

# *Rogers Sprayers Inc.*

813B - 50th Street East, Saskatoon, Saskatchewan S7K 3Y5 CANADA

Telephone: (306) 975-0500 or (888) 975-8294 Fax: (306) 975-0499

Web: [www.rogerssprayers.com](http://www.rogerssprayers.com) Email: [info@rogerssprayers.com](mailto:info@rogerssprayers.com)

## ***Falcon*** Booms

### DRIFT CONTAINMENT SPRAY SYSTEM (DCSS)

**FL5000:** Aluminum, 1-6.6 ft. (2.0 m) center + 2-5.0 ft (1.5 m) wings; 16.5 ft (5.0 m) spray width

**FL6000:** Aluminum, 3-6.6 ft. (2.0 m) sections, 20.0 ft; (6.0 m) spray width

**FL5000E/6000E:** Aluminum Boom with Electric Fold (clears tanks, etc. 52" wide)



### ASSEMBLY, PARTS AND OPERATOR'S MANUAL

# DCSS Spray Boom Manual

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Visit our website, [www.rogerssprayers.com](http://www.rogerssprayers.com), for additional models.

## DCSS Forward

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The DCSS was developed to give the industry an environmentally friendly and reliable way to apply liquids to turf. This system, designed in a wind tunnel and proven by government tests, contains the spray in a shroud that is sealed to the turf's surface. Tests show the DCSS has better drift control in winds of 24 mph (40 kph) than an open boom in winds of 6 mph (10 kph), which virtually eliminates the wind problem in spraying.

The airfoil on top of the shroud is the key. It eliminates the uplifting eddy from behind the DCSS that flips drops up into the air, more commonly referred to as drift on non-airfoil covered booms.

The DCSS is the most environmentally friendly and safe liquid applicator available in the world today. By using it you join the leading professionals around-the-world and protect the environment.

## Safety

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

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 then wait for all parts to stop before adjusting, cleaning, or lubricating the power unit or sprayer.
- Before spraying an area familiarize yourself with any rocks, debris, trees, traps, ditches, or gullies that may be potentially dangerous. Plan the spraying route to avoid these hazards. When spraying, use individual section controls to reduce the amount of double spraying.
- Keep sprayer boom width in mind at all times. When turning, exercise caution and avoid any obstacles or other persons. Remember the boom takes a wider swing going around corners.

### Assembly Safety

- Clear large area to fold booms out in field position.
- A minimum of two people should be available for assembly of large equipment, especially when lifting or exertion is required.
- Always use clean tools of the proper size and specification to match the hardware and specific job.

### Transport Safety

- Reduce speed on rough terrain.
- For all sprayers ensure that booms are folded and/or locked securely for transport.
- If excessive buffeting of airfoil/curtains occurs reduce speed as damage may result. An optional wing cover is available to protect the wing curtains during transport.

### Minimize Chemical Drift

The sprayer has been designed in wind tunnels to control airflow around and behind the sprayer this minimizes drift and allows safe spraying in windy conditions. [See literature.]

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 is less effective when the wind blows the curtain off the turf canopy, breaking the seal between the curtain and the turf.

## General Spraying Information

### Application Tips

Always use clean filtered water in the sprayer tank.

Your DCSS is supplied with API ceramic tips. In our tests these tips had a coefficient of variation of less than 6%; other tips were 9%. Ceramic material is one of the hardest in the world; it greatly increases the life of your tips. Calibrate frequently to confirm tip accuracy.

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

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.

### Nozzles

**Caution:** API 80° tips are recommended, as they are true 80° tips. Being ceramic they far out last any other tip. These tips can not be mixed or interchanged. Only conventional 80° tips are recommended, XR tips have a wider pattern than 80° and hit the shroud end, and are not recommended.

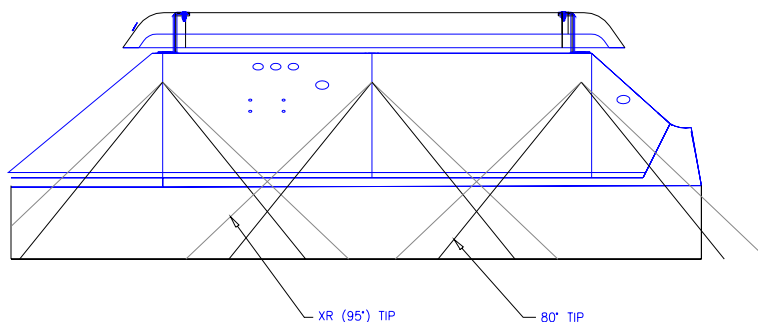
Despite being the most important component for accurate uniform spraying application, nozzles are often neglected and abused. Nozzle flow rate depends on effective orifice size and the pressure.

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

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. The curtain must be in contact with the turf at all times to seal the shroud to the turf surface and contain the drops inside.

Use only conventional TP or API 80° tips, as these tips will provide the most uniform spray pattern in the DCSS. 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 minimize the bounce off the turf, on to the end curtain which may cause dripping, put a 65 degree tip in the end nozzle. This will increase your application variability but not noticeably so. 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.



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

For ultra low volume applications 200 and 500 mesh screens and 8001 and 800067 (stainless steel) tips can be specially ordered from *Rogers Sprayers Inc.*

## 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.

## 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.

Rotate the DSCC up to calibrate and 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 has a visibly distorted pattern.

Actual sprayer speed, as determined from the tables below, will differ from the sprayer speedometer readings because of wheel slippage. Run a speed test in the field to be sprayed, and have the sprayer tank half full. The sprayer must be at full speed before starting the test run. To determine the speed discrepancy, mark off a distance as found on one of the tables. Run the power unit over this distance, carefully noting the speedometer reading and recording the time to cover the distance. The actual speed traveled can be found for the specific distance and time to travel, using the table.

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 5: Time (seconds) to travel a distance of:

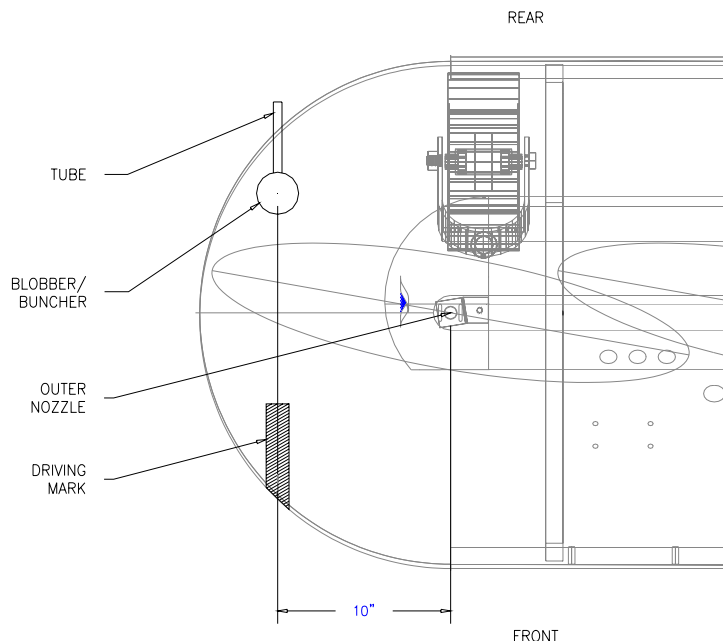
km/h	10m	25m	50m	100m	200m
1	36.0	90.0	180.0	360.0	720.0
1.5	24.0	60.0	120.0	240.0	480.0
2	18.0	45.0	90.0	180.0	360.0
2.5	14.4	36.0	72.0	144.0	288.0
3	12.0	30.0	60.0	120.0	240.0
4	9.0	22.5	45.0	90.0	180.0
5	7.2	18.0	36.0	72.0	144.0
6	6.0	15.0	30.0	60.0	120.0

Table 6: Time (seconds) to travel a distance of:

mph	10ft	20ft	50ft	100ft	200ft
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

## Foam Marker Installation Considerations

Mount the foam marker tank etc. as instructed by the manufacturer. Run hoses along the spray hoses under the shrouds as much as possible. Be sure to go around the back of the breakaway hinge point and into the wing, along the top of the 2"X2" tube to the end. Ensure no plumbing or hardware gets into the spray pattern as dripping or stripping may occur. If the blobber is small enough, locate it inside the shroud with the tube or buncher going out the back such that it drops the blob just past the lower edge of the curtain. It must be located 10" along the centerline of the shroud from the end tip. This places the blobber where it is protected from branches etc. plus positions the blob where both the front and rear curtain should hit it on the return pass, smearing it out



which will help it dissipate. Put a large mark on the front of the shroud the same distance from the tip and drive such that the foam blob lines up with the mark. This will ensure proper overlap and provide even coverage.

Under certain conditions large foam blobs will suffocate the grass underneath them. This can be minimized by smearing the foam and by using the smallest blob possible. Some operators replace the large blobber supplied with a ½" hose running down the back edge of the curtain.

## General Maintenance

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### Cleaning

Sprayers need to be cleaned to prevent corrosion, cross contamination of chemicals and 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 chemicals, such as RoundUp®, that will damage turf always 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. Wash the sprayer and DCSS in a wash area that properly contains the wash water. 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. Spray the rinse over the application area.

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 this accumulation. If water alone does not dissolve and remove the buildup, add a solvent. Allow paste to dissolve, then agitate and flush. 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 that neutralizes the chemical to prevent cross contamination. The solution used depends on the chemical to be removed from the sprayer. Check the chemical label for cleaning instructions.

Remove nozzle tips and screens, clean them in a strong detergent solution (or kerosene) using a soft brush. 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.

### Sunshine

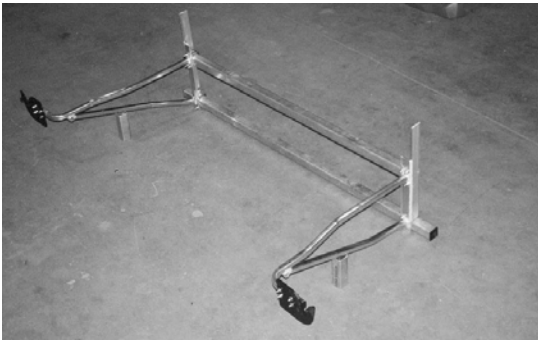
Many plastic sprayer parts are degraded by ultra violet light, especially the nozzle flow indicators. Store the sprayer in the shade to extend the length of service.

### Winterizing

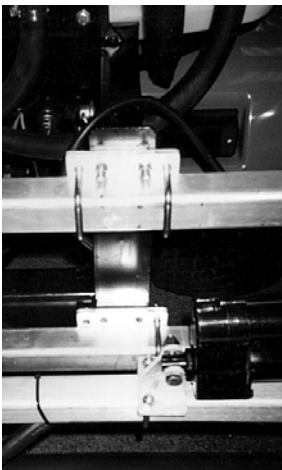
After the sprayer is thoroughly cleaned, put 2 to 5 gallons of rust inhibitor or RV antifreeze in the tank prior to the final flushing to help prevent corrosion. As the water is pumped from the sprayer, the antifreeze will leave a protective coating on the inside of the tank, pump, and plumbing.

## Assembly Instructions

### Photos and Instructions



Assemble the top and bottom tube and wing transport support structures and mount on the sprayer's rear frame using the cross over plates provided. Some adapters may be required. The bottom of the lower bar must be 18½" above the ground.



On the John Deere HD200 sprayer bolt the crossover plate to the sprayer frame using the holes near the top and u-bolt the top tube of the support structure to it, ensuring that the frame is centered on the sprayer. Using 1 u-bolt on each side U-bolt crossover plates to the bottom tube with the u-bolt on the outside and using the small clamp plate clamp it to the bottom of the HD200 frame.

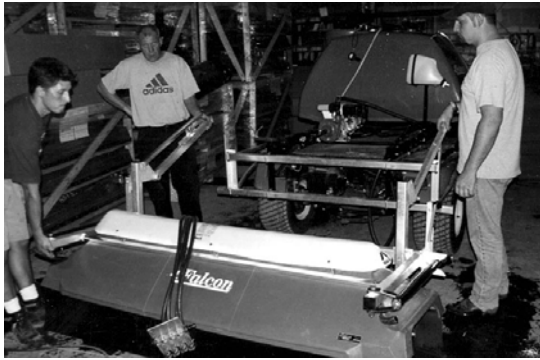


Bolt the boom float arm in to the plates on the center wheel assembly; be sure to include the slider bushing over the head of the bolt on the inside. The actuator mount float arm goes on the left side. Slide the center wheel assembly through the square hole in the center shroud and u-bolt it to the shroud mount cross tube near the ends. Adjust the center wheel assemblies on the tube so they are centered, at 90° to the tube, and the slider bushings are snug on the boom mount side plates.



Assemble the wheel forks to the wheel arm, include the shroud support angles and u-bolt to the center boom structure; the lock arm goes on the right side. Ensure that the wheels are tracking straight and that the center wheel forks are mounted in the back hole slightly angle to the rear.

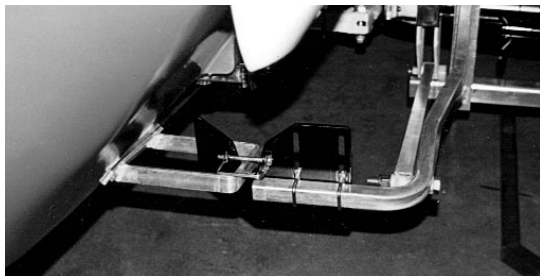




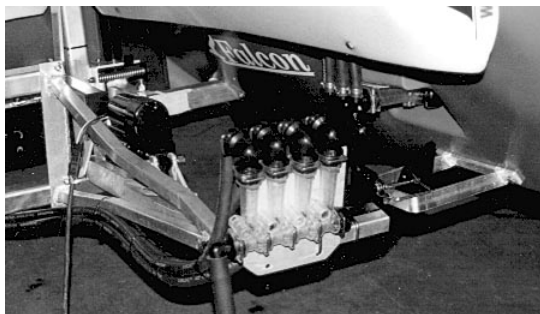
Pull the boom assembly up to the sprayer.



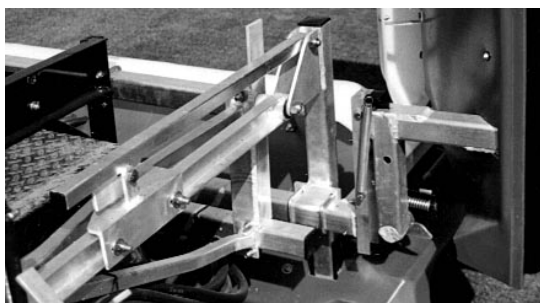
Mount the boom center assembly to the boom mount and bolt the float arm to the fixed arm with a 5/8" bolt, head to the inside through the bushing on the fixed arm and the float arm, tighten the bolt just enough to allow free movement.



Mount the boom transport lock plates on the fixed arm, including the flow monitor on the left side, put the u-bolt through the 2 holes in the monitor mounting plate and then the tube, and last the boom transport plate.

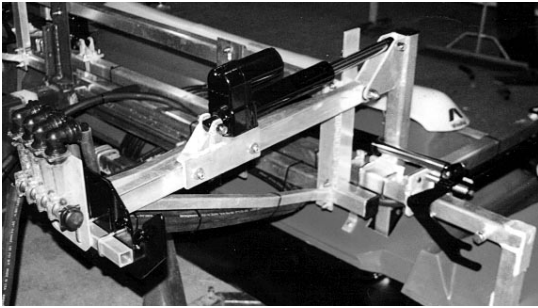


Note the hoses should be under the shroud mount cross tube and tied to the bottom of the lower boom mount tube. Tie them to the lower part of the fixed arm ensuring that they will not get caught in the wheel.

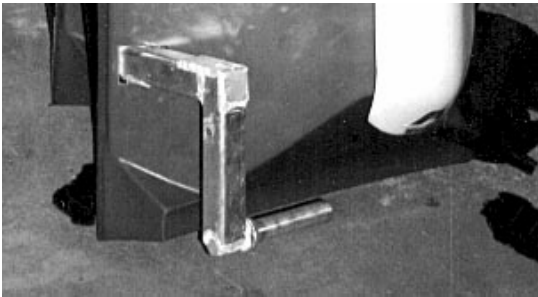


If the boom is a manual lift boom, mount the wing lock-up channel to the end of the shroud support.





If it is an electric lift mount, mount the wing lift pivot to the end of the shroud mount frame with the pivot arm in it. Also mount the wing actuator mounts on the front shroud mount tubes 18½" from the pivot bushing, adjust later to ensure the wings are at 90 degrees.



Slide the solid wing hinge shaft inside the front of the breakaway arm all the way in, be careful not to dislodge the nylon bearing.



Put the rear wing support in back of the breakaway arm; be careful not to push the nylon bearing inside.



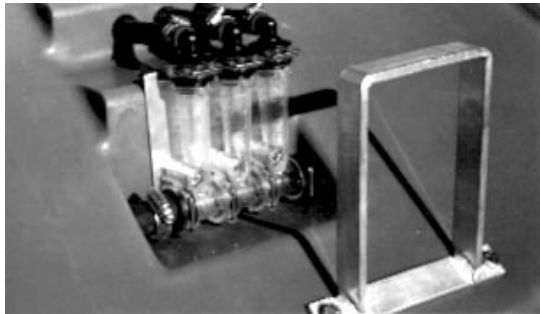
Bolt the rear wing brace in place, ensuring that wing is straight with the center when down.



Mount wing wheels.



Bolt on the airfoils with the long supports in the front and the short supports in the back.



Mount the wing catches on the wings.



Connect the wing feed hoses to the center section, trim them so the elbow is just in front of the breakaway hinge bolt. Connect the center monitor located on the fix arm feed hose to the center solenoid on the sprayer. Then the right and left wing feed hoses to the right and left solenoids. Use nyties to secure the hoses in place being sure to leave enough slack so the boom can float and rotate without damaging the hoses. The wing feed hoses should run under the shroud mount front tube and between the boom mount tubes to the solenoids.

## Check and Calibrate

Before operating the sprayer be sure to check all connections etc. for leaks and calibrate each nozzle.

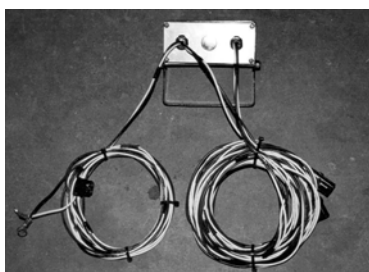
Ensure that the wings fold up and the boom rotates in to its transport locks. The angle of the wings can be adjusted in the manual fold by adjusting the rubber stopper on the wing lock channel. With the boom down adjust the actuator or lock mount on the fixed arm to level the boom. On electric folds the wing actuator mounts can be adjusted to guide the wings into their transport locks.

## Electrical Harness and Control Box Installation



Run wire from the control box or from the switch location down under the floor and to the battery and actuators ensuring that they will not be damaged and nytie in place. If needed the switches can be mounted in the dash by drilling a hold in the dash, or use the optional control box (L5008). Connect the harness to the battery, switches and actuators as shown in the Electric Fold Kit parts page.

If mounting on a John Deere HD200 sprayer, mount the Rogers' switches in the John Deere sprayer control plate if those locations are not used. If they are either mount the switches in the dash or purchase the optional control box.



### Optional Control Box

The box can be bolted under the dash, on top of the dash, or clamped to the toolbox bar. The wires must be threaded through the strain reliefs and connected to the switches (see parts page for circuit) then feed down under the dash and under the floor to the battery and the actuators. Tie securely with nyties.

## Final Assembly Checklist

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### Mechanism Checks

Boom Level: Sitting on a level pad adjust the angle of the boom by adjusting the center lock bar or actuator mount angle with the bolts on the upper arm to level the boom front to back with half a load of water in the sprayer.

Breakaway Catches: The breakaway catch should release with a good push (45 lbs.) exerted at the transport catch on the end of the boom, (toward the rear). Return the wing to its spray position and the catch should grab firmly. Engage the catch before folding the boom for transport.

The amount of force required for the breakaway catch to operate is adjustable by changing the position of the shim washers on the breakaway bolt from outside to inside to increase spring pressure if required.

Wing Folding: For manual fold, lift the wing and hook the latch in the slot provided. For electric option retract the actuator, the wing should rise 90° if not adjust the actuator mount so the wing rotates in to the transport lock.

The Float Arms: The float arms should be free to move up and down without interference. The wheel mount will float down until it hits on the lower cross bar in the field or in transport. Avoid running hoses, wires, etc. between these moving parts.

Curtain: Ensure curtain touches the turf. If not, move the castor wheel spacers from below the boom to on top of the boom mount.

Check For Leaks: Ensure all connections are leak free. If leaks occur check connection to ensure it is tight.

### Testing After Assembly

After assembling the spray boom, check for field readiness. Points to consider are:

- a) Remove the nozzle body caps with the spray tips and the tip screens. Flush the entire system with clear water. Install the tip screens and nozzle caps with spray tips. Check for proper alignment of the nozzle caps. Pressure test all the booms inspecting hose connections, nozzle caps, spray pattern and diaphragm nozzle bodies.
- b) Move all hinge or swivel joints through the full arc of movement. Check for interference, ease of movement.
- c) Check all fasteners to see that they are tightened firmly.
- d) Calibrate the sprayer and DCSS

## Operating Instructions

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Note: Stay clear of the pinch points and areas where the sprayer moves under power.

### Operating the Folding Mechanism

Caution: Be sure to unlock the transport lock when lowering the boom. If left locked the electric actuator may bend the boom.

Manual Folding To and From Transport Position: Lift the wing up and lock them up with the catch. Then lift the manual lift lock arm, pull the boom forward until it stops and then rotate it down into the transport or service position and lock in place with the D ring.

Electric Boom Folding To and From Transport Position: After the wings are up in transport position, operate the actuator to rotate the complete boom into the full transport position. As the boom leaves the ground, check the position of the wings relative to the transport arms on the side plate assemblies. Check that the wing fold-up locks rest in the wing support plates and lock the wings in place with d-rings.

Reverse the procedure to fold the booms out for field position. Fully extend the actuator mechanism for field operations or retract fully for transport. When spraying, retract the actuator for the boom to lift the wing over sand traps etc. The trap lip may cause the breakaway to let go

Transport position allows convenient access to the spray tips.

### Plumbing System Operation

Nozzle Bodies: Nozzle bodies are equipped with diaphragm check valves to prevent dripping. Valves close when the system pressure drops below 15 psi. Valve bodies contain filter screens. Spray tips and screens are retained with quick connect caps. Keep alternate sets of tips in other caps for quick tip changing. See assembly diagram in appendix.

Spray Monitor Manifold: Each column monitors the flow to each nozzle. Check the instruction sheet in the appendices of this manual to change the ball in the column to match the flow rate of the spray tips. If the balls are not even, the low balls indicate plugged or partially plugged nozzles.

### Breakaway Operation

Should the wing hit a large or fairly heavy object on the field, the wing will pivot back out of the way. Stop and shut off the sprayer immediately. Reset the boom manually after such an incident. Swing the boom forward and the catch mechanism will lock the boom in place.

### Driving Considerations

The four wheels under the boom enable the shroud and the curtain to follow the contours of the land. They are small and are subject to damage if left on the ground during fast rough transport. Fully lift the boom for transport. Do not back up over curbs etc, the boom may be damaged.

### Maintenance

- Check regularly that all fasteners are tight and secure.
- See the General Spraying Information section of this manual.
- Check wheel bearings every 10 hours and adjust if required. Check more often in rougher situations.

## Trouble Shooting

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### Leaking Nozzles

If 1 or 2 tips drip until the line is empty, check:

- ⇒ For deteriorated diaphragms
- ⇒ For material under the diaphragm
- ⇒ For a weak spring
- ⇒ For a deterioration of the diaphragm sealing surface

If all tips spray for more than 3 seconds after shut off, check:

- ⇒ To see if the sprayer shut off valve is leaking

If all tips spray for less than 3 seconds after shut off, check:

- ⇒ For air accumulation in the line
- ⇒ For swelling of the feed hoses

If the diaphragm leaks out the diaphragm spring body, check:

- ⇒ For loose spring body
- ⇒ For ruptured diaphragms
- ⇒ For missaligned diaphragm
- ⇒ For broken diaphragm body

### Wheel Bearing Failure

Check wheel bearings daily. If excessive wear is found, replace bearings. If bearings are too tight load will reduce their life, if too loose, hammering will reduce life. If bearings are wearing excessively under your working conditions a heavy duty bearing kit (#L5004 c/w wheel or #L5003 w/o wheel) is available.

### Spray Hitting End of Boom/Curtain

The spray booms are designed for true 80° spray tips. If spray is dripping off the end of the curtains, 110° or XR tips may be incorrectly installed. Remove these and install true 80° tips. API tips are recommended.

### DCSS Wings do not Hit the Lock-Up Brackets when Folded for Transport

The wings should be vertical and the actuators fully closed when in transport position. If not adjust the actuator mount clamps so the DCSS wing fits into the lock up brackets.

### DCSS Breaks Away Too Easily

Adjust the breakaway tension by putting washers in side the stops to increase spring compression.

### Tracking

The wheels have been placed in front of the spray so they do not run over it. However the weight of the prime mover and in extreme situations, the boom wheels, will modify the turf and cause it to absorb more fertilizer or chemical. Some fertilizers and fungicides are very susceptible while others are not. The track will disappear within a few days.

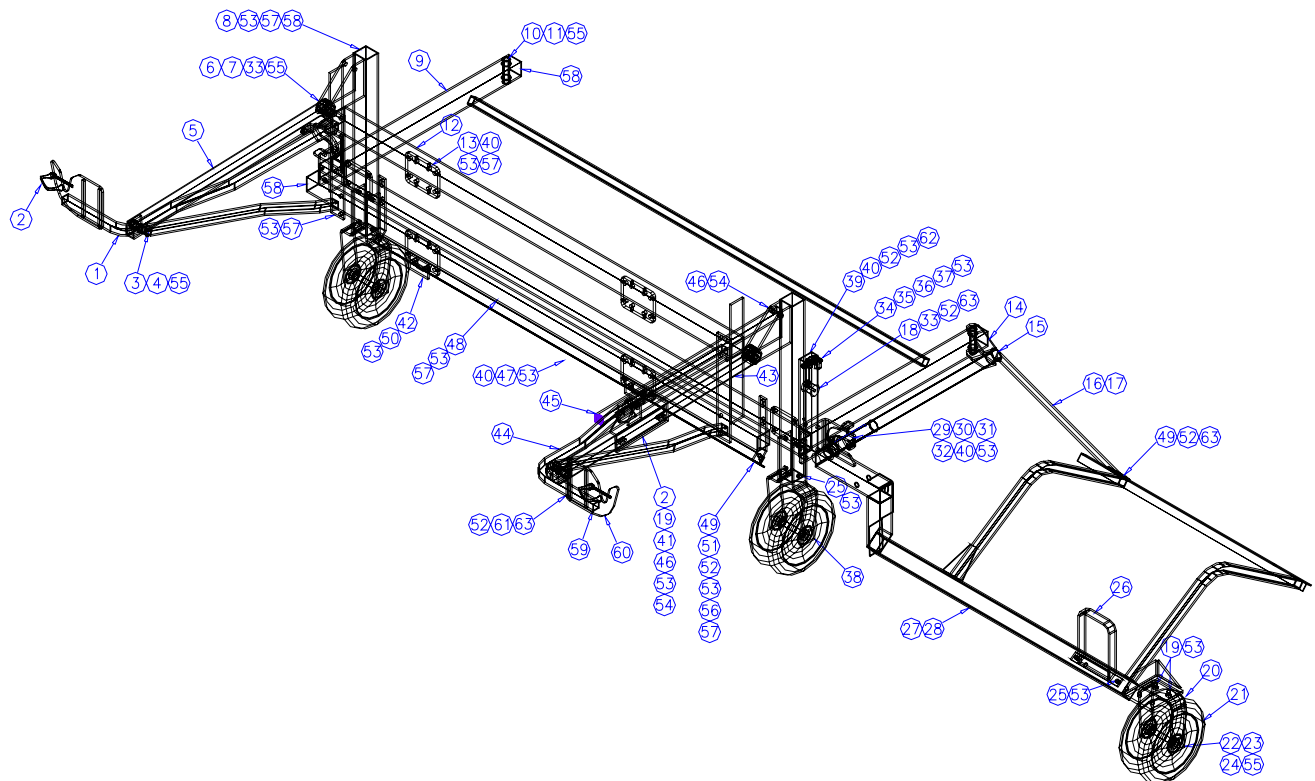
### Stripping

At end of Shroud – check:

- ⇒ If tips are spraying at a greater angle than 80°, XR 80° tips have a wider than 80° spray pattern.
- ⇒ High tip pressure, over 40psi (2.8 Bar), will cause a wider spray pattern by extending the spray pattern angle.

Between Tips – check:

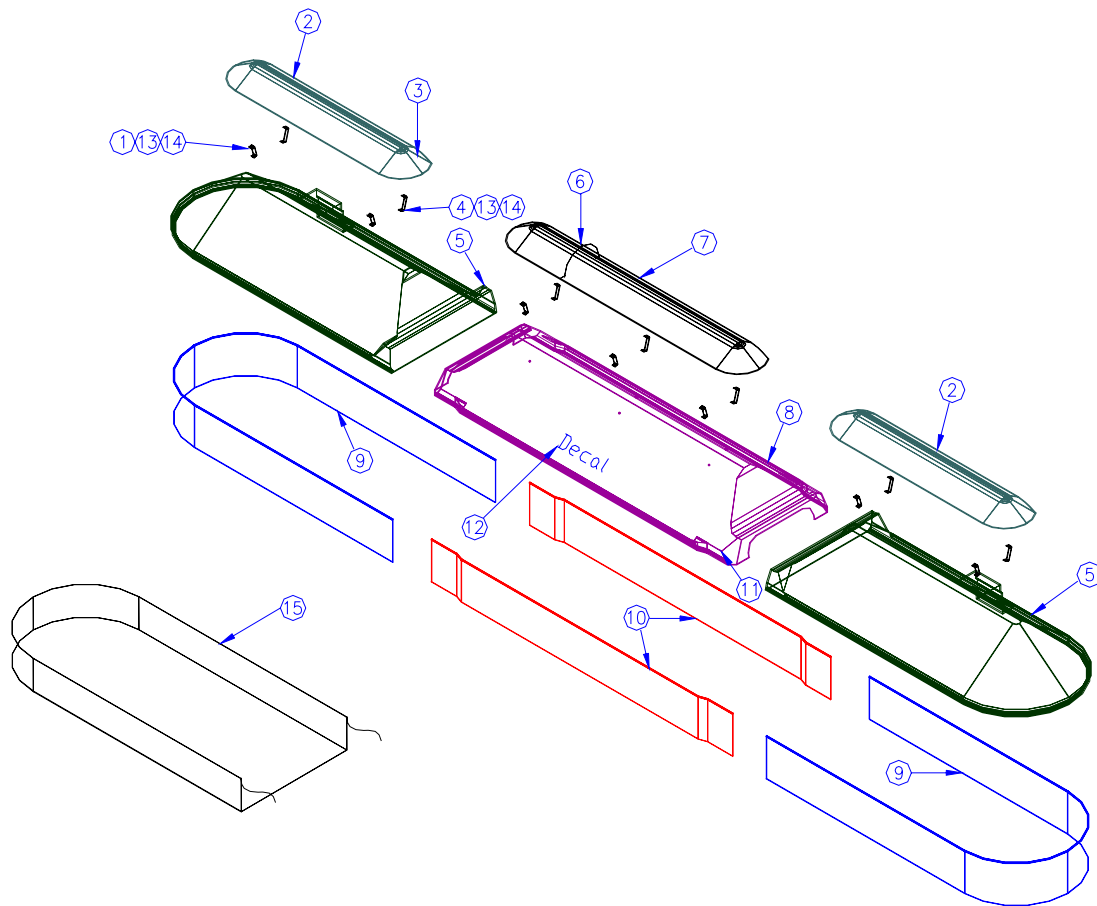
- ⇒ Low tip pressure will cause a narrower pattern. Actual tip pressure should be between 25 – 40 psi (1.7 - 2.8 bar).
- ⇒ Tip screens to see if they are plugged.



## Frame Assembly, Manual, HP, Lite

Item	Description	Part #	Qty	Item	Description	Part #	Qty
1	Boom Float Fixed Arm	13565R	1	33	Rubber, Boom Float Damper	13556	2
2	Pin, Stl, sq. wire lock, D-Ring	01319	3	34	Wing Catch Hook	13577	2
3	Nylon Bushing, 3/4"ODx5/8"IDx1-1/4"lg	13528	6	35	Wing Catch Hook, spacer	13579	4
4	Bolt, 5/8NC x 4, Pld	05456	2	36	Spring, Manual wing catch	13580	2
5	Boom Float Arm	13563	1	37	Bolt, 3/8NC x 2-1/2, Pld	05436	2
6	Bolt, 5/8NC x 3, Pld	05455	2	38	Center Shroud Wheel Yoke	13571	4
7	Slider, Hex	13542	2	39	Wing Catch Arm	13578	2
8	Center Wheel Assembly	13574	2	40	Bolt, 3/8NC x 1, Pld	05431	14
9	Shroud Mount Frame	13485	2	41	Actuator Mount, Center	13561	1
10	Nylon Bushing, 3/4"ODx5/8"ID x 3"	13477	2	42	Bolt, 3/8NC x 1-1/2, Pld	05432	4
11	Bolt, 5/8NC x 4-1/2, Pld	05457	2	43	Boom Float arm, Actuator	13562	1
12	Boom Mount Upper Tube, 62"	13544	1	44	Boom Float Fixed Arm, L	13565L	1
13	Plate, Reversing, 3/8" - 1.5"x2"	13547	4	45	Lift Lock Arm	13588	1
14	Breakaway Tube	13499	2	46	Bolt, 1/2NC x 2 1/2, Pld	00967	2
15	Bushing, Nylon, 1-1/2"ODx1-3/8"IDx1"lg	13493	2	47	Shroud Support, front, 4 Noz	13480	1
16	Wing Stabilizer Bar, R	13501L	1	48	Boom Mount Lower Tube, 70"	13543	1
17	Wing Stabilizer Bar, L	13501R	1	49	Bolt, 1/4NC x 1 1/4, Pld	05407	4
18	Bolt, 1/4NC x 2, Pld	01070	2	50	Boom Mount Lower Clamp Plate	13548	1
19	Bolt, Crg, 3/8NC x 1-1/2,Pld	04388	6	51	Center Shroud Front Support	13481	2
20	Wing Wheel Fork	13514	2	52	Nut, Nylock, 1/4NC, Pld	00968	18
21	Wheel, Plstc, Roller Brg, 5/8 Bore	13178RB	4	53	Nut, Nylock, 3/8NC, Pld	00956	76
22	Bolt, 5/8NC x 6, Pld	05460	4	54	Nut, Nylock, 1/2NC, Pld	00963	2
23	Spacer, for 13514 fork	13502	8	55	Nut, Nylock, 5/8NC, Pld	01051	8
24	Brg, 5/8ID X 35mm	00857	8	56	Wshr, Flat, 3/8, Pld	00957	4
25	Bolt, 3/8NC x 3, Pld	05437	8	57	Ublt,3/8NC x 2sq x 3, Pld	12587	16
26	Wing Fold-up Lock	13539	2	58	Plug, Tube, Sq, Plstc, 2	01058	6
27	Wing Frame Assembly, R	13527R	1	59	Plug, Tube, Sq, Plstc, 1	01056	2
28	Wing Frame Assembly, L	13527L	1	60	Boom Float wing Supports	13558a	2
29	Breakaway Catch, Left	13475L	1	61	Ublt,1/4NCx1sqx2,Pld	01049	4
30	Breakaway Catch, Right	13475R	1	62	Bolt, 1/4NC x 1, Pld	01164	2
31	Spr,Cprsn,13/16ODx5 1/8lg,	00955	2	63	Wshr, Flat, 1/4, Pld	01157	10
32	Bolt, 3/8NC x 6, Pld	01393	2		Drawing 13602c		

## Shroud Assembly, HP, Lite

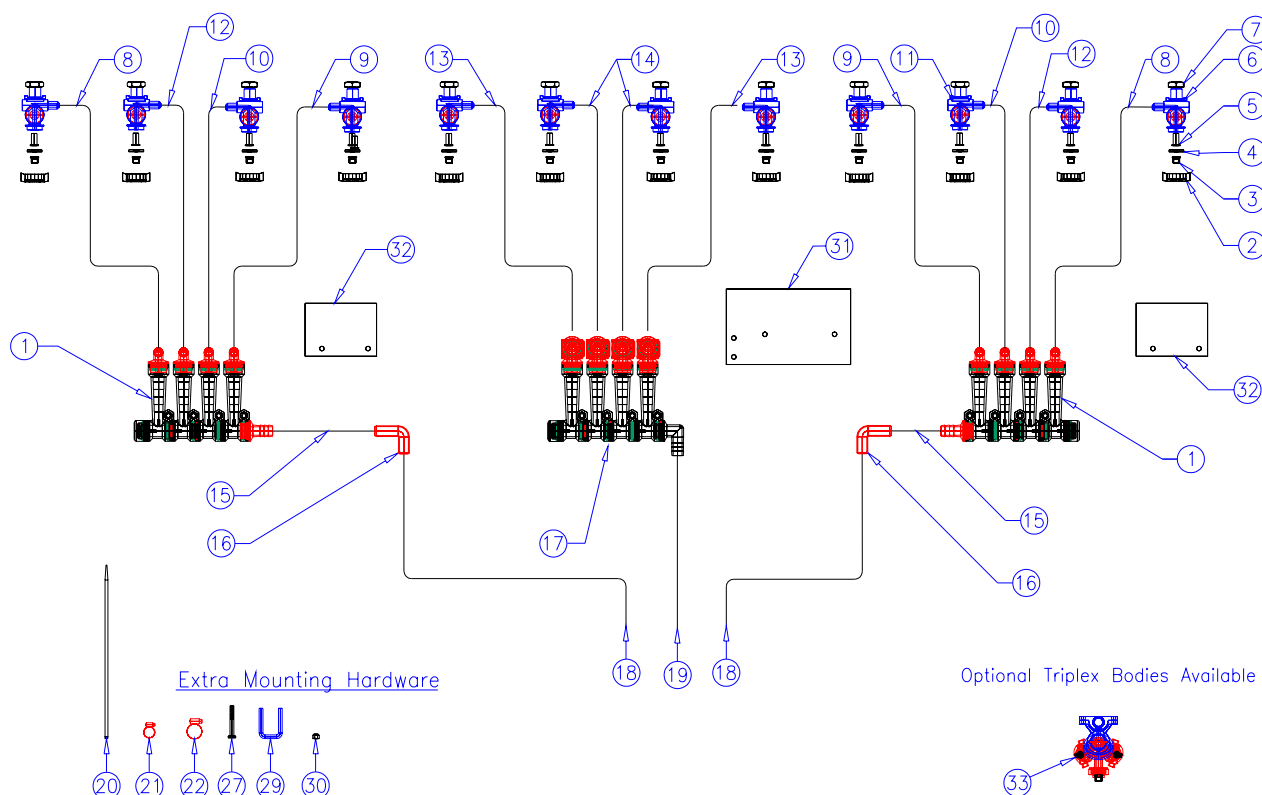


Item	Description	5000		6000	
		Part #	Qty	Part #	Qty
1	Airfoil Standoff - Back	13478	7	13478	9
2	Airfoil, 52-1/2"	13523	2	13523	0
2	Airfoil, 72-1/2"	13503	0	13503	2
3	Dcl, "Windfoil" Logo	01396	6	01396	6
4	Airfoil Standoff - Front	13479	7	13479	9
5	Shroud, HP, 4 Noz., Wing, Left, Green	13520JL	0	13520JL	2
5	Shroud, HP, 4 Noz., Wing, Left, Red	13520L	0	13520L	2
5	Shroud, HP, 3 Noz. Left, Green	13526JL	2	13526JL	0
5	Shroud, HP, 3 Noz. Left, Red	13526L	2	13526L	0
6	Airfoil, 68-1/2"	13483	1	13483	1
6	Airfoil, 48-1/2"	13490	0	13490	0
7	Decal, Front/back	12341	2	12341	0
8	Shroud, HP, 4 Noz., Center, Green	13482J	1	13482J	1
8	Shroud, HP, 4 Noz., Center, Red	13482	1	13482	1
8	Shroud, HP, 3 Noz., Center, Red	13489	0	13489	0
8	Shroud, HP, 3 Noz., Center, Green	13489J	0	13489J	0
9	Curtain, 3 nozzle, 13'3", black, 40oz.	13568	2	13568	0
9	Curtain, 4 nozzle, 16'7", black, 40oz.	13569	0	13569	2
10	Curtain, 84" Center, black, 40oz	13484	2	13484	2
10	Curtain, 64" Center, black, 40oz	13492	0	13492	0
11	Plate, Serial	01398	1	01398	1
12	Dcl, "ROGERS", White, 3 3/4" x	01397	3	01397	3
12	Dcl, "FALCON", White, 4" x 16"	01397J	3	01397J	3
13	Bolt, 1/4NC x 3/4, Pld	01154	28	01154	36
14	Nut, Nylock, 1/4NC, Pld	00968	28	00968	36
15	Wing Cover, HP, (optional)	L5009		L5010	

Drawing #13605



# Plumbing Assembly, Lite DCSS



Item	Description	5000		6000	
		Part #	Qty	Part #	Qty
1	ORC Rotometer Assembly, Wing	13428	2	13429	2
2	Ftg, Poly, Cap, Noz, Std	01532	10	01532	12
3	Tip, Spray, 8004API	12423	10	12423	12
4	Seal, Nozzle Cap	01521	10	01521	12
5	Screen, Tip, 50 Mesh	04720	10	04720	12
6	Nozzle Body Assembly, 15psi CV, Left	12300	5	12300	6
7	Nut, Brass, 11/16	12362	10	12362	12
8	Hose, Black, 1/2ID x 33.75Lg	13630	2	13630	2
9	Hose, Black, 1/2ID x 34.75Lg	13631	0	13631	2
10	Hose, Black, 1/2ID x 16.25Lg	13632	2	13632	2
11	Nozzle Body Assembly, 15psi CV, Right	12301	5	12301	6
12	Hose, Black, 1/2ID x 13.75Lg	13633	2	13633	2
13	Hose, Black, 1/2ID x 112Lg	13634	2	13634	2
14	Hose, Black, 1/2ID x 93Lg	13635	2	13635	2
15	Hose, Black, 3/4ID x 66Lg	13636	2	13636	2
16	Ftg, Poly, Elb, 3/4 HB/HB	12355	2	12355	2
17	ORC Rotometer Assy, Cntr	11978	1	11978	1
18	Hose, Black, 3/4ID x 108Lg	13637	2	13637	2
19	Hose, Black, 3/4ID x 126Lg	13638	1	13638	1
20	Nytie, Blk UV, 3/16x15 1/2	00974	22	00974	22
21	Clamp, Hose, Gear, MH6	13665	20	13665	24
22	Clamp, Hose, Gear, MH10	13666	10	13666	10
27	Bolt, 1/4NC x 2, Pld	01070	6	01070	6
29	Ublt, 1/4NC x 1sq x 2, Pld	01049	0	01049	0
30	Nut, Nylock, 1/4NC, Pld	00968	6	00968	6
31	Plate, Al, Backing, Center	13403	1	13403	1
32	Plate, Al, Backing, WL-Wing	13402	2	13402	2
33	Nozzle Body, Triplex (optional)	13289	0	13289	0

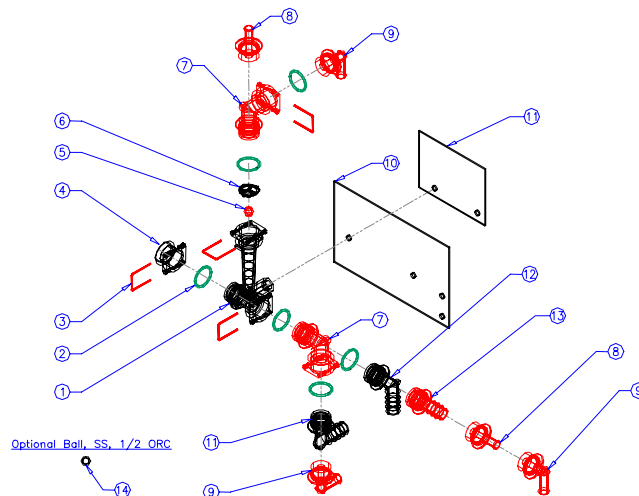
Optional Tips / Screens		
Item	Description	Part #
	Tip, Spray, 80015API	13351
	Tip, Spray, 8002API	12422
	Tip, Spray, 8003API	13352
3	Tip, Spray, 8004API	12423
	Tip, Spray, 8005API	12424
	Tip, Spray, 8006API	12425
	Tip, Spray, 800067SS	05872
	Tip, Spray, 8001VS	01369
	Tip, Spray, 80015VS	00827
	Tip,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

See application rate tables for a listing of API and Tee Jet tips and their application rates.  
Drawing #13427

## Rotometer Assembly, Parts Details

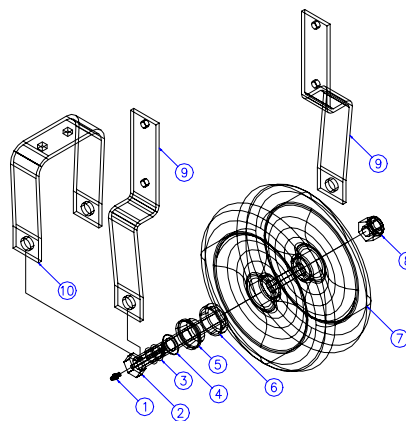
Item	Part #	Description
1	00889	Rotometer Body, ORC
2	11984	O-Ring
3	11976	Clips, ORC
4	00909	Ftg,Poly,Cap, ORC, for Rotometer
5	11990	Ball, Red, ORC
6	11989	Ball Retainer, ORC
7	01115	Ftg,Poly,Elb,St, MORC x FORC
8	11975	Ftg,Poly,Adpt, MORC x 1/2HB
9	00906	Ftg,Poly,Elb, MORC x 1/2HB
10	13403	Plate, Al, Backing, Center
11	13402	Plate, Al, Backing, WL-Wing
12	00905	Ftg,Poly,Elb, MORC x 3/4HB
13	00903	Ftg,Poly,Adpt, MORC x 3/4 HB
14	11991	Ball, SS, 1/2, ORC (optional)

\*Red plastic balls are for lower flow rates (0.09-0.30 US GPM/column)  
Steel balls are for higher flow rates (0.40-1.33 US GPM/column)

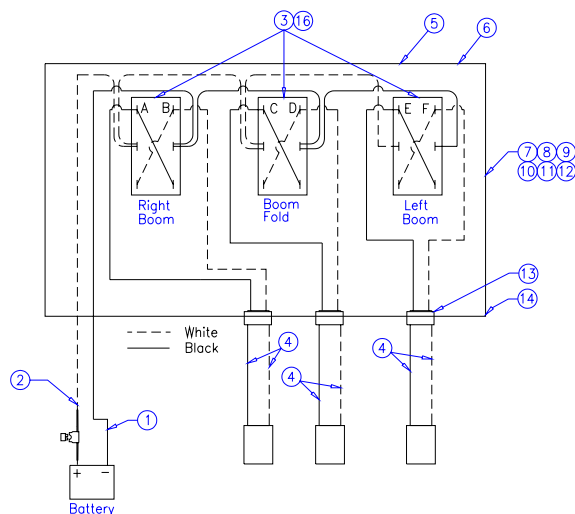
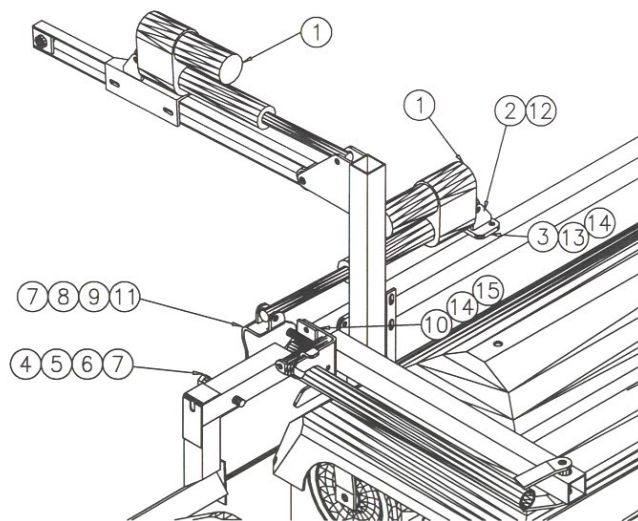


## Heavy Duty Tapered Wheel Kit, L5004

Item	Part #	Description
1	00972	Ftg,Stl,Nip,Grease, 1/4NF
2	13678	Bolt, 3/4"NCx6-1/2", Pld
3	13676	Spacer, HD wheel bearing kit
4	13677	Washer for HD wheel kit
5	12027	Brg, Cone, 3/4" c/w seal
6	12028	Brg, Cup, 3/4"
7	13178TB	Wheel, Plstc, tapered brg, 3/4 Bore
8	05550	Nut, Nylock, 3/4"NC, Pld
9	13571TB	Center Shroud Wheel Yoke, HD
10	13514TB	Wing Wheel Fork, HD



# Electric Fold Kits, Lite DCSS



## ELECTRIC WING LIFT KIT, L5001

Item	Description	Part #	Qty
1	Actuator, 8" stroke, 14-5/16" closed length	13590	2
2	Bolt, 1/2NC x 2 1/2, Pld	00967	4
3	Actuator Mount, wing	13538	2
4	Bolt, 5/8NC x 4-1/2, Pld	05457	2
5	Boom Float lift/bearing	13553	2
6	Nylon Bushing, 3/4"ODx5/8"IDx1-1/4"lg	13528	2
7	Nut, Nylock, 5/8NC, Pld	01051	4
8	Wing Lift Pivot Assembly, Right	13537R	1
9	Bushing, Nylon, 3/4"ODx5/8"IDx2-1/4"lg	13529	2
10	Winglift Pivot Mount	13540	2
11	Winglift Pivot assembly, Left	13537L	1
12	Nut, Nylock, 1/2NC, Pld	00963	4
13	Ublt, 3/8NCx2sqx3, Pld	12587	2
14	Nut, Nylock, 3/8NC, Pld	00956	8
15	Bolt, 3/8NC x 1, Pld	05431	4
	Wiring Kit	13615	1

## WIRING KIT, 13615

Item	Description	Part #	Qty
1	Wiring Harness, Battery, Neg, 175"	13610	1
2	Wiring Harness, Battery, Pos., 175"	13611	1
3	Switch, Toggle DP/DT Spade Term.	13653	2
4	Wiring Harness, Actuators, 205"	13612	2
16	Boot, Rubber	12736	2
	Connector Repair Kit, Weatherpack, 2M/F	11823	0

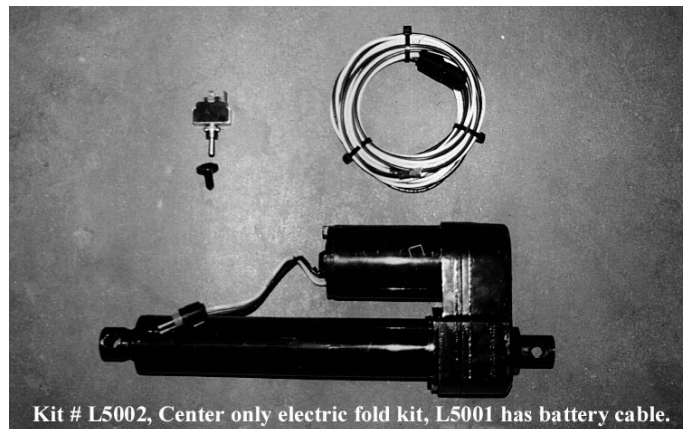
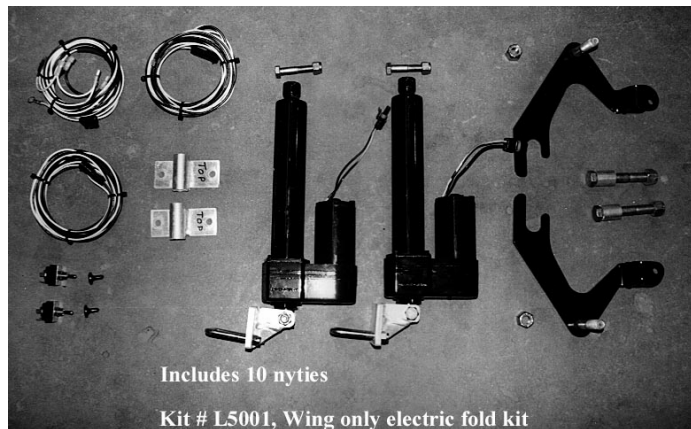
## OPTIONAL CONTROL BOX, L5008

Item	Description	Part #	Qty
5	Control, Front	00793	1
6	Control, Back	00794	1
7	Box, Aluminum Extruded, 2-1/2"	13655	1
8	Gasket, Adhesive one Side	08515	2
9	Mounting Bracket	12679	2
10	Bolt, 1/4NC x 6, Pld	12941	2
11	Nut, 1/4NC, Pld	01905	2
12	Washer, Lock, 1/4", Pld	05567	2
13	Strain Relief, for 14/2 SJ Cable Heyco	01278	2
14	Screw, Self Threading, for SP Box Extrusion	08338	8

## ELECTRIC CENTER FOLD KIT, L5002

Item	Description	Part #	Qty
1	Actuator, 8" stroke, 14-5/16" closed length	13590	1
3	Switch, Toggle, DP/DT Spade Term.	13653	1
4	Wiring Harness, Actuators, 205"	13612	1
16	Boot, Rubber	12736	1

Drawing #13604a / 13602a



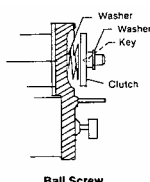
## Actuator and Repair Kits

### Part No. 13590, 8" Stroke, 14-5/16" closed length

#### Part No. 13639

##### Actuator, 8", Clutch Replacement Kit

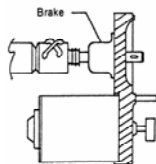
Remove rear housing and intermediate gear. Remove washer on top of clutch. Slide clutch from screw shaft. Remove key. Remove washer underneath clutch. Replace in reverse order.



#### Part No. 13640

##### Actuator, 8", Ball Screw Kit

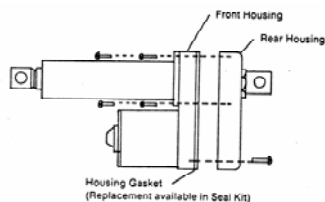
Remove cover tube, rear housing, intermediate gear and clutch. Slide brake and screw assembly out of front housing. To reassemble, remove clamp from screw replacement kit. Slide screw with brake back through front housing being careful not to lose any brake components. Reassemble in reverse order.



#### Part No. 13641

##### Actuator, 8", Rear Housing Kit

Remove 4 screws from front housing and 1 screw from rear housing. Pull housing free. Install the tin furnished bumper inside the new housing. Only use the thin bumper. Install the new housing in reverse order.

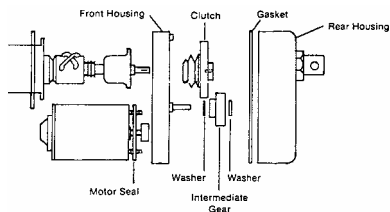


#### Part No. 13642

##### Actuator, 8", Front Housing Kit

Remove cover tube and holder, rear housing, intermediate gear, clutch, drive screw and motor.

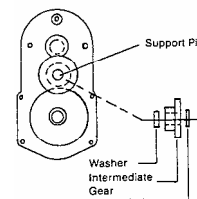
Save all gaskets and seals or replace with new seals with seal kit (part no. 13645). Discard front housing. Replace with housing from replacement kit. Reassemble in reverse order.



#### Part No. 13643

##### Actuator, 8", Intermediate Gear Kit

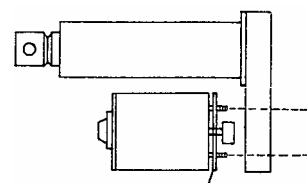
Remove rear housing. Slip washers and gear off of support pin. If you have two different thicknesses of washers, the thicker one goes up against the front housing (goes in first).



#### Part No. 13644

##### Actuator, 8", Motor Replacement Kit

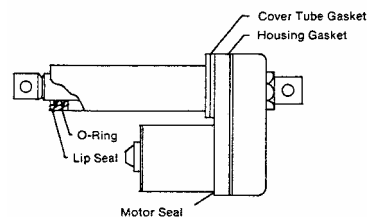
Remove rear housing. Remove 2 motor nuts from housing. Pull motor free. Take care not to disturb the gear train. Replace in reverse order.



#### Part No. 13645

##### Actuator, 8", Seal Kit

It is advisable to replace the appropriate seals whenever the actuator is disassembled. Seal kit consists of: cover tube seal, gasket between housings, motor seal, O-ring and lip seal.



#### Part No. 13646

##### Actuator, 8",

##### Connector Kit

Kit consists of 2 male and 2 female Weatherpac connectors.

#### Part No. 13647

##### Actuator, 8", Cover Tube Kit

NOTE: All screws can be replaced with standard machine screws (#12-24 and #10-32). Tighten all screws/nuts to 70 in-lb. upon re-assembly (except single in rear housing – tighten to 30 in-lb.).

# Application Rate Tables

Table 1: American Application Rates of API Tips at 20-inch nozzle spacing

TIP COLOR	Tip (screen) 80°	Liquid Pressure in PSI	FLOW in GPM 1 Tip	US Gal/AC – 20" Spacing					US Gal/1000 sq. ft/ - 20" Spacing				
				3	4	5	6	7	3	4	5	6	7
				MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH
Green	API 80015 (80 Mesh)  Part No. 12480	30	0.13	12.9	9.7	7.7	6.4	5.5	0.30	0.22	0.18	0.15	0.13
		35	0.14	13.9	10.4	8.3	6.9	5.9	0.32	0.24	0.19	0.16	0.14
		40	0.15	14.8	11.1	8.9	7.4	6.4	0.34	0.25	0.20	0.17	0.15
		45	0.16	15.9	11.9	9.5	7.9	6.8	0.36	0.27	0.22	0.18	0.16
		60	0.19	18.8	14.1	11.3	9.4	8.1	0.43	0.32	0.26	0.22	0.19
Yellow	API 8002 (50 Mesh)  Part No. 12422	30	0.17	17.3	13.0	10.4	8.6	7.4	0.40	0.30	0.24	0.20	0.17
		35	0.19	18.7	14.0	11.2	9.3	8.0	0.43	0.32	0.26	0.21	0.18
		40	0.20	20.0	15.0	12.0	10.0	8.6	0.46	0.34	0.28	0.23	0.20
		45	0.21	21.2	15.9	12.7	10.6	9.1	0.49	0.37	0.29	0.24	0.21
		60	0.25	24.4	18.3	14.7	12.2	10.5	0.56	0.42	0.34	0.28	0.24
Blue	API 8003 (50 Mesh)  Part No. 01586	30	0.26	26.1	19.6	15.7	13.1	11.2	0.60	0.45	0.36	0.30	0.26
		35	0.28	28.3	21.2	16.9	14.1	12.1	0.65	0.49	0.39	0.32	0.28
		40	0.30	30.1	22.6	18.1	15.1	12.9	0.69	0.52	0.42	0.35	0.30
		45	0.32	32.0	24.0	19.2	16.0	13.7	0.73	0.55	0.44	0.37	0.31
		60	0.37	36.9	27.7	22.2	18.5	15.8	0.85	0.64	0.51	0.42	0.36
Red	API 8004 (50 Mesh)  Part No. 12423	30	0.35	34.8	26.1	20.9	17.4	14.9	0.80	0.60	0.48	0.40	0.34
		35	0.38	37.6	28.2	22.5	18.8	16.1	0.86	0.65	0.52	0.43	0.37
		40	0.41	40.1	30.1	24.1	20.1	17.2	0.92	0.69	0.55	0.46	0.39
		45	0.43	42.5	31.9	25.5	21.3	18.2	0.98	0.73	0.59	0.49	0.42
		60	0.50	49.2	36.9	29.5	24.6	21.1	1.13	0.85	0.68	0.56	0.48
Brown	API 8005 (50 Mesh)  Part No. 12424	30	0.44	43.3	32.5	26.0	21.7	18.6	0.99	0.75	0.60	0.50	0.43
		35	0.47	46.8	35.1	28.1	23.4	20.1	1.07	0.81	0.65	0.54	0.46
		40	0.51	50.1	37.6	30.0	25.0	21.5	1.15	0.86	0.69	0.57	0.49
		45	0.54	53.1	39.8	31.9	26.6	22.8	1.22	0.91	0.73	0.61	0.52
		60	0.62	61.3	46.0	36.8	30.7	26.3	1.41	1.06	0.84	0.70	0.60
Grey	API 8006 (50 Mesh)  Part No. 12425	30	0.52	51.5	38.6	30.9	25.7	22.0	1.18	0.89	0.71	0.59	0.51
		35	0.56	55.6	41.7	33.3	27.8	23.8	1.28	0.96	0.76	0.64	0.55
		40	0.60	59.5	44.6	35.6	29.7	25.5	1.36	1.02	0.82	0.68	0.59
		45	0.64	63.1	47.3	37.8	31.5	27.0	1.45	1.09	0.87	0.72	0.62
		60	0.73	72.8	54.6	43.7	36.4	31.2	1.67	1.25	1.00	0.84	0.72

Table 2: Metric Application Rates for API Tips at 50 cm nozzle spacing

TIP COLOR	Tip (screen) 80°	Liquid PRESS. in kPa	FLOW in LPM 1 Tip	L/ha - 1/2 m Spacing					
				5	6	7	8	9	10
				KPH	KPH	KPH	KPH	KPH	KPH
Green	API 80015 (80 Mesh)  Part No. 12840	207	0.49	116.6	97.2	83.3	72.9	64.8	58.3
		241	0.53	125.0	104.2	89.3	78.1	69.5	62.5
		276	0.57	133.5	111.2	95.3	83.4	74.1	66.7
		310	0.61	143.1	119.2	102.2	89.4	79.5	71.5
		414	0.72	169.5	141.3	121.1	105.9	94.2	84.8
Yellow	API 8002 (50 Mesh)  Part No. 12422	207	0.64	156.3	130.2	111.6	97.7	86.8	78.1
		241	0.72	168.3	140.3	120.2	105.2	93.5	84.2
		276	0.76	180.3	150.3	128.8	112.7	100.2	90.2
		310	0.79	191.2	159.3	136.5	119.5	106.2	95.6
		414	0.95	220.0	183.3	157.2	137.5	122.2	110.0
Blue	API 8003 (50 Mesh)  Part No. 01586	207	0.98	235.6	196.4	168.3	147.3	130.9	117.8
		241	1.06	254.9	212.4	182.1	159.3	141.6	127.4
		276	1.14	271.7	226.4	194.1	169.8	150.9	135.9
		310	1.21	288.5	240.5	206.1	180.3	160.3	144.3
		414	1.40	333.0	277.5	237.9	208.1	185.0	166.5
Red	API 8004 (50 Mesh)  Part No. 12423	207	1.32	313.8	261.5	224.1	196.1	174.3	156.9
		241	1.44	339.0	282.5	242.2	211.9	188.4	169.5
		276	1.55	361.9	301.6	258.5	226.2	201.0	180.9
		310	1.63	383.5	319.6	273.9	239.7	213.1	191.8
		414	1.89	443.6	369.7	316.9	277.3	246.5	221.8
Brown	API 8005 (50 Mesh)  Part No. 12424	207	1.67	390.7	325.6	279.1	244.2	217.1	195.4
		241	1.78	422.0	351.7	301.4	263.7	234.4	211.0
		276	1.93	452.0	376.7	322.9	282.5	251.1	226.0
		310	2.04	478.5	398.7	341.8	299.1	265.8	239.2
		414	2.35	553.0	460.9	395.0	345.6	307.2	276.5
Grey	API 8006 (50 Mesh)  Part No. 12425	207	1.97	464.1	386.7	331.5	290.0	257.8	232.0
		241	2.12	501.3	417.8	358.1	313.3	278.5	250.7
		276	2.27	536.2	446.8	383.0	335.1	297.9	268.1
		310	2.42	568.7	473.9	406.2	355.4	315.9	284.3
		414	2.76	656.4	547.0	468.9	410.3	364.7	328.2

Table 3: American Application Rates of Tee Jet Tips at 20-inch nozzle spacing

Tip No. (Part No.) [Screen]	Liquid Press Psi	Capacity 1 nozzle gpm	U. S. GALLONS PER ACRE					U. S. GALLONS PER 1000 SQ. FT.					Press Bars
			2.5 mph	3 mph	4 mph	5 mph	7 mph	2.5 mph	3 mph	4 mph	5 mph	7 mph	
800067 (05872) [200 mesh]	30	0.06	7.1	5.9	4.5	3.6	2.5	0.16	0.14	0.10	0.08	0.06	2.07
	40	0.07	8.0	6.6	5.0	4.0	2.8	0.18	0.15	0.11	0.09	0.07	2.76
	60	0.08	9.5	7.9	5.9	4.8	3.4	0.22	0.18	0.14	0.11	0.08	4.14
8001 (01369) [100 mesh]	30	0.09	10.7	8.9	6.7	5.3	3.8	0.25	0.20	0.15	0.12	0.09	2.07
	40	0.10	11.9	9.9	7.4	5.9	4.2	0.27	0.23	0.17	0.14	0.10	2.76
	60	0.12	14.3	11.9	8.9	7.1	5.1	0.33	0.27	0.20	0.16	0.12	4.14
80015 (00827) [100 mesh]	30	0.13	15.4	12.9	9.7	7.7	5.5	0.35	0.30	0.22	0.18	0.13	2.07
	40	0.15	17.8	14.9	11.1	8.9	6.4	0.41	0.34	0.26	0.20	0.15	2.76
	60	0.18	21.4	17.8	13.4	10.7	7.6	0.49	0.41	0.31	0.25	0.18	4.14
8002 (05876) [50 mesh]	30	0.17	20.2	16.8	12.6	10.1	7.2	0.46	0.39	0.29	0.23	0.17	2.07
	40	0.20	23.8	19.8	14.9	11.9	8.5	0.55	0.45	0.34	0.27	0.19	2.76
	60	0.25	29.7	24.8	18.6	14.9	10.6	0.68	0.57	0.43	0.34	0.24	4.14
8003 (05877) [50 mesh]	30	0.26	30.9	25.7	19.3	15.4	11.0	0.71	0.59	0.44	0.35	0.25	2.07
	40	0.30	35.6	29.7	22.3	17.8	12.7	0.82	0.68	0.51	0.41	0.29	2.76
	60	0.37	44.0	36.6	27.5	22.0	15.7	1.01	0.84	0.63	0.50	0.36	4.14
8004 (05878) [50 mesh]	30	0.35	41.6	34.7	26.0	20.8	14.9	0.95	0.80	0.60	0.48	0.34	2.07
	40	0.40	47.5	39.6	29.7	23.8	17.0	1.1	0.91	0.68	0.55	0.39	2.76
	60	0.49	58.2	48.5	36.4	29.1	20.8	1.3	1.11	0.84	0.67	0.48	4.14
8005 (05879) [50 mesh]	30	0.43	51.1	42.6	31.9	25.5	18.2	1.2	0.98	0.73	0.59	0.42	2.07
	40	0.50	59.4	49.5	37.1	29.7	21.2	1.4	1.14	0.85	0.68	0.49	2.76
	60	0.61	72.5	60.4	45.3	36.2	25.9	1.7	1.39	1.04	0.83	0.59	4.14
8006 (05880) [50 mesh]	30	0.52	61.8	51.5	38.6	30.9	22.1	1.4	1.18	0.89	0.71	0.51	2.07
	40	0.60	71.3	59.4	44.6	35.6	25.5	1.6	1.36	1.02	0.82	0.58	2.76
	60	0.74	87.9	73.3	54.9	44.0	31.4	2.0	1.68	1.26	1.01	0.72	4.14
8008 (05881) [50 mesh]	30	0.69	82.0	68.3	51.2	41.0	29.3	1.9	1.57	1.18	0.94	0.67	2.07
	40	0.80	95.0	79.2	59.4	47.5	33.9	2.2	1.8	1.36	1.09	0.78	2.76
	60	0.98	116.0	97.0	72.8	58.2	41.6	2.7	2.2	1.67	1.34	0.95	4.14

<b>RI 8010</b>	30	.87	102	85	64	51	37	2.35	1.96	1.47	1.17	0.85	2.07
(13674)	40	1.00	118	99	74	59	42	2.72	2.27	1.70	1.36	0.97	2.76
[50 mesh]	60	1.12	133	111	83	66	47	3.05	2.54	1.91	1.52	1.08	4.14

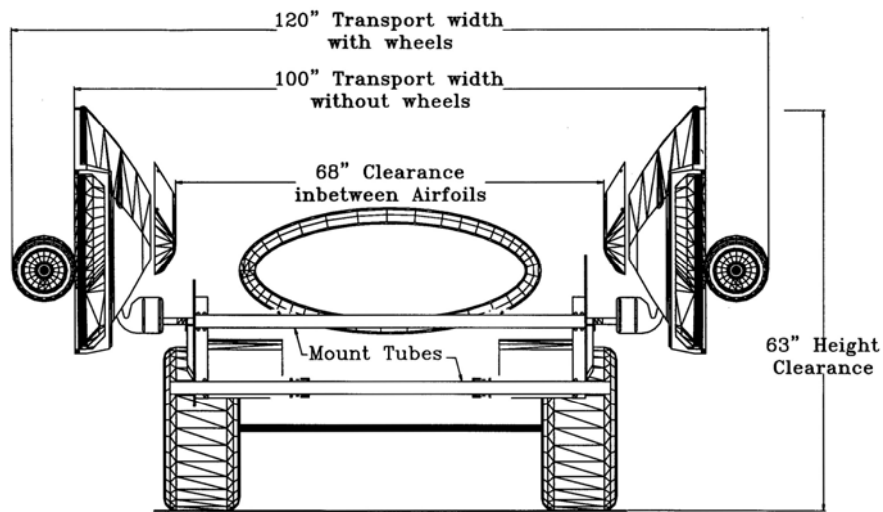
Table 4: Metric Application Rates of Tee Jet Tips at 50 cm nozzle spacing

Tip No. (Part No.) [Screen]	Liquid Press kPa	Capacity 1 nozzle l/min	L/ha - 1/2 m Spacing						Tip No. (Part No.) [Screen]	Liquid Press kPa	Capacity 1 nozzle l/min	L/ha - 1/2 m Spacing					
			4 km/h	5 km/h	6 km/h	7 km/h	8 km/h	10 km/h				4 km/h	5 km/h	6 km/h	7 km/h	8 km/h	10 km/h
800067 (05872) [200 mesh]	2.0	0.21	63.0	50.4	42.0	36.0	31.5	25.2	8004 (05878) 11004 (08858) [50 mesh]	2.0	1.29	387	310	258	221	194	155
	2.5	0.24	72.0	57.6	48.0	41.1	36.0	28.8		2.5	1.44	432	346	288	247	216	173
	3.0	0.26	78.0	62.4	52.0	44.6	39.0	31.2		3.0	1.58	474	379	316	271	237	190
	3.5	0.28	84.0	67.2	56.0	48.0	42.0	33.6		3.5	1.71	513	410	342	293	257	205
8001 (01369) 11001 (05862) [100 mesh]	4.0	0.30	90.0	72.0	60.0	51.4	45.0	36.0	8005 (05879) 11005 [50 mesh]	4.0	1.82	546	437	364	312	273	218
	2.0	0.32	96.0	76.0	64.0	54.9	48.0	38.4		2.0	1.61	483	386	322	276	242	193
	2.5	0.36	108.0	86.0	72.0	61.7	54.0	43.2		2.5	1.80	540	432	360	309	270	216
	3.0	0.39	117.0	93.0	78.0	66.9	58.5	46.8		3.0	1.97	591	473	394	338	296	236
80015 (00827) 110015 (01713) [100 mesh]	3.5	0.42	126.0	101.0	84.0	72.0	63.0	50.4	8006 (05880) 11006 (05865) [50 mesh]	3.5	2.13	639	511	426	365	320	256
	4.0	0.45	135.0	108.0	90.0	77.1	67.5	54.0		4.0	2.27	681	545	454	389	341	272
	2.0	0.48	144.0	115.0	96.0	82.3	72.0	57.6		2.0	1.94	582	466	388	333	291	233
	2.5	0.54	162.0	130.0	108.0	92.6	81.0	64.8		2.5	2.16	648	518	432	370	324	259
8002 (05876) 11002 (05863) [50 mesh]	3.0	0.59	177.0	142.0	118.0	101.0	88.5	70.8	8008 (05881) 11008 (05866) [50 mesh]	3.0	2.37	711	569	474	406	356	284
	3.5	0.64	192.0	154.0	128.0	110.0	96.0	76.8		3.5	2.56	768	614	512	439	384	307
	4.0	0.68	204.0	163.0	136.0	117.0	102.0	81.6		4.0	2.74	822	658	548	470	411	329
	2.0	0.65	195.0	156.0	130.0	111.0	97.5	78.0		2.0	2.58	774	619	516	442	387	310
8003 (05877) 11003 (05864) [50 mesh]	2.5	0.72	216.0	173.0	144.0	123.0	108.0	86.4	RI 8010 (13674) [50 mesh]	2.5	2.88	864	691	576	494	432	346
	3.0	0.79	237.0	190.0	158.0	135.0	119.0	94.0		3.0	3.16	948	758	632	542	474	379
	3.5	0.85	255.0	204.0	170.0	146.0	128.0	102.0		3.5	3.41	1023	818	682	585	512	409
	4.0	0.91	273.0	218.0	182.0	156.0	137.0	109.0		4.0	3.65	1095	876	730	626	548	438
8003 (05877) 11003 (05864) [50 mesh]	2.0	0.96	288.0	230.0	192.0	165.0	144.0	115.0	RI 8010 (13674) [50 mesh]	2.0	3.23	969	775	646	554	485	388
	2.5	1.08	324.0	259.0	216.0	185.0	162.0	130.0		2.5	3.61	1083	866	722	619	542	433
	3.0	1.18	354.0	283.0	236.0	202.0	177.0	142.0		3.0	3.95	1185	948	790	677	593	474
	3.5	1.27	381.0	305.0	254.0	218.0	191.0	152.0		3.5	4.27	1281	1025	854	732	641	512
[50 mesh]	4.0	1.36	408.0	326.0	272.0	233.0	204.0	163.0	[50 mesh]	4.0	4.56	1368	1094	912	782	684	547

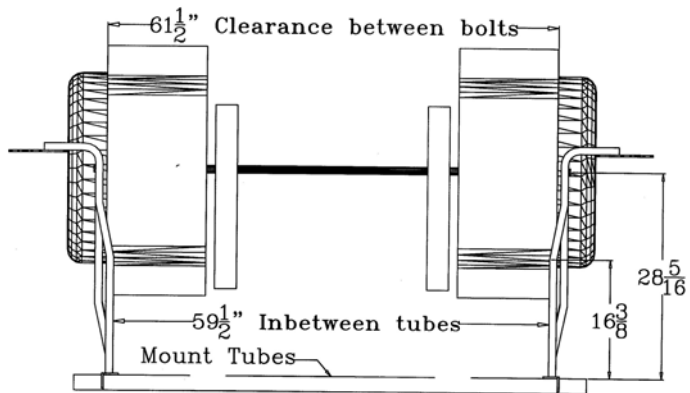
For ultra low volume applications 200 and 500 mesh screens and 8001 and 800067 (stainless steel) tips can be specially ordered from *Rogers Innovative Inc.*

## Lite Mounting Clearances

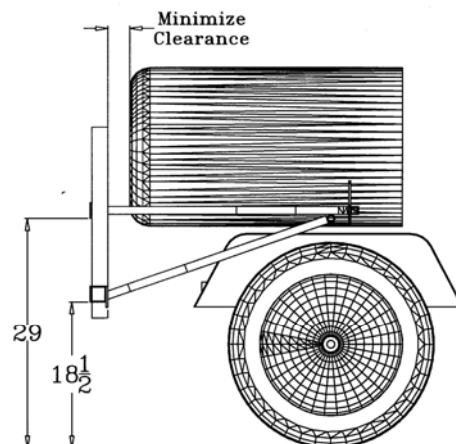
To check if you can mount the Lite on your sprayer make sure that it will fit inside the dimensions own below.



Rear View



Top View



Side View

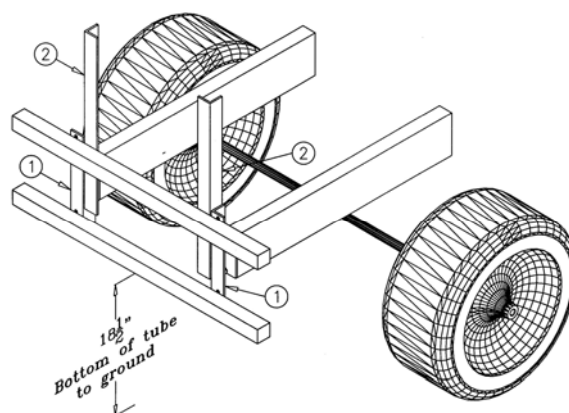


## Lite Mounting Appendix

### Toro 200 Skid Mount

Bolt the Lite mount angle (#1) on the outside of the Toro mount angle (#2) such that the lower mount tube is the right height  $\pm 1"$ .

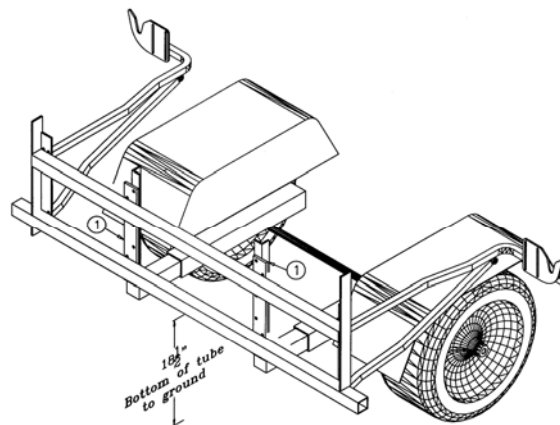
Item	Description	Part #	Qty
1	Lite Mount Angle, bolted outside	13672	2
2	Toro Mount Angle, bolted inside		
	Bolt, $\frac{1}{2}$ "NC x $1\frac{1}{2}$ "	01053	4
	Nut, Nylock, $\frac{1}{2}$ "NC	00963	4



### Toro 1250

Bolt the mount plates (#1) to Toro's boom mount channels and mount tubes.

Item	Description	Part #	Qty
1	Mounting Plate, Toro 1250	13684	2
	Bolt, 3/8NC x 1	05431	4
	Nut, Nylock, 3/8NC	00956	12
	U-bolt, 3/8NC x 2 x 3	12587	4



### Smithco 1600

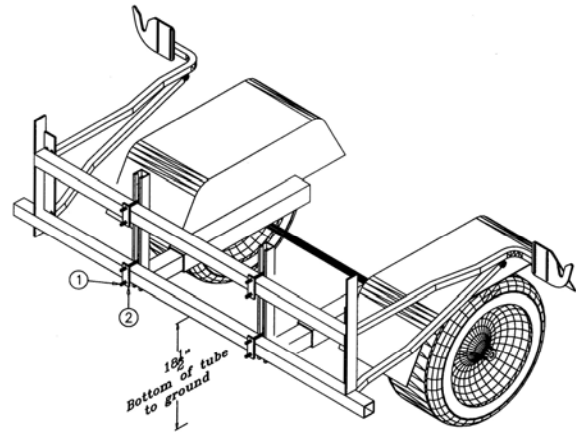
Clamp the mounting plates to Smithco's mounting frame.

Item	Description	Part #	Qty
1	Mounting Plate, Smithco 1600	13683	8
	Bolt, 3/8NC x 5	06251	8
	Nut, Nylock, 3/8NC	00956	8

## Textron DS300

Mount the mounting tubes on Textron's mount channel with mount plate #13686 (#1), with the bolts welded to it, and plate #13685 (#2) at the height shown.

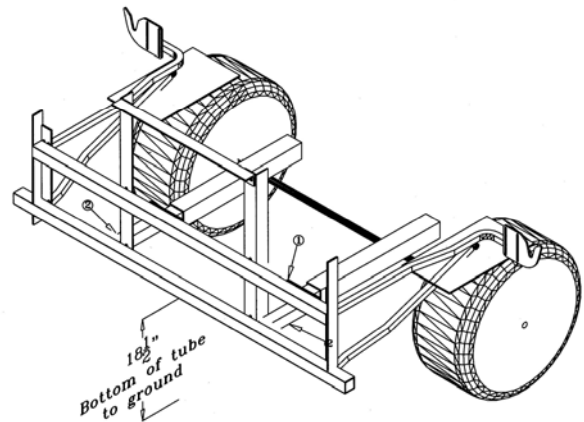
Item	Description	Part #	Qty
1	Mounting Plate, Textron DS300	13686	4
2	Mounting Plate, Textron DS300	13685	4
	Nut, Nylock, 3/8NC	00956	8



## Hahn 435

Mount the tube in the rear to the frame of the Hahn with the slit tilting down toward the front and sticking out 2". Then bolt the angle piece to it and the Lite tubes at the height shown.

Item	Description	Part #	Qty
	Hahn Mount Extension, Left	13680L	1
	Hahn Mount Extension, Right	13680R	1
	Mount Wedge, SP Hahn	02652	2
	Mount Adapter, Hahn	02654	2
	Bolt, 1/2NC x 1 1/2	01053	10
	Nut, Nylock, 1/2NC	00963	10
	U-bolt, 3/8NC x 2sq x 3	12587	4
	Nut, Nylock, 3/8NC	00956	8



## F107, Front Transport Mount – ProGator

### Assembly

