3-Point Sprayer

300-GALLON 3-POINT SPRAYER

Beginning with Serial Number D46140100

Part No. 40736

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

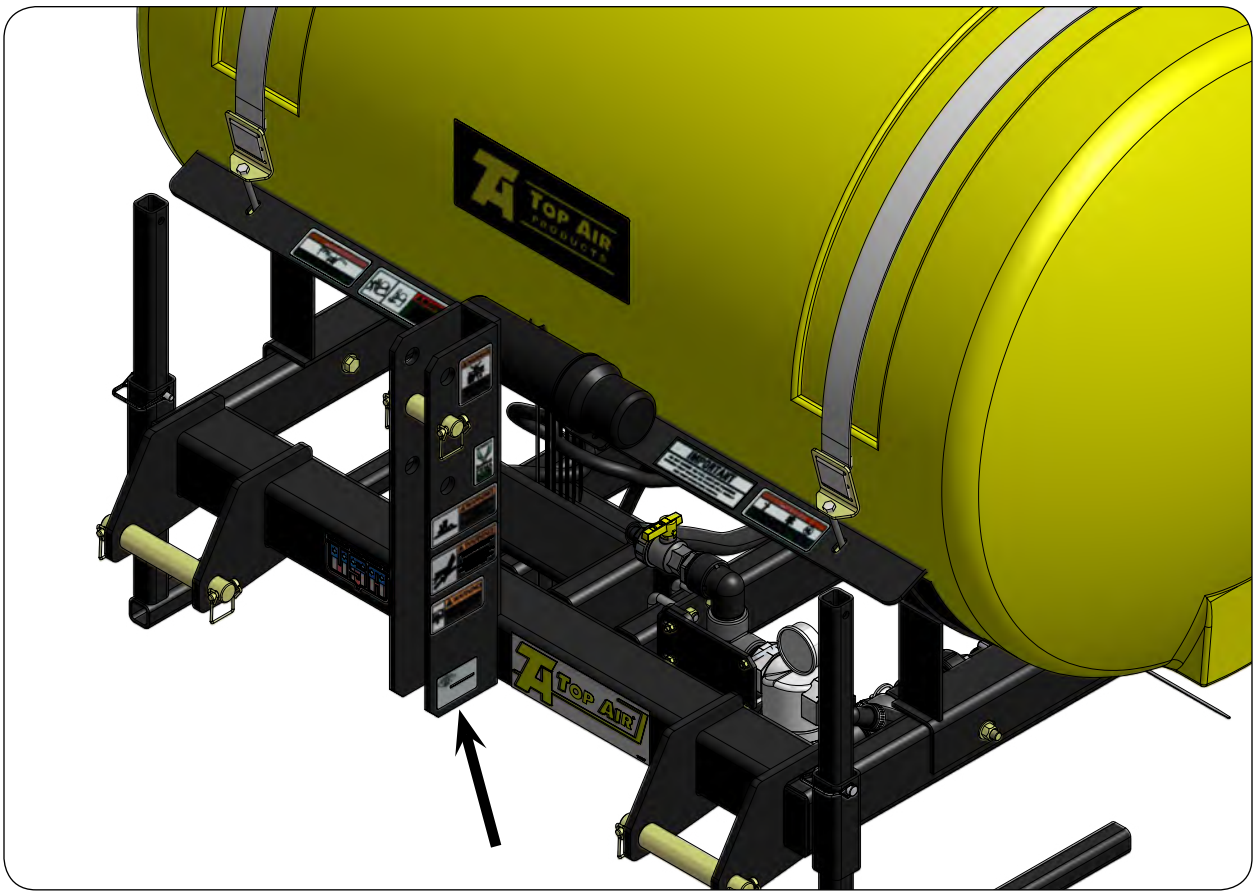
All products manufactured by Unverferth Mfg. Co., Inc. are warranted to be free from material and workmanship defects for one full year from time of consumer delivery. Your local dealer will gladly assist you with any warranty questions.

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

Purchase Date _____ Model _____Serial No._____

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.

Table Of Contents

Table Of Contents

SECTION III
Operation

SECTION IV
Maintenance

SECTION V
Parts

Notes

SECTION I
Safety

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.

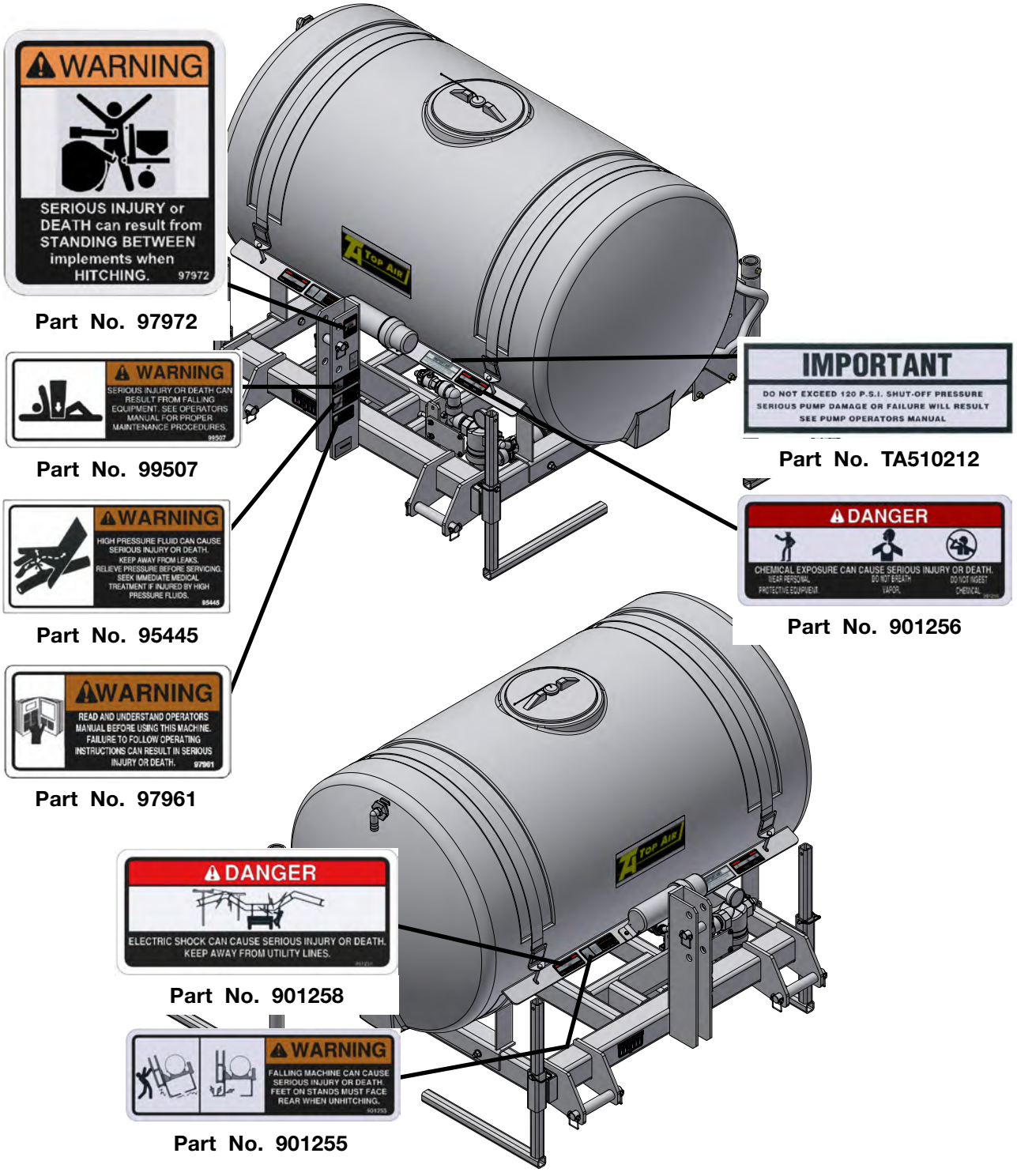
INDICATES AN UNSAFE SITUATION OR ACTION THAT MAY RESULT IN PERSONAL INJURY.

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.**



Part No. 97972

Part No. 99507

Part No. 95445

Part No. 97961

Part No. 901258

Part No. 901255

Part No. TA510212

Part No. 901256

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 power unit and towing vehicle engine off and remove key before servicing the sprayer.

- 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.

Before Servicing or Operating

- Avoid working under an implement; however, if it becomes absolutely unavoidable, make sure the implement is safely blocked.

- Ensure that all applicable safety decals are installed and legible.
- To prevent personal injury or death, always ensure that there are people who remain outside the sprayer to assist the person working inside, and that all safe workplace practices are followed. There is restricted mobility and limited exit paths when working inside the implement.
- Add sufficient ballast to tractor to maintain steering and braking control at all times. Do not exceed tractor's lift capacity or ballast capacity.
- 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.
- Residual pressure may exist in sprayer plumbing even when unit is not in use. Remove pressure before servicing any plumbing.
- Do not stand between towing vehicle and implement during hitching.
- 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.

Before Servicing or Operating (Continued)

- This sprayer is intended to only spray agricultural chemicals. Attempting to spray other liquids may cause equipment damage and introduce unexpected personal hazards.
- When operating sprayers on sidehill conditions, it is recommended that the wheel spacing be set as wide as possible for stability.
- Hitch sprayer to towing vehicle and clear all personnel from the surrounding area before folding and unfolding wings.
- Ensure tank access covers are fully closed before beginning or resuming operation.

During Operation

- Regulate speed to working conditions. Maintain complete control at all times.
- Never service or 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. Make sure the SMV emblem is visible to approaching traffic.
- Ensure that the towing vehicle has adequate weight and braking capacity to tow this unit.

During Transport

- Comply with all laws governing highway safety when moving machinery.
- Use transport lights as required by all laws to adequately warn operators of other vehicles.
- Regulate speed to road conditions and maintain complete control.
- Maximum transport speed of this implement should never exceed 20 mph as indicated on the machine. Maximum transport speed of any combination of implements must not exceed the lowest specified speed of the implements in combination. 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 the hydraulic system of all pressure before adjusting or servicing. See hydraulic power unit manual for procedure to relieve pressure.
- High-pressure fluids can penetrate the skin and cause serious injury or death. Leaks of high-pressure fluids may not be visible. Use cardboard or wood to detect leaks in the hydraulic system. Seek medical treatment immediately if injured by high-pressure fluids.

- 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:
    - o End fittings damaged, displaced, or leaking.
    - o Outer covering chafed/cut or wire reinforcing exposed.
    - o Outer covering ballooning locally.
    - o 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 and exposed skin immediately after contact with spray/fertilizer solution and application equipment.

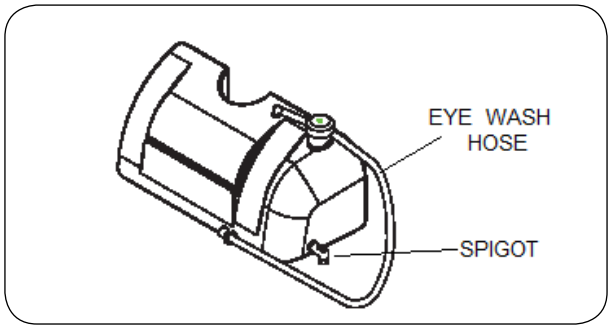
- Remove clothing immediately if chemicals penetrate clothing and contact skin. Wash thoroughly and put on clean clothing.

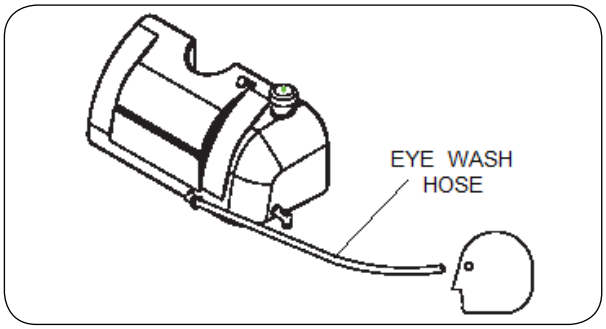
- Dispose of unused chemical in accordance with chemical label directions and local/national regulations.

Preparing for Emergencies

- A clean water tank is optional 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 safety tank is <u>not</u> suitable for human consumption.
- For emergency eyewash, pull hose off of the top fitting and flush affected area.
- Keep a first aid kit and properly rated fire extinguisher nearby.

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





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.

SECTION II
Set Up

Clean Water Tank Assembly

⚠ WARNING

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

- **TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE MACHINE IS SECURELY BLOCKED.**

Clean water safety tank is used for hand washing and has a hose for emergency eye wash. ALWAYS KEEP CLEAN WATER IN THE TANK.

NOTE: Water in clean water safety tank is NOT suitable for human consumption.

1. 45' & 60' Hydraulic Fold Units: attach tank mounting bracket using one U-bolt and current hardware from front support bracket. Remove current nuts and plate from the front support bracket. Attach tank mounting bracket using U-bolt (9811) and Locknuts (9800). Attach other side of tank mounting bracket to current bolts and retain using previously removed plate and nuts.

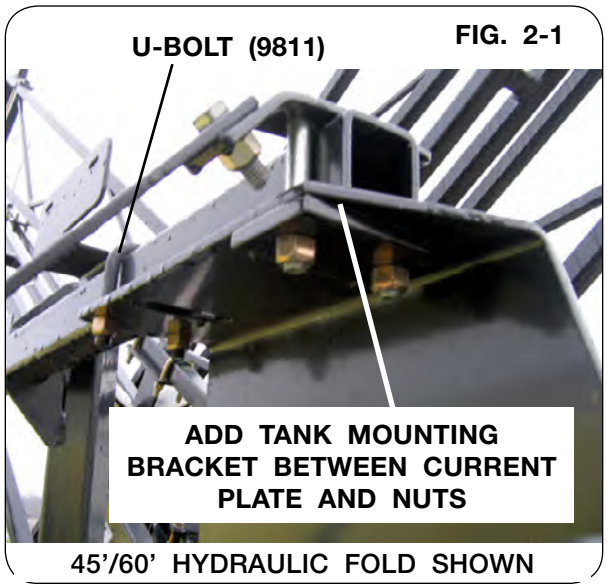


FIG. 2-1
45'/60' HYDRAULIC FOLD SHOWN

2. Attach tank to tank mounting bracket using Flange Screws (91256) on back side and underneath tank. See FIG. 2-2.

NOTE: Be sure tank always contains clean water when using sprayer.

FIG. 2-2

Hydraulic Connections

After cleaning hydraulic hose couplers, connect to tractor hydraulic circuits as follows:

Sprayer Pump Hydraulics

IMPORTANT

- *The sprayer pump is hydraulically driven, and needs to be configured correctly to match the type of hydraulic system on the tractor (closed center, open center, load-sensing, etc.). Failure to configure the pump correctly may permanently damage the pump through over-speeding. Refer to the MAINTENANCE SECTION of this manual for guidelines on configuring the sprayer pump.*

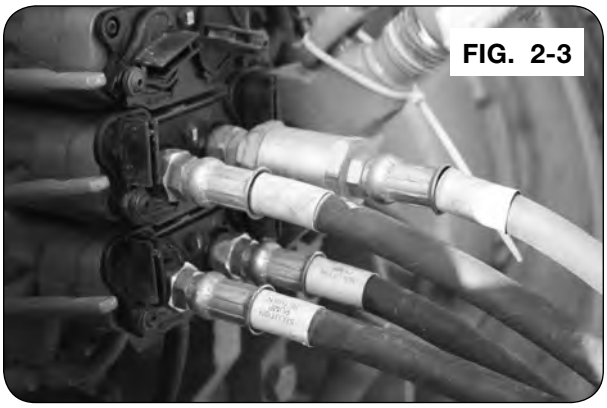


FIG. 2-3

Connect hoses from the sprayer pump to a tractor selective control valve (SCV) circuit. The pump inlet (marked PUMP PRESSURE) should be connected to the RETRACT port and the pump outlet (marked PUMP RETURN) to a low-pressure return port at the tractor (recommended) or to the EXTEND port.

NOTE: It is recommended to pressurize all hydraulic circuits using the retract outlets on the SCV's. This allows all circuits to be shut-off by engaging the hydraulic float feature of the tractor hydraulic system.

To protect the sprayer pump from damage due to excessive speed, adjust circuit flow to minimum setting prior to operating circuit for the first time. When in operation, adjust flow per instructions listed under the "Basic Sprayer Settings" heading in this section.

IMPORTANT

- *Never operate sprayer pump dry, or with pump inlet selector valve closed. Pump damage may result.*

Pump Set Up

Settings on pumps with PWM (Pulse Width Modulated) auto populates when selected. Refer to your Raven ISO Rate Control manual for further details.

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 setup procedure, ensure that the solution tank contains at least 50 gallons of liquid, and the control valves are at the following settings:

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

Load-Sensing Closed-Center System

This type of system is most commonly found on new, larger horsepower tractors. It is characterized by 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 motor needle valve by loosening jam nut, screwing needle valve clockwise until seated, then tightening lock nut.
2. Adjust tractor flow control to its minimum setting.
3. Move hydraulic lever to RETRACT to start pump.
4. Close AGITATION CONTROL valve after pump primes and begins to develop pressure.
5. Adjust tractor flow control until the desired pressure is reached, up to a maximum pressure of 100 psi.

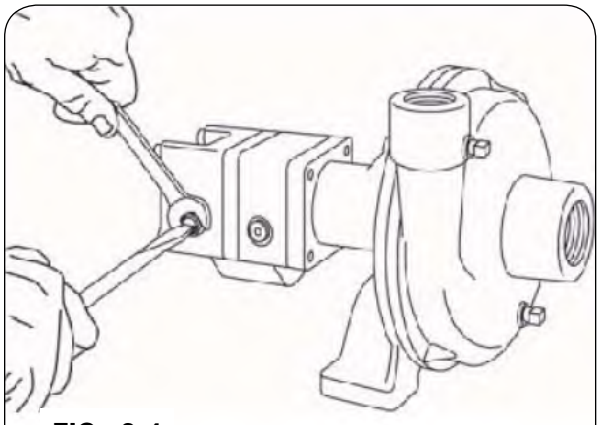


FIG. 2-4

IMPORTANT

- *Do not run pump for extended periods with 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 restrictor orifice in pump inlet.
2. Close motor needle valve by loosening jam nut, screwing needle valve clockwise until seated, then tightening lock nut.
3. Adjust tractor flow control to its minimum setting.
4. Move hydraulic lever to RETRACT to start pump.
5. Close AGITATION CONTROL valve after pump primes and begins to develop pressure.
6. Adjust tractor flow control until the desired pressure is reached, up to a maximum pressure of 100 psi.

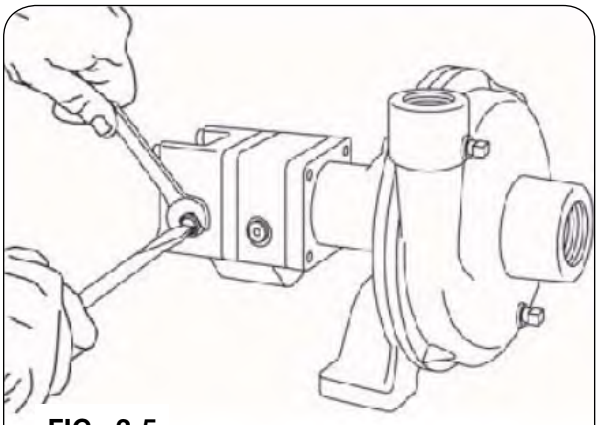


FIG. 2-5

IMPORTANT

- *If sufficient pressure cannot be reached, it may be necessary to enlarge the restrictor orifice. To do so, remove orifice and drill hole to a slightly larger size. Do not run the pump without a restrictor installed. Consult with dealer or factory prior to restrictor modification.*
- *Do not run pump for extended periods with 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 keep the engine speed relatively constant to ensure adequate flow to the pump. This type of system is common on older, lower horsepower tractors.

1. Do not install a flow limiter or orifice on the pump.
2. Loosen jam nut on motor needle valve and back out needle valve 3 or 4 turns counterclockwise.
3. Start tractor and set engine speed to the RPM that will be used while spraying.
4. Move hydraulic lever to RETRACT to start pump.
5. Close AGITATION CONTROL valve after pump primes and begins to develop pressure.

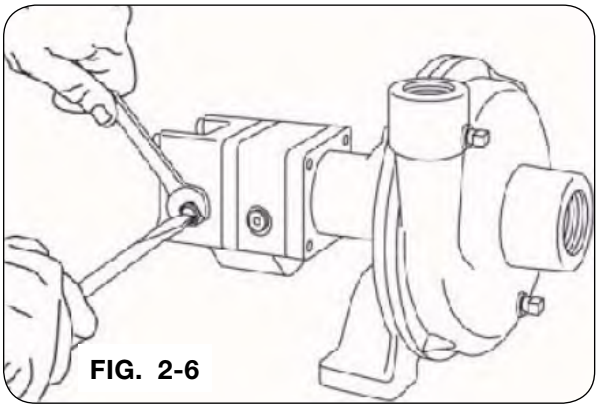


FIG. 2-6

6. Adjust motor needle valve by turning clockwise until the desired pressure is reached, up to a maximum pressure of 100 psi. Retighten jam nut.

Light Package Assembly

NOTE: Unverferth Manufacturing has designed the transport lighting and marking kit to meet United States federal law and ASABE standards at the time of manufacture. Machine modifications, including additional features or changes to the intended configurations, may require updates to the lighting and marking as well.

Compliance with all lighting and marking laws is the responsibility of the operator at the time of travel.

See federal regulation 49 CFR 562; available at www.govinfo.gov for US federal law requirements.

See your Unverferth dealer for additional brackets, reflectors, or lights to meet your requirements.

1. Locate light brackets (40849B) on the rear frame for both red and amber lights. Red light is to be placed 2' - 5' from center of machine. Amber light is to be placed no more than 16" from the end of sprayer while remaining visible from front to rear of machine.

   On Hydraulic Fold Units:
   Attach brackets (40849B) using u-bolts (TA510072), flat washers (9405-076) and locknuts (9928). Slide each light into slot on top of light bracket. Tighten nut provided with light to secure. See FIG. 2-7.

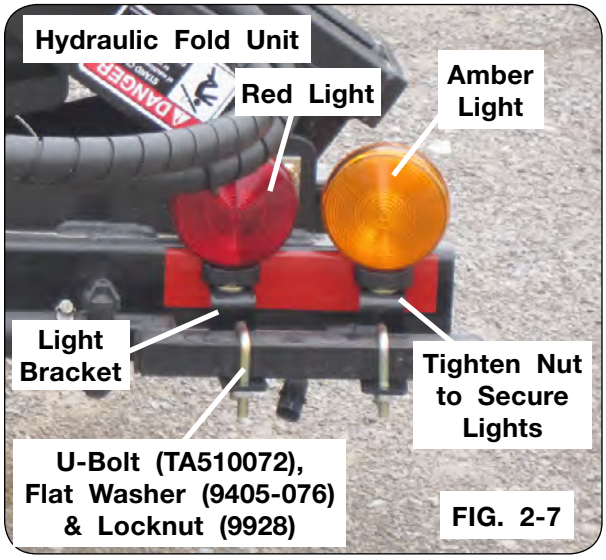


FIG. 2-7

   On Manual Fold Units:
   Attach brackets (40849B) using u-bolts (91163), flat washers (9405-076) and locknuts (9928). Slide each light into slot on top of light bracket. Tighten nut provided with light to secure. See FIG. 2-8.

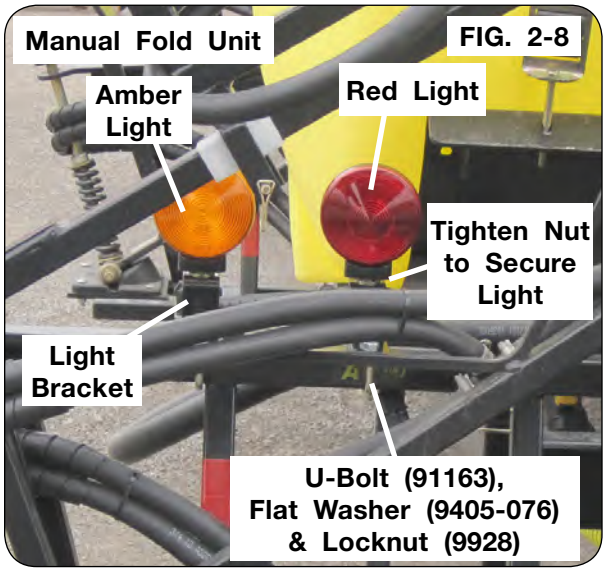


FIG. 2-8

Light Package Assembly (continued)

NOTE: Red lights should always be towards the center of the machine.

2. Repeat step 1 on opposite side of sprayer.

3. Once lights are assembled to both sides, attach the wiring harness (22790) in the middle of the rear frame. Run wires to the left and right lights and attach to the frame using cable ties.

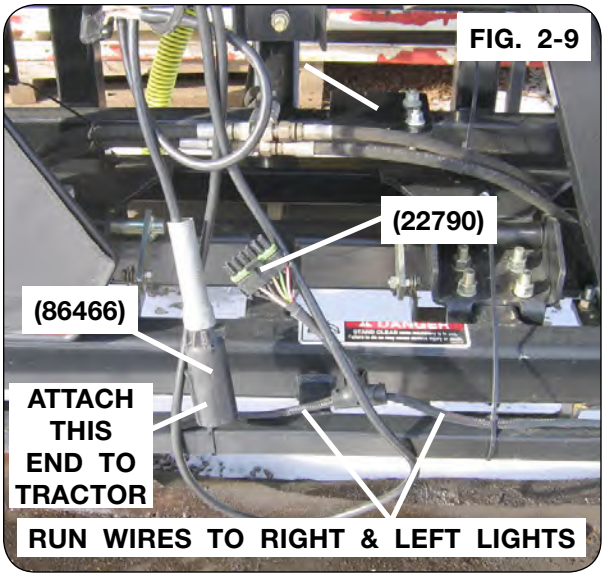


FIG. 2-9

Optional Foam Marker Assembly

1. Attach tank mount bracket to right side of sprayer. Slide mount bracket onto frame as shown in FIG. 2-10 and attach by using clamp bars (40783B) & (40798B), capscrews (9390-115) and locknuts (9800). Clamp bar (40798B) is located to the back of the bracket. See FIG. 2-10.

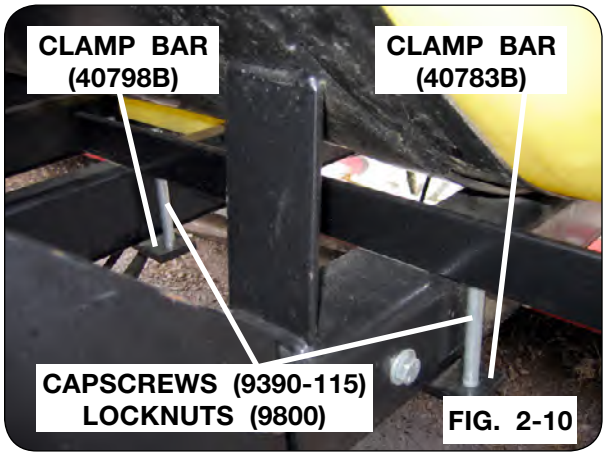


FIG. 2-10

2. Once tank mounting bracket is secured in place, attach tank bracket to the end of the tank mounting bracket using capscrews (9390-055), flat washers (9405-076) and locknuts (9928). See FIG. 2-11 & 2-12.

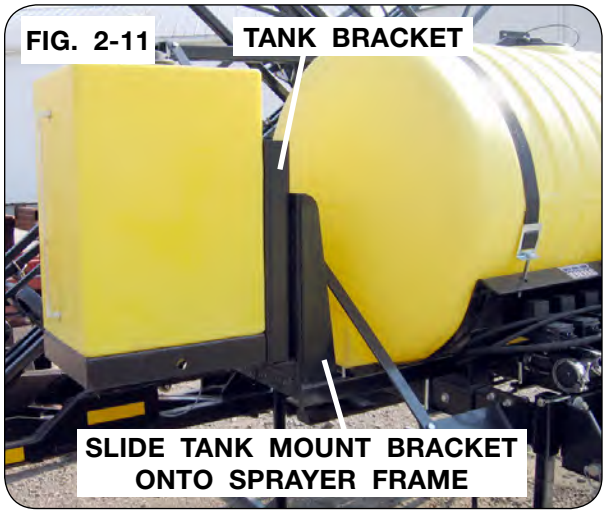


FIG. 2-11

FIG. 2-12

Optional Foam Marker Assembly (continued)

3. Using the hoses provided with the foam marker, connect the clear tube (TA806590) from the bottom of the tank to the "Liquid IN" fitting. There is also a right and left air line and a right and left liquid line. All 4 lines should be routed to the middle of the boom. From the middle, route the right lines to the right-hand end of the boom and left lines to the left-hand end of the boom. Attach lines to the foam mixing chamber. Refer to Mark Master 2500 Foam Marking System Manual (TA8-115627-0) for further details.

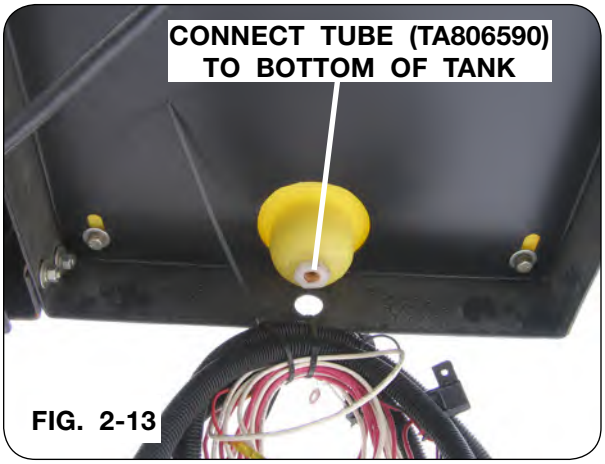


FIG. 2-13

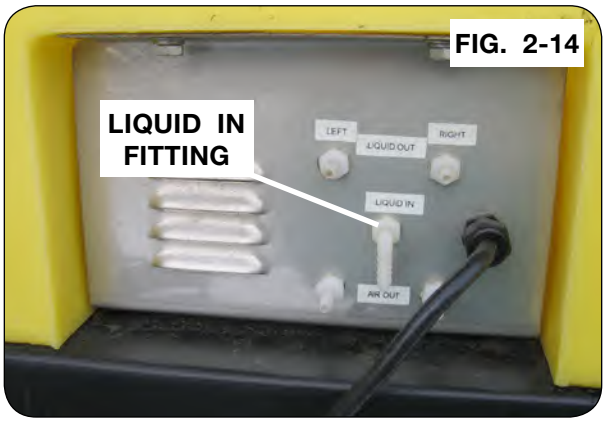


FIG. 2-14

FIG. 2-15

Optional Quick Fill Assembly

WARNING

- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**

1. Attach quick fill mounting bracket loosely to sprayer frame using clamp bar (40783B), capscrews (9390-115), flat washers (9405-088) and locknuts (9800). See FIG. 2-16.

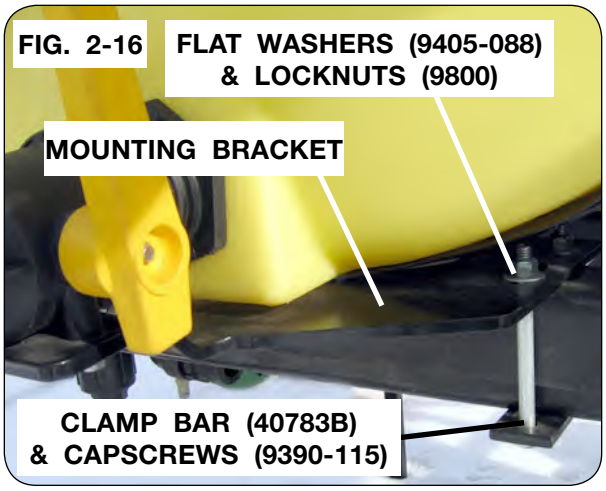


FIG. 2-16

2. Without applying stress to the bracket, use it as a guide to locate dimensions “A” & “B” for tank fitting (TA805428). Center tank fitting on dimensions and hold in place. Using it as a template, mark the location by drawing a line around the fitting end. See FIG. 2-17.

3. Once the location is marked use a 3” hole saw to drill out the hole. (If a 3” hole saw is not available, use a drill and drill consecutive holes around the marked location and punch out the hole.) Deburr hole and clean-up all shavings inside and outside of hole opening. See FIG. 2-17.

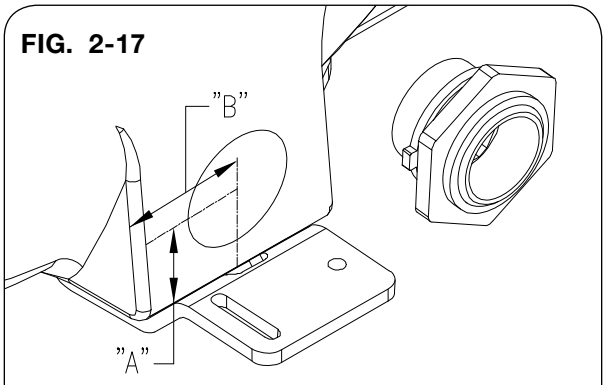


FIG. 2-17

USE BRACKET AS A GUIDE TO LOCATE TANK FITTING AND MARK HOLE

Optional Quick Fill Assembly (continued)

4. To attach tank fitting (TA805428) to the sprayer tank, unscrew nut side of the fitting. Drop adapter end with o-ring into the tank near hole location getting it as close to the hole as possible. (If not within reaching distance use a device that will fit through the hole, without causing damage to the hole, to obtain adapter end.) Prop adapter end up against the hole with the o-ring side closest to the hole on the inside of the sprayer tank. Screw on the nut side of the fitting from the outside of the sprayer tank and tighten. See FIG. 2-18.

FIG. 2-18

5. Attach nipple (94790) to the end of tank fitting (TA805428). Attach ball valve (TA908105) to end of nipple. Loosely attach ball valve to quick fill mounting bracket using capscrews (9390-030), lock washers (9404-019) and flat washers (9405-074). Once all hardware is in place tighten, including previous hardware used for mounting bracket in step 1. Refer to "Torque Chart" in MAINTENANCE section. See FIG. 2-19 & 2-20.

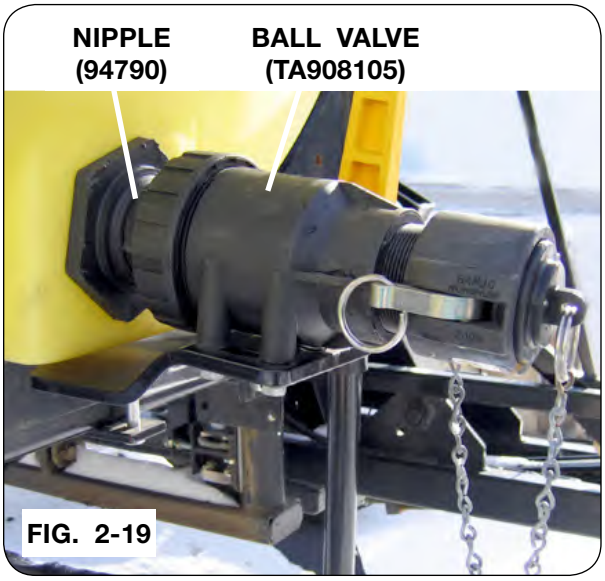


FIG. 2-19


FIG. 2-20

MOUNT BALL VALVE TO BRACKET USING CAPSCREWS (9390-030), LOCK WASHERS (9404-019) & FLAT WASHERS (9405-074)

Optional Quick Fill Assembly (continued)

6. Assemble remaining quick disconnect coupling (TA810750) and dust plug (TA811375). Use end fill chain (TA0-903700-0) to connect together.

NOTE: Coupler (TA811250) is an extra 2" adapter used to connect varying hose sizes. If needed, remove quick disconnect coupling (TA810750) from ball valve (TA908105) and attach coupler.

FIG. 2-22

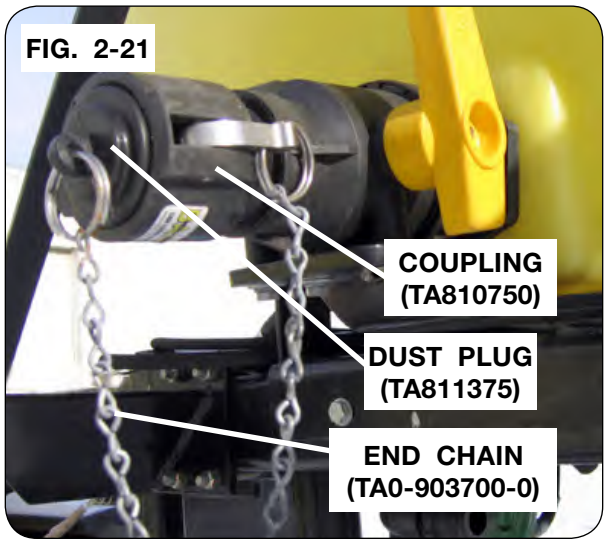
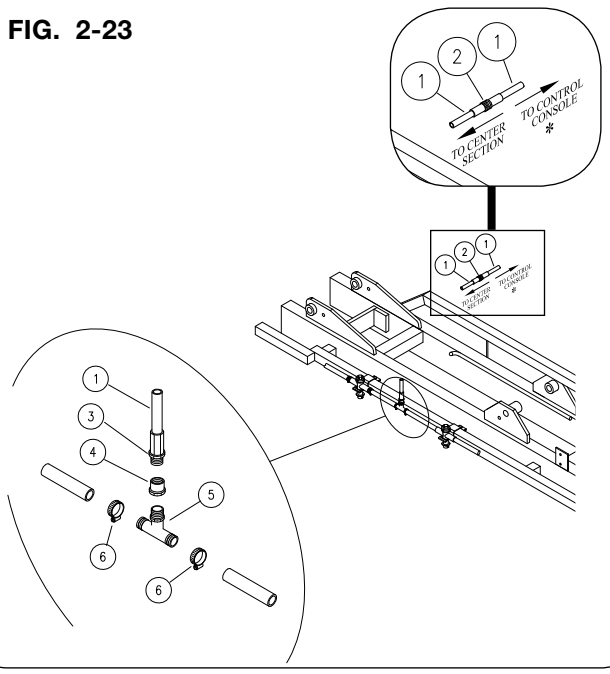


FIG. 2-21

Optional 744 Console

Install the boom gauge line into the center section as shown below in FIG. 2-23. Make sure the gauge tube connection shown in the FIG. 2-23 is directly over the hitch pin for convenience.

FIG. 2-23



Item	Part No.	Description	QTY.
1	895450	1/8" Gauge Tube	1
2	750170	1/8" Tube Union	1
3	895154	1/8" NPT Fitting	1
4	861880	4676-1/8" NYB	1
5	812575	3/4" HB Tee	1
6	801025	Hose Clamp	2

Optional Raven Controller Assembly

1. Remove the cable ties securing the hose to the tank flange on the back of the machine. Remove the caplug from the end of the hose.

Optional Raven Controller Assembly (continued)

2. On the backside of the sprayer, attach the flow control valve (TA720258), flow meter (TA720365) and hose barb (TA816024) to the end of the ball valves using clamps (TA815025) and gaskets (TA811944). See FIG. 2-24.

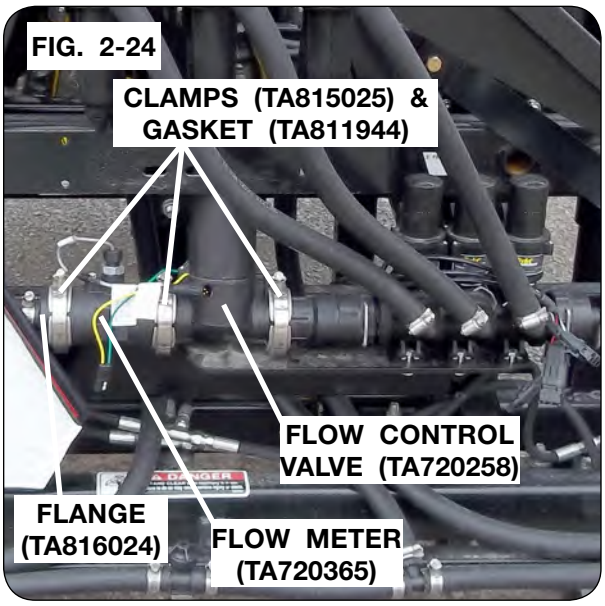


FIG. 2-24

3. Be sure to route wires under wing frame tube to prevent damage when raising and lowering booms. When routing hose, be sure hose goes behind SMV and under the wing frame tube to prevent damage when folding and unfolding booms. See FIG. 2-25 & 2-26.

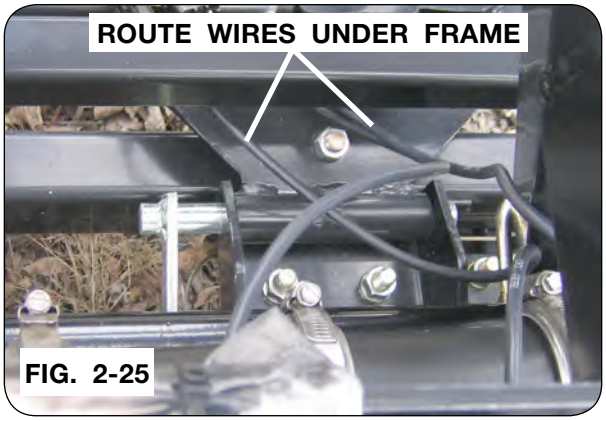


FIG. 2-25

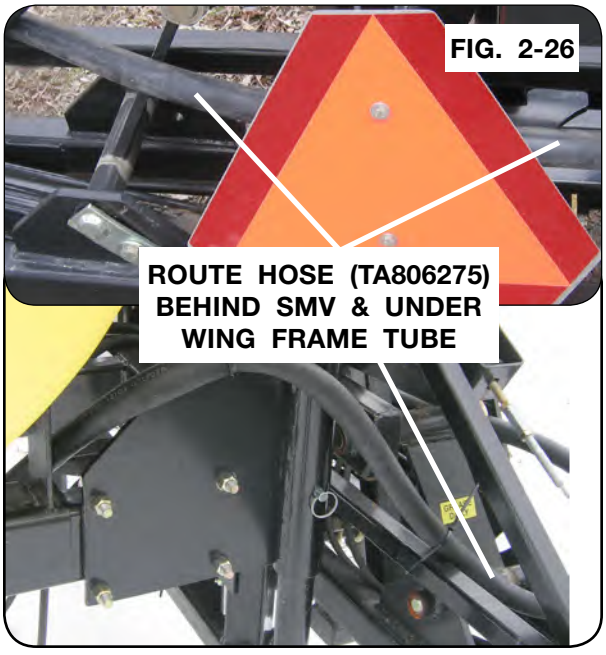


FIG. 2-26

Optional Raven Controller Assembly (continued)

4. Attach 6' flow cable (9005729) to flanged ball valve assembly. Attach flow control valve (TA720258) to 12' flow cable. Attach flow meter (9005729) to 12' flow cable. Place control console (TA720314 or TA720315) inside cab. Attach console control cable (TA720563) to control console and run line out to sprayer connecting to 12' flow cable. See FIG. 2-27.

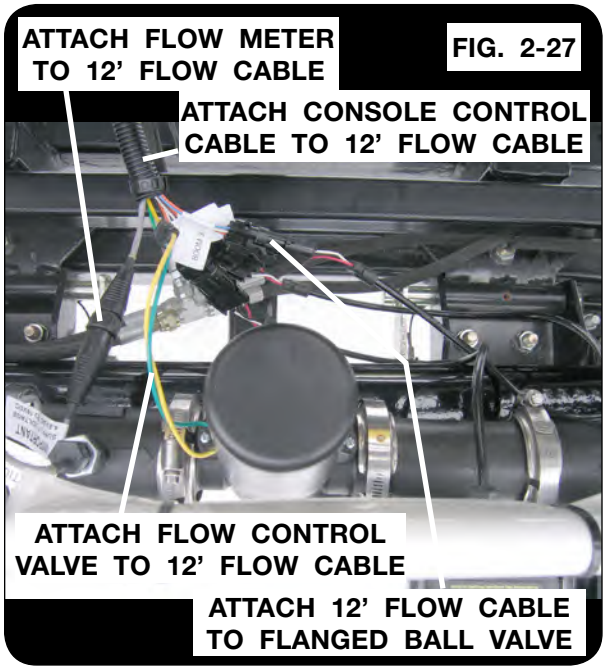


FIG. 2-27

5. Attach Astro GPS speed sensor to control console (see note below).

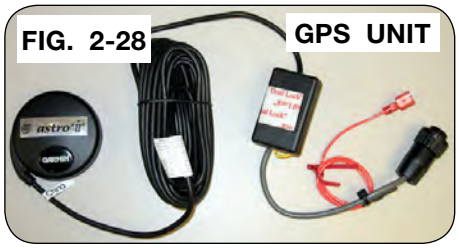


FIG. 2-28

NOTE: Please refer to Astro GPS speed sensor instructions for proper installation and placement of GPS sensor.

Following are websites for your convenience:
Raven Controller = www.ravenprecision.com
Astro GPS = www.micro-trak.com

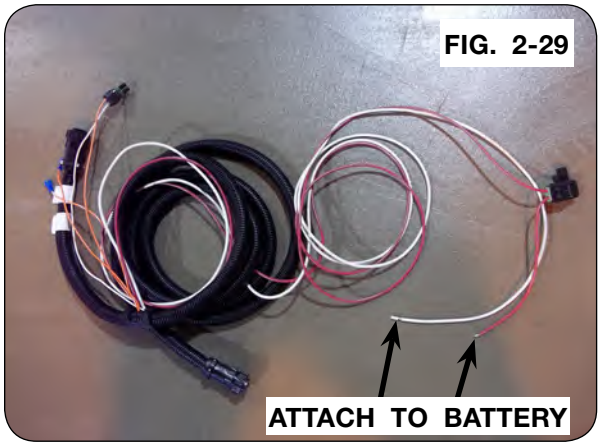


FIG. 2-29

Optional TeeJet Valve Controller Assembly

1. Remove the cable ties securing the hose to the tank flange on the back of the machine. Remove the caplug from the end of the hose.

2. Attach the regulating valve assembly (TA854800) from the TeeJet controller kit (404745) to the end of the ball valves using clamps (TA815025) and gaskets (TA811944). See FIG. 2-30.

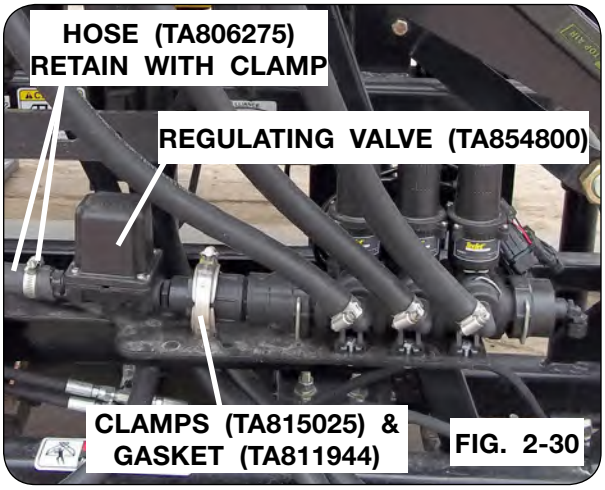


FIG. 2-30

Optional TeeJet Valve Controller Assembly (continued)

3. Be sure to route wires under wing frame tube to prevent damage when raising and lowering booms. When routing hose, be sure hose goes behind SMV and under the wing frame tube to prevent damage when folding and unfolding booms. See FIG. 2-31 & 2-32.

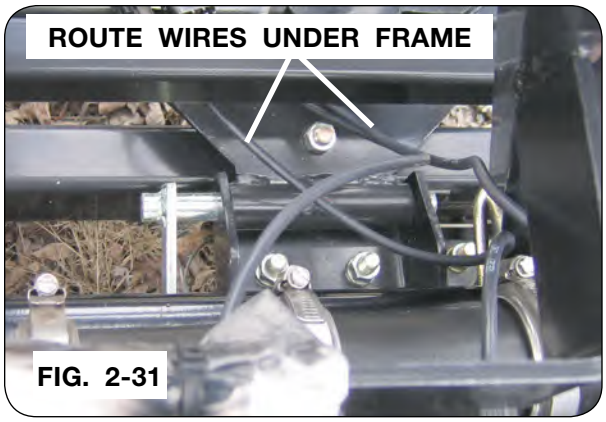


FIG. 2-31

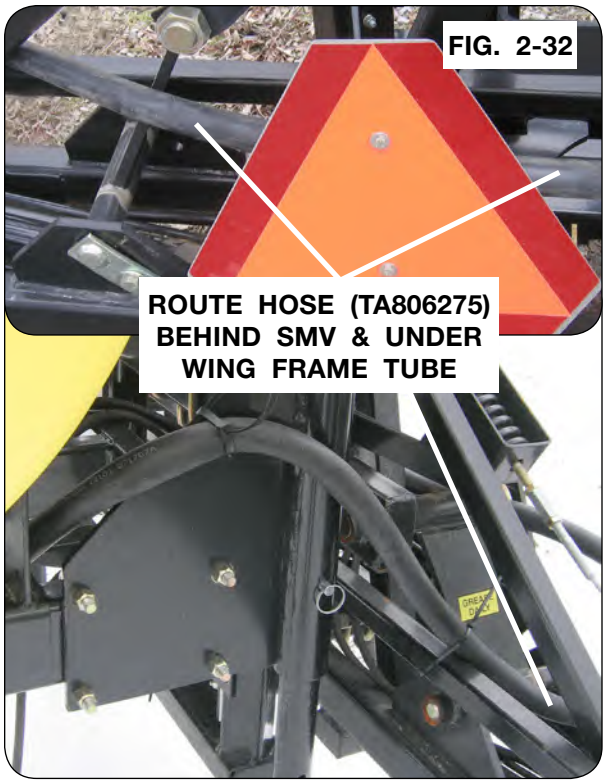


FIG. 2-32

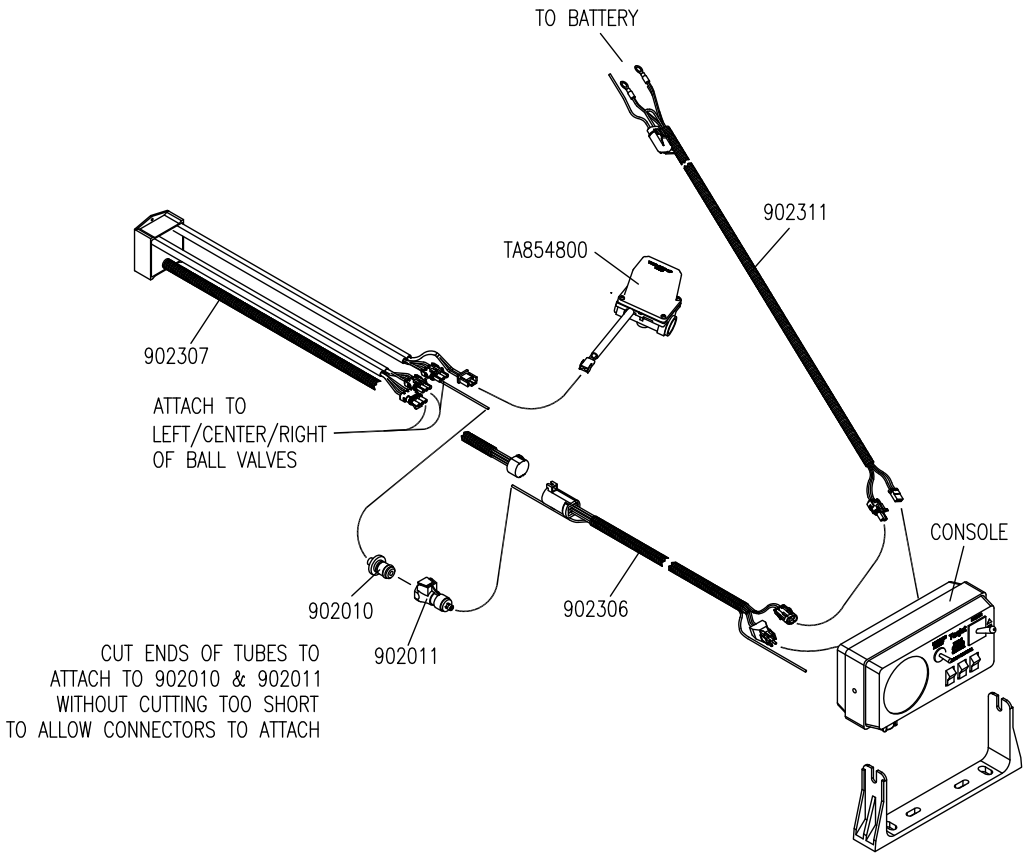
Optional TeeJet Valve Controller Assembly (continued)

4. Attach wiring harness (402594) to the ball valve leads.

5. Attach one end of Power Cable (902311) to the battery. The opposite end of Power Cable (902311) will attach to the console and the remaining connection will attach to the Extension Cable (902306). The remaining connection on Extension Cable (902306) will attach to the console. The opposite end of Extension Cable (902306) will attach to End Cable (902307). The opposite end of End Cable (902307) will attach to the Left/Right/Center of the Ball Valves. Attach the remaining harness to the Regulating Valve (TA854800). See FIG. 2-33.

   Once End Cable (902307) and Extension Cable (902306) are attached, there are tubes that will need to be cut and attached to Quick Disconnect Tubes (902010 & 902011). Cut off ends of tubing keeping the length long enough for Quick Disconnect Tubes (902010 & 902011) to connect together. Once tubes are cut, dip the ends into 140°F - 160°F water for approximately 30 seconds. Next, push tube ends onto the barb side of the connectors. Connect Quick Disconnect Tubes (902010 & 902011) together. See FIG. 2-33.

FIG. 2-33 **FOR UNITS WITH SERIAL NUMBER D54850133 AND ABOVE**



Following is Teejet's website for your convenience:
Teejet Valve Controller = www.teejet.com

Optional TeeJet Valve Controller Assembly (continued)

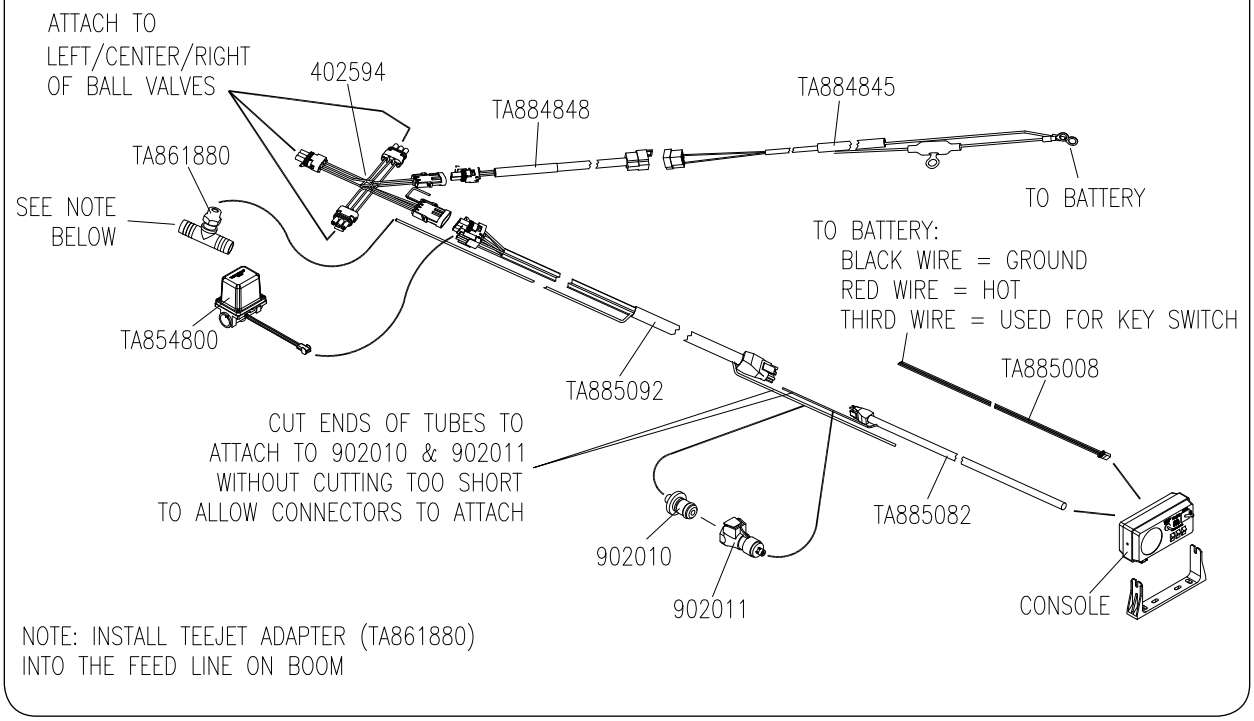
The following is for units prior to Serial Number D54850133.

6. **Attach adapter harness (402594) to the Left/Right/Center of the Ball Valves. Attach one harness to the Power/Battery Cable (TA884848) and the opposite end of (TA884848) will attach to Battery Cable (TA884845). The opposite end of Battery Cable (TA884845) will attach to the battery. Attach last harness (402594) to 8' Valve Cable (TA885092) the opposite end of (TA885092) will attach to 8' Extension Console Cable (TA885082). The 8' Valve Cable (TA885092) will also attach to Regulating Valve (TA854800) and to TeeJet Adapter (TA861880). The opposite end of 8' Extension Console Cable (TA885082) will attach to the console. Power/Battery Cable (TA885008) will attach between the console and battery. See FIG. 2-34.**

   When the 8' Valve Cable (TA885092) and 8' Extension Console Cable (TA885082) are attached, there are tubes that will need to be cut and attached to Quick Disconnect Tubes (902010 & 902011). Cut off ends of tubing keeping the length long enough for Quick Disconnect Tubes (902010 & 902011) to connect together. Once tubes are cut, dip the ends into 140°F - 160°F water for approximately 30 seconds. Next, push tube ends onto the barb side of the connectors. Connect Quick Disconnect Tubes (902010 & 902011) together. See FIG. 2-34.

Following is Teejet's website for your convenience:
Teejet Valve Controller = www.teejet.com

FOR UNITS PRIOR TO SERIAL NUMBER D54850133 **FIG. 2-34**



TeeJet Manual Selector Control Valve (Optional)

WARNING

- **READ AND UNDERSTAND SAFETY RULES BEFORE OPERATING OR SERVICING THIS MACHINE. REVIEW "SAFETY" SECTION IN THIS MANUAL IF NECESSARY.**
- **TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE MACHINE IS SECURELY BLOCKED.**
- **RESIDUAL PRESSURE MAY EXIST IN SPRAYER PLUMBING EVEN WHEN UNIT IS NOT IN USE. REMOVE PRESSURE BEFORE SERVICING ANY PLUMBING.**

1. Attach plate (42120B) to the front, left-hand side of the frame with two plates (42112B), four 1/2"-13UNC x 5 1/2" capscrews (9390-114), and four 1/2"-13UNC locknuts (9800). (FIG. 2-36 & 2-37)

2. Attach the valve mount stand weldment (42088B) to the plate (42120B) using four 3/8"-16UNC x 1 1/4" capscrews (9390-056) and four 3/8"-16UNC locknuts (9928). (FIG. 2-36)

3. Position Tee-Jet manual control valve (9502060) on top of the valve mount weldment (42085B) as shown in FIG. 2-36. Secure with two 3/8"-16UNC x 1 1/4" capscrews (9390-056) and 3/8"-16UNC locknuts (9928).

4. Insert two pipe plugs (TA814751) into the Tee-Jet manual control valve (9502060) (FIG. 2-36).

5. Attach the gauge (TA801155) to the top of the Tee-Jet manual control valve (9502060) (FIG. 2-36).

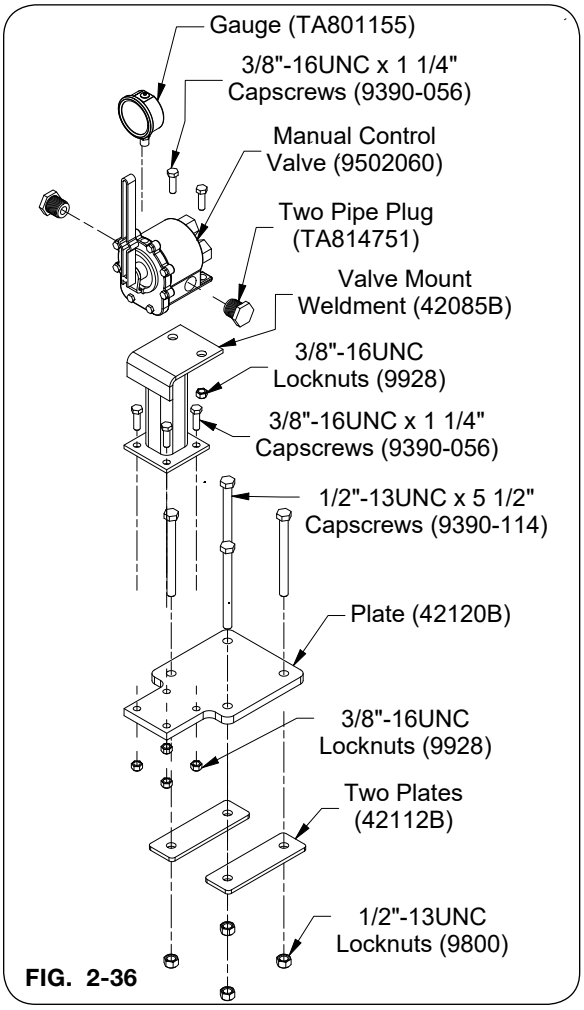


FIG. 2-36

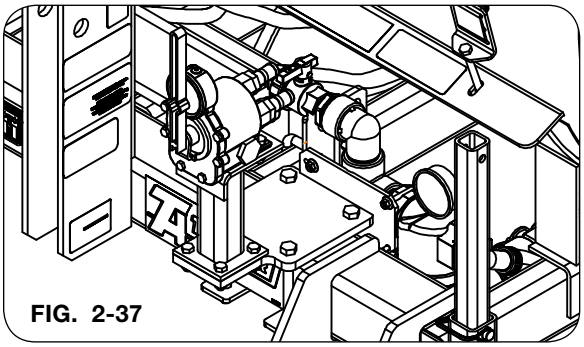


FIG. 2-37

TeeJet Manual Selector Control Valve (Optional) (continued)

6. Assemble the three hose barb 3/4-14MPT x 3/4" hose shank fittings (TA814861) and one hose barb 1-11 1/2MPT x hose shank fitting (TA814866) to the Tee-Jet manual selector control valve (9502060) as shown in FIG. 2-38.

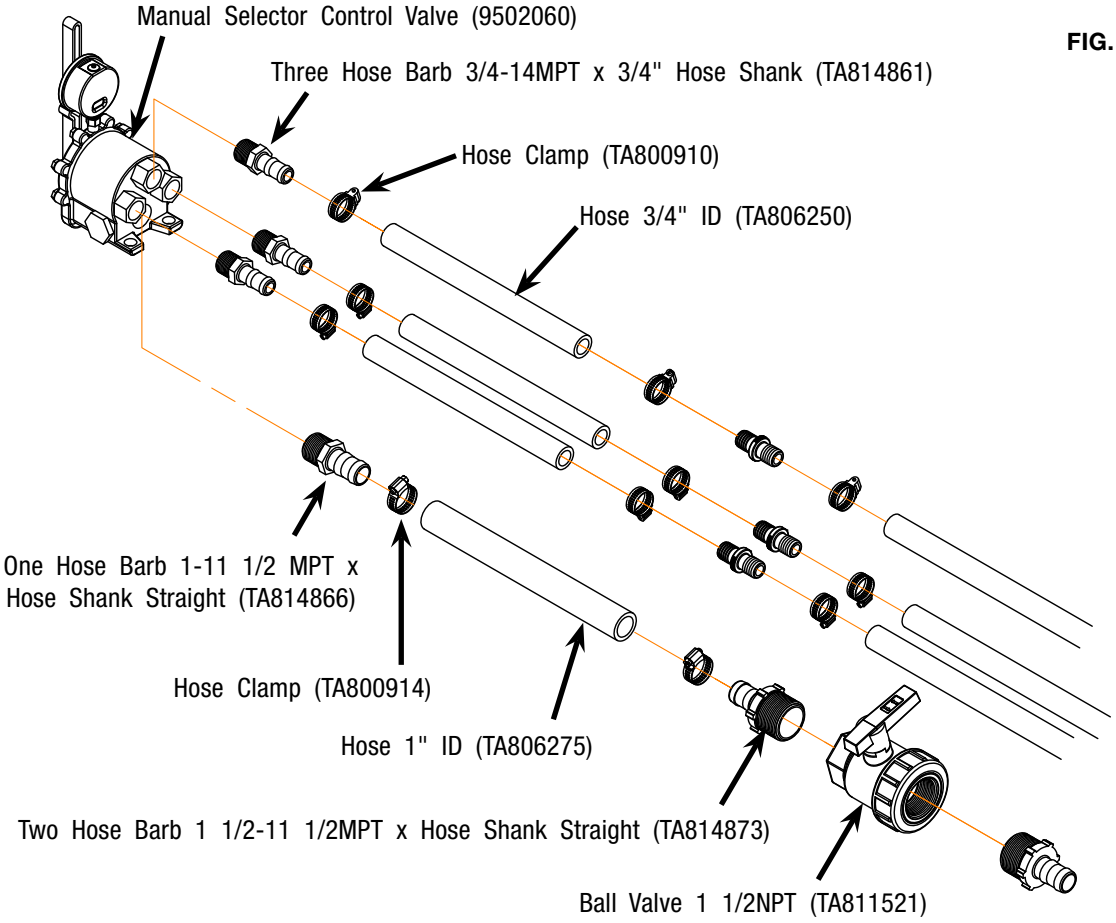


FIG. 2-38

7. Secure the 1" ID hose (TA806275) to the hose barb 1-11 1/2MPT x hose shank fitting (TA814866) on the Tee-Jet manual selector control valve with hose clamp (TA800914). (FIG. 2-38)

8. Attach the 3/4" ID hoses (TA806250) to the three hose barb 3/4-14MPT x 3/4" hose shank fittings (TA814861) on the Tee-Jet manual selector control valve. Secure with hose clamps (TA800910). (FIG. 2-38)

9. Assemble the 1-1/2" ball valve (TA811521) and two hose barbs 1 1/2-11 1/2MPT x hose shank (TA814873) as shown in FIG. 2-38.

TeeJet Manual Selector Control Valve (Optional) (continued)

10. Cut the 1" ID hose that goes between the strainer and the rear of the unit.

11. Secure the 1” ID hose (TA806275) to the hose barb on the ball valve with a hose clamp (TA800914) as shown in FIG. 2-39.

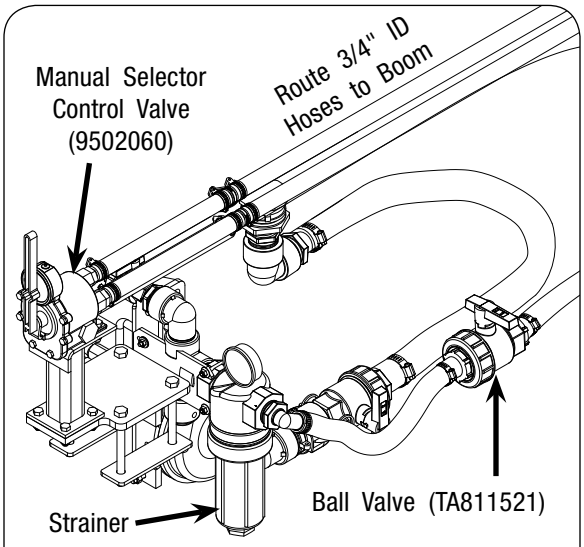


FIG. 2-39

12. Connect the 3/4” ID hoses from the valve to the boom 3/4” ID hoses with hose menders (TA814923) and hose clamps (TA800912) (FIG. 2-40).

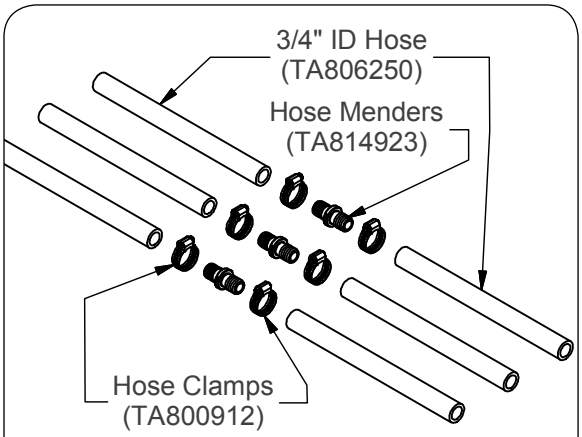


FIG. 2-40

Hose Reel & Sprayer Gun Assembly (Optional)

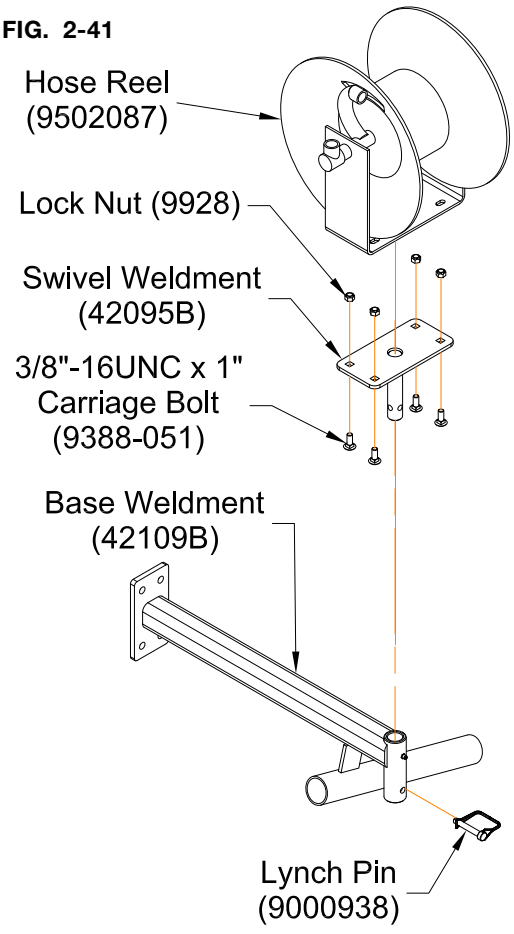
⚠ WARNING

- **READ AND UNDERSTAND SAFETY RULES BEFORE OPERATING OR SERVICING THIS MACHINE. REVIEW "SAFETY" SECTION IN THIS MANUAL IF NECESSARY.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE MACHINE IS SECURELY BLOCKED.**
- **RESIDUAL PRESSURE MAY EXIST IN SPRAYER PLUMBING EVEN WHEN UNIT IS NOT IN USE. REMOVE PRESSURE BEFORE SERVICING ANY PLUMBING.**

1. Assemble swivel weldment (42095B) to hose reel (9502087) using four 3/8"-16UNC x 1" carriage bolts (9388-051) and 3/8"-16UNC lock nuts (9928). (FIG. 2-41)

2. Attached swivel weldment and hose reel to base weldment (42109B). Lock in place using lynch pin (9000938). (FIG. 2-41)

FIG. 2-41



Hose Reel & Sprayer Gun Assembly (Optional) (continued)

3. Mount entire assembly to the front, left-hand portion of sprayer using two 1/2”-13UNC U-bolts (91434) and four 1/2”-13UNC hex nuts (9928). (FIG. 2-42)
4. Assemble hose barb (TA814855) to hose reel outlet as shown in FIG. 2-43.
5. Attach 3/8” ID hose (TA806200) to hose reel outlet using hose barb (TA814855), hose clamp (TA800910), and wind hose around reel. (FIG. 2-43)
6. Assemble hose barb (TA814855) to spray gun (9502044). (FIG. 2-43)
7. Attach the 3/8” ID hose (TA806200) on the hose reel to the hose barb (TA814855) on the spray gun with hose clamp (TA800910). (FIG. 2-43)
8. Place sprayer gun into round retainer on base weldment. (FIG. 2-43)

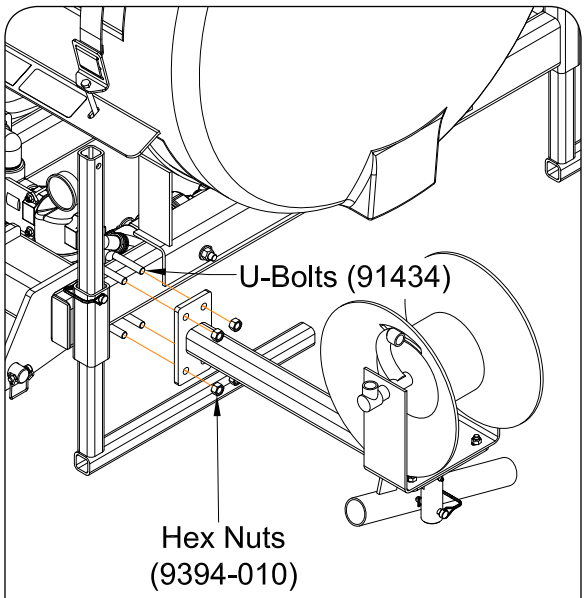


FIG. 2-42

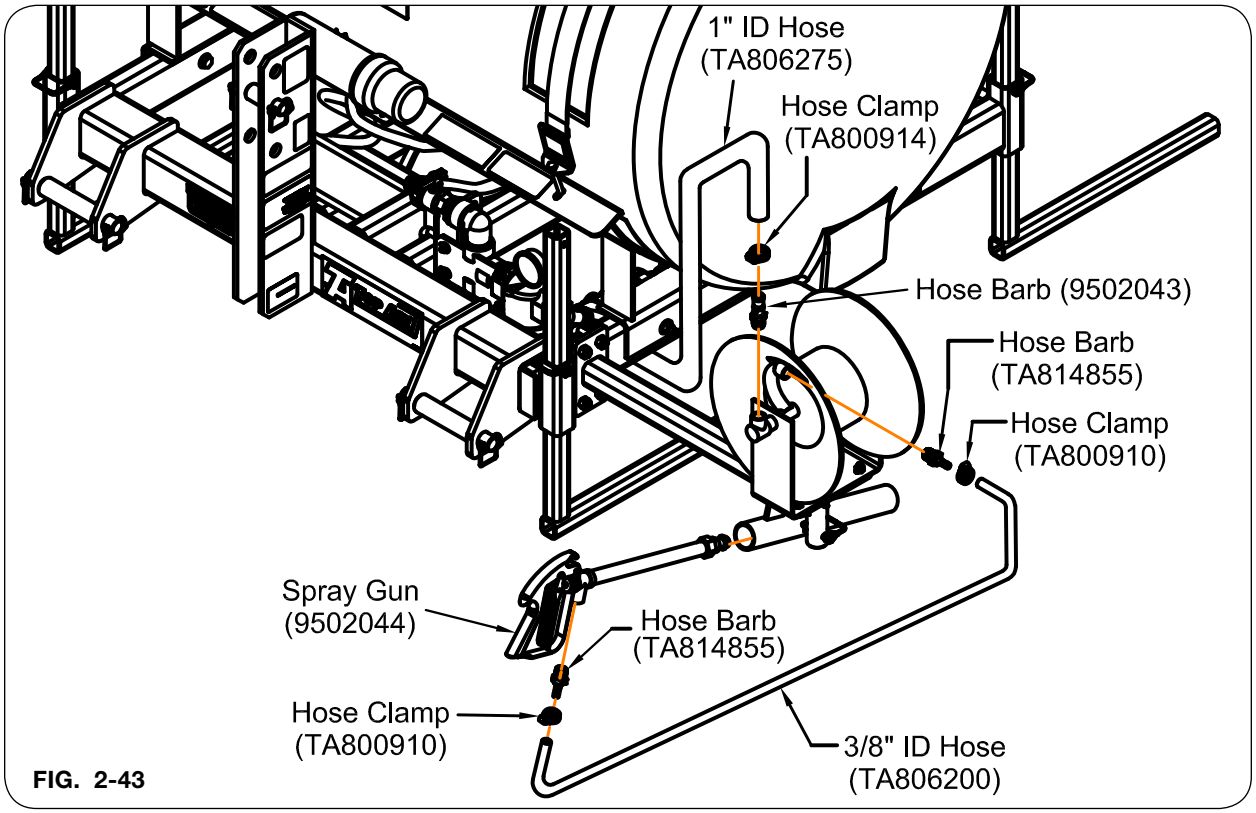


FIG. 2-43

9. Assemble the hose barb (9502043) to the hose reel inlet. (FIG. 2-43)
10. Attach 1” ID hose (TA806275) to hose reel inlet hose barb (9502043) using hose clamp (TA800914). (FIG. 2-43)

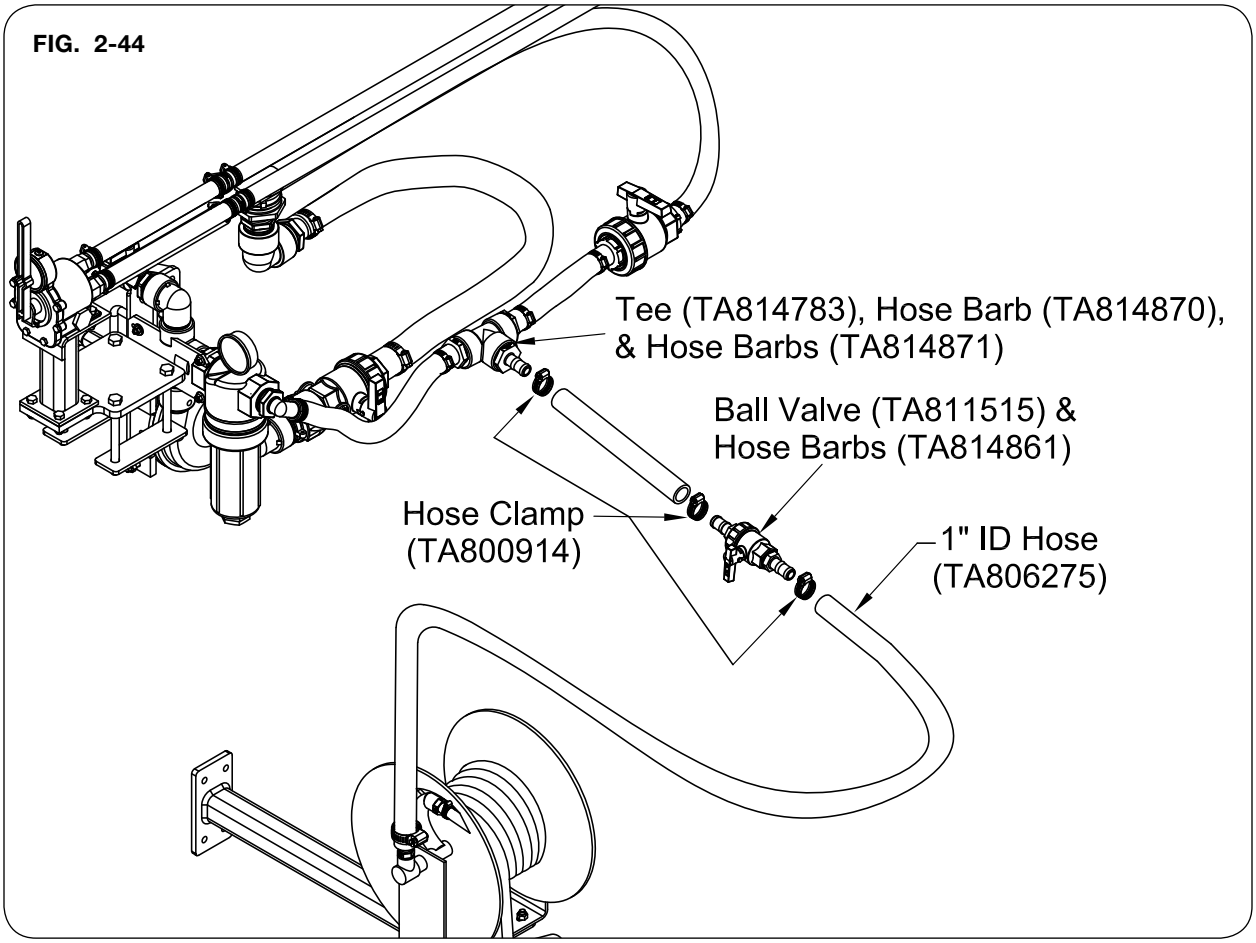
Hose Reel & Sprayer Gun Assembly (Optional) (continued)

11. Cut the 1" ID hose that goes after the strainer as shown in FIG. 2-44.

12. Insert the tee (TA814783), hose barb (TA814870), and hose barbs (TA814871). (FIG. 2-44)

13. Secure the 1" ID hose (TA806275) to the hose barbs (TA814871) on the tee with hose clamps (TA800914) as shown in FIG. 2-44.

FIG. 2-44



14. Attach the 1" ID hose (TA806275) to the hose barb (TA814870) on the tee with hose clamp (TA800914) as shown in FIG. 2-44.

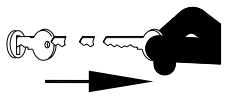
15. Secure the ball valve and hose barbs to the 1" ID hose between the tee and hose reel with hose clamps (TA800914) as shown in FIG. 2-44.

Optional Electric Over Hydraulic System
For Sprayers with 45'/60' HYDRAULIC FOLD BOOMS

⚠ WARNING

- **READ AND UNDERSTAND SAFETY RULES BEFORE OPERATING OR SERVICING THIS MACHINE. REVIEW "SAFETY" SECTION IN THIS MANUAL IF NECESSARY.**
- **TIPPING OR MOVEMENT OF THE SPRAYER CAN CAUSE SERIOUS INJURY OR DEATH. SPRAYER MUST BE HITCHED TO THE TRACTOR BEFORE OPERATING BOOM.**
- **RELIEVE THE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE THE HYDRAULIC POWER UNIT OPERATOR'S MANUAL FOR PROPER PROCEDURES.**
- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**
- **MOVING WINGS CAN CAUSE SERIOUS INJURY OR DEATH. KEEP AWAY FROM FOLDING AND UNFOLDING WINGS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **NEW HYDRAULIC SYSTEMS OR SYSTEMS THAT HAVE BEEN MAINTAINED MUST BE PURGED OF AIR BEFORE OPERATING OR MOVING MACHINE TO PREVENT SERIOUS INJURY OR DEATH.**

NOTE: Park the unit on a firm, level surface. Block the tires on the machine to keep it from moving. Unfold the wings for easy access. Set the tractor's parking brake, shut-off the engine, and remove the ignition key.



Tools Required:

- 1/2" wrench
- 3/4" wrench
- 7/8" wrench
- 15/16" wrench
- 1" wrench
- 11/16" wrench
- Allen wrenches

Optional Electric Over Hydraulic System (continued)
For Sprayers with 45'/60' HYDRAULIC FOLD BOOMS

1. Remove all red caps from ports A, B, C, D, E, F, G, LS, P, and T. (FIG. 2-45 & 2-46)

FIG. 2-45

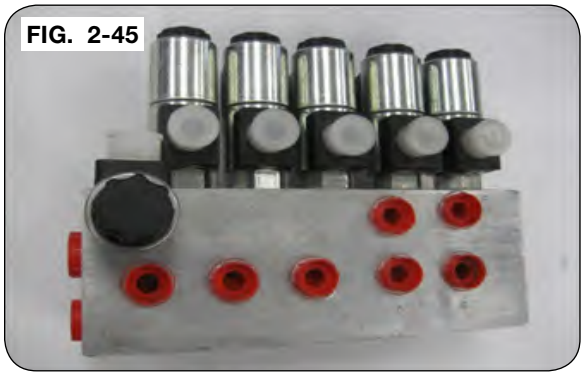
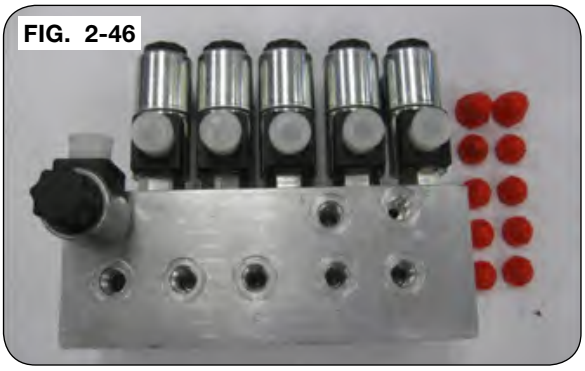


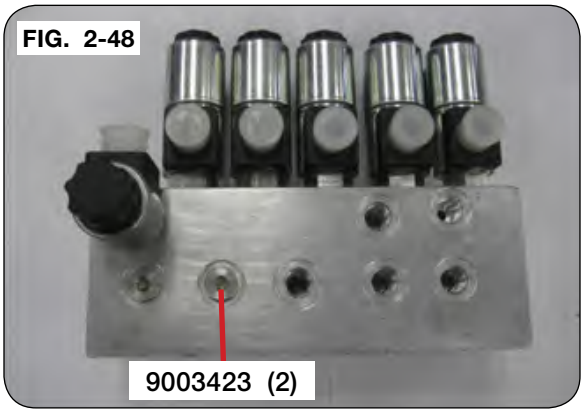
FIG. 2-46



2. Install plug (9003423) into ports A & B (FIG. 2-47 & 2-48).

FIG. 2-47

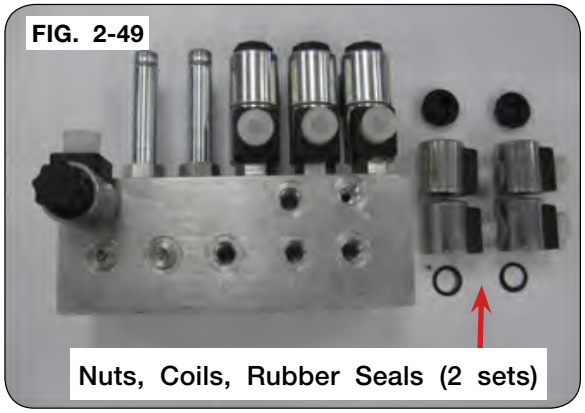
FIG. 2-48



Optional Electric Over Hydraulic System (continued)
For Sprayers with 45'/60' HYDRAULIC FOLD BOOMS

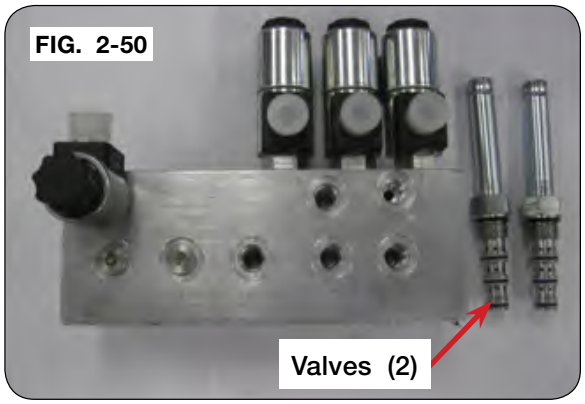
3. Remove nut, coils, and rubber seals for ports 2.1 & 2.2 (FIG. 2-49).

FIG. 2-49



4. Remove valve for ports 2.1 & 2.2 (FIG. 2-50).

FIG. 2-50



5. Install plugs (9005448) in place of the valves for ports 2.1 & 2.2 (FIG. 2-51 & 2-52).

FIG. 2-51

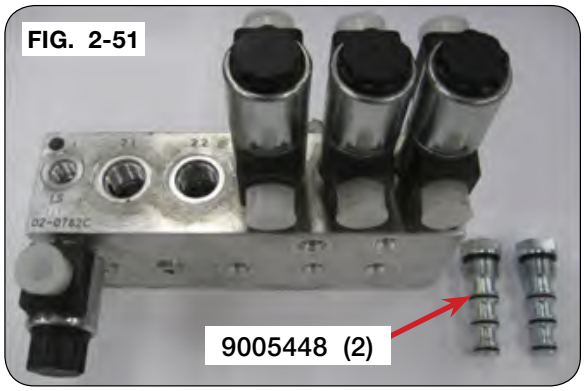
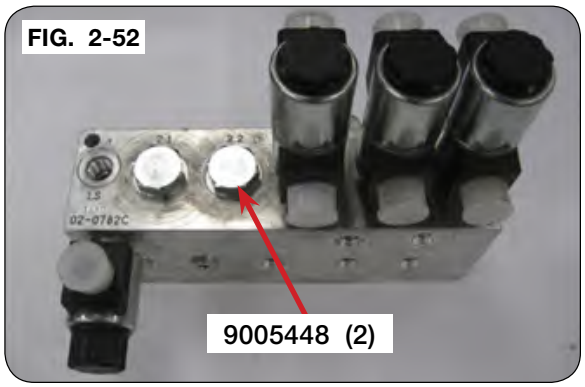


FIG. 2-52



Optional Electric Over Hydraulic System (continued)
For Sprayers with 45'/60' HYDRAULIC FOLD BOOMS

6. Use an allen wrench to install plug (9004326) into LS port (FIG. 2-53 & 2-54).

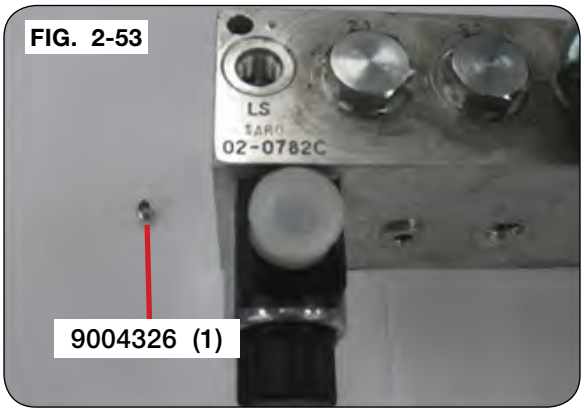


FIG. 2-53

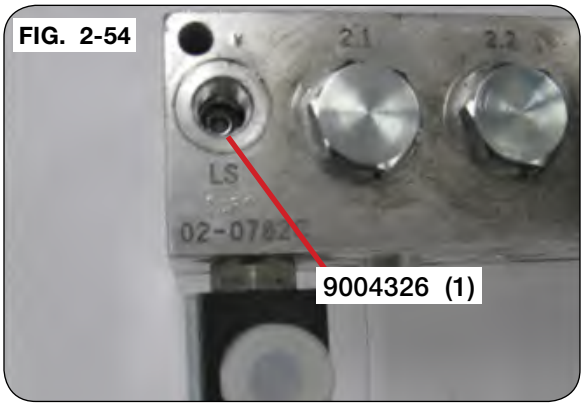


FIG. 2-54

7. Install plug (9003423) into LS port (FIG. 2-55 & 2-56).

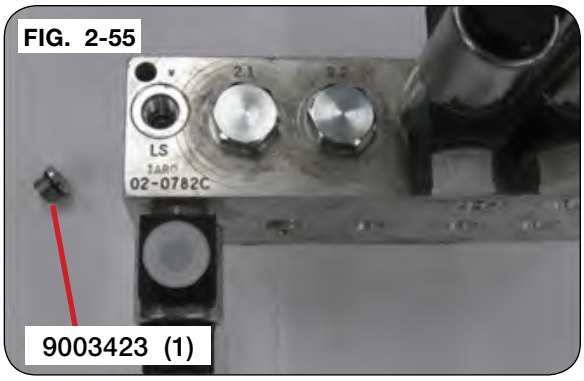


FIG. 2-55

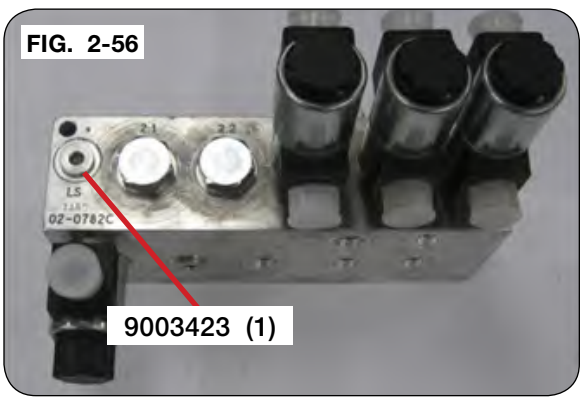


FIG. 2-56

Optional Electric Over Hydraulic System (continued)
For Sprayers with 45'/60' HYDRAULIC FOLD BOOMS

8. Install elbow fittings (TA0-934612-0) into ports P & T (FIG. 2-57 & 2-58).

FIG. 2-57

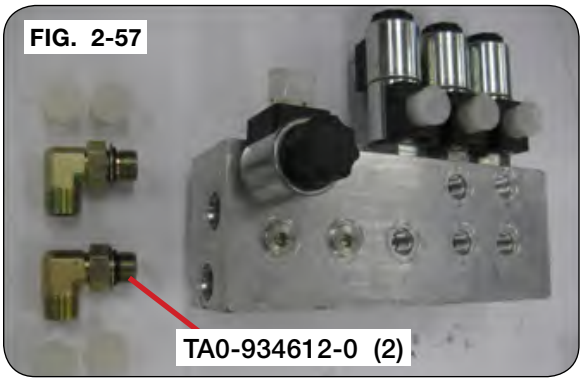
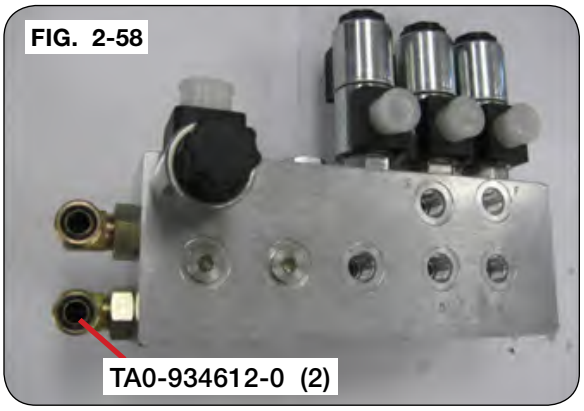


FIG. 2-58



9. Install elbow fitting (TA0-924691-0) into port C. Attach hydraulic hose (9003993) to elbow (FIG. 2-59 & 2-60).

FIG. 2-59

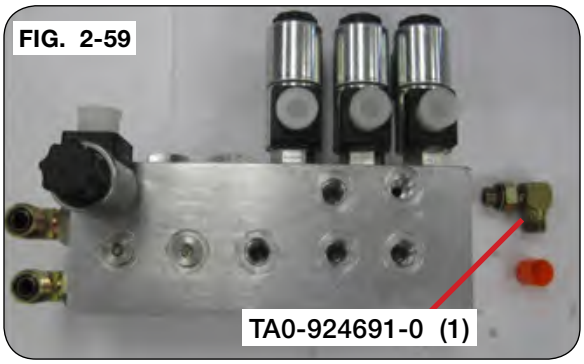
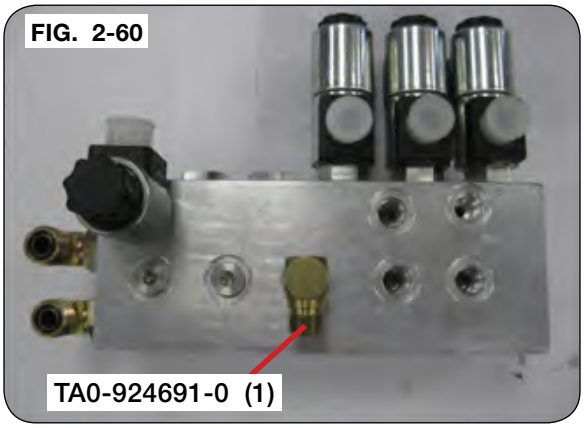
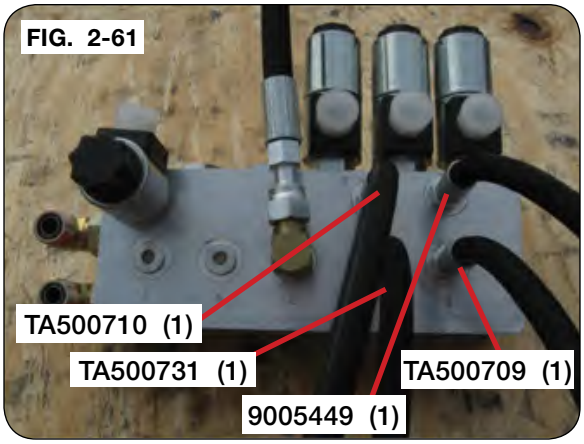


FIG. 2-60

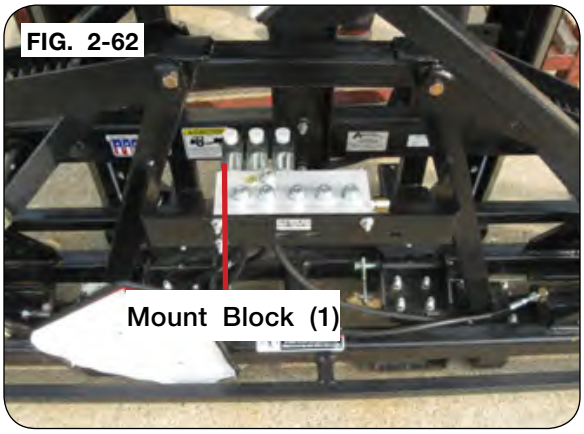


Optional Electric Over Hydraulic System (continued)
For Sprayers with 45'/60' HYDRAULIC FOLD BOOMS

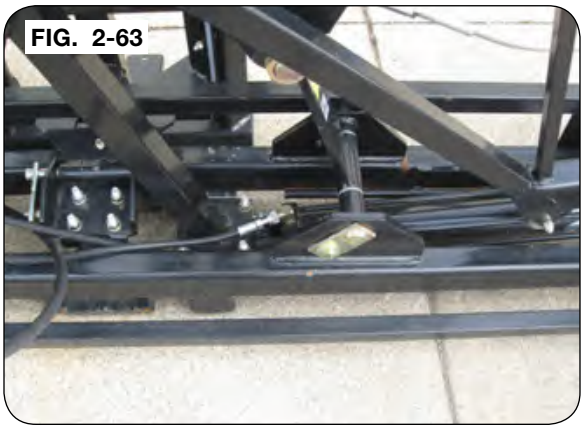
10. Install hydraulic hoses to block. Connect part TA500710 (66" long) to port E (TA500731) (42" long) to Port D (TA500709) (60" long) to Port F, and part 9005449 (30" long) to Port G (FIG. 2-61).



11. Mount valve block to boom. Use the 5/16" hardware provided. Valve should mount on the front side of the bracket with the hydraulic hoses down. It may be necessary to loosen the valve body to install the 5/16" bolt from front to back (FIG. 2-62).



12. Install elbow fittings (TA0-924691-0) into wing fold hydraulic cylinders. The elbow should point to the base end of the cylinder (FIG. 2-63).



Optional Electric Over Hydraulic System (continued)
For Sprayers with 45'/60' HYDRAULIC FOLD BOOMS

13. Install elbow fitting (9874) to the lift cylinder. The elbow should point up.

NOTE: On units with the accumulator elbow fitting (9874) will not be used. Instead connect hose to tee-fitting on the accumulator (FIG. 2-64).

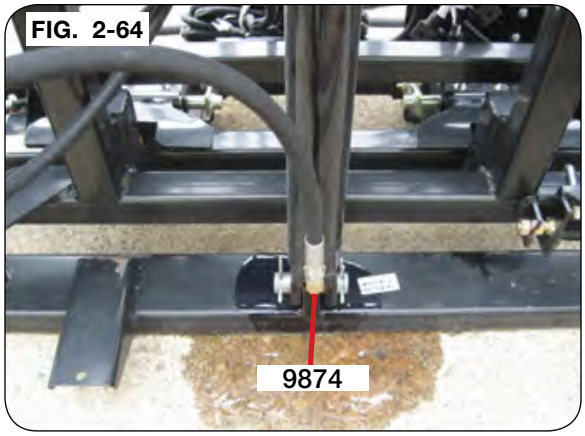


FIG. 2-64

14. Attach hoses to fold cylinders as follows:
    a) Hose (TA500710) from Port E connects to rod end of the RH wing fold cylinder.
    b) Hose (TA500731) from Port D connects to base end of the RH wing fold cylinder.
    c) Hose (TA500709) from Port F connects to rod end of the LH wing fold cylinder.
    d) Hose (9005449) from Port G connects to base end of the LH wing fold cylinder.
    e) Hose (9003993) from Port C connects to the lift cylinder.
    f) Go back and double check all the connectors and hoses have been fully tightened
    (FIG. 2-65).

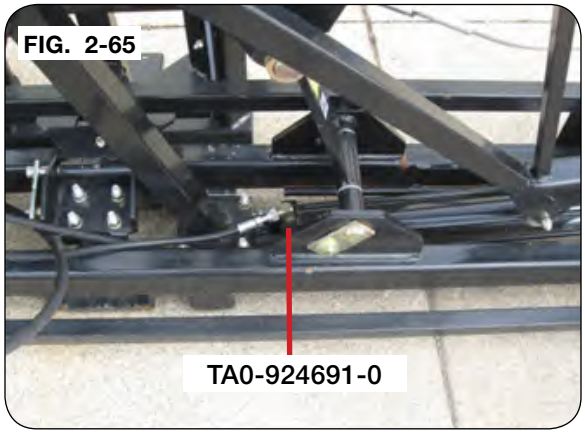


FIG. 2-65

15. Attach hose extensions (9003557) (120" long), to elbows at port T & P. Attach connector (TA0-934688-0) to hose extension. Attach main hose (TA500716) (300" long) to connectors (FIG. 2-66).

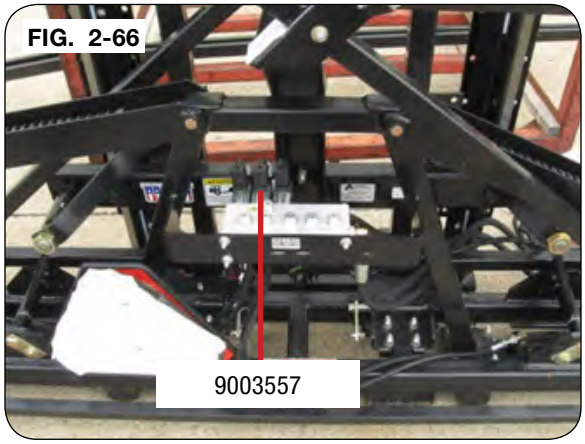


FIG. 2-66

Optional Electric Over Hydraulic System (continued)
For Sprayers with 45'/60' HYDRAULIC FOLD BOOMS

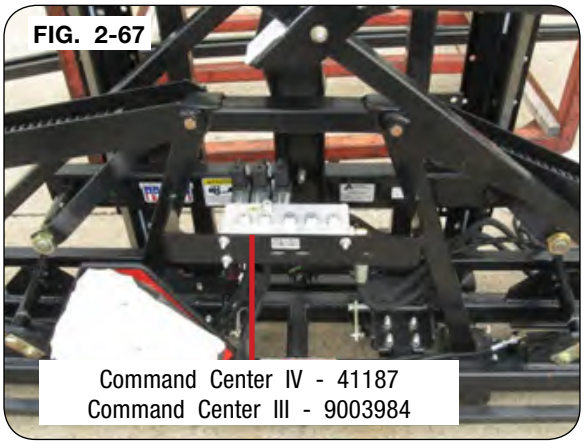
16. Run hoses through hose holder to the front of the sprayer. Route hoses through the sprayer making sure to avoid any pinch points.

17. Attach hose couplers (91383) and covers (91511) to hoses.

18. Install labels (9003937 & 9003938) to hoses by using a heat gun to shrink labels. Pressure label (9003937) attaches to hose for port P. Return label (9003938) attaches to hose for port T.

19. Attach main harness connections (Command Center IV - 41187; Command Center III - 9003984) to hydraulic block making sure to tighten the connector screw. Attach wire harness as follows:
    a) Light Blue/White Connector to coil on Port LS.
    b) Yellow/White Connector to INNER coil on Port C.
    c) Brown/White Connector to OUTER coil on Port C.
    d) Dark Green/White Connector to INNER coil on Port D.
    e) Red/White Connector to OUTER coil on Port E.
    f) Orange/White Connector to INNER coil on Port G.
    g) Dark Blue/White Connector to OUTER coil on port F (FIG. 2-67 & Wiring Schematic on next page).

FIG. 2-67



Command Center IV - 41187
Command Center III - 9003984

20. Mount Command Center Control Box (9005942) into tractor cab.

21. Run main harness to the front of the sprayer. Route the wire harness along the hydraulic hoses through the hose carrier making sure to avoid any pinch points.

Optional Electric Over Hydraulic System (continued)
For Sprayers with 45'/60' HYDRAULIC FOLD BOOMS

22. **COMMAND CENTER IV**
Connect power harness (9503093) and main trailer harness (41187). Wire power harness (9503093) to power source. (Red/White Stripe Wire to 12V power and White wire to ground) Attach harness to control box with 24 pin connector. (FIG. 2-68A).

FIG. 2-68A

COMMAND CENTER III
Connect harness extension (9004319) between power harness (9003985) and main trailer harness (9003984). Wire power harness (9003985) to power source. (Red/White Stripe Wire to 12V power and White wire to ground) Attach harness to control box with 24 pin connector. Attach harness to extension with 19 pin connector. (FIG. 2-68B)

FIG. 2-68B

23. Test boom functions. Attach hydraulic hoses and operate hydraulic to detent position. (System requires 2-3 gpm to operate) Turn on control box, verified by a constant power light being on. Operate LH Tilt Switch down to unfold LH Boom. Operate RH Tilt Switch down to unfold RH Boom. Operate LH Tilt Switch up to fold LH Boom. Operate RH Tilt Switch up to fold RH Boom. Operate Boom Raise/Lower Switch up to raise boom. Operate Boom Raise/Lower Switch down to lower boom.

Notes

SECTION III
Operation

General Information

WARNING

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

Read this operation section thoroughly. Acquaint yourself with the adjustments required to obtain efficient and trouble-free operations.

Preparing Tractor

Before operating 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 for 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 operating position. 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 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 required.

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

Preparing Tractor (continued)

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

NOTE: When using a Category III 3-point hitch, Category III quick attaching coupler or Category 3-N quick attaching coupler, two 1 7/16" OD lower hitch bushings (83881) and one 1 1/4" OD mast bushing (62640) are required. These bushings come with your SPRAYER.

Hydraulics

⚠ WARNING

- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**
- **RELIEVE THE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE THE HYDRAULIC POWER UNIT OPERATOR'S MANUAL FOR PROPER PROCEDURES.**

HYDRAULICS 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 -- Refer to Torque Chart on page 4-4.

Bolts and Nuts

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

Spray Tank & Boom 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.**

1. Fill the main tank with approximately 50 gallons of water. Run pump for approximately 30 seconds to purge agitation and filter plumbing.
2. Dispense rinse water through boom by running pump, stopping pump when solution tank is empty.
3. Rinse main tank by running pump and fill the tank with approximately 100 gallons of water.

IMPORTANT

- *When sprayer tank is empty, the pump can run dry leading to premature pump seal failure. Immediately turn off the engine.*

4. Dispense rinse water through boom by running pump, stopping pump when solution tank is empty.
5. Repeat steps 3 and 4.

SECTION IV
Maintenance

Sprayer Calibration

Verify Nozzle Flow

The following procedure should be checked 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.

Winterizing

Sprayer Plumbing

⚠ WARNING

- **ANTIFREEZE MAY CAUSE SERIOUS INJURY OR DEATH. DISPOSE OF USED ANTIFREEZE ACCORDING TO LOCAL LAWS AND REGULATIONS.**

- **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.**

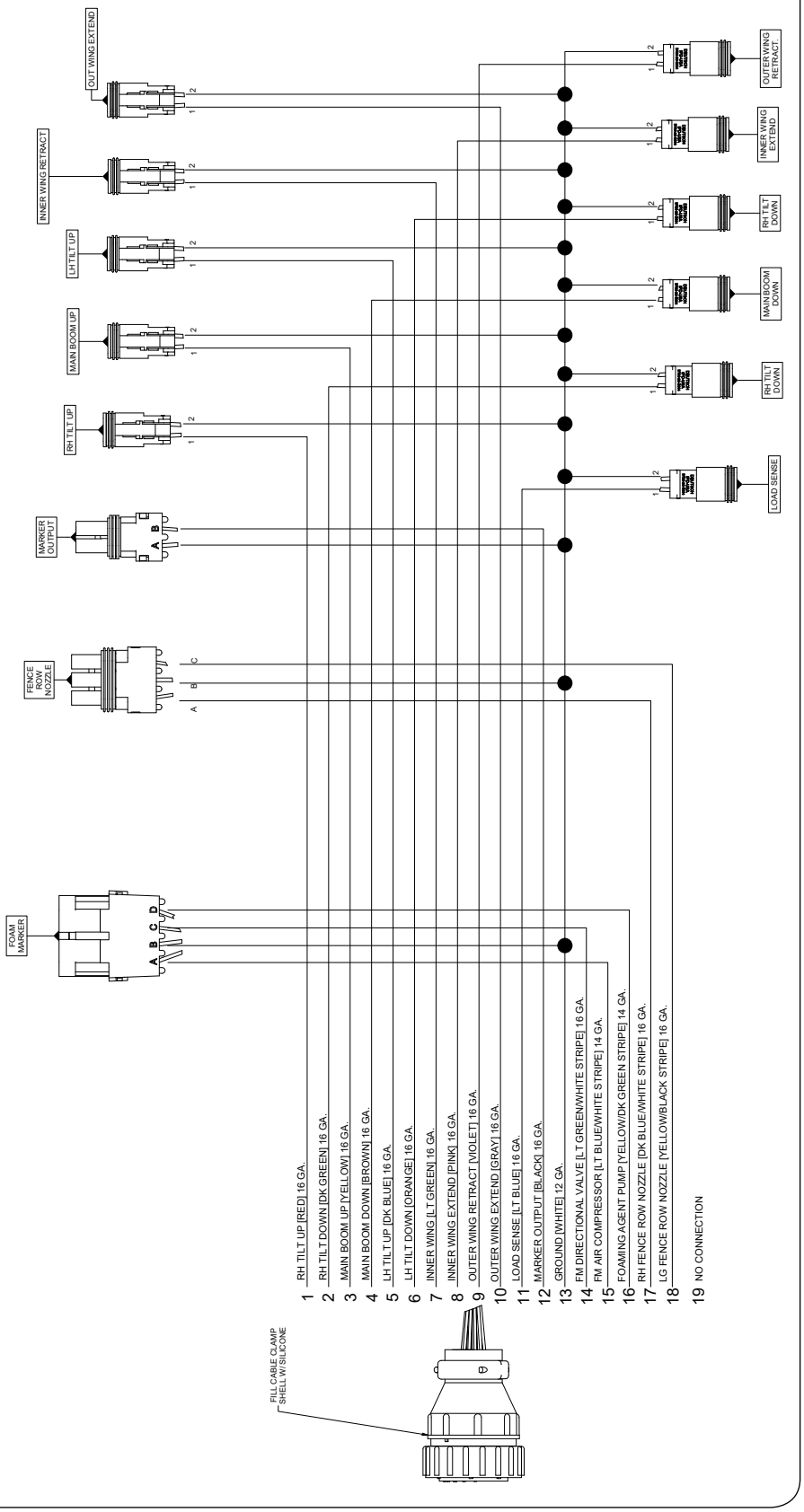
IMPORTANT

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

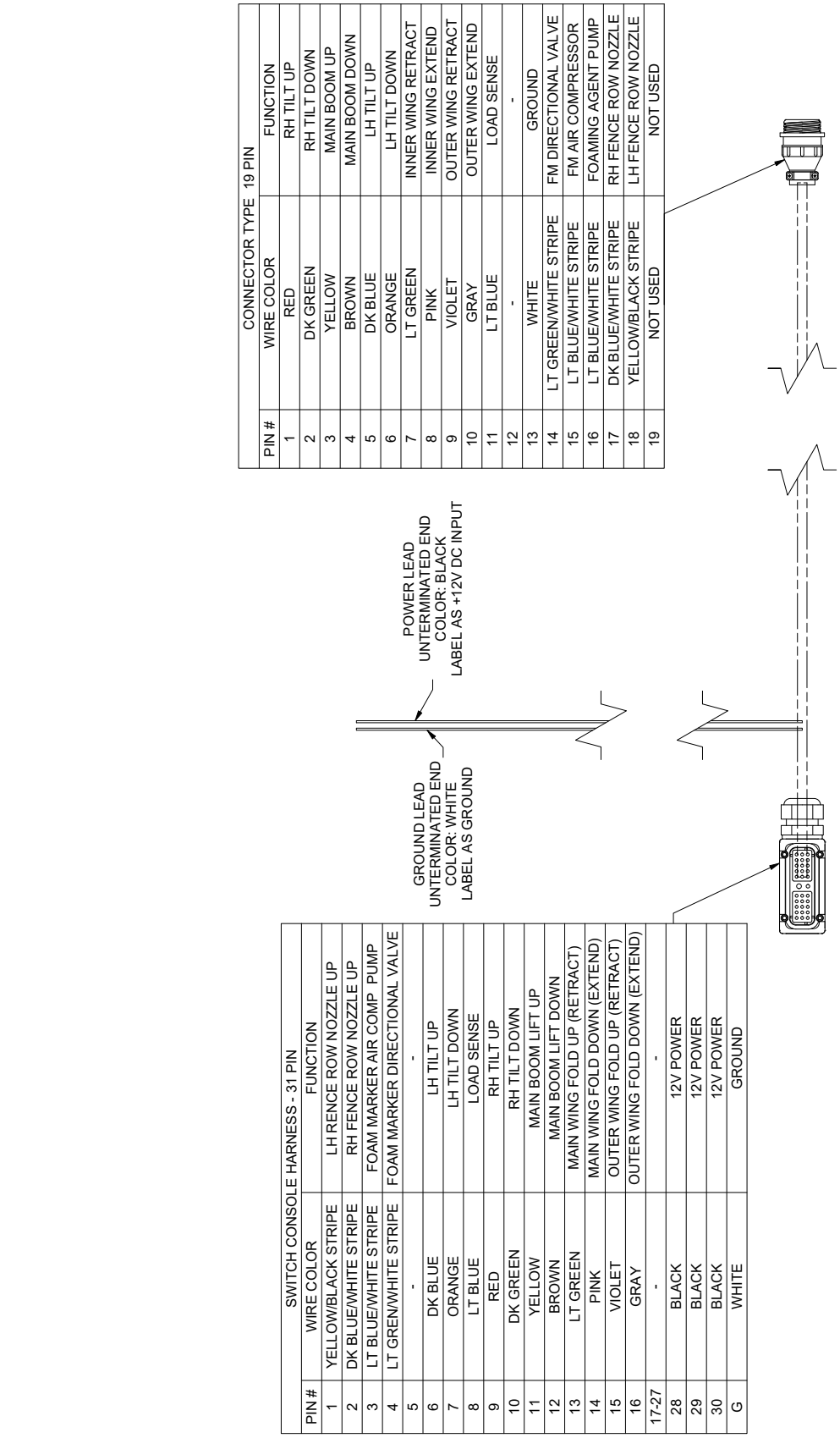
Before storing the sprayer in the freezing climates, perform the following winterizing procedure:

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.

Electrical Schematic - Main Harness #41187



Electrical Schematic - Power Harness #9503093



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

Hydraulic Fittings - Torque and Installation

Tightening O-Ring Fittings

1. Inspect components for damage or contamination. Do not connect any other type of fitting to an O-ring fitting.
2. For adjustable fittings, insure the jam nut and washer are fully backed up.
3. Lubricate the O-ring and threads on the fitting.
4. Turn the fitting into the port until it is finger tight.
5. For adjustable fittings, set in the desired position.
6. Using a wrench, torque the fitting to the value in the below table. For adjustable fittings the jam nut will be tightened.

NOTE: Never use a power tool to install a fitting.

Dash Size	Thread Size	Straight Stud Torque (Ft-Lbs)	Adjustable Stud Torque (Ft-Lbs)
-5	1/2-20	14-19	10-14
-6	9/16-18	18-24	12-16
-8	3/4-16	27-43	20-30
-10	7/8-14	36-48	30-36
-12	1-1/16-12	65-75	44-54
-14	1-3/16-12	75-99	53-70
-16	1-5/16-12	85-123	59-80
-20	1-5/8”-12	115-161	75-100
-24	1-7/8”-12	125-170	105-125

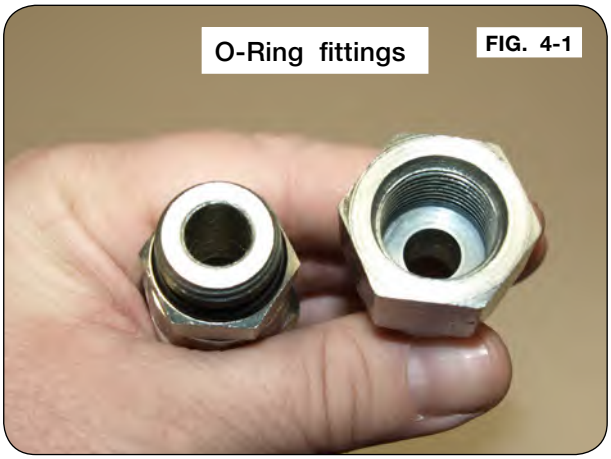


FIG. 4-1

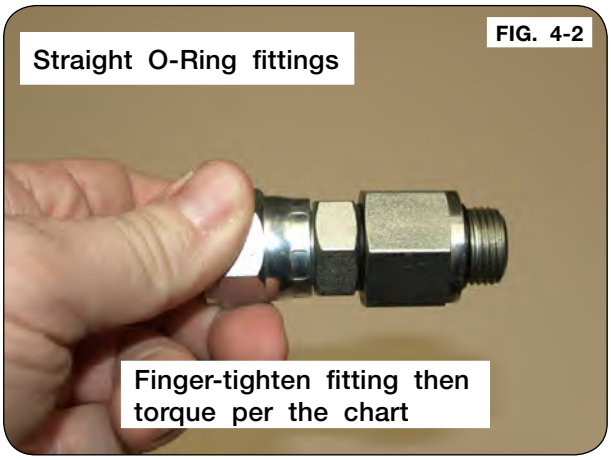


FIG. 4-2

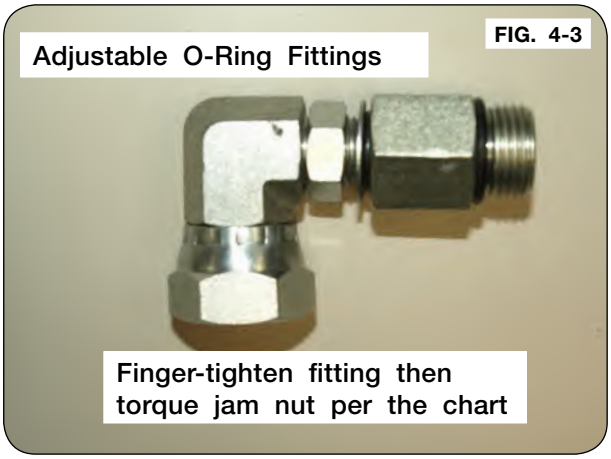


FIG. 4-3

Hydraulic Fittings – Torque and Installation (continued)

Tightening JIC Fittings

1. Inspect all components for damage or contamination. Do not connect any other type of fitting to a JIC fitting.
2. Lubricate the threads.
3. Turn the fitting into the port until it bottoms out.
4. Use one wrench on the fixed hex on the hose to prevent twisting and a second on the swivel. Tighten the fitting another 60 degrees (or one flat)

NOTE: Never use a power tool to install a fitting.

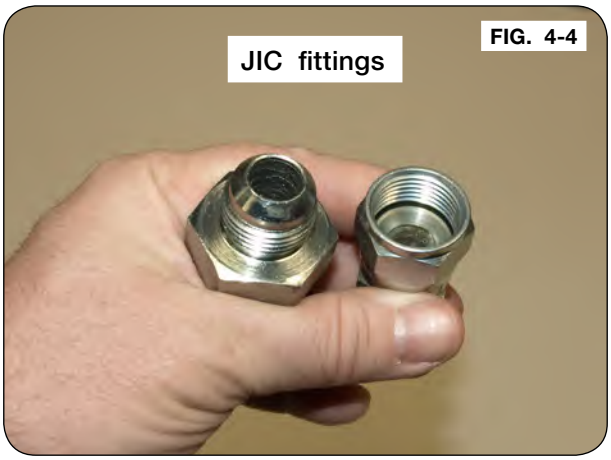


FIG. 4-4

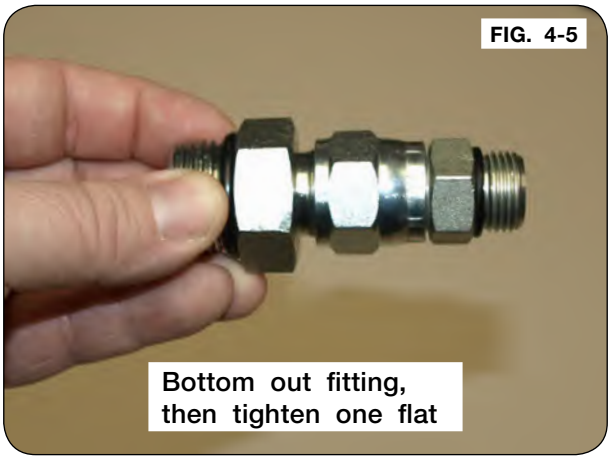
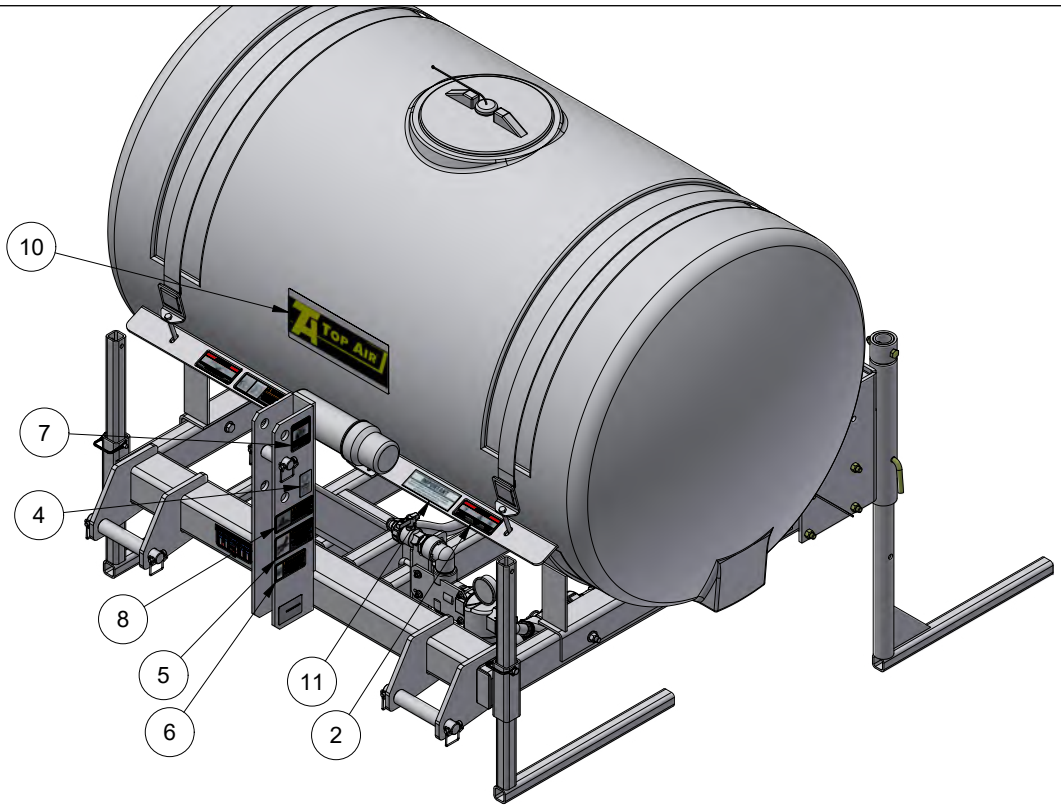


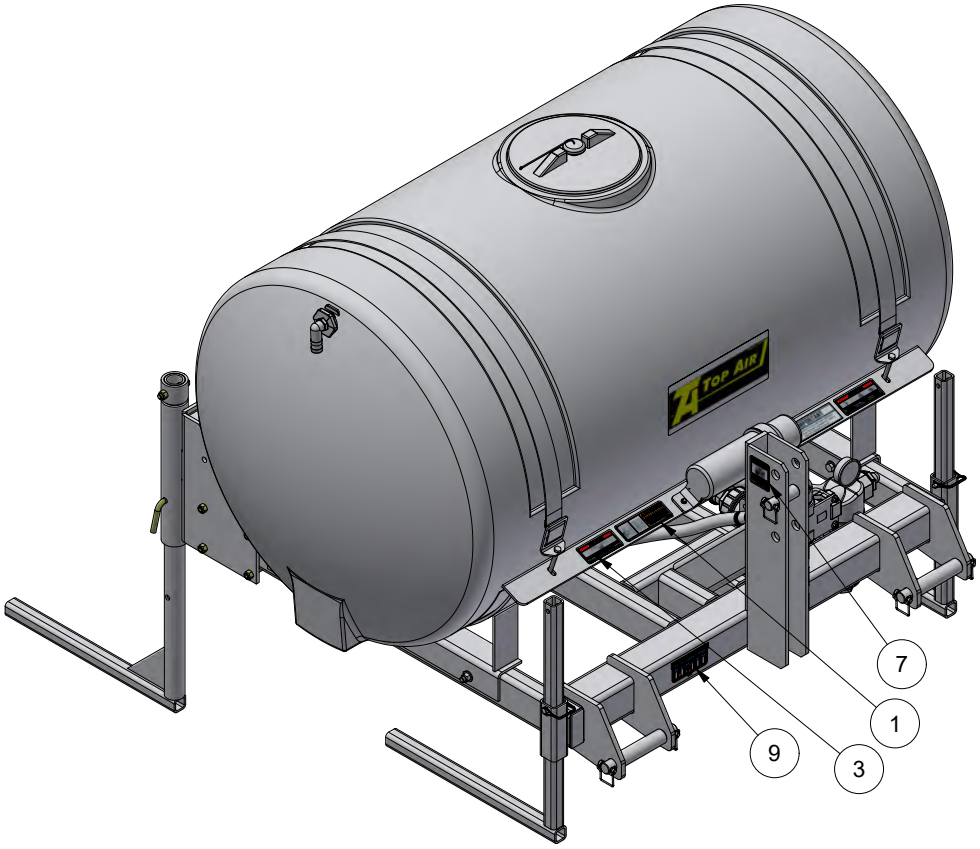
FIG. 4-5

SECTION V
Parts

Decals

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





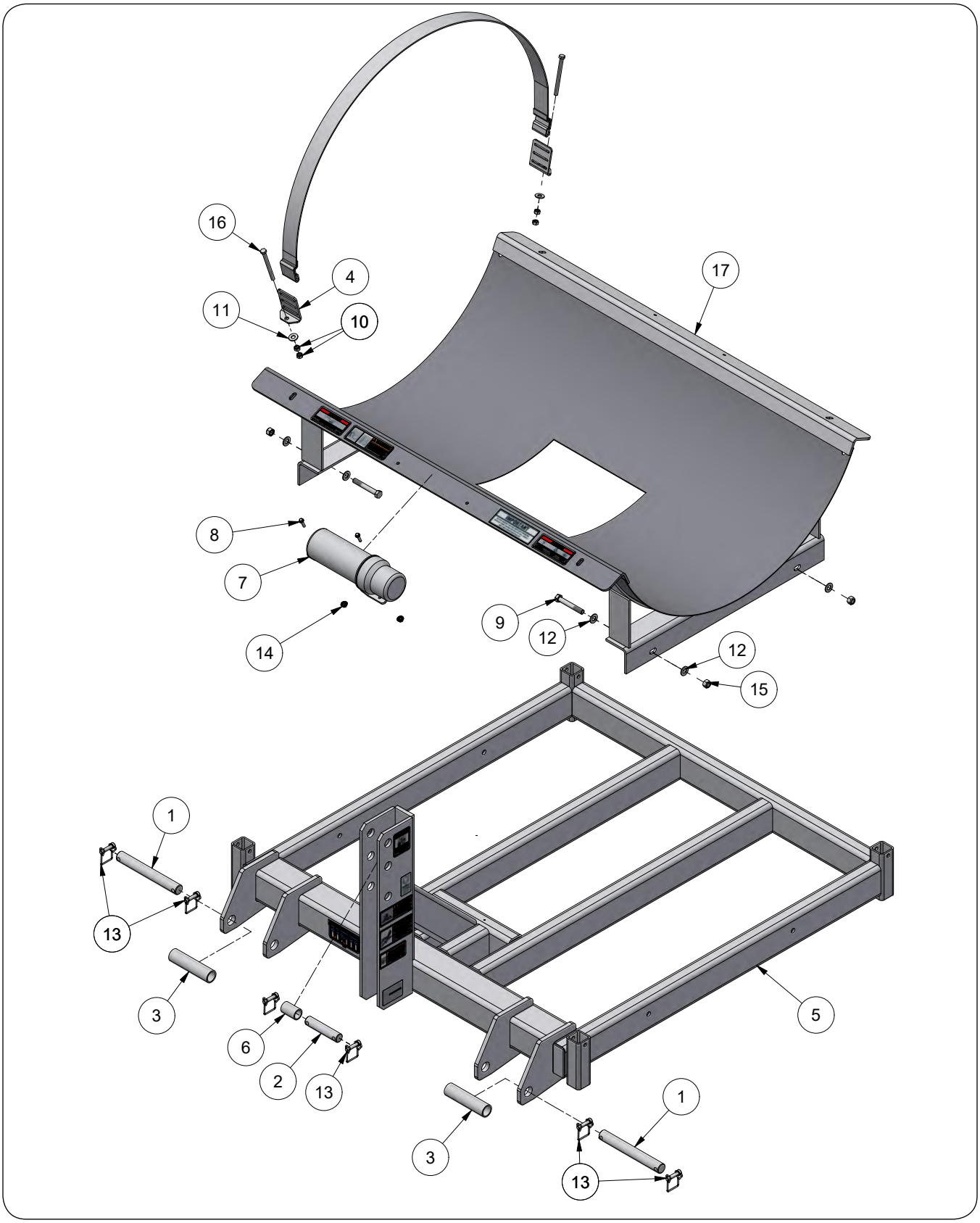
Decals

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	901255	Decal, WARNING "Falling Machine..."	1	
2	901256	Decal, DANGER "Chemical Exposure..."	1	
3	901258	Decal, DANGER "Electric Shock..."	1	
4	91605	Decal, FEMA	1	
5	95445	Decal, WARNING "High-Pressure Fluid..."	1	
6	97961	Decal, WARNING "Read and Understand..."	1	
7	97972	Decal, WARNING "Standing Between Implements..."	2	
8	99507	Decal, WARNING "Falling Equipment..."	1	
9	TA510031	Decal, USA	1	
10	TA510041	Decal, TOP AIR	2	
11	TA510212	Decal, Important "Do Not Exceed 120PSI"	1	

Frame Components

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



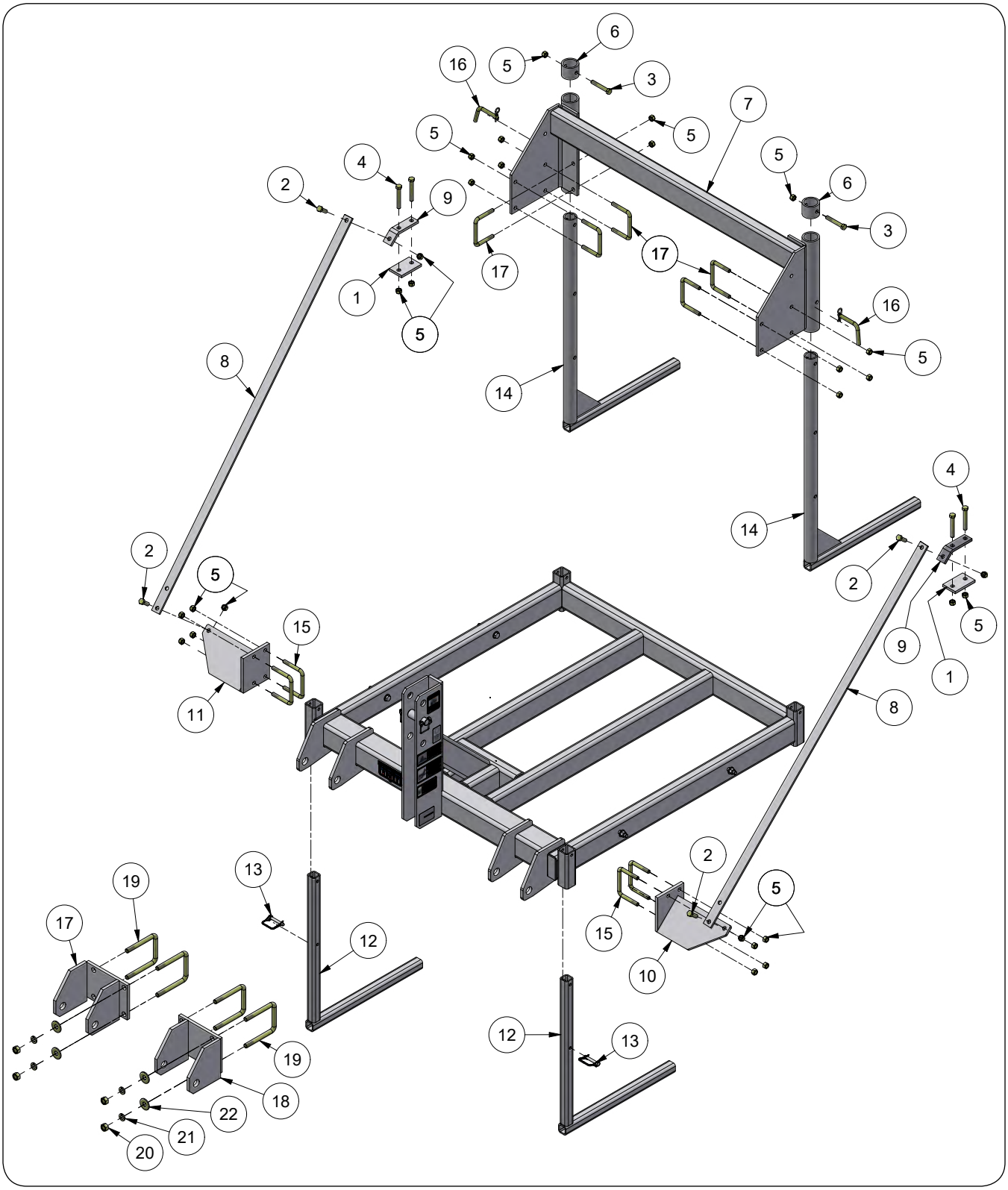
Frame Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	404738	Pin 1 1/8” Dia. x 9”	2	
2	404739	Pin 1” Dia. x 4 3/4”	1	
3	40813	Spacer Tube, 5 3/4"	2	
4	40844	Tank Strap Clip	4	
5	51085B	Frame with Decals	1	Serial #D51400100 & Up
6	62640	Spacer Bushing, 2"	1	
7	900552	Manual Holder	1	
8	901101	Flange Screw, 1/4"-20UNC x 1" G5	2	
9	9390-109	Capscrew, 1/2"-13UNC x 3 1/2" G5	4	
10	9394-006	Hex Nut, 3/8"-16UNC	8	
11	9405-076	Flat Washer, 3/8" USS	4	
12	9405-086	Flat Washer, 1/2" SAE	8	
13	94652	Lynch Pin 3/8”	6	
14	97189	Hex Nut/Large Flange, 1/4"-20UNC	6	
15	9800	Locknut/Top, 1/2"-13UNC	8	
16	TA0-907131-0	Capscrew, 3/8"-16UNC x 4 1/2" G5	4	
17	40773B	Cradle Frame with Decals	1	

Support Stand Components

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



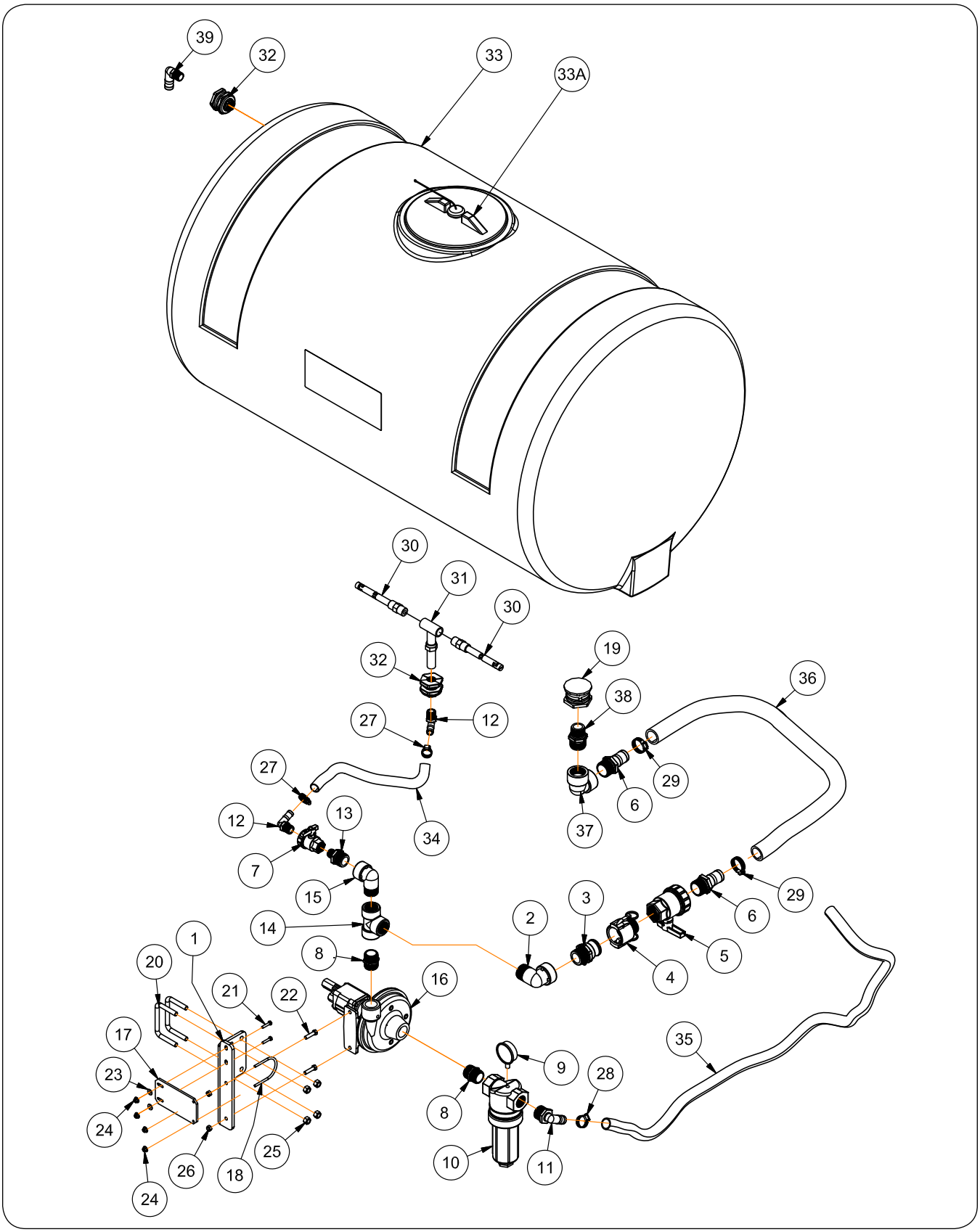
Support Stand Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	8535B	Plate	2	Serial #D51400100 & Up
2	9390-101	Capscrew, 1/2"-13UNC x 1 1/2" G5	4	Serial #D51400100 & Up
3	9390-108	Capscrew, 1/2"-13UNC x 3 1/4" G5	2	
4	9390-109	Capscrew, 1/2"-13UNC x 3 1/2" G5	4	Serial #D51400100 & Up
5	9800	Locknut/Top, 1/2"-13UNC	28	Serial #D51400100 & Up
6	40728B	Collar	2	
7	40734B	Rear Support Frame	1	
8	40759B	Bar, 1 1/2" x 62 5/8"	2	Serial #D51400100 & Up
9	40760B	Bar, 3/8" x 1 1/2" x 6"	2	Serial #D51400100 & Up
10	40767B	Front Support Bracket - Left-Hand	1	Serial #D51400100 & Up
11	40768B	Front Support Bracket - Right-Hand	1	Serial #D51400100 & Up
12	40860B	Stand	2	
13	9000938	Lynch Pin, 3/8" Dia.	2	
14	40861B	Rear Stand	2	
15	95161	U-Bolt, 1/2"-13UNC x 3 1/2", 4 9/16" C/C	4	Serial #D51400100 & Up
16	900803	Bent Pin, 1/2" Dia. w/Hairpin Cotter	2	
17	TA510000	U-Bolt, 1/2"-13UNC x 3 1/4", 4 1/2" C/C	6	
18	TA540270B	Lower Hitch Mount Right-Hand	1	Prior to Serial #D51400100
19	TA540274B	Lower Hitch Mount Left-Hand	1	Prior to Serial #D51400100
20	TA510002	U-Bolt, 5/8"-11UNC x 5 1/2", 4 5/8" C/C	4	Prior to Serial #D51400100
21	9394-014	Hex Nut, 5/8"-11UNC	8	Prior to Serial #D51400100
22	9404-029	Lock Washer, 5/8"	8	Prior to Serial #D51400100
23	9405-100	Flat Washer, 5/8" USS	8	Prior to Serial #D51400100

Tank and Plumbing

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



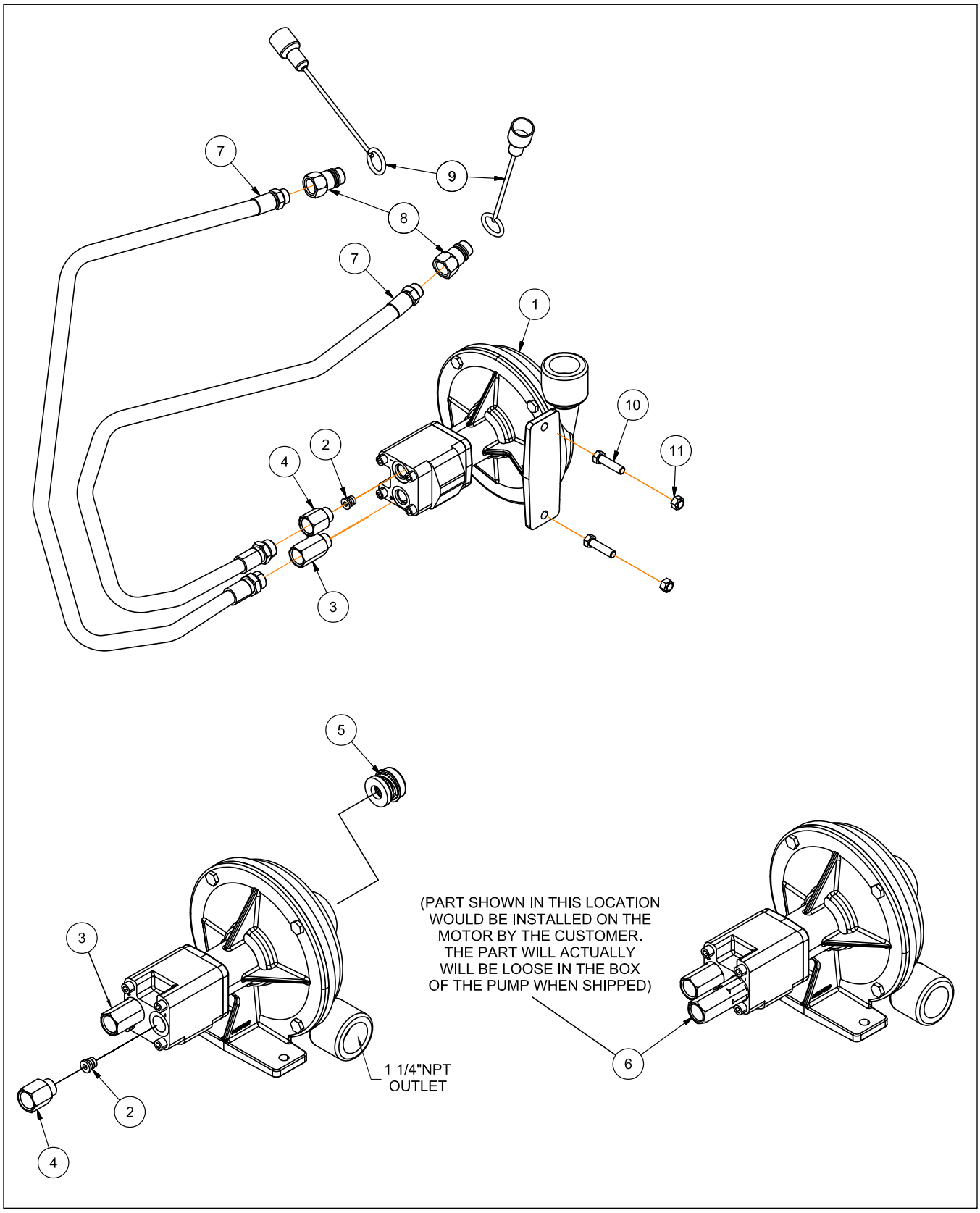
Tank and Plumbing

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	404734B	Plate	1	
2	TA814694	Elbow 90°	1	
3	TA811225	Quick Disconnect Coupling	1	
4	TA810725	1 1/2" Male Coupling	1	
5	TA811521	1 1/4" Ball Valve	1	
6	TA814875	Hose Barb 1 1/2-11	1	
7	TA811515	3/4" Ball Valve	1	
8	TA814615	1 1/4" Close Poly Nipple	2	
9	TA801157	Gauge 2 1/2" Dial	1	
10	404740	Strainer	1	
11	TA814971	Elbow 90° Hose Barb 1 1/4-11 NPTF (1" Hose)	1	
12	TA814961	Elbow 90° Hose Barb 3/4-14 NPTF (3/4" Hose)	2	
13	TA814819	Reducer Nipple	1	
14	TA814783	Poly Tee	1	
15	TA814693	Elbow 90°	1	
16	901955	Hydraulic Pump 206, Inlet 1 1/2, Outlet 1 1/4	1	
17	404800B	Plate	1	
18	9001114	U-Bolt 1/4-20	1	
19	901968	Tank Fitting 1 1/4" Double Threaded	1	
20	91434	U-Bolt, 1/2-13 x 3"	2	
21	9390-006	Capscrew, 1/4-20 UNC x 1 1/4 (Gr. 5)	2	
22	9390-057	Capscrew, 3/8-16 UNC x 1 1/2 (Gr. 5)	2	
23	9405-064	Flat Washer, 1/4" USS	2	
24	97189	Serrated Hex Nut 1/4-20 UNC	6	
25	9800	Locknut, 1/2-13 UNC	8	
26	9928	Locknut 3/8-16UNC	2	
27	TA800910	Stainless Steel Clamp	2	
28	TA800912	Stainless Hose Clamp	1	
29	TA800918	Stainless Steel Hose Clamp	2	
30	TA801250	3/4 Agitator	2	
31	TA801255	Agitator Tee	1	
32	TA805408	Tank Fitting 3/4" Double Threaded	2	
33	TA805570	300 Gallon Tank	1	
33A	TA805187	Lid	1	
34	TA806250	EPDM Hose 3/4"	1	
35	TA806275	EPDM Hose 1"	1	
36	TA806331	1 1/2" Fertilizer Solution Hose	1	
37	TA814794	Elbow 90°	1	
38	TA814825	Reducer Nipple	1	
39	TA814963	Elbow	1	

Hydraulic Components

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



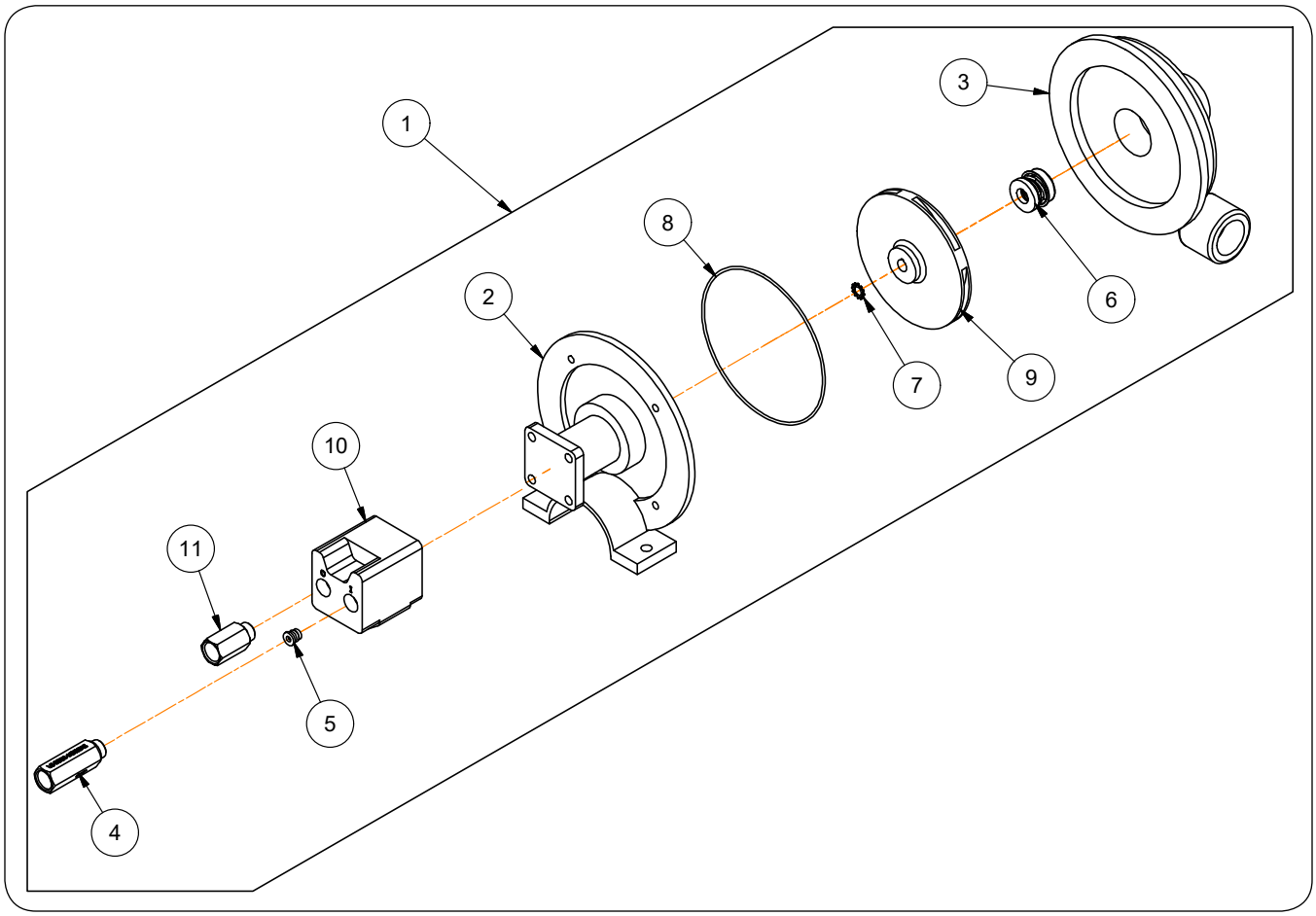
Hydraulic Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	901955	Hydraulic Pump 206, Inlet 1 1/2", Outlet 1 1/4"		Includes Items 2-6
2	901985	Insert w/O-Ring		
3	901975	Reverse Flow Check, 7/8-14UNF-2A Female Threads x 3/4-16UNF-2A Male Threads		
4	901974	Restrictor w/Orifice, 7/8-14UNF-2A Female Threads x 3/4-16UNF-2A Male Threads		
5	TA830733	Seal, Mechanical Silicon Carbide		
6	902009	Flow Limiter Valve, 3/4-16 O-Ring Male x 7/8-14 O-Ring Female		
7	901987	Hydraulic Hose, 3/8" x 90", 3/4-16 O-Ring Male x 7/8-14 O-Ring Male		
8	91383	Male Tip Coupling, 3/4-16 O-Ring Female Thread		
9	91511	Dust Cap/ISO Coupler		
10	9390-057	Capscrew, 3/8"-16 UNC x 1 1/2" G5		
11	9928	Locknut/Top, 3/8"-16UNC		

Hydraulic Spray Pump - ACE 206

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



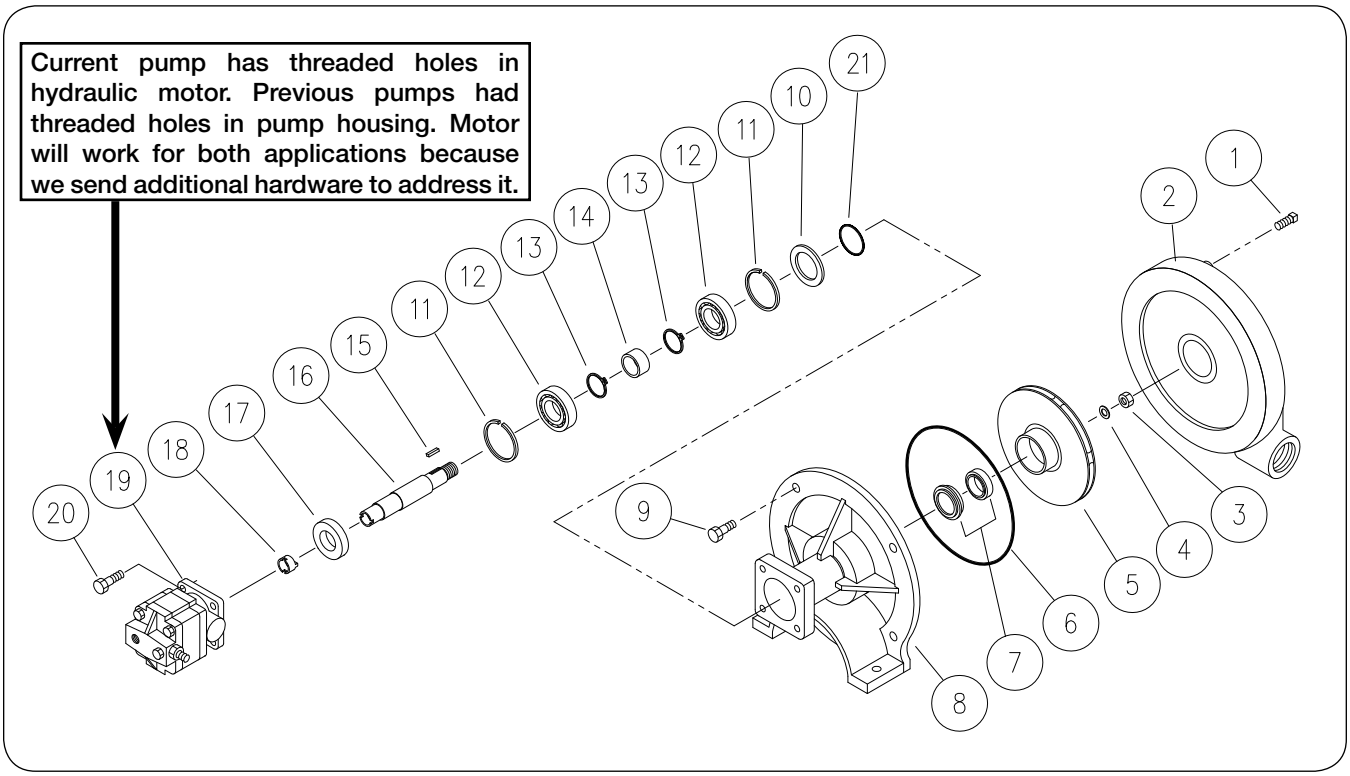
Hydraulic Spray Pump - ACE 206

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	901955	Hydraulic Pump 206, Inlet 1 1/2, Outlet 1 1/4	-	Includes Items 2 through 11
	TA830976	Pump Repair Kit	-	
2	TA829560	Mounting Frame	1	
3	TA827910	Volute, 1 1/2" Suction & 1 1/4" Discharge	1	
4	902009	Flow Limiter Valve	1	
5	901985	Insert w/O-Ring	1	
	TA831038	O-Ring	1	
6	TA830733	Silicon Carbide Seal	1	
7	TA829500	Star Washer, 3/8 S.S.	1	
8	TA827900	O-Ring Volute Seal	1	
9	TA827918	Impeller	1	
10	TA829260	Hydraulic Motor	1	
	TA830955	Seal Kit	-	
11	901975	Reverse Flow Check	1	

Hydraulic Spray Pump - ACE HYD 200-304

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



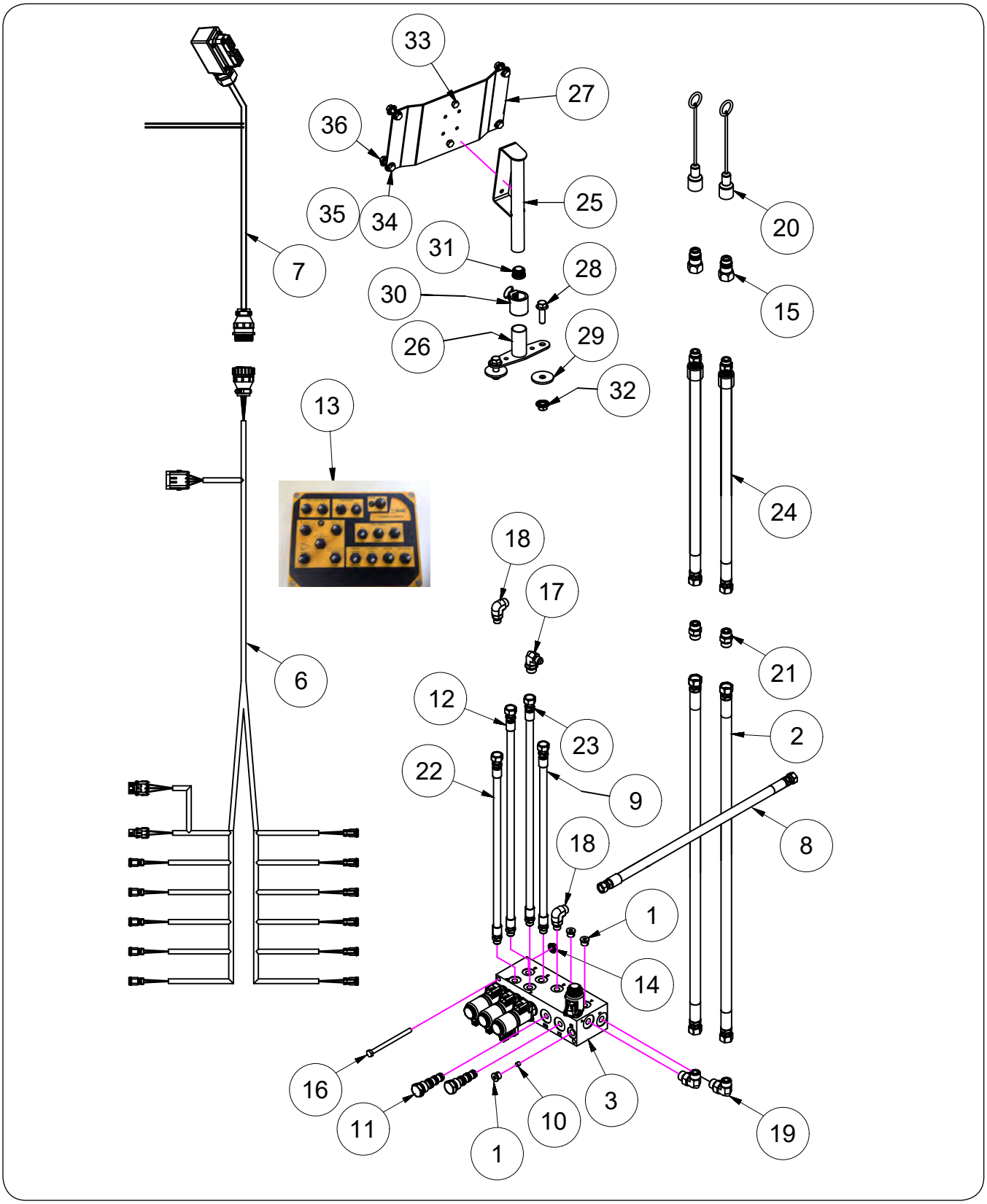
Hydraulic Spray Pump - ACE HYD 200-304

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
	TA825195	Pump Complete, ACE 200-304	1	Includes Items 1 thru 20
	TA830976	Repair Kit - Pump - Incl. 6,7	-	
1	TA826325	Pipe Plug	4	
	TA826325	Pipe Plug, S.S. (Option)	4	
2	TA830738	Volute, 2" x 1 1/2"	1	
3	TA830731	Nut, 3/8NF	1	
4	TA829500	Star Washer, 3/8 S.S.	1	
5	TA827920	Impeller, Cast Iron	1	
	TA829650	Impeller, Cast Iron - Ext. (Opt.)	1	Model 2400
6	TA827850	Gasket, 4-Hole	1	
	TA827875	O-Ring, Body Seal	1	
7	TA827725	Seal, Mechanical w/ 7a -Viton	1	
	TA830733	Seal w/ 7a - Silicon Carbide (Opt.)	1	
8	TA830734	Mounting Frame, 300 Motor	1	
9	TA830739	Capscrew, 3/8UNC x 3/4	4	
	TA826650	Capscrew, 3/8UNC x 3/4 S.S. (Opt.)	4	
10	TA826275	Slinger	1	
11	TA826850	Snap Ring, Internal	2	
12	TA826725	Ball Bearing, Sealed	2	
13	TA826900	Snap Ring, External	2	
14	TA826875	Spacer	1	
15	TA830736	Key, 1/8 x 1/8 x 13/16" - Extended	1	
	TA829475	Key, 1/8 x 1/8 x 1/2"	1	
16	TA830737	Shaft, 5/8" Dia. - Extended Key	1	
	TA829625	Shaft, 5/8" Dia. - Keyway	1	
	TA829600	Shaft, 5/8" Dia. - Keyway S.S. (Opt.)	1	
17	TA827715	Seal Support Spacer	1	
18	TA829200	Coupling, Motor	1	
19	TA829230	Hydraulic Motor, 11 GPM	1	
	TA830910	Repair Kit - Hydraulic Motor	-	
20	TA829300	Capscrew, 5/16UNC x 3/4	4	
21	TA827700	O-Ring, Shaft Seal	1	
22	TA829080	Restrictor Orifice	1	Not Shown

Electric Over Hydraulic System Option - Command Center IV
For Sprayers with 45'/60' HYDRAULIC FOLD BOOMS

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



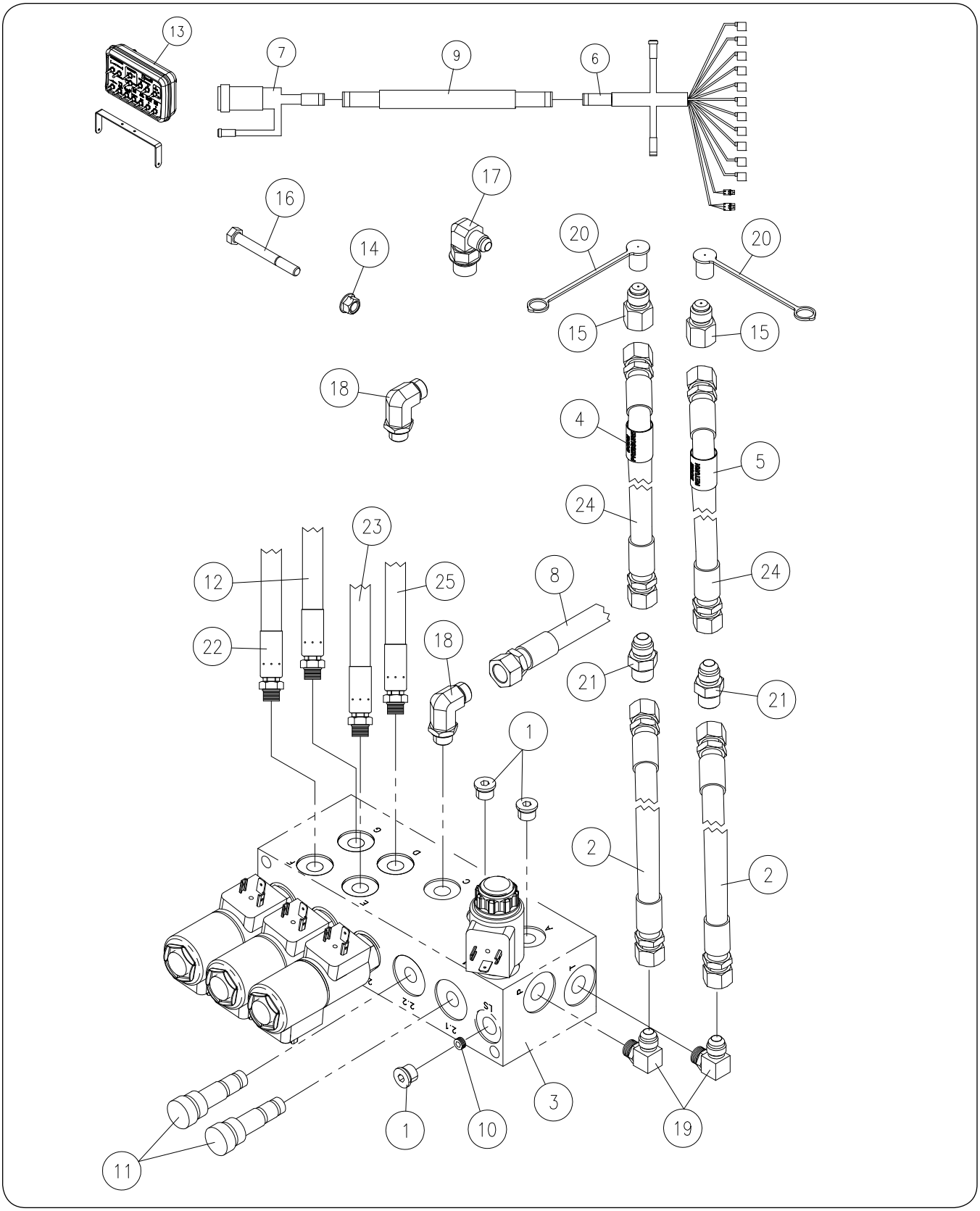
Electric Over Hydraulic System Option - Command Center IV
For Sprayers with 45'/60' HYDRAULIC FOLD BOOMS

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	402449	Electric Over Hydraulic System Package		
1	9003423	Plug 9/16-18 O-R Male	3	
2	9003557	Hose 1/2x120 Hyd 3000 PSI	2	
3	9006399	5 Spool Control Valve	1	
4	9003937	Hose Marker	1	
5	9003938	Hose Marker	1	
6	41187	Harness - Main	1	
7	9503093	Harness - Power	1	
8	9003993	Hose 3/8x54 Hyd 3000 PSI	1	
9	TA500731	Hose 1/4x42 Hyd	1	
10	9004326	Plug 1/16-27 NPT Hollow	1	
11	9005448	Cavity Plug	2	
12	9005449	Hose 1/4x30 Hyd 3000 PSI	1	
13	9007776	Sprayer Switch Box, Command Center IV	1	
14	91257	Hex Nut/LRG FLG 5/16-18	3	
15	91383	Male Tip Coupling 3/4-16	2	
16	9390-043	Capscrew 5/16-18UNC x 4 1/2 G5	3	
17	9874	Elbow 90 Deg 9/16-18 JIC	1	
18	TA0-924691-0	Elbow 90 Deg 11/16-18 Flat	5	
19	TA0-934612-0	Hyd, 13/16 FS X 3/4, Elbow	2	
20	91511	Hydraulic Pioneer Dust Cap	2	
21	TA0-934688-0	Adapter, 8MFS X 8MFS	2	
22	TA500709	Hose 1/4x60 Hyd 3000 PSI	1	
23	TA500710	Hose 1/4 Hyd 60FF Pace	1	
24	TA500716	Hose 1/2x300 Hyd 3000 PSI	2	
25	407802B	CONTROL BOX BRACKET WELDMENT	1	
26	407805B	CONTROL BOX BRACKET WELDMENT	1	
27	411911B	PLATE 12GAx5 5/16x10 3/16	1	
28	9003259	FLANGE SCREW 3/8-16UNCx1 1/4 G5	2	
29	9005696	FENDER WASHER 3/8	2	
30	9005888	TUBE-ADJUSTER	1	
31	9005889	PLUG 7/8D (BLACK LDPE)	1	
32	91263	NUT/LRG FLG 3/8-16 UNC	2	
33	9390-003	HCS 1/4-20UNCx3/4 G5	2	
34	9390-005	HCS 1/4-20UNCx1 G5	4	
35	9405-062	FLAT WASHER 1/4 SAE Z-PLT	4	
36	97189	HEX NUT/LRG FLG 1/4-20UNC ZY/CL-PL	4	

Electric Over Hydraulic System Option - Command Center III
For Sprayers with 45'/60' HYDRAULIC FOLD BOOMS

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



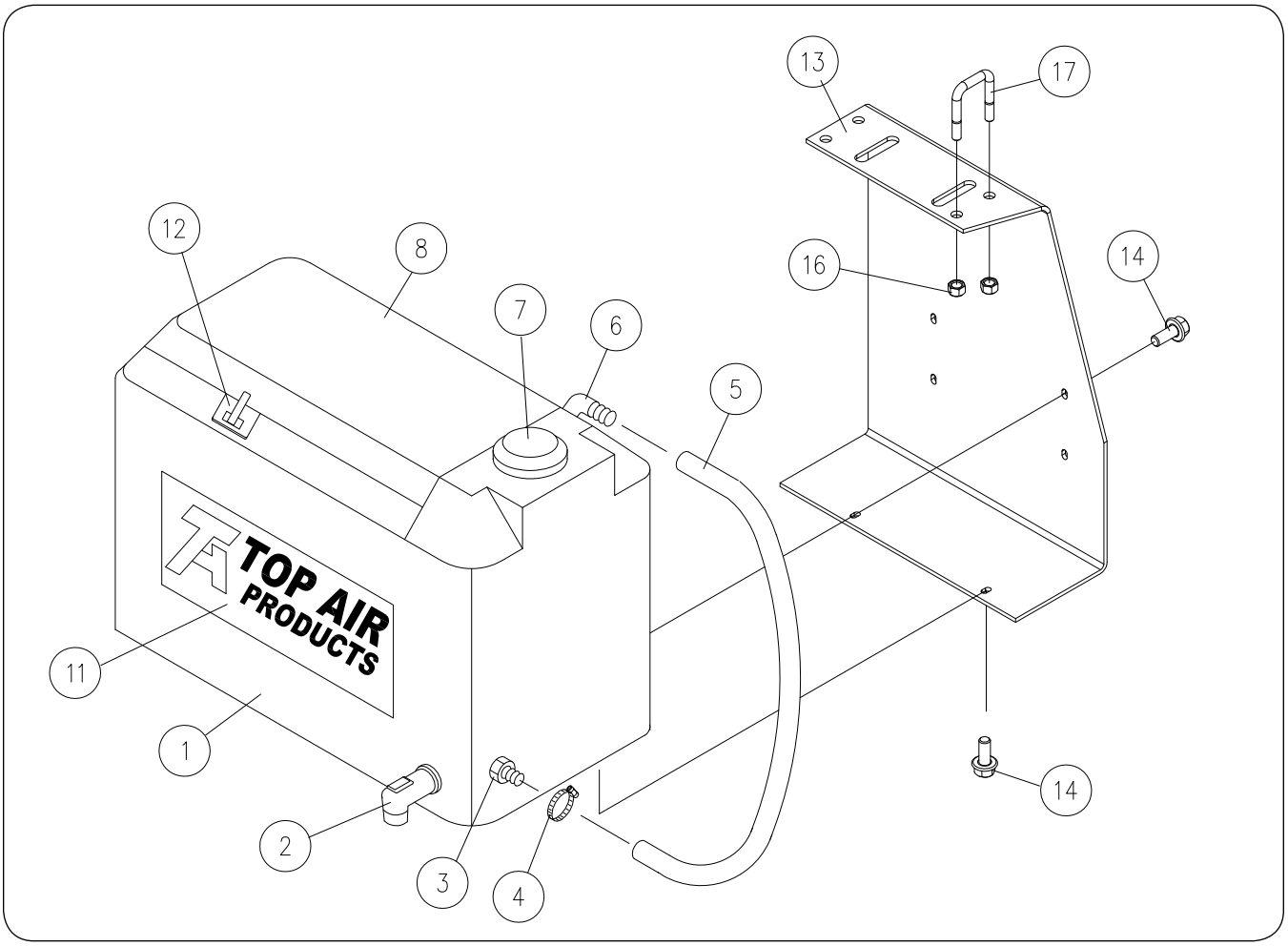
Electric Over Hydraulic System Option - Command Center III
For Sprayers with 45'/60' HYDRAULIC FOLD BOOMS

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9003423	Plug 9/16-18 O-R Male	3	
2	9003557	Hose 1/2x120 Hyd 3000 PSI	2	
3	9003797	5 Spool Control Valve	1	
4	9003937	Hose Marker	1	
5	9003938	Hose Marker	1	
6	9003984	Harness - Main	1	
7	9003985	Harness - Power	1	
8	9003993	Hose 3/8x54 Hyd 3000 PSI	1	
9	9004319	Harness - Extension 120"	1	
10	9004326	Plug 1/16-27 NPT Hollow	1	
11	9005448	Cavity Plug	2	
12	9005449	Hose 1/4x30 Hyd 3000 PSI	2	
13	9005942	Sprayer Switch Box, Command Center III	1	
14	91257	Hex Nut/LRG FLG 5/16-18	3	
15	91383	Male Tip Coupling 3/4-16	2	
16	9390-043	Capscrew 5/16-18UNC x 4 1/2 G5	3	
17	9874	Elbow 90 Deg 9/16-18 JIC	1	
18	TA0-924691-0	Elbow 90 Deg 11/16-18 Flat	5	
19	TA0-934612-0	Hyd, 13/16 FS X 3/4, Elbow	2	
20	91511	Hydraulic Pioneer Dust Cap	2	
21	TA0-934688-0	Adapter, 8MFS X 8MFS	2	
22	TA500709	Hose 1/4x60 Hyd 3000 PSI	1	
23	TA500710	Hose 1/4 Hyd 60FF Pace	1	
24	TA500716	Hose 1/2x300 Hyd 3000 PSI	2	
25	TA500731	Hose 1/4x42 Hyd	1	

Optional Clean Water Tank Components Kit #40754B

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



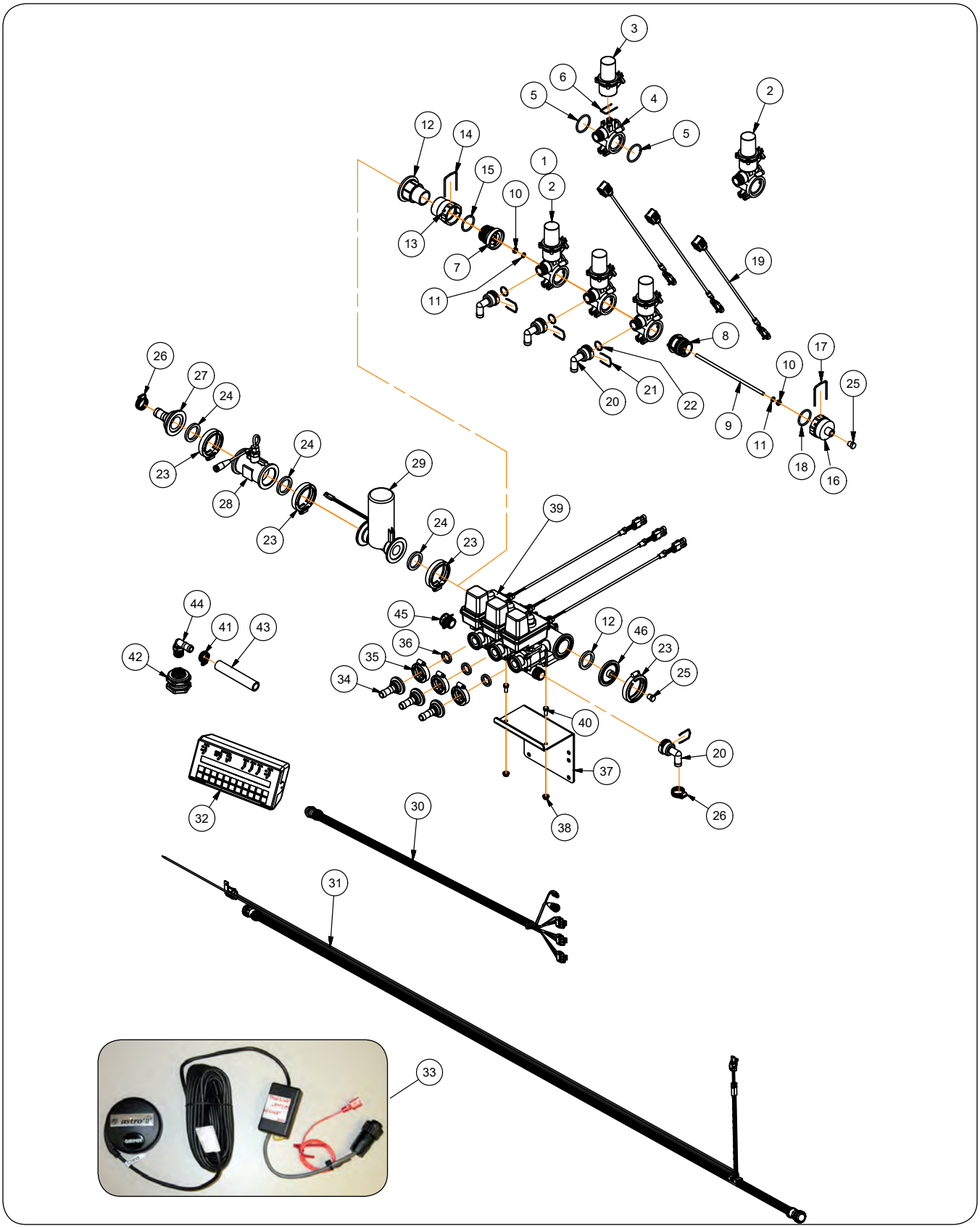
Optional Clean Water Tank Components Kit #40754B

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	TA580278	Clean Water Tank Assembly		
2	TA510073	KBI Fitting (Spigot)		
3	TA810300	Straight, 3/4 MPT x 1/2 HB		
4	TA800902	Hose Clamp, M-6		
5	TA806554	Clear Vinyl Tubing, 1/2"		
6	TA808275	Elbow, 3/4 MPT x 1/2 HB		
7	TA510074	Kelch Cap		
8	TA510066	Lid for Storage Compartment		
9	TA510070	Tank Hinge (Not Shown)		
10	9003503	Rivet, 3/16 x 1/4 (Hinge) (Not Shown)		
	9003502	Rivet, 3/16 x 1/8 (Latch) (Not Shown)		
11	TA510041	Decal, "TOP AIR"		
12	TA510071	Snap Latch		
13	40765B	Mounting Bracket for Tank		
14	91256	Large Flange Screw, 5/16-18 x 3/4		
15	N/A	N/A		
16	9800	Top Locknut, 1/2-13 UNC		
17	9811	U-Bolt, 1/2-13 x 3" Lg.		For 45' Manual Fold Units Only

Optional Raven Controller

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



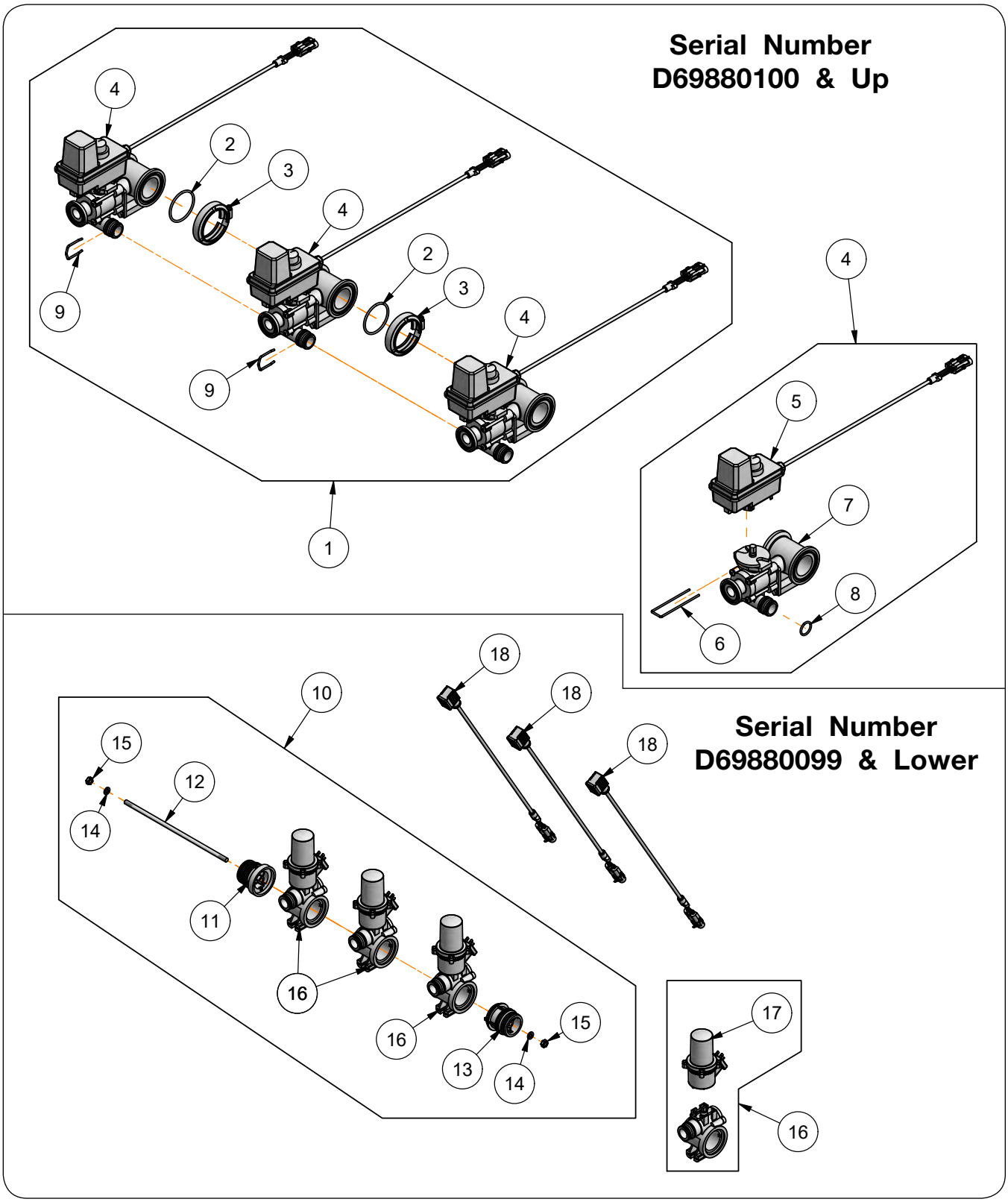
Optional Raven Controller Kit

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
	40796B	Optional Raven Controller Kit (Raven 440/450)		Includes Items 23 through 33
1	902193	430EC Ball Valve Manifold		Includes Items 2 through 11 Serial Number D69880099 & Lower
2	902240	Motor & Valve Body Assembly		Includes Items 3 through 6
3	902207	EC Motor ONLY		
4	N/A	Valve Body Kit		
5	902191	O-Ring		
6	902208	Motor Retaining Clip		
7	902186	Female Inlet Adapter		
8	902190	Male Inlet Adapter		
9	902189	Connecting Rod		Stainless Steel
10	902195	Hex Nut M8 x 1.25		Stainless Steel
11	902194	Lock Washer M8		Stainless Steel
12	902241	Manifold Adapter 1 1/2 NPT		
13	902242	Adapter Fitting Kit		Includes Items 14 & 15
14	902187	Retaining Clip		Stainless Steel
15	902188	O-Ring		
16	902226	Female Gauge Port LQC 1/4 NPT		Includes Items 17 & 18
17	902187	Retaining Clip		Stainless Steel
18	902188	O-Ring		
19	902232	Manifold Wire Kit		
20	TA854885	Quick Connect Kit - 90° Hose Barb 3/4”		Includes Items 21 & 22
21	TA854883	Retaining Clip		Stainless Steel
22	TA854887	O-Ring		
23	TA815025	Flange Clamp, 2” Worm Screw	3	
24	TA811944	Gasket, 2 3/16” OD	3	
25	901484	Pipe Plug 1/4” NPT	1	
26	TA800912	Hose Clamp, 13/16” - 1 1/2”	1	
27	TA816024	Hose Barb, 2” Flange x 1” HS	1	
28	TA720365	Flow Meter	1	
29	TA720258	Flow Control Valve (1” Raven)	1	
30	9005729	Flow Cable, 12’ Lg.	1	
31	TA720563	Console Control Cable	1	
32	TA720314	Control Console Raven 440	1	
	TA720315	Control Console Raven 450		
33	TA723025	Astro GPS Speed Sensor	1	
34	TA815012	Hose Barb, 1" Flange x 3/4"	3	
35	TA815026	Clamp, 1" Flange	3	
36	TA815029	Gasket, 1" Flange	3	
37	407913B	Plate/Bracket	1	
38	9005639	Hex Flange Nut, 5/16"-18UNC SS	2	
39	9006627	Valve Assembly	1	Serial Number D69880100 & Up
40	900900-028	Capscrew, 5/16"-18UNC x 3/4" SS	2	
41	TA800910	Hose Clamp	1	
42	TA805408	Manifold Fitting	1	
43	TA806250	Hose	1	
44	TA814961	Elbow Hose Barb	1	
45	TA854884	Plug Kit	1	
46	TA883114	Plug, 2" Flange	1	

Ball Valve Assembly Components

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



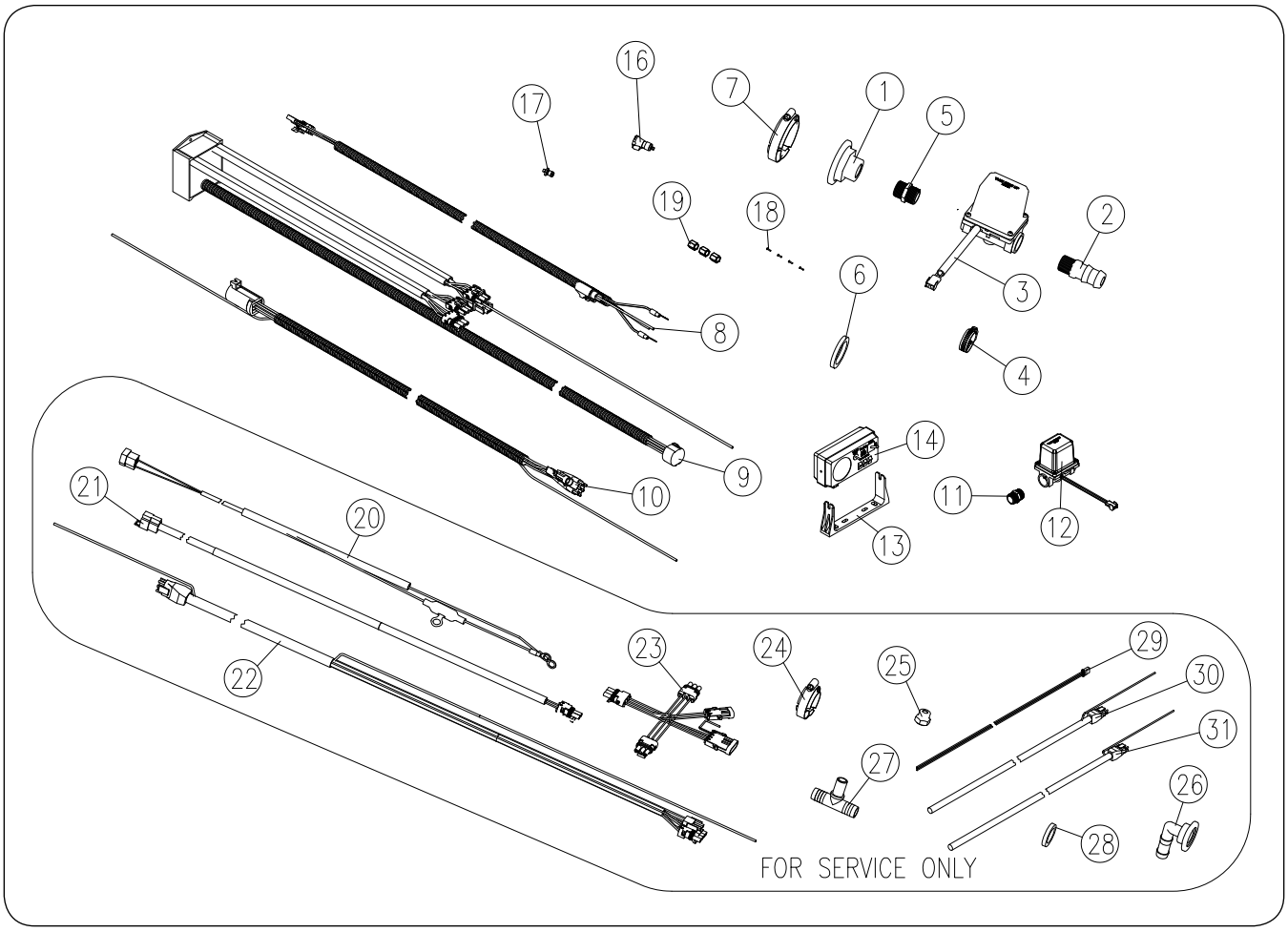
Ball Valve Assembly Components

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

ITEM	PART NO.	QTY		DESCRIPTION	NOTES
		3 SECTION	6 SECTION		
1	9006627	1	-	Ball Valve Manifold Assembly (SHOWN)	**Serial Number D69880100 & Up** Includes Items 2-9
1	9006629	-	1	Ball Valve Manifold Assembly	
2	9006626	2	5	O-Ring, 2 5/8" OD x 1/8" Thick	
3	TA815025	2	5	2" Flange Clamp, Port Worm Screw Clamp	
4	TA854881	3	6	Ball Valve 450 Flo-Bak, Single Manifold	Includes Items 5-8
5	TA854874	1	1	Shutoff Ball Valve, Motor Head	
6	TA854875	1	1	Retainer Clip	
7	TA854882	1	1	Ball Valve, 450 Flo-Bak Less Valve Only	
8	TA854887	1	1	O-Ring For Quick Connect Kit	
9	TA854883	2	5	Retainer Clip	
10	902193	1	-	Ball Valve Manifold Assembly (SHOWN)	**Serial Number D69880099 & Lower** Includes Items 11-17
10	9501715	-	1	Ball Valve Manifold Assembly	
11	902186	1	1	Female Inlet Adapter	
12	902189	1	-	Connecting Rod (SHOWN)	
12	9501618	-	1	Connecting Rod	
13	902190	1	1	Male Inlet Adapter	
14	902194	2	2	M8 Split Lock Washer	
15	902195	2	2	M8x1.25 Hex Nut	
16	902240	3	6	Valve Body Assembly (Includes Item #17)	Includes Item 17
17	902207	1	1	EC Motor	
18	902232	3	6	Manifold Wire Harness	

Optional TeeJet Controller Kit #404745

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



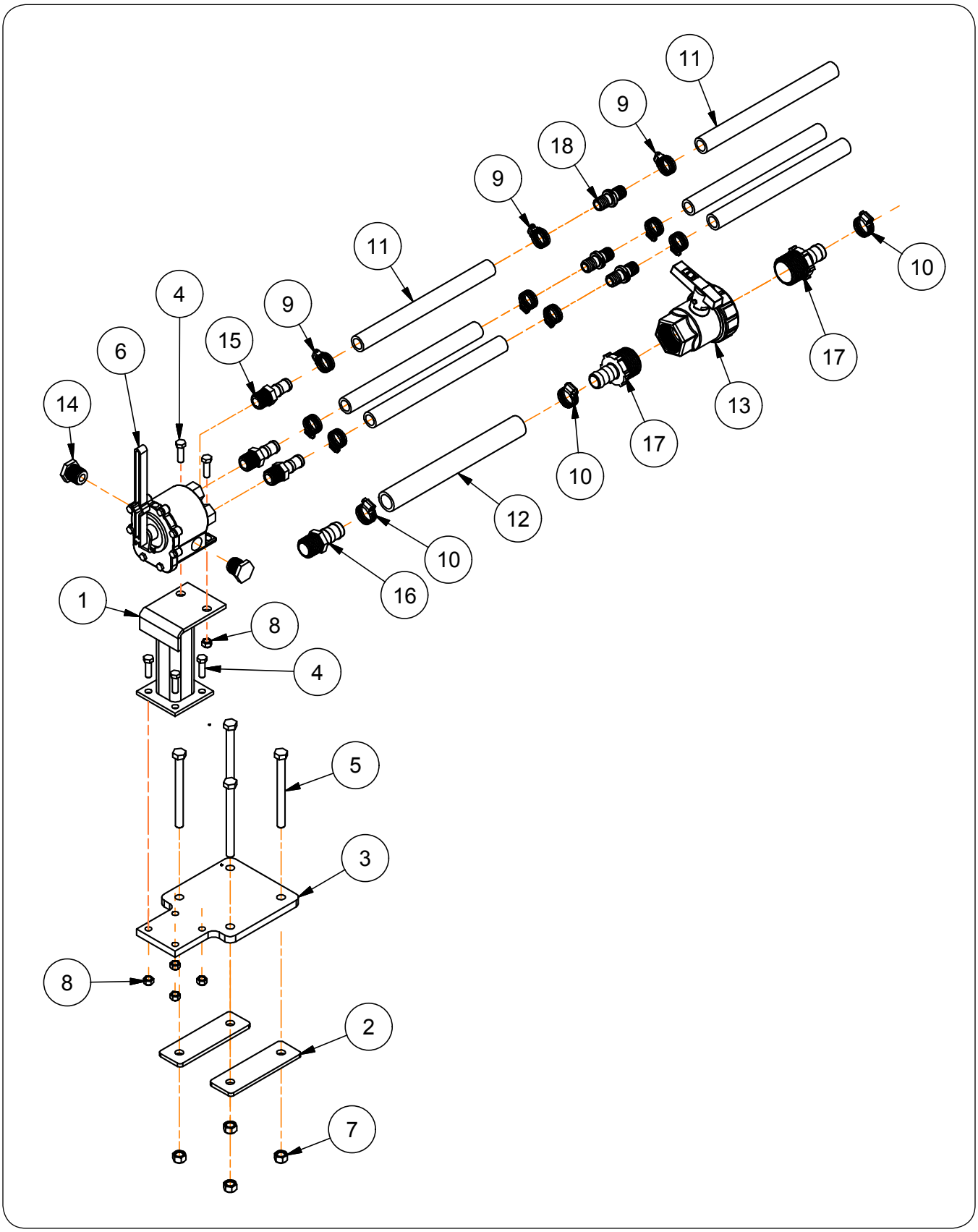
Optional TeeJet Controller Kit #404745

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

ITEM	DESCRIPTION	PART NO.	NOTES
1	Manifold Plug, 2”	901965	
2	Hose Barb, 1”	TA814863	
3	Regulating Valve For TeeJet 744 Kit	TA854800	
	Corrugated Loom, .350 ID x 1’	98729	
4	Hose Clamp, 13/16” to 1 1/2”	TA800912	
5	Rectorseal, 21 1/2 Pint w/Applicator	TA810515	
6	Gasket, 2 3/16 OD x 1 5/8 ID x .25	TA811944	
7	Flange Clamp, 2”	TA815025	
8	Battery End Cable	902311	
9	Wiring Harness, 86 1/4 Lg.	902307	
10	Wiring Harness, 166 1/2 Lg.	902306	
11	Nipple, 1 1/8x1 1/2x3/4	TA809400	
12	Regulating Valve	TA854800	
13	Mounting Bracket	TA884822	
14	Console	TA884986	
15	Accessory Bag Kit	TA885009	Not Shown
16	Quick Disconnect Tube - Female	902011	
17	Quick Disconnect Tube - Male	902010	
18	Brass Insert	902373	
19	Nylon Nut, 5/16-24UNF	902375	
20	Battery End Cable	TA884845	Items 20 thru 31 are for units Prior to Serial #D54850133
21	Power/Battery Cable used w/Manual Controller	TA884848	
22	Valve Cable, 8’	TA885092	
23	Adapter Harness Assembly	402594	
24	Flange Clamp, 1”	TA815026	
25	Tee Jet Adapter, 1/8”	TA861880	
26	Hose Barb, 1” Flange x 3/4” HB 90 Elbow	TA815017	
27	Tee Body, 3/4”	TA812575	
28	Gasket	TA815029	
29	Power/Battery Cable used w/Remote Controller	TA885008	
30	Console Cable Extension, 8’	TA885082	
31	Valve Cable	TA885090	

Tee-Jet Manual Selector Controller Valve (Optional)

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



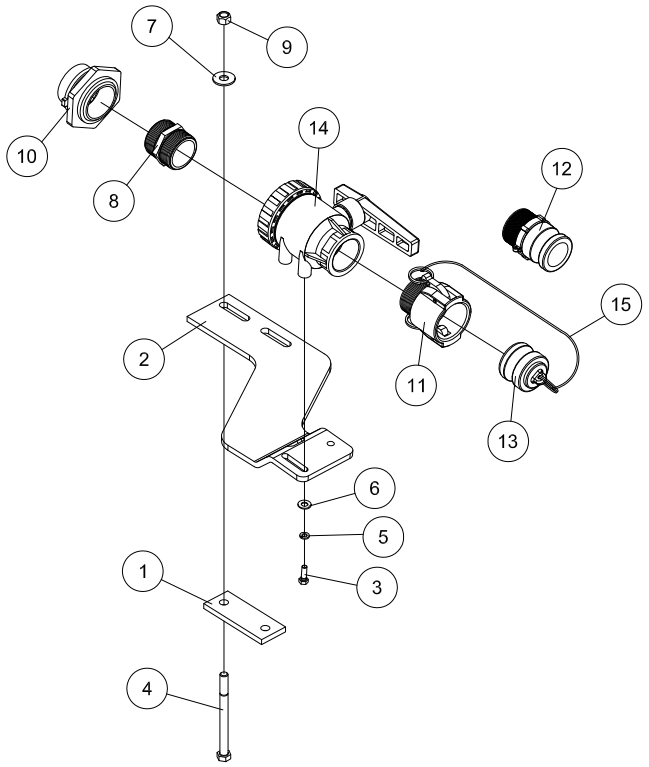
Tee-Jet Manual Selector Controller Valve (Optional)

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

ITEM	PART NO.	QTY	DESCRIPTION
	42123B	-	Manual Control Valve Kit
1	42085B	1	Valve Mount Weldment =Black=
2	42112B	2	Plate
3	42120B	1	Plate
4	9390-056	6	Capscrew, 3/8”-16UNC x 1 1/4” G5
5	9390-114	4	Capscrew, 1/2"-13UNC x 5 1/2" G5
6	9502060	1	Tee-Jet Manual Control Valve 300 PSI
7	9800	4	Lock Nut, 1/2"-13UNC
8	9928	6	Lock Nut/Top, 3/8”-16UNC
9	TA800910	9	Hose Clamp 13/16”-1 1/2”
10	TA800914	3	Hose Clamp 1”-2”
11	TA806250	30 Feet	Hose 3/4” ID x 1 3/32” OD
12	TA806275	10 Feet	Hose 1 1/4” ID x 1 25/32” OD
13	TA811521	1	Ball Valve 1 1/2 NPT Single Union Full Port
14	TA814751	2	Pipe Plug 3/4-14 NPTF
15	TA814861	3	Hose Barb 3/4-14 MPT x 3/4 Hose Shank
16	TA814866	1	Hose Barb 1-11 1/2 MPT x 1 Hose Shank
17	TA814873	2	Hose Barb 1 1/2-11 1/2 MPT x 1 Hose Shank
18	TA814923	3	Hose Mender 3/4 Hose Barb x 3/4 Hose Barb

Optional Quick Fill Components Kit #40793B

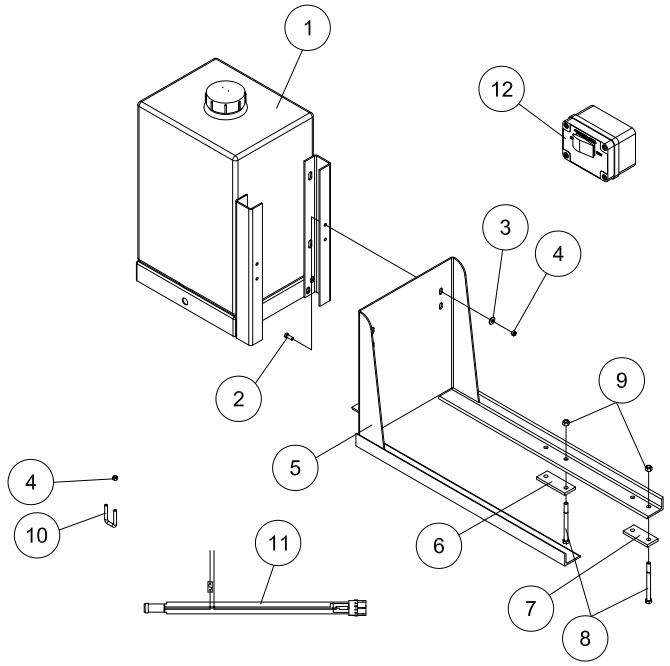
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	DESCRIPTION	PART NO.	NOTES
1	Clamp Bar	40783B	
2	Bracket	40794B	
3	Capscrew, 5/16-18 UNC x 1" Lg. (Gr. 5)	9390-030	
4	Capscrew, 1/2-13 UNC x 6" Lg. (Gr. 5)	9390-115	
5	Lock Washer, 5/16	9404-019	
6	Flat Washer, 3/8	9405-074	
7	Flat Washer, 1/2	9405-088	
8	Poly Nipple, 2 - 11 1/2 NPTF	94790	
9	Locknut, 1/2-13 UNC	9800	
10	Tank Fitting, 2"	TA805428	
11	Quick Disconnect Coupling	TA810750	
12	Coupler, 2"	TA811250	
13	Dust Plug, 2"	TA811375	
14	Ball Valve, 2"	TA908105	
15	End Fill Chain	TA0-903700-0	

Optional Foam Marker Components

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

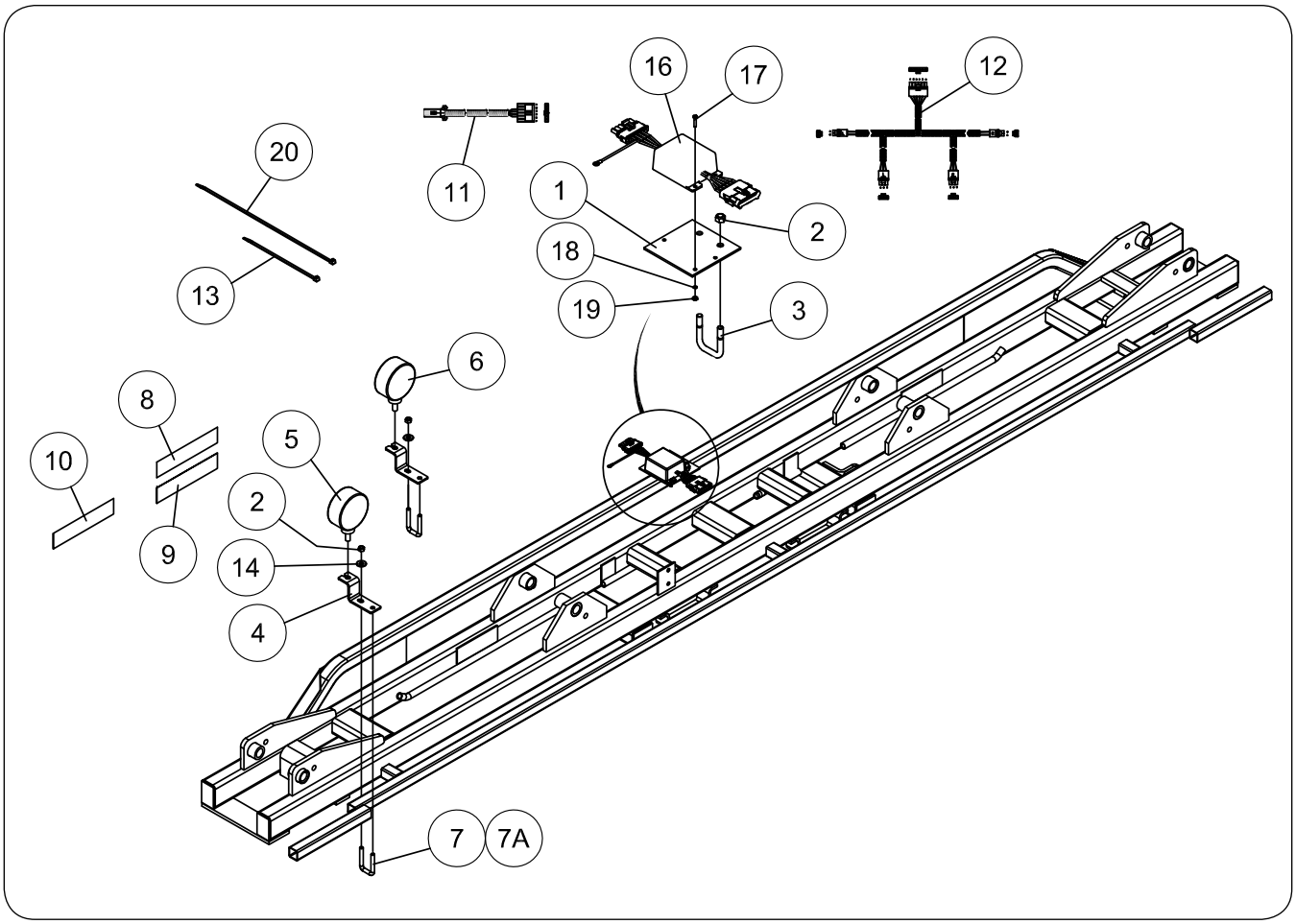


ITEM	DESCRIPTION	PART NO.	NOTES
1	Foam Marker Kit	40774B	
2	Capscrew, 3/8-16 UNC x 1" Lg. (Gr. 5)	9390-055	
3	Flat Washer, 3/8	9405-076	
4	Locknut, 3/8-16 UNC	9928	
5	Tank Mount	40780B	
6	Clamp Bar	40783B	
7	Clamp Bar	40798B	
8	Capscrew, 1/2-13 UNC x 6" Lg. (Gr. 5)	9390-115	
9	Locknut, 1/2-13 UNC	9800	
10	U-Bolt, 3/8-16 x 2 1/2" Lg.	TA510072	
11	Foam Marker Harness	9005193	
12	Foam Marker Control Box	9005236	

NOTE: Refer to Mark Master 2500 Foam Marking System Manual (TA8-115627-0) for further foam marker components and instructions.

Light Components Kit #40777B

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



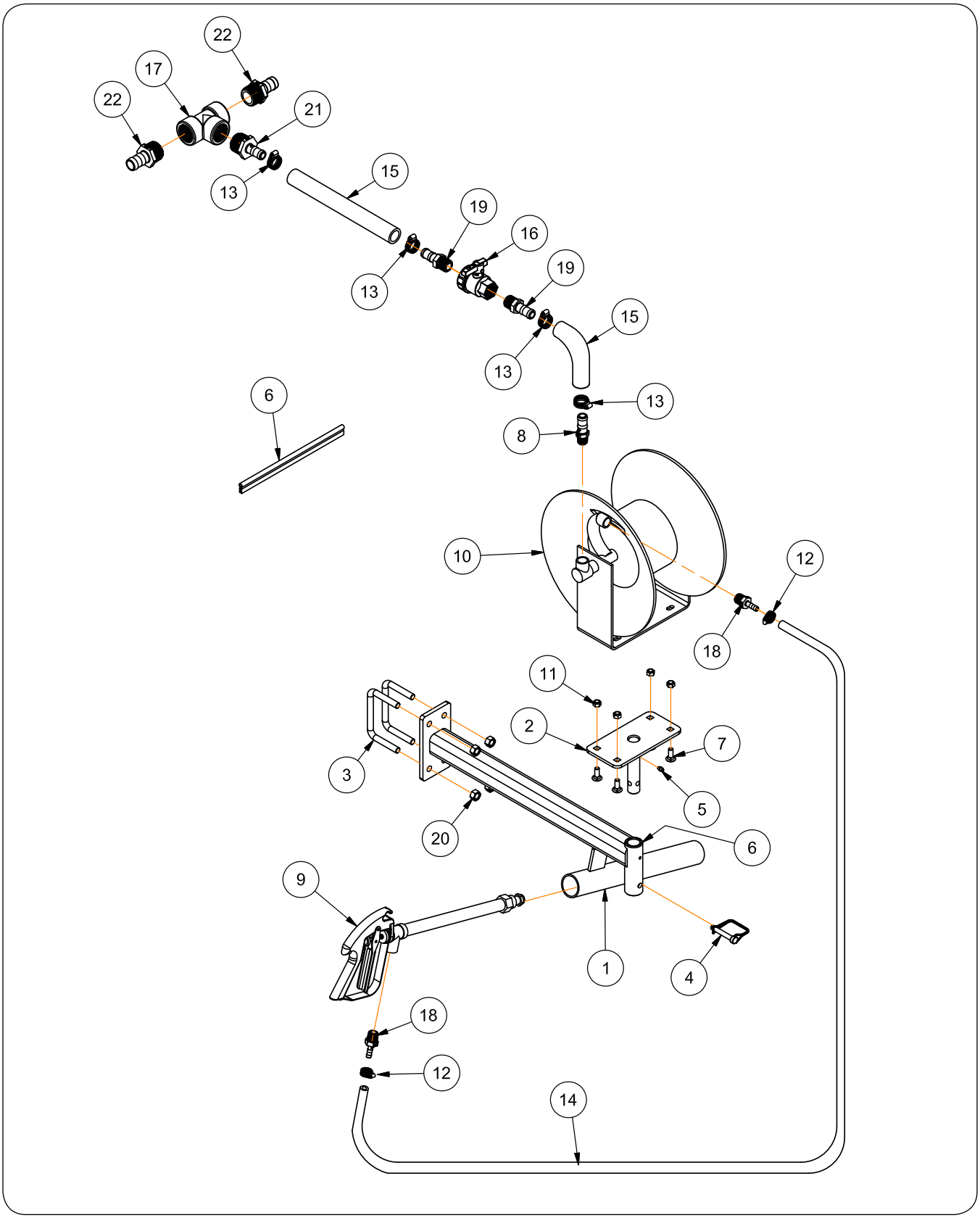
Light Components Kit #40777B

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

ITEM	DESCRIPTION	PART NO.	QTY.	NOTES
1	Plate	40785B	1	
2	Locknut, 3/8-16 UNC	9928	10	
3	U-Bolt, 3/8-16 x 2 1/4 Lg.	91163	5	
4	Light Bracket	40849B	4	
5	Light, Amber	9003876	2	
6	Light, Red	9003877	2	
7	U-Bolt, 3/8-16 x 2 1/2 Lg. (1 11/16 center to center)	TA510072	4	use on Hydraulic Fold Unit
7A	U-Bolt, 3/8-16 x 2 1/4 Lg. (1 15/16 center to center)	91163		use on Manual Fold Unit
8	Reflector, Red 2 x 9	9003126	2	
9	Reflector, Fluorescent Orange 2 x 9	9003125	2	
10	Reflector, Amber 2 x 9	9003127	2	
11	Wiring Harness, 114”	86466	1	
12	Wiring Harness, 132”	22790	1	
13	Cable Tie, 6” Lg.	9000106	12	
14	Flat Washer, 3/8	9405-076	4	
15	Enhanced Turn-Signal Kit (Optional)	22799	1	Includes Items 16-19
16	Module - Enhanced Ag	9003631	1	
17	Pan Head Screw, #6-32 UNC x 3/4	903172-094	2	
18	Lock Washer, #6	9404-009	2	
19	Hex Nut, #6-32	9830-013	2	
20	Cable Tie, 15 1/2” Lg.	94037	4	

Hose Reel & Spray Gun Components

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



Hose Reel & Spray Gun Components

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

ITEM	PART NO.	QTY.	DESCRIPTION
	42111B	-	Hose Reel and Spray Gun Kit
1	42109B	1	Reel Mount Weldment
2	42095B	1	Reel Swivel Weldment
3	91434	2	U-Bolt, 1/2"-13UNC
4	9000938	1	Lynch Pin 3/8" x 2 1/4"
5	91160	1	Zerk 1/4-28 STT
6	92444	6 Inches	Trim-Edge EPDM
7	9388-051	4	Carriage Bolt 3/8"-16UNC x 1" Gr5
8	TA814857	1	Straight Pipe Fitting
9	9502044	1	Gun Jet Spray Gun
10	9502087	1	Hose Reel
11	9928	4	Locknut/Top 3/8"-16UNC
12	TA800910	4	Hose Clamp 0.51" - 1.26"
13	TA800914	2	Hose Clamp 0.8125" - 1.5"
14	TA806200	25 Feet	Hose EPDM 3/8" ID
15	TA806275	3 Feet	Hose EPDM 1" ID
16	TA811515	1	Ball Valve 3/4NPT Single Union, Full Port (UV075FP)
17	TA814783	1	Tee 1 1/4-11 1/2NPT Female x 1 1/4-11 1/2NPT Female x 1 1/4-11 1/2NPT Female
18	TA814855	2	Hose Barb 1/2-14MPT x 3/8 HS Straight Poly (HB050-038)
19	TA814861	2	Hose Barb 3/4-14MPT x 3/4 HS Straight Poly (HB075)
20	9394-010	4	Hex Nut, 1/2"-13UNC
21	TA814870	1	Hose Barb 1 1/4-11 1/2NPT x 3/4 HS Straight Poly
22	TA814871	2	Hose Barb 1 1/4-11 1/2NPT x 1 HS Straight Poly

TOP AIR®

MEMBER

FEMA
FARM EQUIPMENT
MANUFACTURERS
ASSOCIATION

Unverferth®
Manufacturing Company, Inc.

www.unverferth.com

PageMaker_OM_Files\SR\Sprayer\\40736.indd//October 2013-6//December 2013-7// October 2014-8//January 2015-9//November 2017-10//October 2018-11//March 2024-12