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Windfoil Drift Containment Sprayer EcoFoil

EF1000, EF1500, EF2000

Assembly and Operations Manual



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 turf canopy, breaking the seal between the curtain and the turf.

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 themselves with the operating instructions of the sprayer.

Nozzles

The *EcoFoil* is equipped with conventional 110° spray tips, spaced at 20 ". Tips are mounted with self-aligning ¼ turn caps for easy removal or change. Use the provided application rate tables to determine application rate.

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. 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.

Winterizing

Flush with clean water. 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. Store the sprayer in a reasonably clean and dry building.

Assembly

There is more than one way to successfully assemble your *EcoFoil* walk behind hose fed sprayer. 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.

Required Tools & Parts or Acceptable Substitute

- ✓ Assorted parts bag
- ✓ Retaining clip pliers
- ✓ 7/16" Open end wrench or Crescent wrench
- ✓ 7/16" Socket and driver or second 7/16" wrench
- ✓ #2 Robertson screwdriver or standard flathead screwdriver
- ✓ 7/8" Open end wrench or Crescent wrench
- ✓ Utility knife
- ✓ Silicone spray lubricant or other lubricant/moisture source
- ✓ Teflon tape
- ✓ Socket extension (Optional)

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

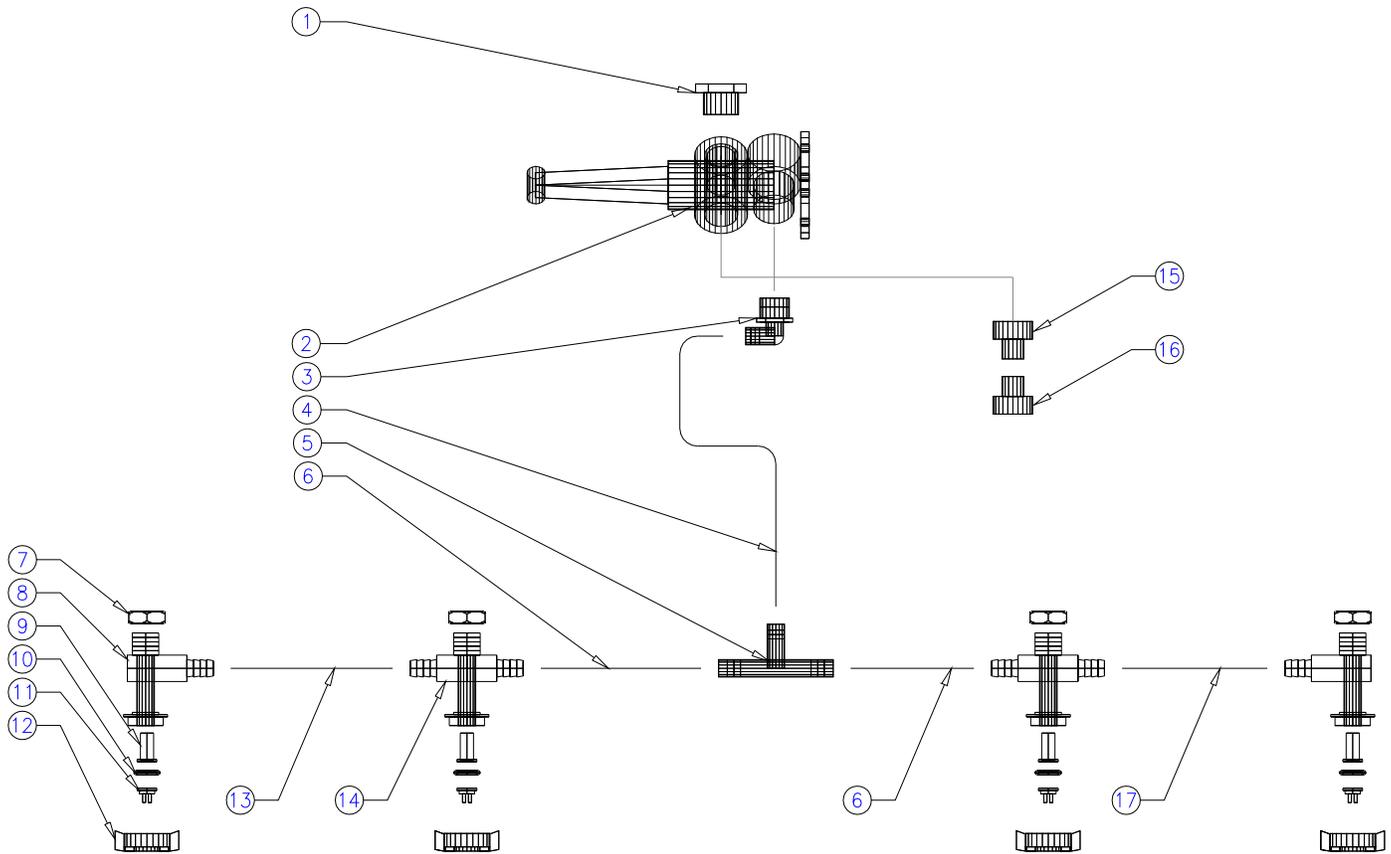
- ⇒ **Avoid kinking or warping the airfoil as this will degrade sprayer performance.**
- ⇒ Remove the, (2) outermost, 11/16" nozzle retaining nuts. There are, (4) found on top of the sprayer shroud (EF2000).
- ⇒ Place the airfoil support brackets in place of the retaining nut, with the top of the support 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.**

Hose attachment.

- ⇒ Spray inside the end of the *hose* to be connected with silicone spray lubricant, or moisten, to ease application over fittings.
- ⇒ 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.

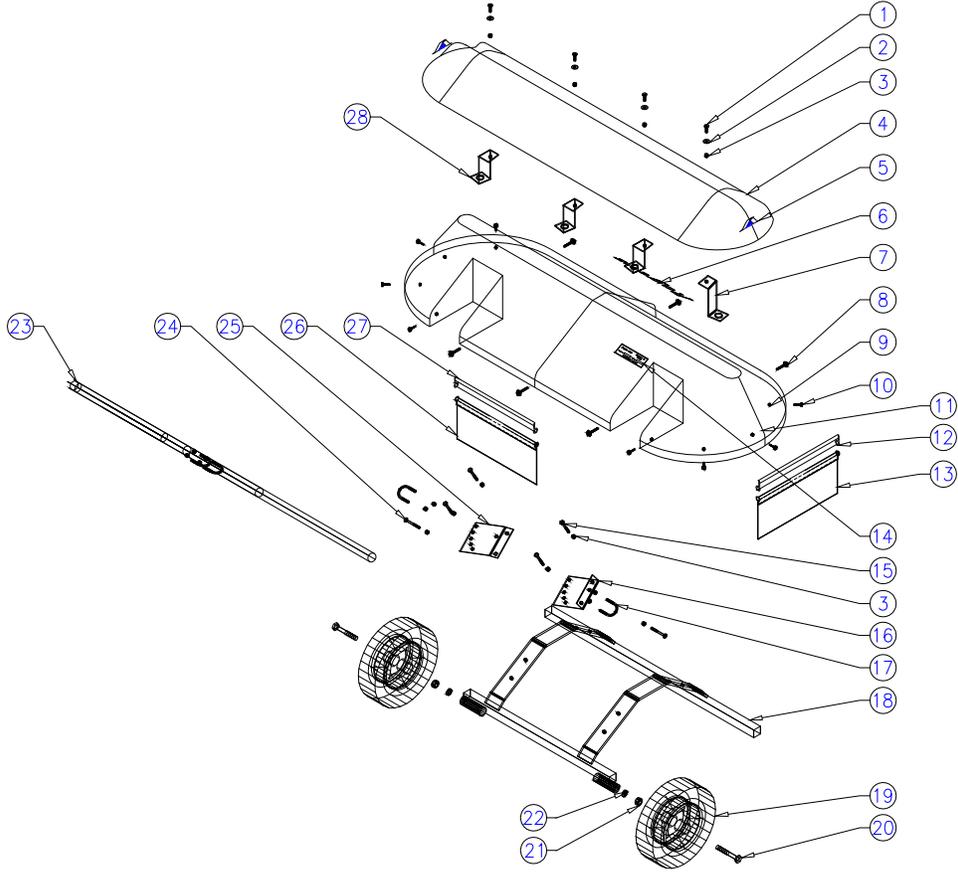
Last Check

- ⇒ Recheck all assembled parts for completeness and secure connections.
- ⇒ Your sprayer is now ready for a wet test, to ensure complete operation.



Plumbing Assembly, Ecofoil Series

| Item | Part # | Description | QTY | | |
|------|--------|--|--------|--------|--------|
| | | | EF1000 | EF1500 | EF2000 |
| 1 | 05916 | Ftg,Poly,Plug, 3/4MNPT, Hex | 1 | 1 | 1 |
| 2 | 01209 | Valve Manual Boom Control | 1 | 1 | 1 |
| 3 | 05527 | Ftg,Poly,Adpt, 1/2MNPT x 1/2HB | 1 | 1 | 1 |
| 4 | 12477 | Hose,Red,1/2x45,300psi | 1 | 1 | 1 |
| 5 | 05816 | Ftg,Nyl,Tee, 1/2HB/HB/HB | 1 | 1 | 1 |
| 6 | 05352 | Hose,Red,1/2x9,300psi | 2 | 2 | 2 |
| 7 | 12362 | Nut, Brs, 11/16 | 2 | 3 | 4 |
| 8 | 04897 | Noz Body,L Type,1/2HB,Delavan | 2 | 2 | 2 |
| 9 | 05969 | Screen,Tip, 100 Mesh, Check Valve, Ball | 2 | 3 | 4 |
| 10 | 00828 | Seal, EPDM, 3/4,for 3/4" Cap Fitting | 2 | 3 | 4 |
| 11 | 05862 | Tip,Spray, 11001VS, Flat Fan,0.1USGPM | 2 | 3 | 4 |
| 12 | 00826 | Ftg,Poly,Cap,Noz,Delavan, 1/2FNPT, Self Aligning, LF | 2 | 3 | 4 |
| 13 | 06178 | Hose,Red,1/2X18,300psi | N/A | 1 | 2 |
| 14 | 04898 | Noz Body,Tee,1/2HB,Delavan | N/A | 1 | 2 |
| 15 | 11093 | Ftg,Poly,Rdcr, 3/4MNPT x 3/8FNPT | 1 | 1 | 1 |
| 16 | 04661 | Ftg,Brs,Adpt, 3/4FGHT x 3/8MNPT | 1 | 1 | 1 |
| 17 | 01092 | Clamp, Hose, Plstc, Bk, SNP-16 | 6 | 8 | 10 |



General Assembly, Ecofoil

| Item | Part # | Description | Qty | Item | Part # | Description | Qty |
|------|--------|---|-----|------|--------|---|-----|
| 1 | 01154 | Bolt, 1/4NC x 3/4, Pld (EF1000/1500) | 2 | 14 | 01398 | Pl,Serial,RogersTypable Aluminum | 1 |
| 1 | 01154 | Bolt, 1/4NC x 3/4, Pld (EF2000) | 4 | 15 | 01164 | Bolt, 1/4NC x 1, Pld | 4 |
| 2 | 01157 | Wshr, Flat, 1/4, Pld (EF100/1500) | 2 | 16 | 12001R | Handle Mt,R,1/8x3 7/16x6 15/16 | 1 |
| 2 | 01157 | Wshr, Flat, 1/4, Pld (EF2000) | 4 | 17 | 05111 | Ublt,1/4NCx1 1/8rdx2,Pld | 2 |
| 3 | 00968 | Nut, Nylock, 1/4NC, Pld (EF1000/1500) | 12 | 18 | 02635 | Frame, EF1000 | 1 |
| 3 | 00968 | Nut, Nylock, 1/4NC, Pld (EF2000) | 14 | 18 | 00388 | Frame, EF1500 | 1 |
| 4 | 12945 | Airfoil, Poly, White,40" (EF1000) | 1 | 18 | 02630 | Frame, EF2000 | 1 |
| 4 | 12946 | Airfoil, Poly, White,60" (EF1500) | 1 | 19 | 04550 | Whl Assy,9 3/4x3,cw Brgs, | 2 |
| 4 | 12947 | Airfoil, Poly, White,80" (EF2000) | 1 | 20 | 05456 | Bolt, 5/8NC x 4, Pld | 2 |
| 5 | 01396 | Dcl, "Windfoil" Logo | 2 | 21 | 01313 | Nut, 5/8NC, Pld | 2 |
| 6 | 01397 | Dcl, "ROGERS", White, | 1 | 22 | 07619 | Wshr, Flat SAE, 5/8, Pld | 2 |
| 7 | 00721R | Airfoil, Standoff, RT, Al (EF1000/1500) | 1 | 23 | 02639 | Handle,EF1000/1500/2000 | 1 |
| 7 | 00721R | Airfoil, Standoff, RT, Al (EF1000/1500) | 2 | 24 | 05406 | Bolt, 1/4NC x 1 1/2, Pld | 2 |
| 8 | 01156 | Scr, TEK, #12 x 1 1/4 (EF1000/1500) | 11 | 25 | 12001L | Handle Mt,Left,1/8x3 7/16x6 15/16 | 1 |
| 8 | 01156 | Scr, TEK, #12 x 1 1/4 (EF2000) | 15 | 26 | 02976 | Curtain, Blue, 5 1/2 x 22 1/2 (EF1000) | 1 |
| 9 | 01153 | Nut, Nylock, #10, Pld | 6 | 26 | 06260 | Curtain, Blue, 5 1/2 x 42 1/2 (EF1500) | 1 |
| 10 | 01152 | Scr, Mach, C, #10-24 x 3/4Truss Head | 6 | 26 | 02977 | Curtain, Blue, 5 1/2 x 57 (EF1000) | 1 |
| 11 | 01479 | Shroud,LP,Red,40,Drilled,EF1000 | 1 | 27 | 02550 | Curtain Hanger, 22 1/2 (EF1500) | 1 |
| 11 | 07226 | Shroud,LP,Red,60,Drilled,EF1500 | 1 | 27 | 06264 | Curtain Hanger, 42 1/2 (EF2000) | 1 |
| 11 | 12322 | Shroud,LP,Red,80,Drilled,EF2000 | 1 | 27 | 02559 | Curtain Hanger, 57Lg | 1 |
| 12 | 02566 | Curtain Hanger, 91Lg (EF1000) | 1 | 28 | 00721L | Airfoil, Standoff, Left, Al (EF1000/1500) | 1 |
| 12 | 06263 | Curtain Hanger, 111Lg (EF1500) | 1 | 28 | 00721L | Airfoil, Standoff, Left, Al (EF2000) | 2 |
| 12 | 02544 | Curtain Hanger, 140Lg (EF2000) | 1 | 29 | 01305 | Nytie,Bk UV,3/16x12 | 1 |
| 13 | 02980 | Curtain, Blue, 5 1/2 x 91 (EF1000) | 1 | 30 | 12341 | Dcl, Airfoil, "Front & Back" | 1 |
| 13 | 06259 | Curtain, Blue, 5 1/2 x 111 (EF1500) | 1 | | | | |
| 13 | 02975 | Curtain, Blue, 5 1/2 x 140 (EF2000) | 1 | | | | |