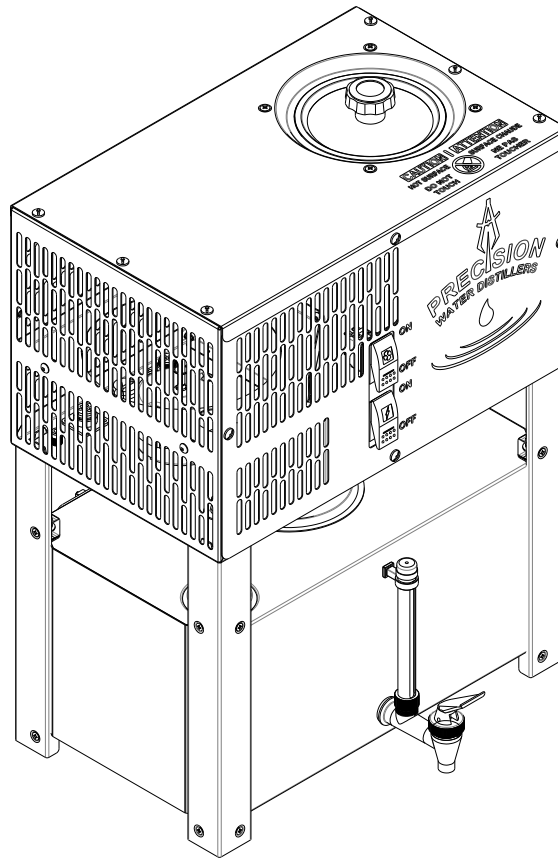




REPLACEMENT PARTS MANUAL

FOR MODEL: PWS RIVER (120VAC), AED-1(120VAC), APK-21(120VAC)

PART #	500058	500006	500061
SERIES	0001	0003	0001



PRECISION WATER SYSTEMS RIVER WATER DISTILLER

MANUFACTURED BY:

PRECISION DESIGN & MANUFACTURING INC.

9024-100 Street

WESTLOCK, ALBERTA, CANADA, T7P 2L4

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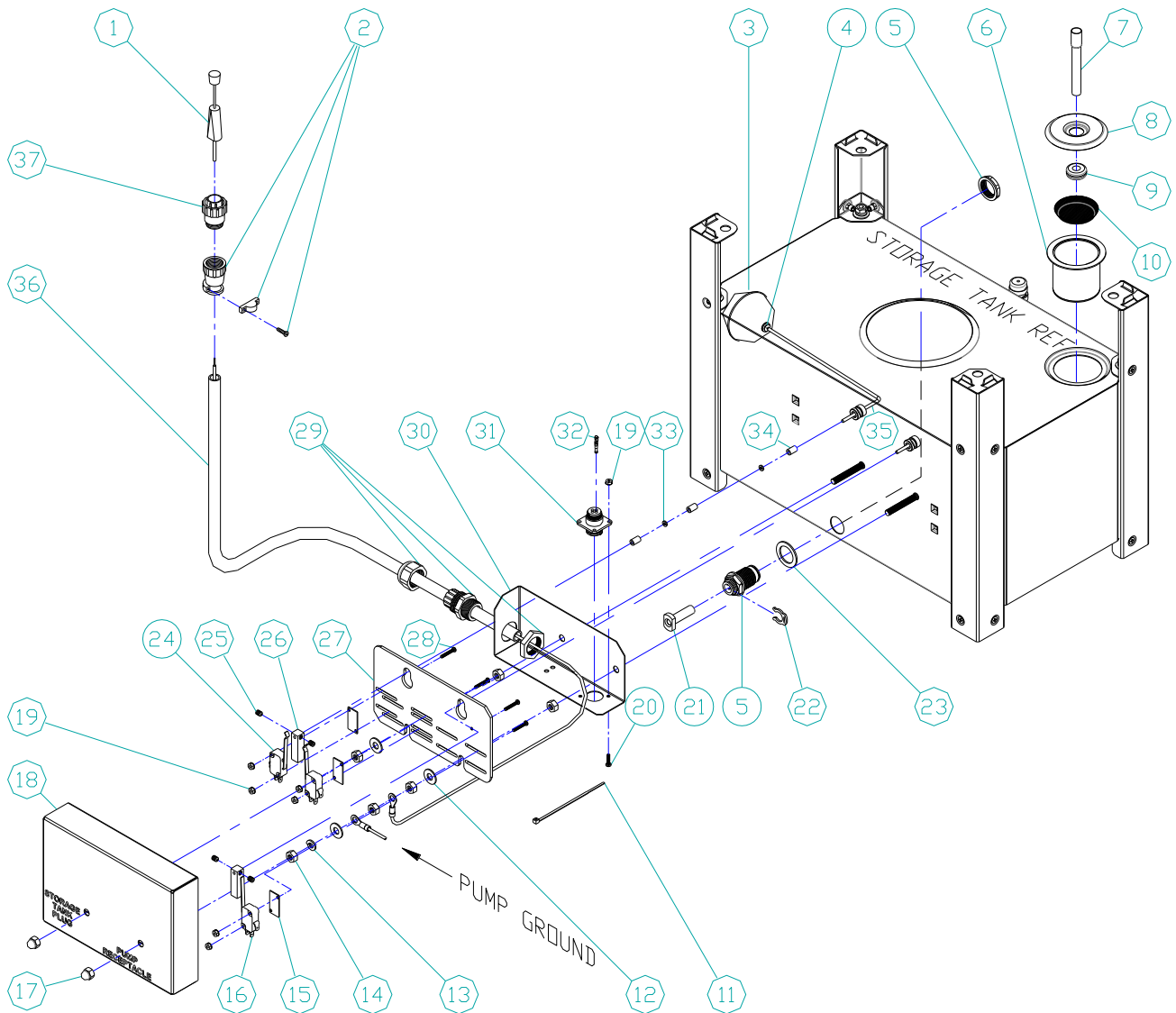
094829, Exploded Parts List

Storage Tank Micro Switches Ass'y, River 5 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	034011	Bulkhead, 3/8", JG	1
6	530345	Charcoal Drop-In Filter WA	1
7	510231	Drip Tube, 3/8"ODX3-1/4" Drop-In Canister Filter	1
8	510255	Canister Top Cap, Drop-In Charcoal Filter	1
9	080875	Grommet W/SS Washer, 11/32" IDX5/8" HoleX1/16" GROOVE	1
10	530349	Charcoal, Drop-In Filter, Screen	2
11	054011	Wire Tie, Plastic, 4"	Ref.
12	018004	Washer, Flat, 5/16"ID x 11/16"OD, 20ga. SS	3
13	024000	Washer, Lock, SS, Heli Coil, 1/4"	1
14	025000	Nut, Hex, SS, 1/4"-20UNC	6
15	500289	Shim, Micro Switch	3
16	400008	Microswitch, PB, Holding Tank	1
17	028000	Nut, Acorn, SS, 1/4"	2
18	510216	Cover, Wire Box, Storage Tank Float	1
19	026007	Nut, Kep, #18-8 SS, #4-40UNC	8
20	012019	Screw, Machine, SS, #4-40UNC X 1/2" Round/Socket	2
21	034014	Stem Plug, 3/8" JG	1
22	034021	Locking Clip, 3/8", JG	1
23	080148	Gasket, Washer, 1/16", Silicone	1
24	060059	Micro Switch, Long Arm, Formed	2
25	016035	Set Screw, SS, #10-32 X .25", Cup Point	4
26	530333	Bar, Actuator, Boiler Float	2
27	530339	Plate, Dual Micro Switch	1
28	012003	Screw, Machine, SS, #4-40UNCX3/4", Round Socket	7
29	054022	Strain Relief, LT Fitting, 1/2" Black	1
30	510215	Wire Box, Storage Tank Float	1
31	060130	Receptacle, 4 Pin, Circular	1
32	060017	Female Pin	Ref.
33	080128	O-Ring, Viton, 1/16" X 1/8" X 1/4"	2
34	080127	Bushing, Teflon, 1/4" X +1/8"	3
35	500546	Float Rod WA, River & Lake Storage Tank	1
36	510226	Harness, Wire Box, Storage Tank	1
37	060043	Plug, 7 Pin, Circular	1

094829, Exploded Parts List

Storage Tank Micro Switches Assembly, River 5 Gallon



REAR RIGHT SIDE VIEW OF THE STORAGE TANK

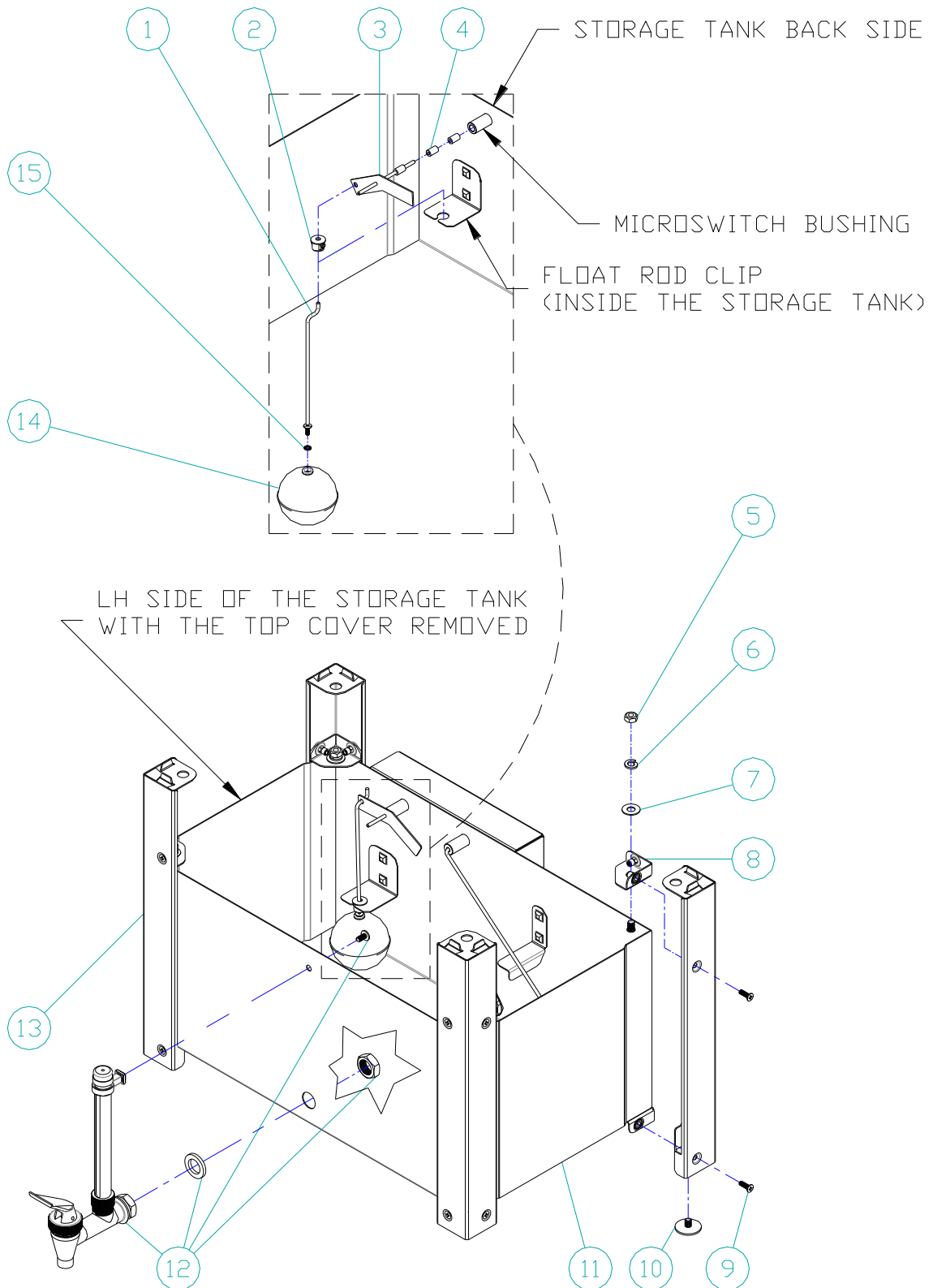
094295, Exploded Parts List

Storage Tank Assembly, River 5 Gallon

Item #	Part #	Description	Qty
1	500548	Rod WA, Pump Shutoff Float, River Storage Tank	1
2	530247	Black Cap, Drilled, Float Rod	1
3	530251	Pivot Rod WA, Pump Shutoff, Holding Tank	1
4	080127	Bushing, Teflon, ¼" X 1/8"	3
5	025000	Nut, Hex, SS, ¼"-20UNC	8
6	024000	Washer, Lock, SS, Helicoil, ¼"	8
7	018004	Washer, Flat, 5/16"ID X 11/16" OD, 20 Gauge SS	8
8	510196	Corner Mount Bracket, Clinch Nut, Storage Tank Leg	8
9	012031	Screw, Mach, SS, #8 X ½", Oval Head/Ph Dr	16
10	500537	Tree Clip, Modified, Nylon, 1" Pad X 3/8" Long, ¼" Hole	4
11	500544	Storage Tank, Studded, River 5 Gallon Tank	1
12	500534	SS Sight Ga Drain Valve, 6" W/New Lower Washer&Red Float Ball	1
13	500540	Leg WA, River Storage Tank	4
14	080162	Float Ball, SS, 2-1/4" Round, #6-32UNC	1
15	020002	Washer Lock, SS, M3.5, External Tooth	1

094295, Exploded Parts List

Storage Tank Assembly, River 5 Gallon

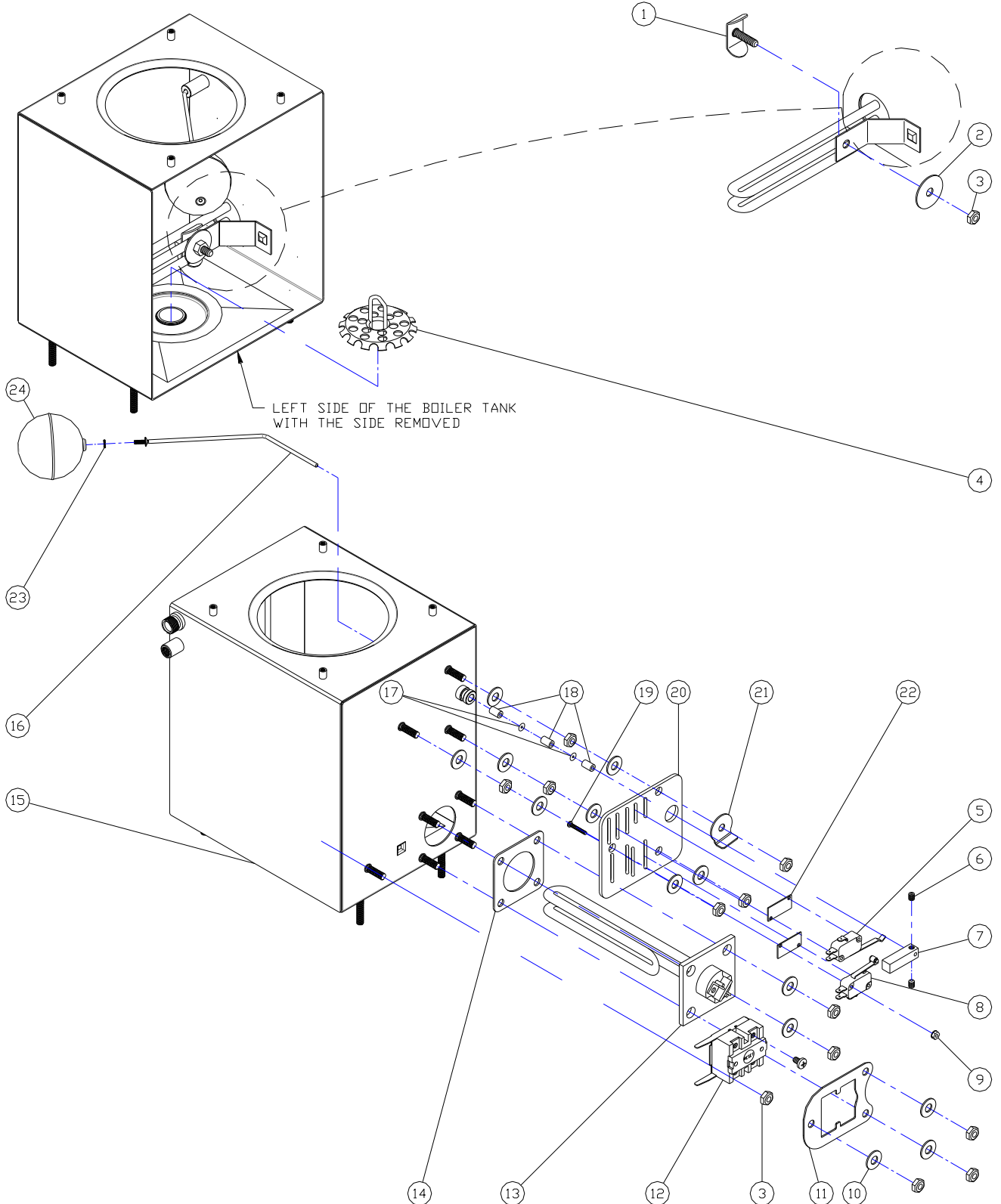


094112, Exploded Parts List

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	060001	Heating Element, 120V, 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



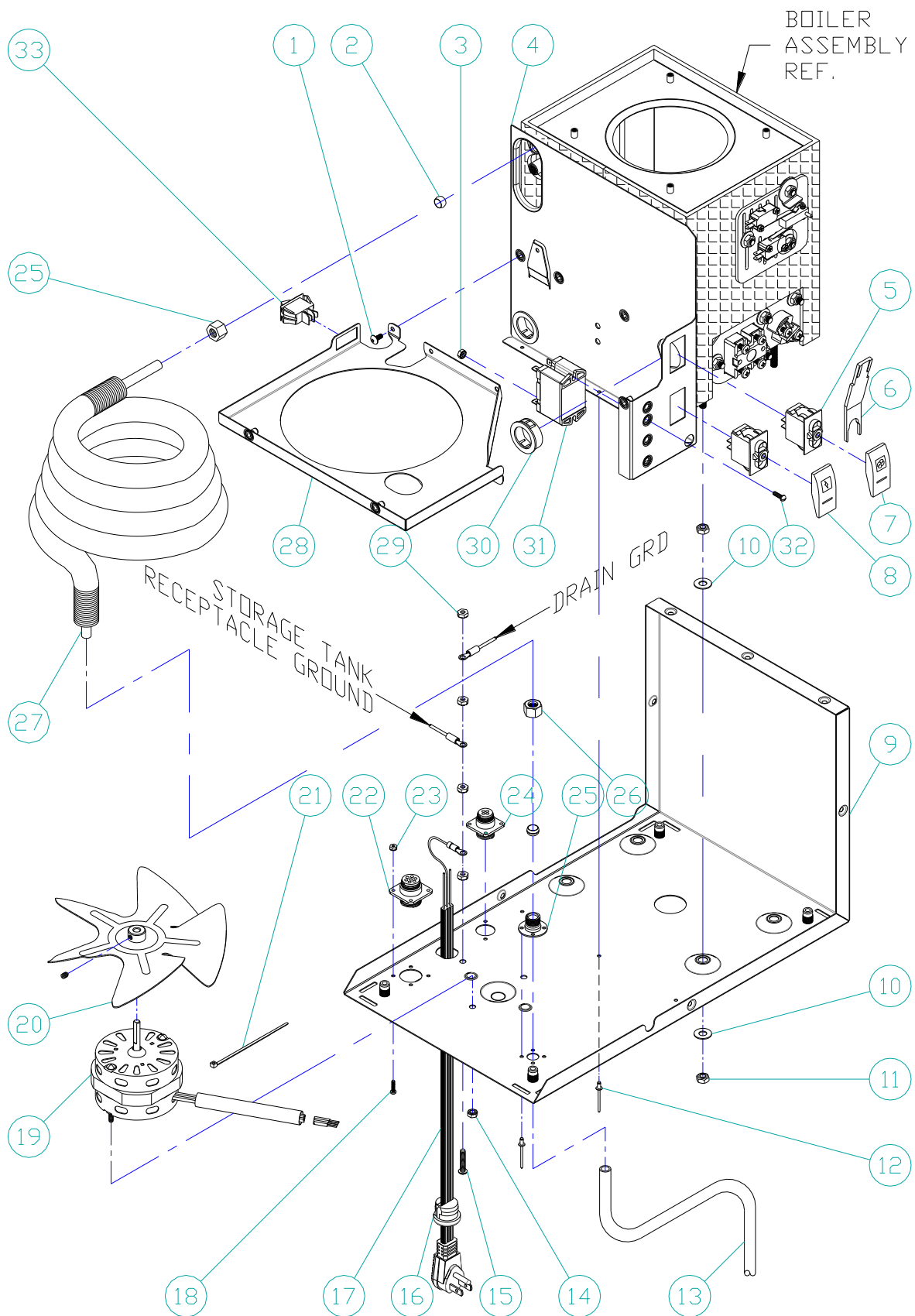
094101, Exploded Parts List

Distiller Body Assembly, 8 GPD, River & Lake

Item #	Part #	Description	Qty
1	012017	Screw, Machine, SS, #8-32UNC X 3/8", TRS HD/SK	5
2	030012	Ferrule, 3/8"	2
3	026006	Nut, Kep, 18-8 SS, #6-32UNC	2
4	500558	Divider, Clinch Nut, 8 GPD Distiller, River & Lake	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	500560	Body, Clinch Nut, 8 GPD Distiller, River & Lake	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	012000	Screw, Machine, Plated, #10-24 X 1"	1
16	054094	Strain Relief, 14 & 12 Gauge, Flat Cable	1
17	500550	Power Cord Ass'y, 14-3 NA, 8 GPD Distiller, R & L	1
18	012019	Screw, Machine, SS, #4-40 X 1/2", Round/Socket	4
19	500233	Motor Assembly, 115V, 9 GPD, Auto	1
20	080046	Fan Blade, 8"	1
21	054011	Wire Tie, Plastic, 4"	Ref.
22	060044	Receptacle, 7 pin Circular	1
23	026007	Nut, Kep, 18-8 SS, #4-40UNC	4
24	060130	Receptacle, 4 Pin, Circular	1
25	530344	Mount, WA, CC Compression	1
26	030013	Nut, Brass, 3/8" Compression	2
27	500574	Cooling Coil Assembly, 12 GPD Distiller, Gulf & Sea	1
28	500565	Air Divider, Clinch Nut, River & Lake Distiller	1
29	026004	Nut, Kep, 18-8 SS, #10-24UNC	4
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, 8 GPD, River & Lake



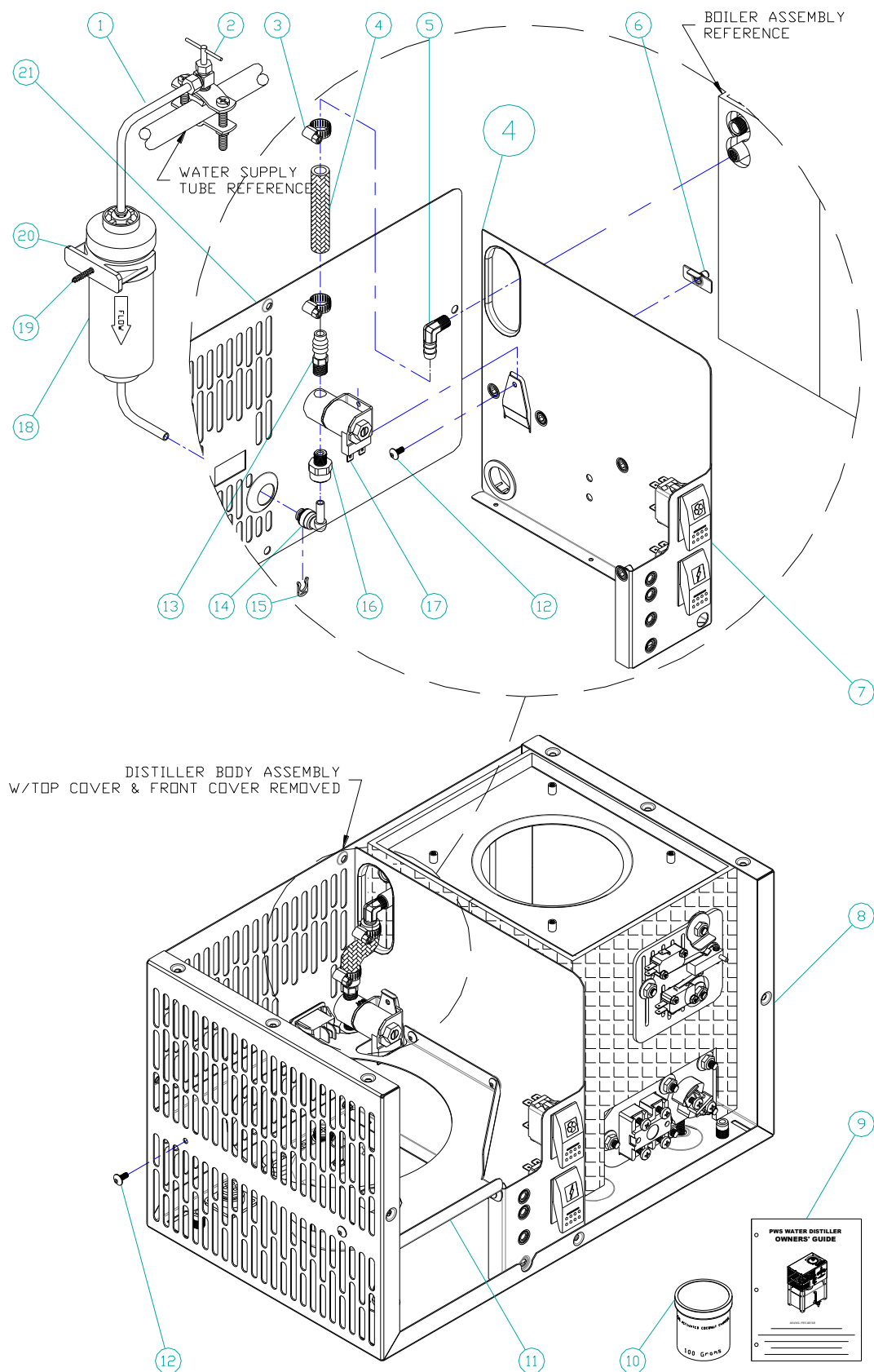
094099, Exploded Parts List

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	510192	Lock Clip, Clinch Nut, Brass Solenoid Valve	1
7	500558	Divider, Clinch Nut, 8 GPD Distiller, River & Lake	1
8	500560	Body, Clinch Nut, 8 GPD Distiller, River & Lake	1
9	097509	Owners Guide, PWS River Distiller	1
10	080116	Charcoal, Sample, 100 Gram Jar	1
11	500565	Air Divider, Clinch Nut, 8 GPD Distiller, River & Lake	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, ¼" 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	500563	Rear Cover, 8 GPD Distiller, River & Lake	1

094099, Exploded Parts List

8 GPD Distiller Solenoid Valve Assembly



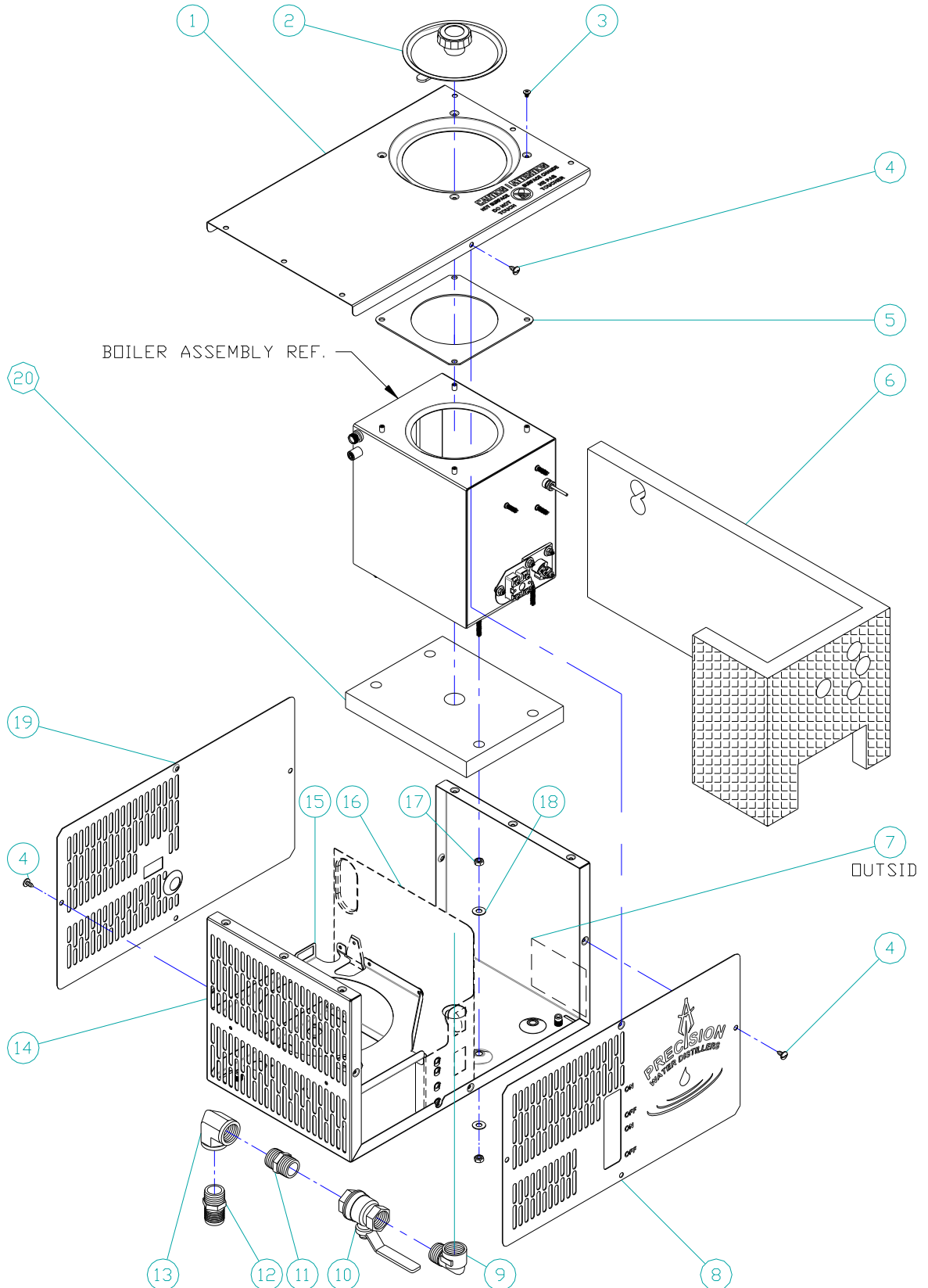
094098, Exploded Parts List

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, #10-24 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	1
8	500562	Front Cover, 8 GPD, River & Lake	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	030017	Nipple, Close, 3/4" 14MPT	1
12	030015	Coupler, 3/4" MPT X 1" HB	1
13	030018	Elbow, 90 Degree, 3/4" FPT, Both Ends	1
14	500560	Body, Clinch Nut, 8 GPD, River & Lake	1
15	500565	Air Divider, Clinch Nut, 8 GPD, River & Lake	1
16	500558	Divider, Clinch Nut, 8 GPD, River & Lake	1
17	025000	Nut, Hex, SS, 1/4"-20UNC	8
18	018004	Washer, Flat, 5/16"ID X 11/16" OD, 20 Gauge SS	8
19	500563	Rear Cover, 8 GPD, River & Lake	1
20	500573	Insulation, Boiler Bottom, 8 GPD, River & Lake	1

094098, Exploded Parts List

Distiller Head Assembly, 8 GPD, River & Lake



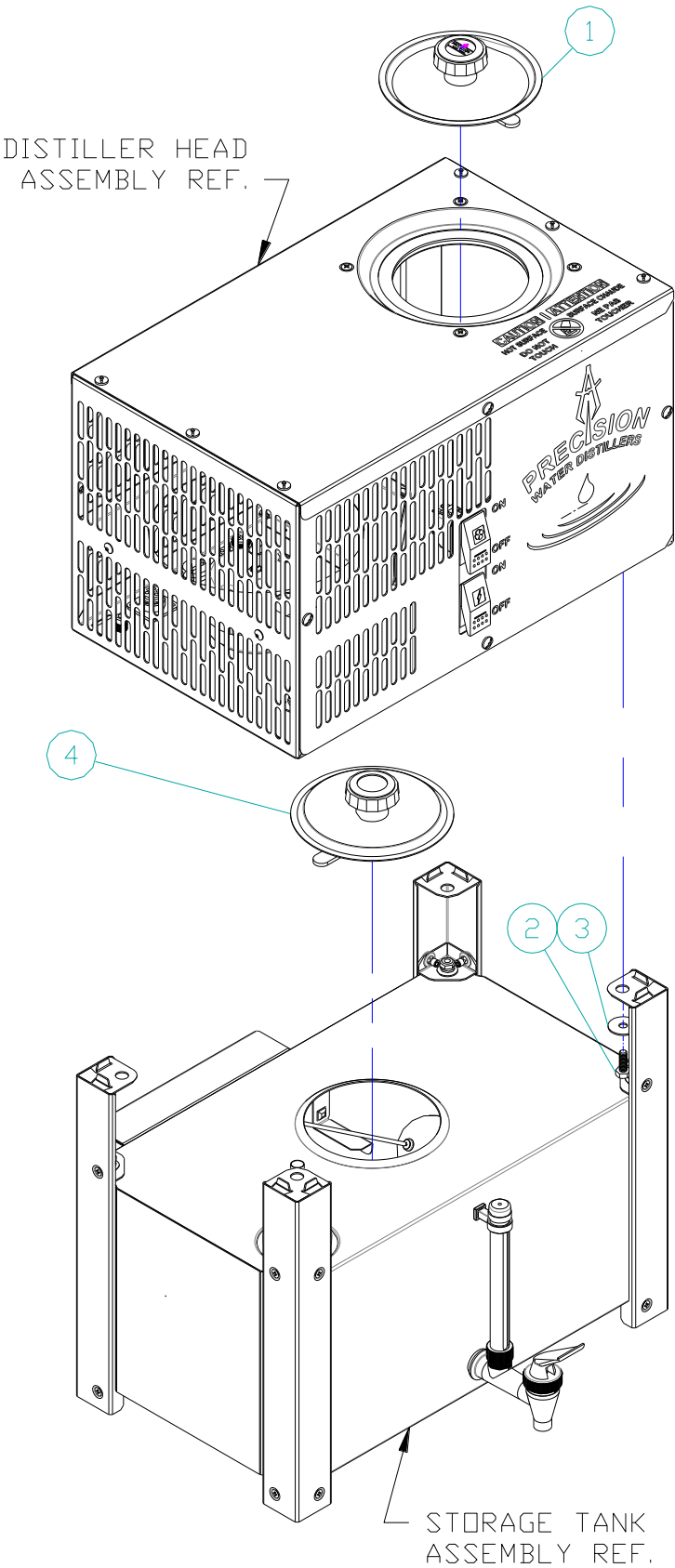
096101, Exploded Parts List

Distiller Head & Storage Tank Assembly

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

096101, Exploded Parts List

Distiller Head & Storage Tank Assembly



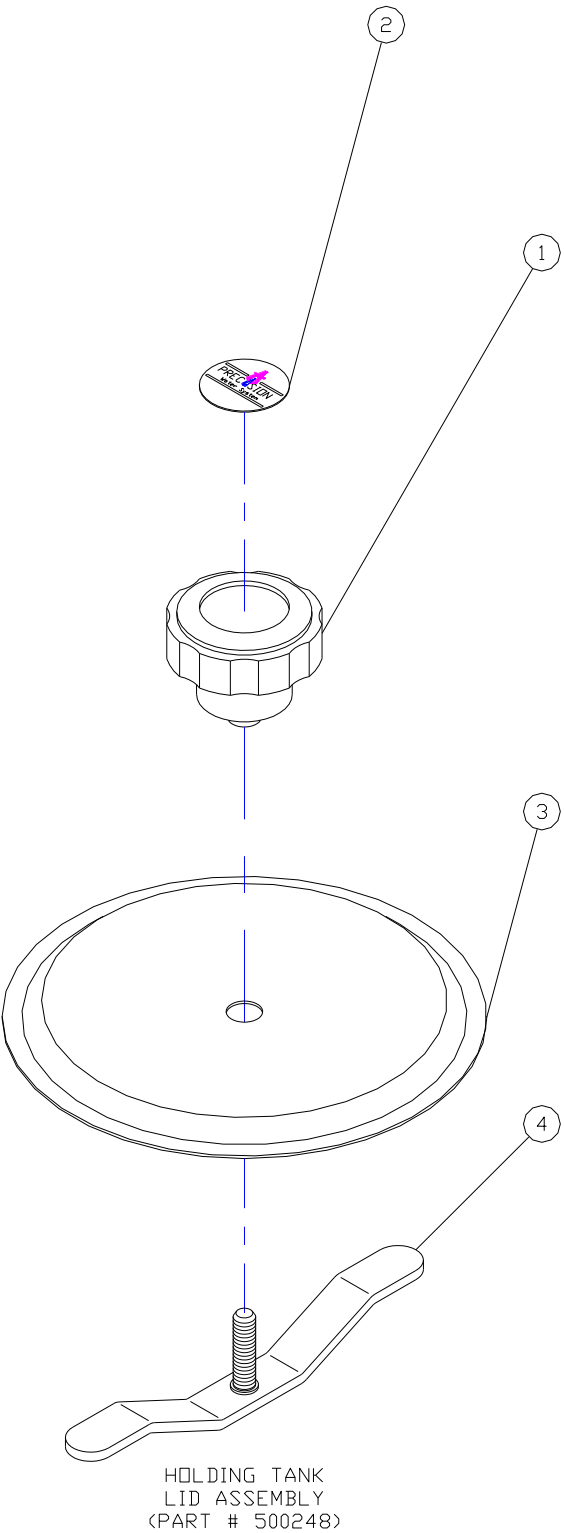
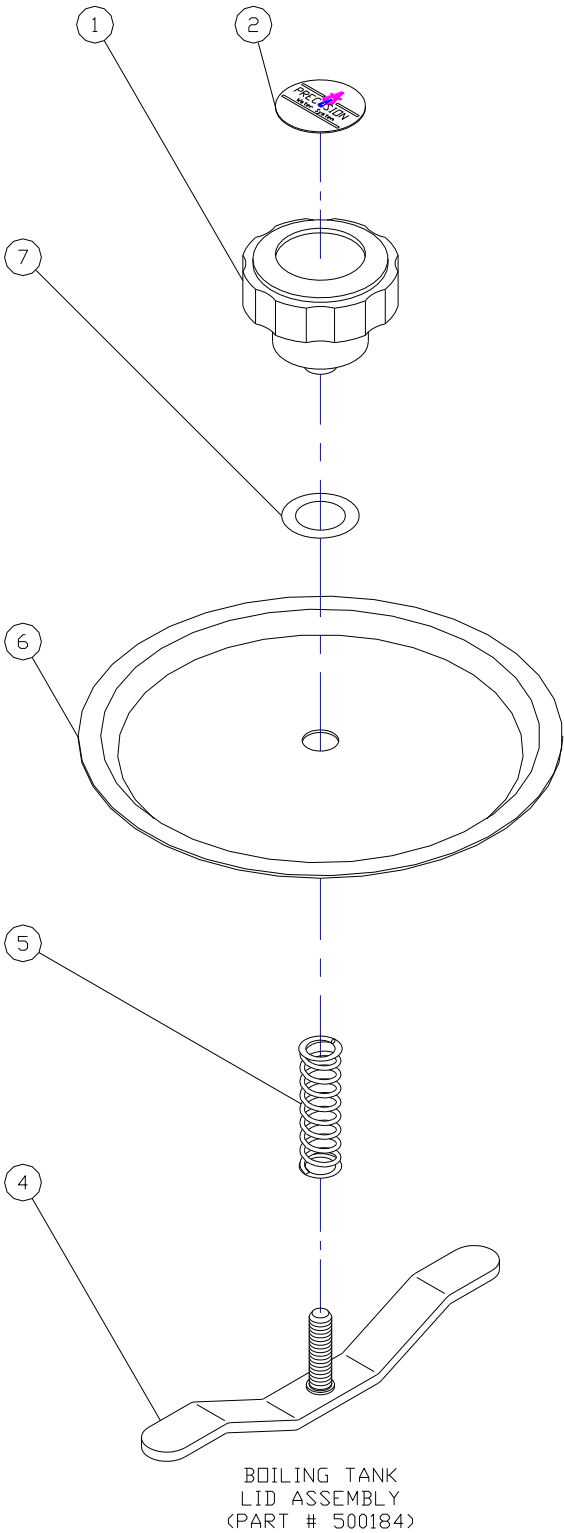
094074, Exploded Parts List

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



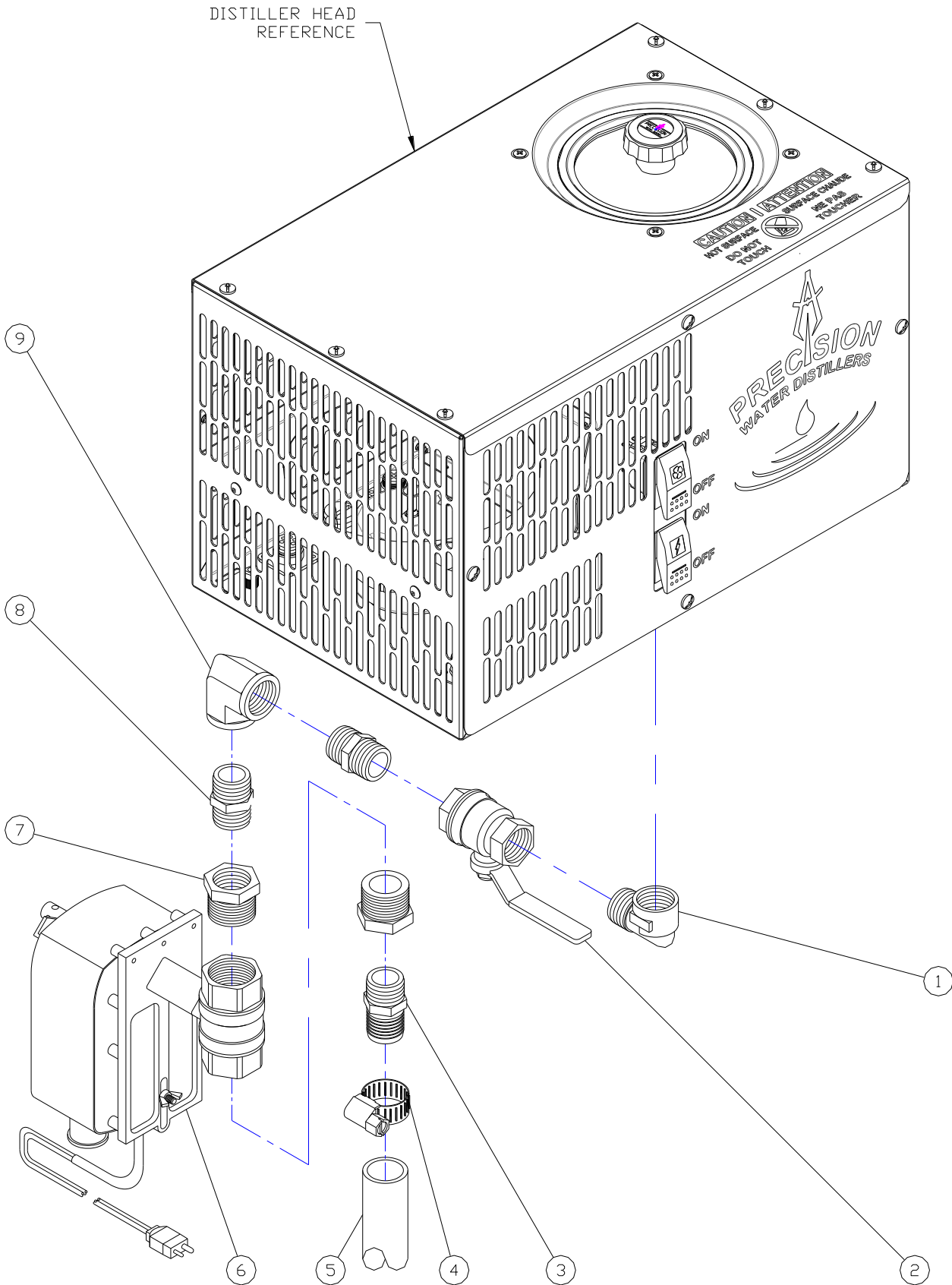
094096, Exploded Parts List

Automatic Electric Drain Assembly, AED-1

Item #	Part #	Description	Qty
1	030016	Elbow, 90 Degree, ¾"-14FPT X ¾"-1"4MPT	1
2	030009	Valve, Ball, ¾"-14FPT, Both Ends	1
3	030015	Coupler, ¾"-14MPT X 1" HB	1
4	080121	Clamp, Gear, 1-1/4"	1
5	052005	Tubing, 1" X 1-1/4"	4'
6	500448	Motorized Ball Valve, w/Cord, 115V	1
7	030031	Reducer, 1"-11.5MPT X ¾"-14FPT	2
8	030017	Nipple, Close, ¾"-14MPT	2
9	030018	Elbow, 90 Degree, ¾"-14FPT	1

094096, Exploded Parts List

Automatic Electric Drain Assembly, AED-1



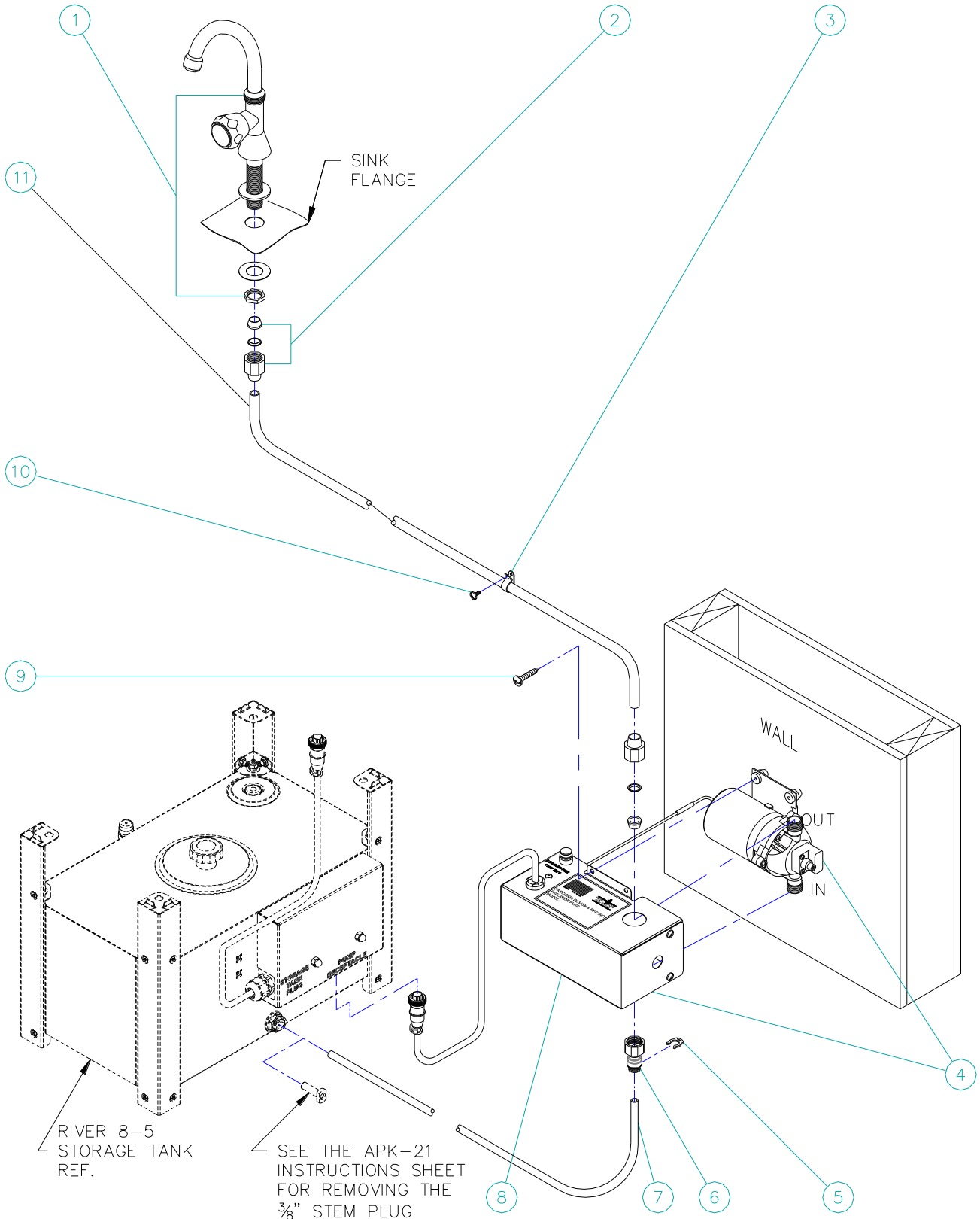
094094, Exploded Parts List

Automatic Pump Assembly, APK-21

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	510257	Pump Assembly, W/Cord & Fuse, 1.4GPM, 120V, 4 Pin CP	1
5	034021	Locking Clip, 3/8" JG	1
6	034115	Female Connector, ½"-14FPT X 3/8" OD	1
7	052007	Tubing, LDPE, ¼" ID X 3/8" OD	4'
8	080119	Sheet, Imprintable Poly, Sliver 8.5" X 11"	0.167 Sheet
9	010008	Screw, Sheet Metal, Plated, #10 X 1" Pan Socket	4
10	010000	Screw, sheet Metal, SS, #10-12 X ½" Truss Head, Socket Drive	8
11	052001	Tubing, LDPE, 3/8" X ½"	25'

094094, Exploded Parts List

Automatic Pump Assembly, APK-21



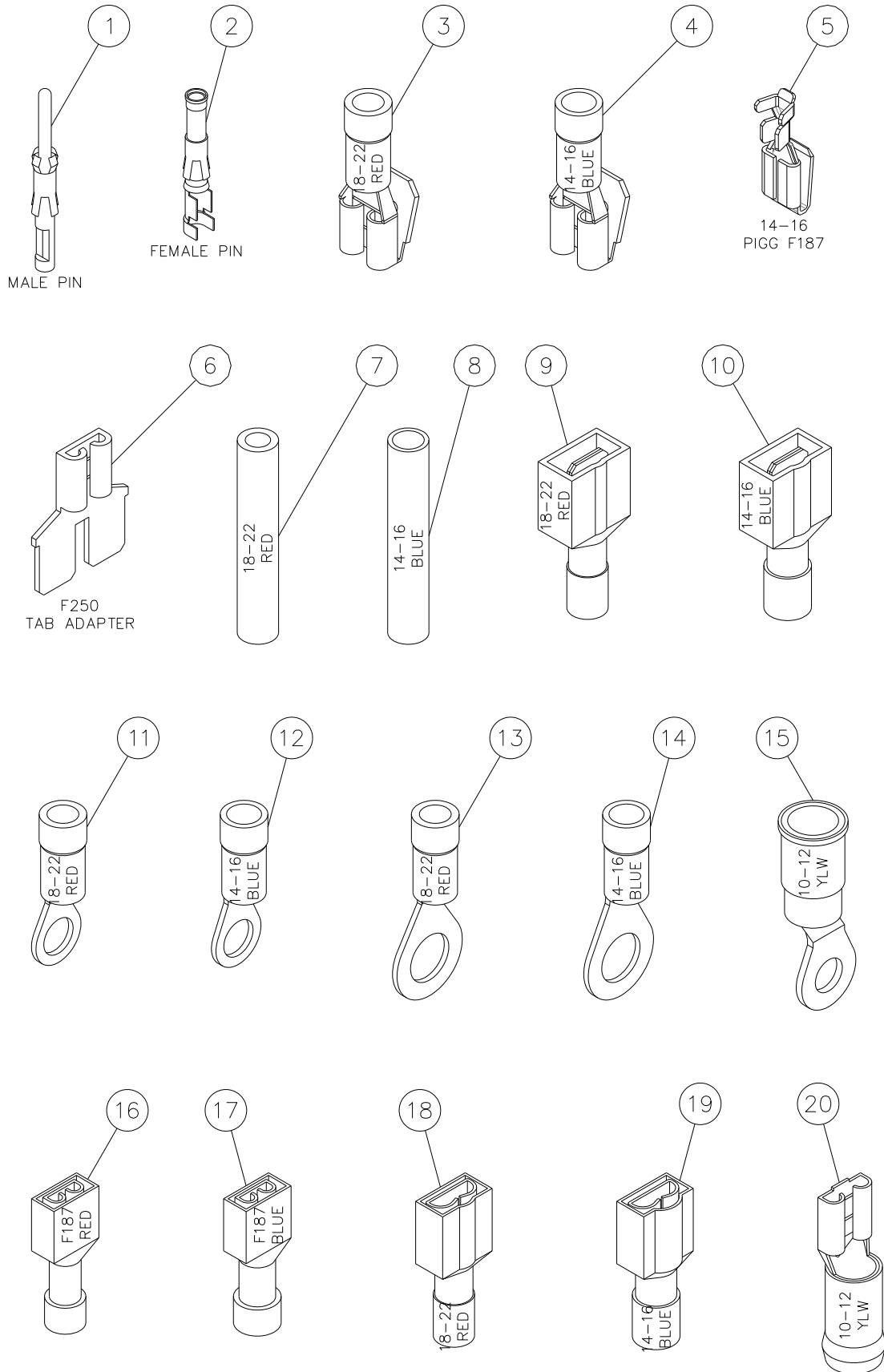
094109, Exploded Parts List

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 # 500551B

SERIES 1								
No.	Part#	Color	Ga	Length	From Conn.	ToConn.	From Location	To Location
1	500550	MIDDLE	14	3"	#10RING #14-#16	POWER CORD MIDDLE WIRE	GROUND	POWER CORD MIDDLE WIRE
2	500550	SMOOTH	14	16"	F250 #14-#16	POWER CORD SMOOTH WIRE	POWER SWITCH #2	POWER CORD SMOOTH WIRE
3	500550	RIBBED	14	17"	#10RING #14-#16	POWER CORD RIBBED WIRE	RESET SWITCH #4	POWER CORD RIBBED WIRE
4	500233	BLK	18	10"	PIGG #18-#22	FAN MOTOR	HEATER RELAY #1	FAN MOTOR
5	500233	BLK	18	11"	F250 #18-#22	FAN MOTOR	FAN SWITCH #2	FAN MOTOR
6	095265	BLK	16	20"	F250 #14-#16	PIGG #14-#16	WATER SWITCH #2	FAN SWITCH #3
7	095275	YLW	16	13"	F187 #14-#16	F250 #14-#16	LOWER BOILER MICRO NC	HEATER RELAY #6
8	095276	ORG	16	20"	F187 #14-#16	F250 #14-#16	UPPER BOILER MICRO NC	WATER SWITCH #1
9	095277	BLK	16	5"	#10RING #14-#16	F187 #14-#16	RESET SWITCH #1	LOWER BOILER MICRO COM
10	095266	BLU	16	19"	PIGG #14-#16	F250 #14-#16	HEATER RELAY "B"	SOLENOID VALVE A
11	095278	BLK	16	20"	F187 #14-#16	F250 #14-#16	UPPER BOILER MICRO COM	SOLENOID VALVE B
12	095267	BLK	16	19"	PIGG #14-#16	FPIN	POWER SWITCH #2	STORAGE TANK RECEPTACLE #4
13	095272	ORG	16	20"	F250 #14-#16	FPIN	POWER SWITCH #8	STORAGE TANK RECEPTACLE #1
14	095273	BLU	16	22"	F250 #14-#16	FPIN	HEATER RELAY #3	STORAGE TANK RECEPTACLE #2
15	095268	YLW	16	10"	PIGG #14-#16	FPIN	SOLENOID VALVE A	STORAGE TANK RECEPTACLE #3
16	095279	RED	16	10"	F250 #14-#16	#10RING #14-#16	POWER SWITCH #3	RESET SWITCH #2
17	095274	WHT	16	17"	F250 #14-#16	FPIN	HEATER RELAY #4	DRAIN RECEPTACLE #3
18	095269	BLK	16	15"	PIGG #14-#16	FPIN	FAN SWITCH #3	DRAIN RECEPTACLE #2
19	095007	WHT	16	4"	#10RING #14-#16	#10RING #14-#16	RESET SWITCH #1	HEATING ELEMENT "A"
20	095280	YLW	16	12"	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	095010	WHT	16	3"	PIGG#14-#16	F250 #14-#16	HEATER RELAY #4	HEATER RELAY #5
24	095281	BRN	16	11"	F250 #14-#16	#10RING #14-#16	HEATER RELAY #2	RESET SWITCH #3
25	095282	ORG	16	11"	F250 #14-#16	#10RING #14-#16	FAN SWITCH #3	HEATING ELEMENT "A"
26	095283	RED	16	11"	#10RING #14-#16	F250 #14-#16	HEATING ELEMENT "B"	POWER SWITCH #7
27	095010	WHT	16	3"	F250 #14-#16	PIGG #14-#16	FAN SWITCH #6	POWER SWITCH #7
28	095010	WHT	16	3"	F250 #14-#16	PIGG #14-#16	FAN SWITCH #7	FAN SWITCH #2
29	095270	WHT	16	7"	PIGG #14-#16	PIGG #14-#16	FAN SWITCH #8	HEATER RELAY #2
30	095271	WHT	16	5"	F250 #14-#16	PIGG #14-#16	POWER SWITCH #8	FAN SWITCH #8
31	095010	WHT	16	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

500551, Exploded Parts List

Wiring Diagram, 8 GPD River & Lake Distiller

