



TOP AIR 3-Point Sprayer


400 & 600 Gallon 3-Point Sprayer

600 Gallon = Beginning With Serial Number
B26480100 & Higher

400 Gallon = Beginning With Serial Number
B26600100 & Higher

Part No. 407460

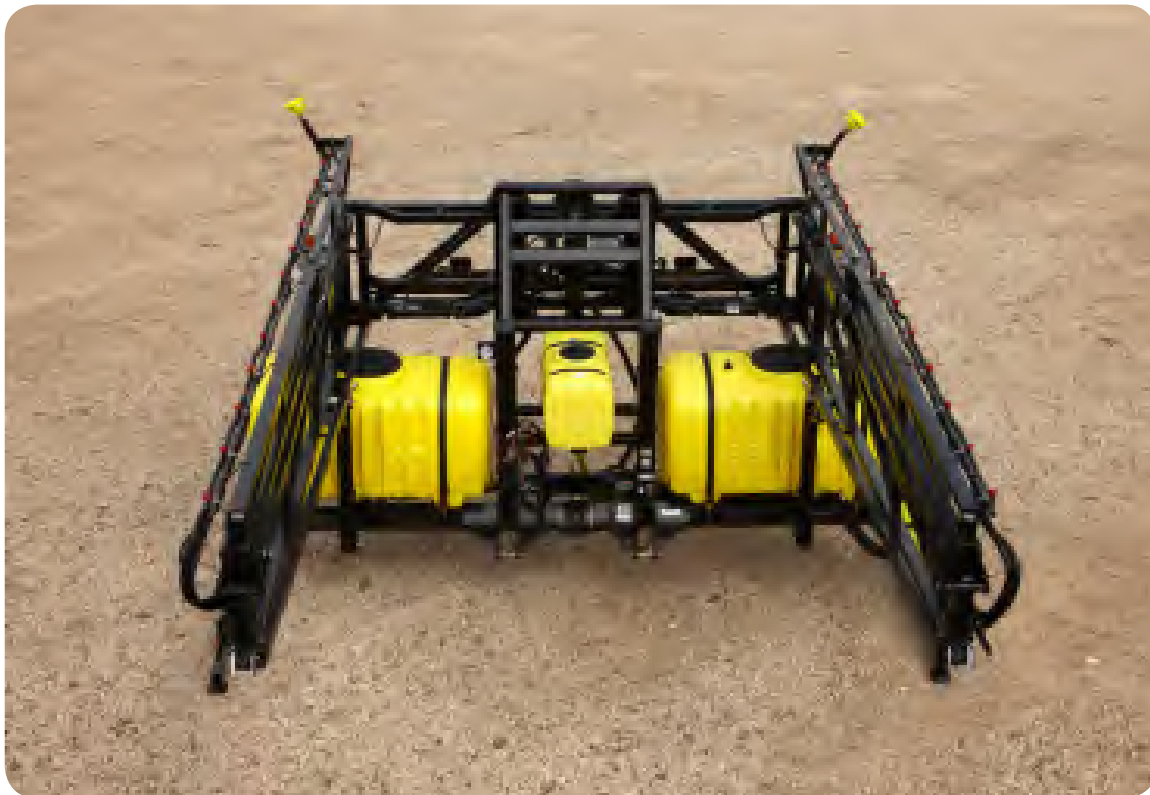
Foreword

 This symbol identifies important safety messages. When you see it, read the message that follows and be alert to the possibility of personal injury.

Remember, safety instructions stated in this manual are for your protection. Read them carefully and follow them closely when working around or using this machine.

Read and study this manual completely before attempting to operate this implement. Take this manual to the field for handy reference when operating, adjusting, or servicing your machine.

When referenced, “Right-Hand” (RH) and “Left-Hand” (LH) side of the machine are determined by standing behind the machine and facing in the direction of travel.



Product Information

All products manufactured by Unverferth Mfg. Co., Inc. are warranted to be free from material and workmanship defects for one full year from time of consumer delivery. Your local dealer will gladly assist you with any warranty questions.

Please fill out and retain this portion for your records. The serial number plate is located on the sprayer hitch.

Purchase Date _____ Model _____ Serial No.'s _____

Dealer _____ City _____

Dealer Contact _____ Phone _____

IMPORTANT

The information, specifications, and illustrations in the manual are on the basis of information available at the time it was written. Due to continuing improvements in the design and manufacture of Unverferth products, all specifications and information contained herein are subject to change without notice.

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General Hazard Information

No accident-prevention program can be successful without the wholehearted cooperation of the person who is directly responsible for the operation of the equipment.

A large number of accidents can be prevented only by the operator anticipating the result before the accident is caused and doing something about it. No power-driven equipment, whether it be transportation or processing, whether it be on the highway, in the field, or in the industrial plant, can be safer than the person who is at the controls. If accidents are to be prevented--and they can be prevented--it will be done by the operators who accept the full measure of their responsibility.

It is true that the designer, the manufacturer, and the safety engineer can help; and they will help, but their combined efforts can be wiped out by a single careless act of the operator.

It is said that, "the best kind of a safety device is a careful operator." We, at Unverferth Mfg. Co., Inc. ask that you be that kind of operator.



REMEMBER:
THINK SAFETY
A CAREFUL OPERATOR IS THE
BEST INSURANCE AGAINST AN
ACCIDENT!

SIGNAL WORDS



INDICATES AN EXTREMELY HAZARDOUS SITUATION OR ACTION THAT WILL RESULT IN SERIOUS INJURY OR DEATH.



INDICATES A HAZARDOUS SITUATION OR ACTION THAT COULD RESULT IN SERIOUS INJURY OR DEATH.



INDICATES AN UNSAFE SITUATION OR ACTION THAT MAY RESULT IN PERSONAL INJURY.

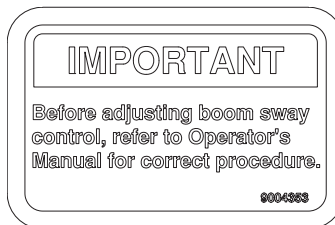
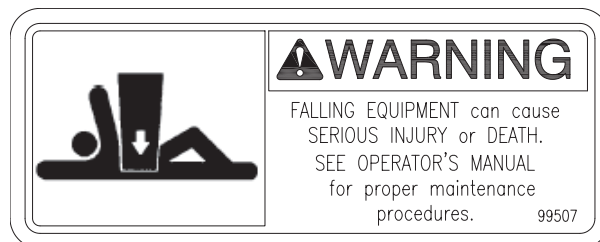
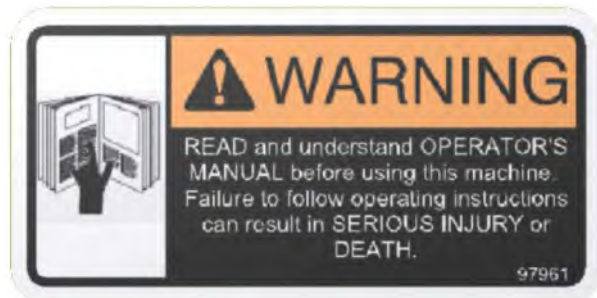
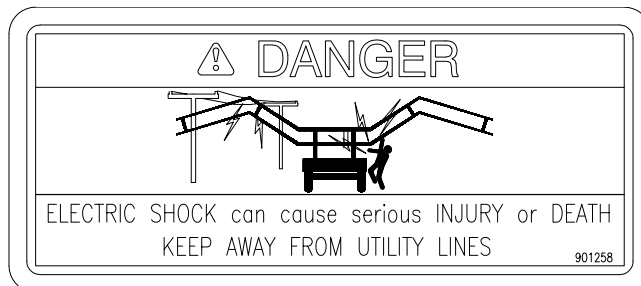


Is used for instruction on operating, adjusting, or servicing a machine.

Safety Decals

⚠️ WARNING

• REPLACE LOST, DAMAGED, PAINTED, OR UNREADABLE DECALS IMMEDIATELY. IF PARTS THAT HAVE DECALS ARE REPLACED, ALSO MAKE SURE TO INSTALL NEW DECALS. THESE DECALS INFORM AND REMIND THE OPERATOR WITH OPERATIONAL INFORMATION AND SAFETY MESSAGES.



9003125 - Fluorescent Strip
 9003126 - Reflector = Red=
 9003127 - Reflector =Amber

Following Safety Instructions

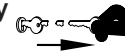
- Read and understand this operator's manual before operating.



- All machinery should be operated only by trained and authorized personnel.

- To prevent machine damage, use only attachments and service parts approved by the manufacturer.

- Always shut towing vehicle engine and hydraulic power unit engine off & remove key before servicing the implement.






- Avoid personal attire such as loose fitting clothing, shoestrings, drawstrings, pants cuffs, long hair, etc., that may become entangled in moving parts.

- Do not allow anyone to ride on the implement. Make sure everyone is clear before operating machine or towing vehicle.



- Never attempt to operate implement unless you are in driver's seat.

Before Operating or Servicing

- Do not stand between towing vehicle and implement during hitching. 
- Avoid working under an implement; however, if it becomes absolutely unavoidable, make sure the implement is safely blocked. 
- Always make certain everyone and everything is clear of the machine before beginning operation.
- Verify that all safety shields are in place and properly secured. 
- Ensure that all applicable safety decals are installed and legible.
- Secure drawbar pin with safety lock and lock tractor drawbar in fixed position.
- Add sufficient ballast to tractor to maintain steering and braking control at all times. Do not exceed tractor's lift capacity or ballast capacity.
- This sprayer is intended to only spray agricultural chemicals. Attempting to spray other liquids may cause equipment damage and introduce unexpected personal hazards.
- Hitch sprayer to towing vehicle and clear all personnel from the surrounding area before folding and unfolding wings.
- Check all spray equipment for leaks. Repair any leaks before beginning or resuming operation.
- Ensure tank access covers are fully closed before beginning or resuming operation.
- Residual pressure may exist in sprayer plumbing even when unit is not in use. Relieve pressure before servicing any plumbing.

During Operation

- Regulate speed to field conditions. Maintain complete control at all times.
- Never lubricate equipment when in operation.
- Keep away from overhead power lines. Electrical shock can cause serious injury or death.
- Use extreme care when operating close to ditches, fences, or on hillsides.
- Do not leave towing vehicle unattended with engine running.


Before Transporting

- Check for proper function of all available transport lights. Make sure that all reflectors are clean and in place on machine

During Transport

- Comply with state and local laws governing highway safety when moving machinery.
- Use transport lights as required by local laws to adequately warn operators of other vehicles.
- Use good judgment when transporting equipment on highways. Regulate speed to road conditions and maintain complete control.
- Maximum speed of implement should never exceed 20 mph. Do not exceed 10 mph during off-highway travel.
- Slow down before making sharp turns to avoid tipping. Drive slowly over rough ground and side slopes.
- It is probable that this implement is taller, wider and longer than the towing vehicle. Become aware of and avoid all obstacles and hazards in the travel path of the equipment, such as power lines, ditches, etc.


Pressurized Oil

- Relieve pressure before disconnecting hydraulic lines from tractor, loosening any hydraulic fittings or servicing hydraulic system. See hydraulic power unit manual for procedure to relieve pressure.
- High-pressure fluids can penetrate the skin and cause serious injury or death. Use cardboard or wood to detect leaks in the hydraulic system. Seek medical treatment immediately if injured by high-pressure fluids. 
- Accumulators used in this hydraulic system can retain fluid under pressure even after tractor hydraulic valve is placed in FLOAT. Remove residual pressure from wing tilt and main lift accumulators by holding wing tilt and main lift switches in DOWN position for at least 20 seconds after cylinders have stopped moving.
- Hydraulic system must be purged of air before operating to prevent serious injury or death.
- Do not bend or strike high-pressure lines. Do not install bent or damaged tubes or hoses.
- Repair all oil leaks. Leaks can cause fires, personal injury, and environmental damage.
- Route hoses and lines carefully to prevent premature failure due to kinking and rubbing against other parts. Make sure that all clamps, guards and shields are installed correctly.
- Check hydraulic hoses and tubes carefully. Replace components as necessary if any of the following conditions are found:
 - End fittings damaged, displaced, or leaking.
 - Outer covering chafed, cut, or wire reinforcing exposed.
 - Outer covering ballooning locally.
 - Evidence of kinking or crushing of the flexible part of a hose.

Chemical Hazards

- Always wear personal protective equipment when working with or near chemicals. This equipment includes, but is not limited to: protective eye wear, gloves, shoes, socks, long-sleeved shirt, and long pants. Additional protection may be required for many types of chemicals.
- Spray tanks may contain residual toxic chemicals. **DO NOT ENTER SPRAY TANK FOR ANY REASON WITHOUT WEARING PROPER VENTILATING EQUIPMENT.** Failure to do so may result in suffocation and death.
- Seek and receive chemical product training prior to using agricultural chemicals
- Read and understand the entire label of every chemical being applied with this sprayer.
- Avoid breathing spray mist or vapor.
- Wash hands before eating, drinking, chewing gum, or using the toilet.
- Remove clothing immediately if chemicals penetrate clothing and contact skin. Wash thoroughly and put on clean clothing.
- Dispose of unused chemical in accordance with chemical label directions and local/national regulations.

Access and Egress

- Mount and dismount the sprayer only where steps and/or hand holds are provided.
- Face the sprayer when mounting and dismounting.
- Do not allow riders on sprayer. 
- Inspect, and when necessary, clean and have repairs made to steps and hand holds before mounting and dismounting.
- Never get on or off a moving sprayer.
- Never jump off the sprayer.
- Do not try to climb on or off the sprayer when carrying tools or supplies.

Electrical Safety

- The electrical system of this sprayer is designed to operate on 12 volt DC power only.
- Never operate the sprayer with a damaged electrical cord. Disconnect electrical power if a cord is damaged.
- Always disconnect power before attempting any electrical repair.
- Disassembly or attempted repairs, if accomplished incorrectly, can create electrical short hazards. Only qualified personnel should perform repair service.
- Never attempt to bypass fuses. Do not replace original fuses with higher amperage fuses. If a fuse repeatedly fails, a short hazard may exist.

Preparing for Emergencies

- Keep a first aid kit and properly rated fire extinguisher nearby.



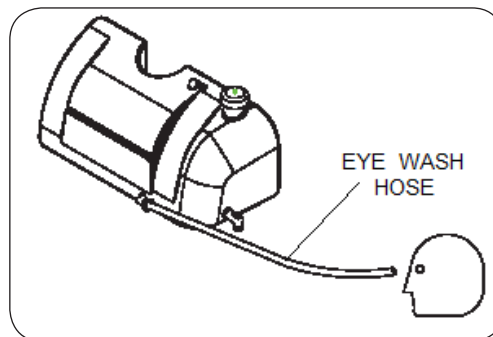
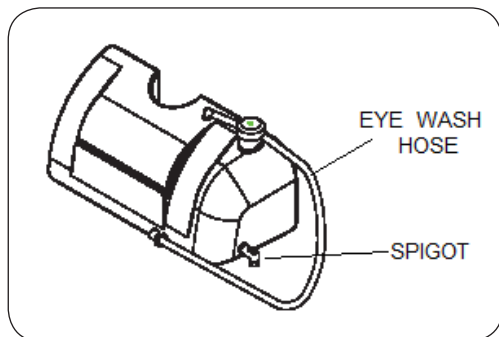
- Keep emergency numbers for fire, rescue, and poison control personnel near the phone.



- A clean water tank is provided as standard equipment. It is equipped with a spigot for general washing and a hose for emergency eye washing.

- Always keep clean water in tank. Water in clean water tank is not suitable for human consumption.

- For emergency eyewash, pull hose off of top fitting and flush affected area.



Wearing Protective Equipment

- Wear clothing and personal protective equipment appropriate for the job.



- Wear steel-toed shoes when operating.



- Wear hearing protection when exposed to loud noises.



- Do not wear additional hearing impairing devices such as radio headphones, etc.



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FOR TORQUE INFORMATION, PLEASE REFER TO THE OPERATION SECTION.

Preparing the Sprayer

WARNING

- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.
- KEEP HANDS CLEAR OF PINCH POINT AREAS.
- FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 1,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.
- FALLING OR LOWERING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. KEEP EVERYONE AWAY FROM EQUIPMENT WHEN SUSPENDED, RAISING, OR LOWERING.

1. Using a hoist or lifting devices rated at 1,000 lbs. minimum, lift the wing assemblies from the 3-point stands by disassembling the shipping clamps. Remove the fork tube stands by removing the pins and bolts securing them. Adapter bushings are provided for converting the hitch to a Category IV hitch, if needed. The bushings are stored in the storage box located on the clean water tank.
2. Using the hoist or lifting device rated at 1000 lbs. minimum, lift the boom lift to relieve the weight supported and remove the boom lift cylinder stops. Stow the stops on the lower parallel lift arm using the brackets provided. Support the center section using stands rated for 1000 lbs. minimum. Lower the boom to a good working height.

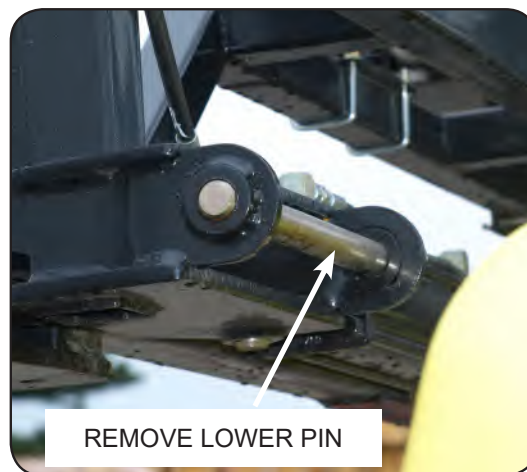
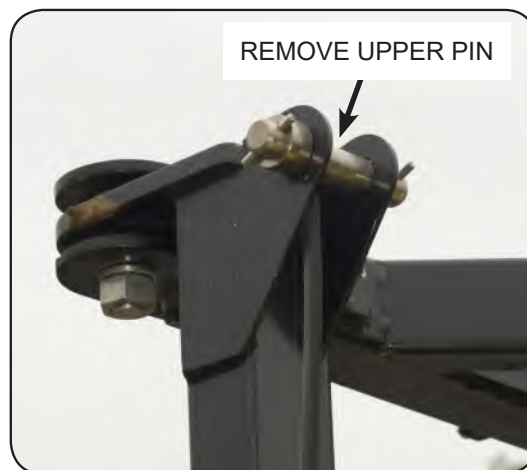


Preparing the Sprayer (continued)

3. Pivot the wing pivots out 90 degrees so that they are positioned as if the boom is unfolded.



4. Remove the upper and lower attaching pins on the wing pivots by removing a coiled spring pin on the upper pin and the retainer bolt on the longer lower pin.



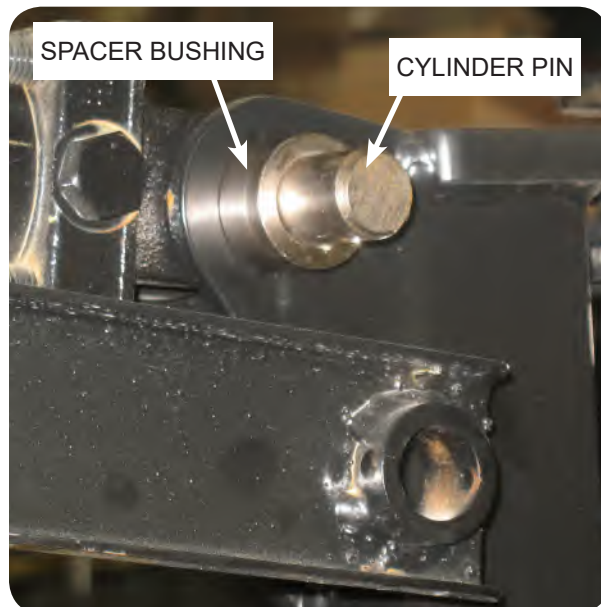
Preparing the Sprayer (continued)

5. Insert the appropriate wing into the lower end of the wing pivot. Secure with the appropriate pin and retaining hardware.
6. Free the tilt cylinder by removing the tie strap. Rotate the cylinder 180 degrees so that the hydraulic accumulator is facing down.

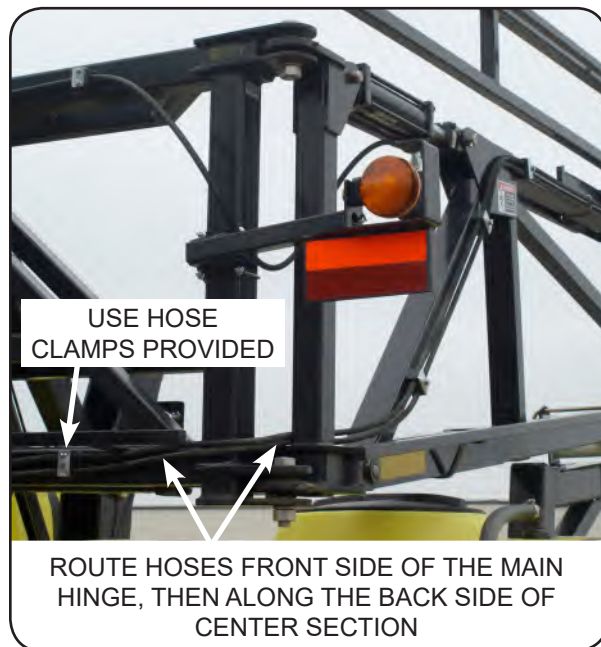


Preparing the Sprayer (continued)

7. Secure the cylinder to the wing pivot by inserting the clevis of the cylinder between the upper cylinder lugs on the wing pivot. Insert the cylinder pin such that the extra length protrudes to the front of the unit. Slide the provided spacer bushing over the front side of the pin. Install the boom level indicator needle over the same side of the pin. Secure with the removed coiled spring pin.

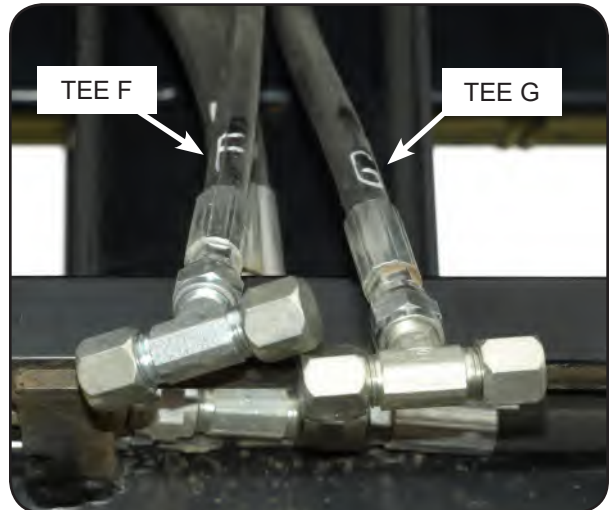
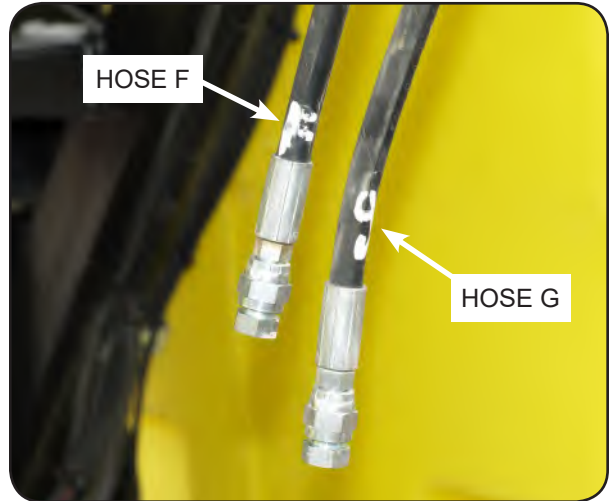


8. Route the hydraulic hoses for the outer wing-fold cylinder around the front side of the main hinge and then along the back side of the center section through the hose clamps provided.



Preparing the Sprayer (continued)

9. Attach the hose labeled with the letter F to the tee that is labeled with F. Do the same with the hoses labeled with G.



10. Repeat steps 4 through 7 for the opposite side.

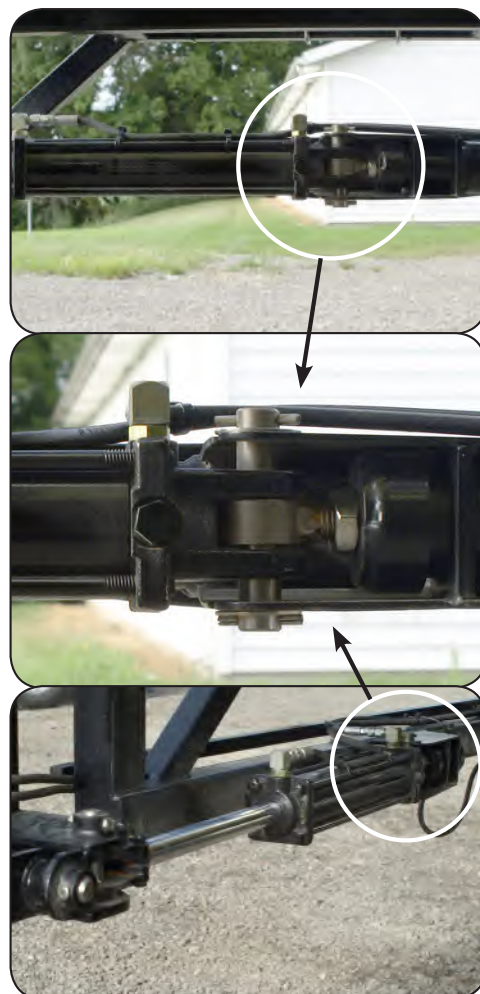
Preparing the Sprayer (continued)

11. Before running the hydraulics, ensure that the sprayer is sitting on a level surface and is stable. Make sure everyone is clear and that the surrounding area is clear before actuating any hydraulics. Never store the unit on an unlevel surface as there is risk of shifting the center of gravity causing the unit to tip over. Carefully cycle the hydraulics to purge air from the system. Repeatedly extend and retract the cylinders partially five to six times to accomplish this before fully extending any cylinders.

12. Adjust the boom level indicator. Place a level on the center section to ensure it is level. Place the level on the lower tube of the main wing. Adjust the tilt until the level reads level. With the wing and center section level, loosen the U-bolts securing the wing level indicator and adjust so that the blackened arrow is aligned with the needle. Repeat for the opposite side.

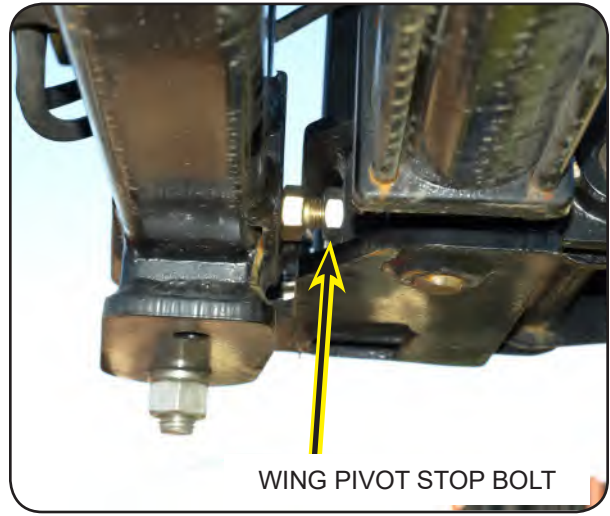


13. Adjust the main wing fold cylinder adjustment eye located at the base end of the cylinder to straighten the wings when unfolded. Ensure the main wing fold cylinders are fully extended when performing this step.



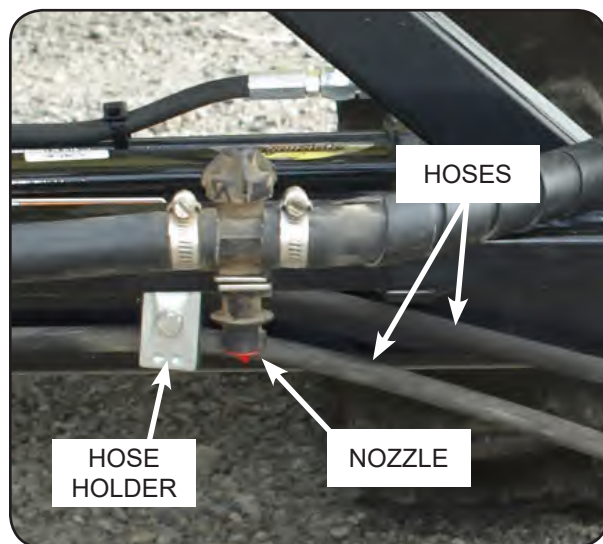
Preparing the Sprayer (continued)

14. Adjust the wing pivot stop bolts so that the wings properly seat in the wing rests when folded.



Preparing the Sprayer (continued)

15. Plumb the boom appropriately with the plumbing kit provided. The feed line hoses should run along the backside of the nozzles and through any hose holder mechanisms provided.



16. At the main hinge, the hose will run around the front side of the hinge in the same manner as the hydraulic hoses.

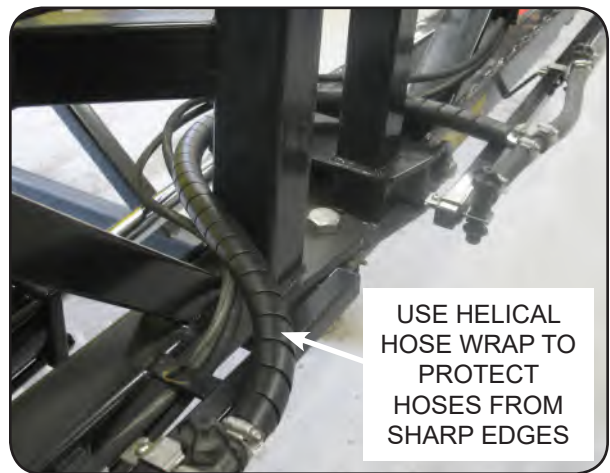


Preparing the Sprayer (continued)

17. The feed lines going out to the outer wings need to be routed through the spring wire form hose holder provided.



18. Wrap the hoses with the plastic helical hose wrap provided at all major hinge areas as well as any areas where the rubber hoses may wear against sharp edges.



19. Wrap the hydraulic hoses and sprayer plumbing hoses together at the main hinge with the Velcro hose wrap provided. Secure the ends of the wrap with tie straps.

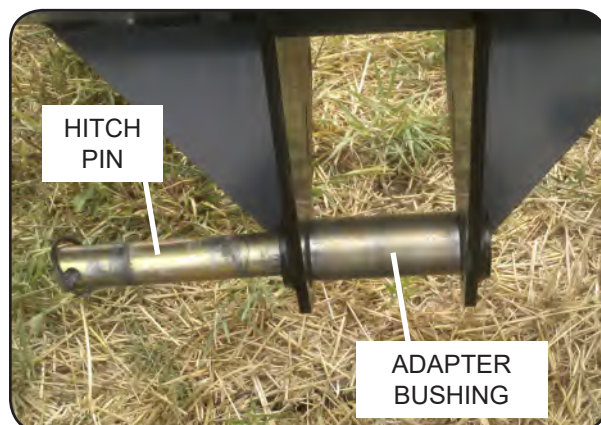
20. Install any accessories ordered for the unit.



Hitching Sprayer to Tractor

This sprayer is intended to be used with either a Category 3 or Category 4N quick couplers.

If the tractor is equipped with a Category 4N quick coupler, install the adapter bushings provided on the three hitch pins before attempting to attach the sprayer to the tractor. The sprayer unit is shipped with these bushings in the storage compartment located on the clean water tank.



1. Back the tractor close to the sprayer. Allow enough room to gain access between the sprayer and tractor.
2. Lower the 3-point hitch onto the tractor. Move the tractor into a position to allow the quick coupler to engage the hitch pins. Raise the 3-point hitch until the pins are fully seated in the quick coupler.
3. Ensure the sprayer hitch pins are installed properly on the sprayer with the lynch pins installed and locked.
4. Connect the hydraulic hoses and all the electrical connections to the tractor.
5. Make sure the quick coupler latches are engaged. Raise the sprayer to the desired working height and remove the storage stands.



Installing Controller

1. Mount the controller in the cab.
2. Connect the wiring harness at the hitch.
For serial numbers below B38010100, connect the two, 16-pin connectors of the braided wiring harness 9005487, to the two, 16-pin connectors of the braided wiring harness of the sprayer.
For serial numbers B38010100 and higher, connect, the 31 pin connector and the 2 pin Deutsch connector of harness 9007774 to the connectors on the sprayer harness.
3. Run the harness into the cab.
4. Attach the other end of the wiring harness to the back of the controller.
For serial numbers below B38010100, attach the 24-pin connector of the 9005487 braided wiring harness to the 24-pin connection on the command center control box.
For serial numbers B38010100 & higher, attach the large rectangular 30 pin connector of the 9007774 wiring harness to the connection on the Command Center IV control box.
5. Connect the red and white wires to a 12V power source. Red is the positive and white is the ground.

Boom Functions

Setting the Flow

1. Adjust the circuit flow to the minimum setting prior to operating the circuit for the first time.
2. Turn on the fold box.
3. Move the hydraulic lever to RETRACT to start the oil flow.
4. Hold the left wing tilt switch in the up position.
5. Slowly increment the flow up until the boom starts to move.
6. Release the wing tilt button.
7. Lower the left wing back into the cradle.
8. Disengage the hydraulics by pushing the lever into float.

IMPORTANT

- *The flow will be approximately 2-4 GPM.*

Setting Up the Controller

Refer to the appropriate Raven manual for instructions on setting up the controller.

Pump Set Up

IMPORTANT

- *The information in this section pertains explicitly to the Ace brand hydraulic-driven spray pumps. While set-up for other pumps is similar to the Ace set-up, please refer to the pump manufacturer's manual for specific instructions.*

The hydraulic-driven spray pump is adaptable to three different types of tractor hydraulic systems. Use the following guidelines to assist with setting the pump for proper operation.

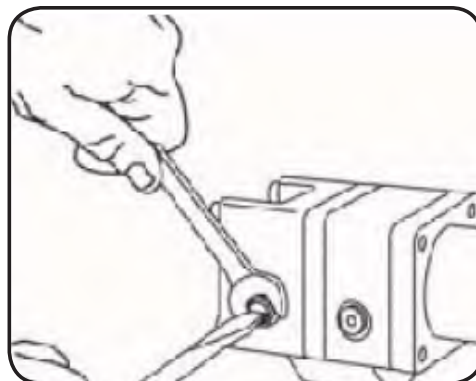
Before starting the set-up procedure, ensure that the solution tank contains at least 50 gallons of liquid, and the control valves are at the settings found in the table to the right:

VALVE SETTINGS	
PUMP INLET SELECTOR	<SOLUTION TANK>
INDUCTOR FLOW (OPT)	<OFF>
FILTER PURGE CONTROL	<OFF>
PUMP OUTLET SELECTOR	<BOOM>

Load-Sensing Closed-Center System

This type of system is most commonly found on new, larger horsepower tractors. It is characterized by the use of a variable-displacement hydraulic pump, which reverts to an energy-conserving low pressure and volume output when no hydraulic flow is being requested.

1. Close the motor needle valve by loosening the jam nut, screwing the needle valve clockwise until seated, then tightening the lock nut.
2. Adjust the tractor flow control to its minimum setting.
3. Move the hydraulic lever to RETRACT to start the pump.
4. Close the AGITATION CONTROL valve after the pump primes and begins to develop pressure.
5. Adjust the tractor flow control until the desired pressure is reached, up to a maximum pressure of 100 PSI.



IMPORTANT

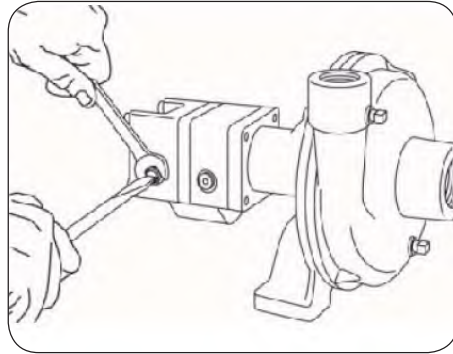
- *Do not run the pump for extended periods with the outlet flow fully blocked. Overheating and pump damage can result.*

Pump Set Up (continued)

Pressure-Compensating Closed-Center System

This system uses a variable-displacement, constant pressure pump, and is typically found on John Deere 20, 30, 40 and 50-series tractors. A restrictor is used with this system to protect the pump from over-speeding.

1. Install the restrictor orifice in the pump inlet.
2. Close the motor needle valve by loosening the jam nut, screwing the needle valve clockwise until seated, then tightening the lock nut.
3. Adjust the tractor flow control to its minimum setting.
4. Move the hydraulic lever to RETRACT to start the pump.
5. Close the AGITATION CONTROL valve after the pump primes and begins to develop pressure.
6. Adjust the tractor flow control until the desired pressure is reached, up to a maximum pressure of 100 PSI.



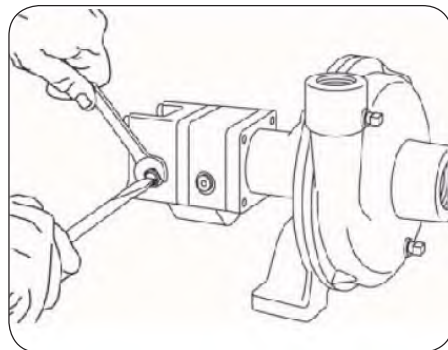
IMPORTANT

- *If sufficient pressure cannot be reached, it may be necessary to enlarge the restrictor orifice. To do so, remove the orifice and drill a hole to a slightly larger size. Do not run the pump without a restrictor installed. Consult with the dealer or factory prior to restrictor modification.*
- *Do not run the pump for extended periods with the outlet flow fully blocked. Overheating and pump damage can result.*

Open Center System

An open-center system uses a fixed-displacement pump, and requires that the operator keeps the engine speed relatively constant to ensure adequate flow to the pump. This type of system is common on older, lower horse-power tractors.

1. Do not install a flow limiter or orifice on the pump.
2. Loosen the jam nut on the motor needle valve and back out the needle valve three or four counter-clockwise.
3. Start the tractor and set the engine speed to the RPM that will be used while spraying.
4. Move the hydraulic lever to RETRACT to start the pump.
5. Close the AGITATION CONTROL valve after the pump primes and begins to develop pressure.
6. Adjust the motor needle valve by turning clockwise until the desired pressure is reached, up to a maximum pressure of 100PSI. Retighten the jam nut.



Hydraulic Manifold Set Up

Set Up for Power Beyond Connection

The hydraulic manifold is configured from the factory to be compatible with connection to a standard tractor hydraulic control (SCV) circuits. To convert for use with power-beyond circuits of load-sensing closed-center hydraulic systems, use the following procedure:

IMPORTANT

- *Tractor MUST be equipped with a load-sensor port.*
1. Relieve all the hydraulic system pressure.
 2. Unscrew retaining nut at the end of the 2-way cartridge valve and remove the electric coil.
 3. Remove the 2-way cartridge valve by unscrewing the valve from the manifold.
 4. Install the “normally-closed” valve in the manifold (Identified by WS08Z stamped on valve).
 5. Reinstall the electric coil and hand-tighten the supplied plastic knob to secure.
 6. Unscrew the pressure hose from the “P” port on the manifold. Install 0.062” inlet restrictor and reattach the hose.
 7. Remove the short hose from the LS port and tee fitting.
 8. Install the cap on the open end of the tee fitting.
 9. Unscrew the fittings from the LS port on the manifold.
 10. Using a hex wrench, install the orifice plug in the bottom of the LS port cavity. Reinstall the fittings on the LS port.
 11. Install the high-pressure hose from the LS port to the tractor load-sense port.

Set Up for Pressure Compensated Closed-Center Hydraulic Systems

The closed-center conversion kit 406107 needs to be installed for pressure-compensating closed-center tractors. Load-sense closed-center tractors do not need this kit.

1. Relieve all hydraulic system pressure.
2. Unscrew the retaining nut at the end of the 2-way cartridge valve and remove the electric coil.
3. Remove the 2-way cartridge valve by unscrewing the valve from the manifold.
4. Install supplied cavity plug in manifold.
5. Remove pressure hose from P port.
6. Install supplied orifice in P port.

Hydraulic Manifold Set Up (continued)

Set Up for Pressure Compensated Closed Center Hydraulic Systems (continued)

7. Reinstall pressure hose on end of orifice installed in previous step.

Setting the Pump Pressure

IMPORTANT

- *The water must be in the Solution Tank. Refer to Filling the Tank in the Operation section.*
- *Booms should be unfolded when setting the pump pressure. Refer to Unfolding Booms in the Maintenance section.*
- *The Pump Inlet selector should be pointed to the Solution Tank. The pump outlet selector should be pointed to the boom.*



1. Adjust the circuit flow to the minimum setting prior to operating the sprayer for the first time.
2. Hold the Agitation button located on the Command Center to close for seven seconds so the agitation is completely closed.
3. Close the filter purge valve.
4. Engage the hydraulic lever to the RETRACT position.
5. Increase the flow in the tractor until the filter inlet pressure is 100 PSI.
6. Increase the agitation so the filter inlet pressure drops by 5 PSI. The gauge should now read 95 PSI.
7. Open the filter purge valve so that the filter inlet pressure drops by another 5 PSI. The gauge should now read 90 PSI.

Sprayer Calibration

Set Up for Pressure Compensated Closed-Center Hydraulic Systems

Use the following procedure to assist with sizing the spray nozzle and calibrating the sprayer. Additional information can be found in the spray controller owner's manual, and also obtained from spray nozzle manufacturers.

The following procedure assumes that an electronic spray rate controller is being used.

1. Decide the typical operating speed (in MPH) and coverage rate (in GPA) that will be used.
2. Calculate the nozzle flow:

$$\text{Nozzle GPM} = \frac{\text{MPH} \times \text{GPA} \times \text{Nozzle spacing} \times \text{DCF}^*}{5940}$$

* DCF = Density Conversion Factor

Weight of Solution	Specific Gravity	Density Conversion Factor (DCF)
8.34 lb/gal. (Water)	1.00	1.00
10.65 lb/gal. (28% Nitrogen)	1.28	1.13

Example:

Speed = 8 miles per hour
 Rate = 10 gallons per acre
 Nozzle spacing = 20 inches
 Liquid = Water

$$\text{Nozzle GPM} = \frac{8 \text{ MPH} \times 10 \text{ GPA} \times 20 \text{ inches} \times 1.0}{5940} = 0.27 \text{ GPM}$$

3. Go to the Top Air Tip Catalog to select a tip.

Choose a nozzle that will provide the calculated GPM within the nozzle's operating pressure range. Typically, two or three nozzle sizes will be found that meet the calculated GPM. However, it is usually a good practice to choose a flow size that lists this GPM in the mid-portion of the nozzle's advertised ratings.

4. Choose a type of tip for the given application. Example: XRC, AIC.
5. Determine a spraying pressure required for the chemical being used.
6. Match up the spraying pressure needed in column 2 and the GPM calculated in column 3. This determines the color of the tip required.

Notes

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Preparing Tractor

WARNING

- **READ AND UNDERSTAND THE SAFETY RULES BEFORE OPERATING OR SERVICING THIS MACHINE. REVIEW THE “SAFETY” SECTION IN THIS MANUAL, IF NECESSARY.**

Before operating the sprayer, read the tractor operator's manual and gain an understanding of its safe methods of operation.

Check the tractor brakes and transport lights. Make sure they are in proper working order.

Check the tractor hydraulic oil reservoir and add oil, if needed.

Front-End Weights

Use front-end weights as needed to provide effective steering control and front-end stability. See your tractor operator's manual from recommendations on ballasting procedures.

NOTE: In adverse field conditions which necessitate using lower gears, use the maximum front-end weights permissible to avoid possible front-end tip-up.

Sway Blocks

Sway blocks should be used and adjusted to provide movement in the operating position. The sprayer should be permitted to sway while operating and should be held rigid while transporting. See your tractor operator's manual.

Wheel Spacing

Set the tractor wheels so they are equal distance from the center of the tractor. The dimension from the center of the tractor to the center of each tire should be the same. If using the sprayer to spray fields of row crops, set the tractor wheels so they are centered between the rows.

See your tractor operator's manual for correct tire inflation pressure and instructions for wheel ballast where it is required.

NOTE: When installing tractor ballast, do not exceed the maximum clearance capacity of the tractor with all its attachments.

Lift Links and Center Links

Adjust the length of the lift links and center link to assure adequate clearance between the tractor tires and sprayer components. See your tractor operator's manual.

Preparing Sprayer

Hydraulics

WARNING

- RELIEVE HYDRAULIC PRESSURE BEFORE SERVICING THE HYDRAULIC SYSTEM. SEE THE TRACTOR OPERATOR'S MANUAL FOR THE PROPER PROCEDURE.
- HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.
- THE HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.



Hydraulic System Checks

On all units, check the following:

Routing of all hoses - Hoses should not be kinked, twisted or rubbing against sharp edges.

Fitting and connections - Use cardboard or wood to check for leaks, not hands. Refer to the Torque Chart at the end of this section.

Bolts and Nuts

Before going to the field, check all the hardware for tightness. After the unit has been operated for several hours, re-check all bolts for tightness.

Pins and Retaining Rings

Before going to the field, check that all of the pins and retaining rings are in place and in good condition. Replace any worn, damaged or missing pins and retaining rings.

Lubrication

Lubricate the sprayer as outlined in the Maintenance section of this manual.

Boom Operation

Unfolding

⚠ DANGER

- **ELECTROCUTION WILL CAUSE SERIOUS INJURY OR DEATH. PERFORM BOOM UNFOLDING AND FOLDING OPERATIONS ONLY IN AREAS WITH ADEQUATE HEIGHT, WIDTH AND LENGTH CLEARANCE. IN PARTICULAR, BE MINDFUL OF LOCATION OF OVERHEAD POWER LINES.**

⚠ WARNING

- **KEEP ALL PERSONNEL A SAFE DISTANCE AWAY FROM THE SPRAYER WHEN UNFOLDING OR FOLDING THE BOOM. PERSONAL INJURY CAN RESULT FROM IMPACT WITH THE BOOM.**

1. Press the top of the ON/OFF switch to turn the power on. (Red LED lamp on the rocker switch should illuminate. Green LED lamp is provided to indicate the circuit continuity whenever any other switch is pressed).
2. Remove the boom rest wing lock pins. Press and hold the RH WING TILT and LH WING TILT switches in the <UP> position until the wings are fully tilted upward.



IMPORTANT

- *The wing tilt function may require several seconds of use before the wings begin to move.*
3. Press the MAIN BOOM switch in the <RAISE> position until the boom raises all the way, remove the lynch pin, remove the stops and place the stops in their storage position.
 4. Press and hold the INNER WING switch in the <EXTEND> position until the wings are fully extended.
 5. Momentarily press the WING TILT switches either <UP> or <DOWN> as required to approximately level the wings horizontally.
 6. Press and hold the OUTER WING switch in the <EXTEND> position until the outer wings are fully extended.
 7. Momentarily press the WING TILT switches either <UP> or <DOWN> as required to level the wings horizontally. (Observe the tilt indicators located near the tilt cylinders to assist with leveling the wings).
 8. Press and hold the MAIN BOOM switch in the <LOWER> position until the boom is at the desired spray height.

IMPORTANT

- *Never unfold the unit without attaching to the tractor first. For proper boom suspension operation, do not operate the boom in the fully lowered position. The minimum spray height is attained by lowering the boom fully, then raising it approximately four inches to permit adequate suspension travel.*

Boom Operation (continued)

Folding



- **ELECTROCUTION WILL CAUSE SERIOUS INJURY OR DEATH. PERFORM BOOM UNFOLDING AND FOLDING OPERATIONS ONLY IN AREAS WITH ADEQUATE HEIGHT, WIDTH AND LENGTH CLEARANCE. IN PARTICULAR, BE MINDFUL OF LOCATION OF OVERHEAD POWER LINES.**



- **KEEP ALL PERSONNEL A SAFE DISTANCE AWAY FROM THE SPRAYER WHEN UNFOLDING OR FOLDING THE BOOM. PERSONAL INJURY CAN RESULT FROM IMPACT WITH THE BOOM.**
1. Press the top ON/OFF switch to turn the power on. (Red LED lamp on the rocker switch should illuminate. Green LED lamp is provided to indicate the circuit continuity whenever any other switch is pressed).
 2. Press and hold the OUTER WING switch in the <RETRACT> position until the outer wings are fully retracted.
 3. Raise the boom fully, install the cylinder stops, secure with the lynch pin, and lower the boom on the cylinder stops. Continue to hold the switch down for an additional five seconds to drain the accumulator.
 4. Press and hold the RH WING TILT and LH WING TILT switches in the <UP> position until the wings are fully tilted upward.
 5. Press and hold the INNER WING switch in the <RETRACT> position until the wings are fully retracted.
 6. Press and hold either the RH WING TILT or LH WING TILT switch in the <DOWN> position until each wing is seated in its wing rest and hold for an additional five seconds after the wings are fully seated in the rest brackets to drain the accumulators. This will prevent inadvertent movement of the wings out of the wing rests during transport. Install the boom rest wing lock pins. Repeat for the opposite wing.



NOTE: The wing tilt function may require several seconds of use before the wings begin to move.

Filling the Sprayer

Tank Mixing

Spray chemicals can be added to the solution tank by either pouring directly into the top tank access hatch, or through the use of an optional inductor. Before adding chemicals, ensure that each tank contains at least 50 gallons of water.

WARNING

- **ALWAYS WEAR PERSONAL PROTECTIVE EQUIPMENT WHEN WORKING WITH OR NEAR CHEMICALS. THIS EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO: PROTECTIVE EYE WEAR, GLOVES, SHOES, SOCKS, LONG-SLEEVED SHIRT AND LONG PANTS. ADDITIONAL PROTECTION MAY BE REQUIRED FOR MANY TYPES OF CHEMICALS.**

The solution tank is equipped with dual mixing inductors for agitation, which use a fraction of the pump output to keep chemicals in the solution. Always allow enough time for the complete mixing of the tank contents before starting any spraying operation.

Rinsing Sprayer

Solution Tank

1. Engage the hydraulic circuit to the RETRACT position.
2. Rinse the Flo-Bak return line, if equipped with Flo-Bak valves, by running the pump with the following settings:

Valve Settings

PUMP INLET SELECTOR	<RINSE TANK>
INDUCTOR FLOW (OPT)	<OFF>
FILTER PURGE CONTROL	<PARTIALLY OPEN>
PUMP OUTLET SELECTOR	<BOOM>
AGITATION CONTROL	<PARTIALLY OPEN>

3. Make sure all of the boom sections are on. Turn on the master switch. Allow water to spray for five seconds. Shut the master switch off. Repeat the sequence twice.

Valve Settings

PUMP INLET SELECTOR	<SOLUTION TANK>
INDUCTOR FLOW (OPT)	<OFF>
FILTER PURGE CONTROL	<OFF>
PUMP OUTLET SELECTOR	<BOOM>
AGITATION CONTROL	<OFF>

4. Rinse the main tank by running the pump with the following settings, using approximately 1/2 of the available rinse water:

Valve Settings

PUMP INLET SELECTOR	<RINSE TANK>
INDUCTOR FLOW (OPT)	<OFF>
FILTER PURGE CONTROL	<OFF>
PUMP OUTLET SELECTOR	<RINSE>
AGITATION CONTROL	<OFF>

5. Repeat steps 3 and 4.

IMPORTANT

- *Do not allow the pump to run dry. Pump damage will result.*

Rinsing Sprayer (continued)

Boom Only

IMPORTANT

- Turn on the master switch to activate the boom.
- Do not allow the pump to run dry. Pump damage will result.

Valve Settings	
PUMP INLET SELECTOR	<RINSE TANK>
INDUCTOR FLOW (OPT)	<OFF>
FILTER PURGE CONTROL	<OFF>
PUMP OUTLET SELECTOR	<BOOM>
AGITATION CONTROL	<OFF>

Foam Marker (Optional)

The optional foam marker for this sprayer automatically mixes foam concentrate and water. Clean water is taken directly from the rinse tank, and foam concentrate is drawn from a separate tank.

Filling

Since the water used comes directly from the rinse tank, ensure that the rinse tank is full before starting the spray operation. This tank can be filled either through the fill cap or the quick-fill connector.

To fill the foam concentrate tank (located behind the LH solution tank on the 600-gallon units, RH side of the LH solution tank on the 400-gallon units), remove the cap and add diluted foam concentrate. Dilute concentrate 50/50 with water to ensure good flow characteristics.

Foam Collector Height

Adjust the foam collector drop hose until the collector is at least one foot above the ground, or to the desired length.

Basic Operation

Before starting the spray operation, test the foam output to ensure that the foam density and delivery rate are acceptable. (Additional information on troubleshooting the foam output can be found in the Maintenance section).

1. Press the switch LEFT or RIGHT to activate the system. Foam should begin to drop from the foam heads within approximately one to three minutes.
2. Move the switch to the center position to stop the flow of foam.



Chemical Inductor (Optional)

Basic Operation

IMPORTANT

- The solution tank should contain at least 50 gallons of liquid.

1. Unlatch the inductor lift mechanism and lower it to the “fill” position.

2. Set values:

Valve Settings	
PUMP INLET SELECTOR	<SOLUTION TANK>
AGITATION CONTROL	Open fully
FILTER PURGE CONTROL	<OFF>
PUMP OUTLET SELECTOR	<BOOM>
INDUCTOR MIX	<OFF>
INDUCTOR DRAIN	<OFF>
INDUCTOR FLOW	<ON>

3. Start the pump.

4. Open the INDUCTOR DRAIN valve.

5. Open the lid and pour the chemicals into the inductor tank. (If using a dry chemical, open the INDUCTOR MIX valve to mix the chemical, using care not to overfill the inductor tank).

6. Close the INDUCTOR DRAIN valve when the tank is completely empty.

NOTE: If one tank is draining faster than the other, the faster tank can be restricted by adjusting the valve associated with that tank. The valve for the right-hand tank would be to the right of the cross in the center plumbing manifold and the valve for the left-hand tank would be to the left of the cross in the center plumbing manifold. Adjust the valves so the tanks drain evenly.

7. Close the INDUCTOR FLOW valve then set the AGITATION CONTROL and FILTER PURGE CONTROL to the proper settings.

8. Close the lid.

9. Raise the tank to the storage position.

Chemical Container and Inductor Tank Rinsing

Both chemical containers and the inductor tank itself can be rinsed by using clean water from the rinse tank. To do so, ensure that the rinse tank is at least 1/2 full, and use the following procedure:

1. Perform steps 1 through 4 under “Basic Operation” of inductor.

Chemical Inductor (Optional) (continued)

Chemical Container and Inductor Tank Rinsing

2. Quickly move the PUMP INLET SELECTOR valve from <SOLUTION TANK> to <RINSE TANK>.

IMPORTANT

- *It is recommended to work efficiently while the sprayer pump is drawing from the rinse tank, as the rinse water is returned to the solution tank not the rise tank, and therefore the rinse tank will eventually become empty.*
 - *Do not allow the pump to run dry. Pump damage will result.*
3. To rinse a chemical container, place the container upside down on the rinse nozzle and squeeze the handle on the rinse wand.

WARNING

- **WHEN USING THE JUG RINSER, BE CAREFUL NOT TO SPRAY THE SOLUTION INTO YOUR EYES OR FACE.**
4. To rinse the inductor tank, close the lid, open the INDUCTOR MIX valve and squeeze the rinse wand handle for approximately 10 seconds.
 5. Close the INDUCTOR MIX valve and release the rinse wand when rinsing is complete.
 6. Repeat steps 4 and 5 for additional rinsing, if desired.
 7. When the inductor tank is empty, close the INDUCTOR DRAIN valve, and quickly move the PUMP INLET SELECTOR valve from the <RINSE TANK> to the <SOLUTION TANK> to minimize the amount of rinse water used.
 8. Close the INDUCTOR FLOW valve then set the AGITATION CONTROL and FILTER PURGE CONTROL to the proper settings.
 9. Raise the tank to the storage position.

Fence Row Nozzles (Optional)

The fence row kit is controlled by two switches on the Electric Command Center. The left-hand (LH) switch turns the left nozzle on; the right-hand (RH) turns the right nozzle on.



Complete Torque Chart - Capscrews - Grade 5

IMPORTANT

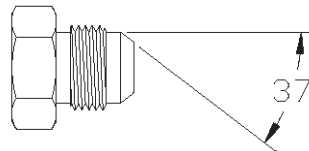
- Grade 5 capscrews can be identified by three radial dashes on head.
- Tighten U-bolts evenly and equally to have the same number of threads exposed on each end.

SIZE	FOOT POUNDS	NEWTON METERS	SIZE	FOOT POUNDS	NEWTON METERS
1/4-20	8-10	11-13	3/4-10	200-220	270-300
1/4-28	9-11	12-15	3/4-16	210-230	285-310
5/16-18	15-17	20-23	7/8-9	330-350	425-475
5/16-24	17-19	23-26	7/8-14	360-380	460-515
3/8-16	25-28	34-38	1-8	500-525	675-710
3/8-24	28-31	38-42	1-14	540-560	730-760
7/16-14	40-45	54-61	1 1/8-7	600-635	815-860
7/16-20	45-50	61-68	1 1/8-12	665-700	920-950
1/2-13	62-68	84-92	1 1/4-7	850-895	1150-1215
1/2-20	68-75	92-102	1 1/4-12	940-990	1275-1340
9/16-12	90-98	22-133	1 3/8-6	1125-1175	1525-1590
9/16-18	100-110	134-148	1 3/8-12	1280-1335	1735-1810
5/8-11	120-135	162-183	1 1/2-6	1500-1560	2035-2115
5/8-18	124-137	168-186	1 1/2-12	1685-1755	2285-2380

Hydraulic Fittings - Torque and Installation

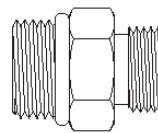
SAE FLARE CONNECTION (J. I. C.)

1. Tighten nut with finger until it bottoms the seat.
2. Using a wrench, rotate nut to tighten. Turn nut 1/3 turn to apply proper torque.



SAE STRAIGHT THREAD O-RING SEAL

1. Insure jam nut and washer are backed up to the back side of smooth portion of elbow adapter.
2. Lubricate o-ring -- VERY IMPORTANT!
3. Thread into port until washer bottoms onto spot face.
4. Position elbows by backing up adapter.
5. Tighten jam nut.



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Sprayer Calibration

Verify Nozzle Flow

The following procedure should be repeated periodically to verify the flow rate of the spray nozzles.

IMPORTANT

- *Use water when verifying the nozzle flow rate.*
1. Turn on the sprayer and set the flow so that the tip pressure is within the nozzles' pressure range. Choose a pressure setting that coincides with a listing for the nozzle being used, in order to have a comparison to the advertised flow value.
 2. Using a calibrated container (TA890020), collect the flow from the new tip for exactly one minute. Compare with the advertised value at the pressure setting chosen. (Divide by 128 to obtain the GPM, if ounces are being measured).
 3. Measure the flow from several other nozzles for the same one-minute interval.
 4. Compare the flow rate of other tips with the flow rate from the new tip. If the flow rate from any tip varies by more than 10 percent from the new tip, replacement is necessary. If more than one tip has an incorrect flow rate, replace all the tips.

Foam Marker (Optional)

Filter Maintenance

Air Filters

Clean the primary filter pad, (located behind the louvered openings on the power unit box) after every 100 hours of use. To clean the filter, remove from the power unit box and wash in warm soapy water or blow dust-free with compressed air.

Water Filter

An in-line water strainer is located under the sprayer frame, in the water line between the rinse tank and power unit box. To clean the strainer, unscrew the filter halves and flush the strainer element with water.

Foam Concentrate Tank Filter

A screen is installed at the outlet of the tank, To clean the screen, drain the tank, then remove the fitting and screen assembly for cleaning.

Foam Head Screens

The foam head screens, located on the outer wings, can be cleaned by disassembling and washing with hot water.

Chemical Inductor (Optional)

Chemical Container and Inductor Tank Rinsing

WARNING

- **ALWAYS WEAR PERSONAL PROTECTIVE EQUIPMENT WHEN WORKING WITH OR NEAR CHEMICALS. THIS EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO: PROTECTIVE EYE WEAR, GLOVES, SHOES, SOCKS, LONG-SLEEVED SHIRT AND LONG PANTS. ADDITIONAL PROTECTION MAY BE REQUIRED FOR MANY TYPES OF CHEMICALS.**

Both chemical containers and the inductor tank itself can be rinsed by using clean water from the rinse tank. To do so, ensure that the rinse tank is at least 1/2 full, and use the following procedure:

1. Perform step 1 through 4 under “Basic Operation” of the inductor in the Operation section.
2. Quickly move the PUMP INLET SELECTOR valve from the <SOLUTION TANK> to <RINSE TANK>.



IMPORTANT

- *It is recommended to work efficiently while the sprayer pump is drawing from the rinse tank, as the rinse water is returned to the solution tank not the rinse tank, and therefore the rinse tank will eventually become empty.*
 - *Do not allow the pump to run dry. Pump damage will result.*
3. To rinse a chemical container, place the container upside down on the rinse nozzle and squeeze the handle on the rinse wand.
 4. To rinse the inductor tank, close the lid, open the INDUCTOR MIX valve and squeeze the rinse wand handle for approximately 10 seconds.
 5. To rinse out the jug rinser, close the lid, and activate the jug rinser for approximately 10 seconds.
 6. Close the INDUCTOR MIX valve and release the rinse wand when rinsing is complete.
 7. Repeat steps 4 and 5 for additional rinsing, if desired.
 8. When the inductor tank is empty, close the INDUCTOR DRAIN valve, and quickly move the PUMP INLET SELECTOR valve from <RINSE TANK> to <SOLUTION TANK> to minimize the amount of rinse water used.
 9. Close the INDUCTOR FLOW valve and then set the AGITATION CONTROL and FILTER PURGE CONTROL to proper settings.
 10. Raise the tank to the storage position.



Winterizing

Sprayer Plumbing

WARNING

- **ALWAYS WEAR PERSONAL PROTECTIVE EQUIPMENT WHEN WORKING WITH OR NEAR CHEMICAL. THIS EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO: PROTECTIVE EYE WEAR, GLOVES, SHOES, SOCKS, LONG-SLEEVED SHIRT AND LONG PANTS. ADDITIONAL PROTECTION MAY BE REQUIRED FOR MANY TYPES OF CHEMICALS.**
-

IMPORTANT

- *Do not allow the pump to run dry. Pump damage will result.*

Before storing the sprayer in the freezing climates, perform the following winterizing procedure:

1. Perform a complete system rinse using procedure in the Operation section of this manual.
2. Wash the sprayer thoroughly inside and out with a high-pressure washer.
3. Remove as much water from the solution and rinse tanks as possible. Close the drain valve on the solution tank after draining.
4. Pour approximately 10 gallons of R.V. antifreeze into the rinse tank.
5. Perform a tank rinse, using the procedure in the Operation section of this manual.
6. Run the pump to flush antifreeze solution throughout the system. Discharge the spray through the boom.
7. Loosen the diaphragm caps on the nozzle bodies to relieve the pressure and allow excess antifreeze to drain from the boom.

Winterizing

Foam Marker

The liquid lines and tank must be drained completely prior to storage. If the liquid in the system is allowed to freeze, several components may be damaged. Use the following procedure to winterize the foam marking system:

1. Drain the foam concentrate tank and line by disconnecting at the bulkhead connector on the power unit box. Disconnect the line by pushing the hose fully into the fitting. Then while pushing the inner collar firmly onto the connector, pull the hose from the connector.
2. Flush out the concentrate tank with warm water.
3. Reconnect the hose by pushing it fully into the bulkhead connector. Pull carefully on the hose near the connector to verify that the proper connection has been made.
4. Add approximately 1/2 pint of R.V. antifreeze solution to the concentrate tank.
5. Disconnect the liquid line at the rinse tank.
6. Attach the hose to a suitable temporary container. Fill the container with approximately one pint of R.V. antifreeze solution.
7. Run the foamer unit until the antifreeze solution from the temporary container is empty.
8. Reconnect the liquid line to rinse the tank.

Chemical Inductor

1. Refer to the rinsing procedure in the beginning of this section.

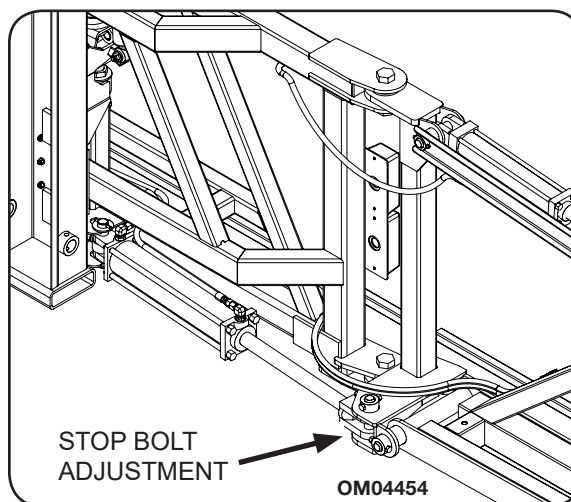
Wing Adjustments

Several areas of adjustment have been designed into the booms to maintain proper wing folding operation throughout the life of the booms.

Main Wing Fold Cylinder (80'/90' Booms)

Use the following procedure on these booms:

1. Beginning with the wings fully extended and relatively level, adjust the jam nuts near the head of the cylinder until each inner wing section is aligned with the center wing section.
2. Inspect the position, relative to the wing rests. If the wings do not line up reasonably well with the wing rests, adjust the main wing fold cylinder stop bolts as needed until the wings align correctly with the wing rests.

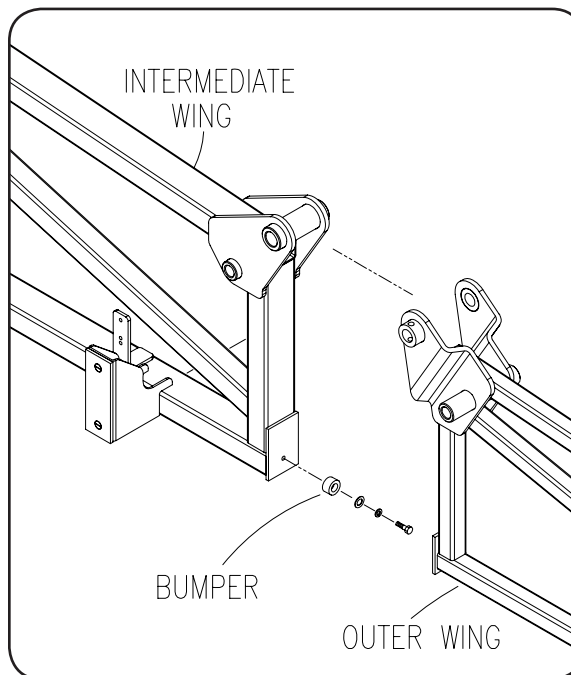


Outer Wing Level Adjustment (All boom sizes)

The outer wing contacts a rubber bumper when fully extended. Periodically inspect the bumper for deterioration and replace, if necessary.

To adjust the levelness of the outer wing, add or remove the washers behind the rubber bumper.

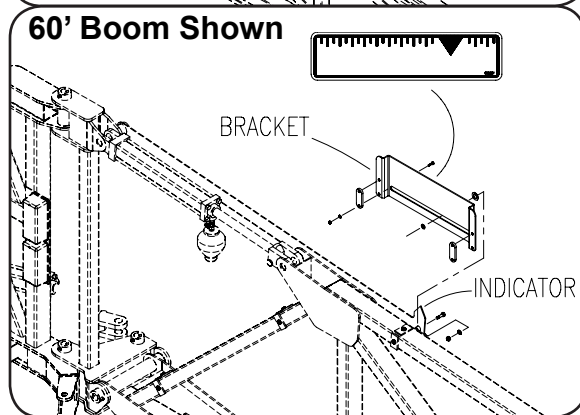
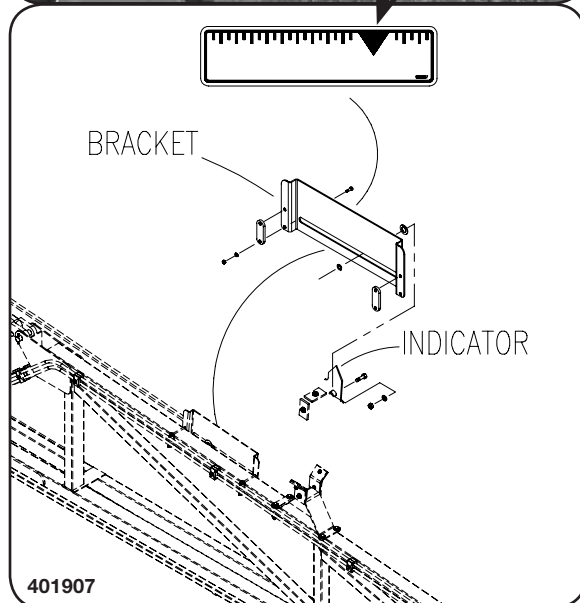
An additional area of level adjustment can be obtained by loosening the bolts securing the ramp casting on the breakaway mechanism, and sliding the casting along its mounting slots.



Wing Tilt Indicator Adjustment

The wing tilt indicators (mounted on the inner wings) are adjustable to accurately indicate the level orientation.

1. Park the sprayer on a level surface.
2. Fully extend the boom, leveling the wings visually.
3. Using a level on the lower tubes of the three inner wing sections, fine-tune the tilt cylinder lengths until the boom sections are as level as possible.
4. Loosen the tilt indicator bracket on either inner wing and slide until the indicator pointer lines up with the primary mark on the indicator.
5. Tighten the tilt indicator brackets.

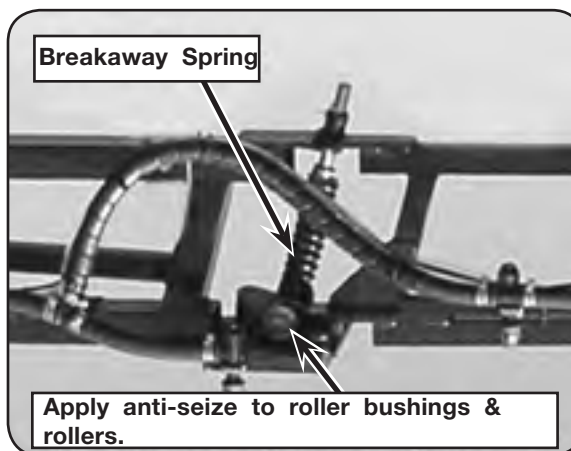
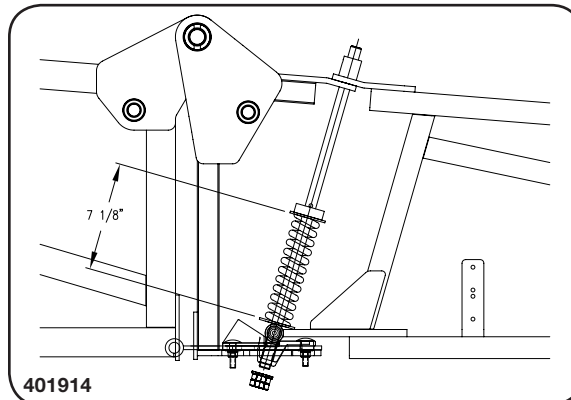


Wing Tip Breakaway Mechanism

The force required to operate the wing tip breakaway section is adjustable. The nominal setting is obtained when the spring length is adjusted to 7 1/8", as shown. Use the 3/4" jam nuts at the bottom of the pivot shaft to adjust the spring installed height. If an excessive amount of force is required to break the wings away. Lengthen the spring until a reasonable amount of force is required. The breakaway force should always be less than the amount of force required to damage the wing.

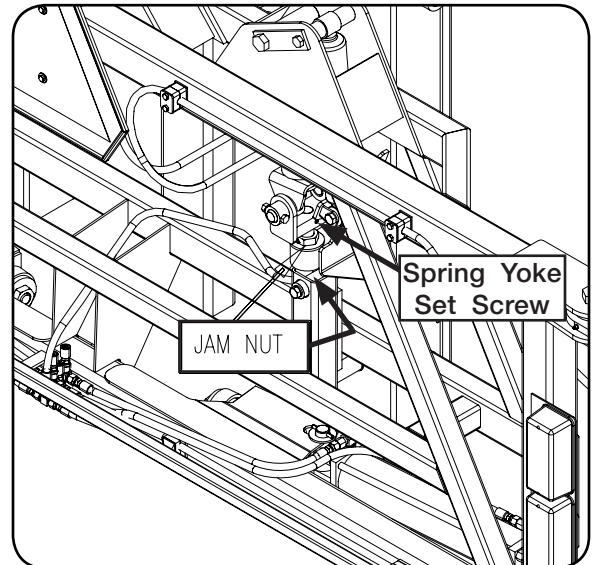
To service the rollers on the breakaway mechanism, use the following procedure:

1. Fully loosen 3/4" jam nuts at the bottom of the pivot shaft to remove the spring pressure.
2. Loosen the setscrews that lock the roller wheel bolts in place.
3. Remove the roller wheel bolts to disassemble the rollers. Replace the components as needed.
4. During reassembly, tighten the wheel bolts completely against the inner bushing. The wheel should spin freely. Always apply anti-seize to the roller bushings and roller ID to ensure the rollers do not seize up.
5. Tighten the setscrews to lock the wheel bolts into place.

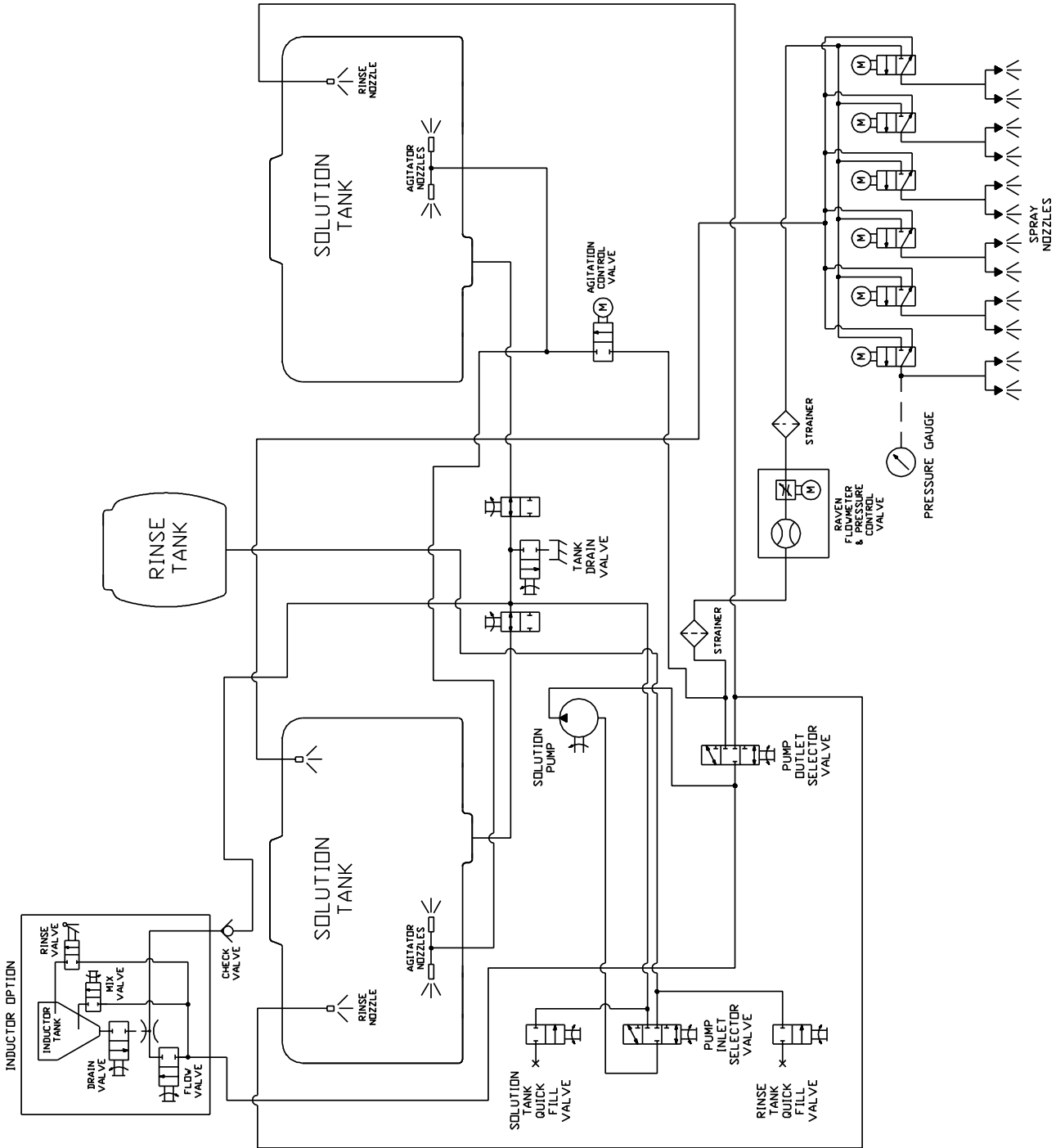


Link Suspension Adjustment (80'/90' Boom)

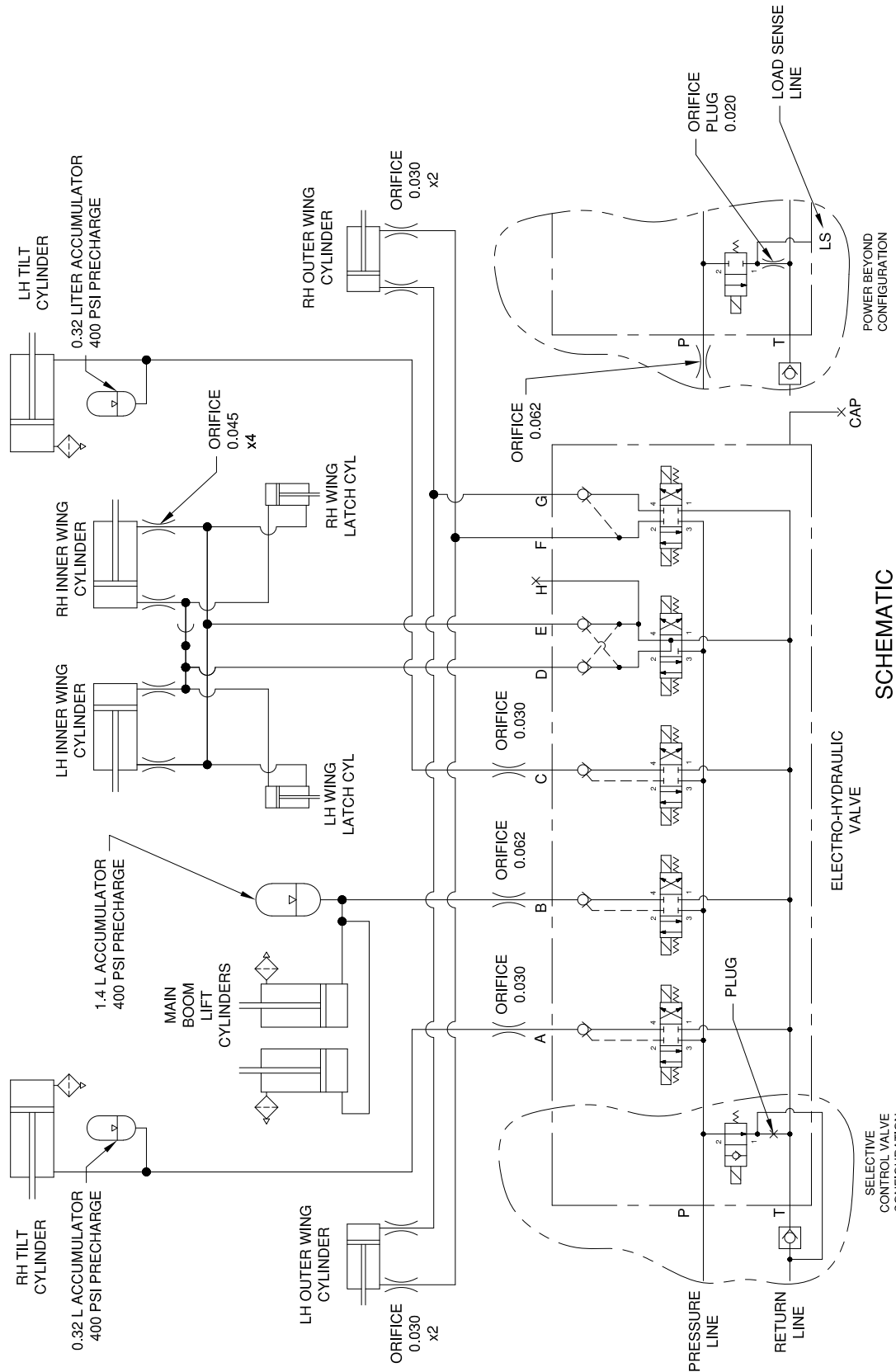
1. Park the sprayer on a level surface.
2. Fully extend and lower the boom. Use the tilt controls to adjust both wings as straight as possible with each other and the center section.
3. Loosen jam nut under adjustment shaft bushing. Remove spring yoke set screw.
4. Place a level on the lower horizontal tube of the boom center section. Turn adjustment shaft to level boom.
5. Reinsert spring yoke set screw and tighten. Fully tighten adjustment shaft jam nut beneath adjustment shaft bushing.



Schematic - Sprayer Chemical



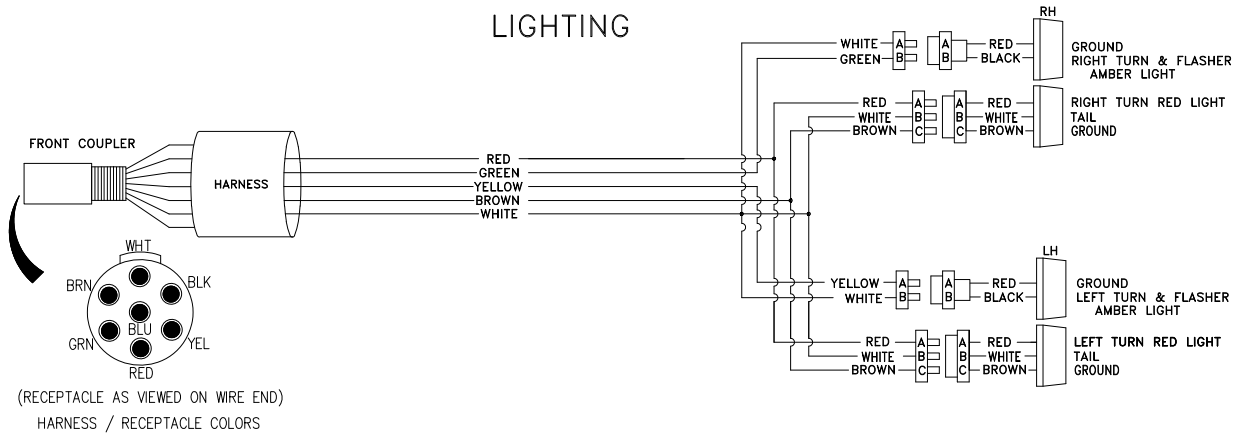
Schematic - Hydraulic



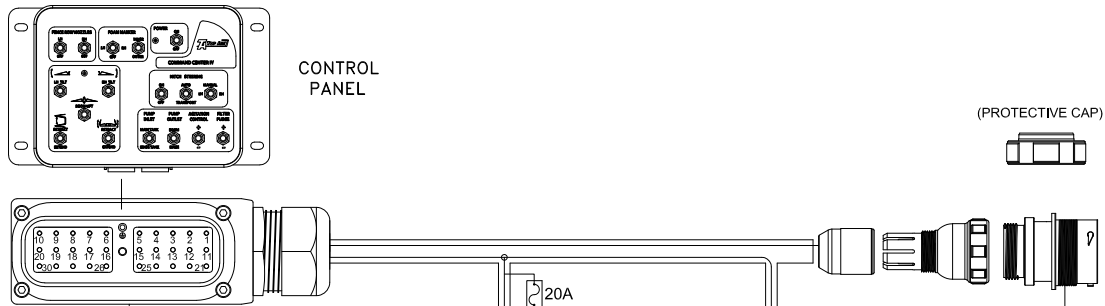
SCHEMATIC
80/90 FT. BOOM HYDRAULIC

Schematic - Electrical — Serial Number B38010100 & Higher

LIGHTING



HYDRAULIC CONTROL

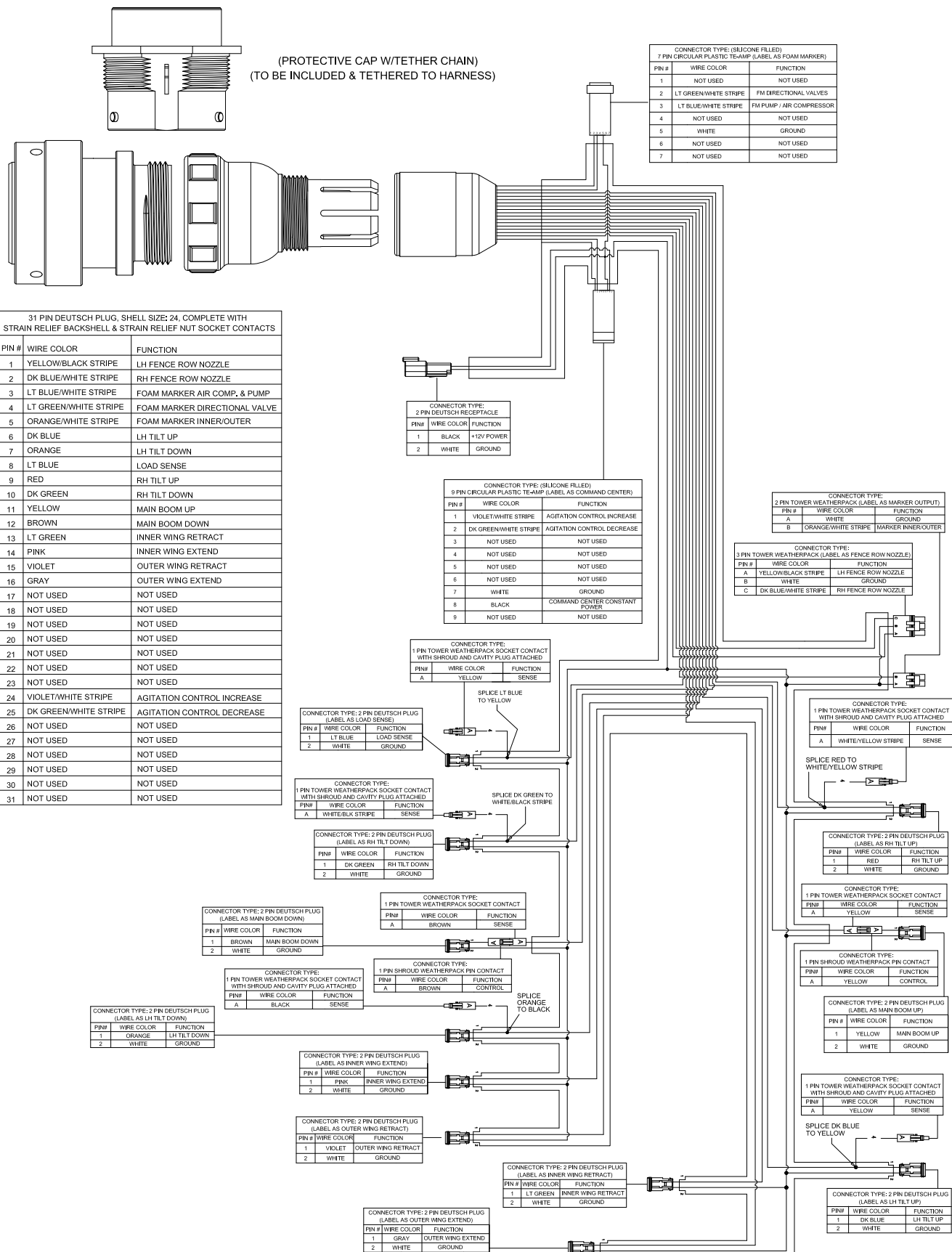


PIN #	WIRE COLOR/#	FUNCTION
1	OR / 1	LH FENCE ROW NOZZLE UP
2	OR / 2	RH FENCE ROW NOZZLE UP
3	OR / 3	FOAM MARKER AIR COMP. & PUMP
4	OR / 4	FOAM MARKER DIRECTIONAL VALVE
5	OR / 5	FOAM MARKER INNER/OUTER LEFT
6	OR / 6	LH TILT UP
7	OR / 7	LH TILT DOWN
8	OR / 8	LOAD SENSE
9	OR / 9	RH TILT UP
10	OR / 10	RH TILT DOWN
11	OR / 11	MAIN BOOM LIFT UP
12	OR / 12	MAIN BOOM LIFT DOWN
13	OR / 13	MAIN WING FOLD UP (RETRACT)
14	OR / 14	MAIN WING FOLD DOWN (EXTEND)
15	OR / 15	OUTER WING FOLD UP (RETRACT)
16	OR / 16	OUTER WING FOLD DOWN (EXTEND)
17	OR / 17	STEERABLE HITCH POWER ON
18	OR / 18	STEERABLE HITCH AUTO
19	OR / 19	STEERABLE HITCH TRANSPORT
20	OR / 20	STEERABLE HITCH NUDGE LEFT
21	OR / 21	STEERABLE HITCH NUDGE RIGHT
22	OR / 22	PUMP INLET RINSE TANK
23	OR / 23	PUMP OUTLET RINSE
24	OR / 24	AGITATION CONTROL INCREASE
25	OR / 25	AGITATION CONTROL DECREASE
26	OR / 26	FILTER PURGE INCREASE
27	OR / 27	FILTER PURGE DECREASE
28	RED	12V POWER
29	RED	12V POWER
30	RED	12V POWER
G	WHITE	GROUND

PIN #	WIRE COLOR/#	FUNCTION
1	RED	+12V POWER
2	WHITE	GROUND

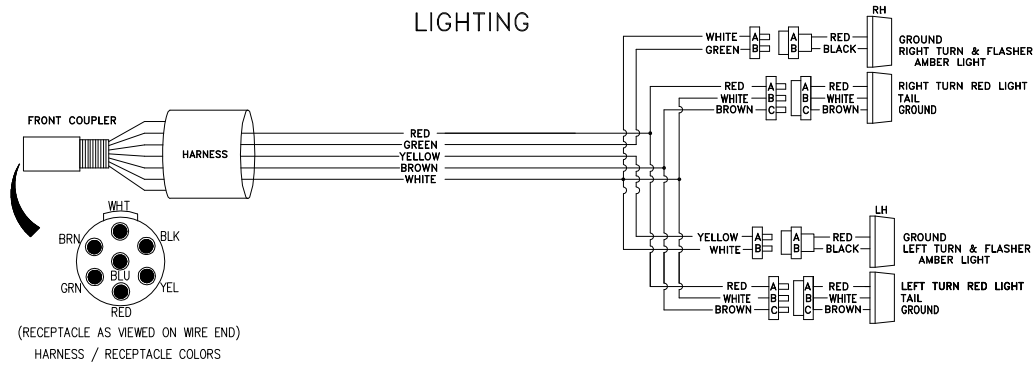
PIN #	WIRE COLOR/#	FUNCTION
1	OR / 1	LH FENCE ROW NOZZLE UP
2	OR / 2	RH FENCE ROW NOZZLE UP
3	OR / 3	FOAM MARKER AIR COMP. & PUMP
4	OR / 4	FOAM MARKER DIRECTIONAL VALVE
5	OR / 5	FOAM MARKER INNER/OUTER LEFT
6	OR / 6	LH TILT UP
7	OR / 7	LH TILT DOWN
8	OR / 8	LOAD SENSE
9	OR / 9	RH TILT UP
10	OR / 10	RH TILT DOWN
11	OR / 11	MAIN BOOM LIFT UP
12	OR / 12	MAIN BOOM LIFT DOWN
13	OR / 13	MAIN WING FOLD UP (RETRACT)
14	OR / 14	MAIN WING FOLD DOWN (EXTEND)
15	OR / 15	OUTER WING FOLD UP (RETRACT)
16	OR / 16	OUTER WING FOLD DOWN (EXTEND)
17	OR / 17	STEERABLE HITCH POWER ON
18	OR / 18	STEERABLE HITCH AUTO
19	OR / 19	STEERABLE HITCH TRANSPORT
20	OR / 20	STEERABLE HITCH NUDGE LEFT
21	OR / 21	STEERABLE HITCH NUDGE RIGHT
22	OR / 22	PUMP INLET RINSE TANK
23	OR / 23	PUMP OUTLET RINSE
24	OR / 24	AGITATION CONTROL INCREASE
25	OR / 25	AGITATION CONTROL DECREASE
26	OR / 26	FILTER PURGE INCREASE
27	OR / 27	FILTER PURGE DECREASE
28	WHITE	GROUND

Schematic - Electrical — Serial Number B38010100 & Higher

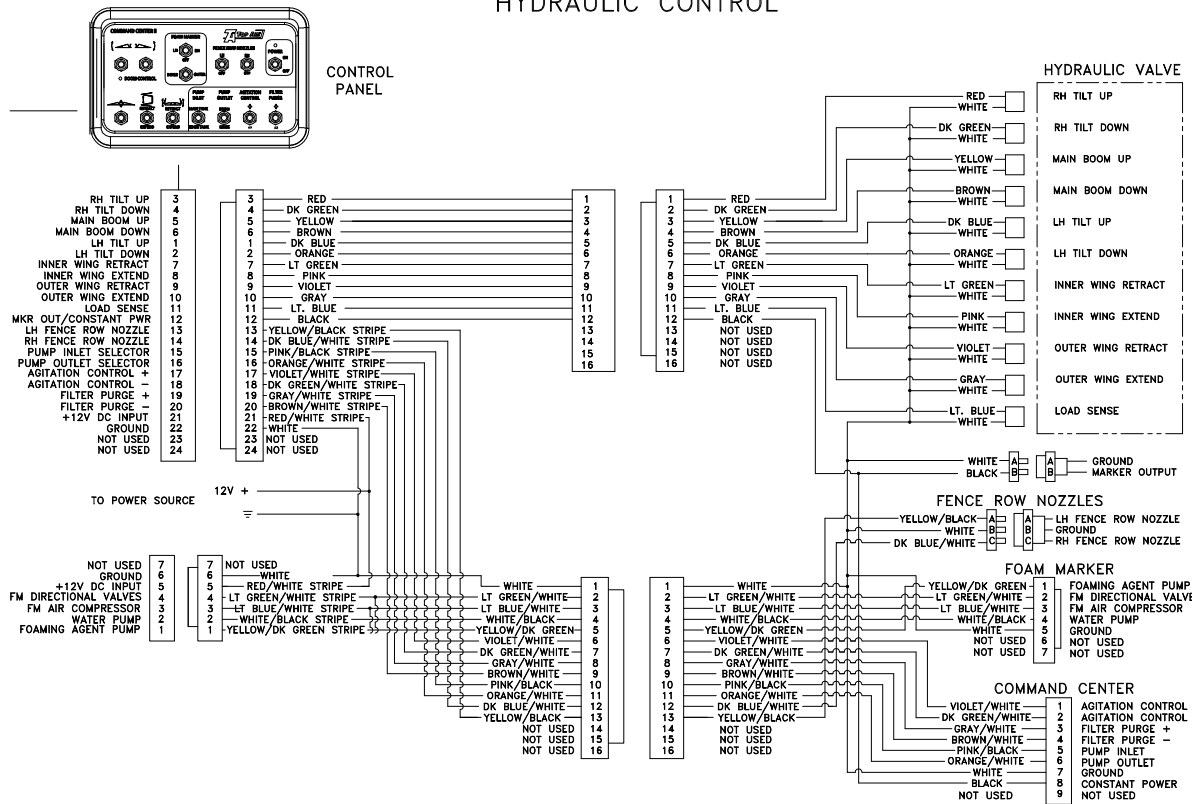


Schematic - Electrical — Serial Number Below B38010100

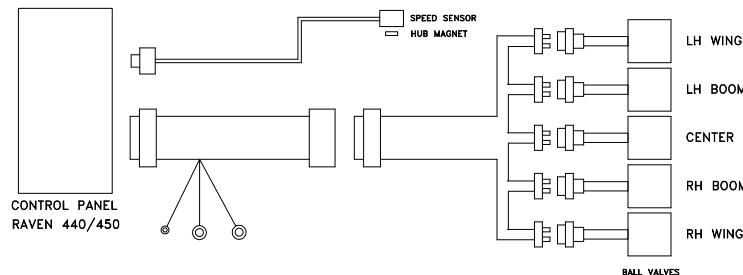
LIGHTING



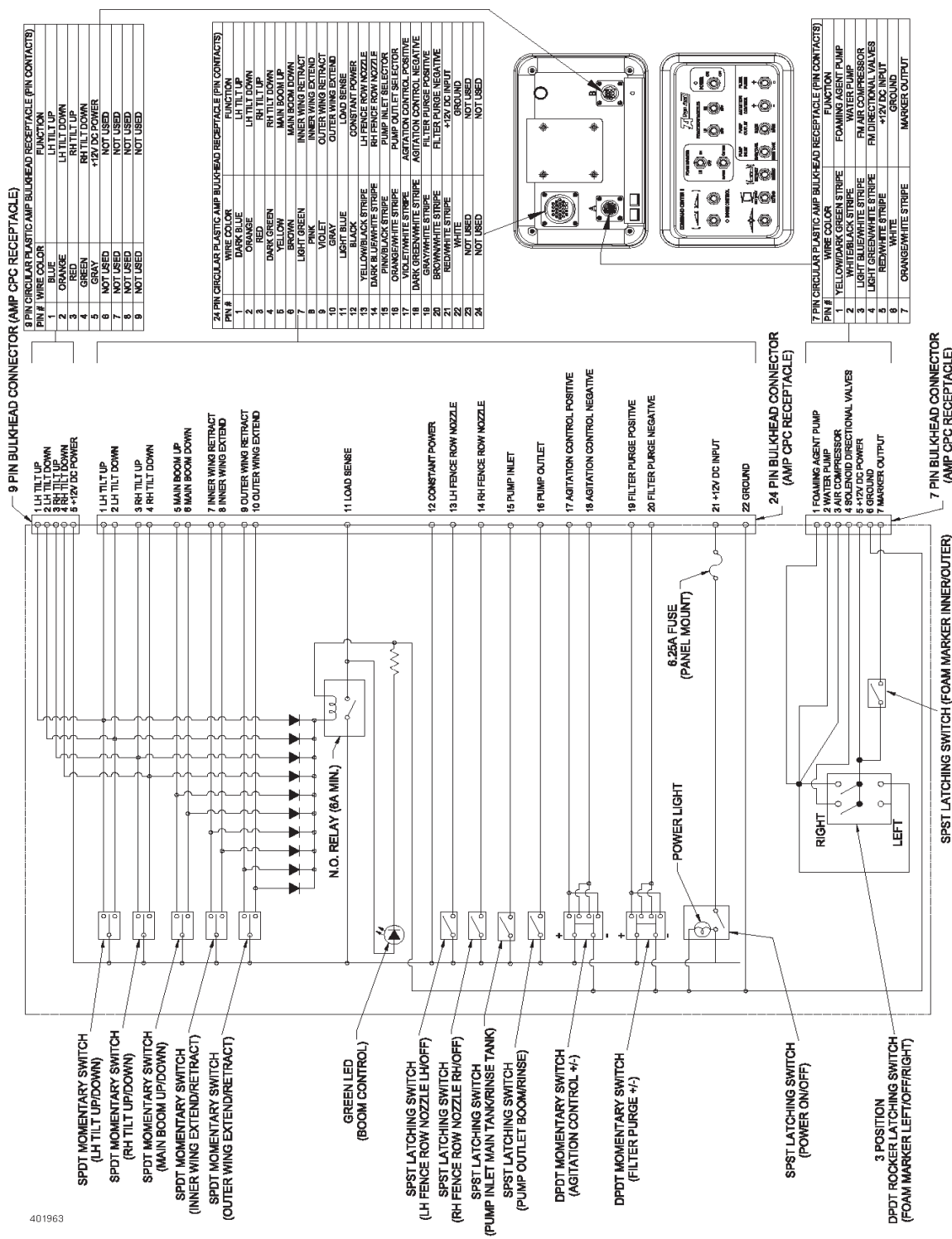
HYDRAULIC CONTROL



SPRAY CONTROL



Schematic - Electrical — Serial Number Below B38010100



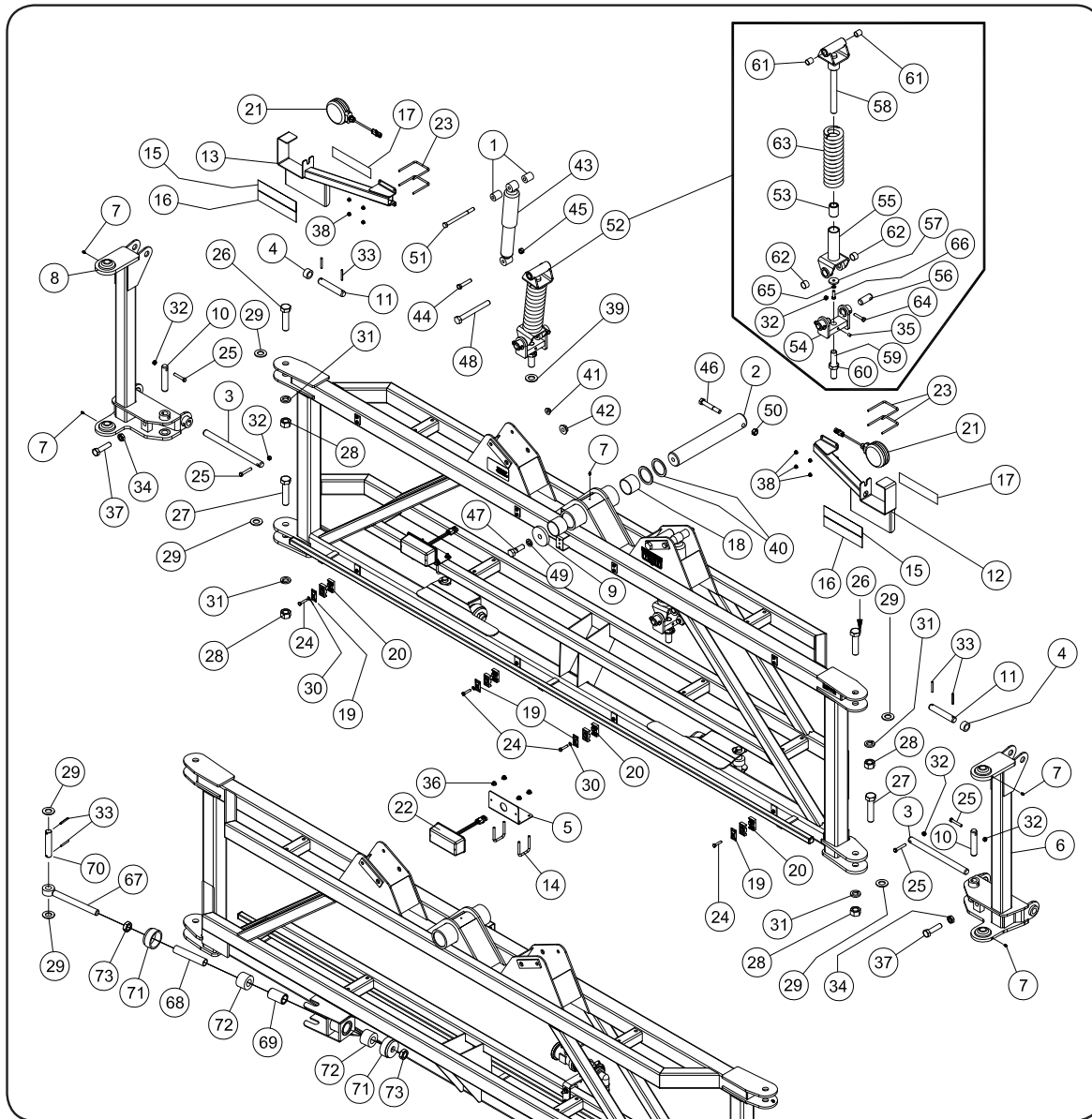
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400- & 600-Gallon 3-Point Sprayer — Parts

Center Section Frame Components



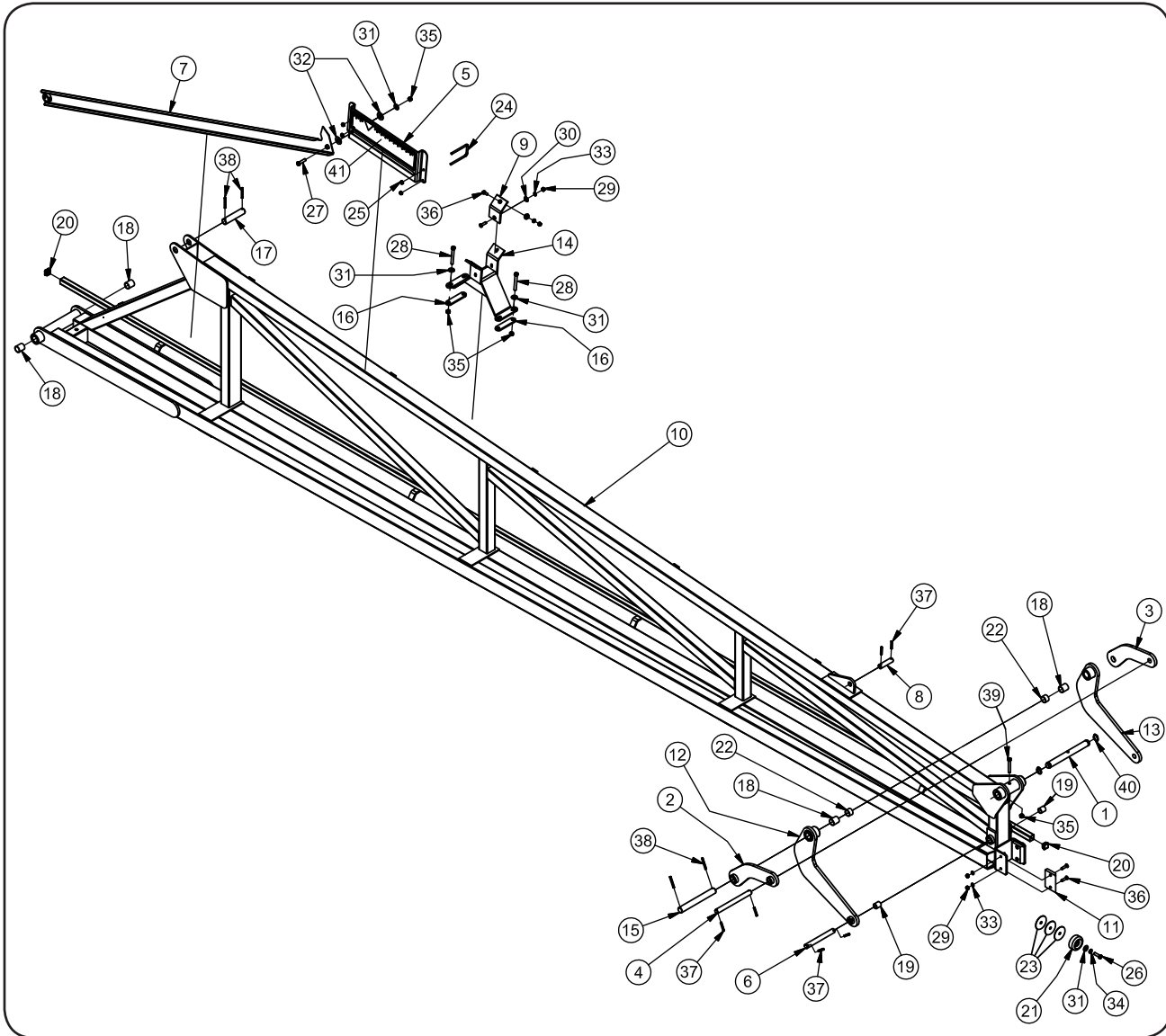
ITEM	PART NO.	DESCRIPTION	NOTES
1	401093	Spacer Bushing 1 1/4" OD x 1/2" ID x 1.531	
2	408153	Boom Pivot Pin 2 1/2" Dia. x 16 3/16"	
3	401372	Tilt Pin 1" Dia. x 13 7/16	
4	402403	Spacer Bushing 1 1/2" OD x 1" ID x 13/16	
5	402432B	Light Bracket Plate	
6	405897B	Wing Pivot Weldment RH	Includes Item 7
7	91160	Grease Zerk 1/4-28	
8	405898B	Wing Pivot Weldment LH	Includes Item 7
9	408154	Washer Plate 3 1/2" Dia.	
10	406037	Cylinder Pin 1" Dia. x 5	
11	406038	Cylinder Pin 1" Dia. x 5 11/16	
12	407056B	Light Bracket Weldment RH	
13	407057B	Light Bracket Weldment LH	
14	9002713	U-Bolt 5/16-18UNC x 2 3/8 C/C	Grade 5
15	9003125	Fluorescent Stripe 2 x 9	

400- & 600-Gallon 3-Point Sprayer — Parts

Center Section Frame Components

ITEM	PART NO.	DESCRIPTION	NOTES
16	9003126	Reflector =Red= 2 x 9	
17	9003127	Reflector =Amber= 2 x 9	
18	9003749	Self-Lubricating Bearing 2.753 OD	
19	9003814	Clamp Top Plate	
20	9003816	Clamp Polypropylene	
21	9005142	Light-Round =Amber= (Double Faced)	
22	9006282	Light-Red w/ 6" Lead & Plug Connector	
23	9004454	U-Bolt 1/4-20UNC x 3.31 C/C	Grade 5
24	900900-032	Capscrew 5/16-18UNC x 1 1/2	Stainless Steel
25	900900-060	Capscrew 3/8-16UNC x 2 1/4	Stainless Steel
26	900900-191	Capscrew 1-8UNC x 4	Stainless Steel
27	900900-192	Capscrew 1-8UNC x 4 1/2	Stainless Steel
28	900901-020	Hex Nut 1-8UNC	Stainless Steel
29	900902-058	Flat Washer 1"	Stainless Steel
30	900903-019	Lock Washer 5/16	Stainless Steel
31	900903-041	Lock Washer 1"	Stainless Steel
32	900906-006	Locknut 3/8-16UNC	Stainless Steel
33	900910-166	Coiled Spring Pin/Spiral Pin 1/4" Dia. x 2	Stainless Steel
34	900911-016	Hex Jam Nut 3/4-10UNC	Stainless Steel
35	9399-086	Set Screw 3/8-16UNC x 1/2 Cup Point/Hex Socket	
36	91257	Hex Nut/Large Flange 5/16-18UNC	Grade 5
37	94733	Capscrew 3/4-10UNC x 3 (Full Threaded)	Grade 5
38	97189	Hex Nut/Large Flange 1/4-20UNC	Grade 5
39	804685	Washer 2" OD	
40	9003100	Hardened Washer 3 1/4" OD	
41	9003397	Locking Flange Nut 1/2-13UNC	Grade 5
42	9003399	Locknut 3/4-10UNC	Grade 5
43	9004219	Shock Absorber	
44	900900-105	Capscrew 1/2-13UNC x 2 1/2	Stainless Steel
45	900906-010	Locknut 1/2-13UNC	Stainless Steel
46	9390-132	Capscrew 5/8-11UNC x 4	Grade 5
47	9390-101	Capscrew 1/2-13UNC x 1 1/2	Grade 5
48	9390-159	Capscrew 3/4-10UNC x 7	Grade 5
49	9404-025	Lock Washer 1/2"	
50	95905	Locknut 5/8-11UNC	
51	9390-116	Capscrew 1/2-13UNC x 6 1/2	Grade 5
52	406313	Spring Assembly	Includes Items 32, 35, 53-66
53	401381	Wear Bushing 1 1/2" OD	
54	405386B	Spring Yoke Weldment	
55	405393B	Spring Guide Weldment	
56	405397	Spring Pin 1" Dia. x 2 9/16	
57	405422	Spring Washer 1 5/8" Dia.	
58	405889B	Spring Guide Weldment	
59	408563	Adjustment Shaft Weldment	
60	9395-020	Hex Jam Nut, 1-8UNC Gr.5	Grade 5
61	9003752	Self-Lubricating Bushing .882 OD	
62	9004397	Self-Lubricating Bushing 1.131 OD	
63	9004435B	Compression Spring	
64	900900-059	Capscrew 3/8-16UNC x 2	Stainless Steel
65	900903-021	Lock Washer 3/8	Stainless Steel
66	9390-056	Capscrew 3/8-16UNC x 1 1/4	Grade 5
67	401072	Adjustment Eye Weldment	
68	401272	Spring Sleeve Bushing 1 1/4" OD	
69	401279	Wear Bushing 1.76 OD	
70	401765	Cylinder Pin 1" Dia. x 5 1/16	
71	406183B	Canister Weldment	
72	9003775	Spring 2 1/2" OD	
73	900911-020	Hex Jam Nut 1-8UNC	Stainless Steel

Main Wing Components

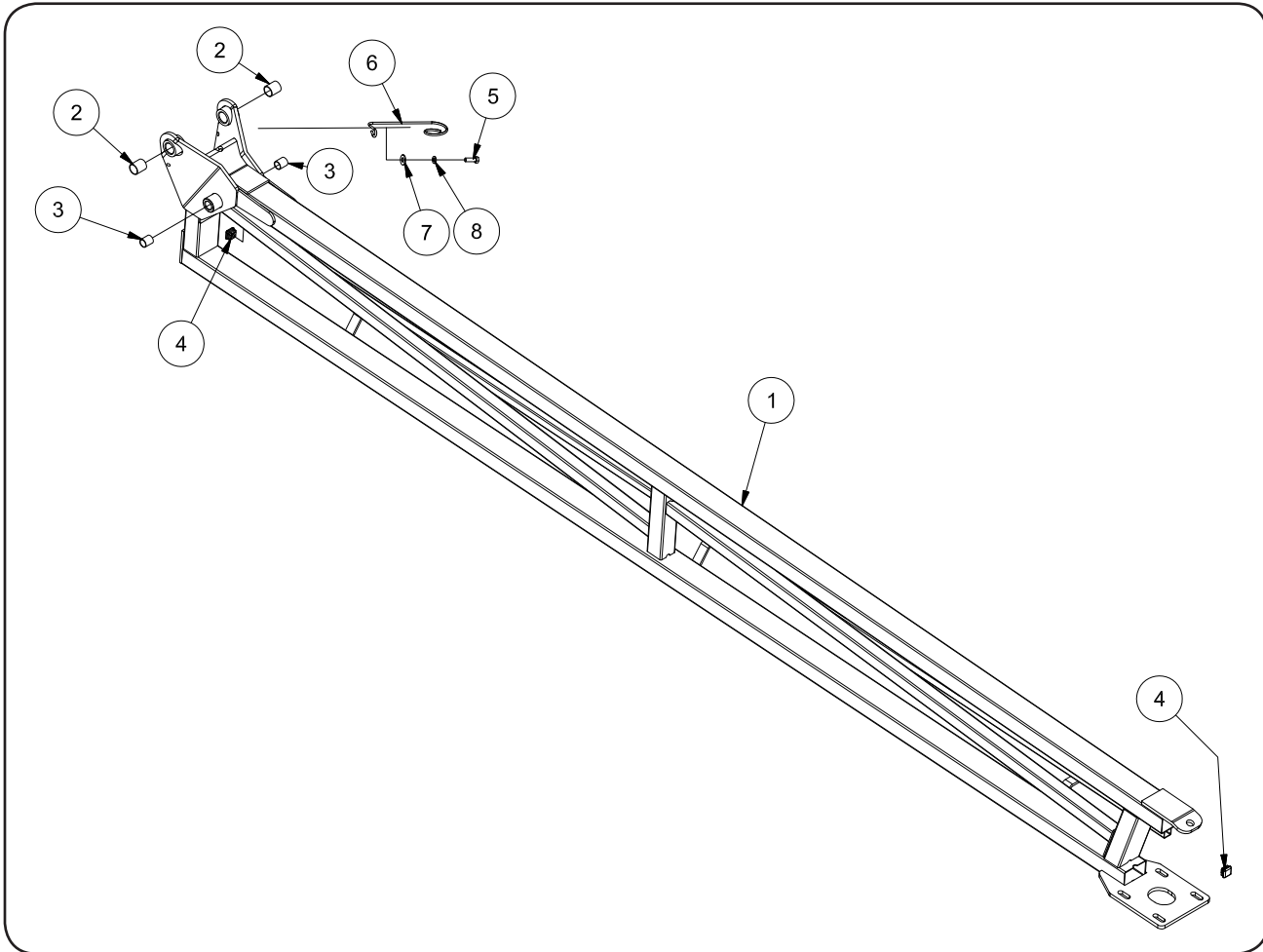


400- & 600-Gallon 3-Point Sprayer — Parts

Main Wing Components

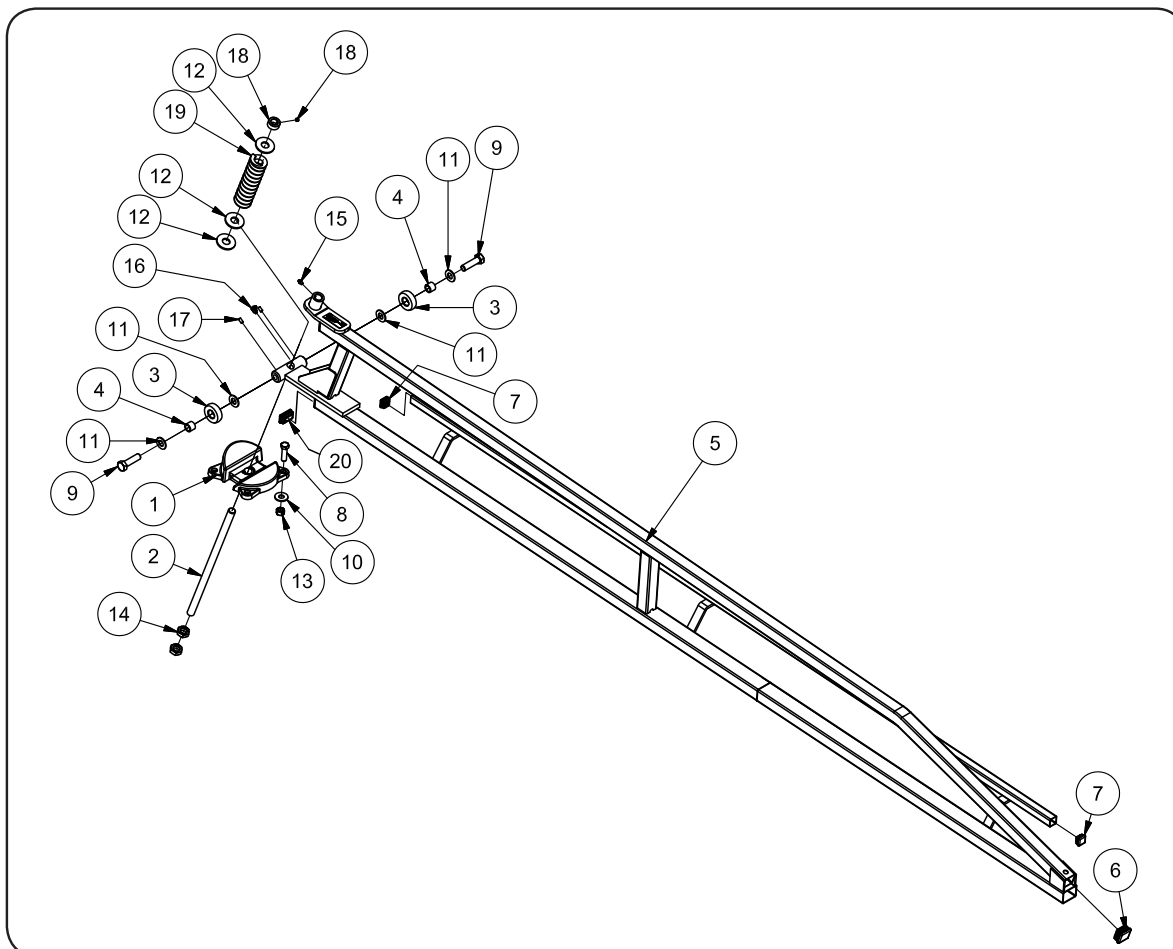
ITEM	PART NO.	DESCRIPTION	NOTES
1	405259	Hinge Pin 1" Dia. x 9 3/4	
2	405988B	Fold Link Weldment	
3	405989B	Plate Fold Link	
4	406049	Linkage Pin 3/4" Dia. x 8 3/16	
5	401329B	Level Indicator Plate	
6	401474	Linkage Pin 3/4" Dia. x 6 11/16	
7	402361B	Needle Weldment LH (Shown)	
	402360B	Needle Weldment RH	
8	403573	Cylinder Pin 3/4" Dia. x 2 15/16	
9	403580	Wing Rest Pad	
10	406762	Main Wing Replacement Kit - LH (Shown)	Includes Main Wing & Items 18 & 19
	406761	Main Wing Replacement Kit - RH	
11	405938	Wear Pad 2 1/2 x 3 1/2	
12	405985B	Fold Link Weldment RH	
13	405986B	Fold Link Weldment LH	
14	406003B	Wing Rest Weldment	
15	406050	Linkage Pin 1" Dia. x 8 3/16	
16	406106B	Bolt Plate	
17	807450	Cylinder Pin 1" Dia. x 4 5/8	
18	9003440	Self-Lubricating Bushing 1.13" OD (1 1/4" Long)	
19	9003752	Self-Lubricating Bushing .882" OD	
20	9004071	Plastic Plug 1" Square	
21	9004389	Recessed Rubber Bumper 2 1/2" Dia.	
22	9004397	Self-Lubricating Bushing 1.131" OD (3/4" Long)	
23	9004497	Fender Washer 2 1/2" Dia.	Stainless Steel
24	9004683	U-Bolt 1/4-20UNC	Stainless Steel
25	9004720	Serrated Flange Nut 1/4-20UNC	Stainless Steel
26	900900-056	Capscrew 3/8-16UNC x 1 1/4	Stainless Steel
27	900900-057	Capscrew 3/8-16UNC x 1 1/2	Stainless Steel
28	900900-064	Capscrew 3/8"-16UNC x 3 1/4"	Stainless Steel
29	900901-004	Hex Nut 5/16"-18UNC	Stainless Steel
30	900902-035	Flat Washer 5/16"	Stainless Steel
31	900902-038	Flat Washer 3/8"	Stainless Steel
32	900902-049	Flat Washer 5/8"	Stainless Steel
33	900903-019	Lock Washer 5/16"	Stainless Steel
34	900903-021	Lock Washer 3/8"	Stainless Steel
35	900906-006	Locknut 3/8"-16UNC	Stainless Steel
36	900907-874	Flat Head Screw 5/16"-18UNC x 1 1/4"	Stainless Steel
37	900910-162	Coiled Spring Pin/Spiral Pin 1/4" Dia. x 1 1/2"	Stainless Steel
38	900910-166	Coiled Spring Pin/Spiral Pin 1/4" Dia. x 2"	Stainless Steel
39	900900-061	Capscrew 3/8"-16UNC x 2 1/2"	Stainless Steel
40	91192	Retaining Ring 1"	
41	9003808	Decal - Indicator - LH (Shown)	
	9003807	Decal - Indicator - RH	

Outer Wing Components



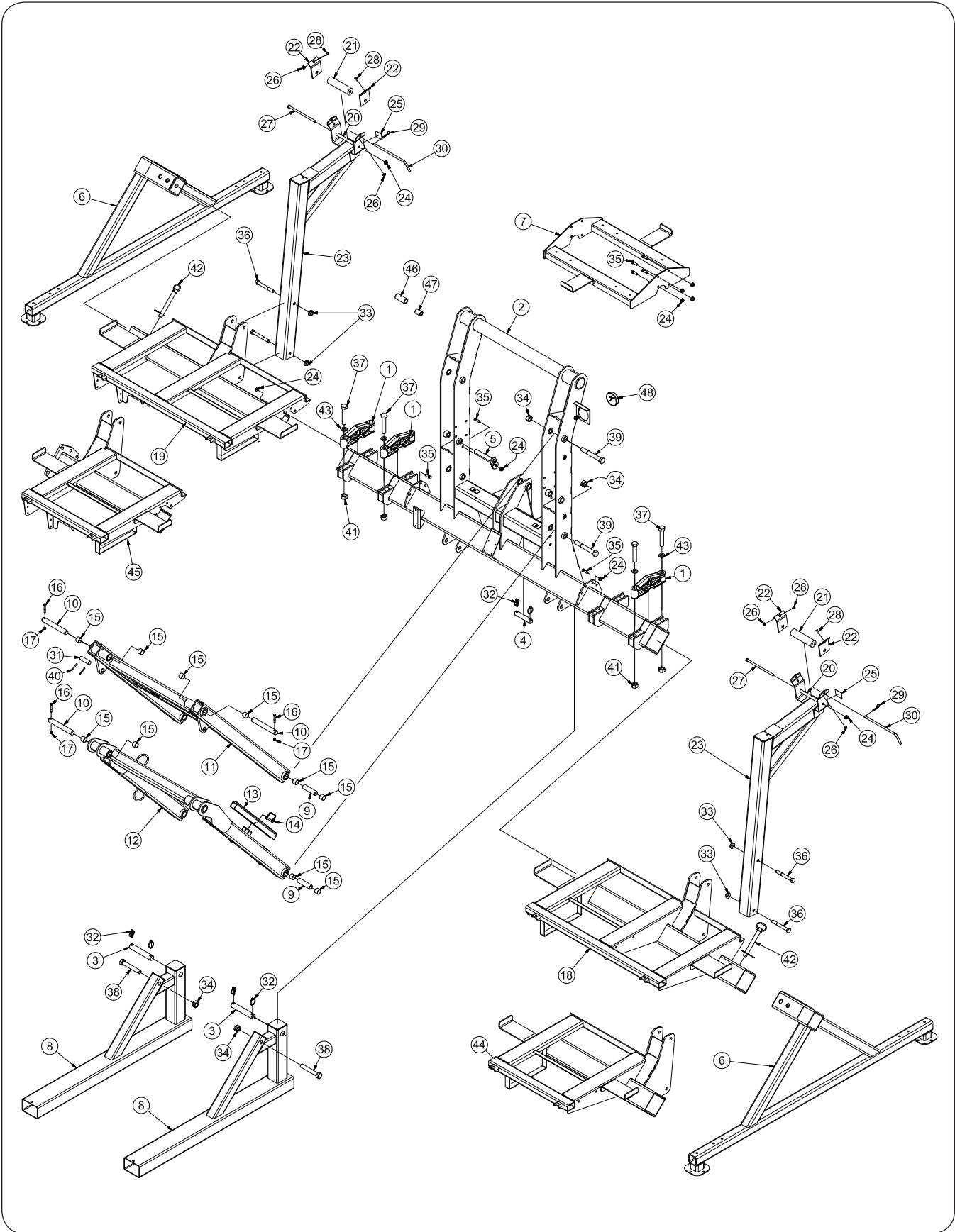
ITEM	PART NO.	DESCRIPTION	NOTES
1	406764	80' Outer Wing Replacement Kit - LH (Shown)	Includes Outer Wing & Items 2 & 3
	406766	90' Outer Wing Replacement Kit - LH (Shown)	
	406763	80' Outer Wing Replacement Kit - RH	
	406765	90' Outer Wing Replacement Kit - RH	
2	9003440	Self-Lubricating Bushing 1.13" OD (1 1/4" Long)	
3	9003752	Self-Lubricating Bushing .882" OD	
4	9004071	Plastic Plug 1" Square	
5	900900-055	Cap screw, 3/8-16UNC x 1	Stainless Steel
6	9005689	Hose Holder	
7	900902-038	Flat Washer 3/8"	Stainless Steel
8	900903-021	Lock Washer 3/8"	Stainless Steel

Outer Wing Extension & Breakaway Components



ITEM	PART NO.	DESCRIPTION	NOTES
1	404606B	Boom Breakaway Ramp	
2	406002	Breakaway Shaft 3/4" Dia.	
3	406287	Breakaway Roller	
4	406288	Roller Bushing 7/8" OD	
5	407044B	Outer Wing Weldment - LH (Shown)	
	407043B	Outer Wing Weldment - RH	
6	9001645	Plastic Plug 1 1/2" Square	
7	9004071	Plastic Plug 1" Square	
8	900900-102	Capscrew 1/2-13UNC x 1 3/4	Stainless Steel
9	900900-125	Capscrew 5/8-11UNC x 2 1/4	Stainless Steel
10	900902-044	Flat Washer 1/2"	Stainless Steel
11	900902-049	Flat Washer 5/8"	Stainless Steel
12	900902-053	Flat Washer 3/4"	Stainless Steel
13	900906-010	Locknut 1/2-13UNC	Stainless Steel
14	900911-016	Hex Jam Nut 3/4-10UNC	Stainless Steel
15	91160	Grease Zerk	
16	93415	90° Grease Zerk	
17	9399-060	Set Screw 1/4-20UNC x 1/2	
18	TA500689	Shaft Collar w/Set Screw 5/16-18UNC x 1/4	
19	TA510013	Breakaway Spring 1.875" OD	
20	9004570	Plastic Plug 1 1/2 x 2	

Lift Assembly & Parking Stand Components

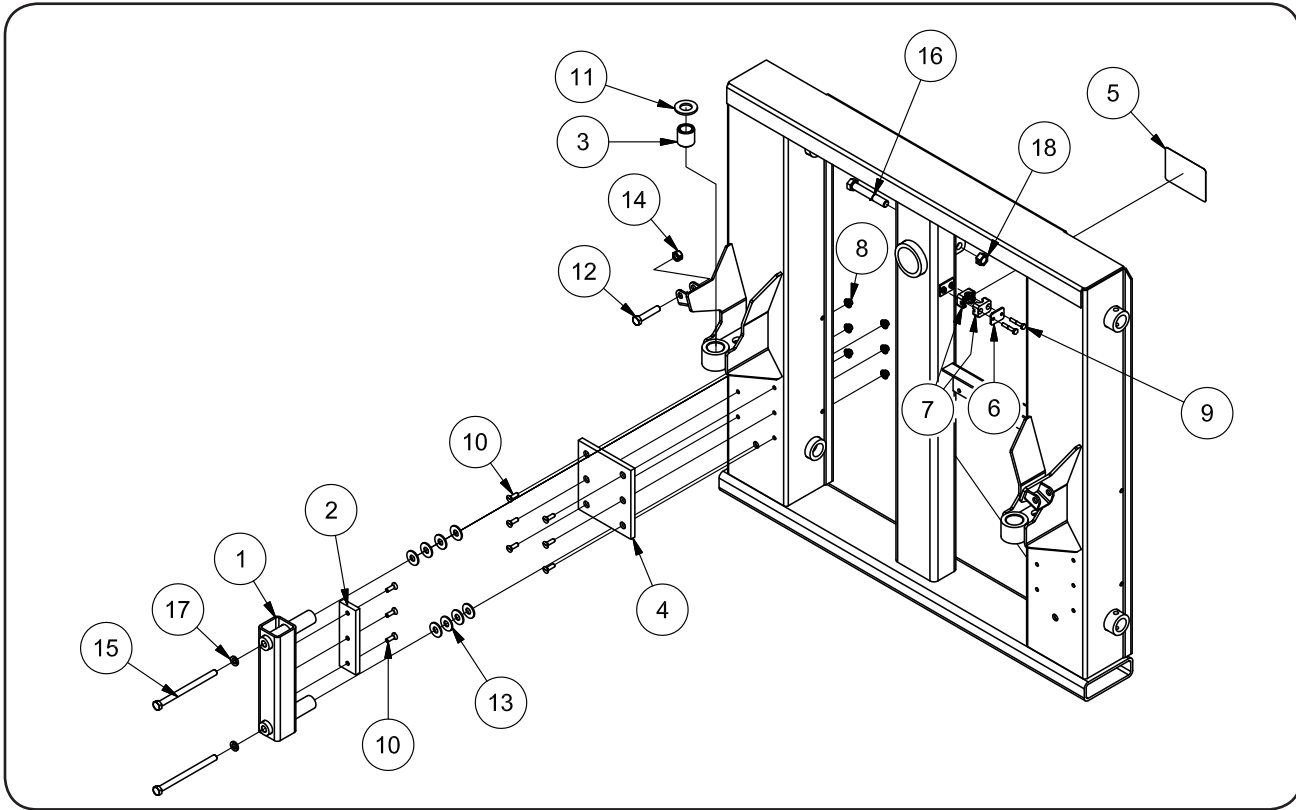


400- & 600-Gallon 3-Point Sprayer — Parts

Lift Assembly & Parking Stand Components

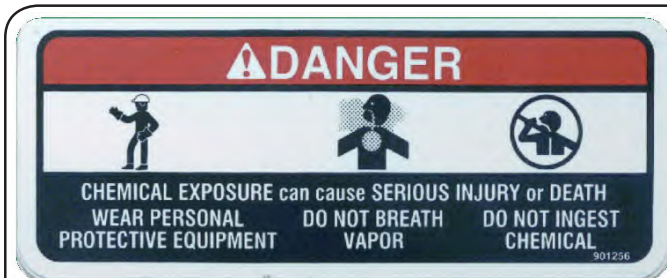
ITEM	PART NO.	DESCRIPTION	NOTES
1	404785B	Axle Clamp	
2	406512B	3Pt Frame Weldment	
3	406634	Lower Hitch Pin 1 7/16" Dia. x 8 1/4	
4	406635	Upper Hitch Pin 1 1/4" Dia. x 6 1/16	
5	406640	Cylinder Pin 1" Dia. x 7 1/4 Weldment	
6	406649B	Storage Stand Weldment	
7	406981B	Rinse Tank Frame Weldment	
8	407075B	Fork Tube Weldment	
9	407084	Lift Arm Bushing 1 3/8" OD	
10	401071	Parallel Lift Pin 1 1/4" Dia. x 9 1/8	
11	406595B	Upper Lift Arm Weldment	
12	406605B	Lower Lift Arm Weldment	
13	407065B	Cylinder Stop Plate	
14	9000938	Lynch Pin 3/8" Dia. w/Square Handle	
15	9003828	Self-Lubricating Bushing 1.414" OD	
16	9390-061	Capscrew 3/8-16UNC x 2 1/2	Grade 5
17	9928	Locknut 3/8-16UNC	
18	407276B	Tank Frame Weldment RH - 600 Gallon	
19	407277B	Tank Frame Weldment LH - 600 Gallon	
20	406571B	Rest Roller Bushing 3/4" OD	
21	406572	Plastic Wing Rest Roller 2" OD	
22	406573	Plastic Wing Rest Pad 3 1/2 x 5 1/4	
23	407260B	Wing Rest Weldment	
24	9003397	Locking Flange Nut 1/2-13UNC	
25	9004755	Decal, IMPORTANT Accumulator Drain	
26	91257	Hex Nut/Large Flange 5/16-18UNC	Grade 5
27	9390-436	Capscrew 1/2-13UNC x 10	Grade 5
28	9400-101	Slotted Flat Head Machine Screw 5/16-18UNC x 1	
29	9806	Hairpin Cotter	
30	407456	Pin 1/2" Dia. x 15 1/8	
31	804572	Pin 1" Dia. x 3 1/2	
32	95031	Lynch/Klik Pin 7/16" Dia. x 2	
33	9003399	Locknut 3/4-10UNC	Grade 5
34	92199	Locknut 1-8UNC	
35	9390-101	Capscrew 1/2-13UNC x 1 1/2	Grade 5
36	9390-157	Capscrew 3/4-10UNC x 6	Grade 5
37	9390-194	Capscrew 1-8UNC x 5 1/2	Grade 5
38	9390-196	Capscrew 1-8UNC x 6 1/2	Grade 5
39	9390-198	Capscrew 1-8UNC x 7 1/2	Grade 5
40	9392-140	Roll Pin 1/4" Dia. x 2	
41	9394-020	Hex Nut 1-8UNC	Grade 5
42	93950	Hitch Pin 1" Dia. x 8 w/ Hairpin	
43	9404-041	Lock Washer 1"	
44	407239B	Tank Frame Weldment RH - 400 Gallon	
45	407240B	Tank Frame Weldment LH - 400 Gallon	
46	407062	Hitch Adapter Bushing, 2" OD x 4 13/16" Lg.	Used with Category IV Hitch
47	407063	Hitch Adapter Bushing, 1 3/4" OD x 2 5/8" Lg.	Used with Category IV Hitch
48	9003758	4" Pressure Gauge	

H-Frame Components



ITEM	PART NO.	DESCRIPTION	NOTES
1	405893B	Clamp Weldment	
2	405895	Plastic Wear Pad 2 x 6 7/8	
3	405385	Guide Bushing 1 1/2" OD x 1 1/2" Long	
4	405896	Plastic Wear Pad 6 1/2 x 7 3/8	
5	900024	Decal, WARNING (High-Pressure Fluid)	
6	9003813	Top Plate 1 3/16 x 1 9/16	
7	9004652	Top & Bottom Poly Clamp Set	
8	91257	Hex Nut/Large Flange 5/16-18UNC	Grade 5
9	9390-007	Capscrew 1/4-20UNC x 1 1/2	Grade 5
10	9400-101	Slotted Flat Head Machine Screw 5/16-18UNC x 1	
11	804685	Depth Adjustment Washer 2" OD	
12	900900-105	Capscrew 1/2-13UNC x 2 1/2	Stainless Steel
13	900902-044	Flat Washer 1/2"	Stainless Steel
14	900906-010	Locknut 1/2-13UNC	Stainless Steel
15	9390-117	Capscrew 1/2-13UNC x 7	Grade 5
16	9390-132	Capscrew 5/8-11UNC x 4	Grade 5
17	9404-025	Lock Washer 1/2	
18	95905	Locknut 5/8-11UNC	

Decals



Part No. 901256 - Decal, DANGER (Chemical Exposure)



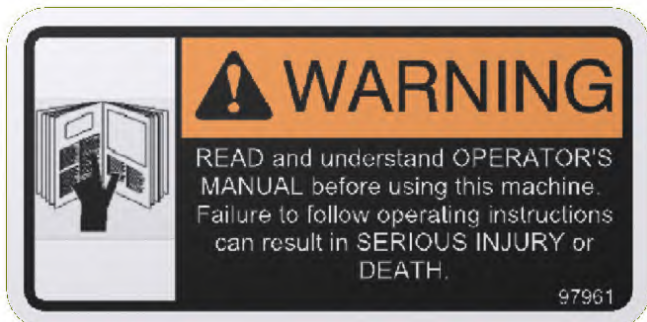
Part No. TA510079 - Decal, DANGER (Folding)



Part No. 901258 - Decal, DANGER (Electric Shock)



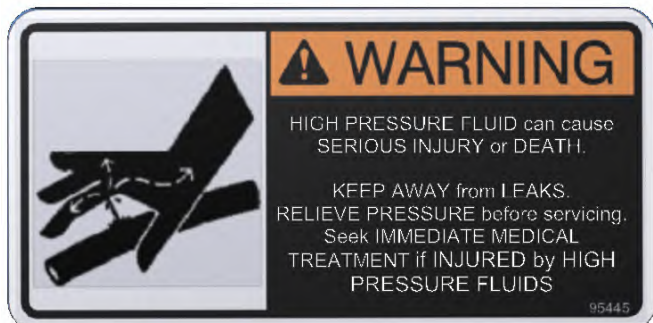
Part No. 97972 - Decal, WARNING (Hitching)



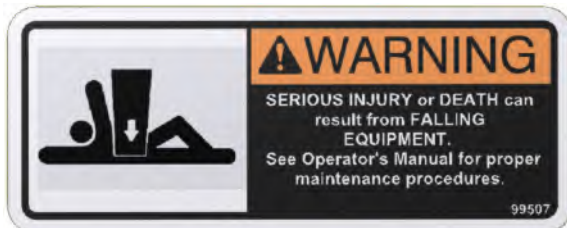
Part No. 97961 - Decal, WARNING (Read & Understand)



Part No. 98350 - Decal, WARNING (No Riders)



Part No. 95445 - Decal, WARNING (High-Pressure Fluid)



Part No. 99507 - Decal, WARNING (Falling Equipment) Part No. 900024 - Decal, WARNING (High-Pressure Oil)

Decals



Part No. 9003125 - Fluorescent Orange



Part No. 9003126 - Reflector =RED=



Part No. 9003127 - Reflector =AMBER=



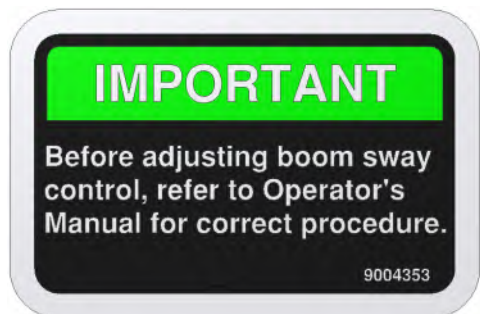
Part No. TA510514 - SMV Emblem



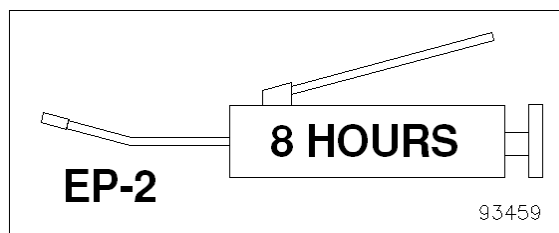
Part No. TA510212 - IMPORTANT (120 PSI)



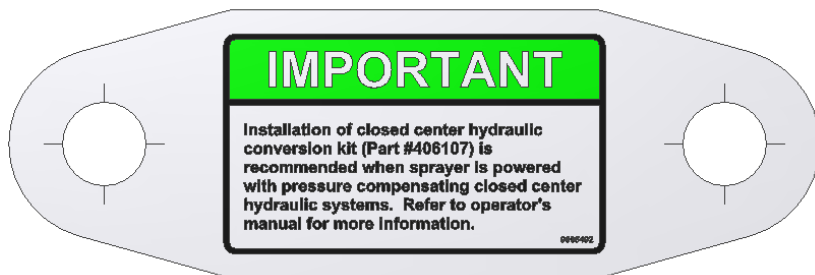
Part No. 9004755 - IMPORTANT (Accumulator Drain)



Part No. 9004353 - IMPORTANT (Boom Sway)



Part No. 93459 - Grease Every 8 Hours



Part No. 9005492 - IMPORTANT (Sprayer Hydraulics)



Part No. 91605 - FEMA

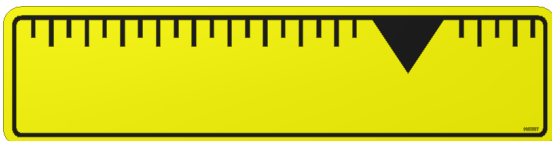


Part No. TA510008 - TA Logo

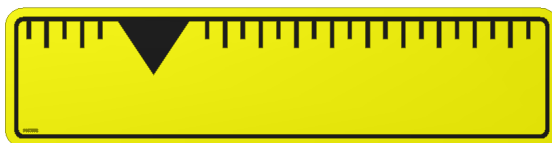


Part No. TA510031 - USA Decal

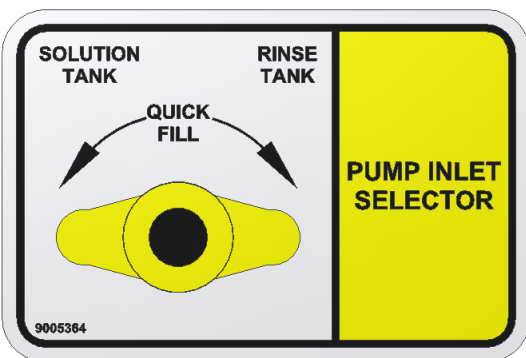
Decals



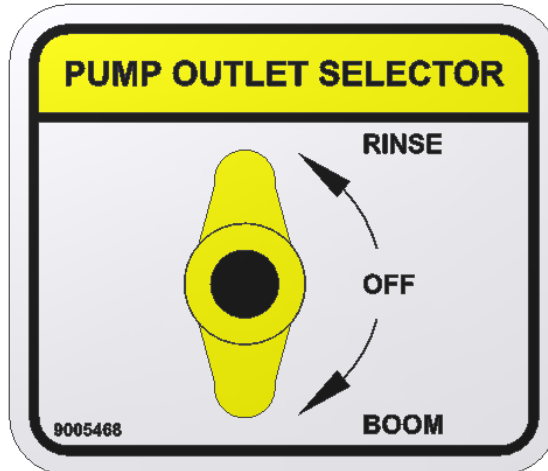
Part No. 9003807 - Right-Hand Indicator



Part No. 9003808 - Left-Hand Indicator



Part No. 9005364 - Pump Inlet Selector



Part No. 9005468 - Pump Outlet Selector



Part No. 9004561 - Agitation Control

SPRAYER OPERATING INSTRUCTIONS

(Refer to Owner's Manual for further information)

QUICK-FILL

- Assure that QUICK-FILL valve is <CLOSED>.
- Connect fill hose to quick-fill coupler.
- Turn QUICK-FILL valve to <OPEN> to fill solution tank. *Do not leave sprayer unattended during filling.*
- Return valve to <CLOSED> when filling is complete.

SPRAYING

Valve settings	
PUMP INLET SELECTOR	<SOLUTION TANK>
INDUCTOR FLOW (OPT.)	<OFF>
FILTER PURGE CONTROL	<PARTIALLY OPEN>
PUMP OUTLET SELECTOR	<BOOM>
AGITATION CONTROL	<PARTIALLY OPEN>

Vary FILTER PURGE CONTROL and AGITATION CONTROL values to suit boom pressure and agitation requirements.

RINSING - BOOM ONLY

Valve settings	
PUMP INLET SELECTOR	<RINSE TANK>
INDUCTOR FLOW (OPT.)	<OFF>
FILTER PURGE CONTROL	<OFF>
PUMP OUTLET SELECTOR	<BOOM>
AGITATION CONTROL	<OFF>

Do not allow pump to run dry.

9004783

RINSING-COMplete SYSTEM

- Step 1: Run pump approx. 30 sec. with the following settings:

Valve settings	
PUMP INLET SELECTOR	<RINSE TANK>
INDUCTOR FLOW (OPT.)	<OFF>
FILTER PURGE CONTROL	<PARTIALLY OPEN>
PUMP OUTLET SELECTOR	<BOOM>
AGITATION CONTROL	<PARTIALLY OPEN>

- Step 2: Rinse main tank by running pump with the following settings, using approx. 1/3 of available rinse water.

Valve settings	
PUMP INLET SELECTOR	<RINSE TANK>
INDUCTOR FLOW (OPT.)	<OFF>
FILTER PURGE CONTROL	<OFF>
PUMP OUTLET SELECTOR	<RINSE>
AGITATION CONTROL	<OFF>

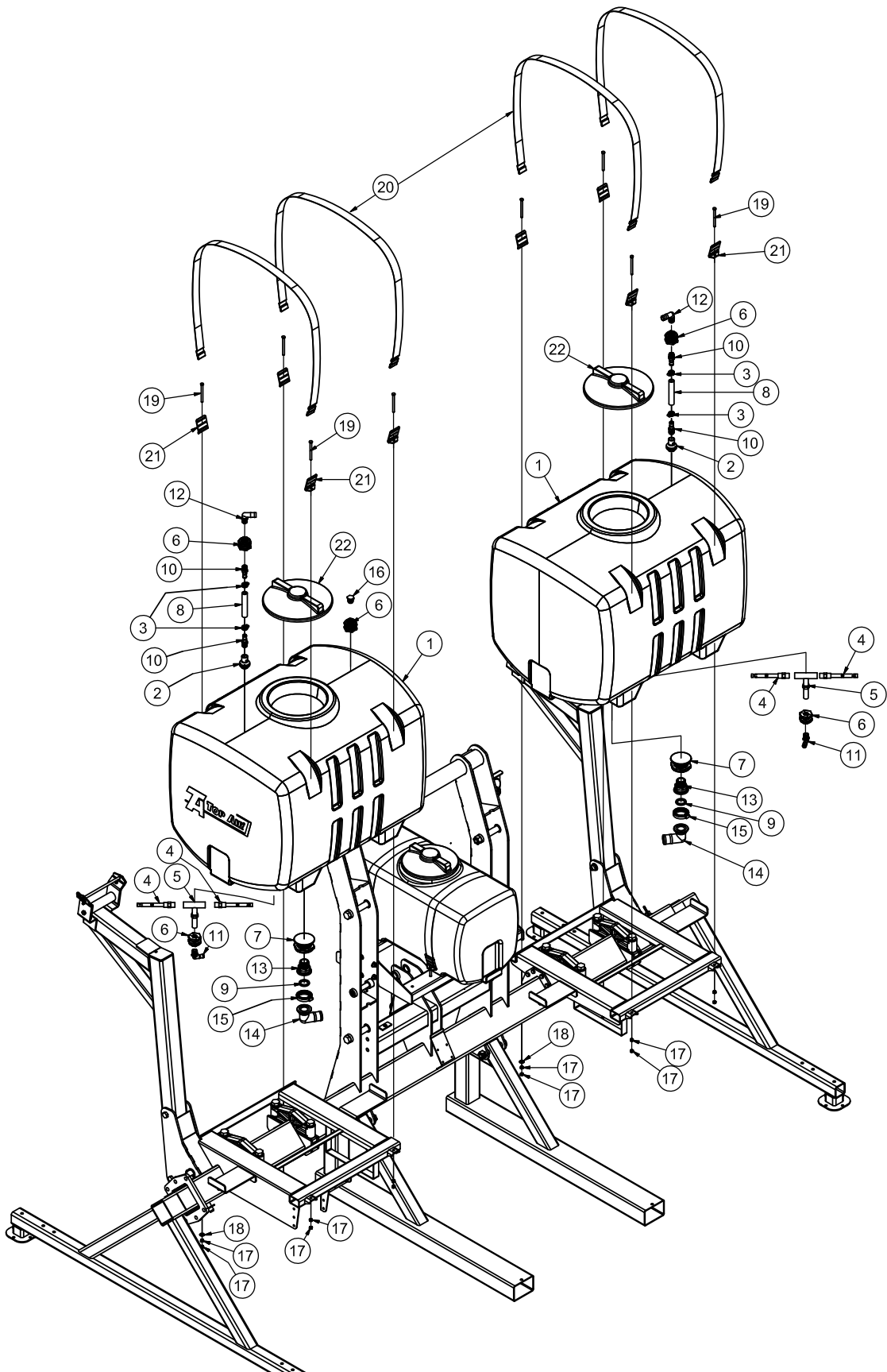
- Step 3: Dispense rinse water through boom by running pump with the following settings, stopping pump when solution tank is empty.

Valve settings	
PUMP INLET SELECTOR	<SOLUTION TANK>
INDUCTOR FLOW (OPT.)	<OFF>
FILTER PURGE CONTROL	<OFF>
PUMP OUTLET SELECTOR	<BOOM>
AGITATION CONTROL	<OFF>

- Step 4: Repeat steps 2 and 3. Do not allow pump to run dry.

Part No. 9004783 - Sprayer Operations

400-Gallon Tank Components

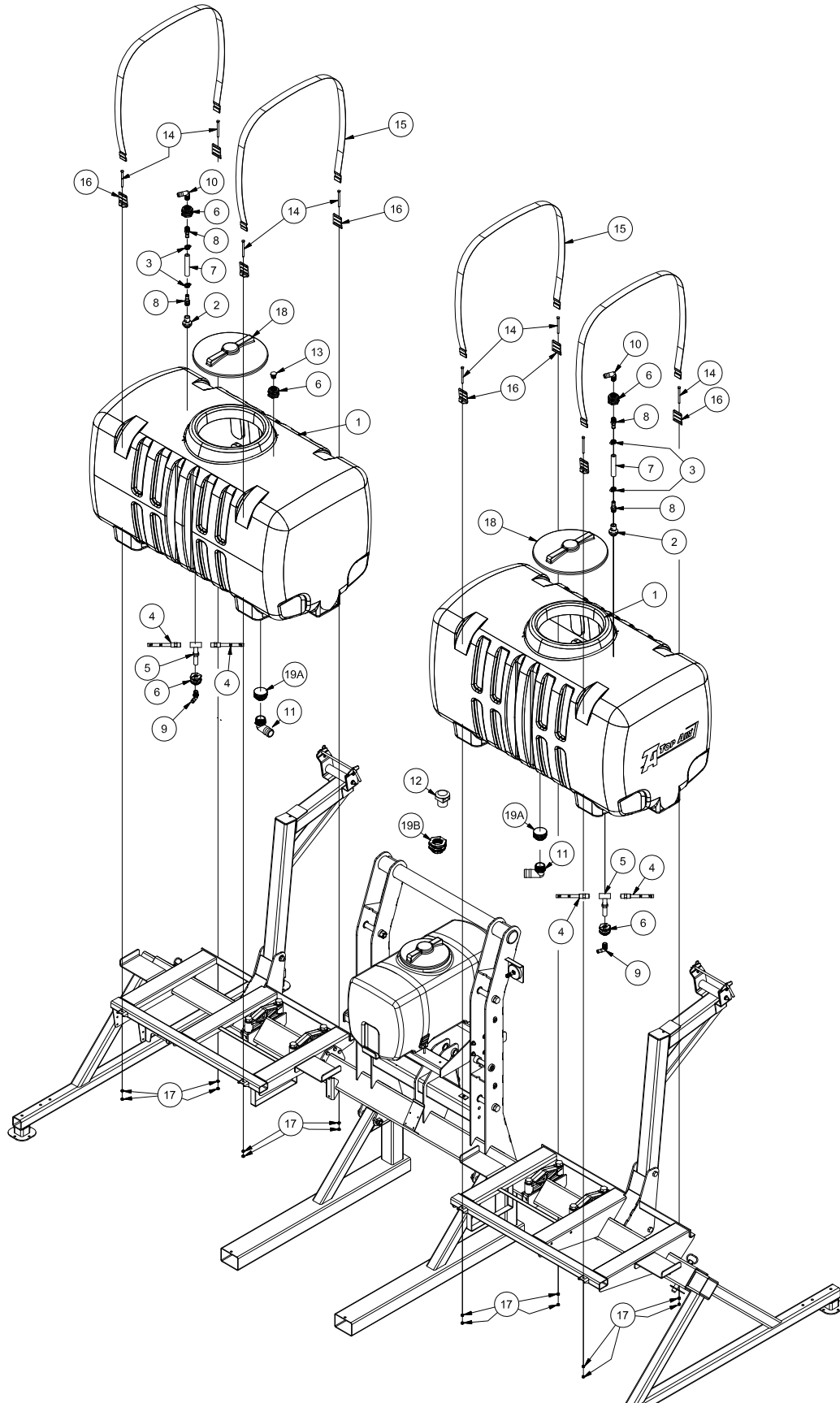


400- & 600-Gallon 3-Point Sprayer — Parts

400-Gallon Tank Components

ITEM	PART NO.	DESCRIPTION	NOTES
1	9005412	Tank 200 Gallon =Yellow= with Lid	Includes Item #22
2	9005451	3/4-14 NPT Female Rinse Nozzle	
3	TA800910	Hose Clamp 1/2 SAE (SZ 12)	Stainless Steel
4	TA801250	Agitator 3/4" Dia. With 3/4 NPT	
5	TA801255	Agitator Tee	
6	TA805408	Manifold Fitting 3/4"	
7	TA805424	Tank Fitting with 1 1/2" Anti-Vortex	
8	TA806250	Hose EPDM 3/4"	(Specify in Feet)
9	TA811944	Gasket 2 3/16" Dia.	
10	TA814861	Hose Barb 3/4-14 MPT x 3/4 Hose Shank	
11	TA814961	90° Elbow, 3/4" Dia. Hose Barb with 3/4-14 NPT Male End	
12	TA814963	90° Elbow, 1" Dia. Hose Barb with 3/4-14 NPT Male End	
13	TA815010	Adapter, 2" Flange x 1 1/2 NPT Male	
14	TA815021	90° Elbow, 2" Dia. Hose Barb with 2" Flange	
15	TA815025	2" Flange Clamp with Worm Screw	
16	TA814751	Plug 3/4-14 NPT	
17	9394-006	Hex Nut 3/8-16UNC	Grade 5
18	9405-076	Flat Washer 3/8"	
19	TA0-907131-0	Capscrew 3/8-16UNC x 4 1/2 (Full Threaded)	Grade 5
20	TA500499	Polyester Tank 2" Strapping	(Specify in Feet)
21	TA510025	Tank Strap Clip Plate	
22	9003929	Lid Only	

600-Gallon Tank Components



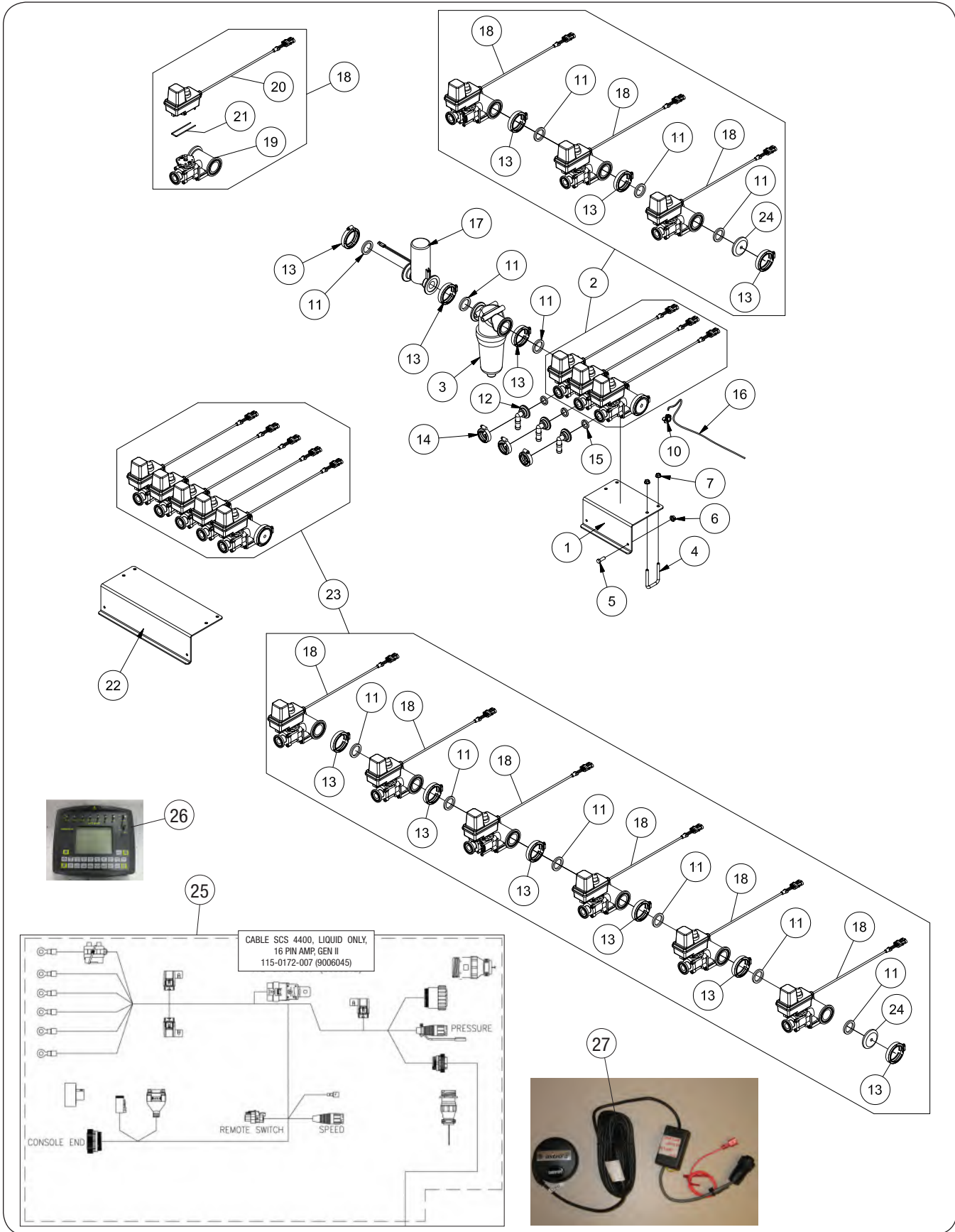
400- & 600-Gallon 3-Point Sprayer — Parts

600-Gallon Tank Components

ITEM	PART NO.	DESCRIPTION	NOTES
1	9003923	Tank 300 Gallon =Yellow= with Lid	Includes Item #18
2	9005451	3/4-14 NPT Female Rinse Nozzle	
3	TA800910	Hose Clamp 1/2 SAE (SZ 12)	Stainless Steel
4	TA801250	Agitator 3/4" Dia. With 3/4 NPT	
5	TA801255	Agitator Tee	
6	TA805408	Manifold Fitting 3/4"	
7	TA806250	Hose EPDM 3/4"	(Specify in Feet)
8	TA814861	Hose Barb 3/4-14 MPT x 3/4 Hose Shank	
9	TA814961	90° Elbow, 3/4" Dia. Hose Barb with 3/4-14 NPT Male End	
10	TA814963	90° Elbow, 1" Dia. Hose Barb with 3/4-14 NPT Male End	
11	TA814980	90° Elbow, 2" Dia. Hose Shank with 2-11 1/2 NPT Male End	
12	TA815074	Tank Fitting with 2" Anti-Vortex	Serial Number B32800099 and Lower
13	TA814751	Plug 3/4-14 NPT	
14	TA0-907131-0	Capscrew 3/8-16UNC x 4 1/2 (Full Threaded)	Grade 5
15	TA500499	Polyester Tank 2" Strapping	(Specify in Feet)
16	TA510025	Tank Strap Clip Plate	
17	9394-006	Hex Nut 3/8-16UNC	Grade 5
18	9003929	Lid Only	
19A	9005306	Tank Fitting, 2" Anti-Vortex	Serial Number B32800100 and Higher
19B	TA805428	Tank Fitting, 2" Double Threaded	Serial Number B32800099 and Lower

400- & 600-Gallon 3-Point Sprayer — Parts

Standard Ball Valve & Regulating Valve Components

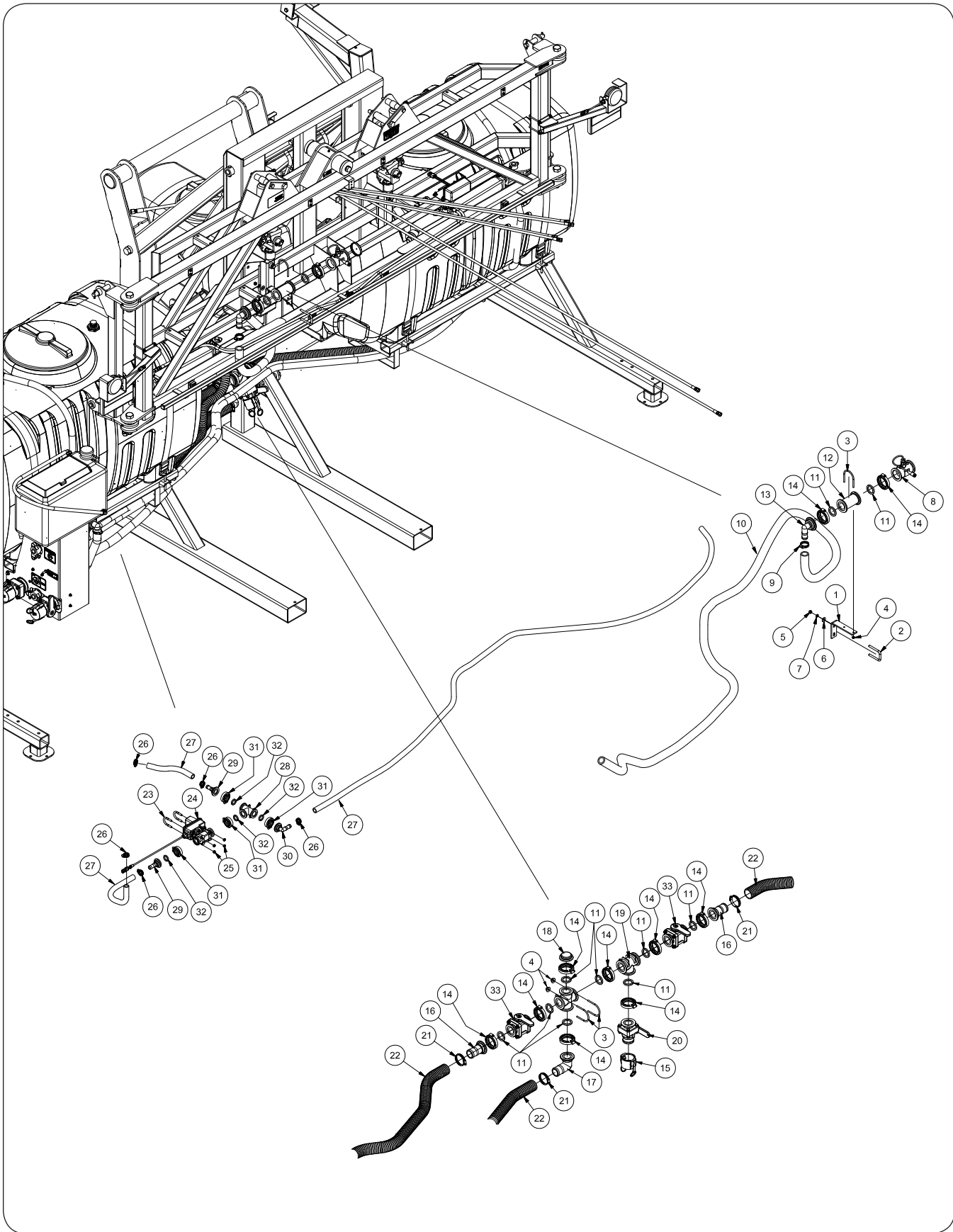


400- & 600-Gallon 3-Point Sprayer — Parts

Standard Ball Valve & Regulating Valve Components

ITEM	PART NO.	DESCRIPTION	NOTES
1	407914B	Manifold Bracket Plate for 3-Section Ball Valve Assembly	
2	TA854833	3-Section Ball Valve Assembly	
3	TA855650	Strainer-2" Flanged Line	
4	9004688	U-Bolt 3/8-16UNC x 2 3/8 C/C	Stainless Steel
5	900900-028	Capscrew 5/16-18UNC x 3/4	Stainless Steel
6	9005639	Flange Nut 5/16-18UNC	Stainless Steel
7	9005640	Flange Nut 3/8-16UNC	Stainless Steel
10	TA720802	Elbow 1/4" NPTx 1/4" Gauge Tube	
11	TA811944	Gasket 2 3/16" OD x 1 5/8" ID	
12	TA815017	90° Elbow 3/4" Hose Barb x 1" Flange	
13	TA815025	Flange Clamp 2" with Worm Screw	
14	TA815026	Flange Clamp 1" with Worm Screw	
15	TA815029	Gasket/Seal 1 3/8" OD x 1" ID	
16	TA720620	1/4" Gauge Tubing	Specify in Feet
17	TA720258	Flow Control Valve 1" (Regulating Valve)	
	TA720260	Flow Control Valve 1 1/2" (Regulating Valve)	
18	TA854831	Ball Valve Assembly	
19	901998	Ball Valve Assembly Base	
20	TA854874	Shut-Off Ball Valve	
21	TA854875	Retainer Clip	
22	407916B	Manifold Bracket Plate for 5-Section Ball Valve Assembly	19 1/8" Long
	407917B	Manifold Bracket Plate for 6-Section Ball Valve Assembly	23 9/16" Long
23	TA854836	6-Section Ball Valve Assembly	
24	TA883114	Plug 2" Flanged with 1/4" Gauge Port	
25	9006045	Cable, 4400 Console CAN	
26	TA720316	Console, Raven 4400	
	9005331	Fuse, Type 3AG, 6.25 Amp, 250 Volt	Not Shown Separately
27	TA723025	Astro GPS Speed Sensor (1Hz) 3-Pin	

Plumbing Components (Part 1 of 2)



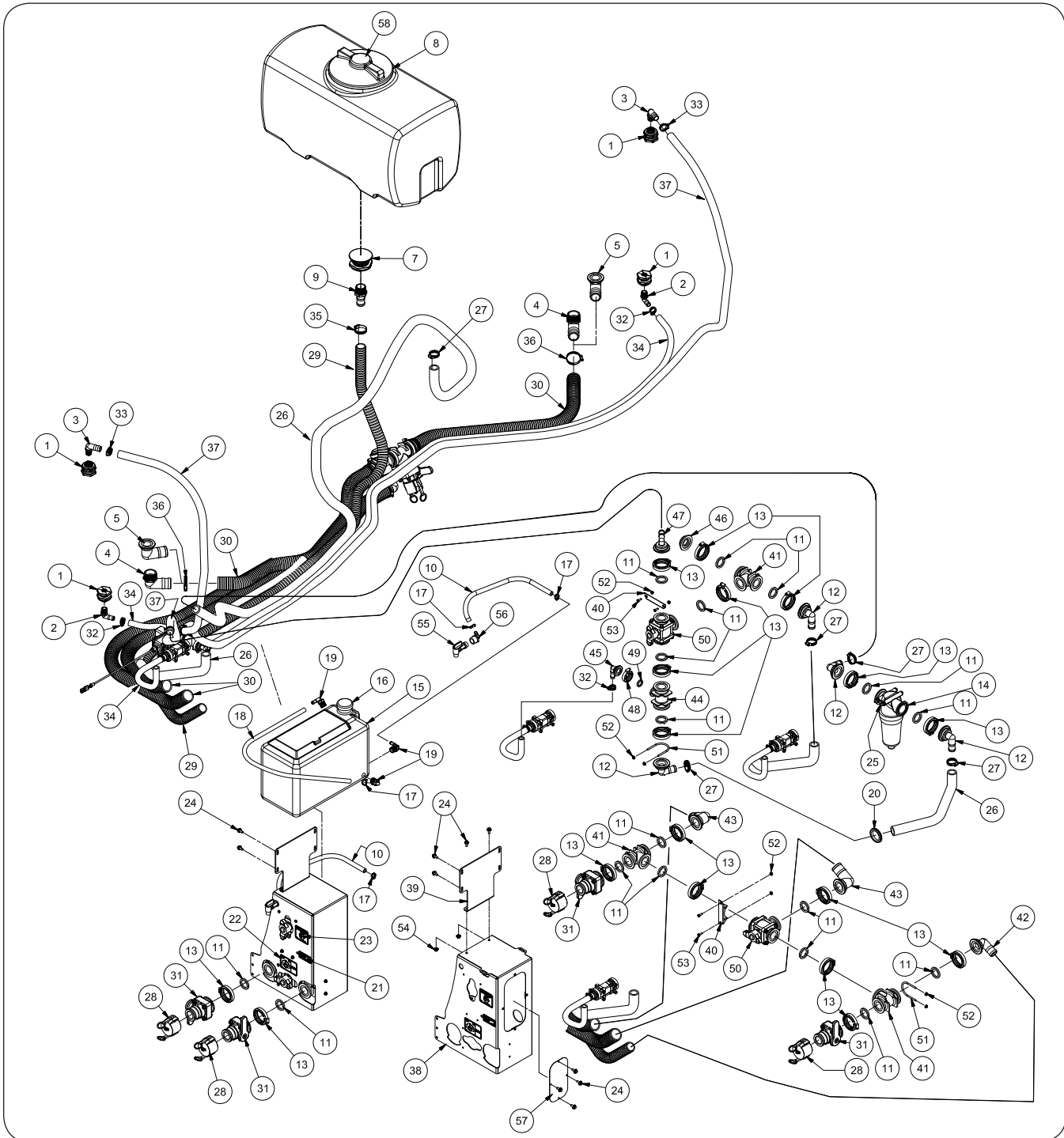
400- & 600-Gallon 3-Point Sprayer — Parts

Plumbing Components (Part 1 of 2)

ITEM	PART NO.	DESCRIPTION	NOTES
1	407918B	Plumbing Bracket	
2	9004688	U-Bolt 3/8-16UNC x 2 3/8 C/C	Stainless Steel
3	9004681	U-Bolt 1/4-20UNC x 2 7/8 C/C	Stainless Steel
4	9004720	Serrated Flange Nut 1/4-20UNC	Stainless Steel
5	900901-006	Hex Nut 3/8-16UNC	Stainless Steel
6	900902-038	Flat Washer 3/8	Stainless Steel
7	900903-021	Lock Washer 3/8	Stainless Steel
8	TA720365	Flow Meter	
9	TA800918	Hose Clamp 1 3/4"-3 3/4"	Stainless Steel
10	TA806300	Hose EPDM 1 1/4"	Specify in Feet
11	TA811944	Gasket 2 3/16" OD x 1 5/8" ID	
12	TA815003	Coupling 2" Flange x 2" Flange	
13	TA815019	90° Elbow 2" Flange x 1 1/4 Hose Barb	
14	TA815025	Flange Clamp 2" with Worm Screw	
15	TA811500	Cap Coupler 2"	
16	TA815016	Hose Barb 2" Flange x 2" Hose Barb	
17	TA815021	90° Elbow 2" Flange x 2" Hose Barb	
18	TA815023	Plug 2" Flange	
19	TA815007	Tee 2" Flange x 2" Flange x 2" Flange	
20	TA815047	Ball Valve 2" Flange x 2" Male Adapter Quick Disconnect Coupling	
21	TA800922	Hose Clamp SC-36	Stainless Steel
22	TA806332	2" Fertilizer Solution Hose	Specify in Feet
23	100965	U-Bolt 5/16-18UNC x 1.6 C/C	Grade 5
24	9003957	1" Flange Electric Valve	
25	9807	Locknut 5/16-18UNC	
26	TA800910	Hose Clamp 1/2"	Stainless Steel
27	TA806250	Hose EPDM 3/4"	Specify in Feet
28	TA815005	Tee 1" Flange x 1" Flange x 1" Flange	
29	TA815012	Hose Barb 1" Flange x 3/4" Hose Barb	
30	TA815017	90° Elbow 3/4" Hose Barb x 1" Flange	
31	TA815026	Flange Clamp 1" with Worm Screw	
32	TA815029	Gasket/Seal 1 3/8" OD x 1" ID	
33	TA815045	Ball Valve, 2" Flange x 2" Flange (Poly)	

400- & 600-Gallon 3-Point Sprayer — Parts

Plumbing Components (Part 2 Of 2)



ITEM	PART NO.	DESCRIPTION	NOTES
1	TA805408	Manifold Fitting 3/4" Double Threaded for 1 5/8" Hose	
2	TA814961	90° Elbow Hose Barb (3/4-14 NPTF Male x 3/4 Hose Shank)	
3	TA814963	90° Elbow Hose Barb (3/4-14 NPTF Male x 1 Hose Shank)	
4	TA814980	90° Elbow Hose Barb (2-11 1/2 NPTF Male x 2 Hose Shank)	600 Gallon Tanks Only
5	TA815021	90° Elbow Hose Barb (2" Flange x 2 Hose Shank)	400 Gallon Tanks Only
6	407113	Rinse Tank Assembly	Includes Items 7-9
7	TA805424	Tank Fitting 1 1/2" Anti-Vortex	
8	TA805675	Tank 50 Gallon (Yellow)	

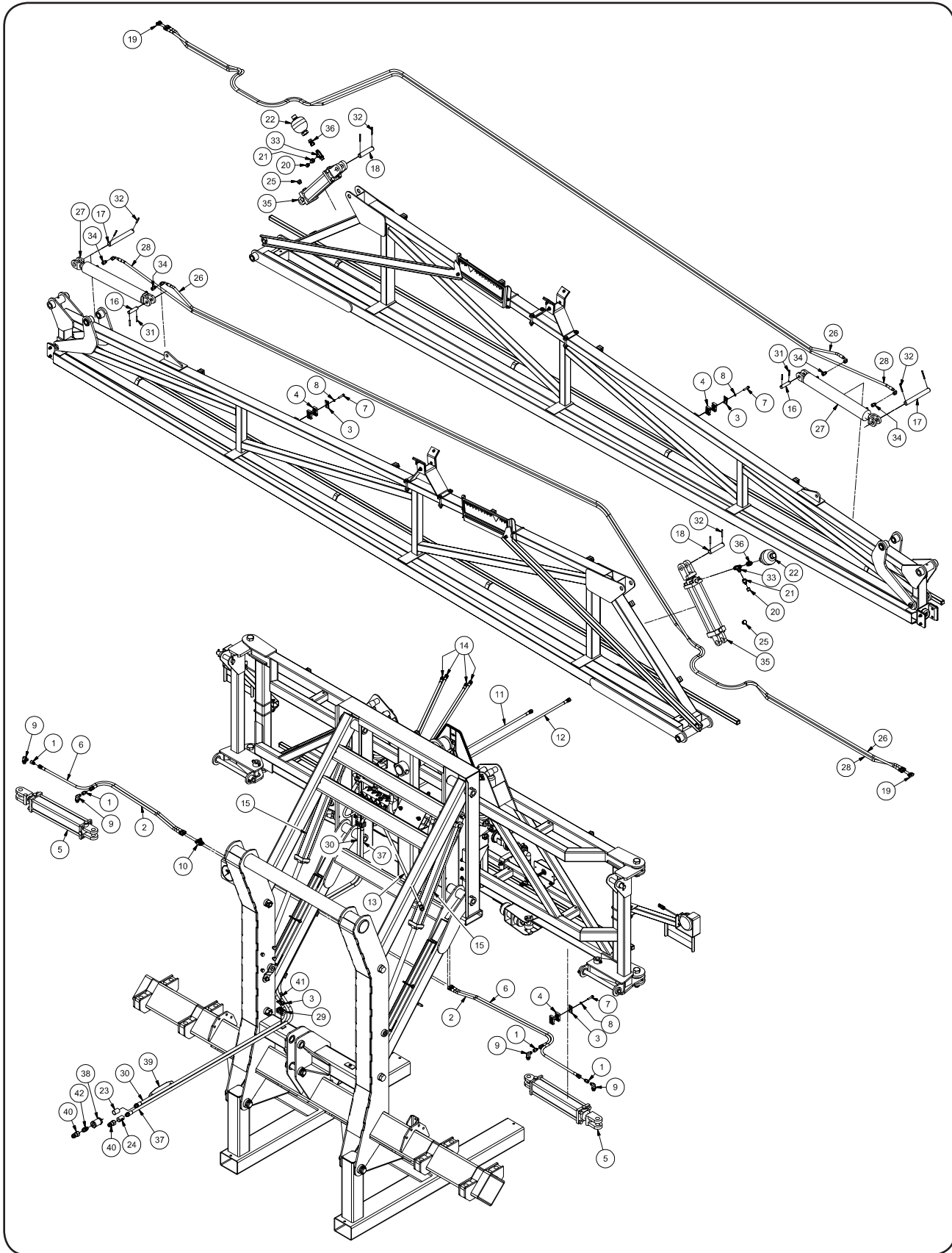
400- & 600-Gallon 3-Point Sprayer — Parts

Plumbing Components (Part 2 Of 2)

ITEM	PART NO.	DESCRIPTION	NOTES
9	TA814875	Hose Barb (1 1/2 NPT Male x 1 1/2 Hose Shank)	
10	TA806225	Hose 1/2 EPDM	Specify in Feet
11	TA811944	Gasket 2 3/16" OD x 1 5/8" ID x .25	
12	TA815019	90° Elbow Hose Barb (2" Flange x 1 1/4 Hose Shank)	
13	TA815025	Flange Clamp 2" w/ Worm Screw	
14	TA855650	Strainer - 2" Flanged Line	
15	TA580278	Tank 9 Gallon (Yellow) - Clean Water Tank Assembly	
16	TA510074	Cap Assembly - Vented	
17	TA800902	Hose Clamp M-6	Stainless Steel
18	TA806554	1/2" Clear Vinyl Tubing	Specify in Feet
19	TA808275	90° Elbow Hose Barb (3/4-14 NPTF Male x 1/2 Hose Shank)	
20	9004468	Grommet/Rubber 2 1/2" Dia.	
21	9004561	Decal - Agitation Control	
22	9005364	Decal - Pump Inlet	
23	9005468	Decal - Pump Outlet	
24	91256	Screw/Large Flange 5/16-18UNC x 3/4	
25	9390-070	Capscrew 3/8-16UNC x 5 1/2	Grade 5
	9405-074	Flat Washer 3/8	
	91263	Nut/Large Flange 3/8-16UNC	Grade 5
26	TA806300	Hose 1 1/4 EPDM	Specify in Feet
27	TA800918	Hose Clamp T-F (1 3/4 - 3 3/4)	Stainless Steel
28	TA811500	Cap Coupler 2"	
29	TA806331	Fertilizer Solution Hose 1 1/2	Specify in Feet
30	TA806332	Fertilizer Solution Hose 2"	Specify in Feet
31	TA815047	Ball Valve 2" Flange Std Port x 2" Male Adapter Quick Disconnect Coupling	
32	TA800910	Hose Clamp 1/2"	Stainless Steel
33	TA800912	Hose Clamp (13/16-1 1/2)	Stainless Steel
34	TA806250	Hose 3/4" EPDM	
35	TA800920	Hose Clamp SC-32	Stainless Steel
36	TA800922	Hose Clamp SC-36	Stainless Steel
37	TA806275	Hose 1" EPDM	
38	407014B	Command Center Weldment Less Decals	
39	407019B	Tank Bracket	
40	407018B	Valve Bracket	
41	TA815007	Tee 2" Flange x 2" Flange x 2" Flange	
42	TA815020	90° Elbow Hose Barb (2" Flange x 1 1/2 Hose Shank)	
43	TA815021	90° Elbow Hose Barb (2" Flange x 2 Hose Shank)	
44	TA815006	Tee 2" Flange x 2" Flange x 1" Flange	
45	TA815017	90° Elbow Hose Barb (1" Flange x 3/4 Hose Shank)	
46	TA815023	Plug - 2" Flange	
47	TA815024	90° Elbow Hose Barb (2" Flange x 1 Hose Shank)	
48	TA815026	Flange Clamp 1" w/ Worm Screw	
49	TA815029	Gasket 1 3/8" OD x 1" ID x .25	
50	TA815048	Ball Valve - 3 Way (2" Flange x 2" Flange x 2" Flange)	
51	9004681	U-Bolt 1/4-20UNC x 2 7/8 C/C	Stainless Steel
52	9004720	Flange Nut 1/4-20UNC (Serrated)	Stainless Steel
53	900900-003	Capscrew 1/4-20UNC x 3/4	Stainless Steel
54	91257	Hex Nut/Large Flange 5/16-18UNC	Grade 5
55	TA510073	Spigot	
56	TA809824	90° Elbow Hose Barb (3/4-14 NPTF Male x 1 1/2 Hose Shank)	
57	407701B	Access Panel for Command Center =Black=	
58	9005308	8" Lid for 50 Gallon Rinse Tank	

400- & 600-Gallon 3-Point Sprayer — Parts

Hydraulic Components (Part 1 of 2)

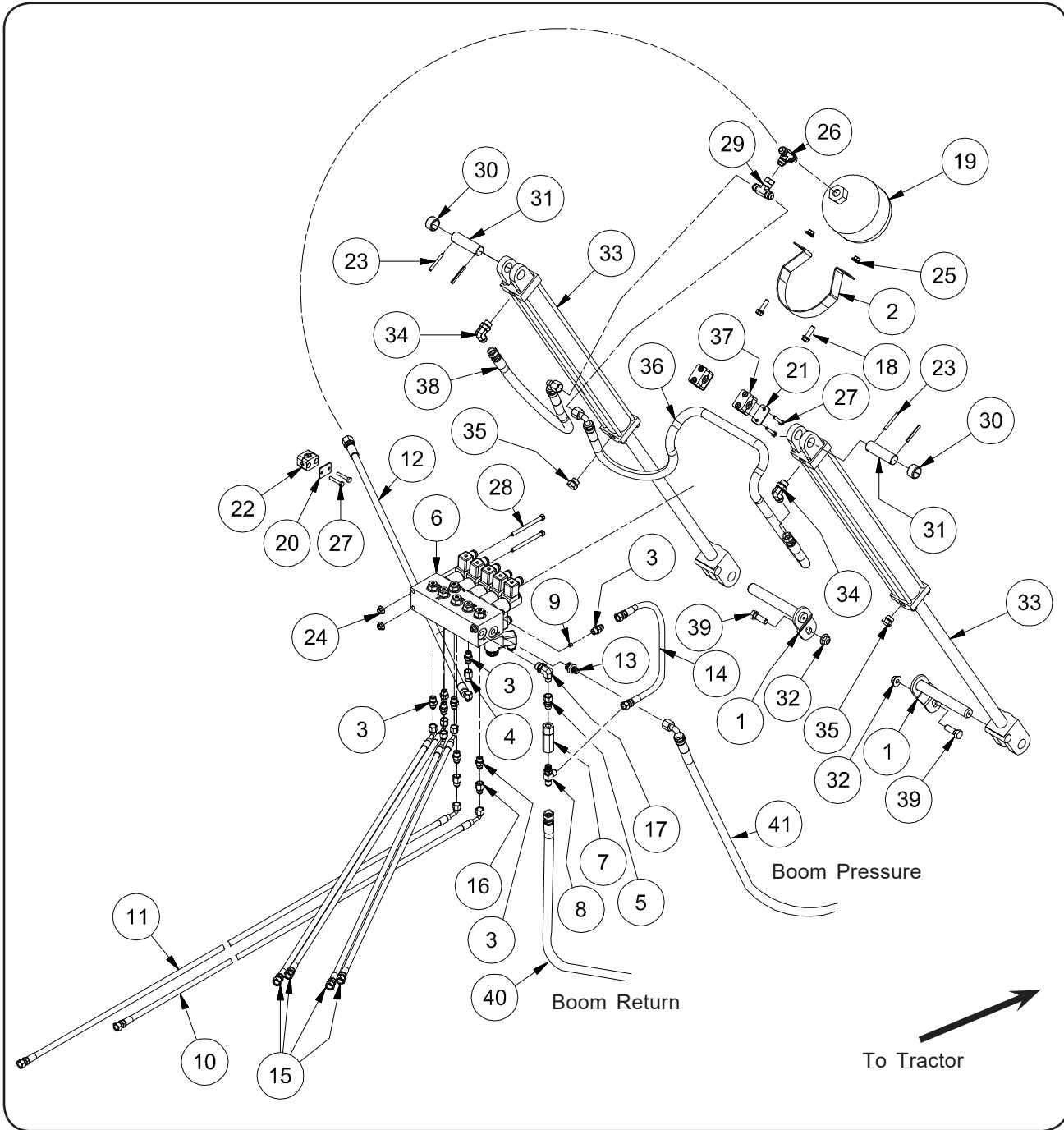


400- & 600-Gallon 3-Point Sprayer — Parts

Hydraulic Components (Part 1 of 2)

ITEM	PART NO.	DESCRIPTION	NOTES
1	9003303	Reducer 9/16-18 JIC Female x 9/16-18 JIC Male	w/ .045 Restrictor
2	9003436	Hose 1/4 x 39 1/2 (3000 PSI)	
3	9003814	Clamp Top Plate	
4	9003816	Poly Clamp Set (Top & Bottom)	
5	9004792	Cylinder 3 x 14 (3000 PSI)	Seal Kit #9003772
6	9005323	Hose 1/4 x 57 (3000 PSI)	
7	900900-032	Capscrew 5/16-18UNC x 1 1/2	Stainless Steel
8	900903-019	Lock Washer 5/16	Stainless Steel
9	9874	90° Elbow 9/16-18 JIC Male x 3/4-16 O-Ring Male Boss	
10	9875	Tee 9/16-18 JIC Male x 9/16-18 JIC Male x 9/16-18 JIC Male	
11	9005321	Hose 1/4 x 115 (3000 PSI)	
12	9005322	Hose 1/4 x 125 (3000 PSI)	
13	9005325	Hose 3/8 x 45 (3000 PSI)	
14	93594	Hose 1/4 x 59 (3000 PSI)	
15	9003680	Cylinder 2 x 24 (3000 PSI)	Seal Kit #9003105
16	403573	Pin 3/4" Dia. x 2 15/16	
17	406050	Pin 1" Dia. x 8 3/16	
18	807450	Pin 1" Dia. x 4 5/8	
19	9001825	Plug 9/16-18 JIC Male	
20	9001850	Cap Nut 3/8 Tube OD x 9/16-18 JIC Female	
21	9003065	Reducer 3/4-16 JIC Female x 9/16-18 JIC Male	
22	9003811	Hydraulic Accumulator (400 PSI Pre-Charged)	
23	9003937	Hose Marker (Boom Pressure)	
24	9003938	Hose Marker (Boom Return)	
25	9003825	Breather Plug 3/4-16	
26	9004447	Hose 1/4 x 286 (3000 PSI)	
27	9004619	Cylinder 2 1/2 x 16 (3000 PSI)	Seal Kit #9005472
28	9005324	Hose 1/4 x 304 (3000 PSI)	
29	9004367	Poly Clamp Set (Top & Bottom)	
30	9005319	Hose 3/8 x 144 (3000 PSI)	(Boom Pressure)
31	900910-162	Coiled Spring Pin/Spiral Pin 1/4" Dia. x 1 1/2"	
32	900910-166	Coiled Spring Pin/Spiral Pin 1/4" Dia. x 2"	
33	93588	Tee 3/4-16 JIC Male x 3/4-16 O-Ring Male Boss x 3/4-16 JIC Male	
34	95193	Adapter 9/16-18 JIC Female x 9/16-18 JIC Male	w/ .030 Restrictor
35	95387	Cylinder 2 1/2 x 10 (3000 PSI)	Seal Kit #95388
36	96935	Adapter 3/4-16 O-Ring Male Boss x 3/4-16 JIC Female	
37	9005320	Hose 3/8 x 144 (3000 PSI)	(Boom Return)
38	9005403	120 Micron Hyd. Filter	
39	9005492	Tag - IMPORTANT	
40	91383	Male Tip Coupling 3/4-16 O-Ring Female (3000 PSI)	
41	9390-032	Capscrew 5/16-18UNC x 1 1/2	Grade 5
42	98508	Adapter 3/4-16 O-Ring Male x 3/4-16 O-Ring Male	

Hydraulic Components (Part 2 of 2)



400- & 600-Gallon 3-Point Sprayer — Parts

Hydraulic Components (Part 2 of 2)

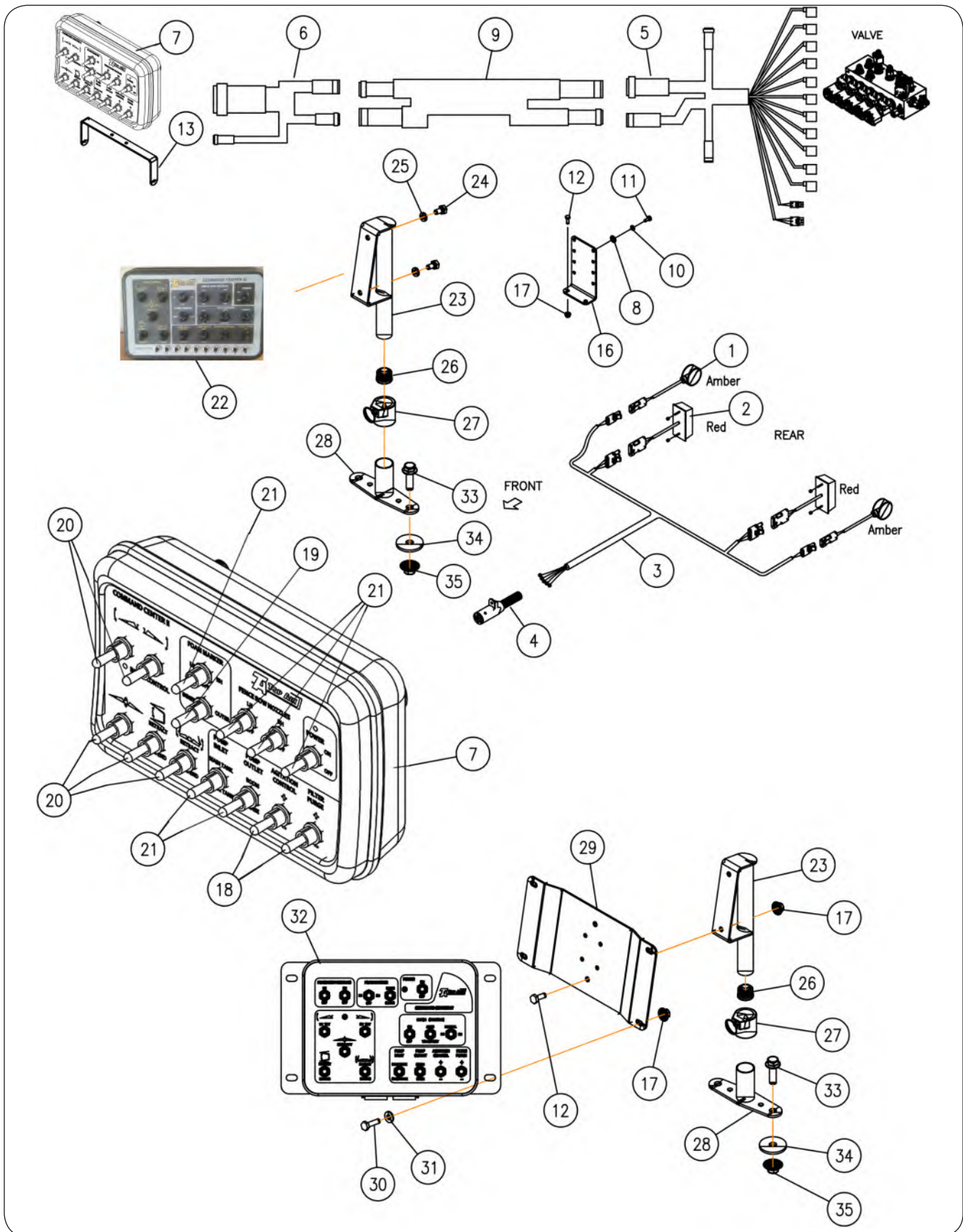
ITEM	PART NO.	DESCRIPTION	NOTES
1	406640	Cylinder Pin Weldment 1" Dia.	
2	400665B	Accumulator Clamp	
3	9001495	Adapter 9/16-18 JIC Male x 9/16-18 O-Ring Male Boss	
4	9002199	Reducer 9/16-18 JIC Female x 9/16-18 JIC Male	w/.062 Restrictor
5	9002446	Adapter 9/16-18 O-Ring Male Boss x 9/16-18 JIC Female	
6	9003797	5 Spool Control Valve - Manifold Block	Serial #B30810099 & lower
	9006399	5 Spool Control Valve - Manifold Block	Serial #B30810100 & higher
7	9004059	Check Valve w/ #6 O-Ring Ports	
8	9004064	Tee 9/16-18 JIC Male x 9/16-18 JIC Male x 9/16-18 JIC Male	
9	9004326	Plug 1/16-27 NPT (Hollow Hex Pipe Plug - 3000 PSI)	
10	9005321	Hose 1/4 x 115 (3000 PSI)	
11	9005322	Hose 1/4 x 125 (3000 PSI)	
12	9005325	Hose 3/8 x 45 (3000 PSI)	
13	92927	Adapter 9/16-18 JIC Male x 3/4-16 O-Ring Male Boss	
14	93472	Hose 1/4 x 16 (3000 PSI)	
15	93594	Hose 1/4 x 59 (3000 PSI)	
16	95193	Adapter 9/16-18 JIC Female x 9/16-18 JIC Male	w/ .030 Restrictor
17	9874	90° Elbow 9/16-18 JIC x 3/4-16 O-Ring Male	
18	9003259	Capscrew/Flange 3/8-16UNC x 1 1/4 (Serrated)	Grade 5
19	9003796	Hydraulic Accumulator (400 PSI Pre-Charged)	
20	9003813	Top Plate	
21	9005334	Top Plate	
22	9004652	Poly Clamp Set (Top & Bottom)	
23	9392-140	Roll Pin 1/4" Dia. x 2	
24	91257	Hex Nut/Large Flange 5/16-18UNC	Grade 5
25	91263	Hex Nut/Large Flange 3/8-16UNC	Grade 5
26	93588	Tee 3/4-16 JIC Male x 3/4-16 O-Ring Male Boss x 3/4-16 JIC Male	
27	9390-007	Capscrew 1/4-20UNC x 1 1/2	Grade 5
28	9390-042	Capscrew 5/16-18UNC x 4	Grade 5
29	94997	Tee 3/4-16 JIC Male x 3/4-16 JIC Male x 3/4-16 JIC Female	
30	95122	Tension Spring Hardened Bushing 3/4" Long	
31	804572	Pin 1" Dia. x 3 1/2	
32	9003397	Locking Flange Nut 1/2-13UNC	Grade 5
33	9003680	Cylinder 2 x 24 (3000 PSI)	Seal Kit #9003105
34	9863	90° Elbow 3/4-16 JIC Male x 3/4-16 O-Ring Male Boss	
35	9003825	Breather Plug 3/4-16	
36	9005326	Hose 1/2 x 54 (3000 PSI)	
37	9005333	Poly Clamp Set (Top & Bottom)	
38	93609	Hose 1/2 x 21 (3000 PSI)	
39	9390-101	Capscrew 1/2-13UNC x 1 1/2	Grade 5
40	9005320	Hose 3/8 x 144 (3000 PSI)	(Boom Return)
41	9005319	Hose 3/8 x 144 (3000 PSI)	(Boom Pressure)
42	9003906	Seal Kit for 3-Position Cartridge	Not Shown
43	9003904	Seal Kit for Load Sense Cartridge	Not Shown

Hydraulic Valve Components

ITEM	PART NO.	DESCRIPTION	NOTES
	9003797	Hydraulic Valve Complete	Includes Items 1 thru 6; Serial #B30810099 & lower
	9006399	Hydraulic Valve Complete	Includes Items 1 thru 6; Serial #B30810100 & higher
1	9003851	Manifold Block, Aluminum	
2	9003856	Check Valve, Pilot Operated	
3	9003857	Cartridge, 2-Position (Open Center)	
	9003852	Cartridge, 2-Position (Closed Center)	Option
4	9003854	Cartridge Valve, 3-Position	Boom Lift, Outer Wing Fold
5	9003855	Cartridge Valve, 3-Position (Special)	Right-Hand / Left-Hand Tilt, Main Wing Fold
6	9003853	Coil, 12 Volt DC	Serial #B30810099 & lower
	9005769	Coil, 12 Volt DC	Serial #B30810100 & higher
7	9004326	Plug	Standard
	9003933	Orifice (Closed Center)	Option
8	9003904	Seal Kit, for 2-Position Cartridge	Item 3
9	9003905	Seal Kit, for Check Valve	Item 2
10	9003906	Seal Kit, for 3-Position Cartridge	Item 4 & 5
11	9004760	Coil Nut w/O-Ring Groove	

400- & 600-Gallon 3-Point Sprayer — Parts

Electrical - Boom



400- & 600-Gallon 3-Point Sprayer — Parts

Electrical - Boom

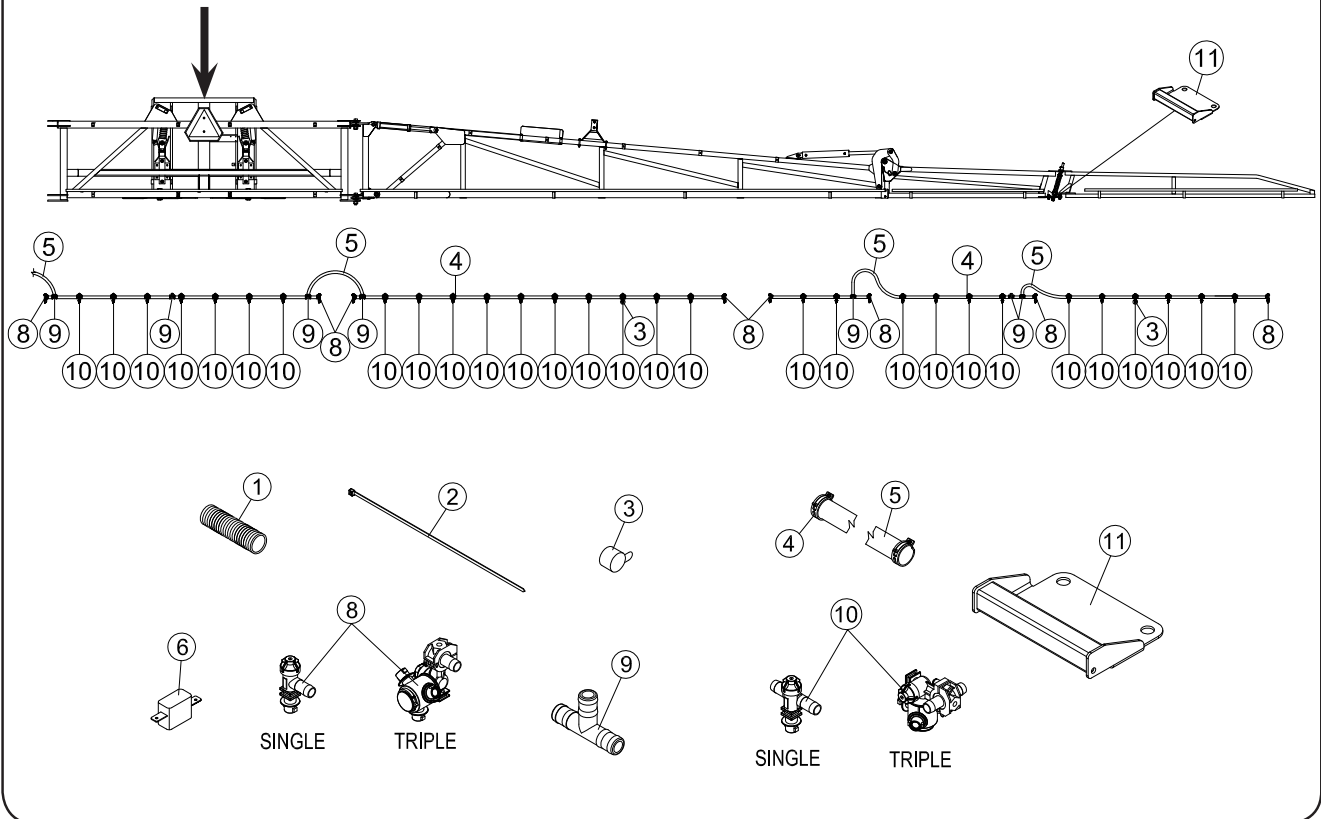
ITEM	DESCRIPTION	PART NO.	NOTES
1	Light, Amber (Round)	9003876	
2	Light, Red	9003136	
3	Wiring Harness	9005310	
4	Electrical Coupler	92450	
5	Wiring Harness - Hydraulic Valve	9005478	Standard; Serial #B30810099 & Lower
		9006445	Standard; Serial Number B30810100 to B38010099
		9008332	Standard; Serial Number B38010100 & Higher
6	Wiring Harness - Control Box	9005487	Serial Number Below B38010100
	Wiring Harness - Control Box	9007774	Serial Number B38010100 & Higher
7	Control Box (Command Center II)	9005525	Serial Number B30810099 & Lower
8	Flat Washer 1/4	9405-064	
9	Extension Harness (16 Pin both ends) Optional	9004318	Serial Number Below B38010100
	Extension Harness (16 Pin both ends) Optional	9007792	Serial Number B38010100 & Higher
10	Lock Washer #10	9404-013	
11	Pan Head machine Screw #10-32UNF x 1/2	9401-067	
12	Capscrew 1/4-20UNC x 3/4	9390-003	
13	Control Box Bracket	407465B	Serial Number B30810099 & Lower
14	Control Box Fuse Holder Panel Mount	9005413	Not Shown
15	Control Box Fuse, (6.25Amp)	9005331	Not Shown
16	Control Box Bracket	407464B	Serial Number B30810099 & Lower
17	Serrated Flange Nut 1/4-20UNC	97189	
18	Switch DPDT 2NT1-7	9005816	Serial Number B30810099 & Lower Included with Control Box 9005525
19	Switch SPDT 1NT1-1	9005817	
20	Switch SPDT 1NT1-7	9005818	
21	Switch SPDT 1NT1-3	9005819	
22	Wireless Control Box (Command Center III)	9005942	Serial Number B30810100 to B38010099
	Fuse, Type 3AG, 6.25 Amp, 250 Volt	9005331	Not Shown
23	Control Box Bracket Weldment	407802B	
24	Capscrew, 1/4-20UNC x 1/2 Gr.5	9390-001	Mounting Hardware for Control Box 9005942
25	Lock Washer, 1/4	9404-017	
26	Finishing Plug	9005889	
27	Tube Adjuster	9005888	
28	Control Box Bracket Weldment	407805B	
29	Command Center IV Mounting Plate	411911B	
30	Capscrew 1/4"-20UNC x 1" G5	9390-005	
31	Flat Washer 1/4" SAE	9405-062	
32	Wireless Control Box (Command Center IV)	9007776	Serial Number B38010100 & Higher
	Fuse, Type 3AG, 6.25 Amp, 250 Volt	9005331	Not Shown
33	Serrated Flange Screw 3/8"-16UNC x 1 1/4"	9003259	
34	Fender Washer 3/8"	9005696	
35	Serrated Flange Nut 3/8"-16UNC	91263	

400- & 600-Gallon 3-Point Sprayer — Parts

80' - 3 Section - 15" Spacing Plumbing Layout

SECTION 1 - 240"
SECTION 2 - 495"
SECTION 3 - 240"

15" Plumbing Kit Starts The Nozzles On Center Of The Boom



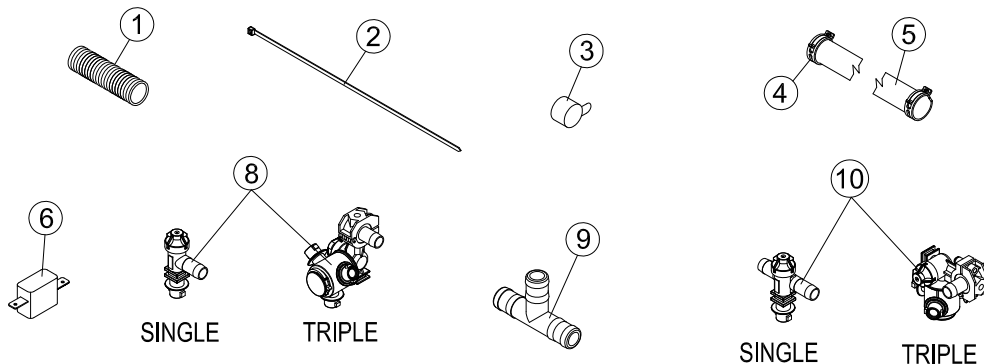
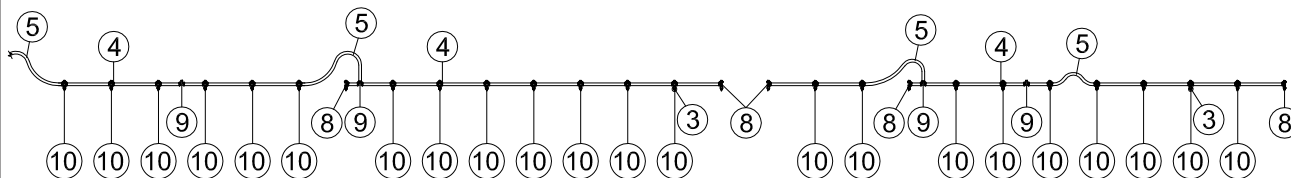
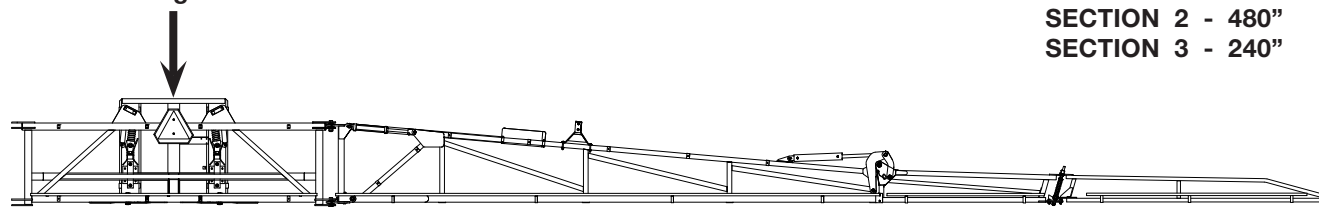
ITEM	PART NO.	DESCRIPTION	NOTES
1	9004075	Spiral Hose Wrap	Specify Length (Feet)
2	9000104	Cable Tie, 21 1/2" Lg.	
3	9003939	Tapered Plastic Plug	
4	TA800910	Hose Clamp, SC-12	
5	TA806250	Hose EPDM, 3/4"	Specify Length (Feet)
6	TA880021	Nozzle Clamp	
7	9003805	Hose 4" Wrap (Not Shown)	Specify Length (Feet)
8	TA886010	90 Elbow, Single	
	TA885400	90 Elbow, Triple	
9	TA814891	Tee, 3/4" Hose Barb	
10	TA886025	Tee, Single	
	TA885410	Tee, Triple	
11	404864B	Nozzle Bracket Weldment	

400- & 600-Gallon 3-Point Sprayer — Parts

80' - 3 Section - 20" Spacing Plumbing Layout

20" Plumbing Kit Starts The Nozzles 10" Off The Center Of The Boom

SECTION 1 - 240"
SECTION 2 - 480"
SECTION 3 - 240"



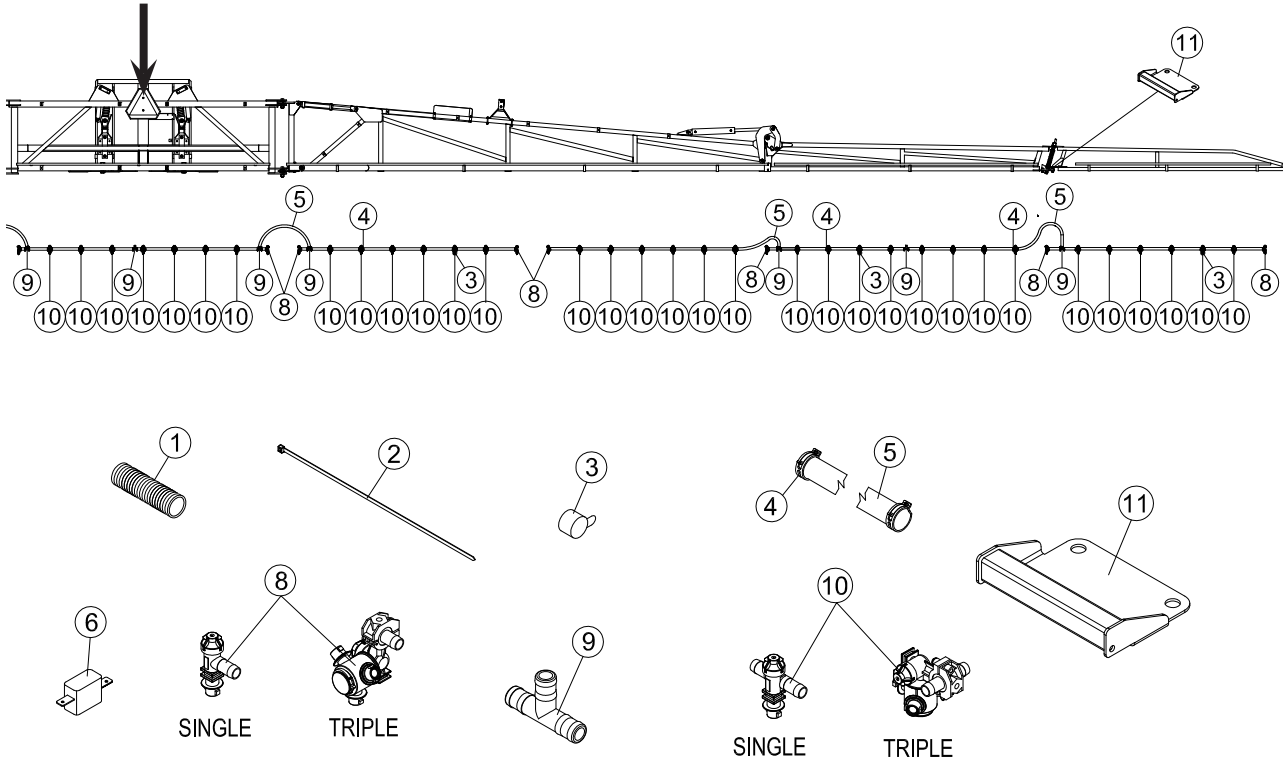
ITEM	PART NO.	DESCRIPTION	NOTES
1	9004075	Spiral Hose Wrap	Specify Length (Feet)
2	9000104	Cable Tie, 21 1/2" Lg.	
3	9003939	Tapered Plastic Plug	
4	TA800910	Hose Clamp, SC-12	
5	TA806250	Hose EPDM, 3/4"	Specify Length (Feet)
6	TA880021	Nozzle Clamp	
7	9003805	Hose 4" Wrap (Not Shown)	Specify Length (Feet)
8	TA886010	90 Elbow, Single	
	TA885400	90 Elbow, Triple	
9	TA814891	Tee, 3/4" Hose Barb	
10	TA886025	Tee, Single	
	TA885410	Tee, Triple	

400- & 600-Gallon 3-Point Sprayer — Parts

90' - 3 Section - 15" Plumbing Layout

15" Plumbing Kit Starts The Nozzles On Center Of The Boom

SECTION 1 - 360"
SECTION 2 - 375"
SECTION 3 - 360"



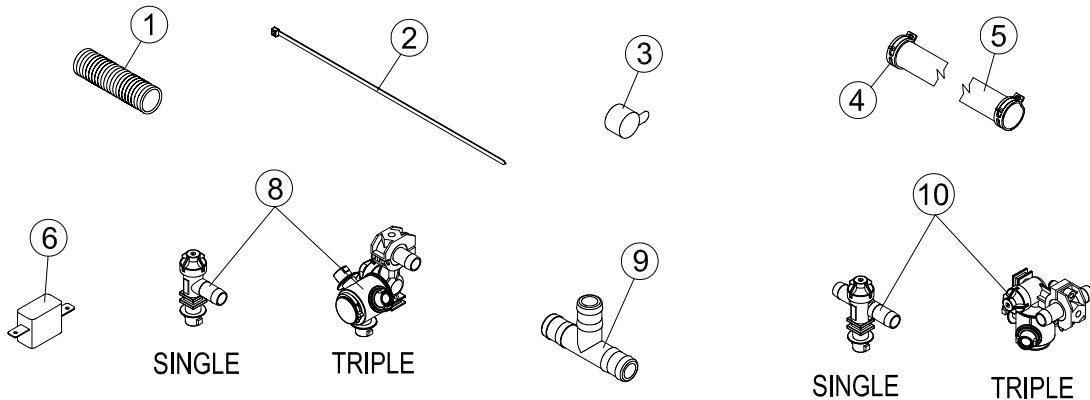
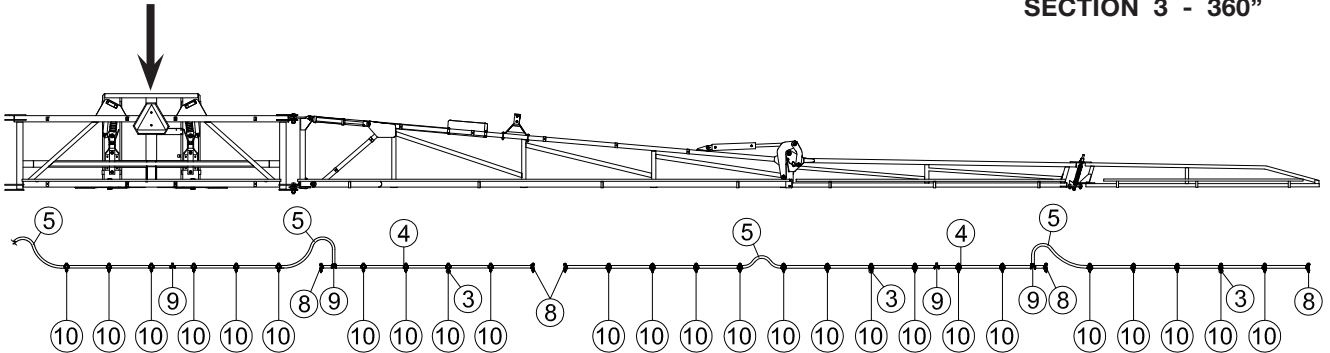
ITEM	PART NO.	DESCRIPTION	NOTES
1	9004075	Spiral Hose Wrap	Specify Length (Feet)
2	9000104	Cable Tie, 21 1/2" Lg.	
3	9003939	Tapered Plastic Plug	
4	TA800910	Hose Clamp, SC-12	
5	TA806250	Hose EPDM, 3/4"	Specify Length (Feet)
6	TA880021	Nozzle Clamp	
7	9003805	Hose 4" Wrap (Not Shown)	Specify Length (Feet)
8	TA886010	90 Elbow, Single	
	TA885400	90 Elbow, Triple	
9	TA814891	Tee, 3/4" Hose Barb	
10	TA886025	Tee, Single	
	TA885410	Tee, Triple	
11	404864B	Nozzle Bracket Weldment	

400- & 600-Gallon 3-Point Sprayer — Parts

90' - 3 Section - 20" Plumbing Layout

20" Plumbing Kit Starts The Nozzles 10" Off The Center Of The Boom

SECTION 1 - 360"
SECTION 2 - 360"
SECTION 3 - 360"



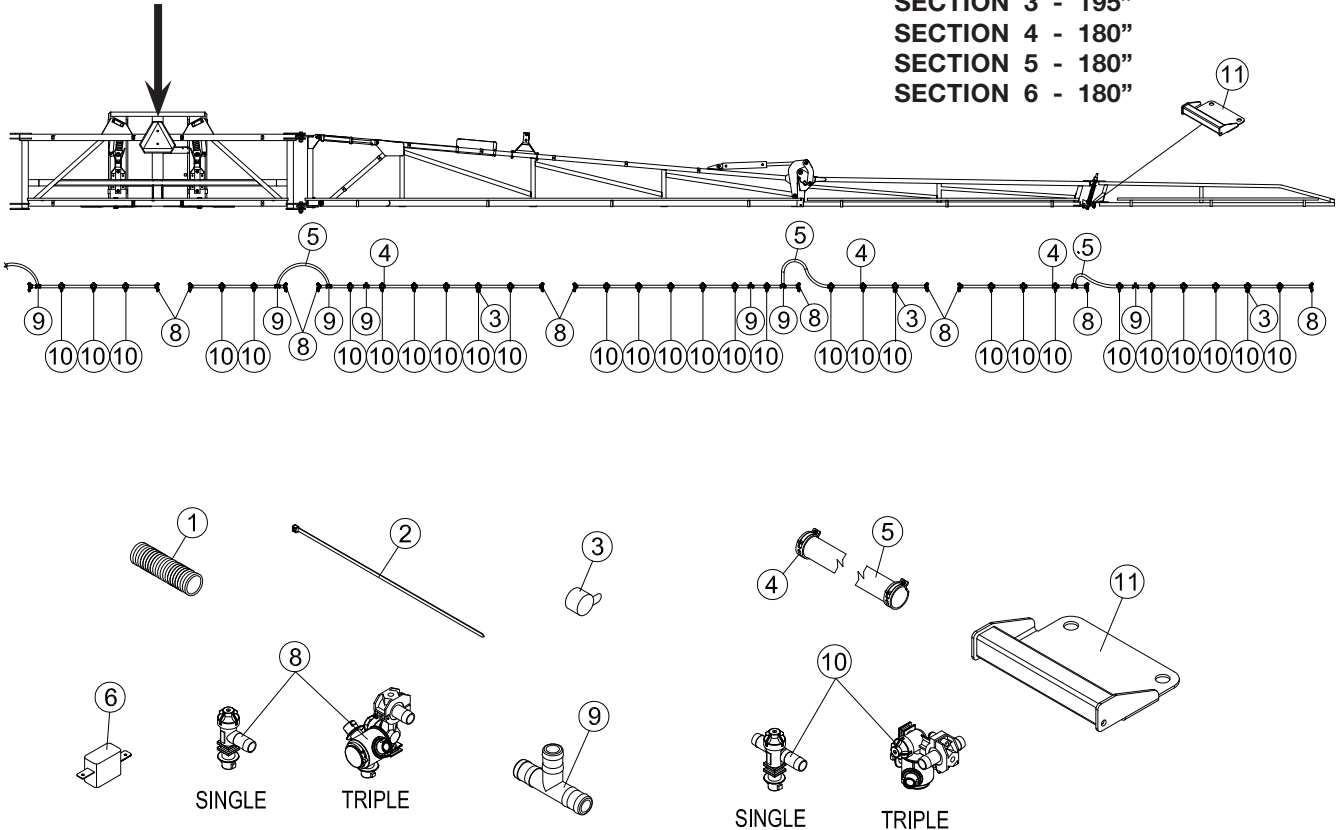
ITEM	PART NO.	DESCRIPTION	NOTES
1	9004075	Spiral Hose Wrap	Specify Length (Feet)
2	9000104	Cable Tie, 21 1/2" Lg.	
3	9003939	Tapered Plastic Plug	
4	TA800910	Hose Clamp, SC-12	
5	TA806250	Hose EPDM, 3/4"	Specify Length (Feet)
6	TA880021	Nozzle Clamp	
7	9003805	Hose 4" Wrap (Not Shown)	Specify Length (Feet)
8	TA886010	90 Elbow, Single	
	TA885400	90 Elbow, Triple	
9	TA814891	Tee, 3/4" Hose Barb	
10	TA886025	Tee, Single	
	TA885410	Tee, Triple	

400- & 600-Gallon 3-Point Sprayer — Parts

90" - 6 Section - 15" Spacing Plumbing Layout

15" Plumbing Kit Starts The Nozzles On Center Of The Boom

- SECTION 1 - 180"
- SECTION 2 - 180"
- SECTION 3 - 195"
- SECTION 4 - 180"
- SECTION 5 - 180"
- SECTION 6 - 180"



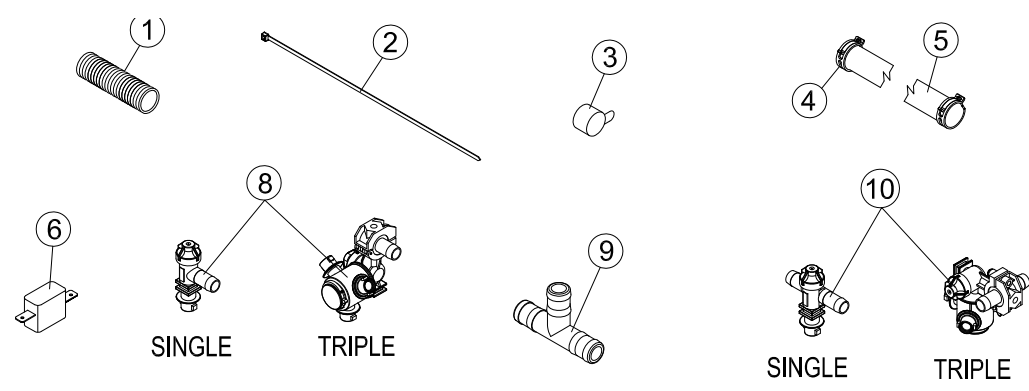
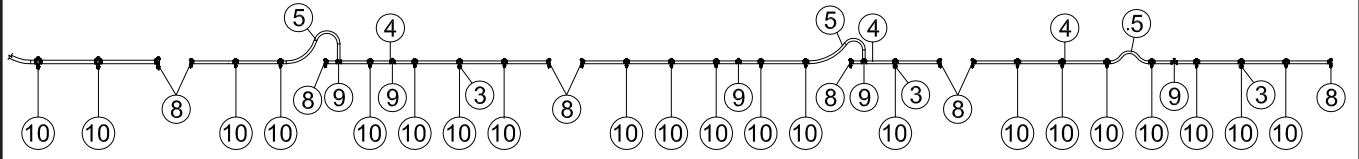
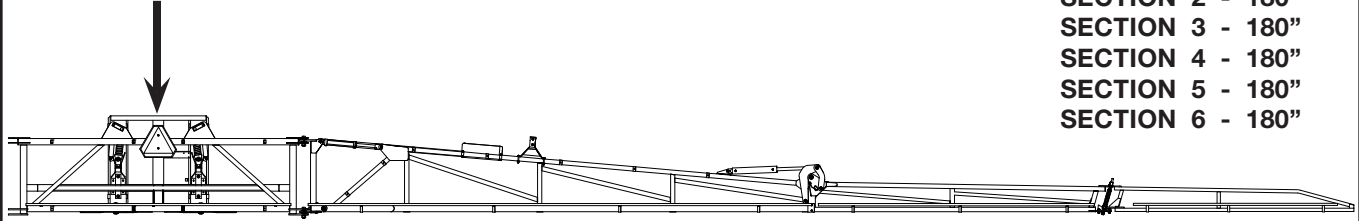
ITEM	PART NO.	DESCRIPTION	NOTES
1	9004075	Spiral Hose Wrap	Specify Length (Feet)
2	9000104	Cable Tie, 21 1/2" Lg.	
3	9003939	Tapered Plastic Plug	
4	TA800910	Hose Clamp, SC-12	
5	TA806250	Hose EPDM, 3/4"	Specify Length (Feet)
6	TA880021	Nozzle Clamp	
7	9003805	Hose 4" Wrap (Not Shown)	Specify Length (Feet)
8	TA886010	90 Elbow, Single	
	TA885400	90 Elbow, Triple	
9	TA814891	Tee, 3/4" Hose Barb	
10	TA886025	Tee, Single	
	TA885410	Tee, Triple	
11	404864B	Nozzle Bracket Weldment	

400- & 600-Gallon 3-Point Sprayer — Parts

90' - 6 Section - 20" Spacing Plumbing Layout

20" Plumbing Kit Starts The Nozzles 10" Off The Center Of The Boom

- SECTION 1 - 180"
- SECTION 2 - 180"
- SECTION 3 - 180"
- SECTION 4 - 180"
- SECTION 5 - 180"
- SECTION 6 - 180"



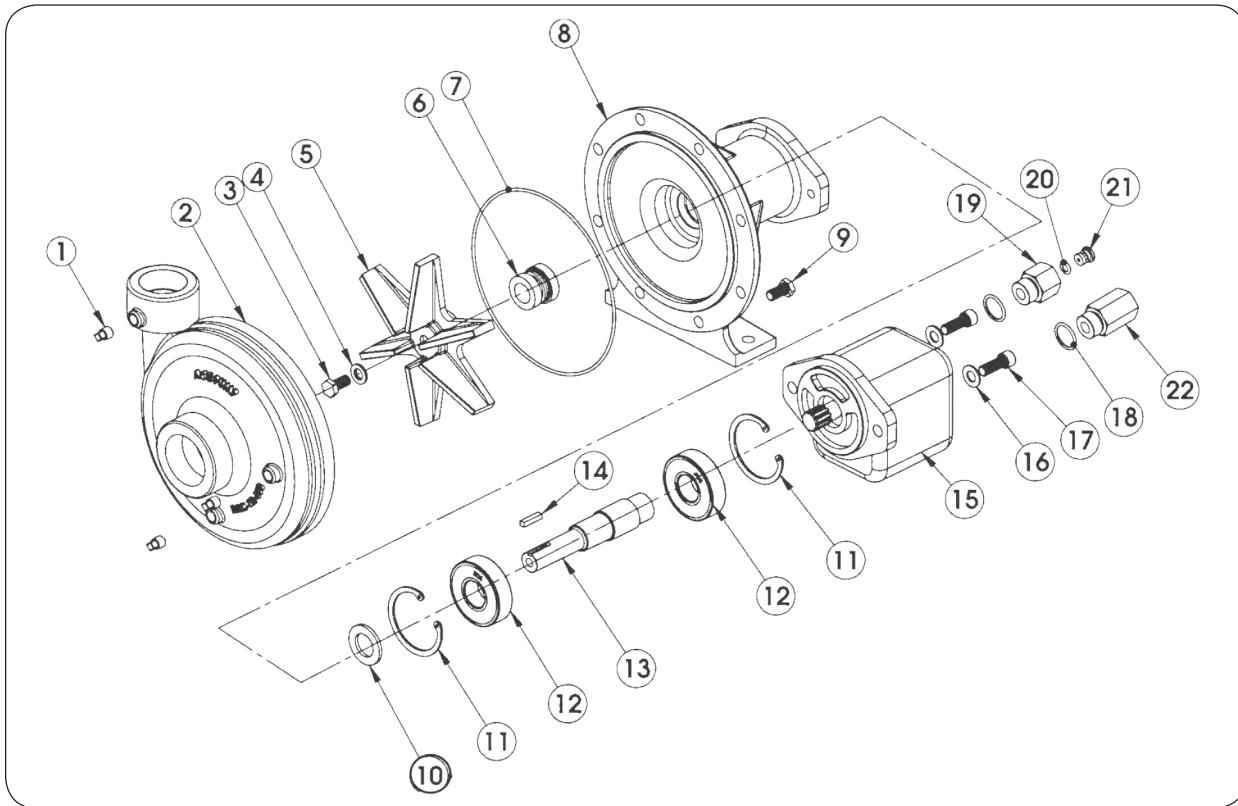
ITEM	PART NO.	DESCRIPTION	NOTES
1	9004075	Spiral Hose Wrap	Specify Length (Feet)
2	9000104	Cable Tie, 21 1/2" Lg.	
3	9003939	Tapered Plastic Plug	
4	TA800910	Hose Clamp, SC-12	
5	TA806250	Hose EPDM, 3/4"	Specify Length (Feet)
6	TA880021	Nozzle Clamp	
7	9003805	Hose 4" Wrap (Not Shown)	Specify Length (Feet)
8	TA886010	90 Elbow, Single	
	TA885400	90 Elbow, Triple	
9	TA814891	Tee, 3/4" Hose Barb	
10	TA886025	Tee, Single	
	TA885410	Tee, Triple	

400- & 600-Gallon 3-Point Sprayer — Parts

Pump Vent Components

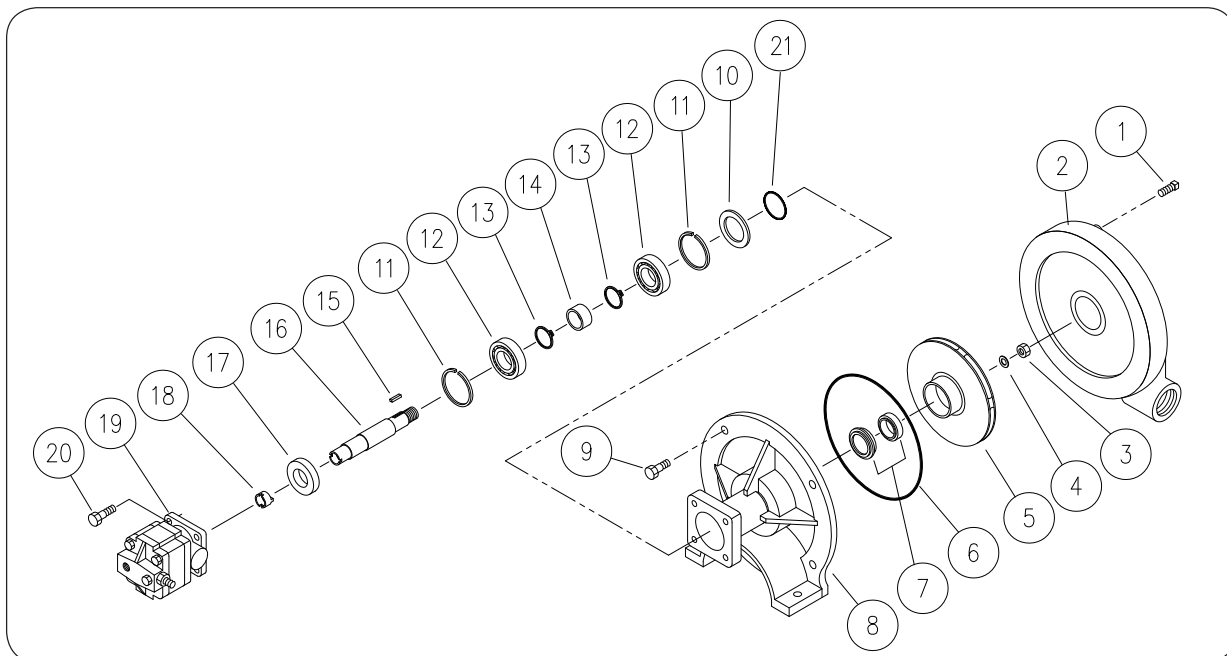
ITEM	DESCRIPTION	PART NO.	QTY	NOTES
1	Gasket/Seal 2 3/16D x 1 5/8D x .25	TA811944	5	
2	Tee Poly 2" Flange x 2" Flange x 2" Flange	TA815007	2	
3	90° Elbow Poly 2" Flange x 2" Hose Barb	TA815021	2	
4	90° Elbow Hose Barb (2" Flange x 1 1/2" Hose Shank)	TA815020	1	
5	Flange Clamp 2" Worm Screw Clamp	TA815025	5	
6	Ball Valve Poly 2" Flange Std Port x 2" Male Adapter Quick Disconnect Coupling	TA815047	2	
7	Coupler Cap	TA811500	2	
8	Ball Valve 3-Way Valve 2" Flange x 2" Flange x 2" Flange	TA815048	1	
9	90° Elbow Hose Barb (2" Flange x 1" Hose Shank)	TA815024	1	
10	90° Elbow Poly 2" Flange x 1 1/4" Hose Barb	TA815019	2	
11	2" Flange Plug	TA815023	1	
12	Tee Poly 2" Flange x 2" Flange x 1" Flange	TA815006	1	
13	Gasket/Seal 1" EPDM	TA815029	1	
14	Flange Clamp 1" Worm Screw Clamp	TA815026	1	
15	90° Elbow Poly 1" Flange x 3/4" Hose Barb	TA815017	1	
16	Hose Clamp SC-36	TA800922	8	
17	Hose Clamp 1 3/4"-3 3/4"	TA800918	4	
18	Pump (FMC-650)	TA825295	1	
19	Elbow	TA720812	1	
20	Nut/Large Flange 3/8-16UNC	91263	2	
21	Capscrew 3/8"-16UNC x 1 1/2" G5	9390-057	2	
22	1/4" Gauge Tubing	TA720620	AR	
23	Clamp 2" Flange	TA816000	1	
24	Gasket 2"	TA816001	1	
25	Adapter	TA816008	1	
26	Nipple	TA802450	1	
27	2" Fertilizer Solution Hose	TA806332	AR	
28	Hose EPDM 1 1/4"	TA806300	AR	

Hydraulic Spray Pump (Ace Hyd 650)



ITEM	DESCRIPTION	PART NO.	NOTES
	Pump Complete Kit ACE 650	406371	Includes Mounting Hardware
	Pump	TA825295	Includes Items 2,4,5,6,7,8,10, 11,12,13,14,15,17,18,20,21,22
	Repair Kit	TA831044	Includes Items 4,6,7
1	Pipe Plug, 1/8" NPT, Square Head	TA826325	
2	Volute, 1 1/2" NPT x 1 1/4" NPT	9006384	Cast Iron
3	Capscrew 3/8-16UNC x 3/4	TA826650	Stainless Steel
4	Washer 3/8 OD, Sealing	TA831016	Stainless Steel
5	Impeller, Cast Iron	TA831017	
6	Seal, Silicon Carbide/Viton	TA831019	
7	O-Ring, Volute Seal	TA827900	
8	Mounting Frame	TA831020	Cast Iron
9	Capscrew 3/8-16UNC x 3/4	9390-053	Grade 5
10	Slinger, 1.5" O.D. x 7/8" I.D.	TA831022	
11	Internal Snap Ring, Mounting Frame	TA831024	
12	Bearing	TA831026	
13	Shaft 1.13" Dia., 11T Female Spline	TA831028	Stainless Steel
14	Key .188 x .188 x .875	TA831030	
15	Hydraulic Motor, Pressure Plated Gear	TA831032	
15A	Hydraulic Motor, Shaft Seal	9005781	Not Shown
16	Flat Washer 3/8"	9405-076	
17	Capscrew 3/8-16UNC x 1", Socket Head	TA831034	
18	O-Ring, #10 SAE Fitting	TA831035	
19	Adapter/Restrictor #10 SAE Male x 1/2" NPT Female	TA831036	
20	O-Ring, Restrictor Insert	TA831038	
21	Restrictor Orifice Insert, .125	TA831040	
22	Reverse Check, #10 SAE Male x 1/2" NPT Female	TA831042	

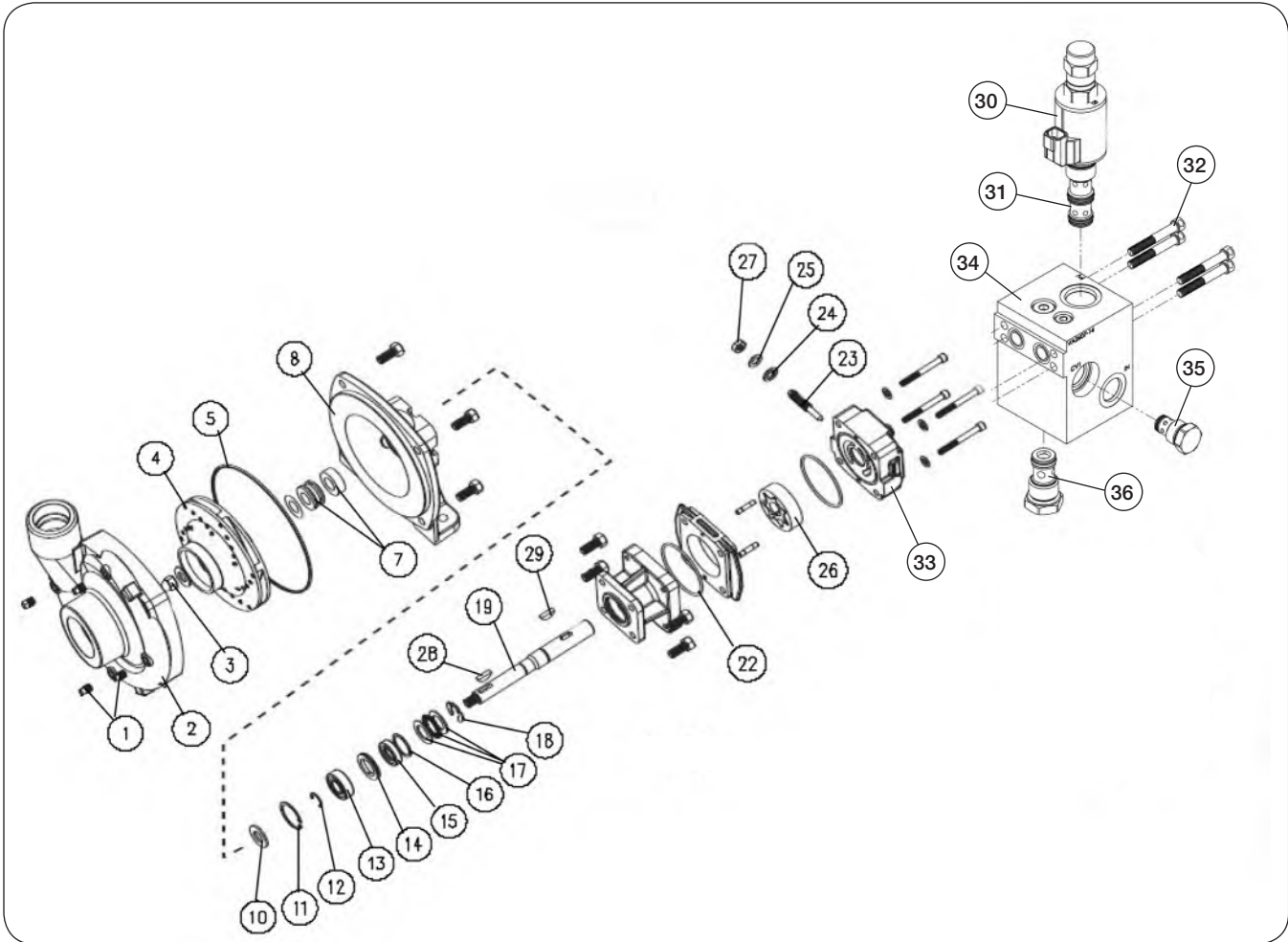
Hydraulic Spray Pump (Ace Hyd 200-304)



ITEM	DESCRIPTION	PART NO.	NOTES
	Pump Complete, ACE 200-304	TA825195	Includes Items 1 thru 20
1	Pipe Plug	TA826325	
	Pipe Plug, S.S. (Option)	TA826300	
2	Volute, 2" x 1 1/2"	TA830738	
3	Nut, 3/8NF	TA830731	
4	Star Washer, 3/8 S.S.	TA829500	
5	Valox Impeller, Cast Iron - Ext. Key	TA827920	
	Impeller, Cast Iron - Ext. (Opt.)	TA829650	
6	Gasket, 4-Hole	TA827850	
	O-Ring, Body Seal	TA827875	
7	Seal, Mechanical w/ 7a -Viton	TA827725	
	Seal w/ 7a - Silicon Carbide (Opt.)	TA830733	
8	Mounting Frame, 300 Motor	TA830734	
9	Capscrew, 3/8UNC x 3/4	TA830739	
	Capscrew, 3/8UNC x 3/4 S.S. (Opt.)	TA826650	
10	Slinger	TA826275	
11	Snap Ring, Internal	TA826850	
12	Ball Bearing, Sealed	TA826725	
13	Snap Ring, External	TA826900	
14	Spacer	TA826875	
15	Key, 1/8 x 1/8 x 13/16" - Extended	TA830736	
	Key, 1/8 x 1/8 x 1/2"	TA829475	
16	Shaft, 5/8" Dia. - Extended Key	TA830737	
	Shaft, 5/8" Dia. - Keyway	TA829625	
	Shaft, 5/8" Dia. - Keyway S.S. (Opt.)	TA829600	
17	Seal Support Spacer	TA827715	
18	Coupling, Motor	TA829200	
19	Hydraulic Motor, 11 GPM	TA829230	
20	Capscrew, 5/16UNC x 3/4	TA829300	
21	O-Ring, Shaft Seal	TA827700	
22	Restrictor Orifice	TA829080	Not Shown
	Repair Kit - Pump - Incl. 6,7	TA830976	
	Repair Kit - Hydraulic Motor	TA830910	

Hydraulic Spray Pump - (HYPRO 9306C-HM1C)

Please visit www.unverferth.com/parts/ for the most current parts listing.



400- & 600-Gallon 3-Point Sprayer — Parts

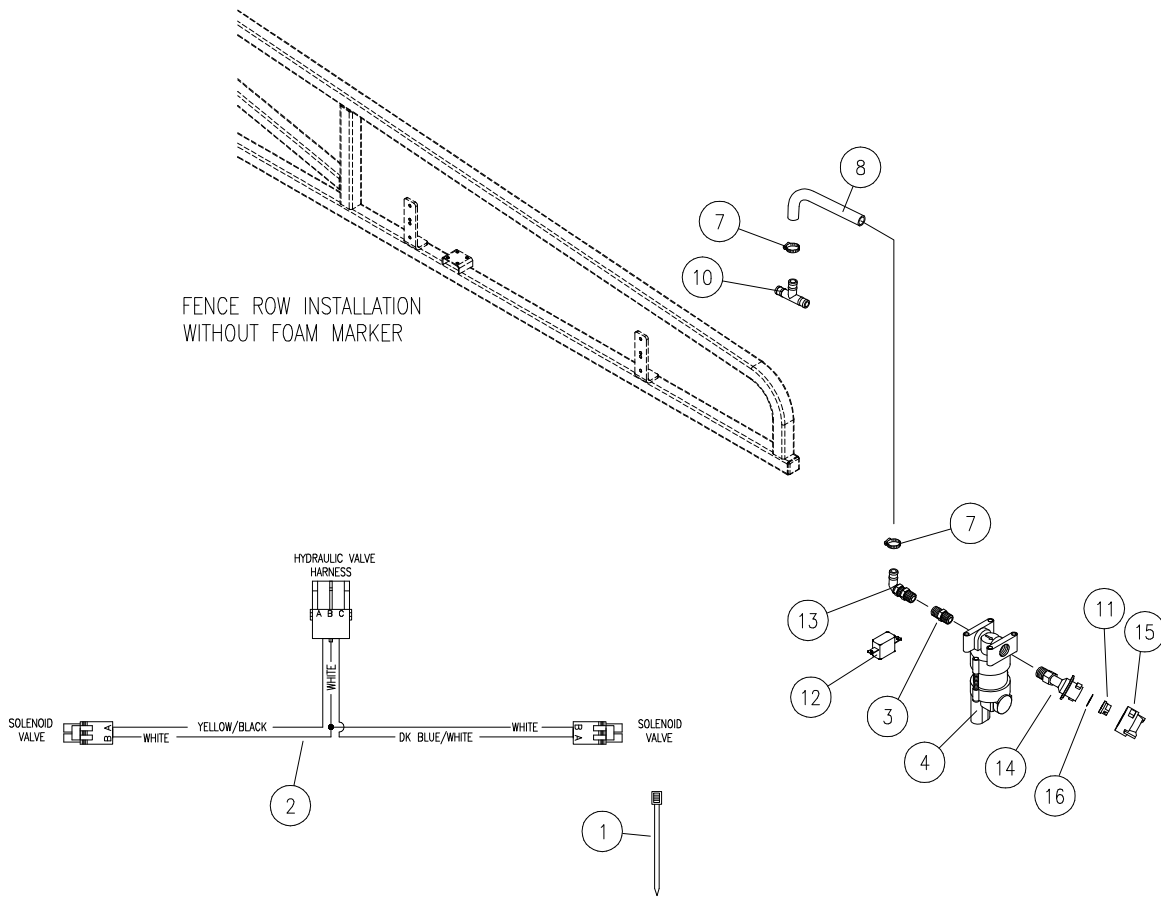
Hydraulic Spray Pump - (HYPRO 9306C-HM1C)

Please visit www.unverferth.com/parts/ for the most current parts listing.

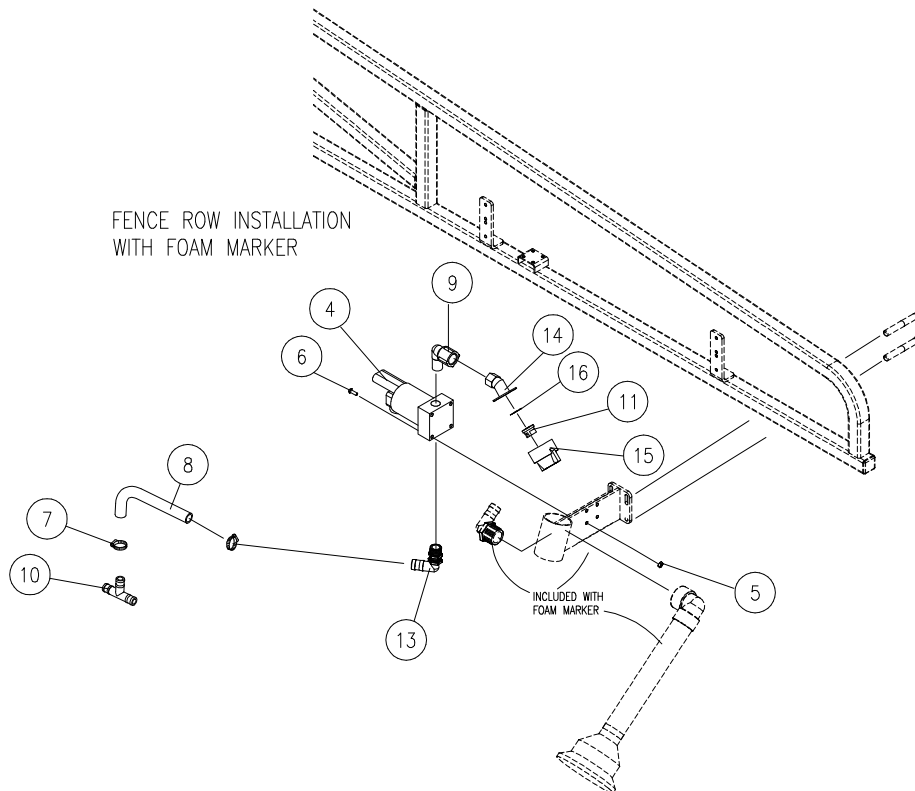
ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
	Pump Complete, Hypro 9306C - PWM	9007141	1	Includes Items 1 thru 29
1	Drain Vent Plug	TA840300	4	
2	Pump Casing	-	1	
3	Impeller Nut	TA840101	1	
4	Impeller	TA836050	1	
5	O-Ring	TA838775	1	
7	Viton Seal	TA839575	1	
8	Mounting Flange	TA837475	1	
9	Reducer, 7/8-14 OR Male x 3/4-16 OR Female Nut	98801	2	
10	Slinger Ring	TA838300	1	
11	Retaining Ring	TA839125	1	
12	Snap Ring	TA839050	1	
13	Ball Bearing	TA839250	1	
14	Spacer	TA838325	1	
15	Shaft Seal	TA839450	1	
16	Seal Spacer	TA838350	1	
17	Thrust Bearing Assembly	TA839350	1	
18	Snap Ring	TA839075	1	
19	Shaft, 7"	TA837050	1	
22	O-Ring	TA838900	2	
23	Bypass Adjusting Screw	TA840400	1	
24	Gasket	TA838700	1	
25	Washer	TA840225	1	
26	Gerotor	TA841225	1	
27	Lock Nut	TA840075	1	
28	Woodruff Key	TA838625	1	
29	Roll Pin	TA838650	1	
30	PWM Valve Coil	9007540	1	
31	Proportional Cartridge Valve	9007538	1	
32	Hex Capscrew	9007541	4	
33	Motor End Cover	9007535	1	
34	PWM Manifold Assembly	9007542	1	
35	Check Valve (#10)	9007537	1	
36	Check Valve (#12)	9007536	1	

Electric Fence Row Nozzle Kit - Optional

FENCE ROW INSTALLATION
WITHOUT FOAM MARKER



FENCE ROW INSTALLATION
WITH FOAM MARKER

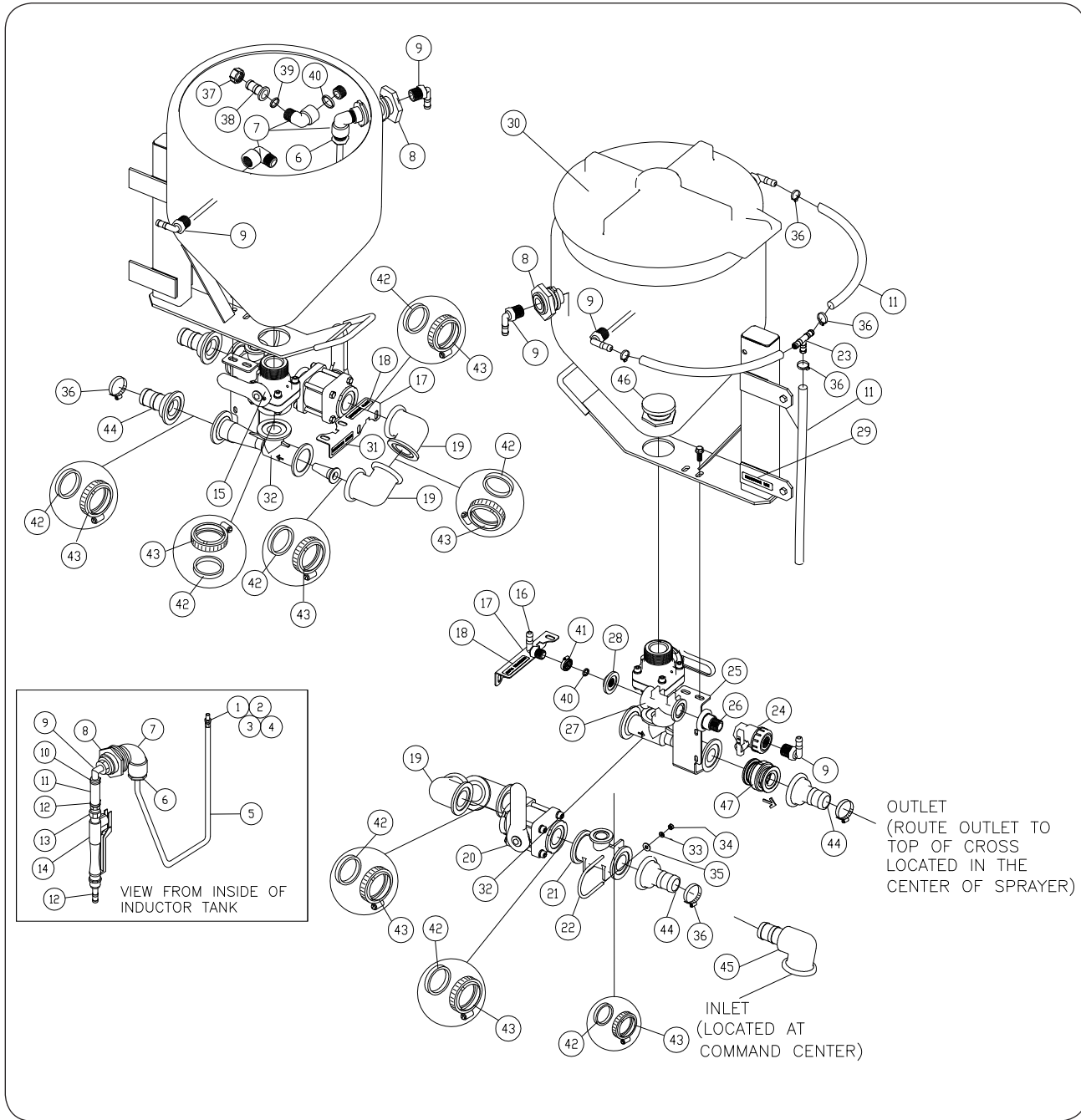


Electric Fence Row Nozzle Kit - Optional

ITEM	PART NO.	DESCRIPTION	NOTES
	406158	Fence Row Nozzle Kit	
1	9000107	Cable Tie, 15.5" Lg.	
2	9004010	Fence Row Nozzle Harness	
3	9004011	Hex Pipe Nipple, 1/4" Brass	
4	9004012	Solenoid Valve, 2-Way 2-Position	
5	9004709	Large Flange Nut, #6-32, Gr.5	
6	903172-098	Pan Head Screw, #6-32UNC x 1 1/4"	
7	TA800910	Hose Clamp, 1/2" SS	
8	TA806250	Hose, 3/4 Dia. x 12 EPDM	
9	TA809523	90° Elbow, 1/4 FPT x 1/4 MPT	
10	TA814891	Hose Barb Tee, 3/4"	
11	TA847211	TeeJet Off-Center Tip	
12	TA880021	Nozzle Clamp	
13	TA880114	Hose Shank	
14	TA880276	Adapter	
15	TA881010	TeeJet Spray Tip Cap	
16	TA881100	TeeJet Seat Gasket	

400- & 600-Gallon 3-Point Sprayer — Parts

Inductor Plumbing - Optional

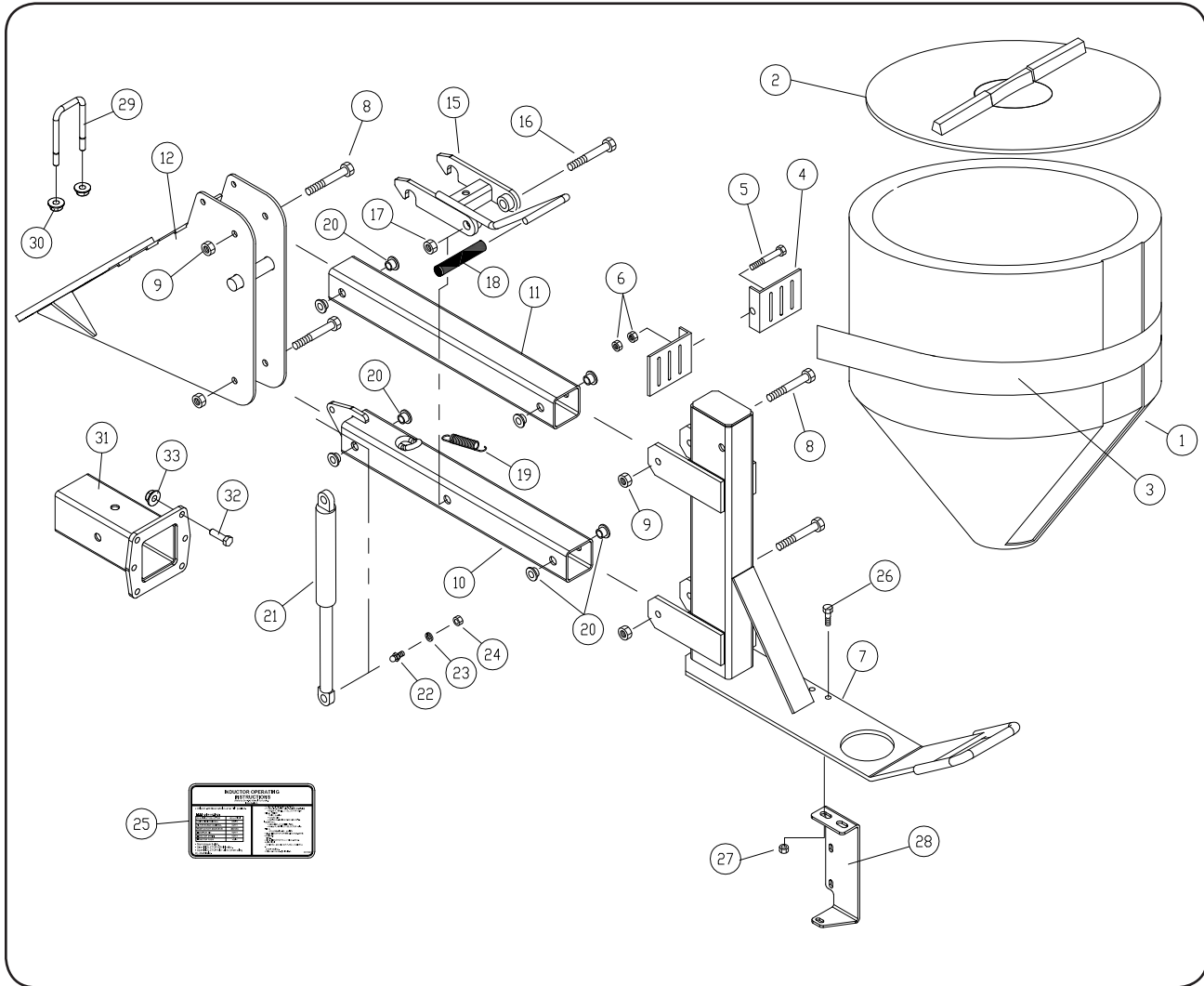


400- & 600-Gallon 3-Point Sprayer — Parts

Inductor Plumbing - Optional

ITEM	PART NO.	DESCRIPTION	NOTES
1	TA848450	Full Jet Celcon Tip - FL15	
2	TA865240	Mesh Strainer (8079-PP-50NY)	
3	TA865180	TeeJet Cap (8027-NY)	
4	TA867250	TeeJet Cap, Extra Long (8027-1-NY)	
5	TA1-114776-0	Tube, Inductor Bottle Washer	
6	TA814651	Reducer Bushing, 3/4 x 1/4" Poly	
7	TA814691	Street Elbow, 3/4" Poly	
8	TA805408	Raven Fitting, 3/4" Double Thread	
9	TA814960	Elbow, 90° - 3/4" MPT x 1/2 Hose	
10	TA800902	Hose Clamp, M-6 SS	
11	TA806225	Hose, 1/2" EPDM	Specify Length
12	TA810100	Hose Barb, 1/4" MPT x 1/2 Straight	
13	TA861885	TeeJet Adapter, 4676-NY-1/4	
14	TA885299	Spray Gun (22670-PP-15-1/4-VI)	
15	TA816022	Valve, 2" Flange x 2" MPT	
16	TA814956	Elbow, 1/2 Poly x 1/2 NPTF	
17	402872B	Inductor Valve Bracket	
18	9004320	Decal, Inductor Flow	
19	TA816017	Elbow, 2" Flange - Short	
20	TA815045	Ball Valve, 2"	
21	TA815006	Tee, 2" Flange x 1" Flange	
22	9001114	U-Bolt, 1/4-20UNC x 3 1/2" Lg.	
23	TA808725	Tee, 1/2" HB	
24	TA811515	Banjo, 3/4" NY-Glass Ball Valve	
25	402651B	Inductor Plate	
26	TA816021	Adapter, 1" Flange x 1/2 FPT	
27	TA815005	Tee, 1" Flange	
28	TA816023	Plug, 1" Flange x 1/2 FPT	
29	9004322	Decal, Inductor Mix	
30	TA805210	Solution Tank Lid	
31	9004321	Decal, Inductor Drain	
32	TA816018	Flange Venturi, 2"	
33	9404-017	Lock Washer, 1/4"	
34	9394-002	Hex Nut, 1/4-20UNC Gr.5	
35	9405-064	Flat Washer, 1/4"	
36	TA800918	Hose Clamp, SS	
37	TA809160	Hex Nut, 3/4"	
38	TA809754	Hose Barb, 1/2" Flat Seat	
39	TA809746	Poly Washer	
40	TA815029	Gasket Seal	
41	TA815026	Clamp, 1" Flange	
42	TA811944	Gasket Seal	
43	TA815025	Clamp, 2" Flange	
44	TA815014	Hose Barb, 2" Flange x 1 1/4 Hose Shank	
45	TA815019	Elbow, 90° - 2" Flange x 1 1/4 Hose Barb	
46	TA805432	Tank Fitting - 2" Anit-Vortex	
47	9005410	Check Valve	

Inductor Mounting - Optional

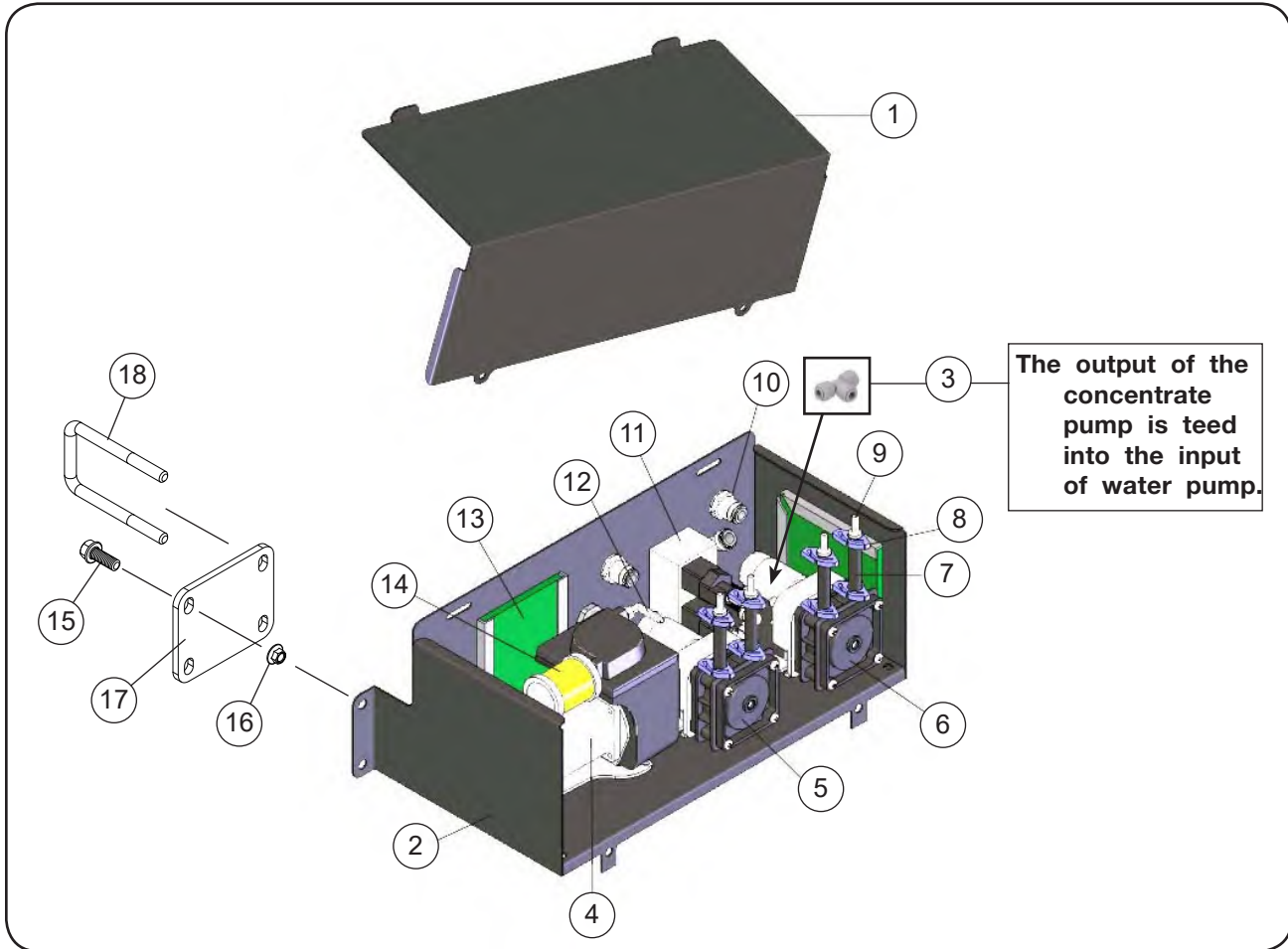


400- & 600-Gallon 3-Point Sprayer — Parts

Inductor Mounting - Optional

ITEM	DESCRIPTION	PART NO.	NOTES
1	15-Gallon Tank With Lid =Yellow=	403597	Includes Items 2,3
	15-Gallon Tank With Lid =Gray=	407469	
2	Lid, 16" - Complete	TA805210	
3	Tank Strap	TA500499	
4	Clip, Tank Strap	TA510025	
5	Capscrew, 3/8-16 NC x 2 3/4	9390-062	
6	Nut, 3/8-16NC	9394-006	
7	Inductor Support Weldment	407096B	
8	Capscrew, 3/8-16NC x 3 1/2	9390-063	
9	Locknut, 3/8-16NC	9928	
10	Lower Lift Arm Weldment	400684B	
11	Upper Lift Tube	400666B	
12	Inductor Mount	407334B	
15	Lock Weldment	400717B	
16	Capscrew, 1/2-13NC x 4	9390-111	
17	Locknut, 1/2-13NC	94981	
18	Grip	9003869	
19	Spring	9000725B	
20	Shoulder Washer, 3/8" ID	9003862	
21	Gas Spring	9003684	
22	Ball Stud	9003832	
23	Lockwasher, 5/16	9404-019	
24	Nut, 5/16-18NC	9394-004	
25	Decal, Inductor Operating Instructions	9004324	
26	Large Flange Screw, 3/8-16NC x 1	91262	
27	Nut, Large Flange 3/8-16 UNC	91263	
28	Plate, Inductor	402651B	
29	U-Bolt, 1/2-13 x 7 3/8" Lg. Gr.5	9005460	
30	Locking Flange Nut, 1/2-13UNC Gr.5	9003397	
31	Extension Weldment =Black=	407291B	
32	Capscrew, 3/4-10UNC x 2 1/4 Gr.5	9390-146	
33	Locknut, 3/4-10UNC Gr.5	9003399	

Foam Marker - Optional



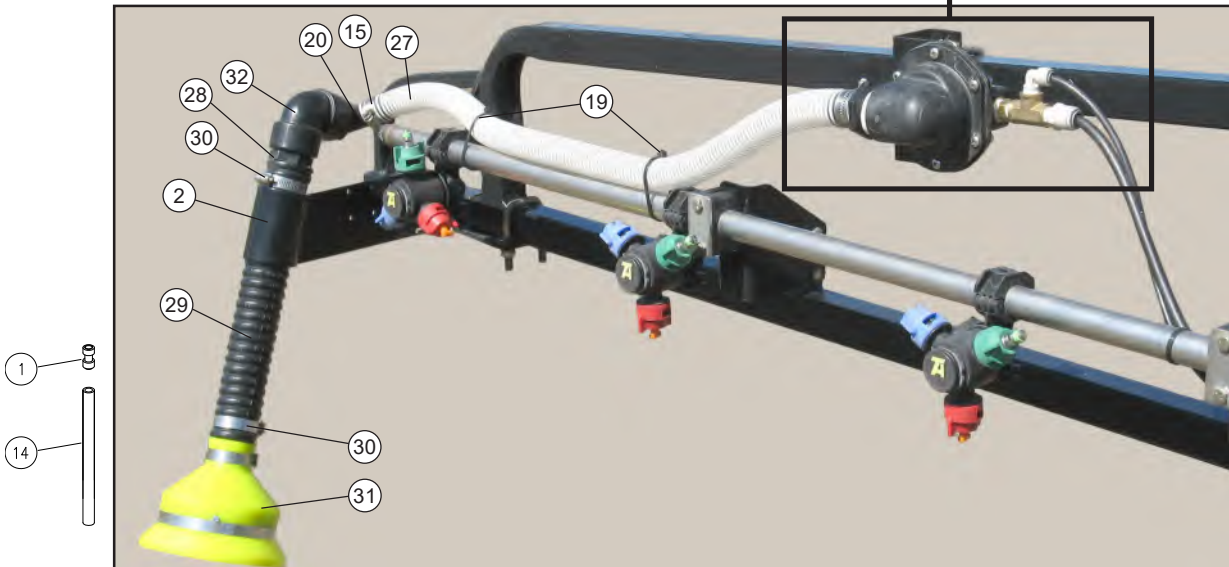
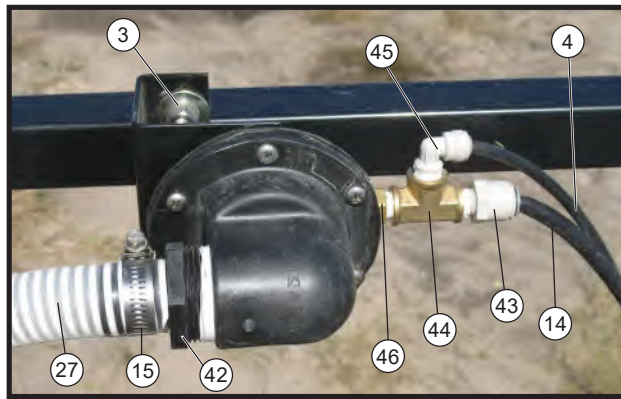
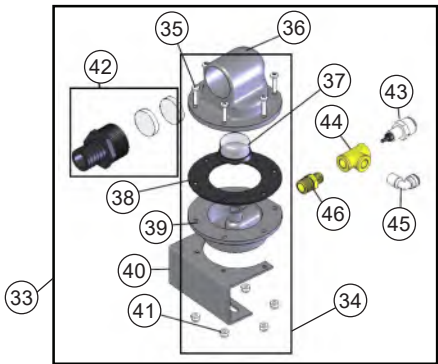
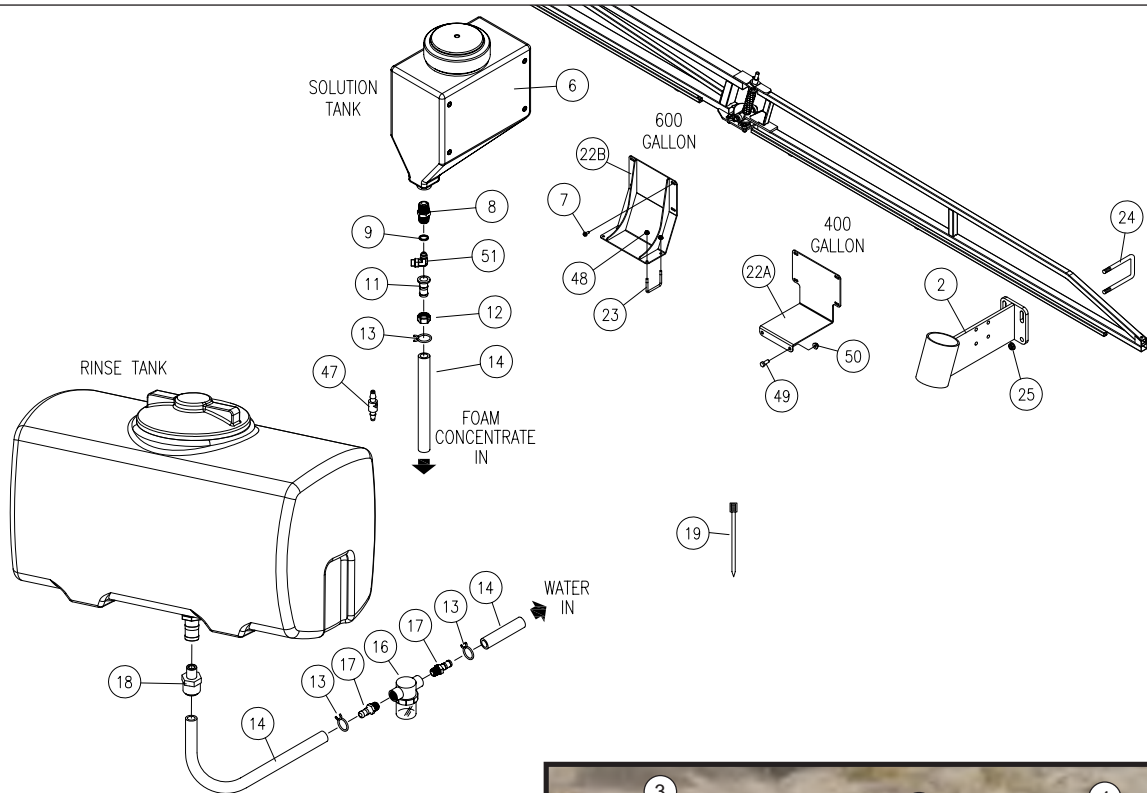
400- & 600-Gallon 3-Point Sprayer — Parts

Foam Marker - Optional

ITEM	DESCRIPTION	PART NO.	NOTES
1	Lid	9005222	
2	Body Only	9005228	
3	Tee 3/8 Push Lock	9005204	
4	Compressor	TA750019	
5	Concentrate Pump	9005227	
6	Water Pump	9005226	
7	Pump Tube	9005225	
8	Speed Clamp	TA801906	
9	Stem 1/4 HB x 3/8	9005224	
10	Bulkhead 3/8	9003944	
11	Control Module w/ Solenoids	9005223	
12	90° Elbow 1/8 M x 1/4 Hose Barb	TA808024	
13	Louver Filter	TA816029	
14	Air Filter	TA750020	
15	Large Flange Screw, 3/8-16UNC x 1 Gr.5	91262	
16	Nut/Large Flange 3/8-16UNC	91263	
17	Marker Box Bracket Plate =Black=	407025B	
18	U-Bolt, 3/8-16 x 4 x 2	TA510210	
19	In-Line Check Valve	9006313	(Not Shown)

400- & 600-Gallon 3-Point Sprayer — Parts

Foam Marker Assembly - Optional



400- & 600-Gallon 3-Point Sprayer — Parts

Foam Marker Assembly - Optional

ITEM	DESCRIPTION	PART NO.	NOTES
1	Union 1/4" Hose Push-to-Connect Style	TA750289	
2	Foamer Bracket	405823B	
3	U-Bolt, 3/8-16UNC x 2 3/4	9004685	Stainless Steel
	Lock Washer, 3/8	900903-021	
	Flat Washer, 3/8	900902-038	
	Hex Nut, 3/8-16UNC	900901-006	
4	Gauge Tubing 1/4"	TA720620	
6	Tank, Solution =Yellow=	9003759	
	Tank, Solution =Grey=	9004816	
7	Screw/Large Flange 5/16-18UNC x 3/4 Gr.5	91256	
8	Close Nipple, 3/4"	TA809400	
9	Garden Hose Washer	9005604	
11	Hose Barb, 1/4" Flat Seat	TA809750	
12	Hex Nut, 3/4" FPT	TA809160	
13	Squeeze Clamp	TA750219	
14	Airline 3/8" Dia. (Black)	TA750051	
15	Hose Clamp, SC-20	TA800914	Stainless Steel
16	Strainer 80 Mesh Line	TA813070	
17	Adapter, 1/2 NPT x 1/4 Hose Barb	TA810180	
18	Quick Coupler, 1/4 MPT x 3/8	TA750120	
19	Tie Strap, 12"	9000107	
20	90° Elbow, Poly	TA814971	
22A	Tank Bracket	407343B	400 Gallon
22B		407026B	600 Gallon
23	U-Bolt, 5/16-18UNC x 2.75 Lg. Gr.5	9005281	600 Gallon
24	U-Bolt 1/4-20UNC x 2 3/4	9004714	Stainless Steel
25	Flange Nut 1/4-20UNC	9004720	Stainless Steel
27	Hose 1" Foam	TA750034	
28	Adapter, 1 1/4 NPTF Male x 1 1/2 Hose Barb	TA814869	
29	Hose 1 1/2 Collector	TA816044	
30	Hose Clamp, SC-32	TA800920	Stainless Steel
31	Collector Head, 1 1/2"	TA750062	
32	90° Elbow, 1 1/4 NPTF Female	TA814793	
33	Foamhead Assembly	9005220	
34	Foam Assembly	9005221	
35	Screw	9005209	
36	Top Housing	9005210	
37	3/8 Screen	9005211	
38	Gasket	9005212	
39	Bottom Housing	9005213	
40	Mounting Bracket	9005214	
41	Nut	9005215	
42	Homogenizer Nipple	9005208	
43	Venturi 1/4m x 3/8t	9005216	
44	Tee 1/4f	9005217	
45	90° Elbow 1/4m x 1/4t	9005218	
46	Adapter, 1/4m x 3/8m	9005219	
47	Check Valve, 1/4" Ball	9004805	
48	Large Flange Hex Nut, 5/16-18UNC Gr.5	91257	600 Gallon
49	Capscrew, 1/2-13UNC x 1 Gr.5	9390-099	400 Gallon
50	Locking Flange Nut, 1/2-13UNC Gr.5	9003397	400 Gallon
51	90° Street Elbow, 3/4 FPT x 3/4 MPT	TA809550	



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