	Lid, Holding Tank, Disc, SS, 5.5"	1
4	500115	Tee Bar, Studded, 5.5"	2
5	080058	Spring, Boiling Tank, Lid, SS	1
6	500118	Lid, Boiling Tank, Disc, SS, 5.5"	1
7	080064	O-Ring, Lid Knob, Buna 112	1

094074, Exploded Parts List

Boiling & Holding Tank Lids Assemblies, PWS



BOILING TANK
LID ASSEMBLY
(PART # 500184)



HOLDING TANK
LID ASSEMBLY
(PART # 500248)

094096, Exploded Parts List

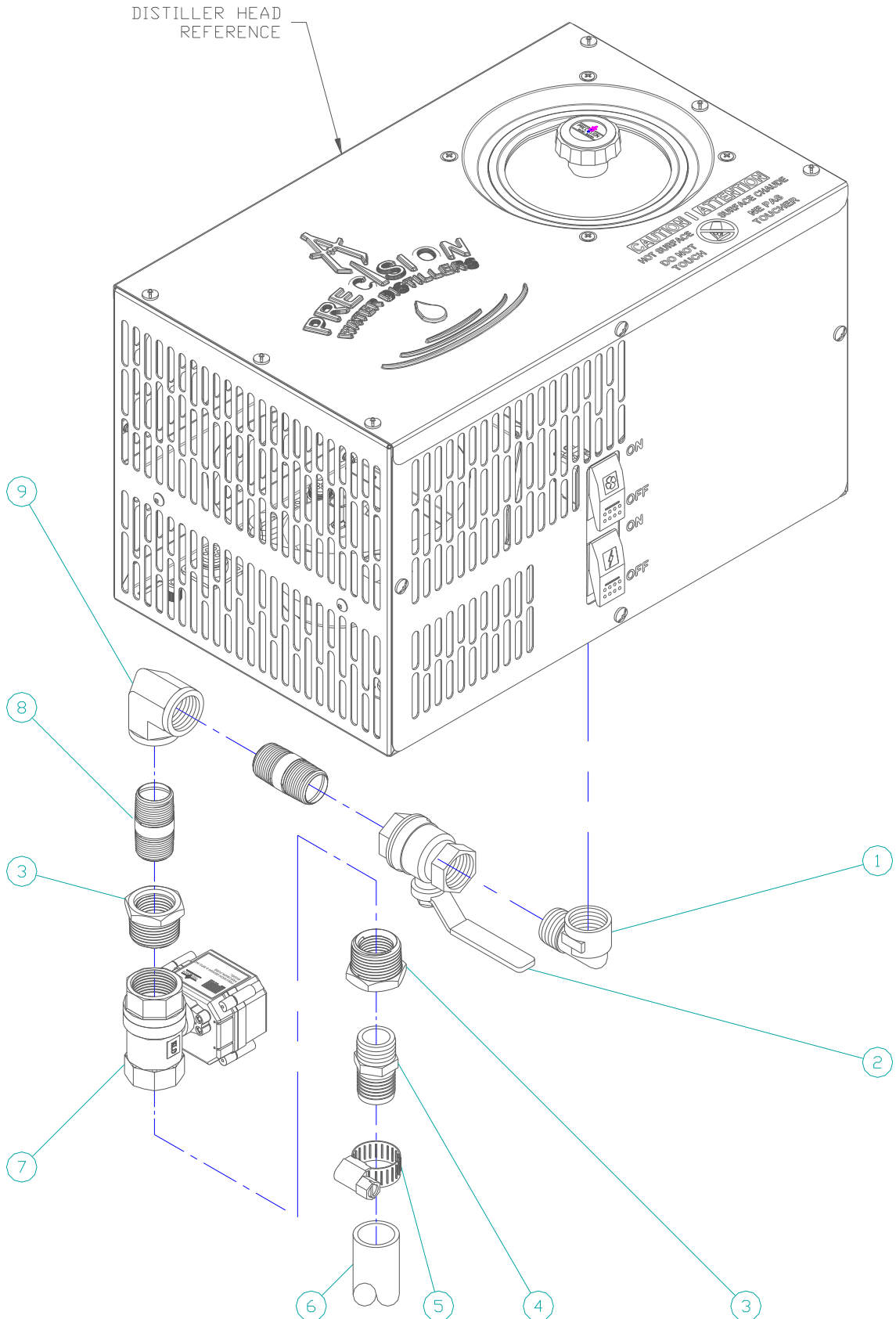
Retrofit Automatic Electric Drain Assembly

Item #	Part #	Description	Qty
1	030016	Elbow, 90 Degree, 3/4"-14FPT X 3/4"-14MPT	1
2	030009	Valve, Ball, 3/4"-14FPT, Both Ends	1
3	030031	Reducer, 1"-11.5MPT X 3/4"-14FPT	2
4	030015	Coupler, 3/4"-14MPT X 1" HB	1
5	080121	Clamp, Gear, 1-1/4"	1
6	052005	Tubing, 1" X 1-1/4"	4'
7	500641	Motorized Ball Valve Assembly, AED-11, 120/240V	1
8	030017	Nipple, Close, 3/4"-14MPT	2
9	030018	Elbow, 90 Degree, 3/4"-14FPT	1

NOTE: Items #1, 2, 4, 5, 6, and one of the items #8 are sourced from the existing manual drain. The retrofit AED kit #500642.

094096, Exploded Parts List

Retrofit Electric Drain Assembly



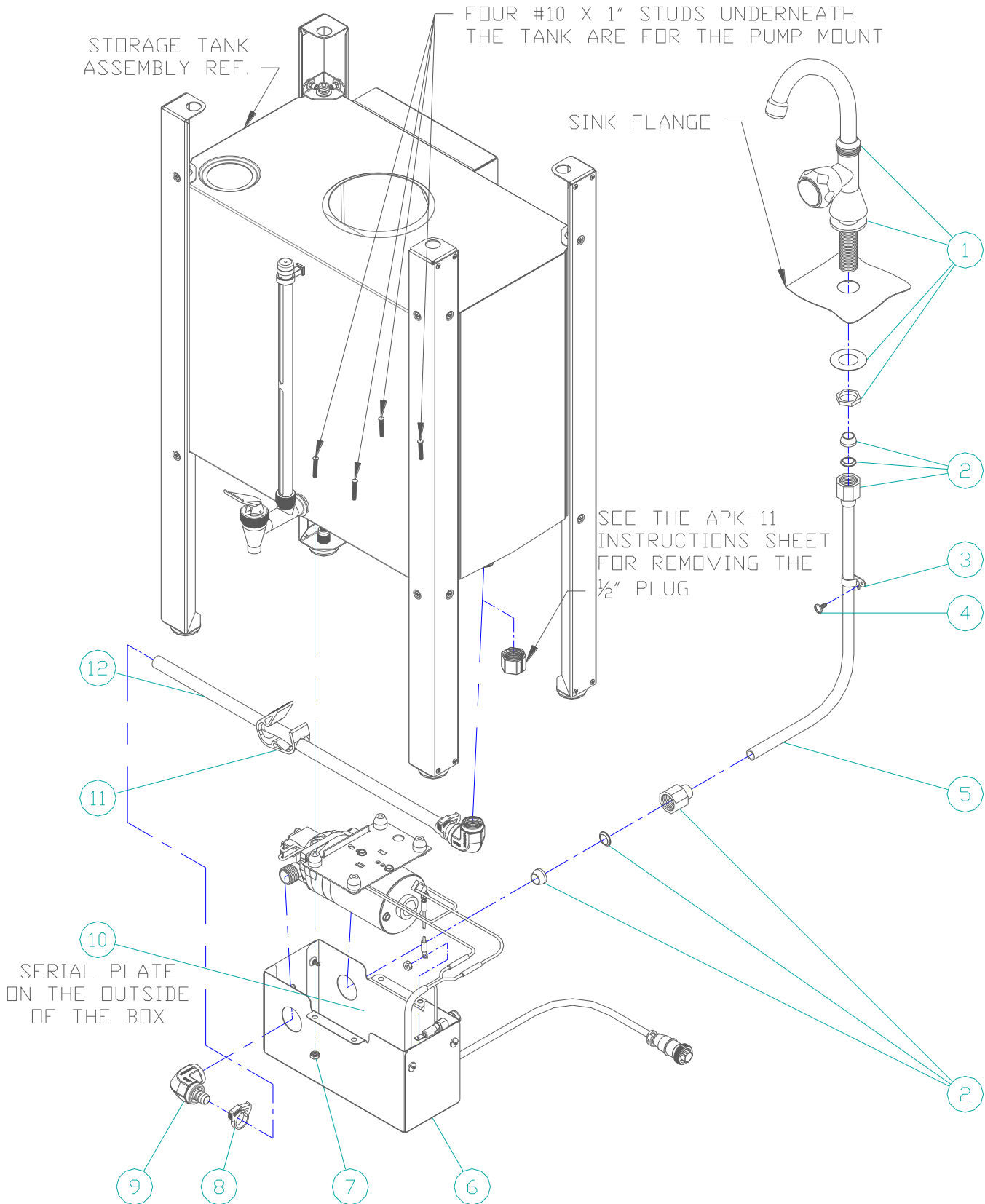
094094, Exploded Parts List

Automatic Pump Assembly, APK-11

Item #	Part #	Description	Qty
1	080052	Faucet, Chrome	1
2	034003	Nut/Cone/Ring Set, ½" OD	2
3	054006	Clamp, Cable, Nylon, Wall Mount, ½"	8
4	010000	Screw, sheet Metal, SS, #10-12 X ½" Truss Head, Socket Drive	8
5	052001	Tubing, LDPE, 3/8" X ½"	25'
6	510233	Pump Assembly, W/Cord & Fuse, 1.4GPM, 120V, 4 Pin CP	1
7	026004	Nut Kep, #18-8 SS, #10-24UNC	4
8	054093	Hose Clamp, Nylon, Diameter Range 0.616"-0.707X 0.231" Thick	2
9	036047	Elbow, SS, ½"-14FPT X 3/8" HOSE BRAB	2
10	080119	Sheet Imprintable Poly, Silver 8.5" 11"	0.167 Sheet
11	0540925	Plastic Hose Clamp, ½", Extra Large	1
12	052032	Silicone Tubing, Size #36.9mmID X 14.6mmOD	10"

094094, Exploded Parts List

Automatic Pump Assembly, APK-11



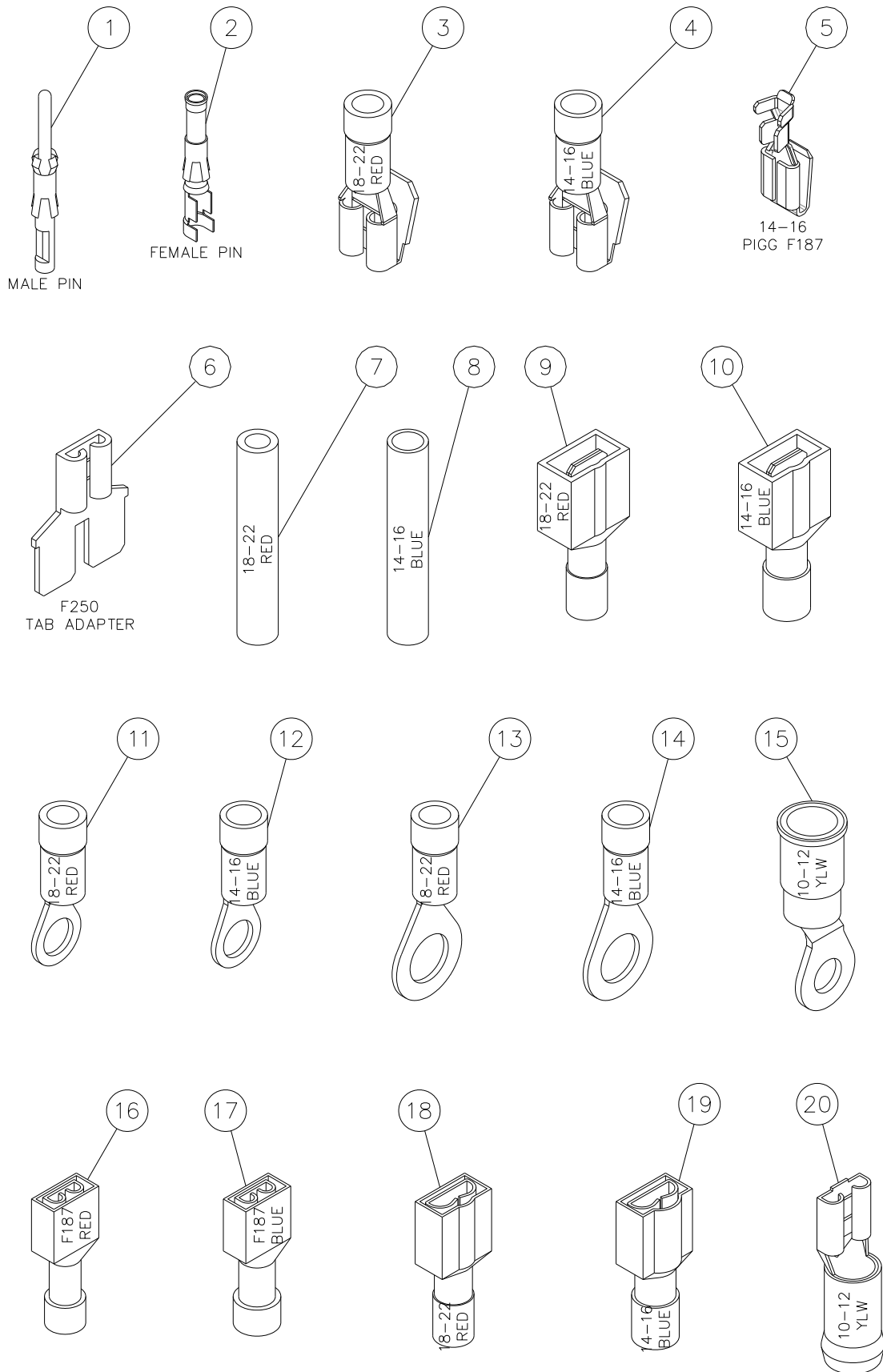
094109, Exploded Parts List

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 - River & Lake Distillers - 125V PART # 500551, S2-

SERIES 2							
No.	Part#	Color	Ga	Length	From Conn.	ToConn.	To Location
1	500550	MIDDLE	14	3"	#10RING #14-#16	POWER CORD MIDDLE WIRE	GROUND
2	500550	SMOOTH	14	16"	F250 #14-#16	POWER CORD SMOOTH WIRE	POWER SWITCH #2
3	500550	RIBBED	14	17"	#10RING #14-#16	POWER CORD RIBBED WIRE	RESET SWITCH #4
4	510283	BLK	18	6.5"	F250 #18-#22	TAB250 #14-#16	HEATER RELAY #1
5	510283	BLK	18	6.5"	F250 #18-#22	TAB250 #14-#16	FAN SWITCH #2
6	095265	BLK	16	20"	F250 #14-#16	PIGG #14-#16	WATER SWITCH #2
7	095275	YLW	16	13"	F187 #14-#16	F250 #14-#16	LOWER BOILER MICRO NC
8	095276	ORG	16	20"	F187 #14-#16	F250 #14-#16	UPPER BOILER MICRO NC
9	095277	BLK	16	5"	#10RING #14-#16	F187 #14-#16	RESET SWITCH #1
10	095266	BLU	16	19"	PIGG #14-#16	F250 #14-#16	HEATER RELAY "B"
11	095278	BLK	16	20"	F187 #14-#16	F250 #14-#16	UPPER BOILER MICRO COM
12	095267	BLK	16	19"	PIGG #14-#16	FPIN	POWER SWITCH #2
13	095272	ORG	16	20"	F250 #14-#16	FPIN	POWER SWITCH #8
14	095273	BLU	16	22"	F250 #14-#16	FPIN	HEATER RELAY #3
15	095268	YLW	16	10"	PIGG #14-#16	FPIN	SOLENOID VALVE A
16	095279	RED	16	10"	F250 #14-#16	#10RING #14-#16	POWER SWITCH #3
17	095274	WHT	16	17"	F250 #14-#16	FPIN	HEATER RELAY #4
18	095269	BLK	16	15"	PIGG #14-#16	FPIN	FAN SWITCH #3
19	095007	WHT	16	4"	#10RING #14-#16	#10RING #14-#16	RESET SWITCH #1
20	095280	YLW	16	12"	F250 #14-#16	#10RING #14-#16	HEATER RELAY #1
21	095063	GRN	16	4"	#10RING #14-#16	FPIN	GROUND
22	095063	GRN	16	4"	#10RING #14-#16	FPIN	GROUND
23	095010	WHT	16	3"	PIGG #14-#16	F250 #14-#16	HEATER RELAY #4
24	095281	BRN	16	11"	F250 #14-#16	#10RING #14-#16	HEATER RELAY #2
25	095282	ORG	16	11"	F250 #14-#16	#10RING #14-#16	FAN SWITCH #3
26	095283	RED	16	11"	#10RING #14-#16	F250 #14-#16	HEATING ELEMENT "B"
27	095010	WHT	16	3"	F250 #14-#16	PIGG #14-#16	FAN SWITCH #6
28	095010	WHT	16	3"	F250 #14-#16	PIGG #14-#16	FAN SWITCH #7
29	095270	WHT	16	7"	PIGG #14-#16	PIGG #14-#16	FAN SWITCH #8
30	095271	WHT	16	5"	F250 #14-#16	PIGG #14-#16	POWER SWITCH #8
31	095010	WHT	16	3"	F250 #14-#16	PIGG #14-#16	POWER SWITCH #6
41	095293	BLU	16	16"	TAB250 #14-#16	PIGG #14-#16	FAN MOTOR
42	095294	BLU	16	17"	TAB250 #14-#16	F250 #18-#22	FAN MOTOR
STORAGE TANK							
32	510226	RED	16	7"	PIGG F187 #14-#16	MPIN	UPPER LEVEL SHUTOFF MICRO COM
33	095250	ORG	16	5"	F187 #14-#16	F187 #14-#16	LOW LEVEL START MICRO COM
34	095249	BLK	16	5"	PIGG F187 #14-#16	F187 #14-#16	LOW LEVEL START MICRO COM
35	510226	WHT	16	7"	FPIN	MPIN	STORAGE TANK PLUG #4
36	095248	RED	16	5"	F187 #14-#16	FPIN	LOW LEVEL PUMP MICRO NO
37	510226	BRN	16	7"	F187 #14-#16	MPIN	LOW LEVEL START MICRO NO
38	510226	BLK	16	7"	F187 #14-#16	MPIN	UPPER LEVEL SHUTOFF MICRO NC
39	095247	GRN	16	5"	FPIN	1/4"RING #14-#16	PUMP RECEPTACLE #4
40	510226	GRN	16	7"	MPIN	1/4"RING #14-#16	STORAGE TANK PLUG #7

500551, Exploded Parts List

Wiring Diagram, 8 GPD River & Lake Distiller

