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Turf Electric Walker



TE1000, TE1500, TE2000

Operators, Assembly and Parts Manual

Table of Contents

Minimize Chemical Drift.....	2
Nozzles	2
Trouble Shooting	2
Cleaning	2
Winterizing.....	2
Assembly	2
Calibration	3
Battery	3
Application Rate Tables	4
General Assembly.....	5
Castor Wheel Assembly	6
Plumbing Assembly.....	7
Rotometer Assembly Components	8
Electrical Assembly	9
WTT060 Walker Trailer Transporter	10

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Minimize Chemical Drift

The *WINDFOIL* sprayer has been designed in wind tunnels to control airflow 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

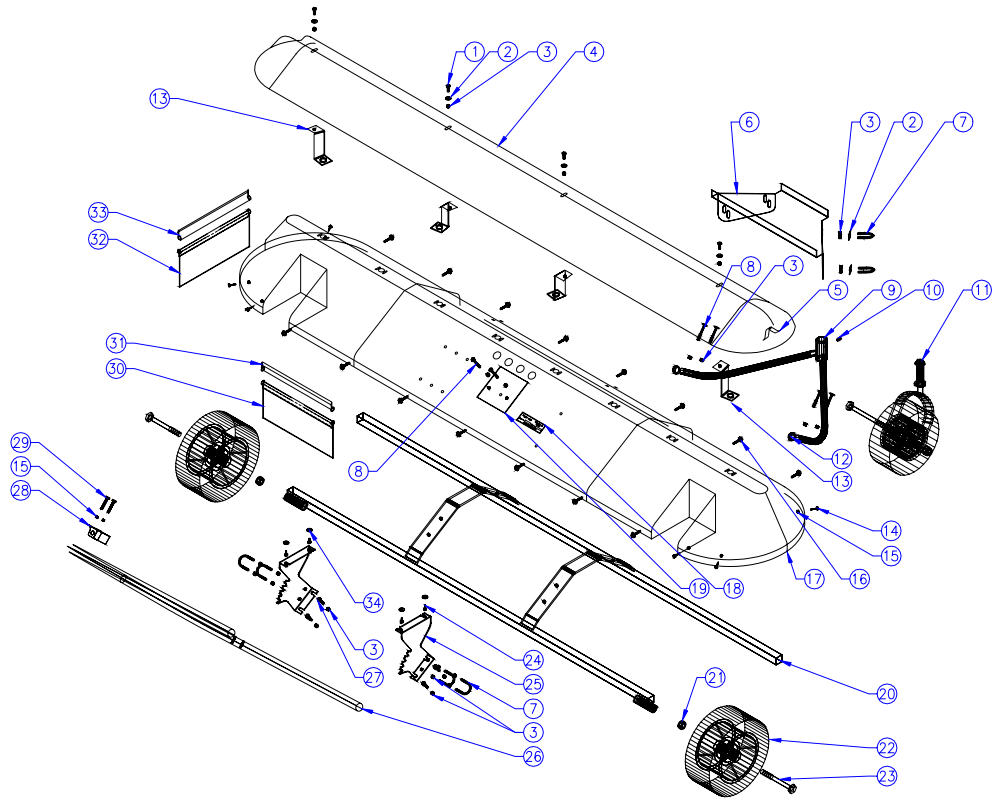
The battery is not supplied with the sprayer as it must be shipped as hazardous goods. A sealed deep cycle battery with bolt on connections must be supplied. The pump draws approximately 7amps; a 150 minute reserve battery should last about 37 hours when new.

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" Spacing			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 # 13351	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 # 13352	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

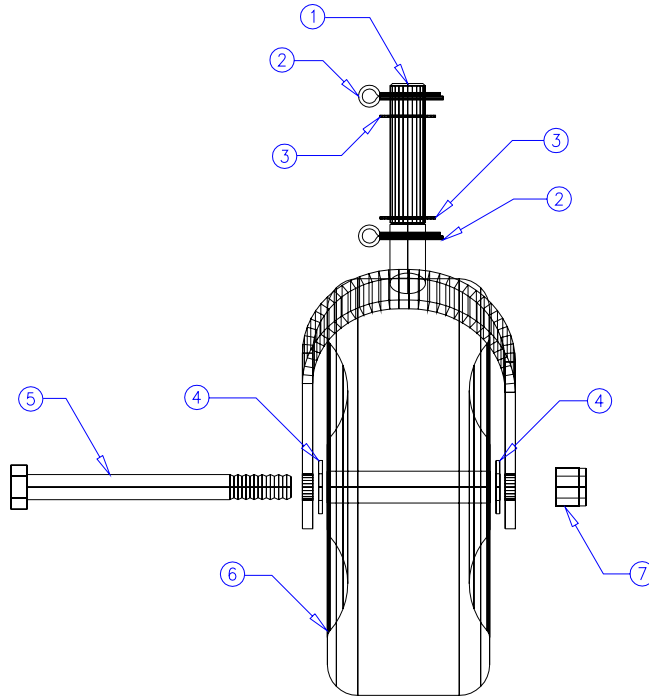
Table 4: Tee Jet Application Rate for 10" (25cm) Spacing

Tip (Screen) Colour	Liquid Press. psi	Capacity 1 nozzle gpm	U.S. Gal/1000 Sq. Ft.			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
800067-SS (200 mesh) Part # 05872	30	0.06	0.30	0.30	0.20	0.23	182	136	109
	40	0.07	0.40	0.30	0.20	0.25	203	152	122
	60	0.08	0.40	0.40	0.30	0.30	242	182	145
8001 (100 mesh) Orange Part # 01369	30	0.09	0.50	0.40	0.30	0.34	204	164	136
	40	0.10	0.60	0.50	0.30	0.38	227	182	151
	60	0.12	0.70	0.60	0.40	0.45	273	218	182
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
8008 (50 Mesh) White Part # 05881	30	0.69	3.80	3.10	2.61	1567	1254	1045	896
	40	0.80	4.40	3.60	3.03	2423	1817	1454	1038
	60	0.98	5.40	4.50	3.71	2226	1781	1484	1272



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	Washer, 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	Decal, "Windfoil" Logo	01396	2	01396	2	01396	2
6	Battery Plate, TE	12725	1	12725	1	12725	1
7	Ubit, 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	Front Castor Mount, GF	02612	1	02612	1	02612	1
10	Fitting, Steel, Nipple, Grease, 1/4NF	00972	1	00972	1	00972	1
11	Castor Wheel Assembly	01601	1	01601	1	01601	1
12	Plug, Tube, Rd, Plastic, 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	Screw, Mach, C, #10-24	01152	6	01152	6	01152	6
15	Nut, Nylock, #10, Pld	01153	6	01153	6	01153	6
16	Screw, 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	Serial Number, Rogers	01398	1	01398	1	01398	1
19	Rotometer, Backing Plate, Wing, AL	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	Wheel, HD Plastic, 5/8" Bore	13178	2	13178	2	13178	2
23	Bolt, 5/8NC x 5, Pld	12387	2	12387	2	12387	2
24	Screw, Mach, C, #10-24 x 3/8	00048	4	00048	4	00048	4
25	Tank Mount Plate, Left, TW, AL	07134L	1	07134L	1	07134L	1
25	Tank Mount Plate, Right, TW, AL	07134R	1	07134R	1	07134R	1
26	Handle, Walking Boom, AL	12950	1	12950	1	12950	1
27	Bolt, 1/4NC x 1, Pld	01164	4	01164	4	01164	4
28	Switch, TE, AL	12722	1	12722	1	12722	1
29	Screw, Mach, C, #10-24 x 1 1/2	05385	2	05385	2	05385	2
30	Curtain (Flexi-Shield), 5 1/2	02976	1	06260	1	01666	1
31	Curtain Hanger	02550	1	06264	1	01668	1
32	Curtain (Flexi-Shield), 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	Decal, Airfoil, "Front & Back"	12341	1	12341	1	12341	1

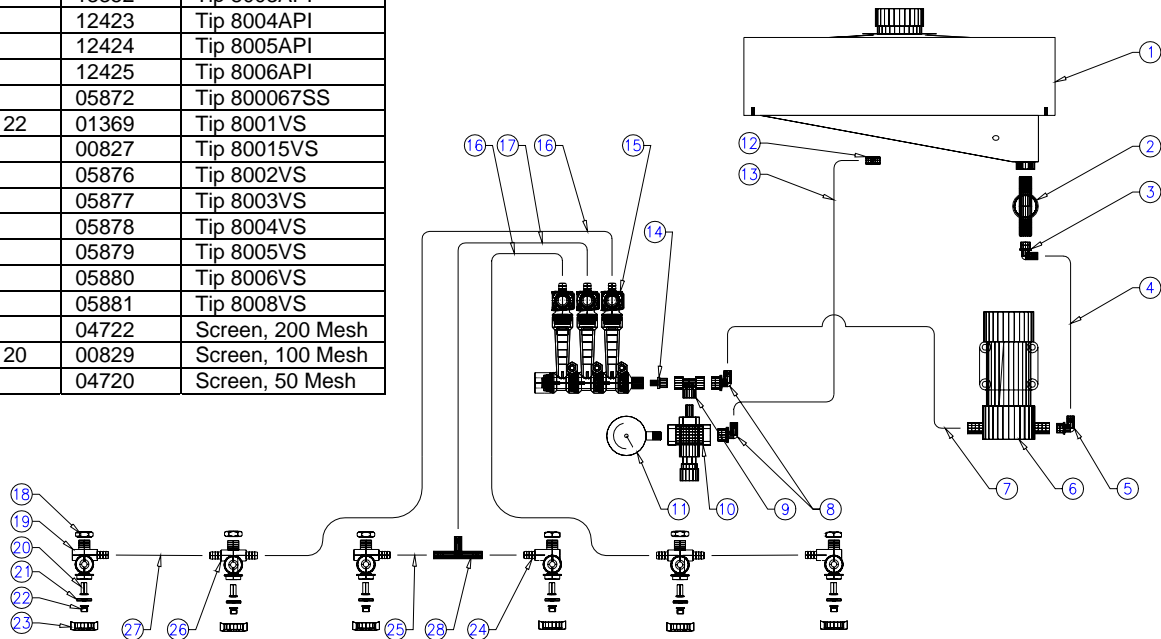


Castor Wheel Assembly, LP Series (01601)

Item	Description	Part #	Qty
1	Castor Arm, 7/8" Shaft	01599	1
2	Cotter Pin, 3/16"x1½"	00965	2
3	Bushing, Machinery, #5, 7/8"ID	05593	2
4	Wheel, HD Plastic, 5/8" Bore	13178	1
5	Washer, Flat, SAE, 5/8"	07619	2
6	Bolt, 5/8NC x 6½"	01166	1
7	Nut, Nylock, 5/8NC	01051	1

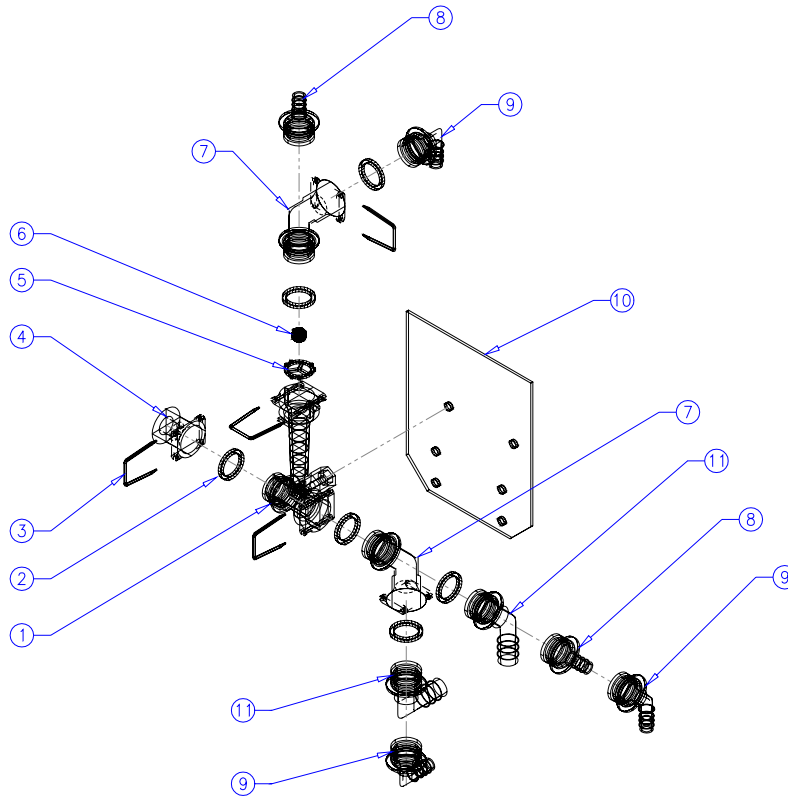
Optional Tips/Screens

#	Part #	Description
	13351	Tip 80015API
	12422	Tip 8002API
	13352	Tip 8003API
	12423	Tip 8004API
	12424	Tip 8005API
	12425	Tip 8006API
	05872	Tip 800067SS
22	01369	Tip 8001VS
	00827	Tip 80015VS
	05876	Tip 8002VS
	05877	Tip 8003VS
	05878	Tip 8004VS
	05879	Tip 8005VS
	05880	Tip 8006VS
	05881	Tip 8008VS
	04722	Screen, 200 Mesh
20	00829	Screen, 100 Mesh
	04720	Screen, 50 Mesh



Plumbing Assembly, Turf Electric Series

Item	Description	TE1000		TE1500		TE2000	
		Part #	Qty	Part #	Qty	Part #	Qty
1	Tank, Rectangle, 5gal w/lid, TE	12955	1	12955	1	12955	1
2	Strainer, Line	07103	1	07103	1	07103	1
3	Fitting, Poly, Elbow, 1/4MNPT x 1/2HB	01239	1	01239	1	01239	1
4	Hose,Red,1/2,300psi	05334	1	05334	1	05334	1
5	Fitting, Poly, Elbow, FloJet	12787	1	12787	1	12787	1
6	Pump, 12V,3.7gpm max,45psi max (FloJet)	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	Fitting, Poly, Elbow, 1/2MNPT x 1/2HB	01235	2	01235	2	01235	2
9	Fitting, Nylon, 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	Fitting, Poly, Adapter, 1/4MNPT x 1/2HB	01202	1	01202	1	01202	1
13	Hose, Red, 1/2, 300psi	05999	1	05999	1	05999	1
14	Fitting, Brass, Nipple, 1/2MNPT x 1/4MNPT	12931	1	12931	1	12931	1
15	ORC Rotometer Assembly, see next page	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, Brass, 11/16	12362	4	12362	6	12362	8
19	Nozzle Body Assembly,15psi, Right, Wilger	00830	2	00830	2	00830	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	Cap, Nozzle, Poly	01532	4	01532	6	01532	8
24	Nozzle Body Assembly, 15psi, Left, Wilger	00831	2	00831	2	00831	2
25	Hose,Red,1/2,300psi	N/A	N/A	01648	2	01648	2
26	Nozzle Body Assembly, 15psi, Tee, Wilger	N/A	N/A	01341	2	01341	4
27	Hose,Red,1/2,300psi	N/A	N/A	05350	2	N/A	N/A
28	Fitting, Nylon, Tee, 1/2HB/HB/HB	N/A	N/A	05816	1	N/A	N/A
29	Screw, 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	Washer, Flat, 1/4, Pld	01157	4	01157	4	01157	4
32	Clamp,Hose,Plstc,SNP-16	01092	16	01092	20	01092	22

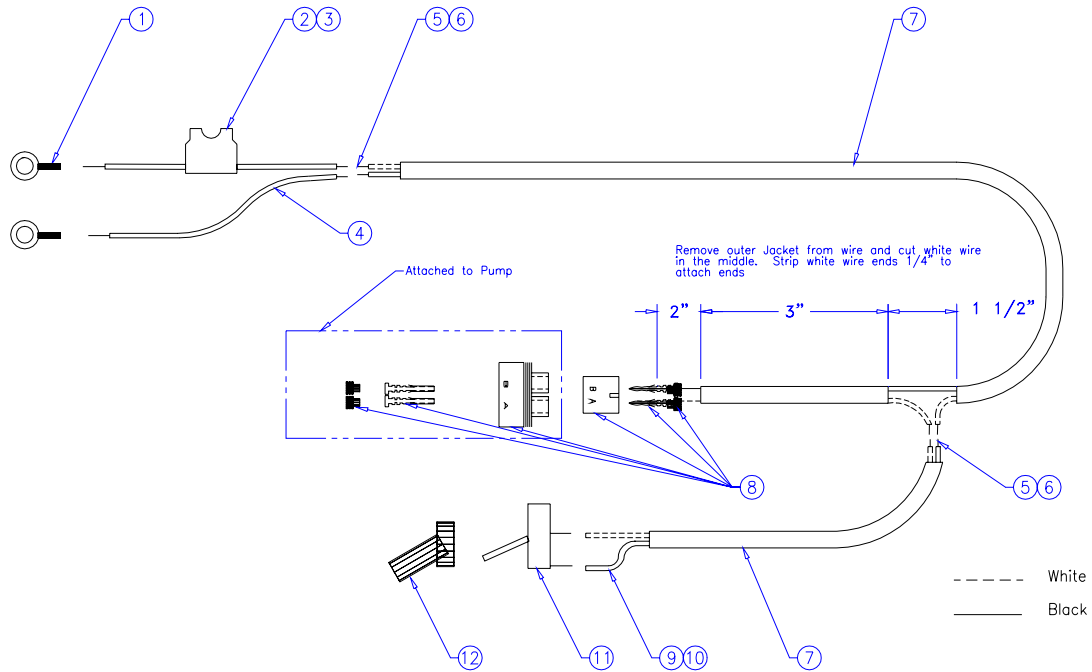


Rotometer Assembly Components

		TE 1000/2000		TE1500	
Item	ORC Rotometer Assy, Complete	12729		12728	
Item	Component Description	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 (optional)	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	00906	4	00906	3
10	Backing Plate, Al	12046	1	12045	1
11	ORC, 3/4" H.B. Elbow	00905	N/A	00905	N/A

* Red plastic balls are for lower flow rates (0.09 – 0.30 US GPM per column).

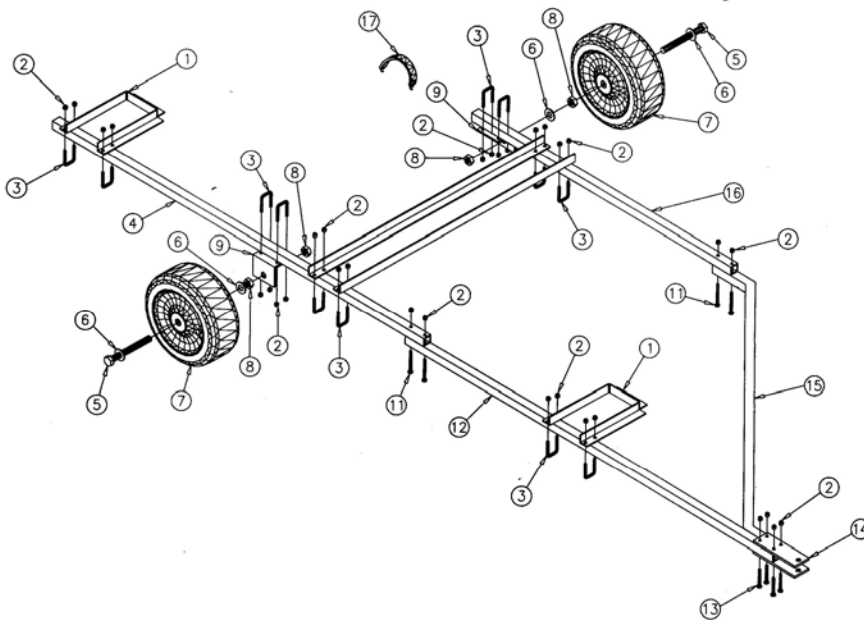
** Steel balls are for higher flow rates (0.40 – 1.33 US GPM per column)



Electrical Assembly, Turf Electric Series (12737)

Item	Description	Part #	Qty
1	Connector, Ring, 14-16GaX3/8, Insul, Blue	01291	2
2	Fuse, Blade, 10Amp	05106	1
3	Fuse Holder, Blade Type, Inline, 12Ga	01268	1
4			
5	Conn, Butt, 14-16Ga, Insul	09323	1
6	Heat Shrink, Ø3/4"x4"	12297	1
7	Cable, 14/2x37, Black Rubber Jacketed	12738	1
8	Connector Kit, Weather-Pak, 2M/F	11823	1
9	Conn, Ring, 14-16GaX0.170, Blue	01291	2
10	Heat Shrink, Ø1½"x3"	12298	1
11	Switch, 15A, Toggle, Single Pole/Throw	01405	1
12	Boot, Rubber for 01405	12736	1
13	Nytie, Black UV, 3/16X15 ½	00974	2

WTT060 Walker Trailer Transporter



Item	Description	Part #	Qty
1	Rear Wheel holders, Walker Trailer	13706	2
2	Nut, Nylock, 1/4NC, Pld	00968	32
3	Ublt, 1/4NCx1sqx2, Pld	01049	12
4	Back Length, Walker Trailer	13702	1
5	Bolt, 5/8NC x 5-1/2, Pld	05459	2
6	Wshr, Flat SAE, 5/8, Pld	07619	4
7	Wheel, Plstc, 5/8 Bore	13178	2
8	Nut, Jam, 5/8NC, Pld	13709	4
9	Wheel Support, Walker Trailer	13704	2
10	Front Wheel Angles, Walker Trailer	13705	2
11	Bolt, 1/4NC x 2 1/2, Pld	00966	4
12	Length Tube, Walker Trailer	13700	1
13	Bolt, 1/4NC x 2, Pld	01070	4
14	Hitch Plate, Walker Trailer	13703	2
15	Hitch Tube (bent), Walker Trailer	13701	1
16	Left Wheel extension, Walker Trailer	13707	1
17	Strap, Tarp, Rubber, 20"	13070	1