

Rogers Innovative Inc.

626 – 47th Street East, Saskatoon, SK S7K 5X3 Canada

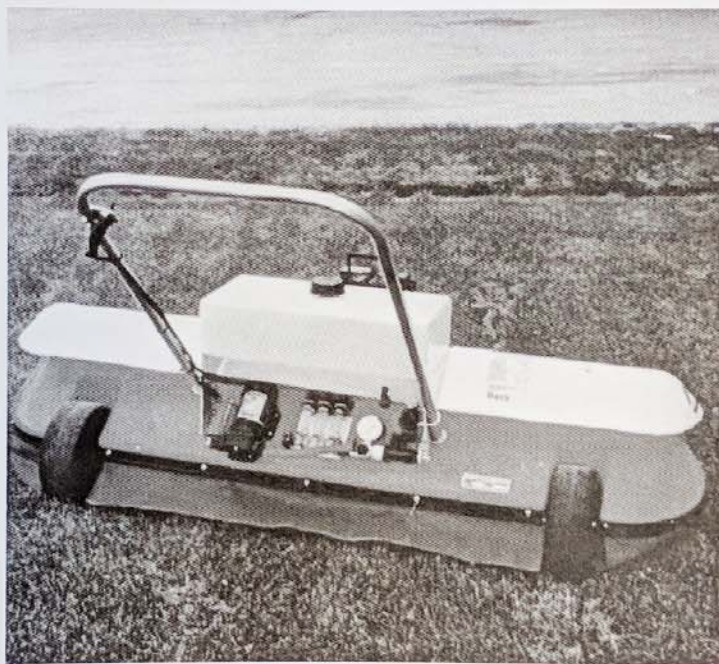
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Windfoil Drift Containment Sprayer

Turf Electric Walker

TE1000, TE1500, TE2000



Assembly and Operations Manual

WINDFOIL OWNER WARRANTY AGREEMENT

Rogers Innovative Inc. (RII)
626 - 47th Street East
Saskatoon, Saskatchewan S7K 5X3 Canada
PH: (306) 975-0500 FX: (306) 975-0499

WINDFOIL sprayers are warranted to be free of defect in the factory workmanship and material, under normal use and service, when setup and operated in accordance with factory instructions, and provided they are operated and maintained in accordance with the operators manual, for a period of one year from date of purchase by the original purchaser. When the equipment is used for rental or custom application purposes the warranty period is 45 days.

RII makes no warranty with respect to engine parts, tires, engine electrical systems, pumps, batteries, tank, plumbing system components or any other component or assemblies not manufactured by RII. Such components or assemblies are subject to warranties of their respective manufacturers. RII does not warranty parts or components manufactured by RII that are damaged due to failure, or caused by improper operation of a component or assembly not manufactured by RII.

RII, through its authorized dealer or factory appointed representative, will repair or replace, at its option, any or all parts that are proven to be defective

and are subject to such warranty, free of charge, upon the return of the original part or component to the factory, and RII investigation.

This warranty does not apply to damage caused by misuse, accident, acts of god, and/or operation without proper servicing. RII will not be responsible for consequential damages, its liability is limited to replacement of parts.

This warranty does not apply to those components such as belts, nozzles, or any other components or assemblies, which require regular maintenance or replacement as a result of equipment usage. Maintenance and replacement is the responsibility of the owner.

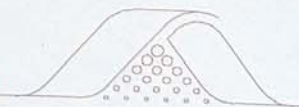
RII makes no other expressed, implied or statutory warranty nor is anyone authorized to make any on our behalf.

Warranty cards are supplied with machines when sold. The warranty card must be filled out completely and immediately returned to RII's Head Office in Saskatoon where upon RII will activate the warranty.

**IMPORTANT: WARRANTY CARDS
MUST BE SENT IN TO ALLOW
PROCESSING OF WARRANTY.**

It is our intention to manufacture durable, user friendly products. Any suggestions you have as to how we may improve our equipment are greatly appreciated.

WINDFOIL WARRANTY REGISTRATION



Company: _____
Contact & Position: _____
Address: _____
City: _____ State/Prov: _____ Zip/PC: _____
Country: _____ Phone: () _____ Fax: () _____
Model: _____ Serial No. _____
Model: _____ Serial No. _____
Dealer: _____ Date Purchased: ____ / ____ / ____

Table of Contents

Minimize Chemical Drift	3
Nozzles	3
Trouble Shooting	3
Cleaning	3
Winterizing	3
Assembly	3
Handle attachment	3
Attach Airfoil	3
Calibration	4
Battery	4
Application Rate Tables	5
General Assembly, Turf Electric Series	6
Castor Wheel Assembly, LP Series	7
Optional Parts	8
Plumbing Assembly, Turf Electric Series	8
Rotometer Assembly, Turf Electric Series	9
Electrical Assembly, Turf Electric Series	10

Minimize Chemical Drift

The WINDFOIL sprayer has been designed in wind tunnels to control air flow around and behind the sprayer to minimize drift, allowing safe spraying in windy conditions. Drift can blow off a field after it has been sprayed, especially in high winds. Reasonable caution should be taken, in order to spray effectively and safely.

For maximum drift control, keep curtain in contact with the canopy to ensure a seal to it.

Nozzles

The Turf Electric is equipped with conventional 80° spray tips, spaced at 10". Tips are mounted with self-aligning ¼ turn caps for easy removal or change. Tips that are actually 80° must be used, some 80° tips spray up to 95°. This will cause dripping from the outside edges of the sprayer.

Trouble Shooting

If dripping occurs, it is caused by the diaphragm not seating properly, the diaphragm may be hard, cracked, or the seating may be damaged.

Cleaning

Sprayers need to be cleaned to prevent corrosion, to prevent cross contamination of chemicals, and to prevent any grit or solids in the liquid that will reduce pressure. Flush with clean water, preferably after each day's operation. Rinse the outside of the sprayer.

Winterizing

After the sprayer is thoroughly cleaned, put 2 to 5 quarts of rust inhibitor or antifreeze in the tank for final system flushing to help prevent corrosion.

Assembly

Following the outlined steps will help to ensure a simple, trouble free assembly. All assembly references to left and right are referring to the sprayer left and right when facing the rear of the sprayer. Approximate time for first instance assembly: 1 hour and 30 minutes. See parts drawing to follow.

Handle attachment

- ⇒ Attach handle mounts to the rear of the sprayer, sloped side facing the front of sprayer using, (2) - ¼" x 1" long bolts and (2) - ¼" nuts for each side.
- ⇒ Attach the handle to the outer side of the handle mount with, (1) - ¼" U-bolt, and (1) - ¼" x 1 ½" long bolt, for each side. Orient so the pressure gauge and hose is to the right.
- ⇒ Place bolt from outside of the support and clinch with ¼" nuts from the inner side.
- ⇒ Tighten both ends of the U-bolt evenly. **Do not over tighten**

Attach Airfoil

- ⇒ Remove the, (2) outermost, 11/16" nozzle retaining nuts. There are, (4) found on top of the sprayer shroud (TE1000).
- ⇒ Place the airfoil support brackets in place of the retaining nut, with the top of the support sloping towards the rear of the sprayer. Refasten the nozzle retaining nuts.
- ⇒ Set the airfoil on top of supports. Point the long slope of the airfoil towards the rear of the sprayer.
- ⇒ Attach airfoil using, (1) - ¼" x ¾" long bolt, (1) - ¼" nut and, (2) - ¼" flat washers at each support.
- ⇒ Remove any free play in the bolts, but **do not tighten**.
- ⇒ If required, move either side of the airfoil forward or backward until the front edge of the airfoil is parallel with the ground. Tighten the airfoil attachment bolts until snug. **Do not over tighten.**

Calibration

To calibrate, operate the sprayer at the desired pressure. Collect the output from each nozzle for 60 seconds, using an accurate measuring cup. Record the output from each nozzle. Replace nozzles that are more than 5% above or below the average reading, or have a visibly distorted spray pattern.

Run a speed test in the area to be sprayed, with a full tank. The sprayer must be at operating speed before starting the test run. To determine the speed, mark off a distance as found on one of the tables below. Spray this distance, carefully noting and recording the time to cover the distance. The actual speed can be found for the specific distance traveled and time to travel, using the table.

After the nozzles have been individually checked, the sprayer should be calibrated to determine the correct speed for the desired application volume. To get area covered, multiply the width {TE1000, 3.3'(1m), TE1500, 5'(1.5m), TE2000, 6.7'(2m)} X distance.

Table 1: Time in seconds to travel a distance of:

mph	10'	25'	50'	100'
2.5	2.7	6.8	13.6	27.3
3	2.3	5.7	11.4	22.7
4	1.7	4.3	8.5	17.0

Table 2: Time in seconds to travel a distance of:

km/h	10m	25m	50m	100m
3	12.0	30.0	60.0	120.0
4	9.0	22.5	45.0	90.0
5	7.2	18.0	36.0	72.0

Battery

The battery is not supplied with the sprayer as it must be shipped as hazardous goods. A sealed deep cycle battery with bolt on connections must be supplied. The pump draws approximately 7amps; a 150 minute reserve battery should last about 37 hours when new.

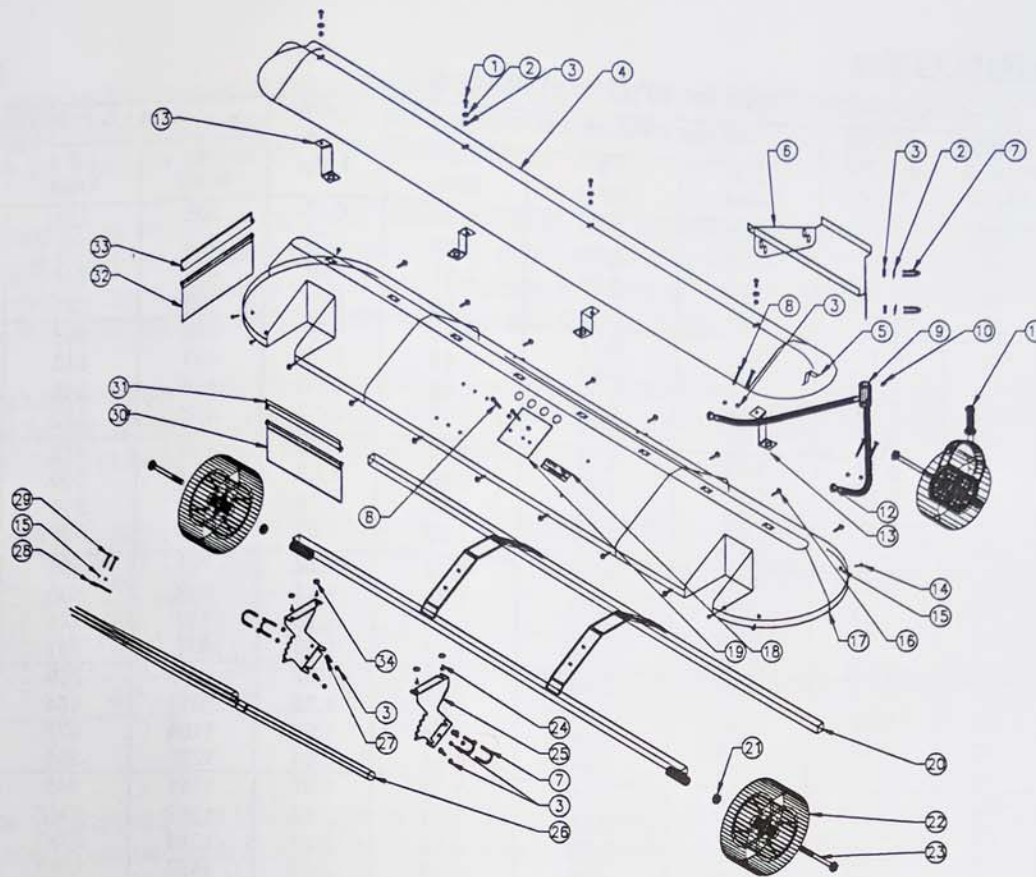
Application Rate Tables

Table 3: API Nozzle Application Rates for 10" (25cm) Spacing

Tip (screen) 80°	Liquid PRESS. in PSI	FLOW in GPM 1 Tip	US Gal/1000sqft - 10" Spac.			FLOW in L/m 1 Tip	L/ha - ¼ m Spacing		
			2.5 MPH	3 MPH	4 MPH		4 km/h	5 km/h	6 km/h
API 80015 (80 Mesh) Green Part # 12480	30	0.13	0.71	0.59	0.44	0.49	295	236	197
	35	0.14	0.76	0.64	0.48	0.53	318	254	212
	40	0.15	0.82	0.68	0.51	0.57	341	273	227
	45	0.16	0.87	0.73	0.55	0.61	363	291	242
API 8002 (50 Mesh) Yellow Part# 12422	30	0.17	0.93	0.77	0.58	0.64	386	309	257
	35	0.19	1.04	0.86	0.65	0.72	431	345	288
	40	0.20	1.09	0.91	0.68	0.76	454	363	303
	45	0.21	1.15	0.95	0.72	0.79	477	382	318
API 8003 (50 Mesh) Blue Part # 01586	30	0.26	1.42	1.18	0.89	0.98	590	472	394
	35	0.28	1.53	1.27	0.95	1.06	636	509	424
	40	0.30	1.64	1.36	1.02	1.14	681	545	454
	45	0.32	1.75	1.45	1.09	1.21	727	581	484
API 8004 (50 Mesh) Red Part# 12423	30	0.35	1.91	1.59	1.19	1.32	795	636	530
	35	0.38	2.07	1.73	1.30	1.44	863	690	575
	40	0.41	2.24	1.86	1.40	1.55	931	745	621
	45	0.43	2.35	1.95	1.47	1.63	977	781	651
API 8005 (50 Mesh) Brown Part# 12424	30	0.44	2.40	2.00	1.50	1.67	999	799	666
	35	0.47	2.56	2.14	1.60	1.78	1067	854	712
	40	0.51	2.78	2.32	1.74	1.93	1158	927	772
	45	0.54	2.95	2.45	1.84	2.04	1226	981	818
API 8006 (50 Mesh) Grey Part# 12425	30	0.52	2.84	2.36	1.77	1.97	1181	945	787
	35	0.56	3.05	2.55	1.91	2.12	1272	1017	848
	40	0.60	3.27	2.73	2.05	2.27	1363	1090	908
	45	0.64	3.49	2.91	2.18	2.42	1453	1163	969

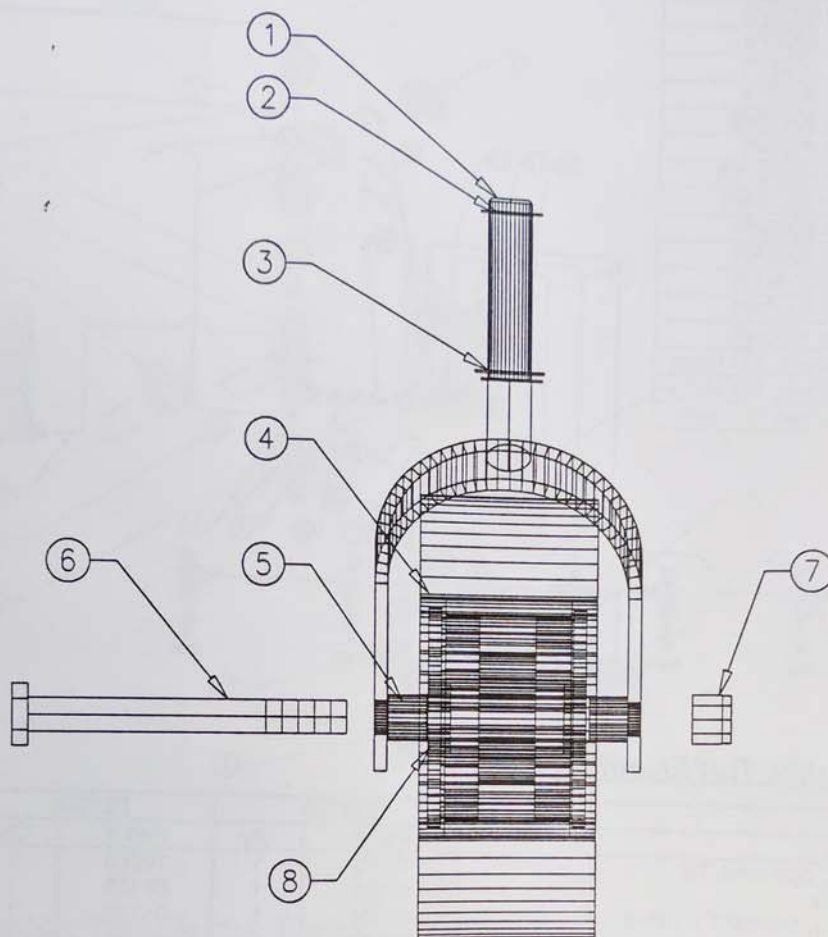
Table 4: Tee Jet Application Rate for 10" (25cm) Spacing

Tip (Screen) Colour	Liquid Press. psi	Capacity 1 nozzle gpm	U.S. Gal/1000 Sqft			FLOW l/min 1 Tip	L/ha - ¼ m Spacing		
			2.5 mph	3 mph	4 mph		4 km/h	5 km/h	6 km/h
80015 (100 mesh) Green Part# 00827	30	0.13	0.71	0.59	0.44	0.49	295	236	197
	40	0.15	0.82	0.68	0.51	0.57	341	273	227
	50	0.17	0.93	0.77	0.58	0.64	386	309	257
	60	0.18	0.98	0.82	0.61	0.68	409	327	273
8002 (50 mesh) Yellow Part# 05876	30	0.17	0.93	0.77	0.58	0.64	386	309	257
	40	0.2	1.09	0.91	0.68	0.76	454	363	303
	50	0.22	1.20	1.00	0.75	0.83	500	400	333
	60	0.25	1.36	1.14	0.85	0.95	568	454	379
8003 (50 mesh) Blue Part # 05877	30	0.26	1.42	1.18	0.89	0.98	590	472	394
	40	0.3	1.64	1.36	1.02	1.14	681	545	454
	50	0.34	1.85	1.55	1.16	1.29	772	618	515
	60	0.37	2.02	1.68	1.26	1.40	840	672	560
8004 (50 mesh) Red Part # 05878	30	0.35	1.91	1.59	1.19	1.32	795	636	530
	40	0.4	2.18	1.82	1.36	1.51	908	727	606
	50	0.45	2.45	2.05	1.53	1.70	1022	818	681
	60	0.49	2.67	2.23	1.67	1.85	1113	890	742
8005 (50 mesh) Brown Part # 05879	30	0.43	2.35	1.95	1.47	1.63	977	781	651
	40	0.5	2.73	2.27	1.70	1.89	1136	908	757
	50	0.56	3.05	2.55	1.91	2.12	1272	1017	848
	60	0.61	3.33	2.77	2.08	2.31	1385	1108	924
8006 (50 mesh) Grey Part# 05880	30	0.52	2.84	2.36	1.77	1.97	1181	945	787
	40	0.6	3.27	2.73	2.05	2.27	1363	1090	908
	50	0.67	3.65	3.05	2.28	2.54	1522	1217	1014
	60	0.74	4.04	3.36	2.52	2.80	1681	1344	1120



General Assembly, Turf Electric Series

Item	Description	TE1000		TE1500		TE2000	
		Part #	Qty	Part #	Qty	Part #	Qty
1	Bolt, 1/4NC x 3/4, Pld	01154	2	01154	4	01154	4
2	Wshr, Flat, 1/4, Pld	01157	10	01157	12	01157	12
3	Nut, Nylock, 1/4NC, Pld	00968	30	00968	32	00968	32
4	Airfoil, White, 40"/60"80"	01500	1	01499	1	01654	1
5	Dcd, "Windfoil" Logo	01396	2	01396	2	01396	2
6	Pl,Al,Battery,TE	12725	1	12725	1	12725	1
7	Ublt,1/4NCx1 1/8rdx2,Pld	05111	10	05111	8	05111	8
8	Bolt, 1/4NC x 2, Pld	01070	4	01070	6	01070	6
9	Frt Cstr Mt,GF/TW	02612	1	02612	1	02612	1
10	Ftg,Stl,Nip,Grease, 1/4NF	00972	1	00972	1	00972	1
11	Cstr Whl Assy,8 3/4x3 1/2,Al	01601	1	01601	1	01601	1
12	Plug, Tube, Rd, Plstc, 1	04794	2	04794	2	04794	2
13	Airfoil, Standoff, Left, Al	00721L	1	00721L	2	00721L	2
13	Airfoil, Standoff, Right, Al	00721R	1	00721R	2	00721R	2
14	Scr, Mach, C, #10-24	01152	6	01152	6	01152	6
15	Nut, Nylock, #10, Pld	01153	6	01153	6	01153	6
16	Scr, TEK, #12 x 1 1/4	01156	7	01156	11	01156	11
17	Shroud,LP,Red, 40"/60"/80"	12951	1	12952	1	12953	1
18	Pl,Serial,RogersTypable Al	01398	1	01398	1	01398	1
19	Pl,Al,Backing,Wing	12046	0	12045	0	12046	0
20	Frame, Al	01589	1	01592	1	01595	1
21	Nut, 5/8NC, Pld	01313	2	01313	2	01313	2
22	Whl Assy,10 1/4x4,Smooth Tread	00920	2	00920	2	00920	2
23	Bolt, 5/8NC x 5, Pld	12387	2	12387	2	12387	2
24	Scr, Mach, C, #10-24 x 3/8	00048	4	00048	4	00048	4
25	Pl,Al,Tank Mt,Left,TW	07134L	1	07134L	1	07134L	1
25	Pl,Al,Tank Mt,Right,TW	07134R	1	07134R	1	07134R	1
26	Handle,Al,Wlkg Boom,	12950	1	12950	1	12950	1
27	Bolt, 1/4NC x 1, Pld	01164	4	01164	4	01164	4
28	Pl,Al,Switch,TE	12722	1	12722	1	12722	1
29	Scr, Mach, C, #10-24 x 1 1/2	05385	2	05385	2	05385	2
30	Curtain, Blue, 5 1/2	02976	1	06260	1	01666	1
31	Curtain Hanger	02550	1	06264	1	01668	1
32	Curtain, Blue, 5 1/2	01638	1	06259	1	01665	1
33	Curtain Hanger	02566	1	06263	1	01667	1
34	Washer,Flat,#10,Pld	01183	4	01183	4	01183	4
35	Dcd, Airfoil, "Front & Back"	12341	1	12341	1	12341	1

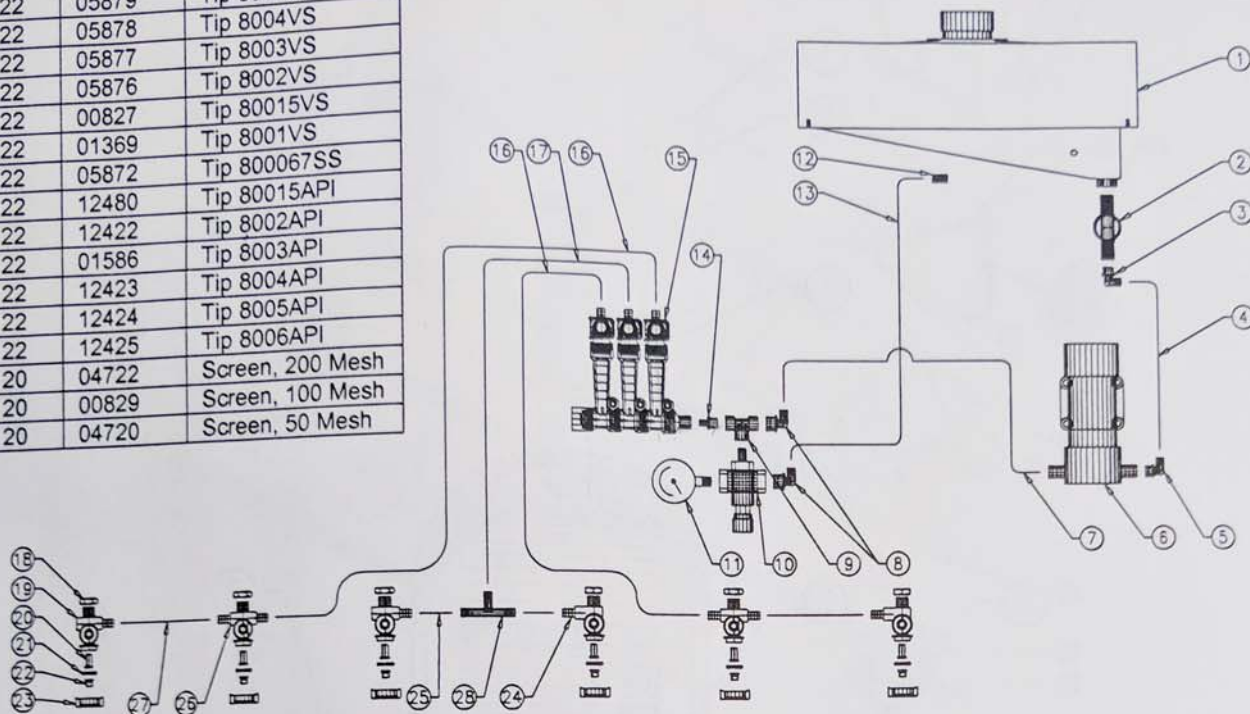


Castor Wheel Assembly, LP Series

Item	Description	Part #	Qty
1	Castor Arm, 7/8" Shaft	01599	1
2	Snap Ring, 7/8"	05177	2
3	Bushing, Machinery, #5, 7/8" ID	05593	2
4	Wheel Assembly	05026	1
5	Spacer, Castor Wheel, 3/4"	00159	2
6	Bolt, 5/8NCX6 1/2	01166	1
7	Nut, Nylock, 5/8NC	01051	1
8	Bearing, 5/8IDX35mmOD	00857	0

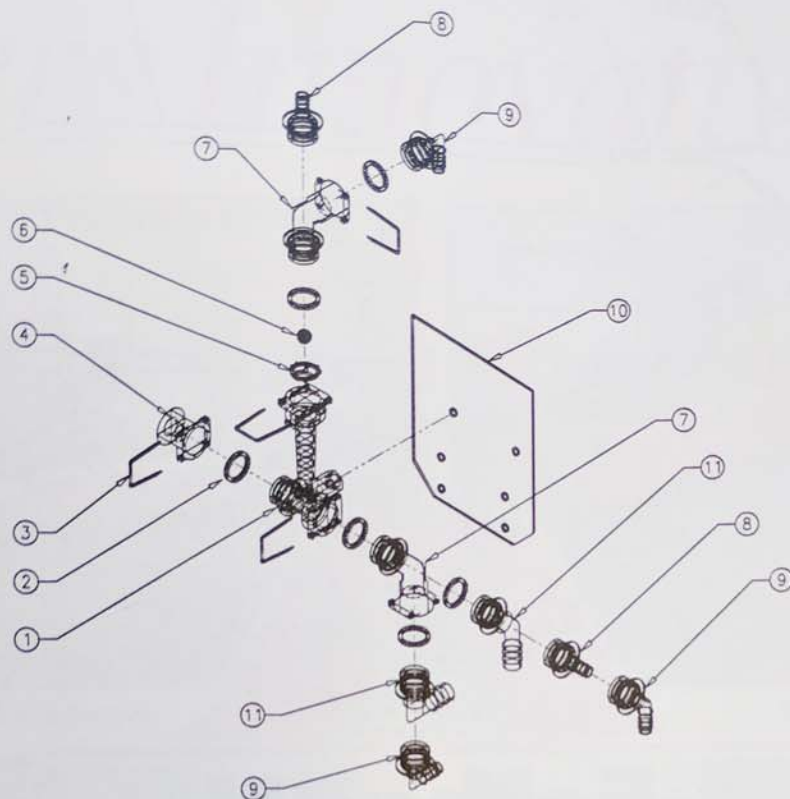
Optional Parts

#	Part #	Description
22	05881	Tip 8008VS
22	05880	Tip 8006VS
22	05879	Tip 8005VS
22	05878	Tip 8004VS
22	05877	Tip 8003VS
22	05876	Tip 8002VS
22	00827	Tip 8001VS
22	01369	Tip 800067SS
22	05872	Tip 80015API
22	12480	Tip 8002API
22	12422	Tip 8003API
22	01586	Tip 8004API
22	12423	Tip 8005API
22	12424	Tip 8006API
20	04722	Screen, 200 Mesh
20	00829	Screen, 100 Mesh
20	04720	Screen, 50 Mesh



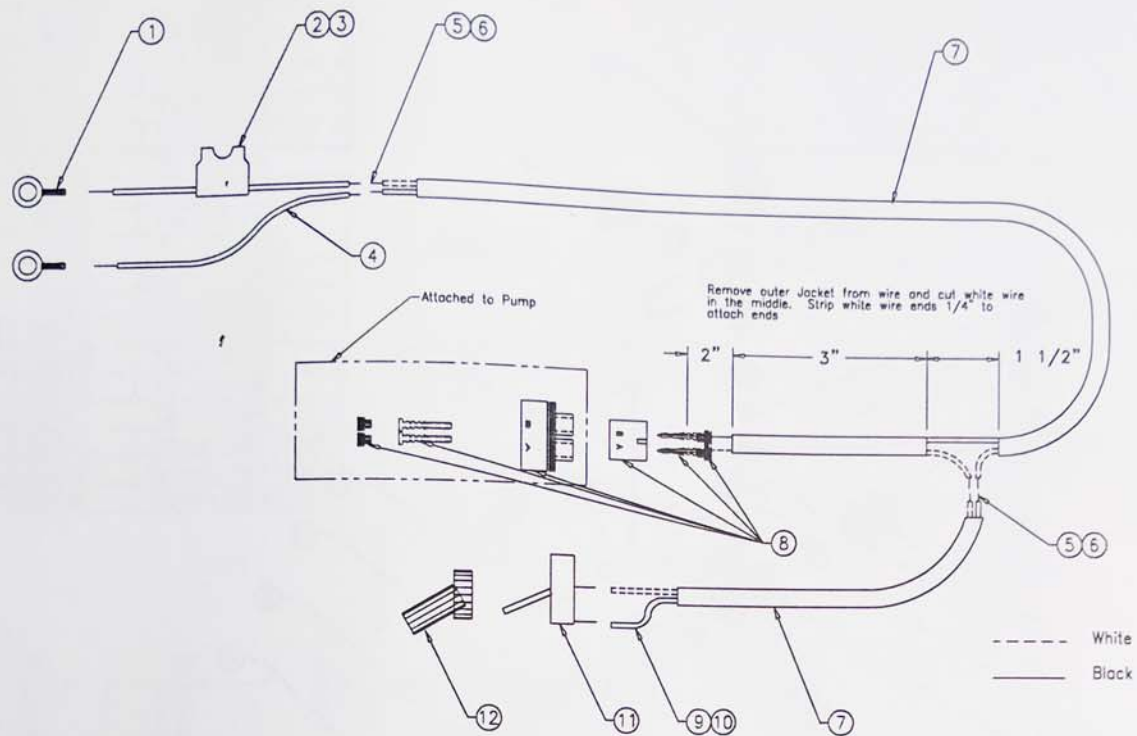
Plumbing Assembly, Turf Electric Series

Item	Description	TE1000		TE1500		TE2000	
		Part #	Qty	Part #	Qty	Part #	Qty
1	Tank, Rect, 5gal w/lid, TE	12955	1	12955	1	12955	1
2	Strainer, Line	07103	1	07103	1	07103	1
3	Ftg, Poly, Elb, 1/4MNPT x 1/2HB	01239	1	01239	1	01239	1
4	Hose, Red, 1/2, 300psi	05334	1	05334	1	05334	1
5	Ftg, Poly, Elb, Flowjet	12787	1	12787	1	12787	1
6	Pump, 12V, 3.7gpm max, 45psi max	01280	1	01280	1	01280	1
6a	Repair Kit, FloJet	12375	0	12375	0	12375	0
7	Hose, Red, 1/2, 300psi	07199	1	07199	1	07199	1
8	Ftg, Poly, Elb, 1/2MNPT x 1/2HB	01235	2	01235	2	01235	2
9	Ftg, Nyl, Tee, 1/2NPT F/F/F	01084	1	01084	1	01084	1
10	Regulator, Pressure	12818	1	12818	1	12818	1
11	Gauge Pressure	01281	1	01281	1	01281	1
12	Ftg, Poly, Adpt, 1/4MNPT x 1/2HB	01202	1	01202	1	01202	1
13	Hose, Red, 1/2, 300psi	05999	1	05999	1	05999	1
14	Ftg, Brs, Nip, 1/2MNPT x 1/4MNPT	12931	1	12931	1	12931	1
15	ORC Rotometer Assy,	12729	1	12728	1	12729	1
16	Hose, Red, 1/2, 300psi	07751	2	07199	2	12220	1
17	Hose, Red, 1/2, 300psi	05324	2	12949	1	12219	2
18	Nut, Brs, 11/16	12362	4	12362	6	12362	8
19	Noz Body Assy, 15psi, Wilger	12301	2	12301	2	12301	2
20	Screen, Tip, 100 Mesh	00829	4	00829	6	00829	8
21	Seal, Nozzle Cap, Wilger	01521	4	01521	6	01521	8
22	Tip, Spray, 8001VS, Flat Fan, 80°	01369	4	01369	6	01369	8
23	Ftg, Poly, Cap, Noz, Std, Self Aligning	01532	4	01532	6	01532	8
24	Noz Body Assy, 15psi, Wilger	12300	2	12300	2	12300	2
25	Hose, Red, 1/2, 300psi	N/A	N/A	01648	2	01648	2
26	Noz Body Assy, 15psi, Wilger	N/A	N/A	12302	2	12302	4
27	Hose, Red, 1/2, 300psi	N/A	N/A	05350	2	N/A	N/A
28	Ftg, Nyl, Tee, 1/2HB/HB/HB	N/A	N/A	05816	1	N/A	N/A
29	Scr, Mach, C, 1/4 x 1	05513	4	05513	4	05513	4
30	Nut, Nylock, 1/4NC, Pld	00968	4	00968	4	00968	4
31	Wshr, Flat, 1/4, Pld	01157	4	01157	4	01157	4
32	Clamp, Hose, Plstc, SNP-16	01092	16	01092	20	01092	22



Rotometer Assembly, Turf Electric Series

Item	Description	TE 1000/2000		TE1500	
		Part #	Qty	Part #	Qty
1	ORC, Rotometer Body	00889	4	00889	3
2	ORC, O-Ring	11984	13	11984	10
3	ORC, Clip	11976	13	11976	10
4	ORC, End Cap	00909	1	00909	1
5	ORC, Ball, Retainer	11989	4	11989	3
6	ORC, Ball, Red	11990	4	11990	3
6	ORC, Ball, SS	11991	4	11991	3
7	ORC, 3/4" Street Elbow	01115	4	01115	3
8	ORC, 1/4" NPT	12727	1	12727	1
9	ORC, 1/2" H.B. Elbow	12727	1	12727	1
10	Backing Plate, Al	00906	4	00906	3
11	ORC, 3/4" H.B. Elbow	12046	1	12045	1
		00905	N/A	00905	N/A



Electrical Assembly, Turf Electric Series

Item	Description	Part #	Qty
1	Conn,Ring,14-16GaX3/8,Insul,Blue	01291	2
2	Fuse,Blade,10Amp	05106	1
3	Fuse Holder, Blade Type, Inline,12Ga	01268	1
4	Wire,14Ga,Stranded,9"	01771	1
5	Conn,Butt,14-16Ga,Insul	09323	1
6	Heat Shrink,Ø3/4"X4"	12297	1
7	Cable,14/2X28,Blk Rbr Jacketed	12738	1
8	Conn Kit, Wea-Pak,2M/F	11823	1
9	Conn,Ring,14-16GaX0.170,Blue	01291	2
10	Heat Shrink, Ø1 1/2"X3"	12298	1
11	Switch,15A,Toggle,Single Pole/Throw	01405	1
12	Boot,Rubber,for 01405	12736	1
13	Nytie,Bk UV,3/16X15 1/2	00974	2