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# FY325 / FY425

## Heavy Duty Farm Yard Sprayer

(3 and 4 Nozzle, 25 USG Tank)




## Assembly, Parts and Operator's Manual

Version FY-1603

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# 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.

Spray only chemicals that the unit was designed for, (ie turf application). Do not use products for which the unit was not designed, (ie PAINT, sealants, cleaning fluids, dust inhibitors, ice surfaces).

### Minimize Chemical Drift

The **Windfoil** sprayer was designed in a wind tunnel to control air flow around and behind the sprayer minimizing drift to allow safer 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 ground 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.

Your **Windfoil** Drift Containment Spray System (DCSS) comes standard with stainless steel insert tips.

The FY Sprayer is equipped with 80º spray tips, spaced at 16". Tips are mounted with self-aligning ¼ turn caps for easy removal or change.

Check the flow rate from all nozzles using the capacity calibration technique; see the Calibration section for tables and instructions. Use clean filtered water for all calibration testing. Adjust the sprayer pressure to get the proper flow rate. The flow meter is 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 (3 bar), for example a 8004 tip at 40 psi (3 bar) delivers 0.4 US gal/min (1.5 litres/min) . Only conventional 80° tips are recommended for the **Windfoil FY** series. Wider angle tips (110°) have a wider pattern than 80° and will hit the curtain at the ends of the boom 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 effective orifice size and pressure. Spray tip manufacturers have supplied tables of nozzle application rates at various pressures, for the best results it is recommended that you follow these guidelines.

The rule of thumb is that as you increase the pressure to your unit the average droplet size decreases. Normally with conventional open boom sprayers large droplets are used to control drift but large droplets can roll off plants without sticking. With the **Windfoil** covered spray system you will be able spray with smaller droplets, increase coverage and not worry about drift.

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.

Typically, 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 approximately 15 psi (1 bar) 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.

To check for defective check valves when the spraying stop control has been actuated, the volume that drips from each nozzle should not exceed 2ml timed over a 5 minute period. The measuring is to start 8 seconds after the flow to the spray boom is shut off.

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 I nstalling caps on the diaphragm nozzle body assembly with the tip screens.

Non-aligning caps are also available for special tips.

## Calibration

As a tip wears recalibration may be required. 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 X distance.

**Table 1:** Time in Seconds to Travel Distance of:

| | 10 | 25 | 50 | 100 | 200 |
|---|---|---|---|---|---|
| mph | (ft) | (ft) | (ft) | (ft) | (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 2:** Time in Seconds to Travel a Distance of:

| | 10 | 25 | 50 | 100 | 200 |
|---|---|---|---|---|---|
| Km/h | (m) | (m) | (m) | (m) | (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.

# General Maintenance

## Cleaning

Sprayers need to be cleaned to prevent corrosion and cross contamination of chemicals. 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 gum deposits. If you spray crops that are very susceptible to injury from the last chemical used (ie 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. If you plan to use the same material over several days most chemicals may be kept in the tank overnight, labels on the chemical 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 a respirator, rubber gloves, or other protective gear as may be directed by label instructions.

If a nozzle becomes blocked, turn the sprayer off. Note that the spray lines could still be pressurized therefore prior to removing the cap on the nozzle body, proper safety equipment should be worn, (ie gloves, eye protection, etc).

### 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 (7-19 litres) 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.

## Operation

With the unit fully assembled, attach the battery clips to the battery on your power unit. (be sure that the toggle switch bar is off, pump should not run once clips are on battery). (NOTE: red clip is for positive post on battery). With liquid in the tank, loosen the pressure regulator fully, ie loosen lock nut on the regulator and turn top knob on pressure regulator counter clockwise. Next turn unit on by flipping the switch on, slowly tighten pressure regulator (turn clockwise) until pressure on gauge rises to 40 psi (3 bar). (NOTE: to obtain optimum pattern, you should always try and operate your spray nozzles as close to 40 psi (3bar) as possible). Due to losses in the system you might want to run your system at 42-43 psi, this should give you close to 40 psi at the tip. (NOTE: Be careful not to run the pump on an empty tank, this could cause a vapour lock in the system. To fix the problem, make sure there is something in the tank, remove the output supply hose on the pump and start the system, take precautions as your chemical will start coming through the pump, once the liquid starts flowing shut the system off, reconnect the line and continue spraying). Watch the ball in the flow indicator as you spray, If the ball is not floating it indicates tips that are plugged or partially plugged. Check and clean the appropriate tip(s). If the ball is right at the top, the flow rate is too high. Replace the ball with the required ball for the tips (see the flow monitor page).

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.

Note: As this is a self contained sprayer with a small tank and does not have a separate fresh water tank, it is recommended that when filling and working with chemicals a fresh water supply is always kept in close proximity for safety reasons.

## Farm Yard Tip Ranges for Pumps

| BOOM | PUMP Part # | PUMP Description | Open Flow (gpm) | TIPS (80 degree only) 8001 | 80015 | 8002 | 8003 | 8004 | 8005 | 8006 |
|---|---|---|---|---|---|---|---|---|---|---|
| FY325 | 14498 | STANDARD DEL | 2.0 | YES | YES | YES | YES | NO | NO | NO |
| FY325HF | 14181 | HIGH FLOW DEL | 5.0 | YES | YES | YES | YES | YES | YES | YES |
| SPRAY TIME TO EMPTY(MINUTES) | | | | 83 | 56 | 42 | 28 | 21 | 17 | 14 |

| FY BOOM | PUMP Part # | PUMP Description | FLOW (gpm) | TIPS (80 degree only) 8001 | 80015 | 8002 | 8003 | 8004 | 8005 | 8006 |
|---|---|---|---|---|---|---|---|---|---|---|
| FY425 | 14498 | STANDARD DEL | 2.0 | YES | YES | YES | NO | NO | NO | NO |
| FY425HF | 14181 | HIGH FLOW DEL | 5.0 | YES | YES | YES | YES | YES | YES | NO |
| SPRAY TIME TO EMPTY(MINUTES) | | | | 63 | 42 | 31 | 21 | 16 | 13 | N/A |

## Metric Application Rates at 16" Nozzle Spacing (0.5 meters)
## 80 Degree Tips

| Rogers Part # | Tip Number | Tip Mfg | Liquid Press psi | Liquid Press bars | Cap /noz. gpm | Cap /noz. lpm | U. S. GALLONS PER ACRE 2.5 mph | 3 mph | 4 mph | 5 mph | 7 mph | Liters/Hectare 4 kph | 4.8 kph | 6.4 kph | 8 kph | 11.2 kph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01369 | 8001VS 100 mesh | Teejet | 30 | 2.07 | 0.087 | 0.328 | 12.9 | 10.7 | 8.0 | 6.4 | 4.6 | 120 | 100 | 75 | 60 | 43 |
| | | | 40 | 2.76 | 0.100 | 0.379 | 14.9 | 12.4 | 9.3 | 7.4 | 5.3 | 139 | 116 | 87 | 69 | 50 |
| | | | 50 | 3.45 | 0.112 | 0.423 | 16.6 | 13.8 | 10.4 | 8.3 | 5.9 | 155 | 129 | 97 | 78 | 55 |
| | | | 60 | 4.14 | 0.122 | 0.464 | 18.2 | 15.2 | 11.4 | 9.1 | 6.5 | 170 | 142 | 106 | 85 | 61 |
| 00827 | 80015VS or | Teejet | 30 | 2.07 | 0.130 | 0.492 | 19.3 | 16.1 | 12.1 | 9.6 | 6.9 | 180 | 150 | 113 | 90 | 64 |
| | | | 40 | 2.76 | 0.150 | 0.568 | 22.3 | 18.6 | 13.9 | 11.1 | 8.0 | 208 | 174 | 130 | 104 | 74 |
| 15287 | AXI-80015 | Albuz | 50 | 3.45 | 0.168 | 0.635 | 24.9 | 20.8 | 15.6 | 12.5 | 8.9 | 233 | 194 | 146 | 116 | 83 |
| | 100 mesh | | 60 | 4.14 | 0.184 | 0.695 | 27.3 | 22.7 | 17.1 | 13.6 | 9.7 | 255 | 213 | 159 | 128 | 91 |
| 05876 | 8002VS or | Teejet | 30 | 2.07 | 0.173 | 0.656 | 25.7 | 21.4 | 16.1 | 12.9 | 9.2 | 240 | 200 | 150 | 120 | 86 |
| | | | 40 | 2.76 | 0.200 | 0.757 | 29.7 | 24.8 | 18.6 | 14.9 | 10.6 | 278 | 231 | 174 | 139 | 99 |
| 14384 | AXI-8002 | Albuz | 50 | 3.45 | 0.224 | 0.846 | 33.2 | 27.7 | 20.8 | 16.6 | 11.9 | 310 | 259 | 194 | 155 | 111 |
| | 50 mesh | | 60 | 4.14 | 0.245 | 0.927 | 36.4 | 30.3 | 22.7 | 18.2 | 13.0 | 340 | 283 | 213 | 170 | 121 |
| 05877 | 8003VS or | Teejet | 30 | 2.07 | 0.260 | 0.983 | 38.6 | 32.2 | 24.1 | 19.3 | 13.8 | 361 | 301 | 225 | 180 | 129 |
| | | | 40 | 2.76 | 0.300 | 1.136 | 44.6 | 37.1 | 27.8 | 22.3 | 15.9 | 417 | 347 | 260 | 208 | 149 |
| 14385 | AXI-8003 | Albuz | 50 | 3.45 | 0.335 | 1.270 | 49.8 | 41.5 | 31.1 | 24.9 | 17.8 | 466 | 388 | 291 | 233 | 166 |
| | 50 mesh | | 60 | 4.14 | 0.367 | 1.391 | 54.6 | 45.5 | 34.1 | 27.3 | 19.5 | 510 | 425 | 319 | 255 | 182 |
| 05878 | 8004VS or | Teejet | 30 | 2.07 | 0.346 | 1.311 | 51.4 | 42.9 | 32.2 | 25.7 | 18.4 | 481 | 401 | 301 | 240 | 172 |
| | | | 40 | 2.76 | 0.400 | 1.514 | 59.4 | 49.5 | 37.1 | 29.7 | 21.2 | 555 | 463 | 347 | 278 | 198 |
| 14061 | AXI-8004 | Albuz | 50 | 3.45 | 0.447 | 1.693 | 66.4 | 55.3 | 41.5 | 33.2 | 23.7 | 621 | 517 | 388 | 310 | 222 |
| | 50 mesh | | 60 | 4.14 | 0.490 | 1.854 | 72.7 | 60.6 | 45.5 | 36.4 | 26.0 | 680 | 567 | 425 | 340 | 243 |
| 05879 | 8005VS or | Teejet | 30 | 2.07 | 0.433 | 1.639 | 64.3 | 53.6 | 40.2 | 32.2 | 23.0 | 601 | 501 | 376 | 301 | 215 |
| | | | 40 | 2.76 | 0.500 | 1.893 | 74.3 | 61.9 | 46.4 | 37.1 | 26.5 | 694 | 579 | 434 | 347 | 248 |
| 14386 | AXI-8005 | Albuz | 50 | 3.45 | 0.559 | 2.116 | 83.0 | 69.2 | 51.9 | 41.5 | 29.6 | 776 | 647 | 485 | 388 | 277 |
| | 50 mesh | | 60 | 4.14 | 0.612 | 2.318 | 90.9 | 75.8 | 56.8 | 45.5 | 32.5 | 850 | 709 | 531 | 425 | 304 |
| 05880 | 8006VS or | Teejet | 30 | 2.07 | 0.520 | 1.967 | 77.2 | 64.3 | 48.2 | 38.6 | 27.6 | 721 | 601 | 451 | 361 | 258 |
| | | | 40 | 2.76 | 0.600 | 2.271 | 89.1 | 74.3 | 55.7 | 44.6 | 31.8 | 833 | 694 | 521 | 417 | 298 |
| 14387 | AXI-8006 | Albuz | 50 | 3.45 | 0.671 | 2.539 | 99.6 | 83.0 | 62.3 | 49.8 | 35.6 | 931 | 776 | 582 | 466 | 333 |
| | 50 mesh | | 60 | 4.14 | 0.735 | 2.781 | 109.1 | 90.9 | 68.2 | 54.6 | 39.0 | 1020 | 850 | 638 | 510 | 364 |

# Application Rates, 16" Spacing
## 80 Deg. Tips

| Rogers Part # | Tip Number | Liquid Press psi | Capacity 1 nozzle gpm | U. S. GALLONS PER ACRE 2.5 mph | 3 mph | 4 mph | 5 mph | 7 mph | U. S. GALLONS PER 1000 SQ. FT. 2.5 mph | 3 mph | 4 mph | 5 mph | 7 mph | Press bars | LITERS PER 1000 SQ. FT. 2.5 mph | 3 mph | 4 mph | 5 mph | 7 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05872 | 800067SS | 30 | 0.058 | 8.6 | 7.2 | 5.4 | 4.3 | 3.1 | 0.20 | 0.16 | 0.12 | 0.10 | 0.07 | 2.07 | 0.75 | 0.62 | 0.47 | 0.37 | 0.27 |
| | (200 mesh) | 40 | 0.067 | 9.9 | 8.3 | 6.2 | 5.0 | 3.6 | 0.23 | 0.19 | 0.14 | 0.11 | 0.08 | 2.76 | 0.86 | 0.72 | 0.54 | 0.43 | 0.31 |
| | | 50 | 0.075 | 11.1 | 9.3 | 7.0 | 5.6 | 4.0 | 0.25 | 0.21 | 0.16 | 0.13 | 0.09 | 3.45 | 0.96 | 0.80 | 0.60 | 0.48 | 0.34 |
| | | 60 | 0.082 | 12.2 | 10.2 | 7.6 | 6.1 | 4.4 | 0.28 | 0.23 | 0.17 | 0.14 | 0.10 | 4.14 | 1.06 | 0.88 | 0.66 | 0.53 | 0.38 |
| 01369 | 8001VS | 30 | 0.087 | 12.9 | 10.7 | 8.0 | 6.4 | 4.6 | 0.29 | 0.25 | 0.18 | 0.15 | 0.11 | 2.07 | 1.11 | 0.93 | 0.70 | 0.56 | 0.40 |
| | (100 mesh) | 40 | 0.100 | 14.9 | 12.4 | 9.3 | 7.4 | 5.3 | 0.34 | 0.28 | 0.21 | 0.17 | 0.12 | 2.76 | 1.29 | 1.07 | 0.80 | 0.64 | 0.46 |
| | | 50 | 0.112 | 16.6 | 13.8 | 10.4 | 8.3 | 5.9 | 0.38 | 0.32 | 0.24 | 0.19 | 0.14 | 3.45 | 1.44 | 1.20 | 0.90 | 0.72 | 0.51 |
| | | 60 | 0.122 | 18.2 | 15.2 | 11.4 | 9.1 | 6.5 | 0.42 | 0.35 | 0.26 | 0.21 | 0.15 | 4.14 | 1.58 | 1.31 | 0.99 | 0.79 | 0.56 |
| 00827 | 80015VS | 30 | 0.130 | 19.3 | 16.1 | 12.1 | 9.6 | 6.9 | 0.44 | 0.37 | 0.28 | 0.22 | 0.16 | 2.07 | 1.67 | 1.39 | 1.04 | 0.84 | 0.60 |
| | or | 40 | 0.150 | 22.3 | 18.6 | 13.9 | 11.1 | 8.0 | 0.51 | 0.43 | 0.32 | 0.26 | 0.18 | 2.76 | 1.93 | 1.61 | 1.21 | 0.97 | 0.69 |
| 15287 | AXI-80015 | 50 | 0.168 | 24.9 | 20.8 | 15.6 | 12.5 | 8.9 | 0.57 | 0.48 | 0.36 | 0.29 | 0.20 | 3.45 | 2.16 | 1.80 | 1.35 | 1.08 | 0.77 |
| | (100 mesh) | 60 | 0.184 | 27.3 | 22.7 | 17.1 | 13.6 | 9.7 | 0.62 | 0.52 | 0.39 | 0.31 | 0.22 | 4.14 | 2.36 | 1.97 | 1.48 | 1.18 | 0.84 |
| 05876 | 8002VS | 30 | 0.173 | 25.7 | 21.4 | 16.1 | 12.9 | 9.2 | 0.59 | 0.49 | 0.37 | 0.29 | 0.21 | 2.07 | 2.23 | 1.86 | 1.39 | 1.11 | 0.80 |
| | or | 40 | 0.200 | 29.7 | 24.8 | 18.6 | 14.9 | 10.6 | 0.68 | 0.57 | 0.43 | 0.34 | 0.24 | 2.76 | 2.57 | 2.14 | 1.61 | 1.29 | 0.92 |
| 14384 | AXI-8002 | 50 | 0.224 | 33.2 | 27.7 | 20.8 | 16.6 | 11.9 | 0.76 | 0.63 | 0.48 | 0.38 | 0.27 | 3.45 | 2.88 | 2.40 | 1.80 | 1.44 | 1.03 |
| | (50 mesh) | 60 | 0.245 | 36.4 | 30.3 | 22.7 | 18.2 | 13.0 | 0.83 | 0.69 | 0.52 | 0.42 | 0.30 | 4.14 | 3.15 | 2.63 | 1.97 | 1.58 | 1.13 |
| 05877 | 8003VS | 30 | 0.260 | 38.6 | 32.2 | 24.1 | 19.3 | 13.8 | 0.88 | 0.74 | 0.55 | 0.44 | 0.32 | 2.07 | 3.34 | 2.79 | 2.09 | 1.67 | 1.19 |
| | or | 40 | 0.300 | 44.6 | 37.1 | 27.8 | 22.3 | 15.9 | 1.02 | 0.85 | 0.64 | 0.51 | 0.36 | 2.76 | 3.86 | 3.22 | 2.41 | 1.93 | 1.38 |
| 14385 | AXI-8003 | 50 | 0.335 | 49.8 | 41.5 | 31.1 | 24.9 | 17.8 | 1.14 | 0.95 | 0.71 | 0.57 | 0.41 | 3.45 | 4.32 | 3.60 | 2.70 | 2.16 | 1.54 |
| | (50 mesh) | 60 | 0.367 | 54.6 | 45.5 | 34.1 | 27.3 | 19.5 | 1.25 | 1.04 | 0.78 | 0.62 | 0.45 | 4.14 | 4.73 | 3.94 | 2.96 | 2.36 | 1.69 |
| 05878 | 8004VS | 30 | 0.346 | 51.4 | 42.9 | 32.2 | 25.7 | 18.4 | 1.18 | 0.98 | 0.74 | 0.59 | 0.42 | 2.07 | 4.46 | 3.71 | 2.79 | 2.23 | 1.59 |
| | or | 40 | 0.400 | 59.4 | 49.5 | 37.1 | 29.7 | 21.2 | 1.36 | 1.13 | 0.85 | 0.68 | 0.49 | 2.76 | 5.15 | 4.29 | 3.22 | 2.57 | 1.84 |
| 14061 | AXI-8004 | 50 | 0.447 | 66.4 | 55.3 | 41.5 | 33.2 | 23.7 | 1.52 | 1.27 | 0.95 | 0.76 | 0.54 | 3.45 | 5.76 | 4.80 | 3.60 | 2.88 | 2.06 |
| | (50 mesh) | 60 | 0.490 | 72.7 | 60.6 | 45.5 | 36.4 | 26.0 | 1.67 | 1.39 | 1.04 | 0.83 | 0.59 | 4.14 | 6.30 | 5.25 | 3.94 | 3.15 | 2.25 |
| 05879 | 8005VS | 30 | 0.433 | 64.3 | 53.6 | 40.2 | 32.2 | 23.0 | 1.47 | 1.23 | 0.92 | 0.74 | 0.53 | 2.07 | 5.57 | 4.64 | 3.48 | 2.79 | 1.99 |
| | or | 40 | 0.500 | 74.3 | 61.9 | 46.4 | 37.1 | 26.5 | 1.70 | 1.42 | 1.06 | 0.85 | 0.61 | 2.76 | 6.43 | 5.36 | 4.02 | 3.22 | 2.30 |
| 14386 | AXI-8005 | 50 | 0.559 | 83.0 | 69.2 | 51.9 | 41.5 | 29.6 | 1.90 | 1.58 | 1.19 | 0.95 | 0.68 | 3.45 | 7.19 | 5.99 | 4.50 | 3.60 | 2.57 |
| | (50 mesh) | 60 | 0.612 | 90.9 | 75.8 | 56.8 | 45.5 | 32.5 | 2.08 | 1.74 | 1.30 | 1.04 | 0.74 | 4.14 | 7.88 | 6.57 | 4.93 | 3.94 | 2.81 |
| 05880 | 8006VS | 30 | 0.520 | 77.2 | 64.3 | 48.2 | 38.6 | 27.6 | 1.77 | 1.47 | 1.10 | 0.88 | 0.63 | 2.07 | 6.69 | 5.57 | 4.18 | 3.34 | 2.39 |
| | or | 40 | 0.600 | 89.1 | 74.3 | 55.7 | 44.6 | 31.8 | 2.04 | 1.70 | 1.28 | 1.02 | 0.73 | 2.76 | 7.72 | 6.43 | 4.83 | 3.86 | 2.76 |
| 14387 | AXI-8006 | 50 | 0.671 | 99.6 | 83.0 | 62.3 | 49.8 | 35.6 | 2.28 | 1.90 | 1.43 | 1.14 | 0.81 | 3.45 | 8.63 | 7.19 | 5.40 | 4.32 | 3.08 |
| | (50 mesh) | 60 | 0.735 | 109.1 | 90.9 | 68.2 | 54.6 | 39.0 | 2.50 | 2.08 | 1.56 | 1.25 | 0.89 | 4.14 | 9.46 | 7.88 | 5.91 | 4.73 | 3.38 |




**Figure 1: Wheel assembly**

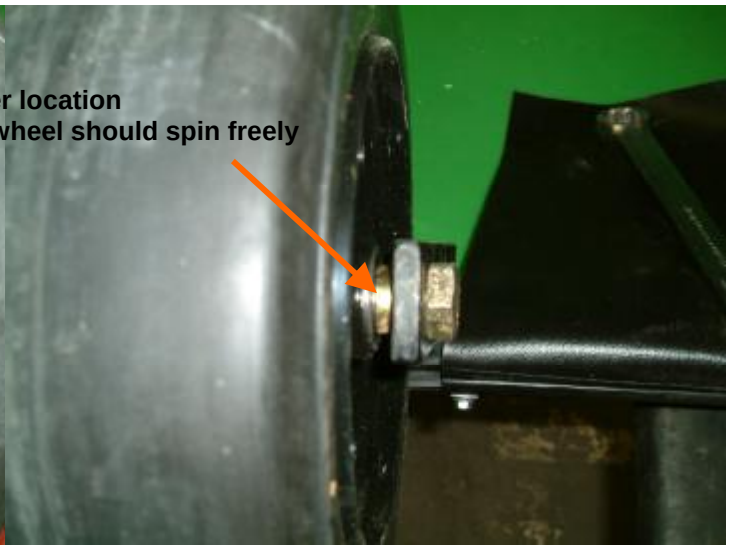


**Figure 2: Wheel assembly**

First take components out of box. With boom upside down on saw horses or table install wheel assemblies. Return to upright position and mount airfoil as shown in figure 3. Take pressure gauge out of box and install on flow monitor. Position flow monitor vertically as shown in figure 4 and connect feed hose. ***** If installing a wand kit see figures 11-16 on pages 10 and 11*****

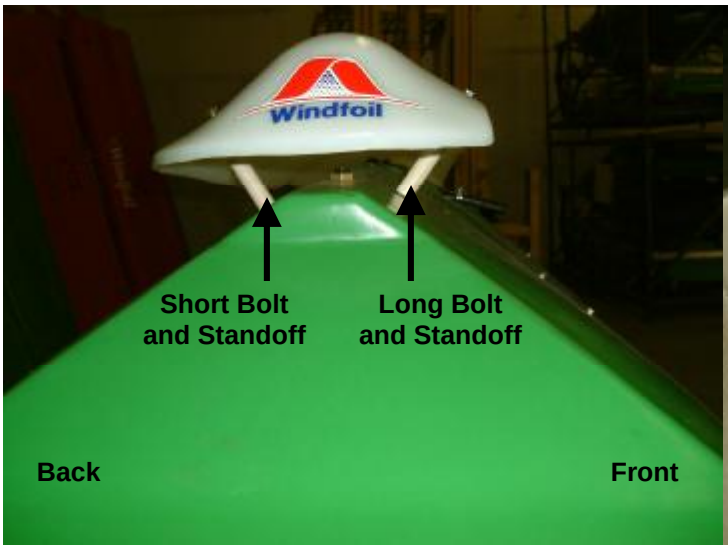



**Figure 3: Airfoil assembly**



**Figure 4: Flow monitor and pressure gauge**



**Figure 5: Mounting hitch on boom**



**Figure 6: Mount tank and secure with strap**



Figure 7: Attaching return line from Pressure Regulator



Figure 8: Attaching feed line from tank to valve



Figure 9: Attaching nozzle feed hose to flow monitor



Figure 10: Main plumbing Assembly

**<u>***The following instructions and pictures are for the installation of the wand kit***</u>**

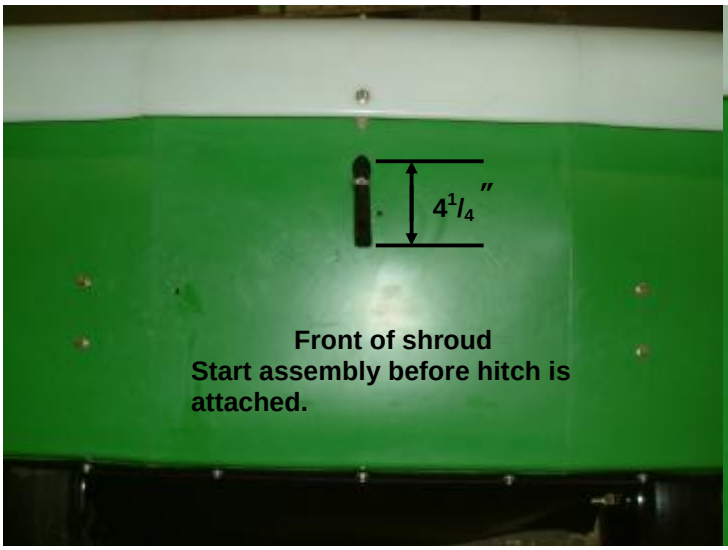



Figure 11: Boom feed hose

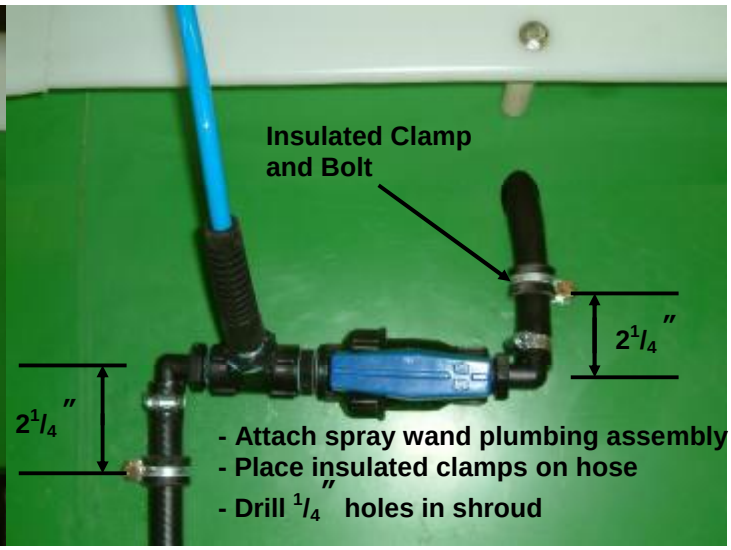



Figure 12: Spray wand plumbing assembly



**Figure 13: Spray wand holding clamps**



**Figure 14: Spray wand holding clamps**

Use existing airfoil mounting bolt to attach insulated clamp for holding spray wand. Position wand so tip is clear from the front of the boom and drill hole for second holding clamp. Now continue with the rest of the assembly from figure 4.

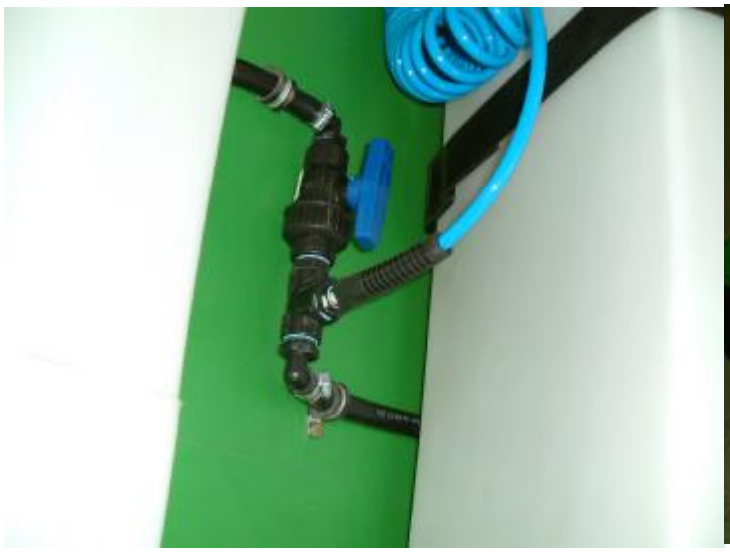


**Figure 15: Assembled FY 425 with wand kit**

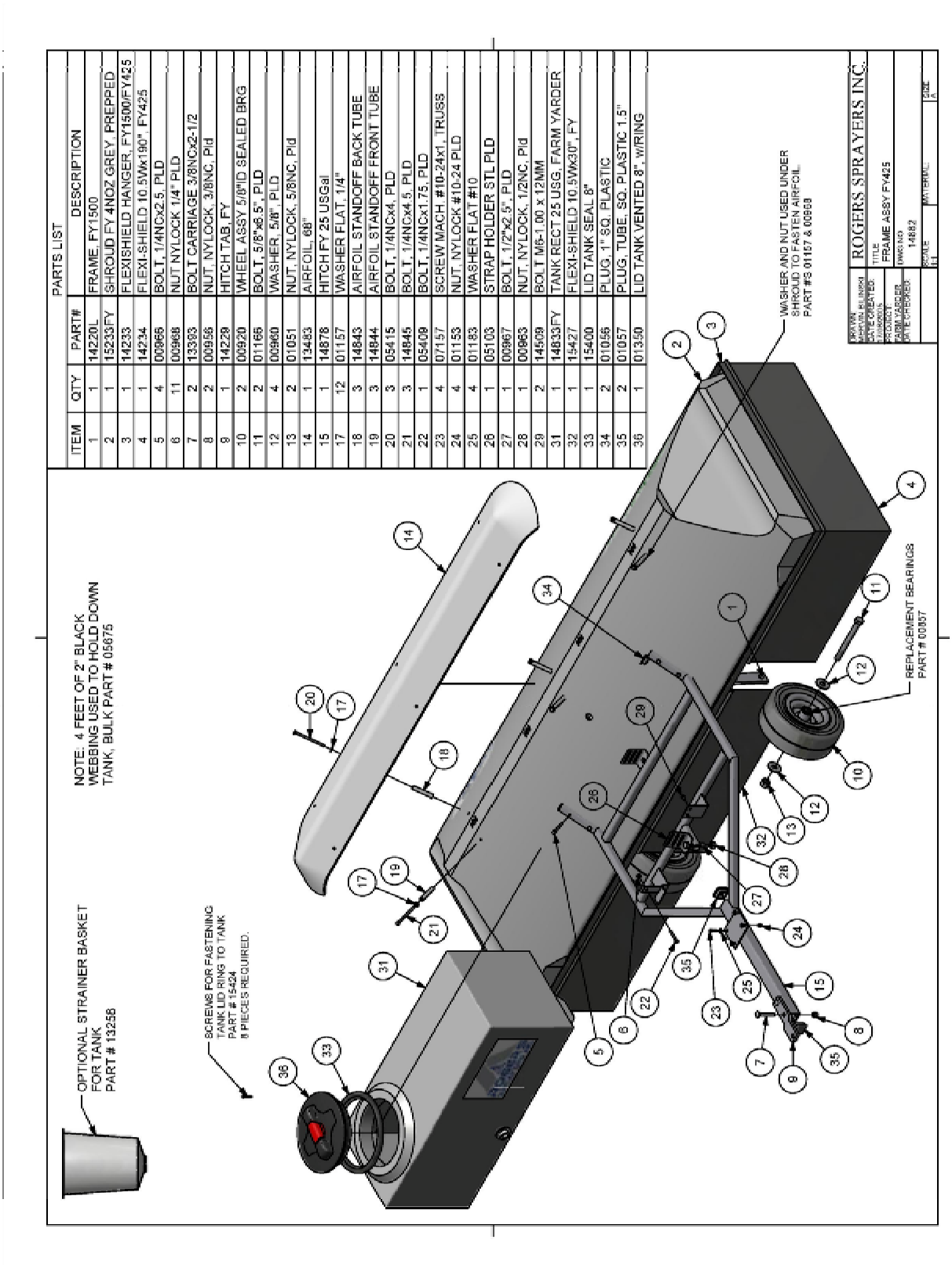


**Figure 16: Assembled FY 425 with wand kit**

Adjust spray wand plumbing assembly if necessary to ensure free movement of valve and wand hose.

**Note: Both FY 425 and FY 325 models use the outer front stand off bolt to mount the clamp for the spray wand**

# FY425 General Assembly Part # 14882



PARTS LIST

| ITEM | QTY | PART# | DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 14220L | FRAME, FY1500 |
| 2 | 1 | 15233FY | SHROUD FY 4NOZ GREY, PREPPED |
| 3 | 1 | 14233 | FLEXISHIELD HANGER, FY1500/FY425 |
| 4 | 1 | 14234 | FLEXI-SHIELD 10.5Wx190", FY425 |
| 5 | 4 | 00966 | BOLT, 1/4NCx2.5, PLD |
| 6 | 11 | 00968 | NUT NYLOCK 1/4" PLD |
| 7 | 2 | 13393 | BOLT CARRIAGE 3/8NCx2-1/2 |
| 8 | 2 | 00956 | NUT, NYLOCK, 3/8NC, Pld |
| 9 | 1 | 14229 | HITCH TAB, FY |
| 10 | 2 | 00920 | WHEEL ASSY 5/8"ID SEALED BRG |
| 11 | 2 | 01166 | BOLT, 5/8"x6.5", PLD |
| 12 | 4 | 00960 | WASHER, 5/8", PLD |
| 13 | 2 | 01051 | NUT, NYLOCK, 5/8NC, Pld |
| 14 | 1 | 13483 | AIRFOIL, 68" |
| 15 | 1 | 14878 | HITCH FY 25 USGal |
| 17 | 12 | 01157 | WASHER FLAT, 1/4" |
| 18 | 3 | 14843 | AIRFOIL STANDOFF BACK TUBE |
| 19 | 3 | 14844 | AIRFOIL STANDOFF FRONT TUBE |
| 20 | 3 | 05415 | BOLT, 1/4NCx4, PLD |
| 21 | 3 | 14845 | BOLT, 1/4NCx4.5, PLD |
| 22 | 1 | 05409 | BOLT, 1/4NCx1.75, PLD |
| 23 | 4 | 07157 | SCREW MACH, #10-24x1, TRUSS |
| 24 | 4 | 01153 | NUT, NYLOCK #10-24 PLD |
| 25 | 4 | 01183 | WASHER FLAT #10 |
| 26 | 1 | 05103 | STRAP HOLDER STL PLD |
| 27 | 1 | 00967 | BOLT, 1/2"x2.5", PLD |
| 28 | 1 | 00963 | NUT, NYLOCK, 1/2NC, Pld |
| 29 | 2 | 14509 | BOLT M6-1.00 x 12MM |
| 31 | 1 | 14833FY | TANK RECT 25 USG, FARM YARDER |
| 32 | 1 | 15427 | FLEXI-SHIELD 10.5Wx30", FY |
| 33 | 1 | 15400 | LID TANK SEAL 8" |
| 34 | 2 | 01056 | PLUG, 1" SQ, PLASTIC |
| 35 | 2 | 01057 | PLUG, TUBE, SQ, PLASTIC 1.5" |
| 36 | 1 | 01350 | LID TANK VENTED 8", w/RING |

NOTE. 4 FEET OF 2" BLACK
WEBBING USED TO HOLD DOWN
TANK, BULK PART # 05675

OPTIONAL STRAINER BASKET
FOR TANK
PART # 13258

SCREWS FOR FASTENING
TANK LID RING TO TANK
PART # 15424
8 PIECES REQUIRED.

WASHER AND NUT USED UNDER
SHROUD TO FASTEN AIRFOIL
PART #'S 01157 & 00968

REPLACEMENT BEARINGS
PART # 00857

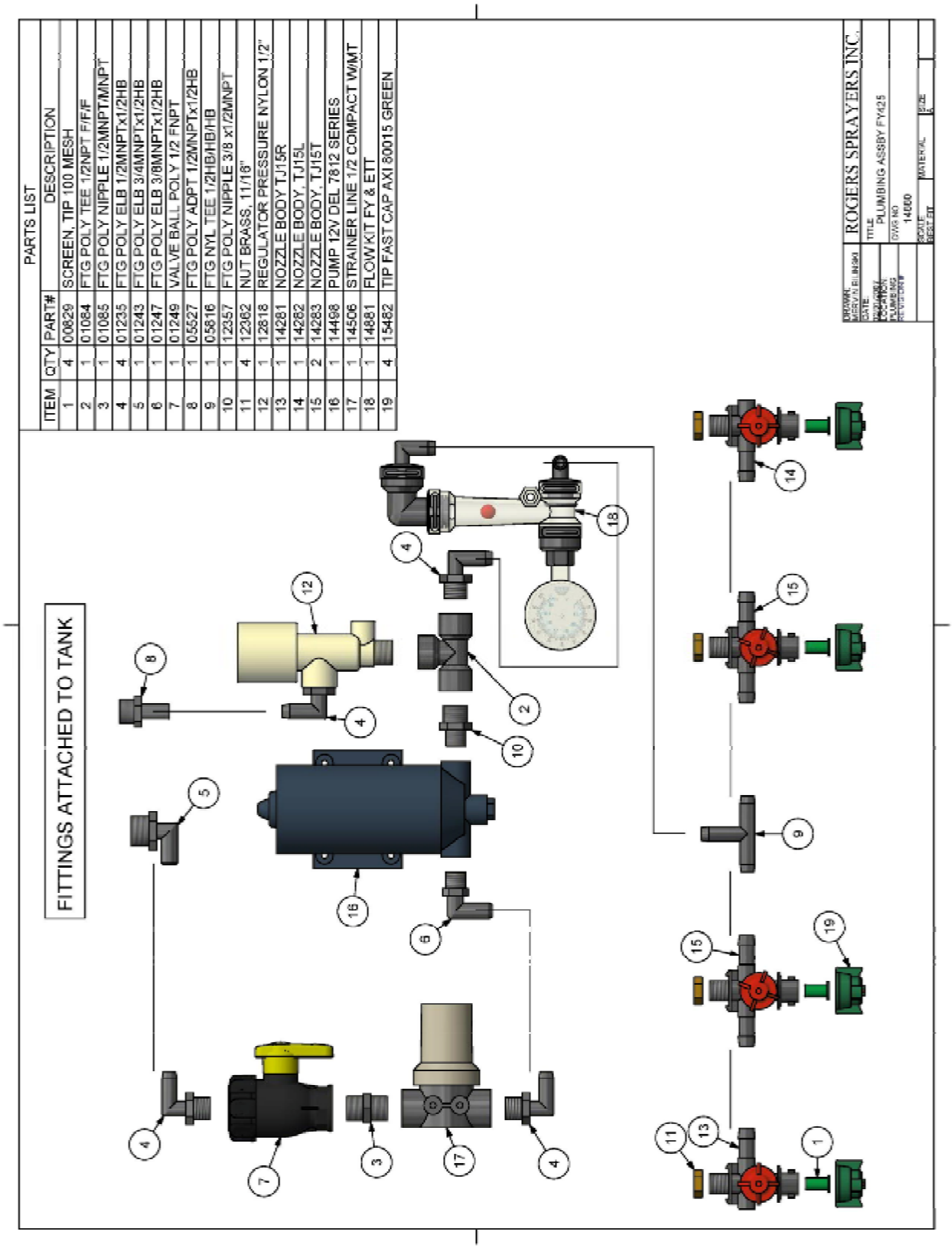
ROGERS SPRAYERS INC.

TITLE
FRAME ASSY FY425

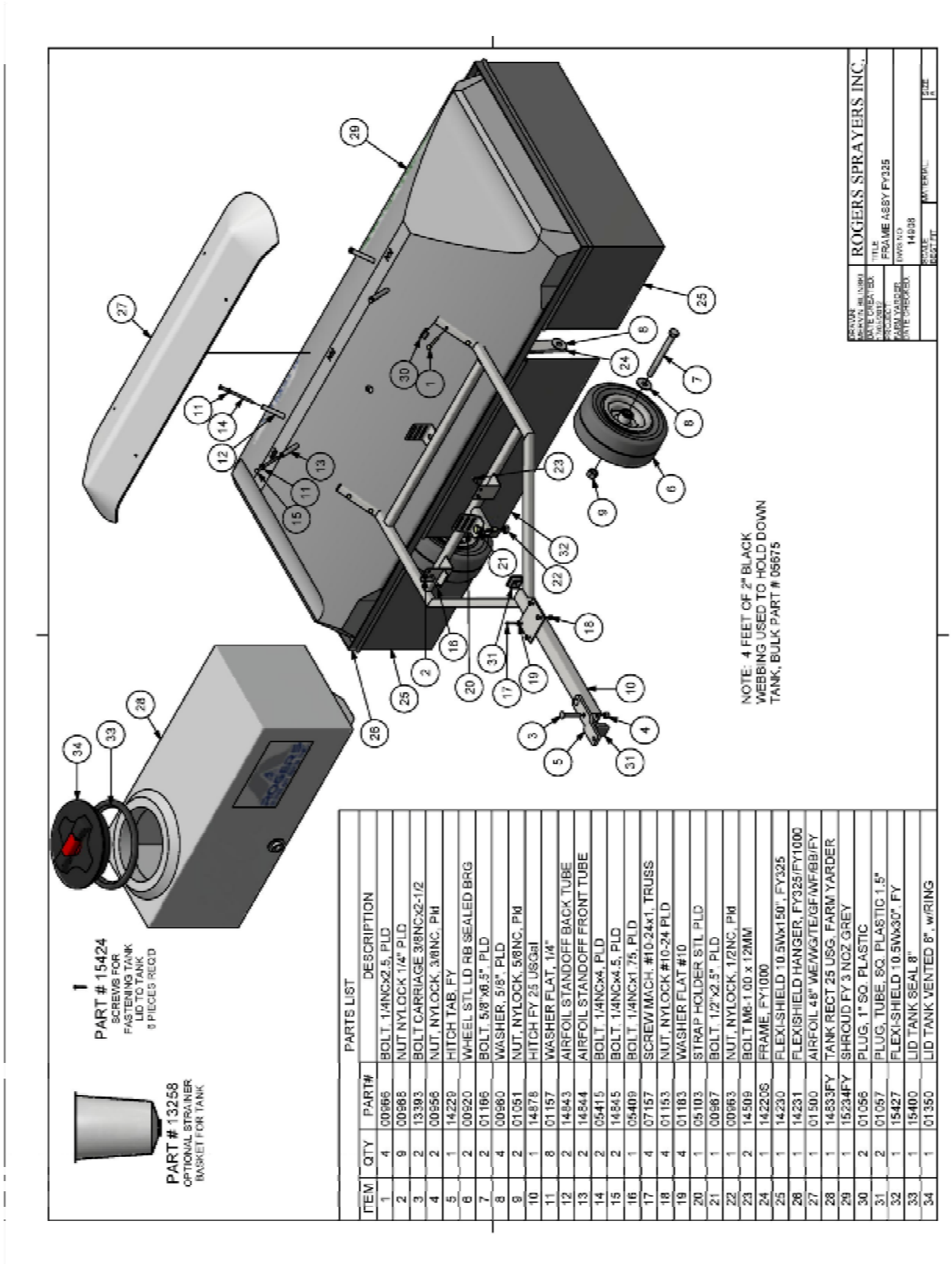
DWG NO
14882

SIZE
C

# FY425 Plumbing Assembly Part # 14880



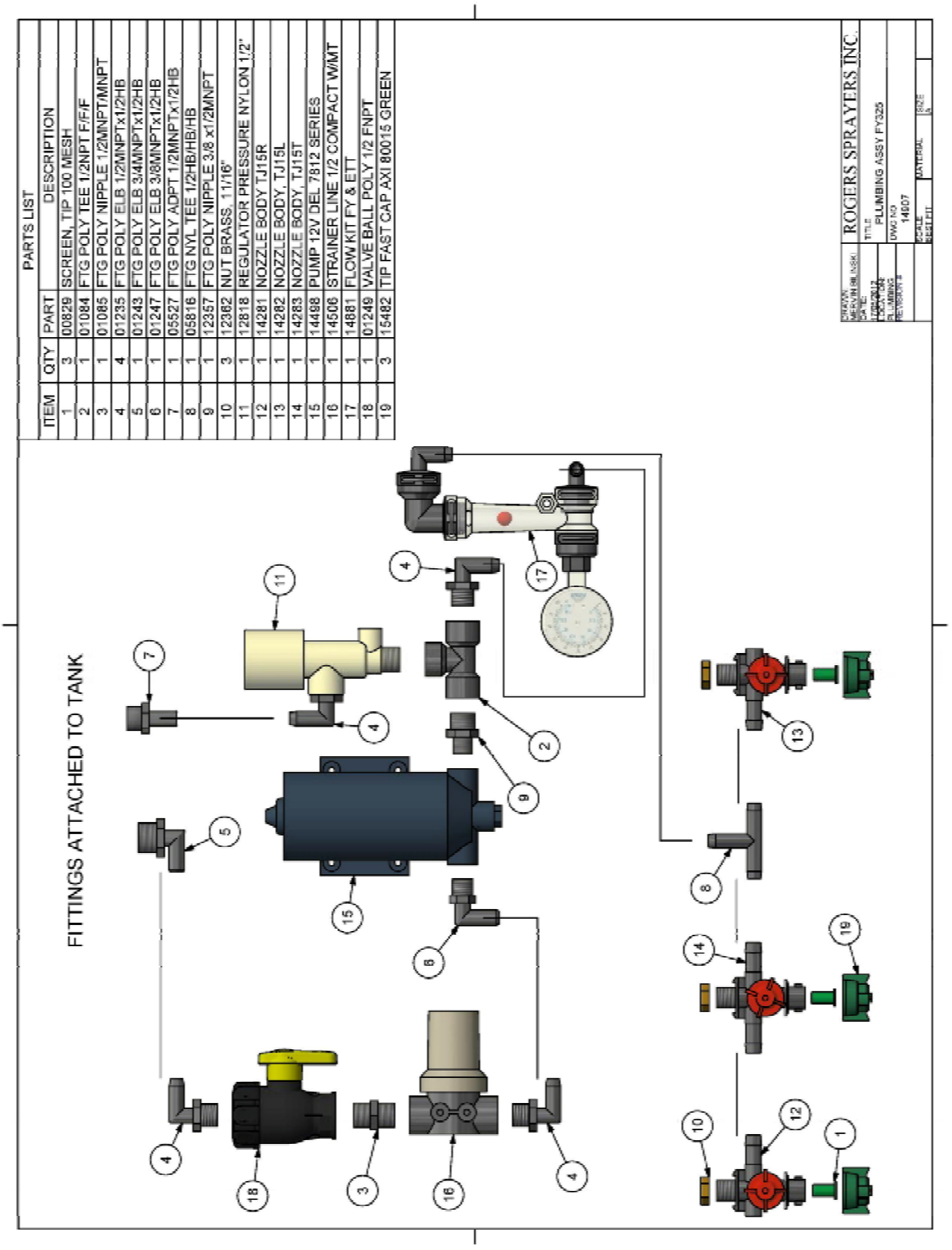
# FY325 General Assembly Part # 14908



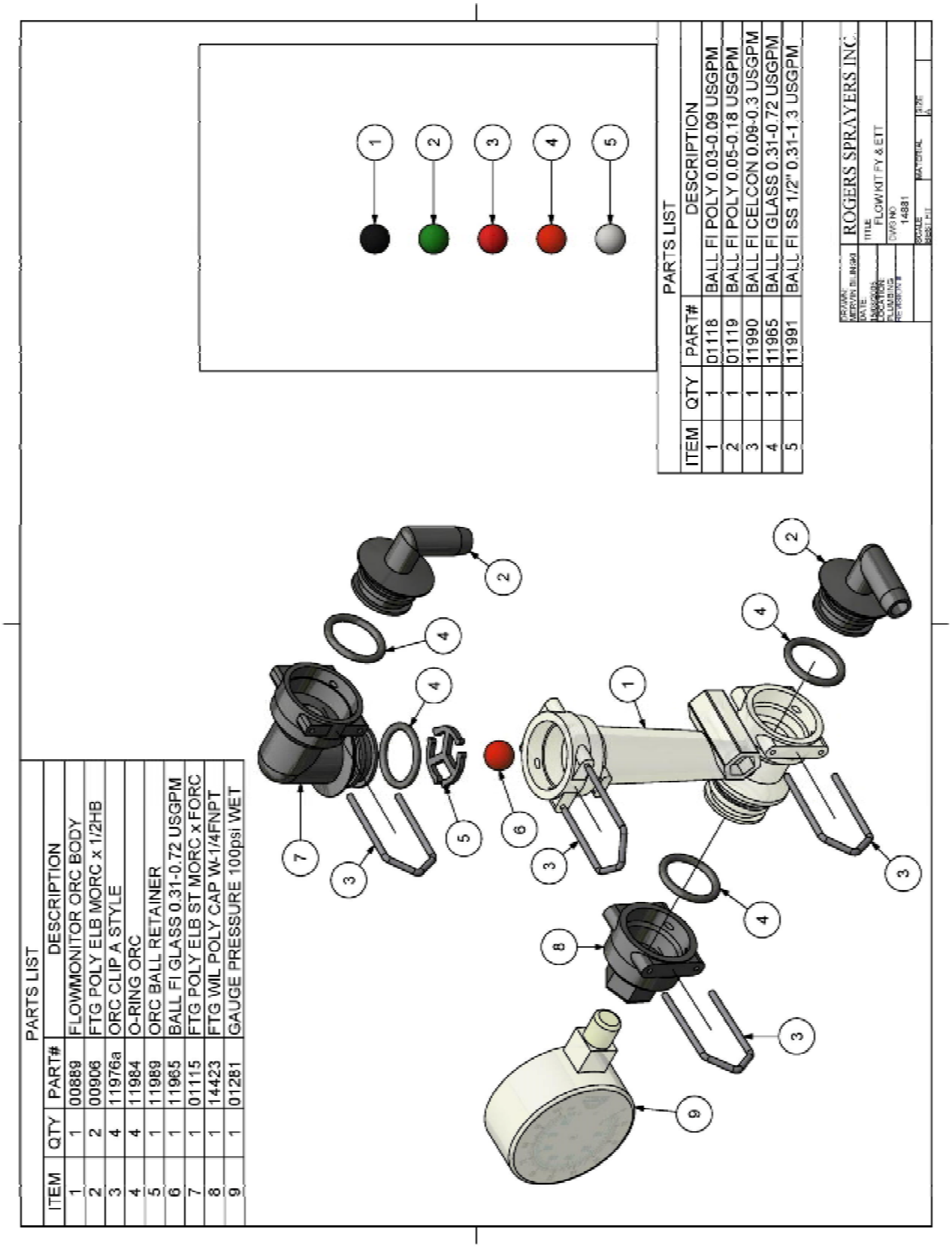

PARTS LIST

| ITEM | QTY | PART# | DESCRIPTION |
|---|---|---|---|
| 1 | 4 | 00666 | BOLT, 1/4NC x2.5, PLD |
| 2 | 9 | 00988 | NUT NYLOCK 1/4" PLD |
| 3 | 2 | 13393 | BOLT CARRIAGE 3/8NC x2-1/2 |
| 4 | 2 | 00956 | NUT, NYLOCK, 3/8NC, Pld |
| 5 | 1 | 14229 | HITCH TAB, FY |
| 6 | 2 | 00920 | WHEEL STL LD RB SEALED BRG |
| 7 | 2 | 01166 | BOLT, 5/8"x6.5", PLD |
| 8 | 4 | 00980 | WASHER, 5/8", PLD |
| 9 | 2 | 01051 | NUT, NYLOCK, 5/8NC, Pld |
| 10 | 1 | 14878 | HITCH FY 25 USGal |
| 11 | 8 | 01157 | WASHER FLAT, 1/4" |
| 12 | 2 | 14843 | AIRFOIL STANDOFF BACK TUBE |
| 13 | 2 | 14844 | AIRFOIL STANDOFF FRONT TUBE |
| 14 | 2 | 05415 | BOLT 1/4NCx4, PLD |
| 15 | 2 | 14845 | BOLT, 1/4NCx4.5, PLD |
| 16 | 1 | 05409 | BOLT 1/4NCx1 75, PLD |
| 17 | 4 | 07157 | SCREW MACH. #10-24x1, TRUSS |
| 18 | 4 | 01153 | NUT, NYLOCK #10-24 PLD |
| 19 | 4 | 01183 | WASHER FLAT #10 |
| 20 | 1 | 05103 | STRAP HOLDER STL PLD |
| 21 | 1 | 00967 | BOLT, 1/2"x2.5" PLD |
| 22 | 1 | 00963 | NUT, NYLOCK, 1/2NC, Pld |
| 23 | 2 | 14509 | BOLT M6-1.00 x 12MM |
| 24 | 1 | 142206 | FRAME, FY1000 |
| 25 | 1 | 14230 | FLEXI-SHIELD 10.5Wx150", FY325 |
| 26 | 1 | 14231 | FLEXISHIELD HANGER, FY325/FY1000 |
| 27 | 1 | 01500 | AIRFOIL 48" WE/WG/TE/GF/WF/BB/FY |
| 28 | 1 | 14833FY | TANK RECT 25 USG, FARM YARDER |
| 29 | 1 | 15234FY | SHROUD FY 3 NOZ GREY |
| 30 | 2 | 01056 | PLUG, 1" SQ, PLASTIC |
| 31 | 2 | 01057 | PLUG, TUBE, SQ, PLASTIC 1.5" |
| 32 | 1 | 15427 | FLEXI-SHIELD 10.5Wx30", FY |
| 33 | 1 | 15400 | LID TANK SEAL 8" |
| 34 | 1 | 01350 | LID TANK VENTED 8" w/RING |

# FY325 Plumbing Assembly Part # 14907



## Flow Kit FY / ETT Part # 14881



PARTS LIST

| ITEM | QTY | PART# | DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 00889 | FLOWMONITOR ORC BODY |
| 2 | 2 | 00906 | FTG POLY ELB MORC x 1/2HB |
| 3 | 4 | 11976a | ORC CLIP A STYLE |
| 4 | 4 | 11984 | O-RING ORC |
| 5 | 1 | 11989 | ORC BALL RETAINER |
| 6 | 1 | 11965 | BALL FI GLASS 0.31-0.72 USGPM |
| 7 | 1 | 01115 | FTG POLY ELB ST MORC x FORC |
| 8 | 1 | 14423 | FTG WIL POLY CAP W-1/4FNPT |
| 9 | 1 | 01281 | GAUGE PRESSURE 100psi WET |

PARTS LIST

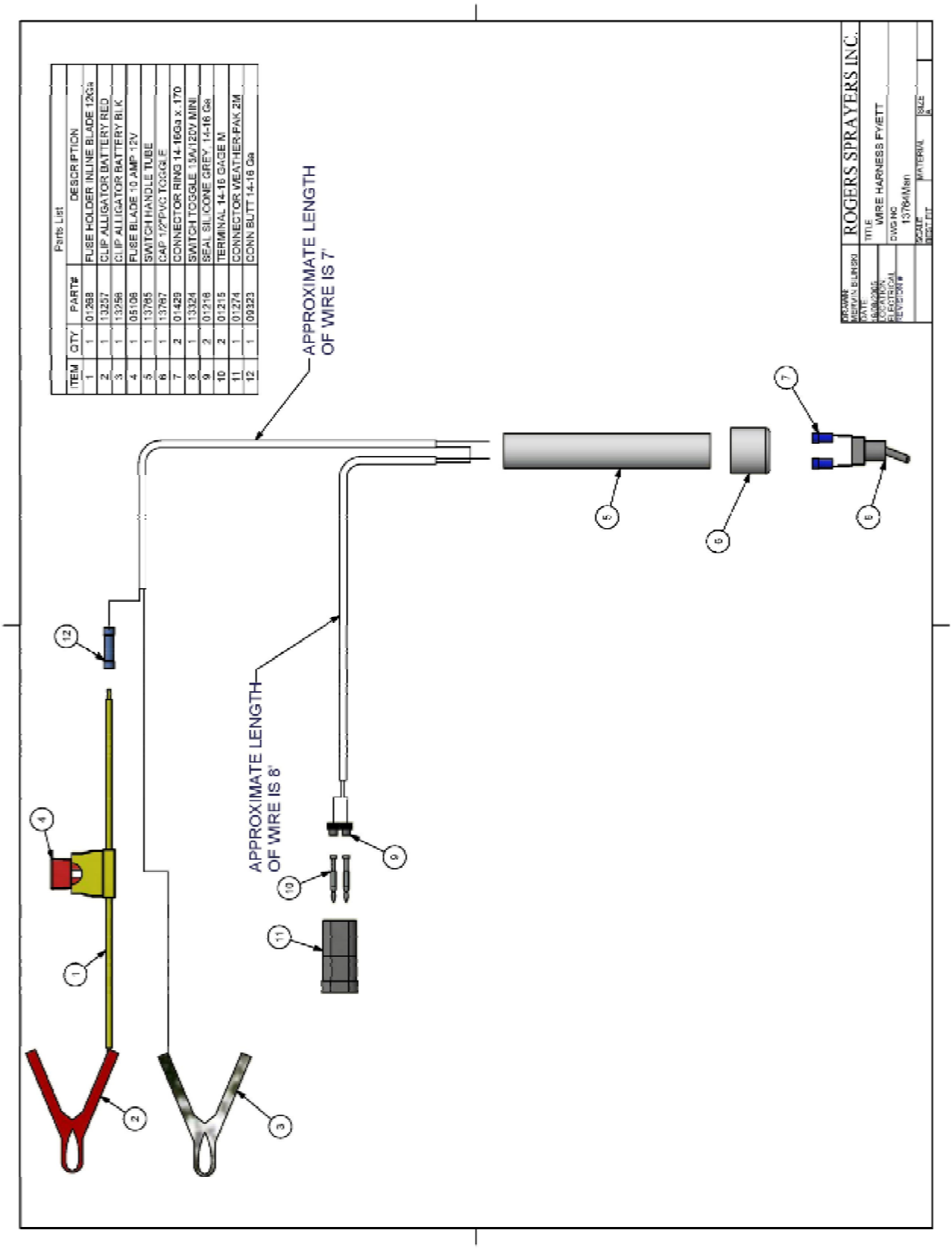
| ITEM | QTY | PART# | DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 01118 | BALL FI POLY 0.03-0.09 USGPM |
| 2 | 1 | 01119 | BALL FI POLY 0.05-0.18 USGPM |
| 3 | 1 | 11990 | BALL FI CELCON 0.09-0.3 USGPM |
| 4 | 1 | 11965 | BALL FI GLASS 0.31-0.72 USGPM |
| 5 | 1 | 11991 | BALL FI SS 1/2" 0.31-1.3 USGPM |

DRAWN: MERVIN BUHLER
DATE:
MACHINING:
PLUMBING:
REVISIONS:

ROGERS SPRAYERS INC.

TITLE: FLOW KIT FY & ETT
DWG NO: 14881
SCALE: 1:1
WEIGHT:
MATERIAL:
SIZE: A

# ETT Wiring Harness Part # 13764



***Rogers Sprayers Inc. (RSI)***
141 - 105th Street East
Saskatoon, SK S7N 1Z2 Canada

Tel.: (306) 975-0500 or (888) 975-8294
Fax: (306) 975-0499
Email: info@rogerssprayers.com

# ROGERS SPRAYERS INC OWNER WARRANTY AGREEMENT

***Windfoil*** Drift Containment Spray Systems (DCSS) are warranted to be free of factory defects under normal and intended use for a period of one (1) year from date of purchase to the original purchaser. Equipment must be setup in accordance with factory instructions and operated, maintained and used in accordance with the operator's manual. Equipment used for rental has a warranty period of forty five (45) days. Any customization or modifications to the original equipment voids warranty immediately.

RSI reserves the right not to warranty any items that are not directly manufactured by RSI. Such components need to be returned to the factory for inspection and tested by either RSI or the original manufacturer for defects. Examples of these parts include actuators, engines, pumps and electrical systems.

**All warranty Claims must be pre-authorized by the factory!**

To obtain warranty, all defective parts must be returned to the factory; in some cases, location of part might require only photo of defective part. RSI must be contacted to determine which route is required. RSI through its designated dealer or factory appointed representative will repair or replace, at its option, any or all parts that are proven to be defective free of charge.

RSI DOES NOT pay or reimburse for any travel time or investigation time to determine the defective part. Warranty labor will be based on the time required for RSI to replace only the part. Warranty labor rates and replacement times will be assessed yearly and will be included in a labor replacement sheet.

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

Standard wear components (see list) such as belts, nozzles, screens, bearings, wheels, flow indicator bodies or flow indicator parts are only warranted for 30 days after original purchase.

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

## Complete your Warranty Registration online at www.rogerssprayers.com

The warranty registration is found on the Contact page of our website. The warranty registration **MUST** be filled out completely and submitted to RSI to activate the warranty. If you would prefer, a printable copy is also available online.

**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.**




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