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Drift Containment Spray System (DCSS)

Low Profile Push DCSS
GF1000, GF1500, GF2000, & SM0030



OWNER'S MANUAL
[Assembly, Parts and Operations]

Greensfoil (GF Series) Manual

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Visit our website, www.rogerssprayers.com, for additional models.

Safety

Many people die or suffer serious injury in job related accidents every year due to carelessness. Know your machinery and be aware of potential hazards. Put safety first in all your operations.

Review all instructions and procedures outlined in this manual annually. Every operator must familiarize himself with the operating instructions of the sprayer.

Operational Safety

Shut down sprayer and power unit and wait for all parts to stop before adjusting, cleaning, or lubricating the power unit or sprayer.

Before spraying a field, familiarize yourself with any rocks, debris, trees, ditches or gullies that may be potentially dangerous. Plan the spraying route to avoid these hazards.

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. Drift control of the *WINDFOIL* is less effective when the wind blows the curtain off the crop canopy breaking the seal between the curtain and the crop.

General Spraying Information

Application Tips

Always use clean filtered water in the sprayer tank.

To provide a better product your *Windfoil* DCSS is supplied with API ceramic tips. These tips gave a coefficient of variation of less than 6%, other tips gave 9%. The ceramic material is one of the hardest materials in the world and provides much greater durability than stainless steel tips. Calibrate frequently to confirm tip accuracy.

Ensure that the pressure on the supply end of the hose used on hose reels is sufficient to deliver the proper pressure at the hand unit on the delivery end of the hose.

Check the flow rate from all nozzles using the capacity calibration technique; see the Calibration section for tables and instructions. Adjust the sprayer pressure to get the proper flow rate. The flow meters are not accurate enough in absolute terms to be used as a flow meter. In relative terms they are very accurate.

Caution: Conventional tips are rated at 40 psi. LP tips are rated at 15 psi. A 8004 tip at 40 psi delivers 0.4 US gal/min, but an 8004LP tip delivers 0.4 US gal/min. at 15 psi. These tips can not be mixed or interchanged. Only conventional 80° tips are recommended for the *Windfoil*. XR tips have a wider pattern than 80° and hit the shroud end, and are not recommended.

Nozzles

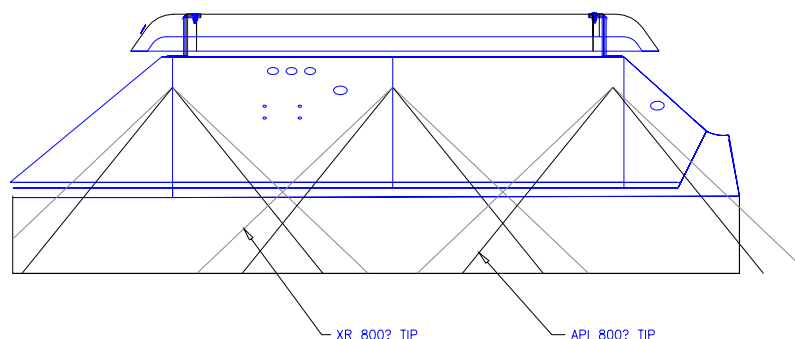
Despite being the most important component for accurate, uniform spraying application, nozzles are often neglected and abused.

Nozzle flow rate depends on the effective orifice size and the pressure. The manufacturers have supplied tables of nozzle application rates at various pressures.

As pressure increases, average droplet size decreases. If droplets are too small, drift may be excessive with conventional sprayers but not with the *Windfoil's* drift control system. With conventional sprayers, large droplets that are used to control drift can roll off plants without sticking. The *Windfoil* sprayer will contain small droplets and allow them to be deposited on target plants. **Small droplets are beneficial in that they increase coverage and not a drift problem with the *Windfoil* drift control system.**

The spray patterns must overlap for even coverage but should not interfere with one another. Nozzles are set at a 10° angle so that one edge of its pattern will be just behind the edge of its adjacent spray pattern, evading interference with each other.

Use only a conventional TP or API 80° tips, as these tips will provide the most uniform spray pattern in the *Windfoil* drift control system. **Do not use XR tips as their spray pattern is greater than 80° causing the spray to hit the end of the shroud which causes dripping.**



If you wish to increase coverage to the edge of the shroud, use XR tips. The spray will hit the curtain and some dripping may occur which will not be noticeable with most pesticides. Caution must be exercised with pesticides that burn the turf, as these drops may increase burning.

As a tip wears, the spray pattern distorts, output volumes usually increase, and the droplet characteristics change. Recalibration may correct for output changes, but cannot correct for spray pattern changes or the drop size generated.

Caution: When spraying next to a flower bed, do not spray over the turf edge as the spray will go under the curtain and onto the flowers.

Diaphragm Check Valve Nozzle Bodies

Diaphragm check valves close at 15 psi to prevent excessive dripping. Should the cap on the valve loosen or the check valve diaphragm become misaligned, the body may leak. Stop the leak by, tightening the check valve cap or remove the cap and inspect the seal for damage or improper assembly.

Nozzle caps are attached by engaging the cap and turning clockwise about a third of a turn. Self-aligning caps have a slot to align the tips. Ensure that the tips fit down into the slotted hole before installing caps on the diaphragm nozzle body assembly with the tip screens.

Non-aligning caps are also available for special tips. *Rogers Sprayers Inc.* has available, on special order, 200 mesh screens for smaller than 800067 tips and low volume tips. Special 500 mesh screens are available. Order from *Rogers Sprayers Inc.*

Calibration

As a tip wears, the spray pattern distorts, output volumes usually increase and the droplet characteristics change. Recalibration may correct for output changes but cannot correct for spray pattern changes or the drop size generated.

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 has a visibly distorted pattern.

Application Rate Tables

Table 1: 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 # 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 2: 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
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

Run a speed test in the area to be sprayed. The sprayer must be up to speed before starting the test run. To determine the speed, mark off a distance as found on one of the tables. Push the sprayer over this distance, carefully noting and recording the time to cover the distance. The speed traveled can be found for the specific distance and time to travel, using the tables below.

After the nozzles have been individually checked and matched, the sprayer should be calibrated to determine the correct speed for the desired application volume.

Table 3: Time in Seconds to Travel Distance of:

mph	10 (ft)	25 (ft)	50 (ft)	100 (ft)	200 (ft)
1	6.8	17.0	34.1	68.2	136.0
1.5	4.5	11.4	22.7	45.5	90.9
2	3.4	8.5	17.0	34.1	68.2
2.5	2.7	6.8	13.6	27.3	54.5
3	2.3	5.7	11.4	22.7	45.5
4	1.7	4.3	8.5	17.0	34.1
5	1.4	3.4	6.8	13.6	27.3
6	1.1	2.8	5.7	11.4	22.7

Table 4: Time in Seconds to Travel a Distance of:

Km/h	10 (m)	25 (m)	50 (m)	100 (m)	200 (m)
1	36.0	90.0	180.0	360.0	720.0
1.5	24.0	60.0	120.0	240.0	480.0
2	18.0	45.0	90.0	180.0	360.0
2.5	14.4	36.0	72.0	144.0	288.0
3	12.0	30.0	60.0	120.0	240.0
4	9.0	22.5	45.0	90.0	180.0
5	7.2	18.0	36.0	72.0	144.0
6	6.0	15.0	30.0	60.0	120.0

Note: Tip pressure is usually less than the pressure at the pump. Losses occur in valves, hoses, etc. Always check the flow by the above calibration method. There is a pressure loss of approximately 40 psi. for every 100 feet of hose.

General Maintenance

Cleaning

Sprayers need to be cleaned to prevent corrosion, to prevent cross contamination of chemicals, and to prevent crop injury. Trace amounts of one chemical can react with another or carry over to the next spraying and cause crop damage, especially with pesticides. Long exposures with even small amounts of some chemicals can damage sprayer components either by corrosion or deposits of gums, etc. If you spray crops that are very susceptible to injury from the last chemical used, such as vegetables, turf, and ornamentals clean the unit especially well.

Always try to end the day with an empty tank; avoid contamination of water supplies and injury to plants or animals. Do not make puddles that might be accessible to children, pets, farm animals, or wildlife. Flush with clean water, preferably after each day's operation. However, if you plan to use the same material over several days, most chemicals may be kept in the tank overnight; the label usually indicates which may not. Rinse the outside of the sprayer. Surfactants combined with chemicals, when they are compatible, will provide some cleaning action in the sprayer.

Some chemical combinations (especially if oil is used) may produce a putty type paste (buttering out) in the sprayer tank and components; flushing with water after each load may prevent an accumulation. If water alone does not dissolve and remove the buildup, add solvent, kerosene, or other low flammable solvent; allow paste to dissolve, then agitate and flush. Next, flush with detergent and finally with clean water. Check with your chemical agent.

Whenever pesticides are changed, or before sprayer storage, clean sprayers thoroughly with a cleaning solution. The solution used depends on the chemical to be removed from the sprayer. Check the chemical label for cleaning instructions.

First, flush with water, then add the cleaning solution to the tank and thoroughly agitate before flushing. Always flush with clean water to remove the cleaning solution. Remove nozzle tips and screens; clean them in a strong detergent solution or kerosene, using a soft brush such as an old toothbrush. Never use a metal probe to clean the orifice of a spray tip!

Follow the same safety precautions during cleaning as for applications. Use respirator, rubber gloves, or other protective gear as may be directed by label instructions.

Sunshine

Many plastic sprayer parts are degraded by ultra violet light, especially the nozzle flow indicators. Store the sprayer in the shade to extend the length of service.

Winterizing

After the sprayer is thoroughly cleaned, put 2-5 gallons of rust inhibitor or antifreeze in the tank prior to the final flushing to help prevent corrosion. As the water is pumped from the sprayer, the antifreeze will leave a protective coating on the inside of the tank, pump, and plumbing. Remove nozzle tips, screens and no-drip valves (if used) and store them in a can of light oil such as diesel fuel or kerosene to prevent corrosion. Close nozzle openings with tape to prevent dirt, insects, mice, or other contaminants from entering.

During the final cleaning, completely check the sprayer. Look at the hoses, clamps, connections, nozzle tips, and screens for needed replacements. Store the sprayer in a reasonably clean and dry building.

Assembly

There is more than one way to successfully assemble your Greensfoil. 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.

Front Wheel Installation

- ⇒ See General Assembly drawing for layout.
- ⇒ Locate four, (4) holes on the front of the sprayer, two, (2) to each side of the ROGERS logo.
- ⇒ Bolt the front wheel mount to these holes. Locate the bend in the support arms towards the bottom of the sprayer.
- ⇒ Use four, (4) - ¼" x 3" long bolts and four, (4) - ¼" nuts to secure the front wheel caster mount.
- ⇒ Remove top snap ring from front caster wheel.
- ⇒ **Do not spring the ring by opening too large.**
- ⇒ Place caster wheel in end of front wheel mount.
- ⇒ Replace front caster wheel snap ring.

Handle attachment

- ⇒ Attach the lower handle to the outer side of the handle supports with two, (2) - ¼" U-bolts for each side.
- ⇒ Place bolt from outside of the support and clinch with ¼" nuts and washers from the inner side.
- ⇒ Tighten both ends of the U-bolt evenly. **Do not over tighten.**
- ⇒ Orient the handle so that the pressure gauge and hose is to the right.
- ⇒ Position U-bolts around handle from the outer side, towards the inner side.

Attach Airfoil

- ⇒ **Avoid kinking or warping the Airfoil as this will degrade sprayer performance.**
- ⇒ There are 4, 6 or 8 11/16" nozzle retaining nuts, found on the top of the sprayer shroud depending if it is a GF1000/1500/2000. Counting from either edge of the sprayer, remove nuts 1 and 4 (1000), 1, 3, 4 and 6 (1500) and 1, 3, 6 and 8 (2000).
- ⇒ Place the Airfoil support brackets under the retaining nuts, 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 one, (1) - ¼" x ¾" long bolt, one, (1) - ¼" nut and one (1) - ¼" flat washer 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**.

Hose attachment

- ⇒ Slip hose clamp over hose end.
- ⇒ Firmly slide hose end over appropriate hose fitting, until completely seated.
- ⇒ Situate hose clamp over hose and fitting connection. Close hose clamp by squeezing clamp.
- ⇒ Follow the above procedure to attach the hose from the handle to the nozzle flow monitor.
- ⇒ Use the supplied cable ties to secure the hose to the handle. Cut off the unused end of the cable tie.

Last Check

- ⇒ Recheck all assembled parts for completeness and secure connections.
- ⇒ Locate the grease nipple on the front caster wheel and grease it.
- ⇒ Your sprayer is now ready for a wet test, to ensure complete operation.

Operation

The 40" Greensfoil (GF1000) has four 80° Flat Fan spray tips, the 60" Greensfoil (GF1500) has six and the 80" Greensfoil (GF2000) has eight tips. API tips are supplied with the GF; it can also use Spraying Systems TP800XVS tips that give an actual 80° spray pattern. Remember XR tips have a wider pattern.

Attach a supply hose to the garden hose fitting on the control valve, located on the sprayer handle. The supply pressure of the fluid should be between 40 and 60 psi. Simply hold the valve control lever against the handle and push the unit to operate. Each of the balls in the spray monitor should raise to an equal level as the flow increases. If they are not equal the lower ball(s) indicated tips that are plugged or partially plugged. Check and clean the appropriate tip(s). If the balls are right at the top, the flow rate is too high for them. Replace them with stainless steel balls (see the flow monitor page).

Monitor the flow to each tip and the pressure while operating to ensure good coverage. Hold the handle up to spray, let down to stop spraying.

Test the unit using clear water on a firm surface such as asphalt or concrete before using spray solution. This will illustrate the effectiveness of the individual spray patterns.

Maintenance

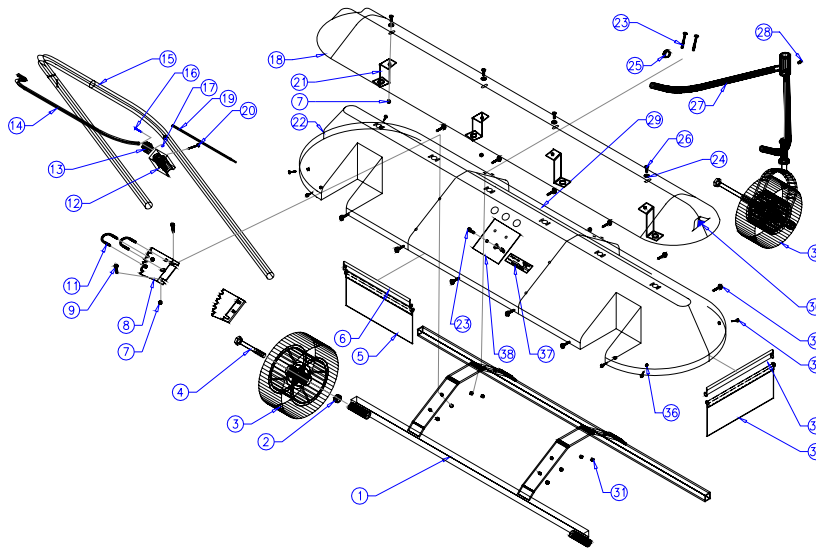
Cleaning and Flushing with clear water after using.

Do not leave water in the unit at freezing temperatures. When storing the sprayer at freezing temperatures, run some windshield washer antifreeze through to prevent ice damage in the plastic parts.

Avoid prolonged storage of the Greensfoil in direct sunlight for prolonged periods. Certain plastic parts on the Greensfoil are not UV resistant.

Keep the unit covered or stored indoors

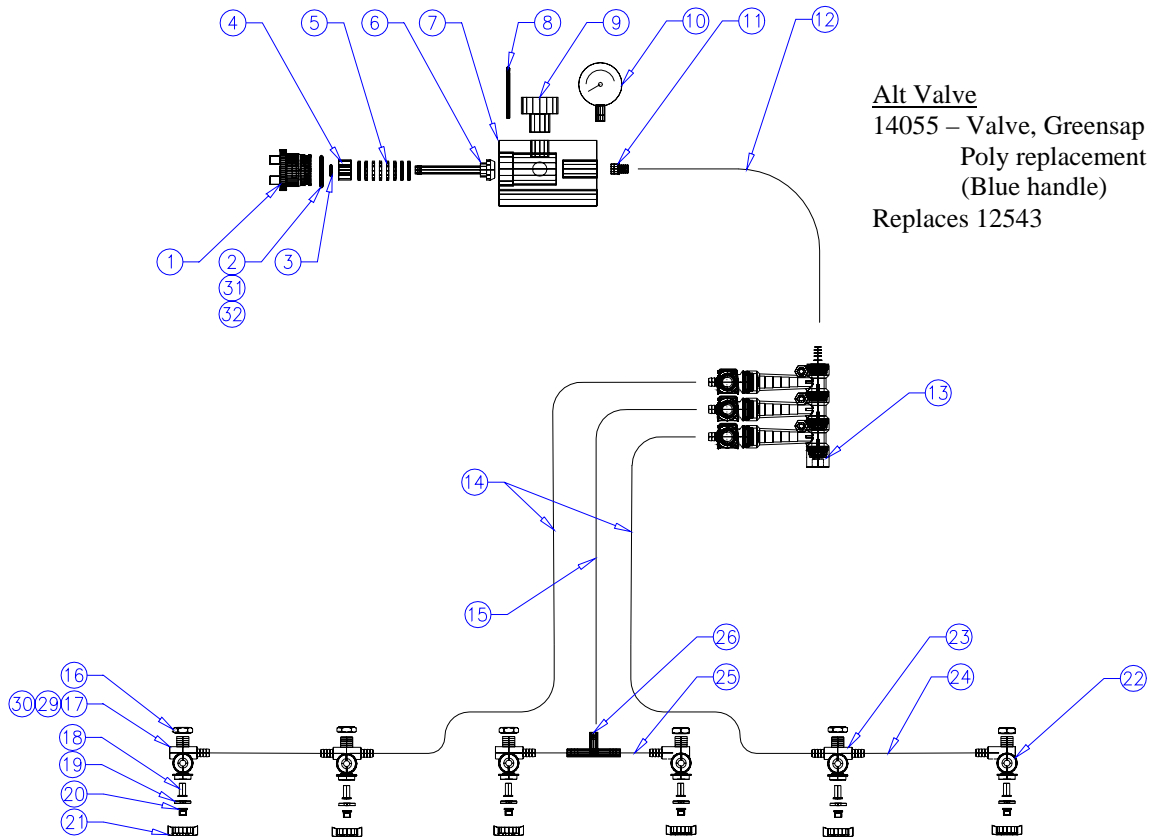
Drawings and Parts Breakdowns



General Assembly, GF Series

Item	Description	GF1000		GF1500		GF2000	
		Part #	Qty	Part #	Qty	Part #	Qty
1	Frame, Aluminum, GF	01589	1	1592	1	01595	1
2	Nut, 5/8NC, Pld	01313	2	01313	2	01313	2
3	Wheel Assembly, c/w Bearings	00920	2	00920	2	00920	2
4	Bolt, 5/8NC x 5, Pld	12387	2	12387	2	12387	2
5	Curtain, Blue, 5 ½	02976	1	06262	1	01666	1
6	Curtain Hanger	02550	1	06264	1	01668	1
7	Nut, Nylock, ¼ NC, Pld	00968	20	00968	22	00968	22
8	Handle Mt, Left	13041L	1	13041L	1	13041L	1
8	Handle Mt, Right	13041R	1	13041R	1	13041R	1
9	Bolt, ¼ NC x 1, Pld	01164	4	01164	4	01164	4
11	U-bolt, ¼ NCx1 1/8rdx2,Pld	05111	4	05111	4	05111	4
12	Valve, Greensap, Poly replacement	14055	1	14055	1	14055	1
15	Handle, Aluminum, Walking Boom	13045	1	13045	1	13045	1
16	Machine Screw, C, #4-40 x 1	05442	2	05442	2	05442	2
17	Nut, #4-40, Pld	05552	2	05552	2	05552	2
18	Airfoil, Poly, White	01500	1	01499	1	01654	1
19	Nytie, Black UV	00974	1	00974	1	00974	3
20	Machine Screw, #10-24 x 1 ¼	05594	2	05594	2	05594	2
21	Airfoil Standoff, Front, Al	13479	2	13479	3	13479	4
21	Airfoil Standoff, Back, Al	13478	2	13478	3	13478	4
22	Shroud, GF	01610	1	01610	1	01612	1
23	Bolt, ¼ NC x 2, Pld	01070	6	01070	6	01070	6
24	Washer, Flat, ¼, Pld	01157	2	01157	4	01157	4
25	Tube Plug, Round, 1"	04794	2	04794	2	04794	2
26	Bolt, ¼ NC x ¾, Pld	01154	2	01154	4	01154	4
27	Front Caster Mount, GF	02612	1	02612	1	02612	1
28	Grease Nipple	00972	1	00972	1	00972	1
29	Decal, "ROGERS", White	01397	1	01397	1	01397	1
30	Decal, "Windfoil" Logo	01396	2	01396	2	01396	2
31	Caster Wheel Assembly	01601	1	01601	1	01601	1
32	TEK Screw, #12 x 1 ¼	01156	7	01156	11	01156	15
33	Machine Screw, #10-24	01152	6	01152	6	01152	6
34	Curtain Hanger	02566	1	06263	1	01667	1
35	Curtain, Blue, 5 ½	01638	1	06259	1	01665	1
36	Nut, Nylock, #10, Pld	01153	6	01153	6	01153	6
37	Serial Plate, Aluminum	01398	1	01398	1	01398	1
38	Backing Plate	12046	1	14076	1	12046	1
39	Decal, Airfoil, "Front & Back"	12341	1	12341	1	12341	1

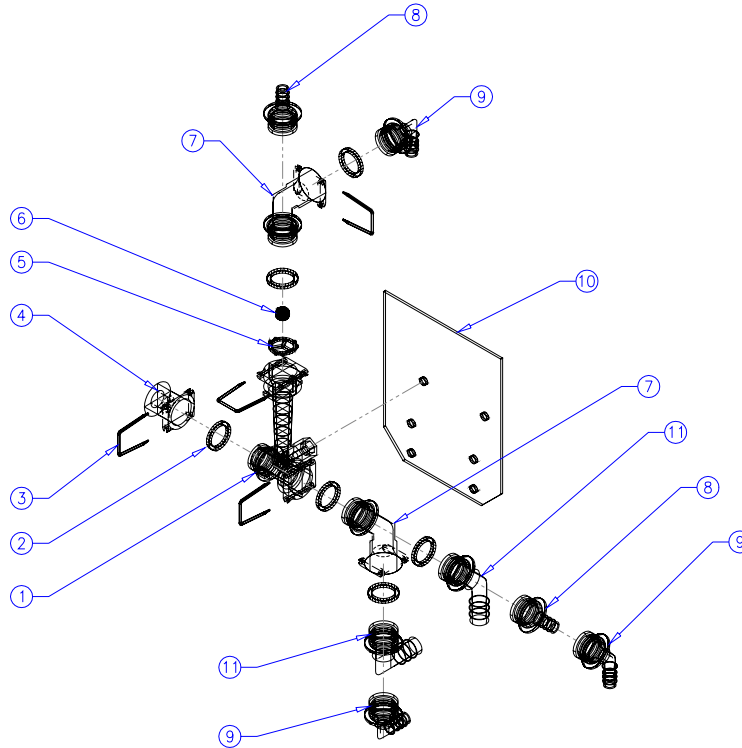
Plumbing Assembly, GF Series



Alt Valve
 14055 – Valve, Greensap
 Poly replacement
 (Blue handle)
 Replaces 12543

Item	Description	GF1000		GF1500		GF2000	
		Part #	Qty	Part #	Qty	Part #	Qty
1	Poly Cap, 3 Port Valve, GF/TW	04929	1	04929	1	04929	1
2	O-Ring, -117, Viton, 13/16IDx3/32W	04793	1	04793	1	04793	1
3	O-Ring, -010, Viton, ¼IDx1/16W	04791	1	04791	1	04791	1
4	Spring Seat, BCV	04931	1	04931	1	04931	1
5	Spring, Valve, GF/TW	04932	1	04932	1	04932	1
6	Plunger Assembly	04930	1	04930	1	04930	1
7	Valve Body, 3 Port, Aluminum	02613	1	02613	1	02613	1
8	Retaining Clip	04933	1	04933	1	04933	1
9	Brass, Adapter, ¾FGHT x 3/8MNPT	04661	1	04661	1	04661	1
10	Pressure Gauge	01281	1	01281	1	01281	1
11	Poly Adapter, 3/8MNPT x ½HB	01206	1	01206	1	01206	1
12	Hose, Red, ½, 300psi	07951	1	07951	1	07951	1
13	ORC Rotometer Assembly, GF	11979	1	14077	1	11979	1
14	Hose, Red, ½, 300psi	05324	2	05329	2	12219	2
15	Hose, Red, ½, 300psi	07751	2	05349	1	12270	2
16	Brass Nut, 11/16	12362	4	12362	6	12362	8
17	Nozzle Body Assembly, 15psi, Right, Wilger	00830	2	00830	3	00830	2
18	Screen, Tip, 50 Mesh	04720	4	04720	6	04720	8
19	Seal, Nozzle Cap, Wilger	01521	4	01521	6	01521	8
20	Spray Tip, 8004API, Flat Fan, 50 mesh	12423	4	12423	6	12423	8
21	Nozzle Cap, Self Aligning	01532	4	01532	6	01532	8
22	Nozzle Body Assembly, 15psi, Left, Wilger	00831	2	00831	3	00831	2
23	Nozzle Body Assembly, 15psi, Tee, Wilger	N/A	N/A	N/A	0	01341	4
24	Hose, Red, ½, 300psi	N/A	N/A	05350	2	05350	4
25	Hose, Red, ½, 300psi	N/A	N/A	01648	2	N/A	N/A
26	Nylon, Tee, ½HB/HB/HB	N/A	N/A	05816	1	N/A	N/A
27	Hose Clamp, Plastic, SNP-16	01092	11	01092	17	01092	19
28	Backing Plate, Al	12046	1	12045	1	12046	1
29	Diaphragm	01537	0	01537	0	01537	0
30	Check Valve	12299	0	12299	0	12299	0
32	Valve, Greensap, Poly replacement, Blue handle (made up of # 1-11 inclusive)	14055	1	14055	1	14055	1

Rotometer Assembly, DCSS

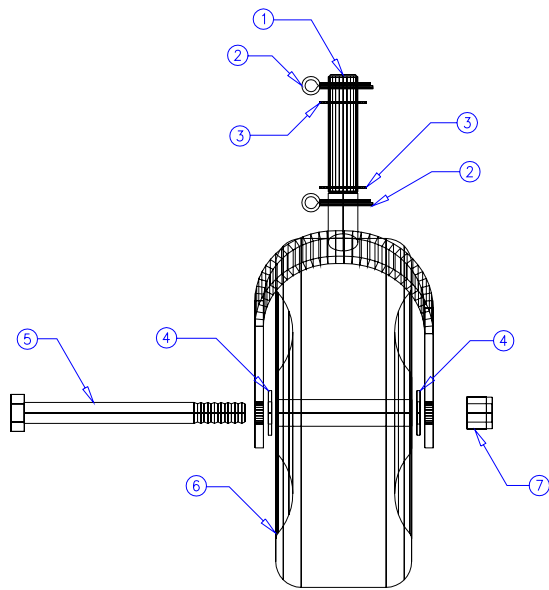


Item	Description	GF1000/2000 (#11979)		GF1500 (#14077)	
		Part #	Qty	Part #	Qty
1	Rotometer Body, ORC	00889	4	00889	6
2	O-Ring, -212	11984	13	11984	20
3	Clip, ORC	11976	13	11976	20
4	Poly Cap, ORC	00909	1	00909	1
5	Ball Retainer, ORC	11989	4	11989	6
6	Ball, Red, ORC	11990	4	11990	6
6	Ball, Stainless Steel, ORC (Optional)	11991	4	11991	6
7	Ploy Street Elbow, MORC X FORC	01115	4	01115	6
8	Poly Adapter, MORC X 1/2HB	11975	1	11975	1
9	Poly Elbow, MORC X 1/2HB	00906	4	00906	6
10	Backing Plate, Aluminum	12046	1	12045	1

Optional Tips and Screens					
Item	Description	Part #	Item	Description	Part #
	Tip, Spray, 80015API	13351	18	Screen, 50 Mesh	04720
	Tip, Spray, 8002API	12422		Screen, 100 Mesh	00829
	Tip, Spray, 8003API	13352		Screen, 200 Mesh	04722
	Tip, Spray, 8004API	12423			
	Tip, Spray, 8005API	12424			
	Tip, Spray, 8006API	12425			
	Tip, Spray, 800067SS	05872			
	Tip, Spray, 8001VS	01369			
	Tip, Spray, 80015VS	00827			
	Tip, Spray, 8002VS	05876			
	Tip, Spray, 8003VS	05877			
20	Tip, Spray, 8004VS	05878			
	Tip, Spray, 8005VS	05879			
	Tip, Spray, 8006VS	05880			
	Tip, Spray, 8008VS	05881			
	Tip & Cap Combo RI 8010	13674			

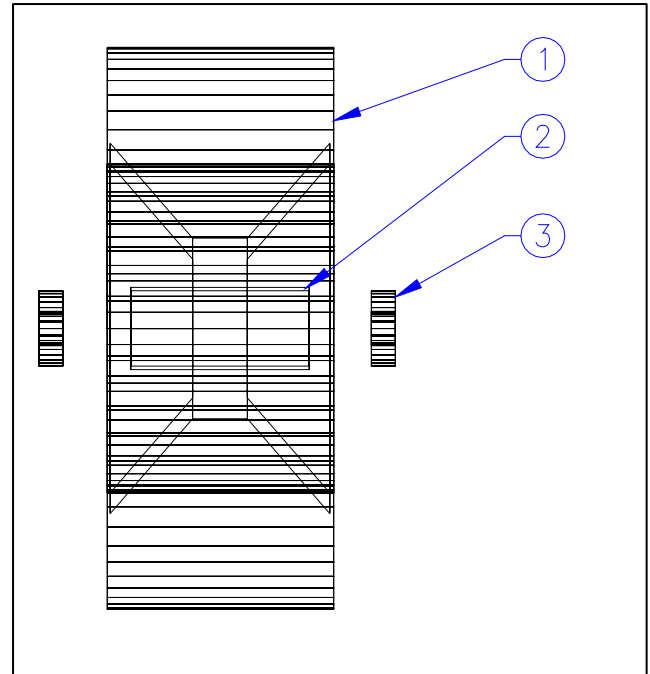
See page 9.

Caster Wheel Assembly (01601)



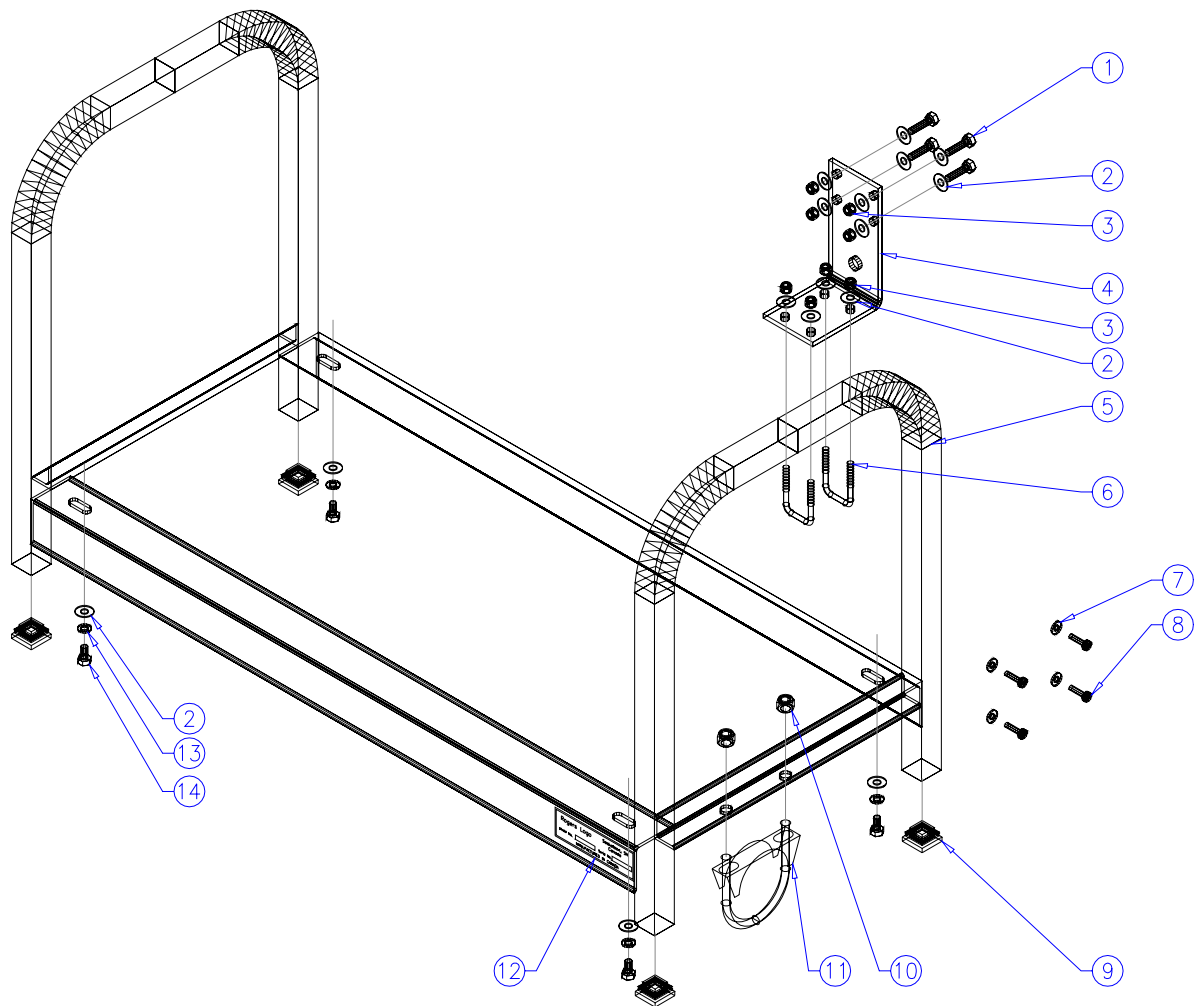
Item	Description	Part #	Qty
1	Castor Arm, 7/8" Shaft	01599	1
2	Cotter Pin, 3/16"x1½"	00965	2
3	Bushing, Machinery, #5, 7/8"ID	05593	2
4	Wheel, HD Plastic, 5/8" Bore	13178	1
5	Washer, Flat, SAE, 5/8"	07619	2
6	Bolt, 5/8NC x 6½"	01166	1
7	Nut, Nylock, 5/8NC	01051	1

Rear Wheel Assembly



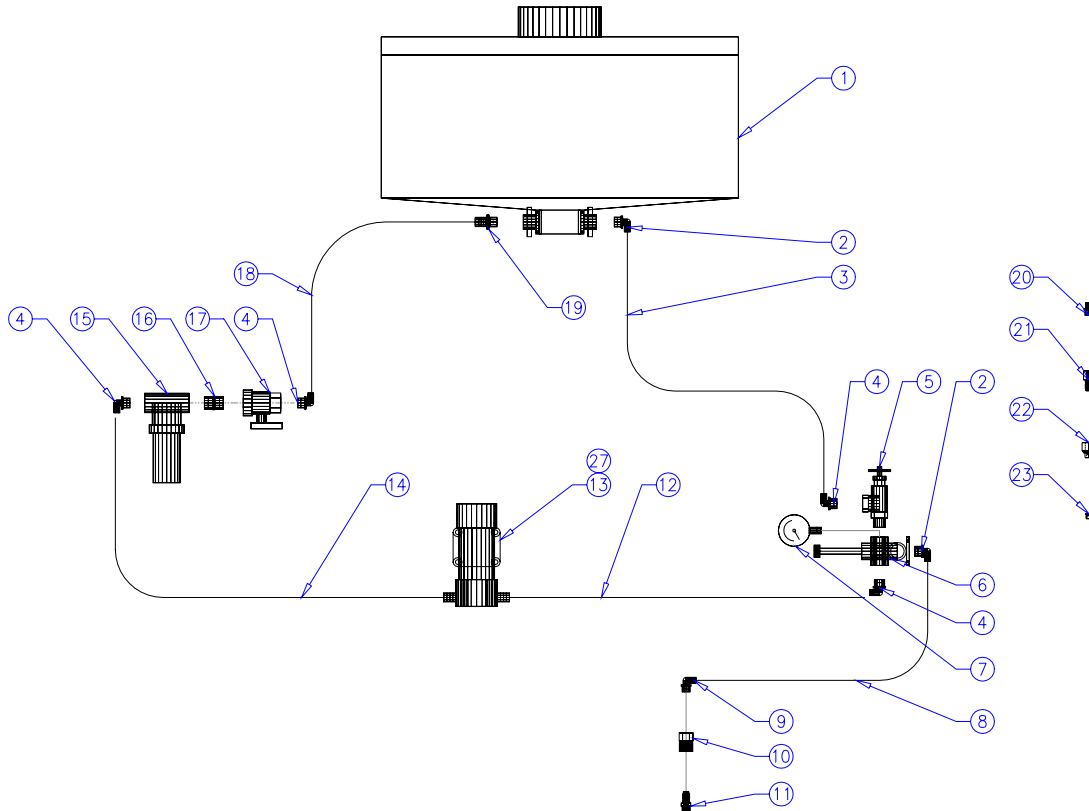
Item	Description	Part #	Qty
1	Wheel, HD Plastic, 5/8" Bore	13178	1
2	DISC	00857	0
3	Bearing, 5/8X35mm	00857	0

General Assembly, 30 Gallon Skid Mount



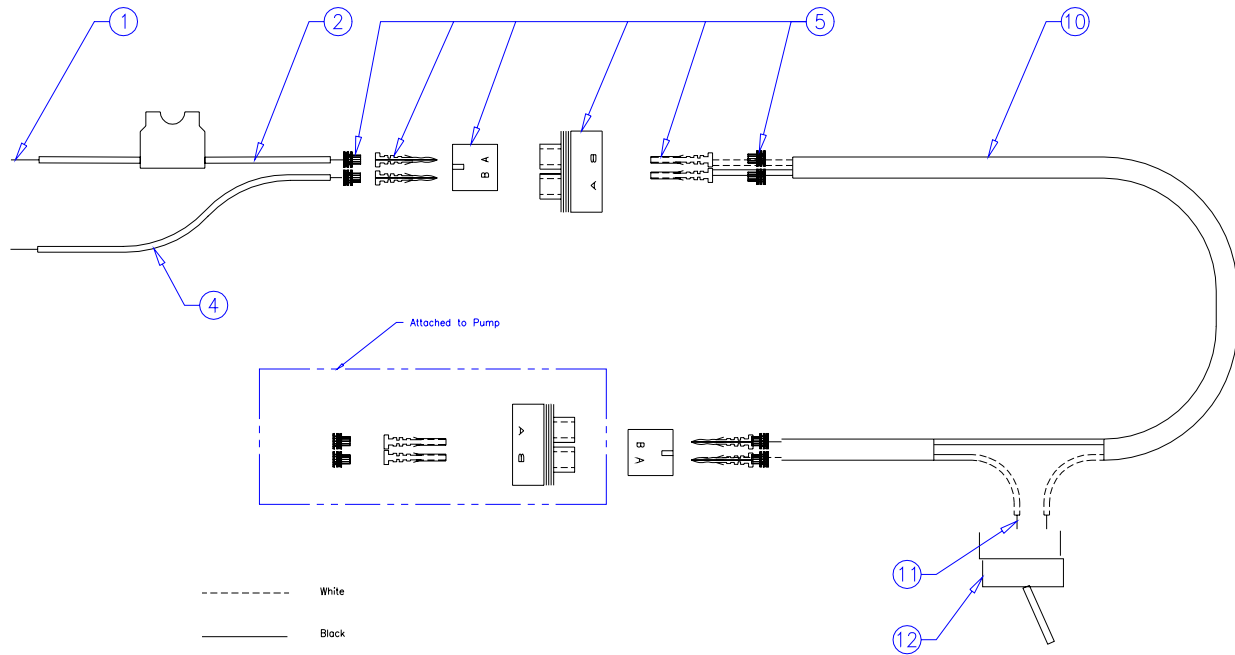
Item	Description	Part #	Qty
1	Bolt, ¼NC x 1, Pld	01164	4
2	Washer, Flat, ¼, Pld	01157	16
3	Nut, Nylock, ¼NC, Pld	00968	8
4	Valve Mount, 30 USgal Skid	01149	1
5	Frame, SM0030	01146	1
6	U-bolt, ¼NCx1sqx2, Pld	01049	2
7	Washer, Flat, #10, Pld	01183	4
8	Machine Screw, #10-24 x ¾	01152	4
9	Tube Plug, Square, 1"	01056	4
10	Nut, Nylock, 3/8NC, Pld	00956	2
11	Clamp, Saddle, 3/8NC	01172	1
12	Serial Plate, Aluminum	01398	1
13	Washer, Lock, ¼, Pld	05567	4
14	Bolt, ¼NC x ½, Pld	01185	4
15	Decal, "ROGERS", Red	08186	1

Plumbing Assembly, 30 Gallon Skid Mount



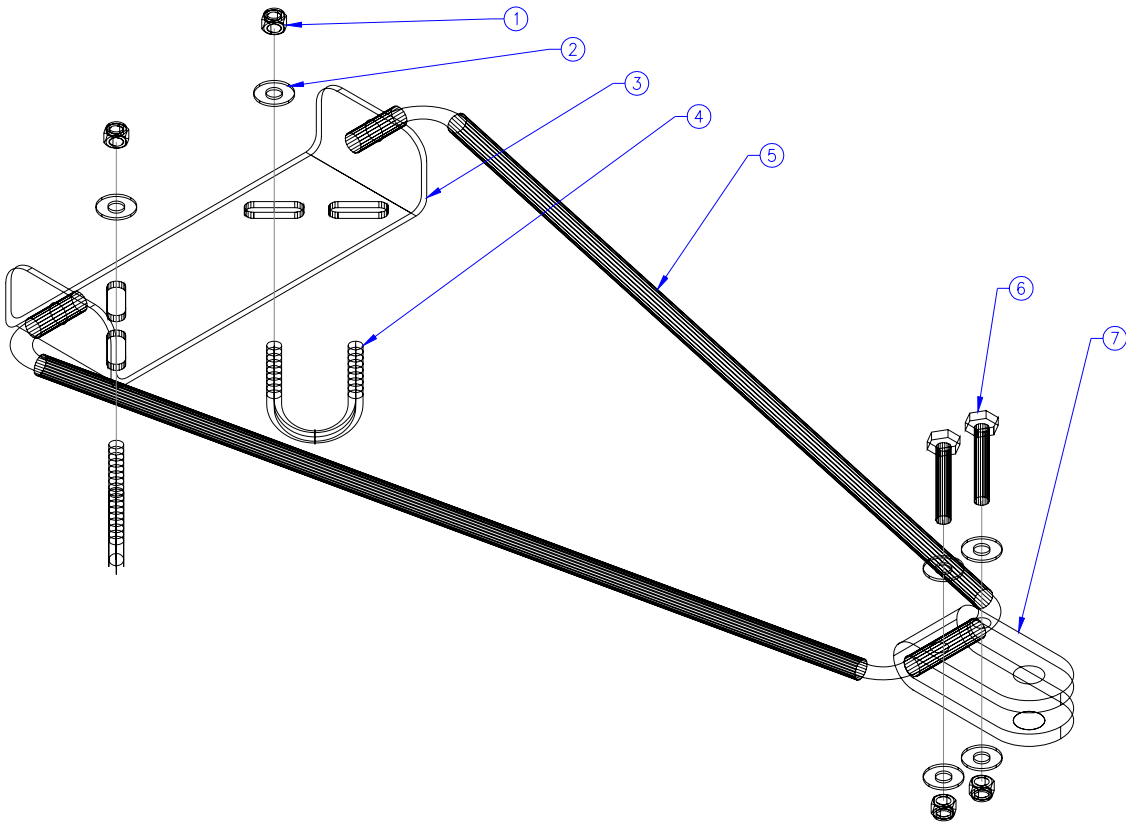
Item	Description	Part #	Qty
1	Tank, Rectangular, 30USgal	00879	1
2	Poly, Elbow, ½MNPT x ½HB	01235	2
3	Hose, Red, ½", 300psi	10702	1
4	Poly, Elbow, ¾MNPT x ½HB	01243	1
5	Pressure Regulator, 0 - 100 PSI	01279	1
6	Valve, Poly, Manual Boom Control	01209	1
7	Pressure Gauge	01281	1
8	Hose, Red, ½, 300psi	05333	1
9	Poly, Elbow, 3/8MNPT x ½HB	01247	1
10	Brass, Quick Coupler, 3/8FNPT	01287	1
11	Brass, Quick Coupler, 3/8MNPT	01288	1
12	Hose, Red, ½, 300psi	05331	1
13	Pump, 12Volt ,3.7gpm max, 45psi max	01280	1
14	Hose, Red, ½, 300psi	05349	1
15	Line Strainer, 100 Mesh Screen	01252	1
16	Poly, Nipple, ¾MNPT/MNPT, Hex	01193	1
17	Poly Ball Valve, ¾FPT	01250	1
18	Hose, Red, ½, 300psi	07199	1
19	Poly, Adapter, ½MNPT x ½HB	05527	1
20	Poly, Adapter, 3/8MNPT x ½HB	01206	1
21	Brass, Quick Coupler, 3/8M/FNPT	01289	1
22	Brass, Quick Coupler, 3/8F/MNPT	01211	1
23	Spray Tip, 8002API, Flat Fan, 50 mesh	12422	3
24	Hose Clamp, Gear, HS-12	01091	6
25	Hose Clamp, Plastic, SNP-16	01092	5
26	Nytie, Black UV	00974	5
27	Pump Repair Kit	12375	0

Electrical Assembly, 30 Gallon Skid Mount



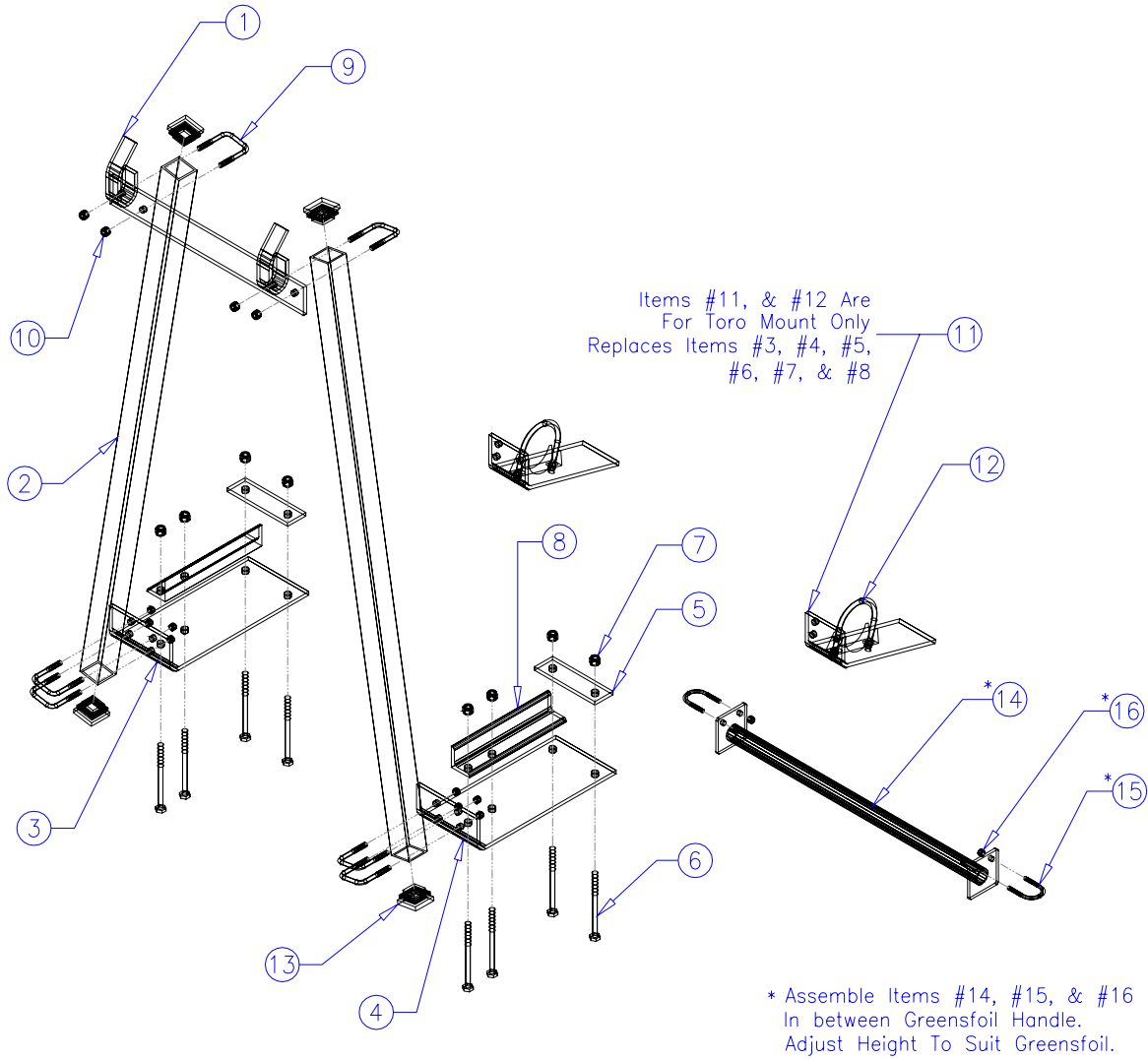
Item	Description	Part #	Qty
1	Ring Connector, 14-16Ga, Insulated	01291	2
2	Fuse Holder, Blade Type w/ 30Amp Fuse	01268	1
4	Wire, 14Ga Stranded, Black	01771	1
5	Weather-Pak Connector Kit, 2 Male/Female	11823	2
10	Cable, 14/2, Black, Rubber Jacketed	01406	1
11	Ring Connector, 1/4/16Ga, 0.17"	01303	2
12	Switch, 15 Amp, Toggle, Single Pole/Throw	01405	1

Tow Hitch General Assembly



Item	Description	Part #	Quantity
1	Nut, Nylock, ¼NC, Pld	00968	6
2	Washer, Flat, ¼, Pld	01157	8
3	Pivot, Greensfoil Tow Hitch	02777	1
4	U-bolt, ¼NCx1 1/8rdx2, Pld	05111	2
5	Floating Hitch	02775	1
6	Bolt, ¼NC x 1 ½, Pld	05406	2
7	Clevis	02774	1

Transport Mount General Assembly



Item	Description	Part #	Quantity
1	Front Plate Weldment	02616	1
2	HSS, 1 ½sqX0.125	01125	2
3	Right Tube Bracket	01127R	1
4	Left Tube Bracket	01127L	1
5	Backing Flat	01128	2
6	Bolt, 3/8NC x 4 ½, Pld	01138	8
7	Nut, Nylock, 3/8NC, Pld	00956	8
8	Left Lock Tab	02617L	1
8	Right Lock Tab	02617R	1
9	U-bolt, 5/16NCx1 ½sqx2 ½, Pld	12393	6
10	Nut, Nylock, 5/16NC, Pld	00969	12
11	Left Toro Mount	02618L	0
11	Right Toro Mount	02618R	0
12	Saddle Clamp, 3/8NC x 2 ½ x 3 ½	01172	0
13	Tube Plug, Square, 1½"	01057	4
14	Handle Cross Support	02019	1
15	U-bolt, ¼NCx1 1/8rdx2, Pld	05111	2
16	Nut, Nylock, ¼NC, Pld	00968	4